

April 2024 update on
development of a gear
modification to reduce potential
for killer whale entanglements

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Background: 2023 steps to avoid KW captures in Bering Sea DWF fishery



- No running fish from factory during setting/hauling (i.e. no discards)
- Running upwards of 12 hours to try to get away from the killer whales
- Twice daily counts of KWs around vessels to better understand number of animals engaged in scavenging activities and how it may be changing
- Gear modifications?

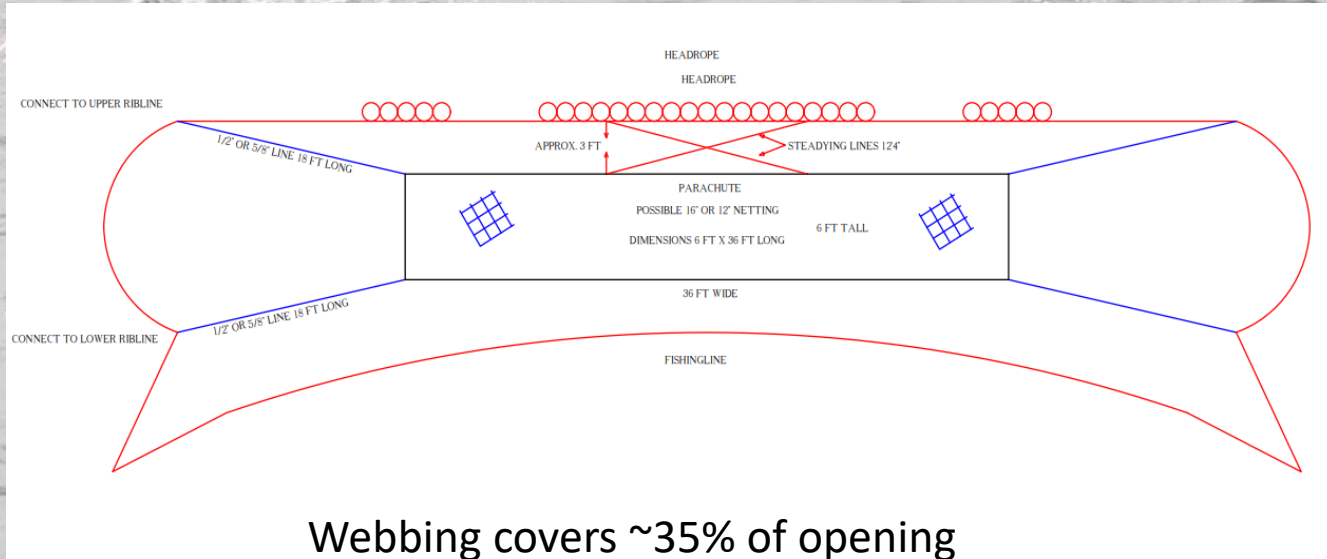
Gear modification?

Dr. Myers' hydrophone work (May 2023) indicated KW's in front of the nets at times during fishing and setting/hauling

- A80 captain deployed a “parachute” device designed to help KW's be more aware of net opening
 - Trialed in July & August 2023; no negative target effects and no KW's caught
 - “Parachute” covered ~30% of net entrance opening



