

**Supporting Statement for Paperwork Reduction Act Submission:**  
Alaska Subsistence Household Survey

**Section A. Justification**

1. Explain why you need to collect this information. Identify any legal or administrative requirements that necessitate this information collection.

Under the Migratory Bird Treaty Act (16 U.S.C. 703-712), the Secretary of Interior has responsibility for setting appropriate regulations for the hunting of migratory birds, with due regard for maintaining such populations at healthy levels. The Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j) more specifically authorizes collection of such information as is necessary to determine appropriate hunting regulations. Information required for effectively governing harvests of migratory birds includes not only knowledge of the harvest's magnitude, but also information on the species harvested, including geographic and chronologic distribution as they relate to various hunting regulations.

The Migratory Bird Treaty Act Protocol Amendment (1995) (Amendment) provides for the customary and traditional use of migratory birds and their eggs for subsistence use by indigenous inhabitants of Alaska. The Amendment, however, states that it is not the intent of the Amendment to cause significant increases in the take of migratory birds relative to their continental population sizes. A May 20, 1996, letter of submittal from the Department of State to the White House, which officially accompanied the Amendment, specifies the need for harvest monitoring and states that harvest estimates will be collected cooperatively by the Service, the State Department of Fish and Game, and Native organizations within the subsistence eligible areas.

2. Explain how FWS will use the information. If this is not a new collection, explain how FWS has used the information received.

The information collected has been, and would be, used by both Federal and State authorities to promulgate harvest regulations and to monitor the effects of harvest regulations on harvests of individual migratory bird species. Annually, we adjust harvest regulations as needed to provide a maximum of subsistence harvest opportunity while keeping migratory bird populations at desired levels. Harvest survey data help ensure that customary and traditional use of migratory birds and their eggs for subsistence use by indigenous inhabitants of Alaska does not significantly increase the take of species of migratory birds relative to their continental population sizes. Information obtained has also helped, and would continue to help, give the Service insight into the status of the many species involved. The information has also been, and would be, used by private organizations that are concerned with the welfare of the migratory bird resource in Alaska and elsewhere.

3. Does this information collection use automated, electronic, mechanical, or other technological techniques? Provide the reasons for the decision to adopt this means of collection. Describe any consideration you gave to using information technology to reduce burden on the public.

This information collection does not involve the use of automated technology for three reasons. First, the subsistence eligible areas of Alaska are generally rural and remote and have low wage employment and low median cash income levels when compared to the rest of the United States and Alaska. Therefore, most households do not have computers or Internet access. Second, the older members of the households often do not read or write English, so this would make them reliant on younger household members to fill out the form electronically, potentially resulting in a loss of reporting accuracy. Third, if the Service put the survey forms online, we might receive responses from households who were not randomly selected for the survey. This would invalidate (i.e., bias) our survey results and complicate our efforts to obtain reliable harvest information to use in setting harvest regulations.

4. Describe efforts to identify duplication. Show why similar information already available cannot be used or modified.

The Alaska Department of Fish and Game, Native organizations, local and regional government entities, and private contractors have collected information on subsistence harvest of migratory birds and eggs in the recent past. Some of the information has been collected under contract to the Service; some information has been collected for other organizations, for their particular purposes. This information is generally not adequate for Federal regulatory responsibilities because: (1) It has been insufficiently detailed or is imprecise. For example, information has sometimes not been broken down by duck or goose species, meaning that it is not useful for regulation setting nor for understanding the population status of the species involved; (2) survey methodologies have differed among the collecting entities, meaning that information has not been comparable across regions; (3) information is not current, and current information is needed for adequate regulation setting; (4) information has not been collected annually, and annual subsistence harvest information is needed in order to be consistent with the national Migratory Bird Harvest Information Program (which is approved under OMB control number 1018-0015), to set adequate regulations, and to help monitor status and trends of migratory bird populations; and (5) information has sometimes been collected several months or more after the actual harvest has taken place, resulting in an unacceptable risk of inaccurate information being reported due to hunters forgetting the details of their harvest.

