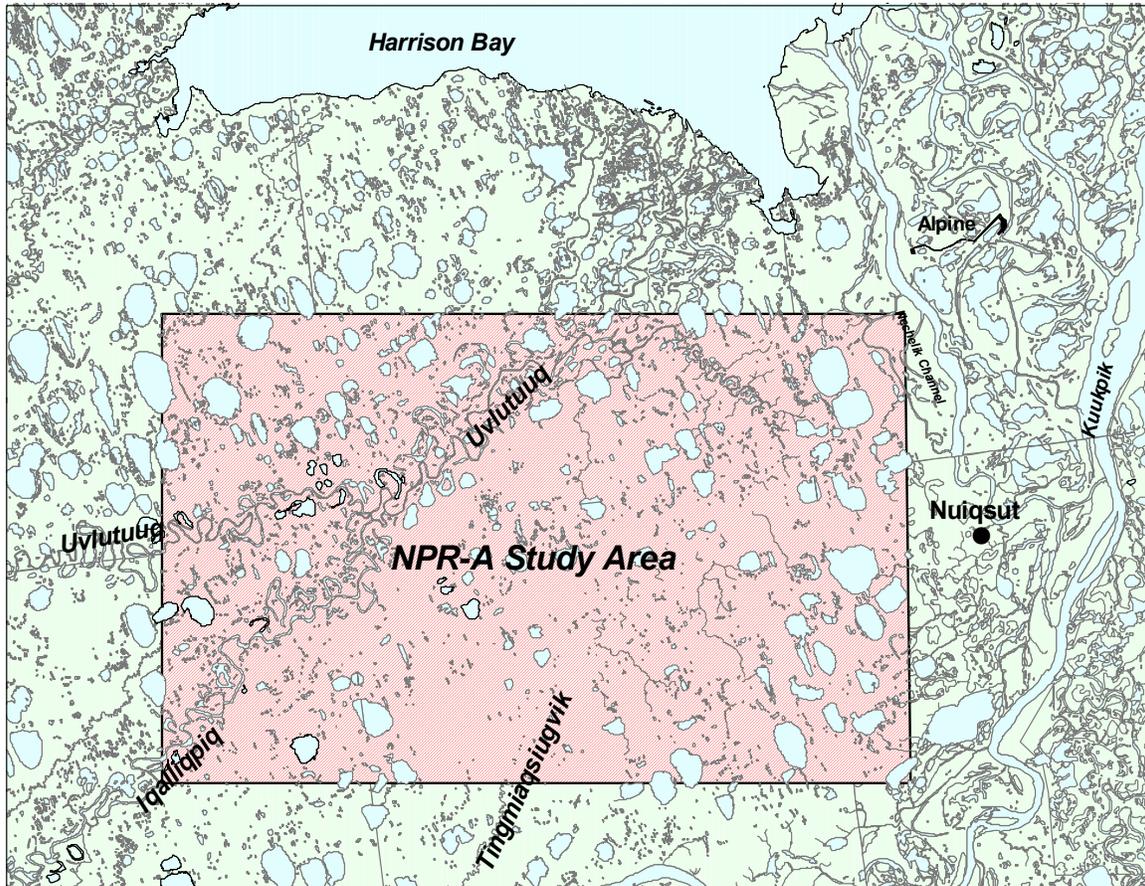


BASELINE SURVEYS OF FISH HABITATS IN EASTERN NPR-A: 2001-2002

Final Report

April 2003



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EXECUTIVE SUMMARY

ConocoPhillips Alaska Inc. (CPAI) has been exploring for oil within the eastern portion of the National Petroleum Reserve–Alaska (NPR-A) since the winter of 1999/2000. Significant oil reserves have been located in the region, and the feasibility of developing a producing field in the area is being investigated. Part of the evaluation process includes assessing the potential environmental impacts. The inventory of fish and fish habitat provides information for assisting permitting decisions regarding road and pipeline routing. In addition, streams in the area may be crossed by ice roads, so an understanding of potential overwintering areas is also desirable. A key element of the study is identifying movements and distribution of fish utilizing the stream systems.

