

Jilkáat Aani ƙa Héeni

The Chilkat Watershed

SEAKFHP Partners Call
June 8, 2023



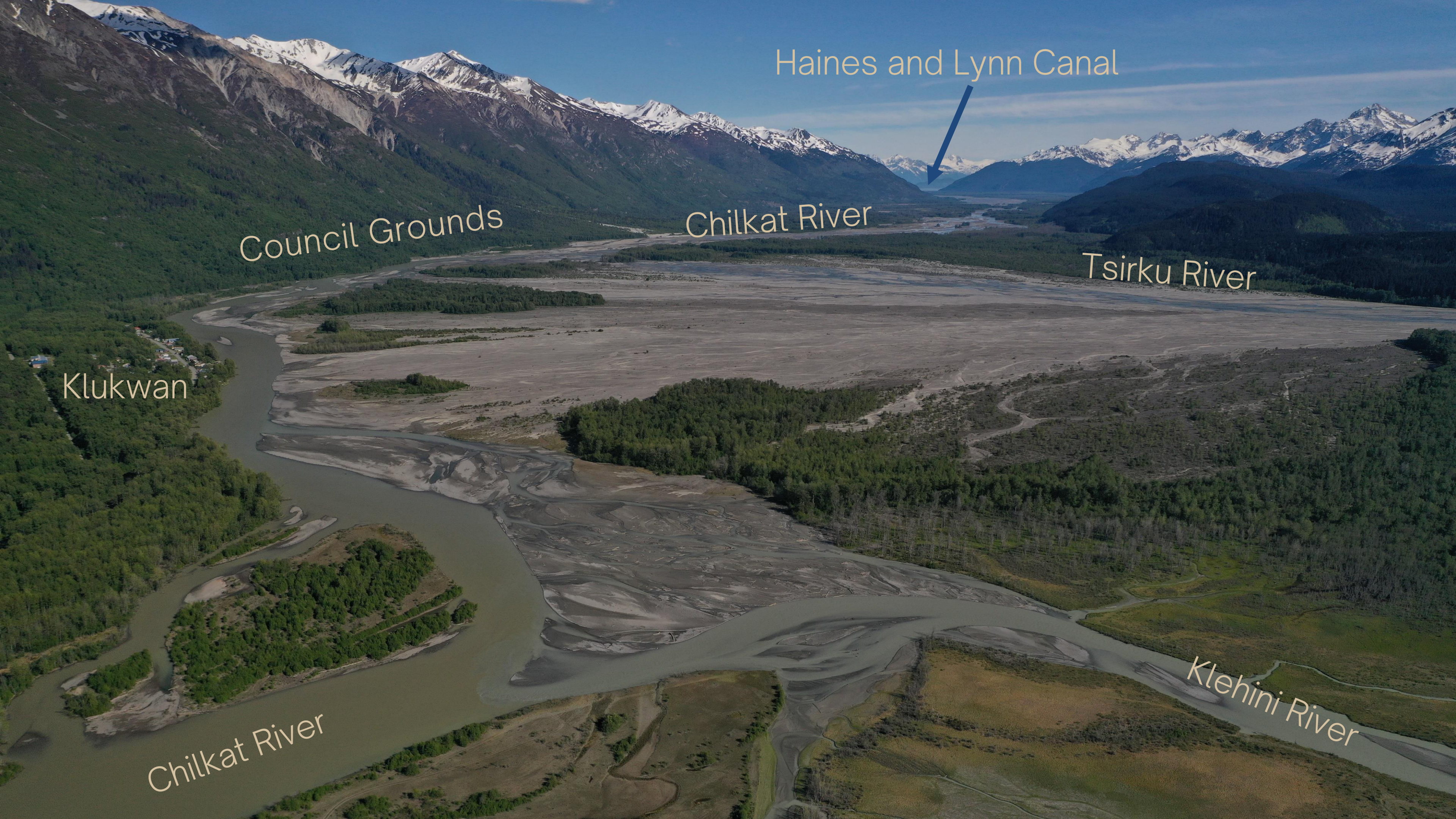
An aerial photograph of the Chilkat River in Southeast Alaska during sunset. The river flows from the background towards the foreground, winding through a lush green forested valley. The water is a milky, light brown color, reflecting the vibrant orange and pink hues of the setting sun. In the background, snow-capped mountains rise against a sky filled with colorful clouds. The foreground shows dense evergreen forests and some smaller water bodies or wetlands.

Jilkáat Aani ƙa Héeni

“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.”

