

## Habitats occupied by Chinook salmon in the Gulf of Alaska and in the U.S. Navy's Temporary Maritime Activities Area

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The U.S. Navy conducts training exercises in the Gulf of Alaska (GOA) Temporary Maritime Activities Area (TMAA). The Navy is interested in understanding the overlap of occurrence between populations of Chinook salmon and these training activities. To provide insights into Chinook salmon ocean ecology while occupying waters of the GOA, including the TMAA, we attached pop-up satellite archival tags (PSATs) to individuals near Chignik, AK (n = 20; August 2020), Kodiak, AK (n = 20; October 2020), Yakutat, AK (n = 20; March 2021), Craig, AK (n = 20; May 2022), and Sitka, AK (n = 20; June 2022). Tissue samples were collected from the tagged fish to determine stock-of-origin of each tagged fish. To date, of the 100 PSATs deployed, 91 have reported to satellites and 4 have been recaptured in fisheries, providing over 5,000 days of Chinook salmon behavioral and habitat data. Reporting locations of tags were widespread across the eastern North Pacific Ocean, ranging as far west as the Bering Sea to as far east as the U.S. Pacific Northwest. Preliminary analyses have suggested that while tagged Chinook salmon occupied the TMAA, 58% of the estimated daily locations occurred over the continental shelf, while the remainder of the days occurred over the slope (22%) and the basin (20%). Furthermore, preliminary genetic analyses suggest that all Chinook salmon originated from southern Southeast Alaska, British Columbia, Washington, and Oregon, making our results pertinent for many populations throughout North America. The information about Chinook salmon gained in this study may be used to provide insights into important management issues in the North Pacific Ocean, including overlap between Chinook salmon and Navy training exercises in the GOA.