Fishery Management Report No. 25-33

Fishery Management Report for Sport Fisheries in the Tanana Management Area, 2024

by

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and

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Alaska Department of Fish and Game Divisions of Sport Fish and Commercial Fisheries

Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figures or figure captions.

Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols	
alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat or long
monetary symbols (U.S.)	\$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	*e*
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	*E*
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	log_2, etc.
minute (angular)	′
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	″
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

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The Fishery Management Reports series was established in 1989 by the Division of Sport Fish for the publication of an overview of management activities and goals in a specific geographic area, and became a joint divisional series in 2004 with the Division of Commercial Fisheries. Fishery Management Reports are intended for fishery and other technical professionals, as well as lay persons. Fishery Management Reports are available through the Alaska State Library and on the Internet: http://www.adfg.alaska.gov/sf/publications/. This publication has undergone regional peer review.

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ABSTRACT

Information specific to sport fisheries in the Tanana River Management Area (TRMA) in 2024 and preliminary information for 2025 are presented. Estimates of fishing effort, total harvest, and catch are summarized through the 2024 season. This information is provided to the Alaska Board of Fisheries, as well as to the general public and interested parties. Details of major fisheries within the area are presented, including descriptions of the performance of these fisheries, regulatory actions by the Alaska Board of Fisheries, social and biological issues, and descriptions of ongoing research and management activities. This report emphasizes fisheries for which regulatory proposals will be considered at the upcoming Board of Fisheries meeting in November 2025.

Keywords: Tanana River Management Area, Chena River, Salcha River, Harding Lake, Rainbow Lake, Minto Flats, Shaw Creek, Tanana River, Volkmar Lake, ice house registration, Arctic grayling, northern pike, Chinook salmon, chum salmon, coho salmon, rainbow trout, sport fisheries, sport fishery management, fisheries management plans.

EXECUTIVE SUMMARY

This document provides a wide array of information specific to the sport fishing opportunities that exist within the Tanana River Management Area (TRMA). Information specific to proposals that the Alaska Board of Fisheries (BOF) will address at its November 18–22, 2025, meeting is contained within this report. To assist BOF members in acquiring information in a timely manner, Appendix A1 has been constructed. This table guides the reader to specific information contained within the text, tables, and figures that will be useful in evaluating regulatory proposals.

INTRODUCTION

This report provides information for the TRMA and is one in a series of reports annually updating fisheries management information within Region III (Figure 1). The report is provided for the BOF, Fish and Game Advisory Committees (ACs), the general public, and other interested parties. It presents a description of area fisheries, a summary of the fisheries effort, harvest, and catch, fisheries assessment information, and the management strategies that are developed from that information.

The mission of the Division of Sport Fish (DSF) of the Alaska Department of Fish and Game (ADF&G) is to protect and improve the state's fishery resources. This is achieved by managing for sustainable yield of wild stocks of sport fish, providing diverse sport fishing opportunities, and providing information to assist the BOF in optimizing social and economic benefits from sport fisheries. In order to implement these goals, the division has in place a fisheries management process.

A regional review is conducted annually, during which the status of important area fisheries is considered and research needs are identified. Fisheries stock assessment and research projects are developed, scheduled, and implemented to meet information needs identified by fisheries managers. Projects are planned within a formal operational planning process. Biological information gathered from these research projects is combined with effort information and input from user groups to assess the need for and development of fisheries management plans, and to propose regulatory strategies.

Division of Sport Fish management and research activities are funded by Fish and Game and Federal Aid in Fisheries Restoration funds. Fish and Game funds are derived from the sale of state sport fishing licenses. Federal Aid funds are derived from federal taxes on fishing tackle and equipment established by the Federal Aid in Sport Fish Restoration Act (also referred to as the

Dingell-Johnson Act or D-J Act). D-J funds are provided to the states at a match of up to 3-to-1 with the Fish and Game funds. Additional funding specified for providing, protecting, and managing access to fish and game is provided through a tax on boat gas and equipment established by the Wallop-Breaux Act. Other peripheral funding sources may include contracts with various government agencies and the private sector or, in a few cases, State of Alaska general funds.

This area management report provides information regarding the TRMA and its fisheries for 2024, with information, if available, from the 2025 season. This report is organized into 2 primary sections: a management area overview, including a description of the management area and a summary of effort, harvest, and catch for the area (based on data from the Alaska Sport Fishing Survey); and a section on the significant area fisheries, including specific harvest and catch by species and geographical region or drainage.

Sport fishing effort and harvest of fish species in Alaska have been estimated and reported annually since 1977 using a mail survey. The Alaska Sport Fishing Survey (commonly referred to as the Statewide Harvest Survey [SWHS]) is designed to provide estimates of effort, harvest, and catch on a site-by-site basis. It is not designed to provide estimates of effort directed towards a single species. Species-specific catch-per-unit-effort (CPUE) information can seldom be derived from the survey data. A questionnaire is mailed to a stratified random sample of households containing at least one individual with a valid fishing license (resident or nonresident). Currently, information gathered from the survey includes participation (number of anglers and days fished), number of fish caught and harvested by species, and site for guided and unguided fishing. These surveys estimate the number of angler-days of fishing effort expended by sport anglers fishing Alaska waters, as well as the sport harvest. Survey results for each year are not available until the following year; hence, the results for 2024 were not available until fall 2025. Additionally, creel surveys have been selectively used to verify the mail survey for fisheries of interest or for fisheries that require more detailed information or inseason management.

The utility of SWHS estimates depends on the number of responses received for a given site (Mills and Howe 1992). In general, estimates from smaller fisheries with low participation are less precise than those of larger fisheries with high participation for estimates from 1977 to 1990. Therefore, the following guidelines were implemented for evaluating survey data:

1. Estimates based on fewer than 12 responses should not be used other than to document that sport fishing occurred;
2. Estimates based on 12 to 29 responses can be useful in indicating relative orders of magnitude and for assessing long-term trends; and
3. Estimates based on 30 or more responses are generally representative of levels of fishing effort, catch, and harvest.

More recently, SWHS estimates were compared to onsite creel surveys for estimates from 1996 to 2006, and it was found that SWHS estimates began to correspond to creel survey estimates when the coefficient of variation (CV) of a SWHS estimate was ≤0.30 (Clark 2009). Clark (2009) recommended that CVs of harvest estimates from the SWHS should be 0.30 or less before using the estimates for evaluating long-term trends.

SECTION I: TANANA RIVER MANAGEMENT AREA OVERVIEW

TANANA RIVER MANAGEMENT AREA DESCRIPTION

The Tanana River drainage is the second largest tributary of the Yukon River that drains an area of approximately 45,918 mi^2 (73,898 km^2; Brabets et al. 2000; Figures 1–3). The glacial Tanana River is formed by the confluence of the Chisana and Nabesna Rivers near Tok and the Alaska-Canada border and flows toward the northwest for ~570 mi (970 km) to its terminus at the Yukon River. The Tanana River receives both the majority of its flow as well as its largest sediment loads from glacial tributary rivers (Chisana, Nabesna, Tok, Delta, Nenana, Kantishna, and Toklat Rivers) flowing out of the Alaska and Wrangell Mountain ranges and entering the south side of the Tanana River. All major tributaries (Goodpaster, Salcha, Chena, Chatanika, and Tolovana Rivers) flowing into the north side of the Tanana River are clear water streams originating from the Tanana Hills uplands. Large alluvial aquifers are located on the south side of the Tanana River and influence fish production by storing water and providing a more stable base flow during winter. The Delta Clearwater and Richardson Clearwater Rivers are the 2 most important sportfishing streams that originate from these aquifers.

Most of the population in Region III is located within the Tanana River drainage along the Alaska, Richardson, and Parks Highways, and along the road system around Fairbanks. These highways and their secondary roads provide much of the area's access to sport fisheries. The Fairbanks North Star Borough (FNSB) and part of the Denali Borough lie within the TRMA. Approximately 100,000 people live in this area, which encompasses the city of Fairbanks, Fort Wainwright Army Base, Eielson Air Force Base, and the communities of Nenana, North Pole, and Salcha (U.S. Census Bureau 2010). Other communities and municipalities located within the TRMA include Anderson, Big Delta, Cantwell, Delta Junction, Dot Lake, Dry Creek, Ester, Fort Greely Army Base, Fox, Healy, Lake Minchumina, Livengood, Manley Hot Springs, Minto, Nabesna, Northway, Tanacross, Tetlin, Tok, Two Rivers, and Whitestone.

The TRMA offers various fishing opportunities ranging from lake trout *Salvelinus namaycush* in the high-elevation lakes along the Denali Highway to some of the highest quality Arctic grayling *Thymallus arcticus* and coho salmon *O. kisutch* fisheries in Interior Alaska. In addition, there are 6 public use cabins available through a reservation and permit system.

FISHERY RESOURCES

Throughout the TRMA, both indigenous (wild stocks) and introduced (produced in hatcheries and stocked) fish are available to anglers. There are 18 fish species indigenous to the Tanana River drainage, 6 of which are commonly targeted by sport anglers: Chinook salmon, coho salmon, Arctic grayling, burbot *Lota lota*, lake trout, and northern pike *Esox lucius*. Chum salmon *O. keta*, Dolly Varden *S. malma*, sheefish (inconnu) *Stenodus leucichthys*, least cisco *Coregonus sardinella*, humpback whitefish *C. pidschian*, broad whitefish *C. nasus*, and round whitefish *Prosopium cylindraceum* are caught occasionally by sport anglers. Longnose suckers *Catostomus catostomus*, Alaska blackfish *Dallia pectoralis*, lake chub *Couesius plumbeus*, slimy sculpin *Cottus cognatus*, and Arctic lamprey *Lampetra camtschatica* are also present but not targeted by sport anglers.

Rainbow trout *O. mykiss* are not native to the Tanana River drainage but have been stocked in many lakes and are sterile. Arctic char *S. alpinus*, coho salmon, Chinook salmon, and lake trout are also stocked in selected lakes. Chinook salmon reared from eggs collected in the summer and coho salmon reared from eggs collected in the fall are all stocked the following season. Lake trout eggs collected in the fall are reared for 2 years before being released as juveniles, and it takes an additional 3–5 years for them to grow to a desirable size for sport anglers.

ESTABLISHED MANAGEMENT PLANS AND POLICIES

Regulations governing fisheries in the TRMA are found in 5 AAC 74.001 through 5 AAC 74.995 (sport fishing), in 5 AAC 77.171 through 5 AAC 77.190 (personal use), and in 5 AAC 01.200 through 5 AAC 01.249 (subsistence fishing). Specific management plans and policies that affect TRMA sport fisheries include the following:

- *Minto Flats Northern Pike Management Plans* (5 AAC 74.044 for the sport fishery and 5 AAC 01.244 for the subsistence fishery)
- *Tanana River Wild Arctic Grayling Management Plan* (5 AAC 74.055)
- *Chena and Salcha River King Salmon Sport Harvest Management Plan* (5 AAC 74.060)
- *Tanana River Area Stocked Waters Management Plan* (5 AAC 74.065)
- *Tanana River Area Wild Lake Trout Management Plan* (5 AAC 74.040)
- *Yukon River Drainage Fall Chum Management Plan* (5 AAC 01.249)
- *Yukon River King Salmon Management Plan* (5 AAC 05.360)
- *Yukon River Summer Chum Salmon Management Plan* (5 AAC 05.362)
- *Policy for the management of sustainable salmon fisheries* (5 AAC 39.222);
- *Policy for statewide salmon escapement goals* (5 AAC 39.223)
- *ADF&G Genetic Policy* (06/11/1985)
- *Lake stocking policy for Sport Fish Division* (02/25/2013)
- *ADF&G Statewide stocking plan for sport fish*

MAJOR ISSUES

Salmon Fisheries

Salmon fisheries are often the most contentious fisheries in Alaska, and those within the TRMA are no exception. In terms of allocation, subsistence salmon fisheries have a regulatory priority over commercial, personal use, and sport fisheries when there are conservation concerns. In past years, this priority has led to regional and/or user group conflicts when commercial fisheries occurred in the Lower Yukon River before subsistence users in the middle and upper portions of the drainage were able to harvest salmon. In recent years, the ADF&G Division of Commercial Fisheries (DCF) has issued emergency orders to reduce or close subsistence harvest of salmon (particularly Chinook salmon) in the Yukon River drainage. Due to poor escapements across the Yukon River drainage, TRMA sport fisheries for salmon were closed from 2021 through 2025, excepting the 2024 summer run of chum salmon and the 2025 run of coho salmon. On April 1, 2024, the state of Alaska and Canada entered into an agreement to suspend all directed Chinook salmon fisheries in the Yukon River for 7 years for Canadian-origin Chinook salmon. Because the Tanana River is a tributary for which salmon stocks do not enter Canada, there remains the possibility of fisheries occurring on Chinook salmon during the term of the agreement if the run strength allows for a harvestable surplus. During the 2023 BOF meeting, the board adopted a proposal forbidding anglers from removing captured Chinook salmon from water if they intended to release the fish, and any fish removed from the water must be retained. The intent of this measure was to minimize stress and mortality of catch-and-release fishing for Chinook salmon.

PFAS

An issue that has recently emerged is per- and polyfluoroalkyl substances (PFAS) contamination in several areas of the Fairbanks North Star Borough. Local wells and several formerly stocked lakes are known to be contaminated with PFAS. Due to PFAS contamination, the department has restricted Piledriver Slough, Moose Creek, Bathing Beauty Pond, and Bear, Cathers, Polaris, and Moose Lakes, which have self-sustaining populations of northern pike, to catch-and-release only, and those lakes are currently not being stocked. Additionally, Z-pit and Kimberly Lakes are no longer stocked but do not have self-sustaining populations of other fish. The status of PFAS contamination in the area, as described by the Alaska Department of Environmental Conservation, will continue to be monitored. In collaboration with the Alaska Department of Environmental Conservation and the Department of Health, a plan was developed to establish an approach and protocols for the collection and analysis of fish tissue from recreational fisheries in the greater Fairbanks and North Pole areas in Interior Alaska. The intent of the sampling was to collect representative samples of fish tissue from portions of waterbodies that are located geographically near known contaminated sites where PFAS and/or aqueous film forming foam (AFFF) releases have occurred or are suspected to have occurred. Fish tissue samples were analyzed for PFAS constituents. The initial results were encouraging in that the samples had very minimal concentrations of these chemicals, but a final report has not been completed. The Department of Health is currently developing health advisories for fish consumption, which will be easy for anglers to use in making their own decisions about consumption. With these advisories, it may be possible to allow harvest and restock some lakes that had been previously stocked. With the pervasiveness of PFAS chemicals and ever-evolving understanding of their health consequences, PFAS will probably become a larger topic of concern for TRMA in the future.

Invasive Species

On May 13, 2024, the True North Pond, a small gravel pit located off of Badger Road, was found to contain a reproducing population of goldfish while it was being evaluated for its potential as a stocked fish pond. The discovery was immediately communicated to the ADF&G invasive species coordinator and other department staff, who became the working group that planned for the eradication of the invasive species. At a planning meeting scheduled for July 30, duties, responsibilities, and dates of execution were outlined. On Monday, September 30, rotenone was applied to the pond, and within a short time, 1 large rainbow trout, 2 large Arctic grayling, and 66 juvenile Arctic grayling mortalities were collected. Goldfish were also collected on Monday, but most were slow to succumb to the treatment. On Tuesday, October 1, additional goldfish were collected for a total of 477 goldfish; however, numerous lethargic individuals remained. By Friday, October 4, only 4 nearly dead individuals were observed. Rotenone was expected to continue working through the winter under the ice. After the ice melted in spring 2025, direct sunlight broke down the remaining rotenone chemical. During follow-up sampling in mid-May and early June, no fish were observed, and the lake was stocked with 1,000 catchable rainbow trout on August 22, 2025.

In 2010, a large infestation of the invasive aquatic plant *Elodea* sp. was discovered in the lower 10 miles of Chena (Badger) Slough (Figure 4). The following year, it was identified in the Chena

River and Chena Lakes, and it has been discovered at 17 more locations over the next 10 years (Table 1). Prior to this discovery, *Elodea* had not been documented in Interior Alaska, although when archival video footage was examined, it was determined that the plant had been in Chena (Badger) Slough for at least 3 years. This plant has the potential to spread throughout the Tanana River drainage and degrade fish habitat by displacing native vegetation.

The Fairbanks Soil and Water Conservation District (FSWCD) is coordinating the substantial multi-agency effort working towards the eradication of *Elodea* in the Tanana Drainage. Efforts include public outreach, surveys, permitting (e.g., completion of environmental impact statements), monitoring, grant/funding proposals, and eradication. Public outreach has included educating pilots, signage at boat launches, and community meetings with residents concerned with the proposed chemical application of Floridone. Continued eradication and identification efforts are ongoing pending funding and permits. Funding remains a significant challenge, and the United States Fish and Wildlife Service (USFWS) has been a major contributor, with ADF&G providing some logistical support. Survey areas have been expanded to include float ponds and remote lakes accessed by float planes, such as Dune Lake. Meanwhile, treatment schedules were initiated to eradicate *Elodea* in the last few years where it has been found.

In contrast with the invasive *Elodea*, department staff often encounter members of the public who believe that northern pike are an invasive species in the Tanana drainage. Northern pike are native to many areas of Alaska, including the Yukon, Kuskokwim, and Tanana River drainages, but they are invasive in Cook Inlet freshwaters (Kenai and Susitna River drainages, Anchorage Bowl lakes). The effort to educate the public about the detrimental effects of the invasive northern pike in southcentral Alaska has inadvertently created some confusion about the native range of northern pike in Alaska.

Public Access through Military Lands

There are many stocked lakes, other fisheries, and trails to fisheries located on military lands in the TRMA. To access military lands, the public must acquire a Recreation Access Permit (RAP) for getting onto the military installations (U.S. Army Ft. Wainwright, Eielson Air Force Base, and Donnelly Training Area [DTA]) and check in, either online or by telephone, before entering an area to ensure training exercises are not occurring. Annually, some stocked lakes in portions of the DTA near Delta Junction are temporarily closed to public access due to large-scale military training exercises.

Sport Fishing Effort, Harvest, and Catch

Opportunities for sport angling are available year-round in the TRMA. During open-water seasons, sport fishing may occur wherever game fish are present, subject to time and/or area closures. Winter effort focuses on stocked lakes, with some effort directed toward lake and river populations of burbot, lake trout, and northern pike.

Angling within the TRMA occurs at numerous rivers, lakes, ponds, and streams. Some of these water bodies are accessible directly from the road system and have some type of boat launch accommodating watercraft appropriate to the size and characteristics of the water body. Overland transportation to off-road waters includes hiking, ORVs, snowmachines, or dog teams. Access to the many remote sites requires light aircraft equipped with tundra tires, floats, or skis.

Effort, harvest, and catch statistics for TRMA sport fisheries have been estimated from responses to the SWHS since 1977 and reported under the headings of the "Tanana River drainages"

(Area U).[1] During 2024, it was estimated that there were 90,367 angler days of effort in the TRMA, whereas the previous 5-year average (2019–2023) was 60,473 angler-days (Table 2). The majority of effort occurred at stocked lakes (46%) and the Chena River (8%). The most popular fish species (Table 3) caught were Arctic grayling (55%) and rainbow trout (28%), and the most popular fish species harvested were rainbow trout (59%) and Arctic grayling (19%). The popularity and importance of stocked lakes to the TRMA are evident by the large amount of effort, catch, and harvest.

ICE HOUSE REGISTRATION

The following section provides information relative to proposal 25. In the Tanana River Management Area (Figures 2 and 3), the registration of ice houses has been required since 1969. The only other management area with the same requirement is the Upper Copper and Upper Susitna Management Area, which enacted the regulation in 2003, and the Matanuska-Susitna Borough has its own registration system for 7 lakes within the borough.

From October 1 through April 30, an ice house not removed from the ice at the end of a day's fishing must be registered with ADF&G, the registration number visible in 12-inch letters from the roof and side of the ice house, and the ice house removed from the ice by April 30. The registration information includes the angler's name and address, location of ice house (water body name), and a list of additional locations where the ice house may be placed. If the ice house is moved to another location, the registrant must notify the department and declare its location, and this must be done during the department's regular business hours prior to their overnight fishing trip. Additionally, Alaska State Wildlife Troopers must also contact the department during business hours to obtain information about any registered ice house.

The original intent of ice house registration was to provide an indication of fishing effort at area lakes and to identify the owner of abandoned ice houses, ideally before they sink during break-up. The original intents of the registration have not been met. The registration of ice houses does not inform fishery management because registering an ice house does not indicate the owner has placed the ice house on the lake, nor that the effort and harvest are enumerated. Abandoned ice houses have not been a problem. During the last 25 years, only 1 unregistered ice house is known to have remained on the ice after April 30, and it subsequently sank. For many years, the registration has been regarded as an unnecessary burden for the department and public because it does not yield useful benefits for fish management, particularly as angler habits have changed over the last 56 years.

In the early 2000s, the first pop-up portable, hub-style, fabric shelters began to be used by anglers, and this style of ice house has become more popular than traditional wooden construction ice houses that are typically sledded on and off the ice. During the early 2000s, a little over 100 ice houses were registered each year, but half as many have been registered annually in recent years, and of those, 33% were registered either to Alaska State Parks or fishing guides. Most registered ice houses are primarily of wooden construction, and it is believed that compliance is low for registration of pop-up ice houses.

