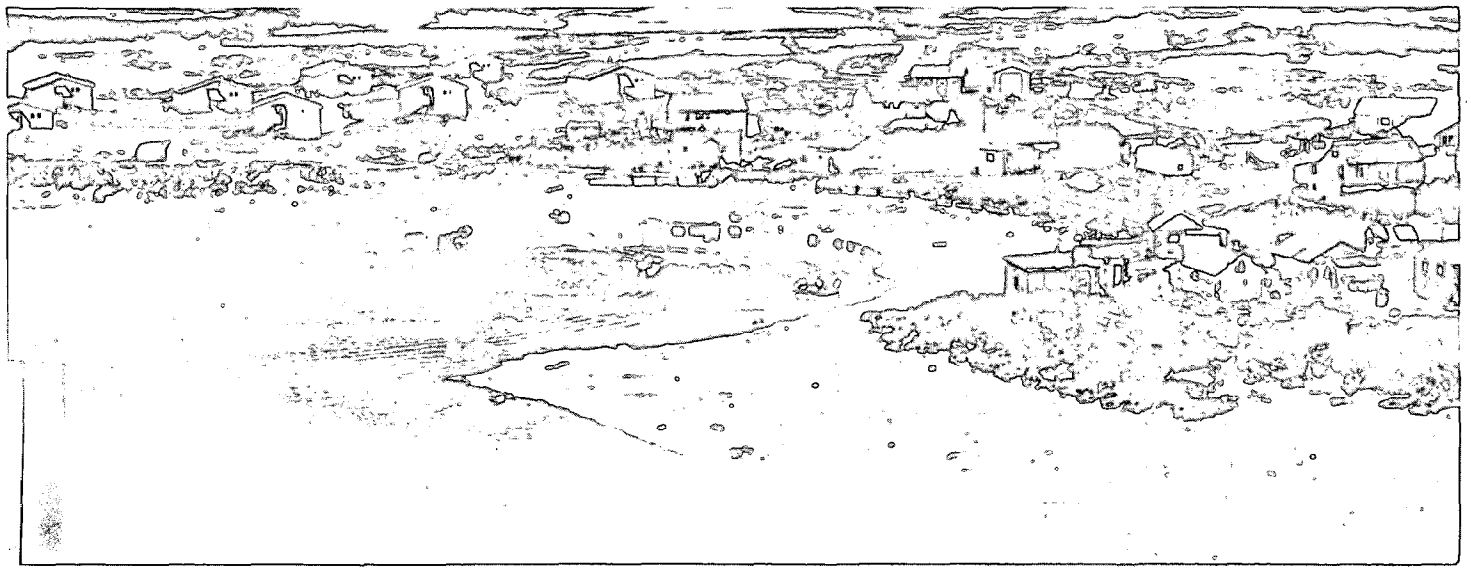
KODIAK ISLAND BOROUGH COASTAL SENSITIVITY STUDY

Citizens Manual



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KODIAK ISLAND BOROUGH COMMUNITY DEVELOPMENT DEPARTMENT

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Citizens Manual

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Prepared for

Kodiak Island Borough
Community Development Department

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KODIAK ISLAND BOROUGH - COASTAL SENSITIVITY TO OIL SPILLS
A CITIZEN'S MANUAL

INTRODUCTION

As part of its coastal management program, the Kodiak Island Borough studied the sensitivity of its coastal areas to pollution from oil and other petroleum products. The study included a technical report on the physical, biological, and human resources of the Borough, and a series of maps showing the sensitivity of these resources to oil pollution in coastal and nearshore areas. This Citizen's Manual is a summary of the technical report.

The Manual provides information about the oil spill sensitivity of Kodiak's resources. It can be used to make decisions in the event of a spill. It is not a specific response plan or a contingency plan. However, it does show where sensitive resources are located within the nearshore zone and when they are sensitive.

THE KODIAK ISLAND BOROUGH

The Kodiak Island group lies in the western portion of the Gulf of Alaska, separated from the Alaska Peninsula by the Shelikof Strait. Approximately 200 miles long and 100 miles wide, the island includes five major island groups: the Barren Islands, Shuyak Island, Afognak-Marmot-Raspberry Islands, Kodiak Island, and the Trinity Islands. The entire archipelago has an area of 5,000 square miles and lies within the boundaries of the Kodiak Island Borough.

There are seven communities within the Kodiak Island Borough: Akhiok, Karluk, Larsen Bay, Old Harbor, Ouzinkie, Port Lions, and the City of Kodiak. Most of these communities are heavily dependent upon commercial fishing for their livelihoods. In addition, subsistence plays a large role in the economies of most Kodiak communities. Kodiak is a favorite recreation area for persons living in other parts of the state as well as residents of the Borough. Kodiak's hunting and fishing attracts sportsmen from all over the world.

SHORELINE

The rugged coastline has many deep, narrow fjords, bays and scattered islets. Much of the shoreline is rocky and steep cliffs are common; however, there are also a number of estuaries, wetlands and lagoons, particularly at the heads of bays. Seven major coastal types are found in the Borough: 1) rocky headlands, 2) wave-cut platforms, 3) sand beaches/exposed tidal flats, 4) mixed sand and gravel beaches, 5) gravel beaches, 6) sheltered rocky and gravel shores, and 7) protected estuarine tidal flats and marshes. Of these, sheltered rocky and gravel shores are the most common, making up more than a third of the coastline. Mixed sand and gravel beaches are the next most common, followed by wave-cut platforms.

Each of these coastline types has a different sensitivity to oil pollution. The shoreline types are shown on the oil retention maps in the back of the manual. Sensitivity to oil pollution depends on how long the oil stays in or on the shoreline. This, in turn, depends on the shoreline type and wave energy. Generally, rocky shorelines and fine sediments (mud and fine sand) prevent penetration of oil. Coarse sediments, particularly pebble, cobble, and boulder-sized gravel, allow considerable oil penetration. Oil in areas of high wave energy exposure can quickly wash away, and oil would not penetrate as deeply into the

shoreline in those areas as it would in places where wave energy is low. High wave energy areas are found on outer coasts which are exposed to ocean waves. Inner bays are usually areas of low wave energy.

The longer oil is present in or on the shoreline, the greater the potential for harming plants and animals. This is important in Kodiak, which is rich in fish and wildlife that contribute to the local economy. The many fjords and bays of the Kodiak Archipelago provide sheltered habitats for birds, fish and marine mammals. Shoreline areas are used by various terrestrial mammals and birds. Oil spilled in these areas could be harmful to fish and wildlife.

FISH AND WILDLIFE

Birds

Kodiak Island has many seabird colonies which host thousands of birds, particularly during the summer months. Some common seabirds found in the area are glaucous-winged gulls, murres, black-legged kittiwakes, cormorants, and puffins. These birds feed in nearshore waters and would be very susceptible to oil spills. If oil coats the birds' feathers, the birds are no longer protected from the cold and may die of exposure. Oiled birds also may sink and drown or may swallow large quantities of oil in trying to clean their feathers.

There are many other species of birds found in Kodiak waters. Kodiak is an important overwintering area for some species of waterfowl. Like seabirds, ducks and geese may be affected by oil. Other birds that live in the area include shorebirds, eagles, ravens, peregrine falcons and other raptors, and songbirds. All of these birds may be affected to some extent by an oil spill in the coastal areas. The biological maps in this manual show seabird colony locations and areas used by waterfowl during winter and summer.

Fish

Marine fish that are found in Kodiak nearshore waters include herring, capelin and various groundfish such as yellowfin sole, rock sole, halibut, pollock and cod. Most of these species spend the majority of their lives in offshore waters and are found in the nearshore zone only as juveniles or during spawning. For example, herring move into rocky coastal areas in the spring to lay their eggs on seaweed-covered rocks and boulders. The eggs and newly-hatched fish remain in the nearshore areas for several months before moving into deeper offshore areas. Capelin have a similar life cycle. Juvenile groundfish are also found in nearshore areas. Since juvenile fish are usually more sensitive to oil pollution than are adults, they are very vulnerable to oil spills in nearshore waters.

Anadromous fish are an important resource in the Kodiak area. Kodiak streams contain sockeye (red) salmon, coho (silver) salmon, pink salmon, chum salmon, chinook (king) salmon, steelhead, and Dolly Varden. These fish generally spend their adult lives in saltwater, returning to Kodiak rivers and streams to spawn. Newly-hatched fish spend varying amounts of time in the rivers before moving to nearshore waters to feed and rear. As they mature, they move into deeper oceanic waters. The nearshore zone is a critical area for anadromous fish. An oil spill here could harm juvenile salmon as well as adults returning to the

Invertebrates

The marine nearshore waters are also home to many invertebrate animals, including mussels, barnacles, clams, shrimp and crabs. King and Dungeness crabs gather in shallow waters during certain times in their lives. During daylight hours, shrimp are usually buried in the muds on the sea floor, but at night they move up to the sea surface to feed. Juveniles often stay in the shallower portions of the habitat and migrate into deeper waters as they grow older. Many of the marine invertebrates are sensitive to oil pollution; clams, barnacles and urchins have experienced massive die-offs in actual spills. However, these animals are able to move quickly back into affected areas, and are not considered to be particularly sensitive, compared to species that do not move back into oiled habitats. Oil appears to be toxic to young of king and Dungeness crabs as well as to shrimp. The young of these species are more likely to be found in Kodiak nearshore waters than would adults.

Marine Mammals

Marine mammals are common in the Kodiak environment. Sea lions, harbor seals, and sea otters are found in most areas of the coastline. Of these, sea otters are probably the most vulnerable to the effects of oil. Otters depend upon their fur for insulation and buoyancy. When their coats become covered with oil, the insulative properties are lost and the otters either die of exposure or sink and drown. Seals and sea lions have a thick layer of blubber under their skin which keeps them warm and helps them float. While they may experience discomfort and may swallow oil trying to clean themselves, seals and sea lions are not as likely to drown or die of exposure as a result of being oiled. Other marine mammals found in Kodiak waters include humpback whales, gray whales, killer whales, and porpoises. The humpback and gray whales pass through the Kodiak area during migrations to and from the Bering Sea. The other species may be found throughout the year but are not considered to be particularly vulnerable to oil pollution because of their mobility, how they feed and their reliance upon fat layers for insulation.

Terrestrial Mammals

Terrestrial mammals use the intertidal zones of Kodiak Island throughout the year and may come into contact with oil. River otters feed in nearshore marine waters and red foxes feed in the intertidal zone throughout the year. Brown bears move into the intertidal zone in the spring to feed after emerging from dens. Deer and elk move out of the higher elevations in the late fall and winter by snow and during these months often move into intertidal areas to feed on grasses and seaweeds. Some deer populations are found in intertidal areas throughout the year. Oil in beach areas could be harmful to these animals by contaminating food sources.

HUMAN RESOURCES

Major concerns during an oil spill are harmful effects to resources used by Borough residents. Commercial fishing, subsistence harvests, recreation activities, and boat and harbor facilities are all sensitive to oil spill damage. These activities and resources are very important to the livelihood of Borough residents and strongly influence actions that should be taken if an oil spill occurs.

Commercial Fishing

Commercial fishing is the most important contributor to the Kodiak economy and takes place in nearly every season of the year. Salmon are fished from the shore at set net sites and in nearshore waters using gill nets and purse seines. Dungeness, king, and tanner crab and shrimp are harvested by pot in the region. Other important resources include herring, halibut and other groundfish, clams and scallops. Fish are processed at shore-based sites and on floating processors.

Oil pollution can harm commercial fisheries in several ways. The fish can be injured or killed by oil, or may avoid an oiled area, both of which could result in fewer fish to harvest. Fish that are harvested could be tainted (or thought to be tainted by buyers), resulting in loss of sales. Oil in the water can foul gear (such as nets and pots) and boats, requiring expensive cleanup or replacement. Finally, fishing areas could be closed to fishing due to potential harm to the resource, potential tainting, or interference with spill cleanup activities.

Subsistence Harvest

All Borough residents rely on subsistence resources to some degree. Subsistence is particularly important in rural areas, where there are fewer opportunities for cash income. In addition to its economic value, subsistence plays an important role in village cultural traditions. Subsistence resources are harvested year-round, using a variety of methods. There are seven categories of resources used in coastal areas: fish (salmon, halibut, and trout), deer and reindeer, marine mammals, birds (waterfowl, bird eggs), rabbit, clams and crabs. While the reliance on specific resources differs among communities, salmon and deer are heavily used by all.

Subsistence resources are sensitive to oil spills in several ways. The fish and wildlife harvested can be injured, killed or scared away by oil pollution. Access to hunting and fishing areas could be prevented. Fish and wildlife oiled or thought to be oiled are less desirable for harvest. Finally, gear and equipment used for harvesting can be fouled by oil pollution, requiring cleaning or replacement.

Recreation

Recreation activities are important to both Borough residents and outside visitors. Recreation contributes to the local economy, benefitting merchants, lodge owners, guides, and air taxi operators. The majority of activity occurs during sport hunting and fishing seasons (May - December), although local use of recreation facilities occurs year-round. Important species include fish (salmon, trout, steelhead, and halibut), brown bear, elk, deer, and waterfowl. Boating, picnics, hiking, camping, and sight-seeing are also important recreation activities. Recreation areas and facilities include state and local parks, and the Kodiak National Wildlife Refuge.

Recreation resources, activities, and facilities can be sensitive to oil pollution. The fish and wildlife important to hunting, fishing, and sightseeing can be injured or killed by oil. Oil contamination or cleanup activities can prevent access to or use of recreation areas. Even if use is not prevented, the presence of oil or cleanup equipment can lessen the quality of a recreational activity.

Infrastructure

Kodiak Island communities depend on the coastline. Homes, commercial facilities, boat harbors, docks, and other important facilities are located on the shoreline and can be exposed to, or be a source of, oil spills. Boat harbors support the commercial fishing industry, and unrestricted access is very important during fishing openings. Docks are used to load and unload supplies, fish, fuel, water, and passengers. In rural communities, the shoreline itself is an important transportation route.

Property damage, interference with access, and potential safety hazards are the main reasons that infrastructure is sensitive to oil spills. Oil contamination can cause damage to homes, boats, and harbor and dock facilities. It also presents a fire hazard in enclosed areas like boat harbors. Fouling of boat and gear during fishing periods can mean lost fishing time and lost dollars. The closing of a boat harbor or dock may have the same effect during fishing periods or scheduled cargo delivery. Effects of oil spills on residential and commercial property can range from creation of a nuisance to loss of property value.

Archaeological and Historical Resources

The Kodiak Island Borough is rich in archaeological and historic resources. Most of the archaeological sites are located on the coastline, concentrated along major bays and fish streams. Historic sites are associated with the island's Russian history, early days under American rule, and World War II defense facilities. Archaeological and historic sites are protected under state and federal law.

Oil spills can harm these sites in two ways: oil damage to the site or artifacts and damage from cleanup activities. Oil contamination can lessen the real and historic value of the site and artifacts. This could hurt future studies of the site. Cleanup activities can cause damage from the removal of oiled soil, use of heavy equipment, and vandalism. Oil spill cleanup activities at archaeological and historic sites must be coordinated with the State Historic Preservation Office and the Kodiak Island Borough.

OIL SPILLS

Sources of Oil Spills

There is a variety of potential petroleum product spill sources in the Kodiak Island Borough. Among these are onshore fuel storage tanks and refueling and maintenance of vessels. Leaky fittings can cause chronic oil pollution. Earthquakes, poor maintenance or human error can cause storage tank ruptures resulting in large, single-ocurrence spills which may reach coastal waters. Refueling and mantenance of vessels can also cause oil spills if waste oil is not properly disposed of or if careless techniques are used when filling vessels at the gas dock. Oil spills from vessel accidents are always a possibility.

If lease sales in the Kodiak area result in oil exploration and production, the Kodiak coastline is vulnerable to oil spills which may come from offshore drill rigs (although the probability is very low). Oil development would increase tanker and ship traffic, resulting in greater chances for accidents to occur during bad weather. Oil tanker accidents have occurred in various parts of the world and have oiled miles of coastline and large numbers of birds and

marine mammals. In addition to their cargo, ships carry thousands of gallons of fuel, which, if involved in an accident, could cause large oil spills. Other sources of spills include oily bilge from empty tankers on their way to tanker terminals and from crude oil storage tanks onshore.

Behavior of Oil and Oil Spills

Crude and refined oils can be divided into three groups: light distillates, heavy distillates and crude oils. The first group includes gasoline, kerosene and jet fuel. These products evaporate quickly and catch on fire easily. They can penetrate rapidly into muds, sands and gravel and are generally the most poisonous to plants and animals.

Heavy distillates include diesel oils and bunker fuel oils. These do not evaporate as rapidly as do light distillates and they tend to become very thick when they get cold. These oils, although somewhat less toxic than light fuels, are still poisonous to plants and animals.

Crude oil is raw, unprocessed oil which has been changed very little (if at all) since taking it from the well. The lighter portions of the oils evaporate very quickly leaving a heavy oil which may sink in water. Oil is "weathered" when the lighter portions evaporate, leaving a tar-like mass which may last for months. The most poisonous parts of any oils are the volatile fractions, i.e. those parts which evaporate quickly. Weathered oil which has lost those fractions is not as poisonous as freshly spilled oil.

Oil spilled into the ocean will usually form large slicks whose movements are affected by wind, waves and currents. Wind is the most important factor since it also influences the direction and the height of waves. Currents also help determine the direction of an oil spill. Tides can cause oil to be carried away from shorelines on ebbing tides and re-oiling them on rising tides. In the event of an oil spill, it is very important to track the spill from the air in order to predict where it is going so that sensitive coastlines can be protected.

Response Actions

Response to an individual oil spill will differ depending on its unique circumstances. Response actions can, however, be generally outlined:

ALERT - Appropriate government agencies are notified of the spill, including location and what type of oil has been spilled.

CONTROL AND CONTAINMENT - Efforts are made to stop the spill and contain the oil.

PROTECTION - Sensitive areas are protected if it appears that oil will reach them.

CLEANUP AND OIL RECOVERY - Oil is removed from the water and shoreline.

DISPOSAL - Oil and oiled vegetation, soil, etc. is disposed of in an acceptable manner.

Oil can be controlled and contained by using booms, berms, and/or chemicals. Booms are floating barriers which

can be used to protect areas from oil or herd oil to a place where it can be picked up. Berms are constructed of earth; usually a trench is dug parallel to the berm to intercept oil. Chemicals are sometimes used to herd oil or to combine with oil to make cleanup easier.

After oil has been contained, it must be removed from the water or the shoreline. This can be done with equipment, by hand or with chemicals. Skimmers are a common piece of cleanup equipment. They are used to suck the oil off the surface of water. There are many different kinds of skimmers which are used in different circumstances. Dispersants are chemicals which break up oil slicks into fine droplets on the water surface and in the water column. The drops are prevented from re-joining after they are dispersed. There are advantages and disadvantages to using dispersants and their use is government regulated.

Sorbents are materials used to absorb oil floating on water. They can continue to float after absorbing the oil and can then be picked up mechanically. Sorbents can be natural substances like straw or sawdust or they can be manufactured items like polypropylene or polyurethane foam. The foams have more capacity to absorb oil than do straw or sawdust.

In some cases, the best way to get rid of the oil is by burning it. This decision must be made after the effects on public safety, air pollution, and fish and wildlife habitat have been considered.

Heavy equipment is often used to pick up oiled sand and gravel on beaches and in other areas. The sensitivity of the area must be considered before deciding to use front-end loaders or scrapers. In some sensitive areas, the best cleaning method may be by hand. Rocks and other objects can be carefully cleaned without causing too much damage to plants and animals. Structures and some beach areas may be flooded with water to wash oil into areas where it can be picked up. Ships and docks may be steamcleaned.

Animal cleaning is a difficult operation and must be done by experts. Oiled birds and animals are under stress and if not treated properly, will die from the stress as readily as they would from the oil itself. Usually, it is better to try to keep the oil from reaching animal habitats than to try to clean oiled animals. In some cases, no action may be the best course. The decision to do nothing must be reached in consultation with the agencies overseeing the spill.

After oil has been cleaned up, it must be disposed of in an approved manner. This can be done by burning it in incinerators or by burying in specially prepared landfills. Another method is recycling. Oil can be picked up by vacuum trucks and transported to sites where it can be separated from any water it may have picked up and prepared for reuse. Recycling should always be the first choice over burning or burial.

HOW TO USE THE SENSITIVITY MAPS

Kodiak is an area rich in resources and important to the State of Alaska. Its coastal areas are sensitive; an oil spill into nearshore waters could have serious consequences for the fish, wildlife and human resources of the area. The maps which follow this section show the sensitive coastal zones and the seasons in which they are sensitive.

The coastal areas of Kodiak has been divided into 49 sections. For each of these sections, there are three maps and a table. The maps represent: 1) oil retention index, 2) human use index, and 3) biological index. Three levels of sensitivity are shown on each map: high, moderate and low. These levels of sensitivity do not reflect the value of the coastline in any way, but show the relative sensitivity of the coastal areas to oil pollution.

Shorelines

The Oil Retention maps show the areas which have the highest likelihood of retaining oil, based on shoreline type and wave energy. Areas of high sensitivity will have oil present for more than one year, and include protected inlets, estuaries, lagoons, tidal flats and marshes. In moderately sensitive areas, oil may be present for weeks to months; they include sand-gravel beaches with moderate wave exposure. Oil will be present from a few days or weeks in areas of low sensitivity. This category includes rocky headlands, wave cut platforms and rocky beaches.

Biological Resources

The Biological maps show the sensitivity of the coastal areas various fish and wildlife species. Areas of high sensitivity include the following:

1. seabird colonies
2. waterfowl high intensity use areas for nesting, staging, and wintering
3. sea lion haulouts and rookeries
4. sea otter high intensity use areas
5. black-tailed deer high intensity winter use areas
6. elk high intensity winter use areas
7. brown bear spring and fall high intensity use areas
8. razor clam beds
9. mouths of anadromous fish streams
10. herring spawning areas

Other types of areas may be as sensitive, but the lack of available information does not allow them to be mapped. Areas of moderate biological sensitivity have been identified as the following:

1. sea otter moderate use areas
2. general winter and summer use areas for waterfowl
3. general wintering areas for elk
4. general wintering areas for black-tailed deer
5. areas near the mouths of anadromous fish streams

Areas of low biological sensitivity include any parts of the coastline which do not fall in the high or moderate categories. Since this classification may reflect only the current state of resource knowledge and not the actual use or importance of the habitat, it is important that the sensitivity maps be reviewed and updated often.

Human Resources

The sensitivity of a particular human resource, facility, or activity to an oil spill depends on a number of factors:

1. level of economic or social importance
2. relative abundance and distribution
3. frequency of use
4. seasonal availability
5. available alternatives
6. regulatory status

Commercial Fisheries: The determination of sensitive commercial fishing areas reflects those fisheries at greatest risk to an oil spill: shrimp, herring and salmon. These fisheries all take place in shallow nearshore waters. Salmon fishery sensitivity was mapped using recent Alaska Department of Fish and Game catch statistics. High sensitivity areas produced more than 100,000 salmon per year, moderate areas produced between 10,000 and 100,000 and low sensitivity areas produced less than 10,000 fish. Herring fishery areas were considered highly sensitive if they produced more than 20 tons of roe per year and moderately sensitive if they produced less than 20 tons. In recent years, shrimp fishing has been allowed only in one bay, Alitak, and this area received a high sensitivity rating for that reason.

Subsistence: Subsistence sensitivities were determined as follows:

- Salmon harvest areas were generally given a high sensitivity rating because villages heavily rely on that resource, its availability is seasonally limited, and harvest activities are subject to gear fouling or exclusion from a spill area.

- Depending upon location, waterfowl are moderately to highly sensitive due to limited seasonal availability, and reliance upon shoreline habitats.

- Some resources, such as deer, marine mammals and shellfish were considered to be more sensitive closer to communities where they are more intensely harvested. While this is somewhat subjective, having to go further to harvest resources requires more time and fuel.

- Resources available in inland areas are considered to be sensitive only when concentrated in shoreline areas (such as deer).

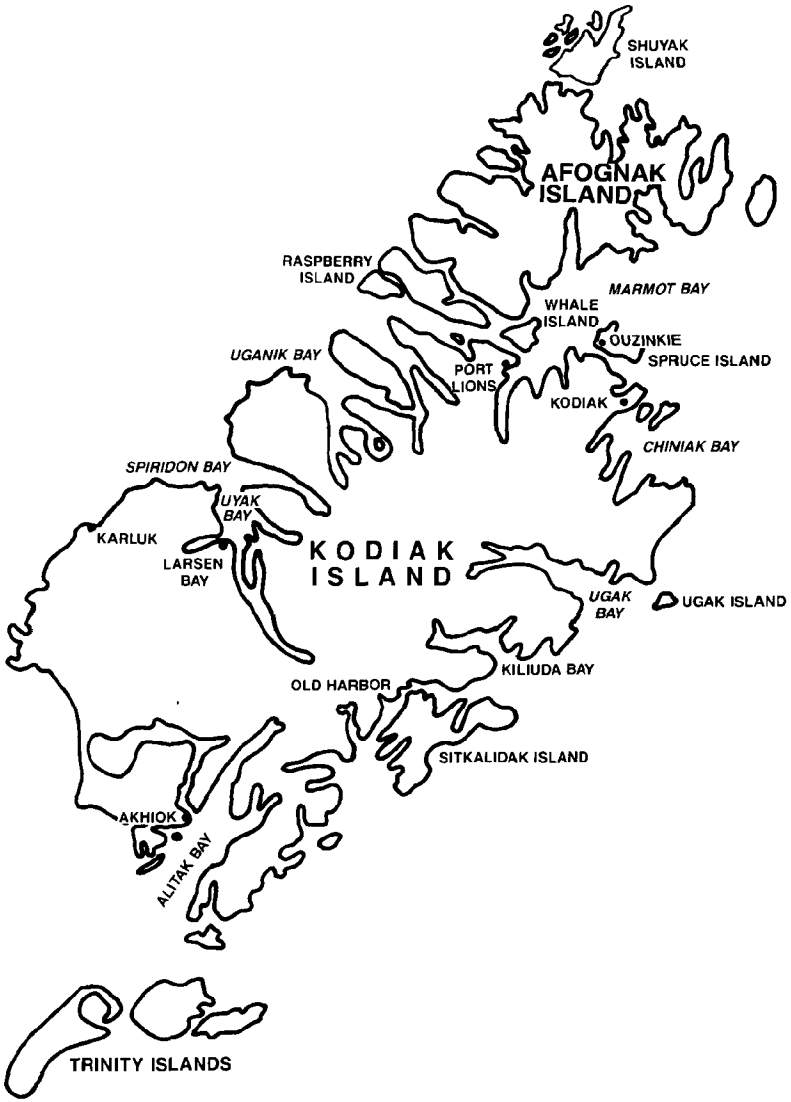
Recreation: Sensitivity of recreational facilities and activities in Kodiak changes with the time of year and proximity to populations and access. Seasonal importance is usually tied to availability of fish and/or game; summer and fall experience a greater level of recreation than winter or spring. Other factors include type of use or activity, level of activity, economic contribution, and management or regulatory status. Areas of high sensitivity include state parks (Ft. Abercrombie, Buskin River, Pasagshak Bay, Shuyak Island), sport fishing areas (marine and intertidal), commercial lodges (Seal Bay, Port Lions, Karluk Lagoon), waterfowl hunting areas, and popular picnic and outing areas. Areas of moderate sensitivity include coastal deer hunting areas, boating areas, and remote areas with moderate documented seasonal use. Remote areas with occasional documented use (usually seasonal) are considered to have a low sensitvity.

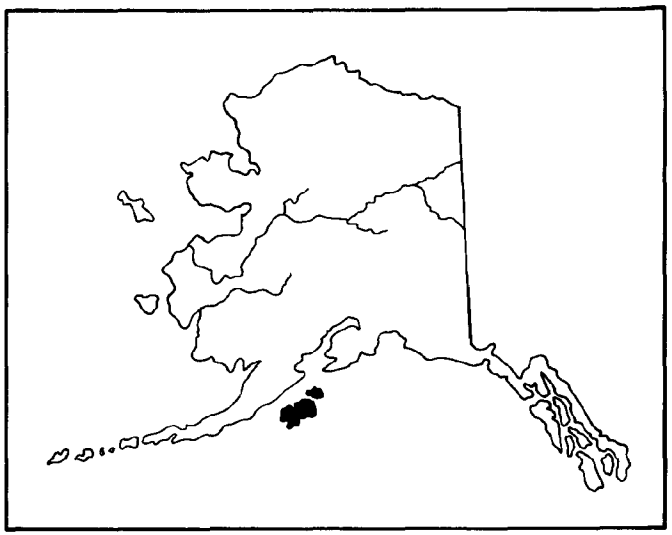
Infrastructure: In general, community infrastructure and commercial and residential property are highly sensitive to petroleum spills. This is due to the potential for property damage and the high cost of cleanup or reimbursement. Sensitivity to a petroleum spill reflects economic value and importance, availability of alternative facilities and level of use. Areas of high sensitivity include: boat harbors,docks and boat launching facilities, residential property, commercial property, and shoreline boat and gear storage areas. Shoreline transportation routes (three-wheelers and other all-terrain vehicles) are moderately sensitive.

Archaeological and Historic Resources: The sensitivity of historical and archaeological resources is generally high due to the potential for damage from oiling and cleanup activities. Areas with a high density of sites are considered to be more sensitive than single sites. These areas do not appear on the map, in order to protect their specific location. Further information can be obtained from the State Historic Preservation Office or the Kodiak Island Borough.

MAPS

All of the areas discussed above are shown on the following maps. Each set of maps has a table showing the seasons in which the resources are sensitive. In the event of an oil spill, these maps and tables can be used to identify the areas where the majority of preventative or cleanup effort may be concentrated, or the areas that should be concentrated on first. They also will help the response team to determine what types of cleanup or prevention measures might be needed due to the types of resources present. This manual is not an oil spill contingency plan; it is, however, an aid to those who are planning for oil spill contingencies or who are responding to an oil spill. REMEMBER: All oil spill response activities must be coordinated with the appropriate local, state and federal government agencies.





MAP INDEX AND SYMBOLS

10	11	12
17	18	19
25	26	27

SHADED BLOCK SHOWS MAP NUMBER; ADJACENT MAP NUMBERS ARE PROVIDED FOR REFERENCE

SPILL SENSITIVITY[1]

- High Sensitivity to Oil Spills
- Medium Sensitivity to Oil Spills
- Low Sensitivity to Oil Spills

CANNERY/SET NET SITES[2]

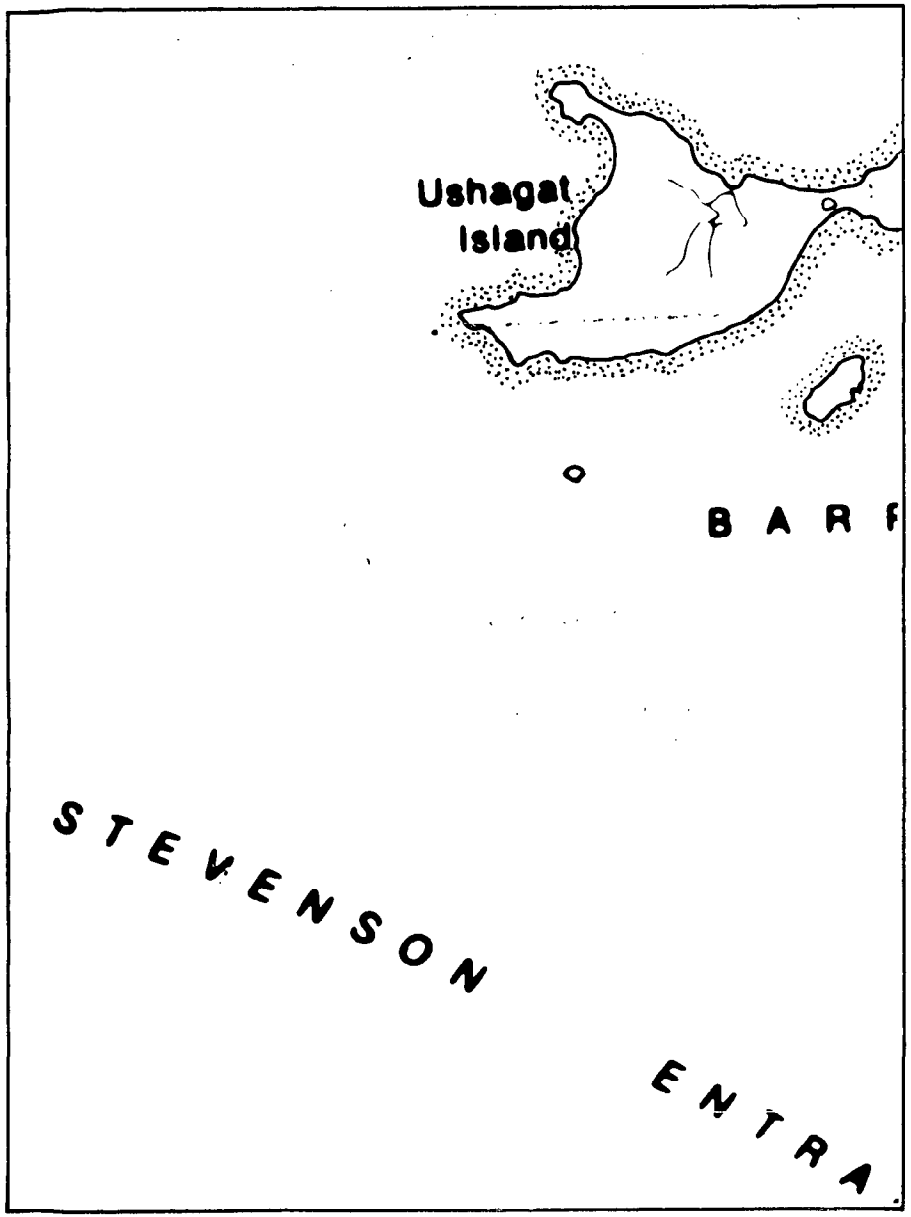
Can-H-1	Cannery
Set-H1	Salmon Set Net Sites

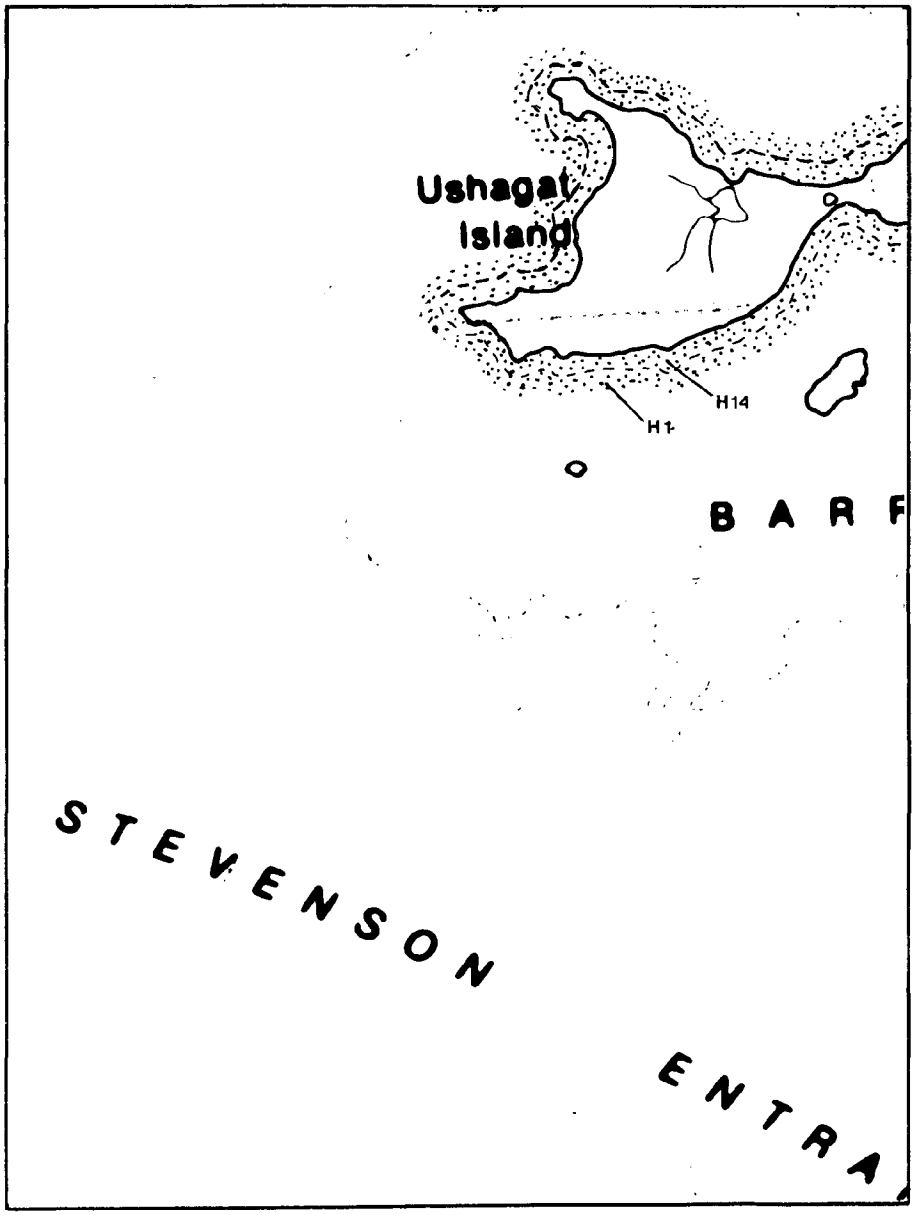
SCALE: 1:100,000

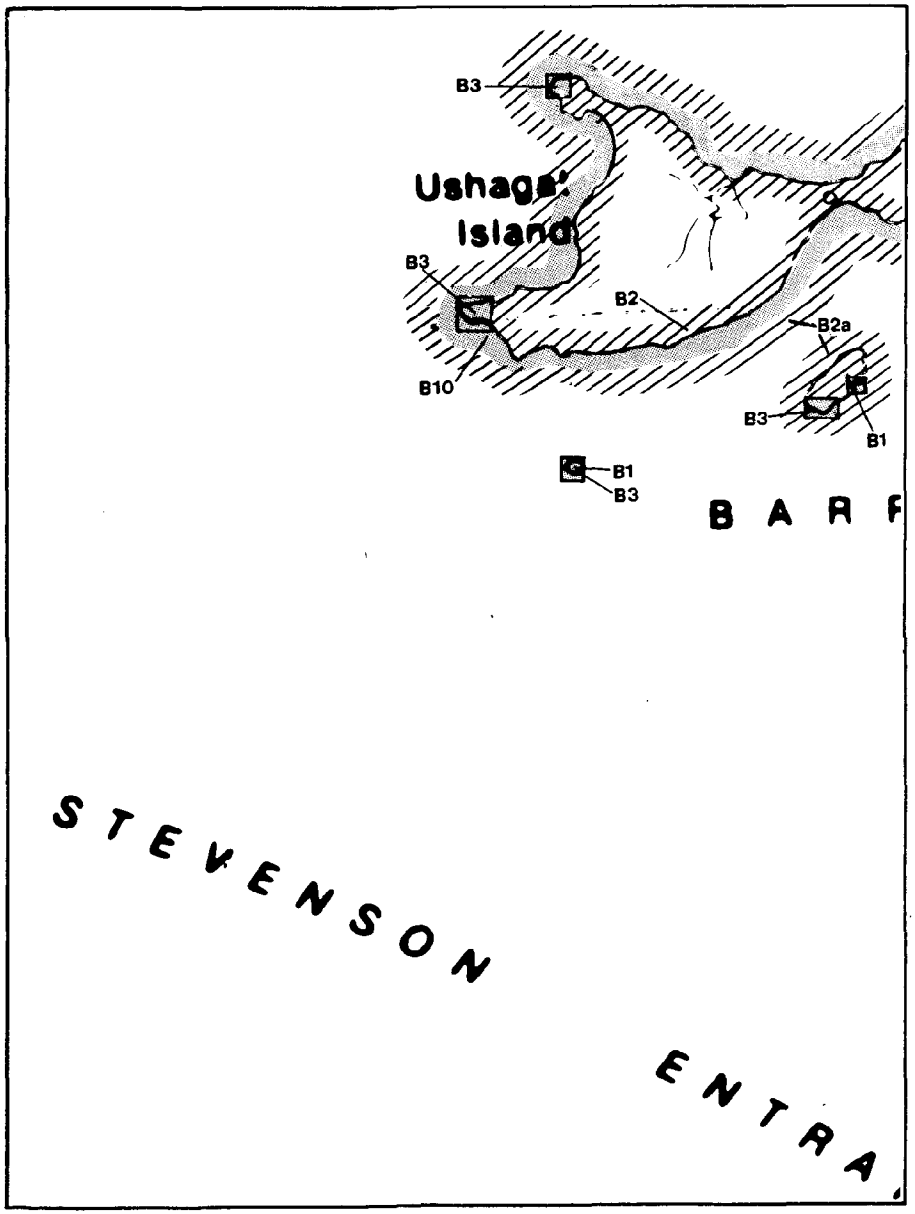
1. Coastal sensitivity rating only applies to oil spills and does not reflect resource value or sensitivity to other disturbance.

2. Seasonal sensitivity is similar to H-1 sensitivity seasonal table.

HIGH MEDIUM LOW

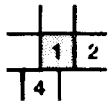




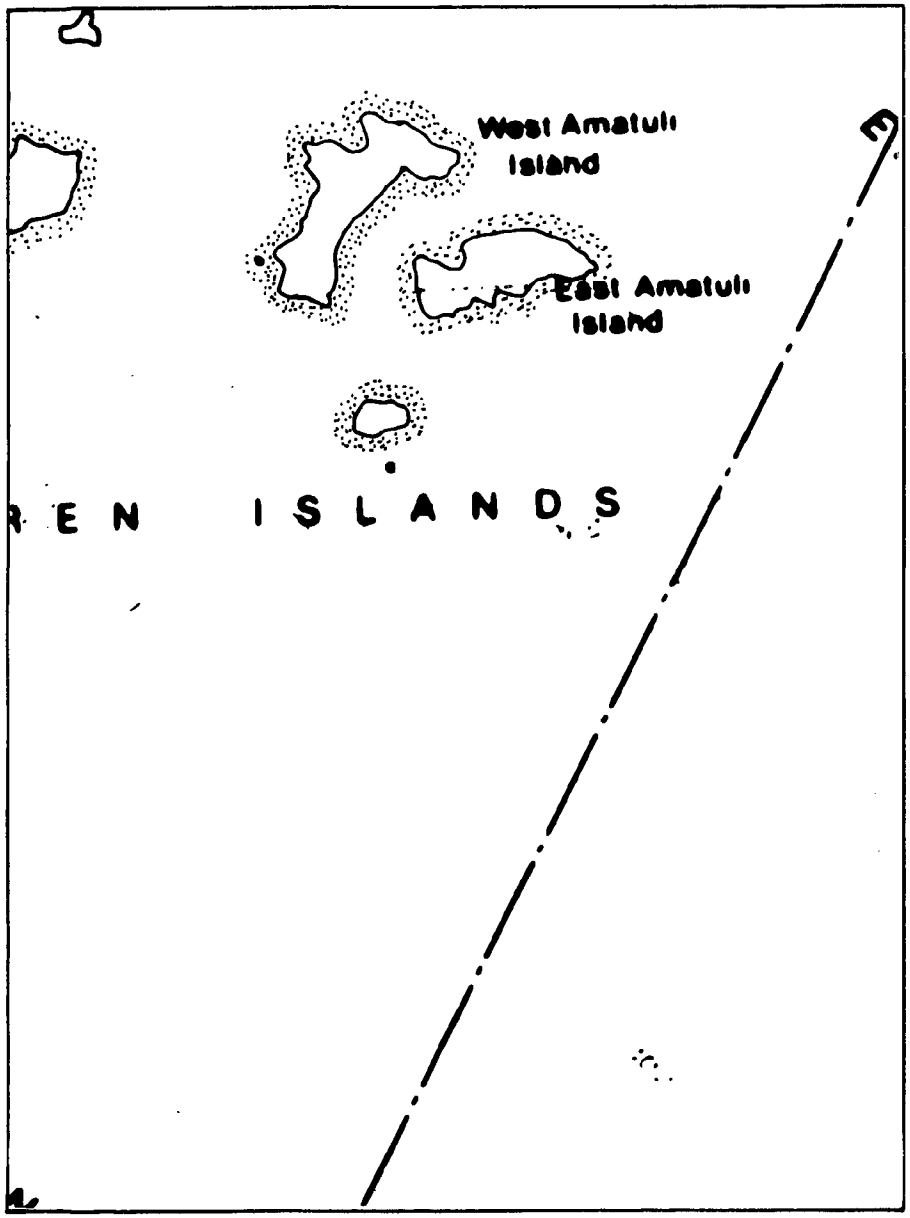


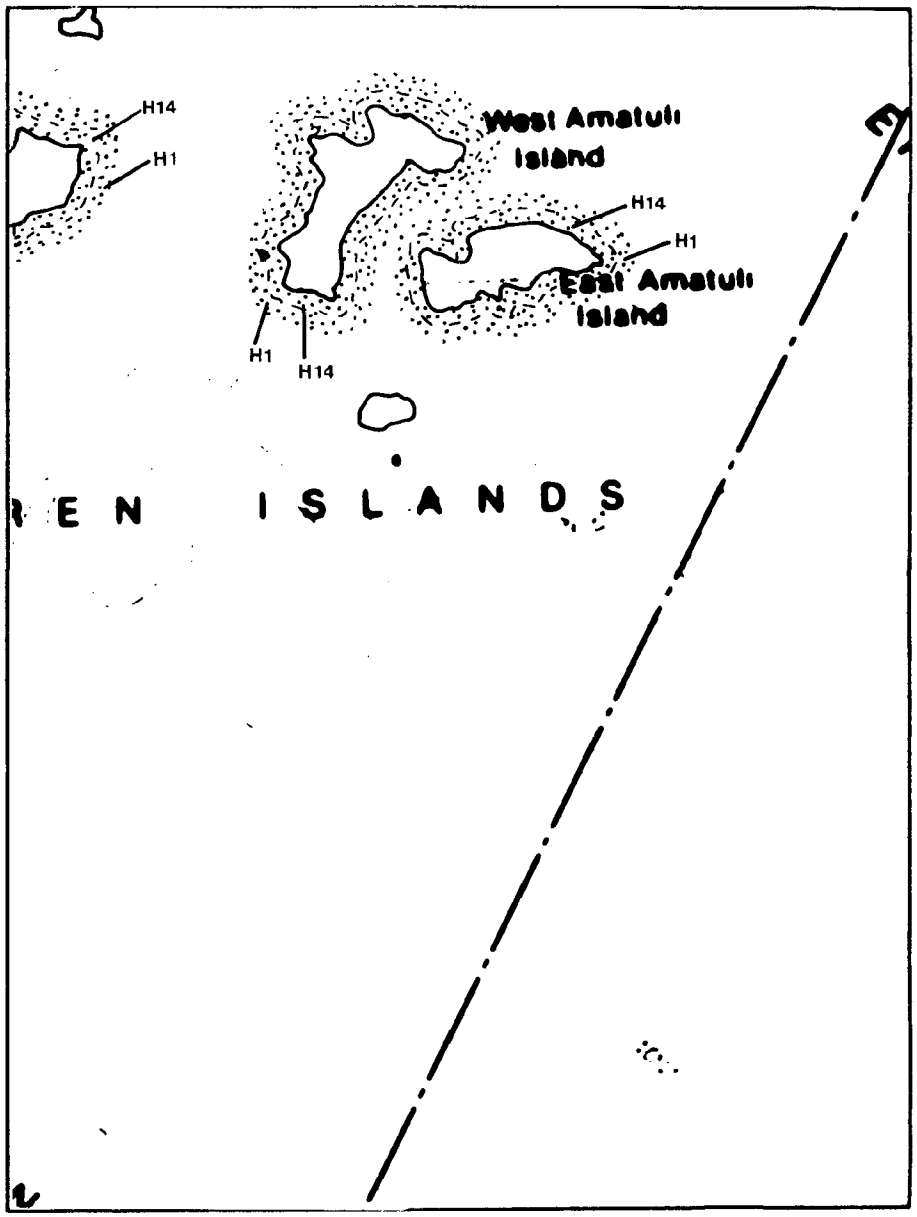
MAP NUMBER 1

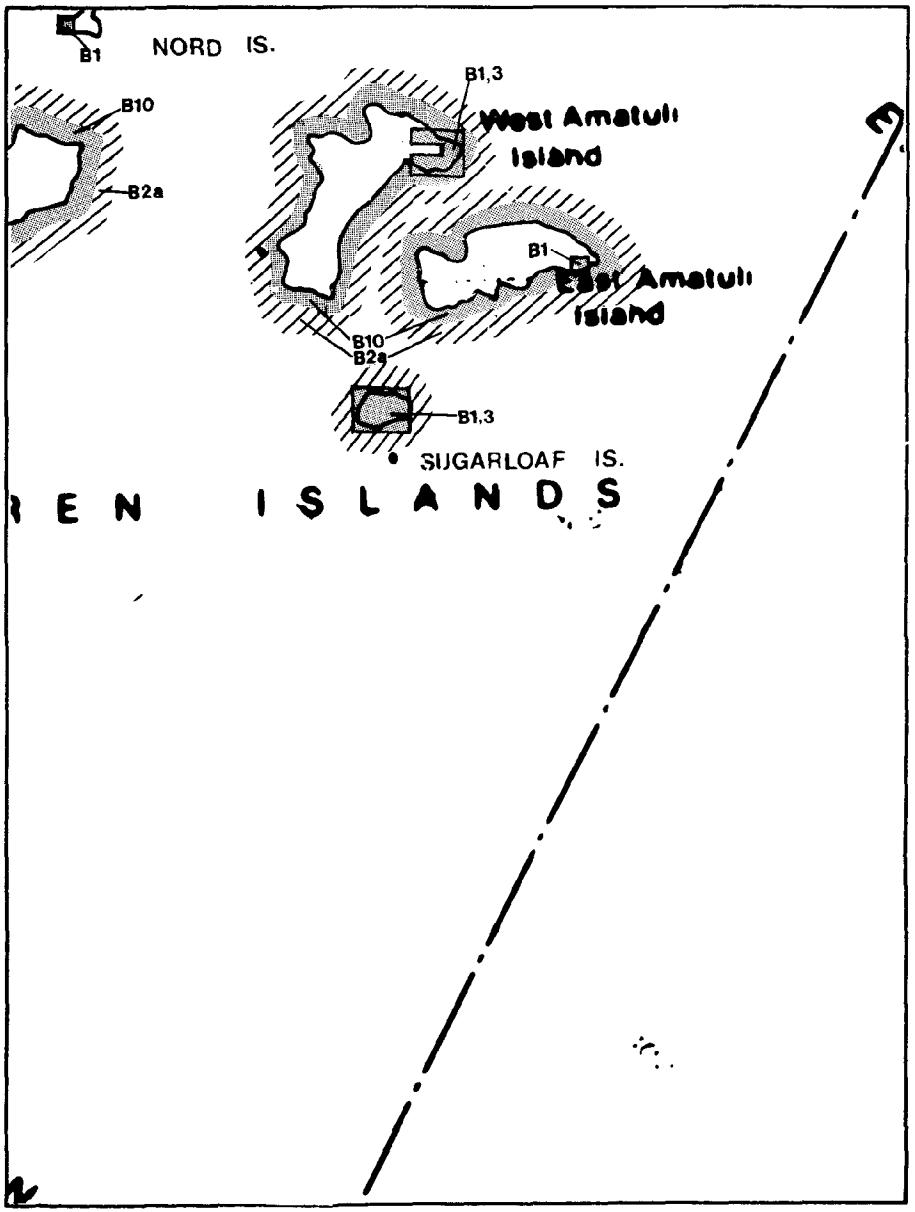
RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												



HIGH MEDIUM LOW



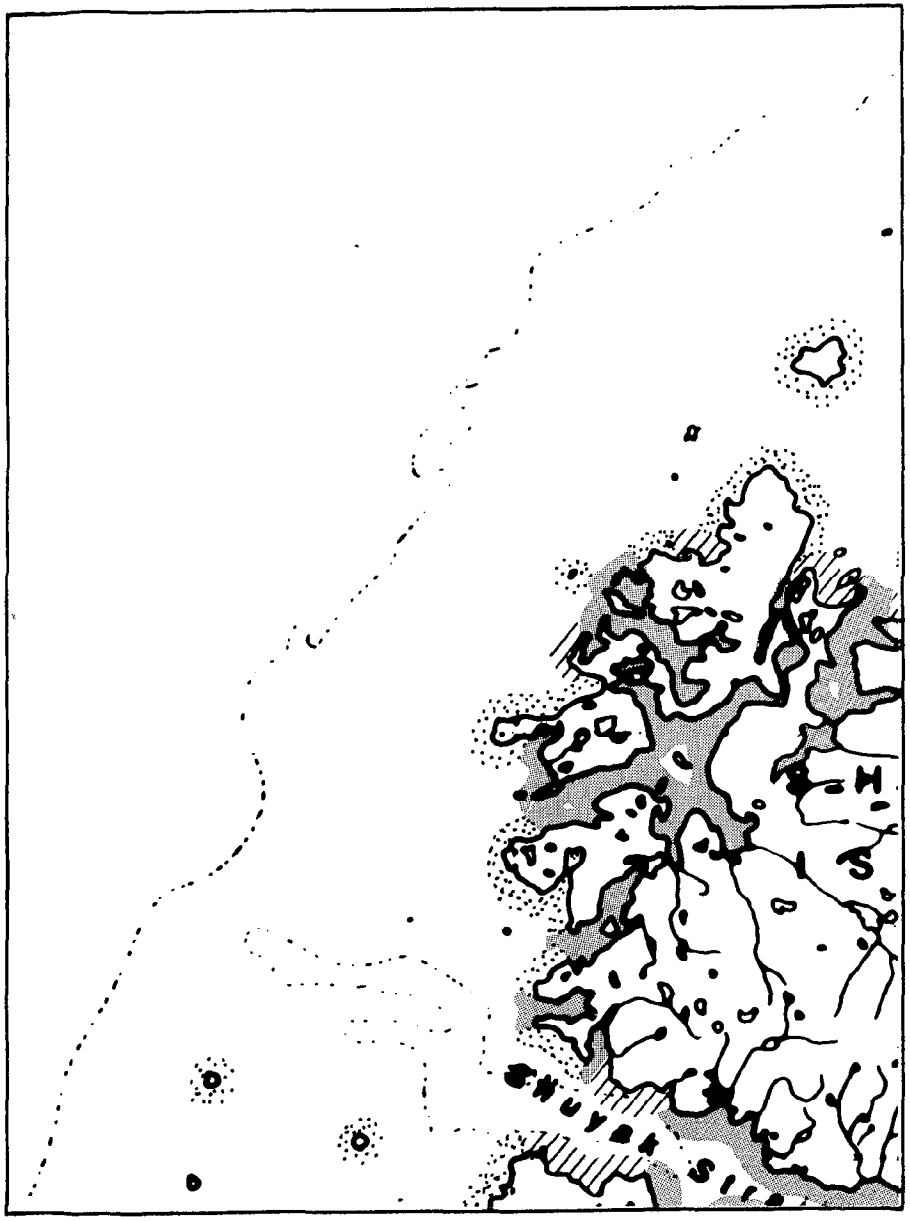


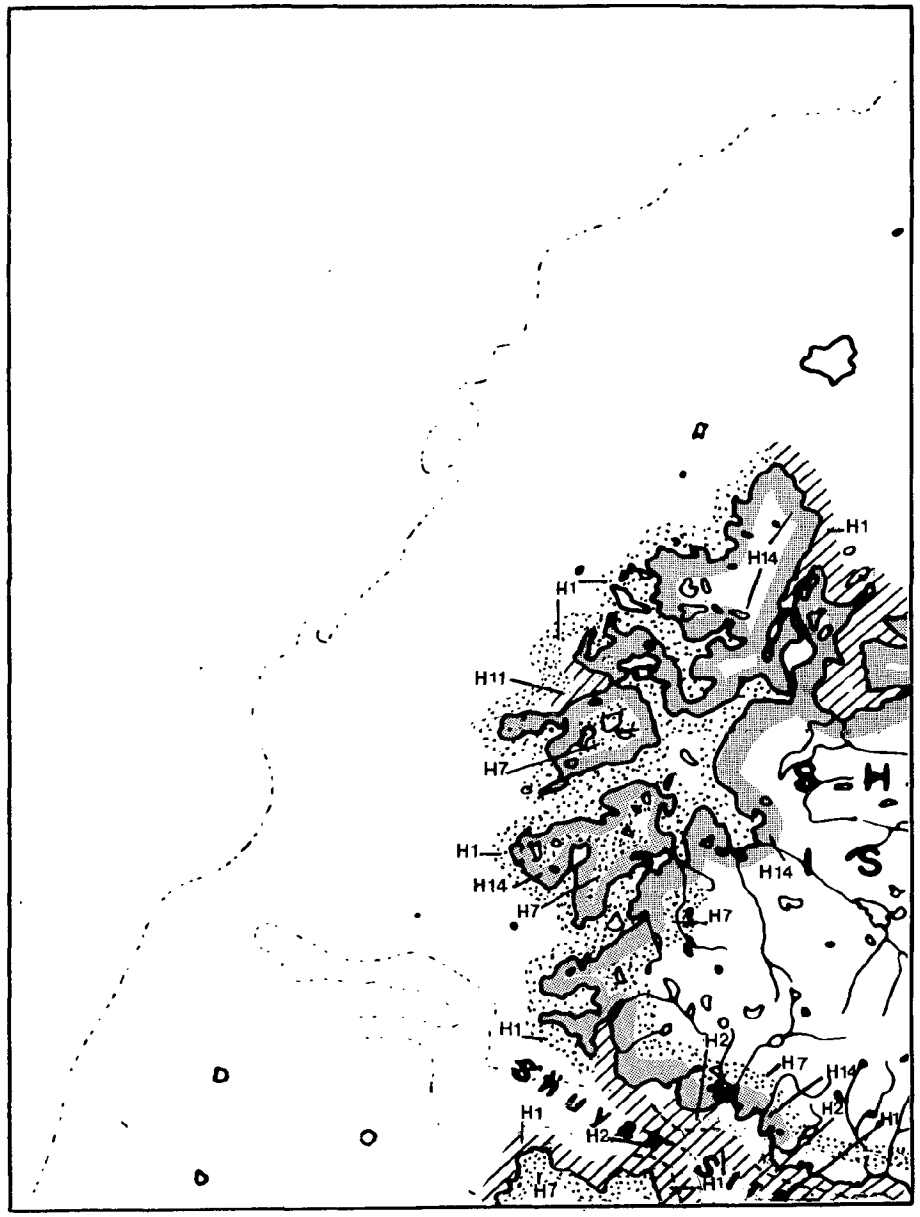


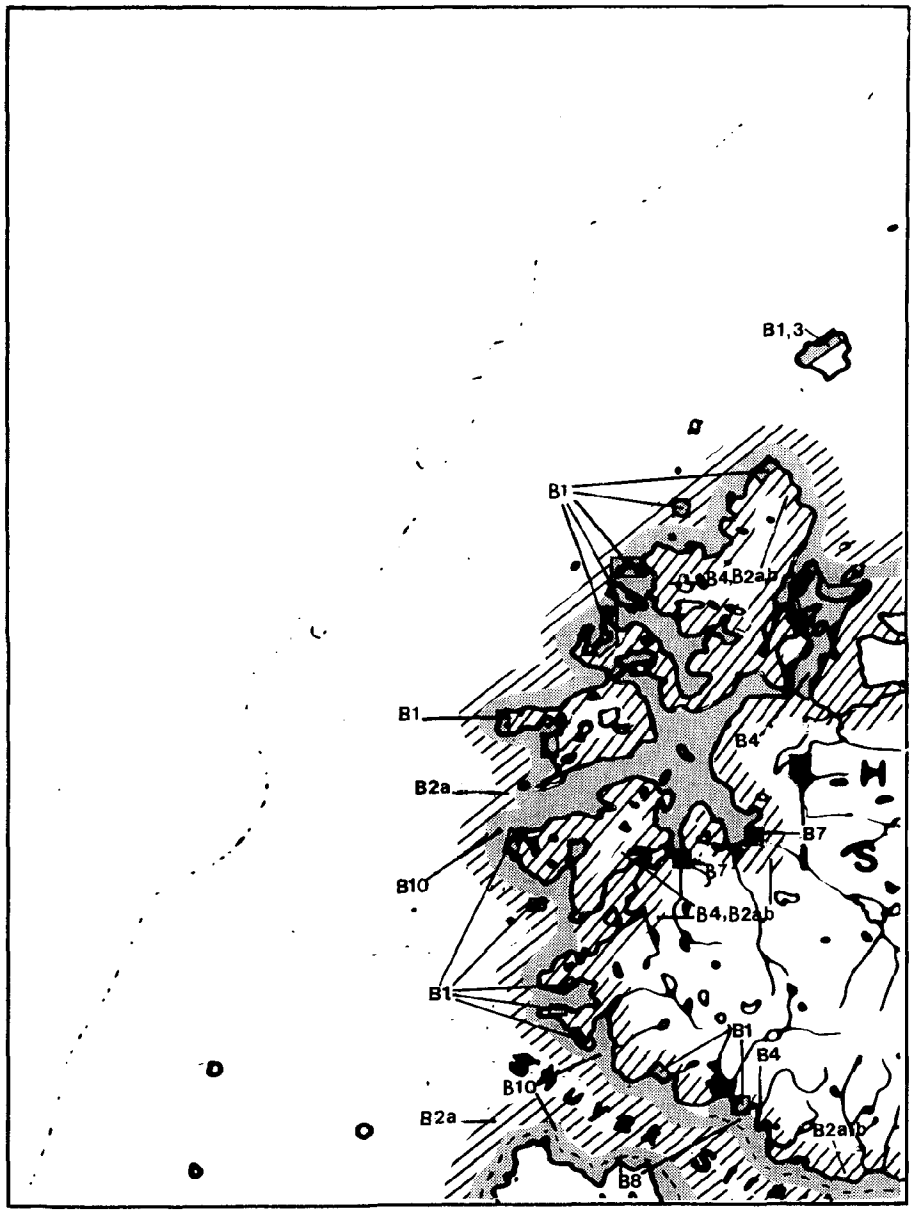
MAP NUMBER 2

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

HIGH MEDIUM LOW



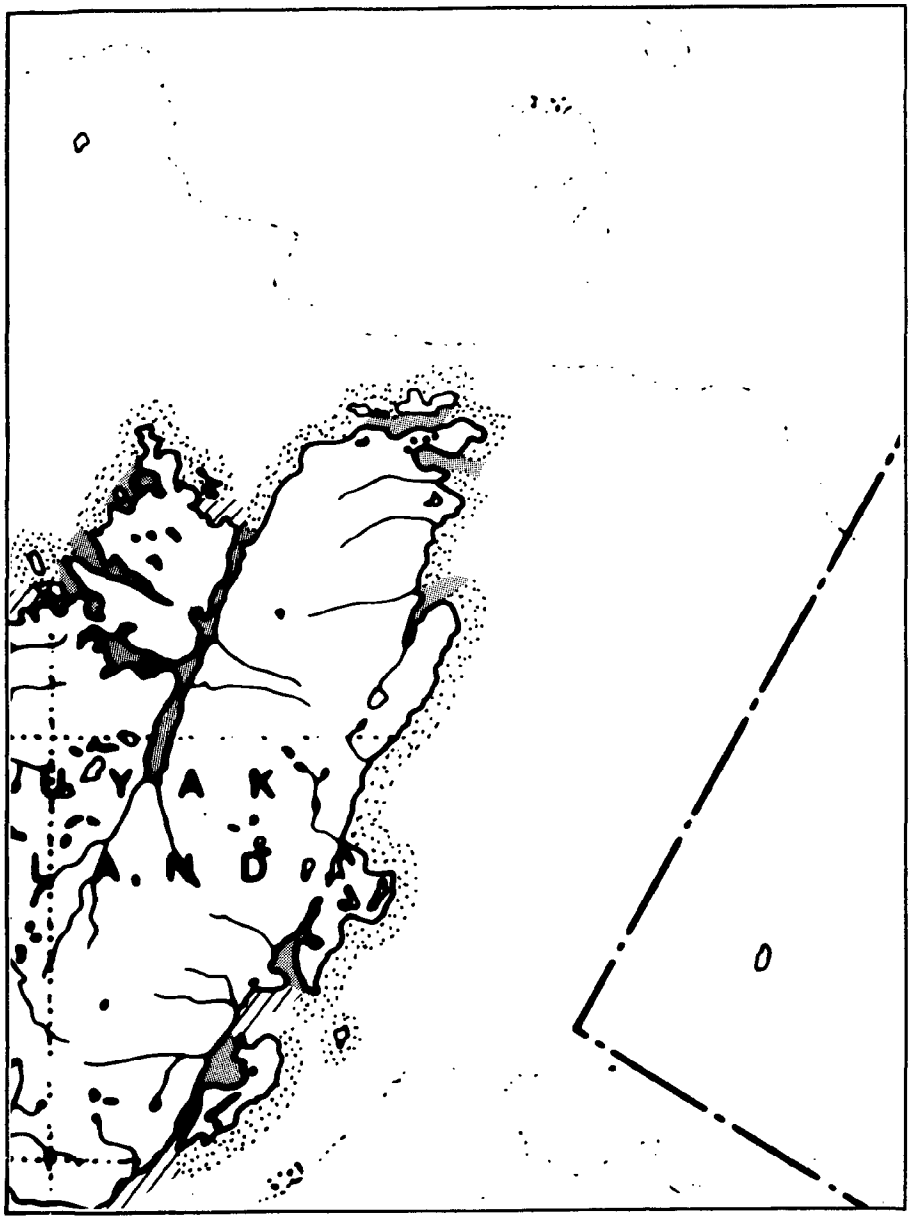


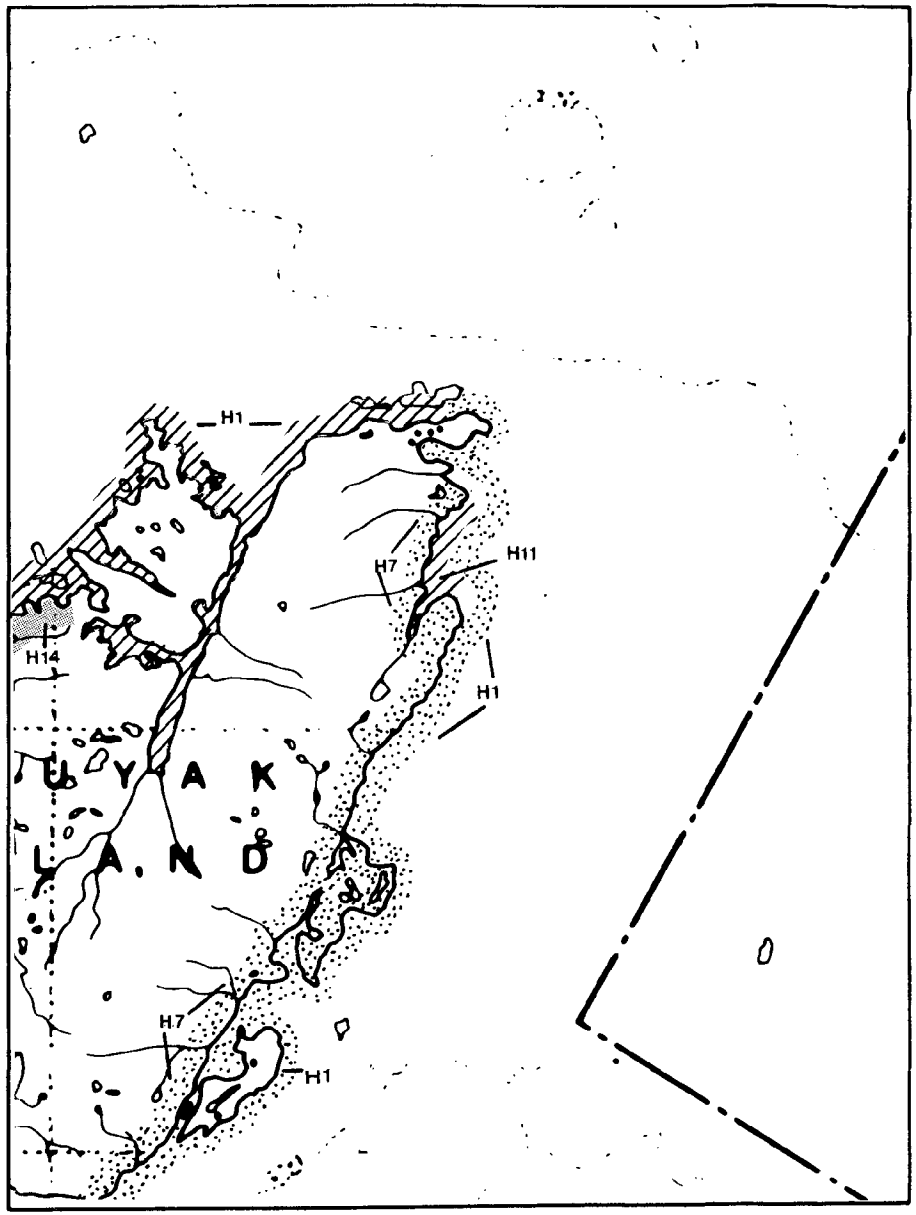


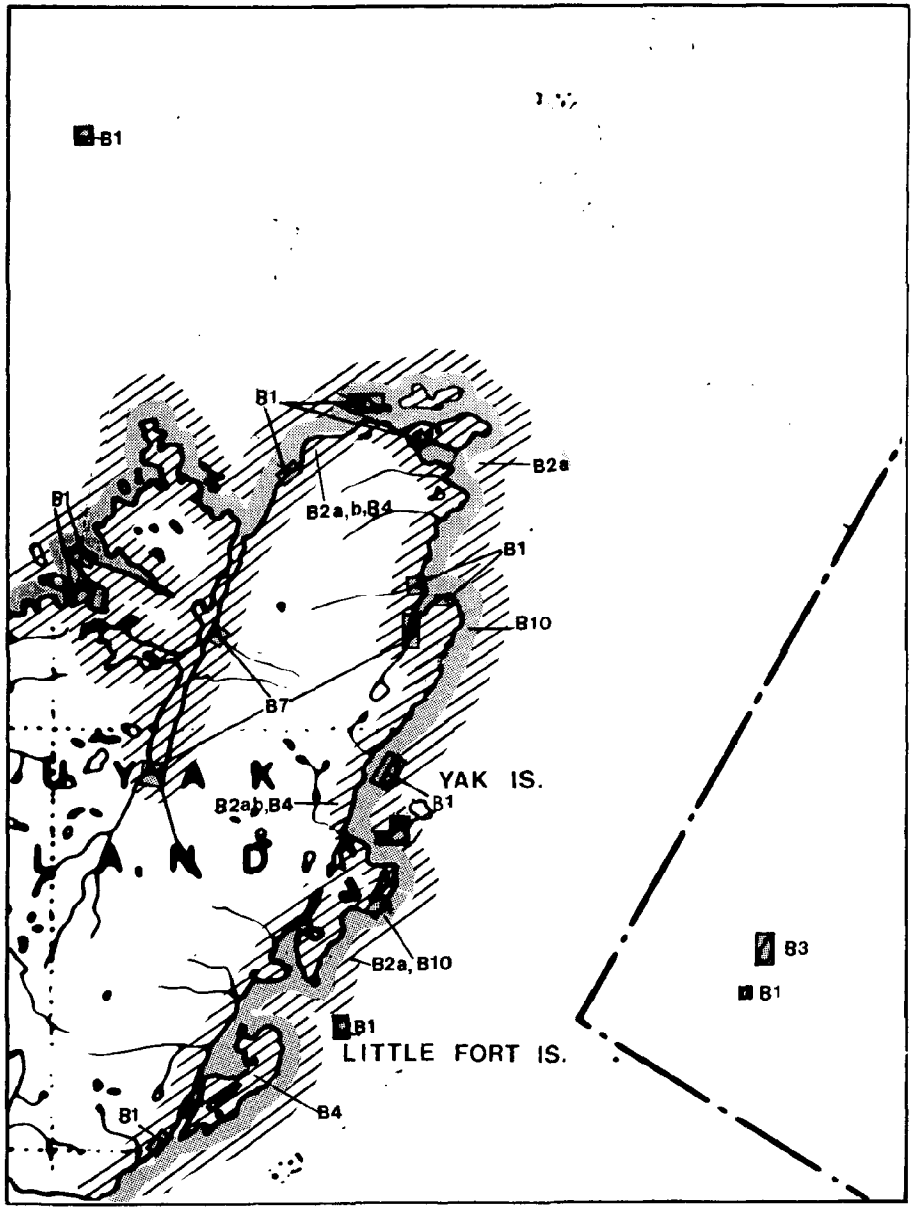
MAP NUMBER 3

RESOURCE		Winter			Spring			Summer			Fall		
		D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE													
R-1	Rocky Headlands												
R-2	Wave-Cut Platforms												
R-3	Sand Beaches/Exposed Tidal Flats												
R-4	Mixed Sand and Gravel Beaches												
R-5	Gravel Beaches												
R-6	Sheltered Rocky and Gravel Shores												
R-7	Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon												
H-2	Roe Herring												
H-3	Crab												
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer												
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl												
H-11	Clams												
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony												
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer												
B-5	Elk												
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults												
	Salmon - Juveniles												
	Char/Dolly Varden - Adults												
	Char/Dolly Varden - Juveniles												
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area												
B-9	Razor Clam Beach												
B-10	Sea Otters												

