



January 2025 Spotted Seatrout Cold Stun Report

DEPARTMENT OF ENVIRONMENTAL QUALITY

Marine Fisheries

Marine Fisheries Commission | Lucas Pensinger, Matthew Zink, Melinda Lambert | May 2026



Outline

- Presentation Purpose
- Cold Stun Timeline
- Data Sources
- Results
- Questions

Purpose

- Why the 2025 cold stun?
- Cold Stun Adaptive Management
 - Close fishery through June 30
 - Additional temporary measures



2025 Cold Stun – Timeline

01/13 – First
cold stun
reports



01/22 – Proc
FF-11-2025



03/13 –
Amendment
1 Adopted



07 –Harvest
Reopens



04/28 –
WRC
Closure



04/08 – Proc
FF-15-2025

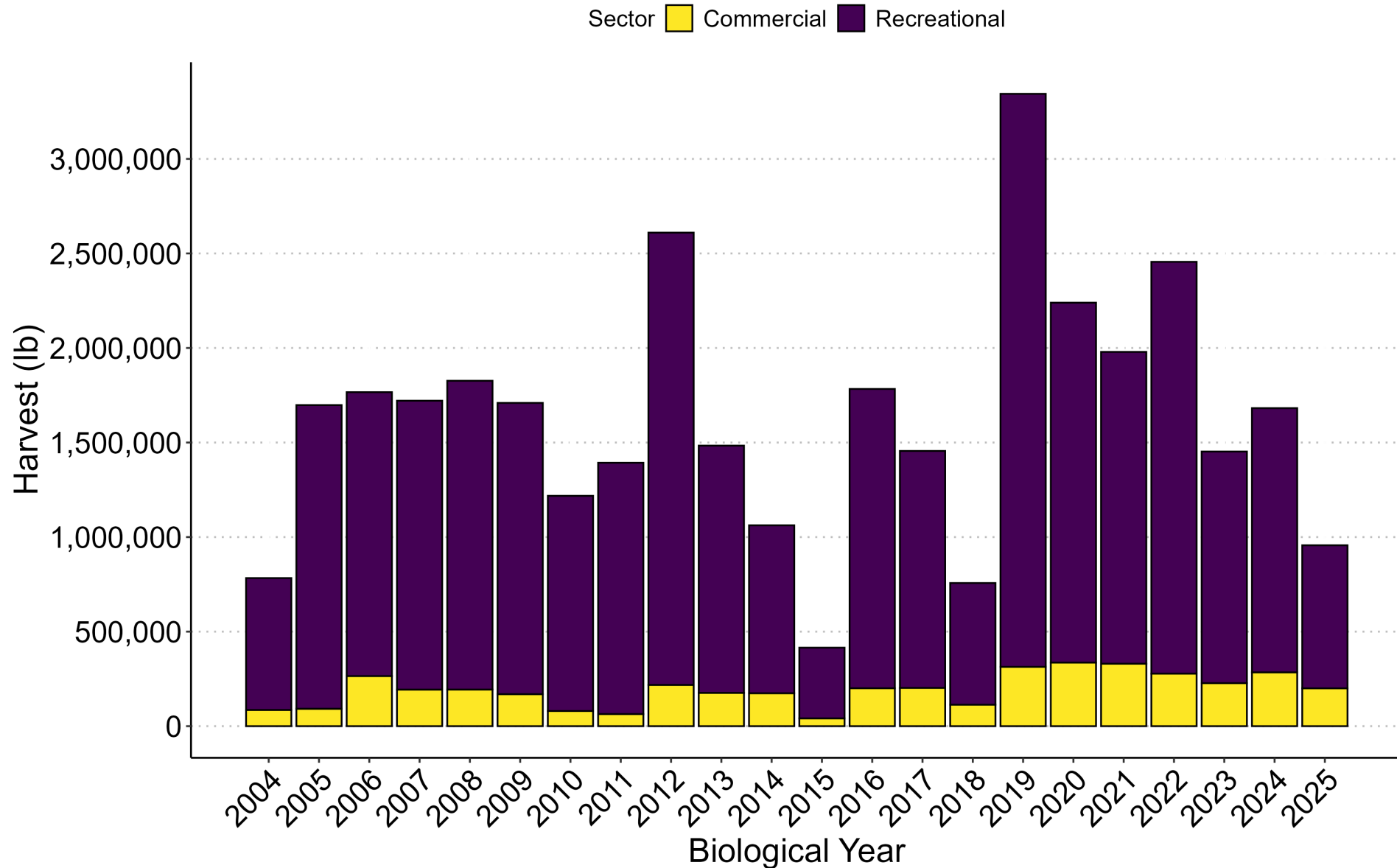
2025 Cold Stun Report – Data Sources

- Harvest
- Water Temperature Triggers
- Relative Abundance
- Relative Abundance & Water Temperature
- Length Composition



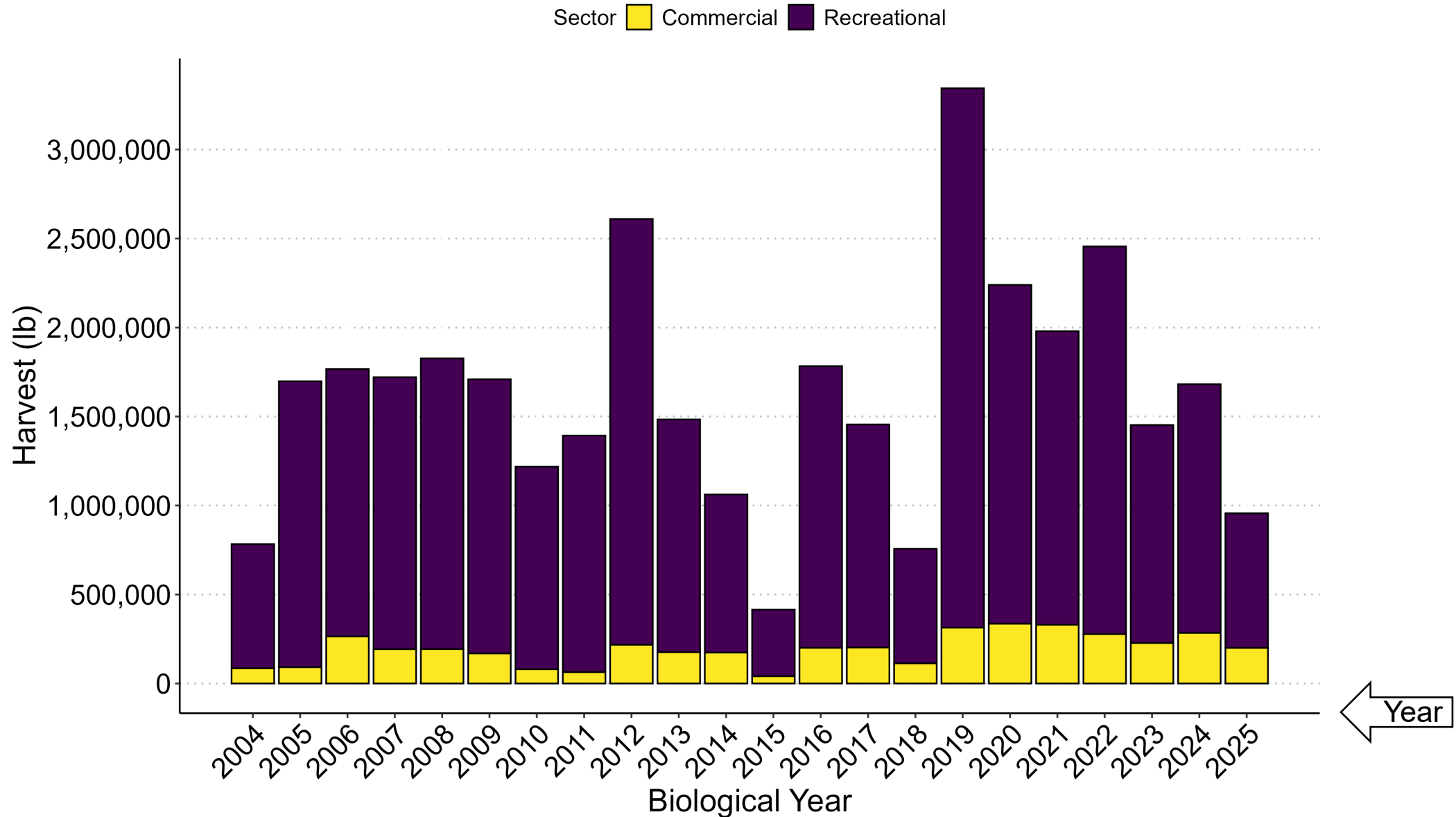
2025 Cold Stun Report – July–December Landings

