Value and Volume of Fisheries Of Alaska

Exvessel Value of Fisheries
~ $2B annually
- Salmon 37%
- Pollock 23%
- Other Species 1%
- Flatfish, Rockfish & Atka Mackerel 9%
- Halibut & Sablefish 10%
- Pacific Cod 10%
- Crab 10%

Source: ASMI / MacDowell Group
Based on 2017-2018 Data

Volume of Fisheries
~ 5.5B pounds annually
- Salmon 14%
- Pollock 59%
- Other Species 1%
- Flatfish, Rockfish & Atka Mackerel 14%
- Halibut & Sablefish 1%
- Pacific Cod 10%
- Crab 1%

Salmon is managed by the State of Alaska
Other fisheries primarily managed by the North Pacific Council & NOAA Fisheries or in co-management agreements with the State of Alaska
What Is Bycatch?

Bycatch is defined under the Magnuson-Stevens Act

“...fish which are harvested in a fishery, but are not sold or kept for personal use, and includes economic discards and regulatory discards....”
Why Does Bycatch Occur?

**Bycatch occurs in all fisheries** regardless of gear type, area fished, or time of harvest, but the amount and type of bycatch varies.

**Some bycatch is economic discards** – fish are poor quality, no market exists, or other reasons.

**Most bycatch is regulatory discards** – only a specific type of gear is allowed, the fish is caught out-of-season, the fish is too small, or other regulation.
How Do We Receive Perspectives on Managing Bycatch?

The Council process, outreach efforts, Tribal Consultations, and input during the rule making process.

There are many views on balancing bycatch with other legal requirements & we strive to provide multiple opportunities to engage.
What Do We Consider When Managing Bycatch?

The Magnuson-Stevens Act requires balancing...

- Minimizing bycatch & bycatch mortality ... to the extent practicable
- Achieving ... the optimum yield from each fishery
- Fair and equitable allocation
- Sustained participation of communities
- & other factors
What Are The Main Types of Bycatch?

**Groundfish**
- Bycatch for everything but halibut, salmon, herring, and shellfish

**Focus Bycatch Species**
- Halibut
- Salmon
- Crab

Subject to strict controls & reporting requirements, “Prohibited Species Catch”
Groundfish Bycatch by Gear in Federal Fisheries Off Alaska (2021)

- **Retained Species:** Pollock, Flatfish, Rockfish, Sablefish, and Sculpins
  - **Primary Bycatch Species:** Pollock, Flatfish, Skates, and Rockfish
- **Retained Species:** Pacific Cod, Sablefish, and Greenland Turbot
  - **Primary Bycatch Species:** Skates, Sculpins, Pacific Cod, and Sharks
- **Retained Species:** Pacific Cod and Sablefish
  - **Primary Bycatch Species:** Octopus and Sculpins

<table>
<thead>
<tr>
<th>2020 Federal Groundfish Fisheries</th>
<th>Retained (mt)</th>
<th>Bycatch (mt)</th>
<th>% Retained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trawl Fisheries</td>
<td>1,804,602</td>
<td>36,221</td>
<td>98%</td>
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<tr>
<td>Hook-and-Line Fisheries</td>
<td>72,910</td>
<td>14,535</td>
<td>83%</td>
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<tr>
<td>Pot Fisheries</td>
<td>27,739</td>
<td>928</td>
<td>97%</td>
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</tbody>
</table>

Source: NOAA Fisheries
Halibut Bycatch off Alaska (2006 - 2021)

Percentage of Coastwide Halibut Removals as Bycatch
(Source: IPHC)

Chinook Salmon Genetic Composition Areas

Templin et al., 2011
Gulf of Alaska Chinook Salmon Bycatch (2003 – 2021)

Genetic Composition Estimate (2019 Pollock Fishery)

- Coastal SEAK: 10%
- British Columbia: 39%
- WA/OR/CA: 33%
- All Other Areas (AK, Asia): 18%


* 2021 Data through November 9, 2021
Bering Sea Chinook Salmon Bycatch (2003 - 2021)

Number of Chinook Salmon

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<thead>
<tr>
<th>Year</th>
<th>Number of Chinook Salmon</th>
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<td>2020</td>
<td>0</td>
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<tr>
<td>2021</td>
<td>0</td>
</tr>
</tbody>
</table>

Genetic Composition Estimate (2019 Pollock Fishery)

- Coastal Western Alaska: 39%
- Northern Alaska Peninsula: 14%
- British Columbia: 25%
- WA/OR/CA: 8%
- Yukon River: 1%
- All other Areas: 13%


* 2021 Data through November 9, 2021
Chum Salmon Genetic Composition Areas

Bering Sea Chum Salmon Bycatch (2003 – 2021)

Genetic Composition Estimate (2019 B season Pollock Fishery)

- SE Asia: 39%
- NE Asia: 18%
- W Alaska: 16%
- Yukon: 23%
- SW AK: 4%
- PNW & EGOA: < 1%


* 2021 Data through November 9, 2021
Chinook salmon bycatch in the Bering Sea is ~ 3% & Chum salmon bycatch in the Bering Sea is ~ 1% of the total returns to Western Alaska Rivers. Percentage of returns is low, but bycatch amounts remain a concern.
Bristol Bay Red King Crab Bycatch (2016 – 2021)

Total Number of Bristol Bay Red King Crab and Bycatch

- Total Crab: 45
- Total Bycatch: 40
- Total Trawl: 35
- Total Hook & Line: 30

Number of Animals

2016: 350,000
2017: 300,000
2018: 250,000
2019: 200,000
2021: 150,000

Source: Zacher et al. 2021, Table 7, & NOAA Fisheries

* 2021 Bycatch data through November 5, 2021
How Do We Measure Bycatch?

• Largest At-sea monitoring program in the Nation
  • Over 40,000 observer days of observation.
  • 100% (or 200%) observer coverage on vessels in catch share programs, and all trawl catcher/processors
  • Electronic monitoring program on pot and hook & line vessels, and pollock vessels
  • Annual scientific review process allowing continuous improvement
How Do We Control Bycatch?

• Bycatch caps (limits)
• Closure areas
• Limit fishing for certain species
• Limit the use of specific gear
• Link Chinook bycatch caps to Western Alaska returns
• Catch share management allows fleets to avoid a “race for fish”, share information, and adopt better fishing practices
• Experimental Fishing Permits that allow testing of new methods to reduce bycatch through gear modifications
• Constant communication with the fleets to help them avoid bycatch “hot spots” and manage effort
• Facilitate industry efforts voluntary cooperatives, and “stand downs”
What Will We Be Doing in the Future?

- Implement Pacific cod catch share program with reductions in halibut & crab bycatch
- Link halibut bycatch caps to abundance
- **Improve communication** with communities, Tribal Governments, and the fishing fleets
- **Encourage more industry efforts** -- voluntary cooperatives, and “stand downs”
- Facilitate additional catch share programs through the Council process
- **Constantly review performance**!
More Information & Contacts

• NOAA Fisheries Alaska Region
  www.alaskafisheries.noaa.gov

• North Pacific Fishery Management Council
  www.npfmc.org

• State of Alaska Department of Fish and Game

• International Pacific Halibut Commission
  www.iphc.int