

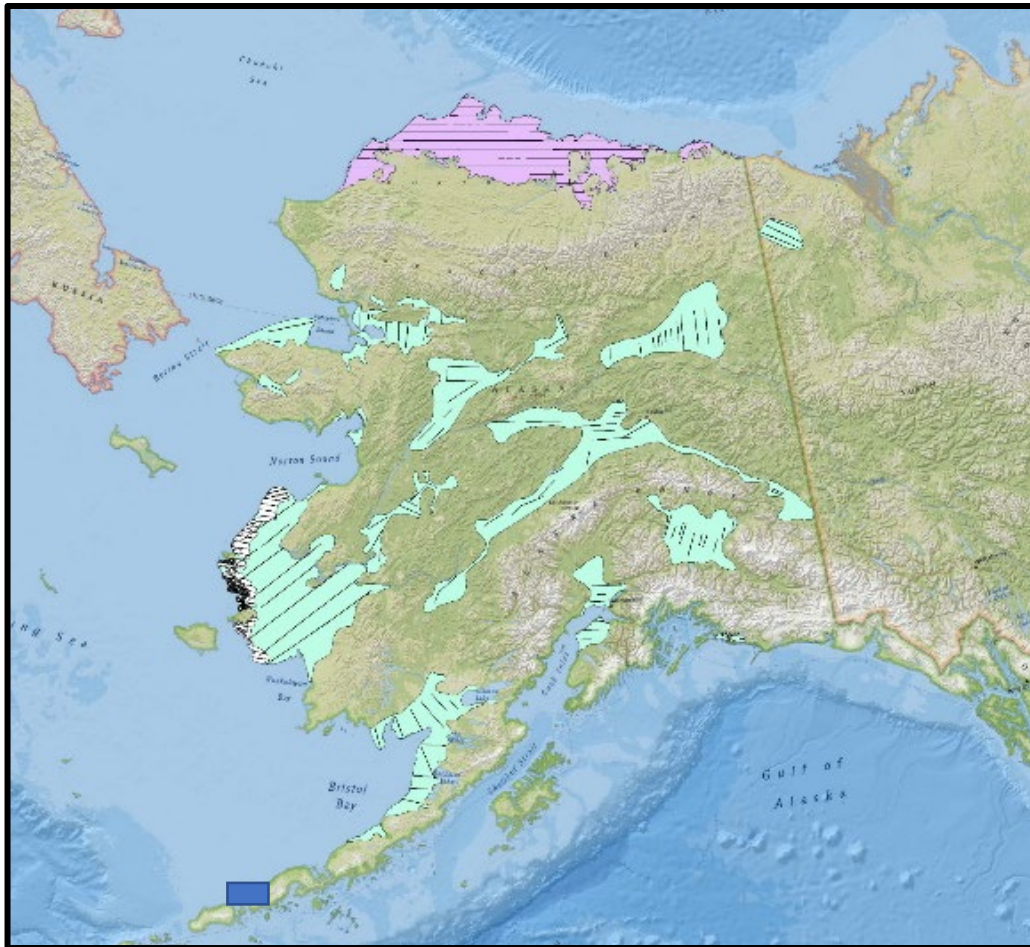
Status of Pacific Brant and Emperor Geese

Kodiak/Aleutian Islands Regional Advisory Council
March, 2023

Julian Fischer
Migratory Bird Management, USFWS

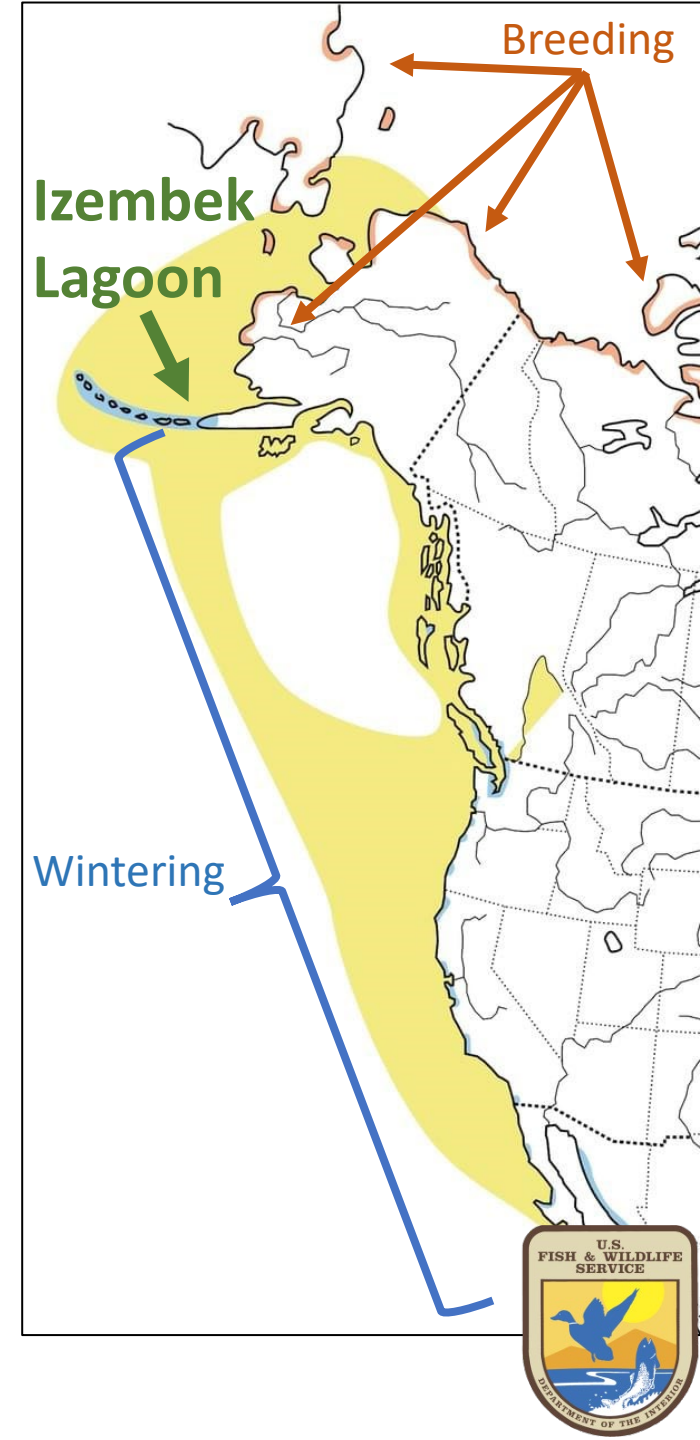


Aerial Migratory Bird Surveys



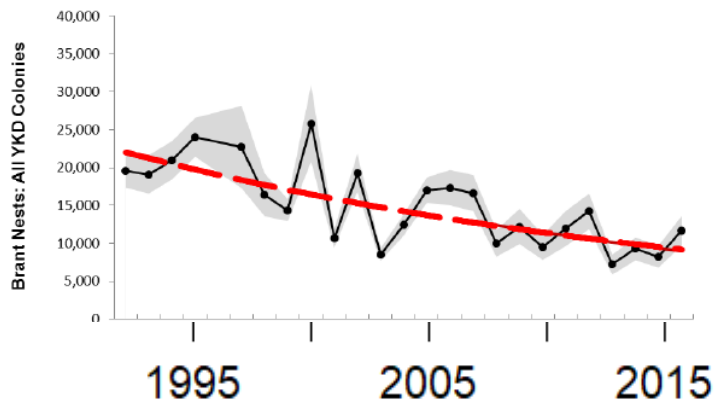
Pacific Brant

- Brant nest primarily on the Y-K Delta, North Slope, northeastern Russia, and High Arctic Canada
- Virtually all Pacific brant pass through Izembek Lagoon in October, most remaining there for at least one month
- Brant winter in eelgrass habitats from coastal Mexico to Izembek Lagoon

