

Tahoe Basin Climate Change Planning Framework

US ACE Climate Change Project

Date: 07/06/2010



The Tahoe Basin Climate Change Adaptation Strategy project was funded by the U.S. Army Corps of Engineers and products were developed by Environmental Incentives, LLC and 2NDNATURE, LLC.

A Tahoe Basin Climate Change Project Working Group (Working Group) was established to provide guidance and feedback on the products developed through this project. Agencies represented in the Working Group include California Tahoe Conservancy, Lahontan Regional Water Quality Control Board, Lake Tahoe Basin Management Unit, Nevada Division of Environmental Protection, Tahoe Metropolitan Planning Organization, Tahoe Regional Planning Agency, Tahoe Science Consortium, Tahoe Transportation District, U.S. Environmental Protection Agency and U.S. Army Corp of Engineers.

Climate Change Terms

The first use of a term in this report that is in the glossary is italicized and the definition is in the Key Terms text box on the right side of the page. Refer to the glossary in Appendix II for a complete list of definitions.

CONTENTS

Climate Planning Framework Introduction	1
Purpose & Scope	2
Objectives	3
Development Process	3
Climate Planning Framework Overview	5
Develop & Deploy	5
Ongoing Implementation, Planning & Reporting	5
Products	6
Roles & Responsibilities	8
Items to Develop & Deploy the Climate Planning Framework	10
Phase 1 – Create Managing Body, Define Purpose & Gain Support	11
Item 1. Create Climate Collaborative	11
Item 2. Define Decision-Making Process	11
Item 3. Define Mission & Guiding Principles	11
Item 4. Gain Support of Participating Implementing Entities	12
Phase 2 – Define Roles, Communication Structure & Operations	12
Item 5. Identify Climate Collaborative Coordinator	12
Item 6. Identify Climate Champion	12
Item 7. Select Planning Focus Areas	13
Item 8. Define Ongoing Implementation, Planning & Reporting Process	13
Phase 3 – Build Out Products & Supporting Tools	15
Item 9. Define Initial Goals, Objectives & Strategies	15
Item 10. Develop Public Outreach Plan	16
Item 11. Develop Initial Tahoe Basin Sustainability Action Plan	17
Item 12. Commission GHG Emissions Inventory	18
Item 13. Set GHG Emissions Reduction Targets	18
Item 14. Expand Climate Science Synthesis beyond Aquatic Resources	18
Item 15. Develop Sustainability Action Plan Evaluation Metrics	19
Item 16. Develop Local Climate Monitoring Plan	20
Item 17. Develop Basin-Wide CEQA & NEPA Guidelines	20
Item 18. Develop Decision-Support Tools	21
Item 19. Develop Training Modules	21
Initiating Ongoing Implementation, Planning and Reporting Process	22
Appendix I: Operational Description of Ongoing Implementation, Planning and Reporting Process	23
Appendix II: Climate Change Term Glossary	34
Appendix III: Develop & Deploy Item Tracking	36
Appendix IV: Climate Planning Framework Integration with Local Planning Process Matrix	37

Climate Planning Framework Introduction

Climate monitoring has indicated mean temperatures are increasing, snowpack is decreasing, rainfall intensity is increasing and ranges of plants and animals are shifting. *Climate change* models project continued increases in temperatures which are expected to result in increased *risk* of drought, flooding, forest fires and other *impacts* to natural, built and human *systems*. The Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report (2007) states that *adaptation* "will be necessary to address impacts resulting from the warming which is already unavoidable due to past emissions." It is therefore imperative that communities immediately invest in understanding how to improve the resiliency of their systems to climate change.

As unavoidable impacts from past emissions are addressed, it is also critical that global greenhouse gas (GHG) emissions are reduced from current levels to minimize future climate change impacts to natural, built and human systems. Global reductions will not be realized unless communities throughout the world change current operations and begin reducing GHG emissions immediately.

Local environmental and human system resiliency and GHG emissions are impacted by policies and actions of a number of actors in the community. By working collaboratively, agencies and the community can integrate climate adaptation and *mitigation* into their existing decision-making, investment and planning processes. Further, targeted climate change research is needed to better understand how local systems have been and will be impacted by climate change. This requires resource managers and the scientific community to work together so that research and monitoring investments are targeted and results synthesized and directly applied to address priority management questions. Science needs to inform management with priorities that will inherently change as more communities undertake adaptation and mitigation plans, which currently are very limited throughout the world.

U.S. federal and state legislation creates legal mandates and potential funding sources for entities in the Tahoe Basin to increase the sustainability of the region. Table 1 contains a list of U.S. federal and state legislation driving climate change activities in the Tahoe Basin as of June 10, 2010. Table 1 should be updated as new federal and state legislation is passed into law.

Key Terms

Adaptation: Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which minimizes harm or exploits beneficial opportunities.

Climate Change: Any long-term change in average climate conditions in a place or region, weather due to natural causes or as a result of human activity.

Impacts: The detrimental and beneficial effects of climate change on the structure or function of a system.

Mitigation: A human intervention to reduce the sources or improve the uptake (sinks) of greenhouse gases.

Resiliency: The ability of a system to absorb some amount of change, including shocks from extreme events, and recover from them to be able to function and provide essential services and amenities that it has evolved or been designed to provide.

Risk: The possibility of interaction of physically defined hazards with the exposed systems. Risk is the likelihood of an event multiplied by its consequences.

Systems: The built, natural and human networks that provide important services or activities.

BILL	TITLE	DESCRIPTION	PASSAGE DATE
AB 32 (Nunez)	Global Warming Solutions Act	The California Air Resources Board (ARB) is responsible for monitoring and reducing GHG emissions to 1990 levels by 2020	August 2006
SB 97 (Dutton)	CEQA Guidelines for GHGs	California state's Office of Planning and Research will develop CEQA guidelines for mitigating GHG emissions or the effects of GHG emissions, which the Natural Resources Agency will certify and adopt the guidelines	August 2007
SB 375 (Steinberg)	Redesigning Communities to Reduce Greenhouse Gases	The 18 MPOs in California will prepare a "sustainable communities strategy" (SCS) to reduce the amount of vehicle miles traveled (VMT) and attain ARB's targets through integration of land use planning and transportation planning efforts	September 2008
SB 732 (Steinberg)	Strategic Growth Council	California creates the Strategic Growth Council (SGC) to coordinate the activities and funding programs of state agencies, including allocation of Proposition 84 grant funding, for encouraging the planning and development of sustainable communities	September 2008
SB 575 (Steinberg)	Local Planning: Housing Element	Clarifies language from SB 375 on the role of Metropolitan Planning Organization's (MPO) in developing the SCS and specifically recognizes that the Tahoe MPO use the Regional Plan for the Tahoe Basin as the SCS	October 2009

Table 1: U.S. federal and state legislation driving climate change activities in the Tahoe Basin

PURPOSE & SCOPE

The Tahoe Basin Climate Change Planning Framework (Climate Planning Framework) is a consistent but flexible means to understand and respond to climate change challenges and opportunities. While there is no single planning approach appropriate for all agencies and community stakeholders, using a consistent framework for the collaborative development and periodic updating of a basin-wide *sustainability* action plan can facilitate coordination across agencies, leverage common tools and methods, and enable prioritization and collaboration of effort and funds.

The Climate Planning Framework defines a process to assist the federal, state and local Tahoe Basin agencies and communities to 1) develop a collaborative basin-wide sustainability action plan that identifies climate *vulnerabilities* and opportunities to build system resiliency and reduce GHG emissions, and 2) guide the annual reporting of progress and updating of the sustainability action plan.

The Climate Planning Framework encompasses both climate change adaptation and mitigation issues as they are both critical to the future well-being of the environmental, social and economic composition of the Tahoe Basin. Additionally, climate change adaptation and mitigation planning processes are very similar and decision-makers are more often than not the same individuals and entities for both mitigation and adaptation planning.

The Climate Planning Framework contains guidance for incorporating climate change adaptation and mitigation into the Sustainability Action Plan, but it does not provide guidance for incorporating social,

Key Terms

Sustainability: Improving the quality of human life while living within the carrying capacity of supporting ecosystems.

Vulnerability: The susceptibility of a system to harm from climate change. Vulnerability is a function of a system's sensitivity to climate and the system's adaptive capacity. Sensitivity + adaptive capacity = vulnerability

economic and other non-climate change environmental issues. The ongoing process developed by the Climate Planning Framework to guide the annual reporting of progress and updating of the sustainability action plan is a robust process that will be adjusted by the Climate Collaborative, the proposed managing body described in the develop and deploy steps below, to also support these additional issues.

OBJECTIVES

The Climate Planning Framework helps Tahoe Basin agencies and stakeholders to identify, balance and achieve both climate change adaptation and climate change mitigation priorities. Further, the Climate Planning Framework is explicitly designed to enable and assess:

Collaboration

- Develop unified goals and objectives
- Increase coordination and collaboration among individual agency efforts
- Increase transparency and trust within the community and with external funders
- Identify common priority adaptation and mitigation actions including research and monitoring needs

Adaptive Management

- Build agency skills and capacity to address climate change related issues
- Provide performance feedback to implementing entities to identify the success of implemented actions at achieving project goals and inform future investment decisions
- Define the function of *decision-support tools* and determine when they should be used
- Improve effectiveness of achieving basin-wide mitigation and adaptation goals and objectives

Science

- Assess the substantial risks, vulnerabilities and opportunities posed by climate change
- Continually reduce *uncertainty* to improve future decisions
- Ensure that the most current science is synthesized and presented in a format that is usable by agency management to inform decisions

Key Terms

Decision-support Tools:

Information systems that improve decision efficiency and effectiveness.

Uncertainty: An expression of the degree to which a value is unknown.

DEVELOPMENT PROCESS

The ICLEI-Local Governments for Sustainability (ICLEI) adaptation and mitigation planning processes - Climate Resilient Community Program and Cities for Climate Protection - are the basis for many of the concepts recommended in the Climate Planning Framework. The ICLEI programs are well defined, based on quality planning processes such as New York City's PLAN NYC, and established among local governments in the United States and abroad. A number of additional processes were researched to inform the development of the Climate Planning Framework, including the California Climate Adaptation Strategy planning and implementation process, the U.S. Forest Service climate change planning process and the United Nations Development Programme Adaptation Policy Frameworks.

Existing planning processes in the Tahoe Basin were researched to ensure the Climate Planning Framework will easily integrate with and complement these processes. Interviews were completed with key program managers for planning processes such as the Environmental Improvement Plan (EIP) planning process, the Southern Nevada Public Land Management Act (SNPLMA) science theme development process, the California Tahoe Conservancy (CTC) project development process, the U.S.

Forest Service planning process and the City of South Lake Tahoe Sustainability Commission work plan development process. A Climate Change Working Group (Working Group) with members from agencies actively engaged in climate change planning and implementation activities was consulted during the development of the Climate Planning Framework to ensure consistency with ongoing climate and agency planning and implementation efforts.

Climate Planning Framework Overview

The Climate Planning Framework guides the Climate Collaborative through development and ongoing implementation of the Tahoe Basin Sustainability Action Plan (Sustainability Action Plan). The Climate Planning Framework is explicitly designed to promote multi-stakeholder collaboration within the Tahoe Basin because climate change adaptation and mitigation needs often overlap management responsibilities of many different entities. The Climate Planning Framework enables individual implementing entities to improve the climate change resiliency of the Tahoe Basin and reduce local GHG emissions by collaboratively developing basin-wide climate goals and objectives, sharing information, and aligning strategies and research needs.

