

DRAFT FEDERAL FISHERIES CLOSURE REVIEW
FCR27-03

Issue

FCR27-03 is a Federal Subsistence Board (Board) directed review of a Federal subsistence fishery closure to the harvest of salmon in the Jim River drainage (**Figure 1**). It is the Board's policy to review existing closures every four years so that Federal public lands and waters can be reopened when the closures are no longer necessary. The purpose of this closure review is to determine if the closure is still warranted and to ensure the closure does not remain in place longer than needed.

Closure Location and Species: Yukon River Drainage (District 4A), Jim River drainage (including Prospect and Douglas Creeks)—salmon

Closure Dates: Year-round

Current Federal Regulation

§___.27(e)(3) Yukon-Northern Area

(ix) You may not subsistence fish for salmon in the following drainages located north of the main Yukon River:

(C) Jim River including Prospect and Douglas Creeks.

Relevant Federal Regulations

§___.27(b) Subsistence Taking of Fish

(4) Except as otherwise provided for in this section, you may not obstruct more than one-half the width of any stream with any gear used to take fish for subsistence uses.

(16) Unless specified otherwise in this section, you may use a rod and reel to take fish without a subsistence fishing permit. Harvest limits applicable to the use of a rod and reel to take fish for subsistence uses shall be as follows:

(ii) Except as otherwise provided for in this section, if you are not required to obtain a subsistence fishing permit for an area, the harvest and possession limits for taking fish for subsistence uses with a rod and reel are the same as for taking fish under State of Alaska subsistence fishing regulations in those same areas. If the State does not have a specific subsistence season and/or harvest limit for that particular species, the limit shall be the same as for taking fish under State of Alaska sport fishing regulations.

§ __.27(e)(3) Yukon-Northern Area

(i) Unless otherwise restricted in this section, you may take fish in the Yukon-Northern Area at any time. ... You may subsistence fish for salmon with rod and reel in the Yukon River drainage 24 hours per day, 7 days per week, unless rod and reel are specifically otherwise restricted in this paragraph (e)(3).

(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060 [emergency orders]), unless superseded by a Federal special action.

(viii) In Subdistrict 4A after the opening of the State commercial salmon fishing season, you may not take salmon for subsistence for 12 hours immediately before, during, and for 12 hours after each State commercial salmon fishing period; however, you may take Chinook salmon during the State commercial fishing season, with drift gillnet gear only, from 6:00 p.m. Sunday until 6:00 p.m. Tuesday and from 6:00 p.m. Wednesday until 6:00 p.m. Friday.

(xi) You may take salmon only by gillnet, beach seine, dip net, fish wheel, or rod and reel, subject to the restrictions set forth in this section.

(xv) Unless otherwise specified in this section, you may take fish other than salmon by set gillnet, drift gillnet, beach seine, fish wheel, long line, fyke net, dip net, jigging gear, spear,

lead, or rod and reel, subject to the following restrictions, which also apply to subsistence salmon fishing:

(G) In the Jim River drainage, including Prospect and Douglas Creeks, you may harvest fish other than salmon with rod and reel only; the grayling harvest and possession limit is 10 per day.

Current State Regulation

Yukon Area—Subsistence

5 AAC 01.225. Waters closed to subsistence fishing

(b) The following drainages located north of the mainstem Yukon River are closed to subsistence fishing:

(4) Jim River drainage, including Prospect Creek and Douglas Creek;

5 AAC 01.230. Subsistence fishing permits

(a) Except as provided in this section and 5 AAC 01.249, fish may be taken for subsistence purposes without a subsistence fishing permit.

Yukon River Area—Sport

5 AAC 73.010. Seasons, bag, possession, and size limits, and methods and means for Yukon River Area

(a) Except as otherwise specified in this section or through an emergency order issued under AS 16.05.060, sport fishing is permitted year round in the waters of the Yukon River Area.

