

**ALASKA LEGISLATURE COMMITTEE FILES 1991-1992 8672**  
**7478 SENATE JUDICIARY**

Alaska with Alaska Natives, the term is to be interpreted more broadly in this case. A community or area need not be predominantly Native to be classified as subsistence dependent. A dictionary definition such as the following might be helpful: "The totality of socially transmitted behavior patterns, arts, beliefs, institutions, and all other products of human work and thought characteristic of a community or population." The American Heritage Dictionary, New College Edition, at 321. The term "way of life" is included to emphasize the broadness of culture and also to require ongoing subsistence hunting and fishing. Having hunting and fishing enshrined in the culture of a community will not be sufficient without an ongoing actual dependence on fish and game.

Dependence on subsistence must also be a principal characteristic of the economy of the community or area.

Proposed AS 16.05.268(h):

Subsection (h) establishes the significance of the identification of communities under subsecs. (f) and (g). It establishes presumptions in the law that direct and focus the management and enforcement efforts at those areas of highest concern.

A person who lives in a subsec. (f)(1) area is presumed to individually qualify for subsistence hunting and fishing for the subsistence use area in which the person lives; no application or signed statement need be submitted before subsistence hunting or fishing. The presumption is not conclusive and can be challenged by the state, but the person will be allowed to subsistence hunt and fish in the subsistence area in which they live unless and until the state demonstrates, by clear and convincing evidence, that the person is not qualified. Proof by clear and convincing evidence is a civil evidentiary standard commonly used by the courts, and is a higher standard than "preponderance of the evidence" but lower than the criminal standard of "beyond a reasonable doubt." It is expected that many, if not most, clearly unqualified persons living in a subsec. (f)(1) area will voluntarily refrain from subsistence hunting or fishing, especially as, in most areas of the state, there will be general, sport, and personal use hunts and fisheries available for nonsubsistence users. In those cases where clearly unqualified persons choose to subsistence hunt or fish, the state will be able legally to take steps to stop them.

A person living in a subsec. (f)(2) community who wishes to subsistence hunt or fish must first sign a statement, in a form to be supplied by the department, averring that the person meets the individual qualification standards of subsec. (i). Once a person signs such a statement, the person is rebuttably presumed to qualify to subsistence hunt and fish in the subsistence use area in which the person lives. This presumption can be rebutted by the

normal civil evidentiary standard of "proof by a preponderance of the evidence." It is anticipated that a work-sheet will be furnished so that the person can satisfy himself or herself that the person does, in fact, qualify. The person will be able to hunt or fish upon signing the statement. Just as in signing a hunting or fishing license, by signing the statement the person subjects himself or herself to prosecution for unsworn falsification if the statement of professed qualification is in fact false.

A person living in a subsec. (f)(3) area (a larger city or urban area, or a smaller community that does not have a demonstrated dependence on subsistence) must qualify to subsistence hunt and fish under an application procedure. The burden of proof rests upon the applicant. Such a person may not subsistence hunt or fish until the person is certified, by the commissioner of fish and game, to be qualified. The procedures, point system, and criteria for qualification are provided for in subsec. (i).

This system of differing presumptions amounts to an administrative scheme to focus the state's efforts to weed out unqualified users onto those areas where most of the unqualified reside. Based on the information collected by the Department of Fish and Game, use of the three sets of standards will result in identifying communities or areas with a large majority of residents that would individually qualify as subsistence users under subsec. (f)(1); communities with a majority of qualified subsistence users under subsec. (f)(2), and communities with a very a small minority of qualifying individuals under (f)(3). Statutory findings based upon this information are contained in sec. 1 of the bill.

It would be very burdensome for the state to implement a statewide application system. Under this statutory scheme, only residents of urban areas and nonsubsistence communities would be required to submit applications. Evidence collected by the Department of Fish and Game indicates that relatively few such people actually and substantially rely on subsistence hunting and fishing. Although there are more people living in urban areas than in rural areas in the state, it is improbable that a large percentage of urban residents will apply for qualification to subsistence hunt and fish, given past history. The department will have a "relatively" small number of applications to review and adjudicate. It is anticipated that most of the applications will be filed in urban centers, where department staff are concentrated.

On the other hand, if applications were required for those living in subsec. (f)(1) communities, a very large majority would undoubtedly apply, and a very large majority would undoubtedly qualify, according to the department's information. The department would have to review and adjudicate thousands of applications collected from all over the state, to little effect. The same would be true, to a lesser degree, in subsec. (f)(2) communities.

The signed statement requirement should deter many unqualified users in those communities.

The presumptions established in subsec. (h) are reasonable and have a strong factual basis. The presumptions will not exclude any person who qualifies as a subsistence user under subsec. (i) from participating in subsistence fishing or hunting.

Proposed AS 16.05.268(i):

This subsection sets out the criteria the Board of Fisheries and Board of Game are to use in jointly setting up a system for individual qualification. Although the language of this subsection is itself fairly specific, the boards will have to adopt regulations setting out procedures and establishing a weighted point system based on criteria set out in this subsection.

Because the Department of Fish and Game is charged with implementing the procedures and making the determinations of individual qualification, this subsection directs the commissioner of the Department of Fish and Game to make recommendations for the procedures to be adopted by the boards.

Under the procedures and point system, an individual's qualification to subsistence hunt and fish in a specific subsistence use area will be determined. The statute does not provide for qualification on a statewide basis; hunting and fishing in one subsistence use area will not qualify the user to subsistence hunt and fish in another area. While it may be technically possible for a person to qualify in more than one subsistence use area under this subsection, it is generally contemplated that the vast majority of users will qualify for only one area. The criteria are designed to protect use that has concentrated in one area.

After receiving the commissioner's recommendations, the boards jointly will adopt regulations that will assign weights to the points earned under the various criteria and will designate the total number of points required to qualify. It is expected that this threshold should be set at a number that will be likely to match the characteristics of a large majority of users living in areas identified under (f)(1), a majority of users living in communities identified under (f)(2), and a small minority of those living in communities identified under (f)(3).

The statute contemplates that a person living in a subsec. (f)(1) community who wishes to subsistence hunt or fish will apply for qualification, and the application will be evaluated by the Department of Fish and Game. It is anticipated that a person living in a subsec. (f)(2) community who wishes to subsistence hunt or fish will be provided a form to use to calculate the person's

qualifications before signing the statement required under subsec. (h) (2).

Most of the criteria focus on a person's activities in the preceding 12 months. The one-year period is a reasonable measure because all fishing and hunting seasons are covered, and it is a reasonable time period for gauging bona fide reliance, as opposed to temporary ventures. The effect of the mandatory minimums in subsec. (i) (1) - (4) is explained in the discussion on subsec. (j). Just meeting each of the minimums, however, will not give a person enough points to qualify unless points are earned in the other three categories. Alternatively, a person might qualify if he or she just meets the minimum in one or two categories, but substantially exceeds the minimums in the others. The categories in subsec. (i) (5) - (7) do not contain minimums; a person could still qualify if he or she earns zero points in one or more of these categories but has high numbers in the other categories. The maximums in subsec. (i) (5) and (6) are included to keep the criteria meaningful and to prevent abuse of any one particular criterion.

Under subsec. (i) (1), a person receives points for the pounds of fish and game eaten by the user in the preceding 12 months. The taking of that fish and game must have been noncommercial. Fish and game taken in a subsistence use area other than the area for which qualification is sought could be counted if the fish or game was received as a gift or bartered for, but not if it was purchased for money. Fish and game used for purposes other than personal consumption by the applicant would not be counted. The mandatory minimum of 125 pounds is a reasonable threshold for demonstrating actual and substantial reliance on fish and game.

The subsistence division of the Department of Fish and Game has done extensive research on pounds of consumption of various wild resources. The average yearly per capita consumption of meat, fish, and fowl in western states is 222 pounds. The average yearly per capita consumption of meat, fish, and fowl by subsistence-reliant users in Alaska in the past has been much higher, because alternate protein sources such as milk and dairy products are not as readily available, and subsistence users tend to consume fish and game for caloric value as well.

The 125-pound minimum was selected as a threshold that would not arbitrarily exclude subsistence-reliant users, but would provide a meaningful filter. Consumption, in both the western states figures and the division of subsistence research, is defined as pounds brought into the kitchen. Pounds of consumption should be measured similarly for the purposes of this statute.

Under subsec. (i) (2), a person receives points for the number of species from the subsistence use area for which qualification is sought that are consumed by the person. The taking of the fish and



game must have been noncommercial, and the fish and game may not have been purchased for money. Dependence on a wide variety of fish and game species indicates a higher reliance on wild fish and game to meet a wider spectrum of nutritional needs. The boards, by regulation, jointly will set the mandatory minimum number of species or groups of species that must be consumed, and may consider regional diversity of species in setting the minimum. To avoid situations where the number of species of an animal or fish is so high that this criterion would become meaningless, the boards are allowed to group some species together for the purposes of determining points under the criterion. For example, the boards may decide to group species in a manner such as the following:

- all species of upland birds,
- all species of water fowl,
- all species of fresh water fish,
- all species of salmon,
- all species of non-salmon salt water fish,
- all species of crab,
- all species of other marine invertebrates,
- all species of small game,
- each individual species of big game, furbearers, or marine mammals.

These are only possibilities; the boards are not required to make such groupings.

Under subsec. (i)(3), a person earns points for the days spent taking fish or game in the subsistence use area for which qualification is sought. Points are also earned for days spent processing that fish and game, although the processing, as opposed to taking, need not take place in the subsistence use area. It is not necessary that the person spend the entire day engaged in taking or processing for that day to count toward points, but at least part of the day must be spent in those activities. The mandatory minimum of 30 days engaged in taking or processing fish or game is a reasonable indicator of actual and substantial reliance on fish and game.

Under subsec. (i)(4), a person receives points for the number of months during which he or she hunts or fishes in the subsistence use area for which qualification is sought. This criterion is intended to reward use that occurs throughout the year, as opposed to use in only one or two forays. Year-round use ties in with a wide diversity of use and tends to reflect a higher degree of reliance on fish and game resources. The mandatory minimum of four months is considered a basic threshold and could be easily met by a person hunting or fishing only once in each season of the year. There is no requirement that the hunting, fishing, or processing occur in any specific month.

Under subsec. (i) (5), a person earns points for the number of weeks during which his or her work effort is principally directed toward hunting and fishing activity, rather than other work such as employment or other business activity. Work effort is to be distinguished from the value of income received during the week. It is not necessary that the market value of fish or game taken be higher than cash income received during the week; it is necessary that the user exert more effort on harvesting fish and game resources than on pursuing any other work effort.

Under subsec. (i) (6), a person scores points for the number of households with which he or she shares, or from which he or she receives, fish or game. The taking of the fish and game must have been noncommercial, and the fish and game may not have been purchased for money. This criterion recognizes that a person may well rely on the fish and game he or she takes to meet family and social obligations. The reliance of the person and those who receive the shared resources should be recognized and protected. The 10-household maximum is designed to prevent abuse of this criterion through minimal sharing with many households.

Under subsec. (i) (7), a person will score a set number of points if all of the fish and game taken by that person comes from the subsistence use area for which qualification is sought. This criterion indicates whether the person has a higher degree of reliance on fish and game in that area than does a person who relies on fish and game from other areas of the state as well.

Proposed AS 16.05.268 (i):

The criteria in subsecs. (i) (1) - (i) (4) set out mandatory minimums. Subsection (j) specifies that all of those minimums must be met in order for a person to meet the requirements for qualification to subsistence hunt and fish in a particular subsistence use area. Failure to meet any one of the minimums disqualifies the person, regardless of the number of points that might be earned in other categories. The minimums are considered to be so basic that anyone who does not meet them could not have the actual and substantial reliance on subsistence hunting and fishing protected by this proposed statute.

Proposed AS 16.05.268 (k):

Subsection (k) authorizes the boards to develop the procedures and any forms in such a way as to ensure that hunting and fishing activity used to satisfy the criteria of subsec. (i) was legal, noncommercial, and efficient and economical. This does not rule out a person's ability to count activity that involves airplane travel to reach the subsistence use area for which qualification is sought, or that involves use of specific types of gear such as rod

and reel for fishing, if the use is efficient and economical. It does mean that the boards may include questions on an application form which will exclude certain methods or means for certain species, because of the clear inefficiency. Questions may also exclude activity involving certain types of travel and equipment that clearly show reliance is not efficient or economical.

If hospitalization during the relevant time period has prevented a person from meeting the qualification requirements of subsec. (i), or if military service or full-term attendance at an educational institution outside the subsistence use area for which qualification is sought has made it impossible to meet the criteria, the person may rely on activity during the 12 months immediately preceding the hospitalization or absence.

Proposed AS 16.05.268(l):

The department's regulations are to provide for an expedited review procedure, most likely by way of an appeal to the commissioner for a decision within 30 days, for persons who have been denied qualification. If the commissioner affirms the original denial, the decision would be final for the department and the person could appeal to the superior court under the Alaska Rules of Appellate Procedure. This subsection contemplates that the person will be given a meaningful opportunity to present relevant evidence supporting qualification. It does not require an adjudication of individual qualification under the Administrative Procedure Act (AS 44.62), which applies only to Department of Fish and Game functions relating to the protection of fish habitat under AS 16.05.870. (See AS 44.62.330(a)(18)).

Proposed AS 16.05.268(m):

Subsection (l) provides that fish stocks and game populations that are not identified as subsistence stocks and populations under subsec. (a) may be harvested only under nonsubsistence regulations. This subsection would apply to all fish stocks and game populations in areas identified by the boards under subsec. (f)(3), as well as fish stocks and game populations in subsec. (f)(1) and (f)(2) areas which are not identified by the boards under subsec. (a) as subsistence stock and populations.

Proposed AS 16.05.268(n):

Subsection (n) is similar to existing AS 16.05.258(f), but it adds a reference to all the major regulatory tools available to the Board of Fisheries under AS 16.05.251 and to the Board of Game under AS 16.05.255. Existing AS 16.05.258(f) specifically lists only "seasons, catch or bag limits, and methods and means." The



language of proposed subsec. (n) clarifies that the boards may also use marking and identification requirements, quotas, harvest levels, and sex, age and size limitations in regulating subsistence. The reference to wanton waste statutes is identical to the existing statute.

Proposed AS 16.05.268(o):

Paragraph (1):

The lack of a definition of "reasonable opportunity" has been a continuing source of controversy in the administration of subsistence law under existing AS 16.05.258. The new definition in subsec. (o)(1), in connection with new AS 16.05.268(b), establishes the legal standard for the boards in adopting fish and game regulations to provide a preference for subsistence uses.

The Board of Fisheries and Board of Game are composed of individuals who are picked in part because they are particularly knowledgeable in matters relating to fish and game. When they make their decisions, they usually have the benefit of testimony and advice from the local and regional advisory boards, the Department of Fish and Game, and the public. This provision allows them to apply that knowledge to make good management decisions.

The standard of a "normally diligent participant" is used to clarify that the boards do not have to tailor hunts or fisheries to satisfy the requirements of inefficient users. This concept ties back to the terms of "efficiency and economy of effort, cost, and transportation" expressed in subsec. (k) and inherent in subsistence hunting and fishing. The hunting or fishing permitted by the board should provide a normally diligent hunter or fisher with a "reasonable expectation of success," but the language goes on to explain that there is no guarantee of taking fish or game, the conditions of the hunt or fishery, or taking all that the user wants or even needs. These qualifications may seem self-evident, but clarity is needed to avoid contrary court interpretations.

The boards are required to make findings when they make reasonable opportunity determinations. These findings need not be in writing, but should be evident on the record of the proceedings of each board. In making its findings, a board considers the factors listed in subsec. (o)(1)(B). These are the factors believed to be important in providing a reasonable opportunity. The criteria listed in subsec. (o)(1)(B)(iii) are not intended to require the boards to match any historic use. While it is expected that the boards will provide hunts and fisheries that correspond generally with customary and traditional seasons and harvest levels, as long as the season is long enough to provide a normally diligent hunter or fisher with a reasonable chance of success, it need not last the entire season of the year. For example, if data shows that hunts have historically occurred both in the fall and winter, with at least a few animals taken in every month, the board is not required

to keep the season open during all fall and winter months. A hunt of reasonable duration during the fall and another hunt of reasonable duration during the winter would generally be sufficient.

Competition from other subsistence and nonsubsistence users is listed as a factor in subsec. (o)(1)(B)(v). This provision is included to allow the board to create seasons separate from general or sport seasons if necessary to provide a reasonable opportunity for subsistence users. Competition for subsistence users might be a reason to lengthen a season or structure it in such a way as to spread the hunting or fishing effort out over time or place.

Paragraph (2):

This paragraph provides a definition of the term "preceding 12 months," which is used in the qualification criteria in subsec. (i).

Sections 3 and 4:

These sections set out the definitions of subsistence fishing and hunting. Both existing definitions are amended to delete "domiciled in a rural area of the state," consistent with the ruling by the Alaska Supreme Court in McDowell.

The use of the terms "qualified resident" and "in accordance with AS 16.05.268 and regulations adopted under that statute" are to clarify that subsistence taking is authorized only under state regulations. The subsistence statutes do not of themselves authorize any hunting or fishing. They authorize and guide the boards' actions in providing for subsistence hunts and fisheries. Hunting or fishing may occur only in accordance with those board regulations. This language reaffirms the intent of existing AS 16.05.259 and the holding in State v. Eluska, 724 P.2d 514 (Alaska 1986) that subsistence not be used as a defense to hunt contrary to regulations. This bill does not create individual rights to hunt or fish absent regulation. It is not intended that any of the provisions of this bill be used as a defense in a criminal prosecution for taking fish or game. A person who is dissatisfied with a board regulation should submit a proposal to the appropriate board, or may challenge the regulation under AS 44.62.300.

In 1986, the legislature extensively debated and rejected the idea of use of rod and reel as a means of subsistence fishing. Section 3 of the bill includes that distinction.

#### Section 5:

The existing definition of "subsistence" has been amended in this section in part to comply with the Alaska Supreme Court's ruling in McDowell deleting the rural criteria: "subsistence use area" has been substituted for "rural area." The terms "fish and game" have been substituted for "wild renewable resources" because this bill does not purport to allocate other renewable resources.

"Shelter," "fuel," and "tools" have been deleted because, while other wild renewable resources are used for such purposes, this legislation only regulates uses of wild fish and game.

The language has also been changed to clarify that, while sharing is unrestricted, barter and customary trade may be for only a portion of fish and game that has been harvested primarily for personal family consumption. This language, along with the statutory definition of "customary trade," is included to emphasize that customary trade and barter are not to be used to commercial fish or hunt under the guise of subsistence.

#### Section 6:

This section adds the following new definitions to existing AS 16.05.940:

Customary and traditional: The intent of this definition is that any stock or population that is presently used for subsistence be classified as such, but classification not occur just because there have been incidental or random takes for subsistence at some time in the past. Application of the factual information about stocks and populations to this statutory definition is to be a judgment call by the boards, relying on their experience and expertise.

