



DRAFT
RECREATION RESOURCES STUDY REPORT

Takatz Lake Hydroelectric Project (FERC No. 13234)

Prepared by:

Anderson Land Planning, Sitka, AK

and

Agnew:Beck, Anchorage, AK

Prepared for:

City and Borough of Sitka Electric Department

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EXECUTIVE SUMMARY

This Recreation Resources Study Report provides a baseline of current and potential recreation use patterns in order to address the proposed Takatz Lake Hydroelectric Project (*FERC No. 13234*) construction and long-term operation. This report analyzes the recreation resources within the project vicinity (City and Borough of Sitka, Baranof Island, Alaska), details recreation activities and frequencies of use and offers findings about recreation trends in southeast Alaska.

This report concerns three large watersheds on Northern Baranof Island: Takatz, Baranof, and Medvejie Lake Basins. Estimates of use for each area are based on the Recreation Day (RD), a preferred measurement unit of use by the Federal Energy Regulatory Commission (FERC).

This study found that the Takatz Basin recreation experience is directly related to the wilderness character of the environment. Takatz Bay has isolation from busy Chatham Strait, access by boat or floatplane only, islands that invite exploration and a dramatic setting with cascading waterfalls. Visitor use can be described as light in the peak season with one (1) or two (2) boats anchoring at a time, more than five (5) anchored boats at one time was uncommon. General recreation activities included anchoring for relaxation, viewing the falls, fishing & crabbing. Commercial fishing periods contributed to an increased use of the area for both active seining and anchoring in between fishing "openers". A few charter yacht operators have made Takatz Bay a destination to provide a wilderness setting for guests and a calm place to kayak. Takatz Bay was also noted to be strategically located along typical charter yacht routes between Juneau, Petersburg and Sitka. An occasional boat may anchor in the bay during the off-season, but this activity is expected to be minimal. Off-season use is mainly by the Northern Southeast Regional Aquaculture Association (NSRAA) crew lodging in Takatz Bay for their hatchery net pen operation from mid-March through the end of May. A small amount of commercial outfitter/guide activity is associated for the area, primarily for fishing dolly varden in the fall. Takatz Basin total minimum estimated use is 3,167 RDs.

Baranof Basin includes the seasonal community of Baranof Warm Springs and Baranof Wilderness Lodge and was found to receive visitors from Alaska, Canada and the Continental US. Visitors came for the free dock, hot springs and boardwalk trail; a welcome respite from more solitary anchorages. Visitors were attracted to the unique setting for a variety of recreation activities unlike other areas where there may be only one or two activity options. The recreation activities available in Baranof Basin appeal to a wide range of users and abilities. Mobile visitors with certain level of outdoor skills enjoyed Sadie Lake Trail, Baranof Lake and the surrounding terrain; however, the dock, bath house and boardwalk provided high-quality accessibility in an otherwise remote setting for most visitors. Baranof Basin can be considered an intensive recreation hub and received consistent use throughout the peak season with the dock full most nights and many boats anchored out nearby. Commercial fishing periods contributed to brief, intense use of the area with boats rafted three (3) to six (6) deep on the dock. Baranof Wilderness Lodge received a steady amount of guests through the peak season with guests

staying for more than the average duration (approx. one week). Lodge guests were also found to utilize a wide area of the basin for fishing and hiking. Field observations indicate relatively light use of this popular destination in the off-season. The main use includes two (2) winter caretakers and occasional guests that are present at Baranof Warm Springs and Baranof Wilderness Lodge generally from October through April. Baranof Basin has a total minimum estimated use of 9,911 RDs.

This study found that Medvejie Basin receives sporadic recreational use for hiking, canoeing, hunting and back-packing with a handful of trips to the Baranof Cross-Island Trail. The Medvejie Trail and lake were the primary destination for most users, with Camp Lake likely the second most popular. The upper areas of the drainage were a more limited destination for experienced backcountry travelers and hunters. Although well-known as a route, only a handful of locals attempted the rugged 16-mile Baranof Cross-Island Trail. Hunting and fishing use appears limited, especially since the area was closed to goat by an emergency order by the Alaska Department of Fish and Game. Off- season use is likely limited by the avalanche/slide danger in the valley. Recreation use through all seasons is expected by the NSRAA Medvejie Hatchery caretakers present on the site year-round. Medvejie Basin has a total minimum estimated use of 963 RDs.

In total, the Project Study Area recreational use estimate is approximately 14,000 RDs. This overall amount is relatively light when viewed from a national perspective, which may see upwards of 200,000 RDs for a similar sized area. However, the concentrated use in Baranof Basin reflects the regional draw of this area in Southeast Alaska.

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INTRODUCTION

In September, 2008, the City and Borough of Sitka (“City”) received a Preliminary Permit (“Permit”) for the Takatz Lake Hydroelectric Project (*FERC No. 13234*, “Project”) from the Federal Energy Regulatory Commission (FERC) in Washington D.C. The Project would be located approximately 18 miles east by northeast of Sitka, Alaska, on Baranof Island and its various components would affect recreation resources in the Takatz, Baranof, Sadie Lake and Medvejie Basins. The Project is described in detail in the Scoping Document 2. (*FERC, 2010b*)

Generally, the Project would consist of one or two dams on Takatz Lake, a power conduit consisting of a mostly unlined tunnel and steel penstock leading to a powerhouse located at tidewater on Takatz Bay plus transmission lines and construction related facilities and access. Installed capacity of the Project would be approximately 27 megawatts.

In support of the license application process, the City is conducting a comprehensive program of field and office studies. This Report analyzes the recreation resources within the project vicinity, details recreation activities and frequencies of use, and offers findings about recreation trends in Southeast Alaska. The Report is organized as follows:

Purpose and Methodology

Describes the need for the Report, as well as methods used for analysis.

Project Study Area

Describes the extent of proposed project features, the area of analysis for the Report and summarizes agency management goals for the Project Area.

Hydroelectric Project Description

Offers details about the location, type and size of key project features.

Recreation Inventory

Provides detailed information on both regional and Project Area character and outlines recreation opportunities. .

Current Recreation Use

Analyzes recreation user characteristics and estimates recreation use in the Project Area.

Visitor Surveys

Provides results from surveys conducted about use and preferences of recreation activities in the Project Area.

Discussion

Offers findings about Southeast Alaska recreation trends and draws conclusions about the current recreation use and future demand for recreation in the Project Area.

PURPOSE AND METHODOLOGY

STUDY OBJECTIVES

The City is proposing a new hydroelectric facility and transmission facilities where none exist; and therefore, is required to evaluate area recreation resources. The purpose of this study is to provide a recreation resources baseline for current and potential recreation uses occurring in the Project Area. This study focuses on visitors at existing developed recreation facilities as well as undeveloped dispersed sites in the Project Area. This study also focuses on understanding use levels, visitor characteristics and preferences in the Project Area. The study provides data necessary for use in anticipated follow-on studies. See *Figure 1* for the Project Study Area location in regional Southeast Alaska context.

LICENSING RELEVANCE AND USE IN DECISIONMAKING

The results of this study provide the data necessary to better understand how the study area is used for recreation purposes. Before this study, little detailed information was available regarding visitor use and perceptions of the study area. In addition, there were no detailed user counts for the recreation facilities or sites in the Project Area. This study was intended to provide this missing visitor information and to establish a baseline of visitor data that may be compared in future years. Information will be used to support National Environmental Policy Act (NEPA) requirements in the FERC licensing process.

METHODS

Anderson Land Planning and *Agnew:Beck* conducted research and collected use data to assess both regional and Project Area recreational opportunities. Data collection methods included a literature review, recreation inventory, visitor observations, stakeholder interviews and visitor surveys.

Literature Review

Anderson Land Planning gathered information on the types of recreational facilities and opportunities in the Project Area and region to establish a regional context for the recreation study. Major sources included area recreation guidebooks, historical reports, regional maps, USDA Forest Service ("Forest Service") reports, Alaska Department of Fish and Game (ADF&G) sources, and web research.

Recreation Inventory

Recreation facilities and dispersed recreation areas and resources were identified by size, type, number and location and mapped in the field by *Anderson Land Planning* concurrent with visitor observations and survey work.

Visitor Observations

Because of the large area covered by various project features, *Anderson Land Planning* and *Agnew:Beck* conducted visitor observations in the air, on the water and over land.

Visitor Surveys

Recreation Visitor Surveys were conducted by *Anderson Land Planning* through personal interviews and questionnaires to assess the attitudes, preferences, and characteristics of the primary visitor user groups in the study area.

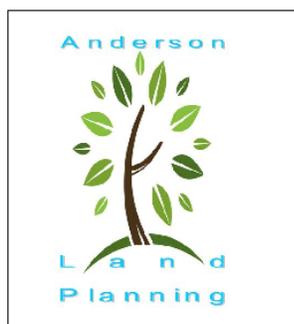
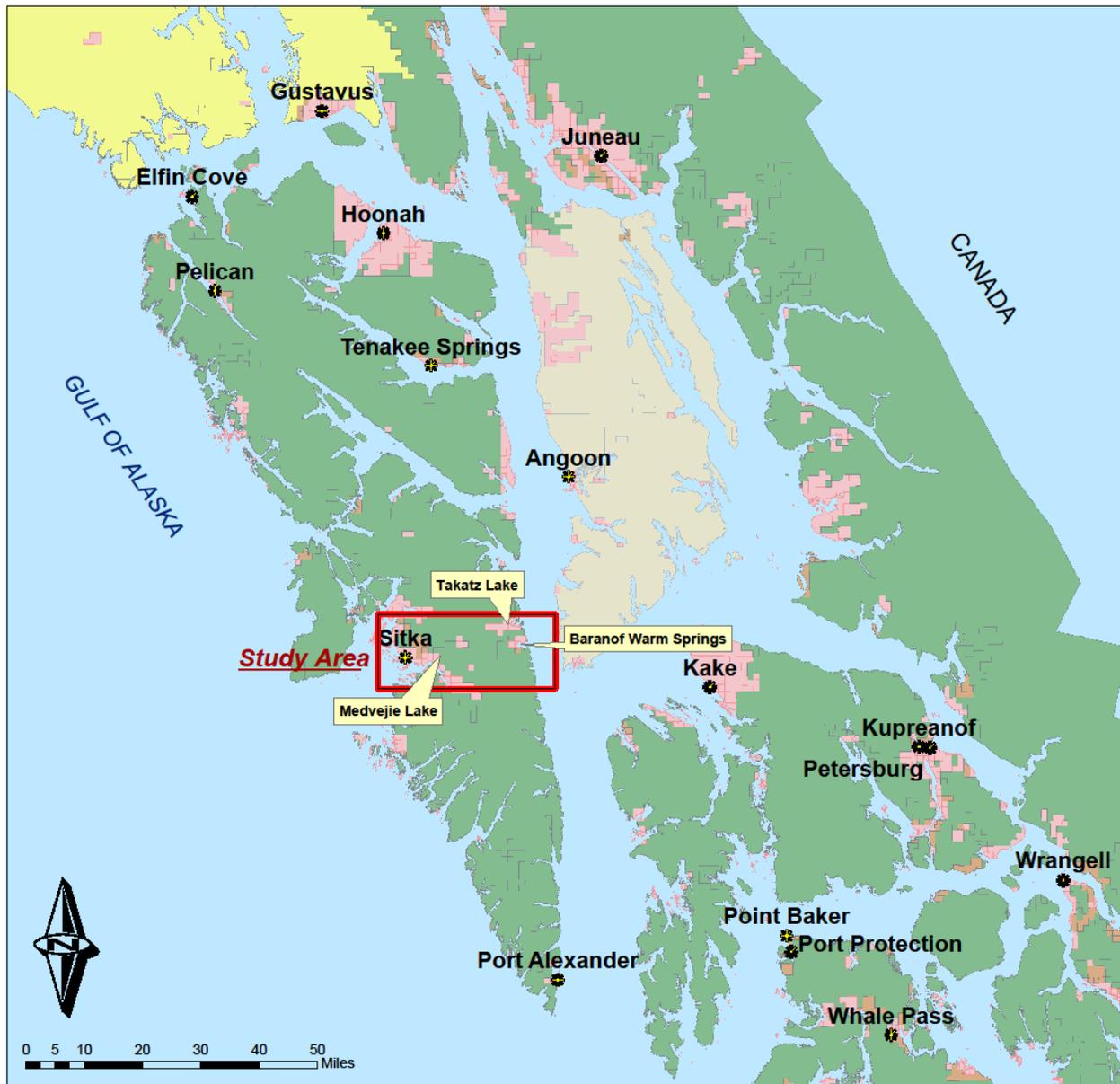
Current Use Estimate

Three (3) primary sources in addition to field observations were used to give a sense of current recreation use in the Project Area: rental data for Baranof Lake Cabin and Outfitter/Guide Special Use Permit data (US Forest Service) as well as Alaska Department of Fish and Game (ADF&G) hunting permits and sport fish licenses. Estimating current use for this Project Area is an imprecise science; much of the recreational activities are informal backcountry trips over a very large geographic area and are simply not tracked. However, these data synthesized with field observations and stakeholder interviews provide a minimum baseline of recreational use.

Regional Trends and Discussion of Existing and Future Use

Existing recreation use was analyzed by assessing recreation activities with population trends and regional tourism tendencies. Future recreational use of the Project Area was derived by analyzing population and visitor trends which may help predict the future growth of the region and visitor industry.

Takatz Recreation Resources Project Location



Legend

- Population Centers
- General Land Status**
- Other
- Tongass National Forest
- Fed Monument
- National Park
- State of Alaska

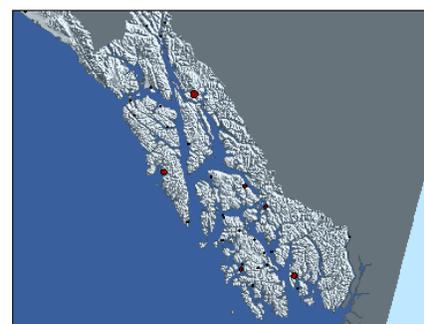


Figure 1. Project Study Area in regional Southeast Alaska context

PROJECT STUDY AREA



Photo 1. Takatz Lake

The Project would be located on Takatz Lake on the northeastern side of Baranof Island approximately 20 miles east of the City of Sitka, Alaska. Sitka is a community of approximately 9,000 people situated on the central west coast of Baranof Island, approximately 100 air miles southwest of Juneau. Sitka is only accessible by air or sea. The city has scheduled air service through Alaska Airlines, and is a stop on the Alaska Marine Highway System connecting Sitka to other Southeast Alaska coastal communities. Just south of Takatz Lake and Bay, Baranof Warm Springs is a seasonally-occupied community of approximately 15 homes and a fishing lodge. Baranof Warm Springs is accessible by boat or floatplane but there is no scheduled ferry/marine passenger service to the community.

Baranof Island is located entirely within the bounds of the Sitka Borough. The Project would be specifically located on Takatz Lake and Bay and would occupy Borough lands and federal lands within the Tongass National Forest, administered by the Forest Service. The majority of the proposed project infrastructure would be directly and immediately adjacent to Takatz Lake and Bay. The proposed project also requires transmission facilities that would run through the Baranof Lake area, through the Baranof River valley, across the Baranof Mountains and down the Medvejie River valley to its connection with the City's existing electrical grid.

The geographic area includes a wide variety of rocky ridgelines, freshwater lakes and streams, island-studded coastal bays and high snowfields and glaciers. Recreation resources and activities in Southeast Alaska are dispersed over large areas with low average use per acre and with an infinite number of entry points via saltwater boat and



Photo 2. High snowfields & glaciers on the ridges

floatplane access. See *Figure 2* for the Project Study Area.

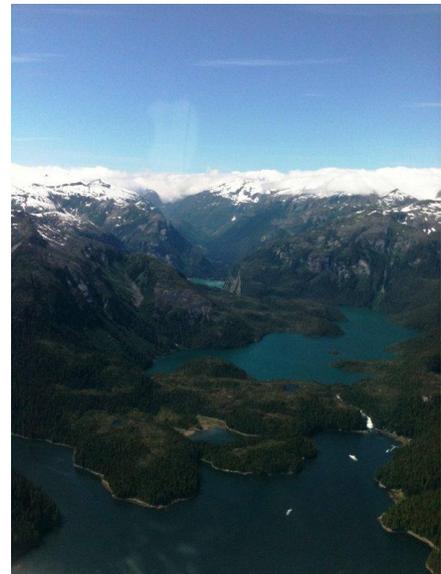
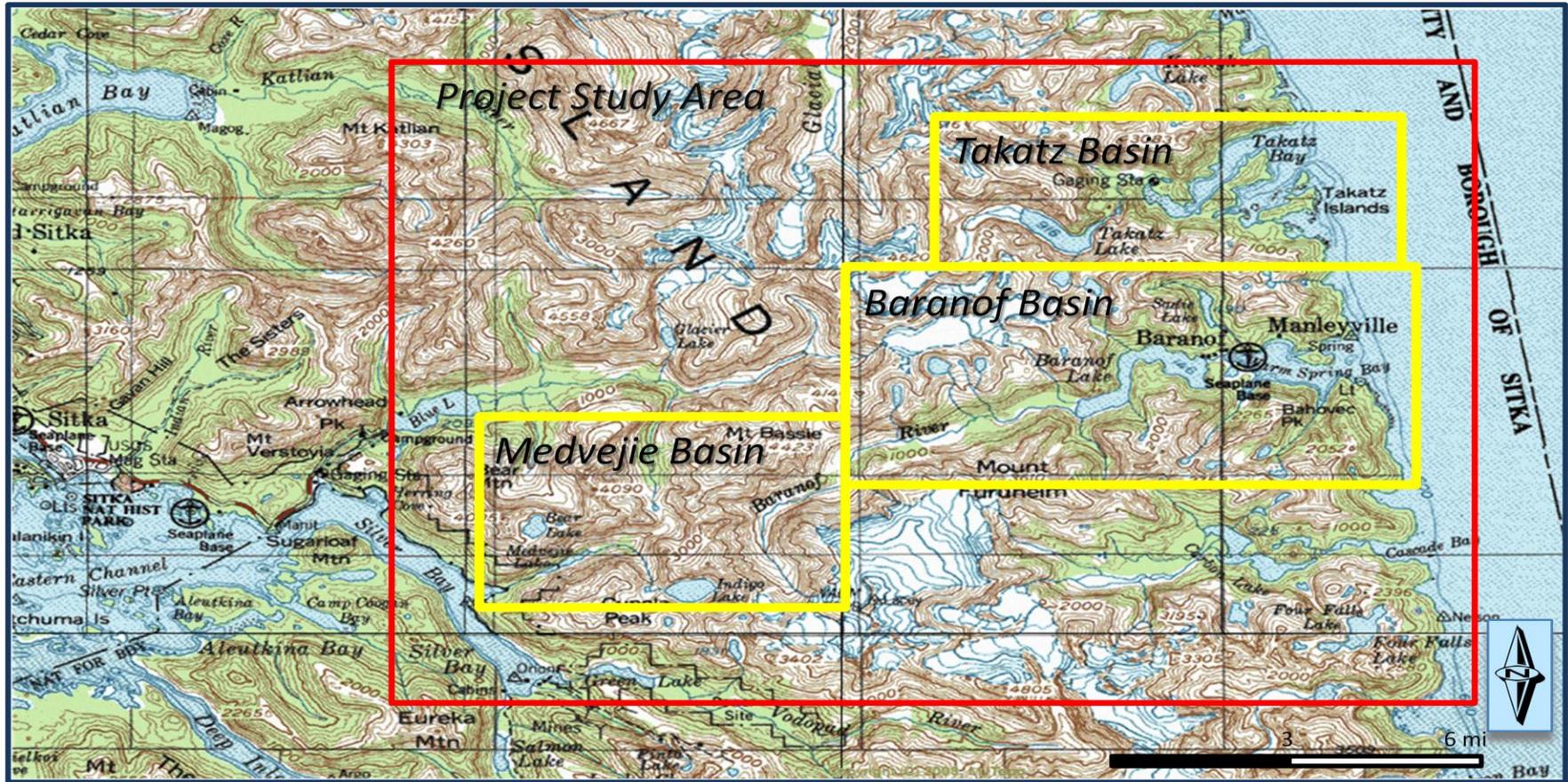


Photo 3. Baranof Warm Springs & Lake

Figure 2. Project Study Area



Legend

- Project Study Area
- Study Unit (Basin)

Takatz Recreation Resources Study



Figure 2. Project Study Area

Agency Management Goals

The Project Study Area includes federal lands within the Tongass National Forest, administered by the Forest Service. A summary of relevant management goals pertaining to recreation is presented below.

Tongass National Forest Land and Resource Management Plan (Forest Plan)

The Forest Plan guides natural resource management activities and establishes management standards and guidelines for the Tongass National Forest. The Project Area includes four (4) land use designations (LUDs) each with its own management prescription detailing goals, desired future condition and standards/guidelines (*USDA Forest Service, 2008*). See *Figure 3* for a land use designation map of the Project Area.

Proposed Utility Corridor –

Provide for the development of existing and future major transportation and utility systems.

Municipal Watershed – Manage municipal watersheds to meet State water quality standards for domestic water supply.

Semi-Remote Recreation – Provide for recreation and tourism in natural-appearing settings where opportunities for solitude and self-reliance are moderate to high.

Remote Recreation – Provide for recreation in remote natural settings outside Wilderness, where opportunities for solitude and self-reliance are high.

