

ALASKA LEGISLATURE COMMITTEE FILES 1997-1998 8672

9371 HOUSE RESOURCES

- (3) the number of days in the preceding twelve months that the person engaged in taking fish or game in the subsistence use area or spent processing that fish or game, with a mandatory minimum of 30 days;
- (4) the number of months in the preceding twelve months in which the applicant engaged in taking fish or game in the subsistence use area, with a mandatory minimum of four months;
- (5) the number of weeks, in the preceding twelve months, during which the taking or processing of fish and game was the applicant's principal work effort, to a maximum of 26 weeks;
- (6) the number of households, other than the person's household, with which the person shared or received fish and game in the preceding twelve months, with a maximum of 10 households; and
- (7) whether the person's taking of fish and game occurred solely in the subsistence use area for which they are qualifying.

As indicated above, in group 3 communities a person must fill out an application and score sufficient points to demonstrate his or her eligibility; in group 2 communities, signature of a statement affirming the person's qualification creates a rebuttable presumption that the person is qualified; and in group 1 areas, no paper work is required and the presumption is that all persons who hunt or fish meet the minimum standards.

Where would people be able to go for subsistence hunting and fishing?

People would normally qualify for the subsistence use area in which they live, but could qualify for another area by application. Subsistence use would be on fish stocks and animal populations that have customarily and traditionally been used for subsistence. This would allow qualified subsistence users to hunt and fish as they have in the past. Group 3 areas would be closed to subsistence hunting and fishing, but urban residents who qualify as subsistence users would be able to subsistence hunt and fish in portions of the subsistence use area in which they live that are not classified in group 3 and thus closed to subsistence taking.

What are the advantages of this approach?

It protects the resource. It does not divide villages. It protects residents of regional centers from growing out of subsistence, and it allows the small minority of urban residents who are subsistence users to participate. It complies with our constitution. Most importantly, because this legislation has been worked out with the help of all sides, it will protect subsistence and subsistence users while reducing the division and political instability that has plagued this issue.



STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

February 6, 1992

Mr. Mitch Demientieff
P. C. Box 249
Nenana, AK 99760

Dear Mitch,

For too many years, the politics of subsistence divided our state. When the Subsistence Advisory Council first met, there were skeptics who said there was no solution. As we wrap up the proposed legislation and conclude the Council's final meeting, it is clear the skeptics were wrong.

You have served as a shining example of how Alaskans of good faith and good sense can work together and solve problems, no matter how tough. You have performed a tremendous service for Alaska.

In about a week and a half, I will introduce legislation you have helped to draft. As we conclude the Council's deliberations and begin the legislative process, I hope each of you will continue to be involved, both individually and on behalf of the interests you have so ably represented. I appreciate the Council's willingness to reassemble, if necessary, as we continue through the process and in two years to review how the law has functioned. Passage of subsistence legislation continues as a top priority for me. I want you and Kathleen to join me for a great party at the signing ceremony.

I know that there are parts of the draft that each Council member would do differently if it were left to him alone. Each of you will have to deal with friends and associates who will feel you should have prevailed on every point. I also understand that while some members were nominated by specific groups, each of you participated as individuals, and each interest group will have to make its own decision.

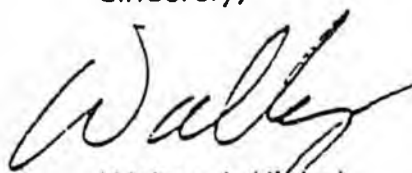
I asked you to draft the best possible subsistence legislation for Alaska, and I think you have done it. I sat at the table as meeting after meeting you hammered out the hard points and forged a document that works. Most important, you have proved that all users of our fish and game can work together for a common purpose.

Mr. Mitch Demientieff
February 6, 1992
Page 2

I have previously told you I feel the Council has made the most important contribution to Alaska of any group since the Constitutional Convention, and I meant it. Thank you for your service. We are all in your debt.

With warm regards.

Sincerely,

A handwritten signature in cursive script, appearing to read "Walter".

Walter J. Hickel
Governor

A similar letter to

was sent to [unclear]

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FISCAL NOTE ANALYSIS: Division of Subsistence

Development of a Subsistence Permitting Program:

OVERVIEW:

The Governor's subsistence bill creates a new system by which subsistence qualification criteria are applied to individual applicants in the urbanized areas of Alaska, and in some smaller communities where the economy is not based on subsistence. This individual application system is expected to draw in excess of 10,000 applicants in the first year or two, and a lesser number of applicants thereafter. Implementation of the proposed subsistence permitting program is anticipated to have a cost of \$285,378 for the first year, FY 93. By FY 98, the cost is expected to have dropped to \$239,342 as the permitting system assumes a normal regulatory presence and acceptance. A subsistence application program staff, with initial support from other Division of Subsistence staff, will have responsibility for the preparation, distribution, scoring, and issuing of subsistence permits. In addition, the staff will review applications for completeness and accuracy, evaluate responses, and hold findings of fact in disagreements involving issuance of permits.

PROCESS:

The unit charged with issuing subsistence permits will consist of a core of four individuals: a hearing officer, an analyst/programmer, a data processing clerk, and a clerk typist. Duties of the staff relate to two primary functions. (1) the mechanics of issuing permits and (2) the rectification of disagreements. The issuance of permits requires the design and printing of applications, a distribution system to provide the public with ready access to the applications, a means to rapidly evaluate applications, and issue permits to qualified applicants. The rectification of disagreements over the issuance of permits requires a systematic process in which applicants have adequate recourse to resolving disputes prior to seeking judicial relief.