[1] Alaska Sport Fishing Survey database [Internet]. 1996–. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited October 1, 2025). Available from: http://www.adfg.alaska.gov/sf/sportfishingsurvey/

SECTION II: FISHERIES

Recreational angling occurs throughout the TRMA in diverse habitats, providing anglers the opportunity to target a wide variety of fish species. This section focuses on the major fisheries in the TRMA that consistently get the highest amount of fishing effort or are most subject to regulatory changes either inseason or through the BOF process.

TANANA RIVER DRAINAGE SALMON

The Tanana River drainage has runs of Chinook, chum (summer and fall), and coho salmon that are important for subsistence, sport, personal use, and commercial fisheries prior to significant salmon declines. Most sport anglers target Chinook and coho salmon, and their harvest has been relatively small (Tables 3 and 4; Appendix B1). Commercial, subsistence, and personal use (Tanana River near Fairbanks) fisheries are managed by the DCF. As with most of the Yukon River drainage, runs of all 3 species have been poor, and sport fishing has been closed by emergency order from 2020–2025, except for the summer run of chum salmon during 2024 and coho salmon during 2025 (Table 5).

Fishery Description

Chinook Salmon

The Tanana River drainage supports the largest spawning stocks of Chinook salmon in the Alaska portion of the Yukon River drainage. Most of the Tanana River Chinook salmon spawn in the Salcha and Chena Rivers, whereas lesser numbers spawn in the Chatanika and Goodpaster Rivers and some tributary streams of the Nenana River. Adult Chinook salmon enter their natal streams starting late June, and the run normally ends in early August.

A Chinook salmon sport fishery has occurred in Tanana River tributaries since before statehood, and the bag and possession limit for Chinook salmon in most of the Tanana River drainage has remained unchanged since the early 1960s: 1 fish 20 in (~510 mm) or longer. Several areas closed to salmon fishing include the Delta and Tok Rivers and the Upper Chatanika, Chena, Salcha, and Goodpaster Rivers. In the Lower Goodpaster River, only catch-and-release fishing is allowed. Most of the Chinook salmon fishing occurs in the Chena and Salcha Rivers. Although Chinook salmon sport fisheries in the TRMA are relatively small compared with fisheries in Southcentral and Southeast Alaska, they have been very popular because they provide one of the few opportunities to catch large fish near Fairbanks; however, Chinook salmon sport fisheries in the TRMA have been closed since 2019 (Table 5). Although some fish may be harvested in the sport fishery, most fish are released because of their lower quality for consumption (Tables 4 and 6).

Chinook salmon escapements have been annually assessed for the Chena River since 1986 and for the Salcha River since 1987 using either mark–recapture experiments, counting towers, or sonar (Table 7; Barton 1987, 1988; Barton and Conrad 1989; Skaugstad 1988–1994; Evenson 1991–1993, 1995, 1996; Evenson and Stuby 1997; Stuby and Evenson 1998; Stuby 1999–2001; Doxey 2004; Doxey et al. 2005; Brase and Doxey 2006; Brase 2012; Savereide 2012a–b, 2014; Stuby and Tyers 2016). Currently, both sonar and counting towers are used.

Counting conditions can be highly variable depending on water level, and sonar technology has been implemented as a secondary means of enumeration during turbid and high-water conditions when visual counts are unreliable (Savereide 2012a-b; Stuby and Tyers 2016). In 2024, the Chena River was high and turbid throughout much of the Chinook salmon run, resulting in an incomplete count. Although sonar can provide data while the water is turbid, it cannot be used effectively at the Chena River counting site when the water is too high, which was the condition of the Chena River during much of the 2024 counting period. During 2025, river conditions remained good for visual counts most of the season. The Chena tower was unable to conduct visual counts for 9 days, but sonar replaced visual counts for 4 days. The Salcha River tower was unable to conduct visual counts for a little over 3 days.

For inseason management when visual counts are not possible, sonar imagery is used to apportion Chinook and chum salmon using a 650 mm length criterion; all chum salmon are assumed to be smaller. Smaller Chinook salmon are not counted, but their contribution is minor and does not affect inseason management actions in the sport fishery. Moreover, their exclusion results in a more conservative approach for meeting the escapement goal. Final estimates of Chinook salmon are produced using a mixture model postseason (Huang 2012; Stuby and Tyers 2016). Counting operations terminate in mid-August; as such, final chum salmon escapement estimates are considered a minimum because the chum salmon migration continues into September.

Historically, the Chena River Chinook salmon sport fishery was managed under a management plan with an escapement goal and a guideline harvest allocation for the sport fishery. A guideline annual sport harvest objective of 300–600 Chinook salmon in the Chena River was adopted by the BOF in 1990. An aerial survey escapement index of 1,700 fish was set by the DCF in 1992. In 1993, Division of Sport Fish staff expanded this aerial survey escapement index into an actual escapement goal of 6,300 fish, as measured at the counting tower. This goal was calculated based on averages of available escapement data. Inseason management for the guideline harvest objectives was impractical because there was no mechanism for day-to-day enumeration of the harvest, and the harvest objectives were repealed in 2001.

In 2000, the department formed an escapement goal (EG) committee to evaluate and calculate EGs for the Chena and Salcha River Chinook salmon and for some Yukon River drainage chum salmon stocks. The EG process is designed to set escapement ranges that maximize potential yield and is periodically updated as more data is collected and modelling efforts evolve. The biological escapement goal (BEG) range, which was established in 2001, was 2,800–5,700 Chinook salmon in the Chena River but was adjusted to 3,300–5,700 during the January 2023 BOF meeting. For the Salcha River, the BEG is 3,300–6,500. There are no escapement goals for chum salmon in the Chena and Salcha Rivers.

Chum Salmon

Summer chum salmon are primarily available to anglers in July and August and are targeted or caught incidentally while fishing for Chinook salmon. Chum salmon are far more abundant than Chinook salmon and are subject to a more liberal bag and possession limit (3 fish per day vs 1 fish per day for Chinook salmon); however, chum salmon sport fishing has been closed in the TRMA since 2020 (except for the summer run of 2024; Table 5). Harvest and catch are typically less than half that of Chinook salmon (Tables 4 and 6). In 2000, the department formed an escapement goal (EG) committee to evaluate and calculate EGs for the Chena and Salcha River Chinook salmon and for some Yukon River drainage chum salmon stocks; however, there are no escapement goals for chum salmon in the Tanana River drainage.

Coho Salmon

Coho salmon spawn in small spring-fed tributaries on the south side of the Tanana River drainage and in the mainstem Tanana River. These waters, particularly near Delta Junction, provide critical habitat for the largest known aggregations of coho salmon in the Yukon River drainage. Because these spring-fed tributaries do not freeze and coho salmon spawn into late fall, these fish provide the last open-water fishing opportunities for salmon in the region. Several such spring-fed systems exist throughout the upper portion of the Tanana River drainage, the largest of which is the Delta Clearwater River (DCR). The Nenana River drainage is believed to support the second-largest coho salmon spawning population in the Tanana River drainage after the DCR and the DCF have regularly surveyed the river by boat and aerial survey since 1993 (Table 8).

The DCR supports the largest documented spawning stock of coho salmon in the Yukon River drainage, with escapements of up to 102,800 fish; however, average escapements have been declining in recent years from an average escapement of 8,173 fish/year during 2015–2019 to 1,693 fish/year during 2020–2024 (Table 8). The DCR is about 20 mi (32 km) in length, is road accessible, and supports the largest recreational fishery for coho salmon in the Tanana River drainage. Coho salmon are the last of the salmon species to enter the Yukon River and arrive in the DCR starting in mid-September. The peak of the run is in late October; however, property owners living along the river have reported coho salmon spawning as late as January.

Annual escapement index counts of DCR coho salmon have been conducted by boat survey since 1972. Counts are conducted from an elevated platform on a riverboat during the peak of the coho salmon spawning period (generally late October or early November). The index section encompasses most of the spawning area of the run (>95%) and extends 18 river mi (29 km) upstream from its confluence with the Tanana River.

Fishery Management Objectives

The Tanana River, as a tributary of the Yukon River, has several management plans, an international agreement, and a policy that affect the management of salmon resources within the drainage. Salmon resources within the State of Alaska are governed by the *Policy for the Management of Sustainable Salmon Fisheries* (5 AAC 39.222). The goal of this policy is to ensure conservation of salmon in the freshwater and marine habitat, protection of customary and traditional subsistence uses and other uses, and the sustaining of economic health of Alaska's fishing communities. In addition, because Chinook, fall chum, and coho salmon also spawn across the border into Canada, these species are also managed through the Alaska/Canada *Yukon River Salmon Agreement*, which represents an international commitment to the restoration, conservation, and management of Yukon River salmon for Canadian-origin Chinook and chum salmon. Salmon escapements at the U.S./Canada border are estimated by a sonar near Eagle, Alaska. Approximately 40–50% of Yukon River Chinook salmon spawn in Canada (Eiler et al. 2014). Per this treaty, an Interim Management Escapement Goal (IMEG) has been established to manage for 42,500–55,000 Chinook salmon to cross the border into Canada; however, 2018 was the last year more than 42,500 fish reached the border. Due to the persistent decline of Chinook salmon and inability to meet the IMEG, Fisheries and Oceans Canada and ADF&G agreed on April 1, 2024, to suspend any directed fishing for Chinook salmon in the mainstem Yukon River and Canadian tributaries for one full life cycle (7 years). The IMEG for fall chum salmon is 70,000–104,000. Currently, no IMEG exists for coho salmon, and the relative proportion of Canadian-bound fish is poorly understood.

Chinook salmon are managed within the Alaska portion of the Yukon River drainage by the *Yukon River King Salmon Management Plan* (5 AAC 05.360). This plan provides guidelines to manage Yukon River Chinook salmon for sustained yield and guides all management decisions for subsistence, commercial, and sport fish uses. The sport fishery in the Tanana River drainage is managed to coordinate with the commercial and subsistence fisheries. Restrictions to sport fishing for Chinook salmon for conservation purposes correspond to abundance levels that are based on inseason daily counts from the Pilot Station sonar and are designed to achieve the IMEG across the Canadian border.

Summer and fall chum salmon are managed within the Yukon River drainage with the *Yukon River Summer Chum Salmon Management Plan* (5 AAC 05.362) and *Yukon River Fall Chum Salmon Guideline Harvest Ranges* (5 AAC 05.365). Inseason run size projections for fall chum salmon are based on the historical run size estimates of summer chum salmon, which is 1/3 of the run strength of the summer chum salmon (Estensen et al. 2021).

Coho salmon usually enter the Yukon River in mid-to-late July and are primarily targeted in the fall. Yukon River drainage coho salmon are managed with the *Yukon River Coho Salmon Management Plan* (5 AAC 05.369). The primary goal of this plan is to provide for the management of directed commercial coho salmon fishing in the Yukon River.

In the Tanana River drainage, the *Tanana River Salmon Management Plan* (5 AAC 05.367) provides additional management direction for salmon resources. The *Chena and Salcha River King Salmon Sport Harvest Management Plan* (5 AAC 74.060) mandates that all the Tanana River fisheries (commercial, subsistence, personal use, and sport) for Chinook salmon be managed in a manner such that the Chinook salmon biological escapement goals (BEG) are achieved in the Chena River (BEG = 3,300–5,700 fish) and the Salcha River (BEG = 3,300–6,500 fish). The DCR was the only river in the entire Yukon River drainage for which there was a coho salmon escapement goal. A sustainable escapement goal (SEG) for DCR coho salmon (5,200–17,000 fish) was adopted by the BOF in 2004, which replaced the previous minimum threshold of 9,000 fish within the index area. During the January 2023 BOF meeting, the DCR SEG was discontinued because it was an unreliable index of drainagewide Yukon River escapement and has not been used to make drainagewide management decisions. Due to a lack of a long time series of escapement data, there are no escapement goals associated with any other TRMA salmon populations. When an EO is implemented that restricts fishing regulations for a salmon species, it typically applies to all flowing waters in the Tanana drainage.

Escapement goals are evaluated on a 3-year cycle in synchrony with the BOF meeting cycle for the Arctic–Yukon–Kuskokwim (AYK) Region. Since 2001, there have been only 3 actions taken by the BOF with regard to the Tanana River salmon fisheries. During the 2019 BOF meeting, the Toklat River drainage was opened to sport fishing year-round for salmon and non-salmon species, with the exception of a closure of a 3-mile corridor of spawning habitat centered near the Kobi-McGrath trail. During the 2023 BOF meeting, the Chena River BEG was adjusted, and the DCR SEG was discontinued.

Recent Fishery Performance

Chinook Salmon

The preseason outlook for the 2024 Yukon River drainage Chinook salmon was a run size of 45,000 to 68,000 fish, and the Chinook salmon fisheries were closed prior to the Yukon River breakup. The TRMA sport fishery was closed by emergency order on 28 March 2024 to protect the spawning population and to align with the subsistence fishing closure. The Chinook salmon run in 2024 showed some improvement from 2022 and 2023, which were the lowest on record. During 2024, 56,159 Chinook salmon were estimated drainagewide (Appendix B2). The Chena and Salcha Rivers had extremely low escapements, but counts were incomplete due to interruptions to the visual counts caused by high, murky water and temporary removal of the sonars (Table 7). The Chena River had an estimated escapement of 397 (SE = 1,309) Chinook salmon, which was less than the BEG of 3,300–5,700 for the sixth year in a row. The Salcha River had an estimated escapement of 1,525 (SE = 331) Chinook salmon that was less than the BEG of 3,300–6,500 for the fourth year in a row. Due to the fishery closure, the TRMA harvest of Chinook salmon was estimated to be 0, and catch was estimated to be 0 (Tables 4 and 6).

The preseason outlook for 2025 was for a run size of 58,000 to 88,000 Chinook salmon for the Yukon River drainage. Because of the poor projected run size, an emergency order was issued to close the sport fishery in TRMA on March 31, 2025. Preliminary counts of Chinook salmon that were estimated by the Pilot Station sonar project were 60,407 (Stuby 2025). The estimate was within preseason forecasts, but it remains historically low for this enumeration project (JTC 2025). Although the Chena and Salcha Rivers had extremely low escapements, they exceeded several previous years' estimates (Table 7). The Chena River had a preliminary estimated escapement of 1,218 Chinook salmon that was less than the BEG for the seventh year in a row. The Salcha River had a preliminary estimated escapement of 1,739 Chinook salmon that was less than the BEG for the fifth year in a row.

Chum salmon

The drainagewide summer chum salmon outlook for 2024 was for a run size of approximately 550,000 to 1,800,000 fish, which would be within the drainagewide escapement goal of 500,000–1,200,000. As a result, there was no preseason closure of the subsistence and sport fisheries for summer chum salmon. The drainagewide summer chum salmon abundance estimate was 807,980 (Appendix B2), which met the drainagewide escapement goal. The preseason forecast for fall chum salmon was for a run of 263,000 to 474,000 fish, which could potentially not meet the escapement goal of 300,000 to 600,000 fish. Normally, fall chum salmon are 1/3 the run strength of summer chum salmon, which would have meant an inseason run of fall chum salmon below the lower end of the escapement goal of 300,000. It became apparent by mid-August that the fall chum salmon run would not meet this goal, and the sport fisheries were closed for fall chum salmon on 16 August 2024. Using genetic mixed stock analysis, it was determined that the early portion of the fall chum salmon run was summer chum salmon, and the preliminary estimate past the Pilot Station sonar was 165,000 (Appendix B2; JTC 2025). Due to the fishery closure, the TRMA harvest of chum salmon was estimated to be 0, and catch was estimated to be 37 fish (Tables 4 and 6).

The drainagewide summer chum salmon outlook for 2025 was for a run size of approximately 550,000 to 1,800,000 fish, which would be within the drainagewide escapement goal of 500,000–1,200,000. However, due to the historically low parent year returns in 2021, the subsistence fishery would open only if confidence was high that the summer chum salmon run was projected to meet the drainagewide escapement goal. The preseason forecast for fall chum salmon was for a run of 114,000 to 322,000 fish, which would potentially not meet the escapement goal of 300,000 to 600,000 fish. The summer chum count estimate past the Pilot Station sonar was 347,529 (~414,488 after preliminary genetic apportionment), which was well below the drainagewide escapement goal (Stuby 2025). As a result of low numbers counted by the Pilot Station sonar, the sport fishery for chum salmon closed on 9 July 2025. Normally, fall chum salmon are 1/3 the run strength of summer chum salmon, which would have meant an inseason run of fall chum salmon below the lower end of the escapement goal of 300,000. The preliminary count past the Pilot Station sonar was 343,426, which would have met the escapement goal; however, using genetic mixed stock analysis, it was determined that the early portion of the fall chum salmon run was summer chum salmon, and after the total run is estimated through run reconstruction techniques, it is anticipated that this number will be below 300,000.

Coho salmon

In 2024, the coho salmon run was forecasted to be below average. The total incomplete drainagewide estimate was 89,916, which was one of the lowest on record (Appendix B2). Much of the estimate comes from the Pilot Station sonar, which ceased operations on 7 September 2024. Because the inseason counts past the Pilot Station sonar were trending below the historical daily medians, the sport fisheries for coho salmon were closed on 22 August 2024. Also, when it became apparent that the coho salmon run was very weak, retention of subsistence-caught coho salmon was no longer allowed. Due to the closure of the sport fishery, 0 coho salmon were harvested and 0 were caught and released in 2024 (Tables 4 and 6).

The 2025 coho salmon run was expected to be below average, given the parent year of 2021, which was the lowest on record. However, the incomplete count of 106,153 past the Pilot Station sonar was larger than anticipated and the largest since 2020 (Stuby 2025). Similar to previous years, the Pilot Station sonar ceased operations on 7 September 2025 before the completion of the coho salmon run. Because the coho salmon run was large enough to allow for a subsistence harvest opportunity, the sport fishery did not close in 2025.

Research and Management Activities

The TRMA has 3 long-term salmon enumeration projects: the Chena River (Chinook and chum salmon), the Salcha River (Chinook and chum salmon), and the Delta Clearwater River (coho salmon). The enumeration project in the Chena River at the Moose Creek Dam has evolved and currently entails a counting tower paired with a sonar positioned on each bank. This dual system, combined with the refined mixture model to better apportion Chinook and chum salmon (Stuby and Tyers 2016), is highly accurate and robust to the dynamic counting conditions and high water that occurs in the Chena River. Similarly, an enumeration project in the Salcha River just upstream of the Richardson Highway Bridge also entails a counting tower paired with a sonar, uses the refined mixture model to better apportion Chinook and chum salmon, and ensures counts under most water conditions in the Salcha River. In 2020, funding was not available to operate the Salcha River enumeration project, and an estimate of escapement was not produced for 2020. Although funding was secured to operate the Salcha River counting tower since 2020, ensuring consistent funding annually for the 2 largest spawning stocks in the Yukon River drainage remains a challenge, despite grave concerns for record-low returns of all Chinook, chum, and coho salmon in the Yukon River drainage.

In the Delta Clearwater River, a visual count from a boat through an 18-mile stretch of river was used to determine if the run met the SEG of 5,200–17,000 coho salmon. Although the DCR no longer has a formal SEG as of 2023, ADF&G DSF continues to monitor DCR coho salmon escapement between mid-September and early October to determine whether any inseason management action is necessary for the DCR. The DCR escapement count also remains an important component of the Yukon River run reconstruction each year, and it has a long historical dataset that is worthwhile to maintain. Yukon River sonar counts and catch rates from fish wheels in the Tanana River are used as preliminary indices of DCR coho salmon run strength. In general, these indices are poor predictors, and if the return to the DCR appears marginal, then early-season boat surveys in the DCR are relied on more heavily. Despite increased assessment effort (i.e., multiple boat surveys) and restrictions to the fishery, the lower bound of the former SEG has not been reached for the past 7 years (2018–2024, Table 8).

ADF&G Alaska Freshwater Fish Inventory (AFFI) conducted surveys on fish species presence/absence in the lower (2022), middle (2021), and upper (2020) TRMA streams. Fish were primarily sampled with electroshocking equipment. After completing the field work, the data on anadromous fish (primarily salmon) were used to nominate waters to the State of Alaska's Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes (Anadromous Waters Catalog, AWC), to update fish life stage information for waters already listed in the AWC, and/or to list non-anadromous resident species for the AFFI online mapping catalog. Habitat characteristics and water quality of each stream sampled were also noted.

The ADF&G DCF, USFWS, and the Yukon Delta Fisheries Development Association have conducted a cooperative drainagewide radiotelemetry project on coho salmon in 2022 to better understand movements and run timing, and to document spawning locations. Three hundred fifty radio transmitters were deployed in the Lower Yukon River, and results are pending. Because of recent poor returns of Chinook and chum salmon, coho salmon have become more important as a subsistence resource, so locating and documenting spawning locations and later nominating them to the AWC will be important for future protection of habitats in critical spawning areas.

