



## Advisory Announcement

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## CONTACTS:

**Jeremy Botz and Heather Scannell**  
**Finfish Area Management Biologists**  
**Jenni Morella**  
**Finfish Area Research Biologist**  
**(907) 424-3212**

### Prince William Sound Herring Announcement #2

**All commercial herring fisheries in Prince William Sound (PWS) will remain closed through June 30, 2023.** This includes: fall food and bait, purse seine and gillnet sac roe, spawn-on-kelp in pounds, and wild spawn-on-kelp fisheries. According to 5 AAC 27.365(b) Prince William Sound Herring Management Plan, the minimum spawning biomass threshold is 22,000 tons, and no fishery may be opened if this estimate is below that threshold. At projected biomass estimates between 22,000 and 42,500 tons the department may allow, **based on age-class strength**, a harvest of herring at an exploitation rate between 0 and 20 percent.

The University of Washington, School of Aquatic and Fishery Sciences calculated a preliminary estimate of **26,202** short tons for the 2022 PWS spawning biomass. It is the largest estimate since 2009 and is 98.3% above the 10-year average (2012–2021) of 13,216 short tons (Figure 1). While this year's preliminary estimate is within the range for consideration of a guideline harvest level, the fishery will remain closed because estimated biomass of recruit-age fish is unlikely to offset older age class mortality and conservative management is warranted. Multiple years of above threshold biomass estimates and signs of improving recruitment will be needed before a fishery is opened.

The preliminary spawning biomass estimate incorporates an age, sex, and length sample size of 763 herring (approximately 25% of samples processed from each sample location) and will be updated once all samples are processed and aged. Preliminary unweighted age composition for 2022 PWS spawning biomass is 18% age-3, 10% age-4, 14% age-5, 55% age-6, 2% age-7, 1% age-8 and <1% age-9+. This age composition is derived from samples collected at Red Head, Cedar Bay, Rocky Bay, Port Chalmers, Port Etches, and Boswell Bay. Age-6 fish are the majority of this unweighted age composition estimate and recruit-age fish (3-4 years old) continue to represent a small portion of the population (Figure 2).

The preliminary spawning biomass estimate also incorporates the 2022 PWS aerial spawn estimate of 32.7 statute mile-days-of-milt. This is the largest level of spawn recorded since 2014 and 57% above the 10-year average (2012–2021) of 20.9 mile-days-of-milt. However, mile-days-of-milt this year is well below historical levels observed in the 1980s and 1990s (Figure 3). Spawn distribution and timing is displayed on the map below for reference (Figure 4).

The 2022 Kayak Island area aerial spawn estimate is 41.1 statute mile-days-of-milt. Historically, Kayak Island has not had regular aerial survey coverage or sampling, and therefore was not included in the development of the minimum spawning biomass threshold for consideration of a commercial fishery.

The Alaska Department of Fish and Game would like to acknowledge and thank community members who aided in the collection of 2022 ASL samples, the University of Washington for the development and operation of the research model, and the funding provided by Exxon Valdez Oil Spill Trustee Council to conduct this assessment.

Additional updates on the status of the PWS herring population including any potential management actions will be announced when new information becomes available.

