

# FINAL REPORT –

## Coastal cutthroat trout in Alaska: An assessment of distribution and occurrence data

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May 2013

**Submitted to the Western Native Trout Initiative, Fish Habitat Partnership**

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- James Ray, U.S. Fish and Wildlife Service (USFWS), Juneau Field Office

**Assisting Agencies:**

- Pacific States Marine Fishery Commission (PSMFC)

**Primary Funding Source<sup>1</sup>:**

- FFY2011 Western Native Trout Initiative (WNTI), National Fish Habitat Partnership

<sup>1</sup> – Funding for this project was administered through USFWS Financial Assistance Award Number F11AC00691

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## Introduction

Increasing demand for resource development in coastal Alaska is creating potential threats to coastal cutthroat trout (*Oncorhynchus clarki clarki*) (CCT) habitat. In Alaska, CCT support an important sport fishery and a small subsistence fishery. Alaska's Wild Trout Policy (5 AAC 75.222) states that wild trout habitat "should be maintained at levels of resource productivity that assure optimal sustained yields". In order to protect CCT and their habitat in Alaska it is crucial to have a working knowledge of their life history strategies, abundance and productivity, and how these factors vary across their range. Implicit in this statement is knowing distribution patterns regionally (e.g., across their entire range) and locally (e.g., within a watershed, stream, or lake). Information on CCT distribution in Alaska is limited and scattered among various state, federal, and tribal, offices throughout the coastal regions of the state.

To date, there has not been a coordinated effort to collect, organize, and disseminate CCT distribution information in Alaska. The current extent of CCT distribution information resides in various agency holdings and within inventory and monitoring programs focused on anadromous and resident Pacific salmonids. The most significant inventory and monitoring programs include the Anadromous Waters Catalog (AWC), the Alaska Freshwater Fish Inventory (AFFI) and various US Forest Service efforts. The fact that CCT exhibit varying freshwater residence or anadromous patterns further obscures efforts to extract distribution information from these existing data sources.

There is currently no established range-wide management or conservation plan in place for CCT; however, CCT are a species of concern for the U.S. Fish and Wildlife Service (USFWS) and a target subspecies of the Western Native Trout Initiative (WNTI) Fish Habitat Partnership. Developing a conservation plan has been identified as a priority by the USFWS, (Finn et al. 2008), the CCT Interagency Committee (Griswold 2006), and the WNTI Strategic Plan.

Since 2006, the Pacific States Marine Fisheries Commission (PSMFC) has supported the CCT Interagency Committee to collaboratively improve the understanding of CCT distribution, develop monitoring tools, and ultimately, conserve CCT (Griswold 2006, Finn et al. 2008). This interagency working group is a WNTI partner and is comprised of representatives from state, tribal and federal agencies throughout the native range of CCT. The activities of the CCT Interagency Committee include the development of a range-wide CCT database, managed by the PSMFC. Gathering and compiling data was identified by the CCT Interagency Committee as the crucial first step to protecting CCT habitat and developing a range-wide conservation plan. In particular, data gaps in Alaska were identified early in the PSMFC database planning process and it was acknowledged that a future data-gathering project would be required in Alaska to fill these gaps. This project attempted to address these data gaps to ensure better geographic coverage of available data, and improve regional awareness of CCT distribution in its range in Alaska. This project will also help address the goal of the National Fish Habitat Action Plan (NFHAP: <http://fishhabitat.org/>) for using science and science-based assessments as the basis for decision making.

Furthermore, the goals and objectives of this project are consistent with key components of the ADFG-SF Strategic Plan (<http://www.sf.adfg.state.ak.us>).

This project builds on CCT Interagency Committee activities and will provide information that will further the efforts to develop a conservation plan, including the need to develop research and monitoring efforts to better describe the status of the subspecies. CCT have an extensive geographic distribution, complex life history and a broad within-watershed distribution that extends from estuaries to headwater streams. These factors have led to challenges in understanding their basic biology as well as determining their population status (Johnson et al. 1999). In Alaska, healthy and ‘stronghold’ populations of CCT exist, due at least in part to relatively low levels of habitat altering anthropogenic activities (relative to portions of the Pacific Northwest), conservative sport fish harvest levels, and a wide array of life history strategies exhibited by CCT. However, current levels of anthropogenic activity in Alaska should not be assumed for the long-term, and therefore providing data on these populations is important as it may provide a better understanding of the range of variation that is present in the subspecies. Increasing our knowledge of the natural range of variation of CCT was identified as a goal by the CCT Interagency Committee (Griswold 2009).

This project collected, organized, and provided spatial information necessary to understand CCT distribution and habitat use in Alaska and contribute to developing strategies to protect CCT habitat in Alaska and throughout their native range. Biologists from the Alaska Department of Fish and Game, Sport Fish Division (ADFG-SF) and the U.S. Fish and Wildlife Service, Juneau Field Office (FWS-Juneau) worked cooperatively to gather and organize available CCT distribution, abundance and life history data from state, tribal, and federal agencies and was incorporated into a range-wide CCT database managed by the PSMFC; ultimately this data will be available to other repositories as requested.

