Historic Context and Evaluation of Ranger Boats in Alaska Chugach and Tongass National Forests

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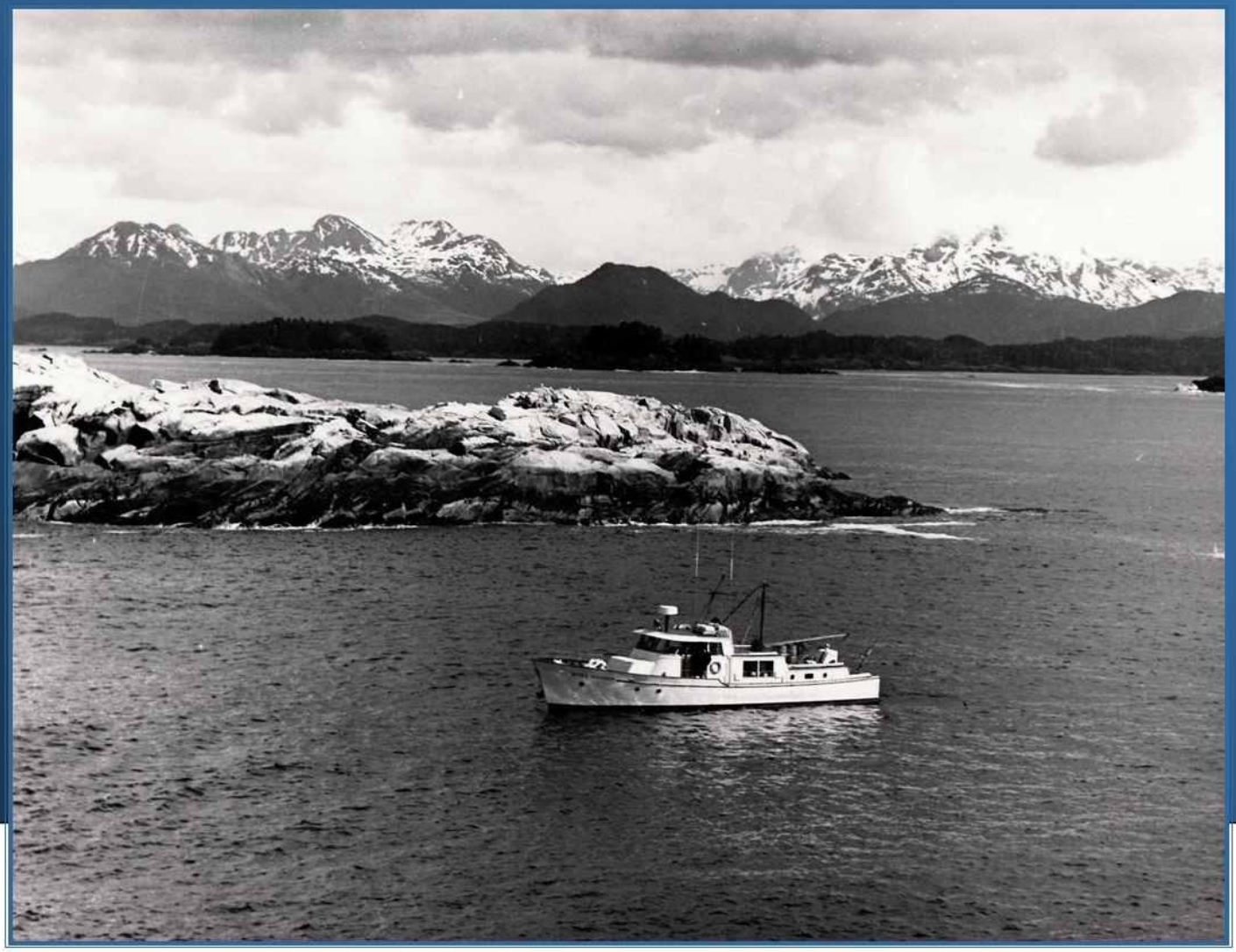

December 16, 2011

EXECUTIVE SUMMARY

This report presents the results of historic evaluations of the *Tongass Ranger* and *Sitka Ranger*, vessels of the U.S. Forest Service Alaska Ranger boat fleet. The boats are two of the last three ranger boats remaining in commission (the other is the *Chugach*). The *Tongass Ranger* and *Sitka Ranger* have been in continual government service from 1959 until 2010, except for a few years in the mid-1980s during major overhauls.

Throughout their service, the vessels have been based in the Tongass National Forest in southeastern Alaska. The Tongass National Forest encompasses 17 million acres of mostly temperate rain forest and embraces 11,000 miles of coastline. Other landforms include coastal fjords, inland ice fields, glaciers, and mountains. The forest incorporates the international boundary between the United States and Canada, and stretches from the southern tip of Prince of Wales Island to Malaspina Glacier to the north. The western and eastern boundaries are defined by the Pacific Ocean and the Boundary Range of the Coast Mountains.

The historic properties evaluations documented in this report were performed in accordance with section110 of the National Historic Preservation Act of 1966, as amended, and were conducted in support of projects planned in association with the management of Tongass and Chugach national forests. The resources were evaluated to ascertain if they rise to the level of significance and retain integrity to be eligible for inclusion in the National Register of Historic Places.

Site visits to Sitka, Petersburg, and Ketchikan, Alaska, were conducted between July 10 and July 14, 2011. The site visits included survey evaluations of each vessel, records searches at U.S. Forest Service offices and on the ranger boats, and interviews with persons who could provide information on the operation of the ranger boat program. Archival and documentary research was also conducted in Anchorage, Alaska, between July 10 and July 15, 2011.

The *Tongass Ranger* and *Sitka Ranger* qualify for listing in the National Register of Historic Places under criterion A, for association with broad patterns of history under the themes of maritime, commerce, and government; and criterion C for embodiment of a distinct characteristic or a type of vessel. The vessels retain integrity for location, design, setting, materials, workmanship, feeling, and association. The period of significance is from their launch dates (1959 and 1958, respectively) to 1968 when the timber industry in Tongass National Forest dramatically decreased.

This report is intended to be a stand-alone document. It includes all elements necessary to determine national register eligibility. Sections below provide discussions on field and research methods (chapter 2), environmental setting (chapter 3), historic context for ranger boats in Alaska (chapter 4), survey results and application of evaluation criteria (chapter 5), and conclusions and recommendations (chapter 6). The U.S. Forest Service site forms with photographs and a map are included in appendix B.

The narrative report and appendices provide documentation of historic features for purposes of determining the effects of undertakings on vessels evaluated in this report. Transfer of government property out of federal ownership is considered an adverse effect to historic properties. Therefore, the U.S. Forest Service must consult with the Alaska State Historic Preservation Officer to negotiate mitigation for the adverse effect prior to transfer.

It is recommended that while the vessels are currently not in use, the U.S. Forest Service make efforts to collect and properly store the vessel logs, photographs, drawings, and other records. Permanent historic records should be stored to archival standards.

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1.0 INTRODUCTION

1.1 GENERAL PURPOSE AND DESCRIPTION OF THE PROJECT

This project is related to current U.S. Forest Service (USFS) planning efforts exploring the best future use of ranger boats. A wide range of alternatives are being considered, from continued current use to excessing the vessels. Some alternatives could be considered undertakings affecting historic properties. The Forest Service is required to identify, evaluate, and protect historic properties within its jurisdiction and must ensure that the actions it takes do not inadvertently harm or destroy properties deemed historic under the stipulations of the National Historic Preservation Act of 1966, as amended (NHPA).

The purpose of this document is to develop a historic context related to the operation of U.S. Forest Service ranger boats in Alaska and provide an evaluation of the National Register of Historic Places (NRHP) eligibility of two of the three ranger boats currently in use in Alaska. These include the *Sitka Ranger*, in Sitka, Alaska, and the *Tongass Ranger*, in Ketchikan, Alaska. The third ranger boat, the *Chugach*, was listed in the National Register of Historic Places in 1992 and, therefore, is not evaluated in this study. The *Chugach* is discussed in the historic context section.

There are two national forests in Alaska with over 17,000 miles of coastline. The Chugach National Forest, the smaller of the two (although it is still the second-largest national forest in the United States) is in central Alaska and comprises over 5 million acres. There have been no ranger boats stationed in the Chugach National Forest since 1953.

All U.S. Forest Service ranger boats in Alaska are currently based in the Tongass National Forest, in the southeastern part of the state. The national forest encompasses 17 million acres and embraces 11,000 miles of coastline. Waterborne vessels have always been important tools for administering these forests.

1.2 PROJECT PARTICIPANTS AND CONSULTANTS

This document was developed by the cultural resources and planning division of AARCHER, Inc. Project personnel included Mr. Chris Baker, historian, and Ms. Jayne Aaron, architectural historian and principal investigator. The following current and former USFS employees contributed to this project: Mr. Jack Yearty and Mr. Richard Guhl, former skippers of the *Tongass Ranger;* Mr. Stan Johnson, former skipper of the *Sitka Ranger*; Mr. John Lombardo, fleet mechanic; Mr. Mike Cruise, former fleet manager Tongass National Forest; Mr. John Autry and Mr. Mark McCallum, Tongass National Forest archaeologists; Mr. Jack Griffith, former forest surveyor; Mr. Paul McIntosh, former interpretive planner for Tongass National Forest; and Mr. Jeremy Karchut, forest archaeologist. Dr Priscilla Schulte, cultural anthropologist, University of Alaska, also contributed information.

1.3 DATES OF WORK ON THE PROJECT

This project was awarded on May 20, 2011, with work to be completed by January 23, 2012. Site visits to Sitka, Petersburg, and Ketchikan, Alaska, were conducted between July 10 and July 14, 2011. The site visits included survey evaluations of each vessel, records searches at USFS offices and on the ranger boats, and interviews with persons who could provide information on the operation of the ranger boat program. Archival and documentary research was conducted in Anchorage, Alaska, between July 10 and July 15, 2011. Upon completion of the site visit and research, the draft and final reports were prepared.

2.0 FIELD AND RESEARCH METHODS

Historic properties and structures are primarily identified through a combination of literature and archival records reviews, field surveys, and application of NRHP criteria (see section 2.3). Archival records reviews were conducted using real property records, historic documents, blueprints and construction drawings, and interviews. This information was used to develop the historic context and complete Alaska state site forms for the *Sitka Ranger* and *Tongass Ranger*.

The historic properties survey conducted for the U.S. Forest Service, Region 10, included the following tasks: background/archival research, interviews with knowledgeable individuals associated with the ranger boat program (especially the *Sitka Ranger* and *Tongass Ranger*), boat survey and documentation, and an evaluation of eligibility of the surveyed resources for listing in the national register.

2.1 BACKGROUND RESEARCH

Background research was conducted to identify potential historic resource concerns and information needs particular to the Alaska Ranger Boat program, specifically, the *Sitka Ranger* and *Tongass Ranger*. This research consisted of a review of holdings of historical records held by the National Archives and Records Administration regional branches in Anchorage, Alaska, and Seattle, Washington. Information on records held by the U.S. Forest Service in Alaska was also ascertained. Internet sources were consulted, particularly the Forest History Society and National Museum of Forest Service History. Finally, pertinent historical reports and documents held at local (Colorado) libraries were collected.

Archival and documentary research was conducted in Alaska between July 10 and July 15, 2011. Records were collected from the following offices and records repositories:

- National Archives and Records Administration – Anchorage, Alaska
- U.S. Forest Service, Chugach National Forest – Anchorage, Alaska
- U.S. Forest Service, Tongass National Forest – Ketchikan, Alaska
- U.S. Forest Service, Tongass National Forest – Petersburg, Alaska
- U.S. Forest Service, Tongass National Forest – Sitka, Alaska
- Tongass Historical Society/Museum – Ketchikan, Alaska

All available literature that was pertinent and applicable to the resources surveyed was collected and reviewed. This literature included the following types of materials:

- U.S. Forest Service inspections and surveys
- reports produced in association with historic context studies and histories previously developed for the U.S. Forest Service in Alaska
- reports produced in association with a previously conducted cultural resource survey of the *Chugach* ranger boat
- published historical references
- historic photographs

- relevant boat logs and ranger diaries
- media accounts of ranger boats
- boat plans
- correspondence
- forest transportation planning documents

2.2 FIELD RECONNAISSANCE SURVEY

The survey team conducted the site visit for the Historic Context and Evaluation of Ranger Boats in Alaska project July 10–16, 2011. The field team consisted of two cultural resources specialists (see Appendix D). Mr. Chris Baker conducted research in Anchorage. Ms. Jayne Aaron visited each of the three vessels in Ketchikan, Sitka, and Petersburg, collected data, photographed the vessels, and conducted interviews. Informal interviews were conducted with:

Ketchikan

- Mike Cruise (USFS, Retired Fleet Manager)
- Jake Yearty (Captain, Tongass Ranger, retired in July 2011)
- John Autry (Tongass National Forest, Cultural Heritage)
- Dr. Priscilla Schulte (University of Alaska, Professor of Anthropology)

Sitka

- Stan Johnson (USFS, Retired Captain, *Sitka Ranger*)
- Richard Guhl (USFS, Retired Captain, *Tongass Ranger*)
- Jack Griffith (USFS, Retired Surveyor)
- Roy Mitchell (USFS, Fleet Manager)

Petersburg

- Mark McCallum (Tongass National Forest, Cultural Heritage)
- Mike Lombardo (USFS, Fleet Manager)

Anchorage

- Paul McIntosh (USFS, retired Public Affairs Officer)

Notes from these interviews are included in Appendix C.

2.3 NATIONAL REGISTER OF HISTORIC PLACES EVALUATION CRITERIA

The national register was established by the National Historic Preservation Act. The national register is a list of buildings, structures, objects, sites, and districts that have demonstrated significance to U.S.

history, architecture, archaeology, engineering and/or culture. The national register is maintained by the Secretary of the Interior and is managed by the National Park Service (NPS) Keeper of the Register. Regulations for listing a property in the national register were developed by the Department of the Interior and are found in 36 *Code of Federal Regulations* (CFR) Part 60. The NHPA requires that federal agencies identify historically significant properties that are eligible for listing in the national register, and manage those properties accordingly by taking into account the effects of undertakings on properties listed in or eligible for listing in the national register (referred to as historic properties).

In order to be eligible for the national register, a property must meet certain criteria (36 CFR Part 60.4). The National Park Service published *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation* to provide guidance when assessing a property's eligibility for listing in the national register. Properties eligible for listing are generally over 50 years of age and meet one or more of the following criteria:

- Criterion A: association with an event(s) that made a significant contribution to the broad pattern of history
- Criterion B: association with a historically significant person
- Criterion C: embodiment of the distinctive characteristics of a period, construction technique, or type; representing the work of a master; possessing high artistic value; or representing a significant and distinguishable entity whose components may lack individual distinction
- Criterion D: having yielded or having the potential to yield information significant to prehistory or history

NRHP-eligible properties are classified as individual buildings, sites, structures, or objects. A building is a type of construction that is created to provide human shelter and can include houses, barns, hotels, churches, jailhouses, courthouses, etc. A structure is a building whose function is for something other than human shelter. An object is an artistic item that is usually small and simply constructed and moveable. A site is the location of an important event, human occupation or activity, or building or structure (standing, in ruins, or removed) where the location retains historic, cultural, or archaeological value.

The national register defines a vessel as any craft built to navigate a waterway (oceans, lakes, rivers, canals), regardless of type of construction. For the purposes of the national register, vessels, including the ranger boats evaluated in this study, are classified as structures. Historic vessels (small and large craft) can be considered while floating, displayed, or dry-docked. They can also be categorized as hulks, generally intact vessels that are abandoned on the landscape (on a beach, mudflat, etc.), or shipwrecks submerged vessels that have foundered or wrecked.

NRHP-eligible properties can also be classified as districts and landscapes. A district is a concentration, linkage, or continuity of sites, buildings, structures, and/or objects united historically or aesthetically by a plan or physical development. Districts usually comprise several types of resources that are connected and that express a visual sense of a historic setting.

Landscapes can be purposefully designed landscapes that possess significance as a work of art; as a property that was purposefully designed by a master gardener, architect, or amateur based on a recognized design or style; as a property associated with a significant person, trend, or event; or as a property that has a relationship with architectural landscape theory or practice. The National Park Service published the *National Register Bulletin 18: How to Evaluate and Nominate Designed Historic Landscapes* to provide

specific guidance. Landscapes can also be cultural landscapes, which Director's Order 28: *Cultural Resource Management Guideline* defines as:

> *. . . a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.*

A final type of historic property is often labeled as a "traditional cultural property," but it is more correctly labeled as a site of religious or cultural significance. These properties are associated with the cultural activities of a contemporary community, are connected to the community's past, and are important to the cultural identity of the community. The National Park Service published *National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties* to provide specific guidance regarding properties of religious or cultural importance.

Integrity is defined by the National Park Service as a property's "ability to convey its significance." In order to be eligible for the national register, properties should retain most of the seven aspects of integrity. Those aspects are:

1. Location—the original location
2. Design—the building layout and use of space, plan, form, and style
3. Setting—the environment of the resource
4. Materials—the construction and finishing materials used
5. Workmanship—the detail elements of craftsmen
6. Feeling—the sense of a particular time
7. Association—the link to an event, person, or cultural resource

When assessing integrity, the following actions should be taken: (1) determine which aspects of integrity are most important to the property using the historic context(s), (2) determine what characteristics the property must have to represent its significance, and (3) determine if those characteristics currently convey that significance, which may require a comparison to similar properties to make a determination. Properties are sometimes modified to meet changing requirements and equipment needs. The modifications often extend the useful life of the property, but can compromise its integrity to such a degree that it does not retain a sufficient level to be eligible for listing in the national register. Within a district, the majority of the properties from the district's period of significance must have integrity, including integrity of the plan or arrangement of properties within the district.

In most circumstances, cemeteries, gravesites, birthplaces, properties owned by religious institutions or used for religious purposes, commemorative properties, reconstructed properties, and properties less than 50 years of age are not eligible for listing in the national register. However, such properties may be eligible as elements of a historic district, or if at least one of the following list of criterion considerations is met:

A. Religious property that is important from an architectural, artistic, or historical perspective
B. Relocated building or structure that retains architectural value or which is the sole surviving property that has importance associated with a historically significant person or event

C. Birthplace or grave of a historically significant individual if there are no other extant properties associated with that person
D. Cemetery that obtains significance from the graves of people of unmatched significance, from its age, from distinguishing design features, or from its association with a historically significant event
E. Reconstructed building or structure when it is in an appropriate environment and is part of a restorative master plan when there are no other structures or buildings with the same association(s) surviving
F. Commemorative property if it has a design, tradition, or symbolic value of exceptional significance
G. Property that is less than 50 years old that is of exceptional significance

In order to evaluate the historic significance of a property, the historic context of the property must be established. The historic context is the pattern or trend of history that gives the property its meaning and importance and should focus on the theme, geographic limits, and period of time from which the property is being evaluated. A context places the property in a local, regional, or national pattern of history and provides a tool for comparing the history of the property to the history of the surrounding area. A historic context's theme should establish the area(s) of significance that the property represents and should describe how the property demonstrates that area(s) of significance. A list of often used areas of significance include archaeology, agriculture, architecture, art, business, communications, community planning and development, conservation, economics, education, engineering, entertainment, ethnic heritage, exploration, health, industry, invention, landscape architecture, law, literature, maritime history, military, performing arts, philosophy, politics, religion, science, social history, and transportation.

A historic context also establishes a property's association with an event, person, architectural or engineering value, or potential to contain information. The physical features of a historic property that represent the area of significance and historic context should be documented as well. The historic context is the key to judging a property's significance. A historic property may be eligible for the national register under one or all criteria, it may have a broad range of dates or a specific date for its period of significance, and its level of significance can vary depending on which criterion and which period of significance is being defined. For example, a historic district that later became the template for a master plan used elsewhere may be eligible for the national register on a national level under criteria A and C. If a prominent local business person was associated with that same district for a short period of time, but left an undeniably notable "stamp" on a portion of the facilities that comprise the historic district, those facilities may also be eligible under criterion B and may have a different period and/or level of significance, depending on the historic context of that particular individual.

A property's level of significance pertains to the level at which the property is important, not the location where the property is found. A local level of significance means the particular property has importance to a town, city, county, or some portion thereof, even if the property type can be found in a larger geographic area. A property is of regional or state significance if it demonstrates an aspect of the history that is of significance to the state as a whole. For example, a property that represents an impact to a state's economy or cultural image may be eligible on the state or regional level. A property is of national significance if it represents an aspect of U.S. history important to the nation.

Under NHPA guidelines, cultural resources are to be evaluated for significance and potential NRHP nomination eligibility using NRHP criteria, as listed in 36 CFR 60.4. In order to evaluate eligibility of the *Tongass Ranger* and *Sitka Ranger,* the following NRHP bulletins and guidelines were referenced:

- *How to Apply National Register Criteria for Evaluation* (Bulletin 15)
- *Guidelines for Completing National Register of Historic Places* forms
- *Researching a Historic Property*
- *Guidelines for Evaluating and Documenting Historic Properties that Have Achieved Significance Within the Last Fifty Years* (Bulletin 22)
- *Nominating Historic Vessels and Shipwrecks to the National Register of Historic Places* (Bulletin 20)

3.0 LOCATION AND GENERAL DESCRIPTION OF THE STUDY AREA

There are two national forests in Alaska; Chugach National Forest (figure 3-1) and Tongass National Forest (figure 3-2). The Chugach National Forest, in central Alaska, comprises over 5 million acres and includes glaciers, mountains, coastal rainforest, and fjords. Prominent landforms consist of the Kenai Peninsula, which makes up the western third of the forest. The central portion of the Chugach is dominated by Prince William Sound and the Chugach Mountains. The Copper River Delta characterizes the eastern part of the forest. The forest supervisor's office is in Anchorage, with district offices in Cordova, Girdwood, and Seward. Ranger boats have been absent from the Chugach National Forest since 1953.

FIGURE 3-1. CHUGACH NATIONAL FOREST AREA MAP

The *Sitka Ranger*, *Tongass Ranger*, and *Chugach Ranger* are currently all based in the Tongass National Forest. In fact, the Tongass National Forest has historically been the center of ranger boat activity, with the majority of boats based in the forest.

FIGURE 3-2. TONGASS NATIONAL FOREST LOCATION MAP

Located in southeastern Alaska, the Tongass National Forest comprises 17 million acres of mostly temperate rainforest. Islands, including the Alexander Archipelago, comprise much of the Tongass National Forest's landscape. In fact, the forest embraces 11,000 miles of coastline. Other landforms include coastal fjords, inland ice fields, glaciers, and mountains. The forest also incorporates the

international boundary between the United States and Canada. The Tongass National Forest stretches from the southern tip of Prince of Wales Island to Malaspina Glacier, 500 miles to the north. The western and eastern boundaries are defined by the Pacific Ocean and the Boundary Range of the Coast Mountains. The forest is administered from supervisor and ranger district offices in Ketchikan, Petersburg, and Sitka, with local district offices in Craig, Hoonah, Juneau, Ketchikan, Petersburg, Sitka, Thorne Bay, Wrangell, and Yakutat. Ranger boats are currently docked in Sitka, Ketchikan, and Petersburg.

The Ketchikan Gateway Borough has a 2010 U.S. Census reported population of 13,477 (http://quickfacts.census.gov/qfd/states/ 02/0238970.html). A large portion of Ketchikan's recent economic and social history centered on the Ketchikan Pulp Company—a pulp mill that opened in the 1950s. The mill closed in 1997. The local economy is now centered on tourism and fishing, much of which is based in nearby public lands. Most visitors arrive in Ketchikan via cruise ship and airplane. In 2009, it was ranked the 18th-largest port by value of seafood harvest in the United States (Lowther 2009).

The Sitka City and Borough has a 2010 U.S. Census reported population of 8,881 (http://quickfacts.census.gov/qfd/states/ 02/0270540.html). The seafood industry and tourism are important economic activities in Sitka. Most visitors arrive in Sitka via airplane or cruise ship. The port at Sitka is fundamentally a fishing port, with the largest harbor system in Alaska having 1,347 permanent slips (http://www.cityofsitka.com/ residents/about/index.html). In 2009, it was the 9th-largest port (by value) of seafood harvest in the United States (Lowther 2009). International trade through the port is comparatively minor. The National Park Service and U.S. Forest Service manage lands in and around Sitka.

Petersburg is halfway between Juneau (120 miles to the north) and Ketchikan (110 miles to the south) on the north end of Mitkof Island, where Wrangell Narrows meet Frederick Sound. The 2010 U.S. Census reported a population of 2,948 (http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk). The western side of the island borders Wrangell Narrows. The Narrows provide a somewhat protected waterway for boats, and opens on the south end of the island into Sumner Straits. In 2009, it was ranked the 22nd-largest port by value of seafood harvest in the United States (Lowther 2009).

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4.0 HISTORIC CONTEXT: RANGER BOATS IN ALASKA

4.1 RESERVING ALASKA'S FOREST LANDS

The decades after the Civil War were punctuated by dramatic change in America. Two trends directly affected Alaska history. First, The United States began looking outward. Territorial expansion became a central policy of the post-war Republican administrations. To this end, William Seward, who served as secretary of state from 1861 to 1869, pursued an elaborate expansionist plan that included the acquisition of the Midway Islands, Haiti, the Dominican Republic, Danish West Indies, and Alaska. Congress and the public, however, were not as ambitious. Seward only succeeded in acquiring the Midway Islands and Alaska.

Prior to 1867, Alaska was a Russian possession. The region, however, was remote and hard to defend and the Czarist government was happy to relinquish Alaska for a price. Seward began negotiations with the Russians and by March 1867, the parties finalized an agreement to transfer Alaska to the United States in return for a payment of $7.2 million, or 2.5 cents per acre. The agreement was codified in a treaty that barely passed U.S. Senate ratification. It took another year before money was appropriated to affect the purchase. The acquisition of Alaska was maligned for another two decades until the territory's rich resources, especially gold, were discovered.

