

Thresholds and Performance Management Strategic Initiative

ADVISORY PLANNING COMMISSION
MARCH 13, 2019



Threshold Update Initiative

Challenge:

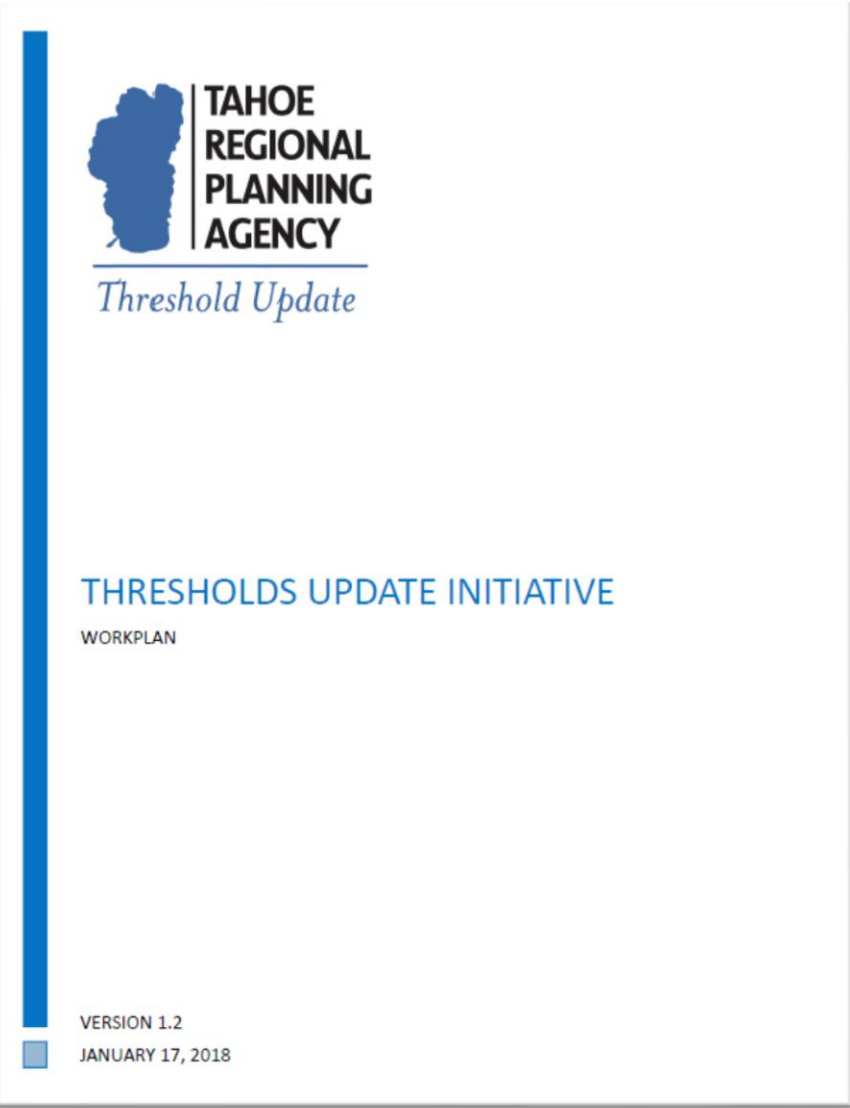
- The majority of the standards were adopted in 1982, based on science that is now over 40 years old.
- Link between actions and outcomes is not always clear



Goals:

- Relevant and scientifically rigorous threshold standards
- A cost-efficient, feasible, and informative monitoring and evaluation plan
- A robust and repeatable process for standard review

Workplan



TAHOE
REGIONAL
PLANNING
AGENCY
Threshold Update

THRESHOLDS UPDATE INITIATIVE
WORKPLAN

VERSION 1.2
JANUARY 17, 2018



Stakeholders Working Group

Membership

- Three representatives of the Advisory Planning Commission;
- Two representatives of the Governing Board;
- One representative of Environmental Community;
- One representative of Business Community;

Accomplishments

Reorganization and Technical corrections (May 2018)

1. Numbering system
2. Addressed overlapping standards in Water Quality, Vegetation, and Soil Conservation.
3. Established standards as a stand alone document
4. Removed outdated references
5. Correction of typographic errors
6. Removed footnotes indicating modification dates

Colocation Recommendation

What is a structure?

