

EXECUTIVE SUMMARY

March 28, 2022

Takshanuk Watershed Council
Haines, Alaska

Takshanuk Watershed Council (TWC), in southeast Alaska, will form the Greater Chilkat Watershed Working Group to produce and publish an ecosystem-based management plan for the Greater Chilkat Watershed. This working group will consist of the two local tribes - Chilkoot Indian Association (CIA) and Chilkat Indian Village (CIV), Lynn Canal Conservation (LCC), Silva Forest Foundation, Discovery Southeast, and TWC. Throughout development of the Plan, the group will engage a diverse group of stakeholders (please refer to the Technical Project Description for a detailed list of stakeholders). The Plan will subsequently be used to inform other local planning processes and documents: the Haines Borough Comprehensive Plan, the Haines State Forest Management Plan, the Alaska Chilkat Bald Eagle Preserve Management Plan, and the BLM Ring of Fire Management Plan. The Greater Chilkat Watershed is one of the most productive salmon systems on the west coast, hosting all five species of Pacific salmon and providing essential cultural, economic, and subsistence resources for the area's residents since time immemorial. Although local freshwater habitats are relatively intact, they are nonetheless facing two significant near-term threats: the unpredictable effects of climate change, and pressure from ongoing and proposed industrial development in the watershed. To address these threats, TWC will facilitate the development of the Greater Chilkat Watershed Working Group, the production of an ecosystem-based management plan, and engagement with stakeholders.

This project is expected to take two years to complete, from 1/31/2023 to 1/31/2025.

This project will involve BLM lands encompassed by the Greater Chilkat Watershed.

PROJECT LOCATION

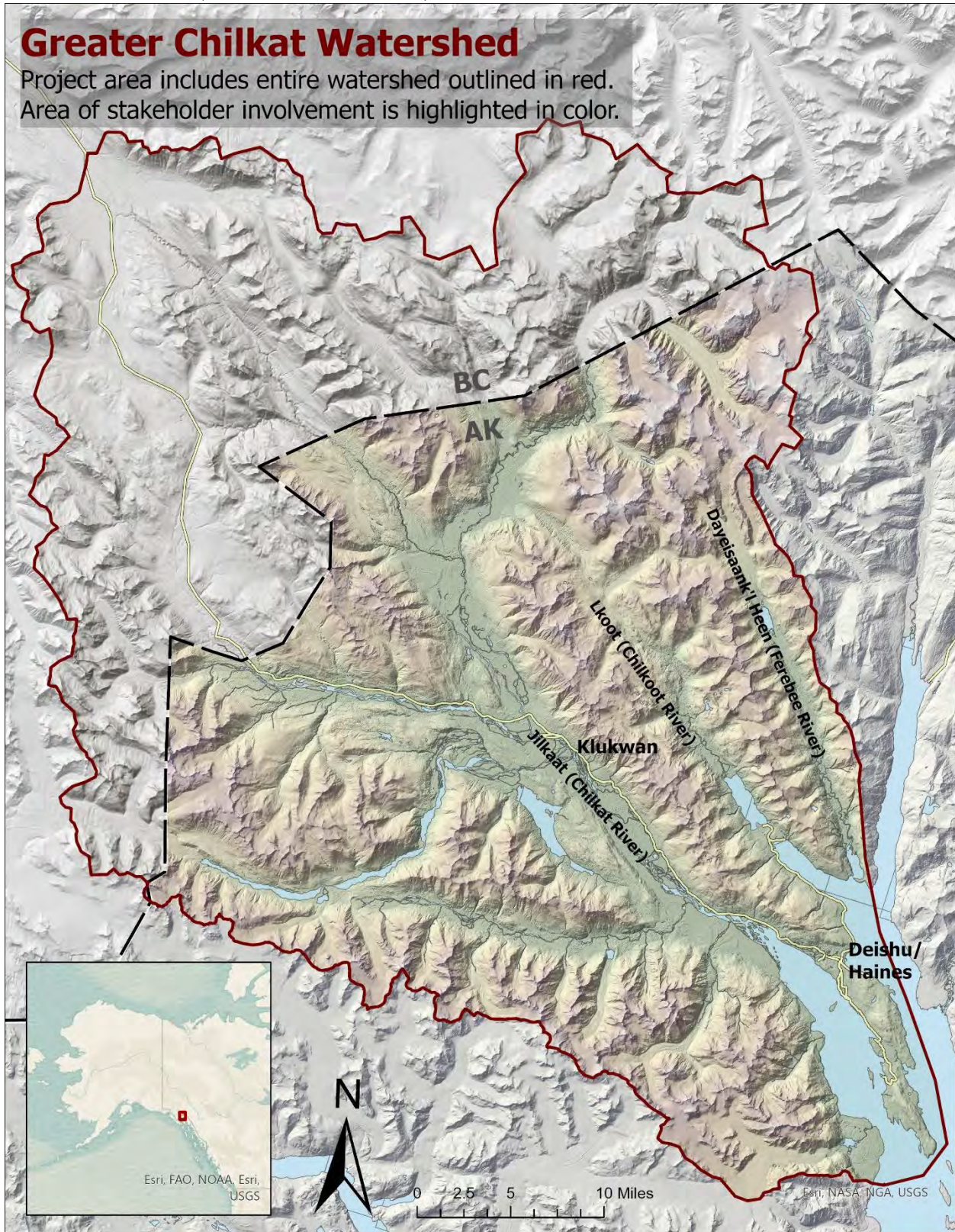
The Greater Chilkat Watershed encompasses the drainage basins of the Chilkat, Chilkoot, and Ferebee Rivers. The area is largely located within the Haines Borough of Alaska, with a small portion in the Hoonah-Angoon Census Area of Alaska around Klukwan. Its headwaters originate in British Columbia, Canada and it encompasses the communities of Deishu (Haines) and Klukwan, Alaska where group operations will be based. The United States Geological Survey (USGS) Hydrologic Unit Code is 19010303.

From Audubon Alaska's *Ecological Atlas of Southeast Alaska*: "The Chilkat River Complex lies at the end of the Inside Passage and consists of nine glacially fed rivers. Overlap of coastal and interior flora produces Alaska's highest vascular plant species richness, and the Chilkat River

watershed is one of the highest value watersheds for salmon habitat (all five species) in Southeast Alaska.” (Audubon Alaska 2010)

Greater Chilkat Watershed

Project area includes entire watershed outlined in red.
Area of stakeholder involvement is highlighted in color.



TECHNICAL PROJECT DESCRIPTION

Applicant Category: New Watershed Group

TWC seeks funding for the formation of the Greater Chilkat Watershed Working Group. The Working Group members include:

- Chilkat Indian Village (CIV-Klukwan Tribe)
- Chilkoot Indian Association (CIA-Deishu/Haines Tribe)
- Takshanuk Watershed Council (TWC)
- Lynn Canal Conservation (LCC)
- Silva Forest Foundation (SFF)
- Discovery Southeast (DS)

All members of the Working Group have previously collaborated to address specific issues within the watershed, however, this is a new endeavor to engage diverse stakeholders to develop a conservation and restoration plan for the Greater Chilkat Watershed as a whole. Ongoing collaborations between members include:

- Baseline water quality characterization in the Chilkat Watershed in response to potential large-scale, industrial mining.
- Water temperature monitoring in the Greater Chilkat Watershed in response to climate change.
- Cataloging biodiversity in the Greater Chilkat Watershed to develop an Ecological Atlas.
- Revising forest regrowth models for the Chilkat Valley using local data inputs.
- Installing engineered log jams to prevent erosion threatening the Jilkaat Kwaan Heritage Center in Klukwan.
- Cataloging and analyzing the effectiveness of restoration, enhancement, and mitigation projects in the Greater Chilkat Watershed
- Identifying restoration opportunities, and implementing restoration projects in the Greater Chilkat Watershed

As the common collaborator for all of these projects, TWC recognized the need to form a working group to leverage capacity and organize efforts in order to develop targeted approach that will prioritize limited financial resources and increase efficiency of conservation and restoration actions.

