

## **Draft Conservation Goals for the North Pacific LCC**

April 9, 2014

### Background:

The NPLCC has adopted a clear mission, seven specific goals ([link](#)), and has devised four strategies to outline how it will achieve the seven goals. These strategies focus on:

- Science and Traditional Ecological Knowledge (S-TEK) (completed)
- Communications and Outreach (COR) (completed)
- Partnership Engagement (under development)
- Tribes and First Nations (under development)

These strategies include measurable objectives and key information regarding the actions that will be taken to achieve these focused objectives, and thus, the seven goals of the NPLCC.

### Need Statement:

This hierarchical combination of the NPLCC's mission, goals, and objectives sets the course, guides the work, and allows us to measure our progress as an organization; but, it does not present a specific articulation of the "conservation-oriented goals and objectives" of the NPLCC. This need to be clear about our conservation goals and objectives, as opposed to our organization's goals and objectives arose recently when the FWS asked LCCs to measure their progress along several parameters.

This review, called the Science Investment and Accountability Schedule (SIAS), was developed by the Fish and Wildlife Service for two purposes: (1) to express the Services' vision for the suite of activities and actions that an LCC would accomplish as it develops as a collaborative conservation forum and (2) to help respond to Congressional direction that "the Service establish clear goals, objectives, and measurable outcomes for LCCs that can be used as benchmarks of success of the program." As such, this version of SIAS is not expected to reflect the total suite of roles with which any individual LCC may be involved as part of meeting the needs of other partners, but it is important to pay attention to SIAS performance, as future funding may be allocated based on performance of these measures.

### Purpose and Approach:

The purpose of this document is to propose a set of Conservation Goals and Objectives in a manner that is consistent with the NPLCC's charter, mission, goals, and strategies. It is an effort to pull from our S-TEK strategy as suite of conservation-based goals and objectives that are aligned with the NPLCC's already-established priority topic areas; and are consistent with the mission and overarching goals of the NPLCC. Recall that these priority topic areas were derived from an exercise that related our priority resources with significant climate-related stressors.

This set (attached) of suggested conservation goals and objectives begins with an over-all conservation and sustainable resource management goal, which is reflective of the work of our partner organizations and captures the "why" we have the NPLCC and its relationship to the work of our individual organizations. Then, a conservation goal and two objectives are presented for each Priority Topic Area in our S-TEK strategy.

### Summary and Next Steps:

Please review this set of draft conservation goals and objectives. If you have comments/suggestions, please send them to Mary Mahaffy. We will attempt to incorporate your comments and distribute

another version in advance of our Summer IN-Person meeting. This topic will be up for discussion/decision at this meeting.



## Climate-relevant Conservation and Sustainable Resource Management Goals for each NPLCC Priority Topic Area

### NPLCC Priority Resources

The NPLCC considered both valued natural and cultural resources and the climate-related stressors that act on those resources in determining the five *Priority Topics* that are the current focus of the *Science and Traditional Ecological Knowledge Strategy* of the NPLCC. Each of the five Priority Topics addresses both a Resource and a climate change-related Stressor. In identifying these Priority Topics hundreds of resource-stressor pairs were considered and prioritized based on four factors: (1) importance of information about the relationship for informing decision-makers, (2) the breadth of need for information about the relationship across NPLCC stakeholders, (3) the importance of NPLCC-level participation, and (4) the timing of the information need. Thus the Priority Resources listed below should be understood to reflect priorities with respect to improving understanding of the effect of specific stressors on each Priority Resource in order to enable more informed conservation and sustainable resource management decisions regarding that resource. Their identification as “priority resources” is not intended to be a statement about the inherent “value” of these resources, but rather a statement about the importance of [promoting the development, coordination & dissemination of science or information about the impact of a climate-related stressor on the resource to inform landscape-level conservation & sustainable resource management](#).

Priority Resource	Significant climate related stressor	Priority Topic
Rivers, Streams, and Riparian Corridors (and associated biota)	Hydrologic regime shifts	Effects of hydrologic regime shifts on Rivers, Streams, and Riparian Corridors
Forests (and associated biota)	Change in air temperature and precipitation	Effects of changes in air temperature and precipitation on forests
Marine shorelines, the Nearshore, and Estuaries (and associated biota)	Changes in sea level and coastal storms	Effects of changes in sea level and coastal storms on marine shorelines, nearshore, and estuaries
Anadromous fish	Hydrologic regime shifts	Effects of changes in the hydrologic regime on anadromous fish
Biological communities*	Diseases, pest, and invasive species	Invasive species, diseases, and pests and their effects on biological communities

\* Biological communities was defined as an emergent attribute of an ecosystem, including species composition and interactions: degree of co-evolution, predation, competition, biodiversity, mutualism, vegetative cover alterations, etc.

