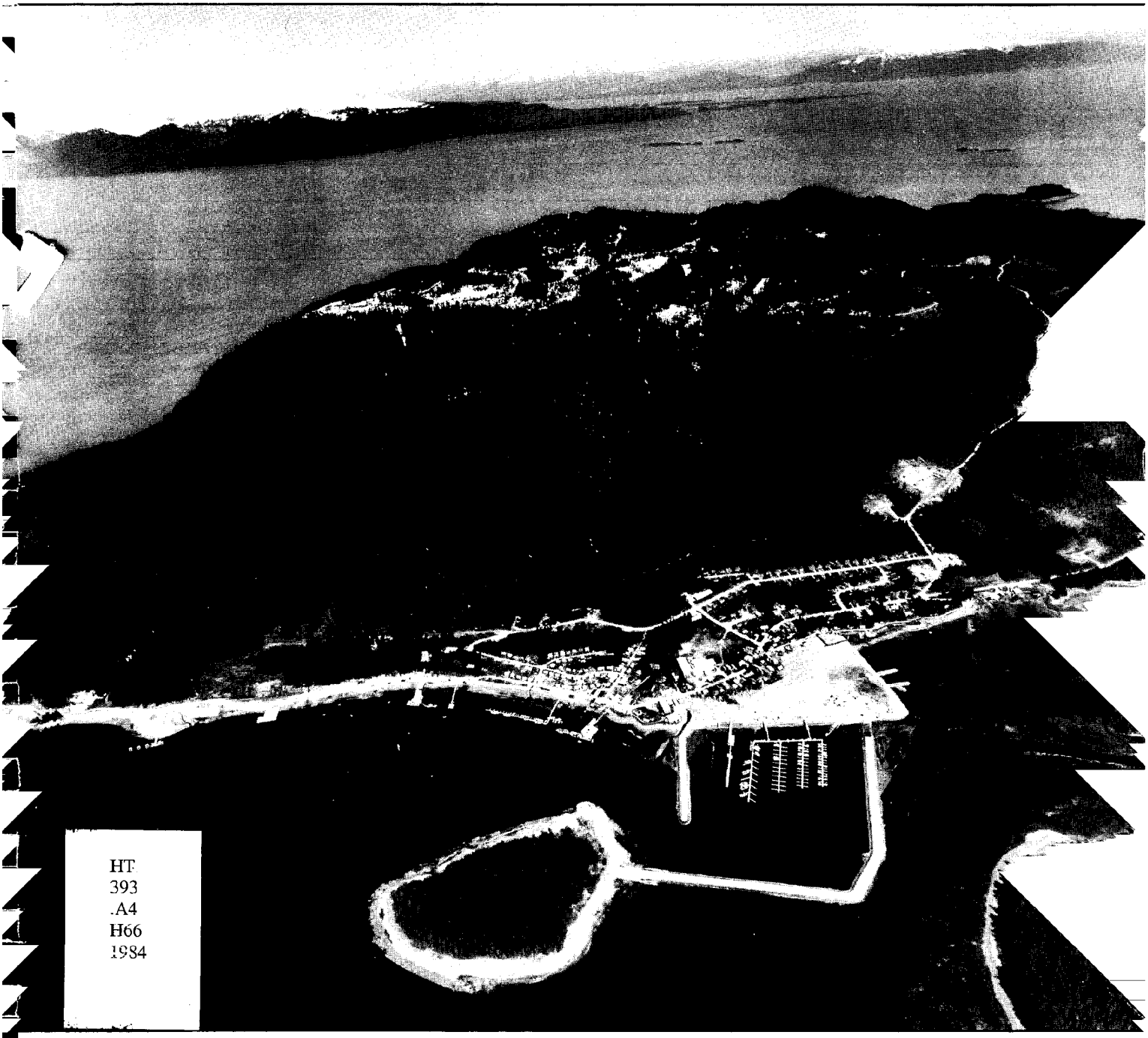
Concept Approved
HOONAH COASTAL MANAGEMENT PROGRAM



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This document has been prepared under the direction of the Hoonah Planning and Zoning Commission:

Planning and Zoning Commission Members

Jessie Gray
Mike Thompson
Jeff Goodell
Gerald Mayeda
Marilyn Williams
William Bevins
Gordon Greenwald, Chairman

Mick Marvin (Alternate)
Stan Taff (Past)
Chuck Johnnie (Past)
Don Gentry (Past)
Jim Erickson, Sr. (Past)

City Planning Coordinator

Marlis Mayeda

The City Council has given Concept Approval of this document, The Hoonah Coastal Management Plan. This plan is now forwarded to the Alaska Coastal Policy Council for state approval.

Hoonah City Council

Albert Dick
Corrine Thompson (Past)
Robert Starbard (Past)
Miles Murphy, Mayor

Leo Houston, Jr.
Wilfred Wolfe
Liv Gray
Robert Creekpaum
James Jack

Hoonah City Manager

Michael John Tavoliero

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CHAPTER 1

Introduction

Chapter 1
INTRODUCTION

ALASKA COASTAL MANAGEMENT PROGRAM

The protection and wise use of Alaska's coastal areas is extremely important to the continuing well-being of the state. Seventy-five percent of all Alaskans live within 10 miles of the coast, and the vast coastal resources provide food, energy, recreation, and economic opportunity to all the state's citizens. These resources are also part of ecosystems that serve the entire living community, of which man is only one component. Man's misuse of any part of this complex chain of life can severely damage the system as a whole, with serious consequences.

As population and man's needs increase, the demand for coastal resources is also increasing. The need for balanced resource management is more than ever imperative. Recognizing this need in all coastal states, the U.S. Congress in 1972 passed the Coastal Zone Management Act, which requires states to use the nation's coastal resources in a way that protects natural systems and cultural values. The act provides funding to states if they choose to develop their own programs. In response to the urgent need for management of the state's coast, the Alaska State Legislature passed the Alaska Coastal Management Act in 1977.

The Alaska Coastal Management Act in turn allows for funding to districts within the state so they can develop their own local management programs. Each district adopts a planning area for which an inventory and analysis are conducted and management decisions are made. Upon approval by the Coastal Policy Council, district programs become part of the state program.

HOONAH COASTAL MANAGEMENT PROGRAM

Hoonah is a predominately native community located in the northeastern part of Chichagof Island, the northernmost major island in Southeast Alaska's Alexander Archipelago (Figure 1). It is situated on the eastern shore of Port Frederick near the entrance to Icy Strait. Hoonah lies about 70 miles by water west of Juneau, 100 miles south of Skagway, and 130 miles north of Sitka.

As a first class city that exercises planning authority and contains a portion of Alaska's coastal area, Hoonah is a coastal resource district able to develop a district management program.

Definition of Planning Area

Figure 2 shows the planning area boundary for Hoonah's coastal management program. The planning area includes a zone of direct interaction (that portion of the coastal area where physical and biological processes are a function of the direct contact between land and sea); a zone of direct influence (that portion of the coastal area that is next to the zone of direct interaction and is therefore influenced by that interaction); and a zone of indirect influence (the outer portions of the coastal zone where human use may have a direct and significant impact on coastal processes). These three zones were defined and mapped for the Hoonah planning area by the Alaska Department of Fish and Game. The entire corporate limits of Hoonah are within the zones of direct interaction and direct influence.

The extent of the planning area was largely determined by the traditional and customary use of the lands and waters surrounding Hoonah. The city's Planning and Zoning Committee, which serves as the advisory body for development of the coastal management plan, gives the following basis for determining the planning area:

> The boundary established by the City of Hoonah for its Coastal Zone Management Program was necessary in order to encompass those geographical areas that are most important to the lifestyle of the people of Hoonah. As will be shown in the text of the study, the people of Hoonah have historically used and continue to use a much larger area for a variety of purposes. The city felt that the area within the established boundary is of utmost importance.
>
> This area is used for subsistence--deer, seal, and bird hunting, berry picking, clam digging, fishing, crabbing, and the gathering of herring roe, to mention a few. It is also a vital area for recreation, commercial fishing, and summer residences.
>
> The city feels that any development within these boundaries, as well as the specific areas identified as important outside of the boundaries, may be detrimental to the people of Hoonah unless it is carefully and properly planned.

The planning area also reflects the Native corporation land holdings surrounding Hoonah. The Alaska Native Claims Settlement Act (ANCSA) of 1971 resulted in the formation of regional and village corporations that own and manage lands accorded to them by the act. Huna Totem Corporation, a village corporation, and Sealaska Corporation, a regional corporation, have considerable holdings around Hoonah. Both

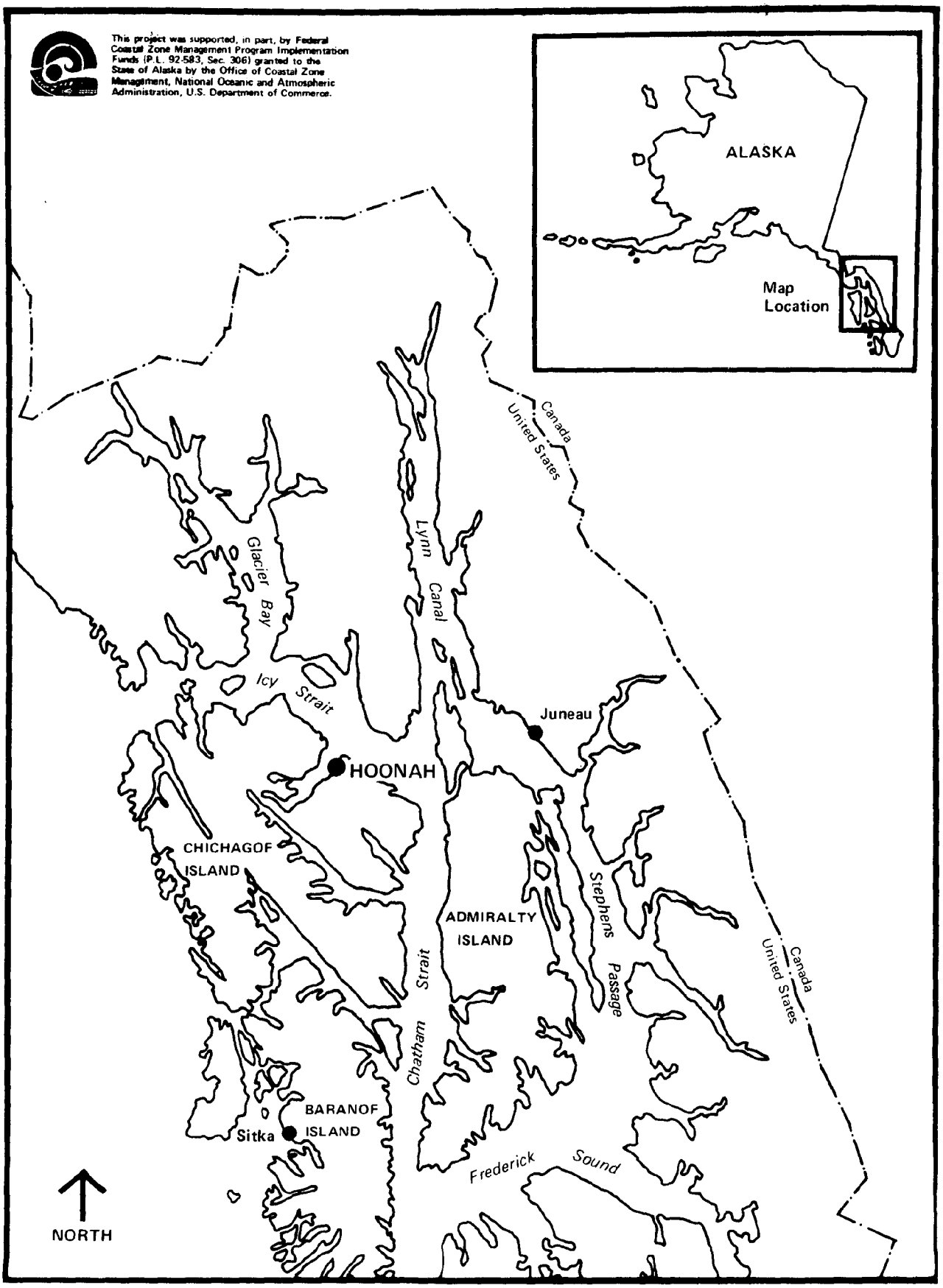


FIGURE 1
Project Locatior

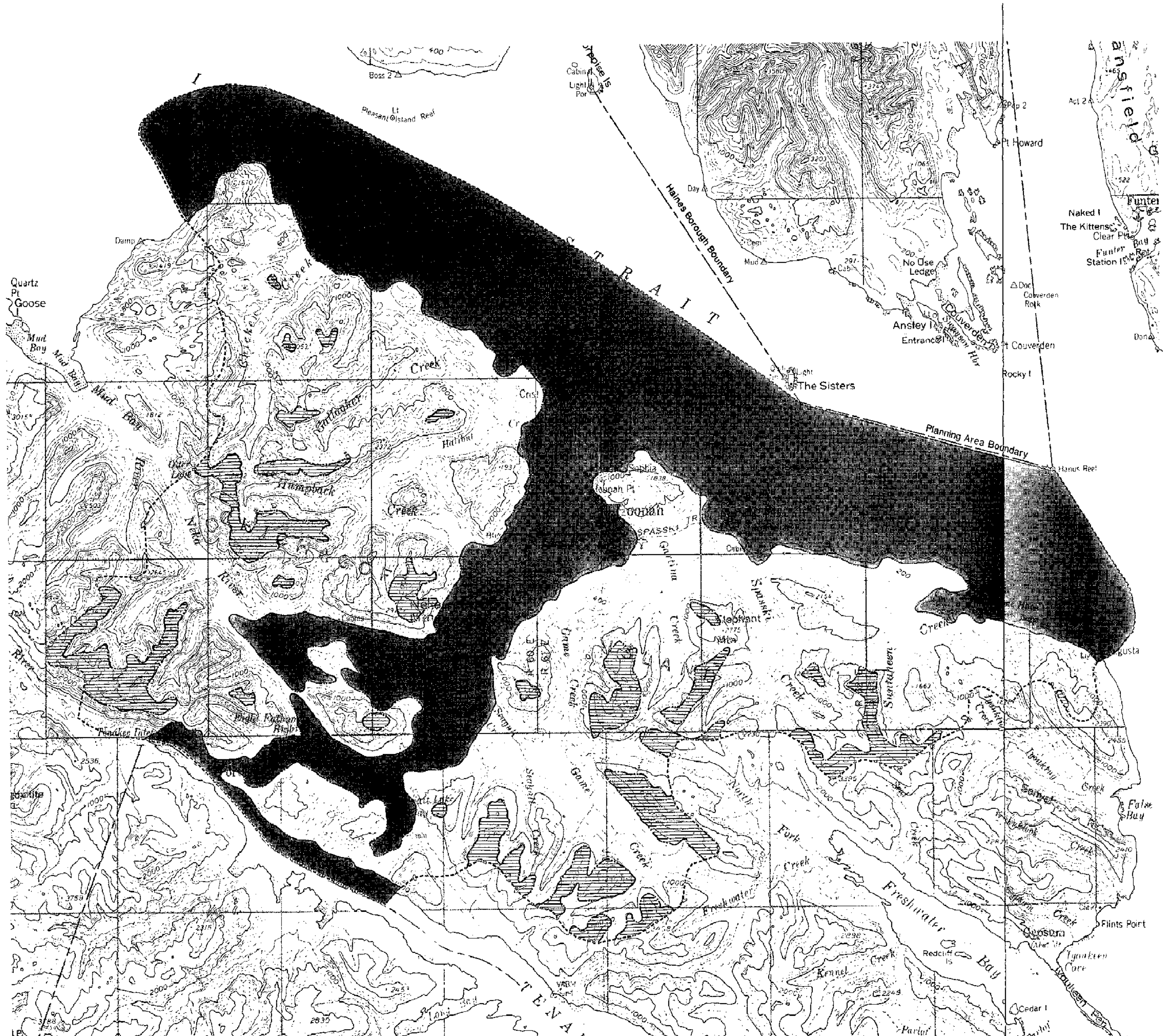


FIGURE 2
Coastal Biophysical Boundaries
PLANNING AREA

ZONE OF DIRECT INTERACTION

A. LANDWARD LIMIT — This zone is defined by the inland extend of active coastal erosion, the region of bald eagle and seabird nesting, coastal towns and buildings, seal rookeries and haul out sites, saltwater intrusion and tidal influence up coastal freshwater systems, storm and tsunami wave runup, and small islands. This boundary line is generally identified by the location of most bald eagle nest sites, which are within 457 m (1,500 ft) of the high tideline. The boundary varies inland in places of steep topography (a slope of 30° or greater) where mass wasting landslide debris can enter into adjacent marine waters and vicinity is included in direct interaction up to the 61 m (200 ft) elevation contour because the daily interactions which coastal human inhabitants and costal structures have with the shorelands and nearshore marine waters are great (e.g. transporttion, fishing, the dredging and filling of shorelands, sewage outfalls, increased erosion and runoff rates).

B. SEAWARD LIMIT — This zone is defined by the extent of: the two-layered estuary system, areas of high sediment deposition, the depth to which benthic algae occur, and nearshore areas where staging and foraging seabirds, shorebirds, harbor seals, sea lions and sea otters occur. This zone includes all the inside marine waters (e.g. Icy and Chatham Straits). A two-layered estuary is a semi-enclosed brackish water area, where a freshwater layer remains near the surface and is forced away from its point of dishcharge by the hydraulic head of more fresh water entering behind it, while simultaneously a denser saltwater layer moves in the opposite direction beneath the freshwater flow. It exists in this area from at least April to October, with the maximum estuarine circulation occurring in the summer months and October, the periods of maximal freshwater input. Also included within this zone are: the intertidal zone, rearing areas for anadromous fish, and herring spawning sites.

ZONE OF DIRECT INFLUENCE

A. LANDWARD LIMIT — This zone is defined by the Sitka spruce-hemlock coastal forest, including deglaciated areas where the forest in invading. Timberline varies in this area between 610 m & 762 m (2,000 ft & 2,500 ft). Also included within this zone are: the freshwater systems where anadromous fish spawning and overwintering occurs, the bulk of the habitat utilized by terrestrial birds and animals, and the extent which harbor seals travel up streams. Seasonally, waterfowl, brown bears, Sitka black-tailed deer, mink, marten, and river otters utilize food found along the seashore.

B. SEAWARD LIMIT — This zone extends to, and in some places slightly exceeds, the edge of the continental shelf at approximately the 183 m (600 ft) isobath. Within this zone, surface currents move landward and estuarine Inside Passage waters seasonally control the surface density. The continental shelf supports much of the biological activity along the coast. Seabirds and sea lions breed on land, but feed to at least the edge of the continental shelf. Adult king and Dungeness crabs spend most of their lives on the continental shelf, but mate in nearshore waters where the offspring also rear. Several species of fish (e.g. Pacific ocean perch and halibut) utilize the shelf waters during much of their life cycle, but spend a portion of their lives in non-shelf waters. Seasonally, some marine mammals also migrate through the contential shelf waters.

ZONE OF INDIRECT INFLUENCE

A. LANDWARD LIMIT — This zone is defined by all the alpine plant communities and watershed areas above the coastal forest treeline. These watersheds have an important influence on the sediment regime, salinity, and temperature of the nearshore marine waters.

B. SEAWARD LIMIT — The seaward zone of indirect influence is not easily defined. In this region most of the ocean waters circulate in a counterclockwise fashion between 50° - 60° N latitude and 130° - 170° E longitude in the Alaska Current and Alaska Gyre. Some animal species such as salmon, marine mammals, and seabirds migrate through, and thousands of kilometers beyond, the Alaska Current circulation pattern.

SOURCE: Alaska Department of Fish & Game, Habitat Division.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 16,895'
0 1 2 3 MILES
NORTH
CH2M HILL 1982

BASE MAP SOURCE: USGS MAPS, ALASKA TOPOGRAPHIC SERIES, MT. FAIRWEATHER, 1961; JUNEAU, 1962; AND SITKA, 1951. ORIGINAL SCALE 1:250,000

This project was supported, in part, by Federal Coastal Zone Management Program Implementation Funds (P.L. 92-583, Sec. 306) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

corporations plan to develop their timber operations and to pursue other resource development opportunities. These activities will have substantial impacts on Hoonah's resource base, population, and economy, and are an essential consideration in coastal management planning.

Planning Subareas

For planning and management purposes, it is useful to distinguish four subareas encompassed by Hoonah's coastal management plan: the city's corporate limits; the city and vicinity; the planning area; and the traditional and customary natural resource use area. Inventory information in this report is presented on four different base maps that represent these subareas.

City of Hoonah Corporate Limits. Hoonah's corporate limits currently comprise about 200 acres. This area is the coastal district as defined in ACMA AS.46.40.210. The Hoonah coastal management program has direct jurisdiction only within this district.

The city can use such means as ordinances, codes, land and water use plans, and economic programs to implement its coastal management program. Another integral means of implementing the program is the requirement for both state and Federal consistency. This means that in most cases, actions by state and Federal agencies must comply to the maximum extent practicable with the state's coastal management standards and, consequently, with approved district coastal management programs.

City and Vicinity. Section 14(c)3 of the Alaska Native Claims Settlement Act (ANCSA) provides for lands held by native corporations to be reconveyed to municipalities for community expansion and development. During the course of Phase II of this project, the city and Huna-Totem formally reached agreement to convey over 1,100 acres of land. The city has undertaken planning for these additional city lands, though annexation is still being studied. Until these lands are annexed, the District program will not include these lands.

Planning Area. As discussed previously, the planning area is that area where uses and activities have a direct impact on the City of Hoonah. The coastal management program has no direct jurisdiction over the planning area outside the city limits. However, the city intends to become more actively involved in management decisions of coastal significance. These actions include uses and activities on state and Federal lands; the granting of licenses, permits, and leases; and financial assistance programs. The planning area also includes lands owned by the native corporations.

Traditional and Customary Natural Resource Use Area. A detailed inventory and analysis for Hoonah's coastal management program was conducted for the planning area. However, Hoonah's Planning and Zoning Commission expressed concern that the planning area does not include many locations that have traditionally been used by Hoonah's people for a variety of purposes. For that reason, a larger area was established, within which only traditional and customary natural resource use was mapped. In this way, locations of significant use that are outside the planning area can be identified. As with the planning area, the program has no direct jurisdiction over this area. However, the city intends to become actively involved in decisions of coastal significance undertaken in locations identified as being of special concern.

CHAPTER 2

Socioeconomic Resource Inventory

Chapter 2
SOCIOECONOMIC RESOURCE INVENTORY

HISTORY AND CULTURAL BACKGROUND

The Huna are a Tlingit people who have lived in the Glacier Bay-Icy Strait area for hundreds of years. The Tlingits traditionally had a well organized social structure and obtained their main livelihood from the sea. They had permanent villages, and in season also established temporary camps as they hunted, fished, and gathered away from the village.

Hoonah, formerly spelled Huna, was and still is the principal village of the Huna people. It was known long ago as Kao'tu'kan or Gow'ta'kan, meaning "Village by the Cliff" in the Tlingit language. The original village was in Glacier Bay, but was destroyed by the advancing glacier. Hoonah has been in its current location for more than 200 years.

An expedition led by Vitus Bering visited the area in 1741, and Captain Cook explored the area in 1778. From the time of these contacts until the 1850's, fur trading was a major economic activity. In 1867, America bought Alaska from Russia, and an intense period of economic development followed. Christian missionaries settled in Hoonah in 1881, and a post office was established in 1901.

With increasing European contact, the traditional subsistence economy of the Tlingits gradually changed to a cash economy based on commercial fishing. Like their ancestors, however, most people still consider the traditional and customary harvesting of natural resources a significant part of their lifestyle. The people of Hoonah today combine the traditional ways of a distinguished past with new opportunities for the future.

POPULATION

Estimates of Hoonah's current population vary by source. The 1980 U.S. census lists Hoonah's population as 680, while the 1981 Overall Economic Development Plan (OEDP) for Hoonah gives a city population of 757. The Alaska Department of Community and Regional Affairs (DCRA) uses a population of 799 for municipal revenue sharing purposes. Other sources estimate the population to be as high as 1,000.

The coastal management planning area also encompasses the private community of Mount Bether, which is located 3 miles south of Hoonah at Game Point and has a population of approximately 120. While residents of Mount Bether use some of Hoonah's private services, the community is largely self-

sufficient and does not rely on Hoonah for public facilities and services.

Since 1900, Hoonah's population has fluctuated between around 400 and its current number (see Table 1). A marked decline was experienced between 1940 and 1950. Much of this decline can be attributed to a major fire in 1944 that destroyed all but a few of the town's structures.

The 1970 census showed 72 percent of Hoonah's population to be Alaska natives (at least one-quarter native blood), mostly of Tlingit origin. The percentage today is probably also around 75 percent. No recent data are available for age or sex composition of the population. In 1970, the population was very young, with a median age of 20.4 for males and 17.1 for females. The percentage of males and females in 1970 was 52 percent and 48 percent, respectively (Alaska Consultants, 1974).

GOVERNMENT

A number of governmental and quasi-governmental organizations conduct the business of the community and provide a wide range of services. While these organizations have their own constituencies, resources, and goals, their activities often overlap.

City of Hoonah

Hoonah was incorporated as a first-class city in 1946 and is administered by an elected mayor who serves a 3-year term and a six-member city council, who serve 2-year terms. The city assumes responsibility for police and fire protection; street maintenance and repairs; the water, sewer, and solid waste systems; the public school system; the elderly nutrition program; and city harbor facilities. It also owns the city liquor store and manages the state-owned airport.

The city council may regulate the affairs of the city by enacting ordinances to:

1. Establish, alter, or abolish any city departments
2. Fix the compensation of members of the council
3. Provide for a fine or other penalty or establish a rule or regulation for violation of which a fine or other penalty is imposed
4. Levy taxes
5. Make supplemental appropriations or transfer appropriations

Table 1

POPULATION TRENDS IN HOONAH
1900-1982

Year	Population	Percent Change
1900	447	
1910	462	+3%
1920	402	-13
1930	514	+28
1940	716	+39
1950	563	-21
1960	686	+22
1970	748	+9
1982	799*	+7

*Figure used by Department of Community and Regional Affairs. Other current population estimates range from 680 to 1,000.

Source: Alaska Consultants, 1974; DCRA.

6. Grant, renew, or extend a franchise

7. Regulate the rate charged for its services by any public utility

8. Authorize the borrowing of money within such limits as will not create a greater indebtedness or liability of any kind in any year than the current revenue of the city of that year

9. Purchase lands or convey or lease any lands of the city, and the ordinance shall specify the terms of the purchase, conveyance, or lease

10. Adopt or modify the official map, platting, or subdivision controls or regulations, or the zoning plan

11. Enact such additional acts of the council as provisions of law require to be by ordinance

Because of the large number of land ownerships in Hoonah involving non-taxable Indian Title, restricted deeds, and other conveyances not subject to taxation, the city does not levy an ad valorem property tax. Neither are personal property, business inventory, boats, mobile homes, or aircraft assessed. A 3 percent consumer sales tax is collected on retail sales, rent, and services performed within the city. The city also assesses fees for sewer, water, and garbage service.

The city has a Planning and Zoning Commission, which is currently working with the city's consultant on the coastal management program. The commission will also serve to develop comprehensive planning and zoning, which the city has identified as a primary goal. Specific ordinances and capabilities are further discussed under Implementation.

Hoonah Indian Association

The Hoonah Indian Association was chartered in 1939 as the local Indian Reorganization Act (IRA) Council. The Indian Reorganization Act of 1934 (amended in 1936 to include Alaska natives) states its purpose to be "To conserve and develop Indian lands and resources; to extend to Indians the right to form business and other organizations; to establish a credit system for Indians; to grant certain rights of home rule to Indians; to provide for vocational education for Indians; and for other purposes."

The Hoonah Indian Association is a recognized tribal governing body, a status that it shares with the Tlingit and Haida Central Council, the regional tribal governing body.

Although its governing functions have become limited since the creation of the mayor/council form of government in 1946, it is still an active force in the community. Its constitution states that it will negotiate with Federal and state agencies, advise the BIA on matters affecting natives in Hoonah, manage and protect their property, aid the needy, and cultivate native arts and culture.

In 1946, 80 housing units that were built by the BIA were turned over to the Hoonah Indian Association, and monies were loaned to individuals to purchase the homes. Monies are still being turned over to the Secretary/Treasurer for payment of these units. In 1978, the association built a cultural center/museum to display tribal artifacts, maintain and enhance Tlingit culture, and promote tourism. It also recently received HUD funding to build a city fire hall and purchase two fire engines.

Alaska Native Brotherhood and Sisterhood

Both the Alaska Native Brotherhood (ANB) and Alaska Native Sisterhood (ANS) are active in Hoonah and sponsor a variety of social activities. The purposes of these organizations are to work for the betterment of the native people, preserve the native culture, promote education, and work toward equality for the people. The ANB and ANS own a large hall with a gymnasium that is used for community recreation.

Tlingit and Haida Central Council

The Tlingit and Haida Central Council was established in 1935 as an outgrowth of the Alaska Native Brotherhood. The ANB filed a class action suit against the United States on behalf of the Tlingit and Haida Indians for about 20 million acres of land in Southeast Alaska. It was possible, however, that the ANB could not represent Tlingit and Haida Indians in their suit because the ANB's membership also included other natives. The ANB therefore created the Tlingit and Haida Central Council, which proceeded with the suit. This litigation eventually yielded a $7.5 million settlement--the Tlingit and Haida Land Claim Settlement of 1967.

The Central Council was organized to govern and manage the affairs of Tlingit and Haida Indians. Today, its primary activities revolve around proper expenditure of the claims money. The $7.5 million is held in a trust fund and is not used except for unique or special projects. Instead, the Council funds its annual budget of $11 million through state and Federal programs and with interest revenues.

The Central Council has developed a six-point plan in the areas of education and skills training; industrial and commercial training; aid to the elderly; community development;

housing assistance; and financing assistance. The programs and projects of the Council are administered by the following Council divisions:

- Division of Economic and Social Development-- provides assistance and training in community planning, implementation, and management

- Division of Fisheries and Natural Resources-- enhances native participation and success in fisheries; develops training opportunities in the development and management of fisheries and forestry

- Manpower Division--coordinates programs in human resources

- Southeast Alaska Agency--manages programs of the Bureau of Indian Affairs, HUD, and HEW.

The Hoonah Tlingit and Haida Council is one of 18 member community councils. It chooses delegates to the Central Council; delegates meet once a year to discuss matters of importance to natives.

Technical assistance is rendered either at the request of a community or at the instigation of the Central Council, depending on the nature of the program. Programs the Council has administered in Hoonah are: CETA; youth employment training programs; Headstart; housing improvement programs through the Tlingit and Haida Regional Housing Authority; development of the city's Overall Economic Development Plan (OEDP); and the Village Public Safety Officer Program (VPSOP).

The Central Council continues to lobby in Congress and the state legislature. Each year, it works with the city to determine the two projects of top priority for its lobbying efforts. Because of its financial resources and region-wide affiliation, the Council is a strong entity throughout Southeast Alaska.

Hoonah Lion's Club

The Hoonah Lion's Club was organized in 1966 as a service club for the betterment of the City of Hoonah. Since its organization, it has actively promoted a city-wide cleanup, including the beaches, roads, and yards. Each spring, the Lion's Club sets aside 2 weeks for spring cleanup of the entire city. It also cleans and beautifies the cemeteries for Memorial Day each year.

The Lion's Club sponsors various recreational activities throughout the year. It also provides assistance to the

needy and provides funding and supplies for the elderly nutrition program.

Huna Totem Corporation and Sealaska Corporation

Huna Totem Corporation is a village corporation formed in 1973 under the provisions of the Alaska Native Claims Settlement Act (ANCSA) of 1971. Its purpose is to select land and administer the use of land and money received in accordance with the Act. Through its Board of Directors, the corporation acts in behalf of and for the shareholders, who are the eligible residents of the community. The corporation owns the Huna Totem Lodge and has undertaken some activities to promote a tourism industry in Hoonah.

Sealaska Corporation is one of 13 regional corporations created under ANCSA. It oversees the activities of nine village corporations, including Huna Totem Corporation. Sealaska owns all the subsurface estates of village lands, as well as the surface and subsurface estates of its own land selections. Stockholders in Huna Totem Corporation are also Sealaska stockholders and are eligible for election to Sealaska's Board of Directors.

More information about corporation activities and development plans is contained in the Economy section, in this chapter and in Chapter 3.

Hoonah Community Action Committee (OEDP Committee)

The Hoonah Community Action Committee was formed in 1965, and is composed of ten members representing the Hoonah City Council, school officials, churches, local organizations, and citizens.

A main activity of the committee has been the development of an annual Overall Economic Development Plan (OEDP) for the city. The OEDP identifies economic and social needs of the city, sets development goals and objectives, and establishes a work plan that includes possible funding sources and implementation schedules. Funding for development of the OEDP was from the U.S. Department of Commerce, Economic Development Administration (EDA). Although the OEDP program was discontinued in 1982, the committee may continue to develop a similar kind of study if other funding can be acquired.

The 1981 OEDP objectives and program recommendations are included in the economic analysis section of Chapter 8.

ECONOMY

Employment and Income

The traditional and major source of employment in Hoonah is the fishing and fish processing industry. During the summer fishing season, there is virtually no unemployment. Halibut fishing begins in early May, and salmon fishing extends into September. Many of the women are employed at the Excursion Inlet Packing Company for about 4 months during the season.

Recently, the seine fisheries have been seriously depleted. Some areas have been closed to local fishermen, and a shortened season has decreased the income derived from this source.

Unemployment during the off-season months is high. The 1978 OEDP reported that the male labor force of approximately 204 experienced an off-season unemployment rate of about 85 percent, and the female labor force of approximately 152 had an unemployment rate of about 50 percent. Average income is consequently low. In 1975, average family income was $6,000 (OEDP, 1978). Traditional and customary food-gathering provides a substantial part of most residents' diets and helps supplement their income (see Chapter 5). Nevertheless, the economy is considered depressed, and additional economic opportunities are needed.

In 1970, 7 percent of the children in Hoonah were receiving Aid to Dependent Children; this figure has probably increased since that time. Approximately 55 people over 65 received some type of welfare benefits and social security payments in 1975. During the 1975-76 winter season, about 30 families were receiving BIA general assistance monies (OEDP, 1978).

Employment opportunities outside of the fishing industry have been limited. The city currently employs 18 workers to implement its programs and services. In 1981, nearly 30 positions were lost because of cutbacks in CETA funding. Other employers include the U.S. Forest Service (about 4 local employees; see section below); the school system (approximately 40 employees); the health clinic (3 employees); cable television company (1 employee); phone company (1 employee); three retail stores (about 10 employees); two oil distributors (2 employees); two restaurants (4 employees); the post office (3 employees); bank (2 employees); two airline offices (4 employees); the Huna Totem Corporation office (7 employees); Huna Totem Lodge (12 employees in winter, 25 in summer); the cold storage plant (20 seasonal employees); and the cultural center (1 employee). Occasional construction projects, such as roads, dock facilities, and housing, provide limited temporary employment opportunities, usually for about 5 workers.

The beginning of logging in the Hoonah area has recently provided new employment opportunities in this industry. The U.S. Forest Service has hired several local employees. Huna Totem has hired about 25 loggers and plans to hire a total of about 40 workers this year (see also the U.S. Forest Service/ALP Development and Huna Totem Corporation Development sections in this chapter).

City Revenues

Hoonah's budget for FY 1982 is $431,125, as shown on Table 2. About 60 percent of the city's revenues come from local sources, while 40 percent are from state and Federal sources.

The city relies heavily on state and Federal grant funds for community development projects. Recent projects have included:

- Construction of new harbor facilities, including a breakwater, stalls, loading dock, grid, transit float, and launching ramp (approximately $5 million Federal grant monies; completion slated for summer 1982).
- Construction of Hoonah Cultural Center in 1979 (state community block grant)
- Construction of city office building in 1980 ($400,000 EDA grant)
- Construction of fire hall in 1980 (funded through IRA with HUD community block grant monies)
- Purchase of an ambulance and two fire trucks, in 1981 and 1982.

The following funding is currently available for projects:

- $40,000 state grant funding for new jail facilities (plus $60,000 matching city funding)
- $20,000 state grant funding for a grader for city street maintenance
- $73,500 state grant funding for an airport terminal
- $1.2 million state grant funding for airport improvements (runway upgrading and extension; apron extension)
- $95,000 state grant funding for solid waste disposal improvements

Table 2

CITY OF HOONAH'S BUDGET FOR FY 1982

Expenses

Mayor/Council	$ 20,073.36
Office Administration	66,632.64
Insurance	10,000.00
Payroll Taxes	40,000.00
Election Judge	300.00
Bank Charges	500.00
Police	61,836.48
Fire	3,372.72
Boat Harbor	28,800.00
School	10,000.00
Maintenance and Repairs	25,000.00
Water and Sewer	46,175.52
Garbage	20,000.00
Streets and Roads	82,726.21
Elderly Nutrition Program (Gas)	1,000.00
Miscellaneous Expense	14,707.71
Total Expenses	$431,124.64

Revenues

Local Sources			
Utilities			
Water	$30,532.08		
Sewer	24,272.16		
Garbage	13,977.36	$ 68,781.60	
Sales Tax		121,052.64	
Fees and Fines, Penalties			
Dog Tags	$ 480.00		
City Fines	1,000.00		
Xerox Copies	500.00	1,980.00	
Rentals			
Boat Stall	$45,038.40		
Warehouse	4,050.00		
Office Space	9,000.00	58,088.40	
Liquor Stores		15,000.00	
Total Local Sources			$264,902.64

Table 2

CITY OF HOONAH'S BUDGET FOR FY 1982
(continued)

Revenues (continued)

State Sources		
State Revenue Sharing	$ 75,794.00	
State Roads and Airport	48,000.00	
Fish Tax	7,654.00	
Liquor License	3,250.00	
Amusement Tax	204.00	
Total State Sources		$134,902.00
Federal Sources		
Federal Revenue Sharing	$ 13,320.00	
BIA Roads	18,000.00	
Total Federal Sources		$ 31,320.00
Total Revenues		$431,124.64

Anticipated Revenues

City Dock Lease (Timber Pacific Corp.)	@ $5.00/mbft	$ 50,000/year for 2 years

Source: City of Hoonah.

- $5,000 state grant funding for hardware for new hookups to the water system

- $80,000 state grant funding for a water source feasibility study

- $200,000 available from DOT to regravel city streets and $100,000 to upgrade road near ferry terminal

- Block grant monies available from DOT for airport lighting facilities

- $160,000 municipal assistance funds, to be used at the city's discretion. (Starting in 1982, this will be an annual state allocation and is in addition to state revenue sharing.) So far, $14,000 has been allocated for purchase of a police car. Other possible uses include feasibility studies for sewer and waterline extensions.

The city will also receive $363,800 in 1982 as its share of the 1981 State of Alaska Municipal Aid Program Act. This is 60 percent of a one-time grant; the remaining amount will be available in 1983. Possible uses of this money include construction of a new police building; construction of a water holding tank above the city's highest housing; placement of water and sewer lines to the ferry terminal; placement of a sewer line on the upper road to serve new housing construction; and purchase of a garbage truck, fork lift, and back hoe. Other uses will also be considered.

U.S. Forest Service/Alaska Lumber and Pulp Company Timber Development

The Alaska Lumber and Pulp Company (ALP) has a 50-year timber sale contract from 1961 to 2011 with the U.S. Forest Service for areas of Tongass National Forest. The 1981-86 timber sale operating plan calls for logging to occur in the immediate Hoonah area (see Chapter 3). Although the plan is a commitment for only 5 years, it is probable that a significant harvest level will be maintained for at least an additional 5 years and that a reduced level may be continued for 10 years after that.

The Forest Service established a ranger district in Hoonah in May 1981 for land management and administration of the ALP timber harvest contract. Since that time, about 17 permanent employees have moved to Hoonah; with family members, a total of 30 people have become residents. Four permanent local employees have also been hired. During the summer season, six seasonal workers will be hired, either locally or from outside. In addition, six to eight local young

people will be hired for the Young Adult Conservation Corps program during the summer, and six USFS employees will come from Sitka to work during the summer.

ALP began road construction in 1981, and logging started in fall 1982. A 50-man logging camp has been established by Tyler Bros. Log Company. It is estimated that the camp will also include 50-65 family members (25-30 women and 25-35 children), for a total of 100-115 people (Homan-McDowell, 1980). The camp location is on the east shore of Port Frederick, south of False Point and east of Long Island. It is anticipated that the camp children will attend the city's schools. The camp will otherwise provide its own public facilities and services (utilities, police and fire protection, etc.), except for health care.

Logging employment opportunities will be limited for current Hoonah residents, since the logging contractor will bring most of his own employees.

The USFS is currently using rooms in the Huna Totem Lodge for offices. The Forest Service is looking to rent 3,500 square feet of office space in an office building. The USFS also needs a work center that would include a warehouse, shop, and yard area for vehicles and equipment.

Huna Totem Corporation Development

Huna Totem Corporation plans sustained yield timber harvest operations from 22,000 acres southeast of Hoonah. The anticipated market includes whole log export, chip export or sale to ALP, and possible large dimension structural timber and piling.

In 1982, Timber Pacific of Washington State entered into a timber contract with Huna Totem. As a joint venture under the name Huna Pacific, they began road building and timber harvesting (see Chapter 3). They have also leased the city EDA dock to support their activities. Huna Pacific hired 30 local people and 20 non-residents and planned to cut 10 million board feet in 1982. Payroll is estimated at from $750,000 to $1,250,000.

Huna Totem has obtained permits for a joint-use (with ALP and the USFS) log transfer and storage facility at Long Island in Port Frederick, about 1 mile south of Hoonah (see Chapter 3). A chipper may also be installed at the facility. It is estimated that 28 employees would be needed for the facility, about 8 to 15 of whom would be hired from outside. These employees and their families would reside in Hoonah, adding perhaps 20 new residents to the community. Huna Totem is providing on-the-job training to local hires.

Huna Totem Corporation constructed a new office building in summer 1982. The primary leasee was to be the USFS (3,500 square feet).

Huna Totem has also taken some steps to develop a tourism industry in Hoonah. It has joined the Alaska Travel Association, and has participated in marketing efforts. In 1981, Huna Totem worked with an excursion vessel that included Hoonah as a tour stop. The corporation plans to pursue further opportunities for tourism development.

Sealaska Corporation

Sealaska has a small camp (25 employees) to support road building for timber harvesting on lands on the west side of Port Frederick. According to a 1982 Alaska Power Administration study, an additional 25 employees are planned to be located in Hoonah in 1982 and 1983 for logging activities. Further Sealaska management plans are not known at this time.

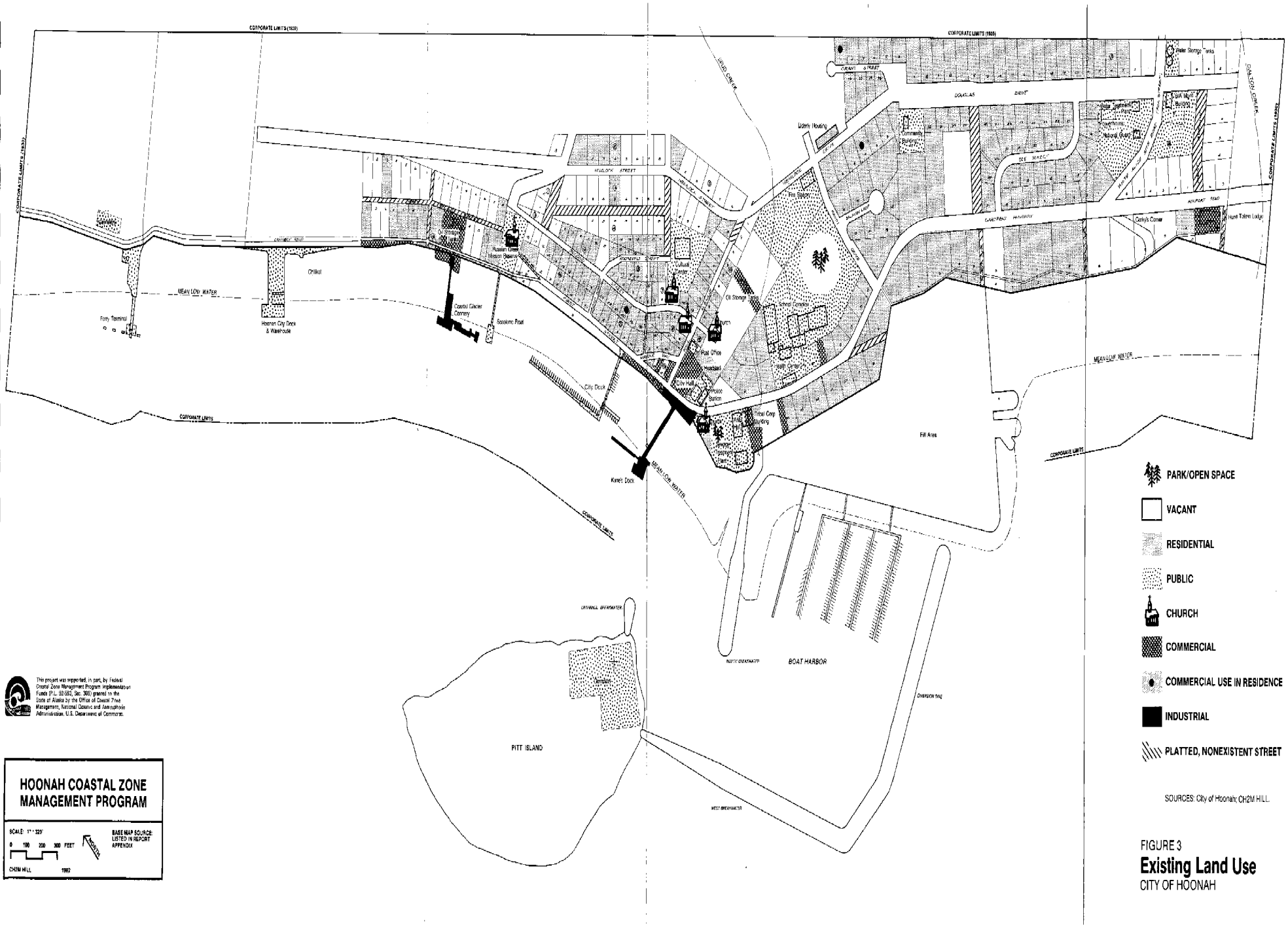
LAND USE

Existing Use

The City of Hoonah contains approximately 200 acres. Existing land use is shown on Figure 3. The land in the area of the city core is relatively flat or gently sloping; this area is developed in a mixture of commercial, residential, and public buildings. Development has occurred primarily along the shoreline to take advantage of the waterfront and the more gentle topography.

Single-family residential development has concentrated around the core area and in the southeastern portion of the city. Development in the northwestern area of the city has been occurring, but is limited because of steep terrain and the unavailability of water. Within and close to the downtown area are some vacant lots where dilapidated houses have been abandoned. Newer development has been occurring to the southeast, toward the Huna Totem Lodge and the airport. There is one multi-family development in the city, near the new fill and west of Garteeni Highway.

Most of the public buildings are located within or close to the downtown core. These include the city hall, the sewage treatment plant, the ANB Hall, the health clinic, school buildings, and the post office. These are generally clustered around the Spud Creek drainageway, which bisects the city. The new fire station and police station are located east of this cluster, at the intersection of Ravin Drive and Hemlock Drive.



This project was supported, in part, by Federal Coastal Zone Management Program Implementation Funds (P.L. 92-583, Sec. 306) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 320'

0 100 200 300 FEET

NORTH

BASE MAP SOURCE: LISTED IN REPORT APPENDIX

CH2M HILL 1992

- PARK/OPEN SPACE
- VACANT
- RESIDENTIAL
- PUBLIC
- CHURCH
- COMMERCIAL
- COMMERCIAL USE IN RESIDENCE
- INDUSTRIAL
- PLATTED, NONEXISTENT STREET

SOURCES: City of Hoonah; CH2M HILL

FIGURE 3

Existing Land Use

CITY OF HOONAH

Industrial development occurs on the waterfront in the northern part of the city on and around the Kane's and Coastal Glacier Cannery docks. Little actual processing occurs on Kane's dock, and it is used primarily for cold storage. A large area south of the city core has recently been filled and is being used primarily for waterfront access and recreation.