HIGH MEDIUM LOW

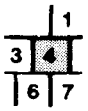




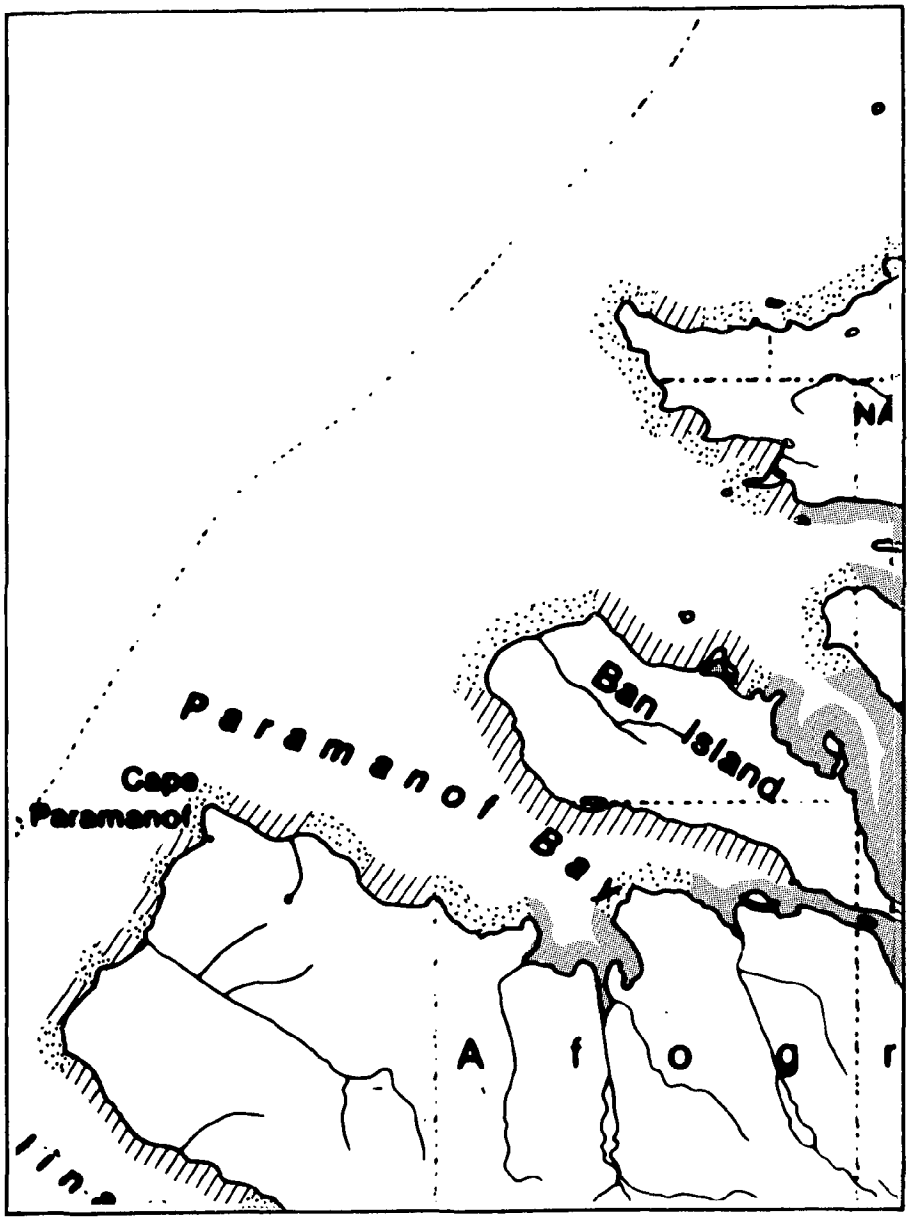


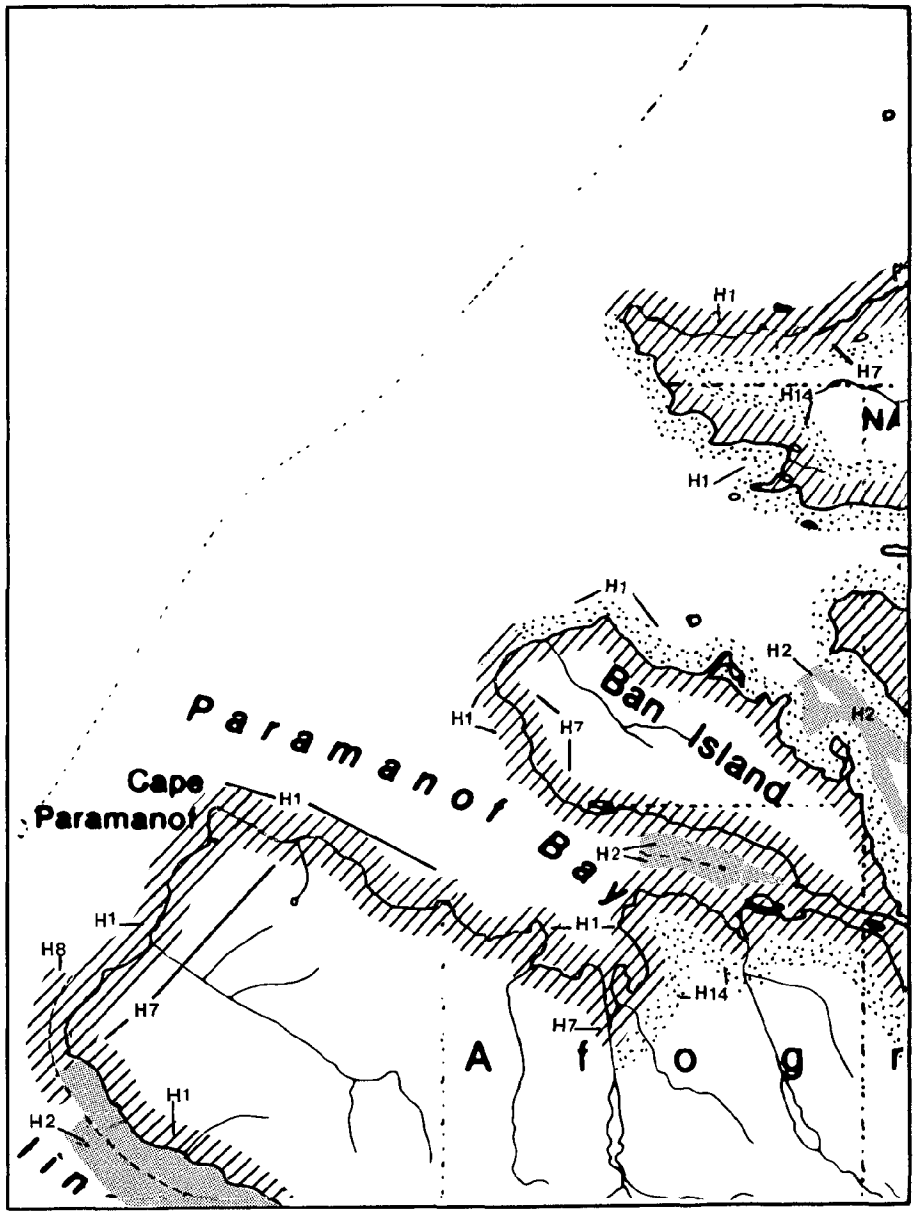
MAP NUMBER 4

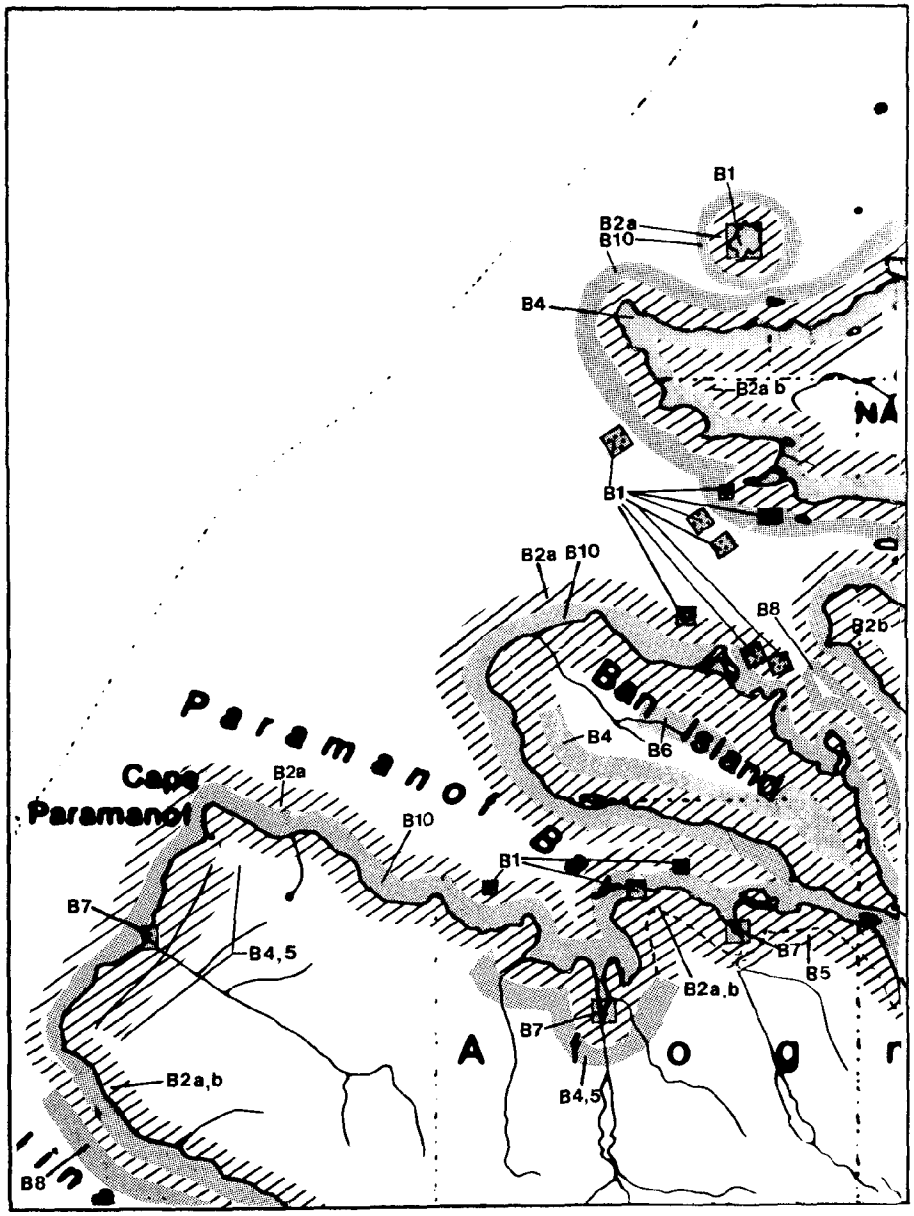
RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2 Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3 Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4 Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5 Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6 Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7 Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon							—	—	—	—		
H-2 Roe Herring						—	—					
H-3 Crab			—	—	—	—	—	—	—	—	—	—
H-4 Shrimp												
H-5 Halibut							—	—				
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer	—											—
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area							—	—	—	—		
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony						—	—	—	—	—		
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)						—	—	—	—	—		
B-3 Sea Lion Haul-out	—	—	—	—	—	—	—	—	—	—	—	—
B-4 Black Tail Deer	—	—	—	—								—
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults						—	—	—	—	—	—	—
Salmon - Juveniles	—	—	—	—	—	—	—	—	—	—	—	—
Char/Dolly Varden - Adults	—								—	—	—	—
Char/Dolly Varden - Juveniles				—	—	—	—					
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters	—	—	—	—	—	—	—	—	—	—	—	—



HIGH MEDIUM LOW



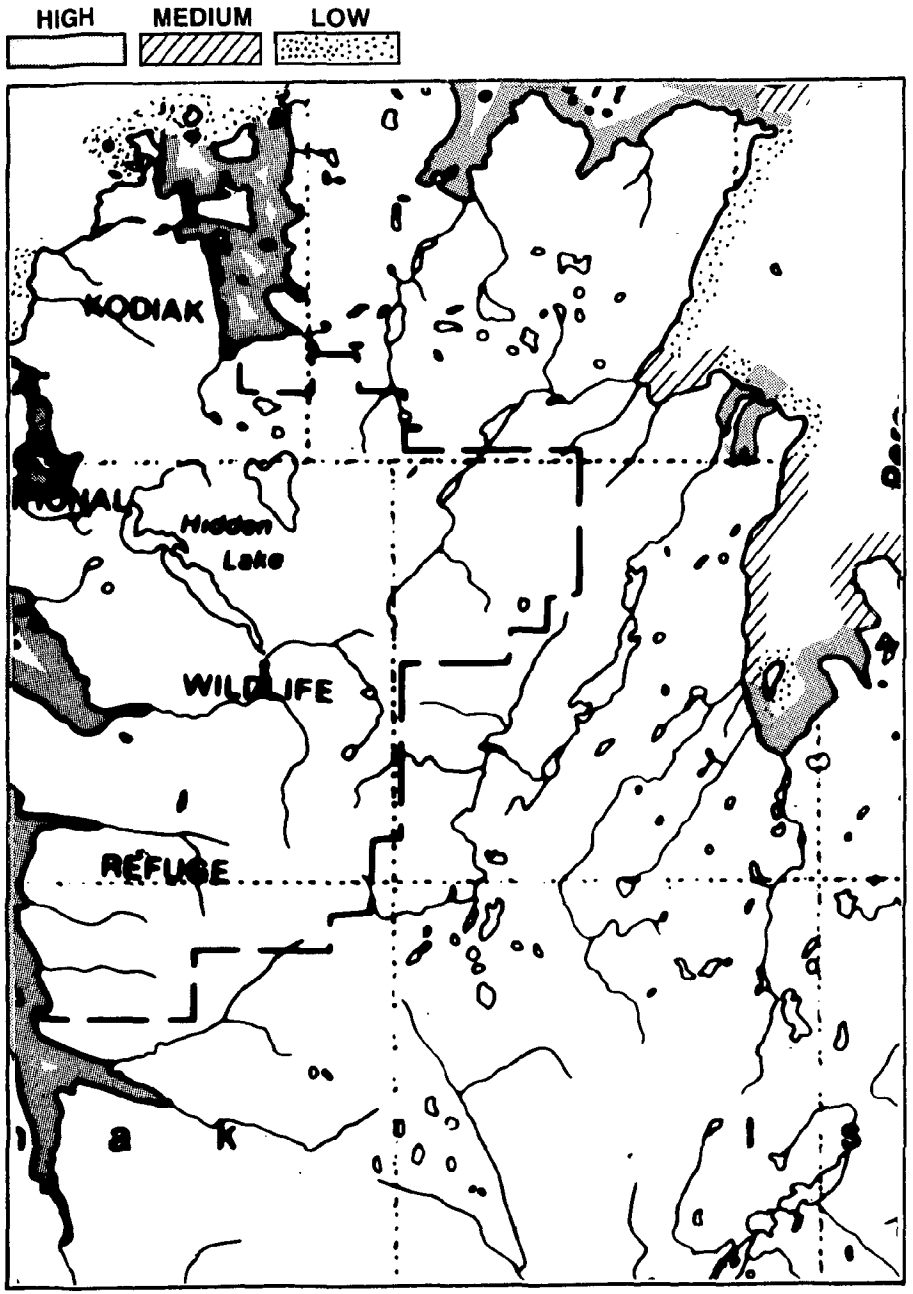


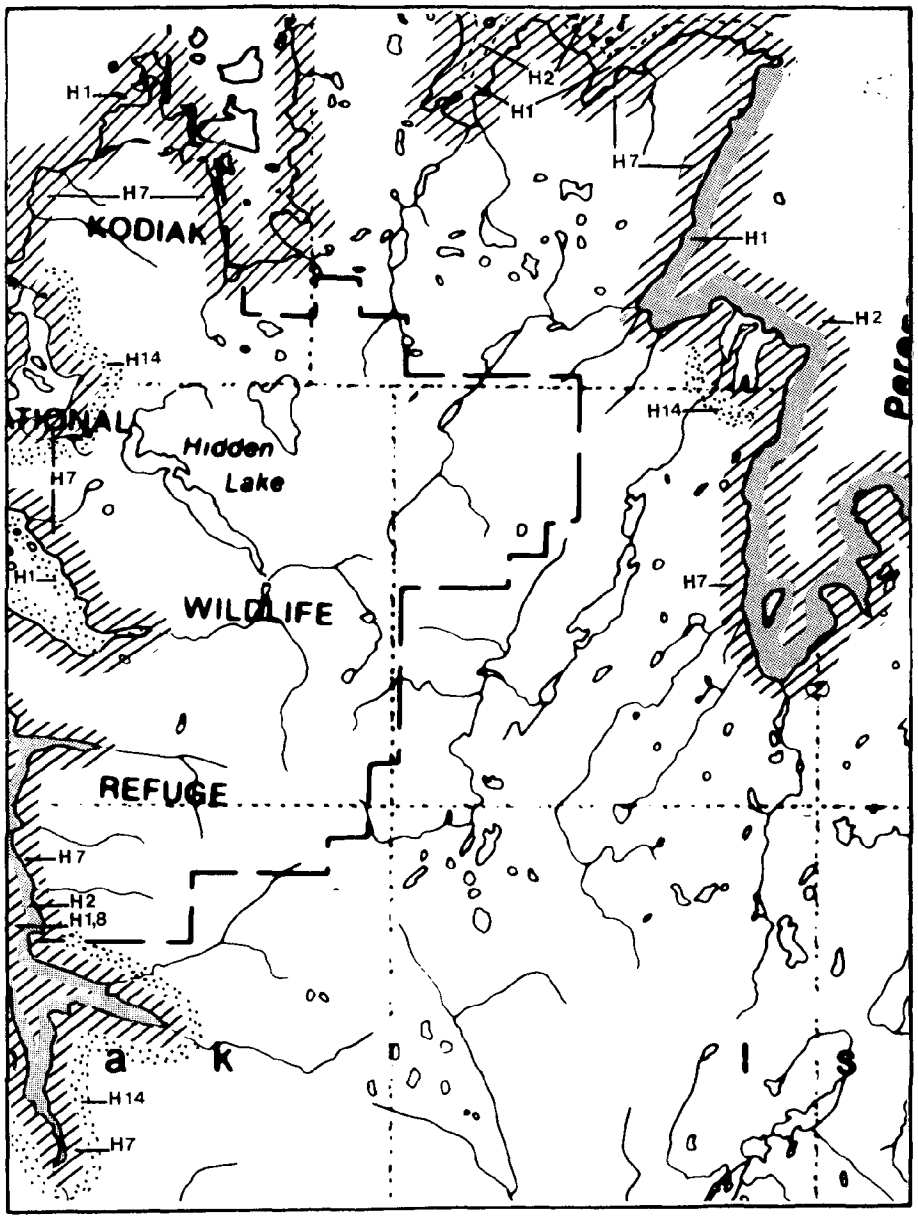


MAP NUMBER 5

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2 Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3 Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4 Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5 Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6 Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7 Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon							—	—	—	—		
H-2 Roe Herring					—	—	—					
H-3 Crab			—	—	—	—	—	—	—	—	—	—
H-4 Shrimp												
H-5 Halibut							—	—				
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer	—											—
H-8 Marine Mammal	—	—	—	—	—	—			—	—	—	—
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area	—						—	—	—	—	—	—
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony						—	—	—	—			
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)						—	—	—	—			
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer	—	—	—	—							—	—
B-5 Elk	—	—	—	—							—	—
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults				—	—	—	—	—	—	—	—	—
Salmon - Juveniles							—	—				
Char/Dolly Varden - Adults	—							—	—	—	—	—
Char/Dolly Varden - Juveniles					—	—	—					
Steelhead - Adults	—	—	—	—	—	—	—		—	—	—	—
Steelhead - Juveniles								—	—	—		
B-8 Herring Spawning Area					—	—	—					
B-9 Razor Clam Beach												
B-10 Sea Otters	—	—	—	—	—	—	—	—	—	—	—	—

	3	
	5	6
9	10	11


HIGH
MEDIUM
LOW
KODIAK
Hidden
Lake
WILDLIFE
REFUGE
a k
l s


H1
H2
H1
H7
H7
KODIAK
H1
H2
H14
H14
Hidden
Lake
H7
H1
H7
WILDLIFE
REFUGE
H7
H2
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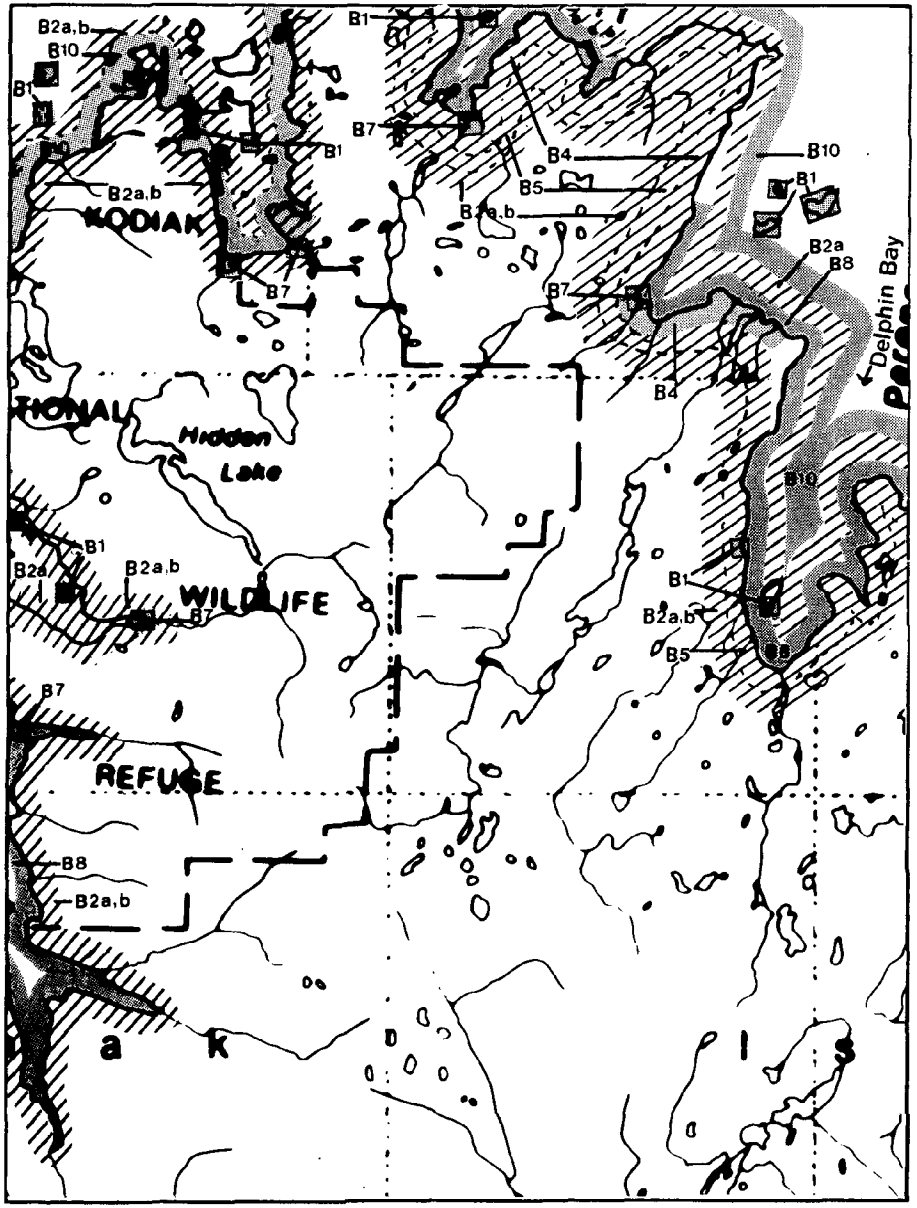
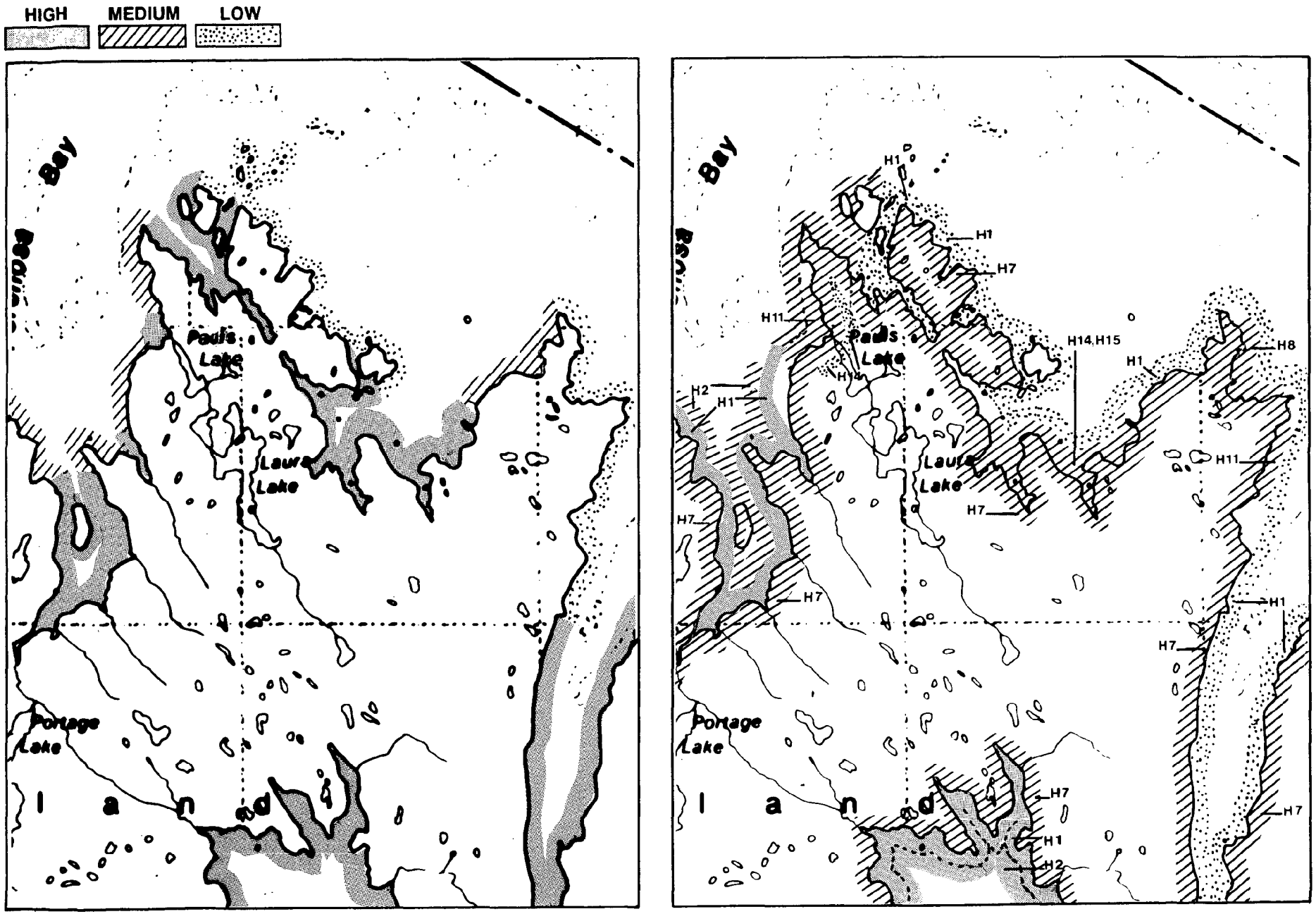
H14
H7

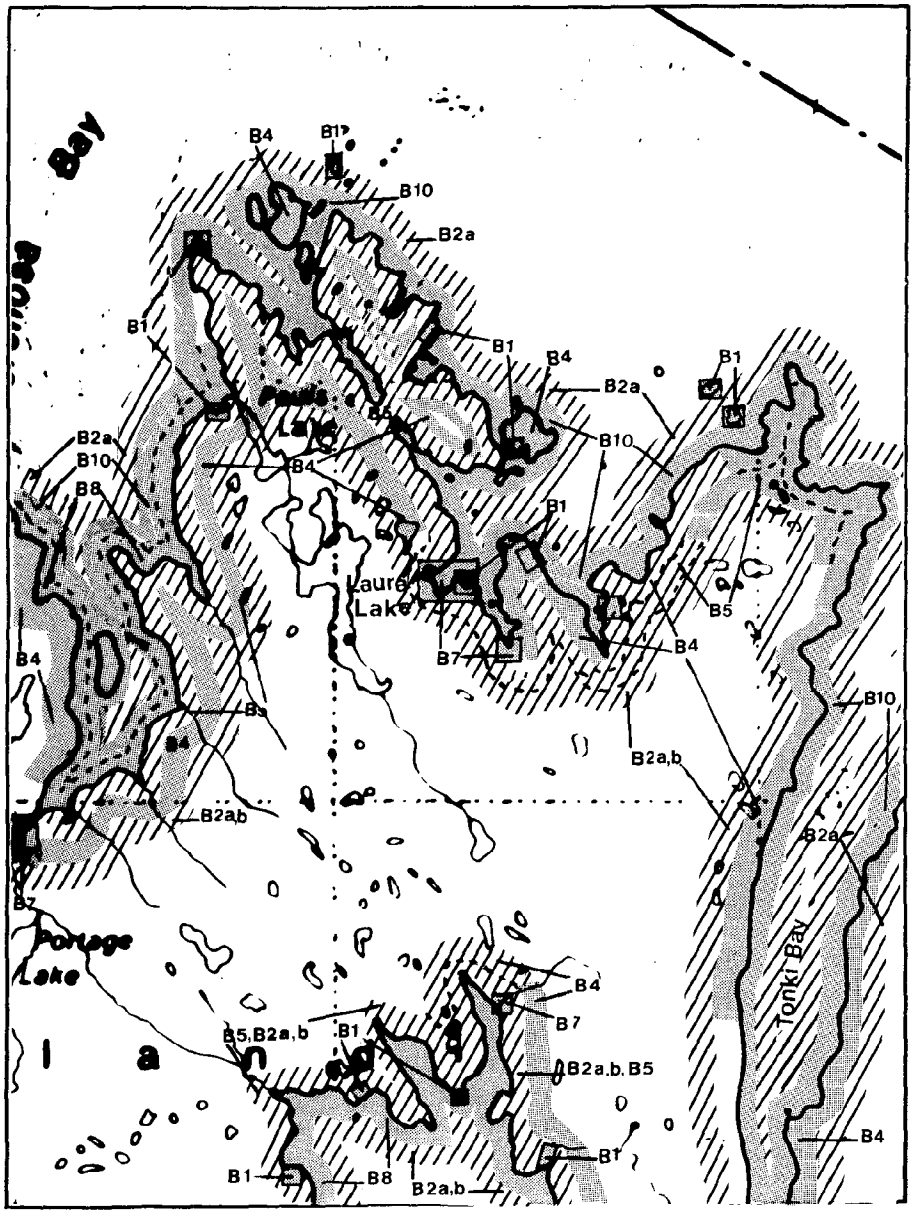


MAP NUMBER 6

RESOURCE		Winter			Spring			Summer			Fall		
		D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE													
R-1	Rocky Headlands												
R-2	Wave-Cut Platforms												
R-3	Sand Beaches/Exposed Tidal Flats												
R-4	Mixed Sand and Gravel Beaches												
R-5	Gravel Beaches												
R-6	Sheltered Rocky and Gravel Shores												
R-7	Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon												
H-2	Roe Herring												
H-3	Crab												
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer												
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl												
H-11	Clams												
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony												
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer												
B-5	Elk												
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults												
	Salmon - Juveniles												
	Char/Dolly Varden - Adults												
	Char/Dolly Varden - Juveniles												
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area												
B-9	Razor Clam Beach												
B-10	Sea Otters												

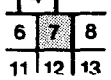
	3	4
5	6	7
10	11	12

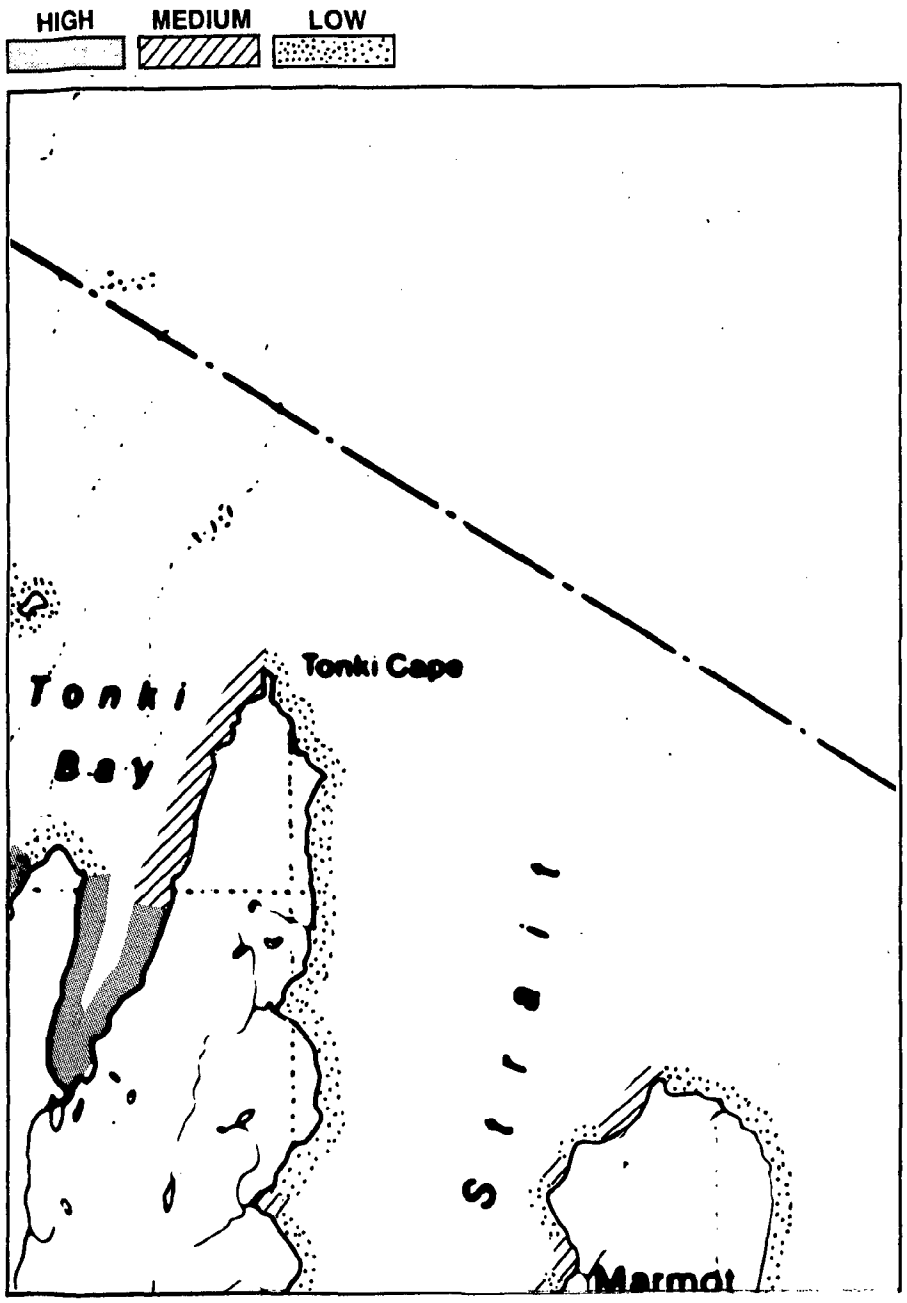

HIGH
MEDIUM
LOW
Bay
Paul's Lake
Laura Lake
Portage Lake
I a n d
H1
H7
H11
H14,H15
H8
H2

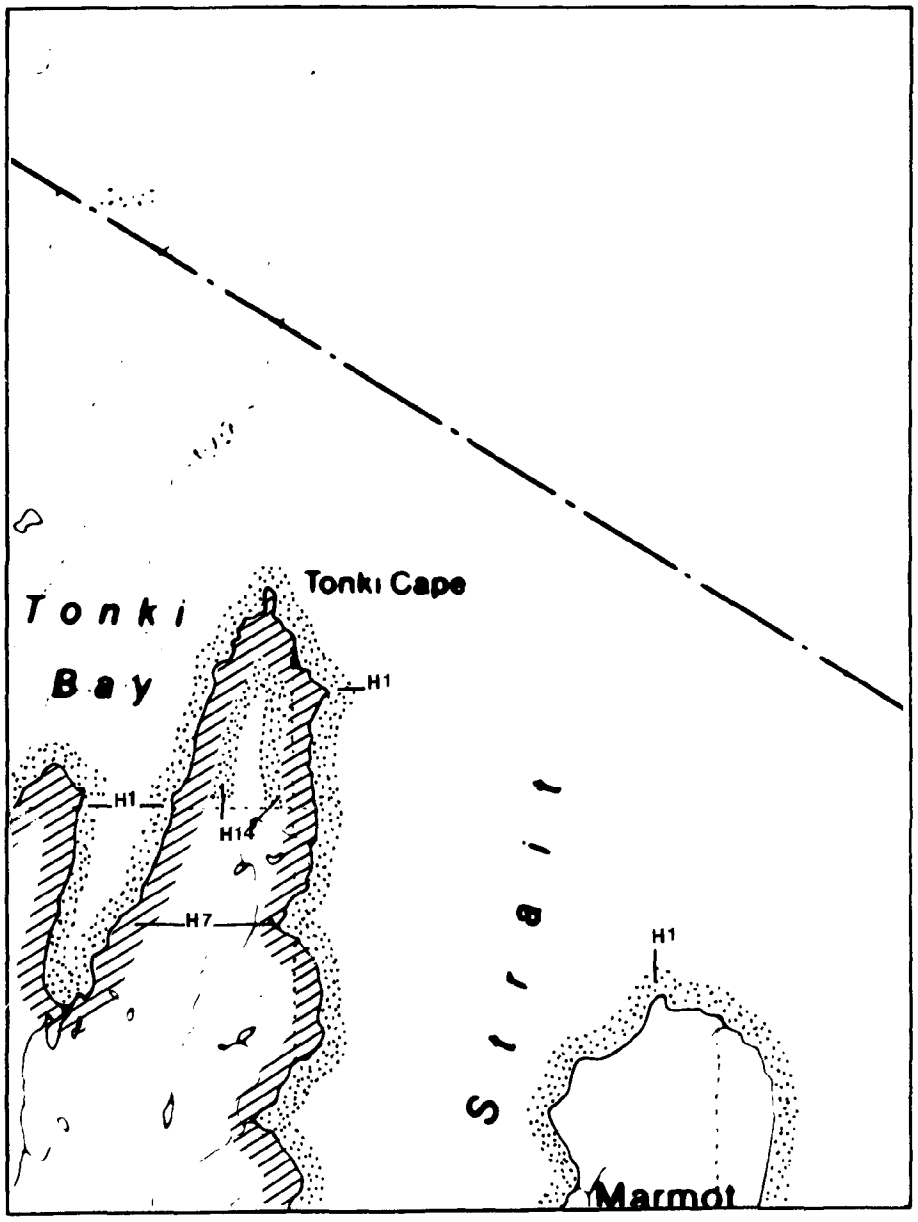


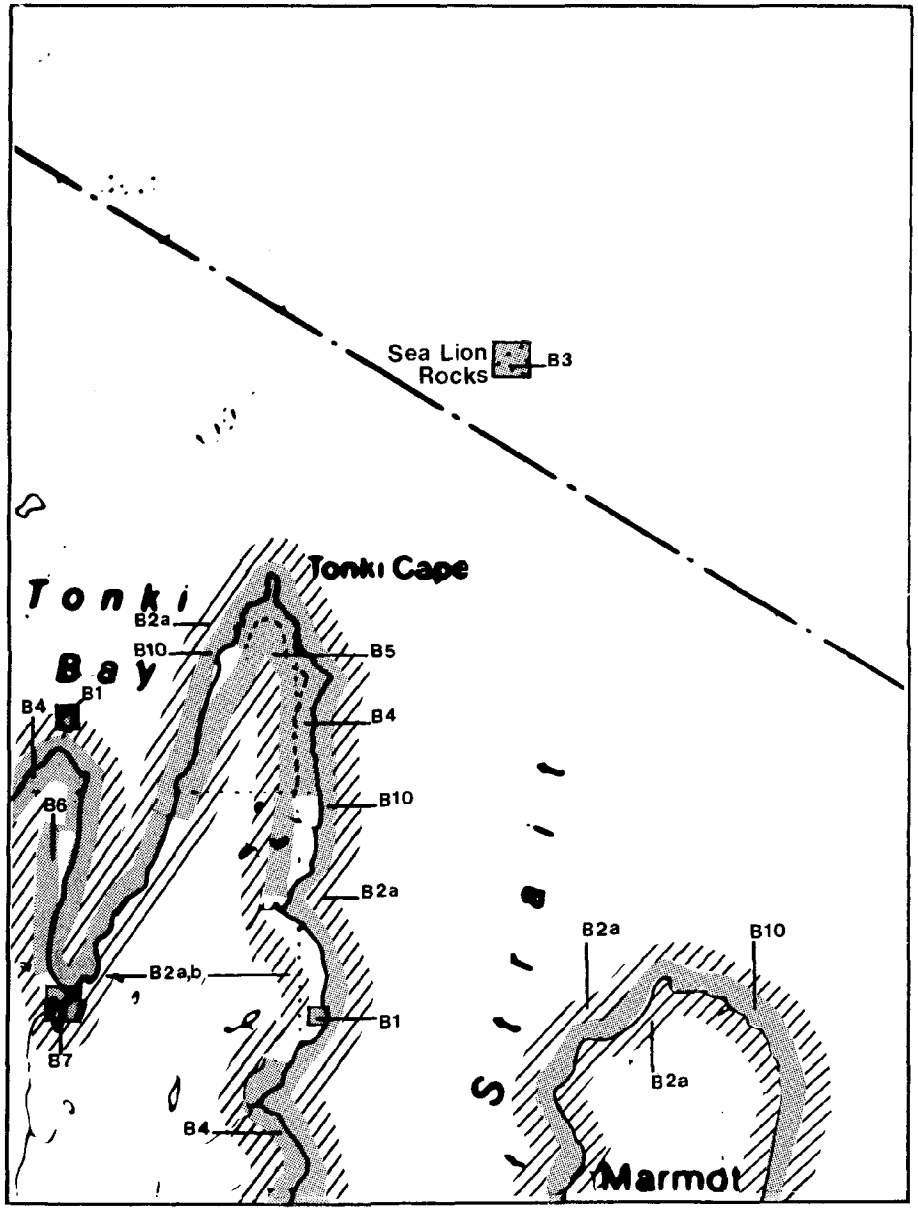
MAP NUMBER 7

RESOURCE	Winter			Spring			Summer			Fall		
	D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												




HIGH
MEDIUM
LOW
Tonki Bay
Tonki Cape
Strait
Marmot

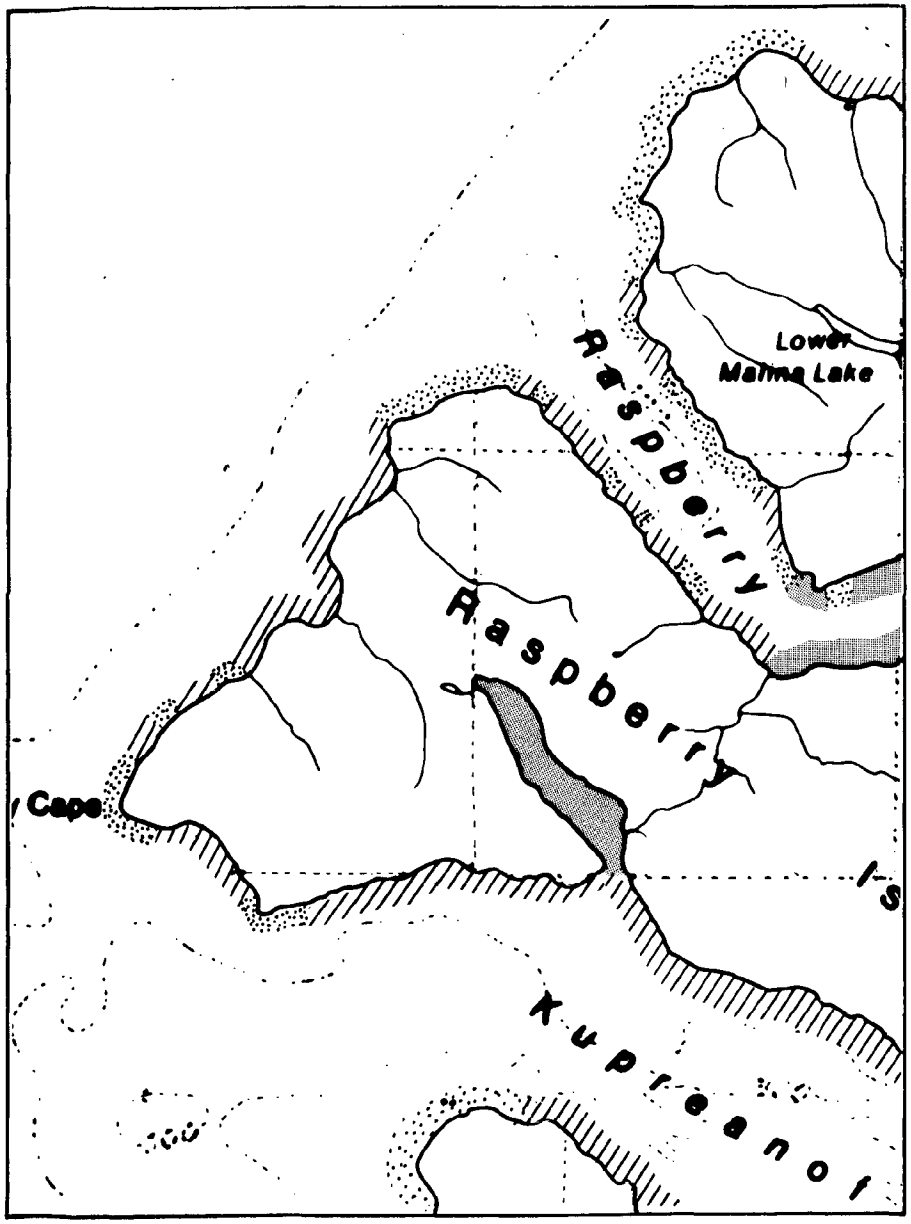

Tonki Bay
Tonki Cape
H1
H1
H14
H7
H1
Strait
Marmot

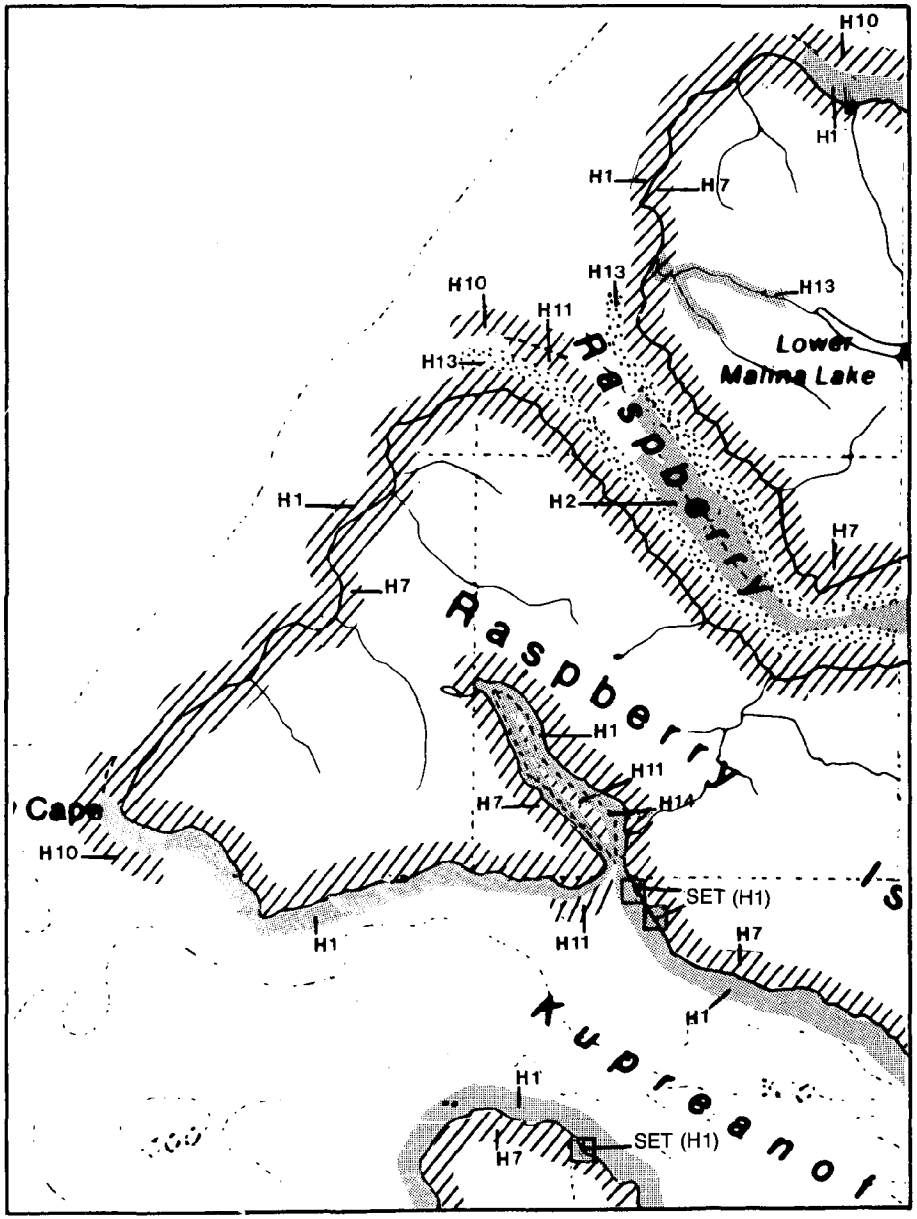


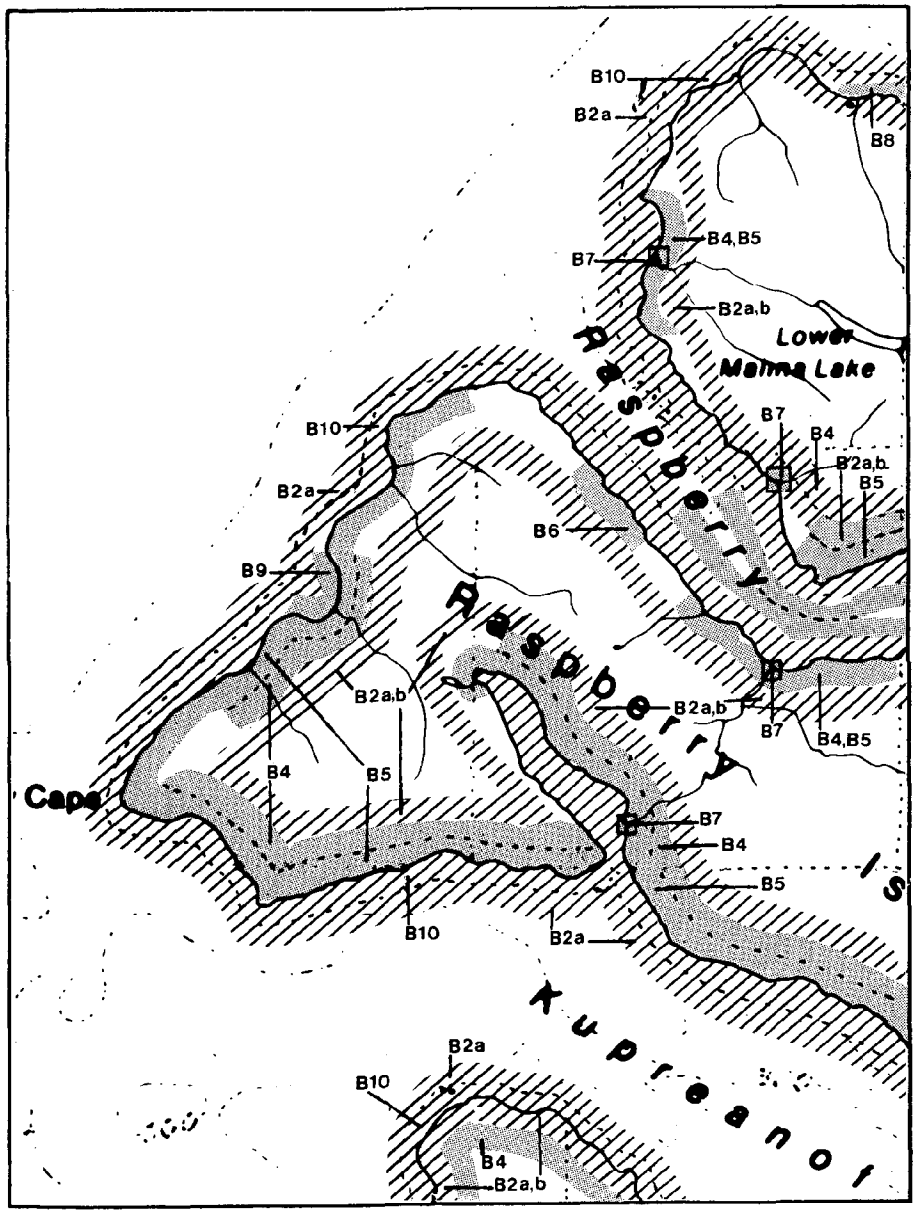
MAP NUMBER 8

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2 Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3 Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4 Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5 Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6 Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7 Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon							—	—	—	—		
H-2 Roe Herring												
H-3 Crab						—	—	—	—	—		
H-4 Shrimp							—	—				
H-5 Halibut							—	—				
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer	—											—
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area	—						—	—	—	—	—	—
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony						—	—	—	—	—		
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)						—	—	—	—	—		
B-3 Sea Lion Haul-out	—	—	—	—	—	—	—	—	—	—	—	—
B-4 Black Tail Deer	—	—	—	—								—
B-5 Elk	—	—	—	—								—
B-6 Brown Bear					—	—				—	—	—
Offshore												
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults						—	—	—	—	—	—	
Salmon - Juveniles		—	—	—	—	—	—	—	—	—	—	—
Char/Dolly Varden - Adults								—	—	—	—	—
Char/Dolly Varden - Juveniles					—	—	—					
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters	—	—	—	—	—	—	—	—	—	—	—	—

HIGH MEDIUM LOW

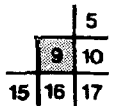


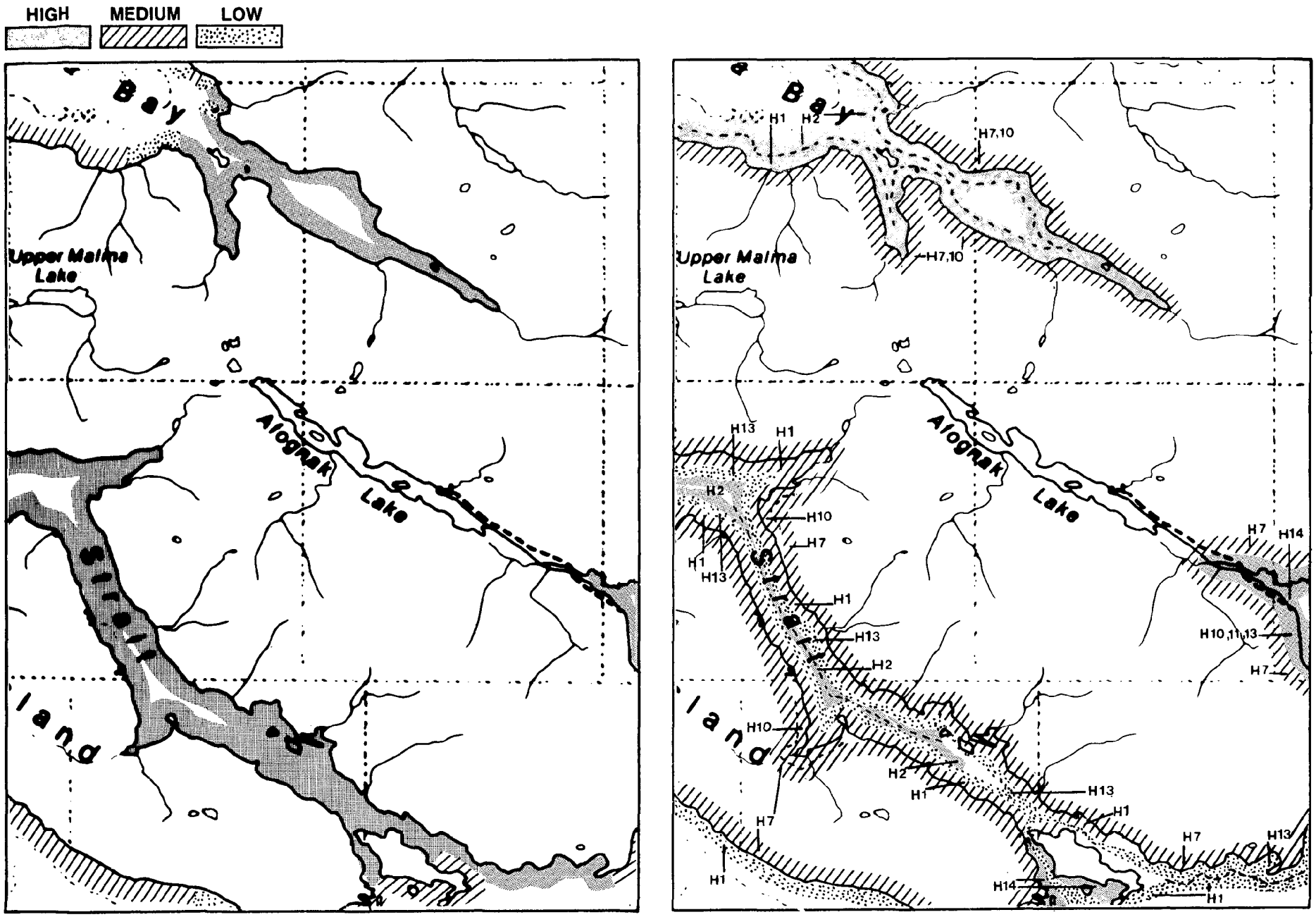


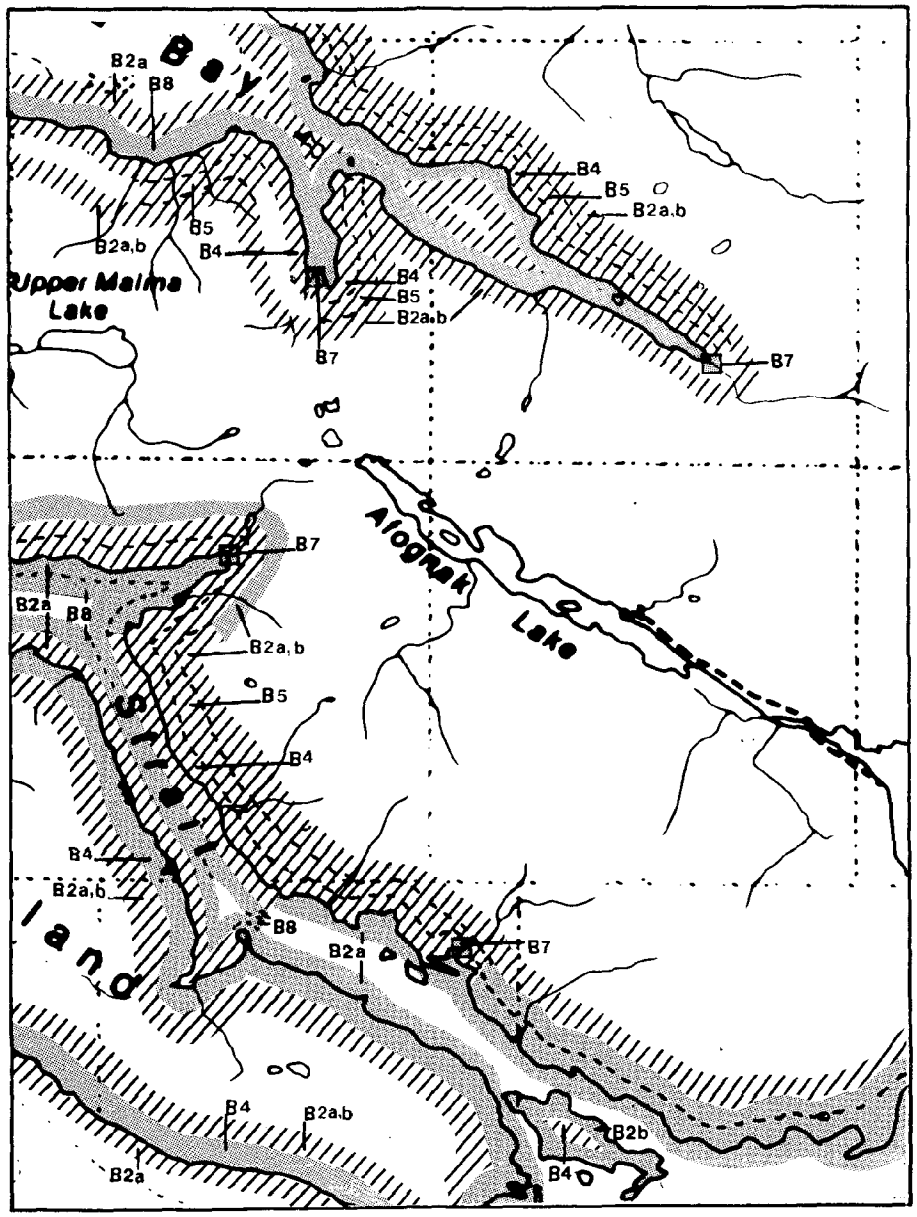


MAP NUMBER 9

RESOURCE		Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE													
R-1	Rocky Headlands												
R-2	Wave-Cut Platforms												
R-3	Sand Beaches/Exposed Tidal Flats												
R-4	Mixed Sand and Gravel Beaches												
R-5	Gravel Beaches												
R-6	Sheltered Rocky and Gravel Shores												
R-7	Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon												
H-2	Roe Herring												
H-3	Crab												
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer												
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl												
H-11	Clams												
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony												
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer												
B-5	Elk												
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults												
	Salmon - Juveniles												
	Char/Dolly Varden - Adults												
	Char/Dolly Varden - Juveniles												
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area												
B-9	Razor Clam Beach												
B-10	Sea Otters												




HIGH
MEDIUM
LOW
Bay
Upper Malina Lake
Alognak Lake
land
H1
H2
H7,10
H7,10
H13
H1
H2
H10
H7
H1
H13
H1
H13
H2
H7
H14
H10,11,13
H7
H10
H2
H1
H13
H1
H7
H7
H13
H1
H14
H1