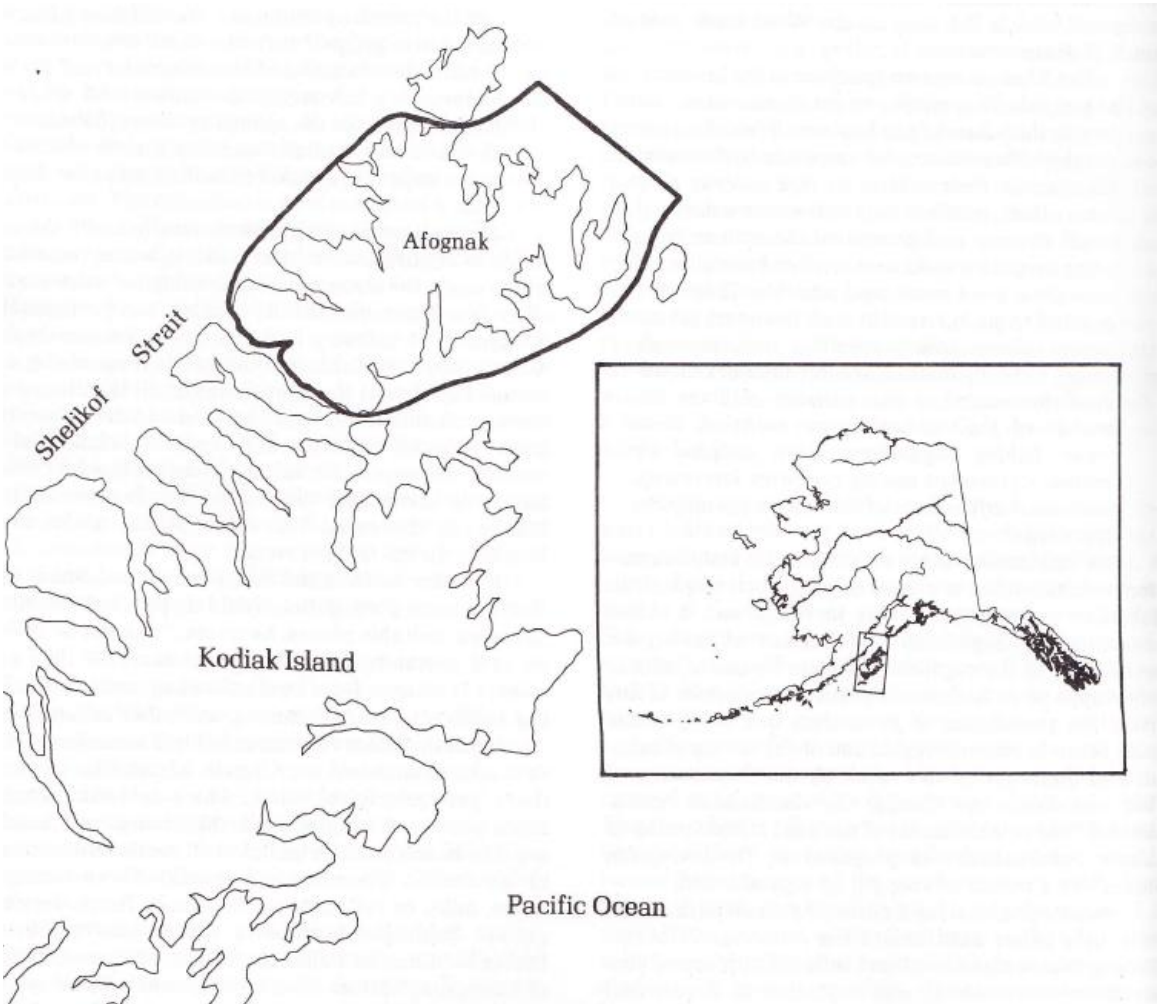
The second important trend that more directly shaped the early history of Alaska's forests was the rise of a more active federal government during the Gilded Age. With regard to land management, the expansion of government reflected a desire to develop and manage resources through the scientific management of land use. Outright preservation, such as national parks, was only considered if the land was deemed to have no commercial value.

In this context, most agitation for forest conservation policy reflected an interest in protecting local or regional water supplies or timber resources. Proponents of conservation had agitated for federal legislation that would enable the government to create federal reserves out of public lands since 1876 (Rakestraw 2002). They finally realized their goal when language was inserted into section 24 of the act of March 3, 1891 (an omnibus bill revising land laws), which provided the legislative framework allowing the president to "set apart and reserve" public lands bearing timber. Section 24 became known as the Forest Reserve Act of 1891. Gifford Pinchot, considered by many to be the father of the U.S. Forest Service, regarded the act as the "beginning and basis of our whole Forest system" (Muhn 1992).

It should be noted that the early history of Alaska national forests does not lie with the U.S. Forest Service. Indeed, the first withdrawals of public land for the conservation of valuable resources predate the establishment of the U.S. Forest Service by over a decade. The foundational Alaskan land withdrawals, which were eventually incorporated into much larger expanses of forest land, were administered prior to 1905 by the General Land Office, Department of the Interior Bureau of Forestry, which administered the Alexander Archipelago Forest Reserve and the U.S. Commission for Fish and Fisheries, which administered the Afognak Forest Service (figure 4-1).

The Forest Reserve Act had an almost immediate effect on Alaska. On December 24, 1892, President Benjamin Harrison issued Presidential Proclamation 343, creating the Afognack Forest and Fish Culture Reserve. The reserve was established through the agitation of the U.S. Commission for Fish and Fisheries who wanted to develop salmon hatcheries in the area to ensure the sustainability of the salmon fishery.

The Alaskan salmon industry was rapidly developing. In 1889, 32 Alaskan canneries produced over one million cases of canned salmon. The primary purpose of the reserve was for the development of hatcheries, but the proclamation asserted that all related resources, including timber and vegetation, were protected (Presidential Proclamation 343 1892, Rakestraw 2002). The Afognack Forest and Fish Culture Reserve was unique in two aspects. It was the only forest reserve established to specifically support the development and sustenance of fisheries. Moreover, it was placed under the management of the U.S. Commission for Fish and Fisheries, instead of just the General Land Office.



(Source: Lawrence Rakestraw 2002)

FIGURE 4-1. AFOGNAK FOREST LOCATION MAP

The Forest Reserve Act was more symbolic than functional. While the president could create forest reserves, there was no provision for management policy or funding. It took six years for this limitation to be addressed with the enactment of the 1897 Forest Management Act, or Organic Act.

The 1897 Act, passed in June, gave the Secretary of the Interior authorization to promulgate rules and regulations to ensure the protection of resources of the forest reserves. By July, the Department of the Interior had issued rules and developed an administrative framework for the management of forest

reserves. A forest supervisor was placed in charge of each reserve and forest rangers were tasked with fieldwork. The General Land Office established a forestry division in 1901 to help facilitate reserve management (Rakestraw 2002). Funding and staffing, however, remained woefully inadequate. Personnel, moreover, were mostly appointed to reserves in California, Oregon, Washington, Arizona, and New Mexico (GLO 1897, GLO 1898). The Afognak Forest and Fish Culture Reserve remained under the management of the U.S. Commission for Fish and Fisheries.

Afognak Forest and Fish Culture Reserve was somewhat removed from the changes in the administration of Department of the Interior forest reserves. Alaska's second forest reserve, while geographically isolated from the lower 48, was not administratively isolated.

Interest in the establishment of another Alaska Forest Reserve began in 1901 when President Theodore Roosevelt instructed Lieutenant George Thornton Emmons, an authority on Alaska, to provide a report on the feasibility of creating additional forest reserves. The report, delivered to the president in February 1902, focused on the timber resources of the territory. Emmons argued that the interior forests were of inferior quality, difficult to access, and best suited to local use. He noted that coastal timber was of better quality, but still rather inaccessible and best suited to local use. Finally, Emmons addressed the forests of the Alexander Archipelago and arrived at a different conclusion. The Lieutenant noted that the timber on the islands was of good quality. There was little settlement that required timber for local use and several small sawmills had already been established (Rakestraw 2002). For these reasons, Emmons recommended that a forest reserve be established comprising the islands of the Alexander Archipelago.

President Roosevelt agreed and established the Alexander Archipelago Forest Reserve on August 20, 1902, by Presidential Proclamation 491. According to the proclamation, the primary justification for the establishment of the reserve consisting of "Chichagof Island and the adjacent islands to the seaward thereof, Kupreanof Island, Kuiu Island, Zarembo Island, and Prince of Wales Island and the adjacent islands to the seaward" was to protect timber resources (Presidential Proclamation 491 1902).

The establishment of the reserve was met with immediate protests from timber and mining companies that had an interest in the Alexander Archipelago. Disapproval was not only local. Remonstrations came from as far away as Minnesota and Oregon. Some opponents, moreover, came from some unexpected quarters. Protestant missionary groups expressed concern that the establishment of the reserve and the more strict management of development would undermine Native communities that had come to rely on employment with timber companies (Rakestraw 2002).

Active management of the reserve, however, was not immediate. In 1902, the Department of the Interior's Division of Forestry and the Department of Agriculture's Bureau of Forestry divided the task of federal forestry. The Department of Forestry managed the day-to-day administration of the forests. Foresters with the Department of Agriculture provided management planning and some policy. The Department of the Interior was having a difficult time administering reserves in the lower 48, so they apparently expended little effort to establish a presence in the comparatively remote Alexander Archipelago. Gifford Pinchot, on the other hand, desired information on the newly established reserve. He hired William A. Langille, a western adventurer and mountain guide with experience in Alaska, to conduct surveys of the reserve. Langille conducted limited reconnaissance of the Alexander Archipelago in the summers of 1903 and 1904. The reserve, to be sure, was not under active management. Events in 1905 served to alter this situation.

Gifford Pinchot was not satisfied with the fact that the Bureau of Forestry only had an advisory role in the management of the forests. Historian Richard White notes that Pinchot launched a "bureaucratic raid" to have the forest reserves transferred to the Department of Agriculture. The forester successfully argued

that forests were essentially tree farms. Since they were a crop, the reserves should be managed by the Department of Agriculture. Pinchot had Theodore Roosevelt as an ally in the White House and in 1905 the Bureau of Forestry became the U.S. Forest Service and all management responsibility for the forest reserves was transferred from the General Land Office to the new agency (White 1991, Transfer Act of 1905).

4.2 THE FOREST SERVICE IN ALASKA

The creation of the U.S. Forest Service did not immediately affect Afognak Forest and Fish Culture Reserve, which was still managed by the U.S. Commission for Fish and Fisheries. In the 1890s, the commission had spent little time managing salmon on the island. Efforts were, instead, focused on Bering Sea patrols and fur seal protection and research. Investigations and surveys of the reserve finally began in 1900 when Jefferson Moser, aboard the *Albatross*, visited Afognak Island. He and his crew conducted surveys and removed illegal salmon barricades. Five years later the U.S. Bureau of Fisheries (formerly the U.S. Commission for Fish and Fisheries) constructed the first federal salmon hatchery in Alaska at Yes Bay in Southeast Alaska. The second hatchery was constructed at Afognak Forest and Fish Culture Reserve in 1908 (Wanderaas 2011).

Alexander Archipelago, meanwhile, became the center of Forest Service activity in Alaska when W.A. Langille officially became USFS forest supervisor in 1905. Headquartered in Ketchikan, Langille was confronted with significant challenges, the greatest being transportation. Unlike inland forests, the federally managed Alaskan forests were characterized by a paucity of roads and trails. Moreover, the Alexander Archipelago boasts about 2,000 miles of coastline; thus, traditional means of patrol and survey were not practical (Langille 1905, Rakestraw 2002).

It was clear to Langille that boats were necessary forest management tools. To this end he continually corresponded with Washington, D.C., on the need for a vessel. Langille expressed his frustration as early as June 1905. He wrote a letter stating that "the question of transportation in and about this reserve is a serious one and provisions should be made for a department boat." Moreover, the demand for motorized boats was so great that he would have to settle for a sloop or schooner for the summer season. Acting Forester Overton Price acknowledged Langille's predicament and requested that he provide "definite recommendations… for buying a small boat, stating size, original cost, and cost of maintenance, which should include the hire of a crew and the purchase of fuel." Price continues, "it seems that this is the only means of transportation that will be satisfactory" (Langille 1905, Price1905). Langille asked Richard Dorwaldt, the assistant forest ranger stationed at Shakan, Alaska, to provide recommendations for a ranger boat. By the summer of 1906, Dorwaldt responded with detailed specifications for a 26-foot, gasoline-powered ranger boat. Langille forwarded the specifications to Washington D.C. (Dorwaldt 1906, Langille 1906). The ranger boat was not forthcoming.

Between 1905 and 1909, the forest supervisor had to charter boats (at $5 to $10 per day) or hitch rides on mail boats to perform the duties of his job. These duties were broad. Langille, like all forest supervisors, was expected to "give [his] entire time to the service" and "deal with the public, all business connected with the sale of timber . . . the issuing of permits, and the application of other regulations for the use and occupancy of forest reserves." In Alaska, these duties also involved the survey of totem poles (USDA, USFS 1905, Rakestraw 2002).

The need for a Forest Service boat continued to be the most pressing concern. Frederick E. Olmstead, the assistant forester in charge of general inspection, examined the administration of Alexander Archipelago

Forest and the feasibility of forest expansion. He noted in 1906 that the Alexander Archipelago is a "maritime forest" and that "[c]ommunication and transportation are by water only and the sea is really a part of the reserve." Olmstead writes in his report that, "the sea takes the place of roads and trails, and a boat of saddle and pack animals." Moreover, "storms are frequent, currents are swift and distances are great, so that small boats are almost useless." He asserts that an Alaskan ranger without a boat is like spiking "the supervisors of the Sierra Reserve to a rock at the top of Mt. Whitney and instruct[ing] them to run the reserve." He argues that the current reserve cannot be properly managed without a boat and that no expansion is recommended unless a Forest Service boat can be acquired (Olmstead 1906, Olmstead 1906a).

Olmstead provided specifications for a Forest Service boat. The boat he recommended was much more substantial than the one Dorwaldt described a year before. Olmstead recommended a 60-foot launch with oak ribs and fir planking that could travel at 10 miles per hour. The boat was to have an engine compartment, pilot house, toilet, lighted cabin, and kitchen area. Required equipment included water and gasoline tanks, stove, cook outfit, table and dishes, mast, sloop rig, compass, anchors, anchor lines, and side and mast lights. The estimated cost of the boat, including the engine, was $5,150. Dorwaldt's 26-foot boat was projected to cost less than $500. Olmstead instructed Langille to inquire whether a 60-foot launch meeting his specifications was available for purchase in the Puget Sound area. If one was not, he gave Langille the authority to have one constructed (Dorwaldt 1906, Olmstead 1906a). An acceptable boat was unavailable and the forest supervisor continued to travel via charter and other borrowed means of transport.

Some of the most important management activities that Langille undertook in the early years were the survey of Alaskan forests for expansion of the Alexander Archipelago National Forest and the establishment of other national forests. Pinchot, as early as 1906, pressed for reports providing recommendations for the expansion of Alaskan lands under Forest Service control. As noted above, this was part of the goal of Olmstead's inspection. In 1907, Langille wrote that he thought the establishment of Tongass National Forest, which included the over two million acres of islands and mainland in southeast Alaska, was advisable and appropriate (Langille 1907). The recommendation was acted on by President Roosevelt. Tongass National Forest was established by Presidential Proclamation on September 10, 1907. Fifteen months later, the Tongass and Alexander Archipelago national forests were consolidated, creating an enlarged Tongass National Forest with an area of almost seven million acres (Presidential Proclamation 772 1907, Presidential Proclamation 846 1909).

Langille was also involved in the creation of Chugach National Forest. In 1904, Gifford Pinchot instructed Langille to head an investigation and provide a report on the feasibility of Prince William Sound for consideration as a forest reserve. The report, completed in 1905, provided boundary recommendations and a general description of resources, but was incomplete. When Olmstead visited Alaska in 1906, he discussed the potential reserve with Langille. Ultimately, Olmstead was ambivalent about the establishment of a forest reserve in the vicinity of Prince William Sound. Politics, however, intervened a year later. Congress, chafing at Theodore Roosevelt's willingness to reserve public lands, passed legislation eliminating the president's ability to establish forest reserves through Presidential Proclamations. Roosevelt reacted by creating National Forests with greater alacrity before the law went into effect. The establishment of Chugach National Forest was part of this flurry (as was the creation of the previously discussed Tongass National Forest). There were apparently few overwhelming reasons among USFS inspectors for the establishment of Chugach National Forest. Richard Ballinger, General Land Office commissioner, was opposed to the proposed reserve. Using Langille's 1905 report, he argued that the land in the vicinity of Prince William Sound should not be withdrawn. Roosevelt, nonetheless, established the Chugach National Forest by proclamation on July 23, 1907. The new forest was bound on the east by the Copper River and on the west by the Kenai Peninsula. The northern and southern

boundaries, respectively, were defined by the Chugach Mountains and open water (Rakestraw 2002, Presidential Proclamation 770 1907). Roosevelt added the Afognak Forest and Fish Culture Reserve to the Chugach National Forest on July 2, 1908. The island was placed under the joint jurisdiction of the Bureau of Fisheries and the Forest Service. Finally, Roosevelt issued a Presidential Proclamation adding Turnagain Arm, Knik Arm, and the Kenai Peninsula to Chugach National Forest on February 23, 1909. The expanded forest encompassed over 11 million acres (Rakestraw 2002, Executive Order 908 1908, Presidential Proclamation 8521909).

By the spring of 1909, the U.S. Forest Service was responsible for management of nearly 18 million acres of forest in Alaska, with thousands of miles of coastline. Much of the land was still inaccessible by road or trail. The importance of boats became ever more paramount. As acreage and associated responsibilities expanded, transportation resources remained static. Before 1909, the Forest Service had no ranger boats available for administrative use. The lack of transportation continued to cause considerable difficulties. For example, when Langille traveled to the newly established Chugach National Forest he was hindered by the schedules of private steamships and other boats he depended on for transport.

The Forest Service undertook a variety of resource management projects prior to 1910, but the most important was timber management. Early timber management operations were relatively uncomplicated. The first timber management efforts were investigations and the settlement of timber trespass cases in the Chugach and Tongass national forests. Most cases were unintentional trespass and easily handled. The Forest Service, in coordination with the Bureau of Fisheries, developed logging regulations designed to protect salmon runs and hatcheries. Timber sales expanded exponentially with the expansion of the national forests between 1905 and 1909. By 1909, sales in Alaska's forests totaled 9 million board feet. Most of the timber came from the Tongass National Forest. The timber industry was less important in the Chugach National Forest. All logging was conducted near water so that felled trees were easily transported for processing (Rakestraw 2002).

4.3 RANGER BOATS

Much of the early forest resource management work was conducted without an agency-owned vessel. This situation was finally addressed in 1908 when the Pacific Yacht & Engine Company constructed a 64-foot launch to Forest Service specifications. Christened the *Tahn* (figure 4-2), the ranger boat was outfitted with a 75 horsepower motor. It had an iron strip protecting the boat's wooden hull from the ice it was sure to encounter on winter trips. Amenities included electric lights, a galley, a head, seven bunks, a bookcase, and a desk (Rakestraw 2002). The *Tahn* was put into service on May 9, 1909.

All employees aboard the *Tahn* were required to follow specific rules promulgated by Langille in 1909. The launch was under the command of Acting Captain Lyle Bloggett and his word was law while onboard the ranger boat. Langille stressed that use of the pilot house by Forest Service employees was a "privilege, not a right." No more than one employee was allowed in the pilot house at a time and all could be excluded at the captain's discretion. Forest Service employees using the boat developed field schedules in coordination with the launch engineer. Langille attempted to instill the utmost efficiency—he instructed the boat's engineering staff (captain) to inform field parties of approaching land 30 minutes before arrival. The field party was required to be ready to depart immediately on arrival. When the boat was used as a base for field duty, field crews were expected to depart the launch by 7:00 a.m. (Langille 1909).

(Source: Ketchikan Historical Museum, date unknown)

FIGURE 4-2. RANGER BOAT *TAHN*

Food and behavior were a particular concern. The boat crew included a steward who served meals on a specific schedule. Breakfast was served at 6:30 a.m., lunch at noon, and supper at 6:00 p.m. No intoxicating beverages or gambling was allowed on the boat. Forest officers were required to clean their berths each day before breakfast. Fresh fruit "and other luxuries" were not allowed. While the crew or field parties could make requests for certain foods, all food was prepared and served by the steward (Langille 1909, Langille n.d.).

The boat proved its worth immediately. Langille spent at least one month in the field with Forest Service inspectors in July and August. He also made his own inspections and performed other administrative functions in the field. The *Tahn* was indispensible to these operations, which encompassed both Alaskan national forests.

The *Tahn* was one of three new waterborne craft that the Forest Service adopted in 1909 in Alaska. A smaller, 26-foot launch, the *Marie,* was purchased for $300 by George Peterson; the boat was stationed in Petersburg. While there is limited information about this launch, it appears to be quite similar to the one described by Richard Dorwaldt in 1906. A wanigan, essentially a portable floating field station, was also added to the Forest Service inventory. The *Tahn* (and eventually other ranger boats) towed the wanigan to

timber sales or other projects that required extended stays in a single location where tent camps were impractical.

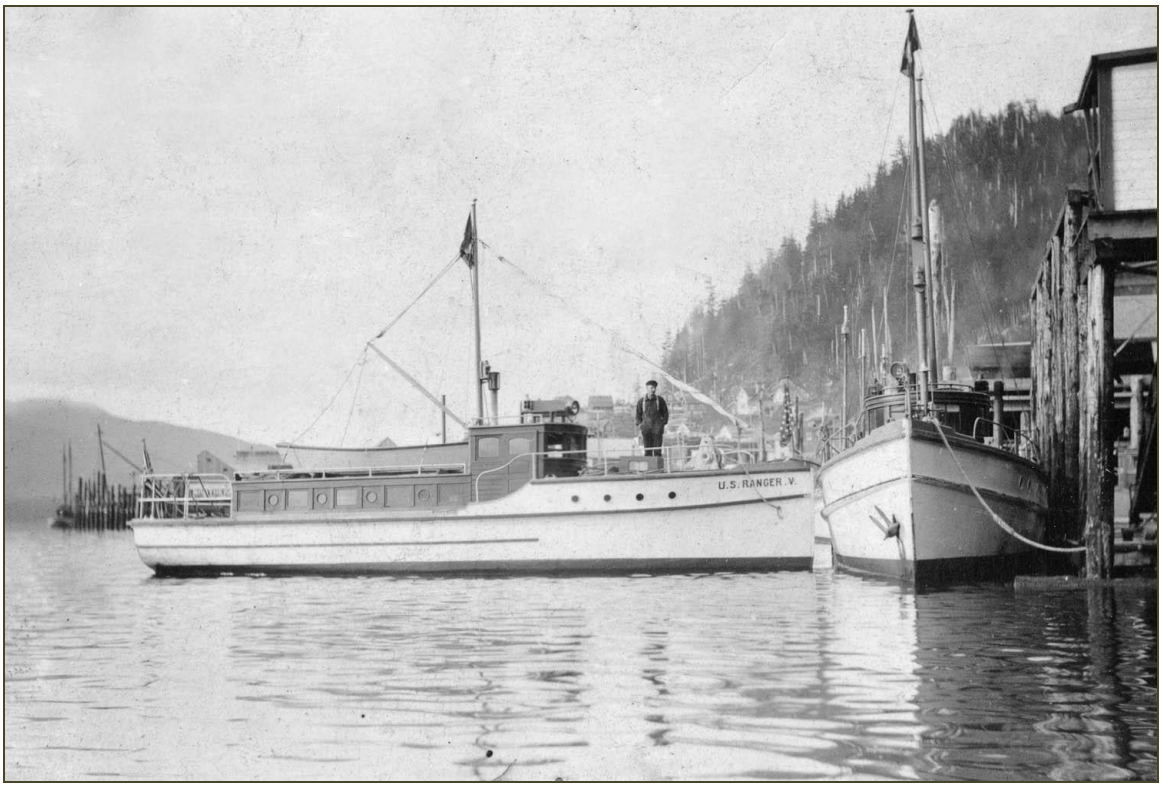
Before long, the *Tahn* and *Marie* were bolstered by additional ranger boats. The *Restless*, a 33-foot launch, was added to the fleet in 1910 and assigned to the Prince William Sound area. The boat had an unfortunate history, however, and was continually beset by mishaps before it was retired in 1919. A series of more dependable boats explicitly classified as "ranger boats" were adopted in 1913. *Ranger 1* (figure 4-3), *Ranger 2*, and *Ranger 3* were constructed for the Forest Service at the Bremerton Navy Yard in Bremerton, Washington. The 36-foot launches were each initially stationed at Sitka, Petersburg, and Craig. *Ranger 3* sank in Clarence Strait in 1922 (McIntosh 2011, U.S. House of Representatives 1922).

(Source: USFS Files in Ketchikan)

FIGURE 4-3. *RANGER I* DOCKED IN KETCHIKAN, 1924

Two more 38- to 40-foot ranger boats (*Ranger 4* and *Ranger 5*) were added to the fleet in 1917 and 1918. *Ranger 4* was constructed in Ketchikan and was not an exemplary boat. Historian Lawrence Rakestraw quotes USFS Forest Examiner George Drake describing the launch as built "by some house carpenter from a knockdown plan you could get out of Detroit." He noted that, "It had a good motor, but the hull construction was such that it shipped water in a headwind." *Ranger 4* was eventually sold to a fox farmer near Cape Fanshaw. *Ranger 5* (figure 4-4) was constructed at an unknown shipyard in Seattle, Washington, and apparently performed much better (Rakestraw 2002, McIntosh 2011). *Ranger 5* remained in service until sometime before 1953.

