



Girdwood Coastal Wetland

Natural and Historic Interpretive Area

The Master Plan Report for the Girdwood Coastal Wetland presents a preliminary study examining the potential for developing the Old Girdwood Townsite located south of the Seward Highway as a natural and historic interpretive area. The report begins with the Background which discusses how the Girdwood Coastal Wetland fits into the Anchorage Coastal Management Plan. The following chapter, Site Resources, identifies significant features that would be of interpretive value. These features fall into the categories of History, Wildlife, Vegetation, Physical Features and Visual Quality. The Master Plan includes a map of the Wetland followed by a discussion of the Site Components and a Conclusion.

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Master Plan Report

Girdwood Coastal Wetland

Natural and Historic Interpretive Area

Prepared for:

**Municipality of Anchorage
Department of Planning**

Prepared by:

**Land Design North, Inc.
September 1981**

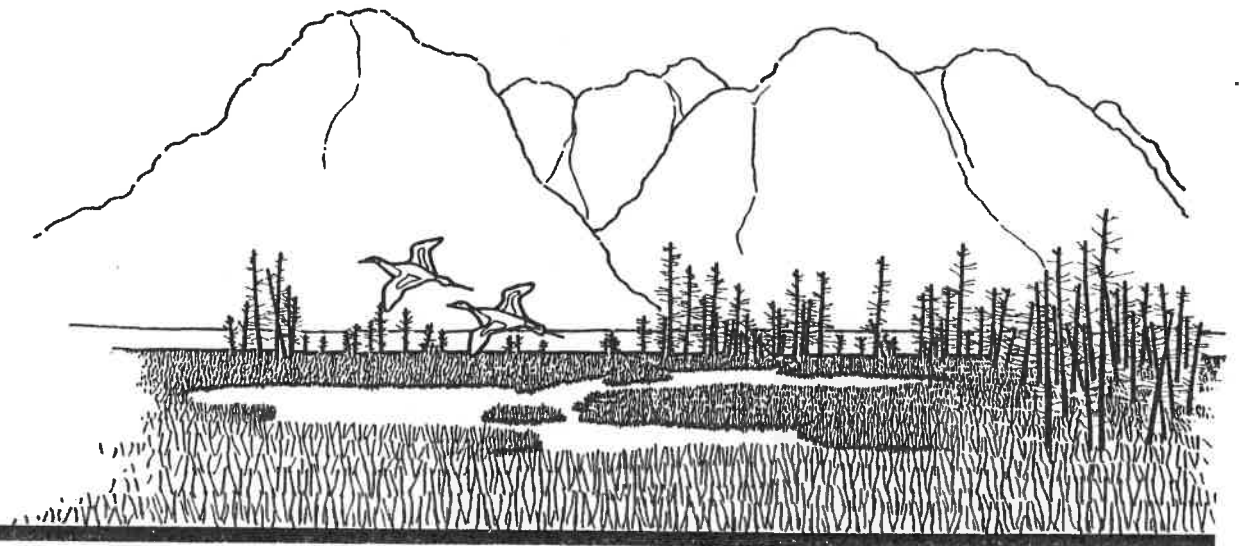


**The Municipality of Anchorage
Planning Department
Physical Planning Division**

George M. Sullivan, Mayor



Alaska Coastal Management Program



Background

Port of Anchorage

Fish Creek

Point Woronzof Bluffs

**Point Campbell-
Point Woronzof
Coastal Wetlands**

**Point Campbell
Dunes and Delta**

**Coastal Bicycle/Pedestrian Trail
(proposed)**

Andesitic Dike at Potter's Marsh

**Seward Highway/ Turnagain Arm
Scenic Corridor**

Anchorage Coastal Management Plan

Areas Meriting Special Attention (AMSA)

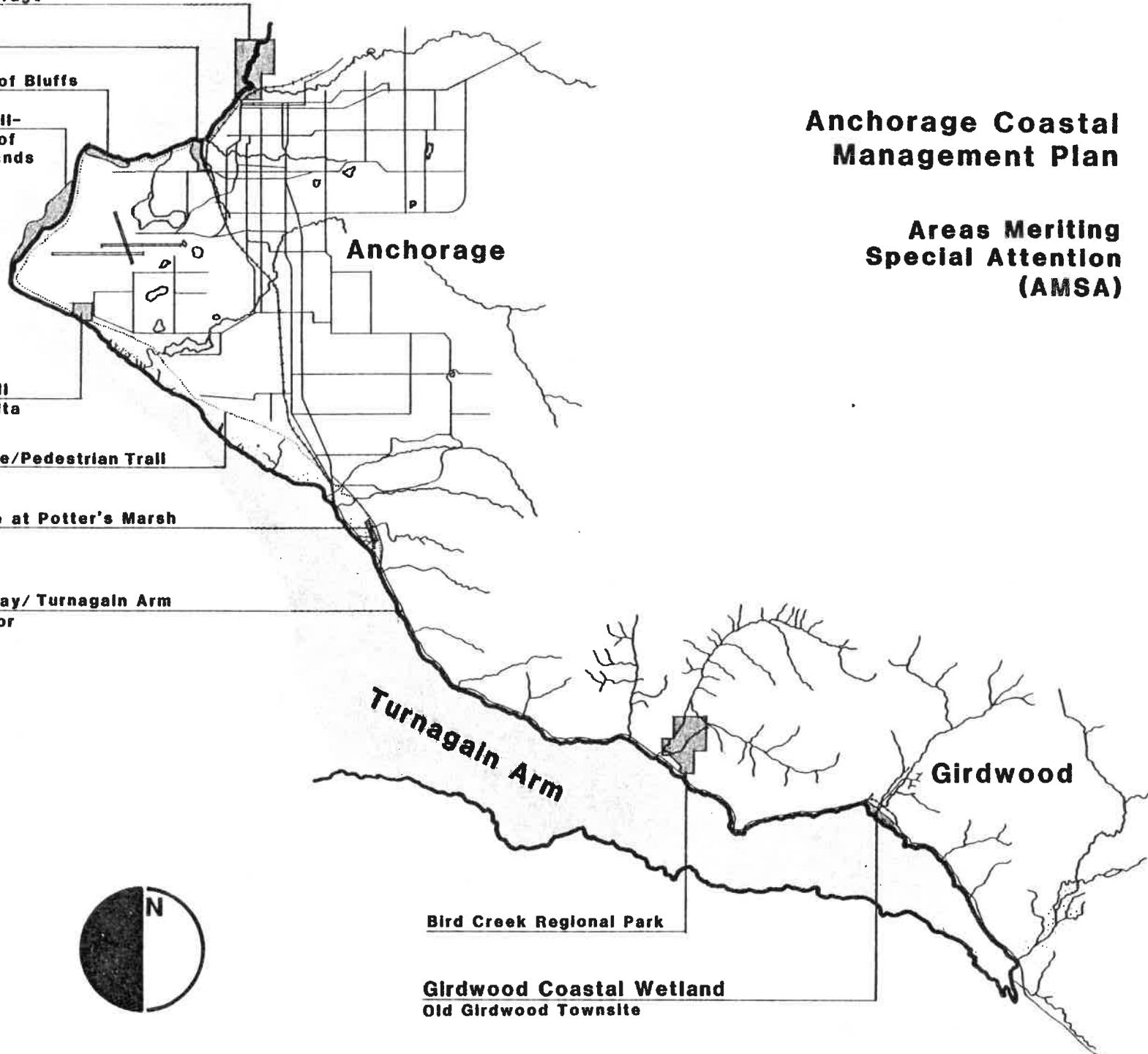
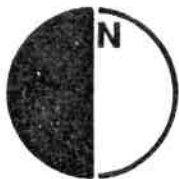
Anchorage