Research projects are being planned and have been implemented to try to better understand the discrepancy between the Canadian-origin salmon counted by the Pilot Station sonar and the much lower-than-expected passage at the border. Multiple agencies, including ADF&G DCF, collected tissue samples from Chinook salmon in different locations from the lower to upper portions of the Yukon River to test for the presence of Ichthyophonus to see if this disease may be a trigger for the lower-than-anticipated number of Chinook salmon reaching Canada in recent years. Additionally, in 2023, ADF&G DCF implemented a radiotelemetry project on Chinook salmon as an additional tool to detect en route mortality with the goal of systematically deploying 500 esophageal radio transmitters into Chinook salmon in the Lower Yukon River and tracking these fish throughout the drainage, including spawning streams in Canada. During 2023, <50 radio transmitters were deployed due to high water. Conditions improved in 2024, and 182 radio transmitters were deployed, of which 94 Chinook salmon were tracked into Canada. This project was slated to operate for one more season in 2025; however, it was cancelled due to budgetary issues.

Multiple agencies have been deploying temperature data loggers in different locations of the Yukon River drainage, and a central database has been created. The water temperatures during 2020–2025 were not as high as recorded in 2019, where temperatures above 72°F (22°C) were recorded during 14–19 July 2019 in the Lower Yukon River near Emmonak (Stuby 2021). Migrating adult Pacific salmon are sensitive to warm water (>18ºC) with a range of consequences from decreased spawning success to early mortality (von Biela et al. 2020). Water temperatures above 70°F for prolonged periods can cause salmon mortality (McCullough et al. 2001). Heat stress was a factor during 2019 when thousands of summer chum were documented to have died due to heat stress, with egg skeins still intact. In contrast, there were no reports of premature deaths among Chinook salmon, just the disappearance of a large proportion of Canadian-origin fish.

ARCTIC GRAYLING

Chena River

Fishery Description

The following section provides information relevant to Proposal 24. The Chena River Arctic grayling population offers high-quality opportunities to anglers because of its ease of access and high proportion of large fish. There is access for nearly the entire length of the river from its outlet to mile 57 (91 km) of Chena Hot Springs Road as it flows through Fairbanks, North Pole, Eielson Air Force Base, Fort Wainwright Army Base, and the Chena River State Recreation Area. The Chena River State Recreation Area is a popular boating, camping, and fishing destination for residents and nonresident visitors traveling along the road system.

The Chena River Arctic grayling fishery has been popular since before statehood and has increased in popularity as Fairbanks and the surrounding area have been developed and access has improved. The fishery occurs almost entirely during open water from April through October. Anglers target Arctic grayling throughout the road- and boat-accessible sections of the river and its tributaries, and some anglers fly into the headwaters to begin float trips for fishing. Badger Slough (historically referred to as Chena Slough) is a particularly important tributary because it provides significant spawning and rearing habitat, as well as easily accessible fishing locations (Figure 4).

The Chena River has historically supported the largest Arctic grayling fishery in North America. The average annual fishing effort (for all species) for the 10-year period (1977–1986) was about 30,500 angler-days, with most of this effort thought to be targeting Arctic grayling (Brase 2009a). Between 1986 and 1987, estimates of abundance declined (Clark and Ridder 1987, 1988), as did average harvest from 28,440 fish/year (1977–1984) to 7,051 fish/year (1985–1986). In 1988, due to evidence of a decline in the Arctic grayling population, the daily bag and possession limit was reduced from 10 per day to 5 per day, fishing was restricted to catch-and-release during the spring spawning period (April 1 through the first Saturday in June), and the use of bait was prohibited. Although harvest decreased for 2 years after the imposition of these restrictions, and abundance estimates increased after 1989, both harvest and effort increased substantially in 1989 (Brase 2009a), prompting the lowering of the bag limit from 5 per day to 2 per day. By 1990, annual estimates of abundance suggested that these new regulations were not sufficient to reduce harvest nor effective in increasing the population, and in 1991, the fishery was restricted by EO to catch-and-release only (Brase 2009a). The BOF made this a permanent regulatory change in 1994. Angler effort remained high after catch-and-release regulations were adopted, averaging 36,073 angler days (1995–1999), but effort has decreased substantially over time to an average of 6,618 angler days (2019–2023) and 7,533 angler days in 2024 (Table 2).

In 1993 and 1994, the department initiated a program of enhancement by stocking hatchery- and pond-reared Arctic grayling spawned from the Chena River stock. Approximately 61,000 catchable fish were stocked into the Chena River. Survival of these fish was estimated as part of the ongoing stock assessment efforts during 1993–1995 and determined to be too low to justify the cost of the enhancement effort. This program was discontinued after 1994 (Clark 1994–1996).

Once the fishery became catch-and-release only, the estimated summer abundance of Arctic grayling ≥150 mm fork length (FL) within the index area ranged from a low of 26,756 (SE = 3,286) fish in 1991 to a high of 45,145 (SE = 3,852) fish in 1995 (Ridder 1999). The last summer estimate was conducted in July 2005, of which 27,698 (SE = 3,661) Arctic grayling were ≥150 mm FL (Wuttig and Stroka 2007), and 7,393 were ≥270 mm FL. An estimate of spring spawner abundance in 1998 was 23,335 (SE = 3,082) Arctic grayling ≥150 mm FL, of which 18,861 (SE = 2,491) were ≥270 mm FL (Ridder 2000). Spring spawner abundance was estimated once again in 2021, and there was an estimated 24,150 Arctic grayling ≥270 mm FL (SE = 1,386; Gryska 2025).

Fishery Management Objectives

In 2004, the BOF adopted the *Tanana River Area Wild Arctic Grayling Management Plan* (5 AAC 74.055) that directed ADF&G to manage Arctic grayling fisheries for long-term sustained yield while providing and/or maintaining fishery qualities that anglers desire. The *Tanana River Area Wild Arctic Grayling Management Plan* has 3 management approaches: regional, conservative, and special. Each of these approaches has different means of achieving the goals of sustained yield (reduce bag and possession limits, reduce fishing season, only allow catch-and-release, modify other methods and means). The Chena River is in the special management category.

In 2004, ADF&G also drafted an "in-house" *Fishery Management Plan for the Chena River Arctic Grayling Sport Fishery*[2] to provide guidance. This drafted management plan was based on stock assessments conducted during the summer in the lower 149 km of the river, when the area is dominated by smaller, younger Arctic grayling. The objectives are to:

1. Maintain a minimum abundance of 8,500 Arctic grayling ≥12 in total length (TL) in the upper river (river mile [RM] 45–90, or river km 72–144); and
2. Maintain a minimum abundance of 2,200 Arctic grayling ≥12 in TL in the lower river (downriver from RM 45 or ~72 km at the Moose Creek Dam).

These objectives have been deemed insufficient to monitor the population because most adult Arctic grayling ≥12 in TL (>270 mm FL) are upstream of the index area. More larger fish occupy the index area during spring than during summer (Ridder 2000), because larger, adult fish from upriver seasonally migrate into the index area for spawning (Ridder 1998a). An assessment of Arctic grayling in the study area during the spawning period serves as a better index for the status of the greater population, as was recognized for the nearby Goodpaster River, which has a management plan based on spring spawner abundance. A new management plan is being developed for the Chena River Arctic grayling that will be based on abundance objectives for the spring spawning population.

Recent Fishery Performance

Much like salmon, catch rates of Arctic grayling are highly dependent on river conditions: lower in years dominated by high, turbid flow, and higher in years dominated by lower flow and clear water. Lower flow allows Arctic grayling to easily see a lure or a fly. For example, in years with lower water levels, Arctic grayling catches were higher than average, and in years with higher water throughout the summer season, Arctic grayling catches were lower than average. The 2024 catch of Arctic grayling in the Chena River was 9,371 fish, less than the previous 5-year average (15,249 fish; Table 9).

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2 Doxey, M., and A. L. J. Brase. *Unpublished*. Fishery management plan for the Chena River Arctic grayling sport fishery. Alaska Department of Fish and Game, Division of Sport Fish, Anchorage.

Prior to 2007, the SWHS divided the Chena River into the “upper river” and “lower river” at the South Fork (RM 77 or ~124 km). Since 2007, the Chena River has been divided into the upper and lower sections at the Moose Creek Dam (RM 46 or ~73 km). The SWHS provides separate estimates of effort, catch, and harvest of all species for each section. Species distributions and regulations that close salmon fishing and prohibit the use of bait above the dam suggest that almost all the effort in the SWHS-designated upper river is directed toward Arctic grayling. The lower river supports a multi-species fishery that includes Chinook salmon, burbot, and northern pike. Although most of the effort in the Chena River is probably directed toward Arctic grayling, effort is not apportioned between species, and the multi-species fishery confounds attempts to describe the total effort targeting Arctic grayling within the Chena River sport fishery.

Research and Management Activities

The first stock assessment since 2005 was conducted during spring 2021. The 2021 spring spawner (Arctic grayling ≥270 mm FL) abundance estimate in the index area was 24,150 (SE = 1,386; Gryska 2025). A radio telemetry project during 2022 described the summer distribution of Arctic grayling that spawn in the index area (Gutierrez et al. 2024). For the study, 149 adult Arctic grayling ≥270 mm FL were radiotagged during late April and early May 2022 in Badger Slough and the Chena River index area. During the next 4 months, periodic surveys were used to locate the radiotagged fish. The summer distributions of radiotagged Arctic grayling through time (i.e., by survey) were described relative to both the Moose Creek Dam and the historic 149 km Chena River index area. Fish exhibited upstream movement post-spawning and vacated road-accessible areas around Fairbanks by late June. A majority of radiotagged fish were upstream of the dam or outside of the index area by early June, and by mid-July, the timeframe in which previous summer population abundance was estimated, most radiotagged fish were upstream of the dam or outside of the index area. During 2024, the Cripple Creek Arctic grayling spawning population was investigated using radiotelemetry to describe the summer distribution of this Chena River subpopulation. A total of 20 Arctic grayling were captured and radiotagged at the mouth of Cripple Creek in early May. The movement and distributions of the radiotagged fish were documented from May through September using 7 aerial surveys and 3 ground-based tracking stations. Final results will be forthcoming.

During the 2019 AYK BOF meeting, a proposal submitted by the Fairbanks Advisory Committee (FAC) proposed a harvest of Arctic grayling less than 12 inches during June 1–July 15 in the Chena River, from 500 yards downstream of the Nordale Road Bridge to the Chena River’s confluence with the Tanana River, and in Piledriver Slough (Figure 3). Due to a lack of contemporary data and in order to conserve the Chena River/Piledriver Slough Arctic grayling population, the BOF and department agreed to create a youth-only fishery. This youth-only fishery allowed for the retention of 1 Arctic grayling of any size downstream of the Moose Creek Dam for 4 consecutive weekends beginning the third Saturday in June (Figure 4).

For the 2023 AYK BOF meeting in January 2023, the FAC submitted a proposal to allow harvest of one Arctic grayling of any size during June 1–March 31 in the Chena River downstream of Moose Creek Dam. Based on the recent research (described above), the Department concluded that this fishery would be sustainable. During deliberations, the BOF accepted the proposal with an amendment retaining the youth-only fishery that occurs over 4 consecutive weekends. The youth-only Arctic grayling fishery was retained in 2023 because it was deemed an opportunity to encourage more youth participation in fishing by both the department and the board of fisheries.

For the 2025 AYK BOF meeting in November 2025, the FAC submitted a proposal to eliminate the youth-only fishery for Arctic grayling that occurs during 4 weekends (8 days) in June and July. The FAC submitted the proposal because local anglers had concerns that the youth-only fishery excludes parents from fishing for Arctic grayling with their children and that the participation rate was low. To evaluate participation in the youth-only fishery, a survey of anglers was conducted in the lower 46 miles of the Chena River and Badger Slough during each youth-only weekend in the summer of 2025. It was found that the Lower Chena River was very lightly fished, and most anglers who were targeting species other than Arctic grayling were older than age 15. Across all 8 surveys, only 1 youth angler was specifically fishing for Arctic grayling, and no more than 2 anglers under 16 years of age were observed on any given day.

Shaw Creek

Fishery Description

The following section provides information relative to Proposal 26. Shaw Creek is a tannic-stained, bog-fed stream, 112 km in length and located 32 km northwest of Delta Junction (Figures 2 and 5). By midwinter, the creek freezes solid in shallow areas, and upriver pools become anoxic. Although some Arctic grayling reside in the Shaw Creek drainage during the summer, most Arctic grayling utilize Shaw Creek as a spawning habitat. After spawning, these fish depart Shaw Creek and migrate through the Tanana River to at least six tributary streams with recreational fisheries within 72 km of the Shaw Creek mouth, ranging from the Little Salcha River downstream to the Delta Clearwater River upstream (Figure 3, Ridder 1991; Ridder 1998b; Gryska 2020). Based on limited tag recapture-to-catch ratios, Ridder (1985) estimated that fish from Shaw Creek drainage accounted for 30 to 50% of grayling abundance in the Richardson Clearwater River.

In the past, a recreational fishery at Shaw Creek occurred in April over a span of 4 to 11 days. This brief and concentrated fishery targeted pre-spawning adult Arctic grayling congregating in the Tanana River, adjacent to the mouth of Shaw Creek, awaiting ice breakup. Creel surveys conducted from 1981 through 1986 found that harvests consisted of greater than 80% mature, pre-spawning grayling and ranged from 4,343 fish in 1981 to 270 fish in 1986 (Ridder 1994). Annual harvests of grayling for the entire fishing season ranged from 2,584 fish in 1985 to 111 fish in 1992 (Ridder 1994).

This seasonally popular fishery was closed twice by Emergency Order in 1981 and 1985 due to concerns about overharvest. Studies in the mid-1980s (Ridder 1989) found that significant declines in Arctic grayling abundance and harvest rates had occurred in these and other waters of the Tanana River drainage. In response, regulation changes restricting the harvest of Arctic grayling were made in 1987 for Shaw Creek and many other waters of the Tanana River drainage. For the Shaw Creek and adjacent Tanana River, a suite of regulations was tailored for the unique fishery area (Figure 5). The regulations for the Shaw Creek drainage and in the Tanana River within a 2-mile radius of its confluence with Shaw Creek allow sport fishing to be open year-round for Arctic grayling, except from April 1 through May 31, when fishing is restricted to catch-and-release. In the Shaw Creek drainage upstream of the Richardson Highway bridge, only 1 unbaited single hook, artificial lure may be used. In Shaw Creek downstream of the Richardson Highway bridge and in the Tanana River and its tributaries within a 2-mile radius of Shaw Creek, bait may be used only on single hooks with a gap size larger than ¾ of an inch.

Fishery Management Objectives

In 2004, the BOF adopted the *Tanana River Area Wild Arctic Grayling Management Plan* (5 AAC 74.055), which directed ADF&G to manage Arctic grayling fisheries for long-term sustained yield while providing and/or maintaining fishery qualities that anglers desire. The *Tanana River Area Wild Arctic Grayling Management Plan* has 3 management approaches: regional, conservative, and special. Each of these approaches has different means of achieving the goals of sustained yield (reduce bag and possession limits, reduce fishing season, only allow catch-and-release, modify other methods and means). Shaw Creek and the adjacent Tanana River were in the regional management category, which allows some regulatory restrictions: namely, bait, hook, and seasonal closures, which have been applied to this fishery.

Recent Fishery Performance

The Shaw Creek Arctic grayling fishery has changed significantly since the 1980s. Public access has diminished because the Tanana River channel has diverted away from the highway, and the Richardson Highway was reconstructed in such a way that access is more difficult than it was during the 1980s. Angler effort has not been estimated for over 25 years because there were too few respondents (<12) to the SWHS. During the last 10 years, the survey has averaged only 2 respondents, and this suggests that light fishing effort occurs at Shaw Creek. This trend is consistent with all Arctic grayling fisheries in the Tanana Management Area, where effort has been trending down, and more notably, anglers harvest far fewer Arctic grayling compared to the 1980s and 1990s. After 38 years of not allowing spring harvests, the unique fishery had become nonexistent.

Research and Management Activities

Due to reductions in fishing effort and harvest at Shaw Creek, there has not been any directed research on the fishery since 1988. There are no concerns for the Arctic grayling population and fishery, and no further research work is recommended. The current regulations do not serve their original conservation aims due to changes in the river, access, and angler habits, and are unnecessarily restrictive given the very low levels of fishing effort, harvest, and catch. It is recommended that the current regulations revert to the general regulations for the Tanana River Area, which will allow sustainable harvests, simplify regulations, and provide additional fishing opportunities.

NORTHERN PIKE

Harding Lake

Fishery Description

The following section provides information relevant to Proposals 21 and 22. Harding Lake is located about 45 road miles southeast of Fairbanks along the Richardson Highway and is the largest roadside lake north of the Alaska Range (Figure 3). The nearly oval, 887-hectare lake has a maximum diameter of about 2.4 km, an average depth of 52 feet, and a maximum depth of 141 feet. The lake is oligotrophic and dimictic (LaPerriere 2003), and it is located in a small, closed basin that intermittently includes the small catchment of Rogge Creek. Due to its small watershed and lack of an outlet stream, the water level is variable and dependent upon the annual differences in precipitation and evaporation. With decadal wet and dry periods, the water level may vary by several feet for long periods, and there is evidence these conditions have occurred over the last 15,700 years (Finkenbinder et al. 2014).

For nearly 100 years, Harding Lake has been used for all types of aquatic recreational activity, including boating, swimming, water skiing, waterfowl hunting, and sport fishing. Fish species indigenous to Harding Lake include northern pike, burbot, least cisco, and slimy sculpin, and self-sustaining populations of Arctic char and lake trout have been successfully stocked. In addition to successful stockings of lake trout and Arctic char, significant numbers (200,000 to 2,000,000) of fry and fingerling Arctic grayling, sheefish, sockeye salmon, coho salmon, and rainbow trout were stocked nearly annually between 1967 and 1992 (Doxey 1991; Skaugstad et al. 1994), and although these proved largely unsuccessful, they likely had a positive impact on northern pike productivity because of increased prey availability. Historically, this lake had provided the only major roadside sport fishery for northern pike within the Tanana River Drainage. Estimates of fishing effort for all species exceeded 5,000 angler-days during the 1990s, and a majority of this effort was directed at northern pike. In 2000, the northern pike fishery was closed due to declining abundance that was attributed to falling water levels and significant losses of vegetated littoral areas needed for spawning and rearing (Doxey 2003).

In summary, the decline in northern pike abundance in Harding Lake was primarily attributed to a substantial decrease in the lake surface elevation that resulted in the loss of rearing habitat (i.e., shallow vegetated littoral areas; Scanlon and Roach 2000, Doxey 2003, Wuttig 2015). The production of northern pike in the lake is strongly influenced by the availability of emergent vegetation and flooded grasses in shallow (≤3 feet) water (Laine 1989), particularly along the shallow flats of the northern and northeastern shores. The availability of this type of habitat is related to the lake water levels that have fluctuated over time, given the prevailing climate (e.g., several drought years in a row). During the 1990s, drought conditions lowered the lake water level, and the loss of high-quality spawning and rearing areas is assumed to be the cause of the most recent northern pike population decline (Scanlon and Roach 2000).

Recruitment of northern pike in Harding Lake is not only related to the availability of spawning and rearing habitat, but also basic life history traits of this species (Scott and Crossman 1973; Laine 1989; Burkholder 1991a; Craig 1996; Wuttig 2015). Northern pike become sexually mature by age-5 at approximately 450 mm FL (18 inches TL), and they commonly live 10 to 20 years, although some fish may live for 20 to 30 years. The male:female ratio is nearly equal, but most fish over 30 inches (725 mm FL) are female. Eggs are about 2 mm in diameter, and spawning females may have 20,000 to 250,000 eggs, depending on the size of the fish (e.g., 23 eggs/gram of body weight; Carlander 1969). Due to the early maturity, long life, and fecundity of females, northern pike populations can recover quickly from high mortality events such as fishing mortality with just a few females (Laine 1989). Additionally, larger pike can often be the main predator of juvenile pike, and when densities of larger pike are low, juvenile survival increases.

In 2007, efforts were initiated to increase the lake surface elevation from 709 to 717 ft above sea level (ASL) by diverting Rogge Creek into Harding Lake (Doxey 2003; USDA 2006). The target lake surface elevation was lower than elevations observed in the 1980s and early 1990s when the production of northern pike supported a directed sport fishery, but the target level is high enough to inundate the northern shoreline (Wuttig 2015). Due to continued drought conditions, water levels had only increased to 713.7 ft ASL by 2014. Wetter weather conditions during 2014–2021 had increased the water level to 717.7 ft ASL by 2020, and large swaths of vegetated littoral areas had been inundated (Jim Vohden, Alaska Department of Natural Resources, Division of Mining, Land and Water, Fairbanks, unpublished data). Water elevation remained above 717 ft. ASL from April 2020 through August 2023, but it has been between 716 and 717 ft ASL from October 2023 through August 2025. As of July 17, 2025, the lake level was 716.13 ft ASL.

As lake elevation has increased, estimates of abundance have reflected increased recruitment. In 2012, the estimated abundance of northern pike ≥450 mm FL was 567 (SE = 47), when the water level was 714.5 ft (Wuttig 2015). In 2020, a stock assessment was conducted to see if the population was responding to the increased water levels. The estimated population was 704 (SE = 59) northern pike ≥450 mm FL, but the number of small northern pike <450 mm FL caught during sampling had increased from 10 to 124 between the 2 studies, which was an indication that the inundated littoral areas were resulting in better recruitment (Gutierrez and Bernard 2021). During 2022, the abundance of northern pike ≥450 mm FL was 949 (SE = 114), and the number of small northern pike (<450 mm FL) captured was 177 fish (Albert and Ocaña 2023). The most recent estimate of abundance during 2025 was 894 (SE = 88) northern pike ≥450 mm FL and 78 small northern pike (<450 mm FL) captured while the water level was 716.4 ft on May 29 and 716.1 ft. on July 17 (Gutierrez and Chari 2025).