To provide the applicant with the greatest opportunity of receiving the benefits to which they are entitled, the permitting system provides a series of safe guards. The oversight process begins with receipt of the application and its initial review. Applications lacking vital information or incomplete responses will be returned with letters of explanation. Applicants who do not receive a permit as confirmation of meeting the subsistence criteria will receive notification of their rejection and the opportunity to provide additional support to their claim of subsistence priority. If the unsuccessful applicant provides additional support, the application will be re-evaluated and the applicant informed of the results. Should the applicant still be rejected, they may seek an appearance before the hearing officer in order to determine the facts of the case. If the hearing officer still decides against the applicant, the applicant can appeal to the Commissioner of Fish and Game. In the event the Commissioner affirms the original denial, the decision would be final for the Department and the applicant could appeal to the state Superior Court.

CORE STAFFING:

Hearing Officer: The hearing officer (HO) is a range 21 employee with responsibilities for determining findings of facts. This position will design and implement the necessary procedures to see that the intent of the legislation is met and that applicants who are denied a subsistence permit are assured of due process. The position receives clerical support from the clerk typist position and investigative support from the analyst programmer position.

Analyst Programmer III: The analyst programmer (A/P III) is a range 17 with responsibilities for the design of the application, creation of the necessary data management procedures and programs, and the

collection of administrative information relevant to the applicant. Using hunting license and permit information within the Department of Fish and Game, the programmer will provide the hearing officer with data relevant to applications in dispute. The position will also undertake a random review of successful awardee to ensure that the system is meeting its objective of providing a subsistence priority to qualified applicants. The analyst/programmer will have co-responsibility with the hearing officer for preparation of documentation on applicant cases. The position will provide immediate supervision of the data processing clerk and those functions of clerk exclusive of the hearing process.

Data Processing Clerk II: The data processing clerk II (DPC II) is a range 9 with responsibilities for the accurate review and entry of information provided by the applicant. Following data entry, the position will archive all materials in accordance with administrative procedures. As required, the data processing clerk will provide support for the distribution of applications and permits.

Clerk III: The clerk III is a range 9 with responsibilities for maintaining administrative functions of the unit, responding to public inquiries, and facilitating the activities of the hearing officer through the recording and preparation of transcripts of all hearings.

SUPPORT STAFF:

During the initial years of the program, the unit will draw upon some staff resources of the Division of Subsistence. The Division's current research director and AP IV will develop and analyze options for the subsistence application and scoring system for presentation to the Boards of Fisheries and Game, who are authorized in the bill to finalize the application and scoring system. These and other support functions will be subsumed within the Division's current budget. Subsistence Resource Specialist (SRS) IIs and clerical staff will provide regional support in facilitating the public's awareness of the process and responding to inquiries of local residents. In the first year, eight months of SRS support is provided. This drops to four months in the second year, and a single month in the third year. After the third year, the permitting process will involve only the core, four-member staff.

BUDGET--Division of Subsistence:

FY 93

The initial budget provides for three full time employees: the analyst/programmer III, the data processing clerk II, and the clerk III. This group will prepare and distribute the application forms, respond to public inquiries, and score the applications received. The hearing officer will be brought onto staff immediately prior to the receipt of applications. With the subsistence permitting unit based in Anchorage, additional regional support to respond to public inquiries will be provided by subsistence resource specialists (SRS) and clerical staff (C III) in other regions of the state. Funding in the amount of four months each is provided for each of the two employee classes. Total personnel costs are projected at \$229,878.

A travel budget of \$8,500 provides opportunities for program outreach in affected portions of the state, and the appearance of the hearing officer for hearings as required.

Contractual services for the printing and distribution of applications, permits, and other correspondence, and communications totals \$27,500. Total contractual expenses are \$27,500.

Providing for office expendibles will entail \$2,500 per year. The creation of a new organization requires the acquisition of the necessary equipment and furniture to allow the staff to perform their required functions. Seventeen thousand dollars (\$17,000) is designated to meet this one-time need for equipment.

The total budget for the first year of operation is \$300,378.

FY 94:

Staff expenses during the second year decline to \$222,416 as the additional SRS and clerical support is reduced. An additional \$3,000 reduction occurs for lines 200 and 300 (travel and services) as the number of applicants declines. Equipment expenses decline to \$3,000. The total cost of implementing the program in the second year is \$260,916, a reduction of over 8% from the previous year.

FY 95:

Further personnel savings accrue during the third year as outside support is reduced to a single month of SRS time. Travel and services decline by an additional \$3,000. Supplies and equipment expenses are unchanged from the previous year. The total cost of program implementation in the third year is \$253,921, a reduction of 2.5% from the previous year.

FY 96:

The third year is projected to show a decline of nearly \$25,000 in personnel costs from the previous year as outside assistance is eliminated and the hearing officer position reduced to half-time as the need for additional rectification declines. Supplies and services decline by another \$2,500. The total program cost for the year is \$226,315, a 10% reduction from the prior year.