Turnagain Arm

Girdwood

Bird Creek Regional Park

**Girdwood Coastal Wetland
Old Girdwood Townsite**



Introduction

The Girdwood Coastal Wetland site is located on the scenic Turnagain Arm, just south of the Seward Highway intersection with the Alyeska Access Road. It is a naturally and historically unique area identified by the Anchorage Coastal Management Plan as an Area Meriting Special Attention (AMSA).

The Anchorage Coastal Management Plan was prepared in response to the increasing pressures on the coastal resources from the rapid growth in the Anchorage Bowl. The Plan outlines ways to resolve conflicts and provide for both future growth and conservation in an acceptable manner. It requires the preservation and conservation of general coastal resource policy units, including coastal habitats, tidal creeks and flats, existing and potential parks and recreation areas, and marginal lands. Uses of these natural areas are restricted to maintain the managed systems and resources in their natural conditions.

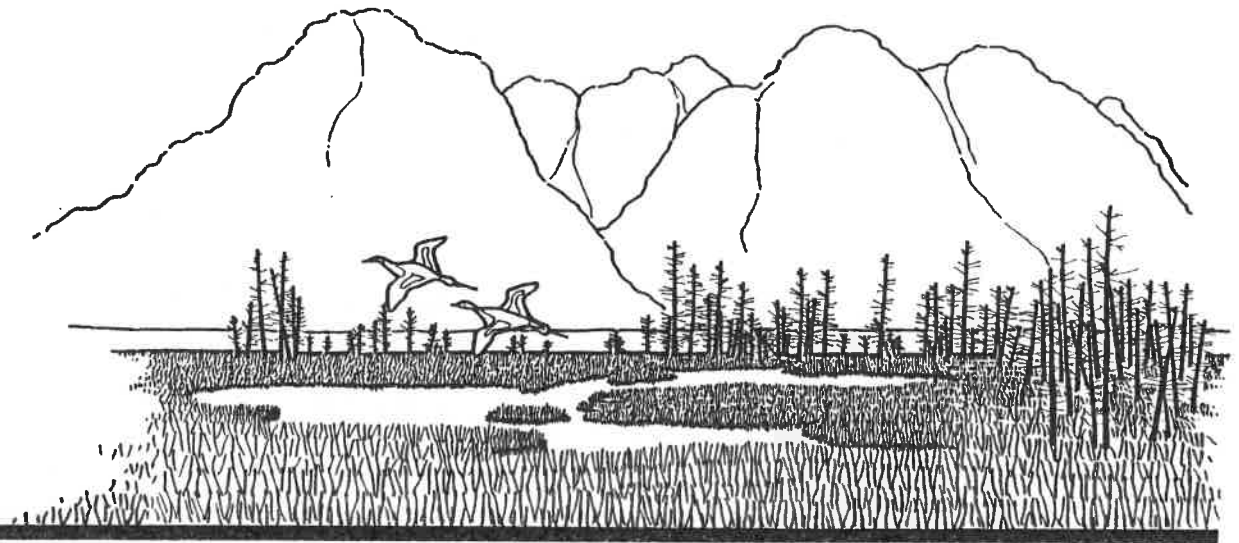
Much of the coastal area can be managed by generalized land use and water quality controls. However, to focus attention on distinct sites, the Plan has identified Areas Meriting Special Attention (AMSA). Those AMSA's located along the Turnagain Arm are shown on the facing page. In the Plan, each of these areas is given a value classification, proposed management recommendations, and allowable uses. Their proximity to Anchorage make these areas ideal destinations for school field trips. Furthermore, tourists and local residents would also find these areas of special interest for a day's excursion.

Several of the AMSA's such as the Andesitic Dike at Potter's Marsh, are valued as potential scientific/educational study areas. Others within the Anchorage area, such as the Point Cambell-Point Woronzoff Coastal Wetlands, are valued for their scenic quality, nature study potential and recreational opportunities. The portion of the Seward Highway through the Turnagain Arm has been identified as a scenic corridor AMSA. The great diversity of the landscape along the corridor has a very high scenic value and attracts several hundred thousand visitors to the Seward Highway every year.

Within the Seward Highway/Turnagain Arm scenic corridor are Bird Creek Regional Park and Girdwood Coastal Wetland. Bird Creek Regional Park is noted for its abundance of wildlife, including moose, brown and black bear, Dall sheep and a variety of smaller animals, birds, and spawning fish.

This report focuses on the potentials of the Girdwood Coastal Wetland or the so-called Old Girdwood Townsite. This site is classified as a wildlife habitat, scenic area and potential passive recreation spot. In addition, its natural and historic significance endow it with great educational potential. Located at the intersection of the Seward Highway and Alyeska Access Road, the site could attract a high volume of visitors year round.

Ecologically, the area is a significant wetland. It is an essential habitat for various trophic levels in the area's food web. As a wetland it plays an important role in reducing the effects of erosion and flooding of surrounding land. In the following pages the various site resources of the Girdwood Coastal Wetland will be described and examined, exploring the potential for developing a natural, scenic and historical interpretive area. The objective of this master plan report is to demonstrate the feasibility of developing a unique roadway pullout for the enjoyment and use of the Anchorage area residents and visitors to the state.



