CITY OF LARSEN BAY
KODIAK ISLAND, ALASKA

COMPREHENSIVE DEVELOPMENT PLAN

KODIAK ISLAND BOROUGH

JULY 1984

LARSEN BAY
COMPREHENSIVE DEVELOPMENT PLAN
City of Larsen Bay
Kodiak Island Borough, Alaska

July, 1984

Prepared by:
NORGAARD CONSULTANTS

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SETTING AND ENVIRONMENT

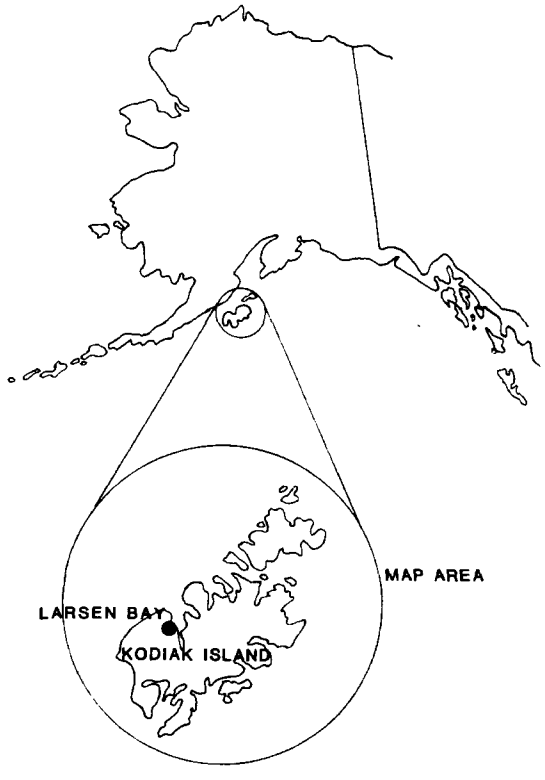
HISTORY

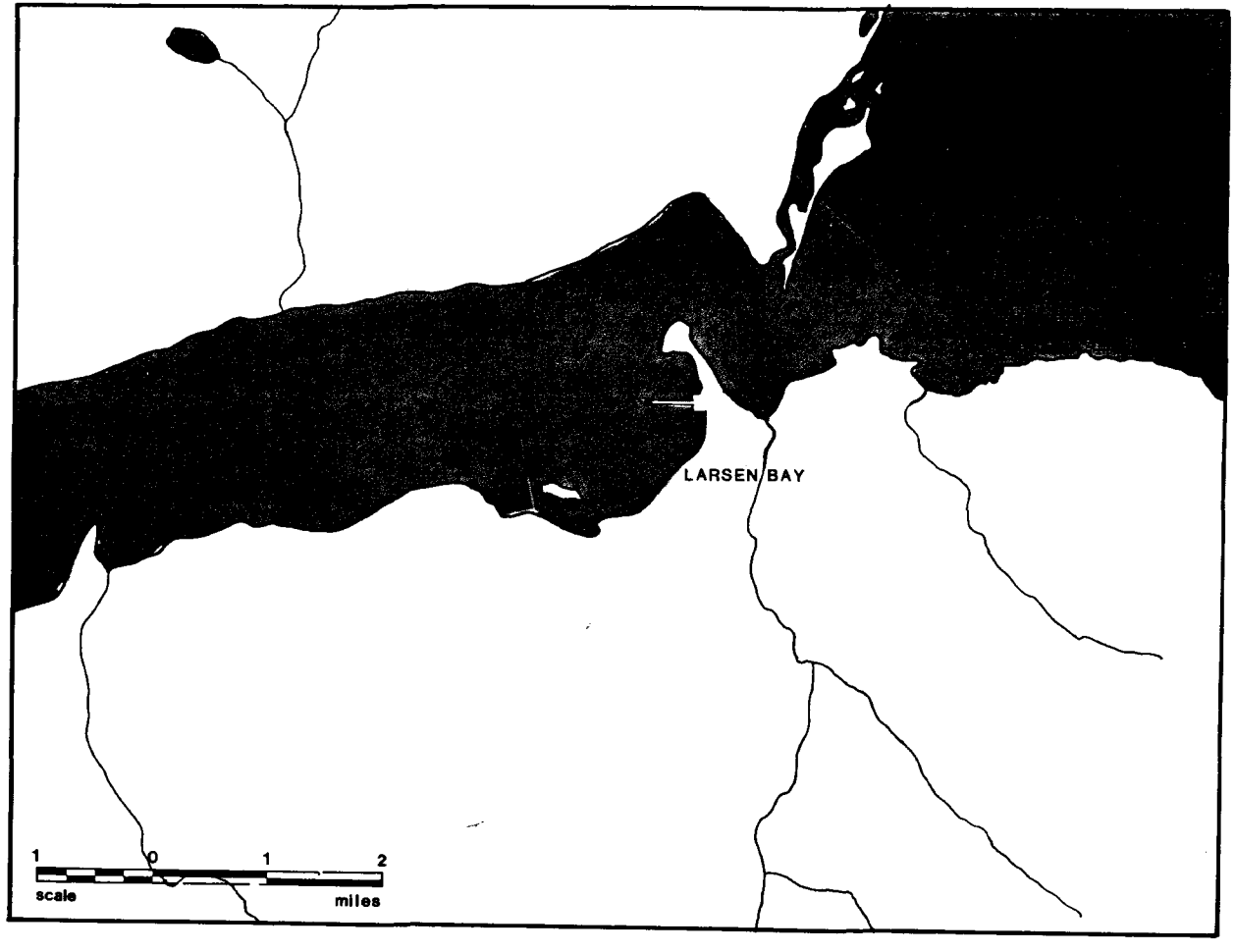
The City of Larsen Bay is located on the west shore of Uyak Bay on the northwest coast of Kodiak Island and about 62 miles southwest of of Kodiak. (See Fig. 1) The community is located near the mouth of Larsen Bay, named after Peter Larsen, a hunter, guide and furrier from Unga Island.

Before construction of a tannery in Uyak Bay in the early 1800's, the area had been occupied by the Aleut people for at least 2000 years. The local recovery of artifacts bearing witness to the long Aleut history in the area has been substantial. There are a number of archaeological sites in the area, some within the community itself. Several local residents have extensive personal collections of artifacts recovered during the past few years.

With the construction of a cannery by the Alaska Packers Association in 1911, the recent history of Larsen Bay began. Owned now by Larsen Bay Seafoods, the facility is one of the largest in the State of Alaska.

The community was incorporated in 1974 and is a second class city within the Kodiak Island Borough.





LOCATION MAP
FIGURE 1

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LOCAL GOVERNMENT
AND
NATIVE CORPORATION

City of Larsen Bay

Larsen Bay is a second class, incorporated city in the Kodiak Island Borough, itself a borough of the second class.

The city has a 7-member city council from which the mayor, vice-mayor and secretary/treasurer are elected. Local elections are held in October, with council terms staggered. The city employs a city administrator, a city clerk and a maintenance person.

Of the diverse powers granted to second class cities by the State of Alaska, Larsen Bay has assumed the following:

- -Streets and sidewalks
- -Sewers and sewage treatment
- -Water
- -Community centers
- -Fire protection

Kodiak Island Borough

The Kodiak Island Borough, a second class borough, is governed by an elected assembly of seven members and a mayor. Borough powers include the levying of taxes, planning, platting and zoning, education, and park and recreation programming. These powers are executed on a borough-wide basis for cities such as Larsen Bay and unincorporated areas.

The Borough employs a borough manager who is responsible for the administration of the borough government, including the supervision of staff.

Planning, platting and zoning for the City of Larsen Bay is administered by the Kodiak Island Borough through the Borough Planning Department.

Larsen Bay Traditional Tribal Council

Recognized by the Bureau of Indian Affairs as the official tribal governing body of the community of Larsen Bay, the Tribal Council is elegible to administer a variety of federal programs, including local health care, employment assistance and other social

services. The Tribal Council works closely with the Kodiak Area Native Association for the execution of these and other services.

Tribal Council members are elected according to an adopted constitution and bylaws. Elections are held at the same time as local municipal elections.

Nu-Nachk Pit Inc.

As the local Native corporation formed pursuant to the Alaska Native Claims Settlement Act of 1971, Nu-Nachk Pit Inc. selected and received patent or interim conveyance for more than 70,000 acres of land in the Kodiak National Wildlife Refuge.

In 1980, Nu-Nachk Pit Inc. merged with Koniag Inc., the regional Native corporation. As a result of this action, the merged corporation owns both the surface and subsurface rights to all land holdings.

Koniag Regional Corporation

Koniag Inc. is a regional Native corporation formed pursuant to the Alaska Native Claims Settlement Act of 1971 and is a private, for-profit corporation. Current assests and enterprises included the ownership of the Kodiak Island Seafood Inc. fish-processing facility in Larsen Bay until its sale to Larsen Bay Seafoods before the 1983 processing season.

