

**RC 3 Report to the Alaska Board of Fisheries**

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**Draft: Norton Sound Subdistrict 3, Kwiniuk River  
King Salmon Stock Status and Action Plan, 2026**

by

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March 2026

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Alaska Department of Fish and Game

Divisions of Commercial Fisheries



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<b>Weights and measures (metric)</b>		<b>General</b>		<b>Measures (fisheries)</b>	
centimeter	cm	Alaska Administrative Code	AAC	fork length	FL
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	mid-eye-to-fork	MEF
gram	g	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	mid-eye-to-tail-fork	METF
hectare	ha	at	@	standard length	SL
kilogram	kg	compass directions:		total length	TL
kilometer	km	east	E		
liter	L	north	N	<b>Mathematics, statistics</b>	
meter	m	south	S	<i>all standard mathematical signs, symbols and abbreviations</i>	
milliliter	mL	west	W	alternate hypothesis	H <sub>A</sub>
millimeter	mm	copyright	©	base of natural logarithm	<i>e</i>
		corporate suffixes:		catch per unit effort	CPUE
<b>Weights and measures (English)</b>		Company	Co.	coefficient of variation	CV
cubic feet per second	ft <sup>3</sup> /s	Corporation	Corp.	common test statistics	(F, t, $\chi^2$ , etc.)
foot	ft	Incorporated	Inc.	confidence interval	CI
gallon	gal	Limited	Ltd.	correlation coefficient (multiple)	R
inch	in	District of Columbia	D.C.	correlation coefficient (simple)	r
mile	mi	et alii (and others)	et al.	covariance	cov
nautical mile	nmi	et cetera (and so forth)	etc.	degree (angular)	°
ounce	oz	exempli gratia		degrees of freedom	df
pound	lb	(for example)	e.g.	expected value	<i>E</i>
quart	qt	Federal Information Code	FIC	greater than	>
yard	yd	id est (that is)	i.e.	greater than or equal to	≥
		latitude or longitude	lat. or long.	harvest per unit effort	HPUE
<b>Time and temperature</b>		monetary symbols (U.S.)	\$, ¢	less than	<
day	d	months (tables and figures): first three letters	Jan, ..., Dec	less than or equal to	≤
degrees Celsius	°C	registered trademark	®	logarithm (natural)	ln
degrees Fahrenheit	°F	trademark	™	logarithm (base 10)	log
degrees kelvin	K	United States (adjective)	U.S.	logarithm (specify base)	log <sub>2</sub> , etc.
hour	h	United States of America (noun)	USA	minute (angular)	'
minute	min	U.S.C.	United States Code	not significant	NS
second	s	U.S. state	use two-letter abbreviations (e.g., AK, WA)	null hypothesis	H <sub>0</sub>
<b>Physics and chemistry</b>				percent	%
all atomic symbols				probability	P
alternating current	AC			probability of a type I error (rejection of the null hypothesis when true)	$\alpha$
ampere	A			probability of a type II error (acceptance of the null hypothesis when false)	$\beta$
calorie	cal			second (angular)	"
direct current	DC			standard deviation	SD
hertz	Hz			standard error	SE
horsepower	hp			variance	
hydrogen ion activity (negative log of)	pH			population	Var
parts per million	ppm			sample	var
parts per thousand	ppt, ‰				
volts	V				
watts	W				

***REPORT TO THE ALASKA BOARD OF FISHERIES***

**NORTON SOUND SUBDISTRICT 3, KWINIUK RIVER KING SALMON  
STOCK STATUS AND ACTION PLAN, 2026**

by

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March 2026

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## ABSTRACT

In response to the guidelines established in the *Policy for the Management of Sustainable Salmon Fisheries* (SSFP; 5 AAC 39.222), the Alaska Board of Fisheries (board) designated the Norton Sound Subdistrict 3 (Elim) Kwiniuk River king salmon as a stock of management concern at the November 2025 meeting in Fairbanks. A “management concern” is defined as, “a concern arising from a chronic inability, despite use of specific management measures, to maintain escapements for salmon stocks within the bound of Sustainable Escapement Goal (SEG), Biological Escapement Goal (BEG), Optimal Escapement Goal (OEG), or other specified objectives for the fishery. King salmon returns to the Kwiniuk River in Subdistrict 3 are small and highly variable. The Alaska Department of Fish and Game (department) has had an escapement goal for this population since 2005, but the goal has not proved useful for informing fisheries management because local fisheries do not target king salmon. During the 2025 escapement goal review cycle the department considered discontinuing the goal in future years. Escapement goal performance has been a function of total run abundance, not harvest management decisions and any efforts to reduce or eliminate the small amount of harvest would require extreme restrictions to chum and pink salmon-directed fisheries that support local subsistence and commercial economies. The escapement goal was revised in 2016 to a lower bound threshold of 250 fish or greater and since then, has only been met once, in 2020. The department did not recommend a stock of concern designation for Kwiniuk River king salmon at the board’s October 2025 work session. However, given the board’s decision, the department offers possible actions that could be taken.

