

BACKGROUND: ILIAMNA-NEWHALEN
SUBSISTENCE SALMON FISHERY

by
Steven R. Behnke

Technical Paper Number 44

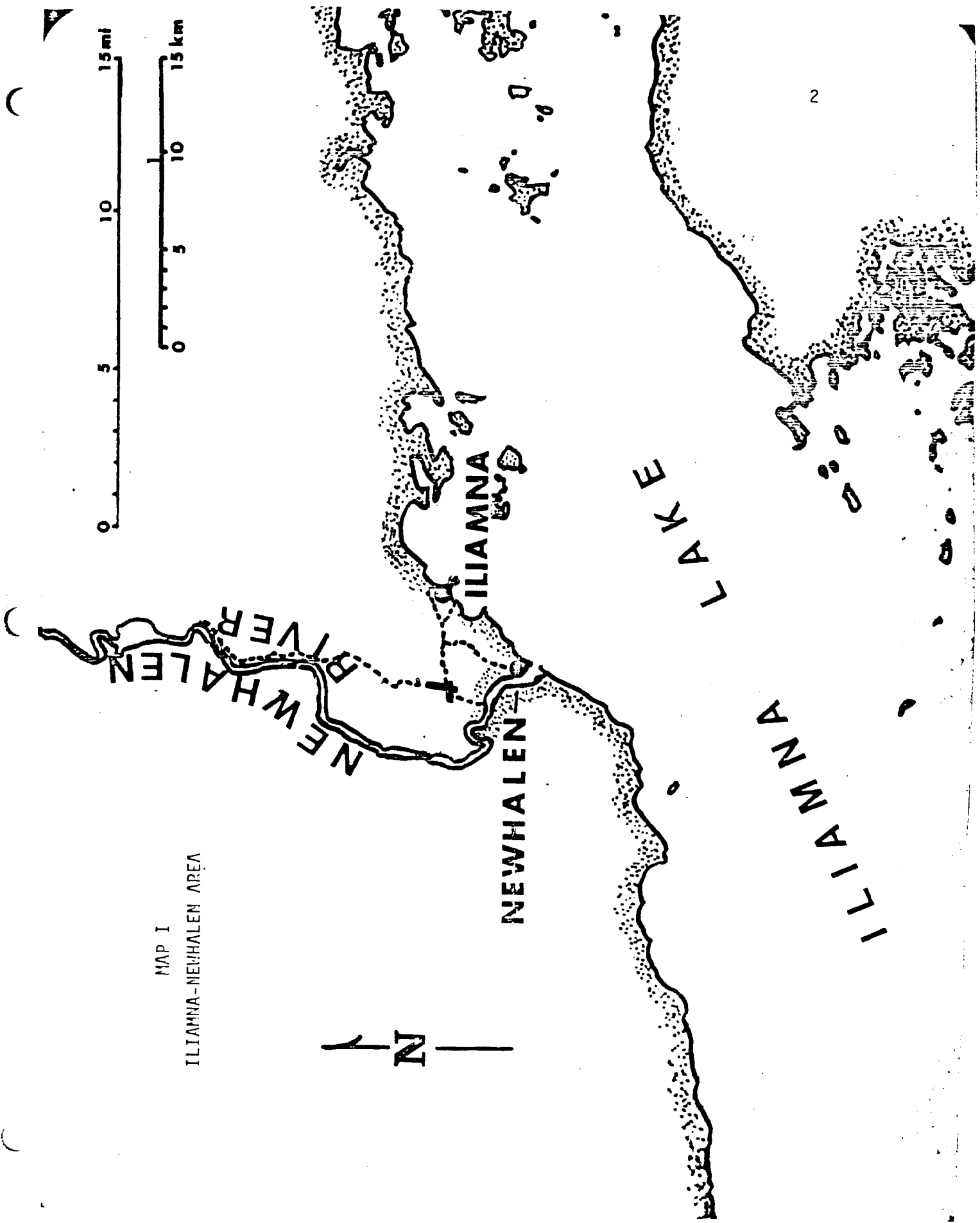
Alaska Department of Fish and Game
Division of Subsistence
Dillingham, Alaska
December 10, 1981

