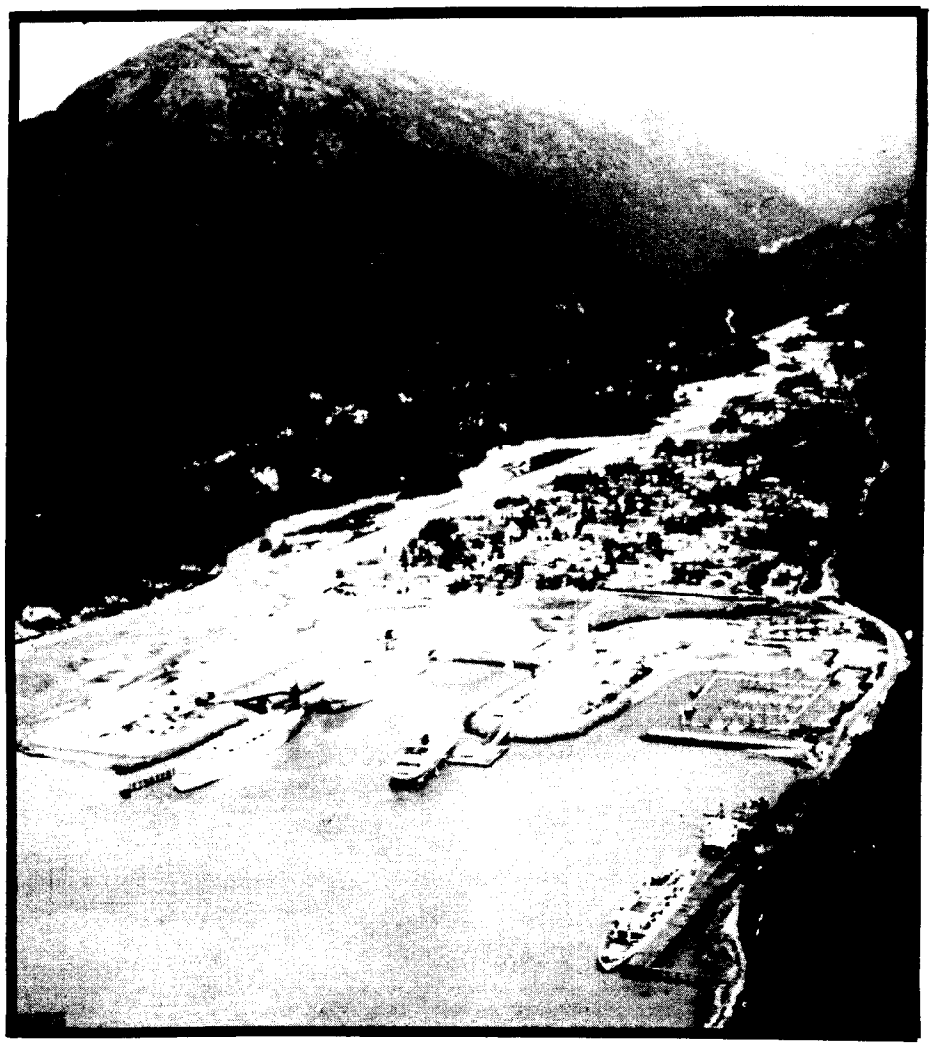
PORT OF SKAGWAY
and
SKAGWAY RIVER

AREA MERITING SPECIAL ATTENTION PLANS

part of the Skagway Coastal
Management Program



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Public Hearing Draft
July 1990

AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

The Port of Skagway on a five ship day in July 1989.
Cover photo by Barbara Kalen of Dedman's Photo Shop in Skagway.

CITY OF SKAGWAY

GATEWAY TO THE GOLD RUSH OF "98"
P. O. BOX 415 SKAGWAY, ALASKA 99840
(PHONE) 907-983-2297
(FAX) 907-983-2151

The City of Skagway invites you to read and comment upon this Public Hearing Draft of the Port of Skagway and Skagway River Area Meriting Special Attention Plans. These Plans were prepared as part of the Skagway Coastal Management Program.

Your comments are important to us. Please make your comments in writing to:

City of Skagway
Tom Healy, City Manager
P.O. Box 415
Skagway, Alaska 99840

Send a copy to:

Joaqlin Estus
State of Alaska
Division of Governmental Coordination
P.O. Box AW
Juneau, Alaska 99811-0165

The review period closes September 20, 1990. Please submit your comments on or by that date.

The Skagway City Council will hold a public hearing to take comments on these AMSA Plans on September 6, 1990 at 7:00 p.m. at the Skagway City Hall.

If you have any questions, please call Tom Healy in Skagway at 983-2297 or Barbara Sheinberg, the City's planning consultant, in Juneau at 586-1840.

Thank you.

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include teaching children about fishing, biology and science and providing a public area for fishing and fish viewing.

The Skagway City Schools operate the hatchery under Scientific-Educational Permit #85-133. The project began with pink salmon because their shorter life history provides returns in just two years. The first return provided a 200,000 pink salmon egg-take, a sport fish catch of well over 500 fish, natural spawning and many fish. Carcasses from the hatchery egg-take were made available and some provided fertilizer for Skagway's notable gardens. Subsequent returns dwarfed the first year. The hatchery later expanded to include coho and king salmon.

In 1989 the Jerry Myers Hatchery (formerly called the Pullen Creek Hatchery) Program was named Alaska State Vocational Education Program of the year. The hatchery is now licensed to raise 200,000 pinks, 50,000 coho and 200,000 king salmon. In the spring of 1989 the ADFG designated the hatchery as the king salmon facility for Lynn Canal. The hatchery is rearing fish for remote fry release and a smolt release at the facility.

In 1990 the Jerry Myers Hatchery was dedicated and renamed the Jerry Myers Hatchery to honor the man so instrumental in the founding and operation of this very successful hatchery.

In 1987 the first soil testing for possible lead contamination occurred. Positive results led to a full scale testing and treatment program by the Alaska Departments of Environmental Conservation (ADEC) and Health and Human Services (H&SS), the U.S. Environmental Protection Agency (EPA) and the responsible parties. Lead contamination has been found in the soil in parts of the town, at the ore terminal, and in some marine sediments and marine organisms.

Soil testing was conducted in 1988 and 1989. It showed localized lead contamination in the immediate vicinity of the ore terminal, along the railroad tracks and along State Street. The clean up involves removal of the contaminated soil and either treatment at a wash plant in town or is shipped back to the mine site. Contaminated material treated in town is separated by size - the gravel and sand is washed and a sludge is left behind. The sand and gravel are tested to ensure lead is lower than 1000 parts per million, (the high end of the 500-1000 ppm level recommended by the EPA for residential soils). The contaminated sludge is then trucked back to the Faro mine for treatment.

Blood samples were collected from the local population in 1988 and 1989. The testing of these samples indicated that no public health hazard exists. A cautionary lead level in the blood established by the Center for Disease Control is 2500 micrograms per liter. No children had a level higher than 15 mg/dl. Only one adult worker at the ore terminal had a level higher than 21 mg/dl. The conclusion from the final 1989 H&SS report was that, "Based on results of all the testing and findings, the community of Skagway does not have a serious health problem from lead. The contribution to the body burden of lead from the ore is minimal. Risk from exposure to lead ore can not said to be zero, but the contribution to the body burden of lead among Skagway residents is so low as to constitute no basis for public health concern."

A program to test for lead contamination of marine sediments and marine organisms in the vicinity of the ore terminal began in 1989. A report from the ADEC contractors explaining test results is due out in the summer of 1990. Reportedly some sediments and marine organisms, such as mussels, are contaminated. The problem has not yet been analyzed in enough detail to determine the least environmentally damaging method to deal with this type of contamination.

Hatchery and Fish Enhancement

Skagway residents worked with the Alaska Department of Fish and Game (ADFG) Division of Fisheries Rehabilitation, Enhancement and Development (FRED) to create a small salmon hatchery and sport fishery in Pullen Creek in 1980. A $30,000 legislative grant, donated property and equipment by WPYR, and volunteer efforts of many of the residents facilitated the actual hatchery construction in 1982. Hatchery goals

ACKNOWLEDGEMENTS

Many thanks are due to the following individuals. Without their help, the AMSA Plans could not have been written.

The Mayor, City Council and City Manager contributed a great deal of their valuable time. These Plans reflect their insights and guidance. Lorene Gordon, Diane Nore, Laurie Sica and Jerry O'Farrell Fuqua answered many questions and provided important information.

CITY COUNCIL

Stan Selmer, Mayor

Casey McBride	Alan See
Ed Fairbanks	John Mielke
John Tronrud	Boyd Worley

CITY ADMINISTRATION

Thomas Healy, City Manager
Jerry O'Farrell Fuqua, Tourism Director
Grant Lawson, Public Works Director
Lorene Gordon, City Clerk
Diane Nore, City Treasurer
Laurie Sica, Assistant Clerk

The following property owners and local citizens discussed issues and trends in the AMSA areas: Paul Taylor of White Pass and Yukon Route Railroad, Jerry Myers of the Jerry Myers Hatchery, Dave Hunz of H&H Enterprises, Irene Henderikson, Phyllis Brown and Mitch Ericksen.

The following agency staff contributed time and help: Joaqlin Estus of the Alaska Division of Governmental Coordination; Bill Rolfsen, Alaska Department of Community and Regional Affairs; Marnie Chapman and Susan Braley, Alaska Department of Environmental Conservation; Randy Ericksen, Janet Hall, Ron Josephson and Rob Bosworth, Alaska Department of Fish and Game; Andy Peckovitz, Nan Musselwhite, Ted Deats, Rita Romans and Mark Stroude, Alaska Department of Natural Resources: Mike McKinnon, Mark Knorr, Andy Hughes, and John Jordan, Alaska Department of Transportation and Public Facilities; Al Shattuck and Harlan LeGare, U.S. Army Corps of Engineers; and Jim Perrin, Federal Aviation Administration.

Drafting and much of the compilation for the Skagway River maps were provided by Dave Miller of Miller Engineering. Scott Gorell completed graphic and layout work on the River maps and completed the drafting, graphics and layout for the Port AMSA maps. The River maps were reproduced at Triad North Technical and the Port maps were printed at Northern Printing. The AMSA plans were printed at Capital Copy.

Apologies are offered to any who helped with these Plans whose names I may have inadvertently omitted.

Barbara Sheinberg
Planning Consultant

PORT OF SKAGWAY
and SKAGWAY RIVER
AMSA PLANS

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BACKGROUND

Looking south down the Skagway River from just above the 23rd Avenue highway bridge. The White Pass and Yukon Route railroad yard is in the foreground. *photo by Barbara Kalen of Dedman's Photo Shop*

BACKGROUND

Skagway, Alaska is located at the head of Lynn Canal in Southeast Alaska at latitude 59°27'30"N and longitude 135°18'45"W (Figure 1). It is approximately 90 miles north of Juneau, Alaska and 1000 miles north of Seattle, Washington. Skagway is bordered by Canada on the north and east and by the Haines Borough on the south and west. Skagway is a first class city with an estimated 443 square miles of land. The City sits on the east bank of the Skagway River (Figure 2).

In the late 1800s Skagway, Alaska was the Gateway to the Klondike Gold Rush. It was a rowdy frontier port controlled by a gang of organized criminals and shootings were common. The town boasted over 70 saloons. Civilization arrived in May 1898 when the White Pass and Yukon Route began constructing a railroad from tidewater through the Skagway River Valley and the White Pass to the town of Whitehorse in the Yukon. The railroad was completed in 1900, but by then the Gold Rush was over.

Since 1900, Skagway has served primarily as a port and railroad town. Visitors first arrived in 1898. The tourist industry was small until the 1920s but then grew steadily until it became the major economic force that it is today. Regular State ferry service to Skagway began in 1963 and the Klondike Highway to Carcross in the Yukon was completed during the summer of 1978.

Today, the City of Skagway is again bustling. Many varied uses compete for space in the Port of Skagway and along the Skagway River. In 1989 some 200,000 tourists arrived on 418 ships. In addition, there were 560,000 tons of lead/zinc ore on 24 vessels, 70,800 tons of freight and 26 million gallons of fuel on 77 barges, and some 100,000 salmon fry that passed through the Port. The Skagway River banks are home to the City's airport, privately owned oil storage tanks, the former and present City landfill, the State highway, a heavily used railroad, and a campground as well as the City of Skagway itself. In addition, salmon swim up and spawn in the River and gravel and sand are extracted from the River's bottom. Because of these many varied uses that compete for the limited space and resources in both the Port and along the Skagway River, the City has developed management plans under the Alaska Coastal Management Program for the Port of Skagway and Skagway River.

FIGURE 1 - VICINITY MAP

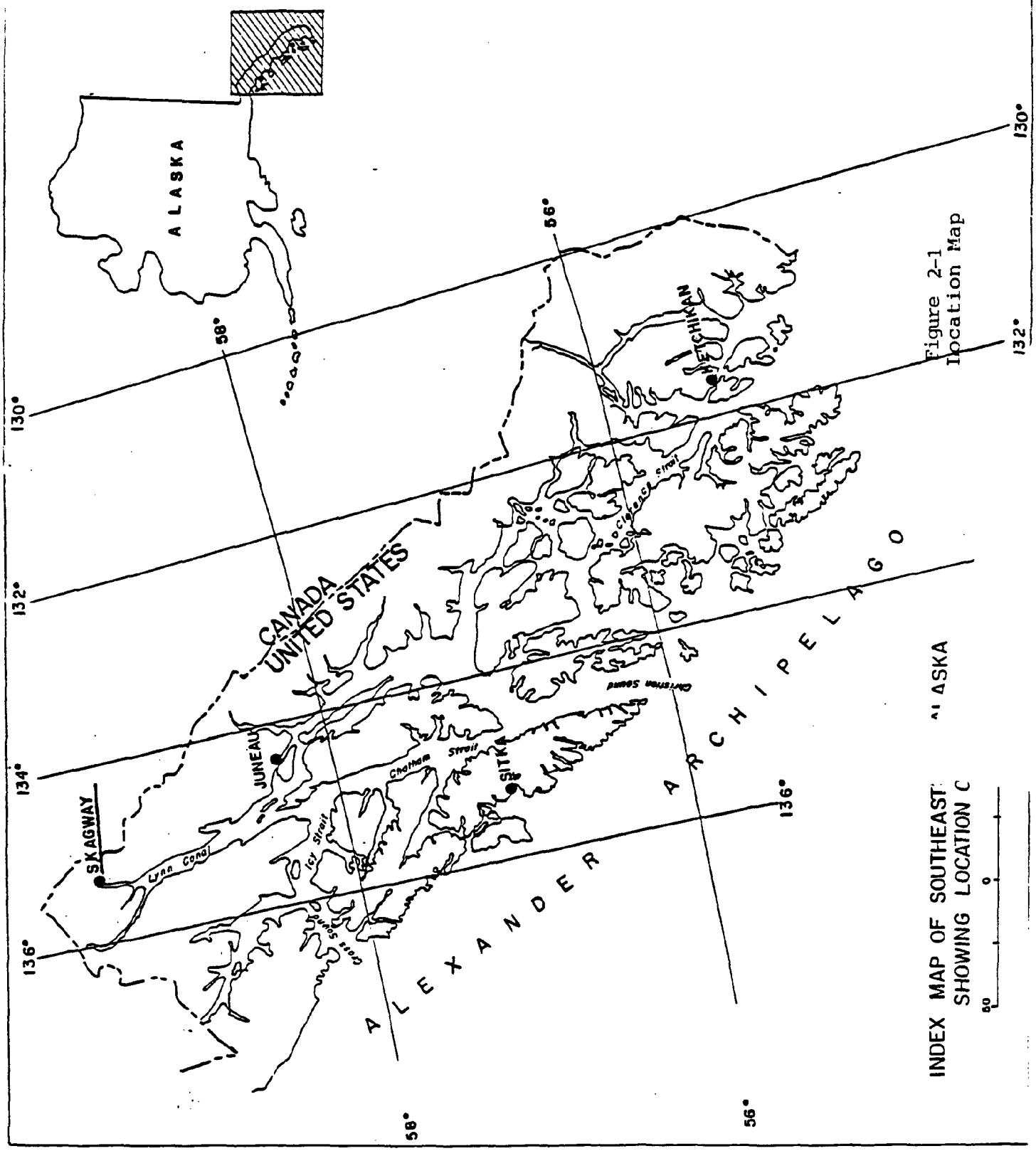
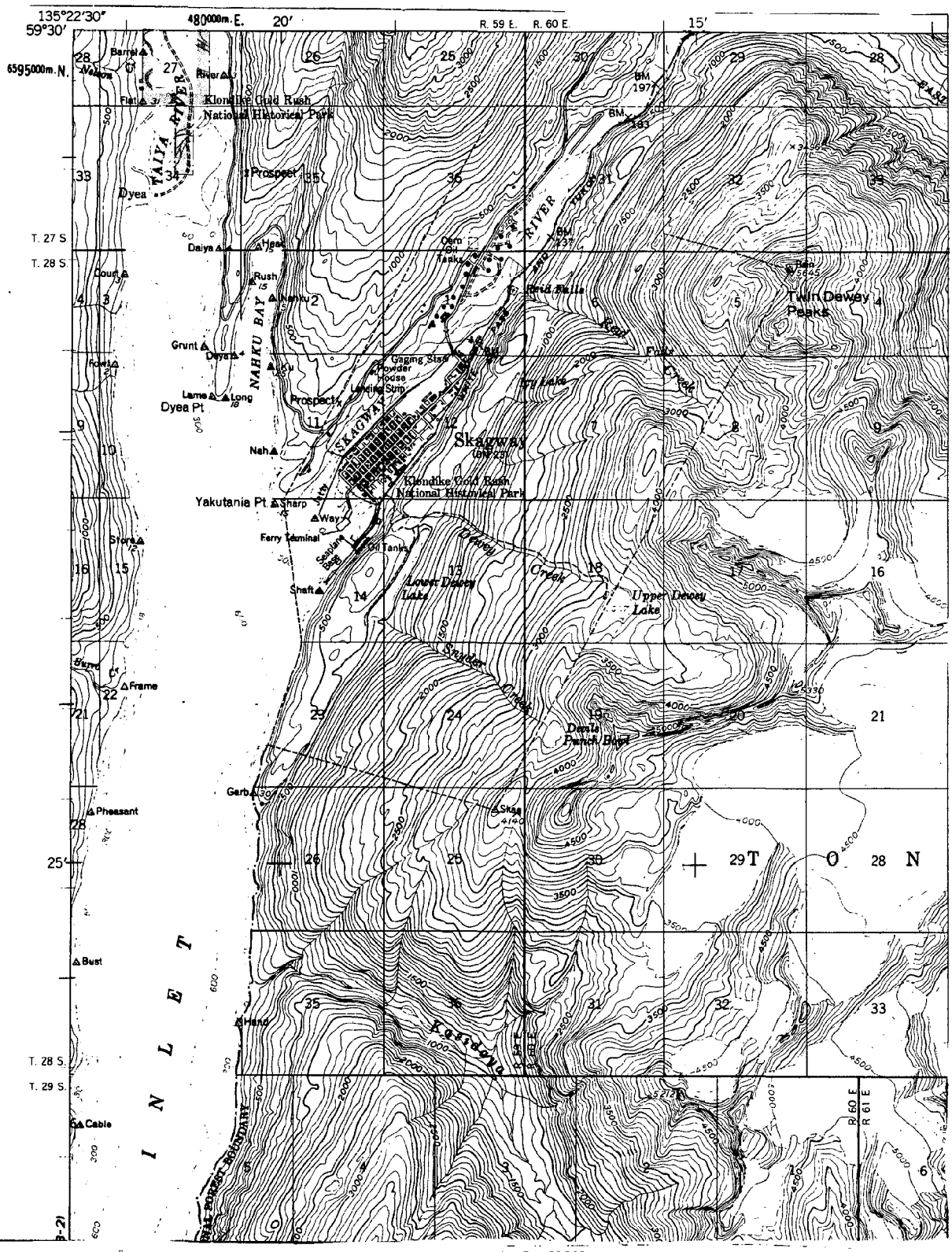


FIGURE 2 - SKAGWAY LOCATION MAP



CONTOUR INTERVAL 100 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES IN FEET—DATUM IS MEAN LOWER LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE AVERAGE RANGE OF TIDE IS APPROXIMATELY 14 FEET

INTRODUCTION

Aerial view of the Port of Skagway, Skagway River mouth and townsite (June 1990).
photo by Barbara Sheinberg

INTRODUCTION

ALASKA AND SKAGWAY COASTAL MANAGEMENT PROGRAM

The Port of Skagway and Skagway River management plans have been prepared with funding from and under the guidelines of the Alaska Coastal Management Program (ACMP). Plan development is authorized by the Area Meriting Special Attention (AMSA) part of the ACMP. Both the ACMP and the AMSA Planning process are explained in more detail below.

The federal Coastal Zone Management Act, passed in 1972, created the nation's coastal management program. The ACMP began in 1977 with the passage of the Alaska Coastal Management Act. Alaska State Statutes AS 46.40 and 44.19 provide the authority for the program. Alaska Administrative Codes 6 AAC 50, 80 and 85 contain the regulations that govern the program.

The ACMP created several coastal districts around the State. Each coastal district is allowed to develop a Coastal Management Plan (CMP) to guide resource development and protection in the area. After a coastal district's CMP has been approved by the local, State and federal governments, proposed activities within that district must be consistent with the CMP policies. Thus, the coastal management planning process offers a way for local citizens to influence how the area where they live will develop.

The City of Skagway is a coastal district authorized by the ACMP. The City of Skagway developed a Skagway Coastal Management Plan (SCMP) that was approved by the local, State and federal government and took effect in 1983. Minor revisions to the SCMP were recently completed and an updated SCMP will be printed during the summer of 1990. Development activities in the area must now be consistent with the policies in the SCMP. Local, State and federal permits for proposed projects are not granted unless the City concurs that the proposed project is consistent with desired future development for the area as identified in the SCMP policies.