TOPOGRAPHY

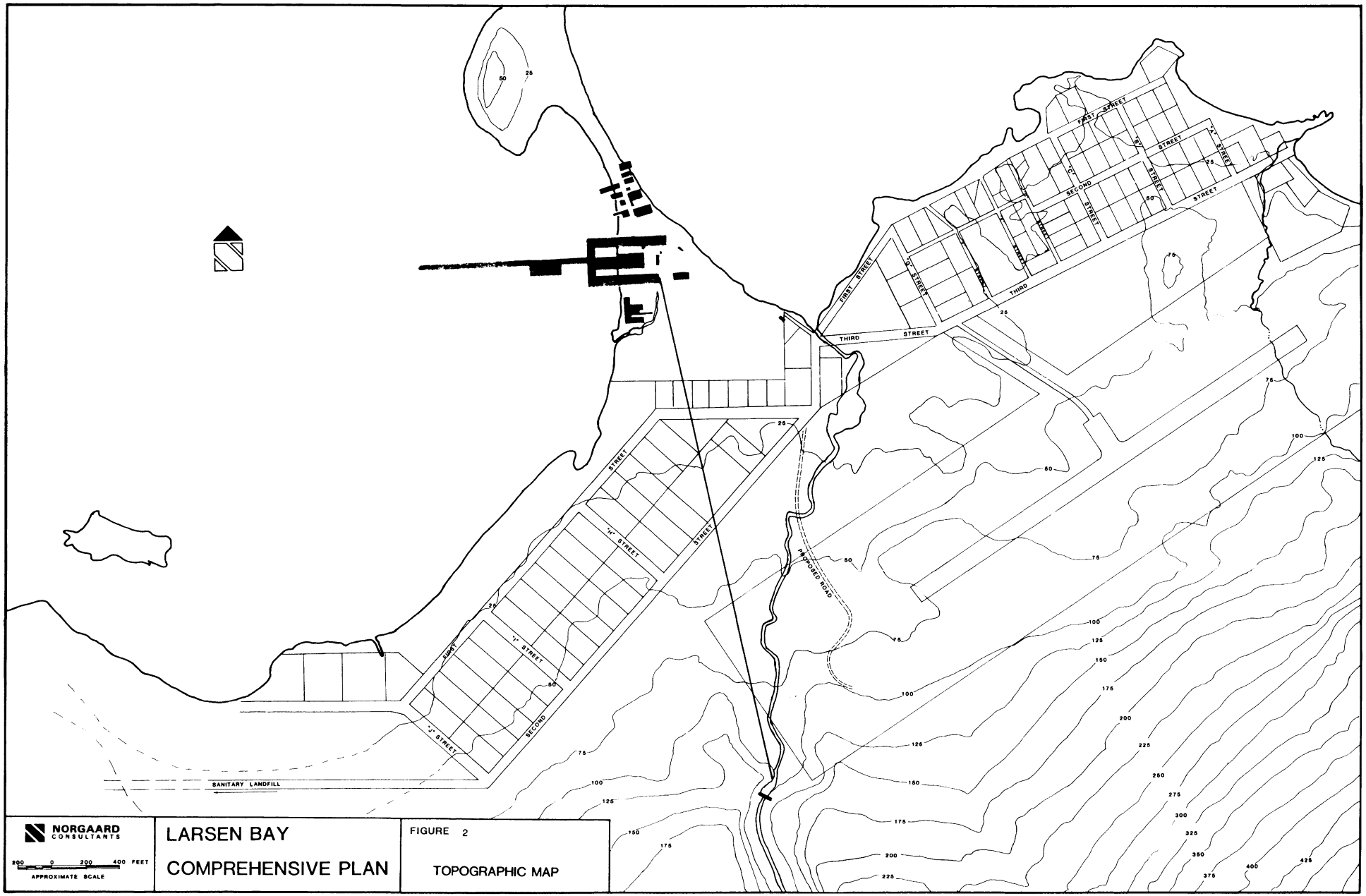
As with most of the land features on Kodiak Island, the Larsen Bay area was fashioned from glacial activities dating from the Miocene to the present. The bay itself is a fiord which was once filled with ice as a part of the extensive ice mass occupying Uyak Bay. The local sea coast is characterized by narrow straits and steep, rocky bluffs.

The community itself, as shown on Fig. 2, is located along a beach characterized by a gradual incline.

The surrounding mountains reach elevations of approximately 3000 feet. Because of the extensive glacial activity in the area, the hills can be described as generally smooth and rounded.

Hanging valleys are common, like the one out of which Humpy Creek flows. This creek, which flows through the community and into Larsen Bay, provided the site for recent hydroelectric project studies and plans.

Located just off the beach on the western edge of the developed part of the community lies


NORGAARD CONSULTANTS
200 0 200 400 FEET
APPROXIMATE SCALE
LARSEN BAY
COMPREHENSIVE PLAN
FIGURE 2
TOPOGRAPHIC MAP
FIRST STREET
"A" STREET
"B" STREET
"C" STREET
SECOND STREET
THIRD STREET
"G" STREET
"H" STREET
"I" STREET
"J" STREET
PROPOSED ROAD
SANITARY LANDFILL

Hospital Island. The island is in the cove created by the spit and forms a natural land base from which a dock and breakwater combination could be built along with protected moorage on the inland side.

CLIMATE

Dominated by a strong marine influence, the maritime climatic conditions prevalent on Kodiak Island are characterized by moderate and even temperatures, with cool summers and relatively warm winters.

High humidity and cool, even temperatures have yielded mean temperature maximums of 32 degrees and 62 degrees.

Average rainfall for the Larsen Bay area is 15 inches per year--only about one-quarter of the average amount recorded in Kodiak. Fog and high clouds occur less frequently than in eastern Kodiak Island communities. Fog occurs primarily in June.

Storm winds from the Gulf of Alaska frequently have reached 50-75 knots. The winter months, December through February, witness most of these storms. Local winds draining through the valleys and straits are not as severe. The average wind speeds for the area are just under 10 mph.

GEOLOGY

The bedrock that underlies the Larsen Bay area is part of the Kodiak Formation dated to the Late Cretaceous Period. This bedrock is primarily slate with poor to moderate fissility. This bedrock lies at varying depths, including some surface exposure.

This mantle of bedrock is covered with till in thicknesses of up to 30 feet. Organic silt and volcanic ash overlay this till in depths of less than four feet.

Soils are relatively shallow throughout Kodiak Island. Valley bottoms and the narrow coastal plain are the major areas of surface deposits.

The poorly drained soils can prove an impediment to development at such locations as the heads of bays. Waste disposal by means other than sewer collection and outfall or treatment is a particular problem in these shallow surface soils.

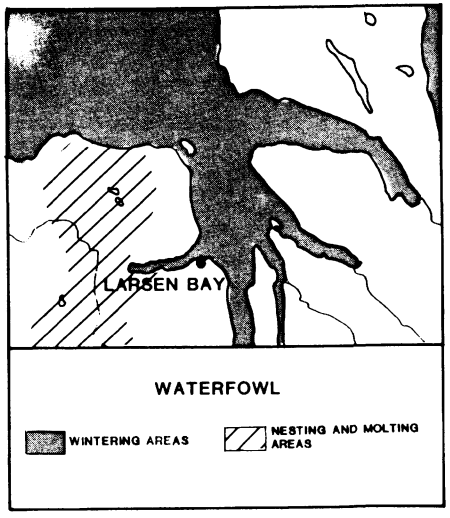
The likelihood of unconsolidated materials underlying soils also becomes a concern when development is contemplated on slopes in excess of 10-15%.

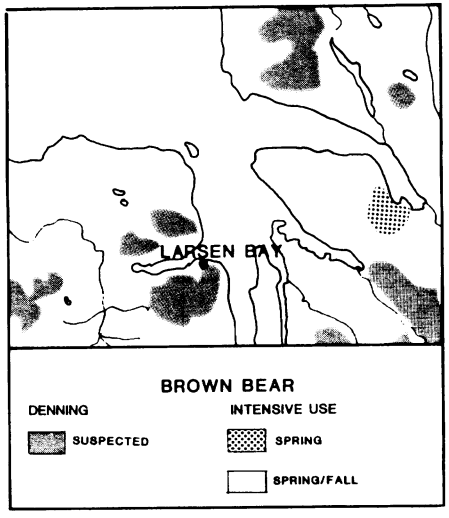
FISH AND WILDLIFE

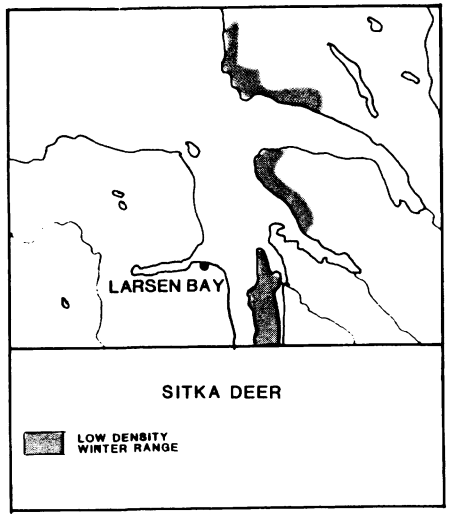
Fish and wildlife resources are critically important for economy and lifestyle throughout Kodiak Island. Larsen Bay is no exception. The waters outside Larsen Bay and around Kodiak are among the richest commercial fishing grounds in the world, with abundant salmon stocks and a rich bottomfish resource still predominantly harvested by foreign fleets. Upland game, including the Kodiak Brown Bear and the Sitka black-tail deer, have proven both popular for sport hunting as well as essential for subsistence activities for local residents. (See Fig. 3)

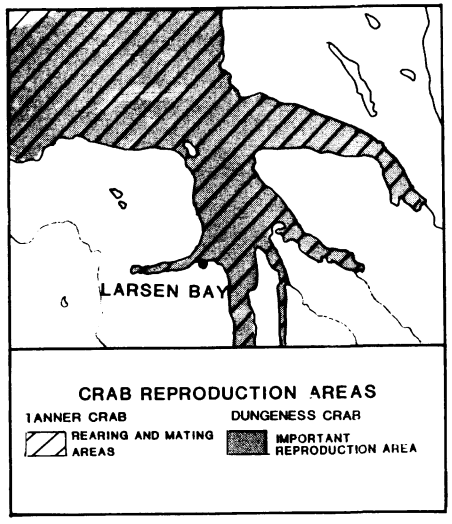
Commercial

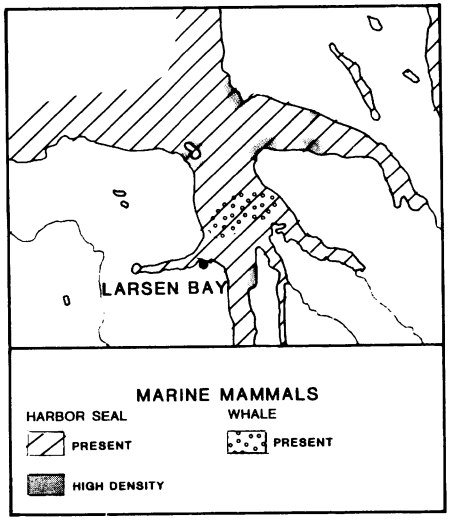
Fishing is the major commercial activity that uses local and regional fish and wildlife. Larsen Bay serves as home port to approximately 50 commercial fishing vessels. Major fisheries activities for Island waters include salmon, halibut, herring and bottomfish, as well as crab, shrimp, and scallops. While Larsen Bay residents do not normally participate in commercial shellfish activities, the commercial effort exists in the waters. Recent years have proven almost catastrophic for this industry. The other

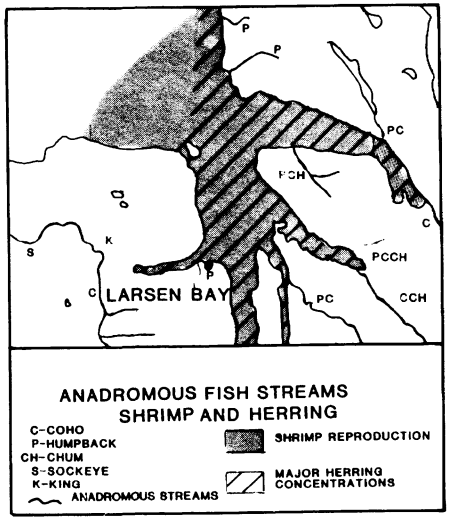




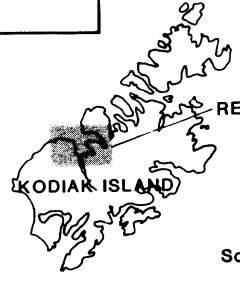








WILDLIFE RESOURCES
FIGURE 3



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Source: Kodiak Island Borough Coastal Management Program

fishery resources may see a marked increase in uses, especially bottomfish harvesting. Such increased activities could have significant impacts on the economy of Larsen Bay. Increased fishing by the U.S. fleet with economic pressures for quick run times from fishing grounds to processing plants makes port communities, such as Larsen Bay, attractive for industrial development.

