

Nushagak River Chinook salmon assessment program, management structure, and stock status



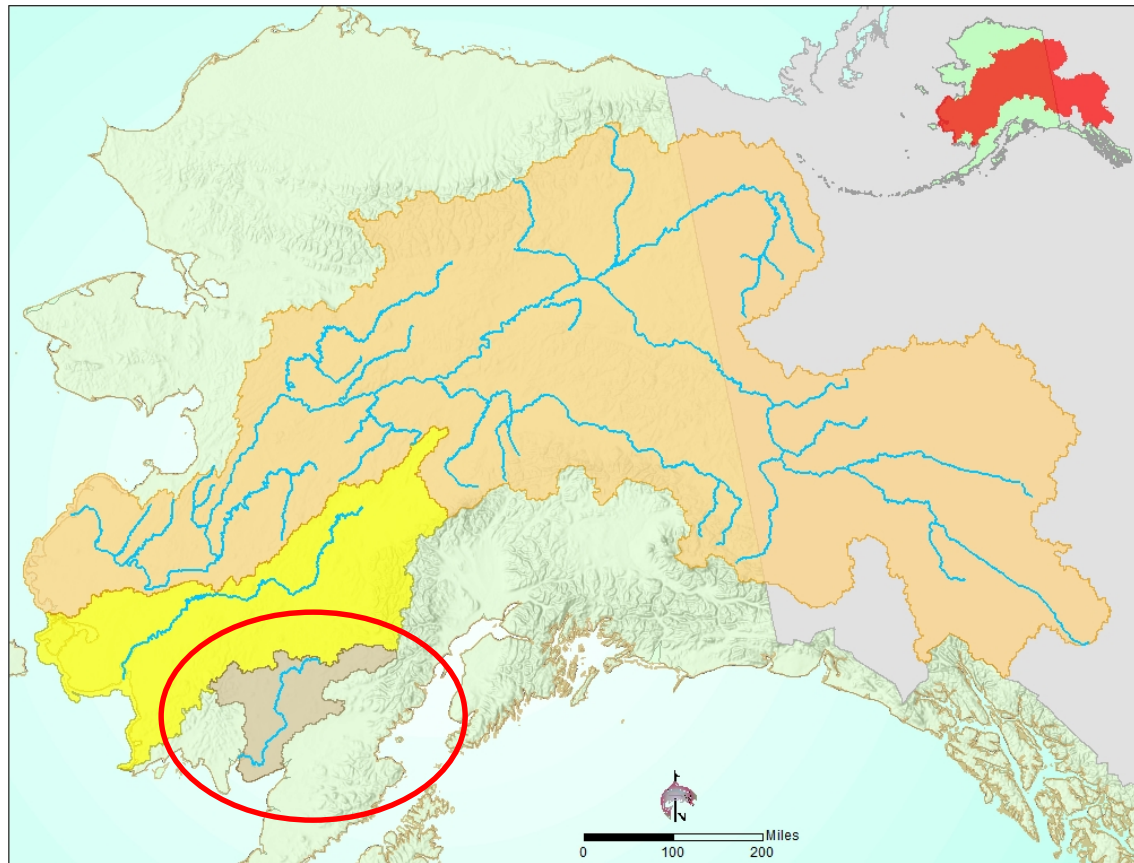
Jack Erickson, Tim Sands, Greg Buck,
Suzanne Maxwell

**Alaska Department of Fish and Game
Division of Commercial Fisheries
Southcentral Region**

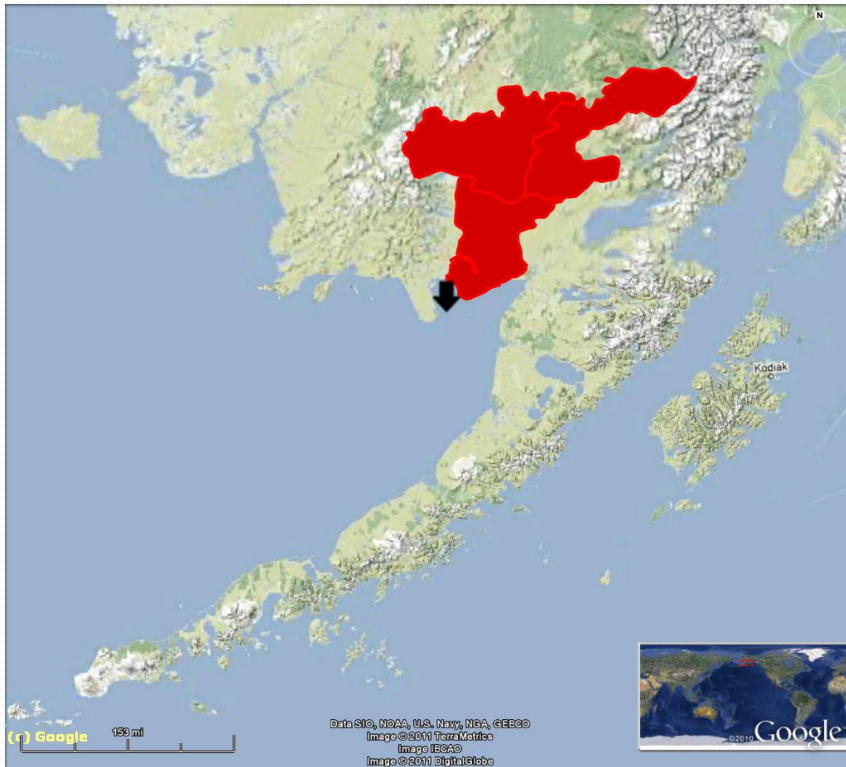
Outline

- Tour of the Nushagak
- Salmon run timing and relative abundance
- Salmon assessment program
- Chinook salmon
 - Total run
 - Harvest
 - Escapement
- Management Plan

