

Arctic-Yukon-Kuskokwim Region 2019 Escapement Goal Review: A Summary Report to the Alaska Board of Fisheries



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Presentation Objectives

- Introduce escapement goal policies and terms
- Explain the 2019 review process
- Orientation to Arctic-Yukon-Kuskokwim escapement goals
- Recommendations



Escapement Goal Policies

- Policy for the Management of Sustainable Salmon Fisheries (5 AAC 39.222)
- Policy for Statewide Salmon Escapement Goals (5 AAC 39.223)



Terms

1) Biological Escapement Goal (BEG):

- Escapement that provides the greatest potential for maximum sustained yield – expressed as a range based on productivity and data uncertainty

2) Sustainable Escapement Goal (SEG):

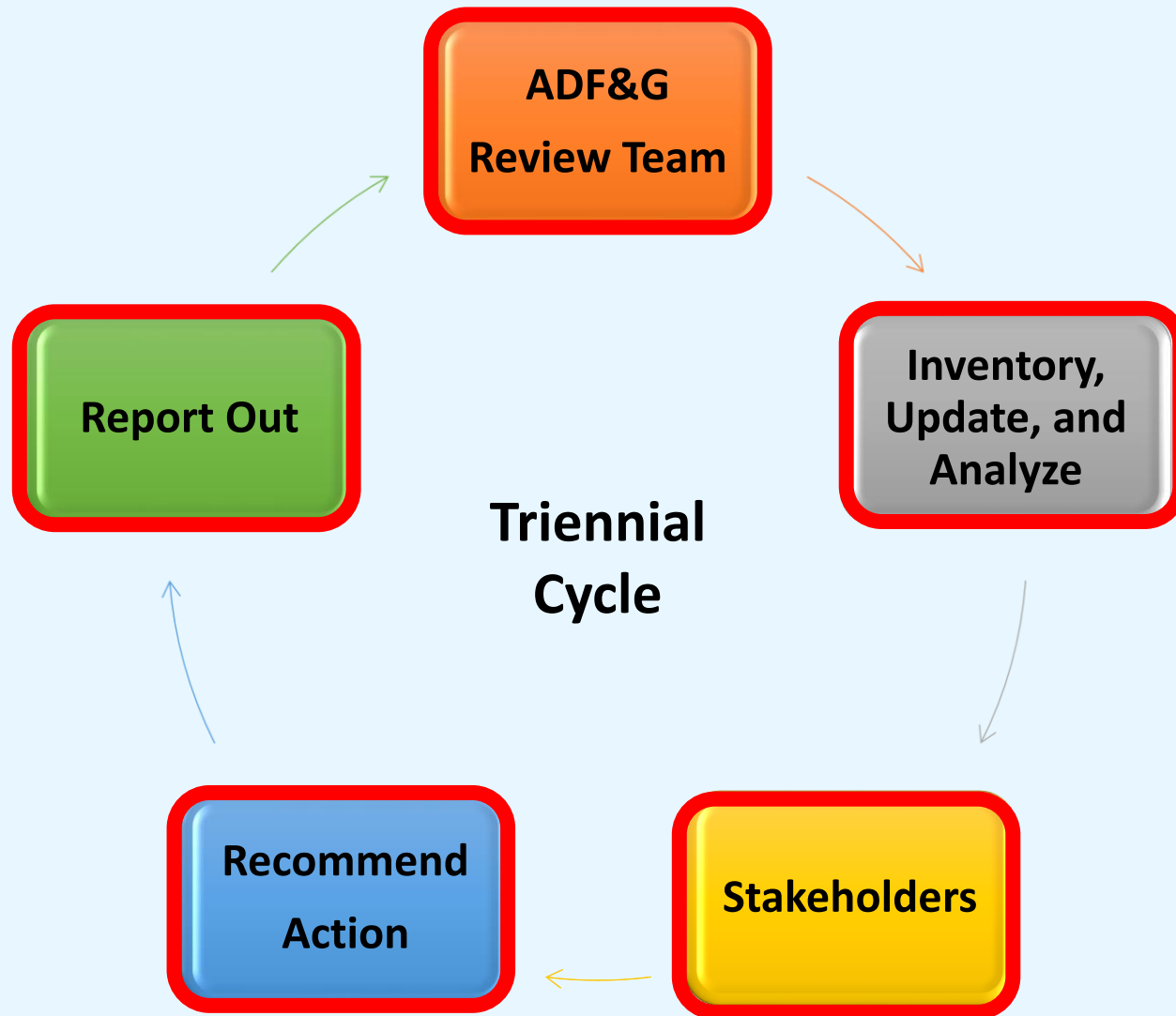
- Escapement that is known to provide for sustained yield over a 5 to 10 year period – accounts for data uncertainty

3) Optimal Escapement Goal (OEG):

