PUBLIC INVOLVEMENT AND ADMIRALTY ISLAND, ALASKA: EFFECTS OF INTEREST GROUPS ON NATURAL RESOURCE ALLOCATIONS

A

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PUBLIC INVOLVEMENT AND ADMIRALTY ISLAND, ALASKA:
EFFECTS OF INTEREST GROUPS ON NATURAL RESOURCE ALLOCATIONS

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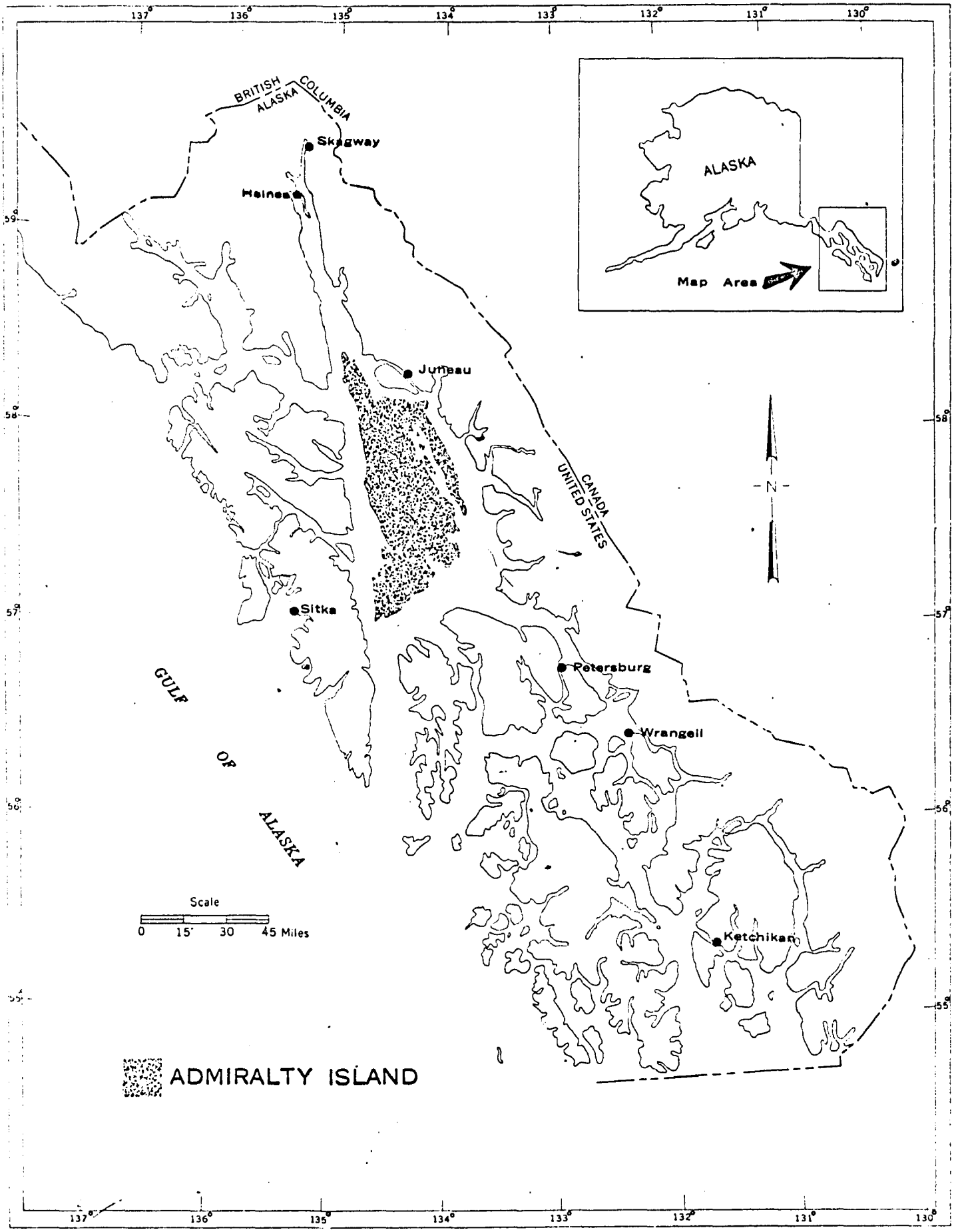
INTRODUCTION

Admiralty Island encompasses approximately five percent of the national forest lands in Alaska. Located in the Alexander Archipelago in the southeastern region of the state (see Figure 1), the island's wild lands are managed by the Chatham Ranger District on the North Tongass National Forest. Still sparsely populated and undeveloped, Admiralty Island is known to the American public as a focal point of land use controversy in the state of Alaska.

Resource planning on the island has been conducted on a broad basis with large areas being dedicated to specific uses as demands arise. Characteristic of public land management policies in the state, there has been little intensive land management on Admiralty Island. Budgetary and staffing limitations have historically posed problems. Of these, the lack of reliable data upon which to base management decisions would be the most prominent. Knowledge concerning the potential uses and values of Admiralty Island's land resources is only now reaching a stage of maturity which would allow an ordering of priorities and a rational decision making process.

This study on public involvement in the resource allocation process will explore the various social and political inputs which have to date influenced land use decisions on Admiralty Island. Chapter I will provide a description of the island

which is based on natural science research available. The impact of environmental factors on land use will be emphasized. Chapter II will explore the historical uses of the island to provide a framework for current resource understanding. Chapter III will trace the evolution of Forest Service public land management policies concerning Admiralty Island. Chapter IV will explore the range of interest groups inputs into the decision making process.



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Chapter I

A NATURAL DESCRIPTION OF ADMIRALTY ISLAND

Admiralty Island can be described as a unique geographic unit. It is isolated and virtually autonomous, surrounded by Stephens Passage to the north and east, Frederick Sound to the south, and Chatham Strait to the west. In Figure 2 the island is shown in relation to adjacent water and land bodies.

Admiralty Island is one of the largest islands in the Alexander Archipelago of southeast Alaska. It is approximately ninety-six miles long and slightly over thirty miles wide at its widest point, and totals over one million acres or 1,664 square miles. The perimeter of the island is very irregular with about 678 miles of coastline. Over twenty-seven bays and inlets are formed. The terrain is rough and mountainous with the highest peaks ranging up to 4,650 feet in elevation.[1] Two small recessional glaciers remain near the head of Lake Florence Creek as reminders of the tremendous ice flows that once covered the island to a depth of 4,000 feet. A number of large lakes occupy glacial cirques and valleys and are particularly concentrated near the geographical center of the island. The northern end of

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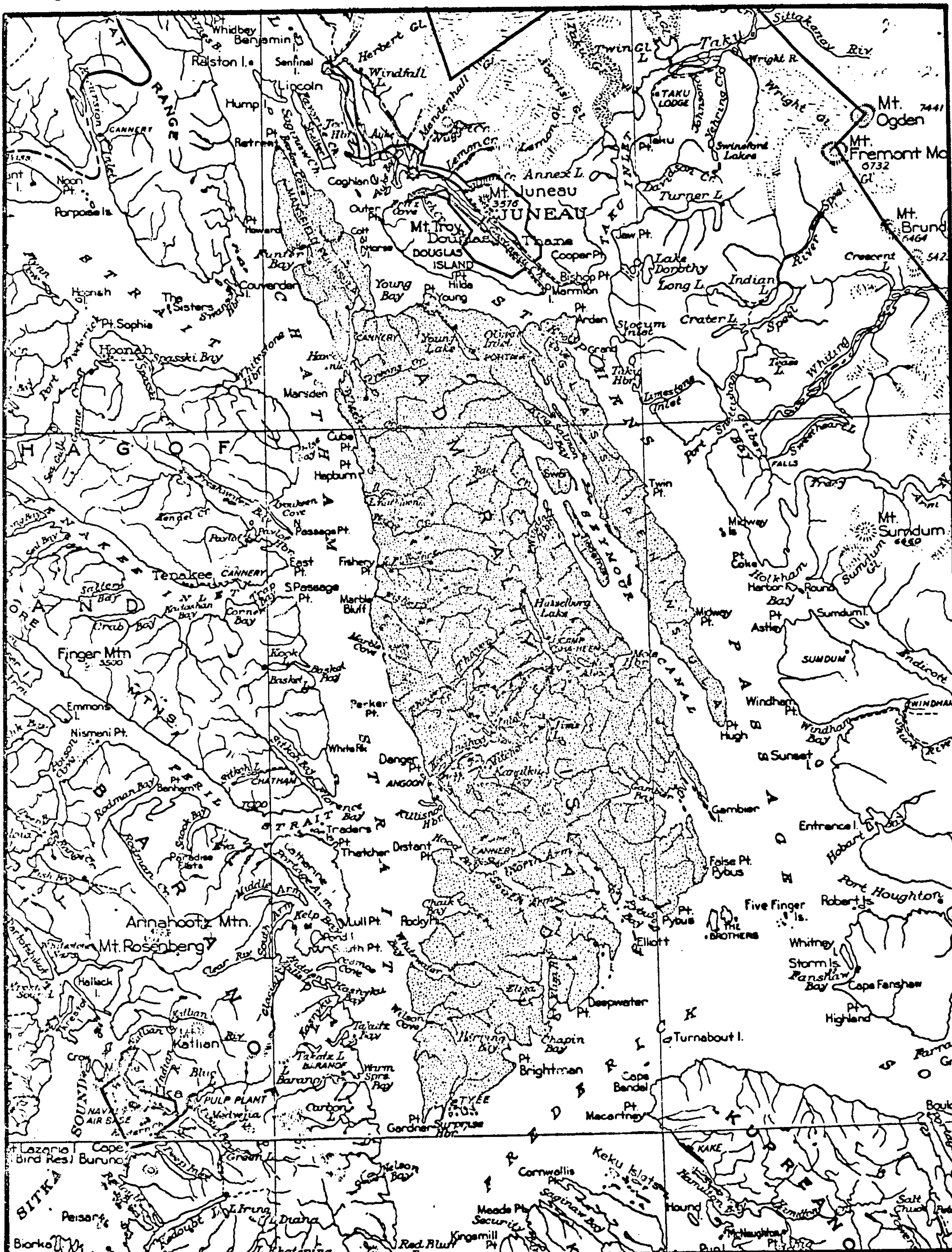
[1]U.S. Forest Service, "Facts on Admiralty Island,Alaska", (Tongass National Forest, Alaska Region, 1968), p. 1.

Figure 2.



the island parallels the community of Juneau, lying to the southeast. The island is, however, separated from immediate view of Alaska's political center by Douglas Island and from immediate access by Stephens Passage. The only existing community of note is Angoon, a native village of 500 people. A few hardy individuals still live on a year-round basis in scattered locations, such as Funter Bay, Hawk Inlet Cannery, Pack Creek, and Mole Harbor.

Admiralty Island falls within the humid maritime climatic zone which is typical of southeast Alaska. Heavy rainfall is normal throughout most of the year and annual sea level precipitation averages between 100 and 125 inches. It receives many cloudy days relative to the rest of the Pacific Northwest. Angoon and the immediate Mitchell Bay area, however, lie in a rain shadow formed by the mountains of south Admiralty and Baranof Islands. Sea level precipitation near Angoon is thirty-nine inches a year. Precipitation levels over the remainder of the area are considerably greater. About seventy-one percent of the total yearly precipitation falls between August and March. During these months frequent cyclonic, or "southeasterly" storms sweep up the coastline from the south. The more severe storms are often accompanied by winds in excess of fifty miles per hour. As the storm fronts move inland they undergo orographic lifting resulting in more precipitation at higher elevations.

The north and east portions of the island are influenced by chilling "Takus," or north winds, which flow from the mainland weather systems during periods of clear weather in the winter months. At lower elevations, the climate is moderate. Average yearly temperatures fluctuate from about 15°F. to 75°F. At higher elevations the weather is more severe with deep snows, high winds, and extreme arctic conditions prevailing, except for a few summer months making climate an overriding environmental factor.[2]

Variations in plant and animal communities are influenced by the soils. Soils, in turn, depend strongly upon climate, glaciation and topography. The soil types vary greatly from extensive areas of volcanic origin (basalt) on the south end of Admiralty Island, to metamorphic with intrusions of massive granite batholiths in the central and northern areas. Bedrock type has little influence on ecosystem occurance here, except as it influences soil drainage and distribution of alpine vegetation. Granite rocks are generally more massive and resistant to glacial erosion than other types of rocks, so they generally form the extensive mountain system.[3]

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[2]R. F. Billings and D. M. Bishop, Soils and Hydrologic Report for the Mitchell, Hood and Chaik Bay Watersheds, Admiralty Island Alaska, (North Tongass National Forest, U. S. Forest Service, Alaska Region, 1971), p. 1.

[3]F. R. Stephens, C. R. Gass and R. F. Billings, Soils and Associated Ecosystems of the Tongass, (Alaska Region, U. S. Forest Service, 1969), p. 5.

Pleistocene glaciation had a major influence upon the topography, soils and ecosystems of the island. Glacial ice covered most of the island during the maximum advance. As a result, U-shaped valleys, rolling glaciated lowlands, and related glacial features dominate land forms of the area. The beginning of today's soils and resultant ecosystems occurred about 10,000 years ago with the major ice recession. The deposits of glacial till, which form the basis for most of the mineral soils, were distributed up to about the 1,500 foot elevation by the glaciers. This soil mantle becomes thinner as it reaches higher elevations. Till deposits also tend to be thicker on south and west facing slopes. The deep soils along the valley floor and lower slopes of the mountains are further displaced down stream and slope by land slides, avalanches and natural erosion. This concentrates the most productive timbered soils in the area of moderated temperatures adjacent to the streams and beaches.[4]

Admiralty Island has an abundance of quality water. The watersheds are characterized by short, precipitous U-shaped glacial valleys. Stream flows are generally unstable with wide ranges in discharge. Water flows rapidly through permeable layers of rotting vegetation and the

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[4] Ibid., p. 2.

highly porous soils to the streams. All the soils are high in organic matter and very resistant to erosion as long as their surface layers remain intact.[5] The main drainage of the island is provided by some sixty-seven streams originating in the principal mountain range. These streams are twenty-five to seventy-five feet wide and one to two feet deep at their tidewater outlets and range in length from about four to twelve miles. Innumerable smaller streams feed these or drain directly into tidewater.

Snow and arctic conditions effectively restrict biological activity for most of the year. As each watershed has different soils-vegetative makeup, water regime, aspect and appeal to wildlife, fisheries and human needs it often requires separate considerations.

"The Forest - Bog Complex of Southeast Alaska" provides a good summary of dynamic biotic relationships:

> The most pronounced impression gained from this vegetation is one of habitat patterns and species' occurance, co-occurance and vigor at all levels in both time and space.[6]

Admiralty Island supports a mature Sitka spruce and western hemlock forest with only a minor occurance of yellow cedar and red alder. Western hemlock occurs as the dominant species (more than sixty percent of the stand), with Sitka

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[5]E. H. Lathram, J. S. Pomeroy and H. C. Berg, Reconnaissance Geology of Admiralty Island, USDI Geological Survey Bull. 1181-R (Washington, D. C.: 1965) p. R1-2.

[6]Bonita J. Neiland, The Forest - Bog Complex of Southeast Alaska "Vegetacio Acta Geobotanica", Vol. XXII 8-III - The Hague 1971.

spruce forming about thirty percent. Both major species are shallow rooted and quite subject to windthrow. Disease, windthrow and insects are the major factors contributing to natural tree loss. Only infrequently is fire a major hazard. Plant succession climaxes with western hemlock which has greater shade tolerance than Sitka spruce. Sitka spruce germinates prolifically and grows rapidly in forest openings along streams or beaches on disturbed sites where sunlight is available. Blowdown areas, burns or clearcuts typically regenerate rapidly with extremely dense stands of spruce and hemlock. On the island, rapid well ordered ecological succession is characteristic with pioneering species, such as alder often preparing the way for Sitka spruce and later western hemlock. Consequently, Admiralty's forests exhibit a variety of different species that represent stages in plant succession as well as adaptations to varying soil and moisture conditions.

The forest understory is typified by mosses, blueberry, rusty menziesia, bunchberry, devil's club and skunk cabbage, with occurance and distribution being controlled by light and soil drainage.

Extensive stands of forest are supported on thin, steep or poorly drained soils. Often called scrub forest, and dominated by western and mountain hemlock, lodgepole pine and Alaska-yellow cedar, these areas compose the majority of the forested area of the land.

Intermixed with the forest types are extensive areas of "muskeg", which are poorly drained organic soils that do not support a closed forest canopy. Here the water table is at or near the surface of the ground year around. Scattered open grown lodgepole pine, mountain hemlock, and Alaska cedar typically occur. Surface vegetation is dominated by healthy stands of sedges, grasses, sphagnum moss and various small flowering plants. Sphagnum peat up to fifteen or more feet deep occurs in some of these muskegs.

Grass and sedge covered "tideflats" occupy uplifted beach soils between low and extreme high tide levels at the mouths of streams. These limited areas are valuable for wildlife habitat. Vegetation is dominated by Lingbye sedge, hairgrass, beach ryegrass, and silverweed, with many other small flowering plants often prevalent.

The alpine community extends from the upper limits of the forest zone, at approximately 2,000 feet elevation to the rocky peaks. Trees occuring here are shrub-like mountain hemlock, Sitka spruce or lodgepole pine. Vegetation is typified by mountain heath, sedges, crowberry and blueberry. Dominant vegetation in snow avalanche areas is typified by Sitka alder, salmonberry, copperbush, and devil's club. A wide variety of smaller plants can be found in these brush types.[7]

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[7]Stephens, Gass and Billings, Soils and Associated Ecosystems.

The ecosystem is a useful model for basic resource planning. It is a totally inter-dependent system of physiographic, biotic, climatic, and animal relationships that are affected by man. Knowledge of inter-relationships between biotic communities and their controlling environment is necessary to understand the existence and the functioning of the ecosystems. Figure 3 illustrates such an ecosystem.[8]

Since biological activity involves the utilization of energy which comes ultimately from the sun, we can measure and compare the relative productivity of ecosystems through their output of energy. Studies of energy flow enable a relative comparision of the various marine and land communities. The comparision in Figure 4 shows that the interface between the estuary and coastal forest possesses the greatest potential for plant and animal production. The tremendous relative production of the coastal forest is one basic reason for its natural responsiveness.[9]

The forests on Admiralty Island are resilient, compared to drier inland forests. Their resistance to natural or many caused changes should be really realized. Vegetative regeneration is spontaneous and complete. In the maritime rain-forest a large biomass gradually accumulates which

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[8]George M. Van Dyne, "Ecosystems, Systems Ecology, and Systems Ecologists", Readings in Conservation Ecology, (New York: Appleton-Century-Crofts, 1969), p. 21-22.

[9]Edward J. Kormondy, Concepts of Ecology, (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971), p. 6.

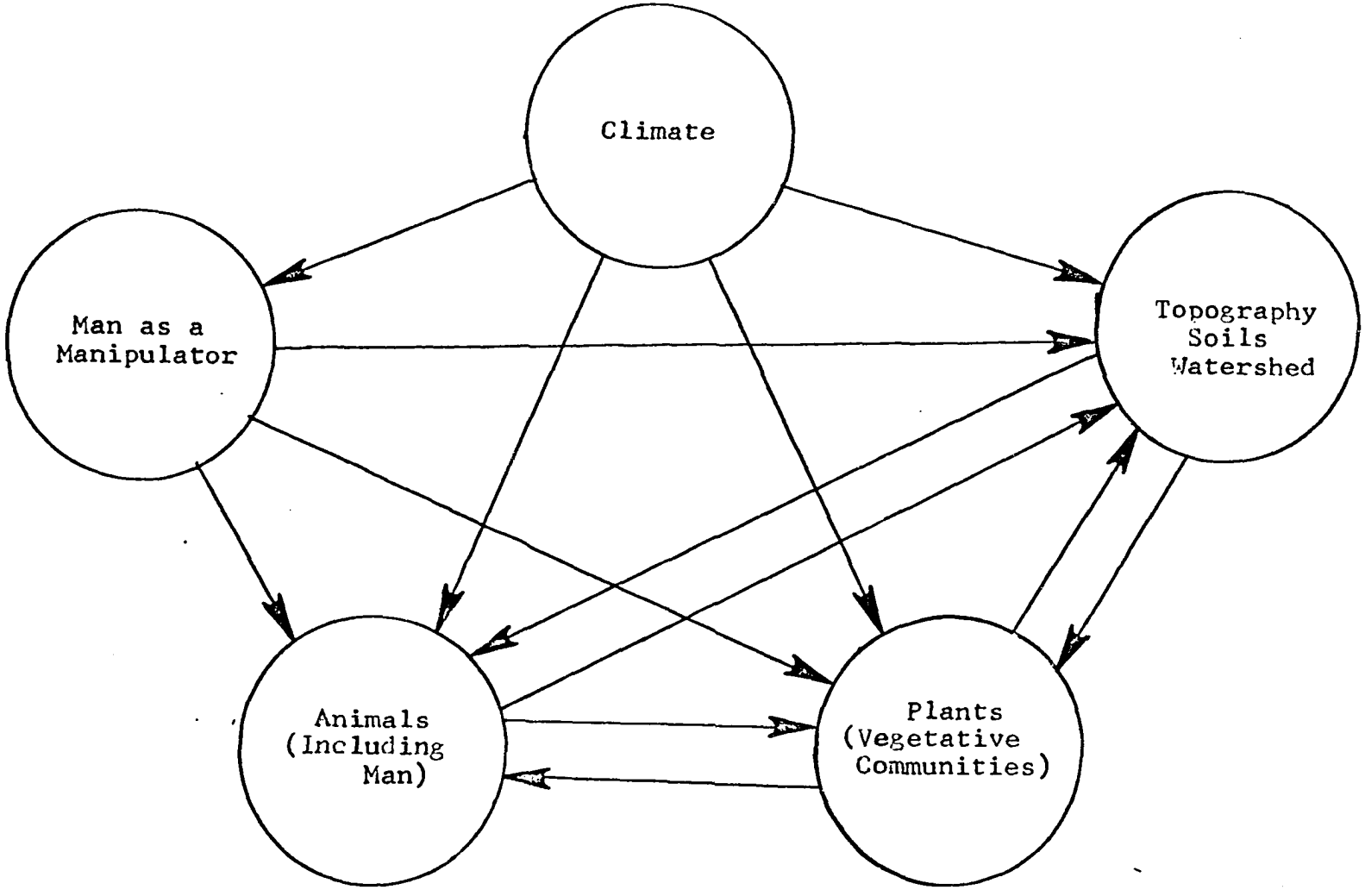
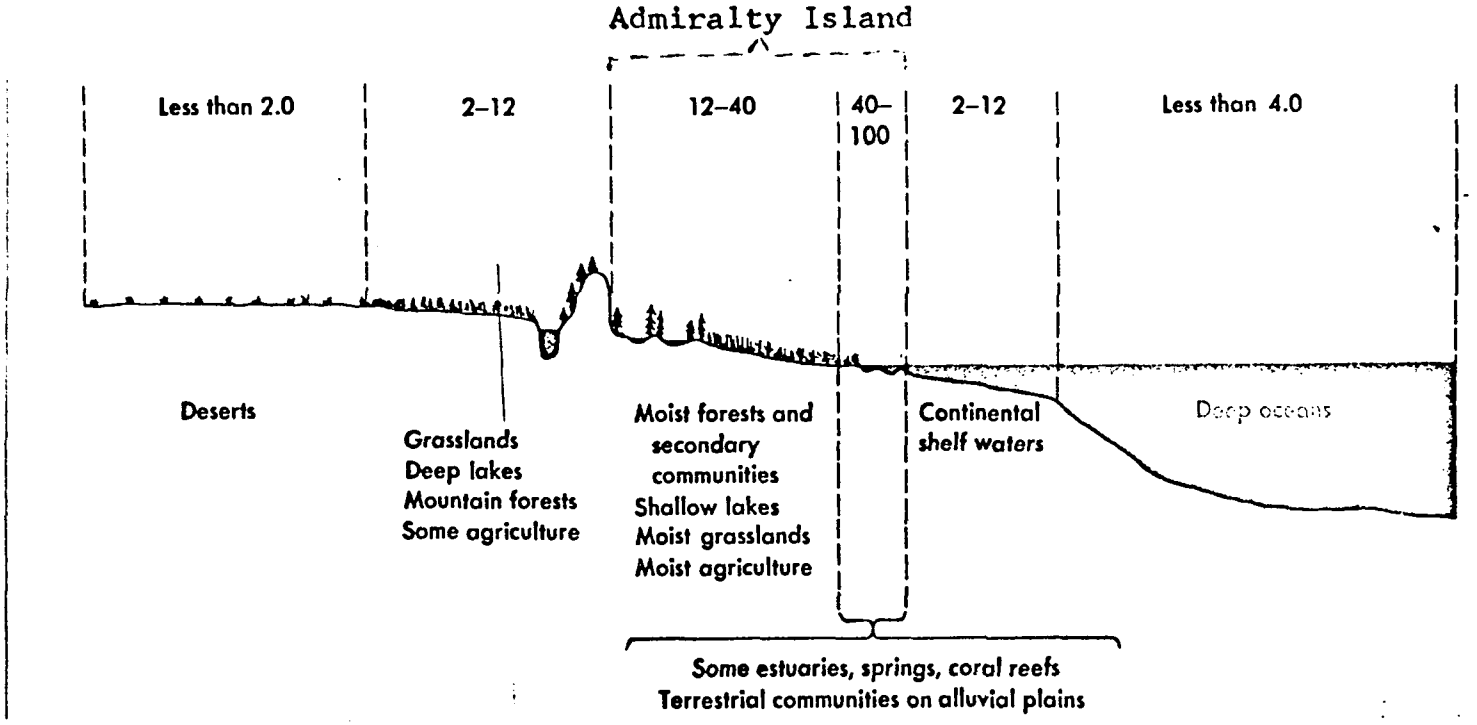


Figure 3. Ecosystem describes all the organisms (including man) and environmental variables of this area. The term "eco" implies environment; "system" implies an interacting, interdependent complex.

