Summary of reported harvest of fish and marine mammals near Ulukhaktok, NT, 1988–2020

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2025

Canadian Data Report of
Fisheries and Aquatic Sciences 1445

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Canadian Data Report
of Fisheries and Aquatic Sciences 1445

2025

SUMMARY OF REPORTED HARVEST OF FISH AND MARINE MAMMALS NEAR ULUKHAKTOK, NT, 1988–2020

by

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Cat. No. Fs97-13/1445E-PDF ISBN: 978-0-660-77954-6 ISSN 1488-5395

Correct citation for this publication:

Lea, E.V., Olokhaktomiut Hunters and Trappers Committee, Matari, K.G.A., Gallagher, C.P., Campbell, K., and Harwood, L.A. 2025. Summary of reported harvest of fish and marine mammals near Ulukhaktok, NT, 1988–2020. Can. Data Rep. Fish. Aquat. Sci. 1445: v + 26 p.

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ABSTRACT

Lea, E.V., Olokhaktomiut Hunters and Trappers Committee, Matari, K.G.A., Gallagher, C.P., Campbell, K., and Harwood, L.A. 2025. Summary of reported harvest of fish and marine mammals near Ulukhaktok, NT, 1988–2020. Can. Data Rep. Fish. Aquat. Sci. 1445: v + 26 p.

Subsistence harvesting of fish and marine mammals provides an important nutritional resource and is a key traditional practice of the Inuvialuit of Ulukhaktok, Northwest Territories. Consistent with approaches initiated by the Inuvialuit Harvest Study in 1988, subsistence harvest records were obtained through monthly surveys conducted between 2016 and 2020. Harvest records between 1988 and 2020 were compiled to examine potential trends in key species. Records from a community-led small-scale Arctic char commercial fishery are also presented. In the added years (2016–2020), anadromous Arctic char (annual average: 3,012 fish), lake trout (annual average: 2,784 fish), and ringed seals (annual average: 176 seals) continued to be the most commonly harvested species. Additionally, landlocked Arctic char (annual average: 349 fish), cod species (annual average: 515 fish), and bearded seals (annual average: 8) were also harvested. The summer coastal fishery near Ulukhaktok and the under-ice fishery at Tatik Lake (locally known as Fish Lake) remain the key subsistence harvesting areas for anadromous Arctic char, with average annual harvests of 1,904 and 711 fish, respectively, between 2016 and 2020. This subsistence harvest data time-series informs monitoring and co-management of local resources, by documenting the timing, location, and size of harvests of fish and marine mammals in the area.

RÉSUMÉ

Lea, E.V., Olokhaktomiut Hunters and Trappers Committee, Matari, K.G.A., Gallagher, C.P., Campbell, K., and Harwood, L.A. 2025. Summary of reported harvest of fish and marine mammals near Ulukhaktok, NT, 1988–2020. Can. Data Rep. Fish. Aquat. Sci. 1445: v + 26 p.

La récolte de subsistance de poissons et de mammifères marins constitue une importante ressource alimentaire et une pratique traditionnelle clé des Inuvialuits d'Ulukhaktok, dans les Territoires du Nord-Ouest. Conformément aux approches lancées par l'étude sur les récoltes des Inuvialuits en 1988, on a obtenu les registres de la récolte de subsistance au moyen de relevés mensuels effectués entre 2016 et 2020. On a compilé les registres de récolte de 1988 à 2020 pour examiner les tendances des espèces clés. On présente également les registres d'une pêche commerciale de l'omble chevalier à petite échelle menée par la communauté. Au cours des années ajoutées (2016 à 2020), l'omble chevalier anadrome (moyenne annuelle : 3 012 poissons), le touladi (moyenne annuelle : 2 784 poissons) et le phoque annelé (moyenne annuelle : 176 phoques) demeurent les espèces les plus couramment récoltées avec l'omble chevalier confiné aux eaux intérieures (moyenne annuelle : 349 poissons), les espèces de morue (moyenne annuelle : 515 poissons) et les phoques barbus (moyenne annuelle : 8 phoques). La pêche côtière d'été près de la collectivité et la pêche sous la glace dans le lac Tatik (également connu localement sous le nom de « lac Fish ») demeurent les principales zones de récolte de subsistance pour l'omble chevalier anadrome, avec des récoltes annuelles moyennes de 1 904 et de 711 poissons, respectivement, entre 2016 et 2020. Cette série chronologique de données sur la récolte de subsistance éclaire le suivi et la gestion conjointe des ressources locales grâce aux renseignements sur l'heure, l'emplacement et la taille des récoltes de poissons et de mammifères marins dans la région.

INTRODUCTION

Ulukhaktok (formerly known as Holman), is a coastal community on the Diamond Jenness Peninsula of Victoria Island, within the Inuvialuit Settlement Region (ISR) of the Northwest Territories, Canada (Figure 1). Subsistence harvesting of fish and wildlife found in nearby coastal and fresh waters contributes not only to the diet of Olokhaktomiut (Inuvialuit of Ulukhaktok), but also to their cultural, social, economic, and overall well-being. Fish and marine mammals in the Ulukhaktok area, and all related harvesting activities, are co-managed by the Olokhaktomiut Hunters and Trappers Committee (OHTC) and Fisheries Joint Management Committee (FJMC), both established under the Inuvialuit Final Agreement (IFA; Canada 1984), in collaboration with the Department of Fisheries and Oceans Canada (DFO).

The collection of long-term harvest data is critical for informing the significance, management, and protection of wildlife and their ecosystems. The Inuvialuit Harvest Study (IHS) was initiated in 1988 to collect subsistence harvest data throughout the ISR (Joint Secretariat 2003), building on 20 years of harvest data collection in various prior government efforts (1966–1988) (see Lewis et al. 1989). While the IHS was paused in 1997, similar harvest data collection programs have continued out of Ulukhaktok given the importance of this data to co-management partners, particularly in support of the management plan for Arctic char (*Salvelinus alpinus*) stocks in the area (HCWG 2006, UCWG 2025), known locally as the Ulukhaktok Char Fishing Plan (UCFP).

Both anadromous (i.e., sea run) and landlocked Arctic char continue to be a significant component of traditional diets in the Ulukhaktok area (Paylor et al. 1998, Joint Secretariat 2003, OHTC et al. 2016, Lea et al. 2023a). Tracking their annual migratory cycle, anadromous Arctic char are generally harvested by fishing rod and gill net in a mixed-stock fishery in nearby coastal waters during summer, and from freshwater lakes and rivers during fall. Landlocked Arctic char are also harvested from a number of lakes in the Ulukhaktok area, predominantly during spring (Lea et al. 2023a). Arctic char populations are managed by the Ulukhaktok Char Working Group (UCWG), a group established by FJMC in the early 1990s to develop, ratify, and implement the UCFP under the leadership of the community (HCWG 2006, UCWG 2025). Specific management zones for anadromous Arctic char are identified in the plan, including: 1) the nearby coastal area (mixed-stock); 2) Kuujjua River, including Tatik Lake (also known as Fish Lake) and Red Belly Lake; 3) the Prince Albert Sound area, including the Kagloryuak River (Kingua area), Kuuk River (Tahiryuak Lake), Naloagyok River, and Kagluk River (Quunnguq Lake); and 4) Mayoklihok Lake (Figure 1). The UCWG has established voluntary subsistence harvest levels for most of these areas, and reviews these annually. The UCWG has also supported a small-scale commercial harvest for Arctic char licensed through the OHTC in the nearby coastal area in certain years if subsistence needs were met (Lea et al. 2023a, Lea et al. 2023b). Long-term harvest monitoring programs have informed the UCWG through the collection of biological and catch-effort data from summer coastal fisheries (Lea et al. 2023b) and the fall Tatik Lake harvest (Harwood et al. 2013, Gallagher et al. 2021).

Here, we summarize fish and marine mammal harvest data out of the community of Ulukhaktok between 1988 and 2020. Subsistence harvest data collected up to and including 2015 have already been published (Joint Secretariat 2003, UCWG 2006, Stephenson 2004, Lea et al. 2023a), while data from 2016–2020 are included here and extend the time series by five years. Data from these additional years were collected and analyzed with the same methods as described for earlier years of harvest data collection. Our key objective is to compile and update available harvest records for all reported fish and marine mammal harvest out of the community of Ulukhaktok across the full series from 1988 to 2020, including the latest updated harvest data for the management zones under the UCFP.

METHODS

Consistent with the 1988–1997 Inuvialuit Harvest Study (IHS; Joint Secretariat 2003) and subsequent harvest survey approaches, the OHTC hired a community interviewer to collect fish and marine mammal subsistence harvest records on a monthly basis between 2016 and 2020. The OHTC was responsible for maintaining the list of active harvesters, who were each assigned a unique identifier number used on the survey forms to maintain anonymity. Surveys were conducted monthly for harvest occurring April to December, with the exception of 2020 when they did not occur in November and December. Further specifics on program details and results from earlier time periods can be found in Joint Secretariat (2003), Stephenson (2004), and Lea et al. (2023a), and the duration and any other relevant notes for surveys in each year are summarized in Table 1.

The community interviewer contacted the list of active harvesters, in-person or over the phone, requesting information on their fish and marine mammal harvests from the previous month. The interviewer completed the survey form with the information provided by each harvester (e.g., Appendix 1), which included details on the species, number, date, and location of harvests, and if they provided any of their harvest reports to other concurrent catch monitoring efforts (i.e., coastal and Tatik Lake fishery monitors or commercial catch reporting) to minimize double counting of harvested Arctic char. Harvesters also had an opportunity to provide any comments or observations related to their harvesting activities each month.

Completed forms were sent to DFO Inuvik for tabulation and sharing back with the OHTC, UCWG, and FJMC. In accordance with the IHS and to respect the sensitivity of specific harvesting areas, data were aggregated among all harvesters, while detailed harvest records were maintained by the OHTC and DFO. Detailed reports and summaries of harvest by area and month were reviewed and verified annually, and in some cases monthly, by the UCWG and OHTC.