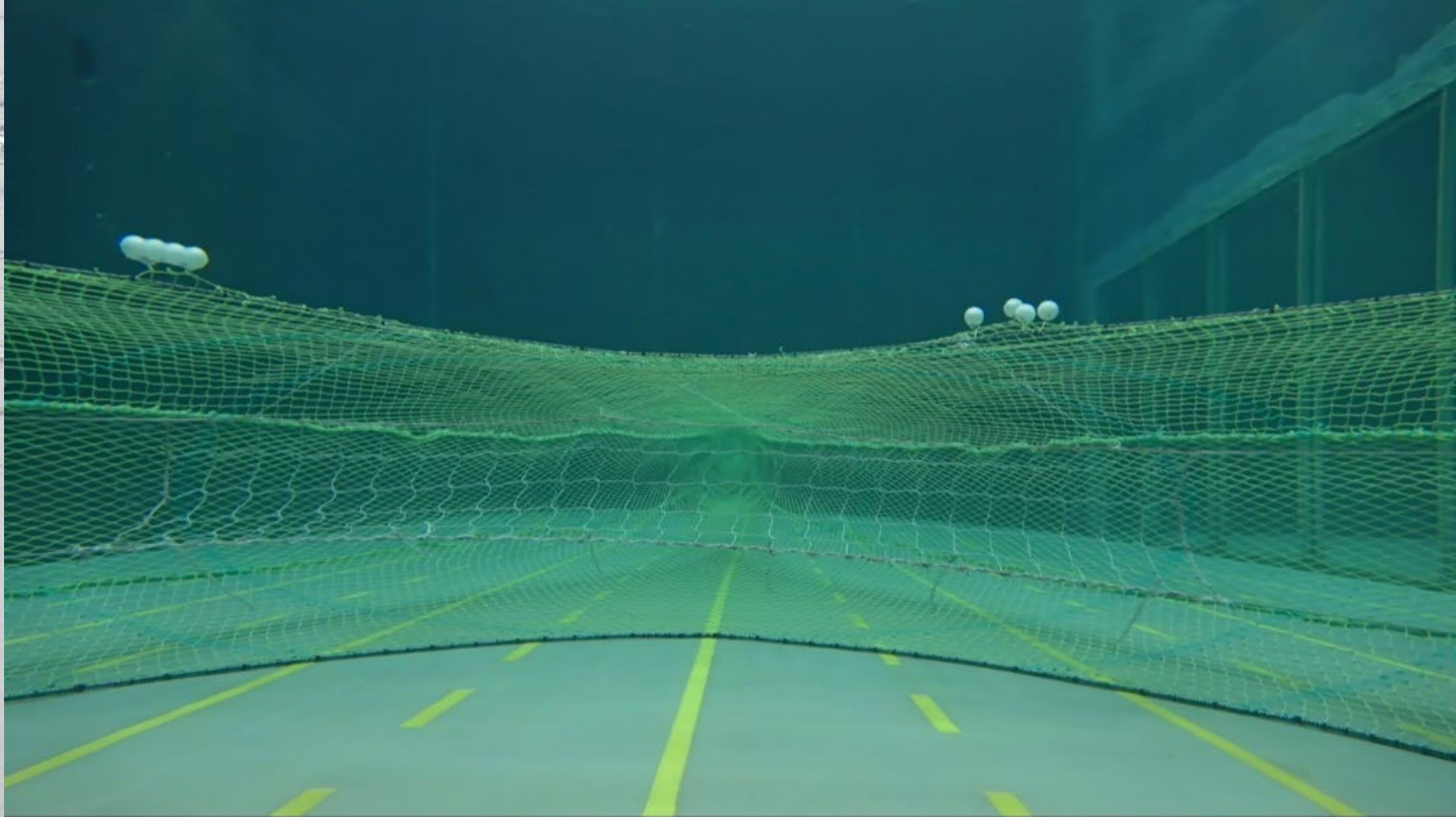
“Beta version” of parachute developed by A80 captain and Dantrawl July/August 2023



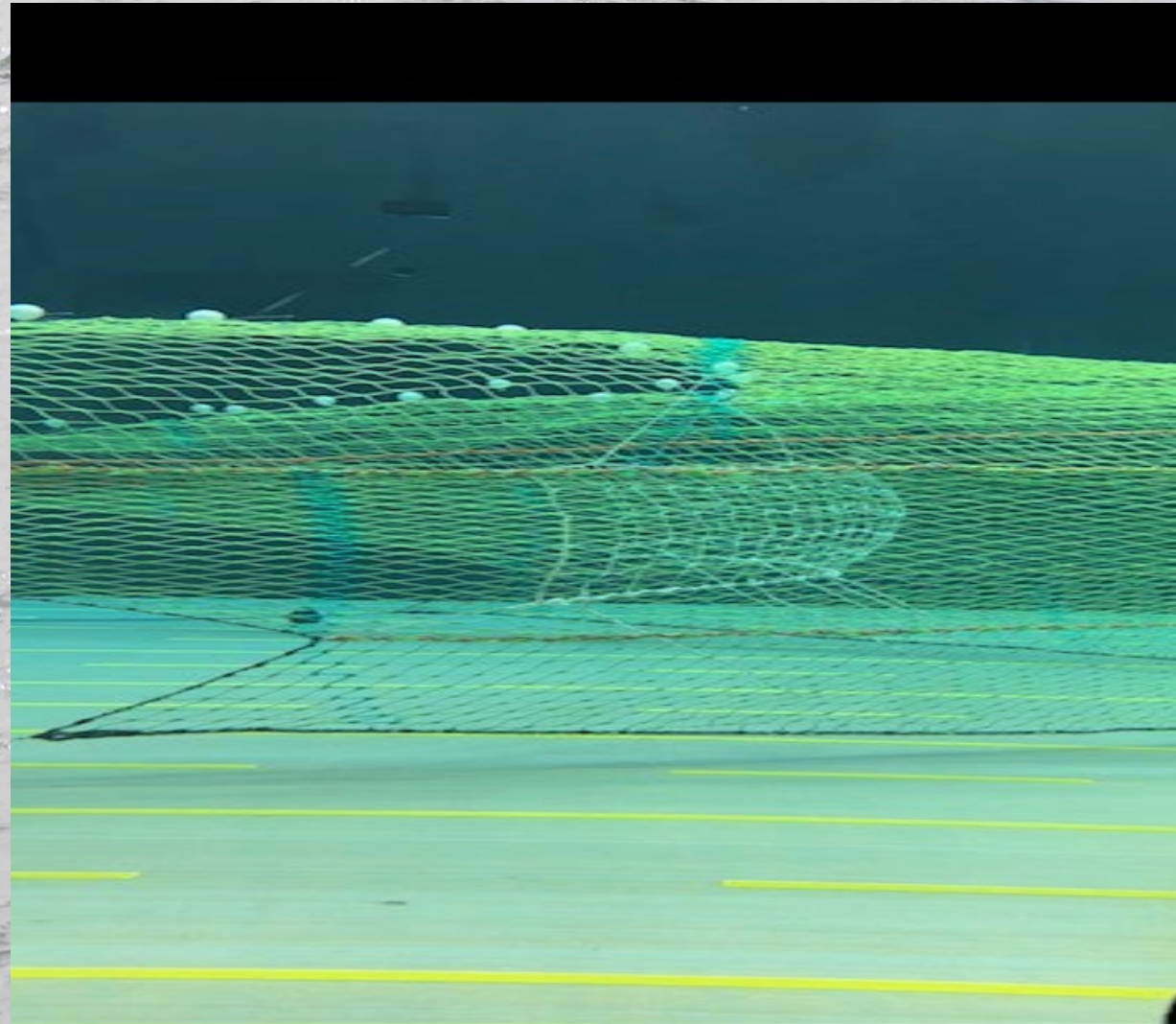
Objectives for Gear Modifications to Deep Water Flatfish (DWF) trawls