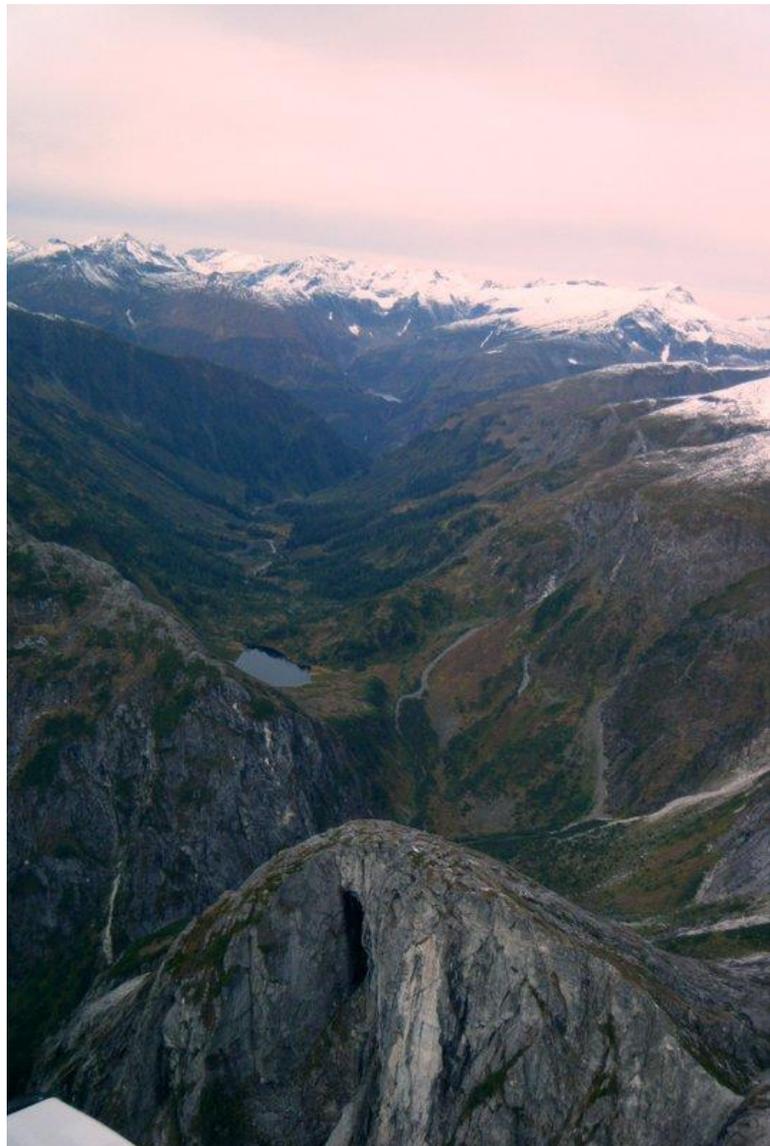
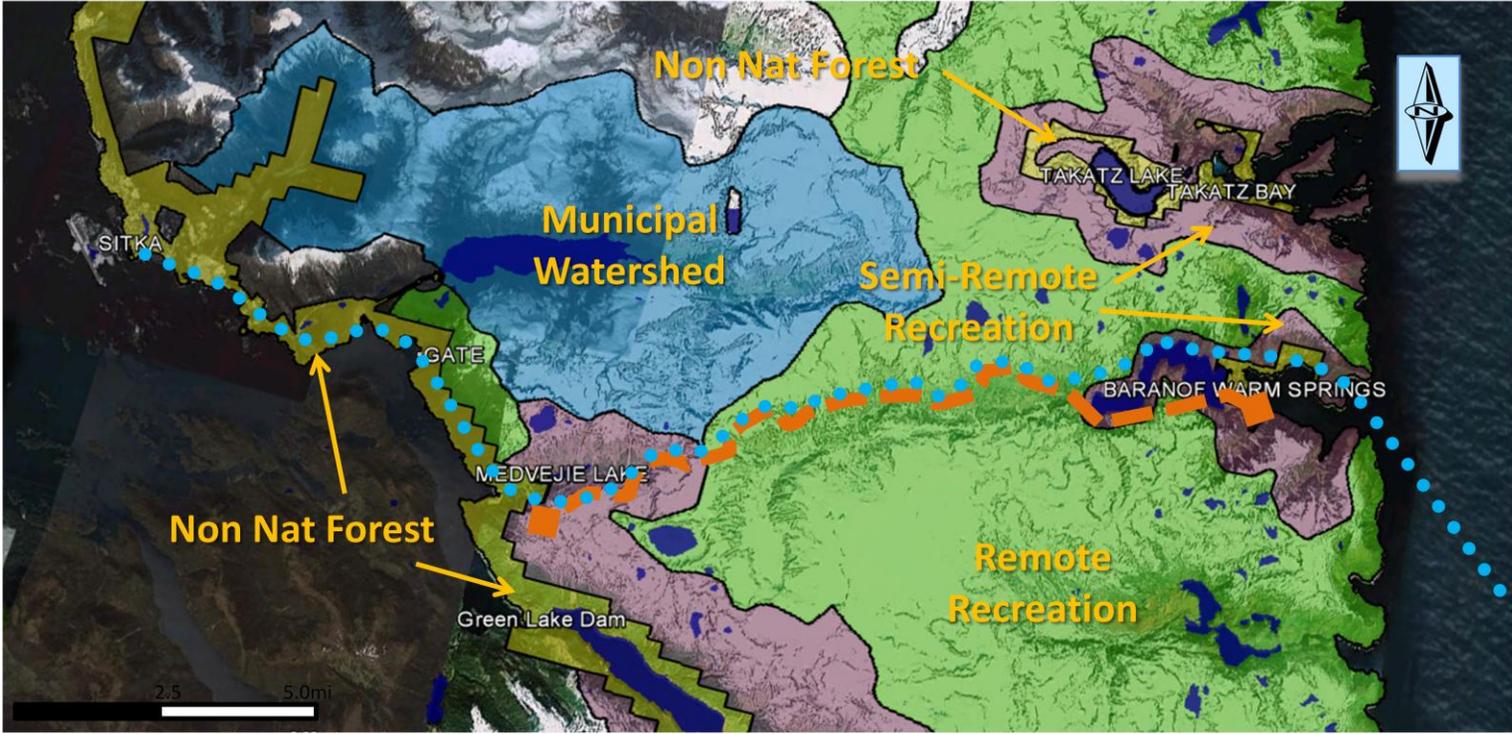


Photo 4. Camp Lake in Remote Recreation LUD

Figure 3. US Forest Service Land Use Designation



- Legend**
- Municipal Watershed
 - Remote Recreation
 - Semi-Remote Recreation
 - Non National Forest
 - Proposed State Road Corridor
 - Potential Power Transmission Corridor

Source: *Current Land Use Designations Tongass National Forest 2006*

Takatz Recreation Resources Study



Figure 3. US Forest Service Land Use Designations

Tongass National Forest Shoreline-Outfitter Guide Federal Environmental Impact Statement

This document defines the commercial use allocation for the Sitka, Hoonah, and Juneau Ranger Districts and Admiralty National Monument based on recreation carrying capacity (*USDA Forest Service, 2004*). The Project Area includes three (3) Recreation Use Areas indicated in *Figure 4*. A Group Day is defined as a measurement of recreation use by groups using the national forest on a daily basis.

04-04B Kelp Bay – Extends from the north end of Baranof Island to the south of Takatz Bay for approximately 29,867 acres. Considered a very scenic area with unaltered forest of old growth Sitka Spruce and Western Hemlock. Includes Takatz Bay and has a recreation carrying capacity of nine (9) commercial groups at one time. The total commercial allocation capacity is 30 group days in the spring season, 184 group days in summer, and 21 group days in the fall. There are no limits on the amount of commercial use that can be authorized during the winter months.

04-04C Baranof Warm Springs – Extends from just south of Takatz Bay to south of Warm Springs Bay for approximately 2,600 acres. Includes Warm Springs Bay, Baranof Lake and Sadie Lake and has a capacity of three (3) groups at one time. Even though a much smaller area, the total commercial allocation capacity is five (5) group days in the spring, 38 groups days in summer, and six (6) group days in the fall.

04-03 Sitka Use Area – This large area encompasses the west central portion of Baranof Island, including the outer islands from Salisbury Sound to Three Entrance Bay for approximately 76,413 acres. Includes Medvejie and has a capacity of 40 groups at one time, which reflects the more intensive recreation use by Sitka residents.

HYDROELECTRIC PROJECT DESCRIPTION

The City proposes to construct a 27 megawatt hydroelectric facility that would consist of one or two dams on Takatz Lake, a power conduit consisting of a mostly unlined tunnel and steel penstock leading to a powerhouse located at tidewater on Takatz Bay, plus transmission lines and construction related facilities and access. A new concrete dam and secondary saddle dam would raise the elevation of Takatz Lake 200 feet, providing an active storage capacity of 82,000 acre-feet. An approximately 2,800-foot-long tunnel and a 1,000-foot-long penstock would discharge the lake flow(s) into a 4,000 square foot powerhouse, with two 18,600 horsepower turbines on the shore of Takatz Bay to provide an estimated 97,100 megawatt-hours of energy per year. (FERC, 2009a)

Transmission Routing

The proposed transmission routing as described in earlier licensing documents, including Scoping Document 1 (SD1) (FERC, 2009a) and the Pre-Application Document (City of Sitka, 2009) depicted a submarine transmission route from the powerhouse proceeding underwater along Chatham Strait, through Baranof Bay and through or around the community of Baranof Warm Springs. The line would then proceed underwater through Baranof Lake and on overhead poles up the Baranof River valley, across the Baranof Mountains and down the Medvejie River valley to its connection with the City's existing transmission facilities. This routing is referred to as the "Marine Transmission Alternative" or "MTA" as shown in *Figure 5*.

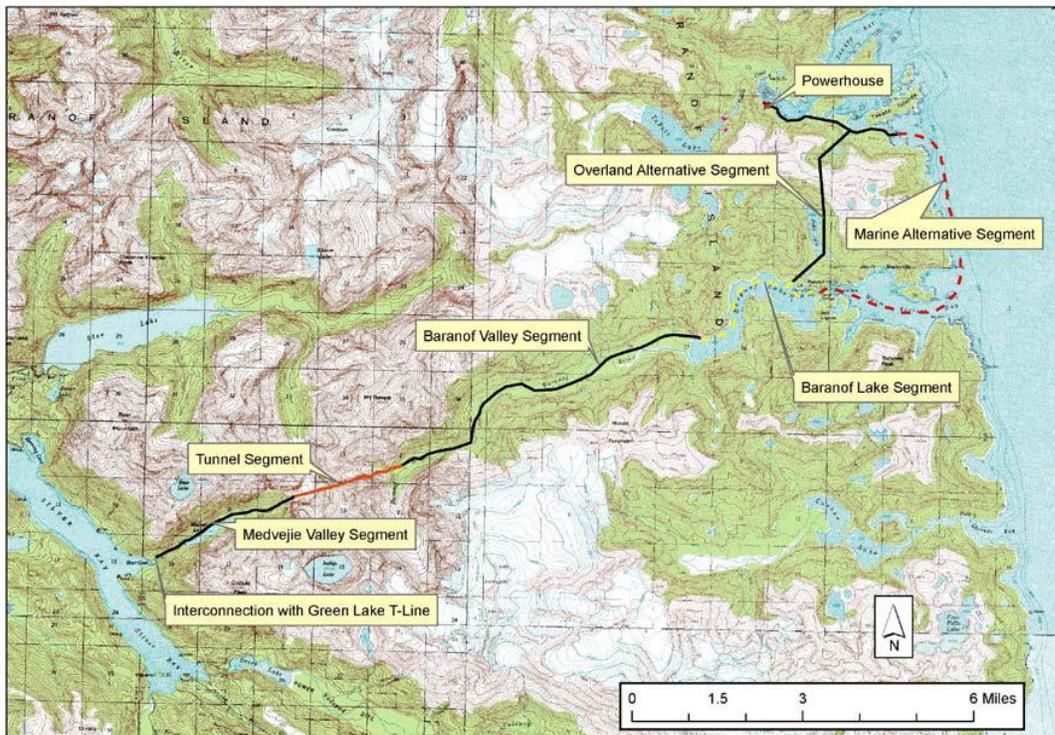


Figure 5. Takatz Lake Project Transmission Alternatives and Terminology

Based on comments received during SD1 review and after Scoping meetings, the City has developed a new transmission alternative which avoids potential effects on marine resources and on the community of Baranof Warm Springs. This routing, referred to as the “Overland Transmission Alternative”, or “OTA” is shown in *Figure 6*. (Note that more recent engineering feasibility studies have shown that the line should be routed north of Baranof Lake on overhead poles, instead of being routed underwater in Baranof Lake).

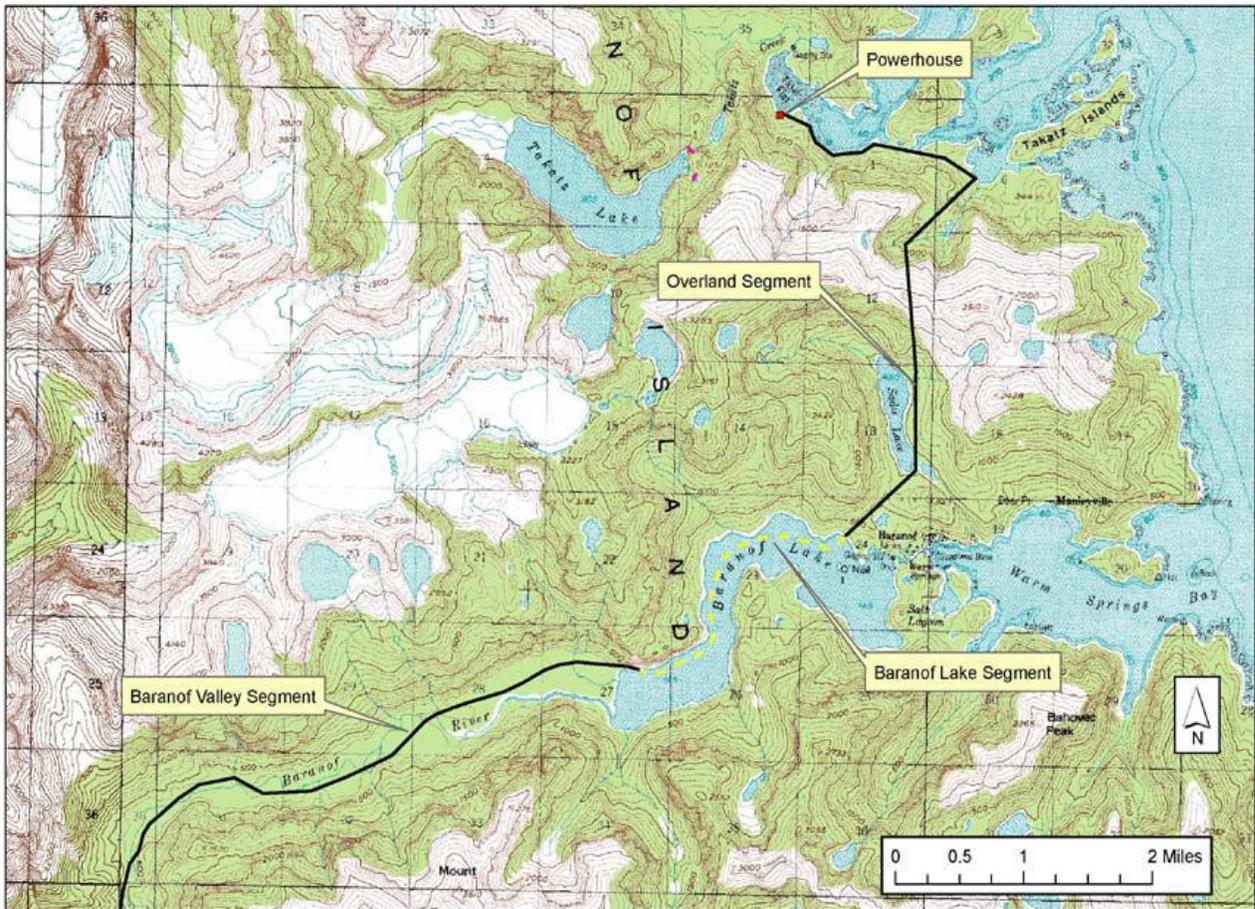


Figure 6. Detail of Overland Transmission Alternative

The OTA does not change the routing of the transmission segments beyond the point at which the line emerges from upper Baranof Lake. At this time, the OTA is the City’s preferred transmission alternative in that it responds to concerns for impacts on both the community of Baranof Warm Springs and those on marine resources in Chatham Strait.

RECREATION INVENTORY

REGIONAL RECREATION RESOURCES

Collectively, Southeast Alaska or the 'Panhandle' or 'Inside Passage' is composed of a mountainous mainland and thousands of islands, varying from rocky reefs that barely jut out of the sea at low tide to a few of the largest islands in North America. This rugged shoreline stretches for more than 11,000 miles and includes over 1,000 named islands, the largest being Prince of Wales, Chichagof, Baranof, and Admiralty islands. Nearly ninety-five percent (95 percent) of Southeast Alaska is federal land; most of it within Tongass National Forest and Glacier Bay National Park and Preserve. Only three towns (Haines, Skagway, and Hyder) are connected by highway to the rest of the continent. All others, including the state capital Juneau, are accessible only by boat or plane.

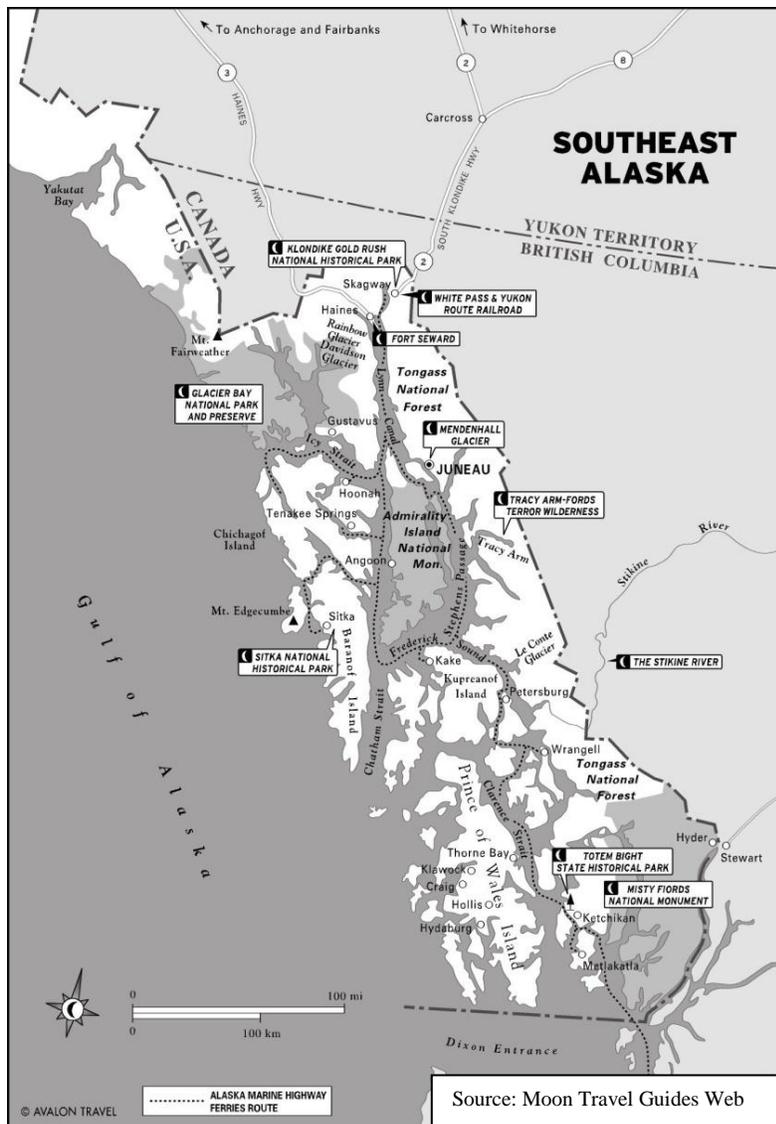


Figure 7. Regional Recreation Resources

Current Conditions in Southeast Alaska

The following is a summary of Southeast Alaska regional recreation conditions. See the Appendix for a more complete analysis of the Southeast Alaska Recreation and Visitor Industry.

Activities: While the urge to experience wild Alaska motivates almost all Alaska visitors, the vast majority of travelers and the large majority of residents do not participate in rugged outdoor adventure. Nearly all outdoor recreation and tourism activity is concentrated on cruise ships, in or adjoining settled communities, and along the road system.

Economic Impact: Tourism and outdoor recreation comprise a major component of Alaska's economy. In Southeast, tourism and outdoor recreation accounts for 21 percent of full- and part-time jobs and 17 percent of total regional labor income (*McDowell Group, 2008-2009*). Statewide, out-of-state travelers generate over \$1.5 billion in direct and over \$3 billion in total spending (*State of Alaska, 2011*). Tourism ripples through all parts of the economy, from spending directly on travel, to indirect activity in construction, marketing, and equipment. Tourism also generates substantial tax revenue to local communities.

Seasonality: Five out of every six out-of-state travelers come in the summer.

General Visitor Characteristics: Alaska attracts many different types of travelers, distinguished by demographics, origin, travel purpose, mode of travel, travel type (package or independent), and activity. In simplest terms, particularly for Southeast Alaska, there are two fairly distinct categories: those who travel on large cruise boats and independent travelers. The former spend less time in Alaska, are less likely to return, and focus their visits on three to four well-developed destinations; the latter (which make up only about one-third of out-of-state visitors to the region) includes people traveling by air, ferry and a range of small craft.

Visitor Origin: International travel to Alaska is growing more rapidly than domestic travel, reflecting the relatively low value of the U.S. dollar, the relative strength of other nations' economies, and the growth in middle and upper class populations in Asia and Latin America.

Travel Modes: Visitors to Southeast Alaska come via cruise ship, airplane, ferry and highway. Because of the topography of much of the region, highway entry is very limited; most people travel to and from Southeast communities via boat or airplane. Marine travel to and within Southeast Alaska includes large cruise ships (up to 2,600 passengers), small cruise ships (6-235 passengers), charter yachts (can range from 6-passenger vessels to nearly 100-passenger vessels), private pleasure vessels (yachts, sailboats, kayak, etc. typically carry five passengers or less), and fishing vessels (*Independent Traveler, 2010*).

Visitor Characteristics

Large Cruise: The majority (nearly two-thirds) of visitors to Southeast Alaska are cruise ship passengers visiting as part of an organized travel package. The vast majority of all cruise ship



Photo 5. Charter Yacht

passengers travel on large-volume ships, none of which visit the Takatz Bay/Baranof Warm Springs area (*Independent Traveler, 2010*).

Small Cruise: In contrast to package visitors, independent travelers make their own travel arrangements, for lodging, daily activities and travel to and within the region. Though making up only a small percentage of total travel activity, Southeast Alaska hosts a number of small cruise companies, charter yachts and private boat owners who make up the majority of the current and prospective future users of the Baranof Warm Springs and Takatz Bay area. Interviews with operators in this portion of the travel market suggest this sector is stable to growing. These visitors

use owner-operated private vessels, including luxury charter yachts, private pleasure vessels, kayaks, skiffs and floatplanes. Some of this travel originates in Alaska, though the larger yachts hail mainly from ports throughout the Pacific Northwest (e.g., Washington State, Oregon, British Columbia, and Alaska). This category of Alaska visitors (commonly referred to as ‘cruisers’) is much less documented than other visitor categories. Generally, independent



Photo 7. Private Pleasure Vessel



Photo 6. Commercial Fishing Seinners at dock and at anchor

travelers prefer destinations with fewer visitors and those that they perceive to be more authentic. Many are repeat visitors, returning to the same lodge or charter yacht tour business year after year (*ICER, 2008*).

Fishing: Independent travelers also include the commercial fishing vessels which visit annually for the lucrative fishing season in multiple destinations throughout Southeast Alaska.

Southern Chatham Strait has over 265

seine permits granted each year, of which only 150 are Alaska based (*Alaska Department of Fish and Game, 2007-2011*).

Regional Physical Setting

The east coast of Baranof Island is considered lightly visited because of its remoteness and lack of passenger services and facilities. Besides the seasonal community of Baranof Warm Springs, Hidden Falls Hatchery has a small year-round population just north of Takatz Lake and the closest communities are Angoon to the east, Sitka to the west and Kake or Port Alexander to the south. Popular anchoring locations within 20 nautical miles of the Project Area (conservative daily average for a recreational boat) include Kelp Bay, Cosmos Cove, Kasnyku Bay, Ell Cove, Cascade Bay, Nelson Bay and Red Bluff Bay according to the most commonly used boating guide. (*Hemmingway-Douglass, 2007*) Southwestern Admiralty Island also has numerous anchorages, as does northern Kuiu Island and southeastern Chichagof Island.

Medvejie Lake is south of Sitka on the west coast of Baranof Island. Sawmill Creek Road provides car access to Herring Cove which is a popular hiking destination managed by the Forest Service. Locals walk, bicycle and even cross-country ski the Green Lake Road through the seasons and value its scenery and exercise opportunities.

Regional Recreation Activities

Survey after survey shows that out-of-state travelers visit Alaska for three main reasons: to experience mountains, wildlife and glaciers. Cultural attractions are important, but generally are secondary reasons for traveling to Alaska. Alaska's three primary attractions involve outdoor recreation, and outdoor adventure activities are popular among Alaska visitors. The region's mountains and the sea provide many recreational opportunities including:

- Sightseeing and wildlife viewing
- Sport fishing
- Hiking and backpacking
- Boating: motor boating, sailing, kayaking, canoeing
- Hot springs bathing
- Hunting
- Camping
- Winter sports: snowboarding, skiing, snowshoeing
- Gathering forest products
- Solitude experience

PROJECT AREA CHARACTERISTICS

The Project Area is largely undeveloped Tongass National Forest lands with the only road access on the west side. Green Lake Road from Sitka crosses the Medvejie Lake outflow where the transmission corridor would tie into the City's existing transmission facilities. The Medvejie Hatchery is located here and is operated by Northern Southeast Regional Aquaculture Association (NSRAA). The east side includes Baranof Warm Springs, a seasonally-occupied community of approximately 15 homes just south of Takatz Lake. The Project Area has been divided into three (3) Study Units and each has a unique physical character offering a range of recreation facilities.