FY 97 and FY 98:

No additional personnel savings are projected as the program is managed by three and a half full time employees. All other expenditures remain stable. In FY 97, the budget is \$232,828, and in FY 98 it is \$239,342. The modest increment is due to personnel longevity charges.

FISCAL NOTE

BILL NO.

STATE OF ALASKA
1992 LEGISLATIVE SESSION

Revision Date:

Department Affected: Fish and Game

Title: An Act relating to the taking
of fish and game for subsistence

BRU: Boards

Component: Board Services

Sponsor: Rules Committee

Requestor:

COMPONENT SERIAL NO.

1	2	0	4
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Expenditures/Revenues: (Thousands of Dollars)

OPERATING	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98
PERSONAL SERVICES	9.0	9.4	8.0	3.0	3.0	3.0
TRAVEL	180.0	187.5	160.0	85.0	85.0	85.0
CONTRACTUAL	90.0	93.5	90.0	37.0	37.0	37.0
SUPPLIES	1.8	1.9	1.6	.5	.5	.5
EQUIPMENT	0					
LAND & STRUCTURES	0					
GRANTS, CLAIMS	0					
MISCELLANEOUS	0					
TOTAL OPERATING	280.8 .0	292.3 .0	259.6	125.5	125.5	125.5 0.0

CAPITAL	0	0	0	0	0	0
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REVENUE FUND SOURCE:						
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FUNDING: (Thousands of Dollars)

GENERAL FUND	280.8	292.3	259.6	125.5	125.5	125.5
FEDERAL FUNDS						
OTHER FUND SOURCE:						
TOTAL	280.8	292.3	259.6	125.5	125.5	125.5

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

Estimate of current year impact:

ANALYSIS: (Attach a separate page if necessary.)

Prepared By: Laird Jones *Laird A. Jones*

Phone: 465-4110

Division: Division of Boards

Date: 2/20/92

Approved by Commissioner: *[Signature]*

Agency: Department of Fish and Game

Date: 2/20/92

Distribution (by preparer): Leg. Fin., Legislative Sponsor, Requestor, OMIB/DBR, Gov. Legis. OSC., & Impacted Agency(ies).

**DIVISION OF BOARDS
FISCAL NOTE FOR SUBSISTENCE BILL**

ANALYSIS

The Board of Fisheries and the Board of Game meeting individually and together as the Joint Board would require approximately seventy days of meetings over a three year period to implement the new subsistence bill. In future years, the new bill would add approximately ten days to the overall board schedule. This estimate is based on board consideration of rural designations and customary and traditional use during the 1980s. It is important to note that since 1989 both boards have deferred most proposals dealing with subsistence in anticipation of legislation that would allow for a defensible approach to proposals. Over this same time period there have been reductions in the Division of Boards budget that have reduced the capability of the boards to meet. With the advent of new subsistence legislation, the boards will have to deal with subsistence issues as well as maintaining a full workload in other regulatory areas.

The items in the proposed legislation requiring the greatest effort on the part of the boards, in descending order, are:

(1) "The boards shall by regulation, jointly identify and delineate areas of the state, utilizing game management unit, portion of game management unit, or community, as follows:

(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.

(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." 20 DAYS

(2) "Upon receipt of recommendations from the commissioner, the Boards of Fish and Game shall identify the fish stock, and game populations, or portions of stocks or populations, that are customarily and traditionally used for subsistence in the areas and communities of the state identified by the boards under (e)(1) and (e)(2) of this section." 40 DAYS

(3) "Upon receipt of a recommendation from the commissioner, the boards shall, by regulation, adopt procedures by which the commissioner shall determine the qualification of subsistence users to subsistence hunt and fish in a specific subsistence use area." 10 DAYS

COSTS - FY93

<u>Personal Services:</u>	9.0
overtime for existing staff	
<u>Travel:</u>	180.0
travel and per diem for board members, Boards staff, and advisory committee meetings	
<u>Contractual:</u>	90.0
meeting space, printing and postage for proposal books, telephone and legal notice of meetings	
<u>Supplies:</u>	1.8
office supplies	
TOTAL	<u>280.8</u>

COSTS - FY94:

Personal Services	9.4
Travel	187.5
Contractual	93.5
Supplies	1.9
TOTAL	<u>292.3</u>

COSTS - FY95:

Personal Services	8.0
Travel	160.0
Contractual	90.0
Supplies	1.6
TOTAL	<u>259.6</u>

COSTS - FUTURE YEARS

Personal Services	3.0
Travel	85.0
Contractual	37.0
Supplies	.5
TOTAL	<u>125.5</u>

FISCAL NOTE

**STATE OF ALASKA
1992 LEGISLATIVE SESSION**

BILL NO. _____

Revision Date: _____ Department Affected: Public Safety
 Title: "An Act relating to the taking of BRU: Fish & Wildlife Protection
fish and game for subsistence. . ." Component: Enforcement & ISU
 Sponsor: Rules
 Requestor: Governor COMPONENT SERIAL NO.

4	9	0
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EXPENDITURES/REVENUES: (Thousands of Dollars) (inflation not included)

OPERATING	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	0	0	0	0	0

CAPITAL	0	0	0	0	0	0
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REVENUE	0	0	0	0	0	0
FUND SOURCE:						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
FUND SOURCE:						
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

Estimate of current year impact: _____

ANALYSIS: (Attach a separate page if necessary.)
 No fiscal impact is anticipated.