B A C K G R O U N D
ILIAMNA-NEWHALEN SUBSISTENCE SALMON FISHERY

INTRODUCTION

The Iliamna Area Advisory Committee submitted Proposal #43, which would restrict the issuance of subsistence salmon fishing permits in the Iliamna and Lake Clark drainages to persons domiciled in those areas. Concern about increasing numbers of non-local fishermen, and about lower-than-expected sockeye returns to the Iliamna area in summer, 1981, were among reasons cited for the proposal. Some local residents are concerned that increasing fishing pressure by non-local people will lead to greater restrictions in the subsistence salmon fishery in coming years, particularly if there are poor sockeye returns to the Kvichak and Newhalen systems.

This paper provides basic information about the socioeconomic and resource use characteristics of the communities of Iliamna and Newhalen (see Map I) which may be of use to the Board in addressing proposals dealing with subsistence salmon fisheries in the Iliamna area. It is a preliminary report, based on subsistence permit data and field visits to these communities between 1978 and 1981, but not on intensive research in the communities.



MAP I
ILIAMNA-NEUHAALEN AREA

THE COMMUNITIES

The villages of Newhalen and Iliamna are located on the north shore of lake Iliamna near the mouth of the Newhalen River. Newhalen, on the east bank of the mouth of the river, is a predominately Eskimo-Aleut community with a population of about 90. Its population has remained relatively stable over the past decade. Iliamna, located on a bay of Lake Iliamna three miles northeast of Newhalen, has grown over the last decade, from a population of about 60 in 1970 to over 90 in 1980. Iliamna began as a trading post and has a predominately white population, although there are also several Native families in the community.

Newhalen and Iliamna are connected by a gravel road, and share a school which is located in Newhalen. The U. S. Post Office for the area is in Iliamna. A gravel runway, extended in 1980 to accommodate commercial jet aircraft, is located between the two communities. Two air-taxi services operate from the area, providing transportation to other communities around Iliamna Lake and Lake Clark. Barges and fishing boats can be brought up the Kvichak River and across Lake Iliamna from Bristol Bay. Most fuel oil and gasoline reaches the Iliamna area by barge from Naknek.

THE ECONOMY

The Iliamna Lake region is relatively isolated compared to surrounding areas, since it can only be reached by air or by long barge hauls up the Kvichak River or across the portage from Cook Inlet. Transportation costs

to the Iliamna region are among the highest in Southcentral Alaska or Bristol Bay, playing a large role in the area's high cost of living.

The small, dispersed population of the Iliamna subregion has discouraged the development of local stores, also contributing to the high cost of goods in the area. Iliamna and Newhalen have access to only one small store located in Iliamna. Most residents of the communities order groceries from Anchorage, and have them shipped air freight or mailed.

Residents of Iliamna and Newhalen are highly dependent upon commercial salmon fishing in Bristol Bay for income. Members of almost every family travel to the Bay in June to participate in the fishery. In 1980, residents of the two communities owned approximately 18 Bristol Bay salmon drift permits and about 24 Bristol Bay set net permits (Langdon, 1981). Many people in the villages, particularly young people without limited entry permits, fish as crew members.

Fifty-seven percent of the Iliamna-Newhalen fishermen who responded to a 1980 survey (Langdon, 1981, Table 5) reported that more than 90% of their annual income is derived from commercial fishing. Eighty-five percent of the respondents indicated that more than 70% of their income comes from salmon fishing.

The average 1980 gross fishing income reported by the eight drift fishermen from Iliamna-Newhalen who responded to the survey was \$23,750, while for the seven set netters it was \$9,571 (Ibid, Table 17). According to local

residents, for most of the last decade average fishing incomes were much lower than in 1980, but in 1979 and in 1981 they were higher.