The present study was the first detailed examination of fish populations in the drainages of eastern NPR-A. The study was designed to provide details of fish populations in eastern NPR-A and the habitats used by those populations, so that oilfield facilities can be sited, designed and constructed in a manner that will avoid or minimize impacts. Specific objectives of the 2001-2002 fish survey were to conduct studies on the Uvlutuuq (Fish Creek) and Tingmiaqsiugvik (Ublutuooh) River drainage systems to:

- a) describe the fish populations and habitat use patterns within streams and lakes of eastern NPR-A,
- b) obtain information on fish movements within the drainages,
- c) document the recovery of tagged fish in both study nets and the Nuiqsut fishery from different release locations, and
- d) estimate available water in lakes in or near potential development areas.

The study included cooperative efforts among ConocoPhillips Alaska, the North Slope Borough (NSB) and Alaska Department of Fish and Game (ADF&G). An additional objective was to provide fish for radio-tagging by ADF&G.

METHODS

During summer 2001-2002, fyke nets were used to sample major drainages and lakes in the eastern NPR-A study area. Additional sampling was conducted in lakes spread across the study area, from near the confluence of Uvlutuuq (Fish Creek) and Iqalliqliq (Judy Creek) to near the Nigliq Channel. Sampling was by fyke net so that fish could be released unharmed. Sampling covered late June to evaluate post-breakup movements, late July-early August to evaluate fish use of channels after spring out-migration was complete, and the end of August into early September to evaluate potential movements to wintering areas. Water chemistry parameters, including water temperature, specific conductance, dissolved oxygen, pH, and turbidity, were measured to assess habitat conditions and provide information on the suitability of the water for domestic and industrial uses.

In 2001, fish longer than 250 mm were tagged to reveal the extent to which fish caught in the study area contribute to the subsistence catch. In 2002, a smaller tag was used and fish longer than 180 mm were tagged. This change was made to increase the pool of tagged fish in the populations, thus potentially increasing the number of tag returns. Recapture was monitored in research sampling

within Colville Delta and eastern NPR-A study areas, in the Nuiqsut subsistence fishery and in the Colville Delta commercial fishery.

Bathymetric data were collected in 2002 to allow estimating lake volume. Lake volume was estimated by contour mapping of depth intervals. The amount allowed for winter water withdrawal when sensitive fish species are present is currently set by ADF&G at 15% of the volume of the lake deeper than 7 feet. When only resistant fish species (i.e. ninespine stickleback and Alaska blackfish) are present, the current allocation recommended by ADF&G is 30% of the volume deeper than 5 feet. There is no withdrawal limit if fish are not present. The area potentially available for ice aggregate was estimated by calculating the area of the lake shallower than 4 feet, assuming that the ice would grow to at least 4 feet by early to mid January, prior to the need for aggregate. If the ice is shallower than 4 feet at the time of ice removal, then the area available for ice aggregate will be less

Aquatic habitats in the Alpine West area were surveyed on June 24, 2002 and evaluated with aerial photographs taken July 14/15, 2001. The objective of the survey was to provide reconnaissance-level information on the distribution of aquatic habitats in the Alpine West area.

RESULTS

Substantial differences were found in fish use of habitats associated with the drainages of eastern NPR-A. Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek), had the lowest catch rates, while tapped lakes had the highest catch rates (not including ninespine sticklebacks) and highest diversity, which parallels results from the nearby Colville River delta. The Tingmiaqsiugvik (Ublutuocho River), a clear water tributary to Fish Creek, produced the second highest catch rates, followed by tundra-stream tributaries to Fish Creek. The catch in these clear water streams was dominated by arctic grayling.