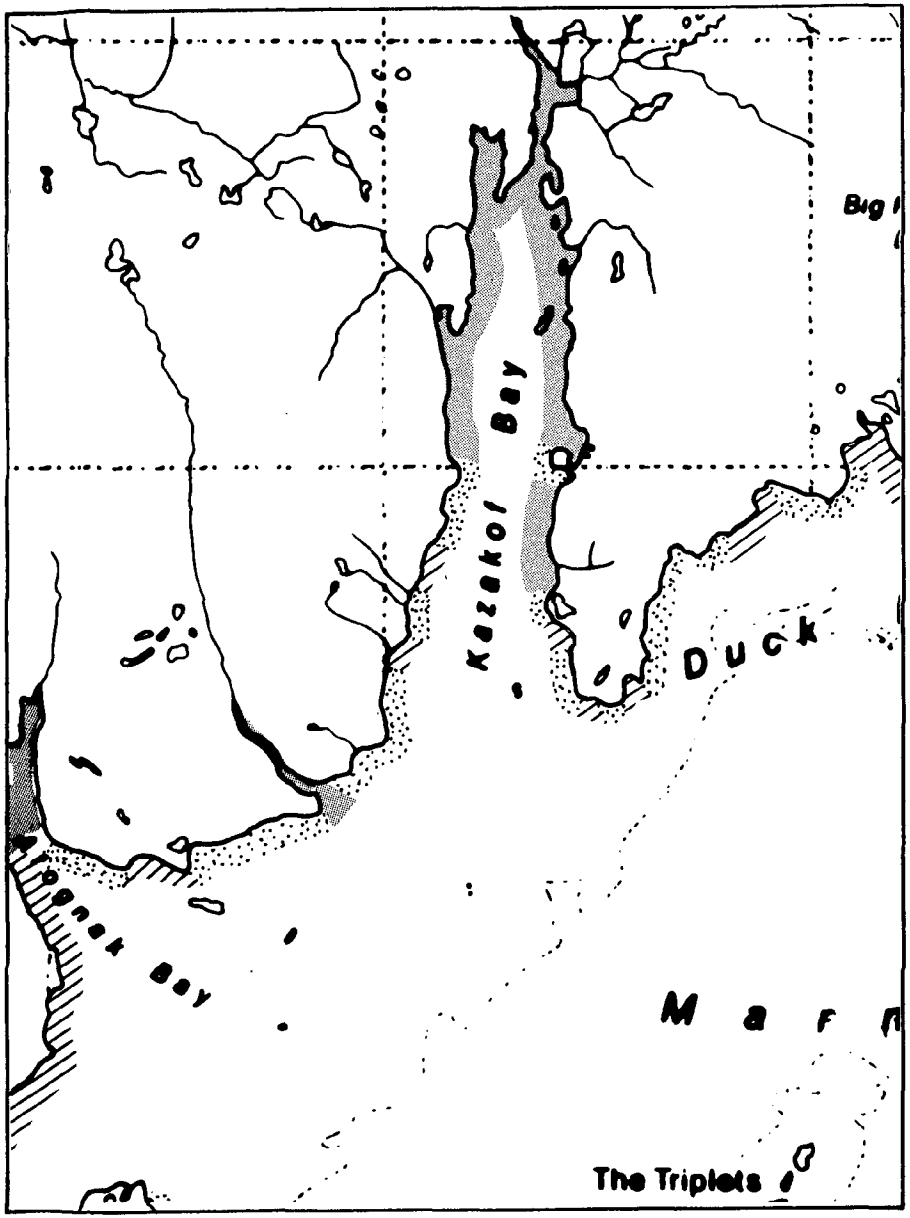


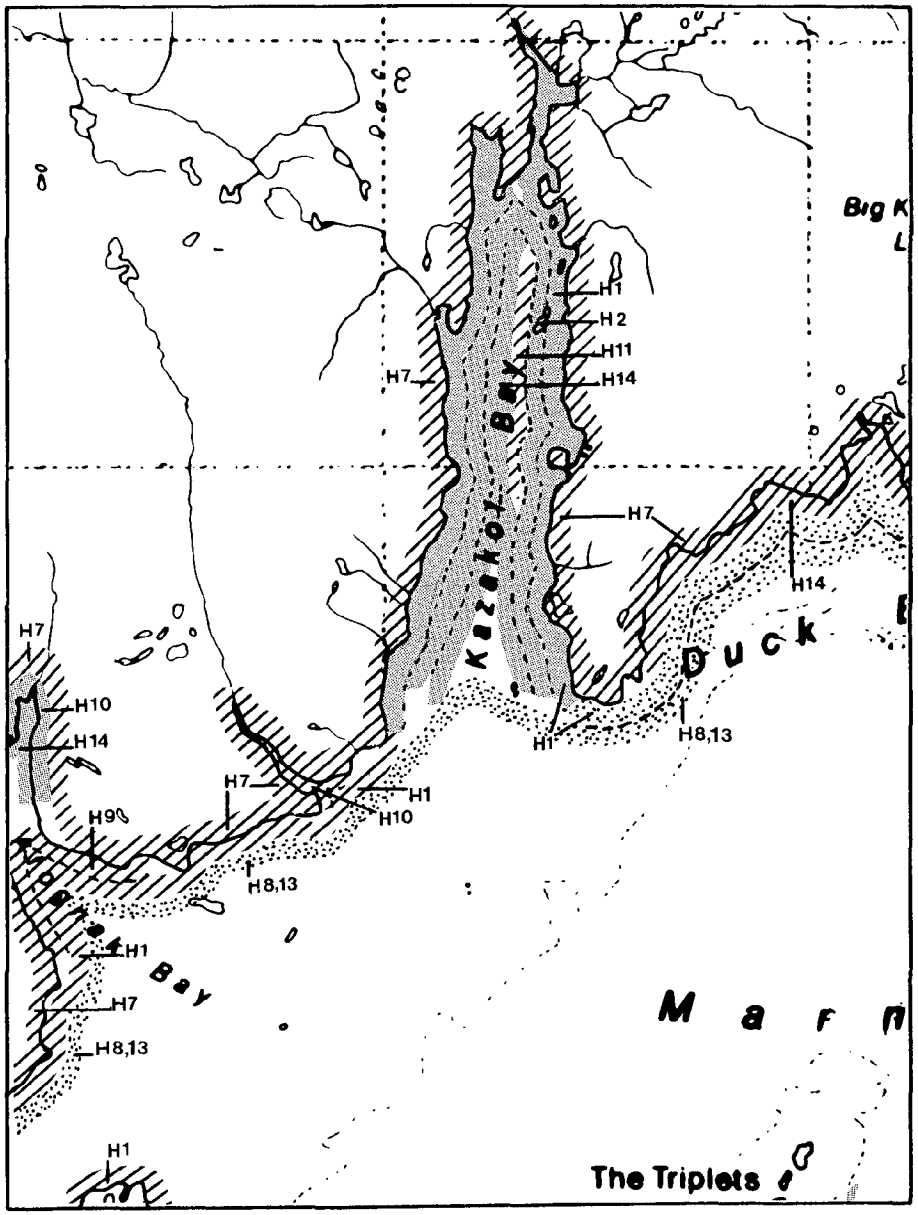
MAP NUMBER 10

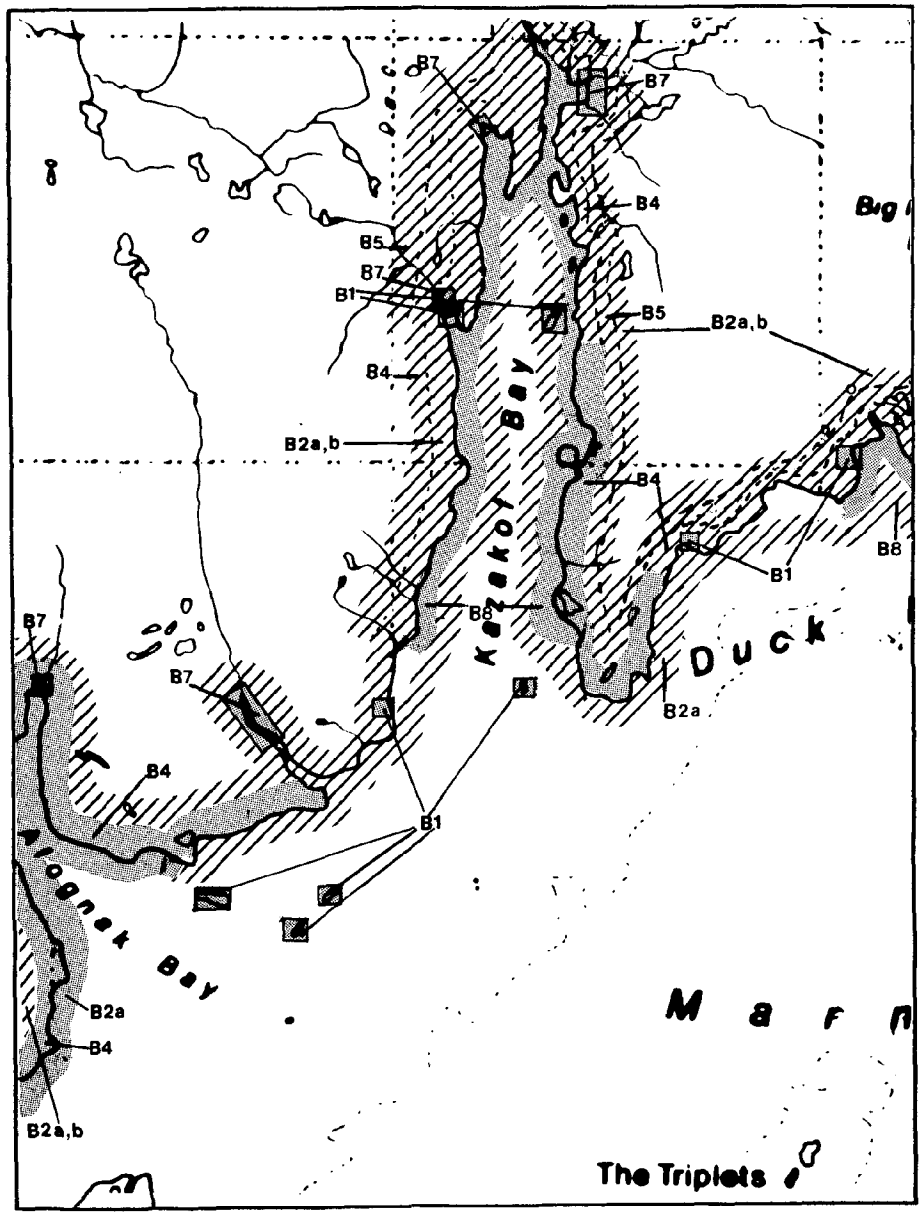
RESOURCE		Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE													
R-1	Rocky Headlands	■	■	■	■	■	■	■	■	■	■	■	■
R-2	Wave-Cut Platforms	■	■	■	■	■	■	■	■	■	■	■	■
R-3	Sand Beaches/Exposed Tidal Flats	■	■	■	■	■	■	■	■	■	■	■	■
R-4	Mixed Sand and Gravel Beaches	■	■	■	■	■	■	■	■	■	■	■	■
R-5	Gravel Beaches	■	■	■	■	■	■	■	■	■	■	■	■
R-6	Sheltered Rocky and Gravel Shores	■	■	■	■	■	■	■	■	■	■	■	■
R-7	Protected Estuarine Tidal Flats and Marshes	■	■	■	■	■	■	■	■	■	■	■	■
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon							■	■	■	■		
H-2	Roe Herring					■	■						
H-3	Crab						■	■		■	■	■	
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer	■											■
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl	■	■	■	■	■	■				■	■	■
H-11	Clams	■	■	■	■	■	■	■	■	■	■	■	■
H-12	Halibut/Marine Fish												
H-13	Salmon						■	■	■	■	■	■	■
Recreation													
H-14	Recreation Use Area	■						■	■	■	■	■	■
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony												
B-2a	Waterfowl (overwintering)	■	■	■	■							■	■
B-2b	Waterfowl (summer use)						■	■	■	■	■		
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer	■	■	■	■								■
B-5	Elk	■	■	■	■								■
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)	■	■	■	■							■	■
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults						■	■	■	■	■	■	■
	Salmon - Juveniles	■	■	■	■	■	■	■	■	■	■	■	■
	Char/Dolly Varden - Adults	■								■	■	■	■
	Char/Dolly Varden - Juveniles					■	■	■					
	Steelhead - Adults	■	■	■	■	■	■			■	■	■	■
	Steelhead - Juveniles							■	■	■	■		
B-8	Herring Spawning Area					■	■						
B-9	Razor Clam Beach												
B-10	Sea Otters												

	5	6
9	10	11
16	17	18

HIGH MEDIUM LOW



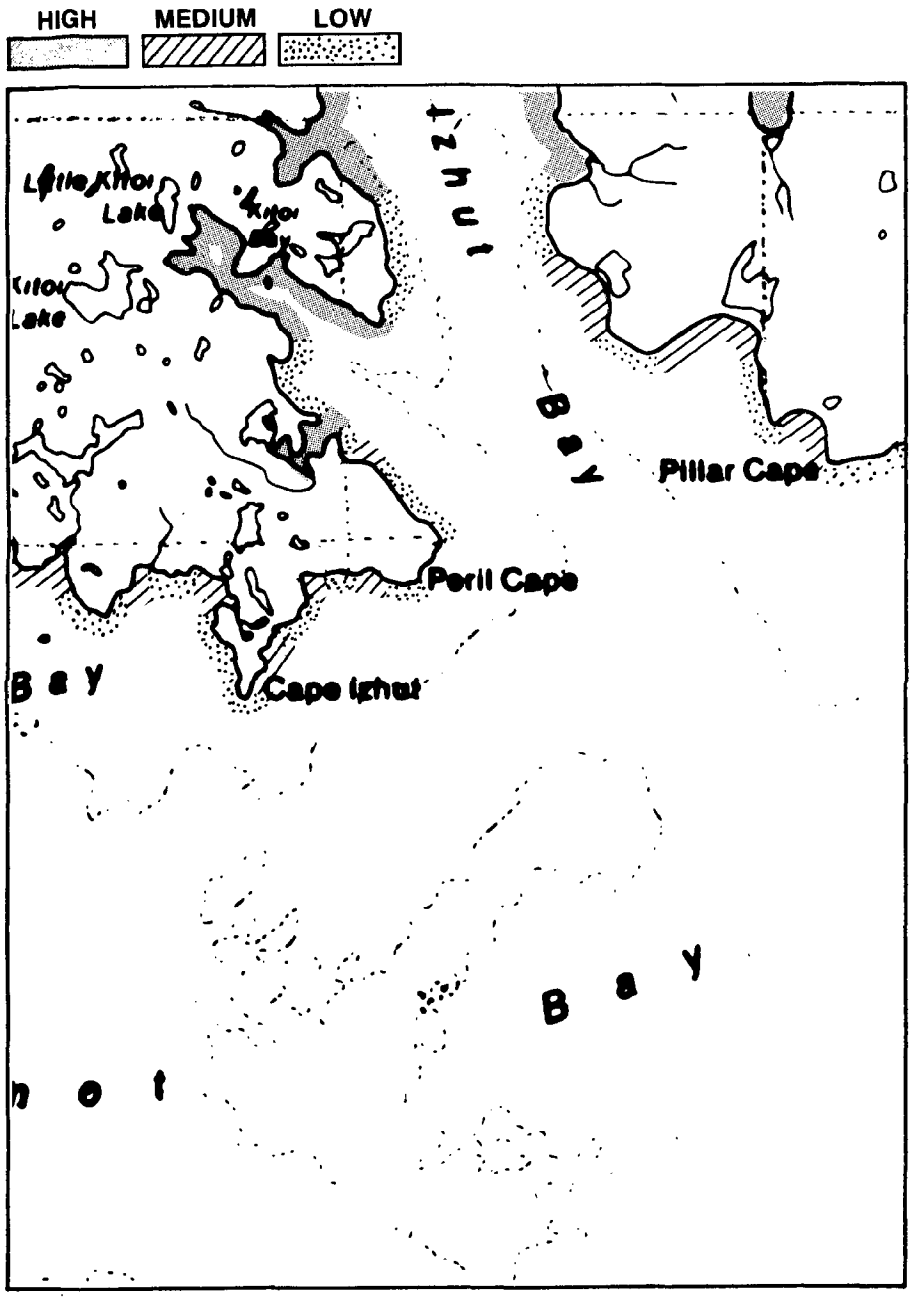


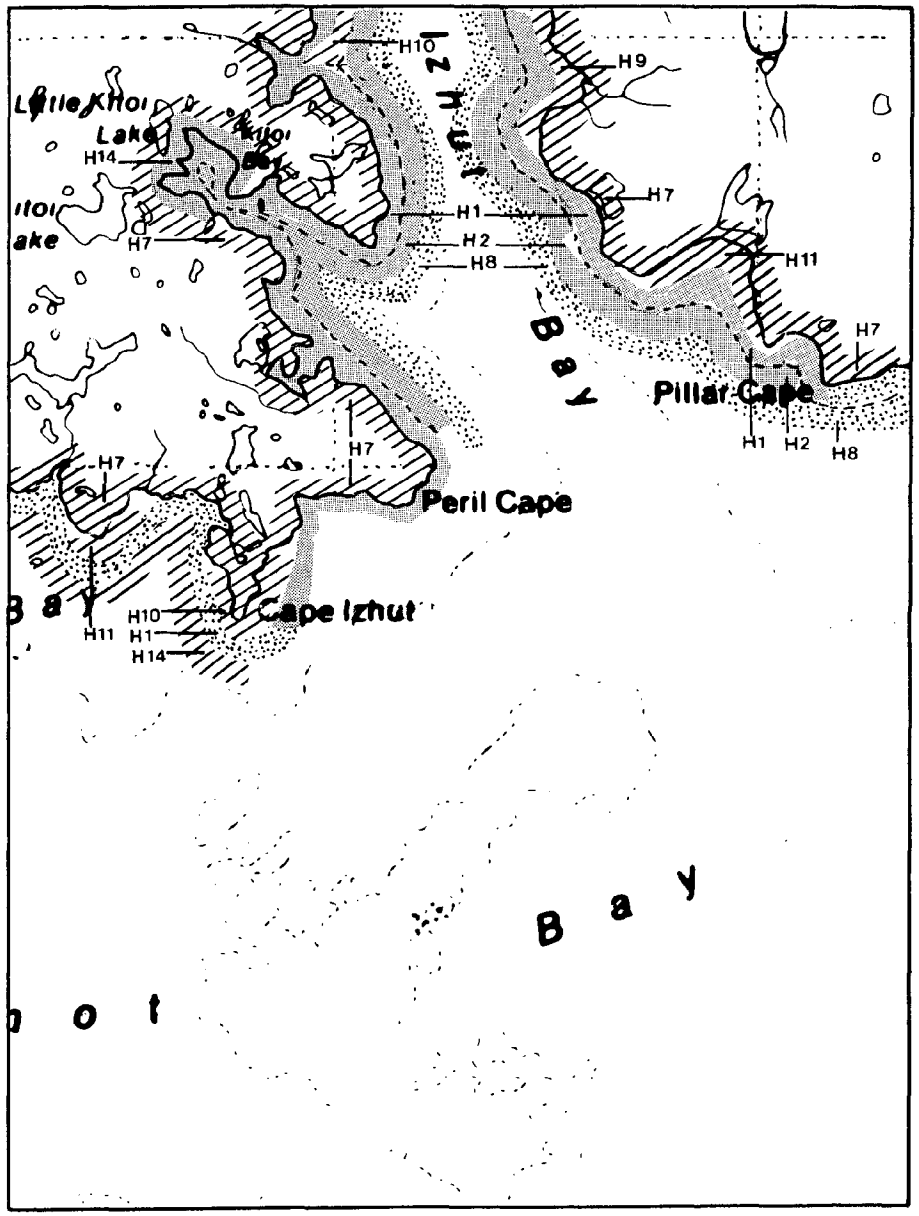


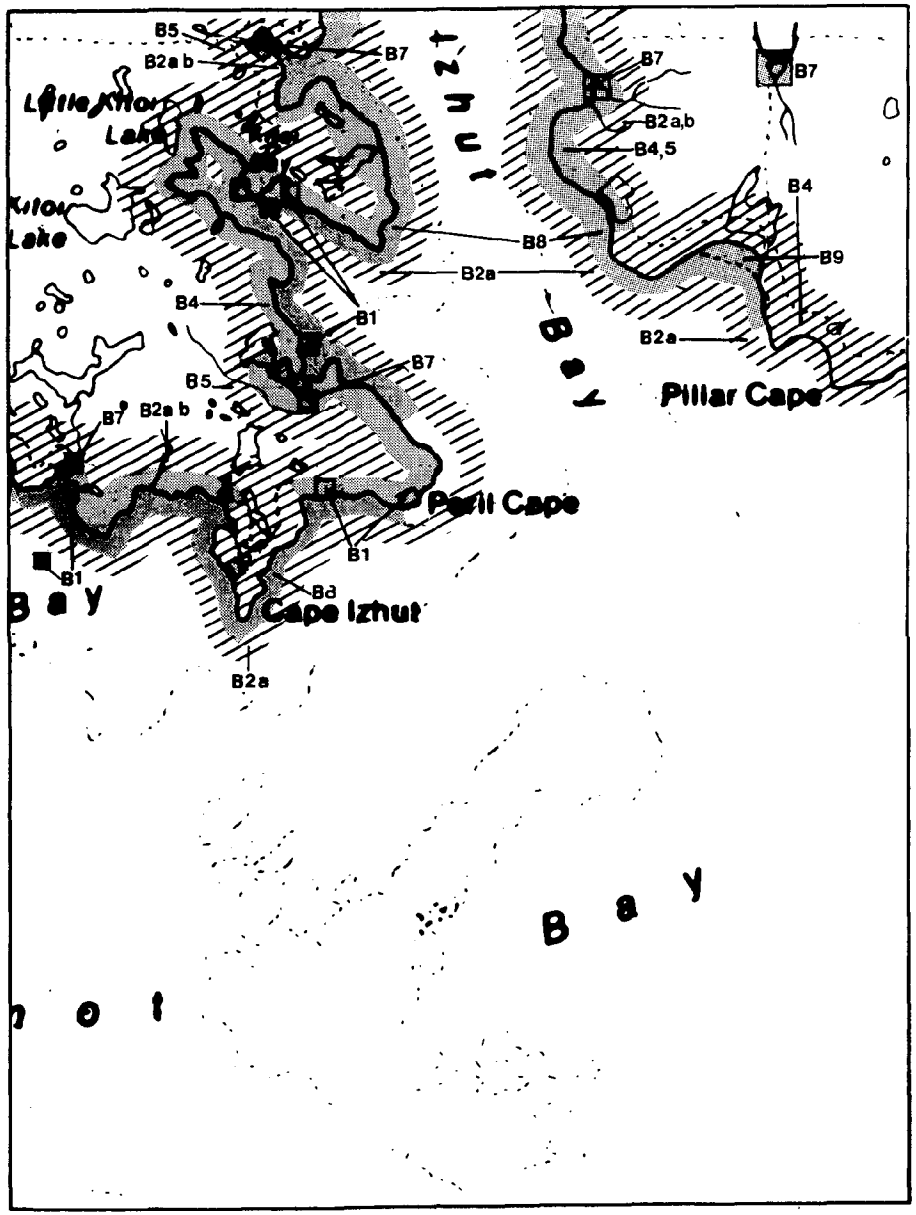
MAP NUMBER 11

RESOURCE		Winter			Spring			Summer			Fall		
		D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE													
R-1	Rocky Headlands												
R-2	Wave-Cut Platforms												
R-3	Sand Beaches/Exposed Tidal Flats												
R-4	Mixed Sand and Gravel Beaches												
R-5	Gravel Beaches												
R-6	Sheltered Rocky and Gravel Shores												
R-7	Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon												
H-2	Roe Herring												
H-3	Crab												
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer												
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl												
H-11	Clams												
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony												
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer												
B-5	Elk												
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults												
	Salmon - Juveniles												
	Char/Dolly Varden - Adults												
	Char/Dolly Varden - Juveniles												
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area												
B-9	Razor Clam Beach												
B-10	Sea Otters												

5	6	7
10	11	12
17	18	19


HIGH
MEDIUM
LOW
Little Kitoi Lake
Kitoi Bay
Kitoi Lake
Izhut
Bay
Pillar Cape
Peril Cape
Cape Izhut
Bay
Bay
not

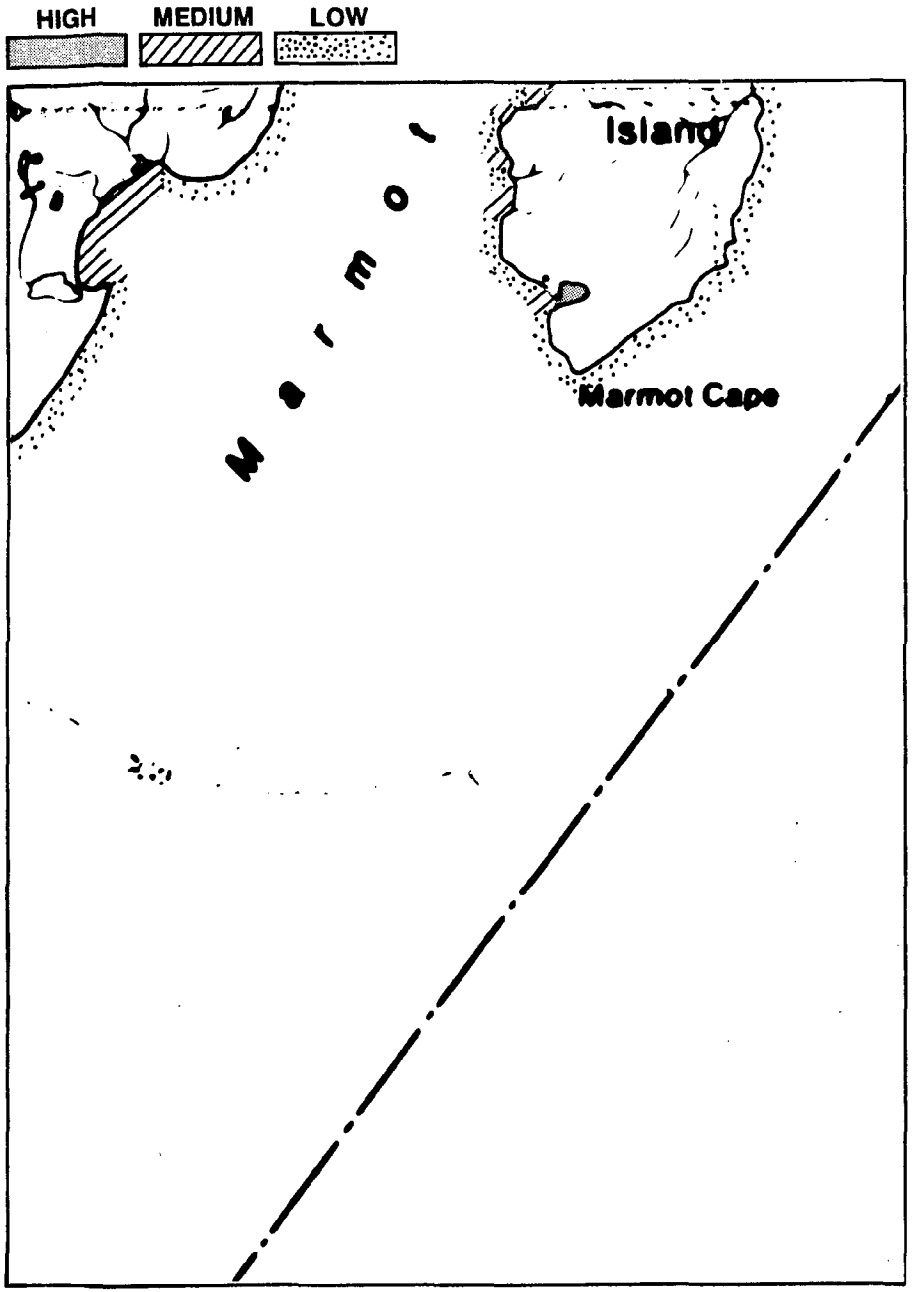

H10
H9
Little Kitoi Lake
Kitoi Bay
H14
Izhut
H7
H1
H2
H8
H11
Bay
Pillar Cape
H1
H2
H8
H7
H7
Peril Cape
H7
Bay
H10
H1
H14
H11
Cape Izhut
Bay
not

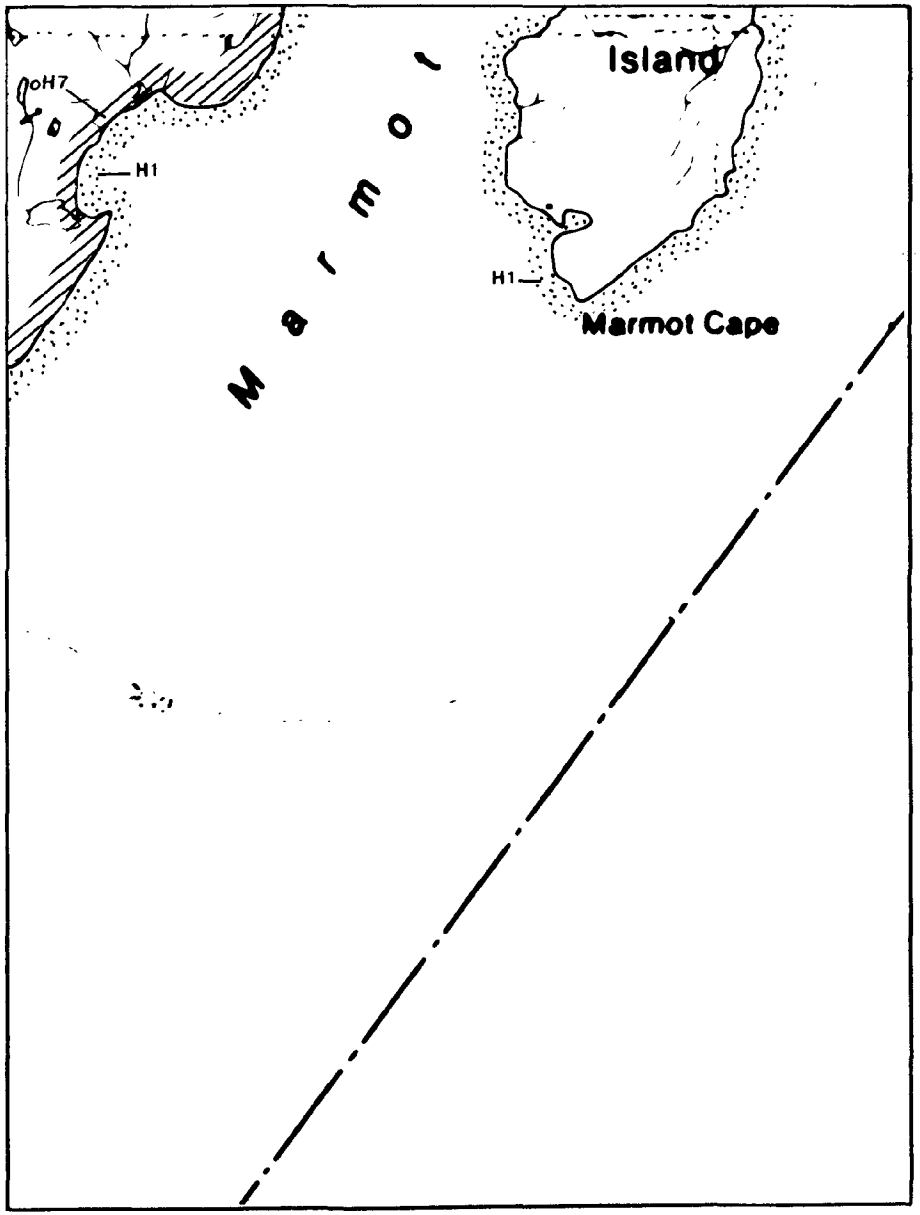


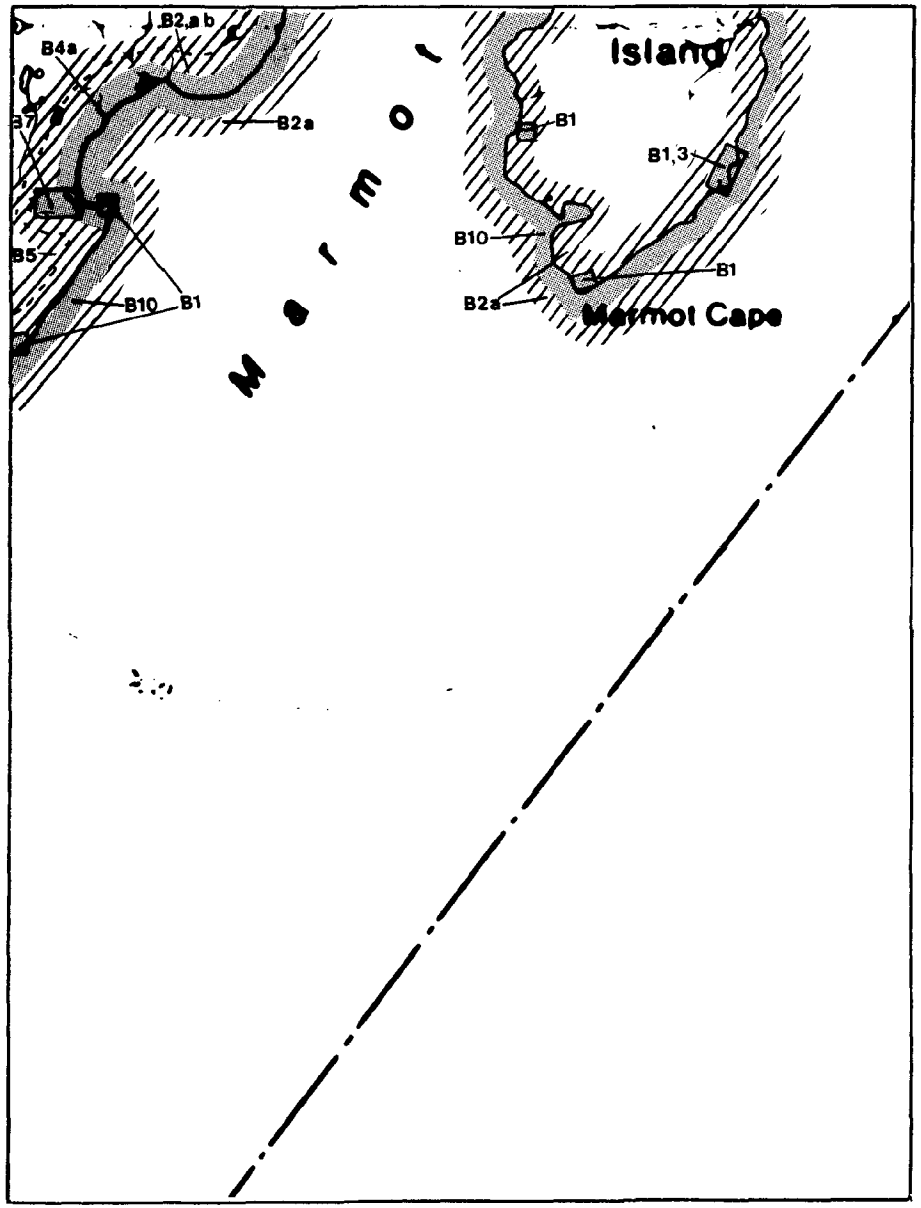
MAP NUMBER 12

RESOURCE		Winter			Spring			Summer			Fall		
		D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE													
R-1	Rocky Headlands												
R-2	Wave-Cut Platforms												
R-3	Sand Beaches/Exposed Tidal Flats												
R-4	Mixed Sand and Gravel Beaches												
R-5	Gravel Beaches												
R-6	Sheltered Rocky and Gravel Shores												
R-7	Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon												
H-2	Roe Herring												
H-3	Crab												
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer												
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl												
H-11	Clams												
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony												
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer												
B-5	Elk												
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults												
	Salmon - Juveniles												
	Char/Dolly Varden - Adults												
	Char/Dolly Varden - Juveniles												
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area												
B-9	Razor Clam Beach												
B-10	Sea Otters												

6	7	8
11	12	13
18	19	


HIGH
MEDIUM
LOW
Marmot
Island
Marmot Cape

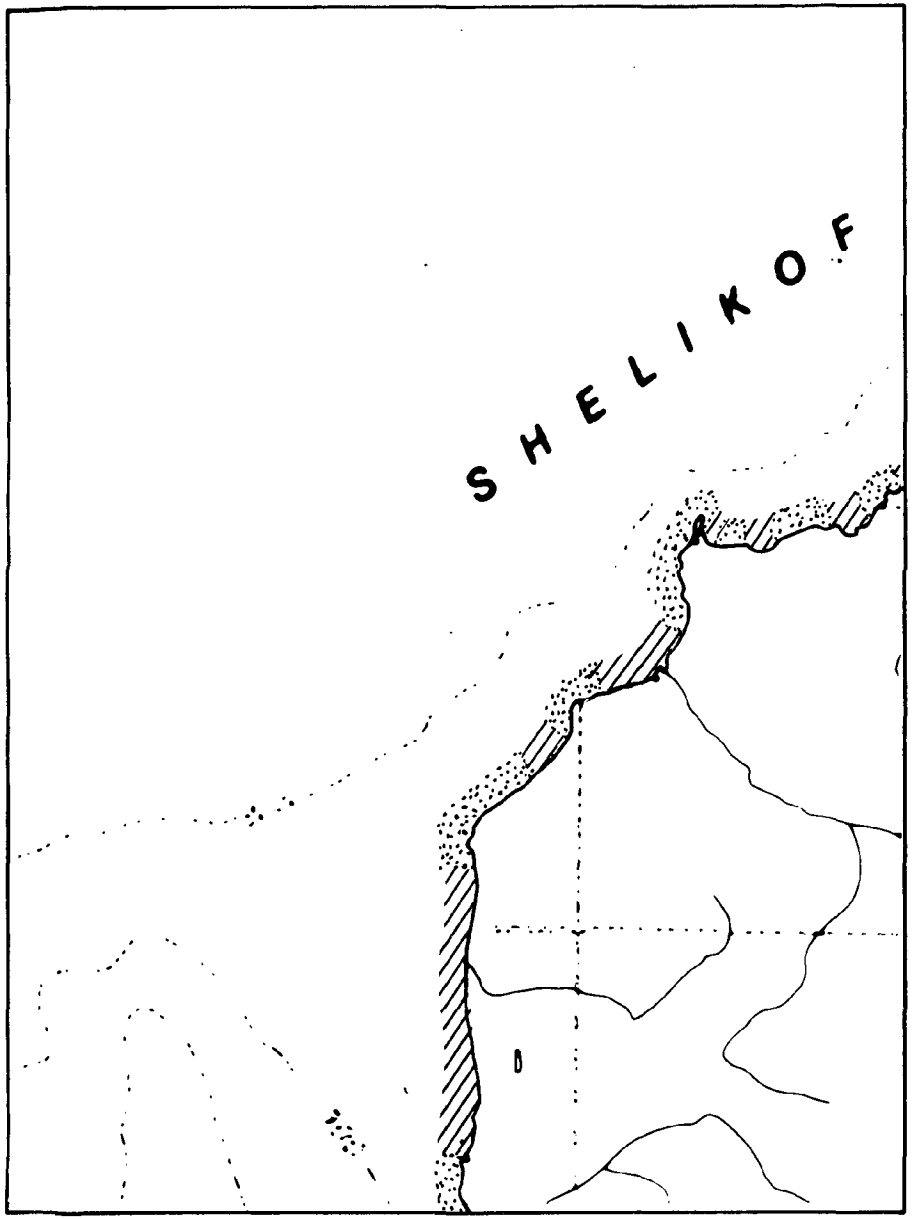

oH7
H1
H1
Marmot
Island
Marmot Cape

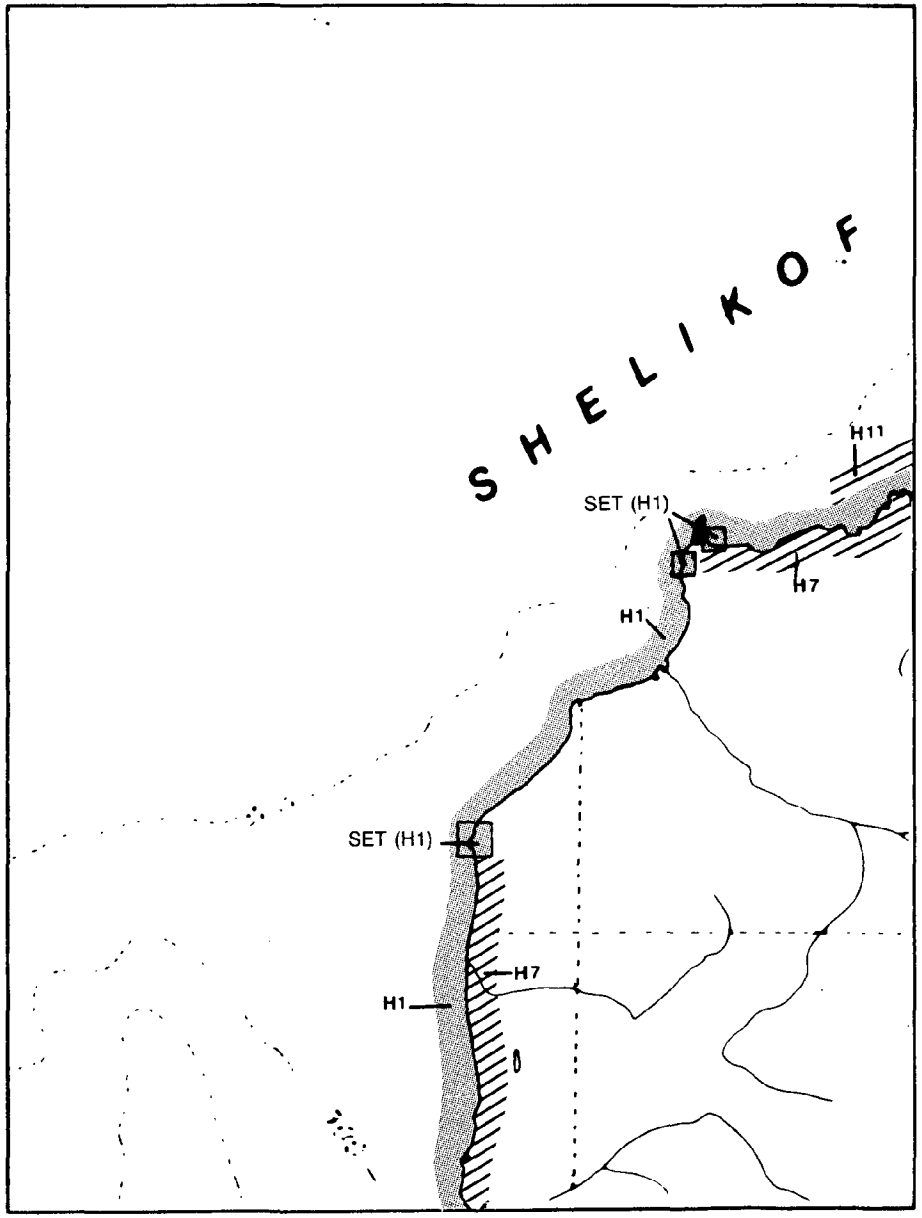


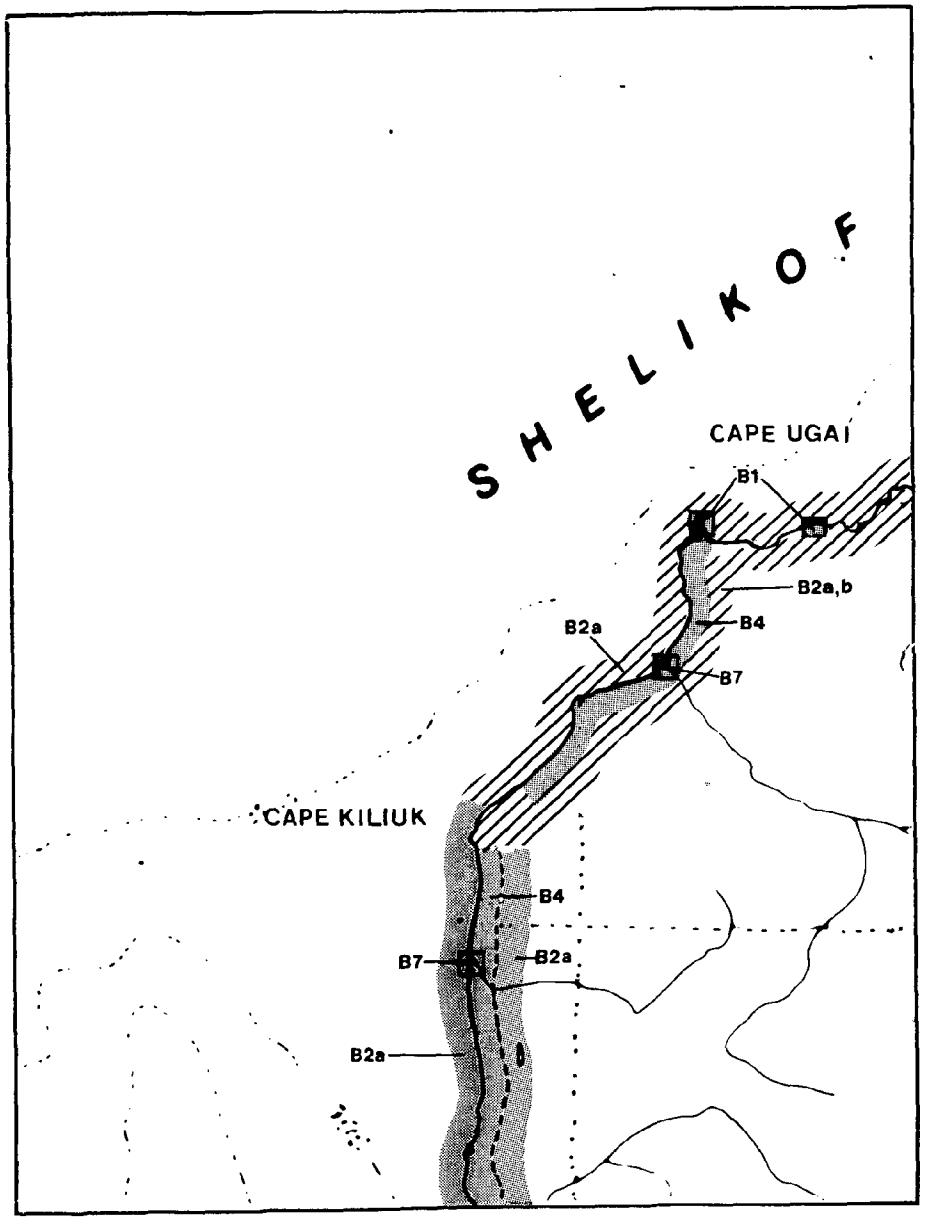
MAP NUMBER 13

RESOURCE		Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE													
R-1	Rocky Headlands												
R-2	Wave-Cut Platforms												
R-3	Sand Beaches/Exposed Tidal Flats												
R-4	Mixed Sand and Gravel Beaches												
R-5	Gravel Beaches												
R-6	Sheltered Rocky and Gravel Shores												
R-7	Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon												
H-2	Roe Herring												
H-3	Crab												
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer												
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl												
H-11	Clams												
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony												
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer												
B-5	Elk												
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults												
	Salmon - Juveniles												
	Char/Dolly Varden - Adults												
	Char/Dolly Varden - Juveniles												
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area												
B-9	Razor Clam Beach												
B-10	Sea Otters												

HIGH MEDIUM LOW



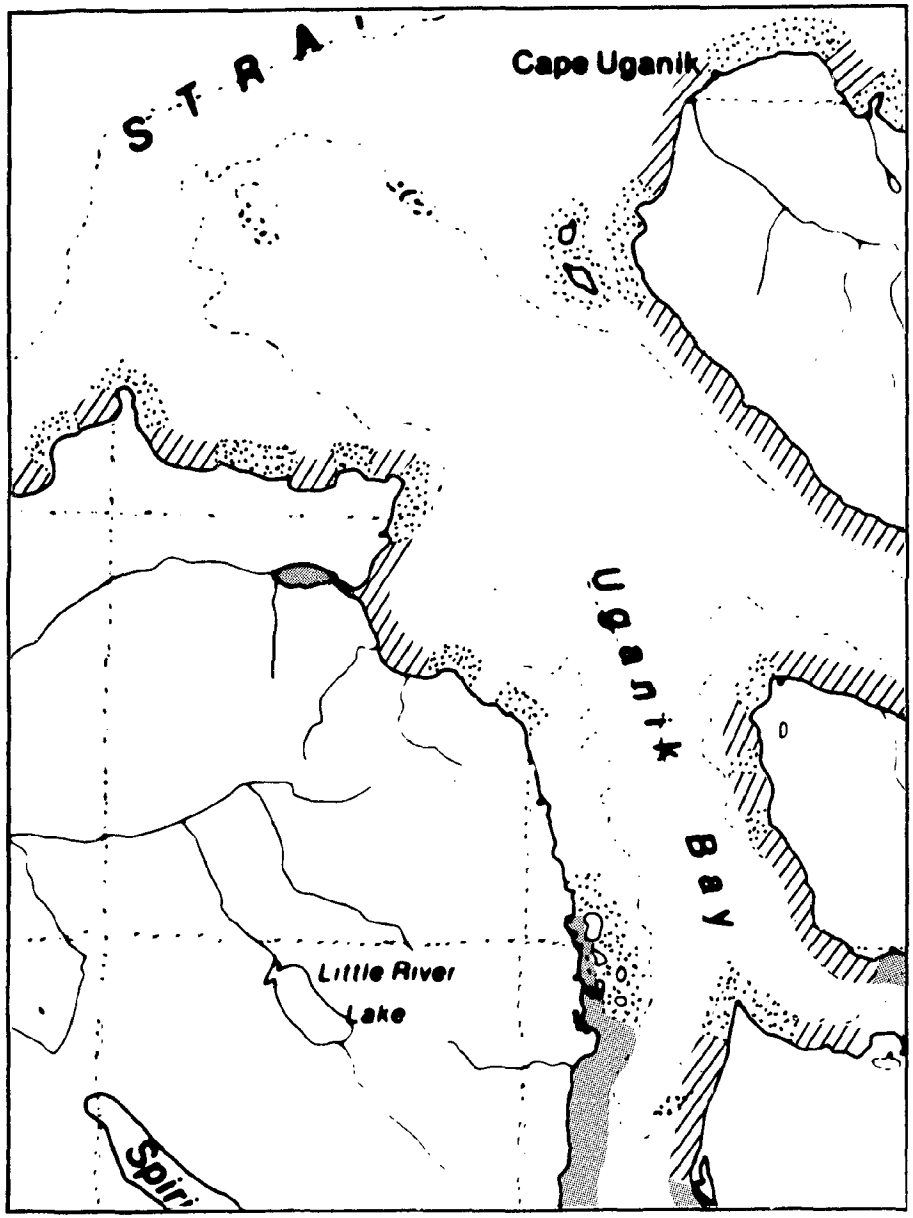


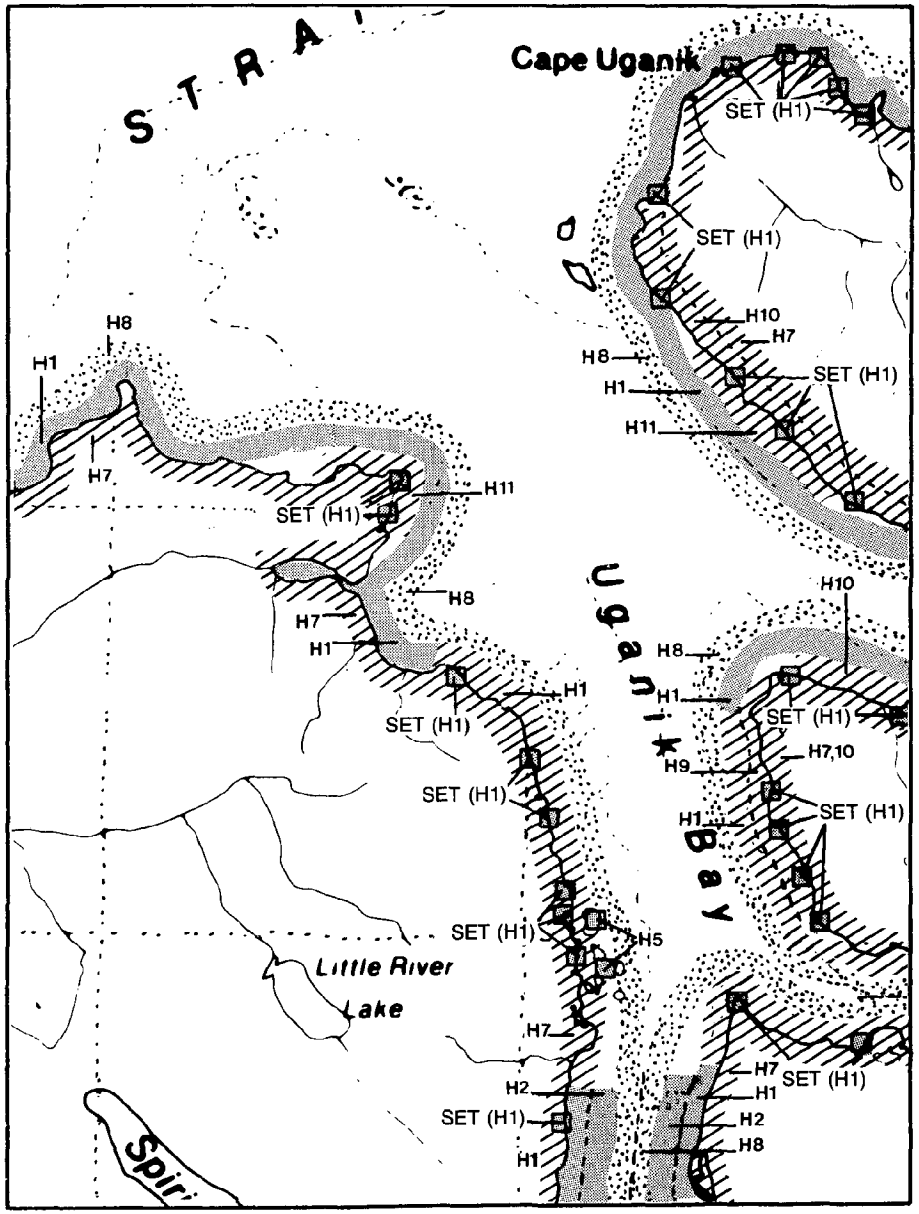


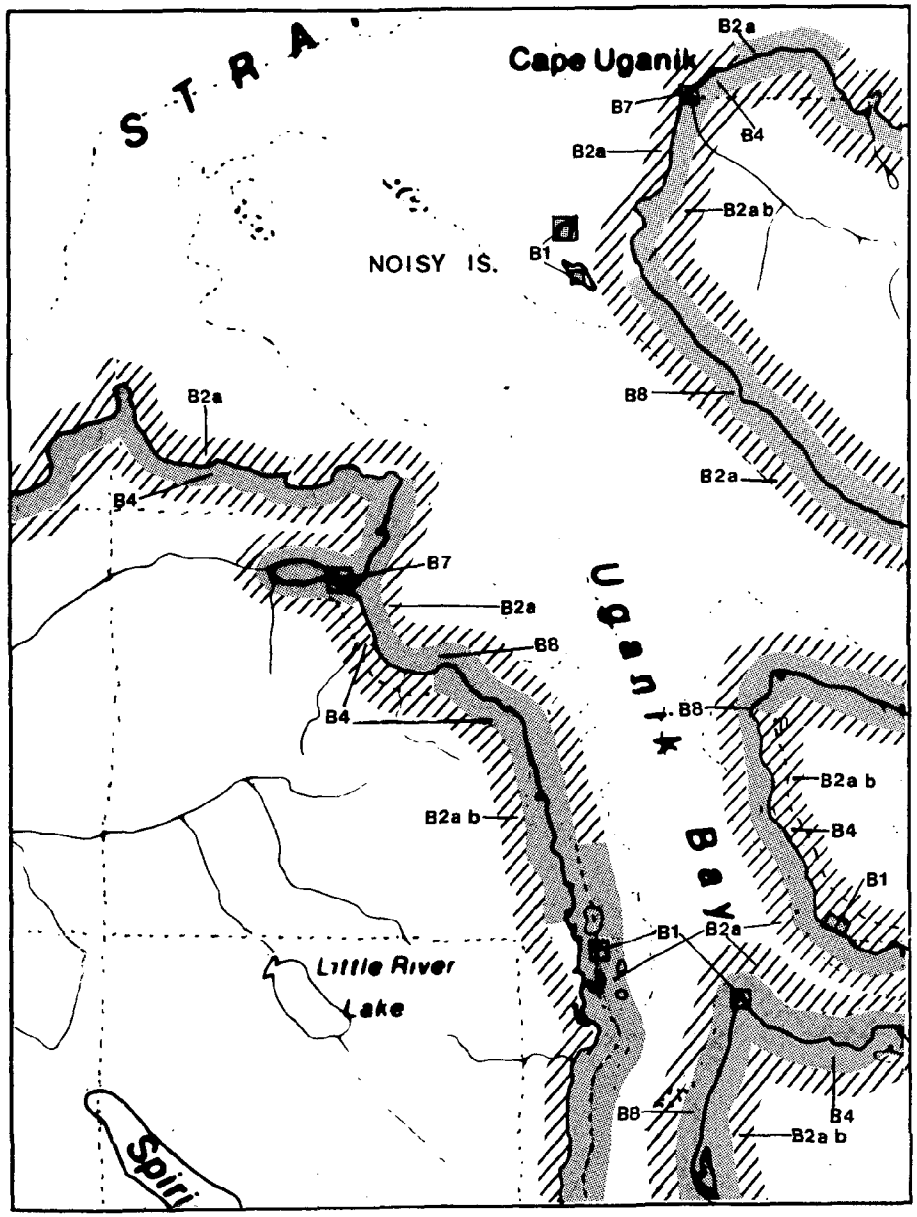
MAP NUMBER 14

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2 Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3 Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4 Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5 Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6 Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7 Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon							—	—	—	—		
H-2 Roe Herring					—	—	—					
H-3 Crab		—	—	—	—	—	—	—	—	—	—	—
H-4 Shrimp												
H-5 Halibut							—	—	—			
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer	—											—
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony						—	—	—	—			
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)						—	—	—	—			
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer	—	—	—	—								—
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults							—	—	—	—	—	
Salmon - Juveniles	—	—	—	—	—	—	—	—	—	—	—	—
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults	—	—	—	—	—	—	—		—	—	—	—
Steelhead - Juveniles							—	—	—			
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

HIGH MEDIUM LOW





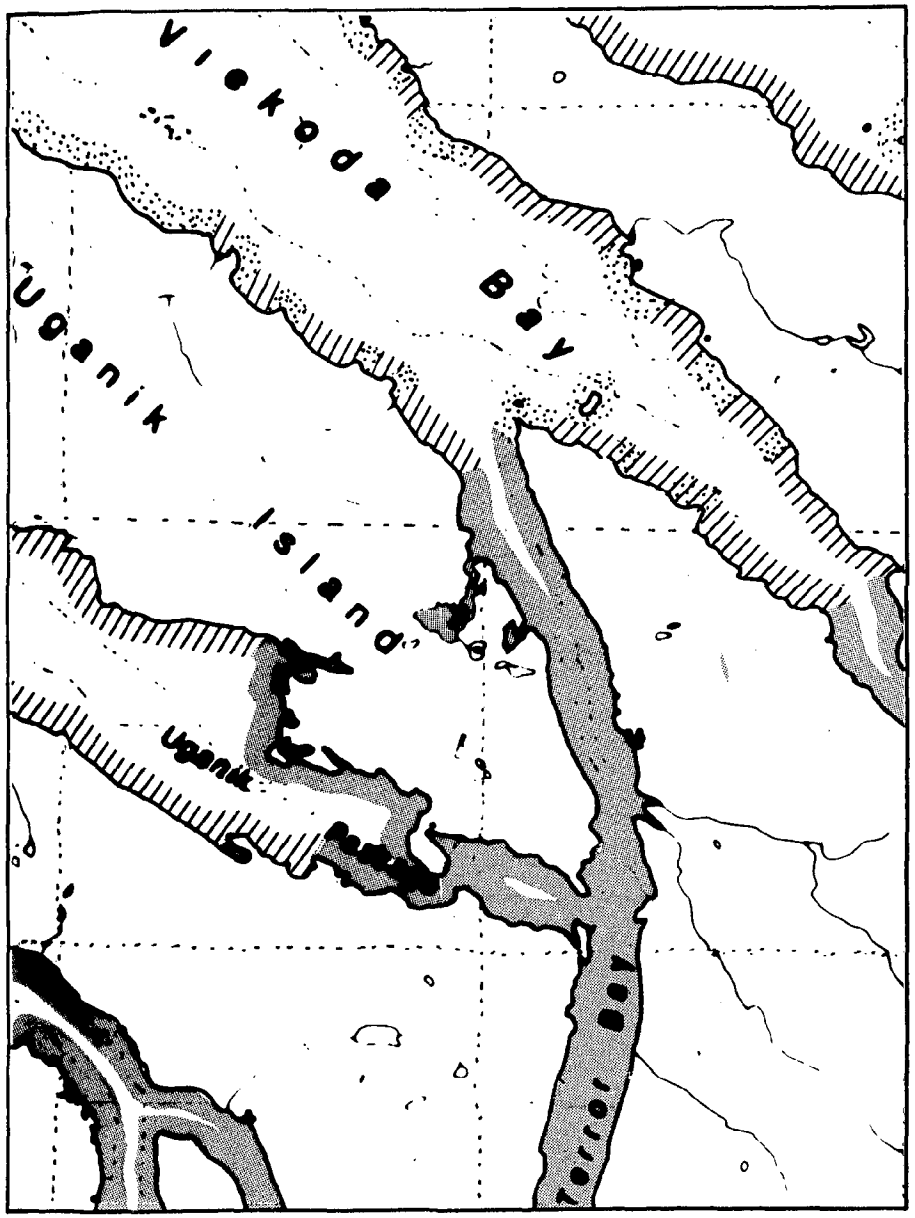


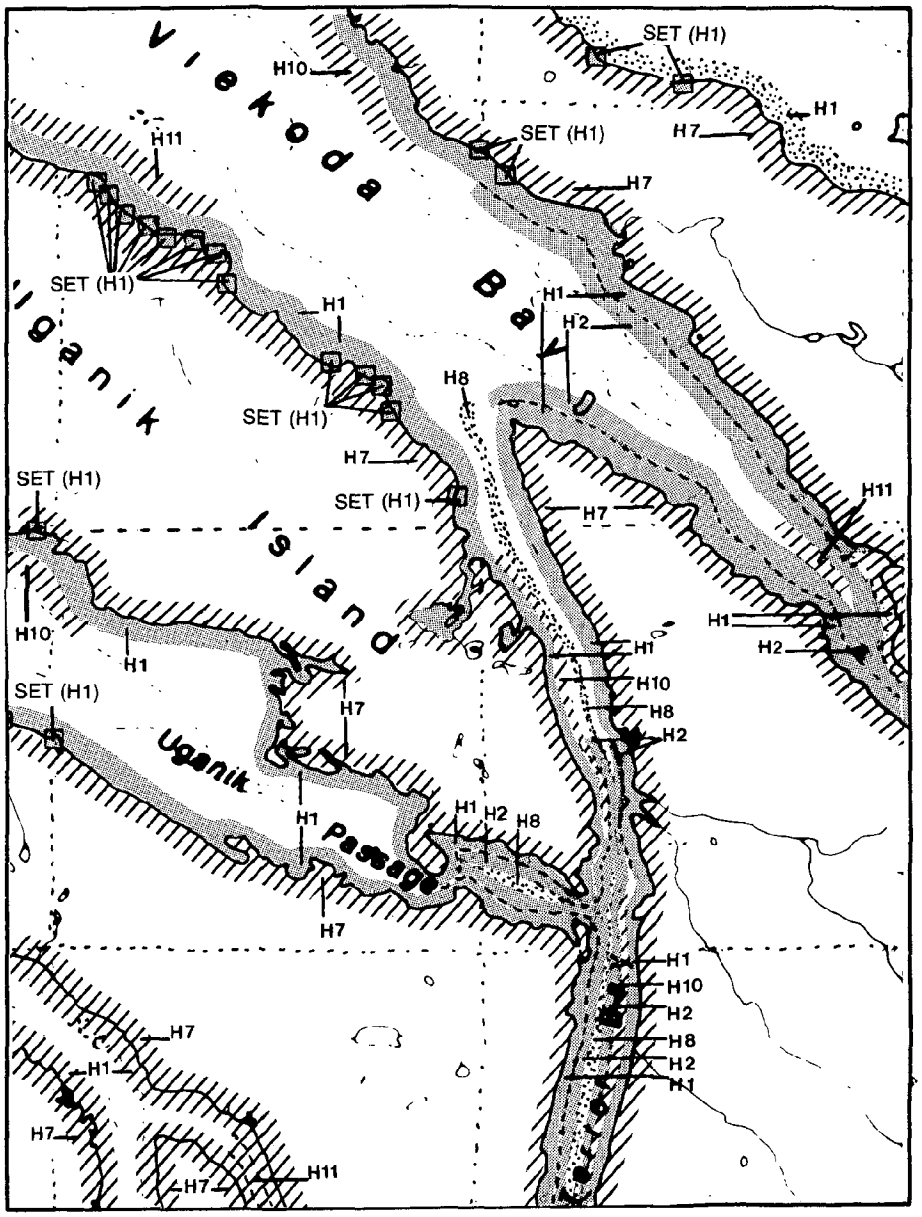
MAP NUMBER 15

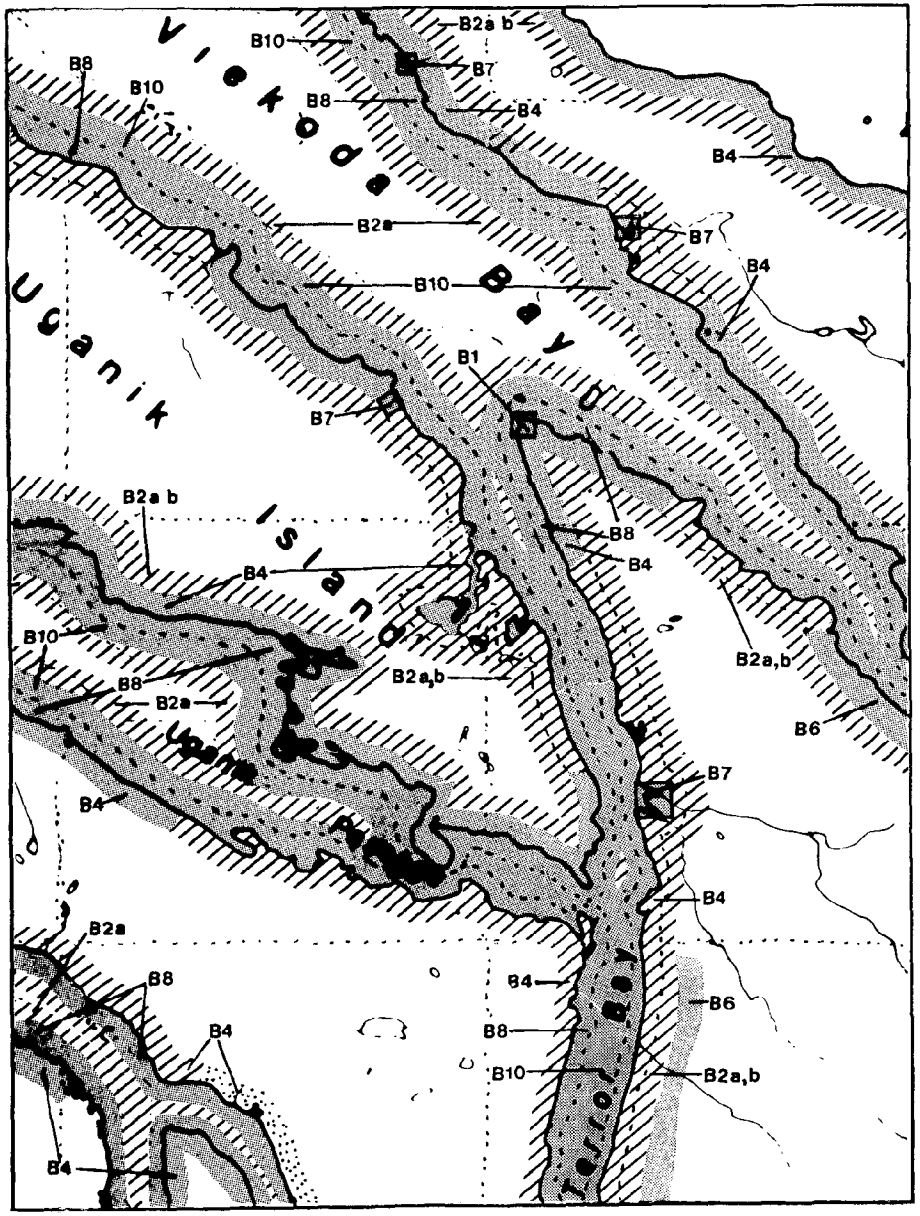
RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands	■	■	■	■	■	■	■	■	■	■	■	■
R-2 Wave-Cut Platforms	■	■	■	■	■	■	■	■	■	■	■	■
R-3 Sand Beaches/Exposed Tidal Flats	■	■	■	■	■	■	■	■	■	■	■	■
R-4 Mixed Sand and Gravel Beaches	■	■	■	■	■	■	■	■	■	■	■	■
R-5 Gravel Beaches	■	■	■	■	■	■	■	■	■	■	■	■
R-6 Sheltered Rocky and Gravel Shores	■	■	■	■	■	■	■	■	■	■	■	■
R-7 Protected Estuarine Tidal Flats and Marshes	■	■	■	■	■	■	■	■	■	■	■	■
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon							■	■	■	■		
H-2 Roe Herring					■	■	■					
H-3 Crab						■	■	■	■	■	■	
H-4 Shrimp												
H-5 Halibut							■	■				
H-6 Whitefish	■	■	■	■	■	■	■	■	■	■	■	■
Subsistence												
H-7 Deer/Elk/Reindeer	■											■
H-8 Marine Mammal	■	■	■	■	■	■	■	■	■	■	■	■
H-9 Crab	■	■	■	■	■	■	■	■	■	■	■	■
H-10 Waterfowl	■								■	■	■	■
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony							■	■	■			
B-2a Waterfowl (overwintering)	■	■	■	■							■	■
B-2b Waterfowl (summer use)							■	■	■			
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer	■	■	■	■								■
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)	■	■	■	■							■	■
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults							■	■	■	■	■	■
Salmon - Juveniles	■	■	■	■	■	■	■	■	■	■	■	■
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area					■	■						
B-9 Razor Clam Beach												
B-10 Sea Otters												