Key words: Norton Sound, king salmon, *Oncorhynchus tshawytscha*, stock of concern, commercial, fishing, department, sustainable salmon fisheries policy, Alaska Board of Fisheries, Alaska.

## INTRODUCTION

The *Policy for the Management of Sustainable Salmon Fisheries* (SSFP; 5 AAC 39.222, 2001) directs the Alaska Department of Fish and Game (department) to provide the Alaska Board of Fisheries (board) with reports on the status of salmon stocks and identify any salmon stocks that present a concern related to yield, management, or conservation during regular board meetings. The department provided a stock status update pertaining to Norton Sound and Port Clarence salmon to the board at the November 2025 Arctic-Yukon-Kuskokwim (AYK) Finfish meeting in Fairbanks, Alaska (Henslee and Clark 2025). The report included an overview of Kwiniuk River king salmon (*O. tshawytscha*) stock within Subdistrict 3 (Elim) of Norton Sound, which highlighted successive years of failure to achieve the lower-bound sustainable escapement goal (SEG). In response to these data, the board designated Kwiniuk River king salmon as a stock of management concern. A stock of management concern is defined as “a concern arising from a chronic inability, despite use of specific management measures, to maintain escapements for a salmon stock within the bounds of the Sustainable Escapement Goal (SEG), Biological Escapement Goal (BEG), Optimal Escapement Goal (OEG), or other specified management objectives for the fishery” (5 AAC 39.222(f)(21)).

The department notes that the board may not have had adequate information to fully consider the implications of its decision to designate Kwiniuk River king salmon as a stock of management concern. Typically, the department provides the board with stock of concern recommendations and associated justification in advance of in-cycle meetings, to allow the public time to provide comments for board consideration. The department did not recommend Kwiniuk River king salmon for designation as a stock of concern. As such, the department did not provide the board with a comprehensive briefing on Subdistrict 3 fisheries, the escapement goal history pertaining to Kwiniuk River king salmon, or impacts of a stock of concern designation on local subsistence and commercial economies. The department believes that a stock of concern designation for Kwiniuk River king salmon may have significant unintended consequences that may negatively impact local subsistence and commercial economies. The issue stems, in part, from the

department's decision to maintain an escapement goal for a small non-targeted population of king salmon that cannot be actively managed. This report provides the board with action plan options for addressing the board's implementation of a stock of management concern for Kwiniuk River king salmon.

## **STOCK ASSESSMENT BACKGROUND**

### **Kwiniuk River**

The Kwiniuk River is a small costal system that originates approximately 4 miles inland from the coast, west of the village of Elim and flows northeast for most of its length before turning south to drain into Norton Sound near Moses Point (Figure 1). The Kwiniuk River is approximately 30 miles in length and is composed primarily of light-colored sand and cobble with large boulders and bedrock sections dispersed throughout its mid and upper reaches. The river is navigable by boat for much of its lower and middle sections; however, due to its depth, only the lower sections of the river that are tidally influenced can safely be navigated by propeller-driven boats. The Kwiniuk River is one of 2 primary salmon producers that flow into Norton Sound Subdistrict 3 (Elim). Both the Kwiniuk and Tubutulik rivers support populations of king, chum, pink, and coho salmon, and salmon runs to each system are believed to be of similar size.

### **ESCAPEMENT**

Escapement monitoring in Subdistrict 3 salmon began on the Kwiniuk River in 1965 with a tower-based escapement project, primarily to measure chum salmon escapement with other species being of secondary importance. Methods and timing of tower operations have varied over the years, and the early years of operation may not be comparable to more recent data. However, king salmon estimates from the early period of tower operations indicate that king salmon abundance was low ( $\leq 30$  fish) and sporadic with no reported data for several years. Reports from local fishermen indicated that king salmon were not an abundant species prior to the late 1970s and early 1980s and any harvest was incidental to other species, limited, and sporadic (Conitz et al., 2015). Abundance of king salmon in the Kwiniuk River started increasing in the early 1980s and peaked in 1997 when 1,022 king salmon were estimated by the counting tower. Escapements have steadily decreased since that time with an average of 404 fish from 2001–2010, 171 fish from 2011–2020, and 77 fish for the 2021–2025 period (Table 2). This small population of king salmon has demonstrated prior resilience from small escapements. The relatively large runs observed in the 1990s were presumably the result of a temporary increase in productivity which allowed previously small escapements to flourish for a time, that coincided with large king salmon returns in other drainages in Western Alaska. More recently, successive years of small escapements (15–57 fish) observed from 2011–2013 were associated with subsequent year run sizes that ranged between 63–417 fish (Table 2).

