Prince of Wales Island
Unified Watershed Assessment

Prince of Wales Watershed Association
December 2014
Version 1.0

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The Prince of Wales Watershed Association would like to apologize in advance for any errors and /or omissions within this document. As a living document, it is expected updates and corrections may be incorporated annually. For more information, please email pow.watersheds@gmail.com.

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ACRONYMS

ADEC	Alaska Department of Environmental Conservation
ADFG	Alaska Department of Fish and Game
AWC	Anadromous Waters Catalog
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
EECA	Engineering Evaluation and Cost Estimate
EPA	Environmental Protection Agency
HUC	Hydrologic Unit Code
KKPC	Ketchikan Pulp Company
LUST	Leaking Underground Storage Tank
NFF	National Forest Foundation
NMFS	National Marine Fisheries Service
NOFA	No Further Action
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
POW	Prince of Wales
POWWA	Prince of Wales Watershed Association
UWA	Unified Watershed Assessment
SEACC	Southeast Alaska Conservation Council
SAWC	Southeast Alaska Watershed Coalition
SISD	Southeast Island School District
TMDL	Total Maximum Daily Load
TNC	The Nature Conservancy
TU	Trout Unlimited
USFWS	U.S. Fish and Wildlife Service
USFS	U.S. Forest Service

Introduction

The purpose of this Unified Watershed Assessment (UWA) is to identify for member groups of the Prince of Wales Watershed Association (POWWA) their watershed based information needs by community which may be addressed by the community, with assistance from POWWA if desired, when funding becomes available. This watershed assessment is not meant to preclude the ability of local entities to submit their own watershed assessments and/or seek their own funding to address local concerns, but to provide an island wide overview of the status of watersheds important to local communities on Prince of Wales Island. The goal of this document is to provide a consistent framework of information about each watershed for each community, without prioritizing one watershed or community over the other. This will be achieved by a categorization process initiated by the Environmental Protection Agency for conducting Unified Watershed Assessments. The methodology used is described in the next section. This document is meant to be a living document, to be reviewed and updated each year. As new member groups join, a community summary may be included into this document.

POWWA is an organization currently working towards non-profit status, which formed in 2011 and serves nine communities and four Tribes on Prince of Wales Island, Alaska. POWWA envisions a unified Prince of Wales (POW) voice that promotes the long term sustainability and management of the Island's watersheds. The group seeks a balance of human and wildlife uses within the watersheds in order to benefit our communities, natural resource-based economies, and our quality of life. In addition, POWWA intends to share, identify and find solutions to help communities begin to implement island wide and individual watershed projects to promote healthy watersheds, clean drinking water, and community engagement in watershed stewardship efforts on Prince of Wales Island.

The Board of Directors for POWWA represents member groups, and is appointed by their respective community. Current member communities are (by resolution found in Appendix A):

- Coffman Cove: represented by the City of Coffman Cove
- Craig: represented by the City of Craig and Craig Tribal Association
- Hollis: represented by the Hollis Community Council
- Hydaburg: represented by the City of Hydaburg and Hydaburg Cooperative Association
- Kasaan: represented by the City of Kasaan and Organized Village of Kasaan
- Klawock: represented by City of Klawock and Klawock Cooperative Association
- Naukati Bay: represented by Naukati Bay Inc.
- Thorne Bay: represented by City of Thorne Bay
- Whale Pass: represented by unincorporated community members

Additional communities on Prince of Wales that may become member groups include:

- Edna Bay
- Point Baker
- Port Protection

The endeavors of POWWA are supported by many organizations that offer technical assistance, leveraging for funding, partnering on projects and serve in advisory role capacities. These organizations have a breadth of knowledge and have worked locally with watershed groups and other organizations on Prince of Wales Island. Other organizations involved include (in alphabetical order):

- National Forest Foundation (NFF)
- National Marine Fisheries Service (NMFS)
- Southeast Alaska Conservation Council (SEACC)
- Southeast Alaska Watershed Coalition (SAWC)
- Southeast Conference
- Southeast Island School District (SISD)
- The Nature Conservancy (TNC)
- Trout Unlimited (TU)
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Forest Service (USFS)

POWWA is collaborating and working on promoting clean water, watershed enhancement and restoration, education, outreach, training and innovative contracting. The organizational goal is to advocate for good health for watersheds and communities. POWWA connects healthy watersheds to healthy communities from alpine to shoreline on Prince of Wales Island thanks to the grant from the National Forest Foundation (NFF) and fiscal sponsorship from Southeast Alaska Watershed Coalition (SAWC).

Founded by Congress in 1991, the NFF works to conserve, restore, and enhance America's 193 million acre National Forest System. Through community-based strategies and public-private partnerships, the NFF helps enhance wildlife habitat, revitalizes wildfire-damaged landscapes, restores watersheds, and improves recreational resources for the benefit of all Americans.

SAWC was formed by a collective of Southeast Alaska watershed councils in 2005. These citizen-lead organizations recognized that by building a network of professionals and community leaders they would be more effective at sharing resources, implementing projects on the ground, and fostering awareness and stewardship of the many watersheds in southeast. SAWC's core objective is to build a regional voice that promotes community watershed stewardship. SAWC does this by bolstering the capacity of communities throughout Southeast Alaska to implement local and collaborative approaches to the management, development and stewardship of the region's watersheds.

For more information on how you can participate, donate, and help with POWWA's action plan, please contact Brandy Prefontaine, POWWA Coordinator at pow.watersheds@gmail.com.

Methodology

The general guidance for this watershed assessment is the UWA method from the Environmental Protection Agency (EPA). The UWA is a process in assessing sub-watersheds important to the member groups of the organization and document efforts across Prince of Wales Island. Each POWWA member community was asked to nominate waterbodies that their respective community wished to be included in this watershed assessment; there were no limits as to the number of watersheds nominated. If one watershed was nominated by more than one community, then the watershed is discussed in each community chapter. The purpose of duplicating is that a given watershed may be important to each community for different reasons.

For each watershed nominated, POWWA staff gathered background information on the watershed from a variety of sources. First, the watershed boundaries were drawn using GIS mapping software. The Hydrologic Unit Codes (HUC) were used as a starting point, and scaled to fit the smaller waterbodies by manually digitizing each water basin. Background information on why the watershed was nominated for inclusion in this document was sought from the POWWA member who nominated the watershed. For each watershed, the following records were used to collect consistent information:

- On-line WESPAK mapping system which included community drinking water sources, State of Alaska anadromous fish layers, State of Alaska impaired waterbodies, and State of Alaska contaminated sites
- EPA Superfund website
- Alaska Department of Environmental Conservation (ADEC) Spill Prevention and Emergency Response database
- EPA Envirofacts mapping system
- Alaska Department of Natural Resources (ADNR) water rights database
- Southeast Alaska Tribal Unified Watershed Assessment
- Local knowledge of past and present information on timber harvest and mining

The streamlined information collected from these resources were summarized in a matrix table for each community. The matrix table was used to categorize each watershed into one of four categories defined by the EPA UWA Method. These categories are not designed to be hierarchal; they are categories that help define what type of watershed funding to pursue for a particular watershed.

- **Category I:** Watersheds in need of restoration. These watersheds do not meet, or face an imminent threat of not meeting clean water or other natural resource goals. Specific restoration projects can be identified for the watershed.
- **Category II**: Watersheds needing preventative action or protection measures in order to sustain water quality or watershed functions to meet natural resource goals.
- **Category III**: Watersheds with pristine or sensitive aquatic systems due to wilderness or non-development land use designations, but still identified as important at a local level.
- **Category IV**: Watersheds with insufficient data to make a determination if the watershed meets watershed function or natural resource goals.

In order to be defined as a Category I watershed, the watershed had to be an identified community drinking water system and/or an anadromous fish system AND had to contain at least one of the following Category I qualifiers:

- Listed as a 303(d) waterbody on the State of Alaska Impaired Waterbody List
- Contains a Class III solid waste landfill
- Contains at least one ADEC listed contaminated site
- Contains an EPA Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) or National Priority List (NPL) site
- Is documented that a subsistence resource has been impacted

If a watershed did not meet the criteria for a Category I designation, then it was assessed as to whether it met criteria for a Category II watershed. To be a Category II watershed, the watershed needed to meet at least two of the following categories:

- Contains Leaking Underground Storage Tank (LUST) site
- Contains two or more National Pollution Discharge Elimination System (NPDES) permit
- Contains two or more other water rights listed with ADNR
- Contains a waterbody with known water quality contaminants
- Has had past or present mining operations
- Has had or is presently being timber harvested
- Has been listed in a State or Tribal Unified Watershed Assessment

Watersheds that did not meet the Category I or II criteria were listed as Category III or IV watersheds. Category III watersheds are watersheds important to the community; however there were no current impairments or immediate threats to the watershed. Category IV watersheds are watersheds that did not have sufficient information to make an assessment. Category IV watersheds are usually those with perceived threats, but additional data is needed in order to determine if the watershed is or will be impaired in any way. Given this Unified Watershed Assessment is a living document, as new information becomes available, watersheds may change categories during updates and revisions to the document.

Additional descriptive information for each watershed was also collected, if it was available. This information may or may not have been used in categorizing a particular watershed, depending on the source of information and how helpful the information was in placing the watershed in a category.

Other information mainly comes from:

- The Nature Conservancy and U.S. Forest Service document which prioritizes forest and freshwater restoration needs for Prince of Wales Island;
- A relative ranking of the value of fish and/or wildlife subsistence resources in the watershed based on maps in the previous document and/or determined by the nominating entity;
- A documented or perceived potential of future timber harvest in the watershed;

- A documented or perceived potential of future mining in the watershed;
- The type of landowners in a watershed;
- A documented potential of other future development.

Once categorized, a summary for each watershed was written. These summaries were not meant to be a full accounting of information researched or available on a particular watershed. Instead, the summary format is consistent across watersheds and provides:

- A brief statement of why the watershed was nominated by the community;
- A map of the watershed boundaries;
- A brief summary of information found in the records research;
- A statement of what category the watershed was defined as;
- A brief statement on the rationale for the categorization.

Once community chapters were compiled, they were distributed to the respective community representatives at the end of May, 2014. Communities were asked to review their chapters, provide edits and make a list of recommended projects for each of the watersheds listed in their chapter. In August of 2014, at the POWWA meeting, representatives brainstormed a list of all potential projects that could be considered for each watershed (Appendix B). Representatives were asked to take the list back to their community and finalize a list of potential projects for each watershed. The project list information and community chapter edits were then integrated into the full draft of the Prince of Wales Island Unified Watershed Assessment. The full draft of the document was reviewed by SAWC, The Nature Conservancy and the U.S. Forest Service, with edits incorporated before the document was finalized for distribution.

The first living version of this document was distributed in hard copy on December 11, 2014 to the member groups. It was also made available in electronic format for ease of sharing. POWWA will continue to work towards raising awareness and acting as a clearing house of information. A computerized watershed application (app) will be developed using this document and will be also be updated annually. The member groups are encouraged to share their chapters with their community leaders, planners, administrators, school teachers, and grant writers to help with community planning and connecting healthy communities to healthy watersheds. Some chapters are more developed then others depending on the participation and availability of members, and can be updated during the annual update as funding allows. Please send comments and recommendations to pow.watersheds@gmail.com if you have questions, comments, or corrections. Member groups can use the tables, maps, and priority lists to help with planning, prioritization, and funding for the projects that they have nominated.

Prince of Wales Island Watersheds

Prince of Wales Island, located in the Alexander Archipelago in Southeast Alaska, is the third largest island in the United States and encompasses 2,577 square miles. Prince of Wales Island hosts 12 communities and an approximate population of 6,000. Main economies on Prince of Wales Island include timber harvest, tourism, fishing, mining and government. Access to Prince of Wales Island is by boat or airplane. There is daily ferry service between Ketchikan and Hollis, regular air service into the Klawock airport and 10 seaplane bases found across the island. Prince of Wales Island is dominated by a cool, moist, maritime climate. Summer temperatures range from 49 to 63 °F and winter temperatures range from 32 to 42 °F. Average annual precipitation is approximately 120 inches, and average annual snowfall is 40 inches. Gale winds are common in the fall and winter months.

Most of Prince of Wales island is characterized by steep, forested mountains (2,000-3,000 feet high) carved by glacial ice which left deep U-shaped valleys with streams, lakes, saltwater straits and bays (Cove Connect, 2005). The island is geologically diverse, hosting granitics, sedimentary carbonates, metasedimentary, complex sedimentary, till lowland, and volcanic features (Nowacki, et al., 2001). North Prince of Wales Island is noted for its complex karst features, where distinct geomorphology has developed from the dissolution of limestone and marble (Prussian and Baichtal, 2004). Minerals are rich across Prince of Wales Island, as noted by past and present mining operations and mining exploration programs. Palladium and uranium were historically mined on Prince of Wales Island, as well as copper, zinc, gold and silver.

The forested areas of Prince of Wales Island are typical southeast Alaska temperate rainforests. Dominant trees include Sitka spruce and western hemlock with some western red and yellow cedar and alder (Cove Connect, 2005). However, only well-drained soils will support the most productive old growth spruce and hemlock forest. Poorly drained soils, like those of the till lowlands, support less productive forests of mixed conifer and pine (Nowacki, et. al., 2001). These areas also support wetland vegetation of bogs, fens, and muskeg. Timber production across the island was once high and the mainstay economy for the island until the mid-1990's.

Land ownership on Prince of Wales Island is diverse and somewhat complex due to on-going land selections and conveyances. A majority of the island is owned by the U.S. Forest Service as part of the Tongass National Forest, approximately 83 percent. Within this, there are two wilderness designations on the island: Karta River Wilderness (39,889 acres) and South Prince of Wales Wilderness (99,968 acres). In addition, there are two LUD II (non-development) designations: North Prince of Wales LUD II and Nutkwa Inlet LUD II. There are five Alaska Native Claims Settlement Act (ANCSA) corporations which have land holdings on Prince of Wales, in addition to State Mental Trust, State of Alaska, local municipalities and private land owners. Sealaska Corporation, the regional ANSCA Corporation, is currently undergoing land selections on Prince of Wales which they were originally entitled to but have not yet received.

Fish and wildlife are abundant on Prince of Wales Island. Most freshwater systems host at least one of four species of Pacific salmon: sockeye salmon, Coho salmon, pink salmon and/or chum salmon. Dolly Varden, cutthroat trout, rainbow trout and steelhead trout may also be found across the island. Intertidal, estuary and nearshore marine areas host a variety of marine rockfish, shellfish, invertebrate

and marine algae species, many of which are harvested as food resources by Prince of Wales Island residents. Marine mammals, such as humpback whales, sea lions, seals and sea otters frequent the surrounding marine environment. Land wildlife species present on Prince of Wales include, but not limited to, Sitka black-tailed deer, black bears, Alexander Archipelago wolves, beavers, marten, mink, land otters, Prince of Wales flying squirrel, bats, shrews and voles.

All 12 communities on Prince of Wales are considered rural under the federal and state subsistence management programs. Prince of Wales Island offers unique opportunities for local residents to fish, hunt and gather natural resources throughout the year. In addition, the Tlingit and Haida people on Prince of Wales have historically practiced a traditional way of life, living off of the resources the land provides. This customary and traditional use of resources is still practiced today and adds to the rich cultural heritage of Tribal members from the four Federally recognized Tribes.

There were 52 watersheds nominated for this initial version of the document. Each watershed is of different scale and type that sometimes required adjustments to the categorization process. These adjustments are defined when they were exercised. Six of the 52 watersheds were nominated by more than one community, including: 108 (Big) Creek, Hatchery Creek, Karta River, Klawock River, Neck Lake and Sarkar River.

Table 1 summarizes basic information on each watershed nominated, including: nominating community, category given in this document, HUC, longitude and latitude of mouth of watershed or lake and the anadromous fish catalog number.

Table 1. Watersheds nominated for inclusion of the Prince of Wales Island Unified Watershed Assessment. HUC refers to the Hydrologic Unit Code and AWC refers to the State of Alaska Anadromous Waters Catalog.

Community	System	Category	HUC	Long/Lat(WGS84)	AWC
Coffman Cove	Chum (Dog) Creek	I	190101030309	X: -132.8223 Y: 56.0140	106-30-10120
Coffman Cove	Coffman Creek	I	190101030309	X: -132.8558 Y: 55.9987	106-30-10160
Coffman Cove	Hatchery Creek	I	190101030103	X: -132.9714 Y: 55.9390	106-30-10670
Coffman Cove	Luck Lake	IV	190101030307	X: -132.7249 Y: 55.9663	106-10-10300
Craig	Crab Creek	I	190101031307	X: -133.1254 Y: 55.4842	103-60-10500
Craig	Dog Salmon Creek	IV	190101031401	X: -133.0340 Y: 55.4548	103-60-10570
Craig	Doyle Bay	IV	190101031403	X: -133.0627 Y: 55.4152	multiple
Craig	Klawock Lake	I	190101031306	X: -133.0750 Y: 55.5485	103-60-10470
Craig	North Fork Lake	IV	190101031401	X: -132.9045 Y: 55.4648	none
Craig	Port Saint Nicholas Creek	II	190101031401	X: -132.9911 Y: 55.4503	103-60-10590
Craig	Trocadero Bay	IV	190101031403	X: -133.0679 Y: 55.3872	14 streams
Hollis	Harris River	I	190101030502	X: -132.6924 Y: 55.4612	102-60-10820
Hollis	Karta River	II	190101030505	X: -132.5485 Y: 55.5619	102-60-10870
Hollis	Maybeso Creek	IV	190101030503	X: -132.6680 Y: 55.4866	102-60-10840
Hollis	Twelvemile Arm	I	190101030504; 190101030501	X: -132.5408 Y: 55.5230	16 streams
Hollis	Wolf Creek	IV	190101030504	X: -132.5758 Y: 55.5200	102-60-10850
Hydaburg	Eek Lake	II	190101031501	X: -132.6694 Y: 55.1559	103-25-10090
Hydaburg	Hetta Lake	II	190101031501	X: -132.5793 Y: 55.1716	103-25-10470
Hydaburg	Hunters Bay	III	190101031705	X: -132.3578 Y: 54.8761	6 streams
Hydaburg	Hydaburg River	I	190101031502	X: -132.8266 Y: 55.2058	103-40-10410
Hydaburg	Kasook Lake	IV	190101031608	X: -132.8175 Y: 55.0449	103-25-10580
Hydaburg	Keete Inlet	IV	190101031504	X: -132.5563 Y: 55.0553	5 streams
Hydaburg	Manhattan Creek	IV	190101031804	X: -133.1440 Y: 55.0987	104-20-10100
Hydaburg	Natzuhini River	I	190101031603	X: -132.8296 Y: 55.2815	103-40-10350
Hydaburg	Reynolds Creek	II	190101031506	X: -132.6042 Y: 55.2153	103-25-10420
Hydaburg	Saltery Creek	I	190101031502	X: -132.8265 Y: 55.2059	103-25-10050
Hydaburg	Sukkwan Island	IV	10901010316; 1901010315	X: -132.7747 Y: 55.0952	19 streams
Kasaan	Jacob's (Tolstoi) Creek	IV	1030101030311	X: -132.4537 Y: 55.6100	102-70-10410
Kasaan	Karta River	II	190101030505	X: -132.5485 Y: 55.5619	102-60-10870
Kasaan	Lindeman Creek	IV	190101030506	X: -132.5116 Y: 55.6044	102-60-10960
Kasaan	Linkum Creek	I	190101030507	X: -132.4005 Y: 55.5391	102-60-10990
Kasaan	Poorman Creek	II	190101030507	X: -132.4353 Y: 55.5506	102-60-10970
Kasaan	Salt Chuck	I	190101030506	X: -132.5603 Y: 55.6244	102-60-10950
Kasaan	Son-i-hat Creek	IV	190101030507	X: -132.4165 Y: 55.5416	102-60-10980

Table 1 con't. Watersheds nominated for inclusion of the Prince of Wales Island Unified Watershed Assessment.
HUC refers to the Hydrologic Unit Code and AWC refers to the State of Alaska Anadromous Waters Catalog.

Community	System	Category	HUC	Long/Lat(WGS84)	AWC
Klawock	Big Salt Lake	II	190101031307; 190101031303	X: -133.0879 Y: 55.6032	9 steams
Klawock	Klawock Lake	I	190101031306	X: -133.0750 Y: 55.5485	103-60-10470
Klawock	Sarkar River	IV	190101031103	X: -133.2397 Y: 55.9511	103-90-10140
Naukati Bay	108 (Big) Creek	IV	190101030303	X: -133.1432 Y: 56.1262	106-30-10800
Naukati Bay	78 Mile Spring	IV	190101031103	X: -133.2021 Y: 55.9108	none
Naukati Bay	Gutchi Creek	IV	190101031002	X: -133.1308 Y: 55.8806	103-90-10270
Naukati Bay	Hatchery Creek	I	190101030103	X: -132.9714 Y: 55.9390	106-30-10670-2004-3031
Naukati Bay	Hillside Spring	II	190101031103	X: -133.1966 Y: 55.9063	none
Naukati Bay	Logjam Creek	I	190101030101	X: -132.9830 Y: 55.9321	106-30-10670-2004-3030
Naukati Bay	Loon Lake Spring	IV	190101031103	X: -133.2026 Y: 55.8933	none
Naukati Bay	Naukati Bay/Karst	I	19010103404	underground	none
Naukati Bay	Naukati Creek	IV	190101031001	X: -133.1470 Y: 55.8882	103-90-10260
Naukati Bay	Neck Lake	IV	190101030304	X: -133.1368 Y: 56.0999	106-30-10750
Naukati Bay	Red Bay Creek	II	190101030902	X: -133.3308 Y: 56.2629	106-41-10300
Naukati Bay	Salmon Bay Creek	IV	190101030301	X: -133.1681 Y: 56.2806	106-41-10150
Naukati Bay	Sarkar River	IV	190101031103	X: -133.2397 Y: 55.9511	103-90-10140
Naukati Bay	Shaheen Creek	II	190101031005	X: -133.2485 Y: 55.7469	103-90-10420
Naukati Bay	Staney Creek	II	190101031003	X: -133.1542 Y: 55.8207	103-90-10310
Naukati Bay	Yatuk Creek	IV	190101031002	X: -133.1519 Y: 55.8953	103-90-10250
Thorne Bay	Deer Creek	I	190101030316	X: -132.5191 Y: 55.6845	102-70-10700
Thorne Bay	Thorne River	I	190101030207	X: -132.5924 Y: 55.6968	102-70-10580
Thorne Bay	Water Creek	IV	190101030311	X: -132.5124 Y: 55.6917	none
Whale Pass	108 (Big) Creek	IV	190101030303	X: -133.1432 Y: 56.1262	106-30-10800
Whale Pass	Neck Lake	IV	190101030304	X: -133.1368 Y: 56.0999	106-30-10750

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Coffman Cove

Population: 181 (2012 DCCED certified) Governance: 2nd class city

Coffman Cove is located on the northeast coast of Prince of Wales Island. The community was first settled in the 1950's as a logging camp, and it was incorporated as a second class city in 1989. The community offers opportunities in tourism, such as kayaking, wildlife viewing and whale watching, and is a sport fishing destination for Prince of Wales Island. A small commercial gillnet fleet operates out of Coffman Cove during the summer months. Blashke Islands, near Coffman Cove has an established oyster farm, which is considered one of the State of Alaska's oldest and largest aquaculture sites. The State of Alaska has offered several land sales in the Coffman Cove Area, providing opportunities for private development.

Since 2006 the City of Coffman Cove has operated a fish enhancement program as part of a cooperative venture with the Prince of Wales Hatchery Association and Southeast Regional Aquaculture Association. Each year 250,000 juvenile Chinook Salmon are transferred to floating net pens in Coffman Cove, where they are fed by volunteers for several months and then released. Tag recovery reports show smolts released from Coffman Cove tend to reside in the Clarence Strait region, thus providing high year round interception rates to all user groups. This project continues to add to the city of Coffman Cove's economic base, providing king salmon for sport, personal use, and commercial fisheries. Cost recovery efforts are underway with nearly 100 king salmon recovered and processed by the city in 2014.

The community of Coffman Cove has nominated four watersheds to be included in this watershed assessment: Chum (Dog), Coffman Creek, Hatchery Creek (including Sweetwater Lake)(also nominated by Naukati Bay) and Luck Lake watershed (including Eagle Creek). Table 2 depicts a summary of the research conducted on each watershed.

Table 2. Summary of records research for watersheds nominated by the community of Coffman Cove for the Prince of Wales Unified Watershed Assessment. For landownership: S = State lands; F = Federal lands; P = Private lands; NC = Native Corporation lands.

	Member Community	Coffman Cove			
	Watershed Name	**Chum (Dog) Creek**	**Coffman Creek**	**Hatchery Creek**	**Luck Lake**
Category I Qualifiers	**Community Drinking Water System**	Yes	Pending	no	no
	Anadromous Fish System	1	1	1	1
	ADEC Impaired Water Body List	no	no	yes -category 5	no
	Class III solid waste facility present	no	no	no	no
	ADEC Contaminated Sites	2	1	1	0
	EPA CERCLIS/NPL Sites	0	0	1	0
	Subsistence resource impacted	no	no	sockeye depleted	no
Category II Qualifiers	**LUST sites**	no	no	no	no
	ADEC Spills sites	1	1+	1+	0
	NPDES/Envirofact records	1	2	0	0
	Other water rights	0	0	0	1
	Known water quality contaminants	0	0	heavy metals	0
	Past/present mining activity	no	no	yes	no
	Past/present timber harvest	yes	yes	yes	yes
	Listed by State or Tribe UWA	no	no	no	no
Other Information	**TNC/USFS Restoration priority**	no	no	no	very high
	Value as subsistence resource	Fish - low Deer - high	Fish - low Deer- high	Fish - high Deer - high	Fish - low Deer - high
	Possible future timber harvest	yes	yes	yes	yes
	Possible future mining activity	no	no	yes	no
	Landownership	S, P, F	S, F	F	F
	Possible other development	Urbanization	no	no	Restoration Recreation

Chum (Dog) Creek — Category I

Chum Creek (also referred to as Dog Creek) was nominated because of its importance to Coffman Cove as a community drinking water source. The watershed encompasses approximately 2.7 square miles and drains into Coffman Cove on the east side of Prince of Wales Island (Figure 1). The watershed drains adjacent to Coffman Creek, which was also nominated for this watershed assessment. The City of Coffman Cove has surface drinking water rights on Chum Creek and is the current intake for city water is in this system (UAS-GIS, 2013).

Figure 1. Watershed boundary for Dog Creek near Coffman Cove, Prince of Wales Island, Alaska.

Chum Creek is listed as an anadromous waterbody (106-30-10120), hosting chum salmon, Coho salmon, pink salmon, cutthroat trout, and Dolly Varden (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for the watershed. Chum Creek is not listed as an impaired waterbody and there is not a Class III solid waste facility within the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There are two listed ADEC contaminated sites within the watershed (ADEC-CS, 2013). One site, a petroleum spill, was cleaned up and had institutional controls set on it in 2007. In 2013 the site was officially closed. The second site is an open site and consists of soil contamination from leaking 55-gallon drums of stored petroleum in 2011 in the Chum Creek Subdivision (ADEC-CS, 2013). There have not been any clean-up activities for this second site. There were no CERCLIS, NPL or LUST sites identified for Chum Creek (EPA, 2013). There were 10 spill records for the community of Coffman Cove, which is partially in the Chum Creek watershed, therefore both reported and unreported petroleum spills have potential impacts (ADEC-PERP, 2013). There were no records for other water rights found for Chum Creek, however there was one NPDES permit in the watershed (ADNR, 2013; EPA, 2013). There are no known water quality contaminants in the watershed. Timber harvest occurred in the watershed, and there is potential for future timber harvest within the watershed. No records turned up past or future mining

activities. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource for deer was noted to be high, and low for fish. Past and most likely some future development includes urbanization with roads, commercial, light industrial and residential areas being constructed. Landownership is a mix of state, private and federal lands.

Chum Creek was categorized as a Category I watershed because it met the following Category I criteria: it is a primary drinking water source; it is an anadromous fish stream; and it contains two ADEC listed contaminated sites. In addition, Chum Creek contains at least one petroleum spill record in the spills database.

As a Category I watershed, it is recognized that the system needs some restoration. Priorities for the Chum Creek Watershed would be to maintain water quality for both drinking water protection and anadromous fish. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available:

- Upgrade current water intake infrastructure
- Address the need for a secondary water treatment source and additional lift stations to meet the demand for drinking water in newly developed areas around Coffman Cove
- Cleanup for petroleum contaminated sites
- Development, outreach and education, and implementation of spill response program
- Watershed assessment that includes instream habitat data collection on stream functions to determine if any instream restoration efforts are warranted
- Baseline water quality data collection to assure surface water and drinking water standards are met
- Data collection on the subsistence uses within the watershed
- Community planning for future development with setbacks from the upper watershed

Coffman Creek was nominated by Coffman Cove because of its importance as a potential community drinking water source and it is the site of a king salmon enhancement program. The watershed encompasses approximately 7.1 square miles and drains into Coffman Cove on the east side of Prince of Wales Island (Figure 2). The watershed drains adjacent to Chum Creek, which was also nominated for this watershed assessment. The City of Coffman Cove has drinking water rights on Coffman Creek (UAS-GIS, 2013).

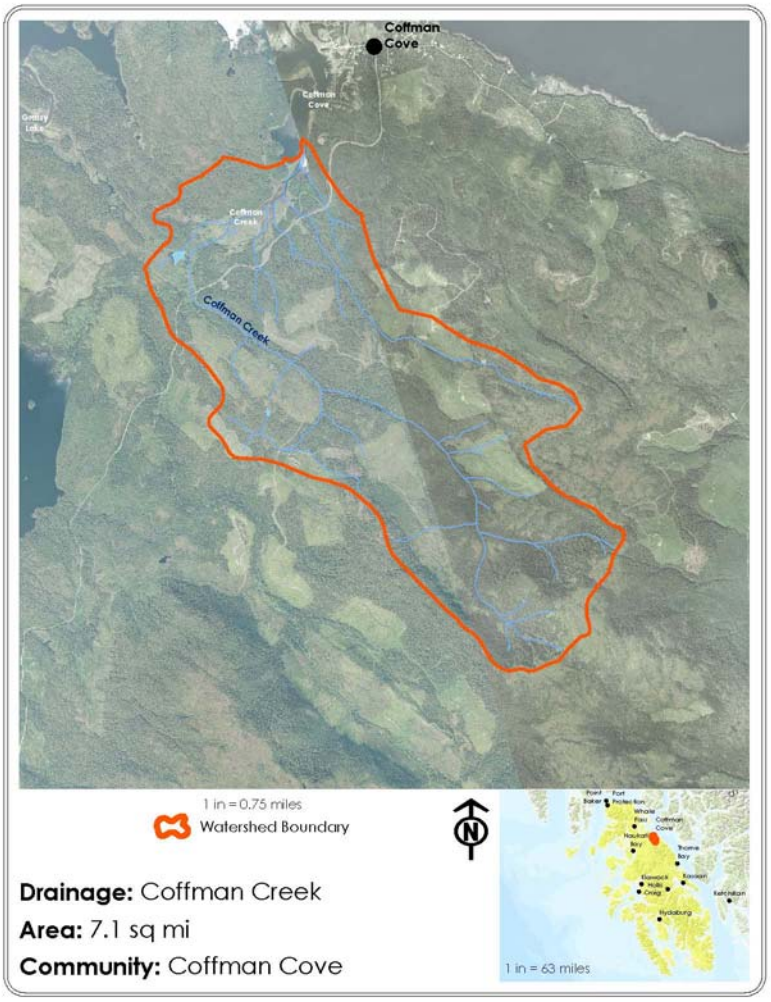

Figure 2. Watershed boundary for Coffman Cove Creek near Coffman Cove, Prince of Wales Island, Alaska.

Coffman Creek is listed as an anadromous waterbody (106-30-10160), hosting Coho and pink salmon (ADFG, 2013, UAS-GIS, 2013). A Chinook salmon enhancement project (described on page 12) takes place at near the mouth of Coffman Creek. The City of Coffman Cove operates a weir structure, from May through August of each year, on Coffman Creek to prevent Chinook salmon from entering and spawning in the creek (J. Lundberg, personal communication). There were no subsistence concerns identified for the watershed (ADEC, 2010; ADEC-SWIMS, 2013). Coffman Creek is not listed as an impaired waterbody and there is not a Class III solid waste facility within the watershed. There is one contaminated site record for the watershed, an old logging camp which had numerous spills and widespread soil contamination. The site was cleaned up and closed in 2001 (ADEC-CS, 2013). There were no CERCLIS, NPL or LUST sites identified for Coffman Creek (EPA, 2013). There were 10 spill records for the community of Coffman Cove, which is partially in the Coffman Creek watershed (ADEC-PERP, 2013). Reported and unreported spills may have impacts on the Coffman Creek watershed. There were no records for other water rights found on Coffman Creek, however there were two records for NPDES permits in the watershed (ADNR, 2013; EPA, 2013). There are no known water quality contaminants in the watershed. Past timber harvest activity has occurred in the watershed, and future timber harvest is likely. There were no records that mining activities have

occurred. The Coffman Creek watershed has not been listed by another Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). Field surveys revealed historic instream restoration efforts on Coffman Creek (cabled logs for bank stabilization), and it was noted that the main stream channel has been abandoned presumably from a flux in bed-load deposition (S. Claffey, personal communication). The value of the watershed as a subsistence resource was high for deer and low for fish. Past and most likely some future development includes urbanization with roads, commercial, light industrial and residential areas being constructed. Landownership is largely state and federal.

Coffman Creek was categorized as a Category I watershed because it met the following Category I criteria: it is a drinking water source; it is an anadromous fish stream; and it contains one ADEC listed contaminated site. In addition, Coffman Creek contains at least one petroleum spill record in the spills database.

As a Category I watershed, it is recognized that the system needs some restoration. Priorities for the Coffman Creek watershed would be to maintain water quality for both drinking water protection and anadromous fish, including the terminal harvest of hatchery raised king salmon returning to Coffman Creek. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available:

- Review historic aerial imagery to confirm historic channel location, determine when the channel shift may have occurred, and determine if the creek should be relocated back to its original channel
- Development, outreach and education, and implementation of spill response program
- Watershed assessment that includes data collection on instream habitat and functions to determine if any instream restoration efforts are warranted.
- Collect baseline water quality data to assure surface water and drinking water standards are met
- Data collection on the subsistence uses within the watershed
- Community planning for future development with setbacks from the upper watershed

Hatchery Creek Category I

Hatchery Creek was nominated by the community of Coffman Cove because of its importance for fisheries and recreation. Hatchery Creek was also nominated by the community Naukati Bay and will also be covered in the Naukati Bay chapter. The watershed encompasses approximately 48.3 square miles and drains into Sweetwater Lake, which drains into Barnes Lake and then into Lake Bay on the eastern side of Prince of Wales Island (Figure 3). Hatchery Creek is an important sockeye salmon subsistence system and is a part of the Honker Divide Canoe Route across Prince of Wales Island. Hatchery Creek is not considered a community drinking water source (UAS-GIS, 2013).

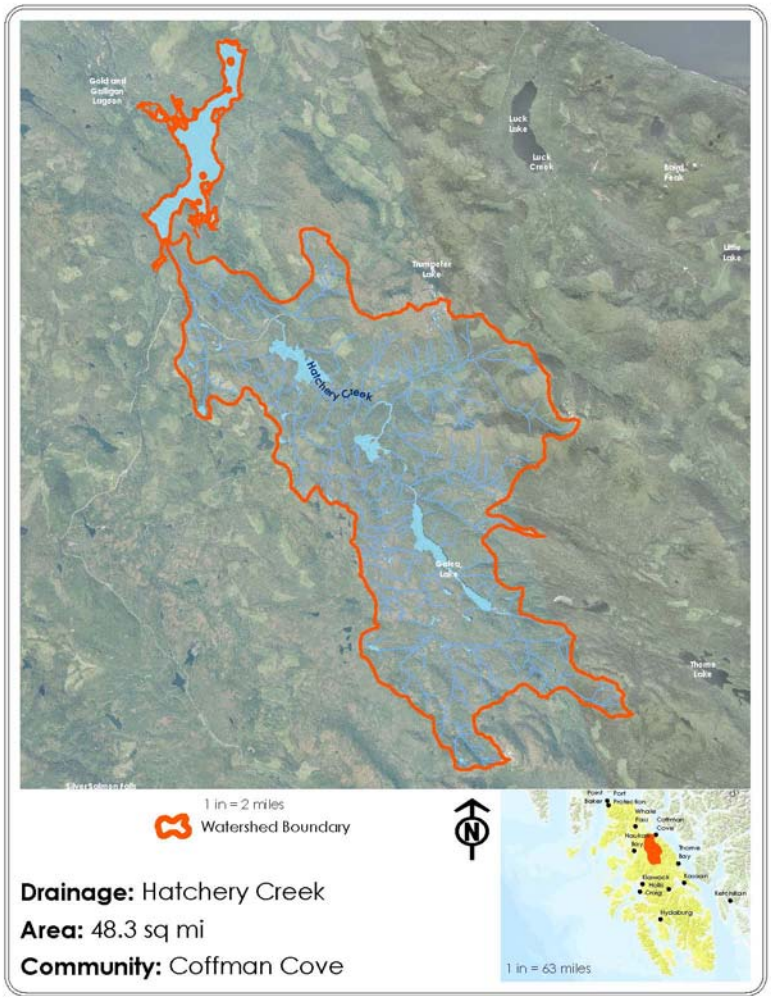

Figure 3. Watershed boundary for Hatchery Creek near Coffman Cove, Prince of Wales Island, Alaska.

Hatchery Creek is an anadromous waterbody (106-30-10670), hosting sockeye salmon, Coho salmon, pink salmon, chum salmon, steelhead trout, cutthroat trout, and Dolly Varden (ADFG, 2013, UAS-GIS, 2013). Hatchery Creek is considered a personal use fishery for sockeye salmon and Coho salmon. Recently, sockeye salmon runs have been monitored on Hatchery Creek as a priority information needs system by the Fisheries Resource Monitoring Program through the Office of Subsistence Management, and Hatchery Creek sees in-season fisheries management closures due to low sockeye salmon escapement numbers (DOI, 2013). There is concern that the subsistence/personal use sockeye salmon population is depleted. The Hatchery Creek watershed, as it includes Sweetwater Lake, is listed as a Category 5 impaired waterbody on the State of Alaska's 2010 Impaired Waterbody list (ADEC, 2010). Five tributaries into Sweetwater Lake contain heavy metal contamination from acid rock leaching during road construction of the Coffman Cove Road. A Category 5 impaired waterbody requires the development of Total Maximum Daily Loads (TMDLs), which have not yet been developed (ADEC, 2010). The situation is also listed as a State of Alaska contaminated site, which is still considered an open record with violations (ADEC-CS, 2013). There is not a Class III solid waste facility in the watershed (ADEC-SWIMS, 2013). The Envirofacts database lists the metals

contamination issue as a CERCLIS site, with reporting back to the EPA (EPA, 2013). The site is not considered an NPL, and there were no LUST records in the Hatchery Creek watershed (EPA, 2013). There is at least one petroleum spill record for the Hatchery Creek watershed (ADEC-PERP, 2013). There were no records for NPDES permits (EPA, 2013). There was one record for other water rights in the Hatchery Creek drainage basin, held by the USFS for public cabin and recreational use (ADNR, 2013). Timber harvest and mining activities previously took place in the Hatchery Creek watershed, and the potential for future timber harvest and mining activities exist. The watershed has not been listed by any other Unified Watershed Assessment, and it is not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). In 2010, the USFS did conduct a partial fish passage barrier modification on Hatchery Creek Falls, to improve passage into upper Hatchery Creek for sockeye salmon and steelhead trout (USDA, 2014). The value of the watershed as a subsistence resource was high for both deer and fish. Hatchery Creek does have road access in the lower portion, closer to Sweetheart Lake, but is otherwise relatively undeveloped. No other possible development within the watershed was identified. Landownership is largely federal.

The Hatchery Creek watershed was categorized as a Category I watershed because it meets the following Category I criteria: in is an anadromous fish stream, it is an impaired waterbody, and it is a contaminated site. In addition, the USFS has surface water rights in Sweetwater Lake for public cabin and recreational use. The following includes a list of potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Continued monitoring of the heavy metal contamination downstream in Sweetwater Lake to assure cleanup activities meet surface water quality standards and participate in the TMDL process
- Continued stock assessment and monitoring of the sockeye salmon population to aid in-season managers
- Genetic sampling of commercially intercepted sockeye salmon
- Assess the potential for instream enhancement of depleted salmon stocks
- Develop a sockeye salmon escapement goal for the system
- Testing of sockeye salmon and other fish for heavy metal contaminants
- Watershed Assessment that includes data collection on instream habitat and functions to determine if any instream restoration efforts are warranted
- Data collection for subsistence uses within the watershed

Luck Lake was nominated by Coffman Cove because of its importance for fisheries, wildlife, recreation and its proximity to the community. The watershed encompasses approximately 30.2 square miles and drains into Clarence Strait on the eastern side of Prince of Wales Island (Figure 4). Luck Lake and Eagle Creek are not considered a community drinking water source (UAS-GIS, 2013).

Figure 4. Watershed boundary for Eagle Creek near Coffman Cove, Prince of Wales Island, Alaska.

The Luck Lake and Eagle Creek system is an anadromous system (106-30-10670), hosting sockeye salmon, Coho salmon, chum salmon, pink salmon, steelhead trout, cutthroat trout, and Dolly Varden (ADFG, 2013; UAS-GIS, 2013). The system is best known for its world class steelhead trout sport fishing. Instream habitat surveys have been completed on Luck Creek (S. Claffey, personal communication). In addition, snorkel surveys for steelhead trout are completed every spring on Eagle Creek and Luck Creek by ADFG (Coyle, 2014). No information on whether subsistence resources have been impacted was provided. Luck Lake is not listed as an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no records for contaminated sites or spill sites within the watershed (ADEC-CS, 2013). The records research also did not turn up records on CERCLIS, NPL, LUST, spills or NPDES permits (EPA, 2013). There was one record for other water rights held by the USFS for public recreational use of surface water (ADNR, 2013). There are no known water quality contaminants in the watershed. Timber harvest has occurred in the watershed and will likely occur in the future. The Big Thorne Timber Sale includes harvest units in the Luck Lake watershed. No records of past or future mining activities were identified. The watershed was not identified by any other Unified Watershed Assessment (CCTHITA, 1999). The Luck Lake/Eagle Creek watershed was listed as a very high restoration priority for terrestrial ecosystems as well as a high priority at risk watershed from being most modified in freshwater ecosystem (Albert et al., 2008). The USFS completed the "*Luck Lake Area, Eagle*

Watershed Restoration Plan" to identify specific restoration actions (USFS, 2010). Due to extensive riparian harvest along major tributaries to Luck Lake, the USFS completed an environmental assessment to conduct 2.5 miles of instream and floodplain restoration on Luck Creek (USDA, 2013). A decision to proceed with the project with modifications discussed with Coffman Cove community members was made. In addition, the USFS is planning improvements to the recreational day use area on Luck Lake (USDA, 2014). The value of the watershed for subsistence was categorized as high for deer and low for fish, although the system is identified as important for sport fishing. Land ownership is largely federal.

