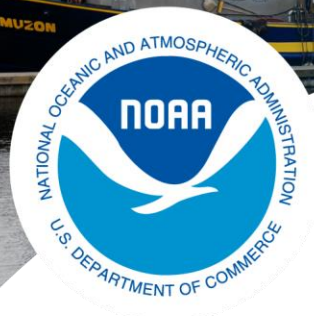


2022 Southeast Alaska Pink Salmon Harvest Forecast



NOAA
FISHERIES

Alaska Fisheries
Science Center
Auke Bay
Laboratories



Alaska
Department of
Fish and Game

NOAA: Jim Murphy, Emily Fergusson, Jamal Moss, Wes Strasburger, Andrew Gray

ADF&G: Andy Piston, Steve Heintl, Sara Miller, and Rich Brenner

2021 Purse Seine Task Force Meeting

November 30, 2021

Southeast Alaska Coastal Monitoring Research

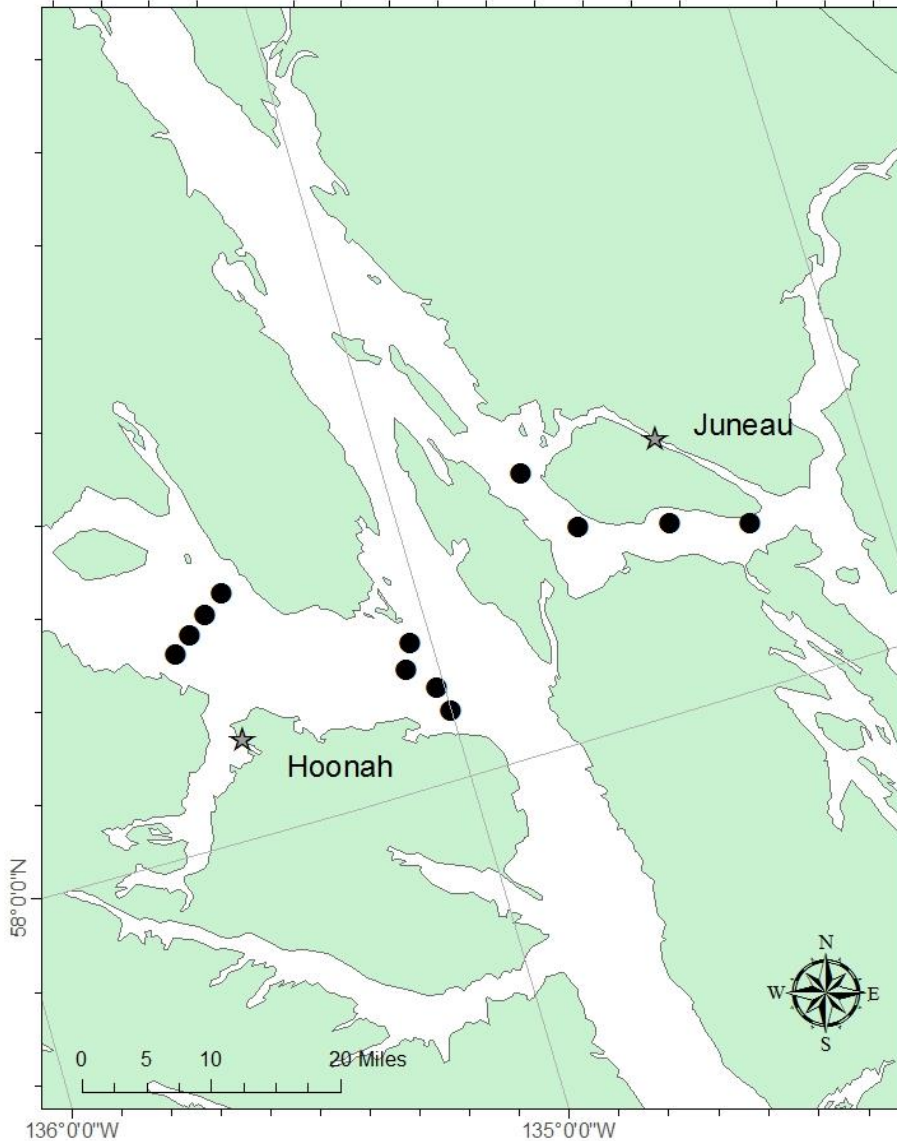
- Surveys are being conducted on ADF&G Research Vessel Medeia.
- Cooperation between NOAA and ADF&G; continued efforts to increase the value of information for the fishing industry.





