

Wrangell Island Project Final Environmental Impact Statement

Cultural Resource Overview

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Cultural Resources

The National Historic Preservation Act (NHPA) sets forth government policy and procedures regarding "historic properties"; districts, sites, buildings, structures, and objects included in, or eligible for, the National Register of Historic Places. Section 106 of the NHPA, requires that Federal agencies consider the effects of their actions on such properties, following regulations issued by the Advisory Council on Historic Preservation (ACHP).

The Section 106 review process seeks to consider historic preservation concerns with the needs of Federal actions. Review occurs through consultation with the Alaska State Historic Preservation Officer (SHPO), the ACHP, Indian Tribes, and other parties with an interest in the effects of the undertaking on historic properties, commencing at the early stages of project planning. One of the goals of consultation is to identify historic properties that potentially may be affected by the undertaking and assess potential effects and seek ways to avoid, minimize, or mitigate any adverse effects on historic properties.

The National Environmental Policy Act requires Federal agencies to consider effects of their actions on cultural resources which include historic and prehistoric sites regardless of eligibility status to the NRHP.

Tribal Consultation

The Forest Service consulted with the Wrangell Cooperative Association (WCA), the tribal group which is culturally affiliated with the project area. Forest Service archaeologists and other members of the interdisciplinary team met with WCA concerning the planned project and supplied them with a copy of the Cultural Resource Report entitled *Cultural Resource Investigations in the Wrangell Island Project Area, Southeast Alaska* for review and comment (Smith 2014). Copies of the report were also sent to the Tlingit and Haida Central Council, Sealaska Corporation and Sealaska Heritage Institute.

To ensure that the procedural requirements of 36 CFR 800 were met, a cultural resource investigation of the Wrangell Island project area was conducted. In accordance with the Programmatic Agreement (2010) among the Forest Service Alaska Region, the ACHP, and the SHPO, a resource report was submitted to SHPO under 36 CFR 800 regulations implementing Section 106 of the NHPA. The SHPO concurred with the Forest Service finding of "No Historic Properties Affected" for this project.

Analysis Area

The Wrangell Island project area includes all of Wrangell Island. The area of potential effect (APE) is the analysis area used for this project. It is defined by the Wrangell Island Project boundaries with the exception of that part of Wrangell Island that lies north of the east–west division line between Township 62 South and Township 63 South (Figure 1). The island's northern extreme was excluded from the APE because no project activities are proposed for the area. The APE includes all project harvest units, access roads, and associated actions that require ground disturbing activities. Most of the activities are planned for terrain in the low sensitivity zone for cultural resources (USDA Forest Service 2010).

Affected Environment

According to oral tradition and various historical accounts, the Tlingit are the dominant native group of Southeast Alaska. The Wrangell Island project area lies within the traditional territory of the Stikine Tlingit, who occupied a large territory, extending up the Stikine River as far as Telegraph Creek in what is now British Columbia, and encompassing the mainland Alaska shore from Union Bay on the Cleveland Peninsula north to Cape Fanshaw. The territory reaches west to include portions of Kupreanof and Prince of Wales Islands, and all of Etolin, Mitkof, Wrangell and Zarembo Islands.

The prehistory of southeast Alaska can be traced through the archaeological record for thousands of years. Geologic processes that shaped southeast Alaska created a diverse landscape that would have been open for human exploitation by the end of the last ice age, some 14,000 years ago. The present-day archipelago hosts dramatic fjords, thousands of bays and inlets, and elevated marine beaches and deltas along the coastline. Some of these features indicate uplift of the land relative to the sea since the glacial maxima; all provide ecological niches that supported a thriving human population for thousands of years.

Pollen records and radiocarbon dates from nearby Mitkof Island characterize the Holocene vegetation history (Ager et al. 2010:263-267). Following deglaciation, pine woodland with abundant alders, sedges, sphagnum mosses and ferns colonized southeast Alaska. By ca 11,460 cal yr BP Sitka spruce and mountain hemlock replace pines over much of the landscape. Sometime around 10,200 cal yr BP western hemlock arrived and expanded to be one of the most common species. A peat bog habitat advanced after about 7,100 cal yr BP indicating a regional climate shift to cooler and wetter conditions. During the late Holocene, ca 2,200 cal yr BP, cedar was well established. The present-day archipelago is a dense rainforest of spruce, hemlock and cedar with intermittent muskeg environments.

A study of fossil vertebrates in the Alexander Archipelago, primarily at cave sites on Prince of Wales and surrounding islands, has helped interpret the Ice Age history of vertebrates. Radiocarbon-dated vertebrate remains support a glacial maximum refugium theory with specimens dating to as early as 40,000 yrs BP and continuing through the Middle Wisconsin, Glacial Maximum and the Post Glacial (Heaton and Grady 2003:46-47).