- 1) Cover a large portion of net entrance (e.g. >80%)
- 2) Incorporate Dr. Myers' expertise of KW behavior to make gear mod effective (e.g. panel location, best way to cover net entrance, applying information from hydrophone data collected in 2023)
- 3) Incorporate sound reflective materials?
- 4) Gear mods should have minimal effects on target species CPUE, avoid catching derelict crab pots; avoid tangling during deployment)

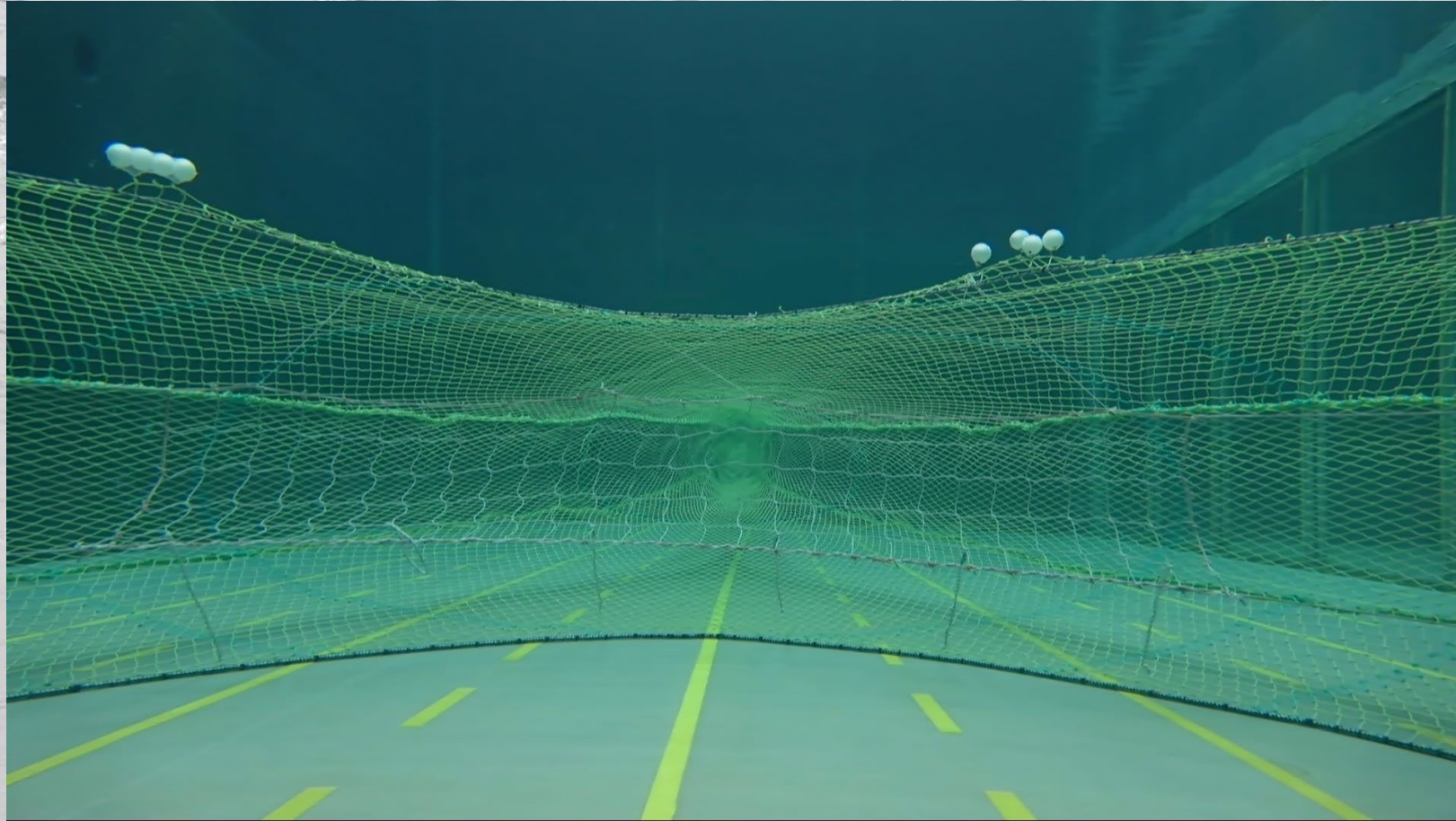
March 2024 flume tank model starting point was 2023 gear mod extended to ~60% of net opening width