### **HARVEST**

Subsistence and commercial harvests occur in the waters of Subdistrict 3 on all 5 species of salmon. Harvest in Subdistrict 3 primarily comes from fish migrating to the Kwiniuk and Tubutulik rivers with minor contributions from other small coastal streams in the Subdistrict. Chum and coho salmon make up the majority of the subsistence and commercial harvest in the Subdistrict with king salmon catch being incidental to the harvest of other species, along with a limited amount of king salmon-directed rod and reel subsistence harvest. Commercial harvest only occurs in marine waters, while subsistence harvest occurs in both marine and freshwater.

Directed king salmon commercial fishing has not occurred since the 1990s in Subdistrict 3 and all king salmon commercially harvested have been incidental to the harvest of other more abundant species. Approximately since 2000, the department has minimized the likelihood of the incidental harvest of king salmon in Subdistrict 3 by restricting gillnet mesh size to 6 inches or less. Incidental commercial harvest of king salmon has averaged 32 and 111 fish for the last 5- and 10-years, respectively (Table 1). The department currently assumes that 50% of the commercial harvest are fish bound for Kwiniuk River, but the true proportion is unknown and likely variable.

Subsistence harvest for king salmon returning to the Kwiniuk and Tubutulik Rivers in Subdistrict 3 is compiled using data returned from required household subsistence permits. No additional restrictions on subsistence fishing opportunity have occurred in recent years, beyond gear restrictions outlined in regulations. Subsistence harvest of king salmon is relatively small and incidental to the harvest of other more abundant species, except for limited directed hook and line subsistence harvest from the Tubutulik River in some years. King salmon harvest has averaged 65 fish and 101 fish for the last 5-and 10-year time frames, respectively (Table 1). Like the commercial harvest, the department assumes that 50% of subsistence harvest in marine waters are Kwiniuk River fish, but the true proportions are unknown.

## **RUN SIZE**

Complete run size estimates cannot be reliably produced for the Kwiniuk River king salmon due to the mixed stock nature of the subsistence and commercial fisheries and the incomplete assessment of escapement in all rivers that flow into Subdistrict 3. King salmon that are harvested in the marine waters of Subdistrict 3 are typically bound for either the Kwiniuk or Tubutulik rivers. Stock specific harvest information in marine waters is not available, and a generalized assumption is made that harvest composition is proportional to freshwater run size of the two rivers. The Kwiniuk River tower project is used as a proxy for king salmon escapement assessment for Subdistrict 3, due to the historical data set of the project. Funding and logistical constraints have limited aerial surveys of the Tubutulik River to focus on chum and pink salmon escapement, since that is the basis of management activities within the Subdistrict. Recent harvest data (2022–2025) indicates that, even under an assumption that all king salmon were destined for the Kwiniuk River and combined with escapement counts from the tower, the total run would have remained below the established SEG, even with a complete closure of all fisheries (Tables 1 and 2). This highlights that the inability to meet the escapement goal cannot be attributed to management actions; even under a scenario of complete fishery closures, escapement would have only increased by a small amount and the SEG would not have been achieved. If a complete closure is enacted, it would have negative impacts on local stakeholders' opportunity to harvest more abundant salmon species for subsistence and commercial activities.

## **ESCAPEMENT GOAL EVALUATION**

The *Policy for Statewide Salmon Escapement Goals* (SSEGP; 5 AAC 39.223), adopted by the board in 2001, established the formal process for setting escapement goals. Prior to this the department policy was encapsulated in the *Salmon Escapement Goal Policy* (SSFP) adopted in 1992 that established a formal process to set, evaluate, and modify existing escapement goals (Fried 1994). The SSEGP and SSFP require the department to report on salmon stock status and escapement goals to the board on a regular basis, document and review existing salmon escapement goals, establish goals for stocks for which escapement can be reliably measured, and prepare scientific analysis with supporting data when goals are created, modified, or recommended for elimination.

## **KWINIUK RIVER**

Assessment for salmon began in the Kwiniuk River with a tower project in 1965, with chum salmon escapement goals established in 1979 (Clark, 2001). King salmon escapement goals were initially set for the Kwiniuk River in 1999 (Fair et al. 1999) with an escapement goal range of 300–550 king salmon. This goal remained in effect and was officially adopted as an SEG in 2005 (ADF&G 2004; Brannian et. al., 2006). The king salmon escapement goal remained fixed until 2016 when it was revised to a threshold escapement of  $\geq 250$  fish (Conitz et al. 2015), which has remained unchanged to present day. The decision to update the goal in 2016 to a lower-bound threshold was to better represent that this small group of fish was unlikely to sustain a directed commercial fishery.

