



# Lower Cook Inlet Commercial Salmon Fisheries

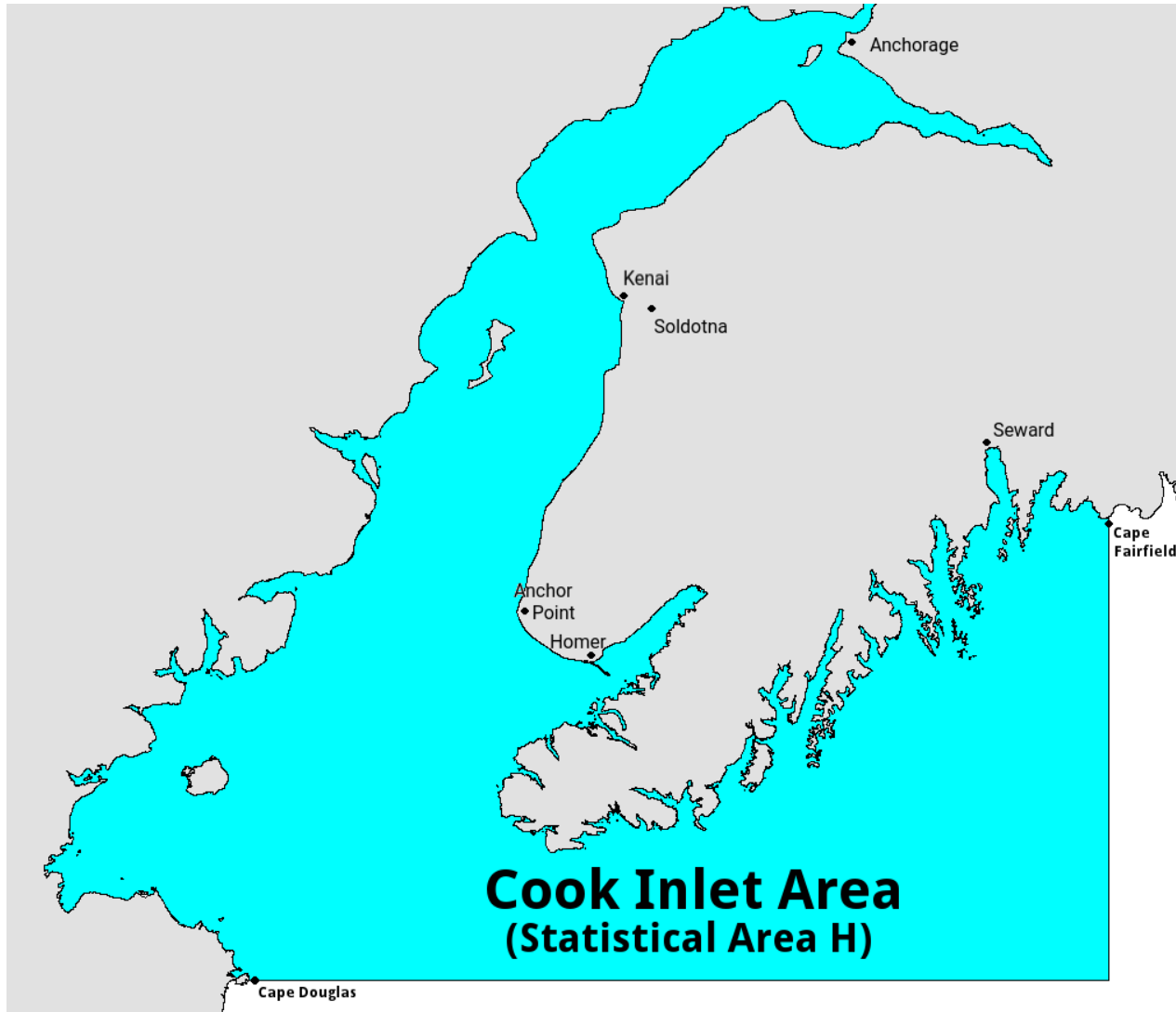
Presented to the Alaska Board of Fisheries  
by Glenn Hollowell, ADF&G  
December 10 – 13, 2019



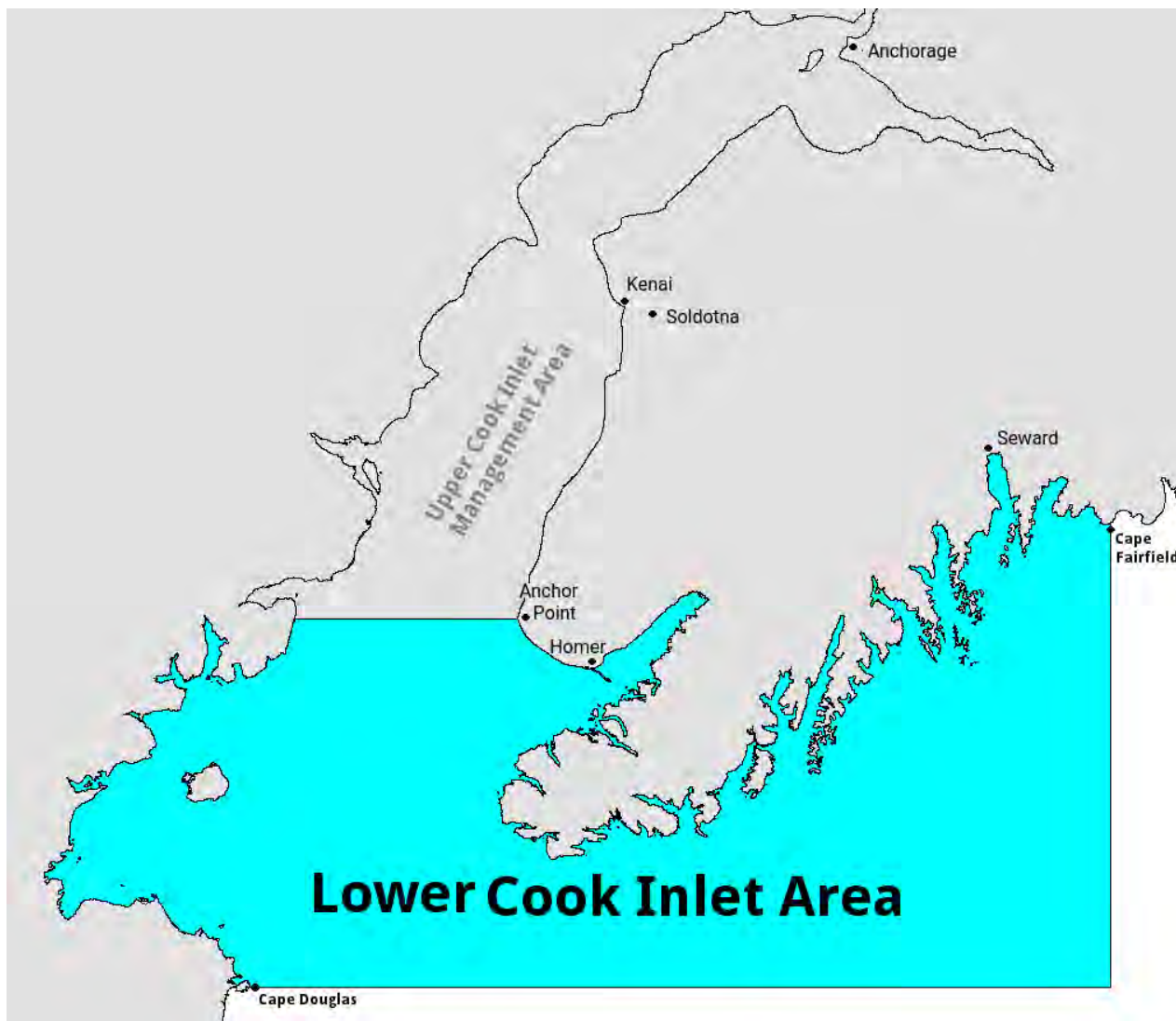
# Overview

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

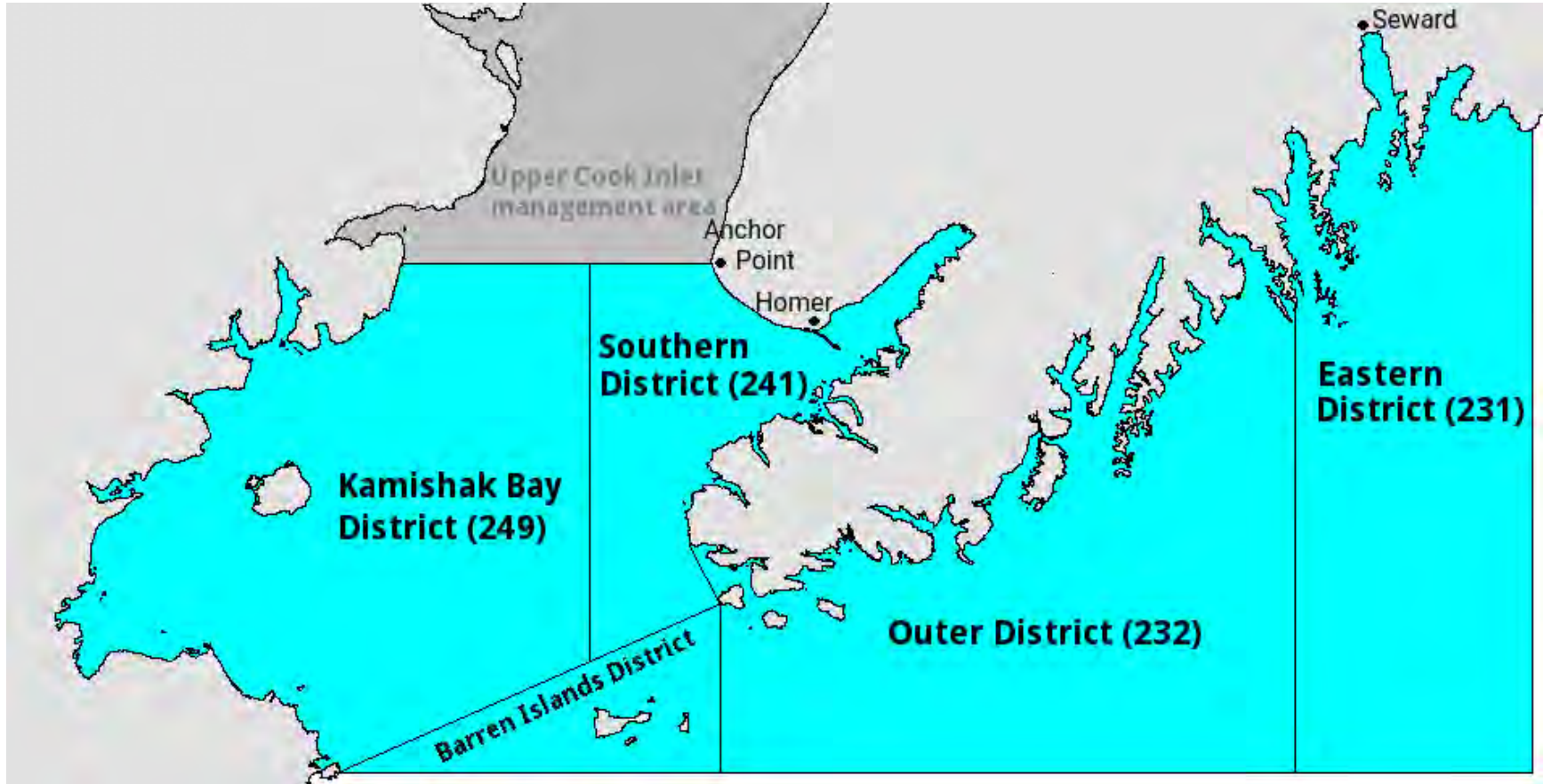
# Cook Inlet (Area H)



