Western Alaska Chinook and Chum Salmon Marine Research

Dr. Katie Howard, Fisheries Scientist
ADF&G Salmon Ocean Ecology Program
1. Long term monitoring of Alaskan salmon at sea
2. Identify survival bottlenecks that affect future run sizes
3. Forecast run sizes (1 to 3 years in the future)
• Exploring Linkages Between a Changing Climate and Productivity of Yukon River Chinook Salmon (ADF&G, NOAA, USGS and YRDFA)

• Species distribution models for Chinook salmon in the Bering Sea (ADF&G, UAF, NOAA)

• Determinants of life history in Yukon River chum salmon (ADF&G and Baylor University)
Juvenile salmon (1st summer at sea)

Immature and Maturing Chinook (2-4 years)

Immature and Maturing Chum (3-4 years)
Future run size of Yukon Chinook is determined very early in their life – before their first winter at sea.
Total Yukon Chinook Run Size

Year 2022

Data showing fluctuations in Yukon Chinook run sizes over recent years.
Yukon fall chum salmon runs also seem to be driven by factors early in life...

......until 2016
Juvenile Chinook

Juvenile Chum

Stored Energy

Ocean Temperature