

Technical Paper No. 353

Alaska Migratory Bird Subsistence Harvest Estimates,
2008,
Alaska Migratory Bird Co-Management Council

Liliana C. Naves



July 2010

Alaska Department of Fish and Game
Division of Subsistence



Alaska Migratory Bird
Co-Management Council



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| | | | | | |
|---------------------------------------|--------------------|-------------------------------------|---------------|--|-------------------------|
| Weights and measures (metric) | | General | | Measures (fisheries) | |
| centimeter | cm | Alaska Department of | | fork length | FL |
| deciliter | dL | Fish and Game | ADF&G | mid-eye-to-fork | MEF |
| gram | g | Alaska Administrative Code | AAC | mid-eye-to-tail-fork | METF |
| hectare | ha | all commonly accepted abbreviations | | standard length | SL |
| kilogram | kg | e.g., Mr., Mrs., AM, PM, etc. | | total length | TL |
| kilometer | km | all commonly accepted professional | | | |
| liter | L | titles e.g., Dr., Ph.D., R.N., etc. | | Mathematics, statistics | |
| meter | m | at | @ | all standard mathematical signs, | |
| milliliter | mL | compass directions: | | symbols and abbreviations | |
| millimeter | mm | east | E | alternate hypothesis | HA |
| | | north | N | base of natural logarithm | e |
| Weights and measures (English) | | south | S | catch per unit effort | CPUE |
| cubic feet per second | ft ³ /s | west | W | coefficient of variation | CV |
| foot | ft | copyright | © | common test statistics (F, t, χ^2 , etc.) | |
| gallon | gal | corporate suffixes: | | confidence interval | CI |
| inch | in | Company | Co. | correlation coefficient (multiple) | R |
| mile | mi | Corporation | Corp. | correlation coefficient (simple) | r |
| nautical mile | nmi | Incorporated | Inc. | covariance | cov |
| ounce | oz | Limited | Ltd. | degree (angular) | ° |
| pound | lb | District of Columbia | D.C. | degrees of freedom | df |
| quart | qt | et alii (and others) | et al. | expected value | E |
| yard | yd | et cetera (and so forth) | etc. | greater than | > |
| | | exempli gratia (for example) | e.g. | greater than or equal to | ≥ |
| Time and temperature | | Federal Information Code | FIC | harvest per unit effort | HPUE |
| day | d | id est (that is) | i.e. | less than | < |
| degrees Celsius | °C | latitude or longitude | lat. or long. | less than or equal to | ≤ |
| degrees Fahrenheit | °F | monetary symbols (U.S.) | \$, ¢ | logarithm (natural) | ln |
| degrees kelvin | K | months (tables and figures): | | logarithm (base 10) | log |
| hour | h | first three letters | Jan, ... ,Dec | logarithm (specify base) | log ₂ , etc. |
| minute | min | registered trademark | ® | minute (angular) | ' |
| second | s | trademark | ™ | not significant | NS |
| | | United States (adjective) | U.S. | null hypothesis | HO |
| Physics and chemistry | | United States of America | | percent | % |
| all atomic symbols | | (noun) | USA | probability | P |
| alternating current | AC | United States Code | U.S.C. | probability of a type I error | |
| ampere | A | U.S. state | | (rejection of the null | |
| calorie | cal | use two-letter abbreviations | | hypothesis when true) | α |
| direct current | DC | e.g., | AK, WA | probability of a type II error | |
| hertz | Hz | | | (acceptance of the null | |
| horsepower | hp | | | hypothesis when false) | β |
| hydrogen ion activity | pH | | | second (angular) | “ |
| (negative log of) | | | | standard deviation | SD |
| parts per million | ppm | | | standard error | SE |
| parts per thousand | ppt, ‰ | | | variance: | |
| volts | V | | | population | Var |
| watts | W | | | sample | var |

TECHNICAL PAPER NO. 353

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2008,
Alaska Migratory Bird Co-Management Council**

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Cover Photograph

Todd Fritze of Dillingham hunts for sandhill cranes and Canada geese in spring. Photograph by Annie Fritze, used with permission.

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ABSTRACT

This report presents subsistence harvest estimates of migratory birds and their eggs in Alaska for the data year 2008. Data were gathered through the harvest assessment program of the Alaska Migratory Bird Co-Management Council. This program relies on collaboration among the U.S. Fish and Wildlife Service, the Alaska Department of Fish and Game, and a number of regional Alaska Native organizations. Information obtained by this program is used to evaluate federal subsistence harvest regulations, to document customary and traditional uses of migratory birds in Alaska, and to plan for the continued harvest and conservation of birds. Participation in the harvest survey is voluntary at both the village and household levels. The survey covers spring, summer, and fall harvests in most regions. Some regions also have a winter survey. Harvest estimates are based on a stratified clustered sampling. The sample frame encompasses all households in regions eligible for the subsistence harvest of migratory birds and their eggs in Alaska. Households are the primary sampling unit. Data at the household level are confidential and data at the village level are considered sensitive. Clusters of villages (subregions) with similar harvest patterns allow expansion of reported harvests in surveyed villages to nonsurveyed villages in the same subregion. Subregions are grouped into regions, which approximately correspond to the designated migratory bird management regions. Within villages, households are stratified by harvest level. Villages and regions are surveyed on a rotating schedule, which can be adjusted based on monitoring priorities and budget constraints. In 2008, the harvest survey was conducted in 5 regions: Aleutian–Pribilof Islands, Bristol Bay, Yukon–Kuskokwim Delta, North Slope, and Interior Alaska (although only in the Yukon–Koyukuk subregion).

Key words: Alaska Migratory Bird Co-Management Council, AMBCC, migratory birds, migratory bird eggs, subsistence harvest, subsistence hunting, subsistence harvest estimates, ducks, geese, swans, cranes, grouse, seabirds, shorebirds, grebes, loons.

INTRODUCTION

AMBCC SUBSISTENCE HARVEST ASSESSMENT PROGRAM

In 1918, Canada and the United States ratified the Migratory Bird Treaty Act (the treaty) to protect wild bird populations. The treaty later included agreements with Mexico, Japan, and Russia. The treaty set provisions to protect migratory bird populations, including an annual hunting season closure from March 10 to September 1. However, this provision failed to provide for the harvest of migratory birds by northern peoples of Alaska and Canada in spring and summer; these harvests have been historically necessary to their subsistence way of life. Despite the closure, customary and traditional hunting of migratory birds in spring and summer continued.

In 1997, the U.S. Congress authorized an amendment to the treaty that legally recognized the traditional spring and summer subsistence harvests of migratory birds by northern peoples of Alaska and Canada. The goal of the amendment was to promote conservation of migratory birds by including subsistence hunting in the regulatory process. This amendment authorized the U.S. Fish and Wildlife Service (USFWS) to open regulated spring and summer subsistence hunts of migratory birds in Alaska. The treaty amendment also mandated that Alaska's indigenous inhabitants play a meaningful role in migratory bird conservation by participating in relevant management bodies. As a result of this direction, the Alaska Migratory Bird Co-Management Council (AMBCC) was formed. The AMBCC is composed of representatives from the USFWS, Alaska Department of Fish and Game (ADF&G), and regional Alaska Native entities (CFR vol. 65, No. 60, pp. 16405–16409, March 28, 2000). The AMBCC first met in October 2000, at which time they discussed the assessment of spring–summer subsistence harvests, important for describing traditional historical uses of migratory birds as well as their levels of harvest. Harvest monitoring is also particularly important to meet the intentions of the amended treaty: 1) subsistence harvests generally should remain at traditional levels relative to bird population sizes; 2) subsistence data should be integrated with flyway and national harvest management programs; and 3) regulatory processes for all migratory bird hunting should be inclusive to users and responsive to conservation needs. The AMBCC found the available harvest data insufficient to properly address management issues, and formed the Subsistence Harvest Survey Committee. This group of Alaska agency staff, regional partners, and consultants was charged with designing a statewide migratory bird subsistence harvest survey to assess the magnitude and composition of subsistence harvests.

A comprehensive statewide harvest survey protocol (AMBCC 2003) was designed based on the harvest surveys conducted in the context of the goose management plan (Pamplin 1986; Zavaleta 1999) for the Bristol Bay (Seim and Wentworth 1996; Wentworth 2007a), Yukon–Kuskokwim delta (Wentworth and Seim 1996; Wentworth 1998, 2004, 2007b), and Bering Strait (Kawerak Inc. 2004), as well as on elements of the USFWS Migratory Bird Harvest Information Program (HIP), which assesses sport harvests of selected migratory bird species (Bales et al. 2002; Padding et al. 2006; Moore et al. 2007). The AMBCC harvest assessment program relies on collaboration between USFWS, ADF&G, and Alaska Native partners; the program is funded by the USFWS. The AMBCC subsistence harvest assessment program was to begin with the first open spring–summer subsistence season in 2003, but delays in survey approval and other procedural problems prevented harvest data collection and the survey was first implemented in 2004. However, funding of the survey program has been 40–50% short every year, and is not

adjusted for inflation. Consequently, cost-cutting measures have resulted in reduced sampling efforts, insufficient village outreach, and insufficient training of survey staff, further compounding intrinsic difficulties of doing the survey in the remote areas of Alaska. In 2005, the Harvest Survey Committee adopted a regional rotation, and since then only the Yukon–Kuskokwim delta region has been surveyed yearly. Other regions are surveyed approximately every other year, depending on monitoring priorities and budget constraints. The necessity of reduced and rotating survey coverage has impaired the accuracy of harvest estimates and greatly extended the time necessary to detect changes in harvest levels.

The AMBCC and its Harvest Survey Committee recognize the need to conduct an effective survey that provides timely and accurate harvest information in order to meet treaty obligations, as well as to sustain migratory bird populations and harvest traditions. In 2007, the AMBCC Harvest Survey Committee asked the ADF&G Division of Subsistence to assess the performance of the original survey design, the effectiveness of the diminished sampling effort, and other operational issues. Based on the survey assessment report (Naves et al. 2008), the AMBCC Subsistence Harvest Survey Committee evaluated problems, considered technical improvements to the survey methods, and collaboratively reformulated an operational plan. The revised survey methods are now being implemented to collect 2010 harvest information. The 2008 harvest information to which this report refers to was collected following the original survey methods (AMBCC 2003; Wentworth 2006).

This report is the second in a series of annual reports with birds and bird eggs harvest estimates at the regional and subregional levels produced with data collected by the AMBCC harvest assessment program. Harvest estimates for 2004 to 2007 were reported in Naves (2010). In 2008, the harvest survey was conducted in 5 regions: Aleutian–Pribilof Islands, Bristol Bay, Yukon–Kuskokwim Delta, North Slope, and Interior Alaska (although only in the Yukon–Koyukuk subregion).

AMBCC MEMBER ORGANIZATIONS

The Alaska Migratory Bird Co-Management Council is composed of representatives from:

- U.S. Fish and Wildlife Service;
- Alaska Department of Fish and Game;
- Chugach Regional Resources Commission;
- Sun’aq Tribe of Kodiak;
- Aleutian–Pribilof Islands Association;
- Bristol Bay Native Association;
- Association of Village Council Presidents;
- Kawerak Inc.;
- Maniilaq Association;
- North Slope Borough;
- Tanana Chiefs Conference;
- Copper River Native Association; and
- Southeast Inter-Tribal Fish and Wildlife Commission.

USES OF THE INFORMATION OF THE SUBSISTENCE HARVEST SURVEY

Harvest estimates from the subsistence harvest survey are available to the communities (“villages”), Alaska Native organizations, state and federal resource management and conservation agencies, the Pacific Flyway Council, and the general public. Data at the household level are confidential and data at the village level are sensitive. Preliminary harvest estimates based on survey data are submitted to Alaska Native regional partners for review before being adopted by the AMBCC. Information from the survey is not to be used for punitive enforcement purposes, nor has this been reported to have happened. Survey data are used to:

- Document the importance of customary and traditional uses of migratory birds by Alaska rural villages so that subsistence uses will be protected and conducted in a sustainable manner;
- Document subsistence harvest trends and track major changes in harvests;
- Assist the USFWS in the evaluation of spring–summer migratory bird harvest regulations; and
- Assist in the development of management plans by state and federal agencies.

METHODS

DATA COLLECTION

Regions, Subregions, Villages

The harvest survey covers a total of 192 rural villages (Appendix A) within the regions eligible to participate in the subsistence harvest of migratory birds in Alaska (50 CFR, Part 92, Subpart 92.5). According to the Alaska Department of Labor and Workforce Development's 2007 population estimates, these villages have a total population of about 87,000 people in 25,000 households (ADLWD 2009). A census survey to evaluate the subsistence harvests of migratory birds within eligible areas would be impractical and cost prohibitive. Thus, appropriate sampling of regions, subregions, villages, and households is the basis for the calculation of harvest estimates. Data collection from the 2004–2008 survey sometimes deviated from the original survey design (AMBCC 2003; Wentworth 2006) by varying degrees, largely as a result of budget constraints and operational difficulties (Naves et al. 2008; Naves 2010).

The sample frame encompasses all households in regions eligible for the subsistence harvest of migratory birds and their eggs in Alaska. The household is the primary sampling unit. Grouping villages with similar harvest patterns into subregions allows for the expansion of reported harvests from surveyed villages to nonsurveyed villages in the same subregion. The subregions are grouped into regions, which approximately correspond to the 12 designated migratory bird management regions (CFR vol. 68, No. 139, pp. 43010–43030, July 21, 2003). The survey, however, covers 10 of these 12 regions—the Gulf of Alaska and Cook Inlet regions were combined because of their small numbers of eligible villages, and the Southeast Alaska region has not been surveyed (Figure 1). The original survey protocol listed 32 subregions within 10 regions (Wentworth 2006). Subregions in the Bristol Bay and Interior Alaska regions were revised by the AMBCC Harvest Survey Committee in 2009, which resulted in a total of 29 subregions (figures 2–11, Appendix A). Data analysis has been based on this revised configuration of subregions, as reported below and in Naves (2010).

Rotation of regions based on monitoring priorities has been implemented as a cost reduction measure (Table 1). Two-thirds of the villages in each surveyed region are to be sampled every year (Reynolds 2007). Regional hub villages (Bethel, Dillingham, Kotzebue, Barrow, Nome, Kodiak, Unalaska, and Tok) are to be surveyed each year that their region is surveyed because these larger villages may have harvest patterns that differ from those of smaller villages (e.g., fewer harvesters and lower harvests per hunter). However, coverage of regions has occasionally been incomplete because of funding limitations and difficulties related to field operations.

In 2008, the harvest survey was conducted in 5 regions: Aleutian–Pribilof Islands, Bristol Bay, Yukon–Kuskokwim Delta, North Slope, and Interior Alaska (only in the Yukon–Koyukuk subregion). The following organizations participated in the 2008 data collection:

- Aleutian–Pribilof Islands region: The Sentinel Program of the Aleut Marine Mammal Commission, the Qawalangin Tribe of Unalaska, and the ADF&G Division of Subsistence;
- Bristol Bay region: Bristol Bay Native Association;
- Yukon–Kuskokwim delta region: Yukon-Kuskokwim Delta National Wildlife Refuge and Togiak National Wildlife Refuge;

- North Slope region: North Slope Borough;
- Interior Alaska region: Kanuti National Wildlife Refuge.

Table 1.—Regions surveyed from 2004–2008.

| Region | 2004 | 2005 | 2006 | 2007 | 2008 |
|----------------------------|------|------|------|------|------|
| Gulf of Alaska–Cook Inlet | • | • | • | | |
| Kodiak Archipelago | | | • | | |
| Aleutian–Pribilof Islands | | • | | • | • |
| Bristol Bay | • | • | • | • | • |
| Yukon–Kuskokwim Delta | • | • | • | • | • |
| Bering Strait–Norton Sound | • | • | | • | |
| Northwest Arctic | | | • | | |
| North Slope | | • | | • | • |
| Interior Alaska | • | • | • | • | • |
| Upper Copper River | • | | | • | |
| Southeast Alaska | | | | | |

Source Survey results for 2004–2007 were reported in Naves (2010).

Sampling Methods

The original survey design called for a 3-level stratification (“none, low, high”) of households within a village and the evaluation of this sampling method once sufficient statewide data were accumulated (AMBCC 2003; Wentworth 2006). Villages surveyed across the state vary in size from a few households to about 2,000 households. Variation in village size led to the application of other sampling methods (Naves et al. 2008).

The survey relies on a village household list that includes all “resident” households. A household is considered resident if its members live in the village year-round and have lived in the village for at least the 12 previous months. The list of resident households does not include unoccupied dwellings, commercial buildings, and public buildings.

The precision goal of the subsistence harvest survey was derived from the precision goal of the HIP sport hunting monitoring program—95% confidence intervals within 10–20% of the estimated harvest (Bales et al. 2002:70). However, there are difficulties in comparing confidence intervals from these 2 surveys: 1) HIP currently does not report confidence intervals for harvest estimates of individual species, 2) some species harvested for subsistence uses are not included in the HIP survey, 3) different sport and subsistence hunting patterns may have different effects on the precision of harvest estimates, and 4) subsistence harvest estimates are currently available only at the regional and subregional levels while sport hunting estimates are available only at the state level.

The subsistence harvest survey covers a large geographic area and a large number of species. Some species are abundant and harvested in large numbers. Other species are harvested only occasionally because they have small populations, restricted distribution, or are not used for subsistence purposes. Wide-coverage harvest assessment programs cannot address both commonly- and rarely-harvested species with the same level of precision. After the publication of the first spring–summer subsistence harvest regulations in 2003, the public, biologists, and resource managers expressed strong interest in subsistence takes of non game bird species, which are sometimes harvested (although in relatively low numbers). Dedicated harvest surveys are

required to determine the harvests of species that have small populations, low densities, or limited distributions, and that are less likely to be precisely documented in the statewide subsistence harvest survey.

“None, Low, High” Stratification

At the beginning of the survey year, the surveyor classifies the resident households, according to their general harvest patterns of previous years, into only 1 of 3 harvest level strata: “none” (0 birds), “low” (1–10 birds), and “high” (10+ birds). The surveyor then draws a random sample from each harvest level so that 10% of all households in the “none,” 15% of households in the “low,” and 40% in the “high” stratum are sampled.

Census: 100% sampling

In small villages (up to about 40 households), sampling by census (100% sampling) is usually attempted because implementing the 3-level stratification and its stratum-specific sampling proportions with a small total number of households usually results in sample sizes that are too small.

Simple Random Sampling

Random selection without harvest level stratification is occasionally used. Also, sampling is treated as a simple random sampling if a census was attempted but some households could not be contacted.

“Harvester, Other” Stratification

In some cases, expansion of reported harvests is based on a 2-level (“harvester, other”) stratification where “harvester” includes all harvester households (“low” and “high” strata in 3-level stratification) and “other” includes non harvester households (“none” stratum) as well as non listed households or households with unknown harvest patterns. Three-level stratification of “none, low, high” is difficult to implement in large villages because 1) surveyors frequently do not know the general harvest patterns of all households, 2) large rural villages frequently have large population turnover, and 3) household lists for large villages often do not represent all resident households. It is difficult and costly to keep updated household lists of large villages. In the case of an incomplete household list, it would be inappropriate to assume that sampling of large villages approached a simple random sampling. Most likely, the households included in the household list were harvesters as opposed to non harvesters, because field coordinator and surveyor training emphasized the importance of surveying a higher proportion of high harvesters (Wentworth 2006). Also, locally hired surveyors are more likely to be familiar with Alaska Native households, which may include a higher proportion of harvesters when compared to households of other ethnicities. At the AMBCC 2008 spring meeting, field coordinators adopted the “harvester, other” stratification to sample large villages. Starting in 2009, field coordinator training focused on the need to survey both harvesters and other households, since beforehand stratification based on previous household harvest pattern naturally results in a degree of misclassification of household into these strata (Naves et al. 2008). Survey training emphasizes that both harvester and other households are to be sampled and that the sample includes a higher proportion of harvester households.

Survey Year and Survey Seasons

As stated earlier, the primary goal of the survey is to document spring–summer subsistence harvests under subsistence regulations. Although open seasons may vary on an annual basis according to subsistence harvest regulations, for purposes of this survey, the “survey year” is

April 1 through October 31 in most regions, except in Southern Coastal Alaska (Aleutian–Pribilof Islands, Kodiak Archipelago, Gulf of Alaska–Cook Inlet, and the South Alaska Peninsula of Bristol Bay), where the survey year ends on March 9. The survey year is divided into 3 “survey seasons”: spring, summer, and fall or fall–winter (Table 2). The fall migratory bird hunts (after September 1) are managed under early season frameworks in federal regulations selected and adopted as state regulations. Harvests from fall hunts should be captured by the HIP survey; however, the HIP survey is most likely ineffective in documenting fall subsistence harvests in rural Alaska because of low hunter participation in the HIP program. For this reason, the AMBCC subsistence harvest survey also covers fall or fall–winter.

The harvest report form is composed of 3 sheets, 1 for each season. In regions that have a winter survey, harvests are noted on the fall–winter page. As in the original survey protocol, surveyors make 4 visits to each participating household during a survey year (Wentworth 2006). In March–April, surveyors distribute survey forms to participating households. After the end of each survey season, surveyors visit the participating households to collect the corresponding sheet of the survey form (Table 2). The intent of using 3 seasonal recall periods is to help respondents more accurately recall the number and species of birds and eggs they harvest, given the large number of species included on the survey. In general, long recall periods may lead to increased recall bias (Westat Inc. 1989). However, difficulties with survey funding and field operations continue to prevent seasonal collection of harvest data as originally scheduled. A large proportion of surveys have been done with a single household visit at the end of the survey year (Naves et al. 2008).

Village and Household Consent

The survey is conducted only in villages and households that have agreed to participate. Village consent must be granted in writing, and is often given as a tribal or village council resolution. Individual household consent is documented with permission slips, which also allow calculation of household participation rates. During the first visit to each selected household, the surveyor explains the purpose of the survey to an adult household member, explains how the survey works, and invites the household to participate.

Household “No-Contact” and Refusals

If after 3 reasonable attempts the surveyor cannot contact a selected household, or if a selected household declines to participate, then an alternate household is selected to replace it. If stratification is used, the alternate household must be from the same harvest level stratum as the no–contact or no–consent household.

Reporting Harvests

The harvest report form is used to record the subsistence harvest of migratory birds and their eggs (Appendix B). The harvest report form has 1 sheet for each survey season (spring, summer, and fall or fall–winter). Each seasonal sheet has color illustrations of bird species in breeding plumage and fields to record the total number of birds harvested and the total number of eggs harvested. Due to variation in the availability and distribution of bird species, there are 3 versions of the harvest report form, each with a different set of species. The versions are for Interior Alaska, Southern Coastal Alaska, and the “main form” for villages in other regions (Appendix B). This helps to prevent erroneously recording bird species as harvested in areas where they do not normally occur.

Table 2.—Seasonal survey coverage and household visits.

| Region | Spring | | | Summer | | | Fall | | | Winter | | |
|---|--------|-----|-----|--------|-----|-------|------|-----|-----|--------|-----|------------|
| | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar |
| Gulf of Alaska—Cook Inlet | • | • | • | • 2nd | • | • 3rd | • | • | • | • | • | • 1st, 4th |
| Kodiak Archipelago | • | • | • | • 2nd | • | • 3rd | • | • | • | • | • | • 1st, 4th |
| Aleutian—Pribilof Islands | • | • | • | • 2nd | • | • 3rd | • | • | • | • | • | • 1st, 4th |
| South Alaska Peninsula (Bristol Bay) | • | • | • | • 2nd | • | • 3rd | • | • | • | • | • | • 1st, 4th |
| Bristol Bay (except South Alaska Peninsula) | • | • | • | • 2nd | • | • 3rd | • | 4th | | | | 1st |
| Yukon—Kuskokwim Delta | • | • | • | • 2nd | • | • 3rd | • | 4th | | | | 1st |
| Bering Strait—Norton Sound | • | • | • | • 2nd | • | • 3rd | • | 4th | | | | 1st |
| Northwest Arctic | • | • | • | • 2nd | • | • 3rd | • | 4th | | | | 1st |
| North Slope | • | • | • | • 2nd | • | 3rd | | | | | | 1st |
| Interior Alaska | • | • | • | • 2nd | • | • 3rd | • | 4th | | | | 1st |
| Upper Copper River | • | • | • | • 2nd | • | • 3rd | • | 4th | | | | 1st |

• Indicates a month in which a region was covered by a seasonal survey.

1st First household visit, to invite households to participate in the survey.

2nd Second household visit, to collect spring seasonal harvest data.

3rd Third household visit, to collect summer seasonal harvest data.

4th Fourth household visit, to collect fall or fall—winter seasonal harvest data.

AMBCC Subsistence Household Harvest Survey, Regions and Subregions

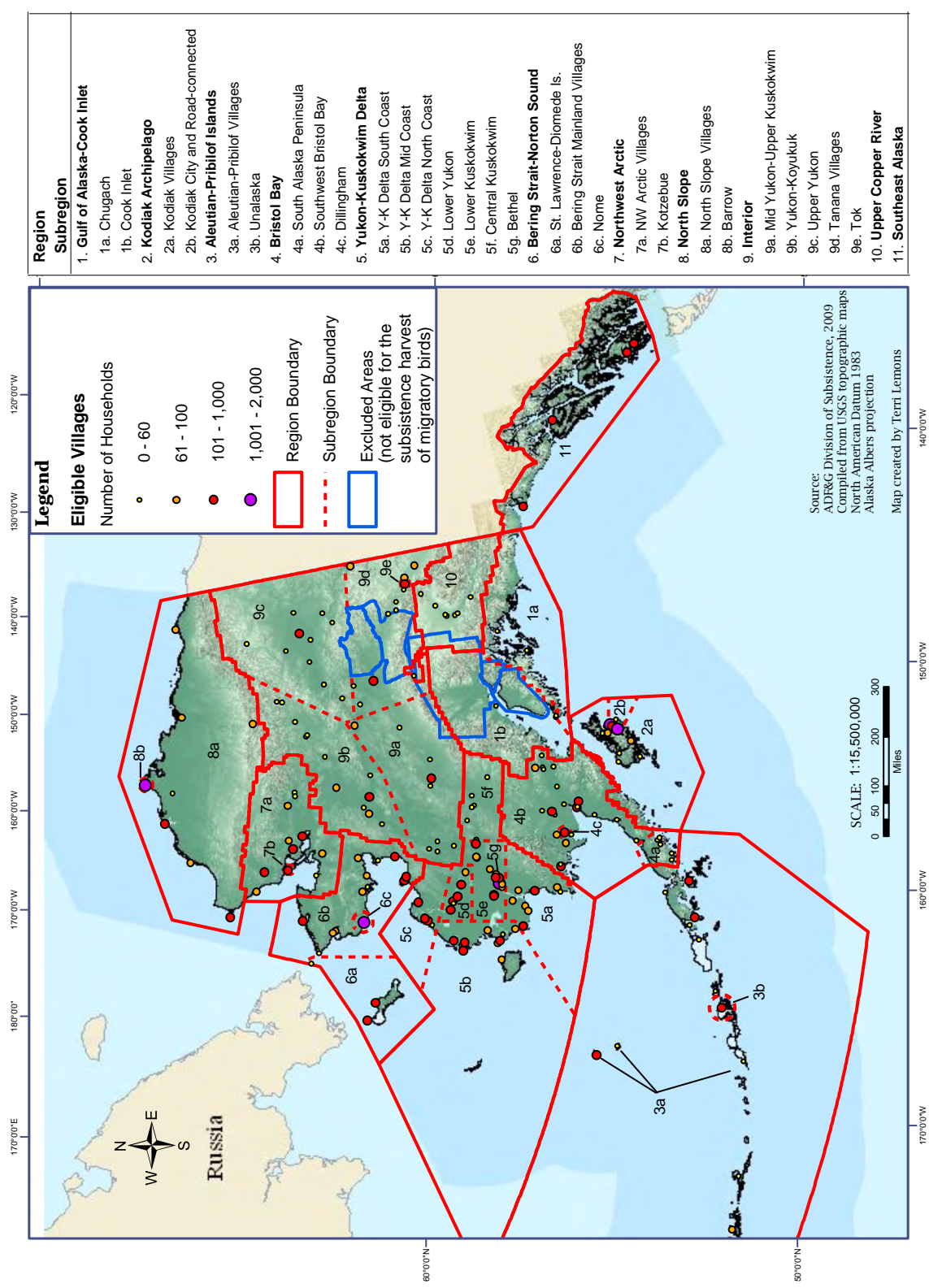


Figure 1.—Regions and subregions of the AMBCC migratory bird subsistence harvest survey.

