MT Meeting
TWG Update on Phase 1: Reporting and Implementation

Thursday, December 5, 2024

Agenda

- Study plans for data gaps
- Physical works (design/review)
- Implementation update:
  - Osprey nesting physical works update
  - Kokanee Reconnaissance Survey

Data Gaps

- PM data gaps
  - Targeted studies to refine existing PMs &/or develop new PMs
- Ecological baseline
  - Research to address uncertainties regarding the current state of ecological components

Planning Approach

- Project on a Page
  - 2-page summary of issue and outlines proposed study
  - Objectives
  - Cost
  - Methods
  - Schedule
- Study Plans
  - More background, detailed cost & methods
  - “implementation ready”

Themes: Productivity

Study	Location
Turbidity and sediment budget	Cheslatta watershed
Hydrology and limnology field assessment (e.g., in-river hydrometric gauges, lake level monitoring, water chemistry, algal productivity, bathymetry, littoral habitats)	Cheslatta watershed
Field study (e.g., limnology, nutrients, macrophytes, benthos, zooplankton, substrate)	Nechako Reservoir
Data to update bathymetry model	Nechako Reservoir
Existing conditions field survey (e.g., nutrients, water quality, productivity)	Nechako River

Themes: Fish & Fish Habitat

Study	Location
HEC-RAS DEM (Tributary confluence gradients & side channel depths)	Nechako River
Wetted area field assessment	Nechako River
Instream flow study (habitat flow relationships for mainstem, side channels)	Nechako River
Existing conditions field survey (e.g., nutrients, water quality, productivity)	Nechako River
Fish abundance & habitat use field assessment across a range of temperatures	Nechako River
Salmon fate assessment (aerobic scope, lethal/sublethal effects)	Nechako River
Habitat quality & quantity assessments (mainstem, side channels)	Nechako River
Field survey of ice thickness & water depth. Flow - ice relationship	Nechako River
White Sturgeon studies	Nechako River
Field study (e.g., limnology, nutrients, macrophytes, benthos, zooplankton, substrate)	Nechako Reservoir
Data to update bathymetry model	Nechako Reservoir
Fish population distribution & habitat/use assessment	Nechako Reservoir
Hydrology and limnology field assessment (e.g., in-river hydrometric gauges, lake level monitoring, water chemistry, algal productivity, bathymetry, littoral habitats)	Cheslatta watershed
Fish distribution & abundance field assessment across species and life stages (e.g., spawning & rearing habitat; FHAP)	Cheslatta watershed

Themes: Other

PM Themes	Study	Location
Invasive species	Reed canary grass field assessment (distribution & native species / habitat impacts)	Nechako River
Invasive species, ramping	Fish stranding assessments	Nechako River & Cheslatta watershed
Wildlife	HEC-RAS DEM (Tributary confluence gradients & side channel depths)	Nechako River
Wildlife	Fish population distribution & habitat/use assessment	Nechako Reservoir
River mussels	Mussel distribution, abundance, & host species field study	Nechako River
Archeological sites inundation	Archeological site erosion assessment at different ramping rates	Nechako Reservoir
Flooding, ice	Field survey of ice thickness & water depth. Flow - ice relationship	Nechako River
Flooding	DOV planned dyke	Nechako River

Study plans

- Initial priorities
  - Cheslatta turbidity
  - Fish overwintering habitat/ice
  - Salmon temperature fate
  - Osprey

Physical Works

- Environmental benefits in lieu of flow changes

Physical Works Plans

PM Themes	Project	Relevant Issue(s)	Location
Wildlife	Large woody debris removal on calving islands	(31) Reservoir caribou woody debris	Nechako Reservoir
Wildlife	Dredge land bridges between known caribou calving islands	(32) Reservoir caribou land links	Nechako Reservoir
Wildlife	At-risk nesting sites tree removal / nest relocation	(38) Reservoir osprey nesting habitat	Nechako Reservoir
Fish & fish habitat	In-stream woody debris structures	(17) Cheslatta fish habitat	Cheslatta watershed
Fish & fish habitat	Scarification channels	(20) River CH spawning habitat, (21) River CH incubation habitat, (22) River CH rearing habitat, (23) River CH overwintering habitat, (25) Resident fish rearing habitat, (26) Resident fish overwintering habitat	Nechako River
Fish & fish habitat	Woody debris/fish habitat complexing		
Fish & fish habitat	Excavate side channel inlets		

