ANGOON SUBSISTENCE COHO FISHERY:  
AN INTERIM REPORT

by

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Introduction

During the December 1979 Fisheries Board meeting, Gabriel George of Angoon presented testimony describing concerns that residents of Angoon have for fisheries resources and their management. Included in this testimony was a request for recognition of a coho salmon subsistence fishery in the Mitchell Bay area. Although the Board made no decisions concerning this subsistence fishery, Chairman Szabo directed Mr. George, Rupe Andrews and Dave Cantillon to work out a solution that would meet the needs of the Angoon residents and still protect the coho stocks.

The Angoon Advisory Committee has submitted regulatory proposals for Board of Fisheries consideration. These proposals include one addressing the subsistence coho fishery and another addressing the issuance of subsistence fishing permits. The following information is presented to the Board for use in evaluating these two proposals.

Methods

During the period from July 1 through November 11, the investigator focused attention on subsistence fishing activity by Angoon residents. Study goals were 1.) to determine the extent of the fishery, the participants, the uses of harvested fish, and the alternatives to subsistence fishing, 2.) to reconstruct the evolution of Board regulations and Department policies and 3.) to determine changes, if any, affected by these policies and regulations.
During the summer of 1980, two visits were made to Angoon. The first visit, in June, was primarily to establish contacts within the community and to meet with U.S. Forest Service personnel. The Forest Service is interviewing many Tlingit elders of Southeast Alaska with regard to sites, species, preparation of food products and seasonality. In the interest of consideration for the elders of Angoon, the Forest Service archaeologist and the resource specialist have been cooperating whenever possible. The second visit, August 7-15, was to talk with community residents about issues related to subsistence use. It is assumed that continued and systematic research will be required from this point forward.

Instead of a questionnaire, or a fixed set of questions, the investigator engaged in conversations about daily life and with the elderly about their youth. Much time was spent explaining the Board of Fisheries regulation-making process and how individuals can participate. Angoon residents perceive that local occurrence of healthy salmon and herring populations for over 600 years indicates that the people of Angoon know how to manage fish stocks. Because coho fishing is currently illegal, Angoon residents are hesitant to discuss the activity. The investigator spoke with certain members of one half to two-thirds of the estimated 112 households in Angoon.

There are many unknowns to the local Angoon subsistence coho fishery. The most significant unknown is the escapement level of coho stocks in the Mitchell Bay area as well as escapement fluctuations in response to fishing pressures elsewhere or to environmental factors. Other biological unknowns include identification of spawning areas and their capacity, nursery
areas and their capacity, and migration routes and timing for both juveniles and adults. (There has been no coded-wire tag project nor adult tagging project on these stocks.)

Human use unknowns include current harvest rate, amount of participation by local residents, amount of participation by non-local residents, and the amount of exchange use (gifts or trade) versus home use. This specific information is difficult to obtain, as the coho fishery activity is not permitted under current regulations, and most people are hesitant to talk about their participation or use of coho for fear of arrest and/or confiscation of property.

Regulatory History

United States Fish and Wildlife Service regulations for commercial fisheries in Alaska prior to statehood included provisions for personal use fisheries. At statehood, the phrase "personal use" apparently was discarded; instead, the State regulations included a "subsistence fishing" section in the commercial fisheries regulation booklet. After statehood, regulations required permits for subsistence salmon fishing. Permits could be issued for all species of salmon; however, many Commercial Fisheries Area Management offices discouraged the issuance of permits for coho and king salmon, and some offices reported not issuing permits for king salmon at all in some years.
The 1968 regulation book shows this Department practice was finally incorporated into regulation. From 1968 to 1970, permits in southeast Alaska were issued only for pinks, chums, and sockeye. In 1971, an amendment to this regulation was passed, which allowed coho to be harvested in the Chilkat River adjacent to Klukwan Reservation.

The current applicable regulations for this area follow:

1. permits are required for subsistence salmon fishing;
2. permits will not be issued for coho;
3. all gear except set gill net is legal;
4. the local Commercial Fisheries Division area management biologist has the authority to determine gear type and time of use for management and conservation purposes.

Socio-economic background

Historically, Angoon is a Tlingit community with a highly developed matrilineal social structure and an associated system of mutually shared resources. A system of barter is intrinsic to the Tlingit culture: not all persons were hunters, fishermen, and preparers of food. The food, clothing, shelter, and service needs of every person in the community were normally met through clan and familial responsibilities.

While studying the Angoon subsistence fishery, a literature search was conducted to determine historical levels of salmon use. According to population estimates and census figures since the late 1800's, Angoon population has fluctuated only slightly around the figure of 550 persons in recent
times. (Employment is approximately 20%, with a per capita income of about $6,000 per annum.) An early ethnohistorian, Ivan Petroff, reported in 1882 that fully one-half or more of the fish catch was dried before being consumed. Petroff estimated that each person ate between 3 and 4 thousand pounds of fresh fish per year. Petroff goes on to note that the southeast Alaskans ate fewer fish than any other coastal people in Alaska, due to the abundance of various game animals—particularly deer and mountain goat.