Prepared By: Captain Conrad G. Seibel Phone: 269-5509
 Division: Fish & Wildlife Protection Date: 2/20/92
 Approved by Commissioner: *Richard L. Burton* Richard L. Burton
 Agency: Department of Public Safety Date: 2/20/92

FISCAL NOTE

STATE OF ALASKA
1992 LEGISLATIVE SESSION

BILL NO. _____

Revision Date: _____ Department Affected: Department of Law
 Title: "An Act relating to the taking of fish and game for subsistence..." BRU: Legal Services
 Component: Operations
 Sponsor: Request of the Governor
 Requestor: Governor's Office COMPONENT SERIAL NO.

		9	3
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EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98
PERSONAL SERVICES	85.0	85.0	85.0	45.0	45.0	
TRAVEL	5.0	5.0	5.0	3.0	3.0	
CONTRACTUAL	17.6	17.6	17.6	12.6	12.6	
SUPPLIES	2.4	2.4	2.4	2.4	2.4	
EQUIPMENT	6.5					
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	116.5	110.0	110.0	63.0	63.0	-0-

CAPITAL						
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REVENUE FUND SOURCE:						
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FUNDING: (Thousands of Dollars)

GENERAL FUND	116.5	110.0	110.0	63.0	63.0	-0-
FEDERAL FUNDS						
OTHER FUND SOURCE:						
TOTAL						

POSITIONS:

FULL-TIME	1.0	1.0	1.0	-0-	-0-	-0-
PART-TIME				1.0	1.0	-0-
TEMPORARY						

Estimate of current year impact: _____

ANALYSIS: (Attach a separate page if necessary.)

Please see the attached analysis.

Richard I. Pegues

Prepared By: Richard I. Pegues, Director Phone: 465-3672
 Division: Administrative Services Date: February 20, 1992
 Approved by Commissioner: Charles E. Cole, Attorney General
 Agency: Department of Law Date: February 20, 1992

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. _____

This bill provides a broad statutory framework that gives subsistence use of fish and game a preference over other consumptive uses of the state's fish and game resources. The bill establishes subsistence dependence standards, defines several terms that have been subject to litigation, and provides a rational scheme for determining those Alaskans whose reliance upon fish and game for subsistence purposes is actual and substantial. The bill also directs the Department of Fish and Game and the Boards of Fish and Game to take affirmative action in situations where a stock or population is not sufficient to provide for both subsistence and nonsubsistence uses, and to formulate plans for recovery of the resource sufficient to provide for all users, if possible.

The bill uses individual eligibility requirements to determine qualification for the subsistence preference. While the bill uses community characteristics to determine the paperwork requirements for qualification, an individual's demonstrated actual and substantial reliance on fish and game in the last twelve months is what determines ultimate qualification as a preferred subsistence user. Urban residents who meet the requirements will also be preferred users. This is an abrupt departure from the state's previous (rural versus urban) attempts to provide a subsistence preference. Furthermore, the bill represents a fair and manageable way of complying with the spirit of ANILCA, without violating special provisions in Alaska's constitution requiring equal access to fish and game and management according to the sustained yield principle.

Because of the controversies that have surrounded and continue to surround subsistence, this bill will be vigorously challenged in court if it is enacted. Although the bill will eliminate many uncertainties that currently involve subsistence, the bill will have a significant, ongoing fiscal impact on the Department of Law over the first four of five years of implementation. That is because the department must defend the bill against court challenges, assist the Boards of Fisheries and Game in drafting, and then reviewing, a substantial body of evolving regulations, and also advise and defend the Department of Fish and Game in disputes resulting from adverse preference qualification determinations. Consequently, the Department of Law will require the additional services of an attorney.

Position Title		Attorney IV		No. of Positions	1	Range / Step	24A	Barg. Unit	PX					
Time Status	PFT	Staff Months	12	Location	Anchorage		Election District	7 through 15						
TYPE OF EXPENDITURE			Amount		Justification Implementation of the subsistence preference law will require the full-time services of an attorney to handle: (1) court challenges of the law; (2) drafting and reviewing of a substantial body of regulations; and (3) representation of ADF&G and the Fish and Game Boards in disputes resulting from adverse preference qualification determinations. All of this work will require journey-level services of an Attorney IV.									
Salary			64,056											
Benefits			20,969											
Premium Pay														
Other														
Total Personal Services			85,025											
Travel			5,000											
Contractual			17,600											
Commodities			2,400											
Equipment			6,500											
Other														
Total Cost			116,525											
FUNDING SOURCE FOR TOTAL COST														
Federal Receipts			1002											
G.F. Match			1003											
General Fund			1004		116,525									
I.A. Receipts			1007											
CIP Receipts			1061											
Other														