## **Geographic Scope**

The geographic extent associated with this project includes all of coastal Alaska, generally extending from Prince William Sound in the North to Dixon Entrance in Southeast Alaska to the South (Figure 1). We further constrained our efforts to only include Alaskan freshwaters extending inland to the U.S./Canada border. This geographic scope was identified based on the limited known distribution information available (Pauley, et al 1989; Marston and Brazil, 2008; Harding and Coyle, 2011) for the state of Alaska. Within the area defined above, we attempted to capture any and all information related to coastal cutthroat trout distribution, abundance, productivity, life history strategies in a coordinated effort that ultimately could be used to evaluate their status across the known range for this species.

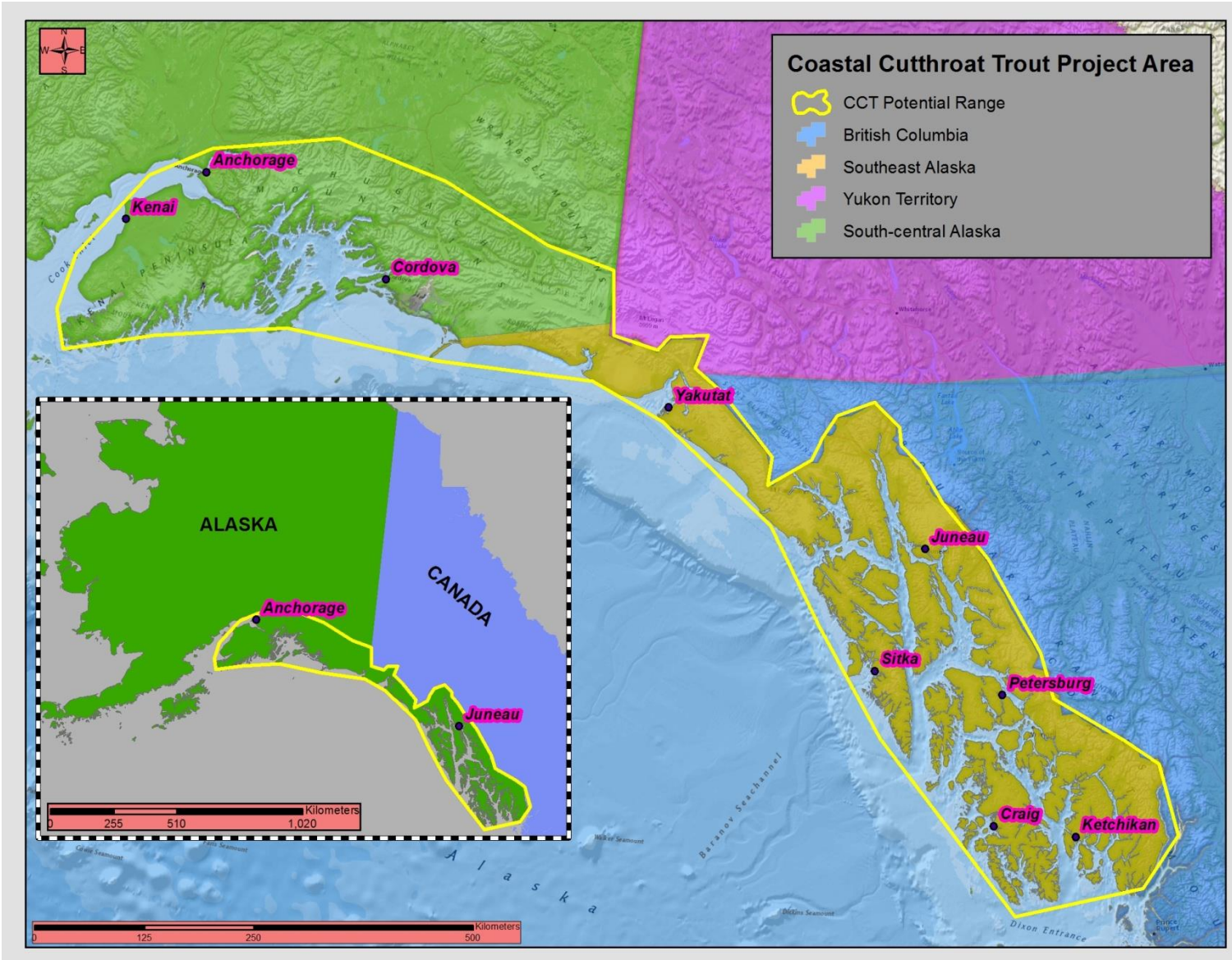


Figure 1. – Geographic extent of coastal cutthroat trout project across Alaska.