For example, if there is a caribou herd whose migration pattern sometimes brings the animals within range of a village and people in the village harvest the animals every time the herd comes in range, that is a consistent and continuing pattern. Similarly, a temporary break in harvest caused by circumstances beyond the users' control (such as regulations temporarily prohibiting harvest to protect sustained yield) would not automatically disqualify the stock or population from classification for subsistence.

The boards have previously used the concept of multi-generational use in establishing which stocks and populations are subject to subsistence use. The standard dictionary definition of the length of one generation is 30 years.

Customary trade: Customary trade is noncommercial. It includes only sales for minimal amounts of money, as restricted by the boards. This definition should eliminate the possibility that commercial fishing or hunting could occur under the guise of

subsistence. No sales to commercial processors, wholesalers, or retailers are allowed at all, nor are sales that result in the fish or game being delivered to such enterprises. Sales of small amounts of game and fish to other subsistence users, neighbors, or other consumers may be allowed by the boards. This definition intentionally corrects the misinterpretation of this section by several federal district court criminal cases and the Ninth Circuit Court of Appeals decision in United States v. Alexander, 938 F.2d 942 (9th Circuit, 1991).

Customary trade is allowed only on a portion of subsistence harvest that has been taken primarily for personal or family consumption rather than sale. This is consistent with the definition of "subsistence" uses both in this bill and existing state law.

Trapping of furs and furbearers is recognized as unique under existing statutes and regulations. The terms of this definition do not purport to regulate the sale of furs or furbearers.

Sustained yield: No use of Alaska's wild fish and game, whether it be commercial, sport, personal use, or subsistence, may violate the principle of sustained yield. Article VIII, sec. 4, of Alaska's Constitution, requires that the state's replenishable resources be utilized, developed, and maintained on the sustained use principle, subject to preferences among beneficial uses. The constitutional convention purposely left the definition of sustained yield to the legislature.

In this definition, "utilization, development, and maintenance," and "beneficial uses" are from the constitution. "Self-perpetuating" is the essence of sustained yield. "Healthy" and "naturally occurring" are federal terms, included so the federal government cannot assert that "sustained yield" is a lower standard than the federal terms.

The constitutional convention was very clear that management to intentionally increase or decrease the size of a specific stock or population is part of sustained yield. The definition allows for such management. This definition is included to clarify that the boards have authority to regulate for growth of fish stocks and game populations and are not required to allow for maximum harvest as soon as a stock or population can be steadily maintained at minimal levels.

For example, only five animals might be available each year from a caribou herd without decreasing the overall size of the herd, but by restricting the harvest for several years the size of the herd and the allowable annual take could be substantially increased. Conversely, a caribou herd might have grown too large and be overgrazing its range. Based on the biologic advice of the Department of Fish and Game, the board could allow a harvest level

that would intentionally reduce the size of the herd while being consistent with the principle of sustained yield.

Section 7:  
(Repealers)

AS 16.05.258 is the existing state subsistence law, which this bill replaces. AS 16.05.940(26) contains the definition of "rural area" that was effectively invalidated by the McDowell decision.

Sections 8, 9, 11, and 12:

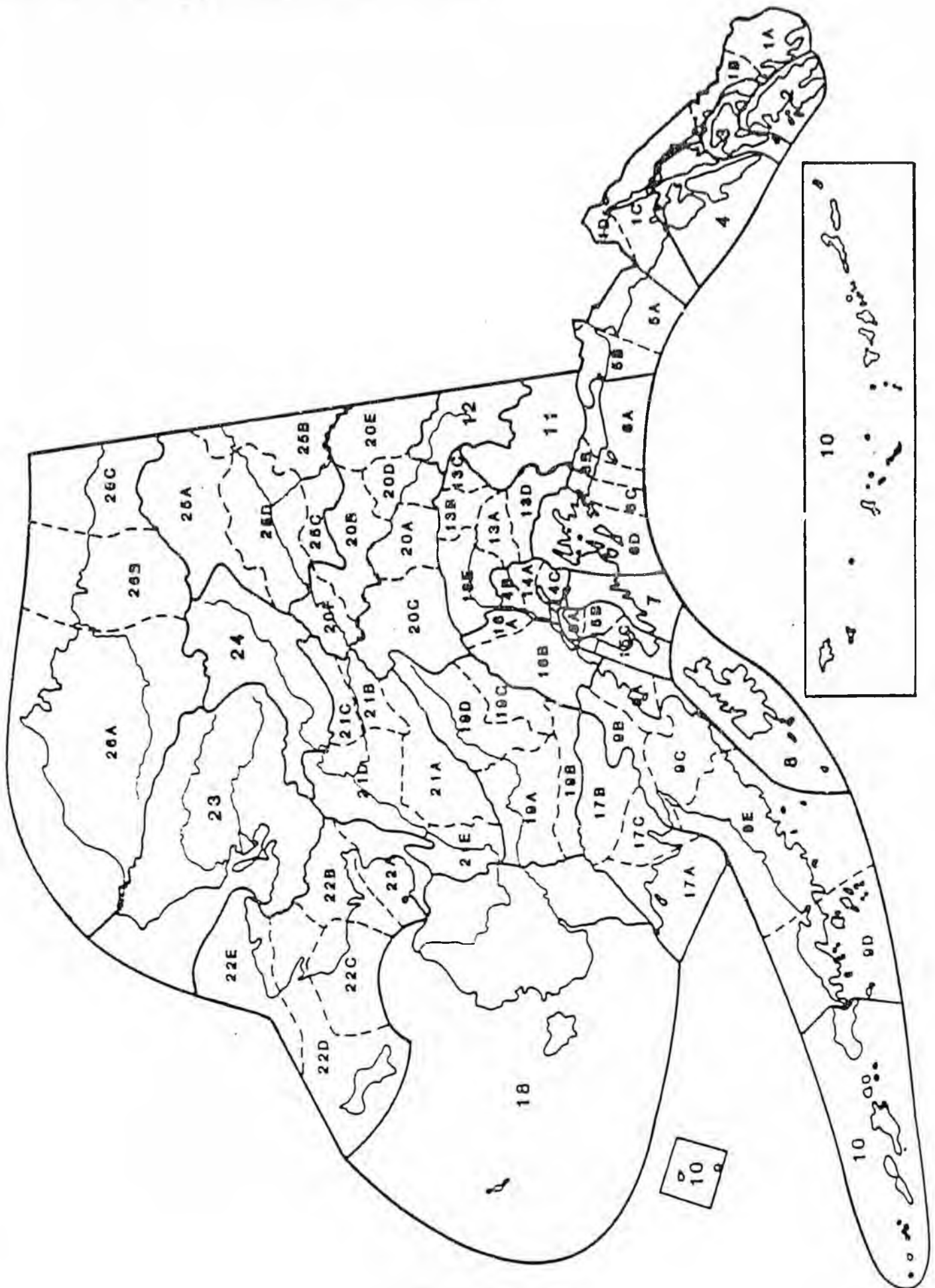
These four sections deal with the transition between the new subsistence law and the old law. These sections recognize that the boards cannot immediately implement the provisions of this bill. While it is required that all regulations the boards adopt after June 1, 1992 must be consistent with the new law, there are many existing hunts and fisheries that can still occur while the boards are reviewing and updating the regulations that govern those hunts and fisheries. Many existing determinations of the boards can be used by the boards and the department in the implementation of this bill. The boards now operate on cycles that cover all the species in every area of the state every two or three years.

Section 10:

This section provides for a formal review process of the new subsistence law.



GOVERNOR'S SUBSISTENCE BILL SECTIONAL ANALYSIS APPENDIX A  
GAME MANAGEMENT UNITS AND SUBUNITS



SECTIONAL ANALYSIS  
APPENDIX A "MAP"

## GOVERNOR'S SUBSISTENCE BILL SECTIONAL ANALYSIS APPENDIX B

### PRELIMINARY LISTING OF ALASKA COMMUNITIES GROUPED BY TYPE OF COMMUNITY IN THE GOVERNOR'S SUBSISTENCE BILL

February 1992

This report presents a preliminary listing of Alaska communities and areas grouped into the three types of communities and areas described in the Governor's subsistence bill. The report is designed to illustrate how this part of the bill might be implemented by the Boards of Fisheries and Game.

#### Three Types of Communities and Areas

The Governor's subsistence bill describes three types of communities and areas:

(e)(1) areas where the human population of each community is less than 2,500 and where dependence upon subsistence is a principal characteristic of the economy, culture, and way of life of the area, and that are not part of an urban area.

(e)(2) communities where the human population is 2,500 to 7,000 and where dependence upon subsistence is a principal characteristic of the economy, culture, and way of life of the community, and that are not part of an urban area.

(e)(3) communities or urban areas where the human population is 7,000 or greater or areas or communities where dependence upon subsistence is not a principal characteristic of the economy, culture, and way of life of the area or community.

The subsistence bill states that the Boards of Fisheries and Game "shall by regulation, jointly identify and delineate areas of the state, utilizing game management unit, portion of game management unit, or community", placing them into each of the three categories.

To place areas and communities into the three categories, the Boards of Fisheries and Game will consider information about population size and "the relative importance of subsistence compared to the totality of the following socio-economic characteristics of the area:

- (1) the social and economic structure;
- (2) the stability of the economy;
- (3) the extent of employment for wages and kinds of wage jobs including full-time, part-time, temporary and seasonal employment;
- (4) the amount and distribution of cash income among residents;
- (5) the cost and availability of goods and services to residents;
- (6) the variety of fish and wildlife species utilized by residents;
- (7) the seasonal cycle of economic activity;
- (8) the percentage of residents participating in hunting and fishing activities or using wild resources;

- (9) the harvest levels of fish and game by residents;
- (10) the cultural, social, and economic values associated with the taking and use of fish and game;
- (11) the geographic areas where residents hunt and fish;
- (12) the extent of sharing and exchange of fish and game by area residents;
- (13) additional similar factors the boards establish in regulation to be relevant to their determinations under this subsection."

While the exact end results of the Boards' future classifications under these procedures cannot be predicted, one can anticipate within some level of confidence which categories most Alaska communities will probably be placed by the Boards. This is because the Boards went through a similar procedure under the state's previous subsistence statute in 1986. At that time, they categorized communities and areas as to whether the use of wild resources was a principal characteristic of the economy of the community or area. Using the 1986 Board findings and making some assumptions with additional updated information, one can make an educated guess about a preliminary listing of communities within each group.

#### Assumptions for the Preliminary Listing

There are several assumptions that were followed to compile the following listing.

1. Group 1 communities are assumed to be those communities with 1990 populations less than 2,500 people, and in which the use of wild resources was a principal characteristic of the economy as determined by the Boards in 1986, with a few exceptions identified in Group 3 below.
2. Group 2 communities are assumed to be those communities with 1990 populations between 2,500 and 7,000 people, and in which the use of wild resources was a principal characteristic of the economy as determined by the Boards in 1986.
3. Group 3 communities are assumed to be communities or areas with 1990 populations greater than 7,000 people, or areas where wild resource use was not a principal characteristic of the economy as determined by the Boards in 1986. Some exceptions to the above are certain small places (logging camps, mining settlements, and military settlements) which the Boards may determine to be in Group 3, which the Boards classified as subsistence communities in 1986.

The 1990 federal census was used for population numbers. The populations of five areas were aggregated into single units for the purpose of the listing:

1. The road-connected area of the Kenai Peninsula (except that the Seward area was considered a separate entity).
2. The road-connected area of the Kodiak City area.
3. The Ketchikan Borough.
4. The road-connected area of the Matanuska-Susitna Borough.
5. The road-connected area of the Fairbanks North Star Borough.

## The Preliminary Listing

Based on the assumptions above, the preliminary listing of communities and areas are presented in Tables 1, 2, and 3. As can be seen, of 297 communities and areas, 257 are in Group 1, 7 are in Group 2, and 33 are in Group 3. Of 550,311 state residents in 1990, 66,798 (12.1 percent) are in Group 1, 23,292 (4.2 percent) are in Group 2, and 460,221 (83.6 percent) are in Group 3 (Table 4). Of the state's 85,964 Alaska Natives, 42,313 (49.2 percent) are in Group 1, 9,948 (11.6 percent) are in Group 2, and 33,703 (39.2 percent) are in Group 3 (Table 4). Of the state's 464,347 non-Native population, 24,485 (5.3 percent) are in Group 1, 13,344 (2.9 percent) are in Group 2, and 426,518 (91.9 percent) are in Group 3 (Table 4). A few comments can be made about each group.

There are 257 communities in Group 1 with a population of 66,798 people (12.1 percent of the state's population) (Table 1). Of this population, 42,313 (66.3 percent) were Alaska Natives and 24,485 people (36.7 percent) were non-Natives (Table 4). There are three communities in Group 1 whose populations are approaching Group 2: Dillingham (2,017), the Haines area (2,117), and Wrangell (2,479).

There are seven communities in Group 2: Cordova (2,579 people), Kotzebue (2,751), Unalaska (3,089), Petersburg (3,230), Barrow (3,469), Nome (3,500), and Bethel (4,674) (Table 2). These mid-sized places had a combined population of 23,292 people in 1990 (4.2 percent of the state's population). Of this population, 9,948 (42.7 percent) were Alaska Natives and 13,344 (47.3 percent) were non-Natives (Table 4).

About 460,221 people were in Group 3 communities and areas (83.6 percent of the state's population) (Tables 3 and 4). Areas with populations greater than 7,000 people include the Anchorage Borough (226,338 people), the Fairbanks North Star Borough (77,720), the Matanuska-Susitna area (39,415), the Kenai Peninsula area (36,651), the Juneau Borough (26,751), the Ketchikan area (13,828), the Kodiak City area (12,230), and Sitka (8,588). There are 21 communities with populations less than 2,500 which were tentatively placed in Group 3 because it was thought that the Board might not consider subsistence to be a principal component of the economy, culture, and way of life. These places primarily are logging camps, mining settlements, and military settlements (Table 3). Of the Group 3 population, 33,703 (7.3 percent) are Alaska Natives and 426,518 (92.7 percent) are non-Natives (Table 4).

**TABLE 1**  
**PRELIMINARY LISTING OF COMMUNITIES AND AREAS IN GROUP 1**  
**(< 2,500 PEOPLE AND WHERE DEPENDENCE UPON SUBSISTENCE**  
**IS A PRINCIPAL CHARACTERISTIC OF THE ECONOMY, CULTURE,**  
**AND WAY OF LIFE, AND NOT PART OF AN URBAN AREA)**

Place Name	1990 Population	Percent Native	Region	Old Rural Status
Balance of Bristol Bay Census Area	3	100.00	Southwest	Rural
Portage Creek	5	60.00	Southwest	Rural
Solomon	6	100.00	Arctic	Rural
Ugashik	7	85.70	Southwest	Rural
Council	8	82.50	Arctic	Rural
Balance of Lower Kuskokwim Census	10	40.00	Western	Rural
Telida	11	90.90	Interior	Rural
Balance of Barrow-Point Hope Census	13	7.70	Arctic	Rural
Balance of Wade Hampton Census Sub	17	70.60	Western	Rural
Balance of Angoon Census Sub-Area	19	0.00	Southeast	Rural
Balance of Outer Katchikan Census Su	21	9.50	Southeast	Rural
Gakona	25	0.00	Southcentral	Rural
McCarthy	25	4.00	Southcentral	Rural
Port Clarence	26	0.00	Arctic	Rural
Paxson	30	0.00	Southcentral	Rural
Paxson-Sourdough	30	0.00	Southcentral	Rural
Alatna	31	93.60	Interior	Rural
Balance of Lake and Peninsula Borough	31	16.10	Southwest	Rural
Lake Minchumina	32	18.80	Interior	Rural
Balance of Dillingham Census Area	32	31.25	Southwest	Rural
Igiugig	33	78.80	Southwest	Rural
Evansville	33	57.60	Interior	Rural
Wiseman	33	15.20	Interior	Rural
Fagle Village	35	80.00	Interior	Rural
Nikolski	35	82.85	Southwest	Rural
Ivanof Bay	35	94.30	Southwest	Rural
Bottles	36	22.20	Interior	Rural
Moyers Chuck	37	10.80	Southeast	Rural
Mendaltne	37	5.40	Southcentral	Rural
Takotna	38	44.70	Interior	Rural
Chase	38	0.00	Southcentral	Rural
Tomsina	38	18.40	Southcentral	Rural
Point Baker	39	0.00	Southeast	Rural
Birch Creek	42	90.50	Interior	Rural
Pedro Bay	42	90.50	Southwest	Rural
Lime Village	42	95.24	Western	Rural
Annette	43	16.30	Southeast	Rural
Healy Lake	47	85.10	Interior	Rural
Chitina	49	46.90	Southcentral	Rural
Stony River	51	88.24	Western	Rural
Central	52	1.90	Interior	Rural
Red Devil	53	50.94	Western	Rural
Chignik Lagoon	53	56.60	Southwest	Rural
Pilot Point	53	84.90	Southwest	Rural
Hughes	54	92.60	Interior	Rural
Kasaan	54	53.70	Southeast	Rural
Port Alsworth	55	1.80	Southwest	Rural
Balance of McGrath-Holy Cross Census	56	10.70	Interior	Rural
Ferry	56	12.50	Interior	Rural
Ellin Cove	57	1.80	Southeast	Rural
Oscarville	57	91.22	Western	Rural
Clark's Point	60	88.30	Southwest	Rural
Chistochina	60	51.70	Southcentral	Rural
Game Creek Census Designated Place	61	0.00	Southeast	Rural
Port Protection	62	1.60	Southeast	Rural
Siana	63	6.40	Southcentral	Rural
Platinum	64	92.18	Western	Rural
Twin Hills	66	92.40	Southwest	Rural



TABLE 1  
 PRELIMINARY LISTING OF COMMUNITIES AND AREAS IN GROUP 1  
 (<2,500 PEOPLE AND WHERE DEPENDENCE UPON SUBSISTENCE  
 IS A PRINCIPAL CHARACTERISTIC OF THE ECONOMY, CULTURE,  
 AND WAY OF LIFE, AND NOT PART OF AN URBAN AREA)

