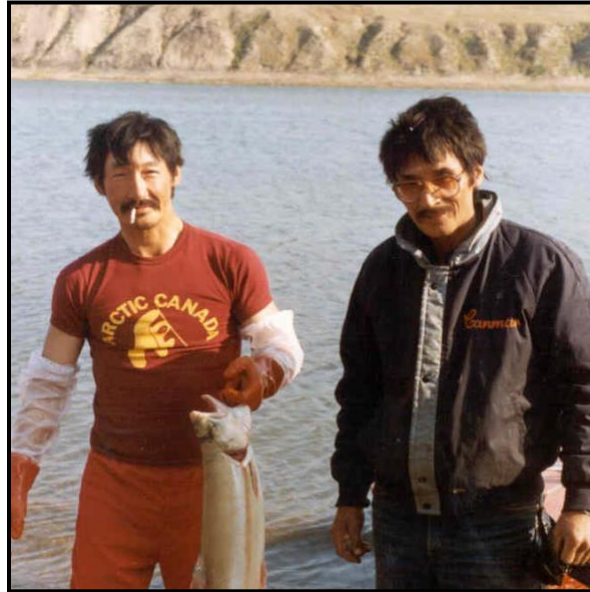


Paulatuk Ikalukpik (Arctic Char - *Salvelinus alpinus*)

Community Fisheries Management Plan

2025



DEDICATION

Nelson Allen Green 1948 - 1999

Charlie Ruben 1952 - 2012

Nelson Green and Charlie Ruben worked on Char Management and Projects in the Paulatuk Area starting in the 1980s. From the day the seeds of this plan were sown, to three years later when the first edition was signed-off by the PHTC, Nelson was totally committed to it. He willingly and effectively chaired the Paulatuk Char Working Group from 1996 to 1998. His vision was to have a Plan that ensured the char resources were conserved, and that the people of Paulatuk had char for subsistence use.

For their insight, patience, knowledge, and guidance in the preparation of this plan, we dedicate this Management Plan to our dear friends and colleagues, Nelson Allen Green and his hunting partner Charlie Ruben.

May God keep their souls and help us to implement the Management Plan for conservation of the resource, to provide for the future, and in deep respect of their memories.

This 2025 edition of the Paulatuk Ikalukpik (Arctic Char) Community Fisheries Management Plan was updated through guidance and leadership from the Paulatuk Char Working Group, with significant contributions from Diane Ruben, Ellen Lea, Colin Gallagher, Red Clarke, Burton Ayles, Stacey Challinor, and Kiyo Campbell.

A condensed version of this Community Fisheries Management Plan has been made into a “back-pocket” pamphlet. The information in the “back-pocket” pamphlet is consistent with that in this Plan and meant to compliment it as an easily referenceable resource for harvesters while out on the land.

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1.0 – Introduction

Ikalukpik (Arctic Char - *Salvelinus alpinus*) from the Hornaday River and Brock River provide an important source of food for the residents of Paulatuk, Northwest Territories (NT). Both anadromous and landlocked Arctic Char are harvested as part of the subsistence fishery, which has been documented since the early 1940s (PHTC et al. 2016).

Between 1995 and 1997, the annual community-based harvest monitoring program at the mouth of the Hornaday River detected decreases in the average size, age, and catch rate in the fisheries. As a result, in 1996 the Paulatuk Hunters and Trappers Committee (PHTC) identified the need for an Arctic Char management plan. At the request of the Fisheries Joint Management Committee (FJMC), the PHTC convened the Paulatuk Char Working Group (PCWG) and prepared the Paulatuk Arctic Char Management Plan on behalf of the PHTC and the FJMC. The first version of the Plan was in place for 1998-2002 and was later revised for 2003-2005 and 2006-2007 (PCWG 1998, PCWG 2006). The Plan has been the basis for the subsequent management of Arctic Char populations in the Paulatuk area. The current PCWG has membership from Fisheries and Oceans Canada (DFO), the FJMC, the Parks Canada Agency (PCA), and the PHTC, and have prepared this updated plan with financial support provided by the FJMC and DFO. The plan summarizes Arctic Char biology, describes Arctic Char fisheries in the Paulatuk area, provides the latest information on the status of Paulatuk area Arctic Char, identifies management requirements, describes community management measures, and summarizes research and monitoring priorities. This plan is an evergreen document and can be updated at any time as required, or on a periodic basis (every five years), to update the current community management and information.

Goals of the Paulatuk Arctic Char Community Fisheries Management Plan

1. To ensure healthy stocks of Arctic Char in the Paulatuk area.
2. To preserve and protect Arctic Char habitats in the Hornaday River and other Arctic Char fishing locations in the Paulatuk area.
3. To manage and conserve Arctic Char populations in the Paulatuk area to ensure that subsistence needs of the residents of Paulatuk are met today and in the future.

2.0 – Background Information

Since the Inuvialuit Final Agreement (IFA) became law (1984), the basic legal context for managing the Paulatuk Arctic Char fishery has been constant. The fishery is managed through an adaptive co-management approach used throughout the Inuvialuit Settlement Region (ISR). This adaptive co-management approach enables the PHTC, DFO, FJMC and PCA to work closely together in fulfilling their responsibilities under the IFA, *Fisheries Act*, *Oceans Act*, and *Canada National Parks Act* for the conservation and management of Arctic Char and its habitats and fisheries. The *Oceans Act* applies to all marine waters (e.g., Darnley Bay) and the *Canada National Parks Act* applies to Arctic Char in Tukturnogait National Park.

The adaptive co-management process focuses on: establishing clear decisions and rationales for proposed actions; implementing those decisions; documenting and evaluating the results on the fish stocks and fisheries; and responding to evaluations by confirming, modifying or changing decisions in future. Decision-making incorporates precautionary and ecosystem approaches.