5. If the collection will have a significant impact on small entities, such as small businesses, describe methods used to minimize burden on them.

This information collection will not have a significant impact on small entities because it involves only individual households in subsistence eligible areas of Alaska. In addition, we conduct this survey in a way that ensures that respondents spend minimal time completing the survey.

6. Describe the consequences to Federal programs or policies if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

If this information were not collected, the Service's ability to promulgate regulations allowing controlled subsistence hunting of migratory birds would be greatly weakened. The health and well being of migratory bird populations demand that harvests be commensurate with population size. If these surveys were not conducted, the lack of accurate assessment of migratory bird harvests would logically dictate restrictive hunting regulations, with a loss in subsistence hunting

due to only vague knowledge of the effects of subsistence hunting on migratory bird populations and fear of possible overharvest.

In situations with some sea ducks and non-game species, in which we are uncertain of population size, it is even more important to annually monitor the subsistence harvest to help ensure the species is not put at risk by overharvest. In these cases, annual harvest monitoring will help the Service take educational and regulatory steps, if necessary, to protect the species.

In addition, the Amendment states that it is not the intent of the Amendment to cause significant increases in the take of species of migratory birds relative to their continental population sizes. If this information were not collected, the Service would have no way of knowing whether or not significant increases were occurring as a result of the subsistence harvest. Therefore, the Service would not be able to fulfill its obligation under the law.

If the subsistence harvest survey were conducted less frequently than at yearly intervals with collections of forms three times per year, it would be impossible to adequately monitor the effect of that year's subsistence hunting on the status of migratory birds. Migratory bird populations can change substantially between years as a result of droughts, floods, freezes, or other conditions. Subsistence harvests can vary substantially from year to year based on bird migration patterns, socioeconomic factors, and river and sea ice conditions, which affect access to birds. Annual subsistence harvest estimates may be used alongside annual estimates of national harvest (Migratory Bird Harvest Information Program, or HIP) as part of the annual promulgation of both recreational and subsistence hunting regulations.

It is necessary to collect forms three times per year in order to: 1) Separate the spring flight's harvest from the fall flight's harvest, for management purposes; 2) separate the harvest occurring before September 1, from the harvest occurring after September 1, since the harvest before September 1 falls under the subsistence regulations and the harvest after September 1 does not; 3) differentiate between spring and summer harvests, due to the requirement for the 30-day closure spelled out in the Protocol Amendment.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

There are no special circumstances that require information to be collected in a manner inconsistent with OMB guidelines.

8. Cite and provide a copy of the 60-day Federal Register notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received on the 60-day notice, and describe actions taken by FWS in response to those comments. Specifically address comments received on cost and hour burden. Describe your efforts to consult with persons outside of FWS to obtain their views on the availability of data; frequency of collection; clarity of instructions, disclosure, or reporting format; and data elements to be recorded, disclosed, or reported. Consultation should include obtaining their views on the amount of burden to be imposed and ways to minimize the burden. If circumstances prevent this consultation, describe them.

On March 3, 2003, we published in the Federal Register (68 FR 10024) a notice requesting public comment on this information collection for 60 days, ending May 2, 2003. No comments were received in response to this notice.

In October 2000, the Alaska Migratory Bird Co-Management Council (Council) formed an ad hoc subsistence harvest survey technical committee to recommend a design and a set of procedures for subsistence harvest monitoring in the migratory bird subsistence eligible areas of Alaska. (Information on the formation of the Council was published in the Federal Register (67 FR 53511) on August 16, 2002.)

The members of this harvest survey committee are from the Service, the State of Alaska Department of Fish and Game (ADF&G), and the Native component of the Council. The committee has met several times since its formation. Two outside peer reviewers and a statistical consultant have also offered advice. ADF&G and Native representatives have provided information on availability of data and recommendations on survey methodology, including sample frame, data to be collected, frequency of collection, reporting format (survey forms), and survey administration.

