



Advisory Announcement

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Prince William Sound Herring Announcement #1

This is an informational advisory announcement to provide updated herring stock assessment information. The University of Washington, School of Aquatic and Fishery Sciences calculated an estimate of **29,253** short tons for the 2023 PWS spawning biomass. It is the largest estimate since 2008 and is 119.9% above the 10-year average (2013–2022) of 13,305 short tons (Figure 1).

The Bayesian age-structured model incorporates age, sex, and length (ASL) and aerial spawn data to estimate spawning biomass. The weighted age composition for the 2023 PWS spawning biomass is 38% age-3, 33% age-4, 6% age-5, 7% age-6, 14% age-7, <1% age-8, and <1% age-9+ (Figure 2). This age composition (Figure 3) is derived from 1,545 samples collected at Red Head, Cedar Bay, Rocky Bay, Canoe Pass, and Port Etches (Figure 6). The 2023 PWS aerial spawn estimate of 26.1 statute mile-days-of-milt is less than the 2022 estimate but 29.2% above the 10-year average (2013–2022) of 20.2 mile-days-of-milt. Mile-days-of-milt in 2023 were well below levels observed in the 1980s and early 1990s (Figure 4). Spawn distribution and timing are displayed on the map below for reference (Figure 5).

The 2023 Kayak Island area aerial spawn estimate is 32.7 statute mile-days-of-milt. Spawn distribution and timing are displayed on the map below for reference (Figure 7). The age composition of a sample of 782 herring from the Kayak Island area is 62% age-3, 19% age-4, 5% age-5, 6% age-6, 7% age-7, and <1% age-8 (Figure 8). 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 2023 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.

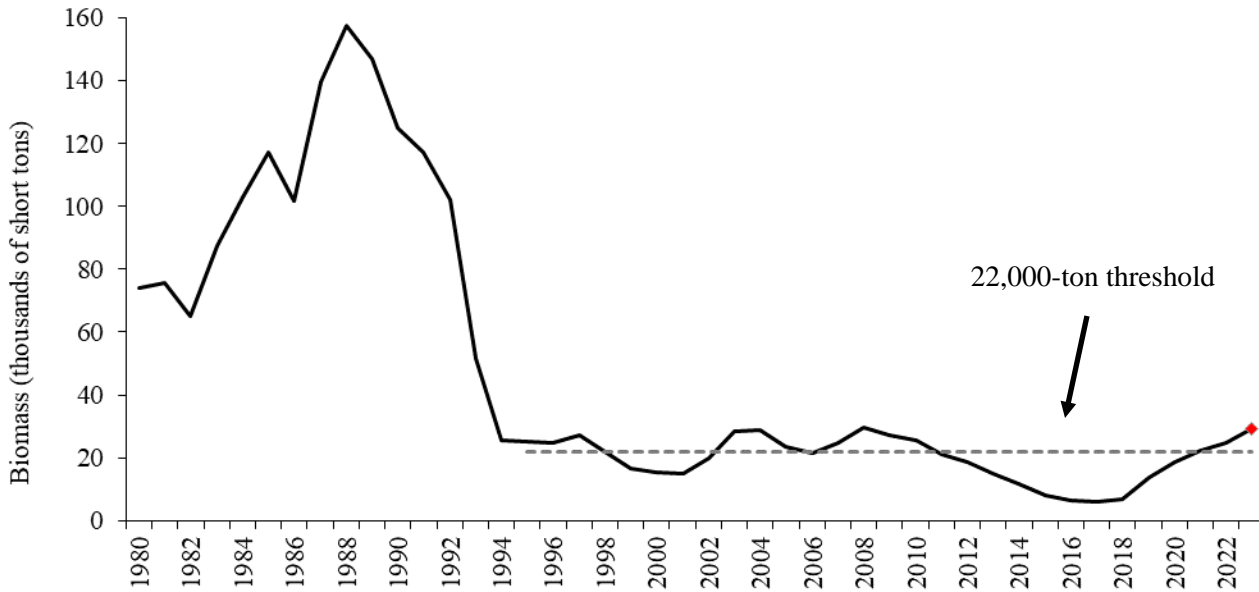


Figure 1. Prince William Sound Bayesian age-structured spawning biomass, 1980–2023. The horizontal dashed line represents the minimum spawning biomass threshold of 22,000 tons for consideration of a commercial fishery (5 AAC 27.365).