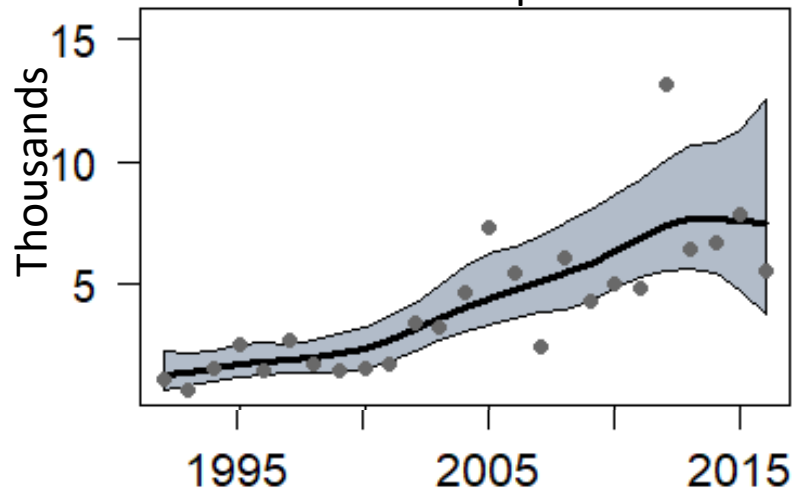


Breeding surveys indicate a decrease on the Y-K Delta and an increase on the North Slope

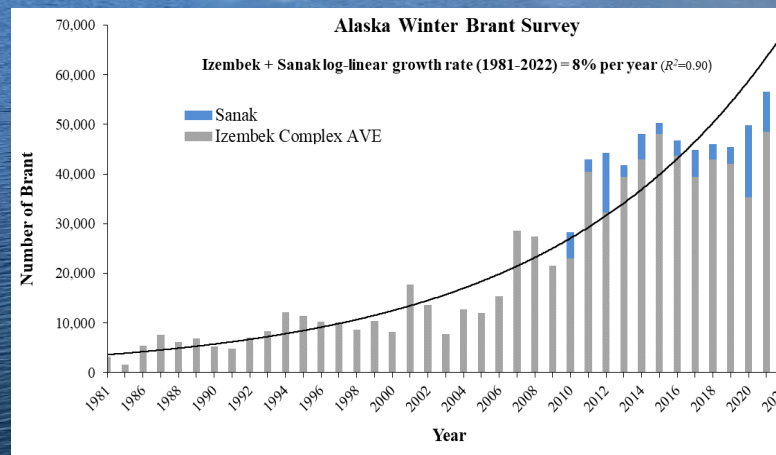
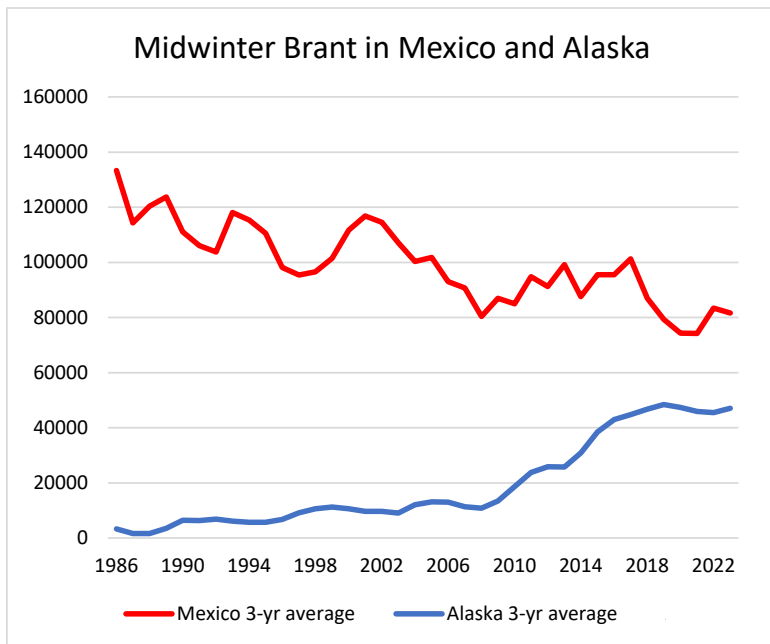
Yukon-Kuskokwim Delta Colonies



North Slope

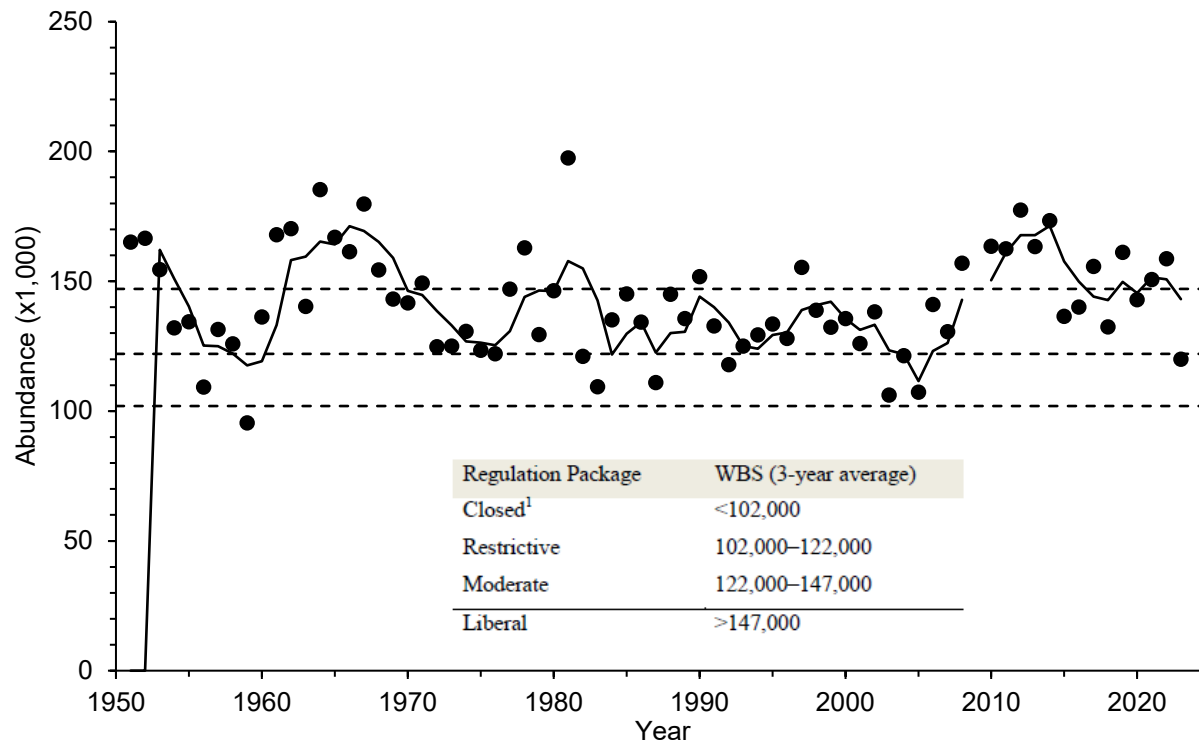


Winter surveys indicate a decrease in Mexico and an increase in Alaska



The winter population index, as measured by the range-wide winter survey dropped below the threshold for liberal winter hunting regulations in 2023