Nushagak watershed



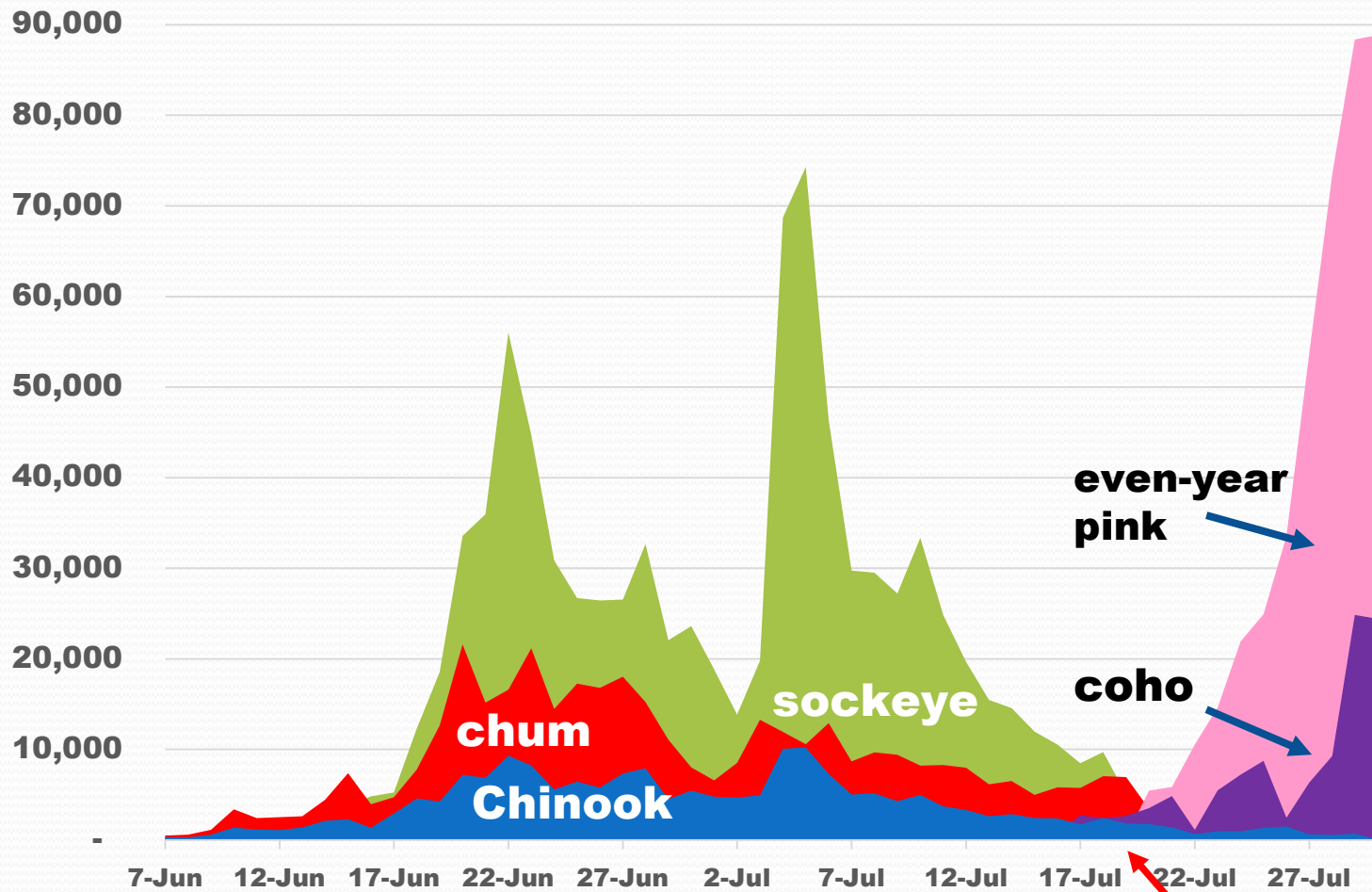
Nushagak Watershed



- FLOWING WATERS:
5,085 km
- Supports all major species of Pacific salmon: Chinook, sockeye, chum, pink, coho.
- Important commercial, sport, and subsistence fisheries associated with this river.