Spotted Seatrout Landings, July-December



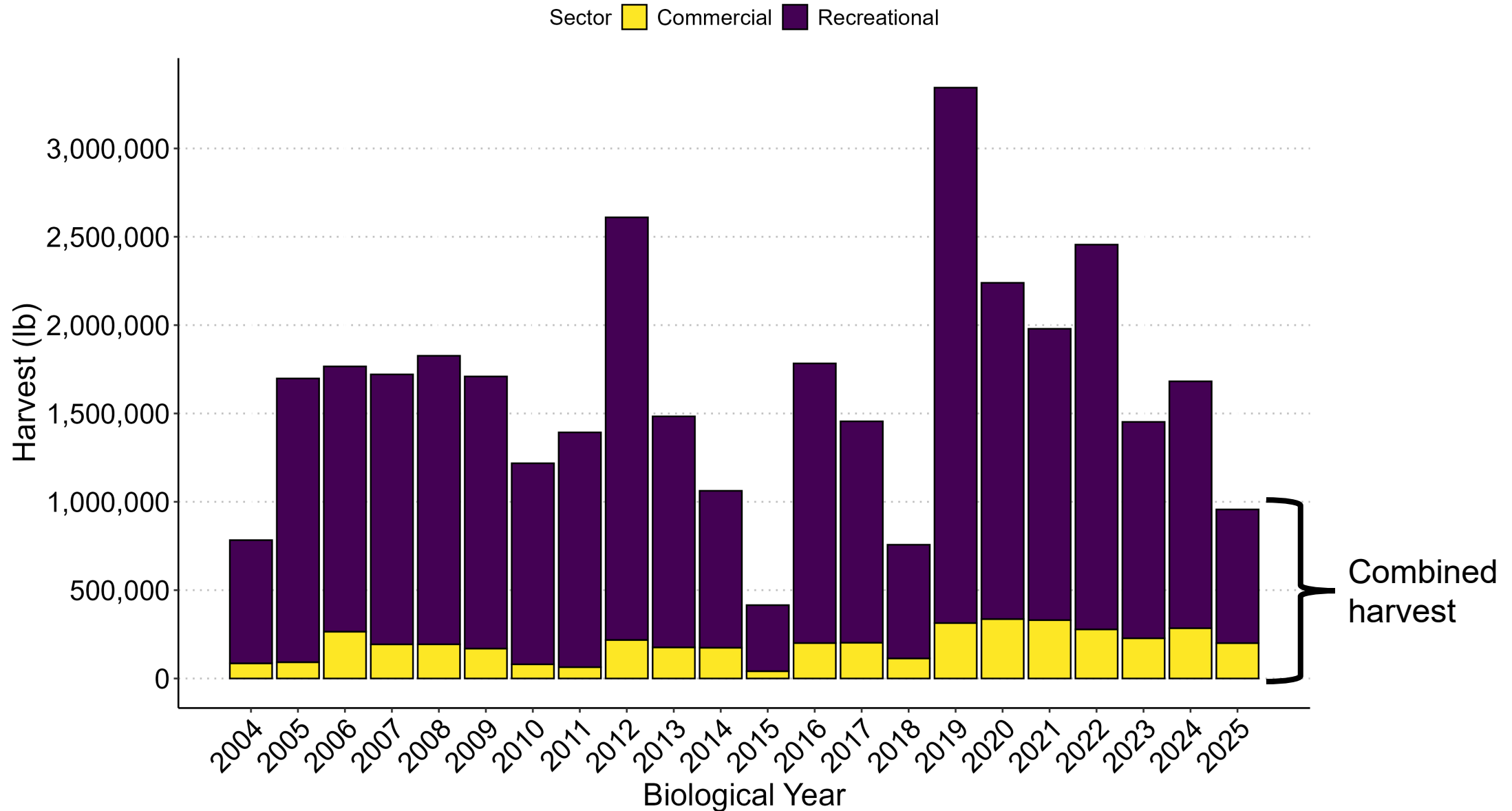
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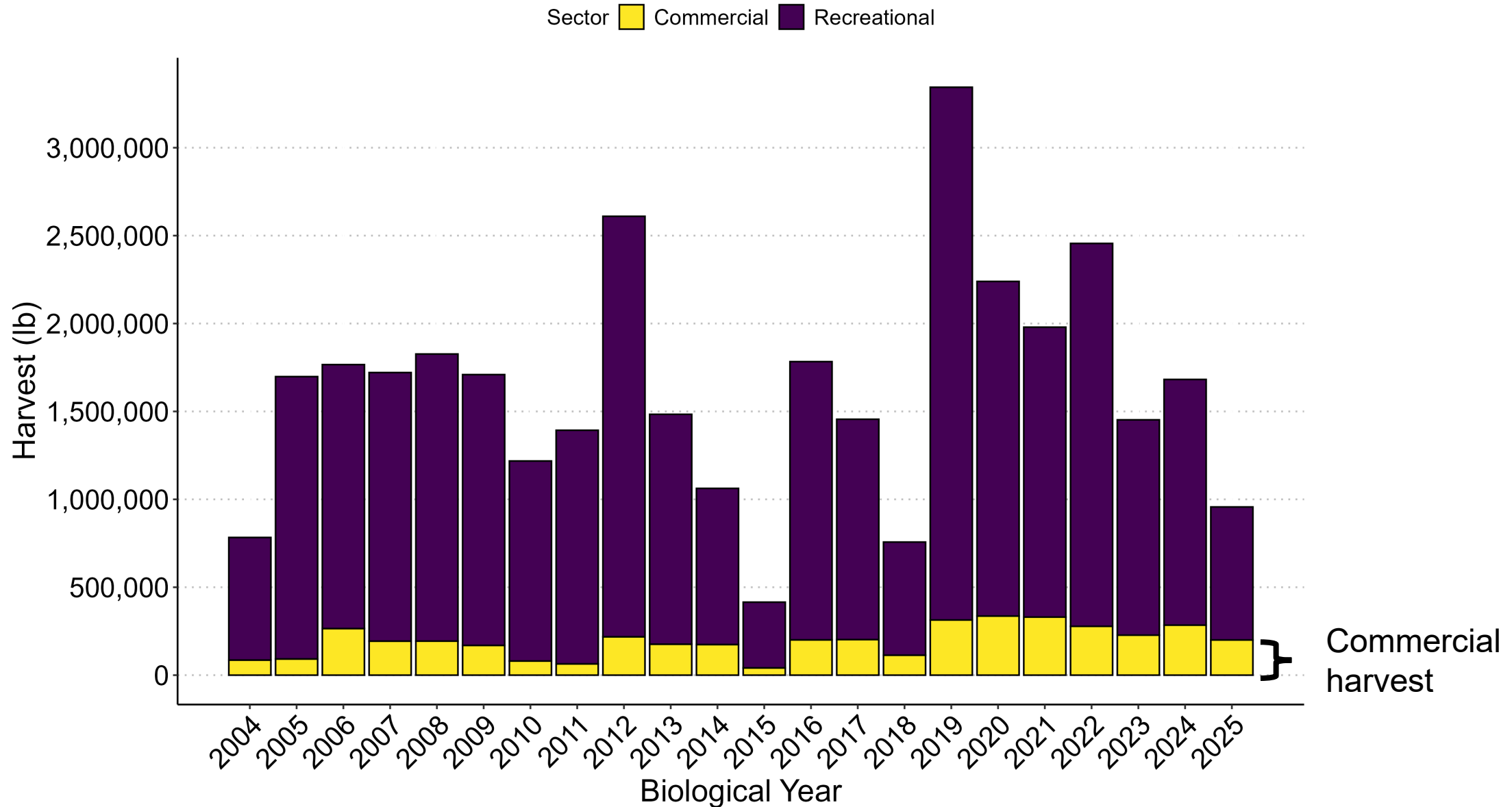