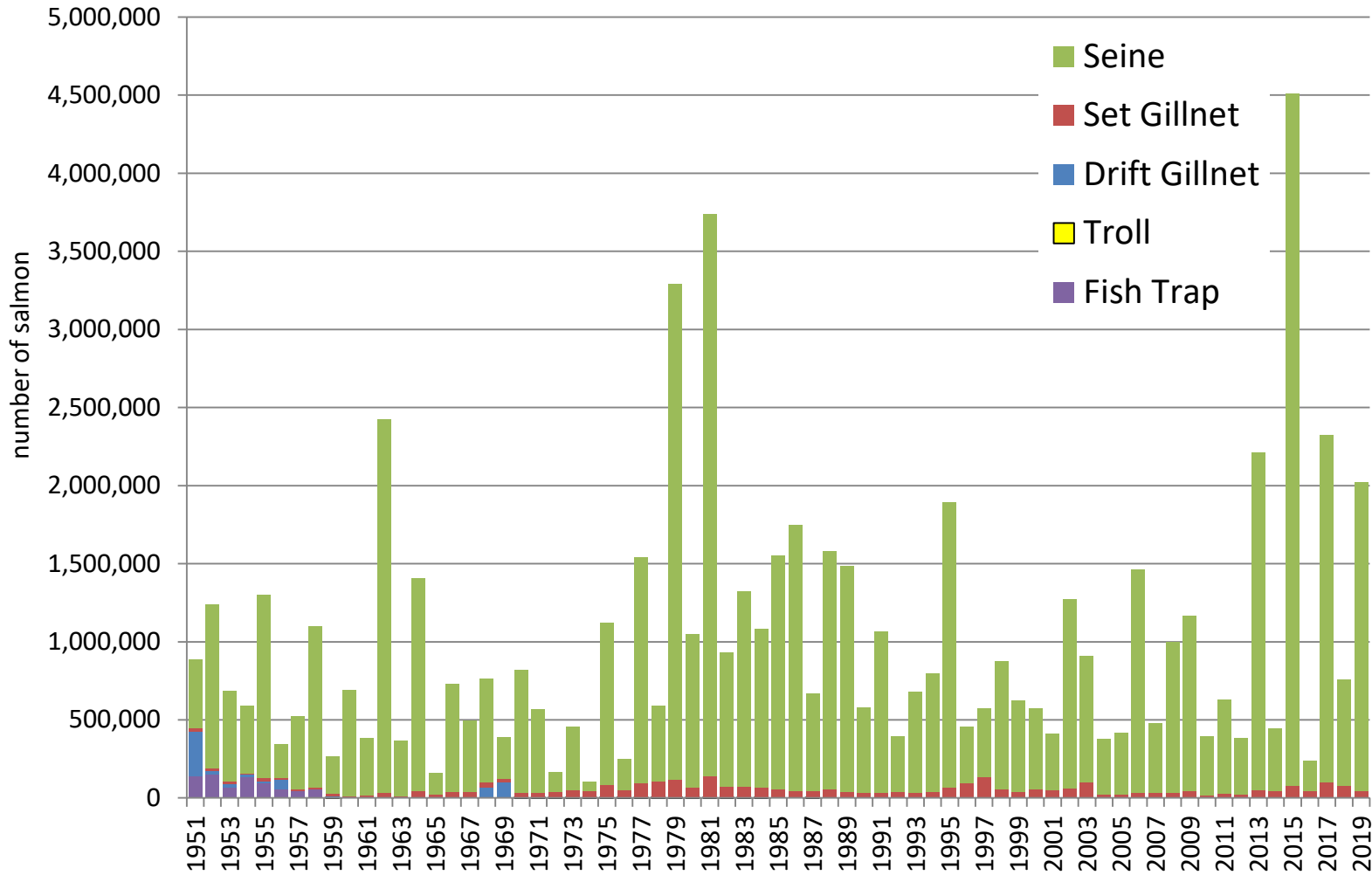
# Cook Inlet (Area H)