Consultation with representatives of those from whom information is to be obtained has occurred at Council meetings, as the Council consists of Native representatives from each of the subsistence eligible areas of Alaska, and at harvest survey technical committee meetings. The Native representatives on the committee also represent those in some of the regions from which harvest information is to be obtained. In addition, Native employees of the National Wildlife Refuge System, who live in, travel frequently to, and administer the survey in some of the villages where the information is collected, sometimes attend Council and harvest survey committee meetings.

9. Explain any decision to provide a gift or payment to respondents, other than remuneration of contractors and grantees.

No payments or gifts have been, or would be, provided to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or policy.

Respondents are always assured that no names are written on survey forms and that information from the survey is confidential at the household level. This is one of the instructions to the surveyors, whether they are Service employees or contractors: no names are to be placed on survey form. At the end of this supporting statement, you will find a notice that will be placed on all survey forms if and when they are approved and assigned an OMB control number.

11. Provide justification for any questions of a sensitive nature. Include the reasons why the questions are necessary, the specific uses for the information, the explanation given to respondents, and steps taken to obtain respondents' consent.

There are no questions of a sensitive nature.

12. Provide estimates of the hour burden of the information collection. Include an estimate of the dollar value of the burden hours.

Form Name and Number	Number of Respondents	Annual Number of Responses	Average Time Per Response	Total Annual Burden Hours	Total Annual Dollar Value of Burden Hours
List of All Occupied Households with Hunting Category Noted (7FW-100)	188	188	2 hrs.18 min.	433	\$3,464
Households Separated by Hunting Category (7FW-101)	188	188	30 minutes	94	\$752
Permission Slip for Participation in the Survey (7FW-102)	16,000	16,000	5 minutes	1,333	\$10,664
Migratory Bird Subsistence Household Survey Form (7FW-103, 7FW-103a, and 7FW-103b)	13,000	39,000	5 minutes	3,250	\$26,000
<b>TOTAL</b>	<b>16,188</b>	<b>55,376</b>		<b>5,110</b>	<b>\$40,880</b>

For the first two forms, 7FW-100 and 7FW-101, the 188 respondents are the same 188 communities in subsistence eligible areas of Alaska. For each of these two forms, the local surveyor completes one form for each community per year.

For form 7FW-100, the local surveyor is usually familiar enough with the community and its bird and egg harvest patterns to put the household in a hunting category without asking the household. Occasionally, especially in the larger communities, the surveyor asks the household, asks neighboring households, or asks community leaders what hunting category to place that household in. Since this process takes an average of one minute per household, and since there are up to 26,000 households in the subsistence eligible areas of Alaska, this totals 433 hours. At \$8 per hour, this amounts to \$3,464.

For form 7FW-101, the local surveyor takes each household on Form 7FW-100 and categorizes it on Form 7FW-101 according to activity level. We estimate that it takes each surveyor an average of 30 minutes to transfer the information from form 7FW-100 to form 7FW-101. With an estimated 188 surveyors in approximately 188 communities, we estimate 94 hours total annual burden. At \$8 per hour, this amounts to \$752.

For form 7FW-102, up to 16,000 households will have to be asked permission in order to get a sample size of 13,000 households to participate in the survey. We ask permission once per year. It will take the surveyor an average of 5 minutes per household to determine whether or not that household agrees to participate in the subsistence harvest survey. With an estimated 16,000 households responding to the permission slip, this amounts to 1333 hours total annual burden. At a cost of \$8 per hour, this amounts to \$10,664. (Note: This form is maintained by the local surveyor. The surveyor asks each household if that household will participate in the subsistence harvest survey. The surveyor then notes a “yes” or a “no” on a permission slip. Each household with a “yes” permission slip is given a survey form (described below). This form does not record, nor is it arranged or retrieved, by personal identifier.)