Throughout development of the Plan, the Working Group will engage the following stakeholders:

- United States Fish and Wildlife Service (FWS)
- United State Bureau of Land Management (BLM)

- Alaska Department of Fish and Game (ADFG)
- Alaska Department of Natural Resources – Haines State Forest (ADNR)
- Alaska Department of Parks and Outdoor Recreation (ADPOR)
- Alaska Chilkat Bald Eagle Preserve Advisory Committee*
- Upper Lynn Canal Fish and Game Advisory Committee*
- University of Alaska Lands Department
- Haines Borough

*These committees were specifically selected to leverage their diverse array of stakeholder participation.

Eligibility of Applicant: TWC is a non-profit organization located in Haines, Alaska. Our mission is to provide stewardship of the Chilkat, Chilkoot, and Ferebee River systems. Through restoration, education, research, and community involvement we seek to benefit the natural ecology, economy, and quality of life valued by all residents. Our vision for the Council is to promote the appreciation and sustainability of the healthy, natural ecosystems within the area. Through our initiatives, we attain a better understanding of our watershed’s ecology and use this information to foster good stewardship of the streams, rivers, lakes, and lands.

Haines, Alaska is located at the far northern end of Lynn Canal, the longest and deepest fjord in North America and the terminus of the Inside Passage. The town of Haines is situated on a narrow isthmus of land between the Chilkoot and Chilkat Rivers. The original Tlingit name for the site is Deishu, which means “the end of the trail”. Here there was an overland portage linking the two valleys, and also the start of a trail (now a road) which led up the valley, past a number of Chilkat villages, including Klukwan, and then over the mountains and into the interior of the continent. TWC serves both of these communities, whose people depend on the quality and quantity of water in the Greater Chilkat Watershed.

These watersheds encompass thousands of square miles of pristine natural habitat that supports a primeval abundance of fish and wildlife, however, degradation from urban development, resource extraction, and climate change has occurred. Salmon are the keystone organism in the dynamics of this ecosystem, as well as the primary focus of human activities, both cultural and economic. The rivers and lakes produce significant runs of all five species of Pacific salmon, as well as steelhead, cutthroat trout, and Dolly Varden char. These fish support vibrant and economically valuable subsistence, commercial, and sport fisheries. The largest runs of sockeye salmon in all of Southeast Alaska are born from the Chilkat and Chilkoot Rivers, accounting for nearly one third of the region’s total production (ADFG data).

Interest in forming a local watershed council first surfaced in 2001. In 2003, the Community Watershed Project solicited additional interest and funding to help protect, conserve, and enhance salmon fisheries and habitat, and enabled the Council to formally organize. TWC achieved 501(c)(3) status in March of 2004. Since then, TWC’s three flagship strategies—education, research, and restoration--have provided place-based environmental education for

both youth and adults, served as a technical resource for the collection and dissemination of scientific data, and rebuilt and restored aquatic habitats that had been degraded by human activity.

As a common collaborator for the majority of conservation and restoration projects in the area, TWC will serve as a facilitator and technical advisor for the Working Group. This will include preparing meeting agendas, facilitating discussion, managing outreach to stakeholders, and organizing tasks among group members, as well as providing technical expertise in development of the Plan.

Goals: The management plans currently directing resource use and conservation in the Greater Chilkat Watershed are outdated and fragmented. The Haines State Forest and Chilkat Bald Eagle Preserve Plans were both adopted in 2002. The Haines Borough Comprehensive Plan was adopted in 2012. All three of these plans are slated for a review and update by their respective agencies. The US BLM Ring of Fire Management Plan was adopted in the final days of the Trump administration. It contains “adaptive management” strategies for managing mountain goats and other wildlife that are intended to be responsive to new information and changing local community needs and values. The BLM plan may be challenged in court, and it is possible the agency will be ordered to restart the planning process, or at least revisit the proposed alternatives. The University of Alaska also owns about 13,000 acres in the Greater Chilkat Watershed. In a recent email newsletter, the UA Lands Department announced that it was moving away from a timber harvest and export model, and was looking into carbon credit markets and other conservation actions, instead.

It has been 20 years since anyone has looked at big-picture conservation and restoration planning in the Greater Chilkat Watershed, and no one has ever looked at the watershed as a unitary whole. Past planning boundaries have instead been just State Forest lands, or just Eagle Preserve lands. In producing an ecosystem-based management plan, we aim to get a head start on all of these other planning processes, complete much of the work that State agencies don’t have the resources for, and streamline conservation and restoration activities by analyzing the watershed as a whole.

“The major goal of ecosystem-based conservation planning is first to protect, maintain, and, where necessary, restore fully functioning ecosystems at all spatial and temporal scales, and then to design human activities that fit within those constraints. Ecosystem-based planning seeks to identify and understand the important ecological characteristics of a landscape or region, and then to design plans to guide the development of ecologically responsible human activities. This approach is based on the understanding that inappropriate human use of ecosystems and landscapes can have serious and long-term negative ecological, social, economic, and cultural impacts.” (Hammond 2002)

The preliminary goal of this project is to formalize the creation of the Greater Chilkat Watershed Working Group. The primary objective of this group is to influence the decision-making

processes of local land management agencies (State of Alaska, University of Alaska, and BLM), as well as project developers and permitting agencies (ADFG, ADNR) by presenting an ecosystem-focused management plan with high scientific and technical value and significant buy-in and support from affected stakeholders. The Plan will place foremost the aim of long-term ecological sustainability within the Greater Chilkat Watershed. The Plan's development will be directed by the values of the Working Group members, in particular the two local Tlingit tribal governments, CIV and CIA, and their members.

A secondary objective, but necessary for accomplishing the above, is researching, mapping, and developing a "Protected Landscape Network" for the Greater Chilkat Watershed (see the Approach section below). This exercise will greatly increase our collective understanding and knowledge of the ecology, hydrology, and geography of the watershed; providing specific information needed to direct our priorities and actions for both the conservation and restoration of important ecosystems.

Approach:

Working Group development (Task A): Members of the Working Group have already expressed support for the methods and goals expressed in this proposal. TWC will facilitate a three-part strategic planning session to ensure that the Working Group advances cohesively. The first part will involve the formalization of the group by developing a mission statement and vision statement, and determining roles within the group. In the second part we will inventory existing data and traditional knowledge about the watershed to determine data gaps and needs for development of the Plan. Finally, we will meet to develop a stakeholder outreach plan.

Watershed Restoration Planning (Task B): "Ecosystem-based conservation planning is a method of ecosystem protection, maintenance, restoration, and human use that, as the first priority, maintains or restores natural ecological integrity—including biological diversity—across the full range of spatial (from very large to very small areas) and temporal (from short to long periods of time) scales. At the same time, it provides for ecologically and culturally sustainable communities and their economies. In other words, ecosystem-based conservation planning provides a picture of the ecological framework that is necessary to protect, and the ecological limits within which human uses need to be carried out, in order to be sustainable." (silvafor.org)

The Greater Chilkat Watershed Management Plan will be based upon the development of a Protected Landscape Network (PLN). The PLN consists of protected networks of ecosystems nested within each other at multiple spatial scales. Five primary variables are considered at each spatial scale:

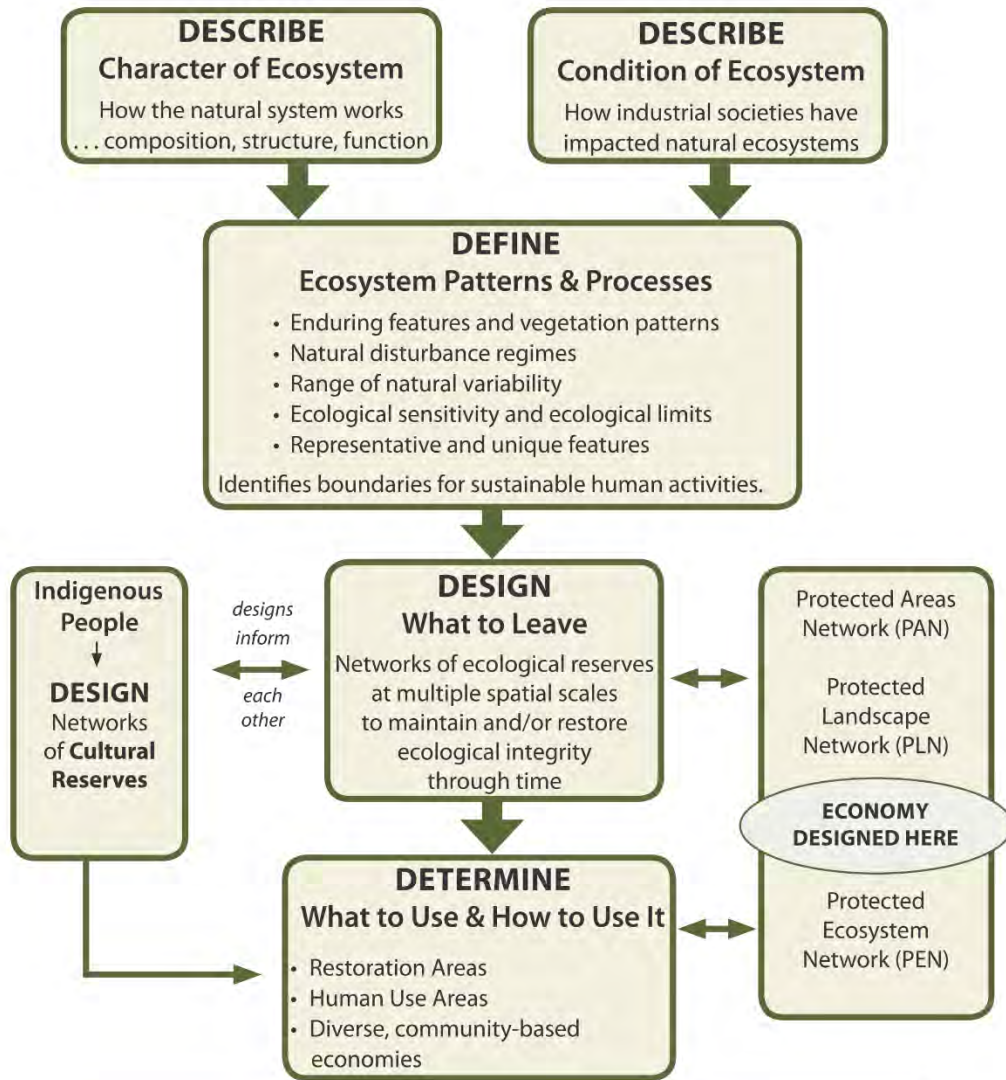
1. Ecological sensitivity
2. Unique or special features
3. Representative features

4. Focal species
5. Connectivity

Considering these five primary variables, specific components of a PLN may include:

- cultural and historically significant areas;
- old growth or late successional forests;
- riparian ecosystems, from large to ephemeral features;
- wetlands and wetland complexes;
- ecologically sensitive areas;
- naturally rare ecosystem types;
- salmon spawning and rearing waters;
- critical wildlife habitats;
- linkages or corridors that provide connectivity between and within ecosystems, groups of ecosystems, and ecological communities;
- ecosystems that provide habitat for rare, threatened, endangered genetic strains, species, and ecosystem types; and
- ecological communities that are representative of the landscape.

THE ECOSYSTEM-BASED CONSERVATION PLANNING PROCESS
 - detailed overview -



Major Goals of Ecosystem-based Conservation Planning:

- Maintain and/or restore ecological integrity across spatial and temporal scales.
- Protect and/or restore Indigenous and community land uses.
- Establish diverse, ecologically sustainable community-based economies.

Figure from Hammond 2002

Considerable research--including a literature and historic data review, GIS analyses and GIS product development--will go into the development of the Plan. Much of this baseline research and mapping has been accomplished already by Richard Carstensen and LCC as part of their “Greater Chilkat Watershed: A living atlas” project which began in 2019 and is ongoing (see References below). Carstensen has collected and compiled much of the available GIS data for the watershed, including timber inventories and historic timber harvest activities. A small amount of field work will be necessary to 1) ground truth the existing data, and 2) fill data gaps and further enhance our understanding of the landscape and its component ecosystems at multiple spatial scales. Much of this field work will be conducted by local volunteers and academic interns.

For example, a necessary field activity will be to conduct surveys of vegetation communities in logged areas of differing ages and harvest methods, and un-logged forests. LCC and TWC is currently working with three graduate students from UC Santa Barbara on this sub-project. The purpose is to gain a greater understanding of the post-logging successional regimes and timescales specifically for the diverse forest communities of the Greater Chilkat Watershed. The methods used by the Haines State Forest for calculating forest regrowth and succession and for long-term management of timber harvest activities are fairly crude and based on limited field data. This will inform the Plan not just by providing important ecological information on Chilkat forest communities, but it will also indicate areas that should be the focus of post-logging ecological restoration activities in the Plan.

All of the above work will generate extensive vegetation, wetland, and fish and wildlife habitat maps and associated information that can be shared with others, independent of the Plan itself. We have already started developing an ArcGIS Online platform for sharing this growing dataset with project partners. As the project evolves, this platform will also be used to share data with agencies and the public. Along with LCC’s “living atlas” project we hope to develop a clearinghouse for ecological, hydrological, and geographical information and be able to provide land managers, project developers, agencies, and also educators, with up-to-date and accurate information about the Greater Chilkat Watershed.

Stakeholder Outreach (Task B): More specific methods for stakeholder outreach will be developed during a strategic planning session between Working Group members. There will be significant community outreach and education associated with the development of the Plan and the dissemination of information after the Plan is completed and published. Outreach activities will orbit around presentations to the Chilkat Bald Eagle Preserve Advisory Council (CBEP AC). The CBEP AC is a legislatively designated 12-member panel delegated to recommend and assist the Division of Parks and Outdoor Recreation in planning, management, and environmental protection of the Chilkat Bald Eagle Preserve. The CBEP AC was selected to leverage its already extensive stakeholder participation. Representation on the Council includes the Haines Mayor, a Haines Assembly Member, the Haines State Forester, the regional State Parks Superintendent, CIV, CIA, USFWS, ADF&G, Klukwan Inc. (the ANCSA village corporation), a local conservation organization, the Upper Lynn Canal Fish and Game Advisory Committee

(ULCFG AC), and the tourism industry. The CBEP AC meets every other month and will provide us with regular opportunities to communicate with a broad range of agencies and stakeholders in an open public forum that is specifically dedicated to issues of local resource conservation and restoration. The Working Group will also be in regular communication with and likely making formal presentations to the Haines Borough Assembly and the Upper Lynn Canal Fish and Game Advisory Committee.

EVALUATION CRITERIA

E.1.1. Evaluation Criterion A—Watershed Group Diversity and Geographic Scope (30 points)

E.1.1.1. Sub-criterion No. A1. Watershed Group Diversity

This project is intended to engage a diverse array of stakeholders across the watershed. The core Working Group is currently supported by its members: Takshanuk Watershed Council, Chilkat Indian Village, Chilkoot Indian Association, Lynn Canal Conservation, Silva Forest Foundation, and Discovery Southeast. The activities of this group will be driven by:

- Traditional knowledge of the local indigenous people whose ancestors have depended on the quality and quantity of water in the Greater Chilkat Watershed for millennia (CIV and CIA).
- Scientific expertise and experience in research and restoration within the Greater Chilkat Watershed (TWC, CIA, CIV).
- Technical expertise in conservation and restoration planning, including GIS data collection, analysis, and cartography (TWC, SFF, DS).
- Conservation values that acknowledge the importance of a subsistence economy as well as an environmentally sustainable commercial economy (CIV, CIA, TWC, LCC, SFF, DS).

Evidence of support from Working Group members

- Letters of support from CIV, CIA, and LCC
- Contracts for preliminary work with SFF and DS, and agreements to continue work if funding is secured.