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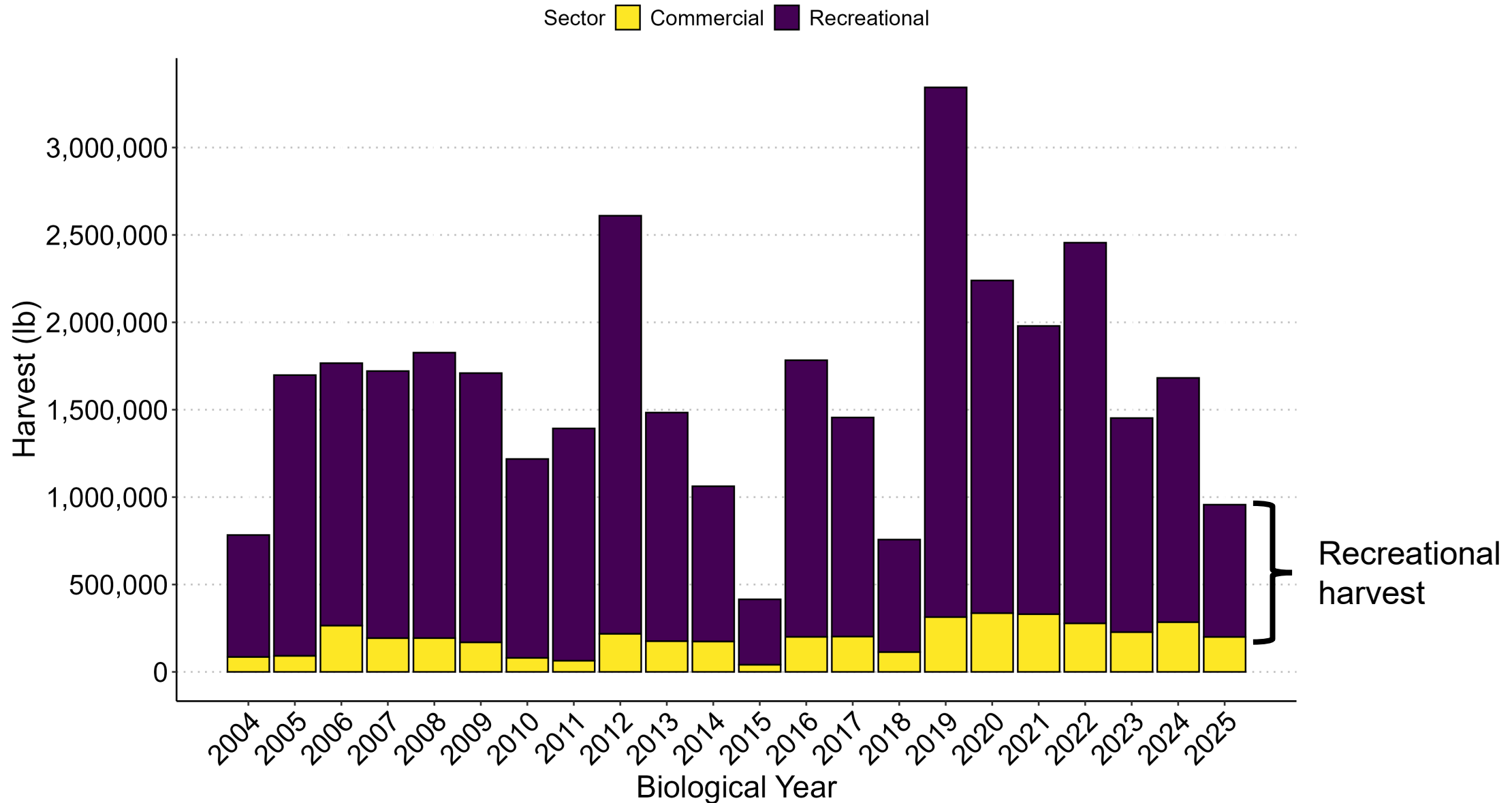
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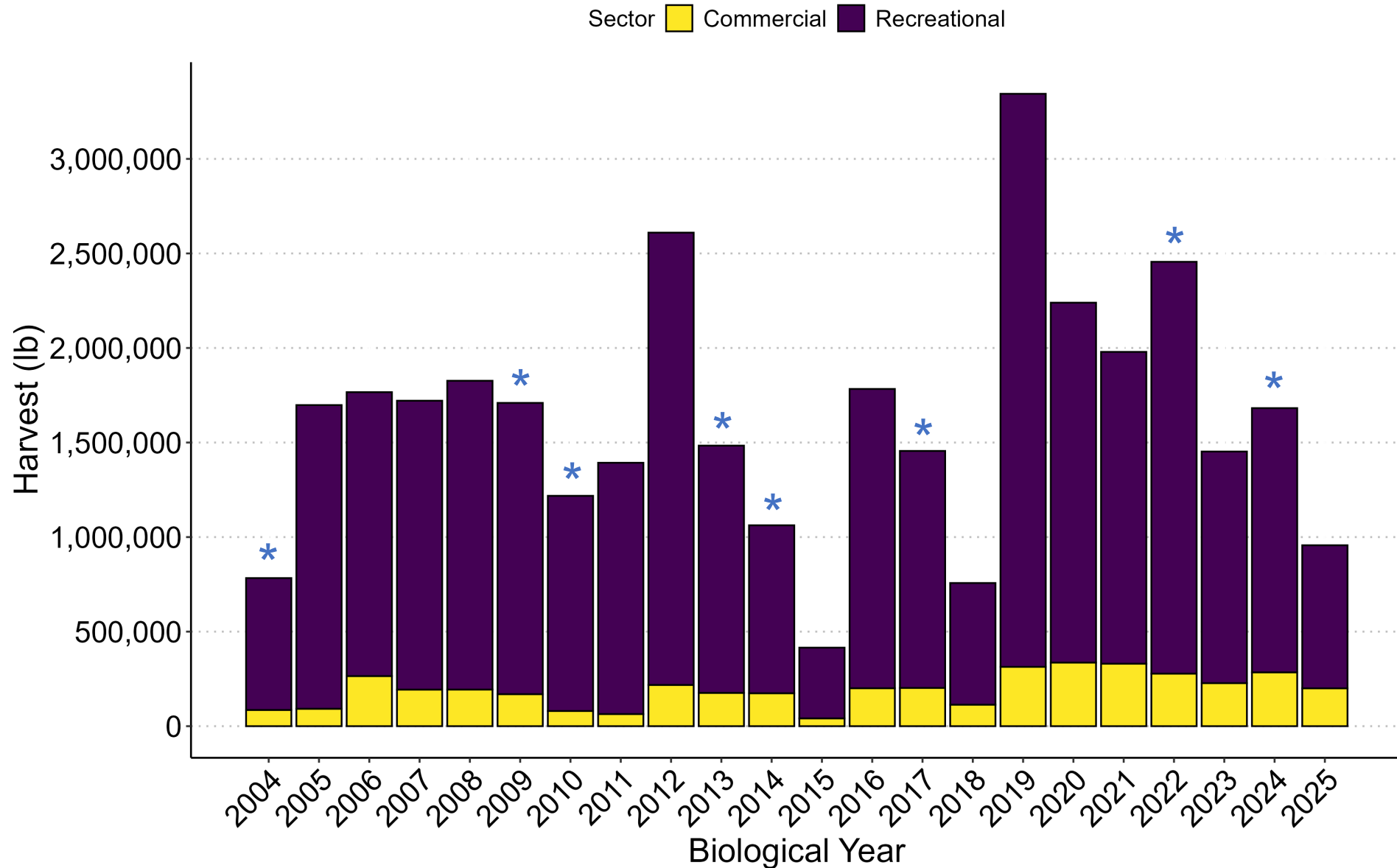
