

# 2023 Yukon River Summer Season Summary

YRDFA Board Meeting

October 2 – 3, 2023

Deena Jallen – ADF&G



## 2023 Preseason Outlook

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- Drainagewide Chinook salmon:
  - 62,000 – 104,000 fish
- Canadian-origin Chinook salmon:
  - 26,000 – 43,000 fish
- 2023 outlook smaller than outlooks for 2022
  - 2021 and 2022 runs well below average, no goals met
- Fishing closures necessary to protect escapement
- Summer chum salmon
  - 557,000 fish
    - 280,000 – 900,000 fish
  - Potential to be within drainagewide escapement goal of 500,000 to 1.2 million fish



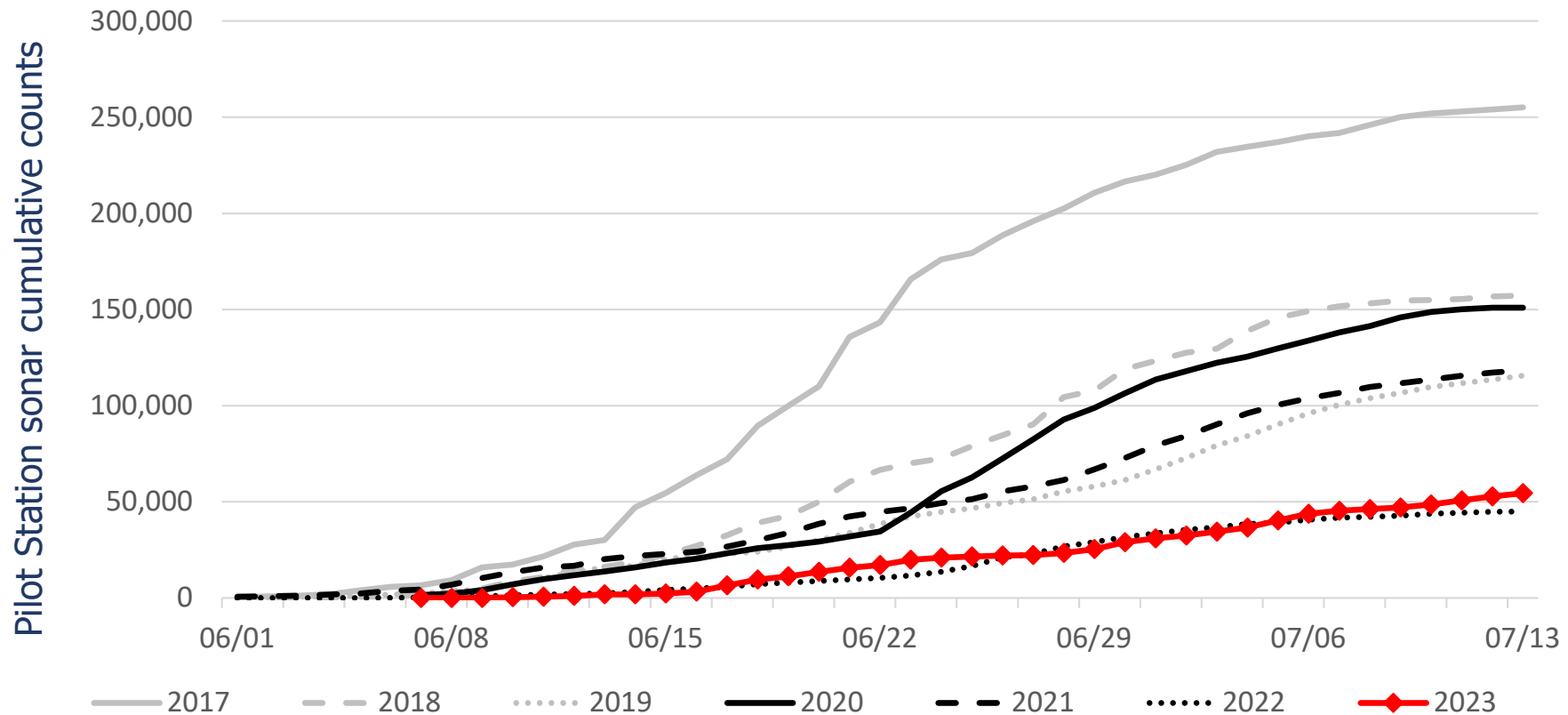
# 2023 Management Strategy

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- Fishery outlook and strategy discussed at preseason meetings and mailed to households in the Outlook flier
- Goals:
  - Protect migrating Chinook salmon
  - Maintain opportunity for nonsalmon species, pink, and sockeye salmon
  - Open fishing for summer chum salmon when there is a harvestable surplus