Since the plan was last revised for 2006-2007 (PCWG 2006), some significant changes have occurred in the context of Paulatuk area Arctic char fisheries, which now have to be considered:

- Fishing on the Hornaday River has decreased and has increased at other locations such as Lasard Creek.
- New information on Paulatuk Arctic Char has been obtained through monitoring and research programs.
- A DFO peer-reviewed stock assessment of Arctic Char in the Darnley Bay area was conducted in 2014 (DFO 2016).
- Climate and ecosystem changes are occurring, including
 - Water flow in the Hornaday River has decreased and/or changed to different channels.
 - Previously rare species, such as Pacific salmon (*Oncorhynchus* spp.), are encountered more frequently in some years and the community is concerned with the impact they may have on Arctic Char.
 - Changes in ice conditions, including break-up and freeze-up times, are affecting Arctic Char and fishing activities.
 - Changes in the amount of sediment being deposited into river systems from permafrost thaw.
- The Paulatuk Community Conservation Plan was revised in 2008 and again in 2016.
- The Angununiaqvia niqiqyuam Marine Protected Area (ANMPA) was established in 2016 and includes the western part of Darnley Bay.
- The *Fisheries Act* was amended in 2019 to restore and incorporate new provisions to protect all fish and their habitats. In addition, amendments recognized the rights of Indigenous Peoples and their knowledge, in informing management decision-making.
- DFO's policy framework for fishery management incorporates precautionary and ecosystem-based approaches through the Sustainable Fisheries Framework.
- The Beaufort Sea Integrated Fisheries Management Framework for new developing commercial fisheries was completed in 2014 and updated in 2025.

2.1 – Biology of Arctic Char in the Paulatuk Area

Most knowledge about Paulatuk area Arctic Char comes from Traditional Knowledge, sampling of the commercial harvest in 1973, 1974, 1979, 1981 and 1983 (MacDonnell 1987, MacDonnell 1988), community harvest surveys, the Inuvialuit Harvest Study (1988-1997; Joint Secretariat 2003) and DFO harvest monitoring programs at the Hornaday River (1990-present), Lasard Creek (2011-present), and Tippitiuyak (2012-present). The harvest-based monitoring programs collect catch-effort and biological data from subsistence-caught char, including fin clips for

genetics analysis, stomachs, and muscle samples for diet/ecosystem analysis (see Harwood et al. 1999, Harwood et al. 2009, Gallagher et al. 2017). Other information comes from: a weir and tagging study of Hornaday River Arctic Char conducted in 1986; radio tagging and tracking of Arctic Char in the Hornaday River in 1995-1996 and 1999, which identified overwintering, spawning, and summer feeding areas (Harwood and Babaluk 2014); and a stock assessment of information on Hornaday River Arctic Char conducted in 1999 (DFO 1999) and of Darnley Bay area Arctic Char in 2014 (DFO 2016).

Arctic Char have three types of life histories: (1) anadromous (sea run), (2) landlocked, and (3) resident (*i.e.*, lifetime spent in freshwater although natal watershed is connected to the ocean; typically sympatric with anadromous fish during spawning and overwintering). All three life histories occur in the Hornaday River system. Anadromous Arctic Char spawn and overwinter in freshwater systems, while spending the summer feeding in coastal waters. The Hornaday River has the largest and most important population of anadromous Arctic Char in the Paulatuk area. The Brock River has a smaller, but still significant population of anadromous Arctic Char (Roux et al. 2011). Landlocked Arctic Char populations occur in a number of lakes in the Paulatuk area, including Seven Islands Lake and Rummy Lake. Other populations of anadromous or landlocked Arctic Char may also exist in the area. Morphologically different ‘blue’ Arctic Char occurs at Tippitiuyak (Green’s Camp) on the west coast of Darnley Bay; they are similar in length, weight and age to those of the Hornaday River (Kavik-Axys Inc. 2012, Gallagher et al. 2017).

The populations from the Brock River and the Hornaday River are genetically distinct, with some gene flow between them. Both populations contribute to the summer fishery along the eastern coast of Darnley Bay, but based on genetic mixed-stock fishery analyses the Hornaday River stock contributed to the majority of the coastal harvest (about 80% for samples collected 2010-2012; Boguski et al. 2016, Harris et al. 2016). Landlocked or resident Arctic Char in two Brock River system lakes were genetically distinct from anadromous Arctic Char in the Brock and Hornaday rivers.