from Audubon Alaska’s Ecological Atlas of Southeast Alaska





Haines and Lynn Canal



Council Grounds

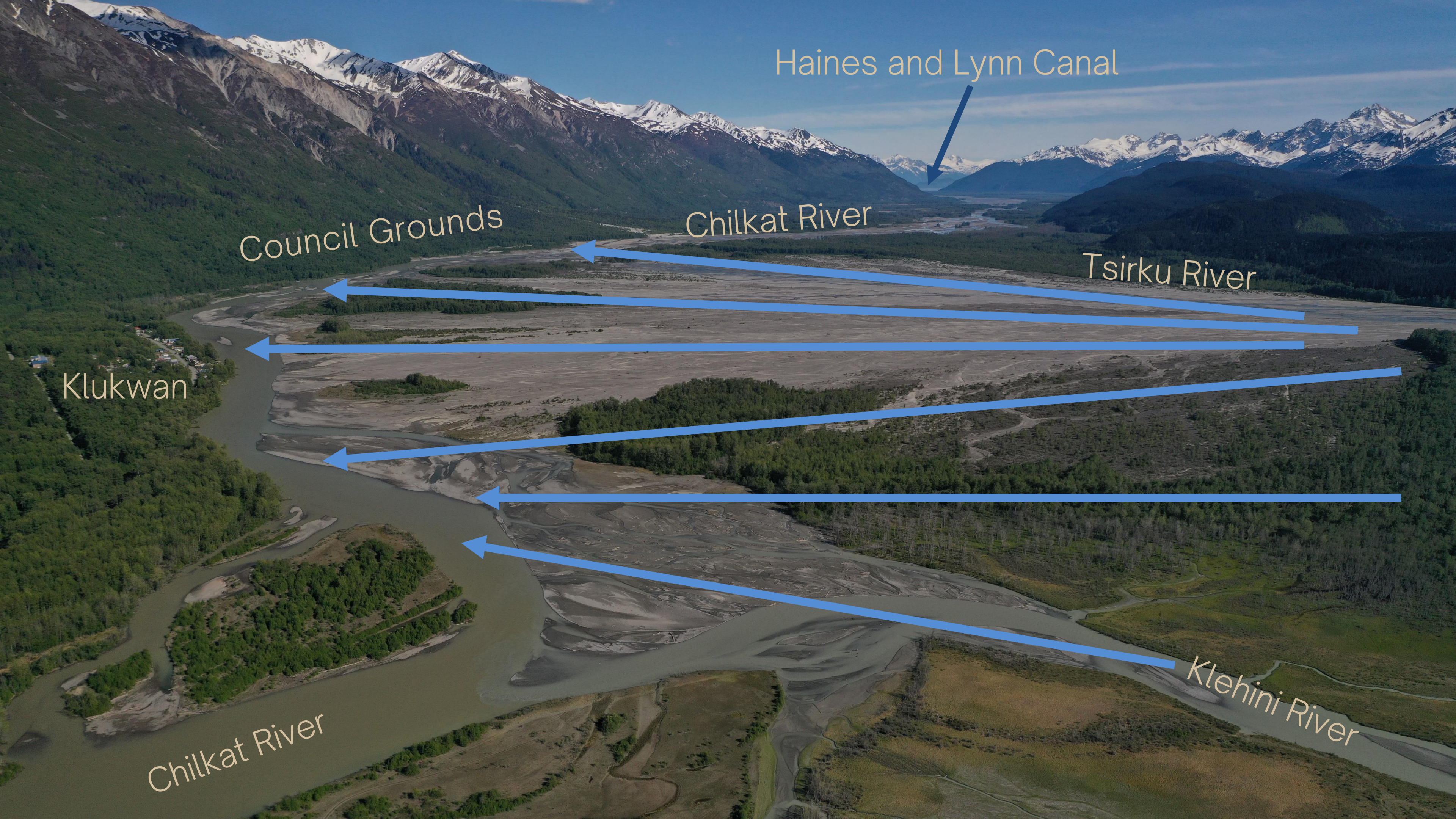
Chilkat River

Tsirku River

Klukwan

Chilkat River

Klehini River



Haines and Lynn Canal

Council Grounds

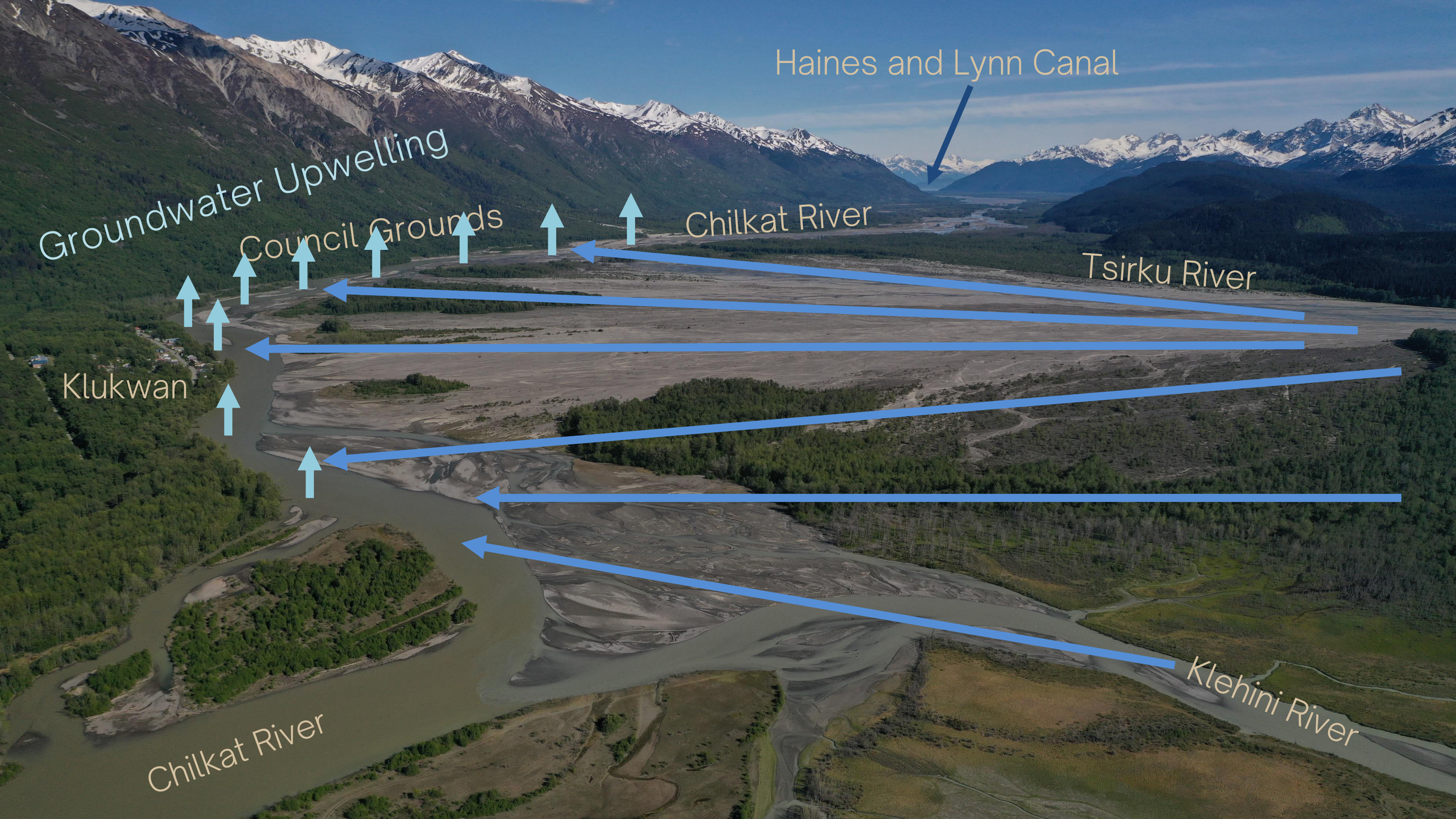
Chilkat River

Tsirku River

Klukwan

Chilkat River

Klehini River



Haines and Lynn Canal

Groundwater Upwelling

Council Grounds

Chilkat River

Tsirku River

Klukwan

Klehini River

Chilkat River

The Chilkat Watershed - A Land of Superlatives

