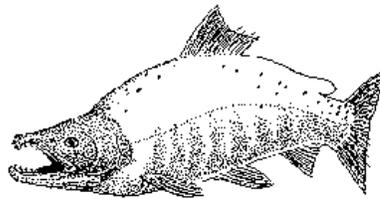


December 2012

PRIORITY INFORMATION NEEDS

FEDERAL SUBSISTENCE FISHERIES



2014 Fisheries Resource Monitoring Program

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The Office of Subsistence Management (OSM) invites the submission of proposals for fisheries investigation studies to be initiated under the 2014 Fisheries Resource Monitoring Program (Monitoring Program). Taking into account funding commitments for ongoing projects, and contingent upon Congressional funding, we anticipate approximately \$3.7 million available in 2014 to fund new monitoring and research projects that provide information needed to manage subsistence fisheries for rural Alaskans on Federal public lands. Funding may be requested for up to four years duration.

Although all proposals addressing subsistence fisheries on Federal public lands will be considered, the 2014 Request for Proposals is focused on priority information needs. The Monitoring Program is administered among six regions: Northern Alaska, Yukon, Kuskokwim, Southwest Alaska, Southcentral Alaska, and Southeast Alaska regions. Strategic plans developed by workgroups of Federal and State fisheries managers, researchers, Regional Advisory Council members and other stakeholders, have been completed for three of the six regions: Southeast, Southcentral (excluding Cook Inlet Area), and Southwest Alaska. These plans identify prioritized information needs for each major subsistence fishery and can be viewed on or downloaded from OSM's website: <http://alaska.fws.gov/asm/index.cfm>. Independent strategic plans were completed for the Yukon and Kuskokwim regions for salmon in 2005, and jointly for whitefish in 2012. For the Northern Region and the Cook Inlet Area, priority information needs were developed with input from Regional Advisory Councils, the Technical Review Committee, Federal and State managers and staff from OSM.

This document summarizes priority information needs for 2014 for all six regions and a multi-regional category that addresses priorities that extend over two or more regions. Investigators preparing proposals for the 2014 Monitoring Program should use this document and relevant strategic plans, and the Request for Proposals, which provides foundational information about the Monitoring Program, to guide proposal development. While Monitoring Program project selections may not be limited to priority information needs identified in this document, proposals addressing other information needs must include compelling justification with respect to strategic importance.

Monitoring Program funding is not intended to duplicate existing programs. Agencies are discouraged from shifting existing projects to the Monitoring Program. Where long-term projects can no longer be funded by agencies, and the project provides direct information for Federal subsistence fisheries management, a request to the Monitoring Program of up to 50% of the project cost may be submitted for consideration. For Monitoring Program projects for which additional years of funding is being requested, investigators should justify continuation by placing the proposed work in context with the ongoing work being accomplished.

Because cumulative effects of climate change are likely to fundamentally affect the availability of subsistence fishery resources, as well as their uses, and how they are managed, investigators are requested to consider examining or discussing climate change effects as a component of their project. Investigators conducting long-term stock status projects will be required to participate in a standardized air and water temperature

monitoring program. Calibrated temperature loggers and associated equipment, analysis and reporting services, and access to a temperature database will be provided. Finally, proposals that focus on the effects of climate change on subsistence fishery resources and uses, and that describe implications for subsistence management, are specifically requested. Such proposals must include a clear description of how the project would measure or assess climate change impacts on subsistence fishery resources, uses, and management.

Projects with an interdisciplinary emphasis are encouraged. The Monitoring Program seeks to combine ethnographic, harvest monitoring, traditional ecological knowledge, and biological data to aid in management. Investigators are encouraged to combine interdisciplinary methods to address information needs, and to consider the cultural context of these information needs.

Collaboration and cooperation with rural communities is encouraged at all stages of research planning and implementation of projects that directly affect those communities. The Request for Proposals describes the collaborative process in community-based research and in building partnerships with rural communities.

The following sections provide specific regional and multi-regional priority information needs for the 2014 Monitoring Program. They are not listed in priority order.