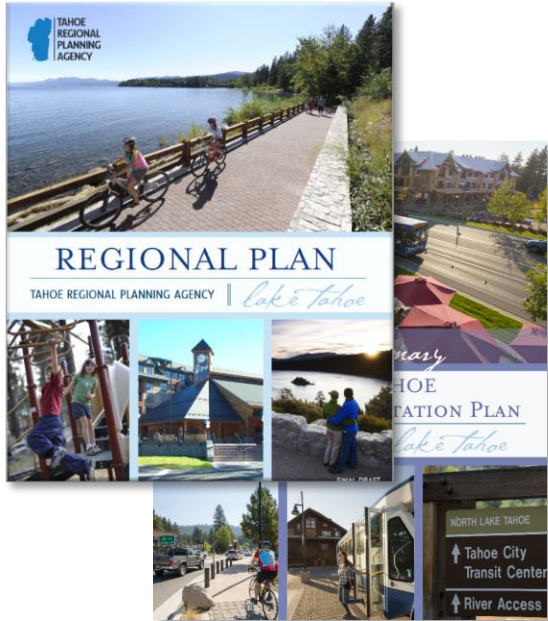
Goals

RESOLUTION NO. 82-11

TABLE OF AMENDMENTS

August 26, 1992, Resolution 92-27;	Amends the footnote (1), to the single event noise threshold for aircraft
September 22, 1993, Resolution 93-16;	Deletion of the Management Standard and the addition of a Numerical Standard

Implementation



Monitoring



Reporting



Is structure really an issue?

- Is the whole more than the sum of the parts?
- Missed opportunity?



Two rounds of peer review

“Reviewers called for explicit, measurable objectives and a clear chain of logic that explains the rationale for the selected standards, and how the 2015 Threshold Evaluation standards allow TRPA to determine the effectiveness of their programs, and consequent improvement in status”

– 2015 Threshold Evaluation Peer Review Summary

Tahoe Science Advisory Council

Natural Resource Evaluation Systems: Assessment of Best Practices for the Tahoe Regional Planning Agency

Tahoe Science Advisory Council Technical Report | October 2017



A product of the Tahoe Science Advisory Council prepared by:

Alan Heyvaert – *Desert Research Institute; TSAC co-chair*
Christopher Knopp – *Desert Research Institute consultant*
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Casey Schmidt – *Desert Research Institute*