Figure 4. World distribution of gross primary production in kilocalories per square meter per day.



Source: Modified from the original contained in Concepts of Ecology, p. 21.

continues to change toward its ultimate natural composition of plants and animals.[10] According to Odum's ecological analysis "Forests are among the most successful ecosystems with a long geological history of survival".[11]

Offshore lies still another natural ecosystem revolving around marine life systems of the Alexander Archipelago. The upland forest and marine systems are thoroughly interrelated forming a distinctive ecological community. It is the climatic factors, the moderation of northern temperatures and the high levels of precipitation and humidity provided by the juxtaposed ocean, that allow the Alaskan forest to grow so densely and rapidly on relatively new soil mantles. The abundant marine life affords a system of survival factors that land based animals, such as the brown bear, Sitka blacktail deer or the bald eagle, have adapted to so well.

Another significant aspect of ecosystems needs to be made explicitly; ecosystems cannot be delimited sharply from each other. Optimum productivity often tends to occur on the "edge" of community boundaries. Where the tideflats or open muskeg meet the forest, the edge combines the optimum attributes of both vegetative types to provide for the Sitka blacktail deer, as an example. During the most critical

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[10] Eugene P. Odum, Ecology, (San Francisco: Holt, Rinehart and Winston, 1963), p. 86.

[11] Howard T. Odum, Environment Power and Society, (New York: John Wiley and Sons, Inc., 1971), p. 1.

survival period the deer requires a dense forest close to salt water. The forest canopy intercepts the heavy snow accumulation where the temperature is moderated by the salt water. The bulk of its food comes from browse along the edge of the forest openings, or adjacent to the tideflats. Southeast Alaska forest wildlife are more a product of the "edge" than of specific forest types. With few exceptions, the ranges of southeast Alaskan wildlife species are neither constant nor distinct within a forest type. Critical survival factors for animals can be isolated only by understanding the complex resultant interdependencies of vegetative communities and wildlife communities.[12]

With this brief introduction to ecological interactions we can see that plants and animals are interdependent. An analysis of cause and effect is necessarily very complicated and must show insight into the multitude of natural interrelationships to be valid.

Differentiations of ecological units can be appropriately based on weather patterns, geological character or topography. The rolling karst topography of the central lowlands, the volcanic formation of south Admiralty, the zone of low precipitation on west Admiralty or the area that winter Taku winds influence are examples. Many more environmentally

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[12]Urban C. Nelson, "The Forest-Wildlife Resources of Alaska", Journal of Forestry, 58 (June, 1960), 461-464.

different areas could each be described as separate ecosystems. Admiralty Island as a whole can be described only very broadly as an ecosystem. Actually each major watershed and adjacent salt water bay separated by arctic alpine mountains is a distinct ecological unit. Broad stratifications based on obvious like characteristics of individual watersheds and a detailed analysis of their contained soils and vegetative types, the waters and related fish and fauna communities are more valid.

A description of the resources of Admiralty Island is not complete without discussing the most recent and variable factor of the ecosystem: people. Any discussion of the term "resource" implies use by man. Conservation "ethic" implies the cultural capability to wisely use natural resources. Resources are normally measured in terms of economic values and productive capacity for man's use. Admiralty Island's natural resources can be categorized as non-renewable and renewable. Minerals are non-renewable, while trees, plants and wildlife are potentially renewable resources which can be protected and managed to obtain a sustained yield indefinitely. Another category of resources is aesthetics, including the wilderness and physical enjoyment of the natural environment.[13]

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[13] National Academy of Sciences, "Resources and Man", (San Francisco: W. H. Freeman and Co., 1969), p. 39.

To enter a bay on this island without the knowledge of man's past use and existence is to enter with blinders. Human history on Admiralty Island adds interest and value to the area. To not understand the natives view, the Russian-American exploration and colonization, the exploitations of furbearers, the fisheries, the minerals, the timber and the associated conflicts, would be to miss the real character of the island. The personality of Admiralty Island lies in part in the history of its past use and controversy. For example, the Hood Bay Cannery was purchased by the Bureau of Indian Affairs to provide employment for the Angoon people. The operation of the cannery concentrated human use of natural resources, until the salmon declined and the main facility burned.

A view of Hood Bay only a decade after the cannery was abandoned shows most of the structures in major disrepair. Rot set into the piling foundations soon after they were built. On the same day that the cannery watchman left, man speeded the environmental degradation of this community. Fishermen on the same radio frequency and natives quickly came to salvage the useable items and lumber from the buildings, thus weakening them. Now many buildings have collapsed. Those along the beach are being pounded by the surf and floated away by the tide. All of the roofs have decomposed, giving the heavy rains and snow access to their

once comfortable interiors thereby accelerating the deterioration. The salt water spray has corroded the remaining machinery beyond use.

Sitka blacktail deer, which were once used by the people at the cannery for a year round meat supply, are plentiful. A large population of brown bear can be found even though they were heavily hunted during periods of human use. Bald eagles are prevalent, but not in the previous numbers, having been bountied as fish predators.

A little further down the beach is an old homestead where an innovative pioneer, Nels Knudson, diked a tidal slough to farm. The buildings have collapsed, leaving rotten shells. The dike and leveled terrain is barely visible under the dense cover of beach grass and moss. The entire area is being reclaimed by Sitka spruce, rapidly closing in on the former cropland. Approximately forty years old, this new forest is growing very fast.

On tideflats scattered throughout the bay are the remnants of the huge fish traps constructed from the large old growth spruce growing along the coast of the island. Several old barges can be found with their bottoms eaten out by shipworms, and with small spruce trees growing in the mud in the cracks of the decks.

To the layman, the Hood Bay forest area appears pristine, with dense tree cover running from the beach to

the brush fields that surround the open alpine mountain tops. To walk the forested shores of the bay, however, one can find few areas without evidence of different periods of man's wood utilization since the turn of the century. Between 1914 and 1944 over ten million board feet of forest products were harvested from fifteen timber sales (550 acres), in many small cutting units. None of these sites are noticeable today, except by the most perceptive individual. An on the ground inspection of these sites reveals that forest growth in the larger cutover units is almost twice that of the high-graded or uncut areas on a volume per acre basis. Another area in Hood Bay was harvested at two different points of time. The first cutting supplied lumber and fuel for the early whaling and herring rendering operations at Killisnoo. The next harvesting provided young poles for use as piling and house logs for buildings near the cannery. Now there is a third forest about twenty years old. The vegetative debris left from logging has completely decomposed to form organic soil material for the new forest. Only a few moss covered stumps provide evidence that man was ever there. In the South Arm of Hood Bay is a large "clearcut" area which was logged between 1947 and 1952. From the 680 acres of forest cut, twenty-four million board feet of wood were shipped. There is still a noticeable contrast between the clearcut and the adjacent fores.

Another decade should bring aesthetic improvement.[14]

One can gain appreciation for nature's way with an informed visit to Hood Bay or to any of Admiralty's major bays. Man's presence has been only temporary, leaving little alteration to this landscape. Without proper care, however, large scale timber harvesting, road construction, occupancy, and other uses can more permanently affect the land, no matter how responsive or productive it may be.

A watershed is an area containing the entire drainage pattern of a stream. All of the land that feeds water into a particular stream is included in this definition. Figure 5 is a block diagram of a representative watershed with its associated physical and natural features.[15]

An illustrative description of resources on Admiralty Island is of value in understanding man in his environment. A discussion of a typical watershed and description of the relative plant and animal communities can lend an insight into the internal workings of the major factors of an ecosystem. A discussion of this small area can give a better idea of the island's resources, in relation to each other, and as valued by people.

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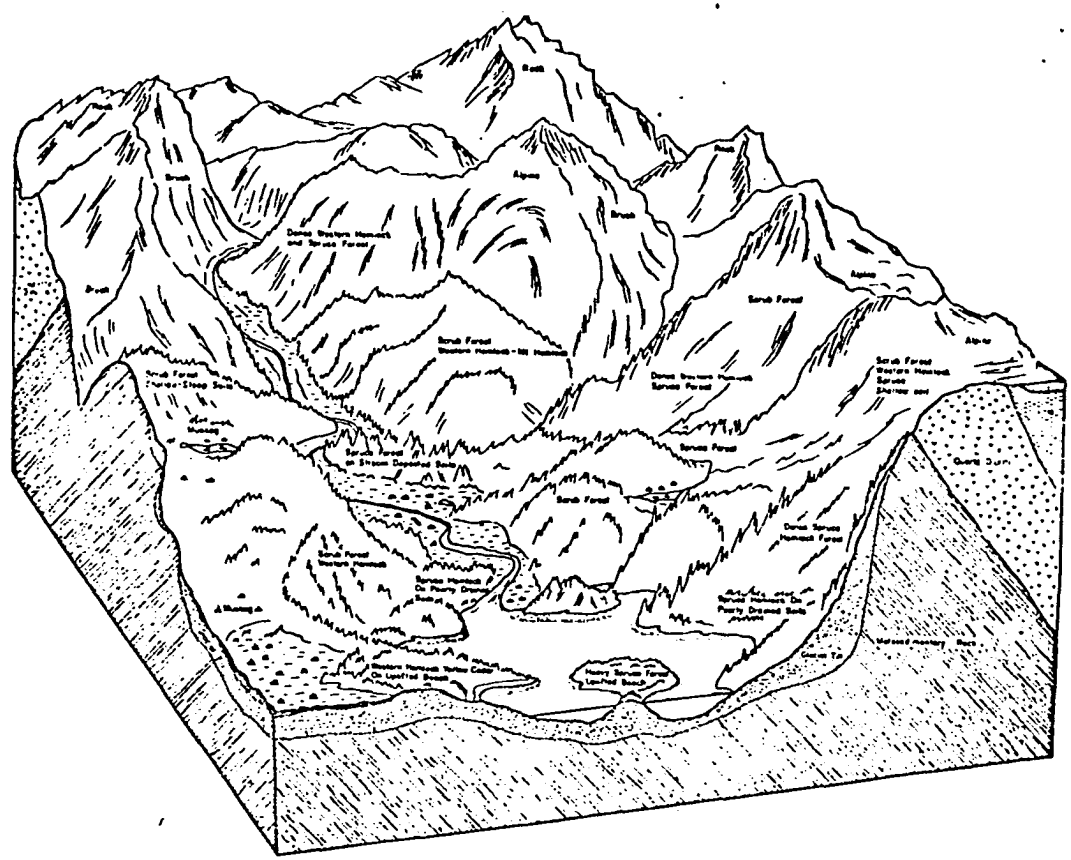
[14]U. S. Forest Service, "Timber Sale Files", (North Tongass and National Archives: 1909-1971).

[15]R. F. Billings, Block diagram of a glaciated valley in southeast Alaska showing soils in their natural relationship, (Petersburg: 1969).

Figure 5. Block diagram of a glaciated valley in S.E. Alaska showing soils and vegetation in their natural relationship.



Source: Modified from the original by. R. F. Billings, Forest Service Soils Scientist, block diagram showing soils in their natural relationship.

In examining the drainage (see Figure 5), one can visualize the relationships between the renewable resources. The mountain tops and upper reaches of the slopes are typically alpine. On the steep or rock terrain and adjacent to poorly drained soils or muskegs the trees are scrubby, interspersed with brush. Nearer the valley are the best timber stands, growing on the deep well drained soils, interspersed with muskegs, ponds and streams. Further down the valley toward salt water are more productive soils, milder temperatures and faster growing timber.

A look at the same drainage from the wildlife resource standpoint shows the alpine as year round habitat for few animals, but an important summer food source for the deer and brown bear. In the edge of the scrubby forest below, we find the dense cover and good berry production that attracts seasonal use by these animals as well as grouse and ptarmigan. It is in this zone at approximately 2,000 feet elevation, that bear often find the protective cover of deep snow for thier winter dens. Sharp ridges beneath the tree canopy are important wildlife access routes. With good timber cover deer can winter at higher elevations where the vegetation and dense browse production is available along the ragged edges between muskegs, slide paths and the coniferous forest. When snow depths exceed two feet the deer move down. Hard winters force them to the lower

elevations and the beaches. Near the lower edge of the steep slopes the small side tributaries, without natural barriers to fish access, are the rearing areas for salmon and trout fry. The stream itself is often excellent salmon and trout habitat, depending on the absence of natural barriers and the stream gradient. Four species of salmon, and three species of trout may occupy one stream at various times during the year. The nearer the mouth of the stream the more valuable the fishery resource becomes. Annual economic returns from the better fish streams are often greater than returns from timber crops in the same watershed. Most abundant and frequently harvested are the pink and chum salmon which spawn in the intertidal and lower portions of the stream. Silver salmon, steelhead, and Dolly Varden generally prefer to spawn further upstream.

Closely associated with the fish are its predators, the brown bear, otter, marten, mink, weasel, raven, eagle, and some waterfowl. The rich estuarine deltas are most desirable for waterfowl. Patches of eelgrass appear to be a prime feeding area. Concentrations of shellfish and plankton draw upon the minerals and nutrients deposited by the tides near the mouth of the freshwater stream. Mink, otter, marten, eagle, deer, and bear, as well as sea mammals, use the estuary for varying portions of their diet, causing them to spend time here seasonally. The forest fringes

offer cover for the bear and deer that feed on the tidal delta tideflats in the spring and early summer, and food from the abundant browse, herbs and berry crop associated with it. This fringe is also a roof that helps protect the deer winter areas from deep snows in severe winters that often decimate their population.

Removal of a timber crop can affect the watershed characteristics and, as a result, fish habitat. Man's use of both resources, because of their close proximity, can be in conflict. Given the limitations of present logging systems and economics, timber cutting requires road development. The most logical locations for roads are along the beach fringe where the tideflats offer gentle terrain and minimal clearing, and up the valleys. This routing makes the forest resources accessible with the least cost and is often the only possible location due to steep terrain, providing relatively good road locations. This is also good timberland, valuable wildlife habitat and frequently it contains a productive fish stream. A permanent road could remove a portion of the land from timber production and adversely affect the fishery resource. These as well can be inter-resource conflicts.

The minerals resource can be found easiest where vegetation is thin or substrata is exposed. Typically the beaches, streams and alpine areas have been prospected.

Clues of ore deposits are difficult to find in dense vegetation, even with advance technology. Access for prospecting and development is another major limiting factor. With road construction or timber sales both vegetational and access limitations are improved.

The recreational aspects of this drainage further complicate the situation. Sport fishermen prefer the lakes, lower streams and intertidal waters, since fishing is best and access is easier. Hunters frequent the tideflats, beach fringe and the stream as waterfowl, bear, and deer can be taken with less effort. Surveys indicate that eighty percent of the deer taken are less than one mile from the beach. Sportsmen's use of the alpine is infrequent. People observing the natural world also prefer the beach influence, the freshwater lake, the stream and the open muskegs in which they can follow bear trails and the alpine areas where they can look around and travel on foot without being encumbered by brush. The most valuable recreation sites would by the areas which provide the best variety of resources. Recreation can be in conflict with alternative resource uses of the land. Permanent home or recreation facilities require suitable sites. Alaskans looking at this resource rich land have generally picked the most productive sites to be set aside for their exclusive use. Preference for the streams, lakes, salt water and associated forest edge, is exhibited most often.

Recent choices for occupying land follow the same selection criteria as originally used by the natives. Virtually all of the cannery locations of the late nineteenth century were located on former native village sites, and for similar reasons. These same sites are now valued for their recreation or occupancy potential. With improved public access, recreation and occupancy conflict will increase in the specific areas that have the combinations of attractions that appeal to people.[16]

To understand all influences, human and natural, on the entire land area of Admiralty Island is nearly impossible. It is much easier to view the most productive zones as the focus of this paper. The most important land areas can be isolated by elimination. From the total of 1,064,960 acres on the island, 716,000 acres, or sixty-seven percent does not support commercial forest. This area is characterized by high country, brush, muskeg, and scrub forest. The remaining 349,000 acres, or thirty-three percent of the island, is classified as commercial forest. Again, by the process of elimination, 84,000 acres, or eight percent of the land, supports commercial forest but in such rough or steep terrain that it is not economically accessible by current technology. This reduces the operable forest

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[16]Viola Garfield, Historical Aspects of Tlingit Clans In Angoon, Alaska, (Social Science Research Council: 1947).

resource areas to roughly one quarter of the land mass.[17] Within the forested areas the variable soils, climate, exposure and terrain produce a gradation of timber site qualities that progressively improves toward the valley bottom and salt water. The better timber producing sites can be generally limited to specific soils within a narrow band less than 1,000 feet in elevation following the beaches and valley bottoms, generally less than a mile from major streams.

This forested quarter of Admiralty's area is the present battle ground and also the area of greatest concentration of opportunities for alternative uses. Specific resource conflict areas which concern less than ten percent of the land area can be isolated. This ten percent, however, is also the most productive land.

The ecosystems and their relationships and complexities are only now being realized. It is certain, however, that the conflicting resource values on Admiralty are located on only a very small percentage of the total land; the most productive area. The fertile lower reaches of stream valleys and narrow bands of forest immediately adjacent to the shore line are the most critical for wildlife, fisheries, forest production, recreation, access, occupancy, and aesthetics.

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[17]U. S. Forest Service, Facts on Admiralty Island.

Therefore, it is here that we can isolate a battlefield between the various competing resource demands and the complex natural inter-relationships of the land.

Chapter II

HISTORICAL USES OF ADMIRALTY ISLAND

The application of our value system to the ecosystem necessitates the blending of natural and human ecology. The stage of demand for Admiralty Island's resources today is not where it will be tomorrow, or where it was yesterday. A historic sketch of human use of the island can yield a better perspective of problems today and to future outlook.

Three progressive levels of the southeast Alaskan economy can be equated to eras in the history of man's use on Admiralty Island. The first historic era outlines the aboriginal subsistance hunting and fishing economy which began with the first Tlingit use and still operates in a limited way. The second is the colonial period which is exemplified by fur trading, and commercial fishing. Production of income from the natural resources within the area is distributed to non-resident proprietors and workers in the typical colonial economy. The third economic era embraces the development of land resources and is more Alaska resident oriented.[1]

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[1]George W. Rogers, "Three Phases of Alaska History", (Anchorage, Alaska: Federal Field Committee for Economic Development in Alaska, 1970).

These stages were conceived as progressive levels of southeast Alaska's economic development and do not necessarily fit distinct periods of time. The native population at Angoon, for example, has adapted in many ways to the influence of the colonial and land resource economic eras. Electricity, water and sewage systems, modern fishing boats, seasonal jobs at canneries, public education and welfare programs all have become a part of the current way of life. The Tlingit culture and seasonal rythmn of living has not changed, however, as their existence still revolves around the sea. Subsistance hunting and fishing still contributes a great deal to each Angoon family's support.

The colonial era is passing, leaving one operating cannery and remnants of canneries, whaling stations, salteries, and fishtraps as reminders of past exploitive interests. Japanese interests in pulp and minerals resources also exhibit remnants of colonialism in today's economy.

With the passing of each progressive period of time, Admiralty Island has received a greater variety of interests. To illustrate the progressive development and complication of human use a historic view is appropriate.

Era of Aborigional Subsistance

Long before European discovery, southeast Alaska was the territory of the Tlingit, one of several groups of

Pacific northwest coast Indians. Admiralty Island, which lies in the center of this territory, was one of the most habitable areas from the standpoint of climate and subsistance resources. The area provided the means of support for a relatively heavy concentration of population, as well as the economic means for the "elaboration of a primitive culture rich in art, oral literature and social and legal organization".[2]

This advanced aborigional culture is attributed to an ample natural resource base. The land and the sea were divided among clans within the broad bounds of the Tlingit people and managed by local geographical units. The land provided the timber for housing, fuel and canoes. Deer, berries, fruit and vegetable foods also came from the land. Marine resources, however, provided the principal source of wealth and well-being, with rich harvests of marine life, including salmon, halibut, candlefish, herring, hair seal, sea otter, shellfish and seaweed. The Tlingit's orientation to land occupancy was to the southwest beach, to receive the sun. The deep forest was a place of fear and superstition as it harbored the brown bear. It provided relatively sparce subsistance and grew devil's club in a dark environment of dense undergrowth.[3]

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[2] Ibid.

[3] George W. Rogers, "Economic Development in Southeast Alaska and its Impact on the Native Population", in Alaska Public Policy, ed. by Gordon Scott Harrison (College, Alaska: Institute of Social, Economic and Government Research, 1971), p. 289.