Catch rates of all species were low in Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek), with arctic grayling and least cisco being the most abundant species. Arctic grayling were also the most abundant fish in the Tingmiaqsiugvik (Ublutuocho River), followed by humpback whitefish, broad whitefish, and round whitefish. Catches in a tapped lake were dominated by broad whitefish and least cisco, with arctic grayling, humpback whitefish and round whitefish being present in lesser numbers. Tributaries to Fish Creek contained ninespine stickleback, arctic grayling and Alaska blackfish. Arctic grayling were the most abundant species in clear water tributaries, which also contained Alaska blackfish and ninespine stickleback.

Sampling in lakes revealed that lakes in close proximity to Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek), or those connected to the rivers by a stream, tend to be fish-bearing, while those remote from the streams normally do not support fish. Most of the fish-bearing lakes are in a corridor along Fish and Judy creeks, where high flows at break-up facilitate dispersal. The distribution of fish in lakes along Fish Creek and Judy Creek was confined to the area lying within the 100-year floodplain. Large isolated thaw lakes had the highest overall catch rates, with virtually all of the catch being ninespine stickleback. Lakes associated with small drainages contained a few juvenile arctic grayling, but catches were sporadic through the summer.

Arctic Grayling. Arctic grayling were second in abundance to ninespine stickleback and were the most consistently caught species across all habitats, being present in all time periods. The Tingmiaqsiugvik (Ublutuooh River) contained the highest abundance of adult arctic grayling through the summer, although they were present in the other habitats as well. Rearing juveniles were particularly abundant in the tundra-stream tributaries to Uvlutuuq (Fish Creek). Young-of-the-year were caught almost exclusively at the Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek) stations, with none observed in the Tingmiaqsiugvik (Ublutuooh River).

Tags were applied to 425 arctic grayling, and 28 tags were eventually recovered during 2001-2002. Most were recaptured near the release location, although one moved almost 10 miles from Iqalliqpiq (Judy Creek) into upper Uvlutuuq (Fish Creek), another moved nearly 16.5 miles, and two moved about 29.7 miles from the confluence of Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek) to the Tingmiaqsiugvik (Ublutuooh River) sampling station.

Broad Whitefish. Broad whitefish were the third most abundant fish caught with the majority of the catch being young-of-the-year caught in lake MC7916. Larger broad whitefish were caught primarily in the Tingmiaqsiugvik (Ublutuooh River) during the late July sampling period, with only scattered records of larger individuals at other locations and during other time periods. Tags were applied to 129 broad whitefish, and 1 was recaptured. The recaptured fish was released at the Tingmiaqsiugvik (Ublutuooh River) and recovered in the Nuiqsut fall fishery conducted on the Nigliq Channel approximately 45 river miles from the release point.

Humpback Whitefish. Humpback whitefish were fourth in abundance, with most of the catch recorded from the Tingmiaqsiugvik (Ublutuooh River). Unlike most other species, over 90% of the captured humpback whitefish were adults. There was a strong upstream movement of these large humpback whitefish in the Tingmiaqsiugvik (Ublutuooh River) during July, which accounted for most of the catch. Tags were applied to 248 humpback whitefish, with 2 recaptured in the Nuiqsut fall fishery.

Round Whitefish. Round whitefish were encountered in low numbers in all habitats except perched lakes. They were most abundant in the Tingmiaqsiugvik (Ublutuooh River), followed by the Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek) nets. Captured round whitefish covered a broad size range, from 40 to 400 mm, with no size range being dominant. Large individuals were especially abundant in the Tingmiaqsiugvik (Ublutuooh River). Tags were applied to 68 round whitefish, with none recovered to date.

Least Cisco. Least cisco were most abundant in lake habitats, including both tapped and perched lakes. There was an early season movement in Uvlutuuq (Fish Creek), then an upstream movement in the Tingmiaqsiugvik (Ublutuooh River) during the July sampling period. Aside from these two periods, few were caught in river channels. They were present in tapped lakes during all sampling periods, over a broad size range. By the Aug/Sep sampling period, young-of-the-year had grown large enough to be caught by the fyke nets, and again were most abundant in tapped lakes.