Existing fishing efforts concentrate on salmon harvesting with 13 purse seine permits, 8 gill net permits held by local residents and 4 crab permits. Some halibut permits are also held locally.

Some fur trapping takes place during winter months around Larsen Bay. Primary pelts include fox and otter.

Subsistence

Subsistence harvesting of locally available fish and wildlife stocks still is a major source of food for residents.

Larsen Bay residents consider halibut, flounder and cod as primary fish subsistence resources as well as salmon, trout and grayling. In addition, all variety of clams are utilized, as are crab and shrimp.

Marine mammals of subsistence importance include seals and sea lions. Waterfowl hunting, mostly ducks, is also engaged in.

Upland wildlife subsistence hunting is mostly for deer.

Uyak Bay is the principal area for subsistence activities, both upland and waterside, but Zachar and Spiridon Bay areas also provide significant subsistence resources for Larsen Bay residents.

Sport

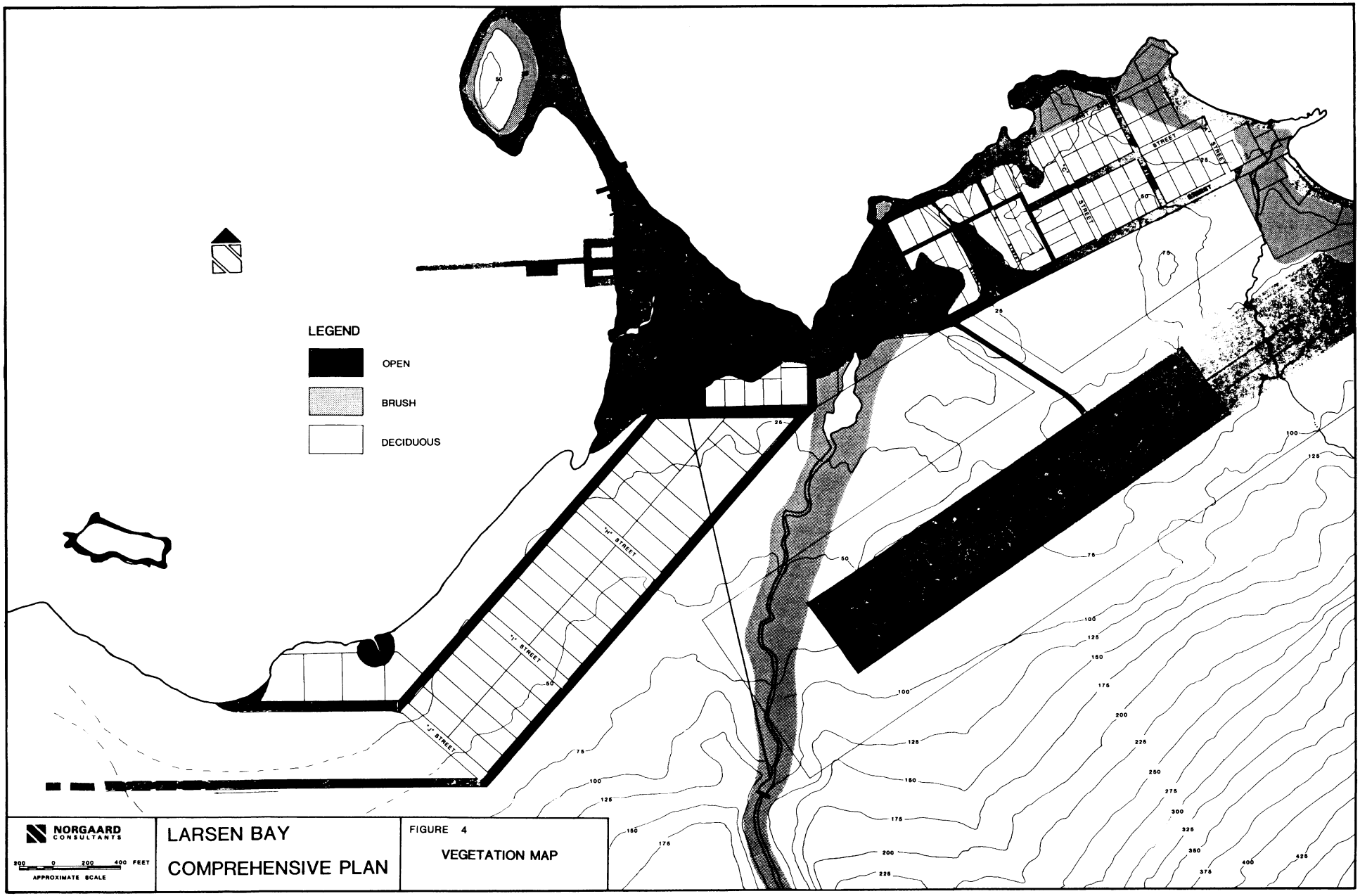
Sport fishing and hunting are used by both residents and non-residents. Principal activities include fishing for salmon in the area waters and deer hunting in the upland areas.

VEGETATION

The area of Kodiak Island in which Larsen Bay is located is dominated by scattered birch, cottonwood and alder trees, with some locally heavy stands. In addition, high brush of alder and willow predominates with the tree growth. There are no Sitka spruce or western hemlock in the area, as are found in eastern Kodiak Island. (See Fig. 4)

Bluejoint and fescue grasses abound in open areas, accompanied by other vegetation, such as lupine, Jacob's ladder, ferns, sedges and horsetail.

Small areas of wetlands are found, especially at the head of the bay, in those areas of poorly drained soils.


LEGEND
OPEN
BRUSH
DECIDUOUS
"H" STREET
"I" STREET
"J" STREET
STREET
NORGAARD CONSULTANTS
200 0 200 400 FEET
APPROXIMATE SCALE
LARSEN BAY
COMPREHENSIVE PLAN
FIGURE 4
VEGETATION MAP

CURRENTS AND COASTAL PROCESSES

Tides in Larsen Bay are semidiurnal (two high and low tides within a twenty-five hour period).

The maximum range between high and low tides in Larsen Bay is between 12.0 and 14.9 feet. These tides arrive in Larsen Bay approximately 14 minutes earlier or later than at the City of Kodiak.

As experienced in other areas on Kodiak Island, narrow straits and even moderate tides can produce siginificant currents. The entrance to Larsen Bay generally experiences currents of 4 to 5 knots. When mixed with wave action of any size, the resultant currents can be dangerous.

River flooding is not considered to be a significant problem in Larsen Bay. Humpy Creek would become wider at its mouth during a flood situation and threaten any structure within a several hundred foot-wide area. All streams in the area have the potential of developing relatively narrow bands of flood zones along their beds.

Coastal flooding is a possible hazard due to land settling and seismic sea waves. Local residents reported the area around Larsen Bay settled from an average of two feet to as much as 20 feet as a result of the 1964 earthquake.

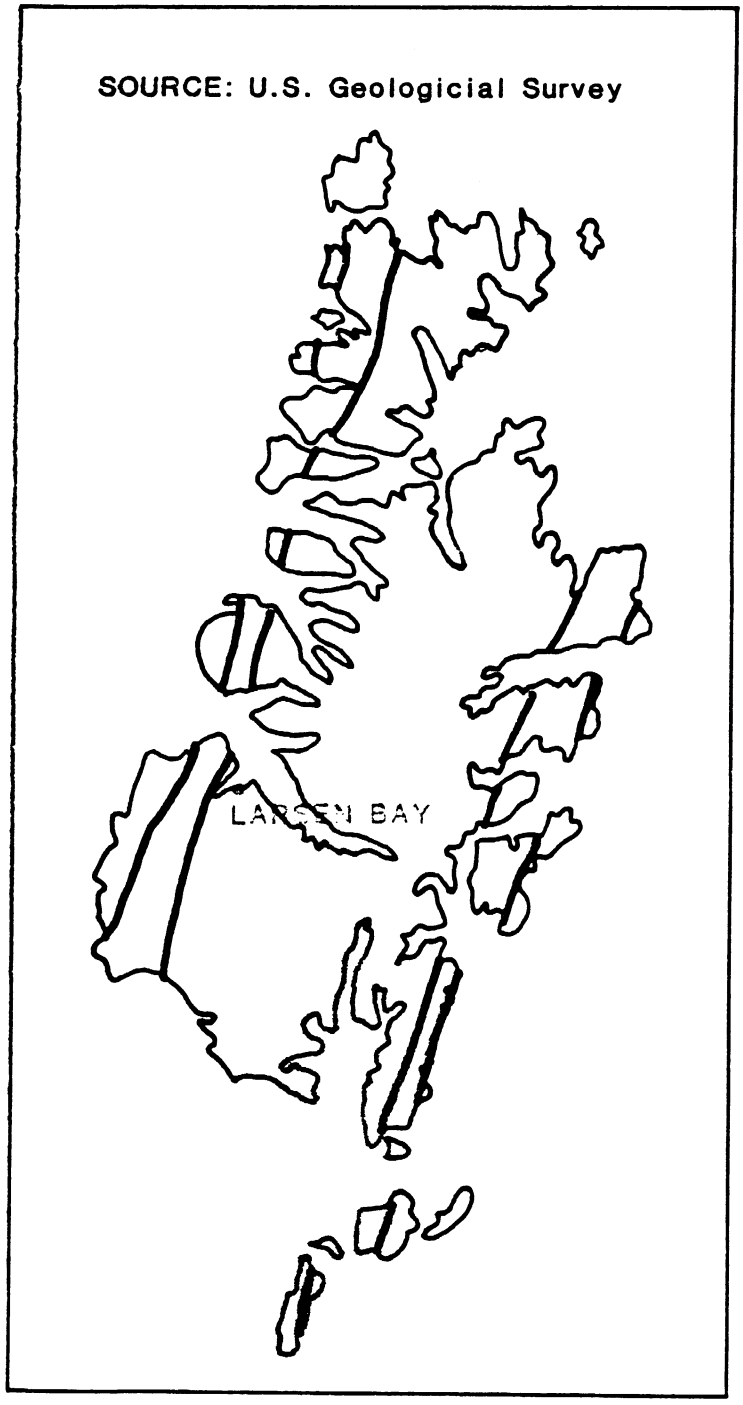
Coastal erosion due to sea-wave activity significantly affects approximately one mile of coastline in the Larsen Bay area, particularly along the shore to the northeast of the mouth of Humpy Creek. East-facing shorelines are the most prone to such damage, especially from Gulf-centered storms that can sustain wind speeds of 50-75 knots.