The Luck Lake watershed is categorized as a Category IV watershed. The Luck Lake watershed did not meet the set qualifiers for a Category I or Category II watershed, however some impacts and concerns for the watershed exist, including on-going restoration efforts by the USFS, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The watershed is considered a restoration priority in the "*A Framework for Setting Watershed-scale Priorities for Forest and Freshwater Restoration on Prince of Wales Island"* reference and the next phase of that process includes field verifying sites and developing a watershed restoration plan (Albert et al., 2008). The following list includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available. It should be noted that prior to any restoration efforts, the community should engage the local USFS districts to explore opportunities to collaborate on restoration priorities.

- Watershed assessment that includes data collection on instream habitat and functions to determine if any instream restoration efforts are warranted
- Collect baseline water quality data to ensure surface water standards are met
- Data collection for recreation uses within the watershed
- Stock or population estimates for species important for sport and subsistence fishing
- Genetic sampling on intercepted salmon species
- Develop a sockeye salmon escapement goal for the system
- Assess the potential for instream enhancement of potentially depleted salmon stocks
- Pursue funding for identified watershed restoration activities identified in Albert et al (2008)
- Data collection for subsistence uses within the watershed

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U.S. Department of Agriculture, Forest Service (USDA), 2013. Luck Creek Restoration Environmental Assessment (EA). Thorne Bay Ranger District.

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Craig

Population: 1,243 (2012 DCCED certified) Governance: 1st class city
Federally recognized Tribe

Craig is located on the western side of Prince of Wales Island. The community was originally seasonally occupied by Tlingit and Haida people as a fishing camp for herring eggs. In the early 1900's Craig was settled with the establishment of a fish saltery and cannery, and the community was incorporated in 1922. Craig is now the largest community on Prince of Wales Island, serving as a major transportation, goods and services center for the rest of the island. Craig hosts major industries in timber, fishing, tourism and government.

The community of Craig has nominated seven watersheds to be included in this watershed assessment: Crab Creek, Dog Salmon Creek, Doyle Bay, Klawock Lake (also nominated by Klawock), North Fork Lake, Port Saint Nicholas Creek and Trocadero Bay. Table 3 depicts a summary of the research conducted on each watershed.

Table 3. Summary of records research for watersheds nominated by the community of Craig for the Prince of Wales Unified Watershed Assessment. For landownership: S = State lands; F = Federal lands; P = Private lands; NC = Native Corporation lands.

	Member Community	Craig						
	Watershed Name	**Crab Creek**	**Dog Salmon Creek**	**Doyle Bay**	**Klawock River**	**North Fork Lake**	**Port Saint Nicholas Creek**	**Trocadero Bay**
Category I Qualifiers	**Community Drinking Water System**	no	no	no	yes - 2	yes	North Fork	no
	Anadromous Fish System	1	1	4	1	0	1	14
	ADEC Impaired Water Body List	no	no	no	no	no	no	no
	Class III solid waste facility present	yes	no	no	no	no	no	no
	ADEC Contaminated Sites	2	0	0	15	0	0	0
	EPA CERCLIS/NPL Sites	0	0	0	1	0	0	0
	Subsistence resource impacted	all fish depleted	no	no	sockeye depleted	no	no	no
Category II Qualifiers	**LUST sites**	yes	no	no	yes	no	no	no
	ADEC Spills sites	1+	0	0	20+	0	1	0
	NPDES/Envirofact records	3	0	0	5	0	0	1
	Other water rights	0	0	0	10	0	0	1
	Known water quality contaminants	petroleum	sediments	no	Heavy metals	no	no	no
	Past/present mining activity	no	no	no	yes	no	no	no
	Past/present timber harvest	yes	yes	yes	yes	no	yes	yes
	Listed by State or Tribe UWA	SE Tribal UWA	no	no	SE Tribal UWA	no	no	no
Other Information	**TNC/USFS Restoration priority**	no	no	no	very high	no	no	no
	Value as subsistence resource	Fish - low Deer - low	Fish – low Deer- low	Fish - low Deer - moderate	Fish - high Deer - high	Fish - low Deer - low	Fish - low Deer - moderate	Fish - low Deer - high
	Possible future timber harvest	yes	yes	yes	yes	no	yes	yes
	Possible future mining activity	no	no	no	no	no	no	no
	Landownership	NC, P	P	NC	NC, F	NC	NC	NC, F
	Possible other development	no	Housing	no	Housing	Larger dam	Roadwork	no

Crab Creek was nominated by the community of Craig because of its historical importance to the community for fisheries, particularly the marine environment where extensive eel grass beds provide nursery habitat for numerous fish species (CCTHITA, 1999). The watershed encompasses approximately 5.3 square miles and drains into Crab Bay at the north end of the City of Craig on the western side of Prince of Wales Island (Figure 5). Crab Creek is not considered a community drinking water source (UAS-GIS, 2013).

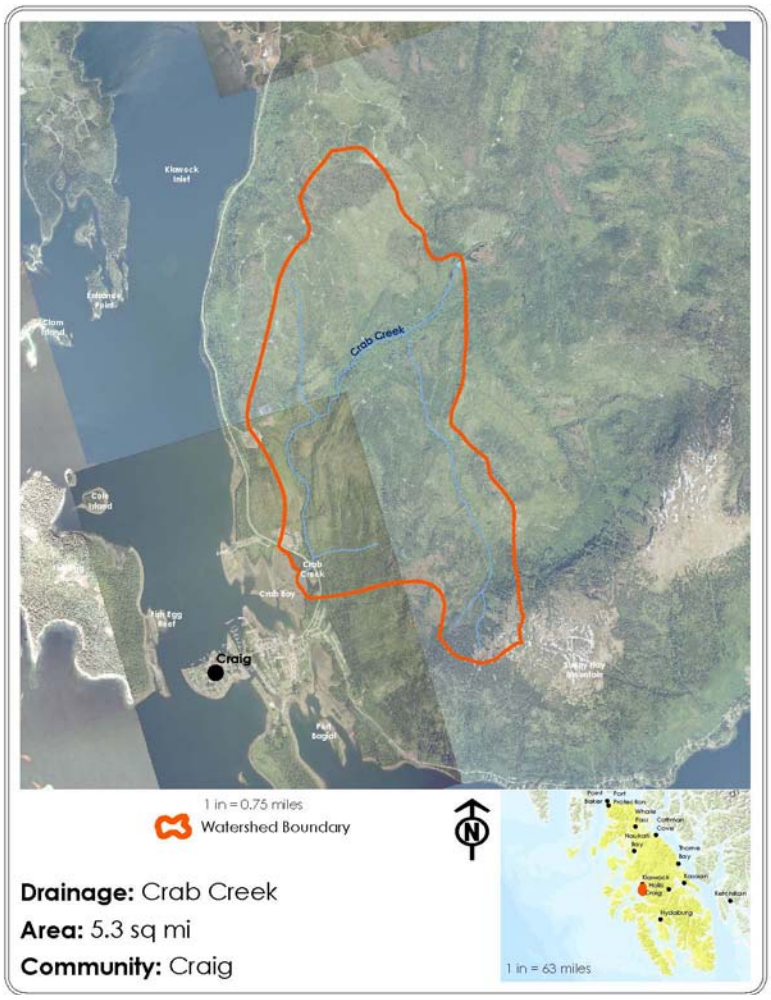

Figure 5. Watershed boundary for Crab Creek near Craig, Prince of Wales Island, Alaska.

Crab Creek is listed as an anadromous waterbody (103-60-10500), hosting Coho salmon, sockeye salmon, chum salmon, pink salmon and steelhead trout (ADFG, 2013; UAS-GIS, 2013). The community is concerned that all fish runs have been impacted or depleted from contamination and development activities in the watershed, affecting subsistence fishing (CCTHITA, 1999). Crab Creek is not listed as an impaired waterbody (ADEC, 2010). The City of Klawock operates a Class III landfill and transfer station, which is located in the Crab Creek watershed (ADEC-SWIMS, 2013). Records researched showed there are two ADEC contaminated sites in the watershed (ADEC-CS, 2013). One site is an old drum site which has been cleaned up and closed. The second is an open contaminated site associated with a vehicle maintenance yard where petroleum products have spilled from aboveground tanks. The site is still considered open by the State of Alaska (ADEC-CS, 2013). There were no CERCLIS or NPL site records for the watershed (EPA, 2013). There was one LUST record identified in the "*Southeast Tribal Unified Watershed Assessment*", but was not confirmed in the ADEC records (CCTHITA, 1999). There is at least one spill record for the watershed, therefore both reported and unreported petroleum spills have potential impacts (ADEC-PERP, 2013). There were no records for other water rights found for Crab Creek, however there were three NPDES permits within the watershed (ADNR, 2013; EPA, 2013). Known water quality contaminants include

petroleum (CCTHITA, 1999, ADEC-PERP, 2013). Past timber harvest was extensive in the upper watershed, and there is the potential for future timber harvest. No records turned up for past or future mining activities. Crab Creek was listed in the "*Southeast Alaska Tribal Unified Watershed Assessment"* as a Category I watershed (CCTHITA, 1999). Under that process, records stated there were six spill sites, three sites with cultural or historical value, six NPDES permits, and there were community concerns with the extensive timber harvest in the upper watershed. The concern was, and still is, that the watershed would not meet surface water quality standards and that there were restoration needs (CCTHITA, 1999). The watershed was not included as a restoration priority for Prince of Wales Island (Albert et al., 2008). The value of the watershed as a subsistence resource for deer was noted as low and low for fish, likely because the area is very urbanized and the fish runs are considered depleted for all species. No new development was identified for the watershed. Landownership is a mix of Native Corporation and private.

Crab Creek is categorized as a Category I watershed because it met the following Category I criteria: it is an anadromous fish stream; it contains a Class III landfill; and it contains two ADEC listed contaminated sites. In addition, Crab Creek contains at least one petroleum spill record and was listed as a Category I watershed in the "*Southeast Alaska Tribal Unified Watershed Assessment"*.

As a Category I watershed, it is recognized that the system needs some restoration. Priorities for the Crab Creek watershed would be to improve water quality for anadromous fish. The following includes a list of potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Development, outreach and education, and implementation of spill response program
- Monitor water quality for petroleum in Crab Creek, as well as other potential contaminants from solid waste activities in the watershed
- Watershed Assessment that includes data collection on stream functions and fish habitat to determine if any instream restoration efforts are warranted
- Data collection for past and present subsistence uses within the watershed

Dog Salmon Creek was nominated because of concerns from local residents that the waterbody, mainly fish habitat, was impaired by timber harvest activities. The watershed encompasses approximately 1.9 square miles and drains into Port Saint Nicholas on the western side of Prince of Wales Island (Figure 6). A watershed assessment, focusing on aquatic habitat, was conducted by TNC in partnership with the USFS in 2013 (TNC, 2013). Dog Salmon Creek is not considered a community drinking water source (UAS-GIS, 2013).

Figure 6. Watershed boundary for Dog Salmon Creek near Craig, Prince of Wales Island, Alaska.

Dog Salmon Creek is an anadromous waterbody (103-60-10570), hosting Coho salmon, chum salmon and pink salmon (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resources concerns identified for the watershed. Dog Salmon Creek is not listed as an impaired waterbody and there is not a Class III solid waste facility within the watershed (ADEC, 2010; ADEC-SWIMS, 2013). Records researched showed there were no ADEC contaminated sites in the watershed (ADEC-CS, 2013). There were no CERCLIS, NPL or LUST sites identified for Dog Salmon Creek (EPA, 2013). There were no sites listed in the spills database, however there may be unreported spills from road construction, past timber harvest activities and/or housing development (ADEC-PERP, 2013). There were no records for other water rights found for Dog Salmon Creek, nor were there NPDES permit records (ADNR, 2013; EPA, 2013). Sediments, most likely from road erosion from old logging roads, were identified as known water quality contaminants (TNC, 2013). Timber harvest occurred throughout the watershed and there is potential for future timber harvest. There were no records turned up for past or future mining activities. The watershed was not listed in a previous Unified Watershed Assessment, nor included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource

for deer and fish was noted as low. Past and most likely some future development includes urbanization with roads and residential housing. Landownership is a mix of Native Corporation and private.

Dog Salmon Creek was categorized as a Category IV watershed. The watershed did not meet the set qualifiers for Category I or Category II watershed, however some impacts and concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. Some restoration actions associated with improving aquatic habitat for fish have been identified in the "*Dog Salmon Creek Watershed Assessment*" (TNC, 2013). In addition, the following includes a list of potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Monitor water quality for Dog Salmon Creek to determine if other contaminants (besides sediments) are impacting water quality in Dog Salmon Creek. The waterbody could be tested for petroleum or other contaminants associated with historical timber harvest activities as well as urban impacts from roads and residences
- Data collection for past and present subsistence uses within the watershed

Doyle Bay was nominated by the community of Craig because of its importance as a nearby subsistence use area. The watershed encompasses approximately 12.9 square miles and drains into the north side of Trocodero Bay on the western side of Prince of Wales Island (Figure 7). Doyle Bay does not contain a community drinking water source (UAS-GIS, 2013).

Figure 7. Watershed boundary for Doyle Bay near Craig, Prince of Wales Island, Alaska.

Doyle Bay hosts four unnamed anadromous waterbodies. The first (103-60-10650) hosts Coho salmon, chum salmon and pink salmon. The other three (103-60-10662; 103-60-10670; 103-60-10680) host pink salmon (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for the watershed. Doyle Bay does not have a stream system that is listed as an impaired waterbody, and there were no Class III solid waste facilities found in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated site records, nor were there CERCLIS, NPL or LUSTS sites found for the Doyle Bay watershed (EPA, 2013). The spills database did not produce records specific to the Doyle Bay area, however unreported spills may exist from past logging activities (ADEC-PERP, 2013). There were no NPDES or other water rights records found for the watershed (ADNR, 2013, EPA, 2013). There are no known water quality contaminants in the watershed. Timber harvest has occurred in the watershed, and there is potential for future timber harvest. No records for past or future mining activities were found. The Doyle Bay watershed has not been listed in any other Unified Watershed Assessment, and it was not included as a restoration priority on Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was ranked moderate for deer and low for fish. There is no known future development plans for the Doyle Bay watershed, outside of potential timber harvest. Landownership is largely Native Corporation.

The Doyle Bay watershed was categorized as a Category IV watershed. The Doyle Bay watershed did not meet the set qualifiers for a Category I or Category II watershed, however some impacts and concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The area was identified as a subsistence use area by the community of Craig, although no present concerns were identified. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Watershed assessment that includes data collection on instream habitat and functions to determine if any instream restoration efforts are warranted
- Water quality monitoring project to determine surface water standards are met
- Data collection for updating fish distribution and potential additions to the Anadromous Waters Catalog (AWC)
- Data collection for subsistence uses within the watershed

Klawock Lake was nominated by the community of Craig because of its importance as a subsistence fish system for sockeye salmon, Coho salmon and steelhead trout. Klawock Lake was also nominated by the community of Klawock and will also be covered in the Klawock chapter. The watershed encompasses approximately 49.3 square miles and drains into Klawock Inlet on the western side of Prince of Wales Island (Figure 8). The Klawock Lake watershed also has two drinking water protection areas; one on Halfmile Creek and one on Threemile Creek , both of which are tributaries to the east side of the lake (UAS-GIS, 2013).

Figure 8. Watershed boundary for Klawock Lake near Craig, Prince of Wales Island, Alaska.

Klawock Lake is listed as an anadromous waterbody (103-60-10120), hosting sockeye salmon, Coho salmon, chum salmon, pink salmon, cutthroat trout, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). The Klawock Lake system has been documented to be an important subsistence use system for sockeye salmon, Coho salmon and steelhead trout for both Craig and Klawock. The sockeye salmon population has been declining (DOI, 2013). The Nature Conservancy is currently investigating sockeye returns and trying to determine if any further habitat improvements may increase sockeye populations returning to Klawock Lake (N. Cohen, personal communication). Klawock River is also a sport fish use system. The Prince of Wales Hatchery also operates on Klawock Lake, and has been important for stocking fish populations for commercial and sport fisheries (POWHA, 2013). The Klawock Lake system is not considered an impaired waterbody and there is not a Class III solid waste facility within the watershed (ADEC, 2010; ADEC-SWIMS, 2013). Records researched showed there were 15 contaminated sites in the Klawock Lake watershed, many at the mouth of the river within the community of Klawock (ADEC- CS, 2013). Of the 15 sites, 11 have been cleaned up and closed and not further discussed (ADEC-CS, 2013). Of the remaining four, two have been cleaned up and have institutional controls placed on them for

further monitoring; one is an active biocell for soil remediation and the other is an old diesel spill (ADEC-CS, 2013). The remaining two contaminated sites have not yet been cleaned up and both are located on Klawock Island at the mouth of the Klawock River; these are petroleum spills at the Phoenix Truck Shop and the Klawock tank farm (ADEC-CS, 2013). The current CERCLIS and NPL records do not list any waterbody in the Klawock Lake watershed, however one past CERCLIS site was reported in the "*Southeast Alaska Tribal Unified Watershed Assessment"* (CCTHITA, 1999; EPA, 2013). The site was listed as the Klawock Trailer Court and No Further Action (NOFA) was assigned. There was one LUST site record at the POW Hatchery, which was cleaned up (EPA, 2013). There were 20+ spill records for the community of Klawock, which is mainly situated in the Klawock Lake watershed, therefore both reported and unreported petroleum spills have potential impacts (ADEC-PERP, 2013). There were five NPDES records for the Klawock Lake watershed (EPA, 2013). This included three log transfer facilities and two Resource Conservation and Recovery Act (RCRA) records for Delta Fuels and Alaska Power and Telephone. There were 10 other water rights records, which include surface water rights for the POW Hatchery, surface water rights for the City of Klawock for Halfmile Creek, surface water rights for Viking Lumber on an unnamed spring and seven instream flow reservation for Alaska Department of Fish and Game (ADFG) for fish (ADNR, 2013). Heavy metals were identified as a known water quality contaminant in the watershed, with high levels of copper, mercury, lead and nickel (CCTHITA, 1999). There has been extensive logging in the watershed, which lead to the development of a "*Klawock Watershed Condition Assessment*" (CCTHITA, 2002) and a "*Klawock Watershed Restoration Management Plan*" (Keta Engineering, 2003). Many restoration efforts have already taken place, associated with decommissioning old logging roads and pulling problem culverts. Future timber harvest or activities associated with timber management are expected. There was one aggregate mine identified for the watershed (CCTHITA, 1999) and no indication that future mining would occur. The Klawock Watershed was listed in the "*Southeast Alaska Tribal Unified Watershed Assessment*" as a Category I watershed (CCTHITA, 1999). The Category I designation was because the watershed had high cultural and historical value, salmon runs were declining, extensive timber harvest occurred, it was a drinking water source, and there were numerous potential water quality issues. Klawock River was also ranked as a very high restoration priority for Prince of Wales Island (Albert et al., 2008). The value of the watershed as a subsistence resource was ranked high for both deer and fish. Future development in the watershed includes continued urbanization with road construction and housing development. Landownership is primarily Native Corporations, with some federal and private lands.

Klawock Lake was categorized as a Category I watershed because it met the following Category I criteria: it is a drinking water source; it is an anadromous fish system; there are 15 contaminated sites and one closed CERCLIS site; and a subsistence resource has been impacted. In addition, the watershed contains a LUST, petroleum spills, NPDES permits, known water quality contamination and has been extensively logged.

As a Category I watershed, it is recognized that the system needs some restoration. Priorities for the Klawock Lake watershed would be to maintain water quality for both drinking water protection and anadromous fish. The following list includes potential projects identified by Klawock in this same document; projects are in no order of priority. This list is not all inclusive and may be added to at any

time. Prioritization would come from a community based planning effort with Klawock or as funding is available:

- Post-construction monitoring of projects that were completed in the Klawock Lake watershed since 2003
- Conduct a Klawock Lake Watershed re-assessment that address which priorities were previously completed, a synthesis if the project were successful, and identifying the next steps to address continued concerns
- Continue sockeye salmon stock assessment project
- Develop a sockeye salmon escapement goal for the system
- Document concerns and develop project that address how climate change is impacting the Klawock Lake watershed, including long term temperature monitoring, river bank erosion, etc.
- Assessment of the impact of spruce bark beetles in the Klawock watershed
- Conduct instream habitat surveys, update surveys that may have been previously conducted and survey all tributaries into the lake system.
- Conduct trail maintenance and improvements, including tree removal, along the Klawock River trail
- Conduct water quality monitoring on the Klawock River

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North Fork Lake was nominated by the community of Craig because of its importance as a drinking water source (UAS-GIS, 2013). The watershed encompasses approximately 3.2 square miles and drains into Port Saint Nicholas Creek, which drains into Port Saint Nicholas on the western side of Prince of Wales Island (Figure 9). Port Saint Nicholas Creek was also nominated for this watershed assessment and is included in this chapter.

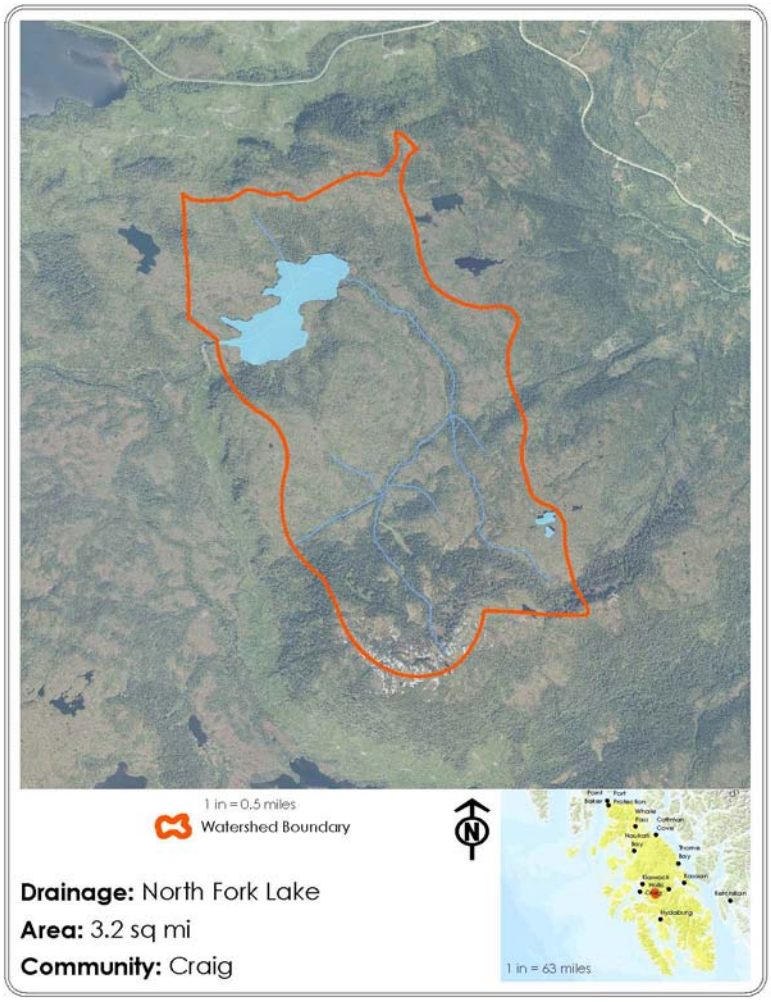

Figure 9. Watershed boundary for North Fork Lake near Craig, Prince of Wales Island, Alaska

The North Fork Lake is not listed as an anadromous fish system (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resources concerns identified for the watershed (ADEC, 2010; ADEC – SWIMS, 2013). North Fork Lake is not listed as an impaired waterbody and there is not a Class III solid waste facility in the watershed. There were no contaminated sites, CERCLIS, NPL, LUST, spills, NPDEC, or other water rights records found for the North Fork Lake watershed (ADEC-CS, 2013; ADEC-PERP, 2013; ADNR, 2013; EPA, 2013). There are no known water quality contaminants in the watershed. Timber harvest has not occurred in the watershed, and no future timber harvest is planned. There have been no past mining activities or planned future mining activities planned for the North Fork Lake watershed. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was noted as low for both deer and fish. There is development planned for the watershed, which is identified as a project occurring on Tongass National Forest Lands. The City of Craig is proposing to raise the dam an additional six feet in order to increase the storage capacity of the lake (USDA, 2014). Landownership is Native Corporation.

North Fork Lake was categorized as a Category IV watershed. The North Fork Lake watershed did not

meet the set qualifiers for a Category I or Category II watershed, however some concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The following list includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Watershed assessment that includes data collection on stream functions to determine if any instream restoration efforts are warranted
- Water quality monitoring program to assure surface water and drinking water standards are met
- Data collection for subsistence uses of deer within the watershed

Port Saint Nicholas Creek was nominated because of its historical importance to the community of Craig and because Craig's primary drinking water source drains into Port Saint Nicholas Creek (UAS-GIS, 2013). The watershed encompasses 11.7 square miles (not including the North Fork Lake watershed) and drains into Port Saint Nicholas on the western side of Prince of Wales Island (Figure 10).

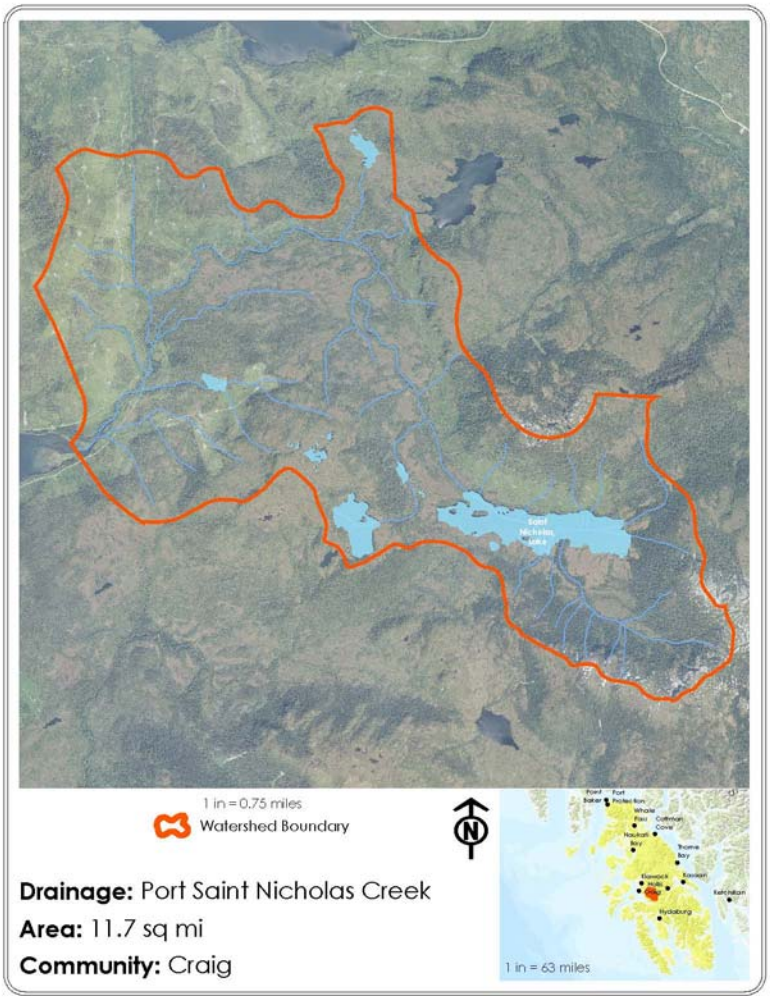

Figure 10. Watershed boundary for Port Saint Nicholas Creek near Craig, Prince of Wales Island, Alaska.

Port Saint Nicholas Creek is an anadromous waterbody (103-60-10590), hosting Coho salmon, pink salmon, chum salmon and steelhead trout (ADFG, 2013; UAS-GIS, 2013). The Port Saint Nick Hatchery is located at mile 5 Port Saint Nicholas Road, where king salmon are reared and then released into the Port Saint Nicholas estuary as an enhancement opportunity (POWHA, 2013). There were no subsistence concerns identified for the watershed. Port Saint Nicholas Creek is not an impaired waterbody, and there is not a Class III solid waste facility within the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated site, CERLIS, NPL or LUST records found in the watershed, however there was one spill record for petroleum (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013. Therefore both reported and unreported petroleum spills have potential impacts (ADEC-PERP, 2013). There were no records for other water rights found for Port Saint Nicholas Creek, and there were no records for NPDES permits (ADNR, 2013; EPA, 2013). There are no known water quality contaminants in the watershed. Timber harvest has occurred in the watershed, and there is potential for future timber harvest. No records turned up past or future mining activities. The watershed is not listed in any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource for deer was noted to be moderate and low for fish. Past and most likely some future development includes urbanization with continued road construction and potentially residential housing. Landownership is largely Native Corporation.

Port Saint Nicholas was categorized as a Category II watershed. The watershed only met one qualifier for a Category I listing; being listed as an anadromous waterbody. Port Saint Nicholas Creek met two qualifiers for being a Category II watershed: petroleum spills have occurred in the watershed, and there have been past timber harvest activities.

As a Category II watershed, it is recognized that the watershed may need some preventative action or protection measures in order to sustain water quality or watershed functions. The following includes a list of potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community base planning effort or as funding is available.

- Watershed assessment that includes data collection on stream functions to determine if any instream restoration efforts are warranted and a water quality monitoring program to assure surface water standards are met
- Data collection for updating fish distribution and potential additions to the anadromous waters catalog
- Data collection for past and present subsistence uses within the watershed

Trocadero Bay — Category IV

Trocadero Bay was nominated by the community of Craig because of its importance and proximity to the community as a subsistence resource. The community of Hydaburg also shares the area in their subsistence use practices but did not nominate the area for consideration in deference to the community of Craig. The watershed encompasses 80 square miles and drains into Bucareli Bay on the west side of Prince of Wales Island (Figure 11). They hydrological unit also includes Doyle Bay, which was nominated separately by the community of Craig. Trocadero Bay does not contain a community drinking water source (UAS-GIS, 2013).

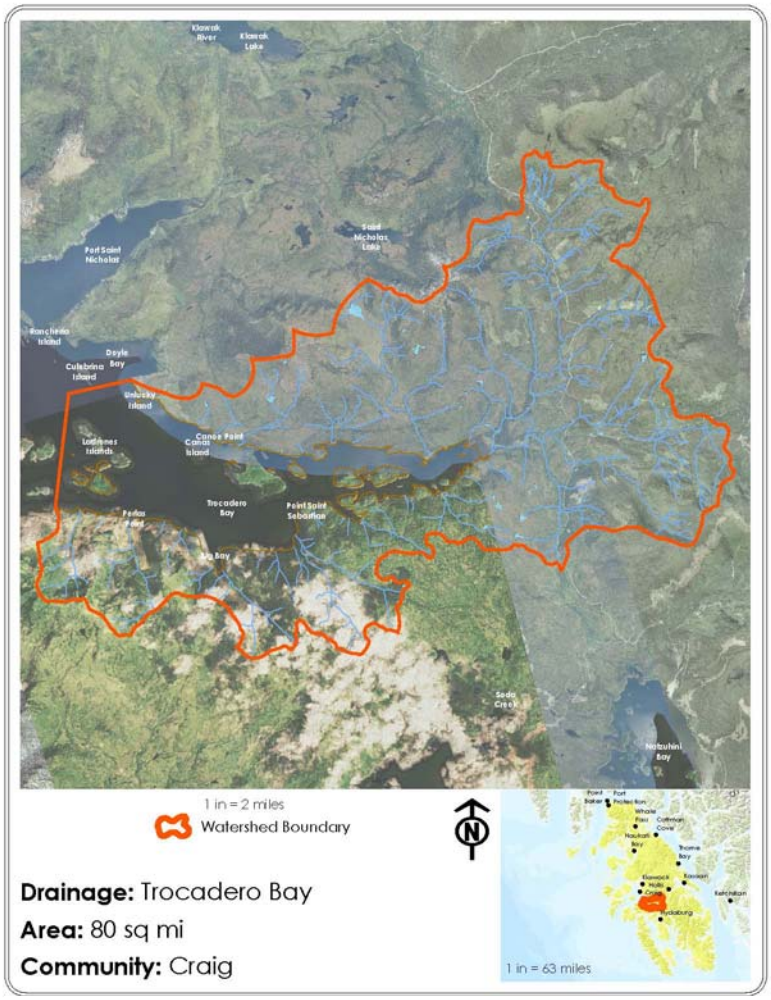

Figure 11. Watershed boundary for Trocadero Bay near Craig, Prince of Wales Island, Alaska.

There are 14 anadromous streams that are part of the Trocadero bay system (ADFG, 2013; UAS-GIS, 2013). Of these, six systems support Coho salmon, pink salmon and chum salmon (103-60-10690; 103-60-10710; 103-60-10780; 103-60-10830; 103-60-10850; 103-60-10890). There are four systems that support only pink salmon and chum salmon (103-60-10730; 103-60-10790; 103-60-10800; 103-60-10810). One system supports Coho salmon and pink salmon (103-60-10900). One system, labeled In-between Creek, supports only pink salmon (103-60-10845). There are two systems that have multiple fish species; both carry Coho salmon, pink salmon, chum salmon and steelhead trout (103-60-10750; 103-60-10770). Anadromous system number 103-60-10750, Trocadero Creek, also lists Dolly Varden. There were no subsistence concerns identified for any of the 14 waterbodies within the watershed. Trocadero Bay does not contain an impaired waterbody, nor is there a Class III solid waste facility located in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no records found for contaminated sites, CERCLIS, NPL, LUST, or spill sites within Trocadero Bay (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There was one NPDES record for Trocadero Bay held by the City of Klawock Waste Water Treatment Plant (EPA, 2013). For other water rights, the ADFG hold instream flow reservations for fish in

Trocadero Creek (ADNR, 2013). There are no known water quality contaminants for Trocadero Bay. There has been past timber harvest activities, and there will likely be future timber harvest within the 80 square miles of the Trocadero Bay watershed. There has been past mining activities in Trocadero Bay. There were no records for future mining activities, however given the size of the area this was difficult to search. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). There have been multiple restoration efforts on Snipe Creek, a tributary to Cable Creek which is a tributary to Trocadero Creek (S. Claffey, personal communication). Restoration efforts have focused on adding large wood into the system. The value of the watershed as a subsistence resource for deer was high but was considered low for fish. It is noted that Trocadero Bay itself is known for subsistence shellfish, crab and shrimp harvest. There was no new development identified for the watershed. Landownership is a mix of federal and Native Corporation.

The Trocadero Bay watershed is categorized as a Category IV watershed. The watershed did not meet the set qualifiers for a Category I or Category II watershed, however some impacts and concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The list below includes other potential projects in no order of priority. Trocadero Bay could be broken down into sub-watersheds, or each of the identified projects below could be applied to one stream system at a time. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Identify important individual stream systems where data collection should occur
- Individual watershed assessments for each stream that include data collection on stream functions to determine if any instream restoration efforts are warranted
- Water quality monitoring program to assure surface water standards are met
- Stock or population estimates for species important for sport and subsistence fishing on individual stream
- Data collection for subsistence uses within the watershed

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Hollis

Population: 109 (2012 DCCED certified) Governance: Unincorporated

Hollis is located on the east side of Prince of Wales Island, in Twelvemile Arm. Hollis was originally settled as a mining town, and in 1953 it became a logging camp for Ketchikan Pulp Company. Hollis more currently serves as a gateway to Prince of Wales by hosting ferry service from Ketchikan. The community is unincorporated, but does have a K-12 school in the Southeast Island School District. The community of Hollis has nominated five watersheds to be included in this watershed assessment: Harris River, Karta River (also nominated by Kasaan), Maybeso Creek, Twelvemile Arm and Wolf Creek. Table 4 depicts a summary of the research conducted on each watershed.

Table 4. Summary of records research for watersheds nominated by the community of Hollis for the Prince of Wales Unified Watershed Assessment. For landownership: S = State lands; F = Federal lands; P = Private lands; NC = Native Corporation lands.

	Member Community	Hollis				
	Watershed Name	**Harris River**	**Karta River**	**Maybeso Creek**	**Twelvemile Arm**	**Wolf Creek**
Category I Qualifiers	**Community Drinking Water System**	no	no	no	no	no
	Anadromous Fish System	1	1	1	16	1
	ADEC Impaired Water Body List	At Fubar category 4b	no	no	no	no
	Class III solid waste facility present	no	no	no	no	no
	ADEC Contaminated Sites	0	0	0	1	0
	EPA CERCLIS/NPL Sites	0	0	0	0	0
	Subsistence resource impacted	habitat concerns	sockeye declining	no	no	no
Category II Qualifiers	**LUST sites**	no	no	no	no	no
	ADEC Spills sites	0	0	0	1	0
	NPDES/Envirofact records	0	0	0	1	0
	Other water rights	4	4	2	4	1
	Known water quality contaminants	sediments	no	no	no	no
	Past/present mining activity	yes	yes	yes	yes	yes
	Past/present timber harvest	yes	no	experimental forest	yes	yes
	Listed by State or Tribe UWA	State UWA	Kasaan UWA	no	no	no
Other Information	**TNC/USFS Restoration priority**	very high	no	high	high	no
	Value as subsistence resource	Fish - low Deer - moderate	Fish - high Deer - low	Fish - moderate Deer - moderate	Fish - low Deer - low	Fish - low Deer - low
	Possible future timber harvest	yes	no	yes	yes	yes
	Possible future mining activity	yes	no	yes	yes	yes
	Landownership	S, P, F	F	S, P, F	F	F
	Possible other development	Housing	no	Road upgrades	no	Hydroelectric

The Harris River watershed was nominated by the community of Hollis because of its importance as anadromous fish system and recreational area. The watershed encompasses 29.7 square miles and drains into Twelvemile Arm, which empties into Kasaan Bay on the east side of Prince of Wales Island (Figure 12). The Harris River is not a community drinking water source.

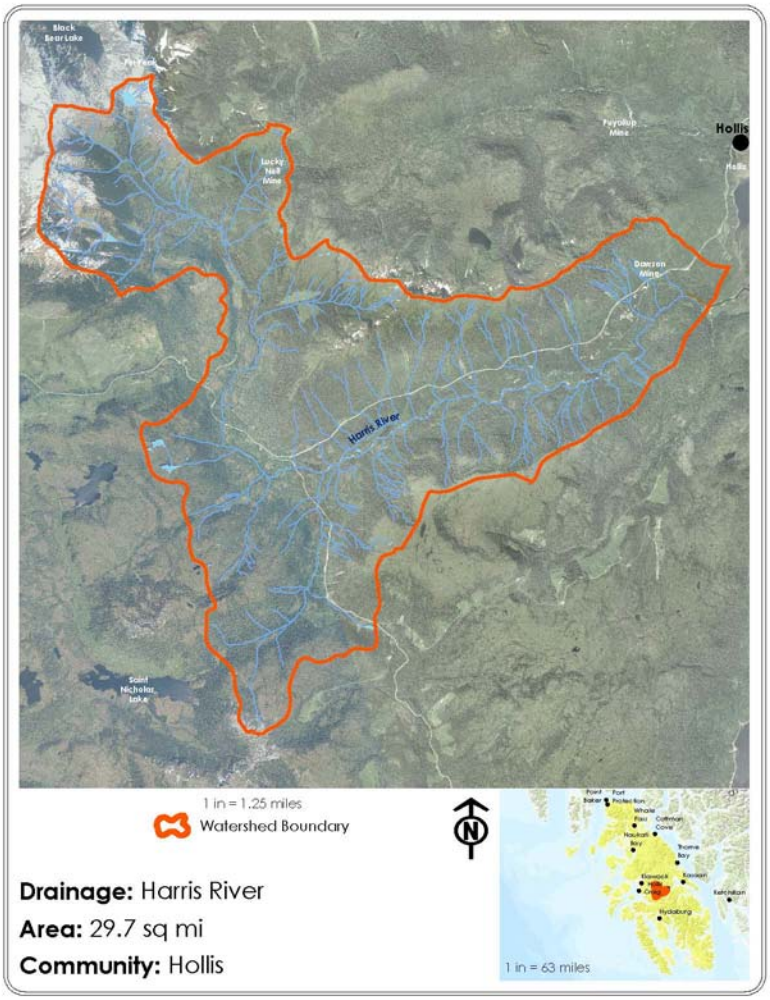

Figure 12. Watershed boundary for Harris River near Hollis, Prince of Wales Island, Alaska.

The Harris River is an anadromous waterbody (102-60-10820), hosting Coho salmon, chum salmon, pink salmon and steelhead trout ((ADFG, 2013; UAS-GIS, 2013). The system is an important sport fishery, particularly for steelhead trout. There are concerns for subsistence steelhead fish in the watershed, due to habitat degradation and loss of fish habitat (Piazza et al., 2008). The ADFG completes annual snorkel surveys for steelhead trout, as well as adult salmon foot counts for Coho salmon on the Harris River (Coyle, 2014; S. Claffey personal communication). The Harris River contains a tributary named Fubar Creek, which is listed on the State of Alaska's 2010 impaired waterbody list as a Category 4a impaired waterbody (ADEC, 2010). Fubar Creek was considered impaired from sediments from past timber harvesting. The USFS conducts annual pink and chum adult salmon foot counts on Fubar Creek (S. Claffey, personal communication). A TMDL is not required for a Category 4a system (ADEC, 2010). There is not a Class III solid waste facility in the watershed (ADEC-SWIMS, 2013). There were no contaminated site, CERCLIS, NPL, LUST, spills or NPDES records found for the Harris River watershed (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There were four records for other water rights in the Harris River watershed (ADNR, 2013). The ADFG actually had instream flow reservations in multiple locations for fish. There were also three private surface water rights for residents in the subdivision. Sediments are a known water quality issue for the Fubar Creek tributary to the Harris River (ADEC, 2010). There has been past timber harvest and mining activity in the watershed, and there will likely be

future timber and mining activity in the watershed. There was one reference that indicated that the Harris River was listed in the State of Alaska Unified Watershed Assessment, however the State's UWA is no longer available for verification (CCTHITA, 1999). The Harris River was listed as a high priority for restoration on Prince of Wales Island (Albert et al., 2008). There have been extensive restoration efforts on instream habitat on Fubar Creek and the mainstem of the Harris River with instream work, which started in 2006 and were completed in 2011 (TNC, 2013). The USFS has completed instream habitat surveys on both the Harris River and Fubar Creek prior to and since restoration efforts began (S. Claffey, personal communication). The value of the watershed as a subsistence resource for deer was noted as moderate and low for fish. There is likely to be future development in the Harris River watershed, including continued road upgrades as well as future residential housing. Landownership is a mix of federal, state and private lands.