Mean daily (2010–2017) passage at Nushagak sonar

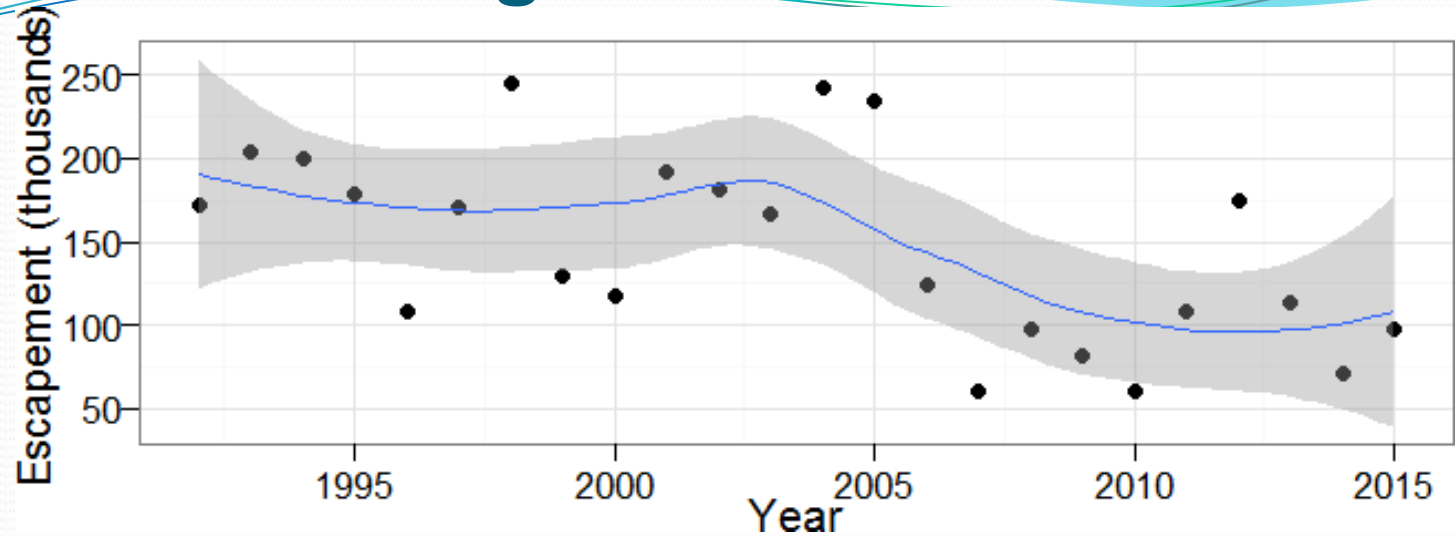


Assessment often ends

CURRENT Assessment Program

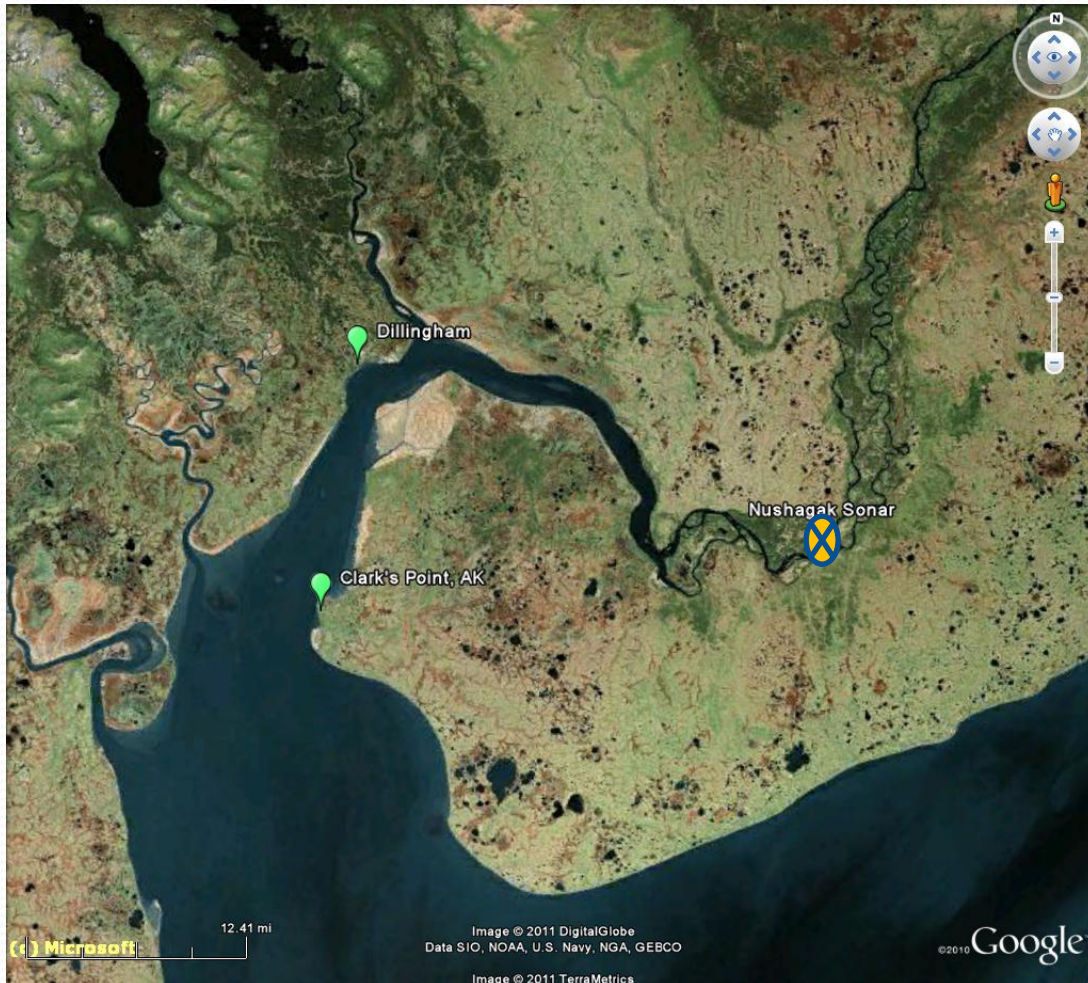
- Commercial harvest (Nushagak District)
 - Inseason reporting of harvest on fish tickets
- Subsistence harvest
 - Permit required
 - One per household
 - Must return with harvest record
- Sport Harvest
 - Statewide harvest survey
- Inriver Passage (sonar)