Fishery Management Objectives

During the 2023 BOF meeting, a proposal to allow catch-and-release fishing for northern pike was considered but rejected due to a small population size and uncertainty about the implementation of a management plan that did not consider the influence of lake water levels on the northern pike population. The BOF instructed the department to update the management plan to account for the current understanding of the dynamics of the Harding Lake northern pike population.

After the fishery was closed in 2000, a management plan was published in 2003, and it articulated the management objective and abundance-based measures to incrementally increase fishing opportunities for anglers (Doxey 2003). The long-term management objective was to maintain a population with an abundance of at least 2,500 northern pike fish 450 mm FL (18 inches TL) or larger. In addition, the plan proposed fishery actions at different abundance levels of northern pike ≥450 mm FL (closed when abundance <1,000 fish, catch-and-release when abundance ≥1,000 fish, harvest of 1 large fish when abundance ≥1,700 fish, and a liberalized bag limit when abundance ≥2,500 fish). These regulatory scenarios were based on models predicting sustained yields (Roach and McIntyre 1999). However, the model assumption of a constant carrying capacity was violated because estimates of yield were developed on stock assessments from 1990 through 1998, a period during which the carrying capacity was appreciably declining due to habitat loss and the cessation of mass stockings of fish.

As prescribed by the 2003 management plan, the northern pike fishery has remained closed for 25 years (since 2000), but abundance has not exceeded 1,000 fish in the absence of fishing mortality. Although the intention of the closure was to increase survival, resulting in greater abundance to eventually allow fishing and harvest, the population has responded instead to lake level increases. Since 2000, lake levels and population abundance have been monitored, and a strong relationship between lake levels, northern pike recruitment, and abundance has been observed (Scanlon and Roach 2000; Wuttig 2015; Gutierrez and Bernard 2021; Albert and Ocaña 2023; and Gutierrez and Chari 2025). Northern pike abundance and recruitment are strongly related to recruitment that results from available spawning and rearing habitat, which is a function of lake level (Laine 1989; Craig 1996), and abundance likely reaches equilibrium at any particular lake level. Based on this relationship, the 2,500-fish objective (Doxey 2003) is now considered unattainable, regardless of fishing closures. Therefore, the management plan considers the influence of recruitment (i.e., lake level) and fishing mortality on the sustainability of any regulatory option.

The updated management plan recommends that sport fishing regulations for northern pike in Harding Lake be indefinitely established as catch-and-release only to ensure long-term sustainability and fishing opportunity (Appendix C). Due to the popularity of Harding Lake, harvest under more liberal regulations, such as a 1 fish daily bag and possession limit, may only be feasible during periods of very high lake levels. These conditions have not occurred since the mid-1980s. Lake level has perpetually changed, rising and falling concurrently with decadal wet and dry periods having unpredictable duration. This uncertainty negates using a management plan based on lake level, nor is it efficient or realistic to change regulations through the BOF process as population size fluctuates. A catch-and-release only fishery will ensure an orderly, predictable, and sustainable opportunity for northern pike fishing across all water levels. Incidental fishing mortality will occur and will be sustainable, even during periods of low abundance or water levels. Northern pike are highly fecund, and even a small number of spawning adults will produce sufficient numbers of recruits to fully utilize available rearing habitat and maintain the population.

Recent Fishery Performance

The Harding Lake northern pike fishery has been closed since 2000, and there has been no effort, catch, or harvest occurring for 25 years.

Research and Management Activities

There have been 4 stock status studies during the summers of 2012, 2020, 2022, and 2025 (Wuttig 2015; Gutierrez and Bernard 2021; Albert and Ocaña 2023; Gutierrez and Chari 2025). The abundance of northern pike ≥450 mm FL in 2012 was 567 (SE = 47), in 2020 was 704 (SE = 59), and in 2022 was 949 (SE = 114). The most recent assessment during 2025 had an estimate of 915 (SE = 90) northern pike ≥450 mm FL. In addition to increasing abundance estimates during previous stock assessments, the proportion of small fish (i.e., 300–449 mm FL) in the catch increased from 3% in 2012, to 20% in 2020, and then to 31% in 2022, along with an increase in the lake level (Wuttig 2015; Gutierrez and Bernard 2021; Albert and Ocaña 2023; Figure 6). By 2025, the lake level had decreased by ~1 ft since 2023, and the proportion of small fish handled during the 2025 experiment dropped to 14%. This suggests that lake level may affect recruitment and, over time, overall population size, even though annual abundance estimates alone cannot fully distinguish a lake-level effect on the population.

Minto Flats

Fishery Description

The following section provides information relevant to Proposals 18, 19, and 20. The Minto Flats wetlands complex is located about 35 miles west of Fairbanks between the communities of Nenana and Minto (Figure 3). It is an approximately 500,000-acre area of marsh and lakes, interconnected by numerous sloughs and rivers (Figure 7). Most of the area is included in the Minto Flats State Game Refuge, established by the Alaska Legislature in 1988 to ensure protection and enhancement of habitat, conservation of fish and wildlife, and continuation of public uses within the area. The Chatanika, Tolovana, and Tatalina Rivers, as well as Washington, Goldstream, and numerous other smaller creeks, flow into Minto Flats. These flowing waters come together as tributaries to the Tolovana River, itself a tributary to the Tanana River at its terminus at the southwestern end of Minto Flats. The waterways of Minto Flats are slow and meandering.

Minto Lakes is a group of large interconnected, generally shallow, and heavily vegetated lakes located in the eastern portion of Minto Flats. They are a popular area for northern pike fishing and hunting for waterfowl and moose. Access to the area is primarily by boat or floatplane, and the area is utilized by guides and private individuals. Some private individuals and guides have cabins in the few sparse areas of higher ground that are not regularly flooded. Minto Lakes is thought to support the majority (i.e., >90%) of the northern pike sport fishery within the Tolovana River drainage (Table 10).

Minto Lakes are a major northern pike spawning and summer feeding area. Northern pike overwintering in the Chatanika River are composed mostly (~2/3) of fish that utilize Minto Lakes during the open water period (i.e., for spawning and feeding), and this overwintering area has been termed the Chatanika River Overwintering Area (CROA; Roach 1998a, Albert 2016; Figure 7). In winter, much of the flowing and standing water within Minto Flats becomes anoxic, forcing fish to move to discrete oxygenated areas of the Chatanika and Tolovana Rivers. Partial winterkills are thought to occur, which can confound modeling of population dynamics to assess angler impacts. Northern pike are typically the only fish targeted by sport anglers in the Minto Flats area. These large piscivores are located throughout Minto Flats and can be readily taken on many types of lures.

The Minto Flats northern pike fishery includes the Tolovana River, the Lower Chatanika River, Minto Lakes, and numerous sloughs and creeks, such as Goldstream Creek. Northern pike seasonally move between all these water bodies, and therefore, SWHS effort, catch, and harvest estimates for all of these water bodies are summed and presented under the general heading of Minto Flats (Table 10 and Figure 7).

The Minto Flats northern pike population has supported a major proportion of the TRMA northern pike sport fishery for many years (Table 10). It was primarily a summer fishery until the mid-1980s, when an intensive sport fishery developed on concentrations of northern pike overwintering in the Chatanika River just upstream from the mouth of Goldstream Creek, which was also a traditional subsistence area. A subsistence gillnet fishery for northern pike (and whitefish) also occurs throughout the open-water period near the village of Minto and other historic sites (Andrews 1988). During winter, northern pike are taken through the ice with hook-and-line primarily in the regulatory Chatanika River Harvest Area (CHA; Figure 8). The CHA is 13 miles of the Chatanika River from the Fairbanks Nonsubsistence Area boundary (approximately 1 mi [~1.6 km] downstream from the Murphy Dome Road) downstream to a location one mile upstream of Goldstream Creek mouth. The CHA makes up about 90% of the CROA.

Fishery Management Objectives

The Minto Flats northern pike population is managed under the *Minto Flats Northern Pike Management Plan* (5 AAC 74.044 for sportfishing and 5 AAC 01.244 for subsistence), which stipulates that the maximum exploitation rate of northern pike by all users in the "lakes and flowing waters of Minto Flats" may not exceed 20% of the northern pike population annually.

The sport fishing plan prescribes an open season for the sport fishery from June 1 to October 14 and a bag and possession limit of 5 fish, only 1 of which may be ≥30 in. Additionally, if subsistence harvest in the CHA is ≥750 northern pike from January 1 to the ice-free period, an emergency order is issued to reduce the sport bag and possession limit to 2 fish, of which only 1 may be ≥30 in within the lakes and all flowing waters of Minto Flats for the remainder of the calendar year.

The subsistence management plan is:

1. Subsistence fishing for northern pike is open year-round to Alaskan residents; however, a permit is required;
2. A 10-fish bag, 20-fish possession limit for the fishery that occurs in the CHA (in 2010, the BOF established a daily bag and possession limit; previously, there had been none);
3. In the CHA, only 2 fish of the 10-fish bag limit may be 30 inches or greater in length (in 2019, the BOF amended the bag and possession limit to include a size restriction; previously, there had been none);
4. Subsistence fishing through the ice is closed for the portion of the Chatanika River from an ADF&G regulatory marker located at the confluence of the Chatanika River and Goldstream Creek upstream approximately 1 mile to another ADF&G regulatory marker;
5. Gillnets may be used only from April 15–October 14; and
6. A hook-and-line may be used only if fishing through the ice.

If subsistence harvest in the CHA is greater than 1,500 northern pike from January 1 to the ice-free period, these waters will be closed by emergency order to subsistence fishing for northern pike through the ice. Finally, both the sport and subsistence management plans for northern pike require the use of single hooks in the Chatanika River upstream of Goldstream Creek mouth.

The *Minto Flats Northern Pike Management Plan* for subsistence fisheries (5 AAC 01.244) was amended during the 2010, 2016, 2017, and 2019 BOF meetings. These amendments established a daily bag and possession limit (2010), closed ice fishing (subsistence) from the confluence of the Chatanika River and Goldstream Creek to an ADF&G regulatory marker approximately 3 river miles upstream (2016), changed the 3-mile closed area in the Chatanika River to a 1-mile closed area (2017), and changed daily bag and possession limits to allow only 2 northern pike ≥30 inches in the daily bag and only 4 northern pike ≥30 inches in possession (2019).

Recent Fishery Performance

The estimated sport catch and harvest of northern pike in Minto Flats, which includes the middle Chatanika River between Elliot Highway Bridge and Murphy Dome Road, peaked in 1994 with a harvest of 9,489 fish and a catch of 52,191 fish (Brase 2009b). Since 2012, there have been high-water events in the Chatanika River drainage, resulting in prolonged periods of high water throughout Minto Flats (Albert and Tyers 2020). These consistent high-water events are probably impacting levels of effort, harvest, and catch. Since 2019, the SWHS has divided the Lower Chatanika River into 2 sections: (1) the Lower Chatanika River (downstream of Murphy Dome Road); and (2) the Middle Chatanika River (Elliot Highway Bridge to Murphy Dome Road). The division of the former Lower Chatanika River was done to differentiate between the northern pike-dominated fishery in the lowermost Chatanika River and the Arctic grayling-dominated fishery in the Middle Chatanika River. Consequently, the historical data set is only 5 years (2019–2023), but the information is better suited for evaluating the Minto Flats northern pike fishery.

In 2024, fishing effort in Minto Flats was average, with an estimated 1,010 angler-days compared to the previous 5-year (2019–2023) average of 1,064 angler-days (Table 2). Fishing effort is not estimated by target species in the SWHS; however, fishing effort in Minto Flats is assumed to be largely directed at northern pike. The 2024 catch of northern pike in Minto Flats was 3,748 fish, which was a bit more than the recent 5-year average of 2,335 (Table 10). The 2024 estimate of harvest was 491 northern pike, and the most recent 5-year average was 400 fish (Table 10).

Although Minto Flats is closed to northern pike sport fishing from October 15 through May 31, a state-managed subsistence fishery occurs throughout the winter. To participate in any state subsistence fishery in Alaska, users must be Alaska residents. Residents must acquire a Tolovana River Drainage Northern Pike Subsistence Permit from ADF&G DCF in Fairbanks or online. Subsistence users commonly harvest northern pike through the ice in the CHA late in the winter and early in the spring. Prior to 2016, the DCF did not collect harvest data specific to the CHA, and it was instead assumed that permits issued to FNSB residents were indicative of CHA effort and harvest since the fishery is typically dominated by Fairbanks residents. For additional information specific to subsistence harvest, please contact DCF, Fairbanks. For 2024, the total subsistence harvest among permit holders was 2,398 northern pike among 309 permits issued, of which 1,600 were harvested in the CHA (Table 11). The 5-year average (2019–2023) was 2,528 fish from an average number of 339 permits issued (Table 11; Ransbury and Gleason 2022; Matt Olson, DCF Biologist, ADF&G, Fairbanks, September 5, 2025, personal communication). Total harvest (subsistence and sport) of northern pike in Minto Flats during 2024 was 2,889 fish. The preliminary subsistence northern pike harvest for the CHA during spring 2025 is 1,013 fish by 144 permit holders that fished from among 316 permits issued (Payton Russell, Division of Commercial Fisheries Biologist, ADF&G, Fairbanks, May 20, 2025, personal communication).

Since 2005, subsistence harvests have been appreciable (Table 11), primarily by residents of the FNSB, and there has been a downward trend in sport fish harvest (Table 10). Total annual harvests of northern pike in the lakes and flowing waters of the Minto Flats area have been below the maximum 20% exploitation rate specified in regulation. The assessment area used to manage the fisheries and calculate the 20% exploitation rate has changed multiple times in the past few decades (Table 12). In 2018, the assessment area consisted of the Minto Lakes Study Area (MLSA) and the CROA (Figure 7). The MLSA is more consistent with the historical assessment area, and the CROA was a "new" assessment area, aimed at estimating the abundance and length composition of the overwintering population in the CROA. Stock assessments are now conducted in the CROA because it has been deemed better able to assess population trends and exploitation rates.

The 2018 abundance estimates for the MLSA and CROA were 11,443 and 14,675 northern pike larger than ~24 in (600 mm), respectively (Table 12). Abundance was also estimated in 2025, and there were 15,779 northern pike larger than ~24 in (600 mm), respectively (Table 12). It is unclear to what degree the estimates represent the total Minto Flats northern pike population for which the 20% threshold exploitation rate is applied, but because they are a portion of the overall population, they serve as a conservative measure of exploitation. If sport and subsistence harvests continue to maintain current levels and the population of northern pike in the assessed areas (MLSA and CROA) is indicative of a minimum Minto Flats population, there should be no need for restrictions to the sport fishery relative to the 20% exploitation threshold. Additionally, recent high-water events throughout the Minto Flats are providing optimal rearing habitat for northern pike that should yield large recruitment, but the sport fishery has temporally been negatively affected due to dispersal of fish across a wider area, making fish more challenging to find.

Research and Management Activities

Northern pike population assessments were performed in Minto Flats annually from 1987–1991 (Holmes and Burkholder 1988, Burkholder 1989, 1990, 1991a-b; Hansen and Burkholder 1992).

However, obtaining accurate and unbiased abundance estimates was difficult to achieve because experimental assumptions were often not met (Roach 1997, 1998a). These large open-system experiments were fraught with low sample sizes, limited mixing of marked and unmarked fish, size and sex biases, and high water during spring sampling events. Based on difficulties encountered during these early mark–recapture experiments and radiotelemetry studies conducted by Burkholder (1989), Burkholder and Bernard (1994), and Roach (1998a), the assessment area and study design were modified. Beginning in 1996 through 2008, northern pike abundance estimation experiments were done within an assessment area termed the Minto Lakes Study Area (MLSA; Figure 7). The resulting estimates were used as an index of the abundance of northern pike for the entire Minto Flats wetland complex (Table 12).

In 2018, the population assessment study design was again modified. A three-event mark–recapture experiment was conducted to estimate the overwintering population of northern pike in the CROA and the summer population in the MLSA (Figure 7). The 2018 estimate of overwintering northern pike in the CROA ≥600 mm (~24 in) was 14,675 (SE = 1,631) fish, and the summer abundance of northern pike ≥600 mm in the MLSA was 11,443 (SE = 1,651; Albert and Tyers 2020). The 2018 MLSA summer estimate was well above the previous 2008 estimate of 2,219 (SE = 397) fish (Albert and Tyers 2020, Joy 2009).

In 2025, northern pike stock was assessed again within the CROA during March. It was estimated that there were 15,779 (SE = 2,580) northern pike ≥600 mm (~24 in), of which 3,618 (SE = 624) fish were ≥725 mm (~30 in). These estimates were very similar to the 2018 estimates.

The combined harvest of sport and all subsistence fisheries was 2,899 fish during 2024, less than a 20% exploitation rate of the assessed CROA population. Among the subsistence-harvested fish, there were several subsistence permits from the Minto village that cumulatively harvested over 798 northern pike near the village. Although some of those fish overwinter in the CROA, others overwinter in other areas. The Minto Flats population is larger than the CROA population, and comparing exploitation against the CROA abundance is a conservative measure.

The *Minto Flats Northern Pike Management Plan* (5 AAC 74.044) requires a reduced sportfish bag limit when subsistence harvest exceeds 750 fish, whereas there are no subsistence harvest restrictions until 1,500 fish are harvested. Due to winter subsistence harvest exceeding 750 northern pike each year (2021–2025), emergency orders have been issued each year to reduce the sport fish bag limit from 5 to 2 northern pike, only 1 over 30 inches during the sport fishery season. During the previous 12 years (2013–2024), the CHA harvest exceeded 750 fish 6 times, and the bag limit was reduced from 5 to 2 fish. The average harvest with a bag limit of 5 was 436 northern pike, and the average harvest when the bag limit was 2 fish was 405 northern pike (Figure 8).

Volkmar Lake

Fishery Description

The following section provides information relevant to Proposal 23. Volkmar Lake is situated north of the Tanana River, remote but relatively close to Delta Junction (Figure 2). Volkmar Lake can be accessed by a float plane during summer, by ski plane during winter, snowmachines via a ~24-mile winter trail following the Goodpaster River starting at Quartz Lake, or ~11-mile trail starting from Rapeseed Way north of the Alaska Highway. There are numerous private land parcels and cabins around the shoreline, relatively easy wintertime access, and good catch rates of northern pike. All the sport fishing effort in Volkmar Lake is directed at northern pike because of the absence of other species. The lake supports low levels of fishing effort due to its remoteness; however, for 15 years, Volkmar Lake has been managed using a restrictive bag, possession, and size limit. Most of the fishing effort is thought to occur through the ice during spring when temperatures are more moderate and the Tanana River can still be crossed safely.

In 1995, a record 1,263 angler-days occurred on Volkmar Lake, with a harvest of 1,084 pike (Parker 2009). In 1996, effort and harvest fell to the lowest recorded level (191 angler-days and 9 fish harvested [Parker and Viavant 2000]). In 1996, anglers reported that the size and abundance of pike in Volkmar Lake had declined. At the 1997 BOF meeting, the BOF adopted a bag and possession limit of 1 fish, no size limit, as a conservation measure. It is thought that the large harvest in 1995 was responsible for the decline in population, and harvests at that level were not sustainable (Parker 2009). Angler effort and harvest were minimal after 1997, presumably due to the reduced bag and possession limit and angler perceptions of low northern pike abundance.

In 2000, the estimated abundance of northern pike ≥450 mm FL (~18 in TL) in Volkmar Lake was 615 fish (Table 13; Scanlon 2001). In 2005, the population of northern pike ≥450 mm FL had increased to 1,814 fish (Wuttig and Reed 2010), and in 2009 the population had increased to 4,017 fish ≥450 mm FL (Wuttig 2010). In 2010, the bag and possession limit was increased to 2 northern pike, only one of which may be longer than 30 inches.

Fishery Management Objectives

The management objective for Volkmar Lake is to maintain a population of northern pike ≥18 in TL (~450 mm FL) of 2,000 fish or greater (Parker 2008). This number was selected by the area manager in 2005 as the minimum threshold at which the department would support regulatory changes to increase the harvest of northern pike in Volkmar Lake. The management objective is not a formal abundance or exploitation-based management objective based on population dynamics and fishing mortality.

Recent Fishery Performance

The lake had been relatively popular before 2000, but since then, it has been lightly fished, and there are too few respondents to the SWHS to estimate effort, catch, and harvest (Table 10). The average number of respondents to the SWHS has been less than 2 respondents annually for 15 years. Volkmar Lake is remote and requires additional modes of travel to access the fishery, which is exclusively for northern pike.

In 2009, the abundance was estimated to be 4,017 northern pike greater than 18 inches in length. In 2010, with the increase in abundance and decrease in fishing effort, the BOF increased the bag and possession limit from 1 fish of any size to 2 fish, of which only 1 fish may be 30 inches or longer. At the 2019 AYK BOF meeting, the northern pike season was extended to year-round in Volkmar Lake.