3-yr. average (2021-2023) =143,152

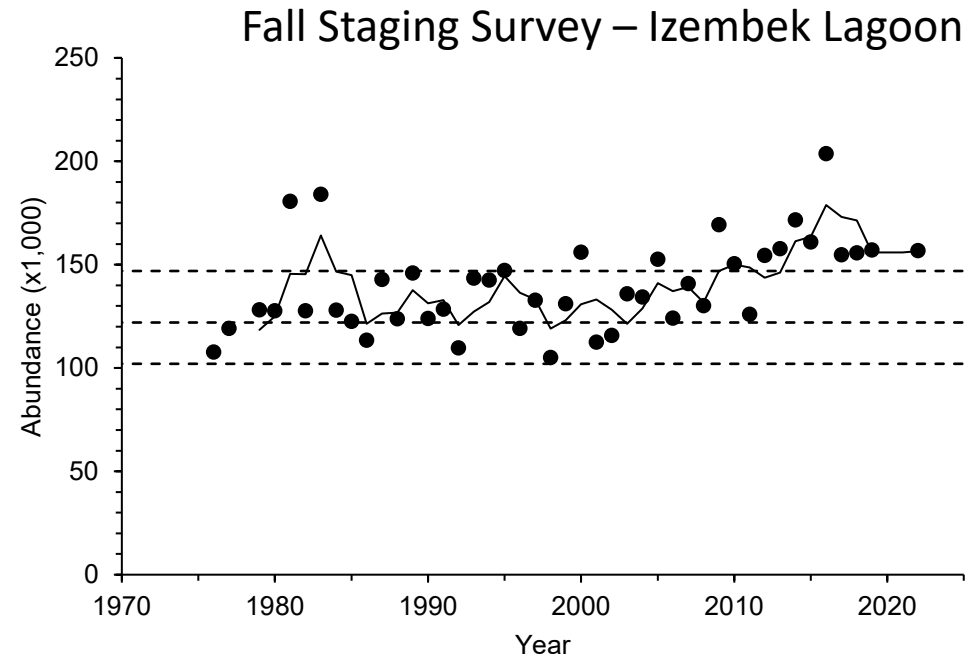
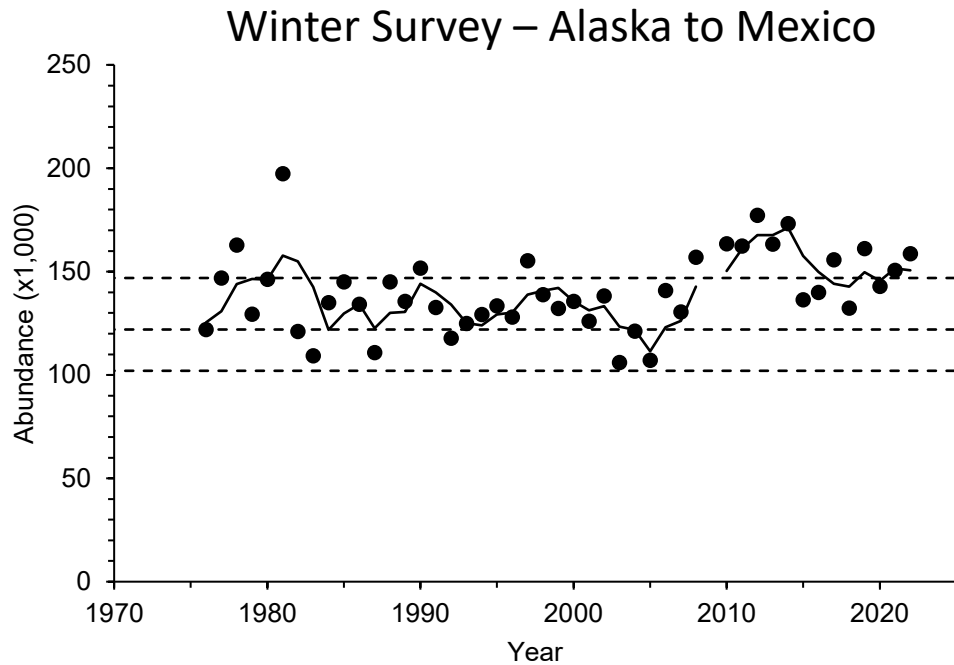


Aerial Staging Surveys

- The breeding and winter range for brant is vast and changing but Izembek continues to be the key staging area for brant in October
- Brant are attracted to Izembek in fall for its abundant and healthy eelgrass habitat
- Fall counts have been conducted at Izembek since the mid 1970s but have not been used as the primary management index due to potential bias of low-level surveys of large flocks



Brant population indices, fall and winter



**Izembek
Lagoon**

**50 km
30 mi**

Cold Bay

Image © 2020 CNES / Airbus
Image © 2020 TerraMetrics
Image © 2020 Maxar Technologies
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google





Image © 2020 CNES / Airbus
Image © 2020 TerraMetrics
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Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google