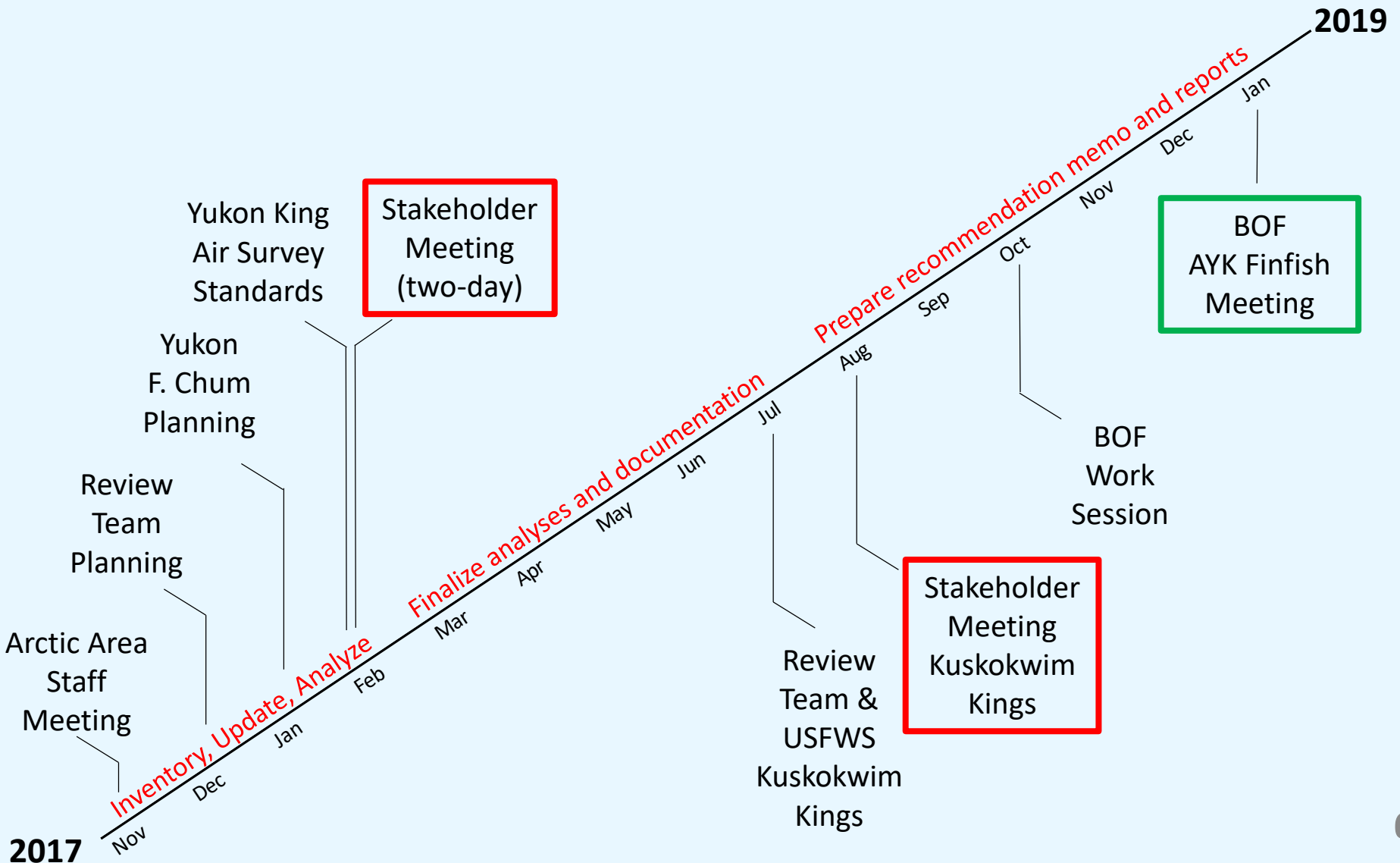
- A specific management objective that considers biological and allocative factors and may differ from the SEG or BEG and will be adopted as a regulation by the Board



