

1.10.7 Stream Environment Zone Subelement

Overview

Stream environment zones (SEZs) are land areas that owe their physical and biological characteristics to the presence of surface water and/or shallow groundwater for a significant duration during the growing season in most years. SEZs typically encompass streams, adjacent wetlands, and many of the transitional areas that exist between the boundaries of these waters and adjacent upland landforms and plant communities.

Although SEZs constitute only a small portion of the land area in the Tahoe Basin, they provide numerous physical, chemical, and biological functions that are critical to sustaining healthy ecosystems and maintaining environmental quality. Accordingly, the Compact identifies the need to establish and adopt environmental standards for the protection of SEZs. The Regional Plan currently contains one Threshold for SEZs:

Soil Conservation Standard SC-2 for 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% 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.

The goals and policies that provide direction for TRPA's SEZ Program and attainment of the SEZ Threshold are contained in the SEZ, Soils, and Land Use Subelements. The SEZ Subelement currently contains one goal and seven associated policies. The goal calls for the long-term preservation, enhancement, and restoration of SEZ lands as a means of achieving various environmental thresholds, most notably Soil Conservation Threshold SC-2 (numeric threshold standard for SEZs). The first two policy statements direct the restoration, preservation, and management of SEZ lands by setting numeric goals for restoration of degraded/developed SEZ lands and requiring their protection and management for natural functions and values. The remaining five policy statements:

- limit permissible uses in SEZs and human-modified SEZs;
- establish standards for SEZ impact avoidance, minimization, and mitigation;
- prohibit development of groundwater resources in SEZs where such activities could adversely affect SEZ vegetation or instream flows;
- encourage the retrofitting of golf courses to minimize nutrient discharges to SEZs; and
- require regular review of SEZ identification criteria.

TRPA employs a variety of planning-, regulatory-, and environmental improvement-based strategies and measures to implement the policies and achieve the goals listed in the SEZ Subelement. The primary strategies and measures are summarized below:

Regulatory- and Planning-Based Strategies

- Permissible Use Regulations. Prohibit new land coverage and permanent disturbance in SEZs except for public outdoor recreation facilities, public service facilities, water quality and SEZ restoration projects, and projects that require SEZ encroachment for property access

- Impact Avoidance and Minimization Regulations. Require that permissible uses in SEZs avoid and minimize impacts to the maximum extent feasible.
- Compensatory Mitigation Regulations. Require that all unavoidable land coverage and permanent disturbance be offset through restoration or enhancement of SEZ lands at a restoration/enhancement-to-impact ratio of 1.5:1
- Hydrologic Alteration Regulations. Prohibit projects that substantially alter ground or surface water conditions in a manner that could have adverse impacts on SEZ vegetation or instream flows
- Land Coverage Replacement and Relocation Regulations. Prohibit the replacement or relocation of existing coverage within SEZs unless the proposed replacement or relocation project would result in a net environmental benefit to the affected SEZ
- Community and Redevelopment Plan Requirements. Require plan proponents to identify SEZ restoration and enhancement opportunities, develop SEZ restoration and enhancement targets, and establish implementation strategies during the community and redevelopment planning process

Environmental Improvement-Based Strategies

- SEZ Enhancement and Restoration Projects. Work with partner agencies to implement SEZ enhancement and restoration projects that improve the condition of degraded SEZ lands and return developed SEZ lands to a natural condition
- Erosion and Sediment Control Projects. Work with partner agencies to implement erosion, sediment, and water quality control projects that reduce pollutant loading and degradation of SEZ lands

Alternative 1—Continuation of Existing Regional Plan

Summary

Under Alternative 1, the “No Action” Alternative, the goals, policies, and implementation measures from the 1987 Regional Plan would remain in place.

Goals and Policies

Under Alternative 1, existing goals and policies would remain in place.

Implementation Measures

Under Alternative 1, existing implementation measures would remain in place.

Alternative 2

Summary

Alternative 2 incorporates the desired conditions for SEZs that were developed during the Pathway process. This alternative is also meant to improve the effectiveness of the SEZ Program and ongoing SEZ Threshold attainment efforts. Under Alternative 2, the Program would be updated, restructured, and made more contemporary and comprehensive. It would be built around the four core wetland program elements (see

below) that the U.S. Environmental Protection Agency (EPA) has identified as being essential for effective and comprehensive wetland programs. In addition, existing goals and policies would be reorganized to clarify language and intent and to move detailed implementation language from the Goals and Policies document to the Code.

Goals and Policies

Under Alternative 2, the SEZ goal statement from the 1987 Regional Plan would be revised to reflect the desired conditions for SEZs that were developed as part of the Pathway process. The revised SEZ goal statement would call for the regulation, preservation, restoration, and enhancement of SEZ lands so that physical, chemical, and biological processes function properly within the constraints and dynamics of individual watersheds; SEZ vegetation, terrestrial wildlife, and aquatic communities are healthy and sustainable; watershed characteristics approximate natural conditions where attainable; and permissible and beneficial uses of SEZ lands are compatible with desired physical, chemical, and biological conditions.

The seven existing policy statements would be revised and/or split into multiple policy statements to:

- clarify policy language and intent;
- move more detailed language to the Code;
- distinguish between SEZ restoration and enhancement;
- allow beneficial uses in SEZ lands when compatible with desired physical, chemical, and biological conditions;
- introduce more explicit and stringent permissible-use standards for SEZ impact avoidance, impact minimization, and compensatory mitigation to ensure no net loss of SEZ acreage and function;
- prohibit implementation of any type of project that would substantially alter hydrologic conditions or processes in SEZs; and
- allow for the relocation of land coverage in SEZs when the net effect on SEZ area and function is neutral.