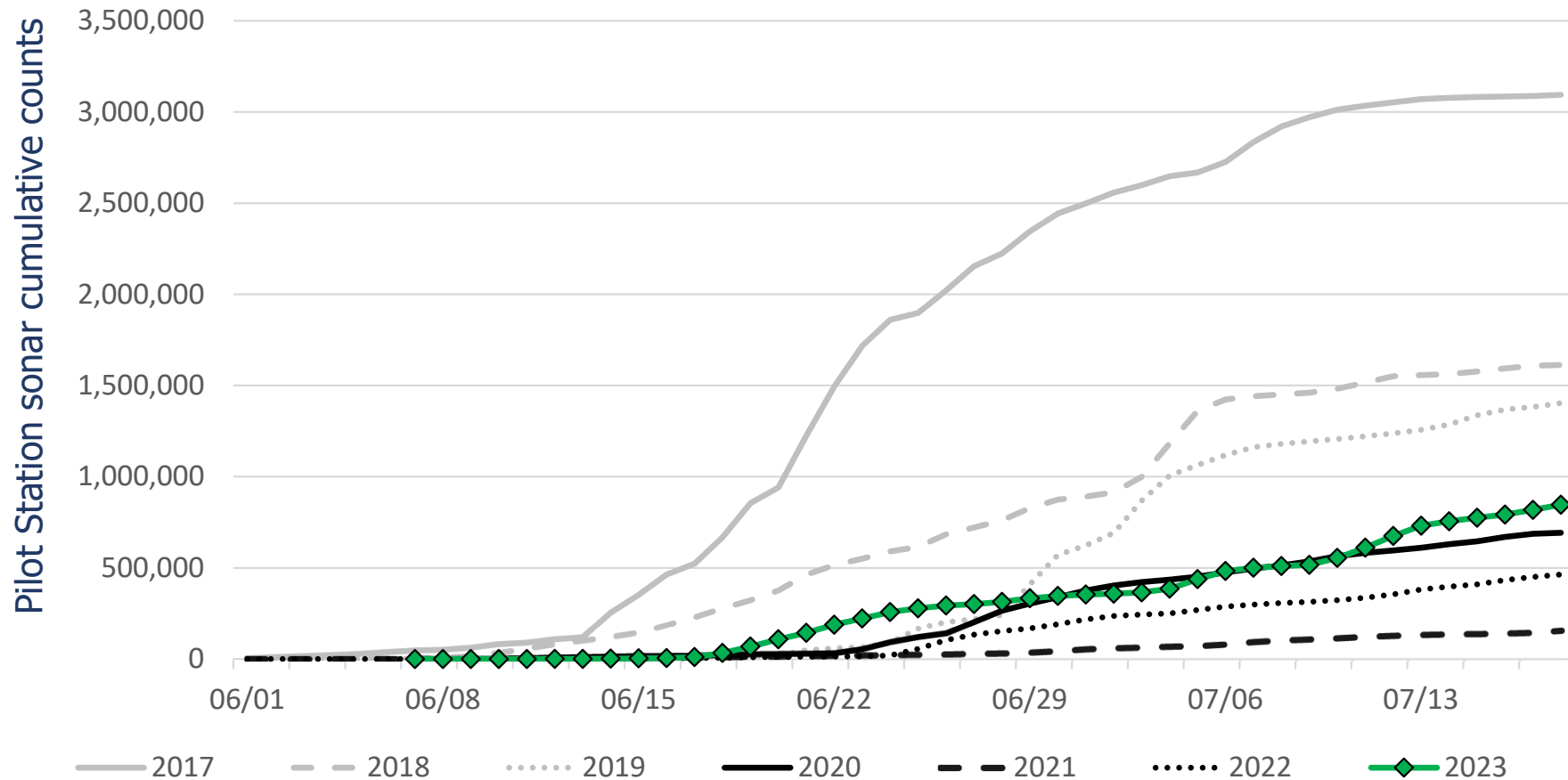


# Pilot Station sonar: Chinook salmon passage



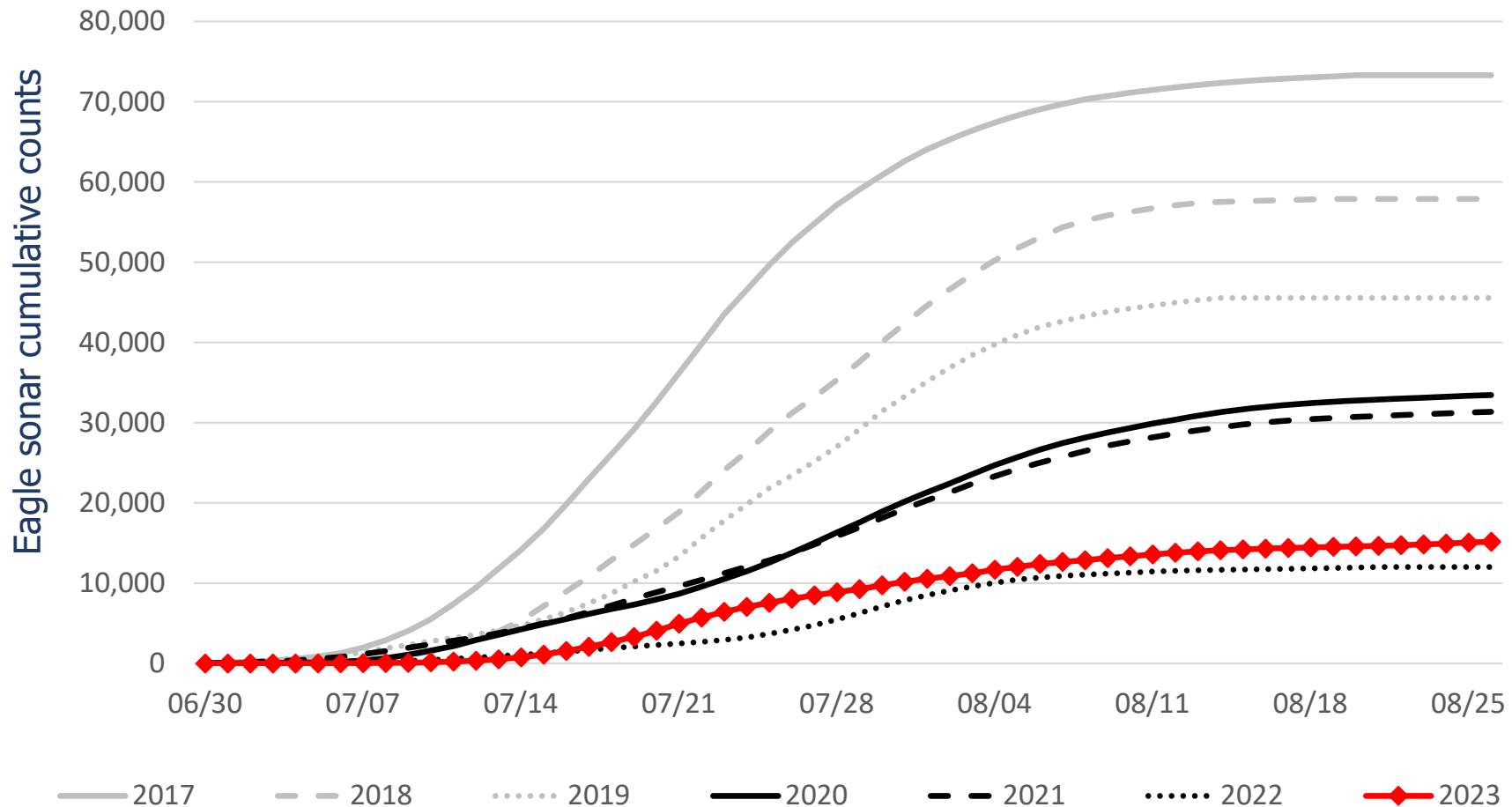
- Low abundance, late entry of Chinook salmon, very similar to 2022
- Inseason projection showed a late, weak run with no harvestable surplus
- Season total counts at Pilot Station sonar (58,280) were the second lowest on record and well below recent 5-year average

# Pilot Station sonar: Summer chum salmon passage



- Late entry of summer chum salmon
- Counts larger than recent four years (2019-2022)
- Pilot Station Sonar count of 845,955 fish on July 18 (end of summer season)

# Eagle sonar: Chinook salmon passage



- Season total count of 15,304 fish
- Second lowest counts from the Eagle sonar project (2022 was smaller)

# 2023 Management Actions

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- Fishing closed on June 2 in District 1 and in the Coastal District
  - Closures included South Coastal Area (communities of Hooper Bay, Scammon Bay, and Chevak)
- All Yukon Area districts and tributaries closed based on Chinook salmon travel timing
- 4-inch or smaller mesh gear for nonsalmon species restricted to setnets 60 feet or less in length
- Other gear allowed for nonsalmon all season (fyke net, hook and line, spear, etc.)
- Selective gear open on regulatory schedules for summer chum salmon starting June 26.
  - Dip nets, beach seines, hook and line, fish wheels
  - Subdistrict 5-D remained close
  - All Chinook salmon required to be released alive
- Selective gear openings for summer chum salmon extended to 24 hours a day starting on July 9
- Fishing may have been affected by high water conditions, flooding, and poor weather