Takatz Basin

Takatz Basin is located approximately 20 miles east of Sitka, on the east side of Baranof Island. Takatz Basin is characterized by steep granite walls laced with cascading waterfalls, a large glacial lake, numerous small and large islands, rocky islets and fast moving creeks flowing into a tideland estuary and protected shallow bay. The shoreline is relatively unbroken with a consistent rock edge, few landing beaches, and surrounding old growth Sitka Spruce forest. The anchoring basin at the head of the bay is well protected and offers a relatively shallow anchoring depth.



Photo 8. Takatz Basin- Tideland estuary, Anchoring Basin and Takatz Islands

Recreation Facilities and Dispersed Recreation Areas/Resources

There are no constructed recreation facilities in this Takatz Basin area. See *Figure 8* for an inventory of dispersed recreation resources. This remote area has very rugged physical topography and visitation to the area is generally by boat or floatplane. The area surrounding the proposed project site is steep, rising rapidly from sea level to 2,400 feet. The terrain is densely vegetated with Sitka Spruce forest at lower elevations and exposed granite and permanent snow fields at higher elevations. Seasonal avalanche and rockslides are frequent.



Photo 9. Takatz Lake, Creek and Lower Lake

Takatz Lake is significantly higher than the bay and only a very difficult route through the gorge potentially connects the bay to the lake. The lake is perched among high Baranof Island peaks and glaciers and does not contain any sport fish. Dispersed hiking, camping and hunting occurs infrequently in the area.

Takatz Bay head is the main boat anchoring basin. The most commonly used boating guide describes the anchorage:

“Deep in landlocked Takatz Bay, you can find excellent shelter from all weather. The basin, a large granite bowl surrounded by snowy peaks, shows evidence of avalanches. The bay has easy access and a flat bottom, formed by a mountain stream emptying as a waterfall” (*Hemmingway-Douglass, 2007*).

Notably, the anchorage is relatively flat, protected and large enough to handle the swing room for numerous and varied sized boats. Even with this above encouraging description, use of the anchorage is relatively light due to the travel distance to the head of the bay from fishing grounds and Chatham Strait, and possibly because Baranof Warm Springs is the major destination draw in the area. Mariners also commonly experience chart plotter errors in the narrows due to a digital datum shift which causes concerns for first time visitors. A typical survey response from a Washington state-based boating couple expressed that they “discovered” the place thirty years ago and have been coming back every year since. They



Photo 10. Vessels at anchor in Takatz Bay head

enjoyed the waterfalls, good anchoring, and the solitude. They noted that they no longer go to Red Bluff Bay in the Wilderness Area to the south due to the more crowded anchorages. Incidentally, Takatz Bay receives excellent cell phone coverage, unlike most other remote anchorages in Southeast Alaska, an unexpected attraction.



Photo 11. Kayak at small beach pocket

A handful of pocket beaches along the Takatz Bay shoreline allow dingy/kayak landings for shore excursions. The remainder of the shoreline is near-vertical granite walls with cascading waterfalls. Takatz Creek and its estuary include several scenic waterfalls and a rugged hiking opportunity along the creek to the beaver pond area. Dolly Varden trout spawn in Takatz Creek and crab/shrimp harvesting is possible in the basin. The rocky islet has a newly established campsite for field research activities associated with the proposed project, which is included in the recreation facilities of the area. No other campsites or cabins were found in Takatz Basin.

Outer Takatz Bay includes several rocky islets with potential for wildlife viewing, fishing and temporary anchorages. Another anchorage area exists north of the Takatz islands archipelago and the peninsula and is primarily a commercial fishing anchorage because the area is exposed to Chatham Strait waves. There are also a handful of small beaches and estuaries along the shoreline which may allow sea kayak or skiff-based camping.

Other uses

NSRAA uses Takatz Bay as a chum salmon rearing site for their Hidden Falls Hatchery operation. A net pen is seasonally placed in Takatz Bay from mid-March to the end of May or early June. A small crew lives on a work barge during this period. Takatz Bay is essentially the crew's backyard during these two and half months and a number of boating, hiking and beachcombing activities are expected to occur. The pens and barge are pulled out in June. The area is also used by hatchery staff to harvest chum salmon stock in late June to the end of July. (Reifenstuhl, 2011)



Photo 12. Seasonal Net Pens

During the Chatham salmon seine commercial fishing season from mid-June through early October, Takatz Bay is a convenient anchoring location between fishing periods also called “openers”. Trollers, long-liners, gillnetters and shellfish boats also utilize the area during their various fishing seasons. While anchored, many fishing boats also set shrimp and crab pots in the vicinity for personal use.

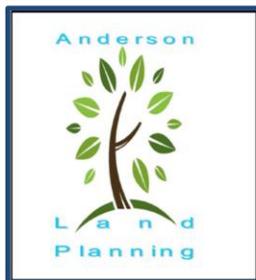
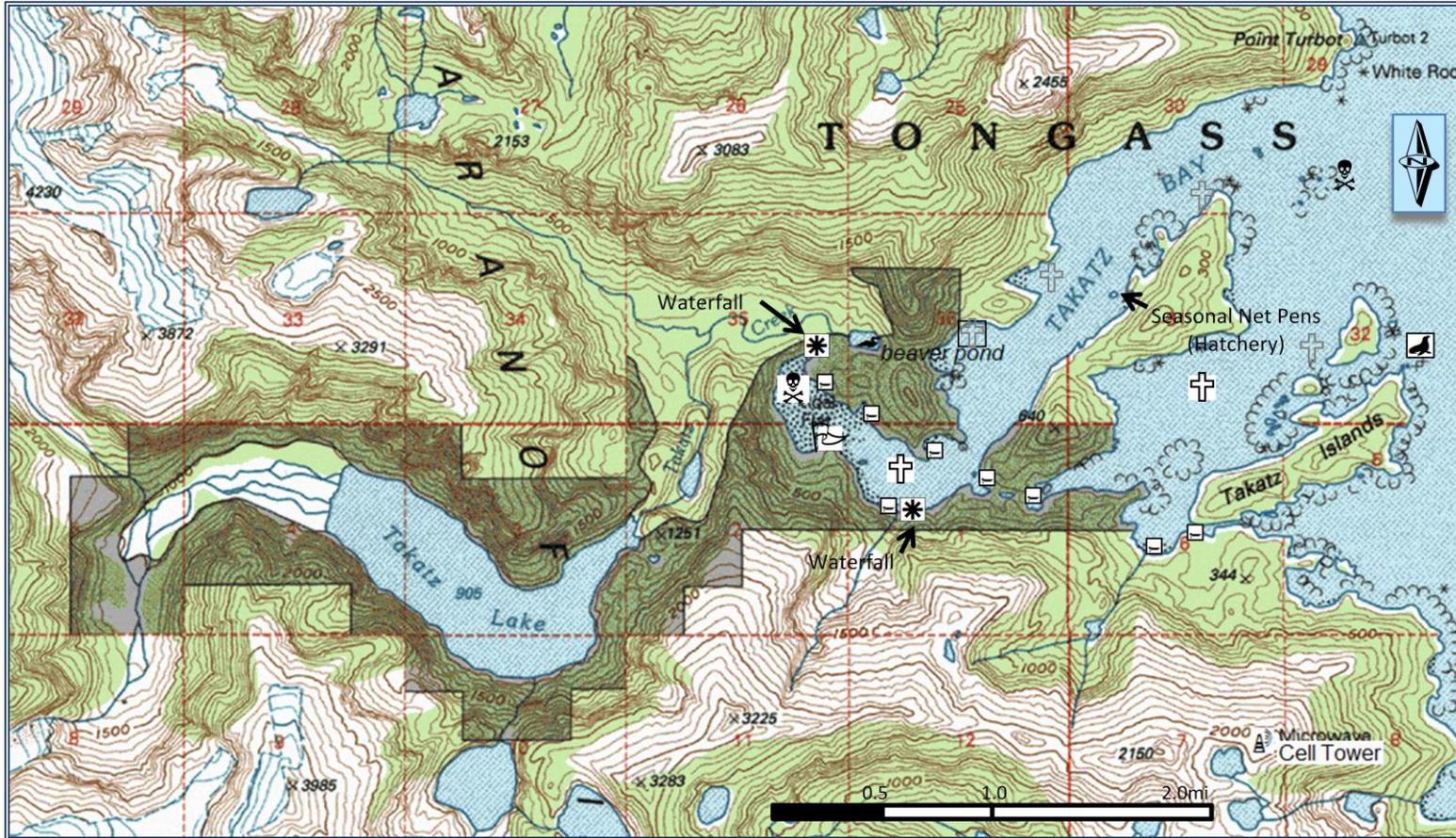


Photo 13. Commercial fishermen going to set their crab pot while relaxing in Takatz Bay



Photo 14. Commercial fishermen rafted up in Takatz Bay

Figure 8. Takatz Basin Recreation Resources



- Legend
- ⊕ Major Anchorage
 - ⊕ Minor Anchorage
 - ⌛ Campsite
 - ⦿ Sport Fishing
 - ☐ Beach Landing
 - ✱ Scenic Viewpoint
 - 🦋 Wildlife Viewing

Takatz Basin
Study Unit



Figure 8. Takatz Basin Recreation Resources

Baranof Basin

Baranof Basin is approximately 20 miles east of Sitka on the east side of Baranof Island. Baranof Basin is characterized by a large glacially-fed lake, a long steep river valley, moderate granite slopes and stunted muskeg vegetation and several saltwater bays offering protected anchorage. Lower Baranof Creek enters saltwater in a dramatic cascade which is visible when entering Warm Springs Bay.



Photo 15. Baranof Warm Springs community and dramatic cascade

Recreation Facilities and Dispersed Recreation Areas/Resources

Baranof Basin has a combination of semi-developed recreation facilities in a largely natural setting. The combination of the setting and hot springs is a draw for local fishermen, cruisers, tourists and tour operators. See *Figure 9* for an inventory of recreation resources.

Upper Baranof Basin includes a remote river valley with steep peaks and rocky snow-covered ridgelines. Occasional dispersed hiking and camping occur in the valley and upper ridges. Rugged hikes and backpack rafting opportunities exist in the valley bottom. The north ridgeline is part of the Cross-Baranof Island Trail.



Photo 16. Upper Baranof River valley



Photo 17. Canoeists on Baranof Lake

Baranof Lake is a large mountain lake surrounded by granite peaks with access from the anchorages and dock at Warm Springs Bay by the Baranof Lake Trail. A Forest Service public use cabin is located at the far west end of the lake and is generally accessed by floatplane or canoe/kayak. Anglers can fish for the resident cutthroat trout along the stream mouth or by small boat on the lake. For local residents, a small boat and canoe storage area exists at the Baranof Lake Trail terminus on a scenic beach. A trail spur goes to Sadie Lake, a small scenic mountain lake also containing cutthroat trout.

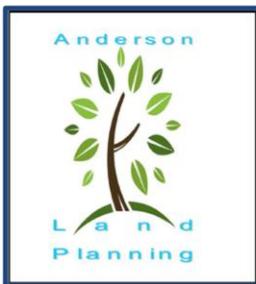
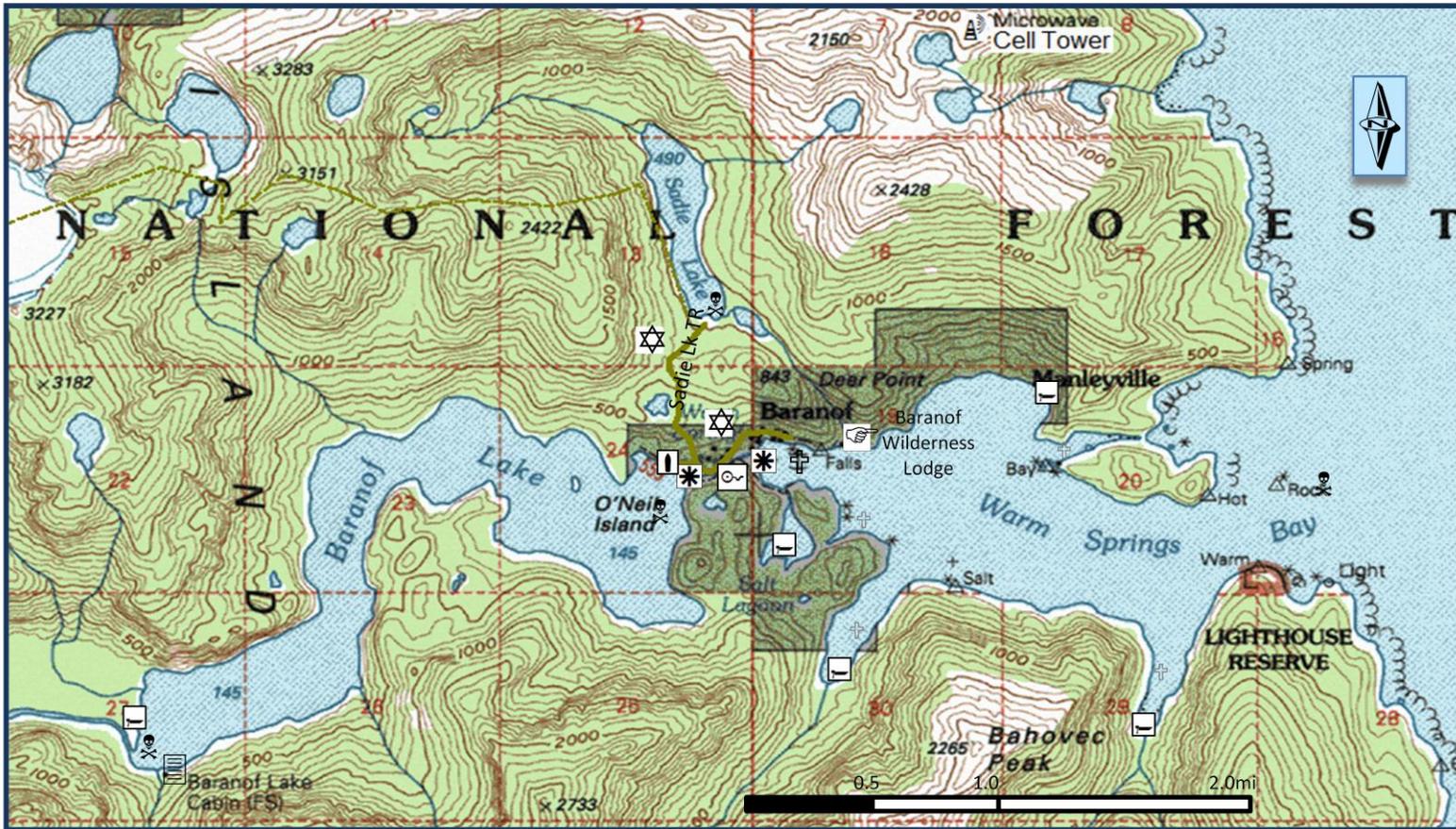
The principal Southeast Alaska cruising guide describes Baranof Warm Springs:

“Warm Springs Bay has a huge, beautiful 100-foot waterfall at its head... Equally impressive are the natural hot springs, an easy half-mile walk from the public float... This is an increasingly popular stop for cruisers, so plan to arrive early in the day if you want a spot at the dock. Boats often anchor nearby and dingy in for the hot tubbing... The salt lagoon across the bay to the south is fun to explore by dingy or kayak (*Hemmingway-Douglass, 2007*).



Photo 18. Baranof Warm Springs Public Dock

Figure 9. Baranof Warm Springs Basin Recreation Resources



- Legend
- † Major Anchorage
 - † Minor Anchorage
 - ⊠ Beach Landing
 - ⊠ Scenic Viewpoint
 - ⊠ Hot Springs
 - ☆ Trail
 - ♁ Sport Fishing
 - ⊠ Boat Storage Area
 - ⊠ Lodge
 - ⊠ USFS Cabin

Baranof Basin Study Area



Figure 9. Baranof Basin Recreation Resources

The small community of Baranof Warm Springs includes a public dock for boats and floatplanes, a city boardwalk which serves as the main thoroughfare and approximately fifteen seasonal homes. Other recreation amenities are a public waterfront bath house, a picnic shelter with barbeque, a falls viewing area and a natural hot springs grotto with rock-lined pools (see *Figure 10*). Un-treated water is available at the dock. A general store selling sundries, coffee and gifts has operated seasonally in the past, albeit irregularly. Notably absent in the area are public restrooms, a payphone, or other common visitor amenities. The public dock does not charge moorage fees and is first-come-first served for vessels.



Photo 19. Public Dock



Photo 20. Bath House



Photo 21. BBQ Shelter

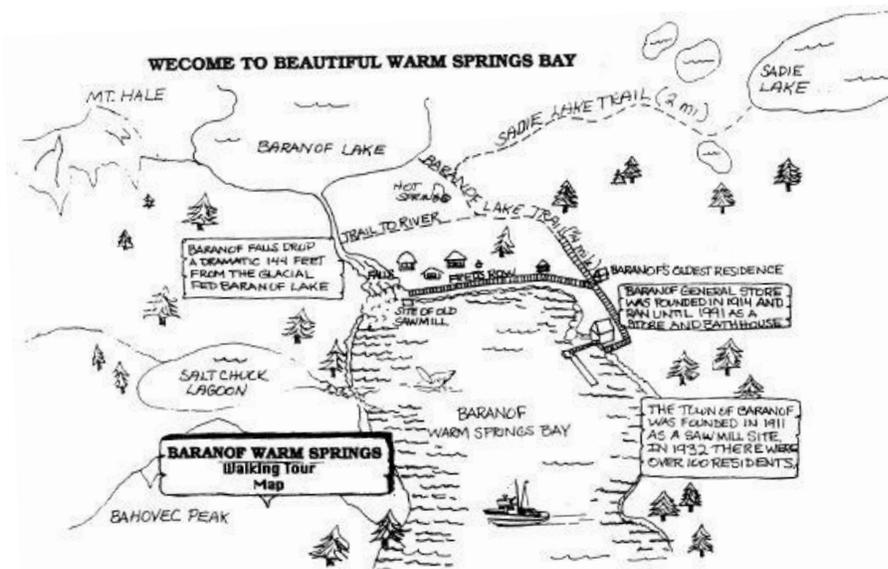


Figure 10. Baranof Warm Springs town site (Source: Baranof Property Owners Association)



Photo 22. Warm Springs Bay with several anchoring basins

Warm Springs Bay has four anchoring areas – Southwest Arm, Schooner Cove and the small bight just to the east of the salt lagoon. Boats also frequently anchor temporarily near the approximately 200 foot-long public dock though depths are deep and the current is strong. A small float house is located in Schooner Cove. Baranof Wilderness Lodge is located east of the town site on Sadie Creek. The bustling facility includes a main lodge and outdoor patio as well as seven guest cabins, dock and support facilities.

Other amenities

A cell phone tower is located just outside the entrance of Warm Springs Bay on an unnamed 900 foot high ridge. Good connections are found in Chatham Strait and nearby Takatz Bay, but the signal weakens significantly in Baranof Warm Springs due to topography.



Photo 23. Seasonal homes are situated along the public boardwalk

in addition to local homeowners funding. Sitka Trail Works re-built the main boardwalk trail a few years ago. The BPOA has expressed that they have no desire for commercialization of the town site.

Baranof Property Owners Association (BPOA) plays a significant role in the upkeep of the recreation facilities at Baranof Warm Springs. Property owners clean the tubs, remove garbage, repair waterlines, replace planks and keep the floatplane dock in service through their volunteer labor and supported in part by visitor donations. The

City of Sitka contributes funding for snow removal

Medvejie Basin

Medvejie Basin is located approximately ten miles south of Sitka along Green Lake Road. Medvejie Lake valley is nestled between the hulks of Bear Mountain and Cupola Peak. Little level land exists between the mountains and shores of the lake owing to the precipitous rise of surrounding topography. The geography of the area creates a narrow natural wind tunnel making blow-downs, landslides and avalanches common throughout the valley. The lake normally freezes over in the winter and there is evidence of rock slides all seasons.



Photo 24. Medvejie Lake with steep slides evident

Recreation Facilities and Dispersed Recreation Areas/Resources

Scenic Medvejie Lake is noted as "Yosemite-like" in the Sitka Trails Plan (*Sitka Trail Works, 2001*), but the logistics of getting there and the primitive facilities make this generally a locals' destination. See *Figure 11* for an inventory of recreation resources.

Green Lake Road is a continuation of Sawmill Creek Road south of Sitka that follows the shoreline of Silver Bay before terminating at Green Lake Dam. The road is gated at Herring Cove with a narrow



Photo 25. Gate at Green Lake Road



Photo 26. Medvejie Trail bridge

route as a viable recreational trail corridor if given major trail work (*Sitka Trail Works, 2001*). Dispersed hiking, camping and hunting occurs in this area, with much use associated with the Baranof-Cross Island Trail.

Baranof Cross-Island Trail

The Baranof Cross-Island Trail is an informal trail located across Baranof Island from the community of Sitka to Baranof



Photo 28. Hiker descending to Camp Lake along the Baranof Cross-Island Trail

entrance for foot or bicycles. Recreating visitors currently park at the gate trailhead and walk or bicycle to the Medvejie Fish Hatchery.

A narrow, log-strewn trail serves as the main trail to Medvejie Lake and is also the usual beginning (or ending) segment of the Baranof Cross-Island Trail. A communal canoe is stored at the west of the lake. A very rough route is used by hikers along the northern shore to continue around the lake to the upper valley. A few scattered campsites exist along the shoreline.

Upper Medvejie valley is a rugged, glacially carved valley with several alpine lakes and a lush meadow at Camp Lake. The Sitka Trails Plan identifies the Bear Cove to Camp Lake



Photo 27. View looking back from the east lake side

Warm Springs. The trail is well known among resident Sitkans, but only a handful of groups attempt the route each year. From start to finish, the trail spans approximately sixteen miles, but owing to the difficult terrain and mountaineering skills needed, the average crossing requires two to three (2-3) days. The route crosses Mount Bassie at 4,300 feet and crosses several ice-fields, rocky ridges and descends down to Baranof Lake through a mix of temperate rainforest and cliffs. There are currently no commercial guides for the trail; however, local guides are available informally. Approximately six (6) formal mountaineering rescues have occurred in this area over the past 26 years according to Don Kluting, Sitka Mountain Rescue Director. Most of the rescues have been for individuals or groups attempting to cross the island. The primary causes for complications on the trail are

poor weather, poor decision-making after bad weather sets in, lack of equipment, and poor physical fitness. (*Kluting, 2011*) See *Figure 12* for the general route area and route profile.