AMBCC SUBSISTENCE HOUSEHOLD HARVEST SURVEY, GULF OF ALASKA-COOK INLET AND UPPER COPPER RIVER

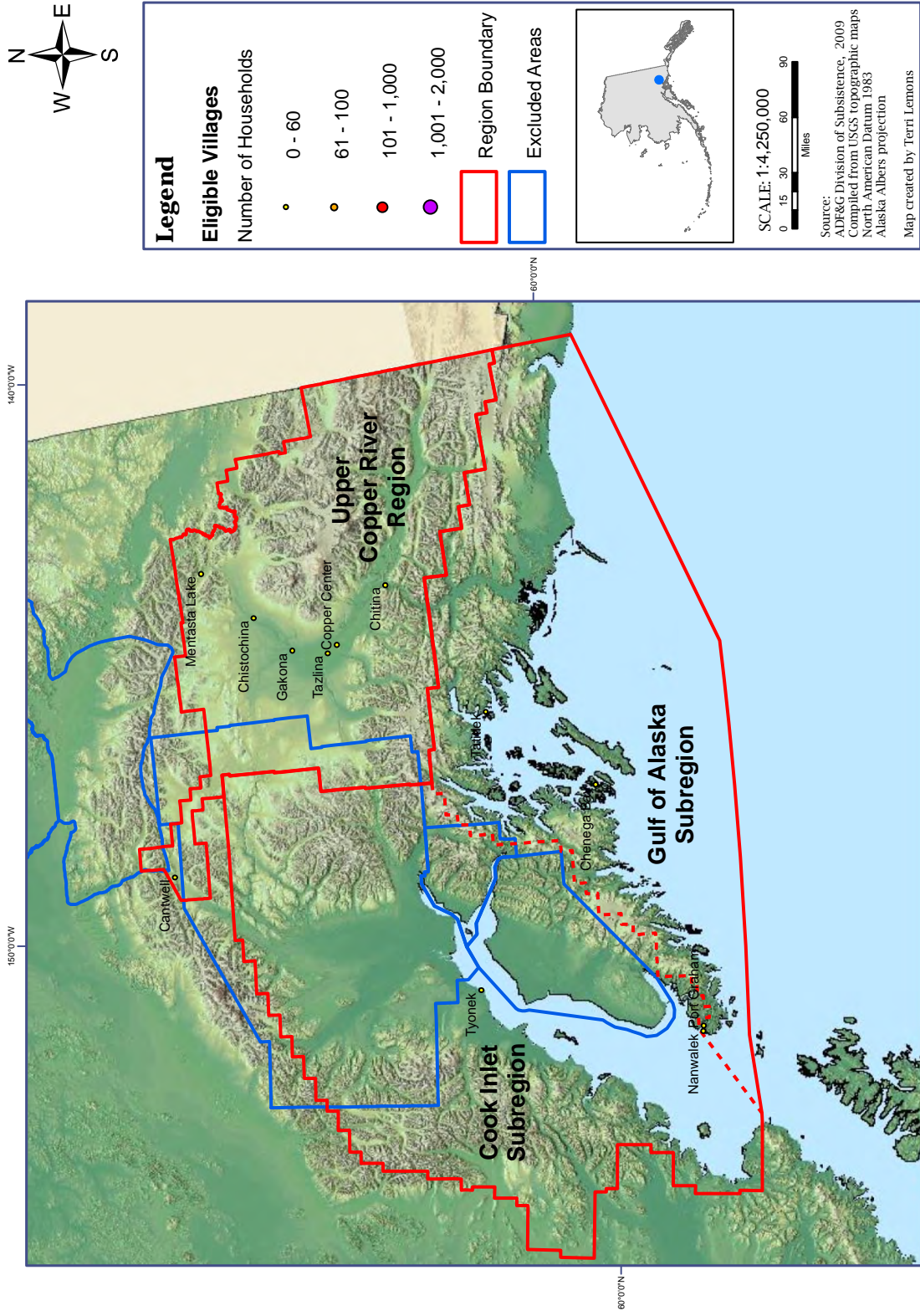
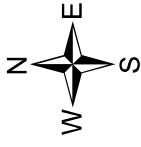


Figure 2.-Gulf of Alaska-Cook Inlet and Upper Copper River regions.

AMBCC SUBSISTENCE HOUSEHOLD HARVEST SURVEY, KODIAK ARCHIPELAGO



Legend

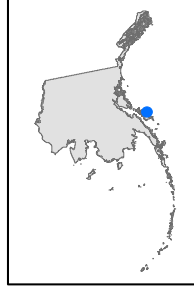
Eligible Villages

Number of Households

- 0 - 60
- 61 - 100
- 101 - 1,000
- 1,001 - 2,000

Region Boundary

Subregion Boundary



SCALE: 1:2,500,000

0 10 20 40 60 Miles

Source:
 ADE&G Division of Subsistence, 2009
 Compiled from USGS topographic maps
 North American Datum 1983
 Alaska Albers projection
 Map created by Terri Lemons

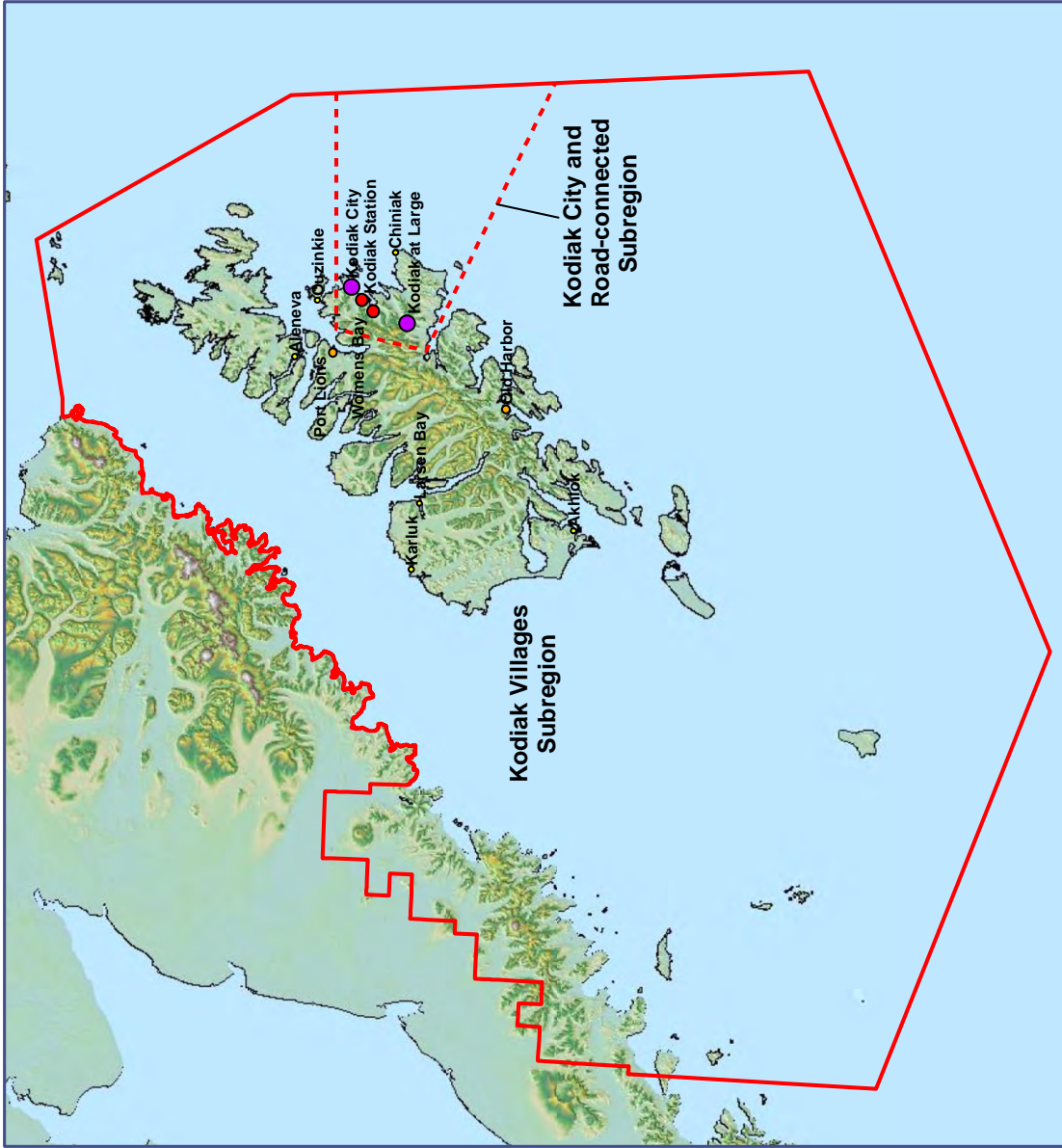


Figure 3.—Kodiak Archipelago region.

AMBCC SUBSISTENCE HOUSEHOLD HARVEST SURVEY, BRISTOL BAY

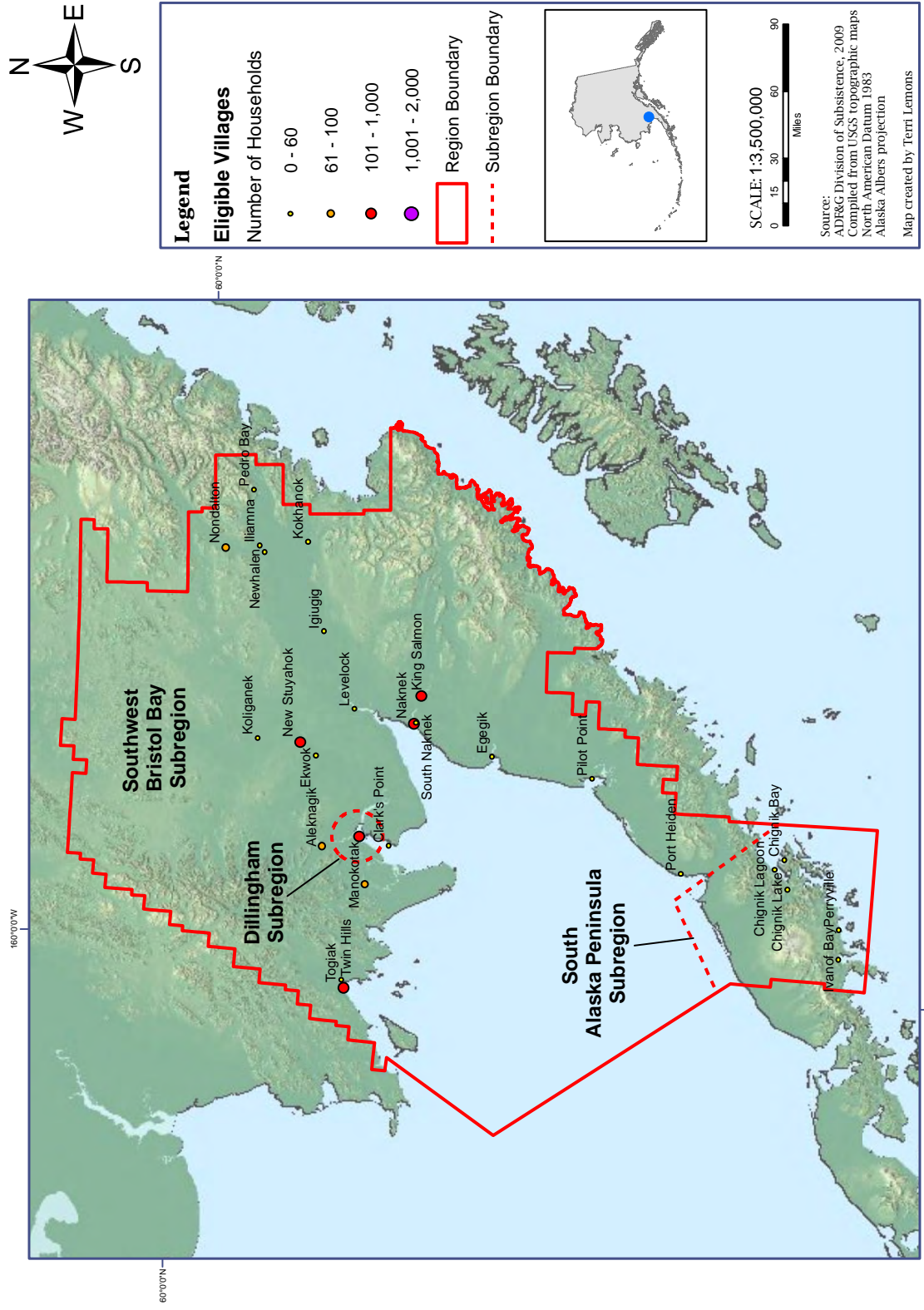


Figure 5.—Bristol Bay region.

AMBCC SUBSISTENCE HOUSEHOLD HARVEST SURVEY, YUKON-KUSKOKWIM DELTA

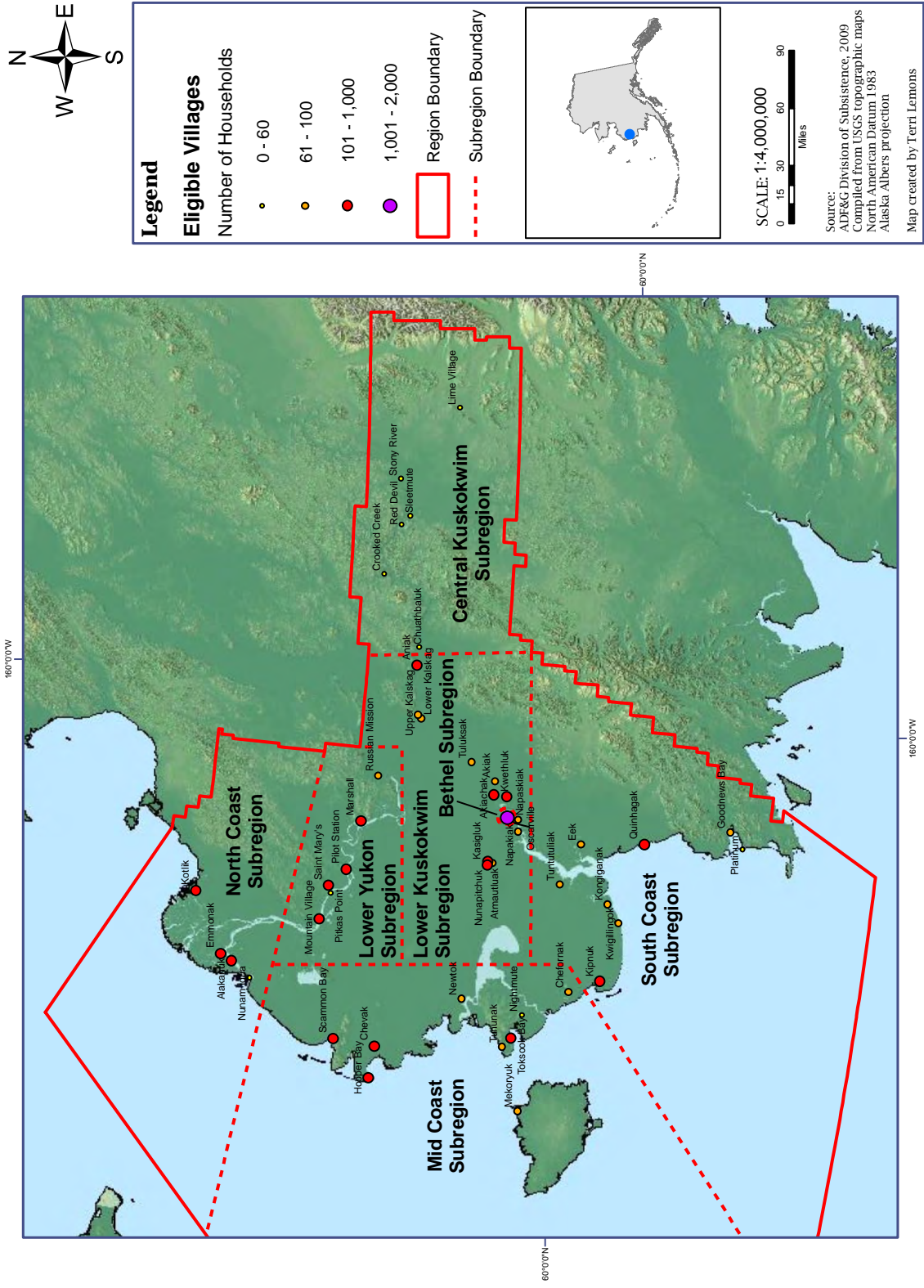


Figure 6.-Yukon-Kuskokwim Delta region.

AMCC SUBSISTENCE HOUSEHOLD HARVEST SURVEY, BERING STRAIT-NORTON SOUND

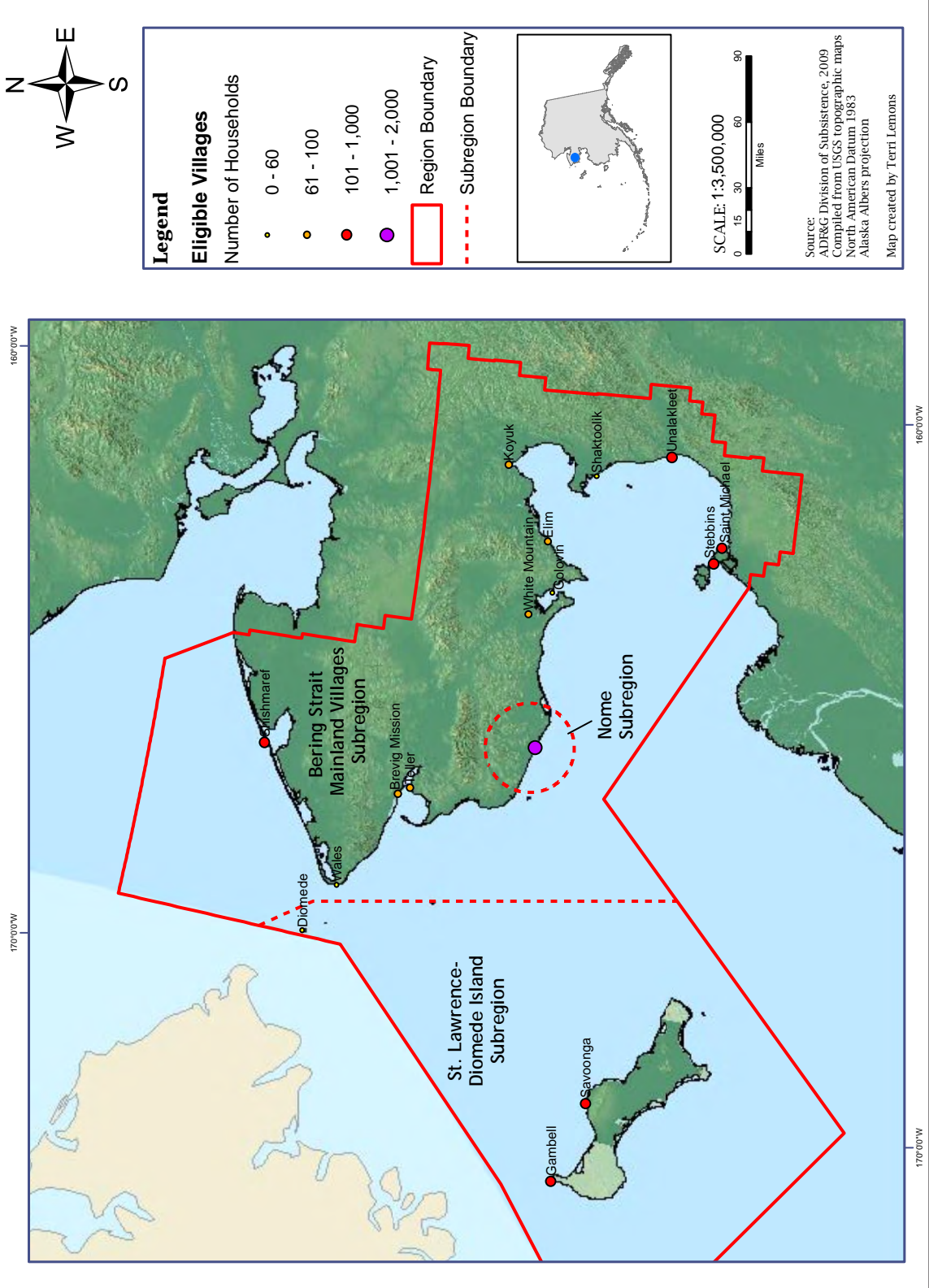


Figure 7.-Bering Strait-Norton Sound region.

AMBCC SUBSISTENCE HOUSEHOLD HARVEST SURVEY, NORTHWEST ARCTIC

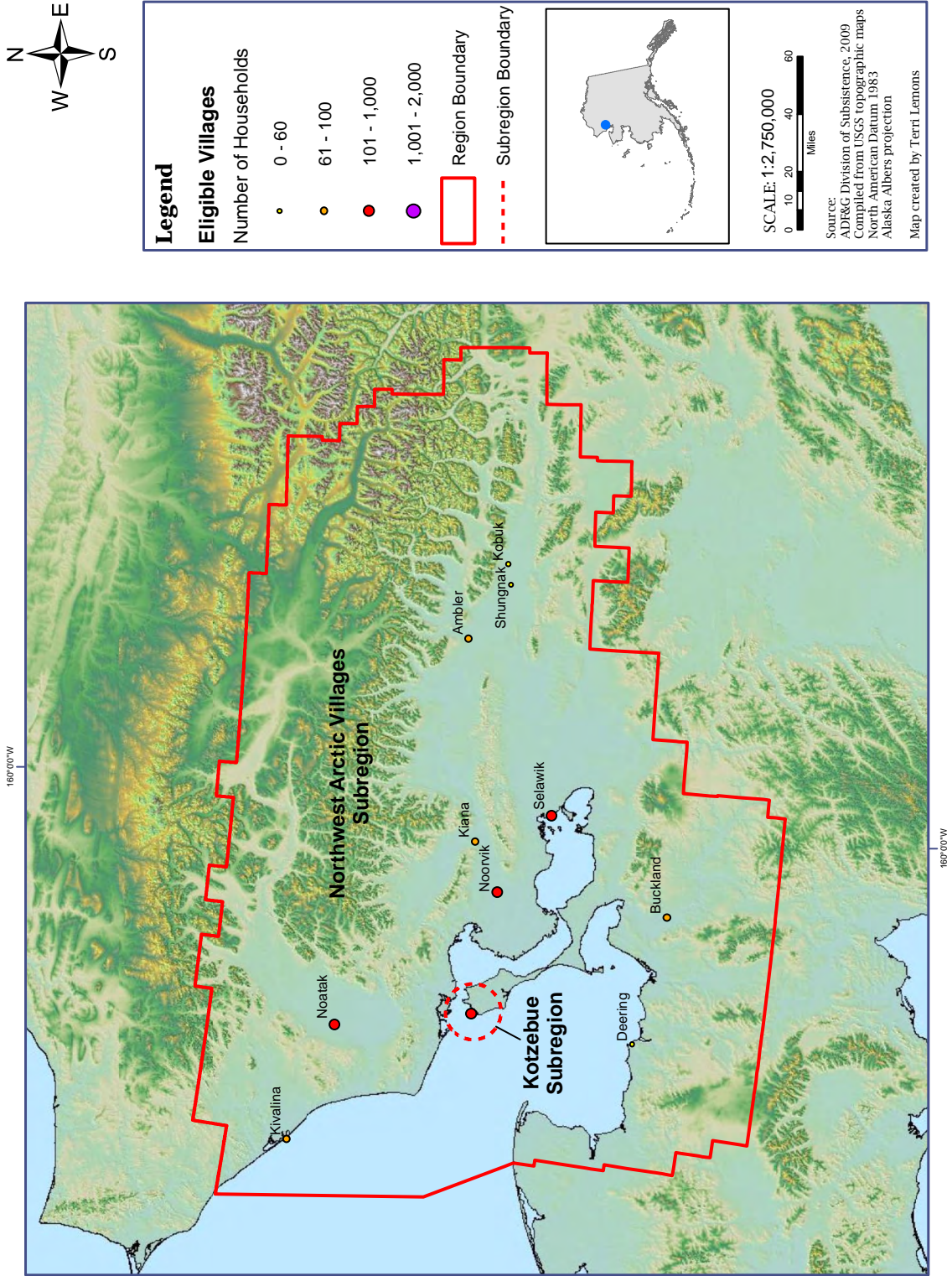


Figure 8. –Northwest Arctic region.

AMBCC SUBSISTENCE HOUSEHOLD HARVEST SURVEY, NORTH SLOPE

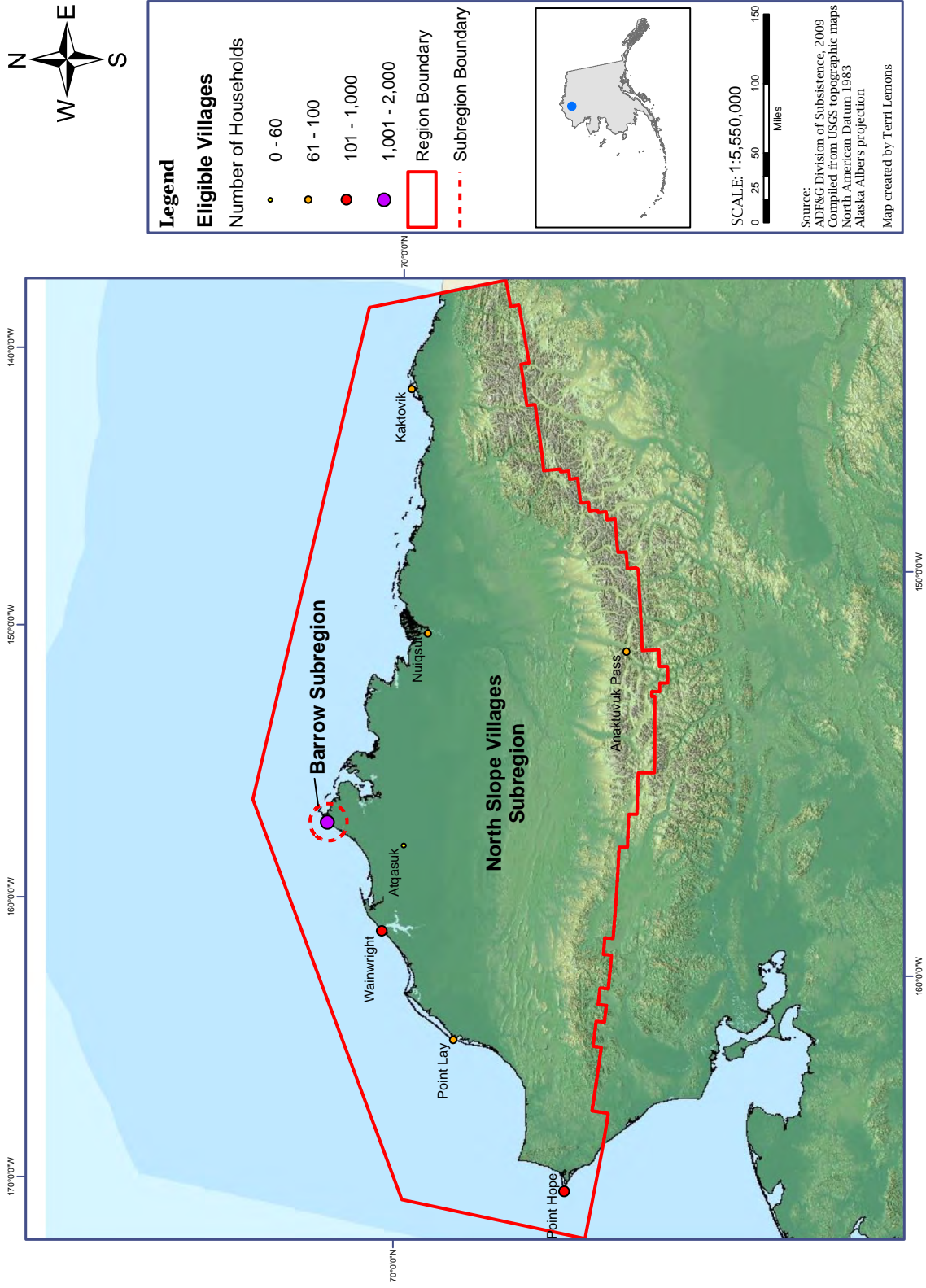
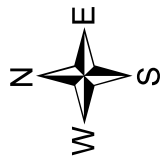


Figure 9. –North Slope region.

