Lower Cook Inlet
Commercial Salmon Fisheries

Presented to the Alaska Board of Fisheries
by Glenn Hollowell, ADF&G

December 10 – 13, 2019
Overview

• Lower Cook Inlet Area (LCI) geography
• Overall historic area harvests and gear
• Harvest by district
• Fisheries enhancement
• 2019 commercial harvest
• Proposals before the board
Overview - Geography - Area harvests - District harvests - Enhancement - 2019 Harvest - Proposals
Cook Inlet (Area H)

Overview - Geography - Area harvests - District harvests - Enhancement - 2019 Harvest - Proposals
Overview - Geography - Area harvests - District harvests - Enhancement - 2019 Harvest - Proposals
Seine Harvests in LCI, 1951-2019

Overview-Geography-**Area harvests**-District harvests-Enhancement-2019 Harvest- Proposals
Set Gillnet Harvests in LCI, 1951-2019

Overview-Geography-**Area harvests**-District harvests-Enhancement-2019 Harvest- Proposals
Southern District Set Gillnet Harvests, 1951-2019

Overview-Geography-Area harvests- **District harvests** -Enhancement-2019 Harvest- Proposals
Southern District Purse Seine Harvests, 1951-2019

Overview-Geography-Area harvests- District harvests -Enhancement-2019 Harvest- Proposals
Outer District Harvests
Outer District Harvests

Overview - Geography - Area harvests - District harvests - Enhancement - 2019 Harvest - Proposals
Outer District Harvest by Species

Overview-Geography-Area harvests- **District harvests** -Enhancement-2019 Harvest- Proposals
Eastern District Harvests
Kamishak Bay District Harvests

Overview-

Geography-

Area harvests-

District harvests

-Enhancement-

2019 Harvest-

Proposals
Kamishak District Harvest by Species

Overview-Geography-Area harvests- **District harvests** -Enhancement-2019 Harvest- Proposals
Three hatcheries in LCI

- Trail Lakes Hatchery (sockeye and coho salmon)
- Tutka Bay Lagoon Hatchery (pink salmon)
- Port Graham Hatchery (pink salmon)
LCI hatchery management transitioned from ADF&G to CIAA management in the early 1990s.

Overview-Geography-Area harvests- District harvests -Enhancement-2019 Harvest- Proposals
Pink Salmon harvests
(based solely on harvest location within SHA)

Tutka hatchery management transitioned from ADF&G to CIAA management in 1994. No pink salmon releases from this facility 2005-2011.
SHA Primer

- **SHA – “Special Harvest Area”**
  - Are situated near hatcheries, or hatchery remote release sites
  - SHAs do not have significant stocks of the salmon species that are being enhanced

- Prior to thermal marking, harvest that occurred within the SHA was the only method of estimating total hatchery harvest without sampling very large numbers of salmon outside of the SHA.

- Consequently, during years where the SHA remained closed to common property harvest, vessels could fish just outside of the SHA boundaries and harvest hatchery returns. In those years, while the commercial harvest was zero in the SHA on hatchery returns, there were harvests occurring just outside of the SHA where hatchery produced fish were caught in significant numbers. Sometimes the common property harvest of hatchery produced fish overall in those years prior to thermal marking has been inaccurately expressed as zero.

Map showing Tutka Bay SHA, Hazel Lake SHA, China Poot SHA, and Halibut Cove SHA.
Otoliths were collected from commercially caught salmon in the Southern District. All set gillnet otoliths were collected from outside of hatchery special harvest areas (SHAs). Otoliths from purse seine harvested fish were primarily collected outside of SHAs.
### Sockeye Salmon otolith sampling

#### Set gillnet vs Purse seine

<table>
<thead>
<tr>
<th>Stat week, (Month)</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>23, (June)</td>
<td>18.9%</td>
<td>31.3%</td>
<td>2.0%</td>
<td>30.0%</td>
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<td></td>
</tr>
<tr>
<td>24, (June)</td>
<td>10.8%</td>
<td>40.2%</td>
<td>3.1%</td>
<td>12.6%</td>
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<td></td>
</tr>
<tr>
<td>25, (June)</td>
<td>4.4%</td>
<td>37.2%</td>
<td>38.7%</td>
<td>9.7%</td>
<td>16.5%</td>
<td>91.9%</td>
</tr>
<tr>
<td>26, (June)</td>
<td>28.7%</td>
<td>21.3%</td>
<td>19.0%</td>
<td>21.6%</td>
<td>14.9%</td>
<td>96.8%</td>
</tr>
<tr>
<td>27, (July)</td>
<td>0.0%</td>
<td>46.3%</td>
<td>12.1%</td>
<td>28.1%</td>
<td>13.0%</td>
<td>16.8%</td>
</tr>
<tr>
<td>28, (July)</td>
<td>2.1%</td>
<td>39.6%</td>
<td>19.4%</td>
<td>27.2%</td>
<td>7.9%</td>
<td>17.1%</td>
</tr>
<tr>
<td>29, (July)</td>
<td>6.3%</td>
<td>13.8%</td>
<td>7.1%</td>
<td>11.9%</td>
<td>7.1%</td>
<td>6.2%</td>
</tr>
<tr>
<td>30, (July)</td>
<td>8.4%</td>
<td>8.4%</td>
<td>14.4%</td>
<td>6.7%</td>
<td>10.3%</td>
<td>27.0%</td>
</tr>
<tr>
<td>31, (July-Aug)</td>
<td>17.3%</td>
<td>25.9%</td>
<td>5.9%</td>
<td>12.8%</td>
<td>6.5%</td>
<td>27.3%</td>
</tr>
<tr>
<td>32, (August)</td>
<td>11.2%</td>
<td>11.5%</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Overall average marked level in samples</strong></td>
<td><strong>4.2%</strong></td>
<td><strong>21.5%</strong></td>
<td><strong>21.0%</strong></td>
<td><strong>20.9%</strong></td>
<td><strong>9.2%</strong></td>
<td><strong>15.9%</strong></td>
</tr>
</tbody>
</table>