Archaeological evidence indicates that humans were living off the rich marine environment at least as early as about 10,000 years ago. The archaeological record and ethnographic information were used to formulate a regional northern Northwest Coast cultural sequence divided into stages or periods (Ames and Maschner 1999:18; Davis 1990:197-202; Moss 1998:88; 2004:181-182, 2011:47). Most of the proposed divisions are consistent but with some time sequence variations (Moss 2004:181; Moss 2011:49). Recognizing the sequence was based on a relatively small data set; the divisions were coarsely formulated to include the Early Period (10,000 – 5,000 BP), the Middle Period (5,000 – 1,500 BP), and the Late Period (1,500 BP – AD 1741) (Moss 1998:92-102; Moss 2004:181-182). Briefly, the Early Period is associated with chipped stone assemblages, often taking the form of a microblade tool tradition. The Middle Period is defined by an increase in the number and size of archaeological sites, more diversified bone tool assemblages and wood stake fish traps and weirs. A continuation of these site types, an increase in fort sites, and written history accounts help define the Late Period.

The Tlingit Indians call southeast Alaska their traditional homeland and were well established by the time Europeans began plying the waters of the inside passage between Dixon Entrance to the south and Yakutat Bay to the north. Developed social organization, custom and tradition suggest ancient ties to the landscape and early European explorers found signs of Tlingit influence and occupation across the entire region (Niblack 1970 [1888]:231, 232).

Tlingit lifestyle is based on an annual subsistence cycle where activities were naturally based upon seasonal influences. Spring was the time for halibut fishing and gathering foods like

herring eggs, beach greens, seaweed and roots; summer activities centered on salmon and berry harvesting; fall was the occasion for deer and water fowl hunting; and winter was when gray cod were harvested and shellfish were gathered (Newton and Moss 1984:5, 13, 14, 15, 18, 20). The Tlingit social organization is an effective means of designating territorial rights and stratifying social levels. Tlingit territory is geographically divided into some 14 or so tribes or kwans, each consisting of two parties called Raven and Eagle (sometimes Wolf instead of Eagle). The party or moiety serves to arrange marriages and are matrilineal in descent. Each moiety is made up of a number of clans that function as the active principle of life, law and religion (Emmons 1991:21, 23; Olson 1967:1). The clan is a blood relationship that binds its members in close union and is made up of households of closely related families living together under one roof (Emmons 1991:27). Although clans owned larger territorial rights, households had their own salmon streams, fishing, hunting and berrying grounds.

Wrangell Island lies within the traditional territory of the Stikine or Wrangell Tlingit (Goldschmidt and Haas 1998 [1946]:73, Chart 4). The Stikine Tlingit are referred to as the Shtax'heen Kwaan or the Bitter Water People. The name is said to refer to one of two things: the Stikine River's silty glacial waters or the chattering of teeth caused by its cold fresh water (Emmons in Rabich-Campbell 1988:21). Either way, the name's association with the Stikine River seems clear. The Stikine Tlingit territory is large, extending up the Stikine River as far as Telegraph Creek and encompassing the mainland shore from Union Bay on the Cleveland Peninsula north to Cape Fanshaw. The territory reaches west to include portions of Kupreanof and Prince of Wales islands, and all of Etolin, Mitkof, Wrangell and Zarembo islands (Olson 1967:3).

Travel to distant reaches of the Stikine's territory for resources was common and created a need for seasonally occupied villages and camps. The Kiks.àdi clan primarily inhabited the island's western and south/southeast shores, and ventured as far inland as Thoms Creek. A large village (known as Old Town) was situated on the west edge of the island, which was inhabited by both the Kiks.àdi and the Naanyaa.aayi (Goldschmidt and Hass 1998 [1946]: 73-78). It was abandoned after the Russians left the area and American interests arrived.

Russian, European, and American interest in southeast Alaska began in the early 1700s fueled by the desire to obtain territory and valuable resources. The Russians were some of the first explorers in southeast Alaska. In 1741, Vitus Bering made his second voyage east of the Russian Pacific coast and reached southeast Alaska, claiming it as a Russian territory. By 1787, the Russians had established small fur-trading outposts in "Russian America," and unified their efforts under the United American Company (changed to the Russian American Company [RAC] in 1799). They established trade relations in southeast Alaska with the Tlingit to obtain more furs for less effort—a business deal that initially worked well for both sides (Arndt et al. 164, 187-189).

In 1834 the Russians heard the Hudson Bay Company (HBC) was interested in trade up the Stikine River. The Russians acted swiftly and built Redoubt St. Dionysius on the northern end of Wrangell Island. The island was named for Ferdinand Von Wrangel, manager of the RAC around 1830. Stikine Tlingit Chief Shakes V, recognized some advantages of cooperation with the Russians, and moved the Tlingit village from its former site at "old town" on Wrangell's west

coast, to Shakes Island in the heart of the current city of Wrangell to be near the Russian Redoubt.