Tags were applied to 77 least cisco, with 1 recovered. The recovered fish was caught in the Nuiqsut fall fishery, approximately 26 river miles from the release location.

Burbot. Fifteen burbot were caught during the study. The burbot were scattered through all of the sampling areas except for the Tingmiaqsiugvik (Ublutuochoch River). The captured burbot covered a range of sizes from young fish to large adults up to 820 mm. Eleven of the large burbot were tagged, however none were recovered to date.

Fourteen lakes in the eastern NPR-A study area were evaluated as potential water-source lakes in 2002. The lakes were selected because of their proximity to proposed pads in eastern NPR-A. Information on depth distribution and fish presence were used to evaluate the volumes of water potentially available for use. All of the lakes contained ninespine stickleback, with one supporting a few juvenile arctic grayling, and four containing Alaska blackfish. The area likely to be available for ice aggregate ranged from 1.4 to 192 acres. The 14 lakes surveyed during 2002 could provide up to 149.34 million gallons of water for use, with up to 820.5 acres available for removing chips for ice aggregate.

Alpine West contains a variety of aquatic habitats, ranging from deep lakes, to tapped lakes, river channel, and numerous shallow ponds. Deep lakes are found along the west bank of the Nigliq Channel. These lakes all retained an ice cover into late June, 2002, which indicates deeper water than nearby ice-free lakes and ponds. Previously sampling identified broad whitefish, least cisco and ninespine stickleback from these lakes.

A branch of the Nigliq Channel with an associated tapped lake lies in the Alpine West study area. These habitats are likely to contain the suite of species associated with other river channels and tapped lakes in the delta, including broad whitefish, humpback whitefish, arctic cisco, least cisco, round whitefish, and rainbow smelt. The numerous shallow lakes and ponds (generally less than 5 feet deep) likely support only ninespine stickleback.

CONCLUSIONS

The sampling in eastern NPR-A during 2001-2002 indicated that the main river channels of Uvlutuuq (Fish Creek) and Iqalliqliq (Judy Creek) are sparsely used by fish during the summer and likely serve primarily as migration corridors for fish moving between various other habitats, such as clear water streams, tapped lakes and perched lakes. The unstable channels of Fish and Judy creeks likely limit productivity, and the prey is probably limited compared to other habitats.

The Tingmiaqsiugvik (Ublutuochoch River), in contrast to Uvlutuuq (Fish Creek) and Iqalliqliq (Judy Creek), is heavily used by arctic grayling, humpback whitefish and broad whitefish, with round whitefish and least cisco also present during summer. A high percentage of the fish in the Tingmiaqsiugvik (Ublutuochoch River) were large fish. Clear water tributaries to Fish Creek supported high density of juvenile arctic grayling.

Lakes connected to the rivers also provide important fish habitat. The value of the lake increases as predictability of access increases. Lakes remote from stream systems supported ninespine stickleback, with some also containing Alaska blackfish, while lakes with seasonal connections to stream systems also supported low densities of juvenile arctic grayling.

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BASELINE SURVEYS OF FISH HABITATS IN EASTERN NPR-A: 2001-2002

INTRODUCTION

ConocoPhillips Alaska Inc. (CPAI) has been exploring for oil within the eastern portion of the National Petroleum Reserve–Alaska (NPR-A) since the winter of 1999/2000. Significant oil reserves have been located in the region, and the feasibility of developing a producing field in the area is being investigated. Part of the evaluation process includes assessing the potential environmental impacts.

In order to submit applications for exploration and development permits, information specific to the activity area is required to evaluate the biological sensitivity of streams and lakes in the region. Streams in the area may be crossed by ice roads during winter or by roads and/or pipelines after development. An understanding of the fish populations in these streams is needed to minimize effects to these populations during field development. The inventory of fish and fish habitat provides information for assisting permitting decisions regarding road and pipeline routing. In addition, streams in the area may be crossed by ice roads, so an understanding of potential overwintering areas is also desirable. A key element of the study is identifying movements and distribution of fish utilizing the stream systems.