As the ranger boat fleet grew, USFS leadership understood that greater infrastructure was needed for the maintenance of the fleet. To this end, the Forest Service began operation of a marine station on Gravina Island, near Ketchikan, in 1916. The station became the center of ranger boat maintenance.



(Source: Ketchikan Historical Museum, n.d.)

FIGURE 4-4. U.S. *RANGER 5*

No doubt, the decade from 1909 to 1919 represented a dramatic increase in transportation capabilities for the Forest Service in Alaska. Essentially, the agency went from an inventory of no boats to six in a decade (seven, if the *Restless* is included in calculations). The vessels provided a symbolic and functional Forest Service presence in Alaska. Ranger E. A. Sherman wrote in 1921 that the ranger boats were available to assist the public "in case of any trouble or disaster in southeast Alaska," including "shipwrecks, sickness, or sorrow." The boats supported an expanding ranger staff and management activities became more varied. Timber management was still important, but other industries such as fox farming and salmon fishing gained importance and required greater attention.

World War I spurred an increased demand for forest resources. There were direct and indirect demands for timber. Sitka spruce was harvested for airplane construction. An increase in demand for fish triggered an increased need for timber used in piling, fish boxes, and construction. The Alaska Railroad also used a considerable amount of lumber that they acquired from the national forests. By 1920, the total amount of board feet cut in Alaska's national forests had grown to 20 million feet (Rakestraw 2002).

Using ranger boats under the command of skippers, the USFS men traveled in pairs or crews. While in the field, the rangers undertook a wide variety of tasks. The men surveyed homestead entries, established river gauging stations, investigated trespass cases, marked timber sales, cruised timber, enforced regulations, scaled log rafts, and mapped various structures and forest-use areas (such as fox farms, cannery sites, and cabin sites). Rangers and examiners camped in tents or stayed on the boats during shorter field sessions. When they needed to spend more than a few days in a single location, they had use of the wanigan, a floating ranger station and bunkhouse that could be towed into the field by the ranger

boats. The boats also provided transportation for agency visitors from out of state, academics, scientists, and VIPs. Finally, the boats provided an important link between population centers and the isolated settlements that dotted the forests (Rakestraw 2002).

The administrative complexity of Alaska's national forests continued to evolve and expand in the 1920s. One reflection of the increased forest activity and USFS staff was the fact that the wanigan, constructed in 1909, became inadequate. Therefore, in 1920, the Forest Service constructed a much larger wanigan to complement the original scow.

The Forest Service continued to expand its boat inventory in the 1920s. The agency acquired boats from a variety of sources. For example, in 1919 the United States was in the process of divesting itself of surplus World War I equipment. The Forest Service was happy to assist and purchased two vessels from the U.S. Navy in the winter of 1919. The *Hiawatha* was an 85-foot boat constructed for the U.S. Navy in 1909. The large boat contained two large and two small staterooms, a large dining room, an office, pilot house and crew quarters, and bathroom. It was equipped with electric lights throughout. The other boat acquired from the Navy, the *Weepoose* (figure 4-5), was a 60-foot yacht. Both boats were transported from the east coast to Bremerton in 1920. They were then towed to Ketchikan where they arrived in March 1921. The *Weepoose* was not well designed for Alaskan waters and was used only for summer projects. Regrettably, the *Hiawatha* was too expensive for the Forest Service to maintain and was retired in 1925 (McIntosh 2011).

The *Ranger 3* sank in 1922. By this time the importance of the ranger boats was well understood. Congress wasted little time appropriating funds for the construction of a new vessel. The Secretary of Agriculture noted in 1922 that, "the loss of the ranger boat constitutes a serious interference" with Forest Service work and that its replacement is "urgent." A search was conducted for a suitable boat in existing government inventories, but the need for a replacement boat was so dire that Congress appropriated $8,500 for the construction of a new boat in case the search was unsuccessful. The funds were included as a supplemental appropriation to the agency's 1923 budget (U.S. House of Representatives 1922). It is likely that *Ranger 6*, a 42-foot launch (figure 4-6), was the vessel that replaced *Ranger 3*. The boat, built in Seattle by the Lake Union Dry Dock Company, was put into service in 1923.

Lake Union Dry Dock Company constructed another boat for use in Alaska's forests two years later. The *Chugach*, a 60-foot launch (figure 4-7), was the last wooden ranger boat commissioned in Alaska. The vessel, commissioned in 1925, operated out of Cordova, Alaska, then headquarters of the Chugach National Forest (http://www.fs.fed.us/r10/tongass/forest_facts/resources/heritage/rangerboats.html). The final construction and outfitting costs of *Chugach* were just over $25,000. The launch would certainly have been more expensive if the *Hiawatha* was not exchanged for a portion of the vessel—the 85-foot navy boat was too expensive for the Forest Service to maintain. The hull of the *Chugach* was obtained in exchange for the *Hiawatha* (Sorensen and Schley 1990).

By 1924, the Gravina Island Marine Station had become the center of ranger boat maintenance. The station provided maintenance and repair facilities for the entire ranger boat fleet. Facilities at Gravina Island consisted of a dwelling, boathouse, gridiron, and several outbuildings. Ranger boats regularly sailed to the marine station for repairs and maintenance, especially in the fall and winter. The *Chugach*, for example, visited the Forest Service marine station as frequently as once a year (Sorensen and Schley 1990).

(Source: USFS Files, Ketchikan, Alaska)

FIGURE 4-5. *WEEPOOSE*, AT GRAVINA ISLAND, 1930

(Source: USFS Files, Ketchikan, Alaska)

FIGURE 4-6. U.S. *RANGER 6*, DATE UNKNOWN

(Source: USFS Files, Ketchikan, Alaska)

FIGURE 4-7. CHUGACH WITH WANIGAN, DATE UNKNOWN

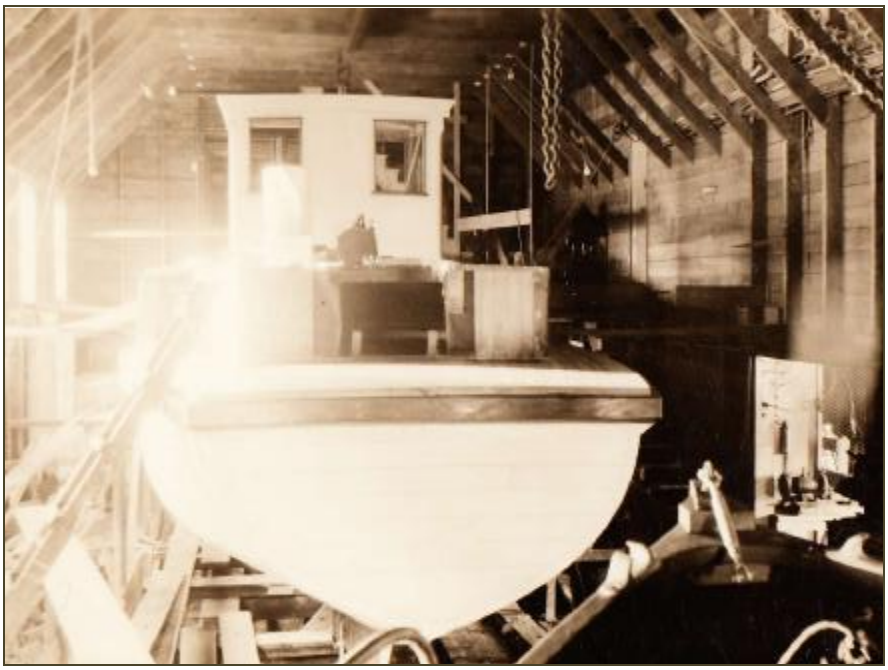
The last boats commissioned in the 1920s were three of the only four vessels constructed by the Forest Service in Alaska. *Ranger 7*, *Ranger, 8*, and *Ranger 9* were built at Gravina Island Marine Station in 1926, 1928, and 1930, respectively. The ranger boat fleet reached its peak in 1930, with 11 boats in service (*Ketchikan Alaska Chronicle* March 13, 1930, *Ketchikan Alaska Chronicle* April 28, 1926).

The ranger boat fleet was most active from 1920 to the 1950s. The boats, essentially waterborne offices, were the centers of administrative activity. The more robust vessels, such as the *Chugach*, operated every month of the year. Duties, in the early years, however, were rarely limited to typical forest management activities.

For example, the *Chugach* was involved in several dramatic rescues and searches because the U.S. Coast Guard (USCG) presence was limited and mostly centered in southeast Alaska. This role was especially prominent during the winter months when the *Chugach* was often the only federal vessel within 500 miles of Prince William Sound (Sorensen and Schley 1990).

(Source: USFS Files, Ketchikan, Alaska)

FIGURE 4-8. *RANGER 7*, 1959



(Source: USFS Files, Ketchikan, Alaska)

FIGURE 4-9. RANGER 8 UNDER CONSTRUCTION AT GRAVINA, 1928

(Source: USFS Files, Ketchikan, Alaska)

FIGURE 4-10. *RANGER 9*, GRAVINA ISLAND, KETCHIKAN, 1930

The ranger boats also served larger communities. Local teenagers from Cordova boarded the *Chugach* during the holiday season and harvested Christmas trees for the community. She was also used to transport wood for the construction of the local auditorium and Cordova's first church. Ranger boats also transported local residents and school children on picnics and short camping trips (McCallum 2001).

Important USFS management projects in the 1920s were diverse and included boundary surveys, a ubiquitous management activity since 1902, especially in Chugach National Forest, which required considerable attention. The Chugach National Forest had been subjected to eliminations in 1917. Forest Service leadership began to notice the recreational potential of the forests as early as 1923 when Frank Heintzelman brought a group of Seattle mountaineers to Lituya Bay. The climbers noted that the area, part of the Tongass National Forest, had impressive recreational potential. Timber sales, however, continued to occupy the majority of USFS management resources. In fact, the cost of administering timber sales in Tongass National Forest outpaced the forest's budget (Rakestraw 2002).

The majority of work was still in the field and schedules could be arduous. Twenty-hour days were not unusual and days off were rare. Considerable time was spent aboard the ranger boats. Ranger George Patterson wrote that during the month of March 1921 he worked 291 hours and traveled 700 miles by

boat (Rakestraw 2002). Patterson, of course, was not alone. The skippers were the men who steered the boats through the forests' waters and escorted the rangers to and from their field outposts.

Beginning in 1924, Frank Heintzelman inaugurated a forest research program. He diverted timber management funds to studies of forest reproduction on small test plots in cutover areas. In their first season, which only involved work in Tongass National Forest, the researchers were not provided with transportation. They literally hitched rides on boats with rangers. Officially known as technical assistants, the men had to forge their own way on the boats. Since they did not have cots, the forest researchers slept wherever they could find space to lie down. The researchers were also expected to provide their own provisions. By 1925, however, technical assistants were stationed in the Chugach and Tongass national forests. While they still had to travel with rangers on occasion, the researchers eventually got their own rented boats and skippers for the field season, which usually lasted from April through October (Rakestraw 2002). The research conducted by the Forest Service in the 1920s was focused on questions related to the economic value of the forests, such as forest regeneration studies.

The acquisition of new USFS boats slowed considerably between 1930 and the late 1950s. *Ranger 10*, a 47-foot launch, was constructed at the Gravina Island Marine Station in 1931. The *Tahn* burned in Ketchikan in 1931 and was replaced by a 54-foot launch, the *Forester* (figure 4-11). No additional boats were added to the USFS inventory in Alaska for over two decades. Two launches, the 34-foot *W.A. Langille* and the 36-foot *W. E. Weigle*, were purchased by the Forest Service in 1954. The boats were originally constructed in the mid-1940s by the Wheeler Shipbuilding Corporation in Whitestone, New York.

(Source: USFS Files, Ketchikan, Alaska)

FIGURE 4-11. THE *FORESTER* AT PORT ALICE, 1961

In one sense, the use of ranger boats continued much as they did in the 1920s. The vessels supported fundamental forest management activities by transporting rangers, technicians, and other personnel through the forests to perform needed fieldwork. The boats also delivered materials and towed wanigans (Cannole 1939, Cannole 1939c).

On the other hand, the ranger boats provided pivotal support in new areas. They were essential to the implementation of President Franklin Roosevelt's New Deal in Alaska. The New Deal included a number of programs, many of which were not especially important to the history of Alaska's national forests, except for one. The Civilian Conservation Corps (CCC), established March 31, 1933, was a program in which unemployed young men were put to work on conservation projects throughout the United States. By summer, hundreds of thousands of participants (known as enrollees) were encamped at sites across the nation, performing various projects. The CCC Forest Service work was primarily directed at improving the productive capacity of the forests through land management activities and construction of infrastructure and facilities.

The first CCC camp in Alaska was established at Gravina Island Marine Station in the early summer of 1933. Nearly two years later the program had expanded to four camps with over 300 enrollees. Most of the men were encamped in Tongass National Forest. Camps in Ketchikan, Petersburg, and Juneau housed 125, 25, and 130 men, respectively. The Juneau camp was designated an admiralty camp. The CCC camps in the Chugach National Forest hosted less than 50 enrollees at Prince William Sound and Kenai (Rakestraw 2002).

Early CCC enrollees undertook a variety of projects, both in developed areas and in the field. Some projects developed administrative infrastructure. For example, enrollees constructed a new supply warehouse and other structures at Gravina Island Marine Station and stream gauges throughout the forests. Road building, another major CCC activity, served two purposes—administrative support and recreational development. Like their counterparts in other national forests, the Alaska CCC crews spent considerable time constructing recreational facilities. These included campgrounds, cabins, trails, and a shooting range. They also undertook resource management projects in the field.

Alaska's CCC program had expanded considerably by 1937 when over 1,000 enrollees were working throughout the Tongass and Chugach national forests. The diversity of work continued, with a combination of administrative and recreational infrastructure projects dominating work schedules. Example projects include the development of recreational facilities on Admiralty Island, the construction of a boat dock in Cordova, restoration of a Russian cemetery, and the installation of in-stream components for fishery management (Rakestraw 2002). Perhaps the most unique CCC project in Alaska was the Totem Pole Project in which USFS employees and CCC enrollees undertook an inventory and preservation effort to identify and protect totem poles in various native villages, and carved new totem poles as well.

The USFS ranger boats made the CCC program possible in Alaska's forests. Skippers and rangers transported enrollees to camps, delivered provisions and supplies, inspected camps, and sometimes provided meals. The *Ranger 7* towed logs and transported poles for the Totem Pole Project (Cannole 1939a, Cannole 1939b, Cannole 1939, Sorensen and Schley 1990, Rakestraw 2002).

The ranger boats also supported research projects taking place in the forests. For example, as early as 1933, the *Chugach* was instrumental in the research projects of several anthropologists and archaeologists. Prominent scholars such as Frederica de Laguna and Kaj Birket-Smith, Ales Hrdlicka, and Robert F. Heizer all benefited from the availability of USFS vessels. Ranger boats provided transportation, supplies, and support for the scientists working in the forests (Sorensen and Schley 1990, Rakestraw 2002).

Timber management continued to evolve in the 1930s. Forest administrators had actively encouraged investment in timber operations since the 1920s. The *Weepoose* was regularly used to transport visiting business leaders on tours of Tongass National Forest timber stands. The hope was that one of these

wealthy investors would develop a pulp mill in the region, which would help Alaska overcome its isolation and energize timber production (Rakestraw 2002).

Alaska's national forests may have been remote, but they were not outside the reach of administrative controversy. A 1936 inspection of the Forest Service in Alaska by the Department of Agriculture Bureau of Personnel caused considerable consternation. The report author, Frank Russell, excoriated the loose manner in which USFS personnel operated. He pointed out paperwork discrepancies, the inappropriate use of official time, and other administrative problems. Russell also condemned the use of ranger boats to take families on picnics. Regional Forester, Frank Heintzelman, responded to all the criticisms in the Russell report. With regard to personal use of the boats, he argued that rangers in all forests have always been encouraged to take their wives to see the forests. In Alaska, such a trip required a boat. Therefore, the men had not violated any policies (Rakestraw 2002).

World War II markedly affected USFS operations in Alaska. While shifts in personnel and defensive concerns in Alaska were important, the most dramatic change was the advent of the Alaska Spruce Log Program (ASLP). The program, administered by the Forest Service and financed by the Commodity Credit Corporation, was developed to produce 100 million board feet of spruce airplane lumber per year. The ASLP began in 1942 and ended in 1944 when metal replaced wood in aircraft construction. The project kept four three-man parties in the field cruising timber. Based on a USFS wanigan and using boats when necessary, they scoured the forests for promising stands of timber (Rakestraw 2002). Independent logging contractors were brought in to do the actual timber cutting. Nine logging camps were established in 1942 alone; four of these camps were floating camps.

Field headquarters for the ASLP were in Edna Bay. A fleet of boats supported operations. The USFS ranger boats, *Forester* and *Ranger 7*, served administrative needs. Other boats were rented and used for longer trips to Seattle, such as boom boats, oil boats, and for towing flat rafts. The Forest Service also began chartering aircraft for inspections and travel (Rakestraw 2002).

The immediate post-war years were dominated by renewed attempts to establish a pulp mill in Alaska. By the late 1940s, Heintzelman finally found a group of willing investors who formed the Ketchikan Pulp Company. They constructed a mill at Ward Cove and signed a preliminary timber contract in 1948. The final 50-year contract was signed on July 26, 1951, with the company agreeing to purchase 1.5 billion cubic feet of timber over 50 years.

Patterns of boat use changed somewhat by the 1950s. The workload decreased considerably in Chugach National Forest. This was partly the result of changing management needs. For example, fox farming was in decline. The fox fur industry was a robust use of the forest in the 1920s. Rangers had to inspect and permit each of dozens of fox farms annually before World War II, but the industry declined precipitously beginning in the 1940s. Construction also slowed, especially with the reduction of railroad activity, resulting in a decreased need for lumber. As a result, timber operations were scaled back (Sorensen and Schley 1990). There were a small number of sawmills operating in the Chugach National Forest, including one on Afognak Island, but they were not intensively managed via boat (Rakestraw 2002).

Meanwhile, Tongass National Forest was experiencing an increase in timber production after World War II. Much of the demand for timber was driven by the post-war needs of Japan (Sorensen and Schley 1990). A team of technical experts traveled from Japan to the United States in 1952 to examine potential mill sites. Within a year a Japanese company had entered into a contract with the Forest Service to construct a sawmill and pulp mill at Sitka. Production from the mill was to be sent to Japan (Rakestraw 2002).

The Forest Service was also encouraging increased production through the adoption of 50-year timber contracts, with timber sale amounts in the billions of board feet. These contracts represent the beginning of large-scale logging in Alaska. Timber sales reached 219 million board feet by 1955. Within a decade, sales nearly doubled to 405 million board feet of timber (Rakestraw 2002). Harvesting methods by this time shifted to clear-cutting, with cut areas often incorporating entire watersheds. Managing these operations became the predominant responsibility of USFS employees in Tongass National Forest.

With expanding timber development came the need for forest research, especially growth and yield studies. The Alaska Forest Research Center was established in Juneau in 1948. Raymond F. Taylor was hired as the center's director. The *Ranger 6* was provided to Taylor for his fieldwork. The forest research center expanded quickly even with a limited budget. Researchers built their own wanigan from scavenged materials and went into the field. Fieldwork mostly consisted of survey and measurement of vegetation in test plots and studies of the effects of logging on salmon fisheries. The latter projects involved building gauging stations and fish weirs. Since most fieldwork was conducted in coastal forests, the *Ranger 6* received heavy use (Rakestraw 2002, no author 1953).

There is little question that ranger boats were still important to USFS operations. When the Forest Service assessed the ranger boats in 1953, there were eight active vessels in the fleet: *Ranger 6, Ranger 7, Ranger 8* (figure 4-12), *Ranger 9, Ranger 10* (figure 4-13), *Chugach, Marmot,* and *Forester.* The assessment included a detailed table proposing a boat replacement and acquisition program spanning the 1950s. The report's author asserted that nine new ranger boats needed to be acquired between 1954 and 1961. Seven of the boats were intended to replace all existing vessels, except the *Forester*. A new wanigan and a few 24-foot runabouts were also needed for timber operations. The *Ranger 6* was the first boat retired after the assessment due to advanced age. It was replaced with the 42-foot *Maybes* in 1954 (no author 1953).

The Gravina Island Marine Station closed in the mid-1950s. Marine Engineer George Reynolds argued that the station was no longer needed because commercial boat yards were readily available and cheaper. After the marine station closed, ranger boats were repaired in commercial boat yards in Petersburg, Wrangell, and Ketchikan. Sometimes the vessels were transported to Puget Sound for repairs and maintenance (Sorensen and Schley 1990).

The closure of the marine station reflects the fact that transportation modes were changing in the late 1950s. First, field personnel began to rely more on float planes and helicopters, which allowed employees to spend less time in transit and more time at their base office and home. Access to a timber sale site, for example, may have taken three days by boat. Float planes and helicopters, on the other hand, were able to reach the site in hours or minutes. The advent of the 50-year timber contract led to a dramatic increase in road construction in Tongass National Forest, which also accelerated in Chugach National Forest. By 1955, employees in Tongass National Forest were spending about half their time in the field; the majority of this time was spent in timber management activities (Baker et al. 1995, Greeley et al. 1956).

One significant fallout from the shifting forest use patterns was the transfer of the *Chugach* to Tongass National Forest. Chugach National Forest began to rely on chartered boats and aircraft for transportation. Between 1951 and 1953, the *Chugach Ranger* averaged less than 70 days per year in the field (Emerson 1954).

(Source: USFS Files, Ketchikan, Alaska)

FIGURE 4-12. *RANGER 8* AT POINT BAKER, DATE UNKNOWN

(Source: USFS Files, Ketchikan, Alaska)

FIGURE 4-13. *RANGER 10*, DATE UNKNOWN

The *Chugach Ranger* arrived at Petersburg, its second duty station, in September 1953. One year later the *Chugach* relocated to Juneau, and a few years later was stationed in Sitka before finally returning to Petersburg by 1960 (Sorensen and Schley 1990).

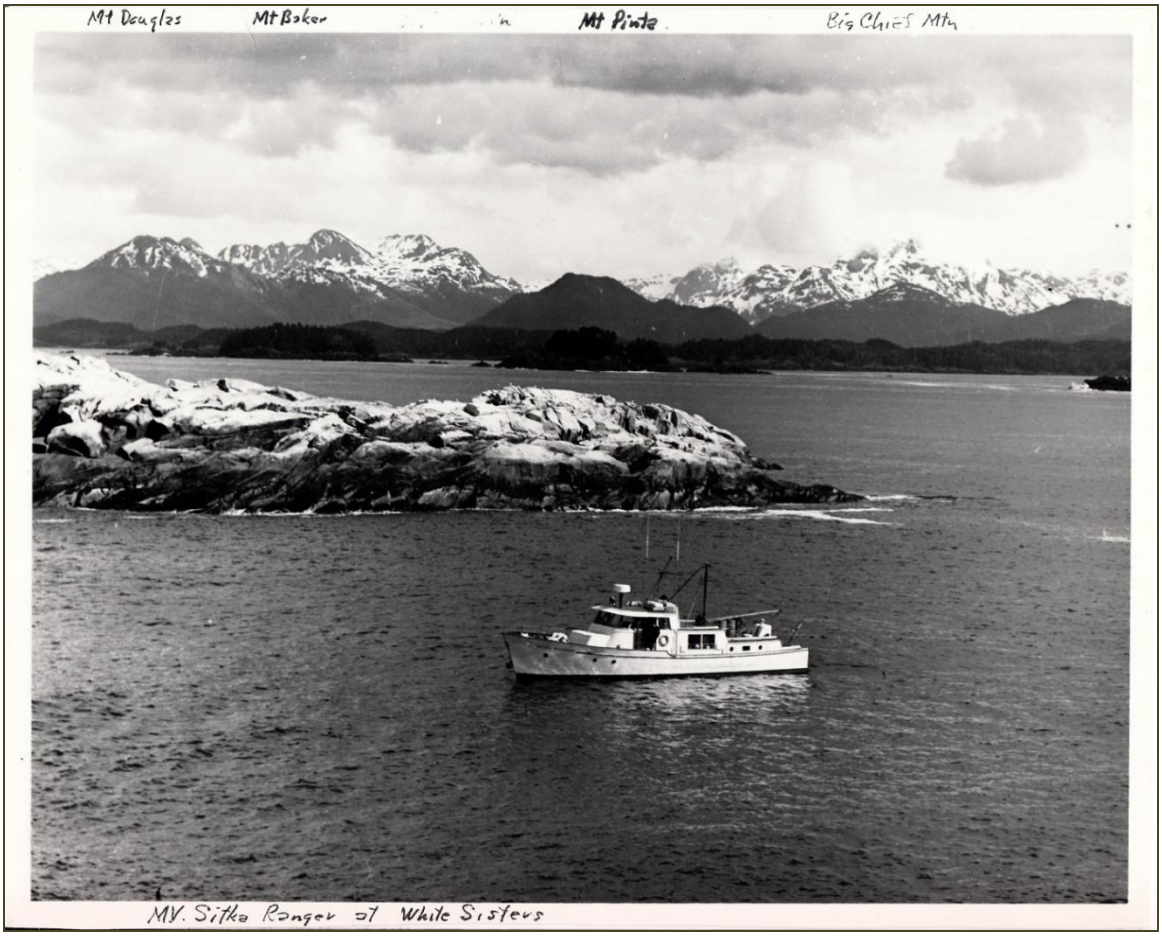
Although the Forest Service came to rely more on aircraft while roads were becoming more prevalent, the ranger boats still served an important role. Aircraft and boats were often used in conjunction with each other. Ranger E. Allen Crozer's 1959 diary describes several trips in which he would fly to one location only to board a boat to travel to another, or vice versa (Crozer 1959). Ranger boats were busy towing wanigans for engineering crews, transporting employees, and supplying logging camps with food and supplies. The vessels continued to spend a considerable time at sea. *Ranger 7* and *Ranger 8*, operating full-time out of North Tongass in 1954, averaged 134 days in the field. The three vessels used in the South Tongass, the *Ranger 9*, *Forester*, and *Weigle*, averaged 137 days at sea in 1955 and 106 days in 1956, despite the fact that only two of the boats had full-time skippers. The *Chugach*, mostly based in Juneau and Sitka, averaged 170 days out of port in the 1950s. Part-time vessels in Tongass National Forest, including *Ranger 10, Marmot*, and *Taku* (figure 4-14), were used infrequently (Sorensen and Schley 1990, Johnson and Rollins 1957, Greeley et al. 1956, no author 1958).