The Climate Planning Framework consists of two primary components. The first is a one-time process to develop and deploy the organizational infrastructure to support the ongoing implementation, planning and reporting process, and produce the first Sustainability Action Plan. The second is the ongoing implementation, planning and reporting process that implements and updates the Sustainability Action Plan annually.

DEVELOP & DEPLOY

The development and deployment of the Climate Planning Framework is a one-time process and is led by the Climate Collaborative and its members. The items to develop and deploy the framework guide the Climate Collaborative through an integrative process that produces the initial Sustainability Action Plan, develops the first version of the supporting products and tools, and defines the ongoing implementation, planning and reporting process.

The individual tasks necessary for developing and deploying the Climate Planning Framework are described in the Items to Develop and Deploy the Climate Planning Framework section of this document. These items are expected to be executed during the first one to two years of the Climate Planning Framework implementation.

ONGOING IMPLEMENTATION, PLANNING & REPORTING

The ongoing implementation, planning and reporting process is an annual process that implements and produces updates of the Sustainability Action Plan. Additionally, updates are produced to the other products that inform the decision-making process of the Climate Collaborative and provide guidance to implementing entities for making coordinated implementation decisions. Descriptions of these products and the roles and responsibilities of the three primary participants that manage and implement the Climate Planning Framework are described below.

A complete outline of the elements of the ongoing implementation, planning and reporting process is provided in Appendix I. This outline is a suggested starting point for the Climate Collaborative when defining the operational details of each element of the ongoing implementation, planning and reporting process. The process is organized in a continual improvement and adaptive management – Plan-Do-Check-Act – structure. Figure 1 summarizes the roles of the two main groups of participants - the Climate Collaborative and the implementing entities - for each of the four phases of the process. The group labeled “implementing entities” includes organizations that implement projects (e.g. U.S. Forest Service, redevelopment organizations, and transportation organizations), develop policy (e.g. Tahoe Regional Planning Agency), and execute research and monitoring (e.g. Tahoe Environmental Research Center).

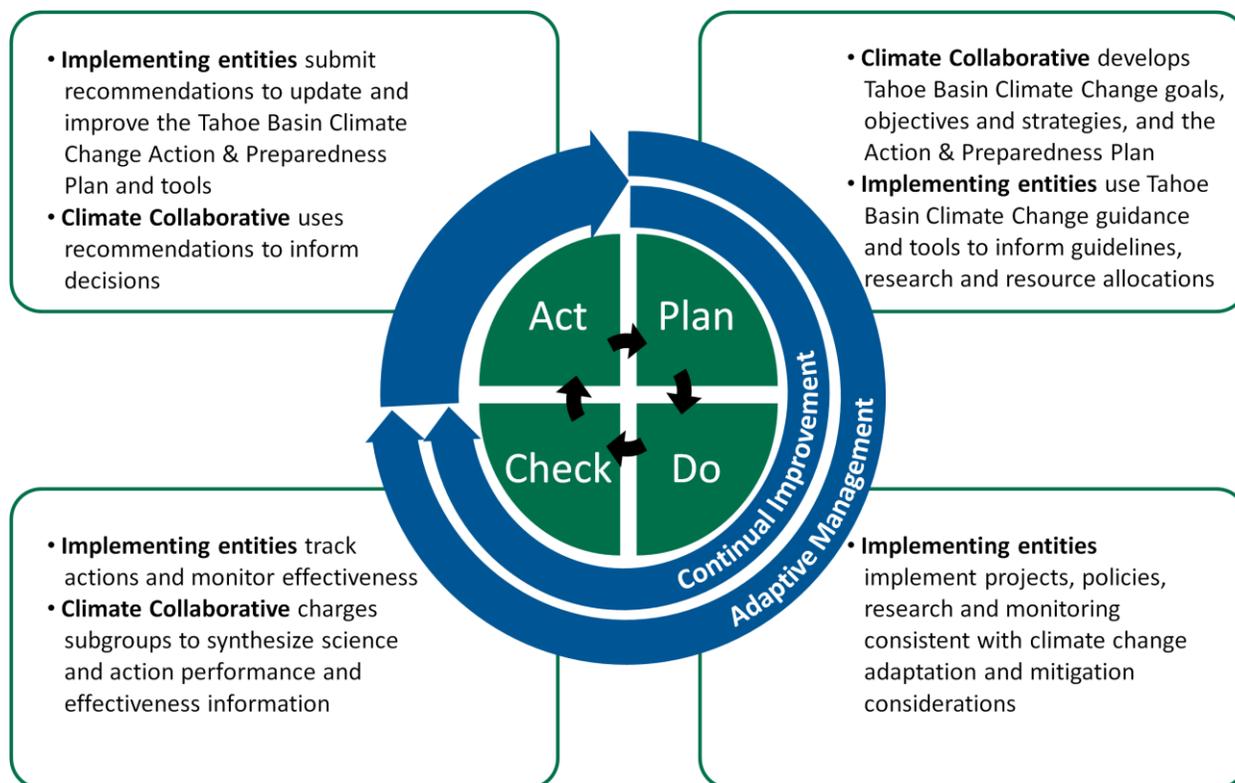


Figure 1: Summary of the ongoing implementation, planning and reporting process participant roles by process phase

Products

The Climate Planning Framework guides the development of a set of products that ultimately drive continual improvement of action effectiveness, build trust within the community, support public outreach, and provide feedback to external funders. The products are updated annually using data and reports primarily produced through existing processes. Each product is designed for different audiences and uses, and developed by subgroups commissioned by the Climate Collaborative.

Figure 2 presents the products produced by the Climate Planning Framework and illustrates the information flow through the products. Each product is described in more detail in the text below. The blue boxes represent information sources:

Implementation performance reports and data include the EIP Capital Program Assessment Report and other implementation data produced by the EIP Chief and project implementers respectively, through reporting of action implementation accomplishments (e.g. EIP performance measure reporting; GHG emission reductions, implementation of actions that align with priority adaptation strategies). Action performance informs future priorities and funding needs.

Effectiveness monitoring studies & data are produced by investigators who conduct intensive studies to determine the actual results from implemented actions that align with adaptation or GHG emission reduction strategies. The actual results are compared to the expected results documented through implementation reporting, specific stated goals and objectives of the action. Efficient strategy and action prioritization depend on effectiveness monitoring.

Status & trend & climate monitoring reports & data include the Status and Trends Synthesis of Findings Report produced by the Tahoe Regional Planning Agency (TRPA) Science Program Manager for Status & Trend Monitoring and other reports and climate monitoring data produced

by investigators to show how systems are changing both in response to climate change and other influences. Results from status and trend monitoring related to TRPA Thresholds and other goals inform the overall context for need for management action.

Research reports include published research and ongoing research status reports produced by scientists who study system *sensitivity*, *adaptive capacity* and risks related to the impacts of climate change and action effectiveness related to improving system adaptive capacity. Developing local climate research is critical to inform ongoing investment in effective actions.

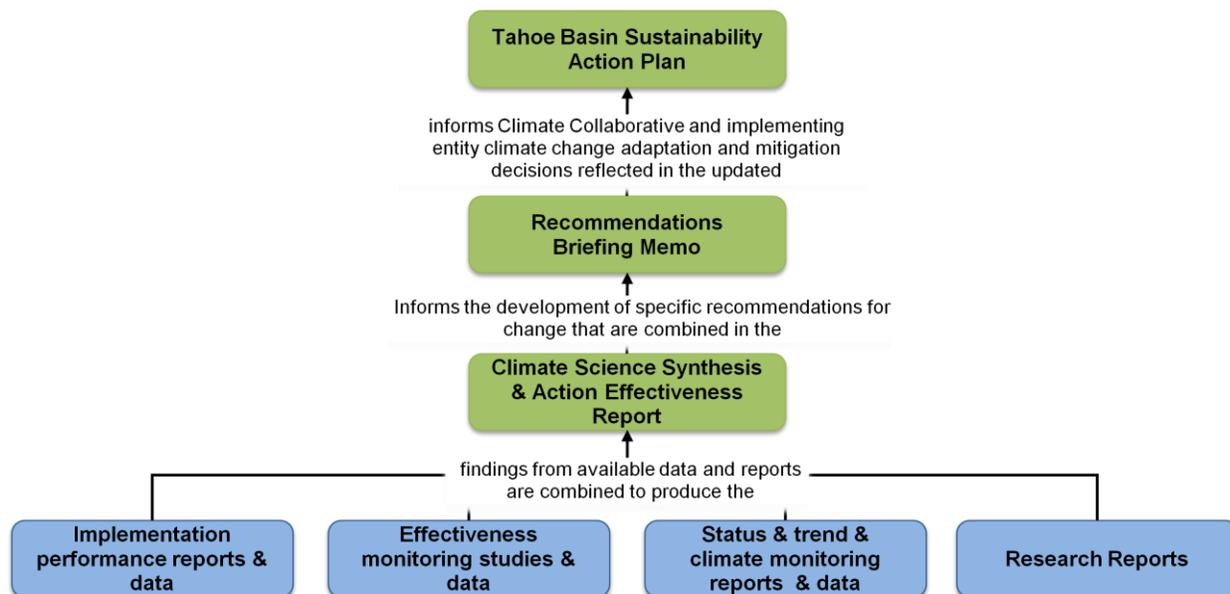


Figure 2: Climate Planning Framework products and supporting information sources

[Climate Science Synthesis & Action Effectiveness Report](#)

This report is the nexus of the information learned from implementing projects and policies, and performing research and monitoring. This report synthesizes the relevant information related to: the efficiency of actions implemented, operational constraints that limit the ability to implement certain types of actions, how project-specific actual outcomes compare to planned outcomes, and new scientific research and monitoring findings. The report is designed for 1) implementing entities to inform action prioritization and implementation decisions, and 2) the Climate Collaborative to inform adjustments to basin-wide goals, objectives and strategies.

[Recommendations Briefing Memo](#)

This memo efficiently provides the Climate Collaborative with specific recommendations to consider in 1) the updated Sustainability Action Plan, and 2) the ongoing implementation, planning and reporting process definition and supporting infrastructure elements. Agency staff and engaged stakeholders submit recommendations for adjusting the report and improving the implementation, planning and reporting process. The recommendations are evaluated for redundancy and efficacy, and then packaged with recommendations extracted from the Climate Science Synthesis & Action Effectiveness Report. The final memo compiles

Key Terms

Adaptive Capacity: The ability of a system to respond to climate change (including variability and extremes), to moderate potential damages, to take advantage of opportunities, and to cope with the consequences. Sensitivity + adaptive capacity = Vulnerability

Sensitivity: The degree to which a system is affected, either beneficially or adversely, by climate-related stimuli. Sensitivity + adaptive capacity = vulnerability

recommendations into sets of changes for consent, discussion and adoption, consideration and rejection by the Climate Collaborative.

Tahoe Basin Sustainability Action Plan

The Sustainability Action Plan summarizes Tahoe Basin climate change joint goals and objectives, results from implemented actions, near-term plans, future funding needs, and other relevant information as available. The goals of this report are to increase transparency for and build trust among stakeholders, motivate action by local communities, and to provide information and feedback to funders of climate change actions. The expectation to regularly show results in this report drives the focus of implementing entities on integrating climate adaptation and mitigation into their planning processes and implementation decisions.

Roles & Responsibilities

The implementation of the Climate Planning Framework is driven by the Climate Collaborative and requires collaboration among many entities. Each element of the ongoing implementation, planning and reporting process is primarily owned by either the Climate Collaborative or the many individual implementing entities.