Fish and marine mammal harvest data from earlier years (i.e., 1988–2015) were compiled and tabulated from all available sources (Joint Secretariat 2003, Stephenson 2004, HCWG 2006, and Lea et al. 2023a) along with annual totals reported in 2016–2020. Specific sources of information for anadromous Arctic char include HCWG (2006) for 1988–2003, Lea et al. (2023a) for 2003–2015, and this report for 2016–2020. Sources of information for all other fish and marine mammal species include Joint Secretariat (2003) for 1988–1997, Stephenson (2004) for 1999–2003, Lea et al. (2023a) for 2004–2015, and this report for 2016–2020. It should be noted that survey forms and species of interest varied over the time series; therefore, comparisons between 1988 and 2020 should be interpreted cautiously. More specifically, in certain years, harvest data was only collected for select species; therefore, for species with no or low reported harvest in a given year, it was difficult to discern between whether there was truly no/low harvest or that the survey design did not solicit harvest data for that species in a given year.

Summary figures were prepared for key harvested fish and marine mammal species, specifically anadromous Arctic char, landlocked Arctic char, lake trout (*Salvelinus namaycush*), lake whitefish (*Coregonus clupeaformis*), cod species (inferred to be Greenland cod (*Gadus Ogac*), but may also include saffron cod (*Eleginus gracilis*), ringed seals (*Pusa hispida*), and bearded seals (*Erignathus barbatus*) for all years of reported data 1988–2020. Basic summary statistics (range, average) were calculated for these key species while excluding years where harvest survey data was incomplete or had lower confidence from the community (see notes in Tables 1 and 2). The interviewer also noted challenges of collecting harvest data in 2020 due to the COVID-19 pandemic; therefore caution should be applied when reviewing harvest totals during this time.

The reported harvest of anadromous Arctic char was tabulated by management zones defined by the UCFP between 1988 and 2020. Historical records of Arctic char harvested within the Kuujjua River system, 1966–2020, were also compiled in Appendix 2 (see Lewis et al. (1989) and Yaremchuk et al. (1989) for records prior to the initiation of the IHS in 1988). Given that the harvest monitors at Tatik Lake were generally on-site for the majority of the fall harvest and also collected catch-effort records from harvesters, harvest totals from each program were combined while accounting for Arctic char reported to both to avoid double counting. Commercial harvest records from the Stage II commercial fishery were also compiled from mandatory logbooks issued to all harvesters allocated tags under the licence for each year (see Lea et al. 2023b).

RESULTS

REPORTED ANNUAL HARVEST OF FISH AND MARINE MAMMALS

Anadromous Arctic char

Reported annual harvest of anadromous Arctic char during 2016–2020 ranged between 2,158 and 4,203 fish with an average of 3,012 annually, and a maximum annual value over the 1988–2020 time series of 11,360 fish in 1995 (Tables 1 and 2, Figure 3). Further details on annual totals by management zone are provided in the next section.

Landlocked Arctic char

Reported annual harvest of landlocked Arctic char during 2016–2020 ranged between 89 and 621 fish, with an average of 349 annually, and a maximum annual value over the 1988–2020 time series of 621 fish in 2018 (Table 1, Figure 4).

Lake trout

Reported annual harvest of lake trout during 2016–2020 ranged between 783 and 3,916 fish with an average of 2,784 annually, relative to the maximum annual value over the 1988–2020 time series being 5,137 fish in 1993 (Table 1, Figure 5).

Lake whitefish

Reported annual harvest of lake whitefish during 2016–2020 ranged between 1 and 15 fish with an average of 5 annually, relative to the maximum over the 1988–2020 time series being 250 fish in 1994 (Table 1, Figure 6).

Cod species (inferred to be Greenland cod but may also include Saffron Cod)

Reported annual harvest of cod species during 2016–2020 ranged between 131 and 1,113 fish with an average of 515 annually, and a maximum annual value over the 1988–2020 time series of 1,113 fish in 2016 (Table 1, Figure 7).

Ringed seals

Reported annual harvest of ringed seals during 2016–2020 ranged between 155 and 201 seals with an average of 176 annually, relative to the maximum annual value over the 1988–2020 time series of 1,398 seals in 1990 (Table 1, Figure 8).

Bearded seals

Reported annual harvest of bearded seals during 2016–2020 ranged between 7 and 9 seals with an average of 8 annually, and a maximum annual value over the 1988–2020 time series of 25 seals in 2014 (Table 1, Figure 9).

Other species

Between 2016 and 2020, beluga whales (*Delphinapterus leucas*) were reported as harvested in 2019 (n=3) and 2020 (n=2). Reported harvest of Pacific salmon (*Oncorhynchus* spp.) during 2016–2020 was 10 fish in 2016, 9 in 2017, and 43 in 2019 (Table 1). Additionally in 2017, 120 capelin (*Mallotus villosus*) were harvested from the shoreline near the community during a spawning event in July, 40 of which were sent for comprehensive biological sampling (E. Lea, DFO Inuvik, unpublished).

SUBSISTENCE AND COMMERCIAL HARVEST OF ANADROMOUS ARCTIC CHAR OVERALL AND BY MANAGEMENT ZONE (1988–2020)

Total reported harvest of anadromous Arctic char between 1988 and 2020 ranged between 2,158 (2018) and 11,360 (1995) fish (Tables 1 and 2, Figures 3 and 10). Generally, total harvest declined over time, with reported harvest being highest in the late-1980s until the mid-1990s. While harvest numbers prior to 2016 are reported in Tables 1 and 2, a more detailed description of these earlier harvest values can be found in Lea et al. (2023a). The coastal harvest continues to dominate the total number of anadromous Arctic char harvested by the community, followed by Tatik Lake, and subsequently with lower numbers from Mayoklihok Lake and Prince Albert Sound (Table 2, Figure 10).

The total summer harvest (subsistence and commercial) of anadromous Arctic char from coastal waters near Ulukhaktok during 1988–2020 has ranged between 1,327 (2018) and 6,297 (1994) fish annually, with an average of 1,904 fish between 2016 and 2020 (Table 2, Figure 10). Coastal subsistence harvests have shown general declines over time and have never exceeded the voluntary harvest level (4,000 fish) established in the UCFP. Following the stock assessment (DFO 2016) and subsequent UCWG meeting in 2016, the commercial fishery advanced from a quota of 500 Arctic char from the coastal Ulukhaktok area under a Stage I licence to 700 fish under a Stage II licence issued under DFO's New Emerging Fishing Policy (DFO 2008). An average of 496 fish (range: 377–583) were harvested under these exploratory fishing licences between 2016 and 2019 (Table 2). After seeking community input at the UCWG community feast in February 2020, a motion was made by the UCWG to discontinue commercial fishery for at least five years to prioritize the subsistence fishery, specifically due to concerns about the stock status of Tatik Lake char.

Tatik Lake continues to be the most important area to fish for anadromous Arctic char during late fall and winter. Between 2016 and 2020, total anadromous Arctic char harvest ranged between 543 and 871, with an average of 711 fish. While the recommended allocation for each household has varied among years (ranging between 25 and 75 per household, depending on the number of families fishing there and the UCWG's annual assessment of stock status), the total reported harvest at Tatik Lake has not exceeded the voluntary harvest level of 1,000 fish since 2003. When comparing harvest data collected from the harvest surveys and harvest monitoring 2016–2020, the highest reported catches varied between programs within a year, underscoring the importance of using both sources of information while also avoiding any double counting (Table 3, Figure 11). While the UCWG previously provided guidance on the recommended timing of fishing at Tatik Lake, this was discontinued in 2020 given the unpredictability of fall freeze-up and ice conditions with the changing climate. Mayoklihok Lake has also been fished more consistently in recent years as an alternative fall fishing location to Tatik Lake, with 295 Arctic char harvested on average annually between 2016 and 2020 (range= 263–352 fish). While records specific to Mayoklihok Lake have only been collected since 2013, the community noted that this location has been fished historically as well.

The Prince Albert Sound area continues to be fished occasionally, predominantly later in the fall as waters begin to freeze up, with only a few instances of reported harvest of anadromous Arctic char in this area between 2016 and 2020, specifically from the Kuuk River with 31 fish in 2016 and 25 fish in 2018, and 356 fish from the Kingua area in 2016 (Table 2, Figure 10). Consequently, the community has not approached the voluntary harvest levels in each of these river systems in recent years. The highest numbers on record for this area occurred between 1993 and 1995 as it was being used as an alternative fishing area during the years when Tatik Lake was voluntarily closed by the community.

DISCUSSION

While subsistence harvest data can help inform co-management partners on various elements of fish and wildlife management, interpretations and applications of the data need to be made with local harvesters given the range of complex factors influencing patterns across time and space. Some of these factors may include, but are not limited to, environmental, social, economic, and cultural drivers of harvesting activities, as well as environmental and demographic influences on the distribution, abundance, and availability of wildlife, particularly in a changing climate. Indigenous Knowledge and scientific research have not only revealed direct climate change impacts on key fish and marine mammal species in the area (e.g., see Harwood et al. 2015, Harwood et al. 2020, Pearce et al. 2024), but local harvesters have also experienced significant impacts on their harvesting activities, with increasing risks, unpredictability, and other challenges due to weather, water, and ice conditions (Pearce et al. 2015, Naylor et al. 2021).

While harvest data were verified annually by the OHTC and UCWG, reported harvests must be considered as best estimates rather than absolute numbers. While the community has reported generally high participation rates and associated confidence in the numbers reported, surveys are voluntary and harvesters may not always be available, although efforts are made to follow up whenever possible. Caution should also be applied while making comparisons over the whole time series given variation in the timing (i.e., monthly survey coverage), periodic breaks in the continuity of these programs, as well as slightly different approaches and focus species in some instances over the years. An absence or relatively low number of reported harvest of a given species may be more a reflection that the survey questions did not solicit harvest data pertaining to those species in a given year. This was the case for data collected between 1998 and 2003, which was mostly focused on Arctic char, and in some years lake trout, ringed seals, and bearded seals. Furthermore, although landlocked Arctic char have always been an important source of fish for the community, they were only reported separately from anadromous Arctic char in certain years of the IHS, and it remains unclear how consistently this was done on an annual basis. Consequently, earlier harvest records of anadromous Arctic char may represent a combination of both types, thereby overestimating the anadromous form and underestimating the landlocked harvest.

