

Evaluate Sockeye Salmon Production in Pilgrim River Drainage, Seward Peninsula, Alaska

Justin Leon

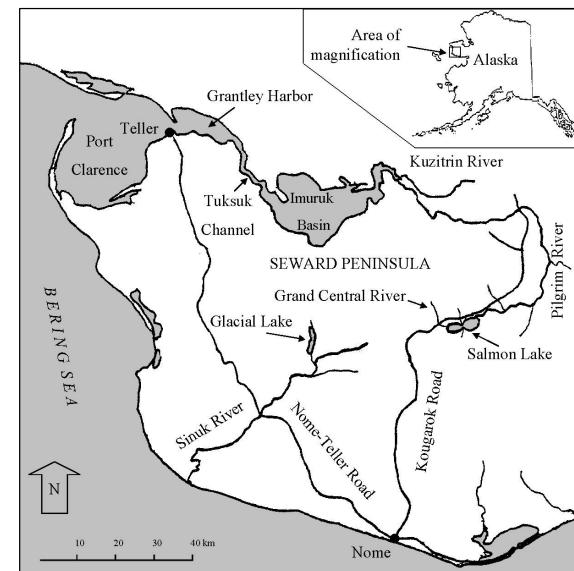
Alaska Tribal Liaison

Native American Fish and Wildlife Society




Background

- Pilgrim River Drainage
 - Grand Central River
 - Salmon Lake
 - Pilgrim River
 - Imuruk Basin
 - Grantley Harbor
 - Port Clarence
 - Bering Sea



Background (continued)

- Important subsistence fishery
 - Supports all 5 species of Pacific Salmon
 - Main source of sockeye salmon
 - BOF tasked ADF&G with reviewing additional data to possibly incorporate into model into
 - Returns declined each of last 4 years
 - 1st closure last year
 - Closed almost entire season this season
 - Lowest returns since 2009

Division of Commercial Fisheries Sam Rabung, Director		Alaska Department of Fish and Game Doug Vincent-Lang, Commissioner
Headquarters Office PO Box 115526 Juneau, AK 99811-5526		PO Box 115526 Juneau, AK 99811-5526 www.adfg.alaska.gov
Advisory Announcement <i>For Immediate Release: July 8, 2022</i>		CONTACT: Jim Menard or Kevin Clark Norton Sound Area Manager & Asst. Area Manager (907) 443-5167 (800) 560-2271
LOWER KUZITRIN RIVER AND PILGRIM RIVER CLOSES TO ALL NET FISHING		

Federal Connection

- Those who don't have boat access
 - Gillnets at BLM Campground
 - Salmon Lake Campground
- 2017-2021
 - Average over 33% of permits fished & harvest

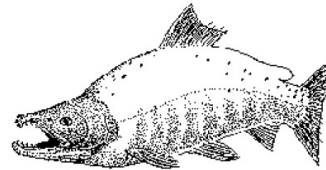


Priority Information Need

- Important subsistence fishery
- Fishery in Decline
- Benefits multiple parties
 - Users
 - Data collectors
 - Federal & State agencies
- Data available now to review
 - Capacity to review

PRIORITY INFORMATION NEEDS

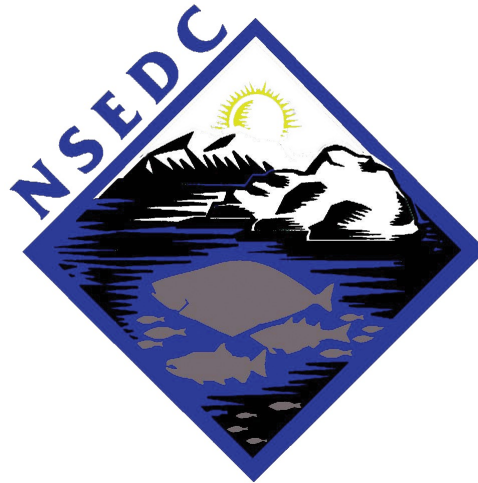
FEDERAL SUBSISTENCE FISHERIES



2022 Fisheries Resource Monitoring Program

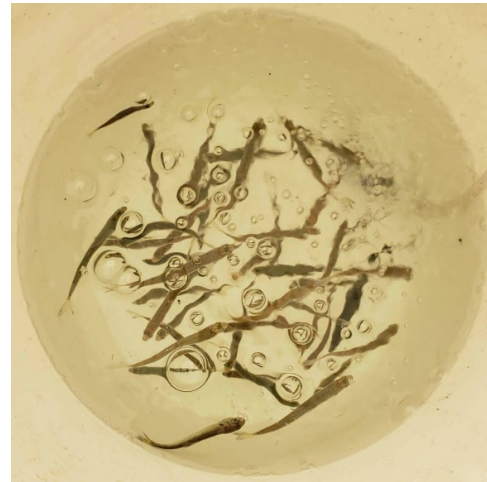
Available Data

- NSEDC & ADF&G
 - Smolt
 - Adult
 - Limnology
 - Fertilization



Smolt Data

- Salmon Lake
 - Historical counts
 - 1995, 1996, 1998-2000, 2002-2019, 2021
 - Age, Weight, Length (AWL) data
 - 1995, 1996, 1998-2000, 2002-2019, 2021



Adult Data

- Pilgrim River
 - Historical counts
 - 1997, 2000, 2002-2021
 - Surveys
 - 1963-2021
 - Harvest
 - Subsistence & Commercial
 - 1963-1983,1989, 1994-2021
 - Age, Sex, Length (ASL) data
 - 1997, 2000, 2002-2021



Limnology Data

- Salmon Lake
 - Temperature, light, pH, SPC, Turbidity, DO, secchi, zoo tow
 - 2007-2021
 - Nutrients
 - C, Ca, Fe, Mg, N, NH₃, Nitrate+Nitrite, P, Pheo, Silicone, CHLA
 - 1994-2021



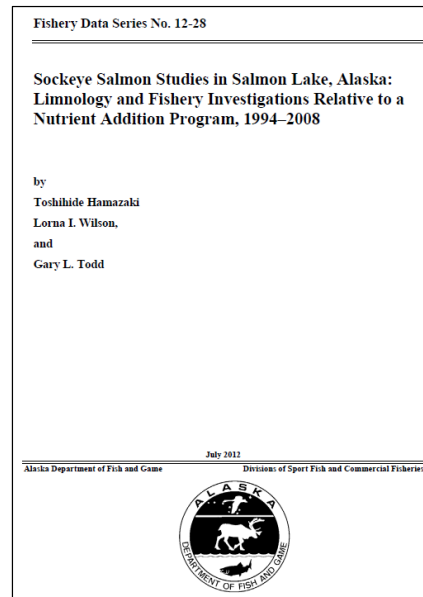
Fertilization Data

- Salmon Lake
 - Amounts
 - 1997-2021



Potential Project Ideas

- Framework
 - Hamachan et al. 2012
 - Incorporate additional years – 2009-present
 - Modeling component – if found viable
 - Predict returns using any or all available data
 - Additional?
 - Climate change
 - Lake cores
 - eDNA
 - drone



Questions?