AYK Escapement Goal Review Process

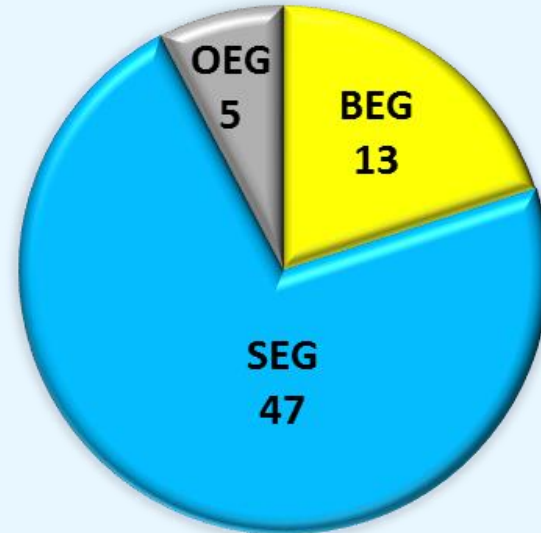
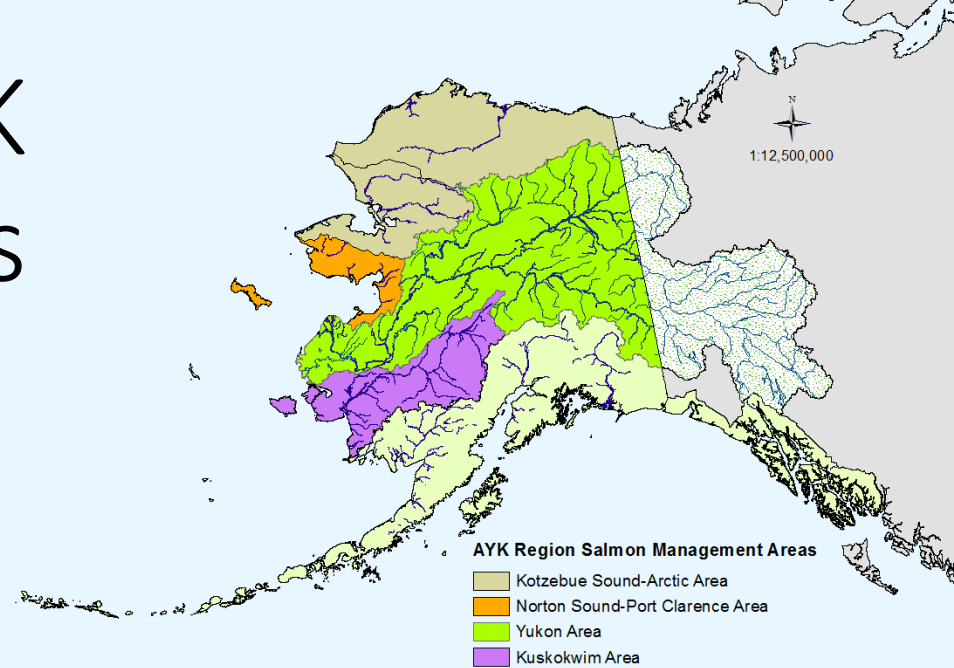
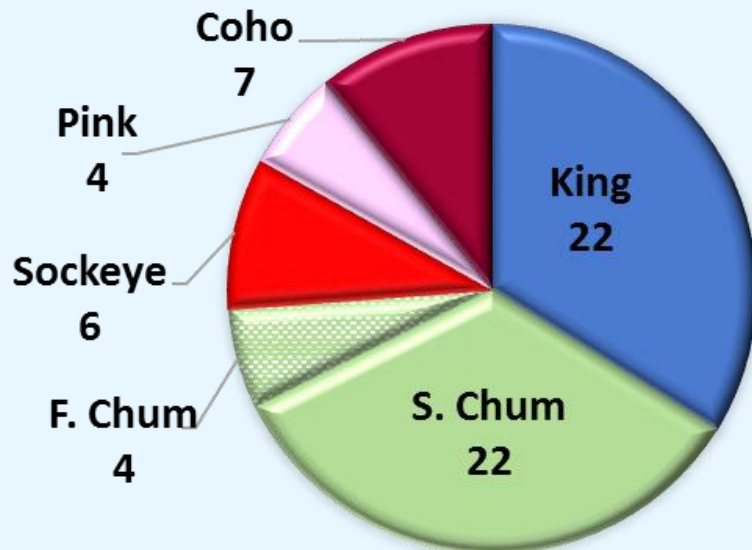
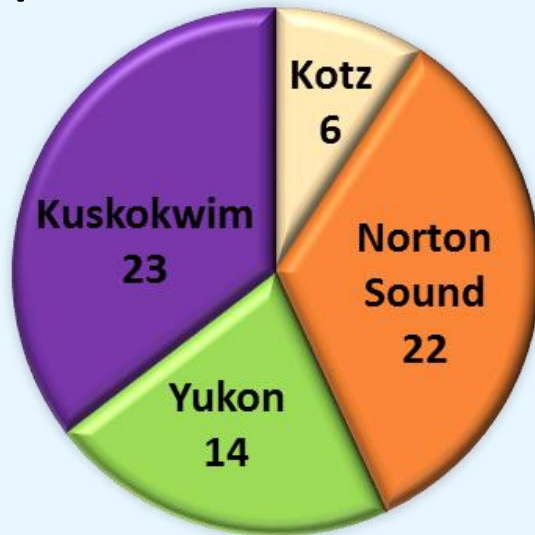


Timeline of Events





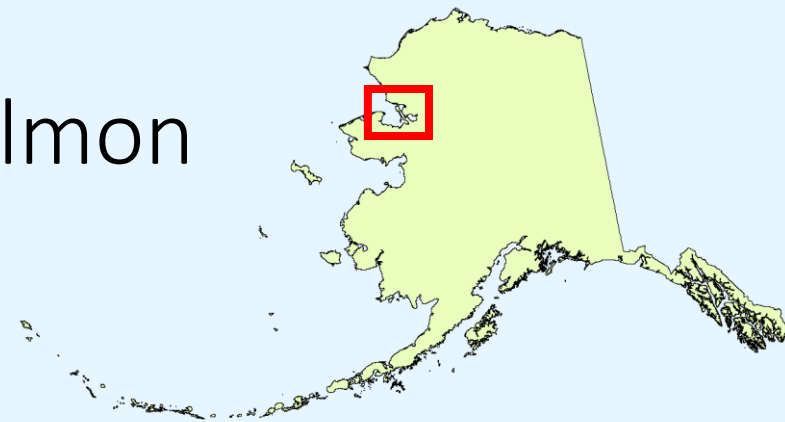
Orientation to AYK Escapement Goals



Summary of 2019 Escapement Goal Recommendations for the AYK Region

- The review team is recommending that 41 of the 65 total goals be continued with no change.
- Twelve goals are recommended for revision.
- Seven goals are recommended to be discontinued.
- Five goals are OEGs established by the Board and ADF&G recommends they be revised or discontinued.
- There are no recommendations for new escapement goals.
- Several of the recommendations have implications for existing management plans.