## Objectives

This project attempted to address CCT data gaps in coastal Alaska by consolidating and organizing the available data from state, tribal and federal entities throughout the native range of CCT. Providing a spatial component to all data was critical to success. Specific objectives of this project included:

1. Identify, acquire, and organize coastal cutthroat trout distribution, abundance, life history, population status, and habitat related information throughout their native range in Alaska;
2. Deliver information gathered in Objective 1, in electronic format (spreadsheets, PDF documents, and geodatabase) to PSMFC for incorporation into the coastal cutthroat trout range-wide database;
3. Collect distributional data on other Alaskan WNTI species (e.g. rainbow trout and Dolly Varden) that is available with minimal effort while concentrating on CCT data.

## Approach

Biologists from ADFG-SF and the FWS-Juneau developed a data acquisition strategy that included outreach to a broad spectrum of state, federal, and tribal entities regarding any and all available CCT information. Outreach activities included identifying the need, purpose, and strategies that would be employed to consolidate and standardize contributed information as well as the eventual dissemination and publication of the same. See Appendix 2 for outreach solicitation.

Following outreach to partner entities, ADFG-SF and FWS-Juneau project staff gathered and collated existing data, maps, and gray literature regarding CCT in Alaska and prepared datasets for entry to the PSMFC CCT database. All spatial data was integrated into a Geographic Information System (GIS) and delineated in point, polyline, or polygon shapefile and geodatabase formats. Project biologists from Alaska collaborated with PSMFC to populate the CCT database using standard methods to ensure important data fields were complete, accurate, and properly defined with associated metadata. The PSMFC finalized activities by populating its CCT database with data provided by this project, including metadata development, and making all information available for review and download through web portals and publicly available web mapping services. Electronic copies of literature in electronic PDF format were provided to PSMFC for inclusion in the CCT library holdings in StreamNet ([http://www.streamnet.org/reports\\_pubs.cfm](http://www.streamnet.org/reports_pubs.cfm)).

- ADFG-SF biologists coordinated with AGF&G field and regional offices as well as other state agencies to identify, acquire, and organize CCT distribution, abundance, population status, and habitat related information.
- FWS-Juneau biologists coordinated with federal agencies (U.S. Forest Service (USFS) and PNW Forestry Research Lab, USFWS, National Park Service, National Marine Fisheries Service) to identify, acquire, and organize CCT distribution, abundance, population status, and habitat related information.
- Work was completed via phone calls, email, outreach solicitations and office visits for on-site data acquisition and QA/QC and metadata development.



## Data Sources

### *Alaska: State Entities*

The source of data acquired during this project from state of Alaska contacts was derived from 6 primary datasets all administered by various inventory, research, and management groups within the ADFG-SF. Collectively, these groups had access to data extending from southern Southeast Alaska to Prince William Sound. The 6 individual datasets are described below:

1. **Anadromous Waters Catalog (AWC)** – the AWC is the state of Alaska’s primary regulatory tool for protecting anadromous fresh waters of the state that provide habitat to anadromous fish species. The AWC uses confirmed presence accounts to identify distribution patterns of individual species across all fresh waters in Alaska where such information exists. Because of its direct tie to anadromous species, information gaps exist for populations of resident (freshwater only) fish, including the coastal cutthroat trout that typically exhibit a diverse array of life history strategies including freshwater residence only, or those fish that inhabit freshwaters during winter (overwinter rearing) and spring (spawning) but move to nearshore marine waters during the summer months. The ADFG-SF administers the AWC and associated web mapping tools. More information can be obtained through ADFG-SF website portals (<http://www.adfg.alaska.gov/sf/SARR/AWC/index.cfm?ADFG=main.home>).
2. **Alaska Freshwater Fish Inventory Database (AFFID)** – The AFFID houses freshwater fish (anadromous and resident) occurrence data sets throughout the state of Alaska compiled from a variety of sources. Unlike the AWC, the AFFID is not used as a regulatory tool, but rather as an additional reference where freshwater habitat, fish occurrence information is required. The ADFG-SF administers the AFFID and associated web mapping tools. More information can be obtained through ADFG-SF website portals (<http://www.adfg.alaska.gov/index.cfm?adfg=ffinventory.main>).
3. **Resource Mapping and Inventory Group (RMIG) Fish Observations** – Fish observation locations captured by the ADFG-SF RMIG include the locations of all fish capture/observation encountered during salmonid habitat or fish assessment surveys since 2001 in Southeast Alaska. All anadromous capture observations are annually reviewed and incorporated into the AWC for nomination. This Fish Observation dataset and associated database is administered by RMIG staff of the ADFG-SF, located in the Regional office (Douglas) of ADFG-SF, Southeast Region.
4. **Recreational Sport Fishing Cutthroat Lakes** – this dataset identifies a subset of lakes in Southeast Alaska that receive significant fishing effort for cutthroat trout, and therefore includes documented occurrence of the species in lakes across Southeast Alaska. This dataset is administered by the Trout Group of ADFG-SF, which is located in the Regional office (Douglas) of ADFG-SF, Southeast Region.
5. **Cutthroat Lakes and Streams** – this dataset identifies an additional subset of lakes and streams in Southeast Alaska where CCT presence has been confirmed. Data was derived from scanned copies of a variety of hard copy reports found in the Catalog and Inventory (C&I) files housed at the ADFG-SF office in Douglas. This dataset is administered by the Trout Group of ADFG-SF, which is located in the Regional office (Douglas) of ADFG-SF, Southeast Region.