Streams in the study region have previously been investigated by Netsch et al. (1977), and Bendock and Burr (1984). These surveys consisted of one-day visits at each site for inventory-level surveys over a wide area, with sampling by gill net, seine, minnow trap, and angling. Species reported from Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek) included broad whitefish, arctic grayling, round whitefish, slimy sculpin and ninespine stickleback. The Tingmiaqsiugvik (Ublutuocho River) was also reported to contain arctic grayling, slimy sculpin and ninespine stickleback.

Lakes also provide substantial fish habitat in or near the potential development area, and are sources of water needed to support field operations, including drilling, ice road construction and camp use. The thick ice cover during winter (approaching 7 feet by late winter) limits the amount of water available to fish, and the amount of winter habitat is considered a critical feature in controlling fish populations (Craig 1984, Power 1997). A substantial number of lakes have been surveyed throughout NPR-A, however, few of these were in the present study area (Netsch et al. 1977, Bendock and Burr 1984, 1985, McElderry and Craig 1981). Studies of fish use of lakes in eastern NPR-A specific to the CPAI exploration program were initiated in 1999, and are reported in Moulton (2000a,b, 2001, 2002a,b).

The present study was the first detailed examination of fish populations in the drainages of eastern NPR-A. The study was designed to provide details of fish populations in eastern NPR-A (Figure 1), and the habitats used by those populations, so that oilfield facilities can be sited, designed and constructed in a manner that will avoid or minimize impacts. Specific objectives of the 2001-2002 fish survey were to conduct studies on the Uvlutuuq (Fish Creek) and Tingmiaqsiugvik (Ublutuocho

River) drainage systems to:

- a) describe the fish populations and habitat use patterns within streams and lakes of eastern NPR-A,
- b) obtain information on fish movements within the drainages,
- c) document the recovery of tagged fish in both study nets and the Nuiqsut fishery from different release locations, and
- d) estimate available water in lakes in or near potential development areas.

The study included cooperative efforts among ConocoPhillips Alaska, the North Slope Borough (NSB) and Alaska Department of Fish and Game (ADF&G). An additional objective was to provide fish for radio-tagging by ADF&G.

METHODS

Biological Sampling

During summer 2001-2002, fyke nets were used to sample major drainages and lakes in the eastern NPR-A study area (Figure 2). The initial stream sampling design planned for long-term fyke net stations in lower Uvlutuuq (Fish Creek), upper Uvlutuuq (Fish Creek) (i.e. upstream from the confluence of Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek)), Iqalliqpiq (Judy Creek), and the Tingmiaqsiugvik (Ublutuooh River). An additional station was added to the tapped lake MC7916, a lake that had previously been surveyed in 1979 by McElderry and Craig (1981). A variety of stations were sampled when attempting to find stations suitable for the long-term monitoring (Table 1). The rapidly decreasing flows in June and unstable streambeds in Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek) necessitated adjustments in the fyke net location in the early season until reasonably stable sites were located. Additional sampling was conducted in lakes spread across the study area, from near the confluence of Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek) to near the Nigliq Channel (Figure 2).

Sampling was by fyke net so that fish could be released unharmed. Sampling covered late June (June 20-28) to evaluate post-breakup movements, late July-early August (July 19-August 6) to evaluate fish use of channels after spring out-migration was complete, and the end of August into early September (August 25-Sep 2) to evaluate movements to wintering areas.

Fyke nets used during the 2001-2002 sampling had an opening 0.9 m deep by 1.1 m wide, the trap end was 4.9 m long, made of 9.5 mm mesh. The wings (5 m long) and lead (15 m long) were made of 12.7 mm mesh. The nets were emptied daily. Fish were measured and released, with no fish retained for laboratory analysis. Duration of each set was recorded to allow calculation of catch rates. Water chemistry measurements taken in conjunction with the fyke net sampling included water temperature, specific conductance, dissolved oxygen, turbidity and pH.