Under the terms of an 1839 lease agreement with the HBC, the RAC withdrew from the post in 1840 (Arndt et al. 1987:186, 189). The HBC renamed the post Fort Stikine and traded with the Stikine Tlingit until the post was abandoned in 1849 (ADCCED 2016). The fort remained under the British flag until Alaska's purchase by the U.S. in 1867.

The discovery of gold in 1861 on the Stikine River fueled community growth as an outfitter for gold prospectors. In 1868, Fort Wrangell was built by the U.S. Army, after the United States officially purchased Alaska from Russia. Gold continued to draw prospectors who staged in Wrangell and traveled up the Stikine River to the Cassiar gold fields during 1874 and again in 1897, when hundreds of miners traveled north during the Klondike Gold Rush (ADCCED 2016). Presbyterian and Catholic churches and schools were established in Wrangell by missionaries during the early 1870s and Alaska's first Protestant church and American school were established in 1877 (CBWA 2014:4).

The fishing industry got its start after the purchase of Alaska. Fish traps and canneries were built around the region mainly seeking the harvest of salmon. In 1889 the Glacier Packing Company opened as a fish packing facility in Wrangell and employed more Chinese laborers than American or native (Brady 1897). During this time period, famed lawman Wyatt Earp traveled through Wrangell and filled in as marshal of Wrangell for 10 days; he declined to become a full-time town marshal (CBWA 2014:3). In 1903, the City of Wrangell was incorporated, at which point the U.S. Postal Service altered the official name from "Wrangel" to "Wrangell," (AlaskaWeb 2016).

The Forest Reserve Act of 1891 allowed for forested public lands to be placed into reserves, from which timber could be harvested and lands could be managed (USDA-FS 2009). In 1902, the Alexander Archipelago Forest Reserve was established, and shortly thereafter, changed to the Tongass National Forest. The Forest Service brought timber management to southeast Alaska, from which small mills and communities sprang. The agency provided employment, public access opportunities, and economic development in the form of lumber and wood products. The first sawmill in Alaska was located in Wrangell; it shipped airplane lumber to Great Britain. Japanese interests in the saw and pulp mills created another foreign interest in Wrangell (CBWA 2014:4).

As the wood and fiber industry took hold, it and fishing became Wrangell's primary economic base. Along with the mill, there were two salmon canneries, two shrimp and two crab canneries within Wrangell City limits. In 1929 the canneries employed more than 150 people. Fur farming was also very important in the Wrangell area with farms of fox, mink, beaver, marten, and muskrat on Wrangell and the surrounding islands (CBWA 2014).

The Alaska Native Brotherhood and Alaska Native Sisterhood lobbied to have the first native boarding school, the Wrangell Institute, opened in 1932. Native children were brought in from throughout Alaska for education of grades kindergarten through high school (CBWA 2014:4).

Although abundant spruce and hemlock resources helped expand the lumber and wood products industry on Wrangell Island (AlaskaWeb 2016), falling lumber prices and an industry-wide decline in lumber production caused the Alaska Pulp Corporation sawmill, Wrangell's largest employer, to close in late 1994. The residual effects are still felt today, with the Wrangell Sawmill closing in 2009.

According to the Tongass Sites Database and Office of History and Archaeology Integrated Business Suite and the work completed for this project, there are 33 prehistoric and historic period archaeology sites in the APE. Prehistoric period sites include 8 shell middens, 5 petroglyphs, 2 pictographs, a wood stake fish trap, and 2 lithic scatters. Historic period sites include a boat, a burial, a building, 4 cabins, a cedar bark source area, 2 gardens, a fur farm, an outpost, a wood platform, a trail and 2 wolf traps.

Methods

The cultural resource evaluation of the Wrangell Island Project began with a literature search of past cultural resource surveys in and around the project area. The Forest Service consulted with the local tribal group (WCA), and reviewed various historical and ethnographic accounts, including Alaska Heritage Resource Survey (AHRs) listings, Alaska Office of History and Archaeology (OHA), Petersburg/Wrangell Heritage files and atlases, special use files, GIS archaeological site and survey data, and the Tongass Site Database.

Over the past four decades Forest Service archaeologists have conducted 44 literature and survey investigations covering over 1,083 acres in the area of potential effect which resulted, in part, with the discovery of 27 sites.