The Harris River was categorized as a Category I watershed because it met the following Category I criteria: it is an anadromous fish stream; it contains an impaired waterbody; there were subsistence concerns for fish habitat identified. In addition, the Harris River had four other water right records, it has water quality issues from sediments, and it was listed at one time in the State's UWA.

As a Category I watershed, it is recognized that the system needs some restoration. Priorities for the Harris River would be to maintain water quality for anadromous fish, as well as for drinking water for those holding private water rights. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available:

- Monitor Fubar Creek and downstream in the Harris River for sediments
- Conduct stream habitat surveys to document fish distribution and habitat to determine if additional instream restoration efforts are warranted
- Develop a water quality monitoring program to ensure surface water standards are met
- Pursue funding for identified watershed restoration activities identified in Albert et al. (2008)
- Data collection for subsistence uses within the watershed

The Karta River was nominated by the community of Hollis because it is a subsistence resource for sockeye salmon and Coho salmon for residents. Given the Karta River is a designated wilderness area, the watershed has a high recreational value and is heavily used as a sport fishing system. The Karta River was also nominated by the community of Kasaan and will also be covered in the Kasaan chapter. The watershed encompasses approximately 61.7 square miles and drains into the head of Kasaan Bay on central Prince of Wales Island (Figure 13). The Karta River is not considered a community drinking water source (UAS-GIS, 2013).

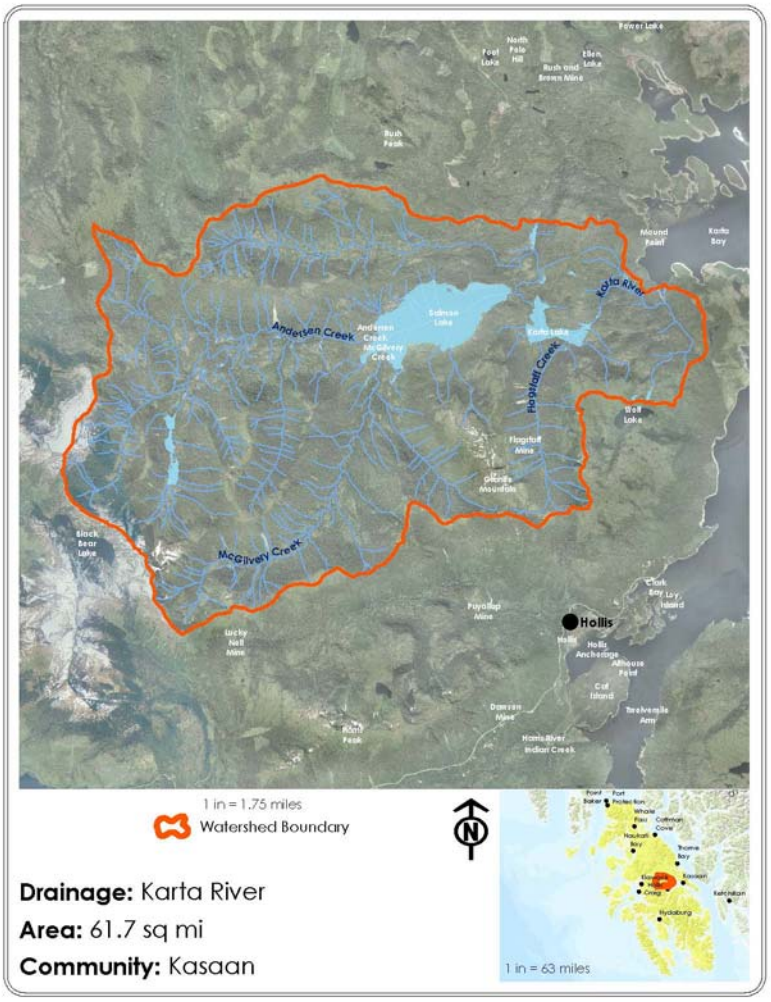

Figure 13. Watershed boundary for Karta River near Hollis, Prince of Wales Island, Alaska.

The Karta River is an anadromous waterbody (102-60-10870), hosting sockeye salmon, Coho salmon, pink, salmon, chum salmon, cutthroat trout, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). The sockeye salmon run on Karta River has been studied under the Fisheries Resource Monitoring Program through the Office of Subsistence Management from 2005-2010 (except 2007) (DOI, 2013). When compared to historical numbers, the Karta River sockeye population has decline, and was therefore identified as a subsistence resource concern. The Organized Village of Kasaan and TNC have conducted instream habitat mapping on a portion of the Karta Watershed, including McGilvery Creek (C. Needham, personal communication). The Karta River watershed does not contain an impaired waterbody, nor is there is a Class III solid waste landfill in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills or NPDES records for the Karta River (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There were six other water rights records for the Karta River, four for ADFG for instream flow reservations for fish and two for the USFS for recreational cabins (ADNR, 2013). There were no known water quality contaminants in the watershed. There was no past timber harvest, and due to the wilderness designation there would be no potential for future timber harvest.

The McGilvery Creek tributary to Karta Lake previously had a mining operation which produced gold, silver, copper and lead (Grybeck, 2004). There are 11 patented mining claims in the Karta River watershed, which are exempted from the wilderness designation, and therefore there is potential for future mining activities in the watershed (Grybeck, 2004). The Karta River watershed was categorized as a Category II watershed in the "*Kasaan Bay Unified Watershed Assessment"*, a category defined as a watershed in need of preventative measures (OVK, 2005). The concern for the Karta River is declining fish populations and the threat of future mining. The Karta River watershed was not considered a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource for Hollis was considered low for deer and high for fish. There were no other potential development projects identified due to the Karta River wilderness designation. Landownership is federal.

The Karta River Watershed was categorized as a Category III watershed, because it does not meet the qualifiers for Category I or II watershed due to the current wilderness designation. A Category III watershed is defined as a watershed with a pristine aquatic system due to wilderness or non-development land use designations but still identified as important at a local level.

As a Category III watershed, there is very little threat of potential large scale projects that would adversely impact the value of the watershed. However, the concern for the Karta River is that sockeye salmon are declining. The list below includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Re-establish a stock assessment for sockeye salmon and include a harvest survey for multiple subsistence communities harvesting at Karta River
- Develop an escapement goal for sockeye salmon returning to the Karta River
- Conduct habitat mapping in the upper watershed of Karta River on important salmon spawning grounds
- Conduct a water quality monitoring and assessment to address baseline water quality conditions and determine if past mining activities have impacted water quality at McGilvery Creek
- Data collection for other subsistence uses in the watershed

Maybeso Creek was nominated by the community of Hollis because of its importance as a subsistence watershed for deer and fish. The watershed encompasses approximately 15 square miles and drains into Twelvemile Arm which drains into Kasaan Bay on the eastern side of Prince of Wales Island (Figure 14). There is not a community drinking water source in the Maybeso watershed (UAS-GIS, 2013).

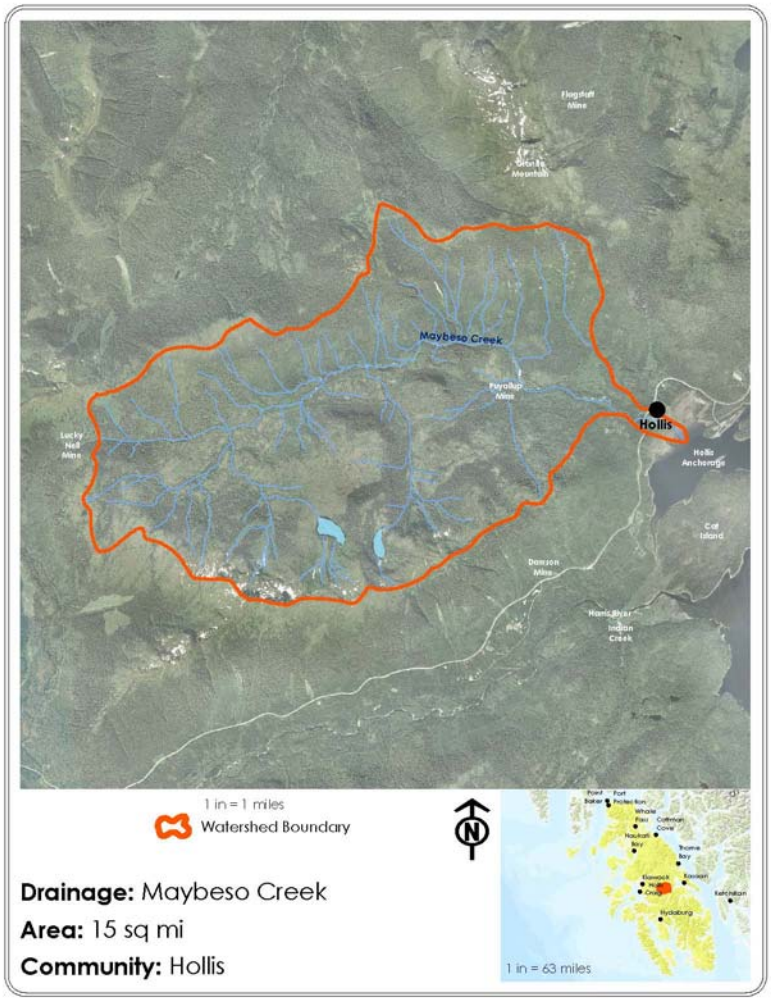

Figure 14. Watershed boundary for Maybeso Creek near Hollis, Prince of Wales Island, Alaska.

Maybeso Creek is an anadromous waterbody (102-60-10840), hosting Coho salmon, pink salmon, chum salmon and steelhead trout (ADFG, 2013; UAS-GIS, 2013). The USFS has conducted instream habitat surveys (S. Claffey, personal communication). There were no subsistence concerns identified for the watershed. Maybeso Creek is not an impaired waterbody, and there is not a Class III solid waste facility within the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills or NPDES records for the Maybeso Creek (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There were two records for other water rights in the Maybeso Creek watershed (ADNR, 2013). One is an instream flow reservation for fish by the ADFG, and the other is for a private drinking water well (ADNR, 2013). There are no known water quality contaminants in the watershed. Past timber harvest has occurred in the watershed, and there is potential for future timber harvest activities. The Maybeso watershed hosts the Maybeso experimental forest, which was established in 1974 to study the effects of timber harvest on salmon bearing streams and forest regeneration (USDA, 2004). There were past mining activities in the Maybeso Creek watershed, and there is the potential for future mining activities. The watershed has not been listed by any other Unified Watershed Assessment, however it was listed as a high priority for restoration for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was noted as moderate for both deer and fish. Past and most likely some future development

includes road upgrades and maintenance and some residential development. Landownership is a mix of state, private and federal.

Maybeso Creek was categorized as a Category IV watershed. The watershed did not meet the set qualifiers for a Category I or Category II watershed, however some impacts and concerns for the watershed exist, so it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The list below includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Watershed assessment that includes data collection on stream functions to determine if any instream restoration efforts are warranted; include instream habitat survey work previously completed by the USFS
- Water quality monitoring program to assure surface water and drinking water standards are met
- Pursue funding for identified watershed restoration activities identified in Albert et al. (2008)
- Data collection for subsistence uses of deer within the watershed

Twelvemile Arm was nominated by the community of Hollis because the community lies within the watershed and because many sub-watersheds are important to the community for subsistence and recreational resources. Twelvemile Arm is also important to the community of Kasaan, however it was not nominated by Kasaan or included in the Kasaan chapter. The Twelvemile Arm watershed encompasses approximately 128.6 square miles and drains into Kasaan Bay on the eastern side of Prince of Wales Island (Figure 15). There is not a community drinking water source in the Twelvemile Arm watershed (UAS-GIS, 2013).

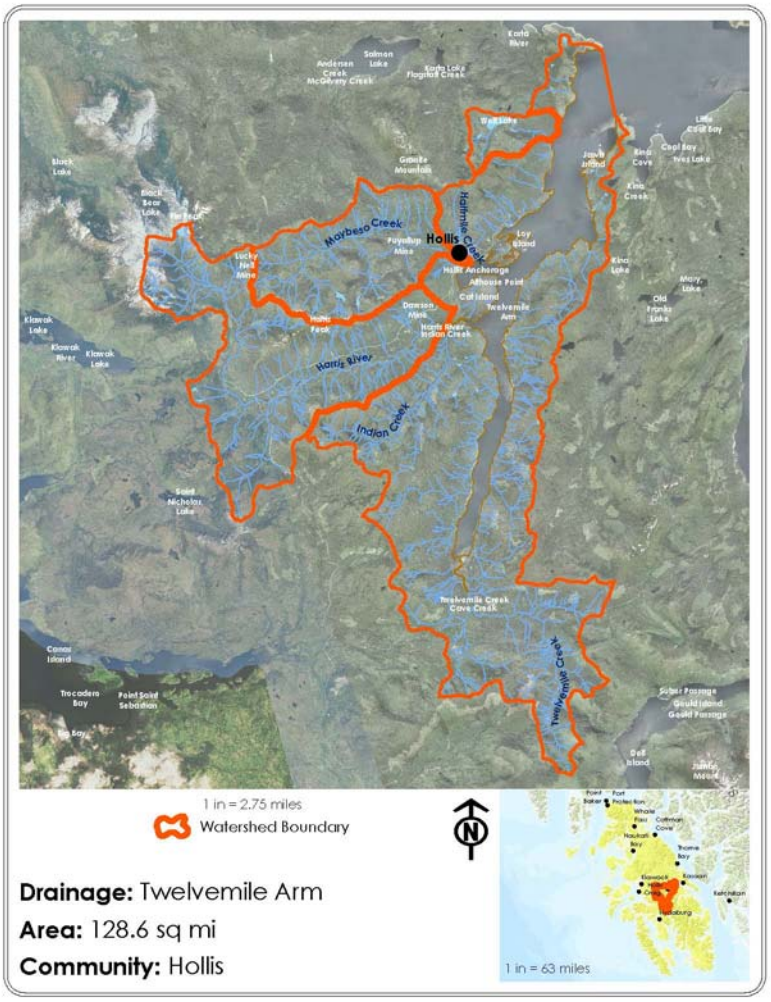

Figure 15. Watershed boundary for Twelvemile Arm near Hollis, Prince of Wales Island, Alaska.

Twelvemile Arm contains 15 anadromous waterbodies, not including the Harris River, Maybeso Creek and Wolf Creek watersheds, which are covered in other sections of the Hollis community chapter (ADFG, 2013; UAS-GIS, 2013). Three systems are named; Indian Creek (102-60-10800), hosting Coho salmon, pink salmon, chum salmon, cutthroat, Dolly Varden and steelhead trout; Halfmile Creek (102-60-10845), hosting Coho salmon, pink salmon and chum salmon; Tributary to Twelvemile Arm (102-60-10794), hosting pink salmon, Dolly Varden and cutthroat trout; and Road Creek (102-60-10835), hosting pink salmon. There is one unnamed system that hosts Coho salmon and pink salmon (102-60-10846). There are two unnamed systems that host only Coho salmon (102-60-10718, 102-60-10684). There are seven unnamed systems that host only pink salmon (102-60-10865, 102-60-10860, 102-60-10780, 102-60-10760, 102-60-10740, 102-60-10710, 102-60-10690). The final unnamed system hosts only Dolly Varden and cutthroat trout (102-60-10700) (ADFG, 2013). There were no subsistence resource concerns identified for the watershed. There are no impaired waterbodies listed in Twelvemile Arm, nor is there a Class III solid waste facility (ADEC, 2010, ADEC-SWIMS, 2013). There was one contaminated site record in Twelvemile Arm, an old logging camp at the head of the bay (ADEC-CS, 2013). The contaminants were associated with an

unregulated dumpsite, and petroleum and heavy metals were found in soils. The site had been cleaned up and the record has been closed (ADEC-CS, 2013). There were no CERCLIS, NPL, or LUST records for Twelvemile Arm (EPA, 2013). There was at least one spill record found for Twelvemile Arm, therefore both reported and unreported petroleum spills have potential impacts. There was one NPDES permit for the Twelvemile Arm watershed (EPA, 2013). There were four other water right records (ADNR, 2013). One record was for ADFG subsurface water rights, and there were three private surface water rights for drinking water. These records were in addition to those water right records found for the Harris River, Maybeso Creek and Wolf Creek covered in this chapter. There are no known water quality contaminants for Twelvemile Arm. Timber harvest occurred in the watershed, and there is potential for future timber harvest within the watershed. Mining occurred in the watershed, and there is potential for future mining within the watershed. The watershed has not been listed by any other Unified Watershed Assessment. It was included as a high restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al, 2008). Restoration efforts by the USFS and TNC have been undergoing on Twelvemile Creek (USDA, 2014). In 2007, the USFS developed the "*Twelvemile Arm Landscape Assessment"* and a *"Twelvemile Arm Watershed Rehabilitation Plan"* to help direct develop and prioritize restoration efforts (USDA, 2007a; USDA, 2007b). Large wood was added to approximately two miles of the mainstem of Twelvemile Creek (S. Claffey, personal communication). The USFS has been conducting aquatic monitoring prior to and during restoration efforts (S. Jacobson, personal communication). The value of the watershed as a subsistence resource was noted as low for fish and deer. No new development was noted for the watershed. Landownership is largely federal.

Twelvemile Arm was categorized as a Category I watershed because it met the following Category I criteria: it contains anadromous waterbodies, and there is a contaminated site in the watershed. In addition, Twelvemile Arm has at least one spill record, one NPDES permit, four other water rights, and both timber harvest and mining have occurred in Twelvemile Arm.

As a Category I watershed, it is recognized that the system needs some restoration. Priorities for the Twelvemile Arm watershed would be to maintain water quality for anadromous fish. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Prioritize waterbodies within the watershed for data collection activities
- Conduct stream habitat surveys on individual stream
- Conduct contaminant sampling adjacent to the old logging camp at the head of the bay to determine if contaminants are making their way into marine waters
- Document the watershed for importance of subsistence resources and use

Wolf Creek was nominated by the community of Hollis because of its importance as a potential hydroelectric power source on Wolf Lake. The watershed encompasses approximately three square miles and drains into Twelvemile Arm, which drains into Kasaan Bay on the eastern side of Prince of Wales Island (Figure 16). Wolf Creek is not considered a community drinking water source (UAS-GIS, 2013).

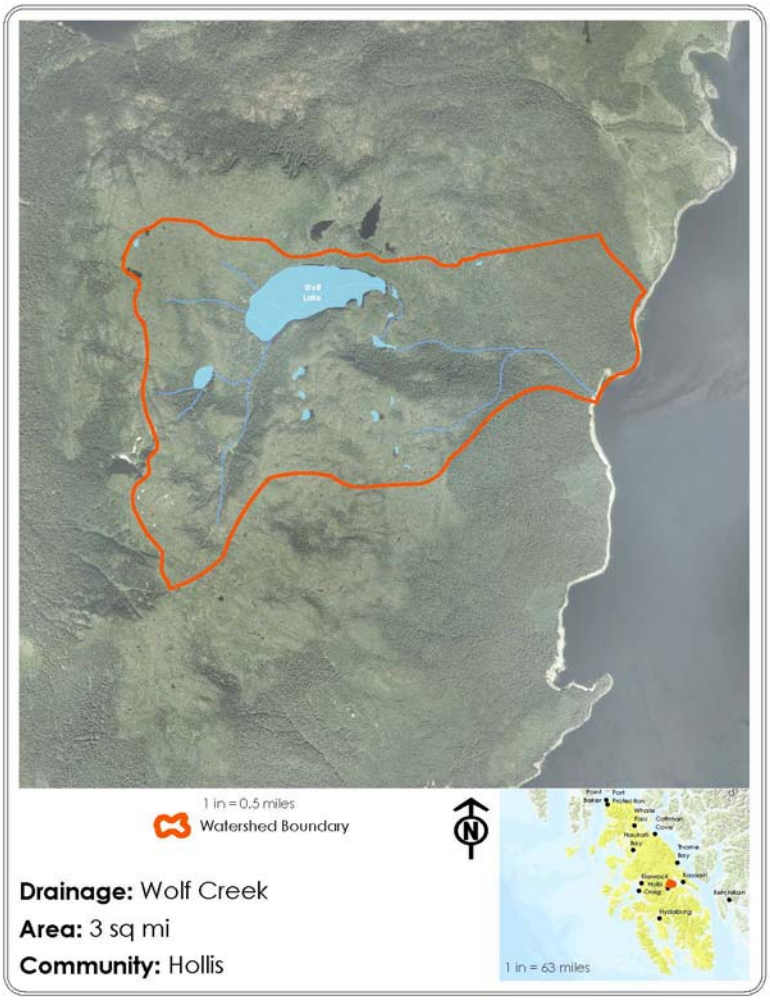

Figure 16. Watershed boundary for Wolf Creek near Hollis, Prince of Wales Island, Alaska.

Wolf Creek is listed as an anadromous waterbody (102-60-10850), hosting pink salmon in the lower reach for about 200 feet before gradient becomes a barrier to fish passage (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for the watershed. Wolf Creek is not listed as an impaired waterbody and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills or NPDES records for the Wolf Creek watershed (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There was one other water right record for a small hydropower operation in association with the Wolf Creek Boatworks (ADNR, 2013). There were no known water quality contaminants in Wolf Creek. Timber harvest has occurred in the watershed, and there is a potential for future timber harvest. There has also been past mining operations, and there is a potential for future mining operations. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was noted as low for both deer and fish. Wolf Lake and Wolf Creek is a site that has been investigated for potential hydropower generating capabilities for Prince of Wales Island (APT, 1997). Landownership is mainly federal.

Wolf Creek was categorized as a Category IV watershed. The watershed did not meet the set qualifiers for a Category I or Category II watershed, however some impacts and concerns for the watershed exist, so it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The list below includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Watershed assessment that includes data collection on stream functions to determine if any instream restoration efforts are warranted
- Water quality monitoring program to ensure surface water and drinking water standards are met
- Install stream guage to monitor stream discharge for hydroelectric potential
- Data collection for subsistence uses of deer within the watershed

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Hydbaburg

Population: 367 (2012 DCCED certified) Governance: 1st class city
Federally recognized Tribe

Hydaburg is located on the southwest coast of Prince of Wales Island. The area surrounding Hydaburg has been occupied by Haida people since at least the 1700's. In 1911 three Haida villages (Sukkwan, Howkan and Klinkwan) were moved to present day Hydaburg, then called Hydaburg Indian Reservation. Timber and fishing played roles within the community and Hydaburg incorporated in 1927, which was also the year a cannery was built. The people of Hydaburg continue a more traditional Haida way of life through present day. Residents work locally in Tribal and city government, commercial fishing, construction, and tourism.

The community of Hydaburg has nominated eleven watersheds to be included in this watershed assessment: Eek Lake, Hetta Lake, Hunters Bay, Hydaburg River, Kasook Lake, Keete Inlet, Manhattan Creek, Natzuhini River, Reynolds Creek, Saltery Creek, Sukkwan Island. Table 5 depicts a summary of the research conducted on each watershed.

Table 5. Summary of records research for watersheds nominated by the community of Hydaburg for the Prince of Wales Unified Watershed Assessment. For landownership: S = State lands; F = Federal lands; P = Private lands; NC = Native Corporation lands.

	Member Community	Hydaburg					
	Watershed Name	**Eek Lake**	**Hetta Lake**	**Hunters Bay**	**Hydaburg River**	**Kasook Lake**	**Keete Inlet**
Category I Qualifiers	**Community Drinking Water System**	no	no	no	yes	no	no
	Anadromous Fish System	1	1	6	1	1	5
	ADEC Impaired Water Body List	no	no	no	no	no	no
	Class III solid waste facility present	no	no	no	no	no	no
	ADEC Contaminated Sites	0	0	0	2	0	0
	EPA CERCLIS/NPL Sites	0	0	0	0	0	0
	Subsistence resource impacted	sockeye declining	sockeye declining	sockeye pass by Bokkan	none	fish spawning	none
Category II Qualifiers	**LUST sites**	no	no	no	no	no	no
	ADEC Spills sites	0	0	0	1+	1+	0
	NPDES/Envirofact records	0	0	0	1	0	0
	Other water rights	0	0	1	0	0	0
	Known water quality contaminants	no	no	no	no	no	no
	Past/present mining activity	no	copper	no	no	no	no
	Past/present timber harvest	no	select cut	no	yes	select cut	no
	Listed by State or Tribe UWA	no	no	no	no	no	no
Other Information	**TNC/USFS Restoration Priority**	no	very high	no	no	no	no
	Value as subsistence resource	Fish - high Deer - moderate	Fish - high Deer - moderate	Fish - high Deer - moderate	Fish - high Deer - moderate	Fish - high Deer - low	Fish - moderate Deer - low
	Possible future timber harvest	yes	yes	no	yes	yes	yes
	Possible future mining activity	no	yes	no	no	no	no
	Landownership	F, NC	F, NC	F	NC, F, P	F, NC	F
	Possible other development	no	no	Sport Lodge	no	no	no

Table 5 con't. Summary of records research for watersheds nominated by the community of Hydaburg for the Prince of Wales Unified Watershed Assessment. For landownership: S = State lands; F = Federal lands; P = Private lands; NC = Native Corporation lands.

	Member Community	Hydaburg				
	Watershed Name	**Manhattan Creek**	**Natzuhini River**	**Reynolds Creek**	**Saltery Creek**	**Sukkwan Island**
Category I Qualifiers	**Community Drinking Water System**	no	no	no	no	no
	Anadromous Fish System	1	1	1	1	20
	ADEC Impaired Water Body List	no	no	no	no	no
	Class III solid waste facility present	no	no	no	yes	no
	ADEC Contaminated Sites	0	1	0	0	0
	EPA CERCLIS/NPL Sites	0	0	0	0	0
	Subsistence resource impacted	Fish habitat	none	none	none	none
Category II Qualifiers	**LUST sites**	no	no	no	no	no
	ADEC Spills sites	0	1+	0	0	1
	NPDES/Envirofact records	0	0	0	1	0
	Other water rights	0	0	1	0	0
	Known water quality contaminants	no	no	no	no	no
	Past/present mining activity	no	no	no	no	no
	Past/present timber harvest	yes	yes	yes	yes	select cut
	Listed by State or Tribe UWA	no	no	no	no	no
Other Information	**TNC/USFS Restoration Priority**	no	very high	no	no	no
	Value as subsistence resource	Fish - low Deer - moderate	Fish - high Deer - moderate	Fish - low Deer - low	Fish -moderate Deer - moderate	Fish - low Deer - low
	Possible future timber harvest	yes	yes	yes	yes	yes
	Possible future mining activity	no	no	no	no	no
	Landownership	F	NC	F, NC	NC, P	F
	Possible other development	no	no	Hydropower	Solid Waste - new	no

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Eek Lake was nominated by Hydaburg because of its importance to the community as a sockeye salmon subsistence system, and the watershed is also important for subsistence deer hunting. The watershed encompasses 7.6 square miles and drains into Hetta Inlet on the southcentral coast of Prince of Wales Island (Figure 17). Eek Lake does not contain a community drinking water source (UAS-GIS, 2013).

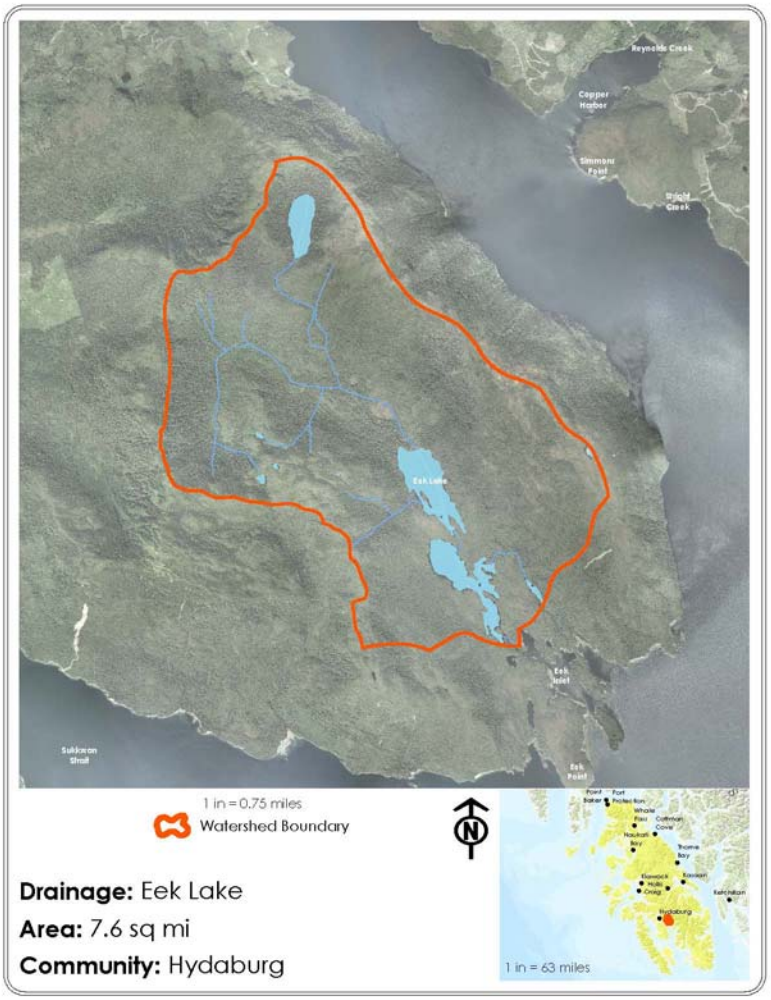

Figure 17. Watershed boundary for Eek Lake near Hydaburg, Prince of Wales Island, Alaska.

Eek Creek and Lake are listed as an anadromous waterbody (103-25-10090), hosting Coho salmon, pink salmon, sockeye salmon and steelhead trout(ADFG, 2013; UAS-GIS, 2013). Sockeye salmon spawning and steelhead trout rearing habitat is also noted (ADFG, 2013). The Hydaburg Cooperative Association, in partnership with TNC, is currently working on updating the Anadromous Waters Catalog (AWC) for Eek Creek and Eek Lake with stream habitat survey information the organization has been collecting (A. Christianson, personal communication). The Hydaburg Cooperative Association has also previously conducted sockeye salmon stock assessments on Eek Lake in order to better understand the system as an important community subsistence harvest system (DOI, 2013). Declining subsistence sockeye populations were listed as a concern, as well as commercial fishing on local fish populations. The records researched did not show that the Eek Lake system was an impaired waterbody, contained a Class III solid waste facility, had contaminated sites, or had CERCLIS NPL or LUST sites within the watershed (ADEC-CS, 2013; ADEC, 2010, EPA, 2013). There were no spill records located at Eek Lake (ADEC-PERP, 2013). There were no other water rights records for Eek Lake, nor were there any NPDES permits in the watershed (ADNR, 2013; EPA, 2013). There are no known water quality contaminants in the watershed. There has not been past timber harvest in the Eek Lake watershed. If the Southeast Alaska Land Entitlement Finalization and Jobs Protection Act (Senate Bill 340) is passed, Eek Lake will become the Eek Lake LUD II Management Area and no future timber harvest activities would occur (Senate Bill 340, 2014). No records for past or

future mining activities are known. The watershed has not been listed by any other Unified Watershed Assessment and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was noted as high for fish and moderate for deer. No possible new development was identified. Landownership is Native Corporation and federal.

The Eek Lake system was categorized as a Category II watershed. While it meets the criteria of Category I because it has an anadromous designation and a subsistence resource is declining, the decline is not well documented. The system would benefit from a sockeye salmon stock assessment to aid in the understanding of the potential decline is a resource impact. Because of its importance as a primary sockeye salmon stream and the a threat of future impacts from timber harvest, the system was designated a Category II watershed, where protection measures should be applied to maintain watershed functions and values. The sockeye salmon run is thought to be declining due to beaver activity in the watershed that may be impacting spawning habitat (A. Christianson, personal communication). In addition, there is potential overharvest of adult sockeye salmon intercepted in the commercial fishery and potential overharvest in the subsistence fishery because of unknown escapement (A. Christianson, personal communication).

As a Category II watershed, it is recognized that the watershed may need some preventative action or protection measures to sustain water quality or watershed functions. The following includes a list of potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Conduct a stock assessment for sockeye salmon population
- Develop an escapement goal for sockeye salmon in Eek Lake
- Genetic sampling and analysis of sockeye salmon caught in the commercial fishery to determine where sockeye salmon in Hetta Inlet are returning.
- Assess beaver activity and develop a beaver management plan that addresses adult sockeye salmon return concerns
- Data collection for past and present subsistence uses besides sockeye salmon within the watershed

Hetta Lake was nominated by Hydaburg because it is the primary sockeye salmon subsistence fishery for the community. The watershed encompasses approximately nine square miles and drains into Hetta Inlet on the southcentral cost of Prince of Wales Island (Figure 18). There is not a community drinking water source in the Hetta Lake watershed (UAS-GIS, 2013).

Figure 18. Watershed boundary for Hetta Lake near Hydaburg, Prince of Wales Island, Alaska.

The Hetta Creek and Lake are listed as an anadromous waterbody (103-25-10470), hosting chum salmon, Coho salmon, pink salmon, sockeye salmon, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). The Hydaburg Cooperative Association has been monitoring sockeye salmon escapement into Hetta Creek and Lake since 2005 through the use of weir system (DOI, 2013). Declining sockeye salmon populations was listed as a subsistence resource concern, as well as commercial fishing impacts on sockeye salmon populations for Hetta Lake (A. Christianson, personal communication). The Hydaburg Cooperative Association, in partnership with the TNC, is currently working on updating the AWC for Hetta Creek and Lake with stream habitat survey information they have been collecting (A. Christianson, personal communication). The records research did not show the Hetta Lake system as an impaired waterbody or containing a Class III solid waste facility (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST or spill records for the watershed (ADEC-CS, 2013; ADEC-PERP, 2013, EPA, 2013). There were also no records for other water rights or NPDES permits (ADNR, 2013, EPA, 2013). There are no known water quality contaminants in the watershed. Select cut timber harvest has occurred in the watershed, and there is a potential for future timber harvest. Copper has previously been mined in the Hetta Lake watershed, and there is potential that copper may still be mined in the watershed (A. Christianson, personal communication). The watershed has not been listed by any other Unified Watershed Assessment (CCTHITA, 1999). It was listed a very

high restoration priority for Prince of Wales Island (Albert et al., 2008). The value of the watershed as a subsistence resource was noted as high for fish and moderate for deer. Aside from the potential of timber harvest, there were no other future development projects identified for the Hetta Lake watershed. Land ownership is Native Corporation and federal.

The Hetta Lake system was categorized as a Category II watershed. While it meets the criteria of Category I because it has an anadromous designation and a subsistence resource is declining, the resource is currently being managed by the local Tribal government. Because of its importance as a primary sockeye salmon stream, and there are potential impacts to salmon habitat from past timber harvest and mining, and there is a threat for future timber harvest and mining ,the system was designated a Category II watershed. Under this designation, protection measures should be applied to maintain watershed functions and values.

As a Category II watershed, it is recognized that the watershed may need some preventative action or protection measures to sustain water quality or watershed functions. The following includes a list of potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Continued stock assessment for subsistence sockeye salmon population
- Develop an escapement goal for sockeye salmon in Hetta Lake
- Apply for instream flow reservation for fish
- Genetic sampling and analysis of sockeye salmon caught in the commercial fishery to determine where sockeye salmon in Hetta Inlet are returning.
- Develop potential project identified in Alberts et al. (2008)
- Data collection for past and present subsistence uses besides sockeye salmon within the watershed

Hunters Bay was nominated by Hydaburg because of its historical importance to the community and a concern that fish returning to Hunters Bay may be contaminated by nearby proposed mining activities. The watershed encompasses approximately 48.2 square miles and is contained within the South Prince of Wales Wilderness. Hunters Bay drains into Cordova Bay on the southern end of Prince of Wales Island (Figure 19). There is not a community drinking water source in Hunters Bay (UAS-GIS, 2013).

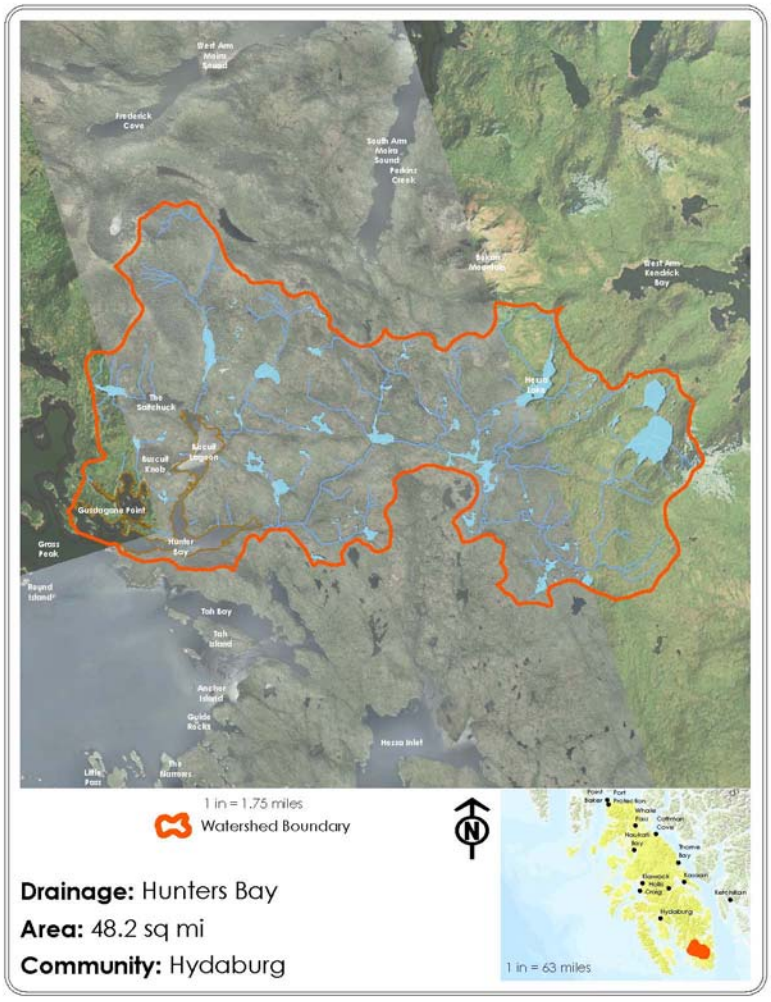

Figure 19. Watershed boundary for Hunters Bay near Hydaburg, Prince of Wales Island, Alaska.

Hunters Bay is listed as an anadromous waterbody and contains six unnamed anadromous fish streams that enter into different parts of the bay. An unnamed stream that enters Klinkwan Cove (103-11-10080) hosts Coho and pink salmon (ADFG, 2013; UAS-GIS, 2013). There are two unnamed streams that enter into Salt Chuck; stream 103-11-10090 hosts pink salmon and stream 103-11-10110 hosts pink and chum salmon. There are two unnamed streams that enter into Biscuit Lagoon; stream 103-11-10130 hosts sockeye salmon, pink salmon, chum salmon, and Dolly Varden and stream 103-11-10150 hosts pink salmon. The last unnamed stream enters directly into Hunters Bay (103-11-10190) and hosts Coho salmon, sockeye salmon, pink salmon, chum salmon and steelhead trout. Hunters Bay has been identified as an important sockeye salmon system to the community of Hydaburg and has been studied by a creel harvest survey by the Hydaburg Cooperative Association at least since 2005 (DOI, 2013). The community of Hydaburg is concerned about the sockeye salmon subsistence fishery because fish have to pass by Bokkan Mountain, where an uranium mine is proposed, and there is a risk of contamination (A. Christianson, personal communication). It is unknown if current sockeye salmon populations are impacted from past mining activities at the same location. The Hunters Bay watershed is largely in a wilderness area; there are no impaired waterbodies, Class III solid waste facilities, contaminated sites, CERCLIS sites, NPL sites, LUST sites, spill sites or NPDES permit records (ADEC, 2010; ADEC-CS, 2013; ADEC-PERP, 2013, ADEC-SWIMS, 2013; EPA, 2013). There was one other water right record for the watershed, a pending application for Boyer Towing Company (ADNR, 2013). There are no known water quality contaminants in the

watershed. No timber harvest or mining activities have occurred in the watershed, and no timber harvest or mining activities are planned within the watershed because of its wilderness designation. The watershed has not been listed by any other Unified Watershed Assessment, and it is not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource is noted as high for fish and moderate for deer. Although in a wilderness area, there are some small private land holdings which include the potential to develop a sport fishing lodge along a coastal area in Hunters Bay. Landownership is federal.

Hunters Bay is categorized as a Category III watershed because it does not meet the qualifiers for Category I or II watershed due to the current wilderness designation. A Category III watershed is defined as a watershed with a pristine aquatic system due to wilderness or non-development land use designations but still identified as important at a local level.

As a Category III watershed, there is very little threat of potential large scale projects that that would adversely impact the value of the watershed. However, the concern for Hunters Bay is that sockeye salmon returning to the watershed may be contaminated because of their shoreline migration into the bay and that migration will take sockeye salmon directly past a future mine site. The community is concerned that fish will be contaminated (A. Christianson, personal communication). The list below includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Develop a fish tissue sampling study to establish baseline conditions of sockeye salmon caught at Hunters Bay. Fish should be tested for the presence of heavy metal contaminants
- Develop a water quality monitoring study to establish baseline conditions in sockeye salmon bearing streams in Hunters Bay to determine whether heavy metal contaminants currently exist in the watershed
- Conduct a stock assessments on sockeye salmon on anadromous water catalog stream numbers 103-11-10130 and 103-11-10190
- Develop sockeye salmon escapement goals for anadromous water catalog stream numbers 103-11-10130 and 103-11-10190
- Conduct stream habitat surveys on anadromous fish streams to document current habitat conditions
- Data collection for other subsistence uses in the watershed

The Hydaburg River was nominated by Hydaburg because of its importance to the community as a drinking water source (UAS-GIS, 2013). It is also important to the community form a historical and cultural perspective, as well as an important subsistence area for Hydaburg residents. The watershed encompasses approximately 10.2 square miles and empties into Sukkwan Narrows and into Cordova Bay in central Prince of Wales Island (Figure 20).