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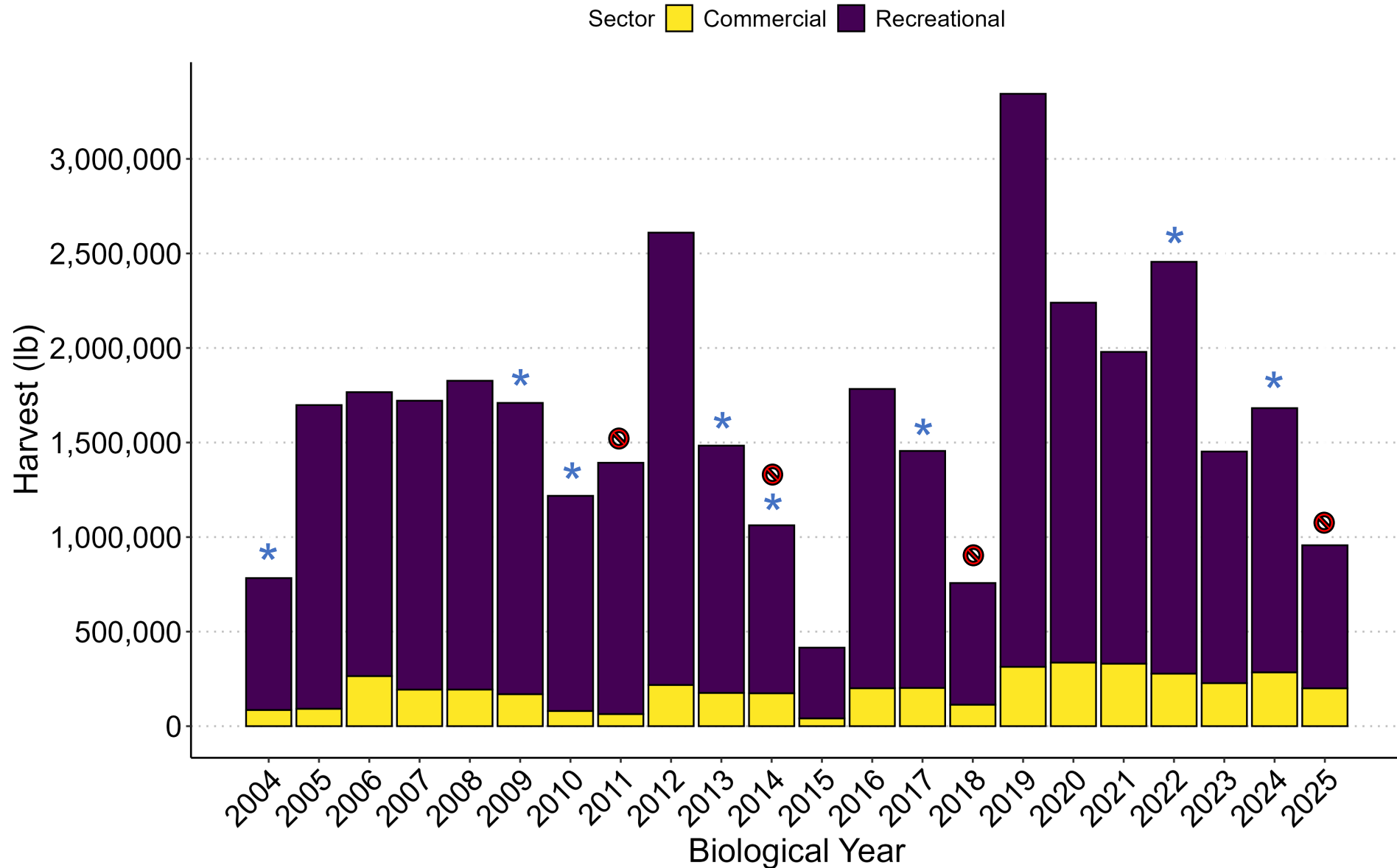
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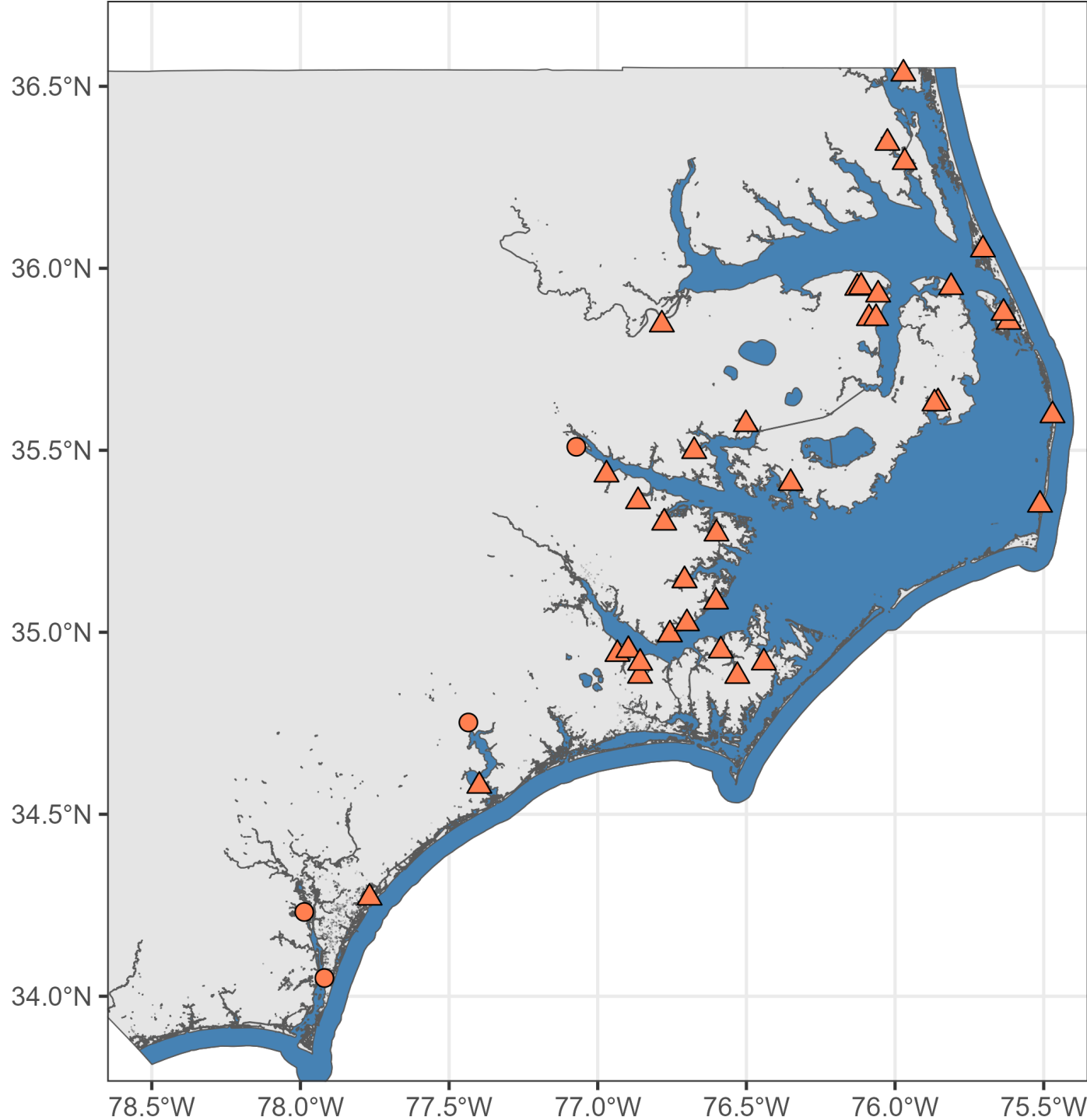