		9
14	15	16
22	23	24

HIGH MEDIUM LOW



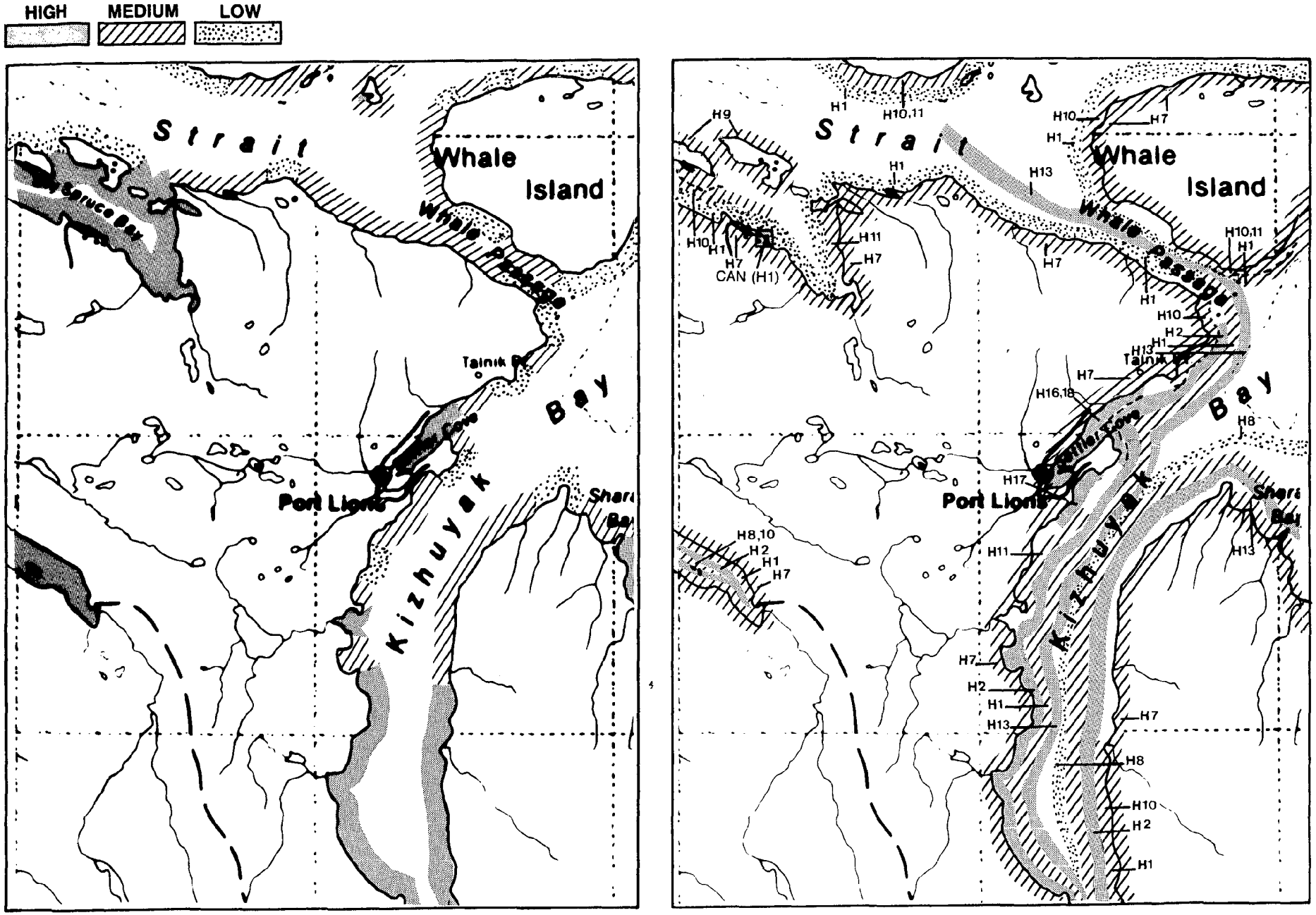


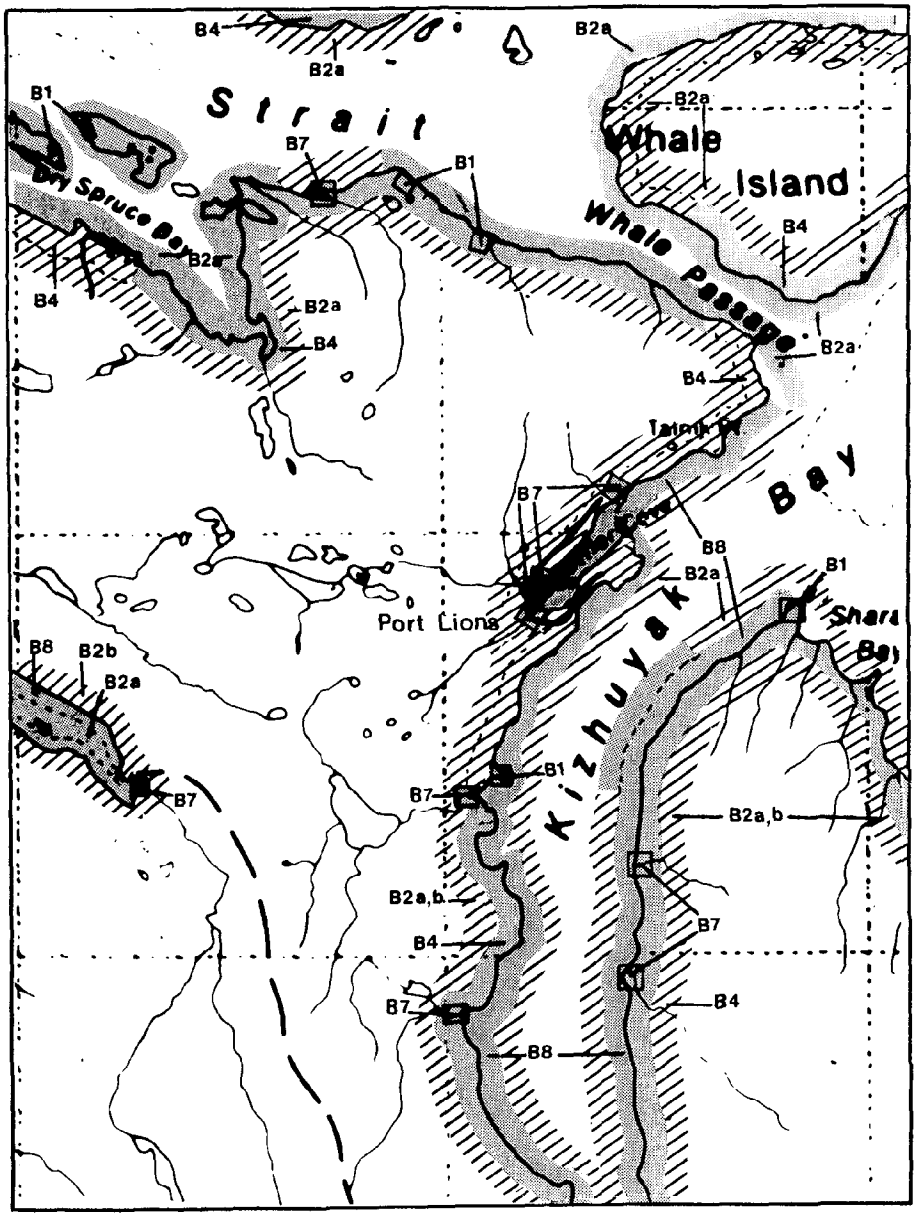


MAP NUMBER 16

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2 Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3 Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4 Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5 Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6 Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7 Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon							—	—	—	—		
H-2 Roe Herring					—	—	—					
H-3 Crab						—	—	—	—	—	—	
H-4 Shrimp												
H-5 Halibut							—	—				
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer	—											—
H-8 Marine Mammal	—	—	—	—	—	—	—	—	—	—	—	—
H-9 Crab	—	—	—	—	—	—	—	—	—	—	—	—
H-10 Waterfowl	—	—	—	—	—					—	—	—
H-11 Clams	—	—	—	—	—	—	—	—	—	—	—	—
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony						—	—	—	—	—		
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)						—	—	—	—	—		
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer	—	—	—	—								—
B-5 Elk												
B-6 Brown Bear					—	—				—	—	—
Offshore												
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults						—	—	—	—	—	—	—
Salmon - Juveniles	—	—	—	—	—	—	—	—	—	—	—	—
Char/Dolly Varden - Adults	—								—	—	—	—
Char/Dolly Varden - Juveniles					—	—	—					
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area					—	—	—					
B-9 Razor Clam Beach												
B-10 Sea Otters												

	9	10
15	16	17
23	24	25

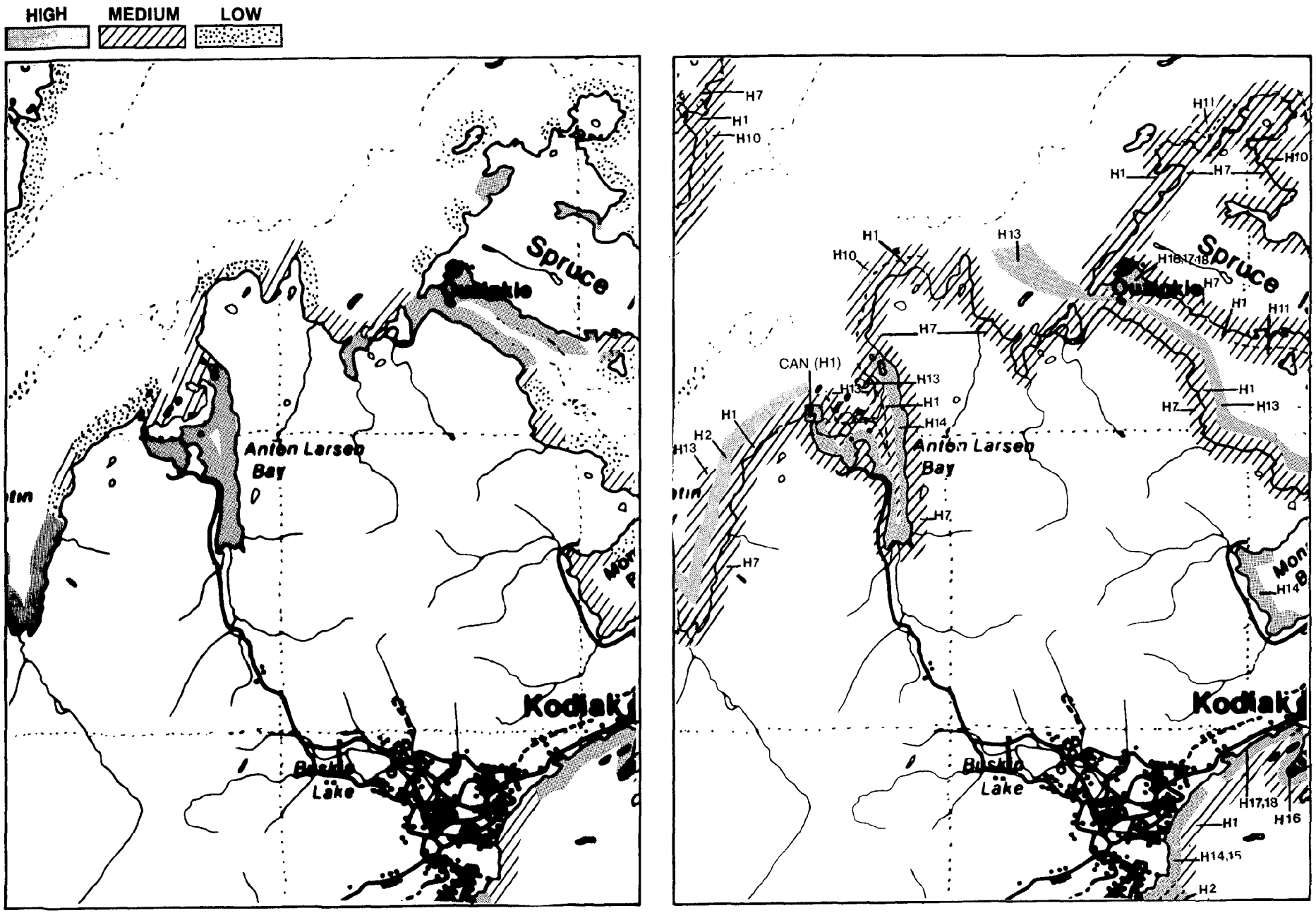

HIGH
MEDIUM
LOW
Strait
Whale
Island
Whale Passage
Spruce Bay
Talnik Pt
Bay
Port Lions
Kizhuyak
Strait
Whale
Island
Whale Passage
Bay
Port Lions
Kizhuyak
H9
H1
H10,11
H10
H7
H1
H13
H10
H1
H7
CAN (H1)
H11
H7
H7
H10,11
H1
H1
H10
H2
H1
H13
Talnik Pt
H7
H16,18
H8
H17
H8,10
H2
H1
H7
H11
H13
H7
H2
H1
H13
H7
H8
H10
H2
H1

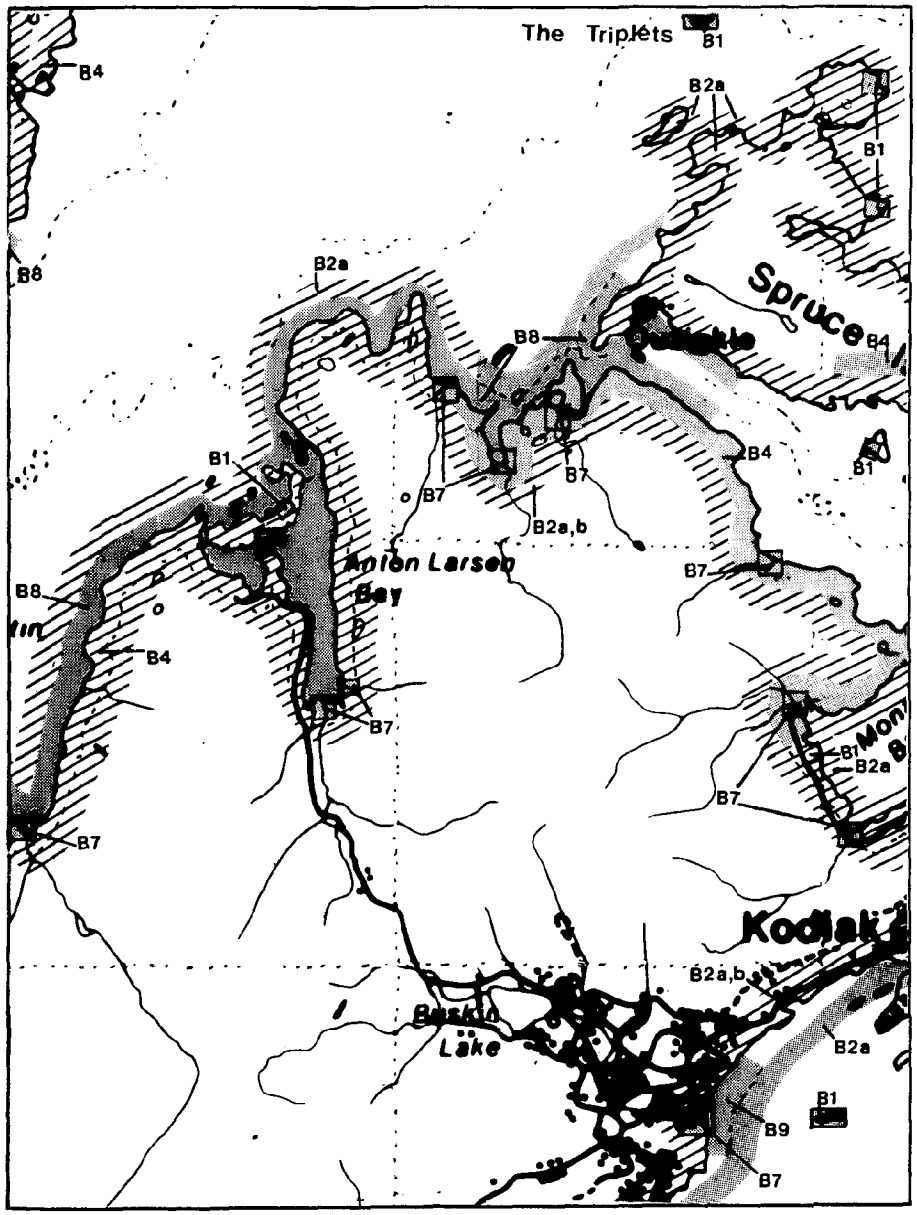


MAP NUMBER 17

RESOURCE	Winter			Spring			Summer			Fall		
	D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

9	10	11
16	17	18
24	25	26


HIGH
MEDIUM
LOW
Spruce
Anton Larsen Bay
Kodiak
Buskin Lake
H7
H1
H10
H11
H13
H18,17,18
CAN (H1)
H14
H2
H17,18
H16
H14,15

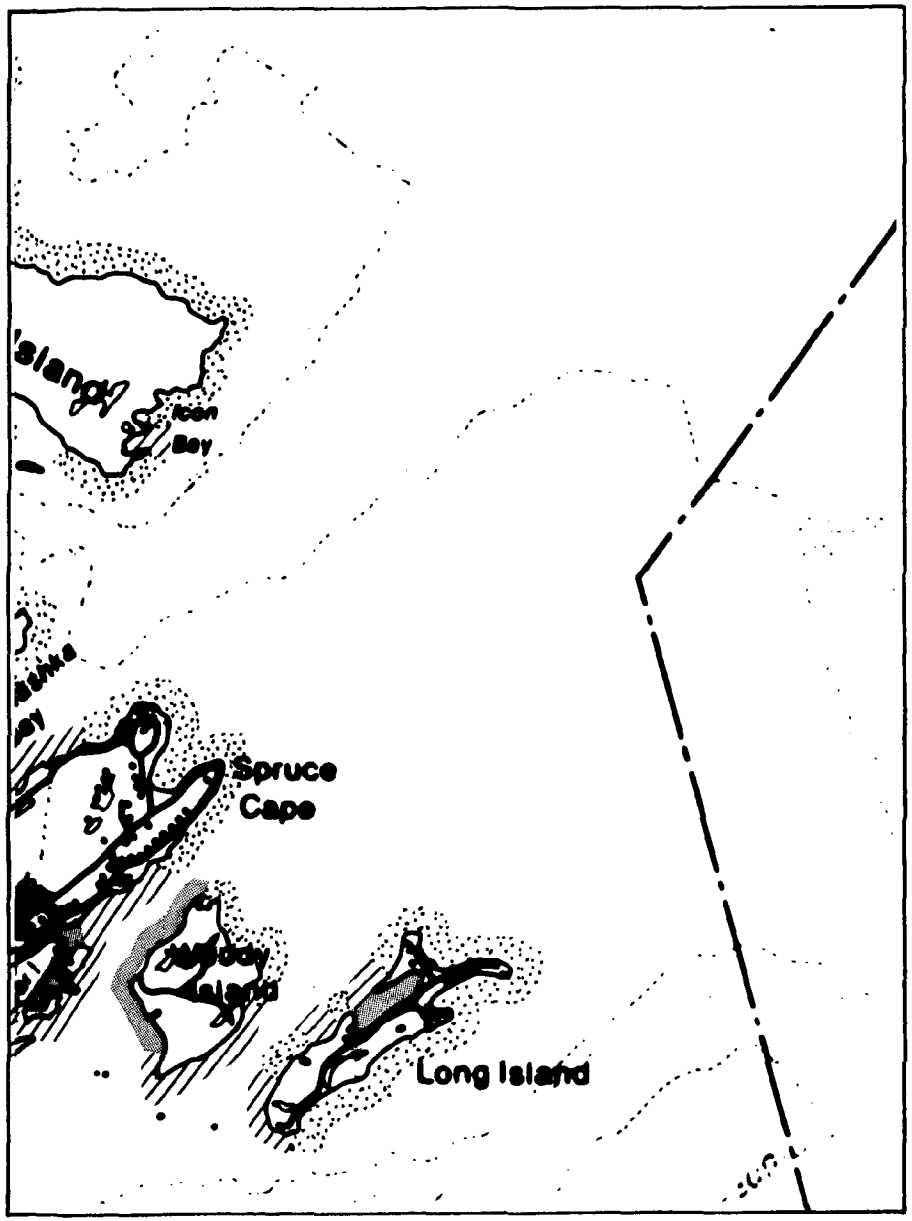


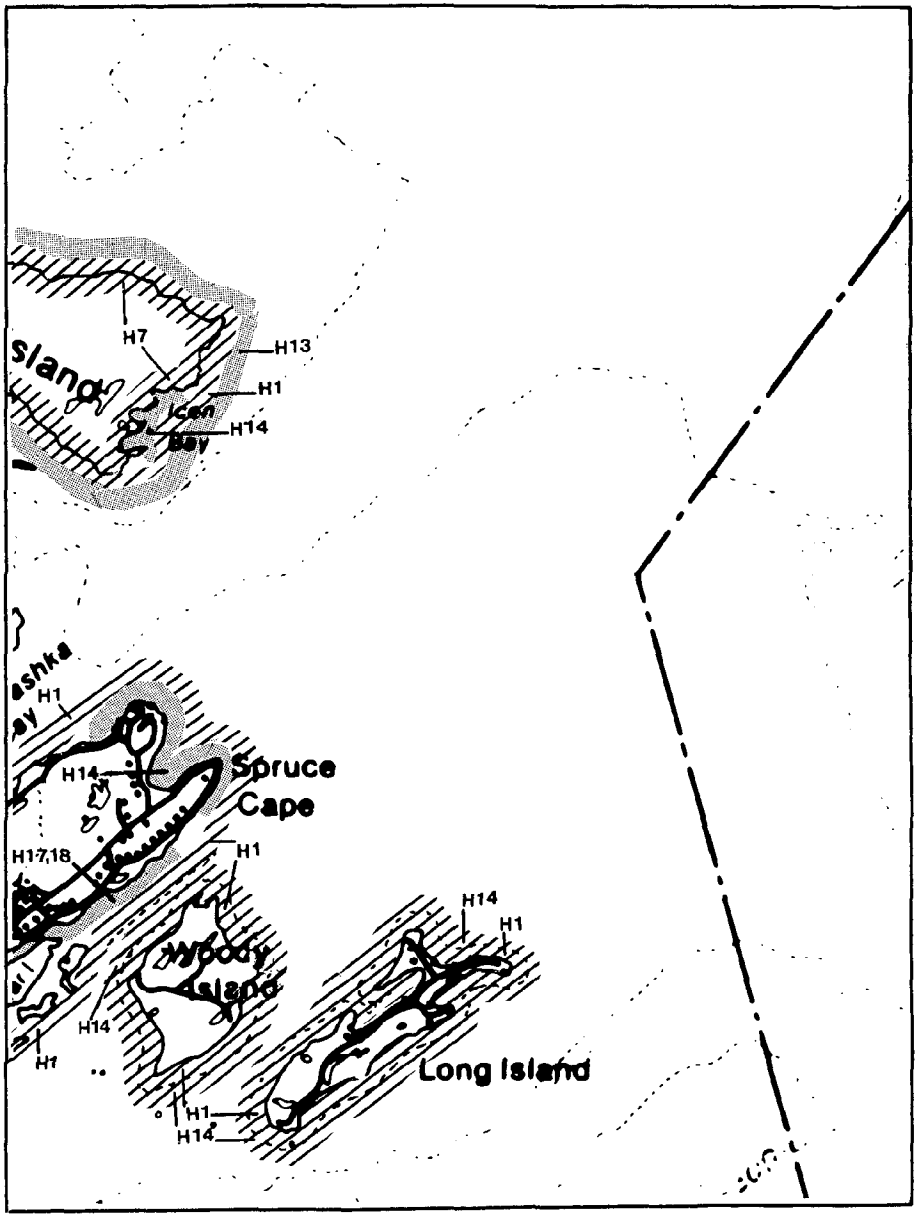
MAP NUMBER 18

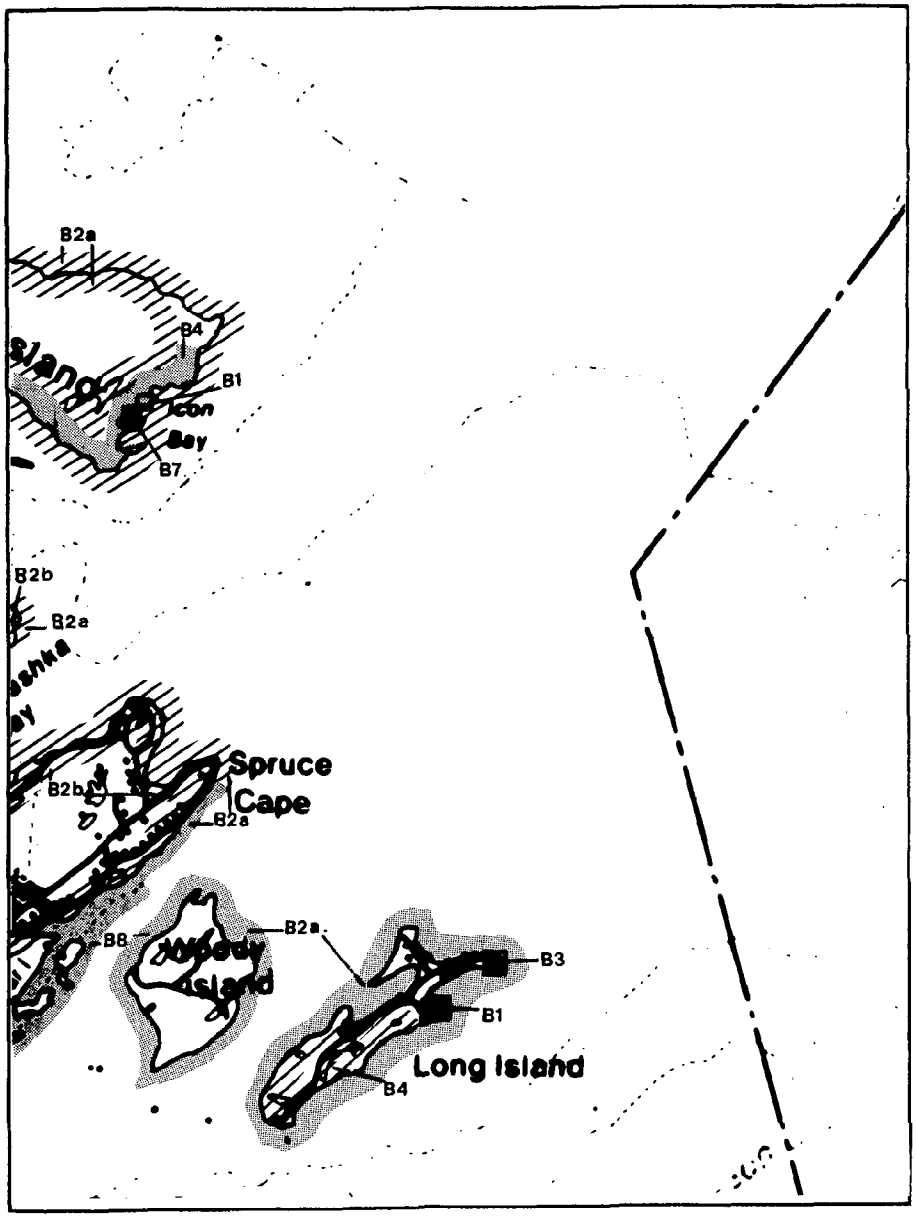
RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

10	11	12
17	18	19
25	26	27

HIGH MEDIUM LOW





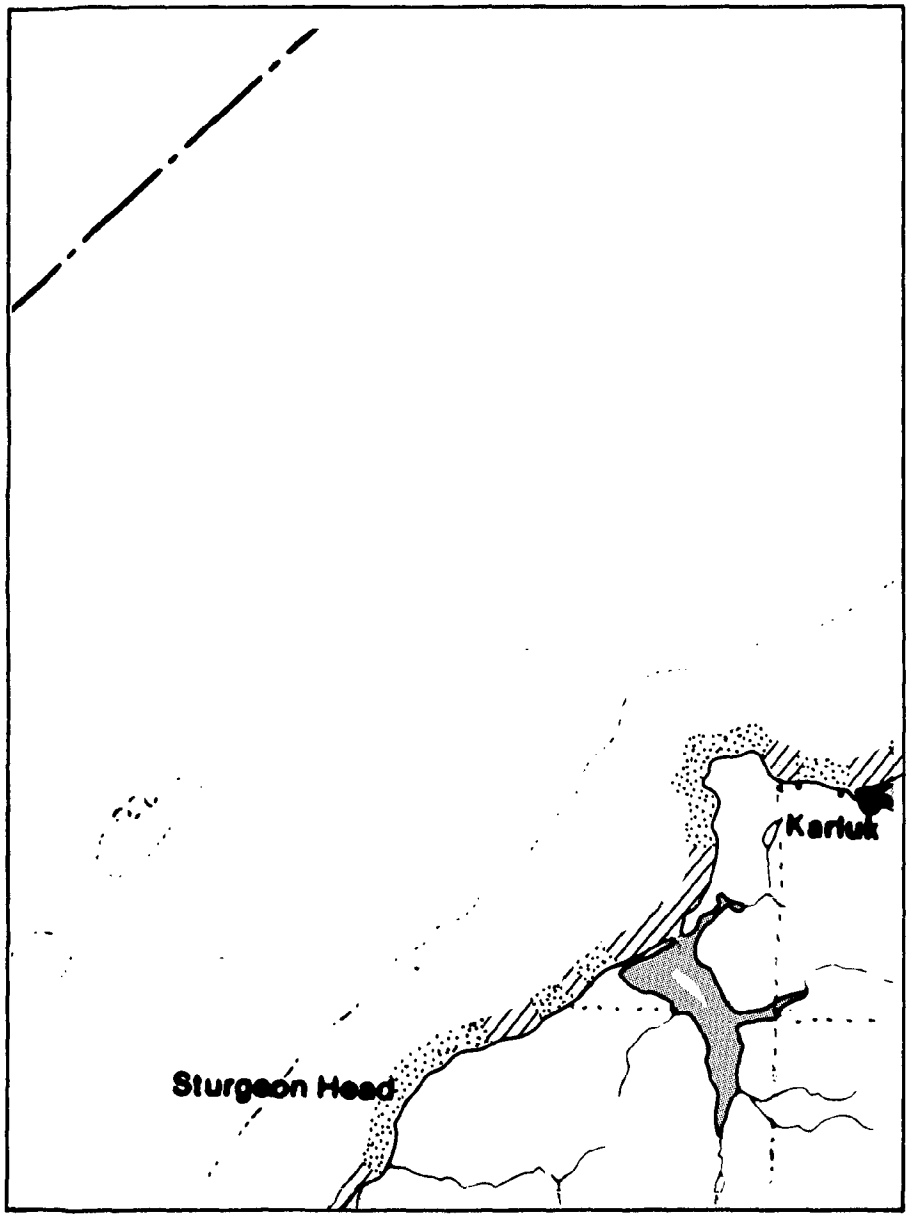


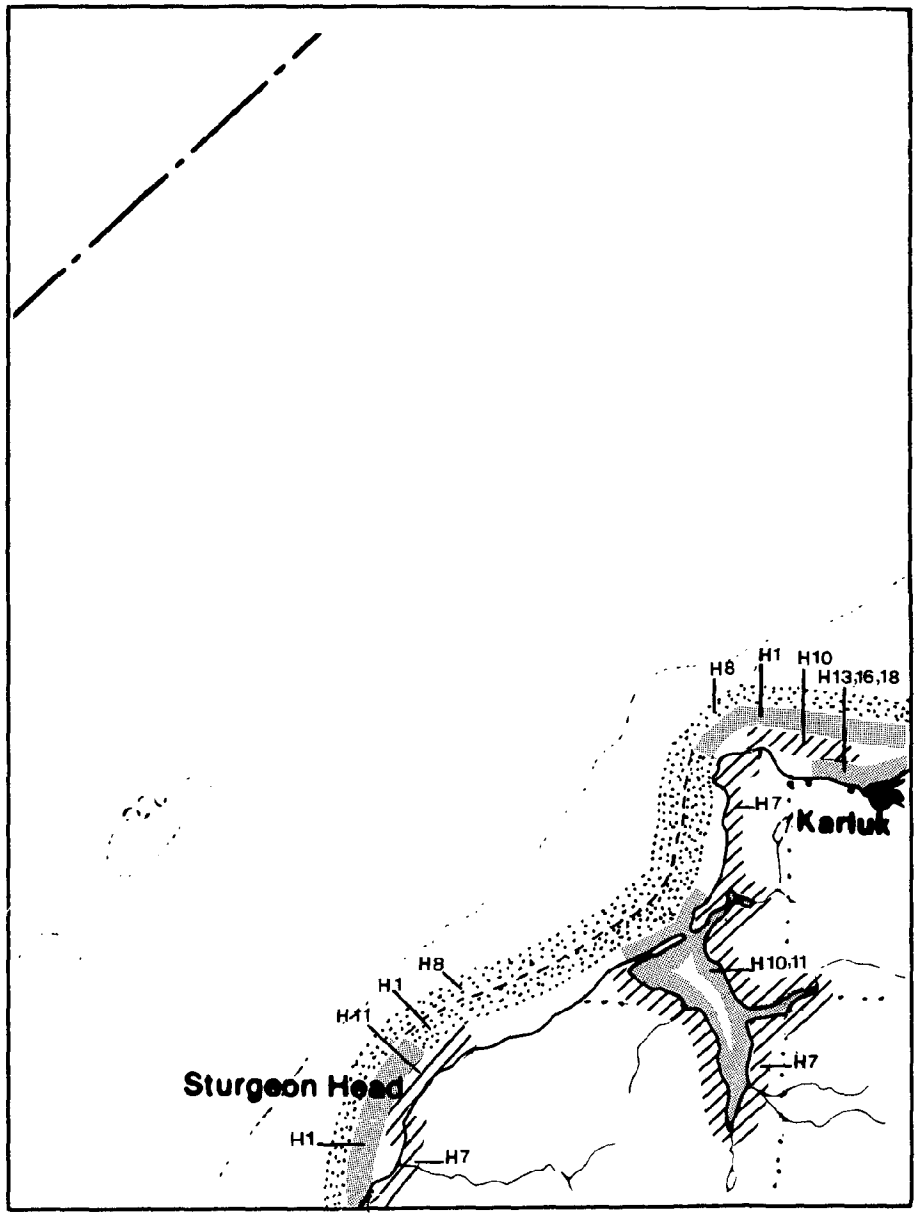
MAP NUMBER 19

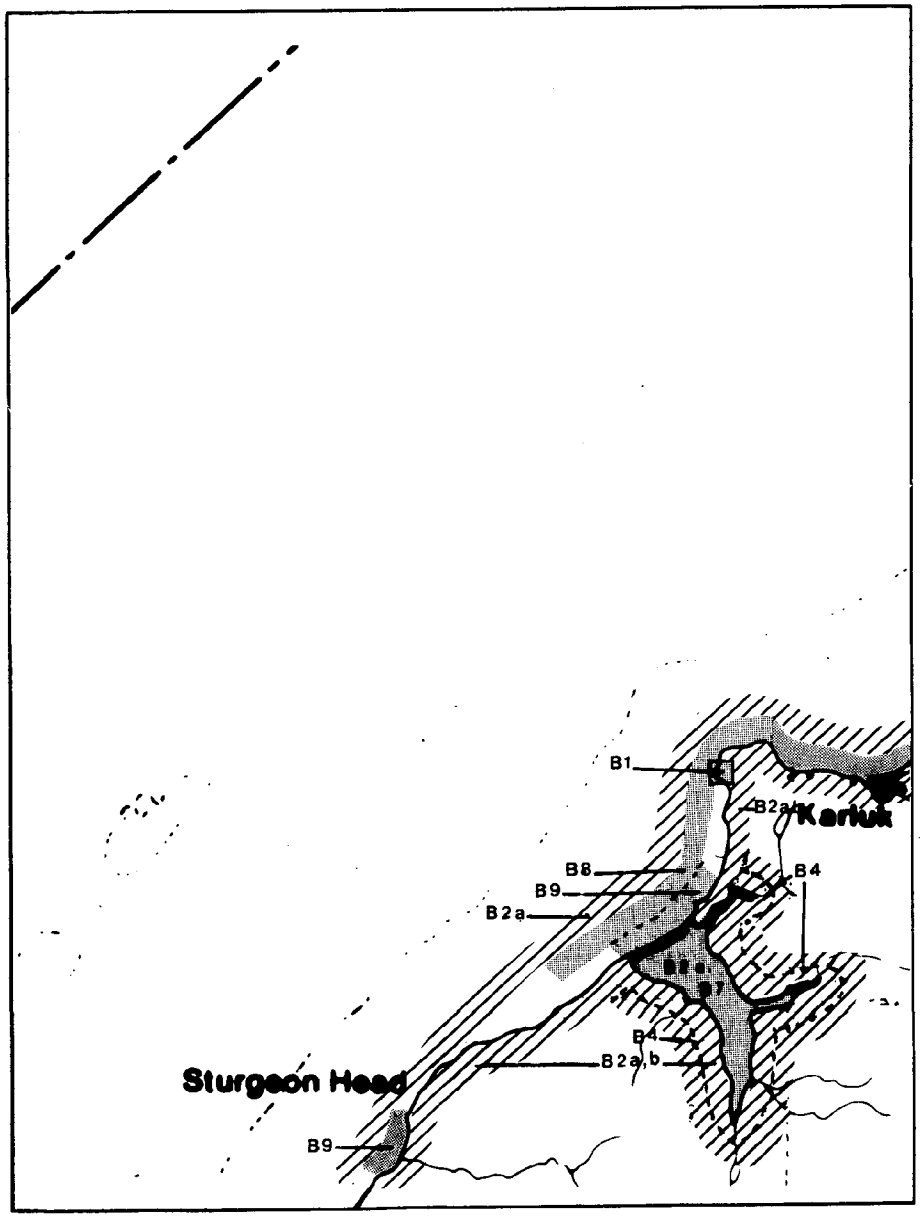
RESOURCE		Winter			Spring			Summer			Fall		
		D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE													
R-1	Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2	Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3	Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4	Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5	Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6	Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7	Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon							—	—	—	—		
H-2	Roe Herring					—	—	—					
H-3	Crab		—	—	—	—	—	—	—	—	—	—	—
H-4	Shrimp												
H-5	Halibut							—	—				
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer	—											—
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl												
H-11	Clams												
H-12	Halibut/Marine Fish												
H-13	Salmon							—	—	—	—	—	—
Recreation													
H-14	Recreation Use Area						—	—	—	—	—		
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property	—	—	—	—	—	—	—	—	—	—	—	—
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony						—	—	—	—	—		
B-2a	Waterfowl (overwintering)	—	—	—	—							—	—
B-2b	Waterfowl (summer use)						—	—	—	—	—		
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer	—	—	—	—								—
B-5	Elk												
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)	—	—	—	—							—	—
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults							—	—	—	—	—	
	Salmon - Juveniles												
	Char/Dolly Varden - Adults												
	Char/Dolly Varden - Juveniles												
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area					—	—						
B-9	Razor Clam Beach												
B-10	Sea Otters												

11	12	13
18	19	
26	27	

HIGH MEDIUM LOW



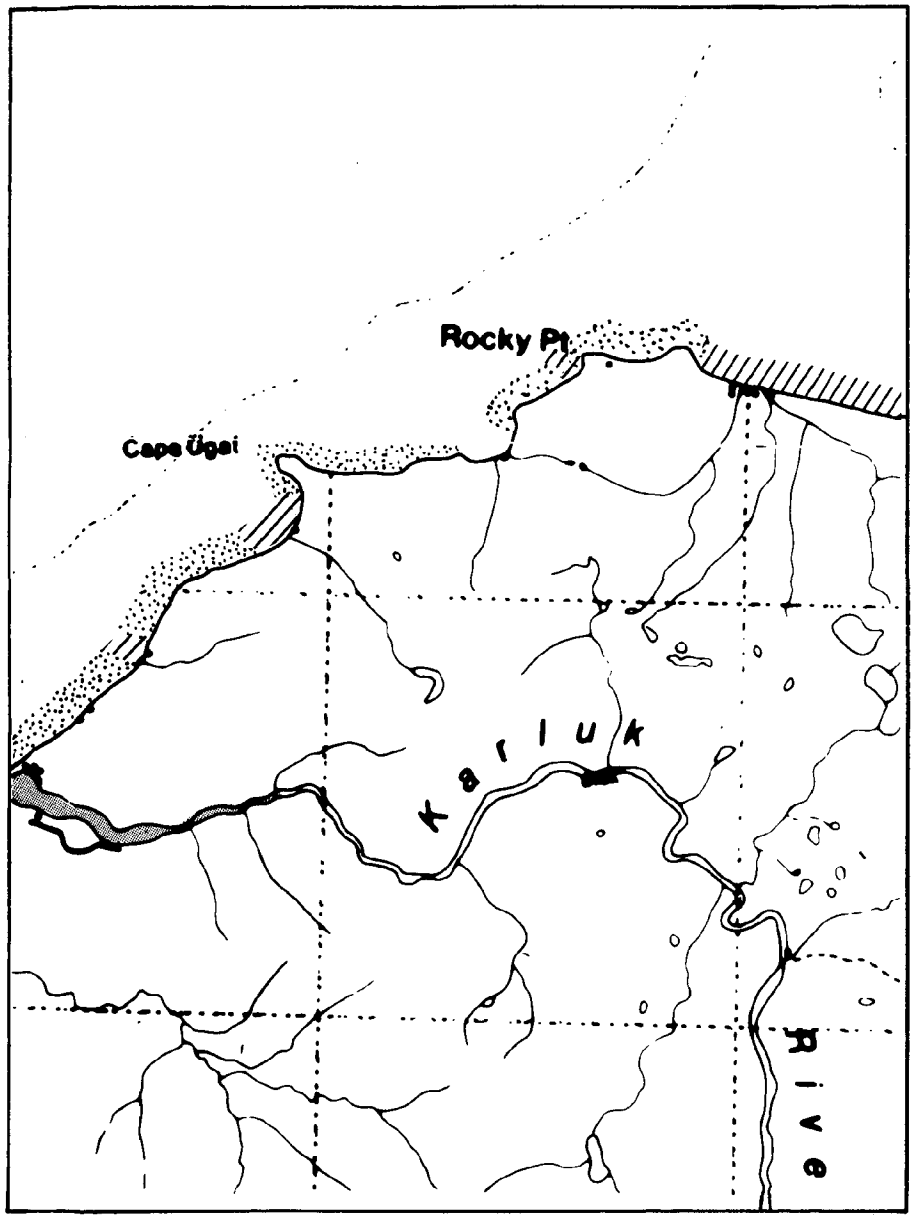


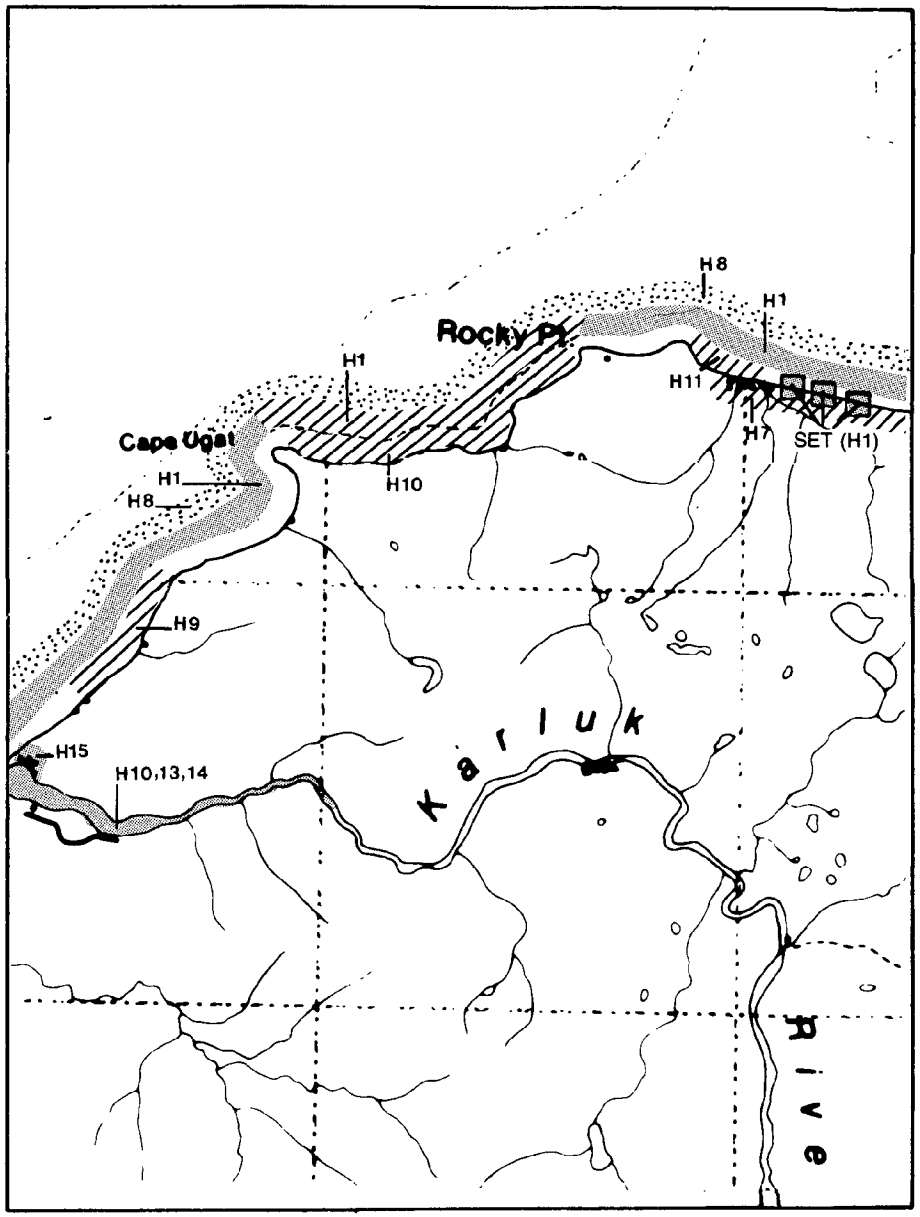


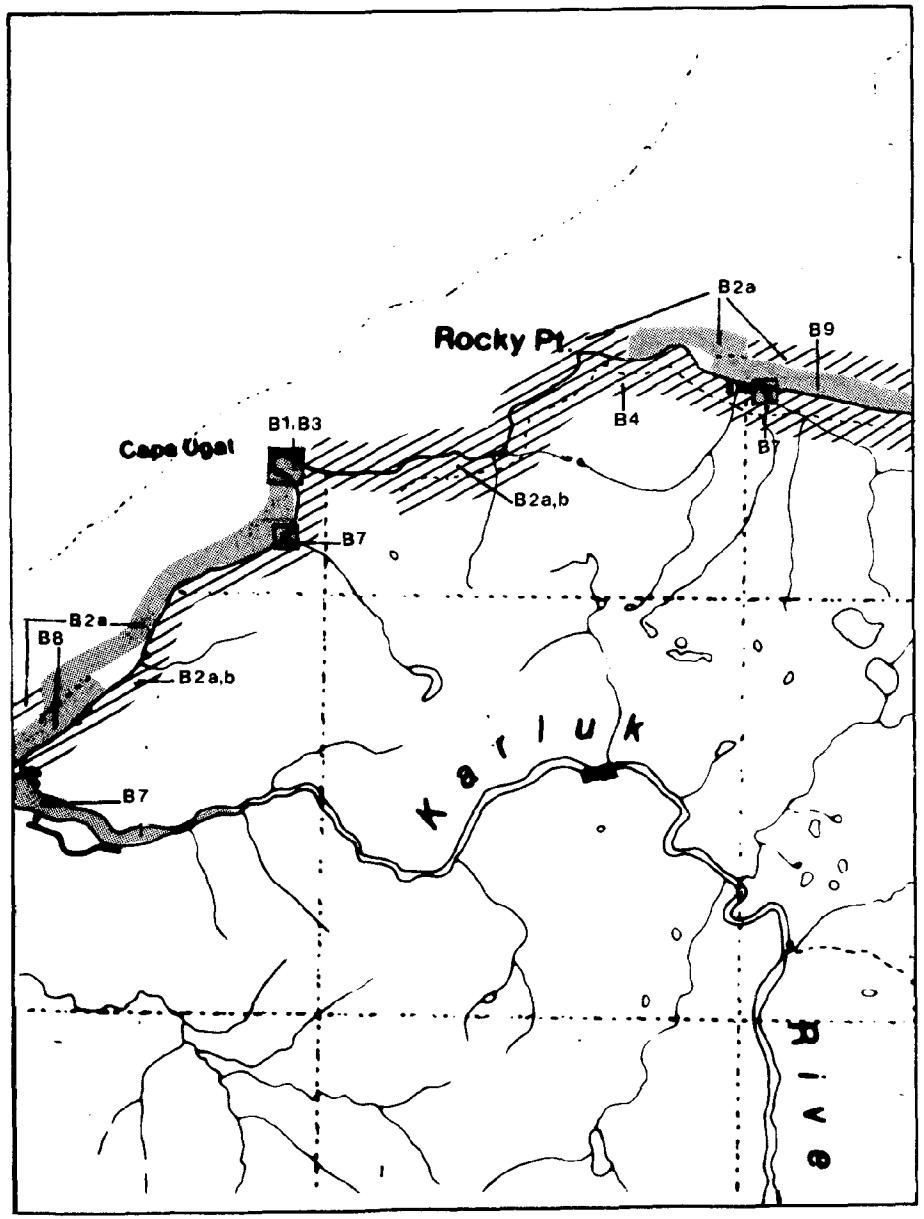
MAP NUMBER 20

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2 Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3 Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4 Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5 Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6 Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7 Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon							—	—	—	—		
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut							—	—				
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer	—											—
H-8 Marine Mammal	—	—	—	—	—	—	—	—	—	—	—	—
H-9 Crab												
H-10 Waterfowl	—	—	—	—	—						—	—
H-11 Clams	—	—	—	—	—							
H-12 Halibut/Marine Fish												
H-13 Salmon						—	—	—	—	—	—	
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property	—	—	—	—	—	—	—	—	—	—	—	—
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony						—	—	—	—			
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)						—	—	—	—			
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer	—	—	—	—								—
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults						—	—	—	—	—	—	
Salmon - Juveniles	—	—	—	—	—	—	—	—	—	—	—	—
Char/Dolly Varden - Adults	—								—	—	—	—
Char/Dolly Varden - Juveniles					—	—	—					
Steelhead - Adults	—	—	—	—	—	—	—		—	—	—	—
Steelhead - Juveniles							—	—	—			
B-8 Herring Spawning Area					—	—	—					
B-9 Razor Clam Beach	—	—	—	—	—	—	—	—	—	—	—	—
B-10 Sea Otters												

HIGH MEDIUM LOW





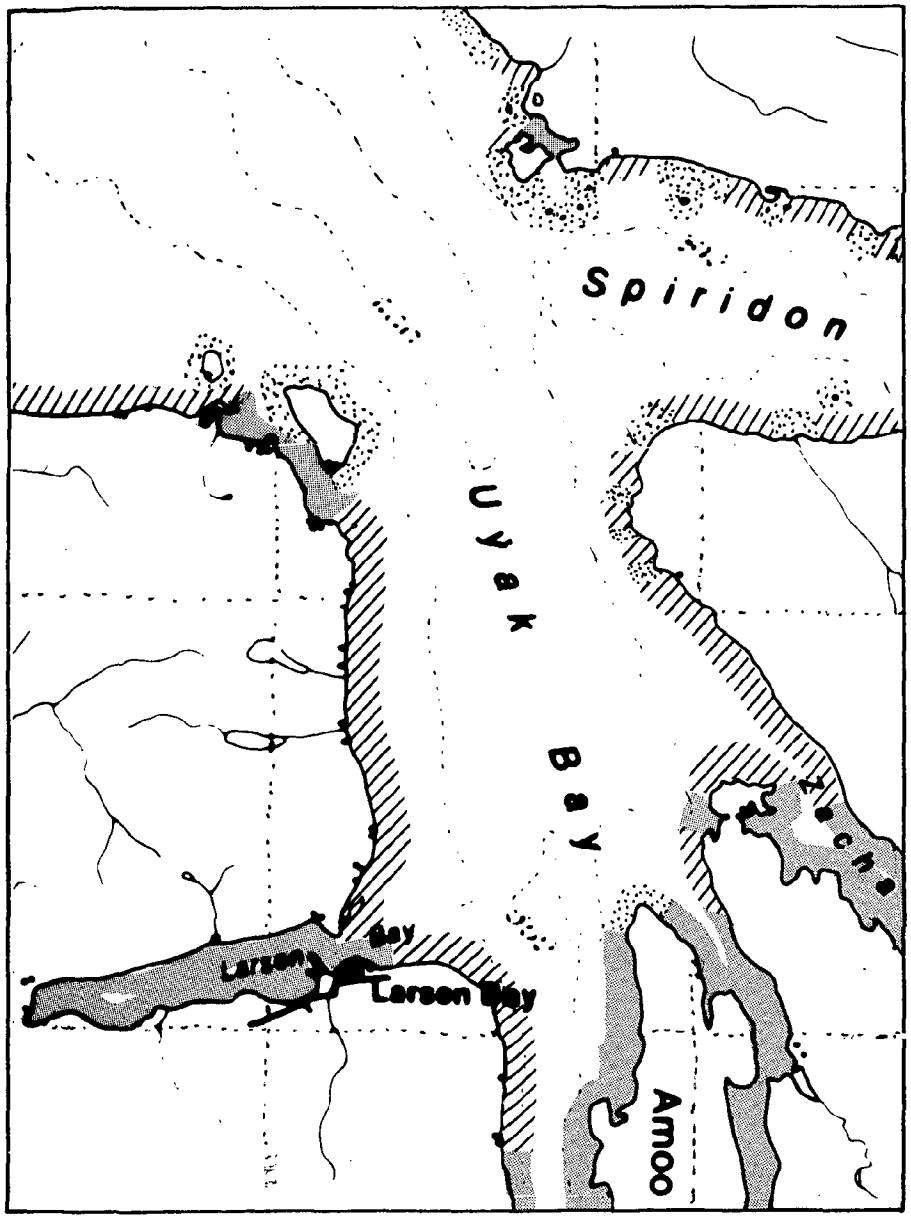


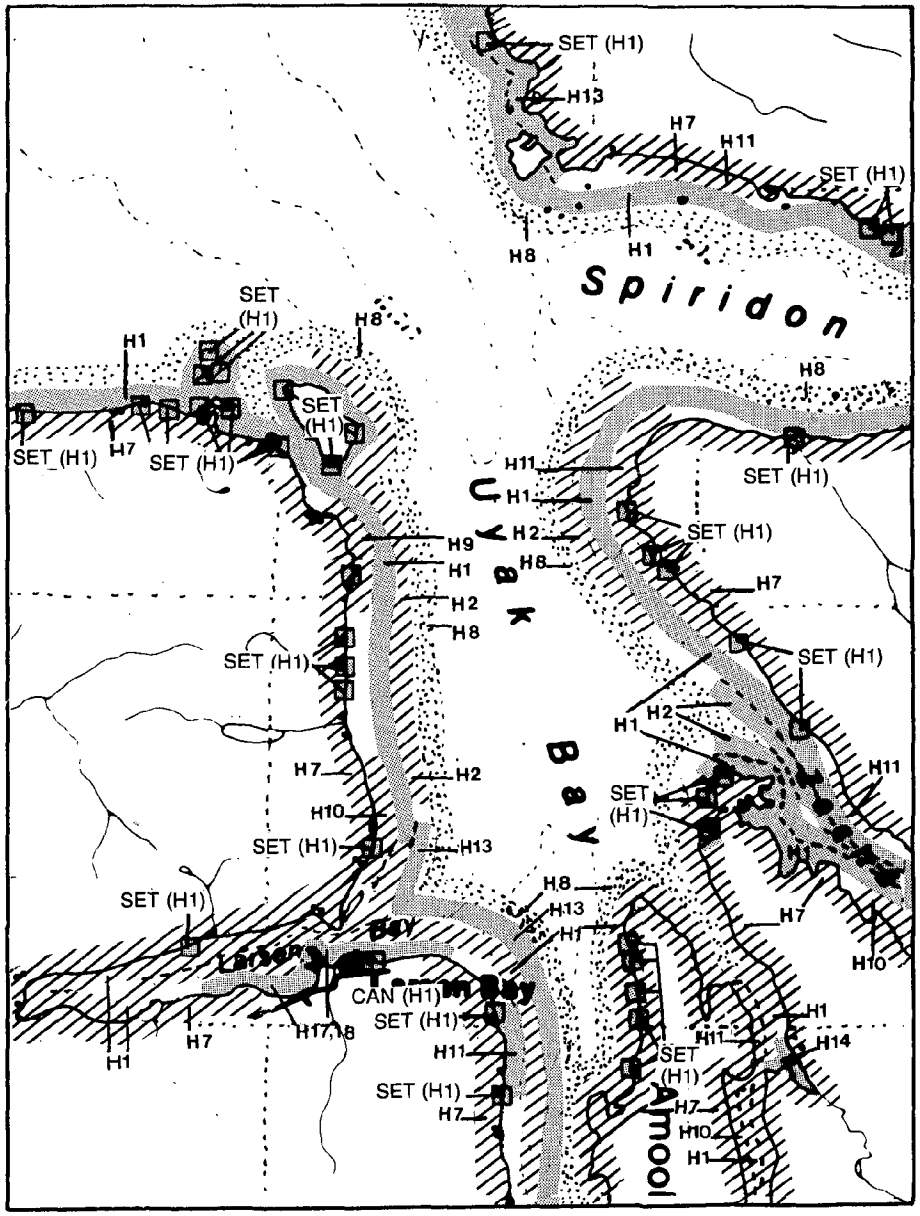
MAP NUMBER 21

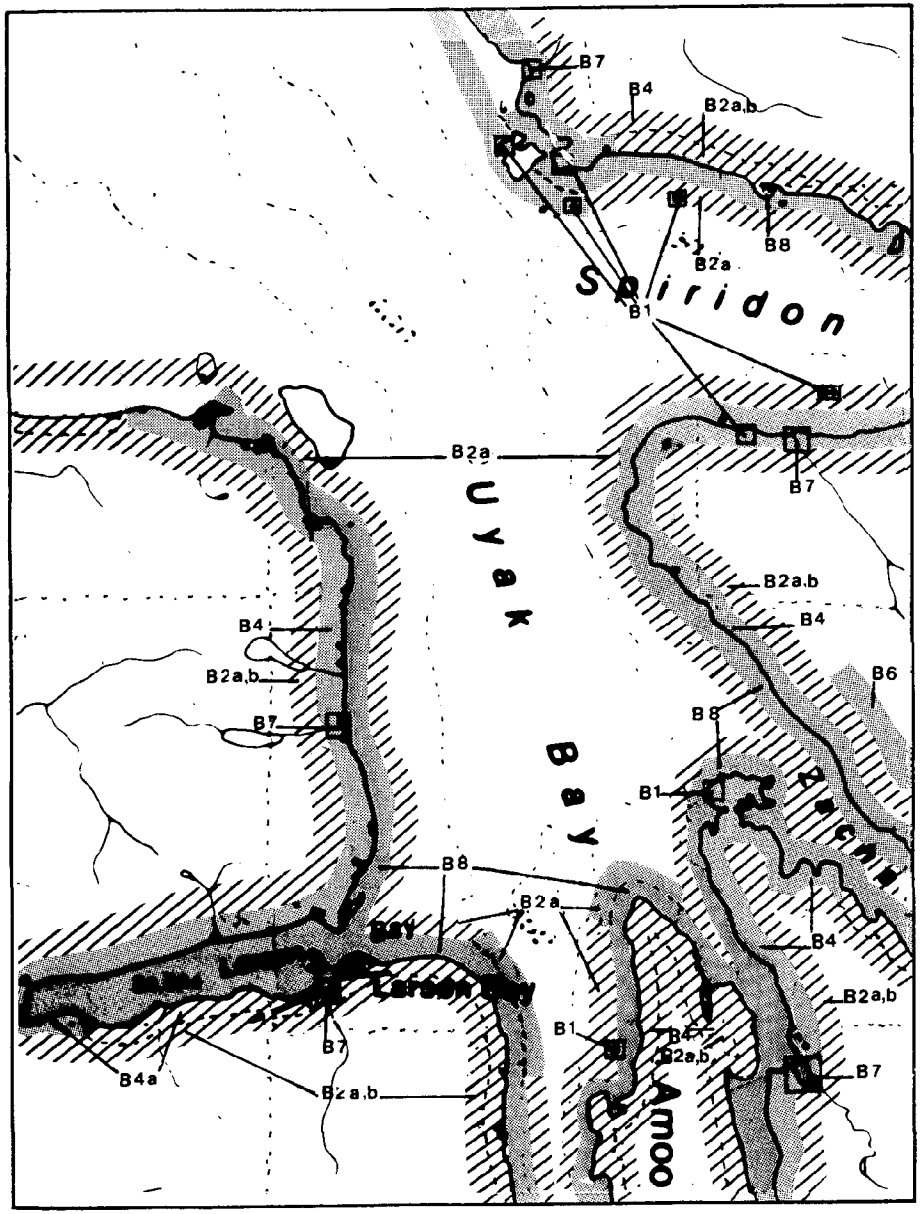
RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

14
20 21 22
29

HIGH MEDIUM LOW



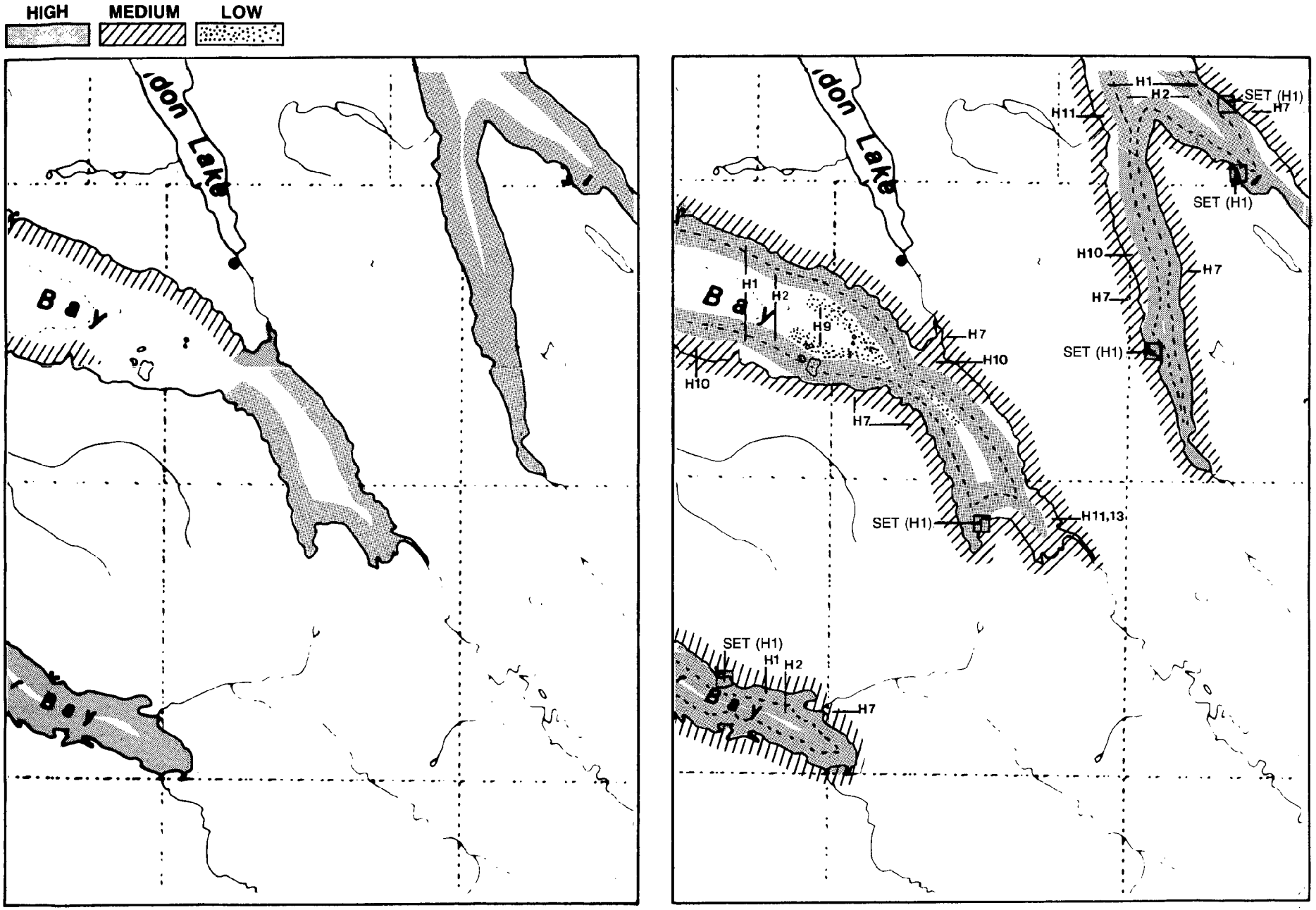


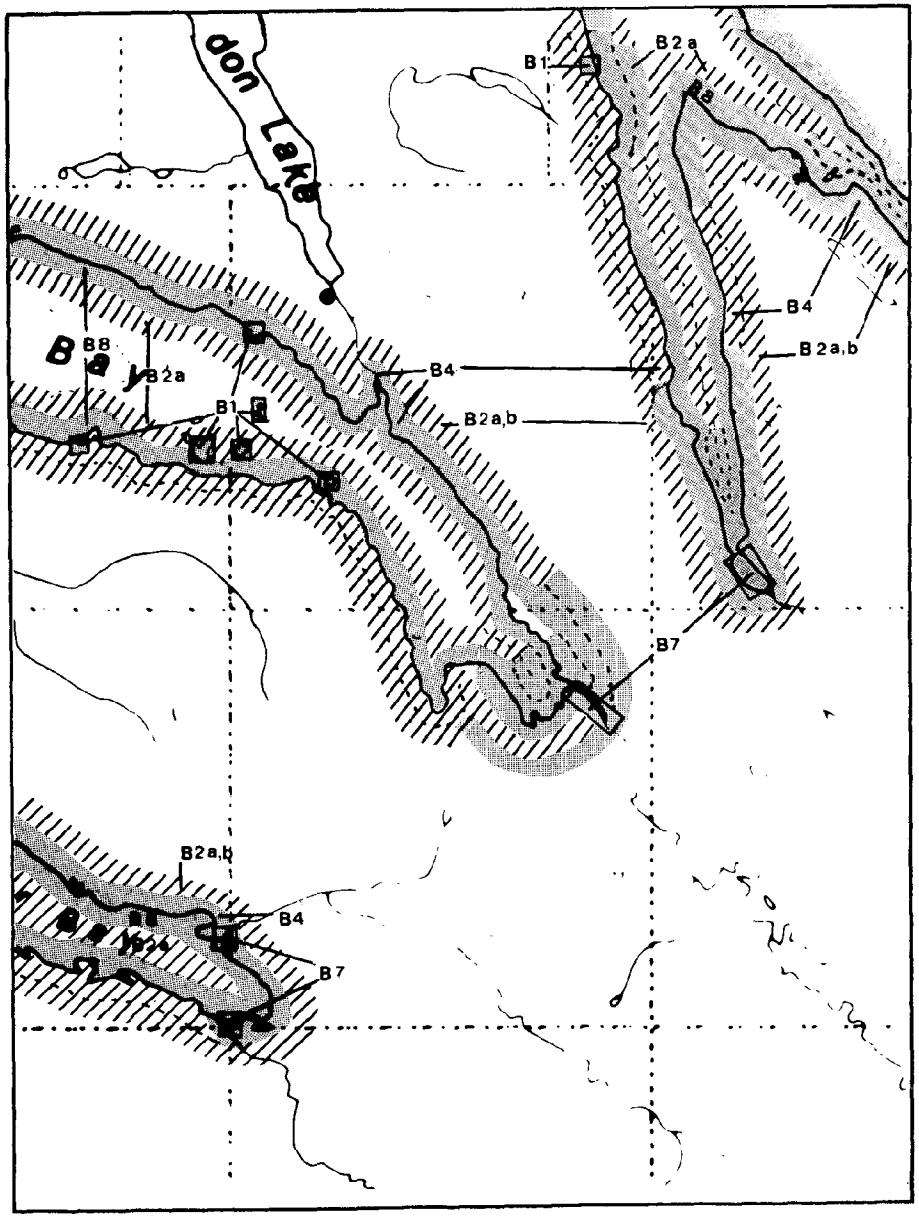


MAP NUMBER 22

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

14 15
21 22 23
29 30

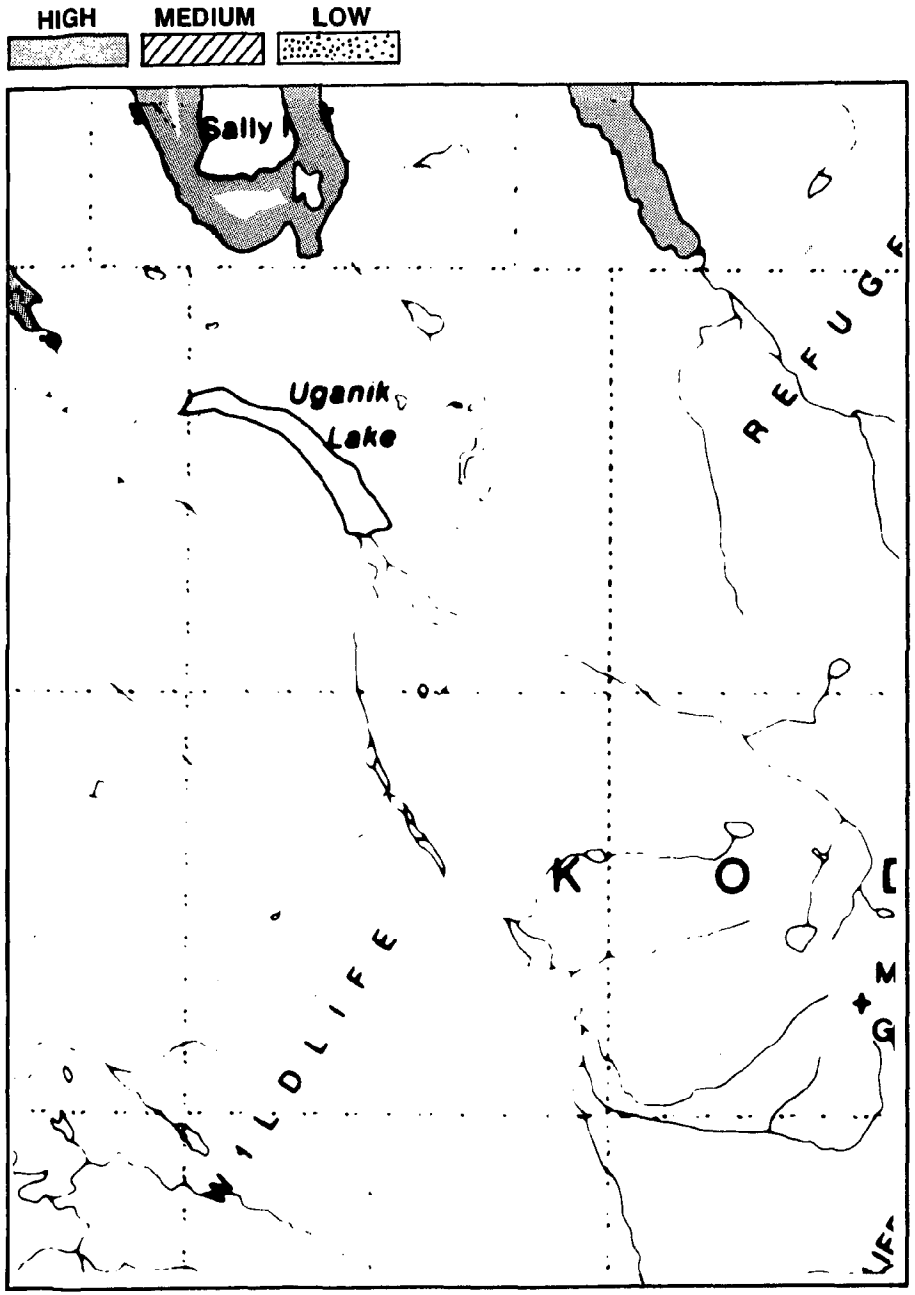

HIGH
MEDIUM
LOW
Bay
Bay
Bay
Bay
H1
H2
H9
H10
H7
H11,13
H11
SET (H1)