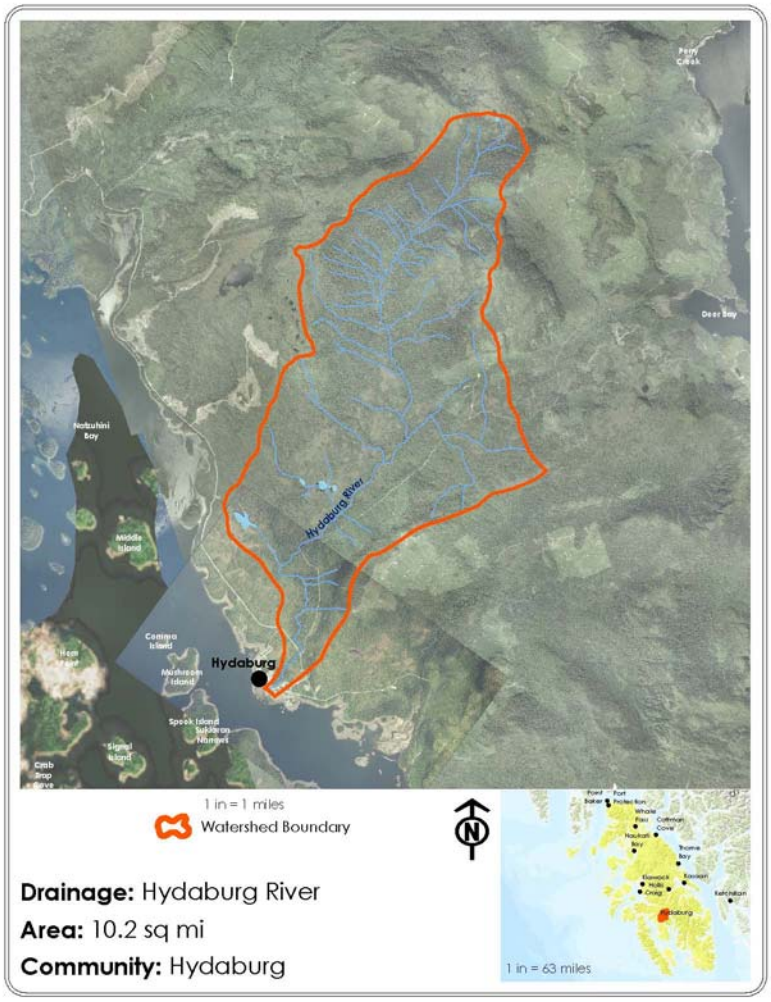

Figure 20. Watershed boundary Hydaburg River near Hydaburg, Prince of Wales Island, Alaska.

The Hydaburg River is listed as an anadromous waterbody (103-40-10410), hosting Coho salmon, pink salmon, chum salmon and steelhead trout (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for the watershed. The Hydaburg Cooperative Association, in partnership with TNC, is currently working on updating the AWC for the Hydaburg River with stream habitat survey information the organizations have been collecting (A. Christianson, personal communication). The Hydaburg River is not an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were two contaminated site records within the watershed (ADEC-CS, 2013). Both sites were petroleum spills. One site is officially closed, and the second site was cleaned up but has not been closed in the database system (ADEC-CS, 2013). There are no CERCLIS, NPL or LUST sites in the watershed (EPA, 2013). There was at least one spill record for the Hydaburg Creek watershed, therefore both reported and unreported petroleum spills have potential impacts (ADEC-PERP, 2013). There was one NPDES permit record for the watershed (EPA, 2013). There were no records for other water rights (ADNR, 2013). There are no known water quality contaminants in the watershed. Timber harvest has occurred in the upper watershed, and there is potential for future timber harvest. There were no records for past mining activities or plans for future mining activities. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included

as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resources was noted as high for fish and moderate for deer. Future development on the Hydaburg River includes potential for drinking water system upgrades (A. Christianson, personal communication). Landownership is a mix of state, private and federal.

Hydaburg River was categorized as a Category I watershed because it met the qualifiers for being a community drinking water source, having an anadromous fish stream and having contaminated sites in the watershed. It also had Category II qualifiers, with petroleum spills and NPDES permits in the watershed.

As a Category I watershed, it is recognized that the system needs some restoration. Priorities for the Hydaburg River watershed would be to maintain water quality for both drinking water protection and anadromous fish. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available:

- Work towards ensuring protection measures for drinking water are maintained
- Plan with local landowners on potential development within the watershed
- Upgrade impoundment for drinking water system, resurface dam, upgrade water tanks

The Kasook Lake watershed was nominated by Hydaburg because of its importance as a sockeye salmon system and its historical use of the area by residents for other subsistence resources. The watershed encompasses approximately 1.9 square miles and empties into Kasook Inlet and then into Tlevak Strait on the west side of Sukkwan Island (Figure 21). There is not a community drinking water source in Kasook Lake (UAS-GIS, 2013).

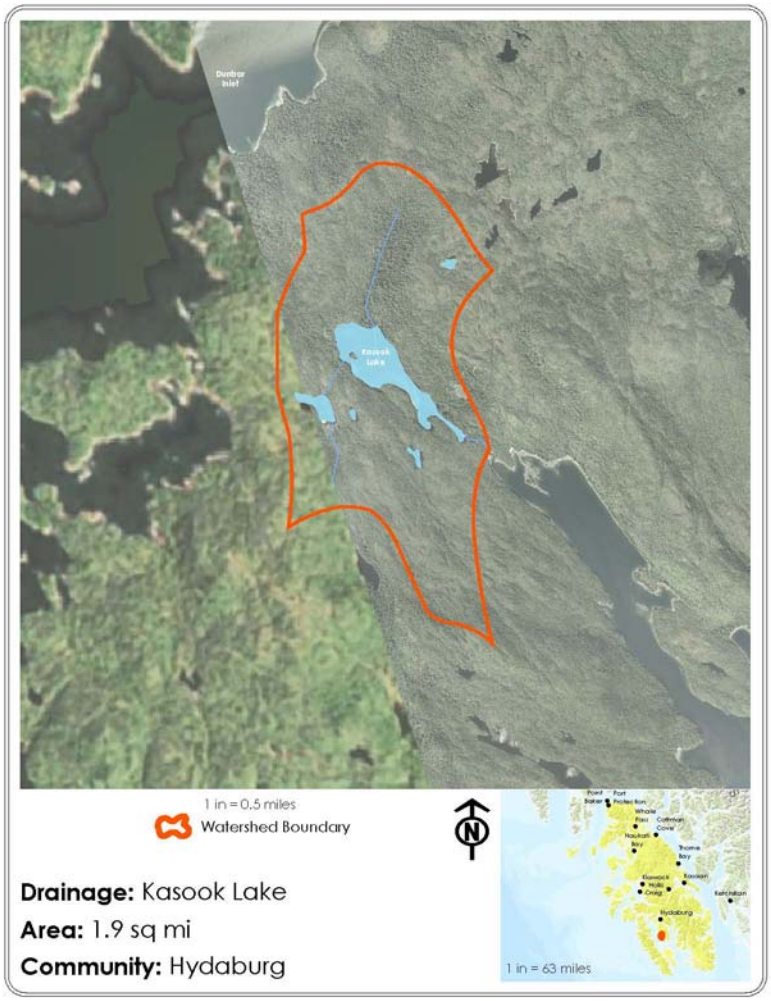

Figure 21. Watershed boundary for Kasook Lake near Hydaburg, Prince of Wales Island, Alaska.

Kasook Lake has one anadromous waterbody (103-25-10580), which hosts sockeye salmon, Coho salmon, pink salmon, steelhead trout and Dolly Varden (ADFG, 2013; UAS-GIS, 2013). A subsistence resource concern identified was that beaver activity was impeding adult fish access to spawning habitat (A. Christianson, personal communication). Hydaburg Cooperative Association has been conducting creel harvest surveys for sockeye salmon on Kasook Lake at least since 2005 to document the use of the watershed for subsistence (DOI, 2013). The Hydaburg Cooperative Association, in partnership with TNC, is currently working on updating the AWC for Kasook Lake with stream habitat survey information they have been collecting (A. Christianson, personal communication). Kasook Lake does not have an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL or LUST records for Kasook Lake (ADEC-CS, 2013; EPA, 2013). There was at least one petroleum spill record for the watershed, therefore both reported and unreported petroleum spills have potential impacts (ADEC-PERP, 2013). There were no other water rights or NPDES permit records for Kasaook Lake (ADNR, 2013; EPA, 2013). There are no known water quality contaminants in in Kasook Lake. There has been past select cut timber harvest in the watershed, and there is a potential for future timber harvest. There were no records of past mining activity or future mining activity for Kasook Lake. The watershed has not been listed by any other Unified Watershed

Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of Kasook Lake as a subsistence resource was noted as high for fish and low for deer. There were no future development projects identified for Kasook Lake. Landownership is largely Native Corporation and federal.

Kasook Lake was categorized as a Category IV watershed. The watershed did not meet the set qualifiers for a Category I or Category II watershed, however some impacts and concerns for the watershed exist so it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The list below includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Stock assessment for sockeye salmon for Kasook Lake
- Develop an escapement goal for sockeye salmon on Kasoon Lake
- Watershed assessment that includes data collected on stream functions as fish habitat and potential water quality monitoring
- Develop a beaver management plan that includes monitoring and removal of beaver dams constructed at the mouth of Kasook Creek
- Data collection for subsistence uses of deer and other salmon within the watershed

Keete Inlet was nominated by Hydaburg because of its historical and current importance as a subsistence resource to the community, and because much of the land surrounding Keete Inlet may be selected by Sealaska Corporation, taking it out of its current LUD II designation. The watershed encompasses approximately 20.6 square miles and drains into Nutkwa Inlet and Cordova Bay on the southern side of Prince of Wales Island (Figure 22). There is no community drinking water source in Keete Inlet (UAS-GIS, 2013).

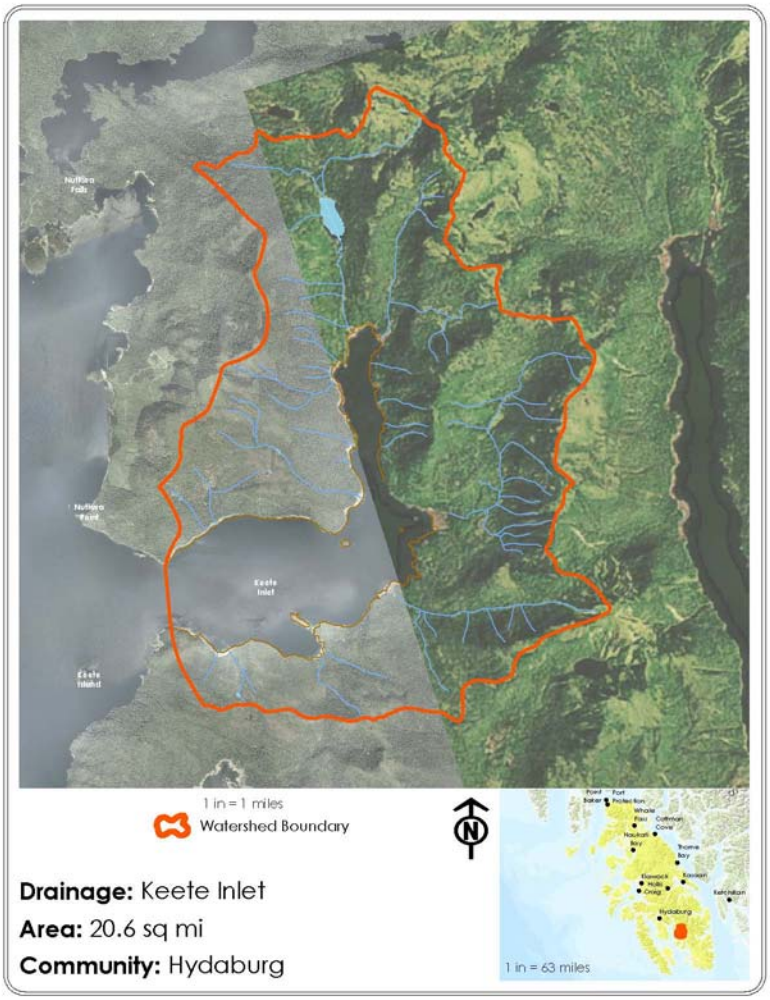

Figure 22. Watershed boundary for Keete Inlet near Hydaburg, Prince of Wales Island, Alaska.

There are five anadromous streams that empty into Keete Inlet (ADFG, 2013; UAS-GIS, 2013). Two anadromous systems host Coho salmon, pink salmon and chum salmon (103-21-10180; 103-21-10250). One system hosts both Coho salmon and pink salmon (103-21-10220). The final two anadromous systems have pink salmon only (103-21-10170; 103-12-10175). The Hydaburg Cooperative Association in partnership with TNC, recently conducted stream habitat surveys for Keete Inlet which resulted in additional nominations to the AWC (A. Christianson, personal communication). There were no subsistence concerns identified for the watershed. There are no impaired waterbodies in Keete Inlet, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There are no contaminated sites, CERCLIS, NPL, LUSTS, spills, or water rights for Keete Inlet (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013; ADNR, 2013). There were three NPDES permit records in Nutkwa Inlet, to which Keete Inlet is connected (EPA, 2013). There are no known water quality contaminants for Keete Inlet. Timber harvest has not occurred in the watershed because it is currently designated as LUD II by the USFS. However, the Keete Inlet watershed has the potential to be selected by Sealaska Corporation to fulfill their land claims settlement, which means there is a potential for future timber harvest (Senate Bill 340, 2014). There are no past or future mining activities in the Keete Inlet watershed. The watershed is not listed by any other Unified

Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was noted as moderate for fish and low for deer. Future development includes timber harvest and infrastructure such as road access. Landownership is currently mostly federal.

Keete Inlet was categorized as a Category IV watershed. The watershed did not meet the set qualifiers for a Category I or Category II watershed, however some impacts and concerns for the watershed exist so it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The list below includes other potential project in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Stock assessment of sockeye
- Watershed assessment that includes data collection on stream functions to determine if any instream restoration efforts are warranted
- Water quality monitoring program to ensure surface water standards are met
- Data collection for subsistence uses of deer and other salmon species within the watershed

Manhattan Creek was nominated by Hydaburg because of its historical and current importance as a sockeye salmon subsistence resource for the community. The watershed encompasses approximately 2.7 square miles and drains into Manhattan Arm and then Sea Otter Harbor on the west coast of Dall Island (Figure 23). There is not a community drinking water source on Manhattan Creek (UAS-GIS, 2013).

Figure 23. Watershed boundary for Manhattan Creek near Hydaburg, Prince of Wales Island, Alaska.

Manhattan Creek is an anadromous waterbody (106-30-10120), hosting sockeye salmon, Coho salmon, pink salmon, chum salmon and steelhead trout (ADFG,2013; UAS-GIS, 2013). The Hydaburg Cooperative Association has been collecting subsistence harvest data for the community, which includes Manhattan Creek, since 2005 (DOI, 2013). The Hydaburg Cooperative Association, in partnership with TNC, is currently working on updating the AWC for Manhattan Lake with stream habitat survey information the organizations have been collecting (A. Christianson, personal communication). There were no current subsistence concerns identified for the watershed. Manhattan Creek is not an impaired waterbody, and there is not a Class III solid waste facility within the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills, NPDES permits or other water rights records for Manhattan Creek (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013; ADNR, 2013). There are no known water quality contaminants in the watershed. Timber harvest has occurred in the watershed, and there is potential for future timber harvest. There were no records on past mining or potential future mining activities in the watershed. The watershed has not been listed by any other Unified Watershed Assessment and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was

noted as low for fish and moderate for deer. There were no future development projects identified. Landownership is largely federal.

Manhattan Creek was categorized as a Category IV watershed. The watershed did not meet the set qualifiers for a Category I or Category II watershed, however some impacts and concerns for the watershed exist, so it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The list below includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Conduct a stock assessment for sockeye salmon on Manhattan Creek
- Develop an escapement goal for sockeye salmon on Manhattan Creek
- Watershed assessment that includes data collection on stream functions to determine if any instream restoration efforts are warranted
- Water quality monitoring program to assure surface water and drinking water standards are met
- Data collection for subsistence uses of deer within the watershed

The Natzuhini River watershed was nominated by Hydaburg because of its historical and current use as a subsistence Coho system, as well as other subsistence resources being near the community. The watershed encompasses approximately 10.1 square miles and drains into Natzuhini Bay in central Prince of Wales Island (Figure 24). There is no community drinking water source in the Natzuhini River watershed (UAS-GIS, 2013).

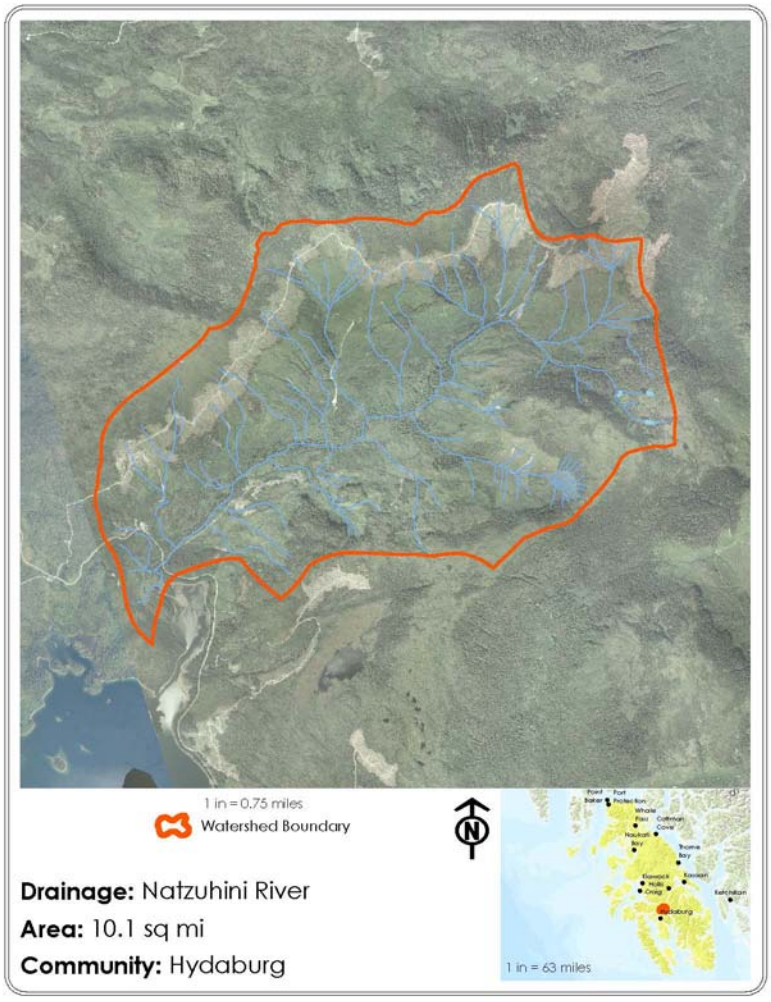

Figure 24. Watershed boundary for Natzuhini River near Hydaburg, Prince of Wales Island, Alaska.

Natzuhini River is listed as an anadromous waterbody (103-40-10350), hosting Coho salmon, pink salmon, chum salmon and steelhead trout (ADFG, 2013; UAS-GIS, 2013). A steelhead trout stock assessment on Natzuhini River showed an alarmingly low population count in 2007 (Piazza, 2009). Fish habitat concerns were identified as impacting subsistence resources from Natzuhini River, including steelhead trout and marine shellfish species. The Hydaburg Cooperative Association, in partnership with TNC, is currently working on updating the AWC for Natzuhini River with stream habitat survey information they have been collecting (A. Christianson, personal communication). Natzuhini River is not listed as an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There was one ADEC contaminated site within the watershed. The site, a diesel fuel spill, was cleaned up and the site was closed with institutional controls in 2013 (ADEC-CS, 2013). There were no CERCLIS, NPL or LUST site records for the Natzuhini River watershed (EPA, 2013). There was at least one spill record, therefore both reported and unreported petroleum spills have potential impacts (ADEC-PERP, 2013). There were no NPDES permit records or other water rights records for the Natzuhini River watershed (EPA, 2013; ADNR, 2013). There are no known water quality contaminants in the watershed. Extensive timber harvest has occurred in the watershed, and there is potential for future timber harvest to occur. There were no records for past mining activities or future mining

activities for the watershed. The watershed has not been listed by any other Unified Watershed Assessment, however it was listed as a very high priority for restoration on Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource for deer was noted as moderate and high for fish. No other new development activities were identified for Natzuhini River. Landownership is largely Native Corporation lands.

The Natzuihini River was categorized as a Category I watershed because it met the following Category I qualifiers: it is an anadromous waterbody, and there are two contaminated sites records. It also had Category II qualifiers, with petroleum spills and timber harvest activities.

As a Category I watershed, it is recognized that the system needs some restoration. Priorities for the Natzuhini River watershed would be to maintain water quality for both drinking water protection and anadromous fish. The following list includes potential project in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available:

- Conduct a Coho stock assessment
- Develop a beaver management plan based on stream habitat assessment data
- Assess Natzuhini estuary as a fish habitat refuge
- Pursue funding for identified watershed restoration activities identified in Albert et al. (2008)
- Explore instream restoration work potential on impacted tributaries

The Reynolds Creek watershed was nominated by Hydaburg because of its historical use for subsistence and cultural resources, and because it has potential for hydropower. The watershed encompasses approximately 5.5 square miles and empties into Hetta Inlet in central Prince of Wales Island (Figure 25). There is not a community drinking water source in the Reynolds Creek watershed (UAS-GIS, 2013).

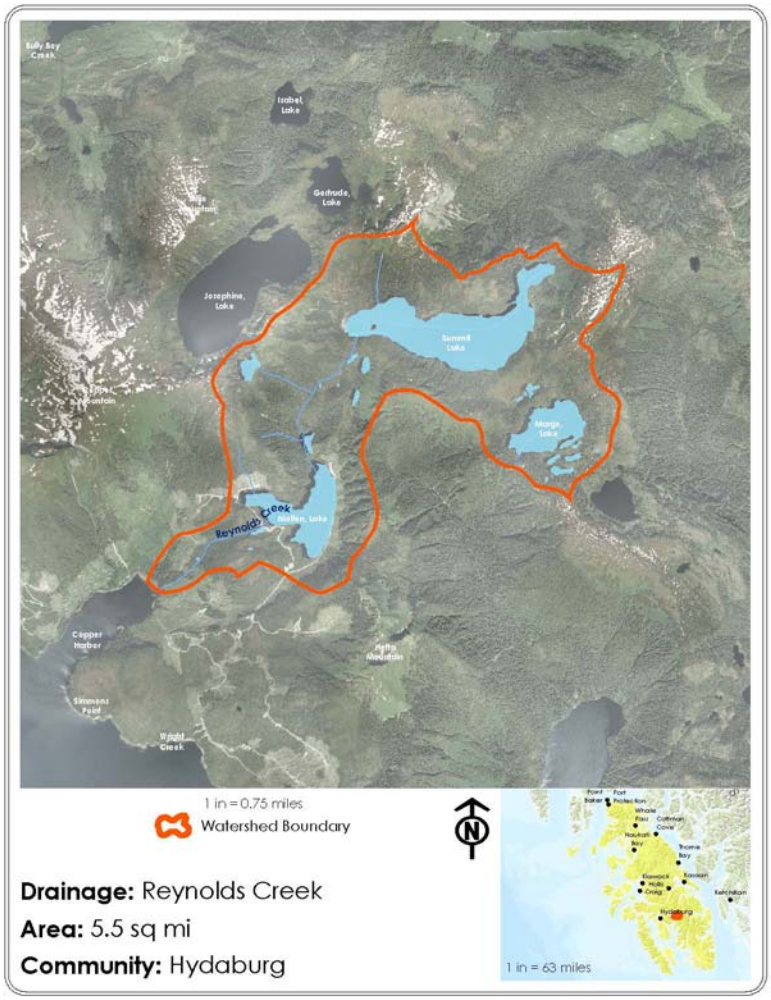

Figure 25. Watershed boundary for Reynolds Creek near Hydaburg, Prince of Wales Island, Alaska.

Reynolds Creek is listed as an anadromous waterbody (103-25-10420), hosting Coho salmon, pink salmon and chum salmon (ADFG, 2013; UAS-GIS, 2013). Steelhead trout are not cataloged, but are known to run in Reynolds Creek (T. Sanderson, personal communication). There were no subsistence resource concerns identified for the watershed. Reynolds Creek is not an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills, or NPDES permit records for the watershed (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There was one other water right record for hydropower, and Reynolds Creek is currently being studied for preliminary Federal Energy Regulatory Commission (FERC) licensing (ADNR, 2013). There are no known water quality contaminants in the watershed. Timber harvest has occurred in the watershed, and there is a potential for future timber harvest. There were no records for past or future mining activities. The watershed has not been listed by any other Unified Watershed Assessment and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was noted as low for deer and low for fish. Future development includes a hydropower facility. Landownership is Native Corporation and federal.

Reynolds Creek was categorized as a Category II watershed. The watershed only met one qualifier for a Category I listing, being listed as an anadromous waterbody. Reynolds Creek met two qualifiers for

being a Category II watershed: other water rights in the watershed, and there have been past timber harvest activities.

As a Category II watershed, it is recognized that the watershed may need some preventative action or protection measures to sustain water quality or watershed functions. The following includes a list of potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Assess Reynolds Creek as a potential alternative drinking water source for Hydaburg
- Watershed assessment that includes data collection on stream functions to determine if any instream restoration efforts are warranted
- Water quality monitoring program to assure surface water standards are met
- Data collection for updating fish distribution and potential additions to the AWC
- Data collection for past and present subsistence uses within the watershed

The Saltery Creek watershed was nominated by Hydaburg because of its proximity to the community and its use as a cultural and subsistence resource area. The watershed encompasses 9.2 square miles and drains into Sukkwan Strait on the central west side of Prince of Wales Island (Figure 26). There is not a community drinking water source on Saltery Creek (UAS-GIS, 2013).

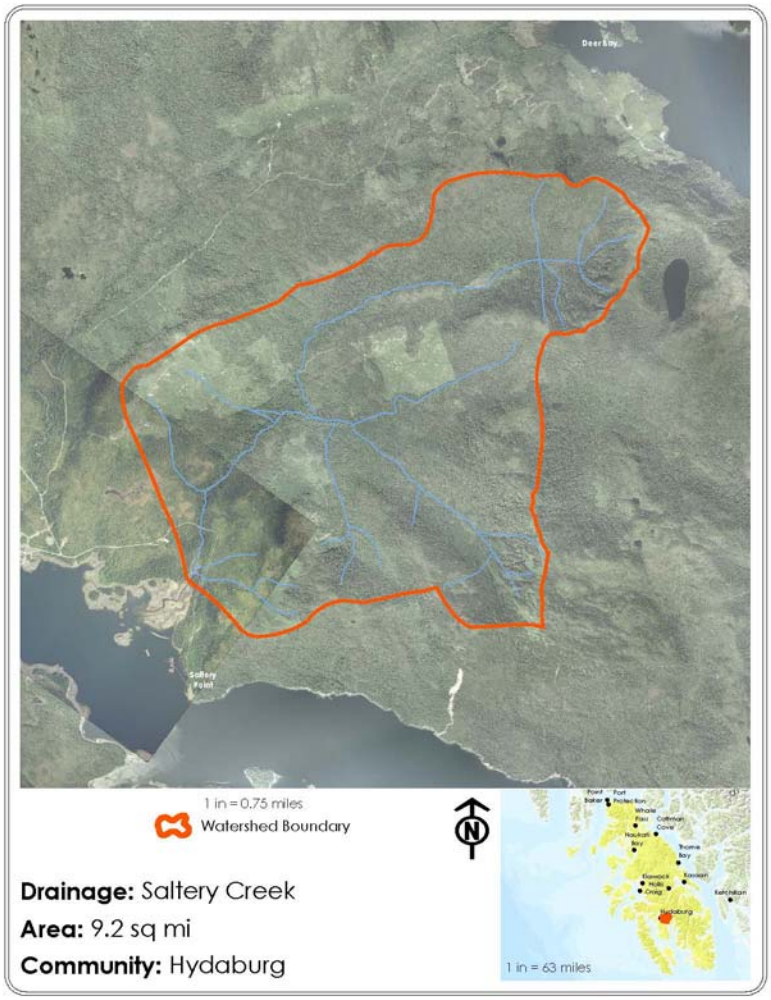

Figure 26. Watershed boundary for Saltery Creek near Hydaburg, Prince of Wales Island, Alaska.

Saltery Creek is listed as an anadromous waterbody (103-25-10050), hosting Coho salmon, pink salmon and chum salmon (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for the watershed. Saltery Creek is not an impaired waterbody (ADEC, 2010). Hydaburg's Class III solid waste facility and future solid waste facility reside in the Saltery Creek Watershed (ADEC-SWIMS, 2013). There are no contaminated sites, CERCLIS, NPL, LUST or spills records for Saltery Creek (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There is one NPDES permit record for the Saltery Creek Watershed, associated with the Hydaburg Ship Moorage out at Saltery Point, where longshoring ships tie up (EPA, 2013). While it didn't turn up in the records research, there is also an old log transfer facility at the end of Saltery Road, which is where the Hydaburg Ship Moorage is located (A. Christianson, personal communication). There were no other water rights records for the Saltery Creek watershed (ADNR, 2013). There are no known water quality contaminants in the watershed. Timber harvest has occurred in the watershed, and there is potential for future timber harvest. There were no records for past or future mining activities. The watershed is not listed in any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource for deer was noted as moderate, and for fish it was also moderate. Future development includes a new solid waste facility and potentially subdivided land for future residential housing. Landownership is largely Native Corporation, with some private.

Saltery Creek was categorized as Category I watershed. The watershed met two qualifiers for a Category I listing; being listed as an anadromous waterbody, and having a Class III solid waste facility. It also met two qualifiers for a Category II listing; having one NPDES record and having past timber harvest in the watershed.

As a Category I watershed, it is recognized that the system needs some restoration. Priorities for the Saltery Creek River watershed would be to maintain water quality for both drinking water protection and anadromous fish. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available:

- Develop a wetland delineation with potential mitigation measures to be applied to potential development near Hydaburg
- Develop a water quality monitoring plan to determine if there are currently impacts associated with landfill operation
- Develop a comprehensive land management plan for the Saltery Creek watershed
- Conduct a study to determine the importance of the Saltery Watershed as a subsistence resource, including subsistence use and patterns.

Sukkwan Island was nominated by Hydaburg because of its historical importance to the community, and it provides nearby subsistence opportunities for many species. The island as a watershed encompasses 65.2 square miles, and various stream systems drain into Sukkwan and Tlevak Straits (Figure 27). There are no community drinking water sources on Sukkwan Island (UAS-GIS, 2013).

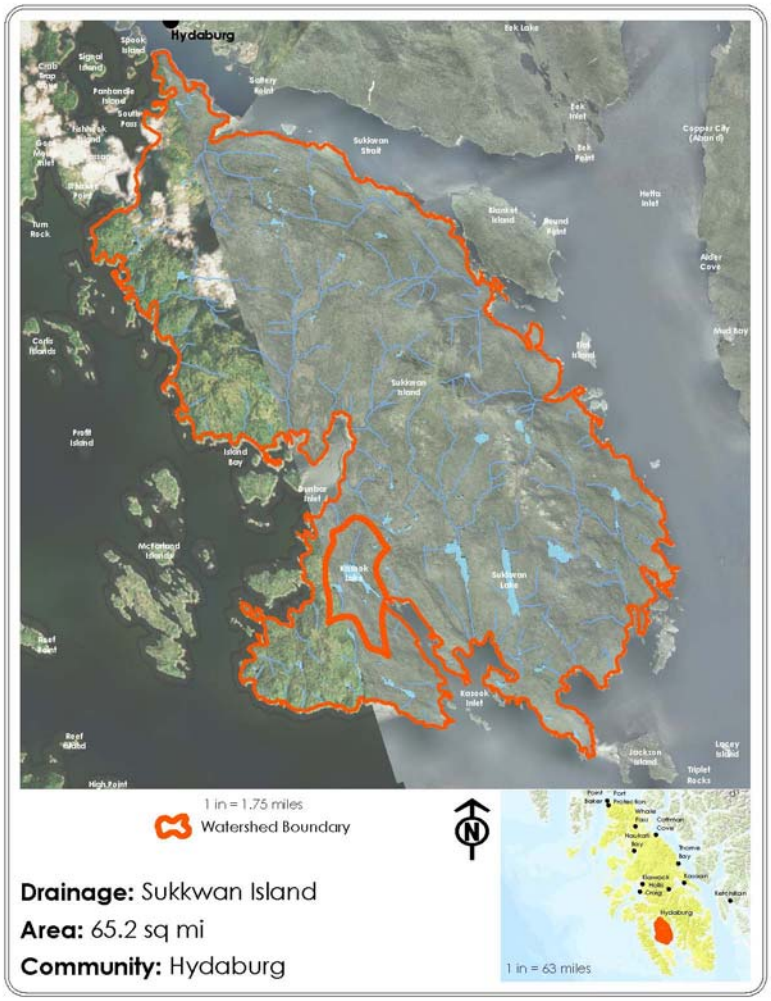

Figure 27. Watershed boundary for Sukkwan Island near Hydaburg, Prince of Wales Island, Alaska.

There are 20 anadromous waterbodies on Sukkwan Island, including Kasook Lake which was previously covered in this community chapter (ADFG, 2013; UAS-GIS, 2013). Two systems (103-40-10620; 103-25-10700) host Coho salmon, pink salmon and chum salmon. One system (103-21-10560) hosts Coho salmon, pink salmon and steelhead trout. One system (103-40-10600) hosts Coho salmon and steelhead trout. Nine systems host Coho salmon and pink salmon (103-40-10420; 103-40-10440; 103-40-10540; 103-30-10010; 103-21-10510; 103-21-10540; 103-25-10600; 103-25-10650; 103-25-10670). The remaining six systems host pink salmon only (103-40-10460; 103-40-10480; 103-40-10500; 103-40-10520; 103-25-10630; 103-25-10690). Anadromous creek 103-25-10650 is also known as Heather Creek, while the remaining systems are unnamed. The Hydaburg Cooperative Association, in partnership with TNC, is currently working on updating the AWC for portions of Sukkwan Island with stream habitat survey information they have been collecting (A. Christianson, personal communication). There were no subsistence resource concerns identified for the watershed. There were no impaired waterbodies on Sukkwan Island, nor is there any Class III solid waste facility (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, or LUST records for Sukkwan Island (ADEC-CS, 2013; EPA, 2013). There was one spills record, therefore reported and unreported petroleum spills have potential impacts (ADEC-PERP, 2013). There were no other water rights or NPDES permit records for Sukkwan Island (EPA, 2013; ADNR, 2013). There are no known water quality contaminants for Sukkwan Island.

There has been select cut timber harvest from Sukkwan Island. If the Southeast Alaska Land Entitlement Finalization and Jobs Protection Act (Senate Bill 340) is passed, major portions of Sukkwan Island will become the Sukkwan Island LUD II Management Area, which would limit future timber harvest activities (Senate Bill 340, 2014). There were no records for past or future mining activities. Waterbodies on Sukkwan Island have not been listed by any other Unified Watershed Assessment and none have been included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watersheds on Sukkwan Island as a subsistence resource (outside of Kasook Lake) is currently listed as low for deer and fish. No future development projects were identified. Landownership is a federal land. In addition, the Mabel Bay land transfer is planned (A. Christianson, personal communication).

Sukkwan Island was categorized as a Category IV watershed. The watershed did not meet the set qualifiers for a Category I or Category II watershed, however some impacts and concerns for the watershed exist so it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The list below includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Develop a beaver control plan to address sockeye salmon passage issues
- Continue collecting instream habitat information in stream systems on Sukkwan Island that have not previously been assessed
- Water quality monitoring program to ensure surface water and drinking water standards are met
- Develop a population estimate for wolves migrating to Sukkwan Island to determine their impact on local deer populations
- Data collection for subsistence uses of deer within the watershed

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Kasaan

Population: 69 (2012 DCCED certified) Governance: 2nd class city
Federally recognized Tribe

Kasaan is located on the eastern side of Prince of Wales Island on the west coast shore of Kasaan Peninsula. Kasaan Haidas have occupied the local area seasonally since the 1700s. Present day Kasaan was developed in the late 1800s with the establishment of a copper mine, and a salmon cannery was built in 1902. The cannery operated until 1953, and Kasaan incorporated in 1976. Haidas from Old Kasaan relocated to present day Kasaan in the early 1900's, and continue to occupy the town, which currently practices a more traditional Haida lifestyle.

It is noted that the Organized Village of Kasaan, a federally recognized Tribe, does not recognize the use of the word subsistence. In this document, the use of the word subsistence refers to regulated species and/or products by both the State of Alaska and the federal government. The Organized Village of Kasaan uses the term Customary and Traditional Use, which is a way of life for its community members that includes not only the harvest of fish and wildlife, but also the cultural ties Tribal members have to the practice and the land.

The Organized Village of Kasaan established a Kasaan Bay Watershed Council in 2005. The organization was comprised of landowner stakeholders, and community representatives to address concerns with watersheds within Kasaan Bay. In 2005, the organization published a Unified Watershed Assessment which categorized watersheds within Kasaan Bay. In the same year, the organization published the Kasaan Bay Watershed Assessment, which identified and prioritized specific concerns and projects in priority watersheds. The Organized Village of Kasaan subsequently worked to fulfill all of the action items identified in the document.

The community of Kasaan has nominated seven watersheds to be included in this watershed assessment: Jacob's Creek (Tolstoi Creek), Karta River (also nominated by Hollis), Lindeman Creek, Linkum Creek, Poorman Creek, Salt Chuck, and Son-i-hat Creek. Table 6 depicts a summary of the research conducted on each watershed.

Table 6. Summary of records research for watersheds nominated by the community of Kasaan for the Prince of Wales Unified Watershed Assessment. For landownership: S = State lands; F = Federal lands; P = Private lands; NC = Native Corporation lands.

	Member Community	Kasaan						
	Watershed Name	**Jacob's (Tolstoi) Creek**	**Karta River**	**Lindeman Creek**	**Linkum Creek**	**Poorman Creek**	**Salt Chuck**	**Son-i-hat Creek**
Category I Qualifiers	**Community Drinking Water System**	no	no	no	yes	no	no	no
	Anadromous Fish System	1	1	1	1	1	1	1
	ADEC Impaired Water Body List	no	no	no	no	no	yes - category 5	no
	Class III solid waste facility present	no	no	no	no	no	no	no
	ADEC Contaminated Sites	0	0	0	1	0	1	0
	EPA CERCLIS/NPL Sites	0	0	0	0	0	1	0
	Subsistence resource impacted	no	sockeye declining	no	no	no	contaminated shellfish	no
Category II Qualifiers	**LUST sites**	no	no	no	no	no	no	no
	ADEC Spills sites	0	0	0	1+	0	0	0
	NPDES/Envirofact records	1	0	0	0	0	1	0
	Other water rights	0	6	0	1	0	0	0
	Known water quality contaminants	0	no	no	Sediments	no	Metals	no
	Past/present mining activity	no	yes	yes	no	yes	yes	no
	Past/present timber harvest	yes	no	yes	yes	yes	yes	no
	Listed by State or Tribe UWA	no	Kasaan UWA	no	SE Tribal UWA; Kasaan UWA	Kasaan UWA	SE Tribal UWA; Kasaan UWA	Kasaan UWA
Other Information	**TNC/USFS Restoration Priority**	no	no	no	no	no	no	no
	Value as subsistence resource	Fish - low Deer - high	Fish - high Deer - moderate	Fish - low Deer - low	Fish - low Deer - low	Fish - moderate Deer - low	Fish - moderate Deer - moderate	Fish - moderate Deer - low
	Possible future timber harvest	yes	No	yes	yes	yes	yes	yes
	Possible future mining activity	no	yes	no	no	yes	no	no
	Landownership	NC, S, P	F	F	NC, P	NC, P	F	NC, P
	Possible other development	Bridges	no	no	Water facility upgrades	Road upgrades	no	Subdivision development

Jacob's Creek, known to ADFG as Tolstoi Creek, was nominated because of its importance to Kasaan as a subsistence deer hunting area. The watershed encompasses approximately 5.7 square miles and drains into Tolstoi Bay on the eastern side of Prince of Wales Island (Figure 28). There is no community drinking water source on Jacob's Creek (UAS-GIS, 2013).

Figure 28. Watershed boundary for Jacob's Creek near Kasaan, Prince of Wales Island, Alaska.

Jacob's Creek is listed as an anadromous waterbody (102-70-10410), hosting Coho salmon and pink salmon (ADFG, 2013; UAS-GIS, 2013). Steelhead trout have also been noted during the spring (C. Needham, personal communication). The Organized Village of Kasaan has partially mapped Jacob's Creek for anadromous fish habitat (C. Needham, personal communication). There were no subsistence resource concerns identified for the watershed. Jacob's Creek is not an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST or spill records for Jacob's Creek (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There was one NPDES permit for Jacob's Creek, associated with a log transfer facility (EPA, 2013). There were no other water rights records (ADNR, 2013). There are no known water quality contaminants in the watershed. Timber harvest has occurred extensively in the watershed, pre-commercial thinning is ongoing, and there is potential for future timber harvest in the watershed. There were no records for past or future mining activities. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was noted to be high for deer and low for fish. Future development includes the replacement of bridges and Kasaan Road upgrades that run adjacent to Jacob's Creek. Landownership is a mix of Native Corporation, state and private.

Jacob's Creek was categorized as a Category IV watershed. The watershed did not meet the set qualifiers for a Category I or Category II watershed, however some impacts and concerns for the watershed exist, so it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The list below includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Watershed assessment that includes data collection on stream functions to determine if any instream restoration efforts are warranted
- Continuation of stream habitat mapping to map the full extent of the watershed
- Water quality monitoring program to ensure surface water standards are met
- Adult foot counts to confirm the presence of steelhead trout
- Data collection for subsistence uses of deer within the watershed
- Study of customary and traditional use of resources in the watershed

The Karta River watershed was nominated by Kasaan because of its historical cultural importance to the Kasaan Haida and because it is the priority system used for subsistence fisheries resources. The watershed encompasses 61.7 square miles, and it is entirety considered the Karta River Wilderness area. Given the designated wilderness area, the watershed has a high recreational value and is heavily used as a sport fishing system. The Karta River was also nominated by the community of Hollis and was previously covered in the Hollis chapter. The Karta River watershed encompasses approximately 61.7 square miles and drains into the head of Karta Bay on central Prince of Wales Island (Figure 29). Karta River is not considered a drinking water source (UAS-GIS, 2013).

