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Memorandum

TO: Tahoe Interagency Executive Steering Committee

FROM: Shane Romsos (TRPA), Paul Nielsen (TRPA), Hannah Schembri (Lahontan), Sue Norman (USFS-LTBMU), Woody Loftus (NRCS), Jacques Landy (EPA), and Tricia York (CTC)

DATE: March 21, 2010

SUBJECT: Summary of Proposed Steps to Update Program Elements and Policies for Stream Environment Zones in the Lake Tahoe Basin ("SEZ Roadmap")

Around July 2010, the Tahoe Interagency Executive Steering Committee directed agency staff to prepare a briefing paper that outlined steps necessary to update policies and program elements related to the conservation of stream environment zones at Lake Tahoe. Multiple agencies worked together to develop the following narrative included individuals listed in the memo heading with input provided by Josh Collins (San Francisco Estuarine Institute), Zach Hymanson (Tahoe Science Consortium) and Jonathan Long (USFS – Pacific Southwest Research Station).

Purpose and Need

Multiple Tahoe Basin agencies have goals and policies related to the conservation and restoration of stream environment zones (SEZs). Broadest among these are the Tahoe Regional Planning Agency's (TRPA), whose Regional Plan requires achievement of several threshold standards related to stream zones. The TRPA and other agencies have adopted and/or implemented various conservation measures, management guidelines, restoration programs and ordinances designed to achieve desired conditions, and regulatory standards related to SEZs. Although land management agencies have made significant strides in protecting and conserving SEZs in the Tahoe Basin, new science-based information, State initiatives, Federal guidance and identified issues with existing SEZ conservation program elements is prompting a comprehensive review and update of Regional SEZ policies and conservation program elements. Consequently, the TRPA has obtained Governing Board and other agencies' endorsement to review and update its SEZ conservation policies and program to encompass the four program elements recommended by EPA for an effective wetlands program.

The four EPA Wetland Program elements and associated Regional needs are:

1. **Monitoring and Assessment** (Standardize methodologies to document and track changes in acreage and SEZ condition)
2. **Establish Water Quality Standards for SEZ** (Set benchmarks for wetland conditions)
3. **Voluntary Restoration and Protection** (Improve the functional characteristics of SEZ and increase the acreage of SEZ)
4. **Regulation and Permitting** (Avoid/minimize the loss of SEZ and set guidelines for mitigation)

Steps necessary to review and update the Region's SEZ policies and program¹:

1. Document desired functions of SEZ and link identified functions to SEZ structure, vegetation composition, hydro-geomorphic setting, and watershed position. Desired conditions and functions for SEZs articulated during the Pathway planning process will be revisited and revised by a Science Management Integration Team (SMIT) SEZ Technical Working Group (TWG) and as part of the EPA Wetland Grant funded project (draft desired conditions briefing - July 2011).
2. Review and revise the SEZ definition and delineation criteria to not conflict with the current soil survey and to resolve current technical inaccuracies and ambiguity through work by the SEZ TWG. Clarification of terms related to SEZ "restoration" and "enhancement" will need to be worked through during this step (see #4, Fig. 1, to be completed as part of the SEZ classification system).
3. Establish a classification system of different SEZ types based on soils, hydro-geomorphology and vegetation that is protective of identified SEZ desired functions (see #1, Fig. 1). Develop GIS mapping and field validation approaches that can be used to accurately map the distribution, functions, relative condition and extent of identified SEZ types. Identify empirically-based hydro-geomorphic, vegetation and soil-based field indicators of different SEZ types that can be used for on-the-ground SEZ delineation. Use refined mapping approaches and revised delineation criteria, contemporary remote sensing data (LiDAR and Multispectral) from the recent Round 10 SNPLMA capital investment and other relevant map layers (e.g., NRCS soils survey) to generate maps showing the current distribution and extent of SEZ by type for the entire basin (see #3, Fig. 1). The classification system, mapping and field indicators will establish a common set of labels and definitions for various types of SEZs in the Lake Tahoe Basin. A Round 12 SNPLMA research subtheme description has been developed to facilitate the accomplishment of this step. Results of this effort would be expected within three years and would also involve the SEZ TWG (target - December 2013).
4. Through currently funded EPA wetland grant and future EPA wetland grants, evaluate and validate the applicability of California's Wetlands and Riparian Monitoring Program to assess and track the status of various SEZ types (using California Rapid Assessment Methodology, aka CRAM). Develop and validate CRAM modules for other SEZ types. If appropriate, probabilistically apply CRAM across the basin for each SEZ type in order to regionally characterize level 2 conditions (see #2, Fig. 1). Use available data (e.g., TRPA/NDEP SWAMP bioassessment, USFS-Stream Condition Inventory and various existing USFS assessments) to assist with validating CRAM level 2 SEZ condition determinations. Use this evaluation to create a map showing the ground-verified distribution and extent of level 2 SEZ conditions (various products from the EPA Grant funded project to be completed and delivered through March 2013).
5. The SEZ TWG in coordination with the EPA-funded project Technical Advisory Committee will develop a process to determine if CRAM scores are appropriate for assigning "water quality standards" to various SEZ types including water bodies. This step could take up to 5 years to complete depending on the level of complexity, extent of stakeholder agreement or dissent, and technical and environmental documentation needed (target July 2014).
6. Secure funding and use findings from steps 1 through 5 to develop a status and trend monitoring and evaluation plan for SEZs. Similarly, secure funding to create a programmatic SEZ restoration effectiveness monitoring and evaluation plan (target July 2014).
7. Develop criteria that can be used to prioritize SEZ restoration and enhancement actions (informed by EPA-funded project and integrated with USFS Watershed Improvement Program and other existing agency specific guidance and direction for this task). Generate map showing realistic opportunities for restoration and the distribution of SEZ restoration priorities (see # 4, Fig. 1). Calculate acreage of SEZ restoration and enhancement needed to meet SEZ desired functions and condition targets (e.g., minimum CRAM score), environmental threshold standard and/or USFS Forest Plan goals. Secure future grant funds and work through SEZ TWG to develop an EIP SEZ restoration plan using findings from steps 1 through 6 (target December 2013).
8. TRPA will work with partners and stakeholders to revise permitting and regulatory requirements as appropriate to improve consistency of TRPA permitting and regulatory requirements with EPA wetland program requirements (target July 2014).
9. Secure funding to conduct appropriate environmental documentation for proposed program, policy and threshold standard updates (target September 2014).