With the abovementioned considerations in mind, reported subsistence harvest of fish and marine mammals has generally declined in the Ulukhaktok area over the entire 1988–2020 time series. Consistent with past results (Joint Secretariat 2003, Lea et al. 2023a), Arctic char (both anadromous and landlocked) and lake trout have remained the most common fish species harvested by Olokhaktomiut, while ringed seals have continued to be the most frequently harvested marine mammal in the area. Interestingly, recent years of reported harvest of cod species, inferred to be Greenland cod (locally known as Oogak), seems to be emerging as an important species in recent years, although without complete historical records for the species, and with this species only added to the survey forms in 2014, it is premature to assess trends in this species based on harvest records alone.

Subsistence harvest data can serve as a valuable indicator for documenting occurrences and tracking changes in species prevalence in the area; for example, there has been an increasing but variable abundance of Pacific salmon harvested in the area (Chila et al. 2022, Dunmall et al. 2024). To our knowledge, this report is the first documented record of capelin occurrence and harvest specifically in the Ulukhaktok area; however, knowledge and experience from the community report this species has been harvested by the community for several decades (David Kuptana, Ulukhaktok, pers. comm.), again underscoring the importance of mobilizing and applying Indigenous and local knowledge with interpretations and context.

Consistent with the available time-series, the summer coastal and the fall under-ice Tatik Lake fisheries continue to be the most important areas for the community to harvest anadromous Arctic char (see Collignon 2006 for historical account of the fall fishery at Tatik Lake). While Mayoklihok Lake has been fished more regularly in recent years given its accessibility to the community and as an alternative site to Tatik Lake, Prince Albert Sound continues to be a less frequented fishing location given its distance and unpredictability with travel conditions during fall. Although specific details on the locations of harvests have not been provided to protect the sensitivity of these important harvesting areas, further insight into changes observed at specific harvesting sites could be provided by local harvesters. It remains unclear how a changing climate may impact these species and the seasonality of harvesting activities over time (Usher 1965, Damas 1972, Joint Secretariat 2003, Johnson 2010, Lea et al. 2023a).

Subsistence harvest of fish and marine mammals in the Ulukhaktok area remains essential for its many social, cultural, economic, and wellness benefits, as well as for food security and with linkages to sovereignty in a changing Arctic. The collection and management of harvest data records are not only essential for supporting the monitoring and management of local wildlife resources, but also serve as necessary documentation for the support, promotion, and understanding of the significance of subsistence harvesting activities, and help to inform the overall conservation of species and their habitats.

ACKNOWLEDGEMENTS

We gratefully acknowledge all Olokhaktomiut harvesters for their ongoing participation in these surveys, along with Bessie Inuktalik (OHTC Resource Person) and community interviewers Jerry Akoaksion, Peter Alikamik, Brian Kudlak, and Justin Memogana for conducting these surveys 2016–2020 and everyone else who contributed in earlier years. We thank Don Dowler and Michael Papst of the FJMC for their ongoing support and the FJMC Board for supporting survey costs through annual IFA Implementation funding. Mapping support was generously provided by Adriana Rivas-Ruiz (DFO). We thank C-Jae Breiter and Connor Faulkner for their helpful reviews of this report.

DATA MANAGEMENT AND ACCESS

Detailed harvest records are stored by DFO, FJMC, and OHTC; these files can only be accessed with written approval from FJMC and OHTC. The authors respectfully request that anyone wishing to use the data published in this report contact FJMC Staff Biologist (Box 2120, Inuvik, NT, X0E 0T0, 867-777-2828, fjmc-rb@jointsec.nt.ca) and DFO (Ellen Lea, Ellen.Lea@dfo-mpo.gc.ca) before doing so.

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TABLES

Table 1. Reported harvest of all fish and marine mammal species 1988–2020. Sources of information for anadromous Arctic char are 1988–2003 (HCWG 2006), 2003–present (Lea et al. 2023a and this report). Sources of information for all other species are Joint Secretariat (2003) for 1988–1997, Stephenson (2004) for 1999–2003, Lea et al. (2023a) for 2004–2015, and this report for 2016–2020. The monthly survey coverage and any issues with the completeness or confidence of the data are also noted. An absence of harvest for a species in a given year could represent zero harvest and/or that harvest data for that species was not solicited for that year (presented as ND in Figures 4–9). A relatively lower number may also reflect that harvest data for that species was not solicited for that year, but was recorded by the interviewer when shared by the harvester.

Year	Arctic char (anadromous)	Arctic char (landlocked)	Lake trout	Lake whitefish	Cod (Greenland or Saffron)	Ringed seal	Bearded seal	Other	Not specified	Monthly survey coverage and other notes
1988	9,239	26	2,076		1	1,120	13		5,124 unspec. char	January-December
1989	5,897	1	1,950			579	3			January-December
1990	7,367	10	3,603			1,398	5			January-December
1991	3,231		4,767			765	9			January-December
1992	8,272		4,008	10	3	676	7			January-December
1993	7,835		5,137	2	23	795	11	1 char	1 unspec. char	January-December
1994	10,050	7	4,142	250	62	814	10	109 cisco		January-December
1995	11,360	79	3,941		87	546	6			January-December
1996	8,479	18	4,126		50	1,164	12	3 flounder		January-December
1997	6,132	11	2,912	48	3	529	3	2 flounder		January-December
1998	5,362									Incomplete- Arctic char only
1999	5,970		1,825	204						June-October, only focused on Arctic char and lake trout
2000	6,166									Incomplete- Arctic char only
2001	5,613		638	18						July-November, only focused on Arctic char and lake trout

Year	Arctic char (anadromous)	Arctic char (landlocked)	Lake trout	Lake whitefish	Cod (Greenland or Saffron)	Ringed seal	Bearded seal	Other	Not specified	Monthly survey coverage and other notes
2002	6,024		3,751	17		818	6			April-December, Arctic char, lake trout, and ringed and bearded seals
2003	3,433		2,740			486	6			January-December, Arctic char, lake trout, and ringed and bearded seals
2004	3,377		2,967	104	6	518	14	2 beluga		January-December
2005	4,058		2,655	145	43	354	8	2 salmon	2	January-December
2006	3,393	27	2,476	100		226	8			January-December
2007	3,433	23	2,550	173	3	424	10		62	January-December
2008	4,934	199	2,775	111	24	426	5	1 walrus		January-December
2009	2,616	1	1,421	3	9	180	2			January-December
2010	701		28			35	3			Surveys only conducted January-March
2011	3,631	140	1,147	20	18	24			2	April-December
2012	3,873	354	1,409	12	216	255	1		1	April-December
2013	1,944	339	817		21	47	2		2	April-December, lower confidence
2014	3,706	136	2,560		57	150	25	37 beluga	5	April-December, lower confidence
2015	3,465	612	2,481	1	966	207	5	1 beluga	14	April-December
2016	4,203	390	3,658	15	1,113	172	9	8 herring, 10 salmon		April-December
2017	3,173	89	783	1	520	201	7	1 sculpin, 120 capelin, 10 salmon		April-December
2018	2,158	621	3,916	5	296	176	8			April-December
2019	2,514	295	2,777	3	131	155	8	3 beluga, 43 salmon		April-December
2020	1,315	77	1,536	2	7	50	5	2 beluga, 8 salmon		April-October, Interviewer noted issues and lower confidence

Table 2. Reported harvest of anadromous Arctic char by management zone under the UCFP, 1988–2020, with asterisks signifying years with lower confidence or incomplete harvest data with respect to Arctic char (sources: Joint Secretariat 2003, Stephenson 2004, HCWG 2006, Harwood et al. 2013, Gallagher et al. 2021, Lea et al. 2023a, and this report).

	Coastal			Inland		Prince Albert Sound					
Year	Subsistence	Commercial	Coastal Total	Tatik Lake (Kuujjua River)	Mayoklihok Lake	Kuuk R./Tahiryruak Lake.	Kagloryuak R./ Kingua area	Kagluk R.	Unspecified	Prince Albert Sound Area Total	Total All Areas
1988	4,838		4,838	4,386		15	0	0		15	9,239
1989	2,609		2,609	3,218		70	0	0		70	5,897
1990	4,021		4,021	3,160		186	0	0		186	7,367
1991	1,752		1,752	1,465		14	0	0		14	3,231
1992	4,934		4,934	2,485		454	399	0		853	8,272
1993	4,753		4,753	0		282	2,800	0		3,082	7,835
1994	6,297		6,297	269		157	3,327	0		3,484	10,050
1995	5,631		5,631	227		0	5,502	0		5,502	11,360
1996	5,549		5,549	1,000		50	1,330	550		1,930	8,479
1997	4,365		4,365	1,166		150	224	227		601	6,132
1998	3,714		3,714	1,260		178	210	0		388	5,362
1999	4,449		4,449	1,201		320	0	0		320	5,970
2000	3,928	100	4,028	1,786		0	351	1		352	6,166
2001	3,469	500	3,969	1,137		54	453	0		507	5,613
2002	4,061	500	4,561	1,180			283	0		283	6,024
2003	2,263	293	2,556	743		29	105	0		134	3,433
2004	2,359	0	2,359	530		29			459	488	3,377
2005	2,126		2,126	951		65	475	191	250	981	4,058
2006	2,163	500	2,663	488		22	100		120	242	3,393
2007	2,154	500	2,654	491		88	200			288	3,433
2008	2,193	500	2,693	967			1,274			1,274	4,934
2009	936	500	1,436	570			610			610	2,616
2010*	unknown	500	500	201						0	701
2011	1,325	500	1,825	892			914			914	3,631
2012	2,083	286	2,369	819		10	675			685	3,873
2013*	132	354	486	518	200		740			740	1,944
2014*	2,409	346	2,755	644			151		156	307	3,706
2015	1,953	500	2,453	821	100	11	80			91	3,465
2016	2,141	583	2,724	794	298	31	356			387	4,203
2017	1509	526	2,035	871	267					0	3,173
2018	950	377	1,327	543	263	25				25	2,158
2019	1,031	497	1,528	634	352					0	2,514
2020*	884	0	884	381	50					0	1,315

Table 3. Tatik Lake anadromous Arctic char harvest, collected by the harvest monitoring program, 1991–2015 (Harwood et al. 2013, Gallagher et al. 2021) and reported to the community harvest survey, 1988–2020 (Joint Secretariat 2003, UCWG 2006, Stephenson 2004, Lea et al. 2023, and this report). The approach for determining the best estimate of total harvest differed slightly between 1991–2015, where the highest number between programs was selected (see Lea et al. 2023a), and 2016–2020 where the totals from both programs were combined while accounting fish reported to both to avoid double counting.