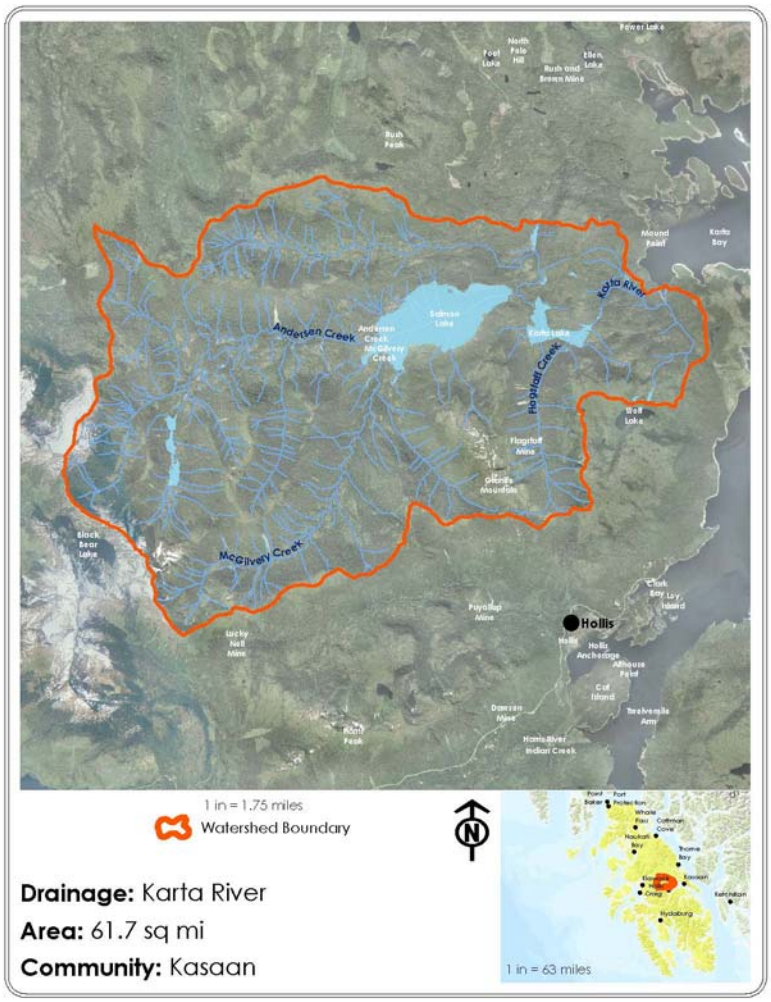

Figure 29. Watershed boundary for Karta River near Kasaan, Prince of Wales Island, Alaska.

Karta River is an anadromous fish waterbody (102-60-10870), hosting chum salmon, Coho salmon, pink salmon, sockeye salmon, cutthroat trout, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). The sockeye salmon run on Karta River has been studied by the Organized Village of Kasaan under the Fisheries Resource Monitoring Program through the Office of Subsistence Management from 2005-2010 (except 2007) (DOI, 2013). When compared to historical numbers, the Karta River sockeye population has declined and was therefore identified as a subsistence resource concern. The Karta River is not an impaired waterbody, nor is there a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills or NPDES permit records for the watershed (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There were six other water rights records in the Karta River watershed, four for ADFG for instream flow reservations for fish and two for USFS for recreational cabins (ADNR, 2013). There are no known water quality contaminants in the watershed. There were no records showing past or future timber harvest activities for the Karta River watershed. Past mining activities have occurred on McGilvery Creek, a tributary to Karta Lake.

The mine produced gold, silver, copper and lead (Grybeck, 2004). There are 11 patented mining claims in the Karta River watershed, which are exempt from the wilderness designation, therefore there is potential for future mining activities in the watershed (Grybeck, 2004). The Karta River was designated a Category II watershed in the "*Kasaan Bay Unified Watershed Assessment*", a category defined as a watershed in need of preventative measures (OVK, 2005). Sub-watersheds were categorized as Category III watersheds, a category defined as needing no immediate action. The concern for Karta River is declining fish populations by commercial, sport and subsistence fisheries, as well as the threat of future mining. The Karta River was not considered a restoration priority for Prince of Wales Island (Albert et al., 2008). The value of the watershed for Kasaan was considered moderate for deer and high for fish. There were no other potential development projects identified, due to the Karta River wilderness designation. Landownership is federal.

The Karta River Watershed was categorized as a Category III watershed, because it does not meet the qualifiers for a Category I or II watershed due to the current wilderness designation. A Category III watershed is defined as a watershed with a pristine aquatic system due to wilderness or non-development land use designations but still identified as important at a local level.

As a Category III watershed, there is very little threat of large scale projects that will occur that would adversely impact the value of the watershed. However, the concern for the Karta River is that sockeye salmon are declining. The list below includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Re-establish a stock assessment for sockeye salmon and include a harvest survey for multiple subsistence communities harvesting at Karta River
- Develop an escapement goal for sockeye salmon returning to the Karta River
- Conduct habitat mapping in the upper watershed of Karta River on important salmon spawning grounds
- Conduct a water quality monitoring and assessment to address baseline water quality conditions and determine if past mining activities have impacted water quality at McGilvery Creek
- Data collection for other subsistence uses in the watershed
- Study of customary and traditional use of resources in the watershed

Lindeman Creek was nominated by Kasaan because of its proximity to Salt Chuck and its usefulness for establishing baseline data. The watershed encompasses approximately 0.9 square miles and empties into Kasaan Bay on the eastern side of Prince of Wales Island (Figure 30). Lindeman Creek does not contain a community drinking water source (UAS-GIS, 2013).

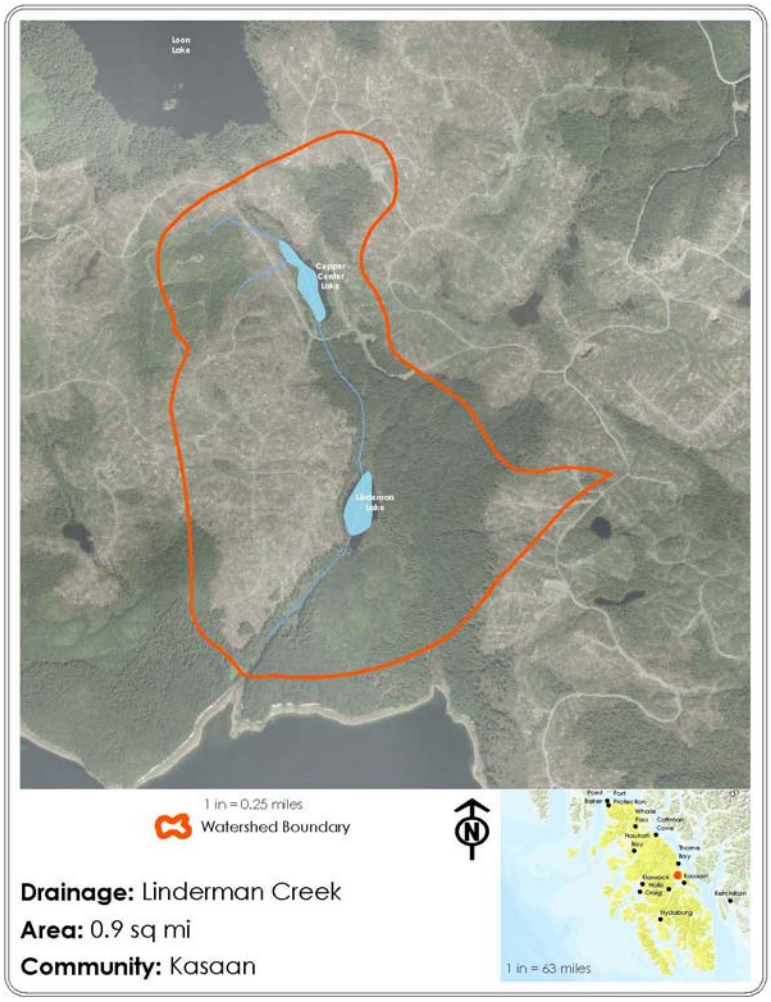

Figure 30. Watershed boundary for Lindeman Creek near Kasaan, Prince of Wales Island, Alaska.

Lindeman Creek is listed as an anadromous waterbody (102-60-10960) for Dolly Varden (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for the watershed. Lindeman Creek is not an impaired waterbody, and there is not a Class III solid waste facility within the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills, NPDES permit or other water rights records found for Lindeman Creek (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013, ADNR, 2013). There are no known water quality contaminants in the watershed. There has been past timber harvest in the watershed, and there is a potential for future timber harvest. There has been past mining in the watershed, however no future mining plans were identified for the watershed. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was listed as low for deer and low for fish. No future development activities have been identified for the watershed. Landownership is federal.

Lindeman Creek was categorized as a Category IV watershed. The watershed did not meet the set qualifiers for a Category I or Category II watershed, however some impacts and concerns for the watershed exist so it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional

information to be collected. The list below includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Watershed assessment that includes data collection on fish habitat to determine if anadromous fish are using the system, including a potential update to the AWC
- Determine if any water quality issues are associated with the watershed, including erosion from past timber harvest activities
- Study of customary and traditional use of resources in the watershed

Linkum Creek was nominated because of its importance to Kasaan as a community drinking water source (UAS-GIS, 2013). Linkum Creek is a v-notch creek that has had past erosion problem. The community of Kasaan is seeking funding to relocate the water treatment plant. The watershed encompasses approximately 1.5 square miles and drains into Kasaan Bay in central Prince of Wales Island (Figure 31).

Figure 31. Watershed boundary for Linkum Creek near Kasaan, Prince of Wales Island, Alaska.

Linkum Creek is an anadromous waterbody (102-60-10990), hosting pink salmon (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resources concerns identified for the watershed. Linkum Creek is not an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There was one contaminated site record for Linkum Creek, where petroleum was found associated with the former Kavilco Co. bunkhouse (ADEC-CS, 2013). Clean-up activities have occurred, and the site is in the process of being closed with institutional controls. There were no CERCLIS, NPL or LUST site records for Linkum Creek (EPA, 2013). There was at least one petroleum spill record for Kasaan, which is partially in the Linkum Creek watershed, therefore both reported and unreported petroleum spills have potential impacts (ADEC-PERP, 2013). There were no NPDES permits or other water rights records for the watershed (EPA, 2013; ADNR, 2013). Known water quality contaminants include sediments from erosion activities during high water events (OVK, 2005; POWTEC, 2005). There has been extensive timber harvest in the Linkum Creek watershed, and there is potential for future timber harvest. There were past or future mining activities identified for the watershed. The watershed has been listed by both the "*Southeast Alaska Tribal Unified Watershed Assessment"* and the "*Kasaan Bay Unified Watershed Assessment"* (CCTHITA, 1999; OVK, 2005). The "*Southeast Alaska Tribal Unified Watershed Assessment"* listed Linkum Creek as a Category I watershed due to past issues with erosion and water

quality data showing high levels of silver and mercury. The "*Kasaan Bay Unified Watershed* " listed Linkum Creek as a Category I watershed, listing past logging activities as a concern for past and future erosion issues in the watershed. Linkum Creek was not included as a restoration priority for Prince of Wales Island (Albert et al., 2008). The value of the watershed as a subsistence resource was listed as low for both deer and fish. Future development includes water treatment facility upgrades and potentially moving the treatment plan out of the watershed. Landownership is largely Native Corporation.

Linkum Creek was listed as a Category I watershed because it met the following Category I criteria: it is a primary drinking water source; it is an anadromous fish stream; and it contains one ADEC listed contaminated site. In addition, Linkum Creek contains at least one petroleum spill record and has past water quality contaminants (silver, mercury and sediments).

As a Category I watershed, it is recognized the system needs some restoration. Priorities for Linkum Creek would be to maintain water quality for drinking water protection. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Design an upslope stabilization project to address erosion concerns that initiate from higher in the watershed
- Move the drinking water treatment plant and drinking water holding tank outside the v-notch portion of the watershed
- Develop a first response plan to outline the step-by-step process of how the community may respond to landslides in the watershed
- Document upper extent of pink spawning habitat
- Develop a water quality monitoring project to determine if other contaminants are present (i.e. silver and mercury as noted in CCTHITA (1999)
- Study of customary and traditional use of resources in the watershed

Poorman Creek was listed by the community of Kasaan because of its proximity to the community and the threat of an open pit magnetite mine. The watershed is used for berry picking and deer hunting, as well as subsistence harvesting of shellfish in marine waters at the mouth of the watershed. The watershed encompasses approximately 5.7 square miles and drains into Kasaan Bay on central Prince of Wales Island (Figure 32). There is not a community drinking water source in the Poorman Creek watershed (UAS-GIS, 2013).

Figure 32. Watershed boundary for Poorman Creek near Kasaan, Prince of Wales Island, Alaska.

Poorman Creek is an anadromous waterbody (102-60-10970), hosting Coho salmon, pink salmon, cutthroat trout and Dolly Varden (ADFG, 2013; UAS-GIS, 2013). The Organized Village of Kasaan and TNC have conducted stream habitat mapping on Poorman Creek (C. Needham, personal communication). There were no current subsistence resource concerns identified for Poorman Creek. Poorman Creek is not an impaired waterbody nor is there a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills, NPDES permit, or other water rights records for Poorman Creek (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013; ADNR, 2013). There are no known water quality contaminants in the watershed. There has been extensive timber harvest in the watershed, and there is the potential for future timber harvest. There has been past small scale mining in the watershed and Poorman Creek for copper, iron, gold and silver (OVK, 2005). Poorman Creek has been identified as having a large untapped magnetite ore body. The threat of an open pit mine in the watershed is the primary reason the watershed was nominated by the residents of Kasaan, who are against large scale mining prospects so close to the community (D. Nickerson, personal communication). Poorman Creek was listed as a Category II watershed in the "*Kasaan Bay Unified Watershed*

Assessment", stating the watershed is in need of preventative actions (OVK, 2005). The document states there may be contamination associated with past mining activities and that the nearshore waters at Poorman Creek have been designated crucial habitat. Poorman Creek was not included as a restoration priority for Prince of Wales Island (Albert et al., 2008). The value of the watershed as a subsistence resource was identified as moderate for deer and low for fish (it has high value for subsistence shellfish harvest in marine waters). Road upgrades were identified as potential future development. Landownership is Native Corporation and private.

Poorman Creek was categorized as a Category II watershed. The watershed only met one qualifier for a Category I listing; being listed as an anadromous waterbody. Poorman Creek met two qualifiers for being a Category II watershed: there has been past timber harvest and activity and mining activities in the watershed.

As a Category II watershed, it is recognized that the watershed may need some preventative action or protection measures to sustain water quality or watershed functions. The following includes a list of potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Establish a water quality monitoring program to establish baseline water quality conditions
- Abandoned mine inventory
- Continued outreach regarding the threat of potential magnetite mining
- Study of customary and traditional use of resources in the watershed

Salt Chuck Category I

Salt Chuck was nominated by Kasaan because of its historical and cultural importance to the community. The area was traditionally used for shellfish harvest by the Kasaan Haida, and there are concerns that shellfish are contaminated by past mining activities. The Salt Chuck watershed encompasses approximately 8.6 square miles and empties into the head of Kasaan Bay on central Prince of Wales Island (Figure 33). There is not a community drinking water source in Salt Chuck (UAS-GIS, 2013).

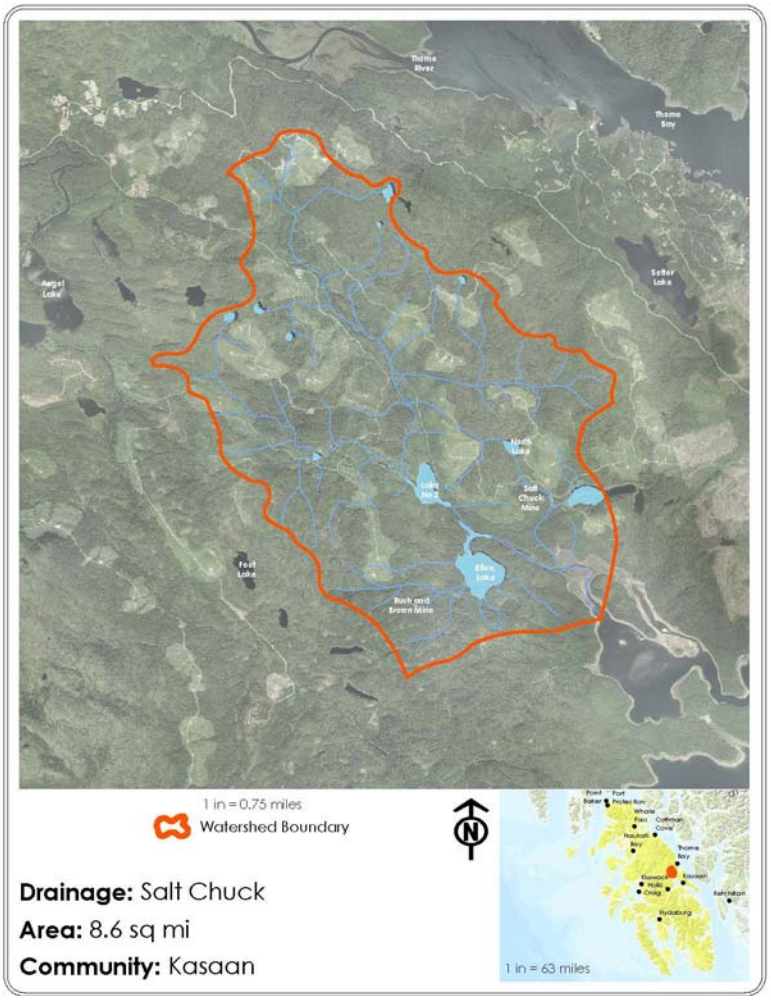

Figure 33. Watershed boundary for Salt Chuck near Kasaan, Prince of Wales Island, Alaska.

Salt Chuck is considered an anadromous waterbody (102-60-10950), hosting Coho salmon, pink salmon, chum salmon, cutthroat, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). Contamination of shellfish from past mining operation was identified as a subsistence resource concern. Salt Chuck is listed as a Category 5 impaired waterbody on the State of Alaska's 2010 Impaired Waterbody list due to heavy metal contamination from past mining operations (ADEC, 2010). As a Category 5 impaired waterbody a TMDL for copper is required but has not yet been developed. There is not a Class III solid waste facility in Salt Chuck (ADEC-SWIMS, 2013). The Salt Chuck mine is also listed as a contaminated site and also has a NPL listing under the CERCLIS program (ADEC-CS, 2013, EPA, 2013). Clean-up efforts will be led by the USFS, an Engineering Evaluation and Cost Estimate (EECA) has been performed, identifying priorities for clean-up (C. Needham, personal communication). There were no LUST, spills, NPDES or other water rights records for the watershed (EPA, 2013; ADEC-PERP, 2013; ADNR, 2013). Known water quality contaminants are heavy metals, with copper being the most concerning (CCTHITA, 1999; OVK, 2005; ADEC, 2010). Timber harvest has occurred in the watershed, and there is a potential for future timber harvest. The watershed has previously been mined for palladium, copper and gold, however no records for the potential for future mining were found (OVK, 2005). Salt Chuck was listed by the Organized Village of Kasaan in the "*Southeast Alaska Tribal Unified Watershed Assessment*" and the

"*Kasaan Bay Unified Watershed Assessment* "(CCTHITA, 1999; OVK, 2005). Both documents include Salt Chuck as a Category I watershed in need of restoration from heavy metal contamination and past mining activities. Salt Chuck was not included as a restoration priority for Prince of Wales Island (Albert et al., 2008). The value of the watershed as a subsistence resource for deer was identified as moderate and moderate for fish. It also has high value as a shellfish subsistence resource (POWTEC, 2005). Outside of clean-up activities, there were no future development projects identified for Salt Chuck. Landownership is federal.

Salt Chuck was categorized as a Category I watershed because it met the following criteria: it is an anadromous fish stream; it is an impaired waterbody; it listed as a contaminated site and a NPL site; and shellfish as a subsistence resource have been impacted with contaminants. In addition, Salt Chuck has known water quality contaminants, has been timber harvested, has been mined and has been listed in two other Unified Watershed Assessments.

As a Category I watershed, it is recognized that the system needs some restoration. Priorities for Chuck would be to maintain water quality for fish, shellfish and wildife. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Water quality monitoring of clean-up activities, in both fresh and salt water
- Long-term monitoring of shellfish after clean-up activities are complete
- Shellfish survey in the intertidal adjacent to mine tailings
- Regular meetings between the USFS and Organized Village of Kasaan throughout the clean-up process
- Outreach and education with Prince of Wales communities on clean-up activities
- Stream habitat surveys of streams adjacent to past mining operations to document fish habitat
- Feasibility study of restocking clam bed populations after clean-up actions are complete
- Study of customary and traditional use of resources in the watershed

Son-i-hat Creek Category IV

Son-i-hat Creek was listed by the community of Kasaan because of its historical and cultural importance to the community and its proximity to the Kasaan Longhouse. The watershed encompasses approximately 2.4 square miles and drains into Kasaan Bay in central Prince of Wales Island (Figure 34). There is not a community drinking water source on Son-i-hat Creek (UAS-GIS, 2013).

Figure 34. Watershed boundary for Son-i-hat Creek near Kasaan, Prince of Wales Island, Alaska.

Son-i-hat Creek is an anadromous waterbody (102-60-10980), hosting Coho salmon and pink salmon (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for the watershed. Son-i-hat Creek is not an impaired waterbody (ADEC, 2010). The community of Kasaan used to have a Class III solid waste facility in the watershed, however it was closed by ADEC in the early 2000s (ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills or NPDES permit records for Son-i-hat Creek (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There was one other water rights record held by Organized Village of Kasaan for subsurface water rights for a commercial lodge (pending) (ADNR, 2013). There is one local resident that draws water from a tributary of Son-i-hat as a drinking water source (C. Needham, personal communication). There are no known water quality contaminants. There has been past timber harvest in the watershed, and there is a potential for future timber harvest. There were no records for past or future mining activities in the watershed. The watershed was listed in the "*Kasaan Bay Unified Watershed Assessment*" as a Category IV watershed, which designated it was a watershed with insufficient information to categorize (OVK, 2005). The watershed was not listed as a restoration priority for Prince of Wales Island (Albert et al., 2008). The value of the watershed as a subsistence resource was identified as low for deer and moderate for fish. Building of residences and upgrading roads in the Kasaan Subdivision was identified as future development. Landownership is Native Corporation and private.

Son-i-hat Creek was categorized as a Category IV watershed. The watershed did not meet the set qualifiers for a Category I or Category II watershed, however some impacts and concerns for the watershed exist so it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The list below includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Watershed assessment that includes data collection on stream functions to determine if any instream restoration efforts are warranted, including stream habitat mapping and updating the AWC
- Water quality monitoring program to assure surface water and drinking water standards are met
- Land use planning in the community to determine if any planned development activities will impact Son-i-hat Creek
- Study of customary and traditional use of resources in the watershed

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Klawock

Population: 799 (2012 DCCED certified) Governance: 1st class city
Federally recognized Tribe

Klawock is named for Kloo-Wah, a Tlingit Indian from Moria Sound. The town site was a summer fishing camp to which Kloo-Wah permanently moved his clan. A trading post and salmon saltery were established in 1868, and the first cannery in Alaska was built here by a San Francisco firm in 1878. Subsequent canneries in the area were operated under contract using Chinese laborers. In 1934, Klawock received federal funds for a cannery. In 1971, Alaska Timber Corporation built a sawmill. Soon after, Klawock-Heenya Corporation, Shaan-Seet Corporation of Craig, and Sealaska Timber Corporation built a log-sort yard outside of Klawock and a deep-water dock on Klawock Island. The only airstrip on Prince of Wales Island is near the town and serves two scheduled carriers using wheeled aircraft; visiting planes also use the runway. Floatplanes land near Klawock's harbor. A hatchery for red salmon opened at Klawock Lake in 1897 known as the Prince of Wales Hatchery Association. A school was constructed in 1929.

Klawock had a Watershed Association from the early 2000's until around 2005 when it dissolved its status. The organization completed a watershed assessment of most of the Klawock Watersheds focusing on the Klawock Lake in particular and is the most studied area on the island. Many projects have been completed or are in progress or are looking for funding. It is hoped that this document will help to update the status of several of these important watersheds.

The community of Klawock has nominated four watersheds to be included in this watershed assessment: Big Salt Lake, Klawock Lake (also nominated by Craig), Little Salt Lake, and Sarkar River (also nominated by Naukati Bay). Table 7 depicts a summary of the research conducted on each watershed.

Table 7. Summary of records research for watersheds nominated by the community of Klawock for the Prince of Wales Unified Watershed Assessment. For landownership: S = State lands; F = Federal lands; P = Private lands; NC = Native Corporation lands.

	Member Community	Klawock		
	Watershed Name	Big Salt	Klawock River	Sarkar River
Category I Qualifiers	Community Drinking Water System	no	yes - 2	no
	Anadromous Fish System	9	1	1
	ADEC Impaired Water Body List	no	no	no
	Class III solid waste facility present	no	no	no
	ADEC Contaminated Sites	0	15	0
	EPA CERCLIS/NPL Sites	0	0	0
	Subsistence resource impacted	no	sockeye depleted	no
Category II Qualifiers	LUST sites	no	yes	no
	ADEC Spills sites	1+	1+	0
	NPDES/Envirofact records	0	6	0
	Other water rights	0	10	5
	Known water quality contaminants	no	no	no
	Past/present mining activity	yes	no	no
	Past/present timber harvest	yes	yes	yes
	Listed by State or Tribe UWA	no	SE Tribal UWA	no
Other Information	TNC/USFS Restoration Priority	no	very high	no
	Value as subsistence resource	Fish - moderate Deer - high	Fish - high Deer - high	Fish - high Deer - moderate
	Possible future timber harvest	yes	no	yes
	Possible future mining activity	no	no	no
	Landownership	NC, S, P, F	NC, P	F
	Possible other development	Subdivision development	Subdivision development	no

Big Salt Lake was nominated by the community of Klawock because of its importance for subsistence hunting, fishing and gathering, as well as its proximity to the community. The Big Salt Lake watershed encompasses approximately 78.8 square miles and drains into San Alberto Bay on the west side of Prince of Wales Island (Figure 35). The Big Salt Lake boundary ended prior to Peratrovich Island, where the waterbody is divided by Shinaku and Klawock Inlet, because Klawock Inlet was addressed separately in this document. It is noted that the Klawock Cooperative Association would like to include Shinaku in future assessment work. There is not a community drinking water source in the Big Salt Lake Watershed (UAS-GIS, 20143).

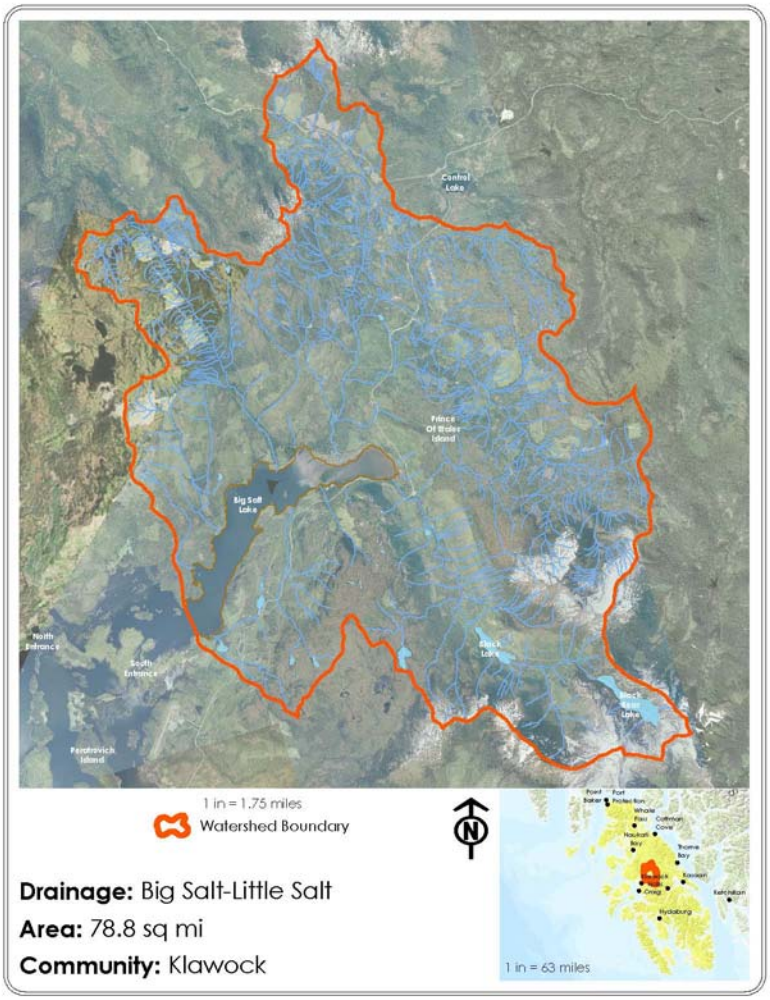

Figure 35. Watershed boundary for Big Salt Lake near Klawock, Prince of Wales Island, Alaska.

There are nine anadromous waterbodies in the Big Salt Lake watershed (as defined by the boundaries in Figure 35)(ADFG, 2013; UAS-GIS, 2013). Four named waterbodies include: Lime Creek (103-60-10250), listed for Coho salmon, pink salmon and chum salmon; Steelhead Creek (103-60-10290), listed for Coho salmon, pink salmon, chum salmon, Dolly Varden and steelhead trout; Blackbear Creek (103-60-10310), listed for sockeye salmon, Coho salmon, pink salmon, chum salmon, Dolly Varden and steelhead trout; and Dog Salmon Creek (103-60-10350), listed for Coho salmon, pink salmon and chum salmon. There are five unnamed watersheds; one listed for Coho salmon, pink salmon, chum salmon and Dolly Varden (103-60-10270), one listed for Coho salmon and pink salmon (103-60-10370), one listed for pink salmon and chum salmon (103-60-10330) and two listed for just Coho salmon (103-60-10230, 103-60-10297). There were no subsistence resources concerns identified for the Big Salt Lake watershed. There is not an impaired waterbody or a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL or LUST site records for the Big Salt Lake watershed (ADEC-CS, 2013; EPA, 2013). There was one spill record, therefore both reported and

unreported petroleum spills may have potential impacts (ADEC-PERP, 2013). There were no NPDES permit records or other water rights records for the watershed (EPA, 2013; ADNR, 2013). The watershed has had past and current timber harvest activities, and there is potential for future timber harvest. The watershed has had past mining activities, however it is unknown if there will be future mining. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource for deer was noted as high and for fish, it was moderate. Future development activities include housing and road improvements in the Big Salt Subdivision. Landownership is a mix of Native Corporation, federal, state and private.

The Big Salt Lake watershed was categorized as a Category II watershed. The watershed met one qualifier for a Category I listing; having anadromous waterbodies in the watershed. Big Salt Lake met the following qualifiers for being a Category II watershed: petroleum spills have occurred in the watershed, and there has been past timber harvest and mining activities.

As a Category II watershed, it is recognized that the watershed may need some preventative action or protection measures to sustain water quality or watershed functions. The following includes a list of potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Watershed assessments on individual systems to document current watershed conditions and functions, including fish habitat and water quality monitoring
- Data collection for updating fish distribution and potential additions to the AWC
- Conduct a stock assessment for sockeye salmon on Black Bear Creek
- Develop an escapement goal for sockeye salmon on Black Bear Creek
- Data collection for past and present subsistence uses within each sub-watershed
- Inclusion of Shinaku Inlet in future assessment efforts and planning for the Big Salt Lake area

Klawock Lake was nominated by the community of Klawock because of its historical and cultural importance as a subsistence fish system for sockeye salmon, Coho salmon and steelhead trout. Klawock Lake was also nominated by the community of Craig and was also previously covered in the Craig chapter. The watershed encompasses approximately 49.3 square miles and drains into Klawock Inlet on the western side of Prince of Wales Island (Figure 36). The Klawock Lake watershed also has two drinking water protection areas; one on Halfmile creek and one on Threemile creek , both of which are tributaries to the east side of the lake (UAS-GIS, 2013)

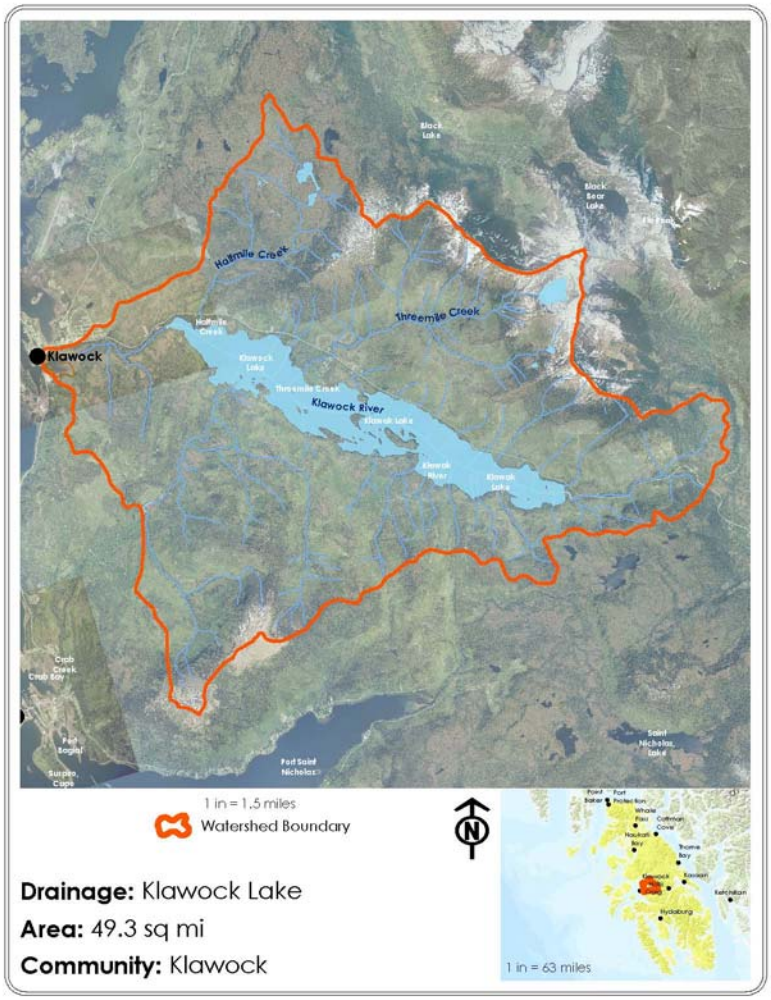

Figure 36. Watershed boundary for Klawock Lake near Klawock, Prince of Wales Island, Alaska.

Klawock Lake is listed as an anadromous waterbody (103-60-10120), hosting sockeye salmon, Coho salmon, chum salmon, pink salmon, cutthroat trout, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). The Klawock Lake system has been documented to be an important subsistence use system for sockeye salmon, Coho salmon and steelhead trout for both Craig and Klawock. The sockeye salmon population has been declining (DOI, 2013). TNC is currently investigating sockeye returns and trying to determine if any further habitat improvements may increase sockeye populations returning to Klawock Lake (N. Cohen, personal communication). The Prince of Wales Hatchery also operates on Klawock Lake and has been important for stocking fish populations for commercial and sport fisheries (POWHA, 2013). Klawock River is also a sport fish use system. The Klawock Lake system is not considered an impaired waterbody, and there is not a Class III solid waste facility within the watershed. Records researched showed there were 15 contaminated sites in the Klawock Lake watershed, many at the mouth of the river within the community of Klawock (ADEC- CS, 2013). Of the 15 sites, 11 have been cleaned up and closed and not further discussed (ADEC-CS, 2013). Of the remaining four, two have been cleaned up and have institutional controls placed on them for further monitoring; one is an active biocell for soil remediation, and the other is an old diesel

spill. The remaining two contaminated sites have not yet been cleaned up, and both are located on Klawock Island at the mouth of the Klawock River; these are petroleum spills at the Phoenix Truck Shop and the Klawock tank farm (ADEC-CS, 2013). The current CERCLIS and NPL records do not list any waterbody in the Klawock Lake watershed, however one past CERCLIS site was reported in the "*Southeast Alaska Tribal Unified Watershed Assessment"* (CCTHITA, 1999; EPA, 2013). The site was listed as the Klawock Trailer Court and No Further Action (NOFA) was assigned. There was one LUST site record at the POW Hatchery, which was cleaned up (EPA, 2013). There were 20+ spill records for the community of Klawock, which is mainly situated in the Klawock Lake watershed, therefore both reported and unreported petroleum spills have potential impacts (ADEC-PERP, 2013). There were five NPDES records for the Klawock Lake watershed (EPA, 2013). This included three log transfer facilities and two Resource Conservation and Recovery Act (RCRA) records for Delta Fuels and Alaska Power and Telephone. There were 10 other water rights records, which includes surface water rights for the POW Hatchery, surface water rights for the City of Klawock for Halfmile Creek, surface water rights for Viking Lumber on an unnamed spring and seven instream flow reservations for ADFG for fish (ADNR, 2013). Heavy metals were identified as a known water quality contaminant in the watershed, with high levels of copper, mercury, lead and nickel (CCTHITA, 1999). There has been extensive logging in the watershed, which lead to the development of a "*Klawock Watershed Condition Assessment*" (CCTHITA, 2002) and a "*Klawock Watershed Restoration Management Plan*" (Keta Engineering, 2003). Many restoration efforts have already taken place, associated with decommissioning old logging roads and pulling problem culverts. Future timber harvest or activities associated with timber management are expected. There was one aggregate mine identified for the watershed (CCTHITA, 1999) and no indication that future mining would occur. The Klawock Watershed was listed in the "*Southeast Alaska Tribal Unified Watershed Assessment*" as a Category I watershed (CCTHITA, 1999). The Category I designation was because the watershed had high cultural and historical value, salmon runs are declining, extensive timber harvest has occurred, it is a drinking water source and there are numerous potential water quality issues. Klawock River was also ranked as very high as a restoration priority for Prince of Wales Island (Albert et al., 2008). The value of the watershed as a subsistence resource was ranked high for both deer and fish. Future development in the watershed includes continued urbanization with road construction and housing development. Landownership is primarily Native Corporations, with some federal and private lands.

Klawock Lake was categorized as a Category I watershed because it met the following Category I criteria: it is a drinking water source: it is an anadromous fish system; there are 15 contaminated sites and one closed CERCLIS site; and a subsistence resource has been impacted. In addition, the watershed contains a LUST, petroleum spills, NPDES permits, known water quality contamination and has been extensively logged.

As a Category I watershed, it is recognized that the system needs some restoration. Priorities for the Klawock Lake watershed would be to maintain water quality for both drinking water protection and anadromous fish. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Continue sockeye salmon stock assessment project
- Develop a sockeye salmon escapement goal for the system
- Post-construction monitoring of projects that were completed in the Klawock Lake watershed since 2003
- Conduct a Klawock Lake Watershed reassessment that address which priorities were previously completed, a synthesis if the project were successful and identifying the next steps to address continued concerns
- Document concerns and develop a project that address how climate change is impacting the Klawock Lake watershed, including long term temperature monitoring, river bank erosion, etc.
- Assessment of the impact of spruce bark beetles in the Klawock watershed
- Conduct instream habitat surveys, update surveys that may have been previously conducted and survey all tributaries into the lake system.
- Conduct trail maintenance and improvements, including tree removal, along the Klawock River trail
- Conduct water quality monitoring on the Klawock River
- Document subsistence uses, other than sockeye salmon, in the watershed

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Sarkar River was nominated by Klawock because of its importance as an alternative sockeye harvesting system. It is used as an alternate because it is accessible by road. Sarkar River was also nominated by the community of Naukati Bay and is also covered in the Naukati Bay community chapter. The watershed encompasses approximately 48.6 square miles and drains into Sarkar Cove and then El Capitan Passage on western Prince of Wales Island (Figure 37). There is not a community drinking water source in the Sarkar River watershed (UAS-GIS, 2013).

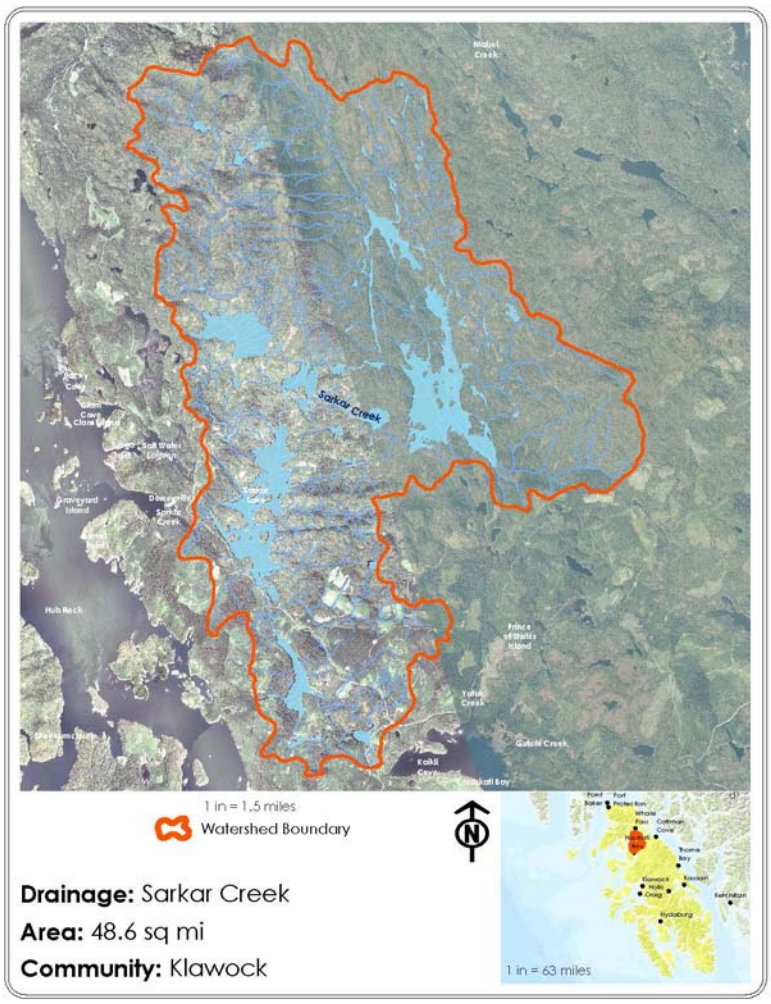

Figure 37. Watershed boundary for Sarkar Creek near Klawock, Prince of Wales Island, Alaska.

Sarkar River is an anadromous waterbody (103-90-10140), hosting sockeye salmon, Coho salmon, pink salmon, chum salmon, cutthroat trout, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS,2013). There were no subsistence resource concerns identified for the watershed, however it was noted that the community of Kasaan also uses the system as an alternative sockeye harvesting system and very little is known about the sockeye salmon stock (C. Needham, personal communication). Sarkar is not an impaired waterbody and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no records for contaminated sites, CERCLIS, NPL, LUST, spills, or NPDES permits for Sarkar River (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There were five other water rights records, one held by the USFS for a recreation cabin, one for El Capitan Lodge and three individual water rights (ADNR, 2013). There are no known water quality contaminants for Sarkar River. There has been past timber harvest in the watershed and there is potential for future timber harvest. No records turned up past or future mining activities. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The USFS is planning improvements to the recreational day use area on Sarkar Lake (USDA, 2014). The value of the watershed as a subsistence resource was identified as moderate for deer

and high for fish. There are no future development projects identified for the Sarkar River Watershed. Landownership is federal.