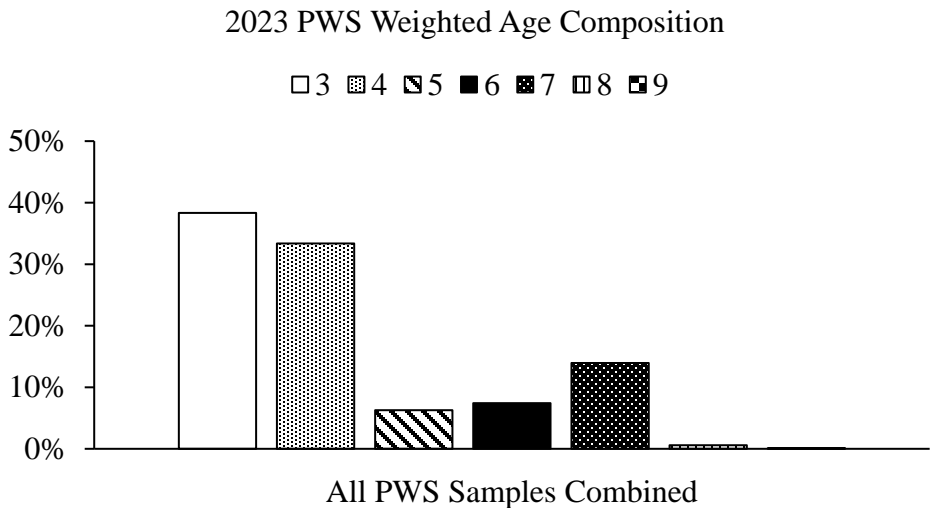


Figure 2. Prince William Sound weighted age composition of spring herring biomass, 2023.