TSAC

TSAC WO-004, ver. 8-d

Structuring Data to Facilitate Management of Threshold Standards

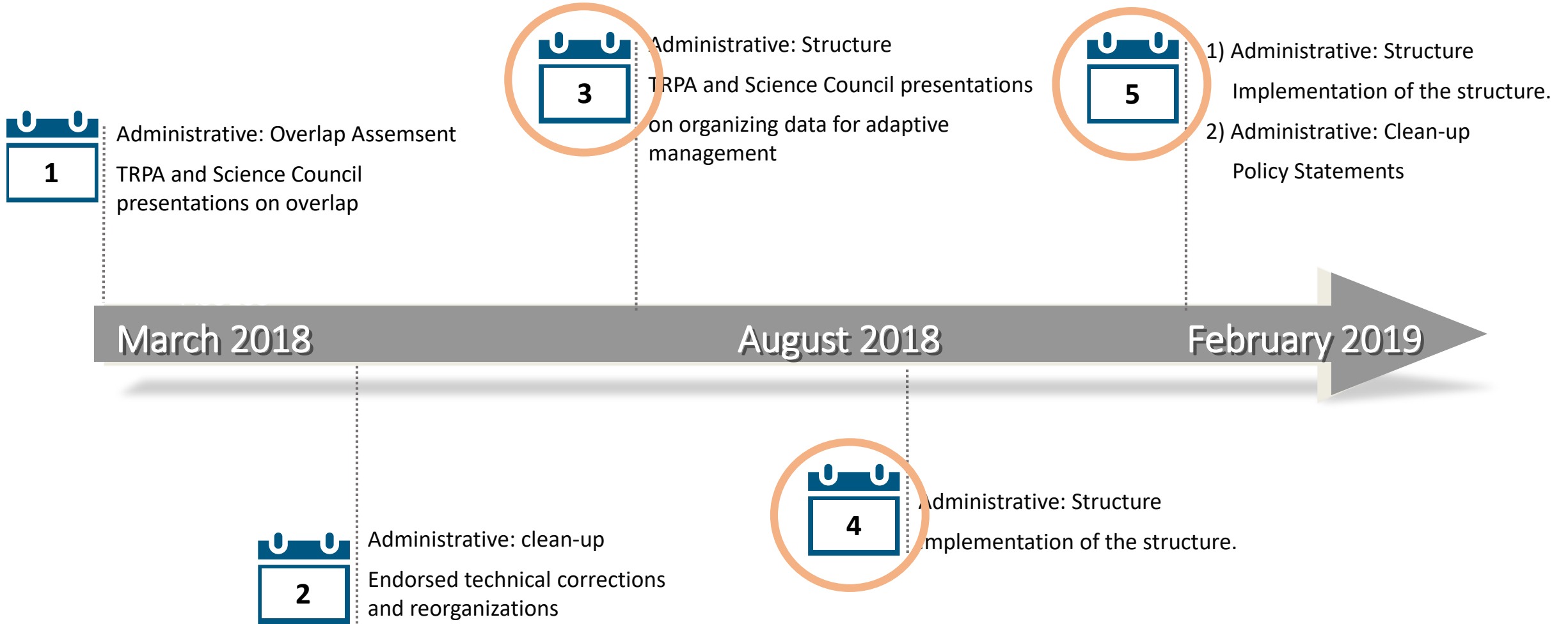
Executive Summary

In a previous study the Tahoe Science Advisory Council (TSAC) reviewed natural resource management systems from around the country and documented their findings in terms of best practices for establishing environmental management goals and for evaluating progress towards those goals (TSAC, 2017). The Council identified four core principles and eight programmatic characteristics that were considered essential for effective natural resource evaluation and management. This document builds on that earlier work by providing guidance on three essential elements needed for structuring information to inform threshold standard development and outcome tracking. These essential elements include 1) the development of a conceptual framework to communicate broad-scale socio-ecological system goals and interactions across threshold categories, 2) elucidation of system functions and causal linkages through conceptual models, and 3) tracking progress toward specified outcomes through indicators selected from causal networks or result chains.

The conceptual framework recommended for Tahoe Basin thresholds management is derived from decades of environmental resource management research based on Pressure-State-Response (PSR) relationships. This has been expanded over time to better represent complex social-ecological systems, where the driving forces from social, demographic and economic developments produce activities that create pressures on environmental states and yield changes or impacts on ecosystem services that ultimately require management responses (DAPSIR: Driver-Activity-Pressure-State-Impact-Response). This basic conceptualization has been used extensively for different types of problems around the world. It has proven to be a flexible and useful framework that can be tailored to the specific requirements of each system. It serves as the foundation for communicating and deliberating on complex environmental issues and for collaborative consideration of potential management responses.

The conceptual model represents our understanding of system function, based on those factors represented within the conceptual framework. It condenses a universe of potentially relevant environmental factors and interactions into a set of diagrams and associated narratives that identify and organize the key attributes of these complex systems into a simplified representation of system structure and dynamics. It shows where management responses can provide benefits by maintaining or restoring desired features or ecosystem services (as benefits humans obtain from properly functioning ecosystems). The conceptual model also indicates where assumptions or uncertainties are present that may require additional investigation, often conducted within an adaptive management system to inform future decisions.

