



Westside Kodiak Salmon Management

Division of Commercial
Fisheries

A Report to the Alaska Board
of Fisheries; January 2024

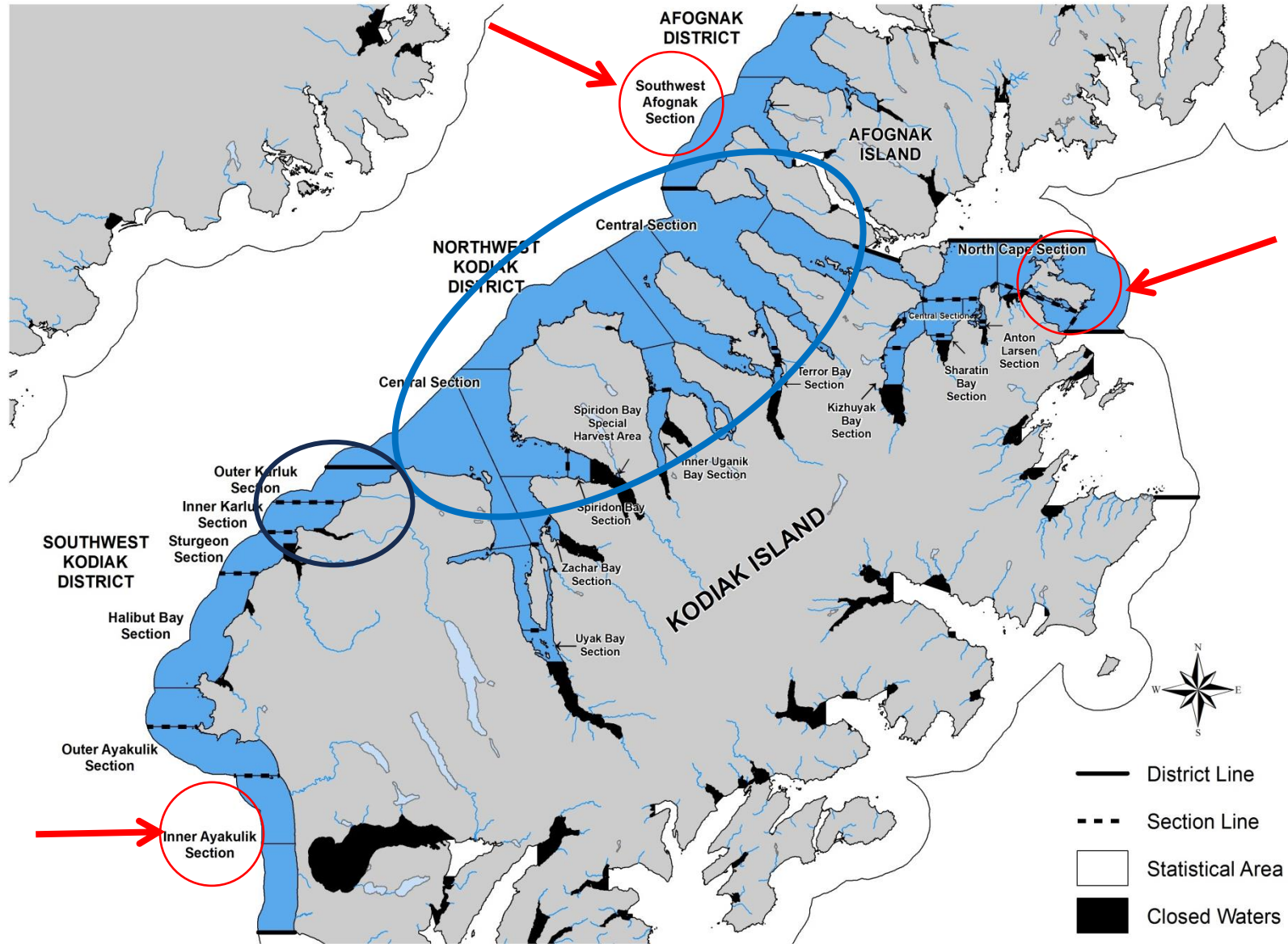
James Jackson

Oral Report: RC 3; Tab 5
Staff Comments: RC 2

Topics to be Covered:

1. Management chronology
 2. Karluk early-run sockeye salmon management
 3. The Kodiak area pink salmon fishery
 4. Spiridon Lake sockeye salmon management
 5. Karluk late-run sockeye salmon management
 6. Change in average fish size
 7. Westside harvest by gear type
 8. Trend in smaller sockeye and less gillnet fish harvested
 9. Conclusions
-
- The diagram uses brackets to group the list items into two categories. The first category, 'Stocks & management', is indicated by a bracket on the right side of the list, encompassing items 1 through 5. The second category, 'Harvest by gear & fish size', is indicated by a bracket on the right side of the list, encompassing items 6 through 8. Item 9, 'Conclusions', is not grouped.
- Stocks & management
- Harvest by gear
& fish size

Westside Kodiak Fishery

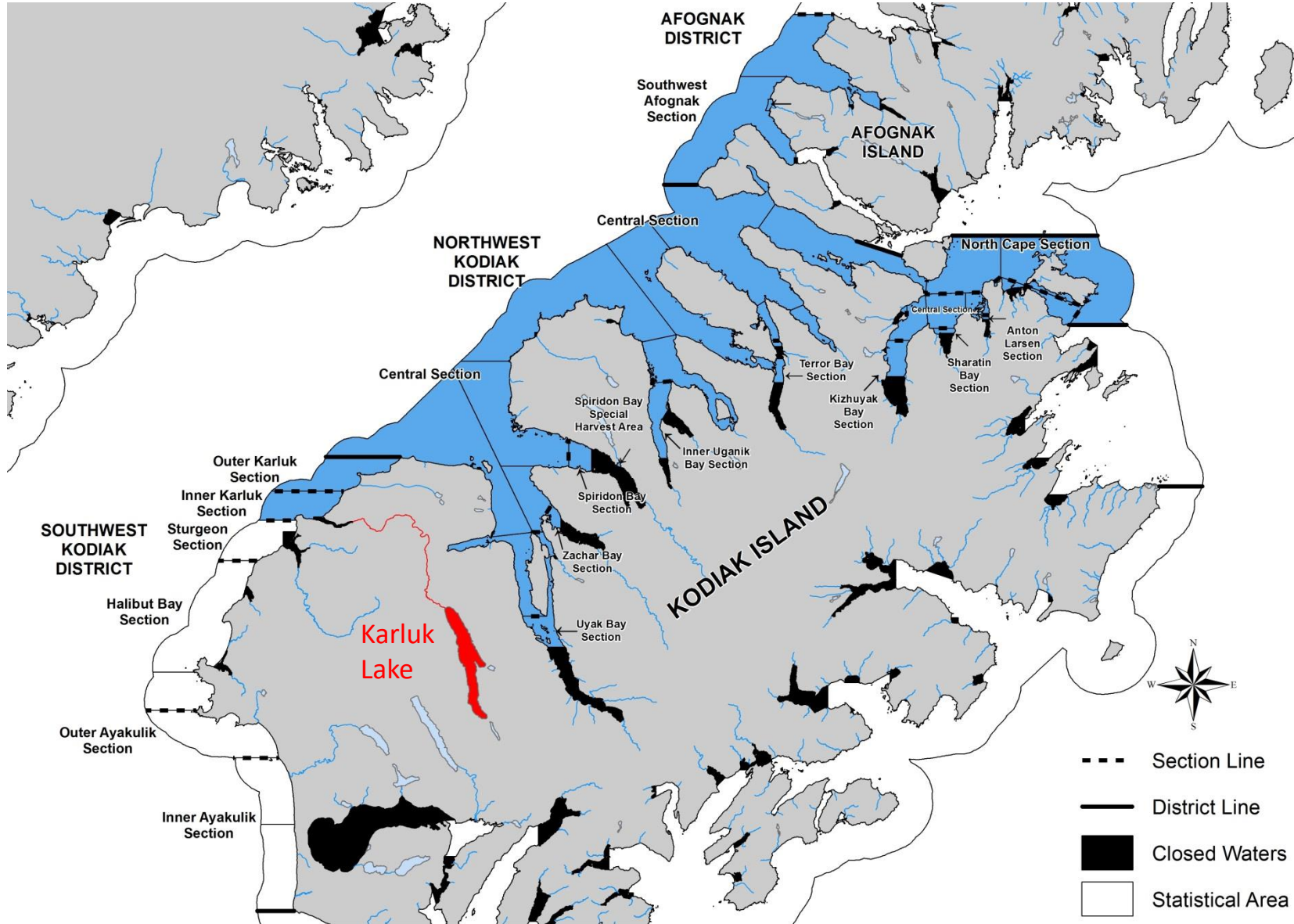


Westside Kodiak Salmon Management Plan 5 AAC 18.362

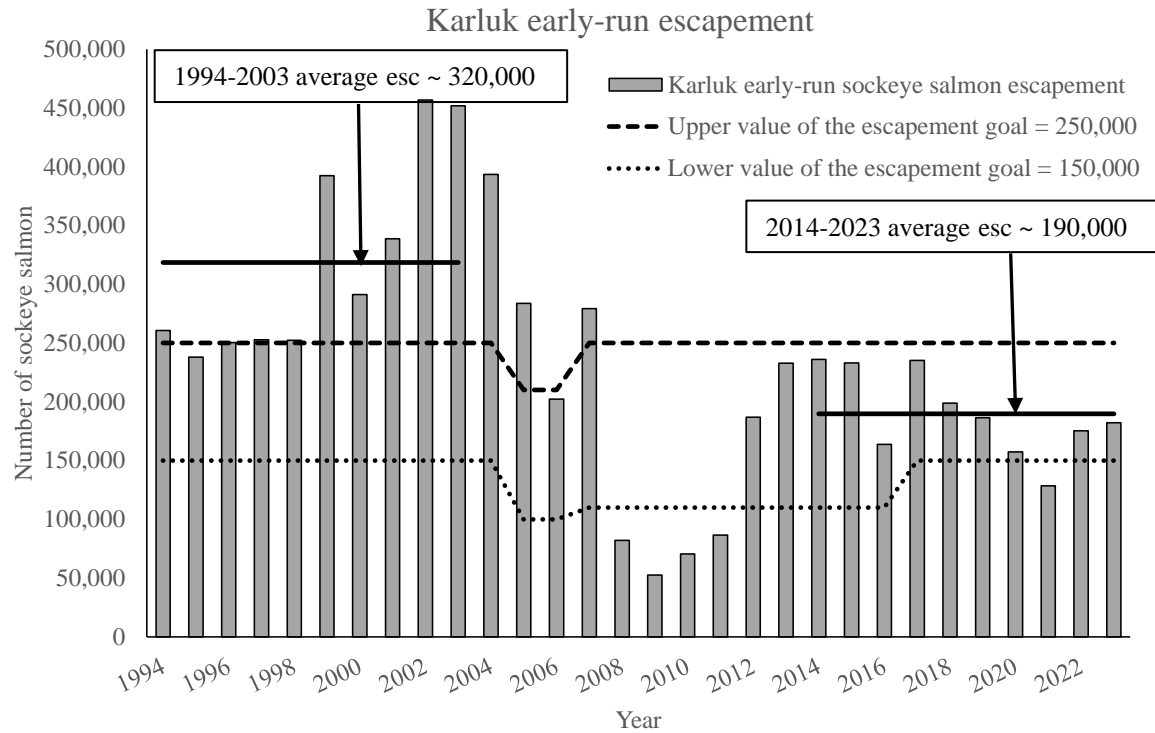
		June	July	August	September	
		Early-run sockeye salmon	Pink salmon	Late run sockeye & pink salmon	Late-run sockeye salmon	Late-run sockeye & coho salmon
The Northwest Kodiak District	Central Section	Karluk early-run sockeye salmon	Northwest Kodiak District or Karluk River pink salmon	NW Kodiak District pinks and Karluk late-run sockeye salmon	Karluk late-run sockeye salmon	Karluk late-run sockeye salmon and NW Kodiak District coho salmon
		June	July	August	September	
		Early-run sockeye salmon	Late-run sockeye and pink salmon	Late-run sockeye salmon	Late-run sockeye & coho salmon	
The Southwest Kodiak District	Inner and Outer Karluk Sections	Karluk early-run sockeye salmon	Karluk late-run sockeye and pink salmon	Karluk late-run sockeye salmon	Karluk late-run sockeye and coho salmon	