Stakeholder outreach will target:

- Local government (Haines Borough, CBEP AC)
- Federal managers (FWS, BLM, CBEP AC)
- State managers (ADFG, ADNR, ADPOR, CBEP AC)
- University of Alaska Lands Department
- Tribal governments and interests (CIV, CIA, CBEP AC)
- Local conservation organizations (TWC, LCC, CBEP AC, ULCFG AC)

- Tourism, commercial fishing, and timber industries (CBEP AC, ULCFG AC)

Other affected stakeholders may engage in public meetings through the CBEP AP and ULCFG AC, or through Working Group presentations.

E.1.1.2. Sub-criterion No. A2. Geographic Scope

The Greater Chilkat Watershed spans nearly 2,000 square miles, encompassing rugged mountainous terrain with immense glaciers at its headwaters, rich and fecund ecosystems at its bottom land, and myriad dynamic systems in between. It includes two rural communities, as well as a diverse array of resources. Similarly, it hosts vast estuaries, multiple ecotones, dynamic hydrology, and biodiversity that is unparalleled in the region. The varied nature of the Greater Chilkat Watershed indicates a need for varied input when planning for watershed management and restoration.

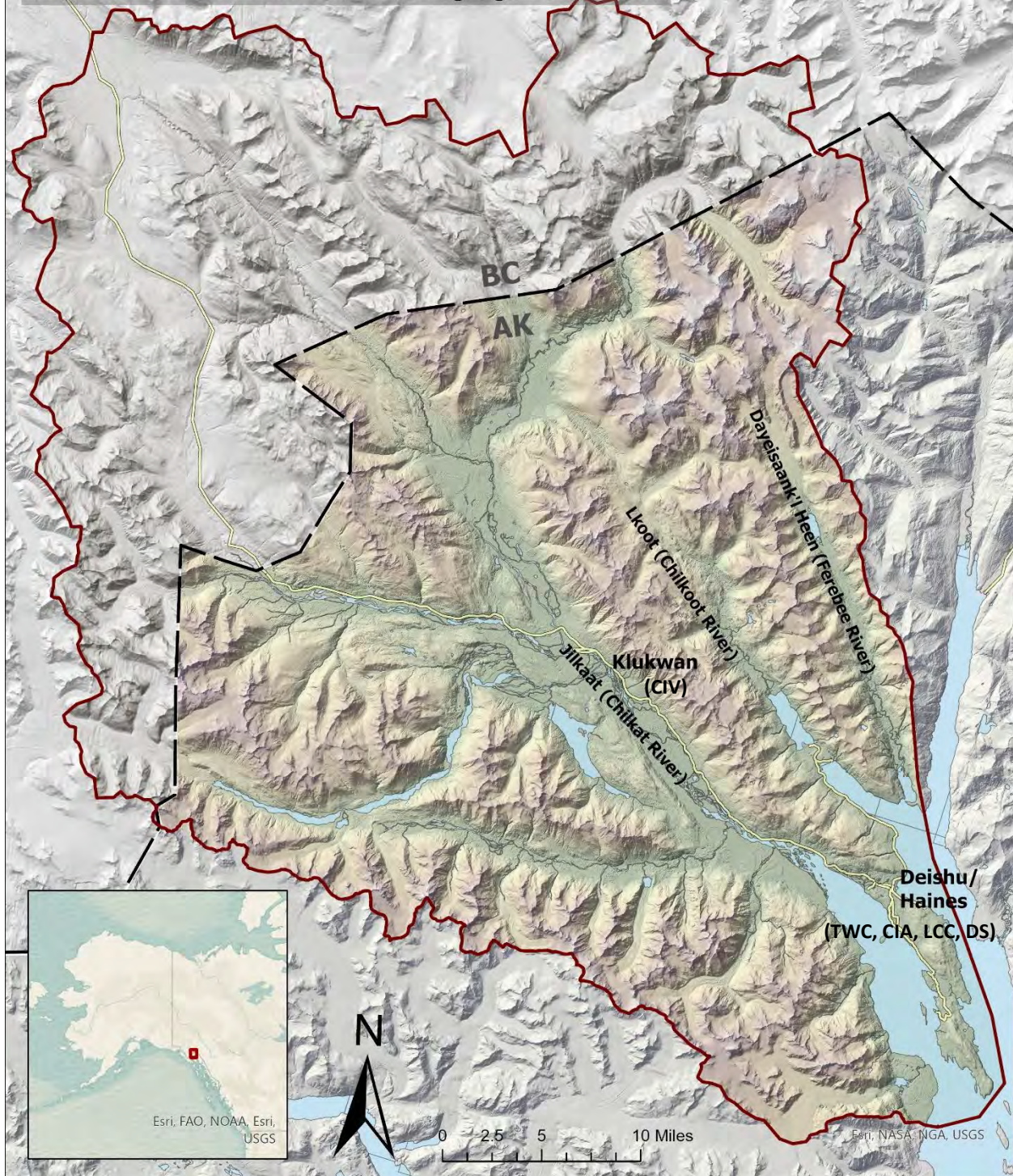
Therefore, this watershed group is intended to represent the full geographic extent of the Greater Chilkat Watershed. Perhaps most importantly, the Working Group will be largely driven by traditional indigenous knowledge of the Lingit Aani (land or territory); an historically underrepresented perspective in watershed management and restoration. This will provide the foundation for planning activities that encompass every square mile of the watershed area. The geographic scope of other Working Group members and stakeholders will layer on top of this foundation to provide input that reflects the diversity and extent of the watershed itself.

Because watersheds often span across boundaries, available and relevant data from Canada will be used to develop the Plan. While a large portion of the watershed area exists in Canada, the vast majority of wildlife, vegetation, and humans affected by water quantity and quality are concentrated in Alaska's lowlands. Stakeholder involvement and management recommendations will therefore focus on lands within the United States. Please refer to the maps below for details.

The watershed group aims to work within the entire watershed because of its high value in relation to its high risk of threat. Please see "Evaluation Criterion B – Addressing Critical Watershed Needs" for more information.

Greater Chilkat Watershed

Project area includes entire watershed outlined in red.
Area of stakeholder involvement is highlighted in color.