Nushagak River Chinook



- Largest Chinook run in Bristol Bay
- Average Escapement: 151,000
- Recent 20-year Average commercial + sport + subsistence harvest: ~56,600
- Roughly equal numbers of age-1.2, age-1.3 and age-1.4
- Salmon spp. are counted with sonar
- Sonar count is apportioned into species counts using 3 sizes of drift gillnets

Nushagak River sonar site

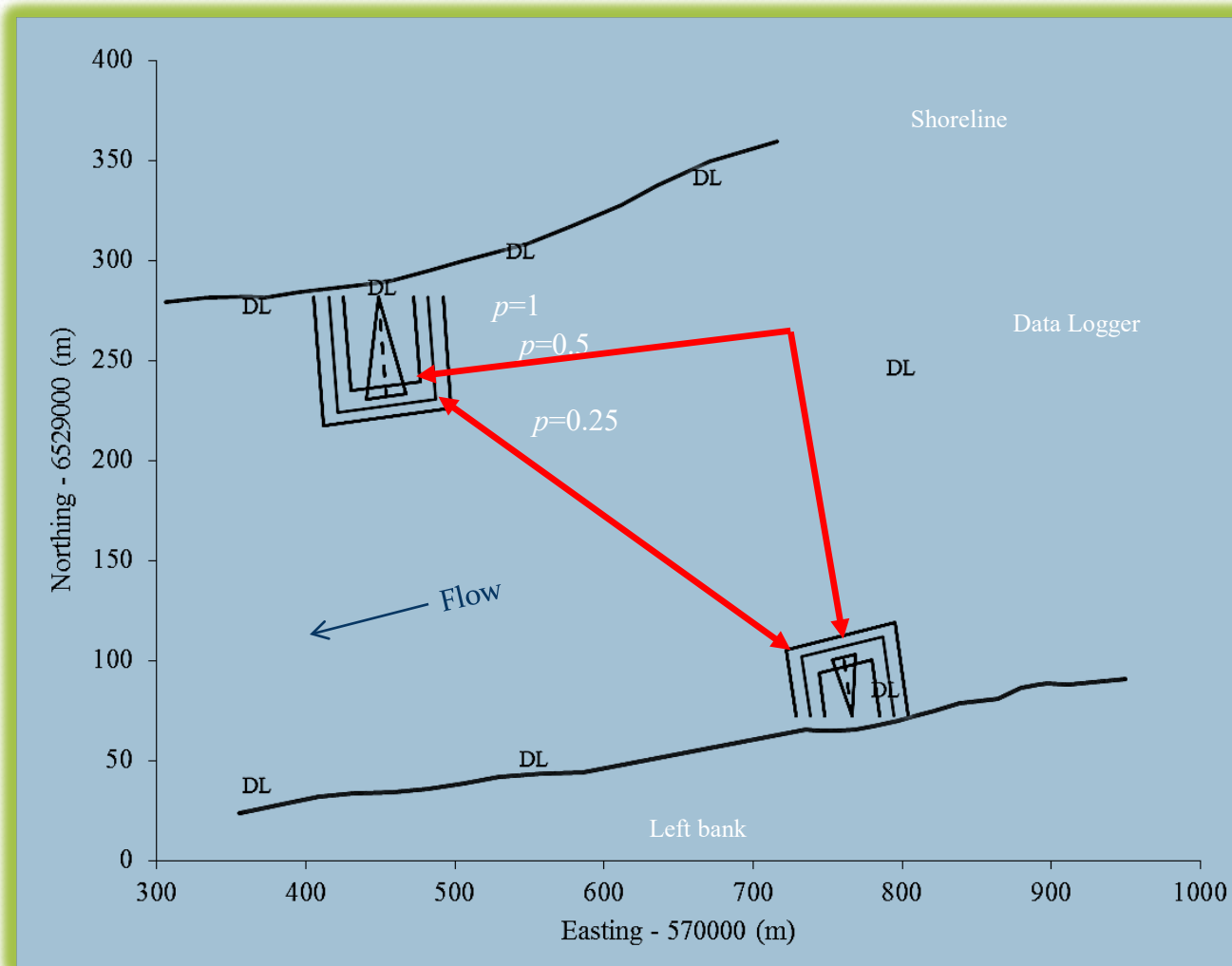


- ~ 40 km upstream of the Nushagak Commercial District
- ~ 48 km upstream from Dillingham
- Tides average 6.6 m
- Sonar site is tidally influenced (~ 1 m)
- Flow at the sonar site is never reversed