(b) Except as otherwise specified in (c) of this section, the following are the general bag, possession, and size limits for finfish and shellfish in the waters of the Yukon River Area:

(1) king salmon 20 inches or greater in length: the bag and possession limit is three fish, of which only two fish may be 28 inches or greater in length;

(2) salmon, other than king salmon: the bag and possession limit is 10 fish, with no size limit;

(c) The following are the exceptions to the general bag, possession, and size limits, and fishing seasons specified in (a) of this section for the Yukon River Area:

(4) in the Dalton Highway corridor (Trans-Alaska Pipeline corridor) within the Yukon River Area, which is described as a corridor five miles wide on each side of the Dalton Highway north of the Yukon River, excluding the Ray River,

(A) sport fishing for salmon is closed;

Regulatory Year Initiated: 1992

Extent of Federal Public Lands/Waters

For purposes of this analysis, the phrase “Federal public waters” is defined as those waters described under 36 CFR §242.3 and 43 CFR §51.3. Approximately three miles of Jim River exist within the Kanuti Refuge boundary, managed by the U.S. Fish and Wildlife Service (**Figure 1**). The remainder of the Jim River drainage is general domain land managed by the Bureau of Land Management (BLM). On general domain lands managed by the BLM, these regulations apply only to non-navigable waters.

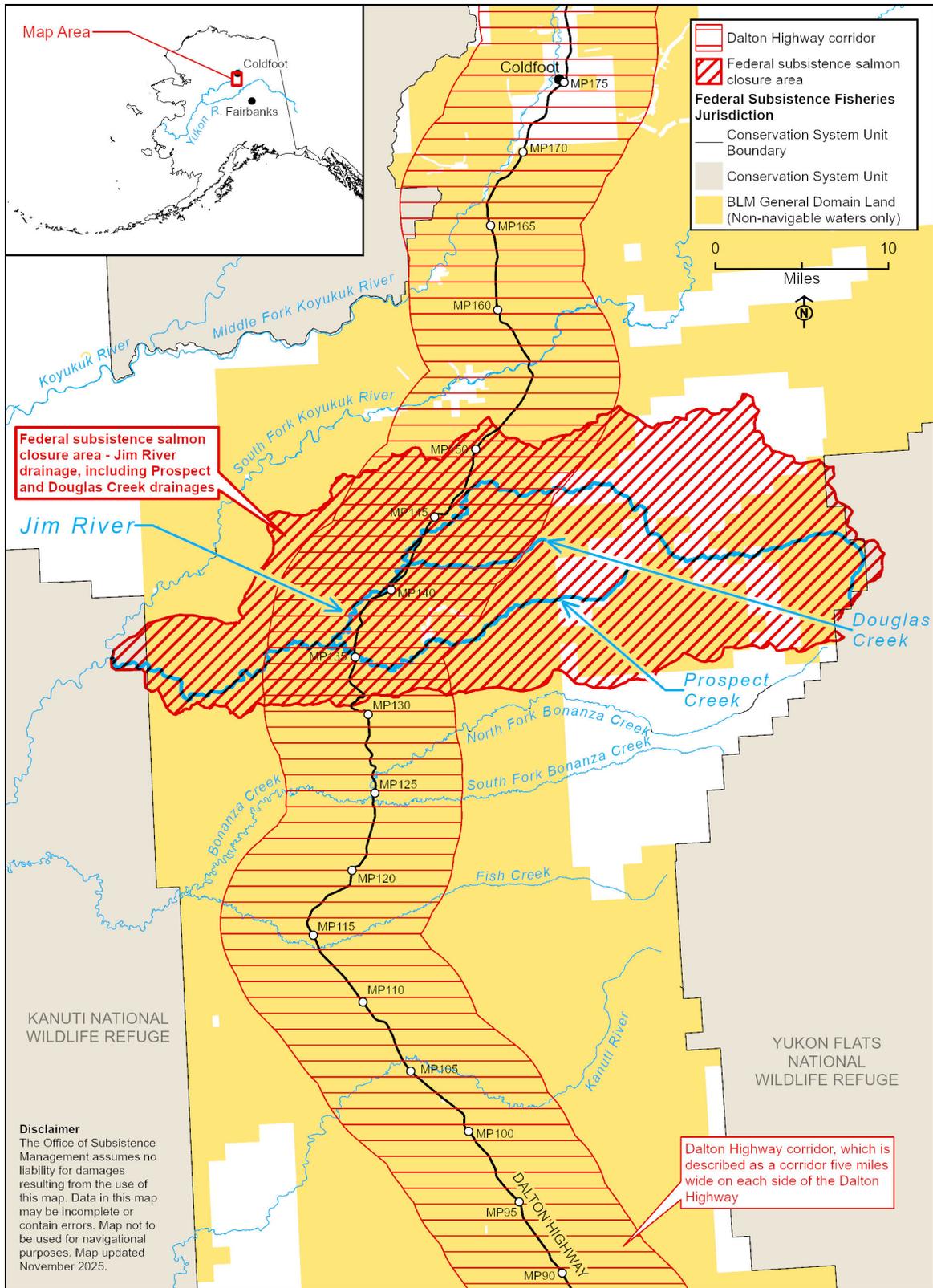


Figure 1. Map of the Jim River drainage (including Prospect and Douglas Creeks) that is closed to subsistence fishing for salmon.