Place Name	1990 Population	Percent Native	Region	Old Rural Status
False Pass	68	76.47	Southwest	Rural
Rampart	68	94.10	Interior	Rural
Kobuk	69	89.90	Arctic	Rural
Chiniak	69	5.80	Southwest	Rural
Battles/Evanville	69	39.10	Interior	Rural
Dot Lake	70	54.29	Interior	Rural
Balance of Aniak Census Sub-Area	71	63.38	Western	Rural
Karluk	71	91.50	Southwest	Rural
Circle	73	86.30	Interior	Rural
Whale Pass	75	2.70	Southeast	Rural
Ekwok	77	87.00	Southwest	Rural
Akhiok	77	93.50	Southwest	Rural
Anvik	82	91.50	Interior	Rural
Nelson Lagoon	83	80.72	Southwest	Rural
Skwentna	85	1.20	Southcentral	Rural
Edna Bay	86	0.00	Southeast	Rural
Balance of Prince William Sound Censu	86	0.00	Southcentral	Rural
Tatlin	87	95.40	Interior	Rural
Balance of Wrangell Census Sub-Area	87	11.50	Southeast	Rural
Northway Junction	88	70.50	Interior	Rural
Chalkyitsik	90	92.20	Interior	Rural
Balance of Yukon Flats Census Sub-Ar	91	38.50	Interior	Rural
Balance of Nome Census Area	92	46.74	Arctic	Rural
Iliamna	94	65.90	Southwest	Rural
Chenega Bay	94	69.20	Southcentral	Rural
Tenakee Springs	94	9.60	Southeast	Rural
Arctic Village	96	93.80	Interior	Rural
Mentasta Lake	96	72.90	Southcentral	Rural
Manly Hot Springs	96	14.60	Interior	Rural
Chuathbaluk	97	89.69	Western	Rural
Atka	98	92.85	Southwest	Rural
Hyder	99	1.00	Southeast	Rural
Lignite	99	0.00	Interior	Rural
Stevens Village	102	91.20	Interior	Rural
Beaver	103	95.20	Interior	Rural
Gulkana	103	59.20	Southcentral	Rural
Levelock	105	82.90	Southwest	Rural
Sleetmute	106	86.79	Western	Rural
Crooked Creek	106	90.56	Western	Rural
Tanacross	106	94.30	Interior	Rural
Dry Creek	106	0.00	Interior	Rural
Perryville	108	94.40	Southwest	Rural
Nikolai	109	88.90	Interior	Rural
Sheldon Point	109	92.70	Western	Rural
Hollis	111	2.70	Southeast	Rural
Northway Village	113	94.70	Interior	Rural
Port Alexander	119	2.50	Southeast	Rural
Port Heiden	119	72.30	Southwest	Rural
Tatitlek	119	86.60	Southcentral	Rural
Balance of Northwest Arctic Borough	122	67.20	Arctic	Rural
Egegik	122	70.50	Southwest	Rural
Northway	123	64.20	Interior	Rural
Koyukuk	126	97.60	Interior	Rural
Golovin	127	92.90	Arctic	Rural
Klukwan	129	86.80	Southeast	Rural
Chignik Lake	133	91.80	Southwest	Rural
Pitka's Point	135	95.80	Western	Rural
South Naknek	136	79.40	Southwest	Rural

TABLE 1  
 PRELIMINARY LISTING OF COMMUNITIES AND AREAS IN GROUP 1  
 (<2,500 PEOPLE AND WHERE DEPENDENCE UPON SUBSISTENCE  
 IS A PRINCIPAL CHARACTERISTIC OF THE ECONOMY, CULTURE,  
 AND WAY OF LIFE, AND NOT PART OF AN URBAN AREA)

Place Name	1990 Population	Percent Native	Region	Old Rural Status
Allakaket	138	94.30	Interior	Rural
Saint George	138	94.92	Southwest	Rural
Point Lay	139	81.30	Arctic	Rural
Shageluk	139	94.90	Interior	Rural
Chickaloon	145	6.20	Southcentral	Rural
Larsen Bay	147	84.40	Southwest	Rural
Cantwall	147	22.50	Interior	Rural
Cold Bay	148	5.40	Southwest	Rural
Kokhanok	152	90.10	Southwest	Rural
Nightmute	153	95.42	Western	Rural
Tyonak	154	92.20	Southcentral	Rural
Deering	157	94.30	Arctic	Rural
English Bay	158	91.10	Southcentral	Rural
Nowhalen	160	94.40	Southwest	Rural
Wales	161	88.90	Arctic	Rural
Coperville	163	26.40	Southcentral	Rural
Port Graham	166	90.40	Southcentral	Rural
Eagle	168	3.00	Interior	Rural
Ruby	170	74.10	Interior	Rural
Allakaket/Alatna	170	94.10	Interior	Rural
McKinley Park Village	171	2.90	Interior	Rural
Upper Kalskag	172	84.88	Western	Rural
Mekoryuk	177	99.44	Western	Rural
Nondalton	178	89.30	Southwest	Rural
Diomedea	178	93.80	Arctic	Rural
Shaktolik	178	94.40	Arctic	Rural
White Mountain	180	87.80	Arctic	Rural
Koliganek	181	96.10	Southwest	Rural
Venetie	182	93.90	Interior	Rural
Alaknagik	185	83.20	Southwest	Rural
Coffman Cove	186	6.90	Southeast	Rural
Chignik Bay	188	45.20	Southwest	Rural
Brevig Mission	198	92.40	Arctic	Rural
Huslia	207	90.80	Interior	Rural
Newtok	207	93.24	Western	Rural
Grayling	208	93.30	Interior	Rural
Ouzinkie	209	85.20	Southwest	Rural
Atkasuk	216	93.10	Arctic	Rural
Minta	218	97.30	Interior	Rural
Port Lions	222	67.60	Southwest	Rural
Pelican	222	29.30	Southeast	Rural
Shungnak	223	94.60	Arctic	Rural
Kaktovik	224	84.40	Arctic	Rural
Balance of Petersburg Census Sub-Area	225	0.00	Southeast	Rural
Teller	230	91.30	Arctic	Rural
Koyuk	231	94.80	Arctic	Rural
Kaltag	240	92.50	Interior	Rural
Goodnews Bay	241	95.85	Western	Rural
Russian Mission	246	94.70	Western	Rural
Balance of Aleutians East Borough	247	91.09	Southwest	Rural
Tazlina	247	23.10	Southcentral	Rural
Eek	254	95.67	Western	Rural
Atmautluak	258	96.89	Western	Rural
Gustavus	258	3.90	Southeast	Rural
Anaktuvuk Pass	259	84.90	Arctic	Rural
Elim	264	91.70	Arctic	Rural
Marshall (Fortuna Lodge)	273	92.70	Western	Rural
Holy Cross	277	93.50	Interior	Rural

TABLE 1  
 PRELIMINARY LISTING OF COMMUNITIES AND AREAS IN GROUP 1  
 (<2,500 PEOPLE AND WHERE DEPENDENCE UPON SUBSISTENCE  
 IS A PRINCIPAL CHARACTERISTIC OF THE ECONOMY, CULTURE,  
 AND WAY OF LIFE, AND NOT PART OF AN URBAN AREA)

Place Name	1990 Population	Percent Native	Region	Old Rural Status
Kwigillingok	278	94.96	Western	Rural
Old Harbor	284	88.70	Southwest	Rural
Akiak	285	97.19	Western	Rural
Lower Kalskag	291	98.28	Western	Rural
Kongiganak	294	97.28	Western	Rural
Saint Michael	295	91.20	Arctic	Rural
Tuntutuliak	300	96.66	Western	Rural
Ambler	311	89.70	Arctic	Rural
Balance of Hoonah-Yakutat Census Su	311	15.40	Southeast	Rural
Tununak	316	96.20	Western	Rural
Seldovia	316	15.20	Southcentral	Rural
Kivalina	317	97.50	Arctic	Rural
Napakiak	318	94.34	Western	Rural
Buckland	318	94.90	Arctic	Rural
Chefornak	320	97.50	Western	Rural
Nepaskieik	328	94.82	Western	Rural
Noatak	333	96.70	Arctic	Rural
Scammon Bay	343	96.50	Western	Rural
Tanana	345	78.30	Interior	Rural
Nuiqsut	354	92.70	Arctic	Rural
Tuluksak	358	95.53	Western	Rural
Nulato	359	96.90	Interior	Rural
Nunapitchuk	378	97.09	Western	Rural
Hydaburg	384	89.10	Southeast	Rural
Kiana	385	93.50	Arctic	Rural
Manokotak	385	95.60	Southwest	Rural
New Stuyahok	391	95.90	Southwest	Rural
Nenuna	393	47.80	Interior	Rural
Stebbins	400	94.80	Arctic	Rural
Toksook Bay	420	95.48	Western	Rural
Kenny Lake	423	9.70	Southcentral	Rural
Kasigluk	425	95.29	Western	Rural
Saint Marys (Andreatsky)	441	82.90	Western	Rural
Balance of Prince of Wales Census Sub	442	7.00	Southeast	Rural
Copper Center	449	34.50	Southcentral	Rural
Glennallen	451	5.70	Southcentral	Rural
King Cove	451	39.25	Southwest	Rural
Shishmaref	456	94.50	Arctic	Rural
Kotlik	461	96.90	Western	Rural
Pilot Station	463	95.00	Western	Rural
Kipnuk	470	97.45	Western	Rural
Akiacnak	483	95.03	Western	Rural
Healy	487	1.40	Interior	Rural
Wainwright	492	94.30	Arctic	Rural
Quinhagak	501	93.31	Western	Rural
Balance of Copper River Census Sub-A	504	0.90	Southcentral	Rural
Savoonga	519	95.20	Arctic	Rural
Gambell	525	96.70	Arctic	Rural
McGrath	528	46.90	Interior	Rural
Noorvik	531	93.80	Arctic	Rural
Yakutat	534	55.10	Southeast	Rural
Aniak	540	70.74	Western	Rural
Alakanuk	544	95.80	Western	Rural
Kwethluk	558	96.42	Western	Rural
Thorne Bay	569	1.20	Southeast	Rural
Naknek	575	41.00	Southwest	Rural
Fort Yukon	580	85.00	Interior	Rural
Balance of Koyukuk-Middle Yukon Cen	589	11.60	Interior	Rural

TABLE 1  
 PRELIMINARY LISTING OF COMMUNITIES AND AREAS IN GROUP 1  
 (<2,500 PEOPLE AND WHERE DEPENDENCE UPON SUBSISTENCE  
 IS A PRINCIPAL CHARACTERISTIC OF THE ECONOMY, CULTURE,  
 AND WAY OF LIFE, AND NOT PART OF AN URBAN AREA)

Place Name	1990 Population	Percent Native	Region	Old Rural Status
Akutan	589	13.58	Southwest	Rural
Selawik	596	95.50	Arctic	Rural
Chevak	598	92.90	Western	Rural
Togiak	613	87.30	Southwest	Rural
Anderson	628	3.70	Interior	Rural
Angoon	638	82.30	Southeast	Rural
Point Hope	639	91.90	Arctic	Rural
Emmonak	642	92.10	Western	Rural
Mountain Village	674	91.10	Western	Rural
Skagway	692	5.50	Southeast	Rural
King Salmon	696	15.50	Southwest	Rural
Kake	700	73.40	Southeast	Rural
Unalakleet	714	81.80	Arctic	Rural
Klawock	722	54.30	Southeast	Rural
Saint Paul	763	66.05	Southwest	Rural
Hoonah	795	67.20	Southeast	Rural
Galena	833	4.50	Interior	Rural
Hooper Bay	845	95.90	Western	Rural
Sand Point	878	49.31	Southwest	Rural
Tok	935	12.50	Interior	Rural
Craig	1260	22.90	Southeast	Rural
Metlakatla	1426	82.90	Southeast	Rural
Dillingham	2017	55.80	Southwest	Rural
Haines Area	2117	13.2	Southeast	Rural
Wrangell	2479	20.00	Southeast	Rural

**TABLE 2  
 PRELIMINARY LISTING OF COMMUNITIES AND AREAS IN GROUP 2  
 (2,500-7,000 PEOPLE AND WHERE DEPENDENCE UPON SUBSISTENCE  
 IS A PRINCIPAL CHARACTERISTIC OF THE ECONOMY, CULTURE,  
 AND WAY OF LIFE, AND NOT PART OF AN URBAN AREA)**

Place Name	1990 Population	Percent Native	Region	Old Rural Status
Cordova Area	2579	10.52	Southcentral	Rural
Kotzeb	2751	75.10	Arctic	Rural
Unalaska	3089	8.38	Southwest	Rural
Petersburg	3230	10.10	Southeast	Rural
Barrow	3489	63.90	Arctic	Rural
Nome	3500	52.10	Arctic	Rural
Bethel	4674	63.89	Western	Rural



TABLE 3  
 PRELIMINARY LISTING OF COMMUNITIES AND AREAS IN GROUP 3  
 (> 7,000 PEOPLE OR WHERE DEPENDENCE UPON SUBSISTENCE  
 IS NOT A PRINCIPAL CHARACTERISTIC OF THE ECONOMY,  
 CULTURE, AND WAY OF LIFE)

Place Name	1990 Population	Percent Native	Region	Old Rural Status
Amchitka	25	8.00	Southwest	Rural
Deadhorse	28	11.50	Arctic	Rural
Alcan	27	0.00	Interior	Rural
Circle Hot Springs Station	29	0.00	Interior	Rural
Port Alice	30	6.70	Southeast	Rural
Balance of Aleutians West Census Area	33	20.00	Southwest	Rural
Prudhoe Bay	47	8.50	Arctic	Urban
Dora Bay	57	3.50	Southeast	Rural
Freshwater Bay	68	10.30	Southeast	Rural
Saint John's Harbor	69	1.50	Southeast	Rural
Naukatli Bay	93	1.10	Southeast	Rural
Balance of Prudhoe Bay-Kaktovik Cens	101	8.90	Arctic	Rural
Rowan Bay	133	6.80	Southeast	Rural
Polk Inlet	135	13.30	Southeast	Rural
LaBouchere Bay	149	1.30	Southeast	Rural
Cuba Cove	156	5.80	Southeast	Rural
Whitestone Logging Camp	164	3.70	Southeast	Rural
Hobart Bay	187	6.40	Southeast	Rural
Long Island	198	4.50	Southeast	Rural
Whittier	243	12.40	Southcentral	Urban
Shemya Station Census Designated Pla	664	0.45	Southwest	Rural
Seward Area	3357	13.89	Southcentral	Urban
Delta Area	4008	2.79	Interior	Urban
Valdez	4068	5.90	Southcentral	Urban
Adak Station	4633	1.20	Southwest	Rural
Sitka	8588	20.90	Southeast	Rural
Kodiak City Area	12230	10.45	Southwest	Rural
Ketchikan Area	13878	13.73	Southeast	Urban
Juneau	26751	12.90	Southeast	Urban
Kenai Peninsula Area	36651	7.35	Southcentral	Urban
Matsu Area	39415	4.91	Southcentral	Urban
Fairbanks North Star Borough	77720	6.80	Interior	Urban
Anchorage	226338	6.44	Southcentral	Urban

TABLE 4  
 CULTURAL DIVERSITY OF POPULATION  
 BY TYPE OF COMMUNITY  
 BASED ON PRELIMINARY LISTING

	NON-NATIVES		ALASKA NATIVES		STATE TOTALS	
GROUP 1	24485	5.3%	42313	49.2%	66798	12.1%
GROUP 2	13344	2.9%	9948	11.6%	23292	4.2%
GROUP 3	426518	91.9%	33703	39.2%	460221	83.6%
STATE TOTAL	464347	100.0%	85964	100.0%	550311	100.0%

GOVERNOR'S SUBSISTENCE BILL SECTIONAL ANALYSIS APPENDIX C  
The following illustrates an example of an application for a subsistence permit for applicants from Type 2 communities.

STATE OF ALASKA  
SUBSISTENCE HARVEST PERMIT APPLICATION CERTIFICATION  
FOR APPLICANTS FROM TYPE 2 COMMUNITIES

I certify that I am a qualified subsistence user. My pattern of taking and use of wild fish and game in a subsistence use area during the last 12 months meets enough of the criteria established in statute and regulation so that my score on the state subsistence application would exceed the qualifying point level and each of the mandatory minimums, including the following criteria:

(A) Personal consumption of a substantial quantity of wild fish and game during the past twelve months, with a mandatory minimum of 125 lbs;

(B) Use of a wide diversity of species and groups of species of fish and game in the past twelve months, with a mandatory minimum of 6 species or groups of species;

(C) Expenditure of a substantial number of days during the last twelve months engaged in taking fish or game in a subsistence use area or processing that fish and game, with a mandatory minimum of 30 days;

(D) Taking fish and game in a subsistence use area in a number of different months, with a mandatory minimum of 4 months;

(E) Expenditure of weeks in the last twelve months during which the taking or processing fish or game was the applicant's principal work effort, with no minimum required to a maximum of 26 weeks (optional criterion);

(F) Sharing or receiving fish and game in the past twelve months with a number of households other than the applicant's, with no minimum required to a maximum of ten households (optional criterion);

(G) Taking fish and game solely in the subsistence use area (optional criterion).

My taking and processing of fish and game described above was legal, noncommercial, and characterized by efficiency and economy of effort, cost, and transportation.

CERTIFICATION

Signature of Applicant \_\_\_\_\_

Signature of Witness \_\_\_\_\_

(Note: Providing false information is subject to a maximum penalty of either \$1,000 fine or 6 month imprisonment, or both, per 16.05.430.)

**STATE OF ALASKA, SUBSISTENCE WORKSHEET  
FOR SUBSISTENCE HARVEST PERMIT APPLICATION CERTIFICATION**

This worksheet can be used by you to see if you qualify as a subsistence user. You do not have to return this worksheet with the application; it is for your use only. To see if you qualify, answer each question and follow the instructions below. A person must score at least 100 points to qualify as a subsistence user. A person must also score higher than the minimums for each question.

1. How many pounds of wild fish and game did you consume during the last 12 months?  
(Scoring: 1 point for every 10 lb. There is a 125 lbs minimum.)
2. How many different species of wild fish and game did you use during the last 12 months?  
(Scoring: 3 points for every species. There is a 6 species minimum.)
3. How many days did you spend engaged in taking fish or game in your subsistence use area, or spent processing that fish and game during the last 12 months?  
(Scoring: 1 point for every day. There is a 30 days minimum.)
4. In how many different months did you hunt or fish during the last 12 months?  
(Scoring: 1 point for every month. There is a 4 months minimum.)
5. During the last 12 months, how many weeks was the taking or processing of fish or game your principal work effort?  
(Scoring: 1 point for each week. There is no minimum; there is a 26 weeks maximum.)
6. With how many different households outside your own did you share or receive fish and game in the past 12 months?  
(Score: 2 points per household. There is no minimum; there is a 10 households maximum.)
7. Did your taking of fish and game occur entirely within the subsistence use area for which you are now applying?  
(Score: yes = 5 points, no = 0 points. There is no minimum.)

To figure your score, fill in your answers below, do the formulas, and add up the total.

Question	Your Answer	Formula	Your Score	Minimum
1. Quantity of fish and game consumed		10 =		125
2. Number of species used		x 3 =		6
3. Days spent taking or processing		x 1 =		30
4. Number of months when taking occurred		x 1 =		4
5. Weeks when taking/processing fish/game was main work		x 1 =		0
6. Households receiving or giving		x 2 =		0
7. Taking was in subsistence use area? y = 5, n = 0		x 1 =		0
<b>ADD UP YOUR TOTAL.</b>				
A person must score more than 100 points to qualify.				
A person must score more than each minimum to qualify.				

**GOVERNOR'S SUBSISTENCE BILL SECTIONAL ANALYSIS APPENDIX D**

The following illustrates an example of an application for a subsistence permit for applicants from Type 3 communities.