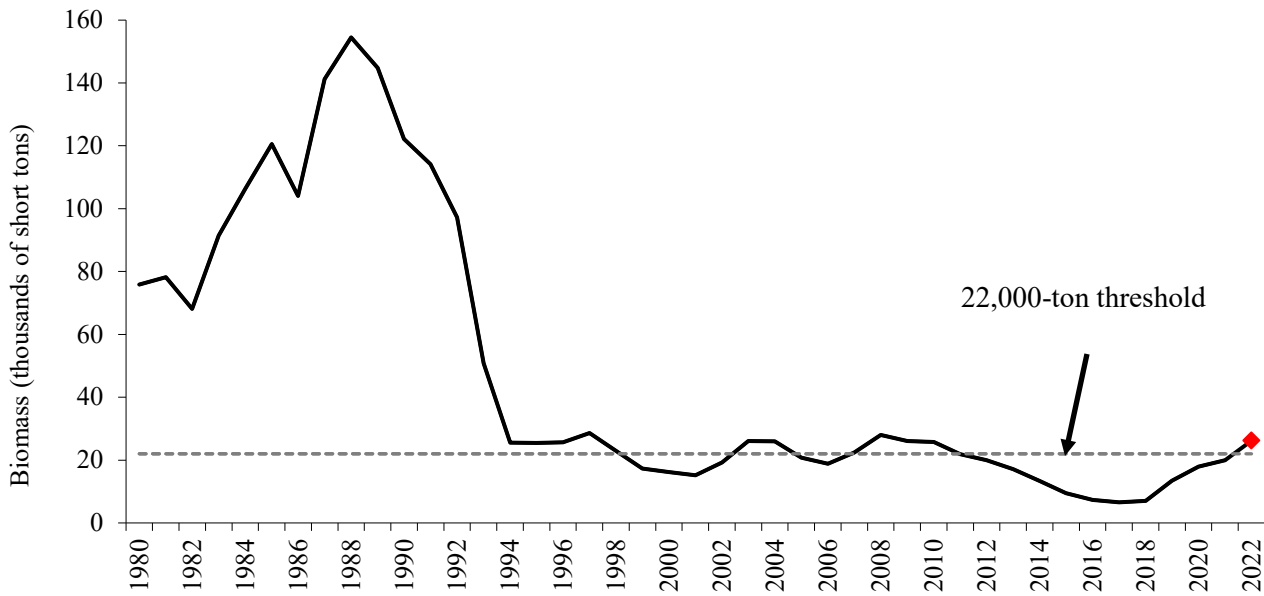


Figure 1. Prince William Sound Bayesian age structured spawning biomass, 1980–2022. The horizontal dashed line represents the minimum spawning biomass threshold of 22,000 tons for consideration of a commercial fishery (5 AAC 27.365).