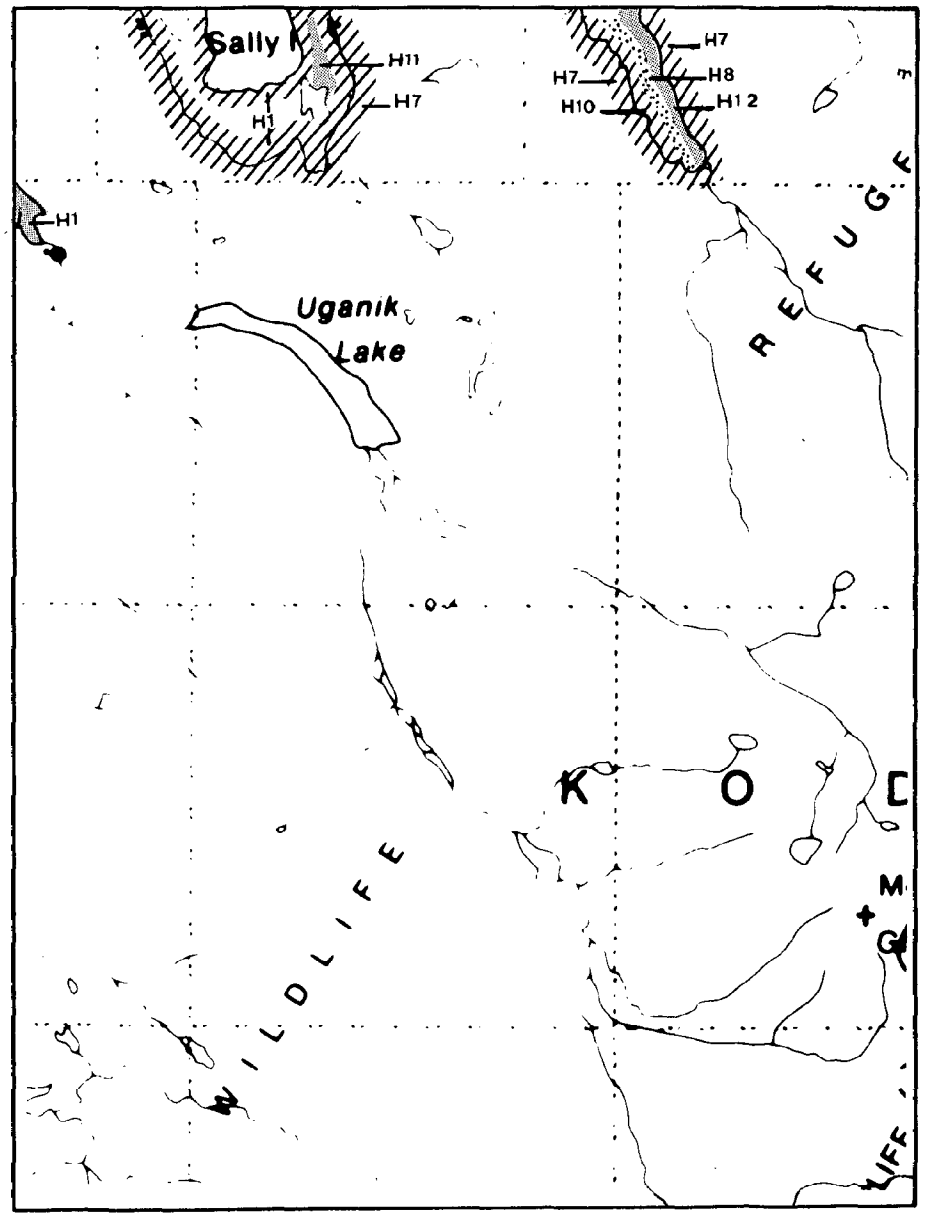


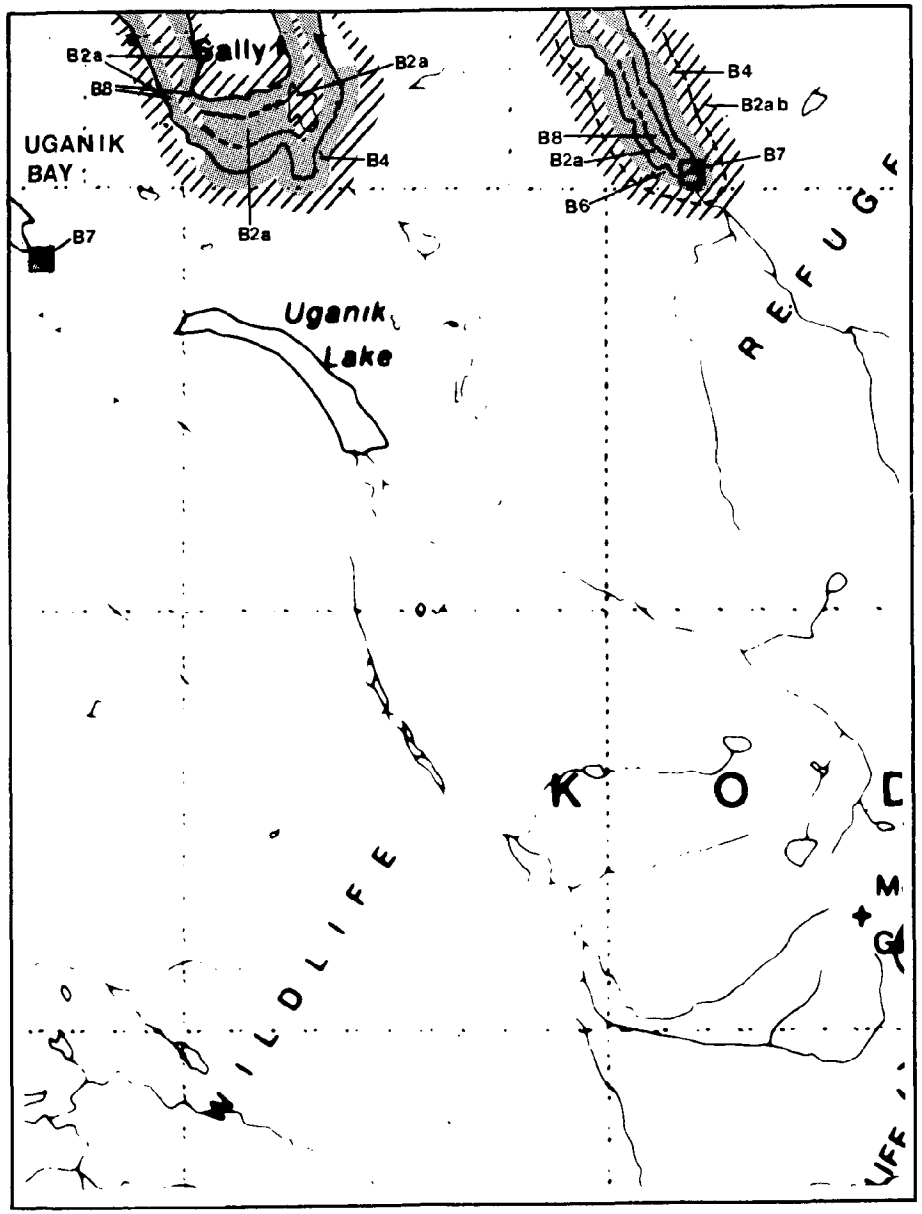
MAP NUMBER 23

RESOURCE	Winter			Spring			Summer			Fall		
	D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

14 15 16
22 23 24
30

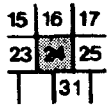

HIGH
MEDIUM
LOW
Sally
Uganik
Lake
REFUGE
K
O
WILDLIFE

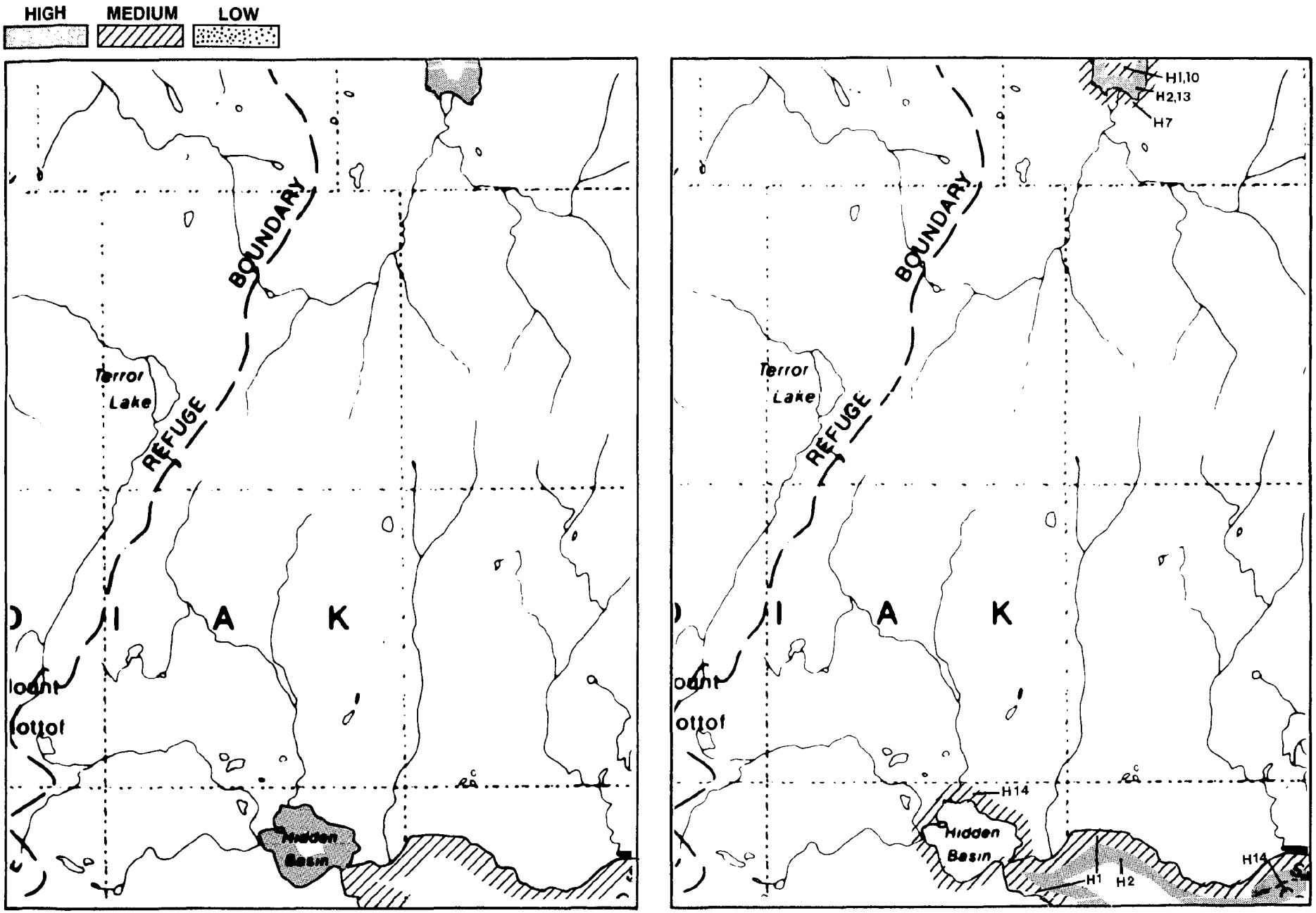

Sally
H11
H7
H1
H7
H8
H10
H12
H1
Uganik
Lake
REFUGE
K
O
WILDLIFE

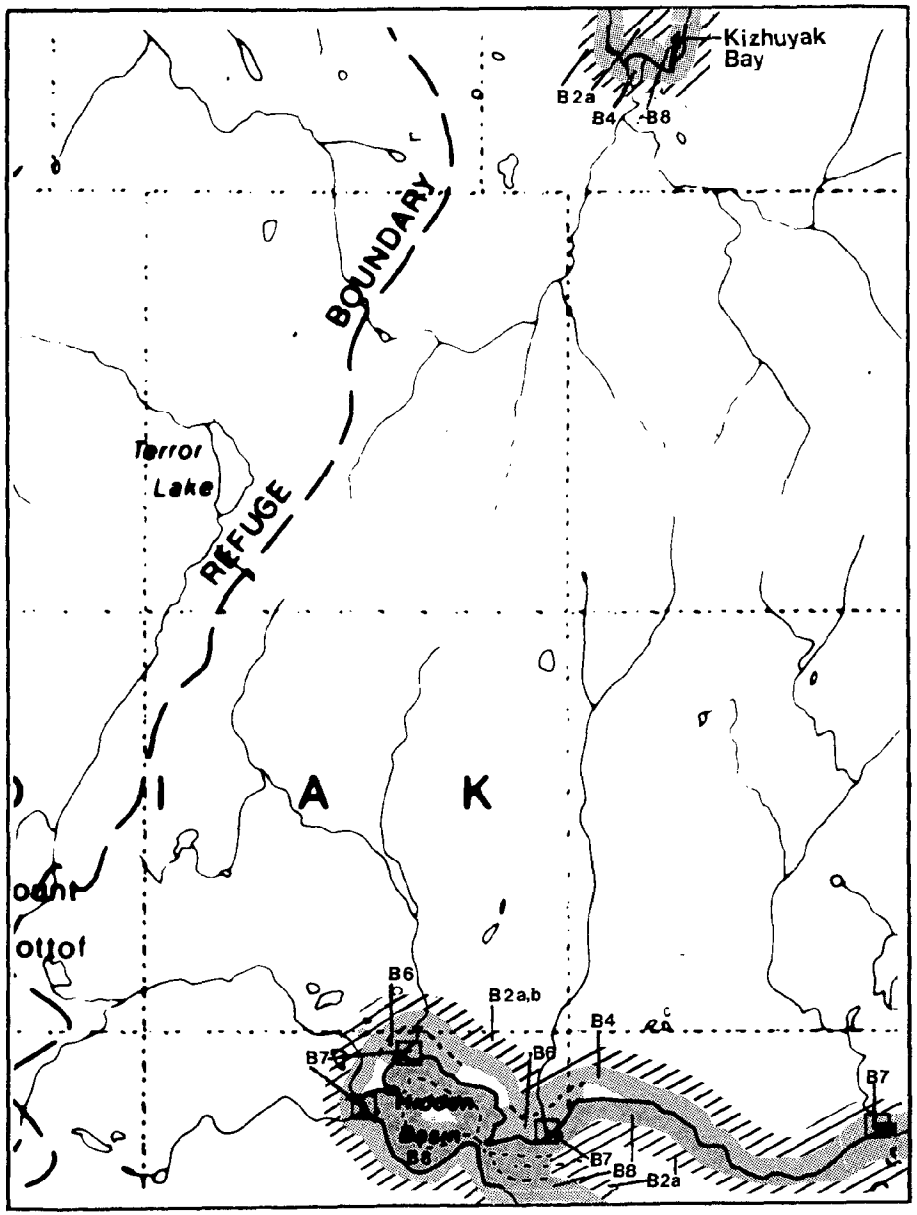


MAP NUMBER 24

RESOURCE		Winter			Spring			Summer			Fall		
		D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE													
R-1	Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2	Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3	Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4	Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5	Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6	Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7	Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon							—	—	—	—		
H-2	Roe Herring					—	—	—					
H-3	Crab						—	—	—	—	—	—	
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer	—											—
H-8	Marine Mammal	—	—	—	—	—	—	—	—	—	—	—	—
H-9	Crab												
H-10	Waterfowl	—	—	—	—	—						—	—
H-11	Clams	—	—	—	—	—	—	—	—	—	—	—	—
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony												
B-2a	Waterfowl (overwintering)	—	—	—	—							—	—
B-2b	Waterfowl (summer use)						—	—	—	—	—		
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer	—	—	—	—								—
B-5	Elk												
B-6	Brown Bear					—	—				—	—	—
Offshore													
B-2a	Waterfowl (overwintering)	—	—	—	—							—	—
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults						—	—	—	—	—	—	
	Salmon - Juveniles	—	—	—	—	—	—	—	—	—	—	—	—
	Char/Dolly Varden - Adults	—								—	—	—	—
	Char/Dolly Varden - Juveniles					—	—	—	—				
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area												
B-9	Razor Clam Beach		—	—	—	—	—	—	—	—	—	—	—
B-10	Sea Otters		—	—	—	—	—	—	—	—	—	—	—




HIGH
MEDIUM
LOW
BOUNDARY
REFUGE
Terror Lake
I A K
Hidden Basin
H1,10
H2,13
H7
H14
H1
H2

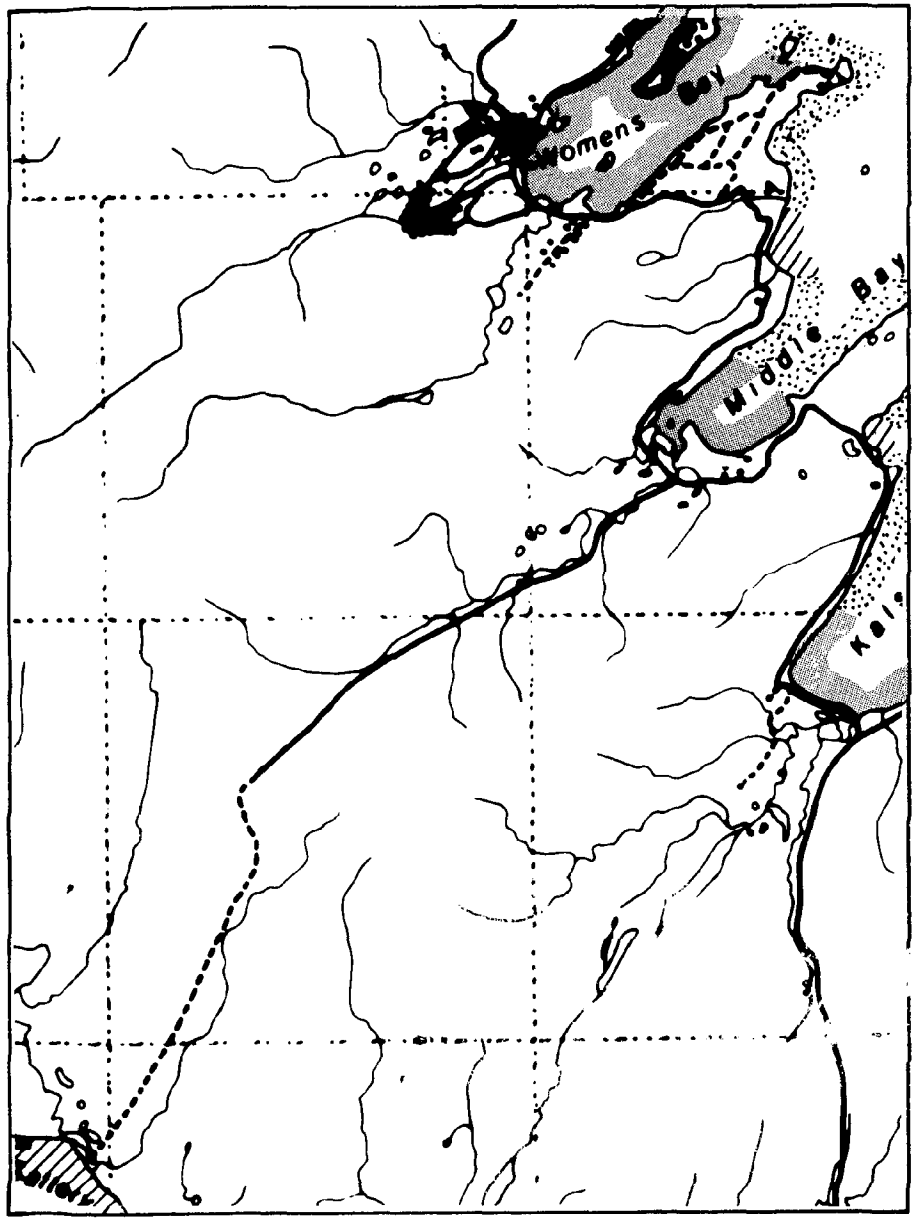


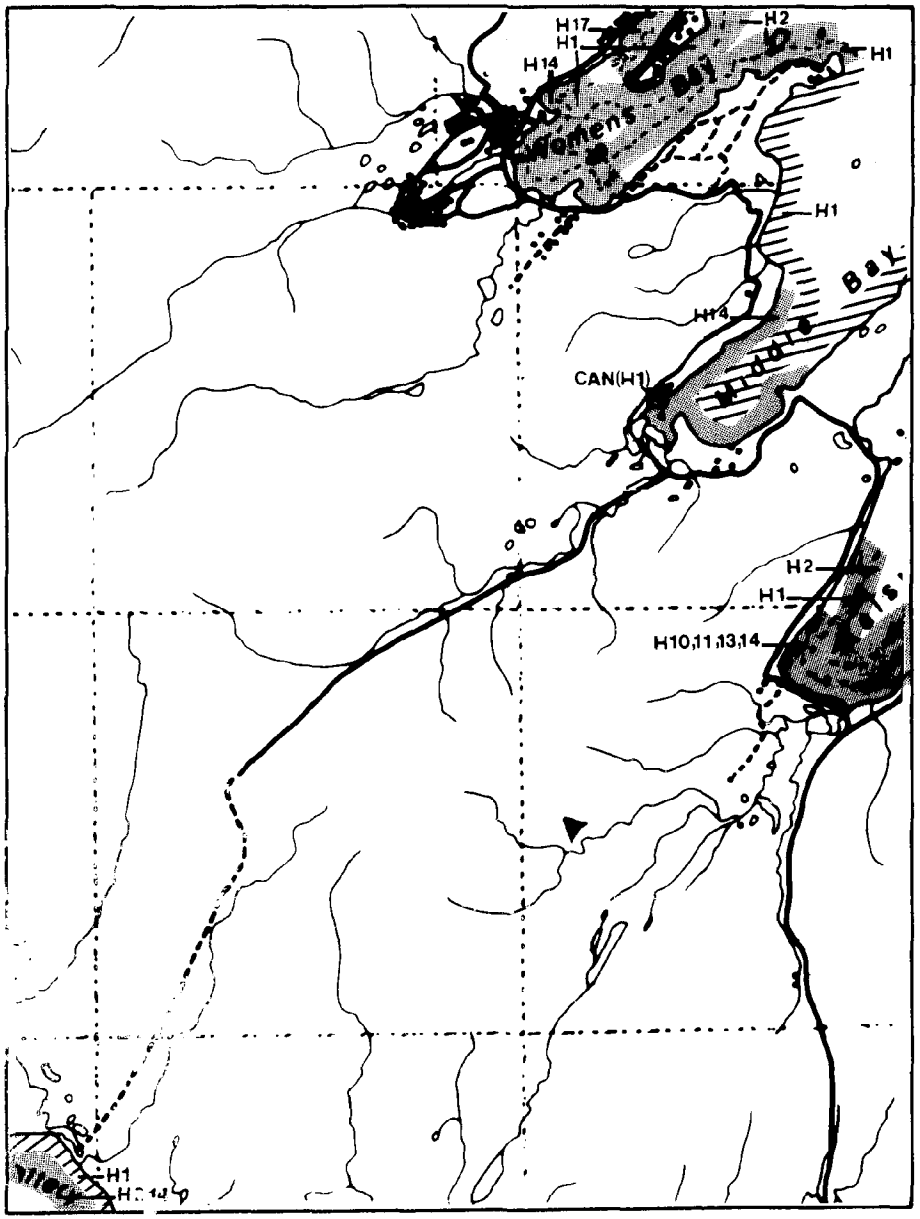
MAP NUMBER 25

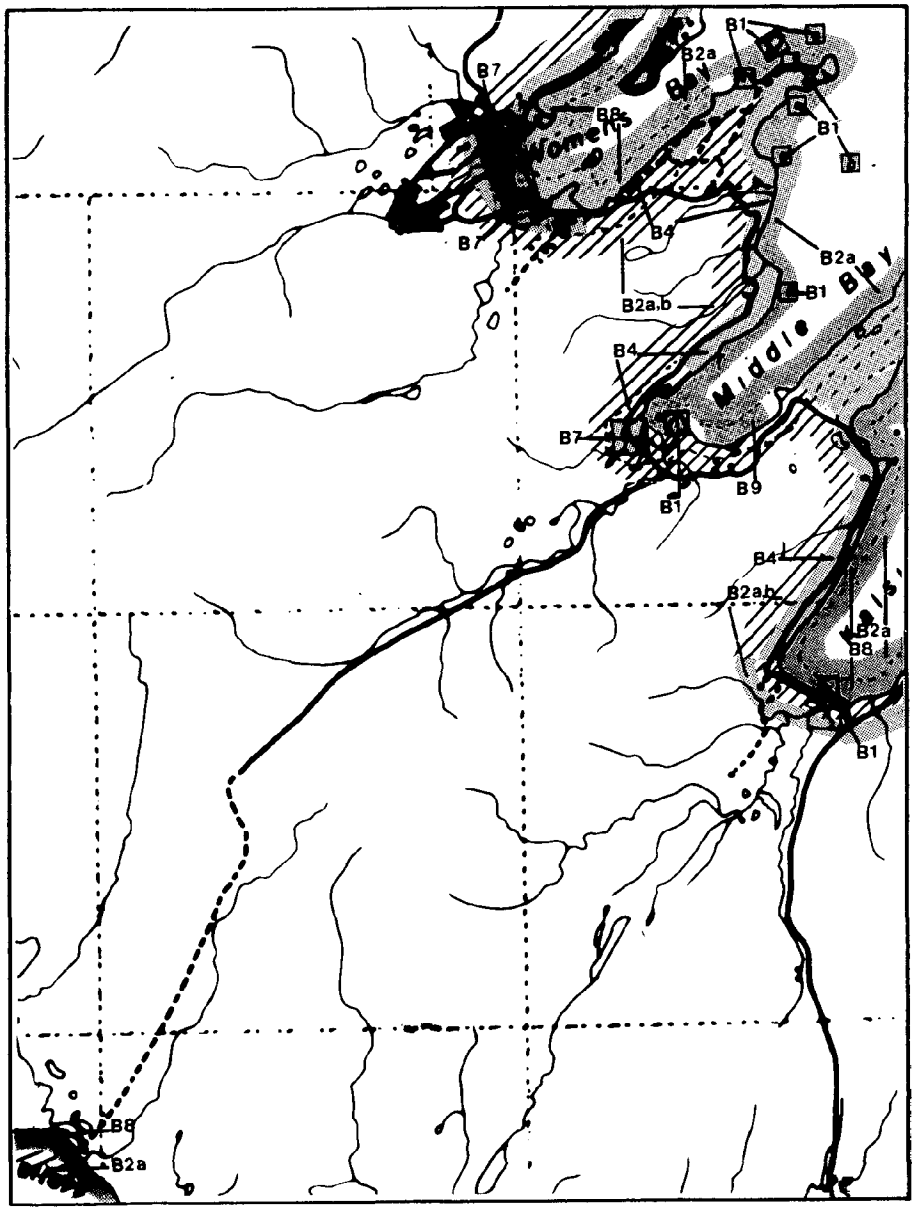
RESOURCE		Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE													
R-1	Rocky Headlands												
R-2	Wave-Cut Platforms												
R-3	Sand Beaches/Exposed Tidal Flats												
R-4	Mixed Sand and Gravel Beaches												
R-5	Gravel Beaches												
R-6	Sheltered Rocky and Gravel Shores												
R-7	Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon												
H-2	Roe Herring												
H-3	Crab												
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer												
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl												
H-11	Clams												
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony												
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer												
B-5	Elk												
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults												
	Salmon - Juveniles												
	Char/Dolly Varden - Adults												
	Char/Dolly Varden - Juveniles												
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area												
B-9	Razor Clam Beach												
B-10	Sea Otters												

16	17	18
24	25	26
31	32	

HIGH MEDIUM LOW





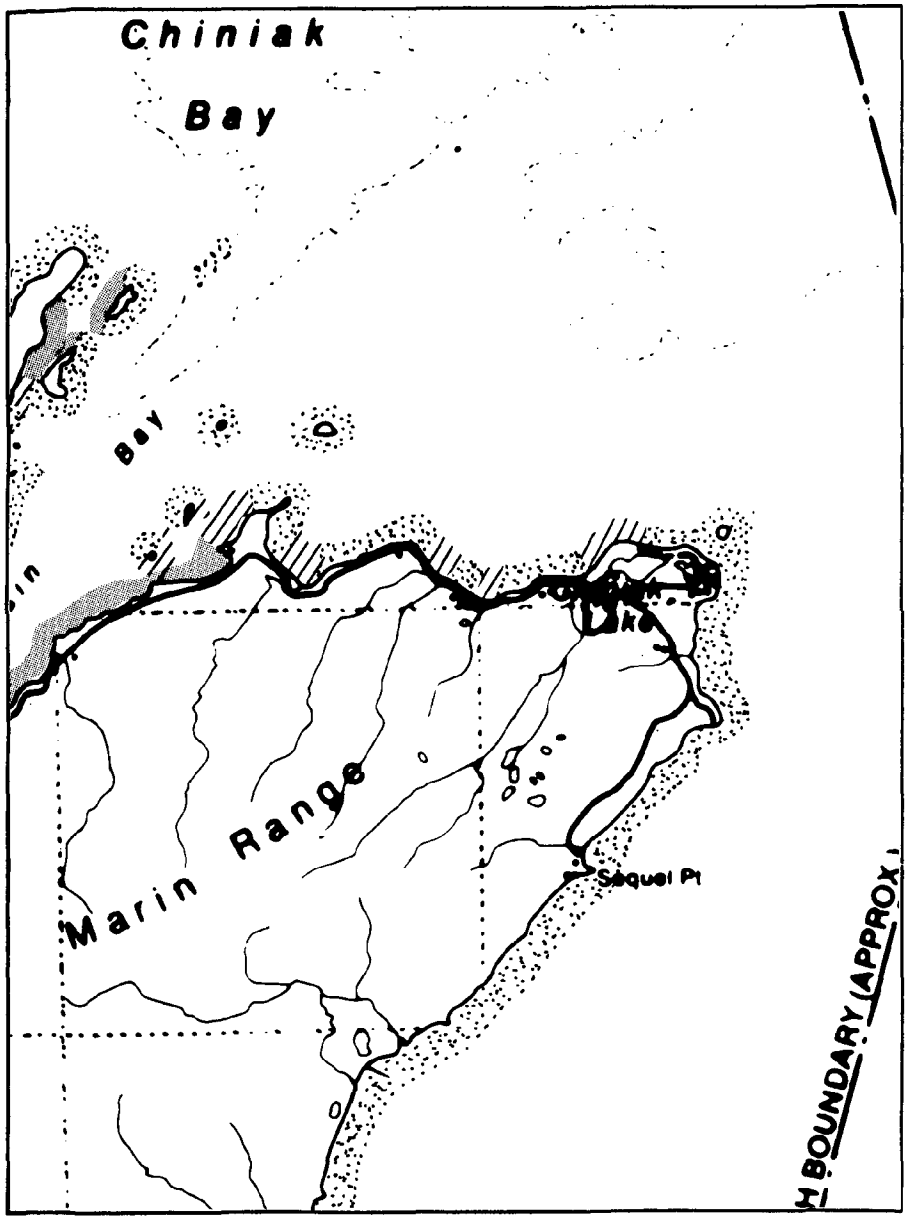


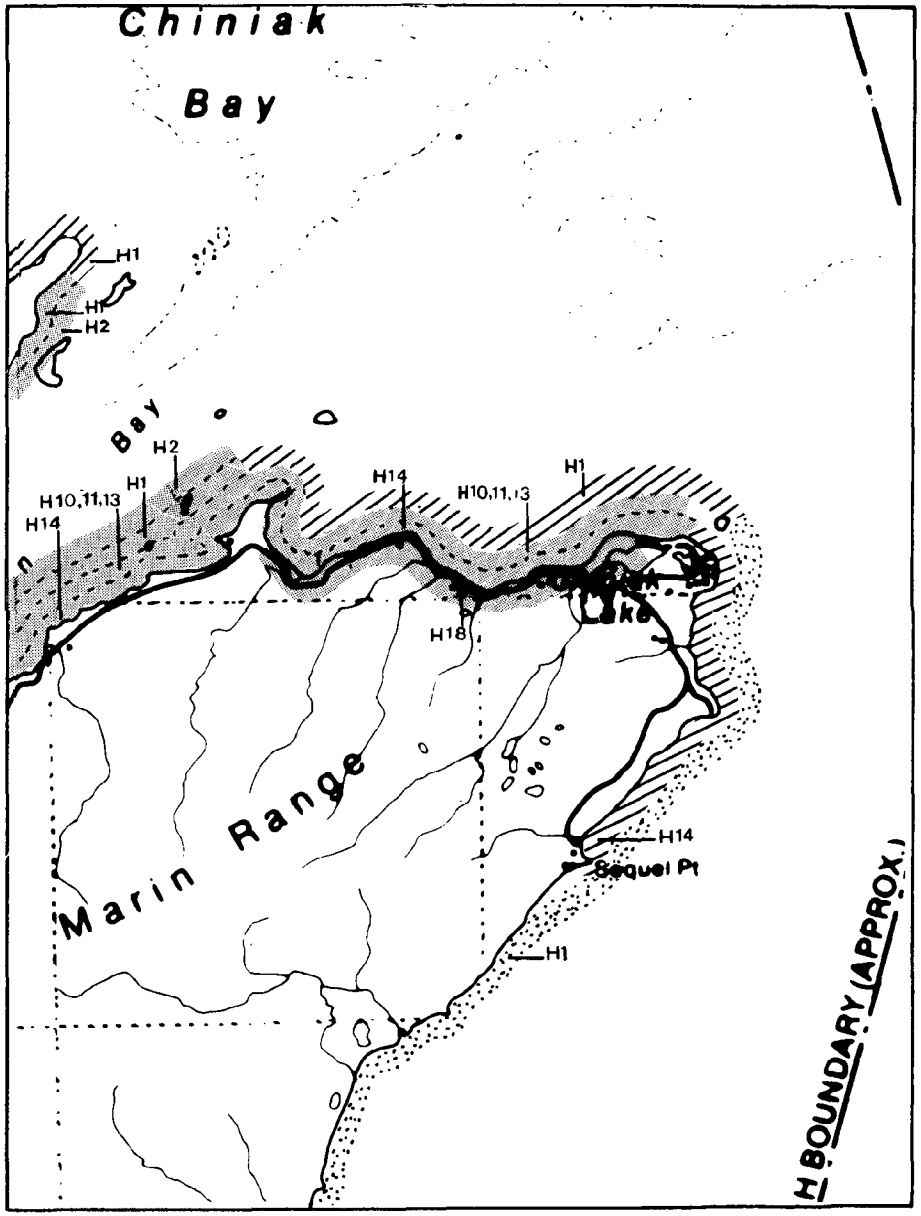
MAP NUMBER 26

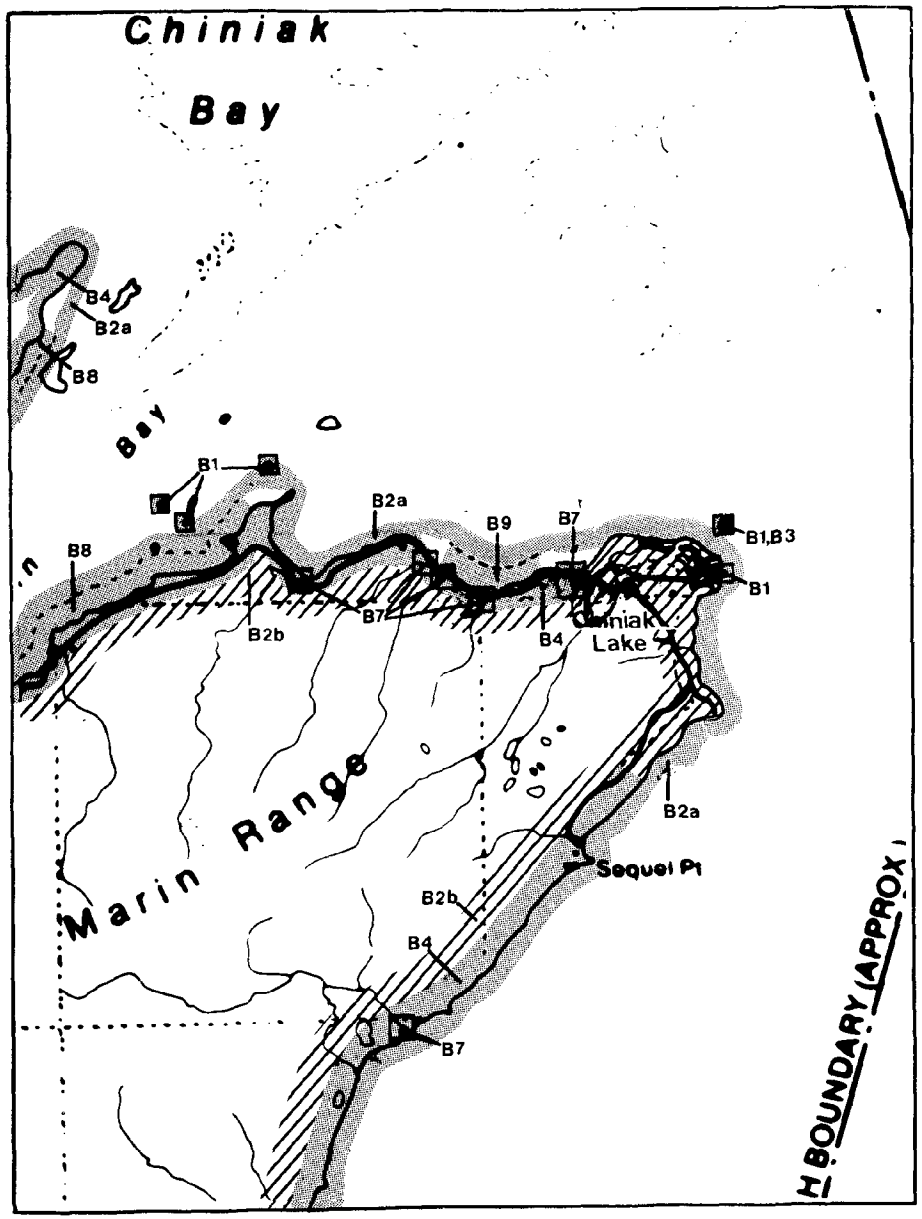
RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2 Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3 Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4 Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5 Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6 Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7 Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon							—	—	—	—		
H-2 Roe Herring					—	—	—					
H-3 Crab						—	—	—	—	—	—	
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl	—								—	—	—	—
H-11 Clams	—	—	—	—	—	—	—	—	—	—	—	—
H-12 Halibut/Marine Fish												
H-13 Salmon						—	—	—				
Recreation												
H-14 Recreation Use Area	—					—	—	—	—	—	—	—
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony						—	—	—	—	—		
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)					—	—	—					
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer	—	—	—	—								—
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)	—	—	—	—	—	—	—				—	—
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults						—	—	—	—	—	—	—
Salmon - Juveniles												
Char/Dolly Varden - Adults	—							—	—	—	—	—
Char/Dolly Varden - Juveniles												
Steelhead - Adults					—	—	—					
Steelhead - Juveniles												
B-8 Herring Spawning Area					—	—	—					
B-9 Razor Clam Beach	—	—	—	—	—	—	—	—	—	—	—	—
B-10 Sea Otters												

17	18	19
25	26	27
	32	33

HIGH MEDIUM LOW



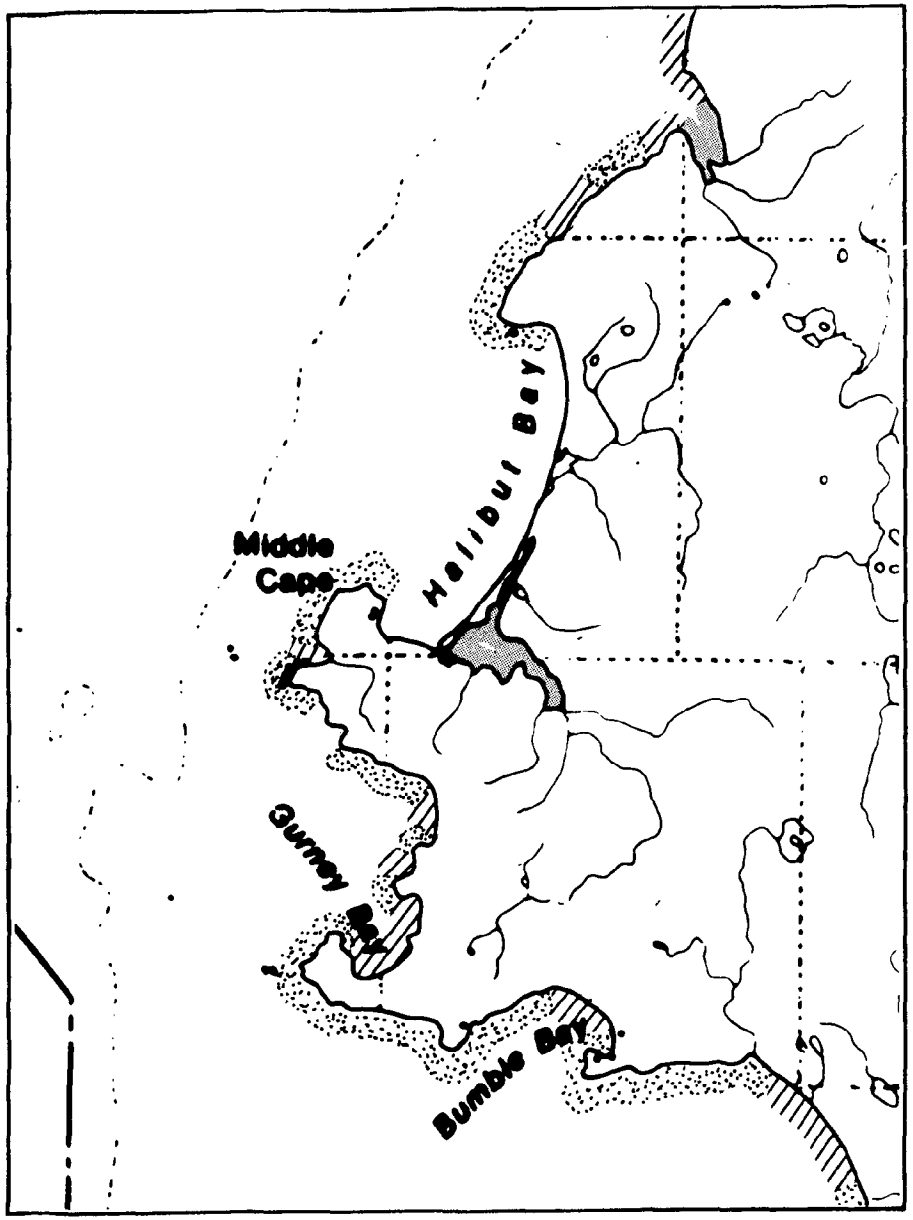


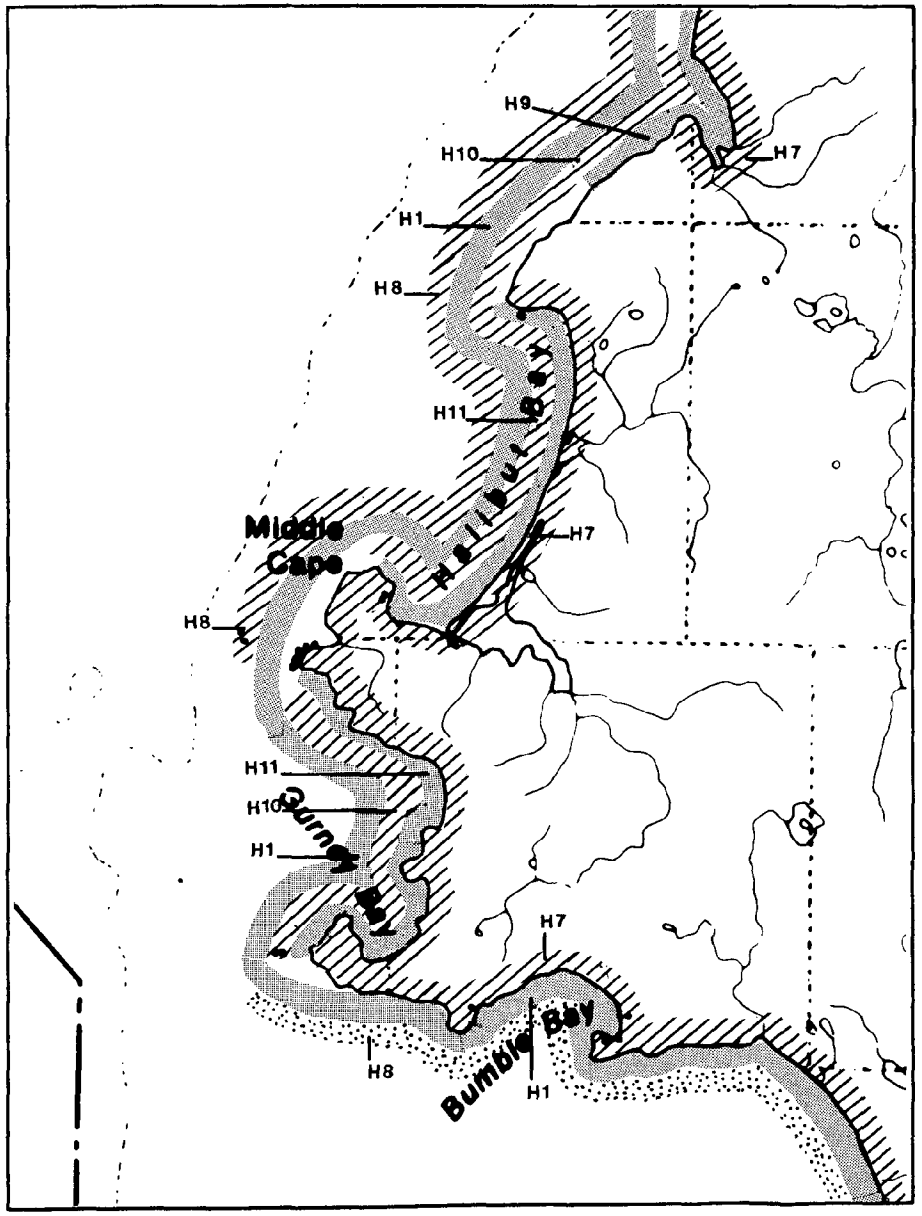


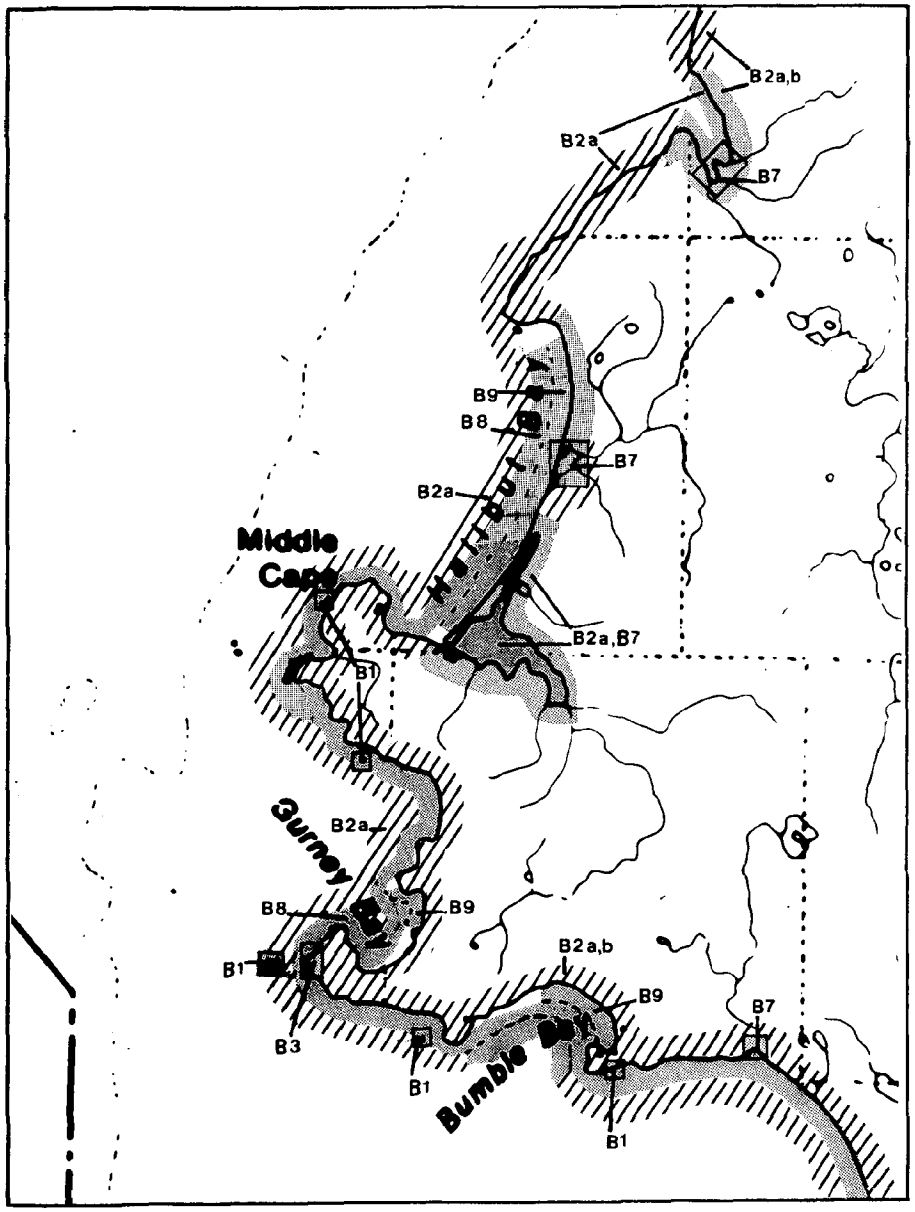
MAP NUMBER 27

RESOURCE		Winter			Spring			Summer			Fall		
		D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE													
R-1	Rocky Headlands												
R-2	Wave-Cut Platforms												
R-3	Sand Beaches/Exposed Tidal Flats												
R-4	Mixed Sand and Gravel Beaches												
R-5	Gravel Beaches												
R-6	Sheltered Rocky and Gravel Shores												
R-7	Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon												
H-2	Roe Herring												
H-3	Crab												
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer												
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl												
H-11	Clams												
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony												
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer												
B-5	Elk												
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults												
	Salmon - Juveniles												
	Char/Dolly Varden - Adults												
	Char/Dolly Varden - Juveniles												
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area												
B-9	Razor Clam Beach												
B-10	Sea Otters												

HIGH MEDIUM LOW





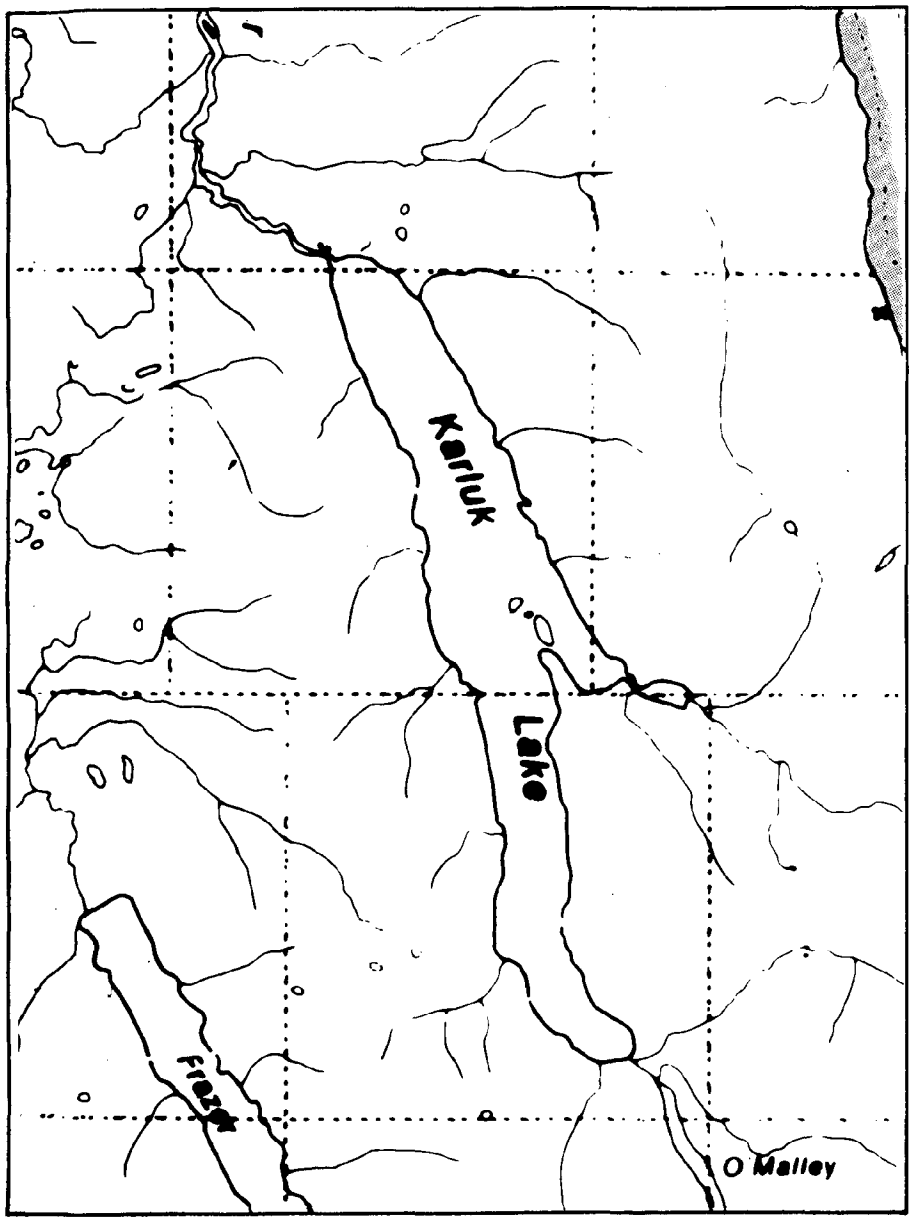


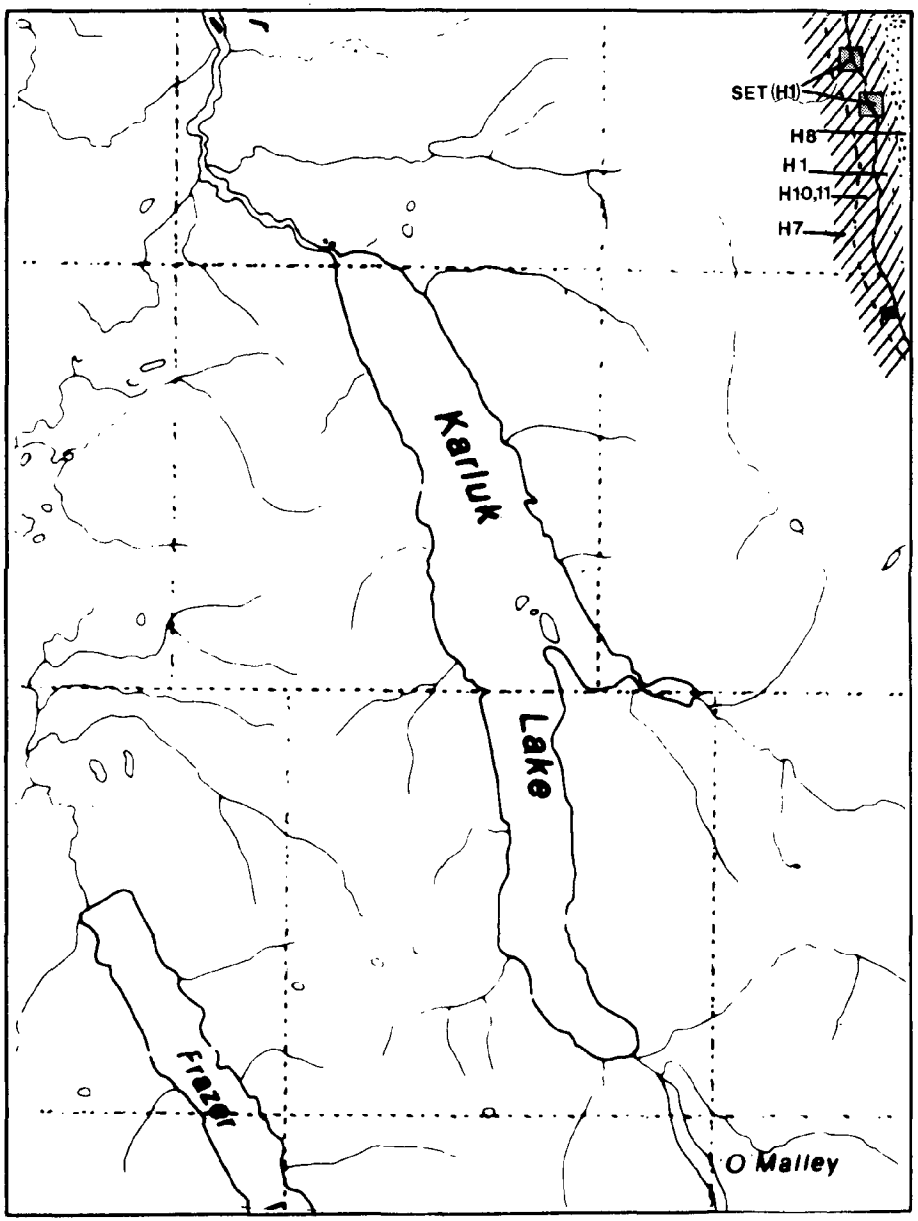
MAP NUMBER 28

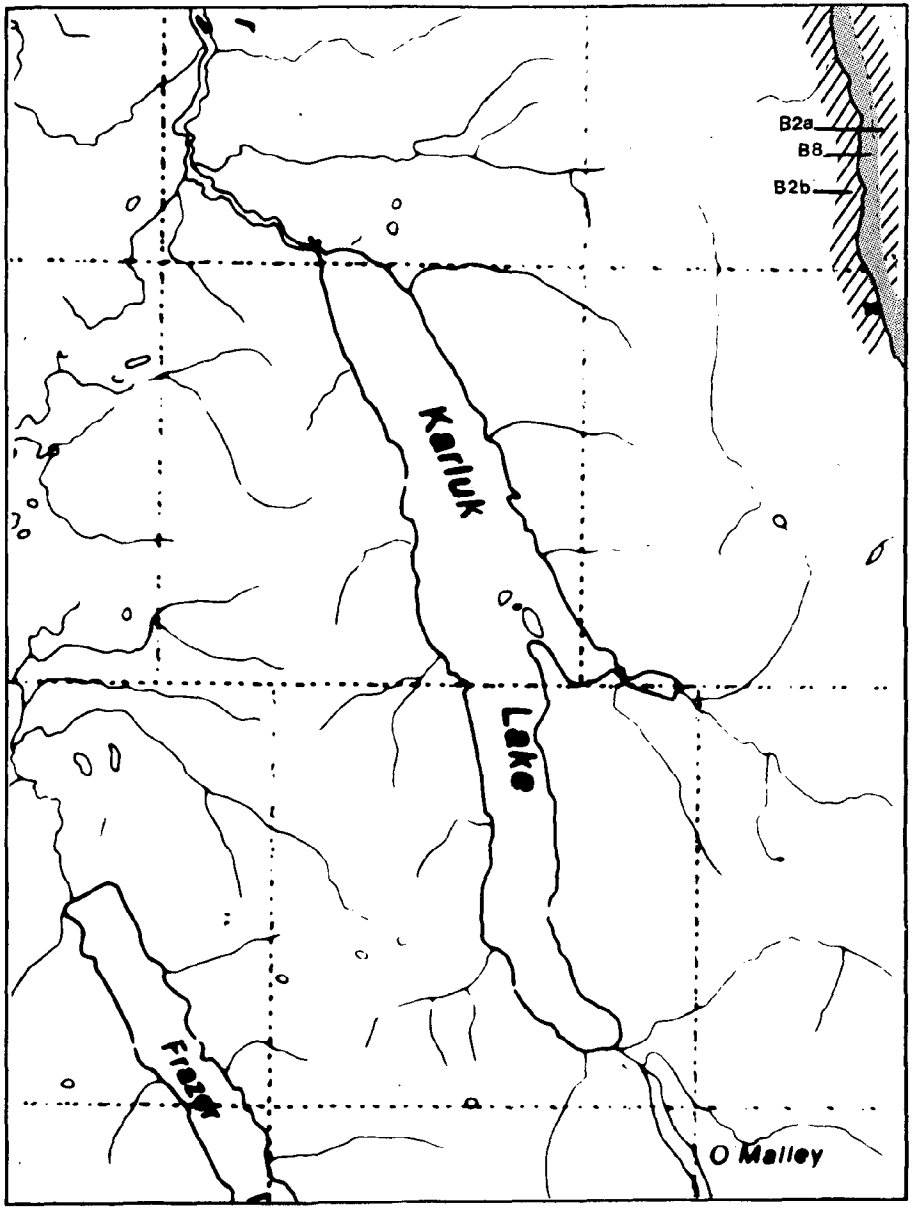
RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2 Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3 Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4 Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5 Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6 Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7 Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon							—	—	—	—		
H-2 Roe Herring												
H-3 Crab						—	—	—	—	—	—	
H-4 Shrimp												
H-5 Halibut							—	—				
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer	—											—
H-8 Marine Mammal	—	—	—	—	—	—	—	—	—	—	—	—
H-9 Crab	—	—	—	—	—	—	—	—	—	—	—	—
H-10 Waterfowl	—	—	—	—	—	—	—	—	—	—	—	—
H-11 Clams	—	—	—	—	—	—	—	—	—	—	—	—
H-12 Halibut/Marine Fish	—	—	—	—	—	—	—	—	—	—	—	—
H-13 Salmon	—	—	—	—	—	—	—	—	—	—	—	—
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony						—	—	—	—	—		
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)						—	—	—	—	—		
B-3 Sea Lion Haul-out	—	—	—	—	—	—	—	—	—	—	—	—
B-4 Black Tail Deer	—	—	—	—	—	—	—	—	—	—	—	—
B-5 Elk	—	—	—	—	—	—	—	—	—	—	—	—
B-6 Brown Bear	—	—	—	—	—	—	—	—	—	—	—	—
Offshore												
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults						—	—	—	—	—	—	—
Salmon - Juveniles	—	—	—	—	—	—	—	—	—	—	—	—
Char/Dolly Varden - Adults	—								—	—	—	—
Char/Dolly Varden - Juveniles					—	—	—	—				
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area						—	—					
B-9 Razor Clam Beach												
B-10 Sea Otters	—	—	—	—	—	—	—	—	—	—	—	—