Staging Survey: 150 Feet

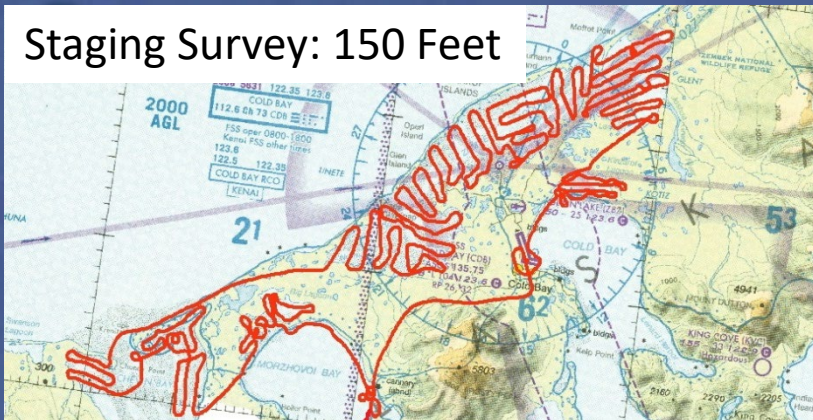


Photo Survey: 1500 Feet

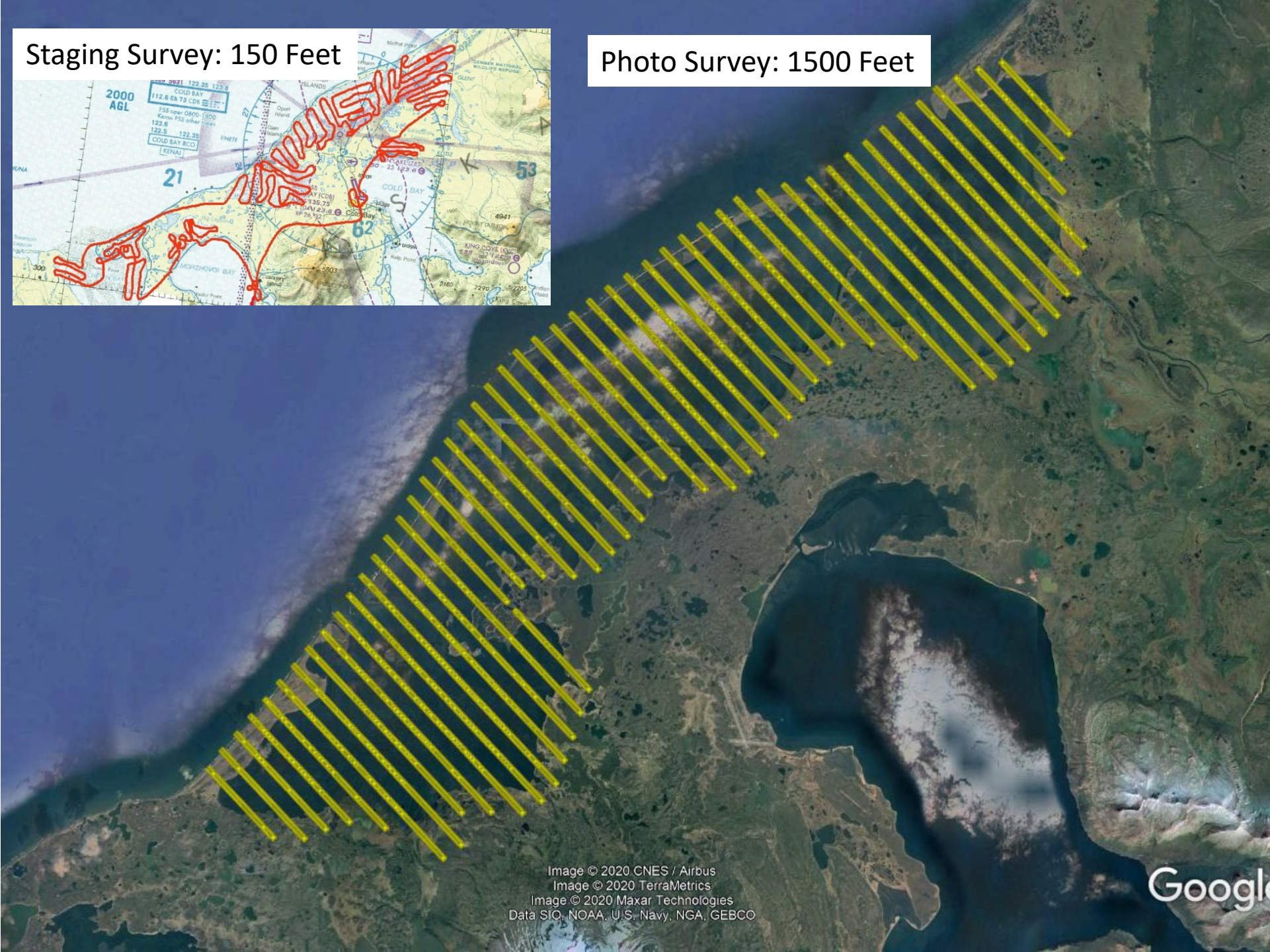
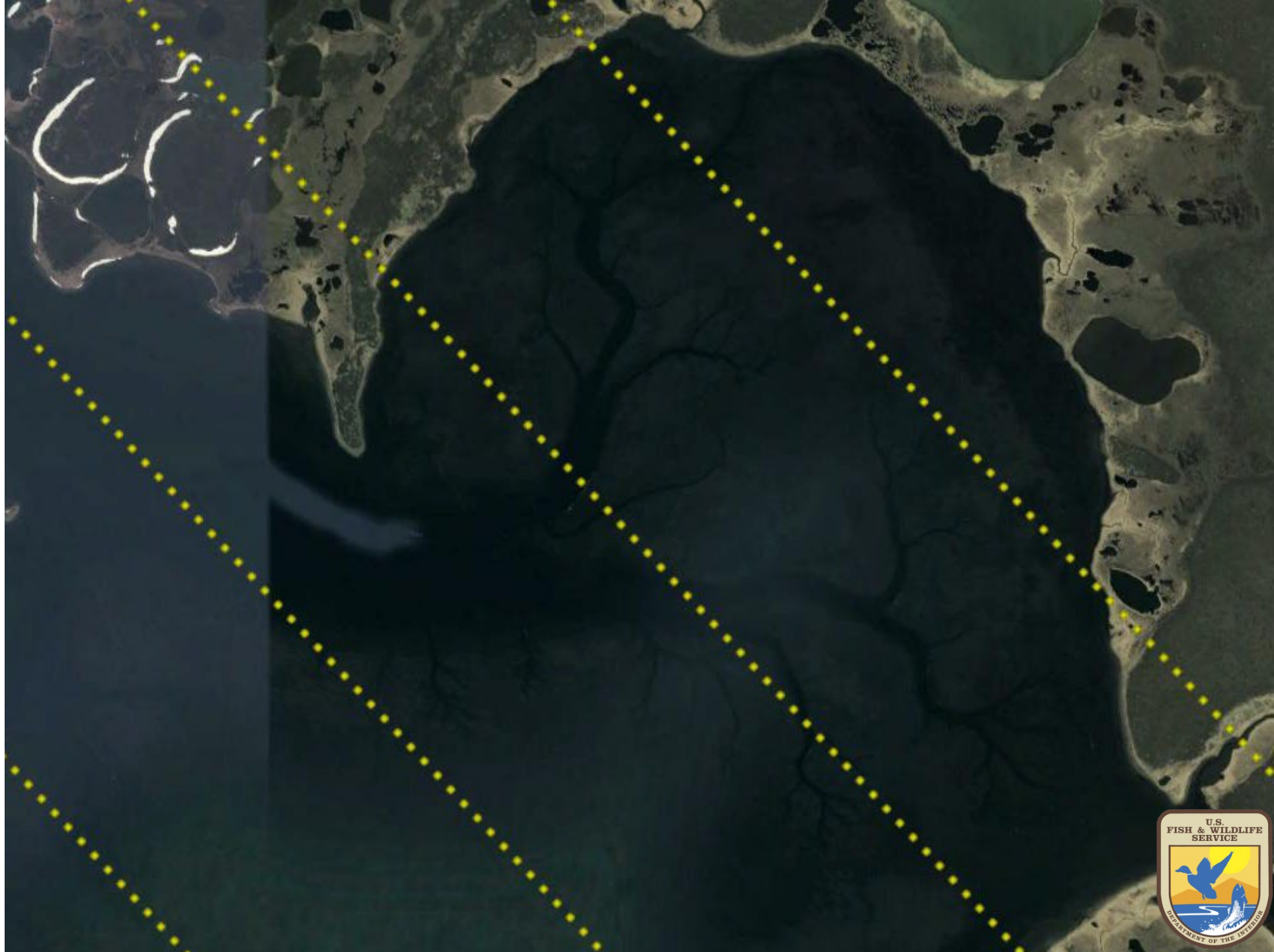