Contemporary Angoon has felt the influences of missionaries, educators, the commercial fishing industry, and other aspects of Western civilization. As a result, certain traditional methods of food preparation and gathering may be lost. Contemporary Angoon is still a Tlingit community, although Aleuts, Athabascans, Caucasians, and Eskimos have settled in Angoon. Many of these people have been formally adopted into Tlingit clans and are active in local civic activities; virtually everyone partakes of local fish and wildlife resources.

**Subsistence**

Angoon depends for a significant part of its food supply on a range of subsistence resources and activities. In addition to subsistence fishing, Angoon residents rely on the subsistence taking of deer and waterfowl. Deer are a significant component of the Angoon diet. Deer are smoked, frozen, dried, canned, or eaten immediately. Distribution patterns for deer meat are not as obvious as those for fish. There are a few hunters who provide for many persons and receive compensation through barter or cash reimbursement for fuel and ammunition expenses. Angoon residents
expressed concern about bag limits and seasons. A fear of recreational hunting pressure also was mentioned. Historical accounts by Tlingit and Angoon elders often mention the taking of waterfowl in November and December. Questions about the use of ducks and other waterfowl did not elicit much evidence of use. Historically, waterfowl that were used include grouse, mallards and "black" ducks (perhaps scaups and scoters).

Discussion

Subsistence fishing by people of Angoon is, for the most part, beyond current regulations set by the Boards and permit harvest for sockeyes and chums set by the Juneau area office of the Commercial Fisheries Division. Limits on numbers of fish taken may be adequate for families who supplement their diet with merchandise from the local store, but are inadequate for those not having the financial ability to purchase beef or other meats.

Subsistence fishing permits are issued to a household or to an individual. In Tlingit social structure, a household traditionally was not a husband and wife and their children, but rather, what Western culture often refers to as an "extended family", that is, a husband, wife and their children, the husband's parents and nephews, and his unmarried siblings. Elements of this social organization exist today; one Angoon man, for example, presently is responsible for as many as 22 persons under one roof.

At this writing, tabulated harvest data were unavailable for salmon stocks
other than coho. It is estimated that approximately five units of commercial purse seine gear and five to fifteen units of subsistence beach seine gear provide the bulk of fish products to Angoon residents, using a distribution system of bartering, sharing, and selling. The range of the subsistence coho harvest is variously estimated at between 500 and 3000 fish annually, depending on fluctuations in resource availability. In years of low returns to the commercial fishery, apparently few, if any, coho are retained for subsistence use. All commercial harvest is sold, leading to an increase in deer harvest effort. In years of high returns, fresh and dried fish often are traded, bartered or sold inside the community for less than the external market price, based primarily on lower local labor costs. The Angoon proposals appear to reflect a desire for legal recognition of this harvest, rather than a desire to increase the harvest or add more units of gear (already restricted due to space and cost considerations.)

For the people of Angoon, there are five general ways to obtain coho for home use

1. A person who has the means may fish commercially but not sell everything he catches, thus retaining a portion for personal use. This approach is available to less than 100 persons in Angoon.

2. It is possible to sport fish for coho. This method is unattractive to most people in Angoon; bag limits are perceived as too small to make the effort worthwhile. (There are, apparently, few sport fishing licenses held by Angoon residents.)
3. The third general means to obtain coho for personal use is to purchase the fish outright. This means is not attractive due to the commitment of limited amounts of cash to other basic necessities.

4. A fourth way to obtain coho is to barter for them. This option meets the needs for many Angoon residents, particularly the elderly and those who have no means to fish for themselves.

5. The fifth way to obtain coho is to subsistence fish for fall chums and hope some coho are caught incidentally.

Most Angoon families have only one boat, generally a small hand troll vessel. Most families do not appear to have the financial means to acquire a second vessel. Those boats not registered in the commercial troll fishery may participate in the sport fishery. Commercial and sport fishing regulations prohibit the use of troll registered vessels for sport fishing (except for authorized derbies.) However, the residents of Angoon do not appear to have much interest in becoming sport fishermen. The primary purpose of residents' fishing efforts is to collect enough fish to make the entire fishing and preparation process worthwhile.

Sport fishing activity in the area generally occurs at Salt Lake, an estuary known as Salt Lagoon or Hassleberg Lagoon. Community perceptions, regarding sport fishing as provided through conversations with Advisory Committee members, community elders, and members and employees of Kootznawoo Corporation, are:
a. Very few persons in Angoon sport fish for salmon.

b. The Salt Lake area is influenced by tidal action, making it possible to boat from Angoon to the base of a falls three miles inside Hassleberg Creek. Sport fishing activity and access to this area chartered is primarily via float plane, with the fly-sport fisherman locally perceived as "outsiders".