¹ Figure 1 provides an overview of several of these steps, their current status, and the relationship between these tasks and EPA's Four Core Elements. Due to the interactive nature of several steps, it may be necessary to address certain issues, such as the definitions of SEZ and SEZ restoration and enhancement, iteratively throughout the program review and update process.

10. TRPA will adopt (pending governing board approval) revised SEZ program elements, definitions, policies, implementation measures and Regional SEZ condition standards (threshold standards) identified in previous steps (target December 2014).

Current Efforts to Update SEZ Policies and Program Elements

Following discussions held during SNPLMA Round 11, TRPA and Lahontan RWQCB obtained EPA CWA funding under §104(b)(3) to test California's Wetlands and Riparian Area Monitoring Program (WRAMP) in the Sierra Nevada. The project will establish a multi-agency Sierra Regional Team to:

(1) test the ability of the draft California wetland and riparian mapping protocol to depict the Stream Environment Zones (SEZs) that are jointly managed by Federal, State, and local agencies;

(2) use the mapping protocol to assess the distribution, abundance, and size-frequency of wetlands and other aquatic habitats in a demonstration watershed;

(3) integrate the Sierran ecoregion into the California Wetlands Portal by adding the base map and selected wetland projects to the Wetland Tracker of the Portal; and

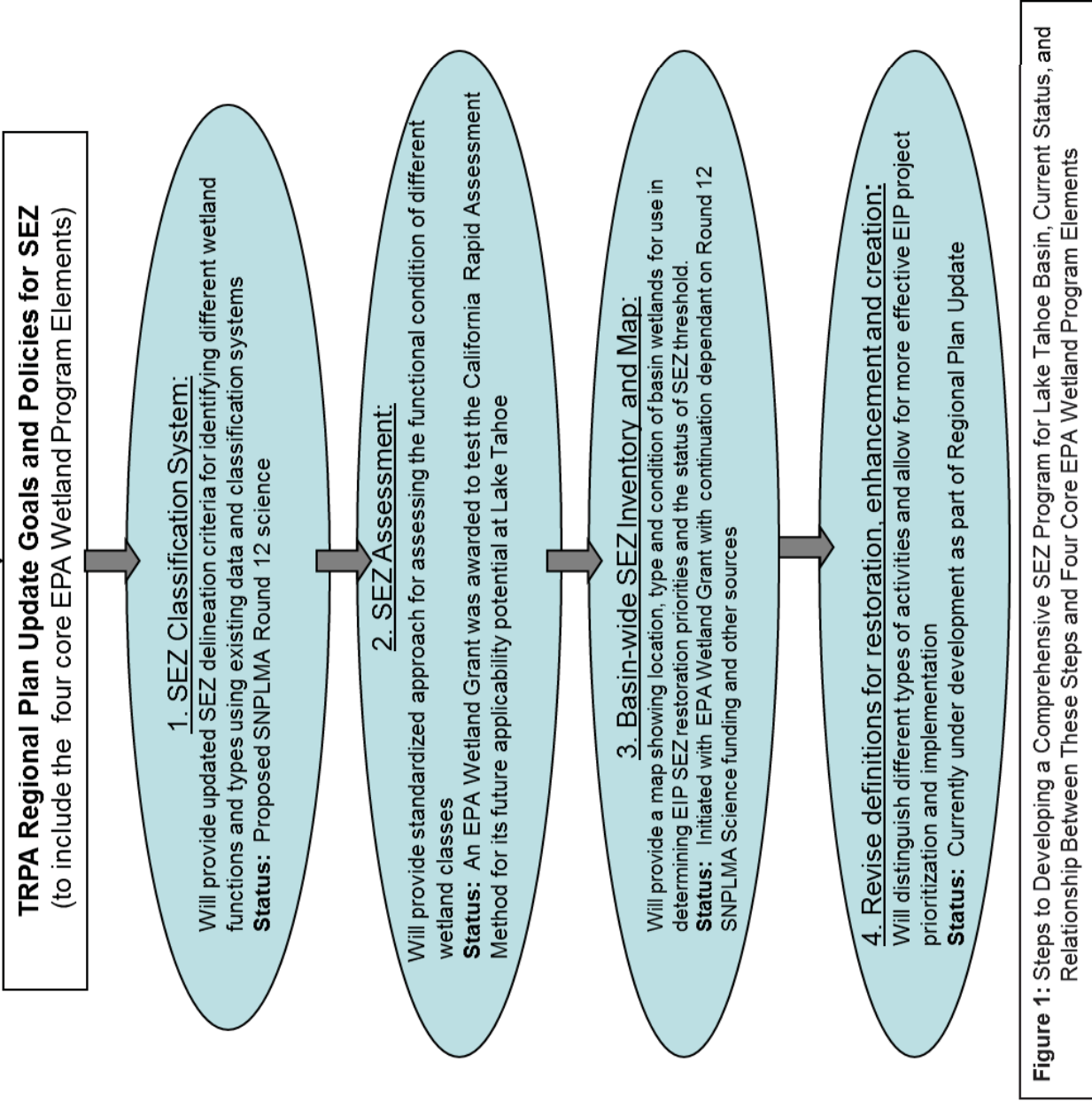
(4) begin developing a montane wet meadow CRAM (CA Rapid Assessment Method) module following the process that has been peer reviewed through the State Water Board.