Image © 2020 CNES / Airbus
Image © 2020 TerraMetrics
Image © 2020 Maxar Technologies
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

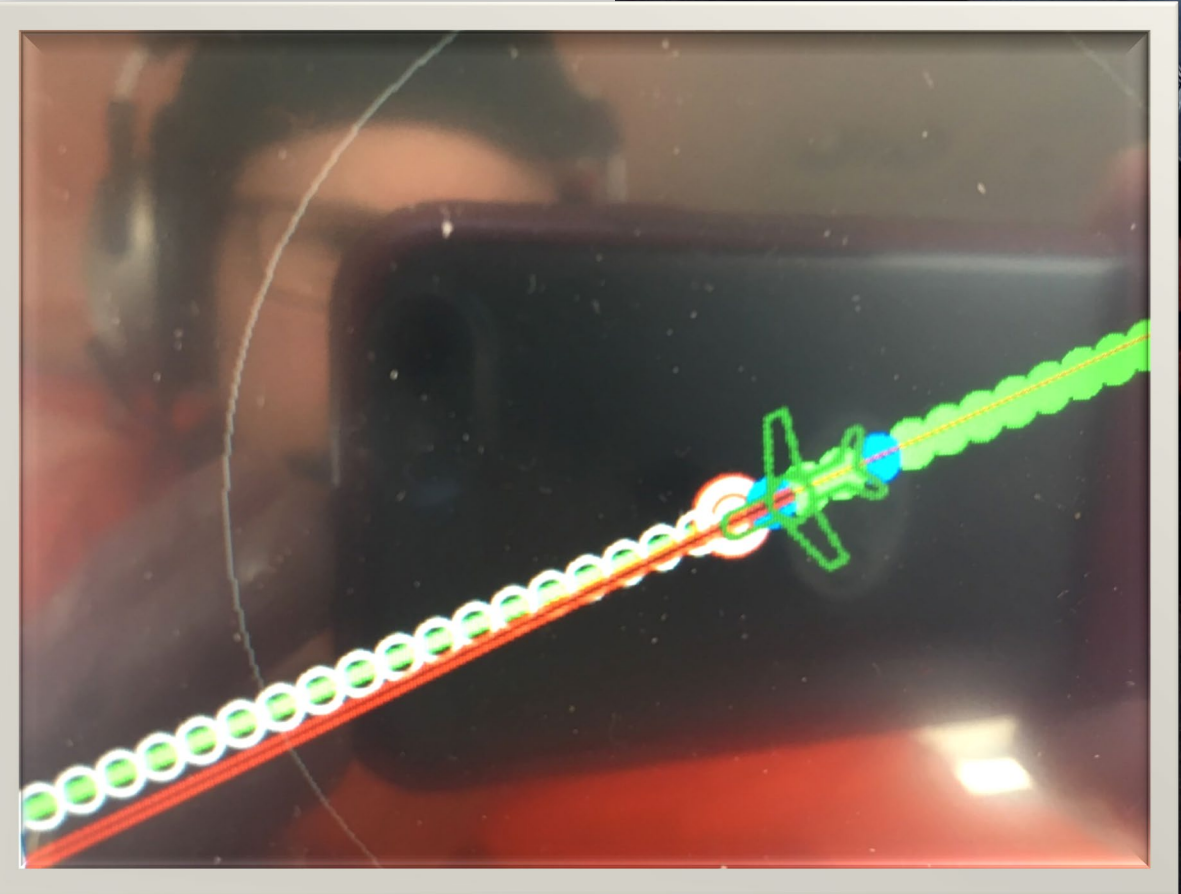
Google



Aviatrix



Aviatrix



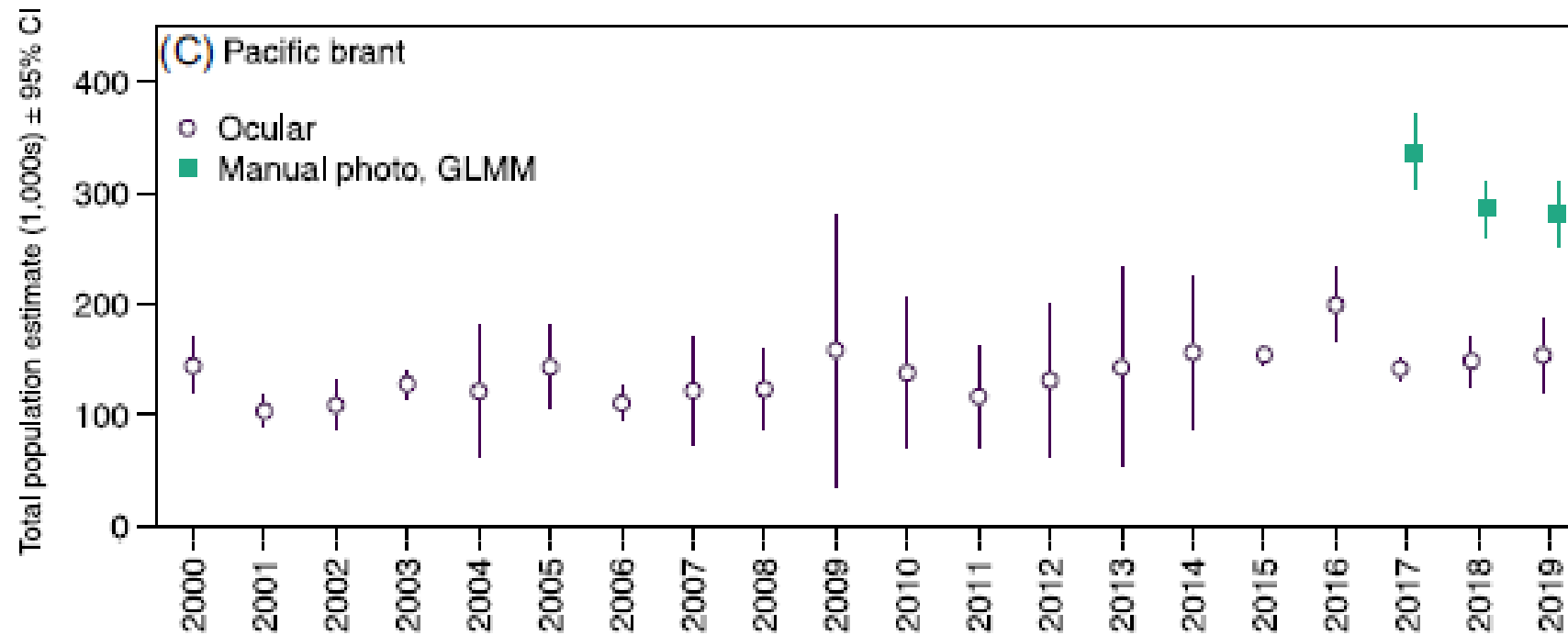








Population estimates based on photo surveys averaged 287,430 (years 2017-2019), nearly twice the average of counts from low level surveys with aerial observers counting flocks.



