

# Gray whale sightings and strandings in Washington State reveal the Eastern North Pacific population is in trouble and the ways gray whales are adapting

John Calambokidis<sup>1</sup>, Jessie Huggins<sup>1</sup>, Hannah Clayton<sup>1,2</sup>, Alie Perez<sup>1</sup>, Alex Vanderzee<sup>1,3</sup>, Elana Dobson<sup>1</sup>, Jeff Harris<sup>4</sup>, Peter Mahoney<sup>4</sup>, Holly Fearnbach<sup>3</sup>

<sup>1</sup>Cascadia Research Collective, Olympia, WA 98501

<sup>2</sup>Stanford University, Hopkins Marine Station, Pacific Grove, CA 93950

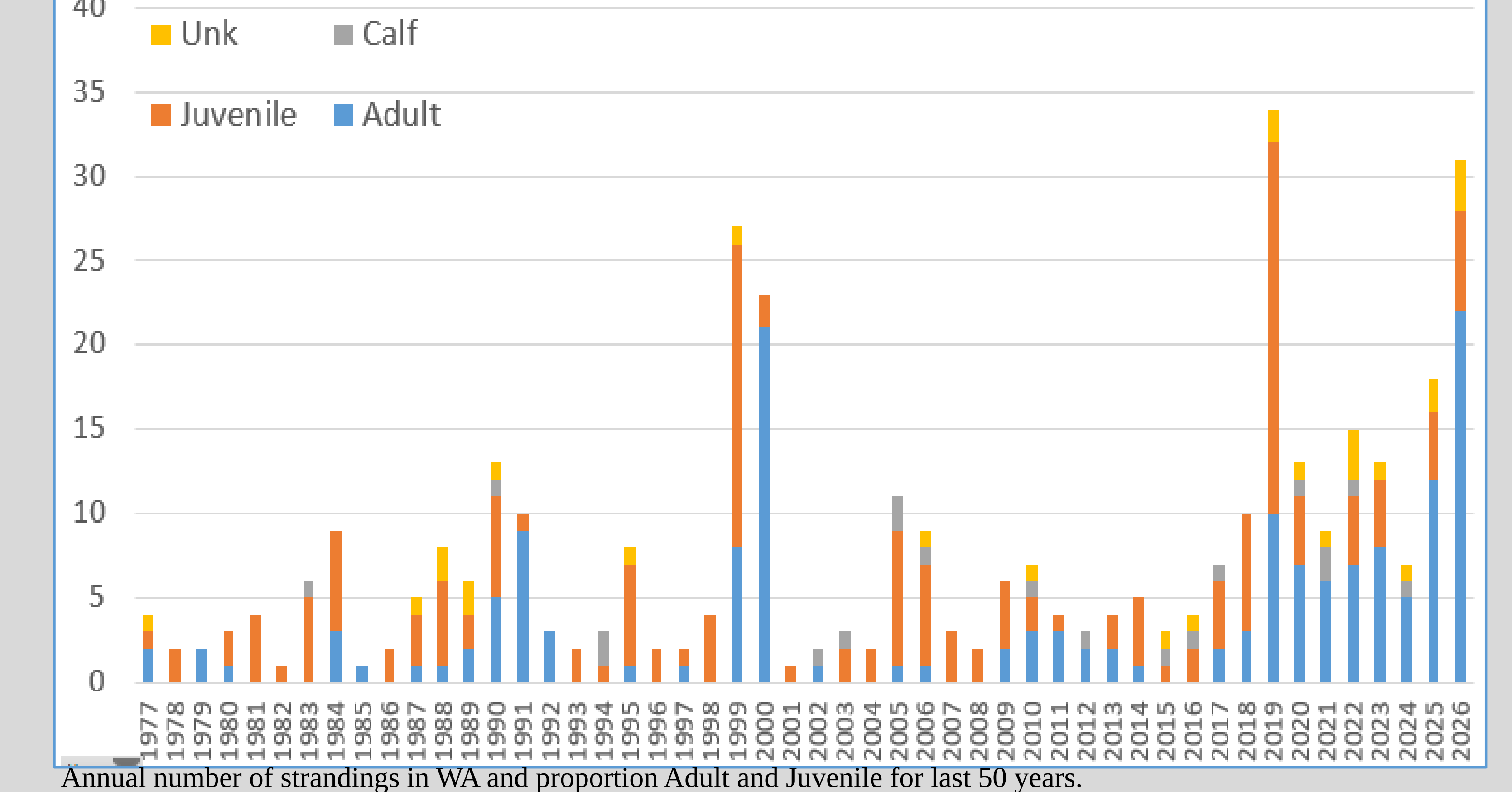
<sup>3</sup>SeaLife Response, Rehab, and Research, Des Moines, WA 98198