HAZARDS

A major inactive thrust fault lies 3.5 kilometers west of Larsen Bay. Should this or other seismic activity become active, certain hazards exist for the community. (See Fig. 5)

A scarp slope has been identified across the bay that could pose a landslide threat. Unconsolidated materials in the area, particularly those on slopes, could prove quite unstable in the wake of severe ground shaking. Regional tectonism keeps seismic risks high for the area. However, given the city's location on the west side of Kodiak Island, tsunami risks are considered low. While this threat is considered low based on relatively recent seismic activity, some risk always is present in any coastal community for some tsunami-related damage, considering the particular location of the epicenter and wave directions.

Local hazards due to volcanic activity come from the active volcanic ridges along the Alaska Peninsula. The particular threats posed by volcanic eruptions are secondary in nature. The most serious is the threat of airborne ash, which can be carried great distances and cover wide areas. Ash deposits of several feet were recorded on Kodiak Island as a result of the 1912 eruption of Mt. Katmai. Additional damage can be caused by



MAJOR FAULT LINES

FIGURE 5

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corrosive rains which are caused by the acidic volcanic gases mixing with precipitation. Additional secondary threats from regional volcanic activity include earthquakes, seawaves, landslides and lightning.

CULTURAL ENVIRONMENT

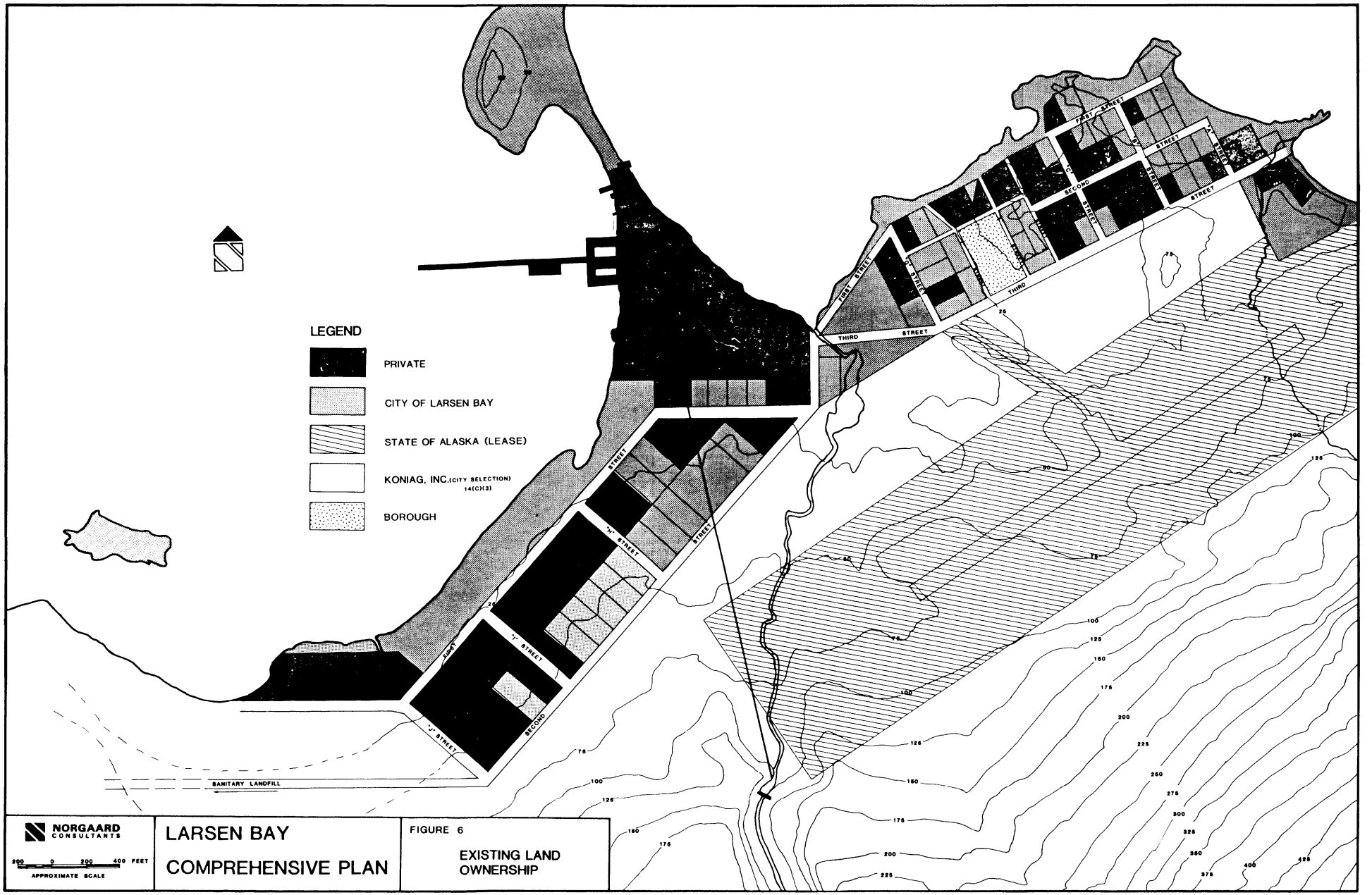
LAND USE

The City of Larsen Bay is made up of approximately 6.6 square miles of both land and tideland. Of the tideland included within the corporate limits, only two tracts are patented, those being TDL PAT 45 02995, which lie to the west and the north east of USS 672, which is the fish-processing property.

Although the city is surrounded by the Kodiak National Wildlife Refuge, there is ample land undeveloped within the corporate limits to meet the community's future needs. In addition to its current holdings, the City of Larsen Bay is anticipating receipt of 1280 acres from 14(c)(3) reconveyances. (See Fig. 6)

The corporate limits include the upland areas on both the north and south shores of Larsen Bay at its entrance into Uyak Bay. All development has occurred on the southern shore.

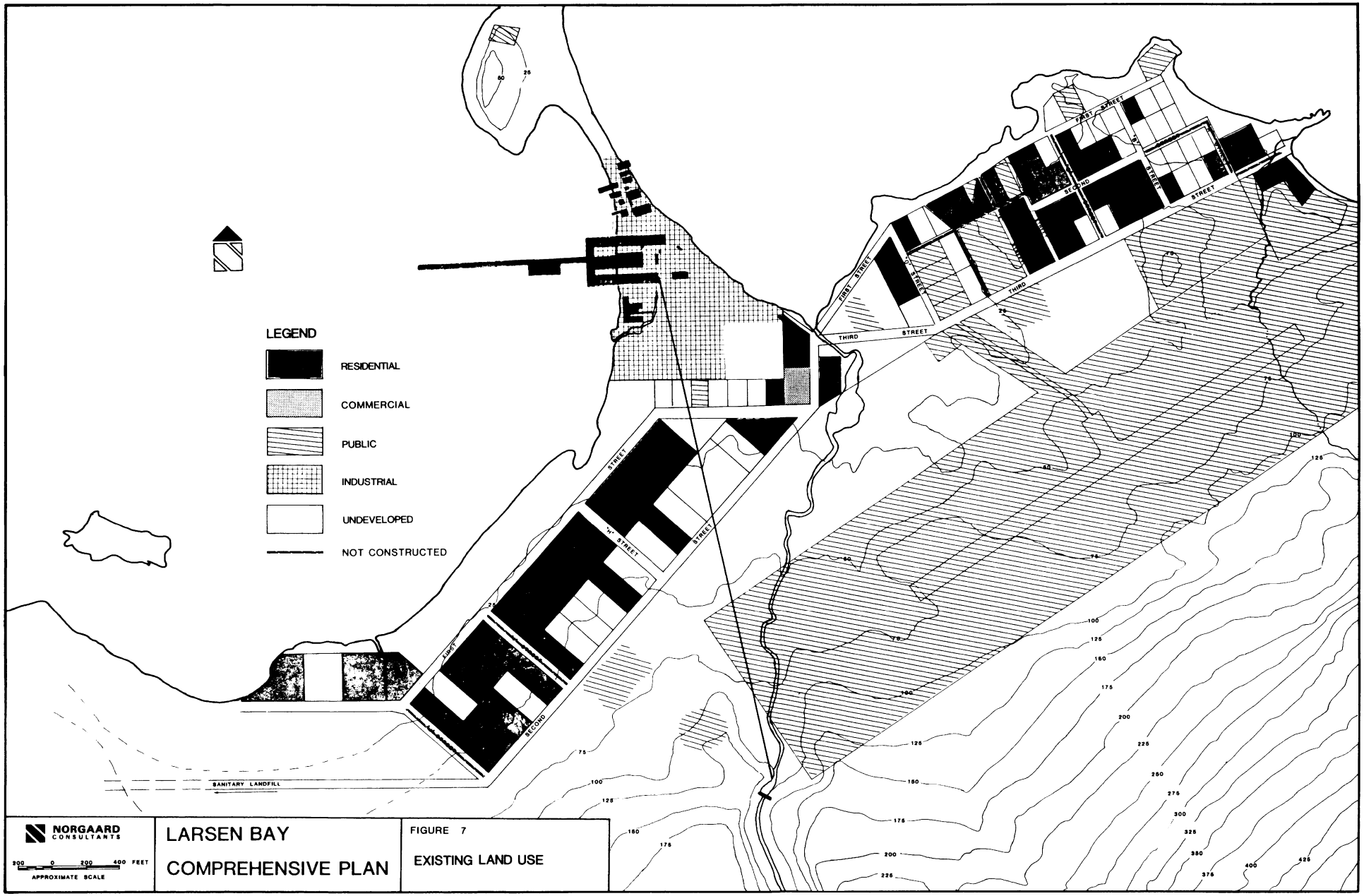
Significant tracts are identified on the north shore of Larsen Bay/western shore of Uyak Bay within the corporate limits. These include historical and cemetary sites selected by Koniag Inc. under the provisions of ANCSA Section 14(h)(1).