Site Resources

History

The Old Girdwood Townsite started just before the turn of the century as a supply camp for gold prospectors. Originally referred to as Glacier City, the townsite was situated between the Alaska Railroad and the coastline on the silty flats west of Glacier Creek. Reflecting the typical mining town cycle, Girdwood dwindled and boomed again in the early 20's when news of a large gold strike was reported in the Seward Weekly Gateway. Prospectors and vital equipment arrived by water and set up canvas tents and small log cabins. Eventually 16 buildings lined the main street, one-quarter of them saloons. One of the more popular was MacIntyre's, later to become the Little Dipper Inn. The original building burned during the 1964 earthquake but was soon replaced and still stands across the Seward Highway from the Girdwood Coastal Wetland. Other buildings included a local grocery and general store, school house, barber shop and miscellaneous port related structures.

One of the cabins on Main Street belonged to James Girdwood after whom the town was named. Girdwood came to Alaska in 1896 and staked four gold claims at Crow Creek, up the valley from the present Girdwood townsite. In subsequent years claims were set up on California Creek and Crow Creek and unsuccessful attempts were made on Virginia Creek.

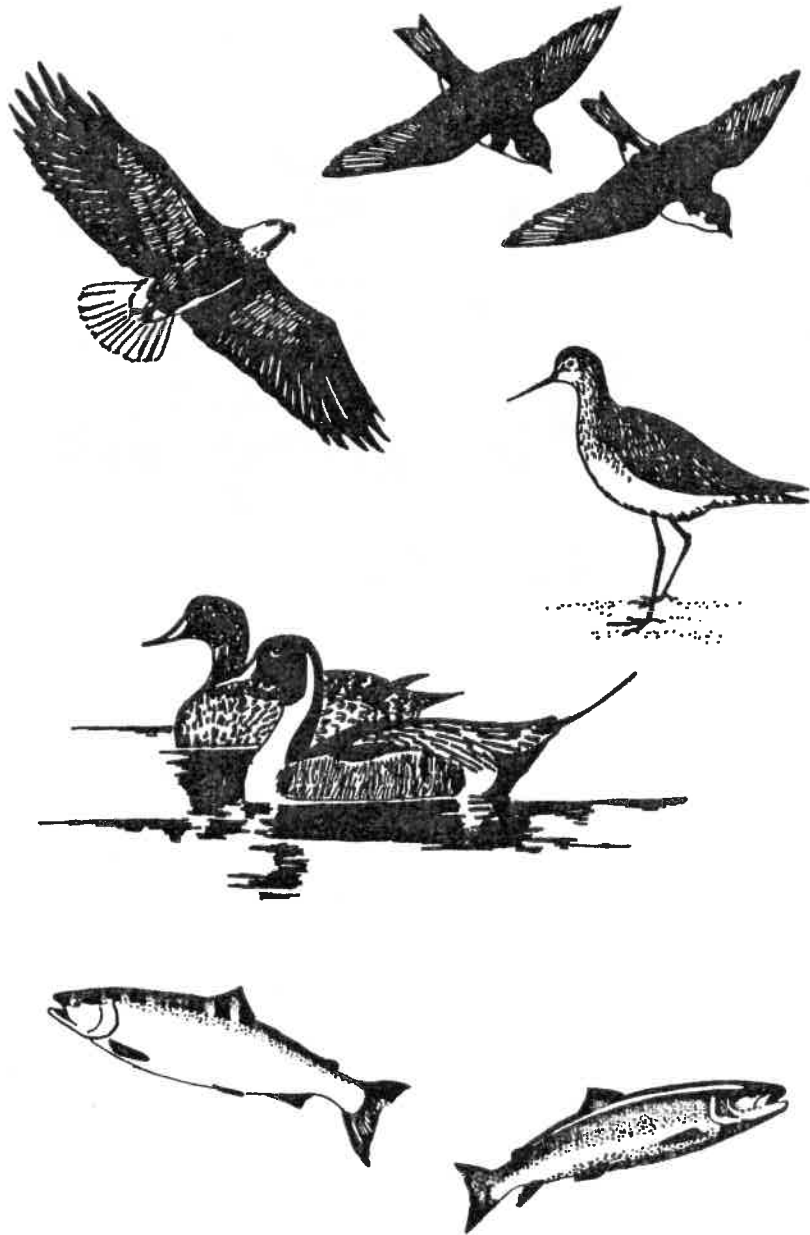
Although the Townsite of Girdwood was established around mining, following 1915 the actual business backbone of the town was railroad construction. Girdwood became a common stop on the way from Seward to Ship Creek and the Interior along the Seward Iditarod Trail. A sawmill was constructed at the edge of town along Glacier Creek to supply lumber for the tracks.

Mine closures in the 1930's caused the population to drift away. However, through the next few decades new construction endeavors brought an influx of supplies and populace, and again Girdwood thrived. Construction of the Anchorage-Seward Highway began in 1949. In 1951, the ribbon cutting was held at the Main Street intersection in Girdwood. By 1954, Alyeska Ski Corporation began development of the popular ski resort.



With redevelopment activity of the 1950's Girdwood seemed to be an established community. However, tragedy hit with the powerful Good Friday Earthquake in 1964. The land subsided, causing floods and fire and destroying the homes and hopes of Girdwood. An emergency effort was made to choose a new townsite 2½ miles from the original town. Salt water inundated the silty soil, killing much of the original vegetation. Only traces of the town remain. The old airstrip is now much overgrown by salt-water tolerant sedges and grasses. Today, the area is a significant wetland and wildlife habitat with immense interpretive value.

Wildlife



The Girdwood Coastal Wetland is a nutrient-rich feeding area that attracts a great variety of migrant birds. The Alaska Department of Fish and Game identifies the site as a significant resting and habitat area for seasonal waterfowl and other birds. A good number of the birds use the site as a waystation in early spring while waiting for other ponds further inland to thaw.

During the migrations, thousands of waterfowl frequent the ponds, streams and tidal flats. The small pond and marshy edges are abundant with insect life and provide ideal habitat for pintails and other nesting ducks. Eagles, hawks and owls are often seen resting on the branches of dead trees searching for rodents commonly found on tidal wetlands. Few birds are attracted to the edge of the coastline and mudflats because high sedimentation limits the sea shore organisms these birds commonly feed on. Other birds frequenting the site include sandhill cranes, mew gulls, loons, woodpeckers, swallows, and various shore birds.

Along the western boundary of the site, Glacier Creek supports the spawning and feeding activities of pink, silver and chum salmon and Dolly Varden trout. The best viewing times are in late summer, from late July through most of August. Although not actually on the site, beaver and muskrat habitat are found further upstream near Girdwood where California Creek branches off to Glacier Creek. Occasionally, moose have been sighted on the grassy plain. Beluga whales have been known to venture into the Turnagain Arm during their seasonal migration and could possibly be sighted from the Wetland.