Karluk Early-Run Sockeye Salmon

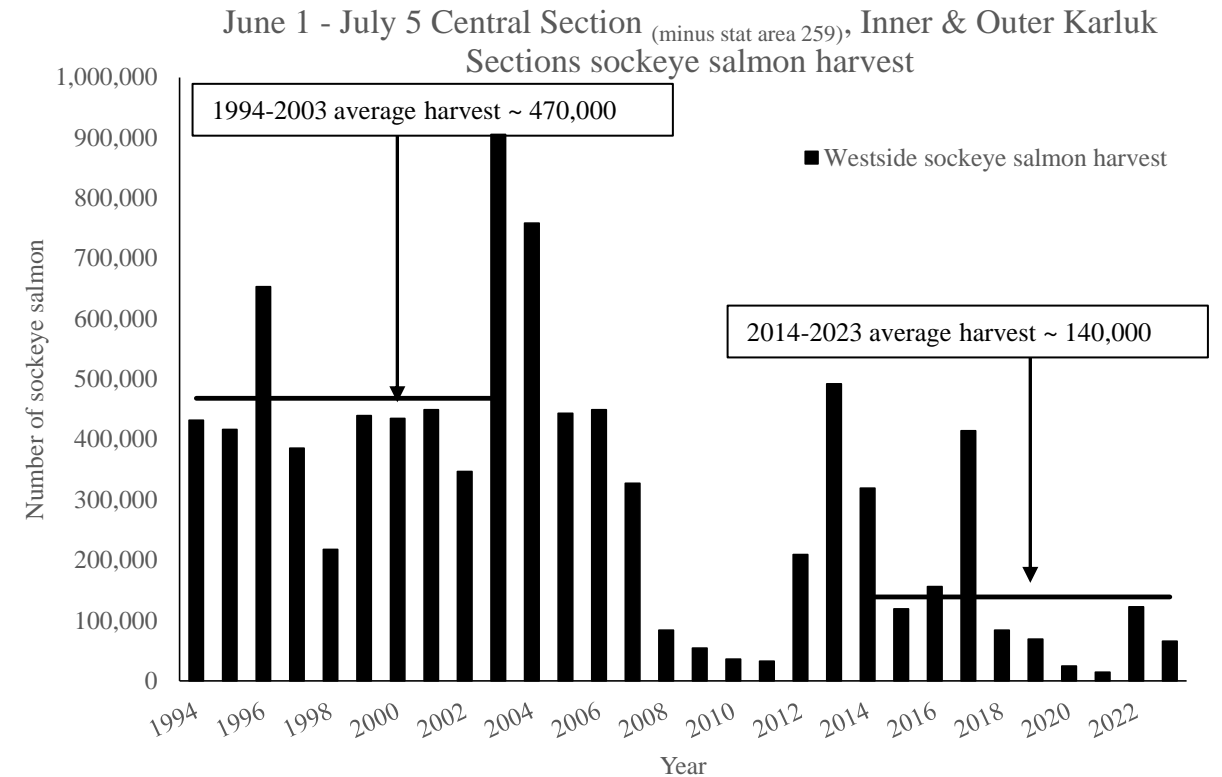
In June, the majority of the Westside is managed based on Karluk early-run sockeye salmon



Karluk Early-Run Sockeye Salmon

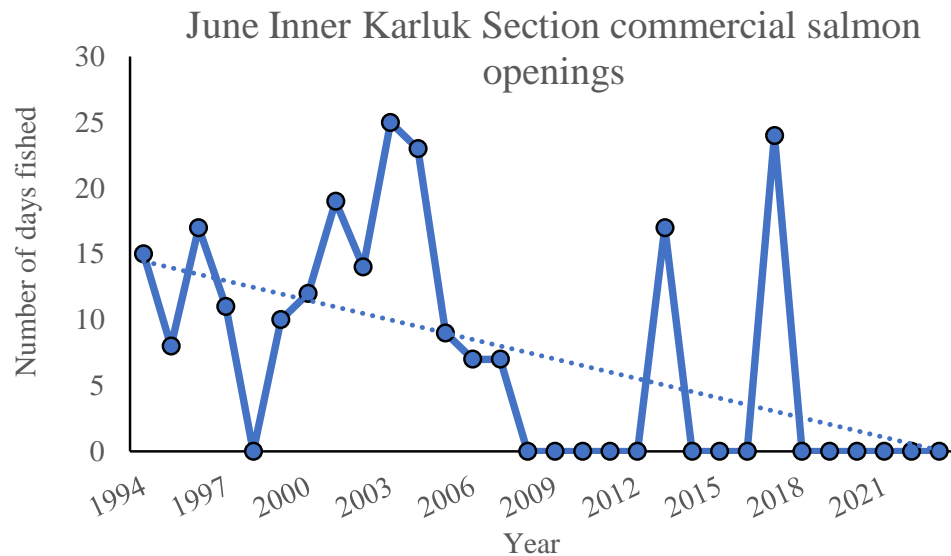
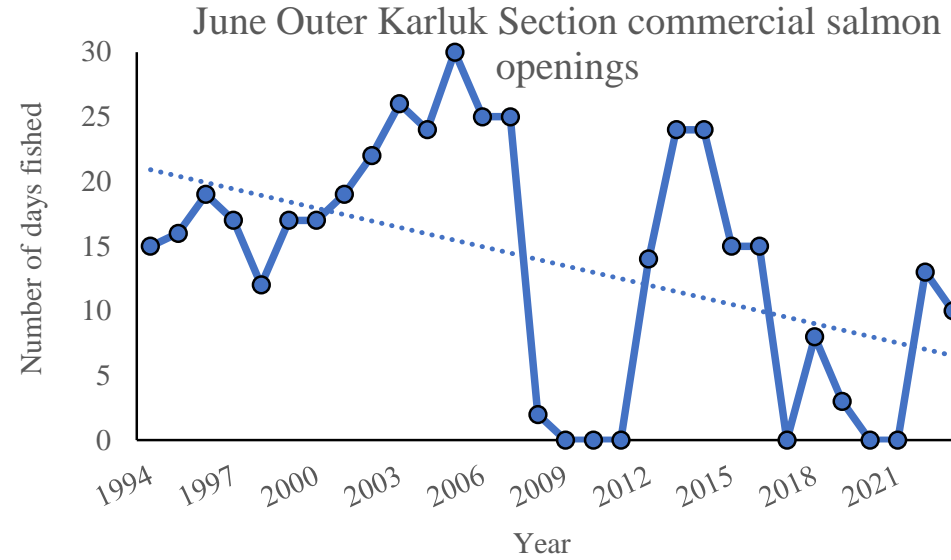
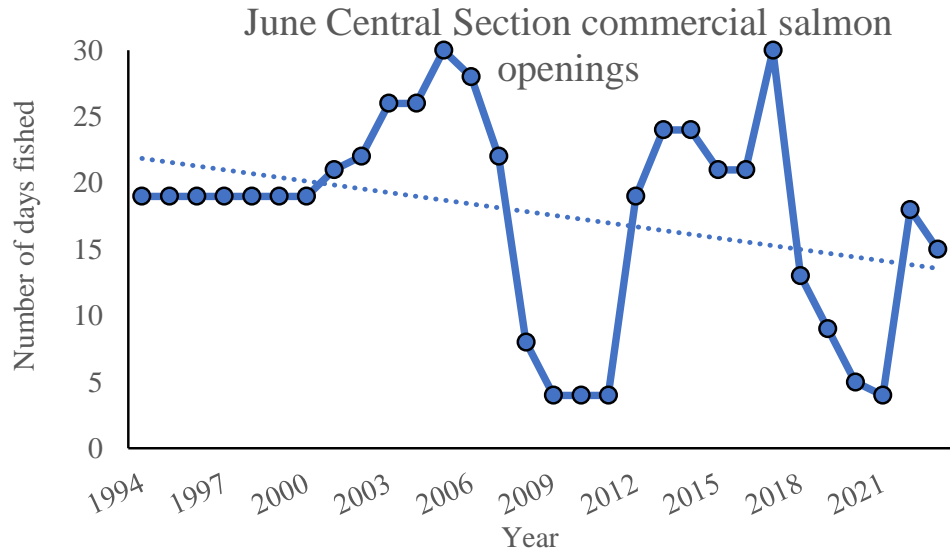


- Karluk early-run escapement is considerably down compared to the past
- We have achieved the escapement goal for 11 of the past 12 seasons



- June Westside sockeye salmon harvest is down considerably
- Harvest in the past 6 seasons has been very poor

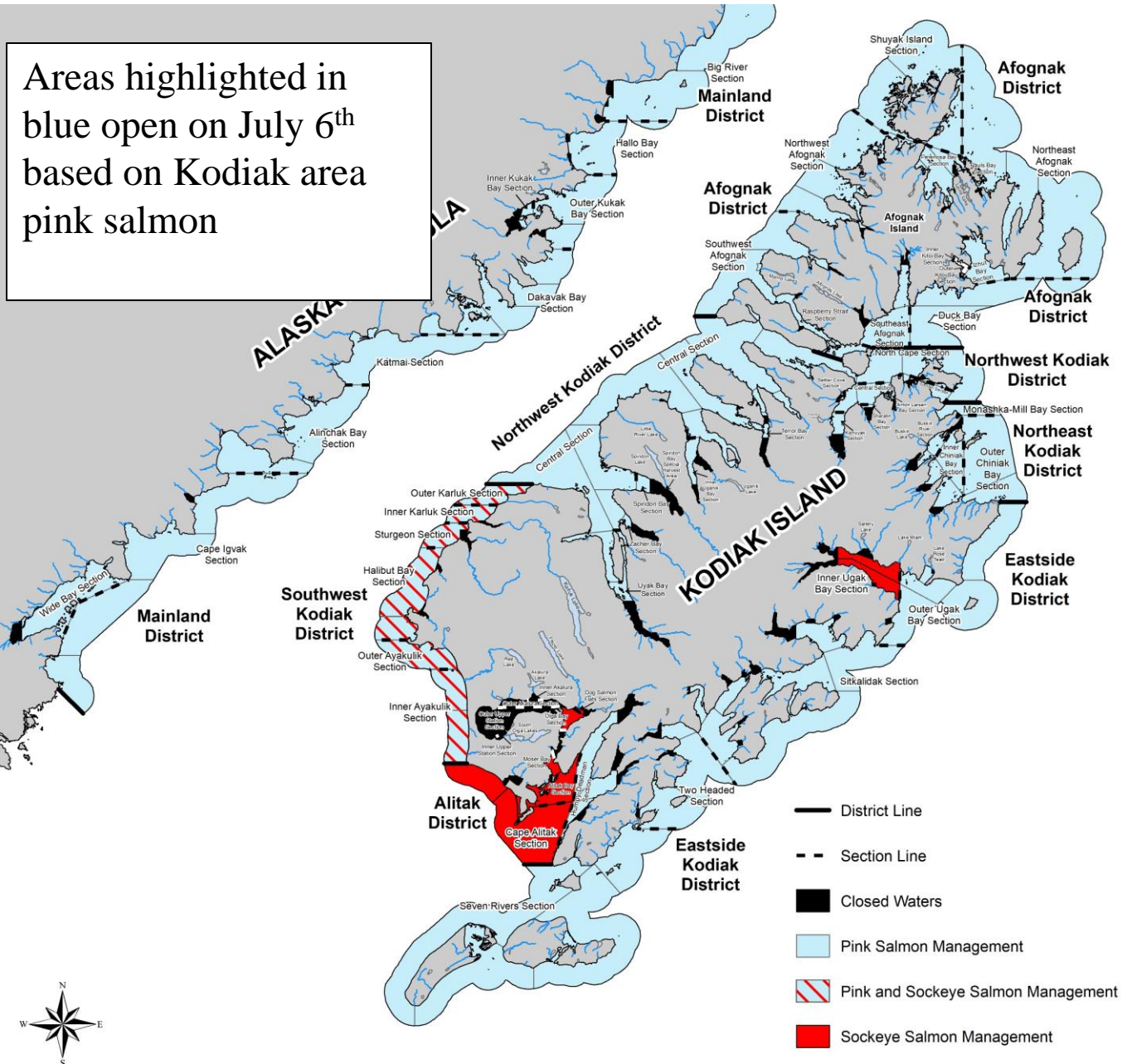
June Westside Kodiak Commercial Salmon Openings