During the 2025 review, the department’s Escapement Goal Review Team (EGRT) discussed the Kwiniuk River king salmon escapement goal extensively. The EGRT discussed the limited utility of this goal as a fishery management tool and entertained perspectives that the goal should be discontinued. The Kwiniuk River king salmon run is, and historically has been, very small and there are no directed subsistence or commercial fisheries for king salmon. Kwiniuk River king salmon represents a small population at the northern extent of the species range. Conitz et al. (2015) noted “Anecdotal information provided by stakeholders indicates there is little overwintering habitat in this system and that king salmon have established themselves in this system in relatively recent human history....”. Small numbers of Kwiniuk River king salmon are harvested incidentally in chum and coho salmon fisheries throughout Subdistrict 3. The long-term average (1965–2024) harvest from the commercial and subsistence fishery, combined, is 150 fish (range: 0–750).<sup>1</sup> Escapement goal performance for this population has been poor. The lower bound SEG has only been met once (2020) since the goal was revised in 2016 and in only 4 of 11 years when the prior goal range was in place (Table 2). It is important to note that escapement goal performance would not have been meaningfully different even if all king salmon harvest was eliminated, which would have required considerable forgone harvest of chum and coho salmon. Ultimately, the EGRT decided the existing goal has utility because it keeps the board and the department’s attention focused on Kwiniuk River king salmon while recognizing management options to attain the goal are limited (Liller and Saveriede 2025). Additional considerations by the EGRT included anticipation that discontinuing the goal may be misunderstood by the board and public as a lack of commitment to long-term monitoring. Given that the department remains committed to long-term monitoring and management of all Subdistrict 3 fisheries and because retaining this goal had not historically caused any harm, the EGRT decided to maintain the goal for future evaluation and consideration.

## **STOCK OF CONCERN RECOMMENDATION**

Escapements of king salmon in the Kwiniuk River have met escapement objectives in 8 of the last 26 years since escapement goals were established in 1999 and was last met in 2020. The department did not recommend Kwiniuk River king salmon as a stock of concern at the 2025 board work session for several reasons: 1) local knowledge indicates relatively recent colonization of

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<sup>1</sup> Harvest values are rounded. The total harvest of Kwiniuk River king salmon is highly uncertain. Commercial and subsistence marine harvests are assumed to be 50% Kwiniuk River king salmon and 50% Tubutulik River king salmon. Information about subsistence harvest within the Kwiniuk River has been available since 2004, and harvests have averaged 54 fish (range: 0–197).

king salmon in the system, 2) lack of a directed fishery, 3) concerns if an escapement goal was appropriate for this group of fish and how that might affect management of other species, and 4) lack of clear path forward to consistently achieve an escapement goal without complete closures to subsistence, sport, and commercial fishing on other established and more abundant stocks. However, in November 2025, the board determined that the Kwiniuk River king salmon stock met the criteria and classified it as a stock of management concern. The department did not have an opportunity to provide further information to the board during this deliberation. Additionally, stakeholders of this area have not been provided opportunity to fully engage on this topic and its implications.

## **HABITAT ASSESSMENT**

The Kwiniuk River is a healthy system without large or medium scale development. The mid and upper sections of the river are shallow with clean water flowing over light-colored sand and cobble with extensive stretches of exposed bedrock. Large rocks and boulders litter most of the system. The lower section of the drainage from where it exits the valley is highly meandered. There is beaver activity present but it does not impede fish passage.

## **FISHERY MANAGEMENT OVERVIEW AND BACKGROUND**

Fisheries in Subdistrict 3 of the Norton Sound District area are managed in accordance with applicable Alaska State Fish and Game regulations and statutes. These include the Norton Sound-Port Clarence area subsistence regulations (5 AAC 01.150–5 AAC 01.188) and *Subdistricts 2 and 3 of the Norton Sound District Salmon Management Plan* (5 AAC 04.390) for the commercial fisheries. The amount reasonably necessary for subsistence uses (ANS) for Norton Sound-Port Clarence Area is currently set at 96,000-160,000 salmon (all species combined), which is inclusive of salmon harvests within Subdistrict 3 (5 AAC 01.186). There is no specific ANS for Kwiniuk River king salmon. The Subdistricts 2 and 3 management plan provides the department clear direction to manage chum salmon commercial fisheries with additional guidance on pink and coho commercial fisheries as they relate to chum salmon escapement and subsistence priority. The management plan does not direct consideration of king salmon abundance when executing salmon fisheries in Subdistrict 3.

### **SUBSISTENCE FISHING**

Chum, pink, and coho salmon make up most of the subsistence salmon harvest in Subdistrict 3 with king and sockeye salmon being a relatively minor component (Table 1). Subsistence salmon fishing in Subdistrict 3 is conducted in marine and fresh waters mainly with set gillnets and hook and line. Subdistrict 3 is a remote area with most of the subsistence harvest taken by residents of the village of Elim. Subsistence salmon fishing is conducted under the auspices of an annual household subsistence salmon permit. There are no annual household limits for any species and currently have no closed areas or periods.

### **SPORT FISHING**

Sport fishing effort and harvest are negligible. Rod and reel are a legal subsistence gear type in Subdistrict 3 and few, if any, local residents sport fish for king salmon.