Climate Collaborative

The Climate Collaborative addresses the need for an all-encompassing, bi-state, multi-agency and private stakeholder group within the Tahoe Basin for developing and implementing a coordinated basin-wide Sustainability Action Plan. The Climate Collaborative oversees the items to develop and deploy the Climate Planning Framework, as well as specific elements of the ongoing implementation, planning and reporting process.

Subgroups Convened by the Climate Collaborative

The Climate Collaborative is responsible for several tasks that require significant effort and unique skill sets. The Climate Collaborative manages these tasks but subgroups are organized or commissioned to develop the draft and final products. Subgroups may be charged with ongoing tasks such as annually evaluating strategies and progress for individual planning focus areas, or one-time tasks such as developing a training module or specific policy statement. Subgroups include a mix of Climate Collaborative members, implementing entity staff, researchers and consultants depending on the task.

Implementing Entities

Significant effort and investment are required to increase the climate resiliency of Tahoe Basin systems and integrate adaptation and mitigation into the existing planning processes. Implementing entities include state and federal agencies, city and county jurisdictions, research groups, interest groups, the business community, private land owners and community members. Implementing entities are provided guidance and tools by the Climate Collaborative and the Climate Planning Framework products to support strategic planning, action development and action prioritization processes.

Figure 3 outlines the roles associated to the three general participants in the Climate Planning Framework. Appendix I contains the roles and responsibilities specific to each element of the ongoing implementation, planning and reporting process.

Climate Planning Framework Participants & Roles

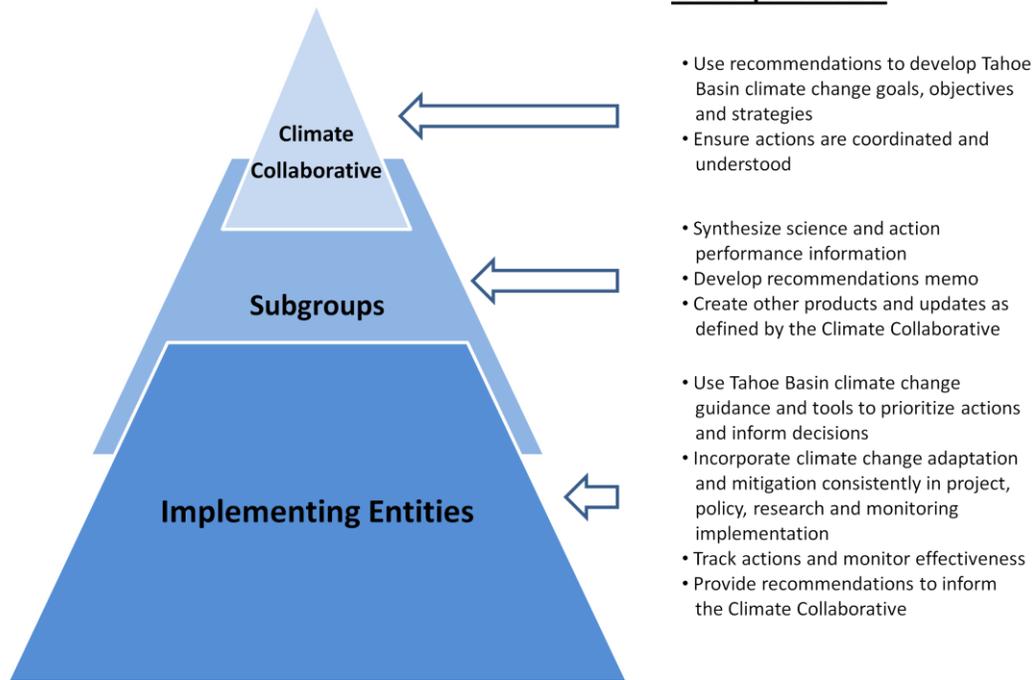


Figure 3: Climate Planning Framework participants and roles

Items to Develop & Deploy the Climate Planning Framework

Who	Climate Collaborative with assistance by Subgroups
What	Develop and deploy the Climate Planning Framework, including supporting products and tools and initial Sustainability Action Plan
When	Estimated mid-2010 through end of 2011

Several one-time items are necessary to develop the Climate Planning Framework and deploy it effectively. These items include creating the Climate Collaborative and selecting *planning focus areas* for organizing GHG emission targets. The products developed through this process, such as the initial Tahoe Basin Sustainability Action Plan, should be defined to only achieve immediate needs so that they can be developed quickly. The ongoing implementation, planning and reporting process will thoroughly define and enhance each product over the first year of its implementation. The items are informed by the established ICLEI adaptation and mitigation planning processes and the specific stakeholder setting in the Tahoe Basin. Table 2 lists each phase, the expected duration to complete the phase, and its component item. The items are listed in a recommended sequence although they do not need to be executed sequentially and several items have begun as of July 2010.

Key Terms

Planning Focus Area: The areas in which an entity manages, plans or makes policy affecting the services and activities associated with build, natural and human systems.

PHASE	DURATION	Item
Phase 1: Create Managing Body, Define Purpose & Gain Support	3 months	1. Create Climate Collaborative
		2. Define Decision-Making Process
		3. Define Mission & Guiding Principles
		4. Gain Support of Participating Implementing Entities
Phase 2: Define Roles, Communication Structure & Operations	6 months	5. Identify Climate Collaborative Coordinator
		6. Identify Climate Champion
		7. Select Planning Focus Areas
		8. Define Ongoing Implementation, Planning & Reporting Process
Phase 3: Build Out Products & Supporting Tools	Over first 1 to 2 years of operation	9. Define Initial Goals, Objectives & Strategies
		10. Develop Public Outreach Plan
		11. Develop Initial Tahoe Basin Sustainability Action Plan
		12. Commission GHG Emissions Inventory
		13. Set GHG Emissions Reduction Targets
		14. Expand Climate Science Synthesis beyond Aquatic Resources
		15. Develop Sustainability Action Plan Evaluation Metrics
		16. Develop Local Climate Monitoring Plan
		17. Develop Basin-Wide CEQA & NEPA Guidelines
		18. Develop Decision-Support Tools
		19. Develop Training Modules

Table 2: Phases and items to develop and deploy the Climate Planning Framework

PHASE 1 – CREATE MANAGING BODY, DEFINE PURPOSE & GAIN SUPPORT

Item 1. Create Climate Collaborative

The multi-stakeholder Tahoe Basin Climate Collaborative is responsible for launching and managing the overall implementation of the Climate Planning Framework and implementing specific elements of the ongoing implementation, planning, and reporting process defined in Appendix I. Another key role of the Climate Collaborative is to facilitate development and coordination of actions that overlap and produce benefits for multiple planning areas. Actions that provide co-benefits (benefits to multiple planning areas) may not be selected if only the benefits of a specific planning area are prioritized and coordinating implementations across multiple planning areas can be difficult without an advocate connected to each planning area.

The Climate Collaborative should include representatives of the primary federal and state agencies, local jurisdictions, business community, academic community, community residents, and environmental and other interest groups within the Tahoe Basin. The exact structure, size and membership should be strategically defined to ensure the group is functional. There should be fewer than 20 members and groups not represented should be considered for participation in subgroups.

The Tahoe Interagency Executive Steering Committee (TIE-SC) contains the executives of the primary agencies in the Tahoe Basin and could function as the founding body of the Climate Collaborative and approve the Climate Collaborative structure, size and membership.

Item 2. Define Decision-Making Process

In order for the Climate Collaborative to work efficiently and effectively, the individual roles of the Climate Collaborative membership and the decision-making process of the Climate Collaborative should be defined and approved by the Climate Collaborative members. A mechanism such as a charter should be used to govern the Climate Collaborative and get all members to agree to and support the defined roles and decision-making process.

Item 3. Define Mission & Guiding Principles

The Sustainability Action Plan mission and guiding principles guide all future decisions related to the design and implementation of the Climate Planning Framework and actions, irrespective of changes to specific goals, strategies, type of work, or the Climate Collaborative membership.

A mission statement clearly states the purpose of climate change planning in the Tahoe Basin. An example mission statement is: The mission of the Tahoe Basin Climate Change Planning Framework is to collaboratively increase the resiliency of the built, natural and human systems and mitigate greenhouse gas emissions in the Tahoe Basin to the greatest extent possible, while responsibly balancing other socio-economic, environmental and political needs.

Two recommended references for developing guiding principles are the guiding principles in the City of South Lake Tahoe Sustainability Plan and the guidance for developing guiding principles in Chapter 10

of the ICLEI Climate Resilient Community Program Guidebook¹. ICLEI recommends the following five guiding principles for adaptation frameworks:

- Increase public awareness of climate change and its projected impacts on your community
- Increase technical capacity to prepare for climate change impacts
- “Mainstream” information about climate change vulnerabilities, risks and preparedness into planning, policy, and investment decisions
- Increase the adaptive capacity of built, natural, and human systems in the community
- Strengthen community partnerships that reduce vulnerability and risk to climate change impacts

The mission and guiding principles are documented in the mechanism (e.g. Charter) governing the Climate Collaborative and in the annual Sustainability Action Plan.

Item 4. Gain Support of Participating Implementing Entities

It is necessary for many implementing entities to participate in the implementation of the Sustainability Action Plan in order to maximize the effectiveness of investments towards achieving basin-wide adaptation and mitigation goals and objectives. A commitment to participate in the Climate Collaborative and use the goals and guiding principles should be made by each implementing entity using a mechanism such as a Memorandum of Understanding.

Implementing entities may be reluctant to make a commitment to incorporate recommendations from the Climate Collaborative into their planning processes and augment their planning and implementation objectives and strategies. It is recommended that the TIE-SC approves the content of the mechanism used to gain commitment in order to build support from the largest agencies before investing effort in gaining commitment from other implementing entities and community stakeholders. After gaining commitment from the largest agencies, focus should shift to local jurisdictions, non-government agencies, interest groups, businesses, private land owners and other community stakeholders.

PHASE 2 – DEFINE ROLES, COMMUNICATION STRUCTURE & OPERATIONS

Item 5. Identify Climate Collaborative Coordinator

A coordinator manages the responsibilities of the Climate Collaborative, including scheduling Climate Collaborative meetings, ensuring materials are assembled and distributed to the Climate Collaborative, and ensuring tasks are tracked and completed.

Item 6. Identify Climate Champion

A climate champion is the face of the Sustainability Action Plan to the public and potential funders. The climate champion plays a critical role by providing leadership to the community, motivating participation of implementing entities in the Climate Planning Framework and participating in policy discussions related to climate change on behalf of the Climate Collaborative. This individual is well-respected and trusted by the public and leaders inside and outside of the Tahoe Basin. Further, this

¹ Snover, A.K., L. Whitely Binder, J. Loopez, E. Willmott, J. Kay, D. Howell, and J. Simmonds. 2007. *Preparing for Climate Change: A Guidebook for Local, Regional, and State Governments*. In association with and published by ICLEI – Local Governments for Sustainability, Oakland, CA.

individual is knowledgeable about climate change and its expected impacts to the Tahoe Basin, and willing to provide policy recommendations that may not be politically advantageous.

Item 7. Select Planning Focus Areas

A strategically designed structure is developed to organize, communicate and manage identified climate change vulnerabilities, developed strategies and implemented actions. The multi-jurisdictional setting in the Tahoe Basin will make the definition of planning focus areas more challenging as well as more important to the success of climate change adaptation and mitigation planning and implementation.

Some existing planning frameworks use other terms, such as “sectors,” to organize climate change efforts. The term “planning focus areas” is recommended for the Tahoe Basin because it emphasizes the essential need to integrate climate change adaptation and mitigation into the existing planning processes.