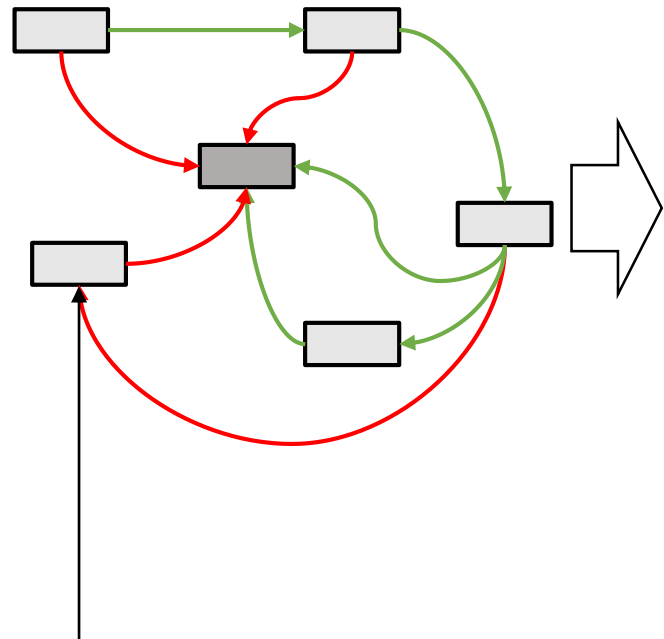
Process – Working Group Meetings



Science-Based Adaptive Management Structure

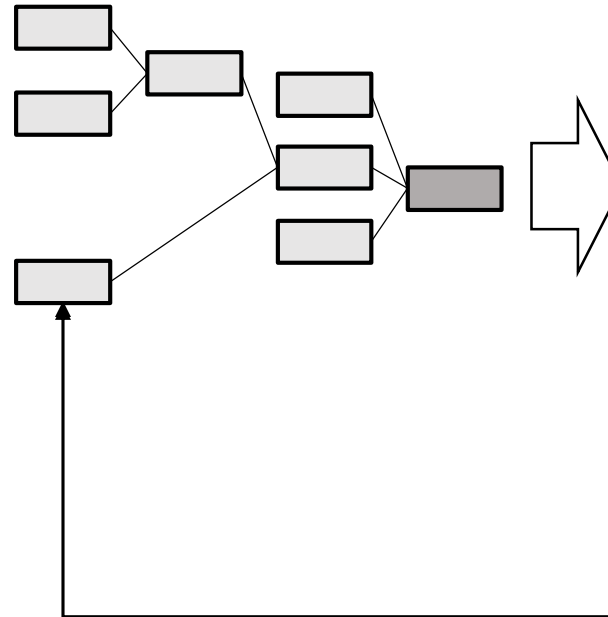
Conceptual Model

Scientific understanding of the processes and drivers that influence the state of the system (Science Groups)



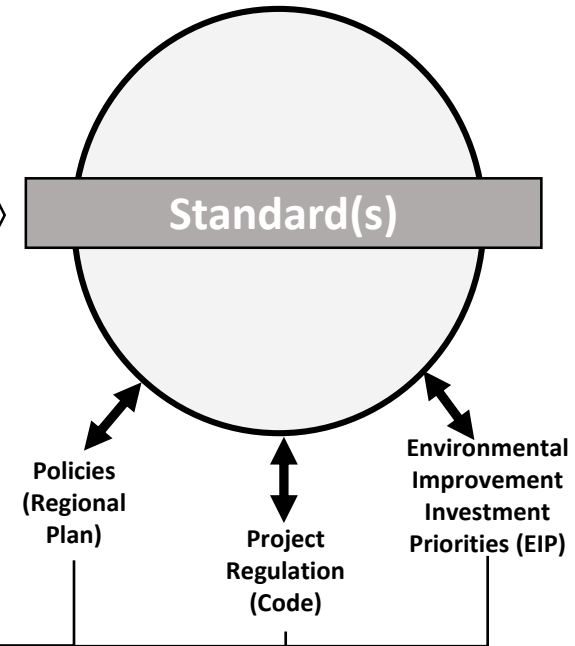
Results Chains

Explanation of management actions and their expected influence on the processes and drivers of the system, and ultimately the desired outcome (Policy Groups)