Research and Management Activities

Currently, a Volkmar Lake northern pike stock assessment is not needed because the lake is lightly fished. Given current fishing pressure and a TRMA trend of declining effort and harvest, the lake has an unnecessarily restrictive regulation. It is recommended that the northern pike background regulations (bag and possession limit of 5 fish, only one of which may be longer than 30 inches) be applied to Volkmar Lake to increase fishing opportunities. The background regulations are inherently conservative and are more restrictive for larger fish 30 inches and longer, which are predominantly fecund females.

STOCKED WATERS

Rainbow Lake

Fishery Description

Rainbow Lake is classified as a “remote” stocked lake in the Upper Tanana Valley about 12.5 air miles northwest of Delta Junction (Figure 2). Currently, Rainbow Lake is stocked every other year with 6,000 fingerling rainbow trout, but it was stocked with up to 25,000 fingerling rainbow trout in the mid-80s. Anglers access Rainbow Lake by float plane during the open-water months and by snowmachine after freeze-up. Rainbow Lake is 86.5 acres in size, and it is relatively productive for an Interior Alaska lake and has produced large rainbow trout in the past (up to 24 inches). Due to the growth of some fish to a large size, regulations were changed in 2004 to enhance the trophy fishery aspect of the lake. At that time, the board adopted *the Tanana River Area Stocked Waters Management Plan* (5 AAC 74.065), which provided for a special management approach for trophy lakes of which Rainbow Lake was one. The special management approach endeavors to create a fishery with a high probability of catching a trophy fish of 18 inches or greater in length, and to do so, the bag and possession limit for Rainbow Lake was reduced from 10 fish, no size limit, to 1 fish 18 inches or greater in length. A stock assessment in 2012 revealed that the special regulation had not resulted in trophy-sized fish (Behr et al. 2016), and a proposal to change the regulations to further develop the trophy fishery was submitted for deliberation by the board during January 2013. The board approved an amended proposal that increased allowable harvest to 5 fish, of which only 1 fish may be 18 inches or larger (conservative approach of *the Tanana River Area Stocked Waters Management Plan*). The conservative approach is intended to provide a reasonable chance of catching a daily bag limit and a fish larger than 18 inches, but once again, a survey in 2018 did not yield any trophy-size fish among 496 measured fish (Behr and Mansfield *In prep*). Due to the inability of the regulations to develop a trophy fishery as well as decreasing effort, the regional background regulation (bag and possession limit of 10 fish, only one may be 18 inches are larger) is recommended.

Recent Fishery Performance

Fishing the stocked waters of the TRMA is very popular because the bag and possession limits are typically very liberal (10 fish, only 1 fish ≥18 in or larger), catch rates can be high, and most of the lakes/ponds are easily accessible. Approximately 44% of all effort and 69% of all harvest within the TRMA between 2014–2023 were supported by stocked lakes (Table 14). During 2024, stocked waters made up even more of the TRMA fishery, by having 56% of effort and 73% of harvest. There are no estimates of effort and harvest for Rainbow Lake because there are seldom respondents to the SWHS who indicate they fish there. It is likely the lake is lightly fished due to its remoteness and difficult access.

Fishery Management Objectives

In 2004, the BOF adopted the *Tanana River Area Stocked Waters Management Plan* (5 AAC 74.065) into regulation. This plan defines how the department should meet public demand for diverse fishing opportunities. The plan defines 3 management approaches: regional, conservative, and special. The regional management lakes are expected to have a high probability of catching fish and harvesting the bag limit, conservative management lakes are expected to have a reasonable chance of catching a fish larger than 18 inches, and special management lakes are expected to have a high probability of catching more than 1 fish larger than 18 inches. Harding

Lake is currently the only lake managed under the special management approach, and Rainbow Lake is the only lake currently managed under the conservative management approach. All remaining lakes in the TRMA fall under the regional management approach.

The Region III general stocking plan, a component of the Statewide Stocking Plan, is annually updated by hatchery and management staff. The stocking plan is a comprehensive list of species, life stage, stocking frequencies, and maximum numbers of fish that can be stocked for all lakes in the stocking program. The projected numbers of fish to be stocked annually for a 5-year period are also listed in this report. The Statewide Stocking Plan, including the Region III stocking component, may be accessed via the department's website http://www.adfg.alaska.gov/index.cfm%3Fadfg%3DfishingSportStockingHatcheries.stockingPlan. Stocked waters are removed or reclassified from the stocking plan when there is a loss of public access, poor fish growth or survival, or insufficient effort. Lakes are added if new opportunities arise.

To improve the likelihood of catching larger rainbow trout from Rainbow Lake, it was managed using a special management approach during 2004–2012, but this proved unsuccessful. Since 2013, the lake has been managed using the conservative approach to improve the chances of catching rainbow trout larger than 18 inches. In addition, the stocking rate was reduced in 2022 from 8,000 fingerlings every other year to 6,000 fingerlings every other year.

Research and Management Activities

Rainbow Lake has been surveyed 4 times (2005, 2012, 2018, and 2025) since regulations were initially changed in 2004. During surveys in 2005, 5 rainbow trout were 18 to 19 inches in length, but during the next 3 surveys, just a few fish reached 17 inches in length. Based on sampling in 2018 and 2025, rainbow trout are not growing to 18 inches in length and are not meeting expectations of the conservative management approach.

There are no estimates of fishing effort and harvests in Rainbow Lake because there are too few responses (e.g., 0–2 respondents annually since 2005) to the SWHS, but the low response rate is an indication that this remote lake is lightly fished. Harvests may be insufficient to decrease competition and promote growth despite reductions in stocking densities, and the lake is not productive enough to grow 18-inch rainbow trout. Additionally, the lake water level has been steadily decreasing and may also be affecting lake productivity. Changing the management approach from conservative to regional will be sustainable, simplify regulations, and provide additional sport fishing opportunities.

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TABLES AND FIGURES

Table 1.–Summary of known *Elodea*-infested water bodies in Interior Alaska.

Water body	Year detected	Acres
Chena Slough	2010	118.0
Chena River	2011	
Chena Lake	2011	230.0
Totchaket Slough	2014	
Bathing Beauty Pond	2018	12.0
Hot Springs Slough	2018	
Birch Lake	2018	800.0
Harding Lake	2020	2192.0
Lost Lake	2020	93.0
Piledriver Slough	2020	
Chena Cove	2021	4.0
Lady of the Lake	2021	1.5
28-mile pit	2021	7.2
Grayling Lake	2021	11.4
Hidden Lake	2021	16.7
Pike Lake	2021	19.0
Scout lake	2021	29.4
Moose Lake	2021	34.8
Polaris Lake	2021	47.7
Mullins Pit	2021	76.6

Table 2.–Estimates of effort (angler-days) for select areas of the Tanana River drainage, 2014–2024.

	Year											5-year Average	10-year Average
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2019–2023	2014–2023
Chena Total [a]	20,293	11,210	8,021	8,460	5,370	6,675	5,313	8,120	7,372	5,612	7,533	6,618	8,645
Upper Chena	5,666	4,294	3,024	3,807	3,476	3,071	1,711	3,181	3,924	1,832	1,707	2,744	3,399
Lower Chena	14,627	6,916	4,997	4,653	1,894	3,604	3,602	4,939	3,448	3,780	5,826	3,875	5,246
Piledriver Slough	1,167	**644**	**250**	1,004	**1,124**	**935**	**608**	**434**	**840**	**ND**	**ND**	**563**	**701**
Chatanika Total[a]	5,144	4,060	4,168	6,439	3,699	4,061	3,526	3,649	3,653	4,361	2,654	3,850	4,276
Upper Chatanika	2,903	2,528	1,344	3,559	2,103	3,200	3,057	2,153	1,758	3,738	**1,570**	2,781	2,634
Lower Chatanika	2,241	1,532	2,824	2,880	1,596	861	**469**	1,496	1,895	623	**1,084**	1,069	1,642
Salcha River	1,406	2,042	2,629	1,371	2,252	**747**	**1,859**	2,841	3,230	**868**	**2,096**	1,909	1,925
Minto Flats[b]	1,996	1,074	**400**	2,570	728	1,751	998	983	964	623	1,010	1,064	
Nenana Drainage[c]	2,373	5,916	6,359	4,291	4,318	2,895	2,581	1,420	2,654	2,338	2,761	2,378	3,515
Delta Clearwater River	5,366	4,330	6,191	5,263	5,184	4,417	3,679	4,473	1,648	4,134	2,875	3,670	4,469
Tangle Lakes Drainage	5,519	3,999	4,619	4,696	4,431	4,732	6,252	3,706	2,586	1,950	4,406	3,845	4,249
George Lake	**641**	**289**	**256**	**148**	**1,135**	**401**	**379**	**467**	**268**	**583**	**7,184**	**420**	**457**
Fielding Lake	**714**	1,732	992	**1,108**	**551**	**805**	**726**	**595**	**255**	1,125	**1,080**	701	860
Volkmar Lake	**53**	**360**	ND	**36**	**369**	**199**	ND	ND	ND	**630**	**ND**	**415**	**275**
Goodpaster River	**1,169**	**789**	**996**	**266**	**349**	**3,238**	**634**	**1,051**	**118**	**408**	**806**	**1,090**	**902**
Stocked Lakes Total	43,082	30,819	28,949	20,815	27,840	25,812	28,679	31,204	25,579	29,615	41,646	27,533	28,917
Quartz Lake	4,114	4,593	5,865	4,203	6,350	3,153	3,805	4,466	3,322	5,841	5,655	4,117	4,571
Birch Lake	7,072	2,745	3,249	3,116	2,714	3,780	4,387	3,874	2,566	4,486	4,744	3,819	3,799
Harding Lake	1,096	1,323	**843**	**590**	**717**	**644**	**995**	**569**	**1,978**	**238**	**663**	885	899
Chena Lakes Recreation Area	11,827	5,885	6,733	5,986	4,504	7,524	9,463	8,644	6,872	8,590	14,108	8,219	7,603
Other stocked lakes	30,800	22,158	18,992	12,906	18,059	10,711	11,024	11,716	9,596	8,656	16,476	10,341	15,462
Other Tanana	7,217	8,977	7,225	10,430	8,011	7,861	4,747	6,778	8,036	6,636	16,316	6,325	6,758
Total Tanana	96,140	76,241	71,055	66,897	69,865	63,305	59,981	65,721	53,678	59,678	90,367	60,473	68,426

Source: Alaska Sport Fishing Survey database [Internet]. 1996– . Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited October 8, 2025). Available from: http://www.adfg.alaska.gov/sf/sportfishingsurvey/. Estimates are biased when they have fewer than 12 respondents. They are in bold and only indicate that sport fishing occurred.

[a] Includes unspecified reaches.

[b] In 2019, the lower Chatanika River survey area was split into lower (northern pike centric) and middle (Arctic grayling centric) to better describe effort, catch, and harvest.

[c] Includes Brushkana Creek, Fish Creek.

Table 3.–Number of fish harvested and caught by recreational anglers fishing in the Tanana River drainage (includes stocked waters), 2014–2024.

Year	Chinook Salmon	Chum Salmon	Coho Salmon	Stocked Lakes Salmon	Rainbow Trout	Dolly Varden / Arctic Char	Lake Trout	Arctic Grayling	Northern Pike	Burbot	Sheefish	Whitefish	Other Species
Harvest													
2014	0	54	216	4,126	10,254	1,015	418	8,010	1,867	1,745	37	1,165	0
2015	13	0	180	1,753	22,119	610	484	5,591	1,838	1,877	0	193	261
2016	20	0	641	7,980	18,834	3,038	480	6,680	1,707	1,689	20	370	0
2017	18	23	236	3,655	11,286	942	375	4,449	1,096	1,032	7	745	189
2018	200	15	482	2,018	9,973	1,375	117	3,176	1,586	578	35	444	17
2019	19	0	72	1,234	12,661	606	428	3,008	2,524	1,078	15	135	0
2020	49	0	80	3,003	14,110	790	582	3,182	913	322	0	32	0
2021	0	0	0	1,477	16,279	170	36	2,515	1,706	680	39	95	103
2022	0	0	0	1,416	10,949	666	71	4,138	1,053	982	10	286	32
2023	0	0	0	2,412	9,795	558	120	3,684	2,598	368	0	271	0
2024	0	0	0	1,496	13,166	1,609	234	1,850	3,448	1,018	0	81	0
5-year Average 2019–2023	14	0	30	1,908	12,759	558	247	3,305	1,759	686	13	164	27
10-year Average 2014–2023	32	9	191	2,907	13,626	977	311	4,443	1,689	1,035	16	374	60
Catch													
2014	10	171	6,655	14,589	37,250	3,249	1,752	109,152	14,651	1,932	186	1,744	48
2015	48	189	4,393	3,323	60,475	4,937	4,330	108,078	14,743	2,929	69	422	586
2016	1,532	117	4,853	19,280	46,584	8,880	1,829	91,319	12,450	3,385	49	612	202
2017	138	627	3,218	8,642	30,366	1,971	4,924	99,450	11,807	1,200	7	822	436
2018	538	57	2,830	7,696	29,919	3,629	589	83,847	6,898	614	75	533	114
2019	36	24	1,579	8,824	42,292	3,556	1,226	124,653	16,880	1,265	15	314	232
2020	154	88	710	12,366	51,285	6,304	3,357	60,197	7,312	1,617	0	285	11
2021	207	12	13	5,790	47,712	1,711	738	76,690	7,238	765	39	111	197
2022	301	135	0	6,445	40,480	1,655	646	61,639	4,825	1,208	116	488	116
2023	58	37	0	8,211	36,147	2,721	1,324	70,630	8,431	443	10	437	14
2024	0	34	0	6,964	59,525	5,223	2,472	55,885	17,811	1,426	0	109	176
5-year Average 2019–2023	247	63	1,026	8,224	42,337	3,371	1,311	81,404	8,631	1,094	49	346	134
10-year Average 2014–2023	309	200	2,620	9,090	41,782	4,094	2,086	96,381	11,210	1,661	64	698	204

Source: Alaska Sport Fishing Survey database [Internet]. 1996–. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited October 8, 2025). Available from: http://www.adfg.alaska.gov/sf/sportfishingsurvey/

Table 4.–Sport harvest of Chinook, coho, and chum salmon in the Tanana River drainage, 2014–2024.

	Year											5-year Average	10-year Average
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2019–2023	2014–2023
Chinook salmon													
Chena River	0	0	0	18	0	0	0	0	0	0	0	0	2
Salcha River	0	13	20	0	200	**0**	0	0	0	0	0	0	23
Chatanika River	0	0	0	0	0	19	0	0	0	0	0	4	2
Goodpaster River	**0**	**0**	**0**	**0**	**0**	**0**	0	0	0	0	0	0	0
Other Tanana	0	0	0	0	0	0	49	0	0	0	0	10	5
Total	0	13	20	18	200	19	49	0	0	0	0	14	32
Coho salmon													
Nenana River drainage	0	0	0	21	141	0	0	0	0	0	0	0	16
Delta Clearwater River	216	180	641	215	325	72	56	0	0	0	0	26	171
Other Tanana	0	0	0	0	16	0	16	0	0	0	0	3	3
Total	216	180	641	236	482	72	80	0	0	0	0	25	173
Chum salmon													
Chena River	0	0	0	0	0	0	0	0	0	0	0	0	0
Salcha River	0	0	0	23	0	0	0	0	0	0	0	0	2
Delta Clearwater River	54	0	0	0	0	0	0	0	0	0	0	0	2
Other Tanana	54	0	0	23	15	0	0	0	0	0	0	0	5
Total	0	0	0	0	0	0	0	0	0	0	0	0	9

Source: Alaska Sport Fishing Survey database [Internet]. 1996–. Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited October 8, 2025). Available from: http://www.adfg.alaska.gov/sf/sportfishingsurvey/.

Note: An estimate is presented in bold if there were fewer than 12 respondents because the estimate is biased. They are presented only to indicate that sport fishing occurred.

Table 5.–Emergency orders issued for Tanana River Management Area sport fisheries, 2023–2025.

Year	Emergency Order Number	Explanation
2023	3-KS-U-6-23	Closed all waters of the Tanana River drainage to sport fishing for Chinook salmon effective 12:01 a.m., Wednesday, April 5, 2023, through September 30, 2023. In addition, the use of bait was prohibited in all Tanana River tributaries.
2023	3-CS-U-7-23	Closed all waters of the Tanana River drainage to sport fishing for chum salmon effective 12:01 a.m., Wednesday, April 5, 2023, through December 31, 2023.
2023	3-R-U-08-23	Restricted Kimberly Lake to catch-and-release fishing for all fish species effective 12:01 a.m., Monday, May 1, 2023.
2023	3-R-U-09-23	Restricted Bear, Moose, and Polaris Lakes, Bathing Beauty Pond, Piledriver Slough, and Moose Creek to catch-and-release fishing for all fish species effective 12:01 a.m., Monday, May 1, 2023.
2023	3-NP-U-10-23	Reduced the bag and possession limit for northern pike in all lakes and flowing waters of the Minto Flats area to two fish, only one of which may be 30 in or greater in length, effective 12:01 a.m., Thursday, June 1, 2023, through October 14, 2023.
2023	3-SS-U-22-23	Rescinded 3-CS-U-07-23 and closed all waters of the Tanana River drainage to sport fishing for chum and coho salmon effective 12:01 a.m., Thursday, August 31, 2023, through December 31, 2023.
2024	3-KS-U-4-24	Closed all waters of the Tanana River drainage to sport fishing for Chinook salmon effective 12:01 a.m., Thursday, March 28, 2024, through September 30, 2024. In addition, the use of bait was prohibited in all Tanana River tributaries.
2024	3-NP-U-5-24	Reduced the bag and possession limit for northern pike in all lakes and flowing waters of the Minto Flats area to two fish, only one of which may be 30 in or greater in length, effective 12:01 a.m., Saturday, June 1, 2024, through October 14, 2024.
2024	3-CS-U-18-24	Closed all waters of the Tanana River drainage to sport fishing for chum salmon effective 12:01 a.m., Friday, August 16, 2024, through December 31, 2024.
2024	3-SS-U-20-24	Superseded 3-CS-U-18-24 and closed all waters of the Tanana River drainage to sport fishing for chum and coho salmon effective 12:01 a.m., Thursday, August 22, 2024, through December 31, 2024.
2025	3-KS-U-02-25	Closed all waters of the Tanana River drainage to sport fishing for Chinook salmon effective 12:01 a.m., Thursday, March 31, 2025, through September 30, 2025. In addition, the use of bait was prohibited in all Tanana River tributaries.
2025	3-NP-U-02-25	Reduced the bag and possession limit for northern pike in all lakes and flowing waters of the Minto Flats area to two fish, only one of which may be 30 in or greater in length, effective 12:01 a.m., Saturday, June 1, 2025, through October 14, 2025
2025	3-CS-U-14-25	Closed all waters of the Tanana River drainage to sport fishing for chum salmon effective 12:01 a.m., Friday, July 9, 2024, through December 31, 2024.

Table 6.–Sport catch of Chinook, coho, and chum salmon in the Tanana River drainage, 2014–2024.

	Year											5-year Average	10-year Average
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2019–2023	2014–2023
Chinook Salmon													
Chena River	10	0	0	57	20	17	33	207	0	18	0	55	36
Salcha River	0	13	1,425	20	518	**0**	**0**	0	282	**0**	**0**	56	226
Chatanika River	0	0	0	20	0	19	**0**	0	19	0	0	8	6
Goodpaster River	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**0**	4	2
Other Tanana	0	15	107	41	0	0	0	0	0	0	0	0	16
Total	10	28	1,532	138	538	36	33	207	301	37	0	102	262
Coho Salmon													
Nenana River drainage	357	0	0	258	141	**283**	**0**	**0**	0	0	0	57	104
Delta Clearwater River	6,278	4,378	4,853	2,844	2,503	1,063	686	0	0	0	0	350	2,261
Other Tanana	20	15	0	179	186	233	8	13	0	0	0	42	54
Total	6,655	4,393	4,853	3,281	2,830	1,579	694	13	0	0	0	457	2,424
Chum Salmon													
Chena River	38	19	27	415	0	0	0	0	0	18	0	4	52
Salcha River	0	118	0	18	15	**0**	**0**	0	0	0	**34**	0	15
Delta Clearwater River	24	52	21	182	0	24	0	0	0	0	0	0	28
Other Tanana	109	0	69	12	42	24	**88**	**12**	**135**	**19**	0	56	51
Total	171	189	117	627	57	24	88	12	135	37	34	59	146

Source: Alaska Sport Fishing Survey database [Internet]. 1996– . Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited October 8, 2025). Available from: http://www.adfg.alaska.gov/sf/sportfishingsurvey/.

Note: An estimate is presented in bold if there were fewer than 12 respondents because the estimate is biased. They are presented only to indicate that sport fishing occurred.

Table 7.–Abundance estimates and methods of estimation for Chinook salmon in the Chena and Salcha Rivers, 2005–2025.