Customary and Traditional Use Determination

Residents of the Yukon River drainage Districts 1–6 and the communities of Chevak, Hooper Bay, Scammon Bay, and Stebbins have a customary and traditional use determination for salmon in the Yukon River drainage Districts 1–6.

Regulatory History

Under State regulations, the portion of the Jim River within the Dalton Highway Corridor (5 miles on either side of the highway) has been closed to subsistence fishing since the late 1970s, beginning with construction of the Dalton Highway (Holen et al. 2012). A formal amendment to State regulation 5 AAC 01.255 was recorded in Register 102 on May 31, 1987, and the codified regulation now, and through later amendments (e.g., amendment 7/26/90, Register 115 through amendment 7/28/23, Register 247) identifies “Jim River drainage” explicitly, extending the closure beyond the Dalton Highway corridor. The opening of the Dalton Highway to public travel in 1994 provided new access to lakes and streams along the route. Increases in recreational fishing effort and harvest resulted in a salmon fishing closure within the Dalton Highway Corridor (Stuby 2021).

In 1992, the Federal Subsistence Management Program promulgated regulations governing the harvest of fish for subsistence uses in non-navigable waters within and adjacent to Federal public lands (57 Fed. Reg. 22940 [May 29, 1992]). These regulations incorporated many provisions from State subsistence fishing regulations. The Jim River closure was incorporated into Federal regulations in this manner.

In 1999, the Board also adopted Federal regulations for fish in navigable waters within and adjacent to Federal public lands where there is a Federal reserved water right (64 Fed. Reg. 1276 [January 8, 1999]). These regulations do not apply on navigable waters within and adjacent to BLM general domain lands (43 CFR 51.3).

The Federal subsistence fishing closures for the Jim River were reviewed by the Board during the 2021–2023 Fisheries Regulatory Cycle (FCR21-04). The Western Interior and Seward Peninsula Subsistence Regional Advisory councils recommended eliminating the closure to the harvest of all fish in the Jim River drainage and modifying regulations to allow rod and reel gear only and an Arctic Grayling harvest and possession limit of 10 per day. The Yukon-Kuskokwim Delta, Eastern Interior Alaska, and North Slope Subsistence Regional Advisory councils took no action in deference to the Western Interior Council. The Alaska Department of Fish and Game (ADF&G) was neutral and provided no comment. However, during the Board’s 2021 Fisheries regulatory meeting, the Department of Interior Solicitor’s Office expressed concern that any action taken by the Board beyond simply eliminating or maintaining the closure would not allow appropriate notice and opportunity for public comment. Therefore, the Board voted to maintain the closure with the expectation that a proposal could be submitted by the Western Interior Council to eliminate the closure.

For the 2023–2025 fisheries cycle, the Western Interior Council submitted Fisheries Proposal FP23-01, which requested that the Board rescind the closure to the subsistence harvest of nonsalmon fish in the

Jim River drainage and modify regulations to allow rod and reel gear only and an Arctic Grayling harvest and possession limit of 10 per day. The Western Interior, Yukon-Kuskokwim Delta, Eastern Interior, and North Slope Regional Advisory councils recommended supporting the proposal. The Board adopted FP23-01 in deference to the Councils. The Board stated that allowing for a limited Federal subsistence harvest would provide opportunity for federally qualified subsistence users. There was no conservation concern for the proposal, as salmon remained closed and nonsalmon fishing would be restricted.

Closure Last Reviewed: 2021—FCR21-04

Justification for Original Closure

This closure was adopted into Federal regulations from State regulations in 1992 to minimize disruption to the State's continuing fish and game management, because of the uncertainty over the resumption of State management of subsistence, yet still fulfill the requirements of Title VIII of ANILCA (55 FR 27114 [June 29, 1990]).