Karluk early-run sockeye salmon run is weaker than in the past

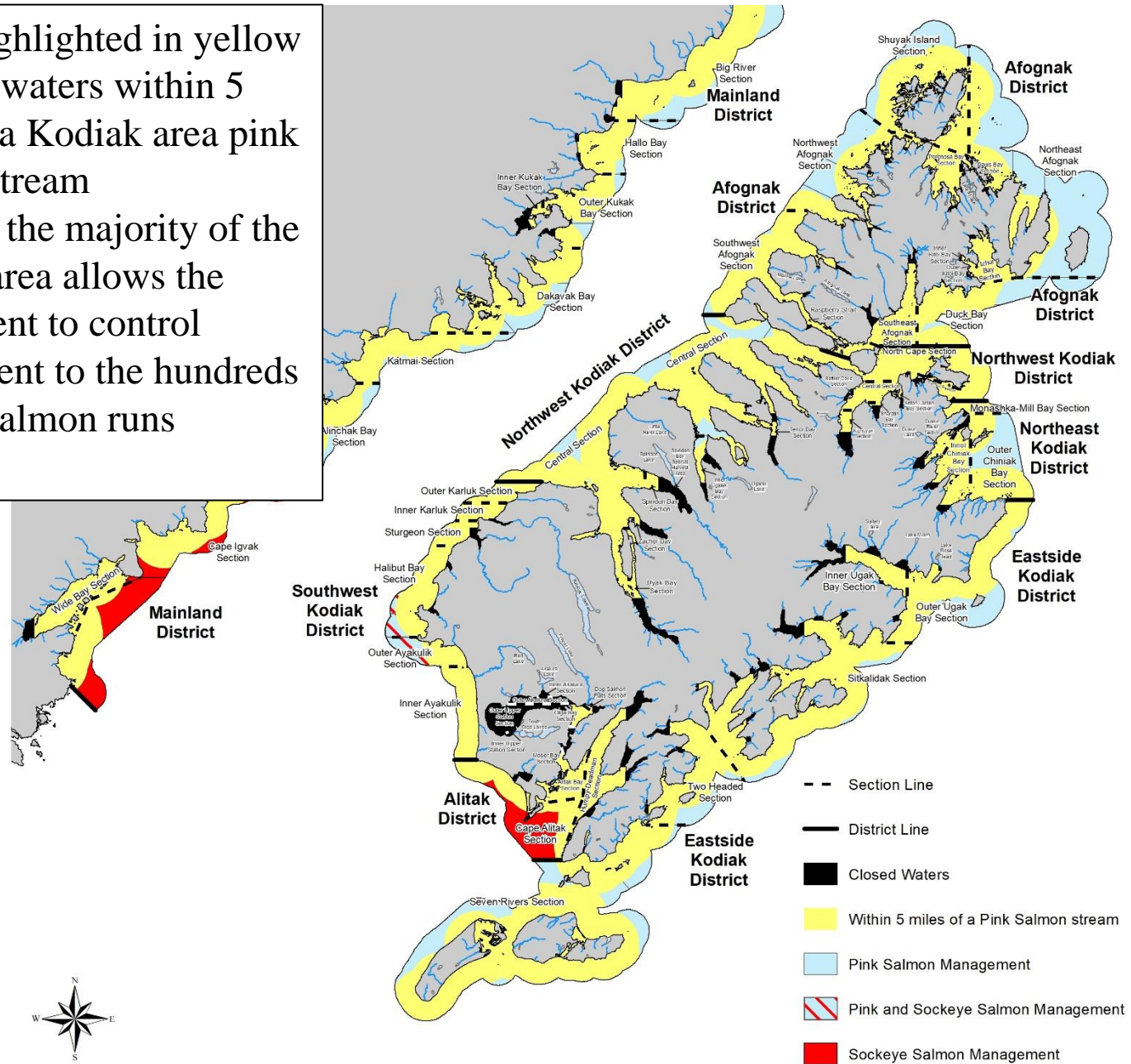
- Early-run sockeye salmon harvest on the westside is down
- There is less fishing time in the Central Section in June
- Considerably less fishing time in the Inner & Outer Karluk Sections in June
- In the past 16 years, only 2 years (2013, 2017) have had Inner Karluk Section commercial salmon openings

Kodiak Pink Salmon Fishery



Kodiak Pink Salmon Fishery

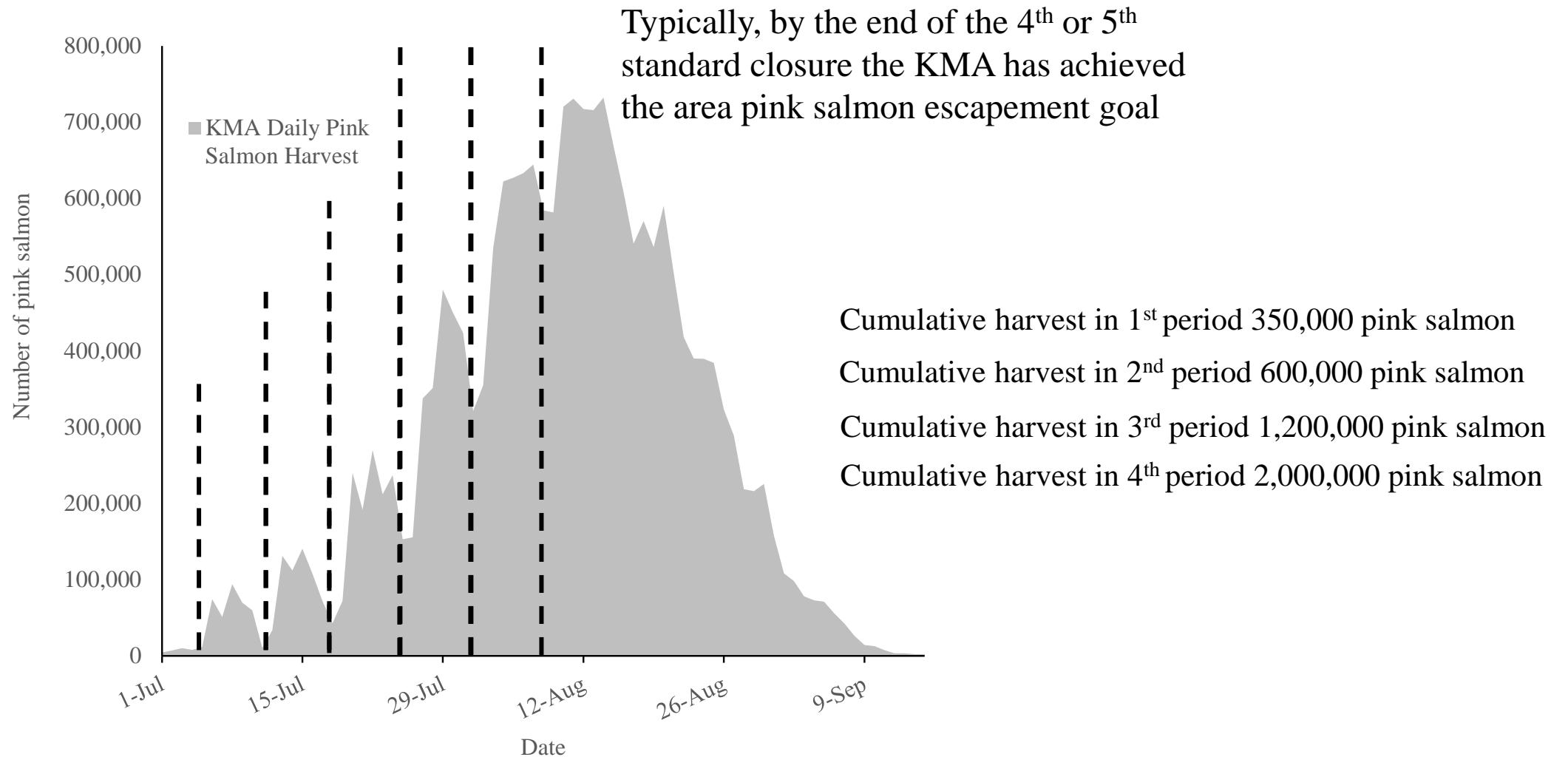
- Areas highlighted in yellow are state waters within 5 miles of a Kodiak area pink salmon stream
- Opening the majority of the Kodiak area allows the department to control escapement to the hundreds of pink salmon runs



Kodiak Pink Salmon Harvest Strategy

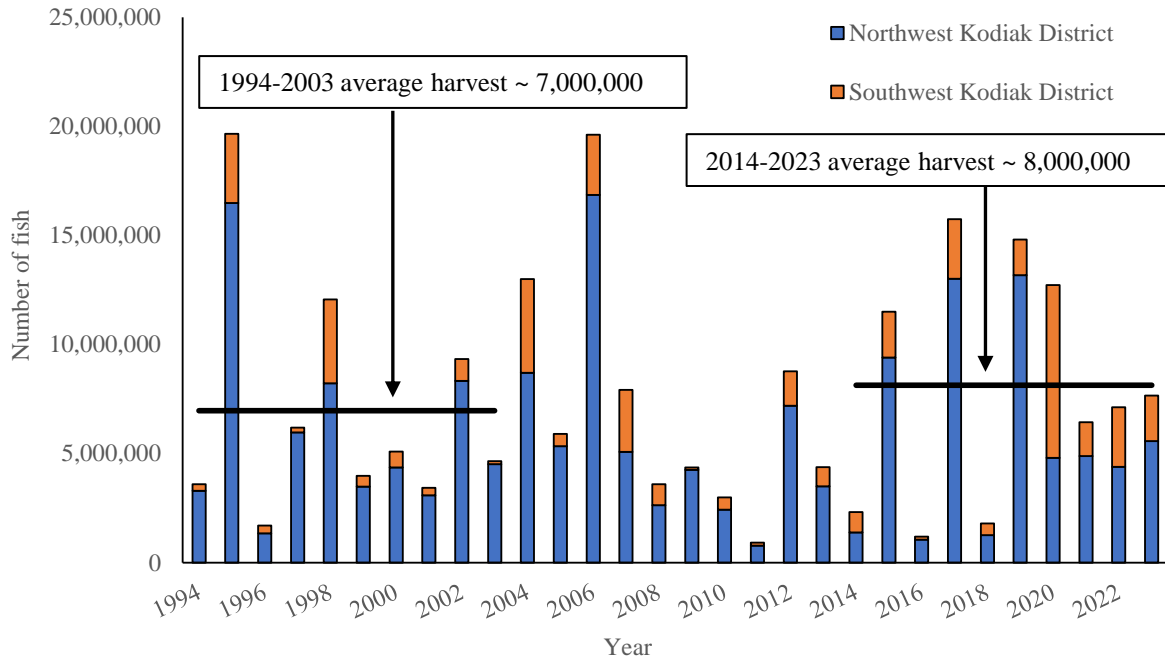
- Areawide July 6th fixed opening date (since 1979; 44 years)
- Coordinate as many fisheries as possible to allow for dispersion of the seine fleet
- Areawide weekly fishing periods based on wild pink salmon forecast
 - weak 2 ½ days
 - average 3 ½ days
 - strong 4 ½ days
- Start flying escapement surveys at the end of 2nd weekly opening to evaluate pink salmon buildup in KMA's inner bays
- During the peak of the wild pink salmon run (late July to mid-August) fishing time is adjusted based on local pink salmon run strength
- Typically by the end of July or early August the KMA has achieved the lower or midpoint escapement value for pink salmon

20-Year Average Kodiak Area Pink Salmon Daily Harvest = Season Total of 20,000,000 Fish



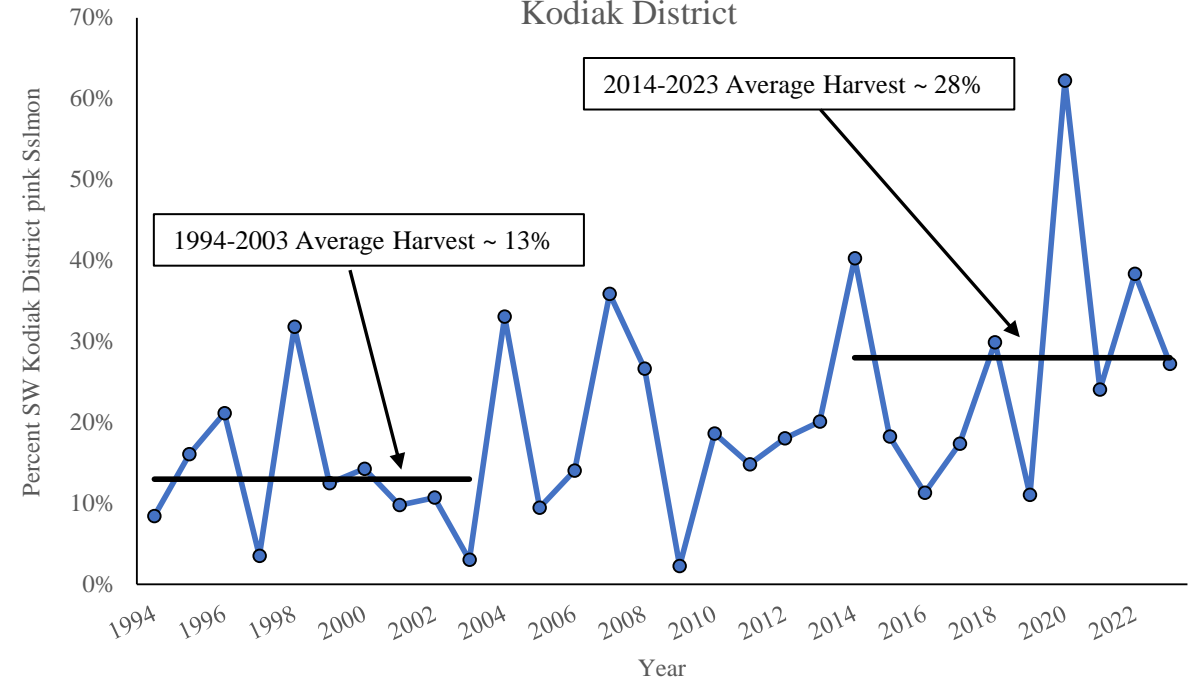
Westside Kodiak Commercial Salmon Pink Salmon Harvest