The following is a list of recommendations to consider when developing the “planning focus areas” for the Climate Planning Framework:

- Develop a list of planning focus areas that will support the most efficient development, communication, collaboration and management of climate change adaptation and mitigation strategies, policies, actions and science needs in the Tahoe Basin
- Align planning focus areas with those of other planning processes in the Tahoe Basin such as the EIP Focus Areas or other planning areas that must incorporate climate change in their existing processes
- Align planning focus areas with California state organizational structures such as California Adaptation Strategy² sectors (Public Health, Biodiversity and Habitat, Ocean and Coastal Resources, Water Management, Agriculture, Forestry, Transportation and Energy Infrastructure) to improve efficiency when working with California agencies outside of Tahoe Basin
- Align planning focus areas with those used by the federal government to more effectively communicate with federal agencies and apply for federal funding

After developing “planning focus areas” for the Climate Planning Framework, consider mapping the planning focus areas to the sectors or planning areas of relevant entities (e.g. federal and state) to facilitate future communications.

Item 8. Define Ongoing Implementation, Planning & Reporting Process

The ongoing implementation, planning and reporting process produces the annual Sustainability Action Plan, provides climate change guidance to implementing entities, and ensures that continual improvement and adaptation management inform management decisions.

The ongoing implementation, planning and reporting process outlined in Appendix I is a starting point based on the Tahoe Basin General Management System. The Generalized Management System was developed specifically for developing management processes in the Tahoe Basin. The Generalized

² California Natural Resources Agency. "2009 California Climate Adaptation Strategy." *The California Energy Commission*. December 2, 2009. <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF> (accessed February 2010).

Management System Manual³ and the accompanying Process for Developing a Program-Specific Management System guidebook are recommended references.

The result of this item is expected to be a manual that clearly defines all process elements, products and roles related to the process. Key recommendations to consider while defining the ongoing implementation, planning and reporting process are provided below by subject area.

Basin-wide Strategies

Basin-wide climate change strategies guide implementing entities to increase the adaptive capacity of the Tahoe Basin's most vulnerable systems. Basin-wide strategies align implementing entities and improve the adoption and use of the Climate Planning Framework. Implementing entities that utilize strategies that span multiple planning areas likely increase their impact by leveraging potential synergies.

The Climate Collaborative should leverage climate change strategies currently guiding Tahoe Basin implementing entities. Making basin-wide climate change strategies easily integrate into the organizational strategies of each implementing entity should be a priority, which will require an understanding of each implementing entity's planning process. Managers should be encouraged to collaboratively broaden the spatial and ecological scope of potential adaptation options, and coordinate resources to ensure priority actions are implemented.

Integrating with Existing Planning Processes

Existing land use, infrastructure and human services planning processes have the greatest impact on the adaptive capacity of Tahoe Basin systems and present the greatest opportunity to increase the adaptive capacity of those systems. Integrating the ongoing implementation, planning and reporting process into existing planning processes entails clearly defining how the joint planning functions relate to individual entity processes and decisions.

The adoption and effectiveness of the ongoing implementation, planning and reporting process depends on 1) how easy it is for individual entities to integrate information and tasks into existing planning processes, and 2) the benefits from participating in the ongoing implementation, planning and reporting process. The primary planning processes in the Tahoe Basin should be analyzed to identify how each element of the ongoing implementation, planning and reporting process can inform and be informed by the individual entity planning processes. It should be emphasized that climate change strategies often complement or advance an agency's broader objectives due to producing co-benefits, making implementation more efficient and avoiding political barriers.

Stakeholder Engagement

Stakeholder engagement entails involving stakeholders throughout the development and implementation of the Sustainability Action Plan. Strategically incorporating stakeholders in the Climate Planning Framework may be the most determining factor in the successful implementation of the Sustainability Action Plan.

It is important to identify when and how the critical stakeholder knowledge of the natural, built and human systems in the Tahoe Basin can be leveraged and who specifically obtains the knowledge, and political and social capital. At a minimum, stakeholders should be involved in the prioritization of basin-wide strategies and actions in order to maximize relevance, usefulness and credibility. Further,

³ Sokulsky, J. and T. Beierle. 2007. Management System Design: Generalized Management System Design Manual. Prepared by Environmental Incentives, LLC for the Tahoe Regional Planning Agency. Stateline, NV. Available at www.tiims.org.

stakeholders understand the perspectives of the local community and implementing entities, and should be involved in the development of the public outreach plan to help motivate the public and increase political support.

Identify and Address Barriers

Barriers, such as legal or social constraints, can increase the cost or completely stop actions after implementation begins. If addressed early on, potential barriers may be overcome at a lower financial or political cost. Further, the cost of addressing the risk related to potential barriers may decrease the expected value of a policy or project, and should be included in action prioritization criteria.

Barriers to achieving goals and implementing actions should be identified early on and options for overcoming barriers should be evaluated. Additional costs and uncertainties should be accounted for before proceeding with implementation.

Staff Training

Training tools and implementing entity staff training increase the technical understanding of climate change among staff and drive change in staff behavior. Increasing the knowledge of climate change is necessary for climate change to be integrated into project selection, design, review and implementation decisions.

Current climate change information should be provided to agency staff in easily digestible formats to improve their understanding of the risks, efficacy, and sustainability of potential climate change adaptation and mitigation actions, and appropriately incorporate climate change adaptation and mitigation into actions.

Monitoring, Research & Adaptive Management

Monitoring, research and adaptive management demonstrate the effectiveness of implemented actions and improve the development and selection of future actions. Demonstrating action effectiveness can increase commitment to the implementation of effective actions. This increases the confidence of funders, and improves the effectiveness of the investment of public and private funds.

It is important to implement additional local climate monitoring, adaptation action effectiveness monitoring and scientific research in the near future considering future climate change planning needs. The existing ecological monitoring network was not established with climate change in mind. The science of climate change on local spatial and decadal time scales is evolving quickly. Lastly, measuring the effectiveness of many adaptation actions requires long time scales due to the time required for natural system responses to change.

The significant uncertainty related to climate projections at local spatial and short time scales should be identified and emphasized while stressing the importance of anticipating general future climate trends in all planning processes.

PHASE 3 – BUILD OUT PRODUCTS & SUPPORTING TOOLS

Item 9. Define Initial Goals, Objectives & Strategies

Goals, objectives and strategies for the Sustainability Action Plan guide the Climate Collaborative and subgroups developing the Climate Planning Framework products and inform implementing entities developing their organization's goals, objectives and strategies. Setting both a mitigation goal and a resiliency goal is recommended to clearly state the purpose of all climate change related actions. After developing the goals, mitigation and resiliency objectives and strategies should be developed that span multiple planning focus areas and focus on each specific planning focus area. Objectives are specific, measurable ends that are used to determine if goals are achieved. Strategies are methods to achieve goals and objectives.

The goals, objectives and strategies are documented in the Sustainability Action Plan and updated annually by the ongoing implementation, planning and reporting process. The Climate Collaborative evaluates the goals, objectives and strategies of the implementing entities to leverage existing efforts and develop synergies. The Climate Collaborative is also informed by the Recommendations Briefing, which includes specific recommendations by implementing entity staff and interested stakeholders as well as synthesized findings from the emissions inventory, climate science synthesis, policy analysis and action performance and effectiveness.

Implementing entities use the Sustainability Action Plan goals to inform their organization's goals (e.g. CSLT Sustainability Plan Goals, TRPA Regional Plan Goals, and LTBMU Forest Plan Goals), objectives and strategies (e.g. CSLT Action Item Goals & Sustainability Plan Strategies, CTC Program Area Guidelines, EIP Priorities, TRPA Regional Plan Element & Subelement Goals & Policies, LTBMU Forest Plan Desired Conditions and Strategies).

Climate mitigation and resiliency goals should be developed together. Synergies should be sought and trade-offs should be well understood. It is recommended that goals, objectives and strategies become more defined over time as implementing entities adopt them, provide feedback on them and identify how to integrate them into their internal processes.

Climate mitigation goals and objectives are primarily based on emissions reduction targets by sector. Climate resiliency goals and objectives are more challenging and measures of resiliency should be explored to measure the impact of actions towards the adaptive capacity of systems. Chapter 10 of the ICLEI Climate Resilient Communities Program guidebook (Preparing for Climate Change - A Guidebook for Local, Regional and State Governments) is a recommended resource for developing climate resiliency goals.

Item 10. Develop Public Outreach Plan

Public education and interactive tools can enable the public to participate in and increase the public's willingness to improve the adaptive capacity of the Tahoe Basin. Public engagement and support for the climate change adaptation and mitigation actions of Tahoe Basin implementing entities can increase future implementing entity funding and political will. The residents of the Tahoe Basin can improve the adaptive capacity of the Tahoe Basin through implementing Best Management Practices, using public transportation, installing energy efficiency appliances and many other actions. A public outreach plan should be developed and implemented, and the ongoing implementation, planning and reporting process will monitor and update the plan annually.

The public outreach plan should be guided by goals developed by the Climate Collaborative. The following is an example set of goals ICLEI identified as part of the New York City's PLANNYC⁴ public outreach plan and is a good starting point for the Tahoe Basin:

- Solicit as many ideas as possible

⁴ Thiel, J. E. and D. Knapp. 2010. The Process Behind PLANNYC.

http://www.nyc.gov/html/planyc2030/downloads/pdf/iclei_planyc_case_study_201004.pdf

- Ensure that the public feels included in the planning process with the hope that they will therefore support the plan once it is released
- Educate the public about the region’s environmental and infrastructure challenges
- Use the planning process to incorporate feedback so the plan will not be a “draft” document but one that is implemented immediately

The public outreach plan should include a clear strategy for reaching each target audience and addressing their individual, unique interests. Chapter 5 of the ICLEI CRCP guidebook contains recommended guidance for identifying audiences and developing messaging. Public outreach plans work best when a clear, branded message is developed and the message is used consistently through a diverse set of channels. The following seven message points are recommended by ICLEI to be considered when developing a message, and each message point is accompanied with an explanation of why it is important in the ICLEI CRCP guidebook, often addressing common barriers to preparing for climate change:

- Describe changes that have already been observed
- Describe changes that are expected
- Describe how climate change may impact the community
- Convey the need for action but balance the challenges with optimism
- Identify other communities similar to yours that are planning for climate change
- Develop a course of action
- Acknowledge that questions remain

The public outreach plan should use a variety of outreach tools to maximize the reach of the communications effort. Further, the public outreach plan should leverage available tools developed for California (e.g. CalAdapt), Nevada or national interest, as well as develop new tools such as a dedicated Tahoe Basin Climate Change Resource Center website. Chapter 5 of the ICLEI CRCP guidebook contains the following suggested channels for spreading the message and each suggested channel is accompanied in the ICLEI CRCP guidebook with a description of how to develop the channel:

- Newsletters, fact sheets, utility inserts, and brochures
- Websites
- Public meetings
- Press releases/public statements
- Media training events
- Events aimed at businesses and non-governmental organizations

A member of the Climate Collaborative with public relations or marketing experience should lead the development of the Public Outreach Plan, likely working with a Climate Collaborative subgroup. The Climate Collaborative should consider partnering with other agencies, science organizations, and non-governmental and community organizations to bring legitimacy and potentially additional resources and expertise to the Climate Planning Framework.

A two-page marketing piece that highlights the goal and benefits of the Climate Planning Framework is recommended to build support for the development of the Sustainability Action Plan among the implementing entities and community in the Tahoe Basin. This is also a valuable resource for grant applications related to development of the Sustainability Action Plan.