**STATE OF ALASKA  
SUBSISTENCE HARVEST PERMIT APPLICATION  
FOR APPLICANTS FROM TYPE 3 COMMUNITIES  
(PAGE 1)**

Preamble

If you live in a community or urban area where the human population is 7000 people or greater, or if you live in a community where dependence upon subsistence is not a principal characteristic of the economy, culture, and way of life of the area, there is a rebuttable presumption that you do not qualify as a subsistence user. You may apply for a subsistence harvest permit using this application. However, the burden of proof is placed on the applicant to demonstrate that the applicant's personal history of wild resource use qualifies the person to be a subsistence user.



STATE OF ALASKA  
SUBSISTENCE HARVEST PERMIT APPLICATION  
(PAGE 2)

A. Background Questions

- A1. What is your name? Please print clearly. (First Name, MI, Last Name)
- A2. What is your mailing address? (Street or Post Office Box, Community, Zip Code)
- A3. Where is your permanent domicile, if different from your mailing address?  
(Location, Community)
- A4. List the Game Management Subunit in which your permanent domicile is located.  
(See accompanying map and table.)
- A5. List the Game Management Subunits contiguous to the Game Management Subunit  
in which you are domiciled. (See accompanying map and table.)
- A6. Other than the Game Management Subunits listed in A4 and A5 above, list any  
Game Management Subunit(s) in which you believe you have established a personal  
history of subsistence harvesting.
- A7. What is your date of birth? [This number is used for cataloging and tracking  
applicants.]
- A8. How long have you lived in Alaska? (Applicants must be Alaska residents for at  
least one year.)
- A9. What is your daytime or message phone?
- A10. What is your social security number? [This number is used for cataloging and  
tracking applicants.]
- A11. How many people are in your household? [This number is used in validating use  
levels in question C1.]
- A12. If you applied for a subsistence permit in the past, did you qualify as a  
subsistence user the last time you applied? (yes, no, did not apply) Indicate the most  
recent year you applied.

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B. Instructions for Questions C1 through C8

While answering Questions C1 through C8 below:

- a. Do not count commercial fish.
- b. Do not count wild fish and game purchased from a store or commercial dealer.
- c. Do not count fish or game harvested by you or household members outside the game management subunit in which you are domiciled (question A4 above), contiguous game management subunits (question A5 above), or the game management subunits identified in question A6 above.
- d. Count only fish or game harvested with means characterized by efficiency and economy of effort, cost, and transportation, as conditioned by local circumstances. For example: (1) in most instances, traveling to Game Management Subunits or harvest areas with aircraft does not qualify as efficient or economical; (2) in most instances, rod and reel fishing in open water does not qualify as efficient or economical; (3) in most instances, guided hunting and fishing does not qualify as efficient and economical. The burden of proof is on the applicant to demonstrate that harvests by means such as these may be counted.

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C. Qualifying Questions

C1. Over the last 12 months, how many pounds of wild fish and game did you consume?

Pounds \_\_\_\_

(Note: Please show the amounts of wild meat and fish used by you in Worksheet D, questions D1, D2, and D3 to support your answer.)

C2. Over the last 12 months, how many different types (species) of wild fish and game were eaten by you?

Number of types of fish and game: \_\_\_\_ types

(Note: Please show how you calculated this number on Worksheet D, question D4.)

C3. Were the methods of harvesting the fish and game reported in questions C1 and C2 characterized by efficiency and economy of effort, cost, and transportation?

Yes \_\_\_\_

No \_\_\_\_

(Note: Please show methods on Worksheet D, question D1. In general, use of airplanes, rod and reel, or paid guides are not considered efficient and economical means.)

C4. During the past 12 months, how many days did you spend engaged in taking fish or game in your subsistence use area, or spent processing that fish or game?

Days \_\_\_\_

(Note: Please show dates on Worksheet D, questions D1 and D5 in support of your answer.)

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C5. In how many different months did you hunt or fish in your subsistence use area during the last 12 months?

Months \_\_\_\_\_

(Note: Partial months may be counted as one month. Please indicate the months on Worksheet D, questions D1 and D6 in support of your answer.)

C6. During the last 12 months, how many weeks was the taking or processing of fish or game your principal work effort?

Weeks \_\_\_\_\_

(Note: Please indicate the weeks on Worksheet D, questions D1 and D7 in support of your answer.)

C7. With how many different households outside your own did you share or receive fish and game in the past 12 months?

Number of households \_\_\_\_\_

(Note: Please indicate the households on Worksheet D, questions D2 and D8 in support of your answer.)

C8. Did your taking of fish and game in the last 12 months occur entirely within the subsistence use area for which you are now applying?

Yes \_\_\_\_\_

No \_\_\_\_\_

(Note: Please indicate areas on Worksheet D, question D1 in support of your answer.)

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D2. In this table, list the types of wild, non-commercial fish and game your household received or gave during the last 12 months. In column A, indicate the types (species) of fish and game received or given. In column B, for species received, indicate the pounds consumed by you. In column C indicate the name of one person in the household from whom you received the fish or game, or the name of one person in the household to whom you gave the fish or game. In column D indicate the communities of the households.

	A. Species Given or Received	B. Pounds Eaten by You	C. Name of Person in Household	D. Household's Community
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
12.	_____	_____	_____	_____
13.	_____	_____	_____	_____
14.	_____	_____	_____	_____
15.	_____	_____	_____	_____
16.	_____	_____	_____	_____
17.	_____	_____	_____	_____
18.	_____	_____	_____	_____
19.	_____	_____	_____	_____
20.	_____	_____	_____	_____
21.	_____	_____	_____	_____
22.	_____	_____	_____	_____
23.	_____	_____	_____	_____
24.	_____	_____	_____	_____
25.	_____	_____	_____	_____



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**D. Worksheets: Supporting Documentation**

You must complete questions D1 through D8 as support for your answers on questions C1 through C8.

D1. In this table, list the kinds of wild, non-commercial fish and game harvested by members of your household during the last 12 months. In column A list the type (species) of fish and game harvested. In column B indicate the numbers taken of each species. In column C indicate the pounds (usable weight) of the harvest consumed by you. In column D indicate the Game Management Subunit(s) where the harvest occurred. In column E indicate the harvest methods used for taking fish (see list below). In column F indicate whether aircraft was used to travel from your permanent domicile to or within the Game Management Subunit where the harvest occurred. In column G, indicate the dates you were engaged in taking or processing fish and game (for instance, if the dates were February 5 through February 8, February 20, and March 3 through March 4, you would enter "2/5-2/8, 2/20, and 3/3-3/4").

	A.	B.	C.	D.	E.	F.	G.
	Species	Number Taken	Lbs Eaten by You	Sub-unit(s) of the Harvest	Method Used for Fish*	Was Aircraft Used? (yes, no)	Dates You Spent in Taking or Processing (Enter all Months/Days)
1.	_____	_____	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____	_____	_____
5.	_____	_____	_____	_____	_____	_____	_____
6.	_____	_____	_____	_____	_____	_____	_____
7.	_____	_____	_____	_____	_____	_____	_____
8.	_____	_____	_____	_____	_____	_____	_____
9.	_____	_____	_____	_____	_____	_____	_____
10.	_____	_____	_____	_____	_____	_____	_____
11.	_____	_____	_____	_____	_____	_____	_____
12.	_____	_____	_____	_____	_____	_____	_____
13.	_____	_____	_____	_____	_____	_____	_____
14.	_____	_____	_____	_____	_____	_____	_____
15.	_____	_____	_____	_____	_____	_____	_____
16.	_____	_____	_____	_____	_____	_____	_____
17.	_____	_____	_____	_____	_____	_____	_____
18.	_____	_____	_____	_____	_____	_____	_____
19.	_____	_____	_____	_____	_____	_____	_____
20.	_____	_____	_____	_____	_____	_____	_____

\* Types of fishing methods: gill net, dip net, seine net, fishwheel, set line, jigging (through the ice), fish trap, gaff, rod and reel, etc.

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D3. To calculate how much wild fish and game you consumed in the last twelve months, add the lbs in column C of question D1 with the lbs in column B in question D2, and enter the number below:

\_\_\_\_\_ Number of lbs of fish and game you consumed

(Note: This is the answer to question C1.)

D4. To calculate how many different types (species) of wild, non-commercial fish and game were eaten by you, count the number of different types of wild fish and game listed in D1 and D2 which you ate and enter the number below:

\_\_\_\_\_ Types of fish and game

(Note: This number is the answer to question C2)

D5. To calculate the number of days you were engaged in taking or processing fish and game, count the number of different dates listed in column G in question D1 and enter the number below:

\_\_\_\_\_ Number of different dates

(Note: Partial days count as one day. Do not count days outside of the subsistence use area. This number is the answer to question C4.)

D6. To calculate the number of different months during which you were engaged in taking fish and game, count the number of different months listed in column G in question D1 and enter the number below:

\_\_\_\_\_ Number of different months

(Note: Any time spent in a month counts as one month. Do not count months outside of the subsistence use area. This number is the answer to question C5.)

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D7. If you claimed any time in question C6, list the weeks in which the taking of fish or game was your principal work effort below, and describe your employment situation during those times:

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D8. To calculate the number of households with which you shared or received fish and game, count the number of different households listed in column C, question D2 and enter it below:

\_\_\_\_\_ Number of different households

(Note: This is the answer to question C7.)

**NOTIFICATION OF POSSIBLE ADDITIONAL MATERIALS**

The State of Alaska may use additional materials at some later date to verify your answers. Verification materials you may be asked to provide at some later date include the following:

1. Names, addresses, and phone numbers of persons who can corroborate your sharing and receiving information, and
2. Names, addresses, and phone numbers of persons who can corroborate your hunting and fishing days.

In addition, the state may check the following additional sources to verify your answers:

1. Game harvest records in ADF&G data files to validate your big game harvests; and
2. Fishing permit records or salmon harvest calendar records in ADF&G data files to verify you salmon harvests.

**CERTIFICATION**

I hereby certify that all of the above information is true and correct and that I understand this information is subject to public disclosure. (Note: Providing false information is subject to a maximum penalty of either \$1,000 fine or 6 month imprisonment, or both, per 16.05.430.)

Signature of Applicant \_\_\_\_\_

Signature of Witness \_\_\_\_\_

# GOVERNOR'S SUBSISTENCE BILL SECTIONAL ANALYSIS APPENDIX E

## APPLICANT CASE EXAMPLES SUBSISTENCE PERMIT APPLICATIONS AND SCORES

The following eight case examples illustrate how an applicant for a subsistence permit might be scored using the example permit application. The cases were real households documented in the early 1980s through research of the Division of Subsistence, Alaska Department of Fish and Game in Sitka, the Kenai City area, Homer, and Nome. The original cases were published in a scientific report which contains a number of other cases for comparison (Robert J. Wolfe and Linda J. Ellanna (compilers), Resource Use and Socioeconomic Systems: Case Studies of Fishing and Hunting in Alaskan Communities, Technical Paper No. 61, Division of Subsistence, Alaska Department of Fish and Game, Juneau, 1983). Although these cases are a decade old, they are examples of types of fishing and hunting patterns that still exist in Alaska communities.

Because the cases were documented in the early 1980s, certain information was not gathered that is necessary to complete the subsistence permit application. For this exercise, assumptions were made to fill in the missing information consistent with the content of the cases and how one might expect the applicants to represent themselves. Therefore, the cases cannot be taken to be exact representations of actual applicants, but only case illustrations of types of applicants that might be expected to apply for subsistence permits.

It is also important to state that the application form and scoring systems are preliminary examples illustrating the general type of application form and scoring system that may be created to implement the state subsistence statute. Ultimately, the Boards of Fisheries and Game are mandated to create the application and scoring system. Should a different set of questions or weighting system be adopted by the Boards, then there may be some differences in the outcomes for particular case applicants.

In this analysis, a person needs a minimum of 100 points on the application, covering seven criteria.

- (A) Quantity of fish and game consumed. One point for every 10 lbs consumed. A minimum of 125 pounds is required, or an applicant is not a subsistence user.
- (B) Number of species used. Three points for each species or species group. Under the terms of the Governor's bill, a minimum qualification threshold will be set by the Boards of Fisheries and Game for this criteria. This analysis assumes a minimum of 6 species or species groups is required. The species groups used for the purpose of this analysis are consistent with Appendix G, Table 1. For example, all varieties of crab are counted as one species group.
- (C) Days spent taking or processing. One point for each day spent hunting, fishing, gathering, or processing. A minimum of 30 days is required.
- (D) Number of months in which the taking or processing occurred. Two points for each month.
- (E) Number of weeks during which the taking or processing of fish and game was the applicant's principal work effort. One point per week. Maximum of 26 weeks.
- (F) Households with which the applicant gave or received fish or game. Two points per household. Maximum of ten households.
- (G) Whether the taking was in the subsistence use area. Five points if the taking was in the subsistence use area for which the applicant is applying for a permit.

Each case follows a similar format. First, a narrative for each case's pattern of fish and game use is presented (these narratives originally appeared in Wolfe and Ellanna (1983: 116-117, 144-148, 243-244, 166). Second, the person's assumed scores on the subsistence application questions are presented, with each applicant's final score and status. A brief listing of assumptions used for scoring follows each case study.

A summary of the final status of each case is as follows, a "yes" indicating a "subsistence user" and a "no" indicating "not a subsistence user":

Case 1. Sitka. Yes.	Case 3. Soldatna. No.	Case 5. Kenai. No.	Case 7. Nome. No.
Case 2. Sitka. Yes.	Case 4. N. Kenai. No.	Case 6. Homer. No.	Case 8. Nome. Yes.

**Case 1.** This Sitka household consists of a couple and their four-year-old daughter. The husband was born in Alaska 52 years ago and the family has been living in Sitka for the past 22 years. Both adults are employed full time: he as a planner and she as an accounts clerk. Their joint household income is more than \$50,000 per year. The household's level of involvement in use of local food resources has remained constant over the last five years.

"Cost savings is probably the most important reason for hunting, fishing and gathering, although our lifestyle places us where there is a good supply of subsistence foods and wood. By using subsistence foods, they have become important in our diet and are not available any other way or elsewhere."

An estimated 60 percent of the household's meat, 100 percent of the fish, and 5 percent of the fowl used in the past year came from hunting and fishing. They reported obtaining eight deer and twelve ducks, a good return for the 6-10 times they went out hunting. They fished about 25 times in the past year and obtained 70 salmon (10 kings, 35 silvers, and 25 sockeye); 10 snapper; 10 halibut; 10 ling cod; 10 Dolly Varden; 10 king crab and 30 dungeness crab; 10 pounds of shrimp; 50 pounds of herring roe, and 10 pounds of smelt. From the intertidal zone they gathered clams, scallops, abalone, cockles, two types of seaweed and kelp. They also gathered salmonberries, huckleberries, and cranberries. To preserve their food, the household uses a freezer, smokehouse and methods of pickling and canning. They also exchange harvested foods with relatives and friends.

		Applicant		Applicant	
Criterion	Minimum	Answer	Formula	Score	Percent
A. Quantity of fish and game consumed	125	350	/ 10 =	35	21%
B. Number of species used	6	16	x 3 =	48	29%
C. Days spent taking or processing	30	45	/ 1 =	45	27%
D. No. of months when taking occurred	4	6	x 2 =	12	7%
E. Weeks when taking fish/game was main work	0	0	x 1 =	0	0%
F. Households receiving or giving	0	10	x 2 =	20	12%
G. Taking was in subsistence use area? y=5, n=0	0	5	x 1 =	5	3%
TOTAL				165	100%

This case qualifies as a subsistence user, scoring a total of 165 points (exceeding the 100 points threshold), and meeting minimum thresholds for each criteria.

#### Case 1 Assumptions

To score this case, the following assumptions were made:

- (1) the applicant's household used 16 resource categories with the following weights: deer (640), ducks (18), king salmon (153), silver salmon (270), sockeye salmon (108), snapper (20), halibut (150), Dolly Varden (27), crab (145), shrimp (10), herring roe (50), smelt (10), clams (?), cockles (?), scallops (?), and abalone (?). (categories not counted included: seaweed, kelp, salmonberries, huckleberries, and cranberries because they are not fish and game)
- (2) the applicant consumed about 350 lbs personally, as the total household harvest weighed about 1,600 lbs, or about 533 lbs per member, and the household gave foods to relatives and friends
- (3) 45 days were spent taking or processing (25 days fishing, 10 days hunting, 10 days gathering)
- (4) the harvest occurred in 6 different months



- (5) there were no weeks where taking fish and game was the main activity
- (6) the applicant shared with the maximum of 10 households
- (7) all taking occurred locally

**Case 2.** This Sitka household includes a couple with their three children, school aged and below. The parents have lived in the Sitka area all their lives. The household reported an annual income of between \$20,000 and \$25,000. The father is employed as a foreman. The household reported that hunting, fishing, and gathering are fundamental to their way of life and essential for the continuation of Tlingit culture. They saw those things as fundamental Native rights. They reported that all of the fish and fowl, and much of the meat they eat comes from hunting and fishing. They exchange these foods with other community members. They have become more involved in the use of local food resources than they were five years ago. In the past year they hunted and obtained three deer, six hair seal, and one sea lion. In addition to utilizing the meat and pelt, seal oil was rendered from the seal fat. The family fished about 15 times in the past year and harvested salmon with a net (25 pinks, 8 kings, 10 silvers, 25 chum, and 25 sockeye); three halibut and five red snapper. The family also gathered a small quantity of herring and herring roe. They gathered a small quantity of clams, sea urchins, and abalone, black and red seaweed, salmonberries, blueberries, huckleberries, and edible plants. They put their food up by canning, pickling, salting, fermenting, freezing, and smoking. They have their own freezer, smokehouse, and maintain an off-road vehicle used for hunting.

		Applicant		Applicant	
Criterion	Minimum	Answer	Formula	Score	Percent
A. Quantity of fish and game consumed	125	300	/ 10 =	30	22%
B. Number of species used	6	14	x 3 =	42	30%
C. Days spent taking or processing	30	30	/ 1 =	30	22%
D. No. of months when taking occurred	4	6	x 2 =	12	9%
E. Weeks when taking fish/game was main work	0	0	x 1 =	0	0%
F. Households receiving or giving	0	10	x 2 =	20	14%
G. Taking was in subsistence use area? y=5, n=0	0	5	x 1 =	5	4%
TOTAL				139	100%

This case qualifies as a subsistence user, scoring a total of 136 points (exceeding the 100 point threshold), and meeting minimum thresholds for each criteria.