SKAGWAY AMSA PLANNING OBJECTIVES

The ACMP allows a district to develop an Area Meriting Special Attention (AMSA) plan when there are resources sensitive to change, when there are conflicting or incompatible resource uses, or when there are values important to the general public. Alaska Statute AS 46.210(1) defines AMSA Plans as:

"A detailed geographic area within the coastal area which is sensitive to change or alteration and which, because of plans or commitments or because a claim on the resources within the area delineated would preclude subsequent use of the resources to a conflicting or incompatible use, warrants special management attention, or which because of its value to the general public, should be identified for current or future planning, protection, or acquisition."

In both the Port of Skagway and the Skagway River there are numerous potentially conflicting land and water uses, that require management plans per AS 46.40.210. This same statute lists special values or areas that are appropriate for AMSA planning. The relevant values for the Skagway River and Port of Skagway are noted. The Port is an area where development is dependent upon using or access to coastal waters [AS 46.40.210 (1)(D)]. The Skagway River is subject to significant flood hazards. Both areas have sections important for recreation values [AS 46.40.210 (1)(C)] and sections of scenic importance [AS 46.40.210 (1)(A)].

GOALS FOR THE PORT OF SKAGWAY AMSA

Skagway's deep sea Port bustles with activity, especially in the summer. An area approximately 2200 by 1500 feet serves an industrial dock, staging areas, two ferry/cruise ship docks, a small boat harbor, a helipad, a recreational vehicle park, a cargo and cruise ship wharf, and a creek/greenbelt/fish viewing area. In 1989 some 200,000 tourists arrived on 418 ships. In addition, 560,000 tons of lead/zinc ore, 70,800 tons of freight, 26 million gallons of fuel, 100 barges and ore vessels and some 100,000 salmon fry passed through the Port.

This very limited land and water area has to accommodate these many different uses. The Skagway Port AMSA Plan protects the limited Port waterfront area for those uses that are directly dependent upon, or directly related to the water, a waterfront location, or both. It allows special consideration to the development, growth and appearance of Skagway's waterfront, the city's most heavily utilized area. Attention is also given to maintaining safety, public access and an attractive appearance.

The Port of Skagway AMSA is designed to allow the City to take a more active role in planning and managing the City's most heavily used area, the Port. The Port AMSA's goals are to:

* **Reserve area for water-dependent and water-related uses**

* **Maintain and strengthen the Port's industrial nature while protecting public health, safety and welfare**

* **Maintain and enhance the Port's appearance and public access**

*** Establish policies that will promote compatibility between the various adjacent uses.**

GOALS FOR THE SKAGWAY RIVER AMSA

The Skagway River drains a portion of the vast Coast Mountains in British Columbia and the Yukon, crosses the U.S.-Canada border, meanders about twenty miles and finally spills into Taiya Inlet in Alaska. Over the years, many have walked the Skagway River Valley from tidewater, across the White Pass, into the Yukon's interior lakes. Today there are many different activities occurring adjacent to and in the Skagway River. The City's airport, privately owned oil storage tanks, the City's former landfill, the State highway, a heavily used railroad, a campground and the City of Skagway itself are all on the River banks. Salmon swim up and spawn in the River and gravel and sand are extracted from its bottom. A foot bridge near the River's mouth is the only foot access from town to the heavily visited Yakutania Point Park.

These myriad activities and issues caused the City of Skagway to designate the lower reach of the Skagway River an AMSA under the ACMP. The Skagway River AMSA Plan covers approximately the last four miles of the River. It begins at the River's mouth and runs north to just past 'Liarsville'. Land immediately adjacent to the River is included within the AMSA because activities on these lands can affect the River.

AMSA Plans clarify land ownership, resolve land use conflicts and establish goals and policies. These factors generally lead to quicker permit review and issuance. The Skagway River AMSA Plan discusses river and upland land ownership, the physical and biological environment and human use of the River, the regulatory scheme governing activities along the River, uses and activities in the River and policies to guide future River use.

The Skagway River AMSA plan was developed to provide a rational management plan with guidelines for the varied uses and activities that occur in and adjacent to the River. The Plan's goals are to:

*** Clarify river and adjacent land ownership and management**

*** Explain regulatory requirements for projects in or near the River**

*** Resolve conflicts**

*** Establish management goals and coordinate management**

*** Address floodplain control and floodplain management**

AMSA BOUNDARIES

The 23rd Avenue highway bridge crosses the Skagway River. The northern edge of the Skagway townsite and the White Pass and Yukon Route railroad shop can be seen on the far riverbank. *photo by Barbara Sheinberg*

AMSA BOUNDARIES

PORT OF SKAGWAY AMSA

The boundary established for the Port of Skagway AMSA was selected to include all land in the Port area. The area was carefully selected to be large enough to accommodate public access and recreation as well as the transition to non-water-dependent uses in a comprehensive manner. The AMSA boundary includes lands immediately adjacent to the water area that must be used for water-dependent and water-related uses, lands that will serve as a buffer between the "working" waterfront and the historic and business district, and a nearby portion of uplands where uses do not have to be water-dependent or related. Figures 3, 4 and 5 all show the location of the Port of Skagway AMSA boundary.

The AMSA boundary coincides with Alaska Tidelands Survey (ATS) No. 4, with these exceptions:

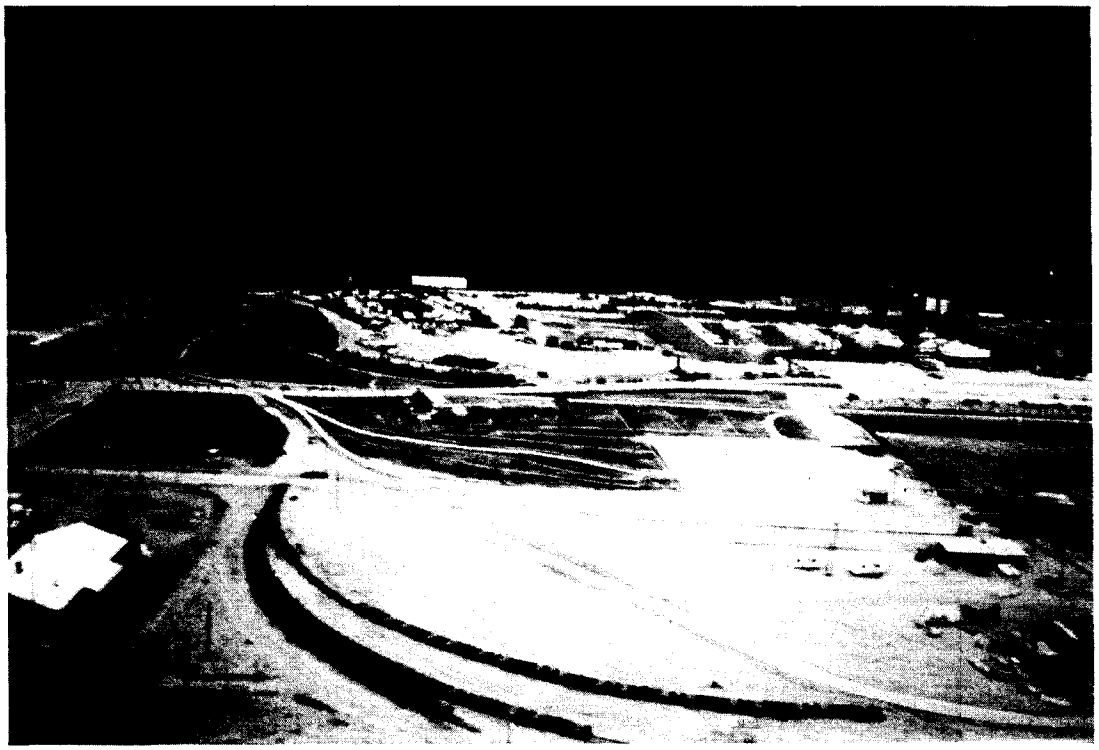
1) The portion of ATS No. 4 where the mouth of the Skagway River is located is within the Skagway River AMSA rather than the Port AMSA.
2) The Port AMSA boundary swings out about 20-100 feet from the ATS No. 4 boundary in the vicinity of Congress Way. At this locale the AMSA boundary coincides with the White Pass and Yukon Route (WPYR) railroad tracks.
3) The Port AMSA boundary extends about 10-200 feet beyond ATS No. 4 out into Taiya Inlet.

SKAGWAY RIVER AMSA

The boundary for the Skagway River AMSA was selected to include the portion of the River most subject to conflicting and competing uses. This includes the river's mouth (the western-most portion of ATS No. 4) and continues north to that part of the River that is adjacent to the northern end of U.S. Survey 3312, Tract A. The total distance along the River is approximately 3.8 miles. Figures 3, 6 and 7 show the location of the Skagway River AMSA boundary.

Most of the surveyed and subdivided land adjacent to the River on its west bank is included within the AMSA since activities on these lands could impact the River. The eastern boundary of the AMSA is the east side of the airport runway to 16th Avenue, the boundary continues in a northerly direction toward the 23rd Avenue highway bridge. At this point the boundary turns east to include the 23rd Avenue highway bridge and then follows the current WPYR railroad tracks north.

LAND OWNERSHIP



Pullen Creek and pedestrian-recreation area (background) with upland staging areas (foreground) at the Port. *photo by Barbara Sheinberg*

LAND OWNERSHIP

PORT OF SKAGWAY

Introduction

The Port of Skagway is an area of approximately 100 acres of filled gravel material that lies between the mouth of the Skagway River and the steep mountain embankment bordering the east side of town. Port lands are either owned by the City and leased to private parties or the State, are owned and controlled by the City, or are owned by private parties or the State. Figure 4 shows land ownership in the Port of Skagway AMSA.

It is important to remember when reviewing Figure 4 that it is almost impossible to combine a survey (made on the ground) and an aerial photo (a picture of the earth's curved surface shot from an oblique angle in the air). Unless an orthophoto is prepared removing an aerial photo's distortion, it is very difficult to match the photo and survey. Consequently, the survey information, upon which the land ownership data is based, and the aerial photo in Figure 4 are not an exact match.

City Owned Land

The City is the major Port landowner. Much of this property however, has been leased to other parties. The City owns the 16 acre small boat harbor and provides a part-time harbor master to manage it. The City owns the Pullen Creek Shoreline Park and the recreational vehicle (RV) park. The RV Park's operation is leased to a private party. The City owns the freight transfer bridge by the State ferry terminal and several acres of uplands adjacent to the state ferry terminal and the small boat harbor. The City also owns several blocks and partial blocks south of 1st Avenue where the City's sewage plant is located.

City Leased Land

In March 1968 the City signed a 55 year lease with the White Pass and Yukon Route (WPYR) Railroad for their use of seventy acres of the waterfront. The WPYR has constructed an ore terminal, ship basin, industrial/tour ship dock, oil tanks and a dock for cruise ship mooring that was just completed in June 1990. The WPYR is presently transferring the part of this leased area that contains the

ore terminal to Curragh Resources (or a subsidiary titled Selawik) for use of area. The Alaska Industrial Development Authority (AIDEA) may also be involved in this lease transfer.

Another large parcel was leased to the State Department of Transportation and Public Facilities (DOTPF) in 1962 for the State ferry terminal. This lease is valid as long as the property is used for a ferry terminal, after which it reverts back to the City. The DOTPF operates and maintains the ferry terminal and dock at this site. In 1978 the City entered into a joint agreement with the DOTPF, to share use of the floating dock and to allow the City to construct a transfer bridge for freight.

Privately Owned Land

The WPYR owns a small parcel adjacent to the pedestrian corridor leading to the State ferry dock. Temsco Helicopters currently has a lease with WPYR to use this area as a helipad. The WPYR also owns the seven acre cargo and cruise ship dock at the south end of Congress Way.

Malcolm Moe owns a small parcel within Pullen Creek Park, that the City may wish to acquire. Some of the blocks and partial blocks south of 1st Avenue are privately owned.

State Owned Land

The State may own some DOTPF managed land southeast of the airport runway in Block 41. City records show this as "tidelands". However, the tidelands were to have been surveyed as part of ATS No. 4 and transferred to the City. No assessments have been made on this land or taxes paid. Title research is necessary to confirm land ownership in this area.

WPYR Railroad Right-of-Way

Land ownership on the eastern part of the AMSA is not clear, between ATS No. 4 and the WPYR railroad tracks. No ownership is designated for this area on Figure 4. In a 1909 right-of-way plat for the WPYR, the federal government had given the railroad a right-of-way that measured 100 feet on either side of the railroad track centerline. In 1914 a court case was filed to clarify the location of railroad right-of-way and certain city lots. Later lawsuits involved the power company and the Mill Lot and Moore Lot. When Westours acquired the site for the Westmark hotel, the title established a 50 foot railroad right-of-way on either side of the tracks in this area. Land ownership in this area is further confused by Congress Way. Congress Way was reportedly originally constructed during the World War II. It is not clear what the right-of-way relationship and land ownership situation is for that part of Congress Way around Pullen Park. Another problem has to do

with the ATS Survey No 4 conducted in January of 1968. When ATS No. 4 was surveyed it was tied into a monument on Yakutania Point rather than the townsite. This further confused land ownership in this part of town because the surveyed relationship between ATS No 4, Congress Way, the railroad right-of-way and the townsite is not clear. Both legal and title research are needed to clarify land ownership in this area.

SKAGWAY RIVER AMSA

Introduction

Principles governing river and adjacent upland ownership are explained in detail below. Using these principles together with plat research and an estimate of the present line of ordinary high water, a map was developed (Figure 5) showing River and adjacent upland ownership in the Skagway River AMSA.

River Ownership

Ownership is often confusing in river areas. The State of Alaska owns the water, and usually the riverbed beneath the water, in navigable waterways. The Skagway River is a navigable waterway. In the AMSA area, the State owns both the River and the riverbed beneath everywhere except in U.S. Survey 176. In U.S. Survey 176, the State owns the water, but the adjacent landowner owns the riverbed beneath.

The landowner owns the uplands adjacent to the water. However, it is often unclear where river water and State ownership really begin and end. The line of ordinary high water (OHW) (sometimes called a meander line on surveyed plats) is the line between the uplands (private ownership) and the river water (State ownership).

When an individual buys property adjacent to a river, the line of OHW shown on the plat at the time of purchase legally establishes where private and State ownership begin and end. However, as the river moves naturally and gradually through time, the line of OHW moves. Thus, the line of ownership between the State and the adjacent landowner is not constant. In fact, title to land adjacent to rivers sometimes carries a clause stating that the title is subject to any rights of the public and governmental bodies to any land or water below the line of ordinary high water. These concepts are explained more clearly below. The details are important because a comparison of the estimated present line of OHW with its location when property was surveyed and purchased, shows that it has moved in several places in the AMSA.

If a river moves over what was once uplands, the State can simply "assert" ownership, based on the present line of OHW. The State has this right because of the strength of the public trust doctrine - the idea that property rights to important environmental resources such as water, reside in the public and that the government and its agencies simply act as trustees for the public. After the State asserts ownership, an individual who disagrees may challenge the State's assertion by filing a lawsuit. If this occurred, the burden would be on the State to prove that the line of OHW is where the State asserts, and that the change occurred gradually and naturally through time. If, as a result of court proceedings, the State's assertion of ownership was affirmed, the State could then acquire quiet title to the water and bed beneath.

If an area that was once beneath river water and thus owned by the State, has naturally and gradually risen or "accreted" above water level, then the adjacent upland owner may try and acquire fee simple title to it. The adjacent upland owner must have the new line of ordinary high water surveyed to show that the change has occurred gradually and naturally. The upland owner may then bring quiet title action against the state to acquire fee simple title to the land. The burden of proof is on the State to show that the land had not accreted.

Areas within the AMSA where the State may have the right to assert ownership include portions of U.S. Survey 1394, 176, 1805, and 994. Areas within the AMSA where the adjacent upland owner may have the right to new land through accretion include Lots 21-27 of U.S. Survey 3312.

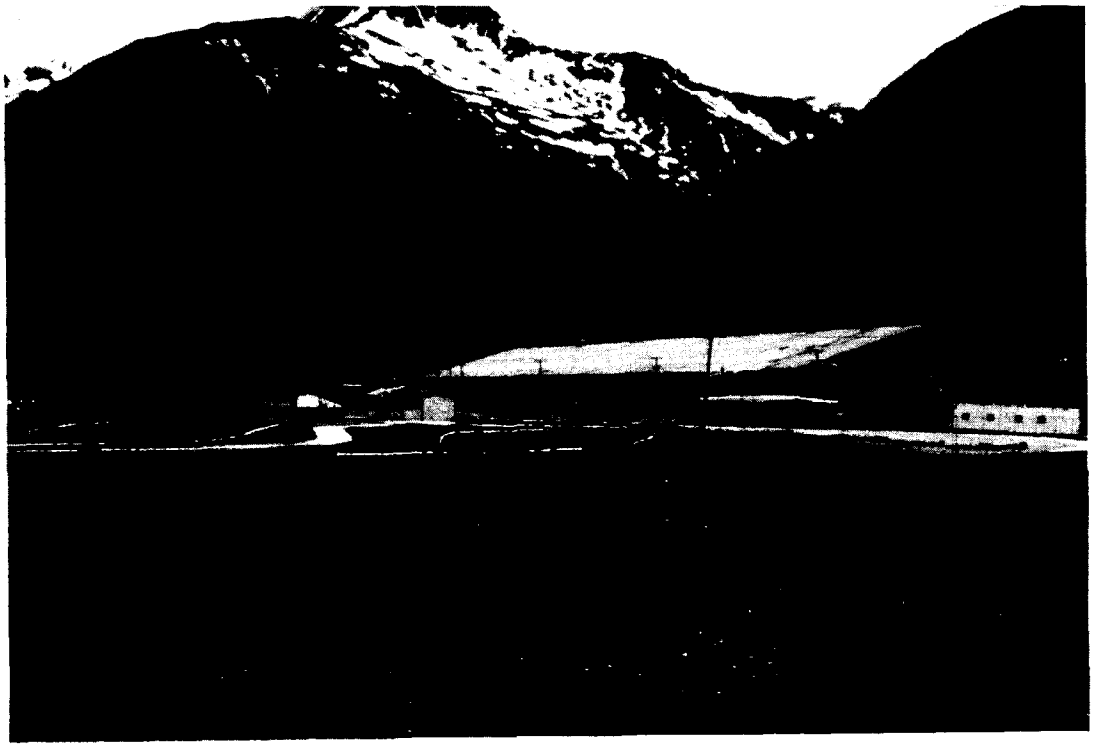
Similar principles apply to islands in a river. If a river island has been created through gradual and natural accretion, a "partition line" is established and it belongs to the State. If the island was once part of the uplands but the river cut in and isolated the new island from the uplands, then the island may still be owned by the adjacent upland owner.

Adjacent Upland Ownership

Uplands adjacent to the Skagway River are both publicly and privately owned. Public owners include the City of Skagway, State of Alaska, State of Alaska lands that have been selected by the City as part of their entitlement under the Municipal Selection Act (AS 29.18), and the U.S. Forest Service as part of the Tongass National Forest. The large private land owners in the AMSA include the White Pass and Yukon Route Railroad, Hunz and Hunz Enterprises, Artic Insulation, Rosemary Lillegraven and the Catholic Church.

The State owns the airport and land adjacent to it, property near Liarsville and Lots in U.S. Survey 3312, Tract A, and manages Dyea Road and the U.S. portion of the Klondike (Skagway-Carcross) Highway.

PORT OF SKAGWAY AMSA RESOURCE INVENTORY



The ore terminal at the Port with upland staging area in the foreground. *photo by Barbara Sheinberg*

PORT OF SKAGWAY AMSA RESOURCE INVENTORY

INTRODUCTION

All coastal district management plans and AMSA plans are required to have a resource inventory. The purpose of the resource inventory is to review the physical, biological and socio-economic features and resources of the area. A thorough inventory of the area's resources provides the background and context for analyzing the use and management of those resources.

The Skagway Coastal Management Plan (SCMP) provides a detailed inventory of the physical, biologic and human resources in the area. This Port of Skagway AMSA focuses on the Port area and provides additional resource inventory information specifically about the Port.

PHYSICAL and BIOLOGIC ENVIRONMENT

General Setting

The Port of Skagway is an area of about 100 acres of fill that lies between the mouth of the Skagway River and the steep mountain embankment bordering the east side of town. The waterfront is in Taiya Inlet, which drains into Lynn Canal.

Geology

Skagway is located within the Coast Mountains that stretch from California to the Alaskan Peninsula. The Coast Range is a broad belt of interconnected mountains formed by volcanos and glaciers. The most recent glacial activity is estimated to have ended between 12,000 and 13,000 years ago. As the glaciers retreated deep bays and channels, such as Taiya Inlet, and steep sided valleys were carved. Taiya Inlet is a narrow fiord, only two miles wide at its breadth.

The intertidal area by the Port is composed of deltaic deposits (sandy gravel, gravelly sand, shell fragments, sand and silt). This is covered by alluvial river deposits and by man-made fill.

Bathymetry

The bathymetry of the Taiya inlet is unique: it is more than three times the depth of other estuaries of Lynn Canal. Depths range from 200 feet to more than 1400 feet. Because of its depth the inlet has a lower deep water temperatures than any other area inlet. In addition, its deep water oxygen values are higher due to an underwater sill located at the southern end of the inlet that separates Taiya Inlet waters from the Pacific Ocean waters.