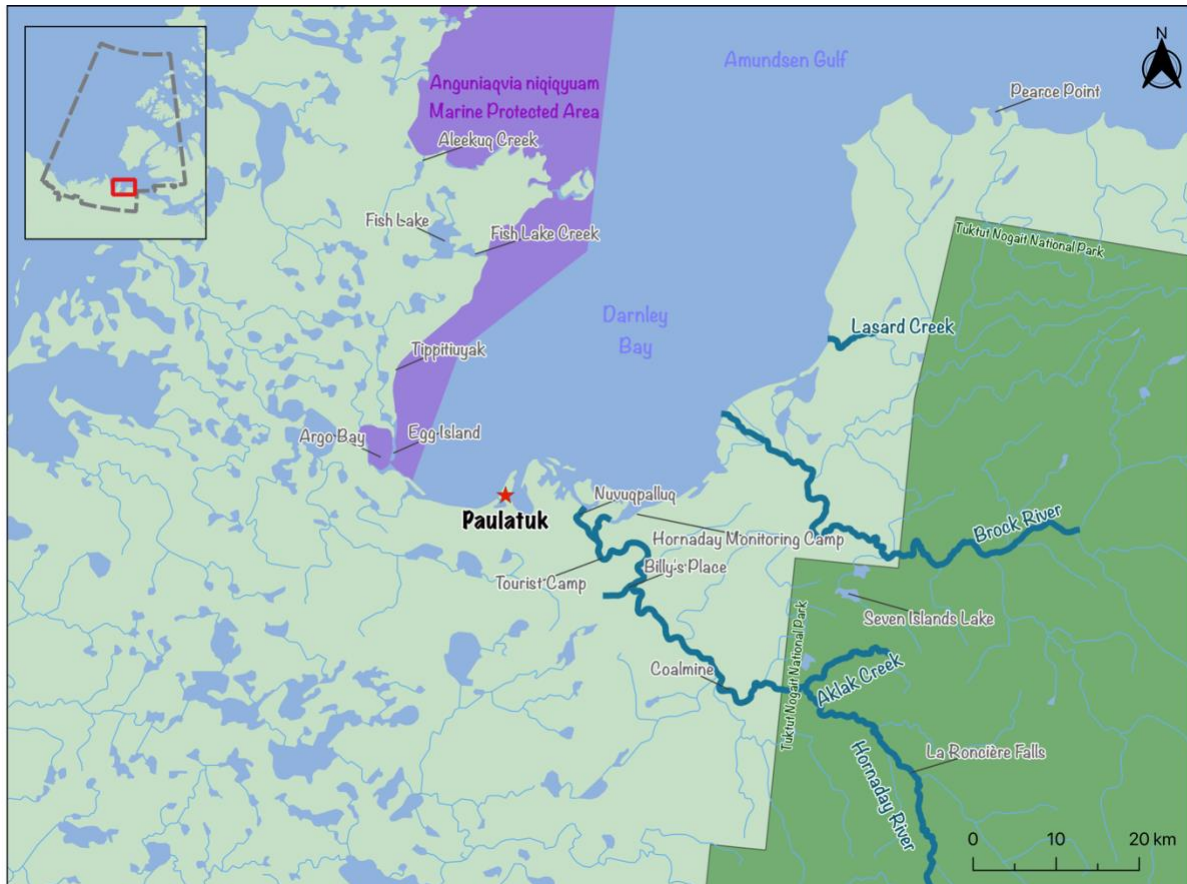


Figure 1. Notable Arctic char fishing areas and landmarks in the Paulatuk area.

Hornaday River Arctic Char spawn in fresh waters during late September and early October at about the same time when the winter ice forms. They prefer to lay their eggs in coarse gravel but may find other suitable places to spawn so long as they are not scoured by ice during the winter and the temperature for egg incubation is suitable. Strontium levels in the otoliths of anadromous Arctic Char from the Hornaday River suggest there may be various sites of origin of the Arctic Char (Babaluk et al. 1998). Hornaday River Arctic Char spawn and overwinter in at least four of the deep holes in the Hornaday River between Coalmine and Aklak Creek and in the pool at the base of La Roncière Falls (Harwood and Babaluk 2014). The 23 m high La Roncière Falls blocks upstream movements of all fish. Nuvuqpalluq, near the mouth of the river has also been identified by Paulatuk harvesters as an over-wintering area for Arctic char in the Hornaday River. Brock Lake was found to be an over-wintering area for at least one Arctic Char tagged in 1999 at the Hornaday River. Arctic Char have a plastic life history that allows them to use any suitable habitats as necessary.

The eggs hatch in the spring and fish spend the first 3–4 years of their lives in freshwater rearing areas before undertaking seasonal migrations between freshwater and the ocean in order to feed. Adult Arctic Char usually do not spawn each year, having one or two years of rest between spawning. In the Hornaday River, fish reach maturity at approximately age 7 and spawn every

second year (Harwood et al. 1999, Harwood et al. 2009, Gallagher et al. 2017). Some mature Arctic Char intending to spawn in the following year may remain in the Hornaday River for up to 20 months, sometimes migrating to the estuary, to spawn the following fall.

During summer, anadromous Arctic Char migrate and feed in the coastal waters of Darnley Bay including Pearce Point (a highly productive area of coastal upwelling) (Harwood and Babaluk 2014). Sea run Arctic Char feed in coastal areas for approximately 1.5 to 2.5 months, which provides most of their annual energy requirements. Arctic Char feed mainly on small fish and benthic organisms including capelin (*Mallotus villosus*), amphipods, and sandlance (*Ammodytes* sp.).

In August, only a small fraction of the upstream migrants are in spawning condition, virtually all are in non-spawning condition, 'silver' (e.g., a combination of char that are not yet old enough to spawn, and mature char that are 'resting').

The size of Arctic char harvested in the fishery over the past ten years has been predominantly between 19.5 and 27.5 inches (500–700 mm) (Harwood et al. 1999, Harwood et al. 2009, Gallagher et al. 2017). Annual mean length and weight have demonstrated a sinusoidal ('up and down') pattern over the past three decades. Currently, sizes appear to be getting smaller with the most recent data from monitoring at the mouth of the Hornaday River showing mean length was 21 inches (531 mm). Harvested Arctic Char were mainly between 6 and 9 years old with few Arctic Char in the Hornaday River are older than 10 years old. Growth has varied considerably since 2014.

2.2 – Arctic Char Fisheries in the Paulatuk Area

2.2.1 - Subsistence Fishery

Anadromous Arctic Char provide an important source of food for the residents of Paulatuk. Under the Paulatuk Char Community Fisheries Management Plan, a Voluntary Community Harvest Level of 1,700 anadromous Arctic Char was in place for the subsistence fishery from 1998 to 2012, which was increased to 1,800 for 2013, to 1,900 for 2014, and 2,000 Arctic Char in 2015. Currently, the Voluntary Community Harvest Level is 2,000 Arctic Char (Appendix II).