Year	Number of Arctic char recorded by harvest monitoring program	Number of Arctic char reported through harvest surveys (number already accounted for by monitoring program)	Best estimate of total annual Arctic char harvest from Tatik Lake
1988		4,386	4,386
1989		3,218	3,218
1990		3,160	3,160
1991	65	1,465	1,465
1992	113	2,485	2,485
1993	0 (closure)	0	0
1994	231	269	269
1995	227	200	227
1996	625	1,000	1,000
1997	209	1,166	1,166
1998	231	1,260	1,260
1999	1,201	1,045	1,201
2000	237	1,786	1,786
2001	191	1,137	1,137
2002	595	1,180	1,180
2003	230	743	743
2004	176	530	530
2005	951	602	951
2006	488	62	488
2007	491	410	491
2008	796	967	967
2009	331	570	570
2010*	201	NA	201
2011	870	892	892
2012	459	819	819
2013*	518	496	518
2014*	644	NA	644
2015	686	821	821
2016	684	293 (183)	794
2017	606	551 (286)	871
2018	200	429 (86)	543
2019	415	844 (625)	634
2020*	139‡	242 (0)	381

* Harvest survey records incomplete and/or low confidence noted in in these years
‡ Harvest monitoring catch records incomplete (139 Arctic char sampled in 2020)

FIGURES

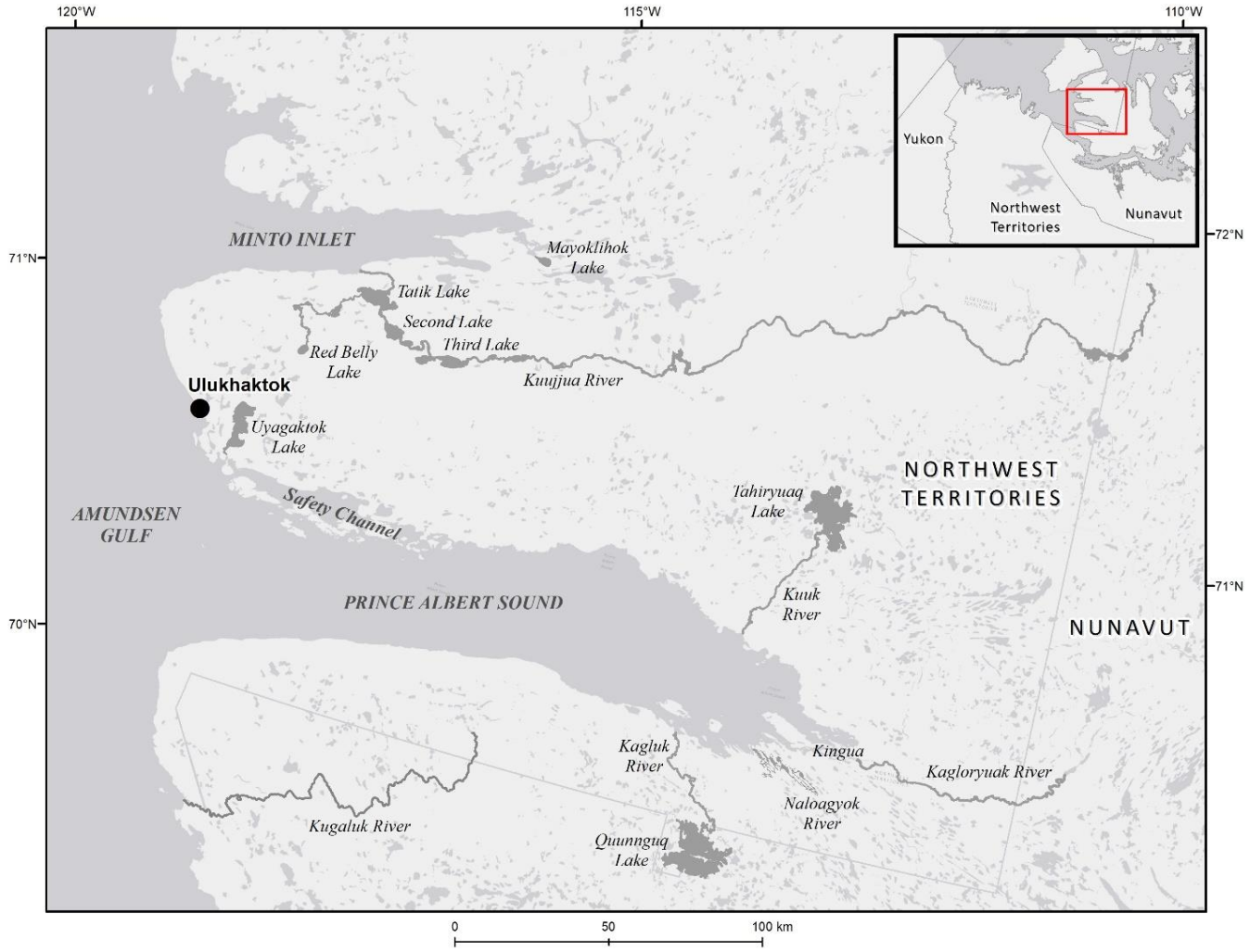

Figure 1. Location of Ulukhaktok, Northwest Territories, and important areas for Arctic char fisheries for the community.

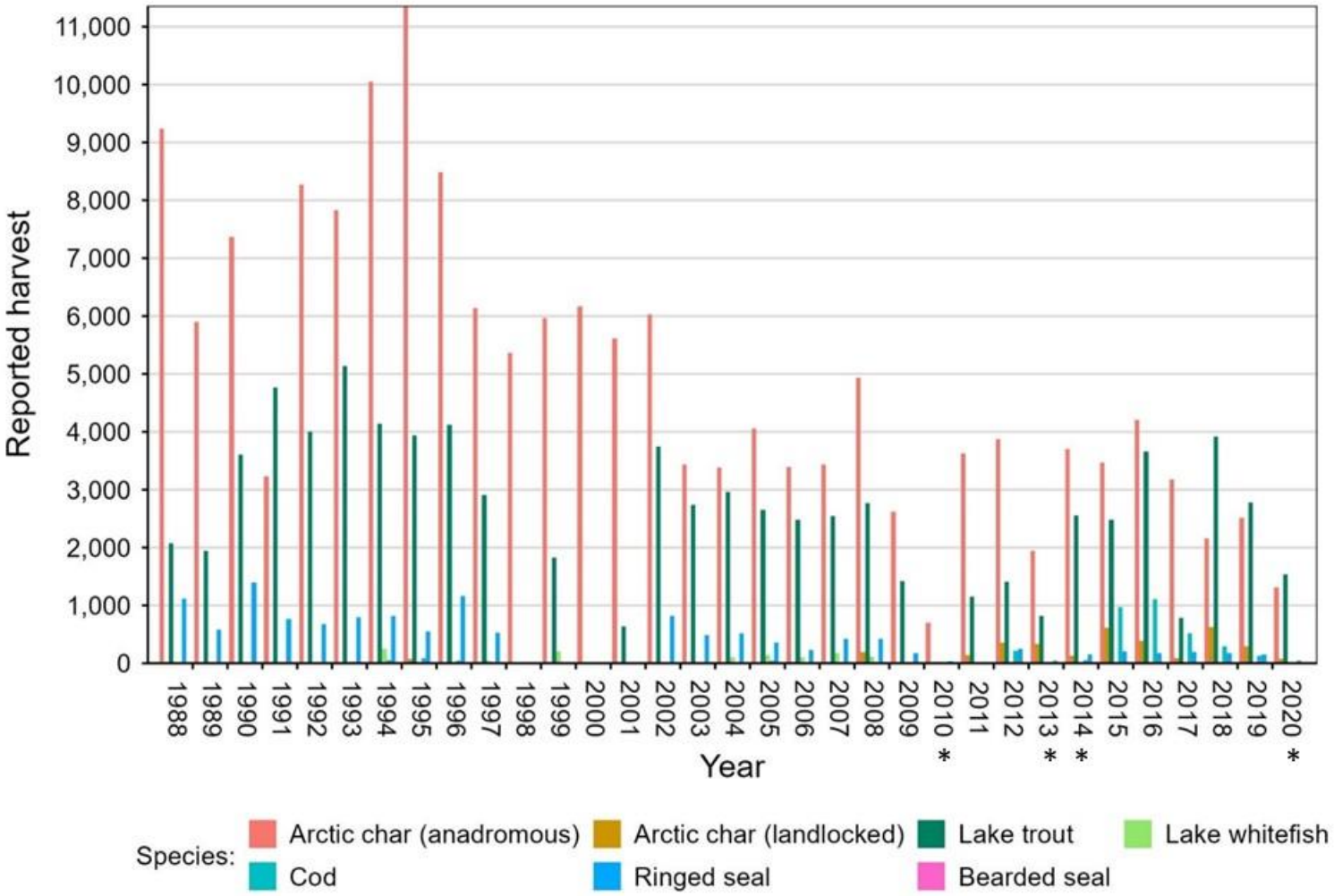

Figure 2. Reported subsistence harvest of key fish and marine mammal species in harvest survey programs out of Ulukhaktok, NT, between 1988 and 2020 (sources: Joint Secretariat 2003, Stephenson 2004, HCWG 2006, Harwood et al. 2013, Gallagher et al. 2021, Lea et al. 2023a, and this report). The asterisks indicate years when survey data was assessed as lower confidence and/or incomplete by the community. Further details for each species over the time series can be found in Figures 3–9.