Nushagak River sonar site



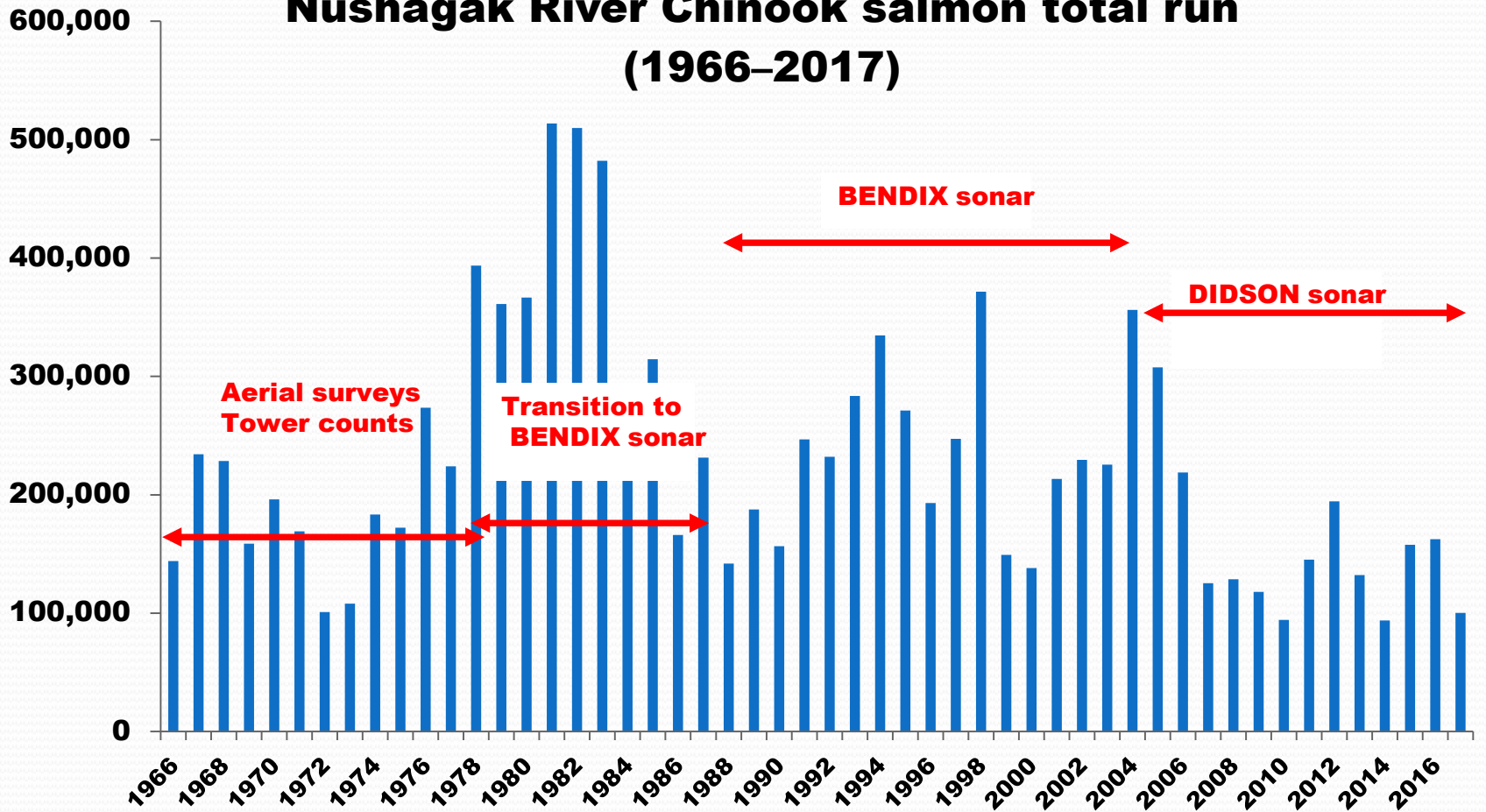
Layout of DIDSON sonars



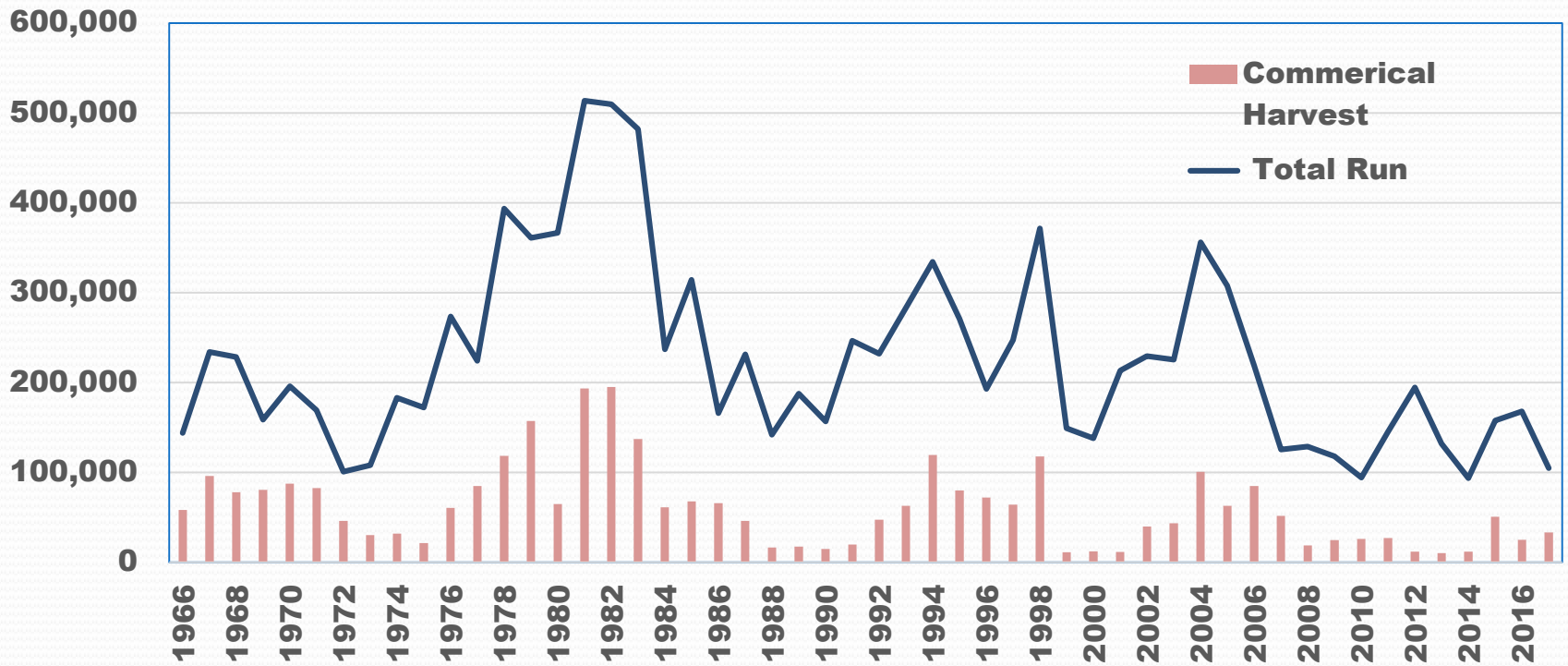