Westside pink salmon harvest



- Westside pink salmon runs have been highly variable over the past two decades with the run being mostly odd year dominate with very weak even years (2008, 2010, 2014, 2016, 2018)
- Recent stronger even years have been concentrated in the 3 major Southwest Kodiak District Systems of Karluk, Sturgeon, and Ayakulik

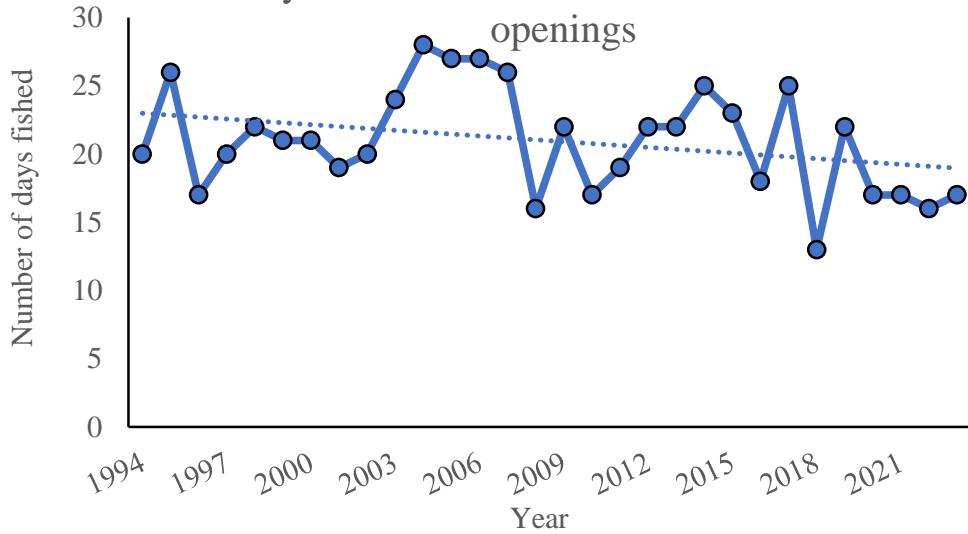
Proportion of Westside pink salmon harvested in the Southwest Kodiak District



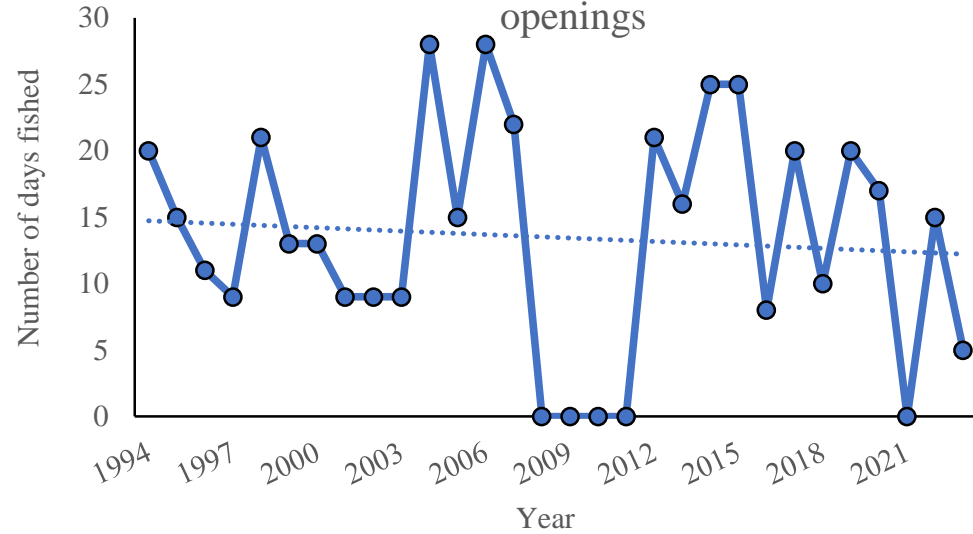
- Larger portion of the Westside Kodiak pink salmon are harvested in terminal areas in the Southwest Kodiak District
- Partly due to larger even year production in Karluk, Sturgeon, and Ayakulik, and a lower Karluk late-run sockeye salmon escapement goal

July Westside Kodiak Commercial Salmon Openings

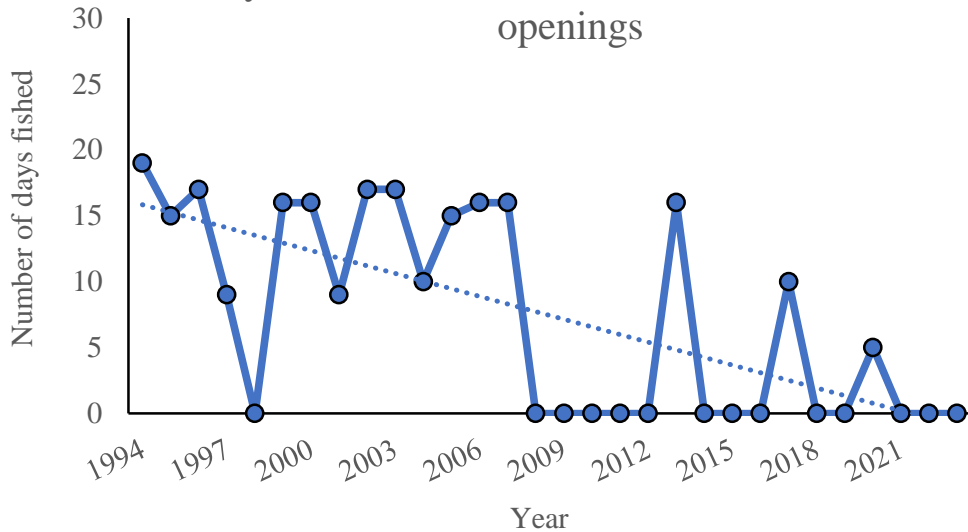
July Central Section commercial salmon openings



July Outer Karluk Section commercial salmon openings



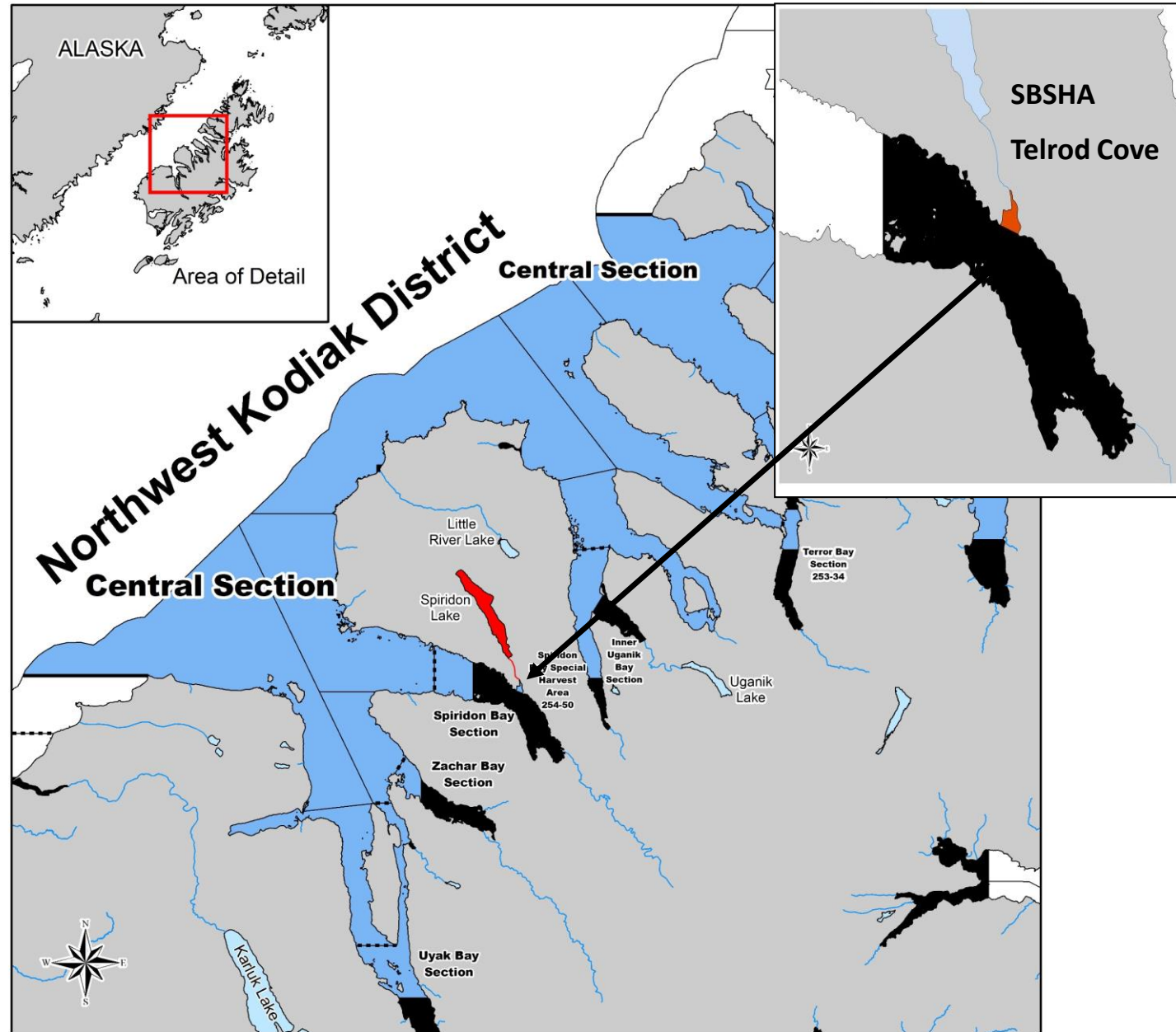
July Inner Karluk Section commercial salmon openings