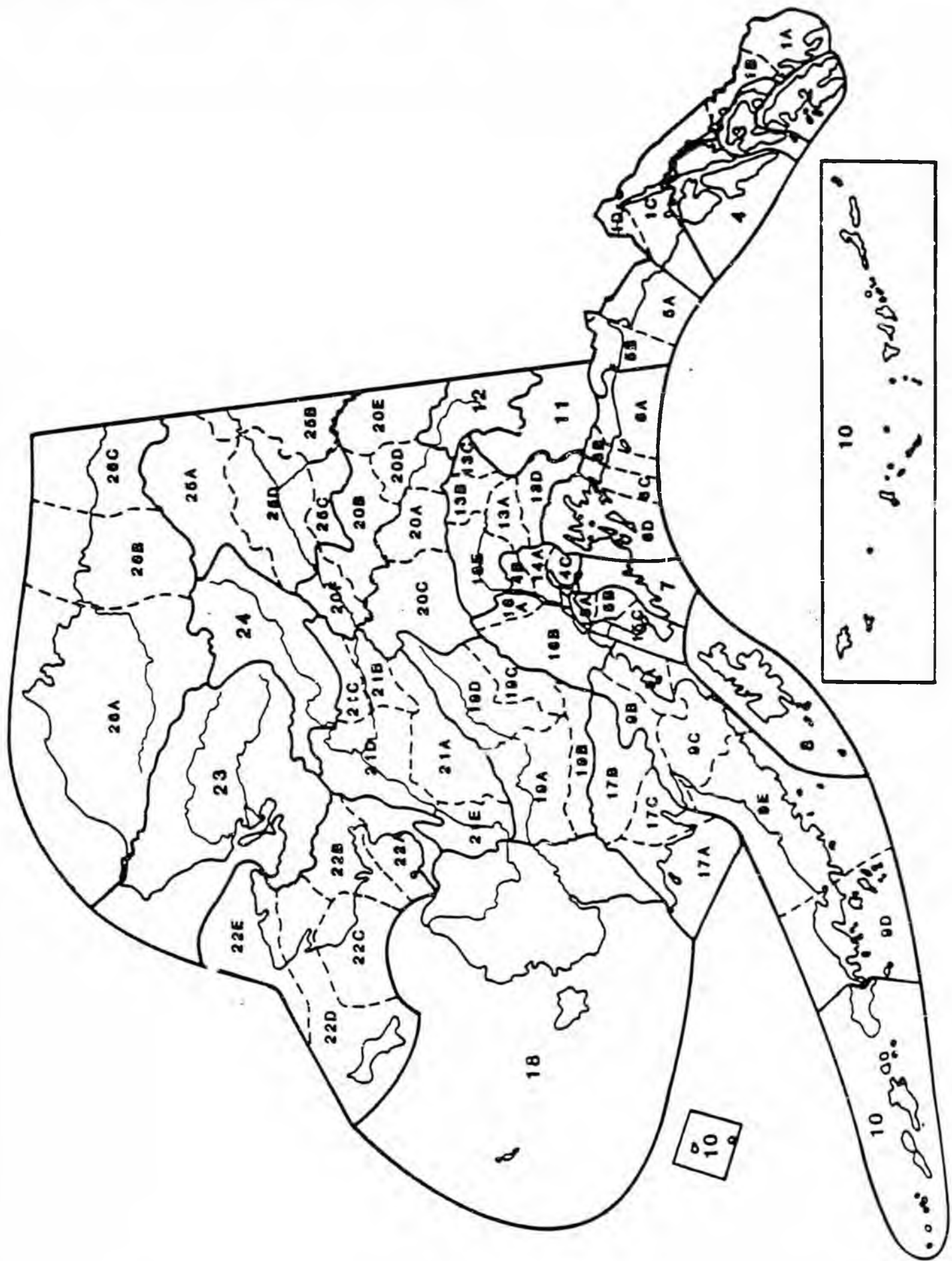
**Request For
New Position**

AGENCY Department of Law
BRU Legal Services
COMPONENT Operations

FY 93

Page 1 of 2
Revised Date: _____

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



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	62.50	Arctic	Rural
Balance of Lower Kuakokwim 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 Wainwright Hampton Census Sub	17	70.60	Western	Rural
Balance of Anaktuvuk Pass Census Sub-Area	19	0.00	Southeast	Rural
Balance of Outer Ketchikan 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	18.10	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
Eagle Village	35	80.00	Interior	Rural
Nikolski	35	82.85	Southwest	Rural
Ivanof Bay	35	94.30	Southwest	Rural
Bettles	36	22.20	Interior	Rural
Meyers Chuck	37	10.80	Southeast	Rural
Mendaitna	37	5.40	Southcentral	Rural
Takotna	38	44.70	Interior	Rural
Chase	38	0.00	Southcentral	Rural
Tonsina	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
Eilin Cove	57	1.80	Southeast	Rural
Oscarville	57	91.22	Western	Rural
Clark's Point	60	88.30	Southwest	Rural
Chistochina	60	61.70	Southcentral	Rural
Game Creek Census Designated Place	61	0.00	Southeast	Rural
Port Protection	62	1.60	Southeast	Rural
Slana	63	6.40	Southcentral	Rural
Platinum	64	92.18	Western	Rural
Twin Mills	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
Frise 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/Evansville	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	88	0.00	Southeast	Rural
Balance of Prince William Sound Census	88	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	48.74	Arctic	Rural
Iliamna	94	85.90	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
Manley Hot Springs	96	14.60	Interior	Rural
Chuathbaluk	97	89.69	Western	Rural
Atka	98	92.85	Southwest	Rural
Hydar	99	1.00	Southeast	Rural
Lignita	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	95.60	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	8.20	Southcentral	Rural
Larsen Bay	147	84.40	Southwest	Rural
Cantwell	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
Newhalen	160	94.40	Southwest	Rural
Wales	161	38.90	Arctic	Rural
Copperville	163	26.40	Southcentral	Rural
Port Graham	168	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
Diomedes	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
Aleknagik	185	83.20	Southwest	Rural
Colfman Cove	186	6.90	Southeast	Rural
Chignik Bay	188	45.20	Southwest	Rural
Brevig Mission	198	92.40	Arctic	Rural
Hustla	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
Minto	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-Are	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	96.8	Western	Rural
Gustavus	258	3.90	Southeast	Rural
Anaktuvuk Pass	259	84.90	Arctic	Rural
Elim	264	91.70	Arctic	Rural
Marshall (Fortuna Ledge)	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	94.98	Western	Rural
Old Harbor	284	88.70	Southwest	Rural
Akiak	285	97.19	Western	Rural
Lower Kalskeg	291	98.28	Western	Rural
Kongiganak	294	97.28	Western	Rural
Saint Michael	295	91.20	Arctic	Rural
Tuntutuliak	300	98.66	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
Napaskiak	328	94.82	Western	Rural
Noatak	333	96.70	Arctic	Rural
Scammon Bay	343	96.50	Western	Rural
Tenana	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
Nanana	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 (Andreafsky)	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	6.70	Southcentral	Rural
King Cove	451	39.25	Southwest	Rural
Shishmaref	456	94.50	Arctic	Rural
Kotlik	461	98.90	Western	Rural
Pilot Station	463	95.00	Western	Rural
Kipnuk	470	97.45	Western	Rural
Akiachak	483	95.03	Western	Rural
Healy	487	1.40	Interior	Rural
Wainwright	492	94.30	Arctic	Rural
Quinhagak	501	93.81	Western	Rural
Balance of Copper River Census Sub-A	504	0.90	Southcentral	Rural
Savoonga	519	95.20	Arctic	Rural