## COMMERCIAL FISHING

Commercial fishing in the marine waters of Subdistrict 3 is focused on chum, pink and coho salmon as outlined in *Subdistricts 2 and 3 of the Norton Sound District Salmon Management Plan* (5 AAC 04.390). Commercial fishing is based on preseason expectations and inseason escapement estimates of chum, pink, and coho salmon from the Kwiniuk River tower project. Initially, commercial fishing periods are scheduled dependent on the department's expectations of returns based on the previous year's performance and recent abundance trends. Commercial fishing time is generally conservative until escapement projections indicate there is a surplus of chum salmon above escapement and subsistence needs. Commercial periods targeting king salmon have not been conducted in Subdistrict 3 since the 1990s. Gear restrictions have also been consistently implemented to minimize incidental harvest of king salmon. King salmon harvest since 1998 has been incidental to directed chum salmon commercial fisheries and has been minimal in most years without intensive commercial chum salmon directed fisheries. Total Subdistrict 3 harvest has ranged from a high of 533 king salmon in 2015 to multiple years with harvests in single digits (Table 1). Only a portion of the Subdistrict 3 king salmon harvest is of Kwiniuk River origin.

## ACTION PLAN MANAGEMENT OPTIONS FOR ADDRESSING STOCKS OF CONCERN

### ACTION PLAN GOAL

Manage Subdistrict 3 chum, pink, and coho salmon fisheries sustainably while minimizing harvest of Kwiniuk River king salmon in an attempt to achieve the king salmon SEG. Continue to monitor and report king salmon harvest in Subdistrict 3 and escapement in the Kwiniuk River as an index of king salmon status.

### ACTION PLAN ALTERNATIVES

Potential management actions and the benefits and detriments described below are based on an intent to achieve the current SEG for Kwiniuk River king salmon.

#### Option #1— Status Quo

**Objective:** Status quo management actions with retention of the stock of concern designation for Kwiniuk River king salmon.

#### Subsistence Fishing

Currently, subsistence fishing in Subdistrict 3 is allowed in marine and fresh waters of the Subdistrict 7 days per week 24 hours per day with gear restricted to gillnet, beach seine, fishwheel, hook and line attached to a rod or pole, and cast nets/dip nets during times the department closes to other gear types for the conservation of a specific species with the non-retention of that specific species. Additionally, Subdistrict 3 is part of the Norton Sound household salmon permit system.

#### Commercial Fishing

Commercial salmon fishing periods in the Norton Sound District are established by Emergency Order from June 8 through September 7. Additionally, Subdistricts 2 and 3 chum, pink, and coho salmon fisheries are managed based on 5 AAC 04.390, *Subdistricts 2 and 3 of the Norton Sound*

*District Salmon Management Plan.* This management plan, although not addressing king salmon conservation directly, outlines steps the department takes in regard to chum salmon abundance.

No directed commercial king salmon harvest has occurred in Subdistrict 3 since the 1990s and all commercial harvest has been incidental to the harvest of other more abundant species. Commercial openings, when scheduled, are based on chum and coho salmon abundance and are restricted to 6-inch maximum mesh size to minimize king salmon harvest. Additionally, initial commercial openings in Subdistrict 3 have been delayed until the later part of June in recent years to allow chum salmon to build in marine waters and avoid incidental harvest of king salmon.

### **Sport Fishing**

Currently, no reported king salmon sport fish harvest has occurred in Subdistrict 3 since at least 2015 and there are no restrictions beyond the bag and possession limits of 1 king salmon over 20 inches in length per day with 1 in possession or 10 king salmon less than 20 inches in length per day with 10 in possession.

**Benefits:** Retaining the status quo would continue long-standing opportunities for subsistence, sport, and commercial fisheries in years when there is a harvestable surplus of chum, pink, and coho salmon while attempting to minimize the incidental harvest of king salmon.

**Detriments:** Small amounts of incidental harvest of king salmon will occur during fishing opportunities directed on other more abundant species. Escapement of king salmon will continue to be based on natural production.

## **Option #2 – Restrict Subsistence, Sport, and Commercial Fishing**

**Objective:** Maximize king salmon escapement by reducing time, allowed gear, and fishing opportunities in the subsistence, sport, and commercial fisheries.

### **Subsistence Fishing**

In years that the Kwiniuk River king salmon escapement goal is not expected to be met: 1) close marine waters in Subdistrict 3 of the Norton Sound District to gillnet fishing from June 1 until July 15 and only allow beach seines, cast nets, and dip nets with the non-retention of king salmon requiring live release of all king salmon caught; 2) restrict hook and line attached to a rod or pole subsistence fishing to non-retention of king salmon requiring live release of all king salmon caught; and 3) close gillnet subsistence fishing in fresh waters of Subdistrict 3 and allow subsistence fishing only with beach seines, cast nets, and dip nets with the non-retention of king salmon requiring live release of all king salmon caught until July 22.

### **Commercial Fishing**

Delay the initial commercial openings in Subdistrict 3 until July 15, or until escapement projections for the Kwiniuk River indicate there is a harvestable surplus of king salmon above escapement and subsistence needs.