Westside pink salmon runs have been highly variable in the past decade

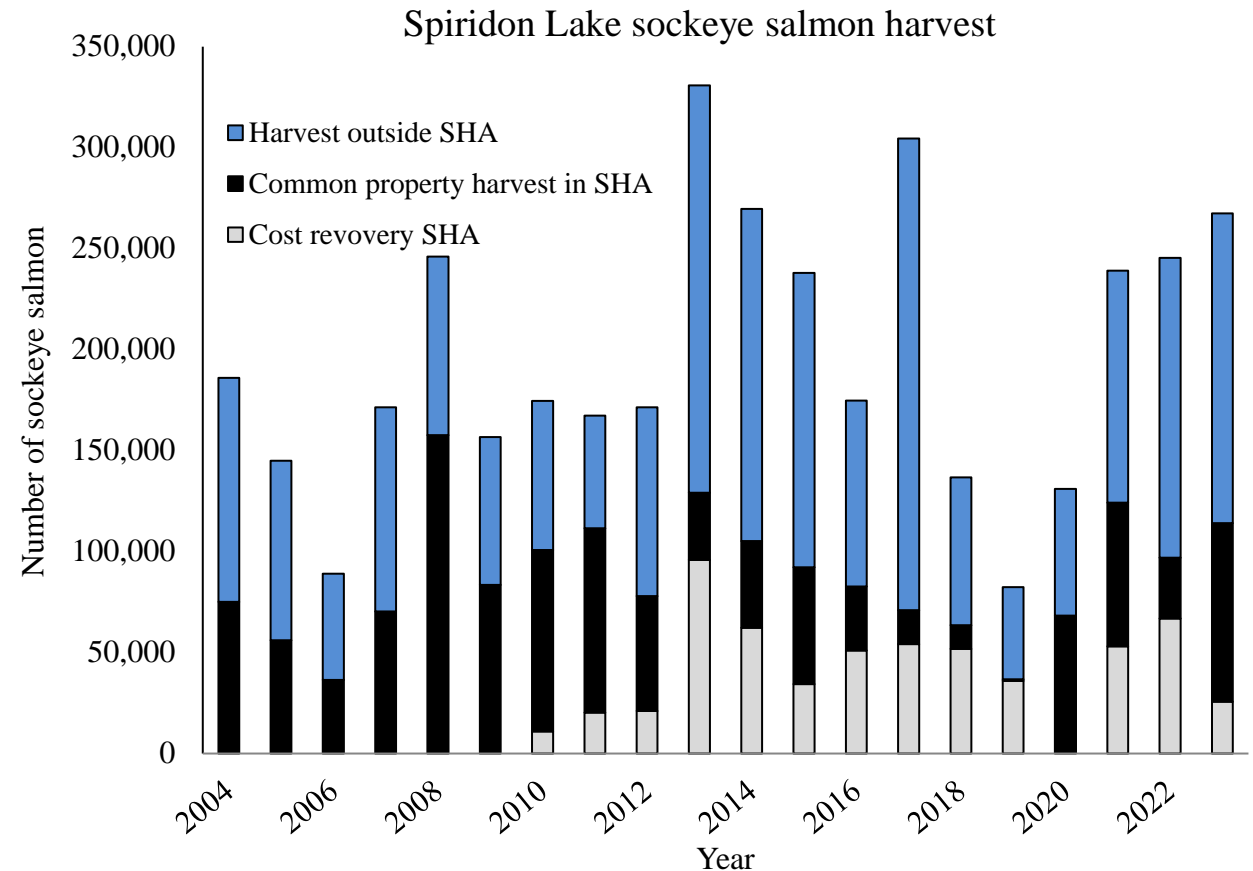
- Mostly strong odd year runs and weak even year runs
- Central Section openings in July are trending down, especially in even years
- Less extended fishing in July
- With about the same amount of fishing time in the Outer Karluk Section
- With much less fishing time in the Inner Karluk Section

The Spiridon Lake Sockeye Salmon Enhancement Project



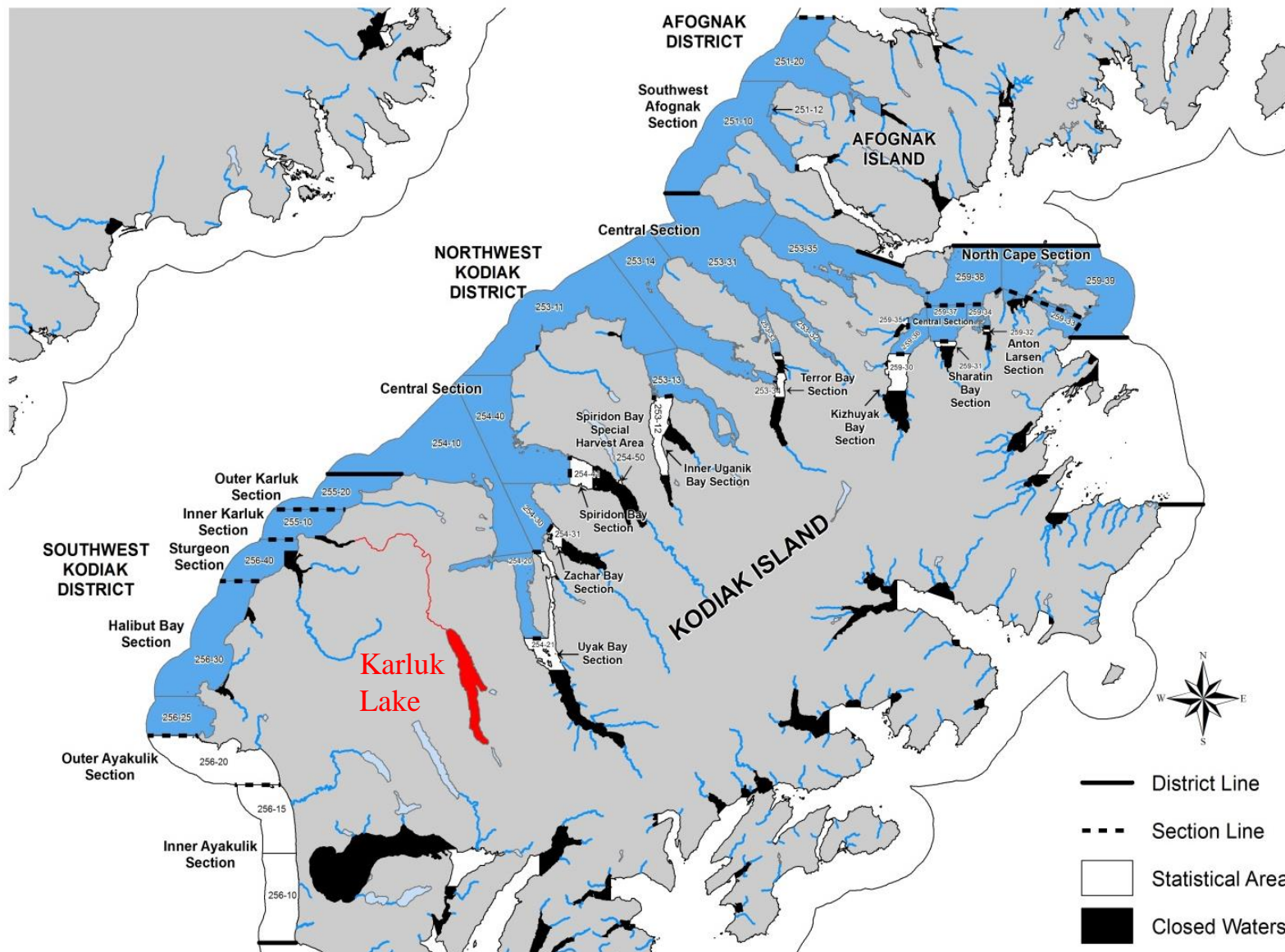
The Spiridon Lake Sockeye Salmon Enhancement Project

- The past 10 years has been highly variable between 80,000 to 270,000 sockeye salmon
- Most of the sockeye are harvested in the Central Section in both seine and set gillnet area (10-year average ~ 57.5%)
- Within the seine gear only SHA, most of the sockeye are harvested by the KRAA cost recovery (10-year average ~ 22.5%)
- Within the SHA, the common property make up the smallest amount (10-Year average ~ 20%)

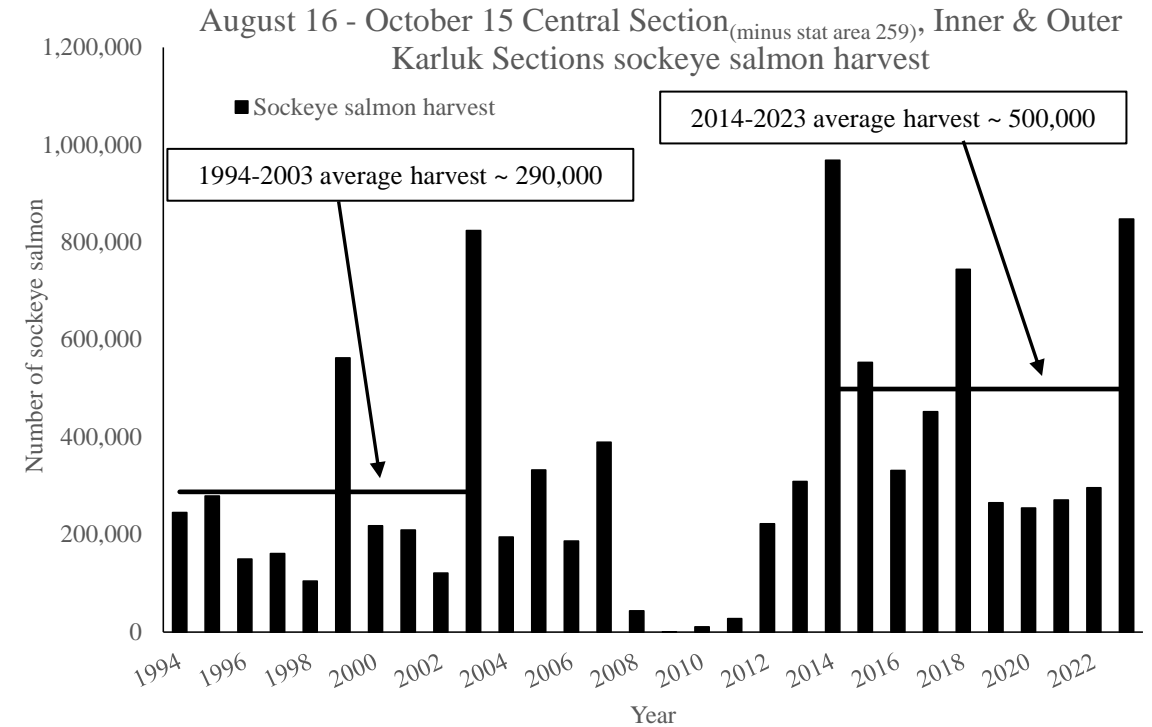
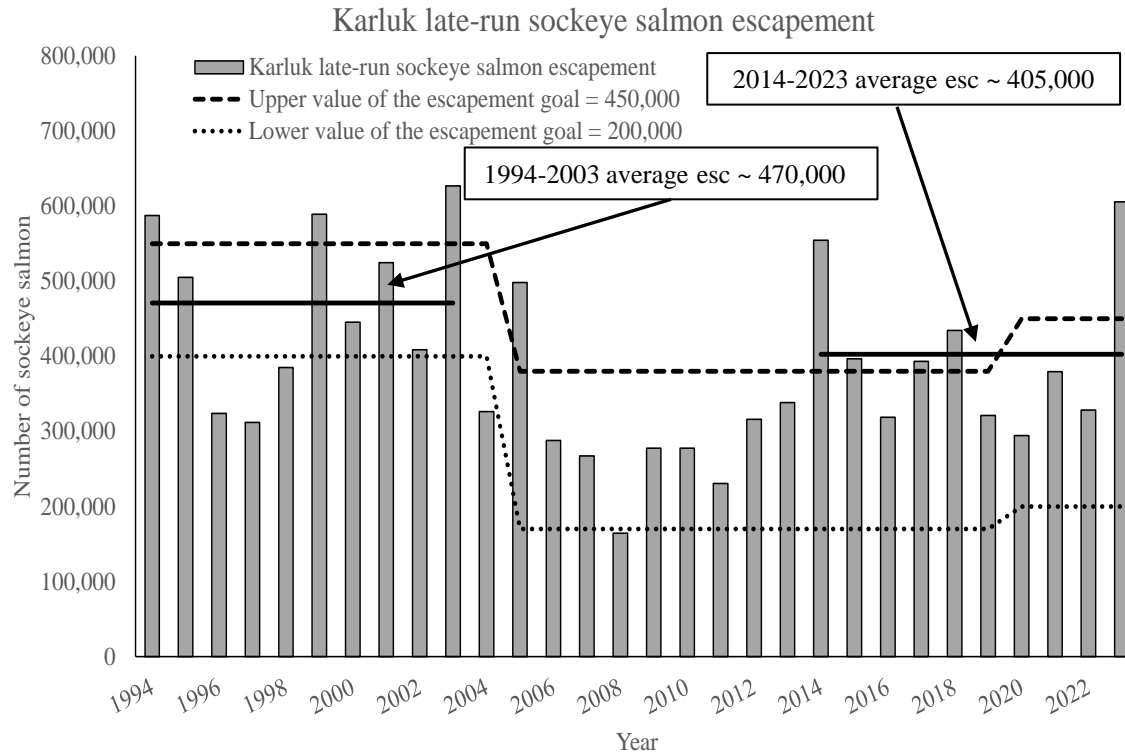


Karluk Late-Run Sockeye Salmon

In mid-August, the commercial fishery management is again centered around the Northwest Kodiak District & Karluk sections



