# SKOOKUMCHUCK PHASE 3 PROPOSED UPDATES TO SCOPE

TASK	FEE
Task 1: Stakeholder engagement support	\$45,000
Task 3: Off-channel reservoir conceptual investigation	\$35,000
Task 4: Concept design of direct piping from reservoir	\$25,000
Task 7: Summary memorandum and meetings	\$80,000
Optional Task 9: Juvenile Salmon Survival through Reservoir and Dam	\$233,000
Optional Task 12: Turbidity Monitoring in Reservoir	\$59,000
Optional Task 13: Predator Study of Reservoir	\$53,000
ESTIMATED FEES	\$530,000



Board Approved 23-25 Budget: \$575,000

# SKOOKUMCHUCK PHASE 3 PROPOSED UPDATES TO SCOPE

TASK	FEE
Task 2: Water rights accounting	<del>\$21,000</del>
Task 5: Conduct Upper Skookumchuck habitat survey	<del>\$55,000</del>
Task 6: Geotechnical data review and site reconnaissance	\$39,000
Optional Task 8: Conceptual Low Level Outlet Design	\$60,000
Optional Task 10: Geotechnical Field Investigation	\$100,000
Optional Task 11: Conceptual LLO Design – CFD Modeling	\$65,000
Total Deferred + Optional Tasks	\$340,000



## FISHERIES AND TURBIDITY STUDIES

Juvenile Salmon Survival through Reservoir and Dam

- Initial look at survival
- Tag and release two batches of hatchery steelhead just upstream of reservoir (acoustic tags)
- Acoustic receivers at middle distance of reservoir, upstream end of spillway/fish sluice, base of dam, USGS gage
- Document travel time and proportion of fish detected
- Scope will be refined in more detail with stakeholders



#### FISHERIES AND TURBIDITY STUDIES

**Predator Presence Initial Evaluation** 

- Snorkel surveys along reservoir shoreline during outmigration timing,
- eDNA sample collection
- Initial evaluation of predator species present and distribution



## FISHERIES AND TURBIDITY STUDIES

Turbidity Monitoring/Investigation in Reservoir

- Two sampling events
- Both instantaneous measurements and samples taken in profiles in reservoir near upper end, middle, lower end (temperature, turbidity, particle size distribution; total suspended solids in samples)
- Up to 6 additional locations (e.g. tributary confluences, shoreline areas)
- Observations in addition to areas sampled



## SUMMARY OF CHANGES

Change	Purpose
Remove Water Rights Analysis	Defer to Permitting/Design Phase
Remove Geotechnical Analysis	Defer to Permitting/Design Phase
Remove Upper Watershed Habitat Assessment	Unable to access property
Add Juvenile Salmon Survival	Understand feasibility of trap & haul
Add Predator Evaluation	Understand feasibility of trap & haul
Add Turbidity Monitoring	Understand reservoir impact on water quality