Form 7FW-103 is actually three forms: Form 7FW-103 Migratory Bird Subsistence Harvest Household Survey, Form 7FW-103a Migratory Bird Subsistence Harvest Household Survey - Interior Alaska, and Form 7FW-103b Migratory Bird Subsistence Harvest Household Survey - Southern Coastal Alaska. The specific form that a household receives depends on that household’s location. We estimate up to 13,000 of the approximately 26,000 households in the subsistence eligible areas will participate in the survey. Approximately 16,500 (63%) of the 26,000 households are located in areas which will receive Form 7FW-103. Approximately 85% of the estimated total migratory bird harvest occurs in these areas, so Form 7FW-103 is the main form. However, to simplify the survey and avoid species confusion, we have designed an interior Alaska survey form (Form 7FW-103a) which has only 38 bird illustrations, and a southern coastal survey form (Alaska Peninsula/Aleutians-Pribilofs/Chugach/Kodiak Island) (Form 7FW-103b) on which four of the bird species differ and the fall hunting period extends into winter months. An estimated 2,800 (11%) of the 26,000 households are located in interior Alaska, where 8% of the total migratory bird harvest occurs; these households will receive Form 7FW-103a. About 6,700 (26%) of the 26,000 households are located in southern coastal Alaska, where about 7% of the total migratory bird harvest occurs; these households will receive Form 7FW-103b. We will collect these surveys three times per year—in spring, summer, and fall or fall/winter. We estimate the reporting burden to average 5 minutes per respondent for the Migratory Bird Subsistence Harvest Household Survey. With an estimated 13,000 respondents filling out the form three times annually, the annual burden hours total 3,250 hours. At \$8 per hour, this amounts to \$26,000. (Note: The local village surveyor provides completed survey forms to us. This form does not record, nor is it arranged or retrieved, by personal identifier.)

The total annual hour burden estimate for all of the forms comprising the Subsistence Migratory Bird Harvest Household Survey is 5,110 hours. Assuming an hourly cost of \$8.00, this amounts to dollar value of \$40,880.00 for those burden hours.

13. Provide an estimate for the total annual non-hour dollar cost burden to respondents or record keepers. Do not include the cost of burden hours described in items 12 and 14.

There is no non-hour dollar cost burden to respondents. There is no fee to participate in the survey or any other costs to respondents associated with the survey.

14. Provide estimates of the annual cost to the Federal Government. Include a description of the method used to estimate cost, which should include quantification of hours, operational expenses, and any other expense that would not have been incurred without this collection of information.

The following shows the estimated annual cost to the Federal Government, in terms of the actual expenditure records for past years:

	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY2002</u>
1) Fund-targeted to National Wildlife Refuge System	\$180,100	\$155,000	\$127,000
2) Paid to contractors	244,750	60,000	170,150
3) Harvest survey support	136,000	157,000	150,918*
TOTALS	\$560,850	\$372,000	\$448,068*

Further detail for FY 2002:

- 1) Fund targeted to National Wildlife Refuge System:

By refuge:	
Yukon Delta NWR	\$93,000
Togiak NWR	15,000
Selawik NWR	10,000
Koyukuk/Nowitna NWR	<u>9,000</u>
	\$127,000

By budget category:	
Contract surveyors	\$52,660
Salaries	53,050
Supplies	1,440
Travel	18,850
Administrative Overhead	<u>1,000</u>
	\$127,000

- 2) Paid to contractors:

By contractor:	
Bristol Bay Native Assn./ Alaska Peninsula/Becharof NWR work	\$12,950
Bristol Bay Native Assn.	45,000
Kawerak, Inc.	75,000
Maniilaq Assn.	<u>37,200</u>
	\$170,150