From Top Left: Bald Eagle, Swallow, Sandpiper Shorebird, Pintail Ducks, Silver Salmon, and Dolly Varden.

Vegetation

Originally, the Girdwood Coastal Wetland or Old Girdwood Townsite consisted of coastal spruce woodland with scattered deciduous woody plants such as birch and willow. The open land could have been a coastal meadow with grasses and various understory plants intolerant to salts. Much of its original vegetation was killed by sea water inundation following the 1964 earthquake, and only a skeleton stand of trees remain.

Today, the site is a tidal meadow which is completely inundated several times a year. Within this tidal meadow are pockets of brackish marsh and estuaries with standing surface water of varying levels of salinity.

Salt-water tolerant as well as brackish-water tolerant plantcover has replaced the original vegetation. These consist predominantly of water sedges with a mixed variety of perennial grasses and Beach Potentilla. In fall, the decaying grasses give off a sulfur odor. The remaining dead trees and shrubs support a large and diverse community of lichen, mosses and fungi which contribute to the slow decay of the wood. Except for the green algae mats commonly found on the mudflats during low tide, much of the beach strand is an unvegetated silt. This established plant association could remain for decades or could be a transition to another association type.



From Top Left: Reed Bentgrass, Sedge, Arrow-Grass, Beach Cinquefoil, and Perennial Water Grass.

Physical Features

The Girdwood Coastal Wetland site is a tidal marsh bordered on the coastal edge by mudflats. The silty banks on which the original townsite was built subsided six to nine feet during the 1964 earthquake. Since the new elevation is below the level of the high tide, the site is thoroughly inundated by salt water several times a year.

Tides in the Cook Inlet average 30 feet and produce strong currents in the Turnagain Arm. These tidal rushes form powerful bore and rip tides which are clearly visible from the site. At low tide, extensive mudflats are exposed all along the coast of the Turnagain Arm. Mudflats are particularly extensive along the west coast of the Girdwood Coastal Wetland. These mudflats serve an important function in catching vital dissolved chemicals that would otherwise be washed directly into the sea. Although the silty clay shelves seem to erode easily and sedimentation has increased, the shoreline is thought to be very close to the original outline.

The major part of the site is a flat and boggy tidal marsh with a large pond situated just about in the center. The soils are fine-grained surficial and subsurface deposits, including Bootlegger Cover Clay, other silt, clay and peat deposits.

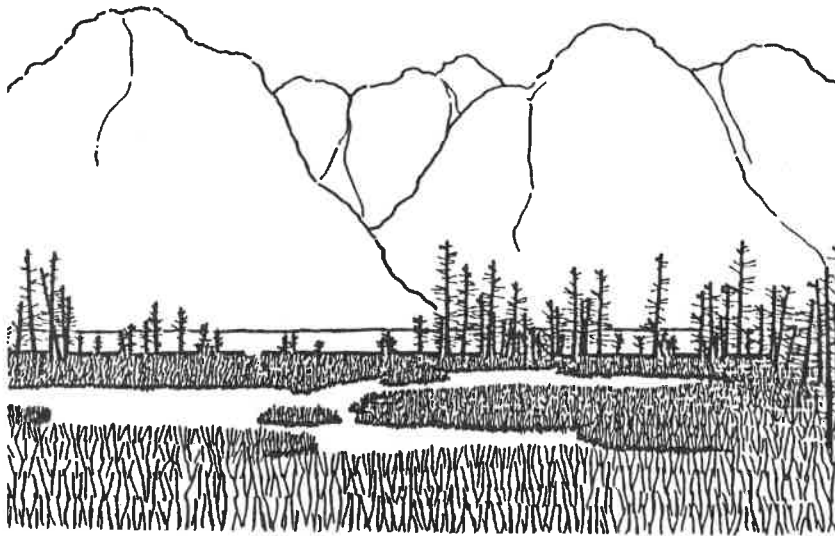
According to the Seismically Induced Ground Failure Map, the site is moderately susceptible to ground failure. Where the coarser materials (alluvium or fill) overlay the silty deposits, seismic-related ground failure is controlled. Ground cracking and horizontal ground movement may develop due to landspreading or lurching and further subsidence may occur due to consolidation.

Part of the site is within the flood plain of Glacier Creek, which flows along the eastern border. Here can be seen interesting patterns of water flow, sedimentation and bank erosion. Several deep clear-water streams run through the site and cut channels in the mudflats as they reach the shore. Here fresh and salt water mix causing a variability in the salinity of Turnagain Arm. As a wetland, there is a high potential for surface drainage problems. Consequently, for the health and continuity of this vital feeding ground, it is imperative not to disturb the regular tidal inundations which serve to circulate nutrients.

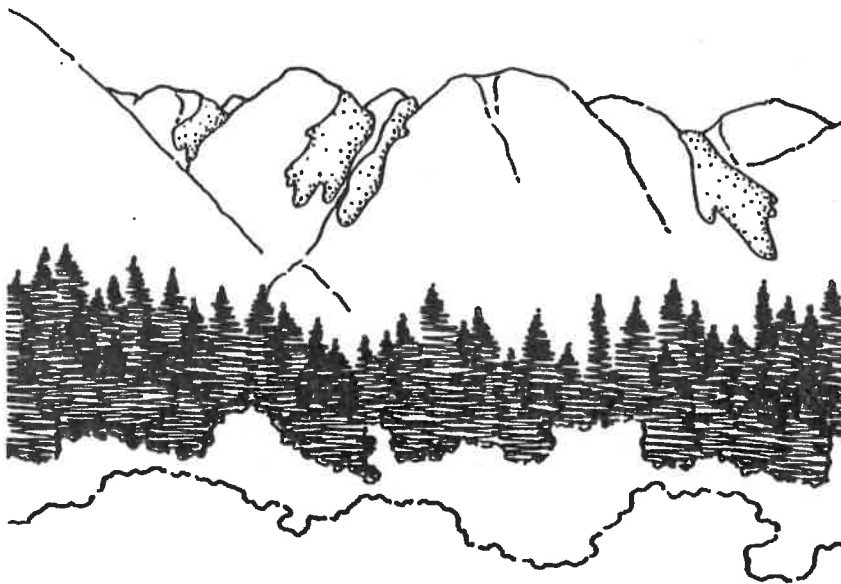
Located at the base of the Glacier Creek Valley and on the coast of the Turnagain Arm, the site is subject to high winds with one or two 50 mph winds per year and an occasional gust to 100 mph.