# Lower Cook Inlet Management Area

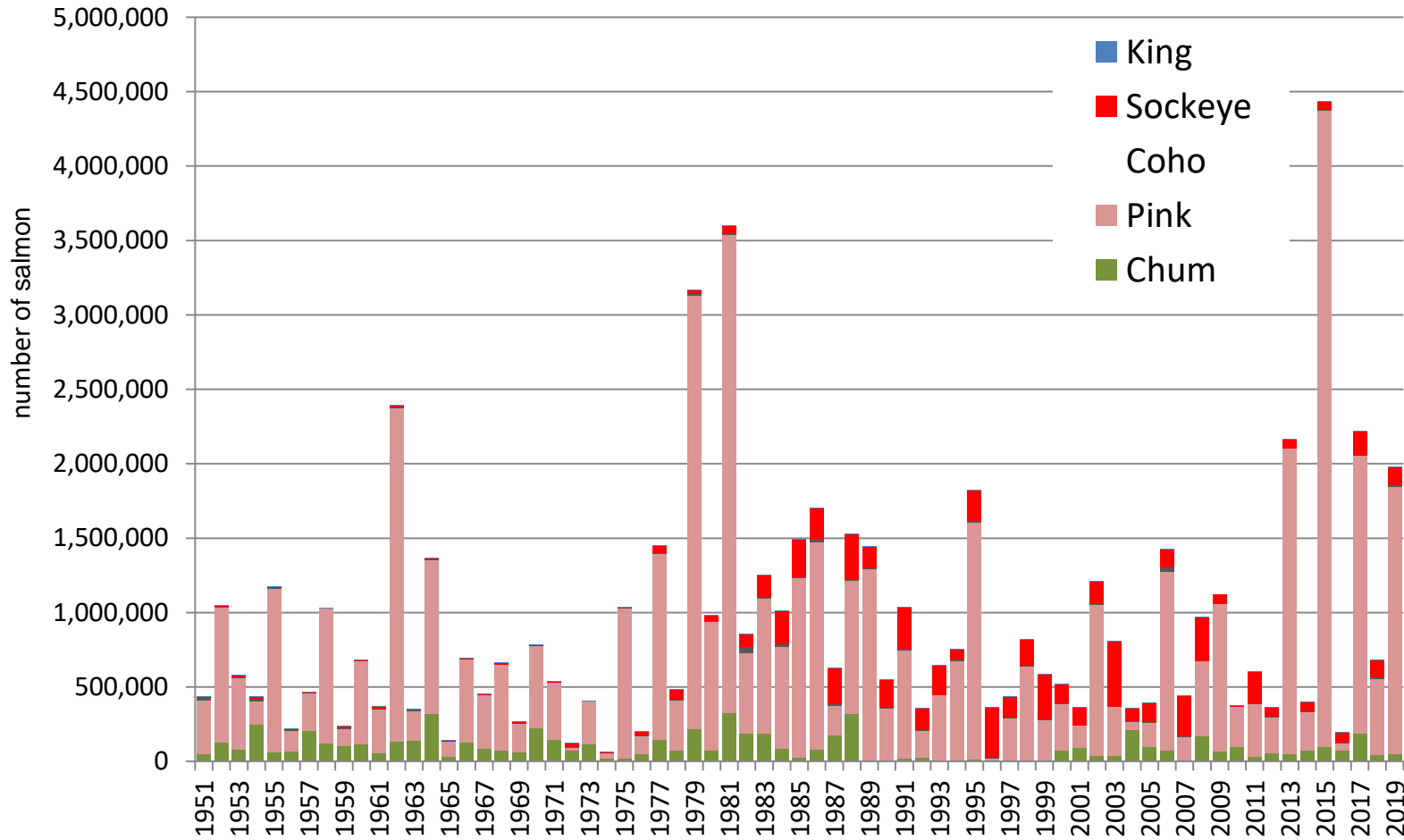


# LCI Historical Harvests by Gear, 1951-2019



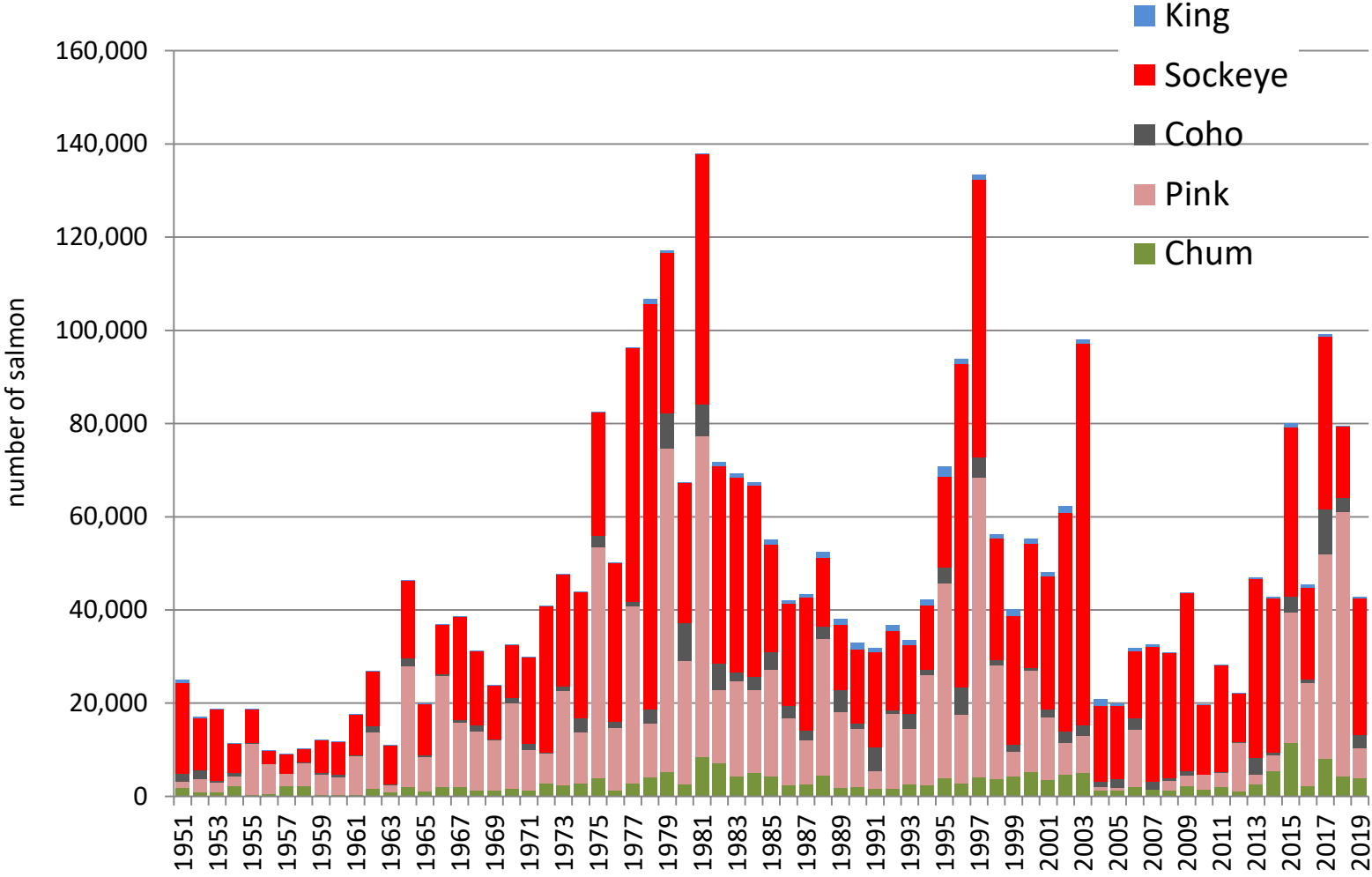


# Seine Harvests in LCI, 1951-2019



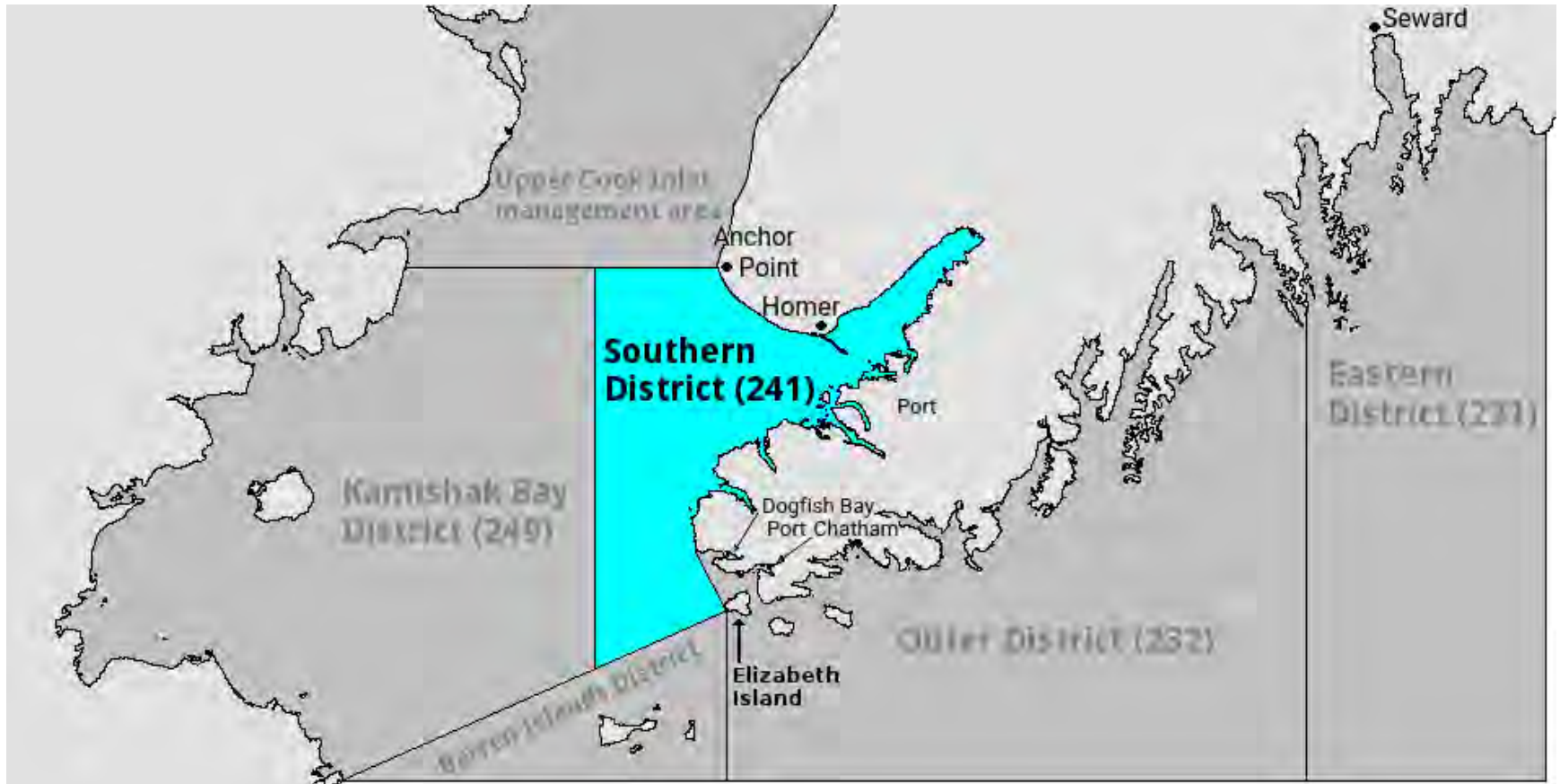


# Set Gillnet Harvests in LCI, 1951-2019

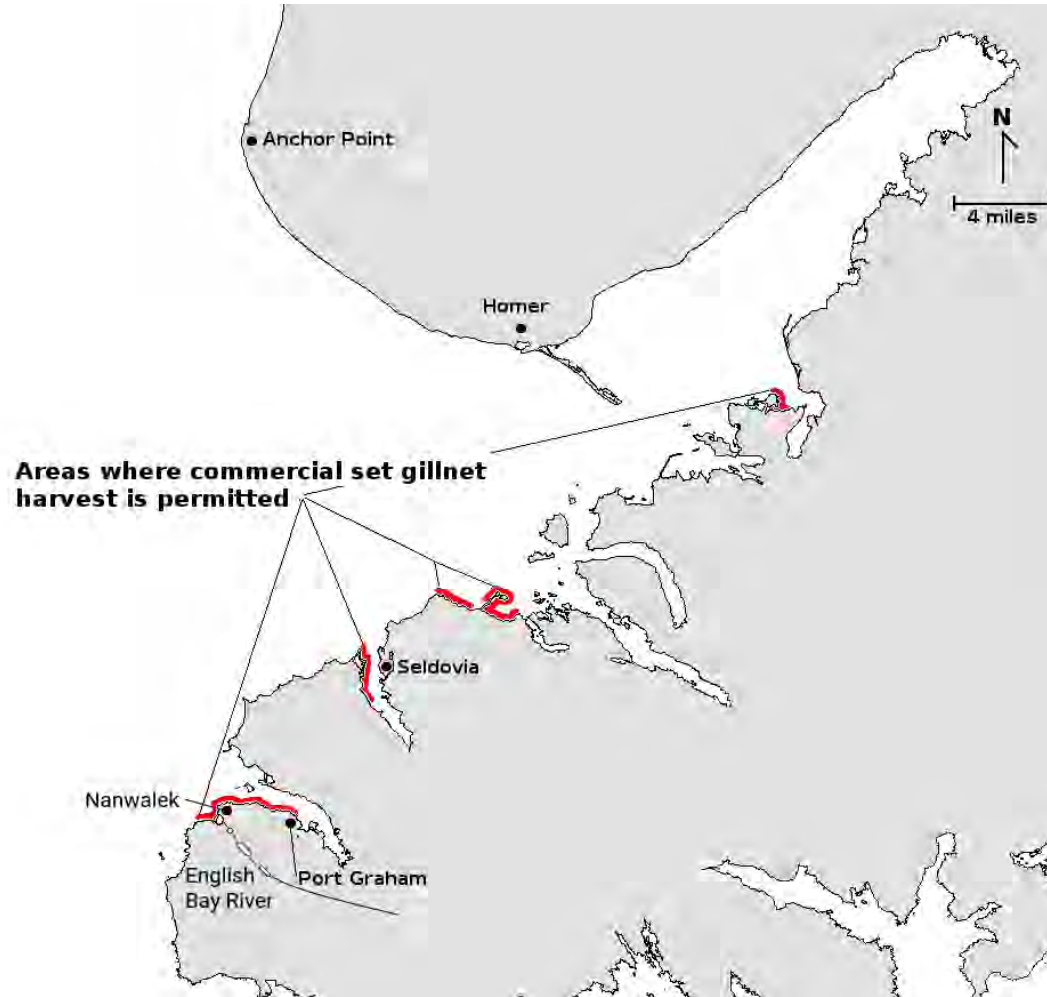