Commercial fishing vessels are moored at the new harbor facilities at the city dock just north of the city hall. Other commercial uses are concentrated primarily in the core area and on and near the Coastal Glacier Cannery dock. Located downtown are three stores, the bank, airline offices, the Hoonah Liquor Store, and a cafe. Near the cannery dock are a store, the Kooteeya Bar, and an air travel center. At the south end of town is the Huna Totem Lodge and Restaurant and Bar. A few other small commercial uses are scattered throughout the city, primarily operated as family businesses in or near private residences.

Streets are unpaved and are maintained by the city. The street system runs the length of the city and provides access to all existing land uses. The main road narrows at the north end of town from First Street onto North First Street.

Land status/ownership within the city is shown on Figure 4.

Land Selections

Section 14(c)3 of the Alaska Native Claims Settlement Act (ANCSA) provides for lands held by native corporations to be reconveyed to municipalities for community expansion and development. Generally, 1,280 acres (2 square miles) are considered for reconveyance.

The City of Hoonah and Huna Totem Corporation just recently finalized an agreement to convey over 1,100 acres of land from corporation ownership to city ownership. This land is immediately adjacent to the existing city limits (see Figure 22) and will be annexed after completion of studies by the Planning and Zoning Commission.

HOUSING

The 1944 fire in Hoonah destroyed virtually all of the city's housing stock. In 1946, 80 single-family residences were built with funding from the Bureau of Indian Affairs (BIA). Many of these units have since seriously deteriorated. Some have been abandoned, and others are badly in need of repair.

From 1968 to 1971, 50 single-family residences were built with HUD funding received by the Tlingit and Haida Regional

Housing Authority. In 1973, another 65 HUD-funded residences were built. In 1980, 15 residences were built to replace some of the demolished, dilapidated, or abandoned war housing.

There is a six-unit privately owned apartment building in the city. A 21-unit apartment building was constructed in 1978 under a HUD-funded program for elderly housing. Some of these apartments are also occupied by non-elderly residents. There are from 12 to 15 mobile homes in the city, about half of which are occupied by U.S. Forest Service employees. Several new homes have been privately constructed over the past few years. There are no float homes in the city at this time.

Most homes in Hoonah are supplied with city water, sewer, and electricity; however, water and sewer lines do not extend to some of the newer homes along Hemlock Street. The electrical systems in as many as 80 homes are very poor, and electrical fires have destroyed several residences. Most houses are of wood-frame construction.

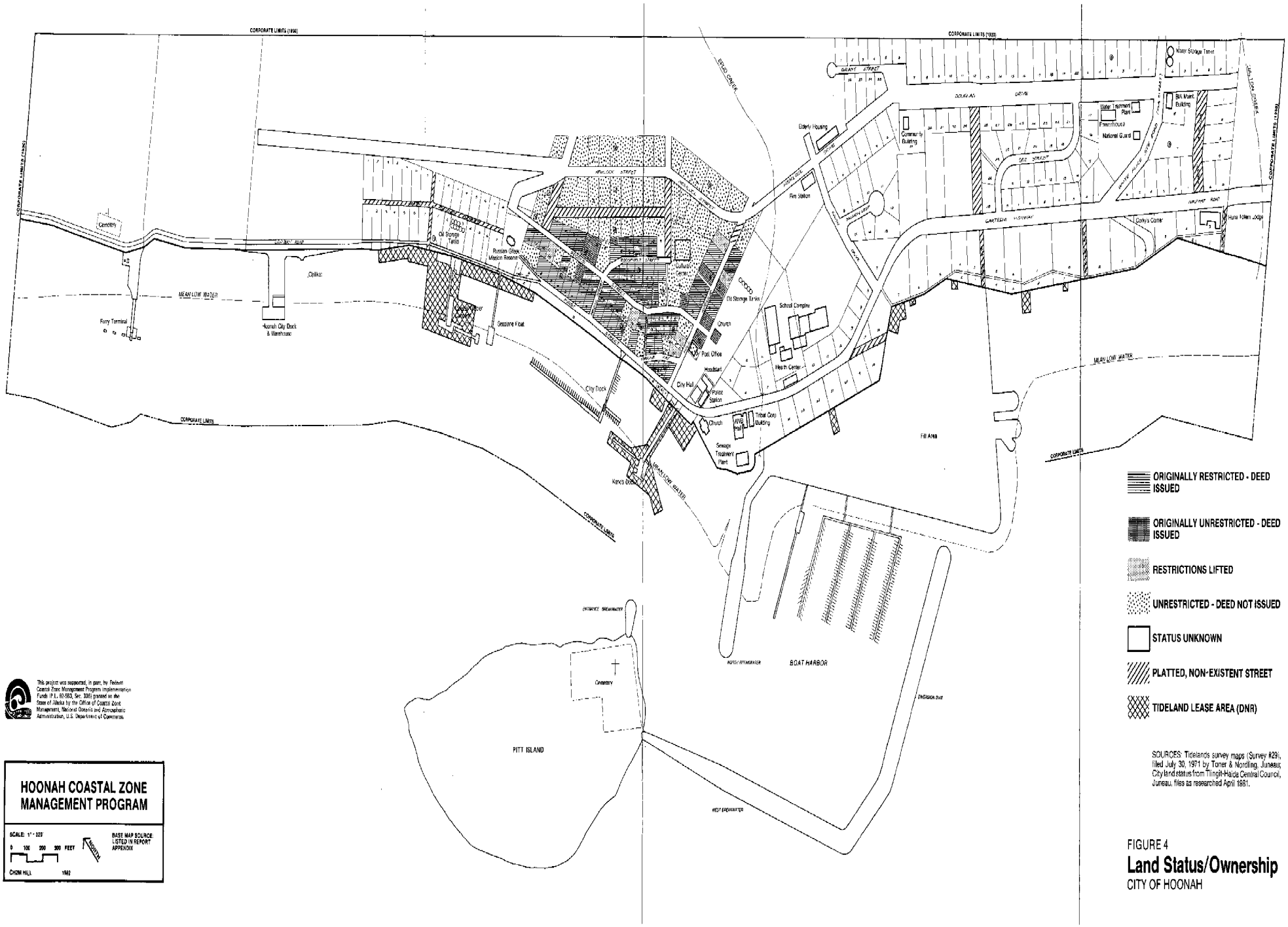
In 1974, general revenue census data indicated an average household size of five. The housing vacancy rate in the city is close to zero. The Planning and Zoning Commission is presently studying additional housing construction, possibly with the Tlingit and Haida Regional Housing Authority.

PUBLIC FACILITIES AND SERVICES

Health and Social Services

Hoonah's health clinic is staffed by a full-time physician assistant, who is sponsored by the Southeast Alaska Regional Health Corporation (SEARHC). SEARHC is a regional, non-profit health care organization that is funded partly by the Indian Health Service (an arm of the U.S. Public Health Service) and partly by the state. It provides preventative and primary health care services to nine communities in the southeast region of Alaska. Fees are charged for the services of the physician assistant on a sliding scale basis. The health clinic is also staffed by two health aides, who are funded by the IHS.

A private doctor, sponsored by the Hoonah Lions Club, visits Hoonah two to three times a year. A public health nurse visits Hoonah's clinic about one week a month. A physical therapist, sponsored by the Elks Club, is also in Hoonah several days a month. No regular dental care is available. However, the Public Health Service holds both medical and dental field clinics in Hoonah about four times a year, and a private dentist occasionally visits the city.



This project was supported, in part, by Federal Coastal Zone Management Program implementation Funds (P.L. 92-583, Sec. 306) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 200'

0 100 200 300 FEET

NORTH

BASE MAP SOURCE: LISTED IN REPORT APPENDIX

CH2M HILL 1982

SOURCES: Tidelands survey maps (Survey #29), filed July 30, 1971 by Toner & Nordling, Juneau; City land status from Tlingit-Haida Central Council, Juneau, files as researched April 1981.

FIGURE 4

Land Status/Ownership

CITY OF HOONAH

The clinic contains an X-ray unit and some laboratory facilities. In 1981, the city bought an ambulance that has adequate equipment for emergency needs.

Major medical and dental care is available in Juneau, about 20 minutes flight time away, or at the Mt. Edgecumbe Public Health Service Hospital in Sitka, about 45 minutes away by air. On an average, two or three people travel to these facilities per week.

A social worker from the State Department of Health and Human Services visits Hoonah several days a month. That department also sponsors a child welfare protection officer who lives in the city. An alcohol counselor sponsored by SEARHC resides and works in the city.

The city has an elderly nutrition program that provides meals at the community center, transportation to the center, and delivery of meals to people not able to leave their homes. The State Department of Aging provides funding for the food, the city pays for car fuel, and the Lions Club pays for heating fuel and wages for the driver.

Education

The City of Hoonah school district operates the school system for grades kindergarten through twelve. Current enrollment is approximately 250 students. The estimated capacity of the system is 350-400 students.

The school staff consists of a superintendent, a secondary school principal, an elementary school principal, 24 teachers, 2 secretaries, a bookkeeper, 5 maintenance personnel, 8 teacher's aides, a librarian, a librarian's aide, a parent coordinator, a cook, and 2 assistant cooks. The current pupil/teacher ratio is about 10:1. The aides and parent coordinator may be eliminated because of funding cuts.

The elementary school has nine classrooms. The high school building includes a home economics room, science room, gymnasium, mechanics and marine mechanics shop, woodworking shop, music room, auto shop, library, and administrative unit. Another building houses the administrative offices, special education classes, parent conference rooms, Follow-through director, and parent coordinator's office. A playground area adjoins the school buildings.

The school operates a hot lunch program for all students from kindergarten through high school and a hot breakfast program. A Follow-through Program is funded by the State Office of Child Development for grades kindergarten through six. The high school curriculum includes special courses in carpentry and mechanics, and offers vocational counseling.

Federal funding cuts may jeopardize these programs for next year.

The city has a Headstart program for preschool children. Monies for food is provided by the U.S. Department of Agriculture and school food program, and the staff is funded by the Tlingit and Haida Central Council.

Adult education classes, both vocational and GED, are funded by the state and are taught evenings. College courses are occasionally offered through the Tlingit-Haida grant-in-aid program to the teacher aides and other community members through Sheldon Jackson College, under the auspices of the federally funded Follow-through Project. Evening adult classes are also offered through the University of Alaska at Juneau.

Police and Fire Protection

Hoonah has two police officers and three dispatchers funded by the city, and two public safety officers funded by the state Village Public Safety Officer Program (VPSOP). The current staff level provides adequate public safety protection.

The city's all-volunteer fire department includes a head fireman and approximately 14 firefighters. The city fire station was constructed in 1980. Two fire trucks were purchased in 1981 and 1982 and are outfitted with adequate emergency equipment. Fire hydrants are located throughout the city. The city's equipment and personnel are generally adequate for current conditions; however, firefighting capability is insufficient when water shortages occur (see Water, Sewer, and Solid Waste, below).

A 1980 community injury control survey for the city (U.S. Public Health Service, 1980) identifies several hazardous fire conditions in Hoonah. These include improper maintenance and use of wood-burning heating units in residences; unsecured gas cylinders in residences; poor maintenance of electrical systems; and abandoned and dilapidated structures throughout the city. The city has had an average of 5 fires a year that can be traced to these causes.

The fire insurance rating in Hoonah is 9. The city believes this rating is too high and is trying to have it lowered. The city is interested in conducting a public education program concerning fire hazards and safety practices.

Electricity and Fuel Supply

Hoonah's electric power is provided by the Tlingit-Haida Regional Electrical Authority (THREA), an REA utility formed

in 1977. THREA facilities in Hoonah include a 1700-kW diesel generation plant consisting of two 600-kW units and one 500-kW unit and a 7.2/12.4-kV primary distribution system.

Net generation increased from 1,230 MWH in 1970 to 2,400 MWH in 1978, then decreased to about 2,170 MWH in 1981. The decrease was the result of customer use decreases attributed to increased retail rates--from 16.9¢/kWh in 1978 to 36.0¢/kWh in 1981. Rate increases were due to system upgrading, generation fuel price increases, and inflation related to operation, maintenance, and overhead costs. A monthly surcharge is assessed to every user in addition to the 36.0¢/kWh rate.

Residential customers began to see some temporary relief from rates in late 1981 resulting from a state subsidy for rural utilities. Rates for residential customers using less than 600 kWh per month decreased to the 17¢/kWh range when the subsidy became fully effective. Beginning in July 1982, the subsidy will decrease about 1¢/kWh each year, and rates will increase annually by this amount, plus by approximately 5 percent from other utility cost increases. This means that residential rates will be in the range of 25¢/kWh by 1986--assuming a 10 percent inflation rate--or $150 per month for 600 kWh. Commercial and industrial users receive no subsidy.

The Hoonah system operates at about 15 percent plant factor and could easily operate at 40 to 50 percent. In other words, three times as much energy could be generated and distributed by the present system (APA, 1982).

The Hoonah OEDP gives high priority to the establishment of an alternative source of energy for the city, mostly because of the current high cost of diesel-generated electricity. Over the last few years, several studies have been conducted concerning energy options for Hoonah. In 1981, the Alaska Power Administration (APA) conducted a reconnaissance evaluation of a transmission line from the Snettisham hydroelectric project (in the Juneau area) to the Hoonah area and the Noranda mine on Admiralty Island. That study concluded that the transmission line was technically practical, economically justifiable, and the only likely alternative to diesel fuel generation. In 1982, detailed load forecasts were made for the project.

The proposed transmission line corridor in the planning area is shown on Figure 7 in Chapter 3. Funding for more detailed feasibility and design studies was approved by the legislature for FY1982, but was subsequently line-itemed out of the capital budget. Detailed environmental analysis will be necessary before final route selection and construction. Further discussion of energy conditions in Hoonah is contained in the energy analysis section in Chapter 8.

About 75 percent of the homes in Hoonah have oil-hydronic heating systems with supplemental wood stoves; some newer homes have wood stoves only. Recent oil cost increases have decreased oil heating in favor of wood heating. Propane is generally used for cooking. Two fuel storage and delivery facilities in Hoonah provide oil, gas, and diesel for the community and for fishing vessels. THREA provides diesel for its generating system.

Communications

Most homes in Hoonah have telephone service, which is provided by the Southeast Telephone Company. Airline agents have radio phones, and most fishing vessels have marine radio phones.

Two radio stations and cable television are received from Juneau. There is also one local television station. Mail and newspapers are delivered by air.

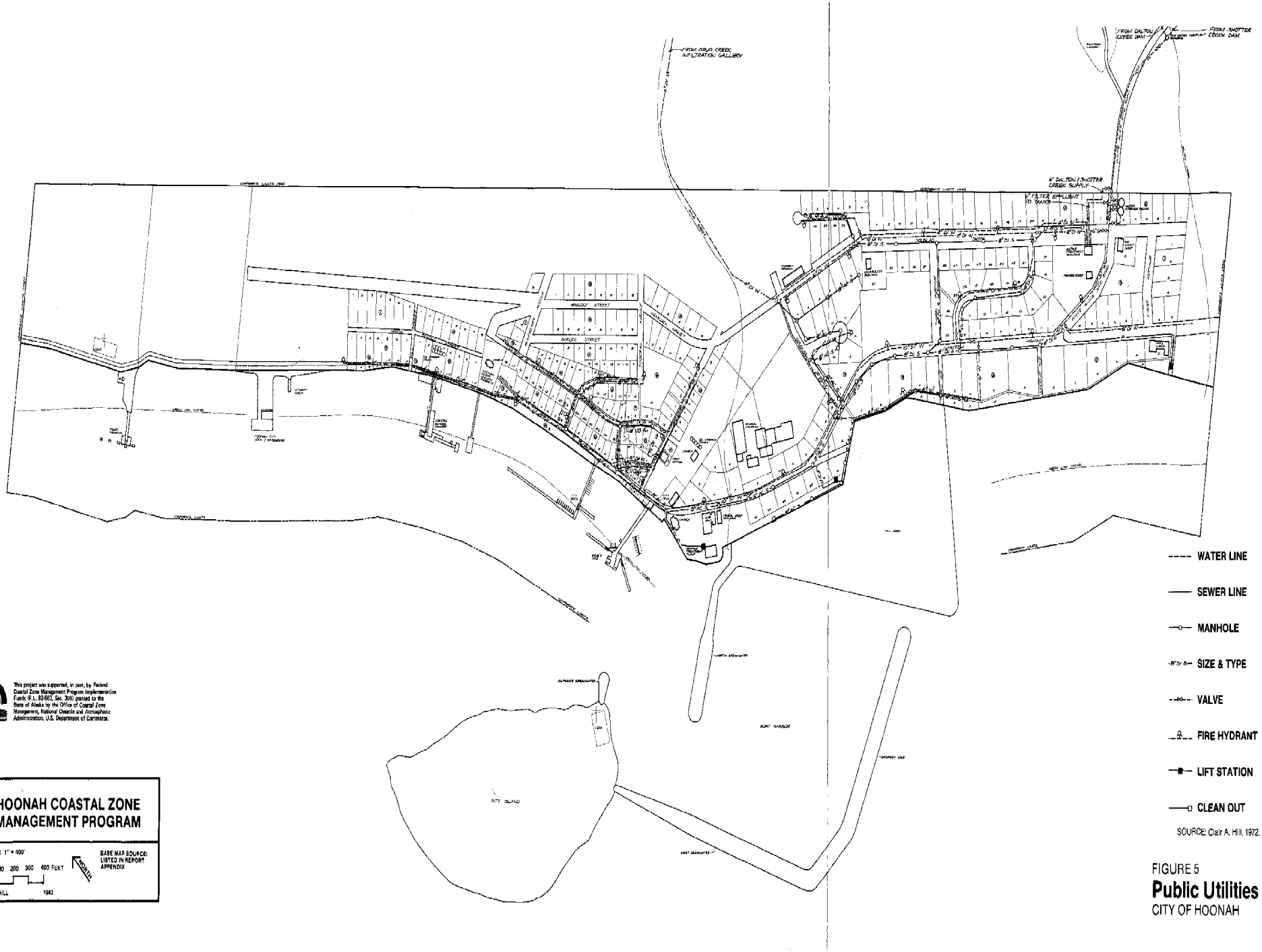
Water, Sewer, and Solid Waste

Hoonah's water, sewer, and solid waste systems are operated and maintained by the city, which employs one water and sewer supervisor and one technician. The city charges a monthly utility service fee.

A water transmission line was built for Hoonah in 1968, and a water treatment plant and lift station were constructed in 1972. Service has been extended as it is needed to serve new development. The water system has a capacity of 300,000 gallons per day. Current usage averages 120,000 gallons per day. The water sources are Shotter, Dalton, and Spud Creeks. Facilities are a 200,000-gallon wood stove storage tank; treatment equipment for filtration, chlorination, and fluoridation; pumps; and 6- to 12-inch distribution mains. Fire hydrants are located throughout the city. Figure 5 shows existing waterlines in the city.

While the theoretical capacity of the water system is adequate to serve the existing population, periodic shortages occur because of low pressure, especially during the dry months of the year. A 1980 Public Health Service survey also identifies several operation and maintenance problems. According to the Alaska Department of Environmental Conservation, serious problems still exist, and DEC has served numerous compliance orders to the city. The city is currently using DEC's emergency chlorinator.

Expansion and repair of the water system is listed as a priority in Hoonah's OEDP. In 1982, the city received an $80,000 legislative funding grant to conduct a water source feasibility study. Design is now underway to develop a new



SOURCE: Clair A. Hill, 1972.

This project was supported, in part, by Federal Coastal Zone Management Program Implementation Funds (P.L. 92-583, Sec. 306) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 100'

0 100 200 300 400 FEET

NORTH

BASE MAP SOURCE: LISTED IN REPORT APPENDIX

CH2M HILL 1982

FIGURE 5

Public Utilities

CITY OF HOONAH

water source. The source, an unnamed tributary of Gartina Creek, is located 4 miles south of Hoonah. Other water system improvements, such as transmission pipelines, distribution pipelines, water treatment plant rehabilitation, and storage reservoirs, will also be designed and constructed for the City of Hoonah in the near future.

The city's wastewater collection and treatment system was funded by the U.S. Public Health System and was completed in 1974. Two lift stations pump sewage through 6- to 12-inch mains to the secondary treatment plant (see Figure 5). The outfall discharges into Port Frederick. According to the city public works supervisor, the treatment plant has the capacity to serve a population of up to 2,000. However, excessive infiltration and inflow, especially in the spring, overloads the system. The city also believes that water waste (unnecessary running water, etc.) by both residential and commercial users contributes to this overload. The 1980 Public Health Service report and DEC both cite operation and maintenance problems. The city's OEDP gives high priority to the upgrading and extension of the wastewater collection system.

Hoonah's past solid waste disposal site was developed around 1965 by the Alaska Area Native Health Service. The site was designed as a sanitary landfill, but covering was not always accomplished. The site itself is one of the few borrow areas in the community, and the backfill material contains a high percentage of fine sand and silt. The character of the solid waste is generally household, with limited commercial and industrial waste because of the limited development in the community. However, many abandoned vehicles, including heavy construction vehicles, are scattered throughout the site. The city is planning to cap the landfill and build a firing range on the site.

Huna Totem Corporation conveyed to the city approximately 12 acres of land on White Alice Road for the new sanitary landfill. This site has been approved by DEC and will be the new landfill for Hoonah. The site will be developed and operational in 1984.

Cemeteries

A Tlingit cemetery is located on Pitt Island, and the Point Frederick Cemetery (known as the Old Russian Cemetery) is located at the northern end of the city, across from the city dock and warehouse. Both cemeteries are listed in the Alaska Historic Resources Survey. A third cemetery is further north of the old Russian Cemetery, outside the city limits. The Planning and Zoning Commission is presently searching for a new municipal cemetery site.

Other Public Facilities

Other public facilities not previously mentioned are the municipal office building; the community center owned by the Tlingit and Haida Central Council; the ANB hall used for community activities; U.S. Post Office; public library; cultural center; and six churches (Presbyterian, Catholic, Salvation Army, Russian Orthodox, United Pentecostal, and Baha'i).

TRANSPORTATION

Hoonah is accessible only by sea and air. It is not linked with other island communities by road.

Air

Hoonah's airport is located about 1 mile southeast of the city. The runway has recently received landing lighting. No terminal facilities currently exist, although DOTPF is developing plans for such facilities.

The airport is used for an estimated 3,000 operations per year. Scheduled passenger service is available between Juneau and Hoonah several times a day; small freight and mail are also delivered. Chartered air taxi service is available from Juneau. L.A.B. Airlines and Wings of America have offices in Hoonah.

The city in 1981 received funding for airport improvements. The gravel runway was upgraded and extended to 3,500 feet. The apron was increased by about 6,000 square feet. Approach clearings have also been undertaken as part of this project. Future improvements, including paved runways, are being considered so frozen fish can be flown out of Hoonah.

In 1980, Hoonah received $73,500 in state funds that were appropriated to rural communities for design and construction of airport terminals. The city is working to develop an airport terminal in 1984.

Hoonah also has a 9,000-foot seaplane landing area. Since the construction of the airport, amphibious aircraft are used less frequently.

Water

Ferry service between Hoonah and Juneau is provided three times a week by the Alaska Marine Highway system. Hoonah's ferry dock was built in 1974. The ferry terminal has no water and sewer service. DOTPF recently requested a legislative appropriation for water and sewer line extension to the terminal, but funding was not received. Hoonah's old ferry landing, built around 1970, is still occasionally used for unloading at high tide.

Regularly scheduled barge service from Juneau and Seattle brings in most of Hoonah's supplies.

Hoonah's other harbor facilities are:

- Downtown government float and stalls: open mooring and approximately 56 24-foot stalls; unloading zone; grid (for boats 24 feet and under). Built in the early 1950's. Approximately 20 boats now permanently moored.

- New inner harbor: 10 62-foot stalls, 18 48-foot stalls, 44 40-foot stalls, 52 30-foot stalls, 64 24-foot stalls; unloading zone; loading dock with 10,000-pound crane; 18' x 96' grid (for vessels 30 feet and larger); 294' x 12' transit float; 26' x 178' launching ramp; breakwater. Approximately 100 boats now permanently moored.

- EDA dock and warehouse: construction funded by Economic Development Administration; owned by city. Built approximately 1975; dock leased in 1982 to Timber Pacific for log loading.

- Private dock: built approximately 1900; owned by Thompson Fish (year-round fish buyer). Also used by Hoonah Oil Company. L. Kane store located at head of dock.

- Private dock: built in late 1950's; owned by Excursion Inlet Packing Company (seasonal fish buyer). Also used by Standard Oil Company. Hoonah Seafood store at head of dock.

- Excursion Inlet Packing Co. Cannery: north of town; storage and repair for private fishing vessels; limited storage of marine parts and other supplies. Built in early 1930's.

Land

Hoonah is not connected by road to other communities on the island except Tyler Bros. Log Company's new camp. The city's streets are generally unpaved and in poor condition, with many ruts and chuckholes. The main street extends as far north as the Excursion Inlet Packing Company cannery and as far south as the airport. The main road is to be paved in 1984 from the airport to the north side of town. Road connections with Forest Service and Huna Totem log roads provide access to more areas. The Hoonah OEDP identifies road paving and repair as a city objective.

Over the next 5 years, about 90 miles of USFS/ALP logging roads are projected to be constructed in the Hoonah area (see Figure 6 in Chapter 3). These roads will not directly connect Hoonah with any other communities, although it is possible that the community at Mt. Bether will construct a road spur to a logging road and so establish a connection. Huna Totem may also be constructing additional logging roads as needed.

RECREATION

Recreation facilities in the city and vicinity and in the planning area are shown on Figures 18, 19, and 22 in Chapter 6.

The ANB Hall and the school complex each contain a gymnasium for community recreation. Outdoor recreational facilities within the city limits include the school complex ballfields and a park developed on land owned by and adjacent to the Presbyterian Church. A portion of the newly filled area west of the school complex is currently used as a track for sporting events. Conceptual plans for a full recreation area for the fill lands are being reviewed by the Planning and Zoning Commission.

The entire waterfront area of the city is used for fishing and other water-related recreational uses. Primary access points for fishing and boating are in the city dock area and south of the Huna Totem Corporation office. The latter provides minimal access to the newly constructed fill, and is proposed for widening in the future. An additional boat access onto the fill from Garteeni Highway just west of its intersection with Ravin Drive is being negotiated. A road will be constructed on the fill in the future to provide better access to the boat harbor.

A cultural center was constructed in the city in 1979 to house community archives and artifacts significant to the local culture. The IRA runs a summer recreation program in the city, and various recreational activities are sponsored by the Lions Club throughout the year (4th of July celebration, Christmas program, etc.). The city is also attempting to reorganize a youth center that used to exist in the ANB Hall. The school district intends to build a swimming pool at the high school in 1984.

Outside the city limits, the Spasski Trail near the airport provides hiking opportunities. The city is planning to widen and improve this trail in the future to accommodate bicycles and snowmobiles. An existing USFS ski trail runs from RCA Road to Airport Road west of Shotter Creek. The city is interested in making improvements to provide a more winding, interesting trail. Other recreation sites outside the city limits include a picnic and swimming hole near the airport, and a picnic area that Excursion Inlet owns near its cannery and makes available for public use.

There are no recreation facilities currently maintained or planned by the Forest Service in the planning area. Huna Totem Corporation is planning to maintain the west side of Long Island as a recreation area after construction of the log transfer facility on the island.

Numerous informal areas outside the city limits have traditional recreational value to the residents of Hoonah. These sites are used for picnicking, camping, and hiking. The area encompassed by the Hoonah planning area has been identified as having high "scenic" and "primitive" values according to Recreation and Heritage Resources of the Alaska Coastline (Alaska Division of Parks).

Tourism has not been a significant industry in the Hoonah area. The city has adopted a long-range goal of encouraging tourist development to further expand economic opportunities in the city.

FUTURE USE

Future land uses and other developable lands in the city are shown on Figure 22. Nonbuildable lands that are unsuitable for development because of slope or soils conditions are also shown.

Residential development will continue to expand south toward the airport where sewer and water can be provided. Huna Totem Corporation has subdivided land north of Huna Totem Lodge near the BIA maintenance facility for residential development. A logging road is being constructed from the city dock and warehouse to connect with the north end of Hemlock Street, follow the eastern city limit, and cross RCA Street south of the sanitary landfill. This will open an area that has been relatively inaccessible in the past. If a water source can be established on Sawmill Creek that can service this area, it will probably develop in residential uses.

There are several vacant structures and lots fronting the water in the core area and near the Coastal Glacier Cannery dock. Future commercial development will concentrate in these areas, and will logically fill in the undeveloped land around city hall and the post office.

There are currently two parks within the city: the ball fields at the school, and a small park on church property north of the ANB Hall. Parks have not been incorporated into new development areas, and the city recognizes a need to provide more play areas for the children living in these areas. The city owns property north of See Street on Garteeni Highway that could be developed as a park. As the city continues to develop along Hemlock Street to the north and south toward the airport, additional park areas should be incorporated into future development plans.

It is anticipated that new families will locate in the Hoonah area in the near future to work on proposed timber operations. The city currently has a very low housing vacancy rate, and a large influx of people will put a strain on existing housing and public facilities.

The recently filled area southwest of city hall is currently used for recreation and water access. The city has little other suitable land available for water-related or water-dependent commercial and industrial uses. This area is ideally suited for a dry dock, boat repair and maintenance facilities, or other similar water-related or water-dependent uses.

CHAPTER 3

Land and Resource Ownership and Management

Chapter 3
LAND AND RESOURCE OWNERSHIP AND MANAGEMENT

LAND STATUS/OWNERSHIP

Before the Alaska Native Claims Settlement Act of 1971, the U.S. government owned almost all of the land within the planning area. All of this Federal land was a part of Tongass National Forest, managed by the U.S. Forest Service. Since ANCSA, large blocks of this land have been transferred to Huna Totem Corporation and Sealaska Corporation; the remaining land is still within the ownership of the government as part of Tongass National Forest. Figure 6 shows land status/ownership within the planning area.

Huna Totem Corporation has selected approximately 22,000 acres of land in the vicinity of Hoonah. The subsurface rights to these properties are owned by Sealaska Corporation, in accordance with the deed restrictions included in the ANCSA legislation. In addition, two parcels of land in the planning area are under application by Huna Totem Corporation (Figure 6). Additional selections have also been identified that would be selected only if present selections prove to have title problems that prevent BLM from transferring ownership to Huna Totem.

Section 14(c)3 of ANCSA provides for lands held by native corporations to be reconveyed to municipalities for community expansion and development. Huna Totem Corporation and the city have formally agreed to reconveyance of over 1,100 acres to date. This includes a large parcel of land surrounding the city and 12 acres for the new landfill (see Figure 22). The city is in the midst of planning for annexation and future development for these lands.

Sealaska Corporation owns land within the planning area (Figure 6). Its ownership includes both surface and subsurface rights. Sealaska also has potential selection (overselection) areas within the planning area. These overselections are lands the corporation has selected for possible future conveyance from the Federal government as part of the ANCSA land transfer process. These lands are not now owned by Sealaska, but will be conveyed from the government at Sealaska's request, assuming no titlement problems occur with claims or previous title actions. Sealaska has conducted a resource inventory to further evaluate these lands for future resource utilization potential; this information will be used in making final selections for conveyance. The Bureau of Land Management, as the lead Federal agency responsible for the land transfers, is conducting title searches on several of these lands to establish ownership rights and mining/subsurface rights. After Sealaska's request for conveyance of specific

lands, the BLM will finalize the land titlement issues and turn over those lands to the corporation (both surface and subsurface rights). All future land conveyances must be selected from those lands now identified as overselection lands.

As shown on Figure 6, numerous small parcels of land within the native corporation selections and overselections are under native allotment application. Under terms of the Act of May 17, 1906, as amended August 2, 1956, Alaska natives of full or mixed blood can, under certain conditions, claim land on National Forest lands (up to 160 acres). Final settlement of these claims has not yet been made. Numerous claims that are scattered throughout Tongass National Forest in the planning area have not been clearly identified and are not shown on Figure 6.

Figure 6 also shows U.S. surveys that have been conducted in the Hoonah vicinity within native corporation selections and overselections. The surveyed parcel at Game Point is in private ownership by the Mt. Bether community. The status of other parcels has not been determined.

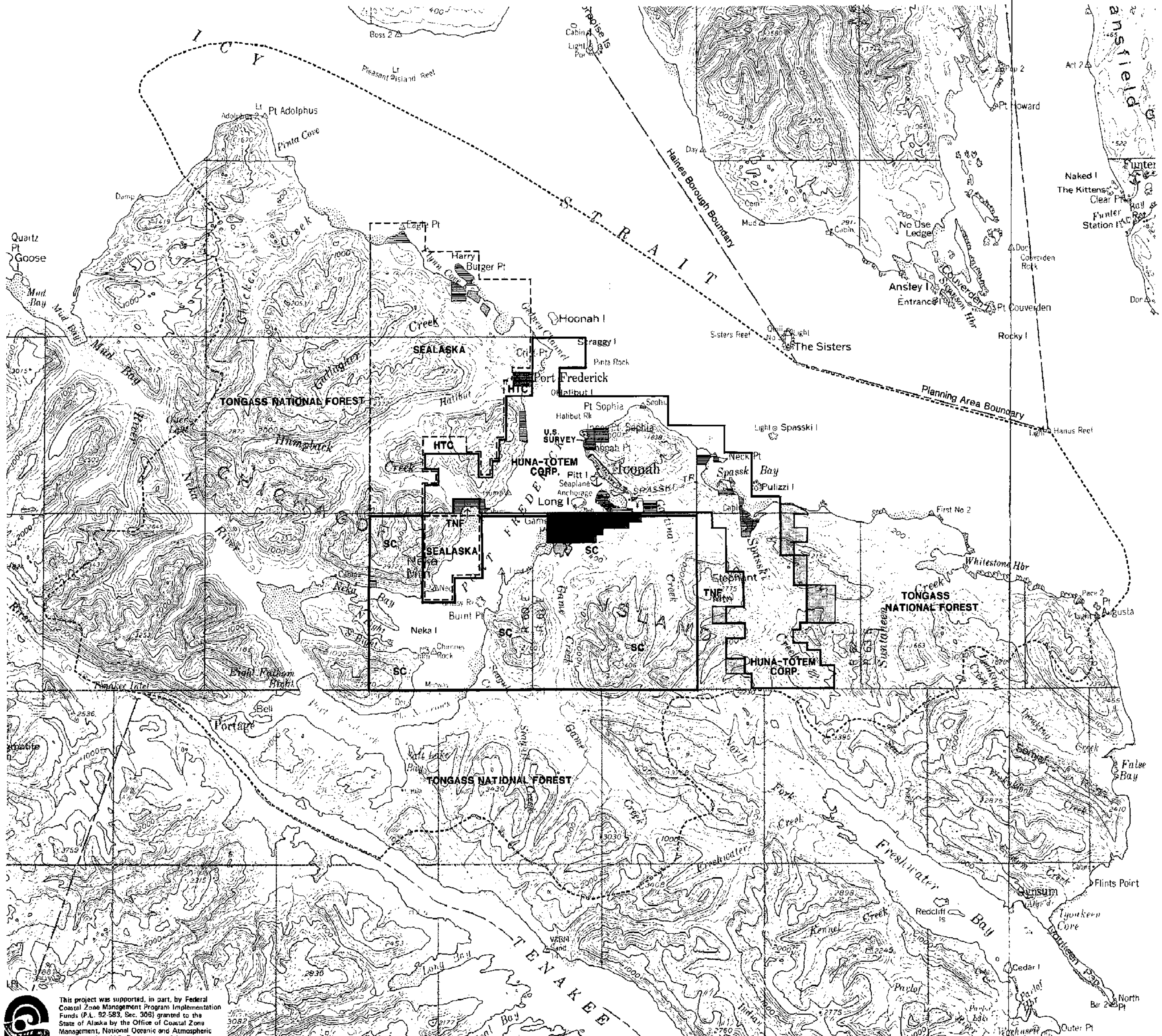
The State of Alaska has selected approximately 1,056 acres of land in the Game Point area for conveyance from the Federal government (under provisions of the Alaska Statehood Act, July 7, 1958). Because this land is also within the Sealaska overselection area, however, the state selection has not been approved by the Federal government. Until selection is determined, the land remains in Federal ownership. Sealaska has priority over the state for selection. The state was considering this land for possible disposal in 1984; however, disposal is not now being planned because of the uncertain land status.

LAND MANAGEMENT PLANS

U.S. Forest Service

The U.S. Forest Service has been developing inventories and land management plans for several years, as required by the Forest and Rangeland Renewable Resources Planning Act of 1974 and the National Forest Management Act of 1976. National forest lands are divided into general planning units called Management Areas. The Hoonah planning area includes four Management Areas: C28, C29, C30, and C31 (the C indicates that the management area is part of the Chatham administrative area).

The Forest Service uses Land Use Designations (LUD's) as a method of classifying or zoning lands according to a combination of various uses and use intensities. A single LUD may apply to an entire management area or may apply only to certain smaller planning units (called value comparison units)



This project was supported, in part, by Federal Coastal Zone Management Program Implementation Funds (P.L. 92-583, Sec. 306) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

FIGURE 6

Land Status/Ownership

PLANNING AREA

- SEALASKA CORPORATION OWNERSHIP
- SC — SEALASKA CORPORATION POTENTIAL SELECTION AREA
- HUNA-TOTEM CORPORATION OWNERSHIP (BLM SURVEYED)
- HUNA-TOTEM ADDITIONAL SELECTIONS
- HTC — UNDER APPLICATION BY HUNA-TOTEM CORPORATION
- TNF — TONGASS NATIONAL FOREST
- NATIVE ALLOTMENT APPLICATION
- U.S. SURVEY
- STATE SELECTION

SOURCE: Sealaska Corporation, June, 1982.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 16,896'
0 1 2 3 MILES
NORTH
CH2M HILL 1982

BASE MAP SOURCE: USGS MAPS, ALASKA TOPOGRAPHIC SERIES, MT. FAIRWEATHER, 1961; JUNEAU, 1952; AND SITKA, 1951. ORIGINAL SCALE 1:250,000

within the management area. All lands in the Hoonah planning area are LUD IV, except a small area in C29 around the southern end of Port Frederick, which is LUD III. These LUD's are described by the Forest Service as follows:

LUD III These lands are managed for a variety of uses. The emphasis is on managing for uses and activities in a compatible and complementary manner to provide the greatest combination of benefits. This can include timber harvesting and intensive recreational development.

LUD IV Opportunities are provided for intensive resource use and development, where emphasis is primarily on commodity or market resources. Generally speaking, timber harvesting is given priority. Amenity values are also provided for, and allowances are made in calculated potential timber yield to provide for protection of physical and biological productivity.

The Alaska Lumber and Pulp Company (ALP) has a 50-year timber sale contract from 1961 to 2011 with the U.S. Forest Service for areas of Tongass National Forest. A timber sale operating plan is prepared every 5 years identifying which specific areas will be harvested during that time increment. The 1976-81 operating plan included timber harvesting within the Hoonah planning area west of Port Frederick (Figure 7). Logging is still occurring and may continue for as long as 5 more years (Chiarella, 1982). A logging camp with approximately 20 families is located at Eight Fathom Bight.

The 1981-86 plan includes timber harvesting within the Hoonah planning area east of Port Frederick (Figure 7). A total of 151.5 million board feet is expected to be harvested, and 91.6 miles of logging road will be built, as shown in Table 3. The 1981-86 plan calls for logging within some lands that have since become Sealaska overselections (those lands the corporation has selected for possible future conveyance from the Federal government as part of the ANCSA land transfer process). The Forest Service is required by law to obtain agreement from Sealaska before any logging or roadbuilding can be done in overselection areas; such an agreement was reached in June 1982. Returns from the logging will be put in escrow until final ownership of the land is decided.

In the 1981-86 operation area, road construction and logging have begun. A 50-man logging camp has been established (Tyler Bros. Log Company). It is located on Forest Service (Sealaska overselection) land between Long Island and False Point.

In June 1982, the Forest Service and Huna Totem Corporation reached a cost-share agreement for joint development and use of a log transportation system that includes a log transfer

Table 3

PROPOSED ALP TIMBER HARVEST AND ROAD CONSTRUCTION
HOONAH AREA, 1981-1986

Drainage	Harvest (mmbf)	Roads (miles)
Gartina	39.6	24.0
Suntaheen	48.3	33.0
Lower Game	34.4	21.9
Upper Game	29.2	12.7
Totals	151.5	91.6
Annual Average	30.3	18.3

Source: U.S. Forest Service.

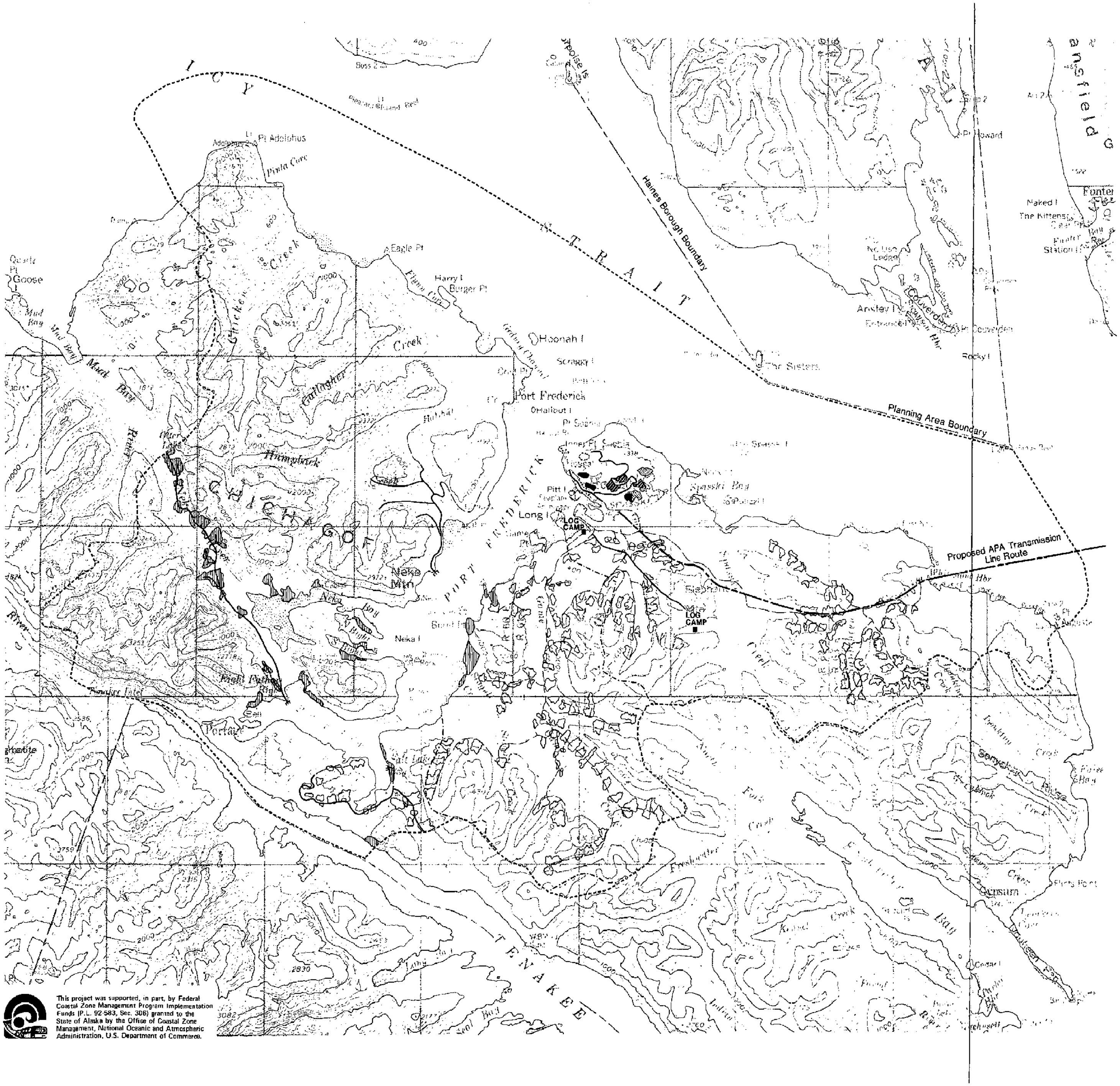


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FIGURE 7
Land Management Plans
PLANNING AREA

U.S. FOREST SERVICE

- EXISTING CUTTING UNITS
- PROPOSED CUTTING UNITS
- LOG TRANSFER FACILITIES
- EXISTING ROADS
- PROPOSED ROADS

HUNA - TOTEM CORPORATION

- EXISTING CUTTING UNITS
- 1982-83 CUTTING UNITS
- PROPOSED CUTTING UNITS
- NEED CITY CONCURRENCE
- LOG TRANSFER FACILITY
- EXISTING ROADS
- PROPOSED ROADS

SOURCE: U.S. Forest Service; Huna-Totem Corporation (6/82)

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 16,896'
0 1 2 3 MILES
NORTH
CH2M HILL 1982

BASE MAP SOURCE: USGS MAPS, ALASKA TOPOGRAPHIC SERIES, MT. FAIRWEATHER, 1961; JUNEAU, 1962; AND SITKA, 1951. ORIGINAL SCALE 1:250,000

facility (LTF) on Long Island and connecting logging roads (see also Huna Totem section, below). If the overselection lands are eventually conveyed to Sealaska, it will share use and management of this system; the Forest Service will retain some use of the LTF and road rights-of-way. A barging site was constructed at Whitestone Harbor in connection with proposed ALP logging in that area but will not be used for a couple of years. It is possible that a chipper will also be installed at this facility at some time.

Although the 1981-86 plan is a commitment for only 5 years, it is probable that a significant harvest level will be maintained for at least an additional 5 years and that a reduced level may be continued for 10 years after that. This would allow continuity of USFS and ALP operations and help reduce economic and social fluctuations in the Hoonah community.

Huna Totem Corporation

Huna Totem Corporation has planned sustained yield timber harvest operations from 22,000 acres southeast of Hoonah. The anticipated market includes whole log export, chip export or sale to ALP, and possible large dimension structural timber and piling.

In 1982, Timber Pacific of Washington State entered into a timber contract with Huna Totem. As a joint venture under the name Huna Pacific, they began road building and timber harvesting in the spring of 1982. Huna Pacific planned to hire 30-40 local people and cut 10 million board feet in 1982. Timber operating plans as of June 1982 are shown on Figure 7.

Huna Totem has constructed a log transfer and storage facility on Long Island in Port Frederick, about 1 mile south of Hoonah. A chipper may also be installed at this facility. Development and use of the facility and of connecting roads will be a joint venture with the U.S. Forest Service and possibly with Sealaska. Huna Totem estimates that total timber volume that could flow to the LTF over a 50-100 year period as 1,322 million board feet. A causeway road with three 100-foot bridges will be constructed to the island. The road system for this facility will eventually tie into the USFS road network in the Hoonah vicinity. The west side of the island will be maintained for recreational use. Huna Totem estimates that about 28 employees will be hired for the LTF, 20 of whom will be local hires.

Sealaska Corporation

Sealaska had a small camp (25 employees) to support road building for timber harvesting on lands on the west side of Port Frederick. A small log transfer facility was located on the west side of Port Frederick for raft assembly and small

barge loading. These facilities were closed in 1983. Sealaska may share joint use and management of the Huna Totem/ USFS log transfer facility at Long Island if overselection lands in that vicinity are conveyed to Sealaska.

CHAPTER 4

Biophysical Inventory

Chapter 4
BIOPHYSICAL INVENTORY

CLIMATE[1]

Like other Southeast Alaska communities, Hoonah has a maritime climate characterized by cool summers, mild winters, and heavy year-round precipitation. Mean temperatures and precipitation recorded for Gustavus, located across Icy Strait about 24 miles north northwest of Hoonah, are reasonably representative of Hoonah, according to the National Weather Service, and are presented in Table 4.

The warm Japan current causes milder temperatures than normal for these latitudes, while the moderating influence of the sea results in low seasonal and diurnal temperature variations. Average monthly temperatures in the Hoonah area are below freezing point for only three months of the year, with the minimum temperature falling below 0°F for an average of 13 days per year. However, during cold periods, freshwater ice forms on the tidal flats of the Gartina Creek delta. Through successive tides, this ice is rafted, broken, redeposited and refrozen until large cakes of stratified ice and silt are formed. The prevailing southerly winter winds used to drift this ice across the flats and into Hoonah's waterfront area, often causing damage to docks, floats, and moored vessels. The new harbor and jetties are expected to eliminate this problem.