6. **Cutthroat Abundance Estimates** – this dataset contains a variety of salmonid abundance estimates for specific lake and stream systems in Southeast Alaska. Estimates of abundance for lakes were obtained from mark-recapture population studies; estimates of escapement were derived from weir projects on select streams. Data was derived from a variety of ADFG-SF Divisional reports and associated spreadsheets or from publications and associated spreadsheets from other resource agencies and entities in Southeast Alaska. This dataset is administered by the Trout Group of ADFG-SF, which is located in the Regional office (Douglas) of ADFG-SF, Southeast Region.

### *Alaska: Federal Entities*

As previously described, the FWS-Juneau focused on acquiring data from federal agency sources. This effort included outreach to the National Marine Fisheries Service and National Park Service, as well as internally within the USFWS; however, the majority of the data was acquired from the U.S. Forest Service (USFS). The Tongass and Chugach National Forests (NF) constitute a significant portion of the land ownership within the range of CCT in Alaska. Data contributions from the USFS are derived from three main sources: 1) Tongass National Forest Road Condition Surveys; 2) Ranger District projects, and 3) research conducted by the Pacific Northwest Research Station (PNWR), Juneau Forestry Sciences Lab. These data sources are described below:

1. **Road Condition Surveys** – As part of the Tongass Road and Stream Crossing Project, the USFS and state partners developed a Road Condition Survey (RCS) protocol for evaluating fish passage and sediment inputs from non-point source pollution throughout the Tongass NF permanent road system. The RCS database, administered from the Tongass NF Supervisor's Office in Petersburg, AK, contains location records of numerous salmonid observations, including CCT, as well as basic stream physical characteristics, from approximately 5000 miles of road throughout the Tongass NF.
2. **Ranger District Projects** – Individual Ranger Districts within the Tongass NF and Chugach NF engage in numerous fisheries activities consistent with the District's management objectives, such as: pre-timber harvest fish presence surveys, monitoring of habitat restoration efforts (in-stream and fish pass construction), and monitoring recreational fisheries. Data from these numerous fisheries sampling efforts was sorted for CCT observations and collated by Ranger District. Fisheries sampling conducted by the USFS is reported to the ADF&G and fish observations are ultimately included in the state managed AWC and/or AFFI databases (see above). CCT observations from Ranger District sources were screened to only include observations that are not currently incorporated in the state databases. Similar to the 'Cutthroat Abundance Estimates' dataset listed in the 'State Entities' section above, CCT data from mark-recapture studies from several lakes in SE Alaska was also available from USFS Ranger Districts. Generally, there is no single centralized database for fisheries activities at the Ranger District level and the information is administered by each District on a project by project basis. The majority of data from Ranger District Projects was contributed by the Cordova, Hoonah, Juneau, Wrangell, and Yakutat Ranger Districts.

3. **PNWR Juneau Forestry Sciences Lab** - This dataset is a compilation of 15 research projects conducted on the Tongass NF by Juneau Forestry Sciences Lab between 1980 and 2005. Research projects included, but are not limited to: 1) Development and testing of a protocol to use coho salmon as a Management Indicator Species (MIS) for the Tongass Land Management Plan; 2) Evaluating the effectiveness of installing an anadromous fish pass and determining the response of resident cutthroat trout and Dolly Varden char to the introduction of coho salmon fry; and 3) Evaluating the importance of Large Woody Debris to fish habitat. This database is administered by the PNWR Juneau Forestry Sciences Lab.
4. **Opportunistic Data Acquisition** – In addition to the data sources referenced above, data was also acquired opportunistically from non-federal sources. This primarily included the compilation of CCT observations documented in various reports, such as theses, journal articles, white papers, and ADF&G Habitat Division field reports.