Other uses

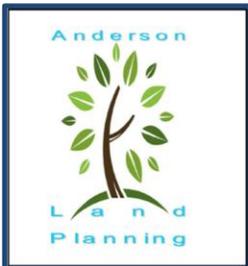
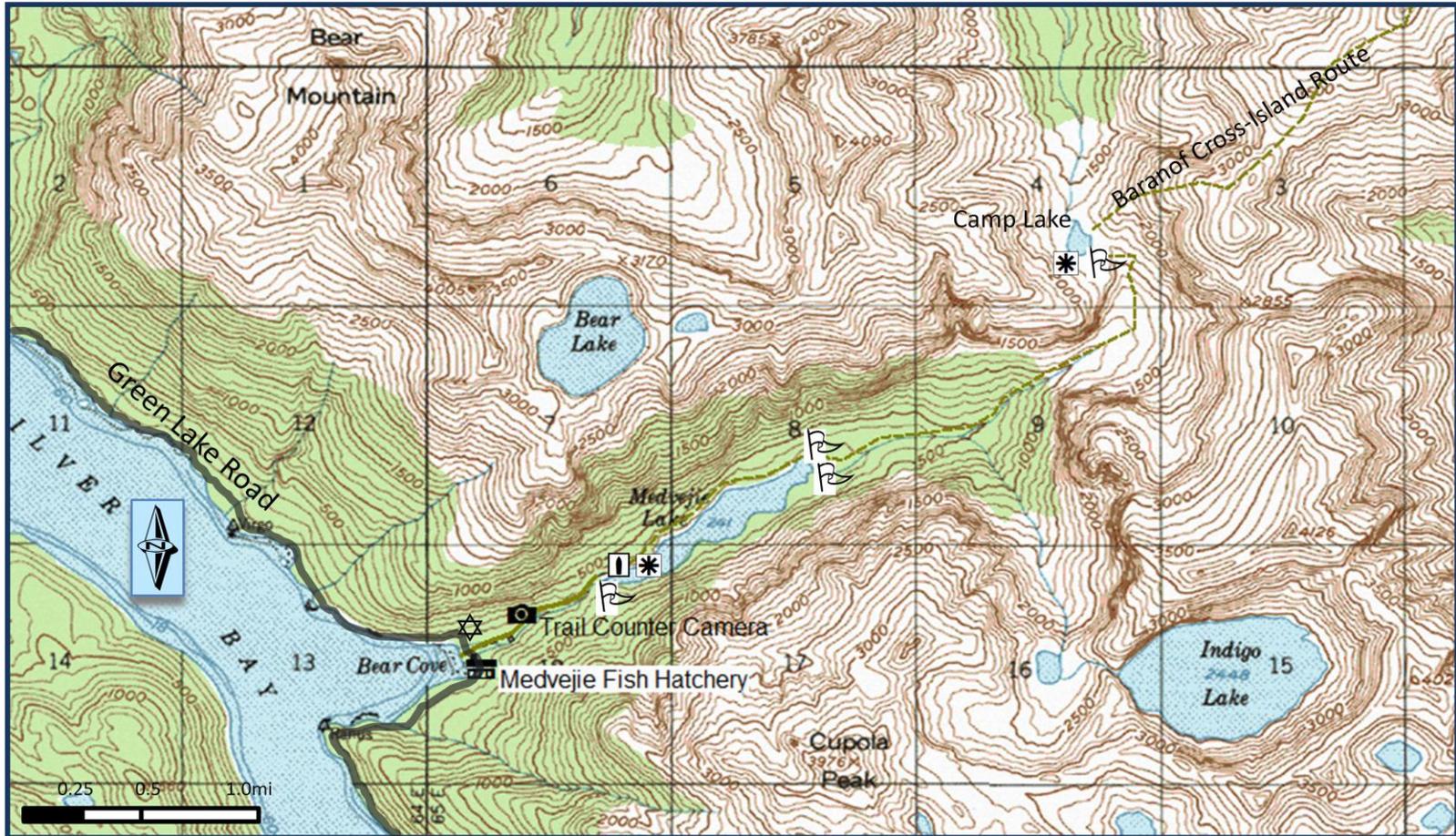
Bear Cove, in larger Silver Bay is the location of the NSRAA's Medvejie Hatchery. The facility includes covered structures, fish-rearing pens and caretaker buildings and is accessible by Green Lake Road. The dock facility is occasionally used by Medvejie Trail hikers if permission is granted by staff.

Intensive commercial fishing for king salmon occurs in May and June throughout Silver Bay. Bear Cove can have up to fifteen vessels in the small bay. A campsite, utilized by Hand-trollers, is often occupied on the south bank during this time period. (*Reifenstuhl, 2011*)



Photo 29. Medvejie Hatchery as seen from Bear Cove on Silver Bay

Figure 11. Medveje Lake Recreation Resources



Legend

- ☆ Trail
- ⛺ Campsite
- 🚤 Boat Storage Area
- ✳ Scenic Viewpoint

- 🛣 Road
- 👉 Rough Trail

Medveje Basin
Study Area

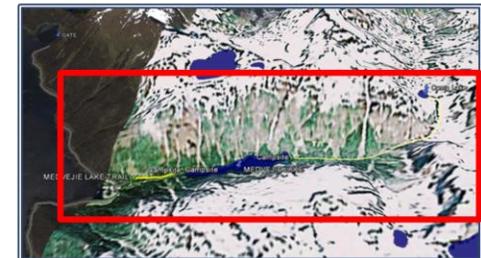
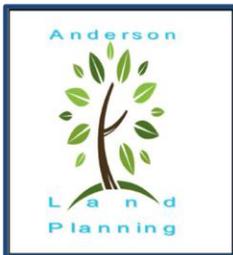
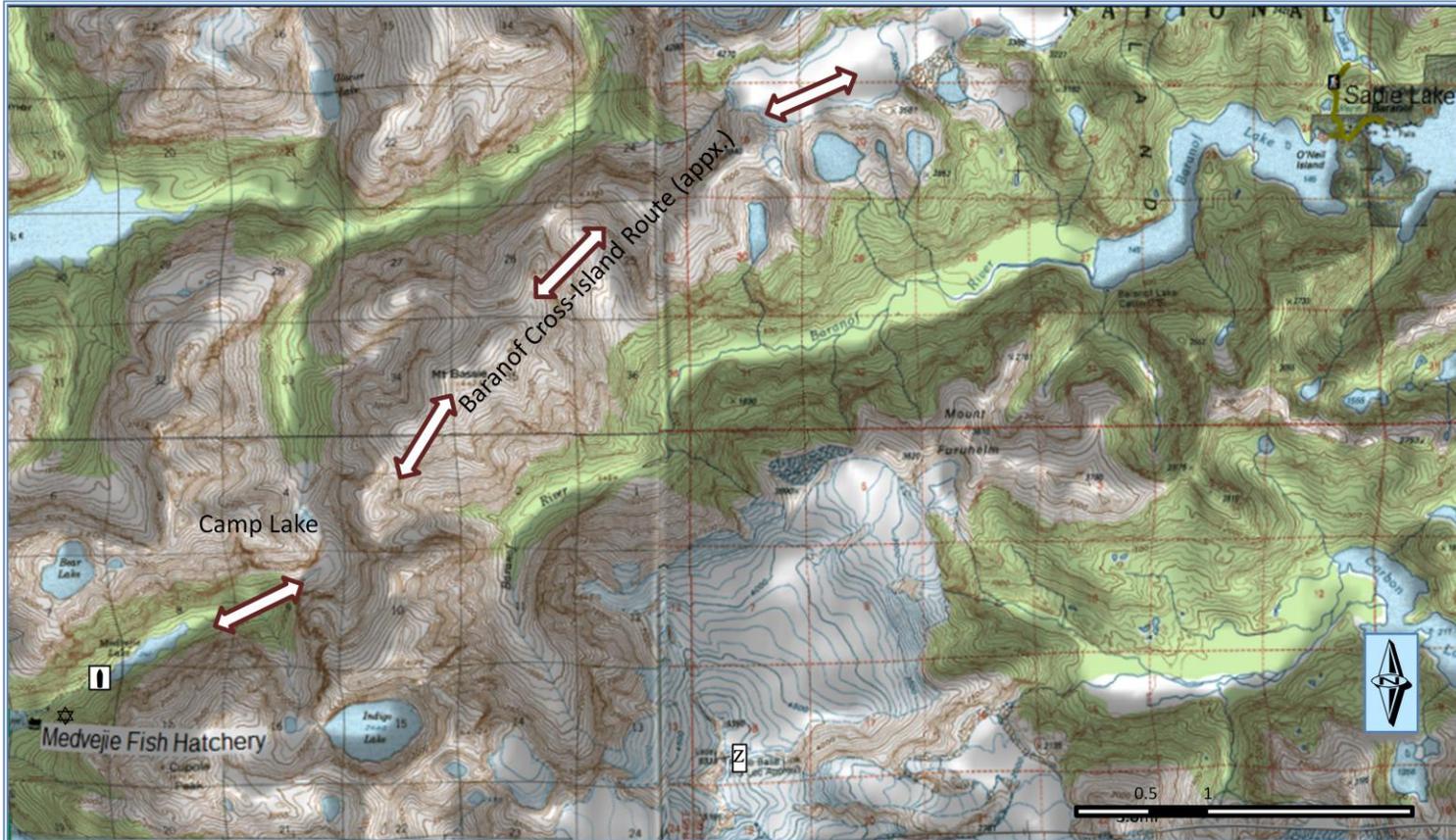


Figure 11. Medveje Basin Recreation Resources
Draft Recreation Resources Study Report
Anderson Land Planning; Agnew:Beck
December, 2011

Figure 12. Baranof Cross-Island Route (approximate)



Legend

- Trail
- Boat Storage Area
- Route
- Tower



Figure 12. Baranof Cross-Island Trail
Draft Recreation Resources Study Report
Anderson Land Planning; Agnew:Beck
December, 2011

PROJECT AREA RECREATION OPPORTUNITIES

A recreation opportunity is defined as a specific activity occurring in a particular setting and acknowledges that those engaged in a recreation activity are seeking a particular experience. For the purposes of this report, recreation opportunities are described on a simple scale of developed versus natural. The following existing recreation opportunities are located within the Project Area. Within each description of recreation opportunity, associated facilities supporting the opportunity are described. In addition, refer to *Figures 8-12* which indicate both developed and natural recreation resources in each Study Unit.



Photo 30. Evening 'Fun Board' activity

Lodging

The majority of visitors to Warm Springs Bay and Takatz Bay sleep on their boats eliminating the need for extensive visitor services. Baranof Warm Springs has approximately fifteen seasonally-occupied private cabins. These cabins are linked by a City-maintained boardwalk which serves as the main thoroughfare for the town. A few of the cabins are available to rent directly from the owners.

Baranof Wilderness Lodge (owners Mike and Sally Trotter) is the only lodge operating in the Project Area and is open May through October. The Lodge is located directly east of the town on Sadie Creek. The facility includes a main lodge, outdoor patio as well as seven guest cabins, dock and support facilities. The Lodge advertises a high quality Alaska wilderness and fishing experience for families and small groups and provides a customized experience for each guest.

Guests choose between five or seven night stays and typically fly one way and take a boat tour back to Sitka. A typical day at the Lodge includes saltwater fishing for halibut or salmon and/or freshwater angling for cutthroat trout, whale watching, wildlife viewing and a family-style dinner emphasizing local seafood. The Lodge takes pride in attention to every detail and boasts of a 90% repeat or referral rate.



Photo 31. Satisfied guest on 'Graduation' night



Photo 32. Forest Service Baranof Lake cabin

A Forest Service Cabin is located on the west end of Baranof Lake and is typically accessed by floatplane from Sitka or other regional communities. The cabin is a typical pan-abode structure and a rowboat is provided for permit holders. Most reserved use comes from fly-in visitors.

Hiking and Backpacking

There is one developed trail within the Project Area: Baranof Lake Trail. Other rough trails include Sadie Lake Trail and Medvejie Lake Trail.

Baranof Lake Trail is 0.5 miles long starting at the public dock and includes the boardwalk linking the waterfront to Baranof Lake and to the natural hot springs. This trail is highly developed for the region and is popular with locals and visitors. The actual trail spur from the boardwalk to the hot springs is not signed and in a primitive condition. Currently, less-agile visitors are unable to access the hot springs grotto due to the rough nature of the trail.

Sadie Lake Trail is a spur off Baranof Lake Trail that leads uphill to Sadie Lake. The trail is primitive with small hand-built structures and is nearly a mile long. The trail winds through boggy muskeg terrain and open spruce/pine forests. The trail intersection is not signed and visitors either discover it by chance or ask locals. Some visitors to the area are guided anglers from the lodge in summer months. Both Baranof and Sadie Lake trails act as a portal to undeveloped recreational opportunities in Baranof Basin. The surrounding terrain is moderately steep but without the typical dense spruce/hemlock forest allowing off-trail hiking opportunities.



Photo 34. Hikers descending to Sadie Lake



Photo 33. Sadie Lake Trail rough section



Photo 35. Location of Medvejie Trail between the Hatchery and Lake

Medvejie Trail is a route between Medvejie Hatchery and Medvejie lake. The trail is primitive with heavy tree blow-downs across many areas. Hikers using the trail must be fit and agile. The actual trailhead is difficult to find and is not signed. First-time hikers typically go with someone knowledgeable, or ask directions of hatchery staff for directions. Medvejie Lake area serves as a recreational gateway to inland destinations such as Mt. Bassie, Indigo Lake and Camp Lake. Camp Lake offers alpine views

and solitude with above-tree line access to numerous ridges. Medvejie Lake is also the beginning (or ending) segment of the Baranof Cross-Island Trail.

Backcountry hiking throughout the Project Area generally occurs along game trails. Upper Baranof creek offers rugged hiking and pack rafting opportunities. The Baranof Cross Island Trail is an informal route across rugged terrain between Medvejie Lake and Baranof Warm Springs.



Photo 37. Extensive blow-down along the Cross-Island route



Photo 36. Medvejie Trail example of primitive condition



Photo 38. Informal campsite at Camp Lake

Camping

There are no formal developed campgrounds in the Project Area; however, the picnic shelter at Baranof Warm Springs serves as a camping site for occasional visitors.

For more natural camping opportunities, informal backcountry camping occurs in upper elevation areas along the Baranof Cross-Island route, at lake edges and at coastal beach locations. Little evidence was found of campsites along Baranof Lake except at the far west end, north of the cabin.

Boating

A significant amount of visitor recreation to the Project Area is marine-based. The public dock is a major attraction at Baranof

Warm Springs in all seasons.

The availability of fresh water and adjacent bath houses were cited as significant reasons for choosing this destination. There is also a floatplane dock associated with this facility allowing easy crew or passenger transfers.

Medvejie Hatchery has a small dock that is used occasionally for passenger drop-offs to hike the Medvejie Trail and/or the Baranof Cross-Island Trail with NSRAA



Photo 39. Public Dock and Floatplane Dock



Photo 40. Kayakers exploring Warm Springs Bay

permission.

Because of the limited dock facilities, anchoring out is a typical activity at the various Project Area locations. Takatz Bay head is the main protected anchoring basin with additional locations in other small bays. Warm Springs Bay has several protected bays that can accommodate one to several boats within a reasonable dingy distance of the busy public dock. The basin directly south of the

public dock is fairly deep but used as an overflow for boats waiting for dock space or by larger vessels in calm conditions.

Dispersed non-motorized boating resources include Baranof Lake which has a small gravel beach that serves as the local small boat storage area and Medvejie Lake where a communal canoe is stored. The entire coastline of the Project Area allows shoreline exploration by dingy or kayak with opportunities for beaching boats at several beaches.



Photo 41. Sport fishermen off outer Takatz Bay

Sport Fishing

The Project Area and general vicinity offers abundant and diverse salt and freshwater fishing. The remote coastline along with the bays and estuaries support a large habitat variety for salt-water fish species. Several species of salmon as well as halibut, lingcod, black cod, Dolly Varden and rockfish are targeted by anglers in specific seasons. Takatz

Bay estuary has a population of Dolly Varden which attracts mostly local

anglers from lodges in the area. There are no developed fishing facilities so sport fishing occurs from private boats and commercial charter boats. Occasionally, salmon can be caught from the Baranof public dock. Sport and personal-use shellfish harvesting also occurs throughout the Project Area.

The Project Area also includes two notable fresh water fishing areas for cutthroat trout: Baranof Lake and Sadie Lake. Baranof Lake fishing access is via the trail, cabin, boat or floatplane near the Upper Baranof River stream mouth. Sadie Lake fishing is accessed by the trail and typically occurs along the shoreline by the creek outfall. Some angling occurs on Medvejie Lake but it is not regarded as a high-quality fishing lake.

Hunting

Brown bear, deer and mountain goat recreational and subsistence hunting occurs in the Project Area with permits issued by Alaska Department of Fish and Game. Medvejie Basin was closed to goat take by emergency order in 2011, due to overharvest of females. There is a half-mile hunting closure around Bear Cove due to hatchery activities. (*Alaska Department of Fish and Game, 2005-2011*)



Photo 42. Fly-fishing in Baranof Creek

Sightseeing and Wildlife Viewing

Traveling by boat along the Project Area coastline offers spectacular sightseeing and marine/land wildlife viewing opportunities. The high Baranof Island peaks are snow clad into late summer with waterfalls cascading from exposed granite cliffs and numerous rivers and creeks. The shoreline has innumerable verdant islands and rocky islets that harbor sea lions, seals and birds. Humpback whales are seasonally abundant and orcas also frequent the area. Brown bear visit the rivers, creeks and estuaries in search of salmon in late summer and fall. Sitka black-tailed deer can be spotted nibbling at beach vegetation. There is high potential to see a number of Southeast Alaska's charismatic mega-fauna along this coastline.

The interior lakes and peaks offer opportunities to see mountain goat, deer, and enjoy meadows surrounded by mountain scenery.

Bathing/Hot Springs

Baranof Warm Springs is well known for its natural hot springs pools dramatically located against the cascading white water of the Baranof River. The hot springs grotto is the primary destination for most visitors to the region, even if they do not soak in them. Residents have built an open-air changing area, but generally the hot springs area is a natural setting.



Photo 43. Baranof Hot Springs

option for visitors not wanting to bathe communally and/or to make the 1/4 mile hike to the natural hot springs grotto.

A public bath house on the main boardwalk holds three tubs. Dock visitors use them for private and convenient soaks in piped hot water. The community built this attractive amenity at the waterfront to provide an

option for visitors not wanting to bathe communally and/or to make the 1/4 mile hike to the natural hot springs grotto.



Photo 44. Sign for the free public bath house

Winter Sports: Skiing, Snowboarding & Snowshoeing

Winter use activities like backcountry skiing, snowboarding and snowshoeing occur in the more moderate terrain of Baranof Warm Springs, but is not quantifiable. The Medvejie area is prone to avalanche activity due to the extremely steep terrain. Occasionally the lake freezes solid and a few hardy groups have accessed it for ice skating, but aside from hatchery staff, use is light in winter. Aside from Hatchery staff, little winter use is expected in Takatz.

Gathering Forest Products

The main trails and informal routes provide access to various berry picking and forest product gathering locations for both residents and visitors.

Biking

Green Lake Road is a continuation of Sawmill Creek Road south of Sitka that follows the shoreline of Silver Bay before terminating at Green Lake and the lower penstock. The road was built as a service road for Green Lake Dam. The road is gated at Herring Cove and public access beyond is only by foot or bicycle.



Photo 45. Bikes stored at the Medvejie trailhead

the trail head.

Solitude Experience

There is a high potential for solitude in both Takatz and Medvejie Basins. Baranof Warm Springs attracts a significant amount of boat traffic to a more social and developed setting; however, dispersed areas away from the public dock also have a high potential for solitude.

There is light vehicle traffic from both the hydroelectric facility and the Medvejie hatchery at Bear Cove. The Medvejie Trail is commonly accessed by biking the three and a half (3.5) miles to the hatchery and then continuing on foot, leaving the bikes at



Photo 46. Visitor at Takatz waterfall

Flight seeing

Flight seeing is an opportunity in Sitka and other local communities with several companies offering flight seeing trips over scenic Baranof Island. Baranof Warm Springs and Hidden Falls are common destinations for passenger drop-offs in addition to routine service to Angoon. Portions of the Project Area are on the most direct air route to Angoon and Juneau for local air companies based in Sitka. Harris Air, a local Sitka company, estimates they fly approximately six (6) times a week to the Baranof/Takatz area in the summer. This includes their service to Baranof Wilderness Lodge at least one (1) time per week and Hidden Falls twice a week in



Photo 47. Cabin users with their chartered floatplane

addition to special charter flights to the Baranof Lake Forest Service cabin and Baranof Warm Springs. (*HarrisAir, 2011*) A few private planes also utilize the public float plane dock at Baranof Warm Springs in summer.

Commercial Fishing and Hatchery Operations

While not literally a recreational activity, the significant number of vessels in the commercial fishing fleet contributes to brief, intense periods of recreational activity in both sides of

the study area. Approximately 265 Southeast Alaska seine permits were given in 2011 targeting five species of salmon, mid-June through early October. Salmon trollers operate in the area in winter, spring and summer troll seasons. There were also 83 sablefish fishery permits in 2011. (*Alaska Department of Fish and Game, 2007-2011*)

Commercial fishing boats anchor and dock in the Project Area between fishing openers and participate in a wide diversity of recreation opportunities described above.

NSRAA maintains a seasonal net pen and crew barge in Takatz Bay associated with Hidden Falls Hatchery and also operates the Medvejie Hatchery in Bear Cove. Staff working at both facilities recreate frequently in the Project Area. (*Reifenstuhl, 2011*)



Photo 48. Seiners at Baranof Warm Springs between fishing openers

CURRENT RECREATION USE

RECREATION USER CHARACTERISTICS

Collecting information on visitors in Alaska backcountry is especially challenging because of dispersed access by a relatively small number of visitors along miles of saltwater coastline and numerous lakes with an almost infinite boat and float plane access points. A method recommended for covering large, remote areas in a short time period is conducting over-flights to count marine vessels along the shoreline (*USDA Forest Service, 2010*). This method was employed in the Study as well as the more traditional observations at select access points and the use of a trail counter. Visitation and activity participation were estimated through the use of instantaneous counts, as well as by monitoring use at specific recreation sites over a longer period of time. A thorough web search and personal interviews gathered agency data on commercial guiding, sport fishing and hunting.

For this Study, measures of use include people-at-one-time (PAOT), boats-at-one-time (BAOT), and recreation days (RDs). A RD is the desired unit of measurement by FERC and is defined as a visit by one person to a recreation area for any portion of a single day. It should be noted that PAOT/BAOT represents a snapshot of use intended to estimate the amount of use and the activities of visitors at a particular point of time. The recreation user groups found in the Project Study Area are described below. Average group sizes for each group are presented in *Table 1*.

People-at-one-time (PAOT)

This unit of measurement signifies individual people visiting the Project Study Area.

Boats-at-one-time (BAOT)

Private Vessel - This group represents multi-week cruisers from Southeast Alaska and British Columbia communities or extended trips from Pacific Northwest ports. Typically each boat has one couple or family/friends aboard.

Commercial Fishing Vessel - This group represents the commercial fishing fleet which is centered on Chatham Strait and Silver Bay over a brief, intense period of a few months. Crew sizes vary per boat type: Seiners (5 crew), Trollers (1-2 crew), Gillnetters (1-3 crew), Longliners (2-4 crew) and Tenders (2-5 crew).

Charter Yacht - Charter yachts offer small ship cruises exploring remote areas roughly between Juneau, Petersburg and Sitka. Many also operate out of Seattle, British Columbia, and other west coast ports. Charter yachts typically offer individual staterooms, gourmet cuisine, customized itineraries and a variety of guided activities like fishing, kayaking and hiking.

Charter Fishing Vessel - This group represents day or multi-day charter fishing boats from lodges and population centers that are scattered around Chatham and Peril Strait (includes Baranof Wilderness Lodge).

Small motorized craft - This group represents small skiffs and dinghies. Most larger vessels will have their own tender for shore excursions and these are not included in use estimates. This group also includes work skiffs associated with NSRAA activities.

Small non-motorized craft – This group represents kayaks and canoes. These may be a part of the other groups listed above or an individual group on a long-distance wilderness trip.

Floatplane – This group represents air travel of people and is included in the BAOT profiles.

Table 1. Recreation User Group Sizes

Recreation User Groups	Min. Group Size	Max. Group Size	Avg. Group Size*
Private Vessel	1	6	2
Commercial Fishing Vessel	1	5	3
Charter Yacht - Large	10	80	30
Charter Yacht - Small	6	20	10
Charter Fishing Vessel	2	6	3
Small motorized craft	1	4	2
Small non-motorized craft	1	2	1
Floatplane	1	6	3

*Average Group Size used to estimate PAOT from Researcher boat counts

VISITOR OBSERVATIONS

As part of assessing existing use, this study identified the types, levels, and distribution of recreational use in the study area. *Table 2* summarizes the visitor observation sites and the methodologies that were employed by researchers for the Project Area. Sites were sampled at different levels depending on their estimated level of use. Estimates of PAOT and BAOT were made based on instantaneous counts and observations taken during the 2011 field season which began in late May and continued through October. A component of the instantaneous counts was to count the number of boats in the applicable Study Units.