The Tlingit groups divided Admiralty's resource base into tribal territory, based on its coastline. The north end was the land of the Auk, the southwest side, by the Hutsnuwu settling at Angoon, and the bays of the southeast shore were the domain of the Kake people. Notable winter village sites were located in many major bays that afforded the combination of good fish producing streams, good beaches for their canoes, shelter from winds and good southwest aspect to receive the winter sun. Some of the larger villages were at Pybus, Chaik, Whitewater, Hood, Funter, and Young Bays, Murder Cove, Mole Harbor, Hawk Inlet, and Angoon. Many other summer subsistance camps were located in outlying bays which were also individual clan territories.[4]

Angoon became the only permanent winter village for a variety of ecological and social reasons. The Kootznahoo-Mitchell Bay estuary afforded a tremendous concentration of marine life. Its narrow inlet at Angoon concentrated the fishery. Angoon has a better climate than any other area within this latitude of southeast Alaska. The community is located on the narrow peninsula between Kootznahoo Inlet and Chatham Strait. Near Angoon, they were able to control the brown bear, first on Killisnoo Island and then on the narrow

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[4]Viola Garfield, "Historical Aspects of Tlingit Clans in Angoon, Alaska", American Anthropologist, (N. W., 49, 1947), 438.

peninsula, to the extent that they felt secure. Their deer hunting subsistence fishing, logging, and berry picking areas were accessible by the protected inland waterways. The intricate maze of islands and treacherous tidal bore also afforded them protection from their human enemies.

Anthropologist De Laguna stated of the Angoon people's resource appreciation and allocation:

> Another reason given for the growth of towns was accessibility of resources. Angoon, at the entrance to Kootznahoo Inlet, and Neltushkan, on Whitewater Bay, were centrally located for exploitation of rich hunting and fishing areas and attracted settlers from far and wide.[5]

> According to Tlingit legal theory, bays, streams, and other productive areas are the private property of certain house groups or local divisions of clans. Once use and occupancy are established, these properties are inalienable.[6]

These people were applying some highly developed human values to the resource base. It may also be summarized that these Admiralty Island people were living very much within the ecosystem. They were attempting to alter, and at the same time, adapt to aspects of wilderness for survival. The fear of the brown bear, the unpredictably rough salt water and the cyclonic weather patterns affected their living conditions, as it does today.

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[5] Fredrica de Laguna, The Story of a Tlingit Community: A Problem in the Relationship Between Archeological, Ethnological and Historic Methods, Bureau of Am. Ethnology Bull. 172 (Washington, D. C.: Government Printing Office, 1960), p. 23.

[6] Federal Field Committee for Development Planning in Alaska Natives and the Land, (Anchorage, Alaska: 1968), p. 276.

The Colonial Era

Admiralty Island, first named by Captain George Vancouver, R. N., had an alternate Russian name published by Captain Tebenkof, which was "O (strov) Kutznoi", meaning "fear island," possibly named for the early conflicts with the Tlingit, or a misinterpretation of the Tlingit name, Hutsnuhu, meaning "bear for" or "bear island".[7]

Vancouver's journals offer the first written account of Admiralty Island:

> The shores of Admiralty Island were very bold and afforded many convenient bays, likely of safe anchorage, with streams of water flowing into them and presented as aspect very different from that of the adjacent continent as the island in general was moderately elevated.
>
> The island seems to be composed of a rocky substance covered with little soil and that chiefly consisting of vegetables in an imperfect state of dissolution, yet it produces timber superior of any I have noticed on this side of America.[8]

In July, 1794, Vancouver anchored in Cross Sound. He sent several long boats exploring under the command of a Mr. Whidby. Here is the first record of Admiralty Island, although at the time it was not recorded as an island. The party traveled towards the head of Lynn Canal where

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[7]Donald J. Orth, Dictionary of Alaska Place Names, Geological Survey Professional Paper 567 (Washington, D. C.: Government Printing House, 1967), p. 48.

[8]Capt. George Vancouver, A Voyage of Discovery of the North Pacific Ocean, (Vol. 6; Juneau, Alaska: Alaska State Historical Library, 1801), p. 52-3.

they encountered a large group of hostile Chilkat-Tlingit Indians.

The explorers were able to lose the native canoes through a long wet night and retreated to the north end of Admiralty, hence named Point Retreat. The exploring party contacted the natives of Kootznahoo, then sailed past Hood Bay towards the south end of the island into Frederick Sound where they rejoined Vancouver.

Later, Whidby commanded another exploring party which sailed up the east side of Admiralty. From here he recognized the country he had seen when exploring Lynn Canal. As he proceeded to Point Retreat, Tlingit canoes set out from a village. A warning shot fired above the natives did not discourage them as they began to close the distance. A second shot was fired, this time into the canoes, apparently hitting a warrior, and causing the Indians to retreat. The shores of Admiralty had now been completely circumnavigated and found to be about sixty leagues in circumference.[9]

Vancouver wrote, referring specifically to this territory, including north Kuiu and Admiralty Islands:

> These bays and arms abound with a greater number of salmon and sea-otters, than Mr. Johnstone had observed on any other part of the coast; and as they were in greatest abundance at the heads of

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[9]Kaye J. Metcalf, "Summary of History of Admiralty Island" (unpublished paper quoting Vancouver's Journals, Juneau, Alaska, 1967), p. 5.

> these places, it was inferred that the salmon, and other small fish, form a large proportion of the food of the sea-otters, which are thus induced to frequent these inland channels, to which at this season of the year (August, 1794) such fishes resort.[10]

Both the Angoon and Kake people he encountered had many sea otter furs to trade. Evidently, Kootznahoo Inlet was a rich hunting area.

The reports of all of the early explorations told a consistent story; that of the fabulous wealth in furs to be had in the new land. With this, the Russian traders and trappers arrived. Interestingly enough, they were very much in competition with each other as well as the Tlingits and American traders.

During this period, the Tlingit of Admiralty were a part of the exploitation of the fur resource. The only established external economy evolved about this trade. Archeological studies by de Laguna at Daxatkanada, a natural fort in the Kootznahoo Inlet disclosed that sea otter bones were the most frequently found remains.[11]

The fur trading period from roughly 1780 to 1840 can be justly characterized as a period of affluence. The wholesale harvest of fur bearing animals enlarged the wealth of the European traders and brought to the Tlingit items from the European culture that soon became necessities

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[10] Ibid., p. 7.

[11] Fredrica de Laguna, The Story of A Tlingit Community, p. 94.

of life. With all of this wealth, new economic orientations began to emerge, yet the social and religious structures of the Tlingit people remained much as it was prior to contact. Smallpox and typhoid from early contact decimated the native population by approximately forty percent between 1787 and 1862. Neltushkan in Whitewater Bay, Aynskultu at Young Bay, and Kootznahoo at Angoon were the only permanently occupied villages in 1867. The native population then was approximately 600 people.[12]

The decline of the fur industry toward the middle of the nineteenth century encouraged the search for other exploitable resources. The potential of the fisheries was recognized, but under the Russian-American Company, was relatively undeveloped. In 1867, by the Imperial Order of Alexander II, the holdings of the Russian-American Company were sold to the United States. The Territory was largely ignored by the federal government during the next decade. The fishing industry during this time, however, was slowly developing.[13]

The Salmon Fishery

In 1878 the Northwest Trading Company established a post. The following year they built a whale, herring oil

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[12] Ibid., p. 7.

[13] Robert E. Ackerman, "Preserving the Cultural Heritage of South Eastern Alaska", (Research Proposal to Alaska Native Brotherhood, U. S. Forest Service, Alaska State Museum, Washington State University, 1970), p. 1.

and fertilizer plant at Killisnoo. This was probably the first major fish processing plant on the North Pacific coast. Another whaling operation began at Tyee on the southern tip of Admiralty.

The year 1878 stands as an important starting point in the economic development of southeast Alaska. In that year the first salmon canneries in Alaska were erected, and within eight years, canneries were operating in all areas of the region.

The Tlingit people accommodated themselves readily to the new commercial fishing industry. Existing labor skills were readily adapted to the new industry; men continued to fish, but with larger boats and somewhat different equipment; women continued to clean salmon and shellfish, but for a cannery rather than the family unit. The industrialization of fisheries required little change in the traditional rhythm of life.[14] With the construction of canneries at Pybus Bay, Gambier Bay, Murder Cove, Hawk Inlet, Funter Bay, and Hood Bay, plus the plant at Killisnoo, fishing became the major industry on Admiralty Island. The catch was erratic with a rapid decline occuring in the early 1920's.

The cannery's operations contributed little to the economic stability of the territory. Under lax federal regulation the fisheries resource was rapidly over harvested, primarily with the advent of fish traps. These were to become

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[14]Garfield, p. 275.

the symbol of profiteers. Most of them were owned by outside interests, contributing little to the local economy. Over twenty-two of these highly efficient fish harvesters covered the northwest and southeast coasts of Admiralty in strategic locations on the fish migration routes. A typical trap was a huge floating installation with wings often extending a half mile or so from shore, but requiring only a trap tender. They were constructed of many huge spruce logs anchored by pilings, supporting wings of wire netting. These wings funneled the fish into a V-shaped trap entrance to the pot where they were held until a tending scow arrived.[15]

Alaskans became deeply concerned about the apparent over use of the fish resource. In 1931, the Territorial Governor expressed this concern:

> Every year the locating of more fish traps by the canneries is making this important industry in Alaska a monopoly of non-residents and foreign corporations whose great wealth has been taken from the waters of Alaska by the operation of canneries a few months annually. If the natives are deprived of an opportunity to fish for a living the government will have to support them; if the white residents are deprived of that opportunity, they will have to leave the homes they have worked so hard to get.[16]

The need for conservation of natural resources in

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[15]Richard A. Cooley, Politics and Conservation, The Decline of the Alaska Salmon (New York: Harper and Row, Publishers, 1963), p. 37.

[16]Ibid., p. 93.

Alaska has been clearly demonstrated through the misallocation of its fisheries. In 1914, in the Governor's annual report, he called for conservation measures to be applied to fisheries as they were to other resources, such as timber:

> In the desire for gain on the part of most of the exploiters of the fisheries of Alaska, the conservation of these fish seems to have been practically lost sight of.[17]

Fisheries to date, have proven to be the most valuable resource on Admiralty Island. They are definitely a land resource, as well as a marine resource, since they require the freshwater streams for spawning and rearing their young. Several tentative statements summarize fisheries conflict of this era:

> 1. After the decline of the fur bearers and the permanent loss of the sea otter, it was the first major resource impact on Admiralty.
>
> 2. It provided the area for conflicts between resident Alaskans and non-residents and federal agencies.
>
> 3. It stirred the need for conservation of natural resources following the fisheries fall into the pattern of "lower 48" economic abuses.
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> 4. Other resources of Admiralty Island were affected by this use. Much of the timber cut was used in conjunction with fisheries.[18] Fishermen, worried about the decline of the fishery, focused on the wildlife that used this resource. Bounties

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[17] Ibid., p. 195

[18] Complete statistical data delineating the economic significance of one resource relative to another at any given point in time are not readily obtainable. More research and analysis is necessary before the general propositions on resource values contained in this study could be further extended and made more specific.

> were issued for bald eagles, seals and Dolly Varden trout, because they ate salmon depriving the people of economic necessities. Brown bear, sea lion, gulls, and small fur bearers were also killed as predators of the fishery.

The Beginnings of Land Use

The discovery of gold in the Juneau-Douglas area in 1880-1881 marked the point of the dramatic entry of the white population into southeastern Alaska. Men, spurred by the lure of gold in the Yukon and Alaska territories, flooded into the southeastern part of the state. Juneau went from a camp to a shanty town to a city within a few years. The impact of this influx of whites upon the Tlingit country came suddenly and was irrevocable.

The discovery had an effect on Admiralty Island's mineral resource interest as well. The U. S. Geological Survey reconnaissance of Admiralty Island stated of the resource in 1906:

> The mines of Admiralty Island have been prospected since 1855. The irregularity with which these have been operated and the small returns obtained from them make it impossible to state production. However, it probably has not exceeded $15,000. . .Although gold is widely distributed over Admiralty Island in quartz veins there are but few known localities which show a concentration of the metal to make valuable deposits. Marble on the west side of Admiralty, opposite Tenakee, forms the shore for a distance of eight miles. It is easily accessible, hence, may be of economic importance. The coal deposits of Admiralty are thin and discontinuous

and have no present commercial value.[19]

The most active mineral exploitation on Admiralty took place between 1885 and 1940 when gold was the chief metal sought. In recent years the island has been prospected sporadically with little physical exploitation and few claims staked. The remaining buildings on the once operational Admiralty-Alaska mine site in Funter Bay and at other mines in Hawk Inlet, Bear Creek and Kanalku Bay have rapidly deteriorated. During this era activity peaked in 1930, and resulted in permanent claims patents for 1,035 acres by six companies or owners, all prior to 1946.

The dense vegetation and harsh climate resisted minerals exploration and use. The latest geological reconnaissance of Admiralty states:

> The mineral potential of Admiralty Island has not been fully tested. Thick glacial soil, glacial deposits, and dense vegetation cover much of the area; hence, the application of geochemical and geophysical exploration techniques will probably be necessary to evalute completely its economic possibilities.[20]

The gold rush itself was short lived, but established

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[19]C. W. Wright, A Reconnaissance of Admiralty Island, Alaska, (Washington, D. C.: U. S. Geol. Survey Bull., 287, 1906), p. 138.

[20]E. H. Lathram, et al. Reconnaissance Geology of Admiralty Island, Alaska, (Washington, D. C.: U. S. Geol. Survey Bull. 1181-R, 1965), p. R 46.

Juneau as Alaska's permanent political center. The beginnings of territorial government were formed when the Juneau and Douglas mines were in full production. Men, attracted by tales of the Klondike gold, found other economic potential.

The gold rush had several impacts on man in Admiralty's environment. It brought a large number of non-Indians to the area and added to the diversity of resource use. Now, not only fishing, hunting, and trapping, but mining and logging were permanently established economic endeavors. The latter uses were focusing upon land resources more than the marine resources.

The brown bear were hunted extensively because their fur was valued by European military regiments for high bear hats, and by the affluent, as bear skin rugs and robes. Admiralty was good bear habitat and therefore a very popular hunting area for both the native and white professional hunters.

Allen Hasselborg was one of the most efficient bear hunters. He first came to Alaska during the gold rush of 1898 as a prospector. Soon, he returned to his former vocation of professional hunting. He was sought by expeditions such as the Annie Alexander Expedition to Admiralty in 1907, and by C. Haft Merriam, naturalist, because of his hunting skill, knowledge of the animals

their habits and habitat.[21] His association with Admiralty Island became permanent when he built his first cabin at Mole Harbor. In a period of approximately fifteen years he supplied over 200 brown bear skulls to United States museums and collectors. In addition, he shot the bear for its skin, gradually evolving into a well known "bear man" and brown bear guide for sportsmen. The brown bear were his major economic means, and Mole Harbor was the area he selected for his way of life.

There were many bear men, both native and white, who knew the animals and the country as well. Hasselborg had chosen Admiralty Island, along with others, for the natural resource was there. Hasselborg, like most of the good professional guides that followed him, became a conservationist. He harvested only a small portion of the bear in a particular location, regarding the animal more as an aesthetic resource and wilderness companion in his later years.

With the settlement of Admiralty, professional hunting for bear skins became secondary to bear killing for family safety. Indiscriminate shooting was the normal practice and mass extermination of this hindrance to settlement was proposed. The habitat area was of great size, the devil's club was thick, and the bears were intelligent enough to

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[21]Frank Stephens, "A Summer's Work, A Natural History Expedition to Southeastern Alaska", Forest and Stream, May, 1909, p. 508.

survive their greatest threat (man), with the help of a sympathetic group of people.[22]

The Wayne Short family established residence in Surprise Harbor, near the Sebastian and Stuart Cannery at Tyee on the southern tip of Admiralty. Typifying settlers and fishermen, their way of life very closely followed the Tlingit as they endeavored to live off the land during the war and depression periods. The following account describes the feelings of the above mentioned family as they viewed Surprise Harbor as a spot to settle.

> The most important thing was the fact that a man could live off the land. Deer were plentiful, and would be the mainstay; there was a world of grouse and ptarmigan, ducks, geese. And the sea would give us almost everything else we needed: There were clams and crabs for the taking, salmon and halibut. Pap had watched the commercial trolling boats come in and unload at the cold storage in Murder Cove, and he had been impressed with the money they had made from fishing. It was true we didn't know the first thing about commercial fishing, but we could learn. . .We would build our house, stake off enough ground for a garden and outbuildings , and the Forest Service would then come and survey the homesite. It would cost us five dollars a year for the homesite permit and at the end of a certain length of time we would be eligible to apply for patent of this land.[23]

Fur was still a demanded commodity well into the twentieth century. Seal, beaver, brown bear, marten, and mink were available to be hunted or trapped on the island.

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[22]John M. Holzworth, The Wild Grizzlies of Alaska, (New York: G. P. Putnam's Sons, 1930), p. 17.

[23]Wayne Short, The Cheechakoes (New York: Random House, 1962), p. 10.

Native and caucasian trappers delineated and jealously guarded their areas.

The fact that fur prices held well encouraged another fisheries based occupancy: the fur farms. Normally, a fox farm or mink ranch was located on a small island where the fur bearer could not escape. The abundant salmon, other marine animals, deer and bear were used as food. Trapping of wild fur bearers and commercial fishing also supplemented the income of the more than twenty fur farms associated with Admiralty Island.

The situation of human occupancy and use in 1935 is described by Heintzleman:

> The Indian village of Angoon, on the shores of Chatham Strait, with a population of 320, is the only town on Admiralty Island. Funter Bay on the north end of the island is the next most important community center, with one gold-mining property employing fifteen men, another smaller mine, a large cannery, and several individual homes. There are also some isolated residents, such as miners, homesteaders, home-site occupants, cannery watchmen, fur farmers and lighthouse keepers. The total year-long population is approximately 365. In the summer the population is materially greater because of the influx of salmon cannery workers, fish trollers encamped on the beaches, fish seiners on boats using the bays for night anchorages, fish-trap watchmen, stream watchmen for the Bureau of Fisheries, sport fishermen, prospectors, miners, and others. This purely seasonal population is estimated at 600 at the peak of the cannery activities. During the middle of the summer, when the island population, including both year-long and seasonal residents, reaches 1,000. The amount of patented land on Admiralty Island is inconsequential.[24]

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[24]B. F. Heintzleman and H. W. Terhune, A Plan for the Management of Brown Bear in Relation to Other Resources on Admiralty Island, Alaska, (Alaska Region, U. S. Forest Service, Alaska Game Commission, U. S. Bureau of Biological Survey: 1935), p. 4.

West Admiralty was the area that Captain Vancouver described over a century before in his journals, saying, ". . .Yet it (Admiralty Island) produces timber superior to any I have noticed on this side of America".[25]

In 1897 an editorial in the Forest and Gardens voiced concern for management of the forests of Alaska:

> Trees cannot be cut lawfully in Alaska for timber or fuel, for there is no law which permits the sales of stumpage or timber-lands, and no law relating in any way to the forest but the one which forbids all shipment of wood from the territory. There are a few sawmills in Alaska, however, and the number will soon be increased, and a large quantity of fire-wood is consumed at salmon canneries and quartz mines, but the Government gets nothing for it, and is powerless to prevent damage to the public domain. Fortunately, the climate of southeastern Alaska is so humid that forest fires are rare, and never very destructive, and reproduction is sure and rapid. These forests, therefore, even with American methods, will not soon or easily be destroyed.[26]

Logging began primarily with local use of spruce for the existing mines, canneries and fish traps. The first logging was "hand logging," and employed the crudest techniques. The best spruce trees near tide water were cut first. They were felled and rolled to the salt water with hand jacks. Here they were tied into rafts and towed to the sawmill. Later steam "donkey" engines assisted the move to "high grade" or take only the best spruce stands growing near the beaches.

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[25]Captain George Vancouver, A Voyage of Discovery, p. 52F.

[26]Professor C. S. Sargent, ed., The Forest of Alaska (New York: Garden and Forest Publishing Co., Sept., 1897), p. 501.

Most of the early utilization of timber on Admiralty Island was for fish trap logs and pilings. Over ninety-seven million board feet of wood product was harvested between 1909 and World War II, most of it directly associated with the rise and fall of the fishery. Remnants of the trap logs are visible on most of the beaches, near the bays that held good fish streams or canneries and adjacent to the fish migration routes. Areas that yielded the largest percentages of the early wood were: Favorite, Mitchell, Chaik, Hood and Whitewater Bays, Seymour Canal, Eliza Harbor, and Marble Cove. These were the most accessible areas with the best forest production. All of these cut-over areas now have well established, second growth forests. Timber cutting prior to, and during World War II, had only limited impact on Admiralty Island as the Alaska Spruce Log Program concentrated operations on the South Tongass National Forest. See Table 1.

Large scale timber cutting began in the south arm of Hood Bay, and Eliza Harbor, between 1947 and 1956. The most recent timber sales have been concentrated in Whitewater Bay and Seymour Canal. The areas cut-over and volume utilized have been much greater following World War II. These clearcuts yielded over 182 million board feet in the past thirty years, bringing the total Admiralty wood yield to approximately 280 million board feet, from an area of some 11,000 acres since

TABLE I

Summary of Known Cutover Areas on Admiralty Island [a]

Date	General Location	No. of Sales	Vol. mbm	Acres Area Cut
1860-1910	Angoon, Killisnoo, Mitchell	--	10,000	800 [b]
1914-1927	Favorite, Mitchell, Kanalku	22	30,162	1,225
1914-1941	Hood Bay	15	10,650	550
1947-1952	South Arm Hood Bay	2	23,730	678
1914-1930	Chaik Bay	14	7,180	520
1909-1928	Whitewater Bay	10	9,865	1,070
1956-1965	Whitewater Bay	6	61,528	1,716
1911-1928	Seymour Canal	11	16,090	960
1960-1971	Seymour Canal	10	18,525	453
1912-1937	No. Adm. Marble Cove, Youngs, Funter	16	9,898	1,220
1939-1969	Funter, Youngs	10	19,100	600 [b]
1912-1931	So. Adm. Eliza	11	3,252	110
1941-1962	Pybus, Gambier, Chapin, Murder Cove	8	60,769	1,697
	Before WW II	99	97,097	6,455
	After WW II	36	183,652	5,196
	Total	135	280,749	11,651

a Records summarized from files in National Archives, Washington D. C., North Tongass Archives, and Timber Sale Atlas, Chatham District, Timber type maps, and aerial photos by author.

b indicates an estimate from computed acreage involved

1900.[27] Logging techniques progressed from cat or bull-dozer logging to high lead, or cable logging systems, that protect the soil to a greater degree. In 1964 Admiralty Island forests were estimated to support a cut of seventy-three million board feet per year, from the one quarter of the island that is classified as commercial forest.[28]

Aldo Leopold's statement in "Round River" could also summarize the historic use profile of Admiralty:

> Many historical events, hitherto explained solely in terms of human enterprise, were actually biotic interactions between people and land (ecosystems). The characteristics of the land determined the facts quite as potently as the characteristics of the men who lived on it.[29]

The three progressive eras of use are still exhibited, lending increasing complexity to the understanding of the management situation.

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[27]U. S. Forest Service, "Timber Sale Files for Admiralty Island", 1909-1971.

[28]U. S. Forest Service, Multiple Use Plan for Admiralty Island, North Tongass National Forest, (Juneau: 1964), p.4.