20 21
28 29
34 35

HIGH MEDIUM LOW

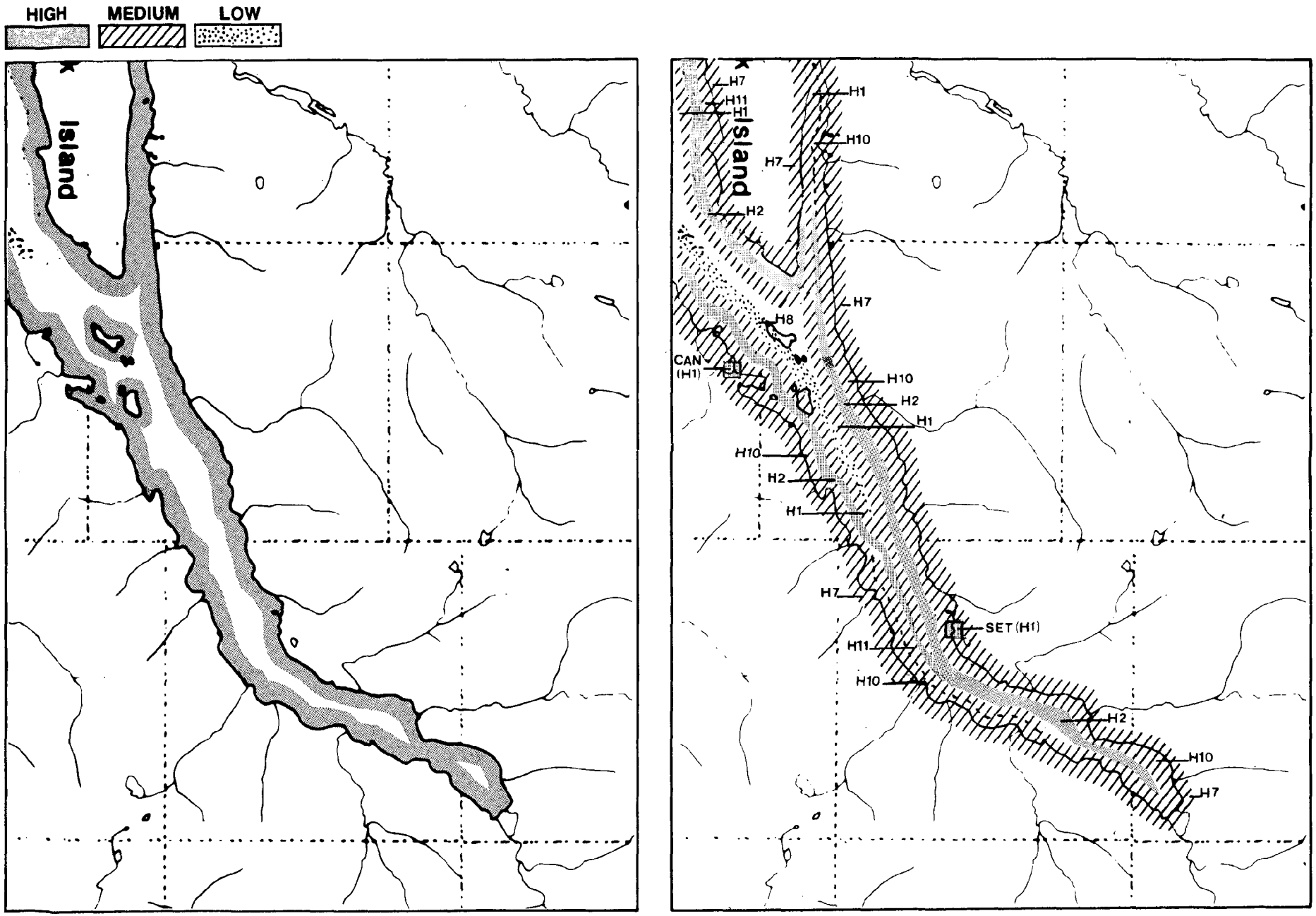


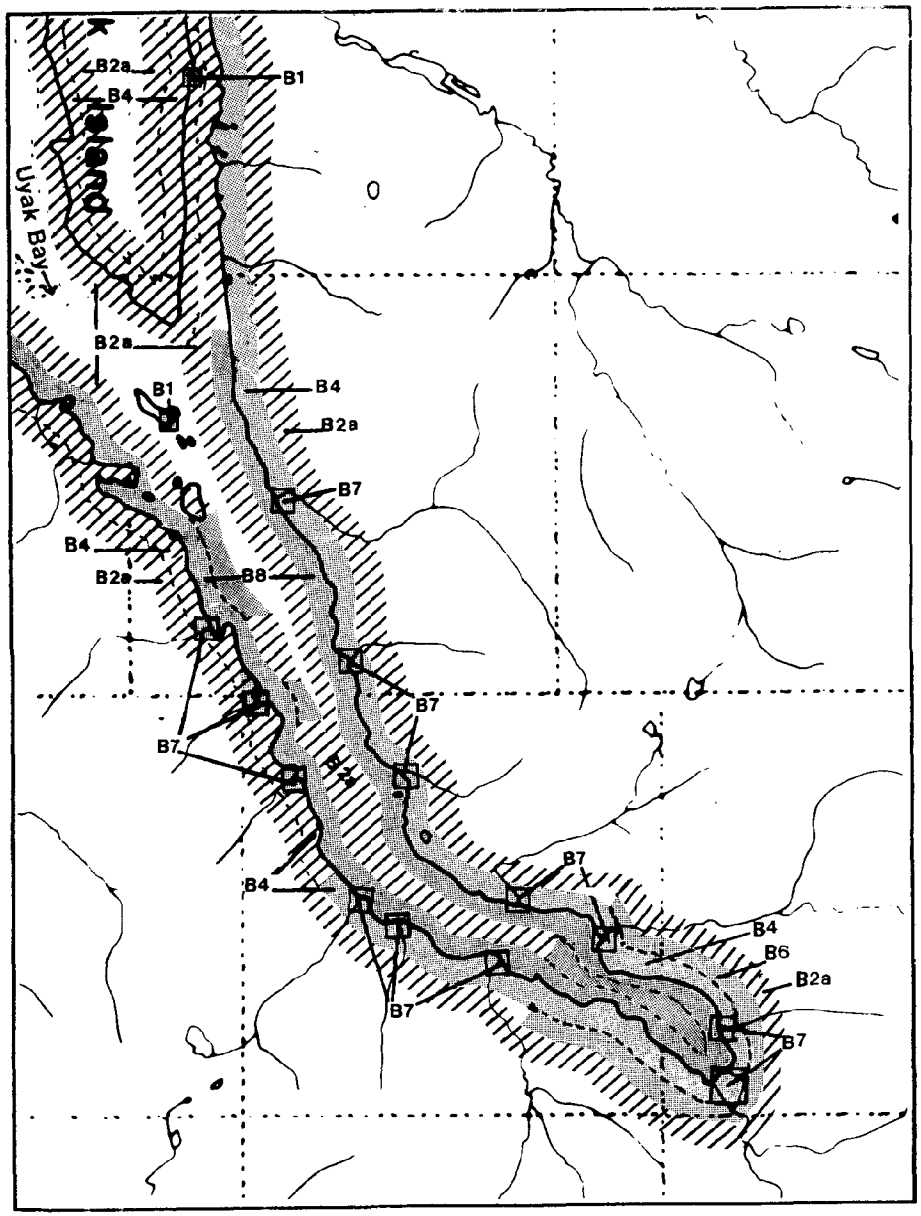




MAP NUMBER 29

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												


HIGH
MEDIUM
LOW
Island
Island
H7
H11
H1
H1
H10
H7
H2
H7
H8
CAN
(H1)
H10
H2
H1
H10
H2
H1
H7
SET (H1)
H11
H10
H2
H10
H7

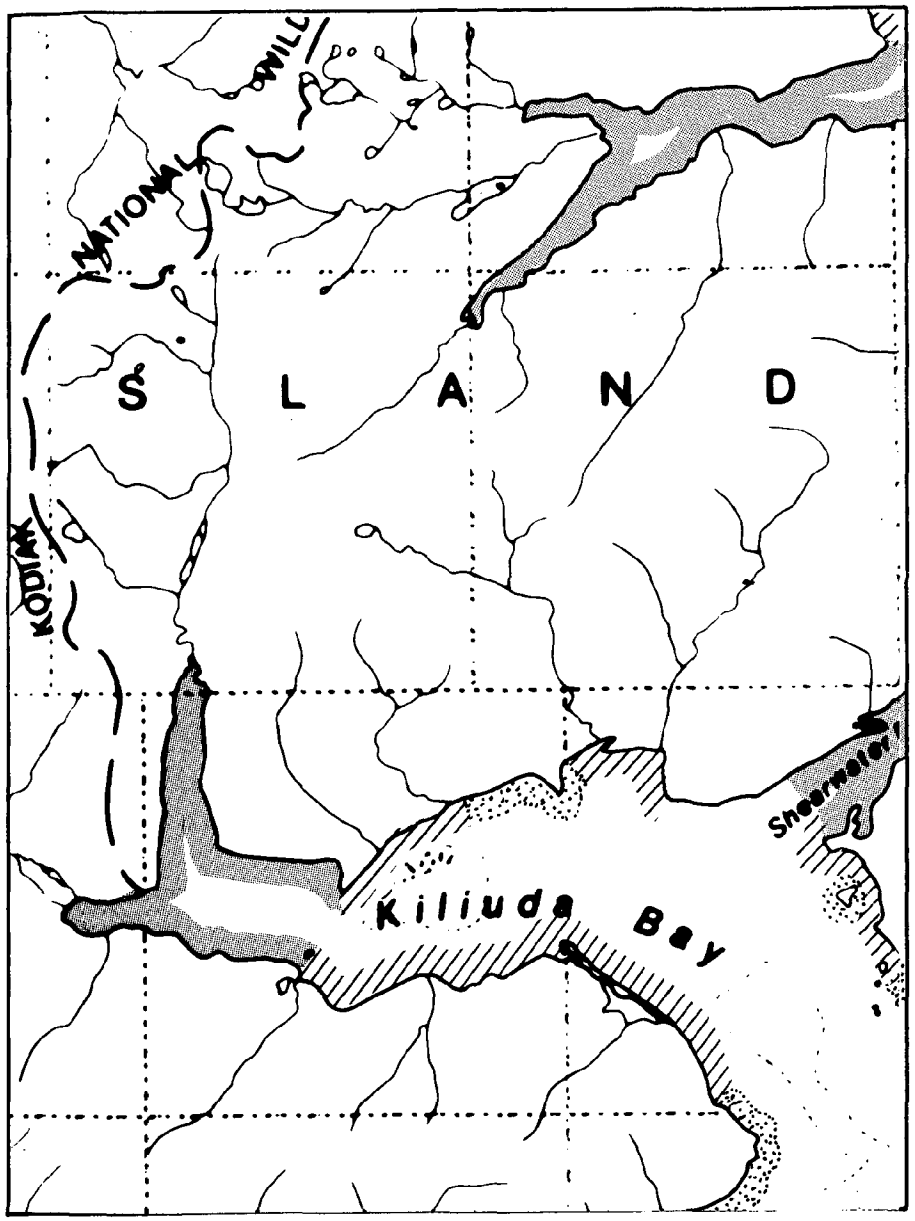


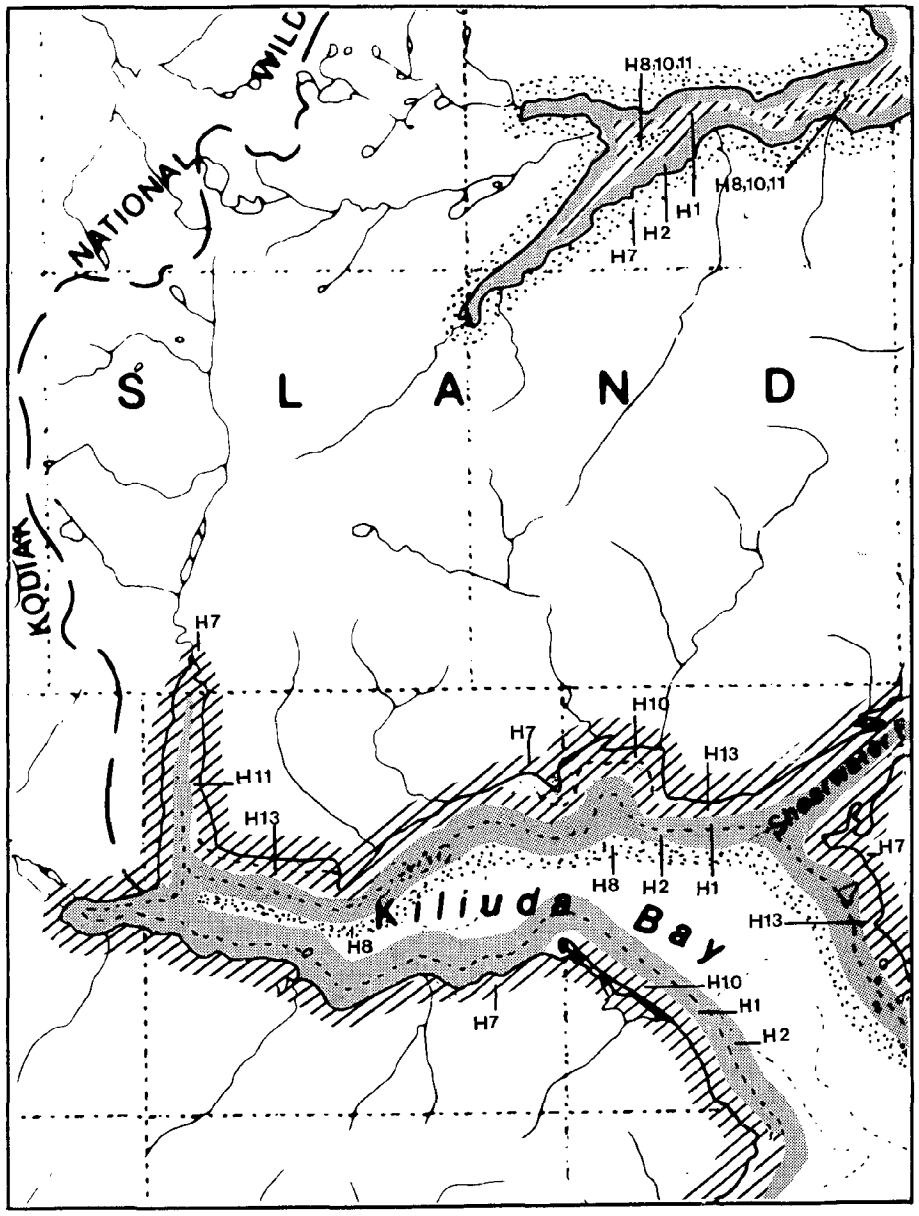
MAP NUMBER 30

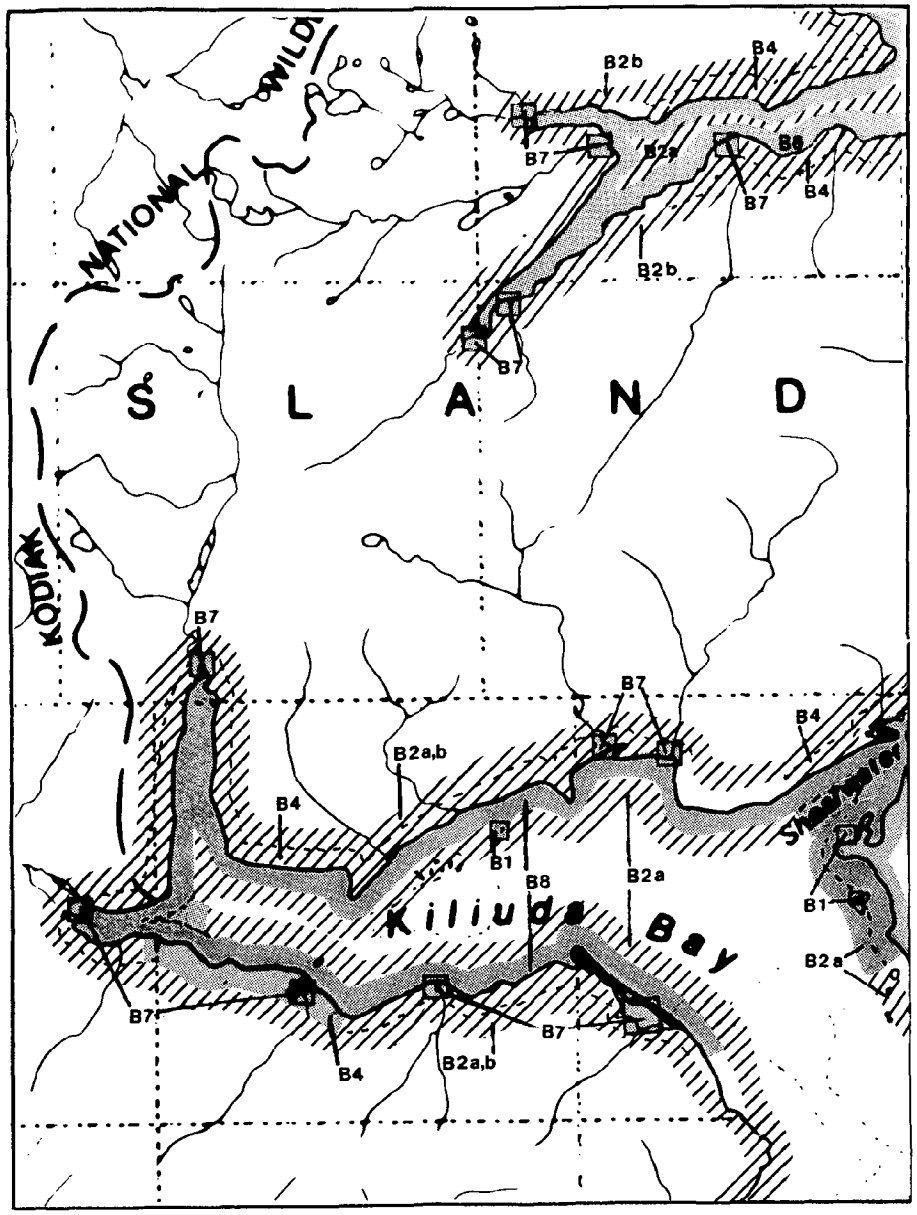
RESOURCE		Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE													
R-1	Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2	Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3	Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4	Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5	Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6	Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7	Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon							—	—	—	—		
H-2	Roe Herring					—	—	—					
H-3	Crab						—	—	—	—	—	—	
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer	—											—
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl									—	—	—	—
H-11	Clams												
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony						—	—	—	—	—		
B-2a	Waterfowl (overwintering)	—	—	—	—							—	—
B-2b	Waterfowl (summer use)						—	—	—	—	—		
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer	—	—	—	—								—
B-5	Elk												
B-6	Brown Bear					—	—					—	—
Offshore													
B-2a	Waterfowl (overwintering)	—	—	—	—							—	—
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults						—	—	—	—	—	—	
	Salmon - Juveniles	—	—	—	—	—	—	—	—	—	—	—	—
	Char/Dolly Varden - Adults									—	—	—	—
	Char/Dolly Varden - Juveniles					—	—	—					
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area					—	—						
B-9	Razor Clam Beach												
B-10	Sea Otters												

21 22 23
29 30
35 36 37

HIGH MEDIUM LOW





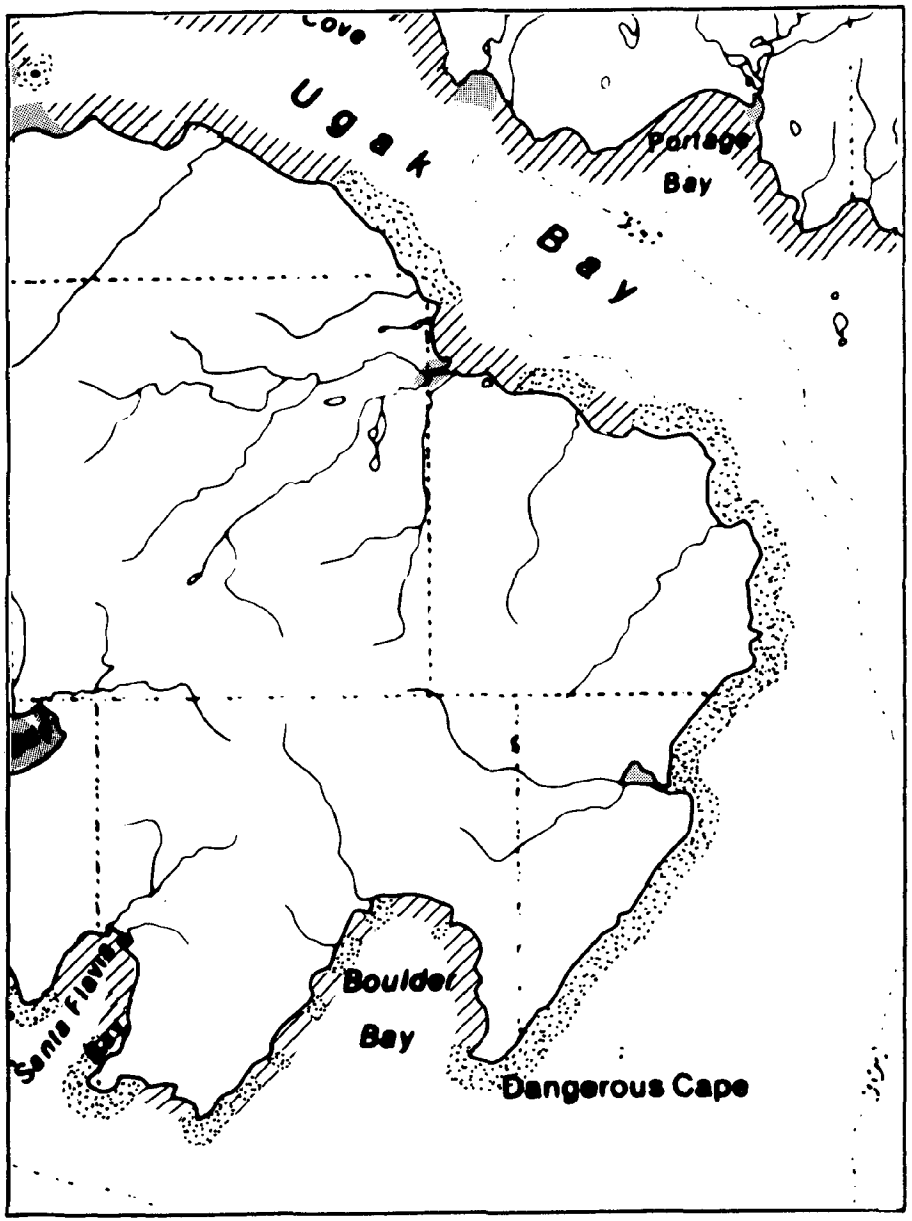


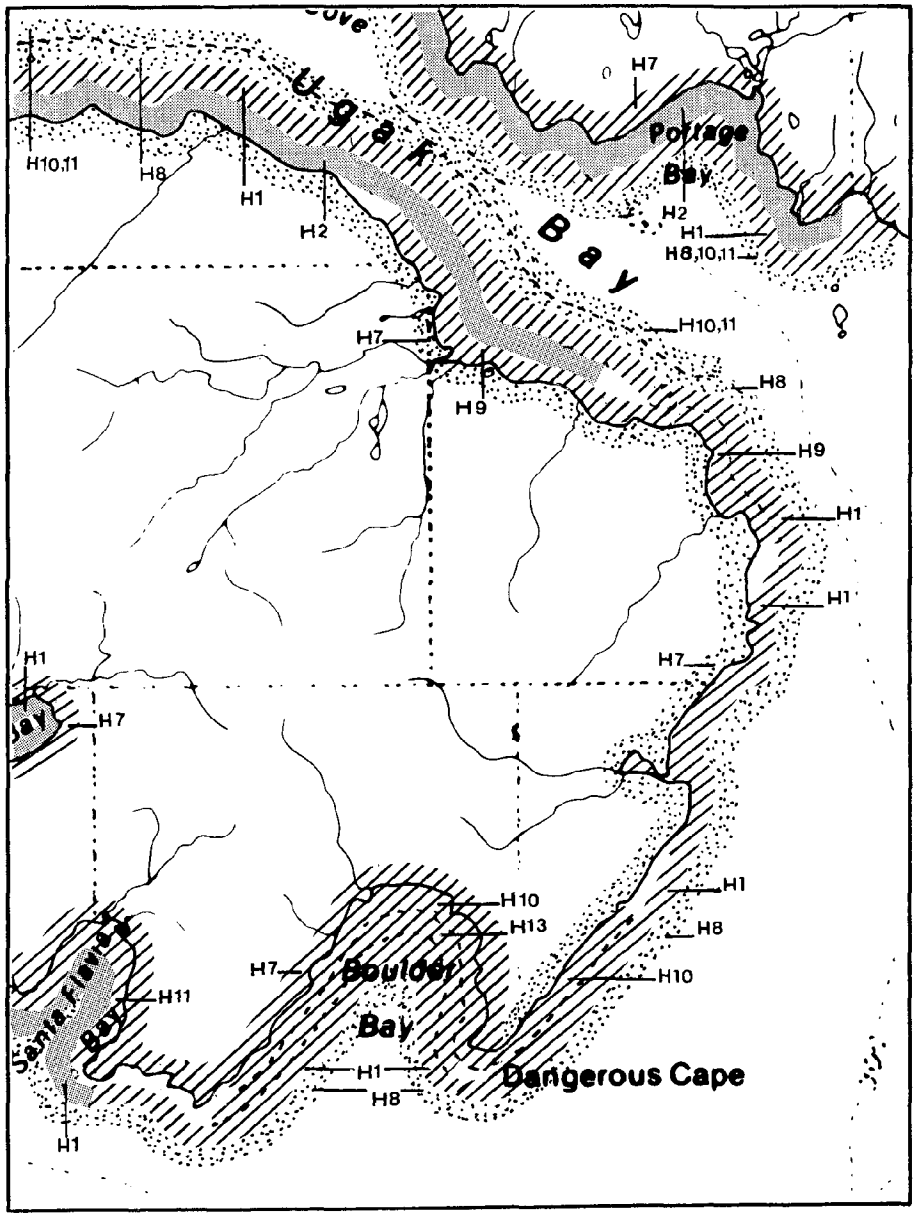
MAP NUMBER 31

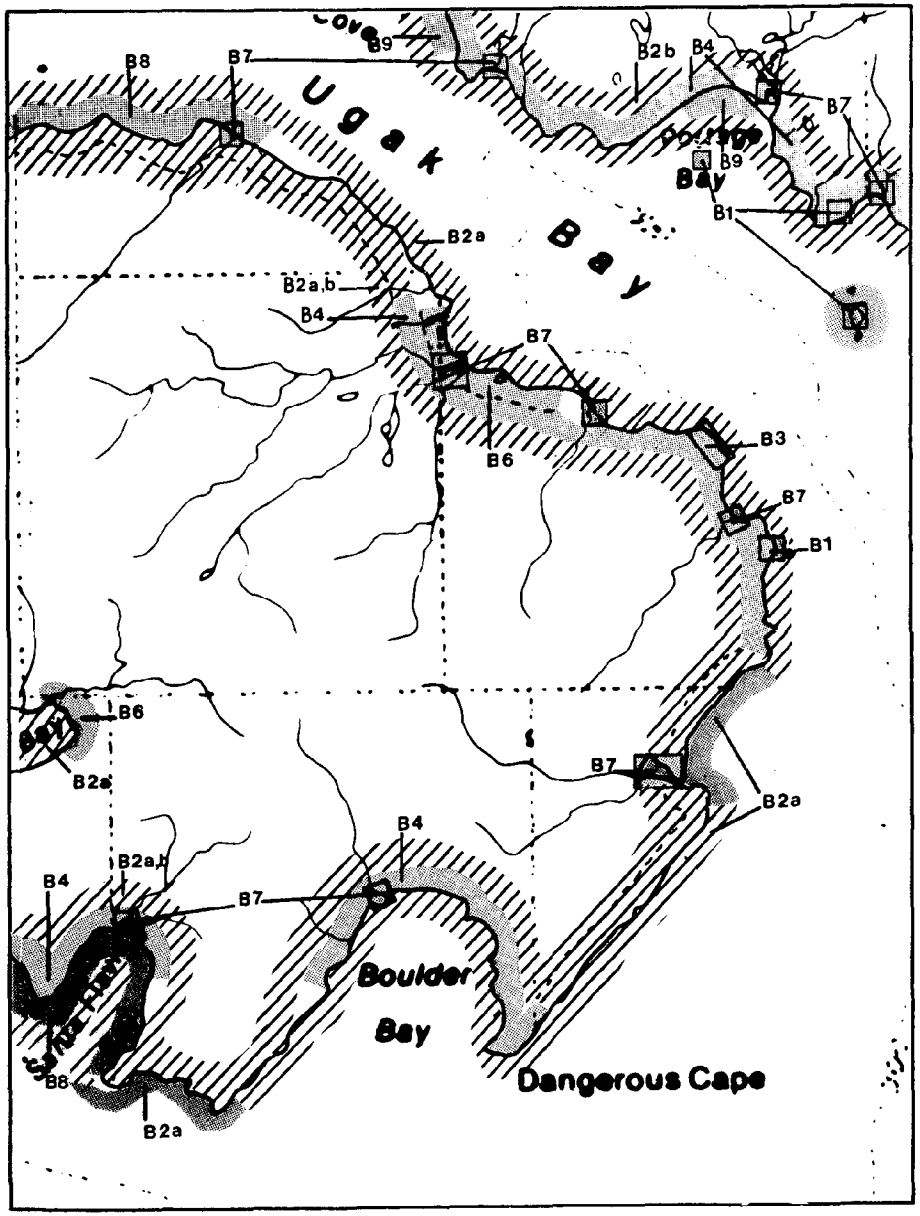
RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

23 24 25
31 32
37 38 39

HIGH MEDIUM LOW



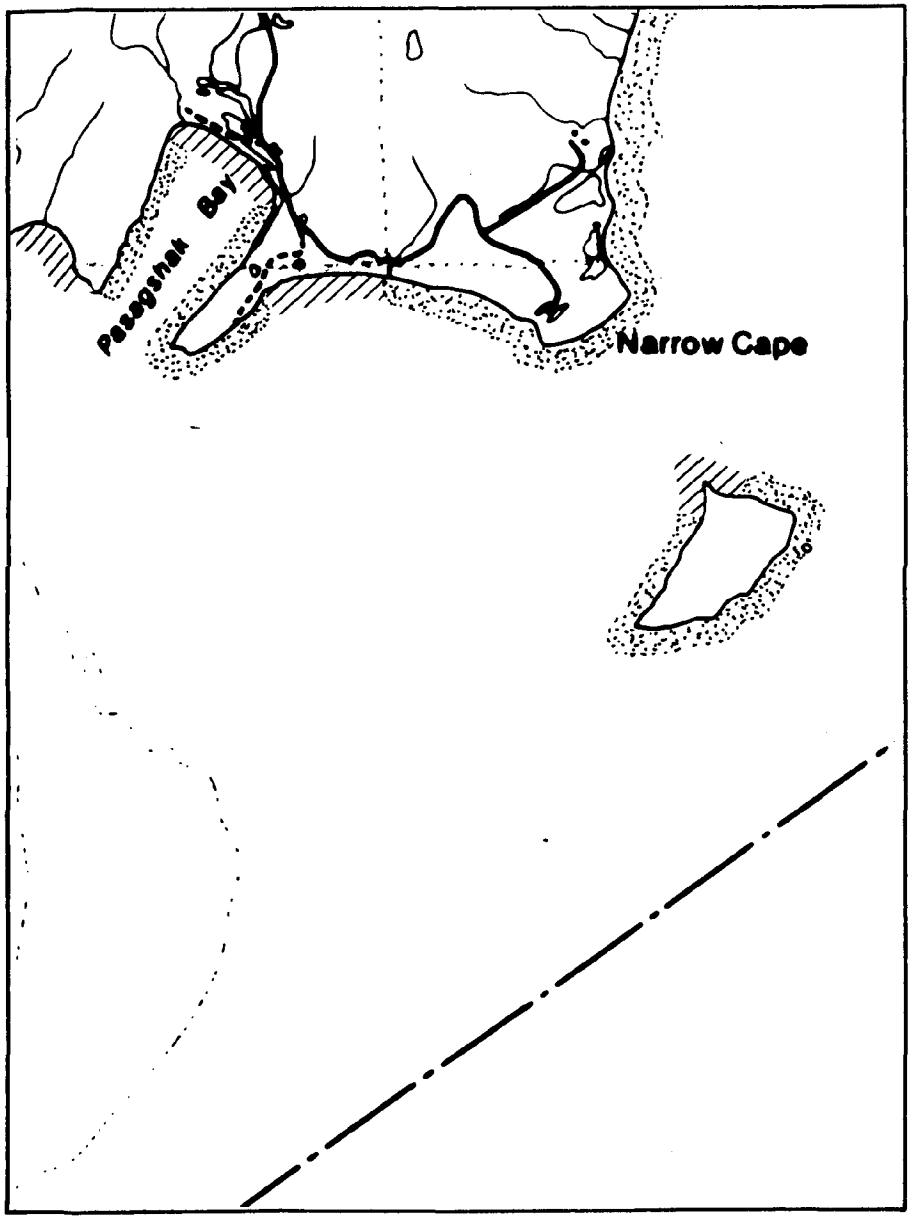


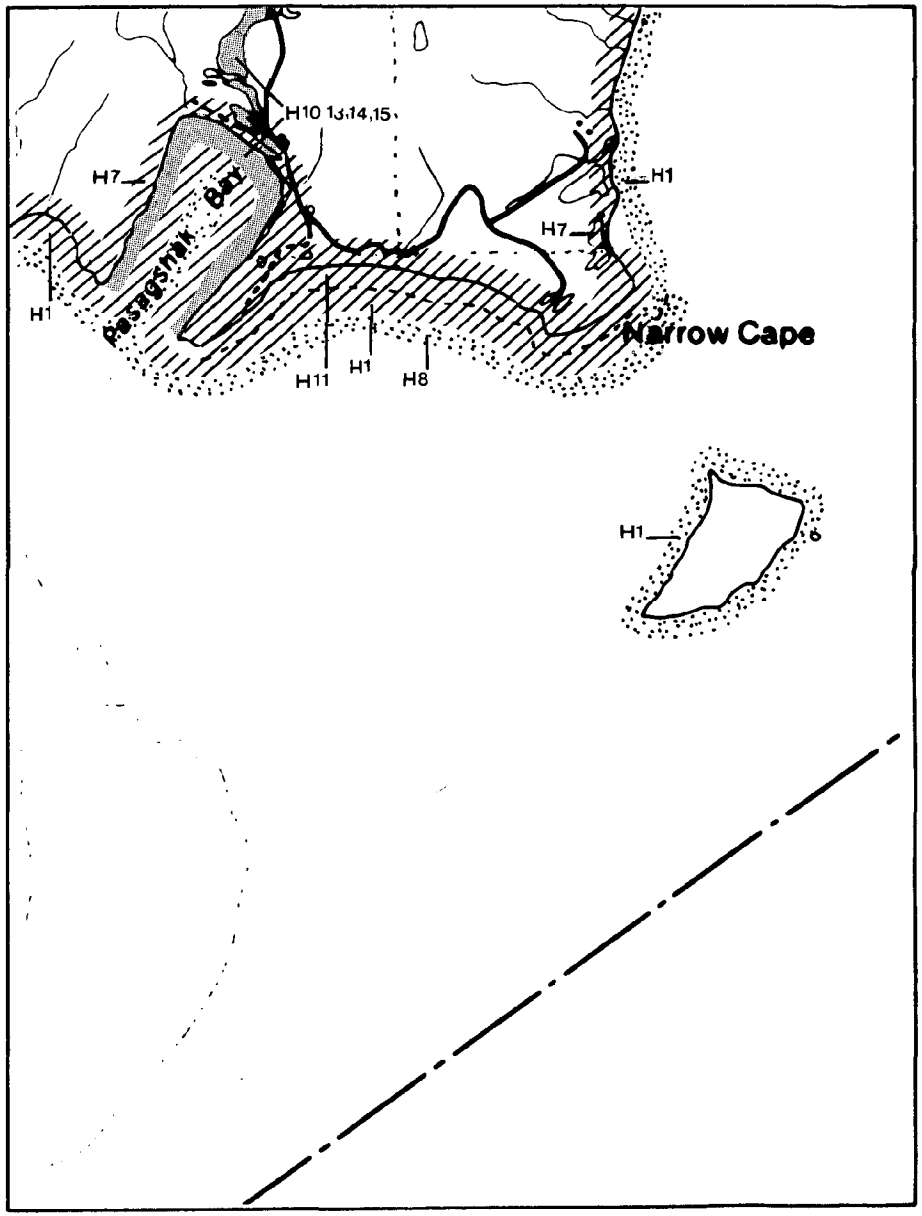


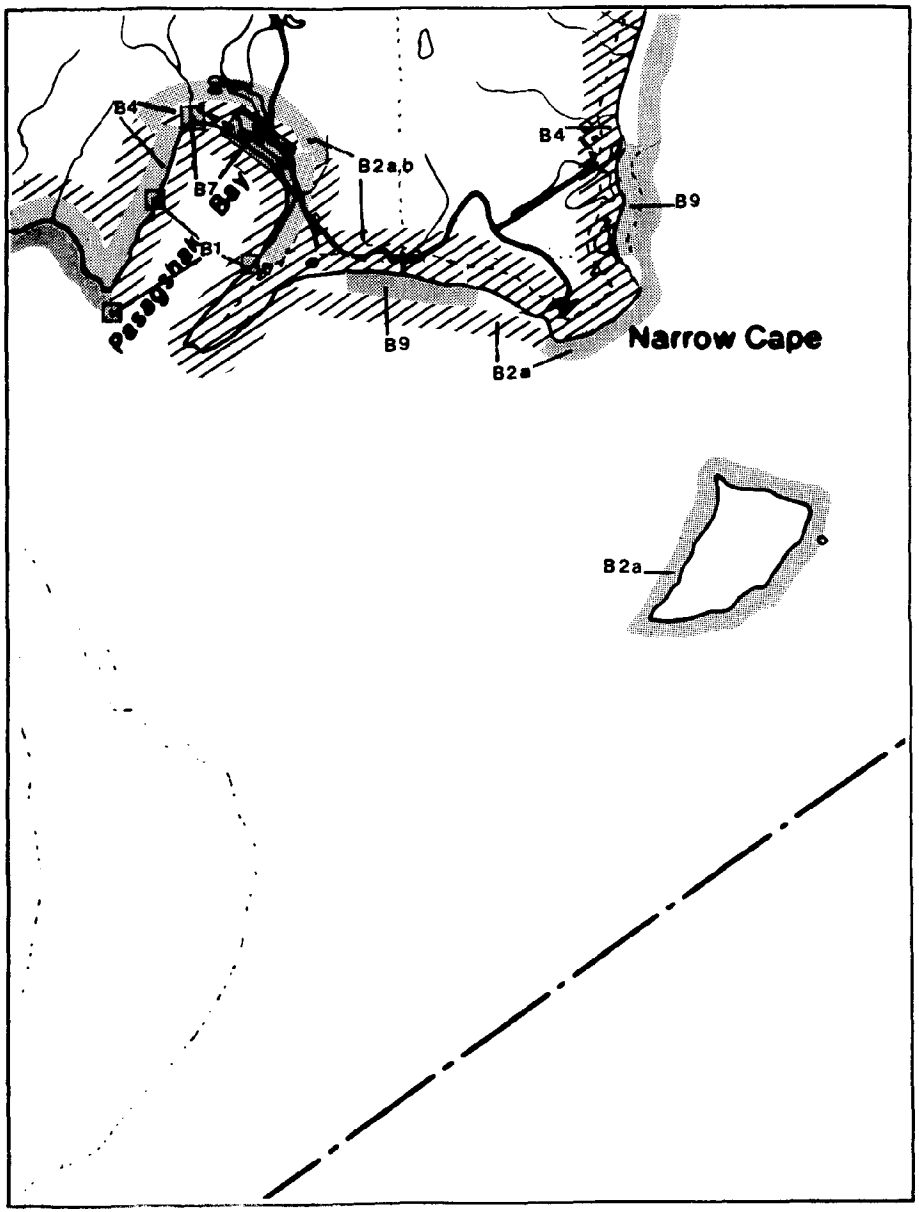
MAP NUMBER 32

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

HIGH MEDIUM LOW



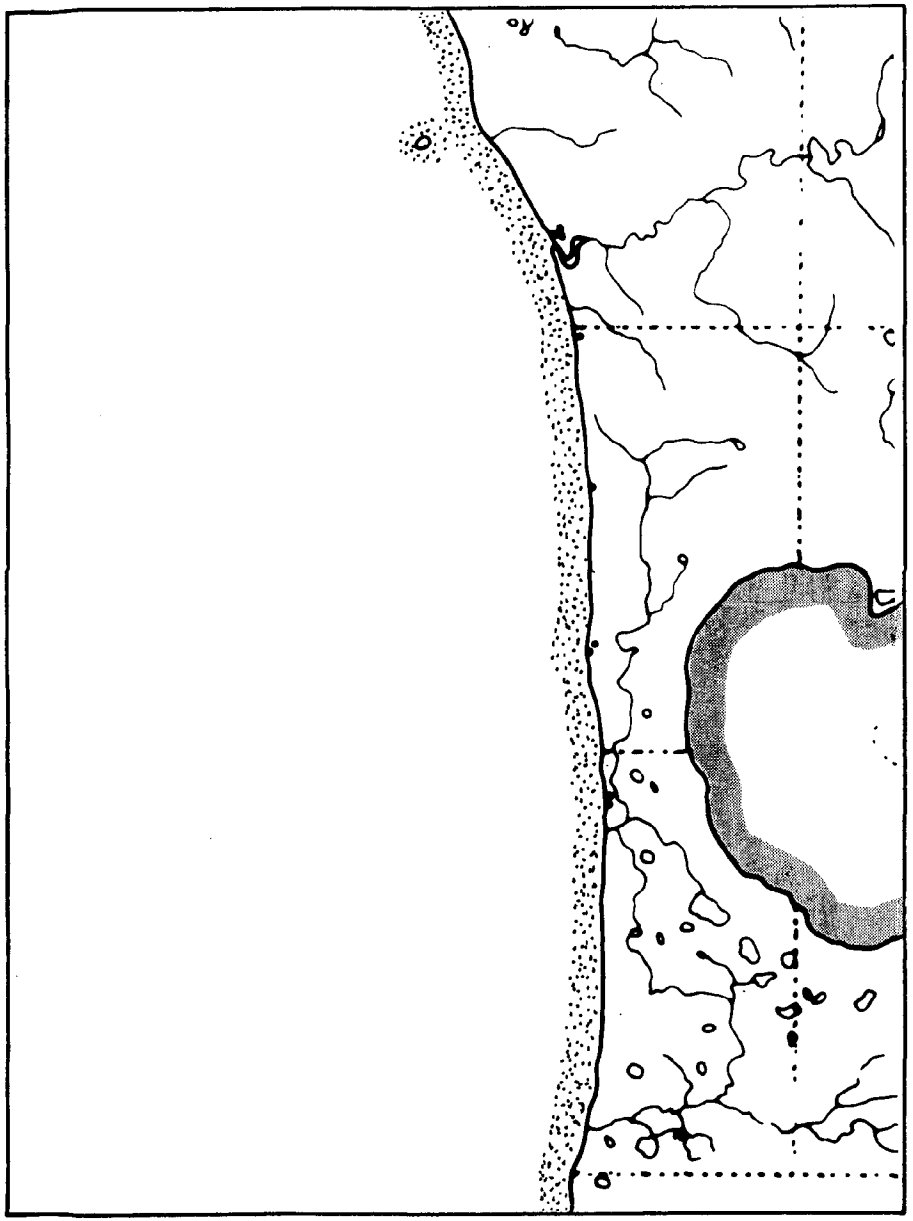


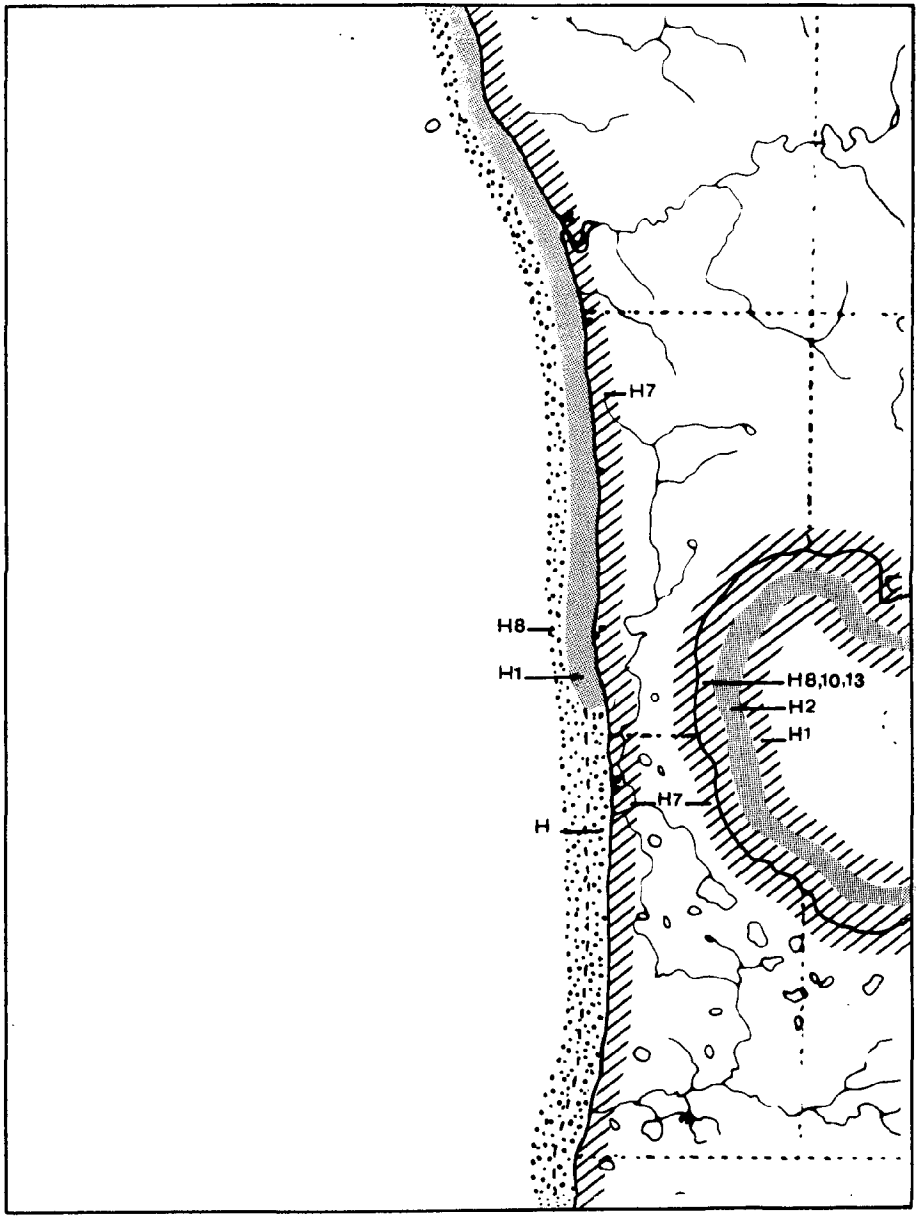


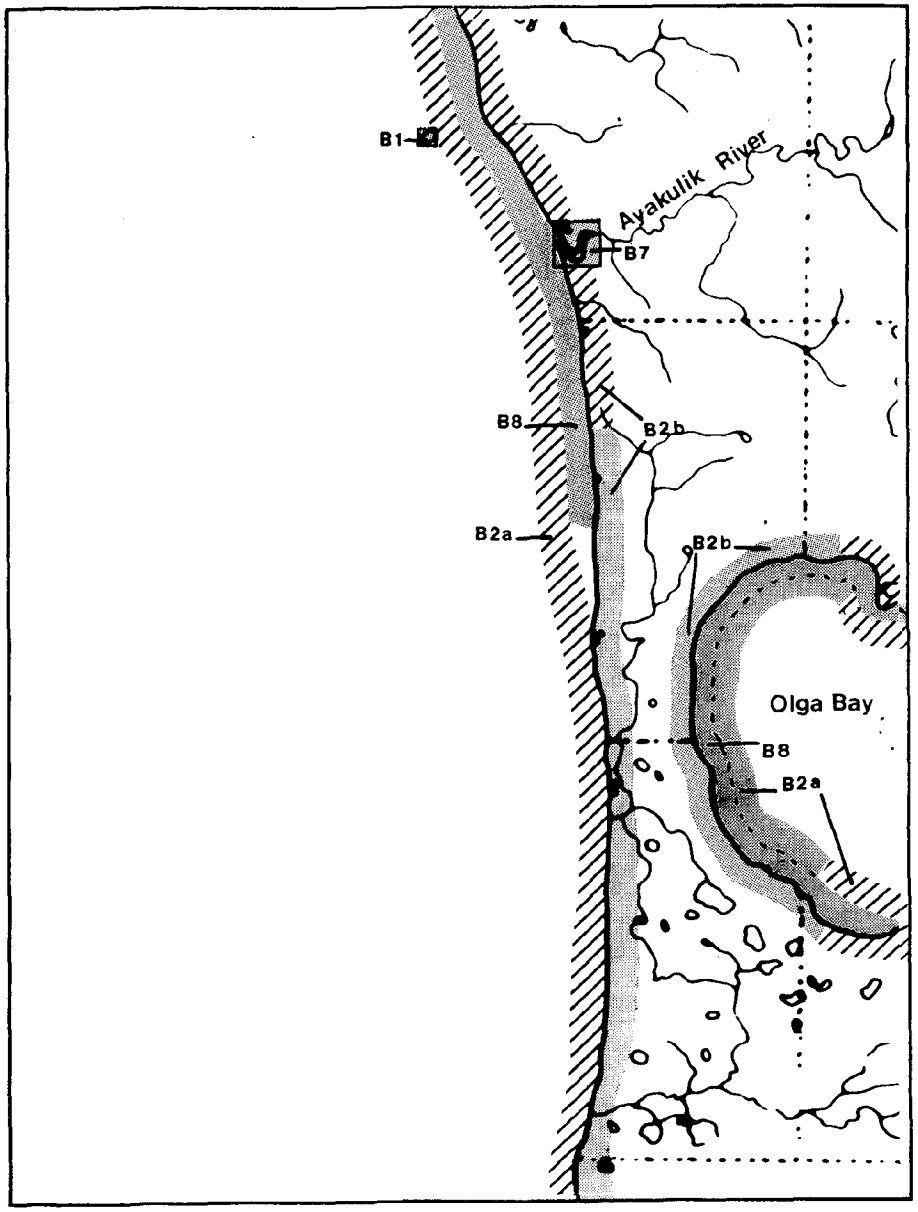
MAP NUMBER 33

RESOURCE	Winter			Spring			Summer			Fall		
	D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE												
R-1 Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2 Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3 Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4 Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5 Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6 Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7 Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon							—	—	—	—		
H-2 Roe Herring												
H-3 Crab		—	—	—	—	—	—	—	—	—	—	—
H-4 Shrimp												
H-5 Halibut							—	—				
H-6 Whitefish	—	—	—	—	—	—	—	—	—	—	—	—
Subsistence												
H-7 Deer/Elk/Reindeer	—											—
H-8 Marine Mammal	—	—	—	—	—	—	—	—	—	—	—	—
H-9 Crab												
H-10 Waterfowl	—									—	—	—
H-11 Clams	—	—	—	—	—	—	—	—	—	—	—	—
H-12 Halibut/Marine Fish												
H-13 Salmon						—	—	—	—	—	—	—
Recreation												
H-14 Recreation Use Area	—					—	—	—	—	—	—	—
H-15 Recreation Facility	—	—	—	—	—	—	—	—	—	—	—	—
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony						—	—	—	—	—		
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)						—	—	—	—	—		
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer	—	—	—	—								—
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults				—	—	—	—	—	—	—	—	
Salmon - Juveniles		—	—	—	—	—	—	—	—	—	—	—
Char/Dolly Varden - Adults	—							—	—	—	—	—
Char/Dolly Varden - Juveniles					—	—	—					
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach	—	—	—	—	—	—	—	—	—	—	—	—
B-10 Sea Otters												

HIGH MEDIUM LOW



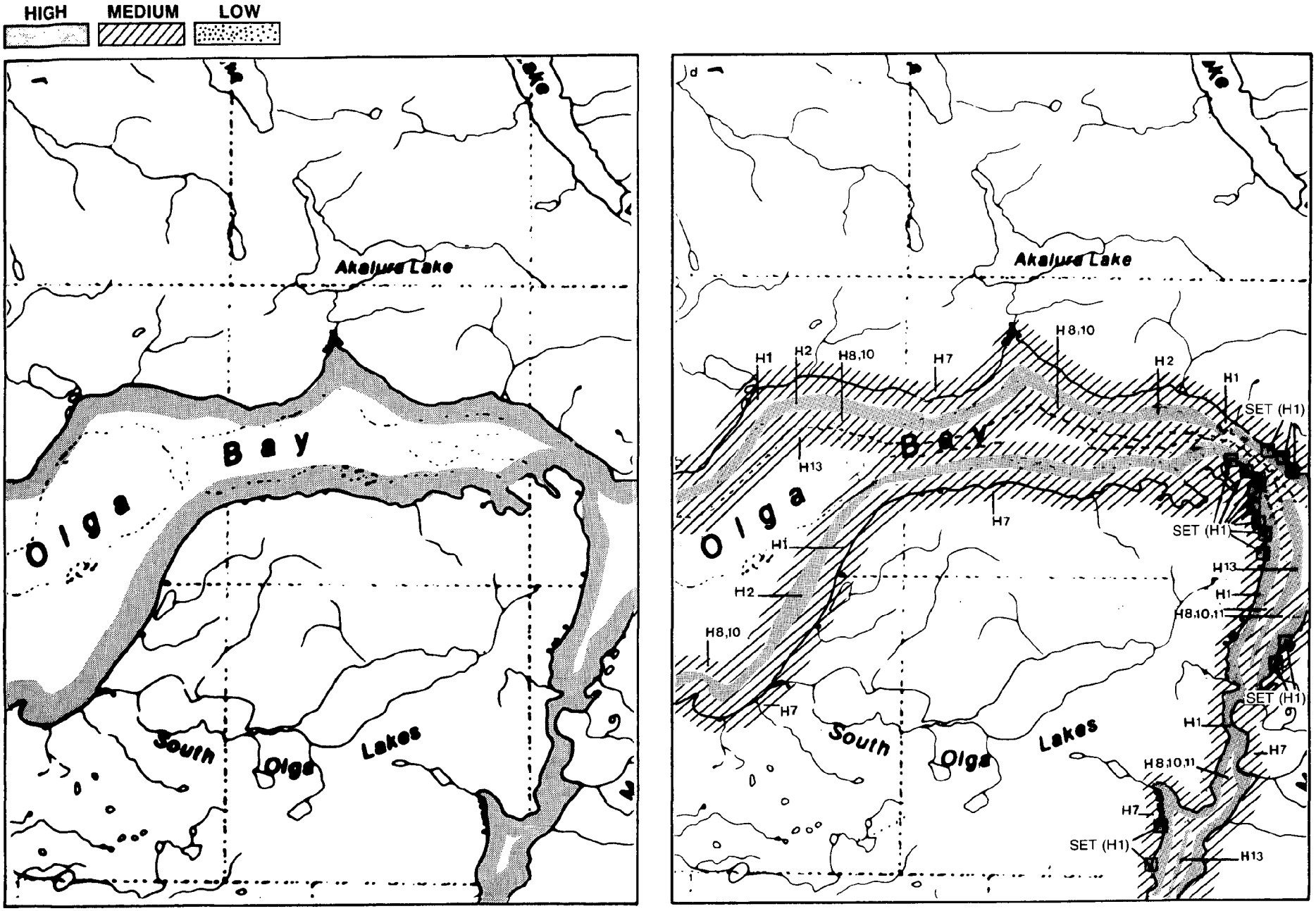


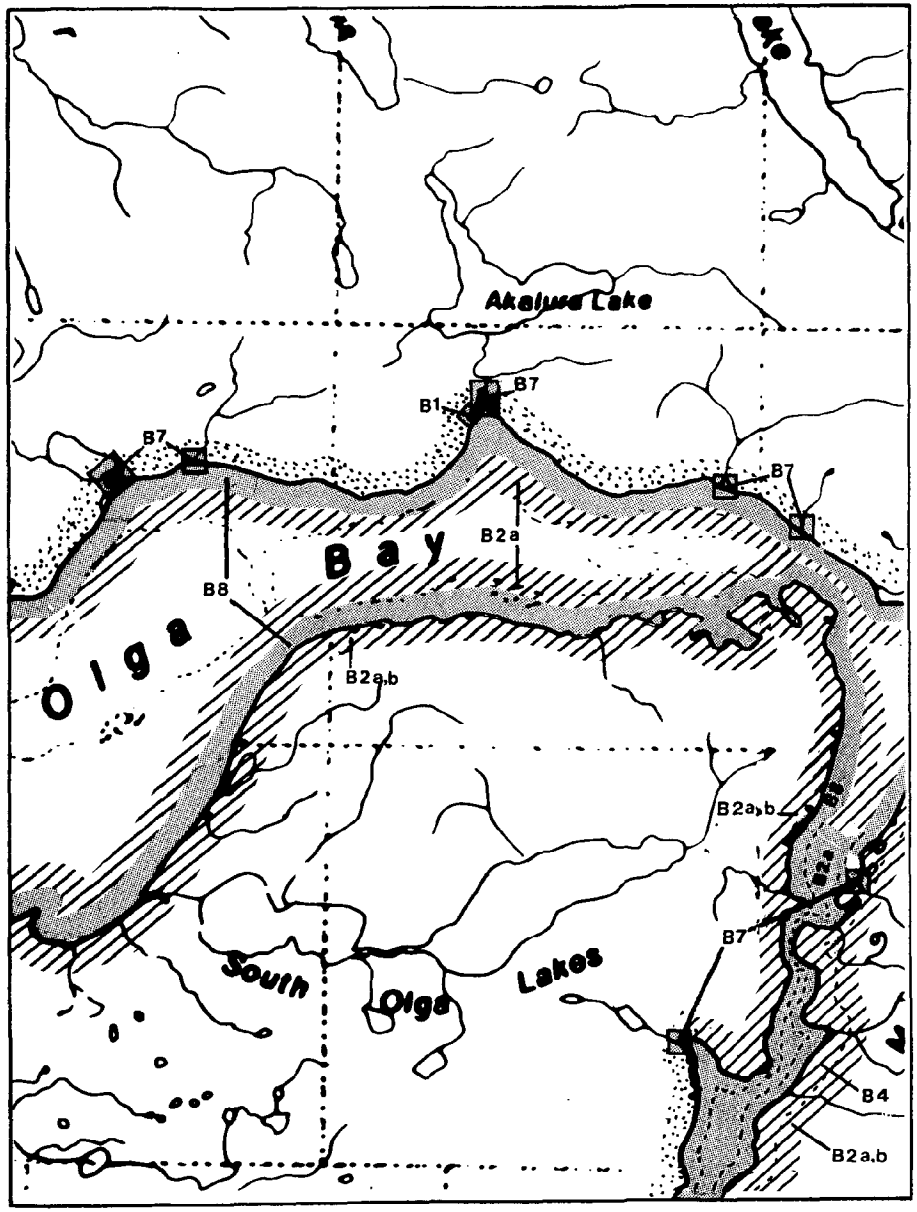


MAP NUMBER 34

RESOURCE	Winter			Spring			Summer			Fall		
	D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE												
R-1 Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2 Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3 Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4 Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5 Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6 Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7 Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon							—	—	—	—		
H-2 Roe Herring					—	—	—					
H-3 Crab		—	—	—	—	—	—	—	—	—	—	—
H-4 Shrimp												
H-5 Halibut							—	—				
H-6 Whitefish	—	—	—	—	—	—	—	—	—	—	—	—
Subsistence												
H-7 Deer/Elk/Reindeer	—											—
H-8 Marine Mammal	—	—	—	—	—	—	—	—	—	—	—	—
H-9 Crab												
H-10 Waterfowl	—	—	—	—	—	—				—	—	—
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon	—	—	—			—	—	—	—	—	—	—
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony						—	—	—	—			
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)						—	—	—	—			
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)	—	—	—	—							—	—
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults				—	—	—	—	—	—	—		
Salmon - Juveniles	—	—	—	—	—	—	—	—	—	—	—	—
Char/Dolly Varden - Adults	—							—	—	—	—	—
Char/Dolly Varden - Juveniles	—				—	—	—					
Steelhead - Adults	—	—	—	—	—	—	—		—	—	—	—
Steelhead - Juveniles							—	—	—			
B-8 Herring Spawning Area						—	—					
B-9 Razor Clam Beach												
B-10 Sea Otters												

28 29
34 35 36
40 41


HIGH
MEDIUM
LOW
Akaiura Lake
Olga Bay
South Olga Lakes
Akaiura Lake
H1
H2
H8,10
H7
H8,10
H2
H1
SET (H1)
H13
Olga Bay
H7
SET (H1)
H1
H13
H2
H1
H8,10,11
H8,10
SET (H1)
H7
South Olga Lakes
H1
H7
H8,10,11
H7
SET (H1)
H13

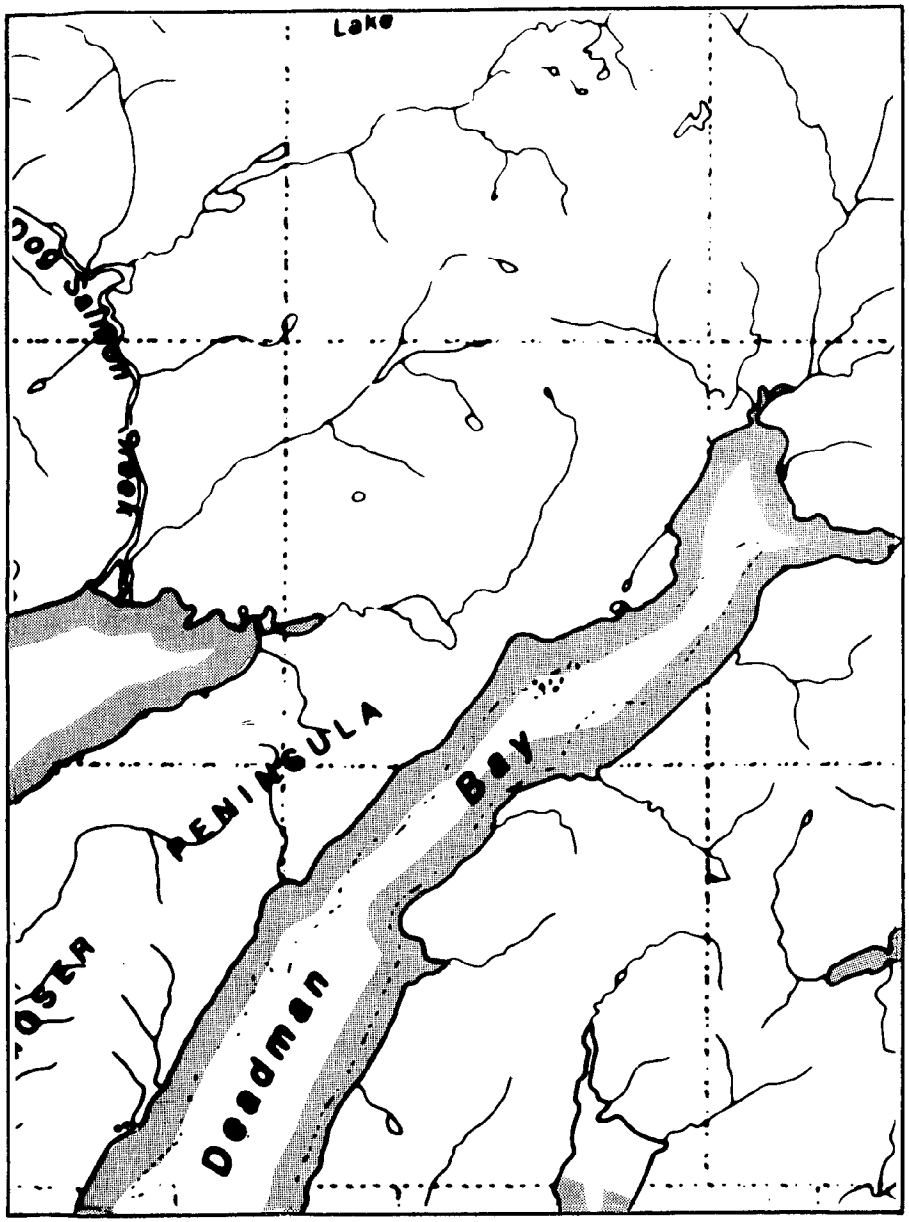


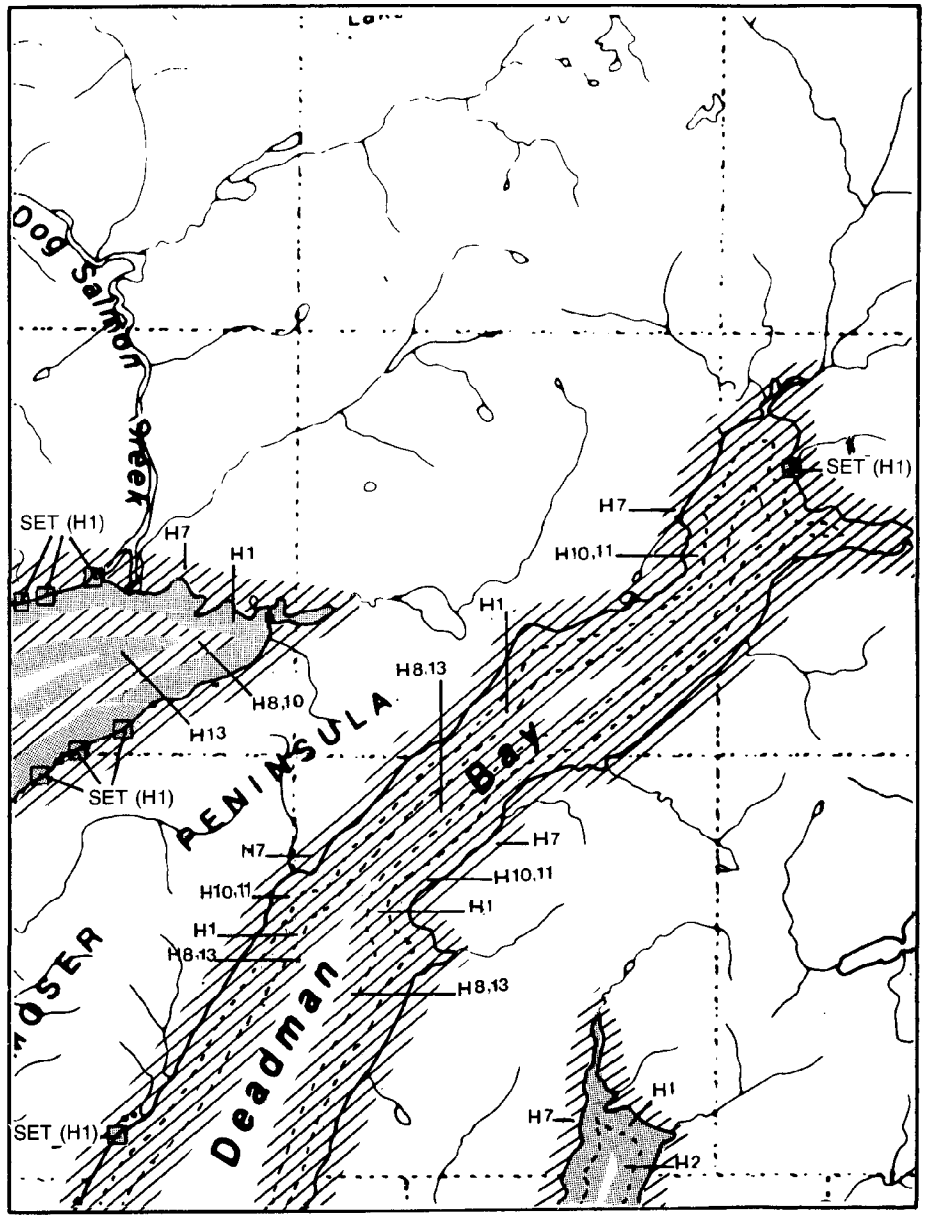
MAP NUMBER 35

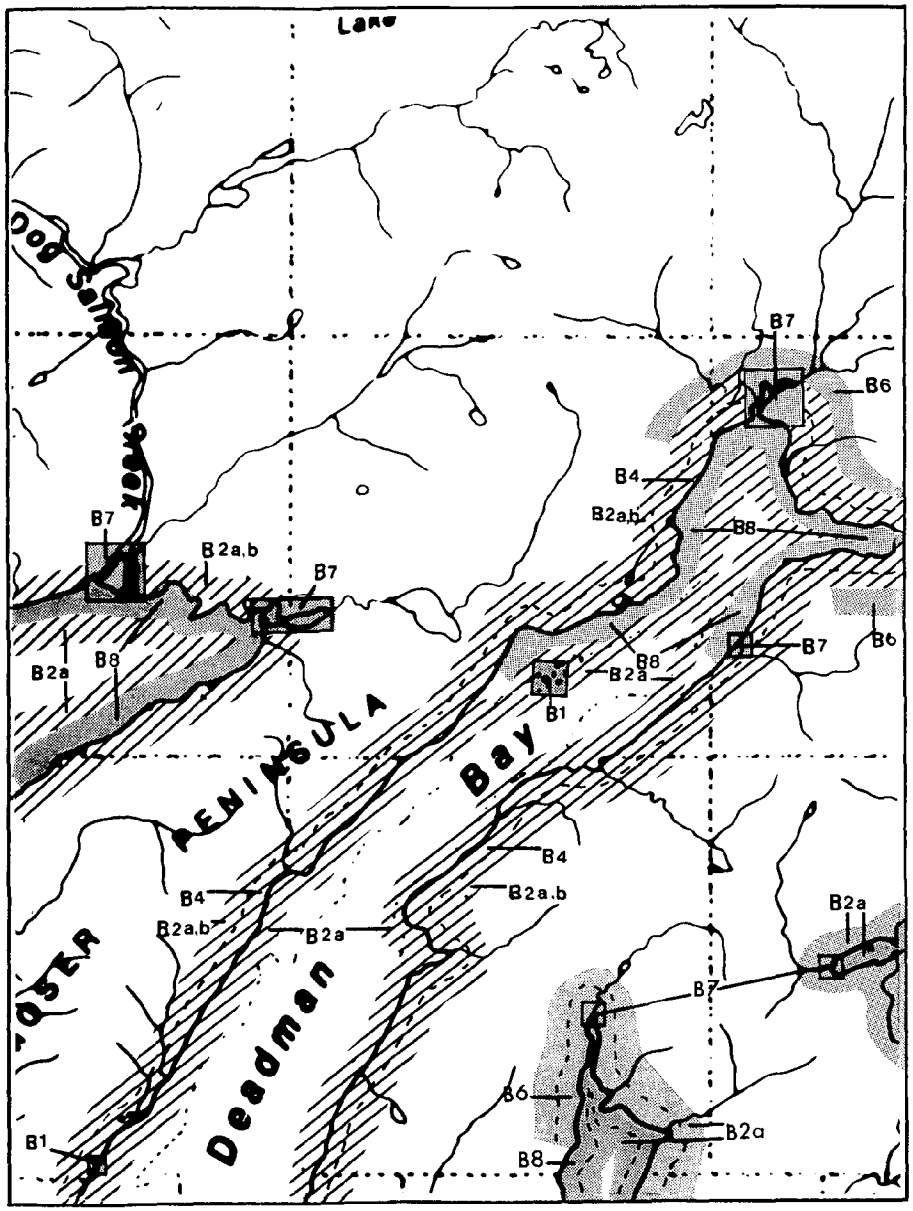
RESOURCE	Winter			Spring			Summer			Fall		
	D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

29 30
34 35 36 37
40 41 42

HIGH MEDIUM LOW





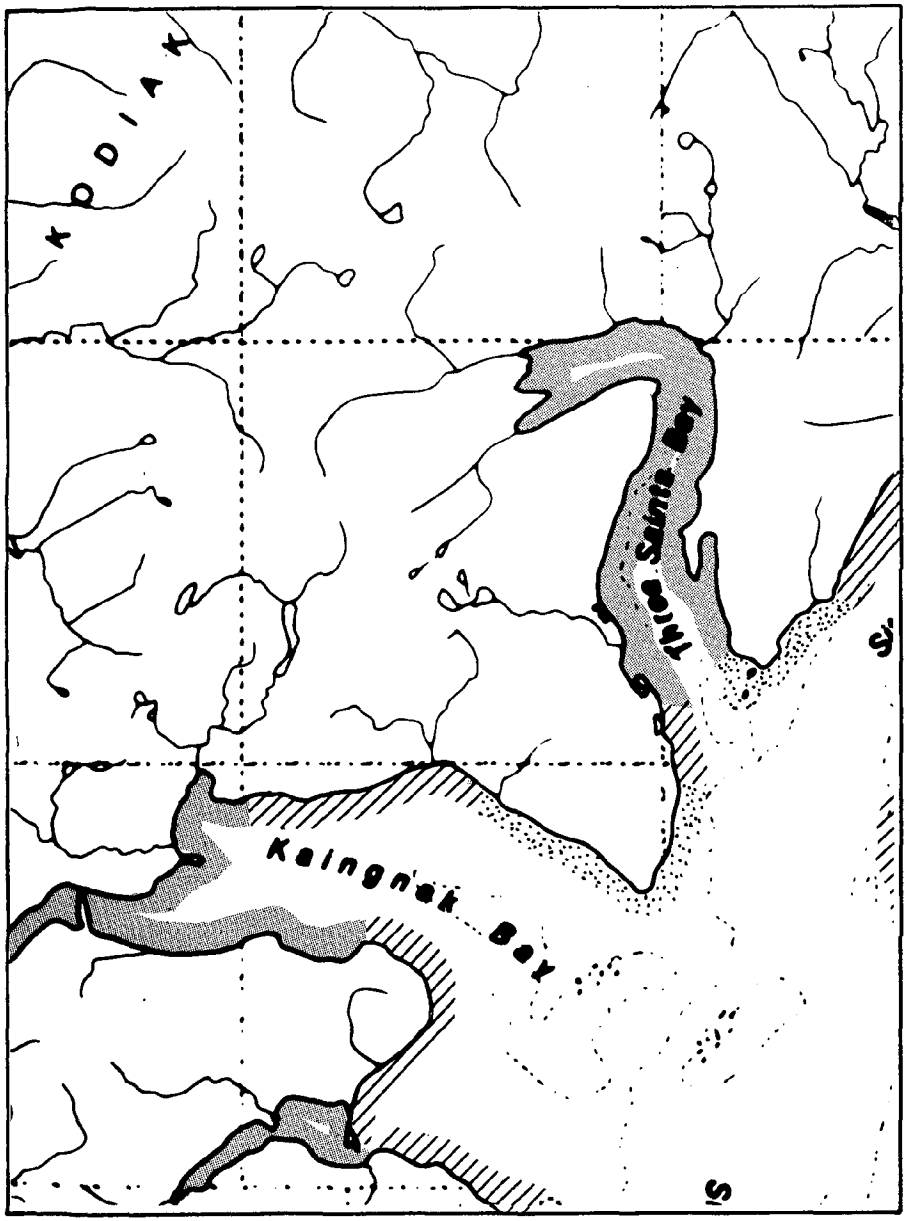


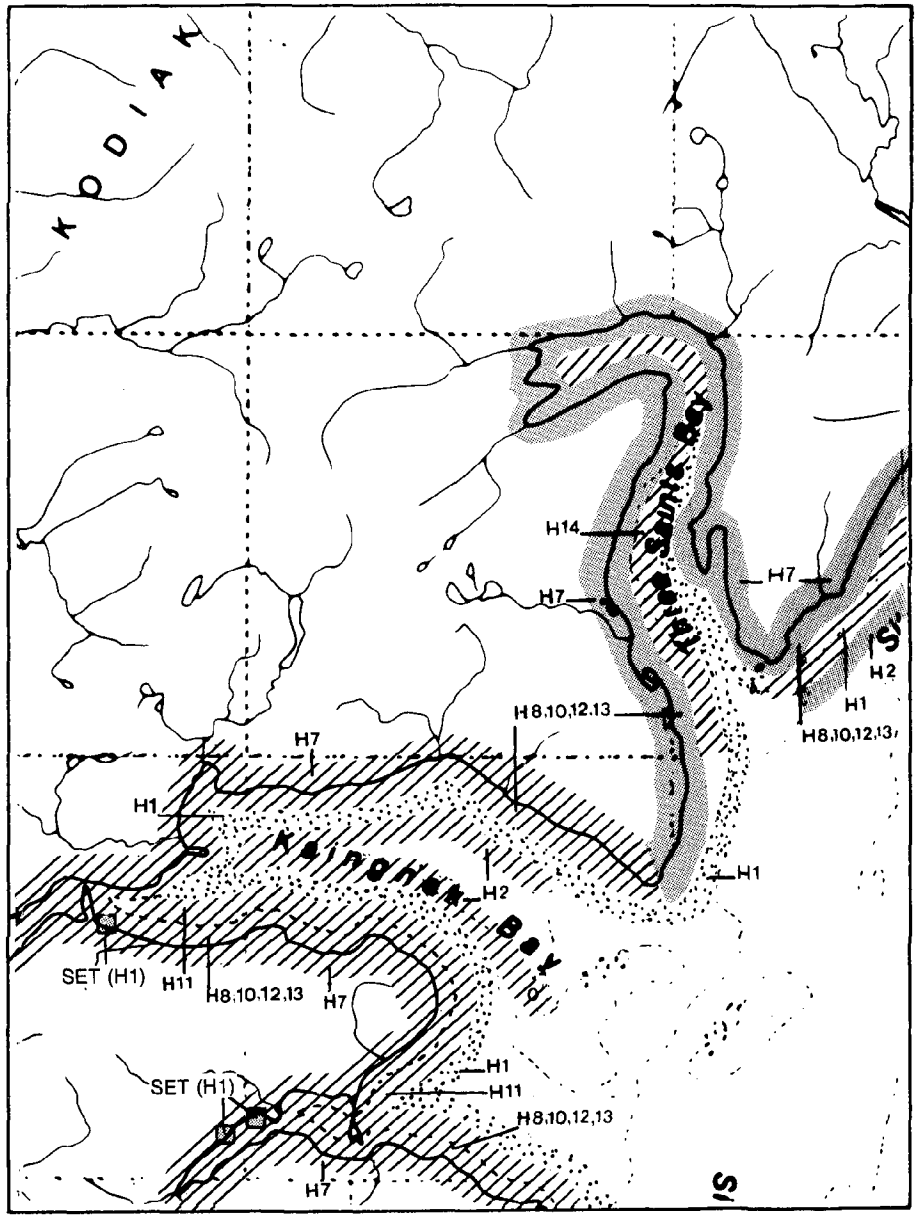
MAP NUMBER 36

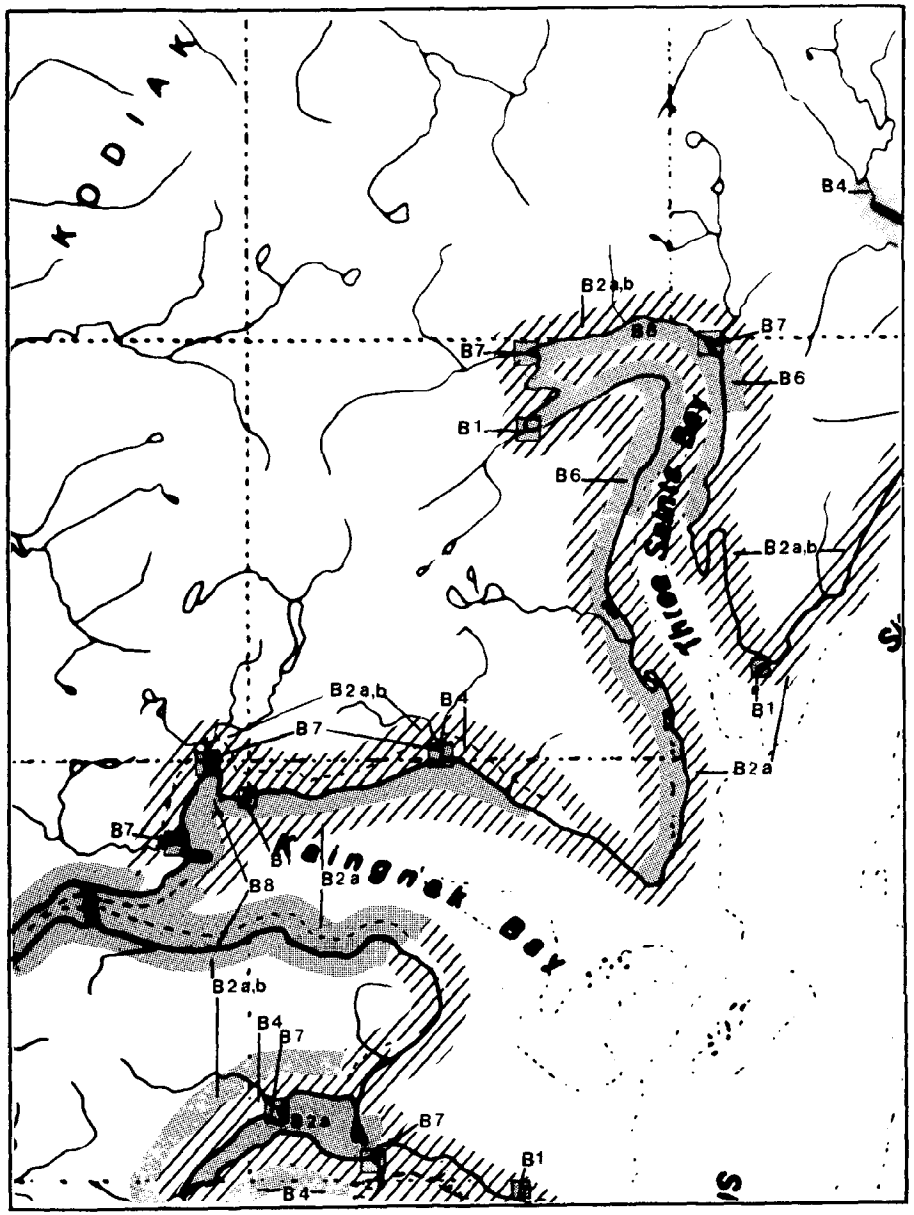
RESOURCE		Winter			Spring			Summer			Fall		
		D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE													
R-1	Rocky Headlands												
R-2	Wave-Cut Platforms												
R-3	Sand Beaches/Exposed Tidal Flats												
R-4	Mixed Sand and Gravel Beaches												
R-5	Gravel Beaches												
R-6	Sheltered Rocky and Gravel Shores												
R-7	Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon												
H-2	Roe Herring												
H-3	Crab												
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer												
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl												
H-11	Clams												
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony												
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer												
B-5	Elk												
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults												
	Salmon - Juveniles												
	Char/Dolly Varden - Adults												
	Char/Dolly Varden - Juveniles												
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area												
B-9	Razor Clam Beach												
B-10	Sea Otters												