<sup>4</sup>Marine Mammal Laboratory, NOAA Fisheries, Seattle, WA 98115

## Abstract

Eastern North Pacific (ENP) gray whales have experienced elevated mortality, declining abundance, and low calf production since 2019. We present some of the ways sightings and strandings in Washington can offer insight into the nature, timing, and potential cause of this crisis, as well as how gray whales are attempting to adapt. Almost 50 years of gray whale stranding records in Washington provides one of best long-term indicators of increased mortality, with elevated number of deaths recorded in 1990-1991, 1999-2000, and 2019-2026. The recent decline has been the most protracted and has involved the largest number of whales, with no sign of recovery. One long-studied subgroup, the “Sounders”, have returned annually to northern Puget Sound since 1990, typically staying for 2-3 months each spring. Their numbers increased from an initial 6 individuals to 12 individuals during the 1999-2000 unusual mortality event (UME), and to 18 in recent years. Sounders showed very little mortality over the first 30 years of monitoring, including through the 1999-2000 UME. In each of the last 5 years, 3-5 whales (8 individuals) have arrived in late December/early January and stayed through late spring, foregoing the migration to winter breeding grounds in Mexico. Another subgroup, the Pacific Coast Feeding Group (PCFG), feeds through the summer/fall in the Pacific Northwest (foregoing migrating to the Arctic), and similar to the Sounders, has not shown comparable declines. The primary or supplemental feeding in the Pacific Northwest further supports findings that the declines are related to changes in their Arctic feeding grounds. Gray whale sightings in Washington in 2025/2026 have also been unusual; with several concentrations observed in areas they are not typically seen. Our observations indicate gray whales are seeking alternate feeding areas to supplement prey loss in the Arctic, sometimes successfully and other times not.

## 2026 already 2<sup>nd</sup> highest annual number of gray whale strandings in WA state despite population decline. Mostly Adult Males in 2026 more than other years



## Shift from primarily juveniles to adults consistent with a progression seen in other sets of years with elevated mortality.

| Year | Num. | % Adult | % Juv | Year | Num. | % Adult | % Juv | Year | Num. | % Adult | % Juv |
|------|------|---------|-------|------|------|---------|-------|------|------|---------|-------|
| 1990 | 13   | 38%     | 46%   | 1999 | 27   | 30%     | 67%   | 2019 | 34   | 29%     | 65%   |
| 1991 | 10   | 90%     | 10%   | 2000 | 23   | 91%     | 9%    | 2020 | 13   | 54%     | 31%   |
|      |      |         |       |      |      |         |       | 2021 | 9    | 67%     | 0%    |
|      |      |         |       |      |      |         |       | 2022 | 15   | 47%     | 27%   |
|      |      |         |       |      |      |         |       | 2023 | 13   | 62%     | 31%   |
|      |      |         |       |      |      |         |       | 2024 | 7    | 71%     | 0%    |
|      |      |         |       |      |      |         |       | 2025 | 18   | 67%     | 22%   |
|      |      |         |       |      |      |         |       | 2026 | 31   | 71%     | 19%   |

Number of strandings in WA and proportion Adult and Juvenile for sets of years with elevated mortality showing initial low proportion of adults increasing through period.