[29]Aldo Leopold, "Round River". A Sand County Almanac, (New York: Sierra Club/Ballantine Books, Inc., Sept., 1970) p. 241.

Chapter III

FOREST SERVICE MANAGEMENT

February 1, 1905, President Theodore Roosevelt signed the Act H. R. 8460 transferring the forest reserves from the Department of Interior to the Department of Agriculture. Gifford Pinchot, Chief of the U. S. Forest Service, wrote a letter for the signature of Secretary of Agriculture James Wilson. This letter established the philosophy of service to the American people, which has guided the Forest Service and has since governed its activities.

This doctrine of conservation came at a time when economic interests for development in the western United States were very similar to those which recently existed in southeast Alaska. The first Forest Service creed was:

> In the administration of the forest reserves it must be clearly borne in mind that all land is to be devoted to its most productive use for the permanent good of the whole people and not for the temporary benefit of individuals or companies. All the resources of forest reserves are for use. . .You will see to it that the water, wood, and forage of the reserves are conserved and wisely used.
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> In the management of each reserve local questions will be decided upon local grounds; the dominant industry will be considered first, but with as little restriction to minor industries as may be possible; and where conflicting interests must be reconciled, the question will

> always be decided from the standpoint of the greatest good of the greatest number in the long run.[1]

Pinchot is considered by most as the Father of Forestry, if not of the first conservation movement itself. Conservation, as defined by this reformer, favored the intelligent, rational and efficient distribution of the nation's natural riches to "be developed and preserved for the benefit of the many, not merely for the profit of the few. . ."[2]

He believed that positive scientific methods for resource conservation could be developed. From the beginning his organization served with pride, under political immunity of the Organic Act, developing a tradition of public service envied by most natural resource agencies.

Until the early 1900's, there were no restrictions on Admiralty Island's resource use. Alaska was still a true frontier. The attitude of residents was very much that of the Klondike "get rich and get out" philosophy. Congress and the Forest Service, however, recognized the need for conservation and were very rapidly formulating

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[1]Edward P. Cliff, "Wilson-Pinchot Letter of February 1, 1905". (U. S. Forest Service Memorandum of transmittal), April 28, 1971.

[2]Robert E. Burke, Ed., The Fight For Conservation. University of Washington Press, Seattle: 1967.

plans to control misuse of these lands. With the establishment of the first forest reserve in southeast Alaska in 1902, work began on an analysis of the agricultural potential of the area. Under the Homestead Laws, Admiralty Island was surveyed for its agrarian use, prior to being established as a national forest. With the exception of limited areas adjacent to tideflats, the area was found not to be well suited for this use. Detailed vegetative maps which closely correspond to current soils and cover types were drafted between 1907 and 1911 on virtually all of the possible agricultural lands of Admiralty, several of which were to be later filed upon or became patented homesteads.[3]

In February, 1909, President Theodore Roosevelt signed a proclamation adding the timbered lands of Admiralty Island to the Tongass National Forest.

The act did not prevent the entry on or any settlement of agriculture lands as established legally in the Alaska Homestead Act of 1906. It most definitely recognized the timber values of the land and that the U. S. Forest Service, under Gifford Pinchot, was the most capable government entity to administer these lands for their timber resource values. The most obvious public

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[3]U. S. Forest Service, "North Tongass National Forest Archives," 1907-1911.

need in the new territory, was a sound economic base, which was fully in line with national forest objectives.[4]

The first task of the Forest Service was to stop the unplanned exploitation of the land and timber resources. Operating under Pinchot's conservationist philosophy, timber was now sold to the users under permit. Their harvesting was policed and the utilization was monitored within the guidelines of the "use book". In a section of this guide, "Service Policies in Timber Use", were outlined by Regulation S-1:

> No sale or other use of National Forest timber will be authorized until the approving officer is satisfied that practicable methods of cutting are prescribed which will preserve the living and growing timber, promote the younger growth, reduce the hazard of forest fires, and other destructive agencies, and secure as complete utilization of various species and grades of material as the existing markets or the requirements of the users permit.[5]

Guidelines were established for minerals use as well as homestead or agricultural use and the occupancies associated with the rapidly expanding fish industry. The administrative duties of the Forest Service were oriented to this workload as well.

The timber was the most obviously untapped natural

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[4]President Theodore Roosevelt, "Proclamation Enlarging Tongass National Forest", Washington, D. C.: February, 1909.

[5]U. S. Department of Agriculture, Forest Service. "The National Forest Manual Regulations and Instructions". (Washington, D. C.: July, 1928), p. 6-S.

resource of the region. The agency began to work diligently toward public utilization of this most extensive commodity. As quickly as possible, given World War I, the Forest Service set about mapping the new resource.

In 1919 the Forest Service began to inventory timber on Admiralty Island, under the direction of the Assistant Regional Forester B. F. Heintzleman. Timber reports for regions of the island were completed in 1920 by R. A. Zellar, 1928 by J. P. Williams, 1929 by John A. Thayer, and 1932 by Wendell Moran. This group of foresters, with the ranger boat skippers, topographic assistants and cooks, analyzed in detail the island's forest resources, an arduous and formidable task.

These early timber cruisers were the first public officials to realize in detail the potential of this particular forest. One of the forest cruisers, J. P. Williams, stated: "This west coast of Admiralty Island contains some of the finest timber, especially hemlock, on the entire forest".[6]

He also stated in his autobiography, "Alaskan Adventure":

> Admiralty Island has a large share of the physical attractions of the others, and in a most pleasing combination. This attractive

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[6] J. P. Williams, Alaskan Adventure. The Stackpole Co., (Harrisburg, Penn.: 1952), p. 148.

> island in my opinion is just about the cream of all southeastern Alaska. It is enriched with a very generous share of physical assets including. . .the finest unbroken stands of commercial timber on the Tongass Forest. . . a heavy stock of waterfowl, upland game birds, deer and brown bear. . .a chain of large inland lakes. . .excellent sport fishing and particularly all the streams are used by salmon for spawning.[7]

Within Alaska the most obvious public need was a stable economy to help "civilize" and settle the wild inhospitable country. The timber management goals promoted this objective. Minor conflicts between the forest users and the Forest Service were widespread due to the government confines forcing restrictions on the Alaskan pioneers. General working relationships with the timber industry improved with time since there was an inherent compatibility of user and public management goals. The industry, the public, and the Forest Service wished to see the forests utilized. Pulp processing of the forests of Admiralty has been felt essential from the very first silvicultural analysis. The small loggers had "high graded" much of the large old growth spruce within reach of their crude equipment. Many remaining forest areas held a low percentage of spruce that would be needed to finance the harvesting of the less valuable old growth hemlock.

In order to meet the national forest management objectives of growing the best crop possible (spruce), to secure the closest practical use of mature or

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[7] Ibid., p. 145.

deteriorated timber and to obtain a continuous yield of wood products, the promotion of this forest as a pulp industrial base was believed the most vital land management need.

In 1910, R. S. Kellogg described the situation of these forest resources:

> The southeastern coast of Alaska has a much greater lumber supply than there is any reason to think will be needed locally for a long time to come. The permanent industries of the region are fishing and mining. The mountainous character of the country will forever prevent agricultural operations of any magnitude. . .
>
> Obviously all the forests of Alaska should be protected and made of the utmost permanent use. The coast forests, which include most of the sawtimber of the Territory, and by far the heaviest stands, are nearly all protected by National Forests. They have not been damaged by fire, and are but slightly reduced by cutting. They are overmature. Carefully planned cutting should take place as soon as possible. Every effort should be made to have them utilized for lumber, and especially for pulp. They should be so managed as to increase the stand of spruce and decrease that of hemlock.[8]

By the early 1920's, the Forest Service had launched a national promotion for the development of the pulp wood resource. One of the first of these units proposed was the extensive West Admiralty Allotment.

In promoting the importance of Alaska as a paper supply, in 1920, Secretary of Agriculture Meredith said:

> Alaska is destined to become a second Norway. With her enormous forests of rapidly growing

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[8]R. S. Kellogg. The Forest of Alaska, (Forest Service Bull. 81.), Washington: 1910.

> species suitable for pulp, her water power and her tidewater shipment of manufactured products, Alaska will undoubtedly become one of the principal paper sources of the United States. A substantial development of the paper industry in this wonderful region, combined with the intelligent reforestation of pulp lands in this region, combined with the intelligent reforestation of pulp lands in the other regions, should settle forever the question of a paper shortage in the United States.

He pointed out that within the first ten years of operation "the Forest Service has brought about the sale of 420 million feet of lumber in the National Forests of Alaska". Approximately fifteen percent of this wood came from Admiralty Island.[9]

Clinton Smith, Forest Inspector, authored a bulletin, on pulpwood resources of the Tongass National Forest, in 1921. He further stated the case for this resource utilization:

> Scarcely any other part of the country offers a field for the upbuilding of a permanent pulp and paper industry equal to that afforded by Alaska. It is a virgin field because, in spite of its natural advantages and vast supplies of raw material, economic conditions had not, prior to 1919, become sufficiently favorable to attract capital. For years the Forest Service tried in vain to interest capital in the development of enterprises for paper production in Alaska. Had it succeeded these enterprises would now be in a very advantageous position.
>
> It may be said in passing that the purpose of the Forest Service looks beyond merely

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[9]Clinton G. Smith, Forest Inspector, Regional Development of Pulpwood Resources of the Tongass National Forest, Alaska, (Wash: USDA Bull. 950, 1921), p. 3.

> finding a market for Government timber in order that the timber may be cut and a new growth started in its place. The Forests are administered as public properties created to serve public needs. Alaska's first need it capital. It has not yet reached a point at which the upbuilding of the Territory can be effected merely by an influx of pioneers of the type that conquered the wilderness in our western states. While development must be a gradual process governed by economic facts, large scale operations are essential. To the extenet that conditions can be made favorable for such operations development will be hastened.
>
> The value to Alaska of a pulp and paper industry on the National Forests can scarcely be overstated. By creating a demand for labor it will build up the population; by creating a demand for labor it will build up the population; by creating a market for farmers' crops it will stimulate agricultural development; and it will improve transportation facilities and benefit all kinds of business. The Territory has been losing population and retrograding commercially and industrially in the last few years, primarily because after the first cream of her mineral wealth had been skimmed, general economic conditions were not favorable to immediate further progress.[10]

The promotional task was not easy. Many problems plagued the program. Compared to other regions, costs, transportation, wages, taxes, power supply and communications were all prohibitive. Severe climate and topography further complicated logistics. Social problems associated with the Alaska natives claim to the land, war and depressions further stalled realization of this forest use.

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[10] Ibid., p. 5.

In 1921, the first pulp mill in Alaska was built in Speel Arm, using water and power from Tease Lake, near the present Snettisham Power Project. The pulp allotment for this first industrial experiment came from a hemlock stand on the Glass Peninsula of Admiralty Island. The first shipments of pulp proved the venture unprofitable due to high freight rates and a loss of market. The timber sale contract, for 100 million board feet of pulpwood, was cancelled in 1925.

In 1927, a large pioneer timber contract with Crown-Zellerback placed the majority of Admiralty Island in a development status. The business depression brought cancellation of this contract in 1933.[11]

Water power sources were available and used a major economic factor in marketing the pulp resources. Three lake watersheds, Hasselborg, Kathleen and Eliza, totalling over 13,000 acres were set aside for potential power production in 1929. See Table 2.

In the early 1930's thirteen tideflats occupying over 6,500 acres suitable and strategically located were formally classified as Public Service Sites for log storage and rafting. This gave added assurance that access would not become a limiting factor to forest utilization.

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[11]Mason M. Bruce, "National Forests in Alaska," Journal of Forestry, Vol. 58, No. 6 (June, 1960), 475.

Forester B. Frank Heintzleman was a significant force in the promotion of the forest pulp resources. His leadership in the drive to improve the economic means in Alaska through forest utilization gave him strong political advantage in the region.

> Concern was expressed by many both within and outside Alaska, that the old established economy of southeast Alaska could not be sustained, much less demonstrate healthy growth. Frank B. Heintzleman was the prime mover in a campaign to promote new industrial establishments, based on the forest resource, for the major communities of the area. The Territory of Alaska made important tax concessions to new enterprises and the U. S. Forest Service completed preparation for several large long-term timber sales for auction to bidders who would contract to establish major forest industries in return for a dependable supply of raw material.[12]

Heintzleman was to become Territorial Governor primarily because he identified with and worked toward the public interest of this area.

In 1933, with the initiation of the Civilian Conservation Corps and a 200 man camp at Juneau, the development of the recreational resources of Admiralty Island was initiated. The CCC's constructed trails and portages making the Admiralty Lakes system as well as Young, Florence and Kathleen Lakes areas accessible. Adirondak shelters, rowboat and cabins, made the area more useable by recreationists.

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[12]Archie M. Byers, "The Timber Industry and Industrial Forestry in Alaska," Journal of Forestry, Vol. 58, No. 6 (June, 1960), 475.

TABLE 2

LAND USE AND STATUS SUMMARY FOR PRIVATE LANDS

ADMINISTRATIVE RESERVES AND SPECIAL USE OCCUPANCY SITES[1]

Type of Land Use	Dates	No. of Sites	Acreage
Homesteads and Homesite	1891-1926	7	583
Native Village Lands			
Village Site	1898-1949	4	670
Homesites	1932-1961	11	64
Mining Claims	1872-1946	6	1,035
Cannery or Fish Trap Sites	1910-1948	15	143
Total Private Lands		43	2,495
Lighthouse Reserves	1901-1925	11	16,445
Federal Power Withdrawals	1929	3	13,000
Public Service Sites	1931-1936	13	6,500
Research and Natural Areas	1951-1959	2	12,100
Admiralty Lakes Rec. Area	1965	1	110,000
Total Admin. Reserves		30	158,045
Residence and Recreation	1949-1967	14	14
Native--Cabin and Garden	1930-1966	12	40
Hunting--Trapping Cabins	1951-1971	33	10
Total Special Use Cabins		59	64

[1]Summarized from: U. S. Forest Service, Chatham Ranger District, Land Status and Special Use Atlas: 1972 (Juneau).

The recreation plans associated with these developments (revised in 1941) assessed the recreation potential of the entire island. The Forest Service operated a field CCC camp at Angoon. Projects included the road to Killisnoo to Angoon, the Mitchell Bay portions of the Admiralty Lakes trails system, and other necessary community activities.

Frank Dufrense, an Alaska Game Warden for the Alaska Game Commission, worked on the original field studies, "Admiralty Island Bear Estimate," with Jay P. Williams, Forest Examiner for the U. S. Forest Service, in 1932. The agencies' joint conclusions were that the bears of Admiralty Island were "holding their own and are in no danger of extermination under conditions which have governed for the past twenty years.[13]

In 1935, a resultant cooperative report described the need for overall resource management for the first time:

> The national forests contain a great variety of important natural resources of commercial, recreational, and aesthetic value that must be conserved. Frequently, two or more of these occur in the same locality, and in order to insure well-rounded use, enjoyment, and perpetuation of the whole, closely coordinated land-use plans commonly deal with commercial utilization of timber, land occupancy, preservation of scenery, general recreation and game hunting.

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[13]Heintzleman and Terhune, A Plan for the Management of Brown Bear, p. 4.

> The plan herein described provides for the management of the brown bears of Admiralty Island, in the Tongass National Forest, Alaska. It coordinates the management of the bears with other present and prospective activities on the island and more specifically provides that all activities, including bear hunting, shall be so regulated as to insure the perpetuation of the animals in satisfactory numbers.[14]

Two areas with outstanding concentrations of bears totaling an area of eighty-one square miles were established as bear preserves. The Pack Creek closed area (later to become a Research Natural Area) was named for the influential naturalist, Arthur Newton Pack, who had visited it four years previously in 1931. The Thayer Mountain closed area (covering the center of what would be the Admiralty Lakes Recreation Area) was named for Forester John Thayer, who was killed by a bear at Eliza Harbor.

As the Forest Service had established a policy to discourage the settlement of any isolated tract too small for the development of a sufficient community to provide reasonable social and educational advantages, they were at odds with the native and white occupants of small parcels.

The natives were moved into central villages so that their youth could be educated in the Bureau of Indian Affairs schools. A hard line on the patenting of homesteads, canneries, fish camps and fox farms created an

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[14] Ibid., p. 1.

opposition to the Forest Service by the settlers. To the pioneers the new agency was saying, "This land is Forest Service's land, not your lands. The Forest Service will decide the appropriate uses of the land based on national and regional needs". Some attempts by the Forest Service to control the occupancy of Admiralty Island failed. The influential fishing industry, some homesteaders and the miners were able to obtain legislation allowing them to patent their lands. The fox farms and the native village camps possessed less knowledge and influence and were not able to gain patent.

The overall policy, however fair, seemed a good one, in that it worked toward centralizing the sparce populations to improve the economic and social advantages of living in southeastern Alaska. At the same time, it lessened the permanent human impact on Admiralty Island.[15]

The problems associated with dispersed land occupancy and an active logging program kept the small work force of foresters extremely busy. Table 2 summarizes approximate land occupancy and administrative reserves established on Admiralty Island. Table 1, Chapter II illustrates the number, areas and volumes logged on the Island. Comparing these two tables, a general idea of where and when recent human acitivity took place can be gained.

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[15] Ibid., p. 9.

Necessary marine navigation aids were established on the points around the island with associated lighthouse reserves to be administered by the Coast Guard. The largest of these reserves at Point Retreat was established in 1901. Later reserves were much smaller to include only the area necessary for the structure.

Between the Great Depression and the end of World War II, the use and management of these lands lessened, as most activities slowed. The trappers and fur farms were doing poorly. Inbreeding and disease, combined with the loss of market and the hardships of the low living standard, effectively eliminated this use following the Depression. The fishermen had over exploited the resource and consequently limited the supply. Mining, because of a fixed price of gold and an ever increasing operating cost, had declined. The timber industry made some progress. With World War II the extensive development of interior Alaska required increased lumbering. High grade spruce was needed for aircraft production, but little of this wood came from the island.

Following World War II, logging equipment became available and more sophisticated. With the chain saw and military surplus equipment, cat logging and new cable systems were feasible. This allowed the cutover areas to be more extensive thus improving the wood utilization. The large clearcuts, however, were much more noticeable.

R. F. Taylor started Forest Service research programs in conjunction with timber management and silvicultural problems in 1924. Some of the first study plots were located on Admiralty Island. In 1948, with the establishment of the Alaska Forest Research Center at Juneau, scientific studies by the Forest Service were increased. The Research Center, later to become the Institute of Northern Forestry, concentrated efforts on problems brought about by the rapidly expanding pulp industry, the clear-cutting of old growth forests and timber resource inventory. Two areas on Admiralty, Pack Creek and Young Bay, totalling over 12,000 acres, were permanently established as scientific study areas. Administrative studies of wildlife and fishery resources began in earnest in 1956, gradually becoming more intensive and diversified in nature. Table 3 illustrates some administrative and research efforts.

> In 1954 a mill initially producing 300 tons daily (later increased to 525 tons) of high alpha pulp for use in rayon and cellulose acetate production went into operation at Ketchikan and late in 1959 a similar mill at Sitka started with an initial capacity of 390 tons per day for export to Japan. The average annual timber cut in the Tongass National Forest jumped dramatically from an average of 55 million board feet for the five year period 1949-1953 to 189 million board feet for 1954-1958 and 317 million board feet for 1959-1961.[16]

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[16]George W. Rogers, "Economic Development in Southeast Alaska and Its Impact on the Native Population", in Alaska Public Policy, ed. By Gordon Scott Harrison (College, Alaska: Institute of Social, Economic and Government Research, 1971). p. 294.

TABLE 3

ADMINISTRATIVE STUDY SUMMARY

Date	Study
1905-11	Agricultural Survey
1921-30	First Forest Inventory
1924-34	R. F. Taylor studied forest yield
1932-35	Admiralty Brown Bear Study
1948	Alaska Forest Research Center established
1927,48,62	Aerial photography of Admiralty Island
1951	Pack Cr. Research Natural Area established
1953	Clearcutting and Reforestation Studies
1954	Forest Inventory with modern techniques
1956	Effects of logging on salmon and streams
1957-67	Blacktail deer studies
1958-66	Brown bear studies
1959-60	National Forest Recreation Survey
1959-63	Young Bay Experimental Forest established
1965	Recon. geology of Admiralty Island (U.S.G.S.)
1965	Dolly Varden studies, ADF&G at Hood Bay
1966-68	Bald Eagle studies (USF&WS)
1970	Study of the Initial Operating Area. Juneau Unit Sale

Upon the establishment of these technologically advance processing plants, the Forest Service assumed that there was room for one more to utilize the Admiralty resources within the Juneau allotment. The era of pulp industry promotion was nearing a close.

In 1955 the Georgia Pacific Alaska Company was granted tentative award to a timber sale specifically including the forests of west Admiralty. The company later failed to qualify for final contract award.

The Forest Service was now concentrating on the business of timber management and its associated problems. Large timber sales, clearcuts, roads and logging camps were appearing on Admiralty, first in Hood Bay, Eliza Harbor and Chapin Bay, then in Whitewater Bay. See Table 1. An independent or small timber sale program later concentrated on the Glass Peninsula in Seymour Canal. Beginning in 1958 detailed timber management plans, coordinated with modern forest inventories, were completed for the Tongass National Forest and the Juneau working circle.

In 1958 a leaflet, "Multiple Use Management on Admiralty, Baranof, and Chicagof Islands", was released by the Forest Service in reply to the need for public information. This paper explained past considerations of land use by the Forest Service and described the action

program it was working toward in recreation, wildlife fisheries and timber. Multiple use was described in the introduction of this paper as follows:

> It is the policy of the Forest Service to manage all resources under the multiple use principle for the greatest good for the greatest number in the long run. The harvesting of the timber resource of these islands will be in harmony with the management of the brown bear and other resources through this multiple use principle.[17]

The paper described wildlife and fisheries studies in process and the cooperation between the Fish and Wildlife Service and the Forest Service on logging plans, to protect wildlife, watershed and fishery values. The publication summarized multiple use under timber as "the multiple use concept requires the full utilization of the timber resource compatible with other uses for the critically important industrial development of Alaska".[18] This definition has changed since 1958.

In 1959-60 a recreation survey provided a comparative study of potential recreation sites. A complete modernization of the potential recreation use was provided for in 1964 with the completion of the North Tongass National Forest Recreation Management Plan.[19] In 1965 the Admiralty

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[17]U. S. Forest Service, Multiple Use Management on Admiralty, Baranof and Chichagof Islands, Pamphlet for public distribution, Tongass National Forest, (Juneau, 1958).

[18]Ibid., p. 4.

[19]U. S. Forest Service, (Juneau: Chatham Ranger District, 1964), p. 4.

Lakes Recreation Area Plan, further prescribed use and management for the newly classified 110,000 acre recreation area.[20] The main shelter at Hasselborg Lake proved so popular that fourteen additional weather proof cabins were later constructed on the better recreation lakes and bays.

In 1961 a wildlife coordination plan for the North Tongass specified measures to minimize resource conflicts between the wildlife resources and other uses of Admiralty Island. Other functional action plans including timber management and land uses have been recognized as portions of total management.

The Multiple Use-Sustained Yield Act of 1960 culminated a Forest Service promotional effort to legalize current public land management philosophy. Under this law the Forest Service was directed to provide for:

> . . .the management of all the various. . . resources. . .so that they are utilized in the combination that will best meet the needs of the American people. . .harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.[21]

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[20]U. S. Forest Servcie, (Juneau: North Tongass National Forest, 1965).