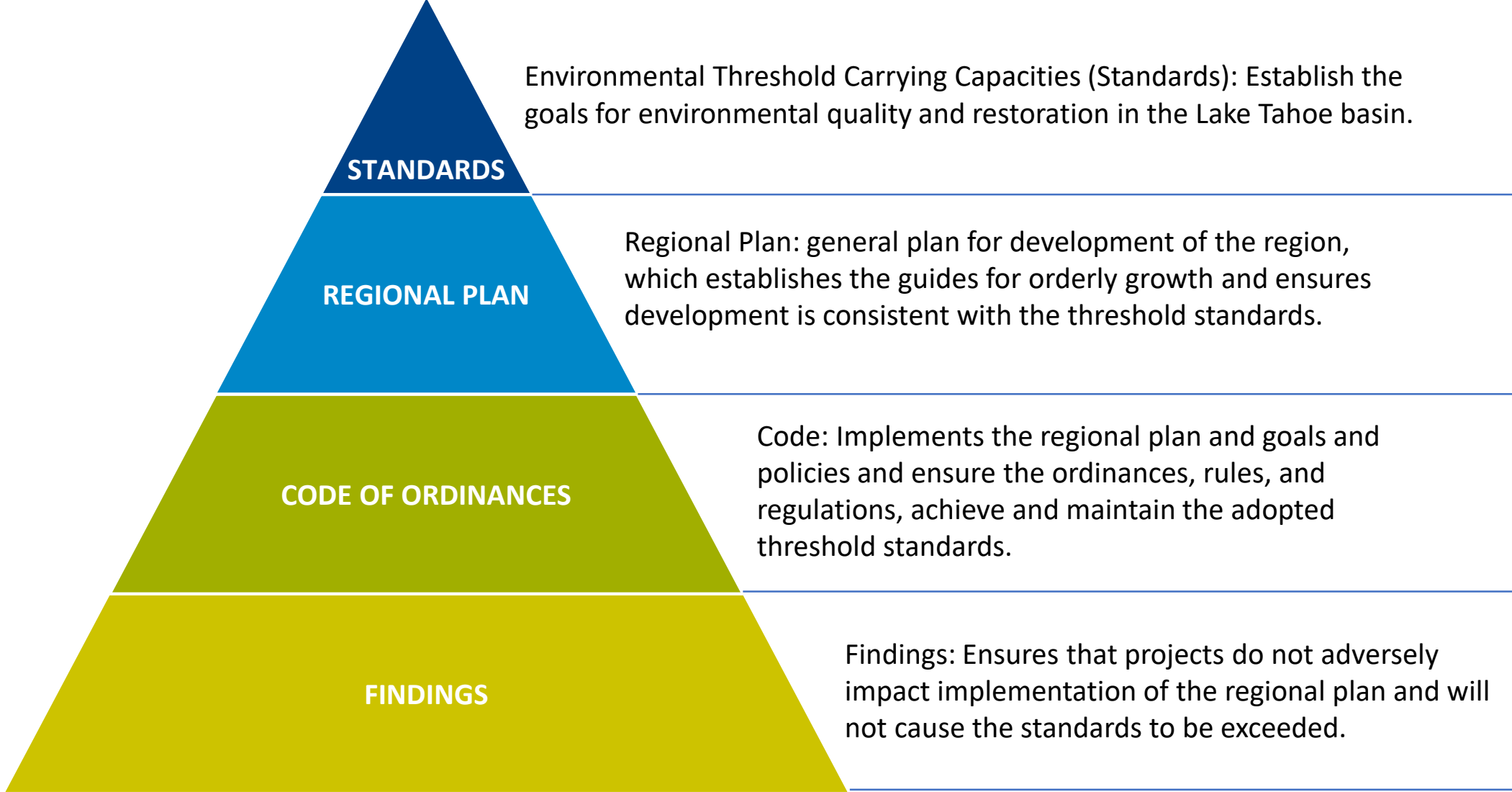
Management Actions

Management of system to achieve desired outcomes through standards expressed in policy, regulations, and investment priorities (Stakeholders)



Monitoring, Evaluation, and Learning

Bi-State Compact



RESOLUTION NO. 82-11

RESOLUTION OF THE GOVERNING BODY OF THE TAHOE REGIONAL PLANNING AGENCY ADOPTING ENVIRONMENTAL THRESHOLD CARRYING CAPACITIES FOR THE LAKE TAHOE REGION



WHEREAS, the Governing Body of the Tahoe Regional Planning Agency ("TRPA") finds:

1. On December 19, 1980 the Tahoe Regional Planning Compact ("Compact") was amended, requiring, among other things, that the TRPA adopt Environmental Threshold Carrying Capacities for the Lake Tahoe Region. The Compact further requires that, within one (1) year after the adoption of the Environmental Threshold Carrying Capacities TRPA shall amend its regional plan so that, at a minimum, the plan and all of its elements, as implemented through Agency ordinances, rules and regulations, achieves and maintains the adopted Environmental Threshold Carrying Capacities.