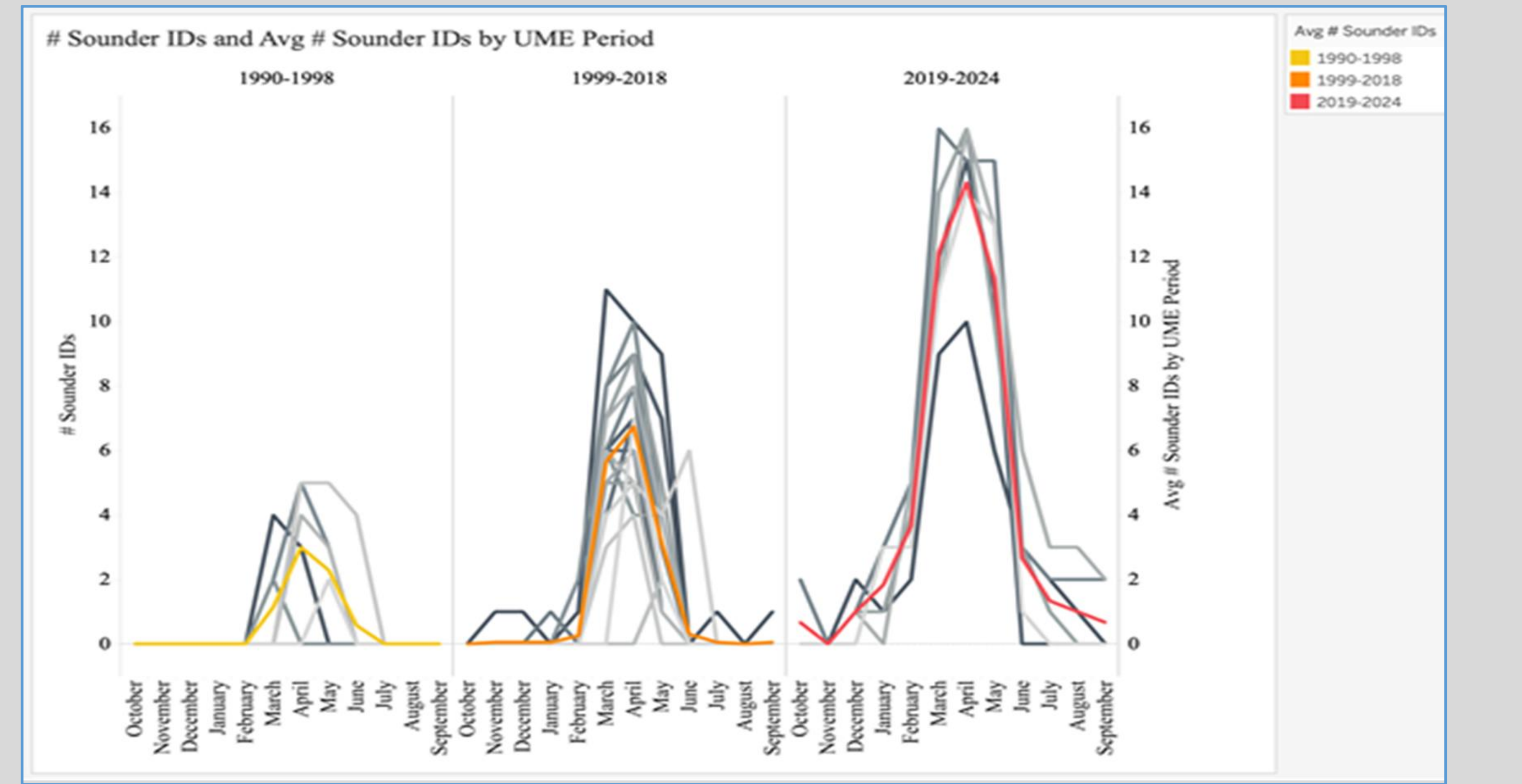
## Many gray whales that were not part of the PCFG aggregated outside Grays Harbor in 2026 trying to find new areas to feed: A Tale of two areas inside and outside Grays Harbor, so close but so different



**Inside Grays Harbor (left above):** 15 whales IDed in 2025 of which 60% were known PCFG and 87% had been identified previously mostly inside Grays Harbor, 3 as calves of PCFG whales

**Outside Grays Harbor (right above):** 111 different whales in 2025 from May to October, only 30% known PCFG, 63% never identified previously with no match found. Some of the known PCFG whales were animals seen primarily inside GH but also outside.