# 2023 Summer chum salmon Escapement

| Project            | Current Goal      | Median    | 2023 Estimate |
|--------------------|-------------------|-----------|---------------|
| Drainagewide       | 500,000–1,200,000 | 1,183,000 | 846,000 *     |
| Anvik Sonar        | 350,000-700,000   | 450,200   | 60,548 **     |
| Gisasa River Weir  | -                 | 42,700    | 16,913 **     |
| Chena River Tower  | -                 | 8,100     | 834           |
| Salcha River Tower | -                 | 13,900    | 676           |

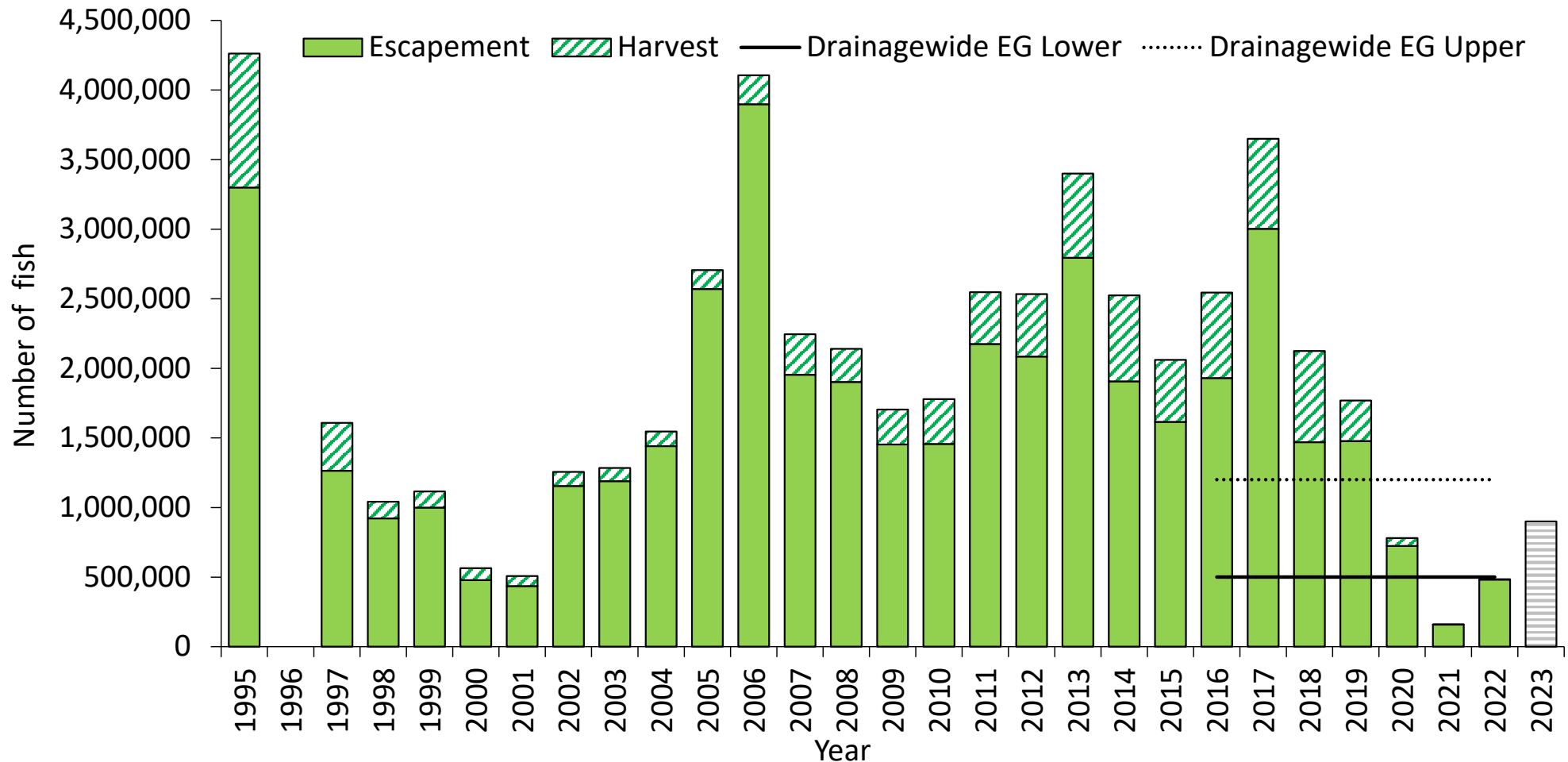
\*Pilot Station Sonar (July 18 total)