#### Case 2 Assumptions

To score this case, the following assumptions were made:

- (1) the applicant's household used 14 resource categories with the following weights: deer (210), seal (540), sea lion (150), pink salmon (55), king salmon (122), silver salmon (77), chum salmon (155), sockeye salmon (108), halibut (45), red snapper (10), herring-herring roe (?), clams (?), sea urchins (?), abalone (?) (categories not counted included: red and black seaweed, salmonberries, blueberries, huckleberries, and edible plants because they are not fish and game)
- (2) the applicant consumed about 300 lbs personally, as the total household harvest weighed about 1,472 lbs, or about 294 lbs per member
- (3) 30 days were spent taking or processing (15 days fishing, 10 days hunting, 5 days gathering)
- (4) the harvest occurred in 6 different months
- (5) there were no weeks where taking fish and game was the main activity
- (6) the applicant shared with the maximum of 10 households
- (7) all taking occurred locally

**Case 3** is a Kenai household. This household consists of a Native woman, age 64, who is a lifelong resident of the community. She formerly fished a commercial set net, but is now retired. Her daughter and son-in-law, both in their 40s, live on an adjacent lot. The older woman shares many of the following resources with her daughter and son-in-law.

The woman ideally could use 30 king salmon each year which she smokes, cans, pickles, and freezes. Kings, however, are difficult to get because she is no longer engaged in commercial fishing, does not have a boat for trolling in Cook Inlet, and has never learned to fish in rivers with a rod and reel. In addition, she considers salmon in the rivers to be too decomposed to eat. As a result, the woman has had to purchase most of her kings from commercial fishermen during the last three or four years. This year, kings sold for \$1.25 a pound; the household purchased \$400 worth. She prefers the early kings that arrive in May, because these have traditionally been used by Kenai residents, are the first fresh salmon available, and run when the weather is cool and dry enough for smoking. However, there is no commercial or non-commercial season on these early kings and, hence, salt water kings are not available. The household also has started using other salmon species, including 18 silvers this year from her son-in-law's commercial gillnetter and 10 reds, which she obtained in five days of fishing with three other people in the new Kasilof River "personal use" gillnet fishery. The woman gets some of her salmon by smoking other people's fish for a one-half share. She distributes fish widely to her many relatives in the community and to old and sick people who cannot get their own. She said salmon is very important to her because she has eaten and preserved it this way all her life.

The woman and her daughter use about four cases of clams each year which they usually harvest from Clam Gulch or Ninilchik. This year, however, they did not go clam digging because they had some remaining from last year. The older woman puts out a hooligan (eulachon) net on Salamatof Beach in April and May, eating what she wants fresh. She also lets friends and neighbors use her net to get hooligan.

The two households usually use a moose every year. The older woman and her now deceased husband formerly hunted moose, but now she relies on her daughter and son-in-law for moose. However, this year the daughter and her husband had only a week to hunt, because the husband was working on the North Slope, and for the first time they were not successful harvesting a moose. Frequently it takes them 10 to 20 days to harvest a moose, and they usually hunt in the Swanson River area. She rarely buys meat in the store. She said she seldom receives fish or game, even though she frequently shares fish with others. "People don't share like they used to, not even relatives," she said.

Criterion	Minimum	Applicant Answer	Formula	Applicant Score	Percent
A. Quantity of fish and game consumed	125	90	$\frac{90}{125} =$	9	9%
B. Number of species used	6	6	$\frac{6}{6} =$	18	17%
C. Days spent taking or processing	30	40	$\frac{40}{30} =$	40	38%
D. No. of months when taking occurred	4	5	$\frac{5}{4} =$	10	10%
E. Weeks when taking fish/game was main work	0	2	$\frac{2}{0} =$	2	2%
F. Households receiving or giving	0	10	$\frac{10}{0} =$	20	10%
G. Taking was in subsistence use area? y=5, n=0	0	5	$\frac{5}{0} =$	5	5%
TOTAL				104	100%

This case does not qualify as a subsistence user, failing to meet the 125 pounds minimum consumption threshold of criteria (A).

### Case 3 Assumptions

To score this case, the following assumptions were made:

- (1) the households of the applicant and her daughter used at least the minimum of 6 resource categories with the following weights: silver salmon (86), red salmon (40), clams (80), hooligan (20), and two others from sharing (king salmon was not counted because it was purchased from commercial fishermen)
- (2) the applicant consumed about 90 lbs personally, as the total harvests of the two cooperating households weighed about 226 lbs, or about 75 lbs per member, and the households gave and received some foods (on other years, a moose was reported taken; however, during the application year, no moose was reported taken or used)
- (3) 40 days were spent taking or processing (35 days fishing or processing fish, 0 days hunting, 5 days gathering)
- (4) the harvest occurred in 5 different months
- (5) there were 2 weeks where taking fish and game was the main activity
- (6) the applicant shared with the maximum of 10 households
- (7) all taking occurred locally

**Case 4** is a North Kenai household that takes salmon with their commercial set net. The household includes a husband and wife, both in their 40s, and four daughters. The entire family works a commercial set net in summer in North Kenai. The husband also fishes the commercial herring season, but neither he nor his wife works at other remunerative employment in winter. The household has lived in North Kenai since 1966.

The household annually uses 50 to 60 red salmon which they retain from their commercial set net harvests; these are first frozen, then canned or smoked when the family has time after commercial season closes. The household also fishes for silvers with a rod and reel in the Swanson River in late August and September, mainly, they say, for recreation. Before they had a set net, the household harvested all the salmon they used with a rod and reel. They generally do not give away much fish, except the silvers taken with a rod and reel if the household already has enough for the winter. These are given to friends and neighbors who do not have time to fish for themselves. The household also has fished in the local August subsistence or non-commercial gillnet fishery when it was open in previous years. The household said they eat fish two or three times weekly year-round; they prefer it to other kinds of meat because it tastes better and is healthier.

The household uses 150 to 200 pounds of halibut each year. The husband previously fished the commercial halibut season, keeping part of his catch for the household. This year the family fished for halibut with a rod and reel in late August from a friend's boat off Deep Creek. In total, they harvested 280 pounds of halibut, half of which their friend kept.

The household occasionally sets crab and shrimp pots in Kachemak Bay, about 90 miles distant. The household says that the cost of gasoline and a boat makes this activity more recreational than economical because depletion of resources in the Bay means that it is no longer possible to harvest enough crab and shrimp to compensate for the costs. The household occasionally digs clams at Clam Gulch for pleasure but generally gives them away because they do not like to eat clams. In winter, the household fishes for pleasure through the ice on local lakes for land-locked silvers.

The husband tried to get a moose each year but does not consider himself an "aggressive" hunter. He hunts very near his house, considering it is dangerous to be in the woods with all the inexperienced hunters. The husband has not harvested a moose in three years. He hunts spruce grouse locally in fall, using as many as he gets. In the fall, the family also gathers low- and high-bush cranberries, raspberries, currants, and blueberries, making about three to four cases of jam which they use each year. The household harvests wild resources, they say, because they enjoy the activities and value the self-sufficiency resulting from wild food harvests. Because the household works seasonally, they have time to take these resources.

Criterion	Minimum	Applicant		Applicant	
		Answer	Formula	Score	Percent
A. Quantity of fish and game consumed	125	98	$\div 10 =$	9.8	12%
B. Number of species used	6	4	$\times 3 =$	12	14%
C. Days spent taking or processing	30	40	$\div 1 =$	40	47%
D. No. of months when taking occurred	4	6	$\times 2 =$	12	14%
E. Weeks when taking fish/game was main work	0	0	$\times 1 =$	0	0%
F. Households receiving or giving	0	3	$\times 2 =$	6	-
G. Taking was in subsistence use area? y=5, n=0	0	5	$\times 1 =$	5	6%
TOTAL				84.8	100%



This case does not qualify as a subsistence user, failing to meet the minimum threshold of criteria (A) and (B), and having a point total less than 100 points.

#### Case 4 Assumptions

To score this case, the following assumptions were made:

- (1) the applicant's household used 4 resource categories with the following weights: red salmon (240), halibut (140), grouse (10), and clams (?) (categories not counted included: silver salmon because it was taken with inefficient rod and reel; crab and shrimp because they were taken on inefficient recreational boat trips; and cranberries, raspberries, currents, and blueberries because they are not fish and game)
- (2) the applicant consumed about 98 lbs personally, as the total household harvest weighed about 390 lbs, or about 98 lbs per member
- (3) 40 days were spent taking or processing (20 days fishing, 10 days hunting, 10 days gathering)
- (4) the harvest occurred in 6 different months
- (5) there were no weeks where taking fish and game was the main activity
- (6) the applicant shared with 3 other households
- (7) all taking occurred locally (Kachemak Bay was considered "local")

**Case 5** is a Kenai city household that heavily uses wild resources but does most of their harvesting in non-local areas. The husband, a Native, is a lifelong Kenai resident; the wife moved to Kenai from Oregon in 1967. The husband is a Cook Inlet gillnetter and fishes the commercial herring, halibut, and salmon seasons. Depending on his income from fishing and the availability of jobs, the husband frequently works as a millwright in winter, often locally but occasionally on the North Slope or in Valdez. The wife has no wage occupation. The income of this household is probably fairly high, though not always dependable due to the variability of commercial fishing income.

Each year this household uses three to four cases of salmon (about 5-15 fish total), which they smoke, can, or freeze. Although they prefer kings because the husband has eaten them all his life, the household also will use silvers. They seldom use other salmon species because they consider these to be of inferior quality. The household gets their fish from the husband's commercial catch. This year, however, he caught only two kings, so the household smoked chum salmon for the first time. The husband does nearly all the salmon harvesting and preserving; salmon are very important to him, he reported. However, the wife has not eaten salmon all her life, does not consider it so important, and does not know how to harvest or process fish.

The household uses halibut which they get from the husband's catch, usually eating it twice monthly, year-round. The husband gets clams about twice yearly across Cook Inlet at Polly Creek, which he reaches in his floatplane. He said he prefers to dig clams there because the clams are bigger and taste better. The household does not like to clean clams, however, so they keep enough for a meal and give the rest away to friends and relatives. The household occasionally uses crab or shrimp which the husband harvests while commercial fishing for other species. The household likes hooligan, but the husband is commercial fishing during the run and has no time for harvest activities. The household occasionally receives hooligan from friends or relatives because it is easy to get and people tend to harvest more than they can use, but the household would use more if it were available. As with salmon, the wife has no interest in or knowledge of harvesting and processing hooligan. In winter the husband occasionally fishes through the ice for rainbow trout on local lakes, mainly, he says, for pleasure.

The husband hunts elk in the fall on Afognak Island which he reaches in his floatplane. He considers elk to be easier to get and more tender than moose. If the husband cannot get elk, he hunts either moose in Stony River area or caribou across Cook Inlet. The household rarely buys meat in the store; only once in the last 15 years have they not have enough wild game. If wild game were not available, however, they would buy a side of beef. Although it is expensive to fly to hunt, the husband says it is almost impossible to get a moose locally because there is too much competition, so he has given up trying. The household does not think it is more expensive to fly to hunt than to buy beef in the store. In addition, wild game is important to the husband, he says, because he has eaten it all his life. He does not consider himself a "recreational" hunter. The family also gathers cranberries, blueberries, and raspberries in the fall.

Because the wife has little interest in or knowledge of wild food harvesting, the husband does nearly all the harvesting and preservation. Because of the limited knowledge of and interest in wild resources on the part of the wife, the amount of wild resources the household uses depends on how much time the husband has. Although the husband has many relatives in the area, the household does not receive much fish or game. With a relatively high income, the household can afford equipment such as a floatplane, which gives the husband access to harvest areas not available to most local residents and facilitates his resource harvesting activities.

Criterion	Minimum	Applicant		Applicant	
		Answer	Formula	Score	Percent
A. Quantity of fish and game consumed	125	65	$/ 10 =$	6.5	9%
B. Number of species used	6	6	$\times 3 =$	18	25%
C. Days spent taking or processing	30	30	$/ 1 =$	30	41%
D. No. of months when taking occurred	4	7	$\times 2 =$	14	19%
E. Weeks when taking fish/game was main work	0	0	$\times 1 =$	0	0%
F. Households receiving or giving	0	2	$\times 2 =$	4	6%
G. Taking was in subsistence use area? y=5, n=0	0	0	$\times 1 =$	0	0%
<b>TOTAL</b>				<b>72.5</b>	<b>100%</b>

This case does not qualify as a subsistence user, failing to meet the 125 lb. minimum consumption threshold, and scoring less than the 100 points threshold.

#### Case 5 Assumptions

To score this case, the following assumptions were made:

- (1) the applicant's household used the minimum of 6 resource categories with the following weights: king salmon (32), chum salmon (74), halibut (24), crab (?), shrimp (?), and hooligan (?) (categories not counted included: clams, elk, moose, and caribou because they were taken with inefficient air transportation; trout because it was taken with inefficient rod and reel; and cranberries, blueberries, and raspberries because they are not fish and game)
- (2) the applicant consumed 65 lbs personally, as the total household harvest weighed about 129 lbs, or about 0.5 lbs per member (only harvests taken with efficient gear were counted)
- (3) the minimum of 30 days were spent taking or processing (30 days fishing)
- (4) the harvest occurred in 7 different months
- (5) there were no weeks where taking fish and game was the main activity
- (6) the applicant shared with 2 households
- (7) some of the taking occurred non-locally

**Case 6.** This Homer household consists of a single female and her teenage daughter. The family moved to the city of Homer five years ago, after living elsewhere in Alaska, because of a business opportunity and an environment they found appealing. The mother is the owner of a local business, and is able to take time off whenever she desires to fish or gather resources. Having no family members locally, they participate with friends in the August subsistence fishery on Kachemak Bay, fishing for silver salmon on the beach below their bluff home at Miller's Landing. They put up 10 to 15 fish by freezing and canning. They gather mussels on the same beach throughout the year and eat them fresh. They fish for halibut by skiff off the same beach, catching and freezing about 50 to 150 pounds per year. With the skiff they also fish in saltwater with hook and line for trout, catching a dozen through the summer. They often give these to friends who bring them gifts of shrimp and crab. During the spring and summer they dig clams on the Homer spit, as the clams and cockles there are considered better than the redneck clams at Miller's landing. They also gather greens for immediate consumption including nettles, goose tongue, and wild parsley. The family conducts extensive berry picking in late summer and fall, and these are frozen as well as used fresh. This household does not hunt moose or other wild game, stating they have neither the equipment nor the knowledge of how to go about it. They say they enjoy resource harvesting because it brings them closer to the country, as well as helping them financially.

Criterion	Applicant		Formula	Applicant	
	Minimum	Answer		Score	Percent
A. Quantity of fish and game consumed	125	110	$/ 10 =$	11	14%
B. Number of species used	6	7	$x 3 =$	21	27%
C. Days spent taking or processing	30	20	$/ 1 =$	20	23%
D. No. of months when taking occurred	4	6	$x 2 =$	12	16%
E. Weeks when taking fish/game was main work	0	0	$x 1 =$	0	0%
F. Households receiving or giving	0	4	$x 2 =$	8	10%
G. Taking was in subsistence use area? $y=5, n=0$	0	5	$x 1 =$	5	6%
TOTAL				77	100%

This case does not qualify as a subsistence user, failing to meet the minimum threshold for criteria A and B, and scoring less than the 100 point threshold.

#### Case 6 Assumptions

To score this case, the following assumptions were made:

- (1) the applicant's household used 7 resource categories with the following weights: silver salmon (72), halibut (150), clams (?), cockles (?), mussels (?), crab (?), shrimp (?) (categories not counted included: trout because it was taken with inefficient rod and reel gear; greens and berries because they are not fish and game)
- (2) the applicant consumed about 110 lbs personally, as the total household harvest weighed about 220 lbs, or about 110 lbs per member
- (3) 20 days were spent taking or processing (10 days fishing, 10 days gathering)
- (4) the harvest occurred in 6 different months
- (5) there were no weeks where taking fish and game was the main activity
- (6) the applicant shared with 4 households
- (7) all taking occurred locally

**Case 7.** This case represents a Nome household which harvests five to ten categories of resources. The household is composed of a 48-year-old retired military officer and his 48-year-old wife. Their only child, a son in his 20s, now lives in a separate household in Anchorage. Husband and wife work for city and state government agencies respectively, and together they earn in excess of \$70,000 net annually. They have lived in Alaska for nine years, eight of which have been in Nome.

Their primary resource harvest activity is fishing. "I love fishing," the wife said. "I'm down at the mouth of that river [the Nome River] at 5:00 every morning when the silver salmon are running." She fishes more than her husband, and recalls she had her first fishing pole at the age of five, whereas her husband did not begin fishing or hunting until ten or fifteen year ago, and then did so only sporadically. This year the household members harvested approximately 100 pink salmon, 50 to 60 silver salmon, 50 to 60 Dolly Varden, four to five grayling, a portion of a shared moose, and an undetermined quantity of blueberries and cranberries. Most of their hunting, fishing, and gathering activities take place along the road system, especially at the Nome, Stuk, and Snake rivers and occasionally inland on the Pilgrim River. They have a boat but have not used it for three years. They also have a snowmobile but usually use their four-wheel-drive vehicle for resource harvest related transportation.

Interestingly, neither eats much fish except for Dolly Varden. Most salmon are smoked and given away to two or three older people in town or to other friends. Salmon are also preserved by freezing. In the winter, friends give them crab, which are taken with handlines or pots through the ice in winter. "It's too spooky out there on the sea ice for me," the wife states. This year they were unsuccessful in harvesting a moose, but their son in Anchorage did and shared it with them. If they had been successful and their son had not, they would have reciprocated. Moose is preserved by freezing. Summer is their busiest resource harvesting period, primarily because of resource availability, road access, and time not committed to work (longer days, vacation time). To this household the ability to use and harvest local resources is an important part of living in northwest Alaska.

Criterion	Minimum	Applicant		Applicant	
		Answer	Förmula	Score	Percent
A. Quantity of fish and game consumed	125	130	/ 10 =	13	21%
B. Number of species used	6	2	x 3 =	6	11%
C. Days spent taking or processing	30	10	/ 3 =	10	18%
D. No. of months when taking occurred	4	1	x 2 =	2	4%
E. Weeks when taking fish/game was main work	0	0	x 1 =	0	0%
F. Households receiving or giving	0	10	x 2 =	20	6%
G. Taking was in subsistence use area? y = 5, n = 0	0	5	x 1 =	5	9%
<b>TOTAL</b>				<b>56</b>	<b>100%</b>

This case does not qualify as a subsistence user, failing to meet the minimum thresholds for criteria (B), (C), and (D), and scoring less than 100 points total.

#### Case 7 Assumptions

To score this case, the following assumptions were made:

(1) the applicant's household used 2 resource categories with the following weights: moose (250 lbs, received from son in Anchorage) and crab (10) (categories not counted included: pink salmon, silver salmon, Dolly Varden, and grayling because they were harvested with inefficient rod and reel; blueberries and cranberries because they are not fish and game)

- (2) the applicant consumed about 130 lbs personally, as the household's moose and crab were assumed to weigh about 260 lbs, or about 130 lbs per member
- (3) 10 days were spent taking or processing (10 days hunting; 0 days fishing were counted because it was recreational in nature)
- (4) the moose hunting occurred during 1 month
- (5) there were no weeks where taking fish and game was the main activity
- (6) the applicant shared with the maximum of 10 households
- (7) all taking occurred locally



**Case 8.** This Nome household is composed of a husband in his late 30s, his wife in her early 40s, an adult son, and a six-year-old son. The husband is Eskimo and has lived in Nome all his life. The wife is not Native, but she has lived in Alaska for 22 years, 9 of which have been in Nome. Both husband and wife are professional educators, although the husband was unemployed at the time of the survey. The older son is employed as a laborer for the city and carves part-time. The combined household annual net income varies depending on whether or not their contracts extend into the summer months, but averages between \$40,000 and \$50,000.