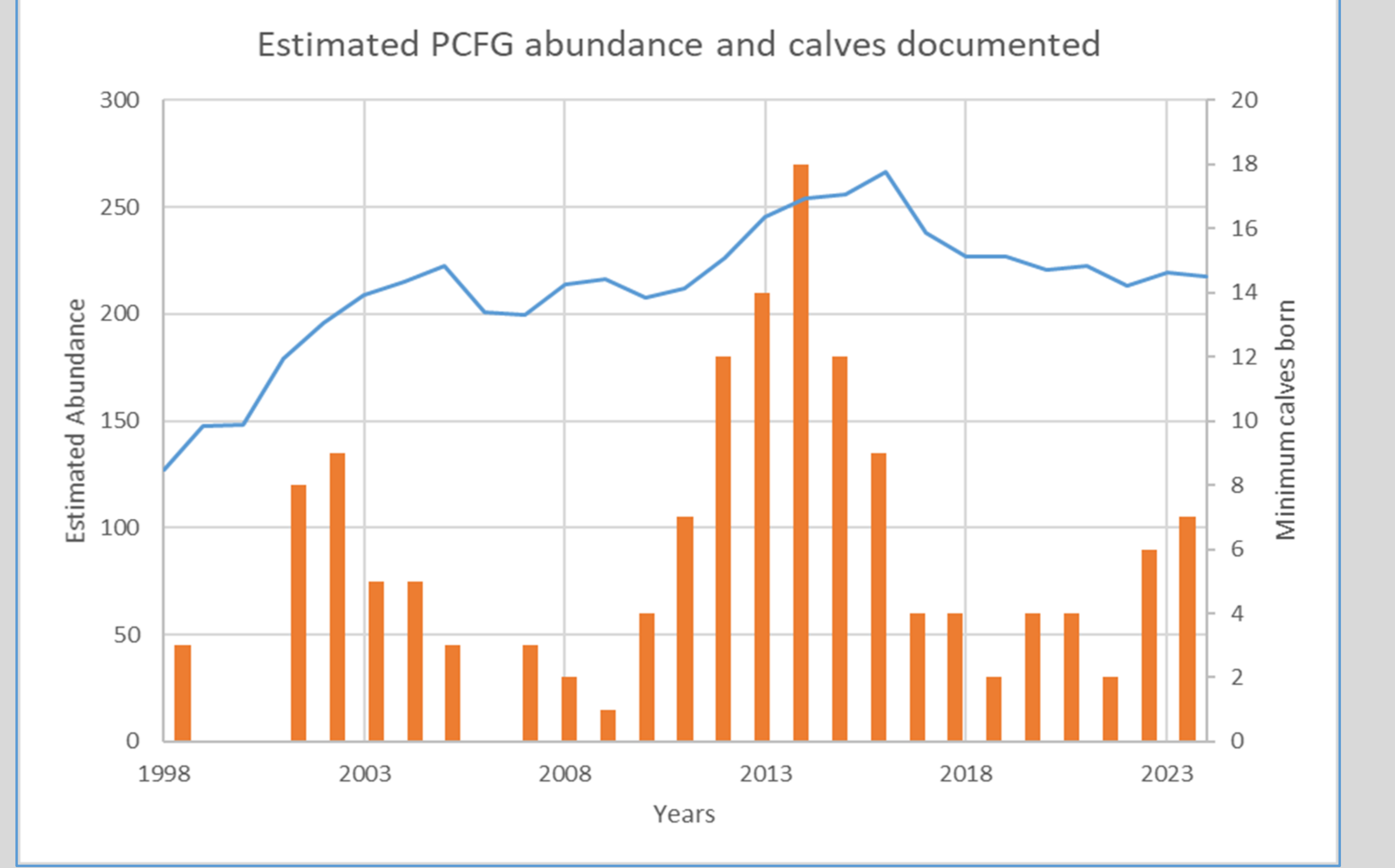
## Sounder gray whales have found a food resource and show rapid improvement in body conditions. They are increasing even as overall population increases declines and are arriving earlier and staying longer



## Sounder unusual seasonal occurrence starting in 2020

- Early arrival first seen starting in 2020 when CRC-53 (Little Patch) showed up in December 2020 almost three months earlier than normal for Sounders.
- Starting in Winter 2021-22 and extending at last through the Winter of 2025-26, 3-5 long term Sounders have arrived early (Dec or Jan).
- Recently 5 Sounders showed up in December 2025 and have been here since
- All skipped the migration to Mexico breeding grounds to stay and feed.
- In the most recent season, five whales showed up in late December 2025 and early January 2026 including three of the long term Sounders (CRC 22, 53, and 531) and two newer (CRC 2246 and 2362), 4 of these 5 are known females.
- One whale (CRC 2440) stayed in N Puget Sound almost continuously from January 2022 to May 2023 before leaving the area for several years and returning in December 2025.

## PCFG gray whales have not shown the dramatic decreases of the overall ENP population and recent calf numbers have been increasing not decreasing



## Conclusions

### Observations in Washington reveal a number of aspects of the crisis gray whales facing including:

- Strandings in Washington show continuation of elevated mortality even as the estimated population declines.
- In 2025 there were increased indications of more gray whales seeking alternate areas to feed sometimes unaware of productive nearby areas.
- Sounder and PCFG gray whales that feed outside the Arctic do not show indications of decline and high mortality like the overall ENP population

These findings confirm that the high mortality and decline of the overall ENP population is being driven by a crisis on their primary feeding grounds in the Arctic.

### Acknowledgements

This work has been conducted over many years with support and help of many people and organizations. Data on the PCFG taken from the Cascadia collaborative catalog and database supported by NOAA and conducted by many collaborating researchers including OSU, Cal Poly Humboldt, Department of Fisheries and Oceans, Makah Tribe and other members of the PCFG Consortium.