\*\* Partial operations due to high water

- All project counts below historic medians
- Final summer chum salmon run reconstruction will incorporate harvests above and below the sonar, and Andreafsky River escapement data
  - Andreafsky River weir only operated for part of the season due to high water. Aerial surveys were poor due to weather and water conditions.
  - Anvik sonar was inoperable from July 11-July 23 due to high water
  - Gisasa operations affected for a week due to high water
  - Subsistence harvests from above and below Pilot Station sonar will be available later this winter



# Summer chum salmon drainagewide run size



- 2023 Run size within the drainagewide escapement goal range
- Subsistence harvest information will be available later this winter
- Parent years of age-4 and age-5 fish met drainagewide escapement goal
  - Pilot Station counts were 1.6 million and 1.4 million in 2018 and 2019

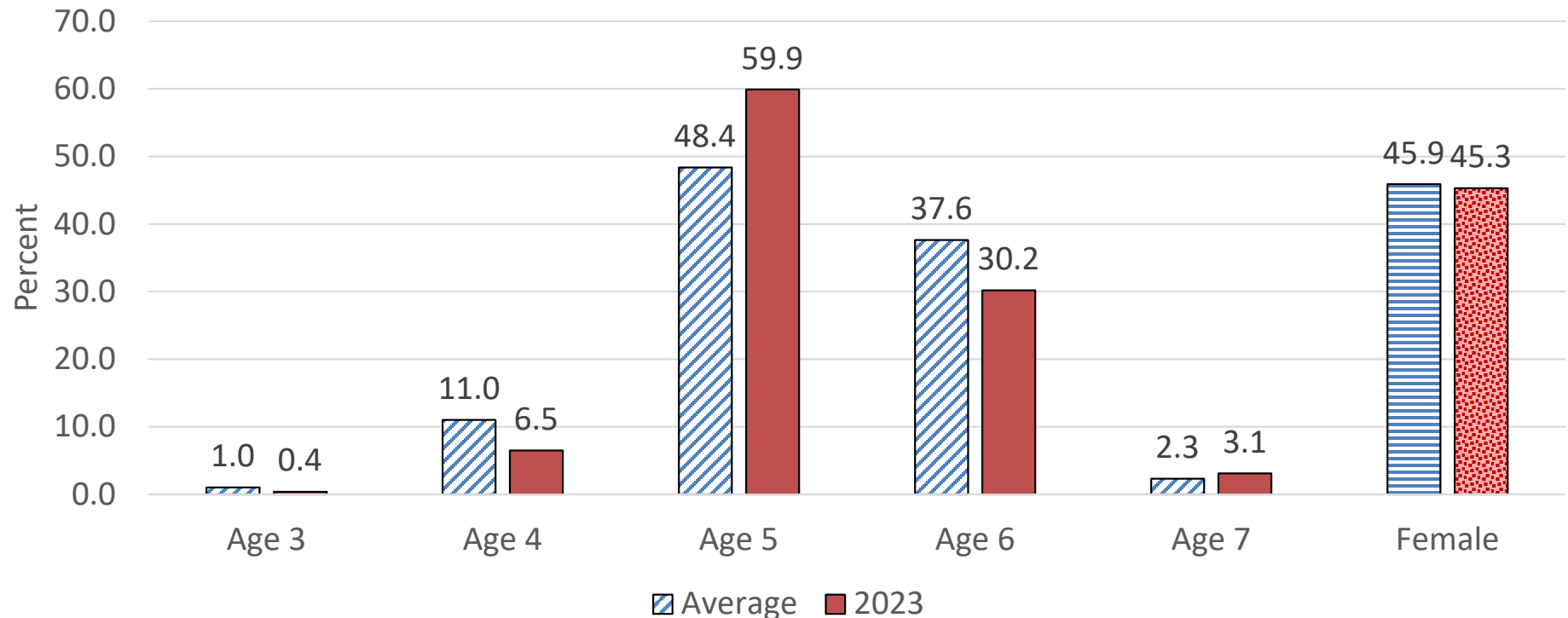
## 2023 Chinook salmon Escapement

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| Project               | Current Goal  | Average | 2023 Estimate |
|-----------------------|---------------|---------|---------------|
| Andreafsky River Weir | 2,100 – 4,900 | 1,374   | 194           |
| Gisasa River Weir     | –             | 2,000   | 490           |
| Chena Sonar/Tower     | 3,300 – 5,700 | 5,663   | 1,069         |
| Salcha Sonar/Tower    | 3,300 – 6,500 | 7,738   | 1,242         |
| Eagle Sonar           | –             | 51,690  | 15,300        |