The prevailing winds at Hoonah are from the southwest in summer and southeast in winter. Damaging storms are generally from the northwest. The following is a tabulation of maximum instantaneous wind velocities by direction as recorded at Gustavus:

Direction	S	SSW	SW	WSW	W	WNW	NW	NNW
Velocity (mph)	24	31	31	31	18	18	31	31

The high mountains surrounding Port Frederick probably channel the winds at Hoonah to a greater extent than at Gustavus, which is situated in flat terrain.

HYDROLOGY[3]

Because of steep elevation, shallow soil conditions with underlying bedrock, and thick organic ground cover, much of the precipitation that falls runs off into streams as surface

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[1]Source: Alaska Consultants, 1974; U.S. Army Corps of Engineers, 1976.

Table 4

AVERAGE TEMPERATURES AND PRECIPITATION

Month	Temperature (° F)	Total Precipitation (inches)	Snowfall (inches)
January	26.5	5.48	16.6
February	28.3	2.50	12.2
March	32.6	3.09	11.0
April	39.2	2.93	1.1
May	46.3	2.90	.3
June	52.3	2.37	-
July	55.4	4.18	-
August	54.3	3.87	-
September	49.7	7.35	T
October	42.1	9.33	.7
November	34.2	6.68	7.0
December	29.1	4.18	17.2
Annual	40.8	54.86	66.1

Source: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Data Service.

water. The suspended sediment concentrations in streams are low, less than 50 mg per liter. Most of the sedimentation that does occur is a consequence of streambed scour, bed erosion, or the process of mass wasting.

Typically, the heaviest precipitation of the year occurs from September through January. Ground storage of water quickly becomes saturated, while stream discharge swells and fluctuates. Localized flooding may occur if rainstorms are particularly severe. From December through April, much of the precipitation is stored as snow and ice. Daily streamflow is at a yearly minimum at this time, and water temperatures may range from 3° C (37° F) to 1° C (34° F), with the median being 2° C (36° F).

In April or early May, snowmelt begins increasing streamflow into July. Water temperature in the summer ranges from 3° C (37° F) to 12° C (52° F), with the median near 8° C (46° F).

Many of the freshwater systems freeze over in winter, reducing food availability for many mammal and bird species. Salmon eggs develop in the well-aerated intergravel spaces where they were deposited. Water temperature is an important aspect in regulating salmonid survival; even slight fluctuations may have adverse effects. The duration and timing of incubation, hatching, and emigration of salmon fry are aspects of development that are critically dependent on water temperature stability.

Freshwater runoff into the surrounding marine waters dilutes those waters and helps to maintain the reduced salinity and estuarine conditions of the surrounding Inside Passage and Pacific Ocean waters.

Hydrology in the City of Hoonah and vicinity is shown on Figure 8.

TIDES AND CIRCULATION[3]

A two-layered estuarine circulation system occurs seasonally throughout the Inside Passage waters, beginning with an increased freshwater discharge accompanying the spring thaw in April and May and continuing through October, the wettest month. The freshened water flows seaward along the surface and is replaced by more saline water intruding at depth. Two-layered estuaries are likely to occur in most protected bays and passages along the outer coast.

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[2]Source: Alaska Department of Fish and Game, 1981.

[3]Source: Alaska Department of Fish and Game, 1981; U.S. Army Corps of Engineers, 1976.

A well-developed northward flow of marine water occurs from November through March. The two-layered estuarine conditions present from April through October are destroyed by the combined effects of winds, storms, and reduced freshwater runoff. The water column both nearshore and offshore becomes more uniform, and the surface waters become more saline and colder. Biological productivity decreases.

Tidal movements play an extremely important role in the mixing and circulation of nearshore marine waters, and in the distribution and abundance of marine flora and fauna. The mean tide level at the existing Hoonah Harbor is 7.7 feet. The range between mean lower low water and mean higher high water (diurnal range) is 14.8 feet; the mean range is 12.4 feet. Hoonah tidal data is summarized below (U.S. Army Corps of Engineers, 1976).

Tide Level	Elevation (MLLW) (feet)
Highest tide (estimated)	20.00
MHHW	14.80
MHW	13.90
Mean (half) tide	7.70
MLW	1.50
MLLW	0.00
Lowest tide (estimated)	-5.00

Landward of the shelf edge, surface currents move shoreward. The complex nearshore current patterns have not been well studied among the myriad of islands, passages, and bays. Maximum currents are commonly 1 to 3 knots, although higher values will occur where tide waters funnel through narrow passages in combination with large daily tidal ranges. Offshore, the Alaska Current moves northwestward and is believed to be strongest along the continental shelf edge, averaging .5 to 1 knot. This flow is greatest with strong southerly winds, but may be completely neutralized for short periods of time by strong northwesterly winds. Weak summer currents flowing closer to the coast and in the opposite direction of the Alaska Current have been observed.

SOILS AND GEOLOGY

Geology--Planning Area

Bedrock in this coastal region is composed primarily of sedimentary rock (e.g., limestone and sandstone) rich in calcium carbonate, volcanic greenschist interlayered with marble, and intrusive granitic rock. These rocks are approximately 135-450 million years old and have undergone uplift and deformation. Glacial ice covering much of this region during

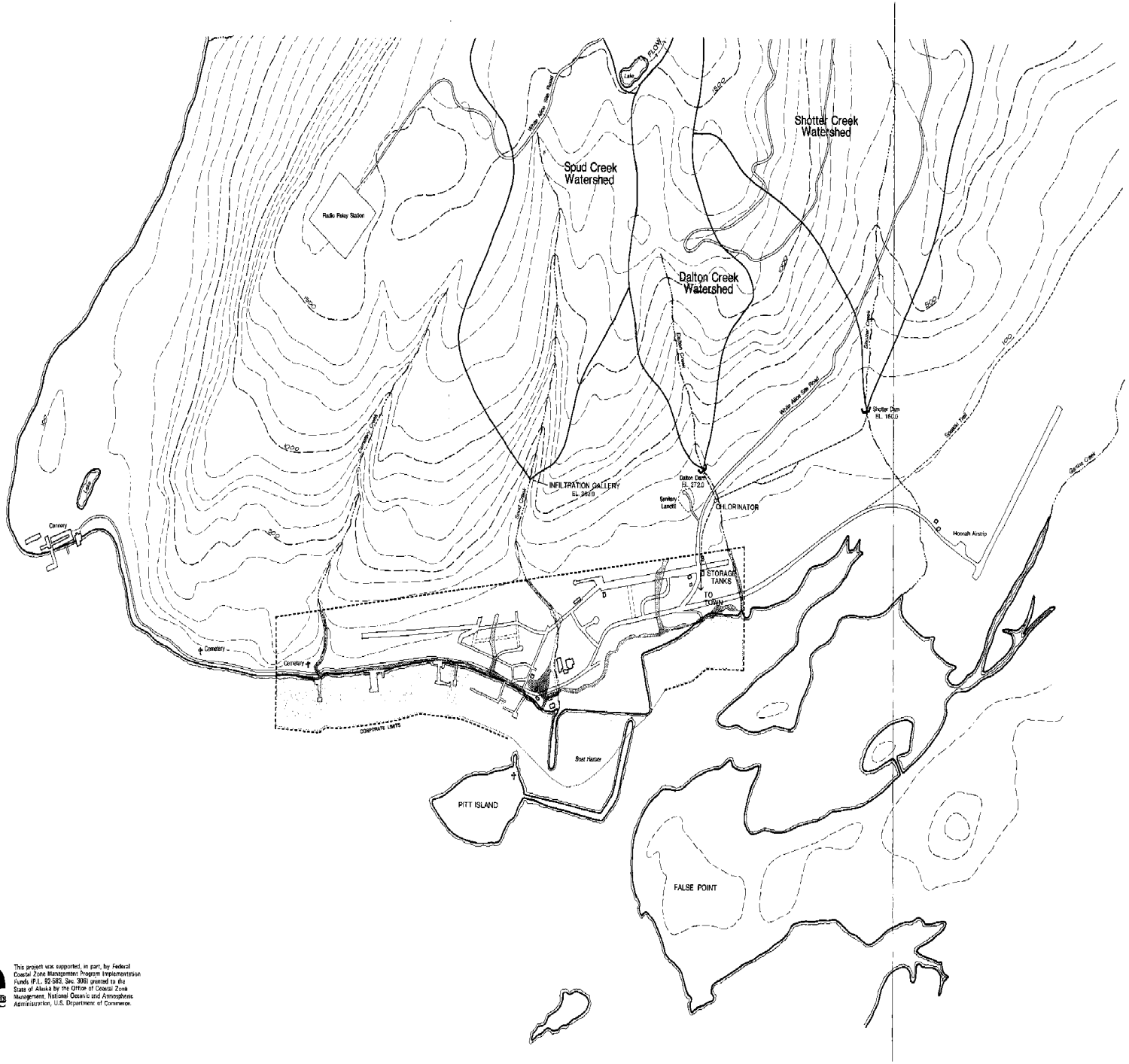

FIGURE 8

Hydrology

CITY OF HOONAH & VICINITY

AREA OF 100-YEAR FLOOD (Approximate Location)

AREA OF 500-YEAR FLOOD (Approximate Location)

NOTE: Flood plain information ends at city limits.

SOURCES: U.S. Department of Health, Education & Welfare; Public Health Service; Division of Indian Health.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" 1230

0 500 1000 FEET

NORTH

BASE MAP SOURCE: LISTED IN REPORT APPENDIX

CH2M HILL 1982

This project was supported, in part, by Federal Coastal Zone Management Program Implementation Funds (P.L. 92-583, Sec. 306) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

the Pleistocene epoch gouged and carved out the straits, lakes, valleys, and mountains. Most of the mountain elevations vary between 610 m and 1,067 m (2,000 feet to 3,500 feet). Because of recent glaciation, the soils are shallow, poorly developed, and low in available nutrients, due primarily to the lack of extensive weathering of either bedrock or glacial till deposits. High rainfall and cool temperatures reduce the rate of biological decomposition, causing organic matter to accumulate on the surface of the ground. Trees are susceptible to blow down because their roots are shallowly rooted in the thin soil.[4]

Detailed geologic mapping for the planning area is not available. Portions (primarily everything east of Port Frederick) were mapped in 1978 by the U.S. Forest Service for land type suitability evaluations.

The bulk of the areas surveyed in northeastern Chichagof Island are made up of sedimentary and volcanic deposits. Unconsolidated sedimentary deposits consisting of alluvium, colluvium, glacial, and glacial-marine deposits have been observed at elevations up to 500 feet (Game Creek, Freshwater Creek). The Point Augusta Formation (graywacke, argillite, minor conglomerate, siltstone, and limestone) is extensive in areas surveyed. The Freshwater Bay Formation, composed of andesite and basalt flows, volcanic breccia, tuff, minor graywacke, and limestone, transects the Freshwater Bay area. Deposits of instrusive rocks are of limited extent and include the Cannery Point area and the north shore at the head of Tenakee Inlet.[5]

Soils--Planning Area

Detailed soils mapping has not occurred for the planning area, although soils surveys have been undertaken by the Forest Service for specific management areas and by Sealaska Corporation.

Generally speaking, the soils can be broken into five different types.[6] Rock exposures occur sporadically throughout the area, and are characterized by local bedrock materials. Typically, little vegetation will occur on these exposures. Organic soils include the silts and peats of the area, and will occur in depths up to 2 feet and more. Glacio-marine soils are predominantly fine-grained plastic mixtures of

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[4]Alaska Department of Fish and Game, 1981.

[5]U.S. Forest Service, 1978.

[6]R&M Consultants, 1976.

rock flour and sand with varying amounts of gravel and boulders deposited from melting or retreating glacial ice. Maximum thickness is usually 4 feet. The colluvial soils result from the combined forces of stream erosion, deposition, and mass wasting accumulating in considerable thicknesses of gravelly sand at the toe-of-slope in many places. In the immediate Hoonah area, this soil type has been measured at 15 feet in thickness. Beach deposits are derived from the reworking of all the above-mentioned soils by wave and current action and occur to unknown depths in excess of 10 feet (especially near Cannery Point).

Mass wasting (gravity induced movement of large masses of earth) is the dominant process of erosion and slope reduction in this region and commonly occurs on slopes 37° (75 percent) or over. The two principal types of mass wasting, debris avalanches and debris flows, involve the rapid downslope movement of a mixture of soil, rock, and forest debris. Measurable surficial soil creep may occur in areas prone to mass wasting. Movement exists throughout the year, but will increase during spring and fall when soil moisture is greatest. The incidence of mass wasting increases with road building and timber harvest on steep slopes when the soils become saturated after heavy rainfall.[7]

Earthquake Hazard--Planning Area[8]

Both seismicity (the historical record of earthquakes) and geological conditions, such as the frequency and recency of faulting,[9] must be considered to permit an assessment of future earthquake probability in an area. Lack of accurate data and an incomplete understanding of earthquake mechanism in general make it difficult to fully evaluate all the factors that must be considered in such an assessment. The determination of earthquake probability in any area must therefore be regarded as an approximation only.

Southeast Alaska is a segment of a belt of active tectonic regions that rims a large part of the Pacific Ocean. Prominent among structural features are several faults along which considerable movement is suggested. The Lynn Canal fault, a fault segment to the north of the Chatham Strait fault, lies within the Hoonah planning area (see Figure 9).

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[7]Alaska Department of Fish and Game, 1981.

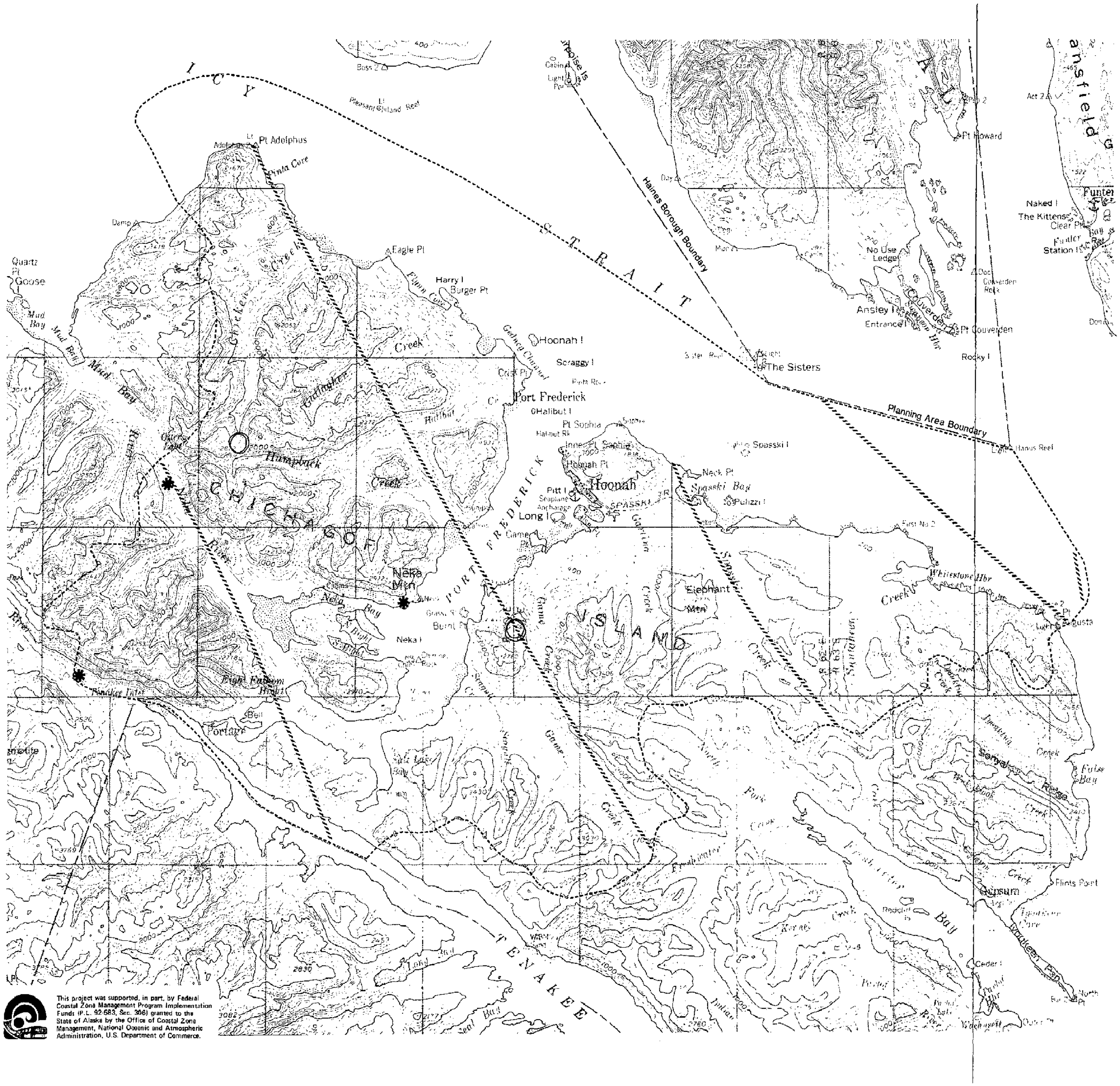
[8]Source: Lemke and Yehle, 1972; Yehle, 1978.

[9]A fault is a rupturing of the earth's crust that is caused by a sudden release of accumulated strain energy and that generates seismic waves that cause ground shaking.

FIGURE 9

Geophysical Characteristics

PLANNING AREA



✱ **GEOTHERMAL SPRING** **(Approximate Location)**

MAJOR EARTHQUAKE FAULT LINE **(Approximate Location)**

MINERAL CLAIM **(Approximate Location)**

SOURCES: U.S. Forest Service, May 1982; U.S. Geological Survey (Lemke, 1972; Berg, 1981).

This project was supported, in part, by Federal Coastal Zone Management Program Implementation Funds (P.L. 92-583, Sec. 306) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 16,896'

0 1 2 3 MILES

NORTH

CH2M HILL 1982

BASE MAP SOURCE: USGS MAPS, ALASKA TOPOGRAPHIC SERIES, MT. FAIRWEATHER, 1961; JUNEAU, 1962; AND SITKA, 1951. ORIGINAL SCALE 1:250,000

There are no recorded earthquake epicenters[10] within the planning area. However, three recorded earthquakes with a magnitude of greater than 5 on the Richter scale have occurred in the western part of Chichagof Island between 1899 and 1977. The largest of these occurred on October 24, 1927, and had a magnitude of 7.1. Its epicenter was located near the northern end of Peril Strait.

As stated before, it is impossible to accurately evaluate the earthquake probability of an area. However, a suggested preliminary seismic risk map of Alaska places the Hoonah area within seismic zone 4, where the magnitude of the largest probable earthquake is equal to or greater than 6 (Yehle, 1978). This zone is characterized by frequent earthquakes of long duration, extensive faults, and areas with thick surficial deposits that tend to increase ground shaking and that in many places are susceptible to liquefaction. Possible maximum damage to structures in this zone is major to very severe.

Geothermal Resources--Planning Area[11]

Southeast Alaska has abundant geothermal resources, with 23 reported hot springs localities. Three reported hot springs are located within the planning area (see Figure 9).

One site is located near Neka Bay, about 8 miles southwest of Hoonah across Port Frederick. The exact location is of these hotsprings has not been established. The general location is on land either owned or overselected by Sealaska Corporation. Exploration would be necessary to determine the exact location and extent of the resource.

A second site is located in the Mud Bay-Neka River area. It is within Tongass National Forest. The U.S. Forest Service land use designation for this area is LUD IV. Within this designation, opportunities will be provided for intensive resource use and development, with an emphasis on timber harvesting. Exploration would be necessary to determine the extent of the resource.

The third site is located about 4 miles above the mouth of a large creek that enters the head of Tenakee Inlet. It is approximately 20 miles west of Hoonah and lies within Tongass

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[10] The epicenter of an earthquake is the point on the earth's surface directly above the focus; the focus is the point below the earth's surface where rupturing on a fault first occurs.

[11] Source: Markle, 1979.

National Forest. The U.S. Forest Service land use designation for this area is LUD III. Lands within LUD III designations are managed for a variety of uses and activities, including timber harvesting and intensive recreational development. The hottest water at this site rises with a temperature of 179° F (82° C) in a shallow, algae-lined pool; there are also 12 minor hot springs.

Neither the U.S. Forest Service nor Sealaska Corporation have any current plans for development of these resources.

Mineral Deposits--Planning Area

Metallic Mineral Deposits of Southeastern Alaska (Berg, Decker, and Abramson, 1981), published by the U.S. Geological Survey, maps and briefly describes the metallic and certain nonmetallic mineral deposits publicly known in Southeastern Alaska in 1980. That report is based on an extensive literature search, consultation with colleagues, recent USGS field examinations, information from private mineral exploration companies and consultants, and U.S. Bureau of Mines maps depicting locations of mining claims. No attempt is made in the report to evaluate the size, grade, or economic value of the deposits.

All mapped locations in the report are classified by category, using conventional terminology: mine, prospect, claim, and occurrence. Within the Hoonah planning area, only two deposits are noted (see Figure 9). Both are classified as claims, for which the only available information consists of a claim filed with the U.S. Bureau of Mines. For both, the resource is iron and the form of deposit is lode (a tabular deposit of valuable mineral between definite boundaries).

The U.S. Forest Service conducted a mineral resource inventory in connection with development of a land management plan for Tongass National Forest. A search, collection, and study was made of documents, publications, records, and individual replies to queries for information concerning geologic occurrences, mineral deposits, prospects, and mineral claims, dating from the earliest filing in 1867 to the time of the inventory (1977). No mineral resources are reported within the Hoonah planning area.

Sealaska Corporation is currently conducting resource inventories of its holdings, including the investigation of subsurface minerals. These inventories are still underway, and information about mineral resources is not yet available.

Geology--City and Vicinity

Hoonah sits on the western toe of a northwest-trending ridge with an elevation of 1,800 feet. The ridge is drained by

relatively short streams that flow southwesterly into Port Frederick. The bedrock is mapped as limestone and conglomerate. The unit consists mainly of intertonguing limestone and conglomerate. Most of the limestone is medium to thick-bedded, with some fossils. The conglomerate consists of clasts of volcanic rocks, alaskite, syenite, graywacke, quartz, chert, and limestone in a matrix of fine graywacke. Interbedded with the conglomerate are graywacke, argillite, subordinate limestone breccia, siltstone, and shale. Pitt Island is mapped as underlain by the Fresh Water Bay Formation, which consists of andesite and basalt flows, breccia, and tuff that contain minor intercalated volcanic graywacke, limestone, and argillite.[12]

The local geology is similar to that found through most of northern Chichagof Island. Glaciation had a significant effect on all landforms, and glacial remains are abundant throughout the city. The geology is characterized by unconsolidated sedimentary deposits that consist of glacial-marine deposits and alluvium. Glacial fines can be seen in several areas, as can the fragmented graywacke and argillite (especially on the cuts along Cannery Road). The geology is considered stable, uniform, and typical for southeast areas.

Soils--City and Vicinity

The soils are generally uniform throughout the city and vicinity. Five distinct soil types have been identified in the immediate area. Soils are mapped on Figure 10a.

Brown Topsoil Mix. This is a topsoil mixture of alluvium and colluvium with a brown color. Small gravels, breccia, and other smaller rocks are mixed in with sands. The soil is typical of the forested areas and through most of the city. This topsoil varies in thickness from a few inches to several feet. It drains very well, and structural strength is good if it is not underlain by organics or other structurally weak materials.

Topsoil-Blue Clay Mix. This soil is not as uniform as the brown topsoils, and can be represented by predominantly clay materials. The clays seem to occur in pockets, although wider distribution may occur. Clays can be fairly thick (2-4 feet), and cause structural problems. The clay and topsoil appears as a mix at the undisturbed surface, and may be somewhat mottled. Generally, these soils will require special considerations for construction purposes, and may require removal of the clay strata for best building results.

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[12]Source: U.S. Army Corps of Engineers, 1976.

High Organics-Wetland Soils. High organic soils occur both in upland areas and in the tidal zones. Upland soils of this nature are known as the muskeg, or peat. Hoonah does not have extensive deposits of these organics, primarily because of the predominant slopes throughout the city. Two muskeg areas do occur just outside the city's southeast boundary (see Figure 10a). Wetland areas with high organics include all the tidal areas around the airport and Spasski Trail. High organic soils require special bedding to ensure structural strength. Building in these areas is often done by setting piles down through the organics to a solid base.

Filled Lands. These areas were once aquatic, and have since been filled with materials from a nearby area. The city's largest fill area is adjacent to the boat harbor, and was created with dredged materials when the harbor was constructed. These materials are generally good for structural purposes, although load limits must be properly determined. Smaller filled lands occur elsewhere in town, usually as small plots along the waterfront.

Soil-Cobble Mix. This is a topsoil mixed with large cobbles, possibly a marine deposit. It is distinguished from the brown topsoils by the larger cobbles. Other characteristics are the same.

Hazards--City and Vicinity

Geology, soils, topography (see Figure 10b), and hydrology present potential hazards in the city and vicinity. In most cases, these physical conditions present some constraints to building and future use, rather than a real "hazard." However, in some cases, a combination of constraints may occur that would present a hazardous situation if future development were to occur. Steep topography presents the greatest hazard within the city and vicinity. Road designs and buildings must be properly designed to prevent slope failures. Soils pose certain limitations to building, but no slides or erosion have presented hazards to the area. The soils are generally uniform and stable. Muskeg occurs in only small, isolated areas within the city and close vicinity. Flooding is uncommon in Hoonah, as the waterfront rises well above the high water lines. Creek flooding is generally limited to the steep banks of each stream, and the small basin limits the total water volume buildup within the drainage.

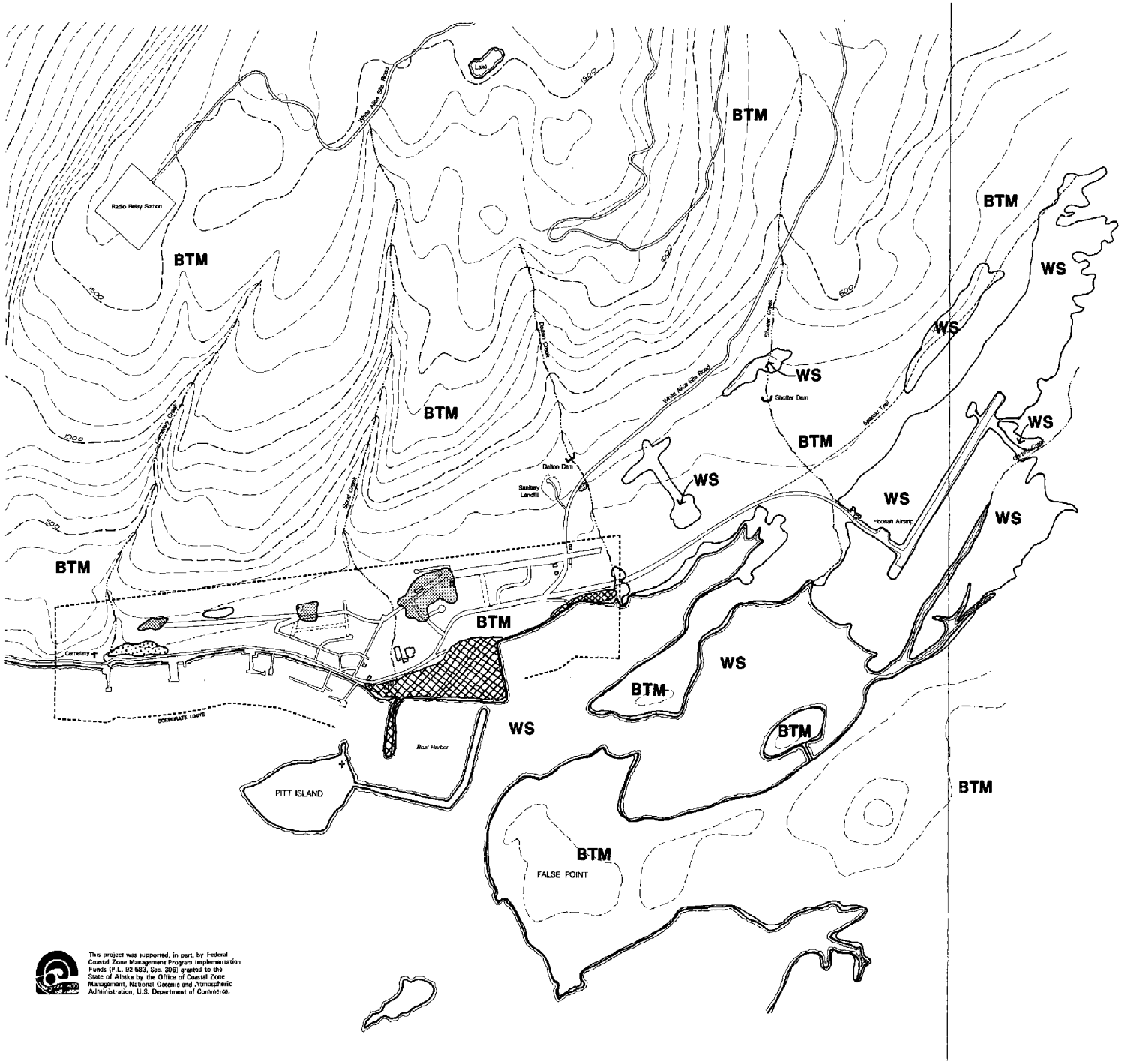
HABITATS

The Alaska Coastal Management Act identifies eight types of coastal habitats that may occur within a district's planning area:

FIGURE 10a

Soils

CITY OF HOONAH



BTM BROWN TOPSOIL MIX

TOPSOIL - BLUE CLAY MIX

SOIL - COBBLE MIX

WS HIGH ORGANICS - WETLAND SOILS

FILLED LAND

SOURCE: CH2M Hill

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 1230'

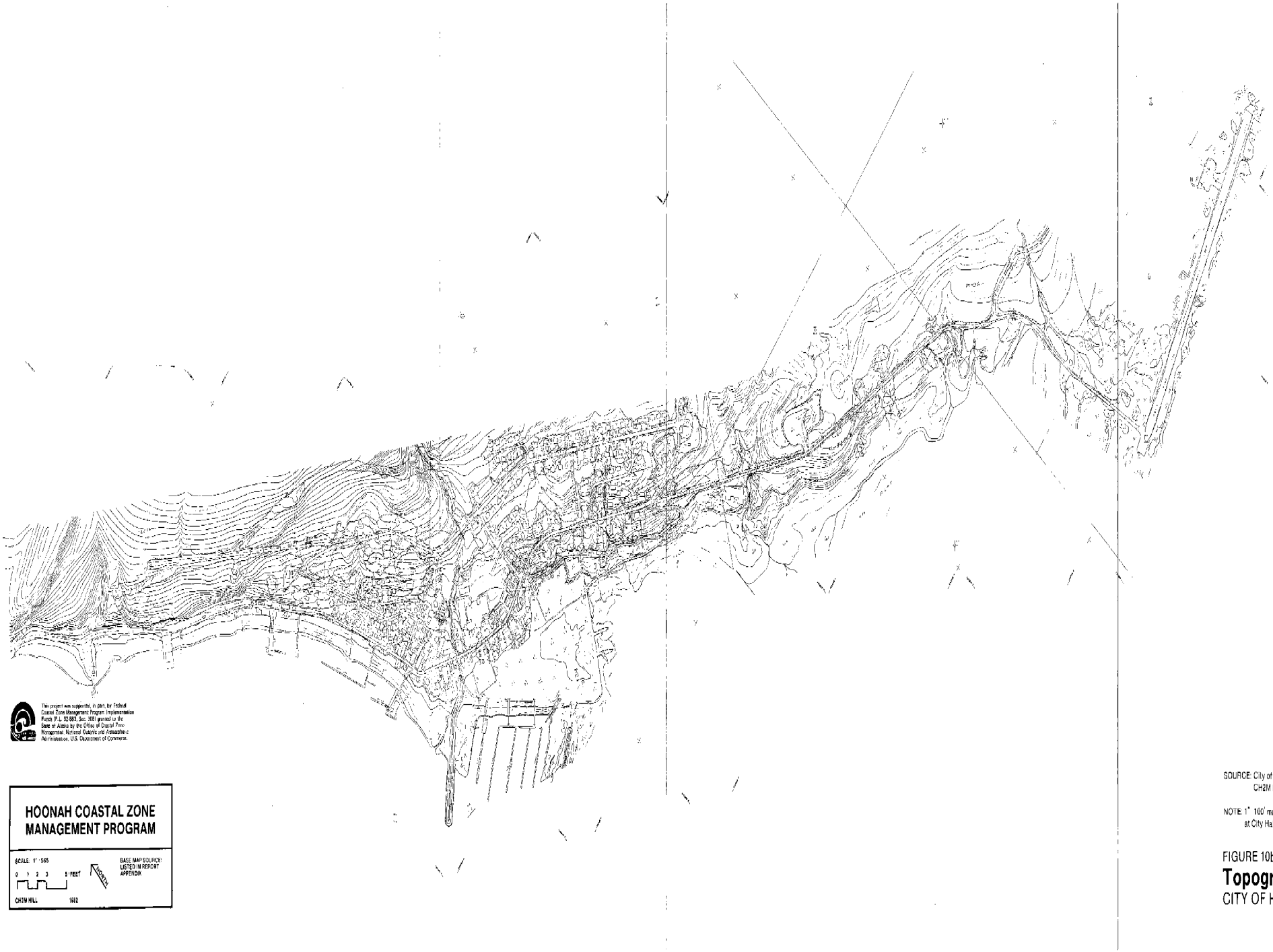
0 500 1000 FEET

NORTH

BASE MAP SOURCE: LISTED IN REPORT APPENDIX

CH2M HILL 1982

This project was supported, in part, by Federal Coastal Zone Management Program Implementation Funds (P.L. 92-583, Sec. 306) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.



SOURCE: City of Hoonah & CH2M Hill

NOTE: 1" 100' maps are available at City Hall

FIGURE 10b

Topography

CITY OF HOONAH

1. Offshore areas are submerged lands and waters seaward of the coastline.

2. Estuaries are semi-enclosed bodies of water such as bays, inlets, salt chucks, and stream mouths where sea water is measurably diluted by fresh water flowing from the land.

3. Wetlands and tideflats are those shallowly submerged lands that are characterized by plants and animals adapted to life in saturated soil conditions. Tideflats are alternately submerged and exposed by the daily rise and fall of the tides, while wetlands may or may not be saltwater-influenced. Muskegs are identified as an upland habitat type.

4. Rocky islands and seacliffs include islands, seastacks, reefs, and precipitous shorelines. These areas furnish specialized habitats for seabirds, marine mammals, eagles, and shore birds. They are often characterized by diverse and productive marine life.

5. Barrier islands and lagoons are depositional coastal environments formed by deposits of sediment offshore, or coastal remnants that form a barrier of low-lying islands and bars protecting a saltwater lagoon with free exchange of water to the sea.

6. Exposed high energy coasts are open and relatively unprotected shorelines that are directly exposed to ocean-generated waves and storms. They are characterized by an active surf zone and beaches composed of primarily sand and gravel.

7. Rivers, streams, and lakes are freshwater drainages lying within the zone of coastal influence. Included are spawning and rearing habitat for anadromous fish (salmon, char, steelhead); waters with important biological productivity; and waters that directly influence the nature of adjacent streams, lakes, and estuaries.

8. Important upland habitats include vegetative communities, natural features, watersheds, critical wildlife habitats, aquifer recharge areas, etc., that are considered to perform important biological and physical functions in the coastal zone.

Figure 11 maps coastal habitats in the City of Hoonah and vicinity. Only five of the habitats occur in this area: offshore areas; estuaries; wetlands and tideflats; rivers, streams, and lakes; and important upland habitats.

All habitat types except barrier islands and lagoons occur within the general planning area, and are mapped on Figure 12.

Further discussion and analysis of coastal habitats is contained in Chapter 8.

FLORA AND FAUNA[13]

Marine Plankton

Phytoplankton (microscopic floating plants) are extremely important in the marine ecosystem, forming the foundation

of many food chains. With increasing light, a phytoplankton bloom usually begins by late April and continues through May. Another bloom occurs in July. Zooplankton (microscopic floating animals), consisting primarily of copepods, are the major grazers on phytoplankton. In turn, zooplankton serve as a major food source for many marine animals. Euphausiids, amphipods, arrowworms, and the larval forms of barnacles, shrimp, crabs, mollusks, polychaetes, and fish compose the bulk of the rest of the zooplankton. Zooplankton numbers increase to yearly highs coincidently with phytoplankton in the spring and summer. Low zooplankton numbers in winter are partly responsible for the downward migration of fish and the slower growth rates of the invertebrates that depend on them.

Marine Invertebrates

The species diversity of marine invertebrates varies with substrate, salinity, and depth. Some common invertebrates include: polychaete worms, clams, scallops, mussels, abalone, snails, crabs, shrimp, barnacles, urchins, sea stars, and sea cucumbers. Figure 13 shows occurrence of marine invertebrates of commercial and sport harvest interest in the planning area. Traditional and customary natural resource harvesting is discussed in Chapter 5.

Dungeness crabs inhabit mud and sandy bottoms from the lower intertidal zone to depths in excess of 183 m (600 feet). Concentrations of Dungeness crabs are often found in eelgrass beds. Mating occurs when the adult crabs move into shallow waters in spring. The eggs are laid in the fall, and hatch

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[13]Source: Alaska Department of Fish and Game, 1981.

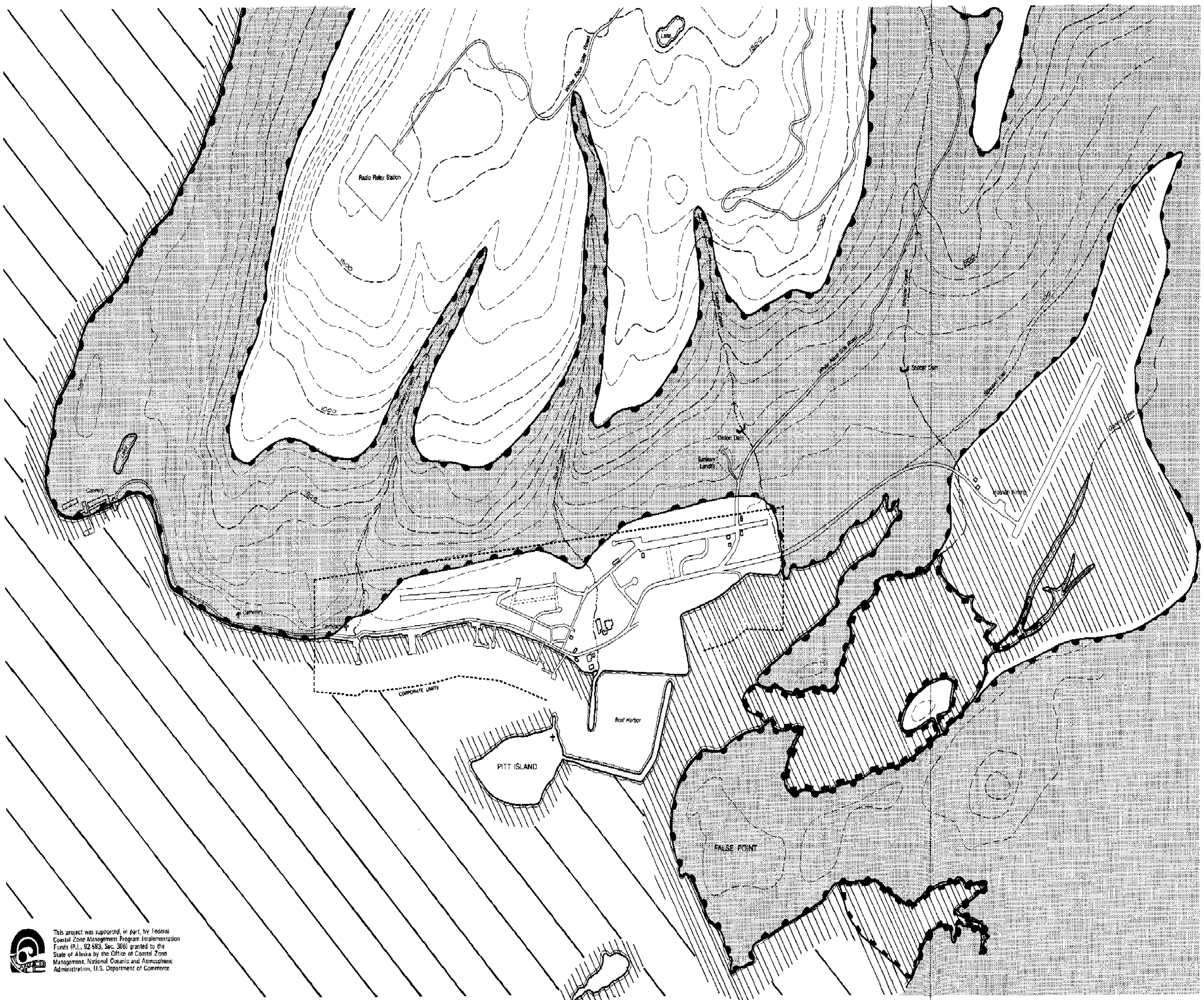


FIGURE 11

Coastal Habitats

CITY OF HOONAH & VICINITY

IMPORTANT UPLAND HABITAT
Important upland habitats include vegetative communities, natural features, watersheds, critical wildlife habitats, aquifer recharge areas, etc., which are considered to perform important biological and physical functions in the coastal zone. Extends from shoreline up to the 800 contour interval.

ESTUARIES
Estuaries are semi-enclosed bodies of water such as bays, inlets, salt chucks, and stream mouths where sea water is measurably diluted by fresh water flowing from the land.

WETLANDS AND TIDEFLATS
Wetlands and tideflats are those shallowly submerged lands which are characterized by plants and animals adapted to life in saturated soil conditions. Tideflats are alternately submerged and exposed by the daily rise and fall of the tides while wetlands may or may not be saltwater-influenced.

RIVERS, STREAMS, AND LAKES
River, streams, and lakes are freshwater drainages lying within the zone of coastal influence. Included are spawning and rearing habitat for anadromous fish (salmon), waters with important biological productivity, and waters which directly influence the nature of adjacent streams, lakes and estuaries.

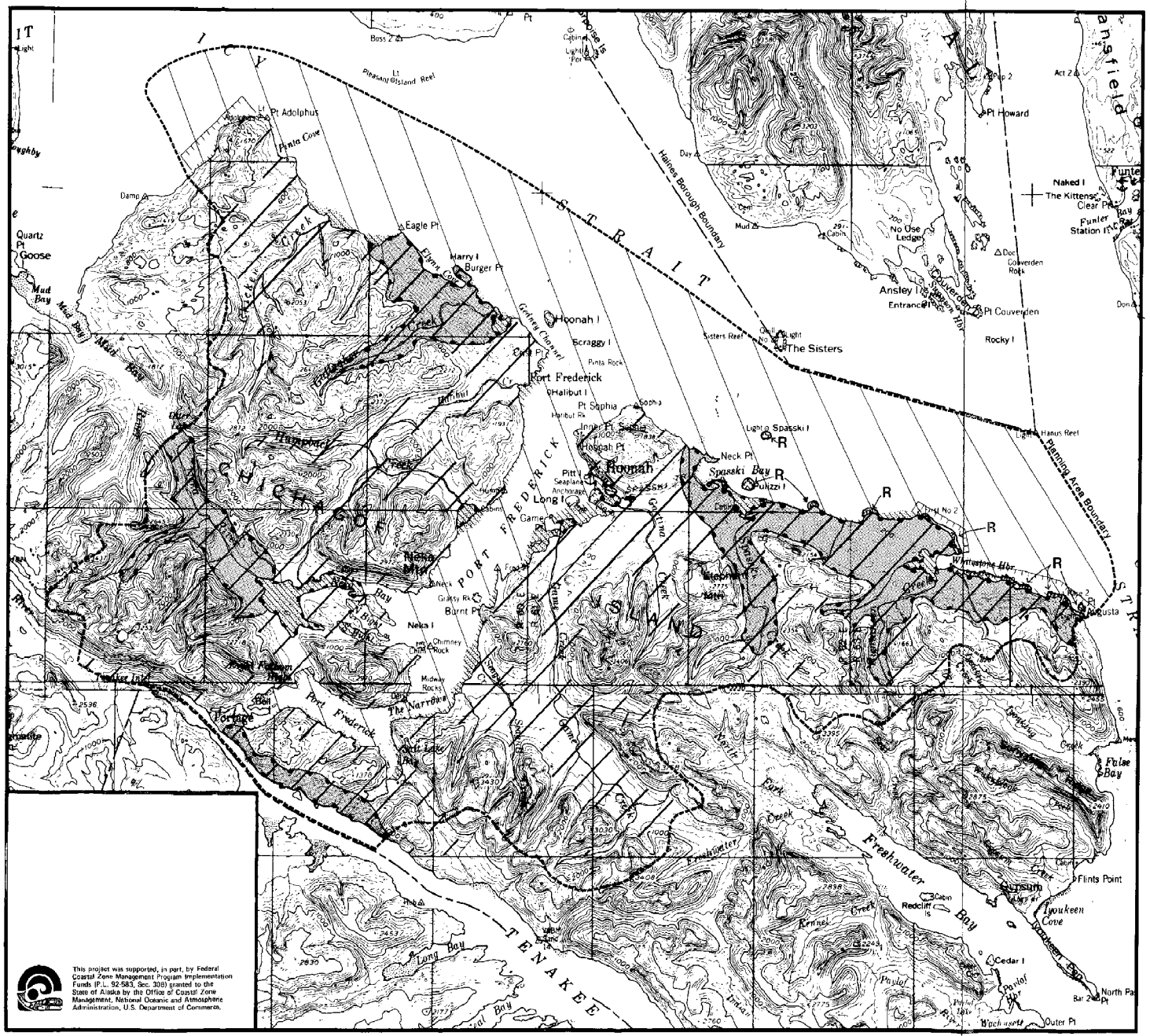
OFFSHORE HABITATS
Offshore habitats include submerged lands and waters seaward of the coastline.

SOURCE: Alaska Department of Fish & Game, Habitat Division.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 1230'
0 500 1000 FEET
NORTH
BASE MAP SOURCE: LISTED IN REPORT APPENDIX
CH2M HILL 1982

This project was supported, in part, by Federal Coastal Zone Management Program Implementation Funds (P.L. 92-583, Sec. 306) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.



This project was supported, in part, by Federal Coastal Zone Management Program Implementation Funds (P.L. 92-583, Sec. 308) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

FIGURE 12

Coastal Habitats

PLANNING AREA

IMPORTANT UPLAND HABITAT
Important upland habitats include vegetative communities, natural features, watersheds, critical wildlife habitats, aquifer recharge areas, etc., which are considered to perform important biological and physical functions in the coastal zone. Extends from shoreline up to the 800 contour interval.

MOST IMPORTANT UPLAND HABITAT
Critical habitat for big game species.

ESTUARIES
Estuaries are semi-enclosed bodies of water such as bays, inlets, salt chucks, and stream mouths where sea water is measurably diluted by fresh water flowing from the land.

WETLANDS AND TIDEFLATS
Wetlands and tideflats are those shallowly submerged lands which are characterized by plants and animals adapted to life in saturated soil conditions. Tideflats are alternately submerged and exposed by the daily rise and fall of the tides while wetlands may or may not be saltwater-influenced.

RIVERS, STREAMS, AND LAKES
River, streams, and lakes are freshwater drainages lying within the zone of coastal influence. Included are spawning and rearing habitat for anadromous fish (salmon), waters with important biological productivity, and waters which directly influence the nature of adjacent streams, lakes and estuaries.

EXPOSED HIGH ENERGY COASTLINE
Exposed high energy coasts are open and relatively unprotected shorelines which are directly exposed to ocean generated waves and storms. They are characterized by an active surf zone and beaches composed of primarily sand and gravel.

ROCKY ISLANDS AND SEACLIFFS
Rocky islands and seacliffs include islands, seastacks, reefs, and precipitous shorelines. These areas furnish specialized habitats for seabirds, marine mammals, eagles, and shorebirds. They are often characterized by diverse and productive marine life.

OFFSHORE HABITATS
Offshore habitats include submerged lands and waters seaward of the coastline.