The Paulatuk Community Conservation Plan (PHTC et al. 2016) identifies rivers, lakes, and coastal areas where fishing for Arctic Char and other species occurs. Arctic Char from the Hornaday River dominate the fishery and are caught mainly at the mouth of the river during their upstream migration in August, where the Hornaday monitoring program was established in 1990 (Harwood et al. 2009). Some residents are now fishing more often in summer farther from the community, at locations along the shores of Darnley Bay including Tippitiuyak, Argo Bay, between the mouth of the Brock River and Fish Lakes, and Lasard Creek (Lea et al. 2020). The Lasard Creek and western Darnley Bay areas (near Tippitiuyak) are now of increased importance, with harvest monitoring programs set up in recent years to better understand the harvest and fish demographics at these locations (Gallagher et al. 2017).

The estimated annual harvest, including subsistence, commercial, and sport fisheries, averaged 1,800 Arctic Char (4,200 kg) from 1968-1974 and 3,800 (8,700 kg) from 1975-1986. From 1984-1993, the average subsistence harvest was 2,217 Arctic Char. Since the implementation of the Management Plan in 1998, the number of Arctic Char harvested has been within the Voluntary Community Harvest Level, with the exception of 2014. Between 1998 and 2013, the reported annual subsistence harvest ranged from 479 to 1,949 Arctic Char (Lea et al. 2020). In 2014, the subsistence harvest totalled 2,509 Arctic Char, exceeding the Voluntary Community harvest Level of 1,900 Arctic Char. Between 2015 to 2021, the reported annual harvest ranged from 621 to 1,982 (with an average of approximately 1,234) Arctic Char (Appendix II). Currently, the Paulatuk Fish and Marine Mammal Harvest Study helps to track Arctic Char harvest numbers and ensure the voluntary community harvest level is not exceeded (Section 3.1.1).

Mono-filament gillnets (4 ½" and 5" (114-127 mm) mesh size) are most commonly used in the fishery (Gallagher et al. 2017), while jigging through the ice is also an important method of fishing. The present-day subsistence fishery occurs primarily during the summer (June-September) and then during the fall and early-winter (October-December). The majority of the fishing takes place along the coast and in the lower Hornaday River during the summer months. About a quarter of the annual catch comes from the under-ice fishing at upstream over-wintering holes.

Harvesting of landlocked Arctic Char from inland lakes occurs mostly during spring (May and June) by jigging (jiggling) under the ice. Fishing occurs at locations such as Seven Islands Lake, Brock Lake, and other lakes on the Parry Peninsula. Harvest of landlocked Arctic Char is variable. Between 2003 and 2013, the harvest ranged from 80 to 431 landlocked Arctic Char and averaged 241 Arctic Char (Lea et al. 2020).

2.2.2 - Commercial Fishery

A commercial fishery for Arctic Char at the Hornaday River began in 1968 and continued through 1986. Annual quotas ranged from 2,300 kg to 6,800 kg. Production averaged 5,760 kg between 1977 and 1984, and the estimated annual catch ranged from 229 to 3,780 Arctic Char (Lea et al. 2020). Declines in the size and catches of Arctic char prompted a hold on the commercial fishery in 1987. Since then, no commercial fishing has occurred in order to prioritize the subsistence fishery.

After the hold on the commercial fishery, test fisheries were conducted in other locations such as Brock River (1987), Horton River (1988), Balaena Bay (1989), and Tom Cod Bay (1989) to find alternative sources of Arctic Char. These test fisheries were not considered successful.

2.2.3 - Sport Fishery

The sport fishery is managed under the *NWT Fishery Regulations*, with exception of the area within Tukturnogait National Park (Figure 1). Sport fishers looking to angle in the Paulatuk area

require a Sport Fishing Licence validated for the ISR and must register with the PHTC or FJMC if they wish to fish from land referred to in 7(1)(a) and 7(1)(b) of the IFA. In 2013, at the request of the community, the Daily Catch and Possession Limits for the Hornaday River Arctic Char were reduced by Variation Order to catch and release only. However, due to recent concerns about the status of Hornaday River Arctic char, and in order to prioritize the subsistence fishery, the PHTC is not supportive of any sport fishing activity in the Hornaday River.

Fishing within Tuktut Nogait National Park requires a National Park Fishing Permit, except by Inuvialuit beneficiaries. Catch and Possession Limits differ within the National Park and the Hornaday River downstream of La Ronciere Falls and up to the boundary of the park, Seven Islands Lake, and Aklak Creek are closed year-round to sport fishing. For a complete list of fishing regulations in Tuktut Nogait National Park, contact the Parks Canada Operations Centre in Paulatuk at (867) 580-3233.

2.3 – Stock Status

In the early 1980s fishers noticed a change in their catch of Arctic Char at the Hornaday River, leading to the hold on commercial fishing in 1987. Biological data from the early 1990s indicated the population was subject to a high level of exploitation with the subsistence fishery catch averaging 2,400 Arctic Char per year. At the time, the best estimate for the size of the Hornaday River population was 15,000 fish from a 1986 study (MacDonnell 1987). Although, the 1986 population estimate was made at a time when the population was depleted; it included returning first time sea-run migrants and current year non-spawning Arctic Char, but virtually no spawners. In addition, Arctic Char too young to go to sea (ages <4 years) were not represented in this count.