The average bottom depth off the Port and Skagway River areas is about 84 feet, increasing to between 120-140 feet by one quarter of a mile offshore. Local bathymetry of the Port area is illustrated on Figure 6, which shows that at approximately 100 feet off the small boat harbor breakwater the bottom is 20 feet below the mean low low water (MLLW) line. At about 120 feet, by the uplands staging area between the two WPYR docks, the bottom is 40 feet below the MLLW.

The extreme tidal range at Skagway is approximately 25 feet. The tidal range is illustrated in Table 1 below.

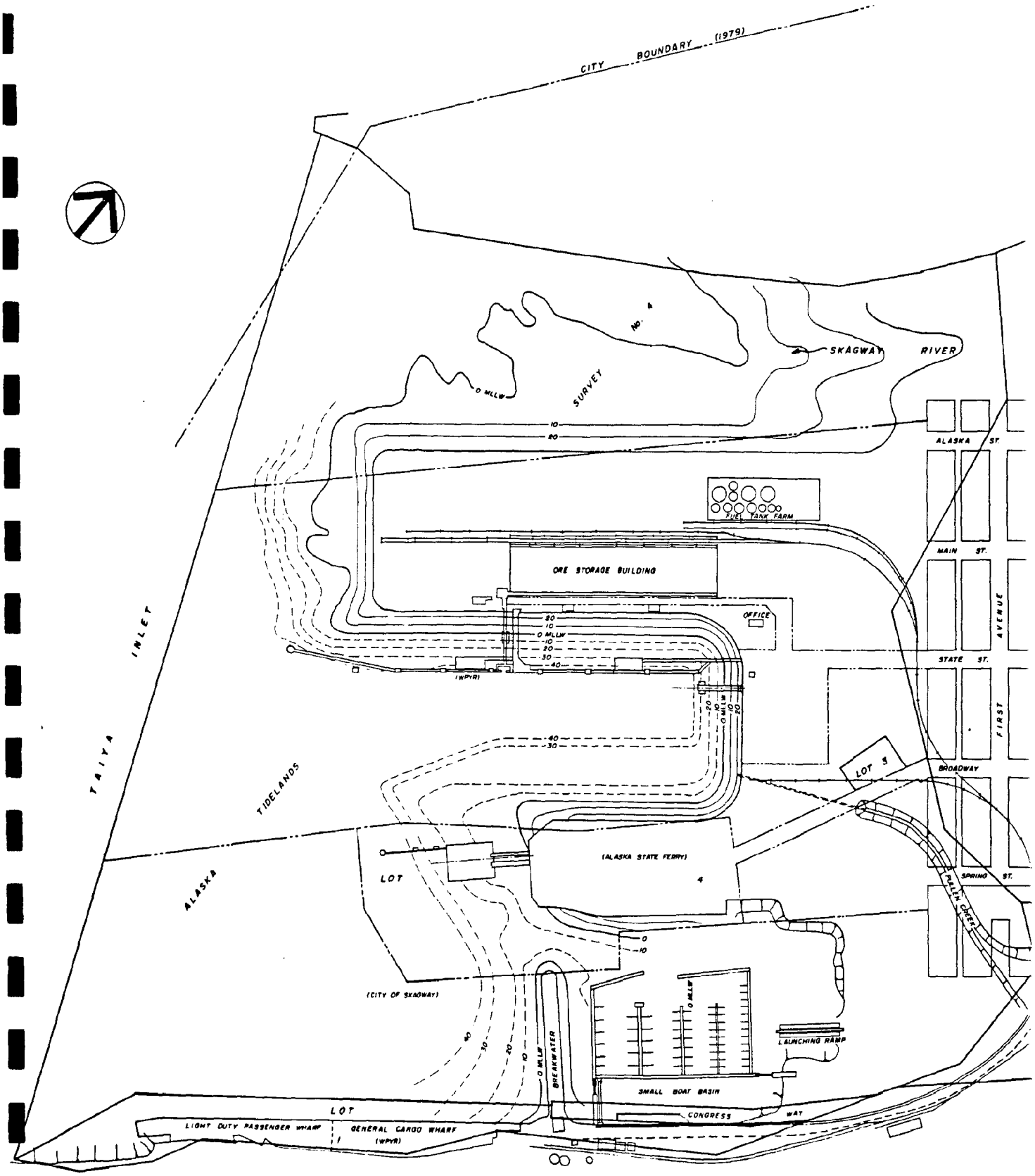
TABLE 1 - APPROXIMATE TIDAL RANGE AT SKAGWAY
(from the Skagway Coastal Management Program document)

	Feet
Extreme High Water	20.6
Mean High Water	15.7
Mean Tide Level	8.7
Mean Low Water	0.0
Extreme Low Water	-4.6
Total Tidal Range	16.8

Hydrology

Port waters are part of Taiya Inlet. Taiya Inlet runs north - south for 17 miles from the mouths of the Taiya and Skagway Rivers to Taiya Point, where it joins with Chilkoot Inlet. Taiya Inlet is an estuary of Lynn Canal. It is classified as an estuary because of the dilution of seawater with freshwater from land drainage and runoff. Taiya Inlet has very low salinity levels because of this freshwater dilution.

FIGURE 6 - BATHYMETRY OF THE SKAGWAY PORT



SITE PLAN
Port of Skagway as existing, 1987

0 50 100 200 400 Feet

Fish, Birds and their Habitat

Marine life in the Port area and Taiya Inlet has not been extensively studied. The nearest surveys of primary, invertebrate, and vertebrate marine life were made in Berners Bay and Auke Bay, south of Taiya Inlet in Lynn Canal.

The intertidal and subtidal zones of Taiya Inlet contain invertebrates and vertebrates which contribute to its overall productivity, including clams, cockles, and mussels. Fishery resources in upper Taiya Inlet do not support a commercial fishery and only support a modest subsistence and sport fishery. The success and popularity of the sport fishery has been growing recently though. This is due to events such as a sports fisherman catching a 50 pound king salmon early in the summer of 1990. Offshore the tanner crab and pink shrimp are the most abundant of those species, but they are generally not present in commercial quantities. There is a limited commercial tanner fishery in Lower Taiya Inlet and Nahku Bay that is managed by the Alaska Department of Fish and Game (ADFG).

The most valuable finfish species present in Taiya Inlet include: Dolly Varden, steelhead, true cod, rockfish, flounder, sole, halibut, coho salmon, chum salmon, humpback salmon, and possibly chinook salmon. Salmon spawning occurs in freshwater rivers and creeks. Efforts are underway to increase the salmon species through hatchery enhancement. Discussion of proposed enhancement efforts that do not involve hatcheries are found in the " Fisheries" section of the Resource Analysis. Minor salmon smolt migrations and adult salmon returns occur in the Taiya Inlet between June 1 - August 31. Local residents sport fish for limited hooligan, dolly varden, salmon, halibut, crab and shrimp.

Larger marine mammals found in Taiya Inlet include seals, sea lions, whales, and porpoises. There are no major concentrations or rookeries.

The tideflats, stream banks and channels, and wetlands form important feeding and resting areas for waterfowl and other birds. The exposed tideflats around the Port contain the following types of vegetation: beach ryegrass, bluejoint, beach pea, goosetongue, reed bent grass, fescue grass, beach lovage and sedges. The major migratory route for waterfowl and seabirds is south of the area in Lynn Canal and the Chilkat Valley. However, some birds, listed below, do feed in the area.

TABLE 2 - WATERFOWL AND OTHER BIRDS IN SKAGWAY

(updated version of a table from the Skagway Coastal Management Program document)

Mallards	Green Winged Teals	Widgeons
Pintails	Shovelers	Canadian Geese
Goldeneyes	Buffleheads	Scoters
Scaup	Mergansers	Harlequins
Oldsquaws	Gulls	Cormorants
Murres	Sandpipers	Plovers
Blue Grouse	Rufous Hummingbirds	Stellar Jays
Ruffed Grouse	Ravens	Ptarmigan
Magpies	Crossbills	Chickadees
Juncos	Bald Eagles	Blue Herons

HUMAN ENVIRONMENT

Role of the Port

Skagway's economy is directly linked to its strategic location at the northern terminus of Southeast Alaska's "inside passage". Its deep water, ice-free port serves as the tidewater trans-shipment point into Interior Alaska and the vast Canadian Yukon Territory. The Port of Skagway has served an important function in the economies of both Alaska and the Yukon since the Klondike Gold Rush in the 1890s. During the past decade, the Port evolved as an important terminus for both cruise ship operators and the Alaska State Ferry System. The year round opening of the highway link between the cities of Whitehorse and Skagway in early 1986 changed regional transportation patterns and opened up new opportunities for the Port to be used for inbound freight and outbound product shipment.

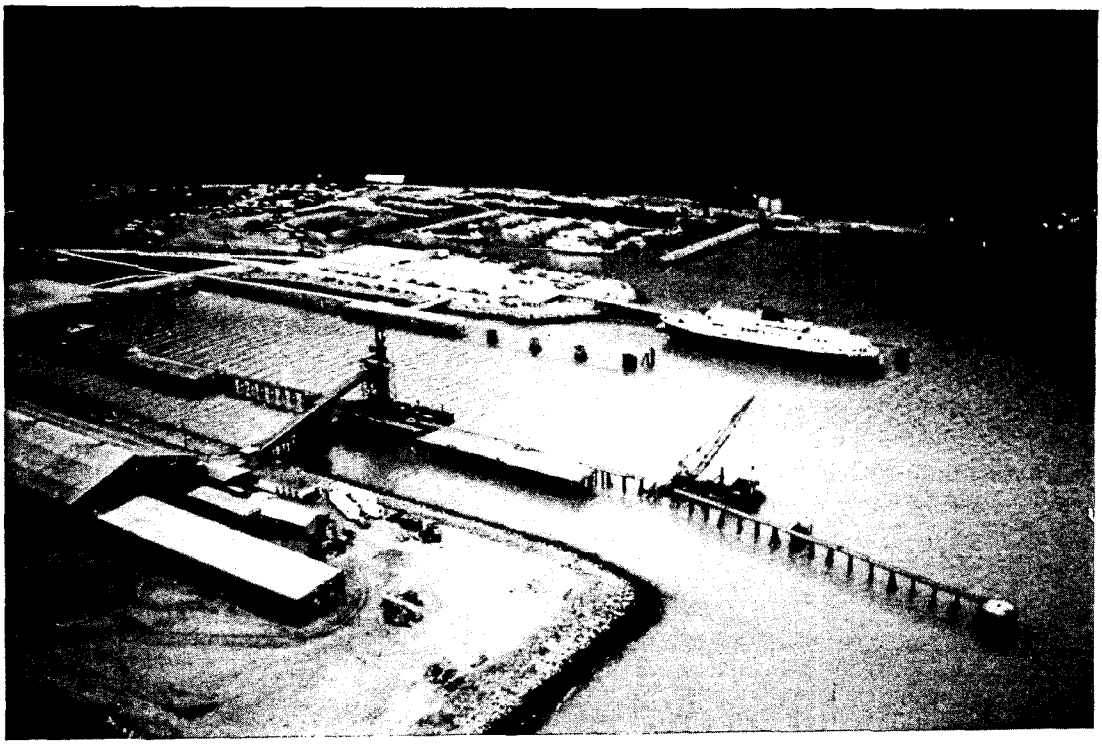
Trans-shipment Use of the Port

The Port of Skagway is the most heavily used part of town. The trans-shipment industry is singly the most important sector within the Skagway economy. The flow of people and goods, products and resources to and through the City drives the local economy.

Skagway is one of the few Alaskan cities that enjoy all three major types of transportation infrastructure within its community: land, sea and air. Given its

geographic location at the head of Southeast Alaska Inside Passage, the City has, from its beginnings as a major staging area for the gold rush at the turn of the century, defined its very existence as an international transportation hub. At the present time, the community is connected with the interior by hard-surface road, open year-round to unrestricted traffic. Its airport provides air linkage with other southeast communities, including the international airport in Juneau. Skagway's waterfront provides the linkage between several types of water transportation systems and the road system, resulting in the potential for the lowest costs for the shipment of goods and materials between southern Canada, Puget Sound and the Pacific Rim to the south and interior Alaska and northwest Canada to the north.

Trans-shipment use through the Port of Skagway is summarized on Tables 3 and 4.



. Close-up of the Port area (June 1990). An Alaska State ferry is in dock. *photo by Barbara Sheinberg*

TABLE 3 - PORT OF SKAGWAY USE

	1970/71	1976[1]	1986/87	1989
General Freight[2]	60,000		30,000	45,000[4]
			25,000[3]	25,622
Concentrates				
-New Imperial Mines	25,000			
-United Keno Hill	95,000		15,000	
-Faro Mine	425,000		500,000	560,000[5]
Asbestos - Cassier	60,000			
- Clinton	60,000			
Petroleum Products	136,000		102,000	82,540[6]
TOTALS (tons)	861,000	800,000	577,000	713,162

1 No Tonnage breakdown available.

2 General freight handled by WPYR vessels including loose unitized or containerized cargo. In 1986/87, approximately 2500 containers were handled inbound and outbound through the Port by WPYR.

3 General freight including loose, unitized and containerized cargo handled by others (mainly Alaska Marine Lines) using the floating ferry dock and city transfer bridge. About 1,250 containers were used for this movement. From Sept/86 to July/87 some 5000 tons of petroleum products were also handled over the transfer bridge.

4 This includes freight and petroleum products shipped through the Port by WPYR, Alaska Marine Lines and via the State ferry.

5 The 1990 estimate for ore to be shipped through the Port is 650,000 tons.

6 The total of 82,540 tons is equal to 26,000,000 gallons. This includes 22 million gal. delivered to Canada, 3 million gal. used in Skagway for the State ferry and 1 million gal. used locally in the City.

Data from 1970-1987 is from the 1988 Reid-Crowther report. Data for 1989 was obtained by this Plan's author.

TABLE 4 - VESSEL ACTIVITY AT THE PORT OF SKAGWAY

Type of Vessel	1975	1986/87	1989
Barges (WPYR)	50	25*	25
(non WPYR)		25	52
Ore concentrate vessels	26	18**	24
Petroleum barges	20		***
Cruise Ships	100	265	153
Alaska State Ferries	246	246	265
TOTAL VESSELS	442	579	519

* One vessel presently calls at Skagway that is partially converted to carry bulk liquids. WPYR commissioned a second, similarly converted vessel, in March 1988.

** Larger ore carriers are now calling at Skagway compared to 1975.

*** All petroleum products came into the Port on the WPYR vessel Frank H. Brown. Thus, petroleum and general freight barges are now combined.

Data from 1975-1987 is from the 1988 Reid-Crowther report. Data for 1989 was obtained by this Plan's author.

Air, Land and Water Quality

Land and water quality have recently received much attention in the Skagway area. Lead/zinc ore was transported from the Faro mine in the Yukon to Skagway by railway from 1967 to 1982. Since 1985, the ore has been shipped via truck. The trucks arrive in Skagway and travel down State Street to the port approximately every 30 minutes 24 hours a day 362 days a year. Ore is transported as a lead/zinc "concentrate"; a product with the consistency of gritty talcum powder containing up to 62 percent lead, primarily as lead sulfide (galena, PbS). The ore is stored in a large warehouse on the dock and loaded onto ships for transport to oversees ore smelters. The empty ships arrive about every 14 days and are loaded over a two or three day period and then depart. Reportedly, it was a common occurrence in the past, for workers at the warehouse to sweep ore off the dock into the harbor. Also, many residents observed windblown ore spread around the warehouse site and off into the adjacent south part of town.

Departments of Environmental Conservation (ADEC) and Health and Human Services (H&SS), the U.S. Environmental Protection Agency (EPA) and the responsible parties. Lead contamination has been found in the soil in parts of the town, at the ore terminal, and in some marine sediments and marine organisms.

Soil testing was conducted in 1988 and 1989. It showed localized lead contamination in the immediate vicinity of the ore terminal, along the railroad tracks and along State Street. The clean up involves removal of the contaminated soil and either treatment at a wash plant in town or is shipped back to the mine site. Contaminated material treated in town is separated by size - the gravel and sand is washed and a sludge is left behind. The sand and gravel are tested to ensure lead is lower than 1000 parts per million, (the high end of the 500-1000 ppm level recommended by the EPA for residential soils). The contaminated sludge is then trucked back to the Faro mine for treatment.

Blood samples were collected from the local population in 1988 and 1989. The testing of these samples indicated that no public health hazard exists. A cautionary lead level in the blood established by the Center for Disease Control is 2500 micrograms per liter. No children had a level higher than 15 mg/dl. Only one adult worker at the ore terminal had a level higher than 21 mg/dl. The conclusion from the final 1989 H&SS report was that, "Based on results of all the testing and findings, the community of Skagway does not have a serious health problem from lead. The contribution to the body burden of lead from the ore is minimal. Risk from exposure to lead ore can not said to be zero, but the contribution to the body burden of lead among Skagway residents is so low as to constitute no basis for public health concern."

A program to test for lead contamination of marine sediments and marine organisms in the vicinity of the ore terminal began in 1989. A report from 's contractors explaining test results is due out in the summer of 1990. Reportedly some sediments and marine organisms, such as mussels, are contaminated. The problem has not yet been analyzed in enough detail to determine the least environmentally damaging method to deal with this type of contamination.

Hatchery and Fish Enhancement

Skagway residents worked with the Alaska Department of Fish and Game (ADFG) Division of Fisheries Rehabilitation, Enhancement and Development (FRED) to create a small salmon hatchery and sport fishery in Pullen Creek in 1980. A $30,000 legislative grant, donated property and equipment by WPYR, and volunteer efforts of many of the residents facilitated the actual hatchery construction in 1982. Hatchery goals include teaching children about fishing, biology and science and providing a public area for fishing and fish viewing.

The Skagway City Schools operate the hatchery under Scientific-Educational Permit #85-133. The project began with pink salmon because their shorter life history provides returns in just two years. The first return provided a 200,000 pink

PORT OF SKAGWAY AMSA
RESOURCE ANALYSIS and POLICIES

The Pullen Creek and Recreational Vehicle Park in the Port area. *photo by Barbara Kalen of Dedman's Photo Shop*

PORT OF SKAGWAY AMSA RESOURCE ANALYSIS and POLICIES

INTRODUCTION

All coastal district management plans are required to have a resource analysis. In the resource analysis section, the uses and activities that occur in the area are analyzed, with special attention to existing and potential conflicts. The resource analysis section of this plan reviews the uses and activities in the Port area and assesses current and anticipated use conflicts for Port resources. A thorough analysis of uses and issues naturally leads to a discussion of the policies that will be applies to resolve these conflicts and guide resource management. Thus, the Port AMSA Plan's enforceable policies follow each issue analysis.

Because the following resources or uses of the ACMP are not significant within the Port of Skagway AMSA, policies have not been developed for them: energy facilities, timber harvest and processing, mining, geophysical hazards, subsistence, and historic, prehistoric and archaeological resources. In the event that a project was proposed that related to one of these issues, the relevant policies from the Skagway Coastal Management Program would be used.

The policies developed in this Port of Skagway AMSA Plan replace both the ACMP State standard (unless the state standard is specifically adopted) and the policies found in the SCMP. This Port AMSA Plan contains a detailed inventory and analysis of the resources, uses and activities in the AMSA area. As a result, the City now has very specific policies to be applied within the AMSA boundary. Management of existing and future land and water use is discussed in this section and shown in Figure 7.

A. WATERFRONT DEVELOPMENT

Analysis

Most of Skagway's primary economic activity accrues from its Port. The City's economic future is closely tied to this facility. The Port of Skagway is the busiest and most heavily trafficked part of town. Visitors arrive on cruise ships and ferry boats. Freight, petroleum supplies and ore shipments cross the industrial docks. Commercial, sport and recreational fishing occur in the area. These varied uses share the Port's limited space. Ideally different users should be separated from one another for safety and aesthetic reasons. However, land use patterns have

not developed ideally, due in part to the reality that economically, most docking facilities cannot be built for a single purpose.

A management plan for the Port of Skagway which includes an Existing and Future Land and Water Use map (Figure 7) has been developed based upon an analysis of current and predicted future Port land use, space requirements for docks and upland staging facilities, a review of natural resources and constraints of the area and on public sentiment. The Plan's goals and policies and the map shown in Figure 7 will be used to guide future development and investment in the Port area. Because of limited working waterfront space, the Plan requires that Port land be reserved for water-dependent and water-related industrial and marine related commercial uses. Logical areas for differing port uses are designated thereby making land availability predictable for the general public, developers and investors. The Plan's land use designations and policies also seek to consolidate facilities where possible and enhance the compatibility between uses in the crowded Port area.

The Plan specifies that approximately seventy-five percent of the Port be devoted to marine industrial and marine transportation uses. Both actual dock space as well as upland staging areas to be used for these purposes are shown in Figure 7. The only non-water dependent or water-related existing use in the area is a helipad. The Plan recommends that the helipad eventually be relocated. Public access to the waterfront is allowed, but only when public health and safety can be protected. Since the area is readily accessible to both residents and tourists, the visual impact of both buildings and operations must be considered during development and operation. As an example, new dark brown metal sheeting for the ore terminal is soon to be installed. This color will make the terminal more compatible and in harmony with the natural surroundings. Special attention to access and visual impact will be given to sections that are devoted to transporting people, for example the State ferry terminal and cruise ship docks. In addition, visual barriers and noise buffers between the industrial area and the designated pedestrian areas of the Port receive special attention. The boundary and buffer between the Skagway River and Port AMSAs should be improved where possible to segregate industrial use and impacts from river habitat and environment.

The small boat harbor and the areas immediately north and east are designated for expanded small boat uses and for marine and fish related commercial development. Small boat haul-out, seafood processing, ice machines, boat repair and fishing supply stores are logical uses for these areas. Immediately west and north of the small boat harbor is an area designated for a potential floating dock and marine-related uplands staging for both the potential new floating dock and the City's existing freight transfer bridge. The transition between industrial related uses and fish and marine commercial uses will occur somewhere in the upland area north of the small boat harbor. Several areas possible for dredge and fill or piling and king (Figure 7) will create more usable uplands to accommodate both types of growth. Waterfront access and improved pedestrian amenities make good sense for this area since both travelers and residents are often drawn to the charm of boat harbors.