SOURCE: Alaska Department of Fish & Game, Habitat Division.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 16,896'
0 1 2 3 MILES
NORTH

BASE MAP SOURCE: USGS MAPS, ALASKA TOPOGRAPHIC SERIES, MT. FAIRWEATHER, 1961; JUNEAU, 1962; AND SITKA, 1951. ORIGINAL SCALE 1:250,000

CH2M HILL 1982

FIGURE 13
Fisheries & Kelp
PLANNING AREA

IMPORTANT BOTTOMFISH HARVEST

HERRING SPAWNING AREAS

HERRING WINTERING AREAS

TANNER CRAB PRESENT

DUNGENESS CRAB PRESENT

KING CRAB PRESENT

SCALLOPS PRESENT

HARDSHELL CLAMS PRESENT

KNOWN KELP BEDS

SHRIMP HIGH DENSITY AREA

SOURCE: Alaska Department of Fish and Game, Habitat Division.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 16,896' 0 1 2 3 MILES NORTH

CH2M HILL 1982

BASE MAP SOURCE: USGS MAPS, ALASKA TOPOGRAPHIC SERIES, MT. FAIRWEATHER, 1961; JUNEAU, 1962; AND SITKA, 1951, ORIGINAL SCALE 1:250,000

into free-swimming larvae the following spring. During winter, juvenile crabs remain in shallow water, seeking refuge from predators, while adult crabs migrate to deeper offshore waters. Dungeness crab harvests for 1979 in the Hoonah statistical area (114) totaled 279,946 pounds.

King and tanner crabs and commercial shrimp species also occur in this coastal area; in 1979, 95,816 pounds of king crab and 594,003 pounds of tanner crab were harvested in area 114. Commercial shrimp species include pink, sidestripe, coonstripe, humpy, and spot. The major human importance in this area of these shellfish (excluding Dungeness crab) lies in their value as traditional and customary natural resources.

Marine Fish

The most common demersal (bottom-dwelling) fish in waters above the continental shelf and in the deeper inside waters include walleye pollock; halibut; sablefish (blackcod); arrowtooth flounder (turbot); Pacific Ocean perch; Pacific cod; and flathead, Dover, and rex soles. Common shallower water fish include herring, salmonids, starry flounder, greenling, lingcod, shiner perch, ratfish, dogfish, surf smelt, tomcod, yellowfin sole, and a variety of rockfish and sculpins.

During spring and summer, the development of larval and juvenile stages of many marine fish and the general upward migration of the adults are well-timed to utilize the increased planktonic food supply. During winter, most marine fish species exhibit a downward or seaward migration from this area, corresponding with the decrease in water temperature and food availability. Herring, rockfish, and flatfish are species that exhibit this type of migration. Mature halibut migrate offshore to deep continental slope waters, where they concentrate to spawn from November to March. Sablefish (blackcod) and Pacific cod also spawn in deep offshore waters during winter. An exception to these migration patterns is lingcod, which spawn and guard their eggs in shallow water during winter.

Pacific herring are a vital marine resource involved in many food chains (Figure 13). They feed primarily on planktonic crustaceans and occasionally on pink salmon fry. Herring are preyed upon by a large variety of terrestrial and aquatic predators, perhaps most notably salmon, halibut, and bald eagles. Adult herring form large winter concentrations traditionally in certain bays in Southeastern Alaska from October until the time of spring spawning. In contrast, the juvenile herring migrate offshore into the Gulf of Alaska in large schools by late fall. Herring spawn between March and July, primarily in April and May. Spawning occurs intertidally and subtidally between +3.7 m and -9.1 m (+12 ft and -30 ft), primarily on rockweed (*Fucus*), eelgrass, laminarians (brown kelps), and giant kelp (*Macrocystis*).

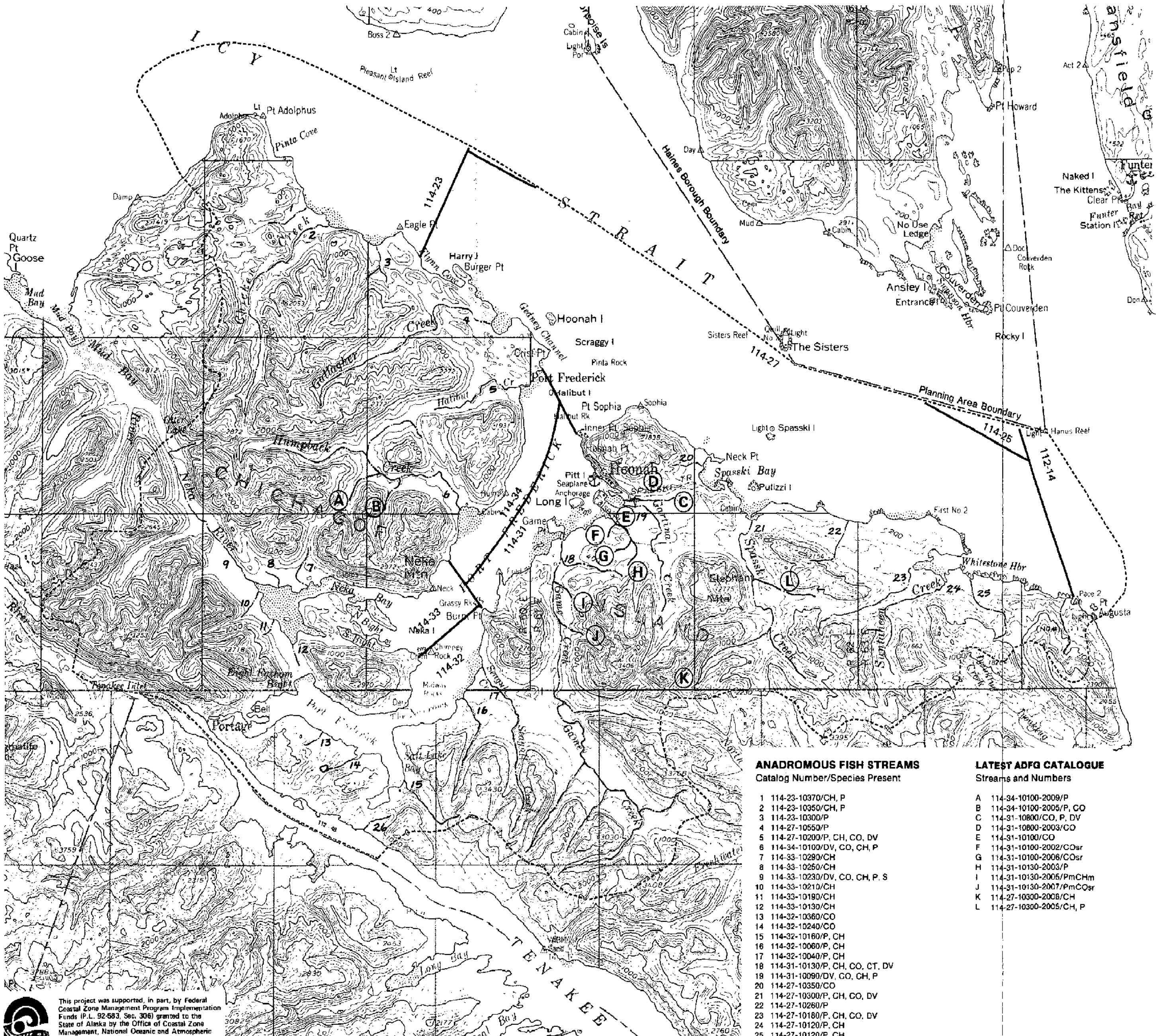
Anadromous Fish

Anadromous (sea-run) fish occuring in this region include pink, chum, coho, sockeye, and king salmon. Dolly Varden, rainbow, and cutthroat trout also have anadromous populations. These fish provide important commercial, recreational, and traditional and customary use, and are integral parts of many land and marine based food webs. Figure 14 shows commercial fishing districts and anadromous fish streams in the planning area.

Pink salmon, followed by chum salmon, are the most abundant and commercially important fish in this region. Spawning generally begins in August or September in the short streams typical of this region or intertidally at their mouths. Odd-year runs dominate. Like pink salmon, chum salmon utilize most of the streams in this region, preferring to spawn in gravel riffle areas from the tidal mouths of streams to inland along the stream course. Spawning occurs from spring to late fall-early winter. Coho salmon utilize fewer stream systems and are less abundant in this region than pink and chum salmon. Spawning occurs between September and January. Sockeye salmon spawn from late July to early October. Their runs are small in this region because of the limited size and number of lakes necessary for rearing their offspring.

Yearly high and low streamflows occur in winter. The accompanying shifting of gravels and freezing temperatures can be fatal to developing fish eggs and sac fry. Pink, chum, and sockeye salmon eggs hatch during the winter from December through March. Once hatched, the young sac-fry remain beneath the gravel for 3 to 4 months until they emerge as fry (young fish about 3 cm or 1½ inches long) between April and June. After emergence, pink and chum salmon fry migrate directly to sea where they feed for several months in nearshore estuarine rearing areas before moving offshore. Sockeye salmon fry migrate, usually downstream, into nursery lakes where they rear from 1 to 3 years before migrating to the sea. Coho salmon eggs develop more slowly during the winter than the other three salmon species and hatch in the early spring. The fry emerge in May or June and the coho smolts (fingerlings) spend 1 to 3 years in freshwater systems before outmigrating in mid-summer into marine waters.

Dolly Varden are found in most freshwater systems in this region. They spawn in streams between September and November, and their eggs usually hatch in March. Emergence occurs in April or May. The young rear in streams until May or June of their third or fourth year, when they migrate to sea for the first time. After their first seaward migration, Dolly Varden usually spend the rest of their life wintering in and migrating to and from lakes.



ANADROMOUS FISH STREAMS
Catalog Number/Species Present

1 114-23-10370/CH, P
2 114-23-10350/CH, P
3 114-23-10300/P
4 114-27-10550/P
5 114-27-10200/P, CH, CO, DV
6 114-34-10100/DV, CO, CH, P
7 114-33-10290/CH
8 114-33-10250/CH
9 114-33-10230/DV, CO, CH, P, S
10 114-33-10210/CH
11 114-33-10190/CH
12 114-33-10130/CH
13 114-32-10360/CO
14 114-32-10240/CO
15 114-32-10160/P, CH
16 114-32-10060/P, CH
17 114-32-10040/P, CH
18 114-31-10130/P, CH, CO, CT, DV
19 114-31-10090/DV, CO, CH, P
20 114-27-10350/CO
21 114-27-10300/P, CH, CO, DV
22 114-27-10260/P
23 114-27-10180/P, CH, CO, DV
24 114-27-10120/P, CH
25 114-27-10120/P, CH
26 112-48-10500/CO

LATEST ADFG CATALOGUE
Streams and Numbers

A 114-34-10100-2009/P
B 114-34-10100-2005/P, CO
C 114-31-10800/CO, P, DV
D 114-31-10800-2003/CO
E 114-31-10100/CO
F 114-31-10100-2002/COsr
G 114-31-10100-2006/COsr
H 114-31-10130-2003/P
I 114-31-10130-2005/PmCHm
J 114-31-10130-2007/PmCOsr
K 114-27-10300-2008/CH
L 114-27-10300-2005/CH, P

This project was supported, in part, by Federal Coastal Zone Management Program Implementation Funds (P.L. 92-583, Sec. 306) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

FIGURE 14
Commercial Fishing Districts/Anadromous Fish Streams
PLANNING AREA

114-31 **COMMERCIAL FISHING STATISTICAL AREAS**

5 **CATALOGED ANADROMOUS FISH STREAMS**

5 114-23-10370/CH **CATALOG NUMBER/SPECIES PRESENT**

SPECIES KEY

P **PINK SALMON** — Spawning Habitat

CH **CHUM SALMON** — Spawning Habitat

Co **COHO SALMON** — Spawning and Rearing

S **SOCKEYE SALMON** — Spawning and Rearing

CT **CUTTHROAT TROUT** — Habitat

DV **DOLLY VARDEN** — Known Stream Habitat. Dolly Varden probably occur in most streams and marine waters throughout the area.

SOURCE: Alaska Department of Fish & Game, Habitat Division.

NOTE: Inventory information is available for areas outside the planning area boundary, at the level of detail presented here. This information was not mapped because the management decisions that occur in this plan are limited to areas inside the planning area boundary. Inventory information for areas outside the planning boundary is available from the Alaska Department of Fish and Game.

UPDATED OCTOBER 1983

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 16,896'
0 1 2 3 MILES
NORTH
CH2M HILL 1982

BASE MAP SOURCE: USGS MAPS, ALASKA TOPOGRAPHIC SERIES, MT. FAIRWEATHER, 1961; JUNEAU, 1962; AND SITKA, 1951. ORIGINAL SCALE 1:250,000

Anadromous cutthroat trout overwinter in lakes or streams. Spawning occurs between February and May. Juveniles rear in the spawning stream or connecting lake 2 to 4 years before migrating to sea.

Steelhead, sea-going rainbow trout, spawn between March and May. After emergence from the streambed, the young steelhead rear 3 to 4 years in freshwater before migrating out to sea from April through June. They reenter their home stream in the fall and overwinter before spawning. Outmigration into the marine waters follows spawning.

Marine Mammals

Common marine mammals of the inshore waters include harbor seals, Steller sea lions, Dall and harbor porpoise, and killer and humpback whales. All are year-round residents except perhaps the humpback whales, which occur during spring and summer. Figure 15 shows the occurrence of whales and Dall and harbor porpoise. Other marine mammals occurring occasionally or rarely in the Inside Passage or in the adjacent Pacific Ocean waters include northern fur and elephant seals; minke, gray, blue, fin, sperm, sei, right, goose-beaked, and giant bottlenose whales; and north Pacific white-side dolphins. Humpback, blue, fin, gray, right, sperm, and sei whales are all endangered species.

In Southeast Alaska, the only three Steller sea lion rookeries are located within the Forrester Island National Wildlife Refuge. However, sea lions do occur within Icy Strait and Port Frederick in the planning area. Known haulout areas include Spasski Island and The Sisters (just outside the planning area). Sea lions are primarily fish eaters and are often associated with schools of herring in the spring. In winter, they move into the more protected waters of bays and inland passages. Feeding usually is in waters less than 91 m (300 feet) deep.

Harbor seals usually occur in close proximity to the coast, seldom swimming more than 8 km (5 miles) offshore. They frequently haul out on rocks and reefs that are exposed only at low tide. Pupping occurs from late May to mid-July, with the majority taking place during the first 3 weeks in June. Harbor seals consume primarily fish, including herring, cod, flounder, smelt, rockfish, sculpins, salmon, and greenling. Octopus, squid, and shrimp are also consumed.

Dall porpoise frequent wide straits and areas of more open water than the harbor porpoise, which is often found closer to shore in bays and inlets. Both species feed primarily on fish.

Killer whales feed mainly on fish and squid, but are also known to take sea otters, seals, sea lions, porpoise, and

whales. In Southeastern Alaska, humpback whales feed mainly on herring and euphausiids, and possibly shrimp and capelin. The commercial taking of herring can displace humpback whales from an area due to the lowering of their needed food supply. Humpback whales begin migrating south from Alaskan waters during late December to winter calving grounds. Gray, blue, and fin whales also migrate south for winter.

Northern fur seal yearlings may appear in considerable numbers in the protected waters of Southeastern Alaska, due to severe offshore sea conditions in winter. Some marine mammal mortality, especially of young or weakened adults, results from winter storms. The beached seal carcasses serve as food for wolves, eagles, bears, small mammals, gulls, and crows.

Terrestrial Mammals

Sitka black-tailed deer and brown bear are well distributed in this region, ranging from the beach fringe to upper mountains (see Figure 15). During the spring, deer congregate on the beaches to feed on new shoots of beach grasses, sedges, and plantain. As the snow recedes, skunk cabbage, marsh marigold, salmonberry, and blueberry leaves become primary foods. Fawns are born in May and June, usually in the fringe of trees adjacent to a lowland muskeg or beach. By July, most deer are in the alpine meadows, where deer cabbage is the major food throughout the summer.

After the first heavy frosts of fall, deer move from the alpine meadows into the high timber and alder slide areas, where they feed on salmonberry and currant shrubs. Throughout the winter, the majority of deer remain just below the snow line, moving up and down the mountain slopes with the changing snow depths. Dwarf dogwood, trailing bramble, and goldthread are high quality perennials eaten when not covered by snow. When snow covers these, low quality browse species such as blueberry are utilized. Even in moderate winters, the snow accumulation on clearcut areas makes them unusable for deer. A long-term decline of deer numbers may be expected with clearcut harvesting of the uneven-aged old growth forests. Deer winter concentration areas are usually near sea level on south facing slopes. Deer populations in Alaska fluctuate with the severity of the winters. High snowfall forces deer to the beach fringe, where only low quality foods such as dry beach grasses and kelp are available. In such conditions, deer will die of starvation or become easy prey for hunters.

Brown bears emerge from their winter dens in May and feed predominantly on vegetation, such as horsetail, skunk cabbage, grasses, and sedges found at low elevations and along beach fringe areas. During the summer, fruit-bearing plants,

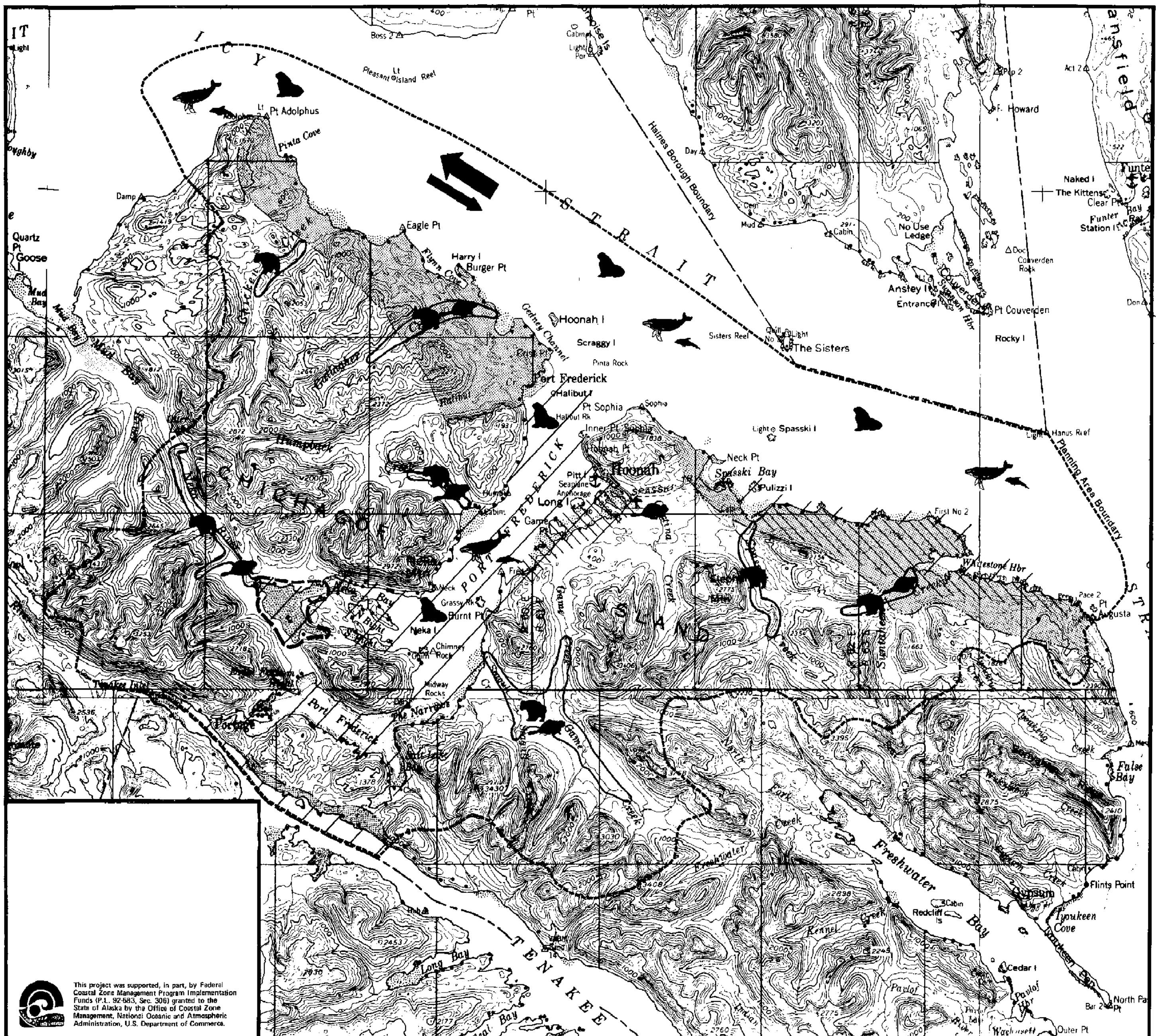


FIGURE 15
Birds and Mammals
PLANNING AREA

- WATERFOWL & SEABIRD NESTING AND MOLTING
- WATERFOWL & SEABIRD WINTERING AREAS
- SEASONAL USE BY MIGRATING BIRDS
- MAJOR WATERFOWL MIGRATION ROUTE
- MINOR WATERFOWL MIGRATION ROUTE
- EAGLE NEST SITES
- BROWN BEAR INTENSIVE USE — SPRING
- BROWN BEAR CONCENTRATIONS ON FISH STREAMS
- BEAVER PRESENT
- DEER HIGH DENSITY WINTER RANGE
- WHALES, DALL AND HARBOR PORPOISE PRESENT
- STELLER SEA LION

SOURCES: Alaska Department of Fish and Game, Habitat Division.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" 16,895'
0 1 2 3 MILES
NORTH

BASE MAP SOURCE: USGS MAPS, ALASKA TOPOGRAPHIC SERIES, MT. FAIRWEATHER, 1951; JUNEAU, 1962; AND SITKA, 1951. ORIGINAL SCALE 1:250,000

CH2M HILL 1982

particularly blueberries, become important food sources as the bears range from sea level to alpine areas. The bears also feed on salmon in summer and early fall. Figure 15 shows brown bear intensive use areas in spring and concentrations on fish streams in summer and early fall.

Other mammals present in this region include mink, land otter, marten, beaver, short-tailed weasels, red squirrels, voles, shrews, mice, and bats. The coastal forest provides important cover and habitat for most of these species. Marine foods taken from the intertidal zone can make up a large part of the diet of mink, land otter, and, to a lesser extent, marten. Beaver are abundant, and their dams help stabilize watersheds by reducing flooding and silting.

Birds

Bald eagle nests are located within 457 m (1500 feet) of the high tideline, with the average distance being 37 m (120 feet). Bald eagles require large, old trees, usually Sitka spruce, to support their heavy nesting platforms (Figure 15). No nests have been found in second growth forests. Nest construction and egg laying begin in early April. Usually two eggs are laid, which hatch by late May or early June. Adults catch herring for their young. Most eaglets are ready to fly by the end of July. The eagle's diet consists primarily of fish, mainly herring and spawned-out salmon. Waterfowl, seabirds, small mammals, sea urchins, clams, crabs, and carrion also supplement their diet.

Common birds breeding in the forest and in other upland habitats include the rufous hummingbird; yellow-bellied sapsucker; western flycatcher; tree and barn swallows; raven; crow; chestnut-backed chickadee; winter wren; varied, hermit and Swainson's thrushes; orange-crowned, Townsend's, and Wilson's warblers; fox and Lincoln's sparrows; pine siskin; red crossbill; blue grouse; ptarmigan; and dark-eyed junco. Ravens and crows frequent the beach where they scavenge for food.

Thousands of waterfowl and shorebirds pass through this region, which is part of the Pacific Flyway, during their spring migration to more northerly breeding grounds (Figure 15).

Critical resting and feeding habitat is provided in the estuaries and wetlands, especially in years when arrival is early or northern ice breakup is late. Nesting waterfowl are distributed throughout the area at the heads of most bays and lakes and along streams, and include red-throated and common loons, Vancouver Canada geese, trumpeter swans, mallards, harlequin ducks, and common and red-breasted mergansers.

Mergansers and harlequin ducks nest along fish-bearing streams. Mergansers bring their broods to tideflat areas soon after hatching. Mallards prefer salmon eggs and flesh from dead fish. Although surf and white-winged scoters breed further north, they are common inshore seaducks, where they feed on mussels, eelgrass, and spawning herring. Fall migration is less spectacular than spring because movements are more diffuse and there is a sizable trans-Gulf movement of black brant, Canada and white-fronted geese. The bays and tidelands of this region can supply critical resting and feeding habitat for young-of-the-year waterbirds which are heading farther south, especially during years when their rearing time is short. Inshore waters, especially along the shores of bays and inlets, provide needed habitat for overwintering gulls; mallards; greater scaups; common and Barrow's goldeneyes; buffleheads; oldsqauws; harlequin ducks; white-winged, surf, and common scoters; common and red-breasted mergansers; Vancouver Canada geese; loons; grebes; some alcids and pelagic cormorants (Figure 15). Eelgrass, sea lettuce and other algae, marine invertebrates, small fish, spawned-out salmon and their eggs are important fall and winter food for these birds.

Although not studied in this area, it is likely that shorebird flocks of black turnstones, black oystercatchers, rock sandpipers, surfbirds, and dunlins frequent the rocky shore in this region during winter and feed on marine invertebrates. The winter species composition and density of offshore seabirds in this region has not been studied. Seabirds occupying these waters are likely to include puffins, petrels, gulls, murres, and murrelets.

Vegetation

The cool, moist, maritime climate strongly influences the vegetation found in this region. The Sitka spruce-hemlock forest thrives in this climate and is the dominant vegetation type occurring from sea level to timberline, which varies from 610 to 914 m (2,000 to 3,000 ft). Western hemlock is the major conifer, followed by Sitka spruce, with a scattering of mountain hemlock, western red cedar, and Alaska cedar. Common understory shrubs include blueberry, huckleberry, rusty menziesia, salmonberry, gray and black currant, wild strawberries, thimbleberry, devilsclub, and salal. Ground cover is composed mainly of mosses, ferns, bunchberry, twisted stalk, and deerberry. Black cottonwood and red alder are found along streamsides. Alpine communities exist above timberline and are dominated by heaths, grasses, and other low-growing plants. Muskegs are interspersed with forest stands on poorly drained soils. They are composed mainly of sphagnum mosses and sedges, with varying amounts of rushes, crowberry, Labrador tea, bog rosemary, Oregon crabapple, shorepine, and stunted conifers. Common plants

of the beach fringes and tidal marshes include beach rye grass, beach pea, beach lovage, lambs quarter, hemlock parsley, oysterleaf, seaside plantain, pickleweed, Lyngbye sedge, and arrowgrass.

Rocky intertidal and subtidal zones support abundant growths of attached marine algae. Brown algae are the most abundant, followed by red, then green algae. Of the browns, rockweed dominates the mid-intertidal zone; the floating beds of bull and giant kelp are prevalent subtidally. Red algae can occur to depths of approximately 37 m (120 ft). Eelgrass is dominant in soft bottom areas. Figure 13 shows known kelp beds in the planning area.

The plant growth so prevalent in the spring and summer declines in winter because of the decrease in light and colder temperatures. Annuals die back, and deciduous trees and shrubs lose their leaves, adding to the organic soil layer. Alders colonize disturbed areas and fix needed nitrogen into the nitrogen-poor mineral soils. Alder leaves drop in fall, helping to build up a humus layer of fertile topsoil. The crowns, leaves, and branches of the hemlock-spruce forest reduce snow accumulation on the ground, leaving understory plant species available for foraging animals. The coniferous forest also provides winter habitat for most terrestrial birds and mammals that are active during winter. The decrease in the availability of edible plants in winter is partially responsible for birds migrating south and for bears denning.

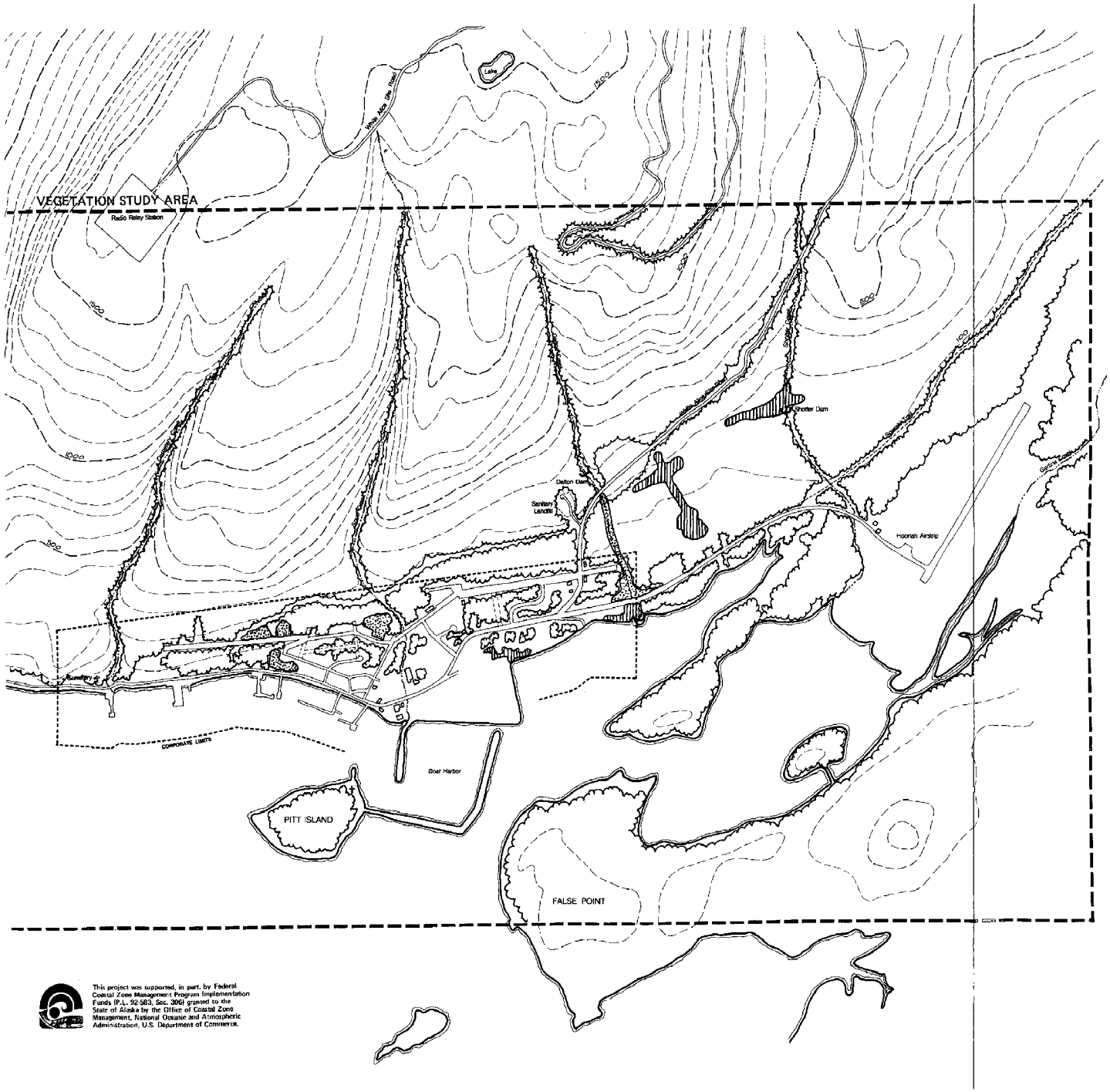
Patches of the forest are periodically blown down by high winds that accompany the frequent fall and winter storms. Trees blown down occasionally block anadromous fish streams. Attached marine algae and eelgrass are often torn loose and are deposited on the beaches. As these plants are broken down by waves and surf, they become an important winter food source for shellfish and other marine invertebrates.

Vegetation within the City of Hoonah is shown on Figure 16.

FIGURE 16

Vegetation

CITY OF HOONAH



SHRUB/BRUSH

MUSKEG

UNVEGETATED

SPRUCE-HEMLOCK FOREST

SOURCE: CH2M Hill

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 1230'

0 500 1000 FEET

NORTH

BASE MAP SOURCE: LISTED IN REPORT APPENDIX

CH2M HILL 1982

This project was supported, in part, by Federal Coastal Zone Management Program Implementation Funds (P.L. 92-583, Sec. 306) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

CHAPTER 5

Traditional and Customary Natural Resource Use

Chapter 5
TRADITIONAL AND CUSTOMARY NATURAL RESOURCE USE

The traditional and customary harvesting of foods and other items has been integral to the Huna way of life for hundreds of years, and is still a significant part of life for the people of Hoonah today. Much of the tribe's cultural heritage is closely linked to certain resources and harvest methods in the area. The importance of this tradition is apparent in the priority these food-gathering practices receive over other contemporary means of food acquisition.

Traditional and customary natural resource use is also very important to the economic life of Hoonah. The average family relies heavily on food gathering for its year-to-year survival. Traditional and customary resource use, rather than government assistance, is the chief means used by Hoonah's residents to supplement their income. Because both their cultural and physical livelihood depend on the traditional use of the area's resources, the people of Hoonah give the highest priority to the preservation and use of these resources.

Traditional and customary resource uses were determined through meetings and personal interviews with numerous Hoonah residents. Maps were distributed to individuals and small groups, who identified various resources and areas they personally use or have knowledge of. This information was then combined onto three master maps. Figure 17 shows resource use in the city and vicinity. Figure 18 encompasses the geographic area that has traditionally been used for a variety of purposes and is still significant to the people of Hoonah; it includes important locations that are outside the planning area. Figure 19 details resource use within the planning area.

As Figure 18 shows, the residents of Hoonah use a large geographic base from which to harvest traditional and customary natural resources. Almost all areas within a 1,300-square-mile area are used to some extent. The most important or significant areas for resource harvesting are the following:

Excursion Inlet. This large inlet is immediately north of Hoonah across Icy Strait. The upper reaches of the inlet are used for the hunting and trapping of land mammals and sea mammals, and for eulachens and salmon fishing. The middle and lower reaches of the inlet are used for bottomfish, cockles, land mammal trapping, sockeye, and for anchorage.

Pleasant Island. Salmon and bottomfish are harvested on the west, south, and east shore areas. Birds and sea mammals are hunted around much of the island. Dungeness and king crab are caught north of the island east of Gustavus. Gumboots

(chitons) are harvested along the north and east shores. Several anchorage areas are also used between the island and the mainland.

Lemesurier Island. This island west of Pt. Adolphus has seaweed along all its shores. Eggs are harvested on the north shore, and king crab are harvested in the Willoughby Cove area. Bottomfish are caught in the southeast off-island areas. Land mammals, including deer, are taken on the island. Anchorages are used in Willoughby Cove and an area in the northwest coast.

Inian, Georges, and Three Hill Islands. These three islands lie to the north and west of the Inian Peninsula, the most northwestern point of Chichagof Island. Salmon are fished throughout the area. Sea mammals are hunted from the west side of Inian Island to George Island. Abalone and gumboots are gathered all around Inian Island. Seaweed is collected from Georges Island, Three Hill Island, Inian Island, and throughout Port Althorp. Anchorages are used at the north and east sides of Inian Island.

Yakobi Island. The northern part of the island waters are fished for salmon. Sea mammals are hunted in the Cape Bingham area. Lisianski Inlet is used for hunting and trapping of land mammals. Takanis Bay-Cape Cross is used for hunting and trapping of mammals and birds, as is the southern portion of Lisianski Strait. Sea mammals are hunted from Lisianski Strait south below Porcupine Islands. Salmon are fished in Stag Bay.

Glacier Bay National Monument. Traditionally, the Glacier Bay region has been heavily used by Huna people. Presently, berry harvesting occurs at Dundas Bay, north of Taylor Bay, and the north side of Berry Bay. Willoughby Island is a trapping area. Herring eggs are harvested around the Marble Islands, and seaweed is gathered from Bartlett Cove to Point Gustavus.

Porpoise Island. Salmon are fished off the island, and gumboots are collected in the intertidal area. Sea mammals are hunted near the shores.

Couverden Island. Gumboots are collected throughout the Couverden Island area, as is seaweed. The area is regularly used for recreation as well, and provides good anchorages in inside waters. Bottomfish and salmon are harvested south of the island.

Sisters Island. At the Sisters, seaweed and gumboots are harvested. Bottomfish and salmon are caught in the waters south of the island.

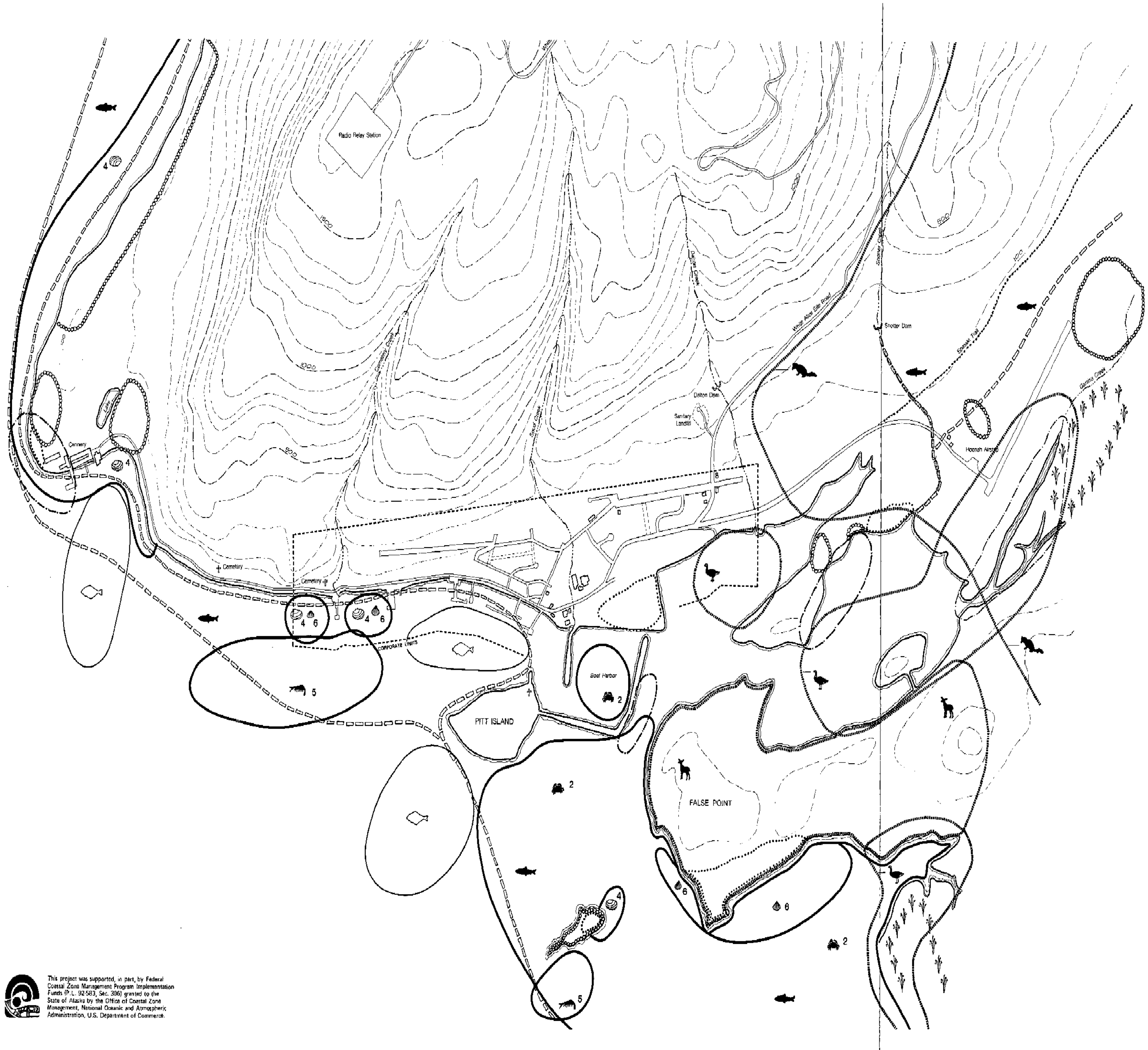


FIGURE 17
Traditional and Customary Natural Resource Use
CITY OF HOONAH & VICINITY

SOURCE: Citizens of Hoonah.

SALMON (King, Sockeye, Coho, Chum, Pink, Dog)

TROUT (Dolly Varden, Steelhead, Cutthroat)

BOTTOMFISH (Halibut, Snapper, Beach Cod)

EULACHON

EGGS (Salmon, Seagull, Herring)

SHELLFISH
1 King Crab
2 Dungeness Crab
3 Abalone
4 Clams
5 Shrimp
6 Cockles
7 Sea Urchins
8 Chiton-Gumboots

PLANTS
Berries
Seaweed
Wood
Wild Rice
Spruce Roots

HUNTING & TRAPPING
Land Mammals
Sea Mammals
Birds

RECREATION AREA

ANCHORAGE

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 1230'
0 500 1000 FEET
NORTH
BASE MAP SOURCE: LISTED IN REPORT APPENDIX
CH2M HILL 1982

This project was supported, in part, by Federal Coastal Zone Management Program Implementation Funds (P.L. 92-583, Sec. 306) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

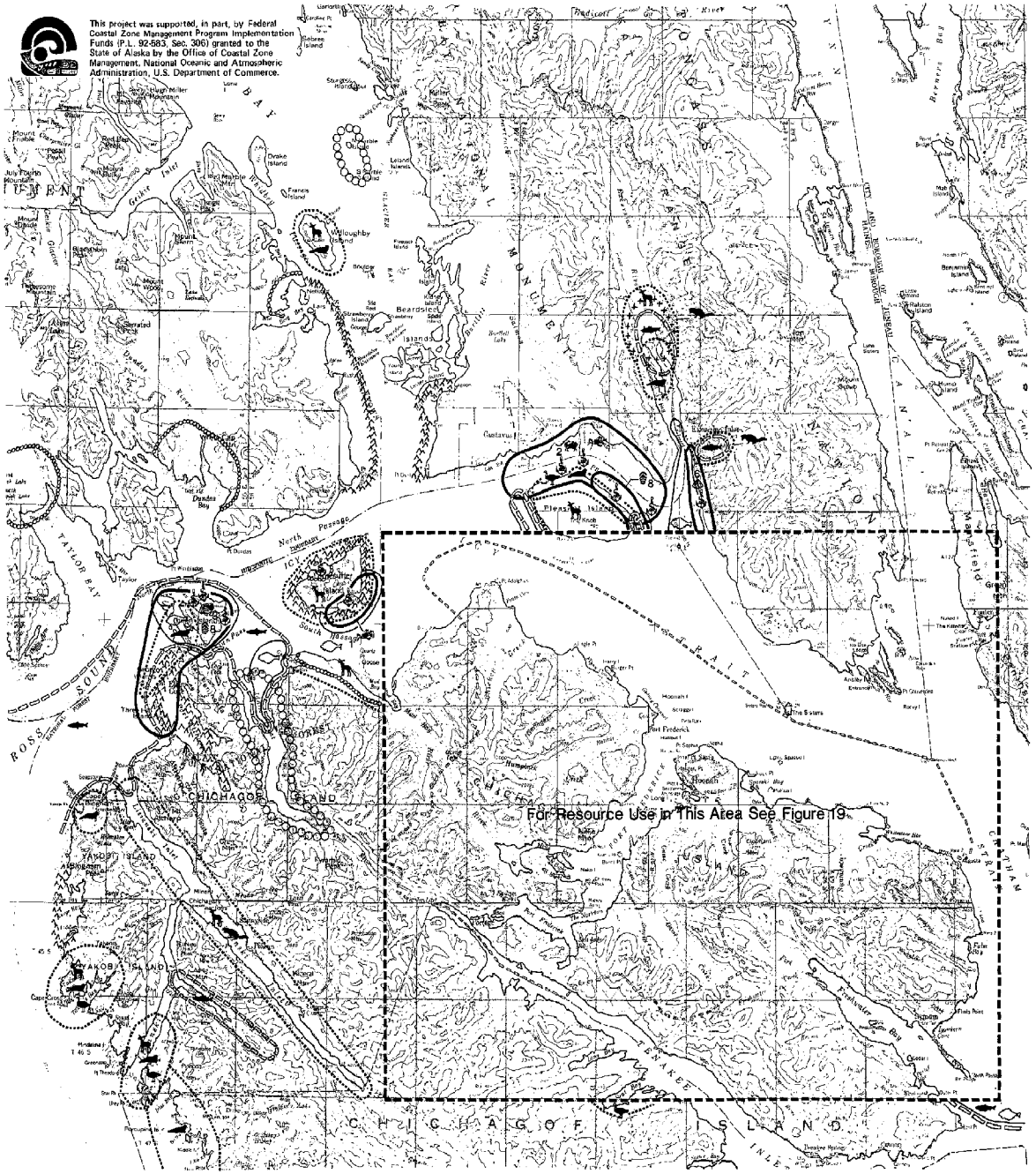


FIGURE 18

Traditional and Customary Natural Resource Use

TRADITIONAL AND CUSTOMARY USAGE AREA

- **SALMON** (King, Sockeye, Coho, Chum, Pink, Dog)
- **TROUT** (Dolly Varden, Steelhead, Cutthroat)
- **BOTTOMFISH** (Halibut, Snapper, Beach Cod)
- **EULACHON**
- **EGGS** (Salmon, Seagull, Herring)
- **SHELLFISH**
  - 1 King Crab
  - 2 Dungeness Crab
  - 3 Abalone
  - 4 Clams
  - 5 Shrimp
  - 6 Cockles
  - 7 Sea Urchins
  - 8 Chiton-Gumboots
- **PLANTS**
  - Berries
  - Seaweed
  - Wood
  - Wild Rice
  - Spruce Roots
- **HUNTING & TRAPPING**
  - Land Mammals
  - Sea Mammals
  - Birds
- **RECREATION AREA**
- **ANCHORAGE**

SOURCE: Citizens of Hoonah.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 36,960'

0 1 3 5 7 MILES

NORTH

CH2M HILL 1982

BASE MAP SOURCE: USGS MAPS, ALASKA TOPOGRAPHIC SERIES, MT. FAIRWEATHER, 1961; JUNEAU, 1962; AND SITKA, 1951. ORIGINAL SCALE 1:250,000

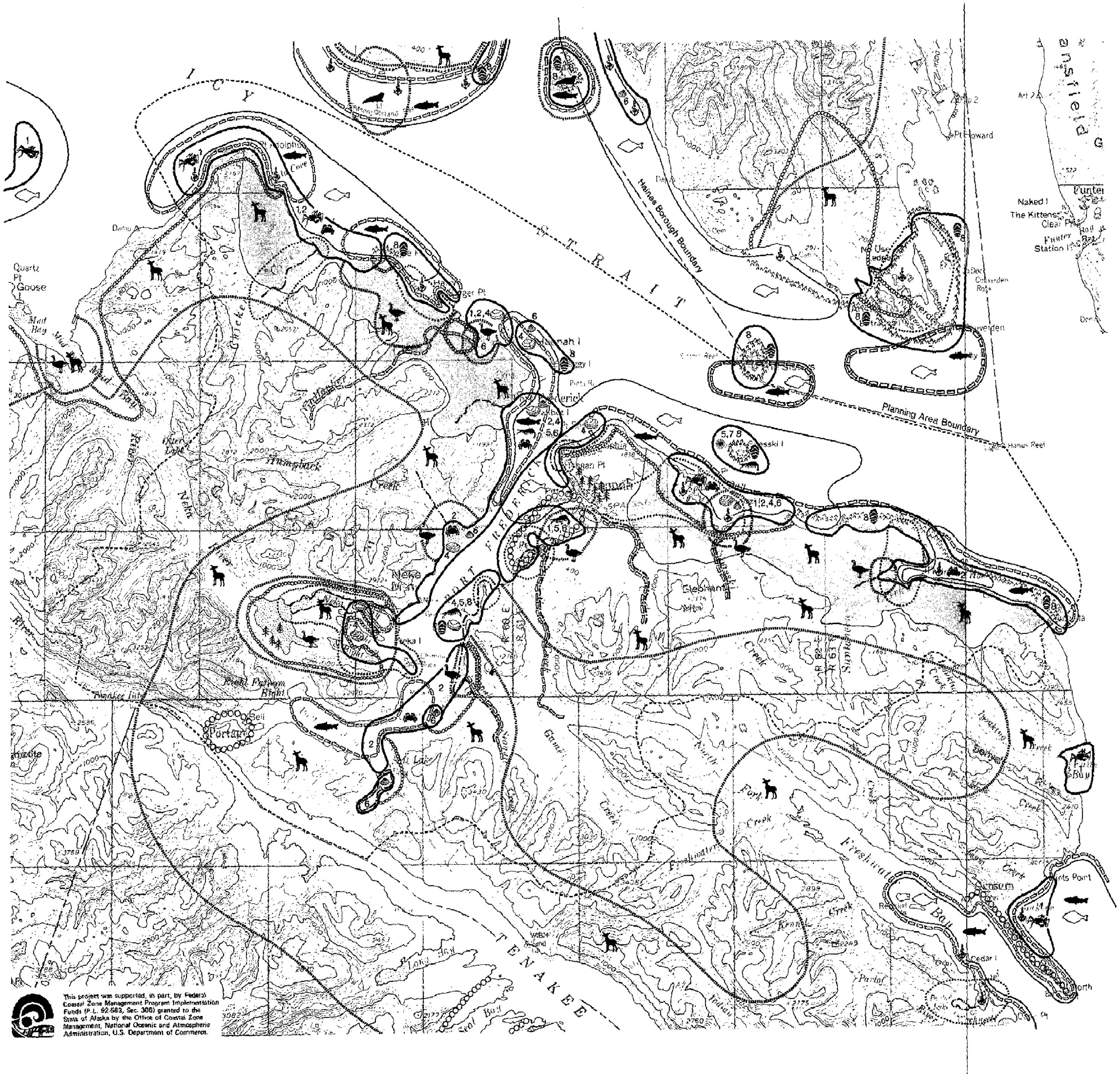


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FIGURE 19

Traditional and Customary Natural Resource Use

PLANNING AREA

- **SALMON** (King, Sockeye, Coho, Chum, Pink, Dog)
- **TROUT** (Dolly Varden, Steelhead, Cutthroat)
- **BOTTOMFISH** (Halibut, Snapper, Beach Cod)
- +++++ **EULACHON**
- ooooo **EGGS** (Salmon, Seagull, Herring)

SHELLFISH

1 King Crab
2 Dungeness Crab
3 Abalone
4 Clams
5 Shrimp
6 Cockles
7 Sea Urchins
8 Chiton-Gumboots

PLANTS

- Berries
- Seaweed
- Wood
- Wild Rice
- Spruce Roots

HUNTING & TRAPPING

- Land Mammals
- Sea Mammals
- Birds

- **HIGH DEER USE AREA**
- **RECREATION AREA**
- **ANCHORAGE**

SOURCE: Citizens of Hoonah.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 16,896'

0 1 2 3 MILES

NORTH

CH2M HILL 1982

BASE MAP SOURCE: USGS MAPS, ALASKA TOPOGRAPHIC SERIES, MT. FAIRWEATHER 1961; JUNEAU, 1962 AND SITKA, 1951. ORIGINAL SCALE 1:250,000

Mud Bay. Deer and birds are hunted in the Mud Bay area. Berries are also gathered throughout the area.

