Alaska's Ocean Sentinels: Update on the 2023-2024 seabird mortality events

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~ 30 million seabirds breed in Alaska and another ~30 million birds migrate here during our summer to take advantage of high productivity and variety of prey

What are seabirds telling us?

Distribution and abundance

Reproductive success

Diet

Prey community composition and availability

Survival

Winter conditions







Alaska Maritime National Wildlife Refuge

2023 Seabird Report Card





Eggs represent overall productivity relative to the long-term average. White eggs indicate productivity derived from monitoring data; colored eggs indicate productivity based on anecdotal observations.

Way above average!





Primarily zooplankton eaters >>> Complete failure



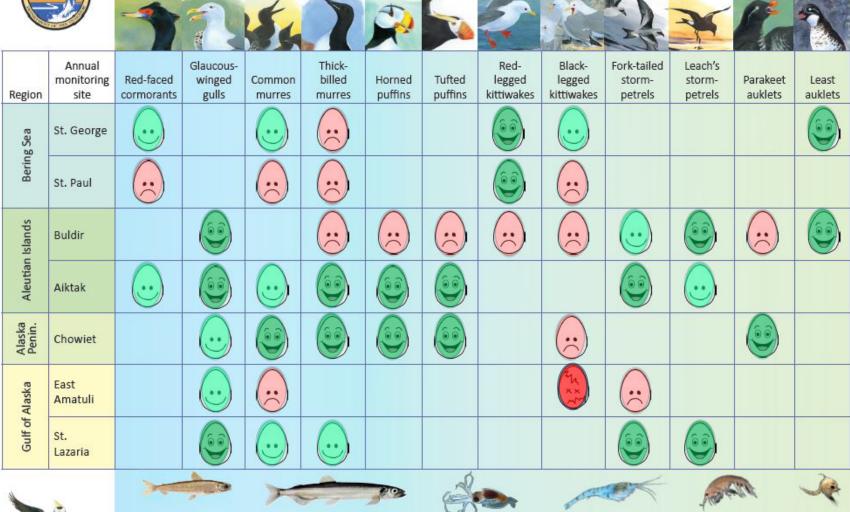




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Alaska Maritime National Wildlife Refuge

2024 Seabird Report Card



<<< Primarily fish eaters

Primarily zooplankton eaters >>>



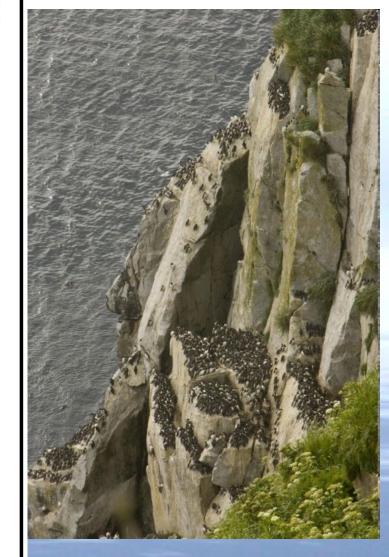
Way above average!



Below average

Complete failure

Eggs represent overall productivity relative to the long-term average derived from monitoring data.

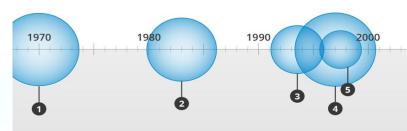






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~1,010,000 Seabirds in the previous 40 years



- 1. Apr 1970 **Bristol Bay** 190,000 murres; starvation
- 2. Aug-Sept 1983 **AK Peninsula** 10-100s thousands murres and other species
- 3. Mar-Apr 1993-94 Southcentral AK 120,000 murres: starvation

Bering Sea

Aleutian Islands

Shearwaters; species; avian cholera starvation Chukchi St. Lawrence Is.

Alaska

Gulf of Alaska

- 4. Aug-Sep 1997 **Bering Sea** 600,000 shearwaters; starvation
- 5. 1997-98 **Bering Sea** No estimate *murres*
- 6. Nov 2013 St. Lawrence Is. 7,000-36,000 murres, auklets and other
- 10. May-Aug 2018 Bering/Chukchi and E. Aleutians 1,200 murres, fulmars, puffins, shearwaters, auklets; starvation

7. 2015-16

Gulf of AK 400,000-1,000,000

8. Oct-Nov 2016

St. Paul Is.

9. Jun-Sep 2017

Bering/Chukchi

1,600 fulmars,

murres: starvation

11. May-Oct 2019 Bering/Chukchi and E. Aleutians 9,000 murres, fulmars, puffins, shearwaters, auklets; starvation

Diameter represents scale

~1,050,000 Seabirds in the last 10 years



- 12. lun-Sep 2020 Bering/Chukchi and E. Aleutians
 - 330 murres, puffins, kittiwakes, auklets: starvation
- 300 puffins; starvation 13. Jun-Oct 2021 Bering/Chukchi and Aleutians 2,200 murres, puffins, kittiwakes, auklets; starvation
 - 14. Jun-Sep 2022 Bering/Chukchi and Bristol Bay 450 murres, puffins, kittiwakes, auklets; presumed starvation











Seabird Die-offs

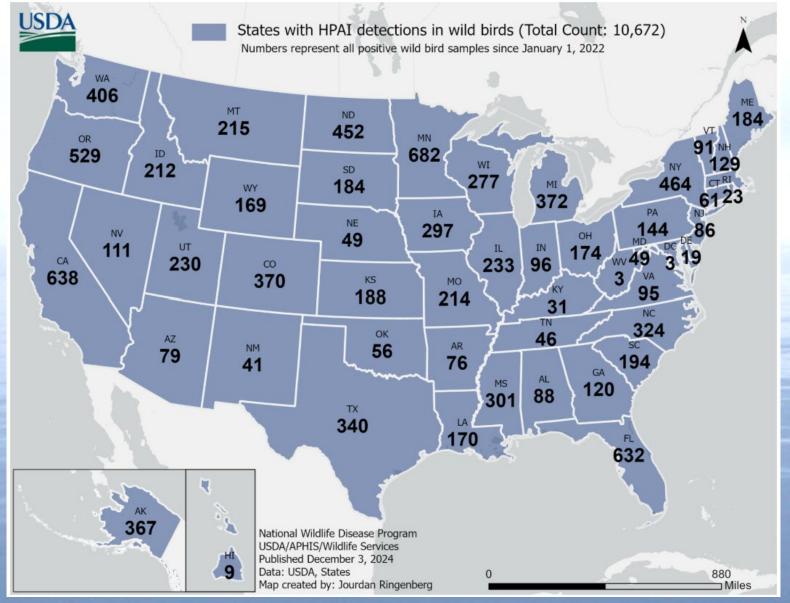
- Alaska die-offs rare prior to 2015, now annual?
- Species at all trophic levels affected
 - Puffins at St. Paul 2017
 - Shearwaters 2019 SE Bering Sea
 - Common Murres in GOA 2014-2016
- Public health concern for coastal communities





St. Paul Is. Bristol

Highly Pathogenic Avian Influenza Detections



Since 2022: 367 detections in Alaska

- Seabirds include shearwaters, murres, kittiwakes, gulls, and jaegers
- foxes, black bears, & 1 polar bear (otherwise no marine mammals)
- Bird Flu has limited samples available for harmful algal bloom but currently not linked to 2023 reports

For further information: USFWS Migratory Bird Office, Alaska Region

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