This project provides a comprehensive review of mariner communications and connectivity mission needs for the Alaska and the U.S. Arctic Extended Economic Zone (EEZ), with a particular focus on the Arctic (based on near, mid-term, and long-term time horizons). The investigation will take a sequenced and iterative approach, beginning with a comprehensive literature review, the establishment of a Core Advisory Team, and the development of detailed working groups. These phases will inform and drive the development of a detailed qualitative market survey, which will serve as the primary data-gathering stage in which key stakeholders will identify gaps and shortfalls related to maritime connectivity needs in their respective regions, industries, and communities. The culmination of the latter phases will inform an expert assessment, leading to the creation of a draft knowledge product, which will be assessed and finalized through a final capstone workshop. The principal focus of this planned series of investigations is to review current-to-long term mission connectivity needs, and to assess current and emerging technologies in order to derive an expert-driven comprehensive knowledge product. Planned research will address support to the public good for marine communications and connectivity concerns that affect mariner and Coastal communities across Alaska. Research will assess associated communications and connectivity needs to include regulatory compliance requirements for the International Convention of Safety of Life at Sea 1974 protocols (SOLAS—1974).