Item 11. Develop Initial Tahoe Basin Sustainability Action Plan

An initial Sustainability Action Plan should be developed to gain recognition for the many climate change efforts that already exist in the Tahoe Basin and share climate change needs with external audiences. The report can be used to 1) communicate progress to date and plans to federal supporters

and other funding sources, 2) communicate identified needs and plans to local stakeholders, and 3) serve as an initial template to modify and build upon to develop a comprehensive Sustainability Action Plan over the following year.

The Action Identification and Action Inventory Databases should be used to evaluate and prioritize potential actions and identify “no-regret” and “low-regret” actions to include in the plan.

This is a potential list of topics to cover in the initial Sustainability Action Plan:

- Tahoe Basin Climate Change Mission and Guiding Principles
- Tahoe Basin Climate Change Goals, Objectives and Strategies
- Tahoe Basin projected climate change hazards, system responses and vulnerabilities to illustrate the issues being addressed by the plan
- Basin-wide and planning area specific adaptation actions completed, system needs, plans, and research and monitoring findings organized by objective
- Basin-wide and planning area specific GHG emissions inventory, emissions reduction targets, completed actions and plans

Item 12. Commission GHG Emissions Inventory

A GHG emissions inventory for the Tahoe Basin is necessary to set GHG emission targets and develop efficient and comprehensive GHG emissions strategies and action plans. Both stationary and mobile sources are inventoried. A GHG emissions *baseline* is identified and future GHG emissions forecasts are used to set basin-wide and planning area specific GHG targets.

Item 13. Set GHG Emissions Reduction Targets

The Climate Collaborative sets a realistic, aggressive basin-wide GHG emissions reduction target to achieve the Sustainability Action Plan climate mitigation goal and objectives. GHG emissions reduction targets are set to guide each planning focus area. The basin-wide and planning focus area specific GHG emissions reduction targets should be set through a collaborative process that incorporates operational and political factors.

Item 14. Expand Climate Science Synthesis beyond Aquatic Resources

The Climate Science Synthesis and Action Effectiveness Report helps decision-makers understand the possible range of future climate change impacts and system responses, and prioritize proposed actions. The report should contain a vulnerability assessment which defines and prioritizes system vulnerabilities, guides the Climate Collaborative when setting basin-wide climate change objectives and strategies, and informs the prioritization of actions.

It is critical that the Climate Science Synthesis and Action Effectiveness Report presents findings in an efficient and consistent format that is accessible to policy-makers and that integrates seamlessly with the decision-support tools. The tables in Chapter 8 and 9 of the ICLEI Climate Resilient Communities Program guidebook (Preparing for Climate Change - A Guidebook for Local, Regional and State Governments) are a format to consider for presenting the science synthesis. The *triage* method suggested by the U.S. Forest Service to categorize and prioritize systems in high-demand situations is another approach that should be considered when developing the format for presenting system vulnerabilities; a

Key Terms

Baseline: The baseline is any datum against which change is measured. A “current baseline” represents observable, present-day conditions. A “future baseline” is a projected future set of conditions excluding the driving factor of interest.

Triage: An emergency resource prioritization method that sorts resource management situations (“patients”) into categories according to urgency, sensitivity, and capacity of available resources to achieve desired goals (“survival”).

description of the triage method is in section 3.4.4 of Preliminary Review of Adaptation Options for Climate-Sensitive Ecosystems and Resources⁵.

The U.S. Army Corps of Engineers commissioned a climate change science synthesis that addresses aquatic water resources in the Tahoe Basin which is expected to be available August 2010. For decision-makers outside of water resources to effectively address climate change issues, a climate science synthesis for each resource area should be commissioned. As of May 2010, the Tahoe Science Consortium is planning to develop a new chapter in the Tahoe Science Plan on climate change. This product may be sufficient depending on the depth and breadth of the synthesis executed.

Item 15. Develop Sustainability Action Plan Evaluation Metrics

Program evaluation metrics gauge program performance. Program evaluation metrics provide insight into the implementation of strategies and progress towards achieving program goals and objectives.

Program evaluation metrics span a spectrum of types (as exhibited in figure 4) and each type serves different and important purposes. Outcomes (right-hand side of spectrum) evaluate goal achievement and are important because they incorporate all drivers including ambient conditions. However, outcomes typically require a time lag and are more costly to produce. Outputs (left-hand side of spectrum) evaluate action implementation and are important because they are more cost-effective and align with short political reporting needs. Program evaluation metrics in the middle of the spectrum can provide insight into action effectiveness.

The following is an example to demonstrate the different program evaluation metric types and it is also illustrated in figure 4. Sweeping streets is an action that helps achieve the Lake Tahoe TMDL. 'Miles Roadway Treated' is an output, 'Pelagic Lake Clarity' (Secchi Depth) is an outcome, and 'Pollutant Load Reduction Achieved' is in the middle of the spectrum.

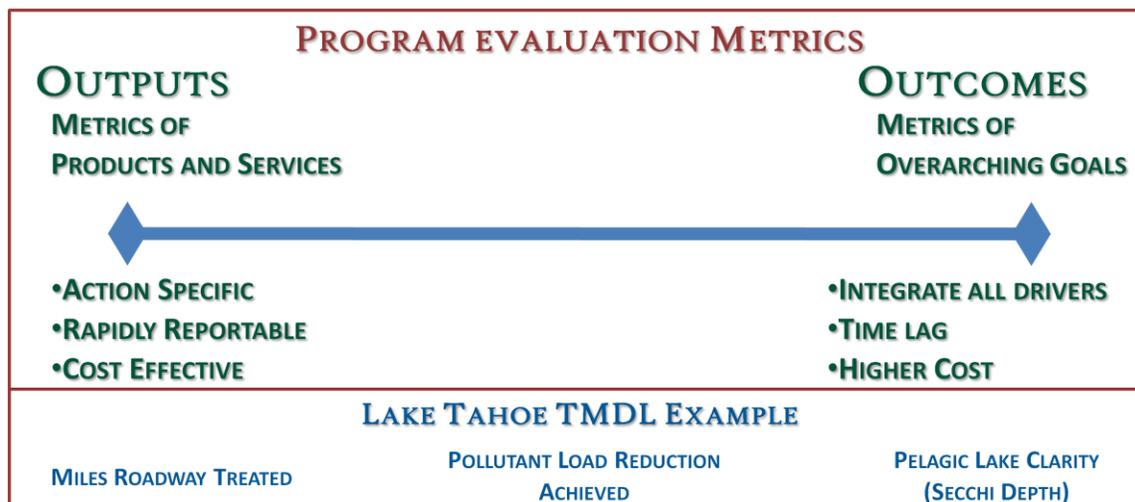


Figure 4: Spectrum of performance measure types and Lake Tahoe TMDL example performance measures

⁵ U.S. Government's Climate Change Science Program (CCSP). "Preliminary review of adaptation options for climate-sensitive ecosystems and resources." *U.S. Climate Change Science Program*. June 2008. <http://www.climatescience.gov/Library/sap/sap4-4/final-report/> (accessed February 2010).

The Sustainability Action Plan program evaluation metrics should be aligned with the program goals and objectives. The Climate Collaborative can then recommend actions to implementing entities based on performance measures and provide potential funders assurance that their investments will be used efficiently.

The Lake Tahoe Watershed Sustainability Measures Project, the EIP Performance Measures and the TRPA Threshold Indicators should inform the development of program effectiveness metrics for the Sustainability Action Plan.

Item 16. Develop Local Climate Monitoring Plan

Monitoring ongoing changes in climate is as important as modeling future changes, but California's existing monitoring network was not established with climate change in mind⁶. Temperature monitoring stations are based in areas where people and resources exist instead of locations that could act as an "early warning system" of greater climate change to social, environmental and economic systems. Long-term DWR and USGS weather and hydrologic datasets within the Lake Tahoe Basin do exist and are analyzed to evaluate past trends with respect to climate change. These datasets are priceless and it is critical to maintain various existing monitoring systems.

Climate change focused monitoring provides better information for climate research and adaptive management within the ongoing implementation, planning and reporting process. Improved local climate change monitoring also enables the measurement of progress towards the Sustainability Action Plan goals. Resources should be allocated to existing monitoring stations that provide reliable, long-term hydrologic and climatic data, and new temperature and resource monitoring stations should be employed to fill climate change data gaps.

Item 17. Develop Basin-Wide CEQA & NEPA Guidelines

Recently adopted CEQA Guidelines Amendments require the analysis and mitigation of GHGs. Recently proposed NEPA guidance suggests considering GHG emissions and future effects of climate change. Both CEQA and NEPA preserve the discretion of lead agencies in making determinations of project specific thresholds of significance for GHG emissions and in the case of NEPA, impacts to system adaptive capacity. The discretion available to lead agencies can contribute to the adoption of varied significance findings, which may fail to appropriately take into account local policy and environmental needs, and may add substantial effort and costs to project planning.

Determining project specific thresholds of significance for GHG emissions and impacts to system adaptive capacity is complex. Thresholds should be scientifically supported, take into account Tahoe Basin policy and environmental needs, and be updated over time as Tahoe Basin policy and environmental needs change. The production of basin-wide CEQA and NEPA guidance reduces the net environmental impact of projects, reduces the resources required to produce CEQA and NEPA documents, and increases the contribution to basin-wide climate change adaptation and mitigation objectives. The resulting products may be in the form of specific targets and guidance related to achieving such targets in the Sustainability Action Plan or in the case of CEQA, may come from an Environmental

⁶ California Natural Resources Agency. "2009 California Climate Adaptation Strategy." *The California Energy Commission*. December 2, 2009. <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF> (accessed February 2010).

Impact Report containing a programmatic analysis of GHG emissions. Future project-specific environmental documents would be able to rely on and tier from such guidance.

It is critical that each agency that may benefit from basin-wide CEQA and NEPA guidelines be involved in the development process so that each agency's experience related to addressing recent climate change requirements is leveraged and guidance accounts for agency-specific processes and policies. Draft basin-wide guidelines should be reviewed by agency departments responsible for approving CEQA and NEPA documents, such as the U.S. Forest Service regional office.

Item 18. Develop Decision-Support Tools

Decision-support tools assist project developers in evaluating different design options, prioritizing potential actions and tracking actions in order to measure progress towards GHG emissions reductions targets. Standardized decision-support tools used by all Tahoe Basin implementing entity staff improve the efficiency of resources expended and increase collaboration and coordination among implementing entities. Climate change decision-support tools include a new set of factors (e.g. climate change risks, action effectiveness uncertainty, system vulnerability and implementation barriers) and utilize risk and tradeoff analysis to improve the effectiveness of resource allocation decisions.

There are existing climate change decision support tools, especially to assist mitigation action evaluation and GHG emission reduction strategy development, which should be reviewed before new tools are developed. The ICLEI Climate and Air Pollution Planning Assistant (CAPPA) is one example that the Climate Collaborative should consider recommending to implementing entities for evaluating and identifying potential mitigation actions, projecting GHG emission reductions for specific actions, and determining achievable GHG emission targets

The U.S. Army Corps of Engineers commissioned the development of a table of potential aquatic water resource adaptation policies for the Tahoe Basin with a qualitative evaluation methodology, as well as a consolidated list of past, current and future adaptation and mitigation policies and research tasks for the Tahoe Basin. Through the course of the project it was identified that a single tool will be easier to use and more effective. The need for more rigorous action evaluation method was also identified and defined. As of July 2010, the Climate Action Database evaluates policy actions and the evaluation of research and monitoring actions is under development. The Climate Action Database will store project actions but the evaluation of project actions is not included in the current project scope. The Climate Action Database is expected to be available to implementing entity staff by September 2010.