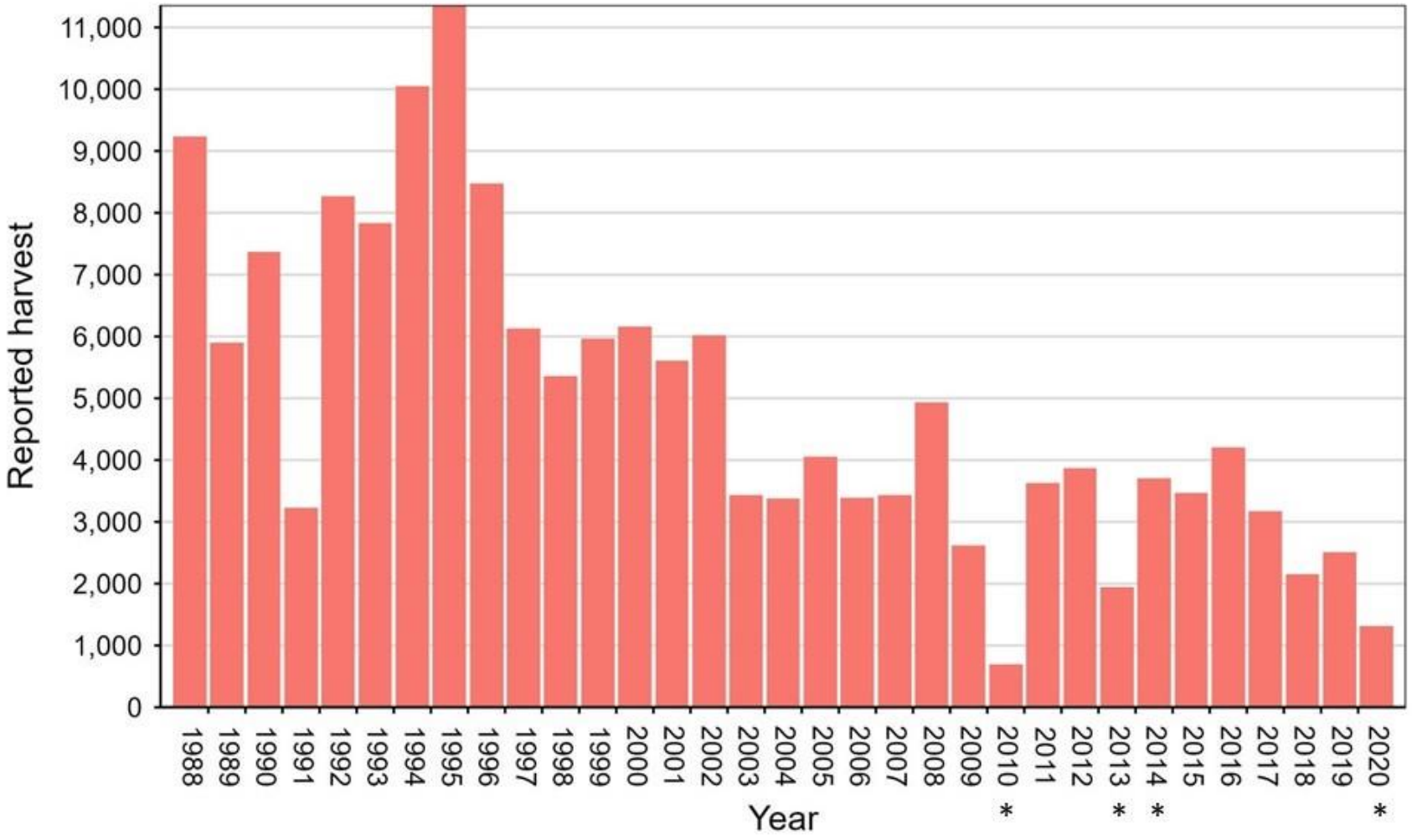

Figure 3. Reported subsistence harvest of anadromous Arctic char in harvest survey programs out of Ulukhaktok, NT, between 1988 and 2020 (sources: Joint Secretariat 2003, Stephenson 2004, HCWG 2006, Harwood et al. 2013, Gallagher et al. 2021, Lea et al. 2023a, and this report). The asterisks indicate years when survey data was assessed as lower confidence and/or incomplete by the community.

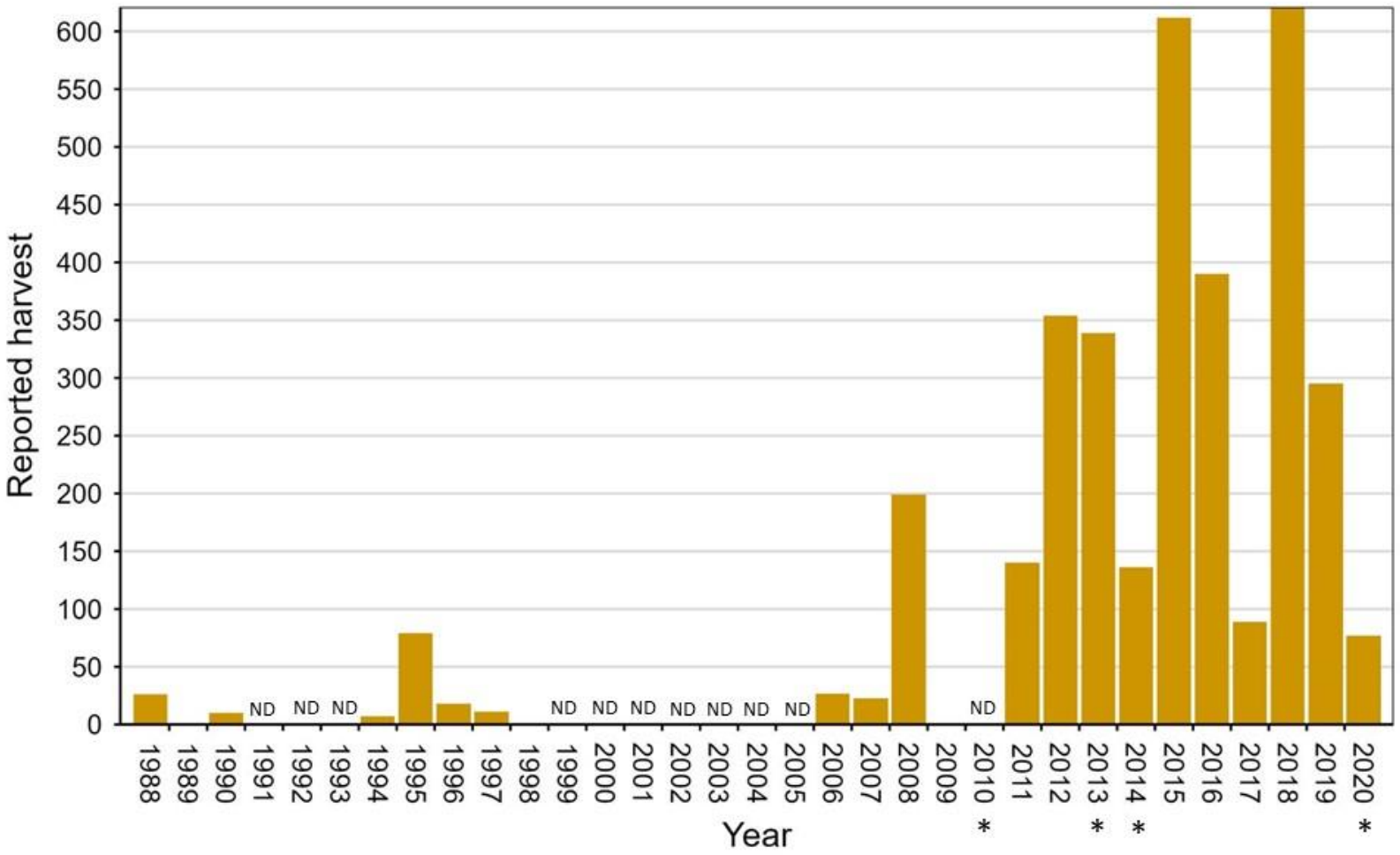

Figure 4. Reported subsistence harvest of landlocked Arctic char in harvest survey programs out of Ulukhaktok, NT, between 1988 and 2020 (sources: Joint Secretariat 2003, Stephenson 2004, Lea et al. 2023a, and this report). The asterisks indicate years when survey data was assessed as lower confidence and/or incomplete by the community; "ND" indicates years where no data were collected for the species.