2. The Compact finds, among other things, that: (a) the waters of Lake Tahoe and other resources of the Lake Tahoe Region are threatened with deterioration or degeneration; (b) said region exhibits unique environmental and ecological values; (c) said region is experiencing problems of resource use and deficiencies of environmental control; (d) increasing urbanization is threatening the ecological values of said region; (e) maintenance of the social and economic health of the region depends on maintaining the significant scenic, recreational, educational, scientific, natural and public health values provided by said region; (f) there is a public interest in protecting, preserving and enhancing said values for the residents of and visitors to said region; (g) in order to preserve the scenic beauty and outdoor recreational opportunities of said region, there is a need to insure an equilibrium between said region's natural endowment and its man-made environment; and (h) it is imperative that there be established a TRPA with the powers, among others, to establish Environmental Threshold Carrying Capacities and to adopt and enforce a regional plan and implementing ordinances which will achieve and maintain such capacities while providing opportunities for orderly growth and development consistent therewith.


3. The Compact defines "environmental threshold carrying capacity" as "an environmental standard 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."

4. Although not required to do so by the Compact, the Governing Body and Advisory Planning Commission of the TRPA, prior to the adoption of this resolution, conducted duly-noticed public hearings, at which hearings considerable oral testimony and documentary evidence were received and considered by the Governing Body and Advisory Planning Commission. Evidence in the record of said hearings, which evidence is hereby determined substantial, established that each of the Environmental Threshold Carrying Capacities adopted by this resolution is necessary to maintain significant scenic, recreational, educational, scientific or natural value of the Lake Tahoe region or to maintain public health and safety within the region.

REGIONAL PLAN

TAHOE REGIONAL PLANNING AGENCY || *lake tahoe*



Recommended Structure



THRESHOLD STANDARDS AND REGIONAL PLAN

TAHOE REGIONAL PLANNING AGENCY

lake tahoe



Resolution 82-11



Compact content (e.g. F1, F2)

Compact definitions, jurisdiction



Process related (e.g. F4, F5,)

Public hearings, study report, EIS



Thresholds related (e.g. F3, F9)

Don't need targets, policy statements, review, monitoring



Pre-Regional Plan (e.g. F12, R7)