In 2001, fish longer than 250 mm were tagged to reveal the extent to which fish caught in the study area contribute to the subsistence catch. Floy FD-68B anchor tags (monofilament = 5/8 inch, vinyl = 1 1/8 inch) were applied to whitefish, cisco, and burbot caught by fyke net. In 2002, a smaller tag (Floy FD-94 anchor tag, monofilament = 1/2 inch, vinyl = 3/4 inch) was used and fish longer than 180 mm were tagged. This change was made to increase the pool of tagged fish in the populations, thus potentially increasing the number of tag returns. Recapture was monitored in research sampling within Colville Delta and eastern NPR-A study areas, in the Nuiqsut subsistence fishery and in the Colville Delta commercial fishery.

In 2001, radio tags were applied by ADF&G to broad whitefish (21 fish), arctic grayling (10 fish) and burbot (8 fish). Details of methods used will be reported by ADF&G.

Water Chemistry Sampling

Water chemistry parameters were measured to assess habitat conditions and provide information on

the suitability of water for use. Water chemistry measurements included surface measures of water temperature, specific conductance, dissolved oxygen, pH, and turbidity. Temperature, specific conductance and dissolved oxygen were *in situ* measurements taken at a depth of approximately 0.5 m near the trap end of the fyke net with a YSI Model 85 meter. A sample obtained from the surface was returned to the field office to measure pH and turbidity. PH was measured with either a Coning pH meter or an Oaktron pH Tester III. Turbidity was measured with an H.F. Scientific DRT15CE turbidity meter.

Estimating Lake Volumes

Bathymetric data were collected in 2002 to allow estimating lake volume. Many of the lakes surveyed in 2002 had previously been surveyed for one-time use during exploration. With the potential for continued long-term use to support field development, there was a need to better define the available water. Methods described by MBJ (2003) were used to provide a consistent approach to estimating water volumes.

Location and depth were recorded on a Lowrance Model LCX-15MT integrated GPS/depth sounder at approximately 1-2 second intervals. The study design was to record at least six to eight depth transects on each lake. Lake volume was estimated by contour mapping of depth intervals. Contour maps were prepared by plotting the position and depth data obtained by GPS on a geo-referenced photomosaic basemap developed by Aeromap and plotting the contours in 1 or 2 ft intervals on maps of the surveyed lakes (included in Appendix A). One foot intervals were plotted for lakes where the maximum depth was 10 ft or less, two foot intervals were used on deeper lakes. The surface area of each 1 ft contour was obtained, then the volume was estimated using the formula for truncated cones:

$$V = h/3*(A1+A2+(A1*A2) (1/2))$$

Where h = vertical depth of the stratum, A1 = area of the upper surface, and A2 = area of the lower surface of the stratum whose volume is to be determined. The volumes of individual strata are summed to obtain the volume of the desired depth intervals.

The amount allowed for winter water withdrawal when sensitive fish species are present is currently set by ADF&G at 15% of the volume of the lake deeper than 7 feet. When only resistant fish species (i.e. ninespine stickleback and Alaska blackfish) are present, the current allocation recommended by ADF&G is 30% of the volume deeper than 5 feet. There is no withdrawal limit if fish are not present.

The area potentially available for ice aggregate was estimated by calculating the area of the lake shallower than 4 feet, assuming that the ice would grow to at least 4 feet prior to the need for ice aggregate. If the ice is shallower than 4 feet at the time of ice removal, then the area available for ice aggregate will be less

Habitat Evaluation in Alpine West

Aquatic habitats in the Alpine West area were surveyed on June 24, 2002 and evaluated with aerial photographs taken July 14/15, 2001. The aerial survey included identifying those lakes that retained an ice cover at that time and were likely deeper than the shallow tundra ponds. Also, drainage patterns during this early post-breakup period were more observable than later in the summer after flow had subsided. The objective of the survey was to provide reconnaissance-level information on the distribution of aquatic habitats in the Alpine West area.