AMBCC SUBSISTENCE HOUSEHOLD HARVEST SURVEY, INTERIOR ALASKA



Legend

Eligible Villages

Number of Households

- 0 - 60
- 61 - 100
- 101 - 1,000
- 1,001 - 2,000

Region Boundary (Red outline)

Excluded Areas (Blue outline)

Subregion Boundary (Dashed red line)

SCALE: 1:5,500,000

0 20 40 80 120 Miles

Source: ADF&G Division of Subsistence, 2009
 Compiled from USGS topographic maps
 North American Datum 1983
 Alaska Albers projection
 Map created by Terri Lemons

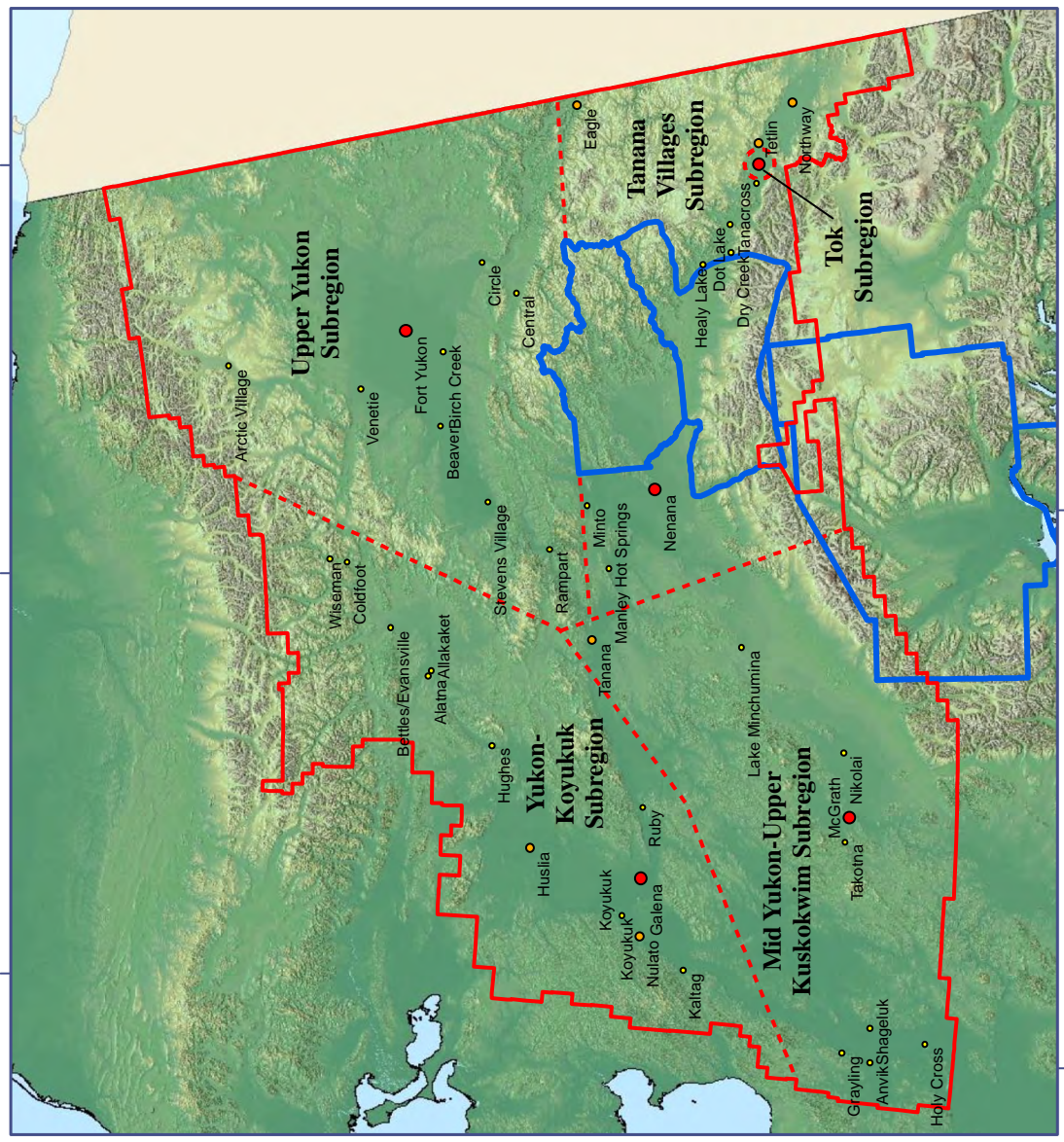


Figure 10.-Interior Alaska region.

AMBCC SUBSISTENCE HOUSEHOLD HARVEST SURVEY, SOUTHEAST ALASKA

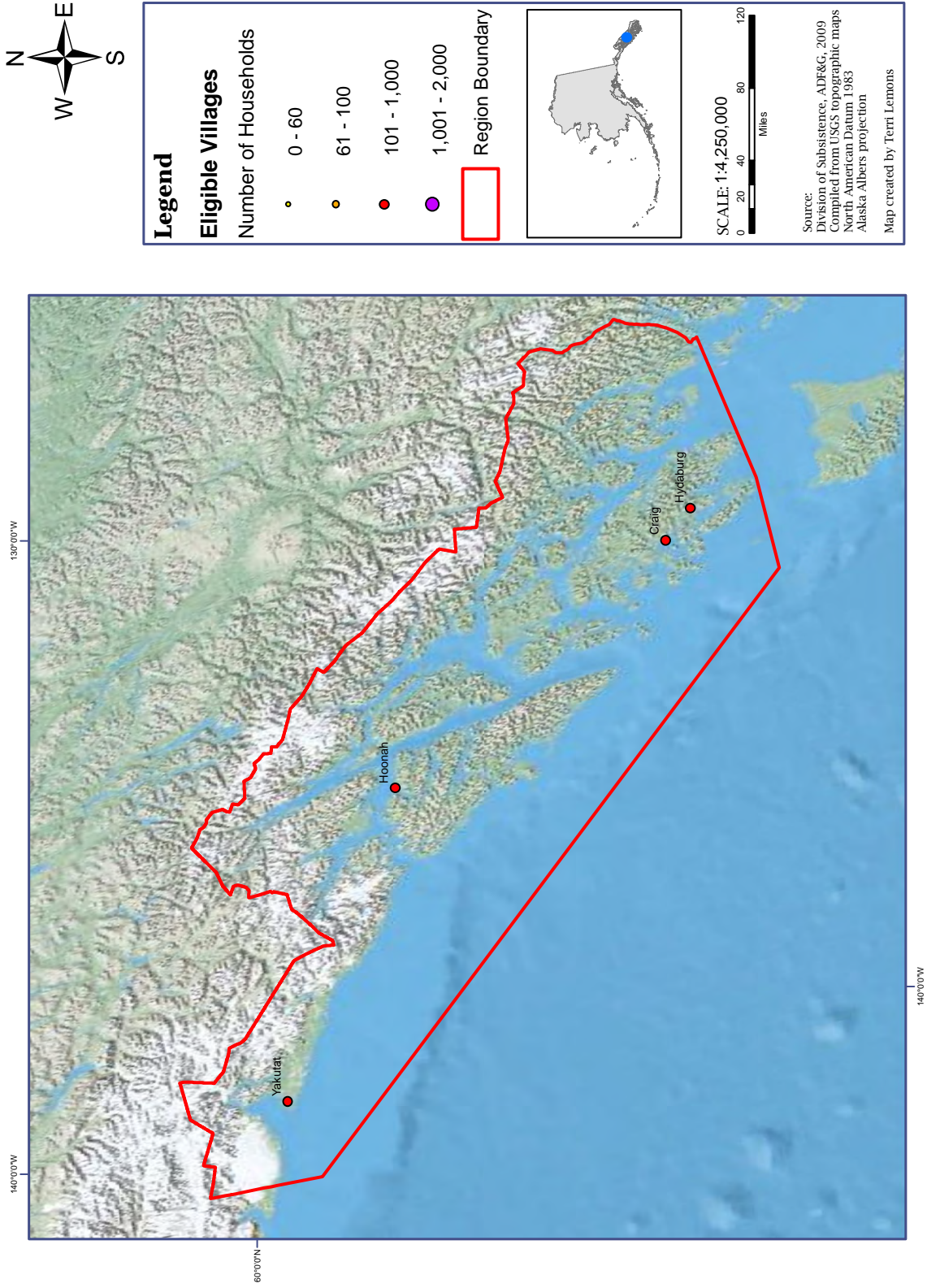


Figure 11. - Southeast Alaska region.

If a household harvests birds or eggs and gives them to another household, the harvest is to be recorded by the household that originally harvested the birds–eggs, and not by the household that received them. If a household does not harvest birds–eggs, any birds or eggs they receive are not to be recorded on their survey form.

Species Represented on the Harvest Report Form

The diverse subsistence cultures and economies across Alaska use a wide variety of migratory bird species, subject to seasonal availability, hunter access, and local traditions. The 2003 federal subsistence regulations allowed spring–summer harvest of about 90 species and subspecies of migratory birds, subject to seasons and restrictions (CFR vol. 68. No. 139, pp. 43010–43030, July 21, 2003). The harvest report form depicts about 50 species. The survey form was designed to record harvests of only those species that are significant to subsistence uses. Harvest of species not represented in the survey form can be reported in the “other bird” field. Identifying birds by subspecies can be difficult and it may be difficult to tell some species from others. The survey form does not differentiate between species and subspecies that are difficult to tell apart. To represent all species open to harvest on the survey forms would also result in an unwieldy, long survey.

Some bird species and eggs that are closed to harvest are depicted on the survey form. The list of birds and eggs closed to subsistence harvest may vary between regions according to the yearly hunting regulations. The inclusion of species closed to harvest on the survey form is not an endorsement of or consent to engage in the harvest of closed species. Rather, it is an attempt to collect accurate harvest data to aid in the sustainable management of all bird species. Management and conservation bodies, such as the AMBCC, the USFWS, and the flyway councils, need to know the numbers of birds and eggs taken to successfully plan for the sustainable management of bird populations. In order to elicit accurate answers to potentially sensitive questions, it is imperative that information from the survey is not used for punitive enforcement. To aid in this effort, identification of households is strictly confidential.

Data Transfer

The surveyor is required to check completed survey forms for completeness and correctness before sending them to the field coordinator. Upon receiving each batch of completed forms from surveyors, the field coordinator organizes and reviews all survey materials before sending them to the statewide survey coordinator. This step allows field coordinators to correct potential inconsistencies in data collection and to manage surveyor payment.

Data Management and Program Reporting

Data entry and archiving is completed by the Information Management Unit of the ADF&G Division of Subsistence. The statewide survey coordinator works closely with the unit to produce and report harvest estimates.

Data are entered in Microsoft Office Access 2003 forms that are designed to mimic survey forms.¹ The multiyear raw data are stored in a Microsoft SQL Server 2005 relational database and backups occur on a monthly basis. The structure of the database is documented in appropriate metadata. Double data entry and logical checks help ensure the accuracy of the information stored in the database and of the sampling information provided with completed survey forms (e.g., sampling method used, sample sizes, strata size). Logical checks and data analysis are done with SPSS Statistics 2008.

1. Product names are given for scientific completeness or because they are established standards for the State of Alaska; they do not constitute product endorsement.

Original survey forms are scanned and archived as digital files. Archived survey materials do not include household names or other personal information in order to ensure confidentiality of household harvest reports. If household names are inadvertently revealed in the survey forms, the information is redacted prior to archiving.

DATA ANALYSIS

Geographic Scale of Harvest Estimates

Harvest estimates are presented at the subregional and regional levels. Harvest estimates at the regional level are produced when at least 75% of the households within the region are represented in the sample (see below). Because of issues related to management of species of conservation concern, the North Slope and the Bering Strait–Norton Sound regions have requested harvest estimates to be presented at the regional level only. Appropriate subregional sampling coverage has allowed calculation of regional harvest estimates in these 2 regions.

Harvest estimates at the subregional level may vary considerably between years (Table 5 and Table 6). Several factors may be involved:

- Yearly variation in the local abundance of birds;
- Hunter access to productive hunting grounds;
- Yearly variation in hunting effort associated with availability of other subsistence resources, especially salmon *Oncorhynchus* spp. and caribou *Rangifer tarandus*, or with temporary employment in the cash economy;
- Inappropriate subregional sampling coverage; and
- Heterogeneity of harvest patterns in villages within a subregion.

To calculate statewide harvest estimates, any large yearly variation in subregional harvest estimates requires analytical approaches that account for variability in harvest between years as well within subregions. Development of accurate statewide estimates may require more years of data as well as appropriate coverage of infrequently surveyed regions (Northwest Arctic, Kodiak Archipelago, Aleutian–Pribilof Islands) and nonsurveyed regions (Southeast Alaska). For a better understanding of yearly variation in subregional estimates, it is important to continue reporting harvest estimates at the subregional level.

Expansion at the Subregional Level

The subsistence harvest survey generally employs a stratified, clustered sampling approach (Cochran 1977). Harvest estimates are calculated for each season and the annual estimate is calculated as the sum of seasonal harvests, although there are a few difficulties. For example, one or more seasonal pages of the harvest report form may be missing for individual households. As a consequence, the total number of households or the sets of households surveyed in a village can vary by season within the same survey year. Furthermore, seasonal data may be missing for an entire harvest level stratum or for an entire village. For these reasons, absolute sample sizes are specific to each harvest level stratum, season, and village. Because calculation of annual harvest estimates and confidence intervals requires an annual sample size, the maximum number of households sampled among seasons is used (Table 3).

The reported harvest is first expanded in each harvest level stratum and village: harvests reported by households sampled in each stratum are expanded to all households in that stratum. Considering the sampling methods used, the number of harvest level strata in a village may be 3

Table 3.–Number of villages and households included in data analysis, 2004–2008.

| Survey year | Villages included in harvest estimates | Households surveyed | | |
|-------------|--|---------------------|--------|-------|
| | | Spring | Summer | Fall |
| 2004 | 77 | 1,770 | 1,707 | 1,673 |
| 2005 | 75 | 2,226 | 2,251 | 1,742 |
| 2006 | 62 | 1,793 | 1,773 | 1,687 |
| 2007 | 74 | 2,076 | 2,051 | 1,491 |
| 2008 | 44 | 1,630 | 1,568 | 1,189 |

Source Survey results for 2004–2007 were reported in Naves (2010).

(“none, low, high”), 2 (“harvester, other”), or 1 (census or simple random sampling). Thus during the calculation of this first expansion, factors are specific to each harvest level and season in each village surveyed. The following formula is used for the first expansion:

Estimated harvest at harvest level stratum = sum of harvests reported by all households in a stratum \times (number of households sampled in the stratum \div total number of households in the stratum).

The mean harvest within the subregion is used as a substitute for missing data at the harvest level and the season. The harvest estimates per year, per village, per season, and per species are calculated as the sum of the estimated harvest at each harvest level stratum.

The second expansion calculation expands estimated harvests in surveyed villages to all villages within the subregion. Because the number of households varies widely between villages within a subregion, this second expansion is calculated using the number of households in surveyed and nonsurveyed villages in a subregion. The following formula is used:

Estimated harvest at subregional level = sum of the estimated harvest in surveyed villages \times (number of households in surveyed villages \div total number of households in the subregion).

Formulas used to estimate harvests and confidence intervals at the subregional level were based on Cochran (1977) and Bernard et al. (1998) (Appendix D). The formula used to calculate estimated harvests accounts for missing data at each harvest level stratum. However, if seasonal data are missing for all harvest level strata in a village, customized analytical approaches are necessary in order to use mean replacement.

The total number of households in the subregion is calculated as the sum of total resident households in the surveyed villages plus the estimated village size of the nonsurveyed villages. For surveyed villages, the total number of households represents the number of households resident in the village for at least 12 months and excludes unoccupied dwellings and households that recently moved to the village. The total number of resident households in surveyed villages is provided by the field coordinator as part of the sampling information in the “household list.” Village size estimates are obtained by dividing State of Alaska yearly village population estimates from the Alaska Department of Labor and Workforce Development² by the average household size as reported in the 2000 federal census (U.S. Census Bureau 2001) (village population divided by the number of households).

The total number of households provided by field coordinators and village estimated sizes are compared in order to assess whether household lists are complete. Annual village size as recorded in the Division of Subsistence Community Subsistence Information System³ (CSIS) is also used

2. <http://almis.labor.state.ak.us/?PAGEID=67&SUBID=171>, accessed June 7, 2009.

3. <http://www.subsistence.adfg.state.ak.us/CSIS>. Hereinafter cited as CSIS.

to assess the completeness of household lists. If these sources yield a discrepancy greater than 30–40% in the number of households, efforts are made to contact the field coordinator and obtain local information on village size, such as from lists held by tribal councils. If local information on village size cannot be obtained, CSIS information or estimated village sizes are used in harvest expansions.

Villages for which sampling information is missing (the household list, sampling method, or harvest level strata size are not provided) are not included in the analysis.⁴

Expansion at Regional Level

The third expansion expands the estimated harvest in surveyed subregions to all subregions within a region. Because the number of households in each subregion varies significantly, this third expansion is based on the number of households in both the surveyed and nonsurveyed subregions in a region, and is calculated as follows:

Estimated harvest at regional level = sum of the estimated harvest in surveyed subregions × (number of households in surveyed subregions ÷ total number of households in the region).

Subregional estimates are expanded to the regional level only if at least 75% of the households within the region are represented in the sample (nonsurveyed subregions must not represent more than 25% of the total households in the region). Formulas used to estimate harvest and confidence intervals at the regional level are based on Cochran (1977) and Bernard et al. (1998) (Appendix E). The formula to estimate harvests does account for missing data at the harvest level stratum. However, if seasonal data are missing for a harvest level stratum in a village, customized analytical approaches are necessary in order to use mean replacement.

For annual harvest estimates both at the subregional and regional levels, if the low end of the confidence interval is less than the reported harvest, the calculated low end is replaced by the reported harvest.

Conversion of Egg Volume to Numbers of Eggs

Egg harvest is sometimes reported on this survey by volume, such as the number of “5-gallon buckets” or the number of “1-gallon buckets.” Conversion factors for volumes of eggs to numbers of eggs were estimated by comparing the volumes of eggs of wild bird species reported in the Birds of North America Series to the volumes of “large” domestic chicken eggs (personal communication, James Magdanz, ADF&G Subsistence Resource Specialist, Kotzebue, Alaska, June 2009) (Table 4). It is known that a 1-gallon bucket can hold 48 large chicken eggs (24 oz per dozen, U.S. Department of Agriculture standard). This comparison is necessary because eggs of different size and shape arrange differently in a given volume; i.e., the amount of empty space among eggs is related to the size and shape of the eggs. In the future, actual counts of eggs per gallon should be documented on the egg gathering grounds.

Reports of Egg Harvest in Fall

Harvest reports occasionally include eggs gathered in fall (September 1 through October 31) or fall–winter (September 1 through March 9). However, the nesting period of birds in Alaska is usually only as late as July and there are no records of customary and traditional uses of eggs that have failed to hatch. For these reasons, reports of eggs harvested in fall or fall–winter are considered to be recording inconsistencies in which the surveyor or the household member records the harvest on the wrong seasonal page or in the field reserved for “birds” rather than in the field

4. In 2008, this was 5 out of 49 villages surveyed.

Table 4.–Estimated conversion factors, egg volume to number of eggs.

| Species | Number of eggs in 5-gallon bucket | Number of eggs in 1-gallon bucket |
|-----------------------------------|--------------------------------------|--------------------------------------|
| Mallard ^a | 261 | 52 |
| Pintail ^b | 327 | 65 |
| Arctic tern ^c | 716 | 143 |
| Mew gull ^d | 261 | 52 |
| Glaucous gull ^e | 121 | 24 |
| Glaucous-winged gull ^f | 147 | 29 |
| Herring gull ^g | 147 | 29 |
| Murre ^h | 126 | 25 |

Sources Personal communication, James Magdanz, ADF&G Subsistence Resource Specialist, Kotzebue, Alaska;

- a. Drilling et al. (2002)
- b. Austin and Miller (1995)
- c. Hatch (2002)
- d. Moskoff and Bevier (2002)
- e. Gilchrist (2001)
- f. Hayward and Verbeek (2008)
- g. Pierotti and Good (1994)
- h. Ainley et al. (2002)

reserved for “eggs.” Each of these cases are individually assessed and assumed to be harvest of birds in fall or harvest of eggs in spring, based on the harvest patterns of the household and of the village.

Household Participation Rates

Household participation in the survey is voluntary. The original survey method used permission slips to document household participation in the survey. During the first visit, when the surveyor invited each selected household to participate, he or she completed a permission slip for every visited household and noted whether the household agreed to participate (“yes”) or not (“no”). The following issues in the use of these permission slips were identified:

- Permission slips were not completed for a surveyed village;
- Permission slips were not completed for some households in a surveyed village;
- Permission slips were completed incorrectly (“no” represented “no harvest” or “no contact” rather than “no consent to conduct the survey”); and
- Completed permission slips were not submitted for data management and analysis at ADF&G.

Household participation rates at the regional and subregional levels are calculated based on the permission slips available for analysis (see the Results section). Identified instances where “no” could represent “no contact” or “no harvest” rather than “no consent” are not included in the analysis of household participation rate. Household participation rates are calculated as the number of households that agreed to participate in the survey (“yes”) divided by the total number of permission slips available.

RESULTS

Harvest estimate tables presented in this report include only the bird species represented in the version of the harvest report form used at each region or subregion (Appendix C). The species categories of “Duck (unidentified)” and “Other/unknown bird” are included in tables only if harvest in these categories is reported.

Information on sampling effort is presented in a footnote to each harvest estimate table. For subregional tables, “sampling effort” refers to the number of villages surveyed and the proportion of subregion households represented in the sample (the number of households in surveyed villages in relation to the total number of households in the subregion). For regional tables, sampling effort refers to the number of villages and of subregions surveyed. Major deviations from survey protocols, such as significantly incomplete geographic coverage or nonstandard village sampling approaches, are also documented in table footnotes.

If not all subregions were surveyed, regional harvest estimates may be larger than the sum of the surveyed subregions because expanded estimates account for nonsurveyed subregions. Regional estimates are not presented if nonsurveyed subregions represent more than 25% of the regional households.

Annual estimates for the total harvests of birds and eggs at the regional and subregional levels are summarized in Table 5 (birds) and Table 6 (eggs). Regional and subregional estimates in these tables indicate that estimates detailed by species are available in the regional and subregional tables that follow (tables 7–38). A regional table precedes the tables for its subregions unless survey coverage was not enough to allow calculation of regional estimates (e.g., Interior Alaska region, 2008). Household participation rates for 2004–2008 are presented in Table 39.

Table 5.—Annual harvest estimates total birds at the subregional and regional levels, 2004–2008.

| Region | 2004 | | | | 2005 | | | | 2006 | | | | 2007 | | | | 2008 | | | |
|---------------------------------------|----------------|---------------------|--------------------------|--------|---------------------|------------|--------------------------|---------------------|------------|--------------------------|---------------------|------------|--------------------------|---------------------|---------------|------------------------|------------------------|------------|------------------------|--|
| | Number | Confidence Interval | | Number | Confidence Interval | | Number | Confidence Interval | | Number | Confidence Interval | | Number | Confidence Interval | | Number | Confidence Interval | | | |
| | | 95% CI | Low – High | | 95% CI | Low – High | | 95% CI | Low – High | | 95% CI | Low – High | | 95% CI | Low – High | | 95% CI | Low – High | | |
| Gulf of Alaska-Cook Inlet | 2,995 | 32% | 2,039 – 3,951 | ** | 2,039 | 32% | 1,050 – 22,702 | ** | 596 | 42% | 343 – 849 | - | - | - | - | - | - | - | | |
| Gulf of Alaska | 2,756 | 17% | 2,278 – 3,234 | | | | | | 596 | 42% | 343 – 849 | | | | | | | | | |
| Cook Inlet | 239 | 30% | 168 – 310 | | 13 | 57% | 5 – 20 | | | | | | | | | | | | | |
| Kodiak Archipelago | - | - | - | - | - | - | - | - | 5,552 | 28% | 3,972 – 7,133 | - | - | - | - | - | - | - | | |
| Kodiak Villages | - | - | - | - | - | - | - | - | a | | | - | - | - | - | - | - | - | | |
| Kodiak City & Road Connected | - | - | - | - | - | - | - | - | - | | | - | - | - | - | - | - | - | | |
| Alutian-Pribilof Islands | - | - | - | - | ** | 35% | 11,050 – 22,702 | - | - | - | - | - | - | - | - | - | - | - | | |
| Alutian-Pribilof Villages | - | - | - | - | 16,876 | 35% | 11,050 – 22,702 | - | - | - | - | - | - | - | - | - | - | - | | |
| Unalaska | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Bristol Bay | ** | 24% | 609 – 992 | - | 47,336 | 32% | 32,026 – 62,645 | ** | - | - | - | - | - | - | - | - | - | - | | |
| South Alaska Peninsula | 801 | 24% | 609 – 992 | | | | | | | | | | | | | | | | | |
| Southwest Bristol Bay | 14,955 | 10% | 13,494 – 16,416 | | 32,769 | 18% | 26,937 – 38,600 | (26,715) | (22%) | (20,959 – 32,471) | | | | | | | | | | |
| Dillingham | - | - | - | - | 11,769 | 30% | 8,188 – 15,350 | - | - | - | - | - | - | - | - | - | - | - | | |
| Yukon-Kuskokwim Delta | 130,343 | 6% | 122,107 – 138,578 | - | 114,514 | 8% | 105,504 – 123,523 | 171,856 | 7% | 159,552 – 184,160 | ^b | - | - | - | 79,088 | 9% | 71,986 – 86,190 | | | |
| Y-K Delta South Coast | 25,764 | 11% | 22,849 – 28,680 | | 35,508 | 7% | 33,144 – 37,873 | 31,918 | 8% | 29,310 – 34,526 | 33,927 | 11% | 30,229 – 37,625 | 19,999 | 12% | 17,663 – 22,334 | | | | |
| Y-K Delta Mid Coast | 34,480 | 8% | 31,870 – 37,090 | | 17,546 | 11% | 15,664 – 19,429 | (61,998) | (12%) | (54,306 – 69,689) | 43,737 | 13% | 37,837 – 49,638 | 17,160 | 15% | 14,512 – 19,809 | | | | |
| Y-K Delta North Coast | 8,806 | 17% | 7,320 – 10,292 | | 11,206 | 14% | 9,663 – 12,748 | 4,493 | 21% | 3,545 – 5,440 | 1,206 | 31% | 829 – 1,584 | 4,867 | 22% | 3,797 – 5,936 | | | | |
| Lower Yukon | (6,201) | (19%) | (5,012 – 7,390) | | 6,815 | 9% | 6,206 – 7,424 | 10,269 | 12% | 9,025 – 11,513 | 3,988 | 15% | 3,404 – 4,572 | 4,727 | 16% | 3,994 – 5,460 | | | | |
| Lower Kuskokwim | 46,033 | 15% | 39,095 – 52,971 | | 16,557 | 11% | 14,771 – 18,344 | 48,849 | 8% | 45,095 – 52,604 | 58,983 | 7% | 54,575 – 63,392 | 22,813 | 14% | 19,721 – 25,906 | | | | |
| Central Kuskokwim | 440 | 32% | 300 – 581 | | | | | 1,167 | 35% | 754 – 1,580 | 219 | 79% | 46 – 391 | - | - | - | - | | | |
| Bethel ^c | 8,618 | 17% | 7,184 – 10,053 | | 23,954 | 24% | 18,246 – 29,662 | 13,163 | 24% | 9,969 – 16,357 | - | - | - | 7,789 | 16% | 6,556 – 9,021 | | | | |
| Bering Strait-Norton Sound | 53,576 | 8% | 49,194 – 57,959 | - | 74,115 | 17% | 61,682 – 86,548 | 123,257 | 10% | 110,419 – 136,094 | 123,257 | 10% | 110,419 – 136,094 | - | - | - | - | | | |
| St. Lawrence-Diomedes Is. | 33,600 | 7% | 31,326 – 35,874 | | 30,481 | 9% | 27,876 – 33,087 | - | - | - | 88,362 | 8% | 81,114 – 95,609 | - | - | - | - | | | |
| Bering Strait Mainland Villages | 17,195 | 9% | 15,567 – 18,822 | | 37,482 | 18% | 30,829 – 44,136 | - | - | - | 31,169 | 10% | 28,193 – 34,145 | - | - | - | - | | | |
| Nome | 2,782 | 21% | 2,210 – 3,353 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Northwest Arctic | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Northwest Arctic Villages | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Kotzebue | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| North Slope | - | - | - | - | 15,615 | 11% | 13,820 – 17,410 | - | - | - | - | - | - | 44,270 | 23% | 34,218 – 54,322 | 45,123 | 22% | 35,404 – 54,842 | |
| North Slope Villages | - | - | - | - | 4,672 | 12% | 4,115 – 5,228 | - | - | - | - | - | - | 6,118 | 24% | 4,630 – 7,607 | 9,873 | 38% | 6,080 – 13,665 | |
| Barrow | - | - | - | - | 10,943 | 10% | 9,848 – 12,039 | - | - | - | - | - | - | 38,152 ^d | 15% | 32,374 – 43,930 | 35,250 | 17% | 29,427 – 41,073 | |
| Interior Alaska | 50,995 | 13% | 44,216 – 57,774 | ** | 37,068 | 17% | 30,792 – 43,343 | 37,068 | 17% | 30,792 – 43,343 | 37,068 | 17% | 30,792 – 43,343 | 45,123 | 22% | 35,404 – 54,842 | 45,123 | 22% | 35,404 – 54,842 | |
| Mid Yukon-Upper Kuskokwim | (3,086) | (43%) | (1,755 – 4,418) | | 2,744 | 29% | 1,956 – 3,532 | 697 | 36% | 447 – 948 | - | - | - | - | - | - | - | - | | |
| Yukon-Koyukuk | 3,108 | 18% | 2,538 – 3,658 | | (930) | (44%) | (525 – 1,335) | (1,764) | (60%) | (712 – 2,816) | (3,031) | (72%) | (856 – 5,206) | (6,908) | (89%) | (731 – 13,084) | (6,908) | (89%) | (731 – 13,084) | |
| Upper Yukon | (14,418) | (16%) | (12,095 – 16,742) | | - | - | - | 10,927 | 12% | 9,576 – 12,277 | 18,402 | 14% | 15,800 – 21,004 | - | - | - | - | - | | |
| Tanana Villages | 20,388 | 16% | 17,197 – 23,579 | | - | - | - | 17,358 | 14% | 14,940 – 19,776 | - | - | - | - | - | - | - | - | | |
| Tok | - | - | - | - | - | - | - | 6,321 ^d | 31% | 4,385 – 8,258 | - | - | - | - | - | - | - | - | | |
| Upper Copper River^e | 1,120 | 30% | 782 – 1,458 | - | 1,120 | 30% | 782 – 1,458 | 247 | 30% | 174 – 321 | 247 | 30% | 174 – 321 | 247 | 30% | 174 – 321 | 247 | 30% | 174 – 321 | |

-: Region/subregion not surveyed. *: 95% CI ≥ 100% (Starting in 2008; if "Low" was smaller than reported harvest, "Low" was replaced by reported harvest). **: Less than 75% of region households represented in sample, harvest estimates not produced at the regional level. (In parenthesis): Less than 30% of subregion households represented in the sample and/or only 1 out of several subregion villages surveyed.