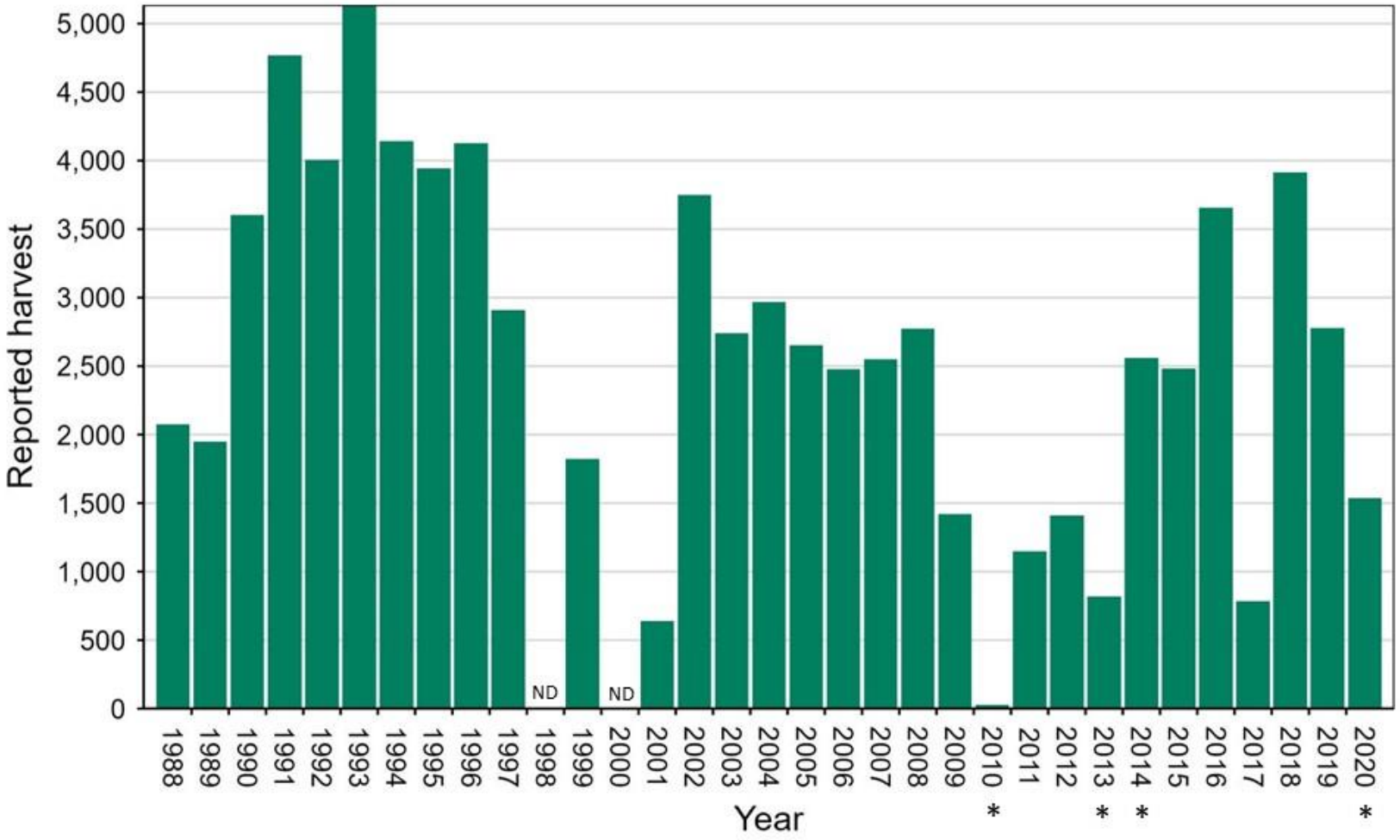

Figure 5. Reported subsistence harvest of lake trout in harvest survey programs out of Ulukhaktok, NT, between 1988 and 2020 (sources: Joint Secretariat 2003, Stephenson 2004, Lea et al. 2023a, and this report). The asterisks indicate years when survey data was assessed as lower confidence and/or incomplete by the community; "ND" indicates years where no data were collected for the species.

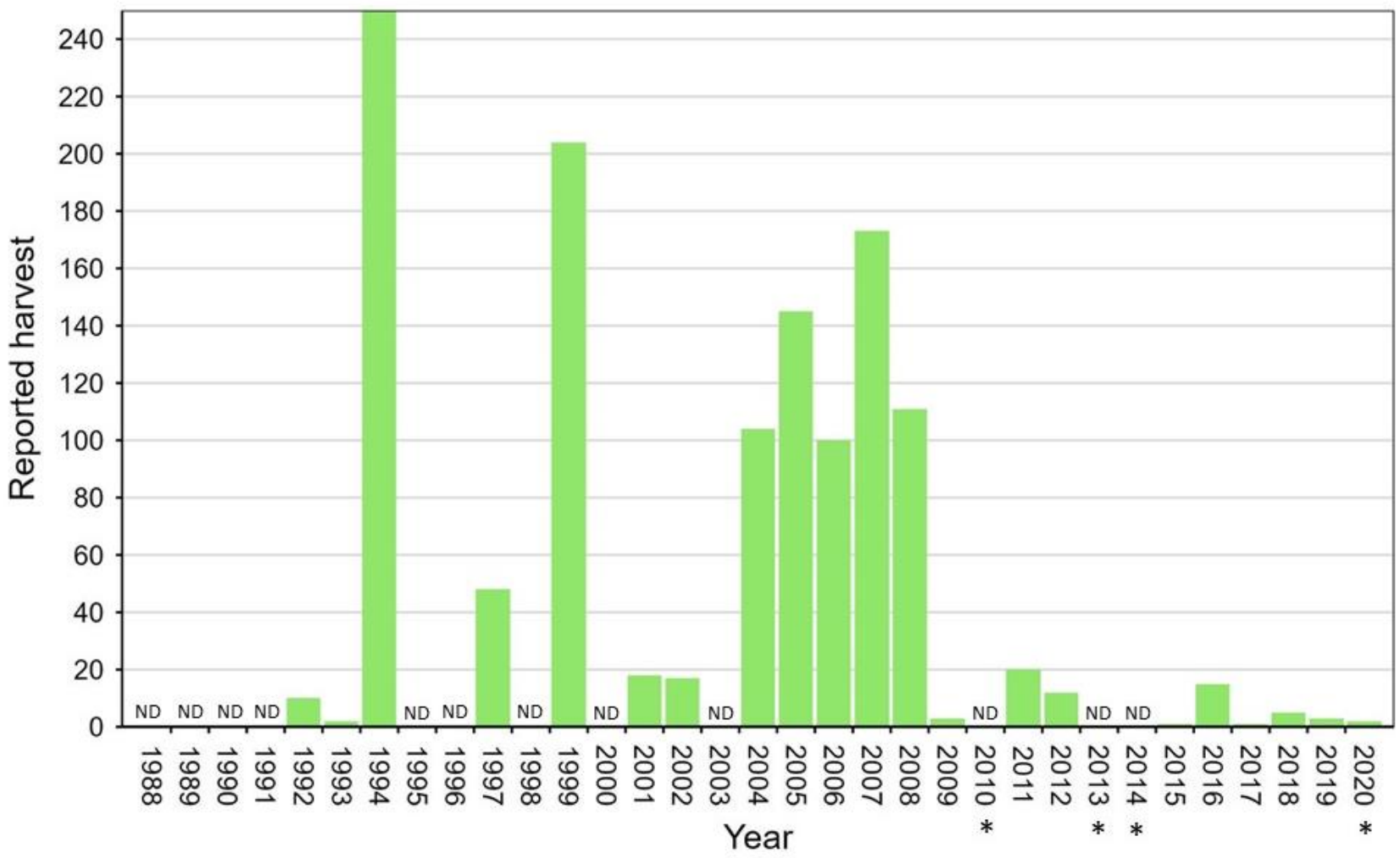

Figure 6. Reported subsistence harvest of lake whitefish in harvest survey programs out of Ulukhaktok, NT, between 1988 and 2020 (sources: Joint Secretariat 2003, Stephenson 2004, Lea et al. 2023a, and this report). The asterisks indicate years when survey data was assessed as lower confidence and/or incomplete by the community; "ND" indicates years where no data were collected for the species.

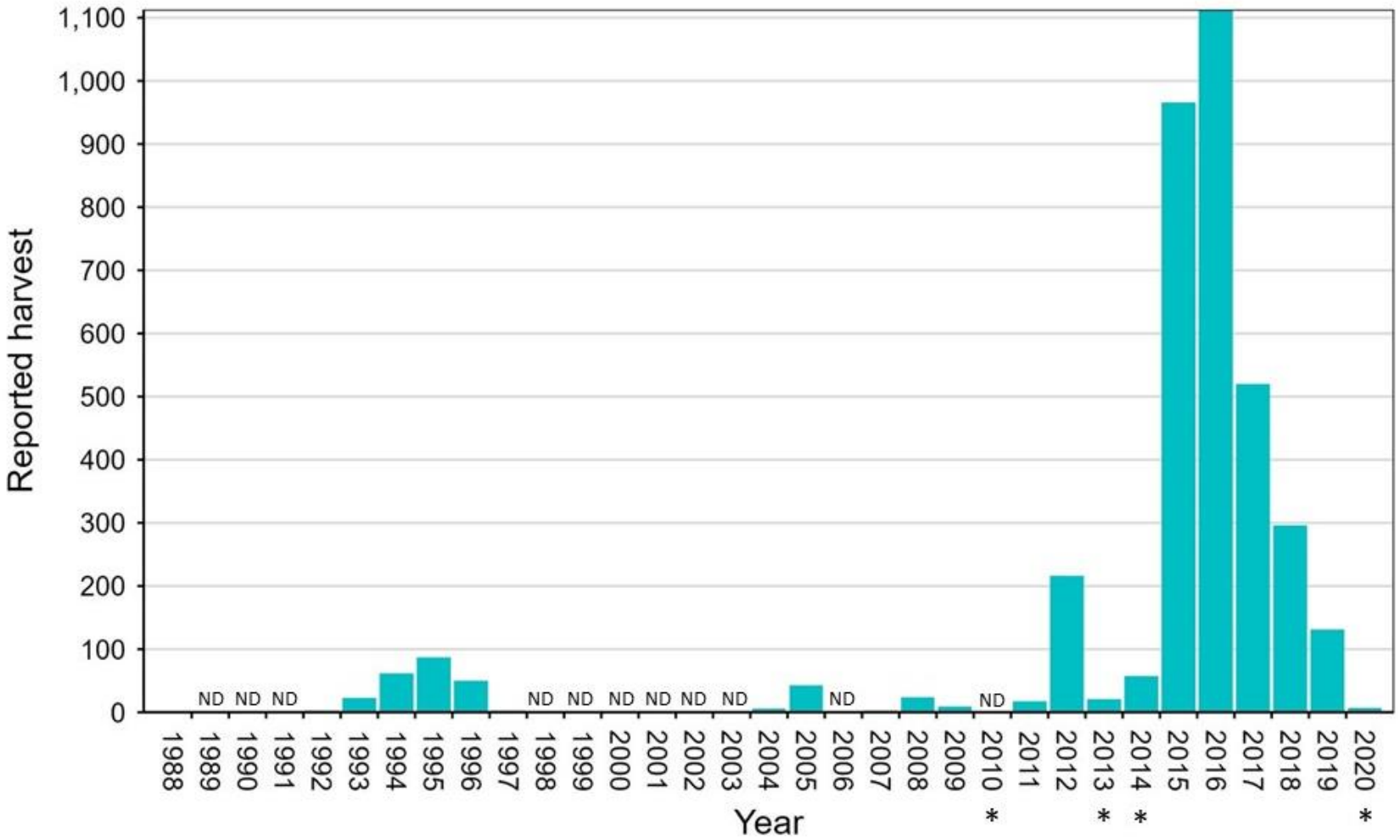

Figure 7. Reported subsistence harvest of cod species (Greenland or Saffron) in harvest survey programs out of Ulukhaktok, NT, between 1988 and 2020 (sources: Joint Secretariat 2003, Stephenson 2004, Lea et al. 2023a, and this report). The asterisks indicate years when survey data was assessed as lower confidence and/or incomplete by the community; "ND" indicates years when no data were collected for the species.