- The most biologically diverse region in all of Alaska*
- Highest vascular plant species richness in Alaska*
Chilkat Valley birch-pine community is unique
- Highest number of bird species in Alaska
as recorded by the USGS Breeding Bird Survey program
- A geographic and migratory corridor between temperate maritime and interior boreal forest ecoregions

* Smith, M., ed., 2016. *Ecological Atlas of Southeast Alaska*



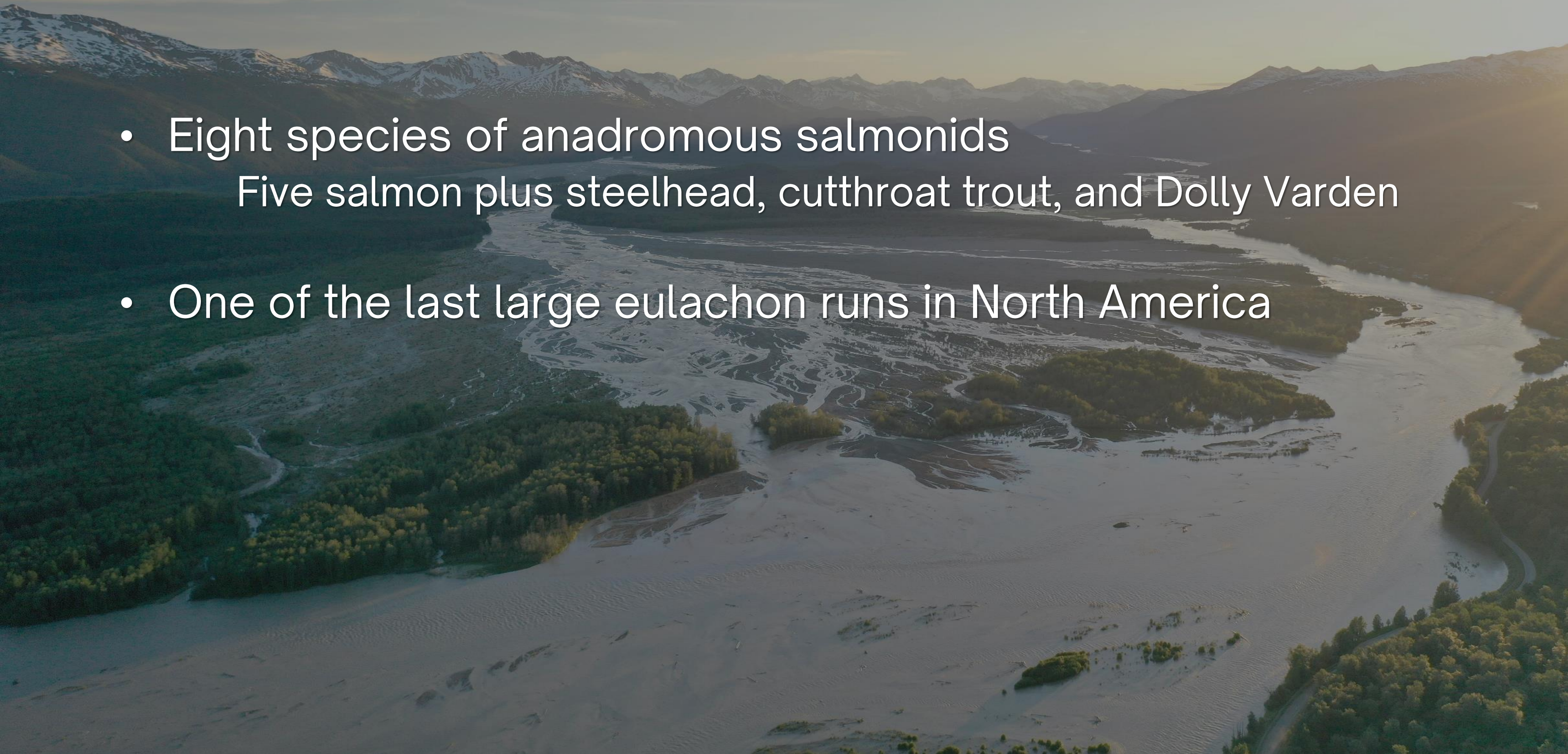
Relatively low-elevation and ice-free mountain passes provide connectivity for both plant and animal communities