## Data Reduction and Manipulation

All data obtained during this project required various measures of collation and organization, editing and revision, and spatial data identification in order to allow integration with the PSMFC database structure. All data obtained for this project resided in 1 of 2 databases, which are described below:

1. **PSMFC Observational Database** – The PSMFC Observational Database was reserved for datasets that included survey type information related to CCT (and other salmonids); generally only data associated with a specific on-site field sampling was included here, where sampling dates, sampling strategy, spatial location, observers, and results were documented and readily available;
2. **PSMFC Parallel Database** – The PSMFC Parallel Database was reserved for all other datasets that may not have been related to a single survey or single set of objectives, or those that this information could not be readily confirmed or identified. This parallel database essentially captured subsets of data, specific to CCT that were available from larger databases or data mining efforts and thus were not associated with a single field sampling event or project. As with data housed in the PSMFC Observational Database, all data residing in the PSMFC Parallel Database had a spatial component allowing immediate integration with GIS and therefore contributes to a more robust identification of the distribution of CCT across their range.

## Results

The project participants (ADFG-SF; FWS-Juneau) conducted outreach to prospective partners both internally (within their respective agencies and regions) and externally in an effort to identify relevant CCT datasets. A complete list of partners that contributed data to these efforts is provided in Appendix 1. All datasets identified by partner contribution in Appendix 1 were integrated into one of two databases administered by the PSMFC: 1) PSMFC Observation Database; and 2) PSMFC Parallel Database. As identified earlier, ‘survey’ type data was incorporated into the Observation database while non-survey type data was absorbed into the Parallel database. Some overlap in data ‘type’ across data absorbed by the two databases was apparent, although no redundancy was observed. Ultimately all data absorbed into either of the two PSMFC databases yielded updated information on CCT distribution within Alaska.



Across all of Alaska, and providing summarized data independent of entity, we acquired a total of 6,728 individual records related to CCT occurrence (i.e., confirmed presence) or various measures of abundance. Individual records may have a one-to-one or many-to-one spatial relationship, because they reflect multiple temporal sampling events for the same type of data (e.g., weir counts across multiple years) or are associated with varying types of information (e.g., some records might be associated with simple confirmed presence, while others document or detail a population estimate or weir count); these examples therefore yield multiple points (records or lines of data) at potentially the exact same location. For this reason, the total number of records is more informative in describing the amount of data acquired during this project rather than evaluating distribution patterns.

We obtained a significant number (> 5,000) of additional records related to CCT (and other salmonid species) presence/absence, abundance, and general observation for which various inherent data requirements or inconsistencies precluded us from delineating or otherwise associating with the 6,728 records identified above that were included in the PSMFC Observational Database. All of these additional records were provided to the PSMFC and were absorbed into the PSMFC Parallel Database.

For evaluating CCT distribution information, we queried all records of data to identify the total number of spatially unique locations. The total number of unique locations in Alaska where CCT had confirmed occurrence (presence) was 2,719. All unique occurrence locations are delineated in Figure 2. It is important to recognize that some portion of the unique locations where we confirmed CCT presence occur on the same island, or within the same watershed, river or stream, or the same lake. We therefore provide additional information related to unique observations of CCT occurrence at the island and watershed spatial scales to better understand the full amount of data acquired for this project and better inform users regarding CCT distribution within Alaska.

As identified above, a total of 6,728 records associated with 2,719 unique locations of CCT occurrence were acquired during this project. We were able to confirm CCT presence on a minimum of 24 individual islands across their distribution within Alaska; all CCT island occurrences were associated within Southeast Alaska. Southeast Alaska alone is populated by 1000's of islands ranging in size from < 0.1 km<sup>2</sup> to over 6,670 km<sup>2</sup>. The smallest island where CCT were confirmed present was Rynda Island (7.04 km<sup>2</sup>), which is located in central Southeast Alaska near the mouth of the Stikine River. CCT were observed on all islands > 661 km<sup>2</sup> and the average size of islands where CCT were not confirmed was 5.91 km<sup>2</sup>.

The total number of unique or individual watersheds (HUC 6 or WBD-HU12) where CCT occurrence was observed in Alaska was 272. Generally, the entire area covering all of the CCT records we captured includes over 2,100 individual non-marine (e.g., terrestrial) watersheds at the 6<sup>th</sup> level HUC scale. Therefore, CCT were observed in approximately 13% of all watersheds that comprise the total extent of their identified range of distribution in Alaska.

All data identified in this report and absorbed into either of the two PSMFC databases are available for query or download upon request by PSMFC staff. An overview of data and processing coordinated by the PSMFC and the Coastal Cutthroat Trout Interagency Committee can be found at <http://cct.psmfc.org/>. An interactive web map delineating data absorbed into the PSMFC Observational database can be viewed at the following webpage: <http://cct.psmfc.org/sample-page/cct-interactive-map>.

## Conclusions

This project focused on gathering and consolidating available information on CCT occurrence and distribution across their assumed range in coastal Alaska. Although distribution range maps were available for CCT prior to this project, the delineation was likely the result of a limited amount of information and coarse in scale, thereby making it impossible to know if CCT inhabited an individual stream, lake, watershed, or island in many cases. A single distribution range map, without multiple individual locations representing confirmed occurrence ignores fine scale habitat preferences, geographic or migratory barriers, and other features that cumulatively factor into refining a species distribution. This project was successful in acquiring a large number of observation records related to CCT occurrence, thus contributing to a more robust and finer scale perspective related to distribution. The absorption of this data into a readily available database hosted by the PSMFC lessens the need for future data mining efforts and duplication of similar efforts.