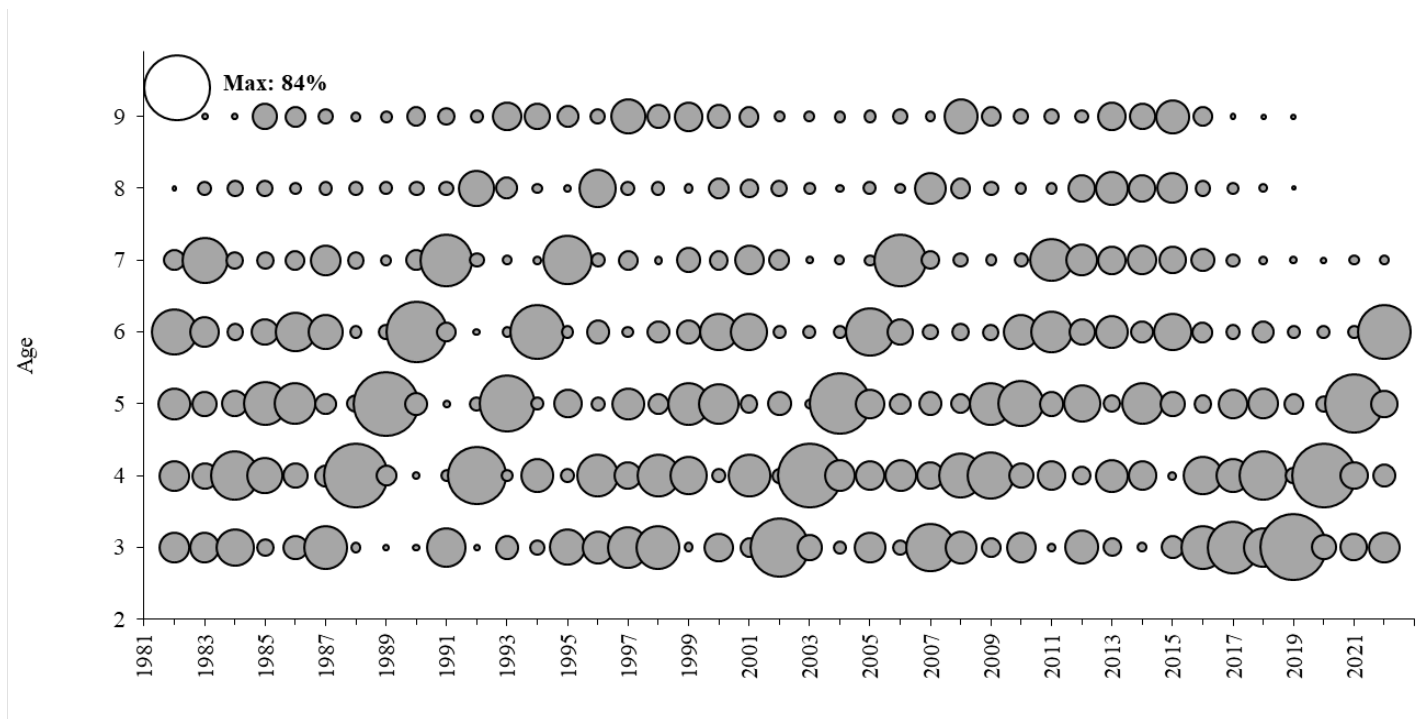


Figure 2. Prince William Sound age structure of spring herring biomass, 1980–2022. Bubble size is proportional to the size of age class.