Photo by master photographer Jim Murphy

Southeast Alaska Coastal Monitoring Research



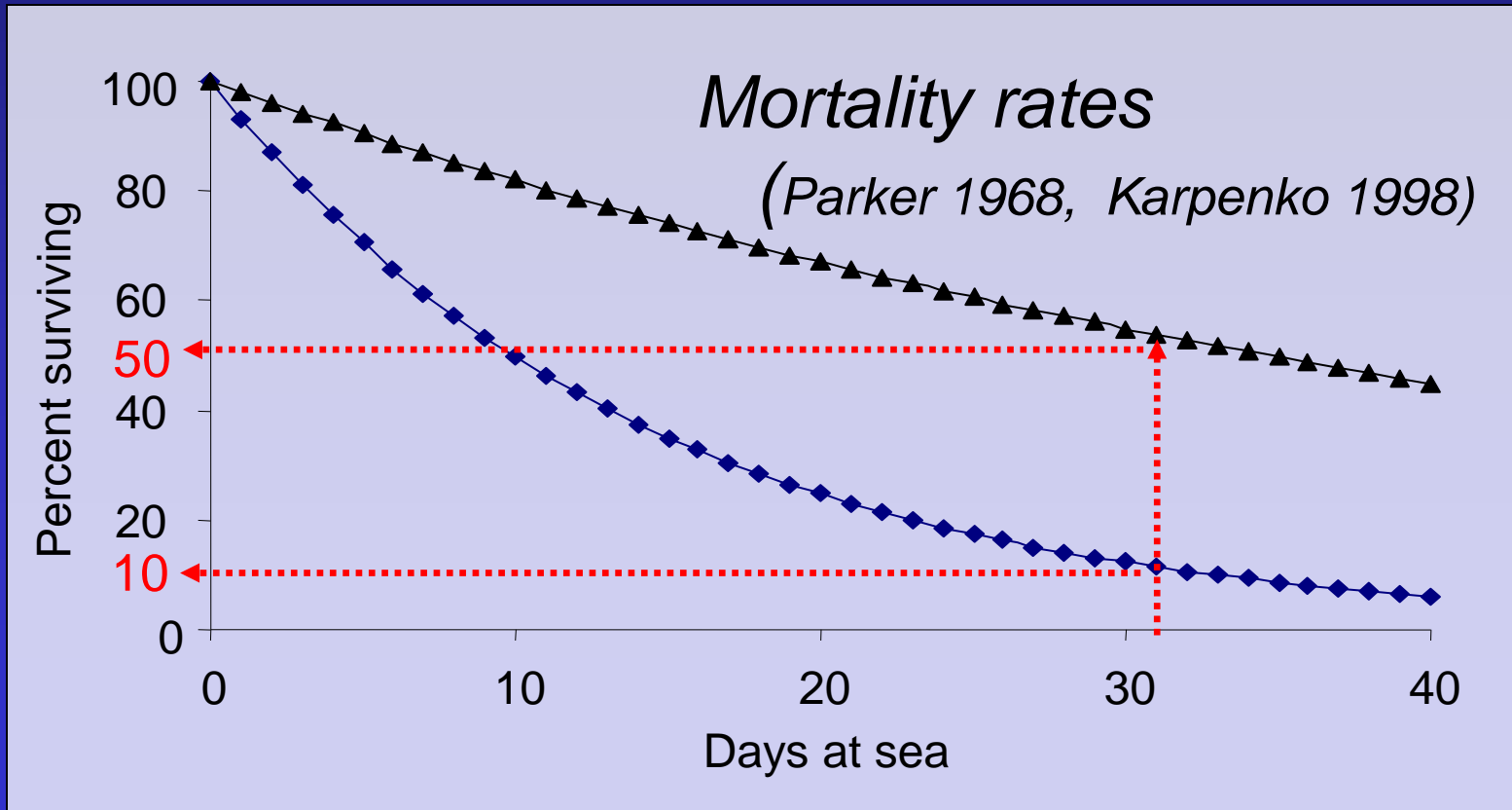
NOAA FISHERIES



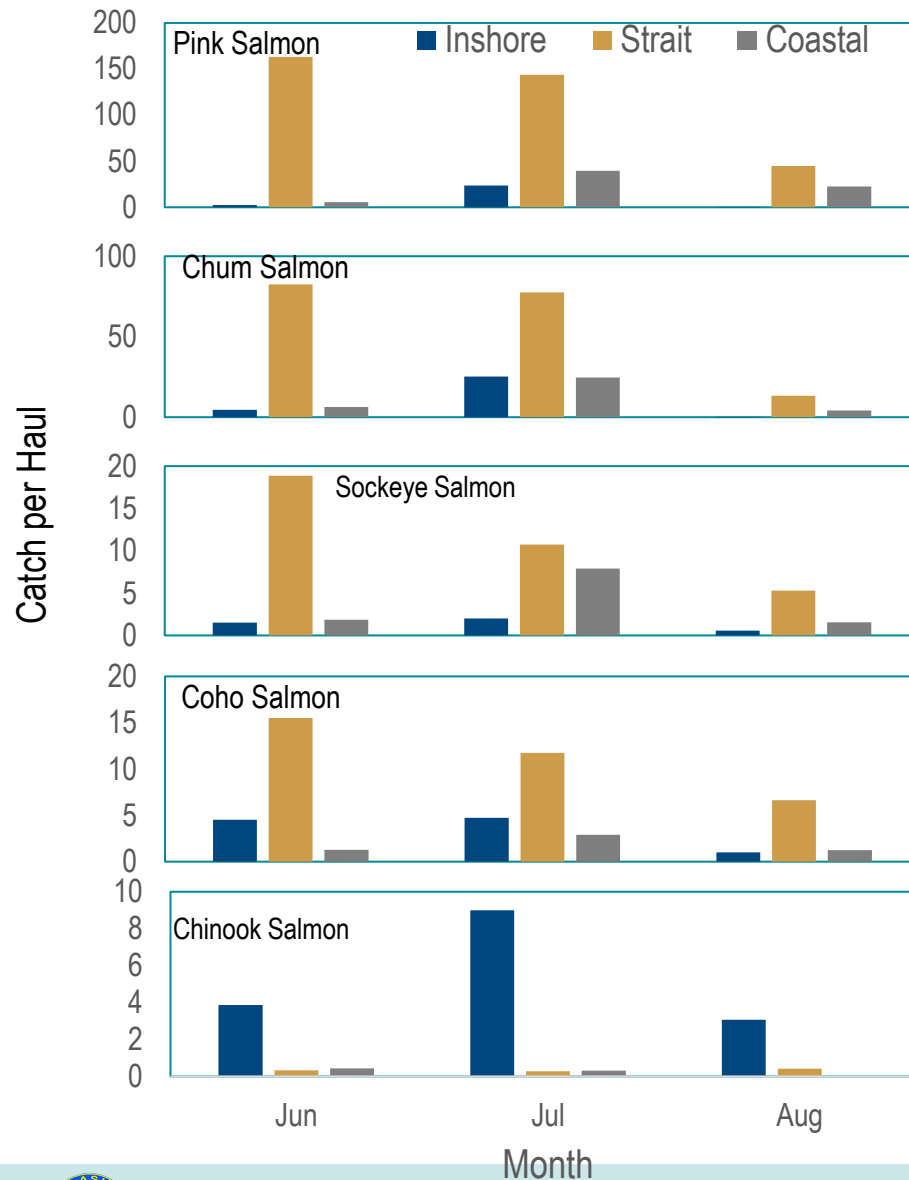
Alaska Department of Fish and Game

Paradigm of pink salmon biology:

Mortality during early marine life is high, variable, and a major determinant of year class strength