The PHTC, FJMC, and DFO monitored the Hornaday River Arctic Char fishery annually since 1990, including information on age, length, and catch-per-unit-effort (CPUE). From 1990 to 1998, annual changes in CPUE, length, age, and condition of Arctic Char were observed but there were no strong trends (DFO 1999, Harwood et al. 1999). After the Paulatuk Char Management Plan was implemented in 1998, the average size of the Arctic Char increased steadily and the average age remained relatively constant from 1998-2001 and increased noticeably in 2002 (Harwood et al. 2009). There was a broad distribution of sizes of Arctic Char in the fishery. Median length, weight, and condition factor appeared to be stable. Harvested Arctic Char were mainly between 6 and 8 years old.

An assessment of the Arctic Char in the Paulatuk area was conducted in 2014 to address a requested increase to the Voluntary Community Harvest Level to meet the subsistence needs of the community, the increased fishing effort at Lasard Creek, and the relative contributions of Arctic Char from the Brock River and Hornaday River systems (DFO 2016). The biological and catch indices and modelling indicated that the Hornaday River Arctic Char population was not experiencing overfishing and was healthy (Gallagher et al. 2017, Zhu et al. 2017). Models estimated the abundance of Arctic Char from the Hornaday River in 2013 to be from 17,000 to 33,700 for fish longer than 440 mm, and 78,600 for the total population (Zhu et al. 2017). The

Voluntary Community Harvest Level of 1,800 Arctic Char in 2013 appeared to be sustainable. The size of Arctic Char populations at the Horton River, Brock River, and other nearby locations are not known but are likely smaller than the Hornaday River Arctic Char population.

More recently, Paulatuk fishers have experienced new reasons for concern regarding the health of the population. These concerns are related to climate change, including: increasing frequency of inclement weather, reducing the window for good fishing times and affecting CPUE when people do fish; changing freshwater habitats like altered river channels and flow, as well as increased sediment inputs from permafrost thaw; and increasing numbers and uncertain impacts of previously uncommon species in the area, like Pacific salmon (*Oncorhynchus* spp.; Chila et al. 2021, Dunmall et al. 2024). There is still uncertainty on the impacts of these changes and whether some of them are a result of anomalous years or whether they are part of long-term trends, but years with ‘good fishing’ are seeming to be more sporadic.

2.4 – Management Concerns

2.4.1 - Population Conservation

Concerns about the health of the Hornaday River Arctic Char was the initial reason for the development of the Paulatuk Char Management Plan and while there have been signs of recovery and population modeling to show that the level of fishing is sustainable, Paulatuk fishers are once again voicing concerns about the health of the population. These concerns, starting in 2018, are related to a changing climate, low harvest numbers and CPUE, and potential impacts of previously uncommon species like the Pacific salmon. The current Voluntary Community Harvest Level is 2,000 Arctic Char. However, continued sound management of the fisheries using the precautionary and ecosystem approaches is required to help ensure the conservation and sustainable use of the Arctic Char populations and to optimize harvest levels. Continued monitoring of the fishery is essential.

The management of Arctic Char in the Paulatuk area relies on indicators of population health such as changes and trends in catches, length, weight, age, and CPUE, as well as Traditional Knowledge and local observations to help inform changes to the Voluntary Community Harvest Level. If implemented by the PCWG, a Traffic Light communication tool that has been incorporated into the decision-making processes of other ISR working groups (DFO et al. 2019), could help with making these types of decisions.

2.4.2 - Arctic Char Habitats

Adverse changes to critical and important Arctic Char habitats (spawning, rearing, overwintering, migration, and feeding areas) would have negative impacts to Arctic Char populations and to the Paulatuk fishery. Although no specific development proposals are known, human activities, such as shipping, tourism, mining, oil, and gas development, may increase especially as the climate warms and could affect Arctic Char.

Any specific development proposal in the Paulatuk area would be subject to review under the *Fisheries Act*, and the requirements of co-management bodies and processes established under

the IFA such as the Environmental Impact Screening Committee and the Environmental Impact Review Board.

Other mechanisms are in place to protect Arctic Char habitats. The Paulatuk Community Conservation Plan identifies the Arctic Char spring harvesting areas, summer and fall harvesting area, and winter harvesting areas. The Hornaday River and most of the coastal waters of Darnley Bay are assigned to Management Category E, lands and waters of extreme significance and sensitivity, where there shall be no development and shall be managed to eliminate potential damage and disruption. The other harvesting area are assigned to Management Category D, lands and waters of particular significance and sensitivity, and shall be managed to eliminate potential damage and disruption.

The Brock and Hornaday watersheds provide important habitat for Arctic Char. A portion of these watersheds are within Tuktut Nogait National Park which was established in 1996. The Parks Canada Agency has measures and regulations in place to help protect Arctic Char habitats within the Park, and works with the PHTC, DFO, and FJMC to conduct research and monitoring studies to better understand Arctic Char in the Hornaday River system. The community of Paulatuk and the Tuktut Nogait National Park Management Board support these initiatives and the management provisions.

The Anguniaqvia niqiqyuam Marine Protected Area (ANMPA) was established in 2016 (DFO 2025). It is an ecologically important area that contains critical marine habitat for Arctic Char and subsistence harvesting. The objectives of the ANMPA are to maintain the integrity of the marine environment and to maintain the habitat to support populations of Arctic Char and other species. The *Anguniaqvia niqiqyuam Marine Protected Area Regulations* prohibit activities that disturb, damage, destroy, or remove any living marine organism or its habitat. A management plan is being developed to detail the protection of the ANMPA under the *Oceans Act*.

2.4.3 - Climate Change

Climate change is projected to affect the Paulatuk area. If emissions continue to increase at their current rates, the mean annual air temperature in Paulatuk is predicted to increase from -11.2 °C (1976-2005), to -8.5 °C between 2021-2050, and to -7.0 °C between 2051-2080, under a low-carbon climate scenario (University of Winnipeg, 2019).