Pt. Adolphus to Crist Pt. Salmon are fished all around Pt. Adolphus, from Eagle Point to Burger Point, and from Hoonah Island into Port Frederick. Bottomfish are caught from west of Point Aldolphus to Harry Island, and from Hoonah Island into Port Frederick. King and dungeness crab are harvested from west of Point Aldolphus to Eagle Point. Gumboots are taken from Eagle Point to Burger Pt., and from Hoonah and Scraggy Islands. Clams are gathered from the cove west of Gedney Channel, Hoonah Island, and Gedney Channel flats. Birds are hunted in the Gedney Channel area. Chicken Creek is used for trout, and Gallagher Creek for salmon.

Port Frederick. This waterway is used almost in its entirety for subsistence purposes. All types of land and marine resources are harvested here. The waters are protected, and are close to Hoonah. This is the single most important area for traditional and customary resource uses.

Spasski Bay and Spasski Island. Gumboots, shrimp, and sea urchins are harvested at Spasski Island, as is seaweed. King and dungeness crab, clams and cockles are harvested in Spasski Bay. Birds are hunted along the shorelines. Recreation uses occur throughout the bay, connecting to the Spasski Trail and the city. Salmon and trout are caught in Spasski Creek. Bottomfish and salmon are caught throughout the bay and island areas. There are two permanent residents on the bay.

Whitestone Harbor. Salmon are fished throughout the Whitestone Harbor area. Gumboots are harvested from west of Whitestone to Pt. Augusta, as is seaweed. Birds, deer, and Dungeness crab are harvested in the harbor area, and trout are caught in the local drainage. Whitestone Harbor is also a recreation area.

Freshwater Bay - Iyoukeen Cove. Salmon are fished throughout the cove and bay areas, as are bottomfish and king and Dungeness crab. Herring eggs are harvested along the south shoreline of Iyoukeen Peninsula. Pavlof Harbor and Pavlof Lake are recreation areas. Pavlof Lake is used for trout. Anchorages exist at Pavlof, Cedar Cove, and Iyoukeen Cove.

CHAPTER 6

Historic, Prehistoric, and Archaeological Resources

Chapter 6
HISTORIC, PREHISTORIC, AND ARCHAEOLOGICAL RESOURCES

Archaeological and historic sites in the planning area have been inventoried by Sealaska Corporation and by the Alaska Department of Natural Resources, Division of Parks, Office of History and Archaeology. The purpose of the Sealaska inventory was to identify culturally significant sites to be considered during Sealaska's land selection process. The state inventory lists sites that have been identified from the literature or reported from other sources. So far, no attempt has been made to analyze or further investigate the significance of these sites beyond field checking for physical evidence and making a written description.

The U.S. Forest Service has also conducted cultural resource surveys in some parts of the planning area in connection with proposed Forest Service activities.

The types of sites found in the planning area include:

- Historic scatters of artifacts
- Pictographs/petroglyphs
- Cemeteries and individual burials
- Former village sites

Figure 20 shows identified sites in the City of Hoonah and vicinity. These include St. Nicholas Church, a Russian Orthodox church in the city; Pitt Island Burial, a Tlingit cemetery on Pitt Island; and Point Frederick Burial (known as the Russian cemetery), located at the northwest end of the city. In addition, the present-day city is in the same location as the principal Huna Village site; a high potential therefore exists for other cultural resources to be found in the city and vicinity.

Figure 21 shows general locations of archaeological and historic sites in the planning area. The specific locations of the sites are not included in this public document to protect them from possible exploitation. A master site map showing all known inventory sites and a descriptive catalog are on file at City Hall in Hoonah. That map will be used when a land use decision is to be made that could have an impact on a culturally significant site.

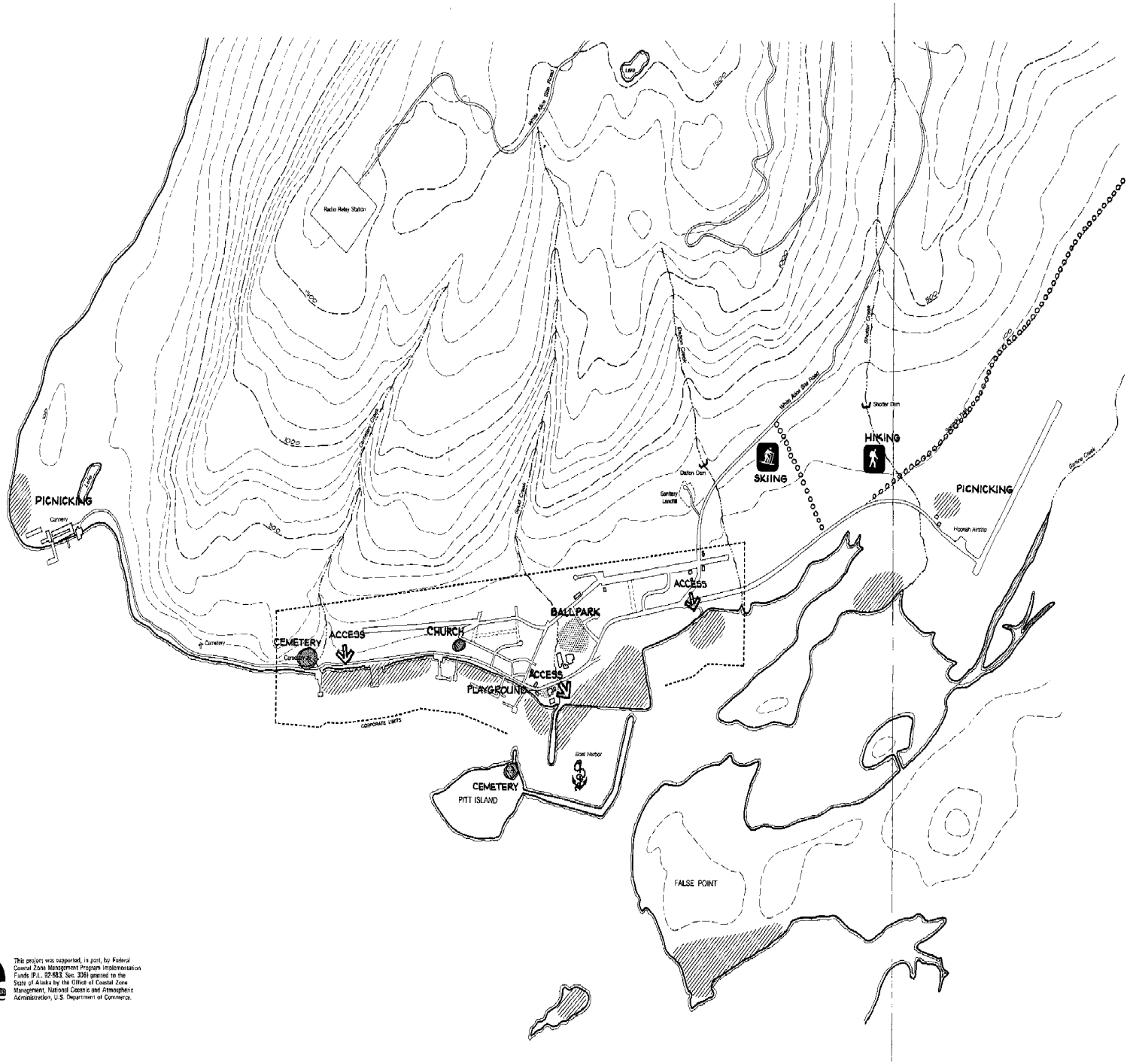
The Alaska State Office of History and Archaeology states that the known cultural resources in the planning area are all important in understanding the prehistory and history of the Hoonah area. Furthermore, there is a high potential for other important cultural resources to be found in this area. The Office of History and Archaeology participates in the A-95 Federal and state review process. It must comment on

all projects that are funded by Federal or state dollars and that may affect archaeological or historic sites. This is a review function only, however, and the ultimate decision to preserve a particular site lies with the funding agency and the land owner.

FIGURE 20

Historic, Archaeological, & Recreational Areas

CITY OF HOONAH & VICINITY



IDENTIFIED HISTORIC AND ARCHAEOLOGICAL AREAS

HIKING/SKI TRAIL

PUBLIC USE RECREATION AREA

COMMUNITY RECREATION FACILITY

ANCHORAGE

SOURCES: City and Citizens of Hoonah; Alaska Department of Natural Resources, Division of Parks, Office of History and Archaeology.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 1230'

0 500 1000 FEET

NORTH

BASE MAP SOURCE: LISTED IN REPORT APPENDIX

CH2M HILL 1982

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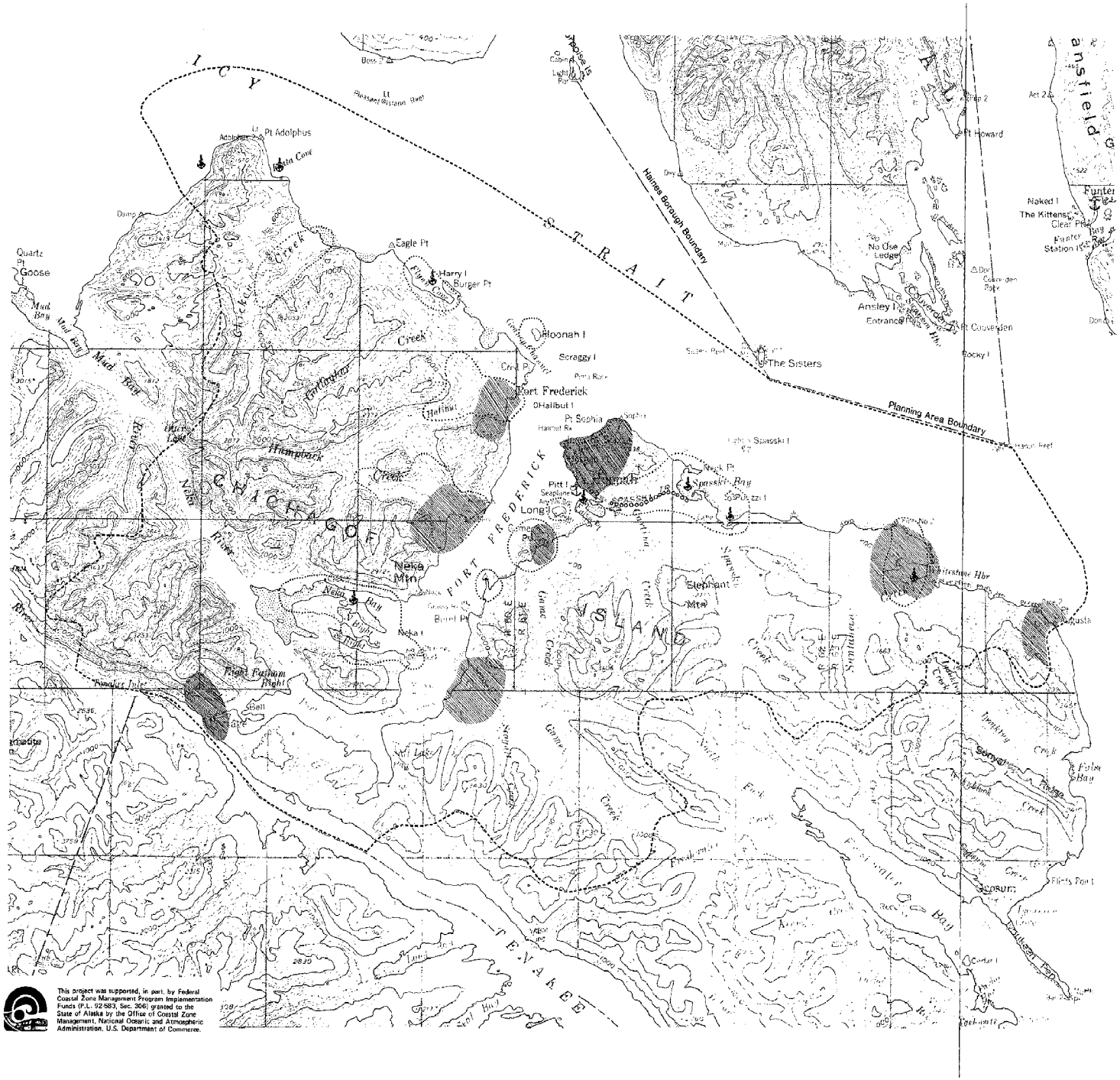

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FIGURE 21

Historic, Archaeological, & Recreational Areas

PLANNING AREA

IDENTIFIED HISTORIC AND ARCHAEOLOGICAL AREAS

HIKING/SKI TRAIL

PUBLIC USE RECREATION AREA

ANCHORAGE

SOURCES: Citizens of Hoonah; Alaska Department of Natural Resources, Division of Parks, Office of History and Archaeology; U.S. Forest Service.

NOTE: This map shows the general areas where archaeological or historical sites exist. The specific location of sites will not be provided in a public document, to protect the sites from possible exploitation. The City of Hoonah has a master site map on file at the City Hall, Hoonah, Alaska, which shows the location of all known inventory sites. The site map will be used when a land use decision is to be made within the areas mapped here, to establish the location of any sites so appropriate protection will occur.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" 16,896'

0 1 2 3 MILES

NORTH

CH2M HILL 1982

BASE MAP SOURCE: USGS MAPS, ALASKA TOPOGRAPHIC SERIES, MT. FAIRWEATHER, 1961; JUNEAU, 1962; AND SITKA, 1951. ORIGINAL SCALE 1:250,000

CHAPTER 7

Issues, Goals, and Objectives

Chapter 7
ISSUES, GOALS, AND OBJECTIVES

The issues, goals, and objectives for Hoonah's coastal management program were developed by the city's Planning and Zoning Commission. The commission met from the beginning of the planning process to draft goals that could provide a general direction for other elements of the work. To ensure that the interests of all community members were represented, a survey was distributed to all resident adults. This survey asked residents' opinions about population growth, economic development, community facilities, and areas of customary and traditional value. The results were considered by the commission in formulating its statements.

An issue is a subject that concerns the community. In Hoonah, the prospect of rapid economic development and community growth raises many issues for discussion, ranging from impacts on natural resources to provision of adequate municipal services.

A goal is a decision that is made after discussion of an issue; it is a general end that the community wishes to achieve.

An objective provides more specific direction to help the community achieve its goals.

ISSUE 1: TRADITIONAL AND CUSTOMARY NATURAL RESOURCE USE

Future development projects in the Hoonah area, primarily timber harvesting, cause concern about the protection of natural resources. While there are benefits to timber resource development, this industry can also be a potential threat to historical sites, recreation areas, watersheds, and biologically rich lands and waters. The people of Hoonah depend on many natural resources for traditional and customary uses. Fishing and hunting are primary to the livelihood of the community. The maintenance of marine biological productivity and upland game habitat is a growing concern to the community.

GOAL 1: Protect, maintain, and enhance natural resources that are traditionally and customarily used by the community.

Objective 1.1: Identify natural resources/areas that have traditional and customary importance to Hoonah.

Objective 1.2: Pursue communication and cooperative agreements with native corporations and state and Federal agencies to protect significant natural resources identified by the community.

Objective 1.3: Review all development plans and permit applications for activities within areas important to Hoonah's traditional and customary natural resource use.

ISSUE 2: LAND AND WATER USE DEVELOPMENT

The people of Hoonah have been traditionally dependent on their shoreline for the main aspects of their livelihood, and access to it remains essential to this day. As Hoonah grows, the demand for its limited waterfront space will increase, and decisions must be made about its best possible use. Management decisions must be made for the uplands, as well. The city's water source flows from these lands, and future development could also occur there. Land and water use development must be balanced with natural resource protection.

GOAL 2: Direct community growth in an organized fashion, providing opportunities for land development as well as land conservation and the maintenance of environmental quality.

Objective 2.1: Reserve those waterfront properties that have been designated for water-dependent and water-related uses for those uses.

Objective 2.2: Maintain, enhance, and protect public access to the waterfront for traditional and customary uses and for recreational use.

Objective 2.3: Encourage future residential development in other than waterfront areas.

Objective 2.4: Separate development as appropriate to avoid impacts caused by conflicting uses (such as residential and industrial).

Objective 2.5: Ensure that development will not negatively affect Hoonah's water source.

Objective 2.6: Designate and preserve areas within the city for parks and open space.

Objective 2.7: Protect identified historic and archaeological resources.

Objective 2.8: Continue to refine the land use plan.

ISSUE 3: CITY EXPANSION

The use of lands just outside its legal boundaries is of great concern to Hoonah. These lands include important watershed resources, areas of potential recreational and economic value, areas suitable for residential and municipal uses, and areas along the shore potentially suitable for water-dependent uses. Incorporation of these lands will greatly increase the city's jurisdictional boundaries and resource base.

The 14(c)3 reconveyance lands will be annexed in the near future. The city must study that and other potential annexation lands to ensure proper management of its local resources.

GOAL 3: Expand Hoonah's legal geographical boundaries to increase its resource base for management, use, and protection.

Objective 3.1: Resolve land ownership and reconveyance issues.

Objective 3.2: Develop a comprehensive development plan for newly acquired lands and annexed lands.

ISSUE 4: WATER, SEWER, AND SOLID WASTE

The city's water system has operation and maintenance problems that present health hazards to residents. Periodic water shortages occur even at the existing population level. Water lines will need to be expanded to serve new development.

The sewage collection system requires upgrading to prevent excessive infiltration and inflow that overloads the treatment plant capacity. Sewer lines will also need to be expanded to serve new development.

The city's old landfill is presently a health and safety hazard to residents and should be properly capped and prepared for a future use. The new landfill must be properly constructed and maintained for optimum service to the residents of Hoonah.

GOAL 4: Provide the community with safe and adequate water, sewer, and solid waste disposal facilities.

Objective 4.1: Develop the new water source and upgrade and expand the water delivery system.

Objective 4.2: Upgrade and expand the sewage collection system.

Objective 4.3: Build the new landfill properly and commit the needed resources to properly maintain it.

ISSUE 5: ELECTRICAL POWER DEMAND

Hoonah's current electricity needs are provided by diesel generators. Because of projected demands and estimated future cost of diesel, it would be uneconomical to introduce more generation of this type. The community is therefore looking for alternatives.

GOAL 5: Provide Hoonah with economically sound alternatives to diesel generation to meet projected electrical needs.

Objective 5.1: Support the soonest possible development of a transmission line from Juneau to Hoonah and support the Tenakee Springs hydropower studies.

Objective 5.2: Support exploration of alternative energy sources such as woodwaste generation and geothermal resource development.

ISSUE 6: PUBLIC SERVICES

The provision of adequate public services to the community is necessary to ensure the safety, health, and well-being of its residents. The population growth that is expected as a result of development will increase the demand on existing services and in some cases require their expansion.

GOAL 6: Provide medical and social services, school facilities, recreation opportunities, and

fire and police protection adequate to meet the needs of the population.

Objective 6.1: Expand community recreation facilities: Renovate the community building; establish a youth center; develop a camper park; add an activity center and swimming pool to the school facilities.

Objective 6.2: Construct a new police station and jail facilities.

Objective 6.3: Expand the city health clinic.

ISSUE 7: TRANSPORTATION

With the construction of Hoonah's new harbor facilities, the city has adequate moorage space and protection for resident and transient fishing vessels. Improvements to the Alaska Marine Highway ferry service to Hoonah are needed. Construction of an airport terminal and runway lights would greatly improve air access to the city.

Development within the city will be closely tied to the development of its streets and roads. The city's streets are unpaved and are in generally poor condition. Additional streets will be necessary to provide access to new areas. The city has requested a legislative funding appropriation for street paving for the past 6 years, but monies have not yet been granted.

GOAL 7: Develop water, air, and land transportation systems according to the community's needs.

Objective 7.1: Encourage extension of water and sewer lines to the ferry terminal.

Objective 7.2: Encourage improvements to increase passenger comfort and expand services on ferry service vessels and air transportation.

Objective 7.3: Develop and submit plans to DOTPF for construction of an airport terminal.

Objective 7.4: Repair and extend city streets and roads. Pursue funding acquisition for street paving.

ISSUE 8: ECONOMIC DEVELOPMENT

Hoonah must develop a stable, diverse, productive economy to achieve a desired standard of living. Fishing, fish processing, and timber harvesting are the community's only major economic activities. The seasonal and cyclical nature of commercial fishing results in a generally high unemployment rate, and other employment opportunities are limited.

The community's primary opportunities for economic diversity are development of the timber industry and tourism industry, expansion of the fishing and fish processing industry, and development of a strong service-related business for area developments.

GOAL 8: Provide a stable, diversified, productive economy, increasing employment and income opportunities for the community.

- Objective 8.1: Support the environmentally sound development of the timber industry on USFS and native corporation lands.
- Objective 8.2: Support development of log transfer and storage facilities in environmentally suitable locations; encourage multiple uses and shared facilities.
- Objective 8.3: Encourage expansion of the fishing industry. Investigate the feasibility of stream planting.
- Objective 8.4: Support city and/or native corporation development of investment and employment opportunities, as identified in the Hoonah Economic Study (Homan-McDowell, 1980).
- Objective 8.5: Support development of a tourism industry.
- Objective 8.6: Encourage business development within the city through administrative actions, such as appropriate ordinances.

Objective 8.7: Encourage development of vocational training programs for city residents.

ISSUE 9: HOUSING

Additional housing is needed in Hoonah. Suitable areas will have to be designated and developed for this purpose. In addition, many existing homes are in need of repair.

GOAL 9: Provide housing opportunities for current residents and for new residents consistent with economic and population growth goals.

Objective 9.1: Pursue funding acquisition for the repair and construction of needed housing.

Objective 9.2: Make property available for residential development.

Objective 9.3: Make housing available for transient workers and seasonal workers.

ISSUE 10: POPULATION TRENDS

As area development occurs and economic opportunities expand, the population of Hoonah could increase. Seasonal and permanent workers will move to Hoonah in connection with logging activities. Although economic development is desired, the prospect of growth may be threatening to many residents who enjoy living in a small community with a population that is largely of Tlingit origin. The management of population characteristics and the maintenance of cultural identity are important issues facing Hoonah.

GOAL 10: Through planning decisions and through cooperation and coordination with developers and land owners, control population growth and preserve the cultural identity of the community.

Objective 10.1: Influence population characteristics through economic development decisions.

Objective 10.2: Encourage the integration of new residents into the community to minimize possible conficts.

Objective 10.3: Develop employment training programs for the local population.

Objective 10.4: Encourage the hiring of current residents as employment opportunities develop.

Objective 10.5: Promote cultural awareness.

CHAPTER 8

Analysis

Chapter 8
ANALYSIS

INTRODUCTION

This analysis presents a general assessment of the resources within the planning area and an evaluation of how particular resources or resource areas may be affected by future activities. The first section discusses the City of Hoonah and the socioeconomic considerations of development. The second section discusses development considerations within the entire planning area. A discussion and analysis of coastal habitats is contained in the third section.

The planning area analysis is limited at this time by the lack of existing data about the resource base. Very little research and recordkeeping have occurred within the planning area because of its remoteness and historically low user demand. Changes in the various resources over the past years and the status of the resources today are often not known. When changes do become evident in some areas, it is often because a marked decline has occurred. This analysis is therefore only able to identify potential problems or areas that must be given further consideration.

CITY OF HOONAH

Of primary concern in Hoonah's planning and management decisions will be the effects of economic development and population growth on the city. In its statement of goals (Chapter 7), Hoonah has included the need to provide a stable, diversified, productive economy, increasing employment and income opportunities for the community. The city also states the importance of maintaining the quality of life and the cultural identity of the community. The achievement of these goals will require careful planning for orderly, controlled growth.

The sections below discuss the population and economic growth the city may experience, and identify the demands this growth would make on the city's resources and services. They also analyze the capability of existing resources and services to meet these demands. This information is essential to anticipate necessary planning actions and make knowledgeable decisions.

Population

The timber development planned by the U.S. Forest Service/ Alaska Lumber and Pulp Co., Huna Totem Corporation, and Sealaska Corporation will require an increased labor pool. Some employees will be hired locally, while others will move

into the community from the outside. Most ALP employees (approximately 50) will live in the Tyler Bros. Log Company camp outside the city. However, the children from the camp will probably use the city's schools, and the total camp population (100-150 people) will use the city for various private services. The proximity of this many people will have a definite impact on the city. It is also possible that some of these people will choose to stay in Hoonah after logging is completed, depending on the availability of other employment opportunities.

Estimates of population growth in Hoonah vary. The Hoonah Load Forecasts study developed by the Alaska Power Administration (February 1982) gives high, medium, and low population forecasts based on various assumptions about levels of development by the U.S. Forest Service and native corporations. The increase in population that will move into and around Hoonah in the next 20 years is summarized below. The study recommends that the medium forecasts be assumed for further studies of power demands.

Population Increase	1986*	1991*	1996*	2001*
High	300	400	500	500
Medium	200	250	300	300
Low	100	100	100	100

*Cumulative increase from 1981.

The city's 1981 OEDP update projects a population increase of 500 by year 2000.

Population growth will place increased demands on the city's resources and services (see sections below). It will also have effects on the population characteristics and identity of the city. The Hoonah Economic Study (Homan-McDowell, 1980) notes the significant social and economic impacts of "predominantly white, middle-class people with substantial incomes moving into a predominantly Tlingit community where most people have lower level incomes and depend partly on a subsistence lifestyle to make ends meet." These possible impacts can be minimized through the awareness and cooperation of both old and new residents. In addition, population characteristics can be influenced to some extent. The city can encourage the hiring of current residents where feasible and support employment training programs for the local population. Cultural identity can be maintained and strengthened through education and community activities.

Economic Development

The following discussion considers the impact of development on employment and the economy. It also summarizes the recommendations of two previous economic studies: the Hoonah Economic Study (Homan-McDowell, 1980) and the City of Hoonah's Overall Economic Development Plan.

Employment. Employment opportunities with the U.S. Forest Service are limited for local residents. Most permanent staff positions are already filled by trained personnel. Some limited seasonal employment may be available.

Most ALP positions will be filled by career loggers who will be brought in by the logging contractor. It may be possible for some local people to be hired, depending on their existing skills and training. ALP has no plans at this time to provide on-the-job training.

The most employment opportunities will be provided by Huna-Totem Corporation, which is providing on-the-job training to local residents. Huna Totem has hired about 25 employees so far, and plans to hire a total of about 40 workers this year. Additional local employees (around 20) will probably be required for the log transfer facility.

The Hoonah Economic Study discusses secondary employment that could be stimulated by the increased number of logging industry jobs. It concludes that secondary employment would probably be largely in retail trade and service, such as clerks, mechanics, and restaurant employees. Opportunities may exist for the self-employed in expanding existing businesses such as groceries, drugs, and clothing and in new businesses such as gas stations, auto repair, airport limousine service, and local freight operations. The number of such jobs is difficult to estimate. In larger developed economies, a ratio of one basic to one secondary job is sometimes used. However, a lower ratio of secondary to basic jobs would probably occur in Hoonah, because of the relatively undeveloped retail and service economy, the self-contained nature of the ALP logging camp, the large number of single logging employees who do not support families, and the tendency to buy outside the city. The study estimates that 60-70 new basic jobs would perhaps add 10-25 secondary jobs to Hoonah's economy.

An increase in government employment could also result from increased economic development and population growth. Local government could require additional employees to handle expanded public services and facilities. State government could add one or two positions in social services or law enforcement. The report estimates that 3 to 8 new government

positions (excluding the U.S. Forest Service) could develop from 60-70 new basic jobs.

Economy. The Homan-McDowell study also discusses the impacts of development on Hoonah's economy. Additional employment and salaries would probably have an impact on most retail businesses. Demand would increase to some degree for groceries, drug store items, restaurant food, package liquor, bars, banking services, hotel rooms, gasoline, car and truck services, sporting goods, work clothing, pleasure boat sales and service, freight on the ferry system, taxi service, and air service for both passengers and freight. The amount of demand would depend on several factors: the extent to which salaries are saved and taken outside the city; the extent to which the logging camp is able to supply its own needs; and the selection of goods and services available from Hoonah businesses. City revenues from sales tax would also increase with expanded commercial activity. The report concludes that in the next few years, Hoonah's underdeveloped, semi-subsistence economy will change significantly as a result of the buying power of new residents and the increased income of existing residents gaining employment in logging and related activity.

Recommendations of Hoonah Economic Study. In 1980, the Hoonah Community Action Committee, with funding assistance from the Alaska Division of Economic Enterprise and the BIA, commissioned Homan-McDowell Associates of Juneau to conduct an economic development study of the city. The purpose of the study was to provide information about expected impacts from future economic events, particularly timber development. This information would be useful for community planning and for identifying future business opportunities.

The resulting Hoonah Economic Study examined four basic subject areas: USFS-ALP timber development; community development and planning considerations; bottomfish considerations; and a tourism plan. The report was updated in January 1981 and again in September 1981. Significant findings and recommendations of the report and updates are as follows:

1. A comprehensive community planning program should be commenced as soon as possible if social and economic benefits are to be gained by Hoonah's citizens, and if serious negative impacts from the impending timber development are to be avoided.

2. The issue of reconveyance of Huna Totem lands to the City of Hoonah (ANCSA Section 14(c)3) must be resolved before beneficial community and economic development can occur. This is now resolved.

3. Several investment and employment opportunities can result from timber development, provided land ownership questions are resolved and adequate local government planning occurs to guide development. Opportunities for the city and/or Huna Totem Corporation include:

   - Construction and lease of office space to USFS, other government agencies, and businesses. This has been attempted.

   - Sale or lease of land to USFS and logging contractors for housing, log transfer site, work center, logging camp locations.

   - Land development (possibly as joint ventures with developers or construction firms):

     - Finance construction of log transfer site

     - Sell logs cut from easements for roads, camps, log transfer site

     - Develop housing for sale or rental to USFS and logging personnel

     - Develop camp facilities and services for logging contractor

     - Construct USFS work center buildings

   - Hotel business opportunities:

     - Rent rooms to USFS to use as office space (this is currently being done)

     - Provide rooms and meals to USFS and logging personnel before permanent facilities are established (being done)

4. Tourism is a viable industry in Hoonah and should be pursued. The report presents a tourism development program as a guide for future local effort.

5. Adequate waste disposal, electrical power, and water systems are critical to community development and must be planned for.

6. The initial report concluded that there was limited potential for bottomfish development in Hoonah. The report recommended that the community gain more information about the possibilities. Some

investigations were made. Since that time, however, the State of Alaska has dropped all funding for bottomfish development and has stopped promoting it as a feasible form of economic development.

Recommendations of Overall Economic Development Plan (OEDP). Hoonah's Overall Economic Development Plan (OEDP) identifies economic and social needs of the city, sets development goals and objectives, and establishes a work plan that includes possible funding sources and implementation schedules. The 1979 OEDP states long-term goals that reflect the future vision the community has of itself over the next 10 years or longer:

> The various leaders and entities in Hoonah who participate in planning for Hoonah's development consider their primary goals to be reducing unemployment and underemployment and unsafe living conditions by making Hoonah more attractive to new industry. Although new industry means a larger population, this is not incompatible with the people's future self-vision of Hoonah. Projected population figures (city estimate) are 1,500 for year "2000" (present population is 677 1980 census, 757 actual city census, 1,057 city and service areas). New industries most likely to come in, based on Hoonah's natural resources, are fishing, timber, and tourism. The community places a strong emphasis on environmental controls so the industry will have little effect on the natural beauty and fishing resources. Tourism is expected to center around Hoonah's traditional Tlingit culture and the fishing, hunting, and surrounding scenery. In sum, Hoonah is a progressive community using progress as a means to improve living conditions but with tight control through environmental controls and strong planning involving most entities in the community.

In 1980 and in 1981, the 1979 OEDP was updated to reflect new activities and establish current objectives. In preparing the updates, the Hoonah Community Action Committee reviewed the findings and recommendations of the Hoonah Economic Study. The committee also obtained information from a 2-day symposium it cosponsored with the Tlingit and Haida Central Council in 1979. Called "A Village Model for Development," the symposium included representatives from local, state, and Federal organizations and agencies. Participants discussed local plans and needs, industry development projections, Hoonah's involvement in the state planning process, possible funding sources, and the degree to which the community is prepared to deal with growth. The symposium was a valuable tool for exchanging information and for helping plan and coordinate Hoonah's economic development.

The following main objectives were established in the 1981 OEDP update:

- Improve basic public services[1]

  1. Close existing landfill and establish new site. (This is presently being pursued.)

  2. Expand and repair sewer and water systems. (A new water source is being designed.)

  3. Establish alternative source of energy.

  4. Expand airport.

  5. Repair and pave roads.

  6. Develop comprehensive plan (presently being done).

  7. Develop new housing.

- Improve community facilities[1]

  1. Renovate community building.

  2. Expand health clinic.

  3. Establish youth center.

  4. Add activity center and swimming pool to school facilities.

  5. Develop camper park.

  6. Build new police station and jail (being done now).

- Promote Hoonah's tourist industry

The goals and objectives identified in the Overall Economic Development Plan were reviewed by the Planning and Zoning Commission in formulating the issues, goals, and objectives for this coastal management plan (Chapter 7).

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[1]Numbered in order of priority, with emphasis on first three.

Future Land Use

Land development in Hoonah has historically occurred in the lower elevations of the city, and primarily in what is now the central part of town. The most developed portion of the city lies just north of City Hall. The majority of the land within the city limits has not been fully developed. Large vacant areas exist in the north part of town and in the east portions (against the hillside), and many vacant lots are scattered throughout.

Future land uses will require proper planning for these reasons:

1. To provide enough land for future economic growth (industrial and commercial uses)

2. To provide appropriate lands for expected future needs (waterfront lands for barge-loading facilities, etc.)

3. To avoid future conflicting land uses (a rock crusher next to a residential area)

4. To design and budget efficiently for sewer and water services

5. To develop safe and efficient transportation systems (keep heavy truck haul roads away from playground areas)

6. To provide commercial services where they are needed (centrally located grocery/shopping areas)

7. To provide for open space and recreational opportunity including public access to local waterfront areas readily accessible to the local citizens.

Future land use planning is well underway through the Planning and Zoning Commission. There are special considerations required because of title restrictions, physical limitations due to slopes, and the prospects of future growth. The city is attempting to anticipate the amount of growth that is likely to occur in the city and vicinity, and to develop the housing and services that will be needed to serve that growth.

The future land use map (Figure 22) shows the general layout for the city.

Industrial areas must be provided to support the needs of the rapidly expanding timber industry, and other industries (related and unrelated) that need to locate in Hoonah. The

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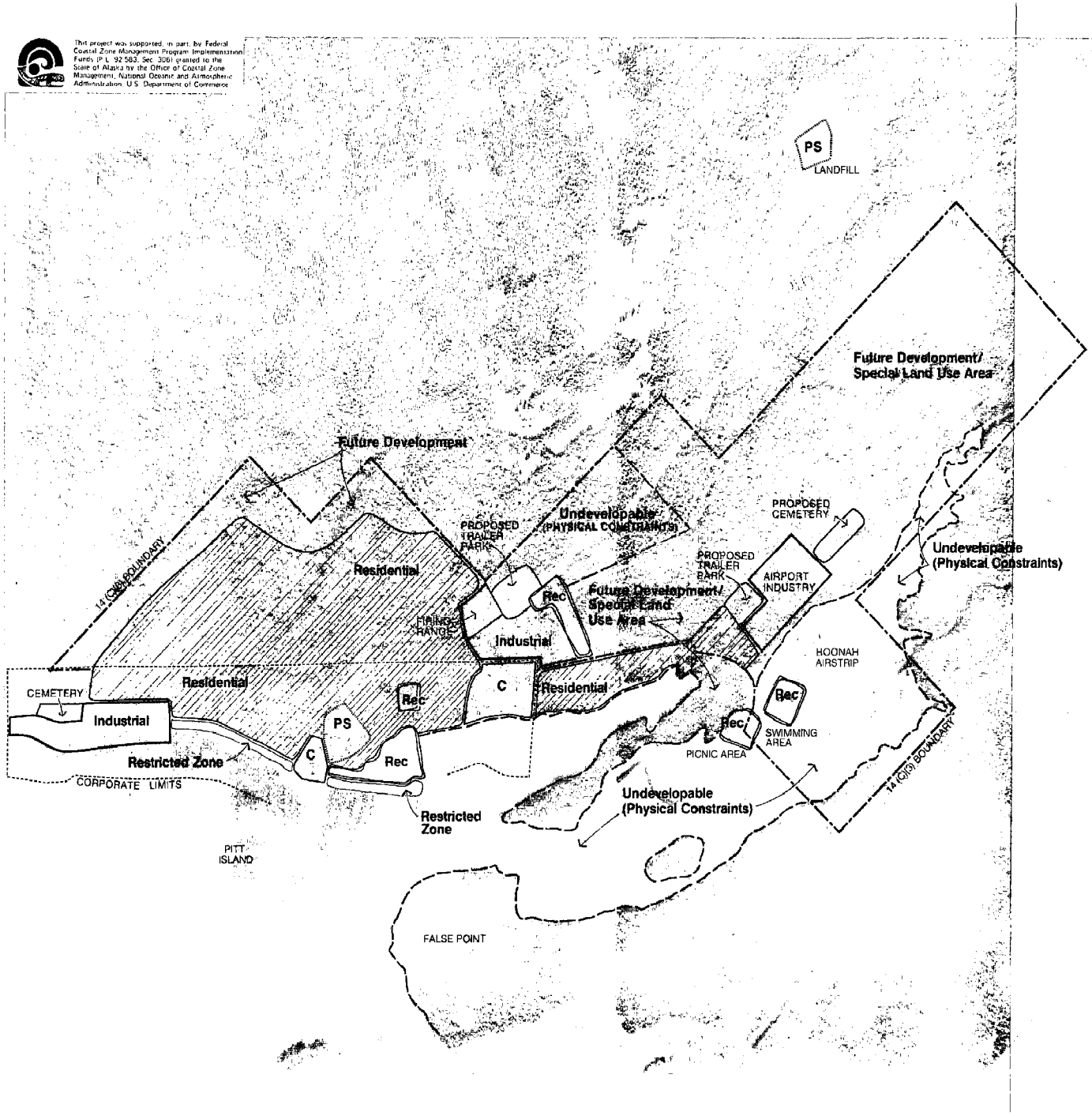

FIGURE 22

Future Land Use

CITY OF HOONAH & VICINITY

- UNDEVELOPABLE (Physical Constraints)
- RESIDENTIAL
- C COMMERCIAL
- INDUSTRIAL
- Rec RECREATION
- PS PUBLIC SERVICE
- RESTRICTED ZONE
- FUTURE DEVELOPMENT/ SPECIAL LAND USE AREA

SOURCE: Planning and Zoning Commission, City of Hoonah.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 1,500

0 500 1,000 1,500 FEET

NORTH

BASE MAP SOURCE: CH2M HILL, 1982 FLIGHT.

CH2M HILL 1983

industries should be separated from residential areas because of noise, traffic, and other activities. The north part of town is primarily vacant at this time, except for ferry and city docks and a few houses. This area would be good for water-dependent or water-related industrial activities. Timber Pacific signed a lease with the city for use of the city dock facilities for log transshipment activities. This area provides the only adequate water depths for good shipping in the city. The land base is limited, however, because of steep slopes. Industrial development would require filling, which would require state and Federal leases and permits. Marine biological resources appear to be limited in this area. The existing dock facilities and a location removed from the populated areas of town provide this site with several basic favorable elements.

Another industrial location is just south of the existing city limits, where equipment storage has occurred in the past. This location does not provide water access, but does provide good land and air transportation access. Again, it can be sufficiently distant from the residential and "downtown" areas of the city, and away from playgrounds.

Commercial and light-industrial uses can be mixed when the commercial uses are marine related (such as retail boat shops, fishing gear stores, etc.). The light-industrial uses would include boat repair facilities, fishing gear manufacturing, fish receiving and cold storage, and other similar uses. Two areas could be used for these purposes. One is the waterward strip of land west of Cannery Road from Kanes Dock to north of the seaplane float. This type of use already occurs in this area. The other location is the west waterfront portion of the harbor fill. These areas are immediately adjacent to the facilities and uses they would be serving, providing efficient access from the water.

Commercial uses will increase as Hoonah is used more and more as a service and goods center for timber-related activities. The city should maintain a business core area much like it has today, with banking, grocery, and other services located close to each other. This "central business district" provides efficient access and complementary services. This is especially important for non-residents who arrive by boat, without a means to travel around town on a variety of errands. Another commercial area could occur where the Huna Totem Lodge (a commercial activity) is located. A new office building was built across the street from the lodge last fall. Other offices and lodging/restaurants could also be located in this area to serve the future growth south of the city.

Recreation uses have historically occurred throughout the city and Port Frederick. In-city recreation will become more limited as lands are built up, and appropriate sites

must be set aside now for future uses. A large recreation area has been planned on the harbor fill, which is already used regularly as a track and playfield. It would provide good access from most areas, and is one of the few flat areas available to the city. Other city properties may also be suited for recreational uses. School facilities will continue to provide a primary recreation opportunity for residents.

Public services and schools could be located where the existing facilities are. These facilities are centrally located, and the city owns a large block of land that could accommodate facility expansions.

Residential uses would occur throughout the rest of the city, and could expand south toward the airport. This is similar to the way the city has developed to date. Aesthetically, this would maximize views both waterward from the land and landward from the water.

Building constraints are primarily posed by steep slopes. Topography rises significantly from the west (Port Frederick) to the east. Local soils limitations occur where blue-clays or patches of muskeg occur, but these areas are small and only require proper design considerations. Erosion areas and flood plains are minimal and pose few limitations to building. Development is more available south of the city than north, because of the flatter topography. Development to the east is severely limited because of slopes. The far north part of the city, at Cannery Point, provides flat areas, but has poor soils and is a long distance from town. Expansion of sewer, water, and other services would be very difficult.

Major energy facilities are not being planned for the Hoonah area. A cogeneration facility, to be used in conjunction with timber harvest wood wastes, is being considered by Huna Totem. If built, this facility may be constructed at or near Long Island, since the log transfer facility and sort yard would provide considerable debris and waste wood. An energy transmission corridor is being considered by APA to come into Hoonah from the airport area. Actual alignments have not been mapped. (See Energy section of this chapter.)

Soils and Geology

Soils and geology do not present significant limitations to future activities in Hoonah. The geology is generally stable and consistent, and representative of Chichagof and Baranof Islands. Soils have few limitations, primarily the blue-clay deposits and the peats (muskeg) (see Figure 10). These soils are not extensive in the Hoonah area, and are usually limited to small, scattered deposits. Building can occur in most

locations, although certain design considerations may be required.

Topography is the greatest constraint, in that it will limit future development in the city to certain areas. However, adjacent lands south of the city will provide several tens of acres for development as needs arise.

Housing

Housing is a critical issue in Hoonah. The vacancy rate is almost zero, and the current housing stock is inadequate to meet any population increase. Some of the existing housing is in need of repair and upgrading.

The Planning and Zoning Commission is presently studying funding resources for housing repairs and construction. New housing will depend on the availability of water and sewer service. One possibility is to replace dilapidated housing with new homes that can be served by existing water and sewer lines. The city can pursue funding from HUD, the State of Alaska, and the Tlingit and Haida Central Council. It can also provide economic and facilities incentives for developers; one example would be providing below-market lot costs in return for guaranteed numbers of units at a predetermined cost. The reconveyance lands provide a good base for future residential development.

Health and Social Services

The city's health clinic could provide the services it now offers to an additional population of 200-300, with its existing staff and equipment (Beaver, 1982). However, the city would like to see an expansion of these services, particularly to provide ocular and dental care.

An increased population would probably require the expansion of social services such as mental health care and alcohol treatment.

Education

The Hoonah school system has an enrollment of about 250 students. An additional 100 to 150 students could be accommodated by the existing facilities.

It is probable that the children from the ALP logging camp (perhaps 25-35) will use the Hoonah school system, as will the children of other logging employees moving into the city. This increased enrollment would benefit the school by providing better use of existing facilities. An increased population in the community would also supply additional tax support to the school system.

Because much of the new employment anticipated in Hoonah is related to the timber industry, appropriate vocational training would help prepare Hoonah students for potential job opportunities. No training program now exists in the school system.

Fire and Police Protection

The current police staff provides adequate public safety protection for the city's current population. An increased city population will require additional police protection. Expansion of the road system in the Hoonah area and establishment of the ALP logging camp will also bring increased activity into the city. Hoonah recently built a new police station; this facility should be adequate for the anticipated growth of the city.

New development in the city will require increased firefighting capabilities. The new water source project will help a great deal in upgrading fire protection.

Energy

The current high rates of diesel-generated electricity in Hoonah impose a financial burden on residents and commercial users. Cheaper electrical power would greatly help low-income households and could provide added incentive to business and industrial development within the city. The Hoonah OEDP lists the establishment of an alternative energy source as a high priority.

According to the 1982 APA load forecast study, conservation and disconnections in all user sectors (residential, commercial, and industrial) have resulted in decreased electrical use over the last few years. The system currently operates at only 15 percent plant factor, while it could easily operate at 40 to 50 percent. The study concludes that while cost was the main factor in reduced usage, under-utilization of the system in fact increases rates for all customers. If there were a higher level of generation, fixed costs would be spread among more kilowatt hours, and the average rate per kilowatt hour would be reduced.

In 1981, the 36¢/kWh rate included about 12¢/kWh operation costs (fuel, supplies, maintenance) and 24¢/kWh fixed costs (investment, depreciation, operators, overhead). Twice as much energy use would have caused an overall rate of roughly 24¢/kWh, and triple energy use would have resulted in 20¢/kWh.

