2022

DRAFT YUKON REGION

- 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.
- Effects of environmental stressors, such as heat stress, on salmon mortality during adult up-river migration and/or pre-spawn mortality within spawning tributaries.
- Effects of Ichthyophonus infection on Chinook Salmon mortality and spawning success.
- Knowledge of population, reproduction, and health of spawning habitat for Bering Cisco and Humpback Whitefish.
- Reliable estimates of Chinook, Summer Chum, Fall Chum, and Coho Salmon escapements and/or harvests, particularly sub-stocks that are large contributors to the total run.
- 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.
- Reliable in-season estimates of salmon harvests in the lower, middle, and upper Yukon River subsistence fishery.
- Reliable estimates of age-sex-length and genetic composition of salmon harvested in the subsistence fishery, with emphasis on Chinook and Fall Chum Salmon.
- In-season estimates of genetic stock composition of Chinook, Summer Chum, and Fall Chum Salmon runs and harvests.
- Reliable methods of forecasting Chinook, Summer Chum, Fall Chum, and Coho Salmon run abundance.
- 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).
- Traditional ecological knowledge of fishes.
- ~~Studies that advance understanding of the geographic distribution, migration patterns, and feeding habits of Chinook Salmon during marine residency.~~

(The Monitoring Program generally funds research in freshwaters.)

2020

YUKON REGION

The 2020 Notice of Funding Opportunity identified the following priority information needs:

- Reliable estimates of Chinook, Summer Chum, Fall Chum, and Coho salmon escapements, particularly sub-stocks that are large contributors to the total run.
- In-season estimates of genetic stock composition of Chinook, Summer Chum, and Fall Chum salmon runs and harvests.
- Baseline information about geographic distribution, migration patterns, run timing, genetic structure, and tributary escapements of Yukon River Coho Salmon. Projects might focus on those portions of the Yukon River drainage downriver from and including the Tanana River.
- Reliable assessment of Porcupine River Fall Chum Salmon, for example, migration characteristics, abundance, escapement, and harvest quantities.
- Reliable quantitative and/or qualitative estimates of age-sex-length and genetic composition of salmon harvested in the subsistence fishery. Applicants are encouraged to focus on Chinook and Fall Chum salmon.
- Advance genetic baselines for Chinook, Summer Chum, and Fall Chum salmon by screening novel genetic markers to improve the accuracy, precision, and scale of stock-composition estimates to inform stock assessment.
- Reliable methods of forecasting Chinook, Summer Chum, Fall Chum, and Coho salmon run abundance.
- 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.
- Bering Cisco population assessment.
- Information sharing between stakeholders and agencies concerning management of subsistence fisheries.
- Baseline information about lamprey populations, migration patterns, and harvest quantities.
- Baseline information about whitefish populations, migration patterns, and harvest, particularly those where habitat and traditional harvest practices could be affected by proposed road and mine development.
- Quantify and qualify the barter and cash exchange of salmon within the context of the social, cultural, and economic life of people in the middle and lower Yukon drainage.

- 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).

- Strategic evaluation of existing and needed information concerning Chinook Salmon and Summer Chum Salmon run timing, escapement, and population in the middle and upper Yukon drainage, particularly the Middle Fork Koyukuk River.

- Analysis of recent regulations changes and effects on salmon escapement in the Yukon River drainage.

- Reliable quantitative and/or qualitative estimates of in-season salmon harvest to support management.

2018

YUKON REGION

The 2018 Notice of Funding Opportunity identified the following priority information needs:

- Reliable qualitative and/or quantitative estimates of salmon escapements and/or harvests.
- Salmon run timing and run strength from Yukon River District 5.
- Geographic distribution of salmon and whitefish species based on traditional ecological knowledge or other knowledge, and incorporation of anadromous information into the Anadromous Waters Catalog.
- A spatially robust indexing method for estimating species-specific whitefish harvest on an annual basis for the Yukon drainage.
- Methods for including "quality of escapement" measures (for example, potential egg deposition, sex and size composition of spawners, or spawning habitat utilization) in establishing Chinook Salmon spawning goals and determining the reproductive potential and genetic diversity of spawning escapements.
- A review of escapement data collection methods throughout the Yukon drainage to ensure that test fisheries are accurately accounting for size distribution and abundance of fishes (for example, are smaller Chinook Salmon being counted accurately).
- Assessment of incidental mortality with gillnets, with particular consideration for delayed mortality from entanglement or direct mortality from dropouts (for example, loss of Chinook Salmon from 6-inch mesh net Chum Salmon fisheries).
- Harvest and spawning escapement changes through time in relation to changes in gillnet construction and use (for example, set versus drift fishing, mesh size changes) for Chinook Salmon subsistence harvests in the mainstem Yukon River.
- Incorporation of traditional ecological knowledge into fishery management processes.
- The effects of beaver dams on salmon spawning.