Existing goals and policies would not only be edited to clarify language and intent – they would also be reorganized and moved from the Goals and Policies document to the Code in cases where they contain nothing but detailed implementation language.

Three new policy statements would be added to the SEZ Subelement. The first would encourage a more holistic approach to SEZ restoration and enhancement. The second would provide greater incentives for public and private entities to relocate existing facilities away from SEZ lands. The third would provide policy direction for development of a SEZ program built around the EPA's four core wetland program elements:

- (1) a comprehensive SEZ regulatory strategy and implementation plan
- (2) a comprehensive SEZ protection and restoration plan
- (3) a comprehensive SEZ monitoring and assessment plan
- (4) comprehensive water quality standards for SEZs

Implementation Measures

In addition to the existing planning-, regulatory-, and environmental improvement-based strategies contained in the 1987 Regional Plan, Alternative 2 would incorporate the following new measures to implement the revised and new policies listed in the SEZ Subelement, and to develop a contemporary, comprehensive SEZ program that contains all four of EPA's core program elements:

- SEZ Identification and Delineation Standards. Revise and update the regulatory SEZ definition, identification criteria, and delineation standards to allow for more accurate and repeatable SEZ identification and delineation.
- SEZ Classification Standards. Develop and adopt a standardized SEZ classification system to facilitate consistent classification and more effective SEZ tracking, monitoring, assessment, mitigation, and restoration and land use planning.
- Regional SEZ Mapping. Update the regional SEZ map using improved remote-sensing data sets to facilitate and improve SEZ tracking, monitoring, assessment, environmental review, mitigation, and restoration and land use planning.
- SEZ Condition Assessment. Develop and adopt standardized methodologies for assessing SEZ conditions at the regional and project scale to facilitate more effective and consistent SEZ monitoring and assessment and more informed and effective restoration, mitigation, and land use planning.
- SEZ Restoration, Creation, and Enhancement. Revise the definition of “SEZ restoration” and adopt new definitions for “SEZ enhancement” and “SEZ creation” to distinguish between these three different types of activities and allow for more appropriate and effective SEZ mitigation and environmental improvement projects.
- SEZ Permitting and Environmental Review. Develop and adopt a more stringent permitting and environmental review process for projects involving SEZ encroachment. This process would place a greater burden on project applicants to demonstrate that proposed actions avoid and minimize SEZ impacts to the maximum extent practicable, and that proposed compensatory mitigation is appropriate and commensurate with the nature of the impacts to SEZ lands.
- Compensatory Mitigation for Permanent SEZ impacts. Adopt a new, minimum compensatory SEZ mitigation-to-impact ratio of 2:1 for all permanent disturbances to SEZ lands. The mitigation-to-impact ratio could increase to a maximum of 4:1 depending on the type and quality of SEZ affected, the extent and duration of proposed impacts, the type and location of proposed compensatory mitigation (e.g., in-kind vs. out-of-kind mitigation), and the likelihood that the proposed compensatory mitigation would be successful.
- Compensatory Mitigation for Temporary SEZ Impacts. Adopt a new compensatory mitigation-to-impact ratio of 1:1 for all temporary disturbances to SEZ lands.
- In Lieu Fee Program. Implement a program that allows project applicants, under certain circumstances, to pay a fee in lieu of implementing on-site or off-site SEZ mitigation or purchasing mitigation credits from a land bank.

- SEZ Performance Standards. Develop and adopt new minimum performance standards for SEZ mitigation, restoration, enhancement, and creation projects.

Alternative 3

Summary

Alternative 3 incorporates the desired conditions for SEZs that were developed during the Pathway process; it is designed to improve the effectiveness of the SEZ program and ongoing SEZ threshold attainment efforts. Under Alternative 3, the Program would be updated, restructured, and made more contemporary and comprehensive. It would be built around the four core wetland program elements that the EPA has identified as being essential for effective and comprehensive wetland programs. In addition, existing goals and policies would be reorganized to clarify language and intent and to move detailed implementation language from the Goals and Policies document to the Code.

Goals and Policies

The goals and policies in Alternative 3 would be the same as those in Alternative 2.

Implementation Measures

Implementation measures for Alternative 3 would be the same as those proposed for Alternative 2, except that the new compensatory SEZ mitigation-to-impact ratio would be the same as under Alternative 1 (fixed at 1.5:1).

Alternative 4

Summary

Alternative 4 incorporates the desired conditions for SEZs that were developed during the Pathway process; it is designed to improve the effectiveness of the SEZ program and ongoing SEZ threshold attainment efforts. Under Alternative 4, the Program would be updated, restructured, and made more contemporary and comprehensive. It would be built around the four core wetland program elements that the EPA has identified as being essential for effective and comprehensive wetland programs. In addition, existing goals and policies would be reorganized to clarify language and intent and to move detailed implementation language from the Goals and Policies document to the Code.

Goals and Policies

The goals and policies in Alternative 4 would be the same as those in Alternative 2.

Implementation Measures

Implementation measures for Alternative 4 would be the same as those proposed for Alternative 2, except that the new compensatory SEZ mitigation-to-impact ratio would be fixed at 4:1.