By budget category:	
Village surveyors	\$72,160
Salaries	48,000
Travel	13,900

Supplies	1,100
Administrative Overhead	<u>34,990</u>
	\$170,150

3) Harvest Survey Support

Salary, Coordinator	\$ 94,365
Salaries, Assistants	9,177*
Survey Forms	18,242
Travel	14,680
Bird Identification Poster	9,410
Computer Support	4,844
Supplies	<u>200</u>
	\$150,918*

\* The harvest survey assistant position (who does data analysis) was vacant for most of FY 2002. Salary for this position was \$35,500 in FY 2000 and \$37,500 in FY 2001. If this position had been filled, total for Harvest Survey Support would have been \$177,241 - \$179,241, and grand total for FY 2002 would be \$474,391 - \$494,391.

15. Provide the reasons for any program changes or adjustments reported in items 13 or 14 of OMB 83-I.

We have been collecting this information without OMB approval for 14 years. We are requesting approval for this collection for the first time.

16. For collections whose results will be published, outline the plans for tabulation and publication.

Plans are to conduct the Subsistence Migratory Bird Harvest Household Survey on an ongoing annual basis, funding permitting.

Schedule for the Subsistence Household Survey:

December-February Survey field personnel are trained. These are Service employees who work for the National Wildlife Refuge System (Refuge Information Technicians) and contractors who work for Native organizations and the Alaska Dept. of Fish and Game, which are both part of the Alaska Migratory Bird Co-Management Council (AMBCC).

Outreach is conducted and permission is sought and obtained from village governments

March-April Village surveyors are contracted with and trained by survey field personnel.

Village surveyors complete the household enrollment forms (Forms 7FW-100 and 101).

Obtain household permission for the harvest survey (Form 7FW-102)

- April 1 - Oct 21      Survey forms (Form 7FW-103) are distributed at the beginning dates of each survey period and picked up immediately after the ending dates, as follows:  
Survey Period  
 Spring    April 1-June 30  
 Summer   July 1 - August 31  
 Fall      September 1 - October 31 (in southern coastal areas, there is a very small winter harvest, so this date is extended to March 9 of the following year; see Form 7FW-103b)
- Nov. - January      Data are audited, tabulated, and analyzed
- February-July      Data are published. Reports must be prepared in time for publication in Pacific Flyway Data book.

17.    If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

We will display the expiration date of OMB approval on the form.

18.    Explain each exception to the certification statement identified in item 19 of OMB 83-I.

There are no exceptions to the certification statement contained in Item 19 of OMB Form 83-I for the information being collected.

**Section B. Collections of Information Employing Statistical Methods**

1.    Provide a table with numerical estimates of the potential respondent universe and any sampling or other respondent selection methods to be used. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.

The potential respondent universe is up to 26,000 households, located in up to 188 communities in the subsistence eligible areas of Alaska. The communities and households in the current subsistence eligible areas are as follows:

	Number of Villages	Number of households
Yukon Delta NWR	38	5,422
Upper Kuskokwim	6	145
Bristol Bay		
Togiak NWR	6	544
Nushagak, Dillingham, Iliamna	13	1,456
Alaska Peninsula/Becharof NWR	11	755
Bering Straits	16	2,642
Tanana Chiefs Conference		

Innoko NWR	7	409
Kanuti NWR	3	89
Koyukuk/Nowitna NWR	7	597
Yukon Flats NWR	9	506
Upper Tanana	7	773
Other Tanana Chiefs	6	425
North Slope Borough	8	2,104
Northwest Arctic Borough	11	1,759
Aleutians/Pribilofs	14	1,796
Kodiak Island	<u>11</u>	<u>4,424</u>
Total, current subsistence eligible areas	173	23,846