Table 2. Visitor Observation Methodology by Site

Observation Sites	Visitor Survey	Instantaneous Counts	2-Hour Observations	Trail Counter
Takatz Basin		x-Aerial		
Bay Head	x	x-event triggered		
Outer Bay			x	
Baranof Basin		x-Aerial		
Public Dock	x	x-4 times a day observation		
Baranof Lake			x	
Baranof Cabin		FS data		
Sadie Lake			x	
Medvejie Basin			x	x

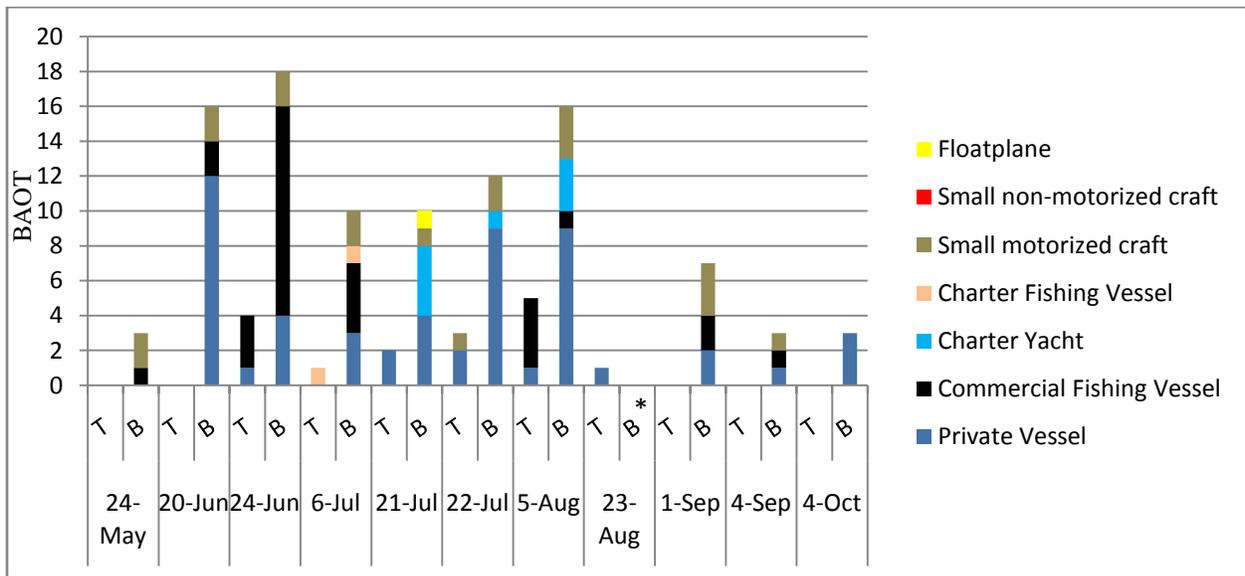
Aerial Reconnaissance Observations

Aerial reconnaissance of Takatz and Baranof Basins was conducted in a chartered floatplane to cover this remote area over an extended six-month period. Flights occurred bi-monthly over early, peak and late season time periods from May through October and on a variety of weekday, weekend day and holiday periods. Flights were conducted in high visibility conditions for a total log of 22 hours flight time. A summary of observations is presented in *Table 3*.



Photo 49. Baranof Dock during aerial reconnaissance

Table 3. 2011 Aerial Reconnaissance Observation Summary



* No data collected due to weather

T = Takatz Basin

B = Baranof Basin

Field Observations

Visitor observations occurred at several pre-selected locations and time periods due to remote locations and access logistics. Use numbers, activities, modes of transport and patterns were recorded at each location. Observations were conducted at specific time periods in Baranof Warm Springs Basin due to the high visitation numbers and frequent turnover. Takatz and Sadie Lake Basin observations were noted continuously for the duration of the research visit.

Additionally, a remote trail counter/infrared camera in the Medvejie Basin captured continuous recreation data in the Medvejie area. The activities, patterns and use levels are presented by each Study Unit below along with Forest Service use data.

Takatz Basin

Researchers traveled to this site by boat and continuously monitored use on eight (8) days in June 2011 in addition to the ten aerial reconnaissance flights. Visitor surveys were given to anchored vessels in Takatz Bay Head.



Photo 50. Takatz Bay aerial reconnaissance

Recreation Use Levels and Activities

Takatz Basin received light use by a private, charter yacht and small motorized skiffs throughout the period of observation. More than five boats in Takatz Bay Head were uncommon. Commercial fishing periods contributed to increased use of the area and boats were observed

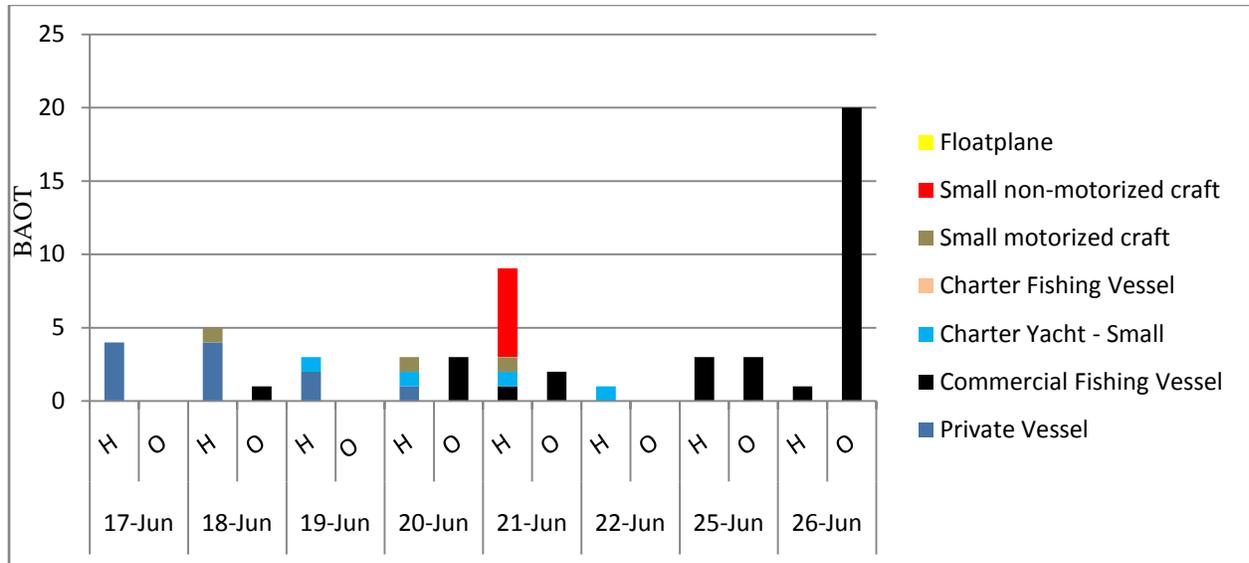
both actively seining and anchored throughout the

entire unit. Some rafted together in groups of three to four (3-4) boats. A fish-buying tender was often observed anchored in the outer bay for strategic access to the fleet.

Anchoring was the primary observed activity for most user groups. Exploration of the coastline by dingy or kayak was observed from private boats, commercial fishing vessels and charter yachts. One group was seen hiking to see the lower falls in the estuary. Several groups were observed setting pots for crab in the head of the bay. Sport fishing occurred in the Outer Bay around the rocky islets. Visitor surveys indicate resting/relaxation, wildlife viewing and sightseeing as the most popular activities for this area. See *Table 4* for the Recreation Use

Observations in this Study Unit. The numbers represent the minimum number of boats observed in both the Takatz Bay Head and Outer Takatz Bay areas.

Table 4. 2011 Takatz Basin Observations



H = Takatz Bay Head (Anchoring Basin)

O = Outer Takatz Bay

Commercial Recreation Data

Within the 04-04B Kelp Bay Use Area, the current three (3) year average (2008-2010) for group day use is 22 groups days in the spring season (or 74% of total capacity), 104 group days in the summer (57% of total capacity), and four (4) group days in the fall (21% of total capacity) (Sitka Ranger District, 2004-2011).

Outfitter/Guide Use

Eight (8) guides have used this area from 2004 to 2010. On average, two (2) guides per year use the area. Guided activities on the Tongass National Forest include brown bear hunting, freshwater fishing, hiking, and nature viewing. Hiking is the most regularly occurring activity occurring five of



Photo 51. Commercial Outfitter/Guide Use in Takatz Bay

the last seven years. Brown bear hunting is second-most, occurring four of the last seven years. *Table 5* provides client and group numbers for Takatz Basin. (*Sitka Ranger District, 2004-2011*)

Table 5. Takatz Basin Outfitter/Guide Use

	2004	2005	2006	2007	2008	2009	2010
Clients	7	16	6	7	5	27	7
Groups	3	5	1	5	1	4	3

Source: Forest Service – Sitka Ranger District

Baranof Basin

Researchers traveled to these sites and monitored use on a total of eight (8) days in June through September 2011 in addition to the ten aerial reconnaissance flights.



Photo 52. Baranof Warm Springs Dock survey in peak season

Recreation Use Levels and Activities
 Baranof Basin received consistent use throughout the period of observation. The dock was full most nights with many boats anchored out nearby. Commercial fishing periods contributed to brief, intense use of the area with boats rafted three to six (3-6) deep on the dock. During this time, many private boats were observed visiting for a few hours but not staying the evening.

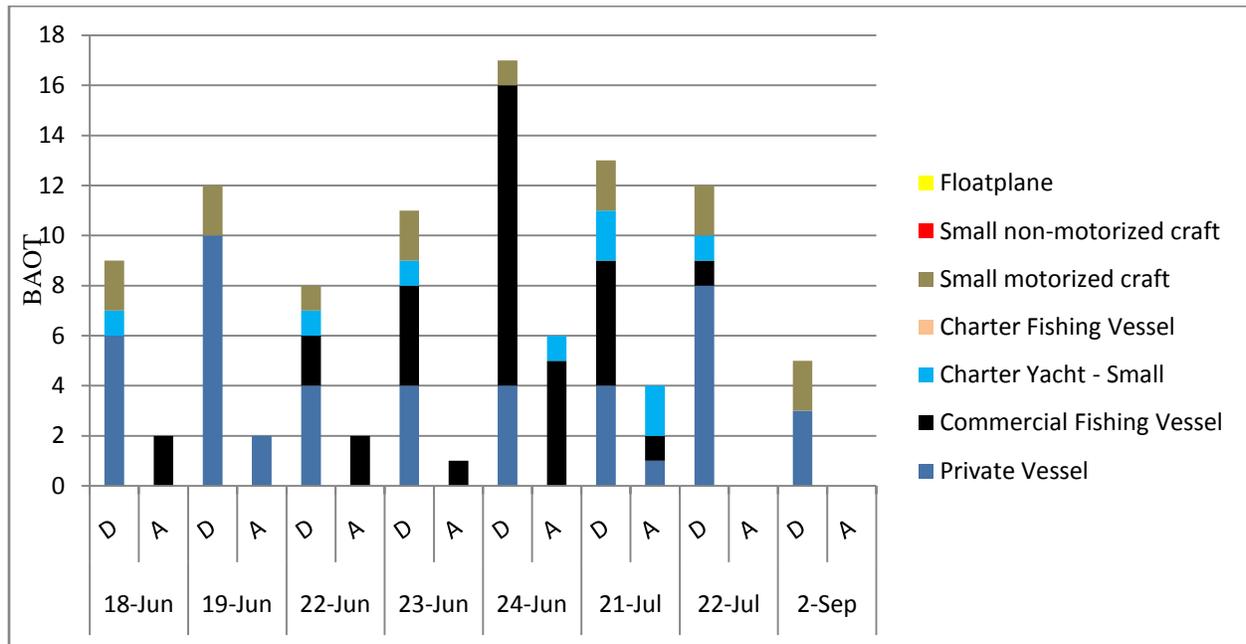
Off-season use is predicted to be lighter, although the presence of a dock increases the draw in the regional area. A winter caretaker is present at both the lodge and town September to May.

See *Table 6* for the Recreation Use Observations in this Study Unit. The numbers represent boats observed each night at 9:00pm at the public dock and in the adjacent overflow anchoring basin and is considered the minimum amount for the area. A few vessels may not have been recorded if anchored in the other bays and using their tenders to access the dock.



Photo 53. Baranof Warm Spring Dock survey in late-season

Table 6. 2011 Baranof Basin Observations



Commercial Recreation Allocation

Warm Springs Bay, Baranof Lake and Sadie Lake fall within the 04-04C Baranof Warm Springs Use Area. The current three (3) year average (2008-2010) for group day use in 04-04C is zero (0) group days in the spring, 23 group days in summer (or 60% of total capacity), and two (2) group days in the fall (33% of total capacity) (Sitka Ranger District, 2004-2011).

Baranof Outfitter/Guide Use

16 registered guides have used this area from 2004 to 2010 with an average of four (4) guides per year (Table 7). Guided activities include freshwater fishing, hiking, hot springs soaking, nature viewing, photography, and sightseeing. Fishing and hiking occurs every year while other activities occur more infrequently. The remaining activities (with the exception of hot springs soaking) are likely occurring in combination with hiking and fishing (Sitka Ranger District, 2004-2011).

Table 7. Baranof Outfitter/Guide Use

	2004	2005	2006	2007	2008	2009	2010
Clients	150	164	110	99	66	89	87
Groups	46	41	38	32	21	27	28

Source: Forest Service – Sitka Ranger District

Sadie Lake Outfitter/Guide Use

Five (5) guides total have used this area from 2004 to 2010. On average, two (2) guides per year use this area (*Table 8*). Guided activities include freshwater fishing and hiking, with each of these activities occurring five (5) out of the last seven (7) years.



Photo 54. Guided fly-fishing on Sadie Lake

Table 8. Sadie Lake Outfitter/Guide Use

	2004	2005	2006	2007	2008	2009	2010
Clients	27	15	3	47	13	0	60
Groups	8	5	1	8	3	0	9

Source: Forest Service – Sitka Ranger District

Baranof Lake Cabin

Baranof Lake Cabin is a remote destination requiring a fairly expensive access by a floatplane. Use has been variable over the years with a ten year average of 24 total days occupied and 32 total number of visitors annually (*Table 9*).

Table 9. Baranof Cabin Use Data

Year	Total Days Occupied	Total # of Visitors
2000	13	25
2001	38	45
2002	27	25
2003	35	39
2004	21	36
2005	22	18
2006	28	41
2007	30	54
2008	21	19
2009	8	12
2010	21	40



Photo 55. Baranof Cabin Users getting dropped off by their floatplane

Medvejie Basin

A trail counter/camera recorded visitor use on Medvejie Trail from May 24 through early November. The counter was placed approximately halfway between the trail head and the lake. Researchers traveled to this site on eleven (11) different days from the end of May through early November of 2011 to monitor use and download data from the counter. The trail counter provided continuous monitoring of visitation.



Photo 56. Trail counter/camera

Recreation Use Levels and Activities

See *Table 10* for Recreation Use

Observations in this Study Unit. The table shows the number of people observed on the trail shown by monthly increments. Hiking, camping, canoeing, cross-island traveling and hunting were the activities observed in order of magnitude. Visitors with no return trip wearing large backpacks were assumed to have continued on the Baranof Cross-Island Trail. The minimum, average and maximum time spent by visitors was 18 minutes, 4.8 hours and 2.5 days respectively. The average group size was 2.6 people. The total number of people recorded was 239. The number of weekday, weekend and holiday trips were 36, 44 and 11 for a total of 91 trips.



Bushnell

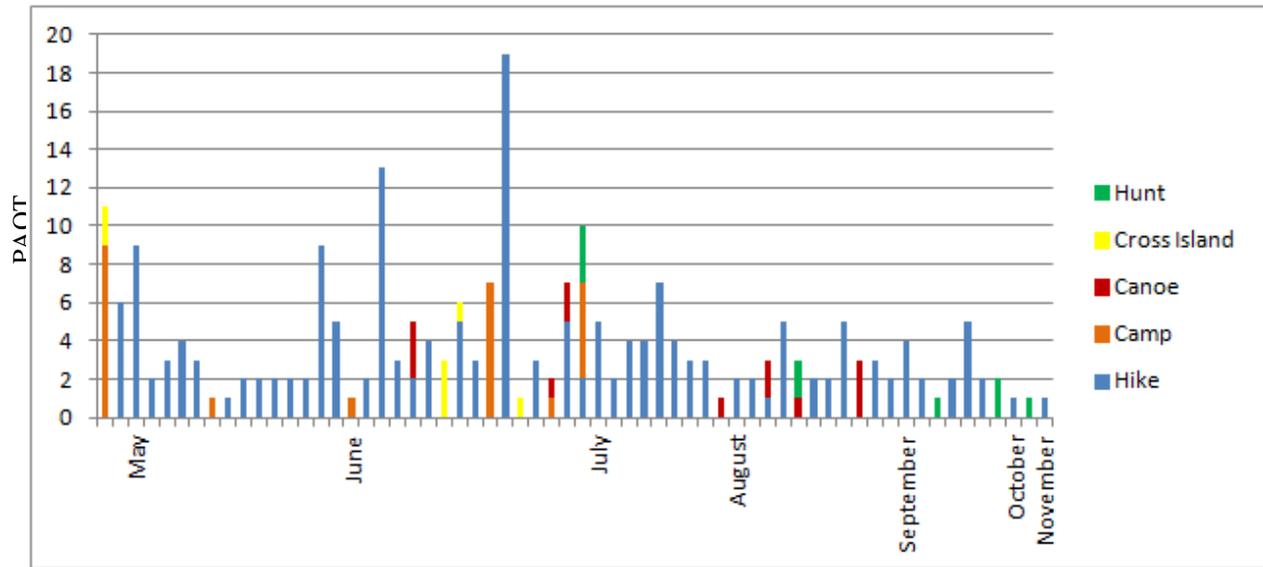
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Photo 58. Example of trail camera data (researcher)



Photo 57. Community canoe stored at lake edge

Table 10. 2011 Medvejie Trail Use



Medvejie Observation Summary

Minimum time (min)	18.0
Average Time (hrs)	4.8
Maximum time (hrs)	60.2
Average Group Size	2.6
Total # of People	239
Weekday Trips	36
Weekend Trips	44
Holiday Trips	11
Total # Trips	91



Photo 59. Terrain example along the Cross-Island Trail

Cross Island Trail

Medvejie Lake is also the beginning (or ending) segment of the Baranof Cross-Island Trail. A handful of people as individuals and in small groups were recorded attempting the Cross Island Trail during the 2011 study period.

Alaska Department of Fish and Game (ADF&G) Summary

These data do not necessarily show actual recreational use of the Study Area, but they are useful to infer user days in the Study Area.

Sport fishing

Sport fishing is a popular activity for Alaskans and out-of-state visitors and occurs throughout the Project Area. ADF&G tracks license permits which are displayed by fishery areas over several reporting years in *Table 11*.

Table 11. Sitka Sport Fish harvest and effort estimates

Anglers by Year	2010	2007	2005	2001
East Shore of Baranof Island - Boat	2051	2641	2247	2328
Silver Bay - Boat	611	2107	907	
Baranof Island streams and lakes	1346	321		
Days Fished by Year				
East Shore of Baranof Island - Boat	4286	5936	6946	11310
Silver Bay - Boat	987	4106	1854	
Baranof Island streams and lakes	1861			683

Source: Alaska Department of Fish & Game website

Brown/Grizzly Bear - Game Unit 4

Of the three (3) harvested species summarized here, only brown bear is divided into three (3) subunits. Bears, in particular, have a high average number of days per hunt, increasing the number of days hunters spend on the Forest. It is not known how many animals were actually hunted in the Project Area. The Unit 4 hunt (RB089 inside drainages (Eastern Baranof Island)) is the closest to Takatz/Baranof Warm Springs but covers a massive geological area from Juneau and Pelican in the North to Kake in the south and includes Admiralty Island. On the West side, the beaches surrounding Medvejie Hatchery are closed to recreational bear hunting, but the uplands are open. (Tables 12-14). (Alaska Department of Fish and Game, 2005-2011)

Table 12. Brown Bear Hunt Descriptions

<i>Hunt Number(s)</i>	<i>Hunt Description</i>	<i>Dates</i>
RB077	Unit 4	Sept. 15 - Dec. 31, 2011
RB088	Unit 4, outside drainages (Western Bar. Island)	March 15 - May 31.
RB089	Unit 4, inside drainages (Eastern Bar. Island)	March 15 - May 20.

Source: Alaska Department of Fish & Game website

Table 13. Summary of Hunter Effort vs. Success by Location (Brown Bear)

<i>Year</i>	<i>GMU</i>	<i>Total Hunters</i>	<i>Total Days Hunted</i>	<i>Avg Days Hunted</i>	<i>Number Success Hunted</i>	<i>Total Days Hunted</i>	<i>Avg Days Hunted</i>
2010	04Z	400	1565	3.9	149	559	3.8
2009	04Z	363	1457	4	154	656	4.3
2008	04Z	426	1519	3.6	162	596	3.7

Source: Alaska Department of Fish & Game website (unknown not included in tally)

Table 14. 2010 Resident Hunters - Principal Residence and Hunt Success Rate for Unit 04Z

Region	Successful	Unsuccessful	Total Resident Hunters
Southeast AK	36	127	163
Far North AK	3	7	10
Western AK	0	4	4
South-central AK	7	12	19
<i>TOTALS</i>	<i>46</i>	<i>150</i>	<i>196</i>

Source: Alaska Department of Fish & Game website

Deer

Records for Sitka black-tailed deer are not reported past 2007, but it is known to be a significant source of recreational use on the Forest. A few hunters were seen in the Medvejie Basin during the observation period, but it is not widely used for this purpose. During hunting season, deer congregate more in low valleys, muskegs and beaches, and thus hunting effort is focused here rather than uplands or areas of steep terrain. The hunt description and most recent statistics are reported in *Tables 15-16*. (Alaska Department of Fish and Game, 2005-2011)

Table 15. Deer Hunt Description

Hunt Number(s)	Unit(s)	Hunt Description
General Season	04	Remainder of Unit 4 Residents and non-residents Bag limit: Four deer total (see details in season dates below) Season dates: Bucks: Aug 1 – Sept 14 Any deer: Sept 15 – Dec 31 Hunt requires harvest ticket

Source: Alaska Department of Fish & Game website

Table 16. Deer Hunting Statistics for Game Unit 4

Year	GMU	# of Hunters	Male	Female	Total	Deer per Hunter
2007	GMU 4	2,026	1,524	337	1861	0.9
2006	GMU 4	3,070	5,557	2,184	7741	2.5
2005	GMU 4	3,325	4,883	2,100	6983	2.1

Source: Alaska Department of Fish & Game website
Last 3 reporting years – 2005-07

Mountain Goat

In the hunt reports, only one of the reporting mountain goat hunters listed “foot” as the method of transportation for the hunt. The large majority listed “boat”. However, it can be implied that all goat hunters did some hiking on the Tongass in order to harvest their animal(s). See *Tables 17-19*. Medvejie Basin was closed to goat take by emergency order in 2011, due to overharvest of females. Nonresident mountain goat hunters are required to have a guide or be accompanied by an Alaska resident who is a relative. (*Alaska Department of Fish and Game, 2005-2011*)

Table 17. Mountain Goat Hunt Description

Hunt Number(s)	Unit(s)	Hunt Description
RG150	04	4, Baranof Island Season dates: August 1 - December 31, 2011.

Source: Alaska Department of Fish & Game website

Table 18. Summary of Hunter Effort vs. Success by Location (Goat)

Year	GMU	Total Hunters	Total Days Hunted	Avg Days Hunted	Number Success Hunted	Total Days Hunted	Avg Days Hunted
2010	04Z	104	268	2.6	28	71	2.5
2009	04Z	117	227	1.9	31	58	1.9
2008	04Z	121	329	2.7	32	75	2.3

Source: Alaska Department of Fish & Game website (unknown not included in tally)

Table 19. 2010 Resident Hunters - Principal Residence and Hunt Success Rates for Unit 04Z

Region	Successful	Unsuccessful	Total Resident Hunters
Southeast AK	19	59	78
Far North AK	0	2	2
Western AK	0	0	0
South-central AK	1	2	3
AK Resident, non-AK city	0	1	1
<i>TOTALS</i>	20	64	84

Source: Alaska Department of Fish & Game website

CURRENT USE ESTIMATE

This section provides an estimate of annual recreation visitation to areas within the Project Study Area. Recreation visitation was estimated in recreation days (RDs) for the entire Study Area, as well as by Study Unit. An RD is defined as a visit by a person to an area for recreation purposes during any portion of a 24-hour period and is FERC's preferred unit of recreation measurement. Total daily recreation use was extrapolated using PAOT/BAOT and other field observations. Additionally, RDs were estimated by season of use (early season, peak season, late season, and off season). The number of RDs is an estimate that provides a minimum "ballpark" use figure to base current and future management decisions regarding recreational use of the Project Study Area.