Sarkar River was categorized as a Category IV watershed. Sarkar River did not meet the set qualifiers for Category I or Category II watershed, however some concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The following list includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Conduct a sockeye salmon stock assessment that includes sockeye salmon harvest by community
- Develop an escapement goal for sockeye salmon into Sarkar River
- Conduct stream habitat surveys to document fish habitat and update the AWC
- Conduct baseline water quality testing to determine if there are water quality concerns
- Collect data on other subsistence uses of the watershed, including other salmon species and deer

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Naukati Bay

Population: 115 (2012 DCCED certified) Governance: Unincorporated

Naukati Bay is located on the northwest coast side of Prince of Wales Island. The community was first recorded as "Naukatee Bay", which was reportedly a local Tribal place name. Naukati Bay was largely settled as a logging camp, and while unincorporated, its services were overseen through a community non-profit homeowners association. Naukati Bay has since incorporated as Naukati Bay Inc. The community of Naukati Bay gets their drinking water from a variety of sources. In addition to rain catchment, residents haul from numerous nearby springs and ponds including 78 Mile Spring, Hillside Spring, Loon Lake Spring and Naukati Bay Karst.

The community of Naukati Bay has nominated seventeen watersheds to be included in this version of the watershed assessment: 108 (Big) Creek (also nominated by Whale Pass), 78 Mile Spring, Gutchie Creek, Hatchery Creek (also nominated by Coffman Cove), Hillside Spring, Logjam Creek, Loon Lake Spring, Naukati Bay/Karst Watershed, Naukati Creek, Neck Lake (also nominated by Whale Pass, Northern Prince of Wales Karst Watershed, Red Bay Creek, Salmon Bay Creek, Sarkar River (also nominated by Klawock), Shaheen Creek, Staney Creek and Yatuk Creek.

In addition, the community of Naukati Bay nominated nine islands to be included because of concerns from aquaculture, pre-commercial thinning activities, marine debris and potential radiation from the Fukushima event. These island watersheds were not assessed in this initial document, but their importance to the community is noted and may be expanded upon in future versions of this Unified Watershed Assessment. They include: Coronation Island, El Capatain Island, Heceta Island, Hoot Island, Kosiusko Island, Marble Island, Owl Island, Tuxecan Island, and Warre Island.

The Naukati Bay Inc. Board met September 22, 2014 to discuss their draft Naukati Bay community chapter in this present document. Five board members and 10 members of the membership were present and reviewed the chapter and conducted a prioritization of watersheds by ranking each of their three top watersheds of concern. In addition, projects were identified for each watershed. The community, with over 10% membership present, voted and approved the Naukati Bay Chapter into the Unified Watershed Assessment and thanked the Prince of Wales Watershed Association for their efforts. Table 8 depicts a summary of the research conducted on each watershed.

Table 8. Summary of records research for watersheds nominated by the community of Naukati Bay for the Prince of Wales Unified Watershed Assessment. For landownership: S = State lands; F = Federal lands; P = Private lands; NC = Native Corporation lands.

	Member Community	Naukati Bay						
	Watershed Name	**108 (Big) Creek**	**78 mile Spring**	**Gutchi Creek**	**Hatchery Creek**	**Hillside Spring**	**Logjam Creek**	**Loon Lake Spring**
Category I Qualifiers	**Community Drinking Water System**	no	unofficial	no	no	unofficial	no	unofficial
	Anadromous Fish System	1	0	1	1	0	1	0
	ADEC Impaired Water Body List	no	no	no	yes -category 5	no	no	no
	Class III solid waste facility present	no	no	no	no	no	no	no
	ADEC Contaminated Sites	0	0	0	1	0	0	0
	EPA CERCLIS/NPL Sites	0	0	0	1	0	0	0
	Subsistence resource impacted	Coho declining	no	no	sockeye depleted	no	sockeye depleted	no
Category II Qualifiers	**LUST sites**	0	0	0	0	0	0	0
	ADEC Spills sites	0	0	0	1+	0	0	0
	NPDES/Envirofact records	0	0	0	0	0	0	0
	Other water rights	5	0	0	0	0	1	0
	Known water quality contaminants	no	coliforms	no	heavy metals	coliforms	no	coliforms
	Past/present mining activity	no	no	no	yes	yes	yes	no
	Past/present timber harvest	yes	yes	yes	yes	yes + thinning	yes	yes
	Listed by State or Tribe UWA	no	no	no	no	no	no	no
Other Information	**TNC/USFS Restoration Priority**	no	no	no	no	no	no	no
	Value as subsistence resource	Fish - moderate Deer - low	Fish - low Deer - moderate	Fish - moderate Deer - moderate	Fish - high Deer - high	Fish - low Deer - moderate	Fish - high Deer - high	Fish – low Deer - moderate
	Possible future timber harvest	yes	yes	yes	yes	yes	yes	yes
	Possible future mining activity	no	no	no	yes	yes - sandy loam	yes	no
	Landownership	S, P, F	S, F	S, P, F	F	S, P, F	F	S, P, F
	Possible other development	Road upgrades	no	no	no	Road upgrades	no	no

Table 8 con't. Summary of records research for watersheds nominated by the community of Naukati Bay for the Prince of Wales Unified Watershed Assessment. For landownership: S = State lands; F = Federal lands; P = Private lands; NC = Native Corporation lands.

	Member Community									
	Watershed Name	**Naukati Bay Karst**	**Naukati Creek (and Ponds)**	**Neck Lake**	**Red Bay Creek**	**Salmon Bay Creek**	**Sarkar River**	**Shaheen Creek**	**Staney Creek**	**Yatuk Creek**
Category I Qualifiers	**Community Drinking Water System**	unofficial	no		no	no	no	no	no	no
	Anadromous Fish System	0	1	1	1	1	1	1	1	1
	ADEC Impaired Water Body List	no	no	no	no	no	no	no	no	no
	Class III solid waste facility present	no	no	no	no	no	no	no	no	no
	ADEC Contaminated Sites	1	0	0	0	0	0	0	0	0
	EPA CERCLIS/NPL Sites	0	0	0	0	0	0	0	0	0
	Subsistence resource impacted	no	no	no	sockeye declining	no	no	Steelhead declining	no	no
Category II Qualifiers	**LUST sites**	0	0	0	0	0	0	0	0	0
	ADEC Spills sites	1	0	0	0	0	0	0	0	0
	NPDES/Envirofact records	1	0	1	0	0	0	0	0	0
	Other water rights	1	0	3	1	1	5	0	4	0
	Known water quality contaminants	DRO	no	no	no	no	no	no	no	no
	Past/present mining activity	no	no	no	no	no	no	no	no	no
	Past/present timber harvest	yes	yes	yes	yes	yes	yes	yes	yes	yes
	Listed by State or Tribe UWA	no	no	no	no	no	no	no	no	no
Other Information	**TNC/USFS Restoration Priority**	no	no	very high	no	no	no	no	very high	no
	Value as subsistence resource	Fish - low Deer - moderate	Fish - high Deer - high	Fish - low Deer - moderate	Fish - high Deer - high	Fish - high Deer - high	Fish - high Deer - moderate	Fish - high Deer - high	Fish - low Deer - high	Fish - moderate Deer - high
	Possible future timber harvest	yes	yes	yes	yes	yes	yes	yes	yes	yes
	Possible future mining activity	no	no	no	no	no	no	no	no	no
	Landownership	S, P, F	S, F	F	F	F	F	F	S, F	S, F
	Possible other development	no	Trail	Hatchery	no	no	no	no	no	no

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108 (Big) Creek was nominated by Naukati Bay because of its importance for fishing and concerns that the Coho salmon run is decreasing. The stream system is labeled as Big Creek on topographic and anadromous fish catalog maps, however it is known locally as 108 Creek. 108 Creek was also nominated by Whale Pass and is included in the Whale Pass community chapter. The watershed encompasses 6.3 square miles and drains from Twin Island Lake and into Whale Passage on the east side of Prince of Wales Island (Figure 38). There is no community drinking water source in the 108 Creek watershed (UAS-GIS, 2013).

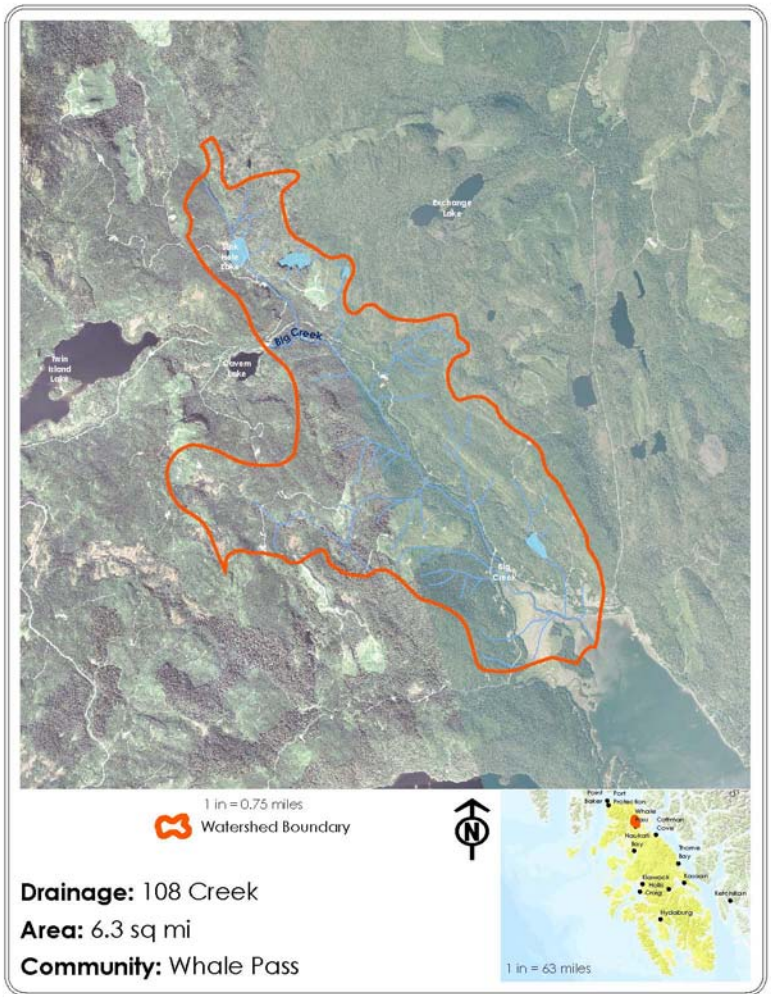

Figure 38. Watershed boundary for 108 Creek near Naukati Bay, Prince of Wales Island, Alaska.

108 Creek is listed as an anadromous waterbody (106-30-10800), hosting chum salmon, Coho salmon, pink salmon, sockeye salmon, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). Coho salmon decline was identified as a subsistence resource concern, however no stock assessment has been conducted. 108 Creek is not listed as an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills, or NPDES permit records for the 108 Creek Watershed (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). The Alaska Department of Fish and Game has two instream flow reservations, and three individuals have private water rights (ADNR, 2013). There are no known water quality contaminants for the watershed. There has been past timber harvest, and there is the potential for future timber harvest. There were no records for past or future mining activities. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource for deer was identified as low and it was moderate for fish. Possible future development includes road upgrades. Landownership is a mix of state, federal and private.

108 Creek was categorized as a Category IV watershed. The 108 Creek watershed did not meet the set qualifiers for Category I or Category II watershed, however some concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Salmon Bay Creek was not prioritized in the process. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning effort or as funding is available.

- Conduct stock assessments for Coho salmon, sockeye salmon and steelhead trout
- Document concern of decreasing Coho salmon and steelhead trout populations due to increasing sport and tourist use
- Conduct a subsistence harvest, use and needs survey
- Conduct deer population and deer habitat assessments
- Conduct stream habitat surveys
- Assess the watershed for potential food security options
- Develop an escapement goal for sockeye salmon

78 Mile Spring was nominated by the community of Naukati Bay because of its importance and an unofficial drinking water source to the community (VSW, 2013). The watershed is classified as a karst watershed, an underground aquifer that has no definable surface boundaries and has not been completely mapped (Figure 39). Residents self-haul water from this karst resurgent spring, located alongside the road, and there is concern that nearby timber harvest may be compromising water quality.

Figure 39. Watershed boundary for 78-Mile Spring near Naukati Bay, Prince of Wales Island, Alaska.

78 Mile Spring is not an anadromous waterbody (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified in the area around 78 Mile Spring. 78 Mile Spring is not an impaired waterbody and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no records for contaminated sites, CERCLIS, NPL, LUST, spills, NPDES, or other water rights for 78 Mile Spring (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013; ADNR, 2013). In 2013, several drinking water sources around Naukati Bay were tested by ADEC Village Safe Water (VSW, 2013). Phase One of the testing program tested sites for coliforms, and the 78 Mile Spring contained coliforms (VSW, 2013). Timber harvest has occurred around the 78 Mile Spring and there is potential for future timber harvest. There were no records found for past or future mining activities. The watershed has not been listed by any other Unified Watershed Assessment, nor was it identified as a watershed in need of restoration on Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the area around 78 Mile Spring as a subsistence resource was noted moderate for deer and low for fish. There were no other development opportunities identified for 78 Mile Spring. Landownership is state and federal.

78 Mile Spring was categorized as a Category IV watershed. It did not meet the set qualifiers for a

Category I or Category II watershed, however there is a concern for drinking water quality and a need to assure residents the drinking water is safe. Therefore it was placed as a Category IV.

As a Category IV watershed, it is recognized that the watershed presents the need for additional information to be collected. In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; 78 Mile Spring was voted as the highest priority watershed to have projects funded first. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning effort or as funding is available.

- Develop water source protection and enhancement measures
- Continue with Phase Two of the drinking water testing for hydrocarbon and heavy metals, and monitor other water quality parameters
- Collect trash and litter around and adjacent to the drinking water collection area and develop ordinances and signage to address prevention of future issues
- Conduct education and outreach on 78 Mile as a drinking water source

Gutchie Creek was nominated by the community of Naukati Bay because of its importance to the community as a subsistence resource area. The watershed encompasses approximately 5.9 square miles and drains into Naukati Bay and Tuxecan Passage on the northwest side of Prince of Wales Island (Figure 40). There is not a community drinking water source on Gutchie Creek (UAS-GIS, 2013).

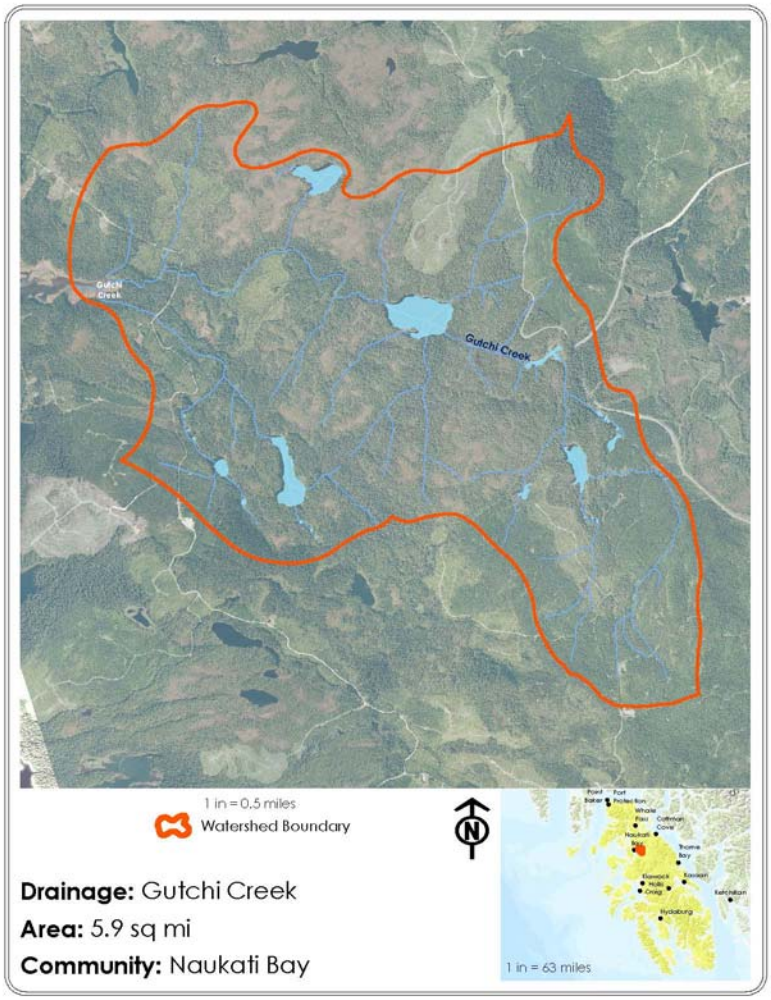

Figure 40. Watershed boundary for Gutchie Creek near Naukati Bay, Prince of Wales Island, Alaska.

Gutchie Creek is an anadromous waterbody (103-90-10270), hosting Coho salmon, pink salmon and chum salmon (ADFG, 2013; UAS-GIS, 2013). There were no subsistence concerns identified for Gutchie Creek, however it was noted in community watershed meetings that the system is important for chum salmon harvest (B. Prefontaine, personal communication). Gutchie Creek is not an impaired waterbody and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no records for contaminated sites, CERCLIS, NPL, LUST, spills, NPDES permits or other water rights for Gutchie Creek (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013; ADNR, 2013). There are no known water quality contaminants in the watershed. There has been past timber harvest, and there is a potential for future timber harvest. There were no records for past or future mining activities. Gutchie Creek has not been included any other Unified Watershed Assessment, and it was not listed as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource for deer was noted as moderate, and it was moderate for fish. There were no future development projects identified for Gutchie Creek. Landownership is a mix of federal, state and private.

Gutchie Creek was categorized as a Category IV watershed. The Gutchie Creek watershed did not meet the set qualifiers for Category I or Category II watershed, however some concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Gutchie Creek was voted as the tenth highest priority watershed to have projects funded. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning efforts or as funding is available.

- Conduct subsistence harvest, use and need survey for the watershed
- Conduct deer population and deer habitat assessment
- Conduct stock assessments for salmon species
- Conduct instream habitat surveys
- Improve trail and access to subsistence resources within the watershed

Hatchery Creek was nominated by the community of Naukati Bay because of its importance for fisheries and recreation. Hatchery Creek was also nominated by the community Coffman Cove and was previously covered in the Coffman Cove community chapter. The watershed encompasses approximately 48.3 square miles and drains into Sweetwater Lake, which drains into Barnes Lake and then into Lake Bay on the eastern side of Prince of Wales Island (Figure 41). Hatchery Creek is an important sockeye salmon subsistence system and is a part of the Honker Divide Canoe Route across Prince of Wales Island. Hatchery Creek is not considered a community drinking water source (UAS-GIS, 2013).

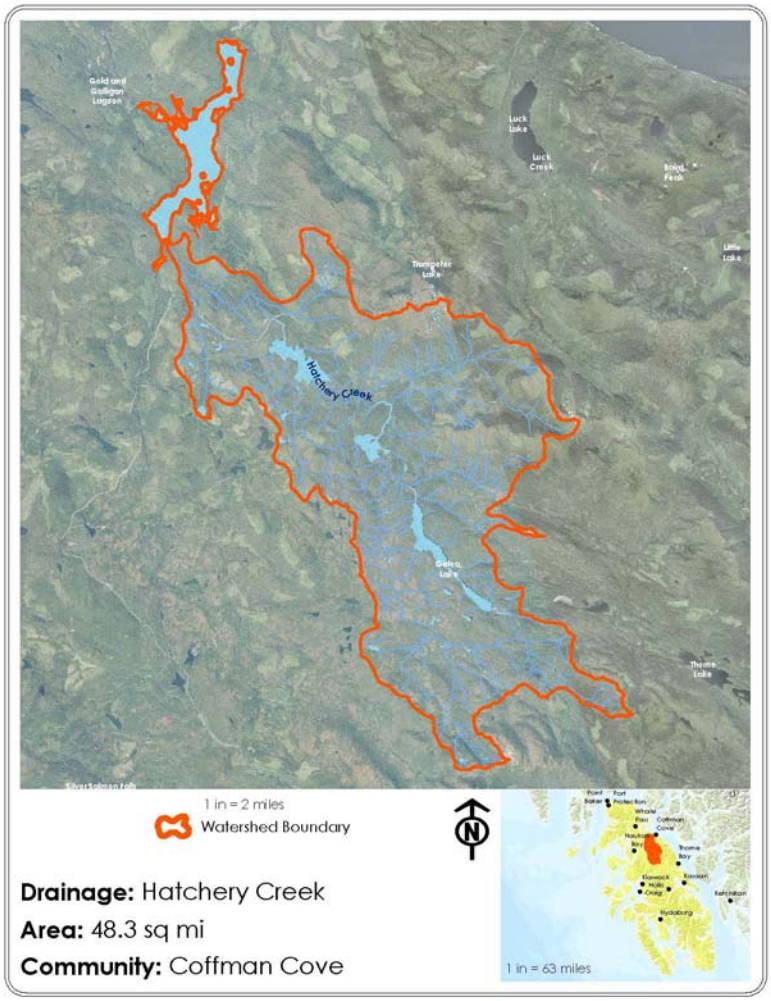

Figure 41. Watershed boundary for Hatchery Creek near Naukati Bay, Prince of Wales Island, Alaska.

Hatchery Creek is an anadromous waterbody (106-30-10670), hosting sockeye salmon, Coho salmon, pink salmon, chum salmon, steelhead trout, cutthroat trout, and Dolly Varden (ADFG, 2013; UAS-GIS, 2013). Hatchery Creek is considered a personal use fishery for sockeye salmon and Coho salmon. Recently, sockeye salmon runs have been monitored on Hatchery Creek as a priority information needs system by the Fisheries Resource Monitoring Program through the Office of Subsistence Management, and Hatchery Creek sees in-season fisheries management closures due to low sockeye salmon escapement numbers (DOI, 2013). There is concern that the subsistence/personal use sockeye salmon population is depleted. The Hatchery Creek watershed, as it includes Sweetwater Lake, is listed as a Category 5 impaired waterbody on the State of Alaska's 2010 Impaired Waterbody list (ADEC, 2010). Five tributaries into Sweetwater Lake contain heavy metal contamination from acid rock leaching during road construction of the Coffman Cove Road. A Category 5 impaired waterbody requires the development of Total Maximum Daily Loads (TMDLs), which have not yet been developed (ADEC, 2010). The situation is also listed as a State of Alaska contaminated site, which is still considered an open record with violations (ADEC-CS, 2013). There is not a Class III solid

waste facility in the watershed (ADEC-SWIMS, 2013). The Envirofacts database lists the metals contamination issue as a CERCLIS site, with reporting back to the EPA (EPA, 2013). The site is not considered an NPL, and there were no LUST records in the Hatchery Creek watershed (EPA, 2013). There is at least one petroleum spill record for the Hatchery Creek watershed (ADEC-PERP, 2013). There were no records for NPDES permits (EPA, 2013). There was one record for other water rights in the Hatchery Creek drainage basin, held by the USFS for public cabin and recreational use (ADNR, 2013). Timber harvest and mining activities previously took place in the Hatchery Creek watershed, and the potential for future timber harvest and mining activities exist. The watershed has not been listed by any other Unified Watershed Assessment, and it is not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). In 2010, the USFS did conduct a partial fish passage barrier modification on Hatchery Creek Falls, to improve passage into upper Hatchery Creek for sockeye salmon and steelhead trout (USDA, 2014). The value of the watershed as a subsistence resource was high for both deer and fish. Hatchery Creek does have road access in the lower portion, closer to Sweetheart Lake, but is otherwise relatively undeveloped. No other possible development within the watershed was identified. Landownership is largely federal.

The Hatchery Creek watershed was categorized as a Category I watershed because it meets the following Category I criteria: in is an anadromous fish stream; it is an impaired waterbody; and it is a contaminated site. In addition, the USFS has surface water rights in Sweetwater Lake for public cabin and recreational use.

In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Hatchery Creek was voted as the eleventh highest priority watershed to have projects funded. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning efforts or as funding is available.

- Continued monitoring of the heavy metal contamination downstream in Sweetwater Lake to assure cleanup activities meet surface water quality standards and participate in the TMDL process
- Continued stock assessment and monitoring of the sockeye salmon population to aid in-season managers
- Develop an sockeye salmon escapement goal for the system
- Testing of sockeye salmon and other fish for heavy metal contaminants
- Assess potential for instream enhancement of depleted sockeye salmon stock
- Genetic sampling of intercepted sockeye salmon into the Sweetwater Lake system
- Watershed assessment that includes data collection on stream functions and fish habitat to determine if any instream restoration efforts are warranted
- Conduct subsistence harvest, use and needs survey
- Conduct deer population and deer habitat surveys
- Assess the watershed for potential food security options

Hillside Spring was nominated by the community of Naukati Bay because of its importance as an unofficial drinking water source (VSW, 2013). Hillside Spring has a small drainage which encompasses approximately 0.3 square miles before it disappears underground (Figure 42).

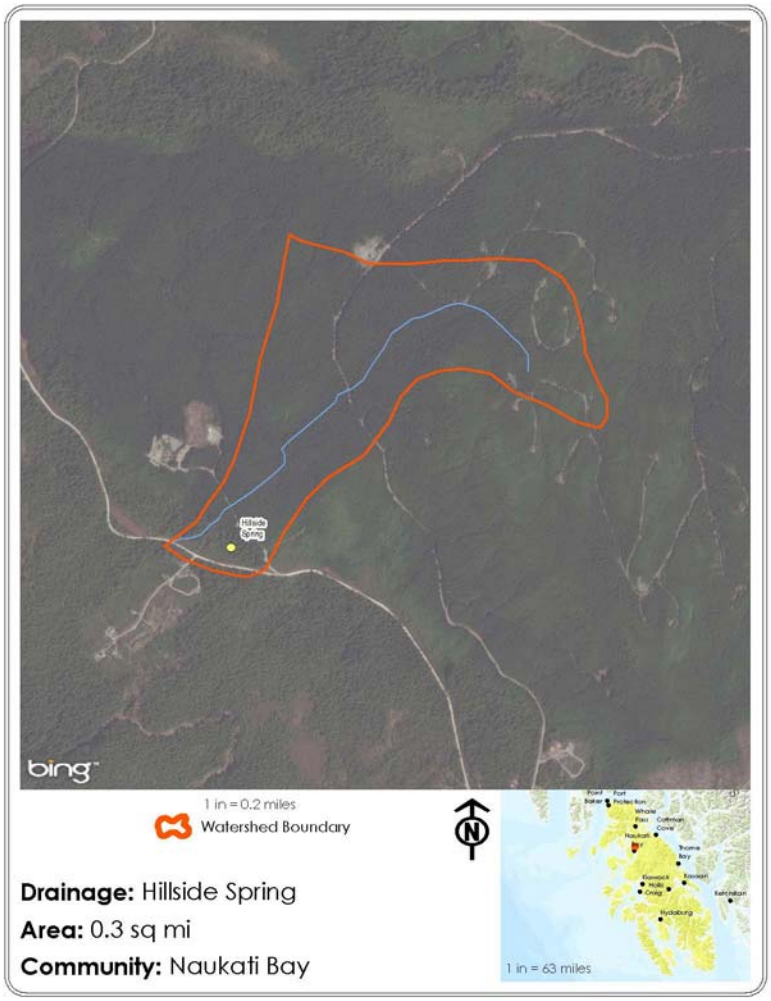

Figure 42. Watershed boundary for Hillside Spriing near Naukati Bay, Prince of Wales Island, Alaska.

Hillside Spring is not an anadromous waterbody (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for Hillside Spring. Hillside Spring is not an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no records for contaminated sites, CERCLIS, NPL, LUST, spills, NPDES permits or other water rights found for Hillside Spring (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013; ADNR, 2013). In 2013, several drinking water sources around Naukati Bay were tested by ADEC Village Safe Water (VSW, 2013). Phase One of the testing program tested sites for coliforms, and Hillside Spring contained coliforms (VSW, 2013). Timber harvest and subsequent thinning has occurred around Hillside Spring, and there is potential for future timber harvest. The Hillside Spring watershed has been mined as a sandy loam source in the past and it will likely be mined in the future. The watershed has not been listed by any other Unified Watershed Assessment, nor was it identified as a watershed in need of restoration on Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of Hillside Spring as a subsistence resource was identified as moderate for deer and low for fish. Other development in the Hillside Spring watershed includes upgrades to the current road system. Landownership is a mix of federal, state and private.

Hillside Spring was categorized as a Category II watershed. The watershed only met one qualifier for a Category I listing: being a drinking water source. Hillside Spring met two Category II qualifiers: the watershed has been timber harvested and mined for sandy loam.

As a Category II watershed, it is recognized that the watershed may need some preventative action or protection measures to sustain water quality or watershed functions. In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Hillside Spring was voted as the second highest priority watershed to have projects funded. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning efforts or as funding is available.

- Develop source water protection and enhancement measures
- Develop water quality monitoring program
- Collect trash and litter around and adjacent to the drinking water collection area and develop ordinances and signage to address prevention of future issues
- Conduct education and outreach on Hillside Spring as a karst drinking water system

Logjam Creek was nominated by the community of Naukati Bay because of its importance as a fish system and because of the concern that sockeye salmon have been depleted in the system. The Logjam Creek watershed encompasses approximately 43.6 square miles and drains into the Sweetwater Lake system, which drains into Lake Bay and Clarence Strait on the northeastern side of Prince of Wales Island (Figure 43). There is not a community drinking water source on Logjam Creek (UAS-GIS, 2013).

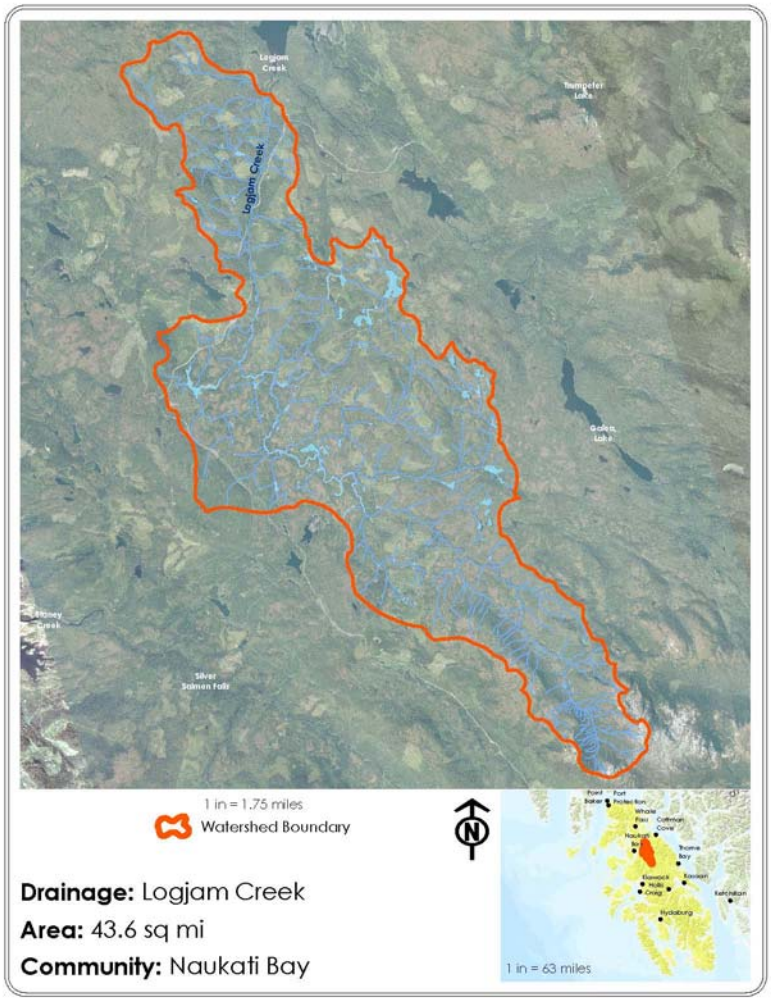

Figure 43. Watershed boundary for Logjam Creek near Naukati Bay, Prince of Wales Island, Alaska.

Logjam Creek is an anadromous waterbody (103-30-10670-204-3030), hosting Coho salmon, pink salmon, chum salmon, cutthroat trout and Dolly Varden (ADFG, 2013; UAS-GIS, 2013). The system is not currently listed for sockeye salmon, however sockeye salmon are present in Sweetwater Lake and the adjacent Hatchery Creek system (ADFG, 2013). Sockeye depletion was identified as an impacted subsistence resource. Logjam is not considered an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spill or NPDES permit records for the Logjam Creek watershed (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There was one other water rights record, held by the USFS for water rights on a recreational cabin (ADNR, 2013). There are no known water quality contaminants on Logjam Creek. The watershed has been timber harvested in the past and will likely have timber harvest activities in the future. There has been mining activities in the watershed, and there will likely be future mining. The value of the watershed as a subsistence resource was noted as high for deer and fish. The watershed has not been included in any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCHITA, 1999; Albert et al., 2008). No other development projects were identified for Logjam Creek. Landownership is largely federal.

Logjam Creek was categorized as a Category I watershed because it met the following Category I qualifiers: it is an anadromous waterbody and the subsistence sockeye have been depleted. It also met three Category II qualifiers; one other water rights record, past timber harvest and past mining.

In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Logjam Creek was voted as the 12th highest priority watershed to have projects funded. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning efforts or as funding is available.

- Conduct a subsistence harvest, use and needs survey
- Conduct a deer population and deer habitat assessment
- Conduct stock assessments for salmon species
- Conduct stream habitat surveys
- Assess the watershed for potential food security options

Loon Lake Spring was nominated by the community of Naukati Bay because of its importance as an unofficial drinking water source to the community (VSW, 2013). The watershed is classified as a karst watershed, an underground aquifer that has no definable surface boundaries and has not been completely mapped (Figure 44). Residents self-haul water from this Karst resurgent spring, located alongside the road.

Figure 44. Watershed boundary for Loon Lake Spring near Naukati Bay, Prince of Wales Island, Alaska.

Loon Lake Spring is not an anadromous waterbody (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resources identified as being impacted. Loon Lake Spring is not an impaired waterbody and there is not a Class III solid waste facility at Loon Lake Spring (ADEC, 2010; ADEC-SWIMS, 2013). There were no records for contaminated sites, CERCLIS, NPL, LUST, spills, NPDES permits or other water rights records found for Loon Lake Spring (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013; ADNR, 2013). In 2013, several drinking water sources around Naukati Bay were tested by ADEC Village Safe Water (VSW, 2013). Phase One of the testing program tested sites for coliforms, and Loon Lake Spring contained coliforms (VSW, 2013). There has been past timber harvest near the Loon Lake Spring and it is likely there will be future timber harvest. No records were found for past or future mining activities near the Loon Lake Spring. Loon Lake Spring has not been listed in any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was noted as moderate for deer and low for fish. There were no future development projects identified. Landownership is a mix of state, private and federal.

Loon Lake Spring was categorized as a Category IV watershed. Loon Lake Spring did not meet the set

qualifiers for a Category I or Category II watershed, however some concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Loon Lake Spring was voted as the eighth highest priority watershed to have projects funded. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning efforts or as funding is available.

- Conduct subsistence harvest, use and needs survey
- Conduct deer population and deer habitat assessment
- Conduct salmon stock assessments
- Conduct stream habitat surveys
- Improve trail and access conditions in watershed

Naukati Bay Karst was nominated by the community of Naukati Bay because of its importance as an unofficial drinking water source and for its significant karst features (VSW, 2013). Naukati Bay Karst is a larger underground karst system that surfaces as a spring in Naukati Bay, which encompasses approximately 0.3 square miles and drains into Tuzecan Narrows on the northwest side of Prince of Wales Island (Figure 45).

Figure 45. Watershed boundary for Naukati Bay Karst near Naukati Bay, Prince of Wales Island. Alaska.

Naukati Bay Karst is not listed as an anadromous waterbody (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resources concerns identified for the Naukati Bay Karst system. The system does not contain an impaired waterbody, and there is not a Class III solid waste facility in the Naukati Bay Karst (ADEC, 2010; ADEC-SWIMS, 2013). There was one contaminated site record for Naukati Bay Karst for a diesel spill. The site was cleaned up and closed (ADEC-CS, 2013). There were no CERCLIS, NPL or LUST records for Naukati Bay Karst (EPA, 2013). There was at least one spill record for the system, therefore both reported and unreported petroleum spills may have potential impacts (ADEC-PERP, 2013). There was one NPDES permit record, associated with a logging camp (EPA, 2013). There was one record for other water rights, a water reservation for shellfish processing (ADNR, 2013). Diesel Range Organics was included as a known water quality contaminant. There have been past timber harvest activities in the Naukati Bay Karst system, and there will likely be future timber harvest. There were no records for past or future mining activities found. The watershed is not listed by any other Unified Watershed Assessment, and it is not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the Naukati Bay Karst system as a subsistence resource for deer was noted as moderate and low for fish. There were no other development projects identified for Naukati Bay Karst. Landownership is a mix of federal, state and private.

The Naukati Bay Karst system was categorized as a Category I watershed because it met the following Category I qualifiers: it is used as a drinking water source, and there was one contaminated site record. It also met the following Category II qualifiers: one petroleum spill record, one NPDES permit record, one other water right record, known water quality contaminants and past timber harvest.

In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Naukati Bay Karst was voted as the fourth highest priority watershed to have projects funded. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning efforts or as funding is available.

- Complete water and sewer certification of individual sites remaining, using Village Safe Water recommendations
- Design and construct a solid waste facility
- Conduct wetland delineations to streamline wetland permiting and development planning for the community
- Identify wetland mitigation opportunities for private landowners to offset potential impacts from building on owned lots and/or using private lands for wetland mitigation opportunities
- Testing at known contaminated sites and monitoring
- Conduct education and outreach with school children and adults on pollution issues in Naukati Bay community
- Document toxic algal blooms
- Assess how ocean acidification is impacting nearshore oyster farms and potential new aquaculture endeavors
- Complete a shellfish inventory in nearshore environment
- Assess adjacent sea otter population and develop a management plan
- Assess the watershed for potential food security options
- Document cultural sites
- Develop Scenic Byways trails and Wellness trails within the community
- Develop waterfront harbor maintenance, spill response and management plan

Naukati Creek was nominated by the community of Naukati Bay because of its importance for subsistence activities. The watershed includes numerous ponds and lakes. The Naukati Creek watershed encompasses approximately 12.6 square mile and drains into Naukati Bay and Tuxecan Passage on the northwest side of Prince of Wales Island (Figure 46). There is not a community drinking water source on Naukati Creek (UAS-GIS, 2013).

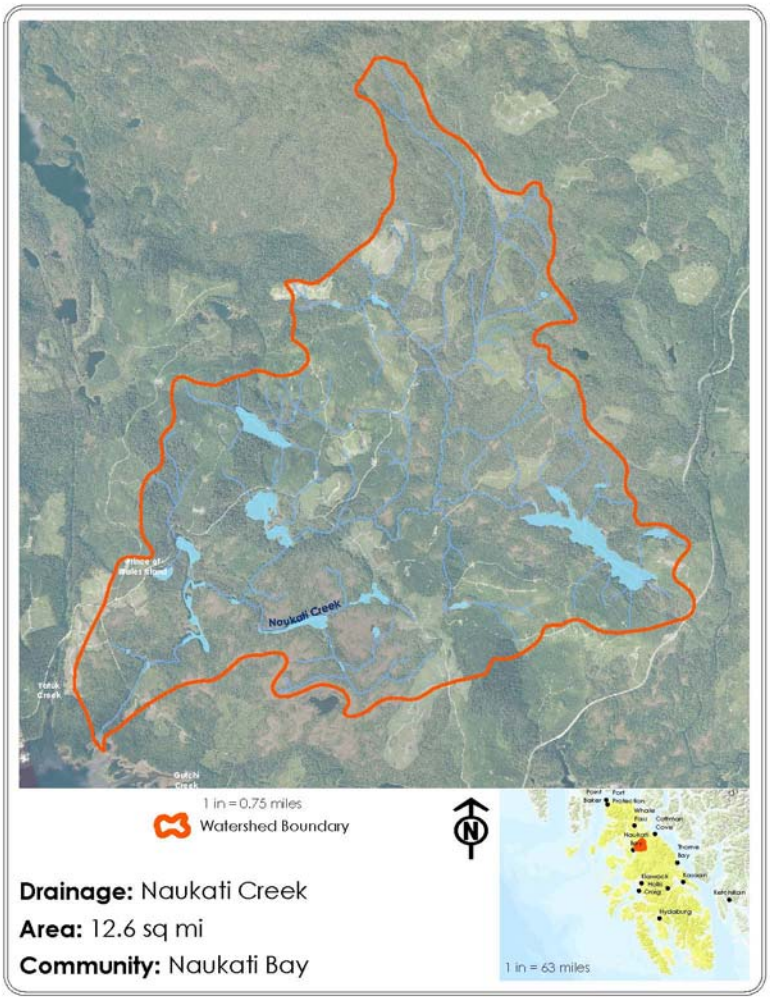

Figure 46. Watershed boundary for Naukati Creek near Naukati Bay, Prince of Wales Island, Alaska.

Naukati Creek is an anadromous waterbody (103-90-10260), hosting sockeye salmon, Coho salmon, pink salmon, chum salmon, and Dolly Varden (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for the watershed. Naukati Creek is not an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills, NPDES permit or other water right records for Naukati Creek (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013; ADNR, 2013). There are no known water quality contaminants in the watershed. There has been past timber harvest, and there will likely be future timber harvest in the Naukati Creek watershed. There were no records for past or future mining activities found. The watershed is not listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was noted as high for both deer and fish. One future development identified for the watershed included constructing a trail system. Landownership is federal and state.

Naukati Creek was categorized as a Category IV watershed. The Naukati Creek watershed did not meet the set qualifiers for Category I or Category II watershed, however some concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Naukati Creek (and Boyd Lake) was voted as the sixth highest priority watershed to have projects funded. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning efforts or as funding is available.

- Conduct stock assessments for sockeye and Coho salmon
- Conduct subsistence harvest, use and need survey
- Conduct a deer population and habitat assessment
- Conduct stream habitat survey
- Conduct long term temperature monitoring
- Determine how far fish go into the karst system cave connecting to Naukati Creek
- Conduct trail improvements up the karst cave and develop interpretive signs about glacier rock and karst caves
- Conduct education and outreach
- Develop an escapement goal for sockeye salmon

Neck Lake was nominated by the community of Naukati Bay because of its importance as a salmon stream. Neck Lake was also nominated by Whale Pass and is also covered in the Whale Pass community chapter. The watershed encompasses approximately 16.7 square miles and drains into Whale Pass and Clarence Strait on the northeast side of Prince of Wales Island (Figure 47). There is not a community drinking water system on Neck Lake (UAS-GIS, 2013).