If all increased energy use were by present customers alone, their total bills would not be reduced because of their increased consumption. However, reconnection of disconnected services and connection of new services would provide a

larger base over which to spread costs. The analysis therefore shows that there is opportunity for rate reduction by increased energy use. Conversely, reduced energy use results in increased rates.

According to the 1982 APA study, four major commercial and industrial consumers in Hoonah are considering discontinuing utility service and installing individual generators, again because of the cost. Conversion to individual generation would require either complete disconnect from THREA or a heavy monthly standby fee, based on payback over a finite period of time. Executives of these businesses and community leaders estimate that private generation costs would be competitive with current THREA rates, although neither private nor utility rates would encourage expanded operation. The study points out, however, that experiences in other locations have shown that individual generation is more expensive than utility generation when all costs are fully accounted.

The APA feasibility and forecast studies conclude that a transmission line from the Snettisham Project in the Juneau area to the Hoonah area and Noranda mine is technically and economically feasible as an alternative to diesel generation. Feasibility is, however, dependent on the Noranda mine load. The recommended Hoonah area load forecast assumes moderate population growth in Hoonah (an increase of 200 people by 1986, 250 by 1991, and 300 by 1996); timber industry developments by ALP, Huna Totem, and Sealaska; and the interconnection of Mt. Bether and some of the timber camps. Project power is assumed to be available for transmission in 1986, with a project life of 25 years.

Retail rates for power from the transmission line are projected to be 5¢/kWh less than diesel-generated power over the project life. Most of the predicted savings are as a result of an assumed future diesel fuel cost escalation. Savings will be only about 1.5¢/kWh in 1986 and about 3¢/kWh in 1990. The forecast study points out that while a transmission project would be economically justified, it would not result in a large power rate reduction for Hoonah customers. The study also states that while power rates will have some bearing on the level of major activity in the Hoonah area, they will not be a sole stimulus or deterrent.

In the absence of the transmission line project, Hoonah's existing generation system has sufficient capacity to meet future needs in the city. Diesel generation is planned as an alternative to the transmission line for the Noranda mine and for the logging operations.

Several studies have been made during the last decade to locate other power supply alternatives for Hoonah. These

have included Hoonah Wood Generation Feasibility Study (Alaska Power Authority and U.S. Forest Service, 1980); Preliminary Appraisal Report--Hydroelectric Potential for Ten Villages (Alaska Power Authority, prepared by Robert W. Retherford Associates, 1977); and Gartina Creek Project, a Reconnaissance Report (Alaska Power Authority, prepared by Harza Engineering Company, 1979). The Corps of Engineers is presently studying hydro potential in Tenakee Springs. This may provide the service Hoonah is seeking.

Based on the published studies, the 1981 APA report concludes that the Snettisham transmission line is the only likely alternative to diesel generation. The two most appealing hydroelectric sites, Gartina Creek and Game Creek, have relatively poor quality, small capacity, and high cost; Game Creek also has serious environmental problems. The short-term possibility of wood generation (using forest byproducts) is limited by uncertain fuel type and availability, uncertain economics, and the lack of applicable small-scale technology. The report does suggest, however, that additional analysis of wood generation as a long-term possibility could be included in further transmission line feasibility studies. By that time, the type, quantity, quality, and market value of wood products or byproducts available from timber operation would be better known, and a smaller scale application could be specifically studied. Huna Totem Corporation is also considering a cogeneration facility to be used in conjunction with timber harvest wood wastes, located at or near Long Island.

Other "state of art" technologies such as wind, tide, and solar have not been specifically investigated. Based on regional characteristics and knowledge of the local area, these technologies are impractical because of lack of resources and near-term technology for reliable economic generation. The 1981 OEDP recommends the exploration of geothermal resources as a possible alternative energy source.

Water, Sewer, and Solid Waste

Water. The city is now developing a new water source to resolve the problems of both quality and quantity that the city has historically experienced. System upgrades will occur as well. This should provide good water service to all citizens.

Sewer. The sewage collection system will also have to be extended to serve new development. The city is currently investigating the placement of a new line along part of Hemlock Street to serve expected development. According to the city's public works supervisor, the treatment plant has the capacity to serve a population of up to 2,000. However, excessive infiltration and inflow, especially in the spring,

overloads the system. The city also believes that water waste (unnecessarily running water, etc.) by both residential and commercial users contributes to this overload. The upgrading and repair of the wastewater collection system will be necessary to eliminate excessive infiltration and prevent operation problems with the treatment system.

Solid Waste. The city received conveyance of 6 acres of land from Huna Totem Corporation for location of the new landfill site. The new site is being developed and the old site will be closed off soon. The new site will provide good service to the city for many years.

Transportation

Land. Development within the City of Hoonah will be closely tied to the development of its street system. Additional streets will be necessary to provide access to improved areas that are not now on the street network. Access would also be improved by resurfacing existing streets, making them more passable, safer, and more easily maintained.

The construction of logging roads in the Hoonah area will connect the city to logging camps and possibly to the Mt. Bether community if it constructs a spur to the road system. This will bring more traffic into the city. The road system could also encourage more Hoonah residents to purchase vehicles. An increase in population, new development, and expansion of the city street system will further increase traffic in and around the city. This could result in traffic-related problems such as safety, congestion, and parking availability. All of these factors will have an effect on the lifestyle of Hoonah residents and will have to be considered in planning for development in the city.

The construction of logging roads will provide increased access to hunting and recreational opportunities in the area. At the same time, these roads will experience heavy industrial-type traffic at times, particularly in the summer when logging trucks and heavy equipment work long hours. Depending on how close logging roads are to the community, residents could experience some noise, dust, visual impacts, and possible safety hazards.

Air. The Ten Year Plan 1983-1992 published by the Federal Aviation Administration in 1981 recommends a number of improvements for the Hoonah Airport by 1992: expanded runway and safety area; medium intensity runway edge lights and taxi lights; apron lights; visual approach slope indicator (VASI); runway and identification lights; a terminal building; crash/fire/rescue facilities; beacon; lighted wind cone; clearing; and power. However, the Alaska Department

of Transportation's plans through 1988 include only those improvements discussed in the transportation section in Chapter 2. DOT's plan states that growth in usage during the forecast period (through year 2000) is expected to be minimal. It is possible, however, that a significant growth in population could require additional flight service to and from the city. This increase in flight frequency would probably not in itself necessitate additional facilities.

Marine. With the construction of the new harbor, the city has adequate moorage space and protection for resident and transient fishing vessels.

The Department of Transportation requested legislative funding in 1982 for extension of water and sewer lines to the ferry building. Although funding was not received, both DOT and the city consider this an important need that should be pursued. DOT also recommends that improvements be made to increase passenger comfort and expand services on the ferry service vessels serving Hoonah and other small communities. This could promote more use of the ferry system and consequently more cost-effective and efficient service to the communities.

Recreation and Tourism

Recreation within the City of Hoonah has historically been informal. Open land, particularly along the waterfront, is used extensively. The city has only two developed recreation areas: the school ball fields and a small park next to the Presbyterian Church.

As the city develops, it will be increasingly important to maintain recreational opportunities for the residents. Open space will become more scarce, and will experience increased use and possible degradation. Future development plans will need to provide for parks and open space. Maintaining access to recreation areas that have historically been enjoyed by residents of the community will also be an important consideration.

Hoonah residents have historically used many sites in the planning area for recreation. Many of these sites are traditional and customary camps, picnic spots, and beachcombing areas. These areas should not necessarily be developed, since they could lose their character and possibly their attraction to the local residents. Most of these sites are under the ownership of the native corporations or the U.S. Forest Service, and as such are not under the direct control of the resident users. Most or all of these sites could be easily protected for future use with a minimal cost to the landowners. However, recreational and scenic amenities may

be altered by the future development (such as timber harvesting) of adjacent or nearby areas.

Tourism has not been significant in the Hoonah area because of the area's remoteness and the consequent low user demand. The city would like to pursue the development of the tourist industry, and some studies and actions have been undertaken. The development of a logging road system in the area will increase recreation access. Again, however, timber harvesting may diminish visual quality and recreational appeal. It will also be important to consider possible conflicts between the development of tourist opportunities and the protection of traditional and customary use areas.

PLANNING AREA

Earthquake Hazard

The Hoonah area is included in risk zone 4 on a suggested preliminary seismic risk map of Alaska (Yehle, 1978). The magnitude of the largest probable earthquake in this zone is equal to or greater than 6, and possible maximum damage to structures is major to very severe. Because accurate data and evaluation techniques are limited, the determination of earthquake probability can be regarded as a generalization only.

Inferred effects from possible major earthquakes that could occur in the future include ground shaking; liquefaction in cohesionless materials; reaction of sensitive and quick clays; earthquake-induced slides and slumps; and tsunamis, seiches, and other abnormal water waves.

The variable most responsible for the degree of shaking at any epicentral distance is the type of ground. Generally, shaking is considerably greater in poorly consolidated deposits than in hard bedrock, particularly if the deposits are water saturated. Severe shaking of alluvial deposits and manmade fill, with resultant heavy damage, is well documented from the records of many past earthquakes.

Liquefaction of sand and silt is a fairly common effect of large earthquakes. When part of a sloping soil mass liquefies, the entire mass can undergo catastrophic failure and can flow as a high-density liquid. In southeastern Alaska, deltaic deposits probably would be most susceptible to liquefaction.

Sensitive and quick clays, which lose a considerable part of their strength when shaken, commonly fail during an earthquake and become rapid earthflows. Extensive studies were made of the sensitivity of the Bootlegger Cove Clay at Anchorage because of the marked loss of shear strength and

dramatic failures of the deposits during the Alaska earthquake in 1964. If similar sensitive clays are present in some places in southeastern Alaska, they most likely are in some of the emergent fine-grained marine deposits; supporting data to inform their presence, however, are largely lacking.

Earthquake-induced sliding on land generally is confined to steep slopes, but may take place in fine-grained deposits on moderately to nearly flat surfaces if the deposits are subject to liquefaction. Earthquake records are replete with accounts of sliding of surficial deposits during moderate to large earthquakes. Most or all of the general factors that favor landsliding are present in southeastern Alaska.

Tsunamis, seiches, and other abnormal water waves associated with large earthquakes commonly cause vast property damage and heavy loss of life. Tsunami effects can be devastating to coastal areas as far as many thousands of miles from their generation source. The tsunami waves generated by the Alaska earthquake of 1964 struck with devastating force along a broad stretch of the Alaska coast and produced heavy property damage and loss of life as far away as Crescent City, California. At Juneau, waves reached a height of 7.5 feet above normal. Seiche effects generally are confined to inland bodies of water or to relatively enclosed coastal bodies of water. Seiche waves generated by the 1964 earthquake reached runup heights of 20-30 feet on some lakes in Alaska, and water level fluctuations were recorded on streams, reservoirs, lakes, and swimming pools in states bordering the Gulf of Mexico. Abnormal waves generated by submarine sliding or by subaerial sliding into water generally produce only local effects, but may be highly devastating. Slide-generated waves probably would have a higher destructive potential in southeastern Alaska than either tsunami waves or seiche waves because of their possibly higher local runups and because they can hit the shores almost without warning during or immediately after an earthquake.

There is no historical record of any of the effects discussed above occurring within the planning area. However, theoretical travel-time charts for tsunamis have been made for 17 towns, including Hoonah, in southeastern Alaska as part of the Alaska Regional Tsunami Warning System. The system is part of the Pacific Ocean Seismic Sea Wave Warning System that detects and locates major earthquakes in the Pacific region and issues appropriate warnings to the coastal population when tsunami waves might constitute a hazard.

Geothermal Resources

The report prepared for the U.S. Department of Energy (Markle, 1979) give general recommendations for possible uses of the reported hotsprings in the planning area. For the Neka site,

the report recommends that exploration be pursued to determine the location and extent of the resource. Recreational use or some use that would tie into forest development could be possible.

Exploration to determine the extent of the Mud Bay resource is also recommended. Use as a primitive recreational facility could be possible.

The hotsprings at Tenakee Inlet could have potential as a recreation facility. The report states that it would be easy to clear a road along the creek from the head of the inlet and to pipe the water a few hundred yards downstream to a suitable place for a bathhouse and other buildings. Another possible use of the springs would be for space heating and drying for a small-scale wood drying facility if timber were to be harvested.

Neither the U.S. Forest Service nor Sealaska Corporation has any current plans for development of these resources.

Mining and Minerals Processing

There are no known plans at this time for significant mining activities or minerals processing within the planning area. Only two mining claims currently exist throughout the planning area (see Figure 8). There is no indication that these mines will experience commercial development in the near future.

Sealaska Corporation is currently conducting resource inventories for its holdings, including the investigation of subsurface minerals. The results of this investigation are not yet available.

If minerals or fossil fuel deposits of a commercial value were to be discovered, their development could affect the surrounding area. Not all mining activities will necessarily cause long-term or significant impacts to the local environment. However, it has been proven that all mining activities, especially in areas of steep topography and high annual rainfall, must be properly planned and engineered to protect the other local resources. State and Federal mining regulations are often adequate to protect the surrounding environment. However, certain areas would require very special design and control features to protect locally sensitive environmental features.

Fisheries

The traditional and primary source of income in Hoonah has been the fishing and fish processing industry. Recently, however, the seine fisheries have been seriously depleted.

Some areas have been closed to local fishermen, and a shortened season has decreased the income derived from this source.

The Hoonah Economic Study recommended that the city obtain more information about possible development of bottomfish resources. Some investigations were made. Since that time, however, the State of Alaska has discontinued funding for bottomfish development and has stopped promoting it as a feasible form of economic development.

One of the objectives included in the city's 1980 OEDP is the investigation and implementation of stream planting. No specific plans for any kind of fisheries enhancement exist at this time, however. The city may want to consider pursuing fisheries enhancement in the future.

The city supports the continuation of the Excursion Inlet facilities in the area because of the employment and income opportunities they provide.

Timber Harvesting

Timber harvesting will occur throughout the planning area, as intensive forest management practices are implemented by Sealaska, Huna Totem, and the U.S. Forest Service. Forest practices under state and Federal guidelines generally are protective of the soils, streams, and other resources of the environment. However, past intensive harvesting activities within sensitive watersheds in southeast Alaska have shown that sedimentation and water quality impacts can cause long-term impacts to fish and wildlife resources.

Most soils in southeast Alaska are relatively resistant to surface erosion. However, surface erosion is increased when runoff is concentrated or mineral soil is exposed by road construction and timber harvest. Timely revegetation of cut and fill slopes and other areas of exposed mineral soil can aid in reducing sediment production resulting from logging and road construction.

The planning area is faced with the potential conflicts between timber harvesting and resource protection. The rich waters and habitats are essential to the economy and the lifestyle of the residents of Hoonah. At the same time, all the major landowners have the responsibility to use their timber resources for the best use. The two considerations must work hand in hand.

Timber activities will require extensive road construction, which will provide easy human access to previously inaccessible areas. Deer populations may be seriously threatened, particularly in the Icy Strait lowlands. (See Potential AMSA discussion concerning deer habitat, below.) Roads

crossing salmon streams pose a continual threat to fish, again because of easy access. Management planning must begin now for these resources.

COASTAL HABITATS[2]

1. OFFSHORE AREAS

Offshore areas include marine waters and submerged lands seaward of the shoreline out to the continental shelf. Because the 3-mile limit has no direct bearing on fish and wildlife populations or their marine habitat, it is much easier to think of the continental shelf as a practical seaward boundary of offshore habitat.

Essential Habitat Elements

Within the continental shelf boundary occur nearly all of the state's fishery resources. The continental shelf adjacent to Baranof and Chichagof Islands is relatively narrow yet it is integral to the marine ecosystem and productivity of inside waters. The northward flowing Alaska Current influences circulation by producing an apparent northward surface transport through the inside waters of southeast Alaska. Waters of the continental shelf replenish inside waters and nutrients and plankton. This process enhances biological productivity in the numerous bays, inlets, fjords, and straits.

Many species occurring seasonally in nearshore areas have life histories which are dependent upon the quality of offshore habitats. Halibut, for example, spawn on the continental slope, their eggs and larvae drifting northward with the Alaska Current until they mature and settle on the bottom as juveniles. The strength of any one year's production of halibut is therefore dependent upon the quality of spawning and rearing habitat on the continental shelf. Other bottomfish have similar life history requirements. Adult phases of salmon and herring are dependent upon offshore areas for feeding and migration. Both of these species are concentrated in areas of high plankton production.

Upwelling, a physical process associated with the rising of deep, nutrient-rich waters to the surface, promotes areas of high primary productivity (plant plankton production) along the continental shelf. This in turn stimulates animal life successively up the food chain. Areas of upwelling are often characterized by concentrations of fish, marine birds, and marine mammals.

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[2]Source: Alaska Department of Fish and Game.

The presence of clean, relatively unpolluted coastal waters if of key importance to maintaining the carrying capacity of offshore habitats. At the present time, the waters of the continental shelf and Chatham Strait adjacent to Baranof and Chichagof Islands are in nearly pristine condition.

Lastly, offshore benthic (bottom) habitats are essential for supporting nearly all forms of marine life. The myriad forms of benthic organisms including snails, clams, burrowing worms, brittle stars, crustaceans, etc., as well as microscopic algae and bacteria, are ecologically intertwined with species inhabiting the ocean waters.

Past and Present Impacts

Little quantitative information is available on the past and present condition of offshore habitats in the Hoonah area. Based upon qualitative observations, it can be assumed that offshore habitat adjacent to Chichagof Island is at or near optimum condition. This assumes that the habitat remains largely in a pristine condition with minimal adverse impacts from either natural or manmade sources. Water quality is high and the conditions for production of marine life are very good.

Some localized disturbances to benthic habitats may have resulted from bottom trawling by fishing vessels. However, many of the bottoms are rocky and therefore trawling has been limited.

Small oil spills are associated with routine marine traffic and fishing operations. These oil spills, while presently causing no widespread ecological problems, can affect sensitive species in the area of the spill, particularly marine birds, sea otters, fish and crustacean larvae, etc. Oil spills should continue to be reported (Call 211 and ask for Zenith 9300) and every effort made to minimize oil in the marine environment. Lost nets, plastic bands, and other floating garbage present a hazard to marine life particularly sea birds and marine mammals. It is difficult to estimate the number of sea birds and marine mammals that have become entangled in manmade debris floating on the sea surface. Efforts should continue to minimize "phantom" fishing gear and the deliberate ocean dumping of floating garbage and debris.

Future Impacts

The future outlook for maintaining the carrying capacity of offshore habitats will depend upon several important factors. These are: 1) state water quality standards are upheld; 2) there are no major oil or other hazardous substance spills; and 3) reasonable precautions are taken against adverse im-

pacts to aquatic and benthic habitats from fishing operations.

Accidental spills of oil or other hazardous materials are possible at any time in the future. The increased marine transportation of crude oil, refined products, and hazardous substances increases the risk of an accidental spill. The biological impacts from hazardous material spills including oil are highly variable and difficult to predict. The fate and effects of spilled materials are left almost entirely to natural processes, with unpredictable consequences to the biological resources. Enforcement of rigorous safety and cleanup technology and further research into the biological and physical effects of oil in the marine environment are all essential towards minimizing future risks of oil and hazardous substance pollution.

If bottom fishing operations, particularly those involving bottom trawling, increase as predicted on the continental shelf, scientific information should be acquired in order to assess the impacts on benthic habitats from fishing activities.

2. ESTUARIES

The term "estuary" has been defined as "a semi-enclosed, coastal body of water which has a free connection with the sea and within which sea water is measurably diluted with freshwater derived from land drainage." In Southeast Alaska, estuaries typically occur in bays, inlets, coves, fjords; wherever a stream or river empties into the sea. Together, estuaries form the aquatic transition zone between the freshwater and marine environments. The seaward boundary of estuaries can be approximately drawn across the headlands forming the mouth of a bay, cove, etc. However, estuarine processes such as circulation, temperature, and density fluctuate both landward and seaward, requiring measurement on a case by case basis where more detailed information is needed.

Essential Habitat Elements

All estuaries in southeast Alaska can be considered positive estuaries, meaning that freshwater inflow derived from precipitation and stream discharge exceeds the outflow lost to evaporation. It is precisely the flow of water from the land to the sea that determines the nature of an estuary including its circulation, salinity, temperature, turbidity, and biological productivity. Shoreline morphology, wind action, and bottom configuration are also important.

Biologically, estuaries are essential for the production of marine resources. The waters of southeast Alaska comprise one of the largest and most productive stream and estuary

systems in the world. All anadromous fish pass through estuaries on the return to their natal streams. Nearly all pink and chum salmon rear in estuaries during their first year. Herring and smelt are dependent upon estuaries for spawning and rearing as are the birds, fish and mammals which prey upon them. Bottomfish such as pollock and Pacific Ocean perch utilize estuaries as rearing areas. Estuaries provide habitat for clams, crab, shrimp, and other important shellfish species. The plankton present in estuaries is composed of a large proportion of fish and shellfish larvae indicating that they are vital nursery areas. The marine plant communities growing along the shores and in bayheads export detrital food energy to offshore areas, enhancing their overall productivity.

All estuaries are not equally "productive." In general, those with gently sloping bottoms or having extensive shallows are more sensitive to disturbance and may be "more productive" than those with steep sides and great depth. The best example of a shallow, sensitive estuary would be Neka Bay.

Past and Present Impacts

Estuaries occur in natural bays, inlets, and coves; sites which are often favorable locations for human settlement and development. The past and present impacts to estuarine habitats have been mostly localized and variable considering the entirety of available estuarine habitat on Chichagof Island. Accurate measurements of habitat carrying capacity and sensitivity are lacking, making evaluation of past, present, and future impacts difficult to quantify. Basic information is needed on many aspects of estuarine processes, sensitivities, and biological productivity, particularly where development is planned. Known information indicates the high value of southeast Alaska estuaries to the coastal ecosystem; hence their value to the economic future of the region and quality of life. The potential for losses of important estuarine habitats is significant, given the present and possible future developments on north Chichagof Island.

Current logging practices often necessitate the use of estuaries for log storage and rafting. In addition, logging practices which affect stream characteristics will likewise affect the characteristics of the adjacent estuary. The impacts from logging practices on estuaries in southeast Alaska have recently been reviewed. A summary of these impacts includes:

1. Hydrographic changes

2. Crushing, compaction, and battering of sediments and shorelines

3. Input of bark and other debris

4. Siltation

5. Increase in turbidity and decrease in light penetration

6. Dissolved oxygen reduction

7. Input of leachates

Most of the impacts to estuarine habitats from logging are associated with changes in stream flow, water quality, and the physical effects of log dumping, storage, and rafting on intertidal and subtidal communities. Log dumping and the attendant sloughing of bark into estuarine waters generally has a deleterious effect on marine algae and their habitat. Drastic reductions of benthic infauna (e.g., clams, worms, etc.) were found at an intertidal log storage area in Rodman Bay. Other bays in the region have a history of past and present use as log storage and rafting areas.

Wildlife usage of estuaries may also be affected. The physical disturbances associated with noise, equipment, people, etc., usually modifies the use which deer, bear, mink, waterfowl, and shorebirds make of the surrounding habitat. Some bears are shot as "nuisances"; others change their habits to avoid the area. In late spring, deer make extensive use of estuarine grass flats for feeding. Logging activities may disrupt or modify this behavior. Waterfowl and other birds may also change their habits or migration patterns due to disturbances taking place in estuaries.

The type, intensity, and duration of impacts from logging vary from situation to situation. The interdisciplinary team (IDT) process currently in use within the Tongass National Forest makes it possible for each proposed timber sale, rafting area, and log dump site to be evaluated on a site specific basis by trained resource specialists (i.e., marine biologist, hydrologist, wildlife biologist, fisheries biologist, soils scientist, silviculturalist, engineer, etc.). While this method is not a panacea, it is presently the most effective means of minimizing environmental impacts from logging on aquatic habitats.

3. WETLANDS AND TIDEFLATS

Wetlands and tideflats include those periodically or shallowly submerged lands where plants and animals have adapted to life in saturated soil conditions. Common names for wetlands include: muskegs, bogs, mudflats, marshes, grassflats,

and swamps. Their value as habitat can be organized into three categories:

1. Those tidally influenced wetlands and tideflats which have saline soil conditions and are freely connected to salt water; included in this category are salt marshes, eelgrass beds, tide-influenced meadows, and clam and worm flats.

2. Wetlands lying adjacent to or having a direct hydrological connection with a freshwater stream or lake; included are marshes around lakes, braided stream banks, and some muskegs.

3. Wetlands which are hydrologically isolated (i.e., perched), stagnant, or have a very slow exchange with flowing water bodies; certain muskegs and bogs are included in this category.

Essential Habitat Elements

Like estuaries, wetlands constitute a transition zone between the terrestrial and aquatic environments. Once thought of as having little value, wetlands are now generally recognized to have important natural values that support not only fish and wildlife habitats, but also serve in practical engineering functions such as shoreline stabilization, flood control, and natural water purification.

In southeast Alaska, one of the most important types of wetlands, tide-influenced grass-sedge meadows, probably occupy less than 1 percent of the land area yet they provide essential feeding areas for waterfowl, deer, brown bear, shorebirds, and a number of smaller birds. The tide-influenced meadows are typically dominated by three major plant species: lyngbye sedge (*Carex lyngbyei*), mountain hairgrass (*Deschampsia atropurpurea*), and beach ryegrass (*Elymus mollis*). Sedges, with their high protein content, constitute an important food item for waterfowl, bears, and deer. During the spring, these animals will concentrate on grass-sedge meadows to feed on the emergent vegetation. Where this important source of protein is eliminated or diminished, it could affect wildlife populations over a large area.

Muskegs and bogs comprise a conspicuous portion of the southeast Alaska setting. Typical muskeg communities are dominated by sphagnum mosses (*Sphagnum* spp.) and sedges (*Carex* spp.). Lodgepole pine (*Pinus contorta*), Alaskan cedar (*Chamaecyparis nootkatensis*), crowberry (*Empetrum nigrum*), Labrador tea (*Ledum palustre*), skunk cabbage (*Lysichiton americanum*), and bracken fern (*Pteridium aquilinum*) are also common. A primary importance of muskegs is their function as large sponges, capable of soaking up peaks in runoff and

snowmelt. Passerine birds, waterfowl, and shorebirds also utilize muskeg habitats.

Past and Present Impacts

Data on past impacts to wetlands habitat are scanty. Wetlands which have been filled, roaded, dredged, or utilized for log dumping and storage have undoubtedly sustained losses of habitat quality, but few measurements and little documentation are available by which to accurately judge past and present impacts. An area of concern is the Gartina flats where gravel extraction has occurred in the past, though no significant impacts have been noticed.

Future Impacts

The degree of future impacts to wetlands and tideflat habitats will depend upon acquiring sufficient data on wetlands identification, classification, and sensitivities, particularly where development pressures are greatest. In most cases, insufficient progress has been made towards comprehensive wetlands management.

4. ROCKY ISLANDS AND SEACLIFFS

Rocky islands and seacliffs provide important habitat for birds, mammals, and marine life. In general, southeast Alaska lacks systematic survey data for either seabirds or sea lions. Undoubtedly, more areas exist and will be catalogued and censused in the future. Harbor seals utilize coastal rocks and reefs throughout the region for haul outs, molting, and pupping areas. Rocky islands are also important for nesting birds such as black oystercatchers, semi-palmated plovers, arctic terns, pigeon guillemots, bald eagles, and song birds.

Essential Habitat Elements

Seabirds generally nest on remote, inaccessible locations, hence a lack of disturbance by both man and predators may be a determining factor. No one knows why seabirds will utilize a certain nesting, while apparently ignoring other similar islands. It is possible that their numbers are significantly reduced from former levels and only a remnant of the total nesting habitat is being utilized. Most successful reproduction occurs in locations that provide natural defenses against predators.

Nocturnal seabirds such as petrels may be active at night to avoid natural enemies such as gulls, crows, ravens, eagles, and falcons. Other birds such as puffins nest in deep burrows or rock crevices. The type of geological formations, soil conditions, productivity of adjacent waters, and degree

of disturbance may all determine whether an island or cliff is suitable nesting habitat.

Islands, rocks, capes, and boulder beaches are typical sea lion haul out and rookery habitats although sand spits and gravel beaches are also used occasionally. Spasski and Sisters Islands are used as sea lion haul out areas. Sea lions will often flee to the water when disturbed. On rookeries, disturbances can aggravate pup mortality. More research is needed on all aspects of sea lion biology in southeast Alaska.

Harbor seals are found throughout the marine waters of Chichagof Island. Very little is known about the population or habits of harbor seals in this region. Their secretive behavior and wide distribution make surveys difficult and time consuming. Harbor seals are frequently observed hauled out on nearshore rocks and remote beaches that are only exposed at low tide. Their food consists primarily of fish such as herring, smelt, cod, rockfish, sculpins, greeling, flounders, and salmon. Octopus, shrimp, and squid are also consumed. Harbor seals do not congregate on rookeries as do sea lions.

Past and Present Impacts

Aside from occasional visitation by fishermen, recreational boaters, etc., there have been few disturbances to the offshore islands. Alaska natives are allowed to hunt marine mammals for subsistence purposes and they will occasionally shoot sea lions and harbor seals on offshore islands. There is occasional illegal shooting by non-natives also.

5. EXPOSED HIGH ENERGY COASTS

Exposed high energy coasts are those open, relatively unprotected shorelines where waves and surf predominate; plants and animals are adapted to life in dynamic, naturally stressed conditions; and beaches are typically composed of materials ranging in size from bedrock to coarse sand. Exposed coast conditions prevail along the west side of Point Adolphus, and west and east of Whitestone Harbor. Exposed high energy coast habitats overlap with those of rocky islands and seacliffs, estuaries, and offshore areas.

Essential Habitat Elements

Exposed high energy coast habitats are principally maintained by the force of waves directed on the coast. Beaches composed of sand and gravel exist in a state of equilibrium between the supply of bed material from land erosion and the action of the sea which suspends materials, moving them offshore, onshore, and alongshore depending upon the wave direction and intensity, shoreline morphology, bathymetry, etc.

Marine life, such as razor clams, have adapted to this environment, being capable of digging down through beach material to secure their foothold under conditions of shifting sands and pounding surf. Other marine life, such as flatfish, crabs, shrimp, amphipods, and certain marine worms, also have this capability of digging rapidly into the beach. Activities which alter either the wave regime or source of beach material can rapidly change the shore environment and with it the attendant marine life. A thorough understanding of beach dynamics and shoreline processes is required to properly site and design shoreline structures such as breakwaters, groins, seawalls, or jetties.

Rocky shores along high energy coasts are characterized by benthic marine life possessing a strong means of adhering to the shore. Limpets, mussels, abalone, barnacles, chitons, sea stars, and marine algae with strong holdfasts are all well adapted to the high energy coast environment.

Birdlife such as sandpipers, black oystercatchers, surfbirds, dunlin, gulls, etc., are often abundant along high energy coasts. Harbor seals and sea lions can frequently be observed hauled out on exposed rocky and sand beaches.

As in all aquatic habitats, ambient waters which are relatively unpolluted, well oxygenated, and contain essential nutrients for primary production are the basis for maintaining the carrying capacity of exposed coast habitats. Because of the high mixing energy, dynamic beach processes, and resilient marine life, these habitats are probably most resistant to many forms of environmental pollution.

Past and Present Impacts

The highly dynamic nature of exposed high energy coasts rapidly removes traces of man-induced impacts on the shoreline. Structures which are improperly designed or poorly maintained are quickly acted upon by the forces of wind, waves, and currents. It is therefore difficult to evaluate the type and magnitude of impacts which may have occurred in the past.

The past and present practice of rafting logs from timber sites to the mill has resulted in a significant increase of drift logs on beaches. Log rafts are susceptible to being broken up by storms. Where logs are frequently moved around by wave action, the resultant battering of intertidal organisms may cause changes in shoreline plant and animal communities. More research is needed on the impacts of increased drift logs on marine life.

Future Impacts

The difficult engineering and operating conditions present on exposed coast environments will discourage many types of

development which could be more easily located in protected bays.

Logging operations may occur on some exposed shorelines. The continued practice of rafting logs will increase the number of drift logs on beaches and result in more battering of intertidal life. A switch to barging logs and log recovery programs could minimize this impact.

6. RIVERS, LAKES, AND STREAMS

It is necessary to include shoreland drainages within the coastal zone for a very practical purpose: the flow of water from the land governs the nature of coastal waters and is a primary controlling factor on the condition of coastal ecosystems. Running water, in the form of literally thousands of streams and lakes, is a conspicuous feature of the physiography of southeast Alaska. Most streams have short drainages and wide ranges in discharges due to the steep topography and abundant rainfall. Streams and lakes provide spawning and rearing habitat for thousands of salmon returning each year to northern Chichagof Island; thus they are the foundation of the area's fisheries resources and long-term economy. Streams and lakes also support various species of trout and char which provide recreational and subsistence resources. They are utilized by wildlife populations on Chichagof Island and are an essential component of the forest ecosystem.

Essential Habitat Elements

Nearly all streams in the planning area are non-glacial; thus their flows are primarily determined by snowmelt and seasonal precipitation. In a typical stream, low flows occur in late March followed by a rise above average during April through June due primarily to snowmelt, followed by a second low flow period in late July. The second high flow occurs during the late summer and fall due to heavy precipitation, then falls gradually off during the winter months when much of the water is locked up in snow and ice. Stream flows are influenced by a number of other factors, however, and there is a great deal of variability within individual streams throughout the region. Many streams will "flash" flood during periods of heavy precipitation or rapid thaws. Sudden departures from average flow curves are not uncommon.

Five water parameters of particular importance to stream habitats are:

1. Temperature
2. Sediment
3. Nutrients

4. Discharge

5. Streambed stability

Excessive water temperatures or changes in the temperature regime can affect fish survival, food production and timing of egg development, hatching, and migrations of juvenile fish to the sea. When shade-producing streamside vegetation is removed, water temperatures may fluctuate by several degrees above or below normal temperatures, depending upon the season.

Sediment may enter stream gravels and affect fish egg and try development. The main effect of sedimentation on spawning habitat is the decreased rate of flow of oxygen-bearing waters within the gravels where the eggs and alevins are incubating. Increased stream sedimentation results from natural processes, such as stream bank erosion and mass wasting; it can also result from man-induced activities such as road construction, gravel operations, land clearing, and certain logging and mining practices. Nearly all studies indicate an inverse relationship between stream sedimentation and salmon egg survival.

Nutrients such as nitrates, phosphates, and trace elements stimulate plant productivity. Within natural limits and balance, they are a necessary component of freshwater ecosystems. When nutrients are excessive, they can lead to excessive algal production and eutrophication. Nutrients are derived, to a large extent, from the natural decay of organic material such as spawned out salmon, dead aquatic organisms, leaf litter, etc. To a lesser extent, minerals are derived from the surrounding soil, rocks, and atmosphere. The balance of nutrients within a water body is affected by surrounding land use in the watershed. Imbalances in nutrients and other water quality parameters can lower the capacity to support aquatic life.

Streamflow is regulated primarily by seasonal precipitation patterns and influenced greatly by evapotranspiration, normal streamflow regime of a given watershed, condition of the soil, and saturation level of groundwater aquifers. The quantity of streamflow depends first on precipitation and then on basin characteristics. The latter include factors that can be modified by land management practices such as logging, roadbuilding, mining, and community development and expansion. The effect of increasing and decreasing streamflows on fish populations and other aquatic life varies according to the stream and the time of occurrence. Increasing flow during the normal low flow periods can increase the available living area for aquatic life, raise oxygen levels and prevent freezeouts in spawning beds. On the other hand, increased flows during normal high flow periods can aggravate

streambed instability and increase sedimentation due to bank and streambed erosion. Decreasing flows can likewise have harmful or beneficial effects. Sufficient data necessary to predict the effects of changed streamflows on aquatic life should be obtained prior to making significant land and water use decisions.

Streambed stability relates to gravel size and type, stream gradient, and streamflow. Most, but not all, streambeds in southeast Alaska are unstable. Instability reduces egg and fry survival in certain instances but in other cases, it acts to clean the gravel of interstitial sediments. Where certain land use practices associated with logging, mining, land clearing, etc., have the combined effects of increasing peak streamflows, sedimentation, and streambed instability, the results can be detrimental to fish habitat. Each stream and land use situation requires evaluation on a case by case basis in order that the proper precautions can be prescribed to deal with a mixture of specific biological and physical conditions.

Past and Present Impacts

The effects of forest practices on certain southeast Alaska coastal resources have recently been reviewed.

A summary of potential impacts from silviculture activities on freshwater habitats includes:

1. Inorganic sediment input
2. Input of organic debris
3. Temperature changes
4. Loss of overhead and bank vegetation - resulting in an increase in light penetration, loss of cover and habitat, loss of terrestrial energy sources, and loss of emergence substrates
5. Changes in streamflow
6. Changes in stream morphometry
7. Changes in water chemistry

The impacts to stream habitats from logging, as well as other land use activities, are highly complex. The type and degree of impacts from logging on freshwater habitats vary widely depending upon the terrain, soils, logging methods, number of roads, etc. In one example, sediment in the gravel of salmon spawning areas increased 8.5 percent following logging. A 3.3 percent increase in sediment was shown in

another southeast Alaska stream caused a 17 percent reduction of annual salmon fry production. Current Forest Service policies strive to minimize stream sedimentation as well as other adverse stream habitat problems during and after logging operations. Forestry practices in the Tongass National Forest have improved with increasing knowledge about the nature and sensitivities of aquatic habitats.

The impacts to stream habitats associated with urban development are similar in many ways to those associated with logging and other land use developments. As with other developments, the impacts on streams and lakes include changes in sedimentation, streambed stability, temperature, discharge, and water quality. All of these impacts vary depending upon the nature of the system and type(s) of land development.

Where action is not taken to provide for greenbelts, setbacks, maintenance of water quality, fish passage, etc., urban development will continue to encroach upon stream habitats. Gravel extractions, culverting, and obstructions in streambeds will reduce the potential fish habitat, particularly where conducted without safeguards for minimizing adverse impacts.

7. IMPORTANT UPLAND HABITATS

Uplands influence the quality and quantity of aquatic habitats, provide drinking water, and furnish food and cover for wildlife. In addition, uplands provide timber land, minerals, and the principal space for human habitation. In the true sense, all uplands in southeast Alaska are "important" as habitat since fish and wildlife populations as well as man are dependent upon the quality of terrestrial ecosystems.

Essential Habitat Elements

The vegetation of this area is dominated by two major habitat types--temperate rain forest and alpine tundra. The forest zone is seen from the air as a mosaic of forest stands of various densities, crown sizes, subtle colors, and natural and manmade openings. Interspersed among forest stands are muskegs growing on deep peat and dominated by *Sphagnum* mosses, sedges, rushes, and heaths.

Forest stands have been classified by the U.S. Forest Service according to their timber value as "commercial forest" and "non-commercial forest." Tree species composition varies by location, topography, drainage, soil type, and stand history. The species composition on commercial forest land consists mostly of western hemlock and Sitka spruce. Alaska-cedar, mountain hemlock, black cottonwood, red alder, and other hardwoods and softwoods make up the remainder. Most commer-

cial forest land lies within 10 miles of tidewater. Species composition of trees on non-commercial forest land consists largely of hemlocks, cedar, and lodgepole pine. Forests which have remained essentially undisturbed by man or have not been extensively cut within the last 150 years are referred to as "old-growth" forest.

All forests are in various stages of plant succession. In old-growth forests, succession is haphazard resulting in uneven-aged stands of mixed tree species and a diversity of understory vegetation complexes. In southeast Alaska, old-growth, uneven-aged forest stands are known to provide optimum habitat for Sitka black-tailed deer, marten, and bald eagles. Further research is needed on all aspects of wildlife utilization of forest habitats, particularly in light of the present-day conversion of uneven-aged, old-growth stands to even-aged stands through commodity-oriented forestry practices.

Secondary succession after forest disruption by clearcutting, blow-down, or fire consists of a shrub stage of short duration in which blueberry, huckleberry, rusty menziesia, devil's club, Pacific red elder, salmonberry, alder, currant, and other species are the dominant vegetation. This initial flush of vegetation results in high forage production for deer, available during snow-free periods for about 10 to 20 years following cutting. Sitka spruce and western hemlock seedlings become established during this time; but because of their slow early growth, these conifers are at first inconspicuous. Within 8 to 10 years after logging, western hemlock and Sitka spruce overtop the shrub layer, developing into an even-aged stand. If left unlogged, the stand may remain even-aged for 300 years or longer before gradually changing to an uneven-aged condition.

The important elements of habitat necessary to attract and sustain desired wildlife populations are complex and vary with the species, locality, and season. Sitka black-tailed deer utilize a variety of habitats from tidewater to alpine tundra during the snow-free months. However, uneven-aged, old-growth forest may provide the only habitat available to deer during severe winters. This relationship is further discussed under Past and Present Impacts of logging.

Brown bear frequent lowlands and tide-influenced meadows during the spring and summer, then move upland during the late fall to den. Small furbearers, such as mink and river otters, inhabit riparian communities and the shoreland fringe, utilizing terrestrial, intertidal, and nearshore areas for feeding. Marten are dependent upon the climax forest. Bald eagles require nesting platforms in trees which average 400 years of age. Their preferred nesting and perching habitat is old-growth forest within 200 yards of the beach.

Mountain goats utilize the alpine tundra and high meadows of the mountains for most of the year, but occasionally require refuge of the forest, particularly when snow conditions dictate. Further research is needed on most wildlife species, with particular emphasis on conditions found in southeast Alaska, to further define their habitat requirements and to predict changes which may result from habitat alteration.

Past and Present Impacts

The potential impacts to upland habitats due to natural and manmade alterations are primarily the result of:

1. Changes in cover and vegetative complexes

2. Loss of food availability

3. Impacts from noise and disturbance

The impacts on wildlife habitats from forest practices are only just beginning to be understood. Most attention has been focused on harvesting old-growth forest to increase the timber yield on successive stands. Recent studies indicate that, during winter, deer usage of former clearcut areas averaged only one-sixth that of old-growth stands. The increased snow depth in recent clearcut areas appears to limit the availability of browse to deer. As the even-aged forest canopy closes in later years, the understory vegetation becomes shaded out, thus limiting its availability to deer. The current rotation period of 90 to 120 years is not sufficient time for adequate deer food to develop beneath the second-growth canopy.

Marten occur throughout Baranof and Chichagof Islands, being introduced to Baranof Island in 1934 and Chichagof Island in 1949. Marten are almost exclusively dependent upon climax forests. A mature spruce-hemlock canopy, diverse understory vegetation, and a well-developed microtine rodent population are all habitat requirements for marten. All three of these factors are either missing or limited in former clearcut areas. Although more research is needed, marten do not appear to utilize former clearcut areas in southeast Alaska.

Much attention has been focused, in recent years, on the effects of logging on bald eagles. The Bald Eagle Protection Act, as amended in 1972, states that eagles, their eggs, and nests are protected by Federal law. Where logging has left no fringe trees along the beach, this zone is completely bypassed in nesting. Nearly all bald eagle nests are located in old-growth forest within 200 yards of the beach. Bald eagles also require sturdy perch trees along the shoreline fringe. Since the rotational period for commercial stands is 90 to 120 years, old-growth forest along the beach fringe

is an essential commodity for bald eagle habitat. A current U.S. Forest Service and U.S. Fish and Wildlife Service memorandum of understanding calls for a 330-foot radius buffer zone of no logging activity around each bald eagle nest tree. In addition, one windfirm perch tree must be provided for every 100 yards. These current practices appear to minimize many of the immediate impacts on nesting habitats. The long-term impacts are not known.

The impacts on wildlife habitats from urban growth and residential development are primarily related to land clearing and the effects of noise and disturbance. Because the topography has limited the extent of development in Hoonah, impacts from urban development are mostly confined to the existing townsite boundary. Within this area, limited deer and bear habitat has been lost. In the case of brown bear, the existing landfill is still visited, but the rest of town is avoided. Deer are a more tolerated species and, given sufficient cover, will continue to occupy at least the fringe areas around the city. The real impact to these large mammals will result from the extensive road building, and thus easy access, that is occurring throughout the planning area.

Small mammals such as mink and river otter utilize nearshore waters, the beach fringe, streams, and riparian vegetation. Where greenbelts, wetlands, and riparian habitats are maintained, the potential for small mammal habitat will be protected.

Future Impacts

As Hoonah grows and development of the surrounding forests continues, the impacts to wildlife habitat and populations will also continue. Urban growth in the Hoonah area, and future roads throughout the planning area will have impacts on upland habitats. The major impacts will come primarily from logging.

If current assumptions about the effects of logging on Sitka black-tailed deer are correct, then the current rate of harvest on commercial old-growth forests will continue to remove optimum deer habitat. The effects that logging may have on overall deer populations or the future availability of deer to the general public cannot be determined from existing data. Potential marten habitat and marten populations can also be expected to decline. Future forest practices may serve to minimize logging impacts on wildlife but more work is needed to define the impacts and provide practical solutions.

CHAPTER 9

Hoonah Coastal Management Program District Policies and Implementation

Chapter 9
HOONAH COASTAL MANAGEMENT PROGRAM DISTRICT POLICIES AND IMPLEMENTATION

INTRODUCTION

The policies and implementation procedures defined in this chapter are central to the Hoonah Coastal Management Plan. They serve as a guide for making future management decisions and provide ways to make the decisions effective. They have been developed to be comprehensive, specific, and enforceable to the extent allowed by the program's authority. They have also been developed to be as clear and straightforward as possible. The coastal management plan will only be as strong as it is workable.

The chapter begins with a summary of the authority the district has for implementing its program, and a discussion of the parties responsible for implementation. This is followed by the district policies and the implementation structure. The key to implementation of the coastal management plan is the consistency determination. This is the means by which the district and agencies can directly apply Hoonah's policies, or rules, to a specific proposed activity and determine if that activity is consistent with the plan. The chapter ends with a discussion of procedures for the appeal of decisions, field checking, and enforcement within the district.

The coastal management plan is meant to be a dynamic and flexible tool that the district can use to manage new and emerging issues as well as those that prompted the initial development of the program. As new information and conditions arise, there may be a need to amend the original plan. Appendix A contains a summary of Alaska Coastal Management Act (ACMA) regulations for making amendments to the Hoonah Coastal Management Plan, and a statement of intent by the city regarding future amendments.

AUTHORITY

Hoonah's corporate limits comprise the Hoonah coastal district, as defined in ACMA Section 46.40.120. The Hoonah coastal district has the authority to implement and enforce the coastal management plan with regard to local actions (municipal and private actions that are not initiated or regulated by a state or federal agency) within the district. In addition, actions by state and federal agencies must be consistent to the maximum extent practicable with the approved district coastal management plan. This means that the agency initiating or regulating the action must give "great weight" to the district's determination of whether or

not the action is consistent with the coastal management plan.

The City of Hoonah has a Planning and Zoning Ordinance that gives the Planning and Zoning Commission the authority to develop a Comprehensive Plan, zoning ordinance, and subdivision ordinance. The Commission can also develop and recommend to the City Council any other plans or ordinances related to planning functions for the city. The Commission is currently developing a Comprehensive Plan, which will be consistent with the goals and policies of the Coastal Management Program. The district can use the Comprehensive Plan and the related ordinances that will be enacted as a means and authority for locally implementing the Coastal Management Plan. In addition, existing laws and regulations of the state and federal government will serve as implementation means and authority. Appendix B contains a discussion and a chart of the laws and regulations that could fall within the Coastal Management Program.

RESPONSIBLE PARTIES

Under Hoonah's existing administrative structure, the mayor is the city's chief administrative officer. As such, he will be responsible for implementing the coastal management plan. With the city's change to a city manager/mayor/council form of government, the city manager will assume these responsibilities. The city manager could be assisted by a staff planner, as recommended in the Administration and Implementation section of the Comprehensive Plan.

In conducting the consistency review, the mayor or city manager will use to the fullest extent possible appropriate City Council groups or persons in a consulting or liaison capacity. For local actions that are appealed (see Appeals section, below), the City Council will sit as the board of adjustment.

DISTRICT POLICIES (6 AAC 85.090)[1]

The district policies are the enforceable rules of the coastal management plan. They were developed on the basis of the inventory data; the issues, goals, and objectives; and the findings of the analysis. By defining the district's overall priorities and development criteria, the policies provide the basic framework for management decisions. The district will evaluate all proposed uses and activities to determine if they are consistent with the applicable policies.