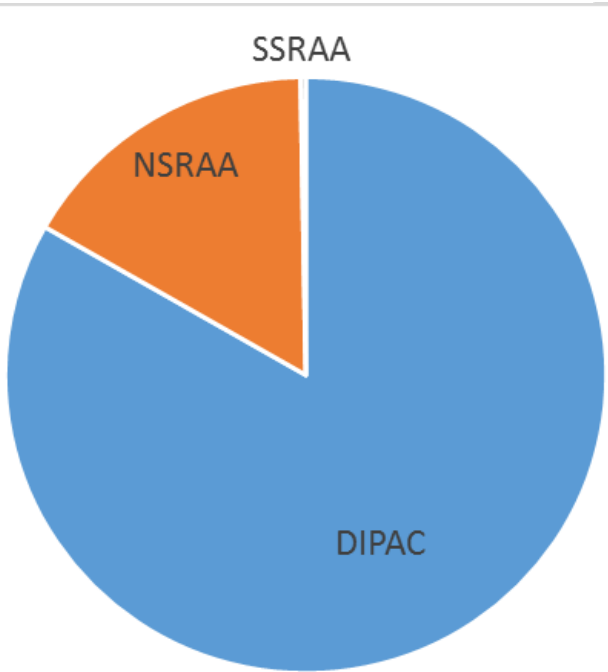


Surface Trawl Catch per Haul for Juvenile Salmon by Month

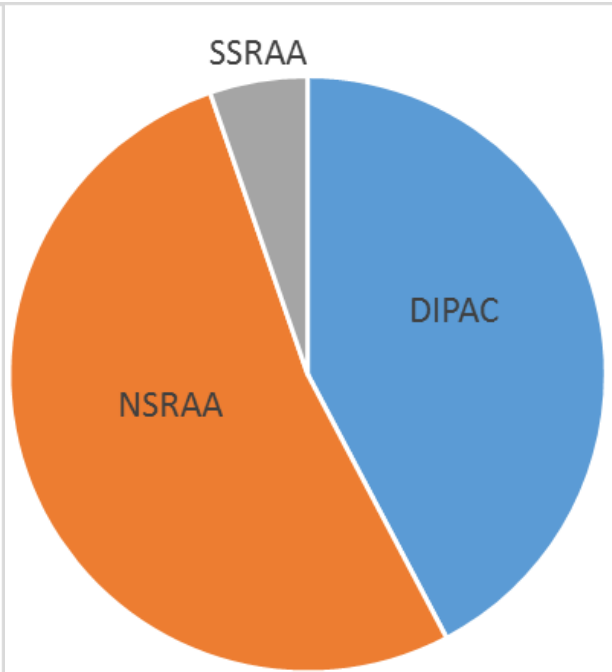


Icy Strait Hatchery Chum Salmon Origin (thermal mark recoveries 1997-2016)

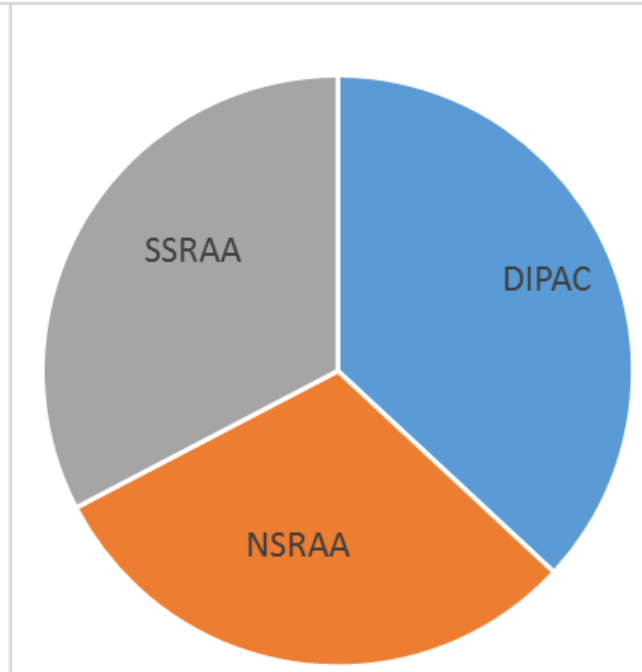
June



July



August



Pink Salmon Harvest Forecast Model Structure

- Peak surface trawl catch rates (CPUE) in June or July.
- Icy Strait Temperature Index (ISTI)