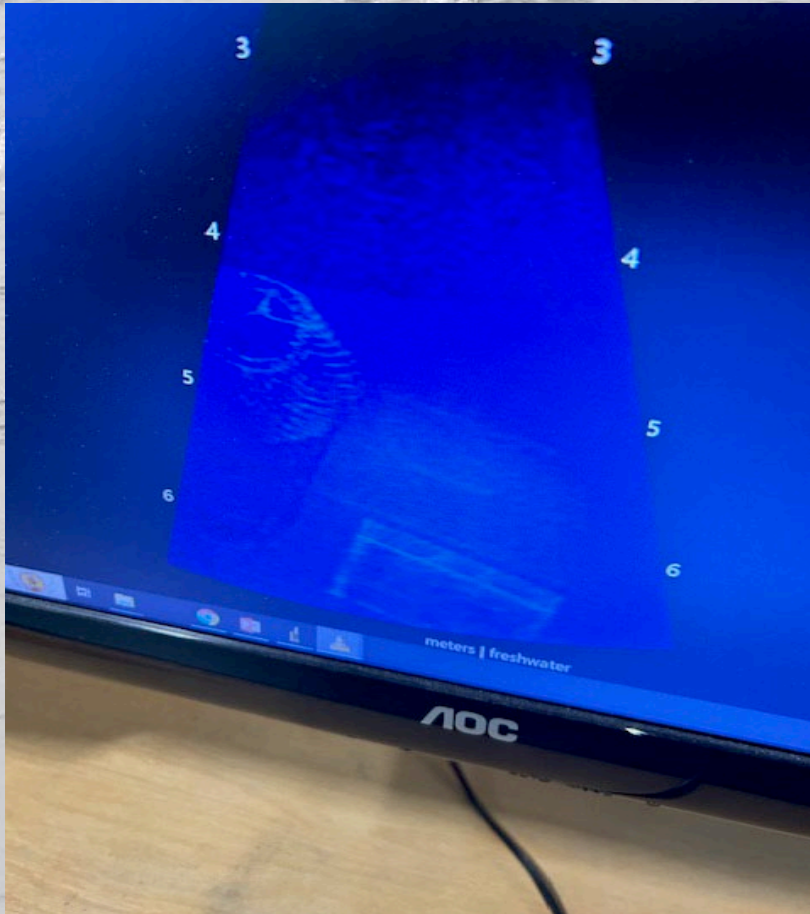
Moving the panel forward to protect KWs more effectively



Blocking the area above panel with crosslines and below with droppers spaced across bottom



Testing echo-reflectivity of Eurostone as material for KW gear mod at tank and NMMF (upcoming)



EuroStone 2.2 mm being tested in Scotland in November 2020. Photo courtesy WireCo.

Steps going forward to implement and evaluate effectiveness of KW gear mod in BS DWF starting May 2024

- All vessels in fishery will be using same gear mod for all DWF fishing*
- Video on boats to verify gear mod positioned correctly during fishing and haul backs
- Funding from NOAA's PR Division for acoustic data collections with hydrophones during 2024 fishery and analysis of those data
- BREP 2024-2025 proposal cycle for hydrophone array purchase, other specialized equipment, additional flume tank design work if needed, data analysis

Thanks for your attention. Questions....?

