Priority Information Needs Southwest Region Adopted by KARAC

(Bristol Bay) Reliable estimates of Chinook Salmon escapement and evaluation of quality of escapement in Alagnak River, Big Creek, Meshik River, Naknek River, and Togiak River, including egg deposition, sex and size composition of spawners, and spawning habitat quality and utilization for determining the reproductive potential of spawning stocks.

(Kodiak/Aleutians) Comparative ecological evaluation of lake rearing habitats of Sockeye Salmon stocks in southwest Kodiak Island, including Olga Lakes and Akalura Lake watersheds, and the assessment of (1) declines of salmon stocks and associated subsistence harvest opportunities, and (2) effects of climate change on salmon production in these lake systems.

(Bristol Bay) Annual estimates of Sockeye Salmon escapement in the Lake Clark watershed.

(Bristol Bay) Evaluation of Chinook and Sockeye salmon populations in the Chignik River area to understand the decline in salmon stocks and associated subsistence harvest opportunities, such as reliable estimates of escapement, quality of escapement, and environmental impacts.

(Kodiak/Aleutians) Reliable estimates of abundance of salmon populations in the Kodiak Archipelago and Aleutian Islands areas important for subsistence use and assessment of changes in these populations. Specific areas of concern are McLees Lake, Mortensen's Lagoon, <u>Unalaska Lake</u> and Kodiak Archipelago stocks.

(Kodiak/Aleutians/Bristol Bay) Using scale analyses of fresh and saltwater growth patterns over multiple years, examine how recent changes in the ocean affect growth and survival of Chinook and Sockeye Salmon within their range and habitats of the Kodiak/Aleutian drainages of particular concern include the following drainages (Buskin, Karluk, Ayakulik, McClees drainages) and/or the Bristol Bay/Alaska Peninsula drainages (Chignik, Nushagak, Big Creek, Alagnak, Meshik, and Togiak drainages). The Chingik drainage is of particular concern.

(Kodiak/Aleutians/Bristol Bay) Evaluate effects on subsistence users in the Southwest Alaska region resulting from changes in fish populations, including biological considerations of run timing, run quality, sex ratios, and age composition, and incorporating local observations and knowledge. Research

should include a multi-disciplinary approach and include elements of Traditional Ecological Knowledge as well as Stock Status and Trends.

Kodiak Area – Enumeration of salmon smolt outmigration in the Buskin River system

Multi-Region PIN – Gain a better understanding of ecosystem factors negatively impacting subsistence salmon runs and harvest practices in Alaska, including ocean conditions, freshwater conditions, and changing climate conditions.