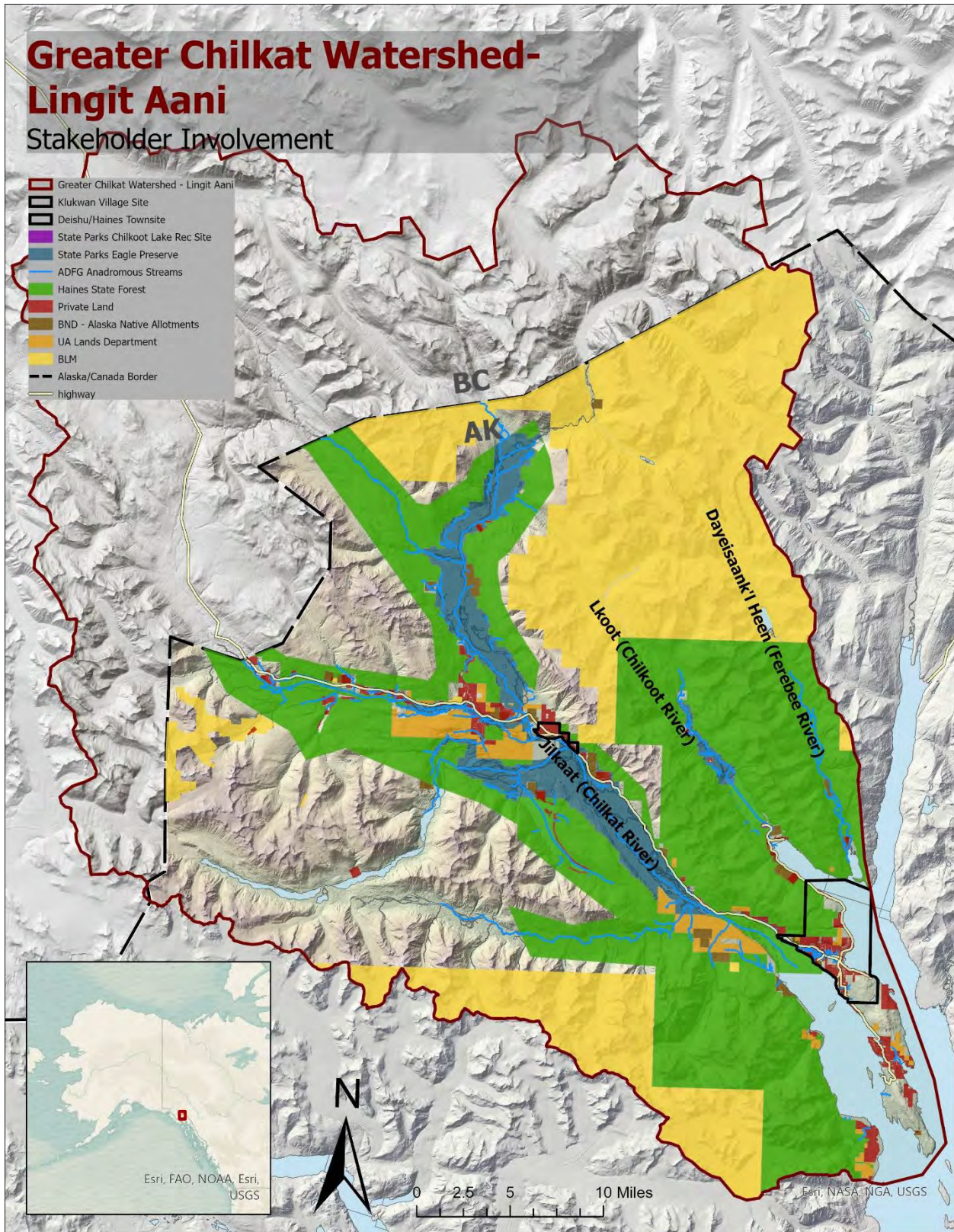


Headquarters of participating Working Group members are indicated on the map. Silva Forest Foundation is based in British Columbia, but has provided consultation for watershed planning groups throughout the world.

Greater Chilkat Watershed- Lingit Aani

Stakeholder Involvement

-  Greater Chilkat Watershed - Lingit Aani
-  Klukwan Village Site
-  Deishu/Haines Townsite
-  State Parks Chilkoot Lake Rec Site
-  State Parks Eagle Preserve
-  ADFG Anadromous Streams
-  Haines State Forest
-  Private Land
-  BND - Alaska Native Allotments
-  UA Lands Department
-  BLM
-  Alaska/Canada Border
-  highway



The entire watershed area (within the United States) represents the Haines Borough's, as well as conservation, industry, and indigenous stakeholder interests.

E.1.2. Evaluation Criterion B—Addressing Critical Watershed Needs (35 points)

E.1.2.1. Sub-criterion No. B1. Critical Watershed Needs or Issues

The Nature Conservancy and Audubon Alaska in their 2007 conservation assessment of Southeast Alaska identify the Chilkat Watershed as one of the most ecologically productive and biodiverse provinces in all of Southeast (Albert 2007). This same document also names the Chilkat as one of the least protected watersheds in the region and facing immediate risk of ecological damage from the cumulative effects of resource extraction and habitat alteration: “The provinces estimated to face the greatest ecological risks include the Chilkat River Complex...” (Albert 2007, chapter 3, page 5).

Evidence of the above includes, but is not limited to:

- **The increasing impacts of climate change on local fish/wildlife populations and their habitats.**

Continuous water and air temperature data gathered at study sites throughout the Chilkat and Chikoot watersheds is being shared with multiple research projects aimed at understanding potential implications of climate change on salmon in the region. Preliminary results show that some parts of the watershed are already experiencing the effects of climate change (Evans and Poinsette 2021). Extensive flooding has also occurred recently within the watershed, causing costly damage to infrastructure and private property, as well as wildlife habitat.

- **The listing of the Chilkat River Chinook salmon as an Alaska Department of Fish and Game (ADF&G) “Stock of Concern”.**

Recent Chinook salmon returns to the Chilkat River have been at record low levels. As a result, ADF&G has implemented unprecedented conservation measures to protect the stock, including strict limits on commercial, sport, and subsistence fishing. ADF&G’s *Chinook Salmon Stock Assessment and Research Plan* states that “there is a lack of basic physical data on stream temperature, stream flow, and explanatory landscape features that can be analyzed and compared at the regional and statewide scale.” The king salmon is a critically important cultural and subsistence resource, as well as an important economic resource.

- **Industrial and Urban Development – Past, present and future.**

- The Palmer Project, a large-scale volcanogenic massive-sulfide (VMS) mine, is proposed for development in the headwaters of the Chilkat River.

- Extensive logging has occurred within the Greater Chilkat Watershed, and current timber sales are available for mixed clear-cut and select harvest logging.

- A major reconstruction of the Haines Highway is ongoing, requiring mitigation as compensation for impacts to the Chilkat River.

- Public objection to the above activities as been extensive, and many believe that mitigation has not, or will not be sufficient. Others are concerned that inhibiting industrial development has damaged

local economies. This division suggests the need for watershed planning with broad stakeholder input and buy-in.

- **The nomination of the Chilkat River for *Outstanding National Resource Water (ONRW or “Tier 3”)* status under the Federal Clean Water Act.**

The State of Alaska is required by the Federal Clean Water Act to establish a system for the protection of water quality and water uses such that “Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.” (40 CFR §131.12). The waters afforded this highest level of protection are referred to as *Outstanding National Resource Waters (ONRW)*, or *Tier 3* waters. The Tribal Council of the Chilkat Indian Village of Klukwan has submitted a nomination to the State of Alaska, seeking these legal protections for the Chilkat River.

Like nearly all watersheds, the Greater Chilkat Watershed faces numerous threats. It is, however, the top producer of both coho and sockeye salmon in all of Southeast Alaska. The abundance of fish, wildlife, and other resources in the watershed has supported the Jilkaat and Lkoot Tlingit since time immemorial, and it continues to support them today. Salmon are the basis of a commercial fishing industry that accounts for 15% of local incomes, and most residents fill their freezers and canning jars with subsistence-caught fish and game. Moose, bears, and mountain goats are particularly important wildlife resources, providing not just food, but also wool for traditional weaving

The people of the Greater Chilkat Watershed wish to conserve and sustain this natural wealth long into the future. Despite a recent history of clear-cut logging and placer mining, local habitats are still relatively intact, and are in fact slowly recovering. Nonetheless, the watershed is facing two significant near-term threats: the unpredictable effects of climate change, and pressure from ongoing and proposed industrial development in the watershed. The human communities of Haines, Deishu, and Klukwan rely on the resources provided by the Chilkat Watershed for both sustenance and commerce. Klukwan is acknowledged as one of the longest continuously-inhabited human settlements in North America, and the people of the Watershed have been caring for and maintaining these abundant resources for a thousand years or more. An eco-centric conservation and restoration plan, developed in collaboration with the Chilkat and Chilkoot Tribal governments (CIV and CIA), will provide a timely guidepost toward another thousand years of sustainable resource management.

E.1.2.2. Sub-criterion No. B2. Developing Strategies to Address Critical Watershed Needs or Issues

Task A: Water Group Development:

Three-part strategic planning session

- Develop a mission statement and vision statement, and determine roles within the group.
- Inventory existing data and traditional knowledge about the watershed to determine data gaps and needs for development of the Plan.
- Develop a stakeholder outreach plan.

The Greater Chilkat Watershed encompasses stakeholders as diverse and abundant as the threats that face the resources, wildlife, and habitat within. Therefore, it is critical that we form a working group that reflects this diversity to develop a holistic management and restoration plan with significant buy-in from a variety of stakeholders.

The core Working Group has decades of experience working together on specific projects. This grant would allow us to use the capacity that we have built together to inventory our previous efforts, identify gaps in our efforts, and reach out to stakeholders so that we may expand the reach of our work to the entire Greater Chilkat Watershed.

