

## **Yukon Region Draft Priority Information Needs for 2024 FRMP Cycle**

- a) Impacts of climate change in continued harvest and use of fish; and impacts of climate change on fish, for example, impacts to fish migration, spawning, and life cycle.
- b) Knowledge of population, reproduction, and health of spawning habitat for Bering Cisco and Humpback Whitefish.
- c) Reliable estimates of Chinook, summer Chum, fall Chum, and Coho salmon escapements and/or harvests, particularly sub-stocks in District 5 that are large contributors to the total run, for example in the Chandalar, Sheenjek, and Porcupine rivers.
- d) Distribution, abundance, condition, and survival of juvenile and out-migrating salmon in the Yukon River drainage.
- e) Estimates of “quality of escapement” measures for Chinook Salmon, for example, potential egg deposition, age, sex, and size composition of spawners, percentage of females, percentage of jacks, and spawning habitat utilization, with an emphasis on Canadian-origin stocks.
- f) Reliable in-season estimates of salmon harvests in the lower, middle, and upper Yukon River subsistence fisheries.
- g) Reliable estimates of age-sex-length and genetic composition of salmon harvested in the subsistence fishery, with emphasis on Chinook and fall Chum salmon.
- h) In-season estimates of genetic stock composition of Chinook, summer Chum, and fall Chum salmon runs and harvests.
- i) Reliable methods of forecasting Chinook, summer Chum, fall Chum, and Coho salmon run abundance.
- j) Assessment of incidental mortality with gillnets, dip nets, and seines, with particular consideration for delayed mortality from entanglement from drop-outs and live release of Chinook Salmon (for example, loss of Chinook Salmon from 6-inch mesh nets during Chum Salmon fisheries and the live release of Chinook Salmon from dip nets and seines).
- k) Traditional ecological knowledge of fishes.
- l) Advance genetic baselines for Chinook, summer Chum, fall Chum, and Coho salmon by screening additional populations and novel genetic markers to improve the accuracy, precision, and scale of stock composition estimates to inform stock assessment for Yukon River fisheries.

- m) Studies that will increase our understanding of life-history patterns of resident species such as Sheefish, Northern Pike, and Arctic Grayling in relation to geographic distribution and seasonal migration.
- n) Funding to facilitate interagency and stakeholder forums for gathering and sharing input on fishery management issues.
- o) Community-based monitoring of fish presence and/or environmental variables in tributaries to better understand fish distribution.
- p) Interdisciplinary studies combining Traditional Ecological Knowledge and biological surveys to document seasonal salmon life-stage usage of tidal tributaries draining the Yukon Coastal District in order to update the Anadromous Waters Catalog and improve management's understanding of salmon in these streams.
- q) Meta-analysis of existing information and research examining the relative importance of freshwater (e.g., predation, stranding, heat stress) and marine (e.g., environmental conditions, bycatch, competition) factors in causing declines of Yukon River Chinook and Chum salmon to present at relevant Regional Advisory Council meetings.