RESULTS AND DISCUSSION

Physical Environment

Sampling began in mid-June as stream flows were receding from peak break-up flows (Figure 3). In 2001, the rapidly decreasing flows in June necessitated almost daily re-positioning of the fyke nets to ensure the nets were fishing properly. In 2002, sampling was in smaller tundra streams and nets were more stable. Sampling during July and August was during the period of consistent base flow, and nets performed more efficiently. The streambed in Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek), however, was unstable sand and silt that shifted constantly during the sampling period. This unstable bed affected net stability even with a consistent flow and necessitated frequent maintenance on the net to avoid burying the wings and leads in the shifting sand. In contrast, the Tingmiaqsiugvik (Ublutuochoch River) had a stable gravel bed and the nets fished effectively with minimal adjustments.

By the onset of sampling, water temperature in the streams had risen to over 5°C (Figure 4). Temperatures continued to rise to near 20°C by late July, then declined through August. An ice sheet remained in lake MC7916 through June, which moderated temperatures in the lake, and temperatures decreased when southwest winds moved the ice sheet near the fyke net (Figure 4).

Specific conductance rose slowly at all sites through the summer as snow melt and runoff decreased. Some reversals to this trend were apparent after rain (Figure 4). Turbidity was highest in Uvlutuuq (Fish Creek) after break-up, then gradually declined through the summer. Turbidity in the Tingmiaqsiugvik (Ublutuochoch River) and tributaries to Uvlutuuq (Fish Creek) was low throughout the summer, generally in the range of 1 NTU, indicating consistently clear water (Table 3).

Biological Observations

Habitat Use in Drainages

Substantial differences were found in fish use of habitats associated with the drainages of eastern NPR-A. Fyke nets in the major rivers, Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek), had the lowest catch rates (Table 4). Fyke nets in tapped lakes (primarily MC7916) had the highest catch rates (not including ninespine sticklebacks) and highest diversity, which parallels results from the nearby Colville River delta (Table 4). The Tingmiaqsiugvik (Ublutuochoch River), a clear water tributary to Uvlutuuq (Fish Creek), produced the second highest catch rates, followed by tundra-stream tributaries to Uvlutuuq (Fish Creek). The catch in these clear water streams was dominated by arctic grayling.

Catch rates of all species were low in Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek), with arctic grayling and least cisco being the most abundant (Figure 5). Arctic grayling were also the most abundant fish in the Tingmiaqsiugvik (Ublutuochoch River), followed by humpback whitefish, broad whitefish, and round whitefish. Catches in the tapped lake, MC7916, were dominated by broad

whitefish and least cisco, with arctic grayling, humpback whitefish and round whitefish being present in lesser numbers. Tributaries to Uvlutuuq (Fish Creek) contained ninespine stickleback, arctic grayling and Alaska blackfish. Arctic grayling were most abundant in CK17, while CK16 contained mostly Alaska blackfish and ninespine stickleback.

The tapped lake, MC7916, had previously been sampled by McElderry and Craig (1981) during a survey in September 1979 to locate cisco spawning areas. They reported catching broad whitefish, least cisco and arctic grayling during an overnight set with variable mesh gill nets. All the fish caught were less than 210 mm. This study thus added 8 species to the list of fish known to use the lake.

Habitat Use in Lakes

Based on the overall catch rates, the perched lakes along Uvlutuuq (Fish Creek) contained arctic grayling and least cisco (Figure 5). This is somewhat misleading because one lake (M9909) contained almost all the least cisco, another (M9910) contained almost all the arctic grayling, and the third had few fish aside from ninespine stickleback (Table 7). Thus there was considerable variation in species composition in three lakes adjacent to one another. Sampling in lakes from 1999 to 2001 revealed that lakes in close proximity to Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek), or those connected to the rivers by a stream, tend to be fish-bearing, while those remote from the streams normally do not support fish other than ninespine stickleback (Moulton 2000a,b; 2001a). Most of the fish-bearing lakes are in a corridor along Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek), where high flows at break-up facilitate dispersal (Figure 6). The distribution of fish in lakes along Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek) was confined to the area lying within the 100-year floodplain as identified by Dietzman and Helmericks (2003).