(Source: USFS Files, Ketchikan, Alaska)

FIGURE 4-14. *TAKU* 1959

A few boats were acquired in the 1950s. The Forest Service purchased the *Taku*, a 50-foot launch, sometime in the 1950s (Emerson and Sword 1961). The boat was constructed by Seattle's Lake Union Boat Works in 1943 for the U.S. Coast Guard. It was originally used as a patrol boat in Puget Sound. By this time, most USFS boats were purchased from other agencies. However. there was one final exception—two launches were constructed specifically for the Forest Service in the late 1950s.

The *Sitka Ranger* (figure 4-15) and *Tongass Ranger*, the last ranger boats constructed specifically for the Forest Service, were two of three planned new ranger boats (Emerson 1957). Apparently, the third vessel was never constructed. The two 61-foot, steel-hulled launches were constructed by Tacoma Boat Works in Tacoma, Washington. Both boats were built in 1958. The *Sitka Ranger*, with George Sarvela as skipper, was launched in the fall of 1958, and the *Tongass Ranger*, with Ralph Ohman as skipper, was put into service in the spring of 1959. The arrival of the new vessels allowed the Forest Service to divest itself of some of its older boats. The *Taku, Weigle, Stikine* (it is not clear why this boat is not mentioned in boat inspections conducted in the 1950s), and *Ranger 7* were sold in 1959 for just under $30,000 (Sandor 1959, Adkins 1959, Gano 1959, Mitchell 1958, Emerson 1958).



(Source: NARA, Anchorage, Alaska)

FIGURE 4-15. *SITKA RANGER* AT WHITE SISTERS, DATE UNKNOWN

Another study complementing the 1953 assessment of the boat fleet was being conducted in 1958, just before the Forest Service acquired the *Tongass Ranger* and *Sitka Ranger*. Where the 1953 assessment contained recommendations for maintaining a fairly large fleet of boats, the 1958 study, which specifically focused on the two roles ranger boats had always filled: transportation and field housing, argued for reductions in the boat fleet. In fact, the report associated with the 1958 study contained several pertinent observations and recommendations. The author notes that aircraft had become much cheaper and more efficient than boats in transporting personnel to field camps and recommended that airplanes and helicopters be used whenever possible. He noted that boat use was declining and would continue to dwindle. On the other hand, the author writes that boats were still very important for the transport of payload and men where aircraft cannot be effectively deployed. He predicts that boat use would remain a necessary tool for forest management for some time. Concurrently, ranger boats were becoming less valuable as field housing by 1958. The transportation study notes that logging camps and other permanent and semipermanent housing available for field crews were more feasible than the ranger boats. The author writes that "the use of boats for field housing can [not] be justified" (USDA, USFS, Alaska Region 1958).

Finally, the 1958 evaluation of transportation and field housing makes recommendations on maintenance of the ranger boat fleet. The author states that the fleet should be reduced to five boats and that the Forest Service should establish a policy wherein any boat that is used for less than 100 days in a year should be retired or reassigned and that contract transportation services should be used more fully (USDA, USFS, Alaska Region 1958).

The fleet recommendations of the 1953 assessment and 1958 transportation and field housing study were only partly adhered to. By the summer of 1959, the USFS boat fleet consisted of five active boats: *Tongass Ranger, Sitka Ranger, Langille, Maybeso,* and *Chugach*. Four more boats were held in reserve or rented to other users. These included *Ranger 8*, *Ranger 9*, *Ranger 10*, and *Forester* (Gano 1959, no author 1953).

(Source: NARA, Anchorage, Alaska)

FIGURE 4-16. *CHUGACH* 1928 AT NUNATAK FJORD

Timber sales, trail construction, and resource management operations occupied most of the vessels' time in the 1960s. An anonymous article in *Sourdough Notes*, an Alaska regional newsletter, notes that it "seems like every time we turn around [loggers] have pruned (at ground level) another hillside, and built another mile of road." All this activity kept the boat skippers busy and although rangers and ranger boats spent less time in the field, they still regularly embarked on 10-day inspection and reconnaissance trips. Moreover, boats such as the *Maybeso* supported scientific research. While field crews often used aircraft to travel to field camps, the boats transported supplies and moved camps and crews once in the field (Jemison 1960, no author 1960, no author 1960a, no author 1960b).

The ranger boat fleet shrank in the 1960s–by 1961, the fleet was reduced to five ranger boats. The same year an inspection of the South Tongass area notes that the *Tongass Ranger* (figure 4-17) and *Forester* were well used, but that only one boat was needed. The report author, Richard W. Wilke, argues that *Forester* should be mothballed for a year. If it is, indeed, not needed, he continues, it should be disposed of or used elsewhere. There was, however, no discussion of eliminating the ranger boat fleet. In fact, inspectors continually asserted that although air travel was a boon to operations, the boats were indispensible for remote travel and, just as important, housing for field personnel (Parker 1961, Parker and Lowes 1961, Wilke 1961). Fleet reductions continued through the decade. *Ranger 10* was put up for sale in 1962 and the *Forester* was sold later in the decade so that by 1970, the ranger boat fleet consisted of three boats—the *Chugach, Sitka Ranger*, and *Tongass Ranger* (Hansen 1963; *Daily Alaska Empire* 1962; USDA, USFS, Alaska Region 1970).

(Source: NARA, Anchorage, Alaska)

FIGURE 4-17. *TONGASS RANGER*, DATE UNKNOWN

The emphasis on large timber sales and clear-cutting began to shift in 1968. Legal challenges, the exhaustion of timber reserves, and shifts in USFS policy resulted in a reduction of large, long-term sales. Timber sales that were pursued became more complicated as federal regulations regarding the effects of logging operations on a wider array of resources, including cultural resources, were implemented. The size of clear-cuts was also limited. Finally, the logging industry itself suffered a decline that made the pursuit of new timber sales less attractive and timber sales declined precipitously. For example, there were 30 timber sales on USFS land in 1969. Three years later there were none (Rakestraw 2002).

The decline in timber production resulted in a reduced need for ranger boats. Ranger boat use days (use of all three ranger boats) plunged from nearly 500 to just over 300 between 1969 and 1973 (no author n.d.), with the most dramatic declines occurring from 1970 to 1971. The *Tongass Ranger* spent 159 days in the field in 1970, and only 96 in 1971. The *Sitka Ranger* experienced a similar reduction with 184 days in the field in 1970 and only 97 days in 1971 (no author n.d.).

The vessels, however, were not deemed expendable. Forest Engineer Pete Meyhart wrote in 1971 that the necessity of these boats was "increasing rather than decreasing" and that arguments for fleet reductions were always related to budgetary constraints rather than actual forest management needs (Meyhart 1971). Meyhart's provocative claim notwithstanding, boat use was in decline.

According to Roy Mitchell, USFS supervisory fleet manager, the long-term timber contracts funded the majority of the ranger boat program. During the heyday of the timber industry, there was plenty of money for operating and maintaining the vessels. Although a trip might include a hydrologist, fisheries person, recreation person, and timber person, it was usually the timber program that paid for most of the trip. As timber work declined, timber and timber-related engineering funds declined; however, the cost of operating and maintaining the vessels did not. This discrepancy resulted in an increased unit rate to operate the vessels (Mitchell 2011).

The work preferences of USFS employees, accounting policies, and priorities of managers also began to change. The new recruits were less inclined to spend 10 days camping and preferred to be in an office using modern technologies. A quick flight to the field became the preferred method of data collection (Mitchell, 2011). Compared to the remaining USFS equipment and fleet, the ranger boats were expensive to maintain. Previous cost coding structures allowed some general aspects of the ranger boat maintenance costs to be spread over all the equipment in the USFS fleet, thus appearing to reduce the ranger boat rate. New management, faced with overall budget reductions, began to prioritize assets, placing greater emphasis on the barges and their applications. The Forest Service had a lot of money invested in the barges and in their modernization (Mitchell 2011).

Ranger boats were still busy during the summer and even though timber production was declining by the 1970s, the activity still dominated forest management. There were about 50 timber harvest operations in the Chugach and Tongass national forests in 1978. Three of these were associated with 50-year contracts awarded in 1951, 1954, and 1957. Logging occurred in the summer and required varying degrees of attention from USFS personnel, ranging from periodic inspections to full-time residence at the work site (USDA, USFS, Alaska Region 1978).

(Source: NARA, Anchorage, Alaska)

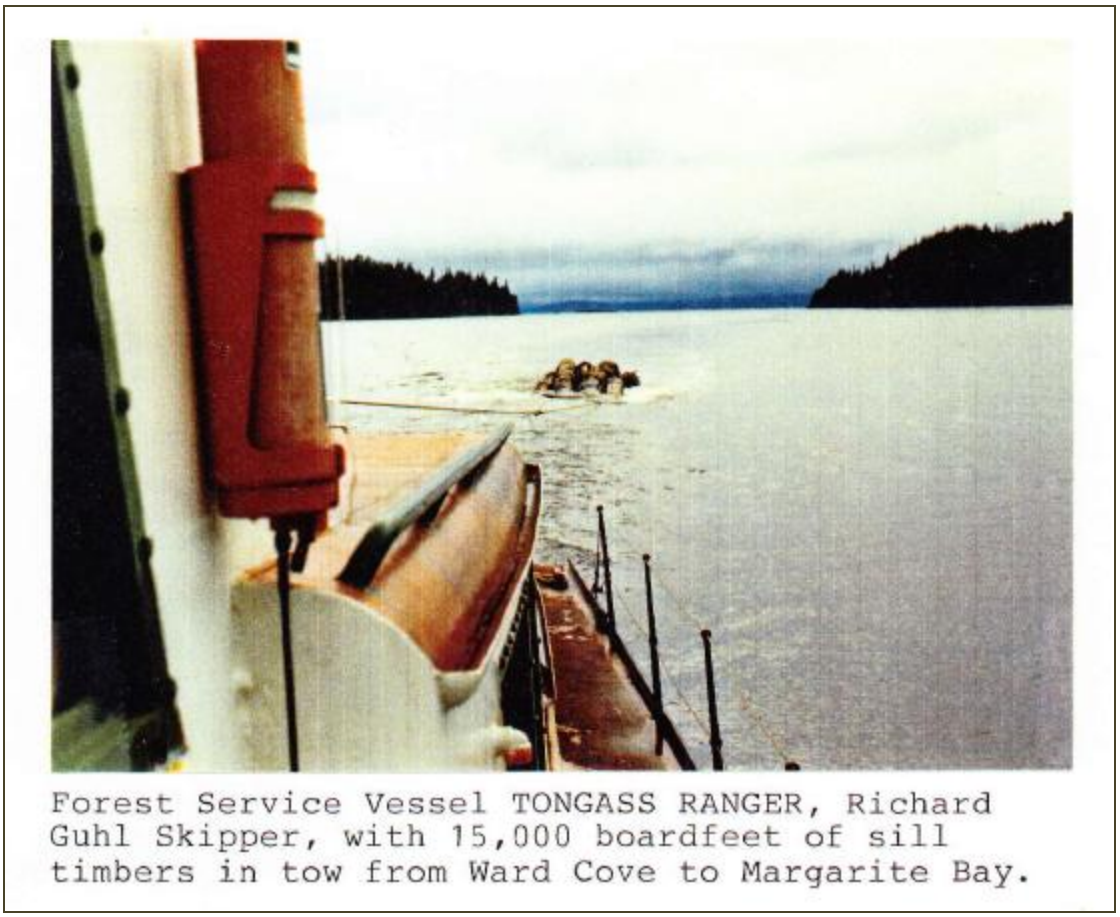
FIGURE 4-18. CHUGACH AND *TONGASS*, DATE UNKNOWN

By 1978, the U.S. Forest Service was maintaining about 2,000 miles of road. Much of this mileage was constructed to access logging operations, especially in Tongass National Forest. Nonetheless, a USFS planning document noted that roads alone were inadequate to serve the forest and that boats and aircraft were still important for resource management and serving the public. The three ranger boats supported various work projects, including cabin maintenance and construction, special-use permit inspections, timber management, resource management, stream improvement, and trail maintenance (USDA, USFS, Alaska Region 1978; USDA, USFS, Alaska Region 1972).

An influx of seasonal workers triggered a brief expansion of the boat fleet. A youth conservation employment program, similar to the Civilian Conservation Corps, was launched as a pilot program in Chugach National Forest in 1970. Four years later, the pilot program was officially established as the Youth Conservation Corps (YCC) and Young Adult Conservation Corps (YACC). YACC activities eventually resulted in the acquisition of a few more boats. These included the *Waters*, a 73-foot harbor tug constructed in 1974 by Steffens Brothers in San Francisco. The tug was procured by the Forest Service in 1976 to support the YACC program in the vicinity of Sitka. The boat was surplused by the Forest Service in 1980. Another boat, the 50-foot *Biorka*, was transferred from the Federal Aviation Administration to the Forest Service in 1976 to support YACC programs in the Petersburg area. The boat

was excessed in the 1980s. The final boat purchased was the *Nellie Brown*, a 34-foot launch that was constructed and used from 1979 until it was sold in 1985 (McIntosh 2011).

The YCC and YACC programs were similar to the Civilian Conservation Corps that provided employment (usually seasonal) to young men and women on public lands conservation projects. Projects in 1978 included improving wildlife and fisheries habitat, and maintaining recreation cabins, trails, picnic areas, and campgrounds. Enrollees were stationed at various camps in the Tongass and Chugach national forests. Some camps were in developed areas, but there were also camps in the backcountry. The remote camps, called spike camps, were largely tent camps that enrollees resided in for 10-day periods (USDA, USFS, Alaska Region 1978; Rakestraw 2002). The newly acquired boats were clearly crucial to the maintenance, provision, and functioning of the camps, especially in Tongass National Forest.



(Source: Richard Guhl, date unknown)

FIGURE 4-19. *TONGASS RANGER*

Ranger boat use was still somewhat heavy in the 1980s and 1990s. In 1984, for example, the *Tongass Ranger* had already been scheduled for an entire summer of use by Ketchikan Ranger District, Craig Ranger District, Misty Fjords National Monument, and USFS engineering on January 11 (no author 1984, Green 1984). The vessels were used for various administrative activities, including timber sale layout,

reconnaissance work, and transport of multidisciplinary field crews conducting resource management work (Fifield 1998, no author 1997, no author 1999, no author 2000). The *Tongass Ranger* was detailed to the Valdez oil spill for over four months in 1989.

(Source: NARA, Anchorage, Alaska)

FIGURE 4-20. *CHUGACH*, DATE UNKNOWN

The *Chugach*, after years of service, became inactive in 1989. An assessment of the boat, however, deemed it sound and worth refurbishment. Another analysis evaluated the historic significance of the vessel and determined the boat eligible for listing in the National Register of Historic Places, and was eventually sent to Port Townsend, Washington, for extensive refurbishment. The newly invigorated *Chugach* was put back into service in Petersburg, Alaska, on May 20, 1995 (McCallum 1995, Sorensen and Schley 1990).

A 1995 study of the management of Alaska's national forests notes that while aircraft, helicopters, and, if applicable, vehicles provided transportation through the forests, boats were still an important component of USFS operations. The authors note that the *Sitka Ranger* and *Chugach Ranger* were making trips that involved "days or weeks of travel" (Baker et al. 1995).

(Source: NARA, Anchorage, Alaska)

FIGURE 4-21. *SITKA RANGER*, DATE UNKNOWN

The ranger boats continued to serve USFS management needs until recently. USFS employee Teri Campbell describes an eight-day trip in 2000 that reflects the diversity of tasks undertaken via ranger boat. She and her companions were to "perform monitoring checks on various lands and special-use permit sites, view potential timber harvest areas, assess recreation cabins and trail conditions, [and] survey subsistence streams" (Campbell 2001).

Not all trips, however, were so complex. In August 2007, USFS archaeologists took the *Sitka Ranger* out to Yakobi Island to evaluate possible evidence of Russian sailors who went missing during the Alexi Chirkov expedition that visited Alaska in 1741 (McCallum 2008). The vessels have also been pivotal for tribal consultation trips in which tribal elders visit sites with USFS personnel (McCallum Autry, Schulte 2011). University of Alaska, Ketchikan, and Tongass National Forest have been working together since 1989 to take Alaska Native elders and students to archaeological sites to discuss how the ancestors lived. Dr. Schulte described the trips as "reawakenings" of Native Alaskan culture and opportunities for the Native elders to visit sites they otherwise could not access (Schulte 2011).

Even with the diversification of ranger boat uses in the last decade, the use of the *Chugach, Sitka Ranger,* and *Tongass Ranger* has declined precipitously in recent years. By 2010, the combined use of all three ranger boats totaled only 100 days per year. In 2010, the forest supervisor decided that all three ships would remain docked until they could be certified as safe and seaworthy. This led the Forest Service to determine that the *Sitka Ranger* should be taken out of service. As of 2011, the *Tongass Ranger* and *Chugach* had not been out of service for over a year (*Fairbanks Daily News-Miner* 2010).

While former ranger boats may be extant outside the U.S. Forest Service, the *Chugach, Sitka Ranger,* and *Tongass Ranger* are the final three to be owned and managed by the agency. In 2005, Paul McIntosh, a former interpretation planner and public affairs officer for the U.S. Forest Service attempted to find the former ranger boats. His research concluded at that time that six of the boats were still in use and in private ownership, one was in service by another federal agency, and five had sunk or been taken out of service. He was unable to determine the disposition of the remaining vessels. The Tongass National Forest 100-year celebration was held in 2007 and three former ranger boats appeared at that event, including the *Forester* (now the *Sea Bear*), *Ranger IX* (the *Aqua Gem*) and *Ranger VI* (current name unknown). The evaluation of national register eligibility of the *Sitka Ranger* and *Tongass Ranger* will help to inform and direct future decisions regarding the vessels.

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5.0 HISTORIC PROPERTY INVENTORY AND EVALUATION

This section provides a description of the properties evaluated and applies the National Register Criteria for Evaluation and a description of the properties' integrity. Two USFS vessels are included in this survey; one was previously listed in the national register. The vessels are over 50 years of age and were evaluated for eligibility for NRHP listing in light of their ability to meet the Secretary of the Interior's NRHP criteria A, B, C, and D.

The USFS site forms with photographs and a map are included in appendix B.

5.1 RANGER BOAT INVENTORY

In mid-1957, the U.S. Forest Service began discussing the purchase of a new ranger boat and met with naval architects in Seattle, Washington, to find a designer. At the time, the Forest Service was contemplating a vessel of 54 feet, costing approximately $50,000 and constructed of steel (many boat builders preferred steel to wood by this time). Jake Yearty, retired skipper of the *Tongass Ranger* stated that the *Tongass* and *Sitka* ranger boats were the steel execution of their wooden predecessor (Yearty 2010).

By October 1957, the Forest Service had selected a naval designer and secured $150,000 for construction of three vessels (Emerson 1957b). A memo from Assistant Regional Forester John L. Emerson dated May 13, 1957, to Wayne Sword, C. M. Armstrong, C.R. Weller, Ralph Ohman, and George Reynolds, appointed the addressees as the boat committee and furnished the following design parameters:

- $50,000 in cost
- 42–50 feet in length with deep draft and diesel power, 10-knot speed
- accommodations for five to six men

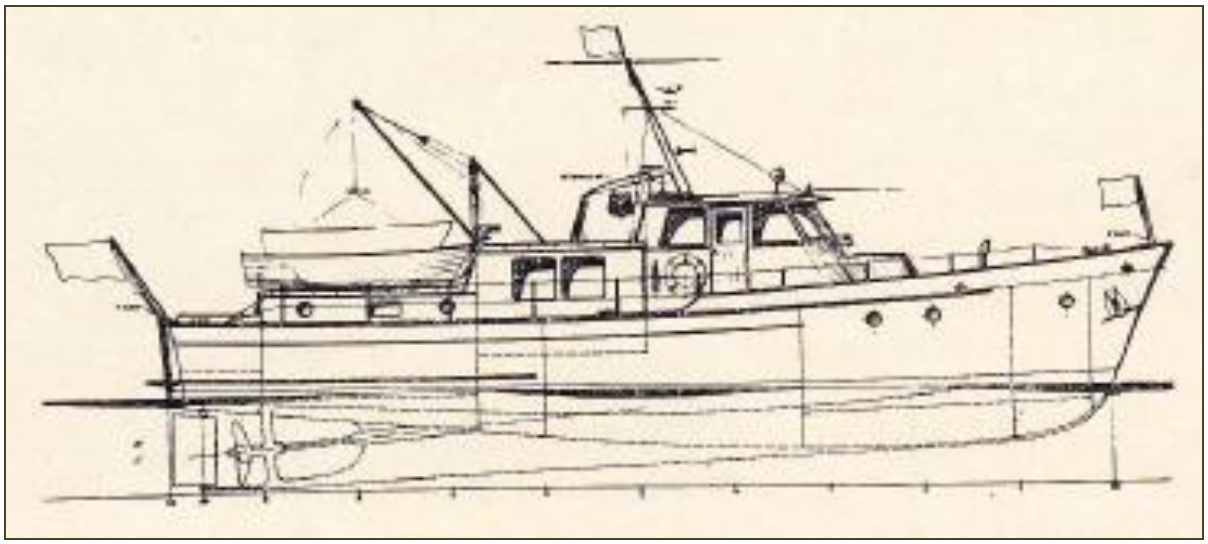
It is unclear when or why the decision to build 61-foot vessels was made. By December 1957, however, the plans were for 61-foot vessels that were designed to "broad usefulness; whether they carry timber men, firefighters, engineers, surveyors, or mineralogists in their extra duties, they must be able to move promptly, land skiffs ashore, maneuver through some floating ice, relay messages, and be a combination workhorse, floating office headquarters, and home for the rain drenched forester coming aboard from a winter timber cruise" (PWB 1959).

(Source: Pacific Work Boat, *New Cruisers for the Timber Cruisers*)

FIGURE 5-1. GEORGE SARVELA AND RALPH OHMAN ON THE *SITKA RANGER*, MARCH 1959 (POOR QUALITY—OLD NEWSPAPER PHOTO)

The Forest Service was involved in the design of the vessel from the beginning. A memo dated August 16, 1957, from John L. Emerson, assistant regional forester, commented on sketches received from Spaulding, indicating surprise that the engine

was in the center of the vessel, and not aft, and that the head space in the engine room was unacceptable. In December 1957, the Forest Service made additional comments on the vessel plans, commenting favorably on the galley layout, but recommending changes to the boat hoist davit mounting, certain bulkheads, anchor davit, location of the electrical system, and missing equipment (Reynolds1957).



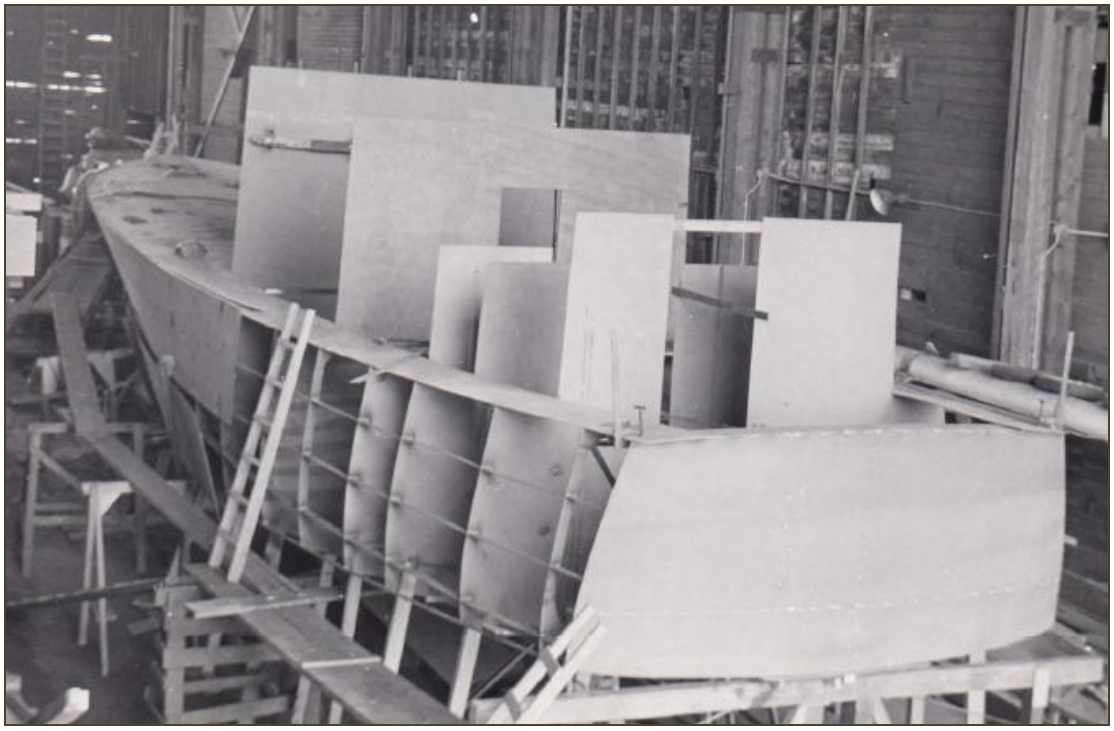
(Source: Ad in March 1959, Pacific Work Boat)

FIGURE 5-2. PHILIP F. SPALDING ADVERTISEMENT, *NEW CRUISERS FOR THE TIMBER CRUISERS*

5.1.1 Description of Exterior

The ranger boats were designed by Philip F. Spaulding & Associates, Seattle Naval Architects, and built by Western Boat Building Company, Tacoma, Washington (PWB 1959). The vessels have a V-bottom hull with a raked stem and transom stern. The steel-hull vessels are longitudinally framed and subdivided by four transverse watertight bulkheads. The overall specifications are:

- length overall – 61 feet 2 inches
- length waterline – 56 feet 8 inches
- beam – 16 feet 0 inches
- draft – full load – 5 feet 9 inches
- displacement – full load – 37.2 long tons (41.7 tons, 83,328 pounds)
- horsepower – 290 HP
- fuel capacity – 1,800 gallons
- fresh water capacity – 800 gallons
- complement – 7 men



(Source: USFS Files, Seattle, Washington)

FIGURE 5-3. RANGER BOAT UNDER CONSTRUCTION, 1958

The forward deck of the vessel measures 16 feet wide (narrowing to the bow) by 17.5 feet deep and is surrounded by a bulwark and rail. Forward decks are equipped with watertight compression-type hatches, anchor windlass, and chain locker. The vessel carries a 135-pound Danforth and a 75-pound second anchor (PWB 1959). There are two fire gear lockers forward of the wheelhouse (Spaulding 1958). There are two port lights on each side of the vessel in the forward section of the hull.