About five hunting and fishing lodges are located in Iliamna, and a number of others are located in the Iliamna Lake region. These provide employment for several local residents. Other jobs are available with air-taxis, the Federal Aviation Administration, Wien Air Alaska, the Lake and Peninsula School District, and the Alaska Department of Transportation.

Fire-fighting is another source of short-term employment during the summer. As many as twenty or thirty people from Iliamna and Newhalen may join fire-fighting crews and be flown by the Bureau of Land Management to fires throughout interior Alaska. Although an individual may earn several thousand dollars fighting fires, the availability of jobs varies considerably from year to year, depending on the severity of fires across the state.

The high degree of variability and unpredictability in families' incomes from year to year, lack of year-round jobs, and high living costs have made the use of local fish and wildlife of continuing importance to residents of Iliamna and Newhalen. The ancestors of Newhalen residents settled in the area because of the Newhalen River's rich sockeye resource, and salmon continue to be a major subsistence resource.

The people of both communities harvest a wide range of other wild resources. Some trapping takes place in the area around the villages, particularly for fox and beaver. Small game harvested includes ptarmigan, spruce grouse, snowshoe and Arctic hare, and porcupine. Moose and caribou are sought in

both the fall and winter seasons, and are relatively abundant in a thirty mile radius of the communities. Each year a few residents take black bear. A variety of freshwater fish species are taken under subsistence and sport fishing provisions, including pike, whitefish, lake trout, char, rainbow trout, and grayling.

USE OF SALMON

Residents of Newhalen and Iliamna focus their subsistence fishing efforts on the sockeye stocks of the Newhalen River. Almost every family in the area acquires salmon, either fishing for themselves or receiving fish from others. Most fishing occurs between the middle of June and the end of July, with peak catches occurring in the first week of July. Some families harvest most of their catch later in the summer because they have been fishing commercially in Bristol Bay during the peak of the run.

A few families harvest spawned-out salmon late in the fall in creeks or ponds accessible from the Newhalen River or Iliamna Lake. These fish are split and hung to air-dry, and are particularly valued by older people, who say they like the flavor and that the white flesh is easier to digest than salmon taken earlier in the run. This type of fish is commonly eaten with seal oil or bear fat. Some spawned-out fish are also taken for use as dog food. These fish may be hung whole to "freeze-dry" or they may be stacked on the beach to freeze, and later retrieved for use.

The primary method used by local residents to take salmon in Iliamna and Newhalen is the set gill-net. Newhalen residents set nets in the lagoon

near the mouth of the Newhalen River, while Iliamna residents generally use bays close to Iliamna and accessible by road.

Another traditional fishing method in the Newhalen River area is the use of a length of gill-net to drift or to beach seine for salmon. This method is highly efficient, since it allows people to take exactly as many fish as they can process. A large number of salmon can be harvested in a very short time. Local residents say that the method saves time and effort compared to operating a set net if they are trying to put up large numbers of fish. No information is available concerning the frequency of use of these methods.

Permit data indicate that typical subsistence sockeye harvests of Newhalen and Iliamna residents range from about 50 to 300 salmon. Larger families, or women who put up fish for more than their own household, tend to harvest in the range of 300 to 500 fish. Three or four families in Newhalen continue to put up large numbers of fish for dog food; they may take 1000 to 2500 salmon per family.

The total harvest of sockeye in the Newhalen-Iliamna area (see Table I) has fluctuated considerably, but with the exception of years of peak runs, has remained in the range of 10,000 to 16,000 fish each year over the past decade. In the peak year run of 1975, 26,000 fish were taken.

Iliamna and Newhalen residents use a range of methods to prepare and store salmon. Many families smoke-dry much of their "eating" fish, bundling the dried product and storing it in caches or sheds. Large numbers of salmon are salted in barrels and canning is another important preservation method.

