

# Using angler engagement to guide documentation of Coastal Cutthroat Trout distribution at the northern and western portion of their range

**State(s):** Alaska

**Managing Agency/Organization:** Alaska Department of Fish and Game – Division of Sport Fish and Alaska Freshwater Fish Inventory (AFFI)

**Type of Organization:** Government

**Project Status:** Ongoing

**Project type:** WNTI Project

**Project action(s):** Population assessment, Monitoring, Education/Outreach.

**Trout species benefitted:** Coastal Cutthroat Trout

**Population:** Prince Williams Sound

**Project summary:** With an expansive area approximately the size of West Virginia (>62,000 km<sup>2</sup>), the Prince William Sound management area has over 750 stream drainages that could harbor anadromous Coastal Cutthroat Trout (CCT), of which less than 10% have been sampled for the presence of CCT. Due to the vastness of PWS, we intend to utilize the numerous recreational anglers that use the area to aid in documenting CCT in Prince William Sound. We will do so by (1) using modeled CCT presence using habitat data, (2) using angler engagement to help document CCT presence and prioritize potential CCT streams to sample, and (3) conduct effective field sampling of streams in western Prince William Sound for the presence of CCT by relying on 1 and 2 and (4) sharing the findings and new information with the angling public.

This project will be carried out in multi-phase process:

Phase 1: Staff will assess modeled potential Coastal Cutthroat Trout (CCT) streams based on previously documented CCT streams and habitat data to guide sampling efforts. The models will use GIS-derived watershed-scale attributes and logistic regression to explain and predict the spatial pattern of coastal cutthroat trout (CCT) occurrence in Prince William Sound, Alaska, USA (PWS). Model outputs will help identify priority locations that guide both angler instruction (phase 2) and field sampling (phase 3) efforts of this study.

Phase 2: Given the fluid situation with COVID-19, initial engagement activities will be held virtually through ADF&G's Fishing Forums, YouTube, and/or social media pages (social media pages combined reach nearly 50,000 people between Facebook and Instagram). Outreach presentations will also be given to local fishing organizations either virtually or in person. Efforts will be made to coordinate with local fishing organizations and recreational guides that operate in Prince William Sound and through the ADF&G port sampling program. Information about the project and opportunities to get involved will be shared with anglers. Those interested in participating will be instructed on methods and supplied forms and contacts for documenting CCT observations and information on behavior (e.g.- spawning, feeding), time, and location.

Phase 3: Field sampling will begin in May and will include a mix of methodology (hook and line, seining, e-fishing, etc). Data on CCT detection/non-detection and associated habitat will be collected from various streams in Prince William Sound and the Northern Gulf of Alaska. Supplemental genetic and tissue samples along with demographic data (e.g., length composition and sex ratio) will be collected when possible. Simultaneously, information will be gathered from recreational anglers about CCT observations in Prince William Sound; data from these documentations will be used to help prioritize streams to sample, substantiate previous CCT documentation, and contribute to AWC nominations.

Phase 4: Findings will be disseminated to anglers and interested groups. A sport fishing forum will be hosted to teach anglers techniques and tips for targeting Prince William Sound CCT and share results of the study. Additionally, a CCT informational brochure and video about CCT fishing opportunities will be made available to the public through the ADF&G Sport Fish Information Center, social media pages, and YouTube channel. Nominations will be submitted to add CCT life stage documentation to the AWC and CCT distribution and biological data will be provided to the Pacific States Marine Fisheries Commission to add to the range-wide CCT database and interactive mapper.

**Problem the Project Addresses:** Coastal Cutthroat Trout (*Onchorhynchus clarkii clarkii*; CCT) range from Northern California to Prince William Sound (PWS) in Alaska. Prince William Sound represents both the western and northernmost distribution of CCT. Species at the periphery of their distribution tend to be highly susceptible to ecological disturbances including logging and climate change. Understanding a species

distribution is critical to guide management, conservation, and restoration efforts. Unfortunately, data are lacking on the distribution of CCT in PWS, the western portion in particular.

The Coastal Cutthroat Trout Interagency Committee (CCTIC) determined that data collection to fill in CCT distribution gaps should be a priority for CCTIC partners, which includes ADF&G. We believe that with rigorous stream sampling and the local ecological observations of anglers in PWS that we can improve and gain a more comprehensive understanding of CCT distribution in PWS. Because Prince William Sound is on the fringe of CCT distribution, there is also potential to increase the known range of this species to the north and west with the combined efforts of ADF&G and recreational anglers.

All documentation of CCT during this project will be used to generate nominations for the Alaska Anadromous Waters Catalog (AWC), which provides protection for critical water to anadromous fish by creating protected habitat buffers and requiring ADF&G approval of a mitigation plan prior to conducting activities (e.g., road building, logging). By documenting CCT habitat, the streams and lakes that are critical to CCT life stages can gain the necessary protection.

The project will engage and attempt to utilize recreational anglers and recreational guides as partners. Efforts will be focused on educating individuals about a less understood native trout species, CCT. To engage anglers initially, a forum will be held to educate anglers about how to target CCT and collect data on CCT observations. Individual organizations and charter companies will also be contacted. The goal will be to collect information from those that have caught these species in the past and engage new anglers looking to target these species to help understand the distribution of CCT in the most northern and western extent of their range. Our engagement will create citizen scientists out of recreational anglers by getting them involved in fisheries research and conservation. The CCT recreational fishery in Prince William Sound is underutilized, and this project could create new opportunities to target this unique trout species.

**Partners:**

- Alaska Department of Fish and Game – Division of Sport Fish and Alaska Freshwater Fish Inventory
- Pacific States Marine Fisheries Commission
- NOAA Fisheries Office of Habitat Conservation
- Coastal Cutthroat Trout Interagency Committee
- Western Native Trout Initiative

The organizing partners are the ADF&G – Division of Sport Fish and AFFI. The Western Native Trout Initiative and Pacific States Marine Fisheries Commission will serve as grant administrator.

**Funding Source(s):** NOAA Fisheries Office of Habitat Conservation

**Project cost:** \$52,156

**Start Date:** 05/01/2021 **Completion Date:** 6/30/2022

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