2025 Cold Stun Report – July–December Landings

Spotted Seatrout Landings, July-December



2025 Cold Stun Report – Water Temperature Triggers



Water Temperature Triggers

- <5 °C for 8 days
- <3 °C for 24 hours

Stations/loggers available

- 43 stations
- 47 loggers

Stations/loggers below trigger

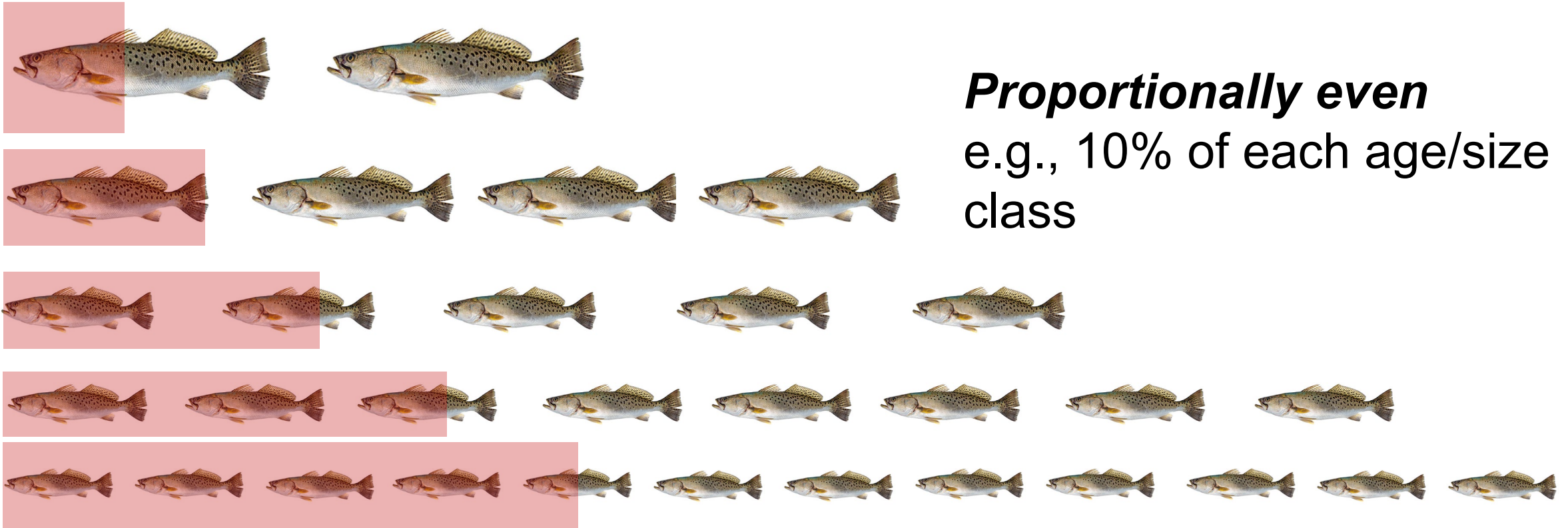
- 38 stations (88%)
- 42 loggers

2025 Cold Stun Report – Analysis Approach

- Objectives:
 - Identify potential impacts of cold winter water temperatures on relative abundance
 - Identify potential impacts of cold stuns on the size structure of the population

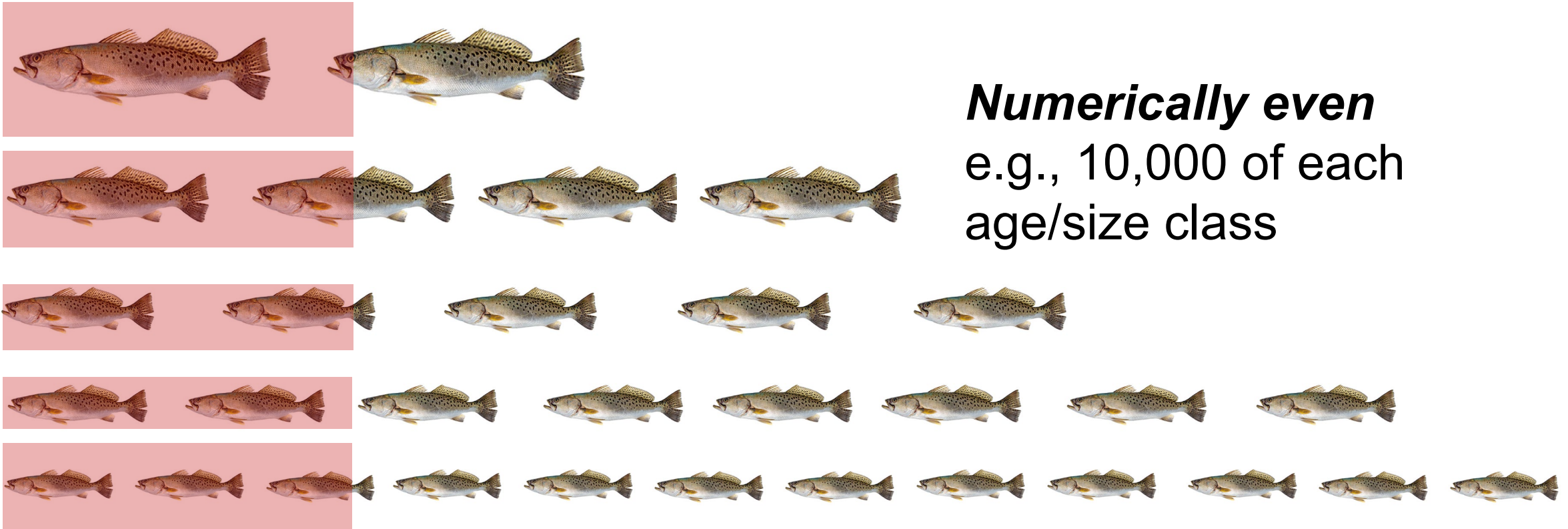
2025 Cold Stun Report – Analysis Approach

- How will mortality from cold stuns manifest in the spotted seatrout population?