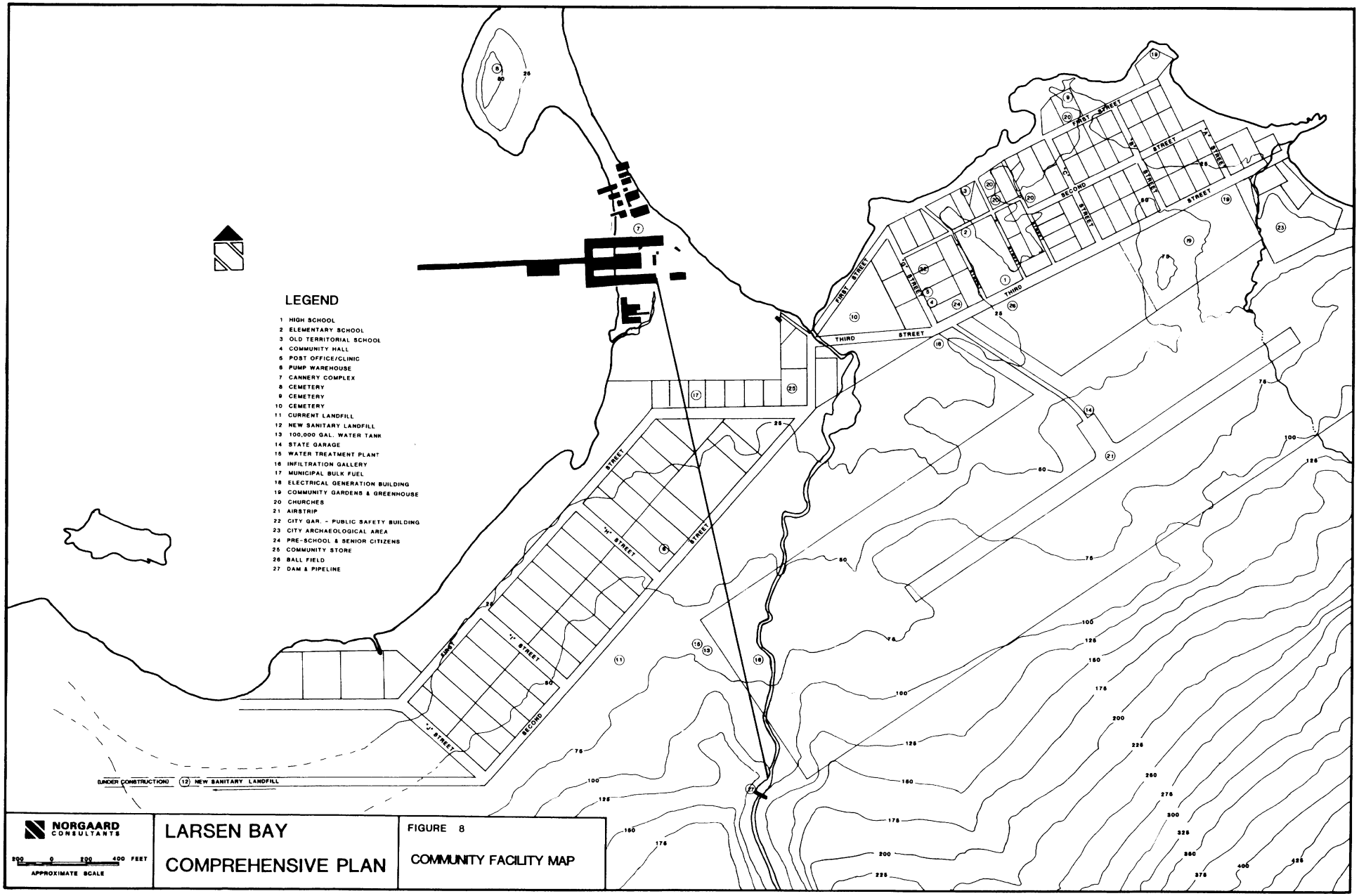

LEGEND
PRIVATE
CITY OF LARSEN BAY
STATE OF ALASKA (LEASE)
KONIAG, INC. (CITY SELECTION) 14(C)(3)
BOROUGH
SANITARY LANDFILL
NORGAARD CONSULTANTS
200 0 200 400 FEET
APPROXIMATE SCALE
LARSEN BAY
COMPREHENSIVE PLAN
FIGURE 6
EXISTING LAND OWNERSHIP

An airport site of 100 acres lies south of the old Bureau of Land Management (BLM) Townsite, USS 4872. This 121.37 townsite has been deeded by the BLM Townsite Trustee to occupying residents with some vacant subdivided lots deeded to the City of Larsen Bay.

Most residential development lies to the east of the spit on which the processing facilities are constructed. Some residential development exists to the southwest of the spit, but the area has not been developed extensively. Of the 62 single-family residential units within the community.

Between French's Point and the residential development to the east are the City's community building, two churches and one of three cemeteries. The elementary and secondary high schools also lie in this area as well as a recreation hall and a preschool building which is operated by the Tribal Council. (See Fig. 7)


LEGEND
RESIDENTIAL
COMMERCIAL
PUBLIC
INDUSTRIAL
UNDEVELOPED
NOT CONSTRUCTED
FIRST STREET
SECOND STREET
THIRD STREET
W STREET
STREET
SANITARY LANDFILL
NORGAARD CONSULTANTS
300 0 200 400 FEET
APPROXIMATE SCALE
LARSEN BAY
COMPREHENSIVE PLAN
FIGURE 7
EXISTING LAND USE



NORGAARD CONSULTANTS

200 0 200 400 FEET
APPROXIMATE SCALE

LARSEN BAY COMPREHENSIVE PLAN

FIGURE 8

COMMUNITY FACILITY MAP

Clinic

In 1981, a new clinic was added to the community hall. The space is owned by the Tribal Council and leased to the Indian Health Service. The clinic contains an examination room as well as a laboratory, waiting room and office. The clinic is staffed by two health aides, who are assisted by a community health representative.

Community Hall

The City of Larsen Bay maintains a community building for its administration and operation. As mentioned above, this structure has been expanded to provide housing for the health clinic. The city employs an administrator, city clerk and a maintenance person.

The Post Office also is operated out of the expanded community building, constructed in 1981.

Fire Protection

Fire protection in Larsen Bay uses a fire-hydrant system attached to the city's 100,000-gallon water storage tank. A recently acquired 1,000-gallon pumper forms the backbone of the community's fire protection system. A local volunteer fire department serves the community and is augmented by emergency medical volunteers.

Cemeteries

Two cemeteries are located east of the spit. One is near the spit, and the other is farther east to the north of the major residential area near the shoreline.

Solid Waste

The landfill operated by the city for the purpose of solid-waste disposal is located on the southern edge of town near the water-treatment plant. The site poses management problems, including attracting brown bears. A new site is being developed for use by the summer of 1984 approximately 1.5 miles west of the community. A new road

is being constructed to reach the site. The existing site will be covered and is planned for use as an outdoor recreation site.

TRANSPORTATION

Access to Larsen Bay is by water or air. No roads connect the community with any other on Kodiak Island.

Water Transportation Facilities

The current docking facilities are those associated with the processing plant owned by Larsen Bay Seafoods. These docking facilities are private and permit only limited public use. Chartered freight service is available out of Kodiak.

The 1984 Alaska State Legislature provided funds for engineering of a small boat harbor facility for the city. This project will result in a small boat harbor facility to provide adequate moorage facilities for the local fishing fleet.

Utilizing Hospital Island as a staging area and warehouse site, the proposed dock will be built on the island's northern tip. This will take advantage of the naturally formed, protected mooring placements on the landward side of the island and the breakwater. The breakwater also serves as the road bed from the mainland to the staging area on the

island. A second and smaller breakwater is envisioned west of Hospital Island running in a northeasterly direction from the shore.

Air Transportation Facilities

The State of Alaska operates a 100 x 2400 gravel runway surface to the south and east of the community. This facility provides access for wheel-plane flights to Larsen Bay. Uyak Air Service is based in Larsen Bay and provides air service to other Kodiak communities on a charter basis. In addition, SEAIR provides daily service (Monday through Saturday) during the summer months and only three flights per week during winter. Additional charters are available from other island-based carriers for flights to Kodiak, which serves as the transportation hub for the Island.

The Federal Aviation Administration has designated a seaplane approach of 1000 x 10,000 feet on an east/west axis. However, wheeled planes are more frequently used than float aircraft.

Larsen Bay is 61 air miles from the City of Kodiak, which maintains daily flights to Anchorage and other points.

Local Road Transportation

Local roads were constructed by the Bureau of Indian Affairs (BIA) and connect major development in the community.

The roads, built in 1977, were not constructed to standards set by the Alaska Department of Transportation and Public Facilities (DOT/PF). This has prohibited the participation in any state maintenance program, leaving the roads without a strong program to prevent deterioration. Roads in the community total 4.5 miles, including the new road surface to the new landfill site.

UTILITIES

In 1979, the U.S. Public Health Service constructed a water and sewer system in Larsen Bay. Until this time, individual systems of privies or septic tanks were used. (See Figs. 9 and 10)