[1]Applicable standard or guideline of Alaska Coastal Management Program.

The future land use map is also an important guideline for making consistency determinations. It designates land uses within the district, based on the physical inventory and on district policies. The map is referred to in the policies and can be used in conjunction with them in evaluating proposed actions.

The district policies are presented below. They are followed by a description of the uses and activities that are subject to these policies, and by a general definition of proper and improper uses and activities.

General Policies

1. It is the general policy of the Hoonah coastal management district to approve specific proposals for uses and activities within areas of the district designated for those uses and activities (see Future Land Use Map, Figure 22).

2. It is the general policy of the district to determine whether specific proposals will or will not be approved by using existing means of evaluation to the greatest extent possible. These means will include a comprehensive plan, a zoning ordinance, a subdivision ordinance, a watershed protection ordinance, a building code ordinance, and state and federal statutes and regulations.

3. It is the general policy of the district to pursue and maximize communication and cooperative agreements with Native corporations and state and federal agencies for maximum possible protection of significant resources identified within the district. These resources include:

    - The Garteeni tidelands and Gartina Creek
    - Subsistence resource uses south of the harbor
    - Waterfowl use areas
    - Important deer habitat
    - The city's municipal water source watersheds

4. It is the general policy of the district to formally adopt all of the standards and policies of the Alaska Coastal Management Program.

5. It is the general policy of the district to establish a landscape buffer of 500 feet for all beach-front lands except those lands within the designated restricted zones. All streams shall receive a minimum of 50 feet of buffer wherever practicable.

Coastal Development and Land Use Policies (6 AAC 80.040)

1. Water-dependent and water-related uses will be priority uses in those areas designated as RESTRICTED ZONE on the Future Land Use map. Other uses for those areas will only be allowed after a review by the Planning and Zoning Commission has determined that no practical alternative locations exist.

2. Filling of marine waters in the areas of the Industrial Zone at the Ferry Terminal and City Dock, and at the Restricted Zone south of the City Dock will be allowable when the filling is to provide for a water-dependent or water-related use. These areas, along with the Restricted Zone at the harbor fill, have been identified as the only lands available for water-dependent and water-related uses. These lands must be protected for such uses wherever practicable, and filling for preparation of such uses is consistent with Hoonah's plan. State and federal permits will be required where such laws are applicable.

3. The Restricted Zone at the harbor fill will include a strip of land at least 200 feet wide for the extent of the western shoreline (that facing the actual harbor). This area is to be used for marine-related commercial and light industrial activities that will provide support services to the harbor. The Planning and Zoning Commission will develop height restrictions and other building and parking conditions as appropriate.

4. A joint Timber and Land Management Plan is being developed for the Reconveyance Lands by the city and Huna Totem Corporation. This management plan is to fulfill a requirement of the Reconveyance Agreement. The management plan will include sufficient guidelines to protect the city's water source, both quantitatively and qualitatively, and will be drafted with the assistance of the Department of Environmental Conservation. The DEC water quality standards will be utilized in this management plan and enforcement will be pursued.

5. The Planning and Zoning Commission will continue to develop a zoning ordinance, utilizing the performance zoning concept to maximize flexibility yet minimize conflicting land uses and inefficient public service commitments. The Department of Community and Regional Affairs will assist the city in developing the zoning ordinance.

6. The city will strive to resolve the land ownership, rights-of-way, and easement problems that presently exist within the city limits. The Title and Survey

Study shall be undertaken during the next few months and further funding requirements will be identified by the end of 1983.

7. The city will adopt the Future Land Use Plan as developed by the Planning and Zoning Commission, to provide guidance in the future reviews and approvals of proposed developments. The Future Land Use Plan will be refined on a regular basis, as new information and studies identify needs for refinement.

Geophysical Hazard Area Policies (6 AAC 80.050)

1. When feasible and prudent, prohibit development from occurring in known or potential geophysical hazard areas.

2. Where no feasible and prudent alternatives exist, allow development in a known or potential geophysical hazard area only if siting, design, and construction measures have been provided in accordance with zoning and building ordinances to minimize damage and protect against loss of life.

Recreation Policies (6 AAC 80.060)

1. Protect those recreation areas designated on the Future Land Use map for recreation purposes, and develop those areas for the enhancement of recreational uses.

2. Designate those recreation sites near the airport for public use, and develop appropriate access and future facilities plans with the landowner.

3. Finalize a development plan for the new rifle range and construct the appropriate facilities as soon as possible.

4. Finalize a parks plan for the harbor fill area (excluding the Restricted Zone) and pursue necessary funding for construction of the facilities. Designate specific easements at north and south ends for permanent public access.

5. Require any subdivisions for 20 units or more to provide for park or recreation area access or onsite play areas.

6. Landowners and land managers shall use land management practices that will maintain and protect designated recreation areas.

Energy Facilities Policies (6 AAC 80.070)

1. Develop the most economically sound alternatives to diesel generation as soon as feasible. Options include:

   a. Development of a transmission line from Juneau to Hoonah.

   b. A tie-in with the hydroelectric facility near Tenakee Springs currently being planned by the Corps of Engineers.

   c. Woodwaste generation and geothermal resource development.

   d. Tidal water generation.

Transportation Policies (6 AAC 80.080)

1. In conjunction with DOTPF, develop an airport facilities and services plan. Determine needs for additional filling at the airport to provide for necessary support services (terminal parking, hangars, etc.). Develop plans for airport-related business expansion (warehousing, transshipments, etc.) near the airport. Work with resource agencies to minimize adverse impacts to the important anadramous fishery and waterfowl usage of the Garteeni tidelands.

2. Require all planning, design, and construction of roads to minimize erosion and other adverse impacts, and to minimize safety hazards and traffic-related problems in accordance with state and federal regulations.

3. Locate routes inland from beaches and shorelines unless they are water-dependent or unless no feasible alternative exists to meet the public need.

Public Utilities and Services (6 AAC 80.080)

1. Give top priority to completion of the design and construction of the city's water supply and delivery system, so that adequate water services will be available to existing and future development.

2. Ensure that all necessary sewer and water improvements along the highway are completed prior to the DOTPF paving project.

3. Prepare and prioritize sewer and water improvement plans for the city's Capital Improvements Program. Priority will be given to in-city residential lands for sewer and water expansion plans.

4. Prohibit the dumping of garbage and trash except in the city's new landfill site.

5. Complete development of the city's new landfill as soon as possible. Commit required dollars immediately to complete construction.

Fish and Seafood Processing Policies (6 AAC 80.090)

1. Develop the expansion of the fishing industry, including fish ranching, stream planting, and diversified fish processing (bottomfish, crab, shrimp) where feasible.

2. Locate fish and seafood processing facilities in sites designated as suitable for that use on the future land use map (commercial and industrial areas).

3. Require adequate design and control of processing facilities, in accordance with state and federal requirements, to prevent negative impacts on surrounding coastal habitats.

Timber Harvest and Processing Policies (6 AAC 80.100)

1. Leave a 50-foot buffer along all streams within city boundaries unless no alternatives are available.

2. Do not allow commercial log water storage within city boundaries.

3. Allow ship or barge loading of logs within the city only at the city dock.

4. On all lands within city boundaries, allow commercial harvesting of timber only after a cutting, roads, equipment use, and site clean-up plan is approved by the Commission and the Council.

Mining and Mineral Processing Policies (6 AAC 80.110)

1. Minimize sand and gravel extraction in coastal waters, intertidal areas, barrier islands, and spits when practicable alternatives are available. Locate extraction where it will have the least environmental impact and the least conflict with nearby uses and activities. For any in-water extraction activities, use protective measures to minimize habitat degradation in adjacent waters. Schedule in-water activities to protect seasonal biological processes.

2. Require adequate design and control features for mining activities (including disposal of waste materials) to

prevent soil erosion, slope failure, and watershed sedimentation and to protect locally sensitive environmental features.

Traditional and Customary Natural Resource Use Policies (6 AAC 80.120)

1. Authorize potentially conflicting uses or activities within or adjacent to identified traditional and customary areas only after a review of possible adverse impacts has been conducted (and mitigation identified if appropriate) by the Planning and Zoning Commission (and resource agencies as appropriate).

2. Maintain and enhance public access to traditional and customary areas. Restrict public access in the Garteeni area if easy access may jeopardize the resources.

Habitats Policies (6 AAC 80.130)

1. Incorporate into the coastal management plan the habitats standards contained in the Alaska Coastal Management Program (6 AAC 80.130).

2. Protect and enhance fish and wildlife habitats that are important to the people of Hoonah for traditional and customary uses.

3. Maintain Gartina Creek as an anadromous fishery.

4. Protect riparian wooded areas and beach fringes wherever practicable.

Air, Land, and Water Quality Policies (6 AAC 80.140)

1. Do not discharge dredged or fill material near a public water supply intake. A minimum set-up of 50 feet shall be enforced for supply intake protection.

2. Ensure that discharged dredged or fill material consists of suitable material free from toxic pollutants in other than trace quantities.

3. Ensure that impoundment water created by the discharge of dredged or fill material does not cause adverse impacts on aquatic systems.

4. Properly maintain the fill created by the discharged material to prevent erosion and other nonpoint sources of pollution.

5. Develop and adopt a municipal watershed protection ordinance, in accordance with AS 29.48.037.

6. The regulations and procedures of the Alaska Department of Environmental Conservation for the protection of air, land, and water quality are hereby incorporated into the Hoonah Coastal Management Plan.

Historic, Prehistoric, and Archaeological Resources Policies (6 AAC 80.150)

1. Preserve historic, prehistoric, and archaeological resources to the maximum extent possible.

2. Protect historic, prehistoric, and archaeological resources to the maximum extent possible from adverse impacts caused by surrounding uses and activities.

Uses of State or National Concern - Policies

1. Do not arbitrarily or unreasonably exclude or restrict uses of state or national concern.

Subject Uses (6 AAC 85.070)

All residential, commercial, industrial, and governmental uses of land and water within the district, whether of public or private property, and all habitats and resources within the coastal area, are subject to the policies and provisions of the Hoonah coastal management plan.

Subject uses also include "uses of state or national concern," which are defined as those land and water uses which would significantly affect the long-term public interest. These uses, subject to Alaska Coastal Policy Council definition of their extent, include:

- Uses of national interest, including the use of resources for the siting of ports and major facilities which contribute to meeting national energy needs, construction and maintenance of navigational facilities and systems, resource development of federal land, and national defense and related security facilities that are dependent upon coastal locations

- Uses of more than local concern, including those land and water uses which confer significant environmental, social, cultural, or economic benefits or burdens beyond a single coastal district

- The siting of major energy facilities or large-scale industrial or commercial development activities which are dependent on a coastal location and which, because of their magnitude or the magnitude of their effect on the economy of the state or the

surrounding area, are reasonably likely to present issues of more than local significance

- Facilities serving statewide or interregional transportation and communication needs

- Uses in areas established as state parks or recreational areas under AS 41.20 or as state game refuges, game sanctuaries, or critical habitat areas under AS 16.20

Proper and Improper Uses (6 AAC 85.080)

Land and water uses and activities within the district will be considered proper if they are consistent with the policies and provisions of the Hoonah Coastal Management Plan; if they comply with the regulations of the state and/or federal agencies exercising lawful jurisdiction in the coastal area; and if they comply with the applicable ordinances and regulations of the City of Hoonah.

Land and water uses and activities within the district will be considered improper if they are not consistent with the policies and provisions of the Hoonah Coastal Management Plan; or if they do not comply with or cannot be modified to comply with applicable local, state, and federal regulations.

IMPLEMENTATION CONSISTENCY DETERMINATION

In making consistency determinations, the district will directly apply its policies or rules to specific proposed activities. Through a well-defined process, the district will receive notification of proposed actions; complete a step-by-step checklist that provides the information necessary for a consistency determination; and respond to the appropriate parties.

Actions Subject to Consistency Review

The district can be informed of proposed state and federal actions by receiving notices of permit applications, public notices of actions, and general "mailing list" notifications from the various state and federal agencies. See Appendix B for a list of activities that may occur within the district and the state and federal regulatory authorities for these activities. The Hoonah district can comment on any of these activities; however, routine notification is recommended only for the most significant permits/notices, as shown in Table 5. This list should reflect Hoonah's particular needs and should be within the ability of local workloads, and can be adjusted accordingly. Upon final approval of the Coastal Management Plan, the district will have formal notification of all future projects as a matter of state procedure (the

Table 5
PERMITS/PUBLIC NOTICES LIST

	Review Time (days)
Federal	
Corps Section 10 Permit	30
Corps Section 404 Permit	30
Environmental Impact Statement	45-90
State	
DEC Wastewater Discharge	30
DNR Tidelands Lease	30
DNR Water Appropriations	15
DEC Solid Waste Management Permit	30
DNR Notification of Operation (for timber harvesting)	30
DNR Minerals Leasing Notice	30
ADFG Anadromous Fish Stream Permit (Title 16)	7-14

approved plan constitutes formal notification to all agencies). Federal actions notification will be provided through the State Clearinghouse.

Actions that require only local approval (municipal or private actions that are not initiated or regulated by a state or federal agency) will all be screened by the district (see following section). Notification of local actions will be received through planning and zoning procedures (building permits, sewer extension approvals, water hook-ups, land use changes, capital improvements projects, and transportation systems).

Using the Checklist for Consistency Determinations

After the district receives notification of a proposed local action, it will perform an initial screening to determine if the consistency checklist should be completed or if existing routine and approval (such as a building permit approval) is sufficient. This screening consists of two questions that will be applied to the proposed action:

1. Will any part of the proposed action be inconsistent with the future land use plan?

2. Will the proposed action have any secondary effects that will be inconsistent with the future land use plan or that will impact coastal resources?

If the answer to both questions is no, the proposed action needs no further review. Typically, such actions as building permit requests or subdivision plat approvals will fall into this category. Approval by the appropriate existing review authority (such as the Planning and Zoning Commission) will be sufficient.

If the answer to either question is yes, the checklist for consistency determination will be filled out for the proposed action. An example of a two-question screening would be a proposed extension of the road network. The extension may be consistent with the land use plan (i.e., provides access to a developable area; does not cross a designated recreation area), making the answer to question 1 "no." However, the extension could have secondary environmental impacts from construction or use. The answer to question 2 would therefore be "yes," and the action would have to be further evaluated.

All proposed state and federal actions within the district will be evaluated by means of the checklist for consistency determination.

The checklist that will be used is included at the end of the section. The checklist is designed to be the only document necessary for evaluating proposed actions and for presenting an explanation of how and why a consistency determination is reached. It can be filled out to the level of detail that is appropriate for each specific action, making it both concise and comprehensive. The analysis contained in the checklist provides a legal basis for the consistency determination and sets a precedent for future application of the coastal management plan.

Part I of the checklist provides a description of the proposed action, including the proponent or lead agency, the kind of action, and the location.

Part II calls for an evaluation of the action's possible impacts on uses, activities, resources, and habitats in the district. It also specifies ways of obtaining additional information and assistance if it is needed for this evaluation.

In Part III, the impacts identified in Part II are evaluated against the district policies, and a consistency determination is made. If the district recommends possible changes or conditions that could bring the action to consistency, these are also included in Part III. Finally, there is room for the district to indicate the significance of the proposed action to the coastal management plan and to make additional comments to support its position. These comments can provide a further explanation of why the district objects to an action it has found to be inconsistent. The comments can also emphasize why an action that is found to be consistent should occur. In this way, the district can exert a positive influence on state or federal permitting of development that is in accordance with the coastal management plan.

Responding to the Proponent or Lead Agency

Once a consistency determination has been made, the mayor's office will inform the proponent or lead agency of the decision.

If the district finds that a local action does not require completion of the checklist, it will inform the proponent of this decision within 7 days from receipt of notification.

If the checklist is required and the proposed action is found to be consistent, the district will normally submit its determination to the proponent or lead agency within 14 days from receipt of notification. If the district wishes to provide a detailed analysis of its support and needs additional time for this, it may take up to 30 days to submit its determination.

If the proposed action is found to be inconsistent, the district will normally submit its determination to the proponent and/or lead agency within 30 days from receipt of notification.

In cases where the state or federal lead agency specifies a review period shorter than the above times, the district will meet the specified deadline.

There may be cases where the district requires more than 30 days to make its determination (for instance, if more information must be acquired or if a public meeting is conducted). This additional time may already be within the lead agency's specified review time. If not, the district will consult with the lead agency at the earliest practicable time to ensure that the additional time is permissible and that no deadlines will be missed.

APPEALS

Two kinds of appeal may occur after a consistency determination is made: an appeal at the local level of the district's determination, and an appeal by the district of a state or federal agency's decision.

If a proposed local action is found to be inconsistent and is denied, the district may suggest changes or conditions that could make the action consistent. The project proponent can choose to incorporate these suggestions into the project proposal and resubmit it for consideration. Then, the consistency determination process will again occur from the beginning. If no modifications are recommended by the district, or if the proponent chooses not to make any changes, the proponent can appeal the district's determination of inconsistency. In that case, the City Council will sit as the board of adjustment. The board of adjustment will issue a written statement of its findings within 14 days of the proponent's appeal.

If a state or federal agency makes a decision contrary to the district's recommendation, the district can send a complaint stating the grounds of disagreement to the agency, with a copy sent to the Coastal Policy Council. The district can include in the complaint:

1. A written statement from the City Council stating its support of the district's position

2. A request that a public hearing be held in Hoonah concerning the proposed action and the agency's decision

3. A request that the agency consult with appropriate City Council advisory persons, boards, commissions, and committees

If the state or federal agency agrees that the complaint has merit, it should work with the district and resolve the matter within 30 days from receipt of the complaint. If the disagreement cannot be settled through this process, the district can take its case to the Coastal Policy Council, in accordance with the procedures outlined in ACMA Section 46.40.100.

FIELD CHECKING

There are two basic reasons for field checking the decisions that have been made based on the district program. The first is to ensure that approved projects are actually being conducted properly. The second is to ensure that activities that need some type of consistency determination have indeed received one. Techniques for field checking within the district include:

a. Routine field inspections by city personnel of projects that are significant to the program

b. Periodic checking on specific projects or locations of particular concern

c. Request for copies of field reports and trip reports from state and federal personnel who make field observations; coordination of site inspection with state and federal personnel when appropriate.

Because of the limited total area of the Hoonah coastal district, local inspection of projects or locations will be manageable.

ENFORCEMENT

Enforcement actions are initiated when a person, organization, or agency has violated the requirements of the district plan or has violated an approval that included a consistency determination (including possible conditions) that was based on the district plan. The first step in an enforcement action is an attempt at informal resolution of the problem. In most cases, this will serve to end the matter, since many people may not be aware of what they had to do to comply with the district plan. If informal means fail, one of three enforcement avenues may be appropriate:

Local Enforcement

The district has the authority to enforce its consistency determinations for local actions within the district boundary. It can enforce violations of the district plan that occur through noncompliance with the local building code, local zoning ordinance, subdivision ordinance, or other local permit systems. The district can gather the necessary information, and the matter will proceed in the same way enforcement of any violation of a local ordinance would.

State Enforcement

The district coastal plan is as much a part of state law as it is of local law. If a district determines that a violation of its coastal plan has occurred as part of a violation of a state permit condition, it can report the violation to the state agency responsible for the regulatory process. The responsible state agency will then handle the matter in conjunction with the Alaska Department of Law.

Federal Enforcement

If a violation has occurred through noncompliance of a federal permit condition, the district can report the violation to the federal agency responsible for the regulatory process. The responsible federal agency will then handle the matter.

HOONAH COASTAL MANAGEMENT PROGRAM
CHECKLIST FOR CONSISTENCY RECOMMENDATIONS

PART I: DESCRIPTION OF PROPOSED ACTION

1. Who is the applicant or the lead agency for the proposed action?

   Federal _____
   (Name of agency)

   State _____
   (Name of agency)

   Local _____
   (Name of authority or proponent)

2. How was the district notified of the proposed action?

   ☐ Permit application _____
   (Name and number)

   ☐ Public notice _____
   (Describe)

   ☐ Mailing list _____
   (Describe)

   ☐ Other _____
   (Describe)

3. When is the district's recommendation due to the lead agency?

   _____, 19
   (Date)

4. What is the action that is being proposed? (Give a brief description, such as "widening of road" or "construction of hydroelectric facilities.")

   _____
   _____
   _____
   _____

5. Where is the proposed action located?

   ☐ District _____
   (Identify by streets, etc.)

   ☐ Area Meriting Special Attention _____
   (Name)

   ☐ General planning area _____
   (Describe)

PART II: IMPACT EVALUATION

1. What uses, activities, resources, and habitats will be altered by the proposed action?

- [ ] Coastal development and land use
- [ ] Geophysical hazard areas
- [ ] Recreation
- [ ] Energy facilities
- [ ] Transportation or utilities
- [ ] Community services
- [ ] Fish and seafood processing
- [ ] Timber harvest and processing
- [ ] Mining and mineral processing
- [ ] Economic and employment development
- [ ] Traditional and customary natural resource use
- [ ] Habitats
- [ ] Air, land, or water quality
- [ ] Historic, prehistoric, and archaeological resources

2. What type of habitat or area will be affected by the proposed action? (Mark "D" for areas directly affected, "I" for areas indirectly affected.)

D	I	
		Waterway or wetland area:
☐	☐	Marine water
☐	☐	Shoreline/tidal
☐	☐	Stream or lake
☐	☐	Wetland habitat (marsh, etc.)
☐	☐	Muskeg
		Upland and non-aquatic area:
☐	☐	Within major drainage
☐	☐	Directly adjacent to water body
☐	☐	Generally unrelated to water body

Zoning or management plan designation (if known):

☐ ☐ _____
(Describe)

3. What is the quality of the affected habitat? (If not known, district may consult with Alaska Department of Fish and Game)

☐ Good

☐ Marginal to average

4. Have the affected uses, activities, resources, and habitats been mapped or inventoried in the coastal management program?

☐ Yes If yes, please list map and page numbers where possible:

☐ No _____

5. What is the nature and significance of the potential alteration(s)? (Examples: Access to a significant recreation area will be obstructed; an important traditional fishing area will be degraded by development activities.)

_____
_____
_____
_____
_____
_____
_____
_____

The district may conclude at this point that it has insufficient information to fully evaluate the impacts and significance of the proposed action. If so, the following means may be used to obtain further information or assistance:

a) Consult with appropriate city council advisory groups or persons
b) Hold a public meeting to obtain public opinion
c) Consult with the proponent or lead agency
d) Consult with other appropriate agencies (such as ADFG, DEC, etc.). For state and Federal actions, the lead agency normally has responsibility for obtaining review comments from other agencies. The district should contact the lead agency for this information.

6. Are alternative sites available for the proposed action?

☐ Yes _____
_____
(Describe)

☐ No

7. Have alternative sites been considered by the proponent or lead agency?

☐ Yes

☐ No

PART III: CONSISTENCY DETERMINATION

1. Are the alterations that will result from the proposed action consistent with all applicable policies of the coastal management program?

☐ Yes

☐ No

Name the policies with which the action is consistent/inconsistent, and briefly describe why the action is consistent/inconsistent. (Attach additional sheets if necessary.)

2. What is the district's consistency determination for the proposed action?

☐ Consistent with the coastal management program

☐ Inconsistent with the coastal management program

☐ May be consistent if certain conditions or changes are applied (go to question 3)

3. What changes or conditions does the district recommend that may resolve conflicts and make the action consistent with the coastal management program?

4. (For district only) Does the district request that "great weight" be given to its determination because of the significance of the action?

☐ Yes

☐ No If no, then these comments are primarily advisory.

5. What additional comments does the district have to support its consistency determination?

CHAPTER 10

Comprehensive Plan Policies and Implementing Actions

Chapter 10
COMPREHENSIVE PLAN POLICIES AND IMPLEMENTING ACTIONS

POPULATION GROWTH AND CHARACTERISTICS--POLICIES

1. Support moderate, controlled population growth through the phased development of utilities and services.

2. Promote cultural and historic awareness to help maintain the cultural identity of the city.

3. Encourage the integration of new residents into the community to minimize possible conflicts.

LAND USE--POLICIES

1. Adopt the Future Land Use Plan map as presented in this document.

2. Adopt land use designations as presented in 11-7 and 11-8.

3. Maintain and protect designated traditional and customary natural resource areas and recreation areas.

4. Maintain, enhance, and permanently protect public access to designated traditional and customary natural resource areas and recreation areas unless easy access would jeopardize resources.

5. Preserve and protect historic, prehistoric, and archaeological resources.

6. Wherever possible, include public access and amenities (walkways, sitting areas, viewpoints, etc.) in industrial/commercial development along the waterfront.

7. Ensure that development will not negatively affect Hoonah's water source.

8. Make sufficient property available for needed development.

9. Encourage an agreement with the subsurface owner (Huna Totem) for the source of rock for future community needs.

LAND USE--IMPLEMENTING ACTIONS

1. Develop a performance zoning ordinance and a subdivision ordinance to implement land use policies.

2. Undertake a title search and land survey to resolve boundary issues and identify available city lands.

3. Investigate possible incentives for the development of privately owned vacant land within the city.

4. Investigate the annexation of additional areas to the city to accommodate and manage future growth. Do not provide city services outside the city boundaries.

5. Investigate ways to change Title 29 restrictions on land disposal so municipal land can be sold directly to city residents. Obtain needed assistance from DCRA and/or appropriate state legislator(s). Investigate other means to free municipal land, such as long-term leases or the exchange or transfer of lands to entities that are not restricted by Title 29 requirements.

6. Develop and adopt a municipal watershed protection ordinance, in accordance with AS 29.48.0367.

HOUSING--POLICIES

1. Make property available for residential development.

2. Give priority to the infill of existing available parcels before new areas are opened for development, in order to make maximum use of existing services and reduce development costs.

3. Provide for orderly, phased development in new areas through extension of services and land availability.

4. Make rental and owner-occupied housing opportunities available to residents.

5. Give the following priority to the provision of housing types to serve current and future needs:

   a. Single-family housing
   b. Mobile home housing
   c. Multi-family housing (apartments)
   d. Floating homes

6. Provide a location for a mobile home park that is compatible with adjacent uses.

7. Give the following priority to the provision of housing types for seasonal and transient workers:

   a. Rental apartments
   b. Mobile home housing
   c. Trailer park/campground

HOUSING--IMPLEMENTING ACTIONS

1. Pursue land use implementing actions 2, 3, 4, and 5 to make property available for residential development.

2. Investigate and pursue regional (Tlingit-Haida Housing Authority), state, and Federal funding sources for the construction of rental and ownership housing.

3. If city staffing capabilities permit, provide information to residents about available state and Federal assistance (grants, loans, technical assistance) for housing construction and rehabilitation.

4. Investigate economic and facilities incentives that could be provided to developers to encourage housing construction.

EMPLOYMENT AND ECONOMIC DEVELOPMENT--POLICIES

1. Support the controlled, phased development of commercial and industrial enterprises to provide needed goods and services and diversify the city's economic base.

2. Support only those commercial and industrial enterprises that will not seriously deplete existing natural resources.

3. Work cooperatively with Huna Totem Corporation, the U.S. Forest Service, and any other land owners and managers to achieve the environmentally sound development of the timber industry.

4. Support the controlled development of the tourism industry.

5. Support the expansion of the fishing industry, including stream planting, fish ranching, and diversified fish processing where feasible.

6. Provide the infrastructure necessary to stimulate and support economic development: site availability, utilities (water, sewer, electricity), access, good roads, housing availability, and other community services.

7. Encourage the development of vocational training programs and opportunities for city residents.

8. Support preferential hiring of residents for local employment opportunities where feasible.

EMPLOYMENT AND ECONOMIC DEVELOPMENT--IMPLEMENTING ACTIONS

1. Give priority to infrastructure development in those areas designated for commercial and industrial development, and provide adequate housing for the labor pool.

2. Investigate possible state and Federal sources for financial and technical assistance for economic development.

3. If staffing capabilities permit, provide information to interested residents about state and Federal assistance programs available for the development of economic enterprises.

4. Explore the feasibility of establishing a sawmill or other timber-related enterprises.

5. Investigate state and Federal programs for fisheries development.

6. Monitor the effects of tourism to prevent potential conflicts with traditional and customary resource uses and other lifestyle considerations.

7. Investigate possible vocational training programs and opportunities with the school district.

INFRASTRUCTURE--POLICIES

1. Provide the infrastructure (water, sewer, solid waste disposal, electricity) necessary to support the city's policies for orderly, controlled development.

2. Extend water and sewer services to the ferry terminal.

3. Provide water and sewer services to all existing residential areas within the city limits prior to extending lines outside city boundaries.

4. Provide a water supply and delivery system that is adequate to serve existing and new development and that will provide necessary fire protection.

5. Provide a wastewater collection and treatment system that is adequate to serve existing and new development.

6. Provide solid waste disposal that is safe and adequate to serve the city's needs.

7. Support and encourage the development of economically sound alternatives to diesel generation to meet projected electrical needs.

8. Support and encourage the exploration of alternative energy sources such as woodwaste generation and geothermal resource development.

9. Locate utility routes and services in environmentally suitable locations. Locate routes and facilities inland from beaches and shorelines unless they are water-dependent or unless no feasible alternative exists to meet the public need.

INFRASTRUCTURE--IMPLEMENTING ACTIONS

1. Continue studies and funding acquisition to improve and expand the city's water supply and delivery system.

2. Ensure proper maintenance and operation of the water system. Work with DEC to provide adequate water quality sampling and monitoring.

3. Obtain funding to repair and upgrade the wastewater collection system to eliminate excessive infiltration and inflow and to prevent operation problems with the treatment system.

4. Ensure proper maintenance and operation of the wastewater treatment plant.

5. Finish development of the new landfill site. Ensure proper maintenance and operation of the new landfill. Provide adequate capping of the existing landfill to eliminate health and safety hazards.

6. Enact an ordinance prohibiting the dumping of garbage and trash except in the city's landfill site.

7. Support further feasibility studies concerning development of a transmission line to carry Snettisham Project power from Juneau to Hoonah. Request the Alaska Power Authority to resubmit funding for further studies as a line item in its legislative budget request.

8. Investigate the development of a possible alternative energy source with Huna Totem Corporation and the U.S. Forest Service.

TRANSPORTATION--POLICIES

1. Repair and maintain existing streets, and provide for adequate access to improved areas within the city.

2. Require all road developers to construct roads with as little erosion and disruption as possible, and to minimize safety hazards and traffic-related problems.

3. Locate transportation routes in environmentally suitable locations. Locate routes inland from beaches and shorelines unless they are water-dependent or unless no feasible alternative exists to meet the public need.

4. Ensure that commercial and industrial developments include adequate circulation and parking.

5. Encourage the provision of more cost-effective and efficient ferry service to Hoonah.

TRANSPORTATION--IMPLEMENTING ACTIONS

1. Pursue funding acquisition for identified street paving needs.

2. Develop standards for logging road construction in accordance with the State Forest Practices Act.

3. Require that adequate circulation and parking are provided before approval is given for commercial and industrial development.

4. Require subdivision applications to submit adequate road design drawings as part of subdivision plat applications.

5. Identify platting and vacating actions that are necessary to provide adequate access and circulation.

6. Support DOT efforts to acquire funding for water and sewer line extension to the ferry terminal.

7. Support DOTPF efforts to obtain funding for upgrading and expanding ferry services to Hoonah and other southeast communities.

RECREATION--POLICIES

1. Preserve and, where appropriate, develop areas within the city for parks and open space.

2. Maintain and enhance access to recreation areas.

3. Improve and expand indoor recreation facilities.

4. Investigate possible recreational uses on lands adjacent to the city.

5. Support the development of a trailer park/campground to serve tourists.

RECREATION--IMPLEMENTING ACTIONS

1. Designate appropriate locations within the city for parks and open space.

2. Where appropriate, designate permanent access easements to new or future recreation areas.

3. Obtain funding for development of a multi-recreational facility at Hoonah School. Investigate resources for renovating the community center and for establishing a youth center.

4. In cooperation with Huna-Totem Corporation and the U.S. Forest Service, consider the development of skiing/hiking trails and other recreational uses on lands adjacent to the city.

5. Designate appropriate location(s) for a trailer park/ campground.

6. Begin development of a master plan for the harbor fill recreation area.

COMMUNITY SERVICES--POLICIES

1. Provide police protection and facilities adequate to serve the city's population.

2. Ensure the provision of adequate fire protection services.

3. Ensure the provision of health services adequate to serve the city's population.

4. Ensure the provision of social services needed to serve the city's population.

COMMUNITY SERVICES--IMPLEMENTING ACTIONS

1. Obtain funding for adding a kitchen and juvenile holding area to the city jail facility.

2. Obtain funding to improve and expand the city's water supply and distribution system to achieve adequate fire-fighting capacity.

3. Monitor and periodically evaluate the adequacy of social services; obtain resources for meeting identified needs.

CHAPTER 11

Administration and Implementation

Chapter 11
ADMINISTRATION AND IMPLEMENTATION

CURRENT ADMINISTRATIVE STRUCTURE

Hoonah is currently administered by a city manager, an elected mayor, who serves a 3-year term, and a City Council, with six members serving 2-year terms.

City Manager

The city manager is the chief administrator and is directly responsible for conducting the business of the city. The manager's administrative duties are:

- Signs documents as authorized by the City Council
- Appoints and supervises employees and officers
- Prepares and executes the budget
- Prepares and executes the capital program
- Prepares the annual report
- Performs other duties prescribed by the council

City Council

The City Council is the chief legislative body of the city. The council may regulate the affairs of the city by enacting ordinances to:

1. Establish, alter, or abolish any city departments

2. Fix the compensation of members of the council

3. Provide for a fine or other penalty or establish a rule or regulation for violation of which a fine or other penalty is imposed

4. Levy taxes

5. Make supplemental appropriations or transfer appropriations

6. Grant, renew, or extend a franchise

7. Regulate the rate charged for its services by any public utility

8. Authorize the borrowing of money within such limits as will not create a greater indebtedness or liability of any kind in any year than the current revenue of the city of that year

9. Purchase lands or convey or lease any lands of the city, and the ordinance shall specify the terms of the purchase, conveyance, or lease

10. Adopt or modify the official map, platting, or subdivision controls or regulations, or the zoning plan

11. Enact such additional acts of the council as provisions of law require to be by ordinance

Planning and Zoning Commission

The city has an appointed Planning and Zoning Commission that works with the City Council to perform the functions of planning, platting, and zoning.[1] The existing responsibilities of the Commission are defined in City Ordinance No. 78-5, as summarized below:

1. Prepare and recommend to City Council a Comprehensive Plan.

2. Prepare and recommend a zoning ordinance to implement the Comprehensive Plan.

3. Prepare and recommend a subdivision ordinance.

4. Act as the authorized body for city platting, including plats, replats, and vacations of public ways.

5. Prepare plans for the systematic development of the city for residences and business.

6. Investigate and report to Council the location and design of any public building, dock, beach, ski ground, statue, memorial, park, parkway, boulevard, street or alley, playground, public street, alley or grade thereof before any action by city or agency is taken.

7. Investigate and/or prepare capital improvements programs for the city.

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[1]Title 29 of the Alaska Statutes defines the authority of cities to provide for planning, platting, and zoning, and directs how these powers are to be exercised. The provisions of Title 29 are summarized in Planning Powers of Alaskan Municipalities (DCRA Planning Guidebook Series, January 1982).

8. Investigate and propose to Council amendments to or new ordinances regarding planning, platting, and zoning.

9. Investigate and prepare reports as may be necessary for land selection, land transfer, etc., with special attention given to acquisition of lands for public recreation.

City Staff

The City of Hoonah assumes responsibility for city administration; police and fire protection; street maintenance and repair; water, sewer, and solid waste systems; and city harbor facilities. Current paid city employees are:

- City manager
- City clerk
- Utility clerk
- City bookkeeper
- Water and sewer superintendent
- Street and road crew (3 employees)
- Harbormaster
- Maintenance man
- Police officers (3) (1 on call)
- Police dispatchers (3)
- Refuse collectors (2)
- Planning and zoning staff (1/2 time)

RECOMMENDED ADMINISTRATION AND IMPLEMENTATION ACTIONS

The Planning and Zoning Commission has the authority to develop a Comprehensive Plan; make day-to-day planning decisions; approve plats and subdivisions; and make recommendations to the City Council for funding requirements, capital improvement projects, facilities maintenance and development (sewer and water, transportation), and other activities related to land use and coastal planning. The City Council has the legislative authority to review, modify, and adopt the recommendations of the Planning and Zoning Commission. With the City Manager/Mayor/City Council form of government, the City Manager has responsibility for implementation of the planning requirements that are defined by the Planning and Zoning Commission and the City Council.

The Commission, in recognizing the tremendous work effort required in developing good land management and implementation procedures for the city, has undertaken the following as a "game plan":

- The Commission will directly involve at least two members of the City Council throughout the development of the Comprehensive Plan, the Coastal Management Plan, the Land Disposal Plan, and other key efforts of the Commission.

- The Commission is developing a Timber Management and Land Use Plan for the 14(c)3 reconveyance lands in conjunction with Huna Totem Corporation as provided for in the Reconveyance Agreement.

- The Commission has identified annexation lands and forwarded a formal request to the state.

- The Commission is developing more detailed future land use analysis to further refine the city's future land use plan.

- The Commission is developing a Land Disposal Prioritization and Procedures Plan for the city's 14(c)3 lands and other city-owned properties, to then recommend to the City Council a means to implement land disposal for development purposes.

The Commission is presently meeting semi-monthly (all meetings are open to the public) to effectively pursue these objectives. Subcommittees have been formed to study particular topics and areas.

The City Manager will have primary responsibility for planning implementation. Because of the anticipated workload,

however, it is recommended that at least a half-time planner be retained. The planner is responsible for day-to-day implementation requirements (permit reviews, agency correspondence, city administration of zoning requests, etc.) and acts as staff to the Planning and Zoning Commission. Clerical assistance would also be required for letter writing, agenda preparation, meeting notice distribution, and planning reports. The planning staff would be responsible to both the City Manager and the Planning and Zoning Commission.

Planning implementation requirements are outlined below. The specific assignment of these duties to the City Manager and/or planner could be determined when job descriptions are reviewed.

1. Review development checklists and permit requests and make staff recommendations to the Planning and Zoning Commission.

2. Work with DCRA and the Planning and Zoning Commission to develop needed city ordinances (see Ordinances section, below)

3. Coordinate the implementation actions identified in the Comprehensive Plan.

4. Make recommendations to the City Council concerning funding requirements, capital improvement projects, facilities maintenance and development needs, and other activities related to land use and coastal planning.

5. Investigate funding sources and coordinate funding acquisition for identified capital improvement projects and service needs.

6. Coordinate annual updates of the Capital Improvements Program.

7. Provide information to residents concerning housing assistance, economic development opportunities, and other areas as appropriate.

8. Serve as the city liaison with Huna Totem Corporation and the U.S. Forest Service in all matters regarding land use, transportation, permitting, housing, industrial and commercial development, and other areas of comprehensive planning and coastal management.

9. Conduct implementation activities (notification, consistency review, field checking, and enforcement) for the Coastal Management Plan.

10. Monitor compliance with existing ordinances and recommend needed enforcement actions.

11. Periodically review and update the Comprehensive Plan and Coastal Management Plan; recommend needed modifications to the Planning and Zoning Commission.

ORDINANCES

Title 29 of the Alaska Statutes requires the Zoning and Planning Commission to prepare and recommend to the City Council a zoning ordinance and a subdivision ordinance.

Zoning Ordinance

Zoning is an effective means for a city to implement its comprehensive plan and to guide and control development and growth. The comprehensive plan states general policies and standards for development and designates general land uses. A zoning ordinance may specifically identify zones where certain types of land use may occur, and imposes regulations upon development in each of these zones. Such regulations may include lot size requirements, setbacks, access and parking requirements, performance standards (requiring that certain standards for air quality, noise, wastewater, etc., be met), and other criteria established for each zone. A zoning ordinance provides for orderly, controlled development, provides clear guidelines for property owners and developers, and prevents conflicting uses. The city is currently developing a performance zoning ordinance, which will provide maximum flexibility within the zoning concept.

A subdivision ordinance further specifies development requirements. It provides regulations for lot and street design; provision of utilities; provision of adequate easements for access and utilities; drainage; and other public utility facilities and improvements.

The zoning ordinance will be premised upon seven basic zoning categories, determined by the Commission to provide sufficient control and flexibility to accommodate future growth of the city. These are residential, commercial, industrial, public services, recreation, future development/special land use, and a restricted zone.

Residential. This zone would include any dwelling unit or group of units built or used for full-time human occupancy. The ordinance can either provide for several residential zoning districts (single-family, multi-family), or permit single-family outright and allow other housing types as conditional uses with that basic residential zone. Because multi-family dwellings would probably be of a scale very compatible with single-family homes, they could be permitted as a conditional use to allow review for such things as adequate parking space and adequate lot coverage. Scattered small-scale commercial uses will be allowed as a conditional use in residential zones (see Conditional Use criteria).

A separate mobile home park zone would be appropriate because of general incompatibility with other types of residential use. The city is presently looking for specific sites for mobile home parks to accommodate seasonal workers, tourists, and others.

Commercial. This zone is for uses that relate to the sale of goods and services, including such operations as motels, stores, and cafes. The Commission has designated two areas for commercial uses: the "downtown" area around City Hall and the area at the south end of town where the Huna Totem Lodge exists. The intent is to keep the commercial enterprises in clusters to maximize transportation efficiencies, and convenience for the shopper or commercial user.

Other uses will be allowed in the commercial zone as a conditional use. Conditional uses will be approved by the Planning and Zoning Commission after the project has demonstrated that the use will not adversely impact the commercial nature of the zone (see Conditional Use criteria).

Industrial. This zone includes facilities for manufacture or processing of a product. These could include wood products processing, fish processing, and boat construction or repair. A primary concern in this zoning district would be compatibility with surrounding land uses (as well as protection from potentially incompatible uses) and availability of adequate services, such as sewer, water, and power. Industrial uses have the greatest potential of adversely impacting surrounding areas (noise, dust, traffic, etc.) and two areas have been identified to separate this use (see Figure 22). Conditional uses will be allowed in this zone as well.

Public Services. This zone includes facilities owned by the city or developed for a public use. This includes sewage treatment facilities, water facilities, landfill, schools, fire station, and City Hall. This zone is usually applied to existing uses, or areas where future uses are identified and should be protected for future development. These are

public interest areas essential to the city's operation and future well-being.

Recreation. This zoning district is applied to areas set aside for recreation or open space use. It may include developed playgrounds, areas within the city that cannot or should not be developed because of topographic constraints or lack of services, or areas specifically designated to provide open space relief to surrounding development. The city historically enjoyed unrestricted access to common recreation areas, but this is quickly changing with the accelerated growth of the city. Therefore, certain areas must be set aside for permanent protection for recreational use.

Future Development/Special Land Use Area. This designation is for the majority of the "new lands" the city has just acquired through 14(c)3 reconveyance. These lands will be developed in the future, but will not preempt the development of existing in-city lands that already have proper municipal services (roads, sewer, water, power, etc.). These lands must be properly planned to minimize expensive utilities expansions and to maximize future land planning (such as road networks, subdivision layouts, etc.).

On the other hand, there are good development lands in these areas that the city may want to consider for near term building requirements. It is therefore necessary for the Commission and Council to carefully consider any development plans for this area, to make sure that they are in the best interest of the community. A special review would be required for all proposed developments in these areas to include: long-range transportation, sewer, and water planning for the area; private versus public costs for the development (should the developer be responsible for all road and utility costs?); recreation/open space provisions for future needs; subdivision lot sizes and layouts; police and fire protection needs and costs; soils, slopes, and geologic hazards planning; and community aesthetics considerations.

Restricted Zone. The Restricted Zone is a special zone for two waterfront areas: the waterward lands along Cannery Road from Kane's Dock almost to the City Dock and Warehouse; and a 200-foot strip of waterfront land at the harbor fill. The restricted zone will provide for special review of any future proposals for development in these areas so that full consideration of the waterfront amenities of the sites will be considered. Water-related/water dependent uses that are compatible with surrounding uses will be given priority. Any uses must demonstrate compatibility with surrounding structures. Access and parking must be provided for on a use-by-use basis. Height restrictions and setbacks will be considered to minimize impacts to surrounding land uses and to provide aesthetic harmony to the area. The Restricted

Zone areas are recognized areas of importance to Hoonah's future.

Conditional Uses. It is the city's intent to maintain flexibility in the land use and zoning procedures. The city has historically had mixed uses throughout the city, and these mixed uses should be maintained in the future, given certain conditions and circumstances. Therefore, a conditional use provision is incorporated into the zone designations to provide for site-specific and use-specific considerations as may be appropriate. Listed below are the general criteria for conditional use review and approval to be used by the Planning and Zoning Commission.

1. A conditional use approval will be determined by the fulfillment of the criteria stated herein as determined by the Planning and Zoning Commission.

2. The specific use proposed will not adversely impact the neighboring uses because of incompatible noise, dust, visual disruption, traffic, pedestrian and recreation activities, etc.

3. The proposed use receives written approval of the immediately adjacent property owners.

4. The proposed use is in conformance with the requirements of the zone designation.

5. The proposed use will not adversely affect access to or future development of abutting properties given the existing zone designation.

Subdivision Ordinance

Because development will occur before such an ordinance is enacted, the Planning and Zoning Commission will need some basis for making decisions about proposed projects. A checklist of required information is included at the end of this section. It will be used by the Commission to help determine the requirements and the feasibility of new developments.

Coastal Management Program Ordinances

The Hoonah Coastal Management Program is being developed in conjunction with the Comprehensive Plan. The city will conceptually approve the program by resolution (see Appendix C for sample resolution), and will adopt the final program by ordinance after it is approved by the Alaska Coastal Policy Council. Because the Coastal Management Program will be consistent with and augment the goals and policies of the Comprehensive Plan, adoption of the program will be a further means of ensuring orderly growth and development of the city.

Other Ordinances

The implementing actions identified in the Comprehensive Plan policies specify two other ordinances to be developed and adopted by the city: a municipal watershed protection ordinance (as per AS 29.48.037), and an ordinance prohibiting the dumping of garbage and trash except in the city's approved landfill site. The second of these could be incorporated into the first, or could be incorporated into Title 42 (Health and Safety) of the city code, which includes a refuse code and refuse disposal regulations.

In addition to the ordinances discussed above, the city should adopt or revise any other ordinances that are necessary to enforce the policies of the Comprehensive Plan. A review of the Hoonah City Code shows several sections that are currently reserved; ordinances for these sections should be developed and codified (Title 52: Public Safety; Title 54: Public Utilities; Title 57: Streets and Sidewalks). Other ordinances have been adopted, but still need to be codified (Ordinance 68-2: Building Code; 68-3: Electrical Code; 68-5: Plumbing Code; 68-4: Fire Protection Code; 78-5: Planning and Zoning Commission; 79-2: Flood Damage Protection Code). Finally, it is important that compliance with city ordinances is monitored and enforced, as discussed previously in this section.

CITY OF HOONAH

BUILDING PERMIT
APPLICATION FORM
PLANNING AND ZONING COMMISSION

1. This is a request for:

- ☐ Major remodel (addition of 200 sq ft or more in exterior floor space)
- ☐ Single residential
  - ☐ Wood frame
  - ☐ Trailer/mobile home
- ☐ Subdivision (more than one lot and one house)
- ☐ Commercial
- ☐ Industrial
- ☐ Public facility
- ☐ Utility structure
- ☐ Other _____

2. To be located at (describe):

_____

_____

3. Lot number _____ Block number _____

4. Legal description and/or plot/survey map attached? _____

If not, how do you propose to demonstrate ownership and property description?

_____

_____

Can you demonstrate that this has been properly recorded?

_____

If not, how do you propose to show legal recording?

_____

5. Lot size _____ sq ft or _____ acres.

6. Proposed building(s) size(s)

_____ sq ft _____ sq ft _____ sq ft

7. What are your plans for parking?

_____

Driveway _____

To accommodate how many cars/trucks _____

(Please attach site plan sketch (if more than 4 spaces).

8. Does this project require access or close proximity to the waterfront? _____. If not, yet it is located in a Restricted Zone, have you considered alternative locations outside that zone?

_____

_____

Does the project have any special water access requirements?