# Southern District Harvests

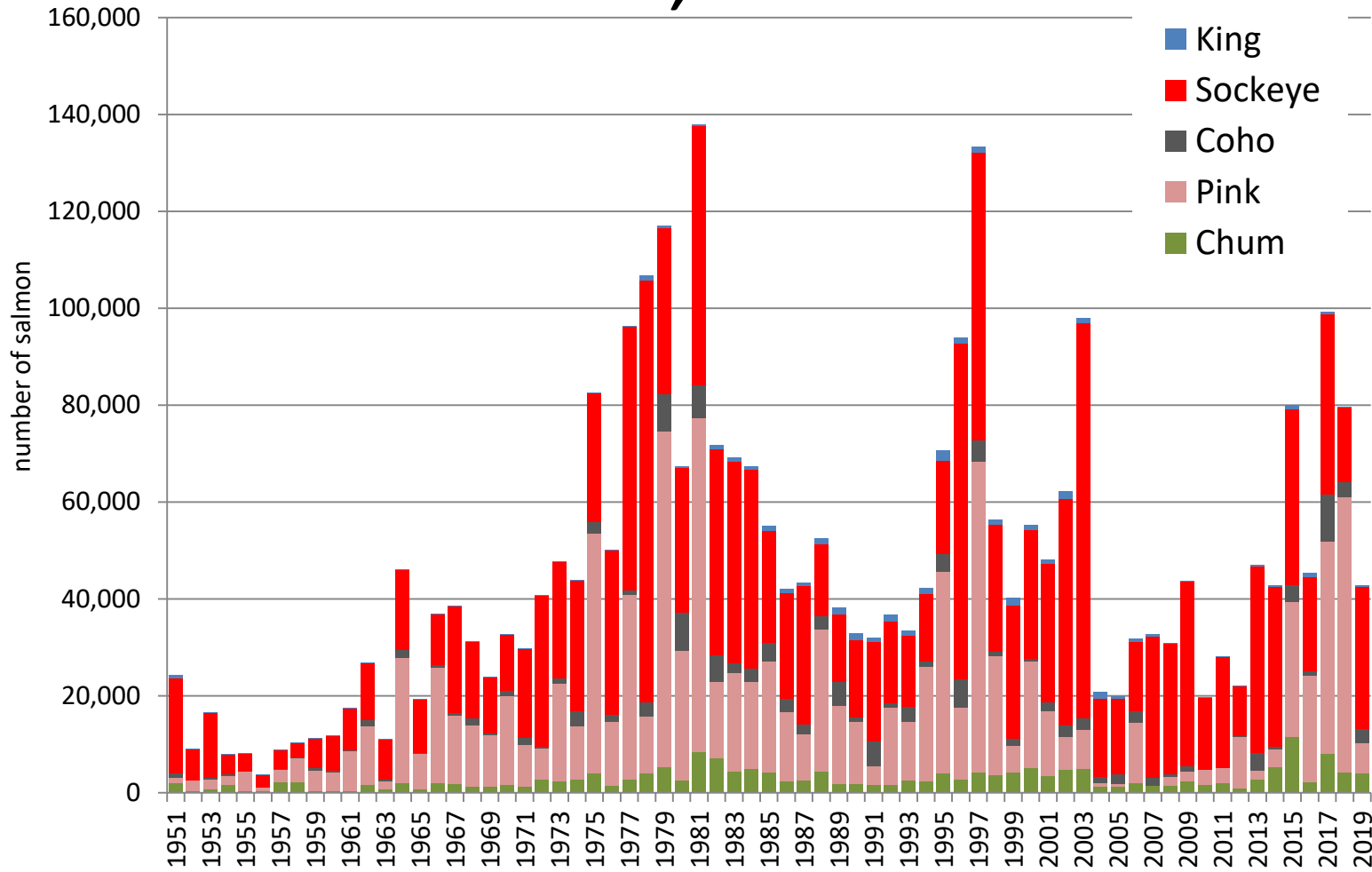


# Southern District Harvests



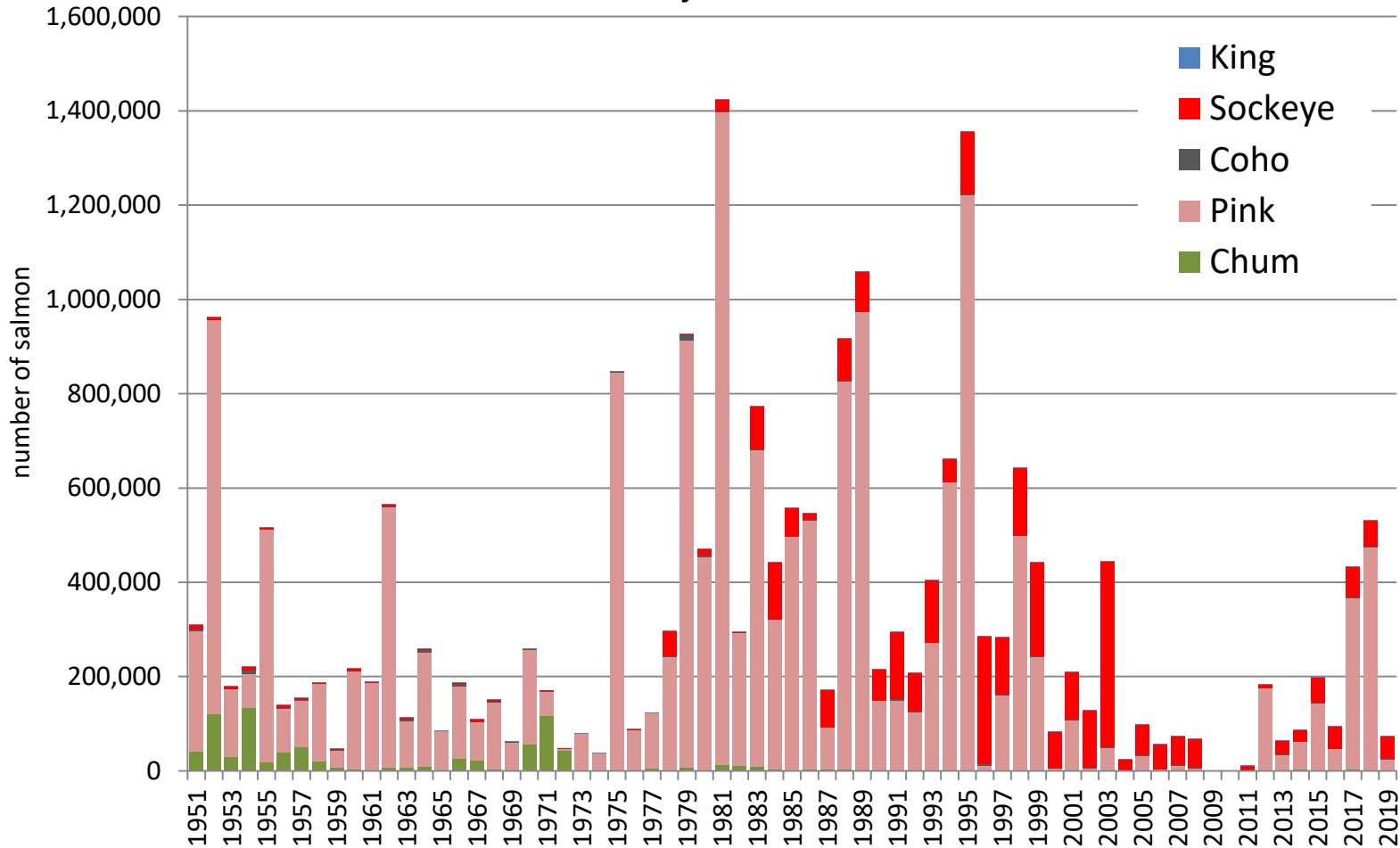


# Southern District Set Gillnet Harvests, 1951-2019

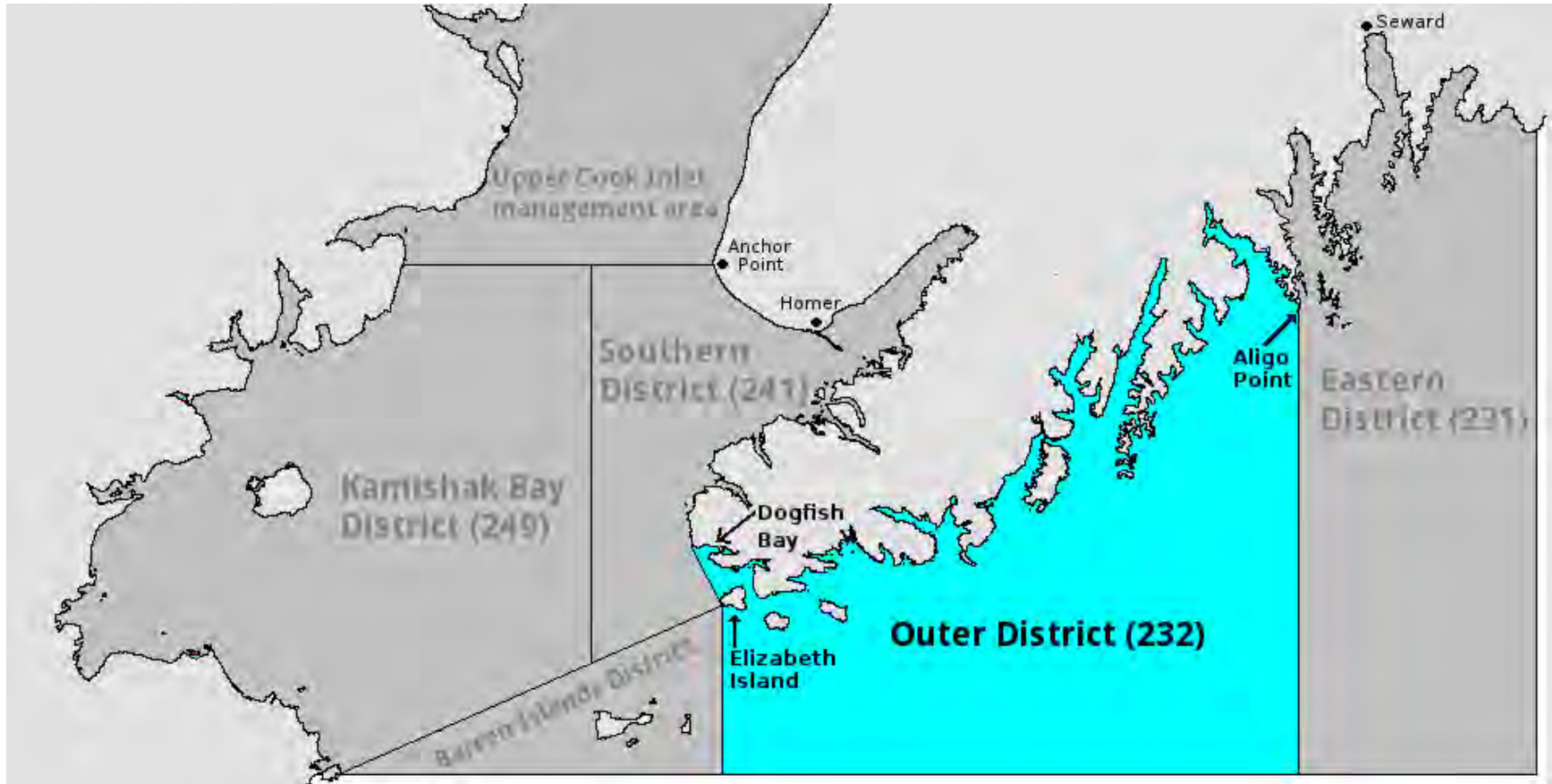




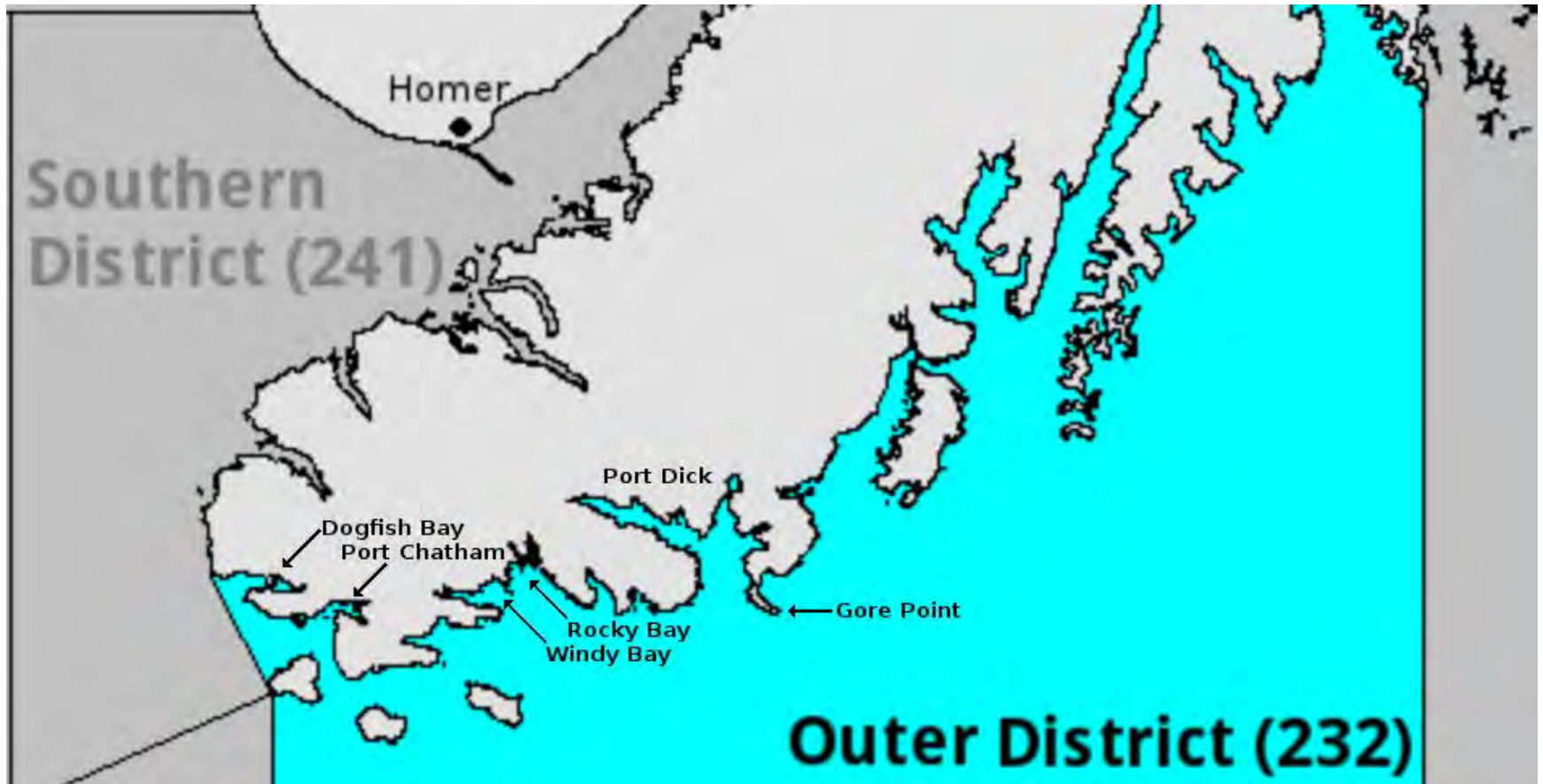
# Southern District Purse Seine Harvests, 1951-2019