^a Fall bird harvest data not available for Kodiak City & Road Connected subregion; annual harvest estimates not available.

^b Fall bird harvest data not available for Bethel subregion; annual harvest estimates not available.

^c Bethel harvest expansions assume that harvester households account for 30% of the total village households (village size estimates).

^d Subregional harvest estimates assumed simple random sampling.

^e Sampling and harvest expansions represent Alaska Native households only. 2004–2007 Harvest estimates from Naves (2010).

Table 6.—Annual harvest estimates total bird eggs at the subregional and regional levels, 2004–2008.

| Region | 2004 | | | | 2005 | | | | 2006 | | | | 2007 | | | | 2008 | | | |
|---------------------------------------|---------------|---------------------|---------------|-----------------|----------------|---------------------|---------------|-----------------|--------|---------------------|-----|------|--------|---------------------|-----|------|--------|---------------------|-----|------|
| | Number | Confidence Interval | | | Number | Confidence Interval | | | Number | Confidence Interval | | | Number | Confidence Interval | | | Number | Confidence Interval | | |
| | | 95% CI | Low | High | | 95% CI | Low | High | | 95% CI | Low | High | | 95% CI | Low | High | | 95% CI | Low | High |
| Gulf of Alaska-Cook Inlet | 2,178 | 17% | 1,801 | -2,556 | ** | | | | | | | | | | | | | | | |
| Gulf of Alaska | 2,173 | 24% | 1,652 | -2,694 | | | | | | | | | | | | | | | | |
| Cook Inlet | 5 | 75% | 1 | -9 | 0 | | | | | | | | | | | | | | | |
| Kodiak Archipelago | | | | | | | | | | | | | | | | | | | | |
| Kodiak Villages | | | | | | | | | | | | | | | | | | | | |
| Kodiak City & Road Connected | | | | | | | | | | | | | | | | | | | | |
| Aleutian-Pribilof Islands | | | | | | | | | | | | | | | | | | | | |
| Aleutian-Pribilof Villages | | | | | | | | | | | | | | | | | | | | |
| Unalaska | | | | | | | | | | | | | | | | | | | | |
| Bristol Bay | ** | | | | | | | | | | | | | | | | | | | |
| South Alaska Peninsula | 409 | 49% | 209 | -609 | | | | | | | | | | | | | | | | |
| Southwest Bristol Bay | 54,437 | 20% | 43,363 | -65,511 | | | | | | | | | | | | | | | | |
| Dillingham | | | | | 5,768 | 74% | 1,478 | -10,058 | | | | | | | | | | | | |
| Yukon-Kuskokwim Delta | 27,288 | 14% | 23,433 | -31,143 | | | | | | | | | | | | | | | | |
| Y-K Delta South Coast | 7,768 | 20% | 6,216 | -9,321 | 13,424 | 13% | 11,654 | -15,195 | | | | | | | | | | | | |
| Y-K Delta Mid Coast | 14,598 | 17% | 12,136 | -17,060 | 2,140 | 25% | 1,595 | -2,684 | | | | | | | | | | | | |
| Y-K Delta North Coast | 2,466 | 40% | 1,474 | -3,459 | 3,921 | 43% | 2,251 | -5,592 | | | | | | | | | | | | |
| Lower Yukon | (191) | (69%) | (58 | -323) | 652 | 71% | 191 | -1,112 | | | | | | | | | | | | |
| Lower Kuskokwim | 2,265 | 32% | 1,537 | -2,993 | 1,302 | 31% | 900 | -1,703 | | | | | | | | | | | | |
| Central Kuskokwim | 0 | *** | | | | | | | | | | | | | | | | | | |
| Bethel ^b | 0 | *** | | | 261 | 60% | 106 | -416 | | | | | | | | | | | | |
| Bering Strait-Norton Sound | 99,494 | 15% | 84,180 | -114,808 | 113,082 | 19% | 91,685 | -134,480 | | | | | | | | | | | | |
| St. Lawrence-Diomedes Is. | 81,675 | 17% | 68,193 | -95,157 | 75,373 | 17% | 62,590 | -88,157 | | | | | | | | | | | | |
| Bering Strait Mainland Villages | 16,467 | 17% | 13,682 | -19,253 | 29,321 | 31% | 20,363 | -38,280 | | | | | | | | | | | | |
| Nome | 1,351 | 26% | 996 | -1,706 | 8,387 | 28% | 6,038 | -10,737 | | | | | | | | | | | | |
| Northwest Arctic | | | | | | | | | | | | | | | | | | | | |
| Northwest Arctic Villages | | | | | | | | | | | | | | | | | | | | |
| Kotzebue | | | | | | | | | | | | | | | | | | | | |
| North Slope | | | | | | | | | | | | | | | | | | | | |
| North Slope Villages | | | | | | | | | | | | | | | | | | | | |
| Barrow | | | | | | | | | | | | | | | | | | | | |
| Interior Alaska | 1,009 | 104% | * | -2,057 | | | | | | | | | | | | | | | | |
| Mid Yukon-Upper Kuskokwim | (0) | *** | | | 2 | 149% | * | -6 | | | | | | | | | | | | |
| Yukon-Koyukuk | 11 | 78% | 3 | -20 | (0) | *** | | | | | | | | | | | | | | |
| Upper Yukon | (40) | (121%) | (* | -89) | | | | | | | | | | | | | | | | |
| Tanana Villages | 760 | 73% | 205 | -1,315 | | | | | | | | | | | | | | | | |
| Tok | | | | | | | | | | | | | | | | | | | | |
| Upper Copper River^d | 82 | 101% | * | -164 | | | | | | | | | | | | | | | | |

-. Region/subregion not surveyed. *: 95% CI ≥ 100% (Starting in 2008; if "Low" was smaller than reported harvest, "Low" was replaced by reported harvest). **: Less than 75% of region households represented in sample, harvest estimates not produced at the regional level. ***: No reported harvest. (In parenthesis): Less than 30% of subregion households represented in the sample and/or only 1 out of several subregion villages surveyed.

^a Harvest estimates based on a sample of only known harvester households.

^b Bethel harvest expansions assume that harvester households account for 30% of the total village households (village size estimates).

^c Subregional harvest estimates assumed simple random sampling.

^d Sampling and harvest expansions represent Alaska Native households only.

2004–2007 Harvest estimates from Naves (2010).

2008 HARVEST ESTIMATES

Table 7.—Estimated harvest of birds, Aleutian–Pribilof Islands Region, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|-----------------------|----------------------------------|-------------|------------|-------------|--------------|------------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall-Winter | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 1,647 | 58% | 697 – 2,596 | 594 | 87% | 24 | 126% | 1,029 | 83% |
| Mallard | 2,108 | 45% | 1,154 – 3,061 | 475 | 93% | 39 | 112% | 1,593 | 57% |
| Pintail | 39 | 109% | 11 – 81 | 0 | - | 0 | - | 39 | 110% |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 77 | 71% | 34 – 132 | 0 | - | 18 | 126% | 59 | 85% |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 58 | 98% | 27 – 115 | 0 | - | 0 | - | 58 | 98% |
| Bufflehead | 29 | 84% | 12 – 53 | 0 | - | 12 | 126% | 17 | 112% |
| Goldeneye | 30 | 110% | 6 – 63 | 0 | - | 3 | 126% | 27 | 127% |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 9 | 82% | 4 – 17 | 0 | - | 3 | 126% | 6 | 106% |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 12 | 126% | 4 – 27 | 0 | - | 0 | - | 12 | 126% |
| Harlequin duck | 210 | 68% | 75 – 353 | 0 | - | 11 | 177% | 199 | 70% |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 17 | 95% | 7 – 34 | 0 | - | 9 | 126% | 8 | 142% |
| Red-breasted merganser | 38 | 169% | 7 – 102 | 27 | 177% | 11 | 177% | 0 | - |
| Duck (unidentified) | 86 | 149% | 16 – 215 | 32 | 177% | 16 | 177% | 38 | 136% |
| Total ducks | 4,359 | 44% | 2,427 – 6,291 | 1,128 | 80% | 145 | 104% | 3,086 | 56% |
| Geese | | | | | | | | | |
| Black brant | 555 | 39% | 341 – 770 | 0 | - | 6 | 126% | 549 | 39% |
| Cackling Canada goose | 996 | 47% | 523 – 1,469 | 259 | 129% | 0 | - | 737 | 49% |
| Lesser Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Emperor goose | 109 | 75% | 28 – 191 | 32 | 177% | 12 | 126% | 65 | 95% |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 1,660 | 34% | 1,092 – 2,229 | 291 | 116% | 18 | 126% | 1,351 | 36% |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Ptarmigan | 2,055 | 45% | 1,126 – 2,985 | 567 | 104% | 29 | 101% | 1,460 | 52% |
| Seabirds | | | | | | | | | |
| Comorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous-winged gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Herring gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 11 | 169% | 2 – 29 | 0 | - | 11 | 177% | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 252 | 56% | 111 – 394 | 166 | 66% | 86 | 80% | 0 | - |
| Total seabirds | 263 | 54% | 121 – 406 | 166 | 66% | 97 | 73% | 0 | - |
| Shorebirds | | | | | | | | | |
| Black oystercatcher | 64 | 142% | 30 – 154 | 0 | - | 64 | 142% | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 64 | 142% | 30 – 154 | 0 | - | 64 | 142% | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total birds | 8,401 | 30% | 5,909 – 10,894 | 2,152 | 70% | 352 | 69% | 5,896 | 34% |

Sampling effort (Aleutian/Pribilof Islands, 2008): 4 out of 12 villages in this region were surveyed; 2 out of 2 subregions were surveyed. -: No reported harvest.

Table 8.—Estimated harvest of eggs, Aleutian–Pribilof Islands Region, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|----------------------|---------------------------------|-------------|--------------|-------------|-------------|----------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall-Winter | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mallard | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pintail | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 32 | 169% | 6 – 87 | 32 | 177% | 0 | - | 0 | - |
| Duck (unidentified) | 194 | 169% | 36 – 522 | 129 | 177% | 65 | 177% | 0 | - |
| Total ducks | 226 | 169% | 42 – 609 | 162 | 177% | 65 | 177% | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Ptarmigan | 11 | 169% | 2 – 29 | 11 | 177% | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous-winged gull | 3,779 | 42% | 2,198 – 5,359 | 2,783 | 44% | 996 | 66% | 0 | - |
| Herring gull | 498 | 102% | 136 – 1,008 | 215 | 177% | 283 | 126% | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 65 | 169% | 12 – 174 | 0 | - | 65 | 177% | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 4,342 | 40% | 2,585 – 6,098 | 2,998 | 43% | 1,344 | 56% | 0 | - |
| Shorebirds | | | | | | | | | |
| Black oystercatcher | 172 | 159% | 35 – 446 | 168 | 170% | 4 | 142% | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 172 | 159% | 35 – 446 | 168 | 170% | 4 | 142% | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Other/unknown bird | 27 | 169% | 5 – 73 | 27 | 177% | 0 | - | 0 | - |
| Total eggs | 4,778 | 43% | 2,704 – 6,852 | 3,365 | 48% | 1,413 | 55% | 0 | - |

Sampling effort (Aleutian/Pribilof Islands, 2008): 4 out of 12 villages in this region were surveyed; 2 out of 2 subregions were surveyed. -: No reported harvest.

Table 9.—Estimated harvest of birds, Aleutian–Pribilof Islands Region, Aleutian–Pribilof Villages Subregion, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|----------------------|----------------------------------|-------------|------------|-------------|--------------|------------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall-Winter | |
| | | 95% CI | Low - High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 1,566 | 38% | 972 – 2,159 | 583 | 89% | 24 | 126% | 959 | 88% |
| Mallard | 2,000 | 31% | 1,373 – 2,627 | 454 | 97% | 18 | 126% | 1,529 | 59% |
| Pintail | 33 | 105% | 10 – 68 | 0 | - | 0 | - | 33 | 124% |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 77 | 70% | 34 – 131 | 0 | - | 18 | 126% | 59 | 85% |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 58 | 98% | 27 – 115 | 0 | - | 0 | - | 58 | 98% |
| Bufflehead | 29 | 80% | 12 – 52 | 0 | - | 12 | 126% | 17 | 112% |
| Goldeneye | 3 | 111% | 1 – 6 | 0 | - | 3 | 126% | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 9 | 81% | 4 – 17 | 0 | - | 3 | 126% | 6 | 106% |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 12 | 111% | 4 – 25 | 0 | - | 0 | - | 12 | 126% |
| Harlequin duck | 129 | 82% | 60 – 235 | 0 | - | 0 | - | 129 | 82% |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 17 | 90% | 7 – 33 | 0 | - | 9 | 126% | 8 | 142% |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 3,933 | 31% | 2,732 – 5,135 | 1,037 | 85% | 85 | 126% | 2,811 | 61% |
| Geese | | | | | | | | | |
| Black brant | 523 | 30% | 365 – 681 | 0 | - | 6 | 126% | 517 | 40% |
| Cackling Canada goose | 996 | 30% | 700 – 1,292 | 259 | 129% | 0 | - | 737 | 49% |
| Lesser Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Emperor goose | 45 | 58% | 19 – 70 | 0 | - | 12 | 126% | 33 | 73% |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 1,563 | 24% | 1,194 – 1,932 | 259 | 129% | 18 | 126% | 1,286 | 36% |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Ptarmigan | 1,829 | 32% | 1,238 – 2,421 | 432 | 129% | 18 | 123% | 1,379 | 55% |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous-winged gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Herring gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 252 | 50% | 127 – 378 | 166 | 66% | 86 | 80% | 0 | - |
| Total seabirds | 252 | 50% | 127 – 378 | 166 | 66% | 86 | 80% | 0 | - |
| Shorebirds | | | | | | | | | |
| Black oystercatcher | 64 | 142% | 30 – 154 | 0 | - | 64 | 142% | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 64 | 142% | 30 – 154 | 0 | - | 64 | 142% | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total birds | 7,642 | 21% | 6,030 – 9,254 | 1,894 | 77% | 272 | 73% | 5,476 | 36% |

Sampling effort (Aleutian/Pribilof Villages, 2008): 4 out of 11 villages in this subregion were surveyed; 47% of subregion households were represented in the sample.

-: No reported harvest.

Table 10.–Estimated harvest of eggs, Aleutian–Pribilof Islands Region, Aleutian–Pribilof Villages Subregion, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|---------------|---------------------------------|--------|--------|--------|-------------|--------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall-Winter | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mallard | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pintail | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Ptarmigan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous-winged gull | 3,725 | 31% | 2,586 – 4,864 | 2,729 | 45% | 996 | 66% | 0 | - |
| Herring gull | 283 | 111% | 96 – 598 | 0 | - | 283 | 126% | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 4,008 | 30% | 2,823 – 5,193 | 2,729 | 45% | 1,279 | 58% | 0 | - |
| Shorebirds | | | | | | | | | |
| Black oystercatcher | 11 | 103% | 5 – 22 | 6 | 142% | 4 | 142% | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 11 | 103% | 5 – 22 | 6 | 142% | 4 | 142% | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total eggs | 4,018 | 30% | 2,829 – 5,208 | 2,735 | 45% | 1,283 | 58% | 0 | - |

Sampling effort (Aleutian/Pribilof Villages, 2008): 4 out of 11 villages in this subregion were surveyed; 47% of subregion households were represented in the sample.
 -: No reported harvest.

Table 11.—Estimated harvest of birds, Aleutian–Pribilof Islands Region, Unalaska Subregion, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|--------------------|----------------------------------|-------------|-----------|-------------|-------------|-------------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall-Winter | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 81 | 64% | 29 – 133 | 11 | 177% | 0 | - | 70 | 125% |
| Mallard | 108 | 52% | 52 – 164 | 22 | 177% | 22 | 177% | 65 | 125% |
| Pintail | 5 | 102% | 1 – 11 | 0 | - | 0 | - | 5 | 177% |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 27 | 74% | 7 – 47 | 0 | - | 0 | - | 27 | 127% |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 81 | 66% | 28 – 134 | 0 | - | 11 | 177% | 70 | 128% |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 38 | 78% | 8 – 67 | 27 | 177% | 11 | 177% | 0 | - |
| Duck (unidentified) | 86 | 55% | 39 – 133 | 32 | 177% | 16 | 177% | 38 | 136% |
| Total ducks | 426 | 46% | 230 – 621 | 92 | 177% | 59 | 177% | 275 | 101% |
| Geese | | | | | | | | | |
| Black brant | 32 | 102% | 6 – 65 | 0 | - | 0 | - | 32 | 177% |
| Cackling Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Emperor goose | 65 | 72% | 18 – 111 | 32 | 177% | 0 | - | 32 | 177% |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 97 | 76% | 23 – 171 | 32 | 177% | 0 | - | 65 | 177% |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Ptarmigan | 226 | 62% | 86 – 367 | 135 | 146% | 11 | 177% | 81 | 177% |
| Seabirds | | | | | | | | | |
| Comorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous-winged gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Herring gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 11 | 102% | 2 – 22 | 0 | - | 11 | 177% | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 11 | 102% | 2 – 22 | 0 | - | 11 | 177% | 0 | - |
| Shorebirds | | | | | | | | | |
| Black oystercatcher | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total birds | 760 | 41% | 445 – 1,074 | 259 | 139% | 81 | 177% | 420 | 92% |

Sampling effort (Unalaska, 2008): 1 out of 1 village in this subregion was surveyed. -: No reported harvest.

Table 12.—Estimated harvest of eggs, Aleutian–Pribilof Islands Region, Unalaska Subregion, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|--------------------|---------------------------------|-------------|------------|-------------|-------------|----------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall-Winter | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mallard | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pintail | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 32 | 102% | 6 – 65 | 32 | 177% | 0 | - | 0 | - |
| Duck (unidentified) | 194 | 76% | 46 – 341 | 129 | 177% | 65 | 177% | 0 | - |
| Total ducks | 226 | 78% | 49 – 404 | 162 | 177% | 65 | 177% | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Ptarmigan | 11 | 102% | 2 – 22 | 11 | 177% | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Comorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous-winged gull | 54 | 102% | 10 – 109 | 54 | 177% | 0 | - | 0 | - |
| Herring gull | 215 | 102% | 40 – 435 | 215 | 177% | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 65 | 102% | 12 – 131 | 0 | - | 65 | 177% | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 334 | 71% | 98 – 570 | 269 | 146% | 65 | 177% | 0 | - |
| Shorebirds | | | | | | | | | |
| Black oystercatcher | 162 | 102% | 30 – 327 | 162 | 177% | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 162 | 102% | 30 – 327 | 162 | 177% | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Other/unknown bird | 27 | - | - | 27 | - | 0 | - | 0 | - |
| Total eggs | 760 | 80% | 154 – 1,365 | 630 | 162% | 129 | 177% | 0 | - |

Sampling effort (Unalaska, 2008): 1 out of 1 village in this subregion was surveyed. -: No reported harvest.

Table 13.—Estimated harvest of birds, Bristol Bay Region, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|------------------------|----------------------------------|------------|--------------|------------|------------------|------------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall/Fall-Winter | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 406 | 44% | 227 – 586 | 217 | 50% | 77 | 71% | 112 | 49% |
| Green-winged teal | 919 | 39% | 562 – 1,276 | 443 | 34% | 145 | 74% | 330 | 51% |
| Mallard | 3,520 | 18% | 2,897 – 4,142 | 2,435 | 17% | 543 | 36% | 541 | 33% |
| Pintail | 3,276 | 22% | 2,563 – 3,989 | 2,332 | 22% | 449 | 51% | 494 | 36% |
| Shoveler | 443 | 42% | 255 – 630 | 246 | 53% | 76 | 65% | 121 | 92% |
| Black scoter | 125 | 56% | 55 – 195 | 59 | 88% | 37 | 102% | 29 | 102% |
| Surf scoter | 102 | 146% | 21 – 251 | 10 | 88% | 0 | - | 92 | 161% |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 280 | 57% | 120 – 440 | 249 | 64% | 26 | 79% | 4 | 144% |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 2 | 144% | 1 – 5 | 2 | 144% | 0 | - | 0 | - |
| Common eider | 22 | 144% | 10 – 53 | 22 | 144% | 0 | - | 0 | - |
| King eider | 64 | 85% | 9 – 119 | 64 | 85% | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 37 | 98% | 4 – 73 | 37 | 98% | 0 | - | 0 | - |
| Harlequin duck | 149 | 81% | 29 – 269 | 103 | 107% | 0 | - | 46 | 105% |
| Long-tailed duck | 20 | 89% | 2 – 37 | 20 | 88% | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 28 | 170% | 6 – 76 | 0 | - | 0 | - | 28 | 170% |
| Total ducks | 9,392 | 17% | 7,752 – 11,032 | 6,239 | 17% | 1,354 | 37% | 1,798 | 30% |
| Geese | | | | | | | | | |
| Black brant | 219 | 62% | 84 – 354 | 150 | 51% | 0 | - | 69 | 161% |
| Cackling Canada goose | 4,499 | 23% | 3,456 – 5,541 | 3,451 | 21% | 555 | 52% | 492 | 52% |
| Lesser Canada goose | 1,587 | 24% | 1,199 – 1,975 | 1,121 | 21% | 228 | 65% | 237 | 51% |
| White-fronted goose | 2,237 | 23% | 1,719 – 2,755 | 1,548 | 23% | 262 | 61% | 427 | 45% |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 8,541 | 20% | 6,873 – 10,210 | 6,270 | 16% | 1,045 | 54% | 1,226 | 37% |
| Swans | | | | | | | | | |
| Tundra swan | 92 | 36% | 59 – 126 | 60 | 41% | 32 | 72% | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 325 | 34% | 214 – 437 | 201 | 33% | 71 | 51% | 53 | 56% |
| Grouse | | | | | | | | | |
| Spruce grouse | 5,579 | 21% | 4,423 – 6,734 | 595 | 40% | 170 | 53% | 4,814 | 23% |
| Ptarmigan | 7,893 | 21% | 6,251 – 9,534 | 6,783 | 23% | 226 | 56% | 883 | 53% |
| Total grouse | 13,471 | 17% | 11,167 – 15,776 | 7,378 | 22% | 397 | 40% | 5,697 | 21% |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 203 | 68% | 65 – 342 | 203 | 68% | 0 | - | 0 | - |
| Glaucous-winged gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous gull | 805 | 66% | 271 – 1,339 | 805 | 66% | 0 | - | 0 | - |
| Herring gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 1,008 | 55% | 458 – 1,558 | 1,008 | 54% | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Black oystercatcher | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 165 | 98% | 18 – 326 | 165 | 98% | 0 | - | 0 | - |
| Total shorebirds | 165 | 98% | 18 – 326 | 165 | 98% | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total birds | 32,995 | 14% | 28,326 – 37,663 | 21,321 | 14% | 2,900 | 35% | 8,774 | 19% |

Sampling effort (Bristol Bay, 2008): 9 out of 27 villages in this region were surveyed; 3 out of 3 subregions were surveyed. -: No reported harvest.

Table 14.—Estimated harvest of eggs, Bristol Bay Region, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|------------------------|---------------------------------|------------|----------|----------|------------------|----------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall/Fall-Winter | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 78 | 89% | 9 – 147 | 78 | 88% | 0 | - | 0 | - |
| Mallard | 158 | 82% | 28 – 287 | 158 | 82% | 0 | - | 0 | - |
| Pintail | 654 | 48% | 338 – 969 | 654 | 48% | 0 | - | 0 | - |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 156 | 89% | 18 – 294 | 156 | 88% | 0 | - | 0 | - |
| Total ducks | 1,045 | 45% | 573 – 1,518 | 1,045 | 45% | 0 | - | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 98 | 89% | 11 – 184 | 98 | 88% | 0 | - | 0 | - |
| Lesser Canada goose | 78 | 89% | 9 – 147 | 78 | 88% | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 176 | 89% | 20 – 331 | 176 | 88% | 0 | - | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Comorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 2,990 | 31% | 2,074 – 3,906 | 2,990 | 30% | 0 | - | 0 | - |
| Black-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Kittiwake | 215 | 69% | 66 – 364 | 215 | 69% | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 18,485 | 70% | 5,680 – 31,436 | 18,485 | 70% | 0 | - | 0 | - |
| Glaucous-winged gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous gull | 21,147 | 21% | 16,662 – 25,631 | 21,147 | 21% | 0 | - | 0 | - |
| Herring gull | 1,035 | 108% | 162 – 2,157 | 1,035 | 108% | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 43,872 | 32% | 29,948 – 57,796 | 43,872 | 32% | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Black oystercatcher | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Whimbrel | 195 | 89% | 22 – 368 | 195 | 88% | 0 | - | 0 | - |
| Bristle-thighed curlew | 224 | 62% | 85 – 364 | 224 | 62% | 0 | - | 0 | - |
| Godwit | 2,023 | 62% | 760 – 3,286 | 2,023 | 62% | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 117 | 89% | 13 – 221 | 117 | 88% | 0 | - | 0 | - |
| Total shorebirds | 2,560 | 50% | 1,276 – 3,843 | 2,560 | 50% | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total eggs | 47,653 | 30% | 33,492 – 61,813 | 47,653 | 30% | 0 | - | 0 | - |

Sampling effort (Bristol Bay, 2008): 9 out of 27 villages in this region were surveyed; 3 out of 3 subregions were surveyed. -: No reported harvest.

Table 15.—Estimated harvest of birds, Bristol Bay Region,
South Alaska Peninsula Subregion, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|-----------------|----------------------------------|-------------|----------|----------|-------------|-------------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall-Winter | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mallard | 46 | 114% | 8 – 98 | 18 | 110% | 0 | - | 28 | 170% |
| Pintail | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 14 | 174% | 3 – 39 | 0 | - | 0 | - | 14 | 170% |
| Surfscoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 28 | 174% | 6 – 77 | 0 | - | 0 | - | 28 | 170% |
| Total ducks | 88 | 141% | 17 – 213 | 18 | 110% | 0 | - | 71 | 170% |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Ptarmigan | 27 | 104% | 3 – 54 | 27 | 110% | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Comorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous-winged gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Herring gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Black oystercatcher | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total birds | 115 | 111% | 20 – 242 | 44 | 76% | 0 | - | 71 | 170% |

Sampling effort (South Alaska Peninsula, 2008): 1 out of 5 villages in this subregion were surveyed; 21% of subregion households were represented in the sample.
-: No reported harvest.

Table 16.—Estimated harvest of eggs, Bristol Bay Region, South Alaska Peninsula Subregion, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|------------|---------------------------------|--------|--------|--------|-------------|--------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall-Winter | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mallard | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pintail | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Ptarmigan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-legged kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous-winged gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Herring gull | 106 | 104% | 12 – 216 | 106 | 110% | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 106 | 104% | 12 – 216 | 106 | 110% | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Black oystercatcher | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total eggs | 106 | 104% | 12 – 216 | 106 | 110% | 0 | - | 0 | - |

Sampling effort (South Alaska Peninsula, 2008): 1 out of 5 villages in this subregion were surveyed; 21% of subregion households were represented in the sample.
 -: No reported harvest.

Table 17.—Estimated harvest of birds, Bristol Bay Region, Southwest Bristol Bay Subregion, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|------------------------|----------------------------------|------------|--------------|------------|--------------|------------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 365 | 35% | 238 – 491 | 207 | 52% | 77 | 71% | 81 | 54% |
| Green-winged teal | 816 | 30% | 575 – 1,058 | 402 | 36% | 145 | 74% | 269 | 60% |
| Mallard | 3,236 | 17% | 2,692 – 3,781 | 2,233 | 18% | 543 | 36% | 460 | 37% |
| Pintail | 3,068 | 21% | 2,428 – 3,709 | 2,188 | 23% | 449 | 51% | 430 | 40% |
| Shoveler | 395 | 43% | 224 – 566 | 207 | 59% | 76 | 65% | 112 | 99% |
| Black scoter | 111 | 57% | 48 – 174 | 59 | 88% | 37 | 102% | 15 | - |
| Surf scoter | 102 | 145% | 21 – 251 | 10 | 88% | 0 | - | 92 | 161% |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 275 | 58% | 115 – 436 | 249 | 64% | 26 | 79% | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 64 | 78% | 14 – 114 | 64 | 85% | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 37 | 89% | 4 – 69 | 37 | 98% | 0 | - | 0 | - |
| Harlequin duck | 149 | 81% | 29 – 270 | 103 | 107% | 0 | - | 46 | 105% |
| Long-tailed duck | 20 | 81% | 4 – 35 | 20 | 88% | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 8,638 | 17% | 7,199 – 10,077 | 5,777 | 18% | 1,354 | 37% | 1,506 | 34% |
| Geese | | | | | | | | | |
| Black brant | 219 | 60% | 87 – 351 | 150 | 51% | 0 | - | 69 | 161% |
| Cackling Canada goose | 4,345 | 20% | 3,460 – 5,231 | 3,359 | 21% | 551 | 52% | 435 | 58% |
| Lesser Canada goose | 1,374 | 22% | 1,069 – 1,679 | 976 | 22% | 228 | 65% | 169 | 64% |
| White-fronted goose | 2,123 | 21% | 1,671 – 2,574 | 1,438 | 25% | 262 | 61% | 423 | 45% |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 8,061 | 17% | 6,668 – 9,455 | 5,923 | 17% | 1,041 | 54% | 1,097 | 41% |
| Swans | | | | | | | | | |
| Tundra swan | 88 | 36% | 56 – 120 | 56 | 43% | 32 | 72% | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 306 | 27% | 224 – 389 | 195 | 34% | 61 | 56% | 51 | 58% |
| Grouse | | | | | | | | | |
| Spruce grouse | 4,029 | 25% | 3,032 – 5,026 | 595 | 40% | 170 | 53% | 3,264 | 28% |
| Ptarmigan | 7,057 | 23% | 5,420 – 8,695 | 5,959 | 25% | 226 | 56% | 872 | 53% |
| Total grouse | 11,086 | 18% | 9,094 – 13,079 | 6,554 | 24% | 397 | 40% | 4,136 | 24% |
| Seabirds | | | | | | | | | |
| Comorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 203 | 63% | 76 – 331 | 203 | 68% | 0 | - | 0 | - |
| Glaucous gull | 805 | 57% | 342 – 1,267 | 805 | 66% | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 1,008 | 48% | 528 – 1,488 | 1,008 | 54% | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 165 | 89% | 18 – 312 | 165 | 98% | 0 | - | 0 | - |
| Total shorebirds | 165 | 89% | 18 – 312 | 165 | 98% | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total birds | 29,352 | 14% | 25,173 – 33,532 | 19,677 | 15% | 2,885 | 35% | 6,790 | 23% |

Sampling effort (Southwest Bristol Bay, 2008): 7 out of 21 villages in this subregion were surveyed; 23% of subregion households were represented in the sample.
 -: No reported harvest.