The wheelhouse is in the midsection of the vessel. It has five raked windows in a semicircular arrangement across the front with a steel visor. The windows measure approximately 24 inches by 30 inches. There are two windows on each side of the aluminum doors on the starboard and port sides, and two rectangular windows in the rear of the wheelhouse.

Aft of the wheelhouse is the mess and galley. There are two windows on the port and starboard side of the mess and galley measuring approximately 30 inches by 32 inches. The stateroom and a small lazarette are in the aft section of the vessel. There is a rectangular window and port light on each side, a port light in the drying room (starboard) and head/shower (port). The lazarette measures approximately 7 feet wide by 5 feet deep.

Atop the stateroom is a deck for stowing the two outboard motor-mounted power boats. The vessels were designed to handle two power boats (12 footer and 14 footer Burchcraft fir plywood skiffs) (PWB 1959). The outboard boats are handled by a power-operated boat boom mounted on deck above the mess and galley (Spaulding1958).

The *Sitka Ranger* was the first vessel constructed, and arrived in Juneau the first of February 1959 "after a rather rough trip from Seattle." In a memo from Assistant Regional Forester John L Emerson to A.J. Kennedy, Federal Service Supply, General Services Administration, dated February 13, 1959, Emerson commented that the sash windows in the wheelhouse were leaking badly and the windows had to be taped shut; the wheelhouse doors were leaking to the point that water covered the pilot house floor and ran down the ladder into the galley and the wardroom. He also commented that "the heating system needed thermostats as the engine room and pilot house were always too hot, the forecastle cold, and the wardroom even colder... water in the fuel lines, the whistle quit working, portholes leaking in the wardroom, problem with the running light reflection, paint above waterline and on deck peeling, and relocating the fathometer and radio on the *Tongass*" were some of the other issues. It is assumed that these issues were addressed in the *Tongass* prior to her completion since the wheelhouse was never modified as was the *Sitka Ranger's* in 1987.

5.1.2 Description of Interior

The interior of the vessel is accessed from the deck through doors on either side of the wheelhouse or from the lazarette (aft). The wheelhouse measures approximately 10 feet wide by 9.5 feet deep. The interior is mahogany paneling. The front of the wheelhouse has a built-in cabinet and counter that houses the wooden steering wheel, engine controls, and navigational equipment. The vessels were originally equipped with an 85-watt Northern radio, a Mile Ray searchlight, and a Wood Freeman Metal Marine pilot (PWB 1959). Navigation equipment originally consisted of a standard magnetic compass, echo sounder, and government-furnished radio-telephone, with provisions for future radar installation (Spaulding 1958). The vessels were also equipped with brass fog bells. The communication equipment was mounted overhead. To the rear of the wheelhouse is the skipper's berth atop built-in drawers and storage space. Two companionways with inclined ladders are on the starboard side of the vessel leading to the forecastle and aft to the galley and mess.

The forecastle measures 13 feet in length and tapers in width toward the bow. It has four built-in bunks with a head and washroom. The forecastle is mahogany-paneled with vinyl tile flooring, and contains built-in dressers, mirror, clothes lockers, and life safety equipment storage.

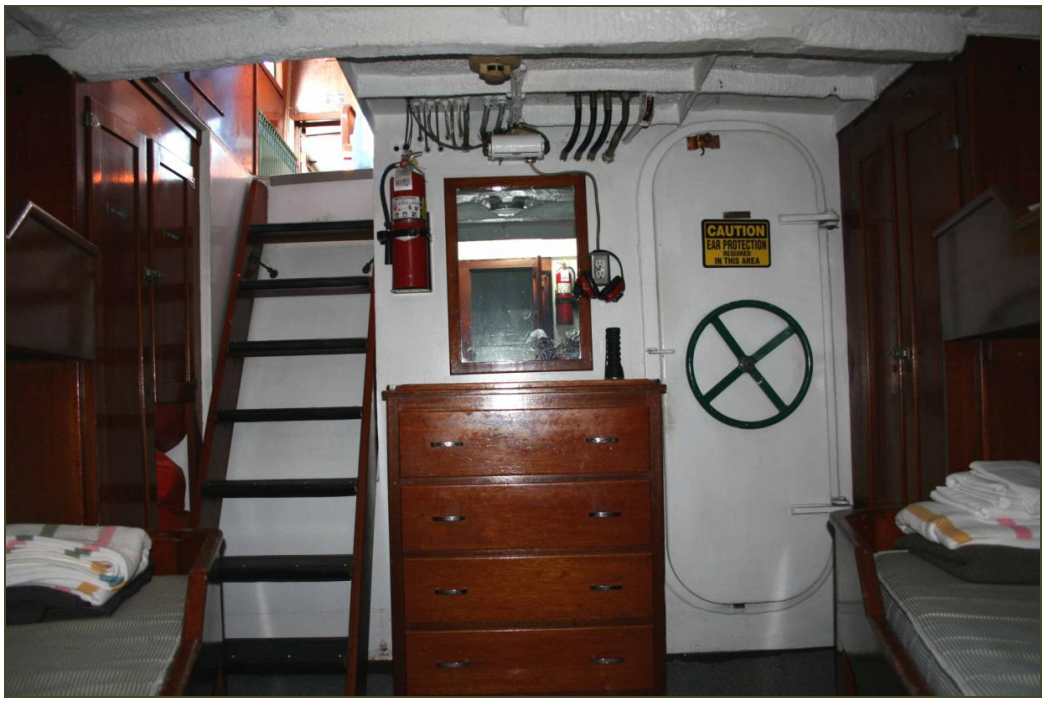
The engine room is accessed from the port side of the back of the forecastle and is under the wheelhouse. It is the full width of the vessel and approximately 15 feet deep. It contains the engine in the center of the vessel, a work bench on the port side, banks for ship services (house) and starting batteries, generators, material storage (paint, oils, etc.), domestic water heater, and the fuel and water tanks.

The vessels are single screw, and originally propelled by Caterpillar D353 marine diesel propulsion with a 2.19-to-1 Caterpillar hydraulic reverse and reduction gear, on a 4-inch Monel shaft with Goodrich Cutlass rubber bearings. The propeller, manufactured by Coolidge of Seattle, Washington, was a 3-blade Pacific type, 48-inch diameter with 32-inch pitch (PWB 1959).

The original electrical system was a 110-volt DC system powered by a 5 kilowatt Onan generator on the main engine. Complete drainage, bilge, fuel, and water piping systems were installed, as was a mechanical-hydraulic steering system with an automatic pilot (Spaulding1958).

(Source: J. Aaron)

FIGURE 5-4. *TONGASS RANGER* FORECASTLE, 2011



(Source: J. Aaron)

FIGURE 5-5. *TONGASS RANGER* FORECASTLE LOOKING AFT, 2011

The mess and galley are approximately 11 feet wide by 10 feet deep. The galley and mess are equipped with an oil-fired range, full-size refrigerator, and built-in table and settees that also provide storage. The galley is port side and the mess is starboard. The galley has stainless steel countertops and two sinks running the length of the galley. The galley and mess have mahogany paneling and mahogany cabinets with vinyl tile flooring (Spaulding1958).

The stateroom, or forester's office, is accessed from the galley and mess or from the lazarette. The stateroom, including the head/shower and drying room, measures 11 feet wide by 13 feet deep. The stateroom originally contained the forester's berth, clothes locker, and rifle rack on the port side; and a desk and settee as a spare berth on the starboard side. The head/shower are aft on the starboard side, and a large clothes drying room is aft on the starboard side for drying heavy weather gear (Spaulding1958).

FIGURE 5-6. D353 CATERPILLAR ENGINE FROM PORT SIDE, *SITKA RANGER* (poor quality newspaper photo)

(Source: March 1959, Pacific Work Boat, *New Cruisers for the Timber Cruisers*)

FIGURE 5-7. GALLEY, *SITKA RANGER* (poor quality newspaper photo)

(Source: March 1959, Pacific Work Boat, *New Cruisers for the Timber Cruisers*)

FIGURE 5-8. OFFICE IN STATEROOM, *SITKA RANGER* (poor quality newspaper photo)

Running hot and cold fresh water is supplied to the head, shower, and galley sink. For year-round Alaska operations, boats had interior heating systems (PWB 1959). Hot water convection radiators provided heat in the living spaces, wheelhouse, galley and mess rooms, head, and shower spaces, drying room and engine room (Spaulding1958).

5.1.3 Modifications

From the manufacturer, the two vessels were essentially identical. Over the years, modifications were made to both vessels during major overhauls and bi-annual maintenance or individually to the vessels based on the skipper's discretion. Vessels undergo constant maintenance and equipment is

repaired and replaced as needed to maintain them in operating condition. Marine environments are harsh; equipment fails and materials degrade.

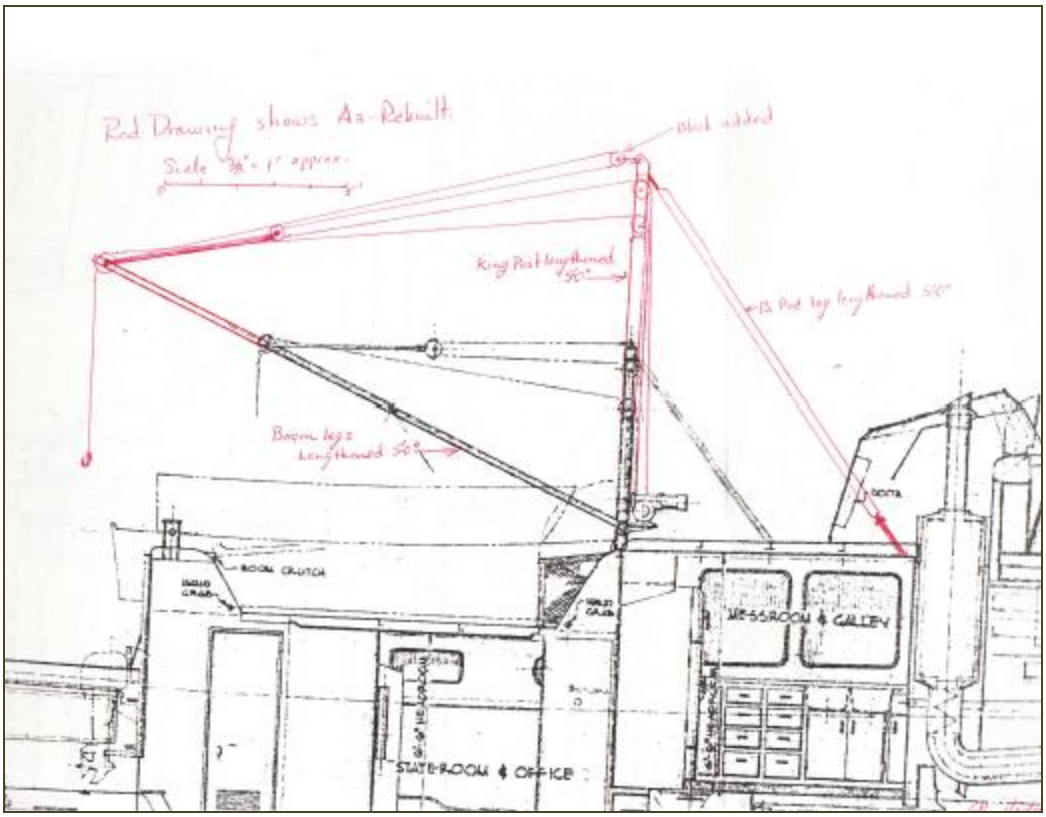
Every two years, the boats were hauled and pressure washed. While hauled, zinc anodes were replaced, painting was completed, and the hull was inspected visually and using ultrasound (M. Cruise 2011). The remainder of the time, the skipper maintained the vessel. Maintenance by the skipper included anything from sand blasting and painting the vessel in off years, to replacing flooring, replacing equipment and systems (including heating, electrical, running lights, galley cushions, etc.), and installing alarm systems (no author n.d.b.).

Sitka Ranger – Modifications

(Source: J. Aaron)

FIGURE 5-9. *SITKA RANGER* IN SITKA, ALASKA, 2011

In 1977, the *Sitka Ranger* crane was modified to reach the bottom of the vessel for loading and off-loading gas cylinders and barrels of fuel. The stainless steel doors, a new refrigerator, and engine cooling system were installed at this time. Plagued with leakage problems since the beginning, the forecastle port lights were also removed and the openings sealed (Wilson 1977).



(Source: USFS Files, Seattle, Washington)

FIGURE 5-10. MODIFICATIONS TO BOAT BOOM, *SITKA*

FIGURE 5-11. MODIFIED WHEELHOUSE *SITKA RANGER*, 2011

(Source: J. Aaron)

FIGURE 5-12. ORIGINAL WHEELHOUSE *TONGASS RANGER* 2011

The *Sitka Ranger* received a major overhaul in 1985 and was remodeled in 1987 (no author n.d.b.). The original engine was replaced with a new Caterpillar 3408 and with a Caterpillar MG514 3:5:1 gear. The electrical system was also converted from DC to AC and the entire vessel was rewired and the generators replaced. In the wheelhouse, the windows and roof were replaced, and the windows were changed to reverse shear (tops canted out instead of in) to stop the chronic leakage. A new, taller mast was added (Griffith 2010).

The stateroom was also modified. The desk was replaced with a new berth, and the settee spare berth was replaced with pantry shelves. The galley was also reconfigured. Originally, the table and benches were perpendicular to the side of the vessel; they were reconfigured to an "L" shape. The flooring was replaced with industrial rubber floor tiles at some point. It is assumed that this was done around 2005 when the flooring in the *Tongass* was changed.

Tongass Ranger – Modifications

The *Tongass Ranger* has been moored in Bar Harbor in Ketchikan, Alaska, since 1972. Bar Harbor is one of six boat harbors operated and maintained by the Port & Harbors Department. According to Mike Cruise in 1971, the *Tongass Ranger* sustained electrolysis because the harbor was not properly grounded. The worst of the pitted hull was replaced (under the head and port side aft). An electrolysis warning system and grounding system were installed. The hull has been monitored every year since; and most steel sheets on the hull have been replaced over time (Cruise 2010).

(Source: J. Aaron)

FIGURE 5-13. *TONGASS RANGER* IN KETCHIKAN, 2011

In 1982–83, the *Tongass* received a major overhaul and was not used during that time. The original engine was replaced with a new Caterpillar 3408 with a Caterpillar MG514 3:5:1 gear, which increased gas consumption from 12 to 34 gallons per hour. The electrical system was converted from DC to AC and the entire vessel was rewired and the generators replaced (Cruise 2010). The cruising time for the *Tongass Ranger* is about two days from Ketchikan to Juneau (24 hours running time) and about four days from Ketchikan to Valdez with an average cruise speed of 9.5 to 10 knots, and a top speed of 11.5 knots (Yearty 2010).

In the mid-1980s, a new hydrologic boat boom was installed, the anchor winch was replaced, GPS installed, the wood doors were replaced with aluminum doors, and the hot water heating system was replaced (M. Cruise). Also about this time, the hull of the *Tongass Ranger* was painted black. According to Mike Cruise, there is no story behind the color change. The stateroom on the *Tongass* was also changed—the desk taken out and another bunk added (Yearty 2010). The galley was also reconfigured, originally the table and benches were perpendicular to the side of the vessel; they were reconfigured to an "L" shape. In 2005, the Tongass received a new mast and the flooring was replaced with rubber industrial tiles.

5.2 EVALUATION

To be eligible for listing in the National Register of Historic Places, the vessels must be 50 years old or older, of a certain type, and meet the NRHP eligibility criteria described in section 2.3 of this report. There are five historic vessel types that may be eligible for listing in the national register and include:

- floating historic vessel (more than 40 feet in length and weighing more than 20 tons)
- dry-berth historic vessels
- small craft (less than 40 feet in length)
- hulks (substantially intact abandoned vessels not afloat)
- shipwrecks

The *Tongass Ranger* and *Sitka Ranger* are over 50 years old and qualify as floating historic vessels.

5.2.1 Statement of Significance

The *Tongass Ranger* and *Sitka Ranger* (and the *Chugach*) are the last of the U.S. Forest Service Alaska Ranger boat fleet remaining in commission. The Alaska ranger boat fleet came into existence on May 9, 1909 when the first ranger boat, the *Tahn* was put into service, and the program continued until 2010. The *Tongass Ranger* and *Sitka Ranger* have been in continual government service from 1959 until 2010, except for a few years in the mid-1980s when they underwent major overhauls.

During the six decades of service, the *Tongass Ranger* and *Sitka Ranger* have played a central role in the successful administration of the nation's largest national forest (the Tongass National Forest). The use of the vessels in forest administration has had an important influence on the regional economy, the welfare and safety of isolated communities, and the Native and non-Native peoples of the region. The careers of these vessels are associated with the maritime history of Alaska and the changing role of the U.S. Forest Service in forest administration.

(Source: J. Aaron)

FIGURE 5-14. BOAT BOOM, *TONGASS RANGER*, 2011

The vessels served as waterborne offices and housing for USFS personnel. Tongass National Forest experienced a dramatic increase in timber production after World War II. Much of the demand for timber was driven by the post-war needs of Japan (Sorensen and Schley 1990). The Forest Service was also encouraging increased production through the adoption of 50-year timber contracts with timber sale amounts in the billions of board feet. These contracts represent the beginning of large-scale logging in Alaska. Timber sales reached 219 million board feet by 1955. Within a decade, sales nearly doubled to 405 million board feet of timber (Rakestraw 2002). Managing these operations became the predominant responsibility of Forest Service employees in Tongass National Forest.

The expanding timber development resulted in the need for forest research, especially growth and yield studies. The *Sitka Ranger* was launched in the fall of 1958 and the *Tongass Ranger* was put into service in the spring of 1959. The arrival of the new vessels allowed the Forest Service to divest itself of some of its older boats. By the summer of 1959, the USFS boat fleet consisted of five active boats: the *Tongass Ranger, Sitka Ranger, Langille, Maybeso,* and *Chugach*. Four more boats were held in reserve or rented to other users. These included: *Ranger 8, Ranger 9*, *Ranger 10*, and the *Forester* (Gano 1959, no author 1953). Timber sales, trail construction, and resource management operations occupied most of the vessels' time in the 1960s. Tongass National Forest staff and the vessels regularly embarked on 10-day inspection and reconnaissance trips.

The emphasis on large timber sales and clear-cutting began to shift in 1968. Legal challenges, the exhaustion of timber reserves, and shifts in USFS policy resulted in a reduction of large, long-term sales. Timber sales that were pursued became more complicated as federal regulations regarding the consideration of the effects the logging operation might have on a wider array of resources, including cultural resources, were implemented. The size of clear-cuts was also limited. Finally, the logging industry itself suffered a decline that made the pursuit of new timber sales less attractive. As a result, timber sales declined precipitously. For example, there were 30 timber sales on USFS land in 1969. Three years later there were none (Rakestraw 2002). Timber sales have occurred since 1972, but the amount of timber cut and sold has decreased significantly after the 1960s.

By 1970, the ranger boat fleet consisted of three vessels, the *Chugach, Sitka Ranger*, and *Tongass Ranger* (Hansen 1963; *Daily Alaska Empire* 1962; USDA, USFS, Alaska Region 1970). Although the boats continued to support timber sale activities, their roles expanded to support other types of projects, including cabin maintenance and construction, special-use permit inspections, timber management, resource management, stream improvement, and trail maintenance (USDA, USFS, Alaska Region 1978; USDA, USFS, Alaska Region 1972).

5.2.2 National Register of Historic Places Eligibility

Under criterion A, a vessel may qualify for listing in the national register through association with historic themes. Areas of significance include maritime, commerce, and government. The ranger boats are associated with USFS administration of Tongass National Forest, the largest national forest in the United States, encompassing 17 million acres and 11,000 miles of coastline in a predominately roadless area. Therefore, boats were a primary means of transportation to access the forest, which was unique to Alaska. The principal duty of forest personnel was to administer timber sales, which were important to the U.S. war efforts during World War I and World War II and later to the post-World War II rebuilding of Japan. Administration of forest resources was necessary to promote commerce and economies, primarily the timber industry in Alaska.

Under criterion C, the ranger boats embody the distinctive characteristics of a type, period, and method of construction. By the 1950s, most USFS boats were purchased from other agencies. The *Sitka Ranger* and *Tongass Ranger* were constructed specifically for the Forest Service, with the Forest Service heavily involved in their design. The *Tongass Ranger* and *Sitka Ranger* represent the most modern ranger boats designed and constructed specifically for the unique administration needs of the Forest Service in Alaska, including lodging, transporting, and providing temporary administrative space for USFS personnel and scientific researchers supporting forest service activities.

Although the skippers of the vessels have been described as outstanding and some as characters with stories of exploits and rescues, and the vessels bear the handiwork of their skippers, the vessels do not illustrate any one significant person's achievements, and therefore, do not qualify under criterion B. The vessels do not have additional information potential under criterion D.

5.2.3 Integrity

Integrity is defined by the National Park Service as a property's "ability to convey its significance." In order to be eligible for the national register, properties should retain most of the seven aspects of integrity. Assessment of the ranger boats' integrity is as follows:

- Location—the vessels are in a port or location (Tongass National Forest) with which the vessels historically have association.

- Design—the vessels still retain integrity in design. The overall layout, materials, and design of the vessels have not changed. The specific spaces that were originally designed in the vessel are mostly still used for those purposes, and the layout and use of space, plan, form, and style are still intact. The changes to the crane and the replacement of the engine on the *Sitka Ranger* constitute normal maintenance and repair and retrofitting activities associated with use of a ship and with changes implemented to extend the useful life of ship equipment. The wheelhouse windows and roof were replaced and reconfigured to eliminate leakage caused by poor design. The changes do not detract from the overall appearance or use of the vessel.

  Changes to the *Tongass Ranger* include the in-kind replacement of the steel sheets along the hull, a replacement engine, a new boom, and new flooring, and changes to the state room to add more bunk space and changes to the configuration of the mess hall tables constitute changes that extend the life and use of the vessel. The minor changes to each vessel do not detract from the overall appearance or use and do not diminish the integrity of the design of the vessels.

- Setting—the vessels are still in the water and reside in the environment for which they were designed, the Tongass National Forest.

- Materials—the vessels retain their steel construction, and the mahogany and stainless steel interiors. Materials that have been replaced are generally in-kind.

- Workmanship—the vessels retain their workmanship. Repairs and replacements have been made by skilled boat builders and skippers.

- Feeling—the vessels evoke an aesthetic and historic sense of the past and particular time for which they were used and how they were used.

- Association—the vessels are still linked to the environment and events for which they were constructed and used.

Both the *Sitka Ranger* and the *Tongass Ranger* retain all seven aspects of integrity.

5.2.4 Period of Significance

The National Park Service defines the period of significance as "the length of time when a property was associated with important events, activities, or persons, or attained the characteristics that qualify it for national register listing. Periods of significance usually begin with the date when significant activities or events began, conveying the property its historic significance; this is often a date of construction" (NPS 1997).

For criterion A, the period of significance is the span of time when the property actively contributed to the trend. The National Park Service states that "(f)ifty years ago is used as the closing date for periods of significance where activities begun historically continued to have importance and no more specific date can be defined to end the historic period. In this case, the trend is the timber production and large-scale timber sales in the Tongass National Forest. For criterion C, the National Park Service states the period of significance is the date of construction (NPS 1997).

The period of significance for the *Tongass Ranger* begins in 1958 and for the *Sitka Ranger* in 1959 and ends in 1968 for both vessels, representing the height of the timber industry in the Tongass National Forest.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The *Tongass Ranger* and *Sitka Ranger* qualify for listing in the national register under criterion A, for association with broad patterns of history under the themes of maritime, commerce, and government; and under criterion C for embodiment of a distinct characteristic or type of vessel. The vessels also retain integrity for location, design, setting, materials, workmanship, feeling, and association. The period of significance is from their launch dates (1959 and 1958, respectively) to 1968 when the timber industry in Tongass National Forest dramatically decreased.