Task B: Watershed Restoration Planning:

The management plans currently directing resource use and conservation in the Greater Chilkat Watershed are outdated and fragmented. The Haines State Forest and Chilkat Bald Eagle Preserve Plans were both adopted in 2002. The Haines Borough Comprehensive Plan was adopted in 2012. All three of these plans are slated for a review and update by their respective agencies. The US BLM Ring of Fire Management Plan was adopted in the final days of the Trump administration. It contains “adaptive management” strategies for managing mountain goats and other wildlife that are intended to be responsive to new information and changing local community needs and values. The BLM plan may be challenged in court, and it is possible the agency will be ordered to restart the planning process, or at least revisit the proposed alternatives. The University of Alaska also owns about 13,000 acres in the Greater Chilkat Watershed. In a recent email newsletter, the UA Lands Department announced that it was moving away from a timber harvest and export model, and was looking into carbon credit markets and other conservation actions, instead.

It has been 20 years since anyone has looked at big-picture conservation and restoration planning in the Greater Chilkat Watershed, and no one has ever looked at the watershed as a unitary whole. Past planning boundaries have instead been just State Forest lands, or just Eagle Preserve lands. In producing an ecosystem-based management plan, we aim to get a head start on all of these other planning processes, complete much of the work that State agencies don’t have the resources for, and streamline conservation and restoration activities by analyzing the watershed as a whole.

Considerable research--including a literature and historic data review, consultation with state and federal agencies, review of existing models, GIS analyses and GIS product development, and a small amount of field work--will go into the development of this Plan. Much of this baseline

research and mapping has been accomplished already by Richard Carstensen and LCC as part of their “Greater Chilkat Watershed: A living atlas” project which began in 2019 and is ongoing (see References below). Carstensen has collected and compiled much of the available GIS data for the watershed, including timber inventories and historic timber harvest activities. Remote sensing data will be collected with a drone and contributed to the project as part of ongoing research by TWC. Any data gaps identified during strategic planning will be addressed during research efforts. This process of finding and compiling existing information will continue as field work commences. The purpose of the field work is to 1) ground truth the existing data, and 2) fill data gaps and further enhance our understanding of the landscape and its component ecosystems at multiple spatial scales. Field work is expected to be minimal due to the amount of existing data, and volunteers or collaboration with universities will be used to the extent possible.

In developing the Plan, the group will analyze the information to identify issues that may present conflicts. Stakeholders will be asked to prioritize a set of input values, which will be designated to the geographic scope that applies to their group. Areas of value conflict or overlap will be determined and ranked using GIS software and mapped. This will be used as a tool for conflict resolution. Similarly, issues and restoration opportunities identified during the research stage will be given prioritized input values and ranked using GIS software and mapped.

This work will generate extensive vegetation, wetland, and fish and wildlife habitat maps and associated information that can be shared with others, independent of the Plan itself. We have already started developing an ArcGIS Online platform for sharing this growing dataset with project partners. As the project evolves, this platform will also be used to share data with agencies and the public. Along with LCC’s “living atlas” project we hope to develop a clearinghouse for ecological, hydrological, and geographical information and be able to provide land managers, project developers, agencies, and also educators, with up-to-date and accurate information about the Greater Chilkat Watershed.

E.1.3. Evaluation Criterion C—Implementation and Results (25 points)

E.1.3.1. Sub-criterion No. C1—Project Implementation

Strategic Planning

- Formalize Working Group
 - Mission and vision statements, defined roles
 - 2/1/2023-3/1/23
 - \$2,500
- Inventory information
 - Inventory of existing data and traditional knowledge
 - Identified data gaps
 - 3/1/2023-4/1/2023

- \$20,000
- Develop outreach plan
 - Outreach plan
 - 4/1/2023-5/1/2023
 - \$4,500

Watershed Restoration Planning

- Implement outreach plan to involve stakeholders.
 - Stakeholder buy-in
 - 5/1/2023-12/31/2024
 - \$18,000
- Research and compile all available data, reports, and GIS products relevant to the ecology of the Greater Chilkat Watershed in order to fill data gaps.
 - Updated inventory of data
 - 5/1/2023-4/30/2024
 - \$45,000
- Collaborate with CIV and CIA project partners on assembling relevant information on cultural, subsistence, and other resources that are important to local tribal members.
 - Inventory of important indigenous sites
 - 5/1/2023-4/30/2024
 - \$36,000
- Conduct field work to ground-truth historic data sets and identify data gaps that need to be filled.
 - Complete dataset
 - 5/1/2023-10/31/2023
 - \$27,000
- Construct the framework of core conservation areas and habitat linkages. Identify and prioritize conflicts, issues, and restoration opportunities.
 - Analyzed dataset
 - 11/1/2023-4/30/2024
 - \$18,000
- Draft management plan.
 - Draft conservation and restoration plan for the Greater Chilkat Watershed
 - 5/1/2024-9/31/2024
 - \$72,000
- Publish the associated data and GIS resources on line.
 - ArcGIS Online clearinghouse
 - 5/1/2023-9/31/2024
 - \$4,500
- Present Plan to stakeholders for review and edit.
 - Final conservation and restoration Plan for the Greater Chilkat Watershed
 - 10/1/2024-11/31/2024
 - \$4,500

- Publish and disseminate Plan for use.
 - Effective tool for watershed conservation and restoration in the Greater Chilkat Valley!
 - 12/1/2024-12/31/2024
 - \$18,000

E.1.3.2. Sub-criterion No. C2—Building on Relevant Federal, State, or Regional Planning Efforts

This Plan is intended to inform updates and consolidate information for the following plans:

- Haines State Forest Plan
- Chilkat Bald Eagle Preserve Plan
- Haines Borough Comprehensive Plan
- US BLM Ring of Fire Management Plan

It is also intended to inform the planning efforts of all stakeholders.

E.1.4. Evaluation Criterion D—Presidential and Department of the Interior Priorities (10 points)

Sub-criterion No. E1. Climate Change:

The climate is changing rapidly in the North. Over the next 50 years, Southeast Alaska can expect to see an increase in mean annual air temperature of 2 to 4 °C, as well as drier summers and wetter autumns. These factors, along with watershed characteristics and stream morphology, drive the potential for widespread and rapid changes in stream temperature and the local aquatic environment. The region is also heavily glaciated, and we expect to see significant changes in both glacial runoff and precipitation patterns, which will greatly impact habitat. The generalized effects of water temperature on the health, growth, and behavior of aquatic life, especially salmon, are well studied and well understood. What are not well documented are the specific local processes that are occurring on the landscape and within the habitat, especially over a time scale of years and decades.

This Plan is intended to use existing data to identify threats from climate change, as well as potential refugia and restoration opportunities so that we might protect, and even increase resiliency in the face of the climate crisis. An example of this would be to highlight cold-water refugia identified by an ongoing temperature monitoring program, so that it may be protected or restored, increasing the resiliency of salmon populations in a warming climate.

Sub-criterion No. E2. Disadvantaged or Underserved Communities:

This project will serve the economically disadvantaged communities of Haines and Klukwan by addressing water quality and resource conservation issues in the Greater Chilkat Watershed. The

human communities of Haines, Deishu, and Klukwan rely on the resources provided by the Greater Chilkat Watershed for both sustenance and commerce. Klukwan is acknowledged as one of the longest continuously-inhabited human settlements in North America, and the people of the Watershed have been caring for and maintaining these abundant resources for a thousand years or more.

According to the 2020 US Census, the total population of the Haines Borough is 2,080. 16% identify as Alaska Native. The poverty rate is 11.3%. In Klukwan, which is not a part of the Haines Borough, 91% of residents identify as Alaska Native, and the poverty rate is 9.7%.

E.1.5. Sub-criterion No. E.3. Tribal Benefits

The upper Chilkat Valley is *Jilkaat Kwaan Aani* (“the land of the Chilkat people”). Chilkat Indian Village is the sovereign Tribal government based in Klukwan. The lower valley and the Haines town site are *Lkoot Kwaan Aani*, and Chilkoot Indian Association is the sovereign Tribal government based in Haines.