Climate change is already affecting Paulatuk area Arctic Char and its habitats and fisheries. Changes have been seen in the physical environment and ecosystem interactions. These changes include or may include: changes in the extent, duration and thickness of ice; changes in the distribution of Arctic Char; increased presence of species not historically found in the area, such as Pacific salmon (*Oncorhynchus* spp.; Chila et al. 2021, Dunmall et al. 2024), killer whales (*Orcinus orca*), and other warmer water species; changes in the food available to Arctic Char; changes in water temperatures; changes in waterflow in freshwater rivers and streams; and thawing of permafrost increasing sediment deposition in Arctic Char habitats.

To the extent possible, the effects and implications of climate change on Paulatuk Arctic Char should be predicted, monitored, and incorporated in all management actions.

3.0 – The Management Plan

Paulatuk area Arctic Char populations, their habitats, and fisheries will continue to be managed through shared stewardship and adaptive co-management processes that incorporate precautionary and ecosystem approaches to help ensure their conservation and sustainable use for present and future generations.

3.1 – The Fisheries

3.1.1 - Subsistence Fishery

1. Consistent with the IFA, and subject to conservation, the first priority for all fishing under this Plan is subsistence use.
2. The Voluntary Community Harvest Level for Arctic Char in the Paulatuk area is **2,000** fish per year or less.
 - a. The Voluntary Community Harvest Level includes all Arctic Char harvested in spring, summer, and fall fisheries, in the coastal fisheries of Darnley Bay, from Pearce Point to Fish Lake, including Argo Bay, as well as up the Hornaday River.
3. The Voluntary Community Harvest Level of 2,000 Arctic Char comprises:
 - a. **1,300** Char for the summer fishery (June-September);
 - b. **300** Char for the general fall and winter fishery (October-December);
 - c. **300** Char for the Elders' fishery (October-December, or earlier in the season if the HTC decides), and;
 - d. **100** Char for families harvesting at their fishing camps (additional to above-any season).
4. The PHTC will allocate the Voluntary Community Harvest Level among its membership, as required.
5. The PHTC may hire two fishermen from the community to do the fishing for the Elders and will oversee the distribution of the catch.
6. Commercial sales of subsistence caught Arctic char are not allowed. Sport and commercial fisheries may be considered by the community in the future, as long as these uses do not compromise the stock and all subsistence needs are met first.
7. If a change to the Voluntary Community Harvest Level is required then the PCWG will follow all available Inuvialuit and scientific knowledge, and if implemented, make use of the developing FJMC Traffic Light Process.
8. There is no voluntary harvest level for landlocked char, but the PCWG recommends taking only what you need.

3.1.2 - Commercial Fishery

1. There are currently no commercial fisheries for Arctic char in the Paulatuk area, given concerns about the impact on the population and the subsistence harvest.

2. Any development of a new commercial fishery would have to be consistent with the requirements of the Beaufort Sea Integrated Fisheries Management Framework (DFO et al. 2014) and would have to follow the process of DFO's New Emerging Fisheries Policy.

3.1.3 - Sport Fishery

1. Currently the sport fishing daily catch and possession limit for Arctic Char in the Hornaday River is 0 and 0 respectively (Variation Order for catch and release only). However, due to recent concerns about the status of Hornaday River Arctic char, the PHTC is not supportive of any sport fishing activity in the Hornaday River including catch and release.
 - a. The catch and possession limit for Arctic Char is 4 and 7 respectively, for other waterbodies in the Northwest Territories (excluding waters within Tuktut Nogait National Park).
2. Sport fishers who want to angle in the Paulatuk area require an NWT Sport Fishing Licence validated for the ISR and must register with the PHTC and FJMC if they wish to fish from lands referred to in 7(1)(a) and 7(1)(b) of the IFA.
3. All other regulations pertinent to sport fishing apply, including the use of barbless hooks.
4. Fishing within Tuktut Nogait National Park requires a National Park Fishing Permit, except by Inuvialuit beneficiaries.
 - a. Within Tuktut Nogait National Park the Daily Catch and Possession Limit for Arctic Char is 1 Arctic Char, except for Arctic Char from the Hornaday River which have a limit of 0 Arctic Char.
 - b. The Hornaday River downstream of La Ronciere Falls and up to the boundary of the park, Seven Islands Lake, and Aklak Creek are closed to all sport-fishing year-round.
 - c. Other provisions of the *National Parks of Canada Fishery Regulations* should be followed. For a complete list of fishing regulations in Tuktut Nogait National Park, contact the Parks Canada Operations Centre in Paulatuk at (867) 580-3233.

3.2 – Community Guidelines for Fishing in the Paulatuk Area

For all fishing in the Paulatuk area, the PCWG recommends:

1. No 100 yard-long (91 m) nets shall be set. Only 25-yard (22.8 m) nets, or shorter, shall be set and used for Arctic Char fishing in the rivers.
2. No mesh size smaller than 4.5” inches (114 mm) shall be used in the Hornaday River.
3. Unless you are fishing for Elders, no gill nets shall be set during fall and winter in the Hornaday River at the fish holes between Coalmine and Aklak Creek; only jigging in this area. It is up to the harvester to contact the PHTC to let them know that they will be fishing for an Elder, and the Elder to confirm this with the PHTC.
4. No nets shall be left unattended. If a harvester leaves their net, the person it is left with becomes responsible for that net. If a harvester sets their net during a day trip, the net shall be pulled up before they head back to Paulatuk.
5. During the summer, weather permitting, nets should be checked twice per day. After freeze-up, nets should be checked once a day. Note: this is more stringent than the *NWT Fishery*

Regulations that specify nets must be checked every 30 hours during the summer months (see Appendix I).