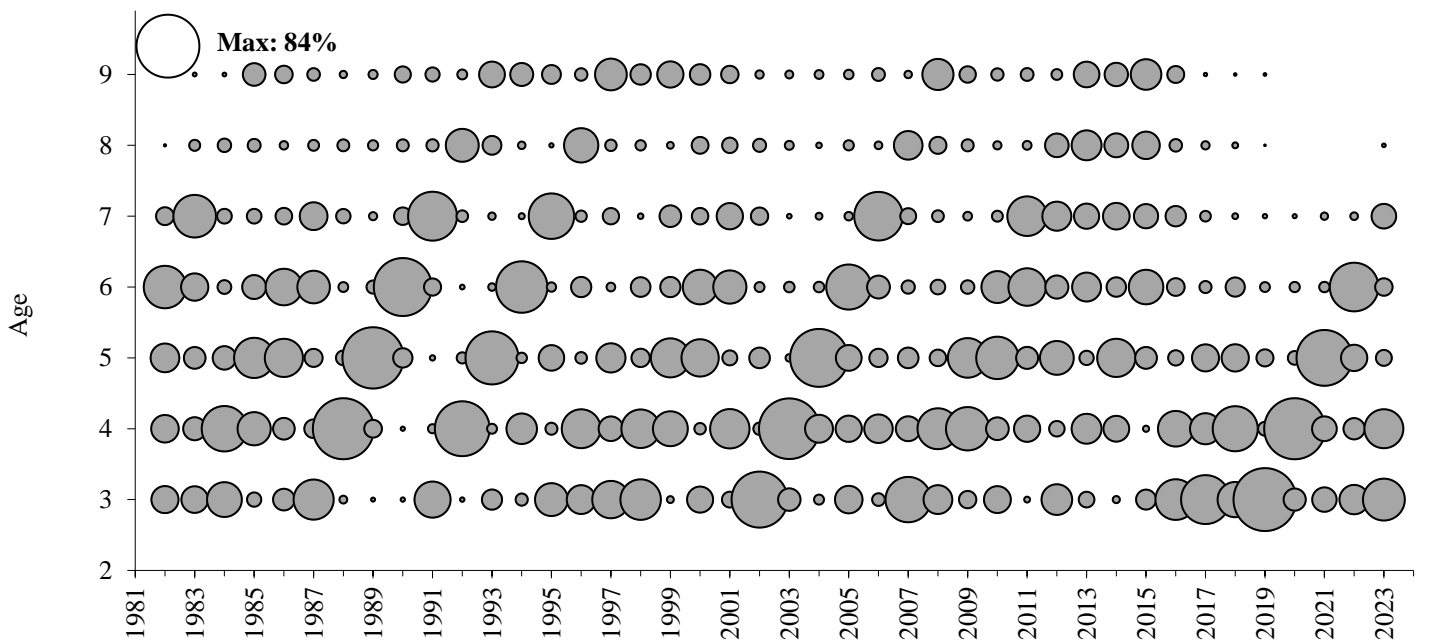


Figure 3. Prince William Sound age composition of spring herring biomass, 1980–2023. Bubble size is proportional to the size of age class.

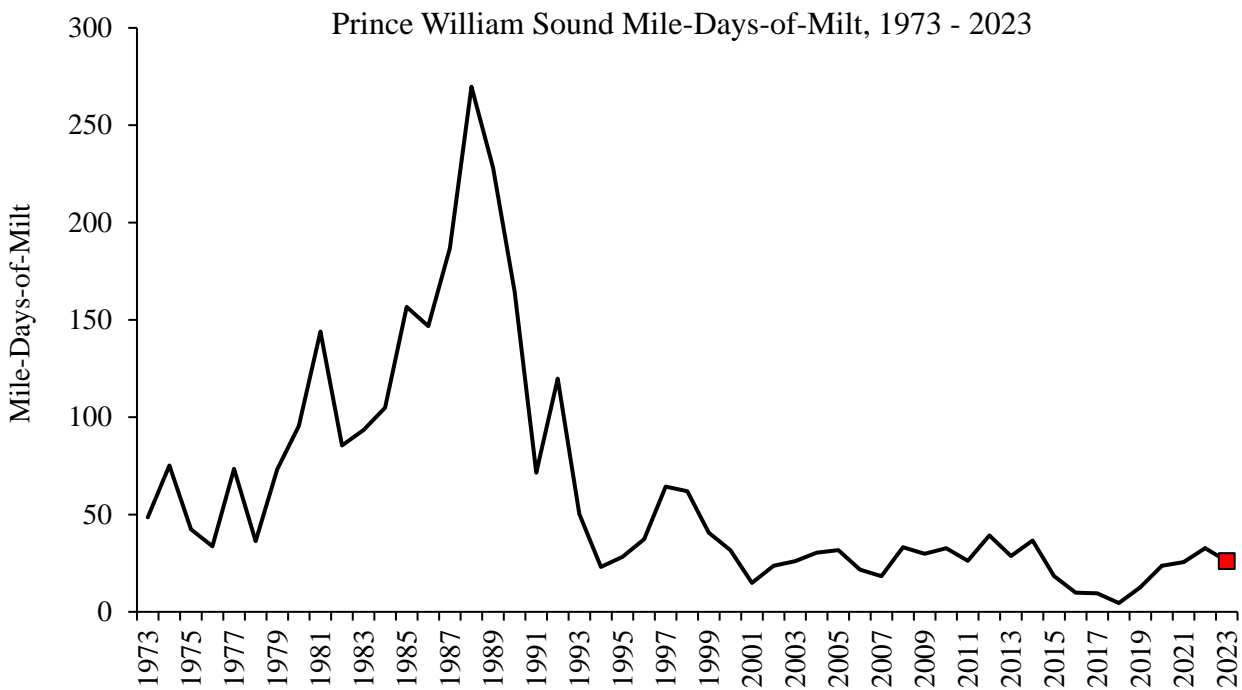


Figure 4. Prince William Sound statute mile-days-of-milt 1973–2023.