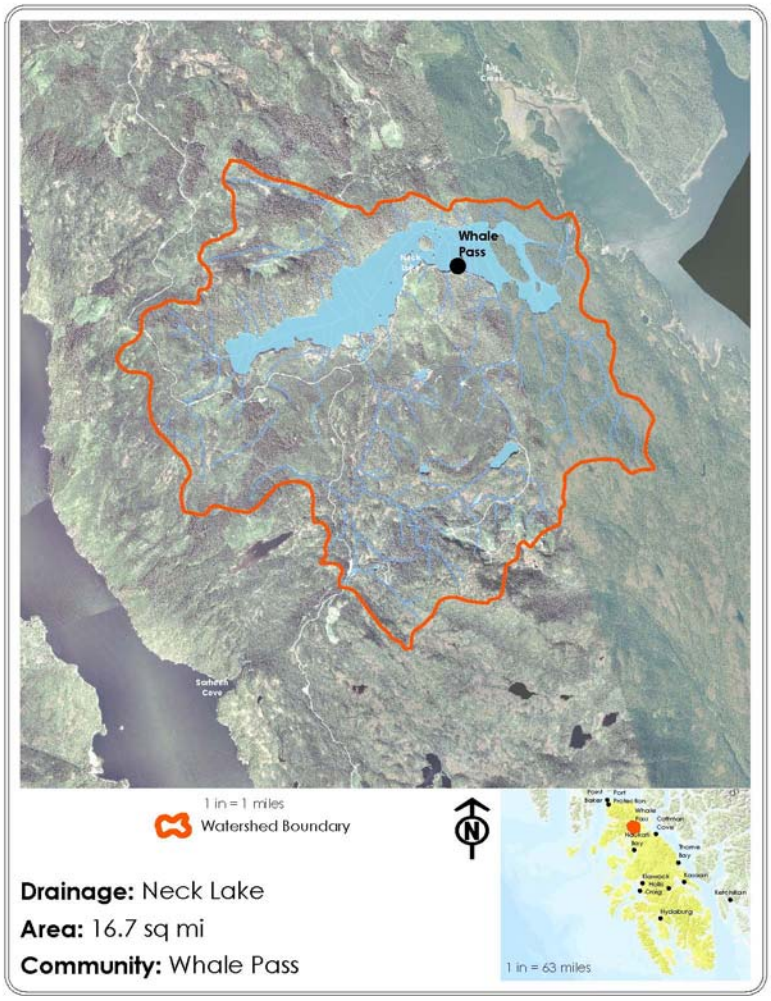

Figure 47. Watershed boundary for Neck Lake near Naukati Bay, Prince of Wales Island, Alaska.

Neck Lake is listed as an anadromous waterbody (106-30-10750), hosting Coho salmon, pink salmon and chum salmon (ADFG, 2013; UAS-GIS, 2013). The Southern Southeast Alaska Aquaculture Association operates a Coho salmon enhancement project at Neck Lake (SSRAA, 2014). Juvenile Coho salmon from the Burnett Island Hatchery are raised and released from net pens in Neck Lake. Returning adult Coho salmon in freshwater do not make it past a barrier falls and they are subsequently harvested in a fish pass and sold to market (SSRAA, 2014). There were no subsistence resource concerns identified for Neck Lake. Neck Lake is not listed as an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST or spill records for Neck Lake (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There is one NPDES permit record for Whale Pass West logging facility (EPA, 2013). There were three other water rights records, one for ADFG instream flow reservation, one for aquaculture and one private (ADNR, 2013). There are no known water quality contaminants for Neck Lake. There has been past timber harvest activity in the watershed, and there is potential for future timber harvest. There were no records for past or future mining activities. Neck Lake is not listed by any other Unified Watershed Assessment, however it has been listed as a high priority for restoration for Prince of Wales Island (Albert et al., 2008). The value of the watershed was

identified as moderate for deer and low for fish. Future development includes a fish hatchery. Landownership is federal.

Neck Lake was categorized as a Category IV watershed. The Neck Lake watershed did not meet the set qualifiers for Category I or Category II watershed, however some concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Neck Lake was voted as the 13th highest priority watershed to have projects funded. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning efforts or as funding is available.

- Conduct subsistence harvest, use and needs survey
- Conduct deer population and deer habitat assessment
- Conduct stock assessments on salmon species
- Conduct stream habitat assessments
- Assess the watershed for potential food security options

Red Bay Creek was nominated by the community of Naukati Bay because of its importance as a subsistence resource for the community. The watershed encompasses approximately 11.1 square miles and drains into Red Bay and Sumner Strait on the north end of Prince of Wales Island (Figure 48). There is not a community drinking water source on Red Bay Creek (UAS-GIS, 2013).

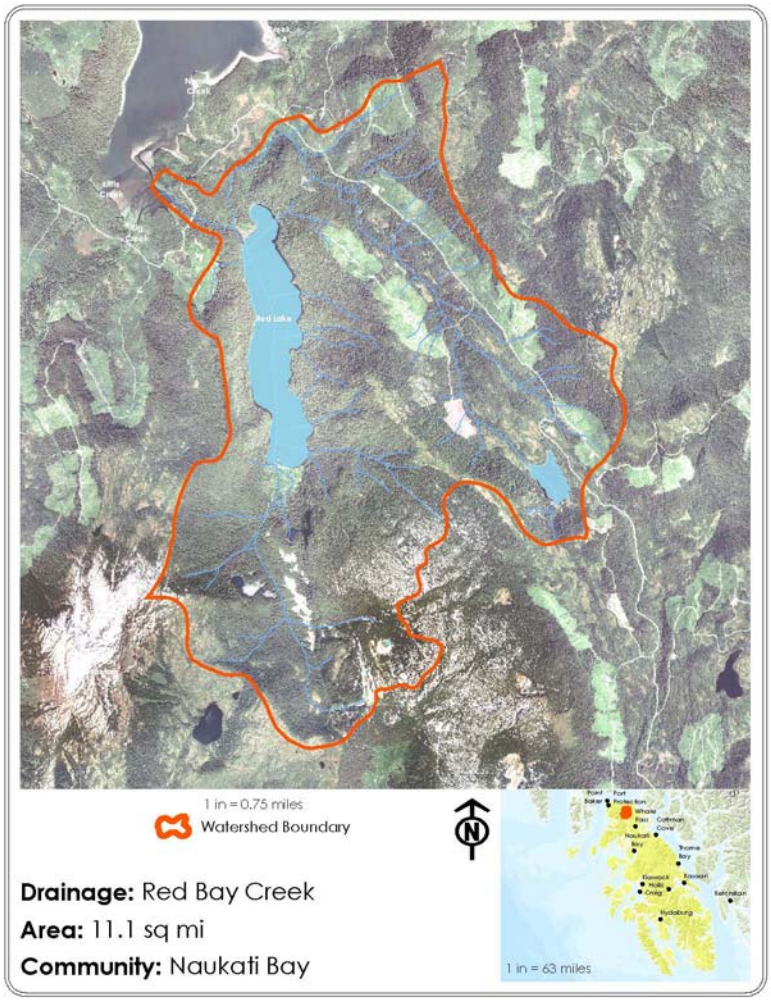

Figure 48. Watershed boundary for Red Bay Creek near Naukati Bay, Prince of Wales Island, Alaska.

Red Bay Creek is listed as an anadromous waterbody, hosting sockeye salmon, Coho salmon, pink salmon, chum salmon, Dolly Varden, cutthroat trout and steelhead trout (ADFG, 2013; UAS-GIS, 2013). Sockeye salmon decline was identified as an impacted subsistence resource, although no stock assessment has been conducted. Red Bay Creek is a road access system, where numerous rural residents go to harvest sockeye salmon off the beach (B. Prefontaine, personal communication). Red Bay Creek is not an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated site, CERCLIS, NPL, LUST, spills or NPDES permit records for the watershed (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There was one other water rights record for Red Bay Creek, held by the USFS for water rights on a recreational cabin (ADNR, 2013). There are no known water quality contaminants for the watershed. Timber harvest has occurred in the watershed, and there is potential for future timber harvest. There were no records for past mining or future mining activities in the Red Bay Creek watershed. The watershed has not been included in any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was noted as high for both deer and fish. There were no future development activities identified for the watershed. Landownership is largely federal.

Red Bay Creek was categorized as a Category II watershed. While it meets the criteria of Category I because it has an anadromous designation and a subsistence resource is declining, the decline is not well documented. The system would benefit from a sockeye salmon stock assessment to help understand if the potential decline is due to a resource impact. Red Bay Creek met the following Category II qualifiers: one other water rights record and past timber harvest.

In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Red Bay was voted as the 14th highest priority watershed to have projects funded. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning efforts or as funding is available.

- Stock assessment and monitoring of the sockeye salmon population to aid in-season management
- Assessment of actual subsistence harvest activities on the watershed
- Develop an escapement goal for sockeye salmon for the system
- Watershed Assessment that includes data collection on stream functions and fish habitat to determine if any instream restoration efforts are warranted
- Conduct subsistence harvest, use and needs survey
- Conduct deer population and deer habitat assessment
- Conduct stream habitat assessments
- Assess the watershed for potential food security options

Salmon Bay Creek was nominated by the community of Naukati Bay because of its importance to the community for subsistence and sport fishing, as well as recreational value. The watershed is also known as White Sox Creek (ADFG, 2013). The Salmon Bay Creek watershed encompasses approximately 28 square miles and drains into Clarence Strait on the northernmost east side of Prince of Wales Island (Figure 49). There is not a community drinking water source in the Salmon Bay Creek watershed (UAS-GIS, 2013).

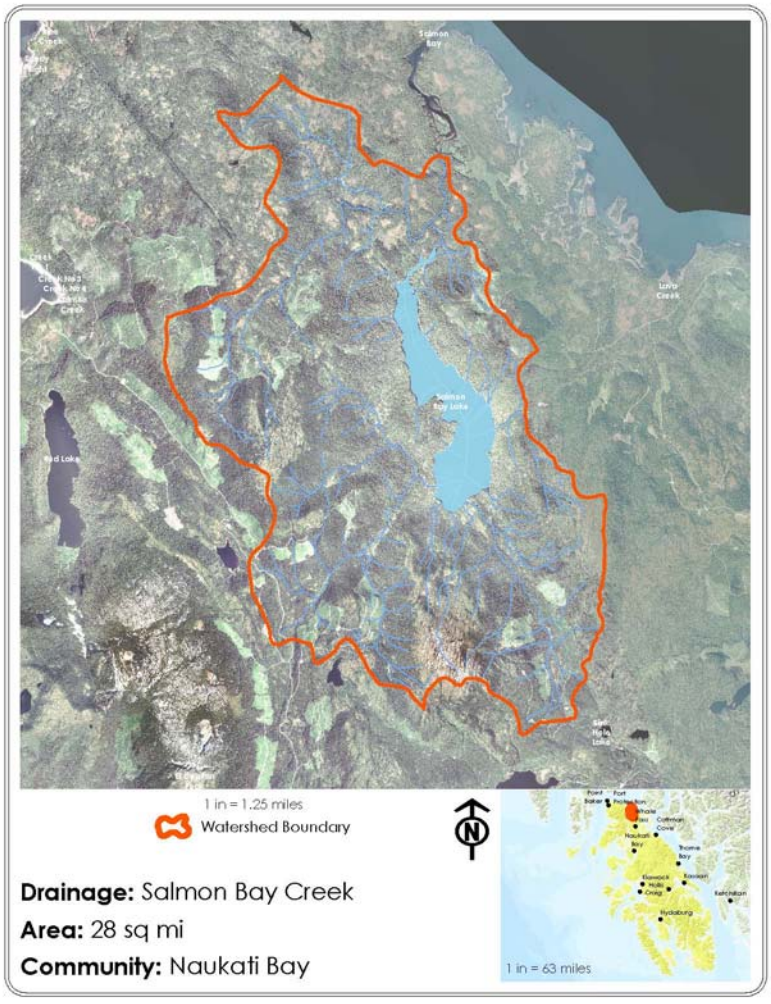

Figure 49. Watershed boundary for Salmon Bay Creek near Naukati Bay, Prince of Wales Island, Alaska.

Salmon Bay Creek is listed as an anadromous waterbody hosting sockeye salmon, Coho salmon, pink salmon, chum salmon, cutthroat trout, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for the watershed. Salmon Bay Creek is not an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spill, or NPDES permit records for Salmon Bay Creek (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There was one other water right record for the watershed, held by the USFS for a recreational cabin (ADNR, 2013). There are no known water quality contaminants in the watershed. There has been timber harvest in the upper watershed. If the Southeast Alaska Land Entitlement Finalization and Jobs Protection Act (Senate Bill 340) is passed, Salmon Bay Creek will become part of the Northern Prince of Wales LUD II Management area and no future timber harvest activities would occur (Senate Bill 340, 2014). There were no records for past or future mining activities found for Salmon Bay Creek. The watershed is not listed by any other Unified Watershed Assessment, nor was it included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of Salmon Bay Creek as a

subsistence resource was noted as high for both deer and fish. There were no other development projects identified for the watershed. Landownership is largely federal.

Salmon Bay Creek was categorized as a Category IV watershed. Salmon Bay Creek did not meet the set qualifiers for a Category I or Category II watershed, however some concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Red Bay was voted as the 15th highest priority watershed to have projects funded. The following list includes potential projects, in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning effort or as funding is available.

- Conduct subsistence harvest, use and needs survey
- Conduct deer population and deer habitat assessment
- Conduct stock assessments on salmon species
- Conduct stream habitat surveys
- Assess the watershed for potential food security options
- Develop an escapement goal for sockeye salmon

Sarkar River was nominated by Naukati Bay because of its importance as a sockeye harvesting system. Sarkar River was also nominated by the community of Klawock and is also covered in the Klawock community chapter. The watershed encompasses approximately 48.6 square miles and drains into Sarkar Cove and then El Capitan Passage on western Prince of Wales Island (Figure 50). There is not a community drinking water source in the Sarkar River watershed (UAS-GIS, 2013).

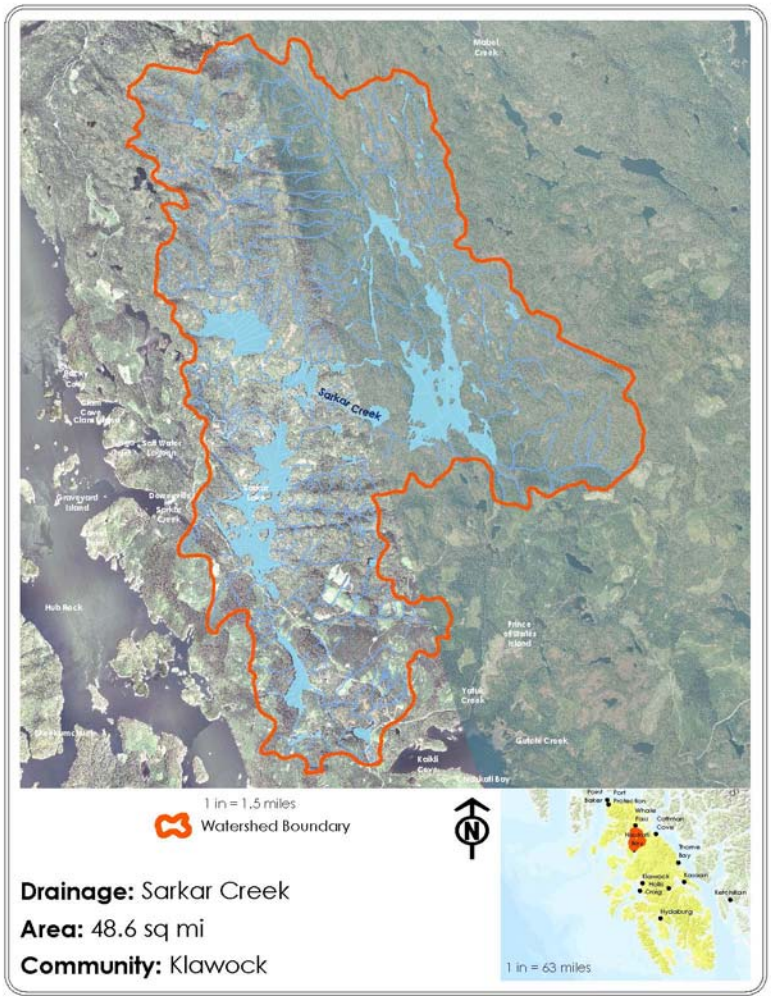

Figure 50. Watershed boundary for Sarkar Creek near Naukati Bay, Prince of Wales Island, Alaska.

Sarkar River is an anadromous waterbody (103-90-10140), hosting sockeye salmon, Coho salmon, pink salmon, chum salmon, cutthroat trout, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for the watershed, however it was noted that the community of Kasaan also uses the system as an alternative sockeye harvesting system and very little is known about the sockeye salmon stock (C. Needham personal communication). Sarkar is not an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no records for contaminated sites, CERCLIS, NPL, LUST, spills, or NPDES permit records for Sarkar River (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There were five other water rights records, one held by the USFS for a recreation cabin, one for El Capitan Lodge and three individual water rights (ADNR, 2013). There are no known water quality contaminants for Sarkar River. There has been past timber harvest in the watershed, and there is potential for future timber harvest. No records turned up past or future mining activities. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The USFS is planning improvements to the recreational day use area on Sarkar Lake (USDA, 2014). The value of the watershed as a subsistence resource was identified

as moderate for deer and high for fish. There are no future development projects identified for the Sarkar River Watershed. Landownership is federal.

Sarkar River was categorized as a Category IV watershed. Sarkar River did not meet the set qualifiers for a Category I or Category II watershed, however some concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Sarkar River was voted as the third highest priority watershed to have projects funded. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning efforts or as funding is available.

- Conduct sockeye and Coho salmon assessment to improve management making decisions
- Develop an escapement goal for sockeye salmon
- Improve trail under the bridge (on Coffman Cove road) for safe access
- Trail improvements and enhancements for existing Deweyville/Sarkar Lake Trail
- Long-term temperature monitoring
- Conduct education and outreach by creating interpretive signs for the Deweyville and Sakar Lake Trail system
- Assess the watershed for potential food security options

Shaheen Creek was nominated by the community of Naukati Bay because of its importance as a subsistence resource. The Shaheen Creek watershed encompasses approximately 28.2 square miles and drains into Tuxecan Passage on the western side of Prince of Wales Island (Figure 51). There is not a community drinking water source on Shaheen Creek (UAS-GIS, 2013).

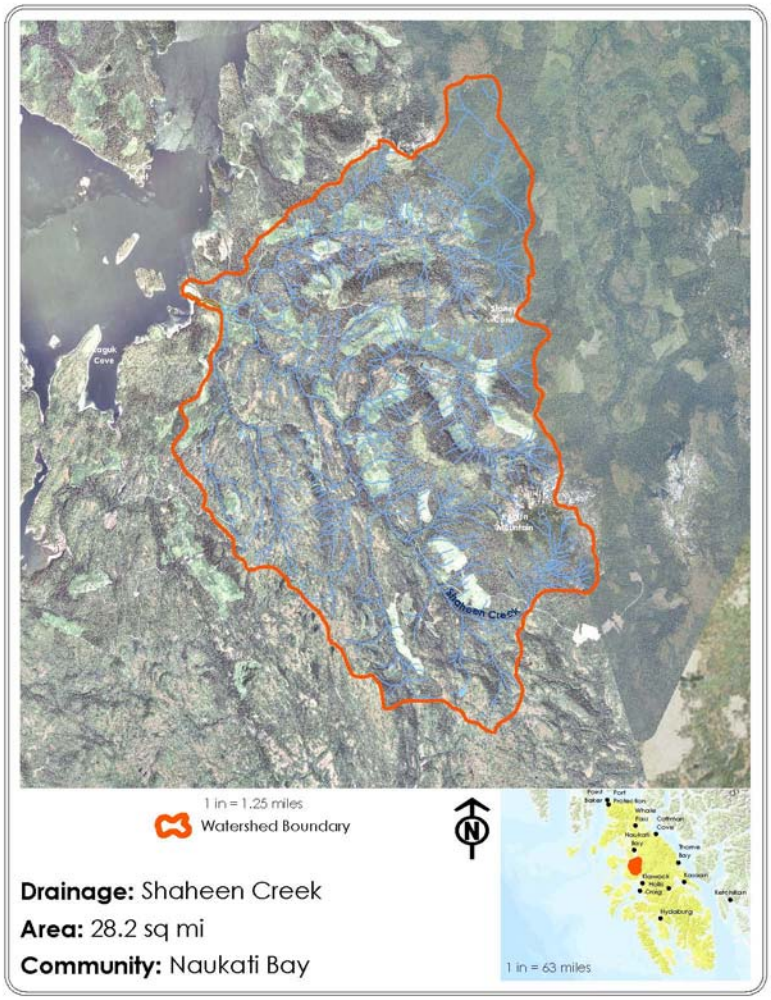

Figure 51. Watershed boundary for 108 Creek near Naukati Bay, Prince of Wales Island, Alaska.

Shaheen Creek is listed as an anadromous waterbody (103-90-10420), hosting sockeye salmon, Coho salmon, pink salmon, chum salmon, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). The decline of steelhead trout was listed as an impacted subsistence resource, although no stock assessment has been conducted. Shaheen Creek is not an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills, NPDES permit or other water rights records for Shaheen Creek (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013; ADNR, 2013). There are no known water quality contaminants. There has been timber harvest in the watershed, and there is a potential for future timber harvest. There were no records for past or future mining activities. The value of the watershed as a subsistence resource was noted as high for deer and high for fish. There were no other future development projects identified for Shaheen Creek. Landownership is largely federal.

Shaheen Creek was categorized as a Category II watershed. While it meets the criteria of a Category I because it has an anadromous waterbody and a subsistence resource is declining, the decline has not been well documented. The system would benefit from a steelhead trout stock assessment before understanding if the potential decline is a resource impact. Because of its importance as a subsistence resource, the system was designated a Category II watershed.

As a Category II watershed, it is recognized that the watershed may need some preventative action or protection measures to sustain water quality or watershed functions. In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Shaheen Creek was voted as the ninth highest priority watershed to have projects funded. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning efforts or as funding is available.

- Conduct stock assessments for steelhead trout and sockeye salmon population
- Develop an escapement goal for steelhead trout and sockeye salmon
- Conduct subsistence harvest, use and needs survey
- Data collection on harvest patterns for all subsistence fish species
- Data collection for past and present subsistence uses besides steelhead trout within the watershed
- Conduct deer population and deer habitat surveys
- Conduct instream habitat surveys
- Conduct long term temperature monitoring
- Conduct education and outreach on continuing restoration efforts
- Assess the watershed for potential food security options
- Improve trails and access within watershed

Staney Creek was nominated by the community of Naukati Bay because of its importance to the community for subsistence hunting and fishing. The Staney Creek watershed has been highlighted for its world class steelhead trout and Coho sport fishery and is a popular recreational destination on Prince of Wales. The Staney Creek watershed encompasses approximately 61.8 square miles and drains into Tuxecan Passage on the western side of Prince of Wales Island (Figure 52). The U.S. Geological Survey maintains a real-time gaging station on Staney Creek (USGS, 2014). There is not a community drinking water source on Staney Creek (UAS-GIS, 2013).

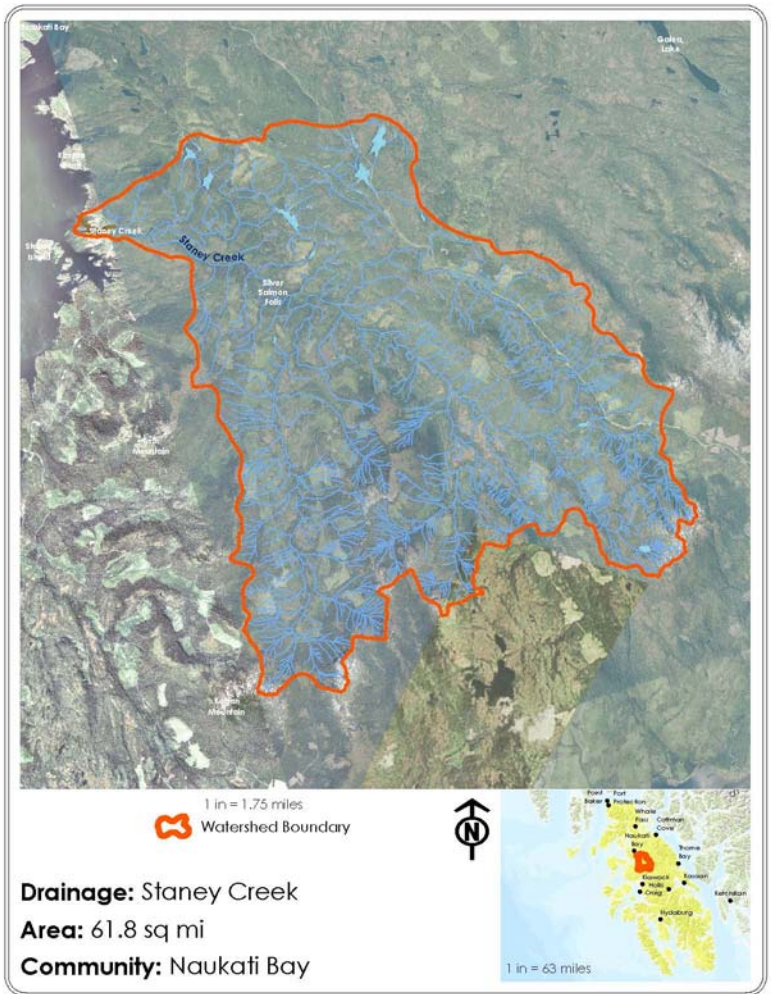

Figure 52. Watershed boundary for Staney Creek near Naukati Bay, Prince of Wales Island, Alaska.

Staney Creek is listed as an anadromous waterbody (103-90-10310), hosting Coho salmon, chum salmon, pink salmon, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). There were no impacts to subsistence resources identified for Staney Creek, although there is a watershed restoration plan which includes wildlife habitat improvements for deer as well as an Environmental Assessment for restoration activities undertaken by the USFS (USDA, 2009). In addition, studies on Coho salmon have shown that timber harvest activities have reduced annual returns by 60% of the historical levels (Stillwater Sciences, 2012). Staney Creek is not an impaired waterbody and there is not Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST spills or NPDES permit records for Staney Creek (ADEC-CS, ADEC-PERP, 2013; EPA, 2013). There were four other water rights records found (ADNR, 2013). All four were held by the USFS, two for recreational cabins and two for campgrounds. There are no known water quality contaminants in Staney Creek. There has been extensive timber harvest, road building and tree thinning activities in the watershed. There is a potential for future timber harvest activities. There were no records for past or future mining activities in the Staney Creek watershed. Staney Creek has not been listed in any other Unified Watershed

Assessment, however it has been identified as a very high restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource for deer was noted as high and was noted as low for subsistence fish. There were no other development projects identified for Staney Creek. Landownership is a mix of state and federal .

Staney Creek was categorized as a Category II watershed because it only met one qualifier for a Category I watershed; listed as an anadromous waterbody. Staney Creek met the following Category II qualifiers: there were four other water rights records, and the watershed has been extensively timber harvested.

As a Category II watershed, it is recognized that the watershed may need some preventative action or protection measures to sustain water quality or watershed functions. In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Staney was voted as the fifth highest priority watershed to have projects funded. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning efforts or as funding is available.

- Conduct a steelhead trout assessment and document sport/subsistence use of steelhead trout
- Conduct a subsistence harvest, use, and needs survey for all fish on Staney Creek
- Develop a beaver management plan for the watershed
- Conduct a deer population and habitat assessment
- Conduct stock assessments for all fish on Staney Creek
- Conduct long term temperature monitoring
- Conduct education and outreach for ongoing restoration efforts
- Document cultural sites
- Assess the watershed for potential food security options

Yatuk Creek was identified by the community of Naukati Bay of its proximity to the community and its value as a subsistence use area. The watershed encompasses approximately 6.4 square miles and drains into Naukati Bay and Tuxecan Passage on the northern end of Prince of Wales Island (Figure 53). There is not a community drinking water source on Yatuk Creek (UAS-GIS, 2013).

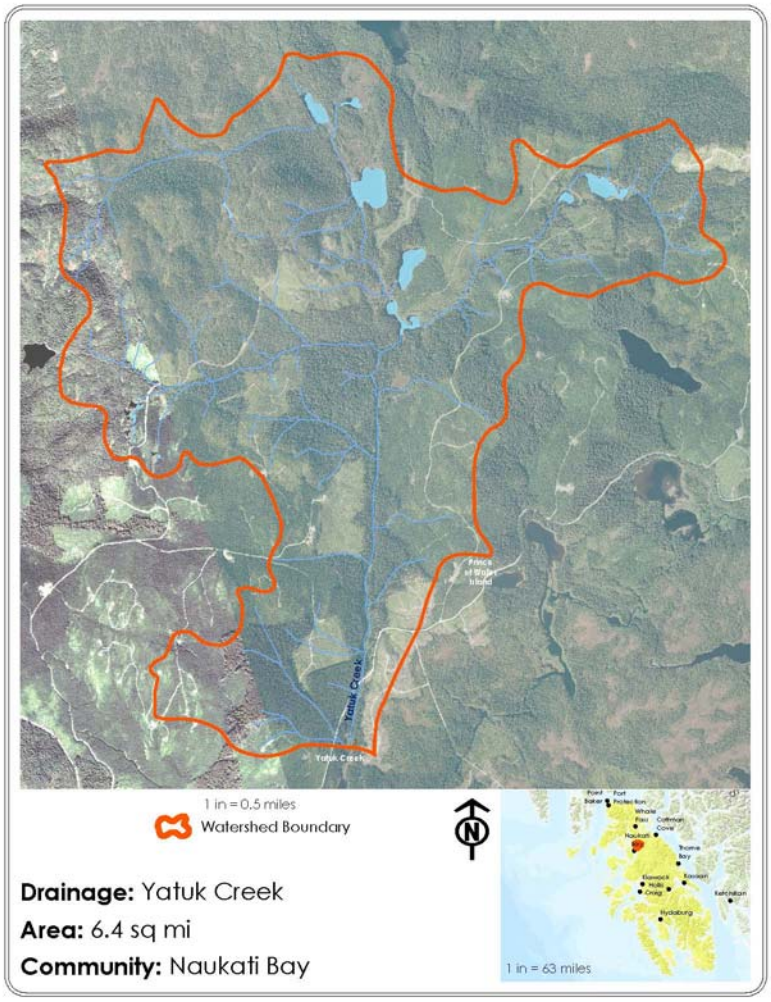

Figure 53. Watershed boundary for Yatuk Creek near Naukati Bay, Prince of Wales Island, Alaska.

Yatuk Creek is an anadromous waterbody (103-90-10250), hosting Coho salmon, pink salmon, chum salmon, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for the watershed, however it was noted in community watershed meetings that the system is important for subsistence chum salmon harvest (B. Prefontaine, personal communication). Yatuk Creek is not an impaired waterbody and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills, NPDES permits or other water rights records for Yatuk Creek (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013; ADNR, 2013;. There are no known water quality contaminants for the watershed. There has been past timber harvest in the watershed, and there is potential for future timber harvest. There were no records for past or future mining activities. Yatuk Creek is not listed in any other Unified Watershed Assessment and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource for deer was noted as high and moderate for fish. There were no other development projects identified for Yatuk Creek. Landownership is state and federal.

Yatuk Creek was categorized as a Category IV watershed. The Yatuk Creek watershed did not meet the set qualifiers for a Category I or Category II watershed, however some concerns for the watershed exist,

therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. In September of 2014, Naukati Bay Inc. went through a project prioritization and planning process for the watersheds included in this chapter; Yatuk Creek was voted as the seventh highest priority watershed to have projects funded. The following list includes potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from additional community based planning efforts or as funding is available.

- Watershed assessment that includes data collection on stream functions to determine if any instream restoration efforts are warranted
- Water quality monitoring program to assure surface water and drinking water standards are met
- Conduct a subsistence harvest, use and needs survey
- Conduct deer population and deer habitat assessment
- Conduct salmon stock assessments
- Conduct stream habitat surveys
- Assess the watershed for potential food security options
- Improve access and trails in watershed
- Develop education materials on cultural sites

References for Naukati Bay:

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Thorne Bay

Population: 508 (2012 DCCED certified) Governance: 2nd class city
Federally recognized Tribe

Named after Frank Manley Thorn, the Superintendent of the U.S. Coast Geodetics Survey from 1885 through 1889, the City of Thorne Bay has evolved in between the estuaries of the Thorne River and Deer Creek. Frank Thorn's name was misspelled when the charts were published resulting in Thorne Bay. In 1998 a 5,360-year-old spruce root basket was found in the estuary of the Thorne River indicating Haida and Tlingit use of the area long ago. The first major western settlement was built around the logging operation of Wes Davidson in South Side Thorne Bay and was accessed via the Davidson landing, which was once the center of the community. The current community center of Thorne Bay was established when Ketchikan Pulp Co. (KPC) moved its main logging camp to the new site on the other side of the bay, known as Thorne Bay. Many of the structures and employees moved from the Hollis location to Thorne Bay during this time. Thorne Bay was mostly a floating camp until 1962 when a shop, barge terminal, Log Sort Yard, United States Forest Service Thorne Bay District, and full logging camp was completed in the uplands. During its heyday in the 60's and 70's and 80's it was the largest logging camp in North America with over 600 residents during peak seasons. The city incorporated in 1982 and began transitioning from a logging camp to a city.

The world's largest logging grabbles were blasted out of the Sort Yard and set up to greet visitors at the entry to the community in 2000-2001 with the end of the 50 year timber contract between the USFS and KPC. The watersheds surrounding Thorne Bay are full of history and the legacy on the landscape left from the decision makers and the tough individuals that have made Thorne Bay their home. There are seas of second growth forest punctuated with landings and wrapped with discarded cable, streams that once had donkeys and mules dragging logs down them to the log deck, streams with all the logs taken out as once was a practice, to streams plugged with unraveling, unstable, sediment loaded banks, to miles of roads with perched, plugged, and pushed out pipes or culverts, that are now known to cause fish passage and water quality issues. To fishing and hunting and gathering stories shared around bonfires and family centered community events memorialized in old black and white photos of the wonderful shared resources that have struggled yet adapted and remain resilient over time, turnover and changes. The Thorne Bay watersheds are growing up and full of stories and restoration needs.

The community of Thorne Bay has nominated three watersheds to be included in this watershed assessment: Deer Creek, Thorne River and Water Creek. Table 9 depicts a summary of the research conducted on each watershed.

Table 9. Summary of records research for watersheds nominated by the community of Thorne Bay for the Prince of Wales Unified Watershed Assessment. For landownership: S = State lands; F = Federal lands; P = Private lands; NC = Native Corporation lands.

	Member Community	Thorne Bay		
	Watershed Name	**Deer Creek**	**Thorne Bay River**	**Water Lake**
Category I Qualifiers	**Community Drinking Water System**	No	no	yes
	Anadromous Fish System	1	1	1
	ADEC Impaired Water Body List	No	yes - category 4a	no
	Class III solid waste facility present	No	yes	no
	ADEC Contaminated Sites	5	1	0
	EPA CERCLIS/NPL Sites	0	0	0
	Subsistence resource impacted	No	no	no
Category II Qualifiers	**LUST sites**	No	no	no
	ADEC Spills sites	0	1+	0
	NPDES/Envirofact records	2	0	0
	Other water rights	0	3	0
	Known water quality contaminants	No	TMDL -Wood	no
	Past/present mining activity	No	no	no
	Past/present timber harvest	Yes	yes	yes
	Listed by State or Tribe UWA	No	no	no
Other Information	**TNC/USFS Restoration Priority**	No	very high	no
	Value as subsistence resource	Fish - low Deer – moderate	Fish - high Deer - high	Fish -low Deer - low
	Possible future timber harvest	Yes	yes	yes
	Possible future mining activity	No	no	no
	Landownership	S, P, F	F	S, P, F
	Possible other development	No	no	no

Deer Creek was nominated by the community of Thorne Bay because of its proximity to the community. The watershed encompasses approximately 4.4 square miles and drains into Thorne Bay and Clarence Strait on the eastern side of Prince of Wales Island (Figure 54). There is not a community drinking water source in the Deer Creek watershed (UAS-GIS, 2013).

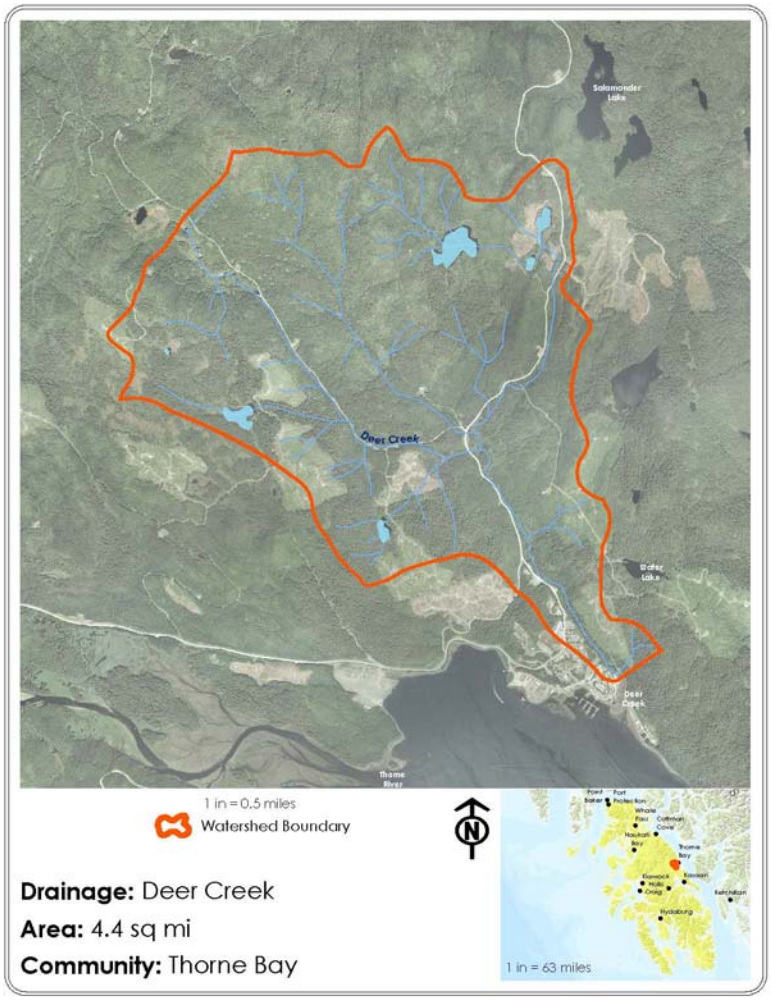

Figure 54. Watershed boundary for Deer Creek near Thorne Bay, Prince of Wales Island, Alaska.

Deer Creek is an anadromous waterbody (102-70-10700), hosting pink salmon (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for the watershed. Deer Creek is not an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were five contaminated sites records listed for the Deer Creek watershed (ADEC-CS, 2013). Two of the sites, both petroleum spills, were cleaned up and are closed. One site was cleaned up and has institutional controls placed on it. One record is for asbestos in cement, which has become a Brownfields project under the EPA, and the record is for information purposes only. The final site is petroleum contaminated soils that have not been cleaned up (ADEC-CS, 2013). There were no CERCLIS, NPL, LUST or spills records for Deer Creek (ADEC-PERP, 2013; EPA, 2013). There are two NPDES records, both for wastewater sewage disposal (EPA, 2013). There were no other water rights in the watershed (ADNR, 2013). There are no known water quality contaminants in the Deer Creek watershed. There has been past timber harvest activities, and there is the potential for future timber harvest. There were no records for past or future mining activities. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource for deer was identified as moderate and low for fish. No new development was identified for the Deer Creek watershed. Landownership is a mix of state, private and federal.

Deer Creek was categorized as a Category I watershed because it met the following Category I criteria: it is an anadromous fish stream, and it has more than one contaminated site listed. In addition, Deer Creek contains two NDPES record and has past timber harvesting activities.

As a Category I watershed, it is recognized that the system needs some restoration. Priorities for Deer Creek would be to maintain water quality for fish and wildlife. The following list includes potential projects in no order of priority. This list is not all inclusive and can be added to at any time. Prioritization would come from a community based planning effort or as funding is available:

- Cleanup for petroleum contaminated sites
- Development, outreach and education, and implementation of spill response program
- Watershed assessment that includes instream habitat data collection on stream functions to determine if any instream restoration efforts are warranted
- Baseline water quality data collection to assure surface water and drinking water standards are met
- Data collection on the subsistence uses within the watershed

Thorne River Category I

The Thorne River was nominated by the community of Thorne Bay because of its proximity to the community and its importance as a resource use area. The Thorne River has a high recreational value as part of the Honker Divide Canoe Route and as a highly used sport fishing system. The Thorne River watershed encompasses approximately 165.9 square miles and drains into Thorne Bay and Clarence Strait on the eastern side of Prince of Wales Island (Figure 55). There is not a community drinking water source on the Thorne River (UAS-GIS, 2013).

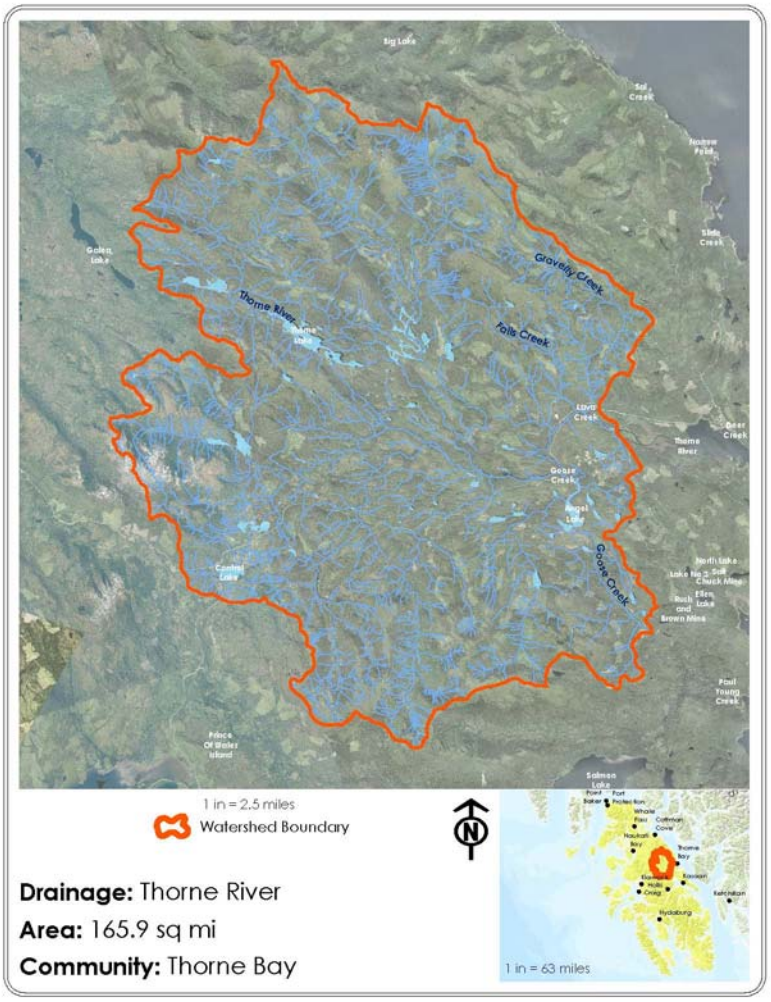

Figure 55. Watershed boundary for Thorne River near Thorne Bay, Prince of Wales Island, Alaska.