	Chena		Salcha	
Year	Abundance	Method	Abundance	Method
2005	no estimate [b]	Tower	5,988	Tower
2006	2,936	Tower	10,400	Tower
2007	3,564	Tower	5,631 [a]	Tower
2008	3,212	Tower	5,300 [a]	Tower
2009	5,253	Tower	12,788	Tower
2010	2,382	Tower	6,135	Tower
2011	no estimate[b]	Tower	7,200	Tower &Aerial
2012	2,220	Tower	7,165	Tower
2013	1,859	Tower	5,465	Tower
2014	7,192	Sonar	no estimate [b]	Tower
2015	6,291	Tower	9,000	Tower
2016	6,665	Sonar	2,675	Tower & Sonar
2017	4,949	Sonar	4,195	Sonar
2018	5,947	Sonar	5,021	Sonar
2019	2,404	Tower	4,863	Tower
2020[c]	306[c]	Sonar	no estimate[d]	
2021	1,416	Tower	2,081	Tower
2022	367	Tower	1,243	Tower
2023	1,109	Tower	1,384	Tower
2024	397	Tower	1,525	Tower
2025[e]	1,218	Tower	1,739	Tower
BEG Range	3,300–5,700		3,300–6,500	
10-year average (2015–2024)	2,985		3,318	
5-year average (2020–2024)	719		1,558	

Source: Brase and Doxey 2006; Brase 2012; Savereide 2012a-b, 2014; Stuby and Tyers 2016; Matter and Tyers 2020a–b.

[a] Should be considered a minimum count due to high- and/or turbid-water conditions.

[b] No estimates were produced due to extreme high-water events throughout the run. Chena River Chinook salmon escapement was likely within the BEG range, based on results from the Salcha River escapement estimate.

[c] An incomplete count due to high water events and significant data gaps.

[d] The Salcha River tower did not operate due to insufficient funding.

[e] Preliminary estimate.

Table 8.–Coho salmon survey counts from the Tanana River drainage, 2014–2024.

Surveyed Stream	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024[c]	5-year Average 2019–2023	10-year Average 2013–2023
Delta Clearwater R.	4,285	19,553	6,767	9,616	2,884	2,043	2,555	913	1,750	1,794	1,455	1,811	5,216
Richardson Clearwater R.	1,941	3,742	1,350	ND	976	ND	475	17	54	ND	395	182	1,222
Lost Slough	333	242	334	1,278	1,822	ND	28	126	43[b]	ND	ND	77	595
Nenana River mainstem	ND	1,789	1,680	862	241	749	206	104	137[b]	ND	349	353	804
Otter Creek (17-mile Slough)	886	3,890	2,746	1,942	347	424	507	ND	122[b]	ND	ND	466	1,535
Julius Creek	0	ND	0	0	0	0	ND	ND	ND	ND	ND	0	0
Wood Creek[c]	649	1,419	1,327	2,025	361	184	231	226	ND[b]	ND	ND	214	803
Clear Creek[c]	25	164	27	9	0	5	3	0	92[b]	ND	ND	3	29
Glacier Creek[c]	0	6	20	0	11	0	0	0	2	ND	ND	1	4
Lignite Creek	37	26	ND	ND	ND	ND	ND	ND	ND[d]	ND	ND	0	32
June Creek	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	3

Source: A. Padilla, biologist, ADF&G – Division of Commercial Fisheries, Fairbanks, personal communication 2024.

Note: ND = No data.

[a] Incomplete survey (lack of daylight).

[b] blizzard

[c] Tributaries to Julius Creek.

[d] Flight restrictions

Table 9.–Sport harvest and catch of Arctic grayling in the Chena River drainage, 2014–2024.

	Year											
Harvest	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	5-year Average 2019–2023
Chena River total[a]	0	0	0	0	0	138	4	28	910	0	0	154
Upper Chena	0	0	0	0	0	0	0	0	0	0	0	0
Lower Chena	0	0	0	0	0	101	4	28	910	0	0	149
Catch												
Chena River total[a]	24,234	24,836	12,920	25,594	13,968	26,164	4,224	21,691	14,908	9,257	9,371	15,249
Upper Chena	16,303	11,006	7,905	11,228	9,475	15,678	1,822	13,310	10,891	4,150	3,351	9,170
Lower Chena	7,931	13,830	5,015	14,366	4,493	10,486	2,402	8,381	4,017	5,107	6,020	6,079

Source: Alaska Sport Fishing Survey database [Internet]. 1996– . Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited October 8, 2025). Available from: http://www.adfg.alaska.gov/sf/sportfishingsurvey/.

[a] Includes unspecified reaches.

Table 10.–Sport harvest and catch of northern pike in the Tanana River drainage, 2014–2024.

	Year											5-year Average	10-year Average
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2019–2023	2014–2023
Harvest													
Minto Lakes[a]						**170**	**25**	**94**	**107**	**410**	**246**	**161**	**247**
Old Minto Flats[b]	597	372	**196**	589	390	770	286	257	300	419	662	406	418
New Minto Flats[c]						746	286	251	300	**419**	491	400	ND
George Lake	**431**	**433**	**102**	**0**	**559**	**365**	**75**	**19**	**110**	**0**	**1,522**	**114**	**209**
Healy Lake	**0**	**25**	**60**	**16**	**0**	ND	**0**	**0**	**33**	**0**	**0**	**8**	**15**
Deadman Lake (Alaska Hwy.)	ND	ND	**0**	**32**	**0**	**77**	**0**	ND	**ND**	**47**	**419**	**41**	**26**
Deadman Lake (Tolovana R.)	ND	ND	**91**	ND	ND	**39**	**139**	ND	**0**	**ND**	**ND**	**59**	**67**
Volkmar Lake	**58**	**37**	ND	**11**	**72**	**24**	ND	ND	**ND**	**466**	**ND**	**245**	**111**
Mineral Lake (into Station Creek)	**40**	**41**	**0**	**8**	**15**	**18**	**0**	**16**	**27**	**11**	**76**	**14**	**18**
Other Tanana	741	930	1,258	440	550	1,255	438	1,420	583	1,655	940	1,059	922
Total Tanana harvest	1,867	1,838	1,707	1,096	1,586	2,524	913	1,706	1,053	2,598	3,448	1,759	1,689
Catch													
Minto Lakes[a]	1,947	4,395	1,986	7,918	1,415	**1,519**	**244**	**764**	**341**	**1,310**	**2,696**	836	2,184
Old Minto Flats[b]	2,218	4,417	2,584	8,578	1,968	4,776	1,089	2,947	1,212	**2,018**	4,031	2,408	3,258
New Minto Flats[c]						4,581	1,089	2,839	1,149	**2,018**	3,748	2,335	ND
George Lake	**4,830**	**470**	**2,606**	**494**	**1,014**	**2,785**	**1,931**	**501**	**173**	**413**	**7,611**	**1,161**	**1,522**
Healy Lake	**29**	**371**	**196**	**183**	**143**	ND	**126**	**58**	**56**	**212**	**118**	**113**	**153**
Deadman Lake (Alaska Hwy.)	ND	ND	**112**	**32**	**10**	**97**	**25**	ND	**ND**	**47**	**419**	**56**	**54**
Deadman Lake (Tolovana R.)	ND	ND	**181**	ND	ND	**2,242**	**1,530**	ND	**100**	**ND**	**ND**	**1,291**	**1,013**
Volkmar Lake	**145**	**817**	ND	**11**	**255**	**314**	ND	ND	**ND**	**932**	**ND**	**623**	**412**
Mineral Lake (into Station Creek)	**259**	**104**	**145**	**49**	**15**	**252**	**101**	**99**	**41**	**32**	**152**	**105**	**110**
Other Tanana	7,170	8,564	6,626	2,460	3,493	9,611	2,510	3,741	3,306	4,777	5,763	4,128	4,895
Total Tanana catch	14,651	14,743	12,450	11,807	6,898	16,880	7,312	7,238	4,825	8,431	17,811	8,937	10,524

Source: Alaska Sport Fishing Survey database [Internet]. 1996– . Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited September 25, 2025). Available from: http://www.adfg.alaska.gov/sf/sportfishingsurvey/.

Note: An estimate is presented in bold if there were fewer than 12 respondents because the estimate is biased. They are presented only to indicate that sport fishing occurred. ND = no data.

[a] In 2019, Minto Lakes was added as a location to the SWHS.

[b] Includes Minto Lakes, Lower and Middle Chatanika River, Tolovana River, and Goldstream Creek. The SWHS differentiated the Lower Chatanika into Lower and Middle beginning in 2019.

[c] Includes Minto Lakes, Lower Chatanika River, Tolovana River, and Goldstream Creek. The SWHS differentiated the Lower Chatanika into Lower and Middle beginning in 2019.

Table 11.–Number of subsistence permits issued, reported fished, Chatanika Harvest Area (CHA) harvest, and total subsistence harvest of northern pike in the Tolovana River drainage, 1998–2025.

	Permits			
Year	Issued	Fished	CHA Harvest	Total Harvest
1998	70	44%		431
1999	54	43%		400
2000	34	35%		352
2001	50	36%		277
2002	32	41%		521
2003	119	46%		966
2004	99	42%		393
2005	80	39%		386
2006	101	54%		865
2007	118	47%		1,837
2008	147	54%		1,363
2009	113	46%		563
2010	96	43%		125
2011	70	41%	27	110
2012	73	48%	243	525
2013	77	57%	154	231
2014	106	54%	377	478
2015	120	55%	516	765
2016	201	64%	855	1,020
2017	93	44%	21	137
2018	175	59%	832	1,040
2019	245	63%	937	1,633
2020	329	58%	965	2,005
2021	425	63%	1,538	3,092
2022	349	60%	1,419	3,299
2023	346	54%	1,199	1,847
2024	309	61%	1,600	2,398
2025 [a]	337	44%	1,070	1,070
5-Year Average 2019–2023	339	60%	1,212	2,528
10-Year Average 2014–2023	239	57%	866	1,724

Source: 1998–2021 (Ransbury and Gleason 2022); 2022–2024 data from OceanAK 2012.

[a] Incomplete annual data.

Table 12.–Estimated northern pike abundance in the Minto Lakes Study Area during 1996–2018, and within the Chatanika River Overwintering Area (CROA) in 2018.

		≥16 in TL (400 mm FL) [a]		≥24 in TL (600mm FL)		≥30 in TL (720 mm FL)	
Year	Area	Abundance	SE	Abundance	SE	Abundance	SE
1996	MLSA-B	23,850	7,799	7,616	883	–	–
1997		16,547	1,754	3,251	174	672	48
2000	MLSA-B	–	–	5,331	1,152	–	–
2003	MLSA-B	25,227	4,529	7,683	2,347	1,405	288
2008[b]	MLSA-A	16,045	3,132	2,219	397	958	362
	MLSA-B	9,854	1,701	2,092	448	635	635
2018	CROA	–	–	14,675	1,631	3,207	549
	MLSSA-A	–	–	11,443	1,651	–	–
2025	CROA			15,779		3,618	

Source: Roach 1997, 1998b; Scanlon 2001, 2006; Joy 2009; Albert and Tyers 2020; Albert, M. L. *In prep*. 2025 Minto northern pike Stock assessment. Alaska Department of Fish and Game, Fishery Data Series, Anchorage)

Note: SE = standard error.

[a] Estimated abundance of northern pike 16–24 in TL (400–599 mm FL) are biased, and the magnitude of this is unknown.

[b] In 2008, the geographical size of the study area was expanded and is referred to as *Area-A*. *Area-B* is the same study area that was used during 1996–2003.

Table 13.–Estimates of abundance of northern pike >18 in (~450 mm) in Volkmar Lake, 1985–2009.

	Volkmar Lake	
Year	Abundance	SE
1985	4,020	250
1986	4,028	587
1987	4,230	634
1988	2,196	148
1989	1,115	179
1990	2,019	349
1991	2,509	289
1992	2,542	369
2000	615	161
2005	1,814	449
2009	4,017	307

Source: Clark and Gregory 1988; Pearse 1990, 1991, 1994; Pearse and Burkholder 1993; Hansen and Pearse 1995; Timmons and Pearse 1989; Scanlon 2001; Wuttig and Reed 2010; Wuttig 2010.

Note: SE = standard error.

Table 14.–Contribution of stocked fish to the Tanana River drainage total effort, harvest, and catch, 2014–2024.

	Year											5-year Average	10-year Average
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2019–2023	2014–2023
Effort													
Effort on Stocked Waters	44,830	32,125	29,465	25,474	27,840	25,168	28,663	31,204	24,672	33,375	50,526	28,616	29,879
Total TRMA Effort (stocked + wild)	96,140	76,241	71,055	66,897	65,361	63,305	59,981	65,721	53,678	59,678	90,367	60,473	67,806
Percent Stocked Waters Effort	47%	42%	41%	38%	43%	40%	48%	47%	46%	56%	56%	47%	44%
Harvest													
Rainbow trout	10,254	22,086	18,834	11,082	9540	12446	13,706	16,279	10,949	9,795	13,166	12,635	13,497
Landlocked salmon	4,126	1,753	7,980	3,655	2,018	1,234	3,019	1,477	1,416	2,412	1,496	1,912	2,909
Arctic grayling	955	538	983	82	311	156	86	534	422	277	424	295	434
Arctic char	846	473	2,373	927	1100	533	687	170	666	515	1,565	514	829
Lake trout	25	80	0	0	57	63	0	0		0	6	16	25
Other	0	213	0	30	256	0	0	0	32	0	0	6	53
Total stocked fish harvest	16,206	25,143	30,170	15,776	13,282	14,432	17,498	18,460	13,485	12,999	16,657	15,375	17,745
Total TRMA Harvest (stocked + wild)	28,907	34,919	41,459	24,053	20,016	21,780	23,063	23,100	19,603	19,806	22,902	21,470	25,670
Percent Stocked Waters Harvest	56%	72%	73%	66%	66%	66%	76%	80%	69%	66%	73%	71%	69%
Catch													
Rainbow trout	37,250	60,442	45,812	29,218	28,255	41,591	50,574	47,655	40,480	36,147	59,525	43,289	41,742
Landlocked salmon	14,589	3,323	19,280	8,642	7,696	8,824	12,382	5,790	6,445	8,211	6,964	8,330	9,518
Arctic grayling	8,211	4,662	5,498	3,934	4,139	9,249	3,048	6,560	5,921	3,313	5,294	5,618	5,454
Arctic char	2,570	2,325	5,745	1,482	2,389	2,677	5,839	1,409	1,655	2,250	4,984	2,766	2,834
Lake trout	25	300	0	0	84	75	169	80	327	38	123	138	110
Other	48	384	0	30	892	0	0	0	32	7	140	8	139
Total stocked fish catch	62,693	71,436	76,335	43,306	43,455	62,416	72,012	61,494	54,860	49,966	77,030	60,150	59,797
Total TRMA Catch (stocked + wild)	191,389	204,522	191,092	163,608	137,339	200,896	143,686	141,223	118,043	128,463	149,625	146,462	162,026
Percent Stocked Waters Catch	33%	35%	40%	26%	32%	31%	50%	44%	46%	39%	51%	42%	38%

Source: Alaska Sport Fishing Survey database [Internet]. 1996– . Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited October 9, 2025). Available from: http://www.adfg.alaska.gov/sf/sportfishingsurvey/

Note: The numbers presented in this table may vary slightly from year to year. Estimates of catch, harvest, and effort on stocked waters were generated using separate annual data exports from the ADF&G Statewide Harvest Survey Database (ADF&G internal use only SharePoint site). Estimates in this database are often revised, and summaries compiled from more recent data exports may be slightly different. Occasionally, errors in previous years' estimates are found and corrected.

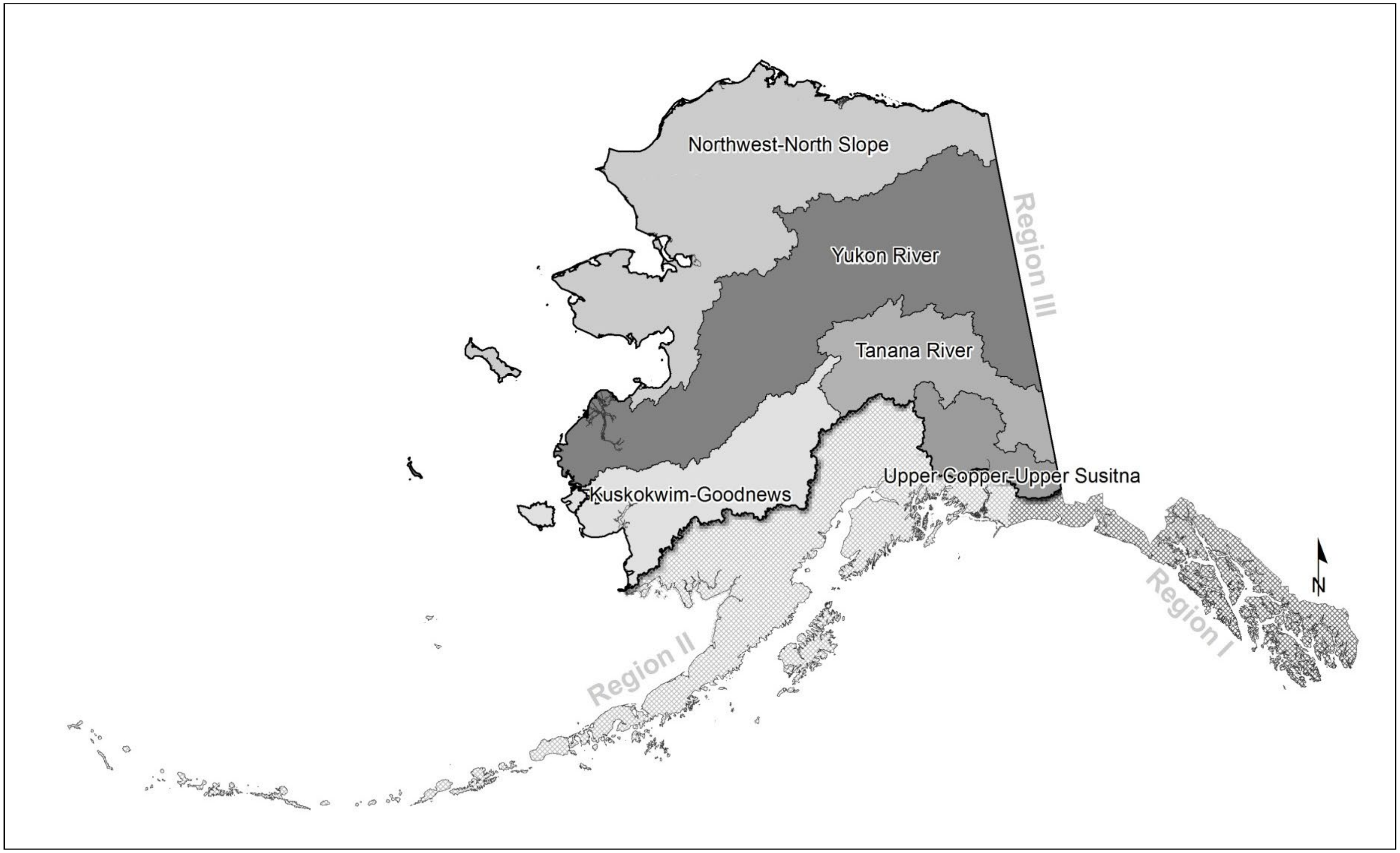

Figure 1.–The regional divisions (I–III) for ADF&G Division of Sport Fish, and the 5 management areas within Region III.

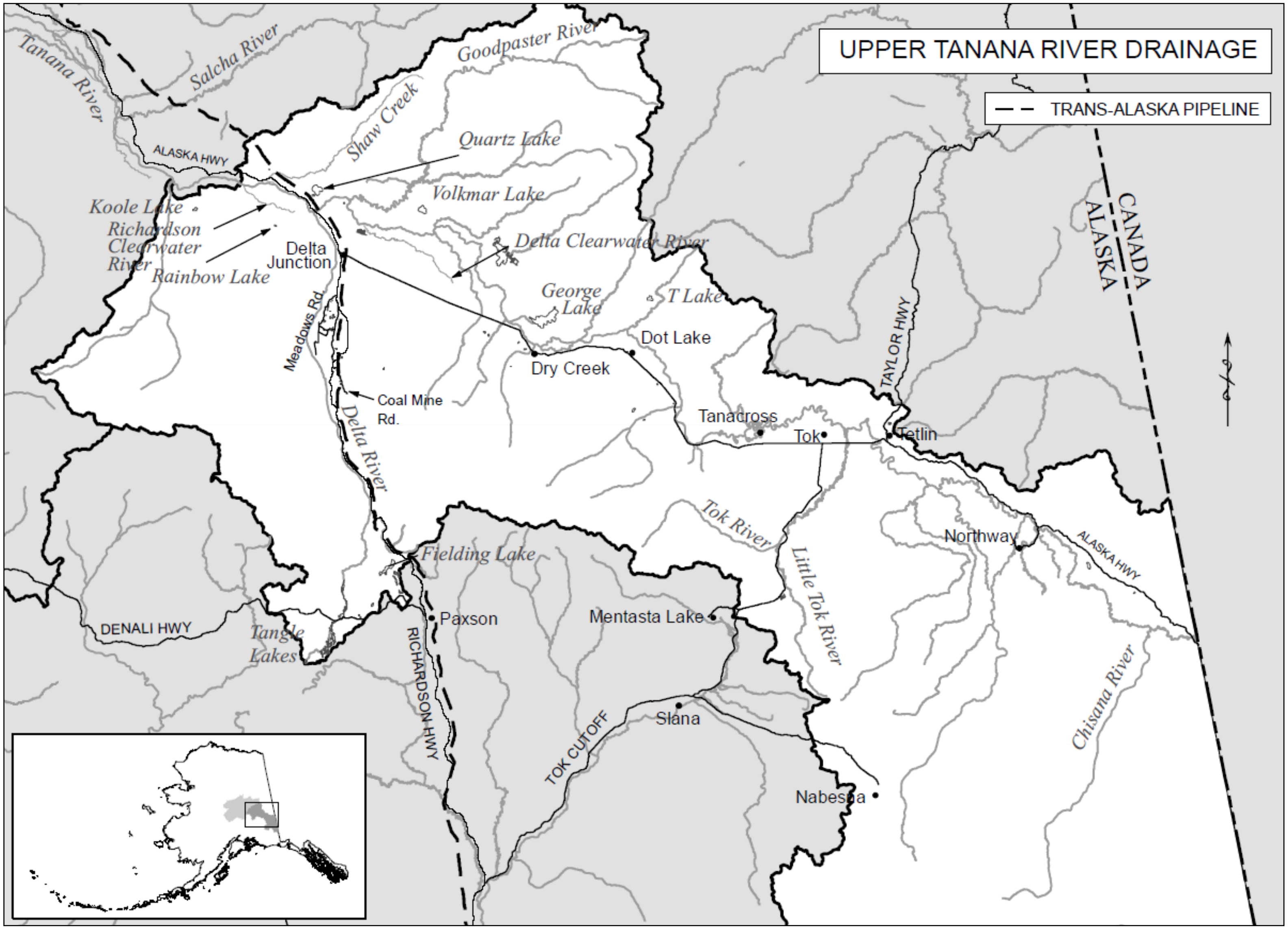

Figure 2.–The portion of the Tanana River drainage located upriver from the Salcha River.