The treaty language also states: Anchorage, the Matanuska-Susitna and Fairbanks North Star Boroughs, the Kenai Peninsula roaded area, the Gulf of Alaska roaded area, and Southeast Alaska generally do not qualify as subsistence harvest areas. Then it states: Limited exceptions may be made so that some individual communities within these excluded areas could qualify for designation as subsistence harvest areas for specific purposes. At an Alaska Migratory Bird Co-Management Council meeting on April 17, 2003, the Council voted to recommend the following communities to the Service Regulations Committee for inclusion as subsistence eligible:

	Number of qualifying villages	Number of households
Copper River Basin	8	215
Cantwell		19
Chistochina		23
Chitna		20
Copper Center		47
Gulkana		19
Gakona		24
Mentasta		54
Tazlina		9
Chugach/Cook Inlet	5	241
Chenega Bay		22
Tatitlek		38
Tyonek		66
Nanwalek		45
Port Graham		70
Southeast Alaska		
Hoonah (birds' eggs only)	1	300
Total "excluded area" villages and households recommended for inclusion	<u>14</u>	<u>756</u>

The sampling methods to be used will be stratified random sampling, both by geographic strata, or clusters, according to the regions listed above, and by activity strata, similar to what is used

in the national Migratory Bird Harvest Information Program (HIP) survey, which is approved under OMB control number 1018-0015. Households will be categorized according to harvest activity (see forms 7FW-100 and 7FW-101), and each activity level will be sampled at a different sampling rate, highest sampling rates being applied to the households in the “High” category, lower rates in the “Low” category, and lowest sampling rates in the “None” category. In very small villages, and in communities where there is very little hunting, there may be only two strata: hunting and non-hunting households.

The number of households in the universe covered by the collection and in the corresponding sample, are shown in tabular form, above, as well as the geographic strata in the proposed sample.

The activity strata cannot be shown for the proposed sample because the survey for the proposed sample has not yet been undertaken. (Determining the activity strata is one of the purposes of forms 7FW-100 and 7FW-101).

Table 1 shows village and household response rates. We expect future response rates to be similar and to improve over time. The collection conducted previously, which provided the above information, occurred in the Yukon Delta National Wildlife Refuge (NWR) and in Bristol Bay.

The Yukon Delta NWR survey, which has taken place since 1985, has always employed a two-stage sampling design. Because the refuge is so large and contains so many villages that rely on migratory birds for food, the Delta has always been divided into six geographic clusters, or strata, for the purposes of the subsistence harvest survey. Within each stratum, a minimum number of required villages has been picked to be sampled based on statistical goals for acceptable variance. In each of these villages, a certain number of households has been sampled and then the results expanded to come up with an estimate for each village. The estimates for each village in the stratum are added together, and then expanded to come up with an estimate for the stratum.

The following shows the required, or targeted numbers of villages to be sampled in each stratum, compared with the number of villages actually sampled in 2001. The failure to get the required number of villages has either to do with politics (village refusal to participate in the survey) or with difficulties finding and contracting with a local village surveyor.

Stratum	Total # Villages	Minimum # Villages Required	Actual # Villages Surveyed	Shortfall
South Coast	5	3	2	1
Mid Coast	9	6	6	0
North Coast	4	3	4	0
Kuskokwim	13	7	7	0
Yukon	6	4	2	2
Bethel	1	1	1	0
Total, all strata	38	24	22	3

The Bristol Bay survey, which has taken place since 1995, attempts to survey every village. Bristol Bay has been divided into three geographic areas, which are each surveyed by separate staffs. The Togiak NWR has six villages, the Alaska/Peninsula Becharof NWR has 11 villages, and the Nushagak-Dillingham-Iliamna area of Bristol Bay has 13 villages. In the

Togiak NWR and Nushagak-Dillingham-Iliamna areas, a certain number of households has been sampled in each village and the results expanded to come up with an estimate for the village. Then the results from each village are added together to get the estimate for the area. In the Alaska Peninsula/Becharof NWR, a census is conducted. In most years, all the households in each village have been surveyed. However, in 2001, the communities of King Salmon, Naknek, and South Naknek in Alaska Peninsula/Becharof NWR were not surveyed due to an administrative problem. Data gathered from the other villages in Alaska Peninsula/Becharof NWR could not be extrapolated to these villages, because the hunting patterns and species taken are too different.