Northern Alaska Region Priority Information Needs

The Northern Alaska Region is divided into three areas which reflect the geographic areas of the three northern Regional Advisory Councils (Seward Peninsula, Northwest Arctic, and North Slope). Together, the three areas comprise most of northern Alaska, and contain substantial Federal public lands. Since 2001, the three northern Regional Advisory Councils have identified important fisheries issues and information needs for their respective areas. The Seward Peninsula and Northwest Arctic Councils have identified salmon and char fisheries as being the most important fisheries for their areas. The North Slope Council identified Arctic char, Dolly Varden, whitefish, lake trout, and Arctic grayling fisheries as most important for its area.

A high priority expressed by these Councils, particularly the North Slope Council, is concern about effects of climate change on subsistence fishery resources. The Multi-regional priority information needs section at the end of this document includes climate change research needs.

For the Northern Alaska Region, the 2014 Request for Proposals is focused on the following priority information needs:

- Baseline and ongoing harvest assessment and monitoring of subsistence fisheries in the Northwest Arctic and North Slope regions to supplement available information.

- Historic trends and variability in harvest locations, harvests, and uses of non-salmon fish, particularly for North Slope communities.
- Iñupiaq natural history of fish, land use, place name mapping, species distribution, and methods for and timing of harvests, and Iñupiaq taxonomy of nonsalmon fish species.

Yukon Region Priority Information Needs

Since its inception, the Monitoring Plan for the Yukon Region has been directed at information needs identified by the three Yukon River Regional Advisory Councils (Yukon-Kuskokwim Delta, Western Interior, and Eastern Interior) with input from subsistence users, the public, Alaska Native organizations, Federal and State agencies, and partner agencies and organizations. The U.S./Canada Yukon River Salmon Joint Technical Committee Plan has been used to prioritize salmon monitoring projects in the Alaskan portion of the Yukon River drainage. Additionally, a research plan for whitefish has identified priority information needs for whitefish species in the Yukon and Kuskokwim river drainages.

For the Yukon Region, the 2014 Request for Proposals is focused on the following priority information needs:

- Reliable estimates of Chinook and chum salmon escapements (for example, projects using weir, sonar, mark-recapture methods).
- Methods for including “quality of escapement” measures (for example, potential egg deposition, sex and size composition of spawners, spawning habitat utilization) in establishing Chinook salmon spawning goals and determining the reproductive potential and genetic diversity of spawning escapements.
- Effects of diminished salmon abundance on contemporary economic strategies and practices. Topics could include an evaluation of barter, sharing, and exchange of salmon for cash (customary trade), as well as other economic strategies and practices that augment and support subsistence activities. Of particular interest are distribution networks, decision making, and the social and cultural aspects of salmon harvest and use.
- Harvest and spawning escapement level 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 harvest in the mainstem Yukon River.
- Complete genetic baseline sampling and population marker development for sheefish spawning populations in the Yukon River drainage.

- Harvests, associated contextual information, and local knowledge of whitefish species in lower Yukon drainage communities, including Alakanuk, Kotlik, Nunam Iqua, Saint Marys, Pilot Station, and Marshall.
- An indexing method for estimating annual species-specific whitefish harvests for the Yukon drainage.
- Inseason harvest enumeration and sex and length information for northern pike taken during the winter subsistence fishery from Paimiut Slough to Holy Cross on the Yukon River.

Kuskokwim Region Priority Information Needs

Since 2001, the Yukon-Kuskokwim Delta and Western Interior Regional Advisory Councils, with guidance provided by the Kuskokwim Fisheries Resource Coalition, have identified a broad category of issues and information needs in the Kuskokwim Region. These include collection and analysis of traditional ecological knowledge; harvest assessment and monitoring; salmon run and escapement monitoring; non-salmon fish population monitoring; and marine/coastal salmon ecology. Additionally, a research plan for salmon and a research plan for whitefish have been used to prioritize monitoring projects for salmon and whitefish. These were reviewed to ensure that remaining priority information needs were considered.

For the Kuskokwim Region, the 2014 Request for Proposals is focused on the following priority information needs:

- Reliable estimates of Chinook, chum, sockeye, and coho salmon escapement (for example, projects using weir, sonar, mark-recapture methods).
- Methods for including “quality of escapement” measures (for example, potential egg deposition, sex and size composition of spawners, spawning habitat utilization) in establishing Chinook salmon spawning goals and determining the reproductive potential and genetic diversity of spawning escapements.
- Subsistence harvest of Chinook salmon from the Bethel Area by nonresidents of the Kuskokwim River drainage.
- Temporal timing of tributary stocks of Chinook salmon through the lower Kuskokwim River subsistence fishery.
- Early life history of Chinook salmon stocks, with particular emphasis on determining freshwater density dependence factors.
- Broad whitefish population assessment, including distribution and age structure.
- Complete genetic baseline sampling and population marker development for sheefish spawning populations in the Kuskokwim River drainage.