Transfer of government property out of federal ownership is considered an adverse effect to historic properties. Therefore, the Forest Service would need to consult with the Alaska state historic preservation officer and Advisory Council on Historic Preservation to negotiate mitigation for the adverse effect prior to transfer.

It is also recommended that while the vessels are currently not in use, the Forest Service make efforts to collect and properly store the vessel logs, photographs, drawings, and other records.

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2011 Personal Communication, Paul McIntosh, Retired USFS Interpretation Planner and Public Affairs Officer, July 2011.

Mitchell, Roy
2011 Personal Communication, Roy Mitchell, Supervisory Fleet Manager. November 2011.

Schulte, Priscilla
2011 Personal Communication, Dr. Priscilla Schulte, Professor, University of Alaska, Ketchikan, Cultural Anthropology, July 2011.

Yearty, Jake
2011 Personal Communication, Jake Yearty, Retired USFS Skipper, Tongass Ranger, July 2010.

APPENDIX A: ACRONYMS AND ABBREVIATIONS

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ACRONYMS AND ABBREVIATIONS

ASLP	Alaskan Spruce Log Program
CCC	Civilian Conservation Corp
CFR	Code of Federal Regulations
NHPA	National Historic Preservation Act of 1966, as amended
NPS	National Park Service
NRHP	National Register of Historic Places
USCG	U.S. Coast Guard
USFS	U.S. Forest Service
YACC	Young Adult Conservation Corps
YCC	Youth Conservation Corps

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APPENDIX B: ALASKA SITE/BUILDING FORMS
(with photographs and maps)

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Site Number: **SIT-00923**
Site Name: W/V Sitka Ranger
Site Type/Function: Ranger boat/water vessel
Date of Construction: 1958–59
Acreage: N/A
Architect/Builder: Philip F. Spaulding & Associates, Naval Architects, Seattle, Washington / Western Boat Building Company, Tacoma, Washington

Historical Context:

The *Tongass Ranger* and *Sitka Ranger* (and the *Chugach*) are the last of the U.S. Forest Service (USFS) Alaska Ranger boat fleet remaining in commission. The Alaska ranger boat fleet came into existence on May 9, 1909, when the first ranger boat, the *Tahn*, was put into service, and the program continued until 2010. The *Tongass Ranger* and *Sitka Ranger* have been in continual government service from 1959 until 2010, except for a few years in the mid-1980s when they underwent major overhauls.

During the six decades of service, the *Tongass Ranger* and *Sitka Ranger* have played a central role in the successful administration of the nation's largest national forest (the Tongass National Forest). The use of the vessels in forest administration has also had an important influence on the regional economy, the welfare and safety of isolated communities, and the Native and non-Native peoples of the region. The careers of these vessels are associated with maritime history of Alaska and the changing role of the U.S. Forest Service in forest administration.

The vessels served as waterborne offices and housing for USFS personnel. Tongass National Forest experienced a dramatic increase in timber production after World War II. Much of the demand for timber was driven by the post-war needs of Japan (Sorensen and Schley 1990). The Forest Service was also encouraging increased production through the adoption of 50-year timber contracts with timber sale amounts in the billions of board feet. These contracts represent the beginning of large-scale logging operations in Alaska. Timber sales reached 219 million board feet by 1955. Within a decade, sales nearly doubled to 405 million board feet of timber (Rakestraw 2002). Managing these operations became the predominant responsibility of USFS employees in Tongass National Forest.

The expanding timber development resulted in the need for forest research, especially growth and yield studies. The *Sitka Ranger* was launched in the fall of 1958 and the *Tongass Ranger* was put into service in the spring of 1959. The arrival of the new vessels allowed the Forest Service to divest itself of some of its older boats. By the summer of 1959, the USFS boat fleet consisted of five active boats: the *Tongass Ranger, Sitka Ranger, Langille, Maybeso,* and *Chugach*. Four more boats were held in reserve or rented to other users. These included: *Ranger 8, Ranger 9, Ranger 10,* and the *Forester* (Gano 1959, no author 1953). Timber sales, trail construction, and resource management operations occupied most of the vessels' time in the 1960s. Tongass National Forest staff and the vessels regularly embarked on 10-day inspection and reconnaissance trips.

The emphasis on large timber sales and clear-cutting began to shift in 1968. Legal challenges, the exhaustion of timber reserves, and shifts in USFS policy resulted in a reduction of large, long-term sales. Timber sales that were pursued became more complicated as federal regulations regarding the effects of logging operations on a wider array of resources, including cultural resources, were implemented. The size of clear-cuts was also limited. Finally, the logging industry itself suffered a decline that made the pursuit of new timber sales less attractive. As a result, timber sales declined precipitously. For example, there were 30 timber sales on USFS land in 1969. Three years later there were none (Rakestraw 2002).

By 1970, the ranger boat fleet consisted of three vessels: the *Chugach, Sitka Ranger*, and *Tongass Ranger* (Hansen 1963; *Daily Alaska Empire* 1962; USDA, USFS, Alaska Region 1970). The boats supported various work projects, including cabin maintenance and construction, special-use permit inspections, timber management, resource management, stream improvement, and trail maintenance (USDA, USFS, Alaska Region 1978; USDA, USFS, Alaska Region 1972). The decline in timber production resulted in a reduced need for ranger boats. The vessels, however, were not deemed dispensable. Forest Engineer Pete Meyhart wrote in 1971 that the necessity of boats was "increasing rather than decreasing" and that arguments for fleet reductions were always related to budgetary constraints rather than actual forest management needs (Meyhart 1971). Meyhart's provocative claim notwithstanding, boat use was in decline. Ranger boat use days (use of all three ranger boats) dropped from nearly 500 to just over 300 between 1969 and 1973 (no author n.d.). However, ranger boats were still busy during the summer and even though timber production was declining by the 1970s, the activity still dominated forest management.

Description:

The *Sitka Ranger* was designed by Philip F. Spaulding & Associates, Seattle Naval Architects, and built by Western Boat Building Corps, Tacoma, Washington (PWB 1959). The vessel has a V-bottom hull with a raked stem and transom stern. The steel-hull vessel is longitudinally framed and subdivided by four transverse watertight bulkheads. The overall specifications are:

- length overall – 61 feet 2 inches
- length waterline – 56 feet 8 inches
- beam – 16 feet 0 inches
- draft – full load – 5 feet 9 inches
- displacement – full load – 37.2 long tons (41.7 tons, 83,328 pounds)
- horsepower – 290 HP
- fuel capacity – 1,800 gallons
- fresh water capacity – 800 gallons
- complement – 7 men

The forward deck of the vessel measures 16 feet wide (narrowing to the bow) by 17.5 feet deep and is surrounded by a bulwark and rail. Forward decks are equipped with watertight compression-type hatches, anchor windlass, and chain locker. The vessel carries a 135-pound Danforth and a 75-pound second anchor (PWB 1959). There are two fire gear lockers forward of the wheelhouse (Spaulding 1958). There are two port lights on each side of the vessel in the forward section of the hull.

The wheelhouse is in the midsection of the vessel. It has five raked windows in a semicircular arrangement across the front, with a steel visor. The windows measure approximately 24 inches x 30 inches. There are two windows on each side of the aluminum doors on the starboard and port sides, and two rectangular windows in the rear of the wheelhouse.

Aft of the wheelhouse is the mess and galley. There are two windows on the port and starboard side of the mess and galley measuring approximately 30 feet by 32 feet. The stateroom and a small lazarette are in the aft section of the vessel. There is a rectangular window and port light on each side, a port light in the drying room (starboard) and head/shower (port). The lazarette measures approximately 7 feet wide by 5 feet deep.

Atop the state room is a deck for stowing the two outboard motor-mounted power boats. The vessel was designed to handle two power boats (12 footer and 14 footer Burchcraft fir plywood skiffs) (PWB 1959). The outboard boats are handled by a power-operated boat boom mounted on deck above the mess and galley (Spaulding1958).

Interior

The interior of the vessel is accessed from the deck through doors on either side of the wheelhouse or from the lazarette (aft). The wheelhouse measures approximately 10.0 feet wide by 9.5 feet deep. The interior is mahogany paneling. The front of the wheelhouse has a built-in cabinet and counter that house the wooden steering wheel, engine controls, and navigational equipment. The vessels were originally equipped with an 85-watt Northern radio, a Mile Ray searchlight, and a Wood Freeman Metal Marine pilot (PWB 1959). Navigation equipment originally consisted of a standard magnetic compass, echo sounder, and government-furnished radio-telephone, with provisions for future radar installation (Spaulding1958). The vessels were also equipped with brass fog bells. The communication equipment was mounted overhead. To the rear of the wheelhouse is the skipper's berth atop built-in drawers and storage space. Two companionways with inclined ladders are on the starboard side of the vessel leading to the forecastle and aft to the galley and mess.

The forecastle measures 13 feet in length and tapers in width toward the bow. It has four built-in bunks with a head and washroom. The forecastle is mahogany-paneled with vinyl tile flooring, and contains built-in dressers, mirror, clothes lockers, and life safety equipment storage.

The engine room is accessed from the port side of the back of the forecastle and is under the wheelhouse. It is the full width of the vessel and approximately 15 feet deep. It contains the engine in the center of the vessel, a work bench on the port side, banks for ship services (house) and starting batteries, generators, material storage (paint, oils, etc.), domestic water heater, and the fuel and water tanks.

The vessels are single screw, and originally propelled by Caterpillar D353 marine diesel propulsion with a 2.19-to-1 Caterpillar hydraulic reverse and reduction gear, on a 4-inch Monel shaft with Goodrich Cutlass rubber bearings. The propeller, manufactured by Coolidge of Seattle, Washington, was a 3-blade Pacific type, 48-inch diameter with 32-inch pitch (PWB 1959).

The original electrical system was a 110 volt DC system powered by a 5 kilowatt Onan generator on the main engine. Complete drainage, bilge, fuel, and water piping systems were installed, as was a mechanical-hydraulic steering system with an automatic pilot (Spaulding 1958).

The mess and galley are approximately 11 feet wide by 10 feet deep. The galley and mess are equipped with an oil-fired range, full-size refrigerator, and built-in table and settees that also provide storage. The galley is port side and the mess is starboard. The galley has stainless steel countertops and two sinks running the length of the galley. The galley and mess have mahogany paneling and mahogany cabinets with vinyl tile flooring (Spaulding 1958).

The stateroom, or forester's office, is accessed from the galley and mess or from the lazarette. The stateroom, including the head/shower and drying room, measures 11 feet wide by 13 feet deep. The stateroom originally contained the forester's berth, clothes locker, and rifle rack on the port side; and a desk and settee as a spare berth on the starboard side. The head/shower are aft on the starboard side, and a large clothes drying room is aft on the starboard side for drying heavy weather gear (Spaulding 1958).

Running hot and cold fresh water is supplied to the head, shower, and galley sink.

For year-round Alaska operations, boats had interior heating systems (PWB 1959). Hot water convection radiators provided heat in the living spaces, wheelhouse, galley and mess rooms, head, and shower spaces, drying room, and engine room (Spaulding 1958).

Sitka Ranger – Modifications

From the manufacturer, the two vessels were essentially identical. Over the years, modifications were made to both vessels during major overhauls and bi-annual maintenance or individually to the vessels based on the discretion of the skipper. Vessels undergo constant maintenance, and equipment is repaired and replaced as needed to maintain them in operating condition. Marine environments are harsh; equipment fails and materials degrade.

Every two years, the boats were hauled and pressure washed. While hauled, zinc anodes were replaced, painting was completed, and the hull was inspected visually and using ultrasound (M. Cruise 2011). The remainder of the time, the skipper maintained the vessel. Maintenance by the skipper included anything from sand blasting and painting the vessel in off years, to replacing flooring, replacing equipment and systems (including heating, electrical, running lights, galley cushions, etc.), and installing alarm systems (no author n.d.b).

In 1977, the boat crane was modified to reach the bottom of the vessel for loading and off-loading gas cylinders and barrels of fuel. The stainless steel doors, a new refrigerator, and engine cooling system were installed at this time. Plagued with leakage problems since the beginning, the forecastle port lights were removed and the openings sealed (Wilson 1977).

The *Sitka Ranger* received its major overhaul in 1985 and was remodeled in 1987 (no author n.d.b.). The original engine was replaced with a new Caterpillar 3408 with a Caterpillar MG514 3:5:1 gear. The electrical system was also converted from DC to AC and the entire vessel was rewired and the generators replaced. In the wheelhouse, the windows and roof were replaced, and the windows were changed to reverse shear (tops canted out instead of in) to stop the chronic leakage. A new, taller mast was added (Griffith 2010).

The stateroom was also modified. The desk was replaced with a new berth, and the settee spare berth was replaced with pantry shelves. The galley was reconfigured. Originally the table and benches were perpendicular to the side of the vessel; they were reconfigured to an "L" shape. The flooring was replaced with industrial rubber floor tiles at some point. It is assumed that this was done around 2005 when the flooring in the *Tongass* was also replaced.

Integrity:

Integrity is defined by the National Park Service as a property's "ability to convey its significance." In order to be eligible for the national register, properties should retain most of the seven aspects of integrity. Assessment of the ranger boats' integrity is as follows:

- Location—the vessels are in a port or location with which the vessels historically have association.

- Design—the vessels still retain integrity in design. The overall layout, materials, and design of the vessel have not changed. The specific spaces that were originally designed in the vessel are still used for those purposes. The layout and use of space, plan, form, and style are still intact. The changes to the crane and the replacement of the engine on the *Sitka Ranger* constitute normal

maintenance and repair and retrofitting activities associated with the use of a ship and with changes implemented to extend the useful life of ship equipment. The wheelhouse windows and roof were replaced and reconfigured to eliminate the leakage caused by poor design. The changes do not detract from the overall appearance or use of the vessel.

- Setting—the vessels are still in the water and reside in the environment for which they were designed, the Tongass National Forest.

- Materials—the vessels retain their steel construction, mahogany and stainless steel interiors. Materials that have been replaced are generally in-kind.

- Workmanship—the vessels retain their workmanship. Repairs and replacements have been made by skilled boat builders and skippers.

- Feeling—the vessels evoke an aesthetic and historic sense of the past and particular time for which they were used and how they were used.

- Association—the vessels are still linked to the environment and to the event for which they were constructed and used.

NRHP Eligibility Recommendation:

Under criterion A, a vessel may qualify for listing in the national register through association with historic themes. Areas of significance include maritime, commerce, and government. The ranger boats are associated with U.S. Forest Service administration of the largest national forest in the United States—Tongass National Forest—comprising 17 million acres and 11,000 miles of coastline in a predominately roadless area. Therefore, boats were a primary means of transportation to access the forest, which was unique to Alaska. The principal duty of forest personnel was to administer timber sales, which were important to the U.S. war efforts during World War I and World War II and later to the post-World War II rebuilding of Japan. Administration of forest resources was necessary to promote commerce and economies, primarily the timber industry, in Alaska.

Under criterion C, the ranger boats embody the distinctive characteristics of a type, period, and method of construction. By the 1950s, most Forest Service boats were purchased from other agencies. The *Sitka Ranger* and *Tongass Ranger* were constructed specifically for the Forest Service, with the Forest Service heavily involved in their design. The *Tongass Ranger* and *Sitka Ranger* represent the most modern ranger boats designed and constructed specifically for the unique administration needs of the Forest Service in Alaska including lodging, transporting, and providing temporary administrative space for Forest Service personnel and scientific researchers supporting Forest Service activities.

Although the skippers of the vessels have been described as outstanding and some as characters with stories of exploits and rescues; the vessels bear the handiwork of their skippers, the vessels do not illustrate any one significant person's achievements, and therefore, does not qualify under criterion B. The vessels do not have additional information potential under criterion D.

Period of Significance:

The National Park Service defines the period of significance as "the length of time when a property was associated with important events, activities, operations, or attained the characteristics that qualify it for national register listing. Periods of significance usually begin with the date when significant activities or events began giving the property its historic significance; this is often a date of construction" (NPS 1997).

For criterion A, the period of significance is the span of time when the property actively contributed to the trend. The National Park Service states that "(f)ifty years ago is used as the closing date for periods of significance where activities begun historically continued to have importance and no more specific date can be defined to end the historic period. In this case, the trend is the timber production and large-scale timber sales in the Tongass National Forest. For criterion C, the National Park Service states the period of significance is the date of construction (NPS 1997).

The period of significance for the *Sitka Ranger* begins with the date of construction in 1959 and ends in 1968, representing the height of the timber industry in the Tongass National Forest.

Sitka Ranger
6621602 Northing 531925 Easting
Township 56 S, Range 63E
USGS Sitka A-5, 1:63 360 Topographical series

***Sitka Ranger* in USFS dock, Sitka, Alaska**

***Sitka Ranger* in USFS dock, Sitka, Alaska**

Lazarette, *Sitka Ranger*, Sitka, Alaska

Boat boom, *Sitka Ranger*, Sitka, Alaska

Wheelhouse exterior, *Sitka Ranger*, Sitka, Alaska

Wheelhouse interior, *Sitka Ranger*, Sitka, Alaska

Head in forecastle looking toward bow, *Sitka Ranger*, Sitka, Alaska

Bunk in forecastle *Sitka Ranger*, Sitka, Alaska

Access to engine room from forecastle looking aft, *Sitka Ranger*, Sitka, Alaska

Galley, *Sitka Ranger*, Sitka, Alaska

Kitchen in *Sitka Ranger*, Sitka, Alaska

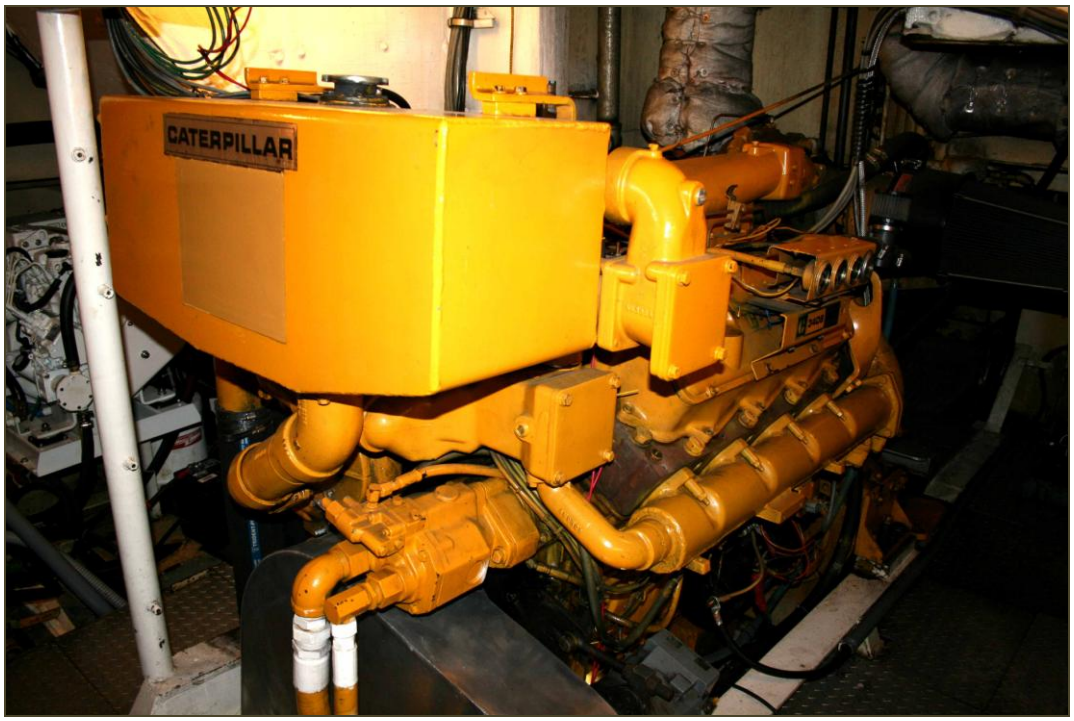
Stateroom, officer's berth, *Sitka Ranger*, Sitka, Alaska

Stateroom, added storage, *Sitka Ranger*, Sitka, Alaska

Looking forward from lazarette, *Sitka Ranger*, Sitka, Alaska

Aft head in *Sitka Ranger*, Sitka, Alaska

Aft drying room in *Sitka Ranger*, Sitka, Alaska



Engine room in Sitka Ranger, Sitka, Alaska

Work bench in engine room in *Sitka Ranger*, Sitka, Alaska

Site Number: **KET-01203**
Site Name: W/V Tongass Ranger
Site Type/Function: Ranger boat/water vessel
Date of Construction: 1958–59
Acreage: N/A
Architect/Builder: Philip F. Spaulding & Associates, Naval Architects, Seattle, Washington / Western Boat Building Company, Tacoma, Washington

Historical Context:

The *Tongass Ranger* and *Sitka Ranger* (and the *Chugach*) are the last of the U.S. Forest Service Alaska ranger boat fleet remaining in commission. The Alaska ranger boat fleet came into existence on May 9, 1909, when the first ranger boat, the *Tahn*, was put into service, and the program continued until 2010. The *Tongass Ranger* and *Sitka Ranger* have been in continual government service from 1959 until 2010, except for a few years in the mid-1980s when they underwent major overhauls.

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The expanding timber development resulted in the need for forest research, especially growth and yield studies. The *Sitka Ranger* was launched in the fall of 1958 and the *Tongass Ranger* was put into service in the spring of 1959. The arrival of the new vessels allowed the Forest Service to divest itself of some of its older boats. By the summer of 1959, the Forest Service boat fleet consisted of five active boats: the *Tongass Ranger, Sitka Ranger, Langille, Maybeso*, and *Chugach*. Four more boats were held in reserve or rented to other users. These included: *Ranger 8, Ranger 9, Ranger 10*, and the *Forester* (Gano 1959; no author 1953). Timber sales, trail construction, and resource management operations occupied most of the vessels' time in the 1960s. Tongass National Forest staff and the vessels regularly embarked on 10-day inspection and reconnaissance trips.

The emphasis on large timber sales and clear-cutting began to shift in 1968. Legal challenges, the exhaustion of timber reserves, and shifts in USFS policy resulted in a reduction of large, long-term sales. Timber sales that were pursued became more complicated as federal regulations regarding the effects logging operations might have on a wider array of resources, including cultural resources, were implemented. The sizes of clear-cuts were also limited. Finally, the logging industry itself suffered a decline that made the pursuit of new timber sales less attractive. As a result, timber sales declined precipitously. For example, there were 30 timber sales on USFS land in 1969. Three years later there were none (Rakestraw 2002).

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Description:

The *Tongass Ranger* was designed by Philip F. Spaulding & Associates, Seattle Naval Architects, and built by Western Boat Building Company, Tacoma, Washington (PWB 1959). The vessels have a V-bottom hull with a raked stem and transom stern. The steel-hull vessels are longitudinally framed and subdivided by four transverse watertight bulkheads. The overall specifications are:

- length overall – 61 feet 2 inches
- length waterline – 56 feet 8 inches
- beam – 16 feet 0 inches
- draft – full load – 5 feet 9 inches
- displacement – full load - 37.2 long tons (41.7 tons, 83,328 pounds)
- horsepower– 290 HP
- fuel capacity – 1,800 gallons
- fresh water capacity – 800 gallons
- complement – 7 men

The forward deck of the vessel measures 16.0 feet wide (narrowing to the bow) by 17.5 feet deep and is surrounded by a bulwark and rail. Forward decks are equipped with watertight compression-type hatches, anchor windlass, and chain locker. The vessel carries a 135-pound Danforth and a 75-pound second anchor (PWB 1959). There are two fire gear lockers forward of the wheelhouse (Spaulding 1958). There are two port lights on each side of the vessel in the forward section of the hull.

The wheelhouse is in the midsection of the vessel. It has five raked windows in a semicircular arrangement across the front with a steel visor. The windows measure approximately 24 inches by 30 inches. There are two windows on each side of the aluminum doors on the starboard and port sides, and two rectangular windows in the rear of the wheelhouse.

Aft of the wheelhouse is the mess and galley. There are two windows on the port and starboard side of the mess and galley measuring approximately 30 feet by 32 feet. The stateroom and a small lazarette are in the aft section of the vessel. There is a rectangular window and port light on each side, a port light in the drying room (starboard) and head/shower (port). The lazarette measures approximately 7 feet wide by 5 feet deep.

Atop the stateroom is a deck for stowing the two outboard motor-mounted power boats. The vessels were designed to handle two power boats (12 footer and 14 footer Burchcraft fir plywood skiffs) (PWB 1959). The outboard boats are handled by a power-operated boat boom mounted on deck above the mess and galley (Spaulding 1958).

Interior:

The interior of the vessel is accessed from the deck through doors on either side of the wheelhouse or from the lazarette (aft). The wheelhouse measures approximately 10.0 feet wide by 9.5 feet deep. The interior is mahogany paneling. The front of the wheelhouse has a built-in cabinet and counter that house the wooden steering wheel, engine controls, and navigational equipment. The vessels were originally equipped with an 85-watt Northern radio, a Mile Ray searchlight, and a Wood Freeman Metal Marine pilot (PWB 1959). Navigation equipment originally consisted of a standard magnetic compass, echo sounder, and government-furnished radio-telephone, with provisions for future radar installation (Spaulding 1958). The vessels were also equipped with brass fog bells. The communication equipment was mounted overhead. To the rear of the wheelhouse is the skipper's berth atop built-in drawers and storage space. Two companionways with inclined ladders are on the starboard side of the vessel leading to the forecastle and aft to the galley and mess.

The forecastle measures 13 feet in length and tapers in width toward the bow. It has four built-in bunks with a head and washroom. The forecastle is mahogany-paneled with vinyl tile flooring, and contains built-in dressers, mirror, clothes lockers, and life safety equipment storage.