Griswold (2006) summarized significant data gaps that were identified during a Coastal Cutthroat Trout Science Workshop that included representatives from states and provinces where CCT populations existed. In this review, Griswold (2006) identified priorities of need to acquire additional information related to key topics (e.g., data gaps) in four states (Alaska, Washington, Oregon, California) and the province of British Columbia, together which comprise the entire range of the CCT. We believe that the distribution and occurrence data absorbed by this project could be used as the foundation to better inform or direct future activities related to these identified data gaps, at least as they relate to Alaska, where data was generally considered to be unavailable or not consolidated and organized.

## Future Opportunities

Opportunities for further existing data mining from federal, state, and NGO sources still likely exist. Perhaps the most significant of this data is associated with Management Indicator Species and Upstream Habitat Assessment data, both of which are maintained by the USFS. Both of these databases were identified by USFS biologists as sources of CCT data, but could not be acquired during this process. A stipulation of the ADF&G fish resource permitting process is that all new data generated by permit holders, such as the USFS, be reported annually to ADF&G. This information is ultimately incorporated into the AFFI, which can be periodically mined for new CCT data. However, older data is often not included in the current reporting system. Therefore, acquiring CCT data directly from Ranger Districts ensures that important historic data is documented and made available.

Future work in Alaska related to CCT distribution and occurrence, life history, abundance estimates, or population status should begin with a review of the data identified from this project, in addition to other datasets absorbed or made available to the PSMFC. Observed data gaps could be identified geographically or by topic (population status, genetic variability, etc.) and then addressed through strategic planning and coordination. Acquisition of currently existing data that was not absorbed during this project is still possible and could provide meaningful information. Alaska USFS Ranger Districts that were unable to respond to our inquiries could be especially critical for addressing data gaps in Southeast Alaska.