This household estimates that during most years 75 percent of their protein foods are derived from locally harvested fish and game. This summer, however, the husband had to attend school in Fairbanks for three months and their four-wheel-drive vehicle was broken down, so only about 50 percent of this winter's protein is composed of locally harvested resources. The household has two canips, one at Cape Nome (18 miles east of town). This summer (June 15 to the end of August), they seined for salmon at Fort Davis with a non-related fishing partner, together harvesting 200 pinks, 150 chums, 25 silvers, and one king. Their half of the fish was dried, requiring the occasional help of a married son and his wife and an average of 2-3 hours' labor a day to care for the drying fish. Much of the salmon was distributed to XYZ (an organization which provides meals to elderly Native people) and to individual older households without adequate resource support. Some dried fish and moose meat are traded for marine mammal products such as walrus meat and belukha muktuk.

Other fish taken by this household include arctic cod ("tomcod") which are taken through the sea ice in winter, dried, and shared with others (75 were harvested this last winter); whitefish, harvested by the older son in nearby rivers; or capelin ("cigar fish") taken on the beach in late July; and arctic char, taken from rivers with a seine or rod and reel and smoked (an activity often undertaken simultaneously with moose hunting). This household uses both a seine and rod and reel for fishing, but reports that the outcome of both techniques is the same, a means for obtaining food. The wife states, "I wouldn't catch a fish I wasn't going to eat; it would be a silly waste of time." They would like to fish through the river ice in winter, but lack adequate knowledge about where the holes are located.

Moose are very important to this household, and they are successful in harvesting at least one every year. Moose meat is also shared with XYZ and with people they "owe things to."

Although marine mammals are used for food and raw materials by household members, the husband does not own a boat and so can hunt only when there is room for him on a friend's boat. He was unable to participate this spring, but, as previously mentioned, obtained some food through trade of other resources.

Waterfowl are not as accessible as the household would like because they have no boat, but someone in the household will harvest various species if they have a chance to hunt with someone else while visiting a village. Husband and wife normally eat ptarmigan, but this year they were scarce and only five were taken. All household members will participate in crabbing for king crab through the ice, but the last couple of years crab have not been abundantly available in nearshore waters; and, according to this household, many people in town are both discouraged and think it is too risky to go out on the necessary three or so miles of ice to harvest this resource. Blueberries, salmonberries, mossberries, greens, and roots are also harvested in summer, primarily by the wife.

Not only does this household provide resources to other households both within and without Nome, but they participate as recipients in a resource distribution network that spans hundreds of miles. The husband's mother and sister reside in Homer and share halibut, clams, and occasionally seal with this Nome household. Cousins in Kotzebue send two to three sacks of sheefish and caribou (as much as they can after they have met their own family's needs) each year.

Although this household states they could physically "survive" without local resources, to do so, in their view, would dramatically reduce the quality of every aspect of their lives: nutritional, economic, social and cultural. The wife learned to harvest and depend on resources in Washington state with her family, and came to live and work in rural Alaska to continue that life. Her husband grew up in an Eskimo family, and values the harvest and use of local resources above almost all other things in his life. As his wife states, "I don't know any

Eskimo male who would be happy if he couldn't participate in resource harvest. It is not simply a matter of choice but rather a reason to exist."

Criterion	Minimum	Applicant		Applicant	
		Answer	Formula	Score	Percent
A. Quantity of fish and game consumed	125	300	/ 10 =	30	17%
B. Number of species used	6	17	x 3 =	51	29%
C. Days spent taking or processing	30	50	/ 1 =	50	28%
D. No. of months when taking occurred	4	9	x 2 =	18	10%
E. Weeks when taking fish/game was main work	0	2	x 1 =	2	1%
F. Households receiving or giving	0	10	x 2 =	20	11%
G. Taking was in subsistence use area? y=5, n=0	0	5	x 1 =	5	3%
<b>TOTAL</b>				<b>176</b>	<b>100%</b>

This case qualifies as a subsistence user, scoring more than the 100 point threshold and meeting minimum thresholds for each criteria.

#### Case 8 Assumptions

To score this case, the following assumptions were made:

- (1) the applicant's household used 17 resource categories with the following weights: pink salmon (460), chum salmon (675), silver salmon (115), king salmon (12), tom cod (16), moose (540), ptarmigan (4), walrus (?), beluga (?), whitefish (?), capelin (?), arctic char (?), waterfowl (?), crab (?), halibut (?), sheefish (?), caribou (?), (berries, greens, and roots were not counted because they are not fish and game)
- (2) the applicant consumed a minimum of about 300 lbs personally, as the total household harvest which was used weighed about 1,191 lbs (an additional 631 lbs of salmon was assumed to be given away), or about 298 lbs per member, and the household received additional foods from relatives and friends
- (3) 50 days were spent taking or processing (40 days fishing, 10 days hunting)
- (4) the harvest occurred in 9 different months
- (5) there were 2 weeks where taking fish and game was the main activity
- (6) the applicant shared with the maximum of 10 households
- (7) all taking occurred locally

## GOVERNOR'S SUBSISTENCE BILL SECTIONAL ANALYSIS APPENDIX F

### COMMUNITY SIZE, ECONOMY, AND NUMBER OF SUBSISTENCE USERS

February 1992

The Governor's subsistence bill states that there are relationships between patterns of wild resource use and types of communities in Alaska. This paper discusses some of the evidence in support of these relationships.

The "Findings, Purpose, and Intent" section of the Governor's subsistence bill states:

(6) among persons who hunt and fish, a large majority of those living in areas described in AS 16.05.268(e)(1); a majority of those living in communities described in AS 16.05.268(e)(2); and a small minority of those living in communities or areas described in AS 16.05.268(e)(3), depend upon the subsistence taking of fish and game.

The subsistence bill describes the three types of areas referenced above:

(e)(1) areas where the human population of each community is less than 2,500 and where dependence upon subsistence is a principal characteristic of the economy, culture, and way of life of the areas, and that are not part of an urban area.

(e)(2) communities where the human population is 2,500 to 7,000 and where dependence upon subsistence is a principal characteristic of the economy, culture, and way of life of the community, and that are not part of an urban area.

(e)(3) communities or urban areas where the human population is 7,000 or greater or areas or communities where dependence upon subsistence is not a principal characteristic of the economy, culture, and way of life of the area or community.

For subsistence permits, residents of the three types of communities are accorded different procedures by the subsistence bill. A person who hunts or fishes living in Type 1 communities (e)(1) "is presumed to meet" subsistence user criteria, rebuttable only by "clear and convincing evidence", so no permit or paperwork is required (g)(1). A person who hunts or fishes living in Type 2 communities (e)(2) "is rebuttably presumed to meet" subsistence user criteria, upon signing a statement affirming the person's compliance, rebuttable by a preponderance of evidence (g)(2). A person who hunts or fishes living in Type 3 communities (e)(3) is presumed not to meet subsistence user criteria, and is qualified only upon certification that the person meets the subsistence user criteria (g)(3).

In general, studies by the Division of Subsistence show that there are strong relationships between community size, economy, and percent of subsistence users in Alaskan communities. These relationships are outlined in this paper, with references to research which provide more detailed data on these issues.

### Communities < 2,500 people with Mixed, Subsistence-Cash Economies

Most small, rural communities in Alaska are supported by mixed, subsistence-cash economies (cf, Wolfe and Ellanna 1983; Wolfe and Walker 1987; Wolfe and Bosworth 1990; Schroeder et al 1987). In these communities, a large majority of residents are subsistence users. Mixed, subsistence-cash economies have several characteristics:

1. domestic mode of production of wild foods (family-based groups produce wild foods)
2. extensive non-market distribution and exchange of wild food products among consuming households
3. high participation rates in consumption of wild foods
4. a traditional seasonal cycle of harvesting and processing wild foods
5. a wide diversity of wild resources produced and consumed
6. moderate to high volumes of wild foods produced and consumed
7. household specialization in production ("the super-household phenomenon," the "30-70 rule")(Wolfe 1987)
8. small-scale, efficient technologies for harvesting and processing
9. integration of subsistence production with cash
  - a. use of income to invest in equipment to harvest and process wild foods
  - b. insecure sources of monetary incomes for some families over the long term is common
  - c. low income levels for a substantial proportion of families is common
  - d. limited private sector employment is common
  - e. high costs of imported goods and limited retail stores are common
10. traditional subsistence territories and rules of access to common property resources ("customary law")
11. traditional knowledge and value systems

Of the approximately 278 Alaska communities with a population less than 2,500 in 1990, about 251 had mixed, subsistence-cash economies with these types of characteristics in 1986, as determined by the Alaska Boards of Fisheries and Game.

In general, research by the Division of Subsistence has found that a large majority of residents participate as consumers of subsistence products in small communities with mixed, subsistence-cash economies (cf, Wolfe and Ellanna 1983; Wolfe and Walker 1987; Wolfe and Bosworth 1990; Fall, Foster, and Stanek 1984; Schichnes and Chythlook 1988; Sumida and Andersen 1990; Leghorn and Kookesh 1986; Schroeder et al 1987). Most wild foods are produced by a subset of very productive households in the community (it is common that about 30 percent of the households produce about 70 percent or more of the wild foods). Wild foods are typically shared by highly productive households with less productive households, most commonly along kinship lines and also through other traditional distribution means. Because of extensive kinship ties connecting households in most small communities, almost all persons in the community become consumers of subsistence products. Exceptions include relatively new residents who may be in the process of integrating into the local system, temporary residents primarily living in the community for employment reasons (such as school teachers or construction workers), and the occasional non-conforming resident household.

A case example of a small community with a mixed, subsistence-cash economy is Kaktovik, an arctic slope community with 224 people in 1990, of which 84.4 percent were Alaska Native, primarily from Inupiat cultural traditions. In 1986, the Division of Subsistence interviewed 42 of 53 households in Kaktovik to document the past 12-month's subsistence patterns. Based on that survey, 90.5 percent of Kaktovik households reported harvesting some wild foods in 1985-86. In terms of use, 100 percent of households used subsistence fish, 100 percent used big game, 88.1 percent used marine mammals, and 88.1 percent used wild birds. Most subsistence foods were harvested by a subset of the community's households: 30 percent of Kaktovik's households produced 70 percent of the harvest by weight. Wild foods were widely shared among households, so that use of major species was reported by a large majority of households. For instance, all households (100 percent) reported using char, 95.2 percent used caribou, 69.0 percent used ringed seal, and 61.9 percent used spotted seal. The community landed no bowhead whales that year, yet 83.3 percent of households used bowhead whale which were shared from other communities on the north slope. While 7.2 percent of Kaktovik households harvested moose, 45.2 percent of households used moose. While 2.4 percent of households harvested muskox, 42.9 percent used muskox. While no one reported harvesting broad whitefish, 47.6 percent used whitefish, received from other communities. Kaktovik residents harvested an average of about 328 lbs of wild foods per person in 1985-86, which contained 213 percent of an individual's recommended daily allowance of protein and 31 percent of the daily allowance of calories. The survey did not ask for estimates of individual or household consumption levels. However, because of the wide-spread sharing of wild foods, the mean per capita harvest estimate is probably a reasonable estimate of per capita consumption as well. Kaktovik's cash sector was relatively strong during the 1980s compared with most other small Alaska communities, due to employment generated from North Slope Borough oil revenues. The mean taxable income per income tax return in Kaktovik from 1981-85 was \$25,591, compared to \$6,629 for Venetie, a neighboring village to the south, and compared to \$24,677 for Fairbanks, an urbanized area to the south. The cost of food in Kaktovik is estimated to be 228 percent of prices in Anchorage. The Alaska Boards of Fisheries and Game determined that Kaktovik had a mixed, subsistence-cash economy during deliberations in 1986. State regulations provide for subsistence hunting and fishing in the Kaktovik area.

Kaktovik is just one example of the approximately 278 small communities with mixed, subsistence-cash economies in the state. Other communities show differences in terms of types of species used, harvest quantities, and the integration of subsistence activities with the pattern of local employment (Wolfe and Ellanna 1983; Wolfe and Walker 1987). However, most small communities are similar to Kaktovik in regards to the general characteristics of the mixed, subsistence-cash economy listed above. The Division has conducted studies in over 200 small communities, reported in the Division's technical paper series. Examples of other case communities for comparison with Kaktovik include Tyonek in the southcentral region (Fall, Foster, and Stanek 1984), Manokotak in the southwest region (Schichnes and Chythlook 1988), Fort Yukon in the interior region (Sumida and Andersen 1990), and Tenakee Springs in the southeast region (Leghorn and Kookesh 1986).

#### Communities with 2,500-7,000 people and Mixed, Subsistence-Cash Economies

There were seven mid-sized communities in Alaska with populations of 2,500-7,000 people in 1990: Cordova (2,579), Kotzebue (2,751), Unalaska (3,080), Petersburg (3,230), Barrow (3,469), Nome (3,500), and Bethel (4,674). Dillingham, with a growing population of 2,017 people, was approaching the 2,500 level. In 1986,



the Alaska Boards of Fisheries and Game determined each of these communities to have mixed, subsistence-cash economies. Studies have been done in most of these communities (cf, Ellanna 1983; Fall, Schichnes, Chythlook, and Walker 1986; Stratton 1989; Smythe 1988; Wolfe 1986). These studies have shown that, in general, in these communities, a majority of residents who hunt and fish probably meet the criteria of a subsistence user; however, some residents who hunt and fish in these communities probably do not. In general, the mixed, subsistence-cash economies of these communities share the characteristics of smaller communities, listed above, with a few important additions:

1. more employment opportunities commonly exist in the community in comparison with smaller communities, especially in government services, transportation, and/or commercial fishing;
2. greater between-household diversity exists in resource use patterns, due to greater cultural diversity in the population and more economic options;
3. other cultural traditions are found within segments of the population that affect a household's resource use patterns, such as the recreational-sport outdoors tradition and commercial fishing traditions of industrial-capitalism.

In general, research by the Division of Subsistence has found that most residents participate as consumers of wild resource products in mid-sized communities (2,500-7,000 people) with mixed, subsistence-cash economies. For instance, in Cordova in 1985, 73.3 percent of households used non-commercial salmon, 69.9 percent used halibut, 79.6 percent used big game, and 80.1 percent used marine invertebrates. In Petersburg in 1987, 96.9 percent used salmon, 81.4 percent used halibut, 76.1 percent used big game, and 80.3 percent used marine invertebrates. As in small villages, most wild foods are produced by a subset of very productive households in the community. Wild foods are commonly shared by highly productive households with less productive households, most frequently along kinship lines.

However, in general, the populations of mid-size communities are more culturally mixed in comparison with small communities, due to in-migrations of new residents during the past decades. Because of this, some households in the community fall outside of the extensive kinship networks used for sharing that characterize subsistence-cash systems. Some portion of households in mid-sized communities do not consume subsistence foods for this reason. In addition, some portion of households do not participate in the community's resource use pattern because they choose to participate solely in the cash sector of the community's economy. This choice appears to be due to the personal cultural background and economic situation of the household. Some segment of the population of mid-size communities engage in wild resource harvests from cultural traditions which are different from subsistence customs and traditions. In particular, some households hunt and fish primarily from a Euro-American recreational-sports outdoors tradition. Some households harvest fish primarily as part of the commercial fishing tradition of industrial-capitalism. Some households in these segments of the population may express ideologies in opposition to subsistence traditions, and disagree with laws providing special subsistence preferences. Therefore, although research supports the conclusion that a majority of residents in mid-size communities who fish and hunt are participants in a subsistence-type pattern of wild resource use, a portion of the residents in mid-sized communities who hunt and fish do not.

A case example of a mid-size community with a mixed, subsistence-cash economy is Kotzebue, a community in northwest Alaska with 2,751 people in 1990, of which 75.1 percent were Alaska Native, primarily from Inupiat cultural traditions.



Kotzebue served as a regional center to 11 villages of the northwest arctic. It provided a center for services, government, commerce, transportation, and administration of a developing regional minerals industry. Wage-paying jobs linked to these government-financed services and administrative functions are more numerous in Kotzebue in comparison with surrounding villages, and mean incomes were correspondingly larger. The mean taxable income per income tax return in Kotzebue from 1981-85 was \$20,444, compared to \$9,858 for Selawik, a neighboring village, and compared to \$24,457 for Anchorage, an urbanized area to the southeast. The cost of food in Kotzebue is estimated to be 155 percent of prices in Anchorage.

In 1986, the Division of Subsistence interviewed a random sample of 90 of 765 households in Kotzebue to document the past 12-month's subsistence patterns. Based on that survey, 78.5 percent of Kotzebue households reported harvesting some wild foods in 1986. In terms of use, 95.1 percent of households used subsistence fish, 88.1 percent used big game, 64.3 percent used marine mammals, and 64.0 percent used wild birds. Most subsistence foods were harvested by a subset of the community's households: 30 percent of Kotzebue's households produced 70 percent of the harvest by weight. Wild foods were widely shared among households, so that use of major species was reported by a large majority of households. For instance, 95.4 percent of households reported using salmon, 76.0 percent used sheefish, and 88.1 percent used caribou. Bearded seal was used by 47.2 percent. The community landed no bowhead whales (some Kotzebue residents helped Point Hope hunt), yet 41.1 percent of Kotzebue households used bowhead whale which was shared from Point Hope. While 8.4 percent of Kotzebue households harvested moose, 42.0 percent of households used moose. While 45.2 percent of households harvested caribou, 88.1 percent used caribou. Kotzebue residents harvested an average of about 398 lbs of wild foods per person in 1986, which contained 258 percent of an individual's recommended daily allowance of protein and 37 percent of the daily allowance of calories. The survey did not ask for estimates of individual or household consumption levels. However, because of the wide-spread sharing of wild foods, the mean per capita harvest estimate is probably a reasonable estimate of per capita consumption as well. The Alaska Boards of Fisheries and Game determined that Kotzebue had a mixed, subsistence-cash economy during deliberations in 1986. State regulations provide for subsistence hunting and fishing in the Kotzebue area.

There are substantial differences between the seven communities in this mid-size class in terms of how wild resources are integrated into each community's culture, economy, and way of life. These use patterns are influenced by the community's history and cultural composition. But underlying these differences in detail appear to be the characteristics common to mixed, subsistence-cash economies, listed above. Other mid-size communities where the Division of Subsistence has conducted studies which can be compared with Kotzebue include Nome (Ellanna 1983), Cordova (Stratton 1989), Petersburg (1988), and Bethel (Wolfe 1986). Dillingham, a community almost within this category, can also be compared (Fall, Schichnes, Chythlook, and Walker 1986).