A tracking and accounting tool is necessary to measure progress towards achieving basin-wide GHG emissions reduction targets. It will translate energy, fuel use and other data into GHG emissions, calculate and track target year projections, and quantify GHG reductions from existing projects, programs and actions.

Decision-support tools, such as the Climate Action Database, should be updated as the climate change adaptation and mitigation fields evolve and Tahoe Basin climate change needs become better understood and change over time. As the need for additional decision-support tools becomes apparent over time, the Climate Collaborative should drive the development of future tools.

Item 19. Develop Training Modules

Enabling agency staff to incorporate climate change adaptation and mitigation into their decisions is one of the most important aspects of the Climate Planning Framework. Training modules that educate project selection, decision and implementation decisions targeted to each planning area should be developed. Many climate change training tools have been developed by relevant agencies, such as the U.S. Forest Service, and existing tools should be assembled before developing any new tools.

Training tools should be available on a website and classroom-style training should also be scheduled. Gaining commitment from agency management to commit their staff to attend training is highly recommended.

INITIATING ONGOING IMPLEMENTATION, PLANNING AND REPORTING PROCESS

The ongoing implementation, planning and reporting process can begin after Phase 2 is completed and can be used to develop the products in Phase 3. The ongoing process is then used to annually update the products as described in the Climate Planning Framework Overview section above and Appendix I.

Appendix I: Operational Description of Ongoing Implementation, Planning and Reporting Process

The ongoing implementation, planning and reporting process described below is an initial outline and will be further defined by a subgroup of the Climate Collaborative during the items to develop and deploy the Climate Planning Framework. The outcome of the items to develop and deploy the Climate Planning Framework will inform the complete definition of roles, responsibilities and processes related to each element of the process.

Figure 5 is a visual representation of the core elements and process flow of the ongoing implementation, planning and reporting process. The figure also highlights the shared implementation responsibility between the Climate Collaborative and the many implementing entities in the Tahoe Basin. Elements with a white background are primarily owned by the Climate Collaborative and elements with a green background are primarily owned by many individual implementing entities.

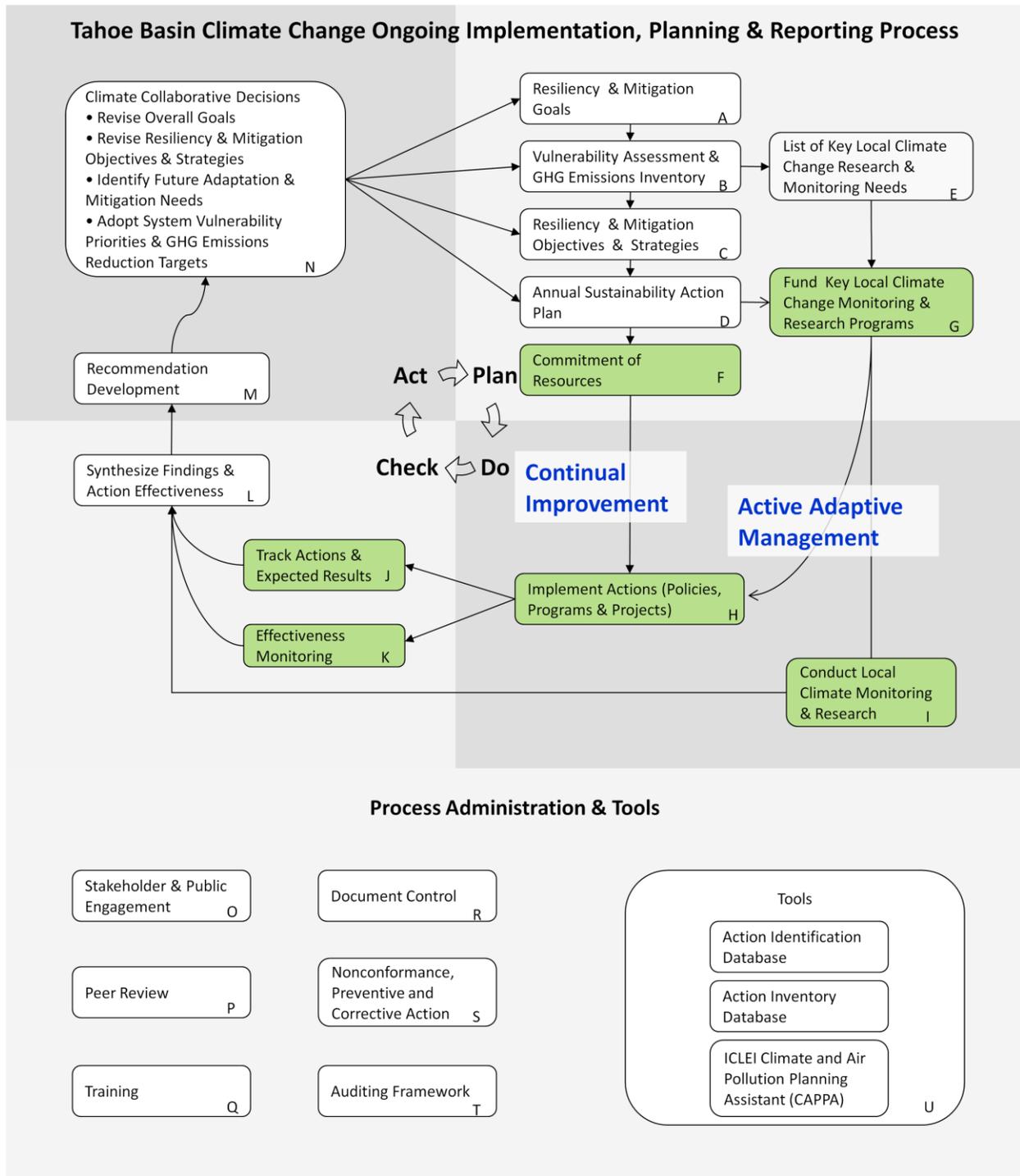


Figure 5: Tahoe Basin Climate Change ongoing implementation, planning and reporting process element diagram (elements with a white background are primarily owned by the Climate Collaborative and elements with a green background are primarily owned by many individual implementing entities)

Legend									
Elements with a white background are primarily owned by the Climate Collaborative									
Elements with a green background are primarily owned by many individual implementing entities									
Element	Title	Process Description	Products & Information	Leading Body	Decision Process	Timing of Process	Secondary Process & Parties	Resources, Examples & Considerations	
Plan	A	Resiliency & Mitigation Goals	Identify a resiliency goal and a mitigation goal that clearly states the purpose of climate change related actions and to guide implementing entity planning processes	An agreement by the Climate Collaborative potentially documented in a Charter for the Climate Collaborative and the Sustainability Action Plan	Climate Collaborative	Climate collaborative informed by implementing entities, interested stakeholders and the Recommendations Briefing (which includes considerations from emissions inventories, science synthesis, policy analysis, action performance and effectiveness, and Climate Action Database)	Once Annually	Implementing entities use the Tahoe Basin Mitigation & Resiliency Goals to inform their own goals (e.g. CSLT Sustainability Plan Goals, TRPA Regional Plan Goals, LTBMU Forest Plan Goals)	Reference Chapter 10 of the ICLEI-Local Governments for Sustainability Climate Resilient Communities Program guidebook (Preparing for Climate Change - A Guidebook for Local, Regional and State Governments) for developing climate resiliency goals Consider developing measure of resilience to include in the monitoring and evaluation systems to measure the impact of actions towards the adaptive capacity of systems
	B	Vulnerability Assessment & GHG Emissions Inventory	Define and prioritize system vulnerabilities by systems or planning focus areas, and inventory and set planning focus area targets for GHG emissions reductions for the basin	Document system vulnerability prioritization updates and GHG emissions inventory results and reduction targets for each planning focus area	Climate Collaborative - science subgroup	Delegated scientists update the vulnerability assessment and emissions inventory and the Climate Collaborative approves modifications	Once Annually		The Climate Science Synthesis & Action Effectiveness Report may contain a vulnerability assessment that can be used in management decisions rather than developing a conceptual model, though both would be ideal and synergistic. See Develop & Deploy Step 14 for more information and recommendations related to the vulnerability assessment

	Element	Title	Process Description	Products & Information	Leading Body	Decision Process	Timing of Process	Secondary Process & Parties	Resources & Examples
Plan	C	Resiliency & Mitigation Objectives & Strategies	Identify multi-planning focus area and planning focus area-specific resiliency and mitigation objectives (specific ends to achieve through implementing actions) and strategies (methods to achieve goals and objectives) to guide the Sustainability Action Plan, Climate Collaborative and implementing entity planning processes	Documented in Sustainability Action Plan	Climate Collaborative	Climate collaborative informed by implementing entities, interested stakeholders and the Recommendations Briefing (which includes considerations from emissions inventories, science synthesis, policy analysis, action performance and effectiveness, and Climate Action Database)	Once Annually	Implementing entities use the Tahoe Basin Mitigation & Resiliency Objectives and Strategies to inform their own objectives and strategies (e.g. CSLT Action Item Goals & Sustainability Plan Strategies, CTC Program Area Guidelines, EIP Priorities, TRPA Regional Plan Element & Subelement Goals & Policies, LTBMU Forest Plan Desired Conditions & Strategies & project planning)	<p>All existing Tahoe Basin implementing entity climate change strategies should inform the basin-wide climate change strategies to leverage existing work and leverage synergies</p> <p>Mitigation objectives include GHG emissions reduction targets by planning focus area</p> <p>Climate Action Database should identify objectives and strategies by what actions are getting funding, what actions are not and what systems lack action ideas</p> <p>Seek synergies and analyze trade-offs between climate mitigation and adaptation strategies and objectives (mitigation actions may have detrimental ecological consequences and adaptation actions may generate significant GHG emissions)</p> <p>Suggest developing a list of key issues related to each objective and strategy to effectively emphasize the primary barriers that implementing entities should plan to address</p> <p>Encourage implementing entities to assess existing projects, policies, plans and research for climate change risks, not just new actions</p> <p>Basin-wide strategies should become more defined over time as implementing entities adopt them, provide feedback on them and identify how to integrate them into their internal processes</p>