### **Sport Fishing**

Close sport fishing for king salmon in Subdistrict 3 of the Norton Sound District until escapement objectives are expected to be met.

**Benefits:** Maximum protection for Kwiniuk River king salmon, increasing the likelihood that the SEG will be achieved.

**Detriments:** Restrictions to subsistence fishing may allow for more king salmon to escape the fishery; however, even eliminating Subdistrict 3 king salmon harvest is unlikely to result in the escapement goal being met in most years. Restrictions to subsistence fishing for other more abundant species may cause some food insecurity and cultural hardships. Reducing time in the commercial fishery in years when chum, pink, and coho salmon have a surplus available for commercial harvest will result in forgone harvest and have negative economic impacts for the local community and region. Commercial fishing income provides local stakeholders additional resources to participate in subsistence hunting and fishing activities, which provides additional food security throughout the winter. Restrictions on sport fishing to catch and release for king salmon is not expected to have any effect on sport fishing effort or harvest as the sport fishery has not had any recorded harvest of king salmon for at least a decade.

## **CONDITIONS FOR REDUCING RESTRICTIONS OR DELISTING A STOCK OF CONCERN**

1. If the lower bound threshold SEG is met or exceeded in 5 consecutive years and is expected to be met in future years, the department may recommend removing the stock as a stock of “management concern” at the first Arctic-Yukon-Kuskokwim board meeting after this condition is met.
2. Management measures could be relaxed if updated stock information indicates restrictions are no longer needed to ensure the SEG is met.

## **CURRENT RESEARCH PROJECTS**

The department currently operates a long-term salmon assessment project on the Kwiniuk River using a counting tower to estimate salmon escapement and collect biological information. Biological data (i.e., length, sex, scales) is taken from commercial harvest in Subdistrict 3 through a sampling program at processing plants in Nome and Unalakleet. Additionally, household subsistence permits are used to determine effort and harvest of salmon from Subdistrict 3.

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## **TABLES AND FIGURES**

Table 1.—Commercial and subsistence salmon catch by species, by year in Subdistrict 3, Norton Sound District, 1990–2025.

Year	Subdistrict 3 (Elim)																	
	Commercial						Subsistence						Combined					
	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total
1990	202	0	0	501	3,723	4,426												
1991	161	0	0	0	804	965	312	0	2,153	3,555	2,660	8,680	473	0	2,153	3,555	3,464	9,645
1992	0	0	3,531	0	6	3,537	100	0	1,281	6,152	1,260	8,793	100	0	4,812	6,152	1,266	12,330
1993	3	0	4,065	0	167	4,235	368	0	1,217	1,726	1,635	4,946	371	0	5,282	1,726	1,802	9,181
1994	0	0	5,345	0	414	5,759	322	104	1,180	9,345	3,476	14,427	322	104	6,525	9,345	3,890	20,186
1995	4	44	3,742	2,962	1,171	7,923	284	17	1,353	2,046	3,774	7,474	288	61	5,095	5,008	4,945	15,397
1996	0	0	1,915	68,609	0	70,524	417	52	1,720	9,442	2,319	13,950	417	52	3,635	78,051	2,319	84,474
1997	844	0	1,409	0	2,683	4,936	619	50	1,213	1,314	2,064	5,260	1,463	50	2,622	1,314	4,747	10,196
1998	105	0	1,462	145,669	2,311	149,547	414	49	1,831	6,891	1,376	10,561	519	49	3,293	152,560	3,687	160,108
1999	0	0	0	0	0	0	424	13	975	1,564	744	3,720	424	13	975	1,564	744	3,720
2000	10	0	5,182	46,369	535	52,096	248	46	1,429	5,983	1,173	8,879	258	46	6,611	52,352	1,708	60,975
2001	7	0	1,696	0	681	2,384	427	70	1,352	1,390	898	4,137	434	70	3,048	1,390	1,579	6,521
2002	0	0	0	0	0	0	565	14	1,801	8,345	1,451	12,176	565	14	1,801	8,345	1,451	12,176
2003	0	0	0	0	0	0	660	39	1,143	2,524	1,687	6,053	660	39	1,143	2,524	1,687	6,053
2004	0	0	0	0	0	0	412	0	704	7,858	683	9,657	412	0	704	7,858	683	9,657
2005	0	0	0	0	0	0	225	9	1,011	3,721	598	5,564	225	9	1,011	3,721	598	5,564
2006	0	0	0	0	0	0	179	13	1,769	5,216	1,267	8,444	179	13	1,769	5,216	1,267	8,444
2007	1	0	5,908	1,648	4,567	12,124	260	0	2,295	1,742	2,334	6,631	261	0	8,203	3,390	6,901	18,755
2008	5	0	4,602	14,536	304	19,447	269	0	1,804	7,655	1,284	11,012	274	0	6,406	22,191	1,588	30,459
2009	0	1	9,582	35	597	10,215	545	13	2,434	1,522	600	5,114	545	14	12,016	1,557	1,197	15,329
2010	9	5	10,180	11,658	23,453	45,305	97	7	1,679	7,830	3,925	13,538	106	12	11,859	19,488	27,378	58,843
2011	4	12	8,336	165	23,531	32,048	160	3	1,688	704	3,671	6,226	164	15	10,024	869	27,202	38,274
2012	3	1	2,003	52,775	2,262	57,044	42	0	1,302	10,848	1,494	13,686	45	1	3,305	63,623	3,756	70,730
2013	6	27	6,675	601	1,434	8,743	39	15	1,515	1,134	1,218	3,921	45	42	8,190	1,735	2,652	12,664
2014	101	164	15,938	28,507	17,525	62,235	276	38	1,808	4,595	2,081	8,798	377	202	17,746	33,102	19,606	71,033
2015	533	1,535	14,155	2,787	30,116	49,126	198	154	1,158	1,828	1,573	4,911	731	1,689	15,313	4,615	31,689	54,037