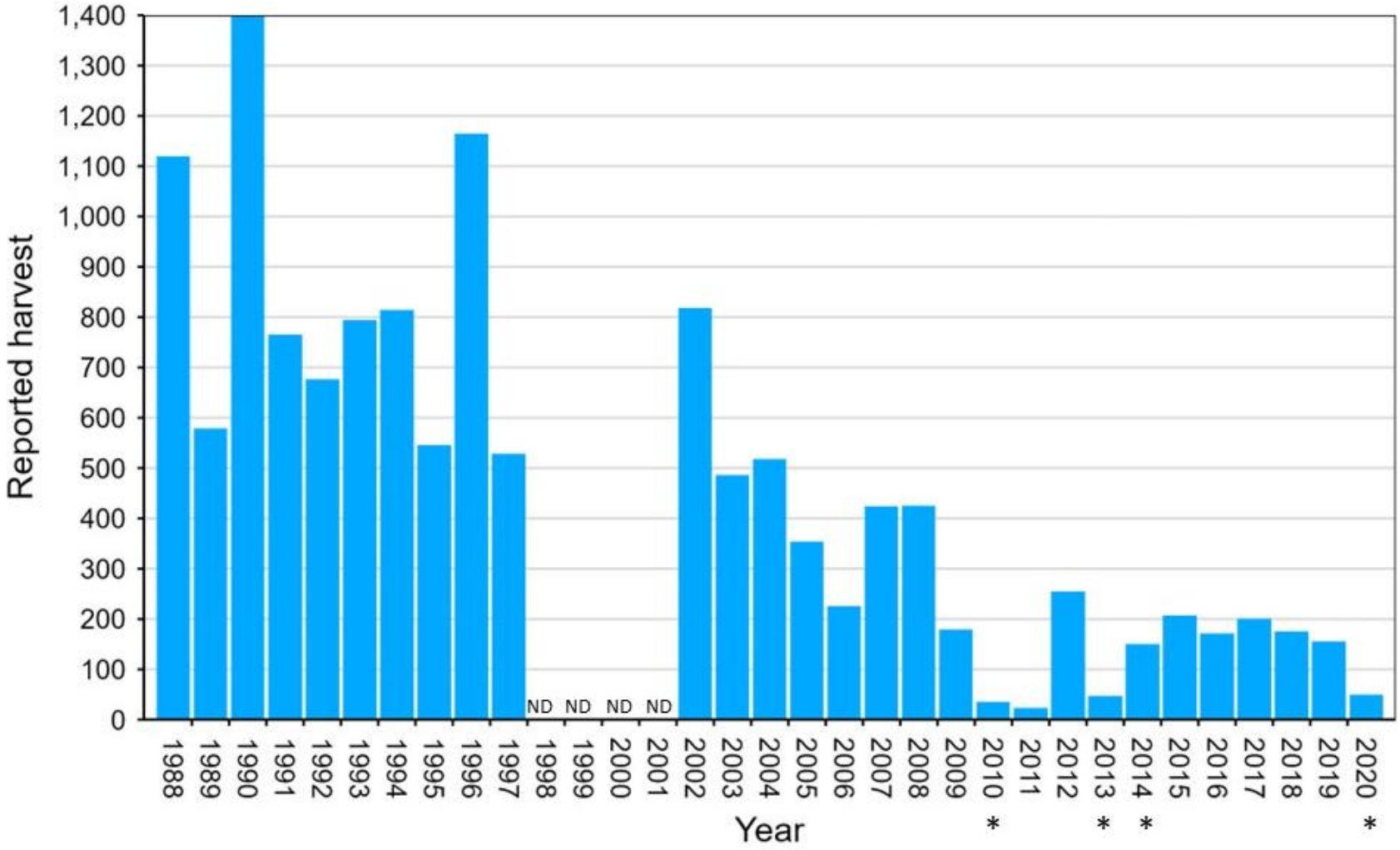

Figure 8. Reported subsistence harvest of ringed seals in harvest survey programs out of Ulukhaktok, NT, between 1988 and 2020 (sources: Joint Secretariat 2003, Stephenson 2004, Lea et al. 2023a, and this report). The asterisks indicate years when survey data was assessed as lower confidence and/or incomplete by the community; "ND" indicates years when no data were collected for the species.

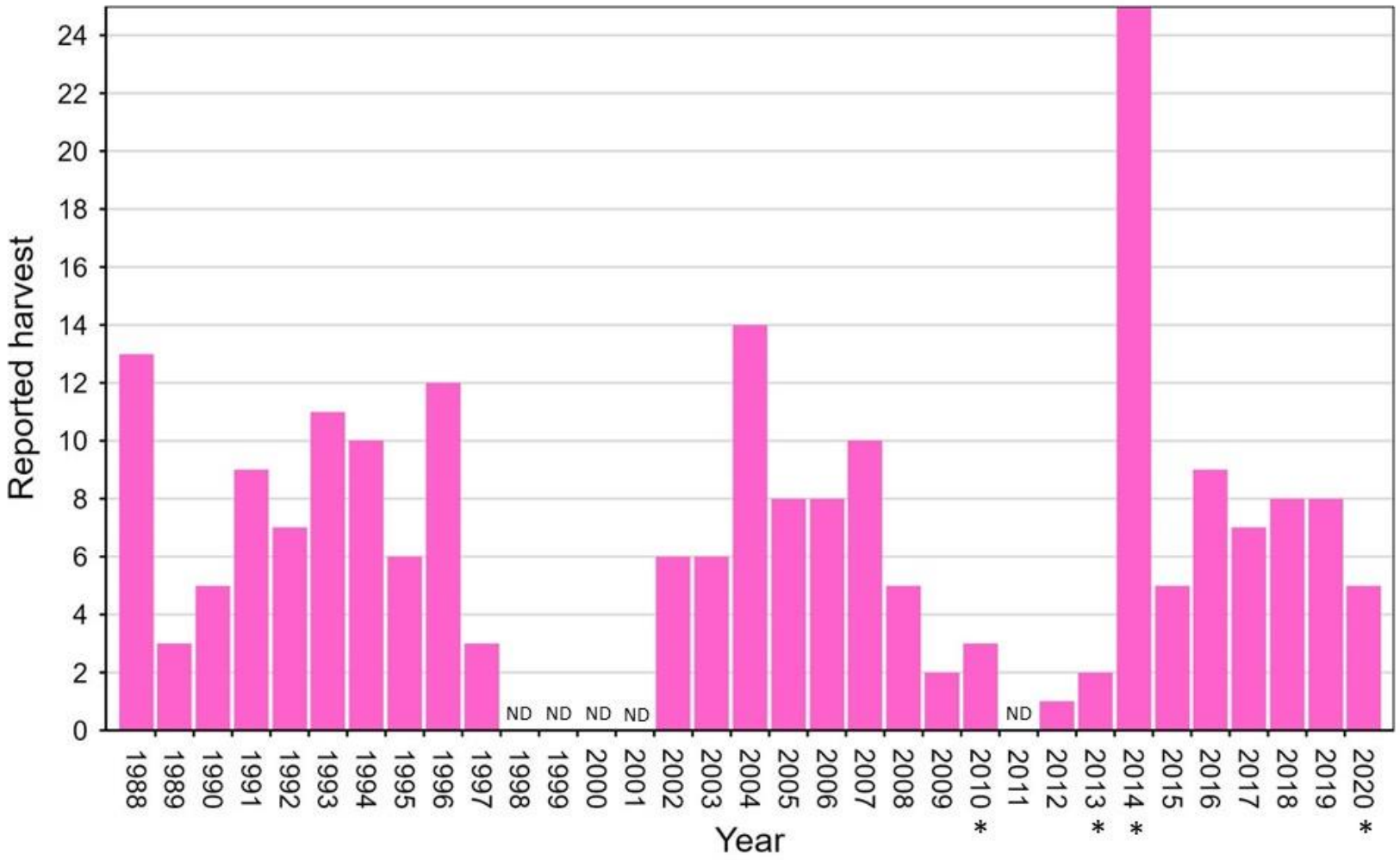

Figure 9. Reported subsistence harvest of bearded seals in harvest survey programs out of Ulukhaktok, NT, between 1988 and 2020 (sources: Joint Secretariat 2003, Stephenson 2004, Lea et al. 2023a, and this report). The asterisks indicate years when survey data was assessed as lower confidence and/or incomplete by the community; "ND" indicates years when no data were collected for the species.