The Pullen Creek Shoreline Park (itself a 1983 AMSA) is part of a larger pedestrian-recreation Port oriented area. This area includes the pedestrian corridor to the ferry terminal and a proposed 25-50 foot wide pedestrian walkway along the eastern part of the present RV Park and a portion of the present small boat storage/parking area along Congress Way. The plan calls for the eventual relocation of the RV Park since it is not a water-dependent or water-related use. Public access to Pullen Creek, its spillway and the shoreline are also emphasized. A proposed new k area on the east side of the small boat harbor that is slated for marine and fish businesses is designated for pedestrian enhancements. In addition, the WPYR cargo dock is designated for pedestrian enhancements. All of these pedestrian-recreation areas are to receive amenities such as windbreaks, banners, benches, picnic shelters and areas, interpretive displays, bike paths, flowers, trees and other landscaping.

The portion of Pullen Creek that is within the AMSA boundary is protected by a 50 foot wide strip on either side of the creek where development is prohibited. A pedestrian path and amenities are allowed here provided that there will be no adverse impact to Pullen Creek and its hatchery and fish passage uses. The new 50 foot buffer requirement means all or a portion of the city's access road next to the RV Park will be relocated because it is presently within this 50 foot buffer. Possible new access routes to the staging area are shown in Figure 7.

A priority at Pullen Creek is the popular and successful hatchery program. Pullen Creek water quality and quantity must be suitable for hatchery use. The only type of development permitted in this area other than recreational or pedestrian related use is a new hatchery facility, and only if the design of the facility is in keeping with the nature of the area.

Both the Pullen Creek area and the larger recreation-pedestrian area described in the paragraphs above are logical targets for amenities that will be required of waterfront developers by the City's zoning ordinance at 19.06.090.

Policies

A-1 Water-Dependent and Water-Related Activities.
In planning for and approving development plans in the Port of Skagway AMSA, the City, State and federal agencies shall give priority in the following order to:

a) water-dependent uses and activities;
b) water-related uses and activities; and,
c) uses and activities which are neither water-dependent nor water-related for which there is no feasible or prudent inland alternative to meet the public need for the use of activity.

A-2 Mitigation.
All land and water uses and activities in the Port of Skagway AMSA shall be conducted with appropriate planning and implementation to mitigate potentially

adverse effects on the following resources or values of local, State or national importance:

a) air and water quality;

b) fish populations and their habitats by Pullen Creek and the mouth of the Skagway River;

c) use of the small boat harbor,

d) commercial fishing activities;

d) recreational resources;

The public and private costs of mitigation relative to the public and private benefits to be gained will be considered, in the implementation of this policy. Mitigation shall include and be considered in the following order of preference:

a) ***avoid*** the loss altogether by not taking a certain action or parts of an action;

b) when the loss cannot be avoided, ***minimize*** the loss by limiting the degree or magnitude of the action and its implementation;

c) when the loss of resources and/or associated activities of local, State or national concern cannot be minimized, ***restore or rehabilitate*** the resource to its pre-disturbance condition, to the extent feasible and prudent; and

d) where the loss of important habitat or activities of local, State or national concern is substantial and irreversible and can not be avoided, minimized, restored or replaced, ***compensate*** for the loss by replacing, enhancing, or providing substitute resources or environments. Compensation may be in-kind or out-of-kind and off-site or on-site.

A-3 Multiple Use.

To the extent feasible and prudent, piers, docks, cargo handling, fuel and other storage, parking and other accessory facilities shall be designed and used to minimize the need for duplicative facilities.

A-4 Consolidation of Facilities.

To the extent feasible and prudent, facilities and activities shall be located adjacent to similarly used facilities and areas.

A-5 Compatibility.

To the extent feasible and prudent, activities on and uses of Port of Skagway lands and waters shall be compatible with adjacent land and water uses and comply with designations on the AMSA Existing and Future Land and Water Uses map at Figure 3. Compatibility shall be given priority attention when industrial uses locate adjacent to or share facilities with docks used by tourists and the recreational portions of the AMSA. Compatibility may be achieved by visual and sound buffering and screening.

A-6 Navigational Obstruction.

Uses and activities in coastal waters shall meet the following requirements:

a) Structures and buoys placed in navigable waters shall be visibly marked and placed in a manner to minimize navigational hazards or obstructions.

b) To the extent feasible and prudent, all temporary and permanent developments, structures and facilities in marine and estuarine waters

shall be sited, constructed, operated, and maintained in a manner that does not create a hazard or obstruction to marine transportation or commercial fishing operations.
c) No one use shall effectively exclude other appropriate uses from significant portions of navigable waters.

A-7 Dredge and Fill Requirements.
Projects that require dredging or filling in productive waterfront habitats will be located, designed, constructed, and maintained to:
a) avoid or mitigate significant impacts or destruction of important fish habitat;
b) avoid or mitigate significant interference with fish migration, spawning and rearing;
c) limit the extent of direct disturbance to as small an area as possible;
d) minimize turbidity and waterborne sediment transported away from the dredge or fill site; and
e) maintain circulation and drainage patterns in the area of the fill.

A-8 Disposal of Dredge Materials.
Dredged materials disposed of in shoreline landfills shall, to the extent feasible and prudent, not cause significant alteration of important habitats or significant adverse impacts to shoreline processes. If impacts can not be avoided, they shall be minimized or mitigated. Upland disposal sites for dredge materials shall be contained and stabilized to prevent erosion and leaching into adjacent waters. Offshore disposal of dredge materials shall avoid important habitats and be conducted in compliance with State and federal water quality regulations.

A-9 Visual Impact.
Because the small Port area is very busy and accommodates industry, local residents and tourists, industrial users shall, to the extent feasible and prudent, avoid negative aesthetic and noise impacts from their facilities and activities. Buffering between adjacent uses is encouraged.

ADDITIONAL WATERFRONT DEVELOPMENT POLICIES FOR THE PULLEN CREEK AREA

A-10 Allowed Uses.
The Pullen Creek area and designated surrounding areas as depicted on the AMSA Existing and Future Land and Water Uses map at Figure 3, shall be reserved for fish hatchery, recreation and pedestrian-related uses. These uses shall be protected from encroachment or interference by incompatible uses. These uses shall be enhanced by the provision of amenities such as landscaping, walkways, bikepaths and bike racks, windscreens, water and fish viewing areas, sportfishing areas, picnic areas and interpretative displays. Public access to the Pullen Creek area and the waterfront shall be emphasized to accommodate sightseeing, fish viewing and sportfishing where appropriate.

A-11 Buffering Affect of Area.
The buffer effect of Pullen Creek and the surrounding area serve as a buffer between the industrial waterfront and the City's Historic District shall be maintained and enhanced.

A-12 Pullen Creek Setback.
There shall be a fifty foot (50') wide buffer strip protected from development, measured from the centerline of Pullen Creek, on either side of the Pullen Creek .

ADDITIONAL WATERFRONT DEVELOPMENT POLICIES FOR THE SMALL BOAT HARBOR AREA

A-13 Allowable Uses.
The small boat harbor and designated surrounding area depicted on the AMSA Existing and Future Land and Water Uses map at Figure 3, shall be reserved for boating and fishing uses, including marine and fish related commercial businesses. These uses shall be protected from encroachment or interference by incompatible uses. Uses include, but are not limited to, a small boat haul-out, businesses such as boat rentals, boat repair, marine service stations and marine equipment. Pedestrian-related amenities and public access to this area will be enhanced to accommodate sightseeing and sportfishing where appropriate.

To the extent feasible and prudent, uses that jeopardize the existence or safe operation of small boats shall be prohibited. Any physical or operational loss of the small boat harbor shall be mitigated.

A-14 Avoid Conflict with Small Boat Harbor Uses.
The industrial waterfront zone shall be managed to avoid or minimize conflict with the development and operation of the small boat harbor and marine and boat related commercial activities.

A-15 Shoreline Access.
Marine and fish related shoreline business shall, to the extent feasible and prudent, provide shoreline access for their customers and the general public.

A-16 Visual Impact.
Marine and fish related shoreline business shall not detract from the scenic qualities of the shoreline, shall be compatible in design with its surroundings and shall not significantly block scenic vistas.

B. FISHERIES

Analysis

The Jerry Myers Hatchery is a very popular and successful program. The resource inventory section provides details of the development and growth of the hatchery. The hatchery is now licensed for pink, coho, king and king salmon. In 1989 it was designated the king salmon facility for Lynn Canal. The Jerry Myers Hatchery is a priority use of Pullen Creek and the associated recreation and pedestrian area. It is outgrowing its present facility and a new hatchery building adjacent to the Pullen Creek Park is a possibility. If the design of the building is appropriate and tourist use of the facility is considered, this is a permitted use in this area. The Pullen Creek fish are a major tourist attraction. The Pullen Creek trails, benches, bridges and picnic areas provide the most comfortable and best spawning salmon viewing in southeast Alaska.

The Jerry Myers Hatchery also has the potential to generate revenue. A pink salmon weighs about four to six pounds and is worth about 27 cent a pound or $1.20 to $1.50 each. Two females and one male can produce 3000 fertilized eggs valued at one cent for each egg or about $30 worth of eggs. The students can harvest 200,000 eggs in three days with a value of $2000 on the hatchery market.

The success of the Jerry Myers Hatchery and the nearby at Burro Creek Hatchery has raised the possibility of a commercial fishery in upper Taiya Inlet. The Northern Southeast Regional Aquaculture Association and commercial fisherman want a portion of the State's fish tax money to fund enhancement projects in the Lynn Canal area. In June of 1990 the ADFG proposed a release of 10 million chum salmon fry in Skagway waters near the small boat harbor. However, local residents have expressed concern about a commercial fishery there. They do not want a commercial fishery to negatively impact their sport fish enhancement efforts or sport fishing. There is concern that a commercial salmon opening in Taiya Inlet would net all salmon species, including the popular sport fish raised by the hatcheries.

Policies

B-1 Maintaining Jerry Myers Hatchery.
Maintenance and enhancement of the Jerry Myers Hatchery and its fisheries shall be given high priority in reviewing any proposal that might impact the fisheries habitat, migratory routes, recreational fish harvest, or the ability of the Jerry Myers Hatchery to operate.

B-2 Protection of Water for Jerry Myers Hatchery.
Other land and water uses shall not degrade water quality or quantity below required needs for the Jerry Myers Hatchery.

B-3 Visual Impact.
Aquaculture development and fisheries enhancement shall be located, designed and operated so that aesthetic values of local shorelines are maintained to the extent feasible and prudent.

B-4 Disposal of Fish Wastes.
Fisheries enhancement and aquaculture practices, including disposal of wastes, viscera or fish scrap, shall be conducted so that State water quality and litter control standards are not violated.

B-5 Pullen Creek Spillway.
The Pullen Creek spillway shall be improved so that fish do not have a 16 foot drop onto rocks when they enter salt water. Sportfishing opportunities around the spillway shall be improved. To the extent feasible and prudent, opportunities to rear fish in saltwater at the base of Pullen Creek shall not be jeopardized.

C. HABITAT

Analysis

Development has been ongoing in the Port area since the 1890s. Today, many portions are intensely developed. Nevertheless, future development must protect and maintain habitat values and biologic productivity. Development projects in the Port area must not interfere with the operation of the Jerry Myers Hatchery and area fish migration. The need for a critical habitat study of the Skagway River area is discussed in detail in the Skagway River AMSA Plan. To the extent that critical habitat are identified around the mouth of the river, particular attention will need to be given to any project proposals on the west side of the Port AMSA, adjacent to the river's mouth. The buffering effect of this area between the river and the Port's industrial activity should be enhanced.

Policies

C-1 State Standard.
The Alaska Coastal Management Program Habitat Standard (6 AAC 80.130) is adopted as part of the Port of Skagway AMSA Plan. The shoreline, tidelands and subtidal area of the Port waterfront and the portion of Pullen Creek that is within the AMSA boundary are subject to coastal management program standards.

C-2 Fish Passage.
Development activities, facilities, and structures shall be designed, sited, constructed and operated in a manner that does not impede or interfere with timely access to spawning streams by adult anadromous fish or movements of juvenile anadromous fish.

D. AIR, LAND AND WATER QUALITY

Analysis

Skagway residents want a clean and safe environment for their children. Air, land and water quality standards acceptable to the regulatory agencies and the community must be maintained. Nowhere has this concern been more evident than with the water and soil pollution discovered along the truck and railroad routes and at the ore terminal in the Port.

The City intends to assure that facilities meet air, land and water quality criteria. The Port's industrial users must design and operate their facilities in an environmentally safe manner. Ongoing monitoring of possible violations by State and federal regulatory agencies is encouraged. Residents want adequate separation between petroleum product tanks and Port or river waters. Oil pipelines must be maintained to ensure that no leaks occur. Water quality standards in marine waters and the Pullen Creek area must be maintained.

Development must proceed with caution and safeguards taken to ensure environmental standards are maintained and the public health protected. As an example, when the WPYR's new dock was built in early 1990, pile driving was carefully monitored to ensure that no turbidity occurred that could have stirred up lead contaminated sediments. As part of the ore terminal lease transfer Curragh Resources will make a number of improvements to the facility. Reportedly the driveway area will be paved to make ore dust removal easier and a new efficient system for ore transfer within the terminal will be installed that decreases the spread of ore dust by using a crane instead of a forklift. Safeguards such as these are encouraged by Plan policies.

Policies

D-1 Air, Land and Water Quality.
Notwithstanding any other provisions of this chapter, the statutes pertaining to and the regulations and procedures of the Alaska Department of Environmental Conservation with respect to the protection of air, land and water quality are incorporated into the Port of Skagway AMSA Plan. Water quality shall not be

lowered below State standards on a long-term basis by development or any activity.

D-2 Waste-Water Discharge.
All permits, leases or plans of operation for projects shall require siting, design, construction, and operation to provide reasonable assurance that waste water discharges will meet water quality standards. Where appropriate, such measures shall include, but are not limited to, dikes, catch basins or settling ponds, interceptor drains, planted buffers or other suitable devices.

D-3 Development Considerations.
Development shall incorporate facilities for proper storage, disposal and handling of petroleum products and fuel, solid waste, waste oil, sewage and refuse in accordance with State and federal regulations. Discharge of untreated sewage from boats is prohibited.

D-4 Hazardous Materials.
Storage, transportation, cleanup, and disposal of hazardous materials (as defined in the Hazardous Materials Transportation Act) shall comply with federal, State and local regulations. The City shall be notified of the quantity, and mode and schedule of transportation or storage, when the quantity of material meets or exceeds the threshold quantity set under the Emergency Planning and Community Right To Know Act.

D-5 Storage of Petroleum and Petroleum Products.
To the extent feasible and prudent, new facilities for the storage, processing, or treatment of 5000 gallons or more of petroleum or petroleum products shall be sited a minimum of 1500 feet from domestic water supplies and a minimum of 200 feet from any surface waters. Impermeable berms or basins capable of retaining 110 percent of the tank capacity (or capacity of the largest tank where multiple tanks are separately valved) plus 12 inches of freeboard shall be required to minimize the potential for inadvertent pollution.

D-6 Spill Containment and Cleanup Equipment.
Any petroleum transport, storage, and refueling operation of 2000 gallons or more shall maintain and have access to oil spill containment and cleanup equipment located in Skagway. Personnel trained in the use and maintenance of this equipment shall be available in Skagway.

D-7 Environmental Protection Technology.
To the extent feasible and prudent, equipment and procedures using the most advanced and effective technology for limiting emissions and effluent, and for the storage, handling, cleanup, and disposal of oil and hazardous materials shall be required for industrial, energy, and transportation facilities.

D-8 Cumulative Impacts.
The cumulative effects of new major development on the ambient air and water quality of the City of Skagway will be considered in the review of proposed development projects.

E. TRANSPORTATION

Analysis

Transportation in the Port area has been and will continue to be vital to the city's economic future. The Port area serves freight, cruise, and ore ships, State ferries, day cruise boats, and small recreational and fishing boats. Tourists come to and leave the Port area by boat, railroad, automobile, bus, airplane and helicopter. General cargo and freight, fuel, mining supplies and ore are shipped through the Port. The trans-shipment section of the resource inventory provides numbers and volumes for these various transportation uses.

Port transportation facilities must be improved to ensure Skagway's role as a gateway port to interior Alaska and Canada. Water-dependent and water-related transportation of all kinds is a priority use in the Port. Adequate space for uplands staging to support this use is also required. Continued improvement in ferry service and scheduling is desirable, including development of fast shuttle ferries.

Policies

E-1 Stream Crossings.
Bridges and culverts shall be designed, constructed and maintained in accordance with fisheries conservation practices that minimize habitat disturbance and allow unimpeded fish passage. Roads and trails shall only cross anadromous streams when necessary to provide access as deemed necessary by the City. Phasing of construction shall be done to avoid critical migration periods for salmon and other anadromous species.

E-2 Road and Railroad Location and Maintenance.
Roads and railroads within the AMSA shall, to the extent feasible and prudent, be cited to minimize disruptions to adjacent uses, shall be constructed and maintained to minimize blowing dust and other hazards, and to maximize public safety.

ADDITIONAL TRANSPORTATION POLICIES FOR THE PULLEN CREEK AREA

E-3 Amenities.
The vehicle and pedestrian access route to the Alaska Marine Highway Terminal shall be enhanced with increased landscaping, benches, windbreaks, a bike path and racks and other recreation and pedestrian-related amenities.

ADDITIONAL TRANSPORTATION POLICIES FOR PORTIONS OF CONGRESS WAY

E-4 Amenities.
The portion of Congress Way that is within the small boat harbor-marine commercial area shall be enhanced with increased landscaping, benches, windbreaks, a bike path and racks and other recreation and pedestrian-related amenities.

F. RECREATION

Analysis

Recent development proposals in the Port area have been quite divisive as local residents struggle to reach a consensus on the right mix of economic development and quality of life. The Port of Skagway AMSA boundary was deliberately selected to be large enough that both of these important concerns could be logically accommodated as part of a comprehensive Port plan.

The Pullen Creek Shoreline Park (a 1983 AMSA) is part of a larger pedestrian-recreation oriented space in the Port. This larger area includes the pedestrian corridor to the ferry terminal, the east part of the RV park when it is relocated, a proposed 25-50 foot wide pedestrian walkway along the eastern part of the present RV Park and small boat storage/parking area along Congress Way, and pedestrian improvements to the WPYR cargo dock. The Plan calls for the RV Park to eventually be relocated as it is not a water-dependent or water-related use. In addition, an area on the east side of the small boat harbor is slated for piling and king to create space for marine and fish related businesses. This new marine business area and all the pedestrian-recreation oriented locations described above will be enhanced with amenities such as windbreaks, banners, benches, picnic shelters and areas, interpretive displays, bike paths, flowers, trees and other landscaping. Public access to Pullen Creek, its spillway and the shoreline are also emphasized in this pedestrian-recreation oriented area.

Development is prohibited in a portion of Pullen Creek within the AMSA boundary surrounded by a 50 foot wide strip on either side of the creek. A pedestrian path and amenities however are allowed, provided that there is no adverse impact to Pullen Creek, its hatchery and fish passage uses. The new 50 foot buffer requirement means some portion or all of the city's access road next to the RV Park will be relocated. The Plan designates possible new access routes through staging area in Figure 7.)

Small recreational and fishing boat use are very important to the local residents. These uses are also one sector of the economy that has room for expansion. The recreational and commercial use of the small boat harbor is recognized and slated for growth.

Policies

F-1 Designation of Recreation and Public-Oriented Areas.
The Pullen Creek area, portions of Congress Way, and the small boat harbor within the Port of Skagway AMSA are designated as recreation areas (see AMSA Existing and Future Land Use map at Figure 3). These three areas are off-site target locations for "5% amenities-enhancement funds" collected under the City of Skagway waterfront zoning ordinance 19.08.060.

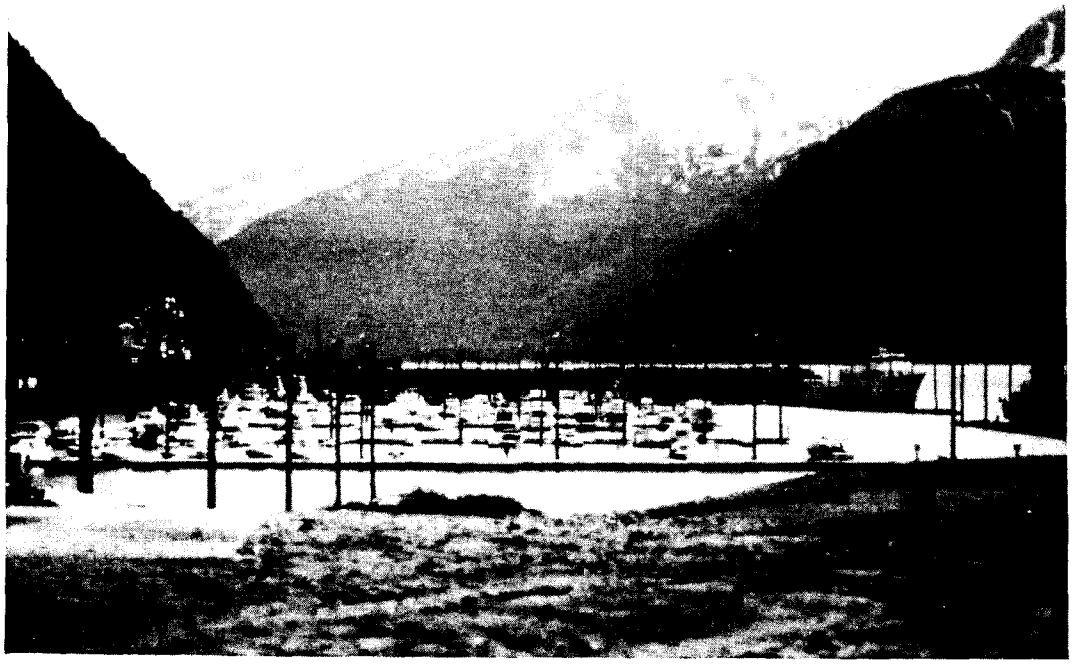
F-2 Protection of Pullen Creek Area Values.
Use of the Pullen Creek area is restricted to fish hatchery, recreation, and pedestrian-related amenities. Public access to the Pullen Creek shoreline for sightseeing, fish-viewing, sportfishing and other recreational pursuits are encouraged.