Standards vs. Plan, Cost share

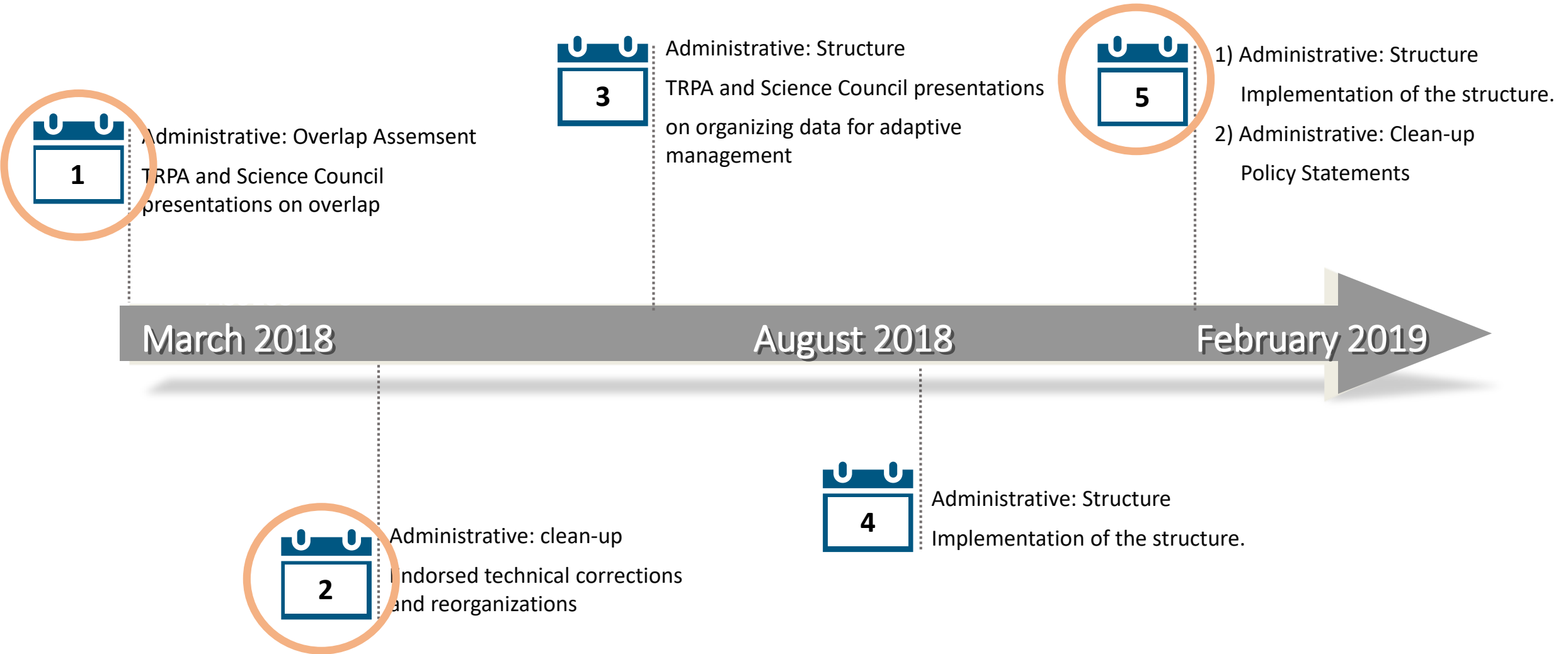


Qualification (e.g. R1, R2)

Not all under our control, long term goals, exceeded for sometime

Policy Statements Recommendation

Process – Working Group Meetings



Standard Assessment



VERSION 1.7
MAY 8, 2017

THRESHOLD ASSESSMENT METHODOLOGY
THRESHOLD UPDATE INITIATIVE

TAHOE REGIONAL PLANNING AGENCY

Name of Standard	Threshold Category	Adopted TRPA Threshold Standard (TRPA Resolution 82-11)	Focus	Causal Basis	Overlap	Specific	M
Highest 8-Hour Average Concentration of Carbon Monoxide	Air Quality	Maintain carbon monoxide concentrations at or below 6 parts per million (7 mg/m ³) averaged over 8 hours.	Outcome	5	No	5	
Highest 1-Hour Concentration of Carbon Monoxide	Air Quality	No Adopted Standard - State standard	Outcome	5	No	5	
Average Daily Winter Traffic Volume, Presidents' Weekend	Air Quality	Reduce traffic volumes on the U.S. 50 Corridor by 7 percent during the winter from the 1981 base year between 4:00 p.m. and 12:00 midnight, provided that those traffic volumes shall be amended as necessary to meet the respective state standards.	Intermediate Result	4	No	5	
Highest 1-Hour Average Concentration of Ozone	Air Quality	Maintain ozone concentrations at or below 0.08 parts per million averaged over 1 hour.	Outcome	5	No	5	
Highest 8-Hour Average Concentration of Ozone	Air Quality	No Adopted Standard - State standard	Outcome	5	No	5	
Oxides Of Nitrogen Emissions	Air Quality	Maintain oxides of nitrogen (NOx) emissions at or below the 1981 level.	Intermediate Result	4	Yes	4	
3-Year Average of the 4th Highest 8-	Air Quality	Federal: The 3-year average of the 4th-highest daily maximum	Outcome	5	No	5	

43 Standards identified as overlapping in threshold standard assessment

Threshold Standard Types



Policy Statement Examples

Community Design

It shall be the policy of the TRPA Governing Body in development of the Regional Plan, in cooperation with local jurisdictions, to insure the height, bulk, texture, form, materials, colors, lighting, signing and other design elements of new, remodeled and redeveloped buildings be compatible with the natural, scenic, and recreational values of the region.

Lahontan Cutthroat Trout

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.

Water Quality

These numeric threshold standards for Pelagic Lake Tahoe are currently being exceeded and will likely continue to be exceeded until full implementation of the pollutant loading reductions prescribed by the Lake Tahoe Total Maximum Daily Load program and implemented by the State of California and Nevada.