Next steps in aerial photographic survey development for brant




Received: 23 February 2022 | Revised: 23 October 2022 | Accepted: 24 October 2022
DOI: 10.1002/wsb.1407

RESEARCH ARTICLE

WILDLIFE SOCIETY BULLETIN

Optimizing surveys of fall-staging geese using aerial imagery and automated counting

Emily L. Weiser¹  | Paul L. Flint¹ | Dennis K. Marks² | Brad S. Shults² | Heather M. Wilson² | Sarah J. Thompson³ | Julian B. Fischer²

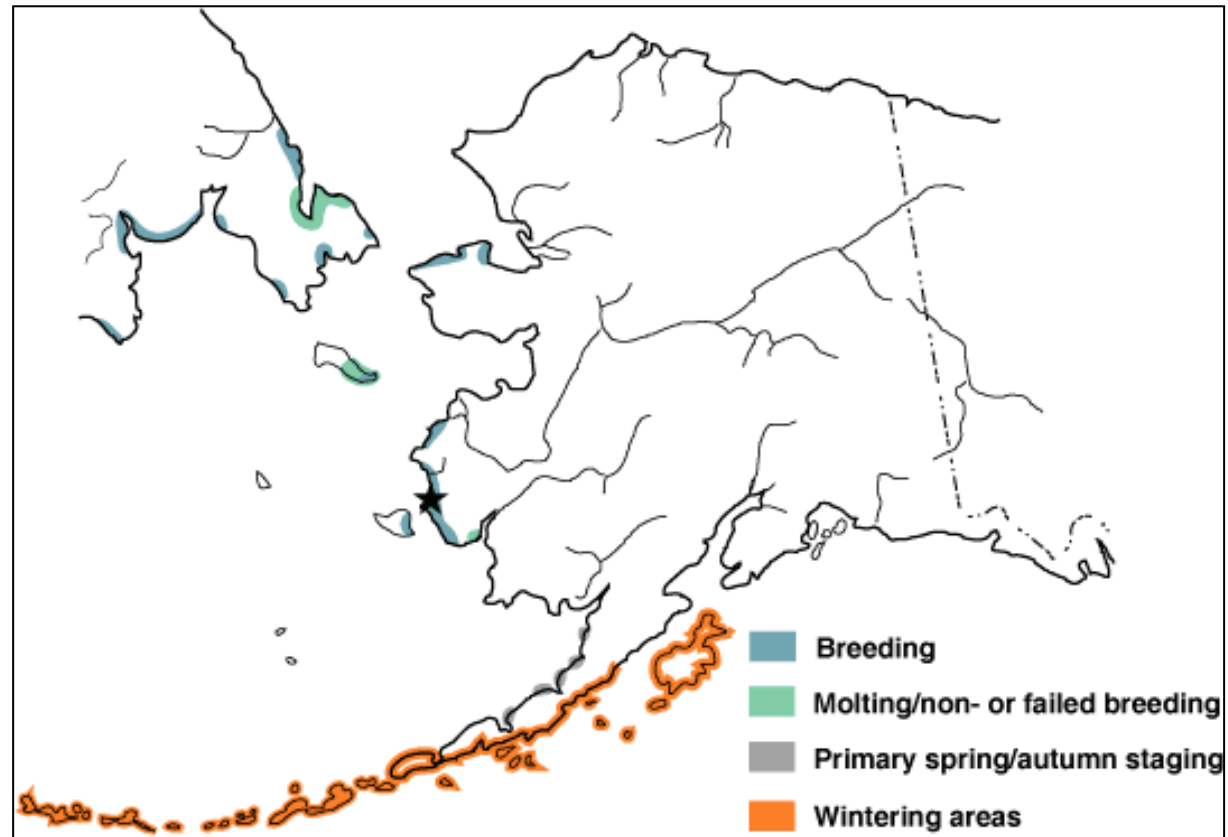
- Methods and results were published in Wildlife Society Bulletin
 - Yields an unbiased estimate
 - Less disturbance to birds
 - Increased safety for survey crews
- Update machine-learning algorithm
- Rescale management thresholds for brant based on photographic estimates



Emperor Goose Status and Management



Emperor Goose Distribution



Breeding area: Yukon-Kuskokwim Delta, small numbers (<10%) nesting on Seward Peninsula, St. Lawrence Is., and Russia.

Wintering area: Alaska Peninsula, Kodiak, Aleutians

The two management plans

Fall-winter hunt (9/1 to 3/10)


50 CFR 20

Spring-summer hunt (3/11 to 8/31)


50 CFR 92

PACIFIC FLYWAY COUNCIL

Management Plan:
Emperor Goose



Adopted September 2016




**A
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2021 - 2022
Migratory Game
Bird Hunting
Regulations



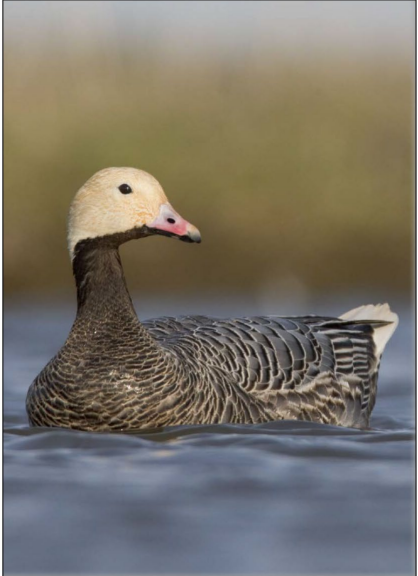
ALASKA
2021 WATERFOWL STAMP
RING-NECKED DUCK - MALE
\$10
VALID FEB 1, 2021 - JAN 31, 2022

Photo by Jamin Hunter Taylor
Graphic Design by Sue Steinacher



ALASKA MIGRATORY BIRD CO-MANAGEMENT COUNCIL

Management Plan:
Emperor Goose



September 2016

1

**Regulations for the 2022
Alaska Subsistence
Spring/Summer
Migratory Bird Harvest**



Conservation through Co-Management

Effective April 2 - August 31, 2022
<https://www.fws.gov/office/alaska-migratory-bird-co-management/>