- Andreafsky River weir only operated for part of the season due to high water. Aerial surveys were poor due to weather and water conditions.
- Gisasa weir was not fish tight for several days due to high water
- All escapement estimates were below goals and below averages
- The amount of incidental harvest between the Eagle sonar site and the U.S./Canada border will be available later this winter and will be used to calculate final border passage

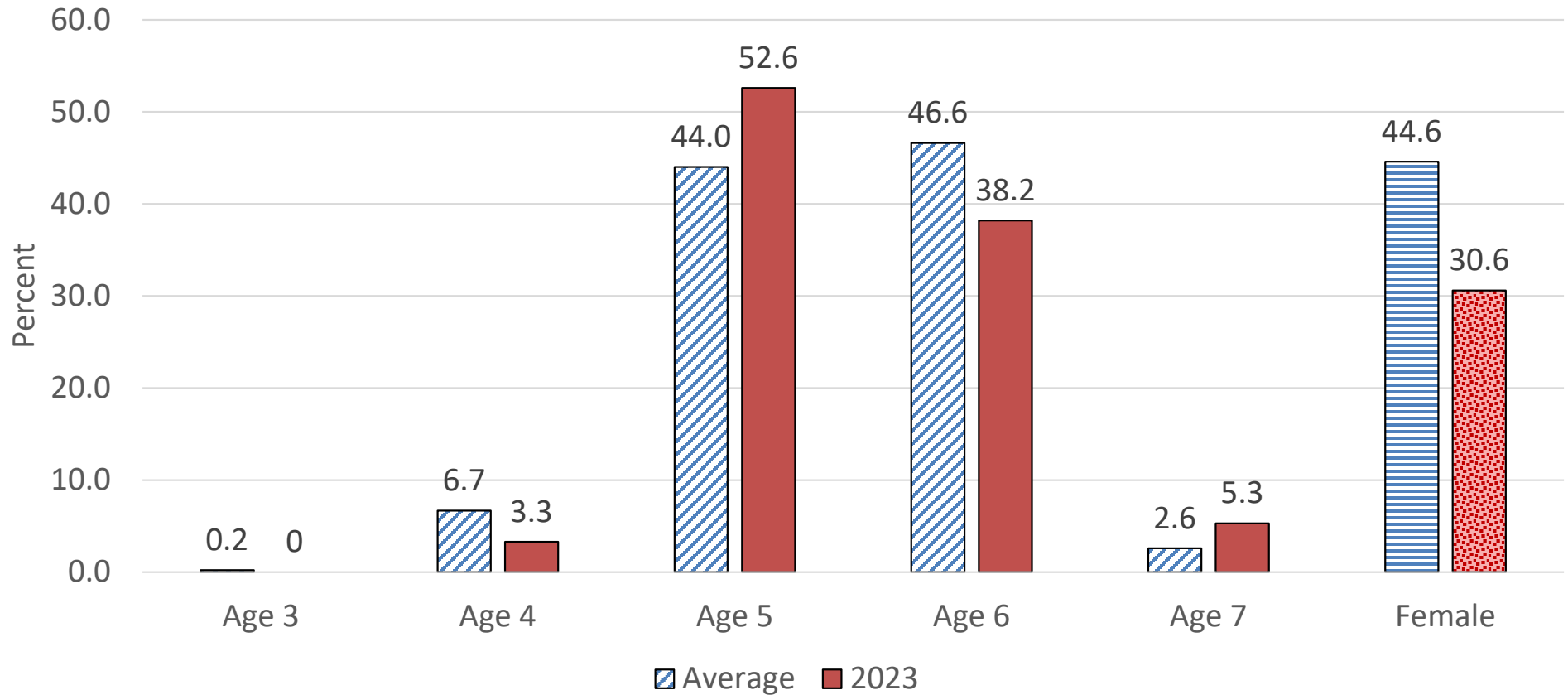
# Chinook salmon Age & Sex Composition Pilot Station Sonar



- More 5- and 7-year-olds than average (2013-2022)
- Percent of females slightly less than average
- Sex ID based on external characteristics
- 54.7% males compared to 10-year average of 54.1%