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Table 1.– Page 2 of 2.

Year	Subdistrict 3 (Elim)																	
	Commercial						Subsistence						Combined					
	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total
2016	69	728	14,197	39,028	6,736	60,758	163	60	1,164	6,717	830	8,934	232	788	15,361	45,745	7,566	69,692
2017	51	538	19,410	2,877	11,779	34,655	51	35	2,362	3,664	1,109	7,221	102	573	21,772	6,541	12,888	41,876
2018	138	482	20,002	9,474	38,419	68,515	59	35	1,657	4,360	588	6,699	197	517	21,659	13,834	39,007	75,214
2019	121	724	11,450	14,911	13,803	41,009	105	20	853	3,065	570	4,613	226	744	12,303	17,976	14,373	45,622
2020	145	238	2,013	331	857	3,584	125	17	365	3,462	124	4,093	270	255	2,378	3,793	981	7,677
2021	1	41	883	6,601	452	7,978	133	9	464	1,194	103	1,903	134	50	1,347	7,795	555	9,881
2022	2	158	1,313	2,634	4,030	8,137	42	62	963	4,325	349	5,741	44	220	2,276	6,959	4,379	13,878
2023	8	44	1,221	21	1,104	2,398	16	34	729	288	214	1,281	24	78	1,950	309	1,318	3,679
2024	5	15	787	14	343	1,164	7	33	223	1,155	68	1,486	12	48	1,010	1,169	411	2,650
2025	1	67	4,428	35	116	4,647	13	10	817	448	179	1,467	14	77	5,245	483	295	6,114
Avg 2020–24	32	99	1,243	1,920	1,357	4,652	65	31	549	2,085	172	2,901	97	130	1,792	4,005	1,529	7,553
Avg 2015–24	111	394	8,717	6,816	11,843	27,880	101	44	1,058	2,794	678	4,675	212	438	9,775	9,609	12,521	32,555

*Note:* Commercial harvest numbers may include some salmon reported on fish tickets that were retained for personal use and not commercially sold. Subsistence data was collected by household surveys from 1991 until subsistence permits were introduced in 2004. Blank cells indicate years that no data is available.

Table 2.– Historical salmon migration at Kwiniuk River counting tower, 1990–2025.

Year	Start date	End date	Chum	Pink	Chinook	Coho
1990	6/21	7/26	14,377	388,114	893	6
1991	6/18	7/28	23,261	77,513	658	2
1992	6/27	7/28	12,863	1,324,397	492	202
1993	6/27	7/27	15,922	50,655	654	0
1994	6/23	8/10	31,867	2,372,787	653	3,004
1995	6/21	7/27	35,991	23,451	491	114
1996	6/20	7/26	24,443	1,031,690	538	362
1997	6/18	7/27	21,847	10,474	1,022	0
1998	6/18	7/27	18,069	668,798	370	0
1999	6/25	7/29	9,353	434	103	0
2000	6/22	7/28	14,975	1,416,770	138	2
2001	6/27	9/16	16,607	8,286	256	9,098
2002	6/17	9/12	38,054	1,114,428	787	6,789
2003	6/15	9/16	12,124	22,329	747	5,502
2004	6/16	9/15	10,359	3,044,489	639	10,740
2005	6/17	9/14	12,084	340,899	342	12,965
2006	6/22	9/13	39,553	1,347,075	195	22,390
2007	6/21	9/11	27,756	54,255	258	9,554
2008	6/23	9/8	9,480	1,443,831	237	10,492
2009	6/24	9/14	8,739	42,960	444	8,602
2010	6/25	9/8	72,162	634,190	138	8,412
2011	6/20	9/12	32,240	30,999	57	3,352
2012	6/23	8/17	5,587	415,174	57	2,766
2013	6/24	9/12	5,686	13,212	15	3,751
2014	6/15	9/8	39,774	326,054	429	14,617
2015	6/15	9/3	37,812	67,294	312	7,592
2016	6/17	9/17	8,531	1,933,803	135	9,072
2017	6/15	9/13	32,560	507,685	63	14,030
2018	7/4	9/17	41,849	1,835,039	94	17,172
2019	7/2	9/7	20,140	710,901	129	6,064
2020	6/25	9/8	4,973	1,767,447	417	5,488
2021	7/1	9/8	4,199	56,625	225	4,949
2022	6/23	9/13	10,337	408,704	42	6,588
2023	7/5	9/4	6,041	18,778	21	6,086
2024	6/30	8/16	1,805	509,841	53	3,859
2025	6/26	8/25	1,644	23,446	42	8,786
<b>2021–2025 Average</b>	<b>6/29</b>	<b>8/31</b>	<b>4,805</b>	<b>203,479</b>	<b>77</b>	<b>6,054</b>
<b>2011–2020 Average</b>	<b>6/22</b>	<b>9/8</b>	<b>22,915</b>	<b>760,761</b>	<b>171</b>	<b>8,390</b>