Table 18.—Estimated harvest of eggs, Bristol Bay Region, Southwest Bristol Bay Subregion, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|------------------------|---------------------------------|------------|----------|----------|----------|----------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 78 | 81% | 15 – 142 | 78 | 88% | 0 | - | 0 | - |
| Mallard | 158 | 81% | 30 – 285 | 158 | 82% | 0 | - | 0 | - |
| Pintail | 654 | 46% | 354 – 953 | 654 | 48% | 0 | - | 0 | - |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 156 | 81% | 29 – 283 | 156 | 88% | 0 | - | 0 | - |
| Total ducks | 1,045 | 43% | 595 – 1,496 | 1,045 | 45% | 0 | - | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 98 | 81% | 18 – 177 | 98 | 88% | 0 | - | 0 | - |
| Lesser Canada goose | 78 | 81% | 15 – 142 | 78 | 88% | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 176 | 81% | 33 – 318 | 176 | 88% | 0 | - | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Comorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 2,990 | 30% | 2,091 – 3,889 | 2,990 | 30% | 0 | - | 0 | - |
| Kittiwake | 215 | 65% | 75 – 356 | 215 | 69% | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 8,568 | 33% | 5,736 – 11,401 | 8,568 | 32% | 0 | - | 0 | - |
| Glaucous gull | 21,147 | 22% | 16,590 – 25,703 | 21,147 | 21% | 0 | - | 0 | - |
| Herring gull | 929 | 120% | 150 – 2,040 | 929 | 120% | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 33,849 | 18% | 27,660 – 40,038 | 33,849 | 17% | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 195 | 81% | 36 – 354 | 195 | 88% | 0 | - | 0 | - |
| Bristle-thighed curlew | 224 | 58% | 95 – 354 | 224 | 62% | 0 | - | 0 | - |
| Godwit | 2,023 | 57% | 875 – 3,171 | 2,023 | 62% | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 117 | 81% | 22 – 212 | 117 | 88% | 0 | - | 0 | - |
| Total shorebirds | 2,560 | 46% | 1,387 – 3,732 | 2,560 | 50% | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total eggs | 37,630 | 18% | 30,831 – 44,428 | 37,630 | 16% | 0 | - | 0 | - |

Sampling effort (Southwest Bristol Bay, 2008): 7 out of 21 villages in this subregion were surveyed; 23% of subregion households were represented in the sample.

-: No reported harvest.

Table 19.—Estimated harvest of birds, Bristol Bay Region, Dillingham Subregion, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|----------------------|----------------------------------|------------|-----------|-------------|--------------|------------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 42 | 50% | 21 – 62 | 11 | 144% | 0 | - | 31 | 107% |
| Green-winged teal | 103 | 37% | 64 – 141 | 41 | 99% | 0 | - | 61 | 86% |
| Mallard | 237 | 23% | 184 – 291 | 185 | 47% | 0 | - | 52 | 57% |
| Pintail | 207 | 29% | 147 – 268 | 144 | 66% | 0 | - | 63 | 71% |
| Shoveler | 48 | 60% | 22 – 77 | 39 | 122% | 0 | - | 9 | 144% |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 4 | 83% | 2 – 8 | 0 | - | 0 | - | 4 | 144% |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 2 | 83% | 1 – 4 | 2 | 144% | 0 | - | 0 | - |
| Common eider | 22 | 83% | 10 – 40 | 22 | 144% | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 665 | 22% | 522 – 809 | 445 | 48% | 0 | - | 221 | 56% |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 153 | 38% | 95 – 211 | 92 | 99% | 4 | 144% | 57 | 77% |
| Lesser Canada goose | 213 | 29% | 151 – 275 | 145 | 64% | 0 | - | 68 | 78% |
| White-fronted goose | 114 | 33% | 77 – 152 | 110 | 58% | 0 | - | 4 | 144% |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 480 | 22% | 373 – 587 | 347 | 49% | 4 | 144% | 129 | 52% |
| Swans | | | | | | | | | |
| Tundra swan | 4 | 59% | 2 – 7 | 4 | 102% | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 19 | 44% | 11 – 27 | 7 | 107% | 10 | 119% | 2 | 144% |
| Grouse | | | | | | | | | |
| Spruce grouse | 1,550 | 25% | 1,162 – 1,938 | 0 | - | 0 | - | 1,550 | 43% |
| Ptarmigan | 809 | 24% | 617 – 1,000 | 798 | 40% | 0 | - | 11 | 144% |
| Total grouse | 2,358 | 18% | 1,929 – 2,788 | 798 | 40% | 0 | - | 1,561 | 43% |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total birds | 3,527 | 15% | 3,011 – 4,043 | 1,600 | 33% | 15 | 112% | 1,913 | 37% |

Sampling effort (Dillingham, 2008): 1 out of 1 village in this subregion was surveyed. -: No reported harvest.

Table 20.—Estimated harvest of eggs, Bristol Bay Region, Dillingham Subregion, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|----------------|---------------------------------|--------|--------|--------|--------|--------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mallard | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pintail | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 9,917 | 74% | 4,536 – 17,225 | 9,917 | 128% | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 9,917 | 74% | 4,536 – 17,225 | 9,917 | 128% | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total eggs | 9,917 | 74% | 4,536 – 17,225 | 9,917 | 128% | 0 | - | 0 | - |

Sampling effort (Dillingham, 2008): 1 out of 1 village in this subregion was surveyed. -: No reported harvest.

Table 21.—Estimated harvest of birds, Yukon–Kuskokwim Delta Region, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|------------------------|----------------------------------|------------|--------------|-------------|---------------|-------------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 2,776 | 23% | 2,127 – 3,424 | 998 | 30% | 336 | 70% | 1,442 | 26% |
| Green-winged teal | 912 | 32% | 623 – 1,202 | 484 | 47% | 15 | 130% | 414 | 45% |
| Mallard | 6,476 | 16% | 5,437 – 7,515 | 2,671 | 31% | 1,449 | 20% | 2,356 | 20% |
| Pintail | 4,262 | 29% | 3,027 – 5,497 | 2,047 | 33% | 1,122 | 64% | 1,093 | 44% |
| Shoveler | 1,120 | 29% | 796 – 1,444 | 443 | 33% | 32 | 66% | 646 | 45% |
| Black scoter | 4,523 | 23% | 3,465 – 5,582 | 3,711 | 24% | 82 | 121% | 730 | 63% |
| Surf scoter | 714 | 50% | 358 – 1,070 | 645 | 66% | 0 | - | 68 | 60% |
| White-winged scoter | 2,720 | 33% | 1,823 – 3,617 | 2,701 | 35% | 0 | - | 19 | 94% |
| Bufflehead | 201 | 82% | 36 – 366 | 80 | 91% | 11 | 147% | 110 | 134% |
| Goldeneye | 344 | 74% | 89 – 599 | 106 | 69% | 90 | 112% | 148 | 101% |
| Canvasback | 230 | 51% | 113 – 347 | 88 | 121% | 87 | 91% | 56 | 90% |
| Scaup | 3,640 | 32% | 2,476 – 4,803 | 2,008 | 37% | 613 | 86% | 1,019 | 48% |
| Common eider | 11 | 121% | 2 – 25 | 11 | 121% | 0 | - | 0 | - |
| King eider | 427 | 57% | 183 – 671 | 380 | 64% | 0 | - | 47 | 80% |
| Spectacled eider | 11 | 121% | 2 – 25 | 11 | 121% | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 75 | 62% | 28 – 122 | 50 | 94% | 0 | - | 25 | 108% |
| Long-tailed duck | 378 | 38% | 234 – 521 | 335 | 51% | 39 | 81% | 4 | 109% |
| Common merganser | 104 | 67% | 35 – 174 | 50 | 121% | 0 | - | 54 | 76% |
| Red-breasted merganser | 120 | 76% | 29 – 210 | 20 | 69% | 0 | - | 100 | 90% |
| Total ducks | 29,044 | 12% | 25,465 – 32,622 | 16,838 | 17% | 3,876 | 30% | 8,329 | 19% |
| Geese | | | | | | | | | |
| Black brant | 3,980 | 20% | 3,196 – 4,765 | 3,525 | 20% | 61 | 63% | 394 | 92% |
| Cackling Canada goose | 9,196 | 15% | 7,817 – 10,575 | 7,242 | 18% | 1,235 | 23% | 719 | 28% |
| Lesser Canada goose | 8,520 | 15% | 7,282 – 9,759 | 5,404 | 19% | 1,078 | 31% | 2,038 | 21% |
| White-fronted goose | 15,118 | 13% | 13,192 – 17,044 | 11,631 | 15% | 1,275 | 31% | 2,212 | 21% |
| Emperor goose | 1,490 | 17% | 1,232 – 1,748 | 1,375 | 19% | 114 | 43% | 0 | - |
| Lesser snow goose | 282 | 39% | 173 – 390 | 252 | 42% | 0 | - | 30 | 93% |
| Total geese | 38,586 | 9% | 35,095 – 42,077 | 29,429 | 11% | 3,764 | 18% | 5,393 | 16% |
| Swans | | | | | | | | | |
| Tundra swan | 3,851 | 12% | 3,401 – 4,301 | 2,754 | 13% | 227 | 63% | 870 | 25% |
| Cranes | | | | | | | | | |
| Sandhill crane | 2,199 | 20% | 1,755 – 2,644 | 2,031 | 21% | 27 | 57% | 142 | 45% |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 4,667 | 36% | 3,006 – 6,327 | 4,355 | 38% | 120 | 143% | 192 | 92% |
| Total grouse | 4,667 | 36% | 3,006 – 6,327 | 4,355 | 38% | 120 | 143% | 192 | 92% |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 112 | 121% | 20 – 248 | 112 | 121% | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 38 | - | - | 38 | - | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 150 | 96% | 32 – 294 | 150 | 96% | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 126 | 61% | 49 – 203 | 0 | - | 87 | 75% | 39 | 116% |
| Bristle-thighed curlew | 115 | 62% | 44 – 185 | 0 | - | 8 | 93% | 107 | 67% |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 240 | 46% | 129 – 352 | 0 | - | 94 | 69% | 146 | 58% |
| Grebes and loons | | | | | | | | | |
| Common loon | 45 | 68% | 14 – 75 | 14 | 97% | 21 | 85% | 10 | 120% |
| Pacific loon | 288 | 18% | 236 – 340 | 288 | 18% | 0 | - | 0 | - |
| Red-throated loon | 18 | 69% | 5 – 30 | 18 | 69% | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 350 | 17% | 289 – 411 | 319 | 17% | 21 | 85% | 10 | 120% |
| Total birds | 79,088 | 9% | 71,986 – 86,190 | 55,878 | 11% | 8,128 | 20% | 15,081 | 15% |

Sampling effort (Yukon-Kuskokwim Delta, 2008): 23 out of 47 villages in this region were surveyed; 6 out of 7 subregions were surveyed; 98% of the region households were represented in the sample. -: No reported harvest.

Table 22.—Estimated harvest of eggs, Yukon–Kuskokwim Delta Region, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|------------------------|---------------------------------|------------|--------------|-------------|----------|----------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 17 | 112% | 6 – 37 | 17 | 124% | 0 | - | 0 | - |
| Green-winged teal | 660 | 40% | 394 – 927 | 637 | 83% | 23 | 93% | 0 | - |
| Mallard | 1,822 | 39% | 1,107 – 2,537 | 302 | 68% | 1,519 | 46% | 0 | - |
| Pintail | 2,686 | 28% | 1,934 – 3,437 | 1,896 | 47% | 789 | 24% | 0 | - |
| Shoveler | 462 | 128% | 40 – 1,054 | 462 | 129% | 0 | - | 0 | - |
| Black scoter | 14 | 128% | 4 – 33 | 14 | 128% | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 37 | 112% | 13 – 79 | 37 | 124% | 0 | - | 0 | - |
| Bufflehead | 398 | 118% | 7 – 867 | 0 | - | 398 | 118% | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 186 | 107% | 67 – 385 | 186 | 404% | 0 | - | 0 | - |
| Common eider | 53 | 99% | 10 – 105 | 53 | 98% | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 112 | 115% | 23 – 240 | 112 | 115% | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 6,448 | 22% | 5,025 – 7,870 | 3,718 | 56% | 2,729 | 32% | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 2,383 | 27% | 1,743 – 3,022 | 2,383 | 27% | 0 | - | 0 | - |
| Cackling Canada goose | 4,114 | 19% | 3,338 – 4,891 | 3,076 | 22% | 1,039 | 41% | 0 | - |
| Lesser Canada goose | 2,572 | 32% | 1,739 – 3,405 | 2,216 | 36% | 356 | 71% | 0 | - |
| White-fronted goose | 4,430 | 21% | 3,494 – 5,366 | 4,430 | 22% | 0 | - | 0 | - |
| Emperor goose | 1,505 | 30% | 1,057 – 1,953 | 1,505 | 30% | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 15,004 | 16% | 12,576 – 17,432 | 13,610 | 18% | 1,395 | 37% | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 1,421 | 36% | 914 – 1,929 | 1,037 | 30% | 384 | 104% | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 1,228 | 23% | 949 – 1,506 | 888 | 32% | 340 | 34% | 0 | - |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 455 | 56% | 199 – 712 | 455 | 66% | 0 | - | 0 | - |
| Total grouse | 455 | 56% | 199 – 712 | 455 | 66% | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 890 | 81% | 170 – 1,610 | 890 | 92% | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 57 | 68% | 18 – 95 | 57 | 71% | 0 | - | 0 | - |
| Mew gull | 1,412 | 42% | 824 – 2,001 | 1,297 | 47% | 115 | 93% | 0 | - |
| Glaucous gull | 986 | 69% | 309 – 1,663 | 969 | 71% | 17 | 143% | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 3,345 | 39% | 2,035 – 4,655 | 3,213 | 45% | 132 | 83% | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 177 | 70% | 53 – 301 | 177 | 70% | 0 | - | 0 | - |
| Golden plover | 390 | 80% | 79 – 701 | 390 | 80% | 0 | - | 0 | - |
| Small shorebird | 2,554 | 57% | 1,106 – 4,002 | 1,418 | 42% | 1,136 | 118% | 0 | - |
| Total shorebirds | 3,121 | 48% | 1,627 – 4,615 | 1,985 | 35% | 1,136 | 118% | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 87 | 76% | 21 – 153 | 87 | 77% | 0 | - | 0 | - |
| Pacific loon | 12 | 88% | 3 – 22 | 12 | 88% | 0 | - | 0 | - |
| Red-throated loon | 13 | 117% | 2 – 27 | 13 | 117% | 0 | - | 0 | - |
| Yellow-billed loon | 61 | 89% | 8 – 116 | 0 | - | 61 | 93% | 0 | - |
| Total grebes and loons | 173 | 50% | 86 – 260 | 112 | 62% | 61 | 93% | 0 | - |
| Total eggs | 31,195 | 15% | 26,621 – 35,769 | 25,017 | 20% | 6,178 | 38% | 0 | - |

Sampling effort (Yukon-Kuskokwim Delta, 2008): 23 out of 47 villages in this region were surveyed; 6 out of 7 subregions were surveyed; 98% of the region households were represented in the sample. -: No reported harvest.

Table 23.–Estimated harvest of birds, Yukon–Kuskokwim Delta Region, South Coast Subregion, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | | | |
|-------------------------------|-------------------------------|---------------------|---------------|----------------------------------|---------------|--------------|-------------|--------------|-------------|--------------|-------------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | | | |
| | | 95% CI | Low | High | Number | 95% CI | Number | 95% CI | Number | 95% CI | |
| Ducks | | | | | | | | | | | |
| Wigeon | 560 | 21% | 444 | – | 675 | 0 | - | 77 | 61% | 483 | 28% |
| Green-winged teal | 273 | 33% | 184 | – | 363 | 19 | 74% | 0 | - | 254 | 56% |
| Mallard | 1,263 | 22% | 991 | – | 1,534 | 287 | 52% | 0 | - | 976 | 38% |
| Pintail | 1,409 | 29% | 996 | – | 1,821 | 847 | 63% | 0 | - | 562 | 83% |
| Shoveler | 396 | 43% | 226 | – | 566 | 46 | - | 3 | 105% | 347 | 79% |
| Black scoter | 1,071 | 29% | 764 | – | 1,378 | 452 | 53% | 67 | 145% | 551 | 83% |
| Surf scoter | 30 | 72% | 8 | – | 51 | 0 | - | 0 | - | 30 | 117% |
| White-winged scoter | 34 | 43% | 19 | – | 48 | 34 | 64% | 0 | - | 0 | - |
| Bufflehead | 107 | 80% | 21 | – | 193 | 0 | - | 0 | - | 107 | 136% |
| Goldeneye | 197 | 51% | 96 | – | 298 | 15 | 103% | 67 | 145% | 114 | 128% |
| Canvasback | 33 | 86% | 5 | – | 62 | 0 | - | 0 | - | 33 | 145% |
| Scaup | 998 | 39% | 604 | – | 1,392 | 32 | 97% | 335 | 145% | 632 | 70% |
| Common eider | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| King eider | 108 | 56% | 47 | – | 168 | 62 | 127% | 0 | - | 46 | 81% |
| Spectacled eider | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 17 | 86% | 2 | – | 31 | 0 | - | 0 | - | 17 | 145% |
| Long-tailed duck | 17 | 69% | 5 | – | 29 | 13 | 134% | 0 | - | 4 | 110% |
| Common merganser | 32 | 58% | 14 | – | 50 | 0 | - | 0 | - | 32 | 81% |
| Red-breasted merganser | 98 | 55% | 44 | – | 152 | 0 | - | 0 | - | 98 | 91% |
| Total ducks | 6,641 | 17% | 5,514 | – | 7,769 | 1,807 | 36% | 548 | 124% | 4,286 | 32% |
| Geese | | | | | | | | | | | |
| Black brant | 902 | 33% | 601 | – | 1,203 | 517 | 66% | 0 | - | 385 | 93% |
| Cackling Canada goose | 1,113 | 21% | 878 | – | 1,348 | 849 | 38% | 0 | - | 264 | 36% |
| Lesser Canada goose | 3,210 | 14% | 2,756 | – | 3,664 | 1,389 | 23% | 514 | 59% | 1,307 | 25% |
| White-fronted goose | 4,871 | 13% | 4,252 | – | 5,490 | 3,061 | 24% | 386 | 70% | 1,424 | 28% |
| Emperor goose | 26 | 62% | 10 | – | 43 | 26 | 101% | 0 | - | 0 | - |
| Lesser snow goose | 8 | 56% | 3 | – | 12 | 4 | 129% | 0 | - | 4 | 117% |
| Total geese | 10,130 | 10% | 9,074 | – | 11,186 | 5,845 | 19% | 900 | 49% | 3,385 | 20% |
| Swans | | | | | | | | | | | |
| Tundra swan | 919 | 20% | 740 | – | 1,099 | 421 | 46% | 17 | 145% | 482 | 40% |
| Cranes | | | | | | | | | | | |
| Sandhill crane | 558 | 18% | 456 | – | 660 | 437 | 31% | 3 | 105% | 117 | 52% |
| Grouse | | | | | | | | | | | |
| Spruce grouse | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 1,463 | 47% | 777 | – | 2,148 | 1,158 | 96% | 117 | 145% | 187 | 93% |
| Total grouse | 1,463 | 47% | 777 | – | 2,148 | 1,158 | 96% | 117 | 145% | 187 | 93% |
| Seabirds | | | | | | | | | | | |
| Cormorant | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 37 | 88% | 12 | – | 70 | 37 | 127% | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 37 | 88% | 12 | – | 70 | 37 | 127% | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | | | |
| Whimbrel | 123 | 46% | 66 | – | 180 | 0 | - | 85 | 76% | 38 | 117% |
| Bristle-thighed curlew | 105 | 44% | 58 | – | 151 | 0 | - | 0 | - | 105 | 68% |
| Godwit | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 228 | 32% | 154 | – | 301 | 0 | - | 85 | 76% | 143 | 59% |
| Grebes and loons | | | | | | | | | | | |
| Common loon | 23 | 49% | 12 | – | 35 | 13 | 98% | 0 | - | 10 | 122% |
| Pacific loon | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | – | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 23 | 49% | 12 | – | 35 | 13 | 98% | 0 | - | 10 | 122% |
| Total birds | 19,999 | 12% | 17,663 | – | 22,334 | 9,719 | 25% | 1,669 | 71% | 8,611 | 23% |

Sampling effort (Yukon-Kuskokwim Delta South Coast, 2008): 5 out of 8 villages in this subregion were surveyed; 65% of subregion households were represented in the sample. -: No reported harvest.

Table 24.–Estimated harvest of eggs, Yukon–Kuskokwim
Delta Region, South Coast Subregion, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|-----------------------|---------------------------------|-------------|------------|-------------|----------|----------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 17 | 85% | 6 – 31 | 17 | 125% | 0 | - | 0 | - |
| Green-winged teal | 234 | 50% | 117 – 352 | 234 | 72% | 0 | - | 0 | - |
| Mallard | 512 | 68% | 162 – 862 | 110 | 89% | 402 | 145% | 0 | - |
| Pintail | 1,293 | 33% | 863 – 1,723 | 1,293 | 51% | 0 | - | 0 | - |
| Shoveler | 384 | 89% | 41 – 727 | 384 | 151% | 0 | - | 0 | - |
| Black scoter | 14 | 87% | 4 – 26 | 14 | 129% | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 37 | 85% | 13 – 68 | 37 | 125% | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 2,490 | 33% | 1,677 – 3,303 | 2,089 | 59% | 402 | 145% | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 269 | 41% | 157 – 380 | 168 | 59% | 100 | 145% | 0 | - |
| Lesser Canada goose | 829 | 40% | 499 – 1,159 | 829 | 65% | 0 | - | 0 | - |
| White-fronted goose | 1,372 | 30% | 957 – 1,787 | 1,372 | 49% | 0 | - | 0 | - |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 2,470 | 29% | 1,759 – 3,181 | 2,369 | 48% | 100 | 145% | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 493 | 46% | 266 – 719 | 242 | 43% | 251 | 145% | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 144 | 39% | 88 – 201 | 111 | 76% | 33 | 145% | 0 | - |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 88 | 78% | 28 – 157 | 88 | 112% | 0 | - | 0 | - |
| Total grouse | 88 | 78% | 28 – 157 | 88 | 112% | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 548 | 74% | 143 – 954 | 548 | 126% | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 23 | 85% | 8 – 42 | 23 | 125% | 0 | - | 0 | - |
| Mew gull | 468 | 40% | 281 – 655 | 468 | 66% | 0 | - | 0 | - |
| Glaucous gull | 768 | 51% | 376 – 1,161 | 751 | 87% | 17 | 145% | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 1,807 | 38% | 1,123 – 2,491 | 1,790 | 64% | 17 | 145% | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 72 | 75% | 18 – 127 | 72 | 128% | 0 | - | 0 | - |
| Golden plover | 215 | 80% | 43 – 387 | 215 | 136% | 0 | - | 0 | - |
| Small shorebird | 621 | 45% | 343 – 900 | 621 | 68% | 0 | - | 0 | - |
| Total shorebirds | 908 | 37% | 576 – 1,240 | 908 | 56% | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 36 | 53% | 17 – 55 | 36 | 77% | 0 | - | 0 | - |
| Pacific loon | 6 | 88% | 2 – 12 | 6 | 127% | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 42 | 47% | 22 – 62 | 42 | 68% | 0 | - | 0 | - |
| Total eggs | 8,442 | 23% | 6,519 – 10,365 | 7,639 | 38% | 803 | 145% | 0 | - |

Sampling effort (Yukon-Kuskokwim Delta South Coast, 2008): 5 out of 8 villages in this subregion were surveyed; 65% of subregion households were represented in the sample. -: No reported harvest.

Table 25.—Estimated harvest of birds, Yukon–Kuskokwim
Delta Region, Mid Coast Subregion, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|------------------------|----------------------------------|-------------|--------------|------------|----------|----------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 204 | 77% | 47 – 361 | 33 | 171% | 171 | 119% | 0 | - |
| Green-winged teal | 93 | 72% | 26 – 160 | 93 | 96% | 0 | - | 0 | - |
| Mallard | 487 | 33% | 325 – 650 | 472 | 35% | 15 | 66% | 0 | - |
| Pintail | 1,074 | 50% | 537 – 1,611 | 288 | 55% | 786 | 87% | 0 | - |
| Shoveler | 259 | 40% | 156 – 362 | 251 | 42% | 8 | 94% | 0 | - |
| Black scoter | 20 | 30% | 14 – 25 | 20 | 70% | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 11 | 87% | 2 – 21 | 11 | 122% | 0 | - | 0 | - |
| King eider | 176 | 57% | 75 – 277 | 176 | 74% | 0 | - | 0 | - |
| Spectacled eider | 11 | 87% | 2 – 21 | 11 | 122% | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 39 | 52% | 19 – 59 | 16 | 122% | 23 | 94% | 0 | - |
| Common merganser | 49 | 87% | 9 – 92 | 49 | 122% | 0 | - | 0 | - |
| Red-breasted merganser | 20 | 30% | 14 – 25 | 20 | 70% | 0 | - | 0 | - |
| Total ducks | 2,442 | 29% | 1,735 – 3,148 | 1,440 | 28% | 1,001 | 77% | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 2,882 | 19% | 2,337 – 3,427 | 2,822 | 21% | 60 | 64% | 0 | - |
| Cackling Canada goose | 2,674 | 15% | 2,266 – 3,081 | 2,333 | 20% | 341 | 48% | 0 | - |
| Lesser Canada goose | 1,353 | 28% | 974 – 1,733 | 1,271 | 32% | 83 | 51% | 0 | - |
| White-fronted goose | 3,209 | 19% | 2,612 – 3,806 | 2,900 | 21% | 309 | 68% | 0 | - |
| Emperor goose | 1,396 | 18% | 1,150 – 1,642 | 1,313 | 19% | 83 | 51% | 0 | - |
| Lesser snow goose | 5 | 126% | 1 – 11 | 5 | 171% | 0 | - | 0 | - |
| Total geese | 11,518 | 15% | 9,766 – 13,271 | 10,643 | 16% | 875 | 38% | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 783 | 27% | 572 – 994 | 658 | 28% | 125 | 106% | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 1,170 | 27% | 852 – 1,487 | 1,162 | 32% | 8 | 94% | 0 | - |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 1,099 | 36% | 700 – 1,498 | 1,099 | 49% | 0 | - | 0 | - |
| Total grouse | 1,099 | 36% | 700 – 1,498 | 1,099 | 49% | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Comorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 110 | 87% | 20 – 205 | 110 | 122% | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 110 | 87% | 20 – 205 | 110 | 122% | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 8 | 63% | 3 – 12 | 0 | - | 8 | 94% | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 8 | 63% | 3 – 12 | 0 | - | 8 | 94% | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 21 | 63% | 8 – 33 | 0 | - | 21 | 86% | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 11 | 61% | 4 – 18 | 11 | 86% | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 32 | 46% | 17 – 46 | 11 | 86% | 21 | 86% | 0 | - |
| Total birds | 17,160 | 15% | 14,512 – 19,809 | 15,123 | 16% | 2,038 | 44% | 0 | - |

Sampling effort (Yukon-Kuskokwim Delta Mid-Coast, 2008): 5 out of 9 villages in this subregion were surveyed; 51% of subregion households were represented in the sample. -: No reported harvest.