Gambell	525	96.20	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	68.05	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
Matlakatla	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
Kotzebue	2751	75.10	Arctic	Rural
Unalaska	3089	8.38	Southwest	Rural
Pateraburg	3230	10.10	Southeast	Rural
Barrow	3409	63.90	Arctic	Rural
Nome	3500	52.10	Arctic	Rural
Bethel	4874	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
Naukati Bay	93	1.10	Southeast	Rural
Balance of Prudhoe Bay-Kaktovik Census Area	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
Cube 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 Place	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	13828	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	6.30	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%	42513	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 Score
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
ADD UP YOUR TOTAL				
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.

**STATE OF ALASKA
SUBSISTENCE HARVEST PERMIT APPLICATION
(PAGE 3)**

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.

STATE OF ALASKA
SUBSISTENCE HARVEST PERMIT APPLICATION QUESTIONS
(PAGE 4)

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.)

**STATE OF ALASKA
SUBSISTENCE HARVEST PERMIT APPLICATION
(PAGE 5)**

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.)

**STATE OF ALASKA
SUBSISTENCE HARVEST PERMIT APPLICATION QUESTIONS
(PAGE 7)**

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.	_____	_____	_____	_____

**STATE OF ALASKA
SUBSISTENCE HARVEST PERMIT APPLICATION
(PAGE 6)**

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*	Air-craft 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.

STATE OF ALASKA
SUBSISTENCE HARVEST PERMIT APPLICATION QUESTIONS
(PAGE 8)

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.)

**STATE OF ALASKA
SUBSISTENCE HARVEST PERMIT APPLICATION QUESTIONS
(PAGE 9)**

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:

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 your 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.

Criterion	Minimum	Applicant		Percent
		Answer	Formula	
A. Quantity of fish and game consumed	125	350	/ 10 =	28%
B. Number of species used	6	16	x 3 =	27%
C. Days spent taking or processing	30	45	/ 1 =	15%
D. No. of months when taking occurred	4	6	x 2 =	15%
E. Weeks when taking fish/game was main work	0	0	x 1 =	0%
F. Households receiving or giving	0	10	x 2 =	20%
G. Taking was in subsistence use area? y=5, n=0	0	5	x 1 =	10%
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.

Criterion	Minimum	Applicant		Applicant	
		Answer	Formula	Score	Percent
A. Quantity of fish and game consumed	125	300	$/ 10 =$	30	22%
B. Number of species used	6	14	$\times 3 =$	42	30%
C. Days spent taking or processing	30	30	$/ 1 =$	30	22%
D. No. of months when taking occurred	4	6	$\times 2 =$	12	9%
E. Weeks when taking fish/game was main work	0	0	$\times 1 =$	0	0%
F. Households receiving or giving	0	10	$\times 2 =$	20	14%
G. Taking was in subsistence use area? $y=5, n=0$	0	5	$\times 1 =$	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		Applicant	
		Answer	Formula	Score	Percent
A. Quantity of fish and game consumed	125	90	$/ 10 =$	9	9%
B. Number of species used	6	6	$\times 3 =$	18	17%
C. Days spent taking or processing	30	40	$/ 1 =$	40	38%
D. No. of months when taking occurred	4	5	$\times 2 =$	10	10%
E. Weeks when taking fish/game was main work	0	2	$\times 1 =$	2	2%
F. Households receiving or giving	0	10	$\times 2 =$	20	10%
G. Taking was in subsistence use area? y=5, n=0	0	5	$\times 1 =$	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		Score	Percent
		Answer	Formula		
A. Quantity of fish and game consumed	125	98	$/ 10 =$	9.8	12%
B. Number of species used	6	4	$\times 3 =$	12	14%
C. Days spent taking or processing	30	40	$/ 1 =$	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	7%
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.