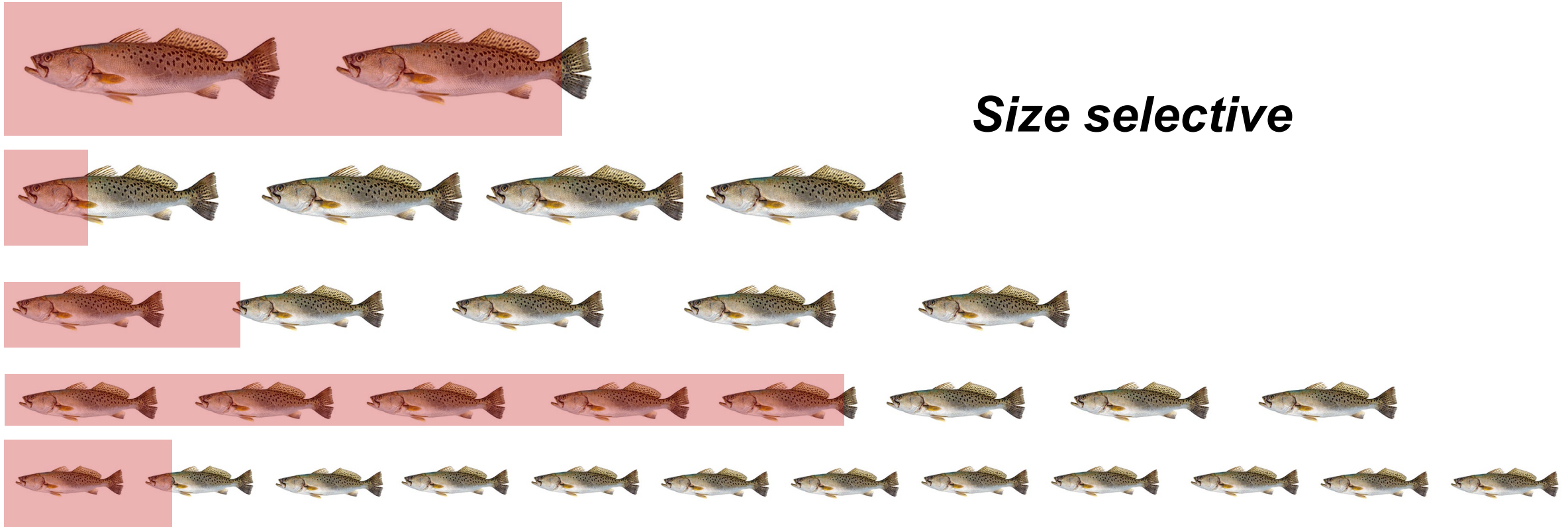
2025 Cold Stun Report – Analysis Approach

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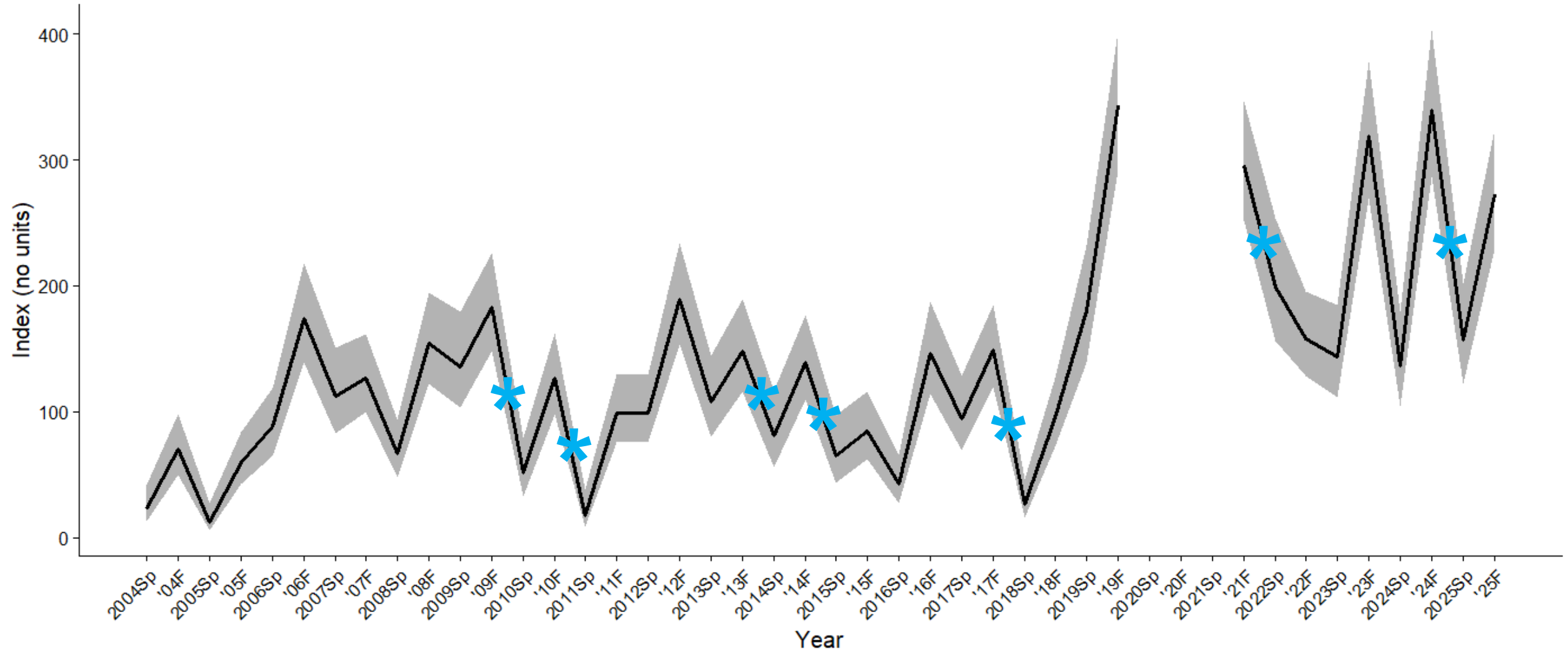
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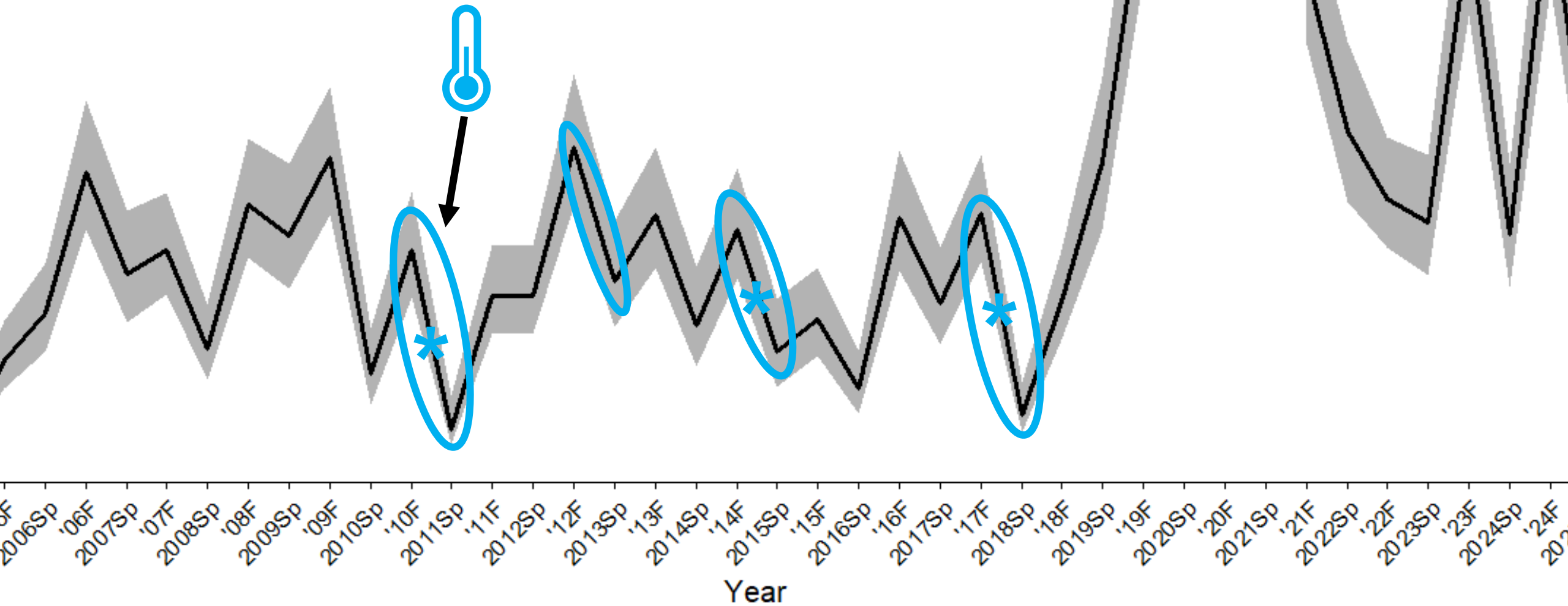
2025 Cold Stun Report – Analysis Approach