	Element	Title	Process Description	Products & Information	Leading Body	Decision Process	Timing of Process	Secondary Process & Parties	Resources, Examples & Considerations
Plan	D	Annual Sustainability Action Plan	Develop an annual report prior to the August event for external audiences (funding sources, public) that summarizes goals, objectives, actions implemented and the effectiveness of those actions, action and funding needs, and status and trends	Annual Sustainability Action Plan	Climate Collaborative	Climate collaborative informed by implementing entities, interested stakeholders, the Recommendations Briefing (which includes considerations from emissions inventories, science synthesis, policy analysis, and action performance and effectiveness) and Action Identification and Action Inventory Databases	Once Annually	Implementing entities use the Sustainability Action Plan to inform internal planning processes (e.g. CSLT Action Item Prioritization Criteria, CTC Grant & Internal Project evaluation criteria, EIP project prioritization criteria, USFS project prioritization criteria); community stakeholders use the plan to understand actions implemented and system vulnerabilities; and funding sources use the plan to understand action and funding needs	<p>Actions that are selected or need funding should be grouped by the following categories to emphasize their value related to risk and cost "no-regrets", "low-regrets" and "win-wins"</p> <p>PLANYC is a model sustainability plan because it includes the following elements:</p> <ul style="list-style-type: none"> • Facts and figures from the sustainability assessment to illustrate the issues being addressed • Goals to set a vision and framework for the plan • Aggressive but achievable initiatives • Initiatives with clear implementation plans covering timing, funding, and responsibilities • Detail how the initiatives address the challenges • Matrix illustrating relationship of goals & initiatives • Monitoring and evaluation for tracking progress
	E	List of Key Local Climate Change Monitoring & Research Needs	Update the prioritized list of local climate change monitoring and research needs, documenting areas of uncertainty & risk, by EIP Focus Area	A ranked list of areas for investigation	Climate Collaborative - science-agency subgroup	A science-agency subgroup of the Climate Collaborative makes prioritization recommendations for the overall Climate Collaborative to adopt and is informed by scientists, implementing entities, interested stakeholders, the Recommendations Briefing (informed by emissions inventories, science synthesis, policy analysis, and action performance and effectiveness) and the Action Inventory decision support tool	Once Annually	Implementing entities use key monitoring and research needs to inform monitoring, synthesis and research investments (e.g. TSC Lake Tahoe SNPLMA Project Nominations, TSC Science Program Key Uncertainties, Risks & Information Needs)	Reference the Tahoe Basin Climate Change Adaptation & Mitigation Action Inventory memo for guidance on using the Action Inventory tool, TSC Science Plan
	F	Commitment of Resources	Incorporate climate change considerations in the prioritization of actions and allocate funding and staff time to implement actions	Implementing entity specific action plans that define how resources are allocated from specific funding sources and agency budgets	Implementing Entities	Implementing entities incorporate Tahoe Basin climate change guidance (goals, objectives, strategies, identified actions and needs) into the action prioritization and selection steps of their existing planning processes	Implementing Entity Planning Cycle (once annually recommended)		

	Element	Title	Process Description	Products & Information	Leading Body	Decision Process	Timing of Process	Secondary Process & Parties	Resources & Examples
Plan	G	Fund Key Local Climate Change Monitoring & Research Programs	Fund local climate change monitoring and research programs to answer targeted questions from the key areas of uncertainty and risk	Funding decisions, scopes of work, and specific experimental design documentation	Implementing Entities	Scientists and implementing entity management develop scopes of work and secure funding, and are informed by the list of key local climate change monitoring and research needs and input from program managers and researchers	Continuous		TSC Science Plan Climate Change Chapter (expected early 2011)
	Do	H	Implement Policies & Projects	Perform implementing entity activities	Products and information generated by activities such as design and planning documents, accounting for funding, explanatory information, monitoring plans and enforcement proceedings	Implementing Entities	Existing implementing entity processes	Continuous	
		I	Conduct Local Climate Monitoring & Research	Perform local climate monitoring and research, and develop report of findings	Data and documentation including a final report that clearly states findings related to area of uncertainty and risk	Implementing Entities	Existing implementing entity processes	Continuous	Examples include local climate indicator monitoring (new local climate monitoring programs should be implemented because most existing monitoring systems were not designed for or provide comprehensive local climate monitoring), and developing and updating emissions inventories
Check	J	Track Actions & Expected Results	Check and document completed versus planned activities, and completed versus planned results, report results through EIP and Sustainability Action Plan	EIP database (for actions related to natural system) and other project tracking systems with activity results	Implementing Entities	EIP reporting and potentially augmented to cover actions not tracked by the EIP	Continuous - with an annual date for reporting information that will be included in the updated Sustainability Action Plan		

	Element	Title	Process Description	Products & Information	Leading Body	Decision Process	Timing of Process	Secondary Process & Parties	Resources & Examples
Check	K	Effectiveness Monitoring	Perform monitoring and document findings and outcomes	EIP database (for actions related to natural system) and other project tracking systems with activity monitoring outcomes	Implementing Entity	Existing implementing entity processes	Continuous		Effectiveness monitoring is critical to improving the effectiveness of invested public and private funds and increase the adaptive capacity of system. However, rigorous and conclusive effectiveness monitoring is resource intensive. Implementing entities are encouraged to implement effectiveness monitoring programs that monitoring a subset of actions in a manner so that the findings can be used to inform future selection and design decisions.
	L	Synthesize Findings & Action Effectiveness	Update the Science Synthesis & Action Effectiveness Report to incorporate new climate change science, which is evolving quickly, changes in the prioritization of system vulnerabilities and an evaluation of all actions related to the Sustainability Action Plan (actions include climate adaptation and mitigation capital projects and policies, as well as training tools, public our reach plan and CEQA & NEPA guidance prepared by the framework. All of these actions should be evaluated improvement annually)	Science Synthesis & Action Effectiveness Report	Climate Collaborative - science-agency subgroup	A science-agency subgroup of the Climate Collaborative develops the report which draws information from the EIP Capital Program Assessment Report and EIP database (for performance data on actions related to natural systems), other project tracking systems (for performance data on non-natural systems), effectiveness monitoring studies and data, climate monitoring synthesis reports and data, research reports and other resources	Once Annually		Systematically incorporate the credibility of the science and likelihood of occurrence when assessing the confidence level of climate change hazards and system responses "Impact thresholds" for vulnerable systems are recommended to inform goal and strategy development Reference Chapter 8 and 9 of the ICLEI-Local Governments for Sustainability Climate Resilient Communities Program guidebook (Preparing for Climate Change - A Guidebook for Local, Regional and State Governments) and the Science Synthesis developed by 2NDNATURE for the Climate Adaptation Planning Project in June 2010

	Element	Title	Process Description	Products & Information	Leading Body	Decision Process	Timing of Process	Secondary Process & Parties	Resources & Examples
Act	M	Recommendation Development	Evaluate available information and develop specific recommendations to change existing Tahoe Basin objectives, strategies and plans, and conceptual model/system vulnerability prioritization and action prioritization evaluation criteria	Recommendations Briefing	Climate Collaborative subgroup	A subgroup of the Climate Collaborative reviews all submitted Improvement Recommendations from implementing agencies and other stakeholders and develops a single set of recommendations. Individual recommendations are inform by the Action Inventory tool which evaluates actions, analyses of public and proprietary action performance and effectiveness data, and new scientific findings - this information is primarily found in the Synthesis, though all information sources are valid.	Once Annually	Implementing entities and other stakeholders provide specific recommendations from their experiences and other information sources	Reference the Tahoe Basin Climate Change Adaptation & Mitigation Action Inventory memo for guidance on using the Action Inventory tool
	N	Climate Collaborative Decisions	Act on recommendations through adoption or rejection and use Actions Inventory to identify future mitigation and resiliency needs	Documentation of decisions and specific actions to execute decisions	Climate Collaborative	Climate Collaborative, informed by Recommendations Briefing, evaluates and identifies recommendations to execute	Once Annually		Reference Chapter 10 Section 4 of the ICLEI-Local Governments for Sustainability Climate Resilient Communities Program guidebook (Preparing for Climate Change - A Guidebook for Local, Regional and State Governments) for action selection and prioritization criteria Reference the Tahoe Basin Climate Change Adaptation & Mitigation Action Inventory memo for guidance on using the Action Inventory tool

	Element	Title	Process Description	Products & Information	Leading Body	Decision Process	Timing of Process	Secondary Process & Parties	Resources & Examples
Process Administration	O	Stakeholder & Public Engagement	Inform stakeholders and public of findings and engage stakeholders and public in the development of Tahoe Basin objectives, strategies and plans	Public Outreach Plan, reports, website and other communication methods to inform stakeholders and public, and documentation of stakeholder and public input	Climate Collaborative - communication and outreach subgroup	Climate Collaborative adjusts the Public Outreach Plan that drives stakeholder and public engagement	Continuous	Implementing Entities - incorporate climate change messages and take on specific communication tasks in individual entity outreach materials	Reference Chapter 5 of the ICLEI-Local Governments for Sustainability Climate Resilient Communities Program guidebook (Preparing for Climate Change - A Guidebook for Local, Regional and State Governments) for identifying audience, developing message and informing stakeholders and public Reference California's CalAdapt for developing a website for informing the public of climate change risks and adaptation options, and consider using CalAdapt as part of the Tahoe Basin Public Outreach Plan Define stakeholder roles up front and for each step of the process and extend stakeholder participation to three priority groups: (1) representatives of the most vulnerable groups (e.g. health or property risk), (2) technical specialists, and (3) policy makers at the appropriate levels (local, regional, and/or national)
	P	Peer Review	Identify appropriate documents for peer review and coordinate peer review for proposals, study plans, reports and findings	Integrated peer review findings	Climate Collaborative	Climate Collaborative is responsible for identifying documents for peer review and coordinating peer review processes	Continuous		TSC Peer Review Guidance memo
	Q	Training	Develop training content, tools and plans	Video training modules and other training documentation	Climate Collaborative - ad hoc training subgroup(s)	Climate Collaborative commissions or convenes subgroups to develop training modules and ensures training content and tools are used to train resource managers, project designers and implementers	Continuous		Reference USFS Climate Change Resource Center for video training modules
	R	Document Control	Catalog and keep track of official documentation	Table of the current version of all documents and archive of all previous document versions	Climate Collaborative	Climate Collaborative is responsible for developing the document repository system and keeping it updated	Continuous		

	Element	Title	Process Description	Products & Information	Leading Body	Decision Process	Timing of Process	Secondary Process & Parties	Resources & Examples
Process Administration	S	Nonconformance, Preventive and Corrective Action	Use a description of expected actions, accomplishments and responsibilities to determine if the Sustainability Action Plan and related activities are being implemented and managed as desired and in a timely manner	Discussions and potentially Climate Collaborative meetings to address need for corrective actions	Climate Collaborative	Climate Collaborative is responsible for being aware, checking on actions, timelines and performance, and initiating the proper process to address issues	Continuous		
	T	Auditing Framework	Review operations for effectiveness and compliance with protocols, develop a report with findings and review findings with Climate Collaborative	Report and discussions	Climate Collaborative - audit subgroup	Climate Collaborative is responsible for initiating the audit and reviewing the findings	Once Annually		

	Element	Title	Process Description	Products & Information	Leading Body	Decision Process	Timing of Process	Secondary Process & Parties	Resources & Examples
Tools	U	Tools	Support collaboration, tracking, prioritizing and reporting of projects, policies, research and monitoring	1) Action Identification database for performing initial rough screen of potential policies, projects, research and monitoring 2) Action Inventory database for performing a more rigorous evaluation and prioritizing of projects, policies, research and monitoring 3) ICLEI Climate and Air Pollution Planning Assistant (CAPPA) for evaluating and identifying potential mitigation actions, projecting GHG emission reductions for specific actions, and determining achievable GHG emission targets 4) EIP database and other project performance tracking databases for action implementation and effectiveness tracking	Climate Collaborative	Climate Collaborative is responsible for developing, maintaining and ensuring the accessibility to the necessary tools	Continuous		reference memo "Tahoe Basin Climate Change Action Identification and Action Inventory Databases" for overview, purpose, use and evaluation criteria and result detail for Action Identification and Action Inventory Databases reference ICLEI website (http://www.icleiusa.org/action-center/tools/cappa-decision-support-tool/) for ICLEI Climate and Air Pollution Planning Assistant (CAPPA) decision-support tool use and download

Appendix II: Climate Change Term Glossary

The terms below are used throughout climate change literature and the Tahoe Basin Climate Change products developed through the U.S. Army Corps of Engineers climate change project. The U.S. Army Corps of Engineers climate change project Working Group approved the definitions below for use by the framework.