Nushagak River—apportionment



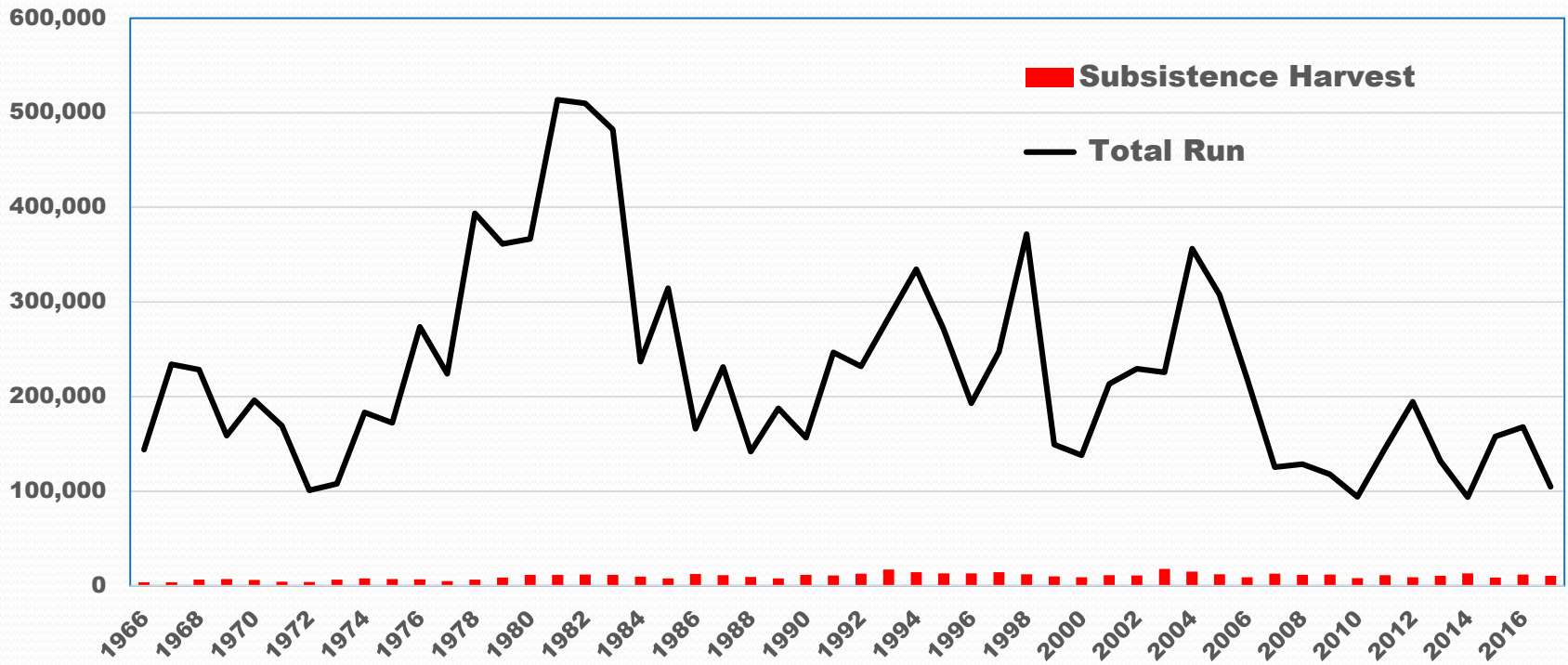
Nushagak River Chinook salmon total run (1966–2017)