- Local knowledge of whitefish species to supplement information from previous research. Groups of communities might include Kwethluk, Akiachak, Napaskiak, and Tuluksak or Chefornak, Kipnuk, Kongiganek, and Kwigillingok.
- Harvest and associated contextual information for whitefish species in the lower Kuskokwim drainage communities of Eek, Tuntutuliak, Nunapitchuk, Atmauthluak, and Kasigluk.
- An indexing method for estimating species-specific whitefish harvests on an annual basis for the Kuskokwim drainage. Researchers should explore and evaluate an approach where sub-regional clusters of community harvests can be evaluated for regular surveying with results being extrapolated to the rest of the cluster, contributing to drainage-wide harvest estimates.

Southwest Alaska Region Priority Information Needs

Separate strategic plans were developed for the Bristol Bay-Chignik and Kodiak-Aleutians areas, corresponding to the geographic areas covered by the Bristol Bay and Kodiak/Aleutians Regional Advisory Councils. These strategic plans were reviewed to ensure that remaining priority information needs were considered.

For the Southwest Alaska Region, the 2014 Request for Proposals is focused on the following priority information needs:

- Obtain reliable estimates of Chinook salmon escapements (for example, projects using weir, sonar, mark-recapture methods).
- Description and analysis of social network underlying the allocation and management of subsistence salmon fisheries in villages in the Bristol Bay-Chignik Area. Investigators should not only focus on a description of the social network, and how it functions in the allocation and management of subsistence resources, but how such a model might be applied and utilized in Federal subsistence management.

Southcentral Alaska Region Priority Information Needs

A strategic plan was developed for Prince William Sound-Copper River and an abbreviated strategic planning process was employed for Cook Inlet. These sources were reviewed to ensure that remaining priority information needs were considered.

For the Southcentral Region, the 2014 Request for Proposals is focused on the following priority information needs:

- Obtain reliable estimates of Chinook salmon escapement into Copper River and Kasilof River (for example, projects using weir, sonar, mark-recapture methods).

- Information related to spawning distribution and stock specific run timing of Chinook and sockeye salmon that can be used to identify long-term stock trends in the context of climate change.
- Effects of climate change on water temperature and flow as it relates to survival of salmon and other fish species.
- Mapping of lifetime and current subsistence use areas for harvest of salmon and non-salmon fish species by residents of Ninilchik, Hope, and Cooper Landing. Research should include intensity of use as well as use on Federal public lands and waters, and should supplement and build upon existing knowledge.

Southeast Alaska Region Priority Information Needs

A strategic plan was developed for the Southeast Alaska Region in 2006 and was reviewed to ensure that priority information needs are identified. The 2014 Request for Proposals is focused on priority information needs for sockeye salmon.

For the Southeast Alaska Region, the 2014 Request for Proposals is focused on the following priority information needs:

Eulachon

- Provide an index of escapement for Unuk River and Yakutat Forelands eulachon.

Sockeye Salmon

- Obtain reliable estimates of sockeye salmon escapement. Stocks of interest include: Hetta, Karta, Sarkar, Hatchery Creek, Redoubt, Gut Bay, Falls, Kah Sheets, Salmon Bay, Klag, Sitkoh, Kook, Kanalku, Hoktaheen, and Neva.
- Document in-season subsistence harvest of sockeye salmon. Stocks of interest include: Hetta, Hatchery Creek, Gut Bay, Falls, Kah Sheets, Salmon Bay, Klag, Kanalku, and Hoktaheen.

Multi-Regional Priority Information Needs

The Multi-regional category is for projects that may be applicable in more than one region. For the Multi-Regional category, the 2014 Request for Proposals is focused on the following priority information needs:

- Changes in subsistence fishery resources and uses, in the context of climate change where relevant, including but not limited to fishing seasons, species targeted, fishing locations, fish quality, harvest methods and means, and methods of preservation. Include management implications.
- Develop models based on long-term relationships between ocean conditions and production, which could include juvenile and adult survival, for Bering Sea and Gulf of Alaska Chinook salmon stocks to better understand and respond to changes in run abundance.