In 2015, TWC was contracted by the village of Klukwan (CIV) to assist and train tribal staff in implementing a water monitoring program. This was in response to climate change and potential impacts to aquatic habitats, as well as ongoing mineral exploration and the potential for large-scale mining in the headwaters of *Jilkaat Kwaan Aani*. This water monitoring effort has since expanded to include Chilkoot Indian Association and the Central Council of Tlingit and Haida, the regional tribal organization based in Juneau. This water conservation project has built cooperation and capacity within all partnering organizations, working together to implement and execute habitat research and restoration projects, as well as provided opportunities to engage with state and federal regulators, the mining company, politicians, and others in the ongoing discussion of the very real impacts already occurring as a result of climate change, as well as the potential for large-scale industrial development. The Greater Chilkat Watershed Working Group will be a natural evolution of these long-term collaborative relationships that have already been established between the two local tribal governments, and the other working group members.

The communities of Klukwan and Haines rely on clean water resources from the Chilkat Watershed, especially salmon and eulachon, which to this day are the cultural and economic lifeblood of the region. The people's livelihoods and identity revolve around hunting, fishing (both subsistence and commercial), and gathering. It is our collective vision that this ecosystem conservation and restoration planning project will serve the interests of CIV and CIA tribal members by associating the traditions and wisdom of our Tlingit elders with Western science and resource management, and it will provide a conduit for exerting tribal influence over local land management agencies and politics—a process that has been lacking, or even absent, since the

time of European colonization. It is expected that developing this Working Group will contribute greatly to local resource conservation and restoration efforts, while providing tools, and solidarity, that may be employed in helping our small community face a rapidly shifting physical and biological environment, and to the greatest possible extent, sustain the bounty of the Chilkat Watershed for the benefit of our children and grandchildren, just as our ancestors did before us.

BUDGET PROPOSAL

Table 1

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
1. Lynn Canal Conservation	\$42,000
2. Takshanuk Watershed Council	\$50,200
REQUESTED RECLAMATION FUNDING	\$178,620

Table 2

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	\$178,620
Costs to be paid by the applicant	\$50,200
Value of third-party contributions	\$42,000
TOTAL PROJECT COST	\$270,820

Table 3. **RECLAMATION PORTION OF BUDGET HIGHLIGHTED**

SALARIES AND WAGES	
Derek Poinette, TWC Executive Director. \$40/hour. 1200 hours	\$48,000
Stacie Evans, TWC Science Director. \$40/hour. 1200 hours	\$48,000
Tracy Wirak-Cassidy, TWC Education Coord. \$40/hour. 400 hours	\$16,000
Dan Schultz, TWC Biologist. \$40/hour. 200 hours	\$8,000
LCC Staff Time. \$40/hour. 800 hours	\$32,000
FRINGE. None.	\$0
EQUIPMENT	
DJI Matrice 30T (unmanned aerial vehicle)	\$16,000
SUPPLIES	
ArcGIS Pro and Drone2Map software. \$1500/year. 2 years	\$3,000
CONTRACTUAL	
CIV Environmental Program Staff. \$50/hour. 160 hours	\$8,000
CIA Environmental Program Staff. \$50/hour. 160 hours	\$8,000
Herb Hammond, Silva Forest Foundation. \$150/hour. 60 hours	\$9,000
Richard Carstensen, Discovery Southeast. \$50/hour. 180 hours	\$9,000
LCC contract with Silva Forest Foundation	\$10,000
THIRD-PARTY IN-KIND	
TWC Office and Conference Space. \$200/month. 48 months	\$9,600
TWC River Boat. \$300/day rental equivalent rate. 40 days	\$12,000
TWC Pickup Trucks. \$80/day rental equivalent rate. 120 days	\$9,600

TOTAL DIRECT COSTS	\$246,200
INDIRECT COSTS	
Di Minimis. 10% of \$246,200	\$24,620
TOTAL ESTIMATED PROJECT COSTS	\$270,820

BUDGET NARRATIVE

SALARIES AND WAGES

Derek Poinsette, TWC Executive Director and *Program Manager*. \$40/hour. 1200 hours.

1. Formalize working group – 10 hours
2. Inventory information – 90 hours
3. Develop outreach plan – 20 hours
4. Implement outreach plan – 80 hours
5. Research and compile data and GIS products – 200 hours
6. Collaborate with CIV and CIA on assembling cultural information – 160 hours
7. Conduct field work – 120 hours
8. Construct conservation areas framework – 80 hours
9. Draft management plan – 320 hours
10. Publish data and GIS products online – 20 hours
11. Present plan to stakeholders – 20 hours
12. Publish final plan – 80 hours

Stacie Evans, TWC Science Director. \$40/hour. 1200 hours.

1. Formalize working group – 10 hours
2. Inventory information – 90 hours
3. Develop outreach plan – 20 hours
4. Implement outreach plan – 80 hours
5. Research and compile data and GIS products – 200 hours
6. Collaborate with CIV and CIA on assembling cultural information – 160 hours
7. Conduct field work – 120 hours
8. Construct conservation areas framework – 80 hours
9. Draft management plan – 320 hours
10. Publish data and GIS products online – 20 hours
11. Present plan to stakeholders – 20 hours
12. Publish final plan – 80 hours

Tracy Wirak-Cassidy, TWC Education Coordinator. \$40/hour. 400 hours.

1. Formalize working group – 10 hours
2. Inventory information – 10 hours

3. Develop outreach plan – 20 hours
4. Implement outreach plan – 80 hours
5. Research and compile data and GIS products – 0 hours
6. Collaborate with CIV and CIA on assembling cultural information – 120 hours
7. Conduct field work – 20 hours
8. Construct conservation areas framework – 80 hours
9. Draft management plan – 20 hours
10. Publish data and GIS products online – 0 hours
11. Present plan to stakeholders – 20 hours
12. Publish final plan – 0 hours

Dan Schultz, TWC Biologist. \$40/hour. 200 hours.

1. Formalize working group – 0 hours
2. Inventory information – 20 hours
3. Develop outreach plan – 0 hours
4. Implement outreach plan – 0 hours
5. Research and compile data and GIS products – 100 hours
6. Collaborate with CIV and CIA on assembling cultural information – 0 hours
7. Conduct field work – 80 hours
8. Construct conservation areas framework – 0 hours
9. Draft management plan – 20 hours
10. Publish data and GIS products online – 0 hours
11. Present plan to stakeholders – 0 hours
12. Publish final plan – 0 hours

LCC Staff Time. \$40/hour. 800 hours.

1. Formalize working group – 10 hours
2. Inventory information – 30 hours
3. Develop outreach plan – 20 hours
4. Implement outreach plan – 80 hours
5. Research and compile data and GIS products – 200 hours
6. Collaborate with CIV and CIA on assembling cultural information – 160 hours
7. Conduct field work – 20 hours
8. Construct conservation areas framework – 80 hours
9. Draft management plan – 120 hours
10. Publish data and GIS products online – 20 hours
11. Present plan to stakeholders – 20 hours
12. Publish final plan – 40 hours

EQUIPMENT

DJI Matrice 30T. \$16,000. Unmanned aerial vehicle (drone) for surveying, mapping, and collecting ecological and other data throughout the landscape. Drone will be owned and operated by TWC. Derek Poinsette is a licensed drone pilot.

SUPPLIES

ArcGIS Pro and Drone2Map software. \$1500/year for 2 years. \$3000. Software is required for drone mapping and surveying functions and publishing these products in maps to be included in the conservation and restoration plan, and also online.

CONTRACTUAL

CIV Environmental Program Staff. \$50/hour. 160 hours. \$8,000.

1. Formalize working group – 10 hours
2. Inventory information – 10 hours
3. Develop outreach plan – 10 hours
4. Implement outreach plan – 10 hours
5. Research and compile data and GIS products – 0 hours
6. Collaborate with Working Group on assembling cultural information – 80 hours
7. Conduct field work – 0 hours
8. Construct conservation areas framework – 0 hours
9. Draft management plan – 20 hours
10. Publish data and GIS products online – 0 hours
11. Present plan to stakeholders – 10 hours
12. Publish final plan – 10 hours

CIA Environmental Program Staff. \$50/hour. 160 hours. \$8,000.