Starting in 2001, the households in each of the sampled villages in the Yukon Delta NWR, Togiak NWR, and Nushagak-Dillingham-Iliamna area of Bristol Bay were categorized into activity strata: HIGH (Activity Level=>10 birds annually); LOW (Activity Level=1-10 birds annually); NONE (Activity Level=0 birds annually).

In 2001, we attempted to survey 50% of the households in the HIGH category, 20% of the households in the LOW category, and 10% of the households in the NONE category. In 2002, we attempted to survey 40% of the households in the HIGH category, 15% of the households in the LOW category, and 10% of the households in the NONE category. Based on our statistical advice, this is also our plan for future surveys.

Table 1 shows the units (geographic strata), with the villages and households attempted, the villages and households sampled, and the village and household response rates by geographic strata. It also shows the product of the village/household response rates, and the overall response rate, which is 66%.

2. Describe the procedures for the collection of information. Include statistical methodology, estimation procedure, degree of accuracy needed for the purpose described in the justification, unusual problems requiring specialized sampling procedures, and use of periodic (less frequent than annual) data collection cycles to reduce burden.

#### a. Statistical Methodology

For statistical methodology to be used, see description of stratification and sample selection for the last collection, under B.1 above.

The Harvest Survey Technical Committee, described in A.8, is having a series of meetings to determine if the statistical methodology described above, is still the best way to conduct the survey. At present, it is planned that the other subsistence eligible areas of Alaska, outlined in B1, will also be stratified by geography and by activity. In very small villages, and in communities where there is very little hunting, there may be only two strata: hunting households and non-hunting households. Preliminary statistical analysis based on information from the Yukon Delta NWR and Bristol Bay area surveys, indicates that the estimation method is generally unbiased and shows little gain in precision from sampling more than two-thirds of each region's villages and 25% of the households in each village. Therefore, we plan to survey two-thirds of each region's villages every year, except for the main hub communities, which we plan to survey every year.

#### b. Estimation Procedure

In each village, for each hunting category, the results from the sampled households are expanded to come up with an estimate for all the households in that hunting category. Then the total estimates

for each hunting category are added together to come up with a total estimate for the village. On the Yukon Delta NWR, where we have six clusters, or strata, the results for the sampled villages in each cluster are expanded to arrive at an estimate for each cluster. In Bristol Bay, where we usually sample or census each village in the area, the results for each village are simply added together to come up with an estimate for each area of Bristol Bay, and for Bristol Bay as a whole.

c. Degree of Accuracy Needed for the Purpose Described in the Justification

On the Yukon Delta NWR and in Bristol Bay, the degree of accuracy that has been achieved to date, is generally adequate for the purpose described in the justification.

In 1999 and 2000, the 95% confidence interval precision levels achieved for estimates on the Yukon Delta NWR were as follows:

	<u>1999</u>	<u>2000</u>
Ducks	+-15%	+-15%
Seaducks	+-16%	+-35%
Geese	+- 8%	+-12%
Brant	+-16%	+-38%
Sandhill Cranes	+-16.5%	+-21%
Tundra Swans	+-16%	+-17%
Seabirds & Shorebirds	+-43%	+-20%

We do not have precision data for other areas, but we expect these precision levels to be similar.

d. Unusual Problems Requiring Specialized Sampling Procedures

For certain species for which there are special concerns (i.e. interior Alaska white-fronts, spectacled and Steller’s eiders, and the Service’s list of Birds of Conservation Concern) more intensive sampling procedures may occur in the future, in narrowly defined areas and at very specific times. These methodologies will be identical to those described here, but may involve sampling more or all of the villages in the area, and more households by using higher sampling rates for each harvest activity level.

e. Any Use of Periodic (less frequent than annual) Data Collection Cycles to Reduce Burden.