Term	Definition	Most Similar Source
Adaptation	Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which minimizes harm or exploits beneficial opportunities.	Hybrid CA CAS & USFS
Adaptive capacity	The ability of a system to respond to climate change (including variability and extremes), to moderate potential damages, to take advantage of opportunities, and to cope with the consequences.	CA CAS & USFS
Baseline	The baseline is any datum against which change is measured. A “current baseline” represents observable, present-day conditions. A “future baseline” is a projected future set of conditions excluding the driving factor of interest.	CA CAS
Climate Change	Any long-term change in average climate conditions in a place or region, weather due to natural causes or as a result of human activity.	CA CAS
(Climate Change) Impacts	The detrimental and beneficial effects of climate change on the structure or function of a system.	Hybrid USFS & IPCC 2001
Climate Variability	Variations in the mean state of the climate and other statistics (such as standard deviations, the occurrence of extremes, etc.) on all temporal and spatial scales beyond that of individual weather events.	CA CAS, USFS & IPCC 2001
Decision-support Tools	Information systems that improve decision efficiency and effectiveness.	Project Team
Implementation Tools	The authorities and/or avenues over which your governing body has control or influence in policy, planning and infrastructure.	ICLEI
Low-regrets Policy	Low-cost policies and actions that have potentially large benefits under climate change scenarios.	PEW Center on Global Climate Change
Maladaptation	Adaptation actions that inadvertently increase vulnerability of natural or human systems to climatic stimuli.	USFS
Mitigation	A human intervention to reduce the sources or improve the uptake (sinks) of greenhouse gases.	CA CAS
No-regrets Policy	A policy that would generate net social benefits with or without climate change.	CA CAS
Planning Focus Areas	The areas in which an entity manages, plans or makes policy affecting the services and activities associated with built, natural and human systems.	ICLEI
Resilience	The ability of a system to absorb some amount of change, including shocks from extreme events, and recover from them to be able to function and provide essential services and amenities that it has evolved or been designed to provide.	CA CAS
Risk	The possibility of interaction of physically defined hazards with the exposed systems. Risk is the likelihood of an event multiplied by its consequences.	CA CAS

Sector	A general term describing any resource, ecological system, management area, or other area of interest that may be affected by climate change.	ICLEI
Sensitivity	The degree to which a system is affected, either beneficially or adversely, by climate-related stimuli.	IPCC, 2001
Sustainability	Improving the quality of human life while living within the carrying capacity of supporting ecosystems.	IUCN, UNEP, WWF 1991
System	The built, natural and human networks that provide important services or activities.	ICLEI
Triage	An emergency resource prioritization method that sorts resource management situations (“patients”) into categories according to urgency, sensitivity, and capacity of available resources to achieve desired goals (“survival”).	USFS
Uncertainty	An expression of the degree to which a value is unknown.	UNDP
Vulnerability	The susceptibility of a system to harm from climate change. Vulnerability is a function of a system's sensitivity to climate and the system's adaptive capacity.	ICLEI

Appendix III: Develop & Deploy Item Tracking

The Develop & Deploy Item Tracking spreadsheet is used to track all projects that have been commissioned to complete each of the Climate Planning Framework Develop & Deploy items. This spreadsheet is a living document and is maintained by the Climate Collaborative.

This is a live table maintained by the Climate Collaborative									
		Status List: Not Started							
		Funding requested							
		Partially funded							
		Partially in-progress							
		Partially complete							
		Funded							
		In-progress							
		Complete							
PHASE	DURATION	ITEM	STATUS	POTENTIAL FUNDING SOURCE/ LEAD	EST. COST	PROGRESS DESCRIPTION	OUTSTANDING DESCRIPTION		
Phase 1: Create Managing Body, Define Purpose & Gain Support	3 months	1. Create Climate Collaborative	Not Started	CTC/Consultant	\$25-\$50,000				
		2. Define Decision-Making Process	Not Started						
		3. Define Mission & Guiding Principles	Not Started						
		4. Gain Support of Participating Implementing Entities	Not Started						
Phase 2: Define Roles, Communication Structure & Operations	6 months	5. Identify Climate Collaborative Coordinator	Not Started						
		6. Identify Climate Champion	Not Started						
		7. Select Planning Focus Areas	Not Started						
		8. Define Ongoing Implementation, Planning & Reporting Process	Not Started						
Phase 3: Build Out Products & Supporting Tools	Over first 1 to 2 years of operation	9. Define Initial Goals, Objectives & Strategies	Not Started	SGC/Climate Collaborative	\$100-\$200,000				
		10. Develop Public Outreach Plan	Not Started	CTC/Sierra Nevada Alliance	\$25,000				
		11. Develop Initial Tahoe Basin Sustainability Action Plan	Partially in-progress	TRPA/Nelson & Nygaard Consulting		\$393,000	SB 375 planning and products, including Sustainability through Mobility handbook, transportation PMs, strategy evaluation tool, strategies for Regional Plan and a public participation plan. The project will be finished ?.	The initial basin-wide Sustainability Action Plan needs to be commissioned.	
				CTC/Climate Collaborative		\$50,000			
		12. Commission GHG Emissions Inventory	Partially funded	CTC/UC Davis	\$100,000	UC Davis will inventory GHG emissions of all stationary sources in the Tahoe Basin, the project will begin in the fall of 2010 and finish ?.	The mobile sources will still need to be inventoried.		
		13. Set GHG Emissions Reduction Targets	Not Started	SGC/Climate Collaborative	\$25-\$50,000				
		14. Expand Climate Science Synthesis Beyond Aquatic Resources	Partially funded	TSC/TSC	\$70,000	The TSC is developing a strategy to address key uncertainties and information gaps in climate research related to the Tahoe basin, the strategy is expected to be complete by ?.	It is unclear if the TSC effort will produce the depth and breadth of synthesis needed by resource managers, policy makers and decision-makers.		
		15. Develop Performance Measures and Status and Trend Indicators	Not Started						
		16. Develop Local Climate Monitoring Plan	Not Started						
		17. Develop Basin-Wide CEQA & NEPA Guidelines	Not Started	CTC/TIE-SC	\$25,000				
		18. Develop Decision-Support Tools	a) Climate Action Database	In-progress	U.S. ACOE/Environmental Incentives	\$40,000	EI is developing a decision-support tool for agency staff to efficiently perform a rigorous evaluation of adaptation and mitigation actions, as well as capture actions already started in the basin. This project will be completed by January, 2011.		
			b) Tracking and Accounting System	Not Started	SGC/TSC	\$50,000	TSC will develop an integrated tracking and accounting system to track mitigation actions in order to manage achieving GHG emissions reduction targets.		
			c) Community Sustainability Toolkit	Not Started	SGC/Sierra Nevada Alliance	\$25,000	Sierra Nevada Alliance will develop a Community Sustainability Toolkit to build capacity of Sierra Nevada communities to collaboratively develop their own sustainability plans.		
		19. Develop Training Modules	Not Started						
		Other Items Addressing Tahoe Basin Climate Change Needs		CSLT Sustainability Plan Implementation Strategies	Not Started	SGC & CSLT & El Dorado County/Consultants	\$200-\$250,000	Consultants will develop a plan and implementation strategies for the City of South Lake Tahoe's Sustainability Framework Plan.	
				Sustainability Framework for Two Urban North Shore Areas	Not Started	SGC & Placer County & NLT Resort Association/Consultants	\$50-\$100,000	Consultants will produce a framework for sustainability in two of the most urbanized areas of the north shore of the basin. It will serve to inform TRPA's Regional Plan, the Community Plan Area Statements, and federal, state, and local investments in green infrastructure in these communities.	
				Basin-wide Economic Prosperity Strategy	In-progress	North and South LT Chambers of Commerce & Western Nevada Development Department/Consultants	\$100,000	Consultants will develop a basin-wide economic prosperity strategy that will seek to transform the basin's declining casino-based economy into a vibrant, ecotourism and green business-based economy.	

Appendix IV: Climate Planning Framework Integration with Local Planning Process Matrix

The Climate Planning Framework Integration with Local Planning Process Matrix demonstrates the use and benefits of the Climate Planning Framework by a subset of local planning processes.

Tahoe Basin Climate Planning Framework (CPF) Components	Integration of Climate Planning Framework with Subset of Local Planning Processes					
	City of South Lake Tahoe (CSLT)	California Tahoe Conservancy (CTC)	Environmental Improvement Program (EIP)	Tahoe Regional Planning Agency Regional Plan	Lake Tahoe Basin Management Unit (LTBMU)	Southern Nevada Public Land Management Act (SNPLMA)
Sustainability Action Plan (SAP) - Goals - Objectives - Strategies - Adaptation & Mitigation Needs	SAP is informed by informs CSLT Sustainability Plan Strategies and work plan action goals	SAP is informed by and informs CTC objectives and Program Area Guidelines	SAP is informed by and informs EIP Priorities and Science Program Priorities	SAP is informed by and informs Regional Plan Element and Subelement Goals and Policies	SAP is informed by and informs LTBMU Forest Plan and project level Goals, Desired Conditions and Strategies	SAP is informed by and informs capital improvement and science objectives, and Science Theme and Subtheme development
CPF Products - Vulnerability Assessment - GHG Emissions Inventory - Climate Science Synthesis - Action Effectiveness Report	CPF products inform work plan action development and prioritization criteria	CPF products inform action design (internal)/selection (external) and evaluation criteria	CPF products inform design of actions submitted and evaluation criteria	CPF products inform policy development and evaluation criteria	CPF products are informed by USFS research and inform LTBMU land management actions (e.g. project design and prioritization)	CPF products inform Science Theme and Subtheme development and evaluation criteria
Key Local Climate Change Monitoring & Research Needs	n/a	Needs inform monitoring and research action design (internal)/selection (external) and evaluation criteria	Needs inform Science Program Priorities	Needs inform Monitoring and Evaluation program development priorities	Needs informed by LTBMU identified information gaps that support land management decision making process and inform USFS research prioritization	Needs inform science objectives, and Science Theme and Subtheme development and evaluation criteria
Recommendation Development	CSLT recommendations improve basin-wide climate change guidance and tools	Conservancy recommendations improve basin-wide climate change guidance and tools provided	EIP partner recommendations improve basin-wide climate change guidance and tools	Regional update staff recommendations improve basin-wide climate change guidance and tools	LTBMU recommendations improve basin-wide climate change guidance and tools	TSC and SNPLMA staff recommendations improve basin-wide climate change guidance and tools
Stakeholder & Public Engagement	Stakeholders inform Sustainability Plan Principles and Strategies, and work plan action development and prioritization criteria	Stakeholders inform Program Area Guidelines and action development (internal)/selection (external) and evaluation criteria	Stakeholders inform EIP Priorities, Science Program Priorities and action evaluation criteria	Stakeholders inform Regional Plan Goals and policy development and evaluation criteria	Stakeholders inform LTBMU Forest Plan Goals and project level Goals, Desired Conditions, and Strategies	Stakeholders inform capital improvement and science objectives, and Science Theme and Subtheme development and evaluation criteria
Training	Training educates City staff on sustainability issues	Training educates Conservancy staff on sustainability issues	Training educates EIP partner staff on sustainability issues	Training educates TRPA staff on sustainability issues	Training educates LTBMU staff on sustainability issues	Training educates capital improvement project developers and scientists on sustainability issues
Tools	Tools support City staff decision-making	Tools support Conservancy staff decision-making	Tools support EIP partner staff and EIP program staff decision-making	Tools support TRPA staff decision-making	Tools support LTBMU staff decision-making	Tools support Science Theme development and capital improvement selection staff decision-making