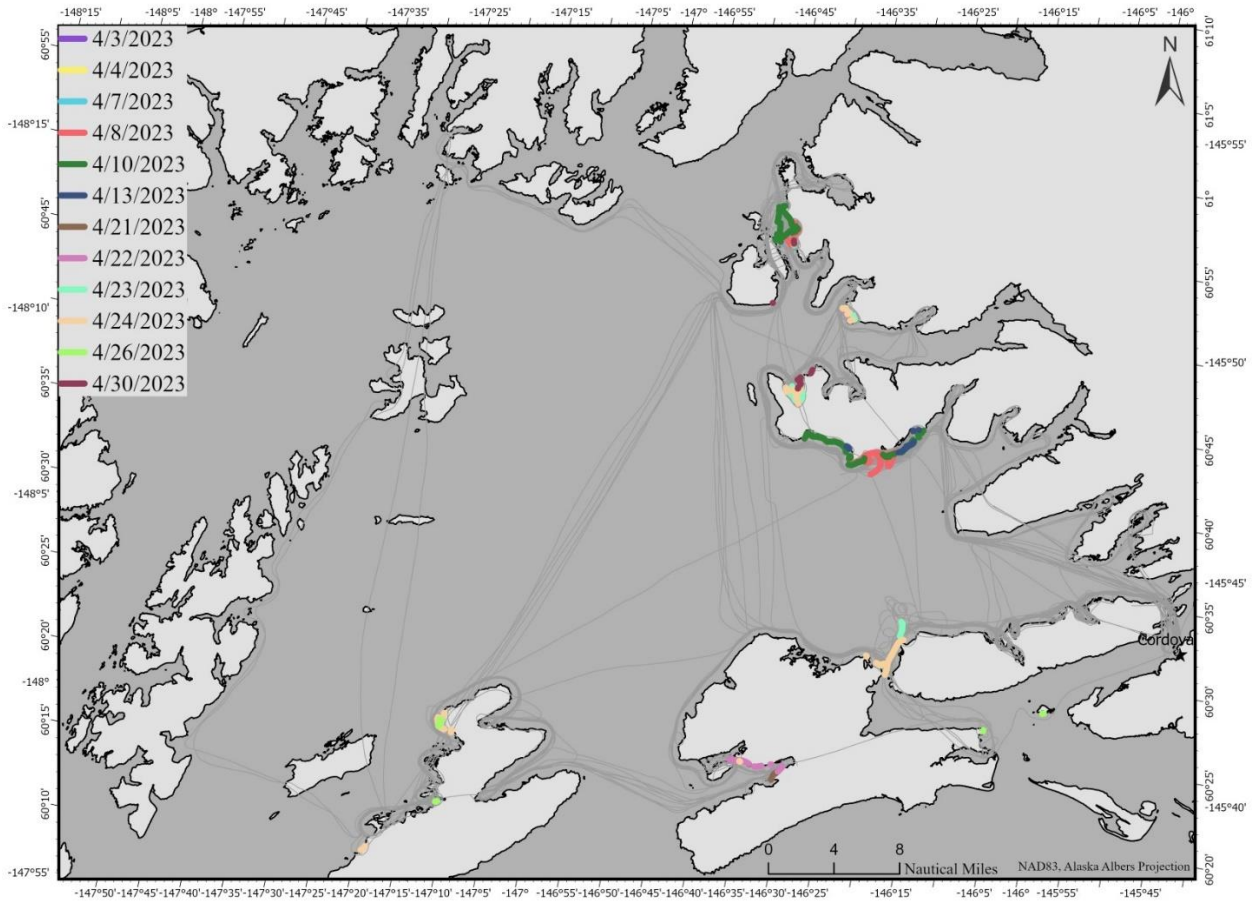


Figure 5. Timing and distribution of 2023 Prince William Sound herring spawn.

