

1.13.5 Monitoring and Evaluation Subelement

Overview

The Tahoe Regional Planning Compact (PL 96-551, December 1980) was enacted to encourage the wise use and conservation of the water of Lake Tahoe and of the resources of the area around the said lake and directed TRPA to adopt Environmental Threshold Carrying Capacity (Thresholds) as a means to achieve this mandate and frame the range of strategies for inclusion in the Regional Plan.

The Thresholds are defined as “environmental standards necessary to maintain a significant scenic, recreational, educational, scientific or natural value of the region or to maintain public health and safety within the region.” Although the Compact directed TRPA to establish Thresholds as the basis for the Regional Plan, it did not explicitly set forth requirements to regularly monitor and assess Threshold achievement.

TRPA Resolution 82-11 was the mechanism by which TRPA formally adopting Thresholds and refined Compact direction to the Agency with respect to Regional Plan maintenance, use of science, and the establishment of a regional monitoring program (see *Resolution statement #4*). The Resolution provided guidance to the Agency to regularly review scientific and technical information as a means to justify revisions and amendment to Threshold Standards and Regional Plan policies and strategies (including development allocations, ordinances, capital improvements, etc.). Although not called out specifically, the inclusion of various findings and Resolution statements related to the periodic review and use of monitoring and scientific information found in Resolution 82-11 established an informal *adaptive management* approach to the conservation of the Lake Tahoe basin.

The Monitoring and Evaluation Subelement of the Implementation Element of TRPA’s Goals and Policies further refines guidance provided by Resolution 82-11. This Subelement provides goals and policies related to assessing the effectiveness of the Regional Plan in achieving environmental standards through implementation of a detailed monitoring program and the use of scientific investigations. It includes a fixed research agenda to reduce uncertainty related to cause and effect relationships for water quality, scenic quality, and fisheries; it endeavors to understand the economic impacts of the Regional Plan. The Subelement establishes the need for TRPA to adjust or revise Regional Plan strategies or programs in response to scientific discovery, environmental, or socioeconomic indicator trends relative to adopted Threshold standards.

Chapter 32 and 38 of TRPA’s Code of Ordinances implement policies found in the Monitoring and Evaluation Subelement. Chapter 32 provides the means and schedule by which Threshold standards and applicable Federal and State standards for water and air quality shall be attained and maintained. It directs staff to identify indicators that can be used to assess the status of environmental conditions relative to adopted standards. This chapter also includes direction to identify “supplemental measures” in response to failure of achieving Thresholds or Federal or State standards. Supplemental measures are additional actions that the agency can take to mitigate the effect of environmental degradation above and beyond adopted measures identified in the Regional Plan

(known as “compliance measures”). This chapter also provides the primary content requirements of Threshold Evaluation reports produced by TRPA staff every 5 years.

Chapter 38 of TRPA Code of Ordinances provides more specific guidance to the Agency for gathering and tracking basic information related to permitting and permit actions, parcel information, land banking, and development allocations.

Goals and policies for the Monitoring and Evaluation Subelement are proposed to be retained in one form or another for each Alternative under consideration.

Fundamentally, the Monitoring and Evaluation Subelement for the “no action” Alternative will remain unchanged; all existing goals and policies would remain the same as today. For the remaining alternatives, monitoring and evaluation (and reporting) mandates and requirements would be retained, although amendments and modifications would be introduced to improve monitoring program implementation transparency and reflect more advanced monitoring and evaluation principles.

Alternative 1—Continuation of Existing Regional Plan

Summary

The Monitoring and Evaluation Subelement of the 1987 Regional Plan contains three goals and 16 policies that direct TRPA to evaluate progress toward Threshold achievement, improve understanding of cause-and-effect relationships (primarily for water quality), and implement a monitoring program. This Subelement established the policies for TRPA to conduct or facilitate research to reduce uncertainties related to factors affecting natural resources of concern, carry out monitoring to improve the Agency’s understanding of the status and trends associated with indicators used to assess Threshold standard compliance and report results and recommendations every 5 years. Without explicitly stating it, this Subelement established an adaptive management framework for the agency where the results and recommendations of monitoring and research would be used to make adjustment to the Regional Plan on a regular basis.

Goals and Policies

No changes are proposed under Alternative 1.

Implementation Measures

No changes are proposed under Alternative 1.

Alternative 2

Summary

Research, environmental modeling, and monitoring afford TRPA the ability to assess, understand, and predict environmental and socioeconomic conditions in the Tahoe Region. Information produced through research and monitoring efforts is fundamental to adaptive management and planning. Therefore, this information is needed to validate,

direct, or refocus TRPA's regulatory policy and conservation strategies to achieve Threshold standards and the goals of the Regional Plan.