RDs were estimated based primarily on BAOT for Takatz and Baranof Basins from both aerial and field observations. In addition to BAOT averages, observation data, interviews, survey results and Forest Service data were also used to develop RD estimates. These additional data sources were used to estimate people per boat, length of stay and off season uses. RDs were estimated primarily on PAOT for Medvejie Basin collected from the trail counter which provided continuous monitoring of use. Early (May), peak (June-August), late (September-October) and off seasons (November-April) are presented by each Study Unit in *Table 20* and it is important to note that these numbers represent the *minimum* amount of recreational use that is occurring in the Project Study Area. The estimated minimum number of RDs for the Project Study Area is 14,401 RDs.

Takatz Basin

- Takatz Basin total minimum estimated use of 3,167 RDs.
- Takatz Basin has an estimated minimum of 62 RDs in the early season, 52 RDs in late season and 90 RDs in the off season. These numbers mainly represent the NSRAA crew lodging in Takatz Bay for their hatchery net pen operation from mid-March through the end of May and four group days of commercial outfitter/guide activity. An occasional boat may also anchor in the Basin during these seasons, but this activity is expected to be minimal.
- Takatz Basin has an estimated minimum of 2,963 RDs in the peak season. As described in the previous section, Takatz Basin receives light use by a private, charter yacht and small motorized skiffs throughout the peak season. More than five anchored boats at one time were uncommon; however as noted, commercial fishing periods contribute to increased use of the area for both active seining and anchoring in between "openers".

Table 20. 2011 Recreation Days Estimate by Season and Study Unit

	Takatz Basin	Obs Days	Baranof Basin	Obs Days	Medvejie Basin	Obs Days	Min RDs/ Season	
Early Season	PAOT (Air & Ground Obs)	0	7	1	22	*		
	Avg PAOT (PAOT/obs days x 31 days)	0	217					
	NSRAA Staff (2 crew x 31 days)	62			62			
	BWL Staff & Guests** (10 x 31 days)		310					
	Outfitter/Guides*** (group days x clients)							
	Min RD Early Season	62		527		84		673
Peak Season	PAOT (Air & Ground Obs)	216	554	15	162	*		
	Avg PAOT (PAOT/obs days x 92 days)	1325	3921					
	NSRAA Staff (2 crew x 92 days)				184			
	BWL Staff & Guests** (20 x 92 days)		1840					
	Baranof Cabin		32					
	Outfitter/Guides*** (group days x clients)	1638	(126 groups x 13)	1863	(23 groups x 81)			
Min RD Peak Season	2,963		7,656		346		10,964	
Late Season	PAOT (Air & Ground Obs)	0	39	3	49	*		
	Avg PAOT (PAOT/obs days x 61 days)	0	595					
	NSRAA Staff (2 crew x 61 days)				122			
	BWL Staff & Guests** (10 x 61 days)		610					
	Outfitter/Guides*** (group days x clients)	52	(4 groups x 13)	162	(2 groups x 81)			
	Min RD Late Season	52		1,367		171		1,590
Off Season	No PAOT Observations (181 days)							
	NSRAA Staff	90		(2 crew x 45 days)	362		(2 crew x 181 days)	
	Baranof Winter Caretakers		362				(2 x 181 days)	
	Outfitter/Guides*** (group days x clients)							
	Min RD Off Season	90		362		362		814
Min Annual RDs per Study Unit	3,167		9,911		963		14,401	

*Trail counter data

**Average daily estimate for Baranof Wilderness Lodge Guests & Staff

***Forest Service Commercial Outfitter/Guide (2008-2010) three year average

Baranof Basin

- Baranof Basin has a total minimum estimated use of 9,911 RDs.
- Baranof Basin has an estimated minimum of 527 RDs in the early season, 1,367 RDs in late season and 362 RDs in the off season. Field observations indicate relatively light use of this popular destination in these seasons. The numbers include an estimated minimum average of Baranof Wilderness Lodge staff and guests for May and September through October and two group days of commercial outfitter/guide activity. The numbers also include two winter caretakers that are present at Baranof Warm Springs and Baranof Wilderness Lodge generally from October through April.
- Baranof Basin has an estimated minimum of 7,656 RDs in the peak season. As described in the previous section, Baranof receives consistent use throughout the peak season with the dock full most nights and many boats anchored out nearby. Commercial fishing periods contribute to brief, intense use of the area with boats rafted three to six deep on the dock. During these intense use periods, many boats may visit for a few hours but not stay the entire evening. The numbers include an estimate minimum average of Baranof Wilderness Lodge staff and guests for June through August, Baranof Cabin users and 23 group days of commercial outfitter/guide activity.

Medvejie Basin

- Medvejie Basin has a total minimum estimated use of 963 RDs.
- Medvejie Basin has an estimated minimum of 84 RDs in the early season, 171 RDs in late season and 362 RDs in the off season. The numbers include the Medvejie Hatchery caretakers present on the site year-round. The recreational use reflects light activity through these seasons.
- Medvejie Basin has an estimated minimum of 346 RDs in the peak season. As described in the previous section, Medvejie receives consistent recreational use for hiking, canoeing, hunting and back-packing with a handful of trips to the Baranof Cross-Island Trail. The numbers also include the Medvejie Hatchery caretakers present on the site year-round.



Photo 60. Intercept Survey on public dock

VISITOR SURVEYS

This section describes the results of the intercept and self-administered surveys.

INTERCEPT SURVEY

Forty-seven intercept surveys were conducted concurrently with field observations in June, July and September at Baranof Basin and Takatz Basin. Surveys focused on project-related visitors, including boaters, shoreline day users, lodge guests, cabin-users and anglers. Intercept surveys were given at the Baranof Warm Springs Dock, Baranof Wilderness Lodge, USDA Forest Service Cabin on Baranof Lake and in the Takatz Bay anchorage. The survey obtained basic information about the respondents' visit, including areas visited, length of visit, and other trip characteristics. See the Appendix for a copy of the intercept survey.

Trip Characteristics

Around 90% of survey respondents were in groups of less than 5 people (*Table 21*). This is reflected by the primary transportation methods to this remote area which include private boat (34%) and commercial fishing vessel (29%). Other transportation methods included floatplane (21%), small charter yacht (17%), large charter yacht (4%) and bareboat charter (4%) represented in *Table 22*. It should be noted that some visitors arrived by one method and left by another so the totals will not equal 100%.

Table 21. Question 1

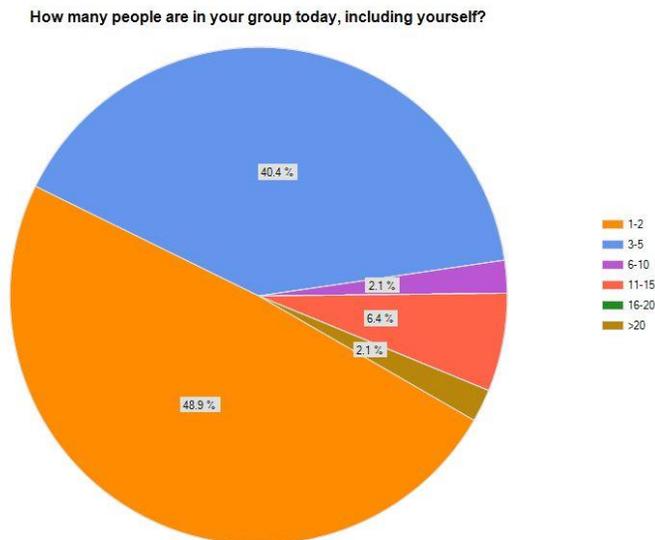
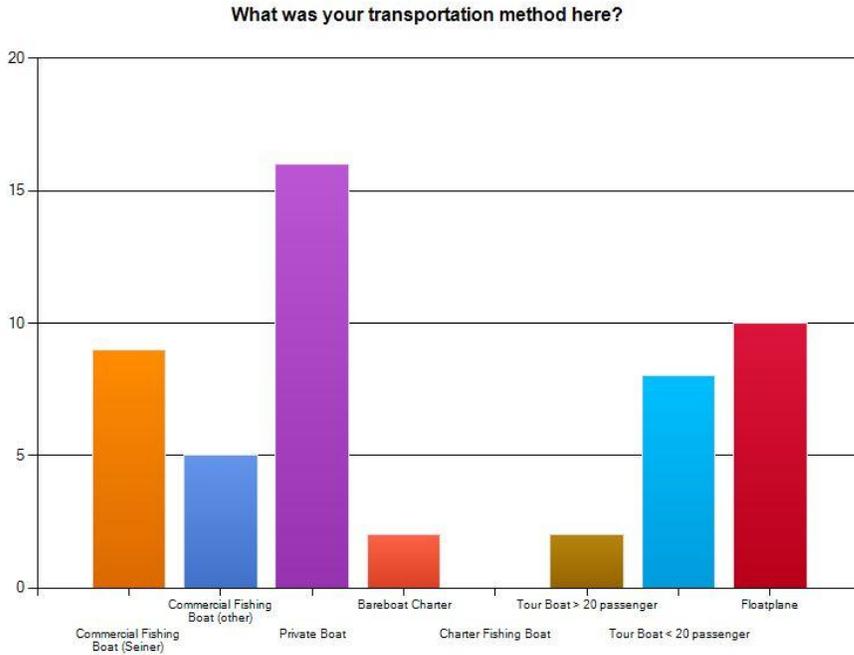


Table 22. Question 2



Visitation History

Nearly 75% surveyed were repeat visitors to the area (Table 24). The average stay reported was between 1-3 days in the area (Table 23). Most users reported once a year visitation. Commercial fishermen reported 3 or more times a year since they spend a few months fishing in the Chatham Strait area and visited multiple times (Tables 25).

Table 23. Question 3

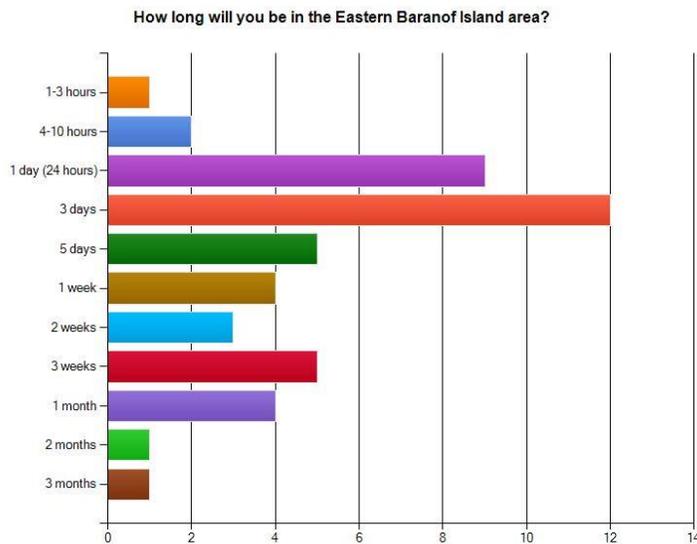


Table 24. Question 4

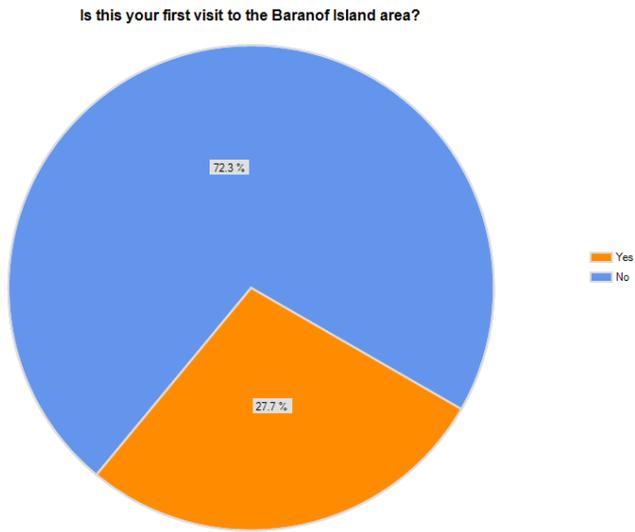
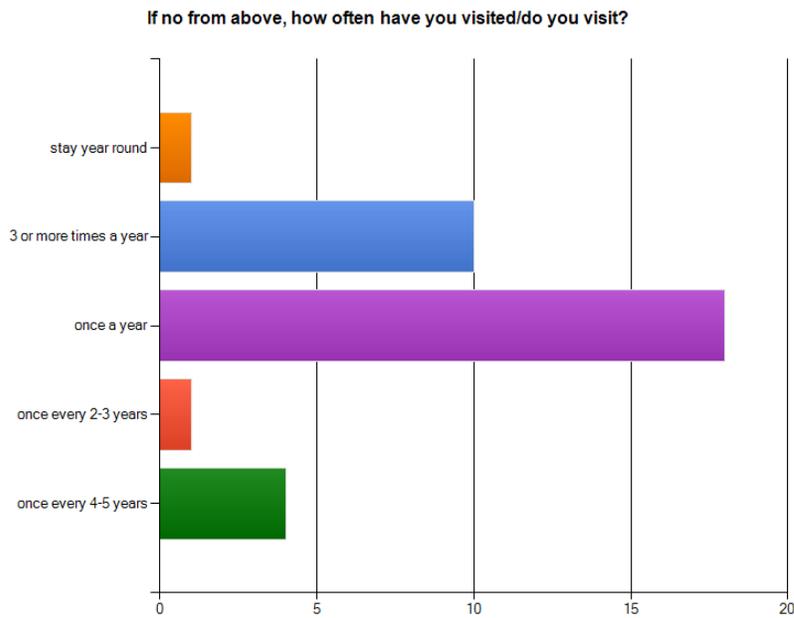


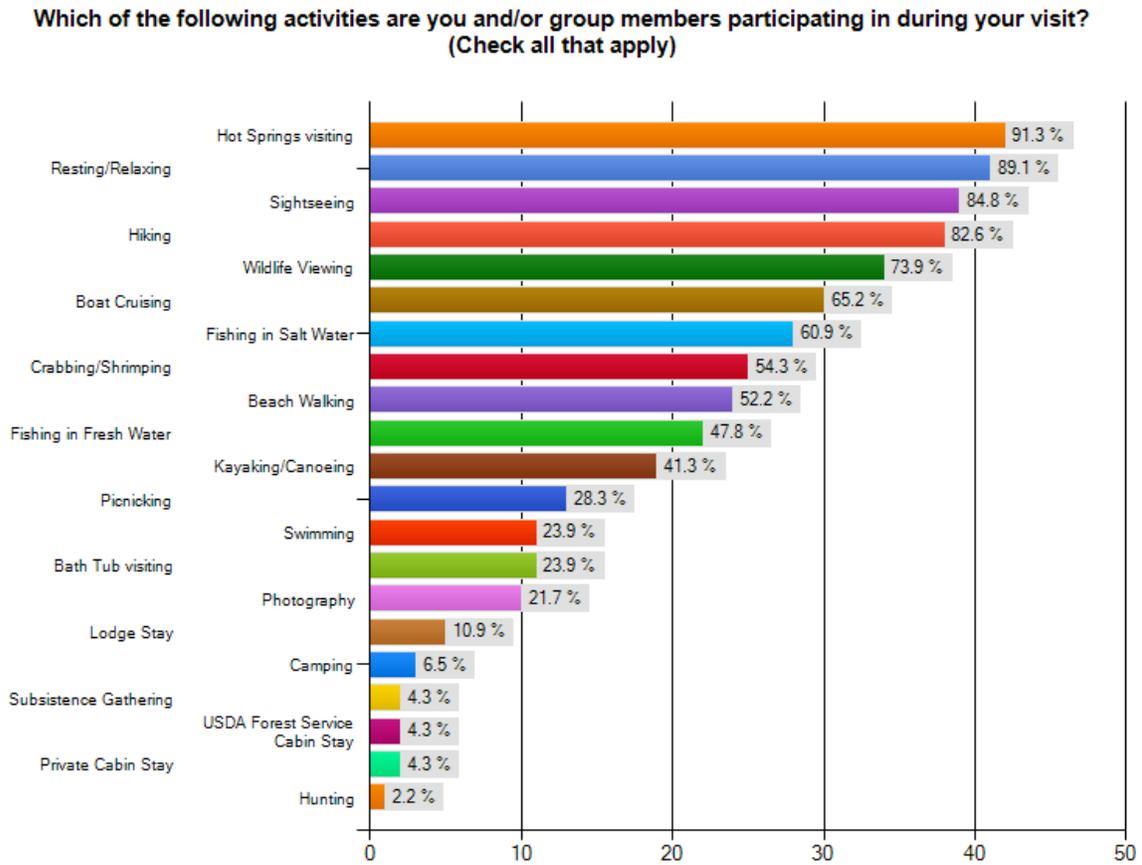
Table 25. Question 5



Recreation Activities

Participants in the visitor survey were asked about the activities they participated in during their stay in the Project Study Area. Multiple activities were allowed to be selected. The most popular activities reported were hot springs visiting, resting/relaxing, sightseeing, hiking and wildlife viewing. It should be noted that results are for the combined Takatz and Baranof Basins. Takatz Basin surveys were fewer in number due to visitation levels (*Table 26*).

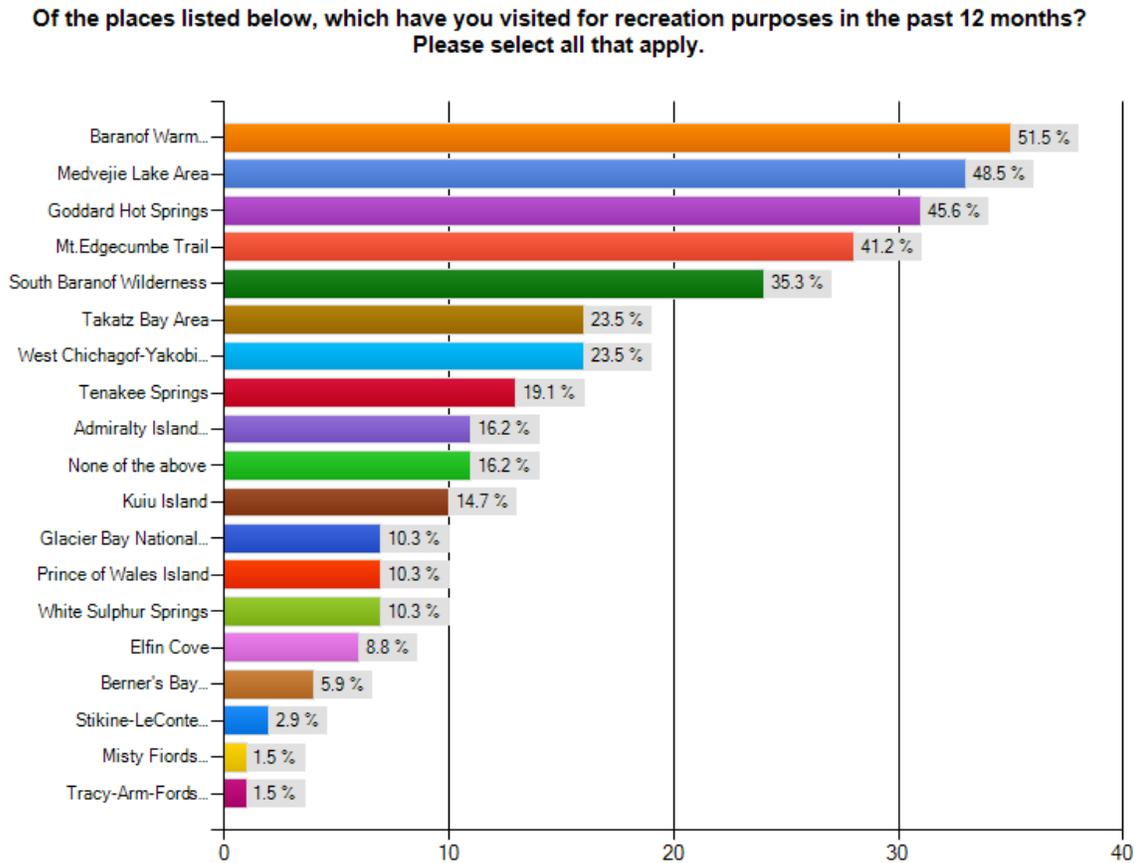
Table 26. Question 6



Recent visitation to other regional recreation areas

Visitors were asked to select other Southeast Alaska places they had visited recently and to provide a qualitative evaluation of the favorite place. Results reflect that a larger majority of visitors went to Baranof Warm Springs rather than Takatz Bay. Other significant regional areas reported are Prince of Wales, Kuiu, Admiralty Island and South Baranof Wilderness. (*Table 27*).

Table 27. Question 7



Question 8 -Of the places listed from above, which do you prefer the most and why?

Thirty-two surveys included a written response. The overwhelming majority (20) stated they liked Baranof Warm Springs the best. Reasons include "sights, hot springs, solitude and social opportunities", "dock, bath tubs, hiking, socializing, not enough time between seine openers to go to town" and "beautiful terrain, waterfalls and rock hot springs." The remaining responses included "All from Above" (5), "Takatz" (2), "Fords Terror" (1), "Kuiu" (1), "Tenakee Springs" (1), "Misty Fiords" (1) and "None" (1).

General Visitor Demographics

35% of visitors were from Southeast Alaska, 7% from Southcentral Alaska, 24% from Washington with the remainder of visitors from California (9%), East Coast (4%), Midwest (4%), B.C., Canada (4%) and Oregon (2%).

Table 28. Question 9

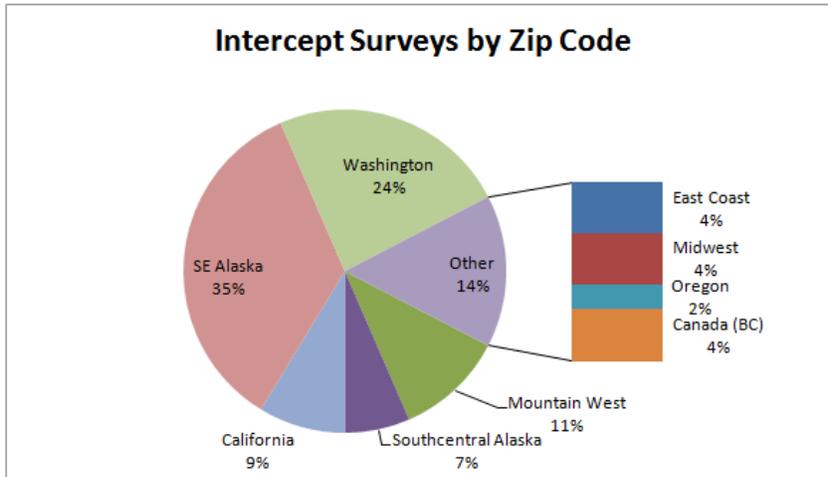


Photo 61. Intercept Survey with Seattle residents

SELF-ADMINISTERED SURVEY- GENERAL PUBLIC

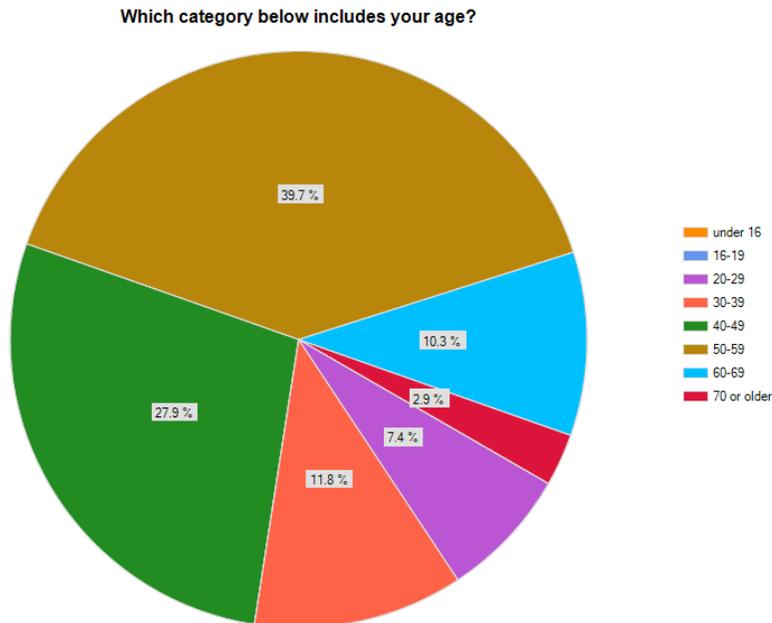
An electronic questionnaire was hosted on the project website during the month of September and October. Local residents of Sitka as well as general users in the regional area were targeted including Haines, Wrangell, Petersburg, Port Alexander, Angoon, Kake, Ketchikan and Juneau. A direct mailing about the survey was sent to Baranof Warm Springs property owners and the Project Stakeholder's list. Ads were placed in several local papers as well as on local community radio stations. The survey was featured on the City of Sitka website and in the City's September utility billing mailer.