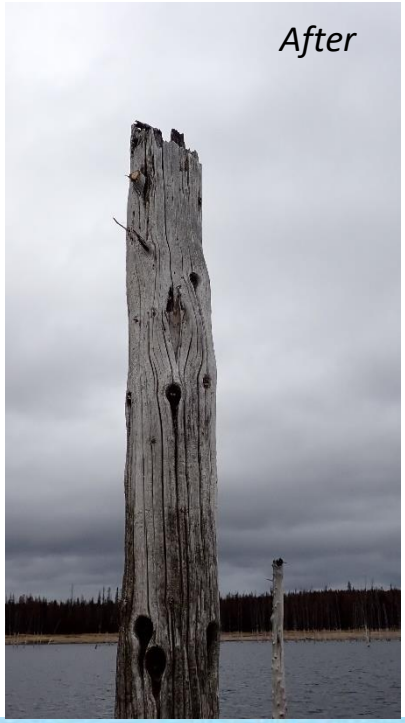
Implementation Update

Osprey: Field Update

- 45 nests documented between the hunt camp area (Skins Lake Spillway) and Knewstubb Arm
- 30 identified as at risk of flooding or wave damage during high water levels (within ~5’ of full pool)
  - To be included in permit application for removal prior to 2025 nesting season

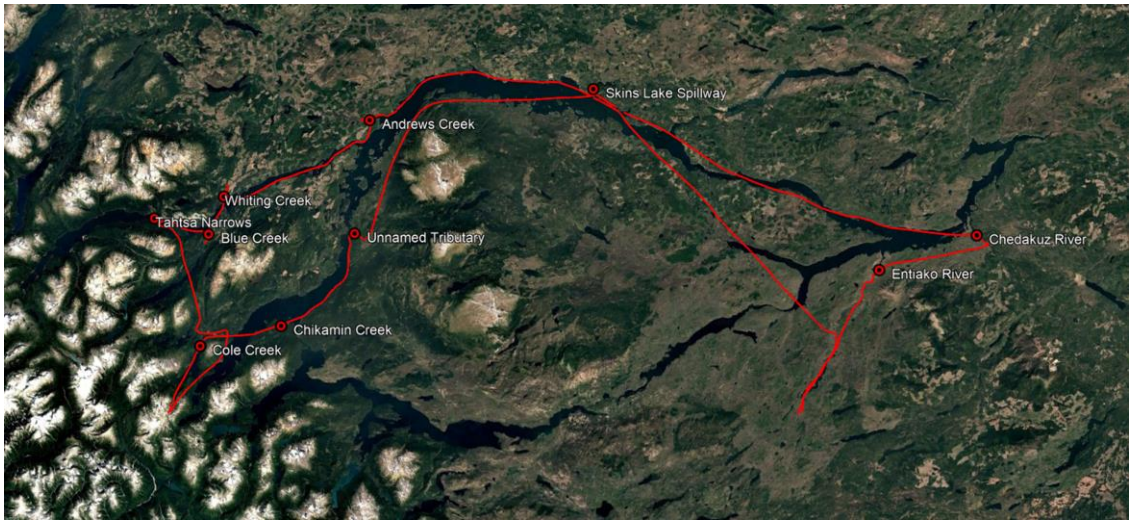
Osprey: Field Update

- Trialed methods for snag removal or modification to deter nesting on unsuitable snags



Kokanee Reconnaissance

- Mid-Oct reservoir helicopter flight
- Gary and Darrel, Andy, Rachel
- Identified potential spawning tributaries
  - 8 streams
  - Tahtsa Narrows



Kokanee Reconnaissance


GET INVOLVED NECHAKO
Rio Tinto

Name	Description – New Round 2E Alternatives
Alt 6A (orange) New concept hybrid alternative Reshaped existing water budget minimum flows in "dry/normal" years, flow targets (extra water) in "wet years" Flow releases earlier in the year reduces uncertainty between known water availability (i.e., pre-freshet spills) and desired release timing. Releases timed to align with freshet and minimize impacts to Tier 2 power generation Same "wet" and "dry/normal" years as Alt 4E and Alt 5E