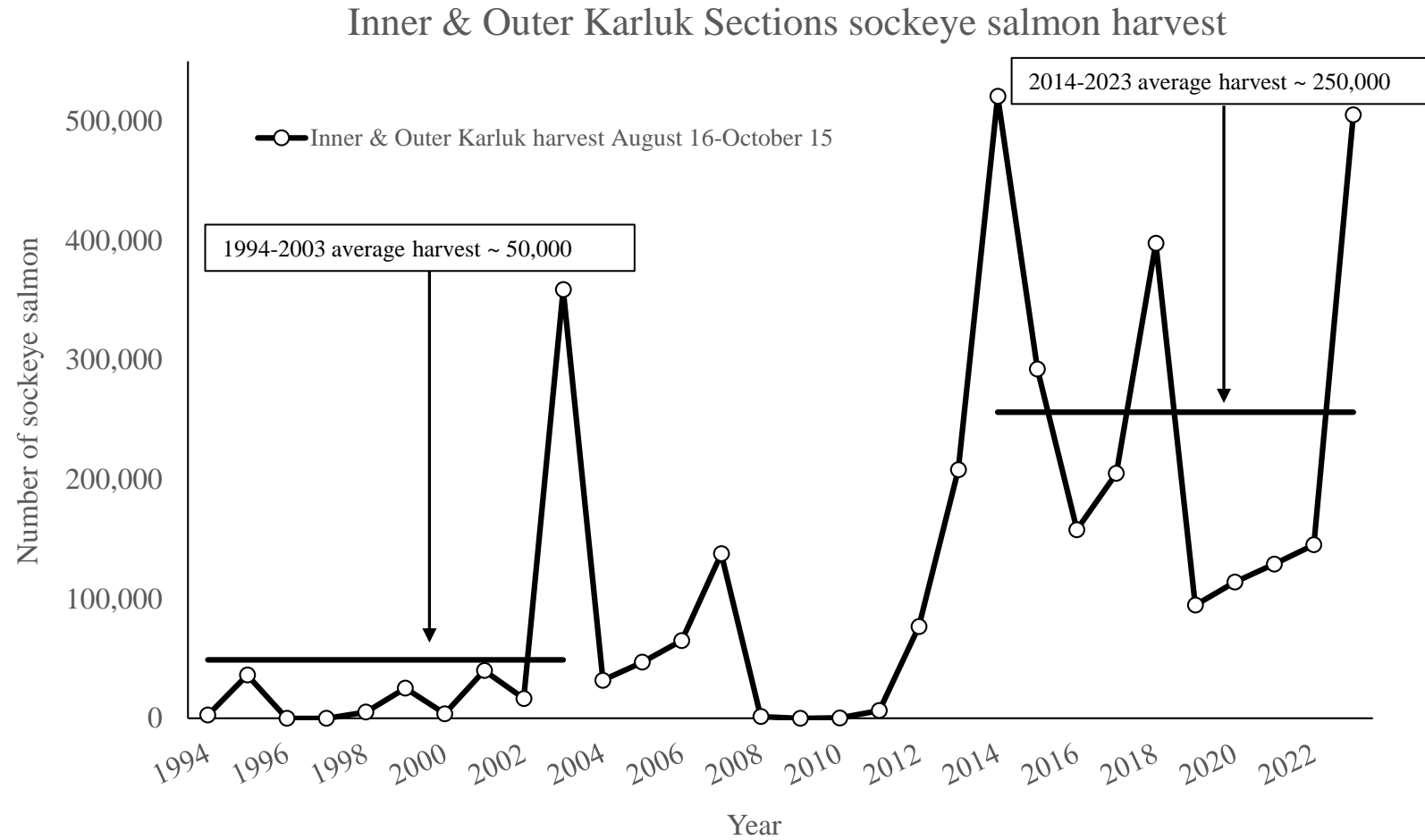
Karluk Late-Run Sockeye Salmon



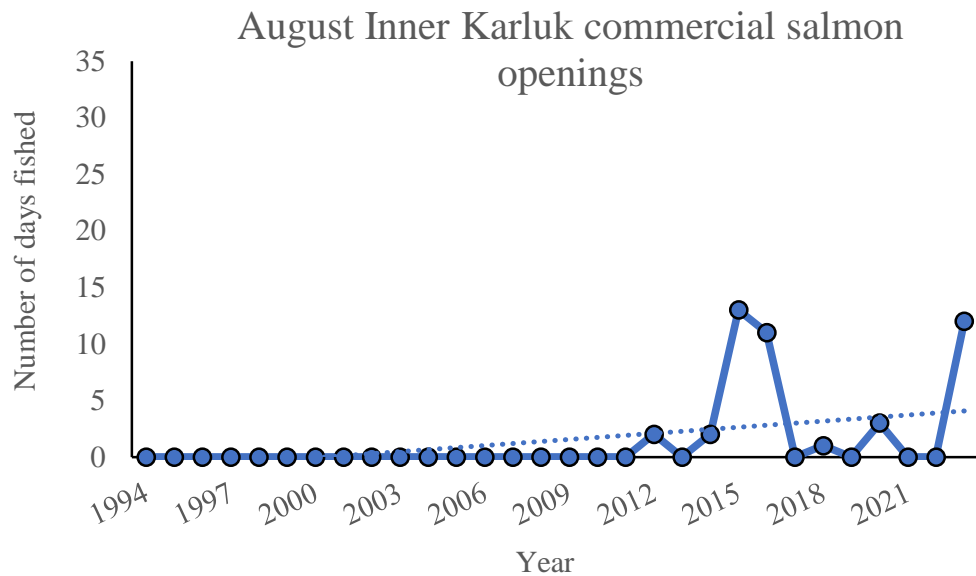
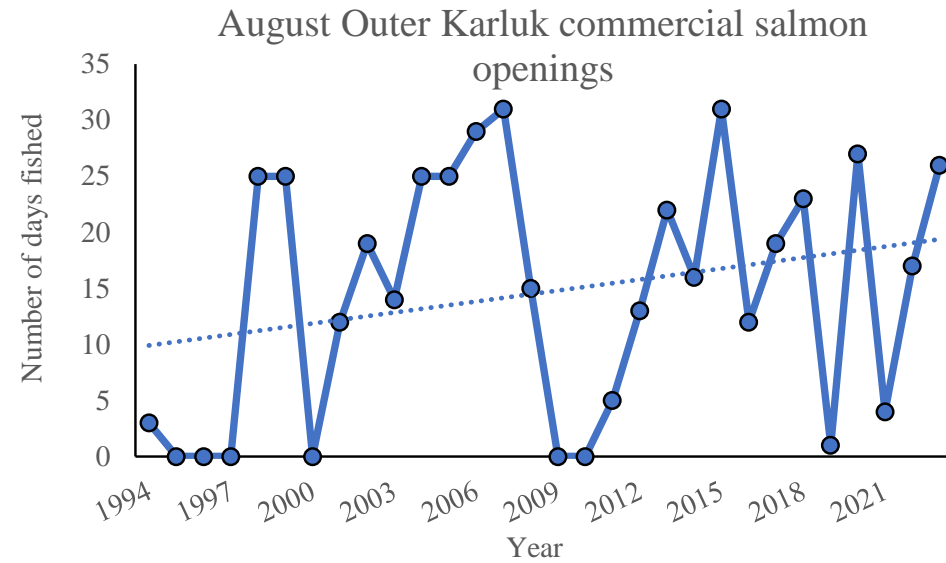
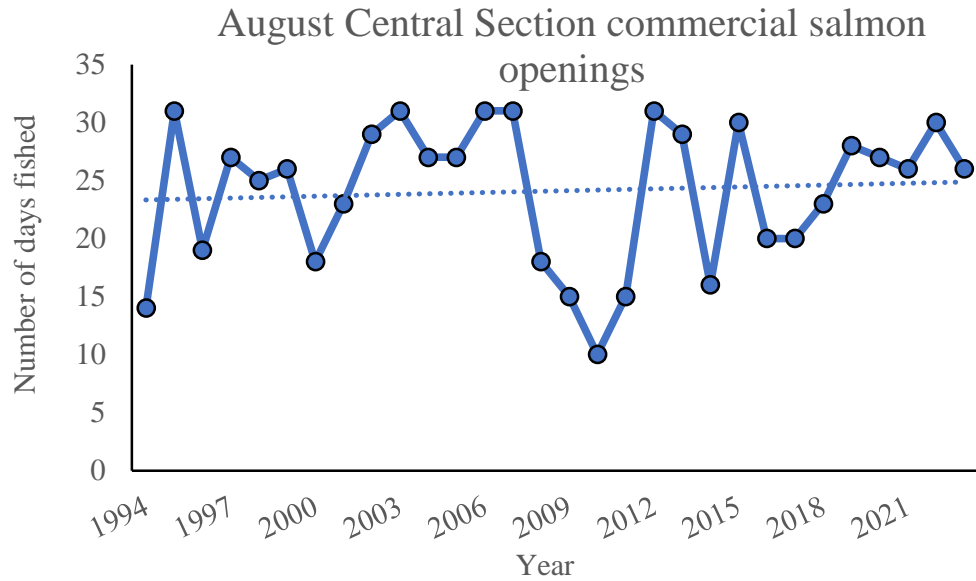
- Karluk late-run sockeye salmon escapement is slightly down compared to the past, but now more often within the escapement goal range
- The late-run escapement goal considerably lower than it used to be in the past (400,000 to 550,000 vs 200,000 to 450,000)

- Considerably more sockeye salmon harvested than in the past, with 4 of the 6 largest late-run harvests in the past 10 years
- Much more terminal fishing in both the Inner and Outer Karluk Sections

Late-Run Harvest of Sockeye Salmon in the Inner & Outer Karluk Sections

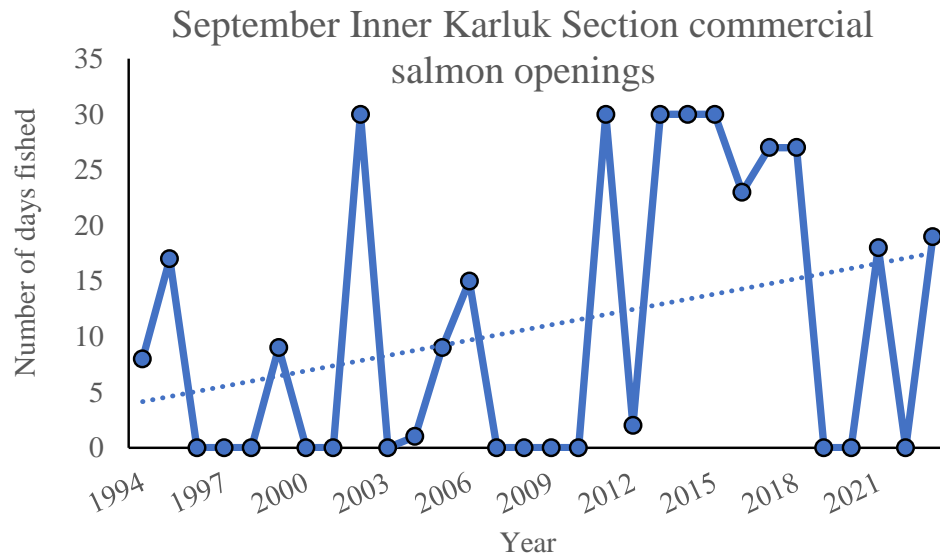
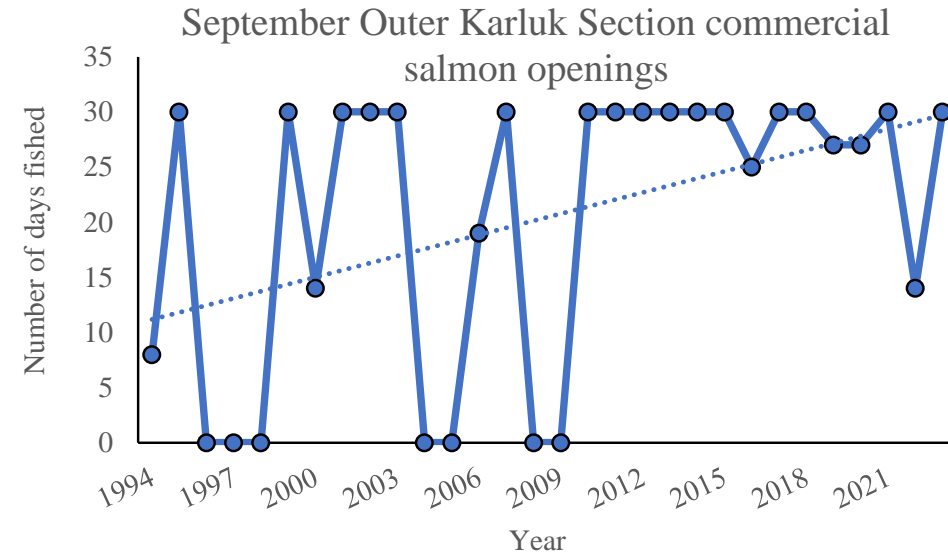
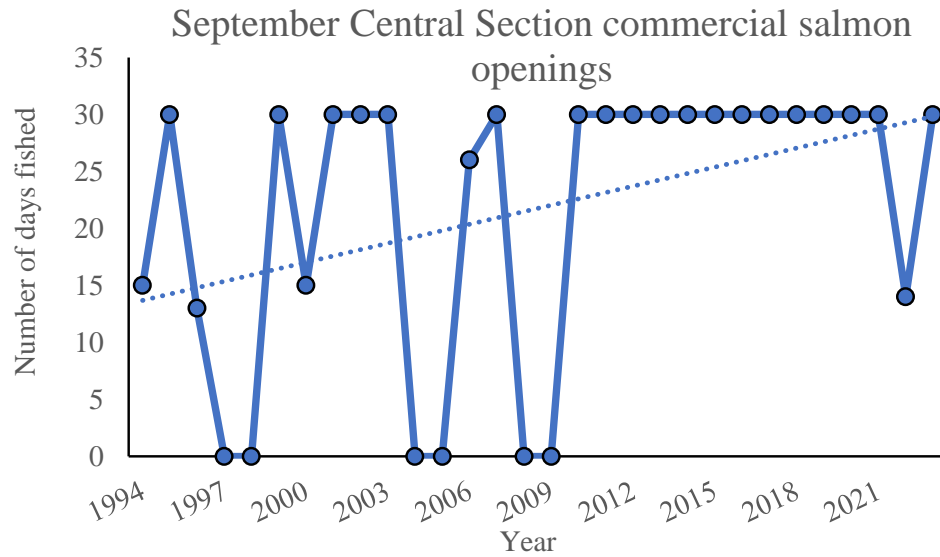