The Chilkat Watershed - A Land of Superlatives

- Highest number of mammal species in Alaska – 38
- Black bears, coastal brown bears, and interior grizzlies
- Moose are abundant and thriving
- Sitka blacktail deer are moving north into the Chilkat Valley
- Mule and whitetail deer may soon move south from Yukon
- Lynx are cyclically abundant, and mountain lions have been spotted on numerous occasions

The Chilkat Watershed - A Land of Superlatives

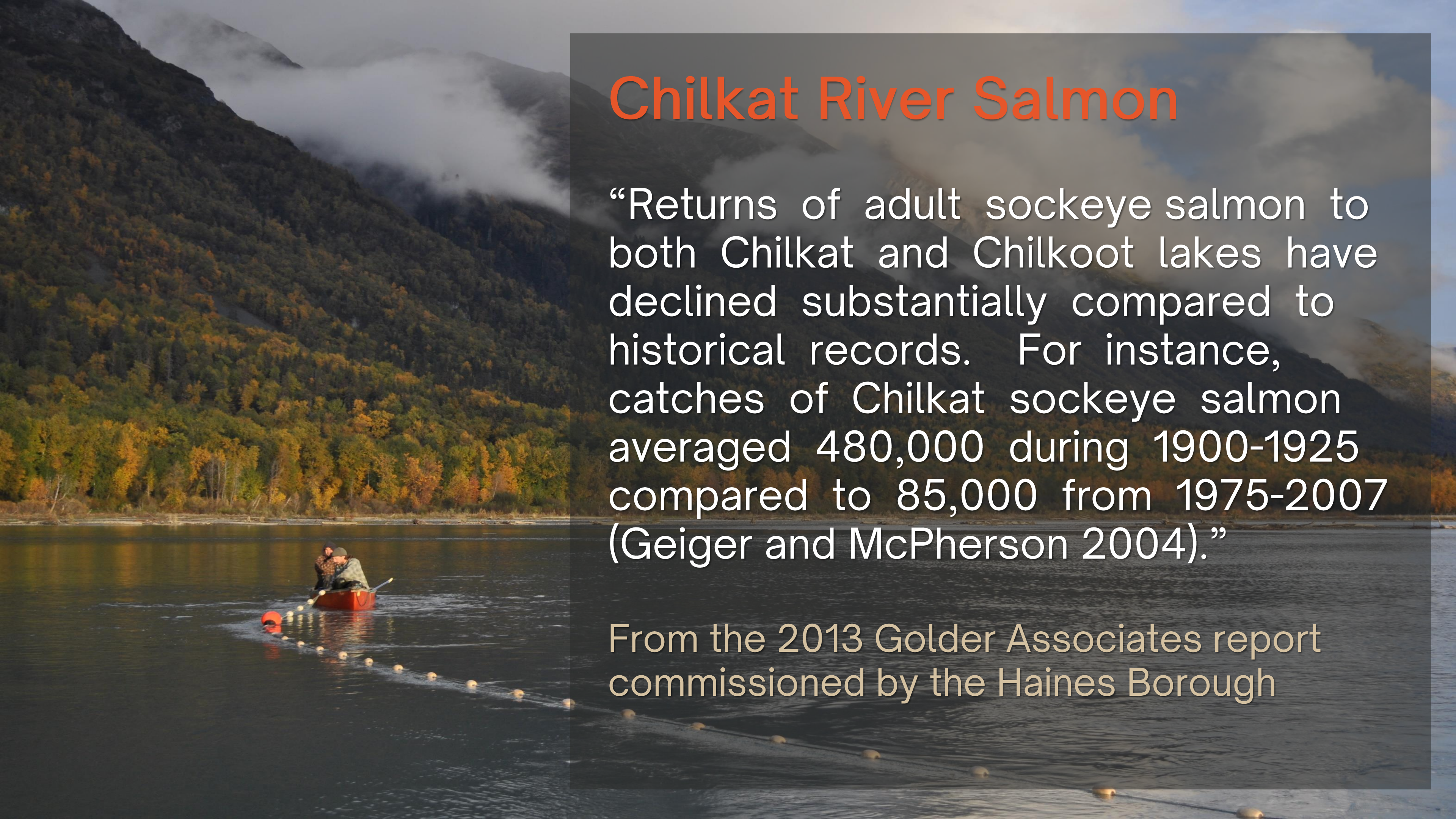
- Eight species of anadromous salmonids
Five salmon plus steelhead, cutthroat trout, and Dolly Varden
- One of the last large eulachon runs in North America