The purpose of the updated Monitoring and Evaluation Subelement would be to characterize TRPA's goals and policies related to regional status and trend monitoring and evaluation (Threshold indicator monitoring), applied research and effectiveness monitoring, and implementation monitoring.

Goals and Policies

Most of the principles that characterized the 1987 Monitoring and Evaluation Subelement Goals and Policies would be retained, including maintenance of a monitoring program, supporting research efforts, and regular reporting on threshold attainment status. However, the three existing goals would be reorganized to more clearly categorize the types of monitoring and research that TRPA should pursue in order to inform decision making: status and trend monitoring, applied research and effectiveness monitoring, and implementation monitoring.

A new policy would be added to encourage the use of the Lake Tahoe Management System to guide the continual improvement and implementation of TRPA's threshold indicator monitoring program (i.e., Regional Status and Trend Monitoring and Evaluation Program). This management system is a formal program management process that requires explicit documentation of program elements, governance structure, roles and responsibilities, costs, and implementation schedules.

One major revision would be the removal of several policies that are, in effect, a specific list of scientific research needs. These policies would be replaced with one generic policy statement recognizing the need to conduct research as management or policy questions arise or uncertainties are revealed. This change recognizes that research needs are not static, but need to be updated as issues or concerns arise.

The updated Subelement would include a new policy that would direct TRPA to work toward replacing certain existing qualitative or ambiguously expressed Threshold standards (often framed as "policy statements") with numeric standards to improve the Agency's ability to consistently and objectively evaluate and report environmental conditions. For example, there are two Threshold "policy statements" within the Recreation Element that are qualitative in nature and would be replaced with numeric standards after sufficient public review, technical analysis, and environmental documentation are provided to justify the change. Likewise, policy language is included that directs TRPA to identify new threshold standards, when appropriate, to ensure that environmental values of the Region are achieved. This adjustment is consistent with direction provided in TRPA Resolution 82-11.

Updated policies would embrace new technologies in order to better manage data and improve the dissemination and availability of information through regular reporting of monitoring results and scientific discovery (e.g., using web-based reporting platforms). The updated Subelement would provide updated policies that encourage TRPA's continued collaboration with other agencies and the scientific community.

Implementation Measures

Alternative 2 would include the following new measure to implement the new monitoring and evaluation policies described above:

- Amend Chapters 32 and 38 of the Code to clarify Threshold monitoring, evaluation and reporting (e.g., schedule, format, agency response, definitions), and permit and development allocation activity tracking requirements. Prior to Code adoption, proposed amendments would be reviewed by a science committee, partner agencies and the public to ensure that the proposed strategies are focused on filling the most relevant information needs, are within budgetary constraints, are implementable, and meet scientific rigor.

Alternative 3

Summary

The purpose of the updated Monitoring and Evaluation Subelement under Alternative 3 would be the same as in Alternative 2: to characterize TRPA's goals and policies related to regional status and trend monitoring and evaluation (Threshold indicator monitoring), applied research and effectiveness monitoring, and implementation monitoring. Regardless of differences in land use and the level of development across the Alternatives, the purpose of the Monitoring and Evaluation Program remains largely the same.

Goals and Policies

The goals and policies under Alternative 3 would be the same as those proposed for Alternative 2.

Implementation Measures

The measures used to implement the new monitoring and evaluation policies for Alternative 3 would be largely the same as those for Alternative 2. Given the increased level of development and the related increase in potential environmental impacts assumed under Alternative 3, the following Implementation Measure from Alternative 2 is restated as follows:

- Amend Chapters 32 and 38 of the Code to clarify Threshold reporting (e.g., schedule, format, agency response, definitions), permit, and activity tracking requirements. The amendments would be reviewed by a science committee and partner agencies to ensure that the proposed strategies are focused on filling the most relevant information needs, are within budgetary constraints, are implementable, and meet scientific rigor. In addition, individual projects would be reviewed under these amended chapters to ensure compliance with permit conditions and assist with determining whether projects are meeting the stated environmental performance objectives.

Alternative 4

Summary

The purpose of the updated Monitoring and Evaluation Subelement under Alternative 4 would be the same as in Alternative 2: to characterize TRPA's goals and policies related to regional status and trend monitoring and evaluation (Threshold indicator monitoring), applied research and effectiveness monitoring, and implementation monitoring.

Regardless of differences in land use and the level of development across the Alternatives, the purpose of the Monitoring and Evaluation Program remains largely the same.

Goals and Policies

The goals and policies under Alternative 4 would be the same as those proposed for Alternative 2.

Implementation Measures

The Implementation Measures under Alternative 4 would be the same as those proposed for Alternative 2.