T A B L E I

NEWHALEN-ILIAMNA AREA SUBSISTENCE SALMON HARVESTS

1963-1981

| <u>YEAR</u> | <u>NUMBER OF PERMITS ISSUED</u> | <u>NUMBER OF PERMITS RETURNED</u> | <u>NUMBER OF SALMON HARVESTED</u> 2/ |
|-------------------|-------------------------------------|---------------------------------------|--|
| 1963 | | | 10,000 |
| 1964 | | | 19,000 |
| 1965 | | | 9,700 |
| 1966 | | | 6,600 |
| 1967 | | | 9,100 |
| 1968 | | | 8,700 |
| 1969 | | | 4,900 |
| 1970 | | | 16,400 |
| 1971 | | | 8,500 |
| 1972 | | | 10,000 |
| 1973 | | | 10,100 |
| 1974 | 33 | 29 | 16,594 |
| 1975 | 35 | 22 | 26,662 |
| 1976 | 33 | 25 | 16,290 |
| 1977 | 38 | 30 | 11,422 |
| 1978 | 30 | 18 | 11,009 |
| 1979 | 60 | 46 | 15,846 |
| 1980 | 171 | 149 | 11,052 |
| 1981 ¹ | 154 | | 15,392 |

1 - Preliminary

2 - Based on ratio proportion expansions from returned permits

Only a small number of families in Newhalen have electrical generators or freezers, but people with these facilities freeze salmon for later use.

Salmon to be preserved for dog food are split, with the sides left connected by the tail, and then dried on racks outside or in large smokehouses. Even the backbones of the fish are preserved for dog food. They are tied together in pairs, and hung on large racks to dry. These "bone-racks," located next to the river, are a conspicuous feature in Newhalen.

As in most villages in the Iliamna area, middle-aged or older women and a few older men do much of the work involved in putting up salmon because younger members of the family are gone during the peak of the run. When people return from commercial fishing there is usually a flurry of effort to put up salmon for household use. Children help with fish preparation by carrying fish, hauling wood, and other chores.

Fresh fish are widely shared within the community when the fish are running, so that elderly people, or others who utilize only a small number of fish, often do not have to do any fishing on their own. Dried fish are also widely shared, and often one person supplies most of the dried fish used by several households. Dried fish is a staple food and is commonly offered to household visitors, along with tea or coffee.

TRENDS IN THE SUBSISTENCE FISHERY

Until 1979 an average of about 35 subsistence salmon permits were issued each year to Newhalen and Iliamna residents. In 1979 the number of permits

issued for the area jumped to 60; in 1980 it jumped again to 171 as Anchorage and other Southcentral Alaska residents learned that it was possible to fish under subsistence permits in the area. Most of this increase came from non-local people obtaining permits.

Iliamna's relative accessibility by jet or small plane, the proximity of the Newhalen River to the airfield, the area's renowned sport fishing opportunities, and publicity about huge salmon runs in Bristol Bay in 1979 and 1980 were apparently factors in the rapid increase in the number of non-local residents desiring to take salmon in this area.

For the first time, in 1980 the Alaska Department of Fish and Game issued subsistence salmon permits for Bristol Bay from the Anchorage office, which made it easier for non-locals to obtain the permits. In 1981, permits were again issued only from King Salmon for the Iliamna area. The number of subsistence permits issued for Newhalen and Iliamna dropped to 154 in 1981.

Other communities in the Lake Iliamna area saw similar increases in the number of permits issued in these years. The closure of the Naknek River to subsistence fishing by non-locals in 1981 may help account for increases in the number of permits issued in Levelock and Igiugig between 1980 and 1981.

Reference

Langdon, Steve 1981, "The 1980 Salmon Season and Bristol Bay Native Fisherman: Performance and Prospects." Bristol Bay Native Association, April 10, 1981.