Table 26.—Estimated harvest of eggs, Yukon–Kuskokwim
Delta Region, Mid Coast Subregion, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|-----------------|---------------------------------|--------|--------|--------|--------|--------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 220 | 48% | 115 – 325 | 198 | 73% | 23 | 94% | 0 | - |
| Mallard | 168 | 82% | 31 – 305 | 168 | 86% | 0 | - | 0 | - |
| Pintail | 214 | 48% | 111 – 317 | 214 | 66% | 0 | - | 0 | - |
| Shoveler | 55 | 87% | 10 – 103 | 55 | 122% | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 389 | 91% | 36 – 741 | 0 | - | 389 | 119% | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 55 | 87% | 10 – 103 | 55 | 122% | 0 | - | 0 | - |
| Common eider | 52 | 72% | 15 – 89 | 52 | 100% | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 109 | 89% | 23 – 207 | 109 | 116% | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 1,262 | 35% | 814 – 1,709 | 850 | 42% | 411 | 113% | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 2,330 | 23% | 1,797 – 2,864 | 2,330 | 28% | 0 | - | 0 | - |
| Cackling Canada goose | 3,085 | 19% | 2,499 – 3,671 | 2,710 | 24% | 375 | 94% | 0 | - |
| Lesser Canada goose | 930 | 38% | 578 – 1,282 | 930 | 45% | 0 | - | 0 | - |
| White-fronted goose | 2,823 | 20% | 2,265 – 3,381 | 2,823 | 23% | 0 | - | 0 | - |
| Emperor goose | 1,472 | 29% | 1,046 – 1,898 | 1,472 | 30% | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 10,640 | 17% | 8,780 – 12,500 | 10,265 | 20% | 375 | 94% | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 605 | 43% | 345 – 865 | 605 | 44% | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 672 | 33% | 452 – 893 | 672 | 35% | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 99 | 87% | 18 – 185 | 99 | 122% | 0 | - | 0 | - |
| Total grouse | 99 | 87% | 18 – 185 | 99 | 122% | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 156 | 55% | 71 – 241 | 156 | 74% | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 33 | 61% | 13 – 53 | 33 | 86% | 0 | - | 0 | - |
| Mew gull | 581 | 53% | 276 – 886 | 469 | 82% | 113 | 94% | 0 | - |
| Glaucous gull | 143 | 70% | 43 – 242 | 143 | 98% | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 913 | 40% | 549 – 1,276 | 800 | 58% | 113 | 94% | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 101 | 60% | 41 – 161 | 101 | 80% | 0 | - | 0 | - |
| Golden plover | 118 | 49% | 60 – 176 | 118 | 68% | 0 | - | 0 | - |
| Small shorebird | 1,671 | 62% | 638 – 2,703 | 560 | 58% | 1,111 | 119% | 0 | - |
| Total shorebirds | 1,889 | 55% | 845 – 2,933 | 778 | 49% | 1,111 | 119% | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 49 | 87% | 9 – 92 | 49 | 122% | 0 | - | 0 | - |
| Pacific loon | 5 | 87% | 1 – 10 | 5 | 122% | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 60 | 63% | 22 – 98 | 0 | - | 60 | 94% | 0 | - |
| Total grebes and loons | 115 | 50% | 57 – 173 | 55 | 111% | 60 | 94% | 0 | - |
| Total eggs | 16,195 | 18% | 13,311 – 19,079 | 14,124 | 20% | 2,070 | 90% | 0 | - |

Sampling effort (Yukon-Kuskokwim Delta Mid Coast, 2008): 5 out of 9 villages in this subregion were surveyed; 51% of subregion households were represented in the sample. -: No reported harvest.

Table 27.—Estimated harvest of birds, Yukon–Kuskokwim
Delta Region, North Coast Subregion, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|----------------------|----------------------------------|------------|----------|----------|--------------|------------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 846 | 28% | 608 – 1,085 | 219 | 109% | 0 | - | 627 | 51% |
| Green-winged teal | 183 | 64% | 65 – 300 | 183 | 109% | 0 | - | 0 | - |
| Mallard | 638 | 27% | 463 – 813 | 0 | - | 0 | - | 638 | 42% |
| Pintail | 246 | 79% | 52 – 439 | 246 | 123% | 0 | - | 0 | - |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 180 | 44% | 101 – 260 | 4 | 150% | 0 | - | 177 | 66% |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 2,093 | 24% | 1,593 – 2,594 | 651 | 81% | 0 | - | 1,442 | 43% |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 46 | 112% | 13 – 98 | 46 | 112% | 0 | - | 0 | - |
| Lesser Canada goose | 1,439 | 33% | 969 – 1,910 | 1,161 | 54% | 0 | - | 279 | 92% |
| White-fronted goose | 943 | 34% | 620 – 1,266 | 841 | 61% | 0 | - | 102 | 92% |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 7 | 79% | 2 – 13 | 7 | 119% | 0 | - | 0 | - |
| Total geese | 2,436 | 27% | 1,776 – 3,096 | 2,055 | 45% | 0 | - | 381 | 92% |
| Swans | | | | | | | | | |
| Tundra swan | 215 | 27% | 157 – 272 | 29 | 74% | 0 | - | 186 | 40% |
| Cranes | | | | | | | | | |
| Sandhill crane | 123 | 79% | 26 – 220 | 123 | 123% | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total birds | 4,867 | 22% | 3,797 – 5,936 | 2,857 | 51% | 0 | - | 2,009 | 40% |

Sampling effort (Yukon-Kuskokwim Delta North Coast, 2008): 2 out of 4 villages in this subregion were surveyed; 45% of subregion households were represented in the sample. -: No reported harvest.

Table 28.—Estimated harvest of eggs, Yukon–Kuskokwim
Delta Region, North Coast Subregion, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|------------|---------------------------------|--------|--------|--------|--------|--------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mallard | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pintail | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 57 | 150% | 16 – 143 | 57 | 150% | 0 | - | 0 | - |
| Lesser Canada goose | 365 | 64% | 131 – 599 | 365 | 109% | 0 | - | 0 | - |
| White-fronted goose | 85 | 150% | 24 – 214 | 85 | 150% | 0 | - | 0 | - |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 508 | 62% | 191 – 824 | 508 | 89% | 0 | - | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 46 | 150% | 13 – 116 | 46 | 150% | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total eggs | 554 | 66% | 187 – 920 | 554 | 88% | 0 | - | 0 | - |

Sampling effort (Yukon-Kuskokwim Delta North Coast, 2008): 2 out of 4 villages in this subregion were surveyed; 45% of subregion households were represented in the sample. -: No reported harvest.

Table 29.—Estimated harvest of birds, Yukon–Kuskokwim
Delta Region, Lower Yukon Subregion, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|----------------------|----------------------------------|------------|------------|------------|--------------|------------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 200 | 24% | 152 – 248 | 81 | 66% | 0 | - | 119 | 45% |
| Green-winged teal | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mallard | 670 | 18% | 548 – 793 | 247 | 45% | 42 | 105% | 381 | 25% |
| Pintail | 306 | 23% | 237 – 375 | 182 | 47% | 5 | 124% | 119 | 39% |
| Shoveler | 110 | 31% | 76 – 145 | 27 | 79% | 10 | 133% | 74 | 64% |
| Black scoter | 565 | 67% | 187 – 943 | 554 | 111% | 0 | - | 11 | 138% |
| Surf scoter | 28 | 61% | 11 – 44 | 16 | 133% | 0 | - | 11 | 138% |
| White-winged scoter | 19 | 58% | 8 – 29 | 0 | - | 0 | - | 19 | 95% |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 48 | 45% | 26 – 70 | 33 | 83% | 0 | - | 15 | 138% |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 52 | 50% | 26 – 78 | 45 | 86% | 0 | - | 7 | 138% |
| Long-tailed duck | 43 | 72% | 12 – 74 | 43 | 109% | 0 | - | 0 | - |
| Common merganser | 20 | 68% | 7 – 34 | 0 | - | 0 | - | 20 | 150% |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 2,062 | 23% | 1,587 – 2,537 | 1,228 | 56% | 57 | 82% | 777 | 24% |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 492 | 18% | 404 – 581 | 288 | 34% | 43 | 150% | 161 | 38% |
| Lesser Canada goose | 454 | 20% | 364 – 544 | 129 | 63% | 78 | 51% | 248 | 27% |
| White-fronted goose | 1,170 | 15% | 999 – 1,341 | 757 | 27% | 133 | 62% | 280 | 27% |
| Emperor goose | 29 | 57% | 13 – 46 | 0 | - | 29 | 86% | 0 | - |
| Lesser snow goose | 219 | 36% | 141 – 296 | 208 | 49% | 0 | - | 11 | 136% |
| Total geese | 2,365 | 14% | 2,032 – 2,697 | 1,382 | 27% | 283 | 50% | 700 | 23% |
| Swans | | | | | | | | | |
| Tundra swan | 272 | 20% | 216 – 327 | 218 | 37% | 22 | 90% | 32 | 61% |
| Cranes | | | | | | | | | |
| Sandhill crane | 29 | 36% | 18 – 39 | 10 | 84% | 0 | - | 18 | 80% |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Comorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total birds | 4,727 | 16% | 3,994 – 5,460 | 2,839 | 33% | 361 | 53% | 1,527 | 22% |

Sampling effort (Lower Yukon, 2008): 4 out of 6 villages in this subregion were surveyed; 72% of subregion households were represented in the sample.

-: No reported harvest.

Table 30.—Estimated harvest of eggs, Yukon–Kuskokwim Delta Region, Lower Yukon Subregion, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|------------|---------------------------------|--------|--------|--------|--------|--------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mallard | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pintail | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Comorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total eggs | 0 | - | - | 0 | - | 0 | - | 0 | - |

Sampling effort (Lower Yukon, 2008): 4 out of 6 villages in this subregion were surveyed; 72% of subregion households were represented in the sample.

-: No reported harvest.

Table 31.—Estimated harvest of birds, Yukon–Kuskokwim Delta Region, Lower Kuskokwim Subregion, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|-----------------|----------------------------------|--------|--------|--------|--------|--------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 682 | 25% | 510 – 853 | 599 | 23% | 67 | 148% | 16 | 67% |
| Green-winged teal | 202 | 21% | 160 – 243 | 176 | 25% | 0 | - | 26 | 37% |
| Mallard | 2,985 | 21% | 2,364 – 3,606 | 1,505 | 52% | 1,278 | 21% | 202 | 23% |
| Pintail | 899 | 22% | 698 – 1,100 | 322 | 38% | 301 | 58% | 276 | 19% |
| Shoveler | 250 | 17% | 207 – 292 | 63 | 67% | 2 | 148% | 184 | 27% |
| Black scoter | 2,074 | 17% | 1,714 – 2,434 | 1,915 | 27% | 13 | 126% | 145 | 25% |
| Surf scoter | 434 | 45% | 241 – 628 | 409 | 89% | 0 | - | 26 | 53% |
| White-winged scoter | 2,288 | 28% | 1,649 – 2,927 | 2,288 | 40% | 0 | - | 0 | - |
| Bufflehead | 89 | 58% | 37 – 141 | 78 | 92% | 11 | 148% | 0 | - |
| Goldeneye | 71 | 42% | 41 – 101 | 37 | 157% | 18 | 117% | 16 | 67% |
| Canvasback | 186 | 46% | 101 – 272 | 86 | 122% | 85 | 91% | 16 | 67% |
| Scaup | 2,031 | 25% | 1,520 – 2,542 | 1,765 | 42% | 265 | 72% | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 4 | 148% | 2 – 11 | 4 | 594% | 0 | - | 0 | - |
| Long-tailed duck | 270 | 37% | 170 – 370 | 254 | 63% | 16 | 148% | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 12,465 | 14% | 10,698 – 14,232 | 9,502 | 25% | 2,056 | 24% | 907 | - |
| Geese | | | | | | | | | |
| Black brant | 22 | 81% | 4 – 40 | 22 | 121% | 0 | - | 0 | - |
| Cackling Canada goose | 3,836 | 22% | 3,002 – 4,670 | 3,096 | 37% | 740 | 27% | 0 | - |
| Lesser Canada goose | 1,344 | 19% | 1,087 – 1,601 | 960 | 42% | 328 | 35% | 55 | 33% |
| White-fronted goose | 2,154 | 18% | 1,762 – 2,546 | 1,833 | 30% | 308 | 34% | 13 | 53% |
| Emperor goose | 6 | 84% | 1 – 11 | 6 | 120% | 0 | - | 0 | - |
| Lesser snow goose | 23 | 81% | 7 – 41 | 23 | 92% | 0 | - | 0 | - |
| Total geese | 7,384 | 15% | 6,281 – 8,488 | 5,940 | 25% | 1,376 | 21% | 68 | 29% |
| Swans | | | | | | | | | |
| Tundra swan | 1,474 | 17% | 1,219 – 1,728 | 1,308 | 16% | 47 | 65% | 119 | 21% |
| Cranes | | | | | | | | | |
| Sandhill crane | 205 | 26% | 153 – 258 | 199 | 41% | 7 | 110% | 0 | - |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 997 | 64% | 363 – 1,631 | 997 | 94% | 0 | - | 0 | - |
| Total grouse | 997 | 64% | 363 – 1,631 | 997 | 94% | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 282 | 27% | 205 – 359 | 282 | 18% | 0 | - | 0 | - |
| Red-throated loon | 6 | 92% | 1 – 12 | 6 | 118% | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 288 | 27% | 211 – 365 | 288 | 18% | 0 | - | 0 | - |
| Total birds | 22,813 | 14% | 19,721 – 25,906 | 18,233 | 23% | 3,486 | 17% | 1,094 | 15% |

Sampling effort (Lower Kuskokwim, 2008): 6 out of 13 villages in this subregion were surveyed; 46% of subregion households were represented in the sample.

:- No reported harvest.

Table 32.—Estimated harvest of eggs, Yukon–Kuskokwim Delta Region, Lower Kuskokwim Subregion, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|---------------|---------------------------------|--------|--------|--------|--------|--------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 192 | 73% | 65 – 332 | 192 | 248% | 0 | - | 0 | - |
| Mallard | 1,102 | 33% | 736 – 1,469 | 18 | 594% | 1,085 | 33% | 0 | - |
| Pintail | 1,097 | 24% | 833 – 1,361 | 325 | 169% | 772 | 24% | 0 | - |
| Shoveler | 13 | 148% | 6 – 33 | 13 | 594% | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 127 | 146% | 57 – 312 | 127 | 582% | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 2,531 | 25% | 1,897 – 3,166 | 674 | 235% | 1,857 | 25% | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 614 | 32% | 420 – 808 | 74 | 118% | 540 | 33% | 0 | - |
| Lesser Canada goose | 392 | 64% | 141 – 643 | 44 | 135% | 348 | 71% | 0 | - |
| White-fronted goose | 52 | 78% | 13 – 93 | 52 | 195% | 0 | - | 0 | - |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 1,058 | 34% | 694 – 1,421 | 170 | 118% | 888 | 38% | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 246 | 70% | 73 – 420 | 121 | 72% | 125 | 128% | 0 | - |
| Sandhill crane | 384 | 29% | 274 – 494 | 85 | 134% | 299 | 34% | 0 | - |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 258 | 62% | 99 – 418 | 258 | 98% | 0 | - | 0 | - |
| Total grouse | 258 | 62% | 99 – 418 | 258 | 98% | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 167 | 66% | 57 – 276 | 167 | 242% | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 332 | 58% | 141 – 524 | 332 | 101% | 0 | - | 0 | - |
| Glaucous gull | 54 | 71% | 17 – 91 | 54 | 224% | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 552 | 50% | 275 – 830 | 552 | 131% | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 49 | 92% | 8 – 94 | 49 | 118% | 0 | - | 0 | - |
| Small shorebird | 206 | 45% | 113 – 300 | 206 | 127% | 0 | - | 0 | - |
| Total shorebirds | 255 | 41% | 152 – 359 | 255 | 105% | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 12 | 92% | 2 – 24 | 12 | 118% | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 12 | 92% | 2 – 24 | 12 | 118% | 0 | - | 0 | - |
| Total eggs | 5,298 | 23% | 4,093 – 6,502 | 2,129 | 127% | 3,169 | 24% | 0 | - |

Sampling effort (Lower Kuskokwim, 2008): 6 out of 13 villages in this subregion were surveyed; 46% of subregion households were represented in the sample.
 -: No reported harvest.

Table 33.—Estimated harvest of birds, Yukon–Kuskokwim Delta Region, Bethel Subregion, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|----------------------|----------------------------------|------------|------------|------------|--------------|------------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 223 | 37% | 140 – 307 | 44 | 149% | 15 | 105% | 165 | 78% |
| Green-winged teal | 142 | 47% | 75 – 209 | 3 | 159% | 15 | 131% | 124 | 92% |
| Mallard | 290 | 21% | 230 – 351 | 102 | 41% | 81 | 96% | 107 | 53% |
| Pintail | 235 | 30% | 165 – 305 | 116 | 84% | 6 | 112% | 113 | 64% |
| Shoveler | 81 | 44% | 45 – 117 | 47 | 104% | 9 | 159% | 26 | 142% |
| Black scoter | 695 | 25% | 521 – 869 | 689 | 43% | 0 | - | 6 | 159% |
| Surf scoter | 207 | 59% | 86 – 327 | 207 | 102% | 0 | - | 0 | - |
| White-winged scoter | 320 | 38% | 198 – 442 | 320 | 66% | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 20 | 79% | 7 – 36 | 17 | 159% | 3 | 159% | 0 | - |
| Canvasback | 6 | 65% | 2 – 10 | 0 | - | 0 | - | 6 | 112% |
| Scaup | 351 | 31% | 243 – 459 | 163 | 73% | 0 | - | 188 | 77% |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 134 | 80% | 46 – 241 | 134 | 139% | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 2,704 | 16% | 2,259 – 3,149 | 1,841 | 36% | 128 | 69% | 735 | 51% |
| Geese | | | | | | | | | |
| Black brant | 87 | 91% | 30 – 167 | 87 | 159% | 0 | - | 0 | - |
| Cackling Canada goose | 833 | 17% | 695 – 971 | 471 | 33% | 84 | 98% | 278 | 58% |
| Lesser Canada goose | 533 | 48% | 275 – 791 | 376 | 111% | 52 | 117% | 104 | 67% |
| White-fronted goose | 2,439 | 31% | 1,671 – 3,207 | 1,984 | 62% | 111 | 106% | 344 | 52% |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 14 | 92% | 5 – 28 | 0 | - | 0 | - | 14 | 159% |
| Total geese | 3,907 | 26% | 2,895 – 4,919 | 2,919 | 56% | 247 | 64% | 741 | 39% |
| Swans | | | | | | | | | |
| Tundra swan | 105 | 19% | 85 – 124 | 61 | 38% | 12 | 112% | 32 | 65% |
| Sandhill crane | 67 | 26% | 50 – 84 | 55 | 50% | 9 | 118% | 3 | 159% |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 1,006 | 31% | 692 – 1,320 | 1,006 | 54% | 0 | - | 0 | - |
| Total grouse | 1,006 | 31% | 692 – 1,320 | 1,006 | 54% | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Comorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total birds | 7,789 | 16% | 6,556 – 9,021 | 5,883 | 33% | 396 | 50% | 1,510 | 37% |

Sampling effort (Bethel, 2008): 1 out of 1 village in this subregion was surveyed. Harvest expansion assumed that harvesters account for 30% of the total village households (village size estimate). -: No reported harvest.

Table 34.—Estimated harvest of eggs, Yukon–Kuskokwim Delta Region, Bethel Subregion, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|---------------|---------------------------------|-------------|----------|----------|----------|----------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mallard | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pintail | 23 | 91% | 8 – 44 | 23 | 159% | 0 | - | 0 | - |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| King eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 23 | 91% | 8 – 44 | 23 | 159% | 0 | - | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cackling Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Auklet | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Murre | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Guillemot | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Puffin | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total eggs | 23 | 91% | 8 – 44 | 23 | 159% | 0 | - | 0 | - |

Sampling effort (Bethel, 2008): 1 out of 1 village in this subregion was surveyed. Harvest expansion assumed that harvesters account for 30% of the total village households (village size estimate). -: No reported harvest.

Table 35.—Estimated harvest of birds, North Slope Region, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|---------------------------------|-------------------------------|---------------------|-----------------|----------------------------------|--------|--------|--------|--------|--------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low | High | Number | 95% CI | Number | 95% CI | Number |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | a | |
| Green-winged teal | 0 | - | - | 0 | - | 0 | - | a | |
| Mallard | 10 | 135% | 3 – 25 | 10 | 135% | 0 | - | a | |
| Pintail | 26 | 184% | 3 – 74 | 26 | 184% | 0 | - | a | |
| Shoveler | 0 | - | - | 0 | - | 0 | - | a | |
| Black scoter | 0 | - | - | 0 | - | 0 | - | a | |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | a | |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | a | |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | a | |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | a | |
| Canvasback | 0 | - | - | 0 | - | 0 | - | a | |
| Scaup | 0 | - | - | 0 | - | 0 | - | a | |
| Common eider | 3,166 | 26% | 2,338 – 3,994 | 1,881 | 22% | 1,285 | 44% | a | |
| King eider | 14,157 | 40% | 8,534 – 19,781 | 5,867 | 41% | 8,290 | 46% | a | |
| Spectacled eider | 9 | 184% | 1 – 25 | 0 | - | 9 | 184% | a | |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | a | |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | a | |
| Long-tailed duck | 112 | 80% | 37 – 202 | 84 | 105% | 28 | 88% | a | |
| Common merganser | 0 | - | - | 0 | - | 0 | - | a | |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | a | |
| Duck (unidentified) | 2 | 145% | 1 – 5 | 0 | - | 2 | 145% | a | |
| Total ducks | 17,482 | 33% | 11,713 – 23,252 | 7,869 | 32% | 9,614 | 41% | a | |
| Geese | | | | | | | | | |
| Black brant | 3,851 | 18% | 3,172 – 4,530 | 3,344 | 17% | 507 | 58% | a | |
| Cackling Canada goose | 274 | 76% | 105 – 481 | 255 | 81% | 19 | 132% | a | |
| Lesser Canada goose | 716 | 41% | 423 – 1,008 | 694 | 42% | 22 | 100% | a | |
| White-fronted goose | 20,187 | 27% | 14,714 – 25,659 | 19,369 | 27% | 817 | 61% | a | |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | a | |
| Lesser snow goose | 688 | 40% | 412 – 963 | 679 | 40% | 8 | 140% | a | |
| Total geese | 25,714 | 22% | 19,991 – 31,437 | 24,341 | 22% | 1,373 | 44% | a | |
| Swans | | | | | | | | | |
| Tundra swan | 47 | 64% | 17 – 77 | 47 | 64% | 0 | - | a | |
| Cranes | | | | | | | | | |
| Sandhill crane | 35 | 139% | 7 – 83 | 17 | 102% | 17 | 184% | a | |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | a | |
| Ptarmigan | 1,556 | 35% | 1,006 – 2,106 | 1,323 | 39% | 233 | 74% | a | |
| Total grouse | 1,556 | 35% | 1,006 – 2,106 | 1,323 | 39% | 233 | 74% | a | |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | a | |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | a | |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | a | |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | a | |
| Mew gull | 0 | - | - | 0 | - | 0 | - | a | |
| Glaucous gull | 120 | 98% | 34 – 238 | 24 | 97% | 96 | 120% | a | |
| Auklet | 0 | - | - | 0 | - | 0 | - | a | |
| Murre | 0 | - | - | 0 | - | 0 | - | a | |
| Guillemot | 0 | - | - | 0 | - | 0 | - | a | |
| Puffin | 9 | 184% | 1 – 25 | 0 | - | 9 | 184% | a | |
| Total seabirds | 129 | 92% | 35 – 247 | 24 | 97% | 105 | 111% | a | |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | a | |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | a | |
| Godwit | 0 | - | - | 0 | - | 0 | - | a | |
| Golden plover | 0 | - | - | 0 | - | 0 | - | a | |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | a | |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | a | |
| Grebes and loons | | | | | | | | | |
| Common loon | 32 | 104% | 14 – 65 | 3 | 132% | 29 | 114% | a | |
| Pacific loon | 24 | 137% | 4 – 58 | 7 | 135% | 17 | 184% | a | |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | a | |
| Yellow-billed loon ^b | 102 | 79% | 28 – 182 | 0 | - | 102 | 79% | a | |
| Total grebes and loons | 158 | 62% | 59 – 256 | 10 | - | 148 | 67% | a | |
| Other/unknown bird | 2 | 145% | 1 – 5 | 2 | - | 0 | - | a | |
| Total birds | 45,123 | 22% | 35,404 – 54,842 | 33,633 | - | 11,490 | 36% | a | |

Sampling effort (North Slope, 2008): a. There is no fall survey in the North Slope Region; 5 out of 8 villages in this region were surveyed and both subregions were represented in the sample. Harvest estimates presented only at the regional level by request of regional partners. A dash ("-") indicates no reported harvest.

b. In the North Slope Region, loons are occasionally entangled in subsistence fishing nets. Entangled yellow-billed loons salvaged from fishing nets are used for ceremonial purposes and were reported as "harvested" in this survey. Reported numbers of yellow-billed loons for the region were 28 birds in 2008.

Table 36.—Estimated harvest of eggs, North Slope Region, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|--------------------|---------------------------------|-------------|------------|-------------|----------|--------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 25 | 140% | 6 – 61 | 25 | 140% | 0 | - | a | |
| Green-winged teal | 0 | - | - | 0 | - | 0 | - | a | |
| Mallard | 0 | - | - | 0 | - | 0 | - | a | |
| Pintail | 0 | - | - | 0 | - | 0 | - | a | |
| Shoveler | 0 | - | - | 0 | - | 0 | - | a | |
| Black scoter | 0 | - | - | 0 | - | 0 | - | a | |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | a | |
| White-winged scoter | 31 | 132% | 10 – 72 | 31 | 132% | 0 | - | a | |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | a | |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | a | |
| Canvasback | 0 | - | - | 0 | - | 0 | - | a | |
| Scaup | 0 | - | - | 0 | - | 0 | - | a | |
| Common eider | 259 | 132% | 84 – 602 | 259 | 132% | 0 | - | a | |
| King eider | 0 | - | - | 0 | - | 0 | - | a | |
| Spectacled eider | 0 | - | - | 0 | - | 0 | - | a | |
| Steller's eider | 0 | - | - | 0 | - | 0 | - | a | |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | a | |
| Long-tailed duck | 65 | 132% | 21 – 151 | 65 | 132% | 0 | - | a | |
| Common merganser | 0 | - | - | 0 | - | 0 | - | a | |
| Red-breasted merganser | 4 | 145% | 2 – 11 | 4 | 145% | 0 | - | a | |
| Total ducks | 385 | 122% | 123 – 855 | 385 | 122% | 0 | - | a | |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | a | |
| Cackling Canada goose | 0 | - | - | 0 | - | 0 | - | a | |
| Lesser Canada goose | 0 | - | - | 0 | - | 0 | - | a | |
| White-fronted goose | 388 | 82% | 107 – 706 | 239 | 72% | 149 | 113% | a | |
| Emperor goose | 0 | - | - | 0 | - | 0 | - | a | |
| Lesser snow goose | 25 | 140% | 6 – 61 | 25 | 140% | 0 | - | a | |
| Total geese | 413 | 77% | 113 – 731 | 265 | 65% | 149 | 113% | a | |
| Swans | | | | | | | | | |
| Tundra swan | 38 | 104% | 10 – 77 | 25 | 96% | 13 | 140% | a | |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | a | |
| Grouse | | | | | | | | | |
| Spruce grouse | 0 | - | - | 0 | - | 0 | - | a | |
| Ptarmigan | 0 | - | - | 0 | - | 0 | - | a | |
| Total grouse | 0 | - | - | 0 | - | 0 | - | a | |
| Seabirds | | | | | | | | | |
| Cormorant | 0 | - | - | 0 | - | 0 | - | a | |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | a | |
| Kittiwake | 0 | - | - | 0 | - | 0 | - | a | |
| Sabine's gull | 0 | - | - | 0 | - | 0 | - | a | |
| Mew gull | 0 | - | - | 0 | - | 0 | - | a | |
| Glaucous gull | 22 | 145% | 10 – 54 | 22 | 145% | 0 | - | a | |
| Auklet | 0 | - | - | 0 | - | 0 | - | a | |
| Murre | 0 | - | - | 0 | - | 0 | - | a | |
| Guillemot | 0 | - | - | 0 | - | 0 | - | a | |
| Puffin | 0 | - | - | 0 | - | 0 | - | a | |
| Total seabirds | 22 | 145% | 10 – 54 | 22 | 145% | 0 | - | a | |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | a | |
| Bristle-thighed curlew | 0 | - | - | 0 | - | 0 | - | a | |
| Godwit | 0 | - | - | 0 | - | 0 | - | a | |
| Golden plover | 0 | - | - | 0 | - | 0 | - | a | |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | a | |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | a | |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | a | |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | a | |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | a | |
| Yellow-billed loon | 0 | - | - | 0 | - | 0 | - | a | |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | a | |
| Total eggs | 858 | 70% | 256 – 1,461 | 696 | 76% | 161 | 114% | a | |

Sampling effort (North Slope, 2008): a. There is no fall survey in the North Slope Region; 5 out of 8 villages in this region were surveyed and both subregions were represented in the sample. Harvest estimates presented only at the regional level by request of regional partners. A dash ("-") indicates no reported harvest.