[21]U. S. Congress, The Multiple Use-Sustained Yield Act, Public Law 86-517, 86th Congress, 1960

Admiralty Island was selected as the first area to try this coordinative planning approach. Following the collection of resource data a comparison of seven logical alternatives of allocation of the island's resources to various use combinations was prepared.[22] See Appendix B. It assessed the situation existing on Admiralty Island in 1964. Factors considered were the present and future resource supply, local and national demands expected from these resources, and a study of alternate methods to make Admiralty most nearly meet these future needs. These seven management proposals were:

1. Classify the entire island as wilderness.
2. Classify the eastern half of the island as wilderness and manage the western half for multiple use of all available resources.
3. Maximum multiple use development with Admiralty Lakes dedicated as recreation area. Timber harvest and mass recreation use emphasized on the west side; maximum consideration of brown bear and salmon on the east side.
4. Maximum timber production.
5. Maximum recreation, including hunting and fishing with preservation of maximum scenic values.
6. Multiple use development with Admiralty Lakes classified as a scenic area.
7. Management as an area with no permanent road system.

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[22]Britt Ash and Dutch Tiedeman, A Summary of Probable Effects or Uses of Various Management Treatments of Admiralty Island, "Multiple Use Plan for Admiralty Island" (U. S. Forest Service, North Tongass National Forest, 1964).

The third proposal, providing for maximum multiple use development with Admiralty Lakes dedicated as a recreation area, was established as a policy for Admiralty Island.[23]

This Multiple Use Plan for Admiralty Island, became the first such planning effort in Alaska.[24] It recognized the high timber and recreation values on the west side of the island and the key fishery and wildlife values of the eastern side. An inter-island highway system was proposed on the western side, the most physically suitable land route between Juneau and points south to Prince Rupert. Short ferry runs would connect islands and road construction would be planned in conjunction with and partially financed by timber harvesting. The plan recognized the value of Admiralty to Alaska's economy as a pulp resource, as a recreation-tourism resource, as a salmon resource, and for its wilderness aspects:

> All Americans share in the ownership of this island. Therefore, national considerations must be recognized along with the more obvious local ones.
>
> Visitors and onlookers from the other 49 states will be concerned more with the development of recreational opportunities and preservation of the wildlife and scenery for which Admiralty is widely known.[25]

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[23] Ibid.

[24] U. S. Forest Service, (Juneau: North Tongass National Forest, 1964), p. 1.

[25] Ibid.

Herb McLean, described this plan as providing something for everyone:

> Multiple Use Management of Admiralty Island surely is not destined to please all the special interests. But, the facts strongly suggest that it is the best hope of achieving planned use and protection of all the resources rather than creating the "barren wet Appalachia" predicted by one logging foe.[26]

The Chatham District Multiple Use Plan, approved in 1965, updated this first plan and coordinated it with the remainder of the region in the vicinity of Juneau.[27] This plan summarized the thought of the Forest Service up to this stage of management.

An Alaska Sized Timber Sale

Under the direction of Regional Forester Howard Johnson the final promotion of Admiralty's pulp resource was completed. In December, 1965, after several years of planning, St. Regis Paper Co. was awarded the contract for the Juneau Unit Timber Sale. This sale of 8.75 billion board feet of wood was the largest timber sale in the history of the U. S. Forest Service. West Admiralty's timber resource was included in a fifty year contract which represented a commitment of the bulk of the west Admiralty

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[26]"What's All This About Admiralty Island?" American Forest, May, 1966, p. 65-66.

[27]U. S. Forest Service, Chatham District Multiple Use Plan.

timber resource to harvest for the third time. In April, 1967, as in two previous sales, St. Regis defaulted, thus forfeiting a $100,000 bond.[28]

The Forest Service later offered the sale to the second highest bidder, U. S. Plywood Champion, at the high bid price. On September 12, 1968, the sale was awarded and a formal contract was signed. U. S. Plywood Champion announced the appointment of a panel of ecologists to mitigate the environmental impact of timber harvesting and the pulp mill location.[29]

February 10, 1970, the Sierra Club, the Sitka Conservation Society, and Karl Lane, a brown bear guide on Admiralty Island, filed a lawsuit against the U. S. Forest Service in Federal District Court. The purposes of this suit were to prevent construction of the projected pulp mill at Berners Bay and to enjoin timber harvesting on Admiralty Island under the fifty-year timber sale for the proposed mill. Many grievances were expressed during the suit, but paramount was the clash between economic development interests of the timber industry and the wilderness preservation interests of the Sierra Club of

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[28]R. E. Lockhart, "Alaska Sized Timber Sale", Journal of Forestry, (February, 1966), p. 83-86.

[29]This panel includes: Dr. Donald J. Zinn, University of Rhode Island; Dr. R. VanCleve, University of Washington; Dr. A. Starker Leopold, University of California; Dr. Stanley Cain, University of Michigan; Dr. Ian McTagart, University of British Columbia; Dr. Kenneth Rae and Dr. Donald Hood, of the University of Alaska.

California.[30] Public involvement in resource management decisions were further maturing with the passage of the Environmental Policy Act of 1969.

> The purposes of this Act are: to declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere, and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.[31]

The events surrounding the enactment of this law mark the turning point of a new national concern for public land management. The Forest Service responded to meet the statutory requirements of the new law in the summer of 1970. Project FALCON (Forest, Advanced Logging, and Conservation) is a national response by the Forest Service to the Environmental Policy Act which could accelerate more intensive management.

On Admiralty Island, foresters, wildlife and fisheries biologists, landscape, watershed and soils specialists were formed into a multi-disciplinary task group to inventory facets of resource management on the proposed logging area, near Angoon. Data from the Forest Service specialists is yielding better information than is presently

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[30]Allen Adasiak, The Tongass Lawsuit Blow by Blow. (Alaska Construction and Oil Report, January, 1971), pp. 40-50.

[31]The Environmental Policy Act of 1969, Public Law 91-190, 83 stat. 852, Sec. 2.

available in some National Forest areas with greater financial and staff capabilities. The study area includes the Kanalku, Hood and Chaik watersheds comprising 121,000 acres or nine percent of the island. Data compiled in the Soils and Hydrologic Report of 1971 yielded ecological insight into relative timber values, erosion problem areas, feasibility of engineering uses, recreation, wildlife, as well as water behavior, soils and vegetative composition.[32]

North Tongass landscape architect, Jim Knode, began inventory of scenic qualities, identifying and ranking existing and potential sites aesthetically. Utilizing modern land use planning skills, a series of "seen" area maps of the Kanalku watershed was produced on the Washington office computer as a pilot project. The maps assisted in the formulation of a land use classification system according to aesthetic values.

Wildlife reconnaissance-surveys by biologists Reginald Barrett, for U. S. Plywood Champion and other biologists with the Forest Service and the Alaska Department of Fish

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[32]R. F. Billings and D. M. Bishop, Soils and Hydrologic Report for the Mitchell, Hood and Chaik Bay Watersheds, Admiralty Island, Alaska, (North Tongass National Forest, U. S. Forest Service, Alaska Region, 1971).

and Game are taking a searching look at known fisheries and wildlife values. Resultant information available for this specific area will likely be as good or better than that for any similar area of southeast Alaska.[33]

During the spring of 1971 the Alaska Region of the Forest Service took an introspective look at its total program to assess its objectives and goals for the 1970's. Specific objectives defined and management direction dictated organizational responsiveness to human needs. New policies aim at:

> . . .increased public interest in a quality environment has made conservation a national issue--one in which many people are deeply concerned and seeking involvement. We should be extremely pleased with this public attitude for it opens a wide range of opportunities for us to gain involvement in our decision making process and thus expand understanding of the principles of conservation. . .The public will be involved. We must adopt an imaginative and systematic approach toward the practical involvement of the public as a vital component in the management of the national forest in Alaska.[34]

The social aspects of resource management are being formally realized. In 1971 a public involvement program was initiated, inviting public input into the revision of multiple use and associated functional plans that impact

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[33]U. S. Plywood-Champion, U. S. Forest Service and Alaska Department of Fish and Game. "Wildlife Surveys and Reports for the Initial Operating Area". (Barrett, Tyler, Peransovich, Baker et al.). 1971.

[34]U. S. Forest Service, Alaska Tomorrow: Quest for Quality, (Alaska Region Objectives Task Force, May, 1971), p. 1-13.

the area. Through a process of meetings public responses are elicited after first acquainting interested people with the planning framework. Preliminary responses are encouraging. Now social values and demands are being currently inventoried for a broader range of interests. The Forest Service is seriously considering and attempting to include public input in resultant plans. This is a formidable task, but it is working toward a more responsive means of future resource allocation systems.[35]

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[35]U. S. Forest Service, "Summary of Public Involvement During Public Involvement in the Revision of Multiple Use Plans", North Tongass National Forest, March, 1972, pp. 230.

Chapter IV

PUBLIC INVOLVEMENT IN ISSUES CONCERNING ADMIRALTY ISLAND

Carl Wilson, the first assigned multiple use coordinator for the Alaska Region realized that Forest Service assumptions of what is best for the people does not necessarily correspond with public opinion. At a 1965 Juneau presentation of the Admiralty Island multiple use plan, the Forest Service was criticized for not involving the people in the development of this plan. Wilson's later study on public interest relative to multiple use planning yielded a framework for understanding conflict between interest groups and the Forest Service.

> A Healthy political society is one in which there is bound to be conflict and disunity (of a peaceful nature). Individual interests vary, making it inevitable that the wants and desires of some individuals will clash with those of others. Politics, government and increasingly the courts are the agents for peacefully deciding these conflicts.[1]

People with common values become political interest groups when they are formally organized to influence the agents of government for activities that favor the group's shared interests. Through collective effort individuals

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[1]Carl N. Wilson, Decision Making and Multipe Use Management in the United States Forest Service. (unpublished Master of Resource Administration Thesis, University of Montana, 1967), p. 21.

can more successfully gain governmental recognition of their interests. Wilson has observed that the Forest Service reaction to interest group pressure is characteristic of most public agencies.

> Administrative agencies tend to be influenced most by the publics or interest groups with which they have the most frequent contact. Those groups with which the agency has long dealt will naturally have developed good access to the agency, which is vital to gaining recognition of the group's desires. In the case of the Forest Service, interest groups of long standing that developed early access, such as the timber industry, (or in the case of Admiralty Island the Territorial Sportsmen) are likely to be in a more favorable position than newer groups. These newer groups, which are a product of the rapidly expanding variety and intensity of uses of the National Forests, are still in the process of attempting to develop good access. Such groups, upon failing to achieve satisfactory recognition by a direct approach to an agency, typically, seek to get their wants recognized through other means, such as a direct approach to Congress, higher levels of the executive branch or the courts.[2]

Who, then, are the interest groups, the publics and what are the issues? What role have these played in the allocation of Admiralty Island resources? The native, the caucasian occupants, the timber and minerals industries, wildlife interests, recreation and wilderness interests have each demanded the inclusion of their needs from natural resource values available on Admiralty Island.

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[2] Ibid., p. 23.

A Brown Bear Preserve

The first advocates of interests other than development of the timber resource or fisheries was in behalf of the brown bear. The most notable advocates of the bear interests were a small group of men: Allen Hasselborg, John M. Holzworth, Frank F. Dufresne, Corey Ford (representing Field and Stream magazine), Ralph Young and Karl Lane. (The latter two are currently brown bear guides who defended their vested interests in the recent lawsuit over the Juneau Unit Timber Sale).

In 1928, John Thayer, a U. S. Forest Service timber surveyer, was killed at Eliza Harbor on Admiralty Island by an attacking wounded bear. His death came at the same time as a strong political movement to eliminate Kodiak brown bears in favor of establishing a cattle industry. The combined settlement interests in all of Alaska were offering to eliminate the bears "in order to not stand in the way of an increasing industrial development in many parts of Alaska".[3]

John Holzworth approached Allen Hasselborg in 1927 to learn about the great Alaskan brown bear. Holzworth had a plan and a cause. He wished to film the bears and to write a book on the Alaska grizzlies. A corporate

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[3]John M. Holzworth, The Wild Grizzlies of Alaska (New York: G. P. Putnam's Sons, 1930), p. 346.

lawyer, he provided the first well written account of these animals. His cause was to stop the indiscrimate killing of the brown bear.

Holzworth's book publicized the need for protecting the brown bear and establishing Admiralty Island as an inviolate game sanctuary. He gained support from the American Society of Mammalogists and the New York Zoological Society in two resolutions expressing this concern to the U. S. Congress, the Chief of the U. S. Biological Survey, and the Alaska Game Commission.[4] His book and the resolution initiated a great deal of national interest in Admiralty Island. Holzworth believed that if he asked for the three Islands, to be set aside perhaps at least Admiralty, the area with the apparent best habitat for the brown bear could be preserved.[5]

In 1931, Arthur Newton Pack, President of the American Nature Association, made an expedition to Admiralty Island, guided by Allen Hasselborg, to popularize the brown bear interest here. His resultant films and article in Nature Magazine, 1932, linked the unique wilderness recreation aspects of the brown bear and Admiralty Island to further the cause of the brown bear preserves.[6]

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[4] Ibid., p. 354

[5] Ibid.

[6] Arthur Newton Pack, "Bears of Admiralty", Nature Magazine, Vol. 19, February, 1932, pp. 79-85.

A resultant cooperative plan answered the Holzworth-Pack plea for protection for Admiralty's bears by setting aside two areas totalling eighty-one square miles (instead of the entire island) for a single purpose. It also established joint administrative recognition and control by the Forest Service and Alaska Game Commission of the management of this wilderness animal and his habitat as a recreation-wildlife-aesthetic resource.

A National Park

The nature of the administrative rivalry between the National Park Service, (U. S. Department of Interior) and the Forest Service, (Department of Agriculture) is extremely complex. The situation, broadly generalized, finds two rival agencies which were conceived at different times to satisfy different public needs vying for control of Admiralty Island. National recreational and historical interests supporting the recreation-preservation ethic of John Muir demanded park areas in Southeast Alaska after the forest reserves were established.

The controversy over brown bear attracted the National Park Service. They viewed it as a potential opportunity to enlarge the National Park System. In 1931, Secretary of the Interior, Stewart E. White, proposed Admiralty and/or Chichagof Islands be established as a National Park.

This was supported by the Sierra Club in 1932.[7] The Forest Service reacted to this by constructing the Admiralty Lakes recreation trails, boats and shelters under the Civilian Conservation Corps program. Later work on the brown bear plan and the pulp timber proposal identified Admiralty Island as valuable for national needs outside the scope of the National Park Service.[8]

The Forest Service conceded to the need for more National Park System administered lands and negotiated a large expansion of the Glacier Bay National Monument in return for the Park Service's interest in Admiralty.

Glacier Bay National Monument had been established in 1925 from existing forest reserves and public domain. This was an initial loss of area administered by the Forest Service and demonstrated the National Park Service's political power. In April, 1939, the Monument was officially enlarged from 1,820 to 3,859 square miles.

> Roosevelt and Ickes, in one grand sweep, made veryone happy. They pleased the Forest Service by not pushing Admiralty Island as a National Park; they pleased the Interior by adding to Interior's empire about nine hundred

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[7] Territorial Sportsmen, Inc., "Wild Forest of Admiralty Area". (unpublished proposal edited by Richard Gordon and Douglas Gregg with input from twenty concerned individuals and revision by a Territorial Sportsmen Committee), May, 1970, p. 3.

[8] Frank T. Been and Earl A. Traeger, "Report on Inspection of Admiralty Island, Alaska", (U. S. Department of Interior National Park Service, McKinley Park, Alaska, 1939), pp. 1-10.

> square miles of land which had formerly been Forest Service domain.[9]

In August, 1939, the same year, National Park Service officials, Earl Traeger and Frank Been, inspected and submitted recommendations on the suitability of Admiralty Island as a National Park, stating:

> Paper and pulp possibilities are probably the greatest in the world. Surely the greatest in North America. . .
>
> The Forest Service plan takes into consideration the preservation of scenic values, wildlife and salmon streams. Hence, although vast welath in pulp timber will be available, the procurement thereof will be regulated toward perpetuity as well as preservation of the forest values.
>
> Without considering the timber cutting plans, which is a development of the future, the present Admiralty Island recreational unit and wildlife preservation in a 1935 plan for management of brown bear, measures of the Forest Service deserve commendation. . .[10]

The U. S. Forest Service officially opposed Admiralty as a National Park in June, 1939:

> The Chief Forester, B. Heintzleman, expresses himself as opposed to the establishment of a National Park on Admiralty Island, saying, "The time is coming when we must limit our one-use reserves."[11]

In 1942, another Park Service official, Victor Cahalane, made a study, at Congressional request, to yield final recommendations on National Park status:

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[9] Dave Bohn, "Glacier Bay" ed. by David Brower, (San Francisco: Sierra Club, 1967), p. 101-104.

[10] Been, p. 3.

[11] Ibid., p. 9.

> Admiralty Island, Alaska an important grizzly and brown bear habitat, has been proposed as a National Monument. Unfortunately, it is not an outstanding area. With the exception of the five species of bears that are indigenous to the island, the fauna is neither diversified nor remarkable. The central lakes section is beautiful in a peaceful way, but the scenery is not spectacular. Most of the island has been glaciated and well rounded, but changed climatic conditions have reduced the original ice fields to two tiny glaciers that are hardly worthy of the name.
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> Numerous economic uses are well established and would conflict with national monument administration and policy. The timber supply is considered essential to future industrial progress of the region. It could be established only with some difficulty.
>
> Although not to be recommended as a national monument, the central portion, at least, of Admiralty Island is well adapted to public outdoor recreation. The lakes provide a good system of waterways. Boating, hiking, nature study, fishing and, in zones, hunting can be afforded large numbers of people without causing appreciable permanent effects. The location and characteristics make the section potentially valuable for public recreation of a wilderness type.[12]

In Behalf of the Fishery

The logging vs. fisheries conflict commenced with a suspicion that something other than fishing was drastically reducing the salmon catch. Counties were paid for seal, bald eagle and Dolly Varden trout, focusing attention on the wildlife users of the fishery. The fishermen and

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[12] Victor H. Cahalane, "Report of an Inspection of Admiralty Island, Alaska", (U. S. Dept. of Interior, National Park Service, 1942), p. 18-19.

natives knew of the dependence of the salmon and the upland streams. People viewed the large clearcuts with alarm and were becoming concerned with the effect of increased logging on the streams.

Logging developed as a pertinent question related to fisheries primarily within the discipline of wildlife biologists as they began to realize the rapidly increasing rate of logging in all of southeast Alaska. Individual fishermen and Alaskan residents also were noticing the initial environmental changes on the few pioneering sales on Admiralty. Wayne Short, referred to three logging operations on Admiralty Island with concern:

> This country is changing, I was over grouse hunting in Chapin Bay not long ago and there's a logging outfit making a hell of a mess of the mountainside. There's one in Eliza Harbor, too, and another big outfit due to begin operations in Whitewater Bay.[13]

Closely tied into the conflicts over Admiralty and the sportsmen's concern for the brown bear was the salmon vs. logging issue. The guide Ralph Young stated:

> When I visited Whitewater Bay a year later (after logging began in 1962) the ruination of the beautiful wilderness, of the watershed and the wildlife habitat was beyond belief, exceeding anything that we had predicted. I was there during a period of rainy weather and the stream that empties into the bay, one of the major salmon producers in southeastern

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[13]Wayne Short, This Raw Land (New York: Random House, 1968, p. 201.

> Alaska, was a raging torrent of muddy water that discolored the bay water a mile from shore. I returned later that fall with my camera, but even the color pictures I took do not tell the full story of the rape of this unique wilderness and the death of a great salmon stream.[14]

The increased timber harvest associated with the beginning of operations at the Ketchikan Pulp Company's mill in 1954 and the Alaska Lumber and Pulp Company's mill at Sitka in 1960 further stimulated the conflict.

Alaska statehood in 1959 complicated the management situation a great deal. No longer was the wildlife or the fish resource solely a federal responsibility. Most wildlife populations were no longer the responsibility of the Fish and Wildlife Service, but were placed under the management of the Alaska Department of Fish and Game. The habitat remained the responsibility of the Forest Service.

The tidelands were separated at mean tide. The lower tidelands became the responsibility of the State Department of Natural Resources. The latter agency could also select national forest land for community expansion or recreational purposes which further encumbered the forest land status.

Interagency conflicts that existed between the Fish and Wildlife Service and the Forest Service were shifted for the most part to the Alaska Department of Fish and Game. The new agency showed more concern for the resource than

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[14]Ralph W. Young, "Last Chance for Admiralty", Field and Stream, May, 1964, p. 12.

its federal predecessors. Now state-federal rights were involved and interagency directives could not restrain the conflict as easily.

Following statehood the Federal Bureau of Commercial Fisheries maintained a fishery research organization primarily for the development of Pacific marine fisheries. Professionals associated with wildlife management agencies have historically formed a strong nucleus of opposition to past national forest logging programs. Scientists from the Auke Bay Biological Laboratory of the Bureau of Commercial Fisheries participated with interested citizens to form the Stellar Society which later evolved into the Juneau Group of the Sierra Club.

It became apparent to Forest Service biologists that fisheries issues raised questions not resolvable without detailed watershed and soil information. Sediment in fish streams was potential impact resultant from logging and road construction. Forest Service studies showed that sedimentation in streams temporarily increased and then returned to original conditions following logging, indicating little long term effects on salmon production. Studies also showed that spawning salmon and numbers of fry increased following logging, but indicated that this could be due to the natural build up of the fishery following the abolition of the salmon traps in 1959. It still was apparent that

when the timber sale contract specifications protecting streams and fisheries were violated that significant damage could be incurred on salmon habitat.[15]

Logging was becoming the major focal issue of fisheries biologists in southeast Alaska as overfishing came under better control. Following a request by the Forest Service, in 1962, the Alaska Department of Fish and Game forwarded recommendations for setting aside thirty key salmon producing watersheds in southeast Alaska as natural areas. This proposal was based on the State agencies' comparison of relative commercial fish values with associated potential for sport fishing, waterfowl, big game, fur production, recreational and hunting values. Ten of these streams were located on Admiralty Island, primarily on the east shore.[16] The Forest Service incorporated protective measures for these streams into the first multiple use plan but this did not satisfy Fish and Game's demands for permanent reservation of the entire watershed areas containing key salmon streams. In 1968, the Alaska Board of Fish and Game requested deferment of logging in all major salmon stream drainages.

A forum on the relation between logging and salmon in 1968, held by the American Institute of Fisheries Research

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[15]Bruce Friedmann, "Anadromous Salmanoids vs. Logging on the Pacific Coast of North America". (Undergraduate paper at the University of California, 1970, p. 7-8, 18-20.

[16]Walter Kirkness, Commissioner, "List of Watersheds Proposed to Reserve as Natural Areas", State of Alaska Dept. of Fish and Game, May, 1962.