Kotzebue Sound - Chum Salmon



Recommendation:

Discontinue Kotzebue Area chum salmon BEG and individual SEGs for Squirrel, Salmon, and Tutuksuk rivers.

Revise SEGs for Noatak and Kobuk rivers based on the percentile of historical aerial survey counts instead of proportion of aggregate goal.



- Noatak/Eli River
Current: SEG 42,000 – 91,000
Recommended: SEG 43,000 – 121,000
- Upper Kobuk/Selby River:
Current: SEG 9,700 – 21,000
Recommended: SEG 12,000 – 32,100

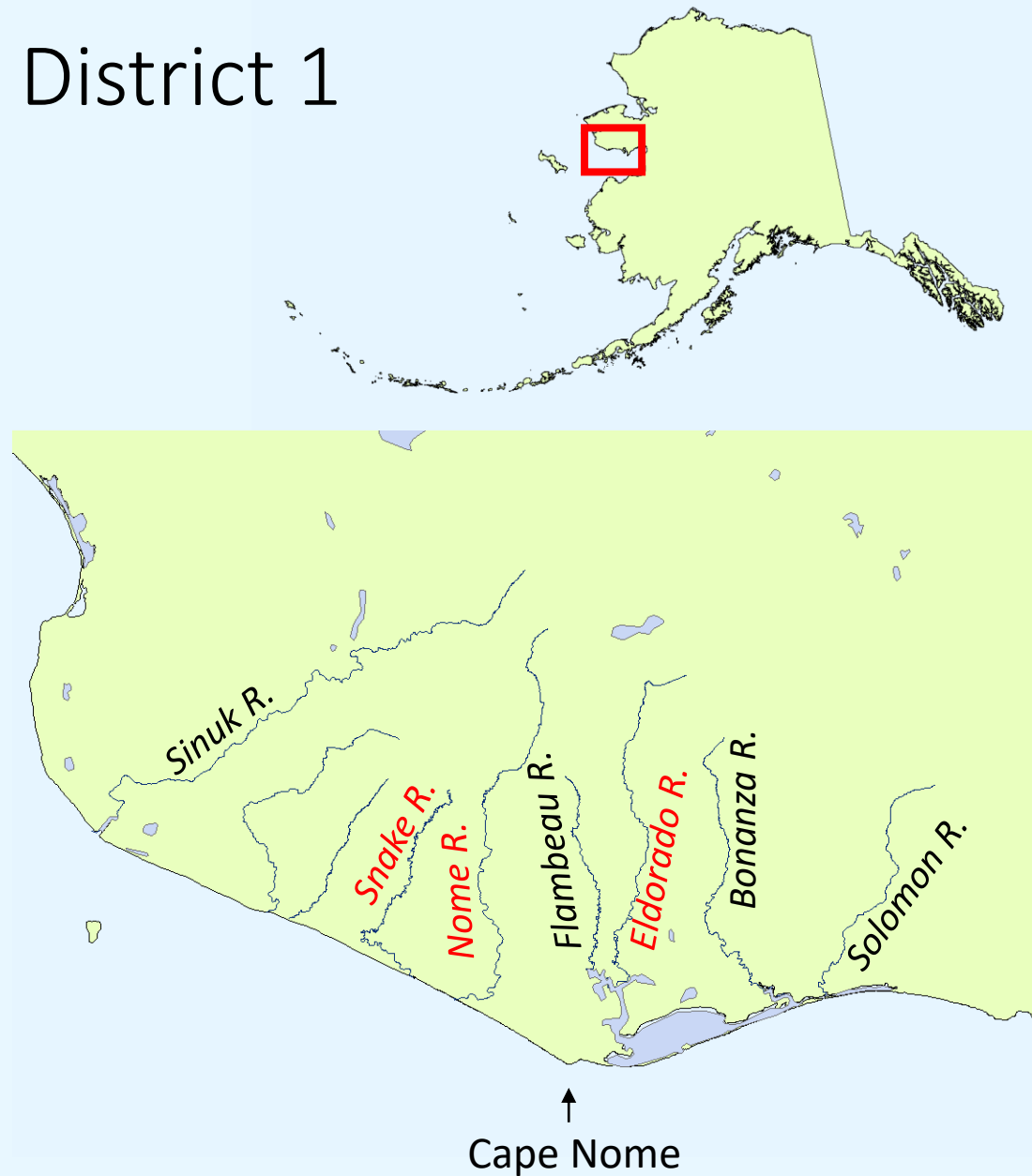
Norton Sound, Sub. District 1 Chum Salmon

Recommendation:

Discontinue Subdistrict 1 aggregate chum salmon BEG.

Revise SEGs for Snake, Nome, and Eldorado rivers based on percentiles of historical escapements instead of proportions of the aggregate goal.