#### Communities > 7,000 People

In 1990, about 441,521 people lived in Alaskan communities larger than 7,000 people, which was about 80.2 percent of the state's population. Areas with populations greater than 7,000 people include the Anchorage Borough (226,338), the Fairbanks North Star Borough (77,720), the Matanuska-Susitna area (39,415), the Kenai Peninsula area (36,651), and the Juneau Borough (26,751). In 1986, the Boards of

Fisheries and Game found that the use of non-commercial fish and game did not comprise a principal part of the economies of these areas. In general, these areas are supported by industrial-capital economies (cf, Wolfe and Ellanna 1983; Wolfe and Walker 1987; Schroeder et al 1987). Other large Alaska communities include the Ketchikan area (13,828), the Kodiak City area (12,230), and Sitka (8,588). In 1986, the Alaska Boards of Fisheries and Game determined that Ketchikan did not have a subsistence-cash economy, while Sitka and Kodiak City did.

In large urbanized areas with industrial-capital economies, the great majority of residents who hunt and fish are probably not subsistence users. In general, the pattern of resource uses of most residents in large urbanized areas with industrial-capital economies show certain characteristics:

1. fishing and hunting are primarily for commercial uses, recreational-sport uses, and personal uses (limited fishing for food)
2. small volumes of wild foods are produced and consumed by most fishers and hunters, with most meat and fish purchased from stores
3. distribution and exchange of wild foods products between households are relatively limited
4. hunting and fishing are typically intermittent breaks from regular wage employment work schedules, rather than a traditional seasonal cycle of harvesting and processing activities
5. a relatively narrow diversity of wild resources is produced and consumed by most households
6. fishing and hunting methods are commonly geared for "fair chase" recreational values, rather than efficient food production
7. both local and relatively wide-ranging land use patterns are common, especially using the public highway systems and aircraft for transportation
8. fishing and hunting values commonly derive from a Euro-American "sports-outdoors" tradition
9. wage employment in an industrial-capital economy provides the primary mode of food production for residents
  - a. strong cash sectors commonly provide wage employment opportunities to most households
  - b. there are relatively lower costs of imported goods and well-stocked retail stores
  - c. commonly there are secure sources of monetary incomes for families over the long term
  - d. commonly there are moderate to high income levels for a substantial proportion of families

In general, many residents of large Alaskan communities with industrial-capital economies fish and hunt. For instance, in 1989 there were an estimated 124,257 resident sport anglers in the Anchorage-Matsu area (West Cook Inlet-Lower Susitna Drainage) and an estimated 24,211 resident sport anglers in the Kenai Peninsula area (Mills 1990). While the numbers participating in fishing and hunting are substantial, estimates of mean per capita harvests in large, urbanized areas are relatively low compared with small communities (Anchorage -- 10 lbs per capita; Fairbanks -- 22 lbs per capita; Kenai -- 37 lbs per capita) (Wolfe and Walker 1987). Mean per capita harvest levels were significantly higher in communities like Sitka (146 lbs) and Kodiak City (147 lbs) for a number of economic, ecological, and cultural reasons (Division of Subsistence, Community Profile Database).

In general, most of the populations of urbanized communities fish and hunt as part of a Euro-American "sport-outdoors" tradition. However, there exists cultural and economic diversity between households in many large communities. In some large communities, there are households who are part of minority enclaves or social groups whose members continue to practice a distinct cultural tradition, such as using traditional wild foods in the home and in ceremonial occasions (Schroeder 1983). Some members of Alaska Native groups with subsistence traditions are examples of these residents. In some communities, there are households who choose to practice an Alaskan "homestead" tradition (or "frontiers tradition"), which includes harvesting for one's household to achieve cultural values of "self-sufficiency" and "healthful foods" from wild resources (Caulfield 1983; Schroeder 1983; Georgette 1983; Reed 1983, 1985). These kinds of households may desire to continue these traditions although it is more difficult in large, populated areas than small communities. Finally, there are some households in certain urbanized areas whose individual household economies resemble the "mixed, subsistence-cash economic systems" of rural communities, but at the domestic household level (Schroeder 1983). These households fish and hunt because it provides a more secure economic base than if they did not.

Thus, there are at least three cultural traditions that explain how subsistence users may exist in urbanized areas: "Alaska Native cultural traditions", an Alaskan "homestead (or frontier) tradition", and the "mixed subsistence-cash economic tradition" at the household level. Although the large majority of residents of large urbanized communities who fish and hunt do so as part of a sports-outdoors tradition, a minority of residents who hunt and fish may do so from these three other types of cultural and economic traditions.

There are differences among the communities in this third category in how fish and game uses are integrated into each community's economic and cultural patterns. Unfortunately, detailed household surveys have not been conducted in the largest urbanized areas (Anchorage, Fairbanks, and Matanuska-Susitna Borough) which are comparable to the surveys conducted in small Alaska communities (but see Caulfield 1983; Schroeder et al 1987). Comparative studies are available for Kodiak City (Kodiak Area Native Association 1983), the Kenai Peninsula area (Georgette 1983; Reed 1983, 1985), and Sitka (Gmelch, Gmelch, and Neison 1984; Schroeder 1983).

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## GOVERNOR'S SUBSISTENCE BILL SECTIONAL ANALYSIS APPENDIX G

### THRESHOLD LEVELS AND BASIC RESOURCE LISTS FOR MEASURING RESOURCE DIVERSITY OF SUBSISTENCE USERS

February 1992

#### Resource Diversity

"Resource diversity" is the number of different kinds of wild resources used by families for food, raw materials, and other subsistence uses during the year. A relatively wide resource diversity can be used as one defining characteristic of a subsistence use pattern. Resource diversity can be measured by counting the number of different resource categories used by a person during the past year (a list of resource categories are shown in Table 1, discussed below).

#### Threshold Levels

The Governor's subsistence bill recommends that the Boards of Fisheries and Game establish threshold levels of resource diversity for subsistence users. This means that applicants for a subsistence permit with resource diversity counts below a certain number would not qualify as subsistence users. The threshold level would be set to meet certain standards: a large majority of residents in communities with populations of less than 2,500 people should be above the threshold; a majority of residents in communities with populations of 2,500 to 7,000 people should be above the threshold; and a small minority of residents in communities with greater than 7,000 people should be above the threshold. The threshold levels also could be specific to particular regions, to deal with variability in species availability between regions.

Measures of resource diversity by the Division of Subsistence, Alaska Department of Fish and Game are summarized in another report (*Resource Diversity As A Characteristic of Subsistence Uses*, by Robert J. Wolfe, Division of Subsistence, Alaska Department of Fish and Game, Juneau, 1992). Tables 2 and 3 derive from that report.

Table 2 presents a measure of resource diversity at the community level. It counts the resource categories used by 50 percent or more of sampled households in particular communities where the Division has conducted research. It illustrates that at the community level, the diversity of resources varies substantially by place and area. For instance, there were six resources used by 50 percent or more of sampled households in Kotzebue in 1987 (1990 population, 2,751 people). By comparison, there were 13 resources used by 50 percent or more of sampled households in Point Lay, and only 2 resources used by 50 percent or more of sampled households in Anderson. In general, this community-level data supports the assertion that resource diversity increases in smaller communities with subsistence-cash economies. As shown in Table 2, most small communities with subsistence-cash economies have community-level counts greater than 6 resources. However, a few are near or below that level, such as Haines (4), Tok (4), Copper Center (6), Gulkana (7), Chignik Bay (7), Galena (9), and Tanana (9) (see Table 2 for the complete list).

Table 3 presents a measure of resource diversity at the household level. It counts the percent of households using a certain number of resources for 15 selected communities where data are available. Resource categories are counted in two different ways in Table 3. The first list is full species list, while the second removes "plants" and "berries" and combines all salmon

species into a single category (the issue of counting resource categories is discussed below). As shown in Table 3, resource diversity at the household level (as measured by the first list) differs substantially between households within a community. For example, in Tanana, 7.8 percent of households used 5 or fewer resources, 51.6 percent of households used 10 or fewer resources, and 81.6 percent used 15 or fewer resources. By comparison, in Kotzebue, 20.6 percent of households used 5 or fewer resources, 45.9 percent used 10 or fewer resources, and 77.0 percent used 15 or fewer resources. As a third comparison, in Copper Center, 31.9 percent of households used 5 or fewer resources, 70.7 percent of households used 10 or fewer resources, and 93.1 percent used 15 or fewer resources.

The data in Tables 2 and 3 are similar to the types of information that the Boards of Fisheries and Game would be provided as they established minimum thresholds and scoring systems for this subsistence user criterion. For instance, if the Boards established a minimum threshold level of 6 for households in the northwest arctic region, then about 79 percent of Kotzebue households look like they exceed that level, according to Table 3 (that is, about 21 percent of Kotzebue households reported using 5 or fewer resources). The data in Tables 2 and 3 suggest that the Boards may want to consider establishing region-specific threshold levels. Region-specific thresholds may provide more sensitive measures of resource diversity than a statewide standard, because they would factor in differences in the availability of resources between areas of the state.

### **Basic Resource Lists**

Measuring resource diversity is affected by the way resources are counted, as shown by comparing household frequencies in the first list with the second list in Table 3. To measure the resource diversity of a subsistence applicant, the Alaska Boards of Fisheries and Game must develop a systematic method for counting resource categories used by an applicant. As part of this method, the Boards must identify a standard list of resource categories for counting.

Table 1 is an example of a list of basic resource categories that might be considered by the Boards. The basic list contains about 90 different categories of wild resources which are commonly reported used within particular Alaska communities, according to Division of Subsistence surveys. Table 1 also lists about 115 other subsistence resource categories which are not included in the basic list, either because they are subsumed under a more general resource category or because the Boards may not choose to count the category for the purpose of measuring resource diversity.

As shown in Table 1, over two dozen species of migratory birds have been grouped into the general categories of "ducks" and "geese" in the basic list. Several varieties of shellfish have been grouped into the general categories of "clams", "cockles", and "crabs" in the basic list. A number of freshwater and saltwater fish species which are less commonly used are grouped into "other non-salmon fish" (including fish such as sturgeon, sea perch, shark, and needlefish). Trout are not included in the basic list because the Boards do not recognize them as subsistence species for most areas of the state.

**TABLE 1**  
**SUBSISTENCE RESOURCE CATEGORIES USED BY ALASKAN COMMUNITIES**  
**BASIC LIST FOR COUNTING RESOURCE DIVERSITY,**  
**AND OTHER RESOURCES SUBSUMED BY OR NOT ON BASIC LIST**

<b>BASIC LIST</b>	<b>OTHERS</b>
Chum Salmon	
Coho Salmon	
Chinook Salmon	
Pink Salmon	
Sockeye Salmon	
Salmon Roe	
Blackfish	
Burbot	
Cisco	
Grayling	
Pike	
Sheefish	
Sucker	
Whitfish, Broad	
Whitfish, Alaska-Humpback-Lake	
Whitfish, Round	
Black Cod-Sablefish	
Lingcod	
Tom Cod	
Pacific Cod-Gray Cod	
Halibut	
Herring	
Herring Roe on Kelp, Hemlock, Eelgrass	
Rockfish	
Red Snapper (Yelloweye Rockfish)	
Sculpin	
Smelt	
Eulachon (Hooligan)	
Arctic Char	
Dolly Varden	
Other Non-salmon Fish	
	Capelin
	Green Sturgeon
	White Sturgeon
	Whiting
	Flounder
	Sole
	Herring Sack Roe
	Blue Rockfish
	Sea Bass
	Sea Perch
	Surf Smelt
	Rainbow Smelt
	Greenling
	Wolf Eel
	Blenny Eel
	Lamprey Eel
	Dogfish
	Shark
	Pollock
	Skates
	Silver Hake
	Black Bass
	Blue Fin
	Tuna/Mackerel
	Needlefish
	Cutthroat Trout
	Lake Trout
	Rainbow Trout
	Steelhead

TABLE 1  
 SUBSISTENCE RESOURCE CATEGORIES USED BY ALASKAN COMMUNITIES  
 BASIC LIST FOR COUNTING RESOURCE DIVERSITY,  
 AND OTHER RESOURCES SUBSUMED BY OR NOT ON BASIC LIST

BASIC LIST	OTHERS
Black Bear	
Brown Bear	
Caribou	
Deer	
Goat	
Moose	
Muskox	
Sheep	
Arctic Fox	
Red or Cross Fox	
Beaver	
Coyote	
Arctic Hare	
Snowshoe Hare	
Land Otter	
Lynx	
Marmot	
Marten	
Mink	
Muskrat	
Porcupine	
Weasel	
Wolf	
Wolverine	
Tree Squirrel	
Parka Squirrel (ground)	
Ermine	
Belukha	
Bowhead	
Bearded Seal	
Fur Seal	
Harbor Seal	
Ringed Seal	
Spotted Seal	
Seal Oil	
Wulrus	
Polar Bear	
Sea Lion	
Sea Otter	
	Gray Whale
	Black Fin Whale
	Ribbon Seal
	Porpoise/Dolphin
Grouse	
Ptarmigan	
Ducks	
Geese	
Swan	
Crane	
Bird Eggs	
	Snowy Owl
	Eider
	Scoter
	Harlequin
	Goldeneye
	Bufflehead
	Merganser
	Scup
	Mallard
	Pintail

TABLE 1  
 SUBSISTENCE RESOURCE CATEGORIES USED BY ALASKAN COMMUNITIES  
 BASIC LIST FOR COUNTING RESOURCE DIVERSITY,  
 AND OTHER RESOURCES SUBSUMED BY OR NOT ON BASIC LIST

BASIC LIST	OTHERS
	Wigeon
	Teal
	Gadwall
	Oldsquaw
	Shoveler
	Canvasback
	Redhead
	Ringneck
	Brant
	Emperor Geese
	Snow Geese
	Whitefronted Geese
	Taverners
	Cacklers
	Lessers
	Vancouver
	Dusky Geese
	Alutian Geese
	Whistling (Tundra) Swan
	Trumpeter Swan
	Whooper Swan
	Snipe
	Plover
	Cormorants
	Loons
	Puffins
	Gulls
	Kittiwakes
	Murre
	Tern
	Grebe
	Great Blue Heron
	Murre Eggs
	Gull Eggs
	Cormorant Eggs
	Puffin Eggs
	Tern Eggs
	Plover Eggs
	Snipe Eggs
	Crane Eggs
	Duck Eggs
	Geese Eggs
	Swan Eggs
Abalone	
Clams	
Crabs	
Cockles	
Scallops	
Mussels	
Chiton	
Octopus	
Sea Cucumber	
Sea Urchin	
Shrimp	
Other Marine Invertebrates	
	Butter Clams
	Razor Clams
	Steamer Clams
	Little Neck Clams
	Softshell Clams

TABLE 1  
SUBSISTENCE RESOURCE CATEGORIES USED BY ALASKAN COMMUNITIES  
BASIC LIST FOR COUNTING RESOURCE DIVERSITY,  
AND OTHER RESOURCES SUBSUMED BY OR NOT ON BASIC LIST

<u>BASIC LIST</u>	<u>OTHERS</u>
	Pinkneck Clams
	Horse Clams (Gaper)
	Dungeness Crab
	King Crab
	Tanner Crab
	Opis Crabs
	Hair Crab
	Box Crab
	Basket Cockles
	Heart Cockles
	Geoducks
	Blue Mussels
	Snails
	Limpets
	Squid
	Oyster
	Whelk
	Berries
	Plants/Greens/Mushrooms
	Black Seaweed
	Sea Ribbons
	Bull Kelp



Table 2  
 Count of the Resources Used by 50 Percent or More of Sampled Households  
 By Community, Region and Resource Class, for Selected Communities

Source: Community Profile Database, Division of Subsistence ADIG

Community	Region	Big Game	Birds & Eggs	Marine		Non-Salmon Fish	Plants & Berries	Salmon	Small Game/Furbearers	Total Count	Total Count, No Plants/Berries	Total Count
				Invertebrates	Mammals							Salmon One Category, No Plants/Berries
Kotzebue	Arctic	1	0	0	0	3	1	1	0	6	5	5
Nuiqsut	Arctic	1	2	0	2	5	1	1	0	12	11	11
Kaktovik	Arctic	3	5	0	3	2	0	0	0	13	13	13
Point Lay	Arctic	1	5	0	4	2	1	0	0	13	12	12
Shishmaref	Arctic	1	5	1	2	4	2	0	0	15	13	13
Brevig Mission	Arctic	1	4	0	3	4	2	2	0	16	14	13
Golovin	Arctic	2	6	1	3	5	2	1	1	21	19	19
Anderson	Interior	1	0			1	0	0	0	2	2	2
Healy	Interior	1	0			1	1	0	0	3	2	2
Tok	Interior	2	1			1	0	0	0	4	4	4
McKinlay Park Village	Interior	2	0			1	2	0	0	5	3	3
Galena	Interior	1	3			0	1	3	1	9	8	5
Tanana	Interior	1	3			1	1	2	1	9	8	6
Chisana	Interior	1	0			3	3	2	1	10	7	6
Fort Yukon	Interior	2	2			2	1	2	1	10	9	8
Northway	Interior	2	2			3	2	0	1	10	8	7
Tanacross	Interior	2	1			3	2	1	1	10	8	8
Totlin	Interior	1	1			3	3	0	2	10	7	7
Dot Lake	Interior	2	1			4	3	1	1	12	9	9
Parks Highway South	Southcentral	0	0	0	0	0	1	1	0	2	1	1
Glennallen	Southcentral	1	0	0	0	0	1	1	0	3	2	2
Talkeetna	Southcentral	0	0	0	0	0	1	2	0	3	2	1
Tazlina	Southcentral	0	0	0	0	0	1	2	0	3	2	1
East Glenn Highway	Southcentral	1	0	0	0	0	2	1	0	4	2	2
Chistochina	Southcentral	2	0	0	0	0	2	1	0	5	3	3
Kenny Lake	Southcentral	0	0	0	0	1	2	2	0	5	3	2
Chitna	Southcentral	0	0	0	0	1	3	2	0	6	3	2
Copper Center	Southcentral	2	0	0	0	1	1	2	0	6	5	4
Petersville Road	Southcentral	1	1	0	0	1	2	1	0	6	4	4
Slana	Southcentral	2	0	0	0	1	2	1	0	6	4	4
Slana Homestead 5	Southcentral	1	1	0	0	1	2	1	0	6	4	4
Totnam	Southcentral	2	0	0	0	1	2	1	0	6	4	4

Table 2

Count of the Resources Used by 50 Percent or More of Sampled Households  
By Community, Region and Resource Class, for Selected Communities