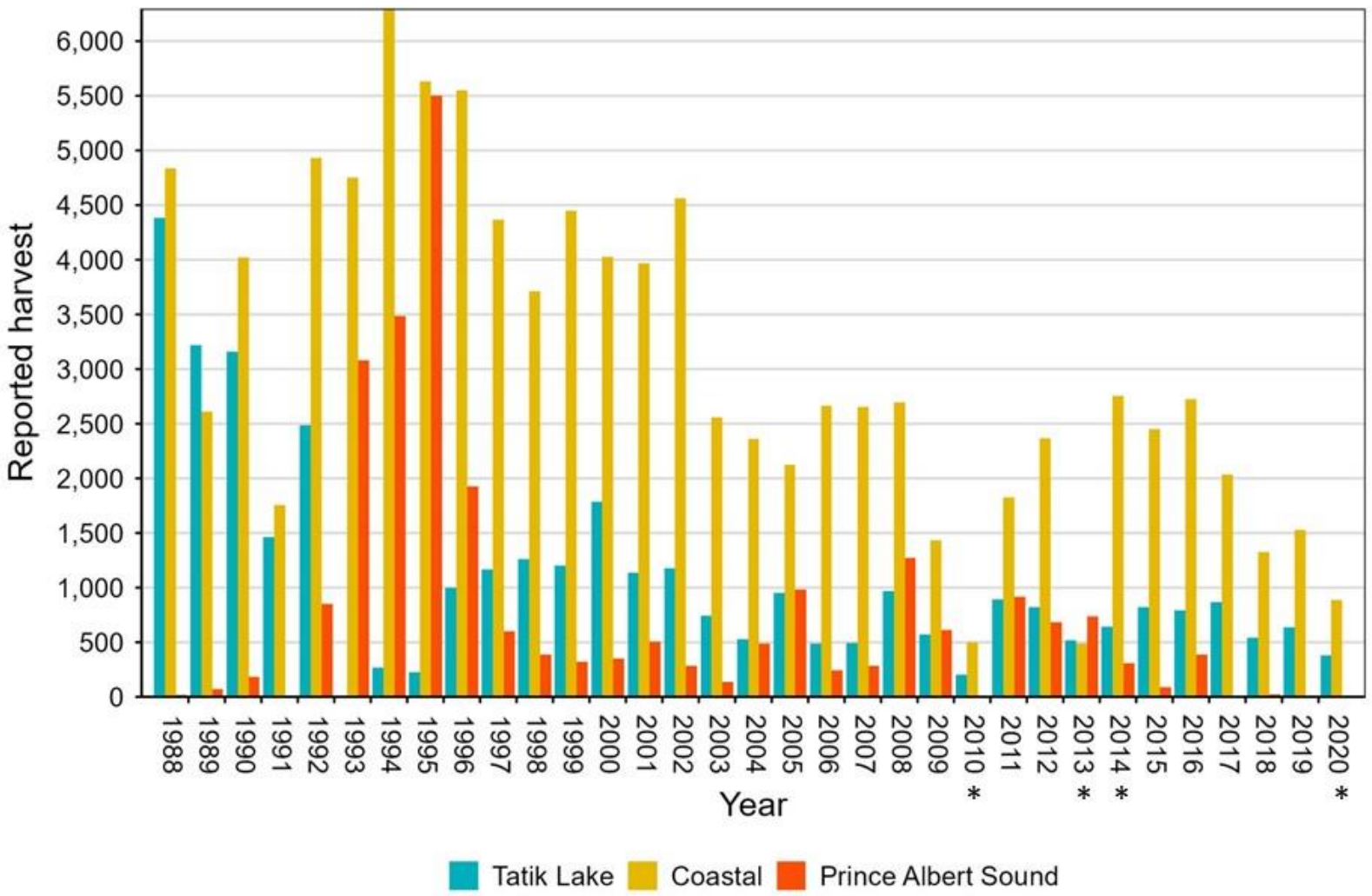

Figure 10. Reported harvest of anadromous Arctic char by management zone near Ulukhaktok, NT, between 1988 and 2020 (sources: Joint Secretariat 2003, Stephenson 2004, HCWG 2006, Harwood et al. 2013, Gallagher et al. 2021, Lea et al. 2023a, and this report). The asterisks indicate years when survey data was assessed as lower confidence and/or incomplete by the community.

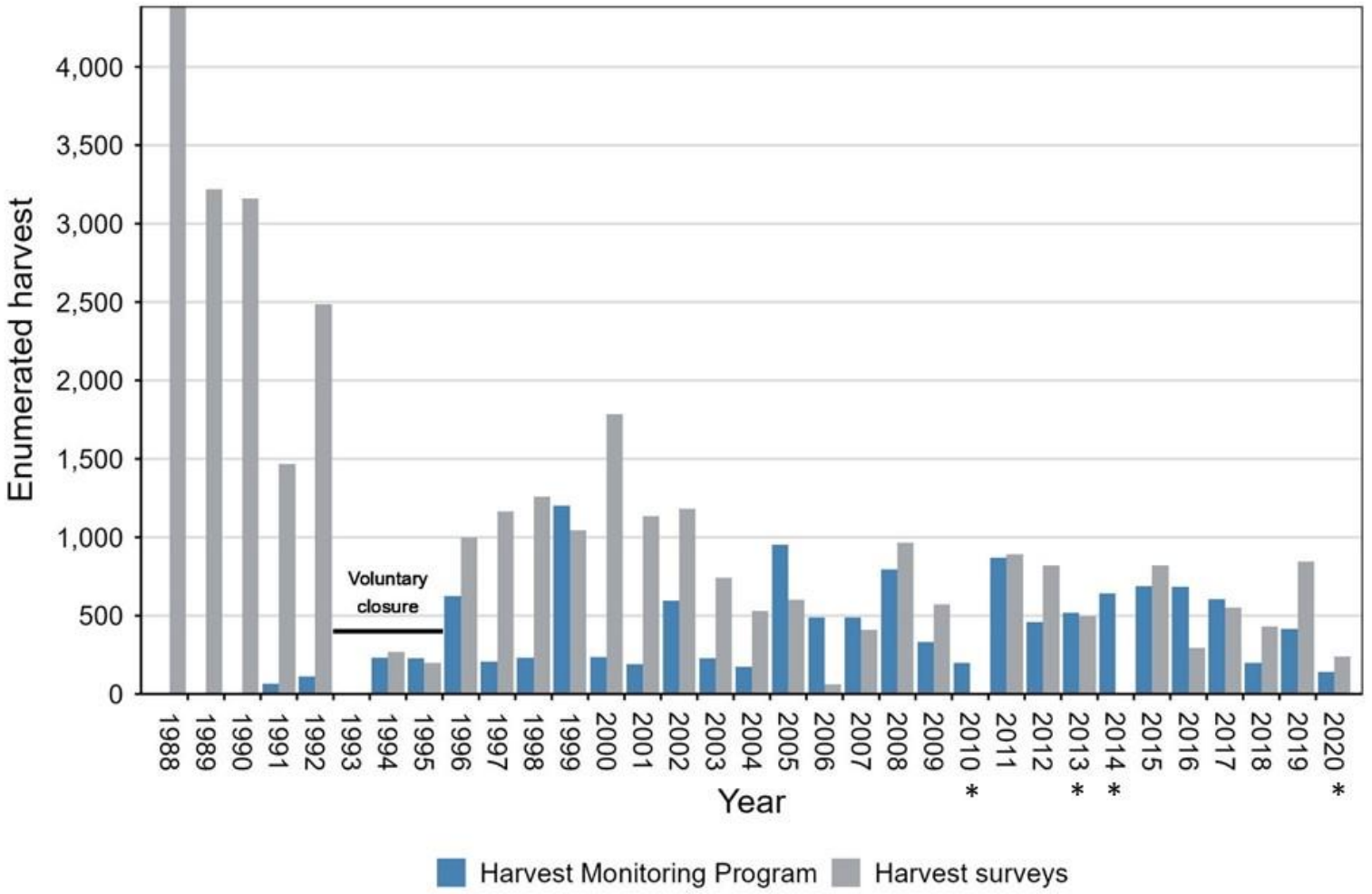

Figure 11. Harvest of anadromous Arctic char from Tatik Lake collected by the harvest monitoring program (Harwood et al. 2013, Gallagher et al. 2021), and reported during community harvest surveys, 1988–2020 (Joint Secretariat 2003, UCWG 2006, Stephenson 2004, Lea et al. 2023a, and this report). During the voluntary closure established by the UCWG 1993-1995, harvest monitoring took place in 1994 and 1995 to obtain biological samples to support stock assessment research. The asterisks indicate years when survey data was assessed as lower confidence and/or incomplete by the community.

APPENDIX 1- EXAMPLE OF A BLANK HARVEST SURVEY FORM

Ulukhaktok 2018-19 Harvest Study	Harvester Number	Community Ulukhaktok
	Interview Date	Interviewer
Harvest information from: _____ to _____		

Did you fish or hunt whales/seals this month: ☐ YES ☐ NO, if YES then fill in harvest information.

FISH			
Species	**Harvest Date**	**Number**	**Harvest Location**
Arctic Char (sea run)			
Of the Arctic Char harvested: a) Were these already accounted for by the summer coastal or fall Fish Lake char monitors? ☐ YES ☐ NO ☐ PARTIALLY If partially, how many were already accounted for? _____ b) Were these caught for the commercial fishery? ☐ YES ☐ NO ☐ PARTIALLY If partially, how many? _____			
Landlocked Arctic char			
Lake Trout			
Broad Whitefish			
Lake Whitefish			
Cod (oogak)			
Other (specify)			
Other (specify)			

MARINE MAMMALS					
Species	**Harvest Date**	**Number Harvested**	**Struck & Lost**	**Sex**	**Harvest Location**
Beluga					
Ringed Seal					
Bearded Seal					

(Male = M, Female = F, Unknown = UK)

OTHER COMMENTS:

How was fishing/hunting compared to previous seasons?

Did you notice anything unusual (*e.g.*, unusual fish, scars, parasites)? ☐ **YES** ☐ **NO**

If YES, please explain

APPENDIX 2- NUMBER OF ANADROMOUS ARCTIC CHAR HARVESTED FROM THE KUUJJUA RIVER 1966–2020

Year	Subsistence	Commercial	Sport Lodge	Total
1966	3,600≠		133	3,733
1967	4,000≠		569	4,569
1968	3,500≠		400≠	3,900
1969	3,500≠		500≠	4,000
1970	3,800≠		110	3,910
1971	3,994		119	4,113
1972	3,063		325	3,388
1973	3,367		135	3,502
1974	1,704		187	1,891
1975	3,782		27	3,809
1976	2,222			2,222
1977	3,046			3,046
1978	1,986			1,986
1979				
1980		1,026‡		1,026
1981				
1982		1,356‡		1,356
1983		1,356‡		1,356
1984		1,356‡		1,356
1985				
1986				
1987				
1988	4,386			4,386
1989	3,218			3,218
1990	3,160			3,160
1991	1,465			1,465
1992	2,485			2,485
1993				
1994	269			269
1995	227			227
1996	1,000			1,000
1997	1,166			1,166
1998	1,260			1,260
1999	1,201			1,201
2000	1,786			1,786
2001	1,137			1,137
2002	1,180			1,180
2003	743			743
2004	530			530
2005	951			951
2006	488			488
2007	491			491
2008	967			967
2009	570			570
2010-	201			201
2011	892			892
2012	819			819
2013-	518			518

Year	Subsistence	Commercial	Sport Lodge	Total
2014[-]	644			644
2015	821			821
2016	794			794
2017	871			871
2018	543			543
2019	634			634
2020[-]	381			381

[≠] Estimation (Lewis et al. 1989).
[‡] Number of fish estimated using an average weight of 2.3 kg per fish.
[-] Underestimate

Sources: Lewis et al. (1989), Yaremchuk et al. (1989), Joint Secretariat (2003), UCWG (2006), Stephenson (2004), Harwood et al. (2013), Gallagher et al. (2021), Lea et al. (2023a), and this report.