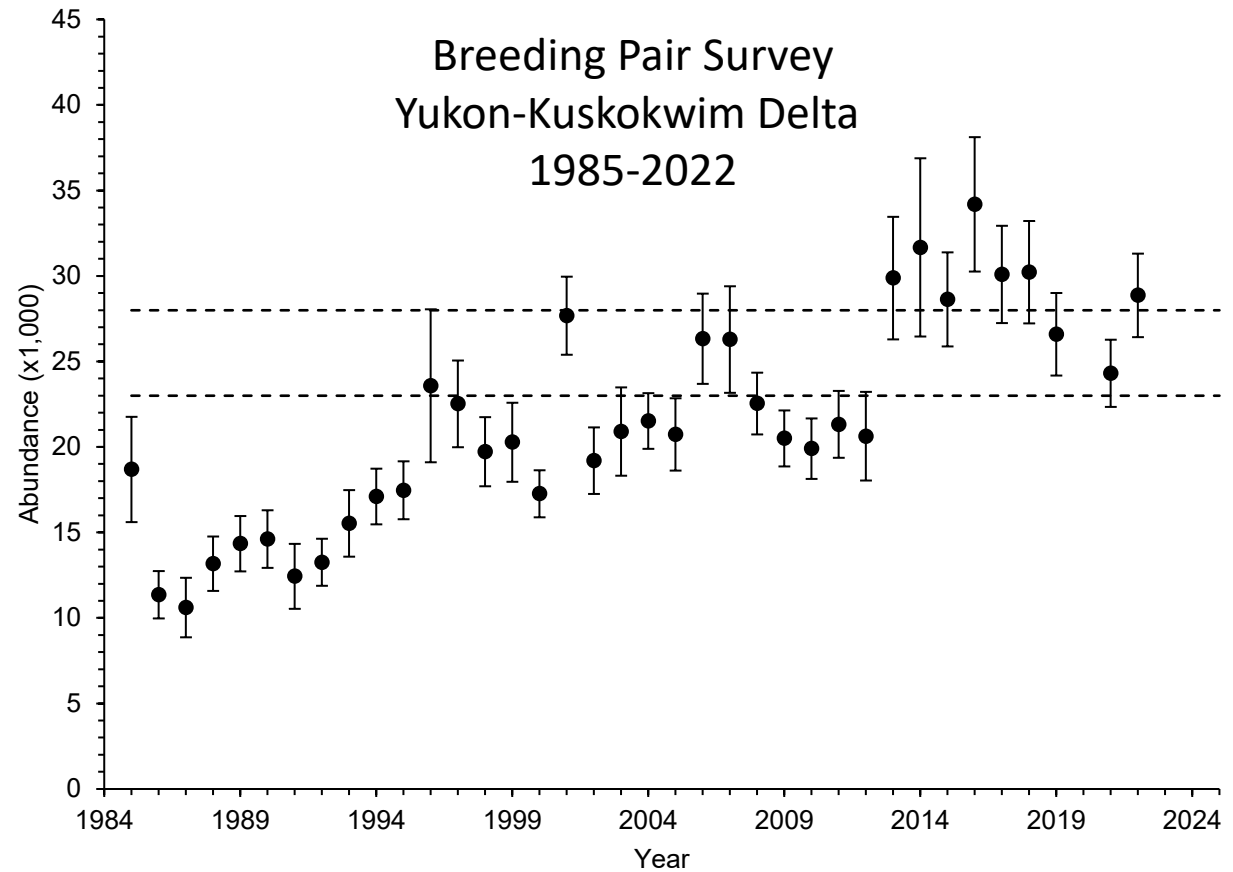
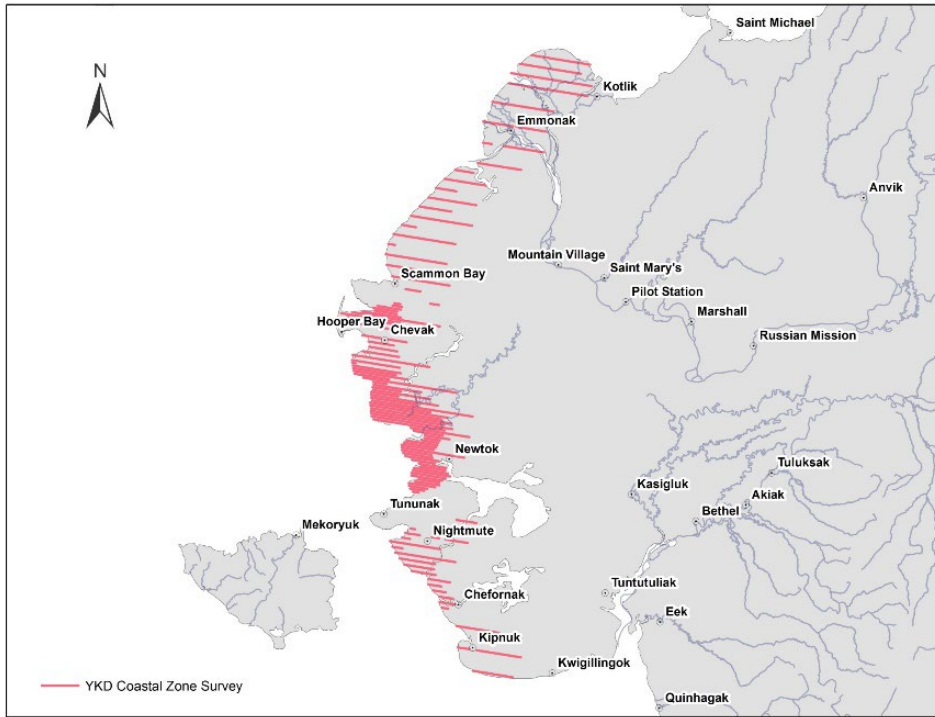
Current harvest strategy

YKD Coastal Zone Total Indicated Birds Index	Spring-summer hunt	Fall-winter hunt
>28,000	<p>Open</p> <ul style="list-style-type: none"> • 122-day season, birds and eggs, no bag/possession limit 	<p>Open</p> <ul style="list-style-type: none"> • 1,000 bird quota, season limit 1 bird by permit, up to 107-day season
23,000-28,000	<p>Open with consideration of conservation measures</p> <ul style="list-style-type: none"> • Currently – Egg harvest closed 	<p>Restrictive</p> <ul style="list-style-type: none"> • 500 bird quota, season limit 1 bird by permit, up to 107-day season
<23,000	Closed	Closed



Emperor Goose Breeding Population Survey

2022 Population Index = **28,864** (95% CI 26,415 - 31,313)



Emperor Goose

- A population index of less than 28,000 would trigger consideration of conservation measures and a count of 23,000 would trigger a harvest closure.
- The 2022 population index was 28,864.
- In 2022 the AMBCC voted to maintain an egg harvest closure that went into effect in 2021 and the State of Alaska maintained no change to the 500 bird quota for the fall-winter registration hunt.