August Westside Kodiak Commercial Salmon Openings



- Central Section openings in August and September are trending up but similar to the past
- Lower late-run escapement goal has resulted in more Inner & Outer Karluk openings

September Westside Kodiak Commercial Salmon Openings

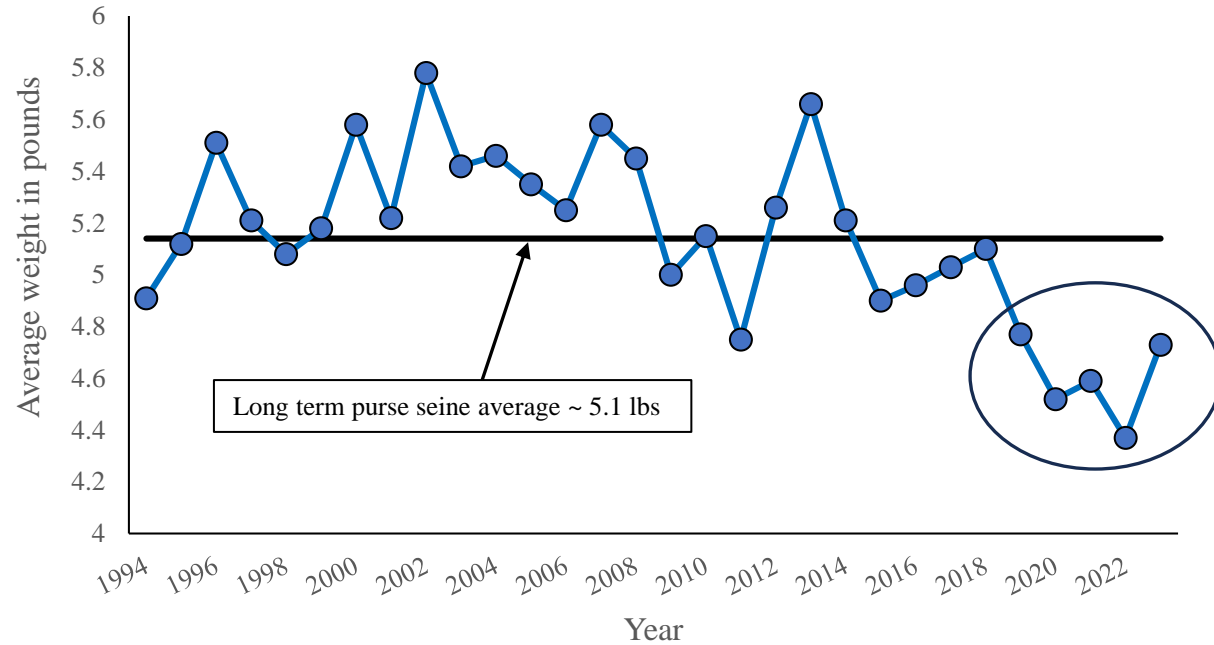


Westside late-run sockeye runs have been strong

- Central Section openings in September are trending up
- More extended fishing time
- Lower late-run escapement goal has resulted in more Inner & Outer Karluk openings
- The terminal harvest of both sockeye and pink salmon is up significantly especially in September and October

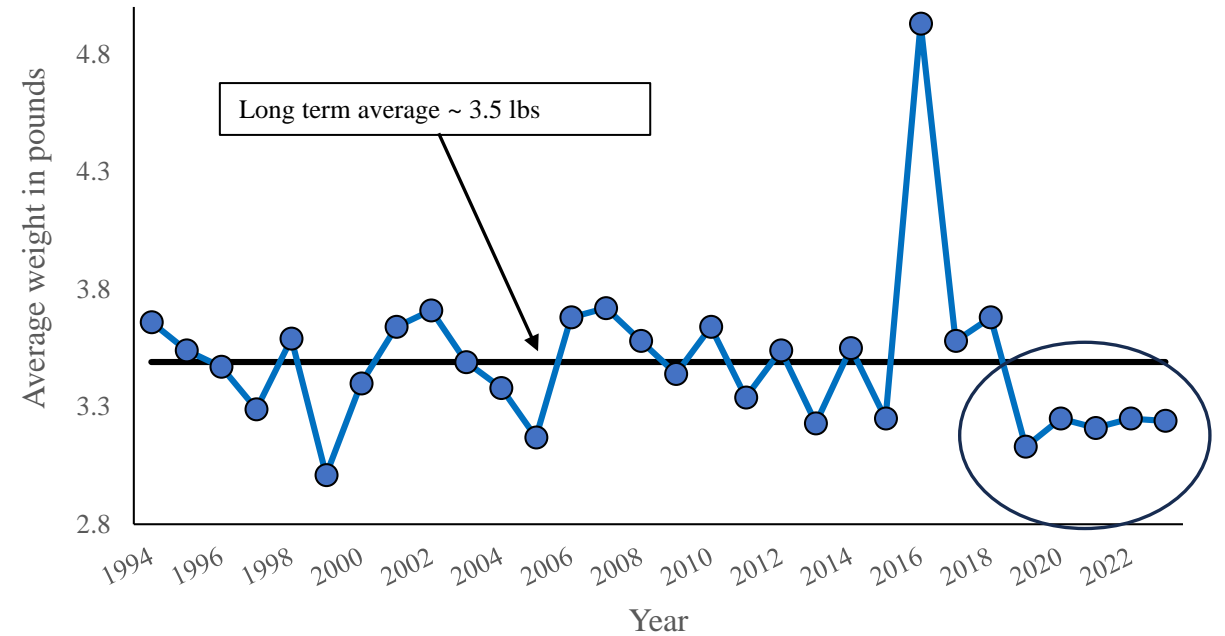
Average Size of Sockeye & Pink Salmon on Westside

Average purse seine sockeye salmon weight in Northwest Kodiak District



- Westside sockeye salmon average weight has been below the long-term average for 9 of the last 10 years
- 2022 was the smallest sockeye salmon harvested in past 53 years
- Past 5-Years have been the smallest sockeye salmon in the past 53 years

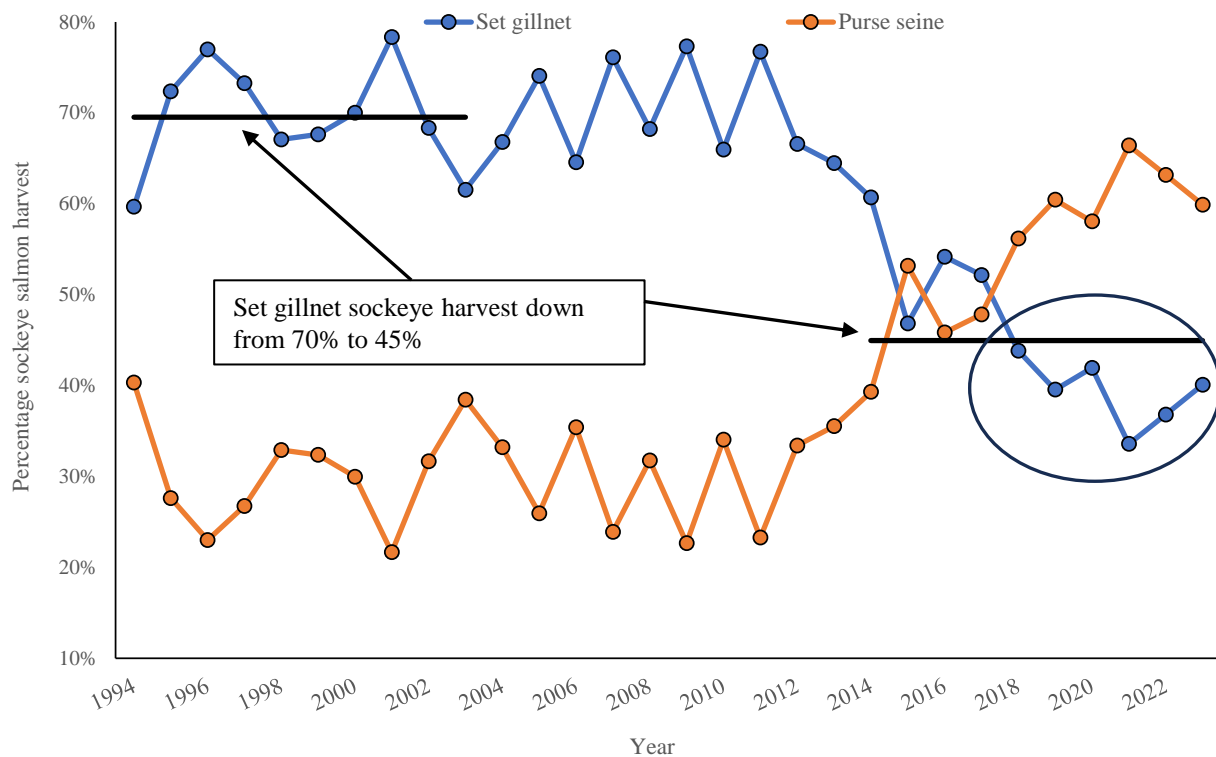
Average purse seine pink salmon weight in Northwest Kodiak District



- Odd years tend have smaller pink salmon than even years
- Westside pink salmon average weight has been below average for the past 5 years
- 2016 was the largest pinks on record

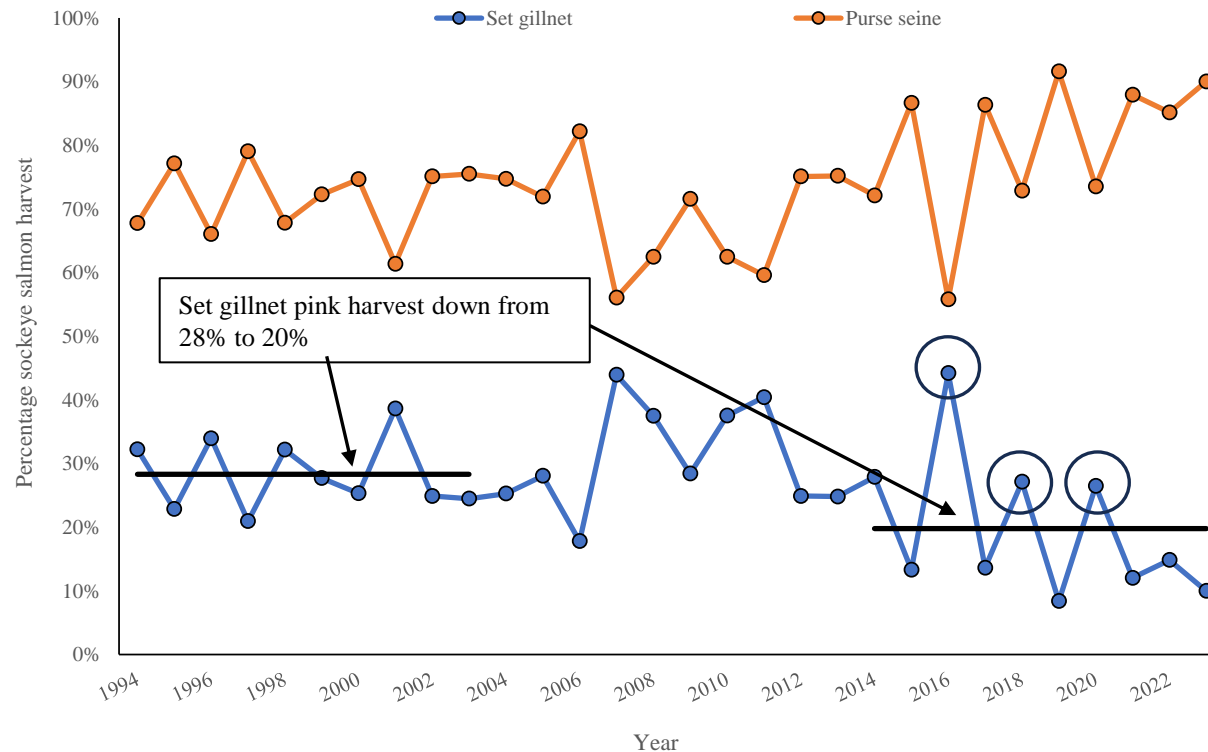
Northwest Kodiak District Percent Harvest by Gear