Surveys must be conducted annually to adequately monitor the effect of that year’s subsistence hunting on the status of migratory birds. Migratory bird populations can change substantially between years as a result of droughts, floods, freezes, or other conditions. Subsistence harvests can vary substantially from year to year based on bird migration patterns, socioeconomic factors, and river and sea ice conditions which affect access to birds. Annual subsistence harvest estimates may be used alongside annual estimates of national harvest (Migratory Bird Harvest Information Program, or HIP) as part of the annual promulgation of both recreational and subsistence hunting regulations.

3. Describe methods to maximize response rates and deal with issues of non-response.

In the subsistence harvest survey, the Service first tries to maximize village and household participation rates, which is what determines who actually receives a survey form. This is accomplished by explaining the purposes of the harvest survey, at both the village and household level. The purposes are explained in terms of the Migratory Bird Treaty Act, the Fish and Wildlife

Act of 1956, and the Migratory Bird Treaty Act Protocol Amendment, as well as the peoples' economic and cultural need to continue subsistence hunting, which is based on healthy migratory bird populations and habitats. The Service's Refuge Information Technicians and contractors carry out these tasks at village council meetings. The Service and the Alaska Migratory Bird Co-Management Council also encourage villages and households to participate in the survey through media outreach.

Once a village or community has agreed to participate in the survey, the surveyor asks each selected household for permission, using Form 7-FW-102, the Household Permission Slip. The surveyor then notes a "yes" or a "no" on the permission slip. Each household with a "yes" permission slip is given a survey form (See Federal Register, March 3, 2003, p.10025). If the household says "no", the surveyor selects an alternate household, and follows the same procedure.

Thus, response rates from selected households and selected alternate households who agree to participate in the survey and who actually have forms in hand, are determined by 1) efficacy of the surveyor in finishing the job by picking up all forms, and 2) cooperation of households in filling out and turning in the forms. The Service's surveyor training and outreach, as described above, are the two methods used to maximize these two response variables.

4. Describe any tests of procedures or methods to be undertaken.

No testing is to be undertaken, other than the testing of survey procedures, that is part of the ongoing process of conducting and refining this survey.

5. Provide the names and telephone numbers of individuals consulted of the statistical aspects of the design and the names of the FWS unit, contractor(s), grantee(s), or other person(s) would will actually collect or analyze the information.

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Table 1 Village and Household Response Rates. Yukon Delta, Alaska Peninsula/Becharof and Togiak National Wildlife Refuges, and Bristol Bay Native Association Survey Villages 2001

Unit	Villages Attempted	Villages Sampled	Villages Non-Resp	Village RespRate	Hhs Attempted	Hhs Sampled <sup>1</sup>	Hh Non-Resp	Hh RespRate	VillxHh RespRate
YDNWR, South Coast	5	2	3	40%	150	86	64	57%	23%
YDNWR, Mid Coast	6	6	0	100%	112	102	10	91%	91%
YDNWR, North Coast	4	4	0	100%	157	139	18	89%	89%
YDNWR, Kuskokwim	11	7	4	64%	372	282	90	76%	49%
YDNWR, Yukon	6	3	3	50%	95	76	19	80%	40%
YDNWR, Bethel	1	1	0	100%	149	149	0	100%	100%
AKPenin/Bech NWR <sup>1</sup>	11	8	3	73%	227	227	0	100%	73%
Bristol Bay Native Assn.	13	13	0	100%	392	318	74	81%	81%
Togiak NWR	6	6	0	100%	202	161	41	80%	80%
TOTALS	63	50	13	79%	1856	1540	316	83%	66%

<sup>1</sup>On the Alaska Peninsula NWR, in the villages where the survey was attempted, the survey was a census rather than a sample.