



Reducing Bycatch with LED Fishing Lights

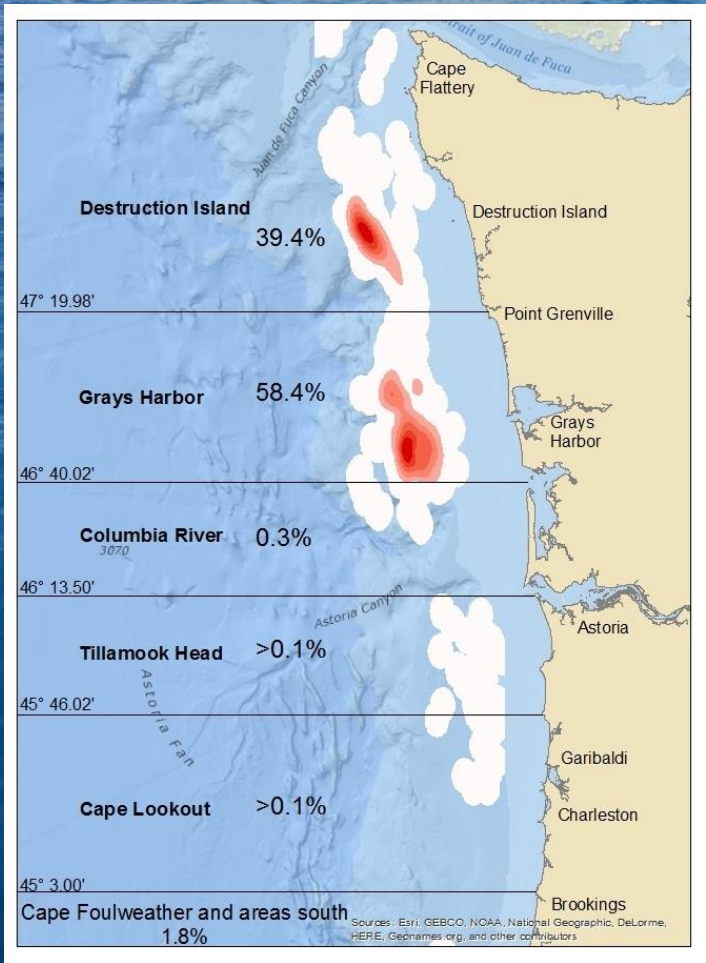
Washington Coastal Shrimp Trawl Fishery

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- **Background**
 - Fishery description
 - Bycatch concerns: Actions
- **Rule Proposal**
 - Purpose and Need
 - Draft Language



Coastal Pink Shrimp Trawl Fishery



**WA Commercial Pink Shrimp
Percent Catch by Area, 2017**

- **Offshore WA, OR, CA**
 - 75 to 125 fathoms
 - Closed in nearshore coastal WA state waters