Tahoe Science Advisory Council

“ The corrosive influence of policy statements as standards is in the vagueness of those statements. The statements more often describe broad and aspirational goals than they do measurable and achievable standards. The negative impact of policy statements as standards can be resolved by separating the overarching goals from the threshold standards.”

Background on Policy Statements

Resolution 82-11:

*In certain instances it was not reasonably possible or feasible to set forth Environmental Threshold Carrying Capacities as numerical standards, requiring in such instances that standards be set forth as management standards. The Governing Body further finds that the inability to set forth a numerical standard for a particular Environmental Threshold Carrying Capacity does not render such Environmental Threshold Carrying Capacity improper or inappropriate for adoption under the Compact. **In association with adoption of Environmental Threshold Carrying Capacities, the Governing Body is adopting policy statements that will provide specific direction for Agency staff in development of the regional plan. It is the intent of the Governing Body that amendment or repeal of the Policy Statements shall be subject to the dual-majority voting provisions of Article III (g)(1) of the Compact.***

Tahoe Science Advisory Council

Recommendation to address Policy Statements

First, the standards could be specifically identified as broad statements of a goal provided for guidance or context only, with no enforceability.

Second, the ambiguity could be resolved by adding specific details to the standard that reformulate it to something that is quantifiable and measurable, and that can be objectively evaluated.

Summary of Recommendations

ID	Name of Standard	Category	Recommendation
WQ42	Recognition of Threshold Standard Exceedance	Water Quality	Remove as a threshold standard.
VP12	Appropriate Management Practices	Vegetation	Remove as a threshold standard.
AQ15	Odor - Reduce Diesel Engine Fumes	Air Quality	Remove as a threshold standard.
SR10	Built Environment (Community Design)	Scenic Resources	Temporarily retain.
F6	Lahontan Cutthroat Trout	Fisheries	Remove as a threshold standard.
N25	Transportation Corridors	Noise	Remove as a threshold standard.
F5	Divert Stream Intakes to Lake Sources	Fisheries	Remove as a threshold standard.
R1	Quality of Recreation Experience & Access To Recreational Opportunities	Recreation	Temporarily retain.
R2	Fair Share Distribution of Recreation Capacity	Recreation	Temporarily retain.

Noise

Policy Statement

It shall be the policy of the TRPA Governing Body in development of the Regional Plan to define, locate, and establish CNEL levels for transportation corridors.

Regional Plan

CUMULATIVE NOISE EVENTS

POLICY STATEMENT: It shall be a policy of the TRPA Governing Board in the development of the Regional Plan to define, locate, and establish CNEL levels for transportation corridors.

TRANSPORTATION CORRIDORS¹

Highway 50	65 ²
Highways 89, 207, 28, 267 and 431	55 ²
South Lake Tahoe Airport	60 ³

Code of Ordinances

68.7.4. Highways and Transportation Corridors - Projects within transportation corridors shall include design criteria to help reduce the transmission of noise from the transportation corridor.

68.8.3. Highways and Transportation Corridors

For project applications submitted after January 1, 2015, if the project will result in the alteration or improvement of segments of State Routes 89, 207, 28, 267, or 431, or U.S. Highway 50 that are not in attainment of adopted transportation corridor CNEL standards the project applicant shall develop and implement design features or other mitigations to achieve the adopted CNEL standards. Noise mitigation features may include but are not limited to improvements to support alternative modes of transportation, noise reducing pavement, noise mitigating landscaping, and/or the reduction or consolidation of curb cuts.

Motions

- 1) A motion to recommend approval of the required findings (Attachment E) including a finding of no significant effect for (1) the collocation of threshold standards and the Regional Plan, (2) amendments to the TRPA Regional Plan Goals and Policies, and (3) amendments to the threshold standards.
- 2) A motion to recommend approval and adoption of Ordinance 19-__ (Attachment F) superseding Resolution 82-11, as amended, and Ordinance 87-9, as amended, for the adoption of (1) the collocated threshold standards and Regional Plan, (2) amendments to the TRPA Regional Plan Goals and Policies, and (3) amendments to the threshold standards as shown in Attachment A.

Thank you