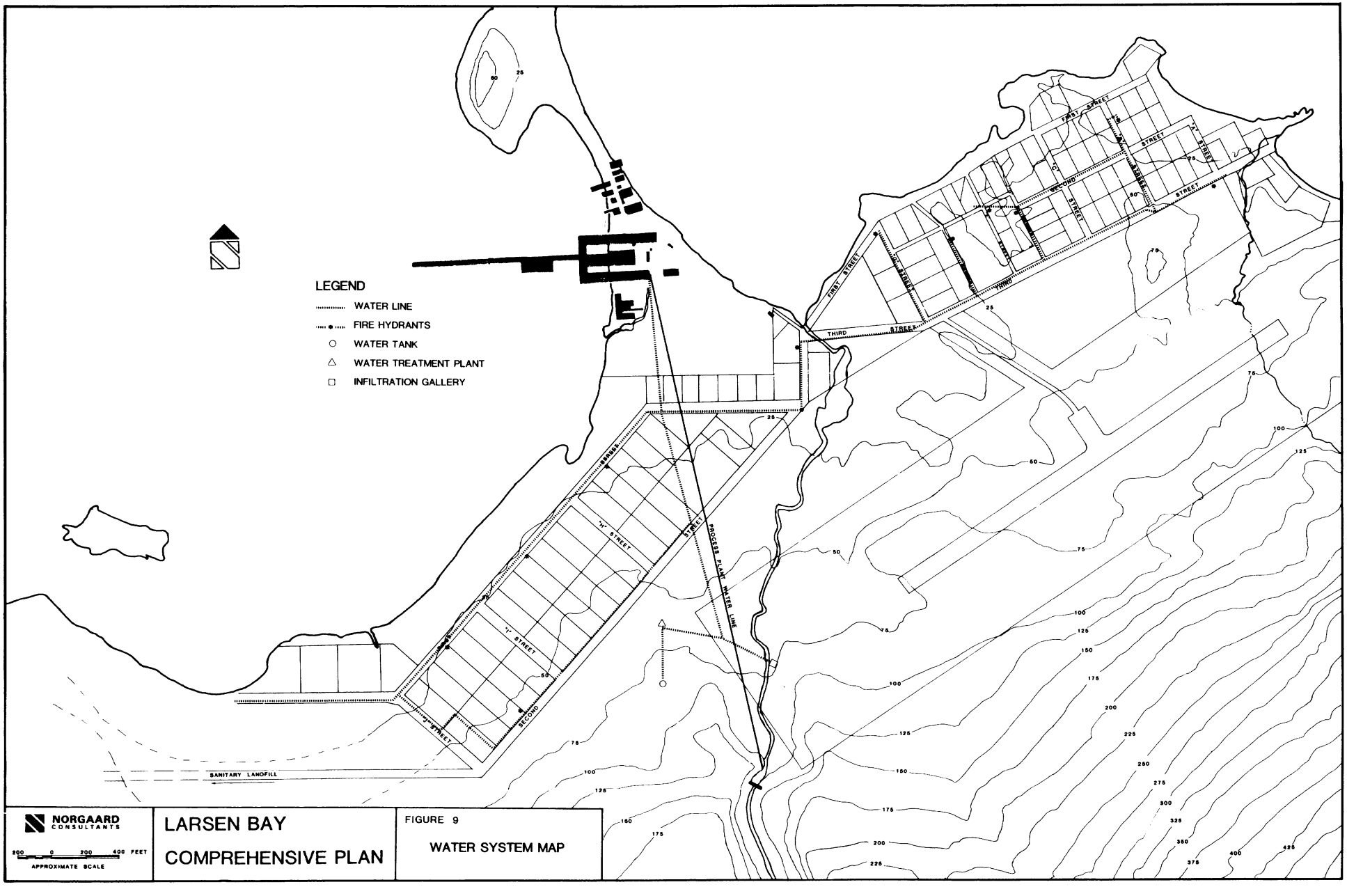
Water

The water system constructed in 1979 consists of a 100,000-gallon storage tank fed by water pumped from Humpy Creek south of the community.

The water is treated with both chlorine and fluoride after it is collected through an infiltration gallery. Water supply is good. A gravity feed system is being developed to replace the current pump system, deemed too expensive to operate.

Water lines throughout the community are 4 inches in diameter, providing minimally adequate presure at the houses and at the fire hydrants.

The processing facility has its own water supply. The old cannery system consists of a concrete dam and 3,000 feet of piping. Piping


LEGEND
WATER LINE
FIRE HYDRANTS
WATER TANK
WATER TREATMENT PLANT
INFILTRATION GALLERY
FIRST STREET
SECOND STREET
THIRD STREET
"A" STREET
"H" STREET
"I" STREET
"J" STREET
PROCESS PLANT WATER LINE
SANITARY LANDFILL
NORGAARD CONSULTANTS
200 0 200 400 FEET
APPROXIMATE SCALE
LARSEN BAY
COMPREHENSIVE PLAN
FIGURE 9
WATER SYSTEM MAP

originally was all wood stave construction but the lower 50% has been replaced by aluminum material.

The well at the school is reported to produce good-quality water although it contains a high concentration of iron. This well serves as emergency back-up for the facility, which also is connected to the city's water system.

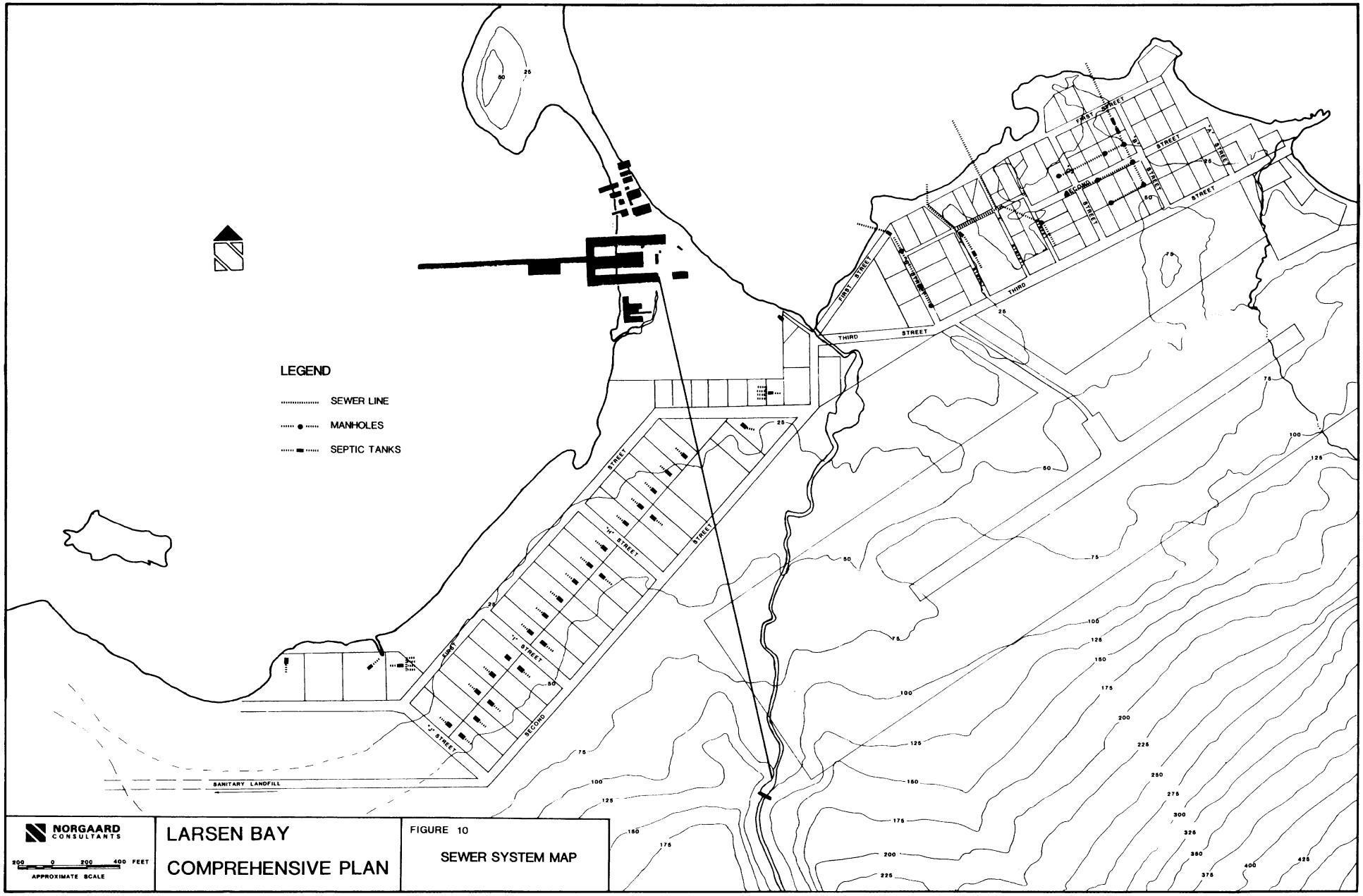
Sewer

The sewer system was constructed in 1979 by the U.S. Public Health Service in conjunction with the water project.

The new system is comprised of a series of sub-systems, each serving one or more houses but not tied together. This system was mandated, given the dispersed nature of the housing.

Each sub-system ties one or more houses to a septic system through collection lines. The Septic system is, in turn, piped to an outfall into Larsen Bay.

With the exception of only a few households at the community's outskirts, all residents are connected to a system.


LEGEND
SEWER LINE
MANHOLES
SEPTIC TANKS
SANITARY LANDFILL
FIRST STREET
SECOND
THIRD STREET
"I" STREET
"J" STREET
NORGAARD CONSULTANTS
200 0 200 400 FEET
APPROXIMATE SCALE
LARSEN BAY
COMPREHENSIVE PLAN
FIGURE 10
SEWER SYSTEM MAP

Electricity

A central diesel generation plant of 400 kilowatt capacity serves the community. The recently constructed system includes buried distribution lines. This system replaces the private generators used by each household in the past. The Larsen Bay Seafoods facility maintains its own generating facility.

The City of Larsen Bay maintains a 50,000-gallon storage tank for fuel, which can be loaded directly from the fuel barge by a piping system. Fuel is sold to individual through a pump located at the storage tank only during certain hours of the week.

Private Utilities

Telephone service recently has become available to each household. Alascom built and maintains an earth station for satellite communication. The facility also provides for the reception of television through the Alaska Satellite Television Project.

A translator is also in place which allows reception of broadcasting by KMXT, a public radio station. In addition reception of KBOK-AM is available, originating in Kodiak.

POPULATION

The 1980 Census for the City of Larsen Bay, U.S. Bureau of Census, is 168. A population count by the Larsen Bay Tribal Council in 1980 yielded a figure of 120. The current population figure for purposes of state revenue sharing, as maintained by the Alaska Department of Community and Regional Affairs (DCRA) is 180.

The community just has conducted (June, 1984) another local census and now counts 220 local residents. This figure will be submitted for purposes of revising DCRA census figures in December of 1984.

The average household size is 3.29 people (1981) and the 1980 census data indicates a Native population of approximately 70%.

The Kodiak Area Native Population (KANA) reports that the median age of the local population is 27 years.

Table 1 shows the population figures reported by various sources since 1940.

TABLE 1

City of Larsen Bay

Population

Date	Population	Source
1940	38	U.S. Bureau of Census
1950	53	" " " "
1960	72	" " " "
1970	109	" " " "
1980	168	" " " "
1982	180	Kodiak Island Borough
1984	220	City of Larsen Bay

While the community has shown steady growth during the last 40 years, the most rapid population increase occurred in the last ten years. Population growth for each decade from 1940 through 1970 ranged from 34% (1960's) to 39.5% (1940's). Growth from 1970 to 1980, however, was 54%. Recent DCRA figures indicate a growth in population of 7% through 1983. This significant increase in the growth rate in the late 1970's and the early 1980's can be attributed to a highly successful fishing industry during the earlier years of this period as well as the dramatic increase in

local housing construction. Since 1978, 33 new housing units have been built, most of them associated with two housing projects, the first in 1978 and the second in 1983-84.

On a per annum basis, growth rates have ranged from an average of 2.4% (1980-83) to 3.3% (1960-70) to 5.4% (1970-80).

As with any small community which depends primarily on a single industry, expansion or reductions in the local industrial operation will have a strong affect on the sustained population of the community.

With it's peaks and valleys in production, the fishing industry will continue to provide the basis for the economy of Larsen Bay for the forseeable future. This industry will not only be based on the traditional fin and shellfish species of the last decades, but also will be expanding in the next 10 years into bottomfishing markets.