Spring-Summer Emperor Goose Hunt Regulations Kodiak and Aleutian-Pribilof Regions

Regulations for the 2023 Alaska Subsistence Spring/Summer Migratory Bird Harvest



Conservation through Co-Management

Effective April 2 - August 31, 2023
<https://www.fws.gov/office/alaska-migratory-birds/alaska-migratory-bird-co-management-council>

Kodiak Archipelago Region

April 2 – June 20 and July 22 – August 31
Closed within the Kodiak Island Roded Area

Aleutian-Pribilof Region

Northern Unit (Pribilof Islands)

April 2 – June 30 and July 1 – August 31

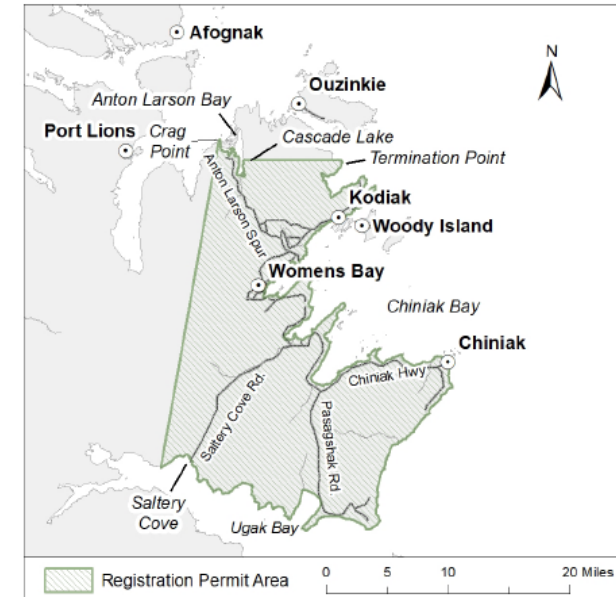
Central Unit (Unimak Island and east)

April 2 – June 15 and July 16 – August 31

Western Unit (Umnak Island and west)

April 2 – July 15 and August 16 – August 31

Kodiak Is. Roded Area

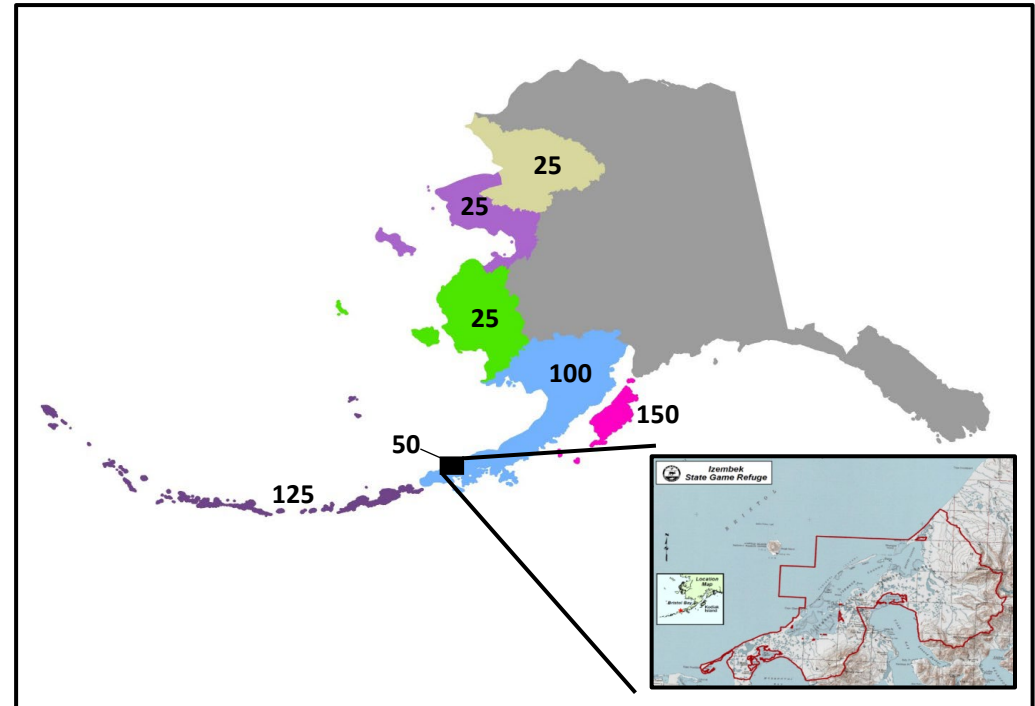


Fall-Winter Emperor Goose Hunt Regulations

- Registration permit hunt
- Seven hunt areas
- Each hunt area has a harvest quota that sum to the 500-bird statewide quota
- Hunt areas will be closed by Emergency Order when the quota is reached
- Mandatory Reporting:
 phone: 1-800-478-7468 OR
 online: www.hunt.alaska.gov

Kodiak – 150

Aleutian-Pribilofs - 125



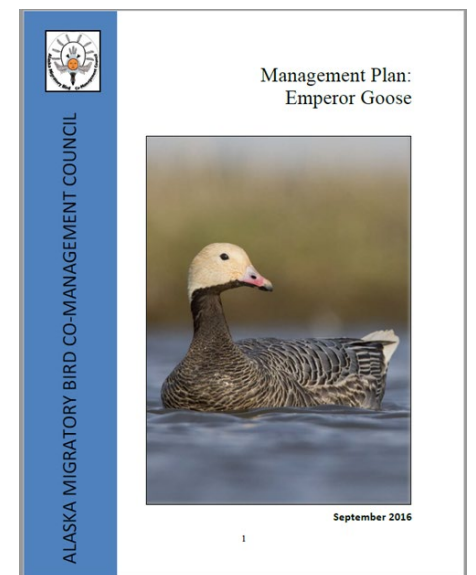
Reported Fall/Winter Emperor Goose Harvest 2017-2023

Fall-Winter Season	Kodiak	Aleutian_Pribilof	Statewide Resident Total
2017/2018	33	16	129
2018/2019	48	25	125
2019/2020	26	24	123
2020/2021	51	17	132
2021/2022	36	70	177
2022/2023	37	31	113
Average	39	31	133
Emperor Goose Resident Quota			
Fall-Winter Season	Kodiak	Aleutian_Pribilof	Statewide
2017/2018	175	175	1000
2018/2019	175	175	1000
2019/2020	175	175	1000
2020/2021	150	125	500
2021/2022	150	125	500
2022/2023	150	125	500



Emperor Goose Management Plan Revision

- Two plans, both being revised (initial terms expired)
 - Current term is for 2017-2021
- Began revision with monthly committee meetings during winter 2021/2022
- Plan for completing plans in 2024
- Committee comprised of ADFG, USFWS, and 6 regions of the AMBCC Native Caucus (Kodiak, Aleutian-Pribilofs, Bristol Bay, Yukon Delta, Northwest Arctic, Bering Strait)
- Committee membership from Kodiak: Coral Chernoff, and Aleutian Pribilofs: Peter Devine and Karen Pletnikof



The Revision Process

1. Define objectives for emperor goose harvest management
 - What do we want to achieve or care about? (e.g. sustainable populations, harvest opportunity, regulatory stability)
2. Describe alternative management options/strategies
 - A set of management alternatives to choose from (e.g. open/closed, egg harvest closures, harvest season length)
3. Understand the consequence of each alternative for the objectives
 - Use mathematical modeling and traditional ecological knowledge to model the effects of each alternative on our objectives
4. Select the best alternative
 - Consider value trade-offs and uncertainty



Thank You - Questions?