Chilkat River Salmon

“Returns of adult sockeye salmon to both Chilkat and Chilkoot lakes have declined substantially compared to historical records. For instance, catches of Chilkat sockeye salmon averaged 480,000 during 1900-1925 compared to 85,000 from 1975-2007 (Geiger and McPherson 2004).”

From the 2013 Golder Associates report commissioned by the Haines Borough



Chilkat River Salmon

650 miles of anadromous streams

#1 sockeye producer in Southeast AK

#1 chum producer in Southeast AK

#2 coho producer (just barely behind Taku)

Unique late fall runs of chum and coho attract one of the largest congregations of bald eagles in the world

And today's runs are just a fraction of what we think they were in the past



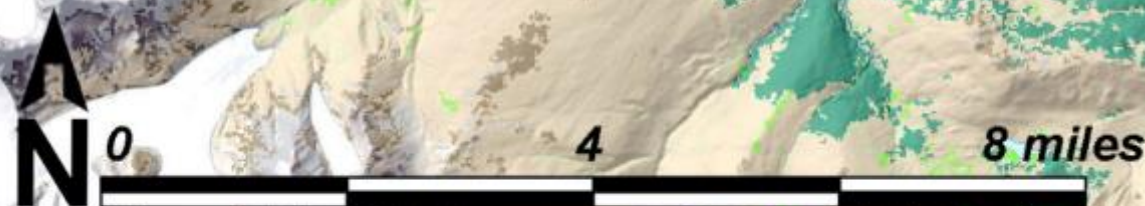




pageflipper:
toggle adjacent
pages for point-to-
point comparison
in Acrobat

- prime spruce
- conifer
- deciduous
- scrub
- alpine

**State timberlands
before logging**



pageflipper:
toggle adjacent
pages for point-to
point comparison
in Acrobat

- conifer
- deciduous
- scrub
- alpine
- logged

State timberlands
logging to date





TABLE 3-7 Cumulative ecological risk based on projected possible change in habitat values for focal species and ecological systems within 22 biogeographic provinces in Southeast Alaska.

Biogeographic Province	Percentage of original habitat values at risk					
	Large-tree forest	Murrelet	Salmon	Bear	Deer	All (avg.)
Chilkat River Complex	91.8%	90.7%	37.2%	82.0%	--	73.7%
North Prince of Wales	64.7%	68.0%	63.7%	79.4%	66.3%	68.7%
Kupreanof / Mitkof Island	71.6%	67.6%	67.1%	73.2%	61.7%	67.7%
Etolin / Zarembo / Wrangell	70.0%	58.7%	23.9%	66.2%	50.9%	54.8%
East Chichagof Island	52.2%	55.4%	45.1%	67.7%	53.1%	54.6%
East Baranof Island	74.4%	52.0%	41.1%	53.1%	53.7%	53.6%
Dall / Long Island Complex	51.8%	39.6%	43.7%	55.0%	49.0%	46.8%
Kuiu Island	53.6%	37.9%	47.0%	54.5%	37.2%	46.2%
Revilla / Cleveland Pen.	58.0%	42.0%	24.1%	57.7%	44.1%	45.5%
Taku River / Mainland	51.8%	39.8%	34.6%	43.9%	--	42.6%
Stikine River / Mainland	38.0%	32.7%	55.7%	39.1%	--	41.5%
Yakutat Forelands	46.5%	31.5%	37.8%	38.8%	--	38.4%
West Baranof Island	63.0%	27.7%	33.2%	37.8%	30.1%	38.2%
Outside Islands	48.7%	29.0%	37.1%	37.6%	34.2%	37.4%
Lynn Canal / Mainland	41.0%	30.2%	30.9%	45.3%	--	36.9%
South Prince of Wales	36.3%	39.7%	13.6%	42.4%	35.6%	33.5%
Admiralty Island	11.1%	7.4%	32.8%	15.5%	9.9%	15.5%
North Misty Fjords	4.6%	2.8%	35.8%	6.0%	--	12.1%
Glacier Bay	--	0.9%	18.6%	17.4%	--	10.3%
South Misty Fjords	0.3%	0.2%	34.2%	4.0%	--	9.6%
West Chichagof Island	0.7%	1.3%	19.6%	7.8%	5.1%	6.9%
Fairweather Range	--	0.1%	2.9%	8.9%	--	3.5%
All	49.7%	40.0%	42.6%	48.9%	45.9%	45.4%

^a Regional data on condition and management of estuaries were not available for this analysis.

TABLE 3-7 Cumulative ecological risk based on projected possible change in habitat values for focal species and ecological systems within 22 biogeographic provinces in Southeast Alaska.