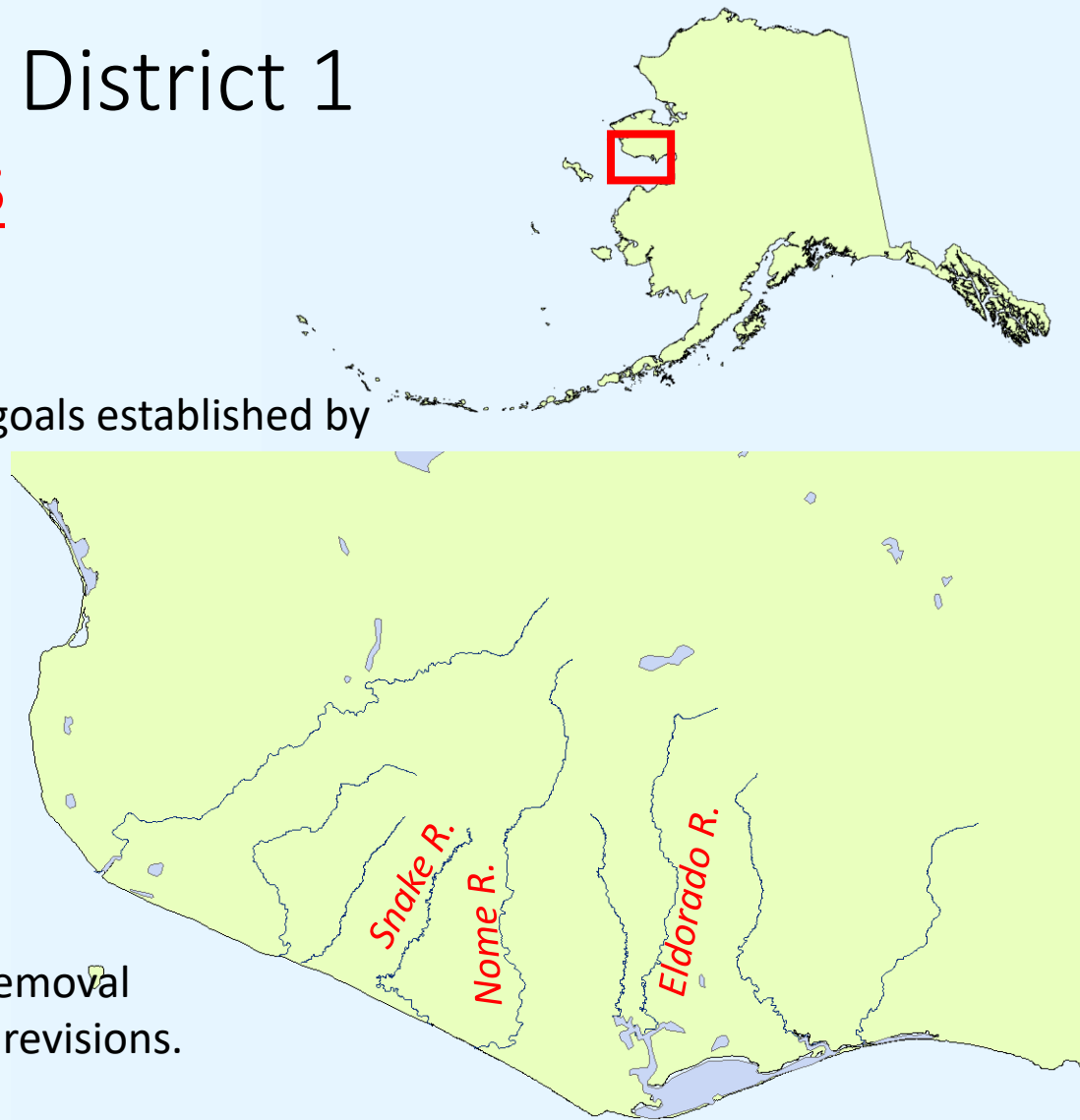
- Snake River
Current: OEG / SEG 1,600 – 2,500
Recommended: SEG 2,000 – 4,200
- Nome River:
Current: OEG / SEG 2,900 – 4,300
Recommended: SEG 1,600 – 5,300
- Eldorado River:
Current: OEG / SEG 6,000 – 9,200 (expanded air survey)
Recommended: SEG 4,000 – 14,200 (weir)



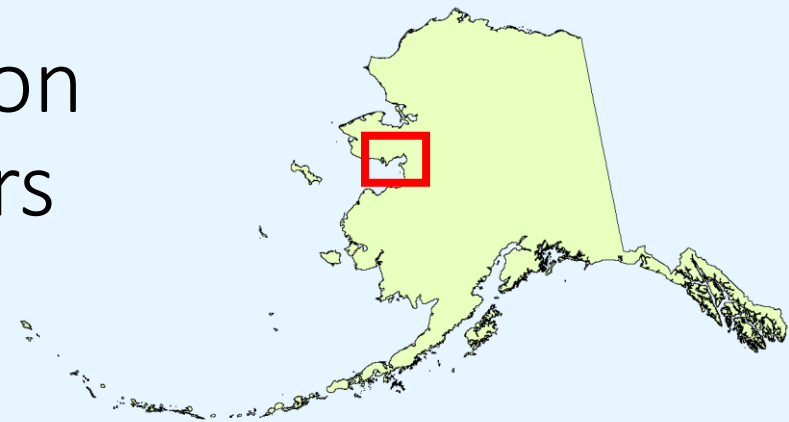
Norton Sound, Sub. District 1

Chum Salmon OEGs

- Prior to 2001, tributary escapement goals established by ADF&G were listed in regulation, 5 AAC 04.358.
- In 2001, BOF updated regulation by establishing OEGs for **Snake, Nome, and Eldorado rivers** consistent with ADF&G escapement goal recommendations.
- The board may consider revision or removal of OEGs for consistency with ADF&G revisions.