Source: Community Profile Database, Division of Subsistence ADIG

Community	Region	Big Game	Birds & Eggs	Mammals Invertebrates	Mammals	Non-Salmon Fish	Plants & Berries	Salmon	Small Game/Furbearers	Total Count	Total Count, No Plants/Berries	Total Count Salmon One Category, No Plants/Berries
Trapper Creek	Southcentral	1	0	0	0	2	1	2	0	6	5	4
Gulkana	Southcentral	2	0	0	0	1	2	2	0	7	5	4
Lake Louise	Southcentral	1	0	0	0	4	2	0	0	7	5	5
Sierra Homestead N	Southcentral	1	1	0	0	1	2	2	0	7	5	4
West Glenn Highway	Southcentral	2	0	0	0	2	2	1	0	7	5	5
Hurricane Broad Pass	Southcentral	1	0	0	0	2	3	2	0	8	5	4
Mentasta Pass	Southcentral	2	1	0	0	1	3	1	0	8	5	5
Chase	Southcentral	1	1	0	0	3	3	1	0	9	6	6
Gakona	Southcentral	2	1	0	0	2	2	2	0	9	7	6
McCarthy Road	Southcentral	2	1	0	0	1	3	1	1	9	6	6
Mentasta	Southcentral	2	1	0	0	2	3	1	0	9	6	6
Paxson	Southcentral	2	2	0	0	3	1	1	0	9	8	8
Sourdough	Southcentral	2	1	0	0	2	2	2	0	9	7	6
South Wrangell Mou	Southcentral	2	1	0	0	2	3	1	0	9	6	6
Gold Creek	Southcentral	1	2	0	0	3	3	1	0	10	7	7
Nabesna Road	Southcentral	3	1	0	0	3	2	1	1	11	9	9
Chenega Bay	Southcentral	2	1	5	2	3	2	0	0	15	13	13
San Juan Bay	Southcentral	2	1	2	1	4	1	4		15	14	11
Port Graham	Southcentral	1	0	5	1	3	3	5	0	18	15	11
Tattler	Southcentral	2	1	2	3	4	2	5	0	19	17	13
English Bay	Southcentral	2	1	5	1	6	4	5	0	24	20	16
Sitka	Southeast	0	0	0	0	0	1	0		1	0	0
Skagway	Southeast	0	0	2	0	1	0	0		3	3	3
Haines	Southeast	0	0	0	0	2	1	1		4	3	3
Collman Cove	Southeast	1	0	2	0	2	1	1		7	6	6
Tenakee Springs	Southeast	1	0	2	0	2	1	1		7	6	6
Wrangell	Southeast	1	0	1	0	1	1	1		7	6	6
Craig	Southeast	1	0	2	0	3	1	1		8	7	7
Hyder	Southeast	0	0	1	0	2	2	1		8	6	6
Metchikilla	Southeast	1	0	1	0	1	1	2		8	7	6
Sustut	Southeast	1	0	1	0	2	2	2		8	6	5
Trask	Southeast	1	0	1	0	2	2	2		9	7	6

Table 2  
 Count of the Resources Used by 50 Percent or More of Sampled Households  
 By Community, Region and Resource Class, for Selected Communities

Source: Community Profile Database, Division of Substance ADIG

Community	Region	Big Game	Birds & Eggs	Mammals		Non- Salmon Fish	Plants & Berries	Salmon	Small Game/ Furbearers	Total Count	Total Count, No Plants/Berries	Total Count Salmon One Category, No Plants/Berries
				Inverte- brates	Mammals							
Klawock	Southeast	1	0	2	0	2	2	2	9	7	6	
Thorne Bay	Southeast	1	0	2	0	3	2	1	9	7	7	
Petersburg	Southeast	1	0	4	0	1	2	2	10	8	7	
Point Baker	Southeast	1	0	3	0	3	2	1	10	8	8	
Whale Pass	Southeast	1	0	4	0	2	2	1	10	8	8	
Hollis	Southeast	1	0	4	0	2	2	2	11	9	8	
Klukwan	Southeast	0	0	0	0	5	2	4	11	9	6	
Angoon	Southeast	1	0	4	0	2	2	3	12	10	8	
Port Alexander	Southeast	1	0	2	0	3	4	2	12	8	7	
Meyers Chuck	Southeast	1	0	4	0	3	2	3	13	11	9	
Ellin Cove	Southeast	1	0	6	0	3	2	2	14	12	11	
Kake	Southeast	1	0	4	1	2	3	3	14	11	9	
Pelican	Southeast	1	0	5	0	4	2	2	14	12	11	
Hoonah	Southeast	1	0	3	1	5	2	3	15	13	11	
Kasaan	Southeast	1	0	5	0	4	3	2	15	12	11	
Port Protection	Southeast	1	0	3	0	3	4	4	15	11	8	
Yakutat	Southeast	1	0	4	1	3	3	3	15	12	10	
Hydaburg	Southeast	1	0	5	0	5	3	3	17	14	12	
Beecher Pass	Southeast	1	1	5	0	4	3	4	18	15	12	
Edna Bay	Southeast	1	0	7	0	4	3	3	18	15	13	
Dillingham	Southwest	2	0	0	0	0	1	3	6	5	3	
Craigik Bay	Southwest	1	0	2	0	1	1	2	7	6	5	
Egegik	Southwest	1	2	0	0	0	1	3	7	6	4	
Kodiak City	Southwest	1	0	5	0	1	0	2	9	9	8	
Chinak	Southwest	1	0	3	0	3	0	3	10	10	8	
Nelson Lagoon	Southwest	1	3	2	0	1	1	2	10	9	8	
Port Heiden	Southwest	1	3	1	0	1	1	3	10	9	7	
Port Lions	Southwest	1	1	4	0	2	0	3	11	11	9	
Levelock	Southwest	2	5	0	1	3	2	0	13	11	11	
Aklavik	Southwest	1	3	5	2	1	0	3	15	15	13	
Chignik Lagoon	Southwest	2	1	2	0	2	2	4	15	13	10	
Elsie	Southwest	2	0	0	0	6	1	4	15	14	11	

Table 2

Count of the Resources Used by 50 Percent or More of Sampled Households  
By Community, Region and Resource Class, for Selected Communities

Source: Community Profile Database, Division of Subsistence ADFG

Community	Region	Big Game	Birds & Eggs	Mammal Inverte brates	Mammal Mammals	Non- Salmon Fish	Plants & Berries	Salmon	Small Game/ Furbearers	Total Count	Total Count, No Plants/Berries	Total Count Salmon One Category, No Plants/Berries
New Stuyahok	Southwest	2	1	0	1	4	1	4	2	15	14	11
Old Harbor	Southwest	1	2	5	2	1	0	4	0	15	15	12
Chignik Lake	Southwest	3	3	2	1	1	3	3	0	16	13	11
Pilot Point	Southwest	1	7	0	0	1	1	4	2	16	15	12
Koliganek	Southwest	2	3	0	1	4	1	4	2	17	16	13
Larson Bay	Southwest	1	1	6	1	5	0	4	0	18	18	15
Ugashik	Southwest	2	8	0	0	2	0	3	4	19	19	17
Ouzinkie	Southwest	1	2	6	1	5	0	4	1	20	20	17
Fulse Pass	Southwest	1	6	5	1	3	2	4	0	22	20	17
Perryville	Southwest	3	2	5	1	4	3	4	0	22	19	16
Karluk	Southwest	1	4	5	2	7	0	4	0	23	23	20
Manokotak	Southwest	2	3	1	2	11	2	4	2	27	25	22
Ivanof Bay	Southwest	2	5	8	1	5	3	7	1	32	29	23









## GOVERNOR'S SUBSISTENCE BILL SECTIONAL ANALYSIS APPENDIX H

### BIBLIOGRAPHY OF SOME SUBSISTENCE STUDIES RELATED TO COMMUNITY SIZE, ECONOMY, AND AND CULTURE

February 1992

The Governor's subsistence bill states that there are relationships between patterns of wild resource use, types of communities, types of economy, and cultures in Alaska. This bibliography lists some subsistence studies done by the Division of Subsistence, Alaska Department of Fish and Game, which serve as basic references on subsistence use patterns within Alaska communities. A complete listing of subsistence studies published by the Division of Subsistence is contained in the abstracts of their Technical Paper Series, cited below. All technical papers are available on request from the Division of Subsistence headquarters office in Juneau (Division of Subsistence, ADF&G, Box 25526, Juneau, AK 99802-5526; 465-4147).

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# DIVISION OF LEGAL SERVICES

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### MEMORANDUM

March 27, 1992

**SUBJECT:** SB 443; Definition of "Sustained Yield"  
**TO:** Senator Lyman Hoffman  
**FROM:** George Utermohle *GU*  
Legislative Counsel

You have asked whether it is necessary that SB 443 contain a definition of "sustained yield."

It is not necessary that SB 443 contain a definition of "sustained yield." Sustained yield is a concept well understood by resource managers and does not need to be defined in statute. The Alaska Supreme Court has had no trouble understanding the constitutional concept of sustained yield and determining that a statutory definition of "sustained yield" in AS 41.17 was potentially violative of the constitutional concept. Southeast Alaska Conservation Council v. State, 665 P.2d 544, 548 n. 12 (Alaska 1983).

The definition of "sustained yield" contained in SB 443 incorporates several concepts from the Alaska Constitution and federal policy. The melding of these diverse concepts reflects substantive policy choices that are more appropriately addressed in a substantive provision of the bill, rather than in a definition. By moving the definition of "sustained yield" into the substantive provisions of SB 443, the policy choices made by the definition of "sustained yield" are more evident and more subject to open discussion.

If it is the intent of the legislature to include a definition of "sustained yield" in SB 443, a concise definition that does not incorporate so many issues into a single concept would be more comprehensible and easier to implement by resource managers.

The definition of "sustained yield" is applicable to sport and subsistence hunting and to sport, commercial, personal use, and subsistence fishing. For this reason the definition of sustained yield is outside of the title of SB 443. The Alaska Constitution



Senator Lyman Hoffman  
March 27, 1992  
Page 2

requires that a bill express its contents. Article II, sec. 13. The purpose of this provision of the constitution is to give the legislature and the people fair notice of the contents of a bill. Without mentioning in the bill title that SB 443 is defining "sustained yield," the legislature and people are not given notice that the bill is defining the term for purposes other than subsistence. To cure the defect in the title of the bill, the definition can be eliminated from the bill or made applicable to only subsistence use of fish and wildlife, or the title of the bill can be amended.

If I can provide further assistance, please advise.

GU:pl  
92-213.plm

# DIVISION OF LEGAL SERVICES

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### MEMORANDUM

March 23, 1992

**SUBJECT:** Consistency of the Governor's subsistence bill with the Alaska National Interest Lands Conservation Act (SB 443)

**TO:** Senator Lloyd Jones, Chair  
Senate Resources Committee

**FROM:** George Utermohle *GU*  
Legislative Counsel

You have asked whether the Governor's subsistence bill is consistent with the subsistence provisions of the Alaska National Interest Lands Conservation Act (ANILCA; 16 U.S.C. 3111 - 3126).

#### SHORT ANSWER

SB 443 is not consistent with ANILCA in regard to who is eligible to participate in subsistence hunting and fishing. This inconsistency is very significant and requires either an amendment of ANILCA or a change to SB 443 in order to make the state and federal statutes consistent.

SB 443 applies only to subsistence uses of fish and wildlife, while ANILCA speaks in terms of subsistence uses of wild, renewable resources. This discrepancy may be significant.

There are also several instances where the provisions of SB 443 vary from those of ANILCA, but it is not clear how significant these variations are. It is possible that in many instances these provisions may be construed as consistent with each other.

#### DISCUSSION

The subsistence provisions of ANILCA have been the standard against which the state subsistence law was measured for determining whether the state retained management of subsistence use of fish and wildlife on federal public land.

State management of subsistence uses of fish and wildlife on federal public land, was contingent upon enactment and implementation of state laws which were consistent with ANILCA's provisions relating to a definition of subsistence (16 U.S.C. 3113), a preference for subsistence use of fish and wildlife (16 U.S.C. 3114), and for local and regional participation in management of subsistence (16 U.S.C. 3115).

ANILCA is ambiguous as to whether the state can regain management of subsistence uses of fish and wildlife on federal public land without action by the Congress. Under 16 U.S.C. 3115(d), the state could retain management of subsistence on federal public land if the state enacted and implemented laws consistent with ANILCA by December 2, 1981. The state could then retain management until the consistent state subsistence law was repealed. The McDowell decision of the Alaska Supreme Court effectively repealed the consistent state subsistence law. McDowell v. State, 785 P.2d 1 (Alaska 1989). ANILCA does not provide for reinstatement of state management authority over subsistence on federal public lands once the state has failed to comply with ANILCA. It is possible that the federal agencies responsible for implementing ANILCA (Department of the Interior and Department of Agriculture) may construe 16 U.S.C. 3115(d) in such a way as to allow the state to regain management authority at any time, provided that the state had a consistent subsistence law before December 2, 1981. However, if it is determined that ANILCA does not authorize the federal agencies to return management to the state, the state cannot regain management until the Congress amends ANILCA to provide such authority.

#### DEFINITION OF SUBSISTENCE

The ANILCA definition of subsistence, in essence, defines "subsistence uses" as the customary and traditional uses by rural Alaska residents of wild, renewable resources for (1) direct personal or family consumption as food shelter, fuel, clothing, tools, or transportation; (2) making and selling of handicrafts from nonedible byproducts of fish and wildlife; (3) barter or sharing for personal or family consumption; and (4) customary trade. The definition of "subsistence uses" also included definitions of "family" and "barter."

SB 443 defines the term "subsistence" as the noncommercial, customary and traditional taking and uses of fish and game by a resident in a subsistence use area of the state for (1) direct personal or family consumption as food, clothing, or transportation; (2) the making and selling of handicraft articles out of nonedible by-products of fish and wildlife resources taken for personal or family consumption; (3) sharing; and (4) barter and customary trade of a portion of fish or game resources harvested primarily for personal or family consumption. The fact that SB 443 defines the term "subsistence" instead of "subsistence uses" is probably inconsequential.

The most significant difference between the ANILCA definition and SB 443's definition is that SB 443 does not limit subsistence to rural residents. The bill provides that any resident of the state whether the person resides in a rural or urban area of the state may qualify for subsistence use of fish and wildlife, if the person can show the requisite history of use and dependence on fish and wildlife. The fact that a resident who lives in an area that is traditionally considered rural can be barred from subsistence activities and the fact that a resident of an urban area can engage in subsistence activities makes SB 443 inconsistent with ANILCA. The federal court of appeals has already determined that the former state system, which limited participation in subsistence activities to residents of rural areas where subsistence was a principal element of the local economy, was inconsistent with ANILCA. Kenaitze Indian Tribe v. State of Alaska, 860 P.2d 312 (CA 9 1989). The court construed ANILCA literally to require that all rural residents of the state be eligible for subsistence activities regardless of the nature of the economy or degree of dependence on subsistence in the area where the person lived.

SB 443 also deletes references to "wild, renewable resources" and to "shelter," "fuel," and "tools". The bill essentially deletes these terms because they are not relevant in the context of subsistence uses of fish and wildlife. The deletion of these terms from the definition of "subsistence uses" or "subsistence" may or may not be significant. In approving the state subsistence law in the past, the federal government did not express any concerns over the fact that the Department of Fish and Game had no authority to provide for these other uses of other renewable resources. If the state must provide for subsistence use of these other renewable resources, the legislature would have to provide for such uses through the Department of Natural Resources --the Department of Fish and Game has jurisdiction over only fish and wildlife.

SB 443 also defines the terms "customary and traditional" and "customary trade." The definition given to these terms by SB 443 varies from the definition of these terms in federal subsistence regulations. It is possible that the definition of these terms in SB 443 is inconsistent with the meanings ANILCA intended to apply to these terms.

#### PREFERENCE FOR SUBSISTENCE USES OF FISH AND WILDLIFE

ANILCA provides that the taking of fish and wildlife for nonwasteful subsistence uses has a priority over takings of fish and wildlife for other purposes. If it is necessary to restrict the taking of fish and wildlife for subsistence uses, then the priority is implemented by applying the following criteria: (1) customary and direct dependence upon the resource as a mainstay of livelihood; (2) local residency; and (3) the availability of alternative resources.

SB 443 does not expressly provide, outside of the bill's statements of findings, purpose, and intent, that subsistence is a priority use of fish and game. That omission may not be significant. The bill provides that, except in cases of shortages of fish and

Senator Lloyd Jones

March 23, 1992

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game, a reasonable opportunity to engage in subsistence hunting and fishing shall be accorded to subsistence users. It is not clear whether the "reasonable opportunity" standard represents a significant deviation from the subsistence preference provisions of ANILCA. The bill provides that subsistence users always have access to fish and wildlife resources and that they are the last user group to have their harvest opportunities reduced when there is a shortage of fish or wildlife.

In the event that available fish or wildlife is not sufficient to provide for all subsistence uses, SB 443 provides that the available resources are to be allocated on the bases of (1) the customary and direct dependence on the fish stock or game population by the subsistence user for human consumption as a mainstay of life; (2) the proximity of the domicile of the subsistence user to the stock or population; and (3) the ability of the subsistence user to obtain food if subsistence use is restricted or eliminated. For the most part, these provisions are substantially similar to those in ANILCA. The one possible exception is that SB 443 considers the ability of the subsistence user to obtain food, while ANILCA considers the availability of alternative resources. It is not clear whether ANILCA would take into consideration the ability to obtain food through the cash economy, like SB 443 evidently does. ANILCA may be referring only to availability of alternative fish and wildlife resources.

#### LOCAL AND REGIONAL PARTICIPATION IN SUBSISTENCE MANAGEMENT

SB 443 does not propose any changes to the existing framework for local and regional participation in subsistence management. The current system for local and regional participation exists largely in regulations of the Department of Fish and Game. The current system should still be consistent with the requirements of ANILCA.

If I may be of further assistance, please advise.

GU:mi

92-046.mai

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### MEMORANDUM

March 23, 1992

**SUBJECT:** Constitutional issues raised by the Governor's Subsistence Bill.  
(SB 443)

**TO:** Senator Lloyd Jones, Chair  
Senate Resources Committee

**FROM:** George Utermohle *GU*  
Legislative Counsel

You have asked whether SB 443, the Governor's subsistence bill, is consistent with the Alaska Constitution?

### SHORT ANSWER

One, SB 443 provides for the establishment of dozens of subsistence use areas. The mandatory minimum eligibility standards for subsistence hunting and fishing proposed by SB 443 establish each subsistence use area as a separate use area and limit admission to the user group for that area to only those persons who have an extensive history of use in the area. The mandatory minimum eligibility standards pose a significant infringement on the open access values of the Alaska Constitution. There is a substantial risk that the mandatory minimum eligibility standards are unconstitutional.

Two, under SB 443, a person's place of residence in the state determines the degree of the burden that the person must overcome to establish eligibility to participate in subsistence activities. Because these varying burdens relate to eligibility for entry into fish and game user groups, they may inhibit equal and open access to fish and game resources and, thus, are at least constitutionally suspect under the open access provisions of the Alaska Constitution.

Three, numerous provisions of SB 443 establish fixed standards or criteria to determine whether a person is eligible to engage in subsistence hunting and fishing or establish the conditions under which the person may apply for subsistence privileges or may engage in subsistence hunting and fishing. Each of these provisions is potentially subject to challenge on equal protection grounds by a person who is