The Thorne River is an anadromous waterbody (102-70-10580), hosting sockeye salmon, Coho salmon, pink salmon, chum salmon, cutthroat trout, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resources concerns identified for the watershed. The Thorne River is listed as a Category 4a impaired waterbody on Alaska's 2010 impaired waterbody list (ADEC, 2010). The Category 4a means it is impaired but does not require a TMDL or has established a TMDL. The Thorne River is listed as impaired for residues from bark and wood debris, and a TMDL has been completed (ADEC, 2010). There is a Class III permitted solid waste facility in the Thorne River watershed on the Goose Creek tributary (ADEC-SWIMS, 2013). There was one contaminated site record for the watershed (ADEC-CS, 2013). The site was located at the landfill and the record has been closed without requirements of clean-up. There were no CERCLIS, NPL or LUST records for the Thorne River watershed (EPA, 2013). There was at least one spill record, therefore both reported and unreported petroleum spills have potential impacts (ADEC-PERP, 2013). There were no NPDES permit records (EPA, 2013). There were three other water right records for the watershed, for the USFS for recreational cabins (ADNR, 2013). Wood residue is a known water quality contaminant for the Thorne River (ADEC, 2010). There has been extensive timber harvest in the Thorne River watershed, and there is potential for future timber harvest.

The timber sale is planned within the Thorne River watershed. There were no records for past or future mining activities. The Thorne River was not listed in any other Unified Watershed Assessment, however it was considered a very high restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). In anticipation of the Big Thorne Timber Sale, a North Thorne Project Area Restoration Plan was drafted to develop restoration goals and objectives for documenting baseline conditions and establishing monitoring and stewardship criteria (Beard, 2011). The value of the watershed for subsistence resources was identified as high for deer and high for fish. There were no new development projects listed for the Thorne River watershed. Landownership is largely federal.

The Thorne River was categorized as a Category I watershed because it met the following Category I criteria: it is an anadromous waterbody; it is an impaired waterbody; it has a Class III solid waste facility; and it has a contaminated site record. In addition, the Thorne River has at least one spill record, three other water rights records and has previously been logged.

As a Category I watershed, it is recognized that the system needs some restoration. Priorities for the Thorne River would be to maintain water quality for fish and wildlife. The following list includes potential projects in no order of priority. This list is not all inclusive and can be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Conduct stream habitat surveys in sub-watersheds to further document fish habitat and potentially update the AWC
- Conduct baseline water quality monitoring to determine if contaminates currently exist
- Test near shore environment for potential impacts from past wood waste disposal
- Conduct stock assessments for salmon and steelhead trout species
- Develop an escapement goal for sockeye salmon
- Developing a management plan and education and outreach for roadside vegetation within the watershed without the use of herbicides, pesticides or spray defoliants
- Pursue funding for identified watershed restoration activities identified in Albert et al (2008)
- Data collection for subsistence uses within the watershed, including fish, wildlife and special forest product

Water Creek was nominated by the community of Thorne Bay because of its importance as a drinking water source (UAS-GIS, 2013). The watershed encompasses approximately 1.1 square miles and drains into Thorne Bay and Clarence Strait on the eastern side of Prince of Wales Island (Figure 56).

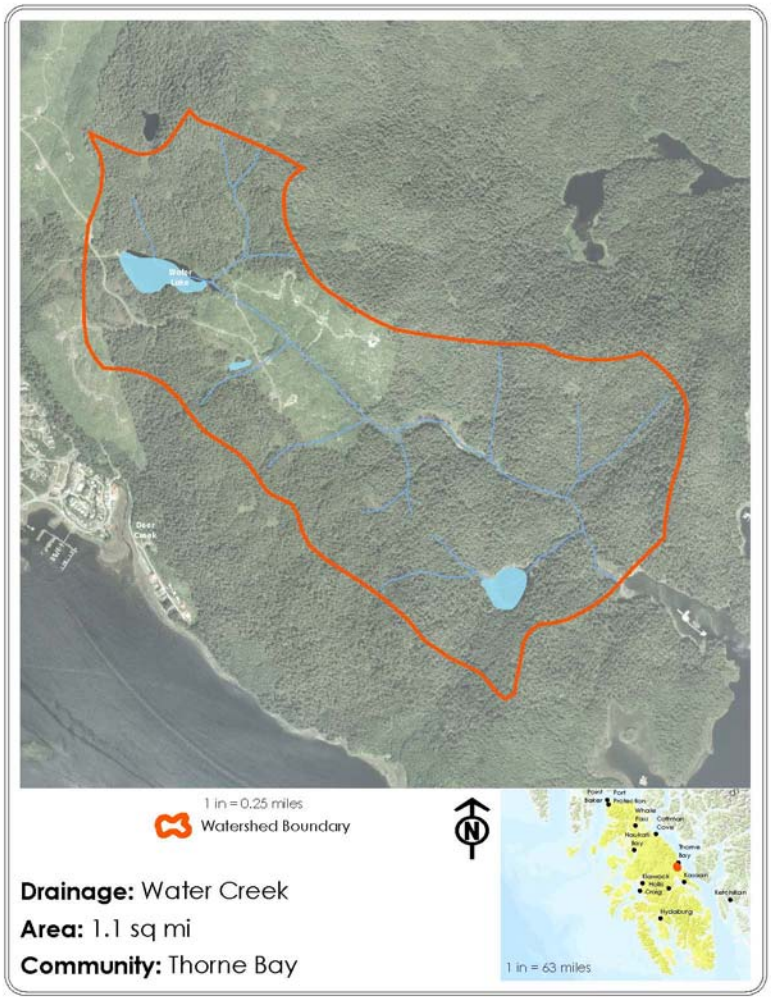

Figure 56. Watershed boundary for Water Creek near Thorne Bay, Prince of Wales Island, Alaska.

Water Creek is not an anadromous waterbody (ADFG, 2013; UAS-GIS, 2013). There were no subsistence resource concerns identified for the watershed. Water Creek is not an impaired waterbody and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills, NPDES permits or other water rights records for the Water Creek watershed (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013; ADNR, 2013). There are no known water quality contaminants for Water Creek. There has been past timber harvest in the watershed, and there is potential for future timber harvest. There were no records for past or future mining activities. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence resource was identified as low for deer and fish. No future development projects were identified for Water Creek. Landownership is a mix of state, federal and private.

Water Creek was categorized as Category IV watershed. The watershed did not meet the set qualifiers for a Category I or Category II watershed, however some impacts and concerns for the watershed exist, so it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The list below includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community

based planning effort or as funding is available.

- Watershed assessment that includes data collection on stream functions to determine if any instream restoration efforts are warranted
- Water quality monitoring program to assure drinking water standards are met
- Data collection for subsistence uses of deer within the watershed

References for Thorne Bay:

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Albert D., L. Baker, S. Howell, K. Koski, and R. Bosworth, 2008. A Framework for setting Watershed-scale Priorities for Forest and Freshwater Restoration on Prince of Wales Island. The Nature Conservancy, Juneau, Alaska.

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Environmental Protection Agency (EPA), 2013. Facility Register Service, Facility Detail Report. Envirofacts website: http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?pgm_sys_id_in=AK0001897602&pgm_sys_acrnm_in=CERCLIS. Accessed December, 2013.

University of Alaska Southeast GIS Library (UAS-GIS), 2013. Wetland Ecosystems Services Protocol for Southeast Alaska (WESPAK-SE) database: http://seakgis.alaska.edu/flex/wetlands/. Accessed December 2013.

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Whale Pass

Population: 39 (2012 DCCED certified) Governance: Unincorporated

Whale Pass is on the northeast side of Prince of Wales nestled in the estuary of several streams they have nominated and was established as a logging camp in the 1950's with many workers traveling from Thorne Bay to Whale Pass depending on needs of the timber sales. The community remains unincorporated but operates and participates in island-wide conversations. The Terminal Coho fishery draws many tourists and residents to these important watersheds. Many ancient fish traps and Petroglyphs are found on the shoreline evidence of past habitation of Haida and Tlingit in the area. Limestone geology has provided an abundance of karst cave systems and aquifers. Watersheds are mostly roaded and seas of second growth punctuate the landscape.

The community of Whale Pass has nominated two watersheds to be included in this watershed assessment: 108 (Big) Creek (also nominated by Naukati Bay) and Neck Lake (also nominated by Naukati Bay). Table 10 depicts a summary of the research conducted on each watershed.

Table 10. Summary of records research for watersheds nominated by the community of Whale Pass for the Prince of Wales Unified Watershed Assessment. For landownership: S = State lands; F = Federal lands; P = Private lands; NC = Native Corporation lands.

	Member Community	Whale Pass	
	Watershed Name	**108 (Big) Creek**	**Neck Lake**
Category I Qualifiers	**Community Drinking Water System**	no	no
	Anadromous Fish System	1	1
	ADEC Impaired Water Body List	no	no
	Class III solid waste facility present	no	no
	ADEC Contaminated Sites	0	0
	EPA CERCLIS/NPL Sites	0	0
	Subsistence resource impacted	Coho declining	no
Category II Qualifiers	**LUST sites**	0	0
	ADEC Spills sites	0	0
	NPDES/Envirofact records	0	1
	Other water rights	5	3
	Known water quality contaminants	no	no
	Past/present mining activity	no	no
	Past/present timber harvest	yes	yes
	Listed by State or Tribe UWA	no	no
Other Information	**TNC/USFS Restoration Priority**	no	very high
	Value as subsistence resource	Fish - moderate Deer - low	Fish - low Deer - moderate
	Possible future timber harvest	yes	yes
	Possible future mining activity	no	no
	Landownership	S, P, F	F
	Possible other development	Road upgrades	Hatchery

108 (Big) Creek was nominated by Whale Pass because of its importance for fishing, its proximity to the community and concerns that the Coho salmon run is decreasing. The stream system is labeled as Big Creek on topographic and anadromous fish catalog maps, however it is known locally as 108 Creek. 108 Creek was also nominated by Naukati Bay and is also included in the Naukati Bay community chapter. The watershed encompasses 6.3 square miles and drains from Twin Island Lake and into Whale Passage on the east side of Prince of Wales Island (Figure 57). There is no community drinking water source in the 108 Creek watershed (UAS-GIS, 2013).

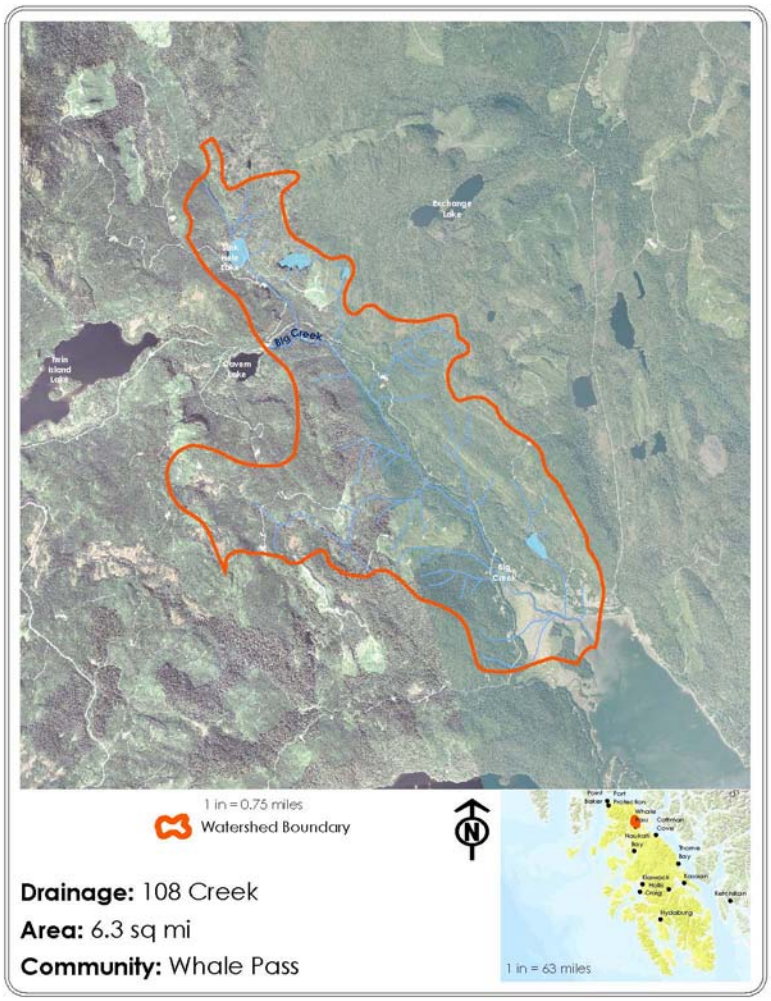

Figure 577. Watershed boundary for 108 Creek near Whale Pass, Prince of Wales Island, Alaska.

108 Creek is listed as an anadromous waterbody (106-30-10800), hosting chum salmon, Coho salmon, pink salmon, sockeye salmon, Dolly Varden and steelhead trout (ADFG, 2013; UAS-GIS, 2013). Coho salmon decline was identified as a subsistence resource concern, however no stock assessment has been conducted (B. Prefontaine, personal communication). 108 Creek is not listed as an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013; UAS-GIS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST, spills, or NPDES permit records for the 108 Creek Watershed (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). The Alaska Department of Fish and Game has two instream flow reservations, and there were three individuals that have private water rights (ADNR, 2013). There are no known water quality contaminants for the watershed. There has been past timber harvest, and there is the potential for future timber harvest. There were no records for past or future mining activities. The watershed has not been listed by any other Unified Watershed Assessment, and it was not included as a restoration priority for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the watershed as a subsistence

resource for deer was identified as low, and it was moderate for fish. Possible future development includes road upgrades. Landownership is a mix of state, federal and private.

108 Creek was categorized as a Category IV watershed. The 108 Creek watershed did not meet the set qualifiers for a Category I or Category II watershed, however some concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The following list includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Coho salmon stock assessment including harvest survey to determine use and needs
- Develop a sockeye salmon escapement goal for 108 Creek
- Watershed assessment that includes data collection on stream functions to determine if any instream restoration efforts are warranted
- Water quality monitoring program to assure surface water and drinking water standards are met
- Data collection for subsistence uses of deer within the watershed

Neck Lake was nominated by the community of Whale Pass because of the importance of the lake for Coho salmon enhancement and economic opportunities the enhancement brings to the community. Neck Lake was also nominated by Naukati Bay and is also covered in the Naukati Bay community chapter. The watershed encompasses approximately 16.7 square miles and drains into Whale Pass and Clarence Strait on the northeast side of Prince of Wales Island (Figure 58). There is not a community drinking water system on Neck Lake (UAS-GIS, 2013).

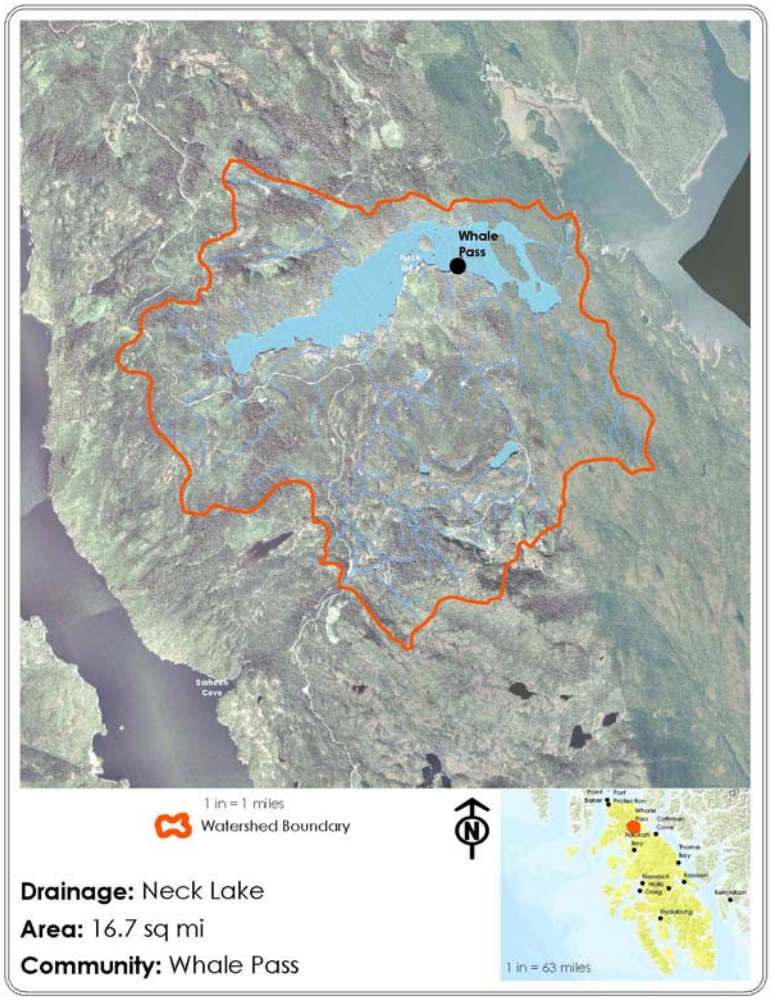

Figure 588. Watershed boundary for Neck Lake near Whale Pass, Prince of Wales Island, Alaska.

Neck Lake is listed as an anadromous waterbody (106-30-10750), hosting Coho salmon, pink salmon and chum salmon (ADFG, 2013; UAS-GIS, 2013). The Southern Southeast Alaska Aquaculture Association operates a Coho salmon enhancement project at Neck Lake (SSRAA, 2014). Juvenile Coho salmon from the Burnett Island Hatchery are raised and released from net pens in Neck Lake. Returning adult Coho salmon in freshwater do not make it past a barrier falls, and they are subsequently harvested in a fish pass and sold to market (SSRAA, 2014). There were no subsistence resource concerns identified for Neck Lake. Neck Lake is not listed as an impaired waterbody, and there is not a Class III solid waste facility in the watershed (ADEC, 2010; ADEC-SWIMS, 2013). There were no contaminated sites, CERCLIS, NPL, LUST or spill records for Neck Lake (ADEC-CS, 2013; ADEC-PERP, 2013; EPA, 2013). There is one NPDES permit record for Whale Pass West logging facility (EPA, 2013). There were three other water rights records, one for ADFG instream flow reservation, one for aquaculture and one private (ADNR, 2013). There are no known water quality contaminants for Neck Lake. There have been past timber harvest activities in the watershed, and there is potential for future timber harvest. There were no records for past or future mining activities. Neck Lake is not listed by any other Unified Watershed Assessment, however it has been listed as a high priority for restoration for Prince of Wales Island (CCTHITA, 1999; Albert et al., 2008). The value of the

watershed was identified as moderate for deer and low for fish. Future development includes a fish hatchery. Landownership is federal.

Neck Lake was categorized as a Category IV watershed. The Neck Lake watershed did not meet the set qualifiers for a Category I or Category II watershed, however some concerns for the watershed exist, therefore it was placed into Category IV.

As a Category IV watershed, it is recognized that the watershed presents a need for additional information to be collected. The following list includes other potential projects in no order of priority. This list is not all inclusive and may be added to at any time. Prioritization would come from a community based planning effort or as funding is available.

- Watershed assessment that includes data collection on stream functions to determine if any instream restoration efforts are warranted
- Water quality monitoring program to assure surface water and drinking water standards are met
- Pursue funding for identified watershed restoration activities identified in Albert et al. (2008)
- Data collection for subsistence use of deer within the watershed

References for Whale Pass:

Alaska Department of Environmental Conservation (ADEC), 2010. Division of Water, Integrated Water Quality Monitoring and Assessment Report, List of Impaired Waterbodies for 2010. http://dec.alaska.gov/water/wqsar/Docs/2010impairedwaters.pdf. Accessed December, 2013.

Alaska Department of Environmental Conservation Contaminated Sites Program (ADEC -CS), 2013. Contaminated Sites Database Website. http://dec.alaska.gov/applications/spar/CSPSearch/default.asp. Accessed December, 2013.

Alaska Department of Environmental Conservation Prevention and Emergency Response Program (ADEC-PERP), 2013. Spills Online Database. http://dec.alaska.gov/applications/spar/SpillsDBQuery/FacilitySearch.asp. Accessed December, 2013.

Alaska Department of Environmental Conservation Solid Waste Information Management Services (ADEC-SWIMS), 2013. Online database of Alaska Solid Waste Facilities. http://dec.alaska.gov/Applications/EH/SWIMS/ModFacility.aspx?siteId=479. Accessed December, 2013.

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Acknowledgements

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This endeavor would not have been possible without the on-going support of the Prince of Wales Chamber Advisory Committee and the member group home councils and boards for hosting rotating monthly meetings, adding POWWA to their agendas, writing supporting resolutions, nominating watersheds and projects, reviewing chapters, and caring about connecting our watersheds and communities across boundaries from alpine to shoreline. Contributors to this Unified Watershed Assessment (in alphabetical order by community) include:

COFFMAN COVE (http://ccalaska.com; http://www.coffmancove.org)
Chery Fecko (POWWA Vice President) – City of Coffman Cove
Misty Fitzpatrick (Participant) City of Coffman Cove

CRAIG (www.craigak.com; http://www.craigtribe.org)
Jon Bolling (POWWA Board Member) – City of Craig
Millie Schoonover (POWWA Board Member) – Craig Tribal Association
Stephanie Fox (Participant) – Craig Tribal Association
Angel Holbrook (Participant – Craig Tribal Association
Brian Holter, Jr. (Participant) – Craig Tribal Association
Don Pierce (Participant) – City of Craig

HOLLIS (http://www.princeofwalescoc.org/communitiesb/hollis)
Robert Andrews (Participant) – Hollis Community Council
Budd Burnett (Participant) – Hollis Community Council
Tommy Lynch (Participant) Hollis Community Council

HYDABURG (http://www.hydaburgtribe.org)
Jean Bland (POWWA Board Member) – Hydaburg Cooperative Association
Anthony Christianson (POWWA President) – City of Hydaburg

KASAAN (http://www.kasaan.org)
Machelle Edenshaw (Participant) – Organized Village of Kasaan
Carol Fletcher (Participant) – Organized Village of Kasaan

KASAAN con't
Dennis Nickerson (Participant) – Organized Village of Kasaan
Fred Olson Jr. (Participant) – City of Kasaan

KLAWOCK (http://cityofklawock.com; http://www.klawock.org)
Les Issacs (Participant) – City of Klawock
Frank Peratovich (Participant) – City of Klawock
Ann Wyatt (POWWA Treasurer) – Klawock Cooperative Association

NAUKATI BAY (http://www.naukatibay.com)
Josh Hills (Participant) – Naukati Bay Inc.
Brandy Prefontaine (POWWA Watershed Coordinator) – Naukati Bay, Inc.
Venessa Richter (Participant) – Naukati Bay, Inc.
Travis Tuttle (Participant) – Naukati Bay, Inc.
Heidi Young (Participant) – Naukati Bay, Inc.

THORNE BAY (https://www.thornebay-ak.gov; http://www.thornebayalaska.net)
Wayne Brenner (POWWA Board Member) – City of Thorne Bay
James Gould (Participant) – City of Thorne Bay
Mark Minnillo (Participant) – City of Thorne Bay
Karen Peterson (Participant) – City of Thorne Bay

WHALE PASS (http://www.princeofwalescoc.org/communitiesb/whale-pass-1)
Don Hull (Participant) – Whale Pass
Dolores Loucks (Participant) – Whale Pass
William Patterson (POWWA Board Member) - Whale Pass

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Appendix A

Resolutions and Letters of Support for the formation of the Prince of Wales Watershed Association

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USDA United States Department of Agriculture | Forest Service | Alaska Region, Tongass National Forest, Craig Ranger District | P.O. Box 500, Craig, AK 99921-9998, Phone: (907) 826-3271, Fax: (907) 826-2972

Date: April 19, 2013

To the Prince of Wales Watershed Association and National Forest Foundation:

The Forest Service would like to express its support for the Prince of Wales Island Wide Watershed Association (POWWA). The collaboration among communities that POWWA has fostered since its inception in 2011 is important to maintaining clean drinking water, healthy fish populations, and wildlife habitats for the residents on Prince of Wales Island. POWWA is just now building the capacity to prioritize and implement projects. The Forest Service looks forward to working with them as a partner on Prince of Wales Island.

Sincerely,

/s/ Matthew D. Anderson
MATTHEW D. ANDERSON
District Ranger

PRINCE OF WALES COMMUNITY ADVISORY COUNCIL
RESOLUTION No. 13-02

A JOINT RESOLUTION BY AND BETWEEN THE COMMUNITIES OF THE PRINCE OF WALES COMMUNITY ADVISORY COUNCIL SUPPORTING FORMATION OF THE PRINCE OF WALES WATERSHED COUNCIL

WHEREAS, the Prince of Wales Community Advisory Council acts in an advisory capacity for participating communities on Prince of Wales Island; and,

WHEREAS, Southeast Alaska has a wealth of well-managed natural resources; and,

WHEREAS, the economy of Southeast Alaska is dependent upon access to and use of natural resources; and,

WHEREAS, the timber, mining, fishing, and visitor industries all share a common need for access to natural resources; and,

WHEREAS, a Prince of Wales Watershed Council will advocate for water quality and healthy fish and wildlife habitats on Prince of Wales Island; and,

WHEREAS, that advocacy will occur by means of seeking funding for approved water quality projects; and,

WHEREAS, POW Watershed Association advocacy efforts will not include litigating or supporting litigation of development projects on Prince of Wales Island; and,

NOW, THEREFORE, BE IT RESOLVED that the Prince of Wales Community Advisory Council supports efforts to organized a Prince of Wales Watershed Association.

PASSED AND APPROVED this 28th day of May, 2013 by the Prince of Wales Community Advisory Council.

POWCAC Chairman

HYDABURG COOPERATIVE ASSOCIATION

PO Box 349
HYDABURG, ALASKA 99922
Phone: 907-285-3660, 3662, 3665, or 3666
FAX: 907-285-3541

Resolution 2012-53

A RESOLUTION FROM THE COMMUNITY OF HYDABURG, ALASKA SHOWING COMMUNITY SUPPORT FOR A PRINCE OF WALES WATERSHED ASSOCIATION.

WHEREAS, The community of Hydaburg, Alaska is a community on Prince of Wales Island; and,

WHEREAS, the residents of Hydaburg, Alaska believe that clean water and healthy fish and wildlife habitats are important to all residents; and,

WHEREAS, an island-wide Watershed Association would advocate for water quality and healthy fish and wildlife habitats on all of Prince of Wales Island.

NOW THEREFORE BE IT RESOLVED, that the Hydaburg Cooperative Association votes in favor of supporting a Prince of Wales Watershed Association.

PASSED AND APPROVED ON THIS 7th DAY OF MAY, 2012 WITH A VOTE OF 6 YES, 0 NO, 0 ABSTAIN.

ATTEST:

Sidney Edenshaw 5-7-12
President Date

Mary Smith 5-7-2012
Secretary Date

Craig Tribal Association
P.O Box 828
Craig AK, 99921
(907)826-3996 phone
(907)826-3997 fax

CRAIG TRIBAL ASSOCIATION
RESOLUTION 2013-34

A RESOLUTION OF THE CRAIG TRIBAL ASSOCIATION TRIBAL COUNCIL TO SUPPORT THE PRINCE OF WALES WATERSHED ASSOCIATION; and to have a representative from the Craig Tribal Association to sit on said board with full voting rights on behalf of the Craig Tribal Association

WHEREAS, the Craig Tribal Association (CTA) is a duly constituted Indian Tribe, organized pursuant to the authority of Section 16 of the Act of Congress of June 18, 1934, (48 Stat.984), as amended by the acts of Congress, June 15th, 1935, (49 Stat.378 and May 1, 1936, (49 Stat. 1250); and

WHEREAS, the Craig Tribal Association, Tribal Council is the governing body of the Tribe in accordance with its Constitution and By-Laws; and

WHEREAS, Article IV, Section 1(e) of the Tribe's Constitution authorizes the Association to organize and charter associations of its member for economic purposes and to regulate the same; and

WHEREAS, the "CTA" and its tribal members believe that clean water and healthy fish & wildlife habitats are important; and

WHEREAS, an island-wide Watershed Association would advocate for water quality and healthy fish and wildlife habitats on all of Prince of Wales Island;

WHEREAS, the "CTA" is a federally recognized Tribe located on Prince of Wales Island that supports the formation of the Prince of Wales Watershed Association (hereinafter "POW-WA").

WHEREAS, the representatives would serve as communication liaisons between POW-Watershed Association and CTA; and will have full voting rights on behalf of CTA's Tribal Council's approved actions; and

WHEREAS, the representative for CTA is: Clinton Cook, Sr. Tribal President; and

NOW THEREFORE BE IT RESOLVED, that the Craig Tribal Association votes in favor of supporting the Prince of Wales Watershed Association and to have a representative from the Craig Tribal Association to sit on said board; and

BE IT FURTHER RESOLVED, that Clinton Cook Sr. is the CTA's representative on the POW-WA with full voting rights on behalf of the CTA.

Certification

This resolution was duly adopted at a regularly scheduled Tribal Council meeting this 10th day of December, 2013, by a quorum vote of:

6 Yes Ø No Ø Abstain Ø Absent Ø Excused

Clinton Cook Sr.

Clinton Cook Sr.,
Tribal President
Craig Tribal Association

Virginia Lawnicki

Virginia Lawnicki,
Tribal Secretary
Craig Tribal Association

Klawock Cooperative Association, Tribe
310 Bayview Blvd.
P.O. Box 430
Klawock, Alaska 99925

Phone: 907-755-2265
Fax: 907-755-8800

RESOLUTION NO. 13-27

TITLE: A Resolution from the Klawock Cooperative Association, Tribe showing support for a Prince of Wales Watershed Association.

WHEREAS: The Klawock Cooperative Association, (hereafter "Tribe"), is a duly constituted Indian Tribe organized pursuant to the authority of Section 16 of the Act of Congress of June 18, 1934 (48 Stat. 984), amended May 1, 1936 (49 Stat. 1250), and

WHEREAS: The Klawock Cooperative Association Tribal Council is a duly elected governing body of the Tribe, authorized to act by and on behalf of its members, and

WHEREAS, The Klawock Cooperative Association, Tribe is a Tribal Community on Prince of Wales Island; and,

WHEREAS, the Klawock Cooperative Association Council believe that clean water and healthy fish and wildlife habitats are important to all membership; and,

WHEREAS, an island-wide Watershed Association would advocate for water quality and healthy fish and wildlife habitats on all of Prince of Wales Island,

NOW THEREFORE BE IT RESOLVED, that Klawock Cooperative Association Council Approve in favor of supporting a Prince of Wales Watershed Association.

CERTIFICATION

The forgoing Resolution 13-27 was duly adopted at a Regular Council meeting held this ____ day May, 2013 by the Klawock Cooperative Association by a quorum vote.

6 Yes ____ No 1 Abstain

Donald Nickerson Jr., Tribal President

Brenda Leask, Tribal Secretary

ORGANIZED VILLAGE OF KASAAN

P. O. Box 26-Kasaan * Ketchikan, Alaska 99950-0340
(907) 542-2230 * (fax) 907-542-3006

RESOLUTION OVK-12-06-001

A Resolution of the Organized Village of Kasaan in support of the formation of the Prince of Wales Watershed Association; and to have two (2) representatives from the Organized Village of Kasaan to sit on said board with full voting rights on behalf of the Organized Village of Kasaan

WHEREAS, the Organized Village of Kasaan is a federally recognized Tribe organized pursuant to the Indian Reorganization Act of June 18, 1934 (48 Stat. 984) and May 1, 1936 (49 Stat. 1250); and

WHEREAS, the Corporate Charter of the Organized Village of Kasaan (Ratified October 15, 1938) states in its Purpose and Existence, "In order to further the economic development of the Indians residing in the neighborhood of Kasaan, Alaska, by conferring upon the Organized Village of Kasaan corporate rights and powers; and to enable this Village and its members to undertake enterprises designed to secure for the members of the corporation an assured economic independence…"; and

WHEREAS, the Organized Village of Kasaan (hereinafter "OVK") is governed by a Council of elected representatives composed of a President and six members who act in accordance with the powers granted to it by its Constitution and By-Laws (Ratified on October 15, 1938); and

WHEREAS, the "OVK" and its tribal members believe that clean water and healthy fish & wildlife habitats are important; and

WHEREAS, an island-wide Watershed Association would advocate for water quality and healthy fish & wildlife habitats on all of Prince of Wales Island; and

WHEREAS, the "OVK" is a federally recognized Tribe located on Prince of Wales Island that supports the formation of the Prince of Wales Watershed Association (hereinafter "POW-WA"); and

WHEREAS, these two (2) representatives would serve as communication liaisons between the POW-Watershed Association and OVK; and will have full voting rights on behalf of OVK's Tribal Council's approved actions; and

WHEREAS, the two (2) representatives for the OVK are: DENNIS NICKERSON as our primary representative and MICHELLE EDENSHAW as our secondary representative.

NOW THEREFORE BE IT RESOLVED, that the Organized Village of Kasaan Tribal Council supports the formation of the Prince of Wales Watershed Association and to have two (2) representatives from the OVK to sit on said board; and

BE IT FURTHER RESOLVED, that DENNIS NICKERSON is the OVK's Primary representative and MACHELLE EDENSHAW is OVK's Secondary representative on the POW-WA with full voting rights on behalf of the OVK.

CERTIFICATION

APPROVED, PASSED AND ADOPTED by a duly constituted quorum of the OVK Tribal Council on this 27th day of JUNE 2012; by a Roll Call Vote: Della Coburn: YES, Julia Coburn: YES, Glenn Hamar: YES, Ronald Leighton: YES, Frederick Olsen: YES, and Paula Peterson: YES.

Richard J. Peterson – President

ATTESTED:

Della A. Coburn – Council Secretary

Naukati Bay Inc.

Resolution # 17
Showing support for a Prince of Wales Watershed association

WHEREAS, the community of Naukati Bay is a community on Prince of Wales Island; and,

WHERAS, the residents of Naukati Bay Inc. believe that clean water and healthy fish and wildlife habitats are important to all residents; and

WHEREAS, an island-wide Watershed Association would advocate for water quality and healthy fish and wildlife habitats on all of Prince of Wales Island,

NOW THEREFORE BE IT RESOLVED, that Naukati Bay Inc. votes in favor of supporting a Prince of Wales Watershed Association.

Passed and approved this day of November 9th 2011

Candy Hempel
President of Naukati Bay Inc.

7-21-11
Date of signing

Diana K Porter
Secretary of Naukati Bay Inc.

11/21/2011
Date of signing

City of Coffman Cove
Resolution 12-16

A RESOLUTION FROM THE COMMUNITY OF COFFMAN COVE SHOWING COMMUNITY SUPPORT FOR A PRINCE OF WALES WATERSHED ASSOCIATION.

WHEREAS, The community of Coffman Cove is a community on Prince of Wales Island; and,

WHEREAS, the residents of Coffman Cove believe that clean water and healthy fish and wildlife habitats are important to all residents; and,

WHEREAS, an island-wide Watershed Association would advocate for water quality and healthy fish and wildlife habitats on all of Prince of Wales Island,

NOW THEREFORE BE IT RESOLVED THAT, The City of Coffman Cove votes in favor of supporting a Prince of Wales Watershed Association.

PASSED and APPROVED by a duly constituted quorum of the City Council of Coffman Cove this 23rd day of February 2012.

Carolyn Duncan, Mayor

ATTEST:

Kassi Knock, City Clerk

City of Coffman Cove

PO Box 18047
102 Denali
Coffman Cove, AK. 99918
Phone: (907) 329-2233 Fax: (907) 329-2212
Email: coffmancove@ccalaska.com

December 3rd, 2013

Prince of Wales Watershed,

The City of Coffman Cove Council is in support of the Watershed Association and their effort to improve the following potential watershed related projects for Coffman Cove:

- Watershed assessments and resulting document for Chum Creek and Coffman Creek that address water quality, watershed function, and addresses historic, present, and future uses and impacts.

- Evaluate the water intake issues at Chum Creek and the options for upgrading the existing water intake in Chum Creek.

- Conduct a feasibility study for moving the water intake to Coffman Creek, which is further from the storage tank and water treatment plant than the current source at Chum Creek.

- Construct a ramp to Chinook Float for fish pen access. Coffman is currently feeding, rearing, and releasing several thousand Chinook smolt in rearing pens.

- Design and construct a pullout, short trail, and interpretive sign to the three-sided shelter on Chum Creek. This is a trout fishing site near town that can be used by visitors and residents.

- Resurface the Luck Lake road and replace culverts as needed.

- Update and add new watershed signs that identify the Coffman Cove watershed.

- Inventory and evaluate culverts in and around Coffman Cove that may be obstruction fish passage.

- Stabilize eroded banks on Luck Creek that have been eroded due to increased use by guided, sport and personal use fishers. Clean heavily used beach sites around Luck Lake.

Respectfully,

Coffman Cove City Council

HOLLIS COMMUNITY COUNCIL

RESOLUTION 11-05-02

A RESOLUTION OF THE HOLLIS COMMUNITY COUNCIL SHOWING COMMUNITY SUPPORT OF A PRINCE OF WALES WATERSHED ASSOCIATION.

WHEREAS, Hollis is a community on Prince of Wales Island; and,

WHEREAS, the residents of Hollis believe that clean water is important to all Island residents; and,

WHEREAS, an island-wide Watershed Association would support clean water and healthy fish and wildlife habitat; and

WHEREAS, an island Watershed Association would support the water quality on all of Prince of Wales Island,

NOW THEREFORE BE IT RESOLVED, that the Hollis Community Council votes in favor of supporting a Prince of Wales Watershed Association.

PASSED AND APPROVED MAY 10, 2011.

Budd Burnett, President

Bob Andrews, Secretary

Budd Burnett

Bob Andrews

RESOLUTION 11-12-06-01
CITY OF THORNE BAY

A RESOLUTION OF THE CITY COUNCIL FOR THE CITY OF THORNE BAY, ALASKA; SHOWING COMMUNITY SUPPORT FOR A PRINCE OF WALES WATERSHED ASSOCIATION

WHEREAS, the City Council is the governing body for the City of Thorne Bay, Alaska; and

WHEREAS, the City of Thorne Bay is a community on Prince of Wales Island; and

WHEREAS, the residents of Thorne Bay believe that clean water and healthy fish and wildlife habitats are important to all residents; and

WHEREAS, an Island-Wide Watershed Association would advocate for water quality and healthy fish and wildlife habitats on all of Prince of Wales Island.

NOW THEREFORE BE IT RESOLVED, that the City Council for the City of Thorne Bay, Alaska, votes in favor of supporting a Prince of Wales Watershed Association.

PASSED AND APPROVE December 6, 2011

James Gould, Mayor

ATTEST:

Teri Feibel, City Clerk

Date

March 2, 2012

To the Prince of Wales Watershed Association and National Forest Foundation:

The community of ___Whale Pass____ would like to express its support for a Prince of Wales Island-wide watershed association. ____Whale Pass____ believes that with a unified voice the communities of Prince of Wales can better address their watershed needs and concerns. We believe that clean drinking water and healthy fish and wildlife habitats are beneficial to all Prince of Wales Island residents.

Sincerely,

Donald L. Hull

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Appendix B

Project Brainstorm List

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Brainstormed ideas of potential individual watershed projects

- Site specific (watershed) restoration project
- Coho stock assessment
- Sockeye stock assessment
- Deer populations assessment
- Baseline water quality monitoring
- Contaminant specific targeted testing (water, fish, plants)…from mining, fukishima, etc
    - VSW RUBA Assessment: testing coliform, hydrocarbon, heavy metals
- Monitoring upland contaminated sites for leachate into waterbody
- Solid waste/landfill assessment/monitoring
- Deer habitat assessment
- Stream surveys to categorize steam type/function (habitat surveys)
- Updates to Anadromous Waters Catalog for added protections
- Beaver management plans
- On the ground watershed assessment (other than unified watershed process)
- Update existing watershed assessments and/or management plans
- Updating existing drinking water source (i.e. intake)
- Maintaining existing water sources
- Erosion control plans
- Recreational site plans
- Evaluate road crossings
- Fish passage assessment/improvements
- Assess individual watershed for restoration opportunities
- Assess if resident fish present
- Assess impacts from potential development projects
- Estuary projects
- Beach assessment projects
- Shellfish inventory
- PSP testing (nearshore)
- Fish enhancement opportunities
- Wetland Planning (delineation, restoration, creation, mitigation opportunities)
- Invasive species inventory (plants, freshwater)
- Riparian thinning assessment
- Education projects/outreach/opportunity
- Food security (education/outreach)
- Subsistence uses of fish and/or wildlife and/or firewood and/or berries and/or other edibles (mushroom)
- Macroinvertebrate assessment (indicator of water quality)
- Cultural inventory/historical sites
- Salmon escapement goals

- Timber assessment (yellow cedar endangered? Spruce tree die off)
- Wastewater assessment/plan
- Solid waste assessment/plan
- Air quality assessment (dust/roads)
- Snotel stations and monitoring
- Long-term stream temperature monitoring for climate change
- Assess for nearshore ocean acidification
- Emergency planning for the watershed
- Spill response planning
- Biomass assessment and clean up
- Risk assessment and stabilization of landslide areas
- Alpine vegetation mapping/inventory (look for shifts)
- Develop community adaptation strategies
- Instream flow/hydraulic analysis for storm events
- Stormwater management planning
- Education/Assessment/Monitoring of pesticide/herbicide application (i.e. roads, power corridors)
- Establish instream flow reservations (for fish or other water uses)
- Community/Tribal water quality standards
- Education/Input on APDES system (i.e. mining)
- Sites assessments for abandoned mines
- Site specific brownfields site assessments