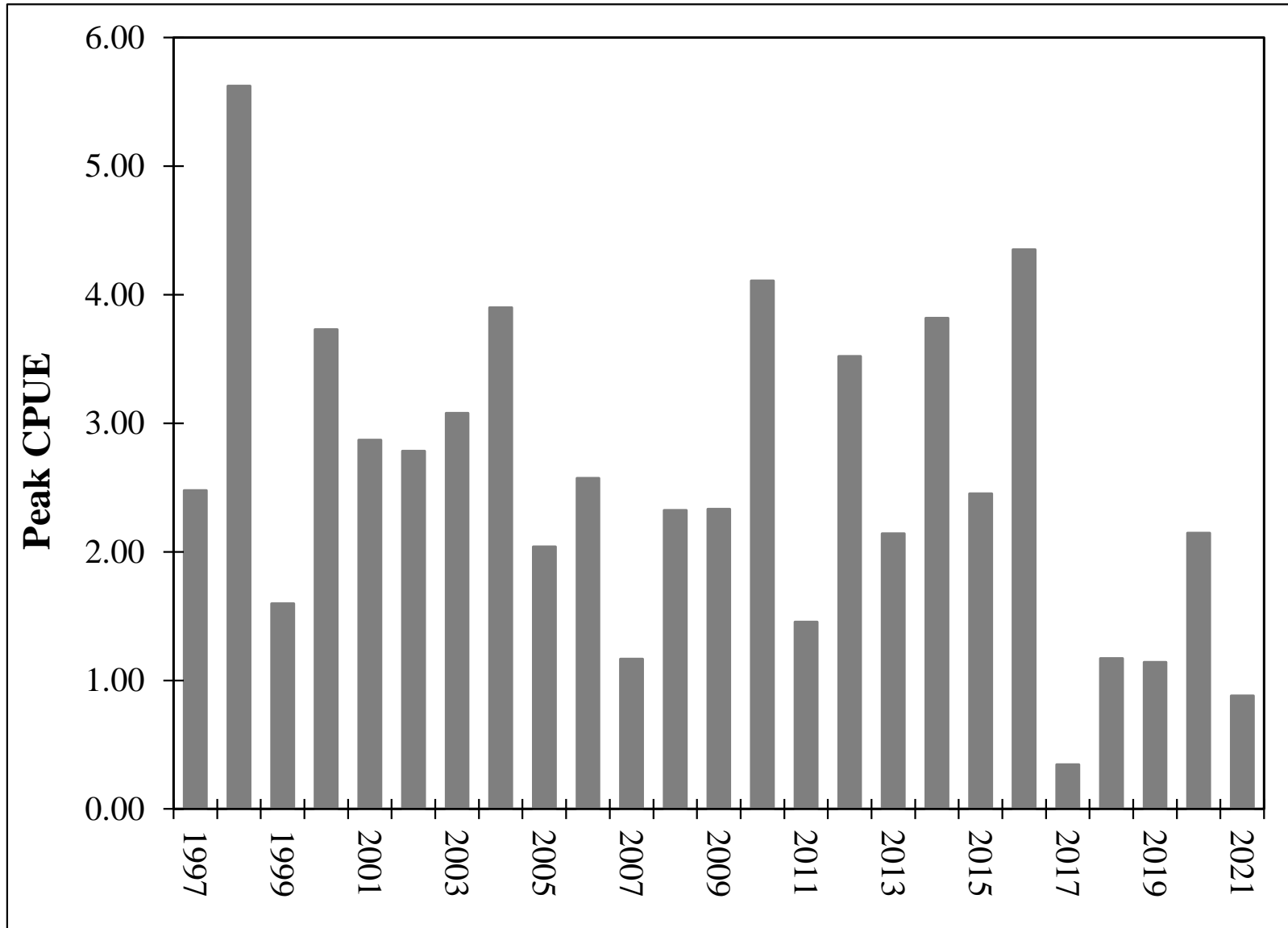


Forecast Model Considerations

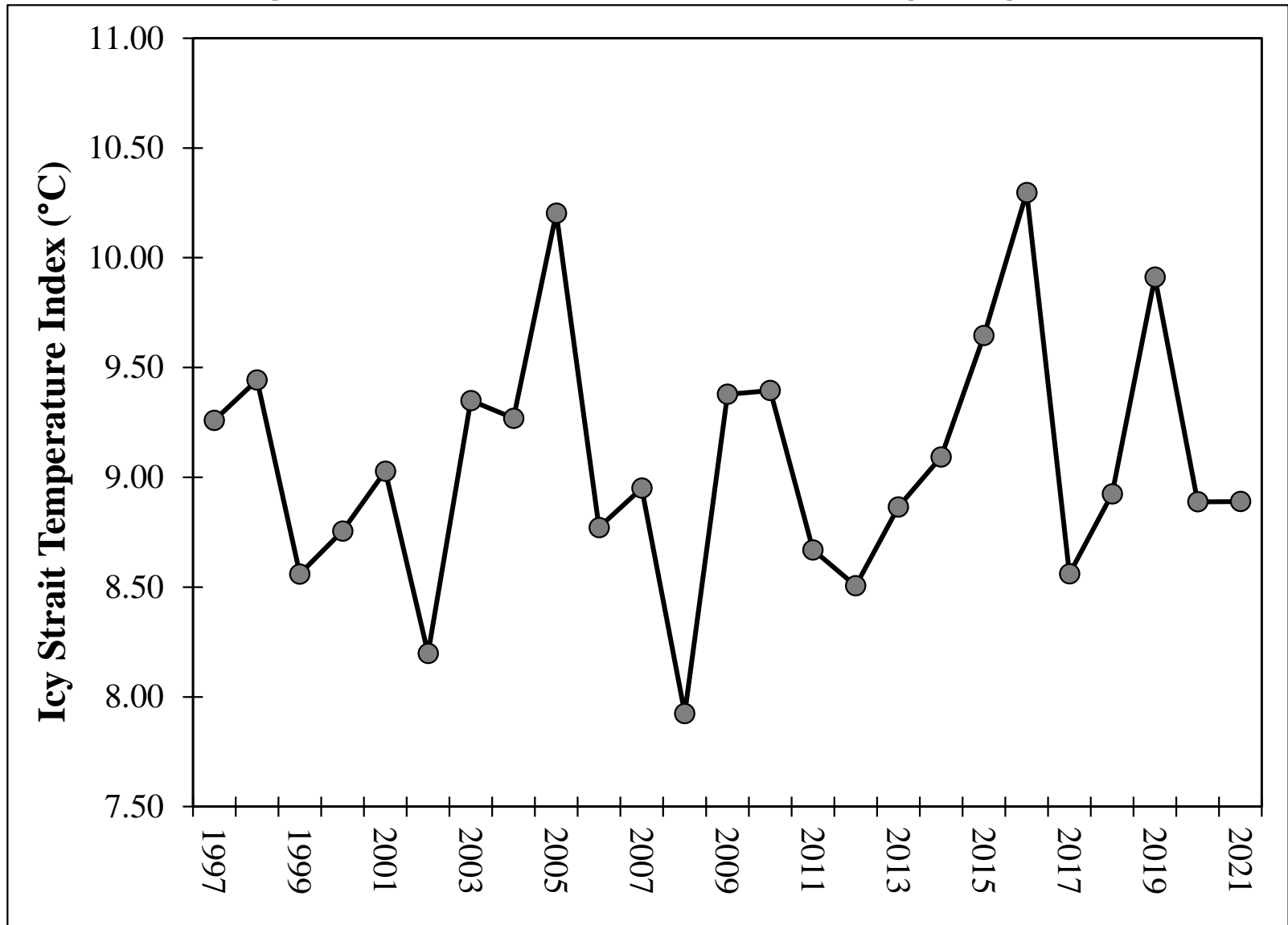
- There are several ways that temperature (ISTI) could be important to the forecast model.
 - Survival: reduced survival during warm years. Since growth is higher in warm years, this would imply that small fish have better survival.
 - Migration: Increased movement of SEAK stocks through Icy Strait during warm years.