The Girdwood Coastal Wetland has abundant and highly visible evidence of the building up and breaking down forces of nature. As an outdoor laboratory, the site is an ideal location for students and visitors to learn about the processes active in a changing coastal landscape.

Visual Quality



View of Wetland



View of Glaciers

The Seward Highway passes at roughly ten feet above the surrounding ground level and allows a good overview lookout of the Girdwood Coastal Wetland. From the highway the continuous tidal meadow broken by ponds, streams, and stands of dead trees creates picturesque line qualities.

Because the site is so visible from the highway, the placement of any structures or walkways must be carefully planned so as to not disrupt the existing high visual quality.

At the site itself, the smooth field of green becomes a foreground of textural sedges and grass, while the stands of dead trees give a unique coarse outline. Within the tree stands, one feels enclosed and drawn to the details of moss and lichen. In fall, color is the dominant quality as the grasses and sedges change from the fresh green to beautiful hues of gold and bronze.

From the Girdwood Coastal Wetland there is a 360 degree panoramic view across the Turnagain Arm and up the valley of Girdwood and Alyeska. The view across the Arm is of a dynamic landscape with steep forested mountainsides abruptly meeting the mudflats and water. A number of creeks and river valleys cut into the mountainsides giving the view additional line and form. The Arm is in constant motion as the extreme tides ebb and flow leaving abstract delta formations in the mud bottom. Up the valley of Girdwood and Alyeska is a vista of four glaciers high in the background mountains. The white of the glaciers creates a high contrast that accentuates the mountains' form. This view is framed by powerful foreground mountains clothed in Sitka Spruce and Mountain Hemlock.

Summary of Features

The map on the facing page outlines the general site features found on the Girdwood Coastal Wetland. These outlines imply that the predominant, but not exclusive, interest of the enclosed area is history, wildlife, vegetation, physical features, or views.

The only visible trace of human history on the site is the overgrown airstrip located near the highway. Several of the original Girdwood buildings were located on the east side of the site near this airstrip but are no longer in evidence.

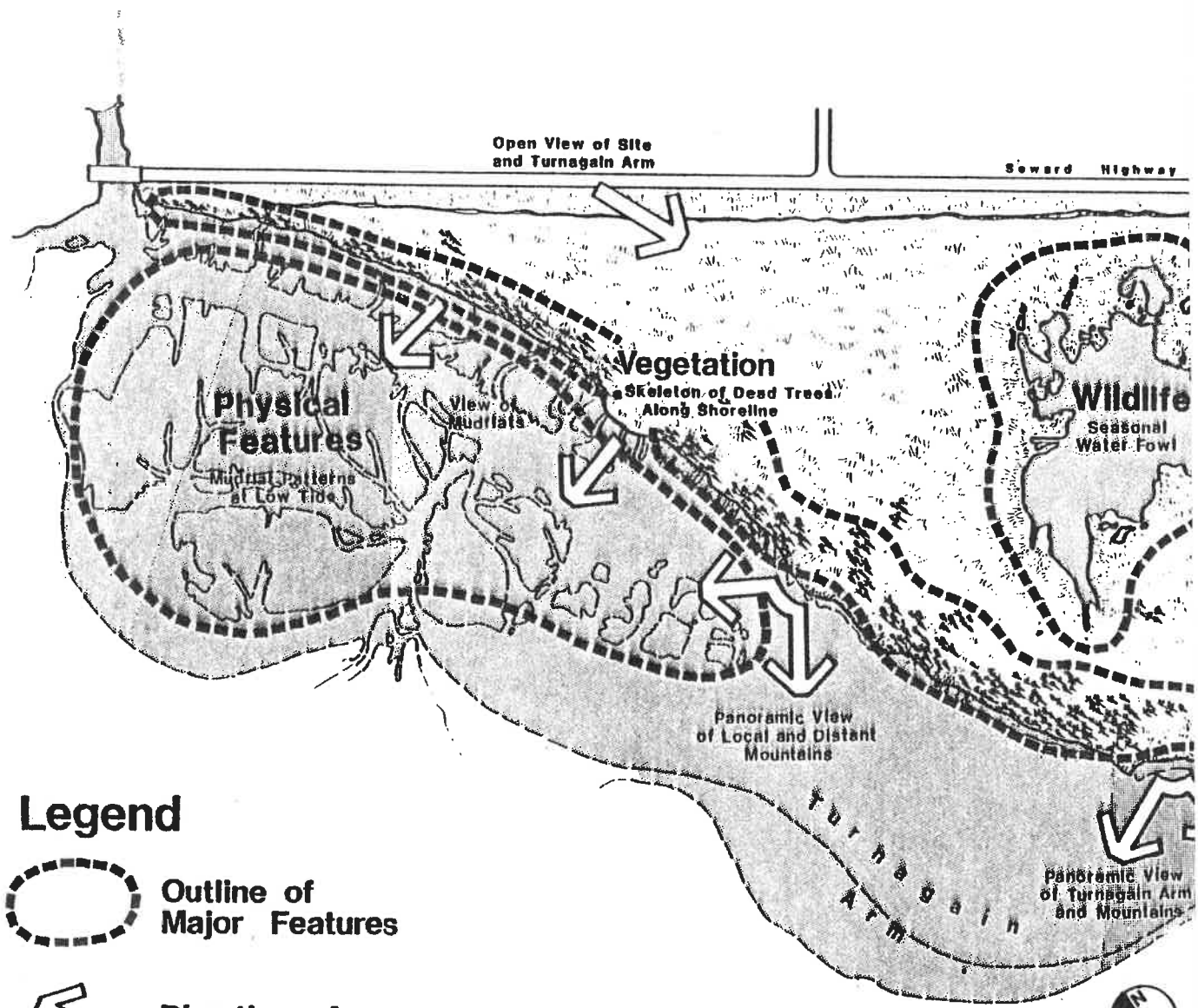
The vegetation that has taken over the airstrip is visibly different from the surrounding sedges and grasses. As the map indicates, dead spruce and birch form a definite edge along the coast. Just east of the pond a dense stand of the decaying trees fosters a large community of moss and lichen. These dead trees, remnants of life before the 1964 earthquake, stand as reminders of the powerful forces of nature.

The Girdwood Coastal Wetland is a critical feeding and resting spot for thousands of birds. The bird population is particularly concentrated in the tree stands and around the pond. For close observers, the pond also harbors a diverse insect community. Seasonal salmon runs occur each year in Glacier Creek that flows along the eastern edge of the site.

In this area, Glacier Creek discharges its silt-laden fresh water into the salt water of Turnagain Arm. The effects of stream erosion and glacial sedimentation can be seen in the mudflats all along the coastline. At low tide the mudflats are particularly vast on the western edge of the site.