29 30
35 36 37
41 42

HIGH MEDIUM LOW





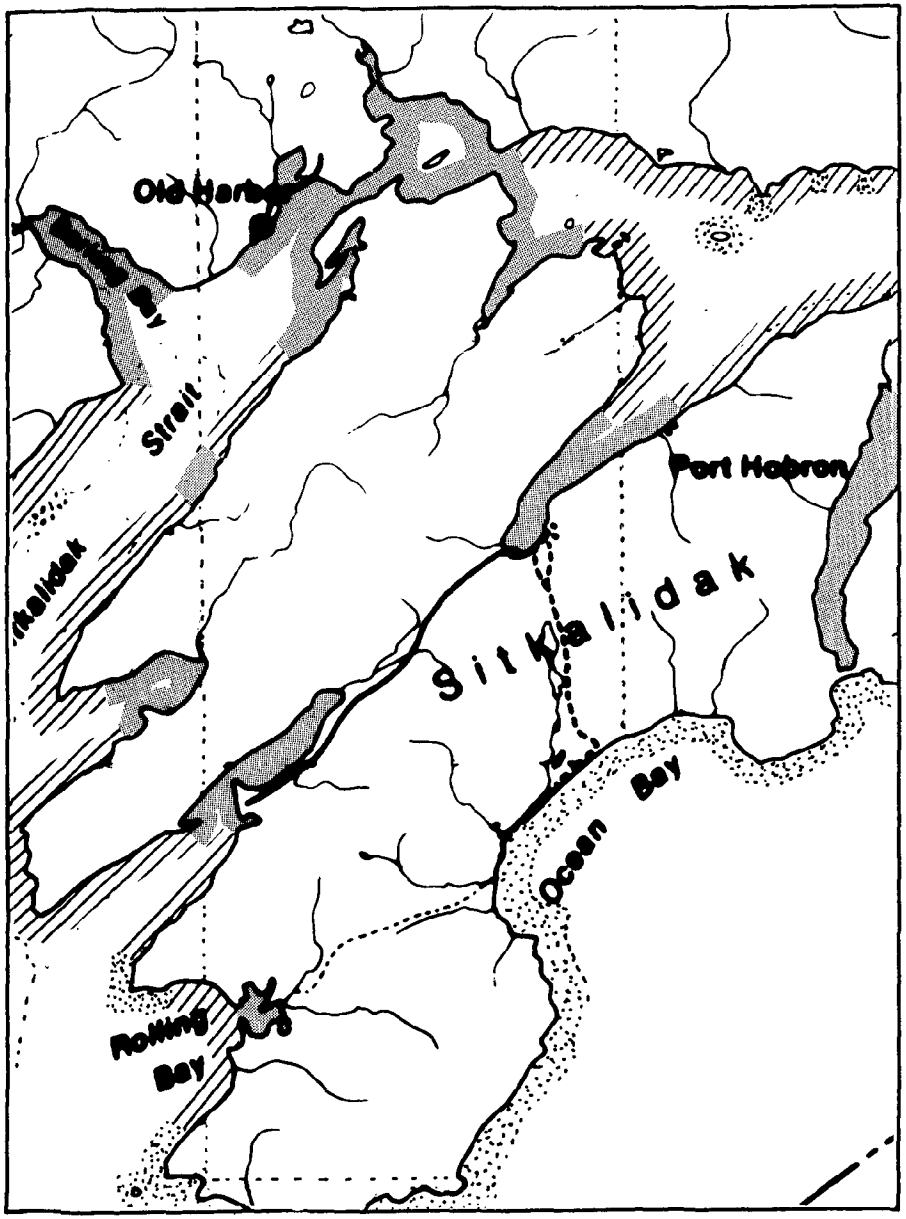


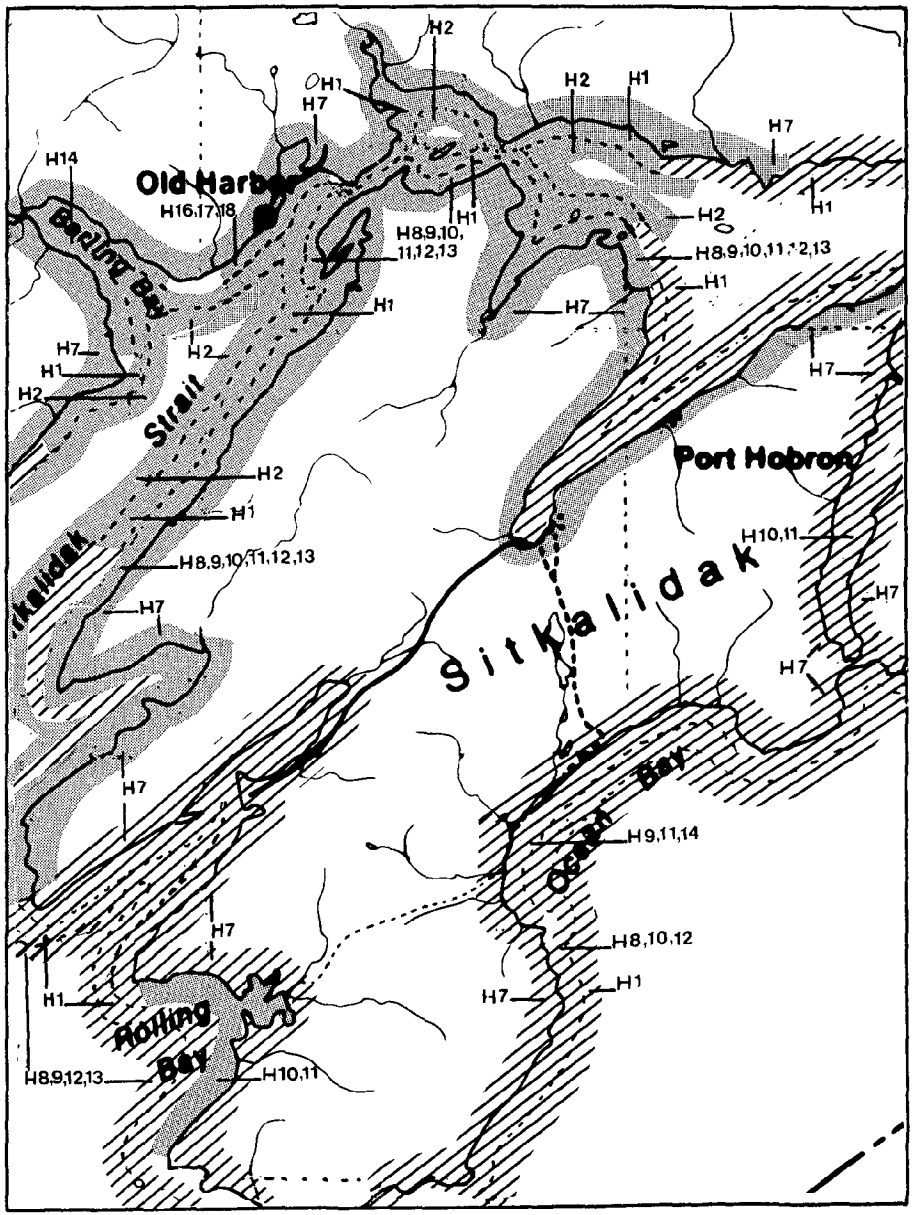
MAP NUMBER 37

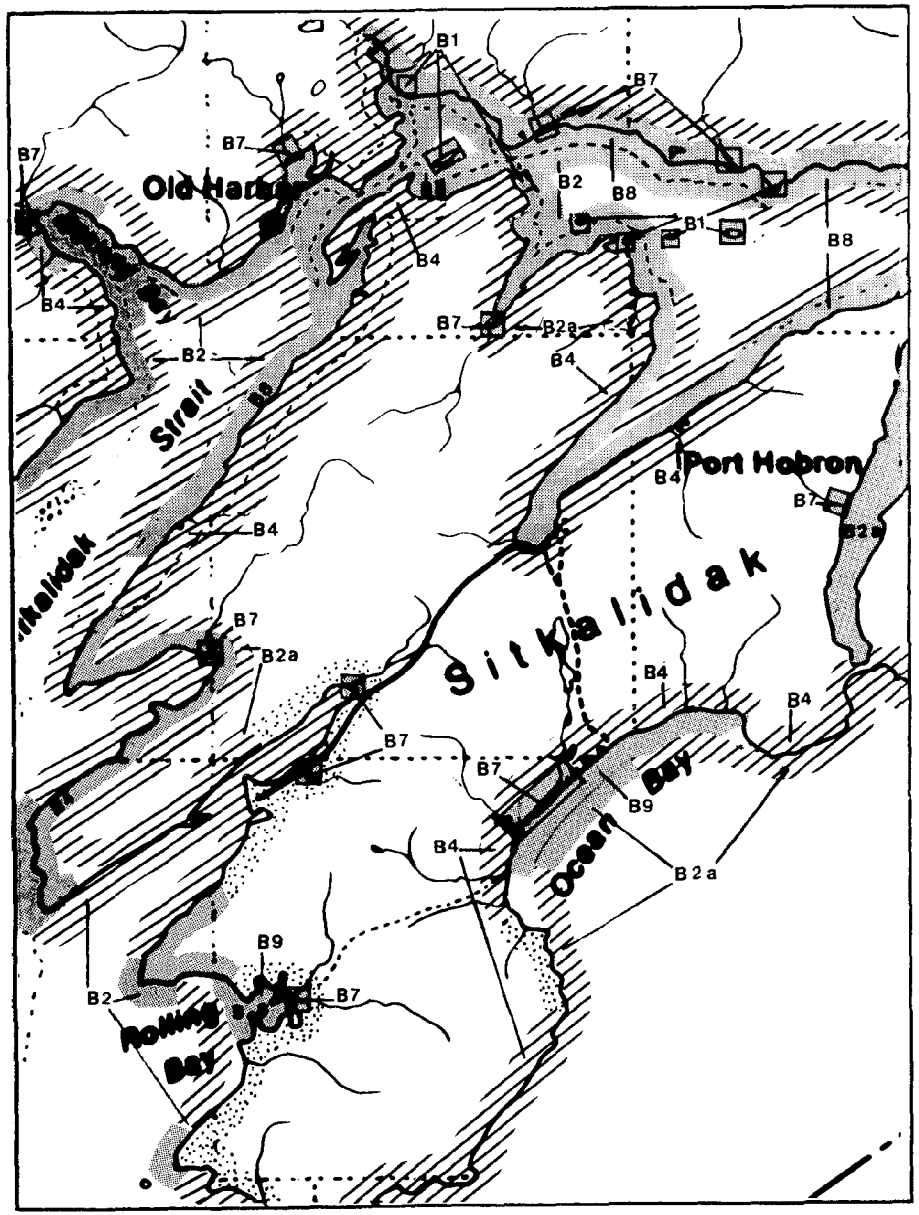
RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

29 30
36 37 38
41 42 43

HIGH MEDIUM LOW



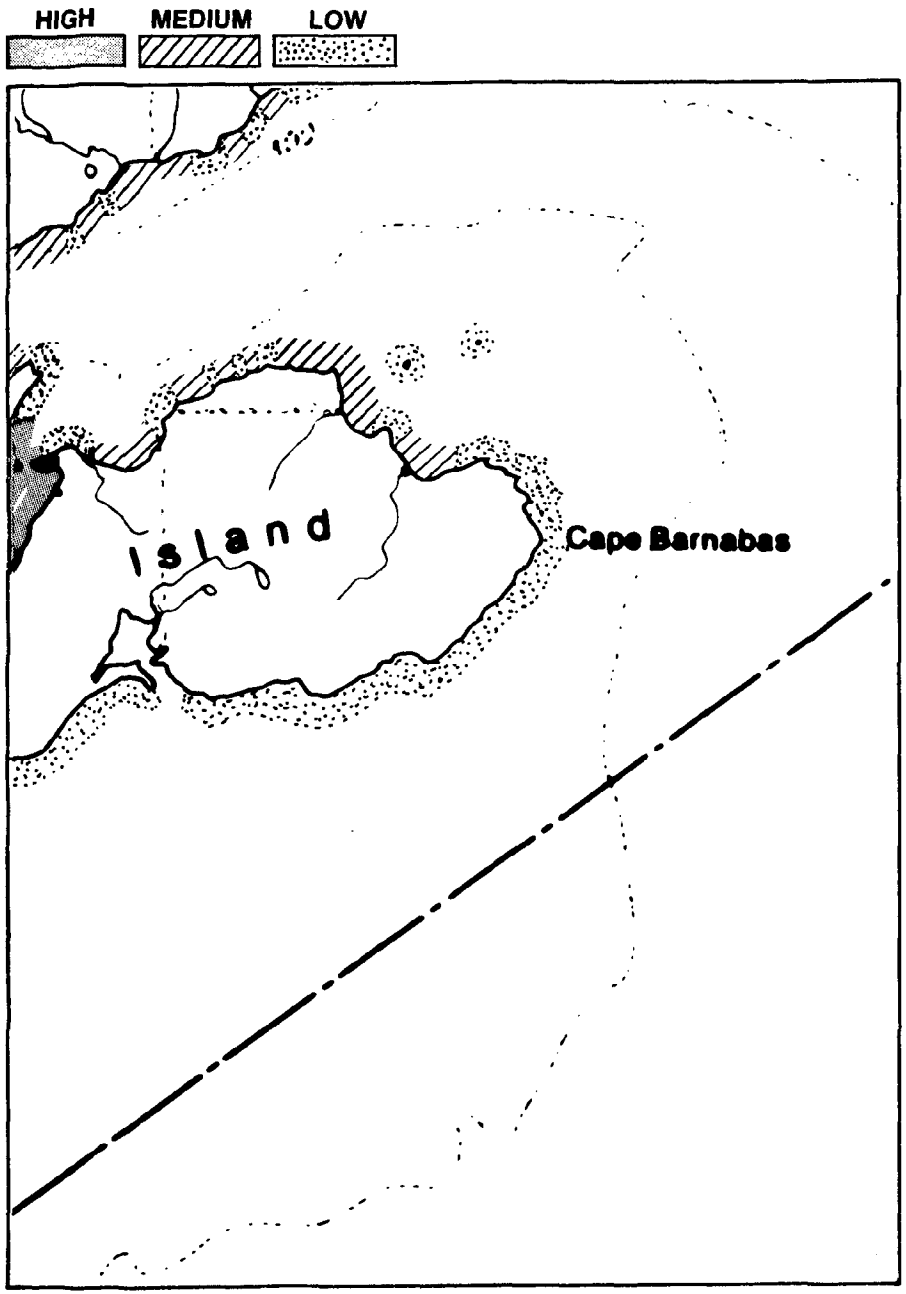


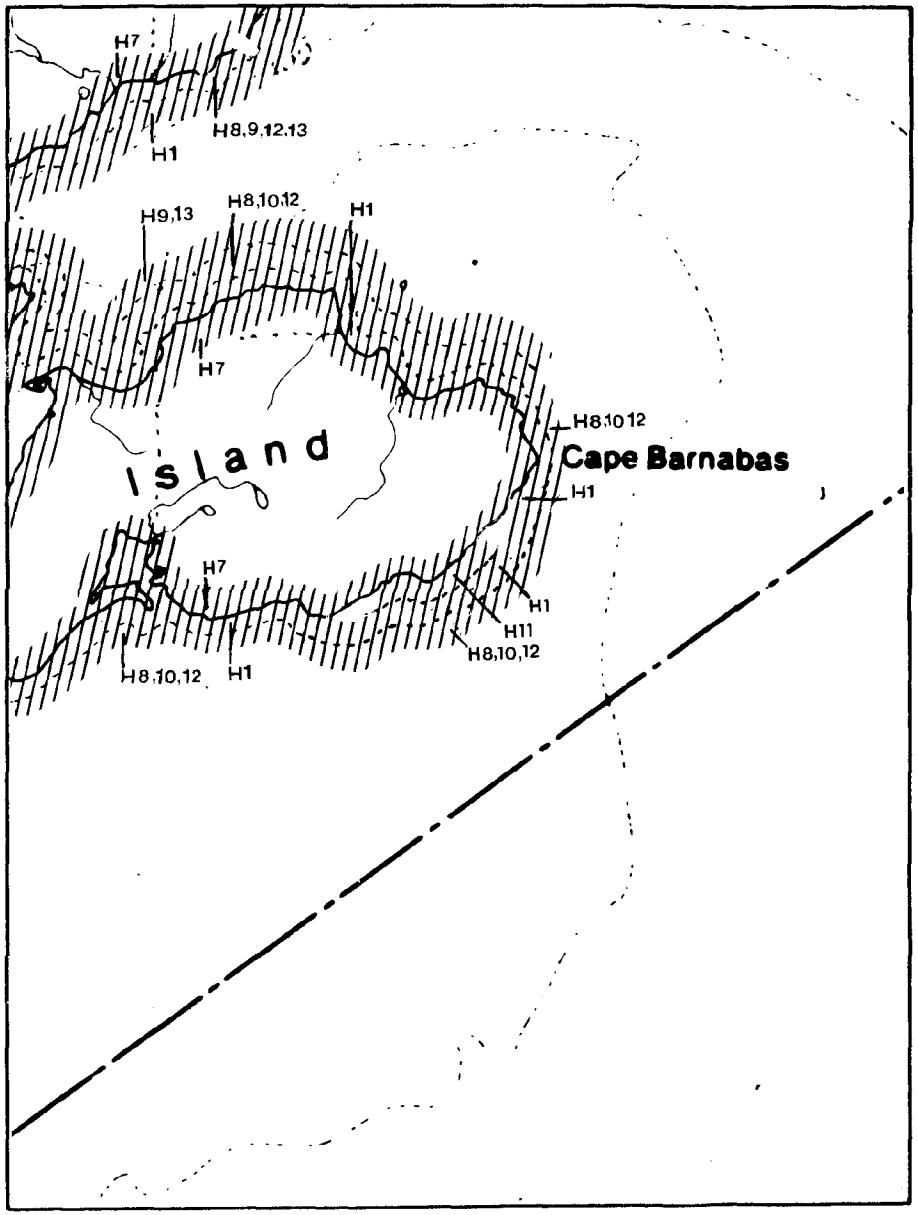


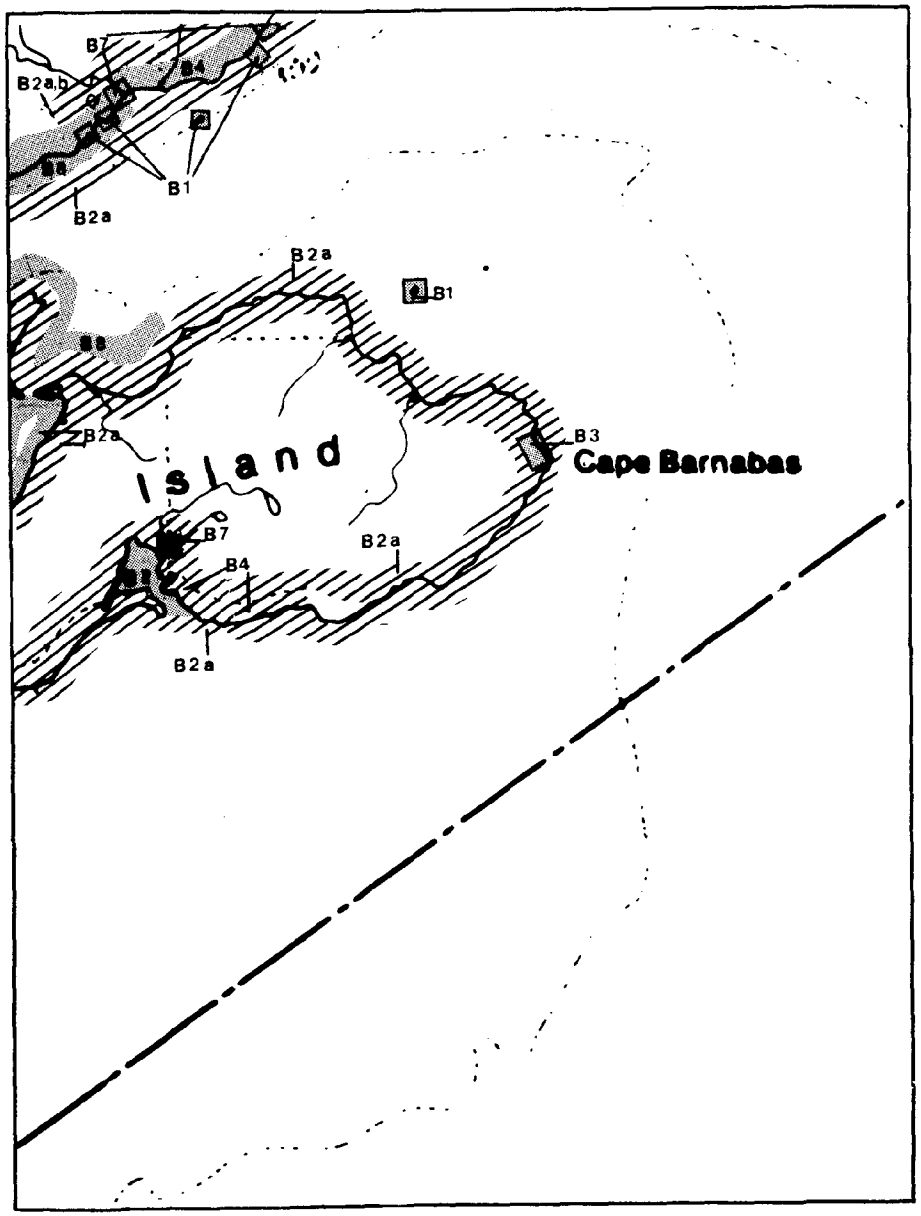
MAP NUMBER 38

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

30 31
37 38 39
42 43


HIGH
MEDIUM
LOW
Island
Cape Barnabas

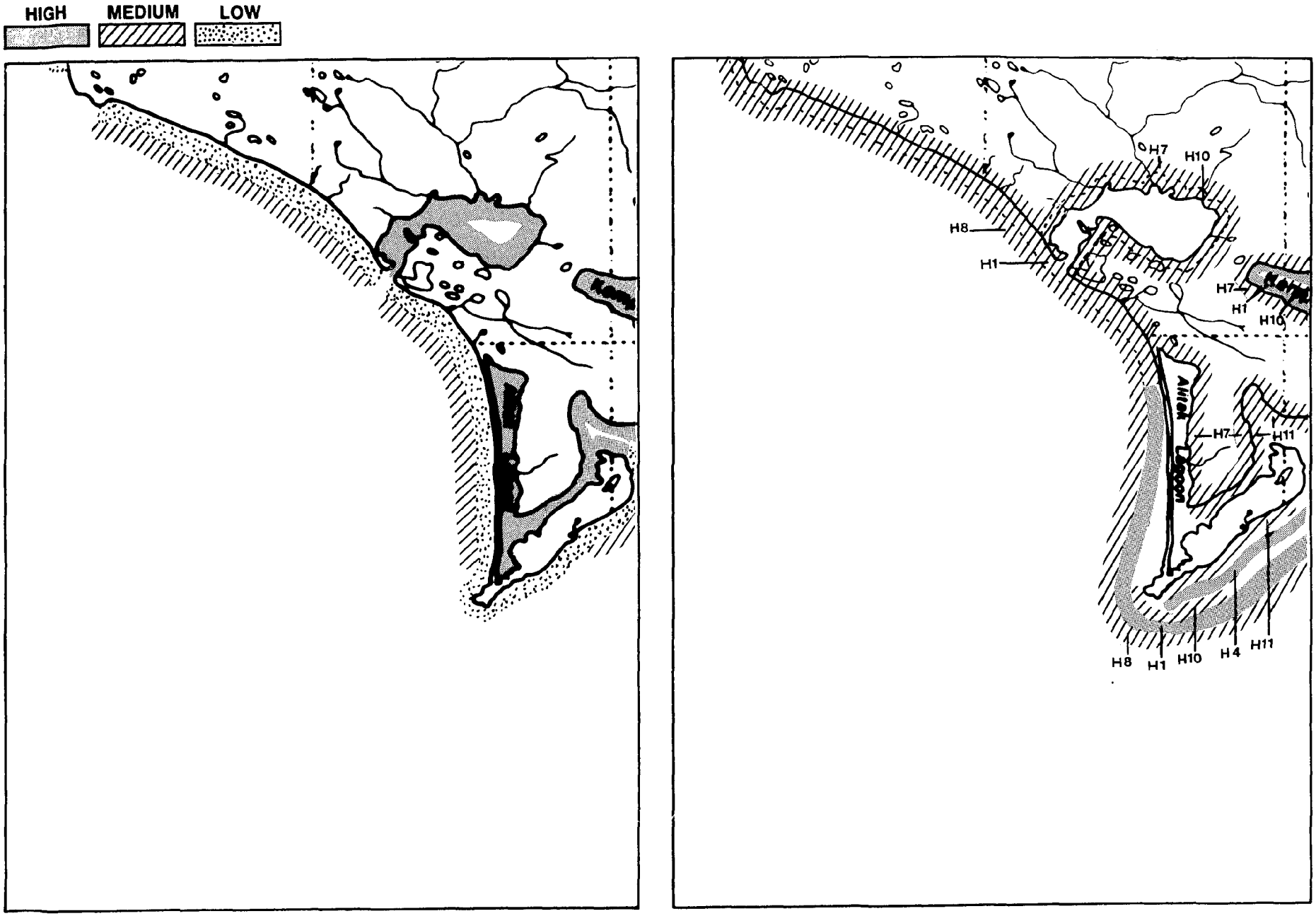

H7
H8,9,12,13
H1
H9,13
H8,10,12
H1
H7
H8,10,12
Island
Cape Barnabas
H1
H7
H1
H11
H8,10,12
H8,10,12
H1



MAP NUMBER 39

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2 Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3 Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4 Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5 Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6 Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7 Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon							—	—	—	—		
H-2 Roe Herring												
H-3 Crab		—	—	—	—	—	—	—	—	—	—	—
H-4 Shrimp												
H-5 Halibut							—	—				
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer	—											—
H-8 Marine Mammal	—	—	—	—	—	—	—	—	—	—	—	—
H-9 Crab	—	—	—	—	—	—	—	—	—	—	—	—
H-10 Waterfowl	—	—	—	—							—	—
H-11 Clams	—	—	—	—	—	—	—	—	—	—	—	—
H-12 Halibut/Marine Fish	—	—	—	—	—	—	—	—	—	—	—	—
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony						—	—	—	—			
B-2a Waterfowl (overwintering)	—	—	—	—								—
B-2b Waterfowl (summer use)						—	—	—	—			
B-3 Sea Lion Haul-out	—	—	—	—	—	—	—	—	—	—	—	—
B-4 Black Tail Deer	—	—	—	—								—
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)	—	—	—	—								—
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults						—	—	—	—	—		
Salmon - Juveniles						—	—	—	—	—		
Char/Dolly Varden - Adults	—								—	—	—	—
Char/Dolly Varden - Juveniles					—	—	—					
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area						—	—					
B-9 Razor Clam Beach												
B-10 Sea Otters												

31 32
38 39
43


HIGH
MEDIUM
LOW
H7
H10
H8
H1
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H1
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H7
H11
H8
H1
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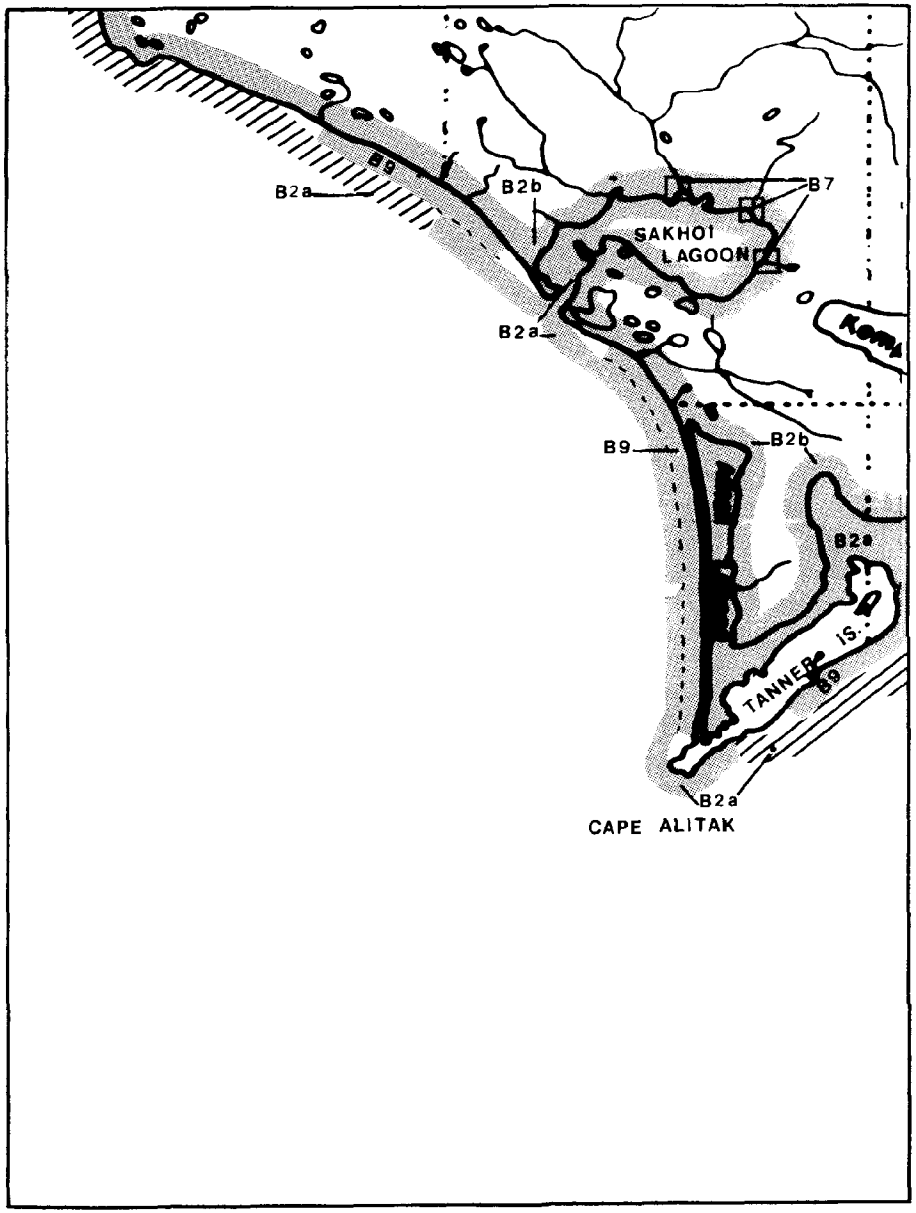
H4
H11

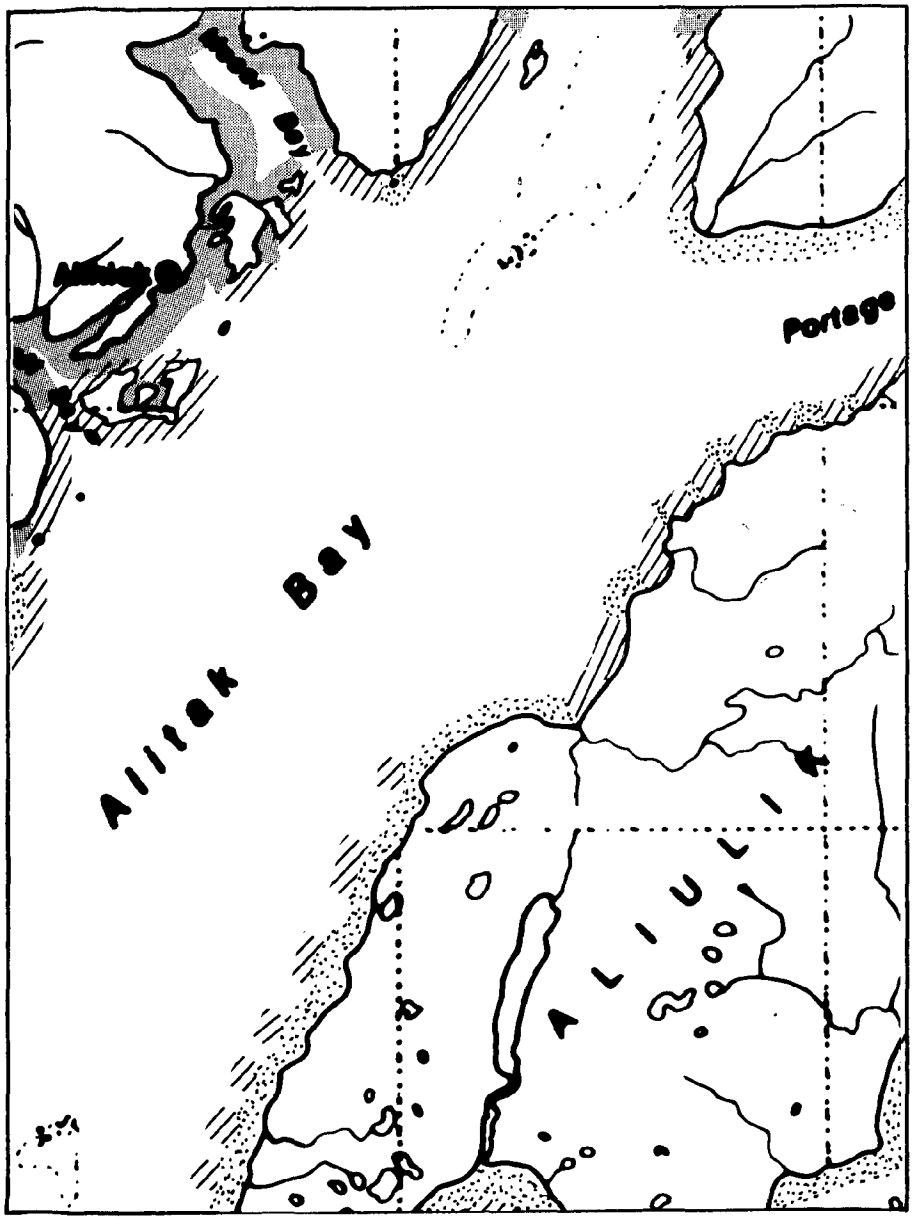


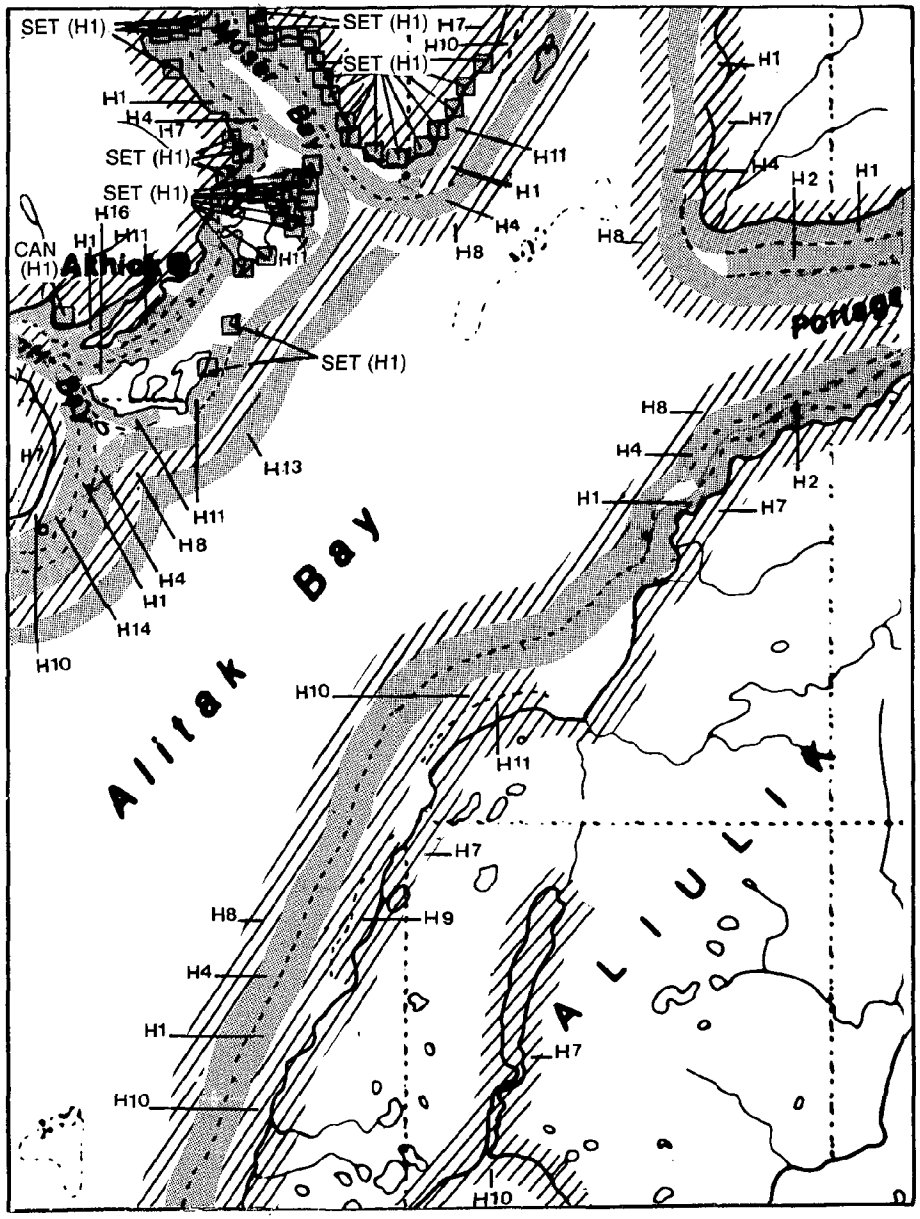
MAP NUMBER 40

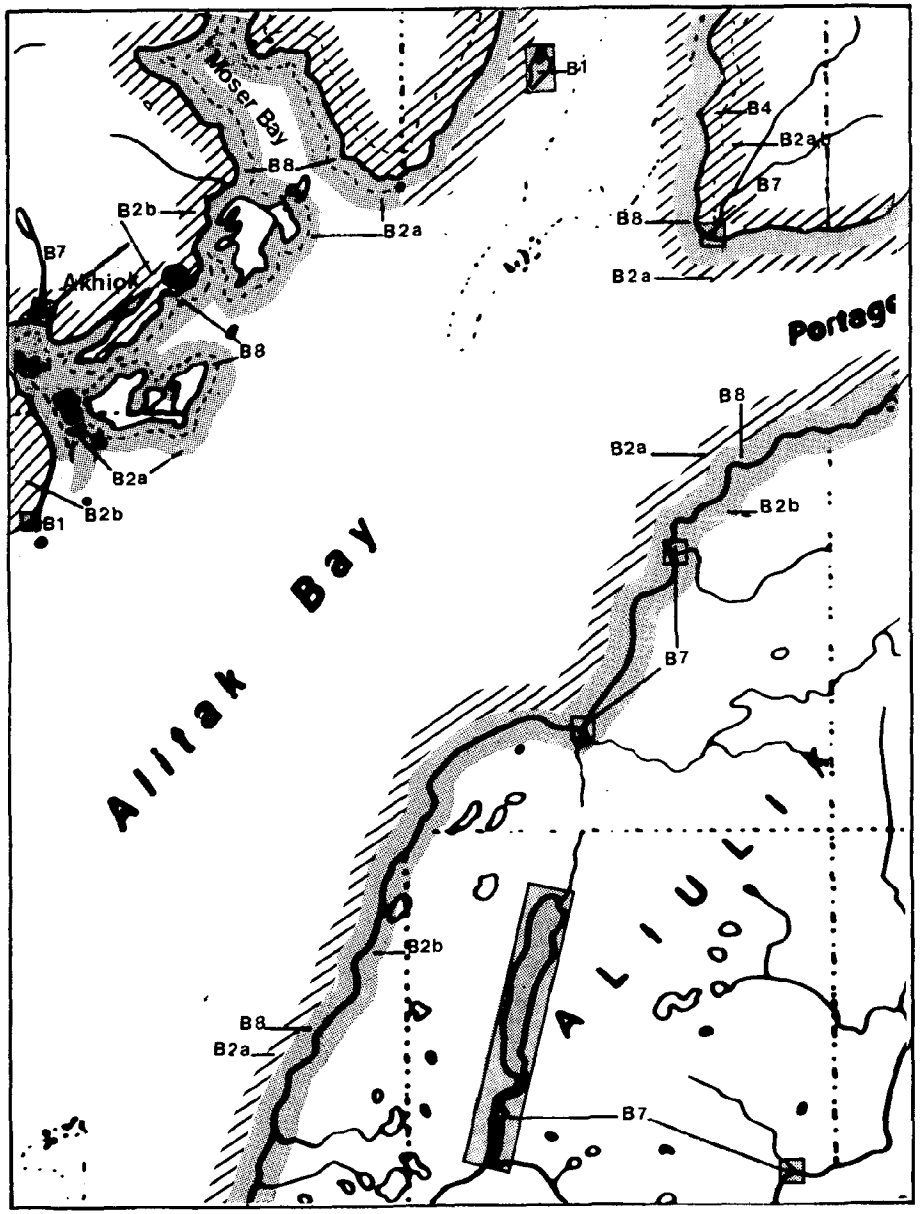
RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

34 35 36
40 41
44 45 46

HIGH MEDIUM LOW





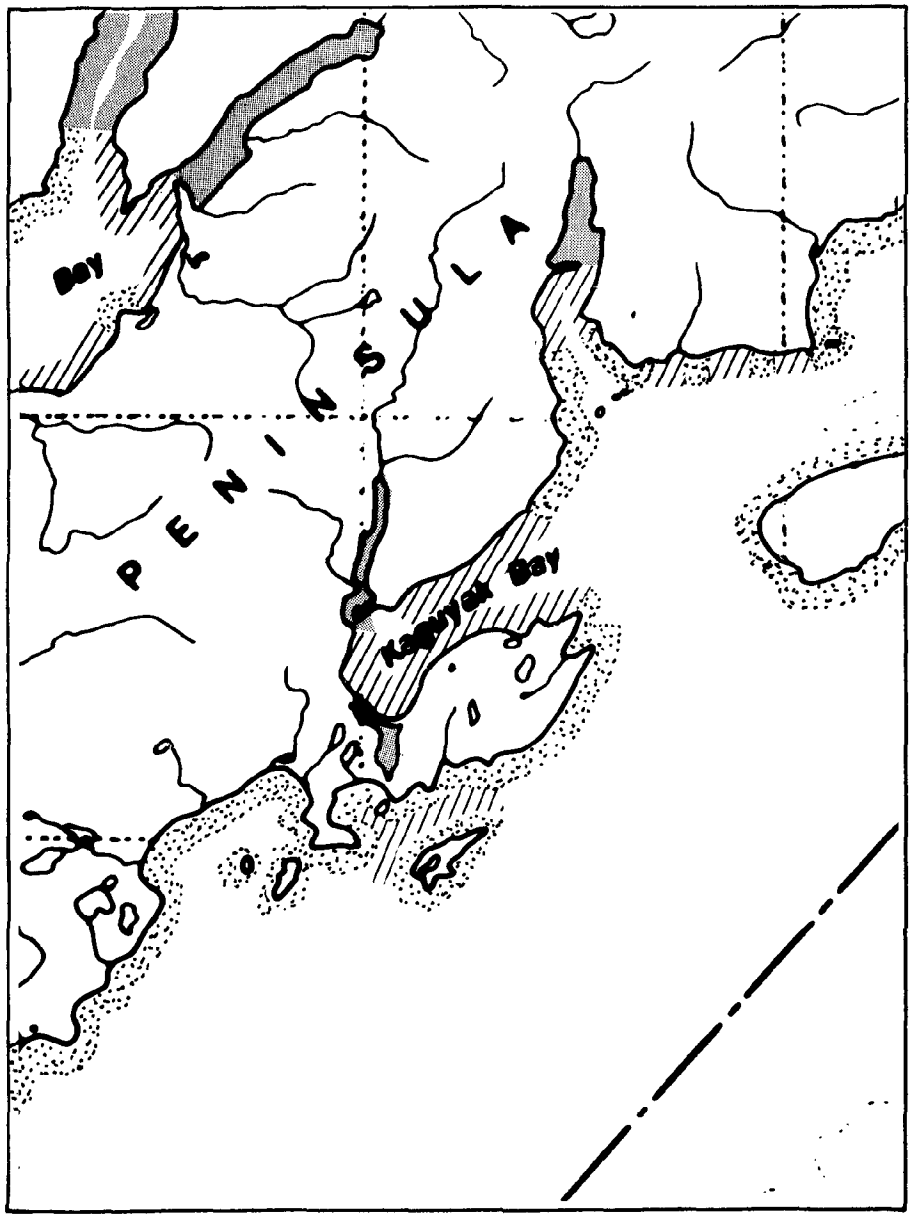


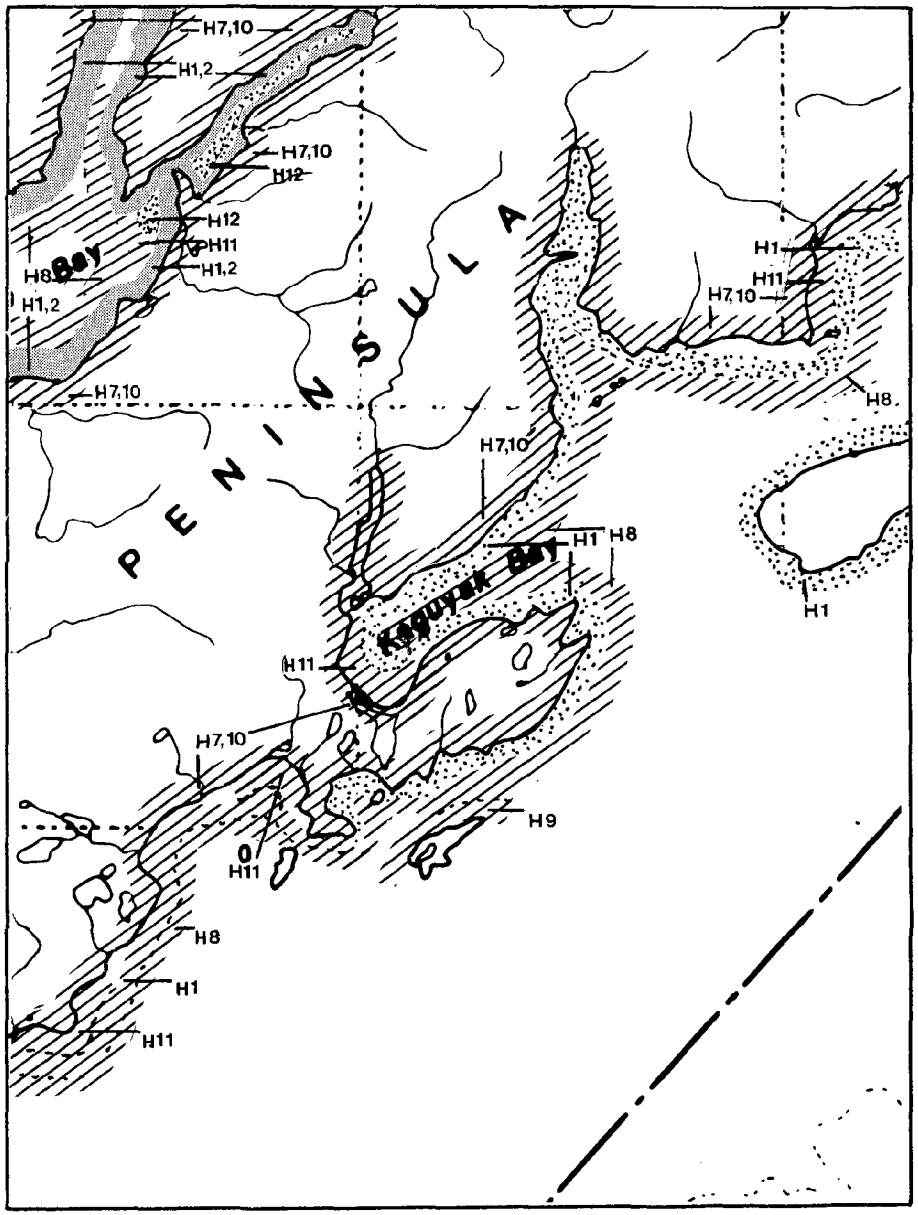
MAP NUMBER 41

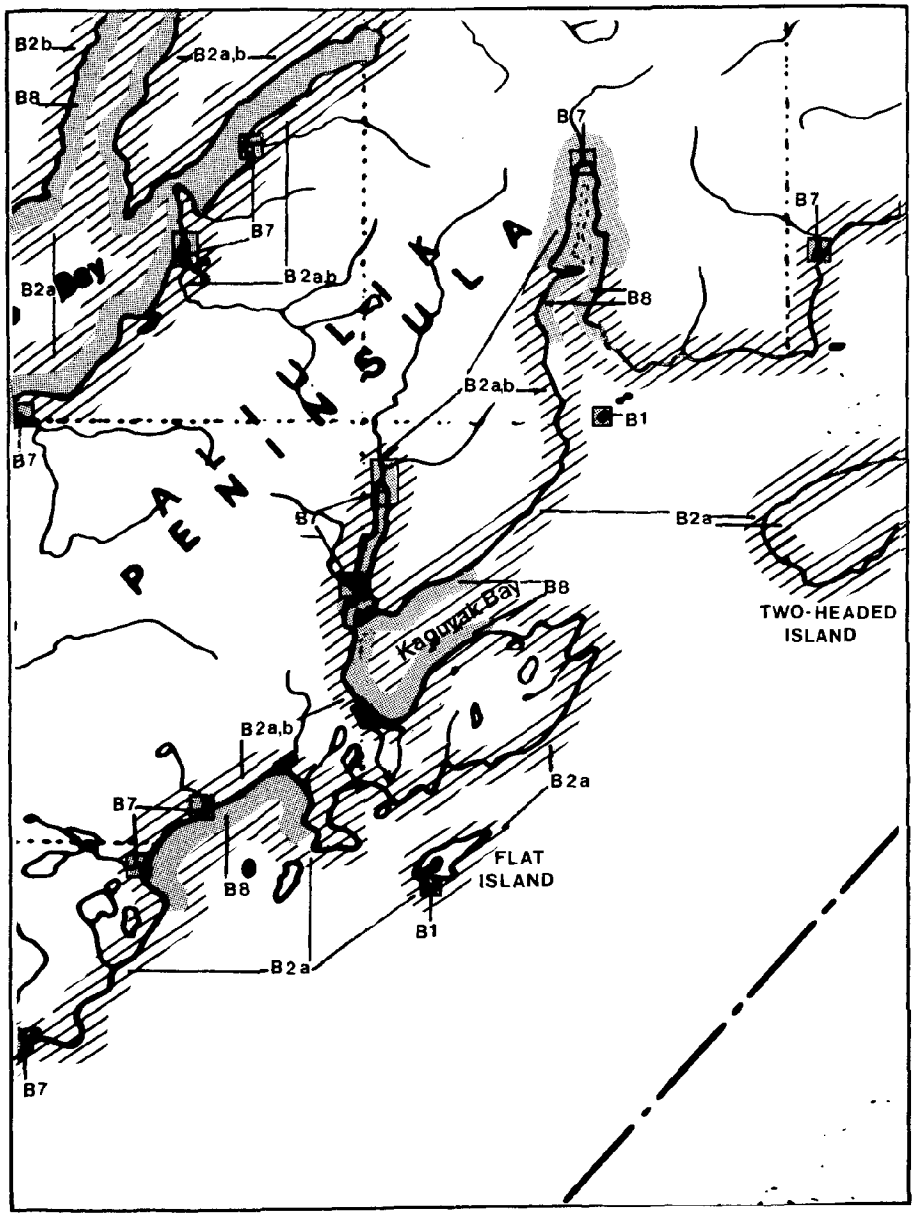
RESOURCE		Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE													
R-1	Rocky Headlands												
R-2	Wave-Cut Platforms												
R-3	Sand Beaches/Exposed Tidal Flats												
R-4	Mixed Sand and Gravel Beaches												
R-5	Gravel Beaches												
R-6	Sheltered Rocky and Gravel Shores												
R-7	Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon												
H-2	Roe Herring												
H-3	Crab												
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer												
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl												
H-11	Clams												
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony												
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer												
B-5	Elk												
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults												
	Salmon - Juveniles												
	Char/Dolly Varden - Adults												
	Char/Dolly Varden - Juveniles												
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area												
B-9	Razor Clam Beach												
B-10	Sea Otters												

35 36
40 41 42
45 46

HIGH MEDIUM LOW



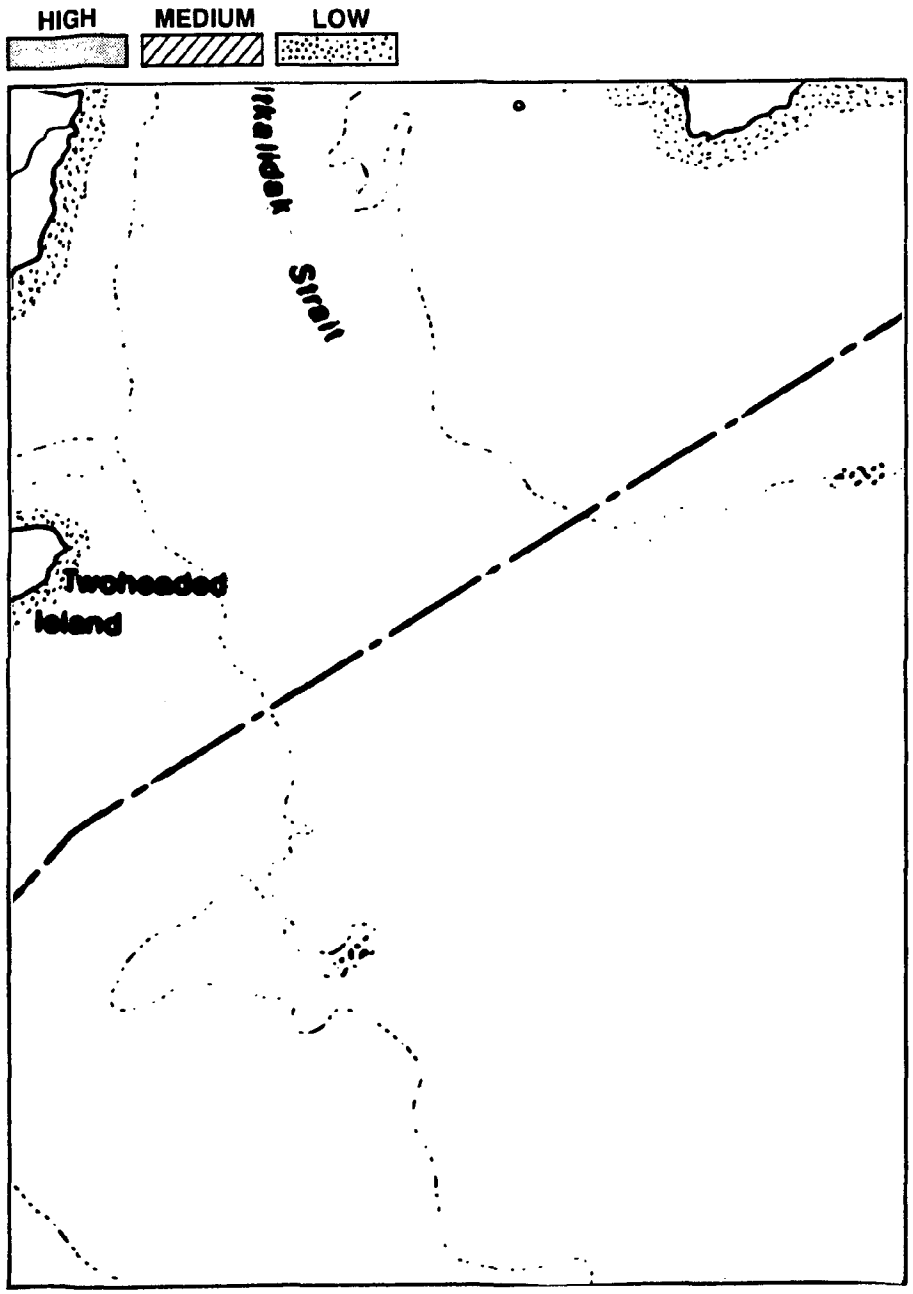


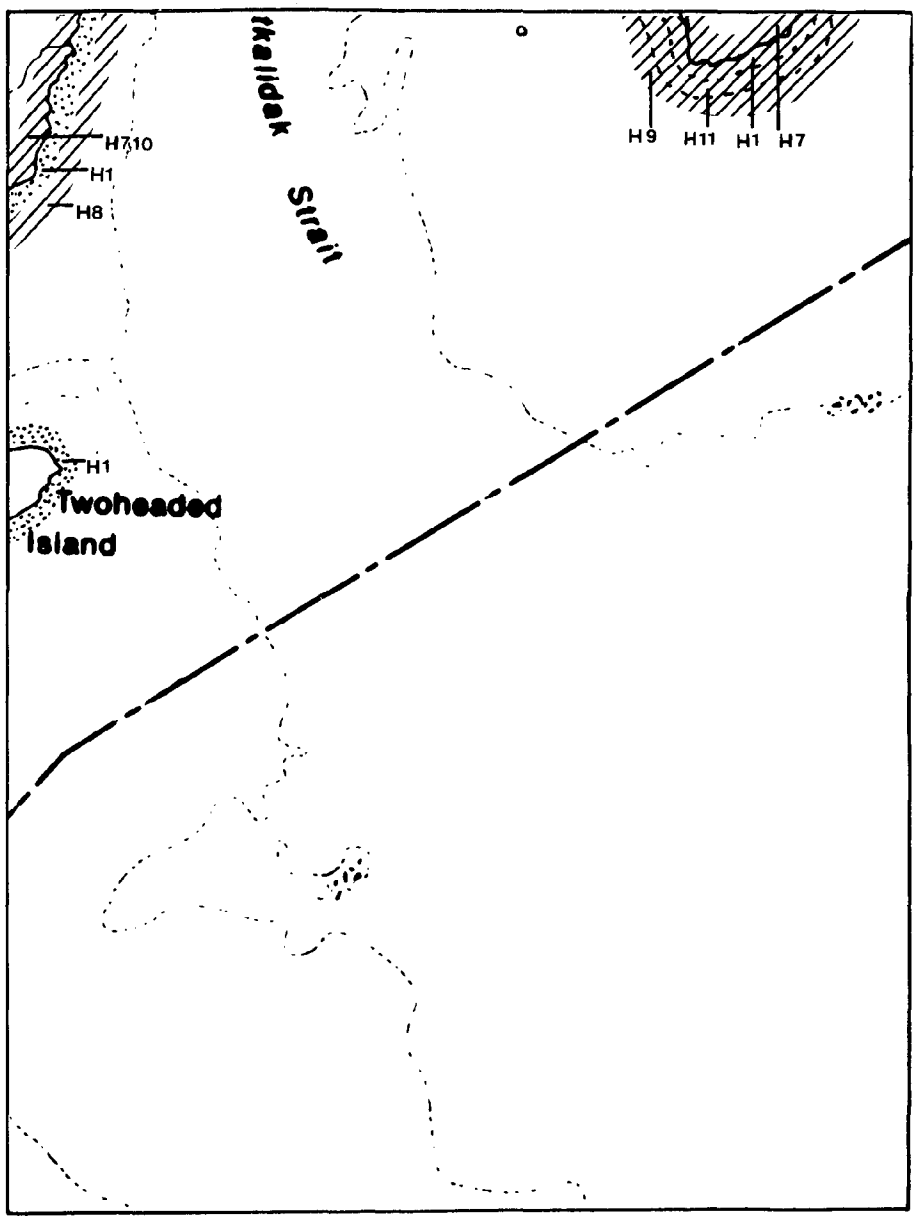


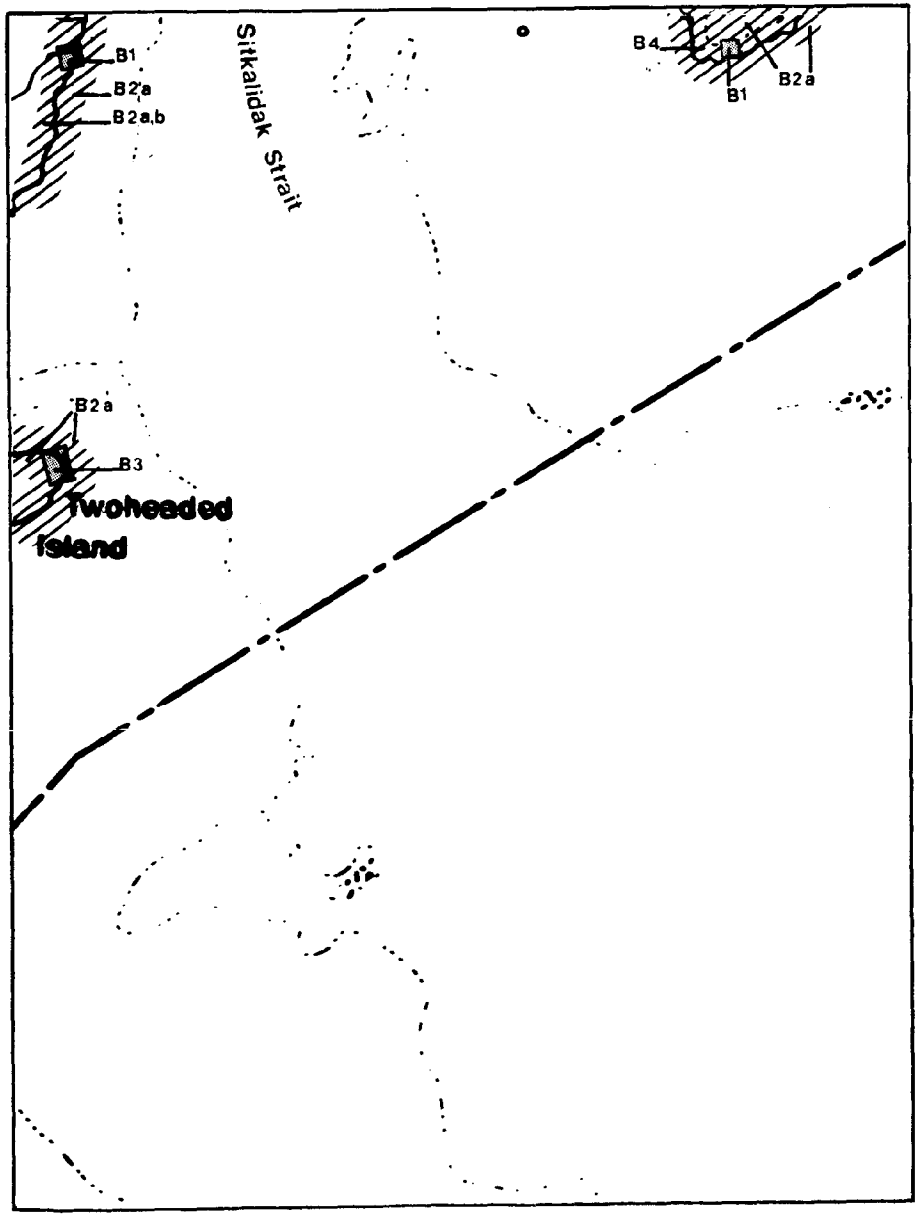
MAP NUMBER 42

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

35 36 37
41 42 43
45 46


HIGH
MEDIUM
LOW
Itkalidak
Strait
Twoheaded
Island


Itkalidak
Strait
H7,10
H1
H8
H1
Twoheaded
Island
H9
H11
H1
H7

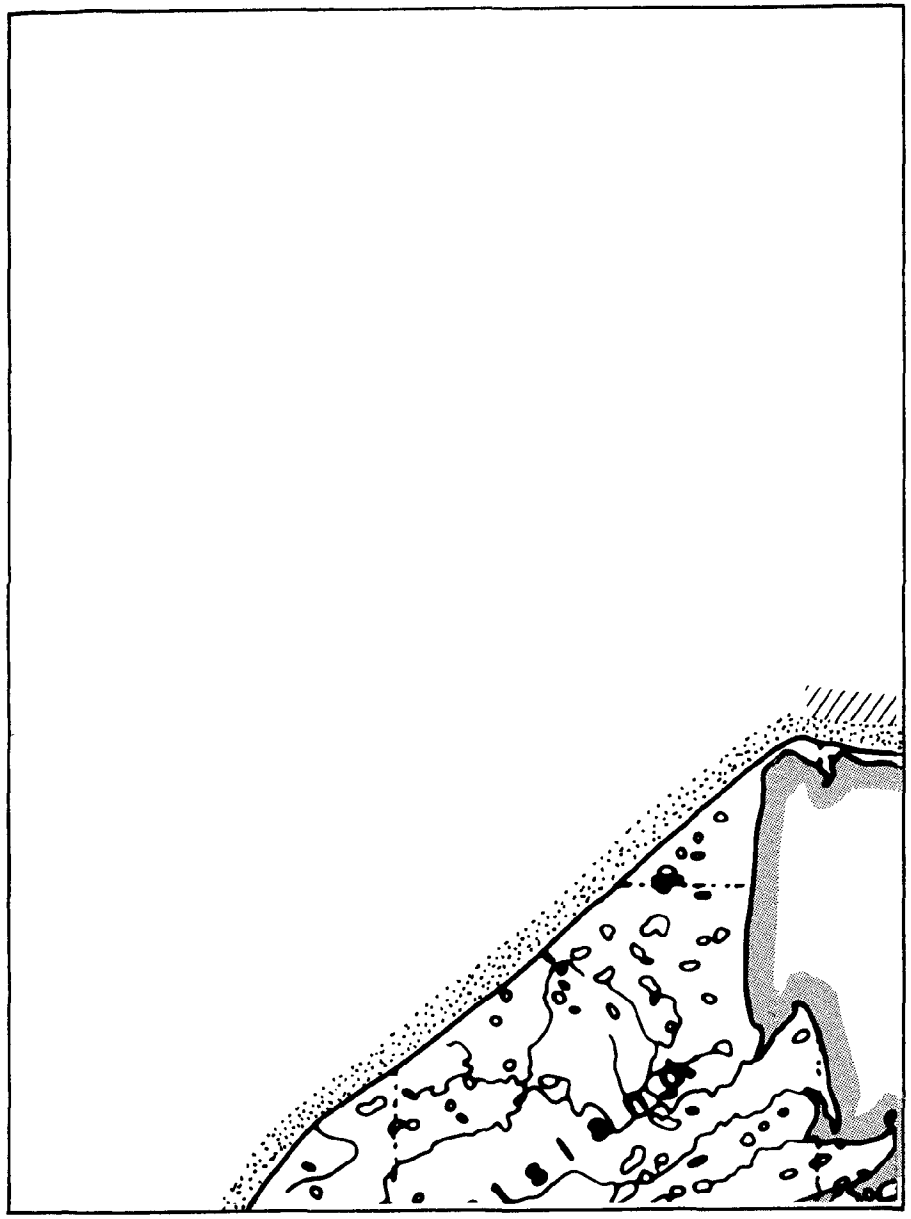


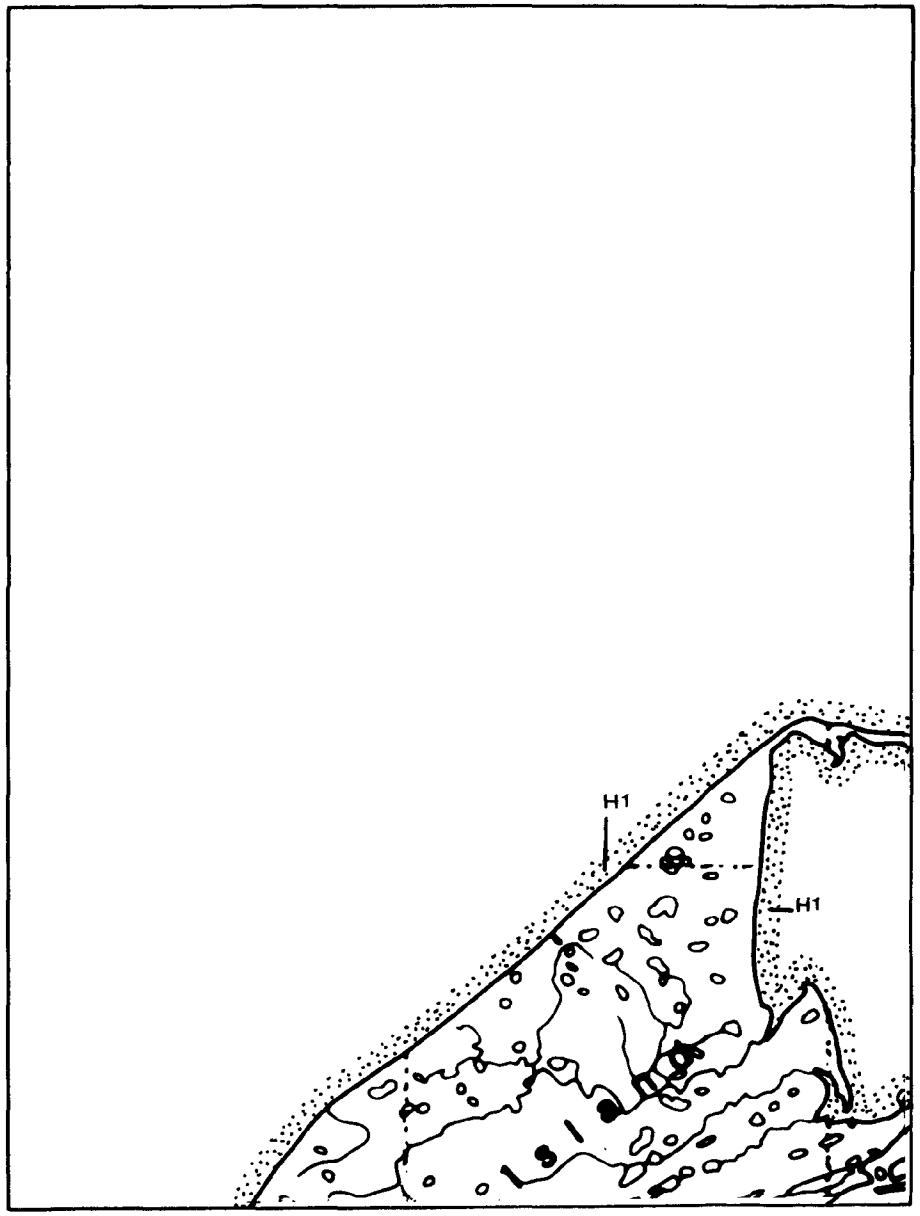
MAP NUMBER 43

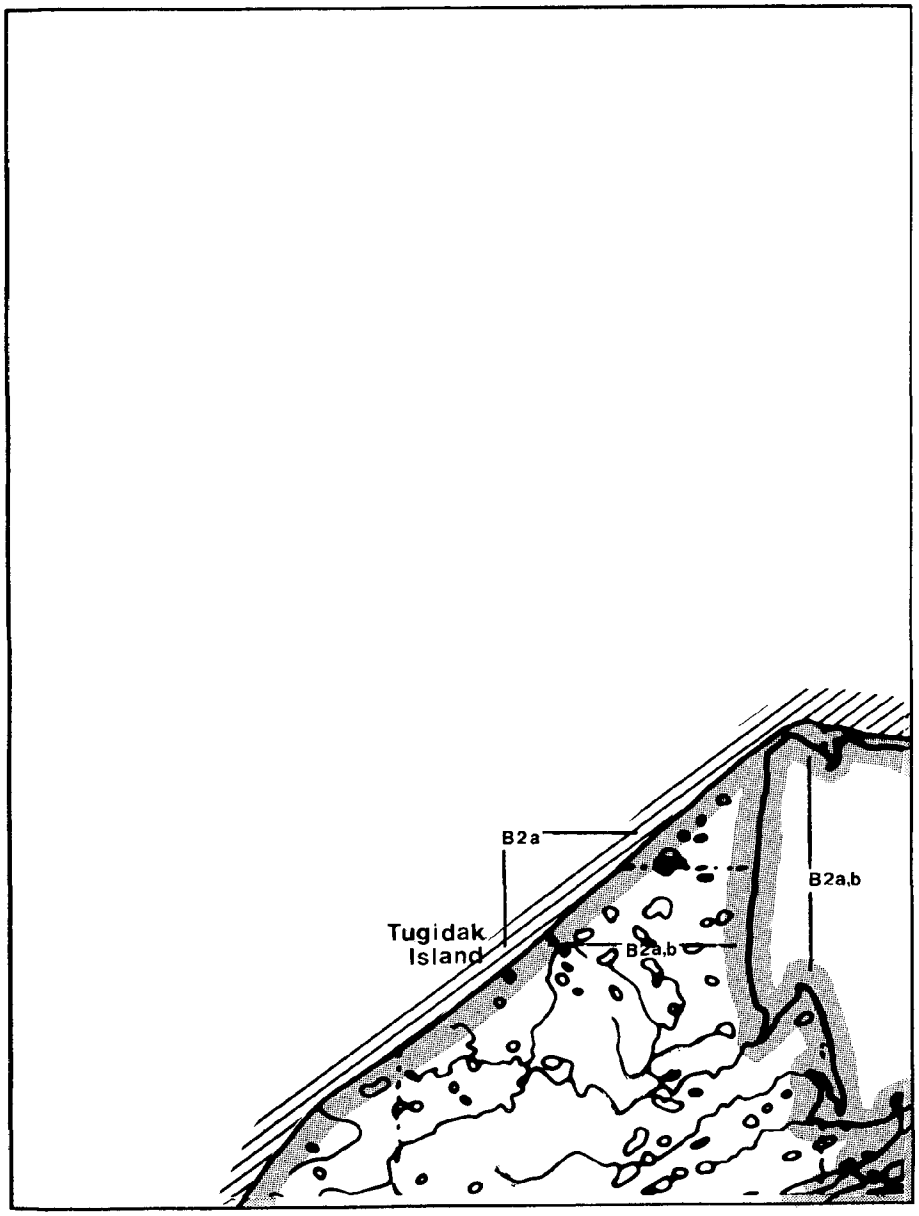
RESOURCE		Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE													
R-1	Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2	Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3	Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4	Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5	Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6	Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7	Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon							—	—	—	—		
H-2	Roe Herring												
H-3	Crab		—	—	—	—	—	—	—	—	—	—	—
H-4	Shrimp												
H-5	Halibut							—	—				
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer	—											—
H-8	Marine Mammal	—	—	—	—	—	—	—	—	—	—	—	—
H-9	Crab	—	—	—	—	—	—	—	—	—	—	—	—
H-10	Waterfowl	—	—	—	—							—	—
H-11	Clams	—	—	—	—	—	—	—	—	—	—	—	—
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony						—	—	—	—	—		
B-2a	Waterfowl (overwintering)	—	—	—	—							—	—
B-2b	Waterfowl (summer use)						—	—	—	—	—		
B-3	Sea Lion Haul-out	—	—	—	—	—	—	—	—	—	—	—	—
B-4	Black Tail Deer	—	—	—	—								—
B-5	Elk												
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)	—	—	—	—							—	—
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults												
	Salmon - Juveniles												
	Char/Dolly Varden - Adults												
	Char/Dolly Varden - Juveniles												
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area												
B-9	Razor Clam Beach												
B-10	Sea Otters												