Northwest Kodiak District sockeye % harvest by gear



- Westside set gillnet percentage of sockeye salmon harvested in the Northwest Kodiak District has declined from 70% to 45% over the past 3 decades
- Past 5 years have been the lowest percent harvest on record

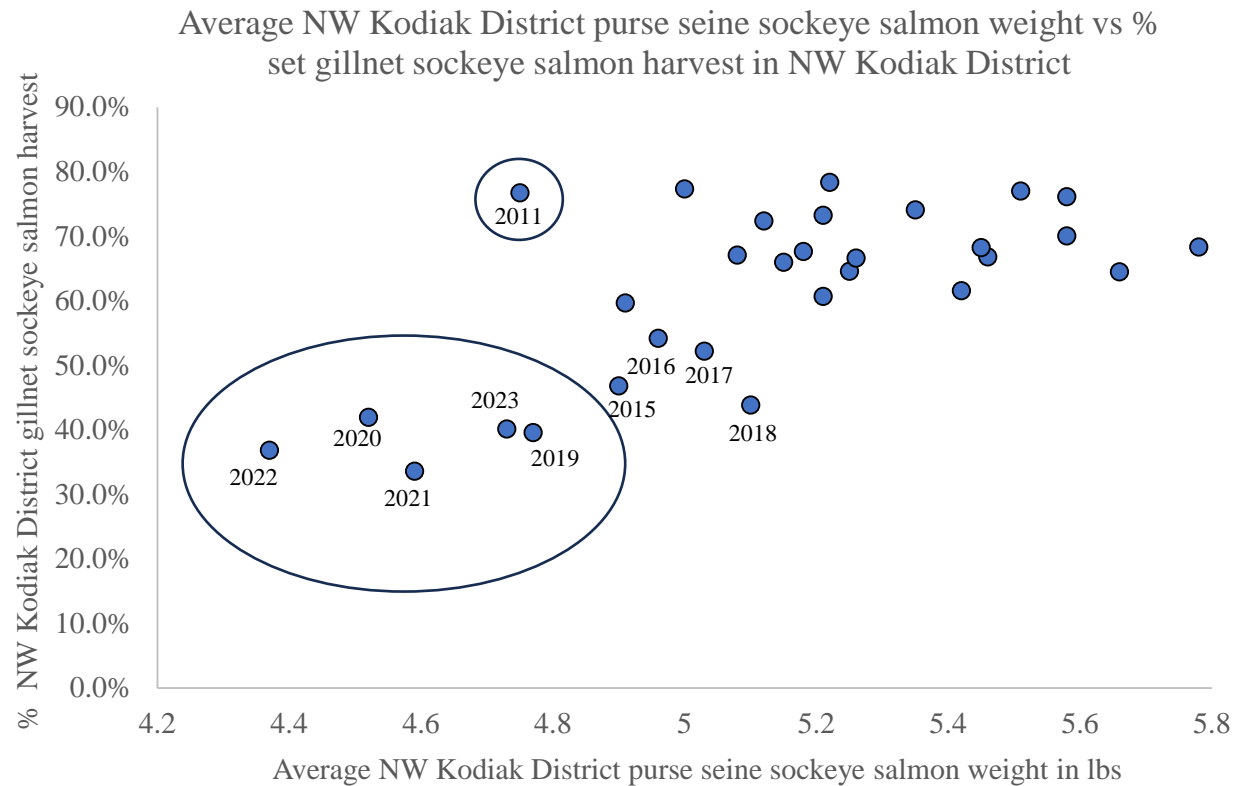
Northwest Kodiak District pink % harvest by gear



- Westside set gillnet percentage of pink salmon harvested in the Northwest Kodiak District has declined from 28% to 20% over the past 3 decades
- The percent set gillnet pink salmon harvest seems to be larger on even years

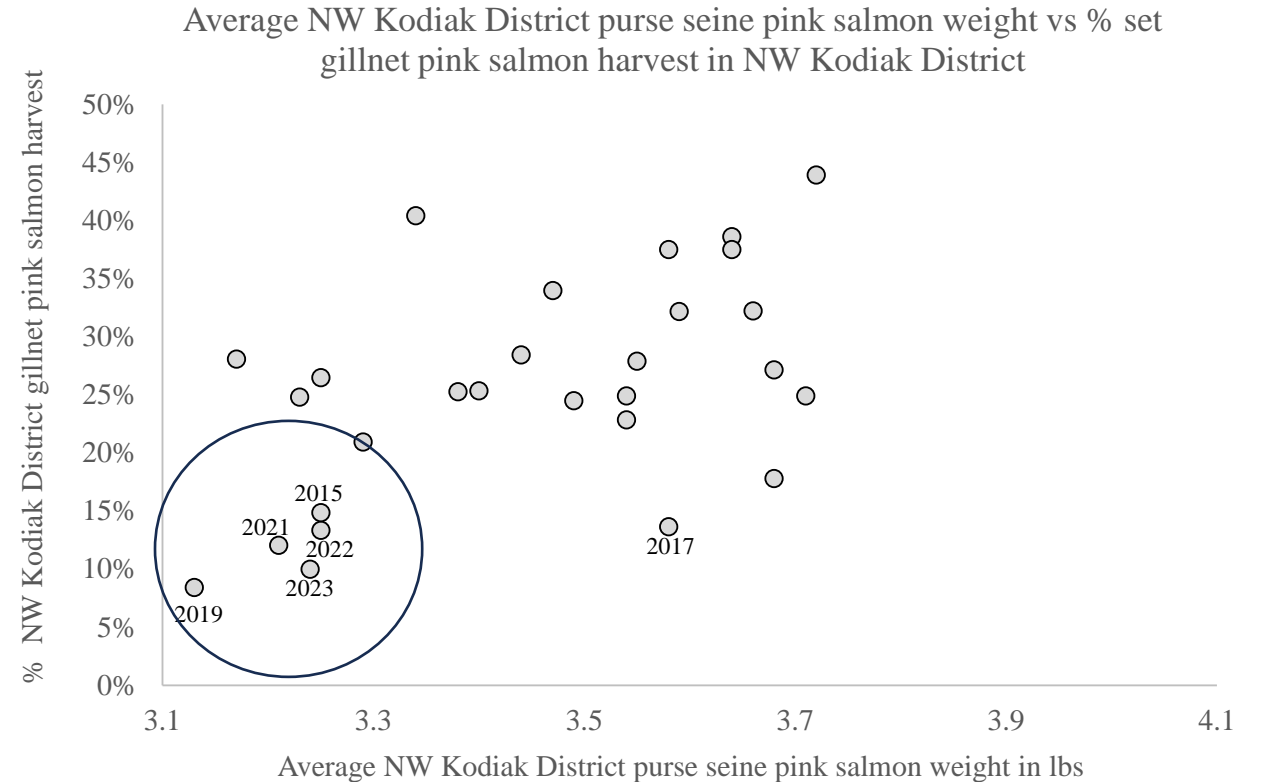
Sockeye Salmon Size vs Set Gillnet Harvest

- The average weight of sockeye salmon harvested on the Westside is trending down
- As the average size of sockeye salmon has decreased, so has the percentage of sockeye salmon harvested by the set gillnet fleet
- The past 5 years were the smallest sockeye salmon average by weight
- The past 5 year set gillnet sockeye salmon harvest is the smallest by percent of the overall Northwest Kodiak District harvest
- The one outlier is 2011, which had small sockeye but also had record low sockeye salmon runs and a record low pink salmon run, with the least seine participation ever in the Northwest Kodiak District



Pink Salmon Size vs Set Gillnet Harvest

- The average weight of pink salmon harvested on the Westside is also trending down, but not as much as sockeye
- Recently, as the average size of pink salmon has decreased, so has the percentage of pink salmon harvested by the set gillnet fleet,
- Several of the most recent year pink salmon runs cluster in both small size and lower percent harvest by the gillnet fleet.
- With 2019 being the smallest fish, and the lowest percent harvest by the gillnet fleet



Conclusions

- Karluk Early-Run sockeye salmon run is weaker than in the past
 - Early-Run sockeye salmon harvest on the westside is down
 - There is less extended fishing time in the Central Section in June
- Westside Pink Salmon Runs have been highly variable in the past decade
 - Mostly Strong odd-year runs and weak even-year runs (2008, 2010, 2014, 2016, 2018)
 - Central Section openings in July are down slightly, especially in even years
 - Less extended fishing in July
 - Recent strong even-year runs have mostly been concentrated in the SW Kodiak District which is seine only (Karluk, Sturgeon, and Ayakulik Rivers)

Conclusions

- The Spiridon Lake sockeye salmon harvest has been variable over the past 10 years
 - Most Spiridon Lake sockeye salmon harvest takes place outside the SHA, within the Central Section, which is open to both seine and set gillnet gear
- Karluk Late-Run sockeye salmon run is stronger than in the past & the lower value of the Karluk Late-Run escapement goal is 50% less than in the past
 - There are more Central Section openings in August and September
 - Both Inner and Outer Karluk are open considerably more
 - Late-Run sockeye salmon harvest is up, especially in August and September in Inner and Outer Karluk, which is seine only

Conclusions

- The average weight of salmon on the westside is decreasing
 - Sockeye salmon harvested on the westside of Kodiak are the smallest they have been on record
 - Pink salmon tend to be smaller on larger odd years
- The percentage of sockeye and pink salmon harvested in the Northwest Kodiak District is decreasing
 - Gillnet sockeye harvest is down compared to two decades ago
 - Pink Salmon Harvest is down, but not as much
 - The last 5 years have been the smallest sockeye salmon

Proposals

- **Proposal 62** – Would create 48-hour set gillnet only fishing periods before seine fishing periods. Seine fishing shall be closed for 48 hours after each 5 days continuous fishing period in the Central Section, allowing for one 48-hour set gillnet only fishing period per week
- **Proposal 63** – Allow a set gillnet fisherman (one person) that owns two Kodiak Management Area setnet fishing permits the opportunity to operate up to 4 set gillnets with no more than 300 fathoms of set gillnet gear in aggregate
- **Proposal 64** – Would increase the maximum set gillnet hook length from 25 fathoms to 50 fathoms
- **Proposal 66** – Would increase the maximum purse seine and hand purse seine length to 250 fathoms in the Kodiak Area
- **Proposal 69** – Would establish a fixed weekly 105-hour set gillnet fishing period in the Central and North Cape Sections of the Northwest Kodiak District
- **Proposal 70** – Would create a harvest allocation for sockeye and pink salmon between set gillnet and seine gear in the Northwest Kodiak District, the Telrod Cove SHA, as well as the Inner and Outer Karluk Sections of the Southwest Kodiak District

Proposals

- **Proposal 71** – Would modify the current regulation requiring the department to open the Outer Karluk Section of the Southwest Kodiak District
- **Proposal 72** – Would allow the department to open the Southwest Afognak Section of the Afognak District based on Karluk pink salmon
- **Proposal 73** – Would allow the department to manage the Sturgeon Section of the Southwest Kodiak District based on Sturgeon River pink salmon
- **Proposal 74** – Would break up the Central Section of the Northwest Kodiak District into three different Sections

Questions