In addition to the background research and previous survey, the Forest Service and SWCA conducted a pedestrian survey of 383 acres of various types of terrain in search of undiscovered sites and other cultural resources. Six additional sites were discovered and recorded. We conducted our field inventory to comply with the NHPA and the NEPA and designed an analysis method that reduces the likelihood that an unanticipated discovery will occur during development. Survey methods are based on a probability model developed over the past several decades. The model recognizes two sensitivity zones in the Alaska Region: high and low. Briefly, the high sensitivity zone includes all land between mean lower low water and 30 m of elevation above mean high water. It also includes certain landscape features like karst and rock shelter areas, streams and lakes, mineral locations, and places described ethnographically or in myths and legends. The low sensitivity zone is all land not relegated to the high sensitivity zone. The model is further described in the Programmatic Agreement (2010). We are in the process of updating the model to include a paleoshoreline model that aids in the prediction of site locations (Carlson and Baichtal 2015). Cumulatively, cultural resource survey in the APE has included inventory of both high and low sensitivity areas. A total of 33 sites have been documented, 30 of which are in the high sensitivity zone. We plotted the location of the sites with respect to proposed activities to determine if known sites could potentially be impacted with project implementation. We evaluated the six sites we discovered while surveying for this project to determine their eligibility status to the National Register of Historic Places. Evaluations are based on a set of criteria described in the National Historic Preservation Act.

Intensive cultural resource surveys and site monitoring have been implemented across the Tongass National Forest beginning in the late 1970s. The current archaeological research and survey designs are based on the results of this work, as well as more modern analysis methods and technology. These methods are designed to preserve and protect significant sites and provide information that will help guide future research and resource management. In addition, continued public education by the Forest Service to increase awareness concerning cultural resources and site stewardship assists the agency in effectively managing the region's heritage sites.

Environmental Consequences

Direct and Indirect Effects

There are 33 sites within the APE. Six of these sites were discovered during pedestrian surveys for this project. All but three of the archaeology sites in the APE are located within a 1,000-foot protected buffer established along the beach and estuary fringe and defined in the Forest Plan Standards and Guidelines (USDA Forest Service 2016, p. 4-4). All of the alternatives propose to harvest timber from inland locations, and none would encroach on the buffer zone. None of the sites outside the buffer zone are in areas proposed for project activities. None of the proposed alternatives would have a direct or indirect effect upon known or newly discovered cultural sites in the project area.

Cumulative Effects

The cumulative effects analysis area coincides with the APE. Cumulative impacts to cultural resources may result from natural erosion, weathering, decay, sedimentation, wind events and cultural processes such as public use and commercial development. Commercial, recreational and subsistence uses are the primary activities that occur within the Wrangell Island project area. Most of the recorded cultural sites are concentrated near the marine shore where visitor access is generally by boat. Increased visitation and expanded use of the beach and estuary fringe could have a cumulative effect on cultural resources. Vandalism and looting, or inadvertent damage, such as ground compaction from trampling, erosion along trails or minor excavation associated with camping may occur with increased use. Activities associated with this project include road building and maintenance and timber harvest. Additional foreseeable activities that may take place in the project area vicinity include timber and salvage harvest projects, pre-commercial tree thinning, State entitlement land selections, utility corridor work, Alaska Mental Health Trust land sale program, Alaska state entitlement land selection, Alaska Department of Transportation utility and transportation corridors and road improvements. Depending on the location and scope of these projects, cultural resources could be affected. The cumulative effects of the project alternatives are not likely to result in adverse impacts on the cultural resources, regardless of whether the sites are in the 1,000-foot protected buffer established along the beach and estuary fringe. The project does not increase access to those sites located outside the buffer zone and activities associated with the project are not occurring near the sites.

Effects Common to All Alternatives

There are 33 sites in the APE but none are in areas proposed for project activities. Most of the areas that are suitable and available for timber harvest in the APE are on steep and highly elevated terrain and within the cultural resource low sensitivity zone. All of the action alternatives propose timber harvest and road work in these areas and implementation, regardless of the alternative, would have no effect on known cultural resources. Most of the known archaeology sites in the project area are located within a protected buffer established along the

beach and estuary fringe and defined in the Forest Plan Standards and Guidelines (USDA Forest Service 2016a, p. 4-4). All of the alternatives propose to harvest timber from inland locations, and none would encroach on the buffer zone. There are three sites located outside the buffer zone but they are not in areas proposed for activities. None of the proposed action alternatives would have a direct or indirect effect upon known cultural resources within the APE.

Mitigation and Monitoring

The Forest Plan addresses the desired condition of cultural resources through a monitoring and evaluation plan. As specified in the Programmatic Agreement (2010), the Forest Service monitors selected areas of direct impact during and/or after the actual ground disturbance. If inadvertent discoveries of human remains or unanticipated discoveries of cultural resources are made during project implementation all work in the area shall cease and the District Ranger and Forest Service archaeologist will be contacted immediately. The Forest Service shall fulfill its consultation requirements in accordance with 36 CFR 800.13. Mitigation measures developed in consultation with the State Historic Preservation Officer to satisfy implementing regulations of the NHPA would be agreed upon and effected before project activities would begin or continue.



Figure 1. Wrangell Island Project Area of Potential Effect.

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