2023 PWS Age Compositions by Sample - Purse Seine

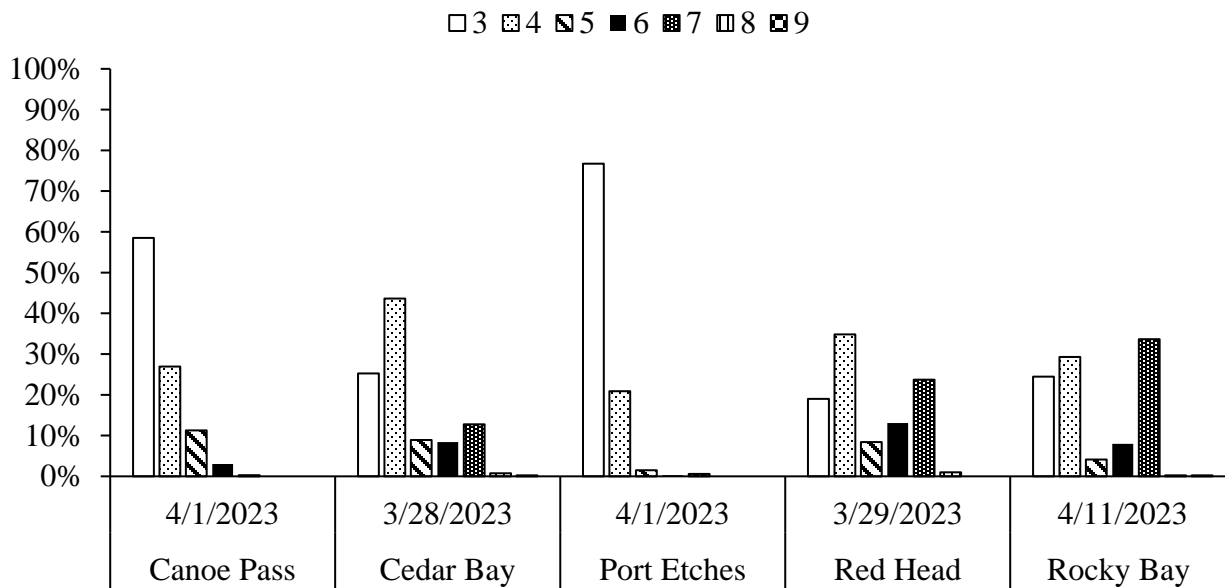


Figure 6. Prince William Sound age composition of spring herring biomass by sample, 2023.