_____

_____

Have you been able to fulfill those requirements? _____

_____

9. If your project is a subdivision, a commercial development, an industrial development, trailer park, or other multi-unit development, please submit the following to the Planning and Zoning Commission for permit application review:

a) Site plan
b) Plan drawing(s)
c) Lot orientation (and landscaping if appropriate)
d) Building dimensions
e) Building materials (roof, exterior walls, etc.)

10. Anticipated project startup _____, completion _____

11. Please outline the utility requirements of this project, including new facility construction needs, improvements to existing facilities, expected demands (number of residents, quantities of processing water, etc.):

a) Sewer services exist within _____ feet of the project site. Existing service (is/is not) adequate. Improvement requirements include:

_____

_____

b) Water services exist within _____ feet of the project site. Existing service (is/is not) adequate. Improvement requirements include:

_____

_____

c) Existing roads do/do not abut the property. Are the roads city or privately owned? _____. What improvements, if any, will be required?

_____

_____

d) If several houses or a large facility are planned, how do you plan to take care of stormwater drainage?

_____

_____

_____

e) Will power be available to your project? _____
(Please contact Tlingit-Harda Electric for information.)

12. If this project includes more than 20 residential units, do you plan to provide any recreational areas or facilities for the residents?

_____

_____

13. Have you reviewed the Hoonah Coastal Management Plan and the city Land Use Plan to determine if you are consistent with those plans? _____ Explain:

_____

_____

CHAPTER 12

Capital Improvements Program

Chapter 12
CAPITAL IMPROVEMENTS PROGRAM

The city has developed a list of needed capital improvements projects, including priority rankings and estimated costs (Table 6). These projects were included in the city's FY 1983 legislative funding request, and would require state grant funding for their implementation.

The city has traditionally relied on state and Federal grant funding for community development projects. In addition, about 40 percent of the city's operating expenses in FY 1982 were met by state and Federal sources, including utilities, sales tax, fees and fines, rentals, and liquor stores. Table 7 shows the city's budget for FY 1982.

As in the past, the city will continue to require state and Federal grant funding for major community development projects. Because grant funding is not an assured source of revenue, however, and is likely to decrease in the future, the city should begin to reduce its dependence on these funds. In the short-term, this could be accomplished to some degree by increasing local revenues. This could free state and Federal revenue sharing funds to be applied to capital projects rather than to annual operating expenses. In addition, any local revenues in excess of expenditures could be applied to capital projects.

Because potential local revenues are limited, and state and Federal revenue sharing is also likely to decrease in the future, these sources can represent only a small percentage of needed capital improvements financing. In the long-term debt can be of either limited or unlimited liability. The former includes primarily bonds backed by specific revenues, such as special assessments or utility system revenues. The latter is usually in the form of general obligation bonds, backed by property taxes and payable before any other city obligations. The city should therefore move toward strengthening its local revenue base, not only to fulfill short-term funding needs, but also to achieve long-term bonding capabilities.

Institution of a property tax in Hoonah would be one means of increasing local revenues. A number of land ownerships in Hoonah involve non-taxable Indian Title, restricted deeds, and other conveyances not subject to taxation. The city could legally institute an ad valorem property tax, but could not levy it against these exempt properties. The problem of tax equity therefore arises, and would be a serious consideration in the decision to institute a property tax. The number of properties that are exempt would also be a determinant; taxation of 80 percent of the property within the city would

be more politically feasible than only 50 percent taxation. A title search to resolve unclear title issues of in-city lands is included in the city's legislative funding request, and would be a first step in the investigation of property taxation. Property value assessments would also be necessary. Because of these and other requirements, property taxation would be fairly expensive to establish initially, but would then be relatively inexpensive to administer.

As the city's economy develops, sales tax revenues will also increase as a result of expanded sales and services. Revenues could also be derived from special assessments, such as developer utility hookup fees. The city should investigate these and other possible revenue sources.

Table 6

CITY OF HOONAH CAPITAL IMPROVEMENTS PROJECTS
(LEGISLATIVE FUNDING REQUEST--1983)

1.	Water and Sewer Improvements			
	Phase I:	New water source Water and sewer connections to north part of town	$4,400,000	
	Phase II:	Water and sewer connections	5,600,000	
	Total			$10,000,000
2.	Road and Street Surfacing			
	Phase I:	Ferry to airport	5,000,000	
	Phase II:	Main street housing projects projects and fire department	2,500,000	
	Phase III:	Old section of town	3,000,000	
	Total			10,500,000
3.	Multi-recreational facility--Hoonah School			
	Phase I:	Gymnasium	3,800,000	
	Phase II:	Water safety facility	1,000,000	
	Total			4,900,000
4.	Harbor Master Building and Airport Terminal			1,000,000
5.	Capping of Old Landfill			175,000
6.	Access Road to New Landfill Site			300,000
7.	Public Safety--Addition to Jail (kitchen facility juvenile holding)			200,000
8.	Title Search and Survey			60,000
9.	Health Facility			a
	Total			$27,135,000

[a]Unavailable.

Table 7

CITY OF HOONAH'S BUDGET FOR FY 1982

Expenses

Mayor/Council	$ 20,073.36
Office Administration	66,632.64
Insurance	10,000.00
Payroll Taxes	40,000.00
Election Judge	300.00
Bank Charges	500.00
Police	61,836.48
Fire	3,372.72
Boat Harbor	28,800.00
School	10,000.00
Maintenance and Repairs	25,000.00
Water and Sewer	46,175.52
Garbage	20,000.00
Streets and Roads	82,726.21
Elderly Nutrition Program (Gas)	1,000.00
Miscellaneous Expense	14,707.71
Total Expenses	$431,124.64

Revenues

Local Sources			
Utilities			
Water	$30,532.08		
Sewer	24,272.16		
Garbage	13,977.36	$ 68,781.60	
Sales Tax		121,052.64	
Fees and Fines, Penalties			
Dog Tags	$ 480.00		
City Fines	1,000.00		
Xerox Copies	500.00	1,980.00	
Rentals			
Boat Stall	$45,038.40		
Warehouse	4,050.00		
Office Space	9,000.00	58,088.40	
Liquor Stores		15,000.00	
Total Local Sources			$264,902.64

Table 7 (continued)

Revenues (continued)

State Sources		
State Revenue Sharing	$ 75,794.00	
State Roads and Airport	48,000.00	
Fish Tax	7,654.00	
Liquor License	3,250.00	
Amusement Tax	204.00	
Total State Sources		$134,902.00
Federal Sources		
Federal Revenue Sharing	$ 13,320.00	
BIA Roads	18,000.00	
Total Federal Sources		$ 31,320.00
Total Revenues		$431,124.64

Anticipated Revenues

City Dock Lease (Timber Pacific Corp.)	@ $5.00/mbft	$ 50,000/year for 2 years

Source: City of Hoonah.

CHAPTER 13

Housing and Land Development Needs

Chapter 13
HOUSING AND LAND DEVELOPMENT NEEDS

The population projections assume a growth of about 45 percent over the next 20 years, which represents an increase of 350 persons in population. There is already a housing shortage in Hoonah, so any population increases will require new housing.

Per house densities average around four persons per household. The trend may decrease in the future as the population makeup changes and (presumably) as more land becomes available. At an estimated 4 persons per household, a population increase of 350 (to year 2000) will represent 88 households. Existing lot sizes range from 6,000 square feet to several acres per lot, but most of the subdivision lots are between 8,000 and 10,000 square feet. At 10,000 square feet per lot, about 4 lots occur per acre. At 4 lots per acre, and 4 people per lot (household), then 16 people per acre would be a minimum estimate for future land needs. Generally speaking, at least 20 percent of the raw land is lost to roads, utilities, etc. Therefore a population increase of 350 will require at least 30 acres for future residential development.

However, within the existing city limits there are an estimated 90 platted residential lots that are now vacant. Though some of these lots have Restricted Deed (or other title problems) or are on steep slopes and therefore of questionable developability, many of these lots would be appropriate for residential development. The city has utilities in place either at these lots or within reasonable distance to them. Some streets that are platted should be built to serve several of these lots (Spruce Street, Federal Avenue). Larger parcels, ranging from 0.5 acre to over 12 acres, exist above (east) of town now, and these lots could be subdivided to provide several more lots in the city. Additional residential lots, ranging from 9,800 square feet to 30,000 square feet, exist in the vicinity of White Alice Road and Garteeni Highway. Thus, existing in-fill city lots can probably fulfill the bulk of the city's residential land requirements for the next few years.

The in-fill lands (vacant lands within the city that have developments existing around them) are the most economical lands for development. The roads, sewer, and water are already nearby, so the city does not have to expend significant dollars to provide basic services. As more users connect to the existing facilities, more revenue for operations and maintenance will be available. The base for cost sharing will become broader. These are critical considerations for the city, since historical practices have not balanced revenues with operations costs.

There are two significant obstacles to accomplishing in-fill development:

1. Land status--The status of these lots is either Unknown Status or Unrestricted - Deed Not Issued. These findings were developed from a preliminary title search of Recorded Titles. Several lots are in the ownership of the city, but deeds have not been made available for public disposal.

2. Lack of incentive to build on or sell property--Many parcels are owned by persons who have no incentive to build housing or to sell at this time. These parcels can be held at no cost to the owner (no property taxes and no utilities assessments). The city could develop incentives to attempt to get these lots on the market, such as:

   - Property tax

   - Utilities assessment--If a parcel abuts an existing city street and/or is close to sewer or water services (specific distances can be determined), then the lot will be assessed accordingly.

The city should strive to resolve the title issues of in-city lands. The city should give priority to those lands of Unrestricted Deeds for which the deeds have not yet been issued.

CHAPTER 14

Areas Meriting Special Attention

Chapter 14
POTENTIAL AREAS MERITING SPECIAL ATTENTION

Through the resource inventory and the analysis of resources and future development activities, certain areas have been identified as meriting special attention. These are areas that provide significant resources to the residents of Hoonah, but could experience significant change in the future. The city wishes to acknowledge these potential conflicts and to begin identifying special management techniques to help maintain those resources. The city has identified three areas as potential Areas Meriting Special Attention and one generic habitat consideration.

LONG ISLAND

Long Island lies 1-1/4 miles west southwest of the City of Hoonah, between Hoonah and Game Creek. The island is being developed as a log transfer facility, with loading ramp, dolphins, access road, and bridges. Approximately 34,000 cubic yards of material have been placed in intertidal areas for construction of the access road, and 92,000 cubic yards of fill will be used to construct the log transfer facility. This facility will be used by the major landowners of northern Chichagof Island for national and international log transshipments. The facility will be built on Huna Totem Corporation land, as a joint venture with the U.S. Forest Service and Alaska Lumber and Pulp Co. An estimated 1,322 million board feet of wood could be transshipped from this facility.

The area surrounding Long Island has been a traditional and customary resource use area for many years. King crabs, shrimp, cockles, herring eggs, and waterfowl are harvested around the island and associated tideflats. The island is close to the city. Potential adverse effects of log storage, debris buildup, refuse disposal, and aesthetic deterioration are the concern of both the city and Huna Totem Corporation.

The area within this proposed AMSA had remained essentially undeveloped until 1982 when the first roads were constructed south of the airport. Until that time, all access to this area was by skiff or other small boats. The Mt. Bether Community was the only development in the area. Hoonah residents used the general area extensively for waterfowl and deer hunting, fishing, shellfish and herring harvesting, and other traditional and customary resource gathering. Resource harvesting appeared to remain in balance with resource production over the years, presumably because of limited access.

Now that the timber development plans of the Forest Service, Huna Totem, and possibly Sealaska are proceeding into full

operation, the Long Island area is experiencing dramatic change. Easy road access has now opened the area to extensive, everyday use. Resource harvesting, particularly deer hunting, has increased several-fold and already some evidence suggests that radical depletions in the deer populations have occurred.

The Tyler Bros. Log Company camp has placed over 100 persons as residents in the midst of this AMSA. The log transfer facility will experience heavy use both on the island and in surrounding waters. Mt. Bether Community may see a road link to Hoonah for the first time. In summary, the Long Island AMSA area has quickly changed from moderate use to extensive use, and the capability of the resources to accommodate the change is of paramount concern to the Hoonah residents.

If the site and appropriate surrounding areas are designated an Area Meriting Special Attention, a comprehensive plan will be developed to ensure compatibility of uses. The proposed development has already been permitted by the state and Federal agencies.

Preliminary joint management meetings have been held between the major land owners, managers, and operators for this area. These parties include the Huna Totem Corporation, the U.S. Forest Service, Tyler Bros. Log Company (as operators of the log camp and the major road builder), Mt. Bether Bible Community, and the City of Hoonah (representing the residents of Hoonah who have traditionally used these areas).

Through these meetings an area boundary was developed (see Figure 23) to include all those tidal and intertidal areas from the Gartina Flats and saltmarshes at the Hoonah airport, south to the end of the Game Creek tide flats (southwest of the Mt. Bether community). The waterward boundary includes all those areas that have a direct influence on the shoreline areas and the log transfer facility. The upland boundary is restricted because of Federal land ownership, thus the boundary follows the Mean High Water line along the shoreline and those streams of state ownership (Game Creek and Gartina Creek). Huna Totem lands are included within the boundary, specifically Long Island, False Point, and the airport/Gartina Flats areas (now mixed with city ownership as a result of reconveyance).

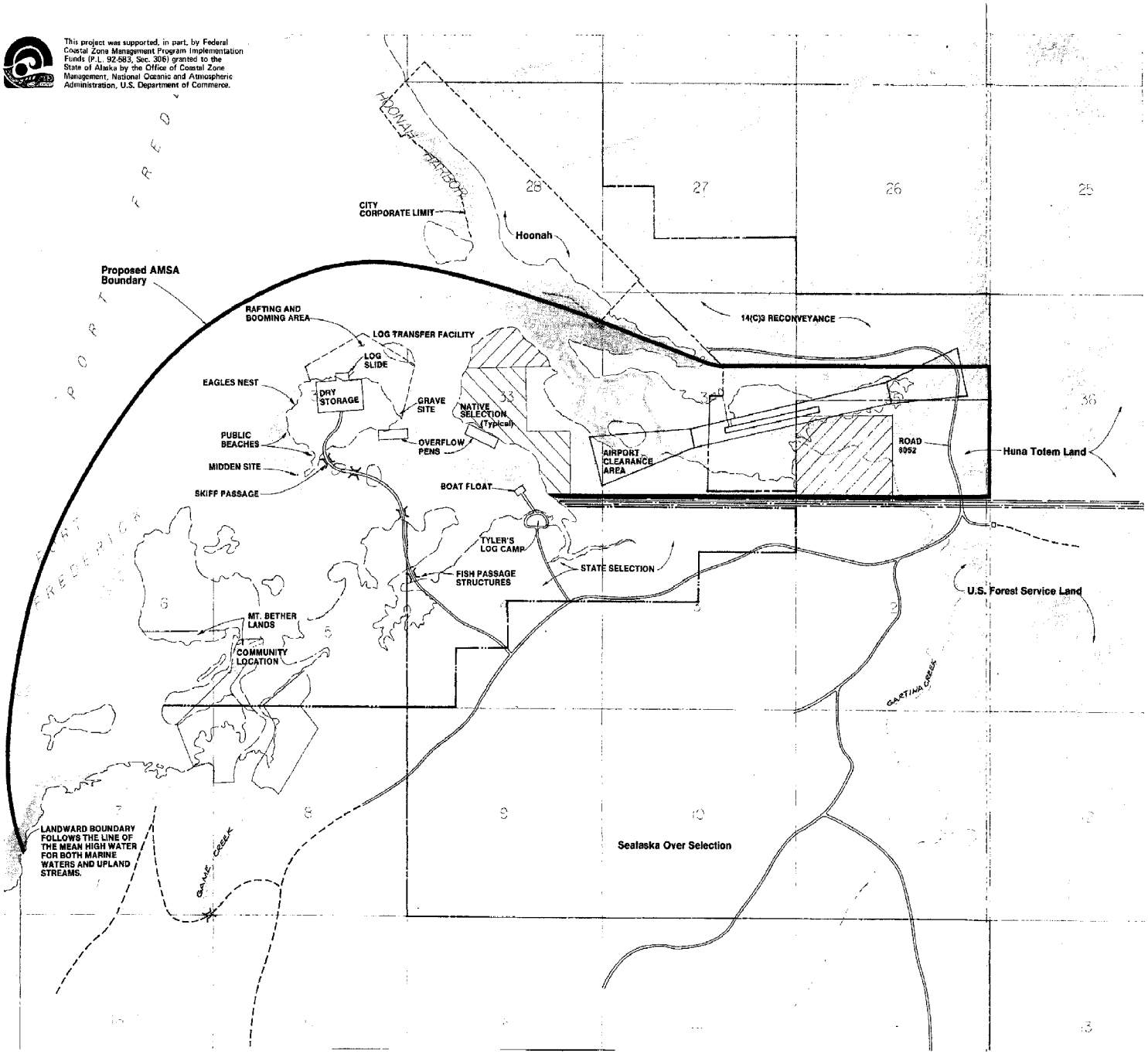
A general management plan now being discussed would designate the immediate Long Island area, including those waters between the island and False Point as industrial development. The primary use of these areas would be for the operation and support of the LTF. Special provisions for public skiff movement through the area would be provided, as this is an important transportation route between the city and the Game

This project was supported, in part, by Federal Coastal Zone Management Program Implementation Funds (P.L. 92-583, Sec. 306) granted to the State of Alaska by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

FIGURE 23

Long Island Area Meriting Special Attention

PROPOSED



SOURCE: North Pacific Aerial Surveys, Inc., Anchorage, Alaska; Huna Totem Corp.; CH2M HILL.

HOONAH COASTAL ZONE MANAGEMENT PROGRAM

SCALE: 1" = 2,500'

0 500 1,500 2,500 FEET

NORTH

BASE MAP SOURCE: NORTH PACIFIC AERIAL SURVEYS, INC., ANCHORAGE, ALASKA, 1975. ORIGINAL SCALE 1:63,360.

CH2M HILL 1983

Creek area (especially during bad weather). The corporation hopes to achieve long-range planning and permitting by designating the specific areas it will need for the long-term operation of the LTF.

The Gartina Flats and the entire Game Creek area from the Long Island access road south to the AMSA boundary would be designated for resource protection. This designation would advocate a management plan that would protect the resources from over-harvest and other adverse impacts. The Alaska Department of Fish and Game would have to take a lead role in this management plan, as it has the authority to manage harvest levels in the area.

The state and Federal resource agencies with management responsibilities in the area have received large-scale copies of Figure 23. AMSA management plans will be developed in conjunction with all landowners, operators, and resource managers.

NEKA BAY AND BIGHTS

Neka Bay, North Bight, and South Bight lie approximately 8 miles southwest of Hoonah on the west side of Port Frederick. The Neka River drains into Neka Bay, and Neka Mountain (El. 2972) lies to the immediate north. The area is very heavily used by Hoonah residents for recreation, berry harvesting, and hunting and fishing for deer, waterfowl, salmon, trout, and clams.

Logging activities will begin in the near future in the bay and surrounding areas. Several specific cutting units have already been identified. A major haul road already exists along the south side of the Neka River, which terminates at the Eight Fathom Bight log camp and log transfer facility of ALP. Development activities should consider the extensive use of Neka Bay, North Bight, and South Bight by the residents of Hoonah. Special management planning may be appropriate to ensure that both development and traditional and customary uses can occur. The upland areas are under Federal ownership and management and therefore would be excluded from an AMSA designation.

WHITESTONE HARBOR

Whitestone Harbor has long been used for traditional and customary purposes by the residents of Hoonah. This is a high recreation use area, and provides important anchorage for the Point Augusta area. Waterfowl are hunted at the mouth of Suntaneen Creek, and seaweed and gumboots are harvested throughout the harbor. Salmon are fished throughout this area as well.

The Forest Service has built a barge loading facility for logs in Whitestone Harbor, but the facility may not be used until the late 1980's. The facility would serve ALP logging operations throughout the drainage. A proposed Alaska Power Authority transmission line corridor transects Whitestone Harbor.

Whitestone Harbor is a very high priority area for continued use by Hoonah residents. Hoonah residents believed that the Long Island LTF was to serve all of Northern Chichacoff Island, and consented to the Long Island development with the understanding that Whitestone Harbor would then be protected. City officials would prefer to have Long Island serve as the only LTF in the area.

DEER HABITAT AND HARVEST

Deer harvesting is a vital element of food acquisition for Hoonah residents. It is estimated that four deer are harvested every year by every household in Hoonah. Unique habitat exists for these deer in this area, particularly in the lowlands adjacent to Icy Strait. There is growing concern that the deer populations may suffer adverse impacts because of 1) elimination of certain habitats because of logging, and 2) increased access for, and number of, hunters.

Particularly unique and heavily used deer habitat areas exist from Point Augusta west almost to Point Sophia, and from Point Adolphus east to the Halibut Creek area (see Figure 15). Both of these areas are low-lying, relatively flat areas that face Icy Strait. They are backed by relatively high ridges (El. 1600-2700 feet) that are snowbound through the winter. High concentrations of deer occur in these areas during the winter months, when the deer are driven down out of the mountains. Much of these lowlands are characterized by muskeg flats with small conifer islands scattered throughout. Deer can be found in high concentrations on these small conifer islands, subject to easy volume killing.

Logging activities within these areas could seriously impact important habitat for wintering deer. Prime timber stands may also be prime habitat areas that provide essential food and cover for large numbers of deer. Logging activities will also mean extensive road building, providing easy human access into areas that have historically required considerable effort to reach. It is likely that the number of hunters and the frequency of visits to prime deer habitats will rise significantly. This threat to deer populations applies to all areas within the planning area, and could represent a serious impact to the deer population of northern Chichagof Island. The threat of greatly increased harvesting will be particularly true in the areas of prime deer use (such as the Icy Strait lowlands).
Special management practices must be considered for these areas to protect the deer populations and the traditional and customary uses.

APPENDIX

Appendix A
COASTAL MANAGEMENT PROGRAM AMENDMENTS

There are two types of amendment that can be made to a district program: significant and nonsignificant. The criteria for distinguishing between the two amendment types is set forth in 6 AAC 80.900(23). The district makes the recommendation to the Alaska Coastal Policy Council (ACPC) as to whether an amendment is significant or not. The district can contact the Office of Coastal Management (OCM) if it needs assistance in making this recommendation. Once the recommendation is made, it can be reviewed by ACPC upon a legitimate request by an affected party.

Nonsignificant amendments are considered matters of routine program implementation, as set forth in 6 AAC 85.120(c). ACPC approval is not required for these amendments. After the district decides an amendment is nonsignificant, it should announce its findings by means of a public notice that also describes the amendment itself. All such notices and proposed amendments should routinely be sent to OCM. OCM will ensure that the ACPC and appropriate state and Federal agencies are notified. Amendments determined by the district to be matters of routine program implementation need not be delayed pending submittal to OCM, but may taken effect immediately upon formal adoption by the district.

Significant amendments must have ACPC approval before they have the effect of state law. The procedure for ACPC approval is the same as for the original program (6 AAC 85.120-160). Districts should prepare findings and conclusions as to the consistency of the amendment with the applicable Alaska Coastal Management Program (ACMP) guidelines and/or standards, and with the unamended portion of the district program itself. It should be remembered that AS 46.40.100 requires districts to act consistently with their own programs, and that an amendment to the program would fall under this requirement.

It is important to note that both nonsignificant and significant amendments take effect under Title 29 powers as soon as they are formally adopted by the district. Nonsignificant amendments also take effect under ACMP law upon district adoption. However, significant amendments take effect under ACMP law only upon ACPC approval.

Appendix B
COASTAL REGULATIONS

It is the intent of the Hoonah Coastal Management Program to avoid creating new regulatory requirements for resource users in the coastal area. The Hoonah program instead intends to better use the existing regulatory authorities of the state and Federal government. The program hopes to effect better coordination and cooperation among the land managers, the public, and the regulatory agencies.

The Alaska Coastal Management Act of 1977 (Alaska Statutes 46.40.100) requires that state agency land and water use regulations be administered consistently with local coastal management programs (within the District) that are approved by the Alaska Coastal Policy Council.

The Federal Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et seq.) requires that Federal agencies be consistent, to the maximum extent feasible, with approved state coastal management programs.

The Hoonah Coastal Management Program, if adopted by the Alaska Coastal Policy Council, will carry that "consistency" requirement for all future state and Federal activities (see Chapter 9 for clarification of planning authorities). The following chart lists the various state and Federal activities that may occur within the coastal zone. Hoonah will use this chart to determine regulatory authorities and responsibilities within the coastal zone. Numerous laws are already available to manage coastal resources; the coastal management program simply intends to better clarify their respective applications.

The coastal regulations chart lists the regulatory authorities by subject matter or activity. The lead agency is listed (abbreviated), as well as the legal authority. The agency responsibility column specifies if a permit, a public notice, or some other means for public review of the proposed action is required. Comment period refers to the legal requirement for responses to a permit or public notice. The city notification column lists whether the city will formally request notification of an activity occurring within the District, the AMSA, and/or the Planning Area. The response column indicates whether the city will respond to the notification or how the city may determine if it will or will not respond. Under notes, information is given that better explains the permit, public notice, or process. The chart's primary function is to serve as a guide for persons who will implement the Hoonah program.

Coastal Regulations (State & Federal)

Activity or Area of Concern	Lead Agency	Legal Authority	Agency Responsibility: PERMIT	Agency Responsibility: PUBLIC REVIEW OR NOTICE	Comment Period (IF APPLICABLE)	City Requests Notification	City Response?	Notes:
STRUCTURES & WORK IN WATERWAYS	Corps of Engineers	33 CFR 323	Sec 10	Yes	30 day	District	Use Checklist	Includes pilings, dolphins, jetties, harbors, floats, etc. Almost all activities in any waterway will require this permit. Will also require a 401 certification.
DISCHARGE DREDGE OR FILL MATERIALS IN WATERWAYS, WETLANDS, MUSKEGS	Corps of Engineers	33 CFR 323	Sec 404	Yes	30 day	District	Use Checklist	Most large waterfront projects will require this permit, as well as water impoundments, road crossings of wetlands, etc. Will also require a 401 certification.
ENVIRONMENTAL IMPACT STATEMENT (Federal)	Fed. Agency sponsoring or permitting activity	40 CFR 1500 (NEPA)	Not necessarily	Draft & Final documents available for public review	Draft 45 days Final 30 days	Yes	Depends on project	Any project within Planning Area requiring an EIS is considered "major" and significant.
WASTEWATER DISCHARGE INTO WATERWAYS	EPA	40 CFR 125	NPDES	Yes	30 day	District	Use Checklist	NPDES (National Pollution Discharge Elimination System.)
• Wastewater disposal	DEC	AS 46.03.100	Wastewater disposal permit	Yes (local paper)	30 day	District		Permit often combined with NPDES.
• Sewage Plant discharge	DEC	AS 46.03.100	Wastewater disposal permit	Yes (local paper)	•			Usually applied for as NPDES permit.
• Federal activity certification	DEC	18 AAC 15.180	401 certification		30 day	District	Use Checklist	Any federal activity involved with water activities requires a "401 certificate of reasonable assurance" that water quality will be protected.
MUNICIPAL WATER SUPPLY								
• Drinking water standards	DEC	AS 46.03.020		Monitoring program by DEC & city	On-going	Yes-whenever standards are exceeded	Yes	Monitoring program by city and DEC necessary to maintain water quality in watershed.
• Source Protection	DEC	18 AAC 80.020		Through monitoring program		Yes-any occurrence in watershed	Yes	Law is means to protect municipal water supply watershed.
• Source Protection	City	AS 29.48.037						City can adopt ordinance to protect water source outside city.
• Maintainance of Municipal Watershed	Forest Service	36 CFR 251.9	No	Probably	?	Yes	Yes	Provision for city and Forest Service to develop a mgmt. plan for Forest Service lands in municipal watershed.
WATER APPROPRIATIONS	DNR	AS 46.15.020	Yes	Yes	15 days	District	Use Checklist	Major appropriation requests in Planning Area may require city review.
• Temporary Water Use	DNR	11 AAC 93.210	Some No Usually Yes	Discretionary	15 days	District	?	Would usually reflect other permits.
TIDELANDS LEASE	DNR	AS 38.05.070 .315	Yes	Yes(?)	30 day	District	Yes	Major leases in Planning Area may warrant comments also. City to request DNR to use Plan document in considering leases.
• Protection of Fish & Game	DNR	11 AC 62.030 .730	No	No	No	District	?	Requires DNR to get letter from ADFG evaluating impacts to fish and game.
• Protection of Fish & Game	ADFG	AS 16.05.870	No	No	No	District	?	Enforcement provision for ADFG to protect fish & game. Enforcement includes all activities, not just tidelands leases.
• Protest Lease Applications	DNR	11 AAC 62.130	No	No	30 days from P.N.	?	?	Provides that anyone can protest a lease. Must justify rationale for protest.

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Coastal Regulations (State & Federal)

Activity or Area of Concern	Lead Agency	Legal Authority	Agency Responsibility		Comment Period (IF APPLICABLE)	City Notification	City Response?	Notes:
			PERMIT	PUBLIC REVIEW OR NOTICE				
EASEMENT TO/ALONG PUBLIC WATERS	DNR	AS 38.05.127	?	?	?	District	?	Easements often for private purposes may affect traditional access.
SALMON SPAWNING STREAMS & WATERS INTERFERENCE	ADFG	AS 16.05.257 16.10.010	No	No	-	District	?	Enforcement provision to protect streams from diversion, pollution, obstruction etc.
PROTECTION OF FISH & GAME	ADFG	AS 16.05.870	No	No	No	District	?	Any work in public waterways requires notification of ADFG. Can use as enforcement mechanism.
PROTECTION OF CRITICAL HABITAT AREAS	ADFG	5 AAC 95.050	No	No	No	-	-	State charge for agency to maintain & protect critical habitats.
EAGLE PROTECTION	USFWS	16 USC 668 (A-C)	Depends	No	No	-		Eagles & their habitat are stringently protected under this act. Any activity within 330' of nests needs consultation w/USFWS.
FOREST PRACTICES								
• Cutting Notification	DNR	11 AAC 95.030	No	No	-	District	Use Checklist	Harvester must notify DNR 30 days prior to cutting. DNR reviews for standards of Forest Practices Act. No public involvement usually.
• Inspections	DNR	11 AAC 95.040	No	No	No	District	Use Checklist	DNR can inspect operations any time. Usually give 5 day notice prior to site visit.
• Road Construction Practices	DNR	11 AAC 95.110	No	No	-	-	-	Stipulates design criteria for road work to protect habitat, soils, run-off, etc.
• Stream Alteration and Protection	ADFG	AS 16.05.840 AS 16.05.870	-	-	-	-	-	ADFG must approve prior to any alteration/ modification of state waters.
• Harvesting Standards	DNR	11 AAC 95.120	-	-	-	-	-	Erosion protection, water quality, debris removal from streams.
• Clean up & Stabilization	DNR	11 AAC 95.130	-	-	-	-	-	Clean-up & soil stabilization standards.
• Aesthetics	DNR	11 AAC 95.140	-	-	-	-	-	Aesthetics protection.
• Log Transfer & Storage Facilities	DNR	11 AAC 95.150						Criteria & recommendations for siting & use.
• Slash Removal	DNR	11 AAC 95.160						Standards for removal of slash.
• Reforestation	DNR	11 AAC 95.170						Standards for reforestation.
MINERALS EXPLORATION & DEVELOPMENT	Forest Serv. (For.Serv.Land)	36 CFR 252	Yes	?	-	District	Use Checklist	Major proposals for Planning Area presumably fall under NEPA EIS requirement.
• State Mineral Leasing	DNR	AS 38.05.345	Yes	-	-	District	Use Checklist	Would include all state waterways.
• Oil & Gas Leasing	DNR	AS 38.05.020	Yes	Yes	30 days(?)	District	Use Checklist	Permit application becomes Public Notice for comment.
• Wells & "Fields" Listings	DNR	20 AAC 25.545	-	Yes	-		-	City can get on mailing list for all notices of Oil & Gas Conservation Commission.
• Pipeline Right-of-way Leases	DNR	11 AAC 80.005	-	-		District	?	R.O.W. requests for state lands (includes streams, other bodies of water)
• Oil Spill Prevention Control	EPA	40 CFR 112.3	Requires SPCC Plan	-		District		Application to EPA for facilities that could spill oil into waterways. Needs Spill Prevention Control & Counter-measure Plan (SPCC).

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Activity or Area of Concern	Lead Agency	Legal Authority	Agency Responsibility		Comment Period (IF APPLICABLE)	City Notification	City Response?	Notes:
			PERMIT	PUBLIC REVIEW OR NOTICE				
STORAGE & VESSEL HANDLING OF HAZARDOUS WASTES	U.S. Coast Guard	33 CFR 126	General Permit for Facilities	No	-	District	If in district yes. Otherwise use checklist.	Facilities need permit; vessels only require review.
SOLID WASTE MANAGEMENT	DEC	18 AAC 60.020	Yes	Yes	30 days	District	If so must be in writing	Permit for disposal of anything more than a duplex, dorm, or small incinerator (200 lbs/hr). Also for landfill modification or move.
DAMS & DIKES ON WATERWAYS	Corps of Engineers	33 CFR 321	Permit to construct	Yes(?)	?	District	Use Checklist	Often will tie into Sec 404 permit, requiring Public Notice and review.
HYDROELECTRIC LICENSE	FERC	18 CFR 1-149	Yes	Yes	30 days	District	Use Checklist	Permit needed for any facility that would generate hydroelectric energy.
FLOODPLAIN MANAGEMENT	Corps of Engineer	E.O. 11988	-	Planning		District		Corps maps & comments on floodplain alterations.
• Disaster Protection	SBA	P.L.93.234	-	-		District		Assistance available for flood hazards from Small Business Administration.
AIR QUALITY • Pollution Emissions	DEC	18 AAC 50.300 18 AAC 50.400	Yes	Can be requested	30 days	District	Yes	Public hearing to review application can be requested.
SUBDIVISION PLAN REVIEW	DEC	18 AAC 72.065	No	By request?	-	District	Use Checklist	Any subdivision of 5 lots or more without municipal sewer & water requires a complete plan review by DEC.
TRADITIONAL & CUSTOMARY RESOURCE USE								
• Protection of Use on Federal Lands	Federal Land Manager	16 USC 3120	-	-	-			Provisions for protection of such uses on Federal lands. (ANILCA)
• Protection of Access to Federal Lands	Federal Land Manager	16 USC 3121	-	-				Provisions for protecting access to Federal lands for traditional and customarty uses. (ANILCA)
• Cooperative Agreements	Department of Interior	16 USC 3119	-	Yes	-		-	Secty. of Dept. of Interior can enter into cooperative agreements to maintain & protect traditional and customary uses. (ANILCA)
• Local Advisory Council	Board of Fish Board of Game	16 USC 315	-	Yes	-		Yes	Local Advisory Council can make recommendations for fish & game rulemaking/policy to Regional Advisory Council, which could go to Boards. "Best link to fish & game mgmt." (ANILCA)
• Hunting Regs to protect subsistence	ADFG	16 AAC 05.257	-	?	-		Yes	Can petition Board of Game for subsistence protection.
• Priority for subsistence	Federal Land Manager	16 USC 3114	-	-			Yes	Provisions which give traditional & customary use (non-wasteful) priority over all other fish and games uses on Federal lands. (ANILCA)
DAM > 10 FT HIGH OR IMPOUNDING > 50 AC FT	DNR	11 AAC 93.160	Yes	?	?	Yes	Yes	

Appendix C

CITY OF HOONAH, ALASKA
A RESOLUTION ENACTING CONCEPT APPROVAL OF
THE HOONAH COASTAL MANAGEMENT PROGRAM

Be it enacted by the Council of the City of Hoonah that:

Whereas, AS 46.40.030 states that coastal resource districts shall develop and adopt district coastal management programs in accordance with the provisions of the Alaska Coastal Management Act and the Alaska Coastal Management Program, Guidelines and Standards, and

Whereas, a comprehensive Coastal Management Program has been developed which recognizes that: 1) the coastal area of the City of Hoonah is a distinct and valuable natural resource of concern to the people of Hoonah; 2) the demands upon the resources of the coastal area are significant and will increase in the future; 3) the protection of the natural, cultural and scenic resources and the fostering of wise development of the coastal area is essential, and

Whereas, the Hoonah Coastal Management Program avoids the creation of new regulatory structures wherever possible, relying instead upon existing Federal, state and local authorities to implement the provisions of the Act.

Now, therefore, be it enacted by the Hoonah City Council that the Hoonah Coastal Management Program be concept approved and forwarded to the Alaska Coastal Policy Council and Office of Coastal Management for adoption by the State of Alaska. Upon acceptance by the State of Alaska, the City of Hoonah intends to adopt the Hoonah Coastal Management Program by ordinance within 90 days pursuant to 6 AAC 85.120(f).

Passed and approved by the Hoonah City Council this _____ day of _____, 19__.

Miles M. Murphy
Mayor

Appendix D
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Persons and Organizations Contacted

Alaska, State of, Department of Environmental Conservation: Dick Stokes, Gene Rehfield, Bruce Hoffman, Doug Redburn

Alaska, State of, Department of Fish and Game: Gary Liepitz, Glen Seaman

Alaska, State of, Department of Natural Resources, Division of Forest, Land, and Water Management: Joan Gilbertson, Tom Lawson

Alaska, State of, Department of Natural Resources, Division of Parks, Office of History and Archaeology: Ty L. Dilliplane, State Historic Preservation Officer; Diana Rigg, Archaeologist

Hoonah, City of: Miles Murphy, Mayor; Gordon Greenwald, Chairman, Planning and Zoning Commission; Paul Dybdahl, Harbormaster; Tom Brown, School Superintendent; Chuckie Johnnie; Roxanna Banquis; Mike Thompson; Corky Thompson; Jeff Goodell; Stan Taff

Huna Totem Corporation: Keith Walker; Don Gentry; Robert Starbard

Sealaska Corporation: Rick Harris

U.S. Department of Agriculture, Forest Service: Joe Chiarella, Hoonah Ranger District; Charlie Knight, Chatham Area, Tongass National Forest, Sitka; Stan Davis, Archaeologist, Chatham Area, Tongass National Forest, Sitka

Appendix E
PUBLIC PARTICIPATION PROGRAM

A public participation program was conducted throughout Phase I and Phase II of the Hoonah coastal management program to ensure that the interests, concerns, and knowledge of Hoonah's citizens have been included in the program. Consultation and review with local authorities, the native corporations, and state and Federal agencies was also conducted throughout Phase I and Phase II.

The Hoonah Planning and Zoning Commission met since the beginning of Phase I to identify the general concerns of the community and to provide direction for all elements of the work. The Commission was instrumental in defining the planning area boundaries. Commission members helped develop a survey that was distributed to each Hoonah household to obtain residents' opinions about population growth, economic development, community facilities, and natural resource use. The results were considered by the Commission in formulating the issues, goals, and objectives of the community. The Commission also developed the Future Land Use map, policy implementation strategies, and the other key elements contained in this plan. All Commission meetings have been open to the public, providing opportunities for direct public involvement throughout the process.

Many Hoonah citizens participated in identifying traditional and customary natural resource use. Base maps were distributed to individuals and small groups, who mapped the resources and areas they personally use or have knowledge of. Mapping was also done at a workshop session at one of the public meetings. A detailed questionnaire was distributed to each Hoonah household to gather further data about the species, locations, and quantities harvested by each household.

Public meetings have been held on April 4, 1982, May 25, 1982, December 9, 1982, and March 29, 1983. These meetings afforded all citizens the opportunity to express their opinions and become involved in coastal management planning. Additional public meetings will be held for review of this document.

A public information center was set up in the Hoonah post office. This display explained the program, posted meeting notices, and presented current information and activities. Articles about the program were also contained in several issues of the community newsletter.

The Hoonah Planning and Zoning Commission has provided a continuous link between the planning process and the public.

The Commission has involved members of the community whenever possible throughout the process. The Commission has also met jointly with the City Council to review the planning efforts of the program and the decisions of the future.

Appendix F
BASE MAP SOURCES

CITY MAP

Map Area	Reference and Date
Boat harbor (fill area and breakwater)	U.S. Department of Health, Education, and Welfare; Sanitation Facilities Construction Branch; Environmental Health Branch Date: March 1980 Alaska District, Corps of Engineers Date: March 9, 1979
Road that comes off of Blueberry Ave. and goes northwest	U.S. Department of Interior, Bureau of Indian Affairs, Juneau area Date: March 20, 1975
Sanitary landfill area and old Water Treatment Building	U.S. Department of Health, Education, and Welfare; Sanitation Facilities Construction Branch; Environmental Health Branch Date: March 1980
Coastal Glacier Cannery City Dock and Kane's Dock	Toner & Nordling (Engineers) Tidelands addition to the City of Hoonah Date: 1964
Hoonah City Dock	Bomhoff & Associates Engineering and surveys Date: July 1973
Hoonah Ferry Terminal	Bomhoff & Associates Engineering and surveys Date: 1973
Mean low water line	Alaska Division of Lands Alaska Tidelands Survey Date: June 25, 1964
Corporate limits in water	Alaska Division of Lands Alaska Tidelands Survey Date: June 25, 1964
Corporate limits on land	U.S. Survey No. 1899 Hoonah Elimination from Tongass National Forest by E. C. Guerin, U.S. Cadastral Engineer Date: June 1930

CITY MAP (continued)

Map Area	Reference and Date
Creeks (Spud and Dalton)	U.S. Department of Health, Education, and Welfare; Sanitation Facilities Construction Branch; Environmental Health Branch Date: March 1980
Plat containing Hill Street, N. Second Street, N. First Street	Portion of U.S. Survey No. 1735 By E. D. Calvin, U.S.C.E. Date: September to October 1926
Plat containing Second Street, First Street, Park Avenue, Marine Way, Mission Ave, Rossevelt Street, Broad Street	Portion of U.S. Survey No. 1735 A Resurvey by Harold Radcliffe, Cadastral Surveyor Date: July to August 1959
Plat containing Hemlock Street, Spruce Street, Blueberry Avenue, Federal Avenue, and Hill Avenue	U.S. Survey No. 3716 By Harold Radcliffe, Cadastral Surveyor Date: August to September 1959
Plat containing church, city hall, and oil tanks	U.S. Survey No. 2577 By F. W. Williamson, Associate Cadastral Engineer Date: April 1943
Plat containing school, ANB hall, tribal corporation building, sewage plant, church, and lots	Hoonah, Alaska, Subdivision, Bureau of Indian Affairs, Branch of Roads Date: December 27, 1968
Area with Douglas Street and circle off of Douglas Street	Hoonah, Alaska, Subdivision, Bureau of Indian Affairs, Branch of Roads Date: December 27, 1968
Plat below Garteeni Highway containing Third Avenue, Second Avenue, and First Avenue	U.S. Survey No. 2128 By Chas. P. Seelye, U.S. Transitman Date: June 1932
Area with S-shaped road between Douglas Drive and Garteeni Highway, Lots 1-25	Turnkey III Housing, 2nd Phase Housing Subdivision, Northwest Design Associates Date: 1976
Plat containing Douglas Drive, Kantukan Court, and Community Building; Third Avenue also drafted from this survey; Lots 1-37	Gaudekan Subdivision, Fraction of U.S. Survey No. 4539 By R&M Consultants, Inc. Date: March 1980

CITY MAP (continued)

Map Area	Reference and Date
Area containing White Alice Site Road, south end of Douglas Drive; BIA maintenance shop, water storage tanks, and First Avenue	Hoonah, Alaska, Subdivision, Bureau of Indian Affairs, Branch of Roads Date: December 27, 1968
Pitt Island	Aerial photo by State of Alaska Department of Highways; Planning and Research Division Date: 1970

VICINITY MAP

Map Area	Reference and Date
Hoonah City	From City Map by CH2M HILL Date: March-May 1982
White Alice Site Road and Radio Relay Site	U.S. Department of Health, Education, and Welfare Hoonah Municipal Watershed Date: April 3, 1970
Dalton and Shotter Dams and Shotter Creek	U.S. Department of Health, Education, and Welfare Hoonah Municipal Watershed Date: April 3, 1970
Contours	U.S. Department of Health, Education, and Welfare Hoonah Municipal Watershed Date: April 3, 1970 U.S. Department of the Interior, Geological Survey
Cannery, Hoonah Airstrip, Shoreline, Spasski Trail, road to cannery, Cemetery Creek, Gartina Creek, and cemeteries	U.S. Department of the Interior, Geological Survey
Road to Hoonah airstrip	Hoonah, Alaska, Electrical Distribution System Tlingit-Haida Regional Electrical Authority

Appendix G
LAND TITLES/STATUS

Land ownership, or land title, problems have been of concern to the City of Hoonah for several years. As is the case in many communities that do not undertake local property taxation, the parceling and selling of lands is not always recorded with the state. As a result, certain titles (deeds to ownership) can be clouded over the years, and the legal ownership of certain parcels is unclear. The city has an additional problem because of the fire of 1944 that destroyed two blocks of downtown homes. In a state of emergency, the Bureau of Indian Affairs rebuilt the houses without first properly researching and surveying the legal parcels. It is suspected at this time that several houses are not placed on the appropriate lot, and that local streets and easements may be improperly located.

As part of the resource inventory and analysis, the title question was further researched. Status plats were obtained from the Tlingit and Haida Central Council, and a land status map was developed in the inventory (see Figure 4). Lot lines had not been mapped for Hoonah for many years, and a lot line base map was developed for land use mapping. This map drew upon 15 different sources, although several are not legally recorded documents.

The land status map and the lot line base map were sent to the Southeastern Title Agency, Inc., a title company in Sitka. This agency was asked to generally review the data and to check this information with the recorded data, where feasible. The Southeastern Title Agency determined that these maps generally looked representative of the status of the city, although they could provide no assurances of legal accuracy without detailed research.

The Southeastern Title Agency did provide an estimate for a complete examination of the titles. There are approximately 500 known parcels to research. The cost could range between $60,000 and $70,000.

The study would research all recorded and filed documents for parcels within the city limits, and would identify owner of record, easements, restrictions, and leases. This information would determine the legal status of the land parcels within the city according to recorded and filed documents. Information regarding unrecorded lot splits, family ownership transfers, etc., could only be researched through individual personal interviews of citizens. This effort would be extremely time-consuming and could pose significant legal problems (title disputes, etc.).

With accurate title records and parcel descriptions and the verification of easements, lot splits, etc., land lines can be properly ground-checked. This requires land surveys of each subdivision, lot split, easement, etc., to verify ground status with recorded legal descriptions. Land surveys for the parcels in Hoonah could require several weeks of survey work and mapping. The cost could vary between $25,000 and $150,000 for that survey work, although a more definite figure could be developed once the title search was completed.

Following is the letter from the Southeastern Title Agency.

Southeastern Title Agency, Inc.

P.O. BOX 1223
SITKA, ALASKA 99835
(907) 747-3278

June 21, 1982

Mr. Daniel D. Heagerty
CH2M Hill
200 S.W. Market Street
Portland, Oregon 97201

Re: City of Hoonah, Alaska

Dear Mr. Heagerty:

Research of the Hoonah, Alaska files in this office indicates the area encompassed by the City of Hoonah is comprised of, at least, the following U.S. Surveys:

736	2097	3716
751	2124	3717
1735	2128	4539
1899	2414	ATS No. 29
1929	2414A	

this breaks down to approximately 500 parcels, or individual lots.

We are willing to undertake an examination of the entire area and furnish our "Limited Liability" report on each unit. This report would reflect the results of an examination of all the recorded and filed documents affecting the property and show:

Owner of Record
Easements
Restrictions
Leases

as well as such additional matters disclosed by examination of the records.

For purpose of clarification, and to reduce the cost to the customer and still comply with the regulations of the Insurance Commissioner, we will, for the project, consider a unit to be any property within the same subdivision in common ownership.

(continued)

Past examinations of this area have proven to be difficult since there is no local taxing authority who keeps records, nor any other source we can contact. A large portion of the property is "Native Restricted", probates of deceased parties estates must be handled by the Bureau of Indian Affairs and this has proven to be seldom done. Parties in possession are quite often not the owners of record.

There are many other matters that can affect the titles which would only be discovered by complete examination.

We would require at least three months to complete this examination and estimate the total cost to be between $60,000.00 and $75,000.00.

Enclosed is a copy of Plat No. 109, Tidelands Addition to the City of Hoonah.

If you require further information please contact us.

Sincerely,

Dale P. Forrester

dpf/jmh

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