# Outer District Harvests

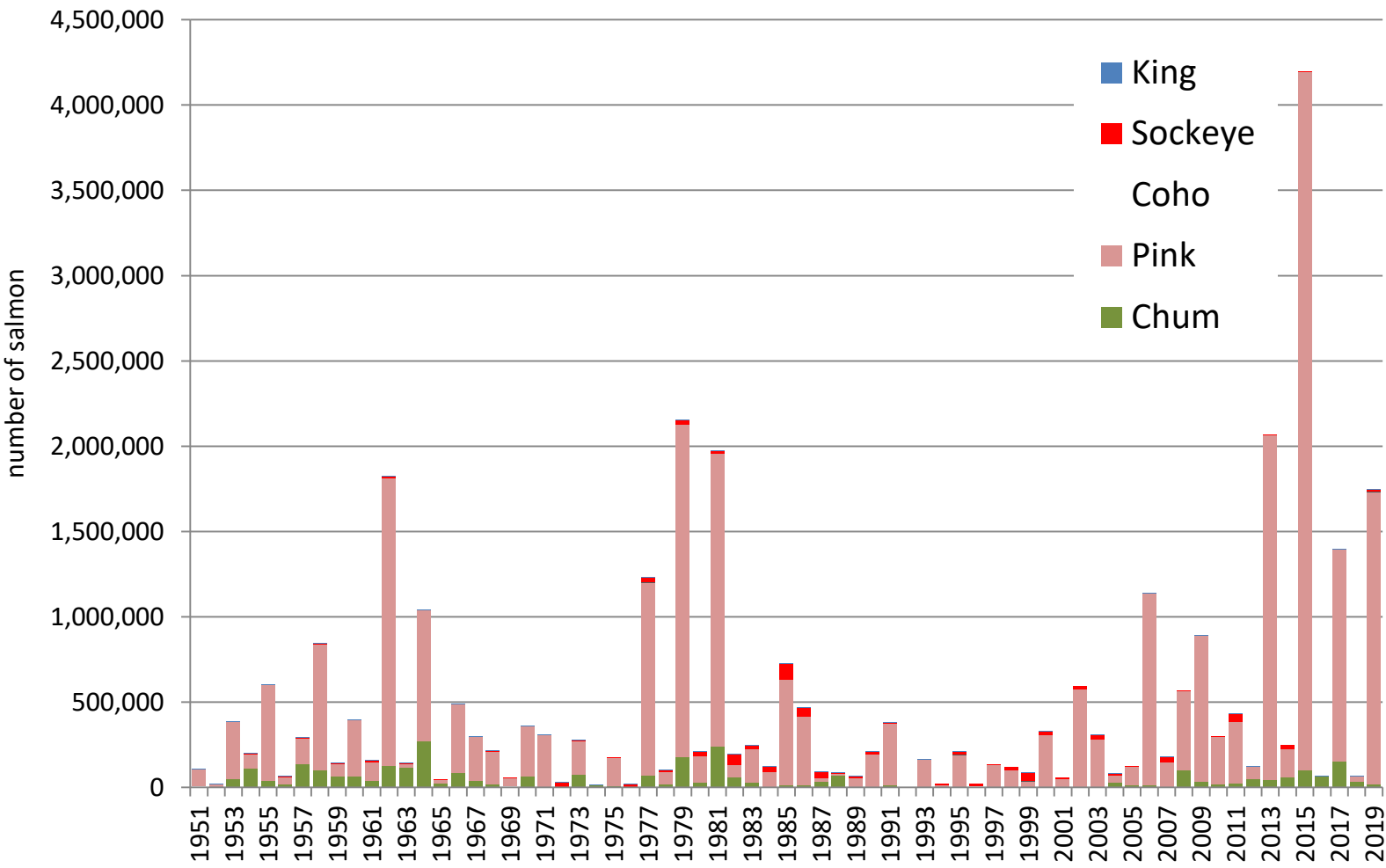


# Outer District Harvests

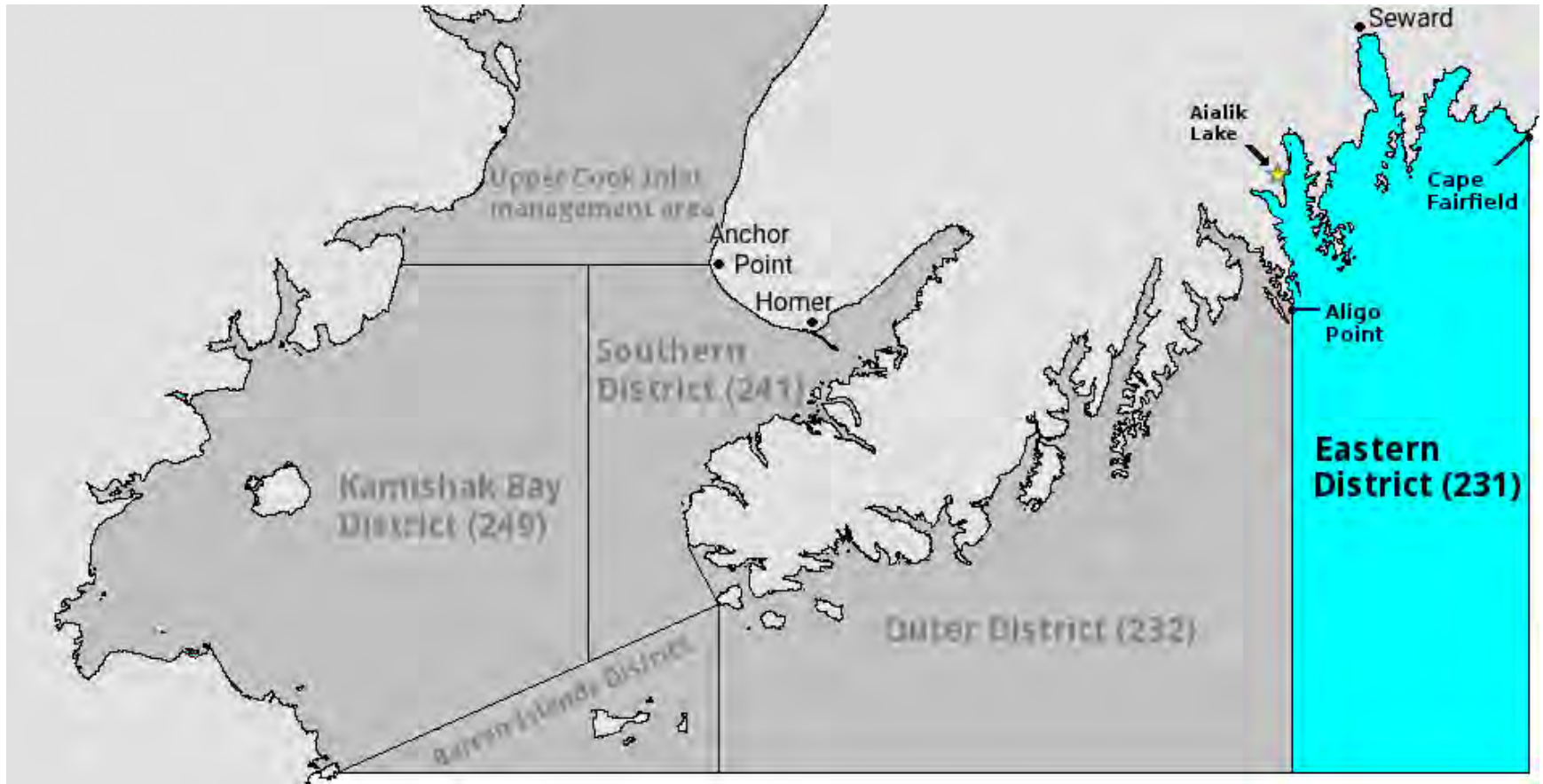




# Outer District Harvest by Species



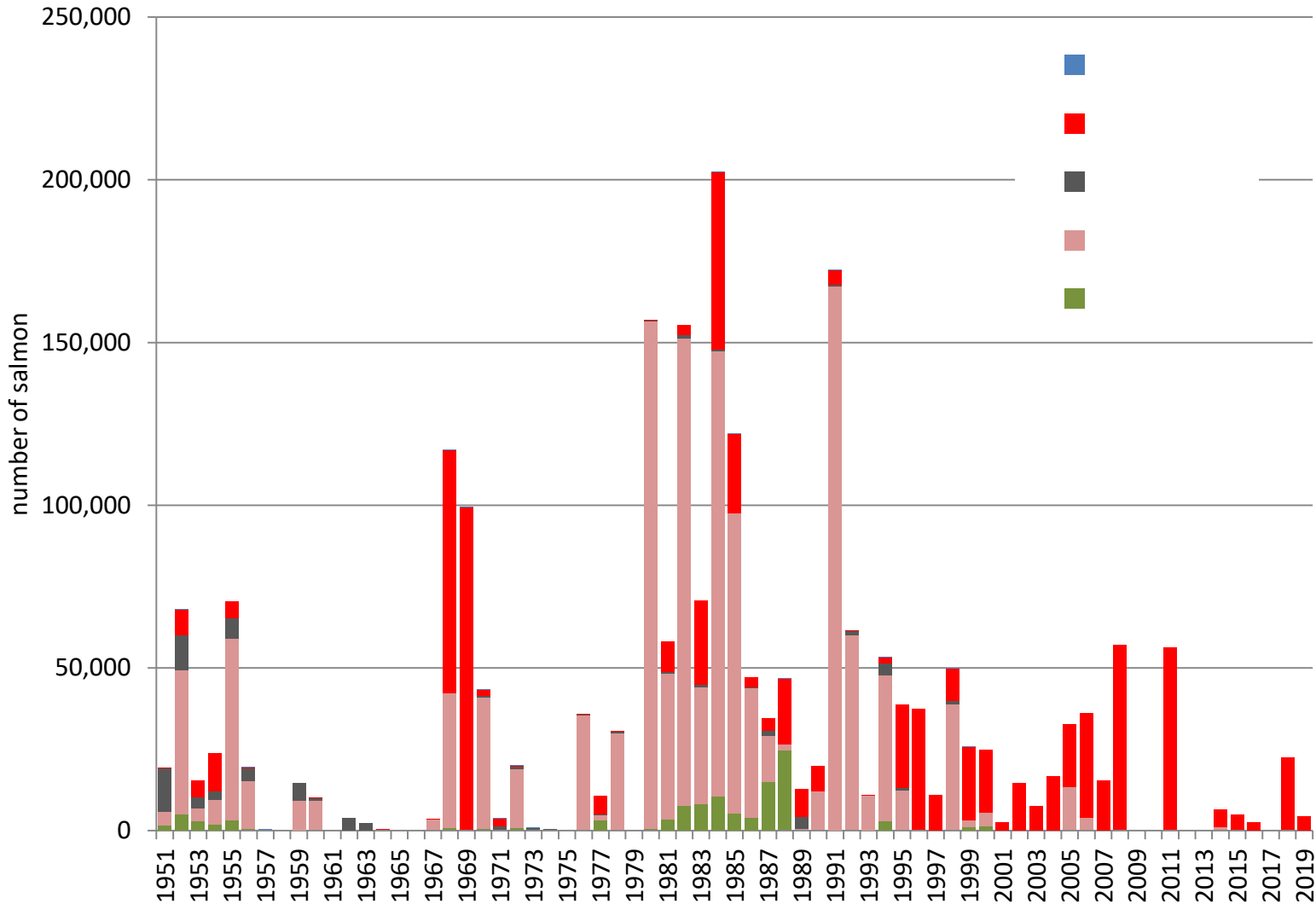
# Eastern District Harvests





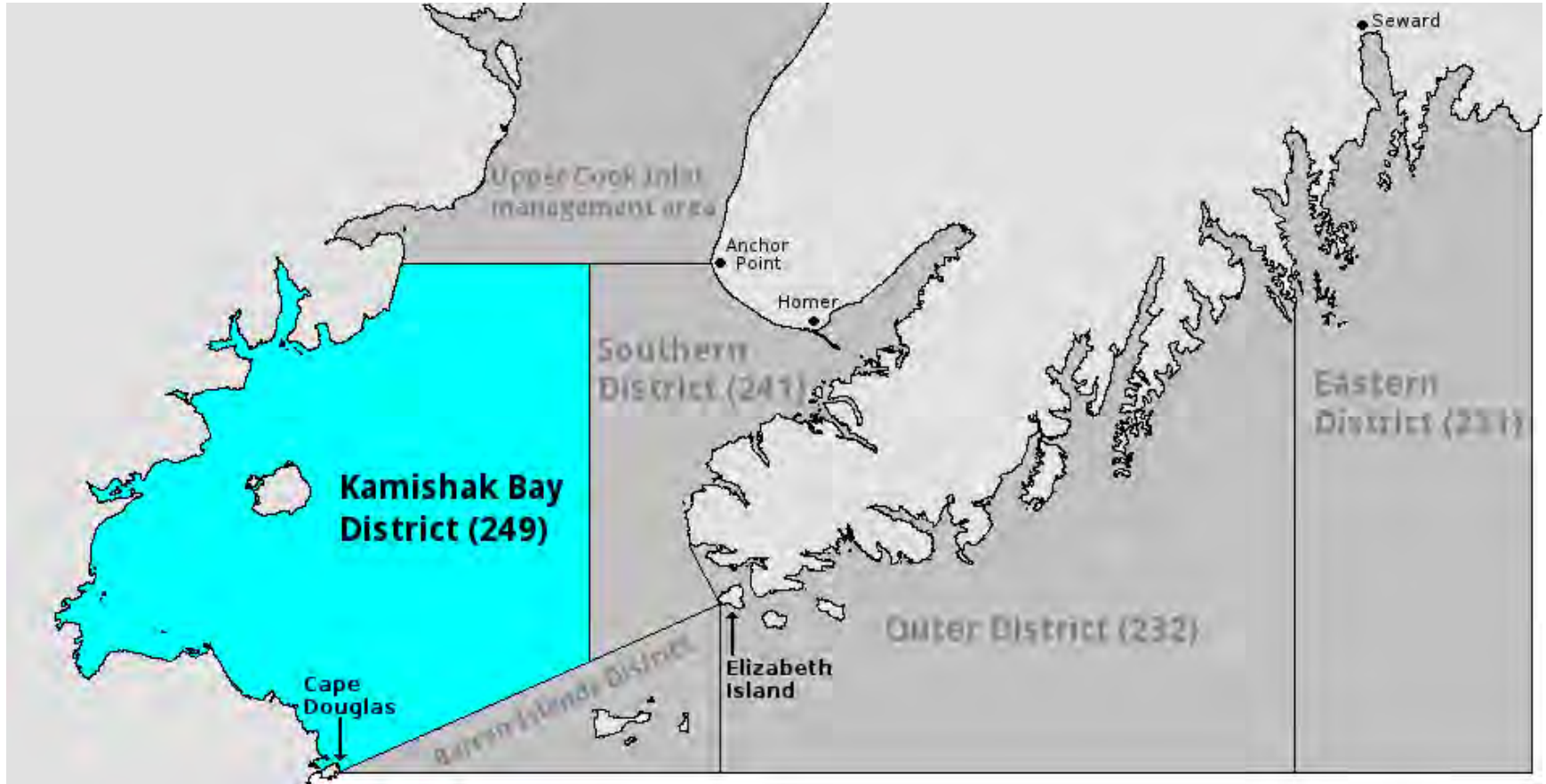