Biologists in cooperation with the Alaska Fish and Game focused on the need for increased research:

> A need for broader understanding of the ecosystem underlies many of the approaches of the logging-salmon problems. . .
> Emphasis of many of the discussion remarks shows that forest managers are aware of the complexity of logging-salmon problems and are attempting to utilize available information to reduce environmental alteration. This is encouraging and is evidence of potential compatibility, with neither resource being developed at the expense of the other.[17]

In 1969 the same group supported the need for controlling the effects of logging on salmon production by stating:

> It is the responsibility of the U. S. Forest Service to guarantee that salmon production will not be adversely affected by environmental changes brought about by logging activities.[18]

The Western Association of Game and Fish Commissioners followed with a similar resolution in 1970.[19]

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[17]Dr. Richard Myren, "Forum on the Relation Between Logging and Salmon", (sponsored by American Institute of Fishery Research Biologists in cooperation with Alaska Department of Fish and Game), Juneau, February, 1968, p. iii-iv.

[18]Harry Merriam, "Statement on the Management of National Forest Lands in Alaska". (Testimony presented to U. S. Senate Subcommittee on timber management practices, later published in the Alaska Magazine), Washington, D. C.: April, 1971, p. 7.

[19]Ibid., p. 8.

In the spring of 1971 the Southeastern Alaska Trollers Association proposed a moratorium on further clearcut logging on major salmon streams "until such time as the Alaska Department of Fish and Game, the Forest Service and the U. S. Fish and Wildlife Service can conclusively agree that this is not detrimental to the existing salmon resource".[20]

Another Fish and Game proposal in 1971, focused on the protective classification of primary sport fish watersheds, with emphasis on quality sport fishing experience. Two categories designated were: Category A, outstanding unique sport fishing, and Category B, excellent recreational stream associated areas. On Admiralty, Kanalku Lake was a Category A, drainage while more than a dozen Category B, streams were identified. Some of these were the same as those identified in the thirty streams proposal.[21]

In a summary paper, Timber Harvest and the Salmon and Trout Fisheries of Southeast Alaska, Forest Service Biologists William Sheridan and Sigurd Olson discussed administrative needs pertinent to resolution of the logging vs. fisheries question:

> . . .A full understanding of either the negative or positive aspects of logging is

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[20] Ibid., Appendix 2., p. 1.

[21] Bob Armstrong et. al. "Sport Fish Division Recommendations" (State of Alaska, Dept. of Fish and Game, 1971), pp. 1-4.

> not yet in sight. We do not think that the research being conducted, individually and collectively, by the various State and Federal resource management agencies is adequate to keep pace with the development of the timber industry.
>
> Management agencies face a critical challenge. The future of the salmon and trout fisheries of southeast Alaska will depend upon past information as well as that developed within the next ten years.
>
> No one agency is capable of doing the job alone. Only the coordinated efforts of all the resource agencies will assure the successful future of the timber and fishing industries in Alaska.[22]

Wildlife Interests

Coincidentally with modern long term sales and the associated large clearcut areas in the 1950's another public outcry began. Outdoor writers, representing sportsmen interested in wildlife-recreation, became an interest group. The protection of wildlife habitat became the issue.

Criticism of forest management had begun, still by small interests in terms of numbers, but with a popular cause and area. Articles about brown bear on Admiralty Island were an easily marketed commodity. The series of articles by outdoor writers or the corresponding answers to them by other writers or the Forest Service had an

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[22] William Sheridan and Sigurd Olson, "Timber Harvest and the Salmon and Trout Fisheries in Southeast Alaska". (Presented at American Fisheries Society Meeting, Victoria, B. C., by U.S.F.S. Alaska Region, July, 1970), p. 10.

influence on forest management. A review of some of these articles illustrates one line of access to resource allocation through small but relatively vocal interests.

Corey Ford and Frank Dufresne, spoke out in opposition to the cutting of the timber, focusing on the then recent (1956) logging in Whitewater Bay. Dufresne, formerly of the Alaska Game Commission and Ford, a popular outdoor writer for Field and Stream magazine, said:

> Fighting for its existence, indeed, like Admiralty Island itself, for this world famous island, one of the most magnificant wilderness areas in North America, so beautiful that Theodore Roosevelt thought it should be set aside as a National Monument, is facing almost sure extinction. The menace is the pulp mill, destroyer of essentially all timbered watersheds, polluter of clean waters so necessary to the life cycle of the salmon, enemy of all wildlife including the brown bear, ruthless despoiler of a nation's recreational heritage. The progress of the pulp industry in Alaska--a progress that appears to be the pet pride of the Territory's present governor--does not represent a vague threat lurking somewhere in the future. Its shadow hangs over Admiralty Island at this very moment.[23]

They then made a plea to the sportsmen of America and national conservation organizations to unite to stop the economic development of Admiralty and to take steps to set the island as a part of the National Park system. The ending statement of the article urged:

> If you want to save Admiralty Island--if you want to preserve one of America's

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[23]Frank Dufresne and Corey Ford, "Lost Paradise", Field and Stream, September, 1956, p. 61-68.

> greatest wilderness recreational areas-
> write to your Senators and Representatives.
> Ask them to urge that whole island be set
> aside as a national game management area.[24]

The authors did not like what logging did to the landscape. They suspected that logging may have damaged the streams, the wildlife habitat, including the bear. Logging undeniably had encroached upon some secluded wilderness settings. These men looked at what had happened recently to some bays and had calculated what the removal of the timber on a major portion of Admiralty in similar fashion would be like. Many letters from Congressmen were forwarded for reply to the Forest Service, but the Forest Service was now legally committed to the sale of timber on west Admiralty.

The Territorial Sportsmen, under A. W. Boddy's leadership, was to become an influential interest group promoting multiple use. At the urging of the Territorial Sportsmen several state and national conservation organizations made determinations, including the Alaska Sportsmen's Council the Isaak Walton League, the National Wildlife Federation, and the Campfire Club of America.[25]

Spurred by the controversy initiated by Ford and Dufresne, in 1958, additional brown bear studies were

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[24] Ibid., p. 164.

[25] A. W. Boddy, "Paradise Is Not Lost", (Unpublished statment of the Territorial Sportsmen, Alaska Sportsmen's Council supporting Multiple Use and Management by the Forest Service, December, 1956), p. 1-5.

undertaken to evaluate relative numbers and population trends in comparison to the 1932 surveys. These studies attempted to determine the effect of logging on brown bear and to formulate forest management practices designed to insure the welfare of the brown bear populations in association with large scale logging. David Klein, wildlife biologist for the U. S. Fish and Wildlife Service in charge of the brown bear studies on Admiralty Island, focused concern on the lack of compatability of logging on salmon streams and wildlife habitat. In 1959, he pushed for more detailed research concerning the prospective impact of large scale timber operations:

> Most of us working with the natural resources, I'm sure, are cognizant of the undesirability of proceeding with the exploitation of Alaska's timber resource without having available the basic knowledge essential to guarantee the welfare of the wildlife resources through proper management. This is true whether it be brown bear, salmon or some other component of the native fauna that is in question. It is also apparent that much of the basic knowledge related to the after effects of timber removal will not be available until considerable time has elapsed after logging has taken place.
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> Certainly we do not desire to see the development of the timber industry impeded, however, in the absence of basic knowledge essential for sound multiple resource management, and in the light of past experience in other areas, which has not been too rosy, the only sound policy to follow in the formulation of forest-use plans is one of caution.

> . . .Generally, timber utilization and wildlife can be compatible in Alaska. Success in the venture will require close cooperation among all agencies involved and a realistic understanding of the present and future economic and aesthetic values of all of the resources at stake.[26]

These studies later including work by Erickson, 1965 and Perensovich, 1966, indicated that bear populations were about the same as the 1932 levels, that timber harvesting could have beneficial as well as detrimental effects upon bear habitat.[27]

Ralph W. Young, a registered guide from Petersburg, returned in 1964, to the site he had taken Dufresne and Ford in 1956. Subsequently, he spoke of the vast recreation and aesthetic resources of the island and the damage he believed the Whitewater Bay logging had produced. He thought the Forest Service was giving official approval to the practices of the "cut and get out" policy of the 19th Century timber barons, and stated that "the whole of Admiralty will become an eroded wasteland--a wet desert". His ending statement urged the readers to write to the President, their Congressmen and the Secretary of Agriculture:

> Just one sentence is enough to tell them to stop the ruination of Admiralty. Write to any or all of them. You are one of 50 million sportsmen in the United States and that represents a lot of political power, but you must tell those who represent you

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[26]David Klein, Erickson, and M. Perensovich, "Brown Bear Studies on Admiralty Island". (Federal Aid-in-Wildlife Restoration Projects, (1958-1966).

[27]Ibid.

> what you want. Remember, only you can stop the rape of Admiralty Island, because you are the last chance for Admiralty.[28]

Young's appeal caused a large campaign of letter writing by sportsmen to each of which the Forest Service furnished a reply.

A. W. Boddy wrote to President Johnson and various individuals, including Dufresne and Young, supporting the Forest Service and multiple use management on Admiralty. The Fish and Wildlife Service likewise answered questions by interested parties.[29] Again, as with previous articles, public opinion slowed but the small interest groups remained unconvinced that these lands were being properly managed.

Popular outdoor writer, Richard Starnes, visited Admiralty Island with Warren Page, firearms expert, as a task force for Field and Stream to investigate the island with reference to Young's article. A resultant article asked "how long must a gut-the-land policy prevail in our national wilderness"? The sportsmen's magazine criticized the Forest Service's reaction to Young's article:

> The Forest Service "fact sheet" may have come as a surprise to a man who has spent his life in such straight forward pursuits as bear hunting, but it was discouragingly familiar

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[28]Ralph Young, "Last Chance for Admiralty", Field and Stream, May, 1964, pp. 110-112, 170-172.

[29]A. W. Boddy, "Letters Concerning Admiralty Island", (Alaska Sportsmen's Council, Territorial Sportsmen, April, 1964).

> to the reporter who has spent most of his life hunting truth amid the whited sepulchers of Washington. In fly-specking Ralph's expose of Admiralty, in taking issue with wholly minor and peripheral questions, the "fact sheet" sought to obscure the glaring truth of the article.
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> Stripped to the essentials, the controversy about Admiralty (and by extension all the rest of Tongass) boils down to this uncomplicated question: Whose forest is it? Whose interests are paramount on Admiralty? Japanese owners of a pulp mill? A few hundred Alaskans temporarily employed in a logging industry that will vanish as soon as the trees are gone? The dug-in bureaucrats of the Forest Service?
>
> Or do the National Forests belong to all of the American people, to be husbanded and held in trust for the generations yet unborn?

They entered a dual plea for the recreational and aesthetic resources:

> This natural wonder is the equal of any in the world. Saving it must become the urgent concern of every American.
>
> The burden of proof must be shifted to the exploiters, and to their agents in the Forest Service. They are the ones who must prove that Whitewater Bay multiplied a hundredfold will not result in Admiralty Island becoming a barren, lifeless rock. They are the ones who must prove that the eroded gullies will ever again support spruce trees half as tall as the Washington Monument.
>
> I don't think they can do it, for I have seen the Whitewater Bay. It is a design for despair and destruction that saddens the eyes and burdens the soul.[30]

In a reply sent to many national conservation organizations, Forest Management in Southeast Alaska, the Forest Service expressed their disappointment at this attack on

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[30]Richard Starnes and Warren Page, "Night Comes to Admiralty Island", Field and Stream, August, 1965, pp. 20-22, 76-78.

their competence and credibility as professional land managers. Concerning Whitewater Bay, they said:

> The Forest Service offers no apologies for its management of the Whitewater Bay sale. It is neither an outstanding example of good or bad administration of timber harvesting. It is in the middle range of accomplishment in respect to timber utilization, erosion control, and stream control.[31]

The agency agreed with Starnes that the initial harvest of previously undisturbed timber was a disruptive process that alters the immediate attractiveness of the site, but explained the temporary nature of the process and, that in reality, a small amount of permanent damage had been caused.

In may, 1966, Herbert E. McLean wrote an article entitled "What's All This About Admiralty?" This effort was not solicited by the Forest Service, although they were contacted by McLean to review the article for accuracy before publication. The article reacted to Richard Starnes' article of the previous year. He described some positive things the agency was up to, including the Admiralty Lakes Recreation Area, the controversial Whitewater Bay area, and the new multiple use plan for Admiralty Island. McLean's article summarized in support of the Forest Service's management:

> The facts considered, I strongly feel that in succeeding years as I travel up and down

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[31] U. S. Forest Service, "Forest Management in Southeast Alaska", (paper distributed to National Conservation Organizations by the U. S. Forest Service, Washington, D. C.), August, 1965.

> the Inside Passage, or fly into Hasselborg or Kathleen or Florence Lake for a bit of cabin camping, or even perchance wet my trout line in the creek above Whitewater Bay, Admiralty Island will not be essentially changed.[32]

A special interest in brown bear and their habitat was developed through Frank Dufresne's years with the Game Commission. After leaving the job of Director of the Alaska Game Commission, he endeavored to write the popular book, "No Room for Bears". A restatement of Holzworth's position for a similar cause--save the bear, but from a different threat--that of logging.

The emphatic interest of the brown bear vs. logging conflict was expressed with his conclusive statement:

> These bears in the National Forest of southeastern Alaska, especially the unique Shiras "black browns" of Admiralty Island are being driven from one timbered retreat to another as logging crews in the employ of Japanese owned pulp mills are permitted to bring the big trees crashing down with disregard for other assets on this famous island, once proposed by President Teddy Roosevelt as worthy of national recreation status for all the people of America.
>
> How are the bears faring? Not so good, especially on Admiralty Island.[33]

Dufresne's book was widely read and conveyed the author's criticism of the multiple use plans and programs

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[32]Herb A. McLean, "What's All This About Admiralty"?, American Forests, May, 1966, p. 66.

[33]Frank Dufresne, No Room For Bears (New York: Holt Rinehart, and Winston, 1965), p. 251-252.

for the management of Admiralty's resources. It was apparent that some conflicts, such as brown bear vs. logging, were not easily reconcilable.

Sitka blacktail deer, the most abundant big game animal on Admiralty, will likely be a continuing point of dispute even though it is inherently more compatible with probable human activities. Deer are one of the few species of game that have historically increased with man's alteration of its habitat. A creature of the forest edge, these adaptable animals have an extremely complex life system that is not well understood by most Alaskans. Population dynamics, including habitat requirements, factors of predation, disease and weather all play a major but complex part in survival of deer. Here again misconceptions that logging and hunting are always harmful to the deer population are common. Actually, some practices such as large contiguous cutting units covering a key habitat area can be harmful. If properly designed and accurate biological data is available logging can improve deer population-habitat relationships. The lack of biological understanding by various publics has promoted the deer issue here.[34]

A National Symbol: The Bald Eagle

The protection of the bald eagle began with the same agencies that administered their bounty as a fish predator.

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[34]Reginald Barrett, "Biology of the Sitka Blacktail Deer", (interviews and presentation to the Juneau group of the Sierra Club, Juneau, February, 1971).

A study of the Alaskan bald eagle in 1941, shed enough information to question the eagle bounty, which was eliminated in 1946. A new bounty in 1949 paid $2.00 per bird killed until nullified by federal protection in 1952. In 1966 the Bureau of Sport Fisheries and Wildlife began bald eagle studies in earnest on Admiralty Island, a known eagle concentration area representative of southeast Alaska. Resultant research has influenced national public opinion toward the protection of eagle habitat. To many resident Alaskans, this national concern seemed disproportionate to the actual situation. Visitors, however, placed a high value on eagle sightings, thus gradually enlightening Alaskans to the egale's aesthetic value as well as their national legal standing. Studies have revealed that logging can impact eagle habitat, which consists basically of large old growth nest trees adjacent to the beach.[35] Protection measures proposed by the Bureau of Sport Fisheries and Wildlife were readily adopted by the Forest Service. Buffer areas 330 feet in diameter and up to eight acres in size, were established around each eagle nest tree. Fred Robards, the "eagle man" for the the Bureau of Sport Fisheries and Wildlife, has been coordinating the location and marking

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[35]Fred C. Robards and James G. King, Nesting and Productivity of Bald Eagles in Southeast Alaska. (U. S. Fish and Wildlife Service, Juneau: 1966).

of all nests in cooperation with the Forest Service since these studies were made.

The bald eagle nests adjacent to salt water, with an average of 1½ miles of beach between nests. Admiralty Island has been estimated to contain some 450 eagle nests, separte prime habitat areas, which may total as much as 3,500 acres.[36]

Recent Foreest Service proposals are assessing areas of greater eagle nest concentration on Admiralty for establishing one or more eagle areas. The southwest shore, Kootznahoo Inlet, and Seymour Canal areas have been considered and portions of the latter are the most feasible. Tiedeman and Swan Islands in Seymour Canal do not have the greatest concentration of eagles, but are representative and accessible. Purposes of an "eagle area" are to promote greater public recognition of their aesthetic and natural value and to demonstrate national concerns. The classification of the Seymour Eagle Management Area in conjunction with National Wildlife Week, March 20-27, 1972, established a major land reserve for eagle nesting habitat.

Territorial Sportsmen

The Territorial Sportsmen, affiliated with the National Wildlife Federation and the Alaska Sportsmen's Council, have long considered Admiralty Island a place for multiple

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[36]Robards, (Personal interviews reviewing recent eagle surveys and studies pertinent to Admiralty Island). May, 1971.

use management. As adamantly as they have supported the promotion of balanced use, they have always opposed National Park status for the area. In each conflict with Field and Stream magazine, the Sportsmen have supported the Forest Service except where agency errors were apparent.

The Sportsmen's original interest was the promotion of quality public recreational use of Admiralty. They have been an influence promoting comprehensive land use planning. Under a cooperative agreement the Sportsmen have supported the majority of the maintenance of the Forest Service public recreation cabin program on Admiralty Island for the past decade.[37]

Will Johns has stated the national interest of the Wildlife Federation in support of the Territorial Sportsmen:

> As a new dawn of resource management and utilization breaks on Admiralty Island--on its vast forests, huge brown bears, and teeming salmon--Alaska's striving for economic growth will continue to be a center of conservation interest. But in opening the door for the greatest timber harvest in our 49th State's history, the U. S. Forest Service has taken upon itself a tremendous challenge and responsibility in applying multiple-use principles in not only the harvest of timber but also in the protection of other, equally important natural resources--soils, waters, fish and wildlife. Thousands of Alaskans, American sportsmen, outdoor writers and conservation organizations will be watching the results--and will be the first to sound the alarm if any resource is sacrificed at the expense of another.[38]

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[37]A. W. Boddy, "Personal Interview Concerning Territorial Sportsmen Interests in Admiralty Island", February, 1972.

[38]Will Johns, "A New Dawn on Admiralty Island", Conservation News, National Wildlife Federation, Washington D. C., Vol. 30, No. 19, October, 1965, p. 6.

The interests of the Sportsmen have become progressiverly diverse as have the public concerns. Recent position statements by this organization speak to resolution of many wild land problems such as those outlined in this paper. They have actively supported requests for increases in Forest Service funding and staffing in order to improve the quality of research and resource planning and management:

> The general public is looking to Alaska as its last great recreational opportunity. To assure the best possible overall management of the wildlife, recreation, timber and water resources, a greatly expanded appropriation for research and advanced planning is needed immediately and will continue to be needed in the foreseeable future. [39]

The frequent political drives to set Admiralty Island aside as a National Park were partly answered by a Territorial Sportsmen's sponsored proposal originally titled "The Wild Forest of Admiralty".[40] Recognizing the influence of the Sportsmen with the Forest Service, Rich Gordon, Bob Weeden, Dixie Baade and other conservationists associated with the Alaska Conservation Society and the Sierra Club approached the Sportsmen with various proposals for the use of Admiralty Island. A planning committee was

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[39] A. W. Boddy, "Position Statement of the Alaska Sportsmen's Council relating to the proper management of the National Forests of Alaska". (16 organizations, Juneau, February, 1968).

[40] Robert A. Henning, Editorial, "Preserve Admiralty Island", Alaska Magazine, September, 1970.

established to draft and coordinate the relatively detailed land classification proposal with the Forest Service.

This proposal identifies approximately two thirds of Admiralty Island as being best suited to dispersed recreation and aesthetic purposes. Classification less restrictive than Forest Service Wilderness but excluding logging was suggested. The Juneau Unit Timber Sale area and the west Admiralty road system, although somewhat altered, remained as recognized needs for orderly development. Many other ramifications of this proposal are still being studied by the committee and the Forest Service.

The Clearcutting Issue

Inherent in many opposing arguments is the issue of clearcutting. This forest harvesting system is validated by most silvicultural research in southeast Alaska. According to the study of environmental factors, patch or clearcutting is an important tool for timber resource use, increasing the productivity of the timber producing land. Past clearcut areas on Admiralty are producing more timber yield than were the sites which were selectively cut.

Opposition to clearcutting is most often exemplified as a national aesthetic problem and a regional ecological problem. It is not so much whether clearcutting is valid as it is a question of size, location, dispersion, timing and debris cleanup in cutting units. How can cutting units

be designed to minimize impacts and optimize opportunities for other resource uses? Some of the justifications traditionally used to promote clearcutting, such as the "decadent old growth philosophy" are becoming topics of conflict.[41] People visiting the larger cutting units soon after logging are often repelled by the view. Lacking access to information concerning clearcut logging, except through printed opposition in popular magazines, many people have expressed the need for eliminating the only known harvesting system for the spruce-hemlock forests.

Several articles recently criticized clearcutting in relation to Admiralty Island. The spring 1969 issue of Living Wilderness, illustrated and spoke critically of timber harvesting practices in Eliza Harbor.[42] Life magazine featured Admiralty Island in an article, "Threatened America", and talked specifically about the "ugliness" of clearcutting and questioned the need for logging here. It was illustrated with an unflattering photograph taken in Whitewater Bay by a local brown bear guide.[43]

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[41]Some conservationists disagree that old growth forests will be of lesser value in the long run than young even age forest which come in following cutting. They question the validity of research on the subject.

[42]The Wilderness Society, "Living Wilderness", (Photographs and text on Eliza Harbor), spring, 1969.

[43]R. L. Graves, editor, "Threatened America", Life Magazine, August, 1969.

"The Stump Merchants" in Field and Stream magazine, were extremely critical of clearcutting on Alaskan national forests and referred specifically to the Juneau Unit Sale on west Admiralty.[44]

Recent Forest Service studies in Kuiu and Admiralty Islands in landscape design, wildlife, soils and watershed analysis point to the desirability of harvesting the timber resources of a particular drainage in several cutting periods rather than one; and generally in smaller individual units with greater dispersion.[45] Objective analysis by multi-disciplinary groups, restrained by arbitrary legal or political limits such as a moritorium on clearcutting or a maximum clearcut size, become professional concessions to less knowledgeable interests. A large cutting unit might still be in the public's best interest if it is located in an area that is not frequently viewed or contains major resource conflcits.

In the spring of 1971, Harry Merriam, game biologist for the Alaska Fish and Game Department, testified as a private citizen in opposition to Forest Service management before a U. S. Senate sub-committee on public lands. The

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[44]Sam Roberson, "The Stump Merchants", Field and Stream March, 1971, p. 16, 20, 116.