There are a number of regulatory and procedural impediments to subsistence fishing. Under current regulations, coho cannot be taken under a subsistence permit and sport regulations limit coho possession to twelve fish (i.e., two daily bag limits of six fish per day per person.) King salmon may not be taken under authority of a subsistence permit.

With regard to subsistence fishing permits, Angoon residents reported that current procedures make permits difficult to obtain. First, an applicant must have a form provided by Commercial Fisheries Division. This is negotiated either by mail or telephone request. This application form must be filled out and mailed to Juneau. In Juneau, the permit application is processed, and if approved, a permit valid for 30 days is mailed to the applicant. The permit application is vulnerable to three possible delays: mail, weather, and administrative processing. The mail system is noted for misrouting rural mail (with delivery delays as long as six weeks) or for losing it completely. The weather may cause delays in mail flight arrival (all mail to Angoon is currently by contract carriers). The work load of the Juneau Commercial Fisheries Division office sometimes prevents immediate processing of permit applications. Because of these problems and local misunderstanding in obtaining a permit, fishing activity is sometimes
conducted without a permit or with an expired permit.

Recommendations

It is suggested from the foregoing that there is a longstanding customary and traditional use of coho salmon in and around Mitchell Bay by Angoon residents for personal and family use as well as for barter. These uses have continued until the present time in contravention of existing regulations. The harvest size and gear type apparently have varied through the years, although the community's basic reliance on the resource has not changed. There are existing sport and commercial fisheries on these coho stocks, but subsistence fishing is not currently allowed.

In light of continued illegal use of subsistence nets targeting coho, and Angoon residents' perceptions about the sufficiency of sport and/or commercial methods, some regulatory change to provide for subsistence needs of the community may be appropriate. No departmental consensus has been reached for a Mitchell Bay/Salt Lake subsistence coho fishery management plan. In lieu of such a plan, seven options are suggested for consideration, individually, or combination:

Option 1. Establish a coho subsistence fishery to occur after the commercial coho fishery has been closed for the season.

Justification

A time restriction of this type reduces potential for coho caught under the authority of a subsistence
fishing permit entering commercial markets. This time restriction also reduces potential for a conflict between sport and subsistence fishermen over physical space in the Salt Lake. The sport fishing activity in the area generally occurs in August, with much less activity after Labor Day in September.

Further, interviews with subsistence fishermen in the Angoon area indicate a large portion of subsistence use coho are harvested from the mid to late segment of the return. **Option 2.** Allow subsistence fishing for coho but require that the heads of coho caught under authority of a subsistence fishing permit be removed from the fish when they are caught prior to closure of the commercial season.

**Justification**

Subsistence coho fishing would be permitted to occur during the commercial season, and would distinguish subsistence caught fish by their "heads off" condition.

**Option 3.** Restrict legal subsistence fishing gear to beach seine and gaff.

**Justification**
The traditional and current subsistence fishing gear for Salt Lake is beach seine and gaff. Restricting legal gear to these two types would favor more local use of the resource.

Option 4. Limit the number of coho taken for subsistence purposes to 500.

Justification

The annual unpermitted subsistence harvest is estimated to average 500 coho. Until escapement and spawning/rearing capacities of the area are determined, the annual subsistence harvest should be limited to current harvest levels. No evidence is presently available to suggest that such a limit does not account for traditional and customary levels (given the unknown quantity currently being retained from commercial catches).

Option 5. Limit the subsistence take of coho in Mitchell Bay to persons primarily domiciled in Angoon; issue subsistence fishing permits in Angoon for a five-day period prior to the opening of the subsistence coho fishery.

Justification

Distribution of permit applications by a local Angoon resident is desirable as is local assistance in completing and mailing
them. However, management authority would remain with the Department.

Option 6. Reduce coho harvest by sport and/or commercial fisheries.

Justification

The annual sport take of coho is estimated to be 150 fish. The present run of coho into this area is sufficient to provide for a subsistence harvest of 500 and a sport take of 150. No further restrictions on the sport fishery appear necessary at the present time. However, as the Admiralty Island National Monument increases in popularity and sport fishing effort also expands, restrictions on the sport and commercial fishies may be necessary in the future.

The Kootznoohoo coho stocks migrate through commercial troll and seine fisheries which occur off and inshore. The impact of the June-September troll fisheries may be considerable but cannot be known specifically without some type of tag and tag recovery program. Similarly the impact of seine fisheries on coho stocks cannot be measured without identification of individual stocks.

Option 7. Prohibit use of aircraft as a means of subsistence
fishing access in Mitchell Bay and Salt Lake.

Justification

Traditional and customary access to this fishery area has been by foot or boat/skiff. Eliminating aircraft access would more appropriately address traditional access means and methods.