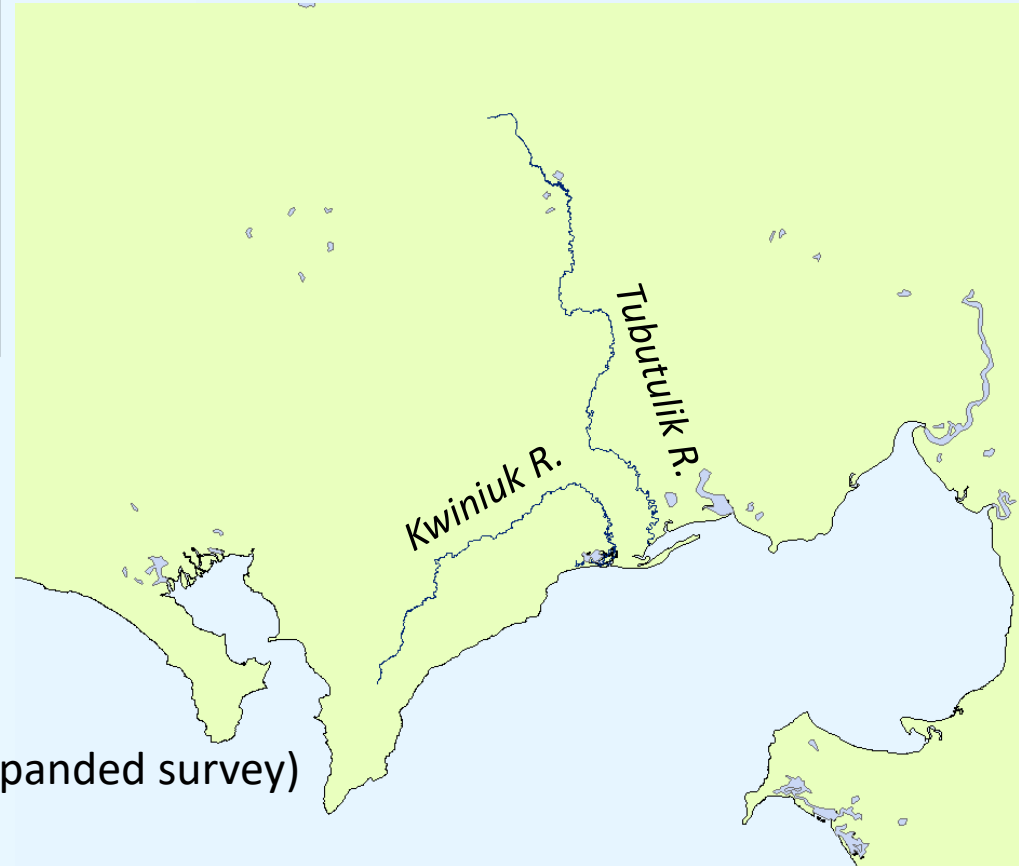


Norton Sound, Chum Salmon Kwiniuk and Tubutulik Rivers



Recommendation:

Revise BEGs for both Kwiniuk and Tubutulik rivers to SEGs based on the percentile range of historical escapement instead of poorly informed spawner recruit analyses which required assumptions to “apportion” harvest taken in marine waters of Subdistrict 3

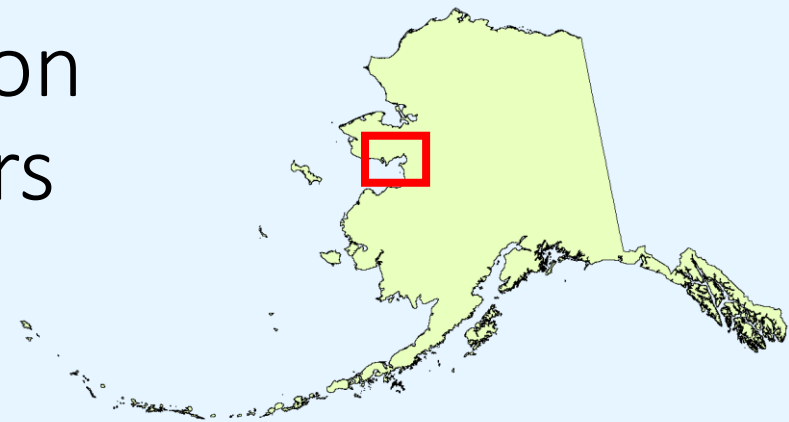


- Kwiniuk River
 - Current: BEG 10,000 – 20,000
OEG 11,500 – 23,000
 - Recommended: SEG 9,100 – 32,600
- Tubutulik River:
 - Current: BEG 8,000 – 16,000 (expanded survey)
OEG 9,200 – 18,400
 - Recommended: SEG 3,100 – 9,900 (unexpanded survey)

Norton Sound, Chum Salmon Kwiniuk and Tubutulik Rivers

OEGs

- Established in 2001, 5 AAC 04.390
- 15% increase to account for unknown level of subsistence harvest
- Since 2004, harvest permits allow for complete accounting of subsistence harvest and accurate escapement estimates.
- The board may consider revision or removal of OEGs for consistency with ADF&G revisions.