# Eastern District Harvest by Species

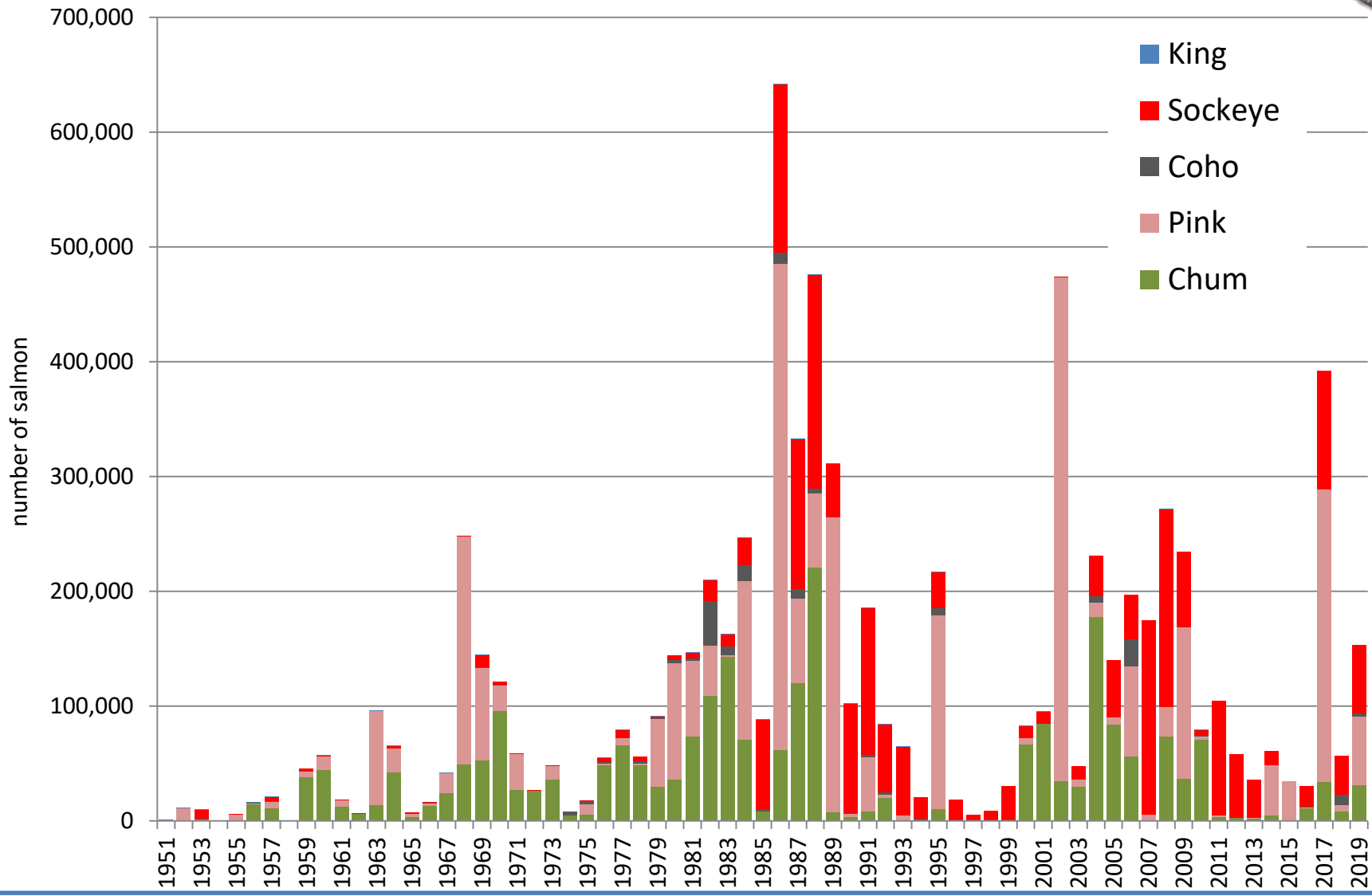




# Kamishak Bay District Harvests



# Kamishak District Harvest by Species

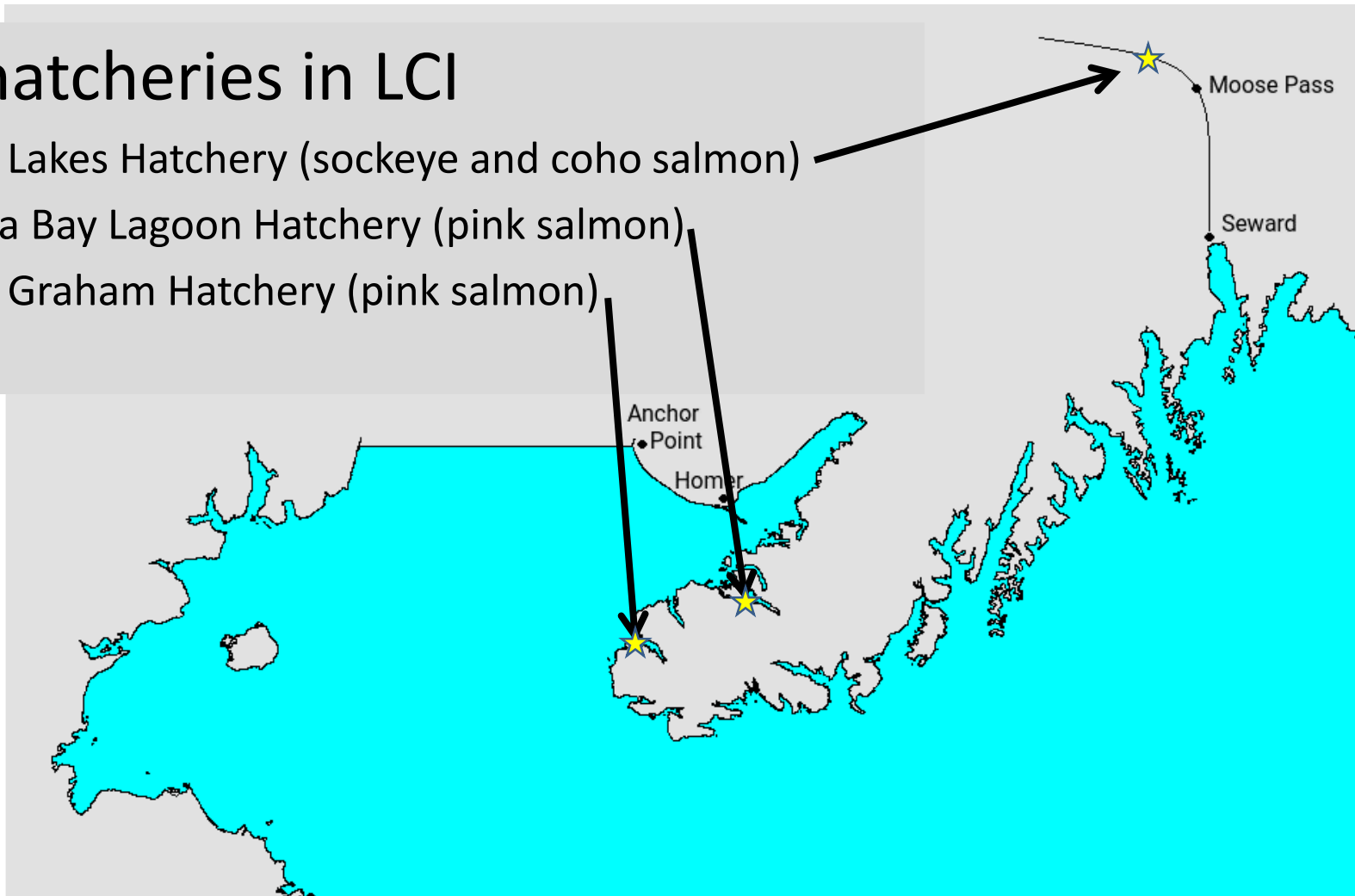




# Enhancement

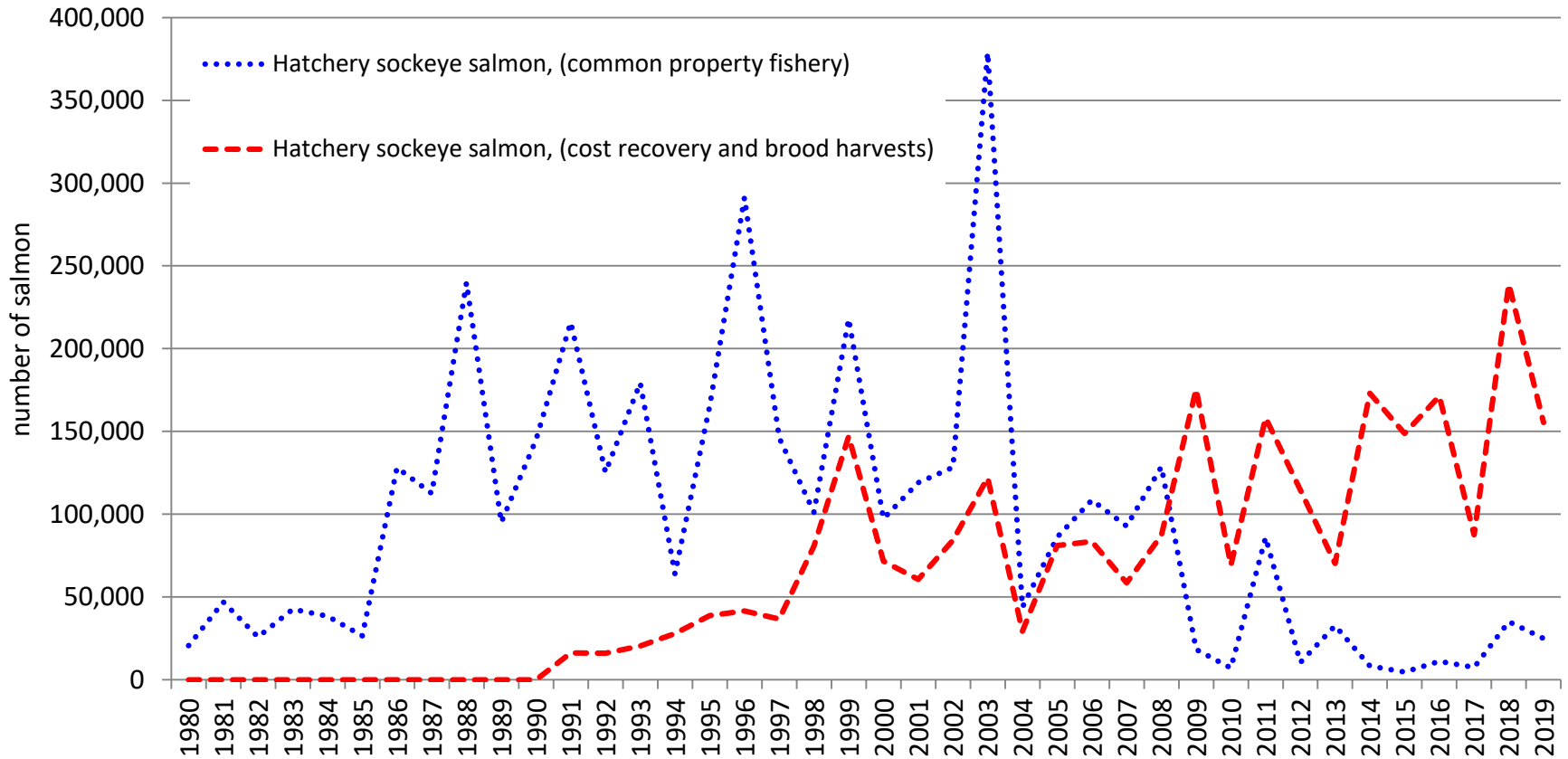
## Three hatcheries in LCI

- Trail Lakes Hatchery (sockeye and coho salmon)