Within this expanding fishing economy, Larsen Bay has the potential of successfully competing for significant portions of that processing market. Continued improvement of the local infrastructure and the maintenance, operation and timely expansion of the processing plant on the spit will encourage this growth.

In addition, the City of Larsen Bay wants to expand its opportunity to support a tourist

and sports hunting, fishing and recreation industry. This type of industy provides a complimentary cash economy to the fishing industry. While providing few additional full time positions, it allows additional seasonal occupations for local residents, thus providing some buffering of the seasonal fluctuations always felt in the fishing industry. Development of such activities will help foster the natural development desired by the community.

Such a growth pattern can maintain an average 3.0% population growth per annum through the year 2000. These growth projections based on five-year increments, can be found in Table 2.

TABLE 2

City of Larsen Bay

Population Growth Projections

Year	@ 3% per annum	@ 5% per annum
1984	220	220
1990	262	295
1995	305	376
2000	353	480

GOALS AND OBJECTIVES

GOALS AND OBJECTIVES

The following goals and objectives represent the course of the City of Larsen Bay as charted by its residents. The goals are statements of the end results that are to be achieved, while the objectives provide the means and methods of achieving them.

The goals and objectives have been broken into categories, including:

- -economic
- -transportation
- -housing
- -land use
- -environment
- -recreation

All of the goals and objectives set out below serve the following primary goal:

Primary Goal

To preserve the traditional lifestyles and the environmental setting of Larsen Bay while increasing the level of community services to the residents to accommodate population growth expected as a result of natural economic growth within the community.

Economic Goal

To build a stronger and less seasonal economic base that provides expanded and more stable employment opportunities for the local population.

Objective 1: Encourage and cooperate with the Larsen Bay Seafoods processing facility in its efforts to expand local operations to a year-around basis.

Objective 2: Encourage and support the establishment of service industries and businesses for tourism and sport/recreational hunting and fishing in the Larsen Bay area.

Objective 3: Encourage the development and expansion of retail sales and services.

Objective 4: Maintain and expand public utilities and services to keep pace with residential, commercial and industrial growth requirements.

Transportation Goal

To provide a well-maintained and viable transportation system both within the community and between the community and others.

Objective 1: Establish the nesessary agreements and secure the necessary support from the Bureau of Indian Affairs, the State of Alaska and the Kodiak Island Borough to initiate and sustain a comprehensive maintenance program for local roads.

Objective 2: Secure the necessary funding for the development of a small boat harbor to serve the local fishing fleet and other commercial users.

Housing Goal

To encourage the development of new housing, consistent with the natural growth and development of the community.

Objective 1: Protect housing and other structures from areas subject to serious erosion.

Objective 2: Continue a housing maintenance program with the cooperation and support of the Kodiak Island Borough, the State of Alaska and the Kodiak Island Housing Authority, to provide for the upgrading and maintenance of older housing units and the continual maintenance of all housing units in the community.

Land Use Goal

To maintain the general pattern of existing land uses while providing suitable land use areas for expected community growth.

Objective 1: Direct residential expansion southwest of the spit which serves as the core industrial area.

Objective 2: Provide for additional industrial growth areas as an expansion of the existing processing plant operations near the base of the spit.

Objective 3: Maintain a centrally located commercial and business enterprise core district with mixed residential use.

Objective 4: Protect the historically and archaeologically significant lands.

Objective 5: Land-based and shoreside economic development shall be given preference over floating or water-based operations.

Environmental Goal

To assure that the natural enviornment is protected and enhanced by eliminating existing sources of environmental degradation and prohibiting future actions by private and public entities that might adversely affect environmental quality of Larsen Bay and its surrounding area.

Objective 1: Maintain a properly located and operated sanitary landfill site.

Objective 2: Encourage and promote development through local and Borough ordinances that preserve the natural land forms, existing vegetation, archaeological resources and other environmental resources of the Larsen Bay area.

Objective 3: Preserve adequate open space and public access along the shoreline.

Objective 4: Provide adequate erosion-control measures for the shoreline within the community.

Objective 5: Protect the existing watershed area of the community.

Recreational Goal

To provide a wide range of recreational opportunities for all residents.

Objective 1: Establish and maintain an on-going parks and recreation program in cooperation with the Kodiak Island Borough and the State of Alaska.

Objective 2: Ensure that future residential development includes the provision of adequate recreation areas and neighborhood parks.

Objective 3: Establish and maintain a trail system with beach and stream access.

Objective 4: Encourage and promote the multiple use of public buildings for recreational and other community activities.

Objective 5: Non-buildable sites and lots shall be designated as natural parks.

COMPREHENSIVE PLAN

GROWTH REQUIREMENTS

Commercial and Industrial

Existing commercial and industrial activity in Larsen Bay centers around the spit on which the Larsen Bay Seafoods processing facility is located. This facility and grounds will continue to serve as the commercial and industrial core for the community well into the future. The success or failure of this facility and the Kodiak fisheries in general will determine the various cycles of growth and recession in Larsen Bay.

Currently, growth in the community is proceeding at a phenomenal rate. A recently conducted local population survey (June, 1984) has yielded a current population of 220 individuals, up 40 from a reported census in 1983 and up 100 from the reported U.S. Census in 1980.

This growth is due to two major factors. First, increased housing has become available since 1979 through housing projects funded by the U.S. Department of Housing and Urban Development (HUD). Fourteen new houses were built thorough the 1983 project. This increased housing has provided the incentive for individuals who left the community to return and take advantage of the reopening of

the fish processing plant. Secondly, the Larsen Bay Seafoods plant has sparked growth during the past two years.

General land requirements for this growth and for Larsen Bay's future will be primarily residential and commercial/industrial in nature.

The industrial land area associated with the processing plant should remain adequate for future plant needs. Commercial property, however, will be needed for growth in associated businesses that develop with the expanding population, as well as with expanding secondary economic ventures, such as the sport fishing/hunting market many local residents hope to develop.

As the population expands at its current rate the availability of land for residential development in the existing townsite plat will diminish. Additional residential acreage will be necessary to support the increased population expected in the next 15 years.

The development of a small boat harbor, city dock and upland staging area on and around Hospital Island will require additional property dedicated to commercial use. Any airstrip expansion from the existing length of 2,400 feet up to a minimum local goal of 3,400 feet will not require the addition of any land to the existing airport property.

Utilities

The recent development of a central, diesel-fired electrical generation plant with buried distribution lines should accommodate the community's needs into the near future. Requirements beyond existing capabilities will be driven by increases in both commercial and industrial users if self-contained generation capabilities also are not developed as part of these increases. Because of the projection of a stable and constant growth for Larsen Bay, the development of hydroelectric power remains viable for consideration. The recent development of a central generation plant should not dissuade near-or long-term consideration of the development of a small hydroelectric plant.

The expansion of the community's water and sewer systems will be necessary with the development of any new housing. The sewer system is composed of a series of sub-systems built large enough only for a few houses. This expansion will have to be considered along with all new housing development. Expansion of housing beyond existing limits also will necessitate the expansion of the water

distribution system. The water supply, however, appears to be adequate for future needs because the processing facility draws its water separately.

School

The school system in Larsen Bay currently provides education through the 12th grade. The facility is new but does not provide sufficient classroom space. The Kodiak Island Borough School District is currently studying alternatives to resolve the problem.

Population increases in the next few years, however, will have a twofold effect on the facility and the system. First, the increased number of children utilizing the system is expected to grow to a point of where expanded classroom facilities are needed. Second, the increased school-age population also will demand and/or justify expansion of the system's capabilities to provision of a full, K-12 curriculum. This, again, will demand expansion of the facility.

Timing requirements for this expansion have resulted in Kodiak Island Borough plans for necessary capital improvements. The Kodiak Island Borough will include these expansions

as a part of their new 5-year Capital Improvement Plan to be prepared this current fiscal year.

Streets

Streets in the community appear adequate for future community needs, with the exception of the planned small boat harbor and new residential expansion.

The newly constructed access road to the sanitary landfill site west of the existing townsite should serve as a primary access to land on either side for residential development.

The construction of the small boat harbor will require building better road access near the proposed breakwater opposite Hospital Island.

LAND USE ELEMENT

Introduction

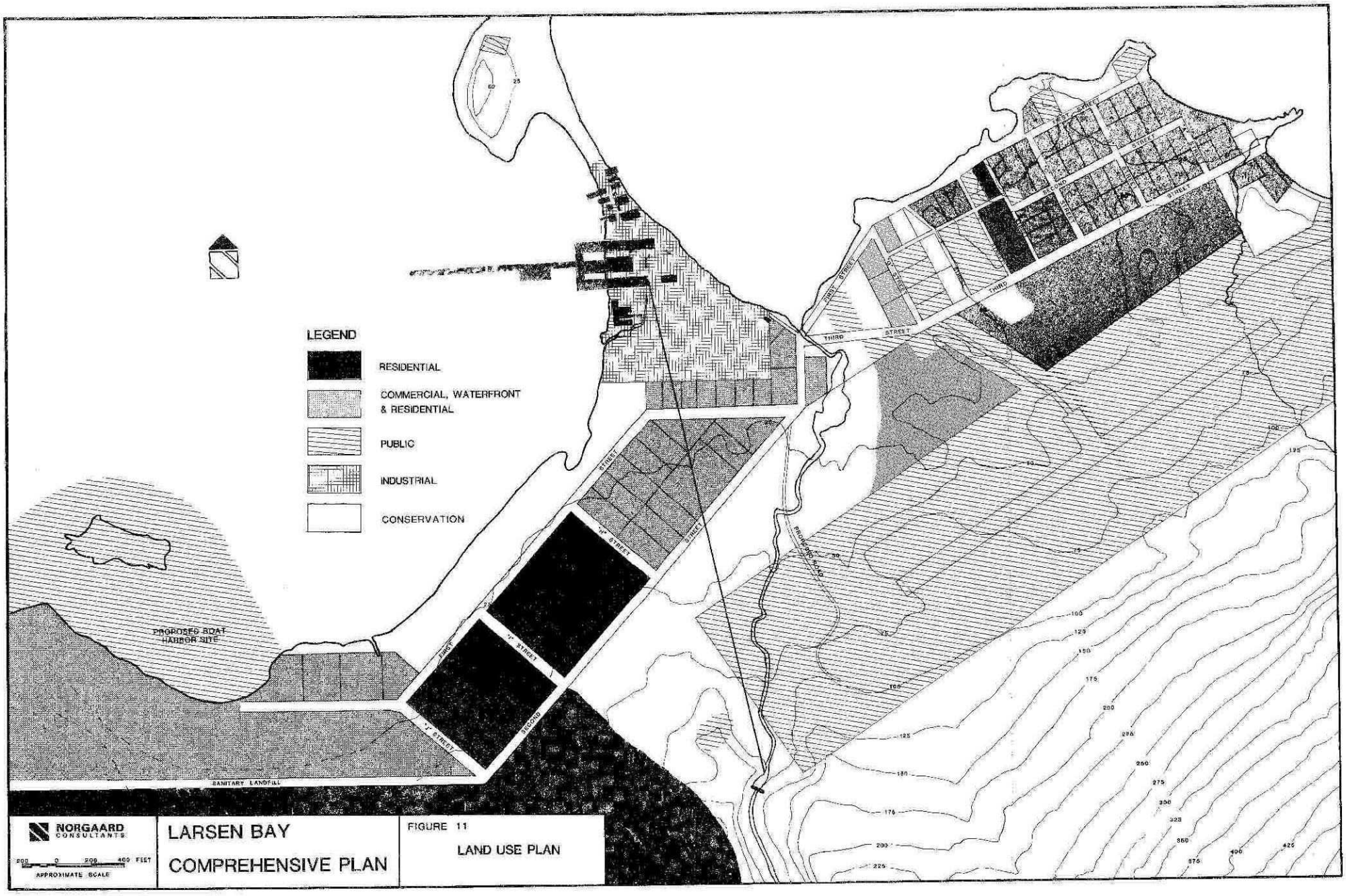
Four basic land-use standards have been applied in developing a land-use plan for Larsen Bay. These are:

- Industrial
- Commercial, Waterfront and Residential
- Residential
- Conservation

These use standards are only general guides and are not intended to stand alone or in the place of more detailed and structured land-use ordinances developed by the Kodiak Island Borough in close cooperation with the City of Larsen Bay. (See Figure 11)

Industrial

Future industrial expansion should develop in conjunction with the existing Larsen Bay Seafoods plant, and those expansion requirements should be adequately met with existing land available at the site. Some uses of this property could change (such as the boat haul-out and some commercial stores) expanding to other property within the


LEGEND
RESIDENTIAL
COMMERCIAL, WATERFRONT & RESIDENTIAL
PUBLIC
INDUSTRIAL
CONSERVATION
PROPOSED BOAT HARBOR SITE
SANITARY LANDFILL
PROPOSED ROAD
FIRST STREET
SECOND STREET
THIRD STREET
"A" STREET
"B" STREET
"C" STREET
NORGAARD CONSULTANTS
200 0 200 400 FEET
APPROXIMATE SCALE
LARSEN BAY
COMPREHENSIVE PLAN
FIGURE 11
LAND USE PLAN

community, e.g. the new small boat harbor site. The existing acreage provides sufficient land base for an expanded operation.

Restricting industrial development to this site also is dictated by the availability of water and electricity. Industrial development elsewhere would entail construction of additional self-contained systems or tying into the city's distribution system. As examined earlier in this document, increased load demands should not be placed on the municipal system, except for commercial and residential development.

Commercial, Waterfront, and Residential

Those platted tracts and lots within the existing townsite that lie adjacent to and immediately upland from the shoreline (from the central core of the community west to the site of the new small boat harbor) have been dedicated for multiple use. These multiple uses are the same as those found in the heart of the community and can be considered traditional uses, i.e. commercial, residential and waterfront-related.

Providing mixed uses in this combination has specific advantages for the City of Larsen Bay.

1. All commercial development will be established along or near the waterfront in the central part of the community. This serves to provide easy access to all community members and also serves to maintain the traditional nature of the coastal community.

2. Waterfront-related uses are not exempt or solely supported but allowed to develop on those sites along the shore that are best suited for their particular function or use. Again, this serves to allow maximum siting advantages and maintaining the traditional nature of the community without restricting other equally prioritized uses.

3. Residential use is allowed to permit full use of existing property, to break up commercial development and to preserve the traditional nature of the city.

4. The development of secondary economic ventures, such as those associated with the sport hunting and fishing markets, can develop as home business ventures from within

this mixed-use area, while still allowing the establishment of larger-scale operations, such as restaurants, lodges and supply stores.

The areas designated in this CWR mixed-use include acreage on the upland side of the new small boat harbor site. Sufficient acreage needs to be so dedicated to accommodate the land-intensive use associated with boat storage, gear storage, future supply and repair vendors as well as parking and other related uses, including those for transient moorage.

Residential

The City of Larsen Bay is preparing for the disposal of up to 25 lots for residential development in the current townsite. This disposal will exhaust the supply of residentially platted lots in the community. It will not, however, exhaust the future demand for land for residential development.

Additional acreage is available to the west of the existing townsite and off the roadway recently constructed as access to the new sanitary landfill site. This property is currently under Koniag Native Corporation ownership but will likely be selected by the

municipality as a part of its ANCSA 14(c)(3) selections.

Sufficient land is available to allow developments, ranging from subdivisions to individual tracts of one acre or larger. The community's goal of not requiring high density residential development should be satisfied with residential growth in these areas. It will be necessary to survey and plat this acreage as soon as possible to allow sufficient time for the necessary utility planning and other development considerations to be executed.

Conservation

Conservation designations serve three basic functions in this land-use plan.

1. Such development requirements protect the community's watershed from encroachment and potential harm. This protection is obviously considered critical by the community.

2. Property that is not suited for development because of its poor drainage or its erosion problems must be protected for the benefit of

surrounding property. The designation of open space use includes such property, especially along the shoreline as well as south of the spit in the vicinity of the creek.

3. The reservation of some open space for outdoor recreation and enjoyment is essential for the well-being of any community. Shoreline open space reserves provide public access to the beaches and coastline for individual and family enjoyment. Park development already is underway by the city and construction of a trail system is envisioned.

4. Open space use reservation also provides a buffering zone between certain land uses that, while not incompatible, are best served by some visual and noise protection from one other. Such buffering may be needed in the vicinity of the small boat harbor site and is served by the natural buffering to the west of the school.

CAPITAL IMPROVEMENT PLAN

CITY OF LARSEN BAY
CAPITAL IMPROVEMENT PROJECTS

Priority	Project	Est. Cost	Year
1	Small Boat Harbor Construction	$4,500,000	85/86
2	Community Center	$345,000	85/86
3	Micro-Hydro Project	$3,200,000	85/86
4	Erosion Control Study	$50,000	85/86
5	Airfield Extension Engineering	$100,000	86/87
6	Park Development	$85,000	86/87
7	Trail Development	$20,000	86/87

CAPITAL IMPROVEMENT PROJECTS NARRATIVE

Priority No. 1: Small Boat Harbor

The 13th Alaska State Legislature authorized $450,000 for design and engineering of a small boat harbor in Larsen Bay. Construction of the proposed facility is planned for Hospital Island and adjacent shore-side area.

Current conceptual plans call for Hospital Island serving as the base landfall for a dock as well as the site for open storage. The island will be connected to the main shore by a breakwater, which will run southeast from the island's southeastern corner. Moorage facilities will be constructed in the protected waters south of the island and west of the breakwater. While construction costs will be more accurately estimated as a result of the engineering and design work in progress, the preliminary estimate for the facility totals $4.5 million.

This project is essential for the continued economic welfare of the community. It also is critical to the Alaska fishing fleet working Kodiak-area waters. Larsen Bay annually hosts a large number of commercial fishing vessels, and what moorage and docking that is currently available is inadequate and dilapidated. This

transient moorage demand on the inadequate facilities places a continuing hardship on the local fleet.

The vitality of the recently re-opened Larsen Bay Seafoods enterprise as well as the community's entire local economy depend on construction of these small boat harbor facilities.

Priority No. 2: Community Center

Given the rapid growth in local population and the demands placed on the city for places to meet for community work and recreation, the existing facilities cannot provide the necessary room and facilities to accommodate these basic needs.

A new community center is needed to provide the meeting space necessary. It also is needed by various public and non-profit groups in the community. In addition, the community center will provide the space and facilities to initiate and/or expand such programs and

services to special members of the community, such as those provided to senior citizens. The community center also will serve as the central facility for indoor social recreation purposes. Estimated construction costs total $345,000.

Priority No. 3: Micro-Hydro Project

The micro-hydroelectric project still would utilize the existing diesel-generation system as back-up and would provide the much-needed stabilizing effect for electrical costs. This stabilization is needed to encourage the maintenance and growth of a strong fish-processing industry in the community.

This project would provide a 270-kilowatt generation system, which, during an average water year, could supply 90 percent of the electricity needs of Larsen Bay and 15 percent of the space-heating needs during the life of the project.

Specific discussions of all aspects of this proposed project are contained in the

Feasibility Study for Larsen Bay Hydroelectric Project (Dowl Engineers for the Alaska Power Authority, 1982). Project costs are estimated at $3.2 million.

Priority No. 4: Erosion Control Study

Coastal erosion poses a particular hazard along the coastline to the east of the spit and the mouth of Trout Creek. The old Bureau of Indian Affairs school and other buildings are threatened unless appropriate measures are taken soon to check, or at least control, the coastal erosion processes.

A study is needed to identify the specific measures that must be implemented to protect further encroachment of eroded coastline from destroying additional property. This project is estimated to cost $50,000.

Priority No. 5: Airfield Extension Engineering

The existing airstrip provides a runway surface of 2,400 feet for fixed-wheel aircraft. This is adequate for light aircraft and small commercial charter airplanes. However, a longer airifeld will be needed if larger aircraft are to serve the community, especially for freight hauling, including fresh and frozen fish products processed at the Larsen Bay Seafoods plant.

Ample space is available off both ends of the existing airstrip for a total expansion of 1000 feet. Estimated costs for project engineering are $100,000.

Priority No. 6: Park Development

Outdoor recreation is a necessity for village life thorughout the State of Alaska, and the City of Larsen Bay is no exception. With the construction of a new landfill west of the community, the old landfill that will be vacated can be filled, covered and prepared for use as a multi-purpose outdoor recreation

field. Funds are needed to develop the site and to provide basic equipment, such as fencing and netting for baseball, softball and volleyball. Restroom facilities also will be constructed. Development costs are estimated at $75,000.

In addition to the large multi-purpose field, smaller picnic areas need to be developed in the open use areas along the coast. Two to three such sites will be able to provide the outdoor cooking and picnic table facilities for the community. Development costs are estimated at $10,000 for three sites.

Priority No. 7: Trail Development

To complement the protection of shoreside and upland areas in their natural state, a series of trails has been proposed which would provide access to both the beach and streams traversing these open-space areas.

This trail system would provide foot access of varying degrees of difficulty for both local residents and visitors to the undeveloped and protected areas surrounding the community. Funds are needed to hire the locally available labor and to provide the necessary lumber and hardware for construction of boardwalks and small bridges, where necessary. Development costs are estimated at $25,000.

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