There were sixty-eight respondents despite the well-advertised survey opportunity. See the Appendix for a full advertising list.

General Demographics

Around 70 percent of respondents were between 40-60 years of age (*Table 29*).

Table 29. Age Demographics



Project Area Visitation Patterns and Preferences

The survey asked for a response about visitation to locations in the Project Area. Medvejie, Baranof Warm Springs and Baranof Lake were the three highest destinations with less than 13% selecting none (*Table 30*). In choosing one area over another, recreation, scenery and proximity to home were the top three choices (*Table 31*).

Table 30. Project Area Location Visitation

Have you visited any of the locations listed below? Please select all that apply.

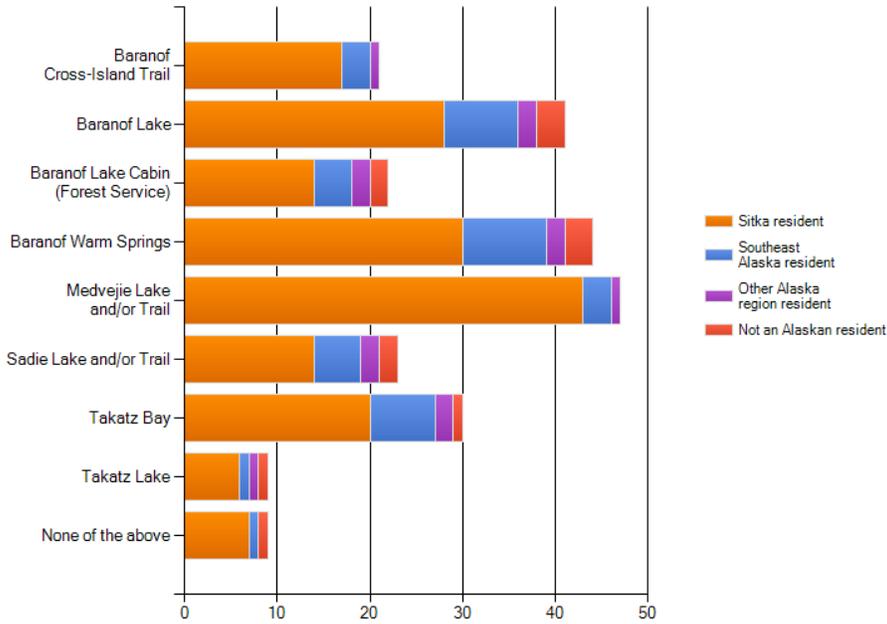
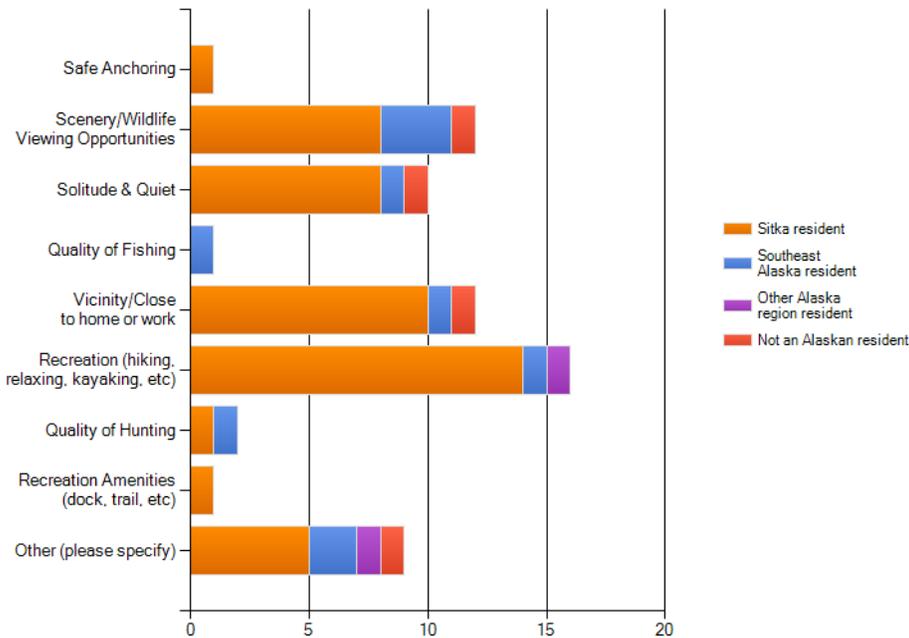


Table 31. Project Area Preferences

What is your primary reason for preferring one recreation area over another? Please select only one.



Project Study Unit Trip History and Characteristics

Over 75% respondents reported visiting Medvejie area, 62% Baranof Basin and 44% Takatz Bay. Recreation was reported as the primary activity for all units with secondary activities being sport fishing (24%) for Takatz, cabin or lodge stay (12%) for Baranof and fish hatchery (17%) for Medvejie. Respondents reported that they first began visiting the area in 1956 for Takatz, 1954 for Baranof and 1977 for Medvejie. The majority of responses included 1-3 times per year visits as the most popular frequency. The duration was under 3 hours (36%) for Takatz, 3 days (33%) for Baranof and under 6 hours (58%) for Medvejie. The primary transportation method to the Study Units was private boat for Takatz (67%) and Baranof (62%) and by foot for Medvejie (47%). The second most popular transportation method was by skiff (20%) for Takatz, by floatplane (36%) for Baranof and by bicycle (33%) or skiff (29%) for Medvejie. Solitude & Quiet was the most important reason for choosing to recreate in Takatz (32%) and Baranof (28%). Vicinity/Close to Home was the most important reason for choosing to recreate in Medvejie. The second most important reason was solitude & quiet (32%) in Takatz, scenery & recreation opportunities & amenities (22% each) for Baranof and recreation opportunities (25%) for Medvejie. See *Table 32* for a summary of the results for each Study Unit.

Table 32. Project Unit Trip History & Characteristics Summary

Survey Questions	Takatz	Baranof	Medvejie
Visitation %	44%	62%	75%
Primary Activity	Recreation (41%)	Recreation (71%)	Recreation (59%)
Secondary Activity	Sport Fishing (24%)	Cabin or Lodge Stay (12%)	Fish Hatchery (17%)
Years Visited	1956-2011	1953-2011	1977-2011
Visit Frequency	1-3 times/yr (35%)	1-3 times/yr (39%)	1-3 times/yr (40%)
Visit Duration	<3 hrs (36%)	3 days (33%)	< 6 hrs (58%)
Primary Transportation*	Private boat (67%)	Private boat (62%)	Foot (47%)
Secondary Transportation*	Skiff (20%)	Floatplane (36%)	Bicycle (33%), Skiff (29%)
#1 Reason for Visiting	Solitude & Quiet (32%)	Solitude & Quiet (28%)	Close to Home (38%)
#2 Reason for Visiting	Solitude & Quiet (32%)	Scenery, Recreation, Amenities (22% each)	Recreation Opportunities (25%)
*Multiple Answers were acceptable so % total does not = 100%			

The survey also asked respondents to rank their satisfaction of a variety of items on a scale of 1-5. All Study Units received satisfaction rankings well above average for each criterion. Results are presented in *Tables 33-35*.

Table 33. Takatz Satisfaction Rankings

Please rate your satisfaction or dissatisfaction about the following items using a scale of 1 to 5:

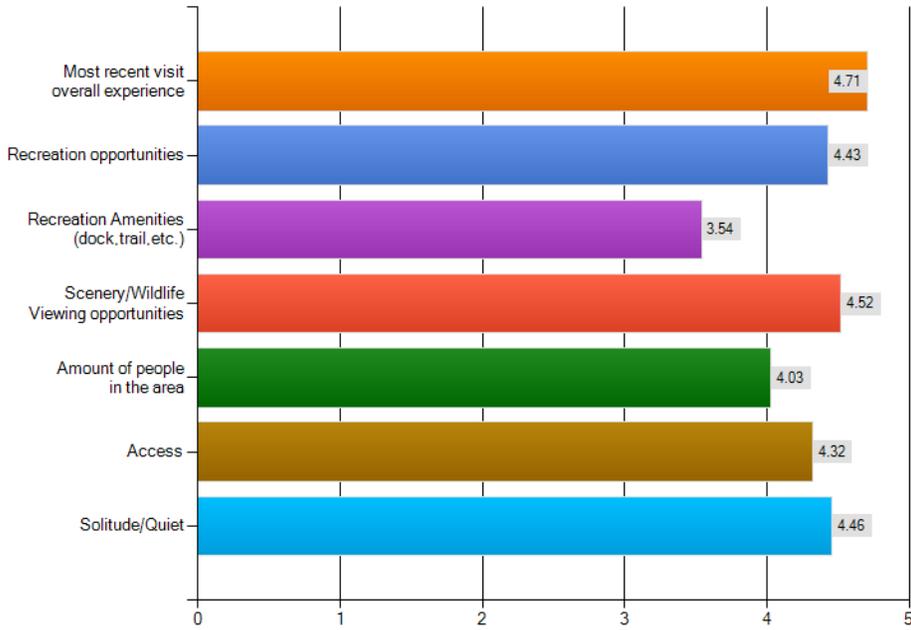


Table 34. Baranof Satisfaction Rankings

Please rate your satisfaction or dissatisfaction about the following items using a scale of 1 to 5:

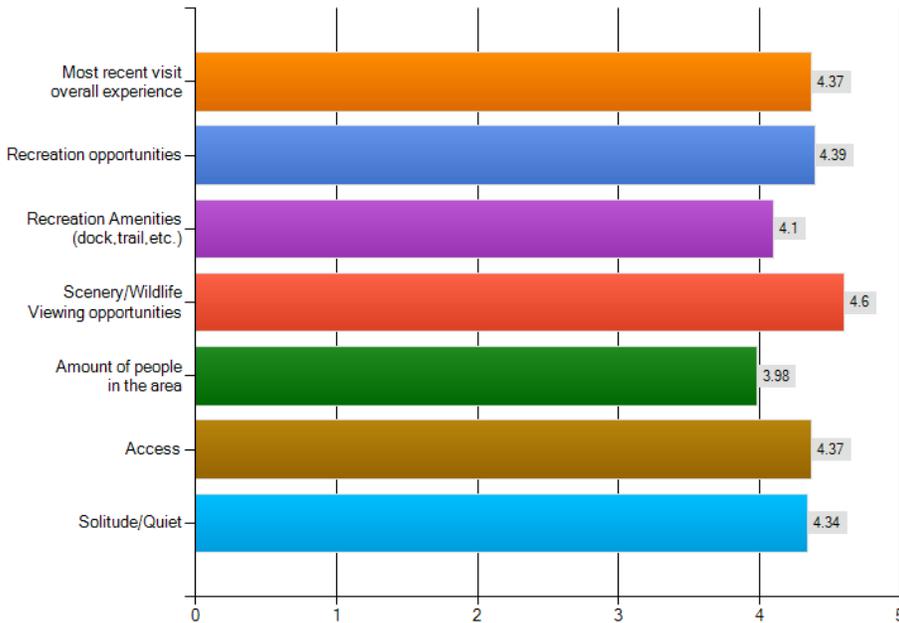
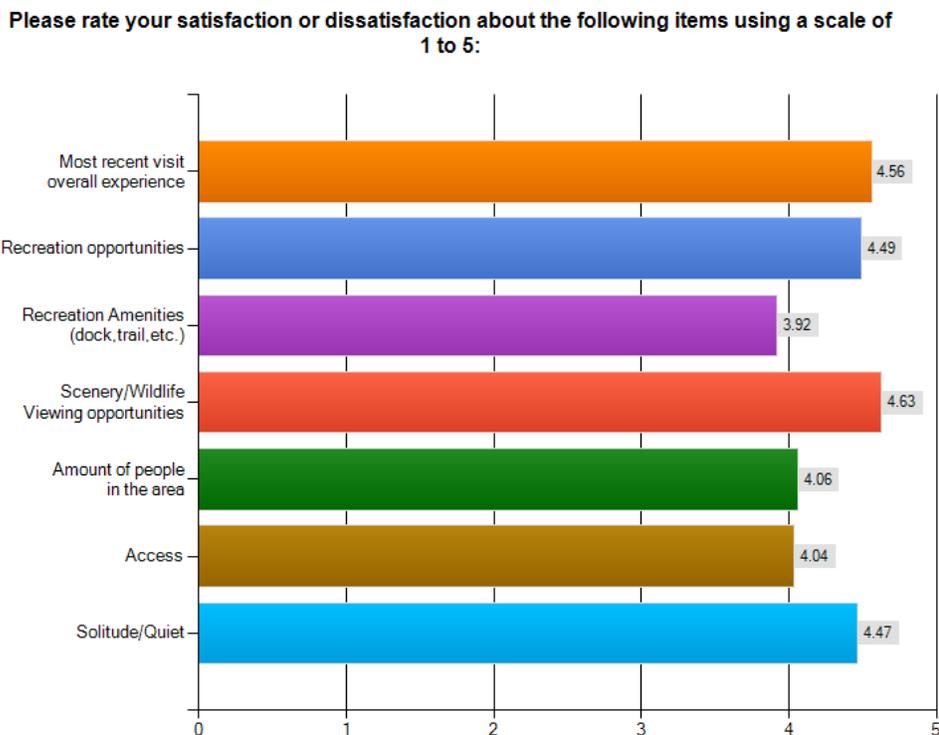


Table 35. Medvejie Satisfaction Rankings



SELF-ADMINISTERED SURVEY - TOUR OPERATORS

A letter seeking participation in a recreation survey was mailed to 87 tour operators. The list was generated from field observations as well as from a web search. Nine tour operators responded to the survey. A copy of the letter and tour operator survey results can be found in the Appendix.

General Tour Operator Demographics

Eight respondents considered themselves a Southeast Alaska organization and one respondent reported being a Sitka organization. Four of the organizations were under 5 employees, two were 6-10 or over 20 employees and one was 11-15 employees.

Tour Operator Visitation Patterns and Preferences

The survey asked for a response about visitation to locations in the Project Area. Baranof Warm Springs (88%) and Baranof Lake (88%) were the highest destinations with Takatz Bay (75%) the next highest (Table 36). Medvejie was not reported to have any guiding activity. In choosing one area over another, scenery and wildlife viewing opportunities was the top choice (33%) (Table 37). Other responses included "Baranof is the favorite of our guests--a very special place" and "Prefer several, not just one."

Table 36. Guided Trip Locations

Has your organization guided trips at any of the locations listed below? Please select all that apply.

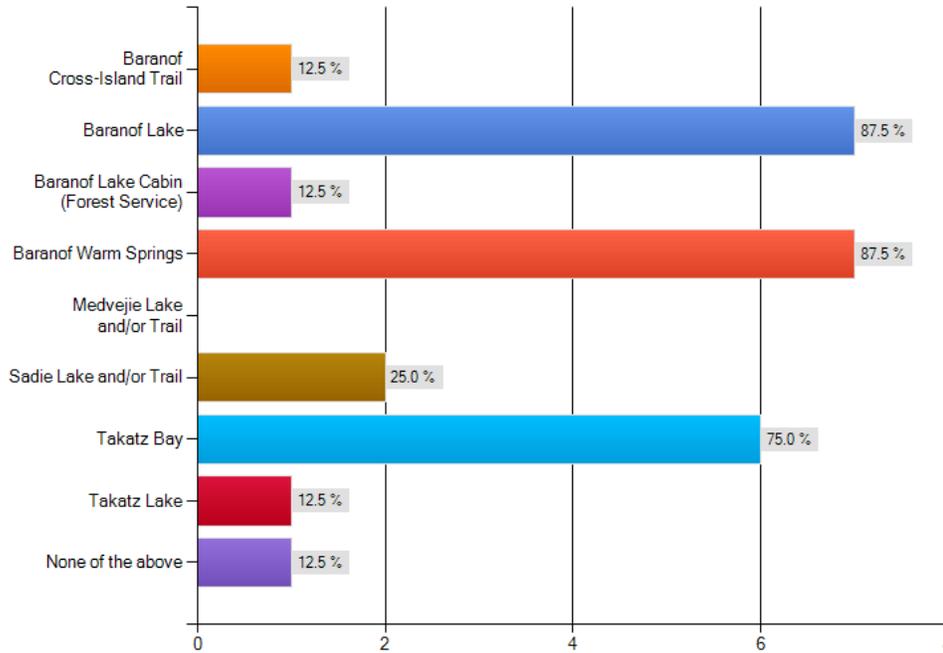
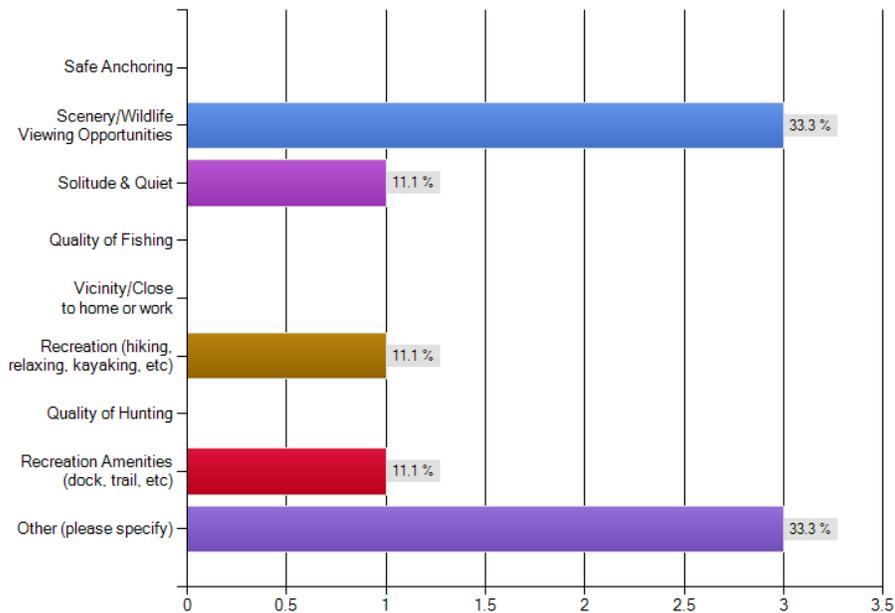


Table 37. Tour Operator Preferences about Recreation Destinations

What was your primary reason for preferring one recreation area over another? Please select only one.



Tour Operator Project Study Unit Trip History and Characteristics

Over 78% respondents reported visiting Baranof area and 67% Takatz Bay. The primary reason for visiting either location was a charter tour. For both areas, 1981 was the earliest year guiding was started. Baranof was reported as being visited 4-10 times/ year (86%) and Takatz as 2-3 and 6-10 times/year (33% each). The most popular visit duration was 12-36 hours for Baranof (57%) and Takatz (68%). Tour operators responded that their average group size was 6-10 (71%) for trips in Baranof and 6-10 (50%) and 1-5 (33%) in Takatz. The primary transportation method for both areas was a charter tour boat with less than 20 passengers. Scenery/Wildlife Viewing was the most important reason for choosing to tour in Takatz (50%). Recreation amenities and solitude/quiet (33% each) were the most important reasons for choosing to tour in Baranof. The second most important reason was solitude & quiet (68%) in Takatz and recreation opportunities (42%) in Baranof. See *Table 38* for a summary of results for each Study Unit.

Table 38. Tour Operator Project Unit Trip History & Characteristics Summary

Project Units	Takatz	Baranof	Medvejie
Visitation %	67%	78%	0%
Primary Reason	Charter Tour (83%)	Charter Tour (71%)	
Year Started Guiding in Area	1981-2011	1981-2011	
Visit Frequency	2-3 times/yr & 6-10 times/yr (33% each)	4-10 times/yr (86%)	
Visit Duration	12-36 hrs (68%)	12-36 hrs (57%) & 3-6 hrs (43%)	
Average Group Size	6-10 (50%) & 1-5 (33%)	6-10 (71%)	
Primary Transportation*	Charter Tour <20 passgr (83%)	Charter Tour <20 passgr (71%)	
Secondary Transportation*	Skiff & Charter Tour >20 passgr (17% each)	Charter Tour >20 passgr (29%)	
#1 Reason for Visiting	Scenery/Wildlife Viewing (50%)	Recreation Amenities and Solitude & Quiet (33% each)	
#2 Reason for Visiting	Solitude & Quiet (68%)	Recreation Opportunities (42%)	
*Multiple Answers were acceptable so % total does not = 100%			

The survey also asked tour operators to list activities they participated in and rank their satisfaction for a variety of items on a scale of 1-5. Results for Baranof and Takatz are presented in *Tables 39-42*.