This project's activities, findings and conclusions are limited to two watersheds in the Tahoe Basin.

Round 12 SNPLMA Science Subtheme

Agencies have coordinated with Josh Collins, the Principle Investigator on the EPA grant project, to articulate anticipated science needs in support of updating SEZ policies and program elements. A subtheme description has been included in SNPLMA Round 12 Science to address some of the most pressing Regional SEZ science support needs. Proposals will be submitted to answer the following question: What hydro-geomorphic, vegetation or soils classification system (or combination of classification systems) is most appropriate for protecting and conserving desired functions identified for SEZ in the Lake Tahoe Basin? Agencies are particularly interested in science-informed efforts and products that lead to the selection of a SEZ classification system, such as: 1) conceptual models that illustrate the linkage of desired SEZ functions to SEZ structure, geomorphic setting, vegetation species composition and watershed position; 2) GIS mapping and modeling approaches, data and field verification methods that can be used to map the distribution, functions, relative condition and extent of identified SEZ types; and 3) an empirically-based identification of hydro-geomorphic, vegetation and soil field indicators of different SEZ types that can be used for on-the-ground SEZ delineation. Ultimately, agencies need maps that depict the aerial extent of different SEZ types that exist within SEZ boundaries and their associated condition across the Lake Tahoe Basin and scientifically defensible documentation that supports the field SEZ delineation approach, mapping approaches and products, and selected classification system. Research is expected to be conducted in collaboration with agency representatives to ensure products meet agency needs will be informed by the results from the EPA grant funded project.

Goal: Conserve and Protect SEZ Desired Conditions and Functions



TRPA Regional Plan Update Goals and Policies for SEZ
(to include the four core EPA Wetland Program Elements)

1. SEZ Classification System:
Will provide updated SEZ delineation criteria for identifying different wetland functions and types using existing data and classification systems
Status: Proposed SNPLMA Round 12 science

2. SEZ Assessment:
Will provide standardized approach for assessing the functional condition of different wetland classes
Status: An EPA Wetland Grant was awarded to test the California Rapid Assessment Method for its future applicability potential at Lake Tahoe

3. Basin-wide SEZ Inventory and Map:
Will provide a map showing location, type and condition of basin wetlands for use in determining EIP SEZ restoration priorities and the status of SEZ threshold.
Status: Initiated with EPA Wetland Grant with continuation dependant on Round 12 SNPLMA Science funding and other sources

4. Revise definitions for restoration, enhancement and creation:
Will distinguish different types of activities and allow for more effective EIP project prioritization and implementation
Status: Currently under development as part of Regional Plan Update

Figure 1: Steps to Developing a Comprehensive SEZ Program for Lake Tahoe Basin, Current Status, and Relationship Between These Steps and Four Core EPA Wetland Program Elements

Four Core EPA Wetland Program Elements

Monitoring and Assessment
Needs:
1. SEZ Classification System
2. SEZ Assessment
3. Basin-wide SEZ Inventory Map
4. Definitions for Restoration, Enhancement, and Creation

Restoration and Protection
Needs:
1. SEZ Classification System
2. SEZ Assessment
3. Basin-wide SEZ Inventory Map
4. Definitions for Restoration, Enhancement and Creation

Regulation and Permitting
Needs:
1. SEZ Classification System
2. SEZ Assessment
3. Basin-wide SEZ Inventory Map
4. Definitions for Restoration Enhancement and Creation

Standards
Needs:
1. Definitions for Restoration, Enhancement and Creation