F-3 Protection of Congress Way Area Values.
Opportunities for public use and access to the shoreline and small boat harbor around Congress Way shall be enhanced. Amenities such as landscaping, broad sidewalks, benches, windbreaks, a bike path and racks, interpretative displays, banners and other recreation and pedestrian-related features shall be established.

F-4 Protection of Small Boat Harbor Values.
Recreational and commercial fishing use of the small boat harbor area are generally compatible and will be maintained and enhanced. Water dependent and related commercial business is encouraged in adjacent designated uplands and the proposed new k area on the east side of the harbor. Public access, visual and pedestrian-related amenities are also encouraged in these areas to the extent feasible and prudent.

F-5 Recreational Development Design.
Recreational developments shall be located, designed, constructed and managed to minimize adverse effects on other appropriate shoreline uses, whether existing or officially planned, and to provide safe, healthy conditions for recreationists.

F-6 Scenic Views.
Recreational and access developments shall blend into the surroundings, preserve or enhance scenic views and vistas, and improve the aesthetic value of the area.



The small boat harbor in the Port. *photo by Barbara Sheinberg*

SKAGWAY RIVER AMSA RESOURCE INVENTORY

Looking north up the Skagway River from the foot bridge. *photo by Barbara Sheinberg*

SKAGWAY RIVER AMSA RESOURCE INVENTORY

INTRODUCTION

All coastal district management plans and AMSA plans are required to have a resource inventory. The purpose of the resource inventory is to review the physical, biological and socio-economic features and resources of the area. A thorough inventory of the area's resources provides the background and context for analyzing the use and management of those resources.

The Skagway Coastal Management Plan (SCMP) provides a detailed inventory of the physical, biologic and human resources in the area. This Skagway River AMSA focuses specifically on the River area and provides some supplemental information.

PHYSICAL and BIOLOGIC ENVIRONMENT

General Setting

Rugged mountains, steep walled valleys with glacial rivers, numerous glaciers and ice fields characterize the geography of the area. The Skagway River and the Taiya River are the two major rivers that drain into Taiya Inlet.

The Skagway River is a braided stream with an overall average gradient of 192 feet per mile and an average gradient of about 40 feet per mile in the AMSA area. The River valley is for the most part a canyon intersected by tributary valleys. The River drains an area of approximately 145 square miles, consisting mainly of steep, partly timbered, mountainous terrain.

Geology and Soils

The townsite of Skagway and Skagway River are located on igneous and metamorphic bedrock. In the Skagway River floodplain this bedrock is covered by an approximately 600 foot thick layer of sediments on top of the bedrock. These sediments include approximately 150 feet of alluvial, deltaic and marine deposits that overlie 450 feet of compact glacial deposits. The glacial deposits are

composed of cobble and boulder sized rubble, sandy gravel and silt. The groundwater table is encountered between five and ten feet below the surface. Sediments below the groundwater table are saturated. Along the River the top surface deposits consist of glacial drift in some places, floodplain deposits and alluvial deposits - gravel, sand, some cobbles and silt. The sorted glacial drift material is good road surfacing material.

The nature of the Skagway River subsurface is described in more detail in material site drilling and testing. Refer to the "Materials Extraction" section of the Resource Inventory chapter for more information.

Hydrology

Skagway River Drainage

The Skagway River drains a vast area that begins in the Coast Range Mountains in the Yukon Territory. Important Skagway River drainage characteristics are summarized in the table below.

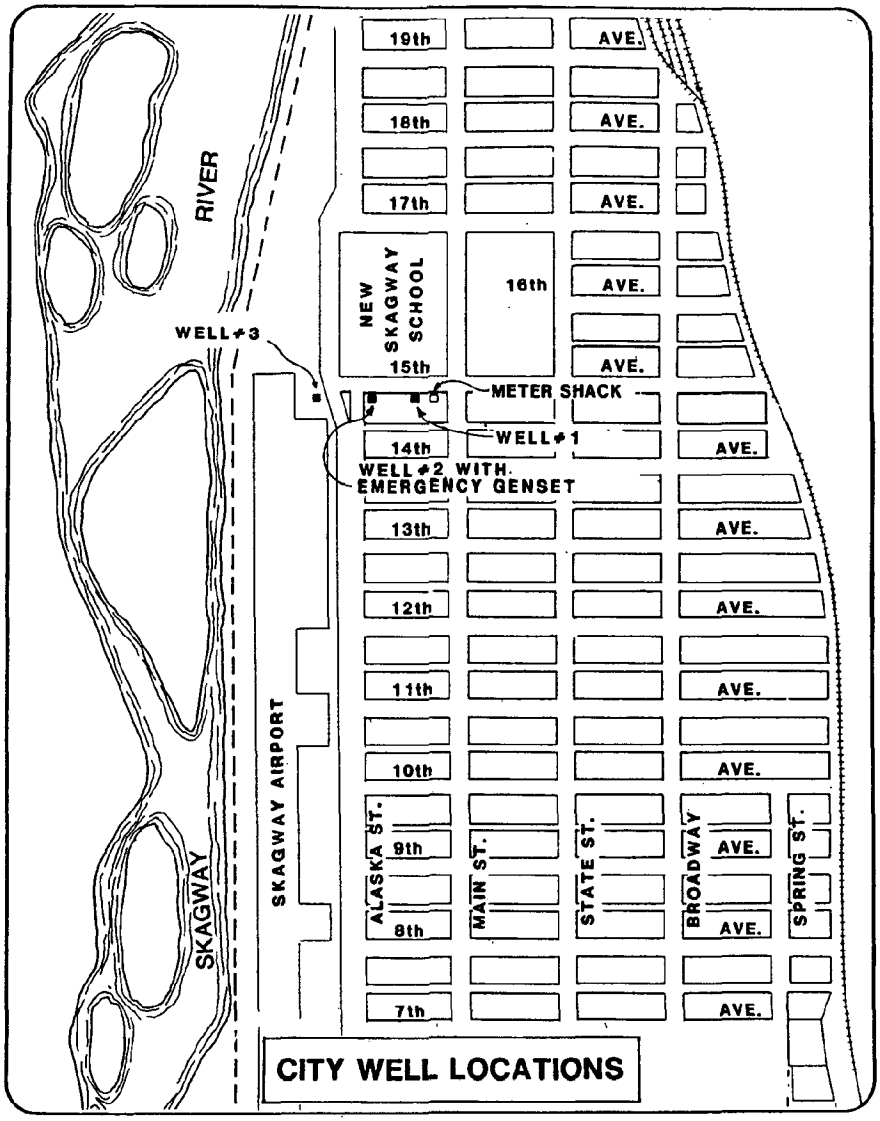
TABLE 5 - DRAINAGE CHARACTERISTIC OF THE SKAGWAY RIVER
(an updated version of a table from the Skagway Coastal Management Program document)

Length:	19 miles
Drainage Area	Appr. 145 square miles
Mean Elevation:	3900 feet
Average Slope:	192 feet per mile
Average slope in AMSA area:	40 feet per mile
Water temperature:	33-49 degrees F
Major tributaries:	East Fork, White Pass
Major Glaciers:	Laughton, Denver, South
Major Lakes:	Summit, Goat
Average Discharge:	500 cubic feet second (low flow of 50 cfs in April- and high flows of 1270 cfs in June-Aug)

Groundwater

Skagway's current drinking water supply comes from three wells located at 15th Avenue that tap a groundwater aquifer in alluvium deposits formed by the Skagway River. The location of these wells is shown below (from the June 1990 Skagway Water Quality Planning Study report by James Montgomery Engineers Inc.).

TABLE 6 - LOCATION OF CITY WELLS
(from the June 1990 James M. Montgomery report)

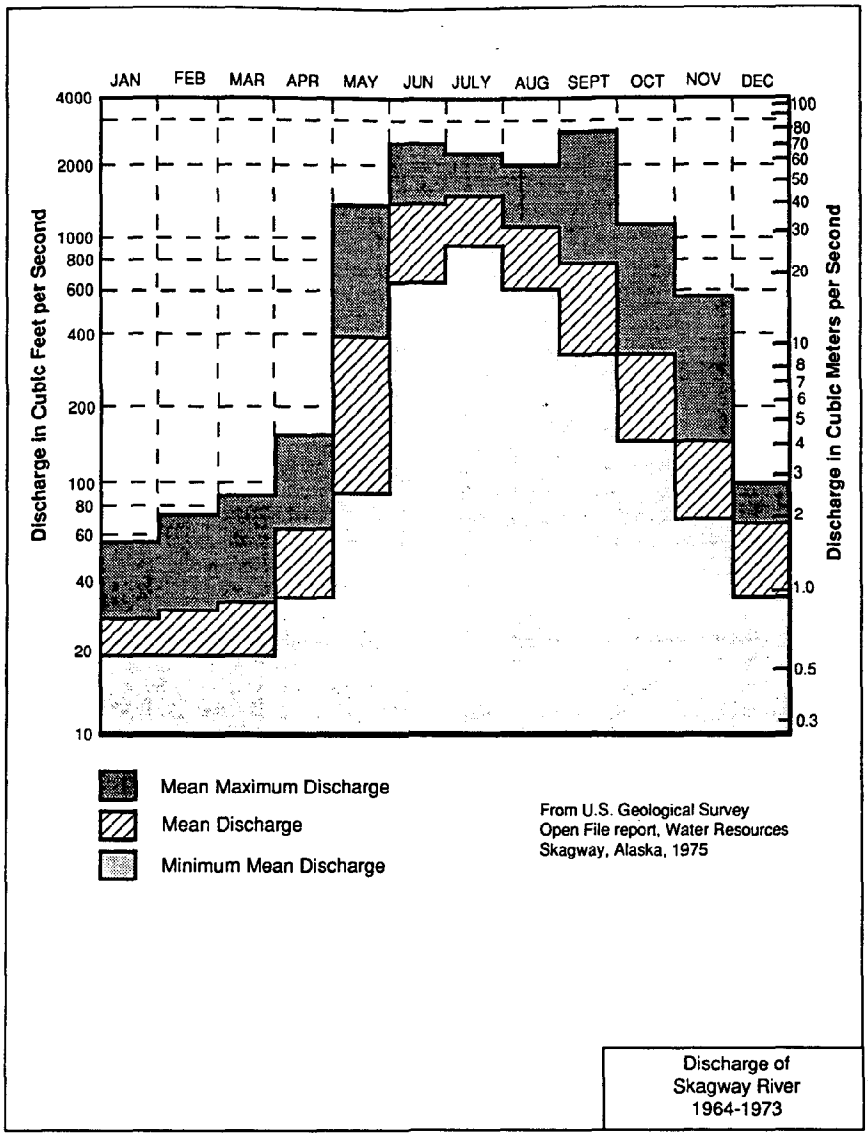


City well No.1 is 80 feet deep, well No. 2 is 75 feet deep and well No. 3 is 120 feet deep. The City began using these wells as its groundwater source in 1966. Areas not served by City water rely on private wells that withdraw water generally from the upper 25 feet of sediments. Water from the Skagway River and its tributary streams enter alluvial deposits to recharge the floodplain aquifer. Additional surface water enters the aquifer as precipitation runoff that percolates downward into the aquifer. Most of the surface water accumulating on paved surfaces and buildings either percolates into the aquifer, is carried away in City storm drains or evaporates. Groundwater entering the floodplain aquifer moves southeasterly through the aquifer toward the inlet.

River Hydraulic Capacity and Flooding

The hydraulic capacity of the Skagway River is of great local concern. The City of Skagway has grown up along the riverbank - the original townsite, City airport and new school are immediately adjacent to its banks. As river waters rise during storms, the possibility of flooding becomes a major concern. To assure that the flooding potential does not increase, development along the River must not decrease the carrying capacity of the River. Data on the Skagway River's water discharge rate is shown in Table 7 on the next page.

TABLE 7 - SKAGWAY RIVER DISCHARGE RATE
(from the June 1990 James M. Montgomery report)



Flooding from the Skagway River may result from heavy rains, rapid snow melt, earthquakes, or the sudden breakout of a glacier-damned lake. Floods usually occur in the autumn after heavy rains and the accumulated snow has melted. In addition, human activity such as control or diversion of waterways or development in the floodplain can magnify flooding problems.

The Skagway River hydraulic capacity and potential for flooding was first addressed by the U.S. Army Corps of Engineers (Corps) in 1940 when a study that resulted in construction of a 1.5 mile dike was completed. That dike extends upstream from the River mouth. It was constructed as part of a harbor navigation project. It is believed the dike can contain a 28,000 cubic feet per second (cfs) peak discharge flood.

Another flood control project to reconstruct and extend the existing breakwater and dikes on the east bank of the River was authorized in 1946. This project was also intended to reconstruct the existing dike at the former tuberculosis sanatorium site. However, this project was never funded.

The Corps, the WPYR Railroad, the State Department of Transportation and Public Facilities (DOTPF) and private property owners have at various times built dikes further upstream, north of the 23rd Avenue highway bridge. These dikes date back to the 1940s. Some were built legally and others were not.

The City's primary protection against flooding is the original Corps dike built in 1940. The location of the dike is illustrated in Figure 8. The dike has been breached several times and significant portions have eroded. At the time it was constructed, the design life was most likely predicted to be 25 years. This means there is daily wear and tear on a structure that is probably to 25 years past its design life. Obviously, this is of great concern to the residents of Skagway.

The Corps completed a new survey of the condition of existing dikes and flood control measures in April of 1990. The City of Skagway has asked the Corps to initiate a reconnaissance study in order to complete a new hydraulic capacity analysis of the River. The new analysis will form the basis of a vision concerning a new flood control project.

Table 8 summarizes data from major Skagway River floods. The U.S. Geologic Survey's (USGS) river gauging station was removed from the Skagway River in September of 1985 due to lack of funding. (The cost to maintain a river station is approximately $20,000. Half of this cost is usually paid by the USGS.)

TABLE 8 - MAJOR SKAGWAY RIVER FLOODS AT 23rd AVENUE BRIDGE

Date	Peak flow Cubic feet/sec	State* Feet-MSL	Remarks
October 1901	35,000	64.4	Assumed equiv.to 1943 flood
September 1919	15,000	61.4	
September 1927	15,000	61.4	
October 1936	15,400	61.7	
October 1943	35,000	64.4	Flood of record
October 1944	30,000	63.4	
October 1949	-------	----	Data not avail.
September 1967	13,000	62.5	

* Average elevation of stream invert is 58.0 feet Mean Sea Level (MSL)

This table is from a January 1975 U.S. Army Corps of Engineers report.

Other Geophysical Hazards

The Skagway area is subject to earthquakes, landslides, erosion, aggradation, and slow geostatic uplift (rebound) of the land resulting from bearing the weight of past glaciers.

Fish, Birds and their Habitat

The ADFG classifies the Skagway River as an anadromous water. This means it provides for the spawning, rearing or migration of fish that spawn in freshwater and spend part of their lifecycle in salt water. The River has a minor autumn run of chums and coho salmon. In the AMSA area, the Skagway River is meandering and periodically floods. This can negatively impact habitat. Flood control efforts and lasting effects caused by the gold rush stampede on and around the River have also altered habitat conditions. As a result of these factors, the River has minimal fishing potential.

Recent conversations with Southeast Alaska ADFG personnel (R. Ericksen, J. Schempf) indicate that the most critical Skagway River habitat for anadromous fish in the summer is the smaller feeder streams that feature alders and other

overhanging vegetation. In winter, the juvenile coho salmon and dolly varden move out of the side streams and into the deeper holes of the Skagway River that do not freeze through. This type of overwintering habitat is critical from October through April or May. In general, areas of the Skagway River that are high, dry and frozen during the winter are not critical habitat areas.

There have not been any recent inventory efforts in the area for fish resources since 1980. However, recent observations have shown that locations with important overwintering or spawning habitat and with enhancement potential include:

1) a stream located opposite the airport near U.S. Survey 3312, Lots 27 and 28, that doesn't freeze through in the winter (R. Ericksen, J. Tronrud),

2) a stream in an old ditch that crosses portions of U.S. Surveys 176 and 1805 where rearing coho were observed (J. Myers/R. Ericksen),

3) a creek by Liarsville where a culvert should be removed and replaced with a larger one to facilitate fish movement (R. Ericksen), and,

4) a pond immediately downstream from the Gold Rush Cemetery where flooding buried a culvert a few years ago that is used by rearing fish (R. Ericksen).

The tideflats, stream banks and channels, and wetlands form important feeding and resting areas for waterfowl and other birds. The major migratory route for waterfowl and seabirds is south of the area in Lynn Canal and the Chilkat Valley However, some birds, listed in Table 2 do feed in the area.

Vegetation

Skagway is located within the coastal spruce/hemlock forest that extends throughout Southeast Alaska. Most of the area forest is considered non-commercial quality. Skagway lost part of its virgin forest to fire shortly after the gold rush era. Along the Skagway River, there are sparse cottonwood and alder trees that are a maximum 24" in diameter. There is also scattered willow brush.

HUMAN ENVIRONMENT

Material Extraction

Sand and gravel resources in the Skagway area come from the Skagway River floodplain, talus slopes, glacial moraines and beach deposits. The Skagway River floodplain provides an easily developed source for the City's material needs. Four

material sites in the AMSA area that have been used recently are illustrated in Figure 8. Three are sources from the River floodplain and one from a talus slope.

Drilling at Material Site 3 (Figure 8) on the east side of the river occurred in October of 1984. At that time the depth of the water table varied from 3.0 to 8.5 feet. Seasonal fluctuation of the water table is to be expected. The drilling showed that the riverbed generally consists of river deposited sand and gravels with 16" to 26" boulders. Material passing from the #200 screen on samples tested ranged from 1 to 4 percent. The average depth of organic soil is approximately 8", but varies in depth from 0-12".

Fish Enhancement

There are no hatcheries in the Skagway River or within the AMSA boundary. However, a variety of fish habitat enhancement efforts do exist. Various culverts have been placed and maintained to aid fish passage. Also, the mining plan for Material Site 3 (Figure 8) calls for the creation of fish rearing ponds as part of the reclamation process. Rearing and other fish enhancement activities can happen here and at the sites described in the 'Fish, Birds and their Habitats' Section of this Resource Inventory chapter.

Air, Land and Water Quality

Air Quality

Skagway is located within a Class II Airshed defined by the ADEC as generally free from pollution but with some industrial use occurring. The narrow Skagway River Valley is the area most impacted by industrial activities. Activities within and near the Skagway River AMSA that have the potential to impact AMSA air quality include: air pollution from ore particulate dust, train emissions, emissions from other industrial users, wood smoke emissions and burning at the landfill site. Contaminated lead ore dust has polluted some soil, marine sediments and organisms. This subject is fully dealt with in the Port of Skagway AMSA. Except for ore dust, most other emissions are considered minor due to prevalent strong blowing winds in the area.

Water Quality

The City's drinking water is provided by an aquifer beneath the Skagway River that is tapped at 15th Avenue. Skagway's water quality is considered good. However, recent City of Skagway and ADEC testing for impurities discovered low levels of seven volatile organic chemicals. Although the final maximum contamination levels (MCL) considered a health risk by the U.S. Environmental

Protection Agency (EPA) are still evolving, it appears that two of the seven that are present in Skagway's wells could on occasion exceed those standards. So far only tetrachloroethylene (which has not been shown to be carcinogenic) has actually exceeded its anticipated MCL, but trichloroethylene (which has been identified as a low risk carcinogen) has come very close. The A has recommended that the City continue to monitor its water supply.

Solid Waste

The City's current solid waste site is within the AMSA boundary. The city collects garbage, burns it and then buries it with cover material. The current site is in violation of regulations and is considered an eyesore by residents. A regulations do not allow landfills to be burned and buried at the same location. Only communities with populations of less than 800 are allowed to open burn their garbage. The present landfill is near capacity and its operating permit expires ember 31, 1990.

Transportation

Introduction

The Skagway River Valley is the predominant transportation corridor for this area. Various transportation related uses include:

1) The City airport, located on flat land adjacent to the Skagway River mouth.

2) The WPYR Railroad shop yard, adjacent to the River and just north of the 23rd Avenue highway bridge.

3) The WPYR railroad which follows the River valley in the north part of the AMSA.

4) A 4" diameter oil pipeline, adjacent to the railroad and River in parts of the AMSA.

5) The State owned Klondike (Skagway-Carcross) Highway, adjacent to the River in the north part of the AMSA.

Airport

Skagway airport, built along the banks of the Skagway River, is owned and maintained by the State. The airport runway is located on fill behind the dike, almost parallel with Alaska Street. The present runway is too close to some residences. The distance from the centerline of the runway to the edge of the City

is only about 2000 feet. The runway centerline is about 300-500 feet from Alaska Street. The building restriction line is currently 160 feet from the runway centerline. About a dozen homes are within 300 feet of the runway centerline. Some parts of these homes are currently within the building restriction line.