The engine room is accessed from the port side of the back of the forecastle and is under the wheelhouse. It is the full width of the vessel and approximately 15 feet deep. It contains the engine in the center of the vessel, a work bench on the port side, banks for ship services (house) and starting batteries, generators, material storage (paint, oils, etc.), domestic water heater, and the fuel and water tanks.

The vessels are single screw, and originally propelled by Caterpillar D353 marine diesel propulsion with a 2.19-to-1 Caterpillar hydraulic reverse and reduction gear, on a 4-inch Monel shaft with Goodrich Cutlass rubber bearings. The propeller, manufactured by Coolidge of Seattle, Washington, was a 3-blade Pacific type, 48-inch diameter with 32-inch pitch (PWB 1959).

The original electrical system was a 110 volt DC system powered by a 5 kilowatt Onan generator on the main engine. Complete drainage, bilge, fuel and water piping systems were installed, as was a mechanical-hydraulic steering system with an automatic pilot (Spaulding 1958).

The mess and galley are approximately 11 feet wide by 10 feet deep. The galley and mess are equipped with an oil-fired range, full-size refrigerator, and built-in table and settees that also provide storage. The galley is port side and the mess is starboard. The galley has stainless steel countertops and two sinks running the length of the galley. The galley and mess have mahogany paneling and mahogany cabinets with vinyl tile flooring (Spaulding 1958).

The stateroom, or forester's office, is accessed from the galley and mess or from the lazarette. The stateroom, including the head/shower and drying room, measures 11 feet wide by 13 feet deep. The stateroom originally contained the forester's berth, clothes locker, and rifle rack on the port side; and a desk and settee as a spare berth on the starboard side. The head/shower are aft on the starboard side, and a large clothes drying room is aft on the starboard side for drying heavy weather gear (Spaulding 1958).

Running hot and cold fresh water is supplied to the head, shower, and galley sink.

For year-round Alaska operations, boats had interior heating systems (PWB 1959). Hot water convection radiators provided heat in the living spaces, wheelhouse, galley and mess rooms, head, and shower spaces, drying room, and engine room (Spaulding 1958).

Tongass Ranger – Modifications

From the manufacturer, the two vessels were essentially identical. Over the years, modifications were made to both vessels during major overhauls and bi-annual maintenance or individually to the vessels based on the discretion of the skipper. Vessels undergo constant maintenance and equipment is repaired and replaced as needed to maintain them in operating condition. Marine environments are harsh; equipment fails and materials degrade.

Every two years, the boats were hauled and pressure washed. While hauled, zinc anodes were replaced, painting was completed, and the hull was inspected visually and using ultrasound (M. Cruise 2011). The remainder of the time, the skipper maintained the vessel. Maintenance by the skipper included anything from sand blasting and painting the vessel in off years, to replacing flooring, replacing equipment and systems (including heating, electrical, running lights, galley cushions, etc.), and installing alarm systems (no author n.d.b).

The *Tongass Ranger* has been moored in Bar Harbor in Ketchikan, Alaska, since 1972. Bar Harbor is one of six boat harbors operated and maintained by the Port & Harbors Department. According to Mike Cruise, in 1971, the *Tongass Ranger* sustained electrolysis because the harbor was not properly grounded. The worst of the pitted hull was replaced (under the head and port side aft). An electrolysis warning system and grounding system were installed. The hull has been monitored every year since; and most steel sheets on the hull have been replaced over time (Cruise 2010).

In 1982–83, the *Tongass* received a major overhaul and was not used during that time. The original engine was replaced with a new Caterpillar 3408 with a Caterpillar MG514 3:5:1 gear, which increased gas consumption from 12 to 34 gallons per hour. The electrical system was also converted from DC to AC and the entire vessel was rewired and the generators replaced (Cruise 2010). The cruising time for the *Tongass Ranger* is about two days from Ketchikan to Juneau (24 hours running time) and about four days from Ketchikan to Valdez with an average cruise speed of 9.5 to 10.0 knots, and a top speed of 11.5 knots (Yearty 2010).

In the mid-1980s, a new hydrologic boat boom was installed, the anchor winch was replaced, GPS installed, the wood doors were replaced with aluminum doors, and the hot water heating system was replaced (M. Cruise). Also about this time, the hull of the *Tongass Ranger* was painted black. According to Mike Cruise, there is no story behind the color change. The stateroom on the *Tongass* was also changed, the desk taken out and another bunk added (Yearty 2010). The galley was also reconfigured, originally the table and benches were perpendicular to the side of the vessel; they were reconfigured to an "L" shape. In 2005, the Tongass received a new mast and the flooring was replaced with rubber industrial tiles.

Integrity:

Integrity is defined by the National Park Service as a property's "ability to convey its significance." In order to be eligible for the national register, properties should retain most of the seven aspects of integrity. Assessment of the ranger boats' integrity is as follows:

- Location—the vessels are in a port or location with which the vessels historically have association.

- Design—the vessels still retain integrity in design. The overall layout, materials, and design of the vessels have not changed. The specific spaces that were originally designed in the vessels are still used for those purposes. The layout and use of space, plan, form, and style are still intact. Changes to the *Tongass Ranger* include the in-kind replacement of the steel sheets along the hull, a replacement engine, a new boom, and new flooring, and changes to the estate room to add more bunk space and changes to the configuration of the mess hall tables constitutes changes that extend the life and use of the vessel.

- Setting—the vessels are still in the water and reside in their environment for which they were designed, the Tongass National Forest.

- Materials—the vessels retain their steel construction, mahogany and stainless steel interiors. Materials that have been replaced are generally in-kind.

- Workmanship—the vessels retain their workmanship. Repairs and replacements have been made by skilled boat builders and skippers.

- Feeling—the vessels evoke an aesthetic and historic sense of the past and particular time for which they were used and how they were used.

- Association—the vessels are still linked to the environment and to the event for which they were constructed and used.

NRHP Eligibility Recommendation:

Under criterion A, a vessel may qualify for listing in the NRHP through her association with historic themes. Areas of significance include maritime, commerce, and government. The ranger boats are associated with U.S. Forest Service administration of the United States' largest national forest, Tongass National Forest, encompassing 17 million acres and 11,000 miles of coastline in a predominately roadless area. Therefore, boats were a primary means of transportation to access the forest, which was unique to Alaska. The principal duty of forest personnel was to administer timber sales, which were important to the U.S. war efforts during World War I and World War II and later to the post-World War II rebuilding of Japan. Administration of the forest resources was necessary to promote commerce and economies, primarily the timber industry, in Alaska.

Under criterion C, the ranger boats embody the distinctive characteristics of a type, period, and method of construction. By the 1950s, most Forest Service boats were purchased from other agencies. The *Sitka Ranger* and *Tongass Ranger* were constructed specifically for the Forest Service, with the Forest Service heavily involved in their design. The *Tongass Ranger* and *Sitka Ranger* represent the most modern ranger boats designed and constructed specifically for the unique administration needs of the Forest Service in Alaska, including lodging, transporting, and providing temporary administrative space for Forest Service personnel and scientific researchers supporting Forest Service activities.

Although the skippers of the vessels have been described as outstanding and some as characters with stories of exploits and rescues; the vessels bear the handiwork of their skippers, the vessels do not

illustrate any one significant person's achievements, and therefore, do not qualify under criterion B. The vessels do not have additional information potential under criterion D.

Period of Significance:

The National Park Service defines the period of significance as "the length of time when a property was associated with important events, activities, operations, or attained the characteristics that qualify it for national register listing. Periods of significance usually begin with the date when significant activities or events began giving the property its historic significance; this is often a date of construction" (NPS 1997).

For criterion A, the period of significance is the span of time when the property actively contributed to the trend. The National Park Service states that "(f)ifty years ago is used as the closing date for periods of significance where activities begun historically continued to have importance and no more specific date can be defined to end the historic period. In this case, the trend is the timber production and large-scale timber sales in the Tongass National Forest. For criterion C, the National Park Service states the period of significance is the date of construction (NPS 1997).

The period of significance for the *Tongass Ranger* begins in 1958 with the date of construction and ends in 1968, representing the height of the timber industry in the Tongass National Forest.

Tongass Ranger
6164503 Northing 319749 Easting
Township 75 S, Range 90E
USGS Ketchikan B-6, 1:63 360 Topographical series

Tongass Ranger
Photographs
July 11, 2011

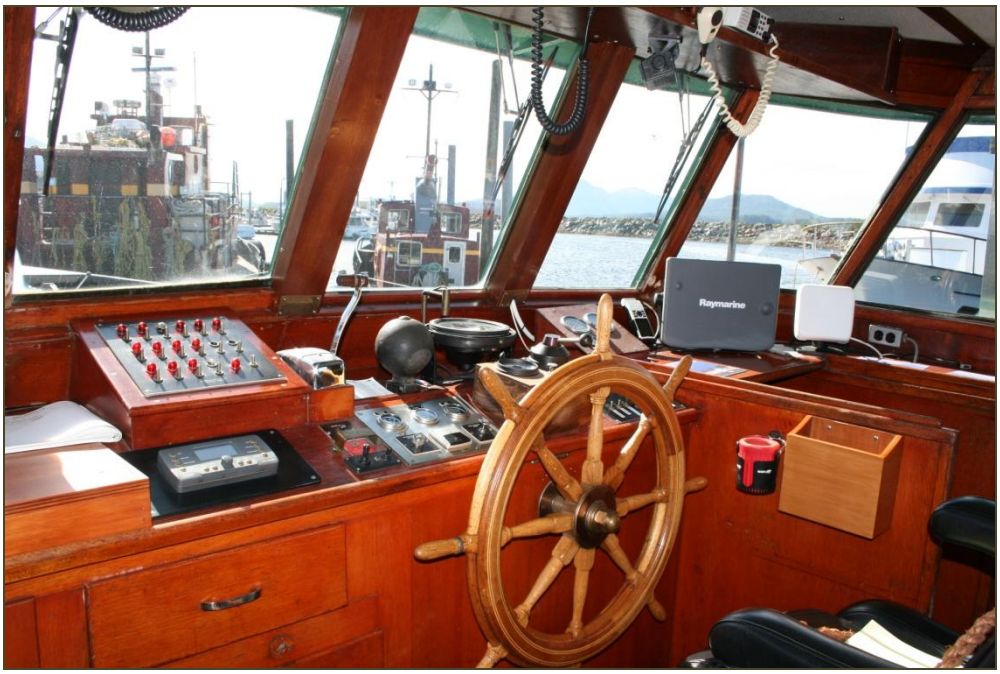
***Tongass Ranger* in Bar Harbor, Ketchikan, Alaska**

***Tongass Ranger* in Bar Harbor, Ketchikan, Alaska**

Main deck, *Tongass Ranger*, Ketchikan, Alaska

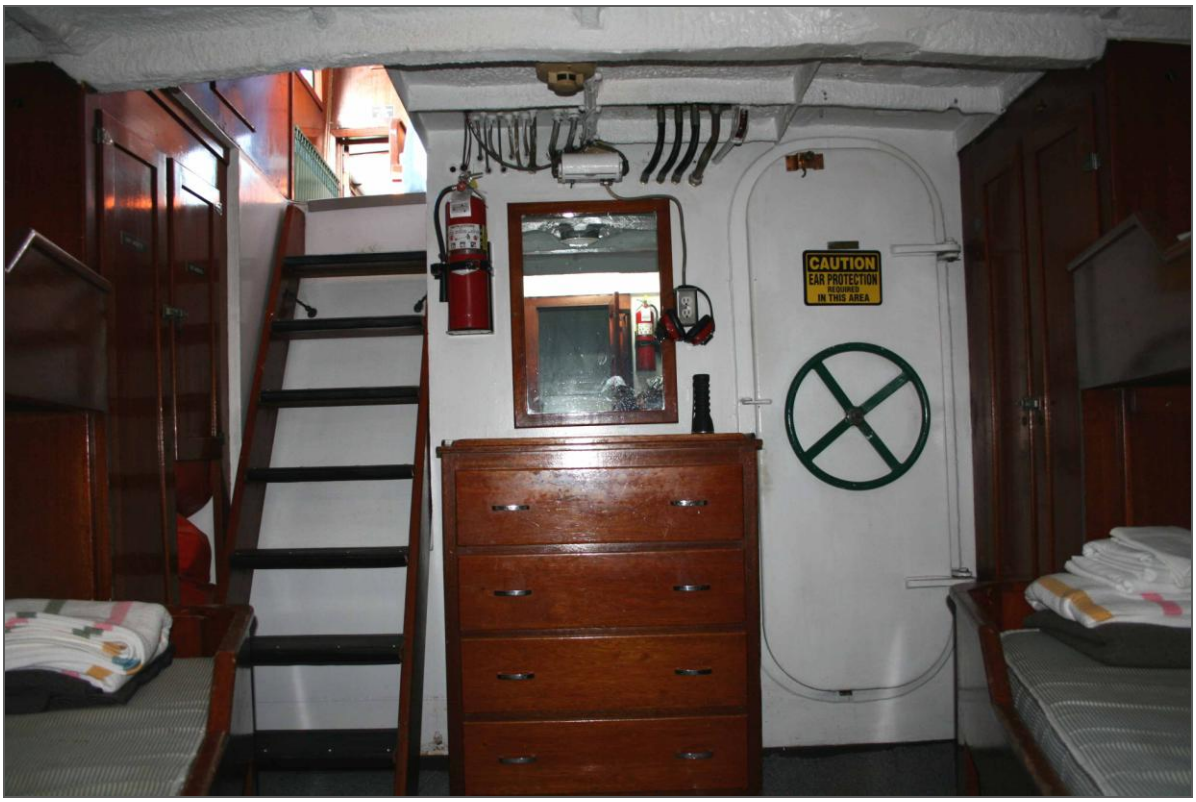
Lazarette, *Tongass Ranger*, Ketchikan, Alaska

Wheelhouse exterior, *Tongass Ranger*, Ketchikan, Alaska



Wheelhouse interior, *Tongass Ranger*, Ketchikan, Alaska

Forecastle looking toward bow, *Tongass Ranger*, Ketchikan, Alaska



Forecastle looking toward bow, *Tongass Ranger*, Ketchikan, Alaska

View of galley from wheelhouse in *Tongass Ranger*, Ketchikan, Alaska

Galley, *Tongass Ranger*, Ketchikan, Alaska

Galley, *Tongass Ranger*, Ketchikan, Alaska

Aft drying room in *Tongass Ranger*, Ketchikan, Alaska

Stateroom, officer's berth, *Tongass Ranger*, Ketchikan, Alaska

Stateroom, added berth, *Tongass Ranger*, Ketchikan, Alaska

Stateroom looking aft, *Tongass Ranger*, Ketchikan, Alaska

Aft head in *Tongass Ranger*, Ketchikan, Alaska

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APPENDIX C: INTERVIEW SUMMARIES / NOTES

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July 11, 2011 – Ketchikan

Jake Yearty, has been the skipper of the *Tongass Ranger* for the past 10 years, and is retiring at the end of July 2011. Prior to joining the Forest Service, he flew Army Aviation and then piloted helicopters in Anchorage, Alaska.

The *Tongass Ranger* has not been out all year. She has been determined to not meet the USCG codes for commercial safety.

The officer's berth has changed from original configuration.

Boom is not original and is now hydrologic, although it is also not working.

The *Tongass* and *Sitka* ranger boats are pretty much the steel execution of their wooden predecessor.

Originally, had onboard the vessels were the Forest Ranger (Officer), Skipper, and four hands/crew. Eventually the officer's berth was remodeled and the desk taken out and another bunk added to increase passenger capacity.

Cruising time from Ketchikan to Juneau is about two days at 24 hours running time, and from Ketchikan to Valdez about four days. She has a cruising speed of about 9.5 to 10.0 knots, and a top speed of 11.5 knots.

Yearty estimates replacement costs of the vessels to about $3.0 to $3.5 million.

USFS is using 32 inch high-speed power boats more. Operations of these boats only require a "Forest Service" license (40 hours riding with licensed operator, plus two seasons). To operate one of the ranger boats, a skipper is required to have a USCG 100-ton masters license specifically for Alaska waters.

John Autry, Archaeologist for Tongass National Forest.

Tongass National Forest has been using the ranger boats in the archaeology program since 1978, including the *Tongass, Sitka,* and *WV Waters*.

Up to 1982, each boat was manned with a skipper and deck hand to assist the skipper; since 1982, anyone on board served as a deck hand.

The vessels were used for:

- timber sales activities
- cooperative program with the state (Alaska Department of Fish and Game) for monitoring
- Since 1990, cooperative program with the University – take Native students and elders out for information exchange, monitoring, subsistence lifestyle support, and cultural resources management
- archaeology surveys for timber sales

The reduction in ranger vessel use has been budget-driven. The resource program now uses airplanes or helicopters. However, aircraft is not an option for tribal relations; there are insufficient funds in budget for chartering aircraft, and the ranger boats provide flexibility; and the Forest Service also cannot use planes

in the wilderness. With the ranger boats not available, the tribal program has dwindled. The tribal trips were usually 7–10 day in length.

For archaeology surveys, field camps are available; however, they are usually not site convenient for survey work. Most archaeological sites are along the coast.

Mike Cruise started with the Forest Service as a summer temp employee on the Tongass National Forest in 1971. He has been fleet manager since 1990. He passed on becoming the skipper due to the uncertainty of the program.

In 1959, the *Tongass* was in Juneau; the *Forester* was in Ketchikan until 1971–72.

Since 75% of the coastline affected by the Exxon Valdez spill was under USFS jurisdiction, the Forest Service felt they needed a presence. So the ranger boats served as the office for the Forest Service all summer so the regional forester could monitor and report on cleanup. It was the first time the *Sitka* and *Tongass* rangers were actually in the same place at the same time when one vessel came in to replace the other.

The *Tongass*'s hull was painted black about 4–5 years prior to the Valdez spill, although there is no story behind the color change.

Charles Judson was the skipper of *Tongass* until he retired in 1982. Judson was in the Forest Service on December 7, 1942, in New York. He conducted the totem pole survey, administered five small timber sales in 1971.

During a period of time, all USFS boats were built on Geneva.

In 1968–69, the *Tongass* was loaned to the U.S. Army Corps of Engineers (USACE) at Prince William Sound for the Valdez facility. The Corps had their own skipper.

In 1966–67, she "starred" in the TV show Lassie.

In 1970, a major forest plan revision was being developed and public meetings were actually held on the vessel.

In 1971, there were about 70 employees in the Tongass National Forest North and South divisions. Also in 1971, the *Tongass* was docked in Bar Harbor (Ketchikan). The harbor was not properly grounded, and the vessel sustained electrolysis. The worst of the pitted hull was replaced (under the head, port side aft). An electrolysis warning system and grounding system were installed. The hull has been monitored every year since; most sheets on the hull have been replaced over time. The determination that the vessel is not seaworthy is not consistent with what the professionals conclude.

Reorganization of ranger districts led to the reduction to two ranger boats.

By the mid 1970–80s, there was no money for all of the projects, so the staff began combining projects together and coordinating use of vessels.

In 1978, the *Tongass* was involved in a search and rescue operation, the Grumman Goose (plane) went down carrying USFS employees.

In the 1980s, the major focus was trails and cabins. During this time, the *Tongass* went out three to four times a summer for 10-day trips with trail crews, then survey crews, and then administrative crews. Jud would not have a day off for the entire summer.

Modifications

In 1982–83, the *Tongass* was in for a major overhaul and not used. The original engine obtained approximately 12 gal/hr; the new engine gets 34 gal/hr and is 600 RPM. At this time, the electrical system was switched from DC to AC and the entire vessel was rewired and old generators replaced.

The *Tongass* had GPS installed in the mid-1980s.

In 1984, a new hydrologic crane was installed, the anchor winch has been replaced, the wood doors were replaced with aluminum doors, and the hot water heating system was replaced.

In 1983–84, Borax discovered molybdenum and all other USFS project for the year were cancelled and the ranger boat housed research crews for mining operations.

She was also involved in a large cave inventory on west Prince of Wales.

Ranger boats used for U.S. Census to reach isolated fish camps during the 1970, 80, 90, and 2000 census. Periodically, the ranger boats delivered the mail.

The vessels also had a law enforcement mission. When they were doing forest monitoring, law enforcement would tag along.

During the 1980s–1990s, wilderness roadless issues were big, had two boats and two barges running during this time in support.

In 2006, the Forest Service had three ranger boats running full time; these were the tools needed for archaeology and fisheries programs.

In 2009, the two vessels turned 50. The year of the major overhaul (1982–83) was the only year the vessel was not used.

Once, they used the vessel to support the search for the *Marble Marlet*, the boat was laden with hay bales, tents, and chickens. Other times used as support for inventories conducted from kayaks.

If the boats are well maintained, they could last another 20–25 years. The boats are the best way to do many jobs.

Maintenance:

Every two years, the boat is hauled out, pressure washed, zinc anodes replaced, hull inspected and ultrasound.

The *Tongass Ranger* is highly recognizable and good image for people in remote areas.

Dr. Priscilla Schulte, (UA) Cultural Anthropology

University and John Autry have been working together since 1989. The university and Forest Service have taken out elders and college students (both Native and non-Native) to archaeological sites and discuss how people lived on these sites. Elders and cultural teachers get a chance to share information and learn. This has led to integration of cultural resources with Native understanding. These trips provide a "reawakening" and contribution to Native culture and builds relationships with the Native community and Forest Service. It also allowed elders to visit sites that they otherwise could not get to.

Alaska Natives were mobile people. They had spring fish camps, and summer/fall, and winter camps. Students got a glimpse of grandparents' life and use of resources (food, fibers, and plants).

For about 15 years, they would go out two times a year with one or two elders; about 12 to 15 people total. The students would pitch tents. The skippers were Richard Gurl and Jake Yearty.

Students have done some survey work. There is always a Native component, although all sites are not Native (canneries, mines, and non-Native homesteads).

July 12, 2011 – Petersburg

Mike Lombardo, Fleet Mechanic

The *Chugach* would go out five to six times per year. She has not gone out this year. She would go out for specific projects, such as timber, if there were no land-based camps to use.

Currently, there are no skippers. Jake Yearty will retire this year and he is the last. Pauley (skipper for the *Sitka*) is running brush cutting this year, because of no vessel being used.

When the crews would go ashore to work, the skipper would do maintenance, like scrape and paint, day-to-day cleaning and polishing, and general upkeep. Skipper generally worked 18 days on and had 8 days off.

They now use a local talent to work on engines and transmissions.

Nakwagina is the newest wanigan. The wanigans generally house 15 to 20 people, had a host couple, have 10 bedrooms and a common living space. There are about five or six wanigans currently in service.

Timber sales are at about 10% of what they were 20 years ago, so the ranger boats are not being used. There is no project work, and the mills are shutting down.

Mark McCallum, Forest Archaeologist. Mark became the forest archaeologist. Tongass National Forest has three supervisor offices. About 12 to 13 years ago the forest had a unified staff instead of three. Now have five zones; Forest Service was decentralized and managed on the ground.

McCallum had a class lined up this year with the elders, but had to cancel because there is no ranger boat. His program will not support use of a private vessel due to funding limits. There are no timber sales, just a little mining (Kinsington, Gold Creek, Prince of Wales).

The *Forester* is now privately owned and called the *Sea Bear*.

The Heritage program was one of the biggest users of the vessels, and if the budget was larger, they would use the vessels more. They now rely on volunteers (PIT program). They used the boats to take out elders and volunteers. They would monitor sites under the Forest Management Plan, usually one 10-day trip/yr. Project work is way down.

The Heritage program needs the boats to do their job and to get to the sites and resources; they cannot get private boats at comparable prices and few boats are available.

It is very powerful to get the elders out to the sites; some have not seen these sites for 30 to 40 years.

Chugach underwent a major renovation 17 years ago. She was taken down to the hull and reconstructed. In the 1930–40s, the *Chugach* had a red top and white hull; in the 1950s, the vessel was painted green. During the rehabilitation, the original red was incorporated into the trim.

In the early days, the vessels were used by law enforcement, teachers, doctors, and nongovernmental people to service communities. The skipper sometimes took his family. As Alaska became a state and the Forest Service matured, the ranger boats were used more by the agency and less as a community vessel. The *Chugach* is a very recognizable symbol of the Forest Service and the federal government, in general. Years ago, the Forest Service was the only federal agency in Alaska.

Other potential contacts:

- Paul McIntosh – personal interest in vessels (met with in Anchorage).
- Ross Evans – former USFS receptionist in Sitka, collected info on vessels (data could not be found in Sitka office).
- Jay Kinsman – archaeologist in Sitka. Currently in the field.
- John Sandor – retired regional forester, in Juneau, amateur historian; John was involved in the development of the administrative history of the forest.
- Mike Barton – retired regional forester – Juneau, supported the ranger boats.
- Gary Morrison – retired forest supervisor in the Chatham area in the 1980s–90s, could speak to timber program and how that affected use of ranger boats.
- Forrest Cole – current Tongass forest supervisor.

July 13, 2011 – Sitka

Stan Johnson, skipper of *Sitka Ranger* for 10 years, retired in 2003. Ten years prior was deck hand and relief skipper. He grew up in Seaside, Oregon. His father was in Navy; he went into Marine Corps, served in Vietnam, and returned and got a degree in Forestry.

The skipper's job was to be skipper, engineer, and cook and look after safety of crew. During his tenure, the skipper was the only person assigned to the vessel. The skipper cooked breakfast and dinner, and cleaned up after each meal and at the end of the trip. They ate very well (steak, pork, chicken, budget based on Juneau per diem). The skipper ordered the food. As skipper, he did a lot of oil changes with two engines, a crane, and two outboard motors on skiffs. Generally, the vessels could run about 8 to 16 hours a day depending on tides and weather. They could run at night, but tried not to. They are good boats, but need to be used or they develop problems.