Council Recommendation for Original Closure

N/A

State Recommendation for Original Closure

N/A

Biological Background

Chinook, Chum, and Coho salmon are known to spawn and rear in the Jim River. Aerial surveys were flown sporadically from 1960 to 2015 to count Chinook and Chum salmon in the Jim River (ADF&G 2020). The 1960 to 2015 average count of live Chinook Salmon is 120 fish with a range of 0–358 fish. The average number of Chinook Salmon carcasses for these same years is 13 with a range of 0–126. Summer Chum Salmon averaged 278 live fish (range 0–1,484) and 116 carcasses (range 0–1,690). Fall Chum Salmon averaged 103 live fish (range 0–1,057), and 41 carcasses (range 0–672). During 2009–2012, and 2015, a mean of 183 Chinook Salmon and 462 Chum Salmon were counted per year (ADF&G 2020). There are no escapement goals for any of the salmon species in this drainage.

Cultural Knowledge and Traditional Practices

Of the many communities with a customary and traditional use determination for salmon in the Yukon River drainage, residents of Wiseman and Coldfoot, which are located in reasonable proximity to Jim River as it crosses the Dalton Highway, are most likely to subsistence fish for salmon in the area if the closure is rescinded. In addition to these communities, which are located on the road system, Evansville and Bettles are connected to the Dalton Highway via a winter road to Evansville from January through March (Holen et al. 2012). However, an ADF&G Division of Subsistence survey indicated that in 2011 residents of Bettles focused their salmon subsistence use on the John River, to

the northwest of the communities (Holen et al. 2012). Division of Subsistence also surveyed residents of Evansville for the 2011 study year. A map of Evansville's search and use areas specific to salmon during the study year was not included in the report, but a map of the community's search and use areas for all resources that year did not include Jim River (Holen et al. 2012).

The community of Stevens Village also has access to the Dalton Highway as it crosses the Yukon River, via boat and snow machine (Trainor 2022, pers. comm.). However, a subsistence survey of Stevens Village conducted from 1984 to 1985 showed that residents focused most of their subsistence fishing activity closer to their community on the Yukon River (Sumida 1988); a more recent ADF&G Division of Subsistence survey of Stevens Village did not map subsistence use areas (Brown et al. 2016).

Wiseman and Coldfoot

Wiseman and Coldfoot fall within the territorial boundaries of the Koyukon Athabascan people, close to the border with traditional Gwich'in Athabascan territory; this is an area which has also been strongly influenced by interaction with the Iñupiat (Clark 1981). This territorial border area likely reflected shifting residency by the different groups over time; ethnohistorians have shown that an area encompassing Wiseman and Coldfoot was associated with the Di'haii Gwich'in until the mid-19th century (Burch and Mishler 1995). When the writer and forester Bob Marshall spent time in Wiseman in the late 1920s to early 1930s, he observed that most Indigenous residents of the settler community were of Iñupiaq descent (Marshall 2000).

Wiseman and Coldfoot are small communities located on the Dalton Highway and the Middle Fork of the Koyukuk River. Both were established as the result of gold discoveries in the late 1800s and early 1900s (Holen et al. 2012). There were no permanent residents of Coldfoot by 1930, although the area continued to be used seasonally by Alaska Native families. In contrast, Wiseman continued to have a small population of residents throughout the mid-twentieth century (Marshall 2000, Holen et al. 2012). Coldfoot was re-settled in the 1970s in connection with construction of the Dalton Highway and the Trans-Alaska Pipeline, which also brought more people to Wiseman (Holen et al. 2012). The Dalton Highway opened to personal vehicles up to mile 211 in 1981, providing greater access to Wiseman and Coldfoot (ADNR 2017). As of 2024, the Alaska Department of Labor and Workforce Development estimated that there were 27 residents in Coldfoot and four in Wiseman (ADLWD 2024). The area also includes an unknown number of residents along the Dalton Highway Corridor in camps and other isolated households.

Traditionally, Koyukon Athabascans moved to fishing camps at the start of the salmon run, where they fished with salmon traps and weirs. They also set gillnets in eddies and at the mouths of tributaries of the Koyukuk River (Clark 1981). Salmon traps were replaced by nets after the introduction of commercial twine (Clark 1981). Writing about Wiseman in the late 1920s and early 1930s, Bob Marshall reported that "occasional adventuresome salmon [came] up the Koyukuk as far as Wiseman," but were found in larger numbers south of the community (Marshall 2000). There, salmon were caught using gillnets and dried and smoked for use by both humans and dogs (Marshall 2000). Today,

residents of Wiseman and Coldfoot can fish for salmon in the Jim River closure area under State sport fishing regulations only, except that sport fishing for salmon is closed within 5 miles on either side of the Dalton Highway.