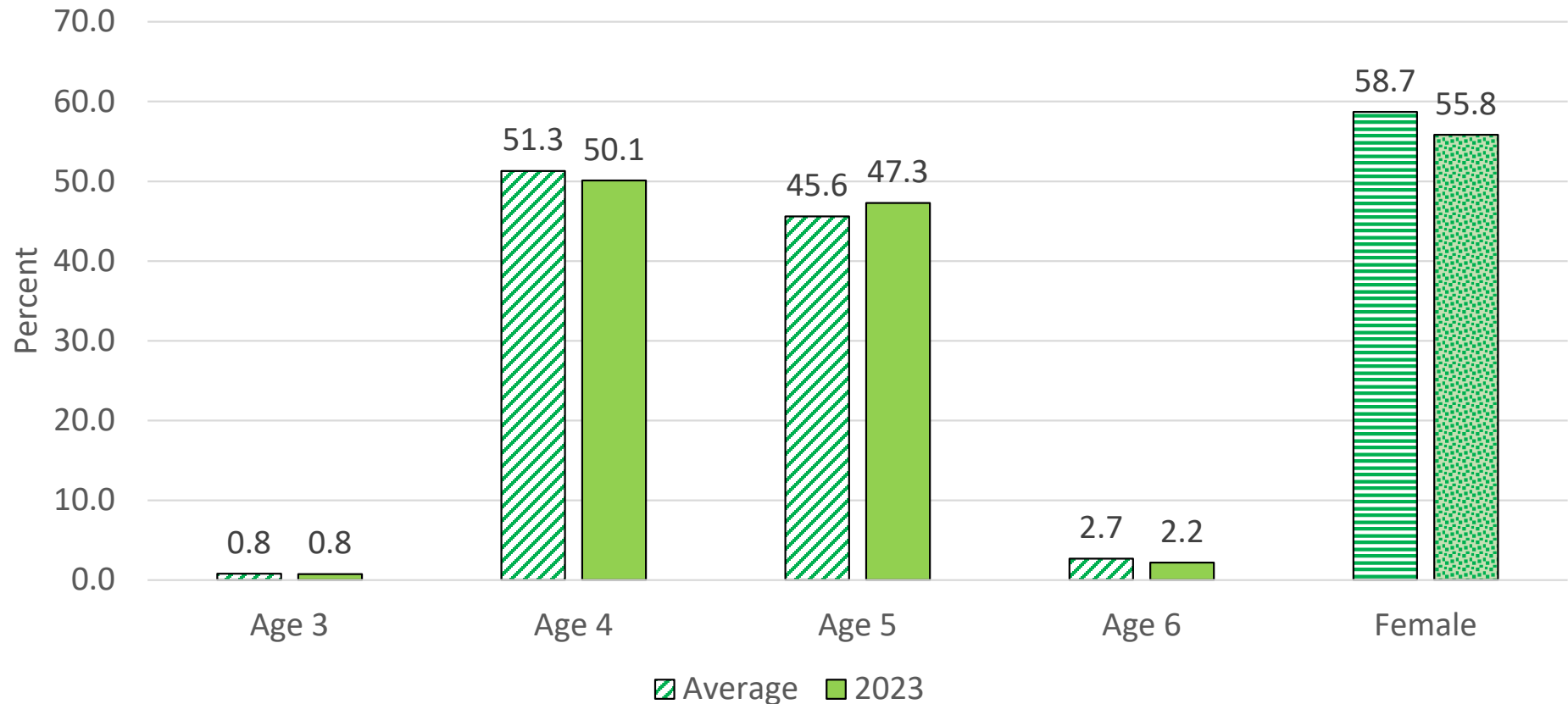


# Chinook salmon Age & Sex Composition Eagle Sonar



- 5-year-old fish above average (2013-2022)
- Percent females below average
- Visual sex ID more reliable farther upriver
- 69.4% male above recent 10-year average of 55.4%