6. All camps shall be kept clean and all garbage shall be brought back to Paulatuk.
7. Be respectful of other people's fishing areas and gear.
8. Take only what you need.
9. Participation in harvest survey and monitoring programs is strongly encouraged to ensure that the best information is available to the PCWG and community.
10. All catches must be stored and processed so as to minimise wastage (*NWT Fisheries Regulations*, Appendix I).

3.3 – Habitat Protection

Critical Arctic Char spawning, nursery, overwintering, feeding habitats, and migration corridors must be protected to ensure the continuation of sustainable fisheries. The entire Hornaday River system, including its tributaries, downstream from La Ronciere Falls to its mouth is especially critical for Arctic Char. To ensure the sustainability of the Arctic Char:

1. Critical habitats, especially spawning, nursery, and over-wintering areas, should be identified and monitored.
2. The integrity of the entire Hornaday River watershed, including water quality and water quantity, must be maintained for the well-being of the Arctic Char and should not be altered by development or other activities.
3. Any developments that could affect Arctic Char habitats should be carefully reviewed to ensure that appropriate fish habitat protection requirements are incorporated and implemented under the *Fisheries Act*, the Environmental Impact Screening Committee and Environmental Impact Review Board processes, and the Tuktut Nogait Park Management Board.
4. The PHTC and the PCWG should participate in the development of the ANMPA Management Plan to ensure that appropriate measures are included to protect Arctic Char habitats.

Habitat concerns and priorities from the community include:

- The potential for sediment from slumping in the river systems to impact fish habitats - there are high sediment levels in the water - importance of monitoring riverbanks through photos and other technologies and a need to monitor water quality and quantity;
- Water levels and channels are changing - tourist camp and other areas of the river used to be deep, water levels are not what they used to be, a lot shallower now - the channels are all changing with erosion and sedimentation, more than they used to;
- Hornaday River waters are warmer than they used to be;

- More coastal erosion, inclement weather, high tides / ocean water levels, and winds (all over, but especially at Billy's Creek);
- Concerns about mine development within watershed;
- Local hunters crossing rivers in quads, resulting in potential oil and gas leaking into the river; and
- Finding ways to minimize presence and impacts of salmon.

3.4 – Monitoring and Research

Continued monitoring and research of Paulatuk area Arctic char and fisheries is essential to ensuring that overharvesting does not occur, habitats are protected, and management decisions can be made with an improved understanding of the system.

1. DFO and FJMC will provide the community with information on the studies that are being conducted, prior to, during, and after projects are completed. The PHTC will review and approve project proposals before projects proceed. Local information and expertise will be used in the design, delivery, and interpretation of all projects concerning Paulatuk Area Char.
2. Persons fishing for Arctic Char are encouraged to report their catch information to the Arctic Char monitors or the Harvest Study field worker. When requested and practical, persons fishing for Arctic Char in the Paulatuk area are encouraged to make their catches available for measuring and sampling by the Arctic Char monitors.
3. Fishers are encouraged to return any and all tags recovered from Arctic Char and will provide DFO or the Arctic Char monitor with accurate information about when and where these were caught. DFO and the Arctic Char monitors will ensure that accurate records are kept about all returned tags, and that rewards are distributed promptly.
4. The August Arctic Char monitors will continue to supervise the Arctic Char fishery and encourage compliance with this Fishing Plan.

Research and Monitoring Projects and Priorities

The following research and monitoring priorities have been identified.

1. Monitoring of the Paulatuk area Arctic Char fisheries.
 - a. Continue the annual Hornaday River and Darnley Bay Arctic Char Monitoring Program (Gallagher et al. 2017).
 - i. Collect CPUE and biological data from the winter fishery in the Hornaday River delta and Coalmine area.
 - b. Continue the annual Paulatuk Fish and Marine Mammal Harvest Study (Lea et al. 2020).
 - i. Improve the harvest survey by adding questions on perceived stock status and on environmental conditions that may influence harvest.
2. Conduct genetic and other studies to delineate the populations of Arctic Char in the Paulatuk area and their contributions to the fishery.

- a. Continue the collection of samples from Hornaday River and Lasard Creek Arctic Char for genetic analysis.
 - b. Assess Arctic Char populations in Brock Lake and their contributions to the Hornaday River population.
 - c. Confirm the contribution of Arctic Char from various coastal fisheries to the Hornaday River population through tagging and other mixed-stock fishery assessment techniques.
 - d. Conduct further scientific analyses and a comprehensive Traditional Knowledge study of 'blue char' from Tippitiuyak.
3. Continue to identify critical habitats such as spawning and overwintering areas in the Hornaday River to improve habitat protection.
- a. Document spawning and overwintering areas in the Coalmine area and migration and overwintering habitat in the Hornaday River delta.
 - b. Determine whether Arctic Char have changed their use of the east and west channels of the Hornaday River delta.
 - c. Improve knowledge of critical summer feeding habitat (e.g., Pearce Point and other coastal locations) and characterize the trophic ecology of Arctic Char by examining diet and stable isotopes.
 - d. Maintain the Hornaday River water gauging station and continue with water, temperature, quality, and quantity studies and explore options of monitoring the quantity and quality of water in the lower stretches of the river.
 - e. Maintain the Hornaday River water quality monitoring work led by Parks Canada Agency.
 - f. Investigate the potential impacts of increased sediment input from thawing permafrost on the river system and Arctic char habitats.
 - g. Monitor changes in groundwater flows and water levels in spawning and overwintering areas.
 - h. Continue to monitor for the presence of Pacific salmon in coastal waters and in the Hornaday River, and explore options for assessing their impacts to Arctic char.
4. Monitor climate change and its effects on Arctic Char through Traditional Knowledge, baseline data collection, and monitoring.