- Tutka Bay Lagoon Hatchery (pink salmon)
- Port Graham Hatchery (pink salmon)



# Sockeye Salmon Harvests

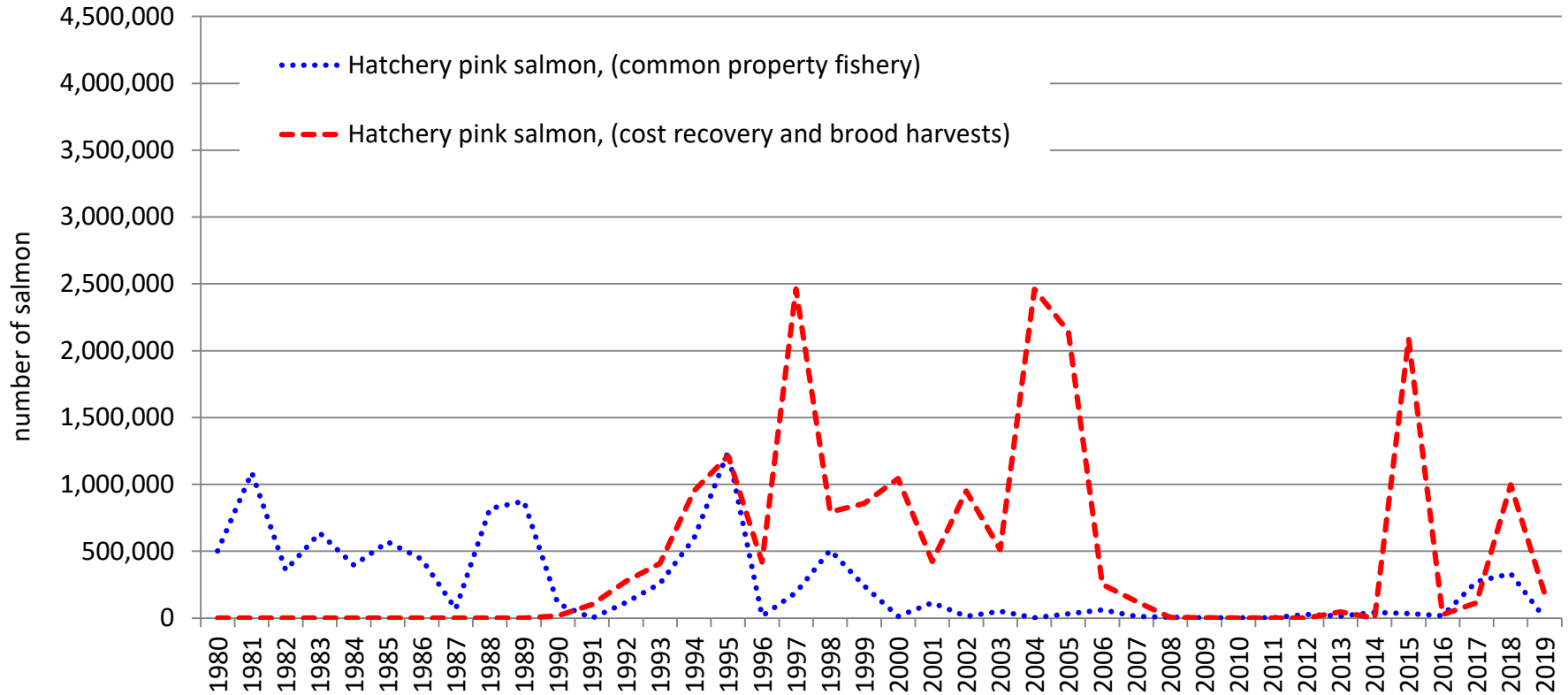
(based solely on harvest location within SHA)



LCI hatchery management transitioned from ADF&G to CIAA management in the early 1990s.