1. Formalize working group – 10 hours
2. Inventory information – 10 hours
3. Develop outreach plan – 10 hours
4. Implement outreach plan – 10 hours
5. Research and compile data and GIS products – 0 hours
6. Collaborate with Working Group on assembling cultural information – 80 hours
7. Conduct field work – 0 hours
8. Construct conservation areas framework – 0 hours
9. Draft management plan – 20 hours
10. Publish data and GIS products online – 0 hours
11. Present plan to stakeholders – 10 hours
12. Publish final plan – 10 hours

Herb Hammond, Silva Forest Foundation. \$150/hour. 60 hours.

1. Formalize working group – 0 hours
2. Inventory information – 10 hours
3. Develop outreach plan – 0 hours
4. Implement outreach plan – 0 hours
5. Research and compile data and GIS products – 10 hours
6. Collaborate with Working Group on assembling cultural information – 10 hours
7. Conduct field work – 0 hours
8. Construct conservation areas framework – 10 hours
9. Draft management plan – 10 hours
10. Publish data and GIS products online – 0 hours
11. Present plan to stakeholders – 0 hours
12. Publish final plan – 10 hours

Richard Carstensen, Discovery Southeast. \$50/hour. 180 hours.

1. Formalize working group – 0 hours
2. Inventory information – 40 hours
3. Develop outreach plan – 0 hours
4. Implement outreach plan – 0 hours
5. Research and compile data and GIS products – 40 hours
6. Collaborate with Working Group on assembling cultural information – 10 hours
7. Conduct field work – 10 hours
8. Construct conservation areas framework – 20 hours
9. Draft management plan – 20 hours
10. Publish data and GIS products online – 20 hours
11. Present plan to stakeholders – 0 hours
12. Publish final plan – 20 hours

LCC contract with Silva Forest Foundation. \$150/hour. 67 hours. \$10,000.

1. Formalize working group – 0 hours
2. Inventory information – 57 hours
3. Develop outreach plan – 0 hours
4. Implement outreach plan – 0 hours
5. Research and compile data and GIS products – 10 hours
6. Collaborate with Working Group on assembling cultural information – 0 hours
7. Conduct field work – 0 hours
8. Construct conservation areas framework – 0 hours
9. Draft management plan – 0 hours
10. Publish data and GIS products online – 0 hours
11. Present plan to stakeholders – 0 hours
12. Publish final plan – 0 hours

THIRD-PARTY IN-KIND

TWC offices and conference room. \$200/month. 48 months. \$9,600. Shared use (with other projects) of TWC-owned office building for project tasks including meetings, report writing, IT infrastructure, etc.

TWC river boat. \$300/day rental equivalent rate. 40 days. \$12,000. Travel to remote areas on the Chilkat and Chilkoot rivers will be required for gathering field data and mapping.

TWC pickup trucks. \$80/day rental equivalent rate. 120 days. \$9,600. Travel up and down the valley on the Haines Highway to meetings in Klukwan and for conducting field work.

INDIRECT COSTS

10% di minimis indirect. \$24,620. Indirect costs and general overhead. Office supplies and operational costs. IT and telecom infrastructure. Personnel management. Financial management of project and organization. Taxes, insurance, and other fees.



Chilkoot Indian Association

Federally Recognized Tribe

P.O. Box 490 Haines, Alaska 99827 907.766.2323

The Chilkoot Indian Association (CIA) would like to lend its support to the Takshanuk Watershed Council's (TWC) proposal to research and develop an ecosystem-based conservation plan for the Greater Chilkat Watershed. This project will identify and map important fish, wildlife, subsistence, and cultural resource areas, and their supporting ecosystems, throughout the Chilkat and Chilkoot River watersheds.

CIA environmental program staff will work with TWC on identifying specific areas and resources that are important to CIA tribal members. The plan will identify core areas that need to be preserved for the protection of ecological and cultural values, areas in need of ecological restoration and recommendations for restoration activities, areas needed to maintain ecological connectivity throughout the landscape, and areas appropriate for human activities such as timber harvest along with recommendations for how these activities should be conducted. Finally, the Plan will address the concept of sustainable human economies and will provide suggestions for ways that we can encourage the development of such an economy here in the Chilkat Watershed.

This plan will also be used to influence the resource management plans of local land managers—the Haines State Forest, the Chilkat Bald Eagle Preserve, the US BLM, and the University of Alaska primarily—to conserve these important subsistence and cultural resource areas, fish and wildlife habitats, and ecosystems, for long term sustainability.

Luke Williams

Environmental Coordinator

CHILKAT INDIAN VILLAGE



"Yee gu.aa yax x'wan."

**An Indian Reorganization Act Village
Under Act of Congress June 15th 1935**
32 Chilkat Avenue Klukwan, Alaska
HC60 Box 2207 Haines, Alaska 99827
Phone: (907) 767-5505
Fax: (907) 767-5518
Email: klukwan@chilkat-nsn.gov

Date: January 7, 2022

Re: Letter of Support for the Takshanuk Watershed Council's grant proposal to create a conservation plan for the Chilkat River Watershed

Dear United States Fish and Wildlife Service,

My name is Jones Hotch Jr.. I am the Vice President of the Tribal Council of the Chilkat Indian Village (CIV) Klukwan. We would like to express support for the Takshanuk Watershed Council's (TWC) proposal to create a Greater Chilkat Watershed Conservation Plan. As we understand, the Plan will identify core areas throughout the watershed that need to be preserved for the protection of cultural and ecological values; areas that are in need of ecological restoration (old clear-cuts, for example); areas needed to maintain connectivity throughout the landscape; and areas appropriate for human activities such as timber harvest, along with recommendations for how these activities should be conducted. CIV environmental program staff and Tribal Council will support TWC and other project partners to ensure specific areas and resources that are important to CIV tribal members and Klukwan residents are identified during the planning process and incorporated into the final plan.

A conservation plan that includes our conservation priorities for the Chilkat Valley will support our Tribal Government's ongoing efforts to protect and enhance the land, waters, plants and animals that are vital to the prosperity of the Jilkaat Kwaan.

Gunalchéesh,

Jones Hotch Jr.
Chilkat Indian Village (Klukwan)
Tribal Council Vice President



Lynn Canal Conservation

biodiversity+protection resilience

Proactive Conservation Grant Review Team
U.S Fish & Wildlife Service Alaska Region
1011 East Tudor Rd
Anchorage, Alaska 99503

January 3, 2022

Members of the Review Board,

Lynn Canal Conservation (LCC) is pleased to offer our full support to the Ecosystem-Based Planning Project proposed by Takshanuk Watershed Council (TWC). TWC routinely produces work with the highest scientific integrity, work that is timely, needed, and relevant. The Ecosystem-Based Planning Project is responsive to the urgent need for greater ecological understanding and forward-thinking, large landscape planning in the Chilkat watershed.

LCC is currently working with Herb Hammond of the Silva Forest Foundation on a smaller project. We find Mr. Hammond's approach and expertise to be of the highest possible standard, and we recommend him without reservation. LCC has devoted funds to related projects that will support and inform the Ecosystem-Based Planning Project, should the project go through, including \$10,000 to an ecological assessment of the Haines State Forest Management plan and \$27,000 for an ecological atlas of the Chilkat watershed. Both projects will inform and support the Ecosystem-Based Planning Project proposed by TWC. In my capacity as LCC director, I will devote at least \$6,400 of my time to collaboration with TWC on the planning project. Please consider the above to be in-kind matches to TWC's grant proposal.

The Chilkat Valley is a unique landscape with irreplaceable ecological values. An ecosystem-based plan will benefit this landscape and its people, and provide for a more resilient future.

Sincerely,

[Jessica Plachta](#)
Executive Director
Lynn Canal Conservation
PO Box 964 Haines, Alaska 99827