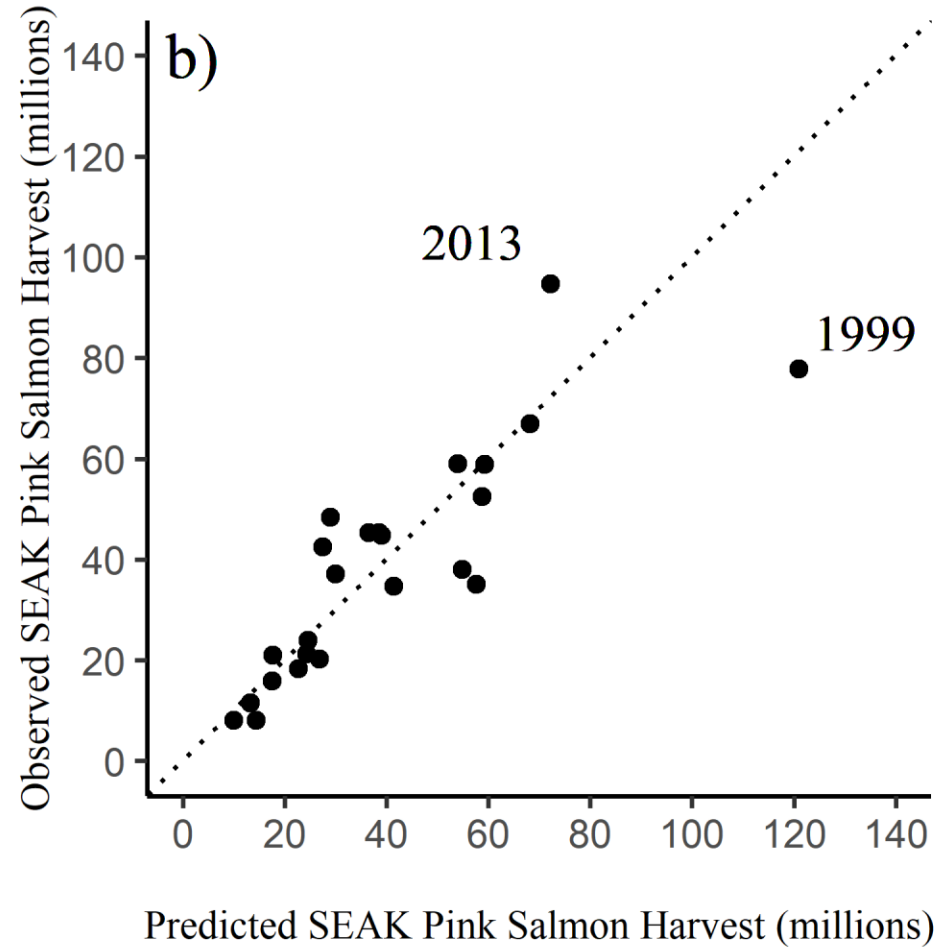
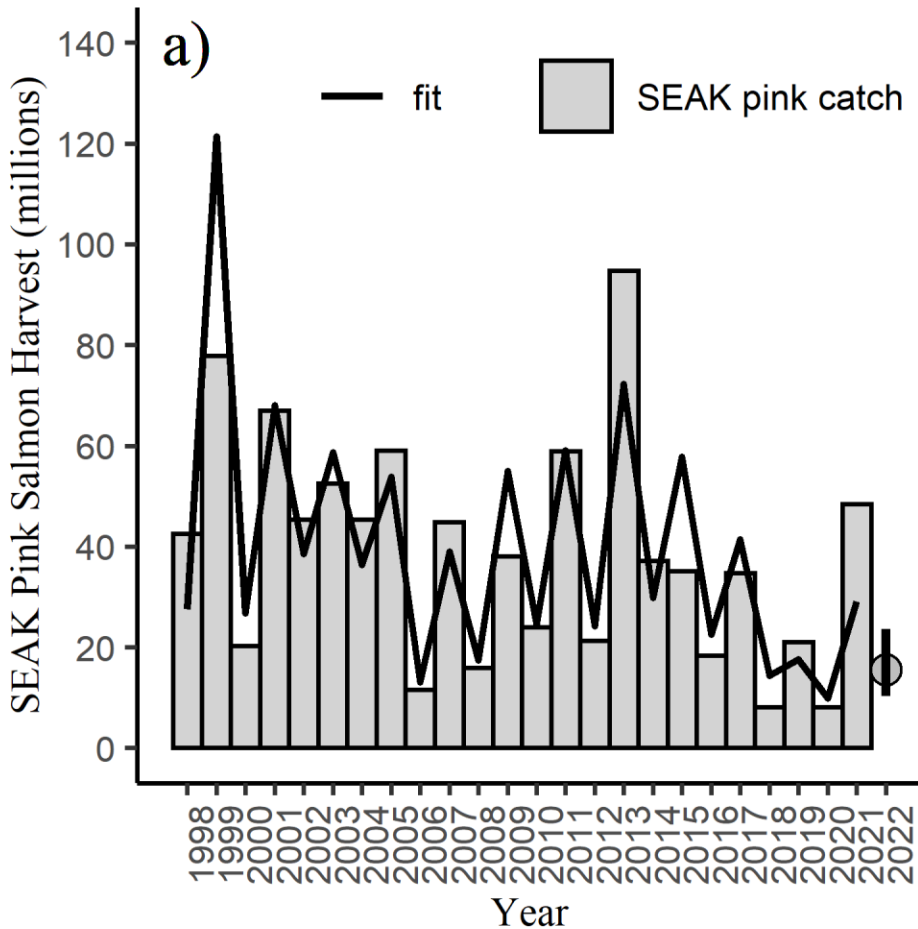
Peak CPUE (calibrated) of