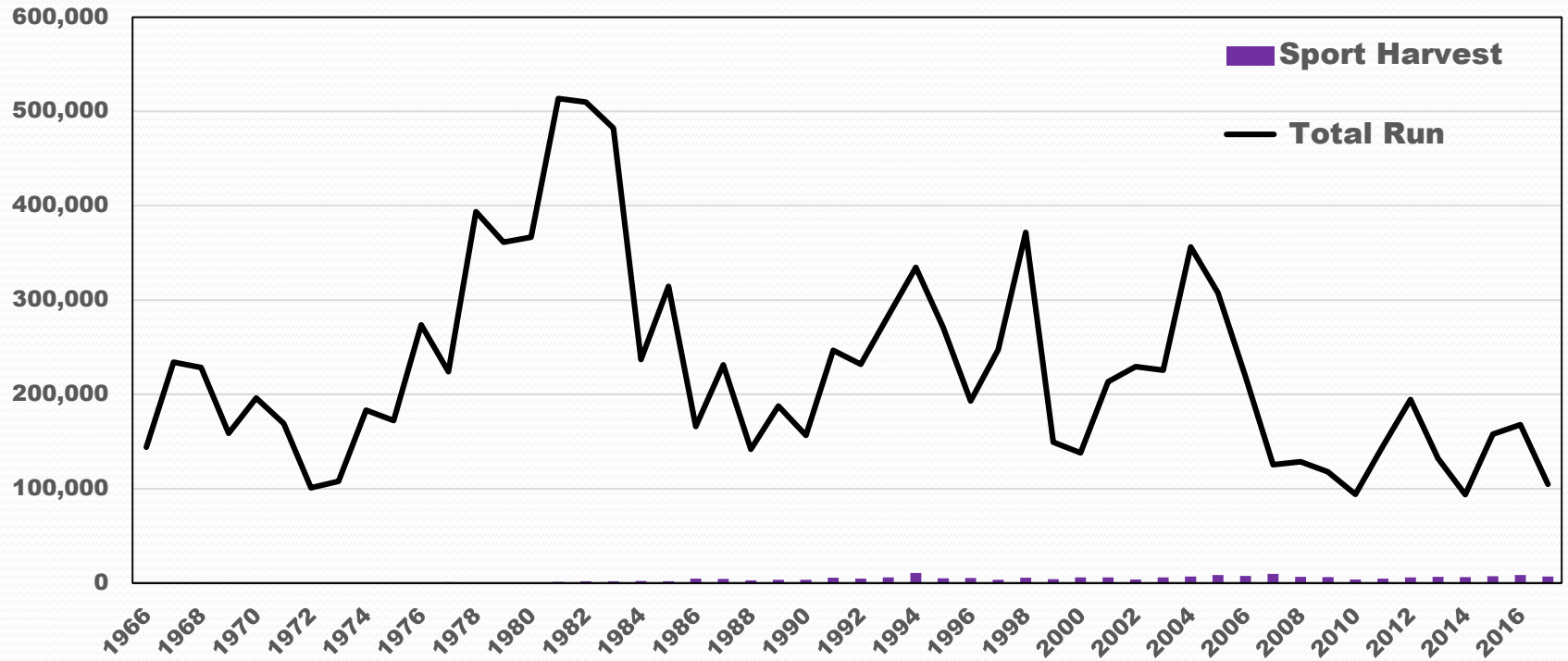
Commerical Harvest



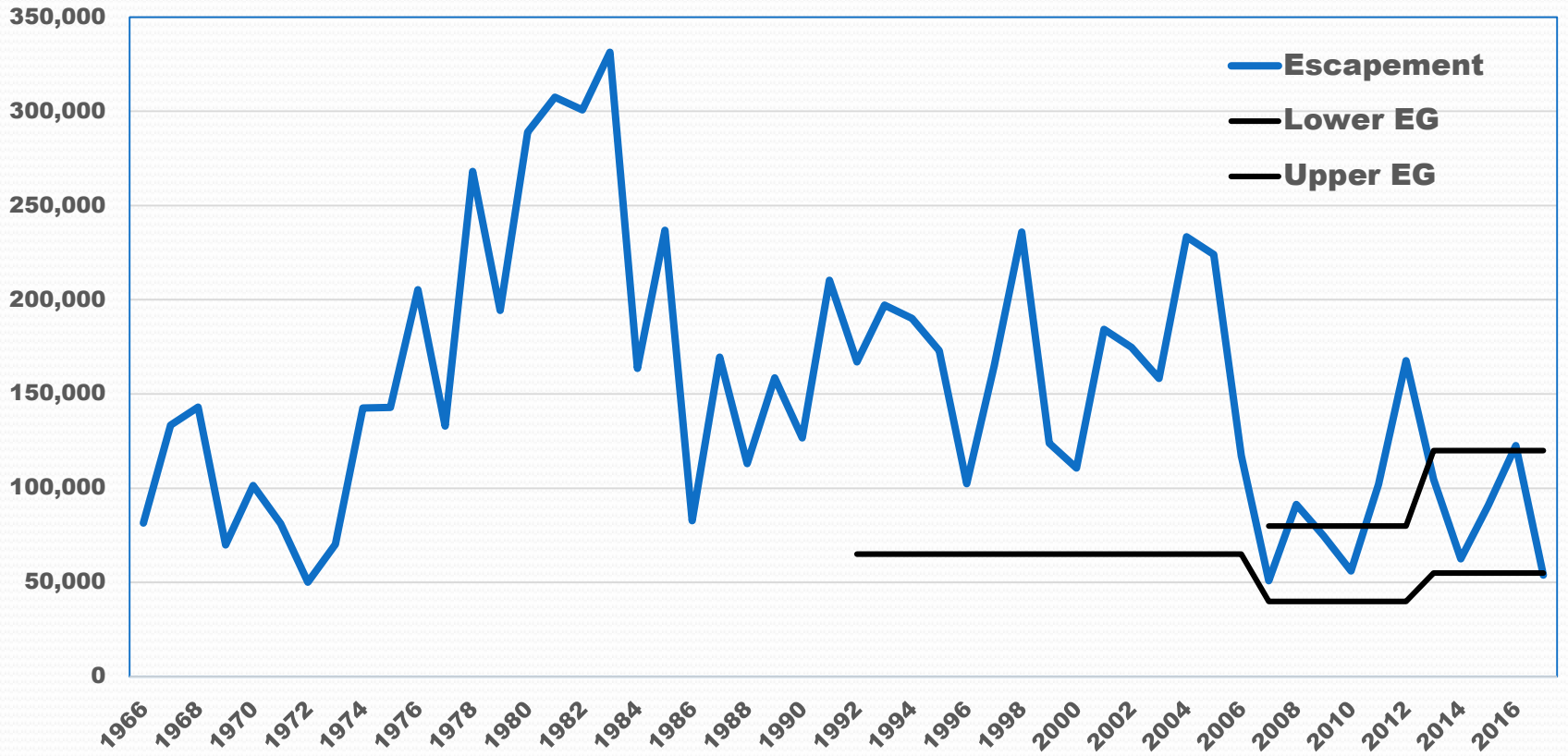
Subsistence Harvest



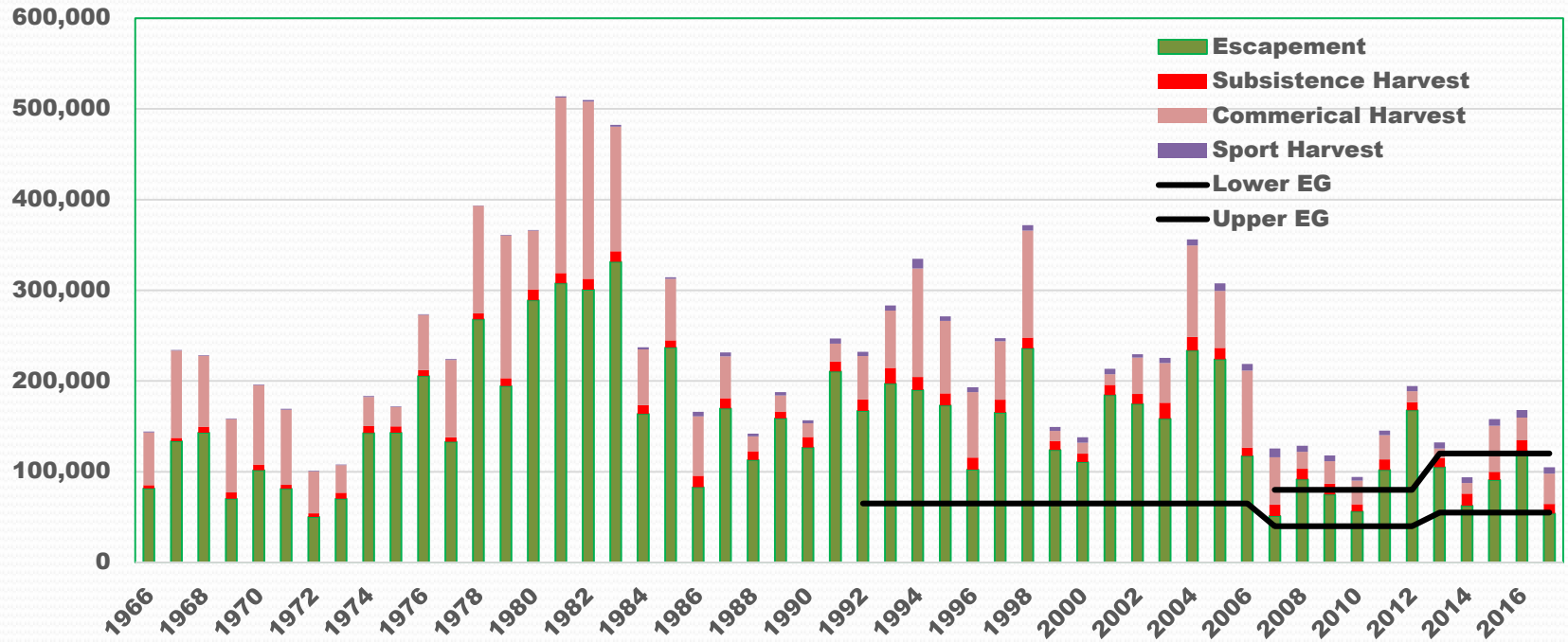
Sport Harvest



Spawning Escapement



Total Run (Escapement + Harvest)



5 AAC 06.361 Nushagak-Mulchatna King Salmon Management Plan

- Inriver goal of 95,000 king salmon upstream of the sonar
 - Provide for the Escapement Goal (55,000–125,000)
 - Provide reasonable opportunity for subsistence harvest
 - Sport fish GHL of 5,000 fish, 20 inches or greater in length
- Series of regulatory actions that can or will be taken based upon inriver run and/or projected escapement

Acknowledgements & Questions