Note: Bottom and top of the boxes are 25th and 75th percentile. Horizontal line in the box is the 50th percentile, (median). Circle is the mean, (average). Whiskers show the minimum and maximum values.

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**Overview-Geography-Area harvests- District harvests -** **Enhancement** -2019 Harvest- Proposals
Pink Salmon otolith sampling

<table>
<thead>
<tr>
<th>Stat week, (Month)</th>
<th>2017</th>
<th>2018</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stat week 27, (July)</td>
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<tr>
<td>Stat week 28, (July)</td>
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<tr>
<td>Stat week 29, (July)</td>
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<td></td>
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<tr>
<td>Stat week 30, (July)</td>
<td>20.8%</td>
<td>60.8%</td>
<td>55.2%</td>
<td>81.8%</td>
<td>16.0%</td>
<td>87.2%</td>
</tr>
<tr>
<td>Stat week 31, (July-Aug)</td>
<td>11.5%</td>
<td>42.6%</td>
<td>38.9%</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Stat week 32, (August)</td>
<td></td>
<td></td>
<td></td>
<td>77.7%</td>
<td>47.1%</td>
<td>35.4%</td>
</tr>
<tr>
<td>Stat week 33, (August)</td>
<td></td>
<td></td>
<td></td>
<td>88.2%</td>
<td>23.8%</td>
<td>83.5%</td>
</tr>
<tr>
<td>Stat week 34, (August)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12.8%</td>
<td></td>
</tr>
<tr>
<td>Stat week 35, (Aug-Sept)</td>
<td></td>
<td></td>
<td></td>
<td>1.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stat week 36, (September)</td>
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<td></td>
<td></td>
<td></td>
<td>94.6%</td>
</tr>
</tbody>
</table>

| Overall average marked level in samples | 16.1% | 47.3% | 68.0% | 82.3% | 27.5% | 74.5% |

Note: Bottom and top of the boxes are 25th and 75th percentile. Horizontal line in the box is the 50th percentile, (median). Circle is the mean, (average). Whiskers show the minimum and maximum values.
2.4 million fish with a preliminary ex-vessel value of $5.3 million.

- Sockeye salmon accounted for approximately 58% of the total value at $3.1 million and 13% of the harvest at 311,700 fish. Of those 155,000 were cost recovery fish valued at $1.5 million.

- Pink salmon accounted for approximately 36% of the value at $1.9 million, and 83.9% of the harvest at 2.0 million fish. Of those, 182,000 were cost recovery harvested and valued at $223,000.

- Chum salmon accounted for 4% of the value at $198,400 and 2% of the harvest at 55,500 fish.

- Coho salmon accounted for approximately 2% of the value at $88,000 and 1% of the harvest at 12,700 fish.

- The king salmon harvest was 736 fish with an estimated preliminary ex-vessel value of $36,000.
2019 LCI Commercial Salmon Proposals

There are 25 commercial, subsistence, and personal use proposals submitted:

(2) address seaweed and kelp harvest,
(2) address personal use salmon,
(12) address commercial salmon area or gear,
(5) address salmon hatchery regulations, and
(1) addresses commercial herring management.
2019 LCI Subsistence Salmon Proposals

- Seldovia subsistence fishery established in 1995
  - Provide salmon to subsistence users
  - Avoid hatchery king salmon returns to the Seldovia Harbor in June and July.

- Currently two subsistence fishing seasons,
  - April 1-May 30, two 48 hour periods
  - First 2 weekends in August, one 36-hour period each

- No ANS finding adopted to date

- Three proposals before the board
  - Proposal 18: Extend fishing season
  - Proposal 19: Expand fishing area
  - Proposal 20: Reduce spacing between nets
Thank you for your time.
Questions?