Table 37.—Estimated harvest of birds, Interior Alaska Region, Yukon–Koyukuk Subregion, 2008.

| Species | Annual estimated bird harvest | | | Estimated bird harvest by season | | | | | |
|-------------------------------|-------------------------------|---------------------|--------------|----------------------------------|--------|--------|--------|--------|--------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low – High | Number | 95% CI | Number | 95% CI | Number | 95% CI |
| Ducks | | | | | | | | | |
| Wigeon | 739 | 97% | 62 – 1,452 | 739 | 93% | 0 | - | 0 | - |
| Green-winged teal | 60 | 152% | 5 – 150 | 60 | 151% | 0 | - | 0 | - |
| Mallard | 881 | 64% | 317 – 1,445 | 881 | 57% | 0 | - | 0 | - |
| Pintail | 738 | 84% | 116 – 1,359 | 738 | 80% | 0 | - | 0 | - |
| Shoveler | 441 | 97% | 37 – 868 | 441 | 93% | 0 | - | 0 | - |
| Black scoter | 12 | 152% | 1 – 30 | 12 | 151% | 0 | - | 0 | - |
| Surf scoter | 381 | 143% | 32 – 927 | 381 | 142% | 0 | - | 0 | - |
| White-winged scoter | 381 | 143% | 32 – 927 | 381 | 142% | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 357 | 130% | 30 – 822 | 357 | 128% | 0 | - | 0 | - |
| Scaup | 357 | 152% | 30 – 902 | 357 | 151% | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 667 | 115% | 56 – 1,437 | 667 | 113% | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 5,014 | 101% | 421 – 10,070 | 5,014 | 97% | 0 | - | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser Canada goose | 906 | 73% | 248 – 1,563 | 906 | 67% | 0 | - | 0 | - |
| White-fronted goose | 881 | 53% | 415 – 1,346 | 881 | 44% | 0 | - | 0 | - |
| Lesser snow goose | 24 | 152% | 2 – 60 | 24 | 151% | 0 | - | 0 | - |
| Total geese | 1,810 | 61% | 699 – 2,922 | 1,810 | 54% | 0 | - | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 83 | 133% | 7 – 194 | 83 | 131% | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Grouse (unidentified) | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Herring gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-necked grebe | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total birds | 6,908 | 89% | 731 – 13,084 | 6,908 | 85% | 0 | - | 0 | - |

Sampling effort (Yukon/Koyukuk, 2008): 2 out of 12 villages in this subregion were surveyed; 10% of the subregion households were represented in the sample.
 -: No reported harvest.

Table 38.—Estimated harvest of eggs, Interior Alaska Region, Yukon–Koyukuk Subregion, 2008.

| Species | Annual estimated egg harvest | | | Estimated egg harvest by season | | | | | |
|-------------------------------|------------------------------|---------------------|-----|---------------------------------|--------|--------|--------|--------|--------|
| | Number | Confidence Interval | | Spring | | Summer | | Fall | |
| | | 95% CI | Low | High | Number | 95% CI | Number | 95% CI | Number |
| Ducks | | | | | | | | | |
| Wigeon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Green-winged teal | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mallard | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pintail | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shoveler | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Black scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Surf scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-winged scoter | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Bufflehead | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Goldeneye | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Canvasback | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Scaup | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Harlequin duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Long-tailed duck | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Common merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-breasted merganser | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total ducks | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Geese | | | | | | | | | |
| Black brant | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser Canada goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| White-fronted goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Lesser snow goose | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total geese | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Swans | | | | | | | | | |
| Tundra swan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Cranes | | | | | | | | | |
| Sandhill crane | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grouse | | | | | | | | | |
| Grouse (unidentified) | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Ptarmigan | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grouse | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Seabirds | | | | | | | | | |
| Arctic tern | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Mew gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Glaucous gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Herring gull | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total seabirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Shorebirds | | | | | | | | | |
| Whimbrel | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Godwit | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Golden plover | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Small shorebird | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total shorebirds | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Grebes and loons | | | | | | | | | |
| Common loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Pacific loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-throated loon | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Red-necked grebe | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total grebes and loons | 0 | - | - | 0 | - | 0 | - | 0 | - |
| Total eggs | 0 | - | - | 0 | - | 0 | - | 0 | - |

Sampling effort (Yukon/Koyukuk, 2008): 2 out of 12 villages in this subregion were surveyed; 10% of the subregion households were represented in the sample.
 -: No reported harvest.

HOUSEHOLD PARTICIPATION RATES 2004–2008

Table 39.—Household participation rates, 2004–2008.

| Region Subregion | 2004 | | 2005 | | 2006 | | 2007 | | 2008 | |
|-----------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|
| | Household Participation Rate | Number of Households ^a | Household Participation Rate | Number of Households ^a | Household Participation Rate | Number of Households ^a | Household Participation Rate | Number of Households ^a | Household Participation Rate | Number of Households ^a |
| Gulf of Alaska-Cook Inlet | 97% | 32 | - | - | - | - | - | - | - | - |
| Gulf of Alaska | 100% | 18 | - | - | 79% | 24 | - | - | - | - |
| Cook Inlet | 93% | 14 | 71% | 17 | - | - | - | - | - | - |
| Kodiak Archipelago | - | - | - | - | 72% | 233 | - | - | - | - |
| Kodiak Villages | 100% | 65 | - | - | 75% | 169 | - | - | - | - |
| Kodiak City & Road Connected | - | - | - | - | 64% | 64 | - | - | - | - |
| Aleutian-Pribilof Islands | - | - | - | - | - | - | - | - | - | - |
| Aleutian-Pribilof Villages | - | - | 97% | 38 | - | - | 100% | 25 | 97% | 189 |
| Unalaska | - | - | - | - | - | - | - | - | 95% | 73 |
| Bristol Bay | - | - | - | - | - | - | 89% | 354 | 99% | 116 |
| South Alaska Peninsula | - | - | - | - | - | - | - | - | 98% | 357 |
| Southwest Bristol Bay | - | - | - | - | - | - | 93% | 29 | - | - |
| Dillingham | - | - | - | - | - | - | 85% | 214 | 96% | 155 |
| Yukon-Kuskokwim Delta | - | - | - | - | - | - | 97% | 111 | 100% | 202 |
| Y-K Delta South Coast | - | - | - | - | - | - | - | - | 62% | 1,300 |
| Y-K Delta Mid Coast | - | - | - | - | 78% | 90 | 86% | 283 | 73% | 173 |
| Y-K Delta North Coast | - | - | - | - | 81% | 156 | 54% | 257 | 50% | 400 |
| Lower Yukon | - | - | - | - | 56% | 107 | 44% | 255 | 63% | 300 |
| Lower Kuskokwim | - | - | - | - | 84% | 56 | 60% | 211 | 98% | 94 |
| Central Kuskokwim | - | - | - | - | 63% | 294 | 60% | 602 | 61% | 333 |
| Bethel | - | - | - | - | 74% | 73 | - | - | - | - |
| Bering Strait-Norton Sound | 71% | 525 | 80% | 354 | - | - | - | - | - | - |
| St. Lawrence-Dionede Is. | 75% | 109 | 87% | 75 | - | - | 90% | 436 | - | - |
| Bering Strait Mainland Villages | 85% | 206 | 78% | 143 | - | - | 95% | 86 | - | - |
| Nome | 57% | 210 | 77% | 136 | - | - | 93% | 159 | - | - |
| Northwest Arctic | - | - | - | - | - | - | 86% | 191 | - | - |
| Northwest Arctic Villages | - | - | - | - | - | - | - | - | - | - |
| Kotzebue | - | - | - | - | 86% | 242 | - | - | - | - |
| North Slope | - | - | 91% | 600 | - | - | - | - | - | - |
| North Slope Villages | - | - | 87% | 394 | - | - | - | - | - | - |
| Barrow | - | - | 98% | 206 | - | - | - | - | - | - |
| Interior | - | - | - | - | - | - | - | - | - | - |
| Mid Yukon-Upper Kuskokwim | - | - | - | - | - | - | - | - | - | - |
| Yukon-Koyukuk | 100% | 18 | - | - | 90% | 83 | 100% | 50 | 100% | 51 |
| Upper Yukon | - | - | - | - | 95% | 246 | 100% | 147 | - | - |
| Tanana Villages | 99% | 100 | - | - | 99% | 123 | - | - | - | - |
| Tok | - | - | - | - | 100% | 60 | - | - | - | - |
| Upper Copper River | 96% | 57 | - | - | - | - | 84% | 38 | - | - |

Household Participation Rate = Number of households that agreed to participate / Total number of households for which permission slips are available.

a. Number of households for which permission slips are available (may not represent the total number of households surveyed).

-. Information not available (region/subregion not surveyed or permission slips not available for data management and analysis), 2004–2007 Participation rates from Naves (2010).

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APPENDICES

Appendix A.—Regions, subregions, and villages included in the 2004–2008 harvest estimates.

| Region | | 2004 | 2005 | 2006 | 2007 | 2008 |
|---------------------------------------|-----------------|------|------|------|------|------|
| <u>Subregion</u> | | | | | | |
| | Village | | | | | |
| Gulf of Alaska–Cook Inlet | | | | | | |
| <u>Gulf of Alaska</u> | | | | | | |
| | Chenega Bay | - | - | X | - | - |
| | Nanwalek | X | - | - | - | - |
| | Port Graham | X | - | X | - | - |
| | Tatitlek | X | - | - | - | - |
| <u>Cook Inlet</u> | | | | | | |
| | Tyonek | X | X | - | - | - |
| Kodiak Archipelago | | | | | | |
| <u>Kodiak Villages</u> | | | | | | |
| | Akhiok | - | - | X | - | - |
| | Karluk | - | - | X | - | - |
| | Larsen Bay | - | - | X | - | - |
| | Old Harbor | - | - | X | - | - |
| | Ouzinkie | - | - | X | - | - |
| | Port Lions | - | - | - | - | - |
| <u>Kodiak City and Road-connected</u> | | | | | | |
| | Kodiak City | - | - | X | - | - |
| | Kodiak Station | - | - | - | - | - |
| | Chiniak | - | - | - | - | - |
| | Women’s Bay | - | - | - | - | - |
| | Kodiak at large | - | - | - | - | - |
| | Aleneva | - | - | - | - | - |
| Aleutian–Pribilof Islands | | | | | | |
| <u>Aleutian–Pribilof Villages</u> | | | | | | |
| | Adak Station | - | - | - | - | - |
| | Akutan | - | X | - | X | X |
| | Atka | - | X | - | - | - |
| | Cold Bay | - | X | - | - | - |
| | False Pass | - | - | - | - | X |
| | King Cove | - | X | - | - | X |
| | Nelson Lagoon | - | - | - | - | - |

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| Region | | | | | |
|-------------------------------|------|------|------|------|------|
| <u>Subregion</u> | | | | | |
| Village | 2004 | 2005 | 2006 | 2007 | 2008 |
| Nikolski | - | - | - | - | - |
| Sand Point | - | - | - | - | X |
| Saint George Island | - | - | - | - | - |
| Saint Paul Island | - | - | - | - | - |
| <u>Unalaska</u> | | | | | |
| Unalaska | - | - | - | - | X |
| Bristol Bay | | | | | |
| <u>South Alaska Peninsula</u> | | | | | |
| Chignik Bay | X | - | - | X | - |
| Chignik Lagoon | X | - | - | - | - |
| Chignik Lake | X | - | - | - | X |
| Ivanof Bay | - | - | - | - | - |
| Perryville | X | - | - | X | - |
| <u>Southwest Bristol Bay</u> | | | | | |
| Aleknagik | X | - | - | X | X |
| Clark's Point | X | X | - | X | X |
| Egegik | - | X | - | X | - |
| Ekwok | X | - | - | X | X |
| Igiugig | - | - | - | - | - |
| Iliamna | - | X | - | X | - |
| King Salmon | - | X | - | - | - |
| Kokhanok | X | X | - | X | X |
| Koliganek | - | X | - | X | - |
| Levelock | X | X | - | - | X |
| Manokotak | - | X | - | X | X |
| Naknek | X | - | - | X | - |
| New Stuyahok | - | X | - | X | - |
| Newhalen | X | X | - | - | X |
| Nondalton | X | X | - | - | - |
| Pedro Bay | - | X | - | - | - |
| Pilot Point | - | X | - | - | - |
| Port Heiden | - | X | - | - | - |
| South Naknek | - | X | - | X | - |
| Togiak | X | - | X | X | - |
| Twin Hills | X | X | - | X | - |

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| Region | | | | | |
|------------------------------|------|------|------|------|------|
| <u>Subregion</u> | | | | | |
| Village | 2004 | 2005 | 2006 | 2007 | 2008 |
| <u>Dillingham</u> | | | | | |
| Dillingham | - | X | - | X | X |
| Yukon-Kuskokwim Delta | | | | | |
| <u>Y–K Delta South Coast</u> | | | | | |
| Eek | X | X | - | X | X |
| Goodnews Bay | - | - | X | - | X |
| Kipnuk | - | X | X | X | - |
| Kongiganak | - | X | X | X | X |
| Kwigillingok | - | - | - | - | - |
| Platinum | - | X | X | - | - |
| Quinhagak | X | X | X | X | X |
| Tuntutuliak | X | - | X | - | X |
| <u>Y–K Delta Mid Coast</u> | | | | | |
| Chefornak | X | - | X | X | - |
| Chevak | X | - | - | - | - |
| Hooper Bay | X | X | - | - | X |
| Mekoryuk | - | X | - | X | X |
| Newtok | - | X | X | - | X |
| Nightmute | X | - | X | X | - |
| Scammon Bay | - | - | X | - | X |
| Toksook Bay | X | X | - | X | - |
| Tununak | X | X | - | X | X |
| <u>Y–K Delta North Coast</u> | | | | | |
| Alakanuk | X | - | X | - | - |
| Emmonak | - | X | X | X | X |
| Kotlik | X | X | - | - | - |
| Nunam Iqua | - | X | X | - | X |
| <u>Lower Yukon</u> | | | | | |
| Marshall | X | X | - | X | X |
| Mountain Village | - | X | - | X | X |
| Pilot Station | - | X | X | - | X |
| Pitkas Point | X | - | X | X | - |
| Russian Mission | - | X | X | - | X |
| Saint Mary's | - | X | - | X | - |
| <u>Lower Kuskokwim</u> | | | | | |

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| Region | | | | | |
|--|------|------|------|------|------|
| <u>Subregion</u> | | | | | |
| Village | 2004 | 2005 | 2006 | 2007 | 2008 |
| Akiachak | - | - | X | - | - |
| Akiak | - | X | X | X | - |
| Aniak | X | X | - | - | X |
| Atmautluak | X | - | - | X | X |
| Kasigluk | X | - | X | X | - |
| Kwethluk | X | X | X | X | - |
| Lower Kalskag | X | - | X | X | X |
| Napakiak | - | - | - | X | - |
| Napaskiak | - | X | X | X | X |
| Nunapitchuk | X | X | - | X | X |
| Oscarville | - | - | X | X | - |
| Tuluksak | - | X | X | - | X |
| Upper Kalskag | - | X | X | - | - |
| <u>Central Kuskokwim</u> | | | | | |
| Chuathbaluk | X | - | - | - | - |
| Crooked Creek | X | - | X | - | - |
| Lime Village | - | - | X | - | - |
| Red Devil | - | - | - | X | - |
| Sleetmute | - | - | X | X | - |
| Stony River | X | - | X | - | - |
| <u>Bethel</u> | | | | | |
| Bethel | X | X | X | X | X |
| Bering Strait–Norton Sound | | | | | |
| <u>St. Lawrence–Diomedes Is.</u> | | | | | |
| Diomedes | - | X | - | X | - |
| Gambell | X | X | - | X | - |
| Savoonga | X | X | - | X | - |
| <u>Bering Strait Mainland Villages</u> | | | | | |
| Brevig Mission | X | - | - | X | - |
| Elim | X | X | - | - | - |
| Golovin | - | X | - | X | - |
| Koyuk | - | X | - | X | - |
| Shaktoolik | - | - | - | X | - |
| Shishmaref | X | X | - | - | - |
| Saint Michael | X | - | - | X | - |

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| Region | | | | | |
|----------------------------------|------|------|------|------|------|
| <u>Subregion</u> | | | | | |
| Village | 2004 | 2005 | 2006 | 2007 | 2008 |
| Stebbins | - | X | - | X | - |
| Teller | X | X | - | - | - |
| Unalakleet | X | - | - | X | - |
| Wales | X | X | - | - | - |
| White Mountain | X | - | - | X | - |
| <u>Nome</u> | | | | | |
| Nome | X | X | - | X | - |
| Northwest Arctic | | | | | |
| <u>Northwest Arctic Villages</u> | | | | | |
| Ambler | - | - | - | - | - |
| Buckland | - | - | X | - | - |
| Deering | - | - | - | - | - |
| Kiana | - | - | - | - | - |
| Kivalina | - | - | - | - | - |
| Kobuk | - | - | X | - | - |
| Noatak | - | - | - | - | - |
| Noorvik | - | - | - | - | - |
| Selawik | - | - | X | - | - |
| Shungnak | - | - | X | - | - |
| <u>Kotzebue</u> | | | | | |
| Kotzebue | - | - | - | - | - |
| North Slope | | | | | |
| <u>North Slope Villages</u> | | | | | |
| Anaktuvuk Pass | - | X | - | X | - |
| Atkasuk | - | X | - | X | - |
| Kaktovik | - | X | - | X | X |
| Nuiqsut | - | - | - | - | X |
| Point Hope | - | X | - | - | X |
| Point Lay | - | X | - | - | - |
| Wainwright | - | X | - | X | X |
| <u>Barrow</u> | | | | | |
| Barrow | - | X | - | X | X |
| Interior Alaska | | | | | |
| <u>Mid Yukon–Upper Kuskokwim</u> | | | | | |
| Anvik | X | X | X | - | - |

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| Region | | | | | |
|------------------------|------|------|------|------|------|
| <u>Subregion</u> | | | | | |
| Village | 2004 | 2005 | 2006 | 2007 | 2008 |
| Grayling | - | X | X | - | - |
| Holy Cross | X | X | X | - | - |
| Lake Minchumina | X | - | X | - | - |
| McGrath | - | - | - | - | - |
| Nikolai | X | X | X | - | - |
| Shageluk | - | X | - | - | - |
| Takotna | - | X | - | - | - |
| Tanana | - | - | - | - | - |
| <u>Yukon–Koyukuk</u> | | | | | |
| Alatna | X | - | X | X | X |
| Bettles–Evansville | - | - | X | - | - |
| Coldfoot | - | - | - | - | - |
| Galena | X | - | - | - | - |
| Hughes | X | - | - | - | - |
| Huslia | X | - | - | - | - |
| Kaltag | X | - | - | - | - |
| Koyukuk | X | X | - | - | - |
| Nulato | X | X | - | - | - |
| Ruby | X | X | - | - | - |
| Wiseman | - | - | - | - | - |
| Allakaket | X | - | X | X | X |
| <u>Upper Yukon</u> | | | | | |
| Arctic Village | - | - | X | - | - |
| Beaver | - | - | X | X | - |
| Birch Creek | - | - | - | X | - |
| Central | - | - | X | - | - |
| Chalkyitsik | - | - | X | X | - |
| Circle | - | - | X | X | - |
| Fort Yukon | X | - | X | X | - |
| Rampart | - | - | - | - | - |
| Stevens Village | - | - | - | - | - |
| Venetie | - | - | X | X | - |
| <u>Tanana Villages</u> | | | | | |
| Dot Lake | X | - | - | - | - |
| Eagle Village | X | - | - | - | - |

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| Region | | | | | | |
|---------------------------|--|------|------|------|------|------|
| <u>Subregion</u> | | 2004 | 2005 | 2006 | 2007 | 2008 |
| <u>Village</u> | | | | | | |
| Eagle City | | - | - | - | - | - |
| Healy Lake | | - | - | - | - | - |
| Manley Hot Springs | | X | - | - | - | - |
| Minto | | - | - | X | - | - |
| Nenana | | X | - | X | - | - |
| Northway | | X | - | - | - | - |
| Tanacross | | - | - | X | - | - |
| Tetlin | | - | - | - | - | - |
| Dry Creek | | - | - | - | - | - |
| <u>Tok</u> | | | | | | |
| Tok | | - | - | X | - | - |
| Upper Copper River | | | | | | |
| <u>Upper Copper River</u> | | | | | | |
| Cantwell | | - | - | - | X | - |
| Ceesh'na (Chistochina) | | X | - | - | X | - |
| Chitina | | X | - | - | - | - |
| Copper Center | | X | - | - | X | - |
| Gakona | | X | - | - | X | - |
| Gulkana | | X | - | - | X | - |
| Mentasta Lake | | X | - | - | X | - |
| Tazlina | | - | - | - | - | - |
| Southeast Alaska | | | | | | |
| <u>Southeast Alaska</u> | | | | | | |
| Craig ^a | | - | - | - | - | - |
| Hoonah ^a | | - | - | - | - | - |
| Hydaburg ^a | | - | - | - | - | - |
| Yakutat ^b | | - | - | - | - | - |

Source Survey results for 2004–2007 were reported in Naves (2010).

- a. Villages eligible to harvest only the eggs of glaucous-winged gulls.
- b. Village eligible to harvest only the eggs of glaucous-winged gulls, Aleutian terns, and Arctic terns.

Appendix B.—Harvest report forms (main form, ~50% of original size).

SUBSISTENCE HOUSEHOLD SURVEY SPRING (APRIL 1 - JUNE 30)

PLEASE WRITE TOTAL NUMBER OF BIRDS CAUGHT AND EGGS GATHERED.

| | | | |
|--|--|--|---|
| Tundra Swan birds _____ eggs _____ | Lesser Canada Goose birds _____ eggs _____ | White-fronted Goose birds _____ eggs _____ | Lesser Canada Goose birds _____ eggs _____ |
| Cackling Canada Goose birds _____ eggs _____ | Black Brant birds _____ eggs _____ | Emperor Goose birds _____ eggs _____ | Shoveler birds _____ eggs _____ |
| Pintail birds _____ eggs _____ | Mallard birds _____ eggs _____ | Wigeon birds _____ eggs _____ | Bufflehead birds _____ eggs _____ |
| Green-winged Teal birds _____ eggs _____ | Canvasback birds _____ eggs _____ | Long-tailed duck birds _____ eggs _____ | White-winged Scoter birds _____ eggs _____ |
| Harlequin birds _____ eggs _____ | Goldeneye birds _____ eggs _____ | Common Merganser birds _____ eggs _____ | Red-breasted Merganser birds _____ eggs _____ |
| Black Scoter birds _____ eggs _____ | Surf Scoter birds _____ eggs _____ | Spectacled Eider birds _____ eggs _____ | Steller's Eider birds _____ eggs _____ |
| Common Eider birds _____ eggs _____ | King Eider birds _____ eggs _____ | | |

VH Code: _____

SUBSISTENCE HOUSEHOLD SURVEY SPRING (APRIL 1 - JUNE 30)

PLEASE WRITE TOTAL NUMBER OF BIRDS CAUGHT AND EGGS GATHERED.

| | | | |
|--|--|---|--|
| Yellow-billed Loom birds _____ eggs _____ | Red-throated Loom birds _____ eggs _____ | Common Loom birds _____ eggs _____ | Pacific Loom birds _____ eggs _____ |
| Auklet birds _____ eggs _____ | Murre birds _____ eggs _____ | Commonant birds _____ eggs _____ | Kittiwake birds _____ eggs _____ |
| Guillemot birds _____ eggs _____ | Mew Gull birds _____ eggs _____ | Stabine's Gull birds _____ eggs _____ | Glaucous Gull birds _____ eggs _____ |
| Arctic Tern birds _____ eggs _____ | Puffin birds _____ eggs _____ | Bristle-thighed Curlew birds _____ eggs _____ | Godwit birds _____ eggs _____ |
| Whimbrel birds _____ eggs _____ | Golden Plover birds _____ eggs _____ | Small Shoresbird birds _____ eggs _____ | Unidentified Duck birds _____ eggs _____ |
| Purmnigan (non-migratory) birds _____ eggs _____ | Spruce Grouse (non-migratory) birds _____ eggs _____ | | Other Bird birds _____ eggs _____ |

Surveyor Notes _____
Date of Pick-up: _____
VH Code: _____

Comments: _____

FORM 7-FW-103
ISSUED JULY 2004
APPROVAL EXPIRES 01/31/10

SUBSISTENCE HOUSEHOLD SURVEY

SUMMER (JULY 1 - AUG. 31)

PLEASE WRITE TOTAL NUMBER OF BIRDS CAUGHT AND EGGS GATHERED.

| | | |
|--|--|---|
| Tundra Swan birds _____ eggs _____ | White-fronted Goose birds _____ eggs _____ | Lesser Canada Goose birds _____ eggs _____ |
| Cackling Canada Goose birds _____ eggs _____ | Emperor Goose birds _____ eggs _____ | Black Brant birds _____ eggs _____ |
| Pintail birds _____ eggs _____ | Mallard birds _____ eggs _____ | Shoveler birds _____ eggs _____ |
| Green-winged Teal birds _____ eggs _____ | Scup birds _____ eggs _____ | Bufflehead birds _____ eggs _____ |
| Harlequin birds _____ eggs _____ | Goldeneye birds _____ eggs _____ | White-winged Scoter birds _____ eggs _____ |
| Black Scoter birds _____ eggs _____ | Surf Scoter birds _____ eggs _____ | Red-breasted Merganser birds _____ eggs _____ |
| Common Eider birds _____ eggs _____ | King Eider birds _____ eggs _____ | Steller's Eider birds _____ eggs _____ |
| | | |

VII Code: _____

SUBSISTENCE HOUSEHOLD SURVEY

SUMMER (JULY 1 - AUG. 31)

PLEASE WRITE TOTAL NUMBER OF BIRDS CAUGHT AND EGGS GATHERED.

| | | | |
|---|--|---|--|
| Yellow-billed Loon birds _____ eggs _____ | Red-throated Loon birds _____ eggs _____ | Common Loon birds _____ eggs _____ | Pacific Loon birds _____ eggs _____ |
| Auklet birds _____ eggs _____ | Murre birds _____ eggs _____ | Cormorant birds _____ eggs _____ | Kittiwake birds _____ eggs _____ |
| Gullmott birds _____ eggs _____ | Mew Gull birds _____ eggs _____ | Sabine's Gull birds _____ eggs _____ | Glaucous Gull birds _____ eggs _____ |
| Arctic Tern birds _____ eggs _____ | Puffin birds _____ eggs _____ | Bristle-thighed Curlew birds _____ eggs _____ | Godwit birds _____ eggs _____ |
| Whimbrel birds _____ eggs _____ | Golden Plover birds _____ eggs _____ | Small Shorebird birds _____ eggs _____ | Unidentified Duck birds _____ eggs _____ |
| Pomarine (non-migratory) birds _____ eggs _____ | Spruce Grouse (non-migratory) birds _____ eggs _____ | | Other Bird birds _____ eggs _____ |

Surveyor Notes: _____
 Date of Pick-up: _____
 VII Code: _____

Comments: _____

FORM 7, FW-103
 OMB NO. 1018-0124
 APPROVAL EXPIRES 01/31/10

SUBSISTENCE HOUSEHOLD SURVEY

FALL (SEPT. 1 - OCT. 31)

PLEASE WRITE TOTAL NUMBER OF BIRDS CAUGHT AND EGGS GATHERED.

| | | |
|--|--|---|
| Tundra Swan birds _____ eggs _____ | White-fronted Goose birds _____ eggs _____ | Lesser Canada Goose birds _____ eggs _____ |
| Cuckling Canada Goose birds _____ eggs _____ | Emperor Goose birds _____ eggs _____ | Black Brant birds _____ eggs _____ |
| Pintail birds _____ eggs _____ | Widgeon birds _____ eggs _____ | Shoveler birds _____ eggs _____ |
| Green-winged Teal birds _____ eggs _____ | Campyloback birds _____ eggs _____ | Bufflehead birds _____ eggs _____ |
| Harlequin birds _____ eggs _____ | Long-tailed duck birds _____ eggs _____ | White-winged Scoter birds _____ eggs _____ |
| Black Scoter birds _____ eggs _____ | Common Merganser birds _____ eggs _____ | Red-breasted Merganser birds _____ eggs _____ |
| Common Eider birds _____ eggs _____ | King Eider birds _____ eggs _____ | Steller's Eider birds _____ eggs _____ |
| | | |

VH Code: _____

SUBSISTENCE HOUSEHOLD SURVEY

FALL (SEPT. 1 - OCT. 31)

PLEASE WRITE TOTAL NUMBER OF BIRDS CAUGHT AND EGGS GATHERED.

| | | | |
|--|--|---|--|
| Yellow-billed Loon birds _____ eggs _____ | Red-throated Loon birds _____ eggs _____ | Common Loon birds _____ eggs _____ | Pacific Loon birds _____ eggs _____ |
| Auklet birds _____ eggs _____ | Murre birds _____ eggs _____ | Cormorant birds _____ eggs _____ | Kittiwake birds _____ eggs _____ |
| Guillemot birds _____ eggs _____ | Mew Gull birds _____ eggs _____ | Sabine's Gull birds _____ eggs _____ | Glaucous Gull birds _____ eggs _____ |
| Arctic Tern birds _____ eggs _____ | Puffin birds _____ eggs _____ | Bristle-thighed Curlew birds _____ eggs _____ | Godwit birds _____ eggs _____ |
| Whimbrel birds _____ eggs _____ | Golden Plover birds _____ eggs _____ | Small Shorebird birds _____ eggs _____ | Unidentified Duck birds _____ eggs _____ |
| Prairie (non-migratory) birds _____ eggs _____ | Spruce Grouse (non-migratory) birds _____ eggs _____ | Other Bird birds _____ eggs _____ | |

Comments: _____

Surveyor Notes _____
Date of Pick-up: _____
VH Code: _____

FORM 7-FWS-03
OMB NO. 1018-0124
APPROVAL EXPIRES 01/31/10

Appendix C.—Species represented in the 3 versions of the harvest report form and their distribution range in Alaska.