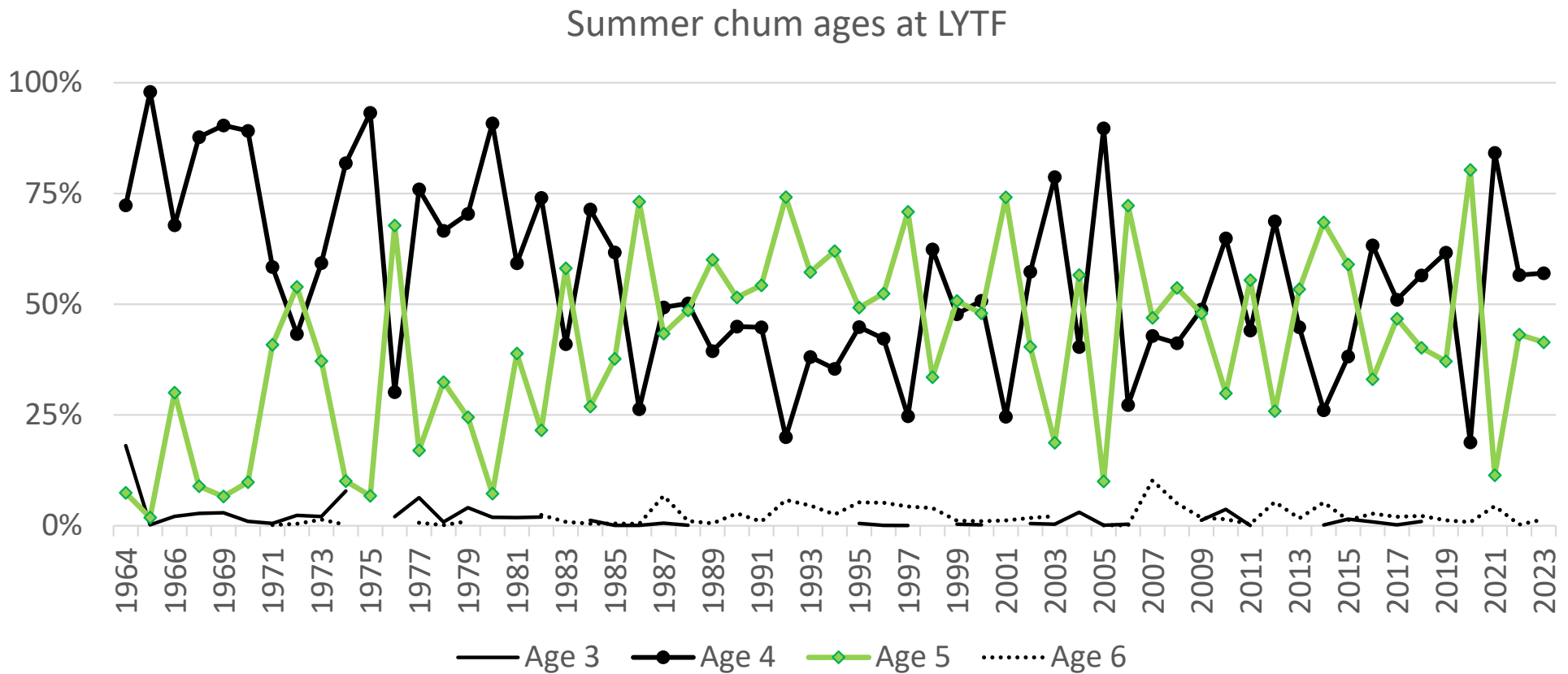
# Summer chum salmon age and sex composition at LYTF



- 4-year-old and 5-year-old fish similar to average (2013-2022)
  - Age-4 fish were low in 2020 (19%) and high in 2021 (84%)
- Percent females slightly below average. Verified by internal sex ID
- 44.2% male slightly above average of 42.3%



# Historic Summer chum salmon age composition



- Summer chum salmon mostly return as age-4 and age-5 fish
- Have seen years with high or low percentages in the past

# Summary

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- Summer season summary likely published in October
- Project counts will be finalized later this winter
- Some tributary weirs, sonars, and aerial surveys were affected by high water and weather conditions
- Post season subsistence harvest surveys taking place in person in communities in September and October
- Research projects ongoing (some will be presented on at this meeting)
- 2024 forecasts available next spring

**Thank you to YRDFA and everyone involved in salmon conservation and management!**



Photos: ADF&G staff





## **Acknowledgements:**

**Communities of Alakanuk, Emmonak, St. Mary's, Pilot  
Station, Anvik, Tanana, Rampart, Fort Yukon, and Eagle  
Tanana Chiefs Conference  
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Yukon Delta Fisheries Development Association  
Yukon River Drainage Fisheries Association  
Yukon River Intertribal Fish Commission**

## **ADF&G Summer Season Team Contacts**

**Deena Jallen – Area Manager**

**[deena.jallen@alaska.gov](mailto:deena.jallen@alaska.gov)**

**Fred West – Research Biologist**

**[fred.west@alaska.gov](mailto:fred.west@alaska.gov)**

**Sam Decker – Assistant Area Manager**

**[sam.decker@alaska.gov](mailto:sam.decker@alaska.gov)**

**Josh Clark – Assistant Research Biologist**

**[joshua.clark@alaska.gov](mailto:joshua.clark@alaska.gov)**

**USFWS Subsistence Fishery Manager**

**Holly Carroll: [holly\\_carroll@fws.gov](mailto:holly_carroll@fws.gov)**