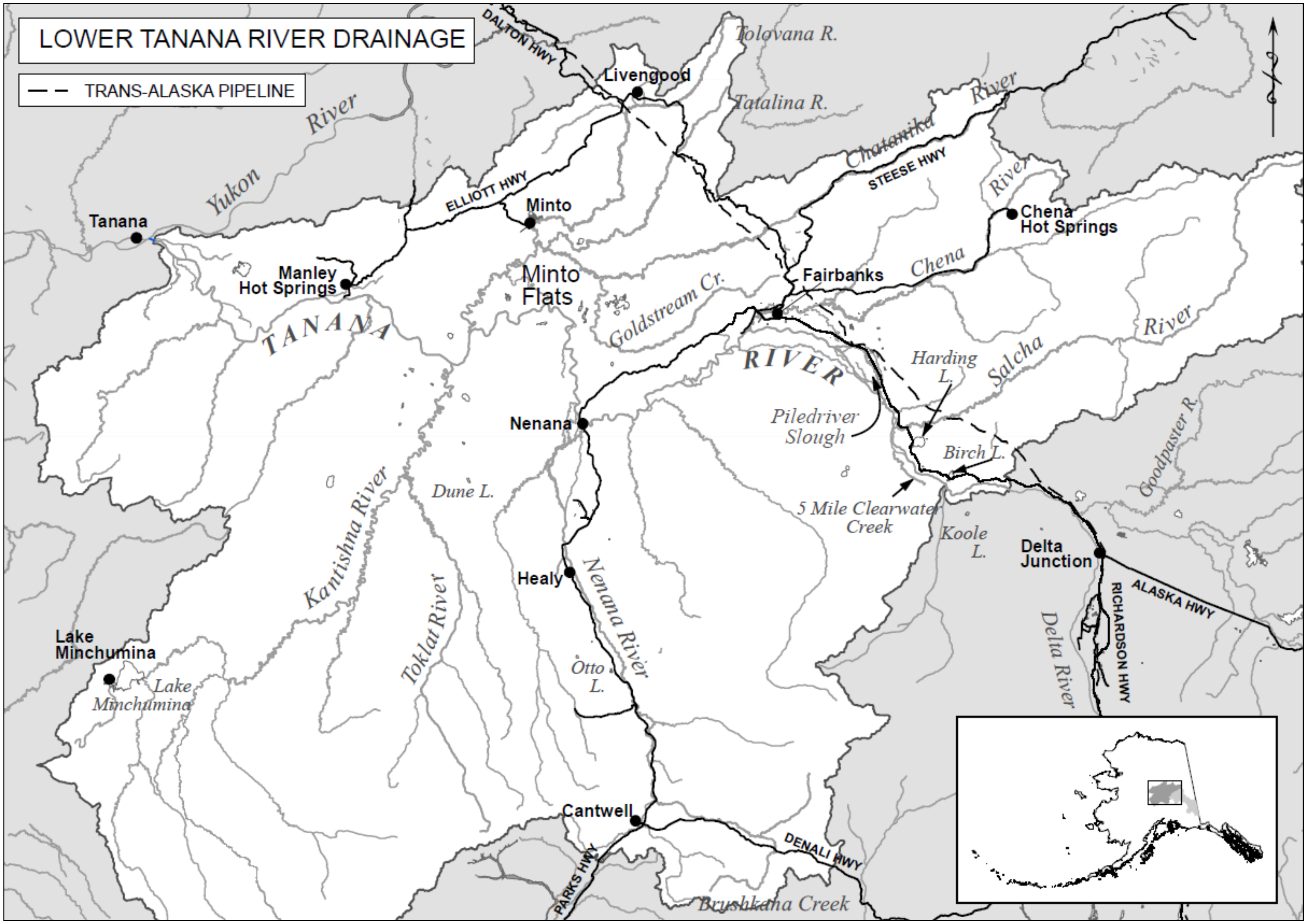

Figure 3.–The portion of the Tanana River drainage located downriver from Shaw Creek.

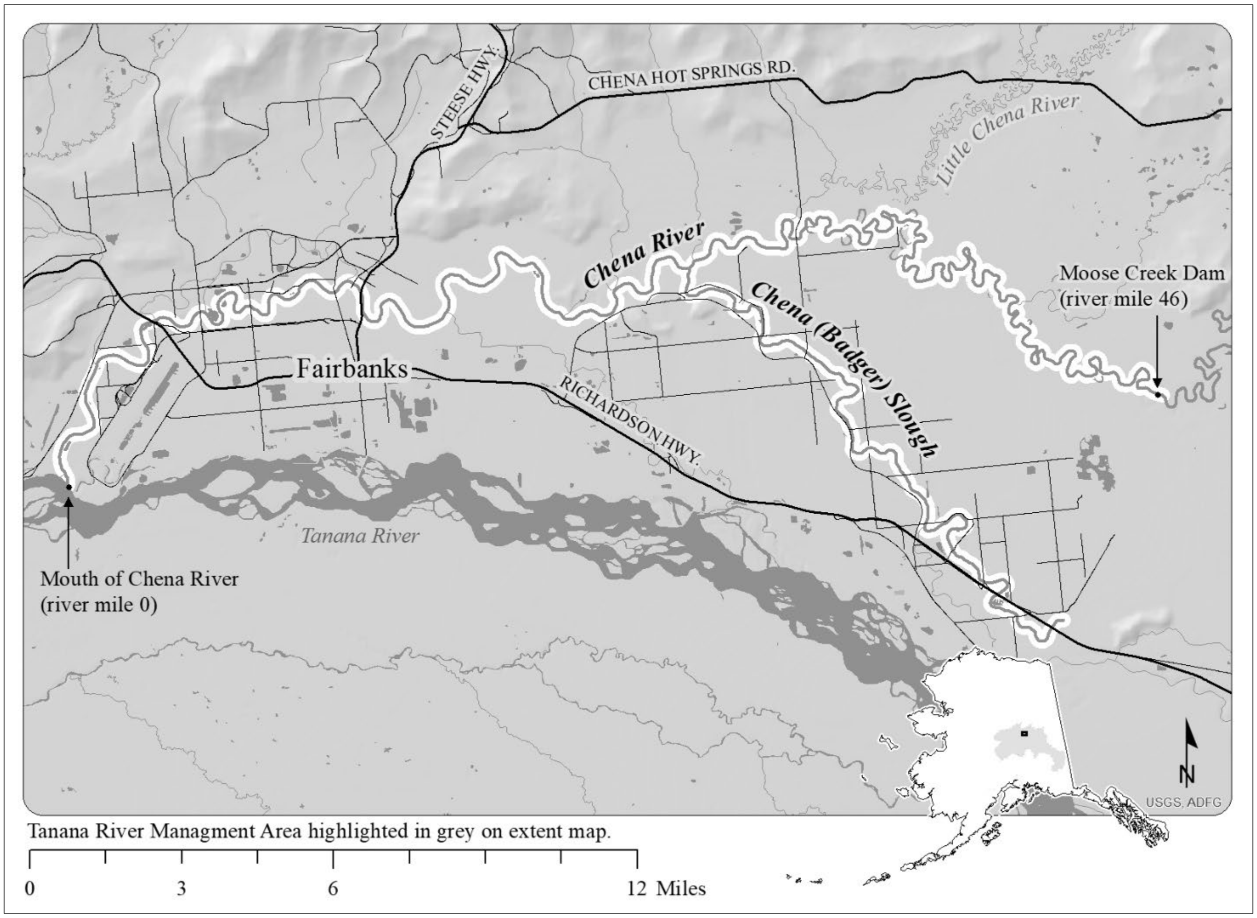

Figure 4.–Location of the Chena River youth Arctic grayling fishery, which extends 46 river miles from Moose Creek Dam to the Tanana River and includes Chena Slough.

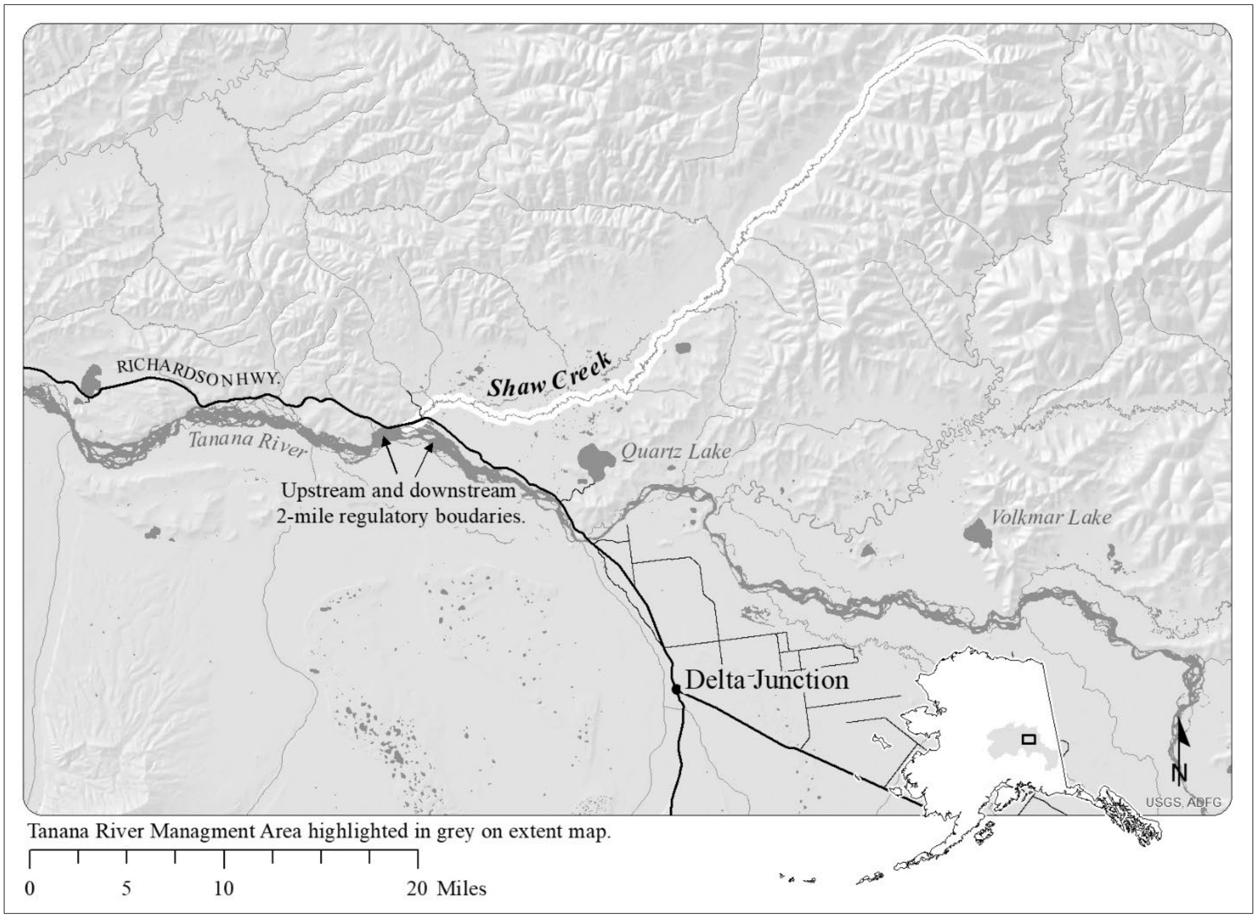

Figure 5.–Shaw Creek drainage and the upstream and downstream 2-mile regulatory boundaries along the Tanana River.

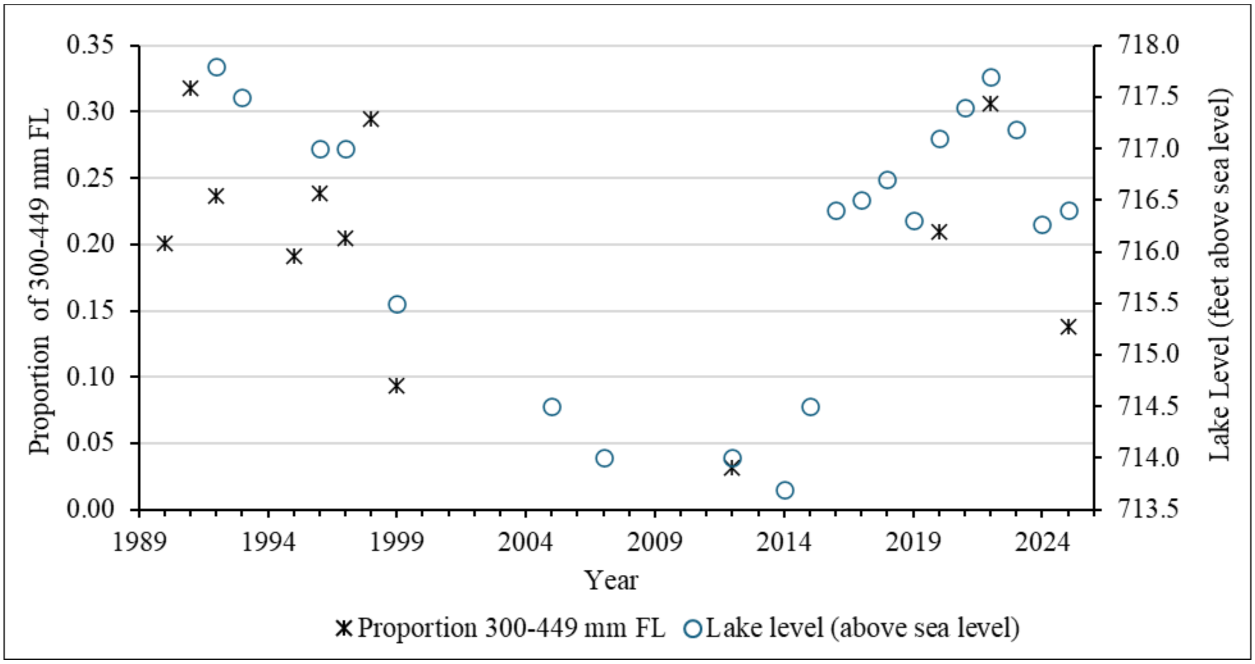

Figure 6.–Proportion of sampled northern pike 300–449 mm FL and lake level (feet above sea level) by year at Harding Lake, 1990–2025.

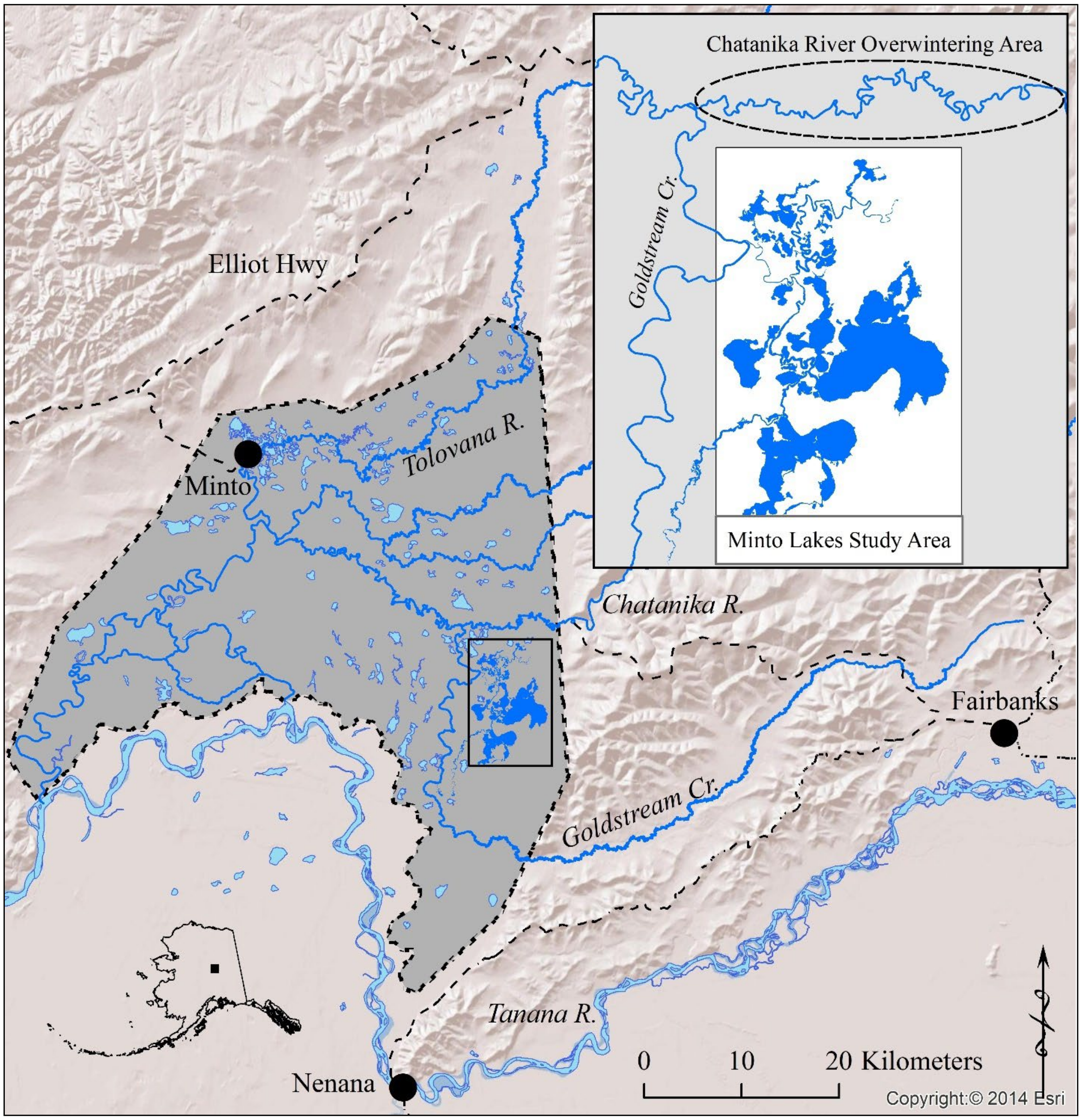

Figure 7.–Minto Flats with demarcation of harvest reporting area and the northern pike population assessment areas (Minto Lakes Study Area and Chatanika River Overwintering Area).