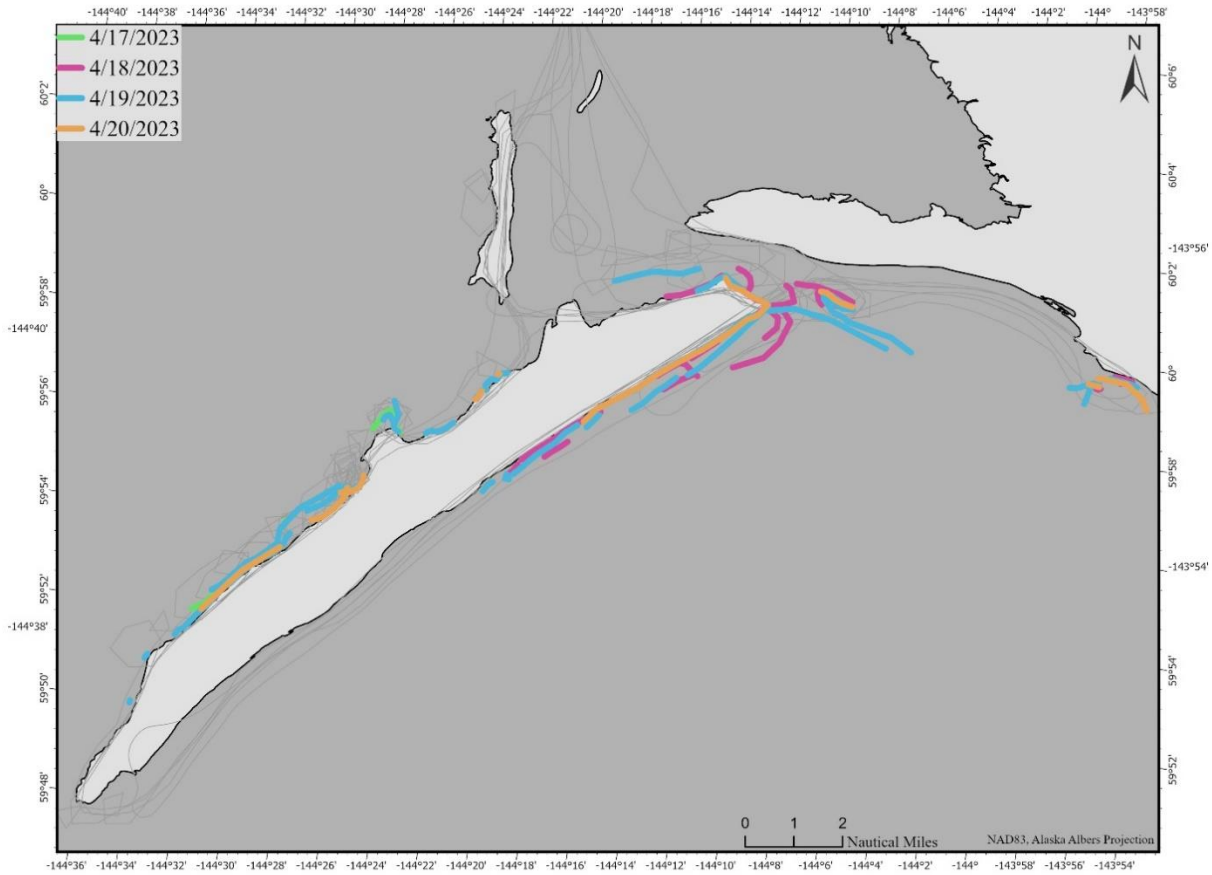


Figure 7. Timing and distribution of 2023 Kayak Island area herring spawn.

2023 Kayak Island Age Composition - Gillnet

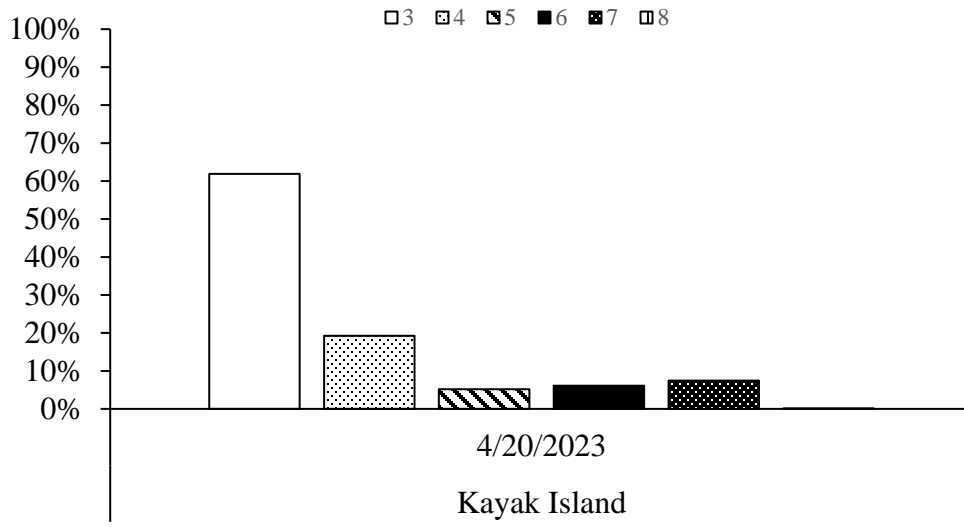


Figure 8. Kayak Island area age composition of spring herring biomass, 2023.