[45]On Kuiu Island, a Forest Service multi-discipline tean was able to isolate areas which were relatively free of resource conflicts in relation to proposed logging. By identifying resource problem areas, known adverse land uses can be deferred until detailed analysis can be afforded.

committee was considering proposals for national moratoriums on clearcutting. Three areas on Admiralty Island were used as examples of less than adequate consideration for resources other than timber. His recommendations follow:

> If a reasonable portion of Southeast Alaska including all ecological types, is to be reserved for recreation, wildlife and aesthetic values, something must be done immediately. Drastic changes in philosophy and emphasis are in order before forest management in Alaska can be termed "Multiple Use". Clearcut sizes should be reduced and a system of small block cutting initiated. I suggest blocks of not more than 100 acres. Major salmon drainages should be completely protected or at least provided with wide leave strips until more information is obtained. A comprehensive survey should be made of areas of existing or potential high recreational, wildlife, and aesthetic values. I suggest a non-partisan study as was recently conducted in the Bitterroot National Forest of Montana. Values other than timber should be acknowledged and the areas given protective classifications. In some cases this means entire drainages and in others lesser amounts, but sufficient should be protected in each case to preserve natural values and provide a wilderness setting. Wilderness proposals should include all ecological types instead of just scenic areas. Under present timber obligations this is almost impossible to accomplish. Perhaps the federal government may be required to repurchase some of the timber already allocated to timber companies to fulfill its total obligation to the public.[46]

Regional Forester Charles Yates, in his reply, "Is Multiple Use on Alaska's National Forests a Myth"? agreed

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[46] Merriam, p. 11-12

with some of Merriam's statements, and explained the management situation where he disagreed. Some reasons for clearcutting were described in one response:

> When used correctly clearcutting is a good practice. It is a good timber harvest technique in Southeast Alaska for reasons listed below. But, unless carefully done it can damage soil, water recreation, fish and wildlife. Clearcutting is practiced rather than selective cutting, because (1) It creates conditions that accelerate decomposition of forest litter. This hastens recyclying of nutrients, particularly nitrogen, so they are available to the new seedlings. (2) It favors the growth of a stand composed of Sitka spruce thus promoting a good mixture of hemlock and spruce in new stands. Mixed stands are less susceptible to disease and insect attack. (3) Clearcutting prevents root and stem damage to remaining timber that would be caused by selective logging. (4) All of Southeast Alaska's timber stands are subject to windthrow. Stands thinned selectively cutting would be more unstable and thus, subject to loss. It is true that clearcutting is economically advantageous both to the logging company and to the taxpayer.[47]

A Wilderness Interest

The most recent resource is wilderness, an abstract need of urban man. According to Roderick Nash, wilderness is a product of affluence and concern for our developed resource base; a concern that began in the cities. Wilderness tends to be subjective, a state of mind, and as such, is not easily defined. [48] The Wilderness Act of 1964 does

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[47] Charles Yates, "Is Multiple Use on Alaska's National Forest A Myth"? Alaska Magazine, March, 1972, p. 80, 92.

[48] Roderick Nash, Wilderness and the American Mind, (New Haven: Yale University Press, 1967), p. 75.

define wilderness as follows:

> A wilderness, in contrast with those areas where man and his own works dominate the landscape, is recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.[49]

The act went on to require that wilderness retain "its primeval character and influence" and it be protected and managed in such a way that it "appears to have been affected primarily by the forces of nature".[50] Wilderness establishes a non-development priority for the land. It is in conflict with other resources which might need to be extracted to be utilized. Increasingly, wilderness interests are focusing on mature stands of spruce and hemlock in order to reserve old growth spruce-hemlock forests for future generations to view. Wilderness might be described as a national interest conceptualized in law and pertinent to Alaska as yet another resource conflict. Robert Marshall, a Forest Service employee and a founder of the Wilderness Society, crusaded for the classification of wilderness areas in Alaska. The Forest Service's support for wilderness was documented by Marshall in the Alaska Resource Committee Report of 1937.[51] Recently when the Forest Service established Alaska National Forest Wilderness

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[49] Wilderness Preservation Act (Public Law 86-517), Sec. 1-4, 88th Congress, Sept. 3, 1964.

[50] Ibid. Sec. 4.

[51] U. S. National Resources Committee, "Suggestions Concerning Government and Administration in the Territory of Alaska", National Resources Committee, Washington, D. C.: 1937, Appendix 2.

Study Areas, Admiralty Island was considered but not selected as a priority area in accordance with availibility and suitability criteria.[52]

In relation to Admiralty Island the Sierra Club has aligned itself as a representative of this national interest. Eying the advantages of a national lobby, professional and legal support and similar goals, the Juneau Chapter was formed with a purpose of resource preservation and promotion of sound conservation practices in September, 1968. The group's interest in resource management on Admiralty Island has resulted largely from studies by a member, Rich Gordon. A former librarian for the Alaska Department of Fish and Game, Gordon maintains a comprehensive personal file on Admiralty Island. Research information for many recent proposals for the use of Admiralty Island originated from this data pool.[53]

The national group, Sierra Club of California, had been actively interested in Admiralty Island issues since the mid 1960's. An Alaska Wilderness Conference in 1968 held in cooperation with existing wilderness interests, including the Forest Service, focused on wilderness in southeast Alaska. In 1969 the topic of the 11th Biennial Wilderness Conference was Alaskan wilderness. At this

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[52]Bob Pickerel, "Ahhh,Wilderness"! New Alaskan, April, May, 1971.

[53]Richard Gordon, "Personal interview and correspondence on wilderness and Admiralty Island", Alaska Wilderness Council Representative for Sierra Club, 1971.

session, Brock Evans of the Sierra Club, spoke about the wilderness versus timber resource use issue, specifically including Admiralty Island:

> My opinion, shared by many Alaska conservationists, is that the most serious and immediate threat to Alaska's wilderness lies in the southeastern panhandle with its heavily forested islands, bays, inlets, and tremendous chain of glacier-clad peaks rising, in many cases, literally out of the water.
>
> The threat there is logging, and there are fears that we may already be too late. The blame for the situation is with the Forest Service which manages nearly the entire area. It appears that Forest Service land management planning in southeast Alaska has been made with one primary goal--to get the timber out.[54]

Several proposals that referred to wilderness on Admiralty Island were developed following this conference. Gordon, of the Juneau Chapter, was successful in gaining Alaska Wilderness Council to establish Admiralty Island as a priority area. They proposed special classification for the area based on this objective:

> ADMIRALTY ISLAND-A place where people would always be able to come, to enjoy the unexcelled opportunities for family camping, hunting, and wildlife observation in natural surroundings: this is our goal on the island of the Alaskan Brown Bear and the Bald Eagle. Here the opportunity would remain to cruise into secluded inlets, photograph the otter and the deer, fish the lakes, or stalk

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[54]Brock Evans, "A Conservationist Views Alaskan Wilderness", in Wilderness: The Edge of Knowledge. ed by Maxine E. McCloskey (New York: Vail-Balby Press, Inc., 1970). p. 93-94.

> the brownie, amidst a backdrop of primeval forest.[55]

The proposal was then forwarded through the San Francisco office of the Sierra Club to the Forest Service as summarized:

> Elimination of logging in Kootznahoo Inlet (including Kanalku Bay) and the eastern half of the island, except where currently being conducted on lower Glass Peninsula. These areas should be established as recreation areas.
>
> The Gambier-Pybus Bay area should be preserved under the Wilderness Act; but allowing air access and recreation developments, including cabins.
>
> We believe that a major national effort is necessary to save the uncommitted section of Admiralty Island.[56]

The most recent strategy by wilderness interests, including the Forest Service, is to retain representative areas of old growth timber as well as good cross sections of all vegetative communities under the Wilderness Act. Precedents in establishing wilderness have established 5,000 acres as minimum size for retention of pristine characteristics. Based on this minimum size Admiralty Island could contain as many as 213 separate wilderness areas. Most of the area, particularly the dense forests are already dedicated to other sets of uses, making them relatively unavailable for wilderness classification. Areas of alpine, rock and icefield do not satisfy the

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[55] Alaska Wilderness Council, "Wild Land Priorities Announced by Southeast Conservationists, Admiralty Island", (summarized in letters by R. Gordon), 1970.

[56] Ibid.

current demands for representative portions of all natural communities. Some areas on Admiralty remain available for wilderness or similar designations.

Mining interests have proven to be formidable opponents to Alaska wilderness proposals. Recent hearings concerning the proposed Glacier Bay Wilderness aired the strong opposition of Alaska's Governor Egan who supported the mining interests and advocated comprehensive land use planning prior to wilderness designation.[57] Recent work on Admiralty Island by the U. S. Geological Survey focused on the Pybus-Gambier area. R. A. Loney studied and mapped the stratigraphy and structure of this complex area in 1958.[58] The area appears to be moderately mineralized. As relatively good geologic information exists for this area, the mining interest here will be better understood in regard to any land use proposal, including Wilderness. In 1965, the Kootznahoo Inlet area was concentrated on in conjunction with a review and compilation of all reconnaissance geology for the island.[59] Past approaches to

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[57]William A. Egan, Governor, "Statement of the State of Alaska opposing the Glacier Bay Wilderness Proposal", November, 1971, 29 pp.

[58]R. A. Loney, "Stratigraphy and Petrography of the Pybus-Gambier Bay area, Admiralty Island, Alaska", (U. S. Geol. Survey Bull, 1178, 100 p., 1964.

[59]Lathram, "Recon. Geol. of Admiralty Island".

multiple use planning have not included geologic or minerals data to any degree. This is another latent interest that is most likely to be heard from in the future.

Native Interests

Known conflicts over the allocation of resources began on Admiralty Island when man first arrived. Under the Tlingit Indian culture, particular villages claimed areas as their own, based on the availability and abundance of the island's resources. Family groups, or clans, established villages and camps delineating particular fishing streams and hunting areas as their individual or group territory. Clan wealth and importance was recognized as being in a direct relationship with their selection of resource subsistence base. The individual clan interests clashed with each other for resource ownership and use, as did the Indians clash with Russian and American exploration and resource exploitations.

Two notable incidents marked the assumption of American control of Admiralty Island. In 1869, a killing of two white prospectors at Murder Cove on south Admiralty by Indians resulted in the destruction of Kake village by the American gunboat, the "Corwin". In 1882, a whale harpoon exploded, accidentally killing an Indian shaman. During the resultant skirmish the Angoon village was shelled,

looted and burned. The community of Angoon still manifests definite resentment at its first examples of American treatment.[60]

Although these actions marked American control over the lands, control over the Tlingits themselves was another matter:

> The natives consider themselves the true owners of the country, with all its accompaniments of soil, forests, streams, and naviagable waters. Its game, fish and vegetable growths are their personal property. The white man is an invader to be tolerated as a matter of necessity, or perhaps as a matter of advantage.[61]

How to resolve the native claims has been a longtime problem. Letters to the Secretary of the Interior concerning the encroachments on native timber, game and fishing areas were answered on September 6, 1889. The Secretary concluded his letter by saying:

> I have to inform you that these matters all lie outside the control of this Department and would be proper subjects for the consideration of Congress.[62]

The Tlingits asked for reservations, including Admiralty Island, but were ignored. A six-point policy drafted in 1889 by the Commissioner of Indian Affairs harshly denied Tlingit requests:

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[60]Fredrica de Laguna, p. 59, 162.

[61]Federal Field Committee, p. 433.

[62]Ibid., p. 432.

1. The Reservation system belongs to the past,
2. Indians must be absorbed into our national life, not as Indians but as American citizens,
3. The Indian must be "individualized" and treated as an individual by the Government,
4. The Indian must "conform to the white man's ways, peaceably if they will, forceable if they must",
5. The Indian must be prepared for the new order through a system of compulsory education, and
6. The traditional society of Indian groups must be broken up.

Before administration of the island passed to the Forest Service many complexities in native rights had already developed. School and village sites had been established in Angoon. The remaining winter villages had been dissolved by moving the people to Juneau, Kake and Angoon to further purposes of Federal policy:

> The "uncivilized tribes" specified in the Russian treaty were in an anomalous position. They were omitted from the General Allotment Act, which was a method of attaining citizenship for American aboriginals. They were omitted from the Homestead Act as being neither citizen nor alien capable of attaining citizenship. They were forbidden by Congress to enter into treateies with the United States for the cession of some lands and the retention of others. Physically they comprised the major part of Alaska's population, officially they were invisible.[64]

A Supreme Court decision settled that the United States had the ". . .duty to protect the property rights of its Indian wards". Within the next two years the Alaska Native Allotment Acts were passed. They provided for homesteads

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[63] Ibid.

[64] Ibid., p. 434.

of up to 160 acres to non-mineral, agricultural land. The 1906 and 1907 acts provided that only those "vacant unappropriated and unreserved" lands suitable for "agricultural" purposes could be filed on. This recognized that some national forest lands had been reserved and that some were not suitable for agriculture. The first national forest planning effort in Alaska pointed toward limited application of the homestead laws to Admiralty Island. The apolication of the agricultural purpose to the native fishing culture was a greater error than its application to an unsuitable ecosystem.

A jurisdictional act passed in 1935 which allowed the Indians to bring suit in the Court of Claims for:

> All claims of whatever nature, legal or equitable, which the said Tlingit and Haida Indians of Alaska may have, or claim to have, against the United States, for lands or other tribal or community property rights, taken from them by the United States without compensation therefore. . .[65]

In 1942 National Park Servcie representative Calahane anticipated a conflict with native interests, while considering Admiralty Island for park status:

> The Indian village of Angoon and other settlements depend on natural resources for existence. The natives have petitioned for a reservation that would exclude considerable area on the west side of the island and might lead to some minor conflict with an adjoining monument.[66]

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[65] Ibid., p. 437.

[66] Calahane, p. 18.

When protests by southeastern Alaskan Native groups were raised toward proposed pulp developments on lands claimed by them Congress relieved the Forest Service of this impediment by enactment of the Tongass Timber Sales Act of August 8, 1947.

The Federal Field Committee for Development Planning in Alaska studied the need for settlement of Alaska native land claims. The Forest Service, one of eleven contributing agencies, assisted with the compilation of resource material for the landmark historical summary Alaska Natives and Land in 1968. President Johnson's message to Congress in 1968 established national goals for the resolution of the American Indian problem and proposed specific action to help the Alaska native:

> Legislation is now pending to resolve this issue. I recommend prompt action on legislation to:
> --Give the native people of Alaska title to their lands they occupy and need to sustain their villages.
> --Give them rights to use additional lands and water for hunting, trapping, and fishing to maintain their traditional way of life, if they so choose.
> --Award them compensation commensurate with the value of any lands take from them.[67]

Late in 1971, the Alaska Native Land Claims Act was enacted, granting formal recognition to native claims. Tentatively, Angoon will receive 36 square miles

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[67]Federal Field Committee, p. 438, 441.

(23,040 acres) located contiguous to the village. This is almost ten times the area of all private lands on Admiralty Island. In addition, a share of the nearly one billion dollars of settlement will become accessible to them through the Central Council of the Tlingit and Haida Indians.[68] This firmly established the natives as a political interest group. Land selection is likely to be a complex process in view of the relative values and the dispersion of interests involved. Proper management of these native lands is another matter of major consideration.

Other interests, including the Southeast Alaska Community Action Program (SEACAP), federally financed agency of Office of Economic Opportunity, are stimulating legal action under the Native Allotment Acts of 1906 and 1907.[69]

Yet the major problem still un-resolved is how to best help the Angoon people to help themselves: to allow them the advantages of modern society with improved education, transportation, housing, services and standards of living without destroying their cultural heritage or making them prey to legal and land speculators.

The settlement of the claims hopefully marks the end of the land claims. The Forest Service can expect,

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[69] Alaska Legal Services "Forest Suit Filed" Southeast Alaska Empire, November 2, 1971.

however, that the problems relative to native interests and land use planning on Admiralty Island are just beginning.

The entire spectrum of issues and interests which this study has included was represented in one manner or another in the North Tongass Sale Suit. The long series of conflicts on Admiralty had pointed toward the liklihood of such an action. Legal documents compiled for the suit formed the administrative record of the Forest Service. The administrative record was the basis for Judge Raymond Plummer's ruling in favor of the Forest Service on a major contention that the Forest Service failed to give due consideration to other values as called for under the Multiple Use Act. His ruling stated:

> The court must presume. . .that the Forest Service did give due consideration to the various values specified in the Multiple Use-Sustained Yield Act. Having investigated the framework in which the decision was made, the court is forbidden to go further and substitute its decision in a discretionary matter for that of the secretary.[70]

Many other issues were contended during the suit, including strong opposition to clearcutting, alleged poor logging practices, application of the Wilderness Act to the sale area, proper consideration for aesthetic

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[70]Judge Raymond Plummer, Sierra Club vs. Hardin Suit (Decision of Federal District Court), Juneau, June, 1971.

values, and violation of procedures called for in the National Environmental Policy Act of 1969.

One of Plummer's statements suggested greater public involvement in management decisions:

> Plaintiff's parade of expert witnesses might have swayed decision of the Forest Service or influenced the result in this case had it been properly presented at an administrative proceeding.[71]

The broad discretionary powers of the Forest Service were sustained by the court:

> . . .while data considered undoubtedly shows the overwhelming committment of the Tongass National Forest to timber harvest objectives in preference to other values, Congress has given no indication as to the weight to be assigned each value and it must be assumed that the decision as to the proper mix of uses within any particular area is left to the sound discretion and expertise of the Forest Service.[72]

But many questions remain as to how the agency will effectively consider the views of diverse interests in future exercises of this dissertion.

On April 5, 1971, the expected notice of appeal was sent to the new Alaska Regional Forester, Charles Yates. This action, filed by six Alaska based conservation groups, effectively delayed future timber harvest until a hearing by a higher court. In terms of time and effort by all involved parties the legal "exercise" in Juneau was very

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[71] Mike Miller, "The Fight for the Trees of the Tongass", American Forests, July, 1971, p. 19.

[72] Ibid.

costly. Some rather far reaching effects were felt. Never before had the Forest Service expended the time and effort to assess the current validity of so many of its programs on one piece of land in Alaska. National recognition appears to be providing some impetus toward more intensive management.[73]

One forest officer was quoted by American Forest magazine immediately following the suit as:

> I don't know if we won, or if we lost, but I feel pretty sure about one thing. Even if we won, I think this whole exercise has been good for us. I think it will help us all if we know the spotlight is on us from now on. I think we'll tighten up some practices where we were maybe a little loose. I think we'll sharpen up.
> . . .No, I don't think it's been a bad exercise at all.[74]

Richard Pardo has indicated some of the parameters of future land use controversy on Admiralty Island.

> The argument is about trees. The contestants are familiar adversaries: the preservationists versus the developers. At issue is the question of how much of the vast coastal Alaska spruce-hemlock forests can or should be set aside as forever roadless and unlogged.
> Occupying an also familiar role--that of being caught in the middle--is the U. S. Forest Service.
> . . .Not an enviable position, [illegible] irs is the complex task of trying to balance competing land uses in such a way as to optimize economic and social benefits while minimizing environmental damage.

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[73] Ibid., "Alaska's Tongass Suit--The Exercise at Juneau". American Forests, March, 1971, p. 52.

[74] Ibid.

> . . . Innovation and flexibility will be called for. It would be foolish to prohibit timber management and logging from the coastal forest of Alaska. But an even greater mistake would be the failure to give highest priority to identifying and protecting the maximum feasible amount of old growth forest.
>
> Admiralty Island is complicated by a lawsuit and a history of controversy. Some excellent wilderness and recreation opportunities are still open. The story of Admiralty is just beginning.[75]

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[75] Richard Pardo, "The Confrontation", American Forests, September, 1970, p. 32, 56.

CONCLUSION

In this study, natural aspects, historical use, administrative problems, and public controversies have been considered with regard to human values. Its central purpose has been to provide a better perspective for understanding some social values attached to Admiralty Island. The arrival of the "environmental 1970's" signifies a change in public opinion which must be reflected in public land management policies.

Admiralty Island will no doubt continue to be a symbolic arena for resource conflicts. A recent article, "Warning: The Chain Saw Cometh", in the Atlantic Monthly, demonstrates again the impact of a professional writer and mass media. Paul Brooks, a National Director of the Sierra Club, stated:

> On AdmiraltyIsland nature's cycle is as yet unbroken. But the chain saws are very close, ready to move in the moment legal roadblocks are removed. By chance or intent, the first areas to go will be the most scenic, the most valuable for conservation. The bears and the eagles, whose home this has been for thousands of years, have no direct voice in the matter. But they are powerful symbols of something priceless that we now realize we have all but lost: What Henry Thoreau called "the tonic of wildness". If enough voices are raised in their behalf, they may yet save this greatest of wilderness islands.[1]

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[1]Paul Brooks, "Warning: The Chain Saw Cometh", Atlantic Monthly, December, 1971, p. 99.

Public administration of wild lands is extremely complex: particularly when social values change as fast as they have in Alaska. Critical statements by interest groups have often reflected social values rather than rational insight into natural resource complexities.

Public involvement in decision making processes has been costly but also provided some assoicated benefits. Adversary relationships appear to be lessened through timely communication among proponents of widely divergent points of view. Much of the "bureaucratic mystique" which the public has associated with agency decision making may be avoided by the opportunity for more public scrutiny. Reassessment of changing social values can be coordinated with other values during the planning process. Most of all, mutual assessments of goals and objectives offers the prospect for a broader based public commitment to resultant natural resource allocation.

A "Summary of Public and Administrative Actions on Admiralty Island" is presented in Appendix A. Comparisions in time between a public action adn an administrative reaction by the Forest Service or vice versa show they are closely related.[2]

The Forest Service is beginning to talk and work with the public in terms of alternatives, instead of final answers.

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[2]U. S. Forest Service, "Summary of Public Involvement for 1972 Revision of the Tongass N. F. Multiple Use Plans", Juneau March, 1972, p. 97 a-d.

Appendix E contains a "Summary of Probable Effects on Admiralty Island" as suggested by various publics concerned with Admiralty Island. This comparison weighs some social and resource values in regard to some management alternatives.

APPENDIX A

SUMMARY OF PUBLIC AND ADMINISTRATIVE ACTIONS CONCERNING ADMIRALTY ISLAND

APPENDIX A

TABLE 4

Summary of Public and Administrative Actions
Concerning Admiralty Island

	Administrative Action	Date	Public Involvement or Resource Impact
112 YEARS: 1794-1906 ABORIGINAL ERA: NATIVE CONFLICT	Exploration by Vancouver	1794	Local battles with Tlingit Indians
	Russian fur trade	1836-40	Smallpox, typhoid decimated Angoon
	Alaskan purchase	1867	Decline of furbearers, loss of sea otter
	Minerals prospecting	1869	Murder Cove killing of miners and Kake bombardment
	John Muir's travels	1879-90	
	Northwest Trading Post and fish processing plant at Killisnoo	1880	Decline of whale and herring in Kootznahoo
		1882	Shelling of Angoon by "Corwin"
	Pressure for Indian reservation, Six Point Policy for native acculturization	1889 1890	School at Angoon, winter villages eliminated
	Juneau gold discovery	1881-1940	Gold mining, Hawk Inlet, Funter Bay; coal mining in Kanalku Bay; gypsum at Bear Cr.
	Homestead and Indian Allotment Acts	1900-07	
	Lighthouse reserves established	1901	
40 YEARS: 1907-1947 COLONIAL ERA: Period of mining, trapping, homesteading, some logging associated with the rise and fall of the salmon fishery, and the promotion of the pulp resource.	Agricultural inventory	1907	Alexander Expedition
	Admiralty becomes part of Tongass Forest	1909	Conflict with miners, loggers, controlling misuse of public lands
	Development of the fishing industry, 6 canneries, 22 fish traps; trapping and commercial hunting	1910-30	Heavy brown bear kill; change of native "way of life"
	"Forests of Alaska" by R.S. Kellogg; recognition of pulp resource	1910	Hand, horse and steam donkey logging
		1911	Forest Service discourages homesteading and Indian allotments due to limited agricultural potential of land
	World War I	1917	
	Glass Peninsula pulp allotment sold to Speel River Pulp Mill	1920-23	
	First timber inventory; "Regional Development of Pulpwood Resources of the Tongass Nat'l. Forest", by Clinton Smith	1921	Decline of salmon by over-fishing
	Lighthouse reserves	1925	
		1926	Speel River Pulp Mill bankrupt
	First aerial photographs; Crown Zellerbach contract for West Admiralty pulp allotment	1927	Forester John Thayer killed
		1928	Brown bear extermination
	Water power withdrawals	1929	Decline of logging
	Depression	1929-30	Holzworth's "Wild Grizzlies of Alaska"
	Log storage sites reserved	1930-36	
	Stewart E. White's proposal for national park	1931 1932	Brown bear preserve proposals
	Cooperative bear studies	1932	
	CCC trails and recreation shelters	1933-37	Fur farms and homesteads
	Brown bear management plan; Pack Cr. and Thayer Mt. bear preserves	1934-35	
	Glacier Bay expansion	1939	NPS recommends no National Park
	Admiralty Island Recreation plan	1940-41	

COLONIAL ERA: Period of mining, trapping, homesteading, some logging with the rise and fall of the salmon fishery, and the promotion of the long term pulp sales and public reactions to large clearcuts.