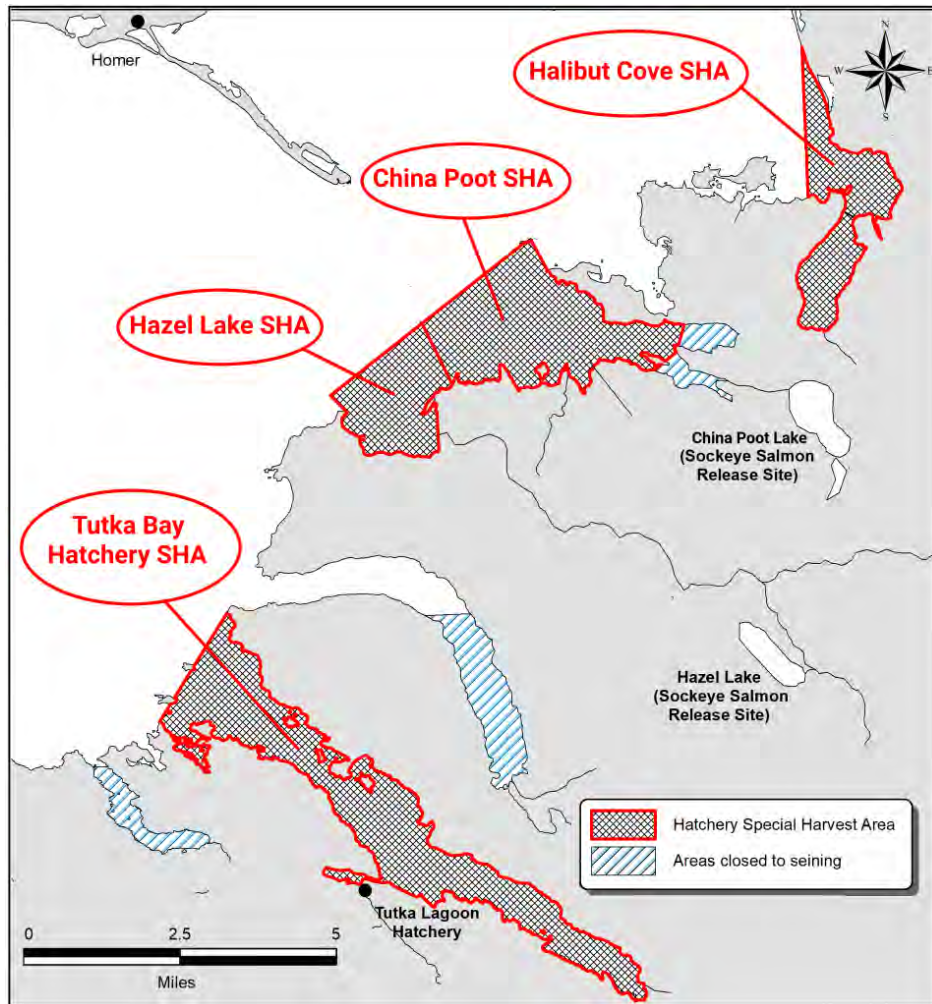


# Pink Salmon harvests (based solely on harvest location within SHA)



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.

# Thermal marked otolith sampling

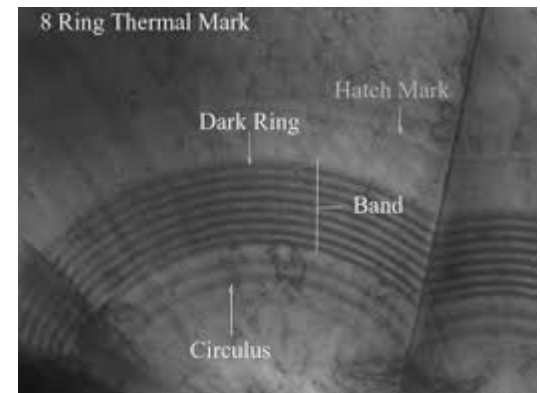


Thermally marked otolith



Otoliths being recovered

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.

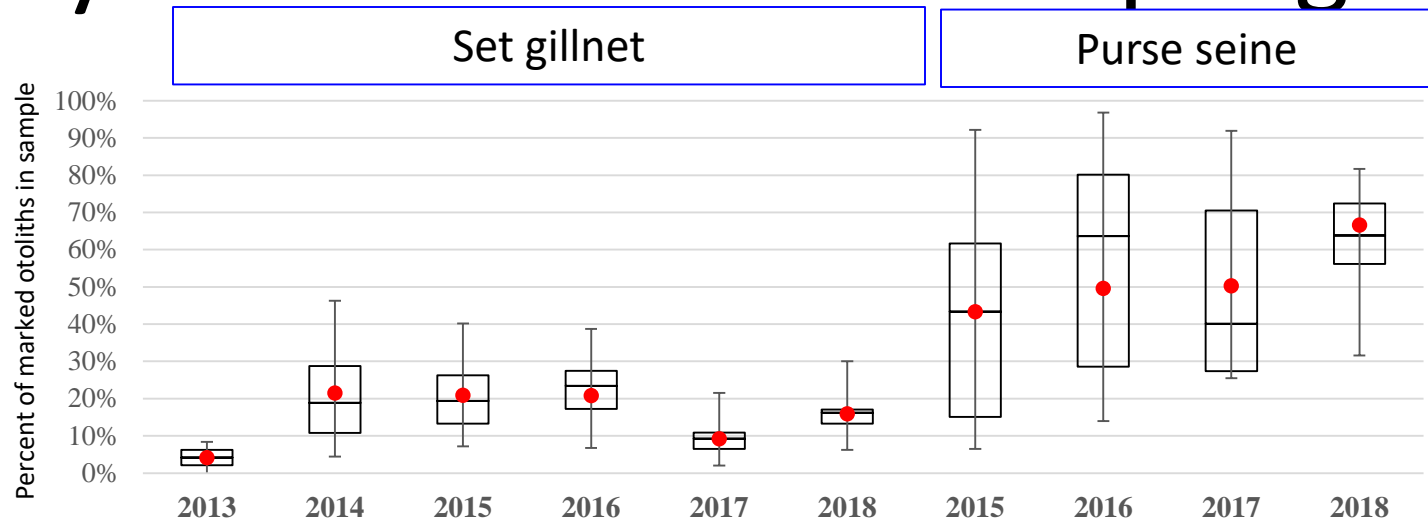


Thermally marked otolith





# Sockeye Salmon otolith sampling

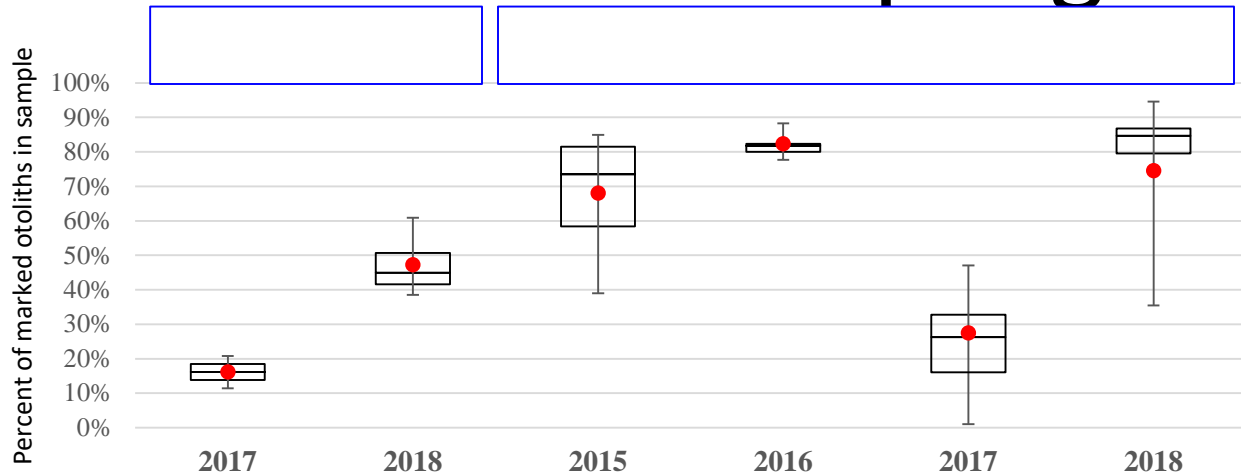


|  | 2013        | 2014         | 2015         | 2016         | 2017        | 2018         | 2015         | 2016         | 2017         | 2018         |
|--|-------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Stat week 23, (June)                           |             | 18.9%        | 31.3%        |              | 2.0%        | 30.0%        |              |              |              |              |
| Stat week 24, (June)                           |             | 10.8%        | 40.2%        |              | 3.1%        | 12.6%        |              |              |              |              |
| Stat week 25, (June)                           |             | 4.4%         | 37.2%        | 38.7%        | 9.7%        | 16.5%        |              |              | 91.9%        | 58.3%        |
| Stat week 26, (June)                           |             | 28.7%        | 21.3%        | 19.0%        | 21.6%       | 14.9%        |              | 96.8%        | 77.3%        | 81.7%        |
| Stat week 27, (July)                           | 0.0%        | 46.3%        | 12.1%        | 28.1%        | 13.0%       | 16.8%        | 92.1%        | 81.0%        | 68.2%        | 78.2%        |
| Stat week 28, (July)                           | 2.1%        | 39.6%        | 19.4%        | 27.2%        | 7.9%        | 17.1%        | 61.7%        | 77.7%        | 29.9%        | 63.8%        |
| Stat week 29, (July)                           | 6.3%        | 13.8%        | 7.1%         | 11.9%        | 7.1%        | 6.2%         |              | 14.0%        | 27.4%        | 54.0%        |
| Stat week 30, (July)                           | 8.4%        | 8.4%         | 14.4%        | 6.7%         | 10.3%       | 27.0%        | 15.1%        | 21.5%        | 25.5%        | 31.6%        |
| Stat week 31, (July-Aug)                       |             |              | 17.3%        | 25.9%        | 5.9%        | 12.8%        | 6.5%         |              | 27.3%        |              |
| Stat week 32, (August)                         |             |              | 11.2%        |              | 11.5%       |              |              |              |              |              |
| <b>Overall average marked level in samples</b> | <b>4.2%</b> | <b>21.5%</b> | <b>21.0%</b> | <b>20.9%</b> | <b>9.2%</b> | <b>15.9%</b> | <b>43.4%</b> | <b>49.6%</b> | <b>50.3%</b> | <b>66.6%</b> |

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.



# Pink Salmon otolith sampling



|  | 2017         | 2018         | 2015         | 2016         | 2017         | 2018         |
|--|--------------|--------------|--------------|--------------|--------------|--------------|
| Stat week 27, (July)                           |              |              | 82.3%        |              |              |              |
| Stat week 28, (July)                           |              |              | 78.9%        |              | 38.9%        | 81.3%        |
| Stat week 29, (July)                           |              | 38.5%        | 84.9%        | 80.0%        | 32.8%        | 86.6%        |
| Stat week 30, (July)                           | 20.8%        | 60.8%        | 55.2%        | 81.8%        | 16.0%        | 87.2%        |
| Stat week 31, (July-Aug)                       | 11.5%        | 42.6%        | 38.9%        |              | 26.3%        | 85.8%        |
| Stat week 32, (August)                         |              |              |              | 77.7%        | 47.1%        | 35.4%        |
| Stat week 33, (August)                         |              |              |              | 88.2%        | 23.8%        | 83.5%        |
| Stat week 34, (August)                         |              |              |              |              | 12.8%        |              |
| Stat week 35, (Aug-Sept)                       |              |              |              |              | 1.1%         |              |
| Stat week 36, (September)                      |              |              |              |              |              | 94.6%        |
| <b>Overall average marked level in samples</b> | <b>16.1%</b> | <b>47.3%</b> | <b>68.0%</b> | <b>82.3%</b> | <b>27.5%</b> | <b>74.5%</b> |

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.



# 2019 Commercial Harvest

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?