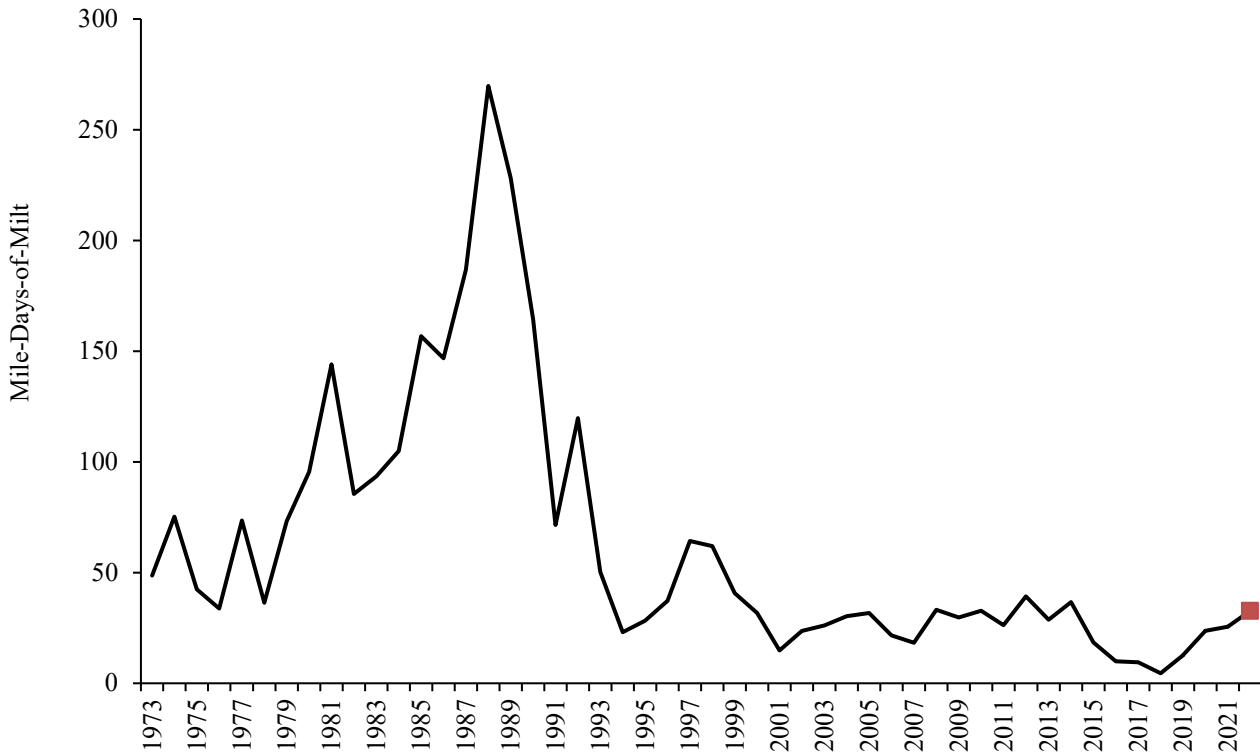


Figure 3. Prince William Sound statute mile-days-of-milt 1973–2022

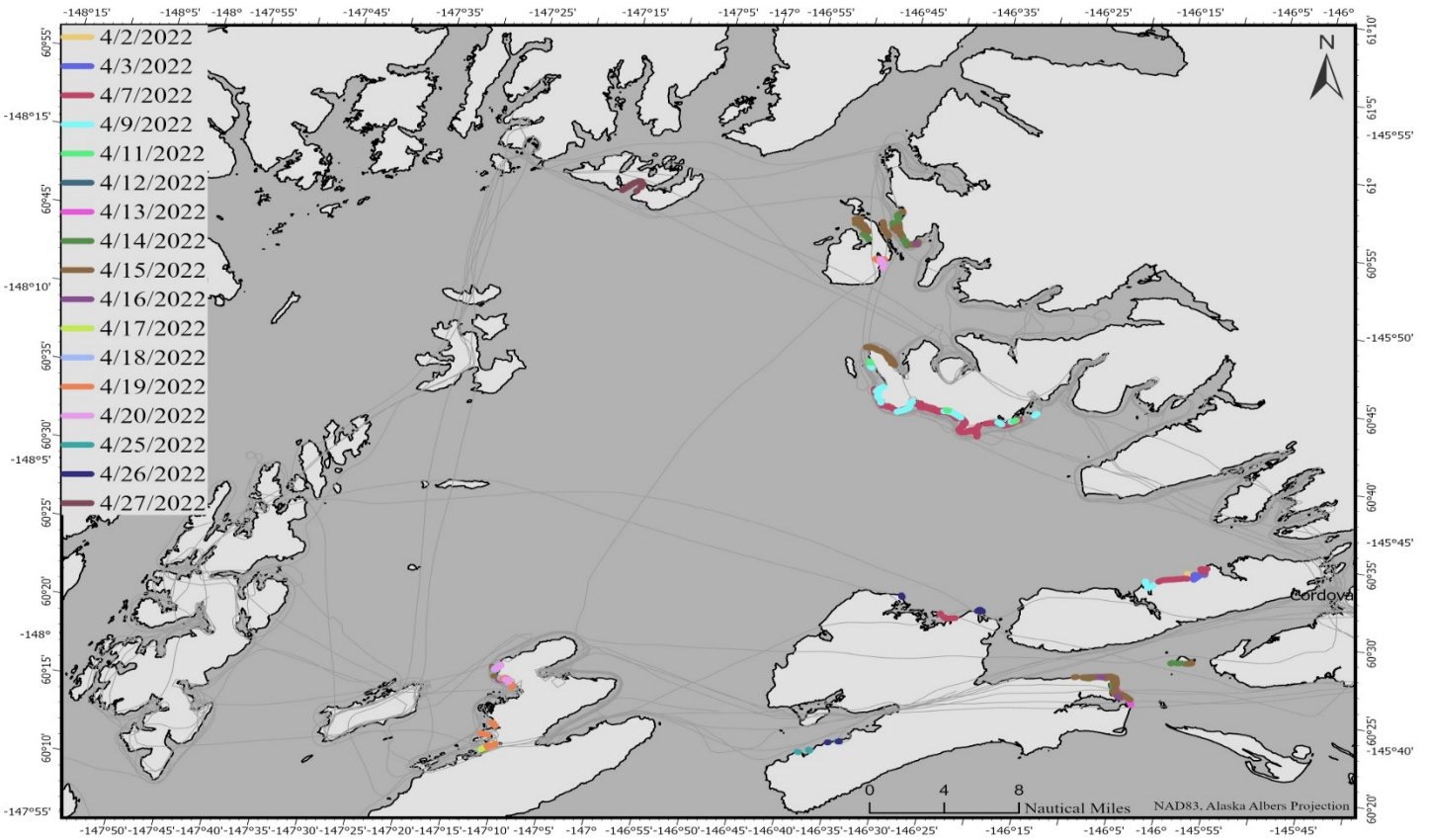


Figure 4. Timing and distribution of 2022 Prince William Sound herring spawn