There are numerous spectacular panoramic views from the Girdwood Coastal Wetland. Nearly the entire Turnagain Arm can be seen, and looking northeast four glaciers are visible high in the background mountains.

Significant natural features together with cultural history make the Girdwood Coastal Wetland a potentially rich interpretive center. Careful planning and appropriate development techniques must be employed to insure the conservation of this critical wetland.

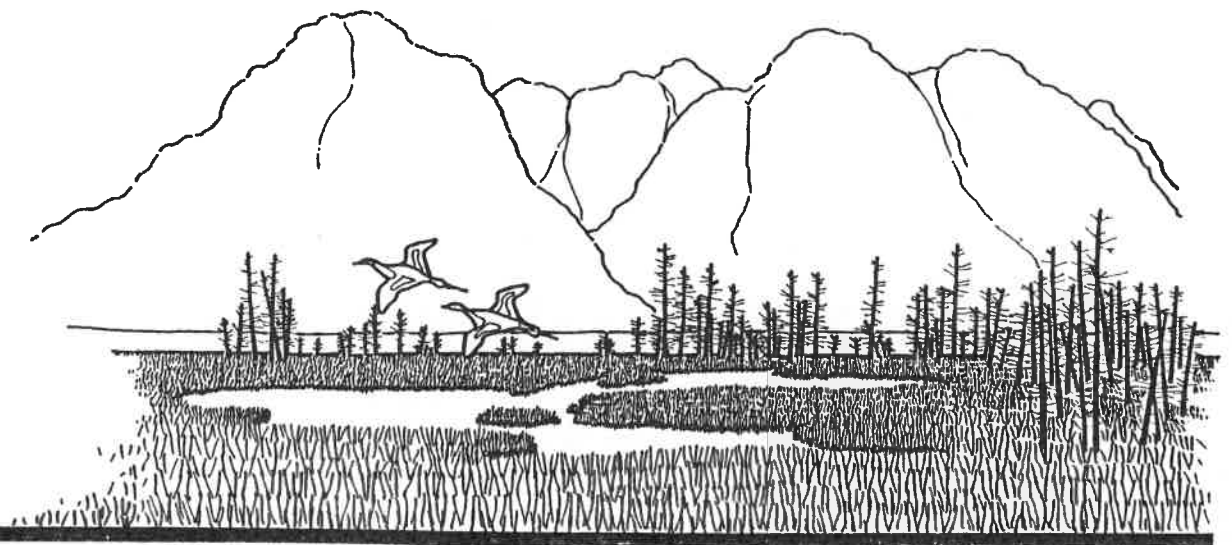


Legend

 Outline of Major Features

 Direction of Major Views





Master Plan

Plan Description

The Girdwood Coastal Wetland is a unique and fragile ecosystem. Any development planned for the site needs to be sensitive to the inherent natural qualities that make this a critical resting and feeding ground for thousands of birds. Also, the site is highly visible from the Seward Highway. Accordingly, the development of trails and interpretive areas should be kept to a small scale and should utilize strictly natural materials.

It is anticipated visitors would have varied interests for coming to the site. The time spent by any one visitor could range from a brief look from the parking area to a morning long hike. The users would include local residents, tourists, school and youth groups and nature societies. The Wetland also has great potential as a data collecting station or study area for naturalists, biologists and ornithologists.

The Master Plan on the facing page presents a viable layout of trails and interpretive stations that would accommodate the various levels of visitors. For those wishing only to pull off the highway momentarily, there is a viewing platform with an overview interpretive display. Visitors wishing to walk through the Wetland will find an indoor Historic Display Station and a system of loop and extended trails. The Short Loop is a handicap accessible trail covering the Major Interpretive and Rest Stations, such as waterfowl identification at the pond edge. From this Short Loop, several soft surface trails take the ambitious visitors to the far reaches of the site, including such interpretive displays as migrating fish and the mudflats.

A visit to the proposed Girdwood Coastal Wetland would be a unique and educational experience on many levels. The on-site interpretive displays would bring textbook readings to life. Visitors to the Wetland would acquire an increased awareness of the local cultural history and of this important natural environment.

Legend

- ① Major Interpretive and Rest Station
- ① Interpretive Station
- Hard Path
(Accessible by the Handicapped)
- ... Soil Foot Path

History

- ① General Background of the Girwood Site and Directory Map
- ② Indoor Display on the History of the Old Girwood Town and other Significant Events
- ⑪ Brief History of the Turnagain Arm
- ⑲ Location of the Old Girwood Town Airstrip