ADF&G Division of Subsistence conducted its only subsistence survey of Wiseman and Coldfoot in 2012, for the 2011 calendar year. Wiseman residents traditionally harvested and used small amounts of Chum and Chinook salmon locally. However, in part because of the local closures to both subsistence and sport fishing for salmon in place since 1978, Wiseman residents primarily harvest salmon at locations far away from the community, such as in the Copper and Yukon rivers (Holen et al. 2012).

At the time of ADF&G's survey, there were five year-round households in Wiseman, and all were surveyed. During the 2011 study year, one of the five Wiseman households fished for salmon, resulting in an estimated 12 pounds of Sockeye Salmon per person, or 4% of Wiseman's total wild food harvest in weight. All the salmon were harvested by dipnet. In addition, Wiseman households received and shared Chinook Salmon, although they did not directly harvest any. All households used salmon (Holen et al. 2012).

For the same study year, Division of Subsistence identified five year-round households in Coldfoot, four of which were surveyed. Surveyed Coldfoot households did not attempt to harvest any salmon in 2011, although one of the surveyed households received and used coho and sockeye salmon (Holen et al. 2012).

Harvest History

Subsistence fishing for salmon is prohibited in the Jim River drainage under State and Federal regulations so there is no legal subsistence harvest of salmon in this system. Subsistence harvest of nonsalmon fish has been allowed under Federal regulations since 2023.

Special State of Alaska sport fish regulations apply to all streams within the Dalton Highway corridor. This corridor includes the stretch of the Trans-Alaska Pipeline north of the Yukon River and the land within 5 miles on each side of the Dalton Highway. The Ray River is the only exception, where State general regulations still apply. The closed area on the Jim River overlaps with this Dalton Highway corridor. Within this five-mile corridor on both sides of the highway, sport fishing for salmon is also closed.

During years when sport fishing for salmon in the Yukon River drainage is not closed or restricted by State emergency order or Federal special action, Chinook Salmon can be harvested outside of the Dalton Highway corridor with a limit of three per day, three in possession over 20 inches (only two can be over 28 inches), and 10 per day, 10 in possession for under 20 inches. Other salmon (Chum and Coho are the species most likely to be encountered) have a 10 per day, 10 in possession limit.

Sport fish harvest data for the Yukon Management Area show a 10-year average (2014–2023) harvest of 2 Chinook, 285 Chum, and 133 Coho salmon (Stuby 2025). The 5-year average (2019–2023) is slightly higher at 4 Chinook, 344 Chum, and 266 Coho salmon. Actual harvest in the Jim River

drainage is likely much lower because Chinook and Chum salmon harvest numbers represent the entire Yukon Management Area, not just the Jim River drainage alone. Coho Salmon harvest is also likely much lower because Jim River drainage harvests are included within the Yukon Management Area's "Other streams" category for all tributaries to the Yukon River, from the Koyukuk River upriver to Fort Yukon (Stuby 2025).

The ADF&G issued emergency orders closing Chinook Salmon sport fishing for the Yukon Management Area during every year 2014–2025, except for limited opportunities in 2017 and 2019 (Stuby 2025). Fall Chum Salmon sport fishing had more opportunities, with harvest allowed 2014–2019 (Stuby 2025). There were no sport fishing closures for Coho Salmon 2014–2020 or in 2025. However, ADF&G did issue emergency orders that closed Coho Salmon sport fishing during 2021–2024 (Stuby 2025).

Alternatives Considered

One alternative is to rescind the closure. Currently, federally qualified subsistence users cannot harvest salmon in the Jim River drainage under Federal subsistence regulations. However, salmon can be harvested under State sport fish regulations in the parts of the drainage outside of the Dalton Highway corridor unless restricted by State emergency order or Federal special action.