- Analysis with Division data
 - Seasonal index of relative abundance focused on fall and spring to limit influence of fishing mortality and reproduction
 - Relate temperature to overwinter changes in abundance (Brooks et al., 2024)
 - Size composition data, do we see declines in any size classes following cold stuns?
- Together, do we see drops in abundance due to colder temperatures and corresponding changes to the size structure of the population?

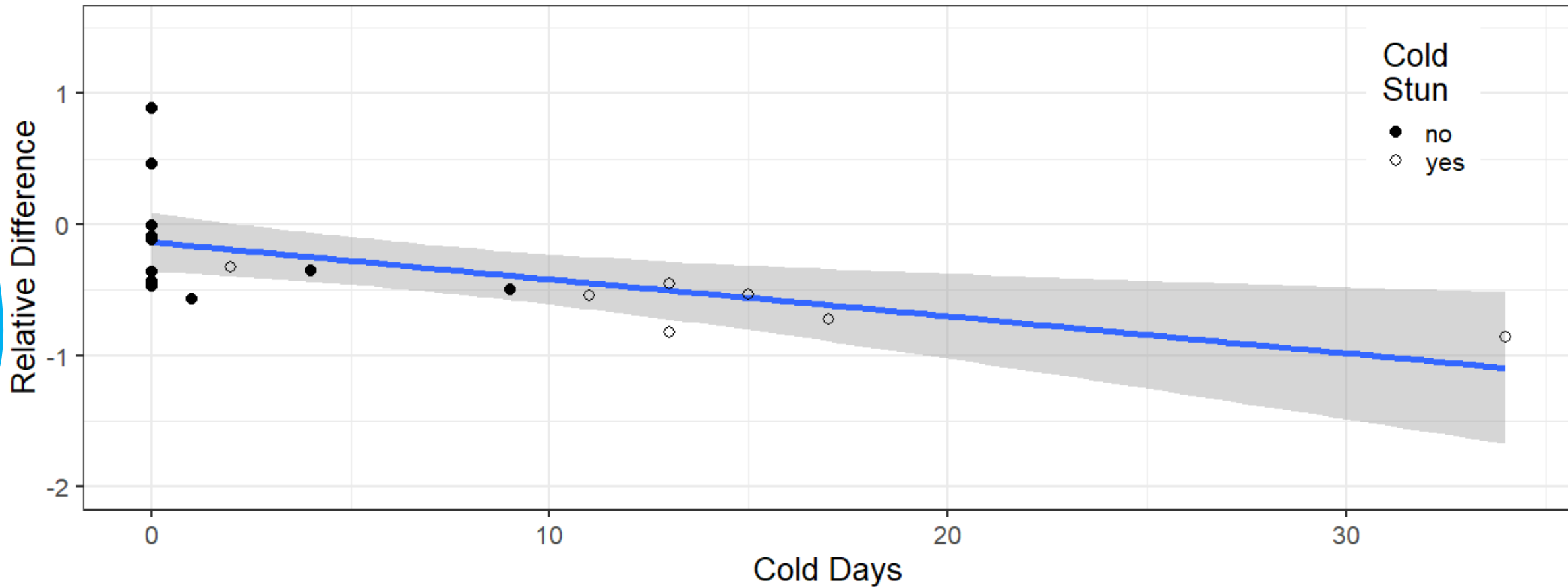
2025 Cold Stun Report – Relative Abundance



2025 Cold Stun Report – Relating Abundance to Winter Water Temps



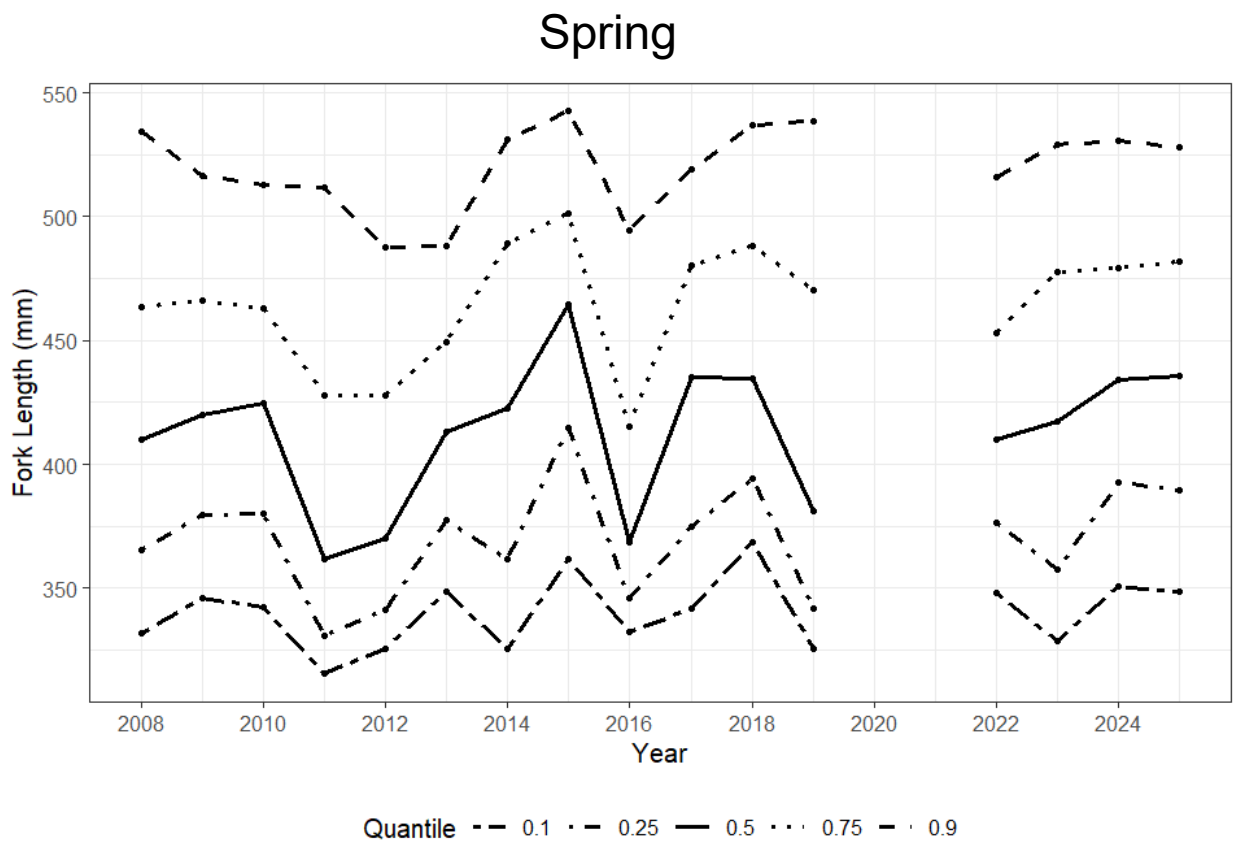
2025 Cold Stun Report – Relative Abundance & Water Temps