juvenile Pink Salmon



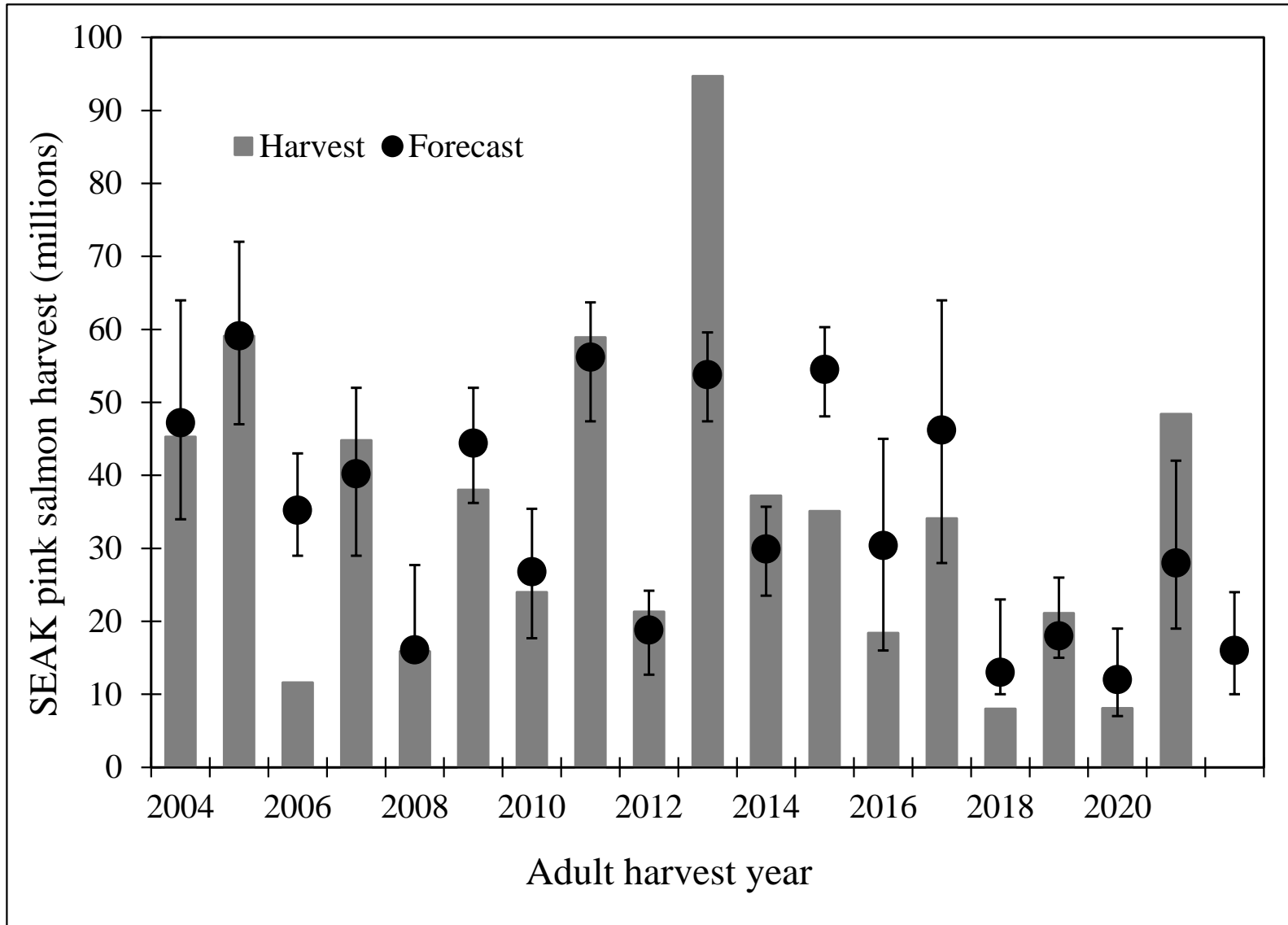
Icy Strait Temperature Index (ISTI)