Table 39. Tour Operator Baranof Recreation Activities

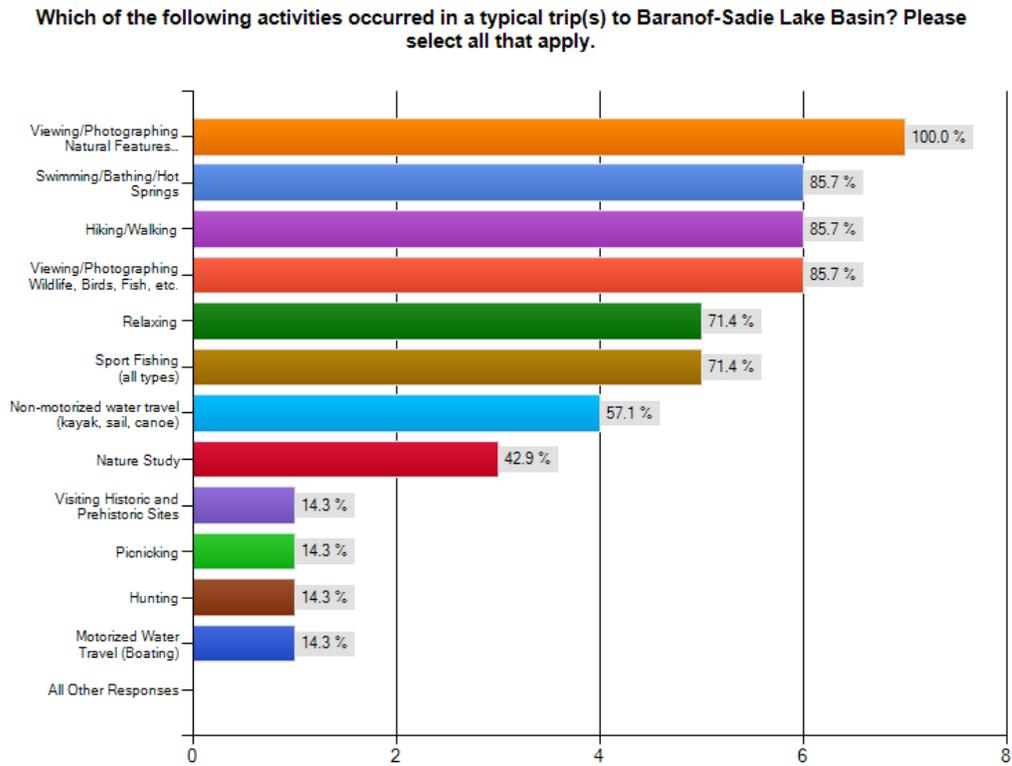


Table 40. Tour Operator Baranof Satisfaction Rankings

Please rate your organization's satisfaction or dissatisfaction about the following items using a scale of 1 to 5:

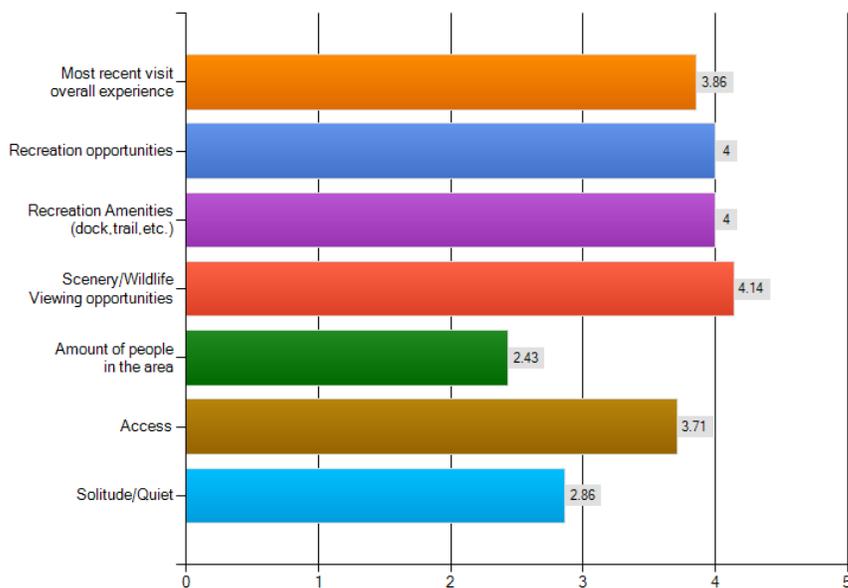


Table 41. Tour Operator Takatz Activities

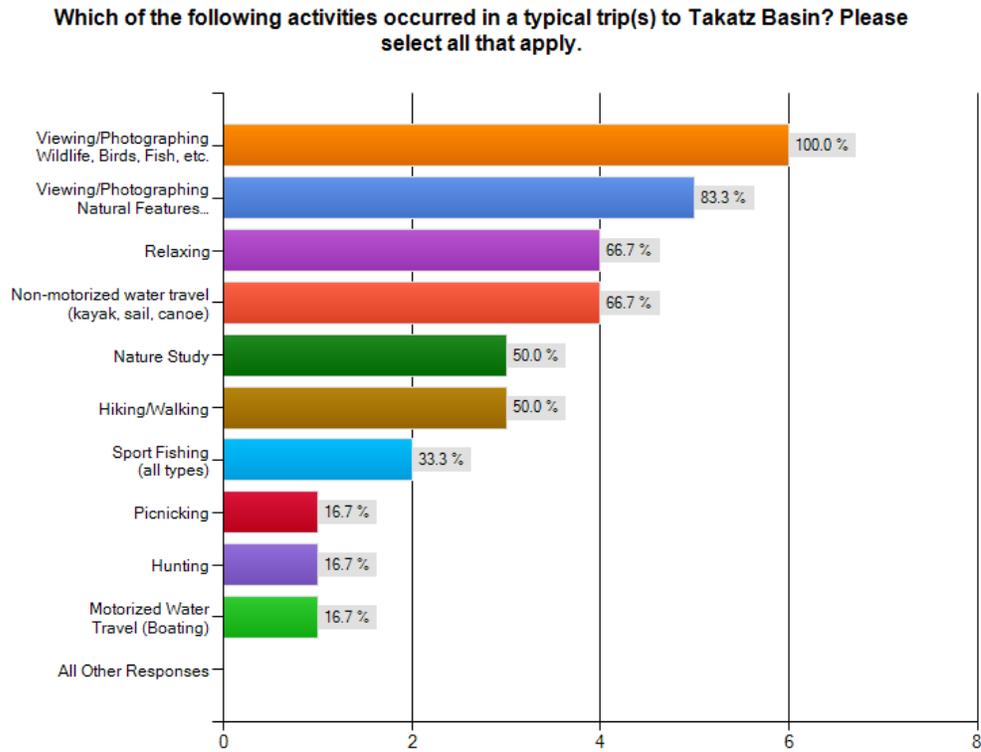
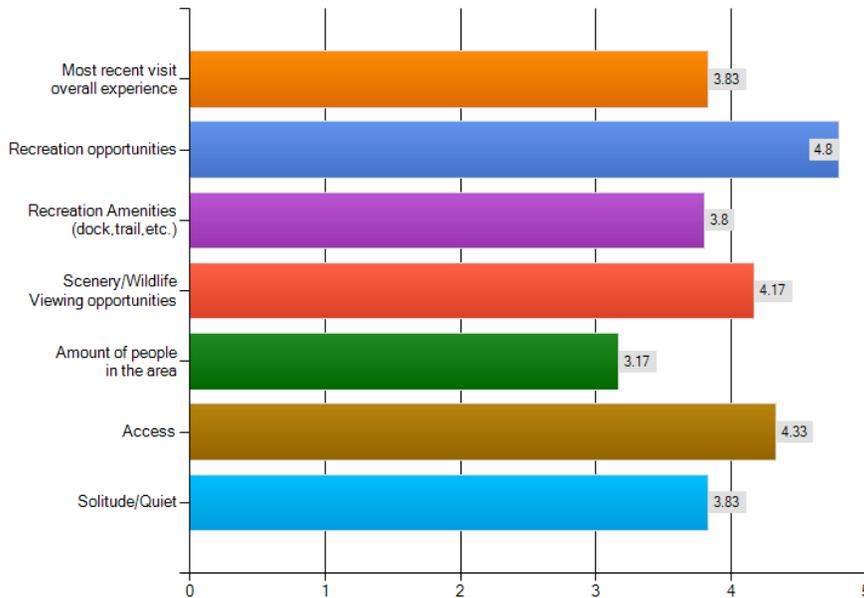


Table 42. Tour Operator Takatz Satisfaction Rankings

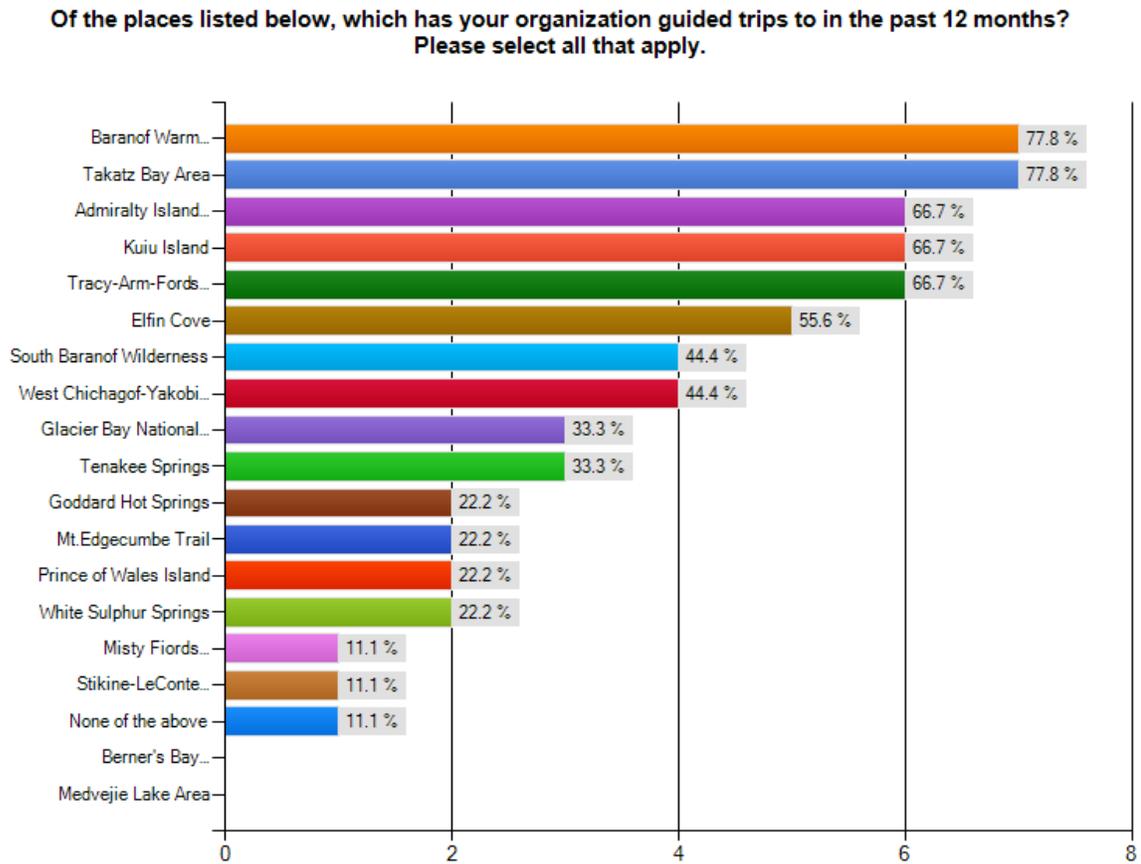
Please rate your organization's satisfaction or dissatisfaction about the following items using a scale of 1 to 5:



Regional Area Visitation

Tour Operators were also asked to select the regional areas they guided in the past twelve months. Given the marine-based access, a wide range of places were selected and can be viewed in *Table 43*.

Table 43. Tour Operator Regional Guided Destinations



DISCUSSION

This discussion synthesizes Project data with respect to the regional recreation trends for Alaska and also specifically Southeast Alaska. This synthesis is intended to be general, but it establishes findings that are useful for future recreation impacts and needs assessment studies.

REGIONAL RECREATION AND TOURISM TRENDS

This section seeks to provide an overview of Alaska's large, multi-dimensional tourism industry, with a focus on Southeast Alaska, and includes both out-of-state visitor and in-state resident activities. This material provides one useful reference point for drawing conclusions about outdoor recreation and tourism trends in the Project Area. See the Appendix for a more complete analysis of the Southeast Alaska Recreation and Visitor Industry.

Much of the information for this section comes from the Alaska Visitor Statistics Program (AVSP) which defines Southeast Alaska as including the Alaska panhandle up to Glacier Bay. Southeast is the second most visited region in Alaska, only exceeded by Southcentral Alaska. Communities in Southeast Alaska have historically been dependent on the timber industry and fishing, but have increasingly turned to tourism and recreation as their local economies have changed. Major findings of this research are presented below:

Current Trends in the Southeast Alaska Region

Upward Global Trend: Despite ups and downs of the U.S. and global economy, the number of people with an interest in and the ability to travel continues to rise. Tourism is a huge global force, accounting for one (1) in 12 jobs in the world and an estimated nine percent of the global economy (*World Travel and Tourism Council, 2010*). Travel has gone from being a luxury for the few to an expected part of life for a substantial and growing portion of the world's population.

Recovery: Around the world, travel activity has significantly recovered since low points in 2008 and 2009 (*World Tourism Organization, 2011*). The recent volatility in the tourism market appears to take place against a backdrop of sustained, multi-decade worldwide growth in tourism. High quality, well-managed destinations and tourism businesses have excellent prospects for success.

Upward Alaska Trend: Out-of-state visitation to Alaska grew remarkably in the last 25 years, from less than 500,000 visitors in the mid-1980's to nearly 1.7 million in 2008. While Alaska has generally weathered the recession better than many areas in the Lower 48, Alaska out-of-state visitation dropped to 1.5 million visitors in the summer of 2010, down from 1.6 million during the summer of 2009. Most recent data shows most tourism sectors returning to levels approaching or equaling previous levels by 2012 (*Alaska Visitor Statistics Program, 2006-2010*).

Southeast: Southeast Alaska was visited by 1.2 million out-of-state travelers in 2006, with about two thirds of these traveling by cruise ship. The cruise component of Alaska travel has been the

sector most affected by the recent recession; total cruise visitors dropped by 15 percent since peaking in 2007. Visitation has begun climbing more recently however, and is expected to approach the 2006 peak by 2012 (*Alaska Visitor Statistics Program, 2006-2010*).

Changing Demographics: Changes in the makeup of the U.S. population will be the driving force for change in travel and tourism over the next twenty years. The baby boom is inheriting and spending the large sums of money carefully saved by their more frugal Depression-era parents. This is expected to total \$8.4 trillion, \$2.4 trillion of which has already been inherited. Two-thirds of all baby boomer households are expected to receive an average of \$64,000 each. In addition to the aging baby boom generation, America is becoming a much more ethnically diverse country. The interests of Hispanics, Asians, African Americans and other groups are expected to have a growing impact on travel markets (*U.S. Travel Association, 2011*).

In-state residents: Alaskans are an important and growing, but less documented component of the outdoor recreation and travel scene in Alaska. Growth in this sector comes from a slow, steady rise in the participation rates by residents in outdoor activities and the steady increase in the state's population.

Competition: Though opportunities abound, the tourism market is extremely competitive. Tourists have global choices; Alaska is now competes for visitors with Patagonia, Scandinavia, Antarctica, Thailand, and other countries.

CHARACTERIZATION OF EXISTING CONDITIONS

Physical Setting

In terms of physical setting, the Project Area is similar to a number of other anchorages and lakes nearby on Baranof Island. Gut Bay and Patterson Bay to the south both provide dramatic granitic walls; Waterfall Cove to the north has an impressive waterfall that you can take your boat close to; Hanus Bay to the north has a recreation trail from saltwater to Lake Eva plus a remote Forest Service Cabin on the lake; and Tenakee Springs to the north has a public dock and developed hot springs. One notable exception lacking in the regional area is the presence of the combination of multiple recreation opportunities in one specific area.

Visitor Origins, Visitation Patterns and Use

Existing recreation use was estimated based on field observation data, in conjunction with results from the visitor survey and existing Forest Service data. Summary results of the various recreation user groups and visitation patterns are provided in *Table 44*.

- Visitation to the Project and regional recreation areas is a combination of visitors from Southeast Alaska communities, other Alaskan areas and out-of-state areas.
- Since a large majority of recreation is marine based, the Southeast Alaska cruising guide "*Exploring Southeast Alaska, Dixon Entrance to Skagway*" is very influential in

anchorage selection for most out-of-state boaters. Baranof Warm Springs is noted in this guide as one of the 'Top 10 Hot Tub Destinations' as well as having a boardwalk trail. Takatz Bay is described as having a fish hatchery which may deter some visitation. Bear Cove is also described as having a fish hatchery with no allowed anchoring. (Hemmingway-Douglass, 2007)

- Locals and charter tour operators have been using the Project Area as authentic back country wilderness destinations as well as for sport fishing and hunting in their own backyard.
- Given the Hidden Falls and Port Walter hatchery proximities in southern Chatham Strait, commercial fishing will continue to be a presence in the area. Over 265 seine permits are granted each year, of which only 150 are Alaska based for just this region. Fishing boats will also pass through the Project Area on their way to other regions in Alaska.
- In total, it is estimated that annual recreational use in the Study Area is approximately 14,000 RDs. This overall amount is relatively light when viewed from a national perspective, which may see upwards of 200,000 RDs for a similar sized area.
- For both Takatz and Baranof, most use is marine-based so the weekday and weekend periods were not found to be a major determining factor for use level.

Table 44. Visitor Characteristics and Patterns Summary

User Group	Trip Characteristics	Primary activities	Average minimum estimated visitation to Project Area (based on observations, surveys, etc.)	Avg. length of stay in Project Area
Multi-week boaters	People cruising in privately owned vessels. Mainly from other Southeast Alaska communities, Washington, Oregon or British Columbia.	Sightseeing, resting + relaxing, hot springs visiting	250 boats/year	1-2 days
Local boaters	People boating in privately owned vessels. Mainly from nearby communities like Sitka, Port Alexander, Petersburg and Hidden Falls Hatchery.	Resting + relaxing, sport fishing, hot springs visiting	200 boats/year Trends tied to the economy (gas prices)	1-5 days; Not convenient weekend use but may be the destination or interim stop.
Commercial Fishermen	Includes seine, troll, long-line and shellfish vessels as well as tenders. Vessels stage in the area for various fishery seasons.	Resting + relaxing close to the fishing grounds	350 boats/year	1-3 days intermittently throughout the June-September season.
Charter Yachts	Small ship cruising. Independent travelers with flexible itineraries.	Sightseeing, resting + relaxing, hiking	150 boats/year (approx. 25 operators with repeat visits)	1 day several times throughout the summer season

Locals (non-boating)	General visitation by modes other than boating	Hiking, hunting, biking	900 people/year	1 day
Floatplanes	Air service to Baranof Warm Springs and Forest Service Cabin. Regular service also to Hidden Falls and Angoon with occasional stops in the Project Area.	Sightseeing	6 times/week in summer for approx. 100 flights/year	Less than 1 day

Demand for Recreation Activities

The Project Area represents an important regional resource in terms of marine based recreational facilities and opportunities. When compared to other regional locations, the Project Area has similar physical features and recreation opportunities; however, the unique combination of multiple recreation opportunities in one location makes the area unique. The most common recreation activities on Project lands are hot springs visiting, resting/relaxing, sightseeing, hiking, wildlife viewing, boat cruising and sport fishing. These are nature-based activities that are in high demand in the Southeast Alaska tourism market. Because much of the Project Area is remote, most visitors arrive by private or chartered boat, eliminating the need for significant shore side facilities. Research observations and anecdotal information regarding use indicates that the public dock at Baranof Warm Springs is generally meeting demand on a seasonal basis; except for the brief, intense periods when the commercial seine fleet utilizes the area.

CHARACTERIZATION OF FUTURE CONDITIONS

Long-term Southeast Alaska regional trends

Southeast communities have been differentiating themselves, capitalizing on nature-based tourism, unique local amenities, and the local character that has developed for each community along with the cruise industry. Communities visited by the largest-volume cruise ships (includes Juneau, Ketchikan, and Skagway) are visited by approximately 900,000 cruise visitors each summer. Another set of communities (notably Sitka and Haines) receive annual out-of-state visitation in the 200,000-300,000 range, based on a mix of visitor types. The remaining Southeast communities (such as Kake, Petersburg, Wrangell) attract much more modest numbers of visitors, mainly charter yachts and independent travelers. Out-of-state travel to these communities (including places like Wrangell and Petersburg) is only a fraction of what is experienced in the major cruise communities.

All Alaska visitors appear to be similarly interested in nature-based tourism. Wildlife viewing is a popular activity and highly attractive to visitors, causing it to feature prominently in marketing materials to out-of-state visitors. According to a study by the University of Alaska Institute of Social and Economic Research (ISER), nature-based tourism generates at least \$277 million per year of direct business revenues in the Southeast communities of Sitka, Juneau, Chichagof Island, Prince of Wales Island, Petersburg and Wrangell. (ICER, 2008)

Potential Trends for Takatz Bay and Baranof Warm Springs

- More people are traveling to and learning about Southeast Alaska as a destination.
- Travel to and within the Southeast region by small cruise, chartered yacht, ferry and other smaller-scale modes has been rebounding from the 2008 recession more rapidly than large-volume cruise travel.
- While the Takatz Bay/Baranof Warm Springs area is off the beaten track, the area is a popular destination among residents and small cruise/chartered yachts.
- Destinations like Baranof Warm Springs that have a dock, hiking trails, unique attractions (e.g., hot springs), and a few services are likely to draw more visitors than other out-of-the-way destinations in the region.
- Improvement of visitor facilities would likely increase use of the area given the strategic geographic location mid-way between Petersburg, Sitka and Juneau.

Potential Trends for Medvejie

- Medvejie Basin receives limited recreation use at present. The area is wild and undeveloped, terrain is steep and vegetation is dense. As a result, travel on foot is challenging in summer and winter snows can pose significant avalanche and landslide danger in winter.
- Although well-known as a route, only a handful of people use the Baranof Cross-Island trail which is a wilderness route linking Sitka to Baranof Warm Springs. Over time, there is an opportunity for increased growth of this route as knowledge about the route attracts out-of-town backpackers.

NEXT STEPS

- Because project design and layout are likely to change through the licensing period, a full *Recreation Impact Analysis* is recommended after project feature locations and construction details are developed.
- A *Recreation Needs Analysis* is recommended to identify future recreation needs over the potential term of the new license.

LITERATURE CITED

Alaska Department of Fish and Game. (2005-2011). *ADF&G*. Retrieved November 2011, from Hunting by Alaska Game Species: <http://www.adfg.alaska.gov/index.cfm?adfg=hunting.species>

Alaska Department of Fish and Game. (2007-2011). *ADF&G*. Retrieved November 2011, from Commercial Fisheries : <http://www.adfg.alaska.gov/index.cfm?adfg=fishingCommercial.main>

Alaska Visitor Statistics Program. (2006-2010). *Visitor Volume Reports* . Anchorage: Alaska Department of Commerce, Community and Economic Development.

City of Sitka. (2009). *Pre-Application Document, Takatz Lake Hydroelectric Project, FERC No. 13234*. Sitka, Alaska: City and Borough of Sitka.

FERC. (2009a). *Scoping Document 1, Takatz Lake Hydroelectric Project, Project No 13234-001*. Washington D.C.: Federal Energy Regulatory Commission.

FERC. (2010b). *Scoping Document 2, Takatz Lake Hydroelectric Project, Project No. 13234-001*. Washington D.C.: Federal Energy Regulatory Commission.

HarrisAir. (2011, December 20). (M. Anderson, Interviewer)

Hemmingway-Douglass, D. D. (2007). *Exploring Southeast Alaska*. Anacortes, WA: Fine Edge.

ICER. (2008). *Nature Based Tourism*. Anchorage: University of Alaska.

Independent Traveler. (2010). *Alaska Cruise Basics*. Retrieved October 2011, from Cruise Critic online: <http://cruisecritic.com/articles.cfm?id=1353>

Kluting, D. (2011, November 23). Director, Sitka Mountain Rescue. (M. Anderson, Interviewer)

McDowell Group. (2008-2009). *Economic Impact of Alaska's Visitor Industry*. Anchorage: Alaska Department of Commerce, Community, and Economic Development Office.

Reifenstuhl, S. (2011, November 28). Manager NSRAA. (M. Anderson, Interviewer)

Sitka Ranger District. (2004-2011). *Outfitter/Guide Commercial Use Database*.

Sitka Trail Works. (2001). *Sitka Trails Plan*. Sitka, Alaska: Sitka Trail Works.

State of Alaska. (2011). *2009 Alaska Economic Performance Report*. Anchorage: Alaska Department of Commerce, Community, and Economic Development.

U.S. Travel Association. (2011). *Travel Facts and Statistics*. Retrieved October 2011, from <http://www.ustravel.org/news/press-kit/travel-facts-and-statistics>

USDA Forest Service. (2010). *Data Surveying and Sampling Procedures to Quantify Recreation Use in Alaska, PNW-GTR-808*. Region 10, Alaska: Pacific Northwest Research Station.

USDA Forest Service. (2008). *Tongass National Forest Land and Resource Management Plan*. Region 10: USDA Forest Service.

USDA Forest Service. (2004). *Tongass National Forest Shoreline-Outfitter Guide Federal Environmental Impact Statement*. R10 Tongass National Forest: USDA Forest Service.

World Tourism Organization. (2011). *Healthy growth of international tourism*. Retrieved October 2011, from <http://media.unwto.org/en/press-release/2011-09-07/healthy-international-tourism-first-half-2011>

World Travel and Tourism Council. (2010). *Economic Data Search Tool for 2010*. Retrieved July 2011, from www.wttc.org/eng/Tourism_Research/Economic_Data_Search_Tool/