| Species category Species ^a | Southern Coastal Alaska form | | | | | Main form | | | | | Interior Alaska form | |
|--|------------------------------|--------------------|---------------------------|-------------------------------------|-------------|-----------------------|--------------|------------------|-------------|-------------|----------------------|--|
| | Gulf of Alaska—Cook Inlet | Kodiak Archipelago | Aleutian—Pribilof Islands | South Alaska Peninsula ^b | Bristol Bay | Yukon—Kuskokwim Delta | Norton Sound | Northwest Arctic | North Slope | Interior | Upper Copper River | |
| Ducks | | | | | | | | | | | | |
| American wigeon <i>Anas americana</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Green-winged teal <i>A. crecca</i> (1), Blue-winged teal <i>A. discors</i> (2) | X (1, 2) | X (1, 2) | X (1) | X (1) | X (1) | X (1) | X (1) | X (1) | X (1) | X (1, 2) | X (1, 2) | |
| Mallard <i>A. platyrhynchos</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Northern pintail <i>A. acuta</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Northern shoveler <i>A. chrypeata</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Black scoter <i>Melanitta nigra</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Surf scoter <i>M. perspicillata</i> | X | X | X | X | X | X | X | X | X | X | X | |
| White-winged scoter <i>M. fusca</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Bufflehead <i>Bucephala albeola</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Goldeneye | X | X | X | X | X | X | X | X | X | X | X | |
| Common goldeneye <i>B. clangula</i> (1), Barrow's goldeneye <i>B. islandica</i> (2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1) | X (1) | X (-) | X (1, 2) | X (1, 2) | |
| Canvasback <i>Aythya valisineria</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Scaup | X | X | X | X | X | X | X | X | X | X | X | |
| Greater scaup <i>A. marila</i> (1), Lesser scaup <i>A. affinis</i> (2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1) | X (1, 2) | X (1, 2) | |
| Common eider <i>Somateria mollissima</i> | X | X | X | X | X | X | X | X | X | X | X | |
| King eider <i>S. spectabilis</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Spectacled eider <i>S. fischeri</i> * | X (-) | X (-) | X (-) | X (-) | X | X | X | X | X | X | X | |
| Steller's eider <i>Polysticta stelleri</i> * | X | X | X | X | X | X | X | X | X | X | X | |
| Harlequin duck <i>Histrionicus histrionicus</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Long-tailed duck <i>Clangula hyemalis</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Common merganser <i>Mergus merganser</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Red-breasted merganser <i>M. serrator</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Duck (unidentified) | X | X | X | X | X | X | X | X | X | X | X | |
| Geese | | | | | | | | | | | | |
| Black brant <i>Branta bernicla</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Cackling Canada goose | X | X | X | X | X | X | X | X | X | X | X | |
| Cackling goose <i>Branta hutchinsii minima</i> (1), Aleutian cackling goose <i>B. h. leucopareia</i> (2), Taverner's cackling goose <i>B. h. taverneri</i> (3) | X (1, 2, 3) | X (2) | X (2) | X (1?, 3) | X (1, 2) | X (1, 3) | X (3) | X (3) | X (3) | X (-) | X (-) | |

-continued-

Appendix C.—Page 2 of 5.

| Species category Species ^a | Southern Coastal Alaska form | | | | | Main form | | | | | Interior Alaska form | |
|--|------------------------------|--------------------|---------------------------|-------------------------------------|-------------|-----------------------|----------------------------|-------------------|-------------|-------------|----------------------|--|
| | Gulf of Alaska—Cook Inlet | Kodiak Archipelago | Aleutian—Pribilof Islands | South Alaska Peninsula ^b | Bristol Bay | Yukon—Kuskokwim Delta | Bering Strait—Norton Sound | North-west Arctic | North Slope | Interior | Upper Copper River | |
| Lesser Canada goose <i>Branta canadensis parvipes</i> (1), Dusky Canada goose <i>B. c. occidentalis</i> (2) | X (1, 2) | X (-) | X (-) | X (1?) | X (-) | X (1) | X (-) | X (-) | X (-) | X (1) | X (1) | |
| White-fronted goose <i>Anser albifrons</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Emperor goose <i>Chen canagica</i> * | X | X | X | X | X | X | X | X (-) | X (-) | - | - | |
| Lesser snow goose <i>C. caerulescens</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Swans | | | | | | | | | | | | |
| Tundra swan <i>Cygnus columbianus</i> (1), Trumpeter swan <i>C. buccinator</i> *(2) | X (1, 2) | X (1) | X (1) | X (1) | X (1) | X (1) | X (1) | X (1) | X (1) | X (1, 2) | X (1, 2) | |
| Cranes | | | | | | | | | | | | |
| Sandhill crane <i>Grus canadensis</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Grouse | | | | | | | | | | | | |
| Spruce grouse <i>Falcipectus canadensis</i> | - | - | - | - | X | X | X | X | X | - | - | |
| Grouse (unidentified) | - | - | - | - | - | - | - | - | - | X | X | |
| Spruce grouse <i>F. canadensis</i> (1), Ruffed grouse <i>Bonasa umbellus</i> (2), Sharp-tailed grouse <i>Tympanuchus phasianellus</i> (3) | (1, 2) | | | | | | | | | (1, 2, 3) | (1, 2, 3) | |
| Ptarmigan | | | | | | | | | | | | |
| Willow ptarmigan <i>Lagopus lagopus</i> (1), Rock ptarmigan <i>L. muta</i> (2), White-tailed ptarmigan <i>L. leucura</i> (3) | X (1, 2, 3) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2, 3) | X (1, 2, 3) | |
| Seabirds | | | | | | | | | | | | |
| Cormorant | | | | | | | | | | | | |
| Pelagic cormorant <i>Phalacrocorax pelagicus</i> (1), Double-crested cormorant <i>P. auritus</i> (2), Red-faced cormorant <i>P. urile</i> *(3) | X (1, 2, 3) | X (1, 2, 3) | X (1, 2, 3) | X (1, 2, 3) | X (1, 2, 3) | X (1, 3) | X (1) | X (-) | X (-) | - | - | |
| Arctic tern <i>Sterna paradisaea</i> (1), Aleutian tern <i>S. alautica</i> (2) | X (1) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1) | X (1) | X (1) | |
| Black-legged kittiwake <i>Rissa tridactyla</i> Red-legged kittiwake <i>R. brevirostris</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Kittiwake <i>R. tridactyla</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Sabine's gull <i>Xema sabini</i> (1), Bonaparte's gull <i>Larus philadelphia</i> (2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1, 2) | X (1) | X (-) | X (-) | X (-) | X (-) | |

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Appendix C.—Page 3 of 5.

| Species category Species ^a | Southern Coastal Alaska form | | | | | | Main form | | | | Interior Alaska form | |
|---|-------------------------------------|-----------------------|----------------------------------|---|--------------------|------------------------------|--------------------------------------|--------------------------|----------------|-----------|--------------------------|--|
| | Gulf of Alaska— Cook Inlet | Kodiak Archipelago | Aleutian— Pribilof Islands | South Alaska Peninsula ^b | Bristol Bay | Yukon— Kuskokwim Delta | Bering Strait— Norton Sound | North- west Arctic | North Slope | Interior | Upper Copper River | |
| Mew gull <i>Larus canus</i> | - (x) | - (x) | - | - | X | X | X | X (-) | X | X | | |
| Glaucous-winged gull <i>L. glaucescens</i> | X | X | X | X | - (x) | - | - | - | - | - | | |
| Glaucous gull <i>L. hyperboreus</i> | - | - | - | - | X | X | X | X | X (-) | X (-) | | |
| Herring gull <i>L. argentatus</i> | X | X | X | X | - | - (x) | - | - | X | X | | |
| Auklet | X | X | X | X | X | X | X | X (-) | - | - | | |
| Cassin's auklet <i>Ptychoramphus aleuticus</i> (1), Crested auklet <i>Aethia cristatella</i> (2), Least auklet <i>A. pusilla</i> (3), Parakeet auklet <i>A. psittacula</i> (4), Whiskered auklet <i>A. pygmaea</i> (5), Rhinoceros auklet <i>Cerorhinca monocerata</i> (6) | (1, 2, 3, 4, 6) | (1, 2, 3, 4, 6) | (1, 2, 3, 4, 5, 6) | (1, 2, 3, 4, 5, 6) | (1, 2, 3, 4, 6) | (2, 3, 4, 6) | (2, 3, 4, 6) | X (-) | | | | |
| Murre | X | X | X | X | X | X | X | X | - | - | | |
| Common murre <i>Uria aalge</i> (1), Thick-billed murre <i>U. lomvia</i> (2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | | | | |
| Guillemot | X | X | X | X | X | X | X | X | - | - | | |
| Pigeon guillemot <i>Cephus Columba</i> (1), Black guillemot <i>C. grille</i> (2) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (2) | | | | |
| Puffin | X | X | X | X | X | X | X | X (-) | - | - | | |
| Tufted puffin <i>F. cirrhata</i> (1), Horned puffin <i>Fratercula corniculata</i> (2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | | | | |
| Shorebirds | | | | | | | | | | | | |
| Black oystercatcher <i>Haematopus bachmani</i> | X | X | X | X | - | - | - | - | - | - | | |
| Whimbrel <i>Numenius phaeopus</i> * | - (x) | - | - | - (x) | X | X | X | X | X | X | | |
| Bristle-thighed curlew <i>N. tahitiensis</i> * | X (-) | X | X (-) | X (-) | X (-) | X | X | X (-) | - | - | | |
| Godwit | X | X (-) | X (-) | X | X | X | X | X | X | X | | |
| Bar-tailed godwit <i>Limosa lapponica</i> (1), Hudsonian godwit <i>L. haemastica</i> * (2), Marbled godwit <i>L. fedoa</i> * (3) | (2) | | (1) | (1) | (1, 2, 3) | (1, 2) | (1, 2) | (1) | (2) | (-) | | |
| Golden plover | X | X | X | X | X | X | X | X | X | X | | |
| American golden plover <i>Pluvialis dominica</i> * (1), Pacific golden plover <i>P. squatarola</i> * (2), Black-bellied plover <i>P. fulva</i> (3) | (1, 2, 3) | (1, 2, 3) | (1, 2, 3) | (1, 2, 3) | (1, 2, 3) | (1, 2, 3) | (1, 2, 3) | (1, 3) | (1, 2, 3) | (1, 2, 3) | | |

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Appendix C.—Page 4 of 5.

| Species category Species ^a | Southern Coastal Alaska form | | | | | Main form | | | | | Interior Alaska form | |
|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | Gulf of Alaska—Cook Inlet | Kodiak Archipelago | Aleutian—Pribilof Islands | South Alaska Peninsula ^b | Bristol Bay | Yukon—Kuskokwim Delta | Bering Strait—Norton Sound | North-west Arctic | North Slope | Interior | Upper Copper River | |
| Small shorebird | X | X | X | X | X | X | X | X | X | X | X | |
| Dunlin <i>Calidris alpina</i> (1), | (1, 2, 3, 4, 5, 6, 7, 12, 14, 15, 16, 17, 18, 19, 17, 18, 20, 21, 22, 20, 21, 22, 25, 26, 27, 28, 22, 25, 26, 27, 28) | (1, 2, 3, 4, 5, 6, 7, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29) | (1, 3, 4, 6, 7, 12, 14, 18, 19, 22, 26, 27, 28, 29) | (1, 2, 3, 4, 5, 6, 7, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29) | (1, 2, 3, 4, 5, 6, 7, 12, 14, 15, 16, 17, 18, 19, 16, 17, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29) | (1, 2, 3, 4, 5, 6, 7, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29) | (1, 2, 3, 4, 5, 6, 7, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29) | (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 21, 22, 23, 25, 26, 27, 28, 19) | (1, 2, 3, 4, 5, 6, 7, 12, 14, 15, 16, 17, 18, 21, 22, 23, 25, 26, 27, 28, 19) | (1, 2, 3, 4, 5, 6, 7, 12, 14, 15, 16, 17, 18, 21, 22, 23, 25, 26, 27, 28, 19) | (1, 2, 3, 4, 5, 6, 7, 12, 14, 15, 16, 17, 18, 21, 22, 23, 25, 26, 27, 28, 19) | |
| Pectoral Sandpiper <i>C. melanotos</i> * (2), | | | | | | | | | | | | |
| Rock Sandpiper <i>C. pilocnemis</i> * (3), | | | | | | | | | | | | |
| Western Sandpiper <i>C. mauri</i> (4), | | | | | | | | | | | | |
| Semipalmated Sandpiper <i>C. pusilla</i> (5), | | | | | | | | | | | | |
| Least Sandpiper <i>C. minutilla</i> (6), | | | | | | | | | | | | |
| Baird's Sandpiper <i>C. bairdii</i> (7), | | | | | | | | | | | | |
| White-rumped Sandpiper <i>C. fuscicollis</i> * (8), | | | | | | | | | | | | |
| Stilt Sandpiper <i>C. himantopus</i> * (9), | | | | | | | | | | | | |
| Red-necked Stint <i>C. nigricollis</i> * (10), | | | | | | | | | | | | |
| Sanderling <i>C. alba</i> * (12), | | | | | | | | | | | | |
| Sharp-tailed Sandpiper <i>C. acuminata</i> (13), | | | | | | | | | | | | |
| Semipalmated Plover <i>Charadrius semipalmatus</i> * (14), | | | | | | | | | | | | |
| Lesser Yellowlegs <i>Tringa flavipes</i> (15), | | | | | | | | | | | | |
| Greater Yellowlegs <i>T. melanoleuca</i> (16), | | | | | | | | | | | | |
| Solitary Sandpiper <i>T. solitaria</i> * (17), | | | | | | | | | | | | |
| Spotted Sandpiper <i>Actitis macularia</i> (18), | | | | | | | | | | | | |
| Ruddy Turnstone <i>Arenaria interpres</i> (19), | | | | | | | | | | | | |
| Black Turnstone <i>A. melanoccephala</i> * (20), | | | | | | | | | | | | |
| Surf-bird <i>Aphriza virgata</i> * (21), | | | | | | | | | | | | |
| Wandering Tattler <i>Heteroscelus incanus</i> * (22), | | | | | | | | | | | | |
| Upland Sandpiper <i>Bartramia longicauda</i> * (23), | | | | | | | | | | | | |
| Buff-breasted Sandpiper <i>Tryngites subnigricollis</i> * (24), | | | | | | | | | | | | |
| Short-billed Dowitcher <i>Limnodromus striseus</i> * (25), | | | | | | | | | | | | |
| Long-billed Dowitcher <i>L. scolopaceus</i> (26), | | | | | | | | | | | | |
| Wilson's Snipe <i>Gallinago delicata</i> (27), | | | | | | | | | | | | |
| Red-necked Phalarope <i>Phalaropus lobatus</i> (28), | | | | | | | | | | | | |
| Red Phalarope <i>P. fulicaria</i> (29) | | | | | | | | | | | | |
| Grebes and Loons | | | | | | | | | | | | |
| Common loon <i>Gavia immer</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Pacific loon <i>G. pacifica</i> (1), | X | X | X | X | X | X | X | X | X | X | X | |
| Arctic loon <i>G. arctica</i> (2) | (1) | (1) | (1) | (1) | (1) | (1, 2) | (1, 2) | (1, 2) | (1) | (1) | (1) | |
| Red-throated loon <i>G. stellata</i> | X | X | X | X | X | X | X | X | X | X | X | |
| Yellow-billed loon <i>G. adamsii</i> * | X | X | X | X | X | X | X | X | X | X | X | |

-continued-

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| Species category | Southern Coastal Alaska form | | | | | Main form | | | | | Interior Alaska form | |
|--|------------------------------|--------------------|---------------------------|-------------------------------------|-------------|-----------------------|--------------|-------------------|-------------|----------|----------------------|--|
| | Gulf of Alaska—Cook Inlet | Kodiak Archipelago | Aleutian—Pribilof Islands | South Alaska Peninsula ^b | Bristol Bay | Yukon—Kuskokwim Delta | Norton Sound | North-west Arctic | North Slope | Interior | Upper Copper River | |
| Red-necked grebe <i>Podiceps grisescens</i> (1), Horned grebe <i>P. auritus</i> (2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | (1, 2) | |
| Other—Unknown Bird | x | x | x | x | x | x | x | x | x | x | x | |

Sources For information on distribution range of species: Banks et al. (2004), Johnson and Herter (1989), National Geographic Society (1999), The Birds of North America Series, Sea Duck Joint Venture (2003–2005), Denlinger (2006), Johnson et al. (2007), Alaska Shorebird Group (2008), Bowman (2008), Pearce et al. (2000), Sibley Guides (2004), Timm et al. (1994), Warren (2006), Pacific Flyway Council (2010 *unpublished*), Richard Lantot (USFWS, Pers. Communication), Eric Taylor (USFWS, Pers. Communication), Donna Dewhurst (USFWS, Pers. Communication), Davis Irons (USFWS, Pers. Communication), Chris Dau (USFWS, Pers. Communication), Daniel Rosenberg (ADF&G, Pers. Communication).

- a. If more than one species is listed, the first species is the one named on the harvest survey form.
- b. South Alaska Peninsula is a subregion of the Bristol Bay region; most of the Bristol Bay region is surveyed with the Main Form, but the South Alaska Peninsula is surveyed with the Southern Coastal Alaska form.
- x The species is represented in the harvest report form used in the region. Numbers in parenthesis indicate the species or the composition of species likely to occur in each region.
- The species is not represented in the harvest report form used in the region.
- x (-) The species is represented in the harvest report form but it is unlikely to occur in the region.
- (x) The species is not represented in the harvest report form but likely occurs in the region.

* Species closed to harvest of birds or eggs, at least in certain management units.

Appendix D.–Formulas to calculate subregion estimated harvests, variances, and confidence intervals (3-stage stratified cluster sampling).

$$X_s = \frac{N_{1s}}{n_{1s}} \left[\sum_{i=1}^h \frac{N_{2si}}{n_{2si}} \left[\sum_{j=1}^{h_i} \frac{N_{3sij}}{n_{3sij}} \left[\sum_{k=1}^{n_{3sij}} x_{sijk} \right] \right] \right]$$

This formula, used to calculate estimated harvest (X_s) at the subregional level, does account for missing strata, but it does not account for missing seasons. If a whole season is missing for any village, complementary analytical procedures are necessary to implement mean replacement.

$$Var(X_s) = N_{1s}^2 \left(1 - \frac{n_{1s}}{N_{1s}} \right) \frac{s_{1s}^2}{n_{1s}} + \frac{N_{1s}}{n_{1s}} \left[\sum_{i=1}^h N_{2si}^2 \left(1 - \frac{n_{2si}}{N_{2si}} \right) \frac{s_{2si}^2}{n_{2si}} \right] + \frac{N_{1s}}{n_s} \left[\sum_{i=1}^h \frac{N_{2si}}{n_{2si}} \left[\sum_{j=1}^{h_i} N_{3sij}^2 \left(1 - \frac{n_{3sij}}{N_{3sij}} \right) \frac{s_{3sij}^2}{n_{3sij}} \right] \right]$$

$$CI(X_s) = t_{1/\alpha} \times \sqrt{Var(X_s)}$$

$$CIP(X_s) = t_{1/\alpha} \times \sqrt{Var(X_s)} \frac{1}{X_s}$$

Where:

$$s_{1s}^2 = \frac{\sum_{i=1}^h \left[\sum_{j=1}^{h_i} \left[\sum_{k=1}^{n_{3sij}} (x_{sijk} - \bar{x}_s)^2 \right] + (\bar{x}_{sij} - \bar{x}_s)^2 p_{3sij} \right]}{n_{1s}}$$

$$p_{3sij} = N_{3sij} - n_{3sij}$$

$$s_{2si}^2 = \frac{\sum_{j=1}^{h_i} \left[\sum_{k=1}^{n_{3sij}} (x_{sijk} - \bar{x}_{si})^2 \right] + (\bar{x}_{sij} - \bar{x}_{si})^2 p_{3sij}}{n_{2si}}$$

$$s_{3sij}^2 = \frac{\sum_{k=1}^{n_{3sij}} (x_{sijk} - \bar{x}_{sij})^2}{n_{3sij}}$$

$$\bar{x}_s = \frac{N_{1s}}{n_{1s}} \left[\sum_{i=1}^h \frac{N_{2si}}{n_{2si}} \left[\sum_{j=1}^{h_i} \frac{N_{3sij}}{n_{3sij}} \left[\sum_{k=1}^{n_{3sij}} x_{sijk} \right] \right] \right]$$

$$\bar{x}_{si} = \frac{N_{2si}}{n_{2si}} \left[\sum_{j=1}^{h_i} \frac{N_{3sij}}{n_{3sij}} \left[\sum_{k=1}^{n_{3sij}} x_{sijk} \right] \right]$$

$$\bar{x}_{sij} = \frac{N_{3sij}}{n_{3sij}} \left[\sum_{k=1}^{n_{3sij}} x_{sijk} \right]$$

- X_s = Subregion estimated harvest.
- $Var(X_s)$ = Variance of subregional harvest estimate.
- CI = Confidence interval.
- CIP = Confidence interval percentile.

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- s = Subscript that denotes first-stage units (subregion).
 - i = Subscript that denotes second-stage units (sampled strata, or harvest level).
 - j = Subscript that denotes third-stage unit (sampled strata).
 - k = Subscript that denotes households.
 - h = Total number of villages sampled in a subregion.
 - h_i = Total number of strata sampled in the village.
 - N_{1s} = Total number of households in subregion s .
 - n_{1s} = Total number of households in sampled villages in subregion s .
 - N_{2s} = Total number of households in all strata of a village in subregion s .
 - n_{2s} = Total number of households in sampled strata of a village in subregion s .
 - N_{3s} = Total number of households in each stratum of a village in subregion s .
 - n_{3s} = Number of households sampled in each stratum of a village in subregion s .
 - x_{sijk} = Individual household reported harvest.
 - s_1^2 = First-stage sample variance.
 - s_2^2 = Second-stage sample variance.
 - s_3^2 = Third-stage sample variance.
 - \bar{X} = Weighted household harvest mean.
 - \bar{x}_r = mean household harvest at subregional level.
 - \bar{x}_{si} = mean household harvest at village level.
 - \bar{x}_{sij} = mean household harvest at harvest level.
 - P_{3sij} = Factor to account for variance of non-sampled households for which a mean harvest was applied.
 - $t_{1/\alpha}$ = Student's t distribution value with tail area probability α .
- Note* The term " N_{2si}/n_{2s} " accounts for missing stratum at the village level; this term equals 1 if all strata in the village have been surveyed. For instance:

| | None | Low | High | |
|--------------------|------|-----|------|----------------|
| Total households | 20 | 40 | 20 | $N_{2si} = 80$ |
| Sampled households | 0 | 20 | 20 | $n_{2si} = 60$ |

Appendix E.–Formulas to calculate region estimated harvests, variances, and confidence intervals (4-stage stratified cluster sampling).

$$X_r = \frac{N_{1r}}{n_{1r}} \left[\sum_{s=1}^h \frac{N_{2rs}}{n_{2rs}} \left[\sum_{i=1}^{h_s} \frac{N_{3rsi}}{n_{3rsi}} \left[\sum_{j=1}^{h_{si}} \frac{N_{4rsij}}{n_{4rsij}} \left[\sum_{k=1}^{n_{4rsij}} x_{rsijk} \right] \right] \right] \right] \right]$$

Note: This formula, used to calculate estimated harvest (X_r) at the regional level, does account for missing strata, but it does not account for missing seasons. If a whole season is missing for any village, complementary analytical procedures are necessary to implement mean replacement.

$$\begin{aligned} Var(X_r) = & N_{1r}^2 \left(1 - \frac{n_{1r}}{N_{1r}}\right) \frac{s_{1r}^2}{n_{1r}} + \frac{N_{1r}}{n_{1r}} \left[\sum_{s=1}^h N_{2rs}^2 \left(1 - \frac{n_{2rs}}{N_{2rs}}\right) \frac{s_{2rs}^2}{n_{2rs}} \right] + \frac{N_{1r}}{n_{1r}} \left[\sum_{s=1}^h \frac{N_{2rs}}{n_{2rs}} \left[\sum_{i=1}^{h_s} N_{3rsi}^2 \left(1 - \frac{n_{3rsi}}{N_{3rsi}}\right) \frac{s_{3rsi}^2}{n_{3rsi}} \right] \right] \\ & + \frac{N_{1r}}{n_{1r}} \left[\sum_{s=1}^h \frac{N_{2rs}}{n_{2rs}} \left[\sum_{i=1}^{h_s} \frac{N_{3rsi}}{n_{3rsi}} \left[\sum_{j=1}^{h_{si}} N_{4rsij}^2 \left(1 - \frac{n_{4rsij}}{N_{4rsij}}\right) \frac{s_{4rsij}^2}{n_{4rsij}} \right] \right] \right] \end{aligned}$$

$$CI(X_r) = t_{1/\alpha} \times \sqrt{Var(X_r)}$$

$$CIP(X_r) = t_{1/\alpha} \times \sqrt{Var(X_r)} \frac{1}{X_r}$$

Where:

$$s_{1r}^2 = \frac{\sum_{s=1}^h \left[\sum_{i=1}^{h_s} \left[\sum_{j=1}^{h_{si}} \left[\sum_{k=1}^{n_{4rsij}} (x_{rsijk} - \bar{x}_r)^2 \right] + (\bar{x}_{rsij} - \bar{x}_r)^2 p_{4rsij} \right] \right] \right]}{n_{1r}}$$

$$p_{4rsij} = N_{4rsij} - n_{4rsij}$$

$$s_{2rs}^2 = \frac{\sum_{i=1}^{h_s} \left[\sum_{j=1}^{h_{si}} \left[\sum_{k=1}^{n_{4rsij}} (x_{rsijk} - \bar{x}_{rs})^2 \right] + (\bar{x}_{rsij} - \bar{x}_{rs})^2 p_{4rsij} \right] \right]}{n_{2rs}}$$

$$s_{3rsi}^2 = \frac{\sum_{j=1}^{h_{si}} \left[\sum_{k=1}^{n_{4rsij}} (x_{rsijk} - \bar{x}_{rsi})^2 \right] + (\bar{x}_{rsij} - \bar{x}_{rsi})^2 p_{4rsij}}{n_{3rsi}}$$

$$s_{4rsij}^2 = \frac{\sum_{k=1}^{n_{4rsij}} (x_{rsijk} - \bar{x}_{rsij})^2}{n_{4rsij}}$$

$$\bar{x}_r = \frac{N_{1r}}{n_{1r}} \left[\sum_{s=1}^h \frac{N_{2rs}}{n_{2rs}} \left[\sum_{i=1}^{h_s} \frac{N_{3rsi}}{n_{3rsi}} \left[\sum_{j=1}^{h_{si}} \frac{N_{4rsij}}{n_{4rsij}} \left[\sum_{k=1}^{n_{4rsij}} x_{rsijk} \right] \right] \right] \right] \right]$$

$$\bar{x}_{rs} = \frac{N_{2rs}}{n_{2rs}} \left[\sum_{i=1}^{h_s} \frac{N_{3rsi}}{n_{3rsi}} \left[\sum_{j=1}^{h_{si}} \frac{N_{4rsij}}{n_{4rsij}} \left[\sum_{k=1}^{n_{4rsij}} x_{rsijk} \right] \right] \right] \right]$$

$$\bar{x}_{rsi} = \frac{N_{3rsi}}{n_{3rsi}} \left[\sum_{j=1}^{h_{si}} \frac{N_{4rsij}}{n_{4rsij}} \left[\sum_{k=1}^{n_{4rsij}} x_{rsijk} \right] \right] \right]$$

$$\bar{x}_{rsij} = \frac{N_{4rsij}}{n_{4rsij}} \left[\sum_{k=1}^{n_{4rsij}} x_{rsijk} \right]$$

Appendix E.–Page 2 of 2.

- X_r = Region estimated harvest.
 $Var(X_r)$ = Variance of region harvest estimate.
 r = Subscript denoting first-stage units (region).
 s = Subscript denoting second-stage units (subregion).
 i = Subscript denoting third-stage units (sampled strata, or harvest level).
 j = Subscript denoting fourth-stage unit (strata).
 k = Subscript denoting individual households.
 h = Total sampled subregions in region r .
 h_s = total sampled villages in subregion s .
 h_{si} = Total sample strata in the village.
 N_{1r} = Total number of households in region r .
 n_{1r} = Total number of households in sampled subregions in region r .
 N_{2rs} = Total number of households in subregion s .
 n_{2rs} = Total number of households in sampled villages in subregion s .
 N_{3rsi} = Total number of households in all strata of a village.
 n_{3rsi} = Total number of households in sampled strata of a village.
 N_{4rsij} = Total number of households in each stratum of a village.
 n_{4rsij} = Number of households sampled in each stratum of a village.
 x_{rsijk} = Individual household reported harvest.
 S_1^2 = First-stage sample variance.
 S_2^2 = Second-stage sample variance.
 S_3^2 = Third-stage sample variance.
 S_4^2 = Fourth-stage sample variance.
 \bar{x} = Weighted household harvest mean.
 \bar{x}_r = mean household harvest at region level.
 \bar{x}_{rs} = mean household harvest at subregion level.
 \bar{x}_{rsi} = mean household harvest at village level.
 \bar{x}_{rsij} = mean household harvest at harvest level.
 P_{4rsij} = Factor to account for variance of non-sampled households for which a mean harvest was applied.
 CI = Confidence interval.
 CIP = Confidence interval percentile.
 $t_{1/\alpha}$ = Student's t distribution value with tail area probability α .
Note The term " N_{3rsi}/n_{3rsi} " accounts for missing stratum at the village level; this term equals 1 if all strata in the village have been surveyed. For instance:

| | None | Low | High | |
|--------------------|------|-----|------|-----------------|
| Total households | 20 | 40 | 20 | $N_{3rsi} = 80$ |
| Sampled households | 0 | 20 | 20 | $n_{3rsi} = 60$ |