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

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 65 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.

		Applicant		Applicant	
Criterion	Minimum	Answer	Formula	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	28%
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, Sinuk, 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	Formula	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	36%
G. Taking was in subsistence use area? y=5, n=0	0	5	x 1 =	5	9%
TOTAL				56	100%

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 camps, 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."

		Applicant		Applicant	
Criterion	Minimum	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%
TOTAL				176	100%

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 208 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 (3,089), 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 Nelson 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

BASIC LIST	OTHERS
Chum Salmon	
Coho Salmon	
Chinook Salmon	
Pink Salmon	
Sockeye Salmon	
Salmon Roe	
Blackfish	
Burbot	
Cisco	
Grayling	
Pike	
Sheefish	
Sucker	
Whitefish, Broad	
Whitefish, Alaska-Humpback-Lake	
Whitefish, Round	
Black Cod-Sablefish	
Lingcod	
Tom Cod	
Pacific Cod-Gray Cod	
Holibut	
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	
Walrus	
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
	Scaup
	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
	Taal
	Gadwall
	Oidsquaw
	Shoveler
	Canvasback
	Redhead
	Ringneck
	Brant
	Emperor Geese
	Snow Geese
	Whitefronted Geese
	Taverners
	Cacklers
	Lessers
	Vancouverers
	Dusky Geese
	Alautian 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

BASIC LIST	OTHERS
	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 ADFG

Community	Region	Big Game	Birds & Eggs	Murine Invertebrates	Marine 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
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
McKinley Park Villag	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
Tanecross	Interior	2	1			3	2	1	1	10	8	8
Tetlin	Interior	1	1			3	3	0	2	10	7	7
Dot Lake	Interior	2	1			4	3	1	1	12	9	9
Perks Highway Sout	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
Christina	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
Chitina	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 S	Southcentral	1	1	0	0	1	2	1	0	6	4	4
Tonana	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 ADFG

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
Siana Homestead N	Southcentral	1	1	0	0	1	2	2	0	7	5	4
West Glenn Highwa	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	?	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
Chonaga Bay	Southcentral	2	1	5	2	3	2	0	0	15	13	13
San Juan Bay	Southcentral	2	1	2	1	4	1	4	0	15	14	11
Port Graham	Southcentral	1	0	5	1	3	3	5	0	18	15	11
Tatitlek	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	0	1	0	0
Skagway	Southeast	0	0	2	0	1	0	0	0	3	3	3
Haines	Southeast	0	0	0	0	2	1	1	0	4	3	3
Coffman Cove	Southeast	1	0	2	0	2	1	1	0	7	6	6
Tanakee Springs	Southeast	1	0	2	0	2	1	1	0	7	6	6
Wrangell	Southeast	1	0	3	0	1	1	1	0	7	6	6
Craig	Southeast	1	0	2	0	3	1	1	0	8	7	7
Hyder	Southeast	0	0	1	0	2	2	1	0	6	6	6
Metalakata	Southeast	1	0	1	0	1	1	2	0	6	7	6
Seaton	Southeast	1	0	1	0	2	2	2	0	8	6	5
Unalaska	Southeast	1	0	2	0	2	2	2	0	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 Subsistence ADFG

Community	Region	Big Game	Birds & Eggs	Marine Inverte- brates	Marine 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
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
Mayers 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
Becher 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	0	6	5	3
Chignik Bay	Southwest	1	0	2	0	1	1	2	0	7	6	5
Egegik	Southwest	1	2	0	0	0	1	3	0	7	6	4
Kudlak City	Southwest	1	0	5	0	1	0	2	0	9	9	8
Chinik	Southwest	1	0	3	0	3	0	3	0	10	10	8
Nelson Lagoon	Southwest	1	3	2	0	1	1	2	0	10	9	8
Port Haden	Southwest	1	3	1	0	1	1	3	0	10	9	7
Port Lions	Southwest	1	1	4	0	2	0	3	0	11	11	9
Levelock	Southwest	2	5	0	1	3	2	0	0	13	11	11
Ahtuk	Southwest	1	3	5	2	1	0	3	0	15	15	13
Chignik Lagoon	Southwest	2	3	2	0	2	2	4	0	15	13	10
Klawock	Southwest	2	0	0	0	0	1	4	2	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	Marine Inverte- brates	Marine 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
Larsen 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
False 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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MEMORANDUM

TO: Territorial Sportsmen, Inc.
FROM: Gregory F. Cook
RE: DRAFT ANILCA & Alaska State law amendments
DATE: December 7, 1997

This memo responds to your request for counsel on the following three questions:

- 1) Does the proposed amendment to ANILCA § 807 insulate the State of Alaska from federal court oversight of State fish and wildlife management regulatory actions?

Answering this question involves a two-part legal analysis. First, we look at the meaning of the "arbitrary and capricious" standard of review specified in the amendment. This is a matter of federal common law. Federal law is quite distinct from State common law in Alaska that interprets the same words. Second, we look at the measure of deference accorded decisions of a federal agency to determine the effect of granting a state agency "the same deference" as a "comparable federal agency."