Biogeographic Province	Percentage of original habitat values at risk					
	Large-tree forest	Murrelet	Salmon	Bear	Deer	All (avg.)
Chilkat River Complex	91.8%	90.7%	37.2%	82.0%	--	73.7%
North Prince of Wales	64.7%	68.0%	63.7%	79.4%	66.3%	68.7%
Kupreanof / Mitkof Island	71.6%	67.6%	67.1%	73.2%	61.7%	67.7%
Etolin / Zarembo / Wrangell	70.0%	58.7%	23.9%	66.2%	50.9%	54.8%
East Chichagof Island	52.2%	55.4%	45.1%	67.7%	53.1%	54.6%
East Baranof Island	74.4%	52.0%	41.1%	53.1%	53.7%	53.6%
Dall / Long Island Complex	51.8%	39.6%	43.7%	55.0%	49.0%	46.8%
Kuiu Island	53.6%	37.9%	47.0%	54.5%	37.2%	46.2%
Revilla / Cleveland Pen.	58.0%	42.0%	24.1%	57.7%	44.1%	45.5%
Taku River / Mainland	51.8%	39.8%	34.6%	43.9%	--	42.6%
Stikine River / Mainland	38.0%	32.7%	55.7%	39.1%	--	41.5%
Yakutat Forelands	46.5%	31.5%	37.8%	38.8%	--	38.4%
West Baranof Island	63.0%	27.7%	33.2%	37.8%	30.1%	38.2%
Outside Islands	48.7%	29.0%	37.1%	37.6%	34.2%	37.4%
Lynn Canal / Mainland	41.0%	30.2%	30.9%	45.3%	--	36.9%
South Prince of Wales	36.3%	39.7%	13.6%	42.4%	35.6%	33.5%
Admiralty Island	11.1%	7.4%	32.8%	15.5%	9.9%	15.5%
North Misty Fjords	4.6%	2.8%	35.8%	6.0%	--	12.1%
Glacier Bay	--	0.9%	18.6%	17.4%	--	10.3%
South Misty Fjords	0.3%	0.2%	34.2%	4.0%	--	9.6%
West Chichagof Island	0.7%	1.3%	19.6%	7.8%	5.1%	6.9%
Fairweather Range	--	0.1%	2.9%	8.9%	--	3.5%
All	49.7%	40.0%	42.6%	48.9%	45.9%	45.4%

^a Regional data on condition and management of estuaries were not available for this analysis.

A spatial optimization of Biodiversity and Timber Values in development of an integrated Conservation Area Design

in the Tongass National Forest
and Southeast Alaska

Summary:

This map represents a preliminary proposal for consideration as part of the ongoing amendment of the Tongass National Forest Land Management Plan. This is the result of a systematic analysis of the distribution and condition of a wide range of ecological values among biogeographic provinces both at the watershed- and sub-watershed scales. Moreover, relative suitability of areas for production of commercial timber was determined based on considerations of operability, proximity to existing roads and marine log-transfer facilities, and existing mills. This provides a blue-print of opportunities for conservation of intact landscapes, restoration of critical habitats, and appropriate production of commercial timber. This represents an ecologically-based estimate of sustainable timber production in Southeast Alaska, yet does not account for specific demands on intact ecosystems such as subsistence harvest and community-use areas.



Key to Symbols:

Conservation Priority Watersheds

High value watersheds in primarily intact condition. Managed for intact ecological values and habitat productivity.

- Core Areas of Biological Value
- High Value Watersheds

Lower Value - Intact Watersheds

Lower biological values in primarily intact ecological condition. Managed for intact ecosystem and other values.

- Lower Value - Intact Watersheds

Integrated Management Watersheds

(High Value Watersheds - Modified Condition)

High value watershed with roads and past timber harvest. These areas are managed for a balance of old-growth forest structure and rotational harvest of young-growth.

- Core Areas of Biological Value (young-growth harvest only)
- High-value Watersheds (young-growth and old-growth harvest)

Timber Production Watersheds

Watersheds with past harvest and existing infrastructure. These areas are managed for rotational harvest of existing old growth and young-growth forest stands.

- Core Areas for Timber Production
- Lower Value - Modified Watershed

Protected by Congress

Wilderness and LUD II

- LUD II / Wilderness (core habitat)
- LUD II / Wilderness (other)

Private or Other Lands

- Private and other lands within Tongass NF

Key to Symbols:

Conservation Priority Watersheds

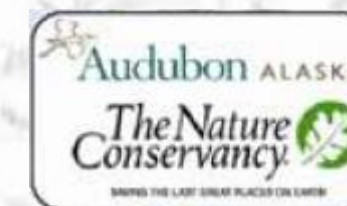
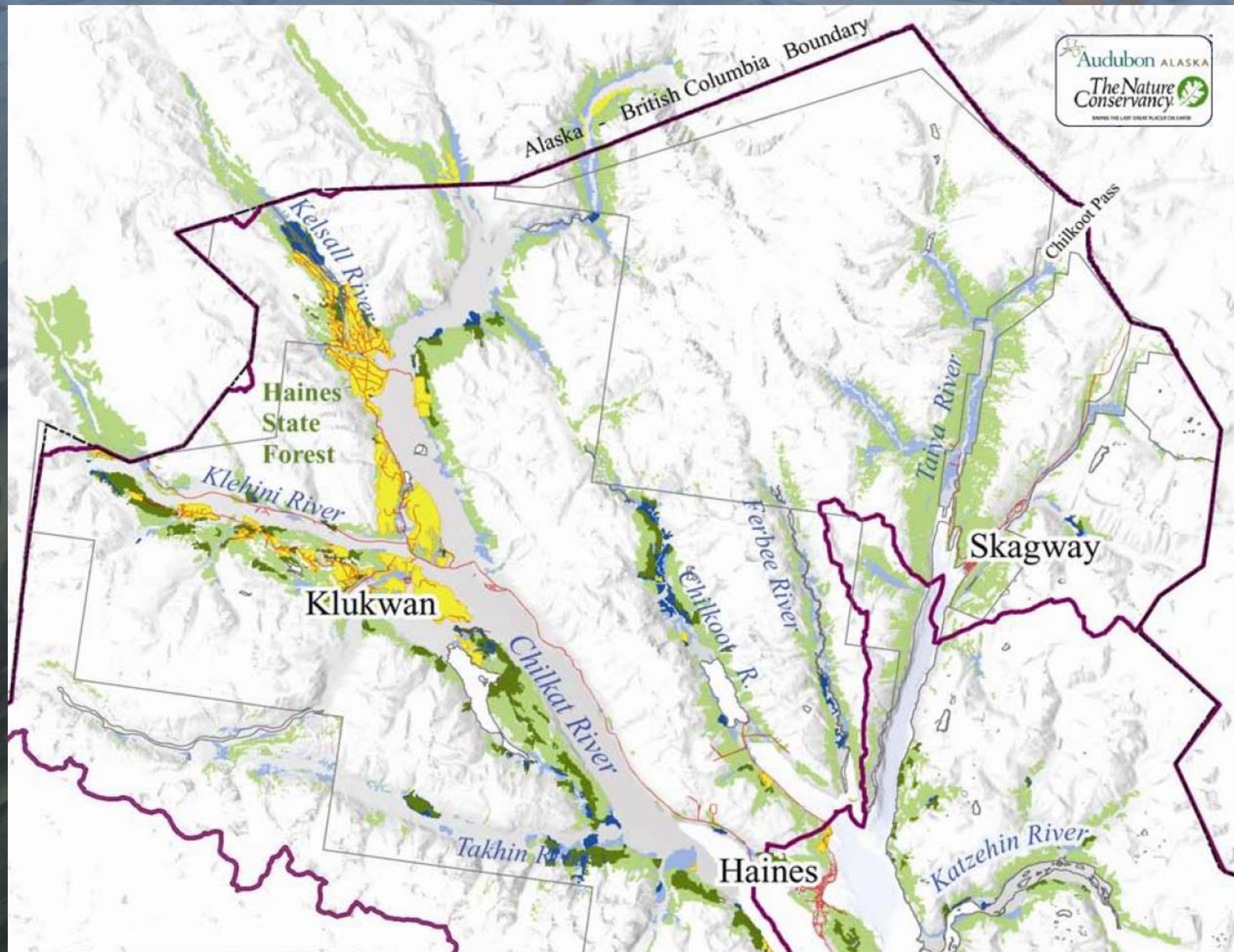
High value watersheds in primarily intact condition. Managed for intact ecological values and habitat productivity.

- Core Areas of Biological Value
- High Value Watersheds

Lower Value - Intact Watersheds

Lower biological values in primarily intact ecological condition. Managed for intact ecosystem and other values.

- Lower Value - Intact Watersheds



A comparison of forest types and
Forest Condition
in the Chilkat River Province

Key to Forest Types:

Valley Floor / Riparian Forest

- Large-tree forest
- Medium-tree forest

Upland Forest

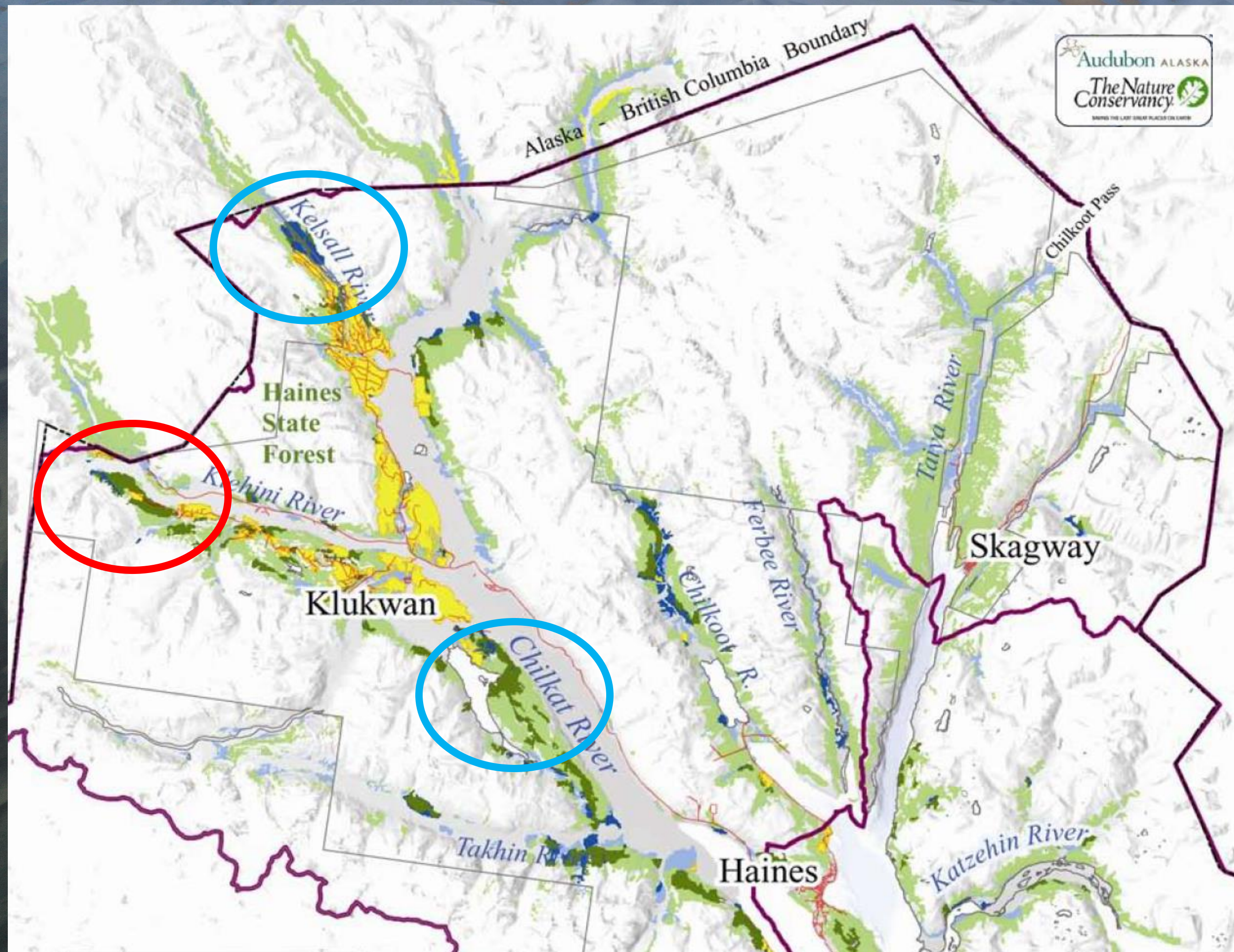
- Large-tree forest
- Medium-tree forest

Cut Forest

- Clear-cut & 2nd-growth

Other Features


- Biogeographic Province Boundary
- Roads




A comparison of forest types and
Forest Condition
in the Chilkat River Province


Key to Forest Types:


Valley Floor / Riparian Forest

 Large-tree forest


 Medium-tree forest

Upland Forest

 Large-tree forest

 Medium-tree forest

Cut Forest

 Clear-cut & 2nd-growth

Other Features

 Biogeographic Province Boundary

 Roads



The Chilkat Watershed – Conservation Concerns

- Hard rock mine development, tailings disposal, and perpetual water treatment liabilities in the upper Chilkat watershed
- The harvest and export of the few remaining stands of large tree old-growth forest
- Continued fish habitat destruction caused by development activities, especially highway upgrades and new road construction in support of resource extraction ambitions

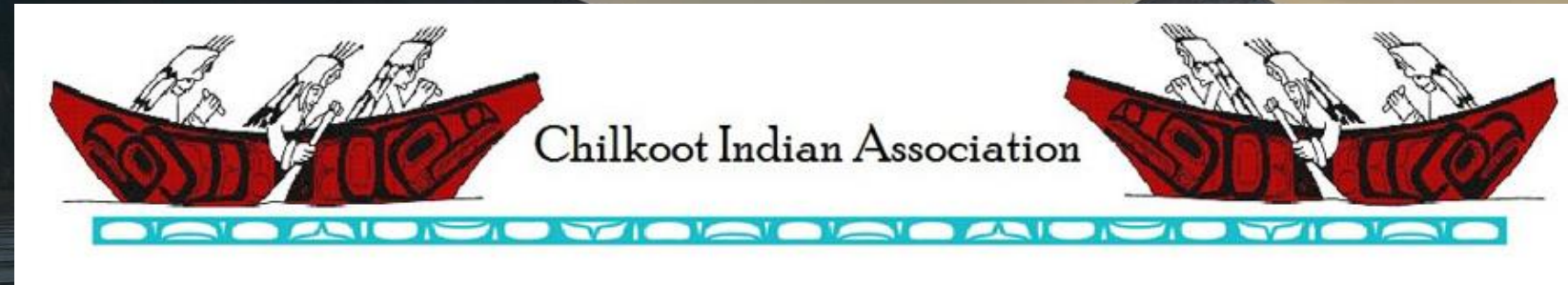
The Chilkat Watershed – Conservation Activities

- Engaging with regulatory agencies, land managers, and developers
Mitigate unavoidable impacts, and avoid unnecessary impacts
- Research and habitat restoration
Direct on-the-ground actions that improve conditions for fish and wildlife
- Education, local outreach and engagement
Building a community around common values—like salmon, and clean water
- Long-term conservation planning
Local people, tribes, and organizations planning the future of the Chilkat Watershed to align with local values, history, and long-term visions





To TWC's friends and partners, Gunalchéesh! and Thank You!



HAINES BOROUGH
SCHOOL DISTRICT