36 37 38 39
42 43
46

HIGH MEDIUM LOW





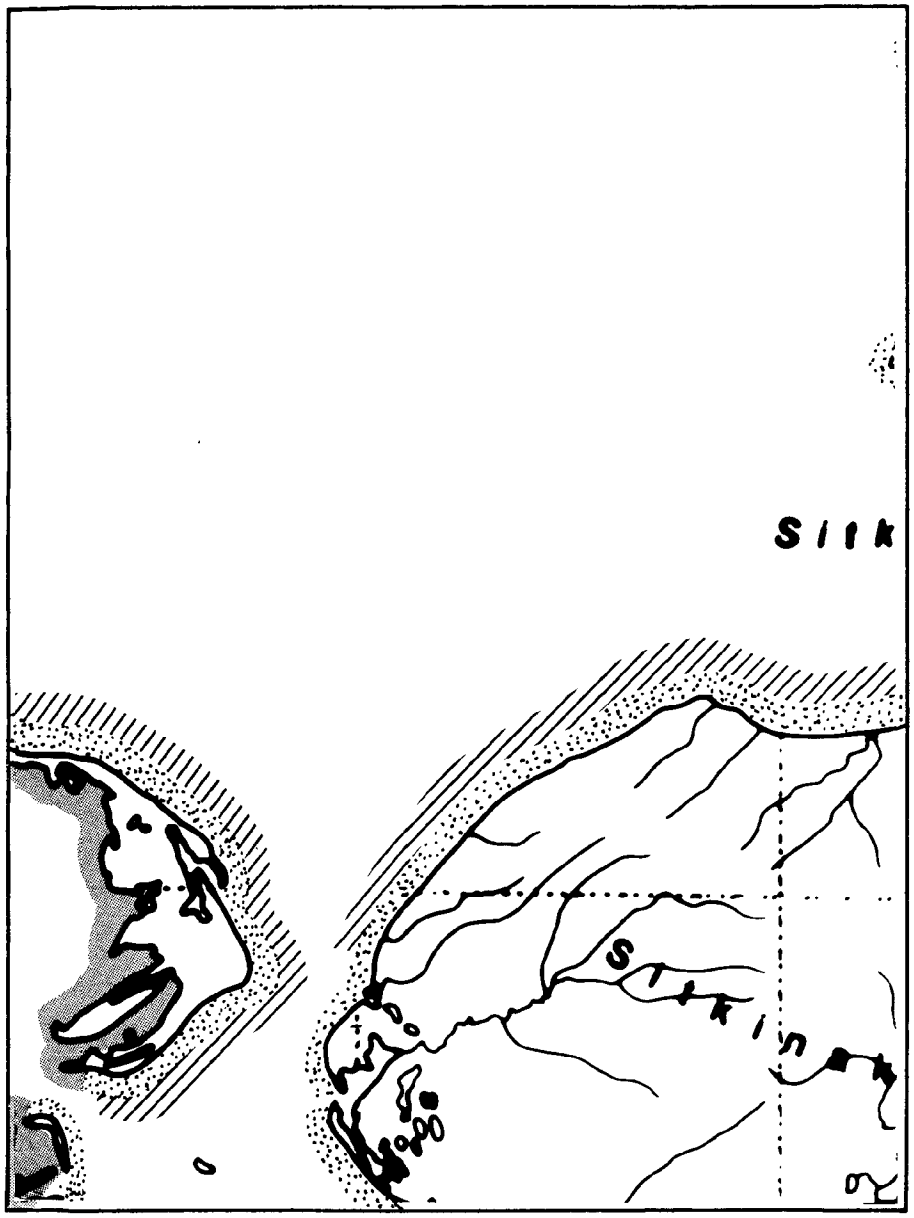


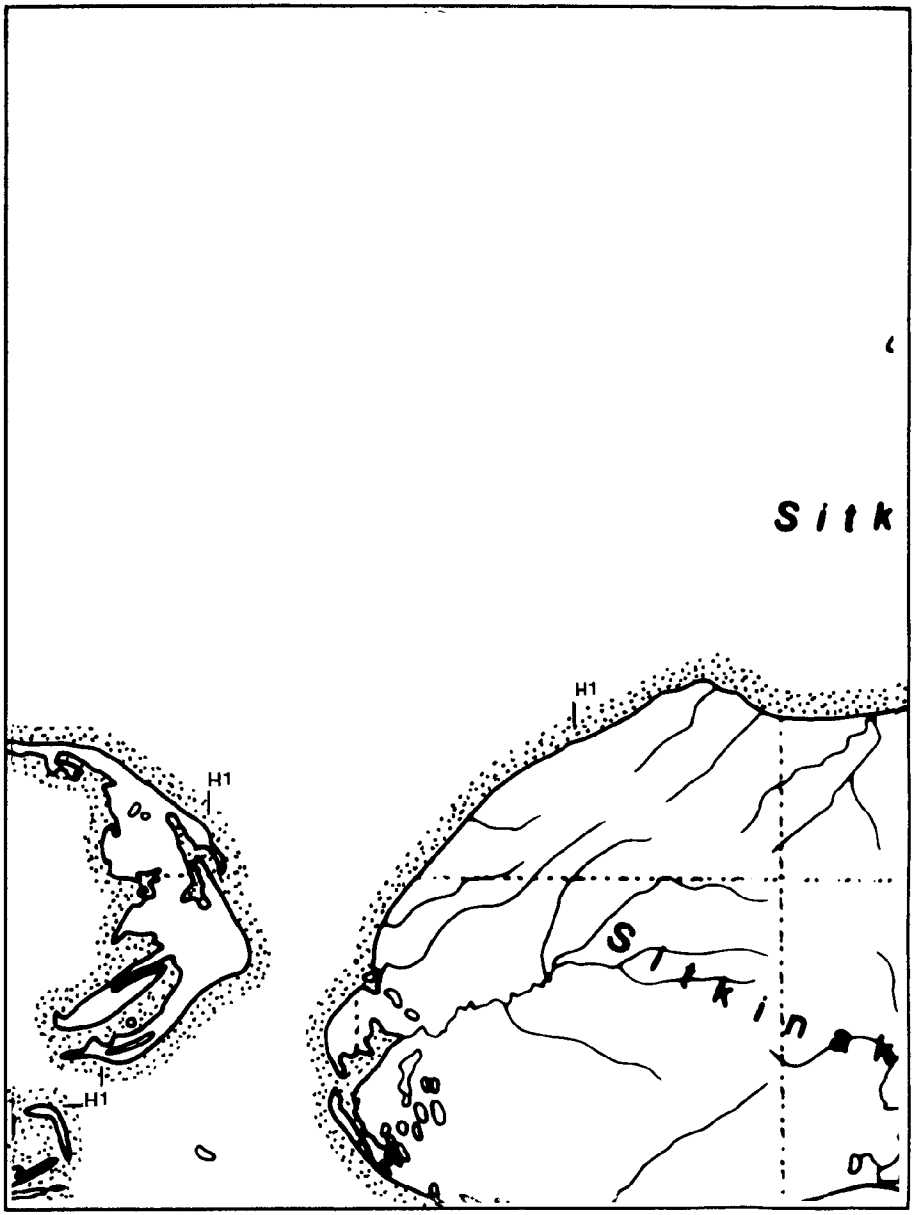
MAP NUMBER 44

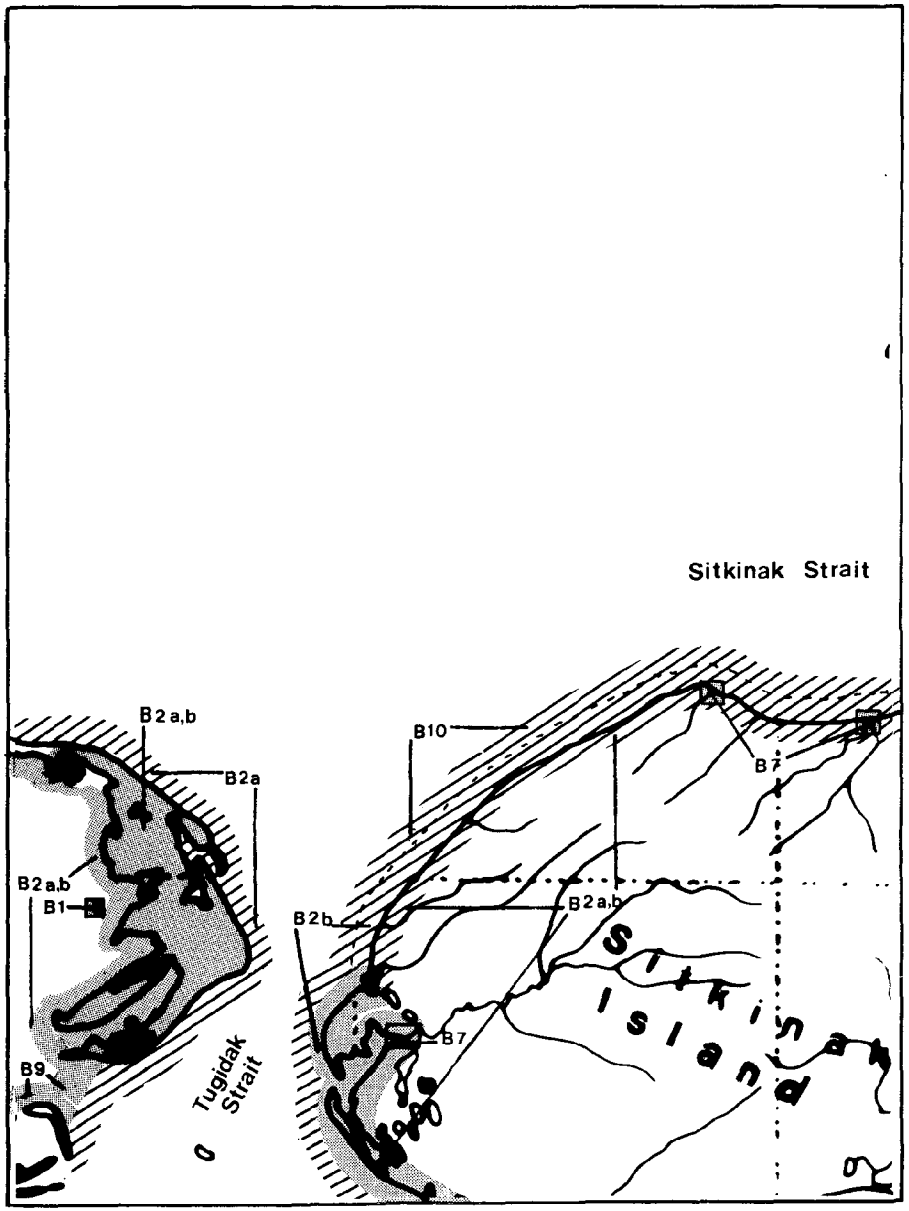
RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

40 41
44 45 46
47 48 49

HIGH MEDIUM LOW



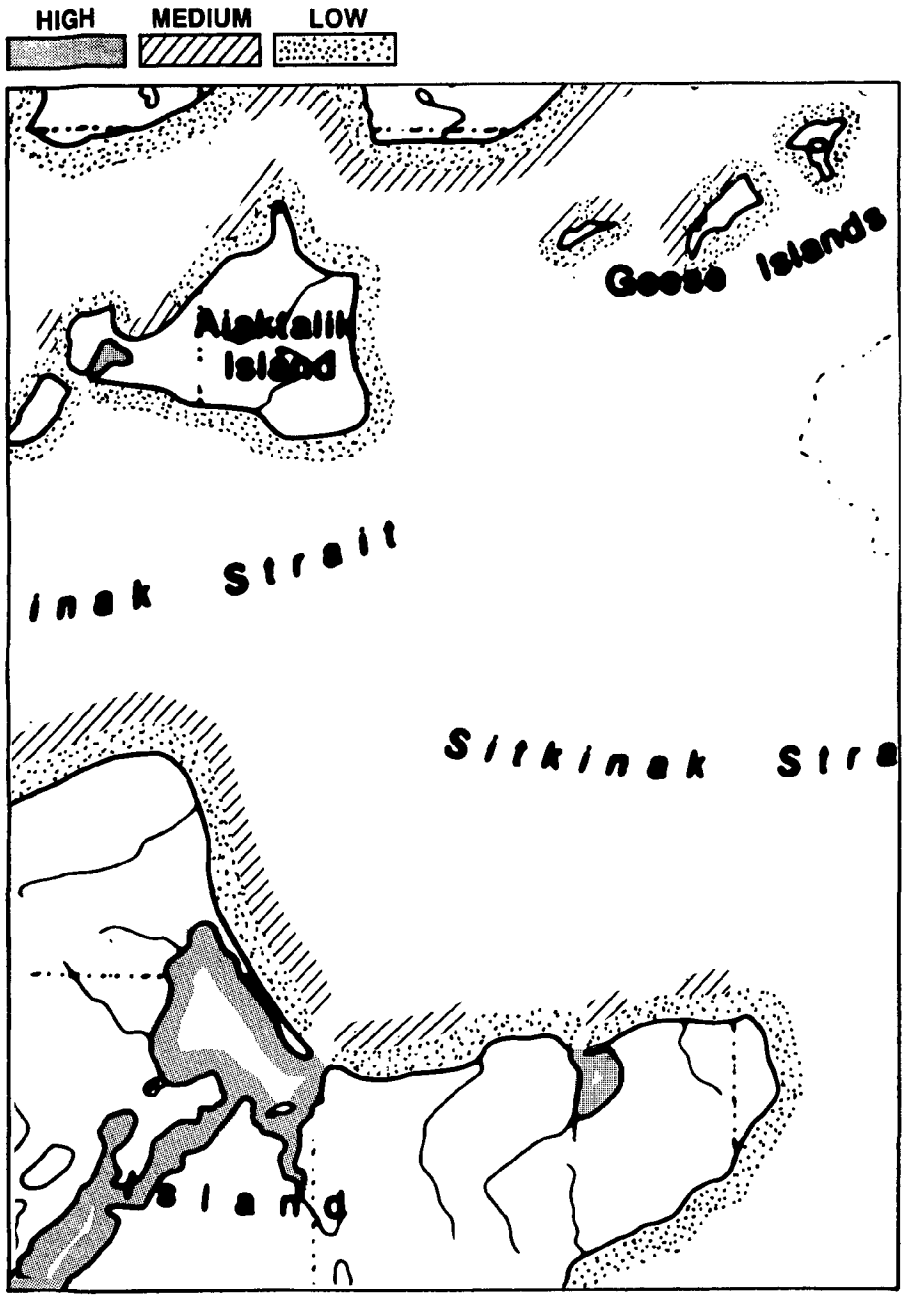


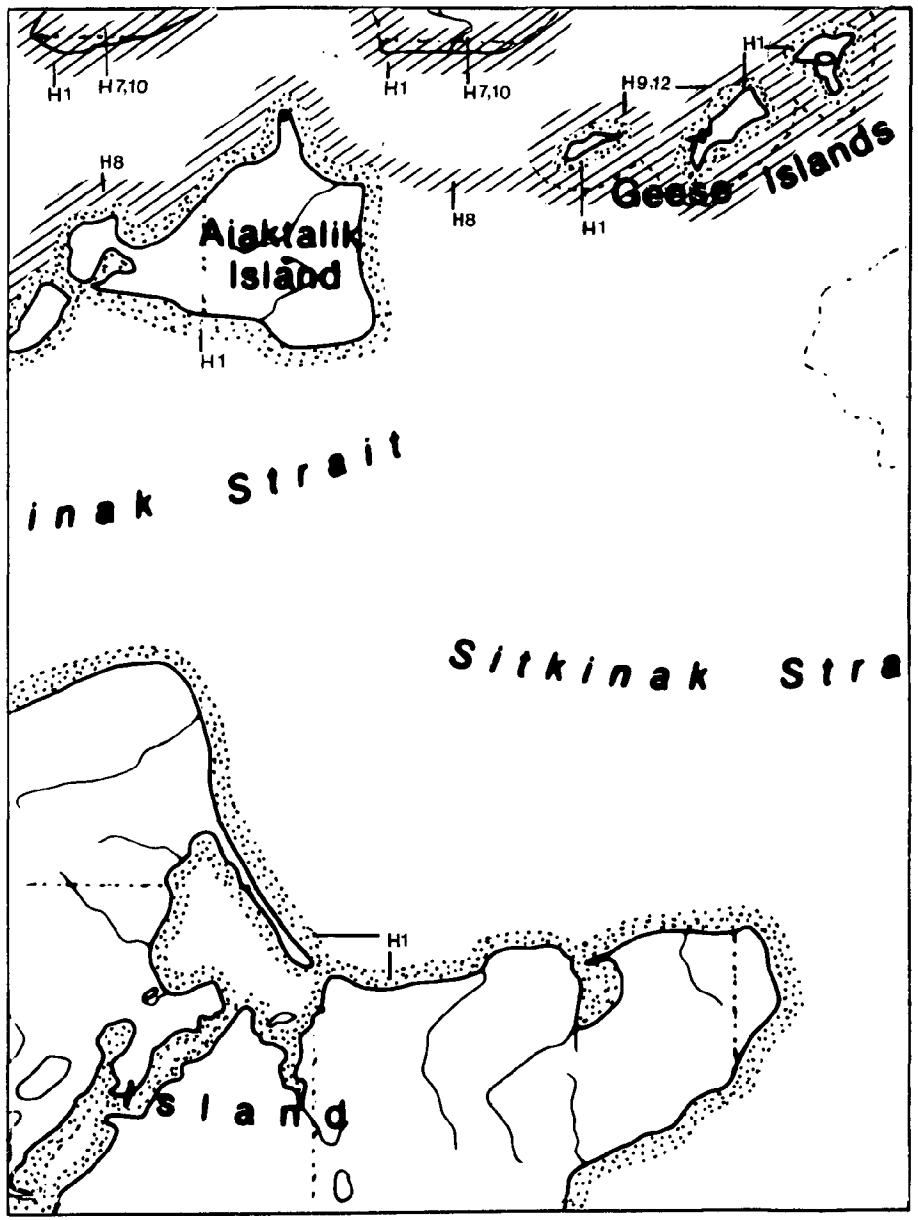


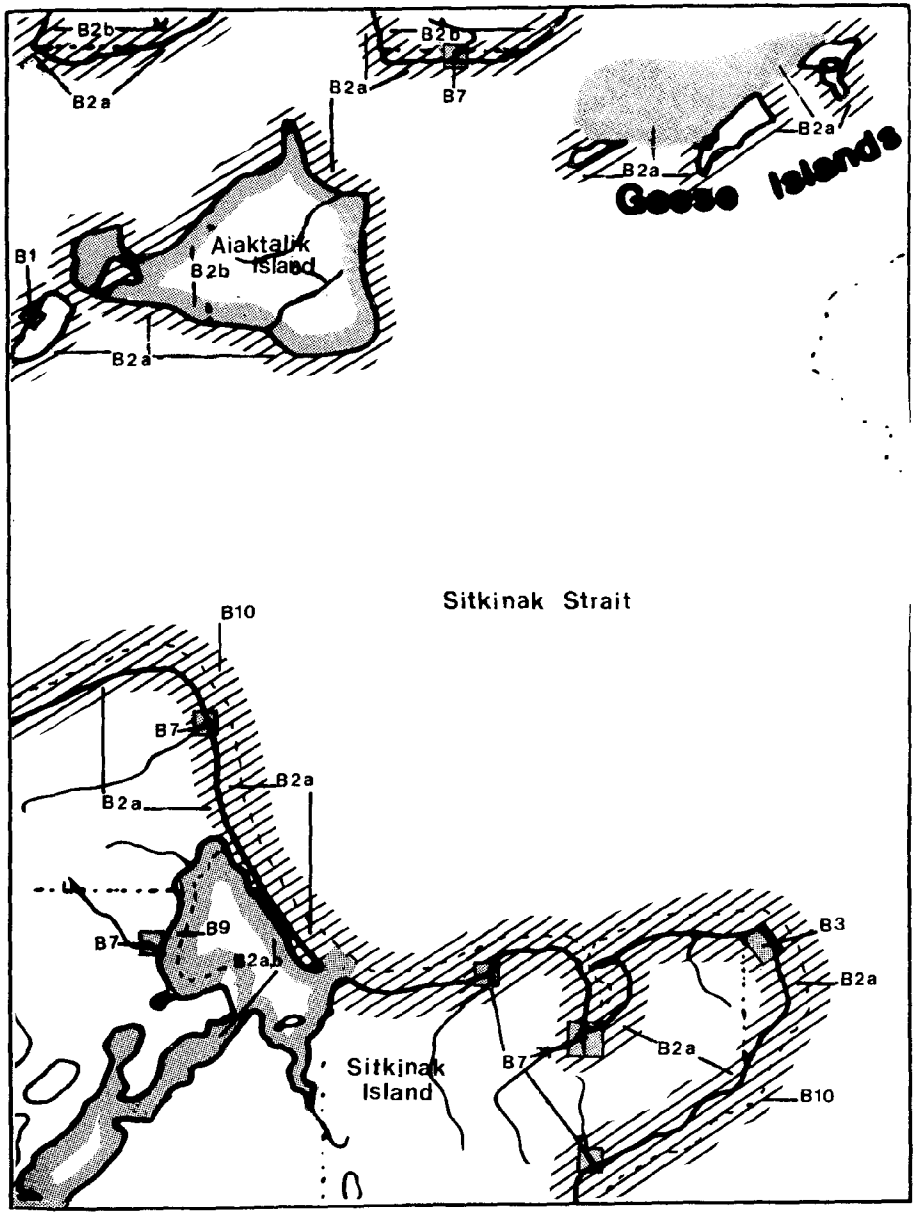
MAP NUMBER 45

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

40 41
44 45 46
48 49


HIGH
MEDIUM
LOW
Geese Islands
Aiaktalik Island
inak Strait
Sitkinak Stra
sland

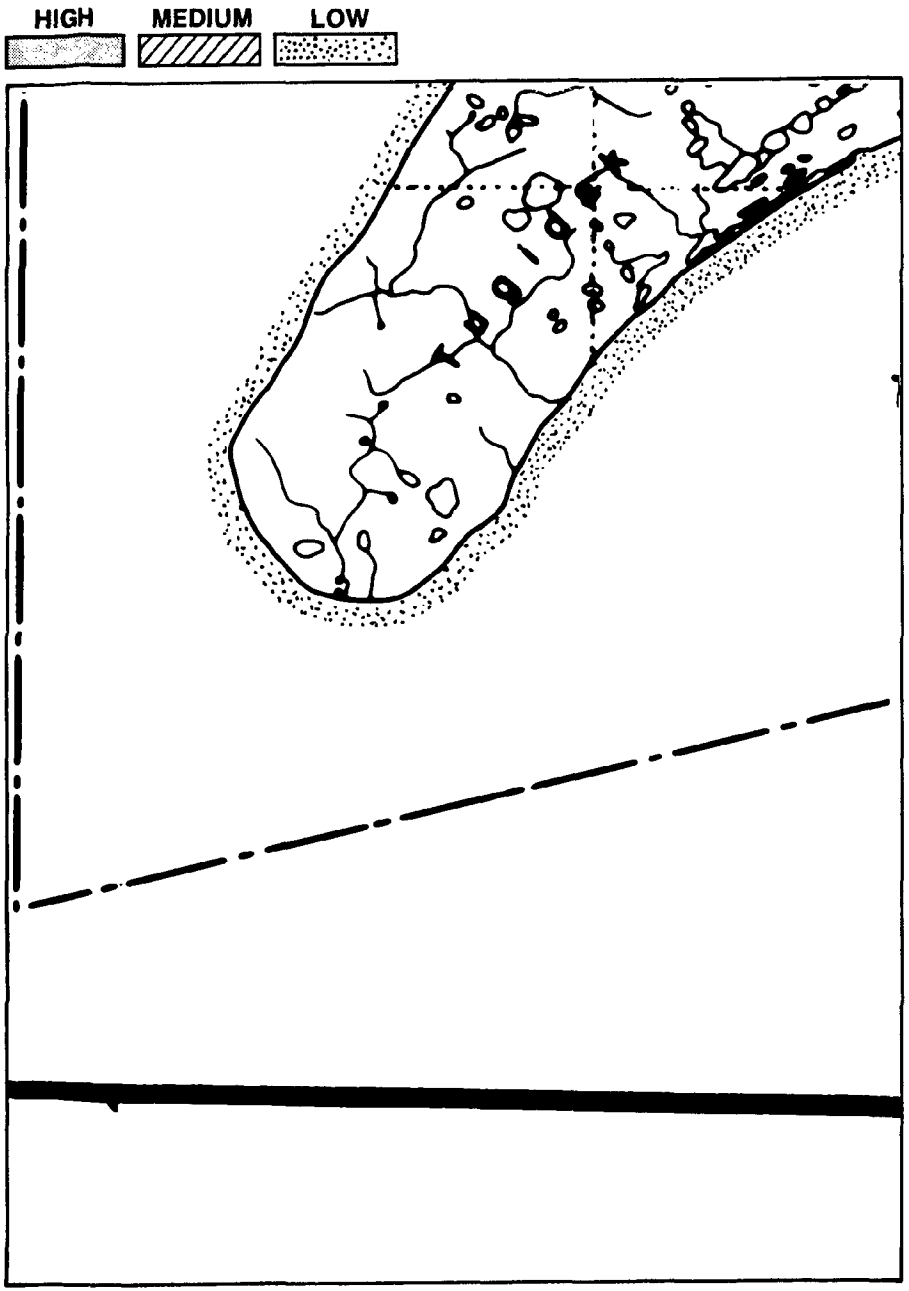

H1
H7,10
H1
H7,10
H9,12
H1
H8
H8
H1
Geese Islands
Aiaktalik Island
H1
inak Strait
Sitkinak Stra
H1
sland

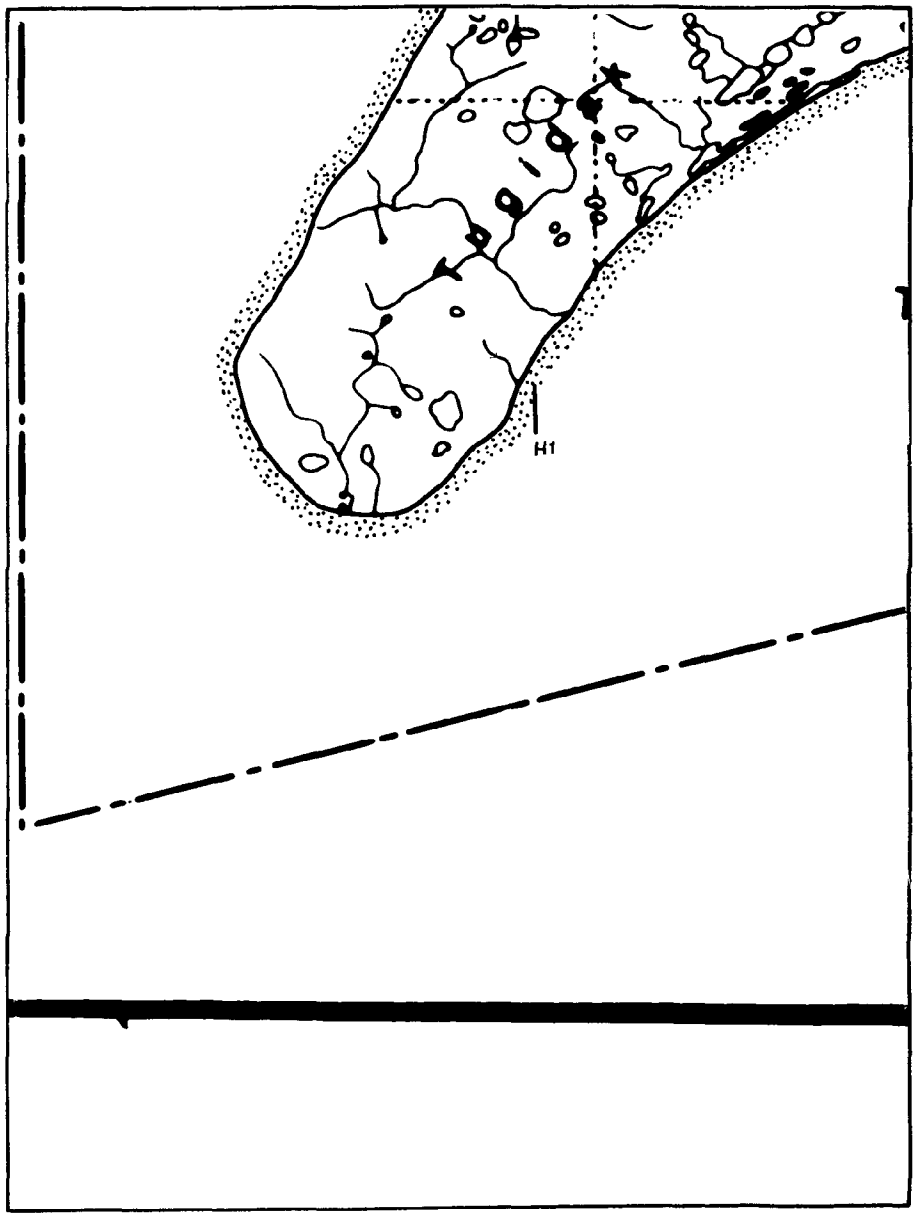


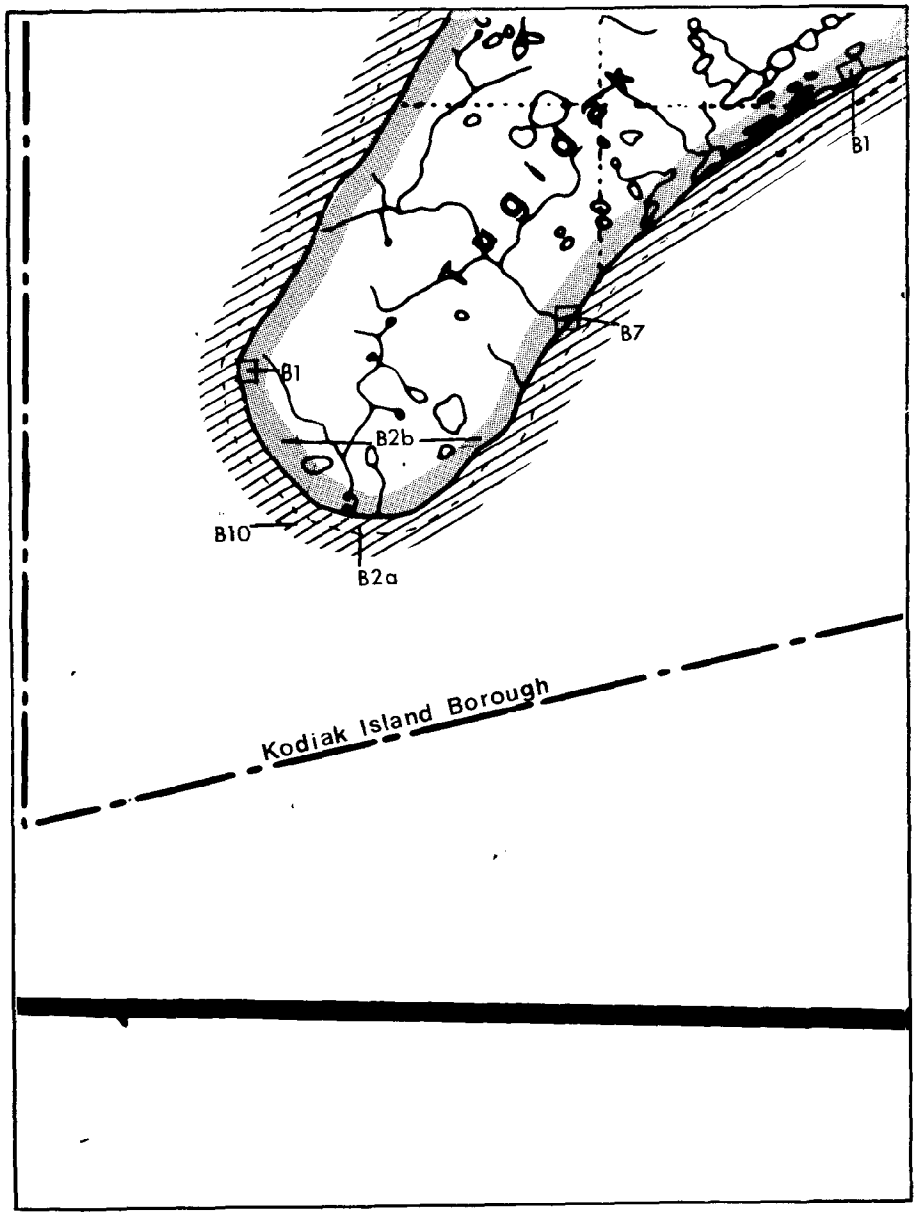
MAP NUMBER 46

RESOURCE		Winter			Spring			Summer			Fall		
		D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE													
R-1	Rocky Headlands	—	—	—	—	—	—	—	—	—	—	—	—
R-2	Wave-Cut Platforms	—	—	—	—	—	—	—	—	—	—	—	—
R-3	Sand Beaches/Exposed Tidal Flats	—	—	—	—	—	—	—	—	—	—	—	—
R-4	Mixed Sand and Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-5	Gravel Beaches	—	—	—	—	—	—	—	—	—	—	—	—
R-6	Sheltered Rocky and Gravel Shores	—	—	—	—	—	—	—	—	—	—	—	—
R-7	Protected Estuarine Tidal Flats and Marshes	—	—	—	—	—	—	—	—	—	—	—	—
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon							—	—	—	—		
H-2	Roe Herring												
H-3	Crab						—	—	—	—	—	—	
H-4	Shrimp												
H-5	Halibut							—	—				
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer	—											—
H-8	Marine Mammal	—	—	—	—	—	—	—	—	—	—	—	—
H-9	Crab	—	—	—	—	—	—	—	—	—	—	—	—
H-10	Waterfowl	—	—	—	—							—	—
H-11	Clams	—	—	—	—	—	—	—	—	—	—	—	—
H-12	Halibut/Marine Fish	—	—	—	—	—	—	—	—	—	—	—	—
H-13	Salmon	—	—	—	—	—	—	—	—	—	—	—	—
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony						—	—	—	—	—		
B-2a	Waterfowl (overwintering)	—	—	—	—							—	—
B-2b	Waterfowl (summer use)						—	—	—	—	—		
B-3	Sea Lion Haul-out	—	—	—	—	—	—	—	—	—	—	—	—
B-4	Black Tail Deer	—	—	—	—	—	—	—	—	—	—	—	—
B-5	Elk	—	—	—	—	—	—	—	—	—	—	—	—
B-6	Brown Bear	—	—	—	—	—	—	—	—	—	—	—	—
Offshore													
B-2a	Waterfowl (overwintering)	—	—	—	—								—
B-2b	Waterfowl (summer use)					—	—	—	—				
B-7	Anadromous Fish Streams												
	Salmon - Adults						—	—	—	—	—	—	
	Salmon - Juveniles	—	—	—	—	—	—	—	—	—	—	—	—
	Char/Dolly Varden - Adults	—	—	—	—	—	—	—	—	—	—	—	—
	Char/Dolly Varden - Juveniles	—	—	—	—	—	—	—	—	—	—	—	—
	Steelhead - Adults	—	—	—	—	—	—	—	—	—	—	—	—
	Steelhead - Juveniles	—	—	—	—	—	—	—	—	—	—	—	—
B-8	Herring Spawning Area	—	—	—	—	—	—	—	—	—	—	—	—
B-9	Razor Clam Beach	—	—	—	—	—	—	—	—	—	—	—	—
B-10	Sea Otters	—	—	—	—	—	—	—	—	—	—	—	—

40 41 42 43
44 45 46
47 48 49


HIGH
MEDIUM
LOW

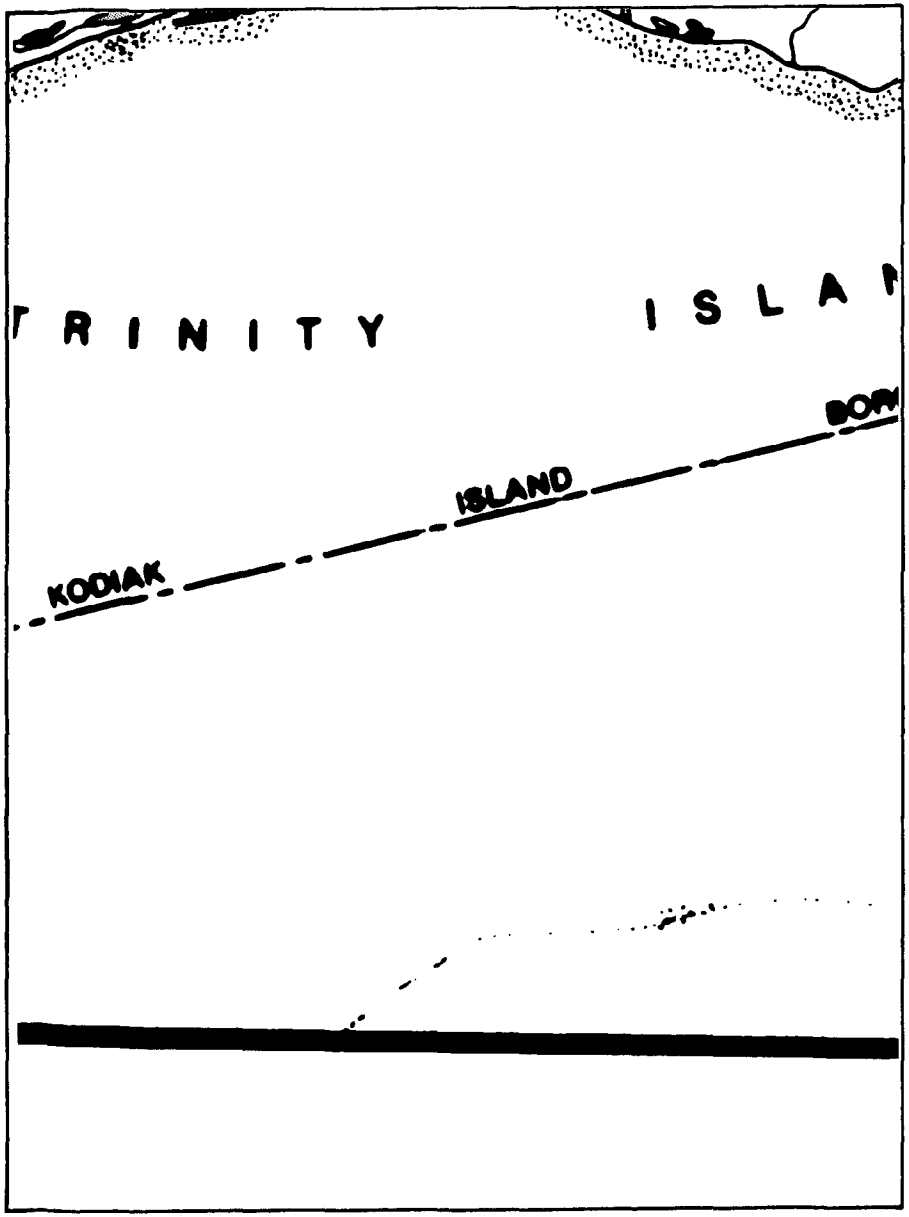

H1

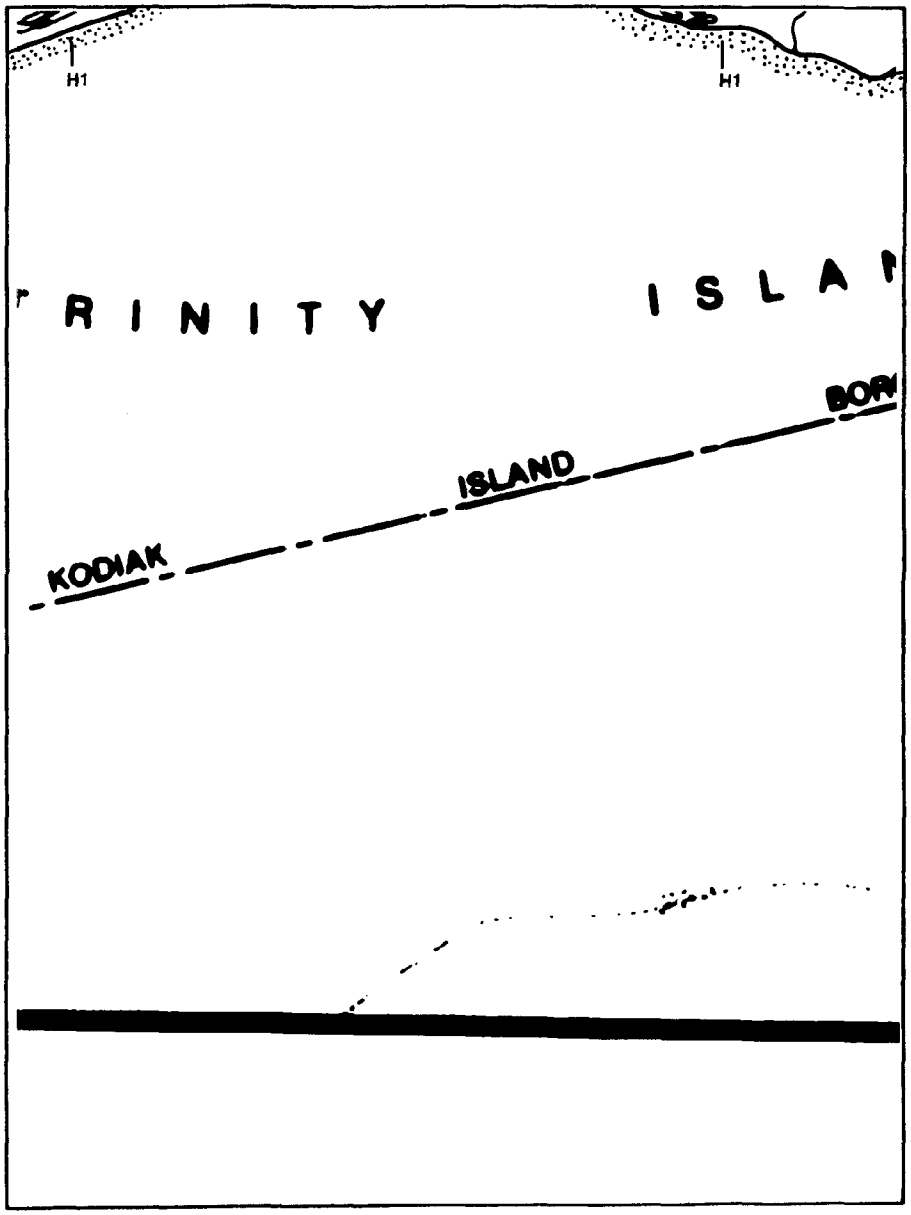


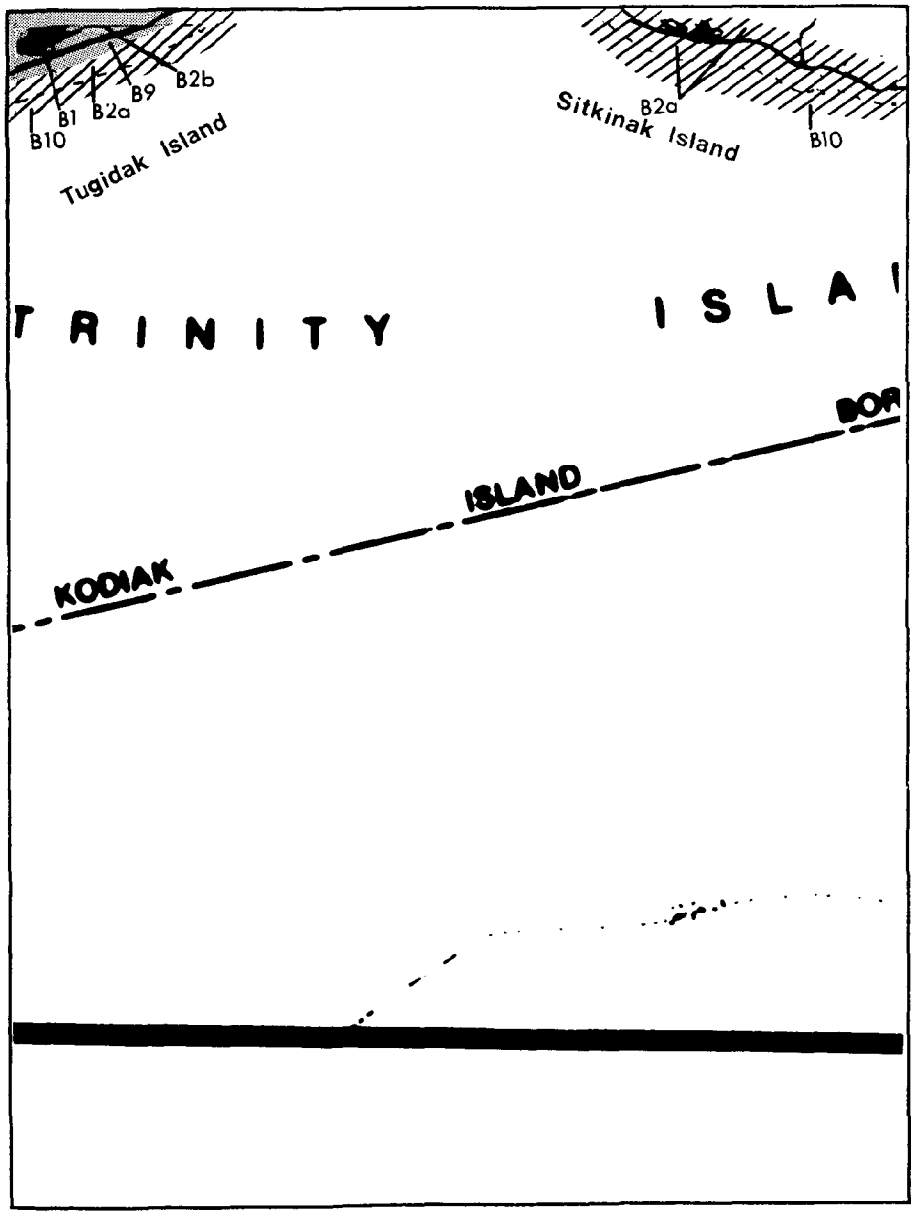
MAP NUMBER 47

RESOURCE	Winter			Spring			Summer			Fall		
	D	J	F	M	A	M	J	J	A	S	O	N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
Commercial Fisheries												
H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
Subsistence												
H-7 Deer/Elk/Reindeer												
H-8 Marine Mammal												
H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
H-12 Halibut/Marine Fish												
H-13 Salmon												
Recreation												
H-14 Recreation Use Area												
H-15 Recreation Facility												
Infrastructure												
H-16 Boat Harbor												
H-17 Dock												
H-18 Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX												
Onshore												
B-1 Seabird Colony												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-3 Sea Lion Haul-out												
B-4 Black Tail Deer												
B-5 Elk												
B-6 Brown Bear												
Offshore												
B-2a Waterfowl (overwintering)												
B-2b Waterfowl (summer use)												
B-7 Anadromous Fish Streams												
Salmon - Adults												
Salmon - Juveniles												
Char/Dolly Varden - Adults												
Char/Dolly Varden - Juveniles												
Steelhead - Adults												
Steelhead - Juveniles												
B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

HIGH MEDIUM LOW

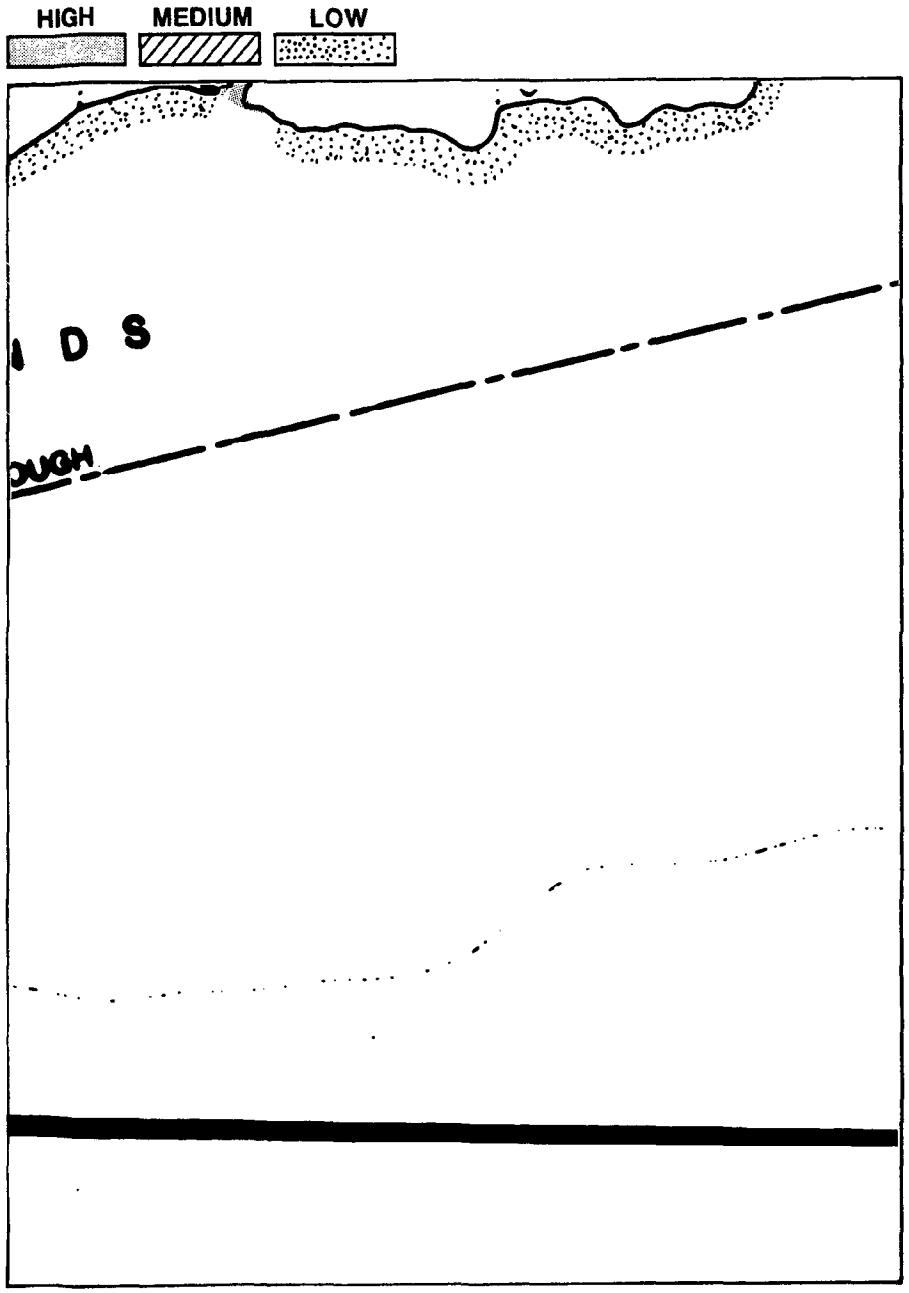






MAP NUMBER 48

RESOURCE		Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE													
R-1	Rocky Headlands												
R-2	Wave-Cut Platforms												
R-3	Sand Beaches/Exposed Tidal Flats												
R-4	Mixed Sand and Gravel Beaches												
R-5	Gravel Beaches												
R-6	Sheltered Rocky and Gravel Shores												
R-7	Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX													
Commercial Fisheries													
H-1	Salmon												
H-2	Roe Herring												
H-3	Crab												
H-4	Shrimp												
H-5	Halibut												
H-6	Whitefish												
Subsistence													
H-7	Deer/Elk/Reindeer												
H-8	Marine Mammal												
H-9	Crab												
H-10	Waterfowl												
H-11	Clams												
H-12	Halibut/Marine Fish												
H-13	Salmon												
Recreation													
H-14	Recreation Use Area												
H-15	Recreation Facility												
Infrastructure													
H-16	Boat Harbor												
H-17	Dock												
H-18	Concentration of Commercial & Residential Property												
BIOLOGICAL INDEX													
Onshore													
B-1	Seabird Colony												
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-3	Sea Lion Haul-out												
B-4	Black Tail Deer												
B-5	Elk												
B-6	Brown Bear												
Offshore													
B-2a	Waterfowl (overwintering)												
B-2b	Waterfowl (summer use)												
B-7	Anadromous Fish Streams												
	Salmon - Adults												
	Salmon - Juveniles												
	Char/Dolly Varden - Adults												
	Char/Dolly Varden - Juveniles												
	Steelhead - Adults												
	Steelhead - Juveniles												
B-8	Herring Spawning Area												
B-9	Razor Clam Beach												
B-10	Sea Otters												


HIGH
MEDIUM
LOW
D S
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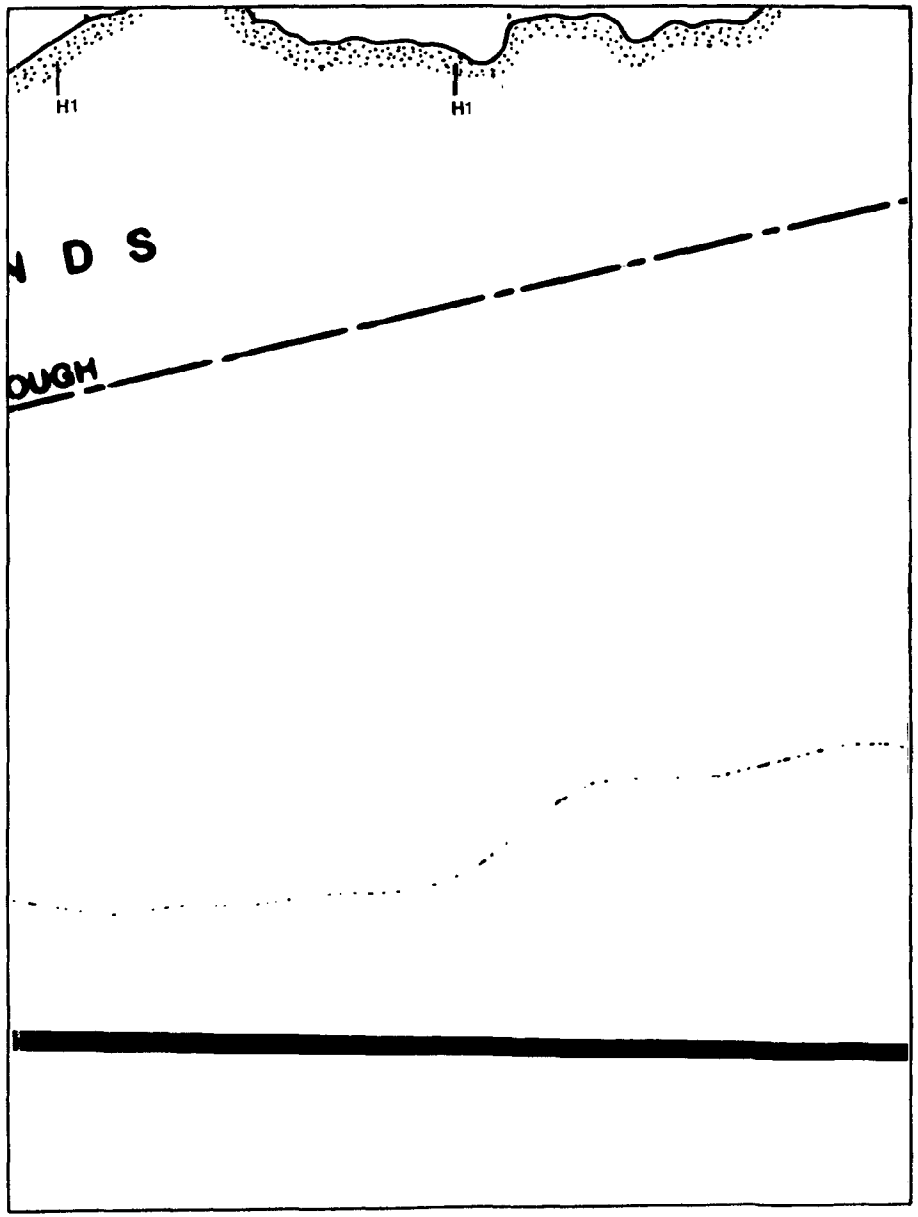
H1
H1
D S
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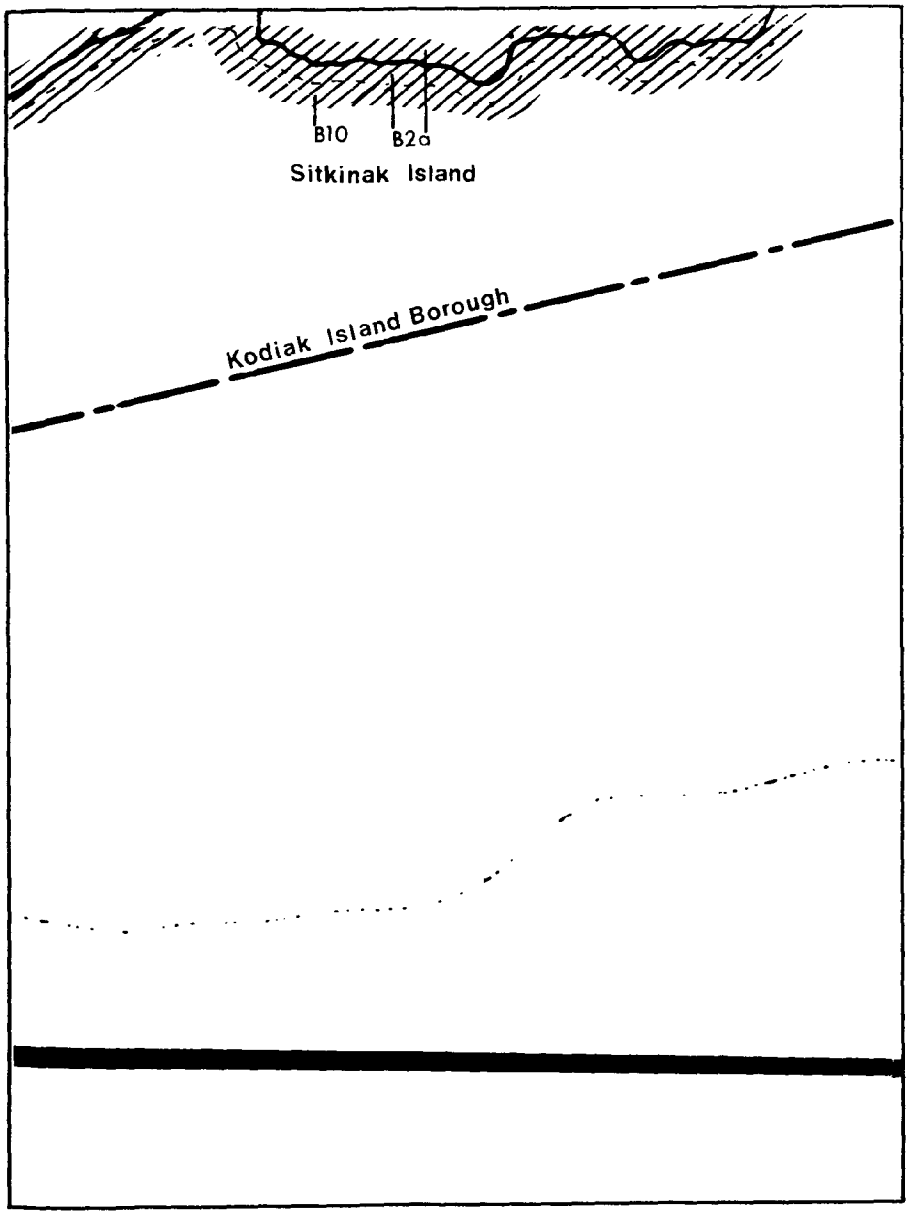

MAP NUMBER 49

RESOURCE	Winter D	Winter J	Winter F	Spring M	Spring A	Spring M	Summer J	Summer J	Summer A	Fall S	Fall O	Fall N
OIL RESIDENCE												
R-1 Rocky Headlands												
R-2 Wave-Cut Platforms												
R-3 Sand Beaches/Exposed Tidal Flats												
R-4 Mixed Sand and Gravel Beaches												
R-5 Gravel Beaches												
R-6 Sheltered Rocky and Gravel Shores												
R-7 Protected Estuarine Tidal Flats and Marshes												
HUMAN USE INDEX												
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H-1 Salmon												
H-2 Roe Herring												
H-3 Crab												
H-4 Shrimp												
H-5 Halibut												
H-6 Whitefish												
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H-9 Crab												
H-10 Waterfowl												
H-11 Clams												
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H-13 Salmon												
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H-15 Recreation Facility												
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H-16 Boat Harbor												
H-17 Dock												
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Onshore												
B-1 Seabird Colony												
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B-7 Anadromous Fish Streams												
Salmon - Adults												
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Char/Dolly Varden - Juveniles												
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B-8 Herring Spawning Area												
B-9 Razor Clam Beach												
B-10 Sea Otters												

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