Wildlife

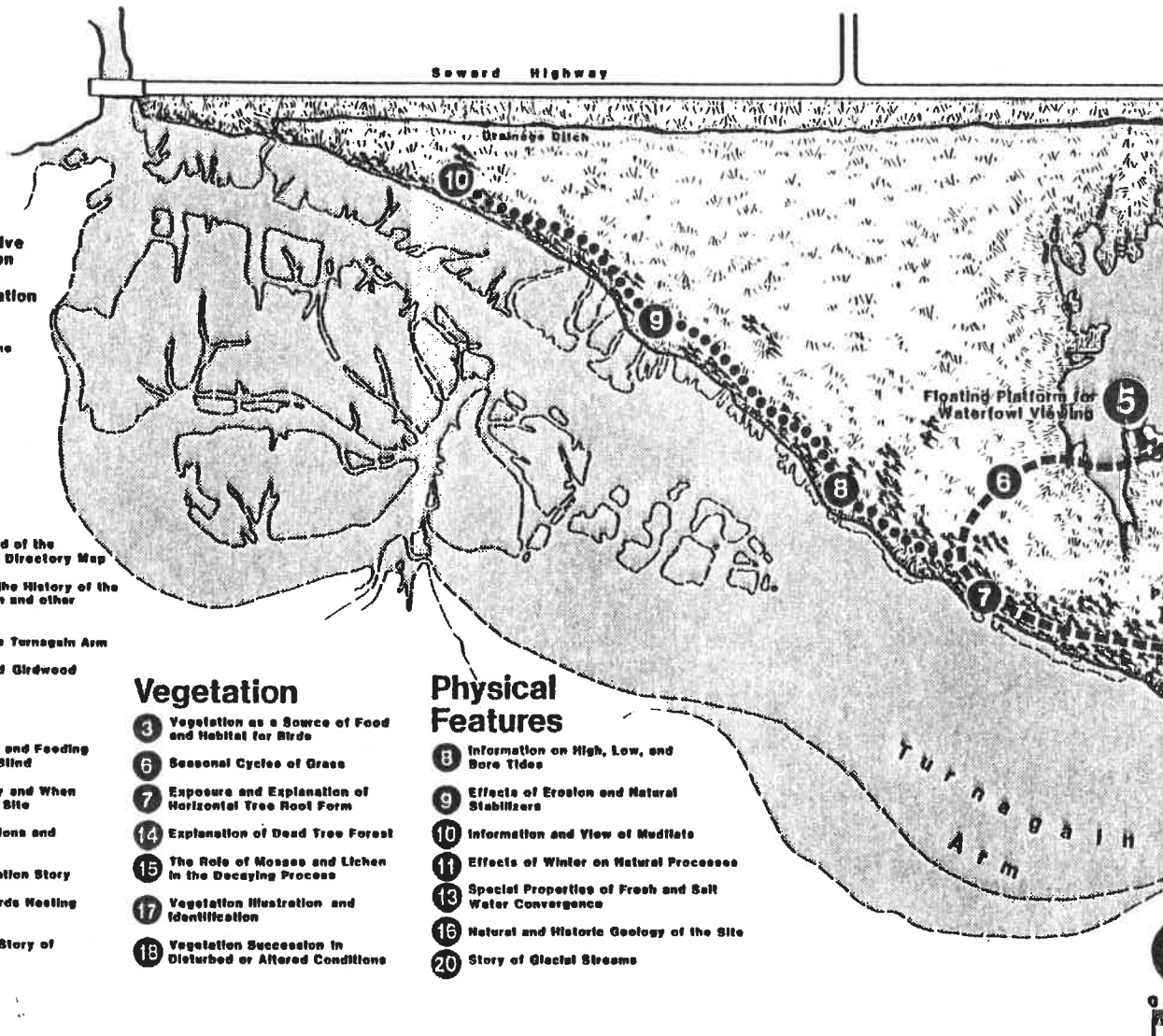
- ③ Waterfowl Nesting and Feeding Station with Bird Blind
- ④ Explanation of Why and When Birds come to this Site
- ⑤ Waterfowl Illustrations and Identification
- ⑨ Beluga Whale Migration Story
- ⑫ Identification of Birds Nesting in Dead Trees
- ⑳ Identification and Story of Migrating Fish

Vegetation

- ③ Vegetation as a Source of Food and Habitat for Birds
- ⑥ Seasonal Cycles of Grass
- ⑦ Exposure and Explanation of Horizontal Tree Root Form
- ⑭ Explanation of Dead Tree Forest
- ⑮ The Role of Mosses and Lichen in the Decaying Process
- ⑰ Vegetation Illustration and Identification
- ⑱ Vegetation Succession in Disturbed or Altered Conditions

Physical Features

- ⑧ Information on High, Low, and Bore Tides
- ⑨ Effects of Erosion and Natural Stabilizers
- ⑩ Information and View of Mudflats
- ⑪ Effects of Winter on Natural Processes
- ⑬ Special Properties of Fresh and Salt Water Convergence
- ⑯ Natural and Historic Geology of the Site
- ⑳ Story of Glacial Streams



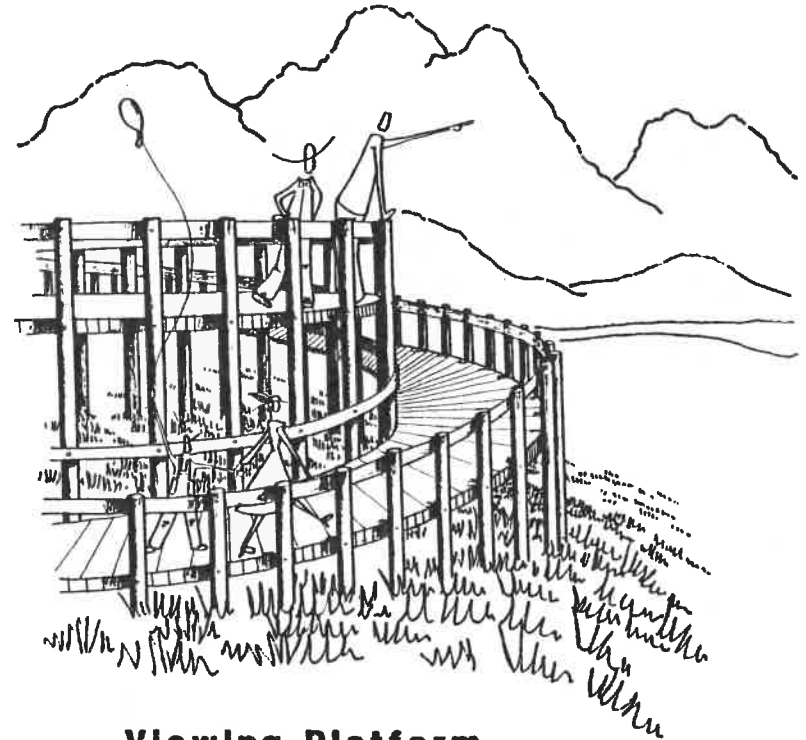
Site Components

The objective of the plan prepared for the Girdwood Coastal Wetland is to propose development that would accommodate the visitor while remaining sensitive to the natural systems.

The components introduced to the site should be kept to a minimum. The layout and design of these introduced elements should compliment the existing landscape character of the Wetland. Textures, colors, and forms should harmonize with those of the site as discussed in the Visual Quality section. The design of the separate components should be consistent throughout the site to create a unified system. For example, there should be a basic interpretive station design that would be appropriately altered to suit each location. Other elements such as trails, benches, and signs should utilize the same design details and materials.

As shown on the Master Plan, the parking lot could be situated roughly 300 feet from the Alyeska Access Road to avoid a four way intersection. It is recommended that it also be set back 50 feet from the highway and dropped to a level halfway between the highway and the Wetland. This separation would help to create a buffer from the highway traffic. The parking lot should accommodate a minimum of 14 cars and 2 buses.

At the parking lot there could be a raised viewing platform with an overview-interpretive display and a directory map of the Girdwood Coastal Wetland. The directory map of the site would orient the visitor to the major interpretive stations and trail system. The display would also point out and describe the view of the four glaciers up the Girdwood valley as well as the panorama of the Turnagain Arm. The display would provide general information about the Wetland, including the major natural resources and historical events. With this information, visitors could plan their outing.