## **Primary Goals and Supporting Objectives**

### **Overall Conservation and Sustainable Resource Management Goal**

Increase the likelihood that the NPLCC region will continue to support its emblematic species, ecosystems, and the cultures and livelihoods that depend on them. We will accomplish this by managing in ways that anticipate climate change and related stressors thereby contributing to sustainable ecologically-connected landscapes.

### **Draft Conservation and Sustainable Resource Management Goals for each NPLCC Priority Topic Area (Resource)**

In support of the overall conservation and sustainable resource management goal for the NPLCC and the seven NPLCC-wide goals, a set of related conservation and sustainable resource management goals for each Priority Topic is proposed. A primary goal with two supporting objectives are identified for each Priority Topic.

#### **1) Effects of hydrologic regime shifts on rivers, streams, and riparian corridors**

Inform policy, management decisions, and actions of resource managers to maintain ecosystem functions so as to provide sustainable cultural, subsistence, recreational and commercial resource use and conservation of rivers, streams, and riparian corridors in light of projected changes in hydrologic regimes. This will be accomplished by:

- a) Identifying decision-relevant information needs associated with understanding how changes in hydrologic regimes will affect food webs, aquatic species populations' dynamics, ecosystem process, riparian vegetative communities, and hydrologic and geomorphic conditions.
- b) Where appropriate, developing that information and providing it to decision-makers in a manner that will be useful for promoting and informing decisions that 1) anticipate environmental changes in hydrologic systems 2) manage for reduced risk and increased adaptive capacity across the landscape, and 3) develop adaptation strategies for species, biological communities, and ecosystems across the landscape.

#### **2) Effects of change in air temperature and precipitation in forests**

Inform policy, management decisions, and actions of resource managers to maintain ecosystem functions and provide sustainable cultural, subsistence, recreational, and commercial use of forest-related resources in light of projected climate-related changes in air temperature and precipitation. This will be accomplished by:

- a) Identifying decision-relevant information needs associated with understanding how climate-driven temperature and precipitation changes will affect forest plant and animal species, including community level attributes such as trophic webs, keystone relationships, and distribution of co-evolved plant species that defines vegetative cover and supports habitat and connectivity benefitting other species.
- b) Developing that information and providing it to interested decision-makers in a manner that will be useful for promoting and informing management decisions that 1) anticipate landscape-scale changing forest conditions, 2) increase adaptive capacity, 3) reduce risk and promote resilience,

and 4) guide ecological transformation to retain connectivity and combat detrimental change (beetles, fire risk, etc).

### **3) Effects of changes in sea levels and storms on marine shorelines/nearshore/estuaries**

Inform policy, management decisions, and actions of resource managers making decisions related to coastal resources that anticipate changing sea level and storm conditions and conserve/manage/restore important natural, cultural, and economic resources. This will be accomplished by:

- a) Identifying decision-relevant information needs associated with understanding the effects (and regional variability) of sea level changes and storms on marine shorelines, nearshore and estuarine processes and habitats
- b) Developing that information and providing it to interested decision-makers in a manner that will be useful for promoting and informing management decisions that 1) anticipate sea level, storm, and coastal erosion changes in coastal marine environments; 2) manage affected natural and cultural resources for reduced risk and increased adaptive capacity, and 3) promote large scale resilience to change.

### **4) Effects of changes in the hydrologic regime on anadromous fish**

Inform policy, management decisions, and actions of resource managers to maintain healthy populations of anadromous fish species that support sustainable cultural, subsistence, recreational, and commercial use in light of projected changes in hydrologic regimes. This will be accomplished by:

- a) Identifying decision-relevant information needs associated with understanding how climate change will affect anadromous fish habitats, life histories, and population dynamics, including increased scouring of redds due to high flow events; migration barriers created by reduced summer flows or high water temperature; climate-related changes in hydropower management; and alteration of food chains in both upstream and estuarine environments
- b) Support development of that information and providing it to interested decision-makers in a form that will be useful for promoting and informing management decisions that: 1) anticipate the effects of hydrologic regime changes on anadromous fish, 2) reduce risk and increase adaptive capacity, 3) promote resilience to change, and 4) develop adaptation strategies.

### **5) Invasive species, diseases, pests and their effects on biological communities**

Inform policy, management decisions, and actions of resource managers to maintain biological communities important for biological, cultural, and economic purposes which are threatened by climate-related expansion of invasive species, diseases, and pests. This will be accomplished by:

- a) Identifying decision-relevant information needs associated with understanding how projected climate change in the region may alter conditions for invasive pathogens, parasites, plant or animal or species that harm or compete with native species in aquatic and terrestrial communities, including changes in species composition and interactions.
- b) Developing that information and providing it to interested decision-makers in a manner that will be useful for promoting and informing decision that anticipate impacts, reduce risk, and increase adaptive capacity for native and desirable non-native species and their biological communities.