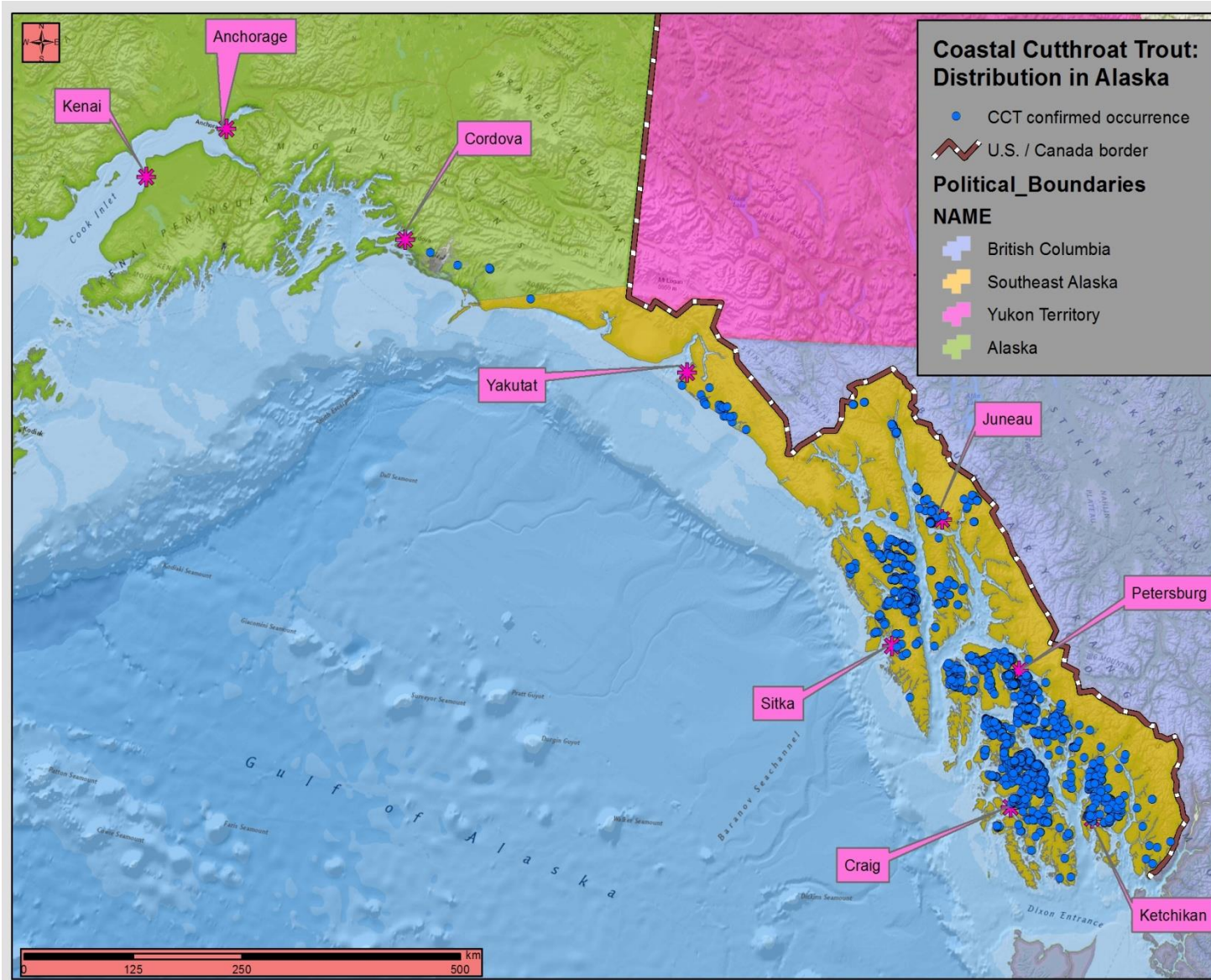


Figure 2. – Locations of confirmed presence of coastal cutthroat trout in Alaska derived from this project.

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## Appendix 1: Partners contributing coastal cutthroat trout data in Alaska

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Appendix 1.- List of partner entities contributing data to the Alaska coastal cutthroat trout project, October, 2011 – March, 2012.

Partner Contact Lead	Partner Agency	Partner Contact Info	Data Description
Roger Harding	Alaska Department of Fish and Game, Sport Fish Division (Region I -Douglas)	<a href="mailto:Roger.Harding@Alaska.gov">Roger.Harding@Alaska.gov</a> (907) 465-4311	3 datasets including: 1) Recreational sport fishing lakes for cutthroat trout in Southeast Alaska (GIS polygon shapefile); 2) cutthroat trout presence in lakes and streams in Southeast Alaska (GIS polygon and polyline shapefiles); and 3) cutthroat trout abundance data in streams and lakes in Southeast Alaska (GIS polyline and polygon shapefiles)
J Johnson	Alaska Department of Fish and Game, Sport Fish Division (Region IV – Anchorage)	<a href="mailto:J.Johnson@Alaska.gov">J.Johnson@Alaska.gov</a> (907) 267-2337	Cutthroat trout confirmed presence information obtained from a query of the Anadromous Waters Catalog (AWC) for the state of Alaska (GIS point and polyline shapefiles)
Joe Buckwalter	Alaska Department of Fish and Game, Sport Fish Division (Region IV – Anchorage)	<a href="mailto:Joseph.Buckwalter@Alaska.gov">Joseph.Buckwalter@Alaska.gov</a> (907) 267-2345	Cutthroat trout confirmed presence information obtained from a query of the Alaska Fresh Water Fish Inventory Database (AFFID) for the state of Alaska (GIS point shapefiles)
Jeff Nichols	Alaska Department of Fish and Game, Sport Fish Division (Region I -Douglas)	<a href="mailto:Jeff.Nichols@Alaska.gov">Jeff.Nichols@Alaska.gov</a> (907) 465-8576	Cutthroat trout confirmed presence information obtained from a query of the Resource Mapping and Inventory Group (RMIG) database (Odyssey) and based on various fish observation projects conducted throughout Southeast Alaska



Appendix 1.- Continued (Page 2 of 3)

Partner Contact Lead	Partner Agency	Partner Contact Info	Data Description
John McDonell	Fisheries Biologist Tongass National Forest Petersburg Supervisors Office	<a href="mailto:jmcdonell@fs.fed.us">jmcdonell@fs.fed.us</a> (907) 772-5862	Road Condition Survey database: Confirmed presence information of CCT at road stream crossings throughout the Tongass NF (GIS point shapefile).
John Hyde	Hoonah Ranger District Tongass National Forest	<a href="mailto:jmhyde@fs.fed.us">jmhyde@fs.fed.us</a> (907) 945 1225	Hoonah Ranger District fisheries project data. Confirmed presence information of CCT (GIS point shapefile).
Pete Schneider	Juneau Ranger District Tongass National Forest	<a href="mailto:pschneider@fs.fed.us">pschneider@fs.fed.us</a> (907) 789 6255	Juneau Ranger District fisheries project data. Confirmed presence information of CCT including lake mark/recapture investigations (GIS point shapefile).
Nate Catterson	Yakutat Ranger District Tongass National Forest	<a href="mailto:ncatterson@fs.fed.us">ncatterson@fs.fed.us</a> (907) 784 3359	Yakutat Ranger District fisheries project data. Confirmed presence information of CCT (GIS point shapefile).
Dennis Reed	Wrangell Ranger District Tongass National Forest	<a href="mailto:dhreed@fs.fed.us">dhreed@fs.fed.us</a> (907) 874 7526	Wrangell Ranger District fisheries project data. Confirmed presence information of CCT including lake mark/recapture investigations.
Ken Hodges	Cordova Ranger District Chugach National Forest	<a href="mailto:khodges@fs.fed.us">khodges@fs.fed.us</a> (907) 424 4738	Chugach NF Cordova and Glacier Ranger Districts and Prince William Sound fisheries project data. Confirmed presence information of CCT.