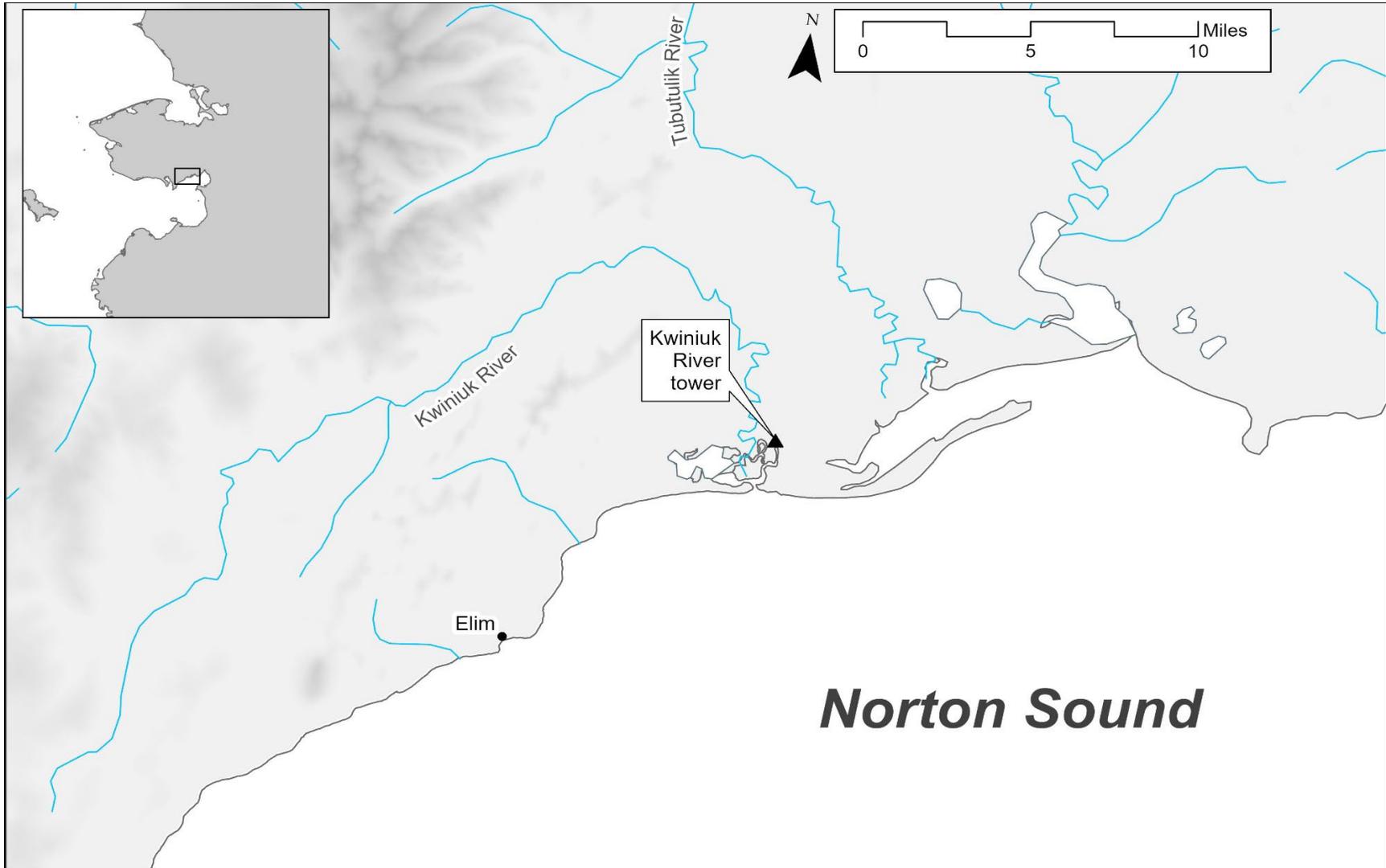


Figure 1.—Kwiniuk River in Subdistrict 3 of the Norton Sound District.