Cold Day = Avg. Daily Water Temp < 7°C

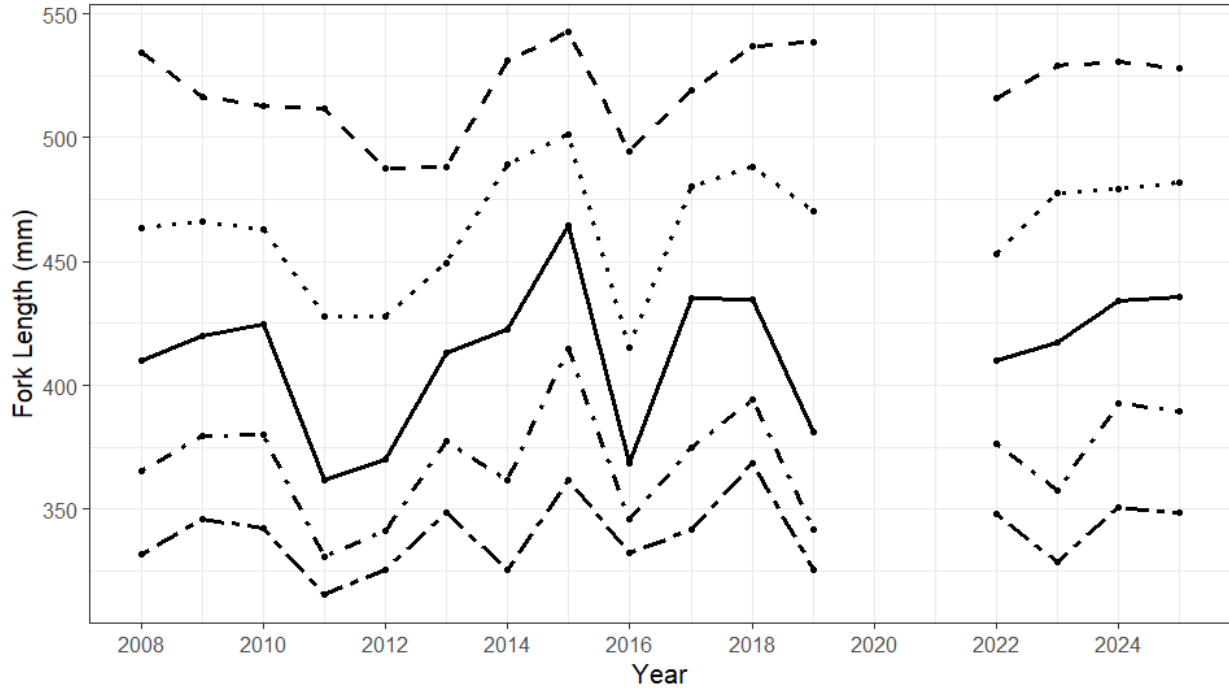


2025 Cold Stun Report – Length Composition



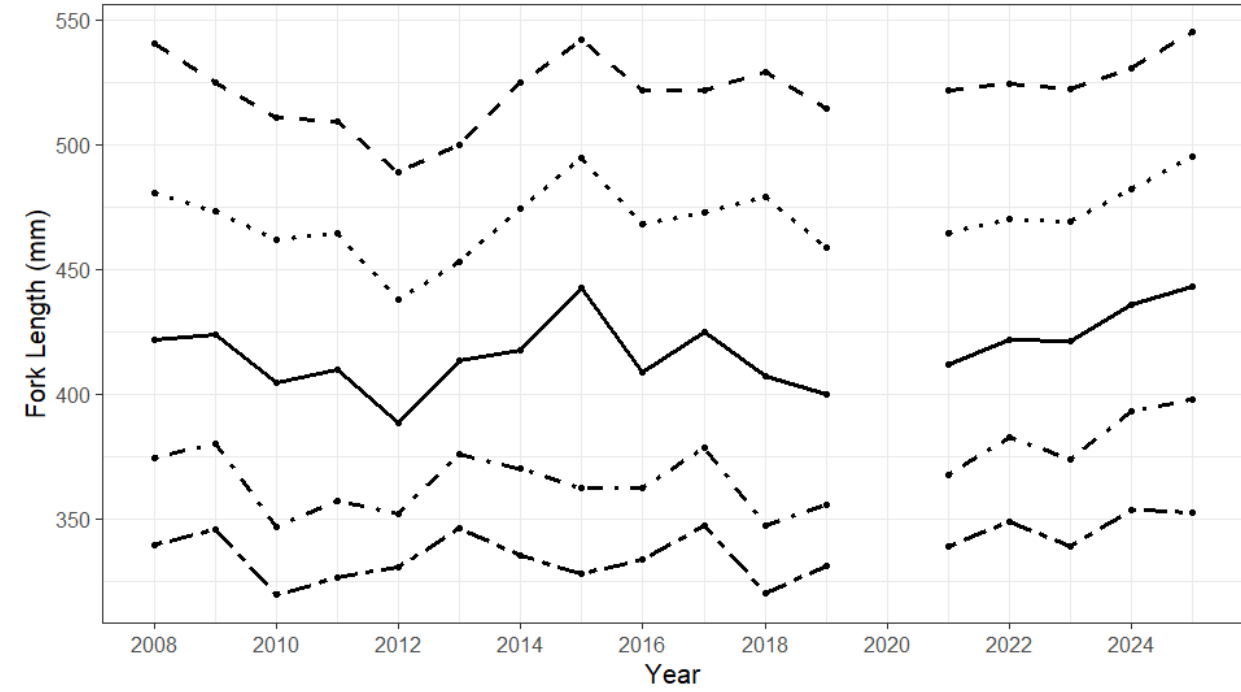
2025 Cold Stun Report – Length Composition

Spring



Quantile --- 0.1 -.- 0.25 — 0.5 ... 0.75 -.-.- 0.9

Annual



Quantile --- 0.1 -.- 0.25 — 0.5 ... 0.75 -.-.- 0.9

2025 Cold Stun Report – Recommendations

Based just on January 2025 cold stun

- No additional management measures
- Decrease in spring abundance
- More cold days => negative abundance trend
- Most effects short-lived
 - Life history
 - Division response



2025 Cold Stun Report – Recommendations

Based just on January 2025 cold stun

- No additional management measures
- Decrease in spring abundance
- More cold days => negative abundance trend
- Most effects short-lived
 - Life history
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Winter 2026 cold stun

- Not appropriate to evaluate 2025 cold stun as a standalone event
- Will evaluate combined effects of back-to-back cold stuns



Questions?

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