Appendix 1.- Continued (Page 3 of 3)

<b>Partner Contact Lead</b>	<b>Partner Agency</b>	<b>Partner Contact Info</b>	<b>Data Description</b>
Sam Hochhalter	Alaska Department of Fish and Game, Sport Fish Division (Region IV – Anchorage)	<a href="mailto:Sam.Hochhalter@Alaska.gov">Sam.Hochhalter@Alaska.gov</a> (907) 267 2186	Chugach NF Cordova and Glacier Ranger Districts and Prince William Sound fisheries project data. Confirmed presence information of CCT.
Brenda Wright (retired)	Pacific Northwest Research Station Juneau Forestry Sciences Lab	(907) 789 4656	Juneau Forestry Sciences Lab Fisheries database 1980 -2005. Confirmed presence information of CCT.
Chad Soiseth	Glacier Bay National Park and Preserve. National Park Service	<a href="mailto:Chad_Soiseth@nps.gov">Chad_Soiseth@nps.gov</a> (907) 697 2659	Glacier Bay National Park CCT observation data. Confirmed presence information of CCT

Appendix 2: Solicitation letter template  
used for outreach to data contributors in  
Alaska

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Appendix 2.- Solicitation letter template used for outreach to potential data managers having access to coastal cutthroat trout information in Alaska.

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United States Department of the Interior  
FISH AND WILDLIFE SERVICE  
Juneau Fish & Wildlife Field Office  
3000 Vintage Blvd., Suite 201  
Juneau, Alaska 99801-7100  
(907) 780-1160



March 25, 2012

Dear \_\_\_\_\_,

The U.S. Fish and Wildlife Service (USFWS) in collaboration with the Alaska Department of Fish and Game (ADFG) and the Pacific States Marine Fisheries Commission (PSMFC), and with financial support from the Western Native Trout Initiative, is conducting a coastal cutthroat trout (*Oncorhynchus clarkii clarkii*) (CCT) data collection project within the Alaska portion of their range. This letter is a request for your assistance with this project.

In 2006, the PSMFC with assistance from the USFWS established the CCT Interagency Committee — a working group consisting of participants from state, federal, and tribal agencies throughout the distributional range of CCT, including Alaska. To further the understanding of CCT distribution, habitat use, and life histories, and aid in management and conservation decisions, this group identified the need to collect and share science-based information throughout the range of the subspecies.

To provide a framework for CCT data storage and sharing, the PSMFC established a database and associated geospatial tools. This database and associated interactive mapper (<http://gis.psmfc.org/flex/cct/>) is primarily focused on documented occurrence of CCT throughout their range; however, it also houses all types of CCT information. The database currently contains no CCT data from the Alaskan portion of the subspecies' range.

The purpose of the current data collection project is as follows:

- 1) Populate the PSMFC range wide CCT database with CCT data from Alaska.
- 2) Develop an accessible centralized source of data, on CCT distribution and ecology within Alaska to be housed at ADFG and USFWS.

We are asking you to share data that you have collected on CCT whether it is from sampling directed towards CCT or incidental to other sampling efforts, such as weir operations or habitat investigations targeted at Pacific salmon. Our primary focus is on documented occurrence of CCT (locations of confirmed CCT observations); however, we are also interested in other types of data, such as abundance estimates, habitat preference studies, life history studies, etc.

For documented occurrence data, at a minimum, the following data fields are required:

- 1) Data Source (who is providing the data: name and agency)
- 2) Location Description (stream name and/or brief geographic description of location)
- 3) Location Coordinates (Lat./Long, UTM's, etc)
- 4) Observer (name and agency)
- 5) Date of Observation
- 6) Taxon Observed (this must include CCT)
- 7) Sampling method (minnow trap, electrofisher, etc)

We understand this information may come in many forms: electronic datasets, raw data, and written reports, to name a few. We can work with you on an individual basis to identify the best way to share data for this project.

We would appreciate your help with this project. If you have CCT data that you can share or if can help us identify other sources of data within your agency please contact the U.S. Fish and Wildlife Service, Juneau Field Office or ADFG, Division of Sport Fish Southeast Region Office. We want to make data exchange arrangements as convenient for you as possible by e-mail, postal mail and/or personal visits. To enable us to complete the project within the terms of our funding agreement, the deadline for data exchange is June 30 2012.

Thank you for your consideration of this request.