- 2) Can the chances of federal court intervention in State management within the framework of ANILCA and ongoing federal oversight be reduced?
- 3) What is the import of the "deference" standard contained in Governor Knowles' proposed AS 16.05.261(h), (i)?

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THE PROPOSED AMENDMENT TO ANILCA § 807 AND THE ISSUE OF
CONTINUING FEDERAL OVERSIGHT

QUESTION PRESENTED: Does the proposed amendment to ANILCA § 807 insulate the State of Alaska from federal court oversight of State fish and wildlife regulatory actions?

SHORT ANSWER: The proposed amendment to ANILCA § 807 provides no more than a thin sheet of protection from the cold reality of Federal Court oversight of State fish and wildlife management and penetrating Federal judicial scrutiny.

I. INTRODUCTION

The Governor's Task Force on Subsistence (1997) has recommended amending ANILCA § 807 to add two new sentences:

"Agency actions may be declared invalid by the court only if they are arbitrary, capricious, or an abuse of discretion.¹ When reviewing any action of a State agency, the District Court shall give the decision of the State agency the same deference it would give the same decisions of a comparable federal agency."²

These two sentences shall be analyzed separately. First, we focus on the standard for judicial review, i.e., the meaning of "arbitrary, capricious, or an abuse of discretion." Next, we examine the likely effect of the proposed amendment's second sentence according parity of deference to the decisions of State and federal agencies.

¹ The "arbitrary and capricious" standard of review is extremely common; it is prescribed by the federal APA, 5 U.S.C. § 706(2)(a).

² Implicit in this provision is the hypothesis that without this clause, a federal court would automatically grant greater deference to a federal agency than to a State agency.

1. The "arbitrary and capricious" standard of review

Analysis of the "arbitrary and capricious" standard of review in the context of ANILCA is a matter of federal common law. As with any matter of common law, the meaning of "arbitrary and capricious" is constantly evolving. There are few, if any, "bright line" distinctions or definitions. Interpretation of this standard is always subject to the discretion of an individual judge, albeit subject to appellate review.

The standards used to guide federal judicial review of agency decisions at the trial court level occupy a spectrum³. At one end of the spectrum is total unreviewability. At the other end of the spectrum is *de novo* review, where the court independently performs the fact-finding task, much like an agency's regulatory hearing⁴.

The most common type of judicial review, including "arbitrary and capricious" review, is in the middle of the spectrum.

The middle ground of judicial review of agency actions has been variously stated by legislative bodies. Examples include: "clearly erroneous," "clear error of judgment," "substantial evidence," "arbitrary and capricious," and "abuse of discretion." Each of these different statutory formulations of the standard for judicial review of agency action has been laboriously explicated by judges in many thousands of cases.

There is considerable cynicism among many legal commentators about judicial sophistry in interpreting and applying the different middle ground standards of judicial review. It is nonetheless useful to be familiar with some of the judicial definitions of the "arbitrary and capricious" standard of review.

The following statement by the U.S. Supreme Court is currently the preeminent explanation of "arbitrary and capricious" review.

...an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Motor Vehicle Manufacturers Assn. v State Farm Mutual Automobile

³ In the federal system, trial level is the District Court.

⁴ The Supreme Court first drew the distinction between reviewable and unreviewable agency actions in the famous case of Marbury v Madison, 5 U.S. (1 Cranch) 137, 170 (1803).

Ins. Co., 463 U.S. 29, 103 S.Ct. 2856, 2866-2867 (1983); see also Arkansas v Oklahoma, 503 U.S. 91, 113 (1992).

In seeking to understand the "arbitrary and capricious" standard of review, it would be a mistake to fail to consider the huge importance of how an agency formally justifies its regulatory decisions when the agency produces written findings. The statement below, is illustrative:

A federal agency's rule is arbitrary and capricious and may be set aside by a court if the agency relies on improper facts, ignores important arguments or evidence, fails to articulate a reasoned basis for the rule, or produces an explanation that is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Natural Resources Defense Council, Inc., v E.P.A., 822 F.2d 104 (D.C. Cir. 1987).⁵

These judicial descriptions of the "arbitrary and capricious" standard should provide a good, general understanding of the term.

As a practical matter, under the "arbitrary and capricious" test, it is a relatively simple matter for a reviewing court, if it is so inclined, to overturn agency action.

Likewise, if a court wants to uphold an agency's action, it is just as simple for the court to review the agency's decision, summarize the administrative record, perhaps note that the court would not necessarily have reached the same conclusion as the agency, then pontifically opine that the court must nonetheless refrain from substituting its judgment for that of the agency.

Each of these two approaches is common in judicial review of agency actions under the "arbitrary and capricious" standard.

In a nutshell, Federal District Court judges have tremendous discretion when they review the decisions of administrative agencies under the "arbitrary and capricious" standard.

The foremost commentator in the field of federal administrative law (K.C. Davis) has written a summary of the law of this middle ground of judicial review that may be more reliable than the many complexities that are constantly repeated in federal judicial

⁵ In the 9th Circuit, it has been held that a Court of Appeals must uphold the findings of fact of an administrative agency if the agency's findings are supported by "substantial evidence" (a low threshold). As to questions of law, appellate review is plenary. SEE: Potato Sales Co., Inc., v Dept. of Agriculture, 92 F.3d 800 (9th Cir. 1996).