The air transport industry is dependent upon tourism for about 80 percent of its business. Air operations increased more than 30 percent from 1986 to 1987. Some of this increase could be due to better reporting. During the summer months, traffic level at the Skagway airport is quite heavy - primarily due to "fly-cruise" and "flight-seeing" clients from cruise ships and the Alaska Marine ferry. Traffic is so heavy that current facilities can not safely accommodate it. This safety concern has prompted improvements to be proposed for airport. The first step, a planning study, was completed in 1989 by TAMS Consultants, Inc. working for the State DOTPF.

Skagway needs to continue to improve the airport's operations and safety.

Railroad

Local rail transportation is now solely dependent on the tourist industry. The WPYR railroad seasonal tourist excursions began in 1988. The industry generated 36,000 passengers that year and just over 77,000 passengers in 1989. Skagway wishes to encourage the rail industry to improve and expand its services.

Roads

Road transportation within the AMSA is provided by the State of Alaska and the City of Skagway. The State maintains the Klondike (Skagway-Carcross) Highway from the U.S. border to the ferry terminal, and Dyea Road. The State also maintains the road built by the U.S. Army Corps of Engineers many years ago from Liarsville to the old tuberculosis sanitarium. The State maintains it since it provides access to State owned lands along the River and access to River dikes for maintenance. The WPYR maintains a private road across their railroad shop yard. This road is the only access for the public to the Ried Falls area and the Gold Rush Cemetery and for the State to its Material Site 3 (Figure 8).

The Klondike (Skagway-Carcross) Highway was completed in 1978. The 112 mile road connects Skagway with Whitehorse, Yukon and the Alaska Highway No. 1 (Alcan). Approximately 14 miles of the highway are within the U.S. border. Between 1979 and 1986 the highway was maintained only during the summer. After major repair work during 1985 and 1986, the road was opened for use in the winter. Year round usage was made possible by an agreement between the State and the Yukon Government and has enabled ore from the Faro mine in the

Yukon to be trucked to the Port of Skagway for shipment. Ore is trucked year round thereby assuring year round road maintenance.

Highway use shows steady increase from 1979 to 1989. During this time period the number of vehicles using the highway increased 8 to 10 percent a year. In 1989 there were approximately 40,700 vehicles traveling the road with a total of just over 99,700 passengers. These figures include 2319 buses (both through buses and Skagway-Carcross-Skagway trips) that carried 23,488 passengers and 12,611 ore trucks.

Recreation

The areas most in demand for recreation are naturally those close to town. The area along the shoreline and waterfront and in the river valleys is especially desirable. Recreational use of the Skagway River is important both to residents and tourists. The Skagway River waters are to be kept open for all users. No one use will preclude any others, including recreation. The State does not provide any recreational facilities for using the River.

The State Department of Natural Resources (DNR), Division of Parks and Outdoor Recreation (DPOR) formerly managed a campsite west of the River at Liarsville. They dismantled the limited facilities and discontinued services when a material sales site was established at the same location. This site was a local favorite for picnicking and cookouts. Just south of this site there is a small privately owned and operated campsite.

State owned land just west of the River at Reid Falls/Gold Rush Cemetery is a popular tourist destination. It is accessible by foot or vehicle. However, access is via privately owned WPYR land and the public must cross the heavily used railroad tracks several times creating a public safety problem. The WPYR is currently relocating this segment of railroad so that visitors will no longer have to cross the railroad tracks several times and to eliminate the need for trains to move through the area at reduced speeds.

City owned and managed Yakutania Point Park is located along the west bank of the River mouth. A small foot bridge across the River provides pedestrian access to this Park and a jogging trail and exercise course. This is another very popular area for local residents and day visitors.

The Klondike Highway from the 23rd Avenue highway bridge to Liarsville is heavily trafficked by pedestrians for sightseeing, jogging, bike-riding and access to the River for picnicking and camping. This same corridor is also heavily used for industrial truck traffic and thousands of tourist vehicles and buses each year.

Another important recreation is the simple pleasure of sightseeing to enjoy the magnificent vistas of the area. Dyea Road offers spectacular views of the town, Port, River, Long Bay and Taiya Inlet.

Subsistence

Few people in Skagway are totally dependent upon harvesting food from the sea or land. However, many people supplement their family diet with fish, game and berries. They also supplement their fuel supply with wood.

Subsistence use was recently documented by Kruse and Frazier, in their study Tongass Resource Use Cooperative Study, September 1988. The study compared Skagway subsistence habits to 29 other communities in Southeast Alaska. According to the survey, Skagway residents harvest fewer pounds of edible subsistence resources than any other community in the study. Skagway residents harvested between 31-72 pounds per capita, compared to Edna Bay, the highest subsistence harvesters at 475-560 pounds per capita.

The survey showed that fishing for salmon, finfish, and other invertebrates (crab, shrimp) is more important to Skagway residents than hunting for deer and other mammals. Fishing may be more popular because of the successful salmon enhancement efforts of the Jerry Myers and Burro Creek hatcheries.

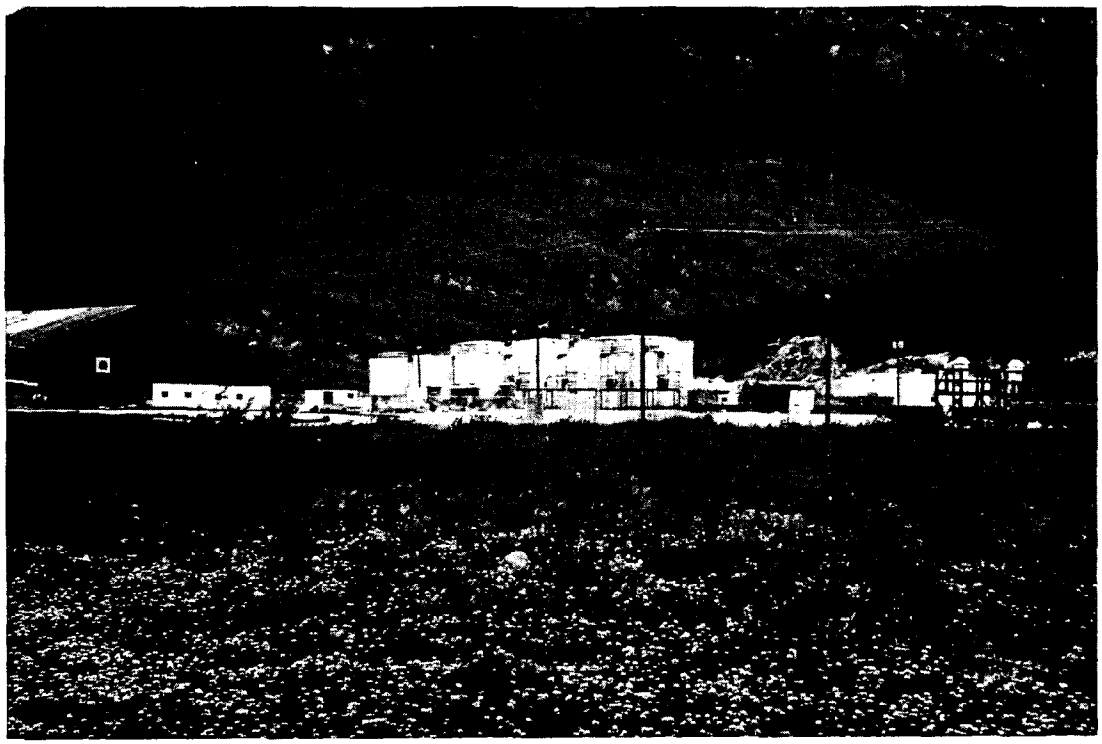
The lower reach of the Skagway River in the AMSA area is generally not used for subsistence.

Petroleum Storage and Transfer Facilities

Energy related facilities along the Skagway River include petroleum product tanks and pipelines for transfer. Approximately 26 million gallons of fuel passed through the Port in 1989. The fuel is either shipped to Canada, used by the State ferries or consumed locally. About 85 percent of the fuel is transferred by the WPYR to Whitehorse in the Yukon Territory. The fuel is generally piped off ships into storage tanks located either at the Port or along the Skagway River. All fuel tanks are located within either the Port or River AMSA. Some of these storage tanks were built in the 1940s and require careful maintenance. Fuel is later trucked or piped through the company's four inch diameter pipeline to Whitehorse. The pipeline parallels the railroad corridor located along the Skagway River valley.

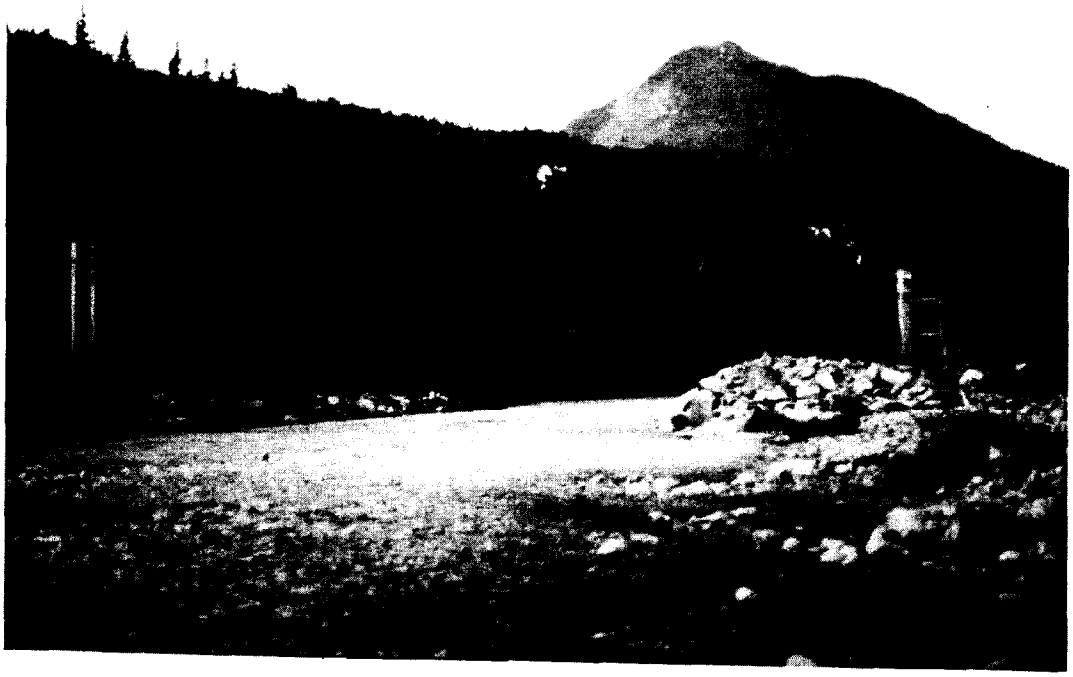
Petroleum product tanks are also located at the H&H construction yard adjacent to the River.

The movement, transfer, and storage of fuel requires vigilance during handling to prevent spills and leaks. This is especially important along the Skagway River where the tanks are located in the River floodplain and above the City's drinking wells.



Oil tanks next to the ore terminal at the Port. *photo by Barbara Sheinberg*

SKAGWAY RIVER AMSA
RESOURCE ANALYSIS and POLICIES



The foot bridge crosses the lower reach of the Skagway River to provide foot access to Yakutania Point Park and popular jogging trails. *photo by Barbara Sheinberg*

SKAGWAY RIVER AMSA RESOURCE ANALYSIS and POLICIES

INTRODUCTION

All coastal district management plans are required to have a resource analysis. In the resource analysis section, the uses and activities that occur in the area are analyzed, with special attention to existing and potential conflicts. The resource analysis section of this plan reviews the uses and activities in and along the Skagway River and assesses current and anticipated use conflicts for River resources. A thorough analysis of uses and issues naturally leads to a discussion of the policies that will be applies to resolve these conflicts and guide resource management. Thus, the Skagway River AMSA Plan's enforceable policies follow each issue analysis.

Because the following resources or uses of the Alaska Coastal Management Program (ACMP) are not significant within the Skagway River AMSA, policies have not been developed for them: energy facilities, timber harvest and processing, subsistence, and historic, prehistoric and archaeological resources. In the event that a project was proposed that related to one of these issues, the relevant policies from the Skagway Coastal Management Program (SCMP) would be used.

The policies developed in this Skagway River AMSA Plan replace both the ACMP State standard (unless the State standard is specifically adopted) and the policies found in the SCMP. This River AMSA Plan contains a detailed inventory and analysis of the resources, uses and activities in the AMSA area. As a result, the City now has very specific policies to be applied within the AMSA boundary. Management of existing and future land and water use is discussed in this section and shown in Figure 8.

A. SHORELINE DEVELOPMENT

Analysis

Land ownership and topographic constraints have dictated the pattern of land development in Skagway. The most intensively used area is the approximately 130 block townsite located at the mouth of the Skagway River. Most of the area outside the core townsite is too steep for development, except for low density

residential, dispersed recreation, and resource development. This outlying area is not serviced by city water and sewer.

The relatively flat land located within the Taiya and Skagway River valleys is the most suitable for development. Of these two river valleys, the Skagway is the most accessible. The State highway, the City airport and the WPYR Railroad are located along this flat river valley. The area north of the 23rd Avenue highway bridge is the most likely for future development. It is the only section of town other than the Port that is suitable for heavy industrial development. There is currently a mix of residential, industrial and dispersed recreational uses in this area. Several physical limitations at this location need to be addressed prior to more intensive use. The area is subject to flooding and has a high water table which may preclude the use of septic systems. It is north of the city's water supply and ground water contamination must be avoided. In addition to these considerations, there are important public recreation, access and scenic values to be considered.

Planning for development along the Skagway River must take into account the natural constraints of the land and river and must also balance the competing uses for this important land. The management called for in this Resource Analysis Chapter, the policies set forth, and the Land Use (Figure 8) all work together to illustrate the community vision for the lower reach of the Skagway River.

Policies

A-1 Water-Dependent and Water-Related Activities.
In planning for and approving development plans in the Skagway River AMSA, the City, State and federal agencies shall give priority in the following order to:

a) water-dependent uses and activities;
b) water-related uses and activities;
c) uses and activities which are neither water-dependent nor water-related for which there is no feasible or prudent upland alternative to meet the public need for the use of activity; and
d) uses and activities which are neither water-dependent nor water-related for which there are upland alternatives. Permitting of such uses and activities will be evaluated on a case-by-case basis to insure that a future significant potential water-dependent or water-related use for that site is not preempted.

A-2 Mitigation.
All land and water uses and activities in the Skagway River AMSA shall be conducted with appropriate planning and implementation to mitigate potentially adverse effects on the following resources or values of local, State or national importance:

a) air and water quality;
b) fish populations and their habitats; and
c) the river's hydraulic capacity.

The public and private costs of mitigation relative to the public and private benefits to be gained will be considered, in the implementation of this policy. Mitigation shall include and be considered in the following order of preference:

a) ***avoid*** the loss altogether by not taking a certain action or parts of an action;

b) when the loss cannot be avoided, ***minimize*** the loss by limiting the degree or magnitude of the action and its implementation;

c) when the loss of resources and/or associated activities of local, State or national concern cannot be minimized, ***restore or rehabilitate*** the resource to its pre-disturbance condition, to the extent feasible and prudent; and

d) where the loss of important habitat or activities of local, State or national concern is substantial and irreversible and can not be avoided, minimized, restored or replaced, ***compensate*** for the loss by replacing, enhancing, or providing substitute resources or environments. Compensation may be in-kind or out-of-kind and off-site or on-site.

A-3 Design and Siting Criteria.

Development shall be sited, constructed and operated to reduce the impact of flooding and other geophysical risks, to allow for natural drainage and to minimize damage to life and property. To the extent feasible and prudent, development within the Skagway River floodway is prohibited. Development within the 100 year floodplain must conform to the City's floodplain management guidelines (SCC Title 15, Chapter 12.) Those areas protected by dikes and other flood control devices, can be developed if density, siting, setback and structural requirements reflect the physical opportunities and constraints of the site (e.g., flooding and a high groundwater table).

A-4 Dredge and Fill Requirements.

Projects that require dredging or filling in productive Skagway River habitat shall be located, designed, constructed, and maintained to:

a) avoid or minimize significant impacts or destruction of important fish habitat;

b) avoid or minimize significant interference with fish migration, spawning and rearing;

c) limit the extent of direct disturbance to as small an area as possible;

d) minimize turbidity and waterborne sediment transported away from the dredge or fill site; and

e) provide for adequate circulation and drainage in the area around the fill

A-5 Disposal of Dredge Materials.

Dredged materials disposed of in shoreline landfills shall, to the extent feasible and prudent, not cause significant alteration of important habitats, degradation of water quality or significant adverse impacts to shoreline processes. If impacts can not be avoided, they shall be minimized. Upland disposal sites for dredge materials shall be contained and stabilized to prevent erosion and leaching into the river waters.

B. HAZARDOUS AREAS

Analysis

Most of the land within the AMSA is subject to a variety of geophysical hazards. These hazards include flooding, erosion and aggradation, slow land uplift as a result of glacial retreat, landslides and earthquakes. Development must include the appropriate safeguards to protect structures against these natural hazards.

The City of Skagway has grown along the banks of the Skagway River. Consequently, flooding is the hazard that occurs most frequently and is of greatest concern to City residents. Erosion and aggradation occur, as a result of both the natural swing of a meandering braided stream and from human actions such as dike and bridge construction. Erosion and aggradation contribute to flooding potential. The Resource Inventory chapter of this Plan describes the history of flooding and flood control measures undertaken along the River.

Important locations for flood control include the 23rd Avenue highway bridge and property to the north. There is growing concern that erosion will eventually affect the highway bridge supports. Concern is also focused on the WPYR railroad shop area where the Corps surveys predict that flood flows will overtop the dike. Other critical flood control areas are south of the bridge and along the airport runway. Here, the dike was removed in one section, lowered in others, and neglected along its entire length to the extent that vegetative growth now threatens stability and accessibility during a flood.

The responsibility for dike maintenance has been debated for years. The Corps claims the City is responsible, the City says responsibility rests with either the State who owns the watercourse, the property owners who abut the River, or the Corps who is responsible for flood control projects. In any case, the Corps recommends the City increase maintenance, stockpile material for use during a flood, survey the dikes, return the dikes to design grade, and clear the vegetation. As discussed in this Plan's Resource Inventory chapter, the Corps has just completed a condition survey of the dike in April 1990.

City flood control focus' on floodway and floodplain management by restricting building location and requiring specific design measures during construction. The City must continue to ensure that the public be informed about flooding hazards, restrict development in the active floodway and require safeguards for building development in the floodplain. These measures will assure the City's goal to minimize loss of life and property. The City must also provide for up-to-date analyses of the River's hydraulic capacity in order to facilitate planning and flood prevention efforts. Finally, flood control devices must be maintained and new flood control measures added where appropriate.

Proposed major projects may be required to analyze the project's impacts on River hydraulics to ensure that there is no increase in the river's flood water carrying capacity. Projects may also be required to propose specific design or mitigation measures to protect life and property from flood threat and protect the integrity of the River.

Policies

B-1 Hydraulic Capacity Considerations.
Major projects within the 100 year floodplain of the Skagway River may be required, as deemed appropriate by the City, State or federal agencies, to complete a detailed investigation of the project's impact on the river's flooding potential and hydraulic capacity. Measures may be required to assure that the river's hydraulic capacity is not decreased. When appropriate, design or mitigation measures will be sensitive to and seek to enhance fish habitat and offer suitable sites for material sale.

B-2 Erosion.
Development and resource extraction activities shall be sited and conducted to minimize accelerated river erosion that could contribute to increased flood potential. To the extent feasible and prudent, development activities shall retain existing vegetative cover in erosion-prone areas. In cases where development necessitates removal of vegetation, erosion shall be minimized through revegetation or other appropriate control measures.

B-3 Flood Control Efforts.
Priority attention for flood control efforts will be given to completing a an up-to-date Skagway River hydraulic capacity analysis, completing new hydraulic capacity analyses as needed, and improving flood control efforts throughout the AMSA but particularly at areas identified as critical in recent U.S. Army Corps of Engineers surveys. These critical areas include low areas near the runway, and the areas upstream and downstream of the 23rd Avenue Highway Bridge.

C. HABITAT

Analysis

The Skagway River is an ADFG catalogued anadromous stream. River management efforts are hindered by the lack of conclusive information on critical river habitats. A formal research study and detailed evaluation is badly needed to identify critical anadromous fish spawning, overwintering and other important habitat areas. As development pressures mount this information will become more and more critical for decision-makers. Information on critical habitat will permit effective habitat and sport fishery enhancement programs and projects to

be designed, thus assuring protection of critical habitat areas. Just as important, the study will identify less important areas where both public and private sector gravel extraction and other development efforts could occur with minimal impact to fish habitat or populations.

The lack of habitat information will become an increasing problem as development projects adjacent to the Skagway River banks continue to occur. For example, demand for development in the flat accessible part of town north of the 23rd Avenue highway bridge and adjacent to the Skagway River will continue to occur; expansion of the airport is needed for safety reasons, and residents prefer it be expanded toward the River; flood control efforts will continue along the Skagway River banks; the Skagway River has gravel resources that will continue to be exploited; the foot bridge to Yakutania Point Park needs a regular maintenance program at its present or a possible relocated site. The lack of detailed habitat information is already the cause of unacceptable delays in Skagway River project evaluation and permitting.

Policies

C-1 State Standard.
The Alaska Coastal Management Program Habitat Standard (6 AAC 80.130) is adopted as part of the Skagway River AMSA Plan. The river shoreline and adjacent wetlands and uplands within the AMSA boundary are subject to coastal management program standards.

C-2 River Channel Stability.
Development or resource extraction activities in or adjacent to the river shall, to the extent feasible and prudent, create a more stable river channel and enhance fish habitat.