Southeast Alaska Pink Salmon Harvest Forecast Model (Calibrated CPUE + ISTI)

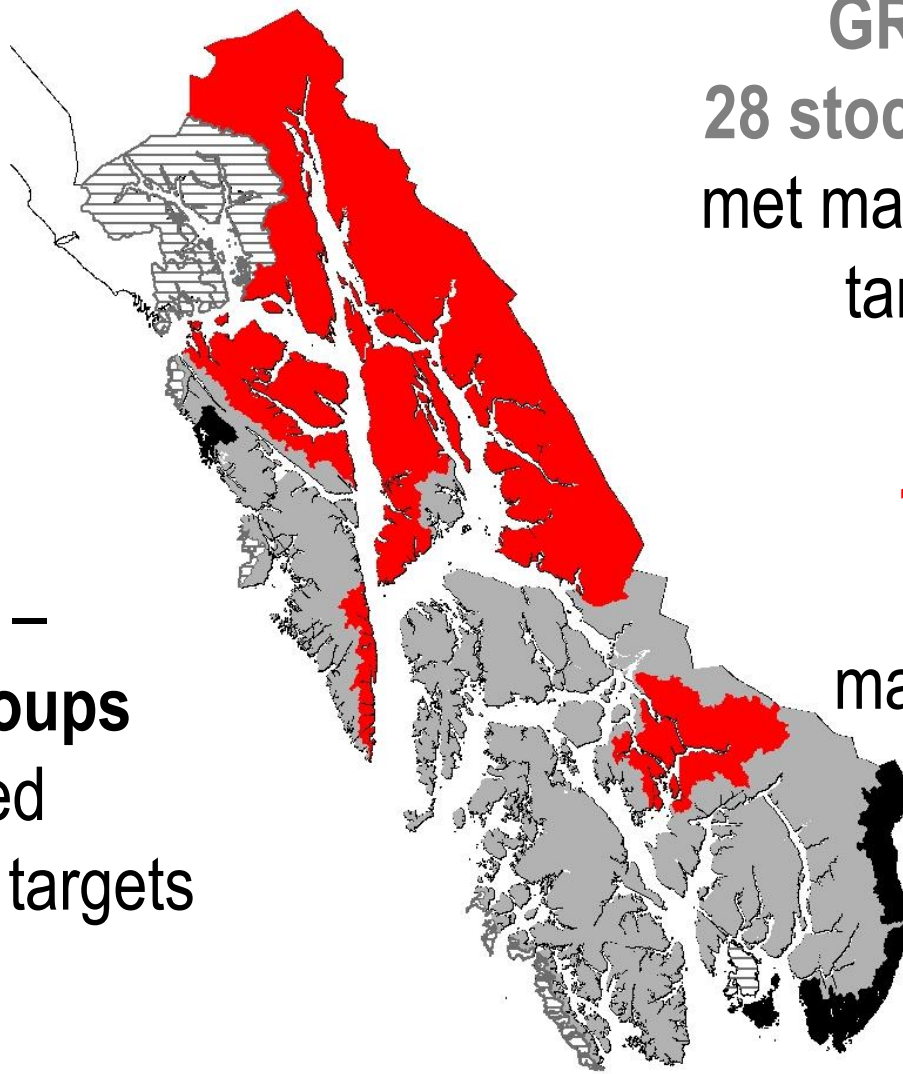


Southeast Alaska Pink Salmon Harvest Forecast Model Performance



2020

BLACK –
2 stock groups
exceeded
management targets



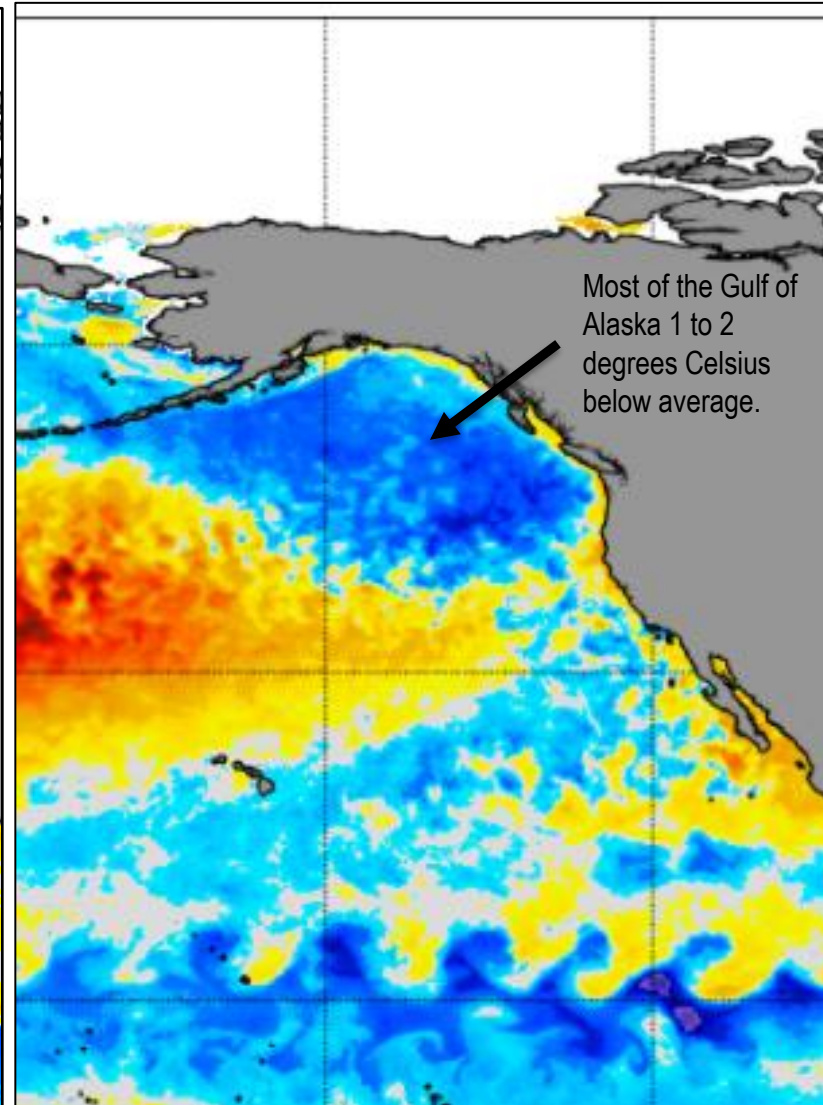
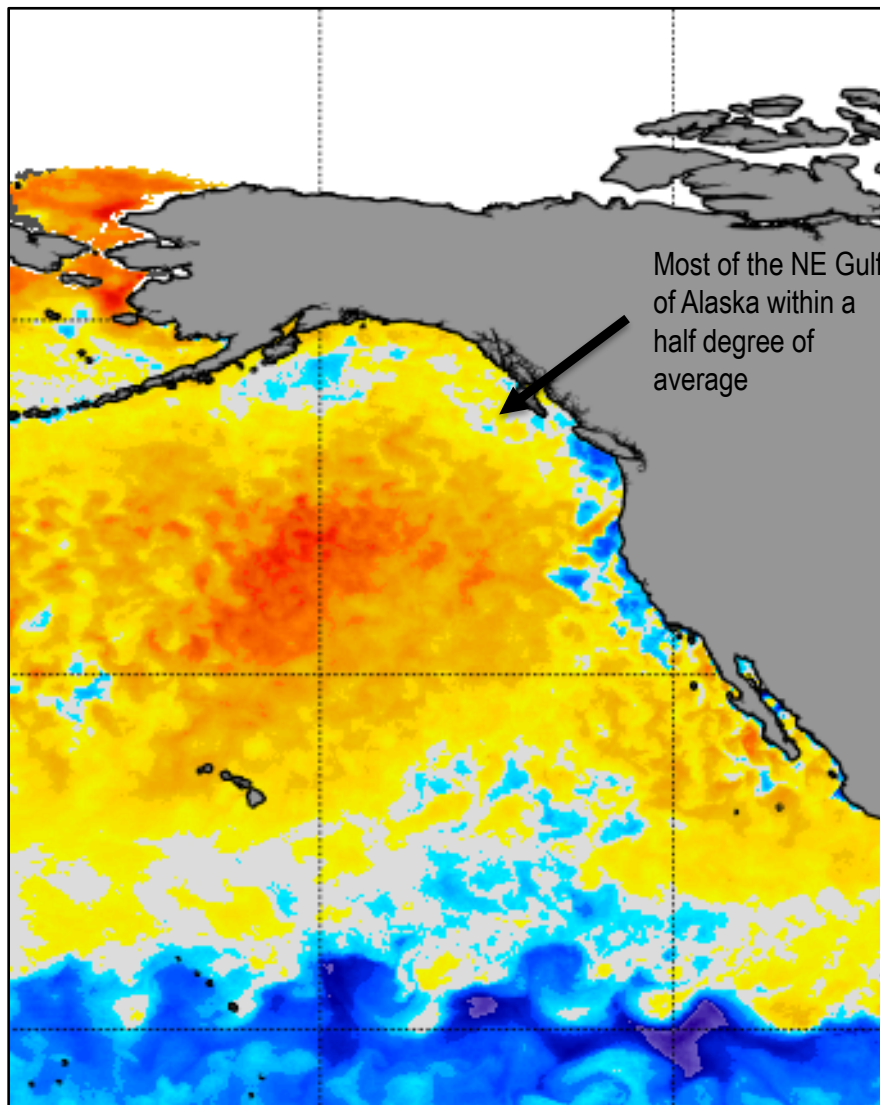
GRAY –
28 stock groups
met management
targets