Rescinding the closure would establish a Federal subsistence harvest priority for salmon in the area. Federally qualified subsistence users with a customary and traditional use determination for salmon in the Yukon River drainage could harvest salmon in the Jim River drainage under 43 CFR 51.27. Federal subsistence regulations would allow subsistence harvest of salmon, and the in-season manager could limit harvests on Federal public lands and waters to federally qualified subsistence users only or close to all users if warranted by poor run sizes. This would give federally qualified subsistence users priority over non-federally qualified users and protect salmon populations from overharvest. Additionally, rescinding the closure would allow unrestricted salmon harvest with all legal subsistence gear other than rod and reel under 43 CFR 51.27(b)(1). In an easily accessible system, this could lead to overharvest, and localized stock depletion. Further, unless restricted by State emergency order or Federal special action, federally qualified users could fish for salmon 24 hours a day, 7 days a week within the Jim River drainage (43 CFR 51.27(e)(3)), including the Dalton Highway corridor, possibly leading to enforcement challenges and confusion among user groups.

While salmon populations may be protected by limiting subsistence harvest to certain gear types (for example, rod and reel only) and/or establishing harvest limits, these modifications are not possible through the closure review process and would require submission of a fisheries regulatory proposal. Until a proposal can be submitted, the Federal in-season manager may use their delegated authority to restrict gear types and/or harvest limits, to protect populations in the closure area. If a fisheries proposal is submitted, the Office of Subsistence Management recommends that harvest be limited to rod and reel only and that salmon harvest limits be established. This recommendation is in response to previous Council statements of conservation and overharvest concerns for salmon.

Another alternative is to modify the closure area to align with the Dalton Highway Corridor, defined as 5 miles wide on either side of the Dalton Highway, north of the Yukon River. Under this alternative, Federal subsistence fishing for salmon would remain closed only within this corridor, while restrictions would be removed from Federal public lands outside of it. This modification would affect approximately 3 miles of the Jim River that exists within the Kanuti National Wildlife Refuge boundary, where the river first branches off from the South Fork Koyukuk River, and any non-navigable waters managed by the BLM.

This alternative would align Federal subsistence regulations with existing State sport fishing closures in the Dalton Highway Corridor, which prohibit salmon fishing within 5 miles of the highway. Outside of this corridor, sport fishing is allowed under State regulations, and this alternative would extend similar access to federally qualified subsistence users under Federal regulations. It would also address concerns about Federal opportunity and access by removing Federal subsistence restrictions in areas where sport fishing is allowed.

This type of modification could be implemented as part of the closure review process. It would allow for a more targeted conservation strategy, focusing restrictions on the most accessible and potentially vulnerable areas, while providing subsistence opportunities elsewhere on Federal public lands.

However, this alternative would require careful consideration of the biological status of salmon populations in the Jim River drainage in areas outside the corridor. If implemented this alternative would allow unrestricted salmon harvest with all legal subsistence gear other than rod and reel under 43 CFR 51.27(b)(1) within Federal public waters outside of the corridor unless restricted by State emergency order or Federal special action. Federal rod and reel harvest limits for salmon would match State sport fish limits. Establishing harvest limits or restricting gear types to address conservation concerns would require a fisheries proposal be submitted as these modifications are not possible through the closure review process.

A third alternative is to modify the closure by closing the fishery to all users and uses. This would fully protect salmon populations in the closure area. Under this alternative, there would be no subsistence or sport fishing opportunity. Closing to all users and uses would eliminate the current situation, in which Federal public waters are closed to subsistence fishing while remaining open to other uses including sport fishing under State regulations. This alternative would be an unnecessary restriction on non-subsistence uses as sport fish harvest data and recent sport fish closures for salmon suggest the sport fishery does not present a conservation concern. In addition, subsistence surveys indicate subsistence users may harvest a portion of their wild foods under State sport fish regulations.

Effects

Retaining the status quo keeps the salmon subsistence closure in the Jim River drainage in place, which helps protect stocks in an easily accessible area where population levels are unknown. Federally qualified subsistence users could still harvest salmon under State sport fish regulations outside of the Dalton Highway corridor using rod and reel unless restricted by State emergency order or Federal special action. However, there would not be an opportunity to harvest salmon under Federal

regulations and there would not be a Federal subsistence priority harvest opportunity. Keeping the closure in place also prevents gear like gillnets, which could otherwise remove large numbers of fish or inadvertently capture a quantity of fish that exceeds harvest limits.

Rescinding the closure would give federally qualified subsistence users a priority harvest opportunity for salmon in the Jim River drainage, including that portion of the closure area that is currently open to State regulated sport fishing. However, opening the area without limits on gear types beyond rod and reel, or adjusting harvest limits, could increase the risk of overharvest and localized stock depletion due to easy access within the drainage. Protective measures, such as restricting subsistence harvest to rod and reel or adjusting harvest limits, cannot be implemented through the closure review itself and would require a separate fisheries proposal, though the Federal in-season manager could apply restrictions if needed. Given these concerns, rescinding the closure may pose biological risks unless appropriate harvest restrictions are established.