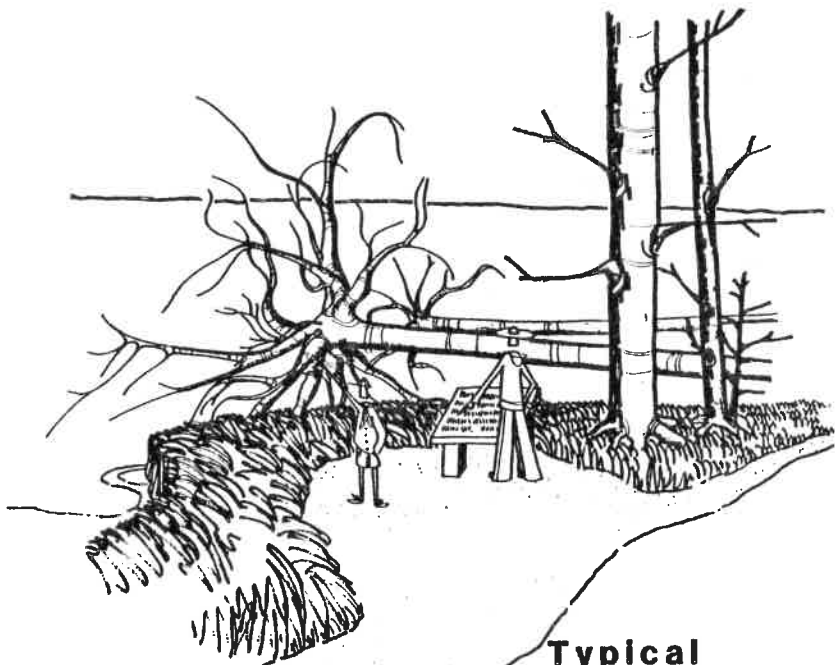


Viewing Platform

Site Components



**Historic
Display Station**



**Typical
Interpretive Station**

There would be two types of interpretive stations: (1) Major interpretive stations and rest stops, and (2) feature interpretive stations. These are represented on the Master Plan by large and small dots, respectively.

Interpretive stations provide the opportunity for visitors to examine an area or feature at close range. To complete the experience there would be displays at each station with interpretive information explaining what is being viewed. These displays would have a combination of graphics and written description appropriate for all ages. The signs should be kept low so as to be unobtrusive. The interpretive stations can focus on one area of interest such as history, vegetation, wildlife, physical features, or views. When appropriate, there could be a combination of these topics described.

Major interpretive stations are generally larger and more extensively developed than the others. They could include more detailed interpretive displays, floating platforms, and seating. The historic display station could be a small building reflecting vernacular structures that once stood on the site. To soften the impact on the site, it should be located by the pond with a backdrop of dead trees. Inside there would be permanent and temporary displays depicting the historic significance of the Old Girdwood Townsite.

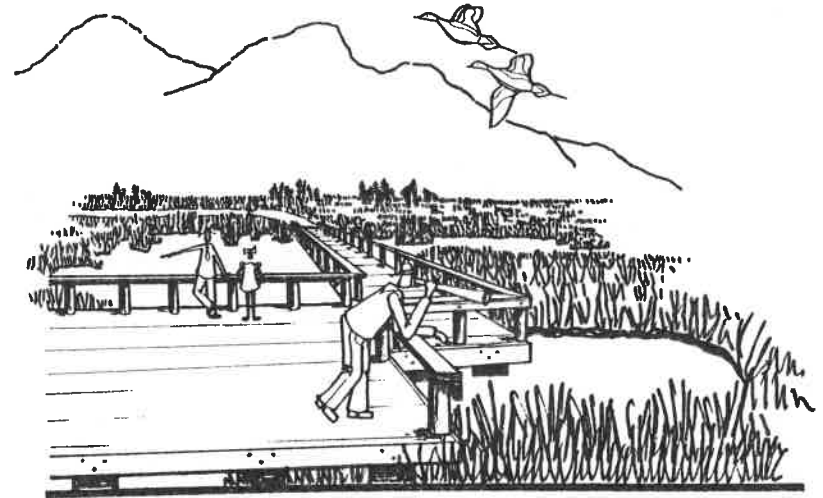
Most of the interpretive stations should be on a smaller scale, requiring only an enlargement of the trail and an interpretive sign. One such station would be the exposure and explanation of horizontal tree root form as shown in the lower left sketch.

Site Components

The system of trails is comprised of hard and soft surfaces. The trails provide the visitor a pleasant and informative walk through the Wetland. It is imperative that these trails are visually and ecologically suitable to the site. They are clearly defined walkways that encourage visitors to stay within the limits of the surfaces, therefore protecting the fragile ecosystem.

Hard surfaces are recommended where there is heavy traffic. The Master Plan shows the hard surface paths starting at the parking lot, continuing to the historic display station, around the short loop and out two small branches from the loop. This provides access to all the major interpretive stations and a good variety of the smaller stations. The short loop supplies the visitor with general information on a wide variety of topics. The trail is intentionally limited to one side of the pond to reduce the impact on this critical feeding and nesting area. The complete hard path would be less than one-half mile of boardwalks or other appropriate hard surface. This system would be ideal for the visitors with moderate interest or limited time and the handicapped.

For the more ambitious, there is a system of soft trails, perhaps of compacted gravel, that allows visitors to explore more of the Wetland. Altogether, the soft trails cover slightly more than a mile. The interpretive stations are further apart than on the hard-surfaced trails and often focus on more specialized topics.



Boardwalk Path



Soft Surface Path

Conclusion

The Girdwood Coastal Wetland Development Plan recommended in this report would provide a unique and educational experience for the Anchorage residents and visitors. Students would find textbook readings about natural processes in our changing landscape brought to life, and visitors would have an increased awareness of the importance of our wetlands and local history. The significance of Girdwood as a prototypical boom town of South Central Alaska would be captured and made accessible to all interested. With careful planning of a natural interpretive area, the Wetland would be conserved as an important feeding and resting spot for thousands of birds.

The next phase of development should be a more detailed information and design activity organized to include several specialists including naturalist, geologists, ornithologists, botanists, and historians. Community involvement could be encouraged through organizations such as the Audubon Society, University Outing Club, Boy and Girl Scouts, and community councils. To continue the planning process, further inquiries about land ownership need to be made to determine whether land acquisition is necessary. It has also been recommended that the Girdwood Coastal Wetland could be incorporated into the Chugach National Forest, which would protect the resources by assuming the existing regulations of the National Forest. Other possible management agencies could include the Municipality, State Fish and Game or the Federal Fish and Wildlife Services.

As an Area Meriting Special Attention, the Girdwood Coastal Wetland would be an ideal interpretive study area. Development of the site as discussed in this report would be of great educational and recreational benefit for both the population of South Central Alaska and visitors. While enhancing the tourist industry, a critical wetland would be preserved.

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Sources of Information:

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