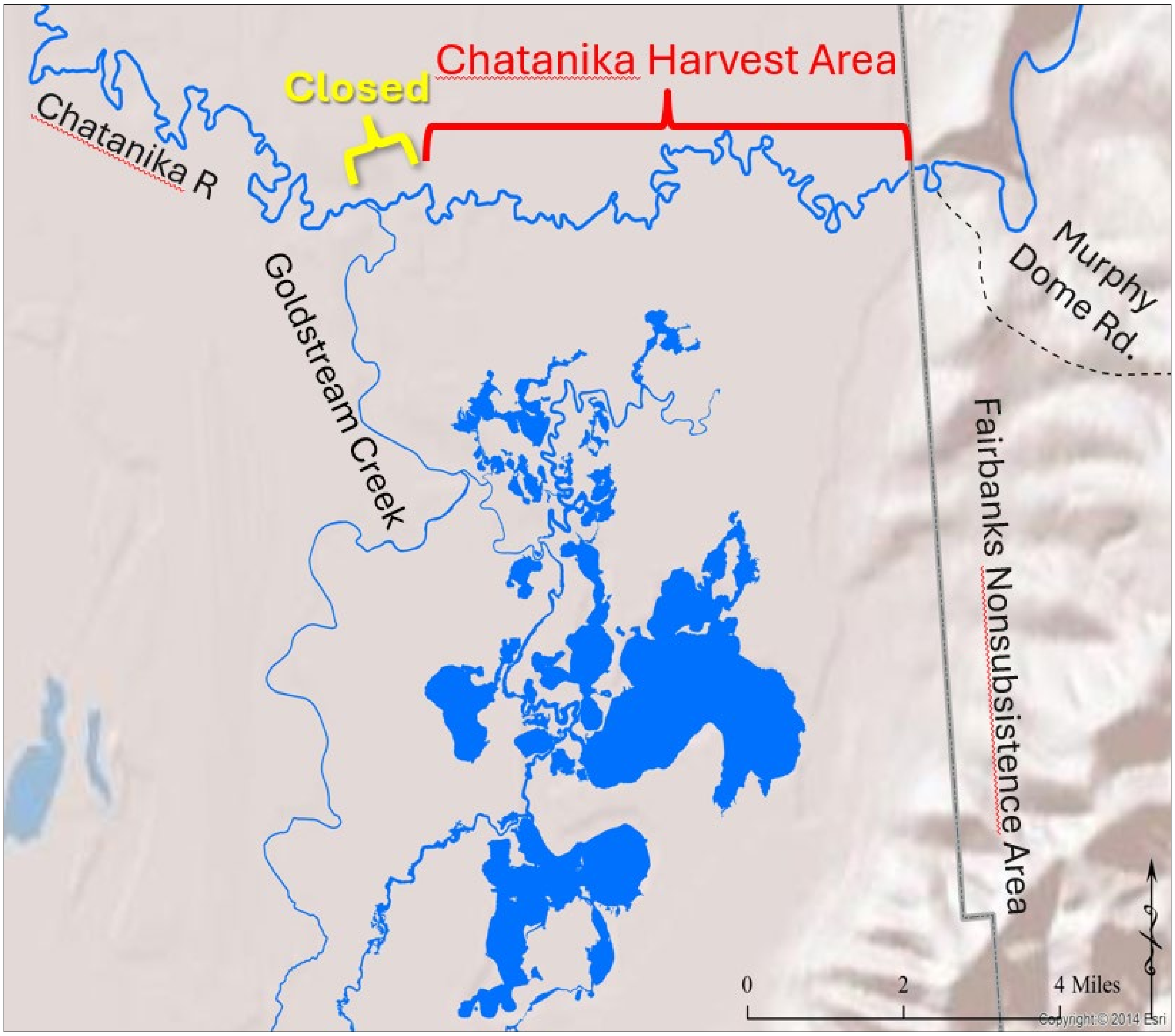

Figure 8.–Location of Chatanika Harvest Area (CHA).

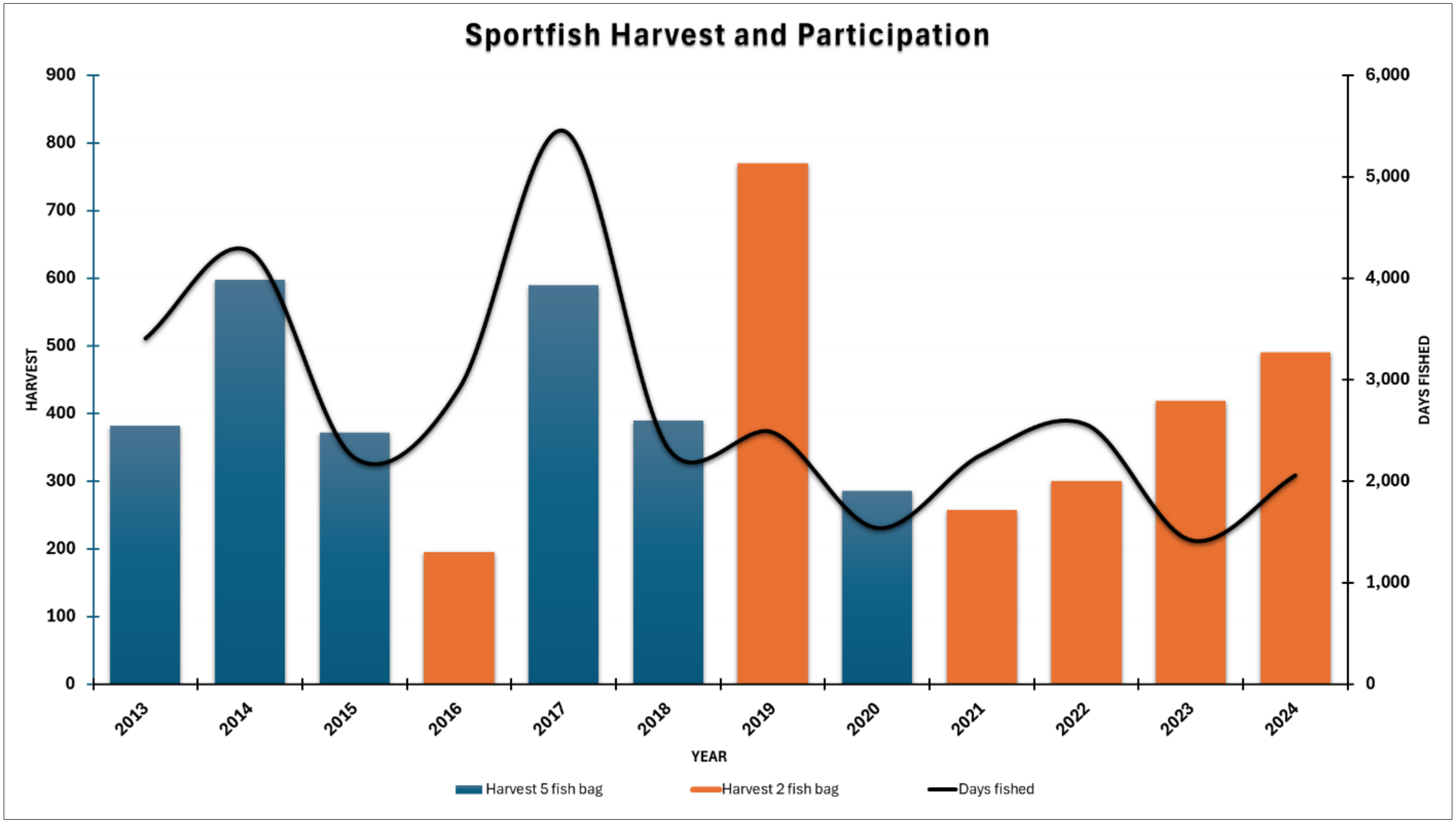

Figure 9.–Minto Flats fishing effort (days fished) and northern pike harvest when bag limit is 2 fish (orange bars) and when bag limit is 5 fish (blue bars).

APPENDIX A:
CROSS REFERENCING BOARD OF FISHERIES INFORMATION

Appendix A1.–References to information specific to 2025 Alaska Board of Fisheries proposals.

Proposal	Proposal subject	Table	Figure	Appendix
18	Eliminate the provision to reduce the sport daily bag and possession limit when subsistence harvest is 750 or more northern pike in the Chatanika Harvest Area (CHA). Additionally, the open season for sport fishing would be changed from June 1 through October 14 to April 15 through October 14.	2, 10, 11, 12	3, 7, 8, 9	
19	Eliminate the provision to reduce the sport daily bag and possession limit when subsistence harvest is 750 or more northern pike in the Chatanika Harvest Area (CHA). Additionally, the open season for sport fishing would be changed from June 1 through October 14 to May 1 through October 14.	2, 10, 11, 12	3, 7, 8, 9	
20	Modify the provision to reduce the sport daily bag and possession limit when subsistence harvest is 750 or more northern pike in the Chatanika Harvest Area (CHA) to only include waters of the Chatanika River drainage upstream of and including Goldstream Creek.	2, 10, 11, 12	3, 7, 8, 9	
21	Allow a catch-and-release fishery for northern pike and prohibit the use of bait and barbed hooks in Harding Lake.		3, 6	C
22	Allow a catch-and-release fishery for northern pike in Harding Lake.		3, 6	C
23	Increase the bag and possession of northern pike in Volkmar Lake to match the general regulations of 5 fish, of which only 1 fish may be 30 inches or longer.	2, 10, 13	2	
24	Eliminate the youth-only fishery for Arctic grayling that occurs during 4 weekends (8 days) in June and July.	2, 9	4	
25	Repeal the registration requirement for ice houses that are not removed from the ice daily in the Tanana River Area.		2, 3	
26	Modify regulations for Arctic grayling in the Shaw Creek drainage and the Tanana River within a 2-mile radius of the Shaw Creek mouth to match the general daily bag and possession limit of 5 Arctic grayling.		2, 3, 5	
27	Would modify management of Rainbow Lake, which is a stocked water, and increase the daily bag and possession limit in Rainbow Lake for all stocked finfish species combined from 5 to 10, of which only 1 may be 18 inches or greater in length.	2, 14	2	

APPENDIX B: DRAINAGEWIDE ESCAPEMENT 2006-2025, AND COMMERCIAL, SUBSISTENCE, AND SPORT HARVEST OF CHINOOK SALMON IN THE ALASKA PORTION OF THE YUKON RIVER DRAINAGE, 2006–2025

Appendix B1.–Commercial, subsistence, and sport harvest of Chinook salmon in the Alaska portion of the Yukon River drainage, 2006–2024.

	Tanana River			Yukon River without Tanana			Total Alaska Yukon River		
Year	Commercial	Subsistence	Sport	Commercial	Subsistence	Sport	Commercial	Subsistence	Sport
2006	84	1,229	638	46,562	47,364	101	46,646	48,593	101
2007	281	1,717	549	34,202	53,457	411	34,483	55,174	411
2008	0	605	254	4,641	44,581	155	4,641	45,186	155
2009	0	1,285	836	316	32,520	27	316	33,805	27
2010	0	1,143	313	9,897	43,416	161	9,897	44,559	161
2011	0	1,367	372	82	39,613	102	82	40,980	102
2012	0	627	114	0	29,788	231	0	30,415	231
2013	0	367	11	0	12,166	155	0	12,533	155
2014	0	283	0	0	3,003	0	0	3,286	0
2015	0	440	13	0	7,137	0	0	7,577	0
2016	0	816	20	0	20,796	0	0	21,612	0
2017	0	657	18	168	36,755	0	168	37,412	0
2018	0	493	200	0	31,493	0	0	31,986	200
2019	0	624	19	3,110	47,753	19	3,110	48,377	38
2020	0	425	49	0	21,289	0	0	21,714	49
2021	0	7	0	0	1,988	0	0	1,995	0
2022	0	1	0	0	1,826	0	0	1,827	0
2023	0	0	0	0	1,564	0	0	1,564	0
2024	0	3	0	0	1,872	0	0	1,875	0
Average									
2014–2023	0	375	32	328	17,360	2	328	17,735	29
2019–2023	0	211	14	622	14,884	4	622	15,095	17

Source: Commercial and subsistence harvest numbers are from JTC (2025).

Source: Alaska Sport Fishing Survey database [Internet]. 1996– . Anchorage, AK: Alaska Department of Fish and Game, Division of Sport Fish (cited September 19, 2025). Available from: http://www.adfg.alaska.gov/sf/sportfishingsurvey/.

Appendix B2.–Drainagewide totals for Chinook, chum, and coho salmon in the Yukon River drainage, including the Tanana River, for 2006–2024.

	Total Drainagewide Run				Total Canadian-Origin Run	
Year	Chinook[a]	Summer Chum[a]	Fall Chum[b]	Coho[c]	Chinook[d]	Fall Chum[e]
2006	289,431	4,043,800	1,216,000	309,275	126,125	330,000
2007	235,265	2,162,400	1,162,000	284,304	92,824	347,000
2008	190,962	2,078,900	858,000	184,121	69,577	269,000
2009	231,841	1,732,200	601,000	–	86,638	128,000
2010	159,928	1,695,900	588,000	200,320	62,767	143,000
2011	192,241	2,421,800	1,247,000	225,319	70,497	326,000
2012	137,079	2,490,900	1,088,000	211,696	51,449	238,000
2013	102,381	3,373,700	1,213,000	175,421	39,617	303,000
2014	175,601	2,504,800	953,000	384,203	65,111	223,000
2015	204,665	2,009,400	825,000	255,541	88,341	205,000
2016	189,953	2,612,800	1,391,000	397,643	83,796	298,000
2017	243,120	3,654,200	2,306,000	308,167	99,946	563,000
2018	178,804	2,102,100	1,116,000	239,251	76,646	279,000
2019	220,602	1,705,400	795,000	176,766	85,148	178,000
2020	138,817	766,030	189,000	119,142	52,140	25,000
2021	102,427	159,680	94,000	45,543	33,239	23,000
2022	37,522	485,890	174,000	101,631	13,360	22,000
2023	39,292	904,310	294,000	64,717	15,816	23,000
2024	56,159	807,980	165,000	89,916	25,390	16,000

Source: Data are from JTC (2025) except summer chum salmon from Gleason, C. M., D. M. Jallen, B. M. Borba, F. W. West, S. K. S. Decker, J. N. Clark, and A. J. Padilla. *In prep*. Yukon Management Area Annual Report, 2024. Alaska Department of Fish and Game, Fishery Management Report, Anchorage.

Note: En dashes mean data are not available.

[a] Total run size estimates come from a run reconstruction model that combines historical data from various assessment projects, harvests, tributary escapements, stock proportions, and age composition under a single Bayesian estimation framework.

[b] Spawner data are derived from a Bayesian spawner-recruit model, then harvest is added for the total run. Methods in Fleischman and Borba 2009.

[c] An abundance index is derived from Pilot Station sonar estimates adjusted for timing using the test fisheries downstream lagged and includes all harvests below the sonar. The drainagewide harvest is then subtracted from the index of abundance to estimate escapement.

[d] Run Reconstruction (RR) Canadian mainstem border passage, RR spawning escapement, and RR Canadian origin total run size estimates are derived from an integrated drainagewide run reconstruction model (Conners et al. 2023). All RR border passages, RR spawning escapements, and RR Canadian origin total run size estimates are updated annually based on the most recent model run.

[e] Estimated run sizes are calculated by adding the estimated U.S. harvest of Canadian-origin fall chum salmon estimates to the mainstem Yukon River Eagle sonar passage estimates. The proportion of Canadian mainstem fall chum salmon in the total U.S. harvest is assumed to be equal to the proportion of Canadian-origin fall chum salmon in the drainagewide escapements (i.e., 25%).

APPENDIX C:
HARDING LAKE NORTHERN PIKE MANAGEMENT PLAN

HARDING LAKE NORTHERN PIKE MANAGEMENT PLAN

This management plan recommends that sport fishing regulations for northern pike in Harding Lake be indefinitely established as **catch-and-release only** to ensure long-term sustainability and fishing opportunity.

The impetus for this updated plan is to provide a contemporary guideline for addressing regulatory proposals by revising the Harding Lake Northern Pike Management Plan using knowledge gained since its publication in 2003. The long-term objective of the 2003 plan was to maintain a population in which the abundance of fish with a fork length of 450 mm or greater exceeds 2,500 fish.

This long-term objective was intended to be achieved incrementally using several measures, including habitat restoration (i.e., raising lake levels) and closing northern pike fishing. Since 2003, lake levels and population abundance have been monitored, and a strong relationship between lake levels, northern pike recruitment, and abundance has been observed. Based on this relationship, the 2,500-fish objective is now considered unattainable, regardless of fishing closures.

In the absence of fishing mortality for 25 years, data have shown that northern pike abundance and recruitment are related to lake level (Figures 1 and 2). The availability, quantity, and quality of spawning and rearing habitat are primarily determined by lake level. Lake level will perpetually change, rising and falling concurrently with decadal wet and dry periods. These cycles are unpredictable, and each corresponds to a different carrying capacity for northern pike in Harding Lake, which may take a decade or more to reach its new equilibrium.

Due to the popularity of Harding Lake, harvest under more liberal regulations, such as a 1 fish daily bag and possession limit, may only be feasible during periods of very high lake levels. Such conditions have not occurred since the mid-1980s, and their duration is unpredictable. This uncertainty negates using a management plan based on lake level, nor is it efficient or realistic to change regulations through the BOF process as population size fluctuates.

Establishing a **catch-and-release only** fishery will ensure an orderly, predictable, and sustainable opportunity for northern pike fishing across all water levels. Incidental fishing mortality will occur and will be sustainable, even during periods of low abundance or water level. Northern pike are highly fecund, and even a small number of spawning adults will produce sufficient numbers of recruits to fully utilize available rearing habitat and maintain the population.

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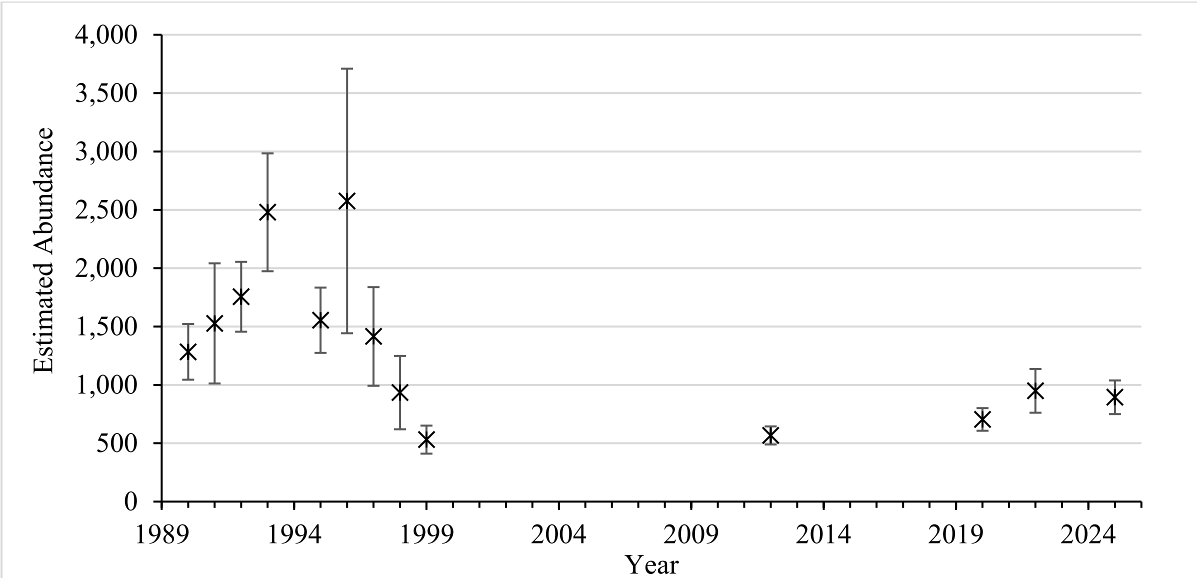

Figure 1.–Estimated abundances of northern pike ≥450 mm FL at Harding Lake, 1990–2025. Error bars represent a 90% CI.

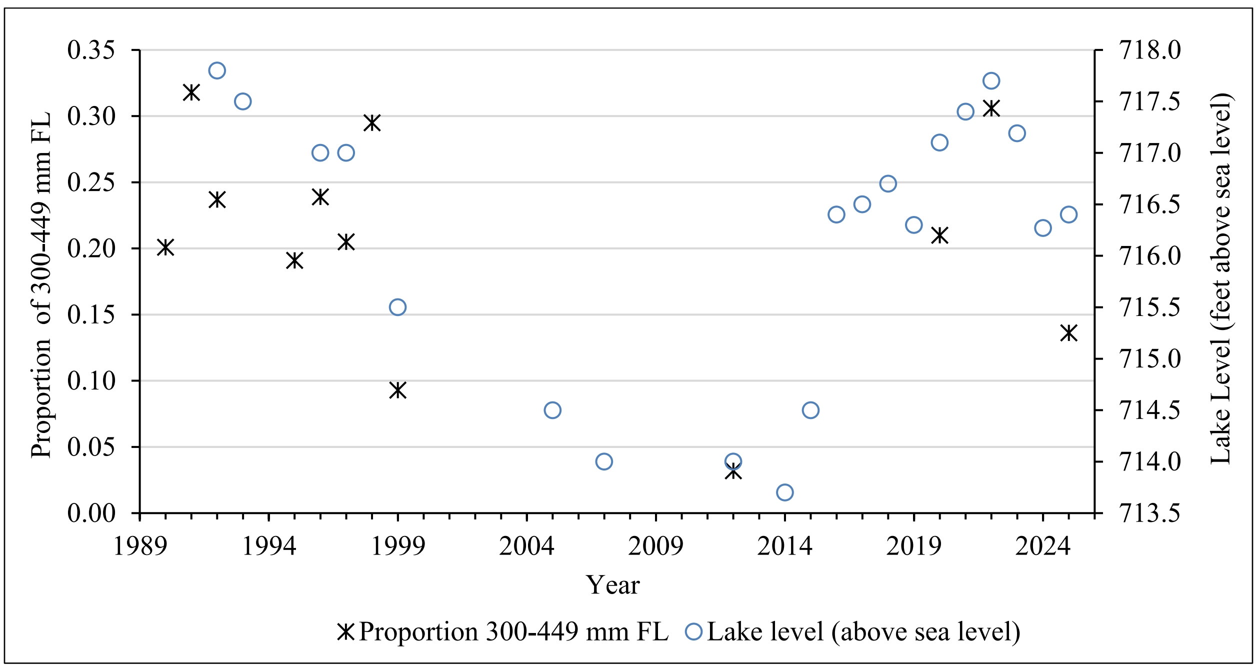

Figure 2.–Proportion of sampled northern pike 300–449 mm FL and lake level (feet above sea level) by year at Harding Lake, 1990–2025.