- **Certified Sustainable**



- Marine Stewardship Council

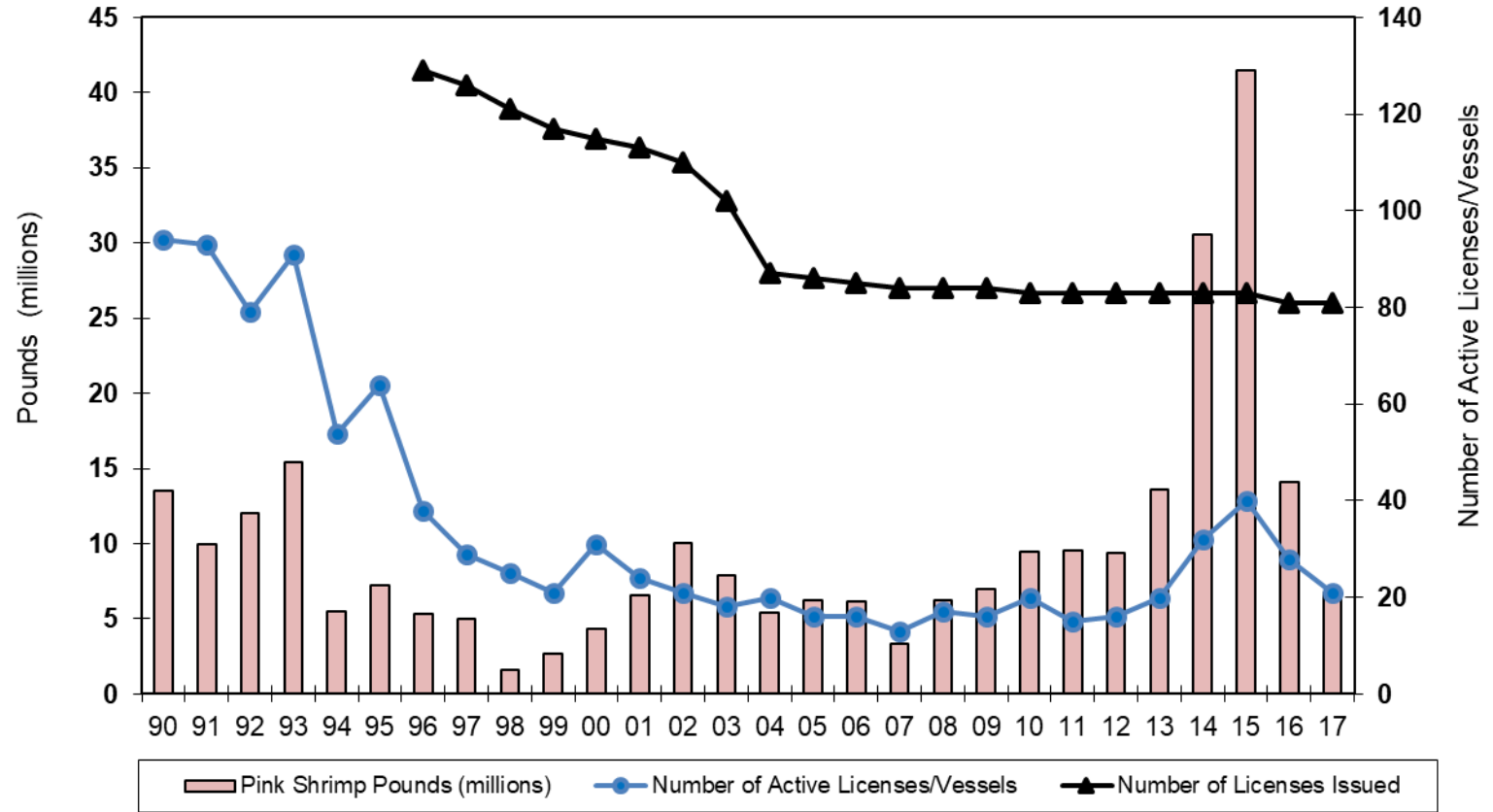
- **Observer Coverage**

- NMFS WCGOP

Information is subject to changes and amendments over time.

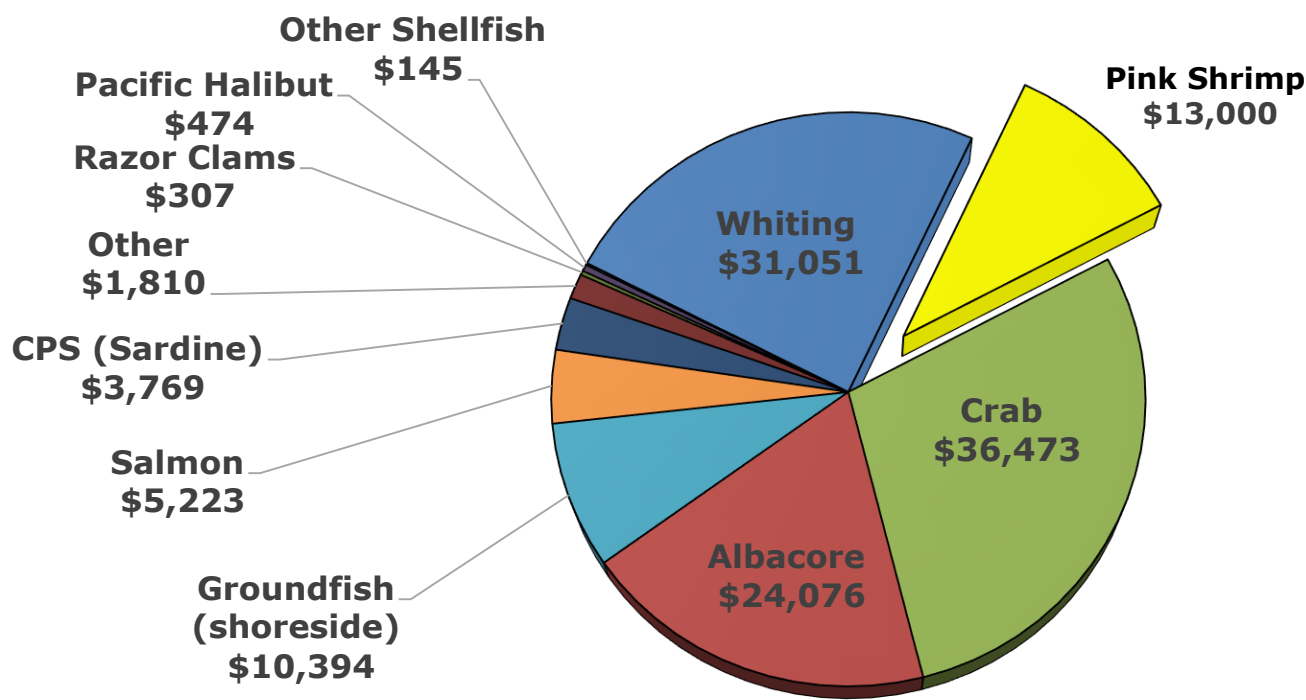
Coastal Pink Shrimp Trawl Fishery

**Annual Pink Shrimp Pounds Landed
Number of Active Vessels and Number of Licenses
1990-2017**



A limited entry license program established 143 licenses in 1994. The number of license issued represents the total number of licenses available.