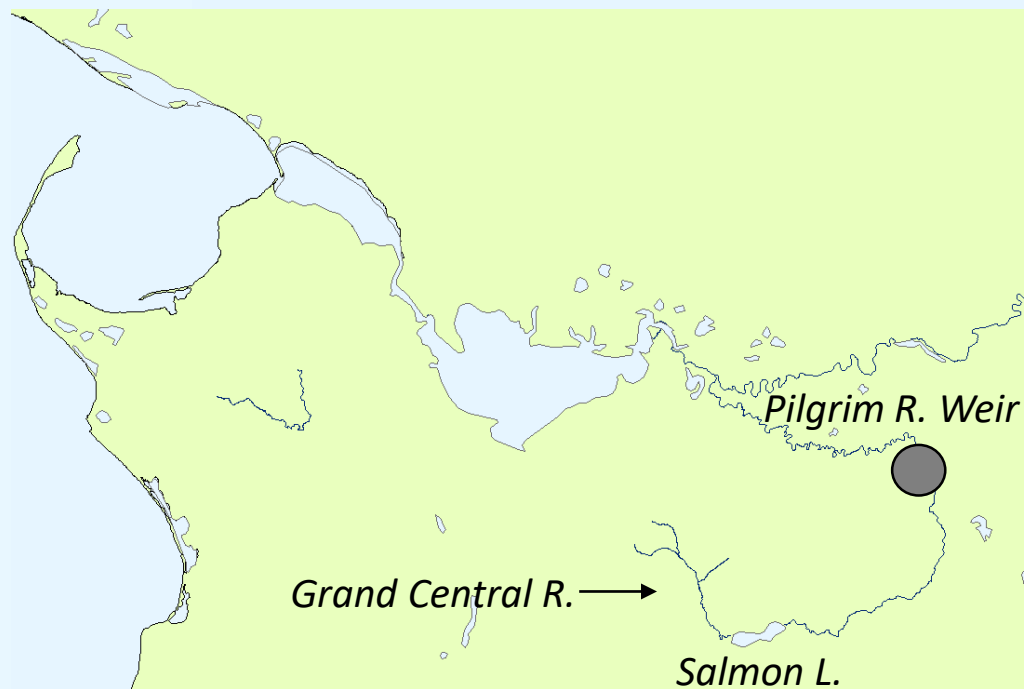


Norton Sound-Port Clarence Area Salmon Lake Sockeye Salmon



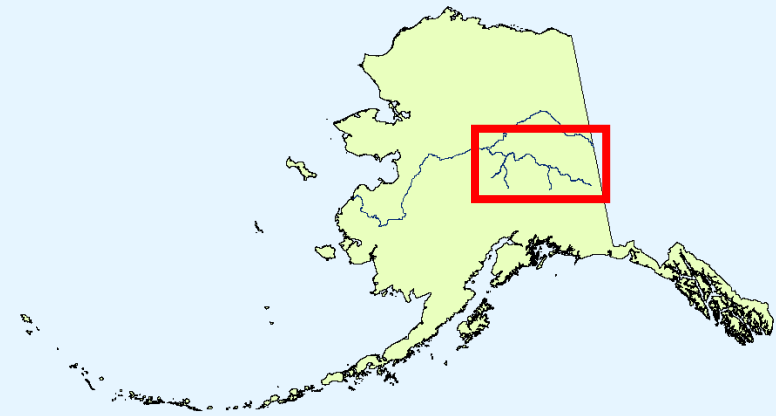
Recommendation:

Revise SEG for Salmon Lake / Grand Central River based on weir-based escapement minus upriver harvest instead of peak aerial survey counts.



- Salmon Lake / Grand Central River:
Current: SEG 4,800 – 8,000 (aerial survey)
Recommended: SEG 6,800 – 36,000 (weir - harvest)

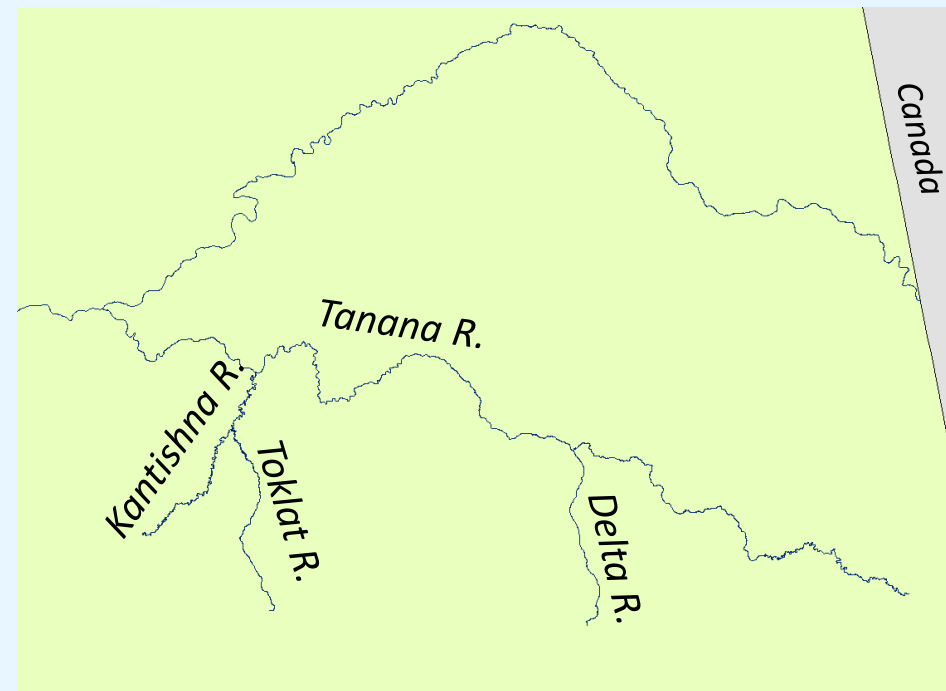
Yukon Area – Fall Chum Tanana and Delta Rivers



Recommendation:

Discontinue BEG for Tanana River due to lack of direct assessment.