C-3 Fish Passage.
Development activities, facilities, and structures shall be designed, sited, constructed and operated in a manner that does not impede or interfere with timely access to spawning streams by adult anadromous fish or movements of juvenile anadromous fish.

D. AIR, LAND AND WATER QUALITY

Analysis

The City is facing a current solid waste/landfill problem. The existing landfill site, almost full, has operating permits that expire December 31, 1990 and is presently in violation of ADEC standards. The present landfill location is shown in Figure 8.

~~shows~~. Recently, the City has studied alternative landfill sites along the Klondike Highway and Dyea Road where easy public access already exists.

Landfill sites along the Klondike Highway have drawbacks including: potential flooding, high water table, and potential groundwater contamination. Flooding along the Klondike Highway can result in a serious health hazard caused by contamination. Additionally a high water table could preclude approval of a site since a landfill must have a minimum of two feet separation from the water table. Also, a land-spreading site must have a six foot vertical separation. A serious source of groundwater and river pollution may be caused by the sites along the highway and river that are above the City's water supply. For these reasons, site selection has been narrowed to a location off Dyea Road, outside the Skagway River AMSA boundary. The City is beginning design and permitting work during the summer of 1990.

The City is involved in an extensive testing and clean-up program for the ore dust contamination problem. This project is discussed fully in the Port of Skagway AMSA Plan.

The City obtains its drinking water from wells on 15th Avenue that tap an aquifer below the Skagway River. The Resource Inventory chapter of this AMSA provides detailed information on recently discovered contamination by organic compounds. The City of Skagway and the ADEC must continue to work together to determine the source of this contamination. The seven organic compounds and common sources for each are listed in Table 9.

If the source can be identified, the City should work with ADEC to ensure cleanup of the contaminant source or sources is accomplished to the extent technically and practically feasible. Even if the source cannot be identified, the City should work with ADEC to determine the extent of the contamination "plume". Monitoring of City wells should continue to document levels and trends of contamination. This would also allow the City and ADEC to track the success of any cleanup efforts and determine if any specific actions are needed to deal with public health issues. At this time it has not been definitively determined whether MCL levels are actually being exceeded nor if a public health problem exists. If local residents are concerned however, activated charcoal filters can be installed in homes or businesses to filter out organic compounds. Careful monitoring of developments upstream from City wells is essential to protect the quality of the City's water supply.

It is not anticipated that municipal water or sewage service will be extended north of the 23rd Avenue highway bridge in the future. Consequently, care must be taken that development there has adequate on-site sewage systems and that the quality of rural drinking water is protected.

Skagway residents want a clean safe environment for their children. Air, land and water quality standards that are acceptable to the regulatory agencies and the community must be maintained by management of the industrial and solid waste

facilities. The City's drinking water quality has to be protected. Ongoing activities that may contribute to air or water quality violations must be monitored. In addition, adequate separation is needed between petroleum product tanks and the River to prevent spills from contaminating the River and the City's drinking water.

TABLE 9 - COMMON SOURCES FOR CONTAMINANTS FOUND IN SKAGWAY WELLS

Compound Detected	Indust. Solvent	Degreaser for Metal	Dry Cleaning Solvent	Precision Instrum. Cleaning	Refri-gerant	Drying Agent
trans 1,2-dichloro-ethylene	*				*	
1,1-dichloro-ethane	*	*	*			
cis 1,2 dichloro-ethylene	*				*	
tetrachloro-ethylene	*	*	*			*
toulene	*					
1,1,1-trich-loroethane	*	*	*	*		
trichloro-ethylene	*	*	*	*	*	*

This table is from the June 1990 Skagway Water Quality Planning Study report by James Montgomery Engineers Inc.

Policies

D-1 Air, Land and Water Quality.
Notwithstanding any other provisions of this chapter, the statutes pertaining to and the regulations and procedures of the Alaska Department of Environmental Conservation with respect to the protection of air, land and water quality are incorporated into the Skagway River AMSA Plan. Water quality shall not be lowered below State standards on a long-term basis by development or any activity.

D-2 Drinking Water Protection.
The portion of Skagway River floodway and wetlands north of 15th Avenue (the southernmost City well) shall be managed to assure adequate water flow, nutrient

and oxygen levels and to avoid adverse effects on natural drainage patterns and the destruction of important habitat and the discharge of toxic substances.

D-2 Waste-Water Discharge.
All permits, leases or plans of operation for projects shall require siting, design, construction, and operation to provide reasonable assurance that waste water discharges will meet water quality standards. Where appropriate, such measures shall include, but are not limited to, dikes, catch basins or settling ponds, interceptor drains, planted buffers or other suitable devices.

D-3 Development Considerations.
Development shall incorporate facilities for proper storage, disposal and handling of petroleum products and fuel, solid waste, waste oil, sewage and refuse in accordance with State and federal regulations. Discharge of untreated sewage from boats is prohibited.

D-4 Hazardous Materials.
Storage, transportation, cleanup, and disposal of hazardous materials (as defined in the Hazardous Materials Transportation Act) shall comply with federal, State and local regulations. The City shall be notified of the quantity, and mode and schedule of transportation or storage, when the quantity of material meets or exceeds the threshold quantity set under the Emergency Planning and Community Right To Know Act.

D-5 Storage of Petroleum and Petroleum Products.
To the extent feasible and prudent, new facilities for the storage, processing, or treatment of 5000 gallons or more of petroleum or petroleum products shall be sited a minimum of 1500 feet from domestic water supplies and a minimum of 200 feet from any surface waters. Impermeable berms or basins capable of retaining 110 percent of the tank capacity (or capacity of the largest tank where multiple tanks are separately valved) plus 12 inches of freeboard shall be required to minimize the potential for inadvertent pollution.

D-6 Spill Containment and Cleanup Equipment.
Any petroleum transport, storage, and refueling operation of 2000 gallons or more shall maintain and have access to oil spill containment and cleanup equipment located in Skagway. Personnel trained in the use and maintenance of this equipment shall be available in Skagway.

D-7 Environmental Protection Technology.
To the extent feasible and prudent, equipment and procedures using the most advanced and effective technology for limiting emissions and effluent, and for the storage, handling, cleanup, and disposal of oil and hazardous materials shall be required for industrial, energy, and transportation facilities.

D-8 Cumulative Impacts.
The cumulative effects of new major development on the ambient air and water quality of the City of Skagway will be considered in the review of proposed development projects.

E. MINING AND GRAVEL EXTRACTION

Analysis

Skagway has limited natural resources available for development. Consequently, while the City wants to minimize any negative impact, it wants and needs to develop what resources it does have. One of the best resources available is high quality rock, gravel and sand, from the Skagway River floodplain and talus slopes. Four material extraction sites within the AMSA have recently been used (Figure 8). The State currently owns the four sites, but the City has recently selected Material Sites 2 and 3 (Figure 8) as part of their municipal entitlement. Material Sites 1, 3 and 4 are in the River floodplain while Site 2 is a talus slope.

The City also recognizes that, while desiring to develop its natural resources, disruptions in the Skagway River's natural flow and habitat must be minimized. Thus, the City finds that material extraction from the River floodplain sites should be limited to Material Site 3. Sand and gravel extraction can help maintain or improve the river's hydraulic capacity and decrease flooding potential if the extraction is done with planning and care. If extraction is limited to one site at a time, active mining areas can be managed better and breaching and flooding can be prevented. Exhausted extraction areas can be managed and rehabilitated for salmon enhancement. These goals can be reached by limiting gravel extraction to one site at a time and by fully utilizing the material from one site before moving to the new one. The City believes exceptions to this policy within the AMSA should be rare and carefully reviewed to assure the exception is justified. This means that future gravel extraction (and contracts issued by the State DNR) within the AMSA would be limited to Material Site 3 for sand and gravel and Site 2 for larger sized rock until those resources were exhausted. An exception would be made if access became a problem. This is a possibility since at the present time, access to Sites 2 and 3 are across private property. (See the Transportation Section of this Plan's Resource Analysis chapter for a full analysis of this issue). An exception would also be merited if a comprehensive plan or new project addressing the river's hydraulic capacity was initiated. If such a plan identified new areas for dredging, it would be logical to offer those sites for sale of sand and gravel.

A detailed mining plan has been developed to guide sand and gravel extraction from Material Site 3. Plan goals permit resource extraction but minimize negative impact. The Plan requires that:

1) the integrity of the site be maintained during and after extraction so that breaching by the River does not occur;

2) salmon entrapment is prevented;
3) the site be rehabilitated to create salmon rearing ponds;
4) toxic substances must be stored safely on site during extraction; and
5) incidental firewood should be offered to the public.

A summary of the State approved mining plan is presented below.

Summary of the DNR Mining Plan for Material Site 3

Organic material stripped as overburden shall be placed on unvegetated areas of the buffer zone adjacent to the active channel to reestablish vegetation and prevent erosion. An earth filled barrier or berm shall be established adjacent to the mouth of Reid Falls on the north bank to prevent anadromous fish from entering the pit. Configurations and dimensions as necessary under the direction of an engineer and an ADFG representative. Usable firewood cleaned from he pit shall be made available to the public. Other cleared material shall be disposed of (burned) within excavation boundaries. A 50' minimum buffer zone of undisturbed material paralleling the active channel shall be left in place to segregate the river from the working area and prohibit the entrance of anadromous fish into the pit during periods of high water. In areas where the natural buffer has been altered or eliminated (due to prior operations) a berm equal to the elevation of the upstream buffer zone shall be constructed paralleling and adjacent to the active channel. Additional soils information is available from DNR's southeast regional materials engineer.

Fuels, oils ands other toxic materials will be stored in a designated area of the pit. This storage area will be constructed in such a manner that if a spill occurs, it will be retained in a storage area. Surface waters will be kept away from the storage area to prevent any fuel, oil, or toxic material from reaching the watercourse in the event of a spill. Asphalt plants shall not be located within material site. Ponds created from dredging operation may be used as fish rearing ponds. Final pit slopes shall be no greater than 2:1.

The sequence of operations shall generally consist of: Phase 1- Material is excavated within the limits of the cells to depth no greater than the depth of the water table. Phase 2- Material will be removed by dredging operations to a maximum of 15 feet.

Policies

E-1 Siting Material Sources.
To consolidate resource extraction activity and its impacts in and adjacent to the river, sources of sand, gravel and other construction materials from the AMSA area shall, to the extent feasible and prudent, be limited to material site 3 depicted on the AMSA Existing and Future Land Use map at Figure 4, until this resource is exhausted. Exceptions may occur if other River areas are targeted for dredging as part of a comprehensive hydraulic/flooding management program for the River.

E-2 In-Stream Mining.
Mining of sand and gravel from the Skagway River floodplain shall, to the extent feasible and prudent, be located to minimize changes to channel hydraulics and the probability of channel diversion through the mining site.

E-3 Best Management Practices.
The following practices shall be incorporated into the siting, design, and operation of gravel extraction activities:

a) A 50' minimum buffer zone of undisturbed material paralleling the active channel shall be left in place to segregate the river from the working area and prohibit the entrance of anadromous fish into the pit during periods of high water.

b) Clearing of riparian vegetation and disturbance of natural banks shall be minimized.

c) To the extent feasible and prudent, mining site configurations shall be shaped to blend with physical features and surroundings to provide for diverse riparian and aquatic habitat.

d) Cells within a mining plan shall be used sequentially. One cell shall be exhausted before extraction in another cell is begun.

f) Usable firewood cleaned from the pit shall be made available to the public. Other cleared material shall be disposed of (burned) within excavation boundaries.

g) Gravel washing operations that discharge effluent into the river shall use settling ponds and recycle treatment waters, as necessary to comply with State and federal water quality regulations. Settling ponds shall be adequately diked or set back from active channels to avoid breaching by the 10 year frequency flood. Wash water shall be recycled and the effluent discharge shall comply with State and federal water quality regulations. Effective use of recycled water shall minimize water withdrawal and subsequent discharge of effluent to adjacent waters.

E-4 Reclamation and Restoration.
Excavated gravel extraction cells may be converted to fish rearing ponds and habitat. Excluded from this requirement is the portion of a gravel extraction site required to provide materials for continuing maintenance and operation. At gravel extraction sites within the floodplain (such as site 4 on Figure 4), at the end of each gravel extraction activity, the area will be regraded so that fish will not be trapped and significant alteration of stream hydraulics will not occur, and adequate circulation and flow through sites is maintained.

E-5 Mining In Fish Habitat.
Sand and gravel shall not be removed from locations that have been documented to provide spawning or over-wintering habitat for anadromous fish, unless impacts can be mitigated and habitat enhancement efforts will be completed when work is finished.

E-6 Petroleum and Other Toxics Storage on Mining Sites.
Fuels, oils ands other toxic materials will be stored in a designated area of the pit. This storage area will be constructed in such a manner that if a spill occurs, it will be retained in a storage area. Surface waters will be kept away from the storage area to prevent any fuel, oil, or toxic material from reaching the watercourse in the event of a spill.

E-7 Scenic Quality.
Since several places along the Skagway River within the AMSA are noted for and benefit from their scenic and recreational nature, the scenic qualities of the River will be maintained to the maximum extent practicable both during gravel extraction or mining and after the activities are completed.

F. TRANSPORTATION

Transportation will continue to play an important role in the economic development of Skagway and region. Transportation facilities need to be improved and upgraded to encourage economic development and to ensure that they are safe.

Transportation facilities within the Skagway River AMSA include: the Skagway airport, portions of the Klondike (Skagway-Carcross) Highway, foot bridge access to Yakutania Point Park, an access route to the popular Gold Rush cemetery tourist attraction, an oil pipeline and the WPYR railroad.

Because these transportation facilities are all proximate to or actually crossing and adjacent to the Skagway River, they can impact the River hydraulic capacity and care must be taken so that use and expansion of these facilities does not decrease hydraulic capacity or disturb critical habitat areas.

These concerns are most pertinent when one considers airport expansion. The Resource Inventory chapter describes public safety issues that compelled the State to study airport expansion. Alternatives evaluated included airport expansion toward Alaska Street and toward the River. While expansion toward Alaska Street is the significantly least expensive (about $4.0 million versus $7.9 million dollars, based on the final TAMS study), residents have deep concerns this expansion. Concerns include impacts the new school, the potential loss of long-standing homes of historic value, loss of the only industrial land suitable for the air transportation industry. Also important, there is a sense that the airport area will become a desolate windblown tarmac channeling heavy wind and dust along town in the non-tourist season when the airport is not so heavily used.

Residents strongly prefer expanding the airport toward the River. The City, State and Federal Aviation Administration are discussing a slightly "scaled down" proposal from the TAMS evaluation for airport expansion toward the River (Figure 8). In addition to securing funding for the project, challenges to the responsible completion of the project include maintaining or improving the River's hydraulic capacity, assessing and mitigating adverse habitat impacts, designing the project so a more stable river channel results, and assuring an environmentally sound and affordable maintenance program.

The portion of the Klondike Highway that is within the AMSA is used by vehicles, buses, RVs, ore laden trucks, bicyclists and pedestrians. In addition, along the Highway from the 23rd Avenue highway bridge to the Liarsville area there is the State DOTPF maintenance shop, a State highway wayside, a private campground and the site where the U.S. Customs House will be relocated. Since recreational use of this part of the Highway is increasing widening of the Highway and shoulder are needed to maintain and improve road and public safety.

Petroleum products are either trucked or transported by pipeline to the Yukon. Care must be taken to prevent any leaks or spills because both types of transportation are close to the River within the AMSA boundary. This is especially important since the City draws its drinking water from an aquifer beneath the River.

Many transportation issues relate to the WPYR railroad. The YPYR railroad is quite close to the River banks at places within the AMSA. Railroad maintenance must assure that erosion does not threaten either the railroad or the River. In addition, the railroad service road doubles as a public access route to Ried Falls and the Gold Rush cemetery and the access route to State Material Site 3 (see Figure 8). Because access to these public resources is across a private road, there is a potential for conflict. To the extent that it is feasible, public access to these resources should be developed. This may be possible as a result of railroad track relocation (which is now occurring) and relinquishing the former track site to the underlying land owner (the State, with a pending city land selection). It may also be possible to obtain a public access easement in the area. Recent research by State DNR staff (R. Romans) shows that federal right-of-way rules require that when the railroad was relocated (1930s) from the west

side of the river to its present location on the east side of the river, it was relocated onto an existing road. The rules required that a substitute public access easement be dedicated at that time to replace the road. Complicating this however, is a report that the road on the east bank of the River upon which the railroad was relocated was bought and owned by the WPYR. State DNR staff is investigating whether a public access easement could be required at the present time.

A small City owned foot bridge near the mouth of the Skagway River provides a town access point to Yakutania Point Park. Tourists use the bridge to walk, sightsee and explore the area; residents who use the jogging path and exercise equipment across the bridge. A few years ago, when the City requested permits to do maintenance dredging around the bridge, many issues were raised including: habitat impact, lack of precise knowledge as to the exact location of the area's critical habitat, decreased river hydraulic capacity, and a lack of consensus on river aggregation. The confusion clearly points to both the need for a critical habitat study of the lower Skagway River and a current analysis of the River's hydraulic capacity including the impact of the foot bridge.

Policies

F-1 Airport Expansion.
Airport expansion into a portion of the Skagway River may occur if the following conditions are met:

a) air safety requirements are met;
b) hydraulic analyses show that the river's hydraulic capacity will be maintained or enhanced by the project;
c) a detailed inventory of existing habitat and predicted adverse impacts is completed and a full mitigation program is designed to mitigate all significant adverse impacts to fish populations or habitat;
d) channel stability of the river is maintained or enhanced; and
e) an environmentally and economically sound program to maintain the River's hydraulic capacity is approved.

F-2 Klondike (Skagway-Carcross) Highway Maintenance and Expansion.
Highway design, construction, maintenance and expansion shall minimize alteration of Skagway River channel and adjacent wetlands. The width of the highway and its shoulder shall be maintained or enlarged to facilitate public safety and multiple use.

F-3 River Crossings.
Bridges and culverts shall be designed, constructed and maintained in accordance with fisheries conservation practices that minimize habitat disturbance and allow unimpeded fish passage. Roads and trails shall only cross anadromous streams when necessary to provide access as deemed necessary by the City. Phasing of construction shall be done to avoid critical migration periods for salmon and other anadromous species.

F-4 Road and Railroad Location and Maintenance.
Roads and railroads within the AMSA shall, to the extent feasible and prudent, be cited to minimize disruptions to adjacent uses, shall be constructed and maintained to minimize blowing dust and other hazards, and to maximize public safety.

G. RECREATION

Analysis

There are several important recreation areas within the Skagway River AMSA. They include the Reid Falls/Gold Rush Cemetery, the foot bridge access to the Yakutania Point Park AMSA, and the Klondike (Skagway-Carcross) Highway corridor from the 23rd Avenue highway bridge to Liarsville. In addition, the River itself is scenic and a popular destination for picnicking, sightseeing and camping. The river shoreline should be protected and reserved for recreational use. Existing trails should be maintained and expanded. Residents wish the shoreline to be protected from uses that will conflict with its recreational nature. The City owns a large parcel (U.S. Survey 3312, Lot 30) just west of the River in the middle of the subdivided and platted land off Dyea Road. This parcel will be preserved to protect the viewshed.

Reid Falls and the Gold Rush Cemetery and Park are visited by thousands of tourists each year. Travelers generally reach these areas by foot or vehicle across a private roadway. Several persons important to the history of Skagway in the Gold Rush days are buried here, including Soapy Smith and Frank Reid who faced each other in a fatal duel on July 8, 1898.

Existing facilities provided for tent camping, RV and picnicking along the River should be improved and expanded. The Port of Skagway AMSA indicates that the City's RV Park will eventually be relocated since it is a not a water-dependent or water-related use. The federal, State and City governments are encouraged to cooperative with the private sector and find a suitable location for an RV park. A survey of RV travelers shows a preference for waterfront and forest locations. The area known as "seven pastures" located within the River AMSA and U.S. Survey 994 may be a suitable location for a RV park.

The foot bridge to Yakutania Point Park provides access to the Park, a popular jogging area and exercise equipment. The foot bridge itself is a tourist attraction. The issues relative to the foot bridge are discussed in the Transportation section of the Resource Analysis chapter.

Policies

G-1 Designation of Recreation and Public-Oriented Areas.
The State lands (City selections) at Reid Falls/Soapy Smith Cemetery, the foot bridge access to the Yakutania Point Park AMSA, and the highway corridor from the 23rd Avenue Highway Bridge to Liarsville, are areas within the Skagway River AMSA designated as recreation areas (see AMSA Existing and Future Land Use map at Figure 6).

G-2 Protection of Reid Falls/Gold Rush Cemetery Area Values.
Encourage recreational and tourist use of this scenic falls along the River and this historic cemetery.

G-3 Access to Reid Falls/Gold Rush Cemetery.
Ensure safe public access is provided and maintained to facilitate use of this recreation area.

G-4 Access to Yakutania Point Park AMSA.
Ensure safe public access across a foot bridge is provided and maintained to facilitate use of this recreation area.