RED –
16 stock group
did not meet
management targets

North Pacific Sea Surface Temperature Anomalies

November 2020

November 2021

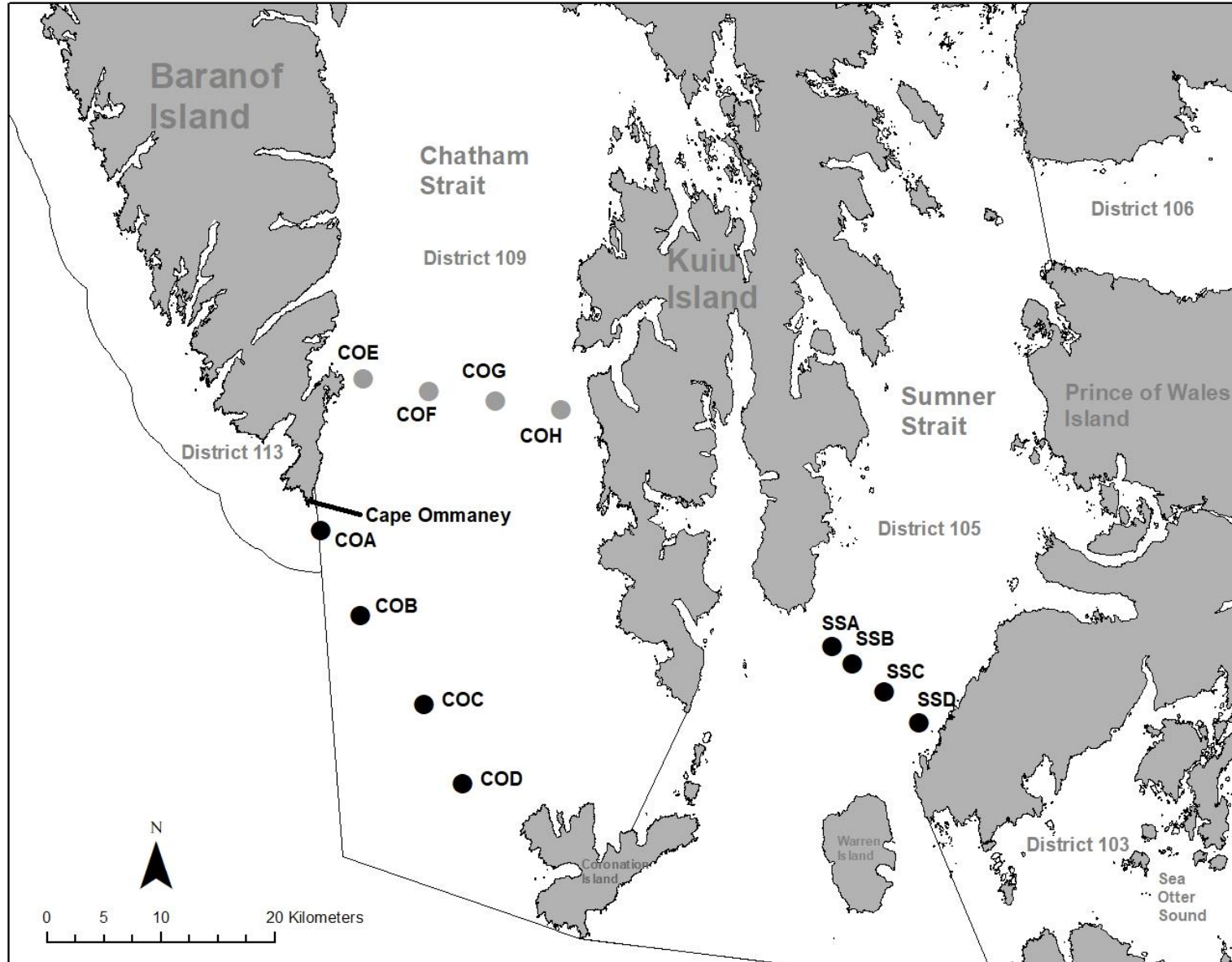


NOAA FISHERIES

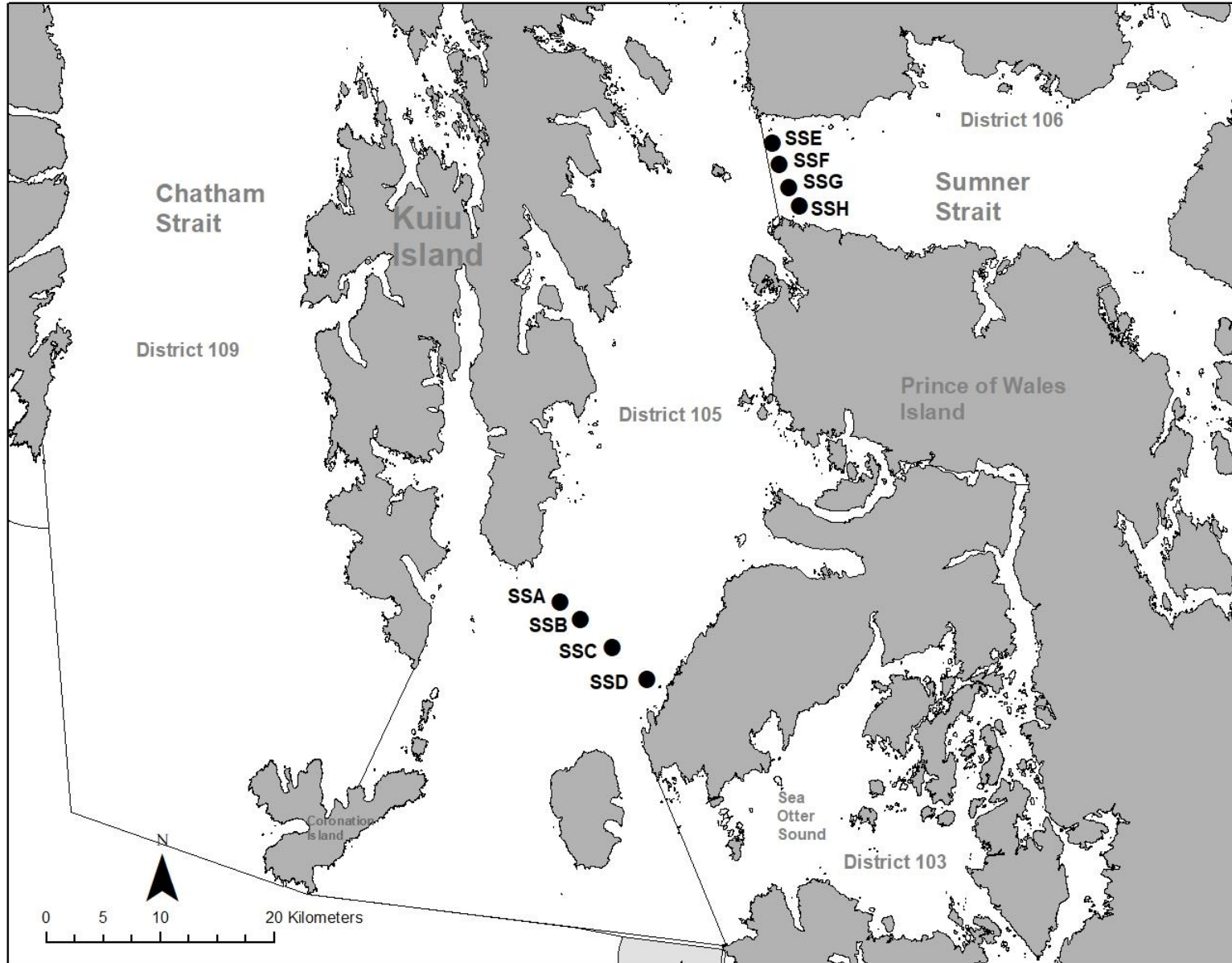


Alaska Department of Fish and Game

Experimental Southern Transects 2021



Experimental Southern Transects 2022



2022 SECM Pink Salmon Forecast Summary

- The 2022 Southeast Alaska pink salmon harvest forecast is:
 - **16 million (80% PI = 10 – 24 million).**
- The forecast is based on a juvenile abundance index and temperature (ISTI). The significance of temperature is unclear, it could be due to variation in survival and/or migration of juveniles.
- Sea surface temperatures have moderated in the Gulf of Alaska, and Icy Strait temperatures were slightly below average.