3.5 – Education and Outreach

Achieving the goals and objectives of this Plan requires the community and other stakeholders to understand the importance of Paulatuk area Arctic Char and its habitats, and to be aware of the need to conserve and protect them to ensure the fisheries are sustainable. Therefore, a condensed version of this Plan has been made into a “back-pocket” pamphlet, that can be distributed to harvesters in the community and easily referenced whilst out harvesting. In addition, the PHTC, PCWG, DFO, FJMC and Parks Canada Agency will use appropriate opportunities to communicate this to community members, especially fishers and youth, including:

1. Continuing to hold annual public meeting with each working group meeting, using door prizes to encourage attendance.
2. Making use of communication tools such as community posters and pamphlets, the local radio station, and social media platforms.
3. Conducting school visits with scientists and Knowledge holders to engage youth in char harvesting and management.

3.6 – Enforcement of Fisheries in the Paulatuk Area

Voluntary compliance by fishers with the requirements of this Plan and legislation is of paramount importance. The PHTC will communicate with its members the importance of compliance, with emphasis on voluntary actions.

DFO Fishery Officers, ECC Officers, and Parks Canada Agency staff will assist the PHTC as appropriate, and will conduct patrols, monitoring and surveillance as required. They will respond to and investigate complaints and reports of illegal activity. If there is evidence of non-compliance, enforcement action will be taken and could include warnings or prosecutions.

Organization	Contact Information
GNWT Environment and Climate Change - Paulatuk officer	1-867-580-3021 or 1-867-788-0114 ECC_Beaufort-Delta@gov.nt.ca
Fisheries and Oceans Canada	1-867-669-4900 (Conservation and Protection - Yellowknife)
Parks Canada – Paulatuk office	1-867-580-3233
Report a Poacher	1-866-762-2437

3.7 – Annual Working Group Review Process

The PCWG will continue to meet annually in the winter, including a public community dinner and meeting. The PCWG may also hold conference calls between meetings if necessary. Actions for the annual PCWG meeting include:

- Review the Paulatuk Arctic Char Community Fisheries Management Plan and its implementation and recommend any required changes.
- Review new data from harvest studies, harvest monitoring, biological monitoring, stock indicators, scientific projects, and Traditional Knowledge.
- Consider scientific advice and Traditional Knowledge for managing the Arctic Char populations.
- Adjust Voluntary Community Harvest Levels, allocation recommendations, and community fishing guidelines, based on the assessment of risk to Arctic Char in the Paulatuk area.

If developed and implemented in the future, the FJMC's Traffic Light communication tool could help the PCWG propose changes to safe harvest levels. Indicators could be identified to trigger additional scientific assessment, research, monitoring or collection of Traditional Knowledge

Signature Page

Fisheries and Oceans Canada, the Fisheries Joint Management Committee, the Parks Canada Agency, and the Paulatuk Hunters and Trappers Committee support the Paulatuk Arctic Char Community Fisheries Management Plan and are committed to its effective implementation.

The signatories wish to acknowledge the work of the Paulatuk Char Working Group in the development of the Plan and its role and responsibilities for its implementation.

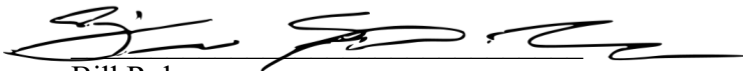
The signatories undertake to conduct an in-depth review and evaluation of the Plan every five years.

Christian Marcoux

Christian Marcoux,
Arctic Region - Regional Director of Fisheries Management
Fisheries and Oceans Canada



Herb Angik Nakimayak
Chairperson
Fisheries Joint Management Committee



Bill Ruben
President
Paulatuk Hunters and Trappers Committee

Andy Sharpe

Andrew Sharpe
Resource Conservation Manager
Parks Canada

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APPENDIX I

NWT FISHERY REGULATIONS THAT APPLY TO INUVIALUIT SUBSISTENCE FISHERIES

The following sections of the NWT Fishery Regulations apply to the Arctic Char subsistence fishery in the Paulatuk area.

1. Nets must be checked every 30 hours in the summer (May 16 to October 31) and every 72 hours in the winter (November 1 to May 15).
2. At least one third of a stream must be left open to allow fish to pass.
3. Inuit, First Nations, or Metis harvesters may fish without a licence by angling or gillnets, set lines, spears, snares or dip nets, for food for their families and dogs.
4. No person shall fish by snagging.
5. No person shall dispose of dead fish or any remains or offal of fish by leaving it in the water or on the ice over water.
6. Fish that is suitable for food shall not be wasted.
7. All nets must have the name of the owner clearly marked.
8. Fishery Officers may determine or prescribe the distance between each and every fishery and shall forthwith remove any fishing apparatus or material that the owner neglects or refuses to remove.

APPENDIX II

Table A1: Paulatuk subsistence Arctic char harvest numbers from 1998 to 2021, including the Voluntary Community Harvest Levels (Information from Joint Secretariat 2003, PHTC 2006, Lea et al. 2020, and DFO records).

Year	Voluntary Community Harvest Level	Subsistence Harvest
1998	1,700	1,686
1999		1,636
2000		1,492
2001		1,949
2002		1,598
2003		1,522
2004		1,597
2005		655
2006		1,300
2007		724
2008		479
2009		1,793
2010		1,175
2011		1,119
2012		1,561
2013	1,800	1,570
2014	1,900	2,509
2015	2,000	1,966
2016		1,982
2017		1,046
2018		1,236
2019		918
2020		621
2021		868