40 YEARS: 1907-1947

20 YEARS: 1948-1968

LAND USE ERA: End of pulp promotion, beginning of land use planning,

	1911
World War I	1917
Glass Peninsula pulp allotment sold to Speel River Pulp Mill	1920-23
First timber inventory; "Regional Development of Pulpwood Resources of the Tongass Nat'l. Forest", by Clinton Smith	1921
Lighthouse reserves	1925
	1926
First aerial photographs; Crown Zellerbach contract for West Admiralty pulp allotment	1927
	1928
Water power withdrawals	1929
Depression	1929-30
Log storage sites reserved	1930-36
Stewart E. White's proposal for national park	1931
	1932
Cooperative bear studies	1932
CCC trails and recreation shelters	1933-37
Brown bear management plan; Pack Cr. and Thayer Mt. bear preserves	1934-35
Glacier Bay expansion	1939
Admiralty Island Recreation plan	1940-41
World War II	1942-47
Tongass Timber Sales Act; large timber sales in Hood Bay	1947
Promotion of pulp sales	1948
Begin forest research and establish Pack Cr. Natural Research area	1949
Protection of bald eagle	1951-71 1952 1954 1953-65
Georgia Pacific Sale	1955-58
Silvicultural studies	1955-64 1956
"Multiple Use Management on Admiralty"; reactivation of bear studies	1958
Statehood	1959
National forest recreation survey and plan; Multiple Use-Sustained Yield Act	1960
Timber management plans	1958-68
Wildlife studies and plans	1961
Young Bay Experimental Forest	1962
Wilderness Act; Multiple Use Plan for Admiralty	1964
Multiple Use Plan, Chatham Ranger District; "Tongass Timbersale"	1965
St. Regis Paper Co. timbersale	1965-67
"Alaska Sized Timbersale", Lockhart; bald eagle studies	1966
"Alaska Natives and the Land", Federal Field Committee; Juneau Unit Timbersale to U.S. Plywood-Champion	1968

Forest Service discourages homesteading and Indian allotments due to limited agricultural potential of land

Decline of salmon by over-fishing

Speel River Pulp Mill bankrupt

Forester John Thayer killed

Brown bear extermination

Decline of logging

Holzworth's "Wild Grizzlies of Alaska"

Brown bear preserve proposals

Fur farms and homesteads

NPS recommends no National Park

Fish predators: eagle, seal, Holly warden bountied

Logging for airplane spruce and interior Alaska construction

Recreation, hunting cabins established

Ketchikan Pulp Mill; began logging at Eliza Harbor, Chapin Bay, and Whitewater Bay

"Lost Paradise", in Field and Stream; "Paradise is not Lost", by Territorial Sportsmen

Elimination of fish traps; low point of fishery; beginning of Alaska Department of Fish and Game

Alaska Lumber Pulp mill at Sitka; logging in Seymour Canal area

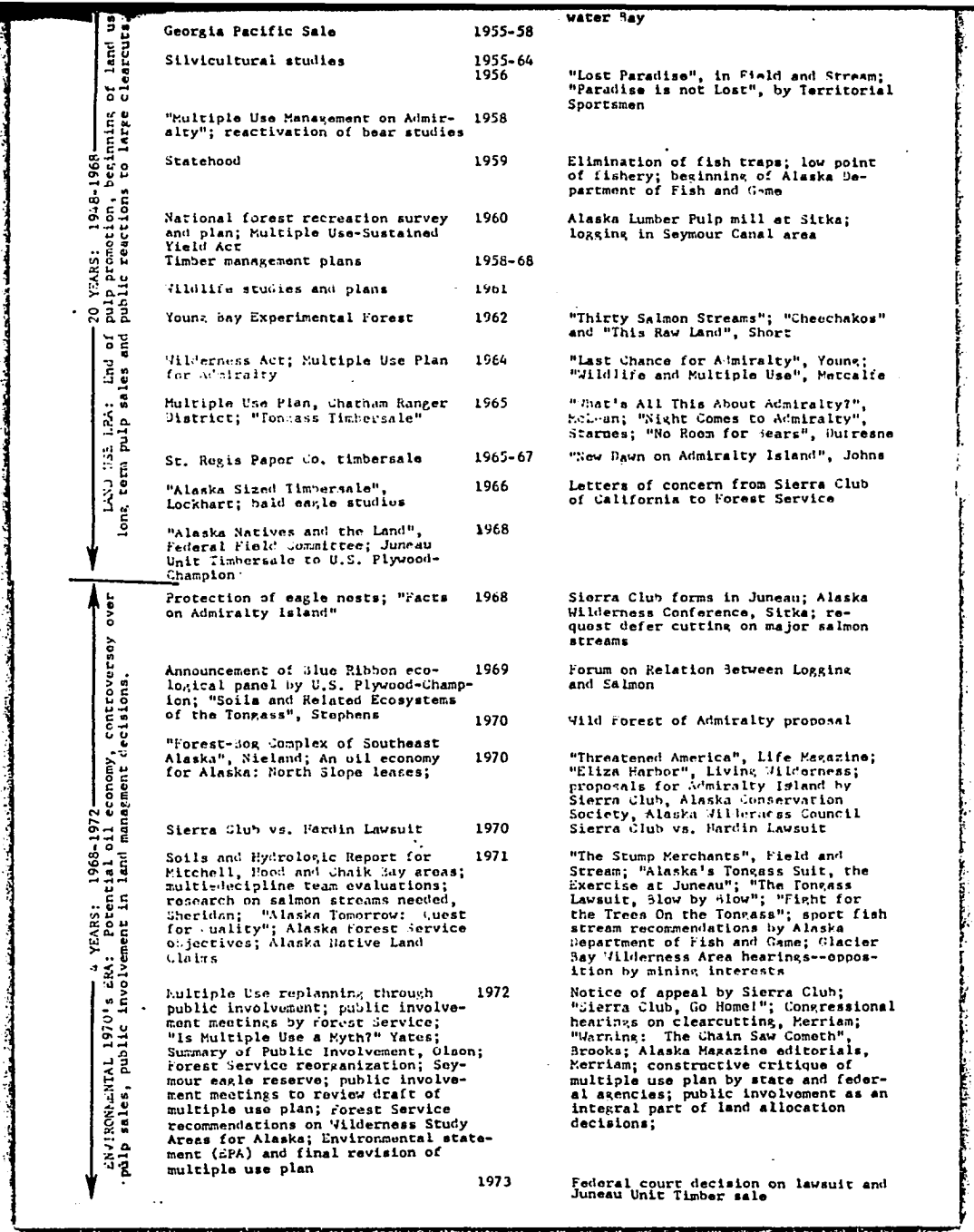
"Thirty Salmon Streams"; "Cheechakos" and "This Raw Land", Short

"Last Chance for Admiralty", Young; "Wildlife and Multiple Use", Metcalfe

"What's All This About Admiralty?", McLean; "Night Comes to Admiralty", Starnes; "No Room for Bears", Dufresne

"New Dawn on Admiralty Island", Johns

Letters of concern from Sierra Club of California to Forest Service



APPENDIX B

SUMMARY OF PROBABLE EFFECTS ON RESOURCES OR USES OF VARIOUS MANAGEMENT TREATMENTS OF ADMIRALTY ISLAND

Admiralty Island

DESCRIPTION:

This geographically distinct area includes the entire 1,064,960 acre area of Admiralty Island. One of the largest Islands in the Tongass National Forest, it is approximately ninety-six miles long by twenty-five miles wide. Over twenty-seven Bays and Inlets are formed along its 678 miles of coastline. The terrain is rugged and mountainous with peaks, averaging up to 4,650 feet in elevation. A large concentration of Lakes occur in the glaciated rolling "karst" topography near the geographic center of the Island.

The areas near the Native village of Angoon, (population 500), the Hawk Inlet Cannery and scattered occupancies on the Mansfield Peninsula contains the majority of the people. Scattered cabins throughout the Island provide seasonal recreation opportunities for many people, primarily from the Juneau Area. The Island has a history of Native and Causacian use, but natural qualities remain intact in most areas. Loggers have harvested over 280 million board feet of timber, from some 11,000 acres under 135 sales since 1900. The bulk of the wood was cut in the 1920's and since the mid 1950's from six major Bays and numerous scattered locations. Conflicts over a few larger cutting units have focused a great deal of attention on the Island. Numerous proposals have suggested classification of the whole Island or major portions of it for one or more specific uses. Specific human demands for; timber, wildlife interests (brown bear, deer and eagle), access (auto, boat and foot), recreation (hunting, fishing, viewing and boating), salmon and trout fisheries, minerals, wilderness and social needs (Native people), have been recognized on Admiralty Island.

RESOURCES:

Many natural resources are available on Admiralty Island, although they are not yet fully inventoried. A general summary of these follows:

A. Timber

Approximately one-third of the Island is classified as commercial forest land. An estimated annual allowable cut of 73 million board feet could be

sustained on the Island. The Juneau unit sale includes a major portion of the west side of the Island. The sale has been contested in the courts and the decision of the District court is being appealed by the plaintiff.

B. Wildlife

An estimated ten percent of Alaska's brown bear population is found on Admiralty Island. The Island also supports abundant populations of deer. Eagle populations are high and other birds, waterfowl and furbearers are common.

C. Fisheries

Some sixty-seven major streams are classified as salmon producers. Ten of these (nine on the east and one on the west side) are major commercial fish producers (100,000 fish per year or more). Many more streams have potential production of commercial fish. Most small streams are recognized as potential rearing or protective habitat for salmon fry.

Over half of the Lake acreage (15,000 acres) on the Chatham District, occurs in conjunction with prime sport fishing streams on Admiralty Island. The Admiralty Lakes Area contains 2/3 of these. The Alaska Department of Fish and Game has identified one outstanding and over a dozen excellent sport fishery systems yielding cutthroat, steelhead and Dolly Varden trout and coho salmon. Additional salt water sportfish values are associated with winter king salmon at Angoon, and the summer commercial fisheries.

D. Minerals

The U. S. Geological Survey has completed reconnissance surveys of Admiralty Island and detailed study of some specific regions, including the mineralized Mansfield Peninsula, Pybus-Gambier Bay area, and the Kootznahoo Inlet Area.

Productive mining prior to 1940 has occurred at Funter Bay, Hawk Inlet, Bear Creek and Kanalku Bay. Other mineral resource areas are known and some are being actively prospected. The maritime

climate, rough terrain, limited access and dense vegetation has limited mineral exploration and development. With improved transportation or market changes exploration and development could accelerate.

E. Watershed and Soils

Sixty-seven watersheds yield quality fresh water supplies to associated salt water bays. Three major lake stream systems have been identified as potential power sources. Watershed soils - fisheries relationships are closely interwoven. High water quality and quantity for Angoon and similar domestic use is important. A soil and watershed survey for the Kanalku, Hood, Chaik Bay areas, completed in 1971, is a beginning for watershed management of this area.

F. An inter-Island Highway system, linking Haines with Prince Rupert, B. C., has been proposed. The West Admiralty Road, appears to be the only practical land route between Juneau and points south, Ferries could connect Angoon to the Alaska Marine transportation system. A secondary road system would provide increased recreation and timber utlization opportunites. A trail system connects from key recreation points, particularly in the vicinity of Admiralty Lakes, Oliver Inlet, and Young Bay. Currently, float planes and boats are the main modes of access to the lakes, bays and shoreline.

G. Recreation - and Land Occupancy

The 110,000 acre Admiralty Lakes recreation area was first developed as a boat-shelter-trail recreation complex in the 1930's. Since then the concept of recreation cabins and associated trails has provided many more quality public recreation opportunities in the Admiralty Island rain forest. Twenty-one public recreation cabins and forty-seven private, recreation, trapping and hunting cabins, under special use permit are scattered throughout the area. Opportunities for dispersed and developed recreation inventoried in the National Forest recreation survey, were found to be in large quantity and diversity.

To date approximately 2,500 acres have been patented for homesteads, homesites, native village, fish processing or mining purposes, on the Island. The Native Land Claims bill provides an additional 23,040 acres for the Native poeple near Angoon.

H. Wilderness and Aesthetics

The natural aesthetic or wilderness values remain intact. Possible exceptions are areas recently cutover for timber and areas occupied by concentrations of people such as Angoon, Hawk Inlet or Hunter Bay. Protection of key aesthetic values is needed in conjunction with all future land use proposals.

PUBLIC INPUT

This area and/or major sections of it, have been suggested as: wilderness, timber management, dispersed recreation, National Park, no cut, wildlife preserves, Indian Reservation, and others.

ALTERNATIVES

In conjunction with the 1964 Multiple Use Plan a form comparing alternatives sets of uses was prepared. Maximum Multiple Use development with Admiralty Lakes as a recreation area, provided the premises for the last eight years of management.

On the following form, five alternatives are compared as suggested by public participation. Obviously other alternatives exist. A combination of two or more of the alternatives presented is also an opportunity.

SUMMARY OF PROBABLE EFFECTS ON RESOURCES OR USES OF VARIOUS

MANAGEMENT TREATMENTS OF ADMIRALTY ISLAND

	MAXIMUM TIMBER PRODUCTION	MAXIMUM MULTIPLE USE [illegible] (19[illegible] PLAN)	MULTIPLE USE PLAN (197[illegible] REVISION)	WILD FORESTS OF ADMIRALTY (MAXIMUM RECREATION)	DESIGNATED WILDERNESS
MANAGEMENT TREATMENT OR OBJECTIVE RESOURCE OR USE	Premises: 1. [illegible] road built down west side of island. 2. Secondary roads abandoned after timber use. 3. No protection of wildlife, recreation or aesthetic values. 4. No effort to improve salmon production or protect habitat. 5. Timber and engineering skills necessary.	Premises: 1. West Admiralty Forest Hwy. built [illegible] Bay to Eliza Hbr. 2. Road to Thayer and [illegible] lakes. 3. No permanent roads on east side of island. 4. Special attention to bear concentrations.	Premises: 1. Inter-island State Hwy. built. 2. Juneau Unit Sale continues. 3. Units with management prescriptions [illegible]. 4. No commercial harvesting planned in several areas. [illegible]. Multi-Discipline Team investigation.	Premises: 1. USPC contract and sale revised (Chaik and Kanalku areas out). 2. Emphasize natural values and dispersed recreation on remaining 2/3 of island. 3. Inter-island highway on West Admiralty with spur road access to key recreation areas only.	1. No commercial harvest, aircraft or motor boat use, roads or recreation facilities. 2. [illegible] national concerns. Area "[illegible] by [illegible]". 3. Wilderness classification and planning necessary.
TIMBER	1. Seventy-three MM bd. ft. annual allowable cut. 2. Maximum benefits to timber industry with total forest resource utilization.	1. Reduction of 6 MM bd. ft. annual cut. Cut would be [illegible] MM annually. 2. Near maximum benefits to timber industry.	1. Reduction of 16 MM bd. ft. or [illegible]% of annual allowable cut. 2. Juneau Unit Sale to USPC would continue. 3. Significant reduction of small timber sales.	1. Reduction of [illegible] MM bd. ft. or 60% of allowable cut. 2. No opportunity for future small timber sales.	1. No Juneau Pulp Mill or USPC sale on Admiralty. 2. Elimination of 73 MM bd. ft. or all volume from annual allowable cut. 3. No increase in forest growth by intensive management.
WILDLIFE	1. Natural hunting conditions eliminated or altered over a period of time. 2. Conflicts with recreation users and deer in vicinity of logging operations. 3. Some key deer winter range areas would be eliminated. 4. Potential impact on other wildlife species, i.e., eagle, fur bearers, waterfowl, and marine life.	1. Natural hunting conditions retained. 2. [illegible] of key game areas [illegible] Pybus and [illegible] [illegible] selected for some time and [illegible] under special prescription. 3. Some conflicts with [illegible] as development progresses. 4. Some possible benefits to deer from timber cutting. Increase in hunter yield.	1. Forest Hwy. would not affect major wildlife [illegible] areas. 2. Some conflicts with [illegible], i.e. bear, as development progresses. 3. [illegible] in bear [illegible]. 4. Fair hunting access. 5. Some benefits from timber cutting on habitat.	1. Undisturbed wildlife habitat due to hunting. 2. Some reduction in bear numbers; few other bear - man conflicts. 3. No bear hunting in Pack Cr. and Thayer Lake bear refuges. 4. Cooperative habitat management continues.	1. No limitations on hunting game. Harvest would remain low due to limited access. 2. Opportunities for quality hunting and viewing experience ~~would remain high.~~
FISHERIES	1. Some disturbance of salmon streams. 2. Stream improvement [illegible] [illegible]. 3. Some [illegible] aesthetic conflicts expected. 4. Poor access except along main road. 5. Possible damage to key anadromous fish habitat.	1. [illegible] disturbance with proper timber harvest practices. 2. Salmon stream improvement work on suitable streams. 3. Good access to freshwater lakes. 4. Possible over-utilization of [illegible] lakes. 5. [illegible] stream improvement [illegible] be facilitated.	1. Little disturbance with proper development practices. 2. Fish habitat improvement work carried on. 3. Good access to most lakes; limited access to [illegible] Admiralty [illegible]. 4. Over-utilization unlikely with good inter-agency [illegible].	1. Essentially unaltered habitat. All major spawning streams and estuarine areas remain undisturbed. 2. Fish rearing habitat would be protected. 3. Winter fish habitat for cutthroat and Dolly Varden at Kanalku undisturbed.	1. No disturbance of [illegible]. 2. No opportunity for habitat improvement practices. 3. Limited access to freshwater lakes. Air travel may be continued. 4. Quality sportfishing would remain high. Over-utilization would be unlikely.
MINERALS	1. Road developments and scarified areas would aid mineral prospecting and development.	1. Mineralized area development enhanced, particularly along road systems. 2. Portions of Admiralty Lakes area withdrawn from mineral entry.	1. Road development would aid mineral prospecting and development. 2. Some quality wildlife, recreation or natural areas would be withdrawn from mineral entry.	1. Mining operations restricted on 2/3 of Admiralty. 2. Some areas withdrawn from mineral entry. 3. Opportunities for mineral survey and development on West Admiralty would be improved. 4. Mineralized Mansfield Peninsula not affected.	1. Limited prospecting and controlled development permitted until 19[illegible]. 2. Area withdrawn from mineral entry after 19[illegible]. 3. Conflict with mining interests and existing private lands expected (on Mansfield Peninsula, Lake Kathleen, Seymour, etc.). 4. Lack of road access would limit exploration.
WATERSHED AND SOILS	1. Water [illegible] used to improve [illegible], [illegible], or protect good timber sites from accelerated erosion. 2. Soils data necessary to show best producing sites. 3. Some impact on stream quality downstream and estuarine areas by siltation and cover removal. 4. Loss of some soil to mechanical damage and accelerated erosion.	1. Temporary decline in water quality and slight increase in yield associated with roads and cutting.	1. Potential watershed problem areas identified and protected. 2. Small degree of disturbance with proper care in logging. 3. Soils survey performed on watershed basis to identify resource values and mitigate problems associated with impacts, such as roads or logging.	1. Large and tributary streams remain undisturbed. 2. Soils or watershed data needed primarily in sale area. 3. Little accelerated erosion or loss of water quality.	1. Watershed and soils improvement and protection not necessary. 2. Natural factors, mass wasting, blowdown, fires, etc, causing accelerated erosion are not managed. 3. Cost of soils and watershed inventory defrayed.
TRANSPORTATION	1. Poor access except on main roads. 2. No additional trails system. 3. No public use of logging roads once put to bed or grown over.	1. Good accessibility, particularly on west side. 2. Cooperative road construction with timber sales.	1. Fair access. Transportation [illegible] balanced between dispersed area and public roads. 2. Cooperative road construction with timber sales.	1. Fair road access including only the West Admiralty Hwy. ferry access at 2 locations and some specific recreation roads. 2. Good dispersed area access by trails, boats and float planes. 3. Cooperative road construction with timber sales.	1. Poor access. Float plane and boat access in most salt water areas. 2. Ferry to Angoon; no roads outside of claims area.
RECREATION AND LAND USE	1. Recreation associated with main roads only. 2. Dispersed recreation in natural surroundings limited to alpine and non-commercial forest types.	1. [illegible] sites available for use. 2. [illegible] for recreation use satisfied (according to National Forest Recreation Survey).	1. Admiralty Lakes Area effectively enlarged to include Mitchell, Kootznahoo and [illegible] or [illegible] [illegible]. 2. Florence-Kathleen managed for higher quality recreation purposes. 3. Eliminate hunter cabin policy. 4. Land uses that meet public need permitted.	1. Most key recreation areas accessible by road. 2. Aircraft, boat, trail and cabin oriented recreation will be permitted. Hunting and fishing encouraged. 3. Large scale development discouraged.	1. No mass-type recreation use. 2. Some public recreation cabins. Special-use cabins and similar occupancy uses would be eliminated. 3. Highest quality natural experience available.
AESTHETIC AND WILDERNESS VALUES	1. Aesthetic conflicts common. 2. Logging areas frequently visible to saltwater travelers. 3. Pack Creek will be the only natural area. 4. Alpine areas remain largely [illegible] in character.	1. Some cutting would be visible at times on all parts of the island. 2. Pack Creek remains as [illegible] area. 3. [illegible] area remains wilderness in character. 4. [illegible] [illegible] [illegible] [illegible].	1. Landscape design and [illegible] precedes [illegible] impacts. 2. Visible cutting areas [illegible] only. 3. Pack Cr., Admiralty-Mitchell-[illegible], Florence-Kathleen and [illegible] Inlet [illegible]. 4. [illegible] wilderness.	1. Complete aesthetic protection in wild forests. 2. Landscape design associated with sale area or approved roads. 3. No designated wilderness.	1. No detractions from scenic values. 2. National wilderness interests would be satisfied. 3. Local and Alaskan conflict could be expected.

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