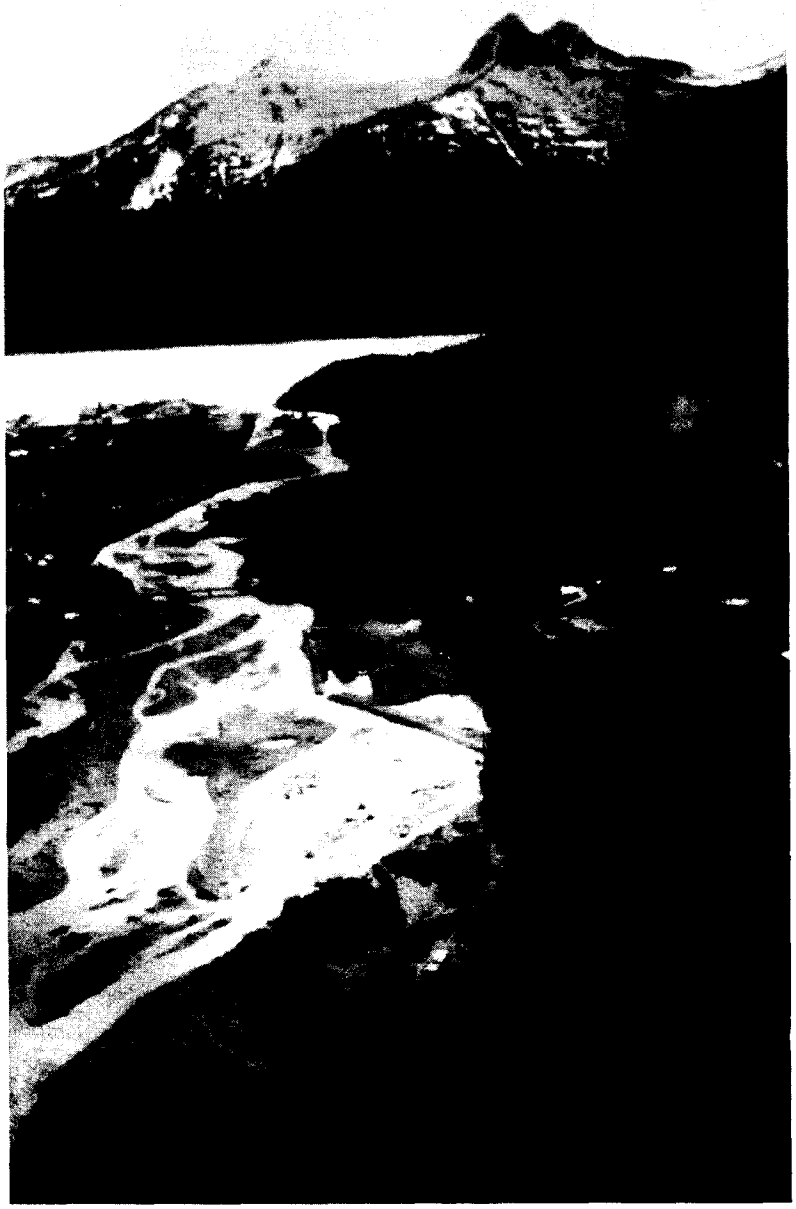
G-5 Multi-Use of Klondike (Skagway-Carcross) Highway Corridor.
The Klondike Highway from the 23rd Avenue Highway Bridge to Liarsville is used heavily used for pedestrian travel such as sightseeing, jogging, access to the River for picnicking and camping, and bike-riding. This corridor also has heavy industrial truck traffic and thousands of tourist vehicles each year traveling along it. Accordingly, the width of the highway and its shoulder shall be maintained or enlarged to facilitate public safety and multiple use.

G-6 Shoreline Camping and Picnic Areas.
Shoreline areas such as beaches that are suitable for several forms of recreation are scarce. To the extent feasible and prudent, these areas shall not be developed for uses which can be located elsewhere. Where recreational developments are composed primarily of a single purpose use (e.g.,camping), adequate open space shall be provided to preserve the natural features of the area.

G-7 Recreational Development Design.
Recreational developments shall be located, designed, constructed and managed to minimize adverse effects on other appropriate shoreline uses, whether existing or officially planned, and to provide safe, healthy conditions for recreationists.

G-8 Scenic Views.
Recreational and access developments shall blend into the surroundings, preserve or enhance scenic views and vistas, and improve the aesthetic value of the area.

AMSA PLAN IMPLEMENTATION



Looking south down the Skagway River from about a half mile above the highway bridge to the River mouth. *photo by Barbara Sheinberg*

AMSA PLAN IMPLEMENTATION

INTRODUCTION

The City of Skagway, both State and federal agencies, and the private sector , play a part in implementing the Port of Skagway and Skagway River AMSA Plans. The Plans are not effective or meaningful without the participation of all parties.

The City of Skagway will implement the AMSA Plans in several ways. Local, State and federal coastal consistency reviews for proposed projects and plans will be employed. Local adoption of the Plans by ordinance and codification in Title 17 will be used. The AMSA Plans objectives will be reinforced in the City's zoning code where appropriate. In addition, the City will employ capital improvement projects, grant acquisitions and continue its future planning efforts.

Skagway is a first class city incorporated in 1900. Powers are granted under Alaska Statute Title 29. It exercises planning, zoning and other controls on resource use within its coastal area. The City is a coastal district under the ACMP and implements its own Coastal Management Program and AMSA Plans.

Skagway has a council-manager form of government. The officers are the six council members, the mayor, the city manager, the city attorney, the city clerk, the city treasurer, and the chief of police. The mayor and council members are elected by city residents. The city manager is appointed by the council and may be removed by the council. All other officers are appointed by the city manager subject to confirmation by the council.

Skagway's Coastal Management Program, codified as Skagway City Code Title 1,7 designates the City Manager as the officer charged with carrying out the elements of this Program. The planning commission and city council may also review major projects to assure that they are consistent.

The coastal coordinator for the City of Skagway may be reached at:

City Manager
City of Skagway
P.O. Box 415
Skagway, AK 99840
(907) 983-2297

SUBJECT USES

The ACMP requires that AMSA Plans list the uses within the AMSA that fall within the purview of the Skagway Coastal Management Program. All land and water uses and activities that occur on private, municipal or State land within the AMSA boundaries are subject to the AMSA Plan policies. These include:

* land and water uses within AMSA boundaries that require permits, leases or other approvals from the City of Skagway, State or federal governments

* resource leasing activities that require City, State or federal permits, land disposals, regional plans and community plans.

Federal activities on federal lands that directly affect coastal resources within the AMSA boundaries are also subject to AMSA Plan policies.

PROPER AND IMPROPER USES

AMSA Plans must identify those uses and activities, including Uses of State Concern [per AS 46.40.210 (E) (6)], that are considered proper and improper within the AMSA boundaries. No activities or uses are categorically prohibited within either AMSA boundary. However, uses and activities must be water-related or water-dependent in most of the Port of Skagway AMSA. In addition, uses that would decrease the hydraulic capacity of the Skagway River are not permitted in the Skagway River AMSA.

Beyond the factors noted above, land and water uses and activities are considered proper so long as they comply with the AMSA Plan intent and policies. A land or water use is improper if it is inconsistent with ACMP standards or the policies of the appropriate AMSA Plan.

PERMITTING FOR ACTIVITIES IN THE AMSAS

Many development activities within the AMSAs require permits. A proposed project may need permits from the City of Skagway, State of Alaska and federal regulatory agencies. In addition, the landowner may have requirements or concerns of their own that the project developer will have to meet. A project developer must generally seek two kinds of information as explained below.

The first question to be answered is who is the landowner. While the landowner may not require permits, the landowner may have concerns that the project developer will need to satisfy so that the project may proceed without legal

challenge. If the City of Skagway, State or federal government is the landowner, a lease or land use permit may be required to satisfy the public sector responsibility to obtain a fair return for use of a public resource.

Second, regardless of the landowner, many activities and developments require permits before the activity can occur. A list of the concerns, responsibilities and permits required by State and federal agencies is presented below as a general guideline.

* **Alaska Department of Environmental Conservation (ADEC)** Regulatory authority for air, land and water quality in the State of Alaska rests with the ADEC under an agreement with the EPA. Most ADEC responsibilities and regulations are established in **Alaska Statute 46 and Alaska Administrative Code, Title 18**. The ADEC regulates wastewater (sewage or greywater) discharge, solid waste disposal, application of oil or pesticides, air emissions from diesel generators totaling more than 10,000 horsepower or fossil fuel-fired generator totalling more than 10,000 hp or 9000 kWh or 100,000 btu/hr, asphalt plants, incinerators that burn more than 1000 lbs. per hour and emissions from other industrial processes. If a public water system is to be altered an ADEC permit may be needed. If a project involves vessel transport of oil or other petroleum products as cargo, or includes onshore storage facilities with an effective storage capacity of greater than 10,000 barrels a ADEC permit is needed. If a sewage disposal system (such as a septic system) is needed on a parcel of land, it is also regulated by ADEC. In addition, anytime the EPA issues a wastewater discharge (NPDES) permit, **Section 401 of the Clean Water Act** requires that ADEC certify that there is reasonable assurance that the wastewater discharge will meet State of Alaska Water Quality standards.

* **Alaska Department of Fish and Game (ADFG)** The ADFG is responsible for activities affecting anadromous streams. The Skagway River is an catalogued anadromous stream. Any work on or disturbance of the bed or borders of anadromous streams requires an ADFG permit under **AS 16.05.870**. Water intake structures in fish streams may block fish movement or cause fish mortality through impingement; these are regulated by the ADFG. ADFG also reviews projects for their potential effects on maintenance of fish and wildlife values, subsistence, recreational or commercial uses., etc and makes recommendations regarding the consistency of projects with the ACMP habitat and other standards. ADFG also provides other State and federal agencies (particularly the U.S. Fish and Wildlife Agency) with ADFG comments on proposed projects' human use effects and habitat impacts under the Fish and Wildlife Coordination Act.

* **Alaska Department of Natural Resources (ADNR)** Unless State of Alaska lands have been put in a special status, such as a bird sanctuary, the DNR is the land manager. In general, the State owns navigable waters, tidelands, submerged lands out to three miles, and State selected uplands. In Skagway, as in many cities, the tidelands at the Port (Alaska Tidelands Survey No. 4) were given to the City. The Skagway River is a navigable waterway and the State thus owns the water and the river bed beneath the water (one exception to this is

discussed in the Land Ownership section of the Skagway River Resource Inventory chapter).

As the State's land manager, the DNR is responsible for permitting others to use or buy State land. Permission to use State lands is given through a land use permit, a lease or selling the land. To use State land one must generally apply for a land use permit from the DNR. To lease State land one must apply to the DNR and receive a positive finding that it is in the State's best interest to lease the land. The State statutes and regulations that govern DNR authorities and regulations are **Title 38 of Alaska's Statutes and regulations found at chapter 11 in Alaska Administrative Code.**

*** Alaska Office of Management and Budget/Division of Governmental Coordination (DGC)** The DGC administers the State of Alaska Coastal Management Program (CMP). The authorities governing the CMP are described in the Introduction Chapter of this Plan. The Alaskan CMP has enforceable standards with which proposed uses or development activities in the coastal zone must be consistent. When a local coastal district adopts its own CMP, the policies in the district's Plan supplement or replace the Alaska CMP standards for that area. In Skagway, the policies in the Skagway Coastal Management Program (SCMP) are applicable throughout the district. The policies in the Port of Skagway and Skagway River AMSA Plans replace the SCMP policies in these two areas.

There is no CMP permit per se. Instead, a project applicant fills out a Coastal Project Questionnaire (CPQ) at the same time other State and federal permit applications are completed. Any activity that might impact coastal resources is reviewed to evaluate its consistency with the SCMP or AMSA policies. Most projects within the Skagway coastal managment program boundary will be reviewed for consistency. DGC staff from the southeast office in Juneau (465-3562) can determine whether a proposed project will require a consistency review. Projects are reviewed for consistency with the CMP policies and for other State and federal permit requirements simultaneously. Stipulations needed so that the project is consistent with the SCMP or AMSA policies are placed in other State (or sometimes federal) agency permits. All three State resource agencies (ADFG, ADEC, DNR) are authorized to enforce ACMP permit stipulations. More detail on the coastal management program regulatory process is found in the narrative in this chapter on "consistency review".

*** U.S. Army Corps of Engineers (Corps)** The Corps regulates the development and protection of waters and wetlands so that they will be used in the best interests of the public. Congress has delegated this responsibility to the Corps to ensure the continued wise use, survival and health of these waters through the public interest review process. The Corps has jurisdiction over placing dredged or fill material in wetlands and waterways, construction of any structure in or over navigable and tidally influenced waters, excavation of material from these waters, or any obstruction or alteration in such waters.

Section 10 of the Rivers and Harbor Act of 1899 requires Corps permits for any construction or activity that alters the navigability of the waterways. This

includes the ocean, rivers, streams, lakes and adjacent waterways. In Skagway construction or activity that alters the navigability of the Port area or the Skagway way River requires a Corp Section 10 permit. **Section 404 of the Clean Water Act of 1977** requires Corps permits for placing dredged or fill material in all waters, including wetlands. Proposed structures in Skagway that would require Corps permits include construction of dikes, stream channelization and riprap for shoreline protection along the Skagway River. In addition, construction in the Port (or River) involving pilings piers, ramps, breakwaters, jetties, stone revetments and placement of buoys or other mooring devices would require Corps permits.

*** U.S. Environmental Protection Agency (EPA)** The EPA regulates the discharge of wastewater through its National Pollutant Discharge Elimination System (NPDES) permit. The review and issuance of this permit is authorized under **Section 402 of the Clean Water Act.** The purpose of this permit is to prevent water pollution by monitoring and controlling the discharge of waste. The owner or operator of any activity or wastewater system that discharges from one or more point sources into a waterway, must obtain a NPDES permit from the EPA. A NPDES permit must be filed 180 days prior to commencing the discharge. The permit is good for up to five years and is renewable.

A "point source" is any discernable, confined and discrete conveyance including but not limited to a pipe, ditch, canal, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel, or other floating craft from which pollutants are, or may be, discharged.

A NPDES permit is NOT required for the following types of discharges:

1) Sewage discharged from vessels (e.g. ships).
2) Dredged or fill material (this requires a Corps permit).
3) Discharges from properly functioning marine engines.
4) Those discharges conveyed directly to a publicly privately owned waste treatment facility (however, discharges originating from the publicly or privately owned waste treatment facilities are not excluded).
5) Most discharges from separate storm sewers. Discharges from storm sewers that receive industrial, municipal and/or agricultural wastes or which are considered by the EPA or the State to be significant contributors to pollution, are not excluded.

Two of the most common development projects in the AMSAs are dike construction in the Skagway River and dredge and fill activities in the Port.
Both projects would likely require a Corps 404 permit for work involving the placement of dredged material into a waterway, a Corps Section 10 permit for work in a navigable waterway, a coastal management program consistency review and determination and possibly an EPA NPDES permit if the work involved discharge of wastewater. If a NPDES permit is required, then an ADEC 401 water quality certification would also be needed. Work in the Skagway River also needs an ADFG Title 16 permit for work in or adjacent to an anadromous stream. Finally, if the State is the landowner a land use permit might be required.

CONSISTENCY REVIEW PROCESS

Introduction

In 1981, the State of Alaska adopted a coordinated ACMP consistency review process. Local, State and federal projects within the AMSA boundaries must be consistent with the AMSA policies. Consistency reviews are conducted when the City of Skagway, State or federal agencies, review a proposed activity or development to see if it is "consistent" with the policies in the AMSA Plans. Neither local, State nor federal permits for a proposed activity are issued until a project is consistent with the AMSA policies. There are no ACMP permits per se. Instead, stipulations that will ensure a project is consistent with AMSA policies, are placed in permits that are already required by other agencies. This generally means that ACMP consistency reviews and all permits for a project can be examined simultaneously.

The consistency review process is outlined in detail in ACMP Regulation 6 AAC 50. The process establishes either a 30 or 50 day consistency review period during which all State and federal permits are considered simultaneously. When a single State permit is needed, the agency issuing the permit coordinates the consistency review. The State Division of Governmental Coordination (DGC) coordinates project reviews when a federal permit is needed or if more than one State permit is required. The process found in regulation 6 AAC 50 outlines responsibilities for the applicant, State agency and coastal district. It also describes an "elevation" process that is used to resolve conflicts. The elevation process allows any of the parties in the project review to elevate or raise the project review and decision-making from regional staff to State agency directors or commissioners.

When there are local, State or federal permitting reviews that involve requirements outside of ACMP program concerns and policies, projects must meet all appropriate local, State and federal regulations.

State and Federal Consistency Review Process

When State or federal permits for a proposed project are needed, the City of Skagway is a participant in the coastal consistency review and determination process. The State or federal agency that is coordinating the review (usually DGC) must by law address the City's recommendations before the agency issues its consistency determination.

The City's comments that are based upon its areas of expertise and responsibility are given "due deference" when the coordinating agency reviews comments received for a proposed project and drafts the preliminary consistency determination. This means that if the coordinating agency rejects one of the City's

recommendations or stipulations that relate to an area of the City's expertise or responsibility, the coordinating agency must make a written finding stating the reason the recommendation or stipulation was rejected.

If a proposed project is not consistent with policies in the AMSA Plans, the lead agency will discuss changes to or stipulations for the project with the applicant so that the project can be found consistent with AMSA policies.

After the final coastal consistency determination has been made, State permits are issued with the stipulations required during the consistency review process. Permits must be issued within five days assuming no other non-coastal management program requirements or reviews are needed.

City of Skagway Consistency Review Process

The process is similar for city permits or approvals such as allowable or conditional use permits. The city manager, planning commission or city council (hereinafter called "city reviewer") reviews the proposed project for consistency with AMSA policies. If the proposal is not consistent with AMSA policies, the city reviewer will meet with the developer to discuss changes. Stipulations that will bring the proposal into compliance with AMSA policies will be discussed. The city reviewer is bound by law to find the project consistent before issuing permits or approvals.

If local, as well as State or federal permits are needed, the State consistency review process will suffice and projects will not need to undergo a separate municipal consistency review. It should be noted that consistency review and approval does not exempt a proposed use or activity from other regular reviews and approvals required by local ordinance.

Other Implementation Mechanisms

The City of Skagway as a First Class City in the exercise of a full planning function, has other tools available to implement goals and policies of the Port of Skagway and Skagway River AMSA Plans.

The City routinely undertakes special planning and development activities including port, landfill, airport, and economic development projects. Many of these efforts will involve some portion of the Skagway River or Port. The goals and policies of the AMSA Plans will be carefully considered where relevant.

In the future, when City capital improvement programs and budgets are considered, the land use maps, goals and policies expressed in the AMSA Plans

will be intrinsic to the planning process. The City will pursue grant funding to continue implementation of the AMSA Plans. Conversely, the AMSA Plans will enhance City grant applications by illustrating the comprehensive planning and public involvement of the City.

The waterfront zoning ordinance (SCC 19.06.090) and the Port of Skagway AMSA Plan with its Future Land Use map (Figure 7) indicate target areas within the Port where pedestrian amenities, recreation, and public access are emphasized. The zoning ordinance calls for developers of waterfront property to spend five percent of their project cost on either onsite or offsite waterfront amenities. The City could establish a waterfront improvement fund with these monies and add an appropriate match of City funds. When sufficient funding is reached, an enhancement project as described in the Port AMSA could be undertaken.

The Skagway River AMSA Plan identifies the need for a study and evaluation of critical habitat along and adjacent to the Skagway River. Specific information that will identify critical habitats and fish and game populations is necessary before management and enhancement efforts can be successful.

PUBLIC PARTICIPATION

The Port of Skagway and mouth of the Skagway River. The new White Pass and Yukon Route dock has just been completed (June 1990). *photo by Barbara Sheinberg*

PUBLIC PARTICIPATION

Public participation occurred throughout the development of the Skagway River and Port of Skagway AMSA Plans. In May 1988 the public participated in a survey about community planning goals and directions. The survey and results can be viewed in Appendix B of the Skagway Coastal Management Program document. Input was provided on both the River and the Port areas in the survey.

Actual work on the Plans began in October 1989. Planning consultant Barbara Sheinberg held discussions and informal work sessions with City Manager. These discussions held on October 19, 1989, March 23, May 17, May 31, June 5, June 6 and June 25, 1990 worked on various aspects of Plan development. A meeting with State and federal agency staff on the AMSA Plans was held on November 13, 1989.

Public meetings advertised by public notice were held on May 17, June 5 and June 21, 1990. The May 17 and June 21 meetings and as such were taped and recorded in the minutes. Tapes and minutes are available at Skagway City Hall.

Mention of the AMSA planning effort was made in the "City Digest " or "City and State" sections of the Skagway News in the May 25 and June 8 issues. There were news reports about the planning effort on public radio station KHNS, which broadcasts in the Skagway - Haines - Klukwan areas, on May 17 and 18, May 30 and 31 and June 21, 22 and 25.

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Looking west across the non-marine industrial area in the Port of Skagway AMSA. *photo by Barbara Sheinberg*

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APPENDIX A

APPENDIX A - DEFINITIONS

Feasible and Prudent means consistent with sound engineering practice and not causing environmental, social, or economic problems that outweigh the public benefit to be derived from compliance with the standard which is modified by the term "feasible and prudent".

Floodplain means any land area susceptible to being inundated by water from any source.

Floodway means the minimum area of a floodplain required to convey a flood peak of a selected magnitude with no more than a specified increase (usually 1 foot) in water surface elevation. This area usually consists of the most hazardous portion of ther floodplain where water velocities are appreaciable. Areas on the landward side of a floodway normally convey little or no floodfloww although they are inundated by water during floods. These areas are referred to as the flood fringe. Waters in the flood fringe are usually shallow and slow moving.

One Hundred Year Flood means a flood having a one percent chance of being equalled or exceeded in any given year. These terms connoye the regulatory floodplain associated with the National Flood Insurance Program and generally adopted as the extent of the area to be regulated. Other flood frequencies can be used for selecting the flood-prone area for floodplain mangament alternatives. For example, park structures, agricultural and recreational activities would continue well within the 100-year floodplain; however, critical facilties such as a hospital may be located above the 100-year floodplain.

Water Dependent means a use or activity that can be carried out only on, in or adjacent to water areas because the use requires access to the water body.

Water Related means a use or activity that is not directly dependent upon access to a water body, but which provides goods or services that are directly associated with water-dependence and which, if not locateed adjacent to water, would result in a public loss of quality in the goods or services offered.

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