

HOW DATA ARE BEING USED IN THE REAL WORLD

Examples of supporting nearshore management & emerging issues



Improving Stock Assessments - Fisheries Management

Cabezon Assessment Cabezon are popular in both the nearshore sport and commercial fisheries. Our marine reserves monitoring surveys provided the following important data in the cabezon stock assessment in 2019. **We are the only nearshore monitoring program currently collecting these data in Oregon.**

Juvenile Fish Surveys:

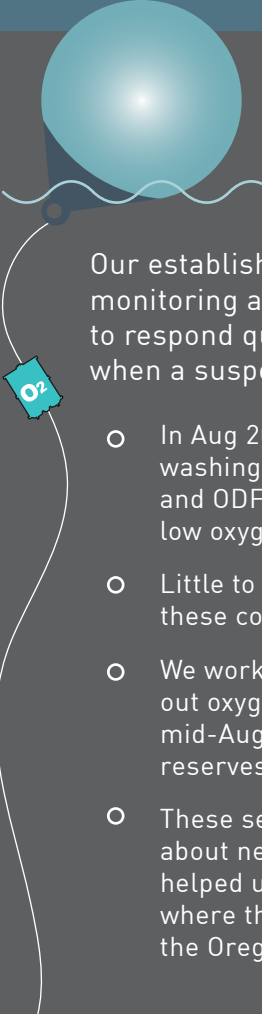
- Our data were used to help stock assessors understand how quickly young cabezon grow.
- These data are often difficult for stock assessors to come by because collecting and aging these very small (< 2 in) fish is challenging.
- These surveys are a collaboration with OSU and the Oregon Coast Aquarium.

Hook-and-Line Surveys:

- Our data were used by stock assessors to help ground truth the population trends in the 2019 cabezon assessment.
- These data are unique because they are fishery-independent, so they aren't influenced by management measures such as size or bag limits, or socioeconomic factors such as market demand.
- We're exploring how our hook-and-line survey data can contribute to future nearshore fish stock assessments, such as the next black rockfish assessment.

Emerging Ocean Issues

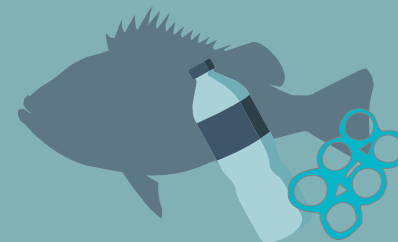
Low Oxygen (Hypoxia)



Our established monitoring program, with 3 staff monitoring at 13 sites along the coast, allows us to respond quickly and deploy oxygen sensors when a suspected hypoxia event occurs.

- In Aug 2018, reports of dead fish and crabs washing up on beaches prompted researchers and ODFW managers to believe there was a low oxygen event off our coast.
- Little to no data were available to confirm these conditions or the extent.
- We worked with Dr. Francis Chan at OSU to set out oxygen sensors on crab pots from mid-Aug through mid-Sep, during our marine reserves monitoring hook-and-line surveys.
- These sensors provide immediate information about nearshore ocean oxygen levels and helped understand the extent of when and where these conditions were occurring along the Oregon coast.

Microplastics in Fish



Our ongoing monitoring at marine reserves and comparison areas is attracting additional research of high interest to Oregonians.

- In 2018, we were approached by Dr. Susanne Brander at OSU to work on her pilot project studying microplastics in nearshore rockfish.
- We collected nearshore rockfish samples during our hook-and-line monitoring surveys for the pilot project.
- OSU researchers then looked to see if microplastics were found in the stomach contents of the collected fish.
- The study found that ~ 20% of the fish collected near Government Point/Cascade Head and Seal Rock/Cape Perpetua had microplastics in their stomachs.
- We're continuing to collaborate with OSU to expand this project.