Coastal Commercial Fisheries Average Annual Ex-vessel Value 2012-2016 (Thousands \$)



- **Bycatch concerns**

- Rockfish: Federal Rebuilding Programs
- Eulachon: ESA Threatened Species, 2010



Canary Rockfish

- **NMFS Eulachon Recovery Plan**

- September 2017
- 5 year action items



Eulachon smelt



WDFW Observer Project

• **LED Fishing Light Research**

- Pacific States Marine Fisheries Commission and ODFW, 2015
- Significant bycatch reductions
 - eulachon \approx 90%
 - certain rockfish and flatfish \approx 56% – 82%

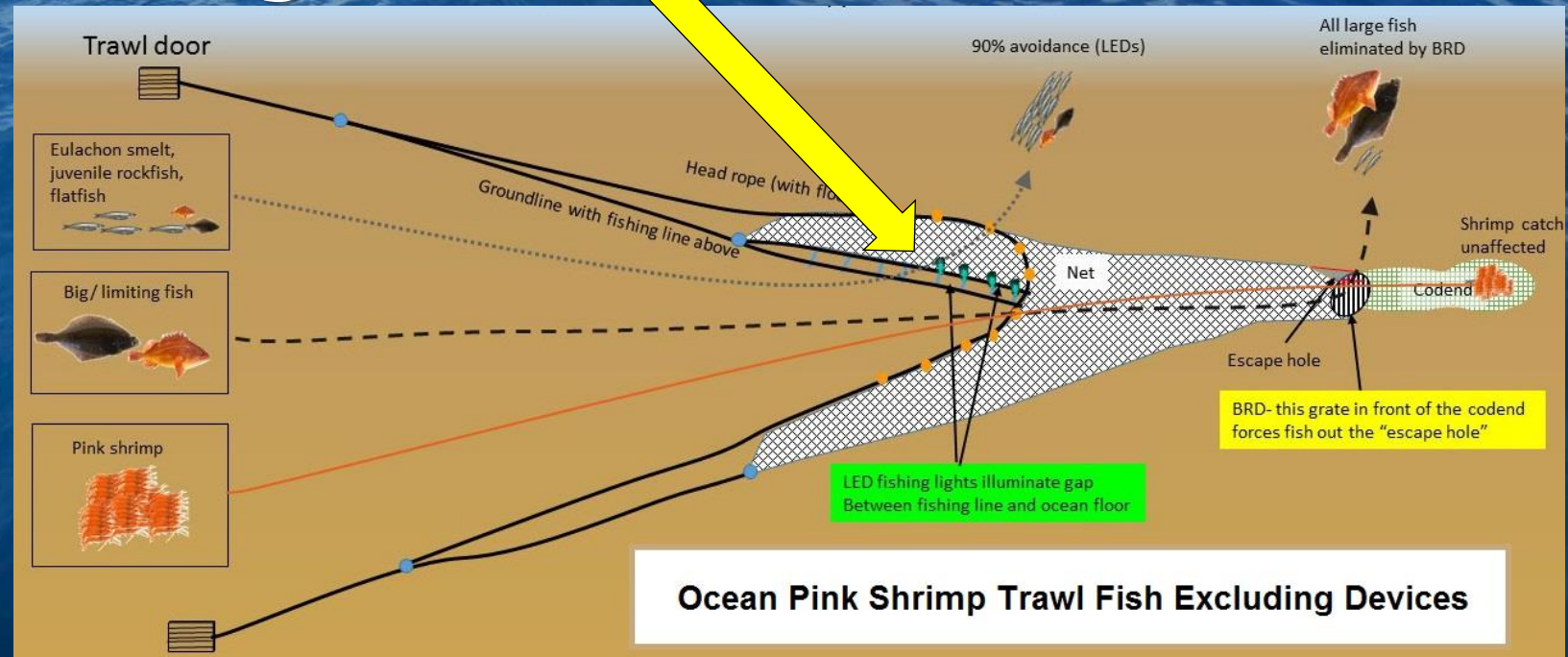


Bycatch prior to sorting



Shrimp Trawler

Placement of LED lights on fishing net



Ocean Pink Shrimp Trawl Fish Excluding Devices

- **Proposal**

- Amend WAC 220-340-500 to require the use of LED Fishing Lights on the nets of commercial shrimp trawl vessels.
- Effective 2018 Fishing Season



LED Fishing Light – Installed on footrope



Sorting catch

- **LED Fishing Light Rule**
 - 5 devices per net
 - Provision for future testing by shrimpers
 - ≈\$1,300 average annual cost per vessel
- **Outreach**
 - Submitted joint SK Grant: One-time purchase of lights
 - WDFW Survey 2016-2017
 - WA Pink Shrimp Fishery Newsletters
 - Public meeting: November, 2017



Questions?

For more information

https://wdfw.wa.gov/fishing/commercial/shrimp/monitoring_research.html