OSM PRELIMINARY CONCLUSION

- Retain the Status Quo
- Rescind the Closure
- Modify the Closure
- Defer Decision on the Closure or Take No Action

Justification

Population statuses of salmon are unknown in the closure area, which is road-accessible, allowing easy access to the harvest of salmon. If the closure is rescinded harvest of salmon would be unrestricted for all legal gear types other than rod and reel, and gillnets could be used to harvest high numbers of salmon. Retaining the closure would protect salmon from overharvest until a proposal to restrict harvest and/or gear types in the closure area could be submitted. Federally qualified subsistence users could still harvest salmon outside of the Dalton Highway corridor under State sport fish regulations with rod and reel while the Federal closure is in place unless restricted by State emergency order or Federal special action. Non-federally qualified users could also harvest salmon under State sport fish regulations.

Retaining the status quo would not provide a Federal subsistence priority harvest opportunity for salmon in the area. However, it would align with past recommendations of the Western Interior, North Slope, Yukon-Kuskokwim Delta, and Eastern Interior Regional Advisory councils, which have all expressed support for keeping the salmon subsistence closure in place because of conservation concerns. This position was reinforced during the 2023–2025 Fisheries Regulatory Cycle when all four councils recommended to support Fisheries Proposal (FP23-01) which maintained the closure to salmon due to conservation concerns.

Literature Cited

ADF&G (Alaska Department of Fish and Game). 2020. AYK data base management system. Available online at: https://www.adfg.alaska.gov/CF_R3/external/sites/aykdbms_website/Default.aspx

ADLWD (Alaska Department of Labor and Workforce Development). 2024. Alaska Department of Labor and Workforce Development: Alaska population estimates. <https://live.laborstats.alaska.gov/data-pages/alaska-population-estimates>. Retrieved: May 28, 2024.

ADNR (Alaska Department of Natural Resources). 2017. Historic Roads of Alaska: Driving the History of the Last Frontier. Office of History and Archaeology and Interpretation and Education, Alaska State Parks. https://dot.alaska.gov/stwddes/desenviron/assets/pdf/historic/Book_Historic_Roads_2017.pdf. Retrieved: September 29, 2025.

Brown, C. L., N.M. Braem, M.L. Kostick, A. Trainor, L.J. Slayton, R.M. Runfola, E.H. Mikow, H. Ikuta, C.R. McDevitt, J. Park, and J.J. Simon. 2016. Harvests and uses of wild resources in 4 interior Alaska communities and 3 arctic Alaska communities, 2014. ADF&G, Div. of Subsistence Tech. Paper No. 426. Fairbanks, AK.

Burch, E. S. and C. W. Mishler, C. W. 1995. The Di'haii Gwich'in: mystery people of Northern Alaska. *Arctic Anthropology* 32(1): 147–172.

Clark, A.M. 1981. Koyukon. Pages 582–601 in J. Helm, ed. *Handbook of North American Indians: Volume 6: Subarctic*. Smithsonian Institution. Washington, D.C.

Holen, D., S.M. Hazell, and D.S. Koster, eds. 2012. Subsistence harvests and uses of wild foods by communities in the eastern Interior of Alaska, 2011. ADF&G, Div. of Subsistence Tech. Paper No. 372. Anchorage, AK.

Marshall, R. 2000 (1933). *Arctic village: a 1930s portrait of Wiseman, Alaska*. University of Alaska Press. Fairbanks, AK.

Stuby, L. 2021. Fishery management report for sport fisheries in the Yukon Management Area, 2019. ADF&G, Fishery Management Report No. 21-27, Anchorage, AK.

Stuby, L. 2025. Fishery management report for sport fisheries in the Yukon Management Area, 2024. Alaska Department of Fish and Game, Fishery Management Report No. 25-32, Anchorage.

Sumida, V.A. 1988. Land and resource use patterns in Stevens Village, Alaska. ADF&G, Div. of Subsistence Tech. Paper No. 129. Fairbanks, AK.

Trainor, A. 2022. Northern Region Program Manager. Personal communication: email. ADF&G, Div. of Subsistence. Fairbanks, AK.