When Howard Ulrick was skipper, he had spent the day cooking a pot roast. One of the girls on the boat caught a halibut and wanted it for dinner. She kept nagging Howard about it, until he threw the pot roast, with pot, overboard. Another time, the first mate was cooking dinner and used oven cleaner instead of Pam.

They were very busy from April to October, with pretty much back-to-back trips, starting with opening logging camps at beginning of season and closures at end of season. April also took Alaska Fish and Game out for 10-day trip. They would also pick up folks if bad weather grounded flights. The vessel supported all forest operations. Only days off were when a trip was cancelled or the vessel broke down and needed to be repaired by Caterpillar mechanic. Days off were used to do paperwork for travel and time cards (a lot of the guys would bribe the office gals to do the paperwork for them).

Vessel was sent to Seattle yard for major repairs.

After World War II, the primary focus of the forest was to support the mills (mills in Ketchikan and Sitka). A lot of timber and pulp was going to Japan. Over the years, the environmental community was shutting down timber sales and fuel costs were going up. There were fewer and fewer trips, no timber sales = no project funds.

Today, Steve Pauley is the only skipper, but he is only part-time. Stan was a full-time skipper.

The *Sitka* was used in a law enforcement sting operation, deer spot-lighting, although they never caught anyone.

The *Sitka* was used in a couple of search and rescue operations. One was a helicopter crash 25 miles from town with USFS people on it; there were some survivors. Another was in 1976 or 77, a boat went down. The Forest Service found the girl alive on the beach after surviving one week; however, the guy died.

The forests in Alaska differ from those in the lower 48 states. In Alaska, the forest seed in quickly and need to be thinned.

The Sitka office used to have 250 USFS employees; there has been a steady decline since 1980.

The wanigans were towed by tugs; the ranger boat could tow a wanigan, but they are hard to control.

Richard Guhl, Skipper Tongass, for 13 years, retired in 2001, although called back nine times during the first three years for specific trips and once for six weeks to train Steve Pauly. He also skippered on the *Chugach* and *Sitka*.

Tongass Assignments:

- Refueling barges with 1,000–1,200 gallons of fuel every six weeks. The *Tongass* used differently than *Sitka Ranger*; *Sitka* did not deliver fuel, just tanks of propane. The *Tongass* delivered diesel and helicopter fuel. Would go out for sometime six weeks at a time.
- Exxon Valdez spill for 27 days at a time with three days in. While at Valdez, a seaplane engine quit, he pulled four people off and towed the plane behind the *Tongass* to a safe harbor.
- Refueled and provisioned Craig.

- For 25 years, there was more timber taken off of Prince of Wales (POW) than the rest of the forest combined. POW required a lot of support and re-supply. From Ketchikan to the east side of POW about 30 hours cruising time.
- The *Tongass* also provided platform for maintaining mooring buoys at remote camps, cabins, and trailheads.
- Sometimes, she towed barges and wanigans – very versatile vessel.

Every year was different. Between four to six trips per year was common. One trip was for the archaeology (elder) program, and there were fuel/resupply trips. Some years would be "hot topics." For example, for a couple of years, goshawk surveys received a lot of funding. In mid-1990s, it was re-surveying public trails. The trails could remain open if surveyed, but they needed to determine if trails and access went across Native allotments or other land claims. This program went on for a good part of the late 1990s to be completed before the sunset date.

In late 1990s, trips were with engineers for the construction of log transfer facilities (LTF). Tide land permits for re-permitting existing LTFs. Permits expired in 2000. From 1998–2000 engineers had to submit paperwork for permitting 31 LTF.

As technology advanced, they were always running out of electrical outlets on the vessel; everyone needed to recharge computers, radios, GPS, phones, boot dryers, and the like.

The *Tongass* held 825 gallons of fresh water; if six guys went out, only half the water was used in 10 days. If it was three guys and three women, in 10 days all of the fresh water was gone.

The *Tongass* has a range of 2,000 miles on a tank of fuel, so they could travel from Ketchikan to Seattle and back again without refueling.

Skipper had to facilitate what passengers needed to complete their tasks.

Richard had an "approved" deck hand in each district that would go out on each trip. This could be an archaeologist, natural resources person, engineer, etc. He would give them basic training, and they were appointed deck hand when boat was in motion, and resumed technical role when the vessel was at anchor.

In 1987, the *Tongass* was at the Exxon Valdez spill for 4.5 months, only half of the other projects got done that year. The Forest Service was left with only two 25-foot whalers to support other projects. This is when Ted Stevens (Alaska Senator) secured $500,000 to rehabilitate the *Chugach*. The Forest Service needed another vessel during emergencies. But this was also when the Forest Service started chartering boats.

Charters can be problematic. They cannot be used to break ice; they can haul fuel, but not with other passengers aboard. Good Samaritan law can make search and rescue tricky (you can only assist to your ability).

Jack Griffith, Forest Surveyor May 1974 – retired 2000

The surveyors marked boundaries for public and private lands, primarily for road and timber projects. During summer, Jack has one assistant and one summary intern; and they stayed very busy. In the winter, Jack wrote reports. He was the fleet manager for the last 4–5 years of his employment with the Forest Service because less surveying work was needed.

In 1985, the *Sitka Ranger* was sent to Port Townsend, Washington, for a new engine and power plant and an electronics overhaul. The *Sitka Ranger* was also sent to Evert, Washington, periodically for sandblasting and hull scans.

Howard Ulrick was an incredible skipper. He survived a tsunami in the late 1980s by riding the wave out of a bay. He was the only one to survive.

Two people from each district used to meet in Sitka once a year to hash out the *Sitka Ranger* schedule for the following season. By early spring of each year, the *Sitka's* schedule would be full.

Modifications:

- replaced engine
- wheelhouse – windows and roof replaced, windows changed to reverse shear (prevent leaking)
- took out bunk in officer's quarters and added pantry shelves
- changed galley
- replaced/upgraded electrical system
- added mast

Anchorage July 15, 2011

Paul McIntosh – USFS 1978–2001 Recreation Juneau, Interpretation Planner, Public Affairs Officer
Discussed the research efforts to date. Paul provided information on possible contacts for the report.

APPENDIX D: SELECTED VESSEL PLANS AND SECTIONS, 1958

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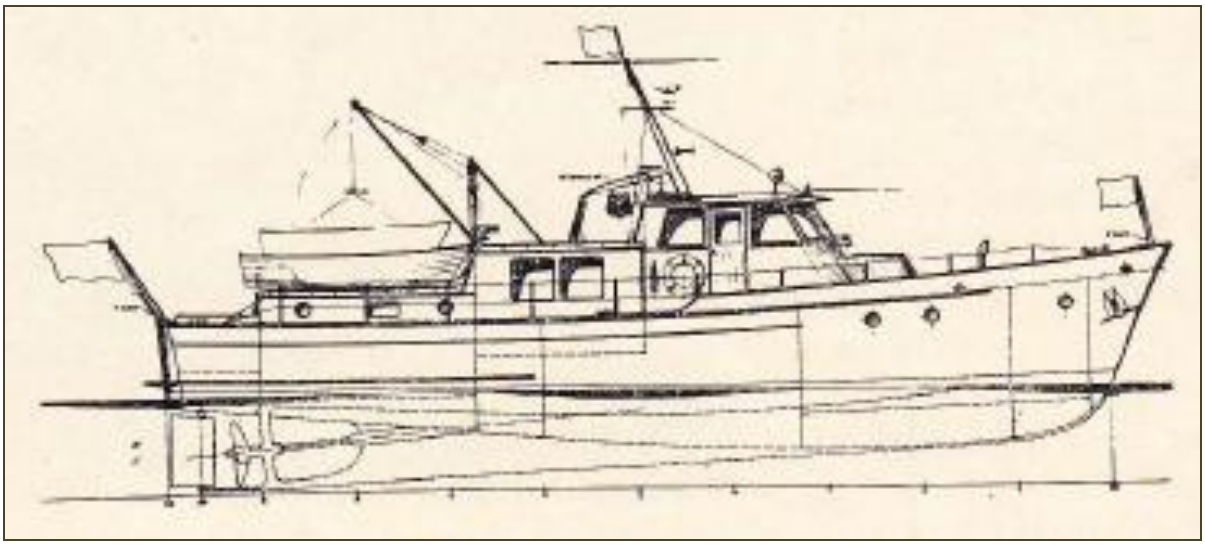
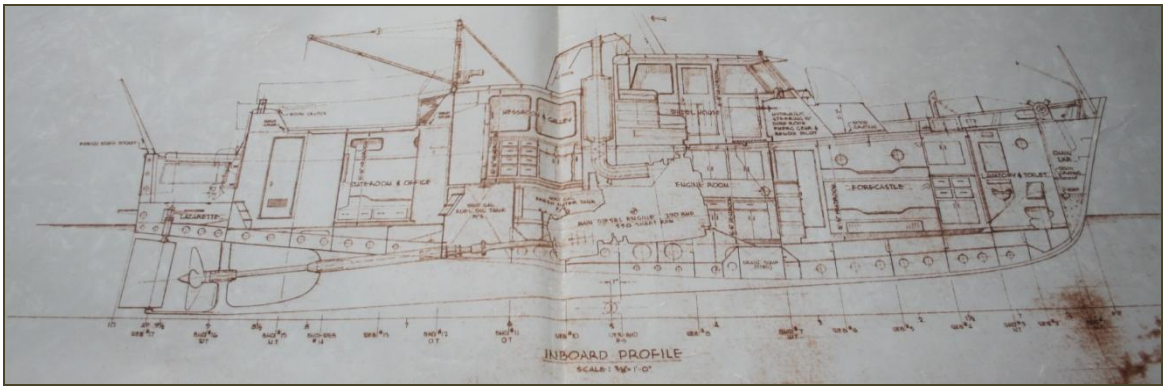
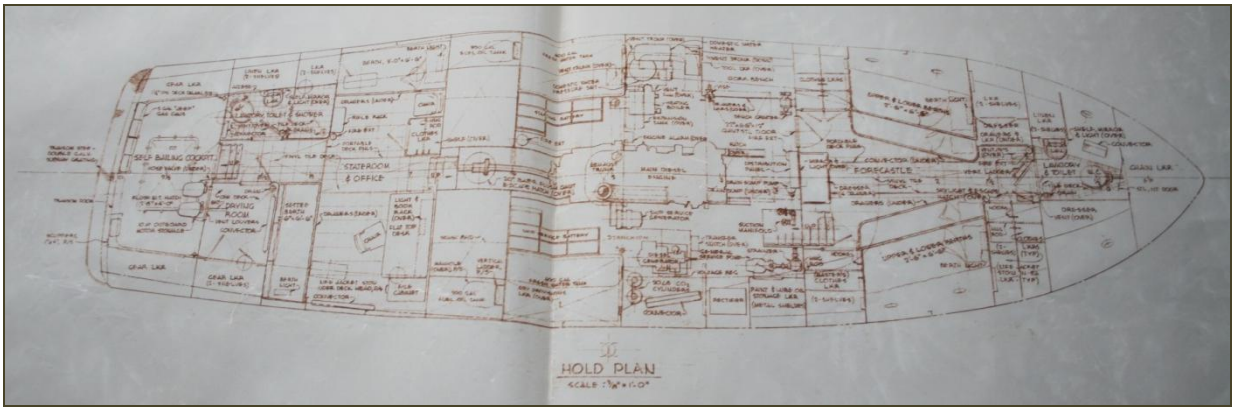


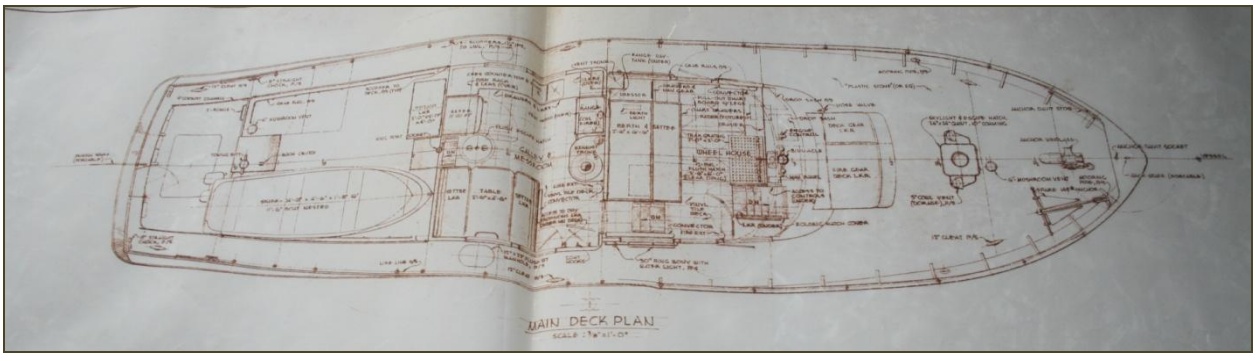
Exterior Profile



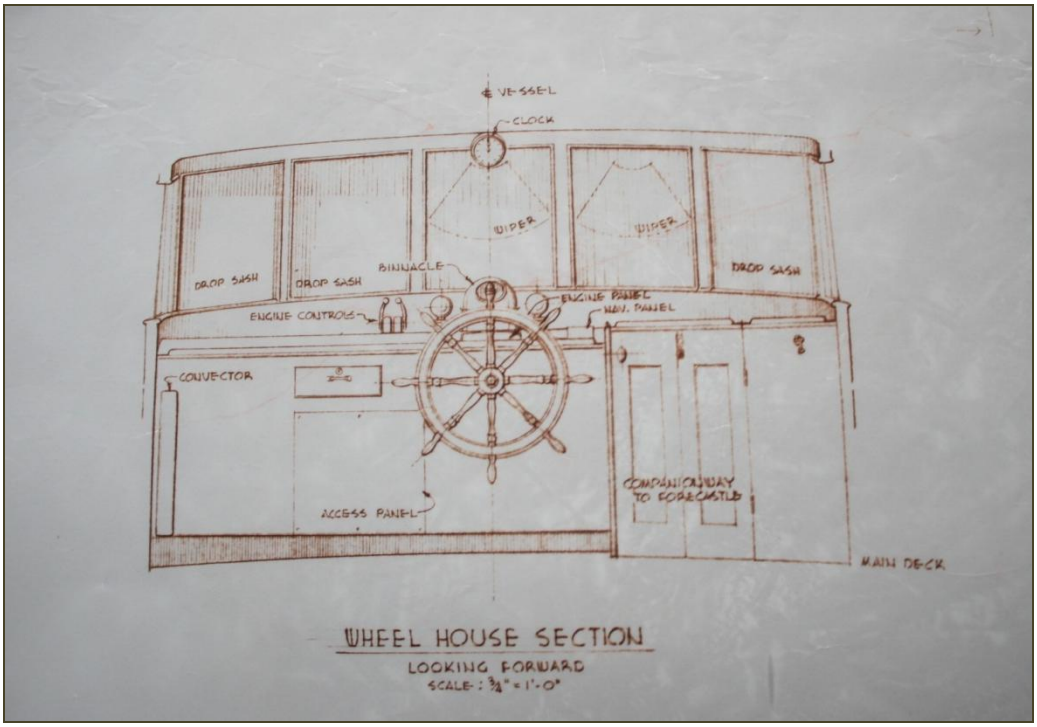
Cross Section of Ranger Boat



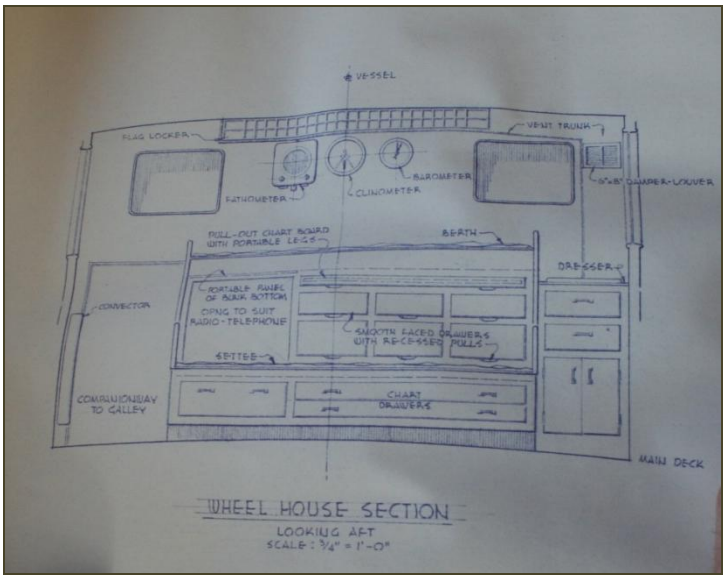
Hold Plan of Ranger Boat



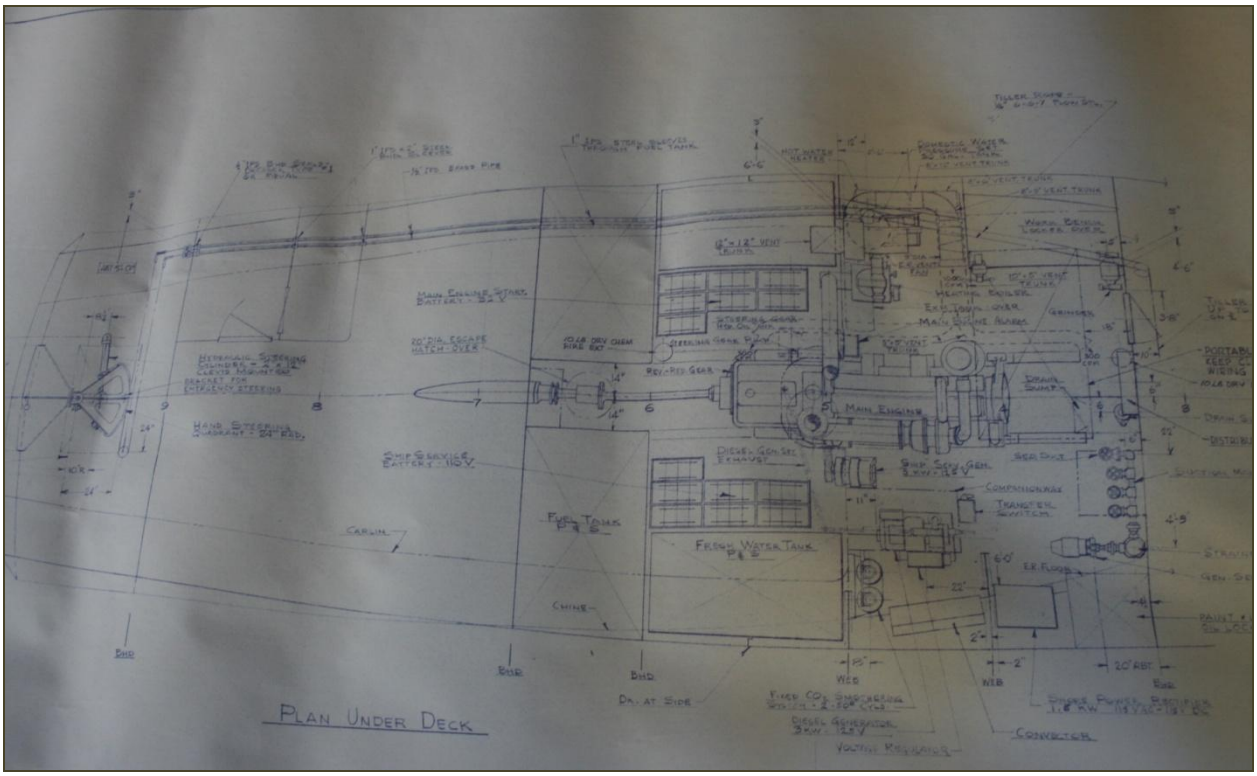
Main Deck Floor Plan



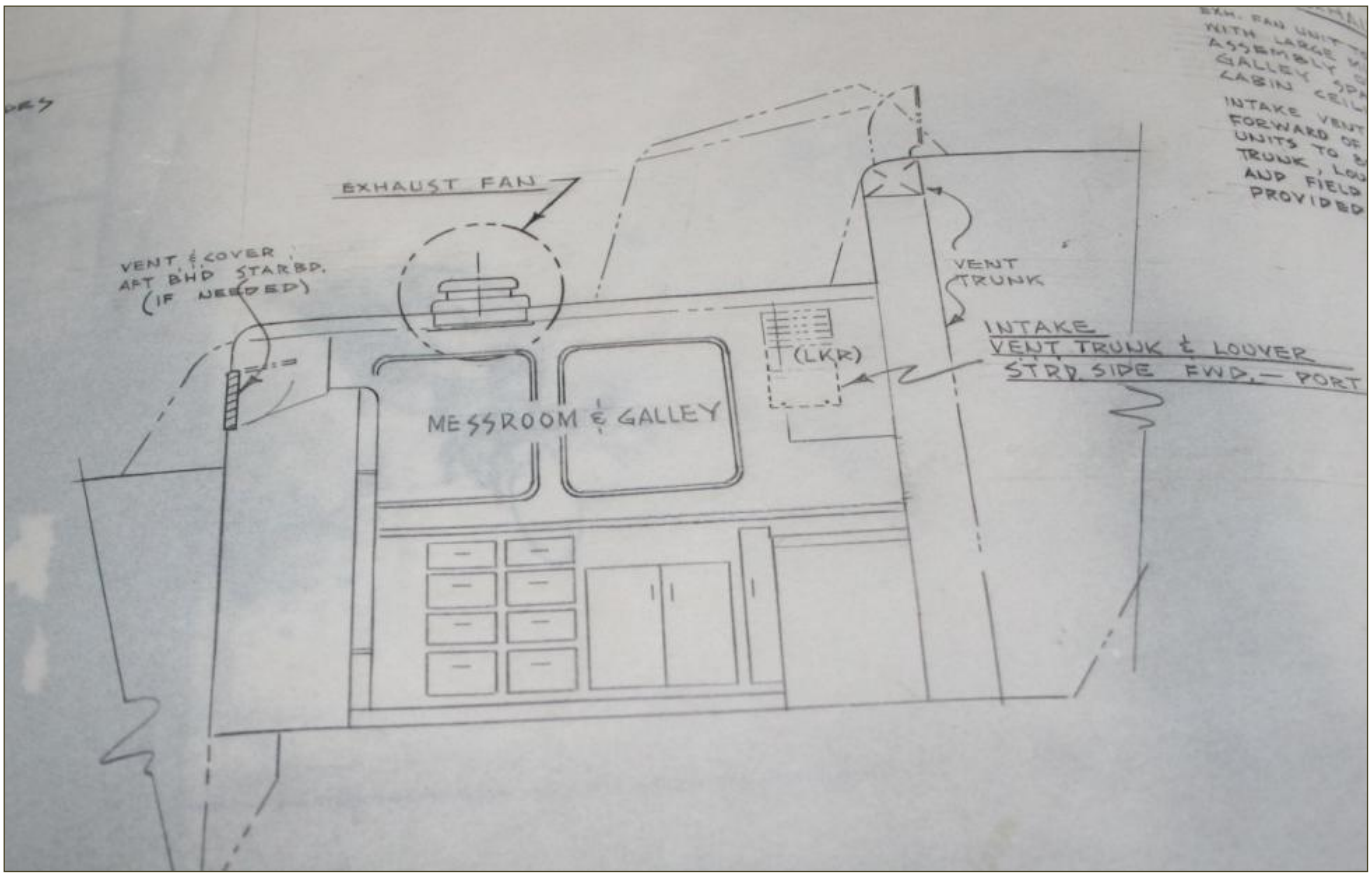
Wheelhouse Cross Section – Forward Facing



Wheelhouse Cross Section – Aft Facing



Plan of Engine Room



Cross Section of Kitchen

APPENDIX E: PREPARERS

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This survey and evaluation was completed by AARCHER, Inc., for the U.S. Forest Service, Alaska Region, under contract number AG-0109-C-11-0002. The following AARCHER staff participated in this survey:

Jayne Aaron, LEED AP, Architectural Historian, Project Manager, Principal Investigator. Ms. Aaron has over 18 years of hands-on experience as a project manager, architectural historian/cultural resources specialist, and NEPA specialist. She has over 18 years of experience managing programs and contracts for federal clients. Ms. Aaron meets the qualification of the Secretary of the Interior for architectural historian. She has been involved in all aspects of section 106 compliance for cultural resources, including the evaluation of U.S. Coast Guard vessels, numerous military installations, and land management agency buildings and structures. She has also designed innovative strategies and management plans to integrate new and existing regulations, policies, and guidance, and cultural and natural resource management activities into single planning and compliance programs, including NEPA, environmental justice, and the National Historic Preservation Act, and Native American Graves Protection and Repatriation Act. As part of her compliance responsibilities, Ms. Aaron has participated in consultation and meetings with a variety of stakeholder groups, including state and federal regulators, American Indian tribes, environmental consultants, and the public. She has written public releases, given presentations, responded to public comments, and facilitated meetings for various sized groups. She has also designed and developed training courses, and has taught in numerous educational and training programs.

Christopher Baker, Historian. Mr. Baker has worked as a historian/cultural resource specialist to advise clients on the management of historic resources. He has prepared cultural resource management documents and conducted impacts assessments (EAs and EISs); evaluated historic buildings, districts, and structures; developed cultural resource management plans and mitigation; and designed innovative strategies to integrate new and existing regulations, policies, guidance, and resource management activities into single planning and compliance programs. He was involved in environmental planning, cultural resources management, and National Environmental Policy Act projects in 19 states for NASA, the Army National Guard, U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, National Park Service, Air National Guard, U.S. Coast Guard, U.S. Air Force, Colorado Springs Utilities, and Denver Housing Authority. This work required a thorough understanding of appropriate federal regulations and directives (NHPA, NEPA, ESA, Preserve America, etc.), state regulations and agency guidance.

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