Revise BEG for Delta River to a SEG based on the percentile range of historical foot surveys instead of a proportion of the Tanana River BEG.



- Delta River:
Current: BEG 6,000 – 13,000
Recommended: SEG 7,000 – 20,000

Yukon Area – Fall Chum Chandalar (*Teedriinjik*) River

Recommendation:

Revise BEG for Chandalar River to a SEG based on the percentile range of historical sonar estimates instead of a proportion of the discontinued Upper Yukon River aggregate goal.

- Chandalar River:
Current: BEG 74,000 – 152,000
Recommended: SEG 85,000 – 234,000



Kuskokwim River - King Salmon

Holitna River aerial &
Kogrukluk River weir



Recommendation:

Discontinue Holitna River peak aerial survey SEG, which was determined to be redundant and less reliable compared to weir-based assessment. Continue to assess escapement using Kogrukluk River weir SEG.

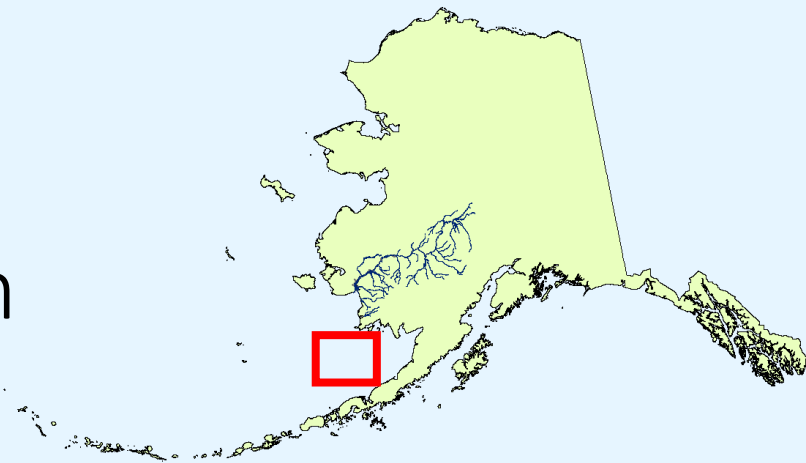


Kuskokwim Bay: Goodnews River King and Sockeye Salmon

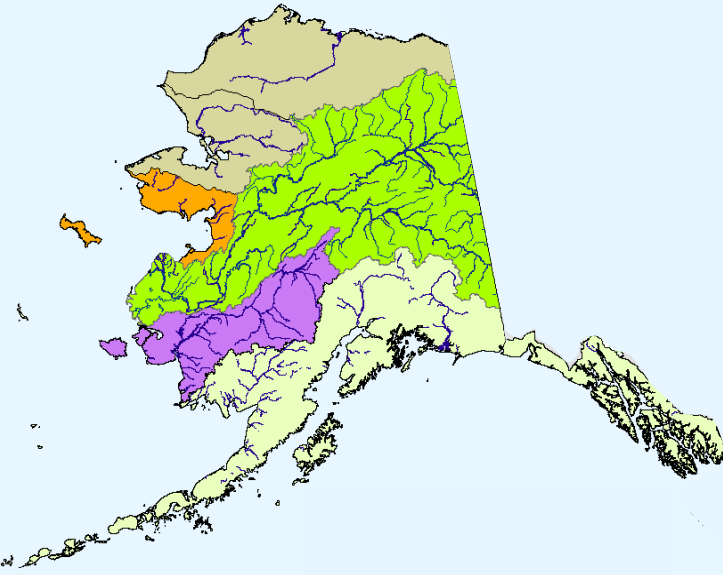
Recommendation:

Revise Goodnews River weir BEG for both King and sockeye salmon to a SEG based on the percentile range of historical weir counts instead of poorly informed spawner recruit analysis which required paired aerial surveys of main forks to “apportion” harvest taken in Goodnews Bay.

- King salmon
Current: BEG 1,500 – 2,900
Recommended: SEG 1,500 – 3,600
- Sockeye:
Current: BEG 18,000 – 40,000
Recommended: SEG 22,000 – 43,000



Summary of Recommendations



Kotzebue Sound-Arctic Management Area

- Discontinue – Four (4) chum salmon goals
- Revise – Two (2) chum salmon goals

Norton Sound–Port Clarence Management Area

- Discontinue – One (1) chum salmon goal
- Revise – Five (5) chum salmon goals and one (1) sockeye salmon goal
 - Notice – OEGs have been established by the BOF for each of the five chum salmon stocks.

Yukon Management Area

- Discontinue – One (1) fall chum salmon goal
- Revise – Two (2) fall chum salmon goals

Kuskokwim Management Area

- Discontinue – One (1) King salmon goal
- Revise – One (1) King salmon goal and one (1) sockeye salmon goal

Questions?