Large isolated thaw lakes had the highest overall catch rates, with virtually all (99.9%) of the catch being ninespine stickleback (Table 8). Lakes associated with small drainages, such as M9914, contained a few juvenile arctic grayling, but catches were sporadic through the summer. Alaska blackfish were present in 5 of the 12 surveyed lakes, but consistently caught only in lake M0254.

Habitat Use by Dominant Species

Five species (arctic grayling, broad whitefish, humpback whitefish, round whitefish and least cisco) comprised 95% of the catch, excluding ninespine stickleback. Ninespine stickleback were almost 90% of the total catch and were ubiquitous, being most abundant in lakes, and present in low numbers in the river channels (Table 4). Burbot were encountered in several habitats, and while not numerous, were conspicuous because of their large size. Since they are a top predator and are an important subsistence species, they are included in the species summaries.

Arctic Grayling. Arctic grayling were second in abundance to ninespine stickleback and were the most consistently caught species across all habitat, being present in all time periods (Figure 5). The Tingmiaqsiugvik (Ublutuooh River) contained the highest abundance of adult arctic

grayling through the summer, although they were present in the other habitats as well (Figure 7). Rearing juveniles were particularly abundant in the tundra-stream tributaries to Uvlutuuq (Fish Creek). Young-of-the-year were caught almost exclusively at the Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek) stations, with none observed in the Tingmiaqsiugvik (Ublutuochoch River). It is not known at this time whether this is an artifact of sampling or reflects the high abundance of large predatory fish in this system.

Tags were applied to 425 arctic grayling, and 28 tags were eventually recovered during 2001-2002 (Table 9-11). Most were recaptured near the release location (Table 11), although one moved almost 10 miles from Iqalliqpiq (Judy Creek) into upper Uvlutuuq (Fish Creek), another moved nearly 16.5 miles from MC7916 to the confluence of Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek), and two moved about 29.7 miles from the confluence of Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek) to the Tingmiaqsiugvik (Ublutuochoch River) sampling station.

Broad Whitefish. Broad whitefish were the third most abundant fish caught with the majority of the catch being young-of-the-year caught in lake MC7916 (Figures 8 and 9). Larger broad whitefish were caught primarily in the Tingmiaqsiugvik (Ublutuochoch River) during the late July sampling period, with only scattered records of larger individuals at other locations and during other time periods.

Tags were applied to 129 broad whitefish, and 1 was recaptured (Tables 9-11). The recaptured fish was released at the Tingmiaqsiugvik (Ublutuochoch River) on July 26, 2001 and recovered in the Nuiqsut fall fishery conducted on the Nigliq Channel on October 20, 2001. The recovery location near Nanuk Lake was approximately 45 river miles from the release point.

Humpback Whitefish. Humpback whitefish were fourth in abundance, with most of the catch recorded from the Tingmiaqsiugvik (Ublutuochoch River), and secondarily from the tapped lake, MC7916 (Figure 10). Unlike most other species, over 90% of the captured humpback whitefish were adults (Figure 11). There was a strong upstream movement of these large humpback whitefish in the Tingmiaqsiugvik (Ublutuochoch River) during the July sampling (July 20-30), which accounted for most of the catch. The second greatest catch was in lake MC7916 in June, which may indicate there is a wintering area in the vicinity, or rapid dispersal from Colville River wintering areas. A few young-of-the-year humpback whitefish were caught in the lake in late August.

Tags were applied to 248 humpback whitefish, with 2 recaptured in the Nuiqsut fall fishery (Tables 9-11). The two recoveries had been tagged in the Tingmiaqsiugvik (Ublutuochoch River) during the peak movements in July, and were recaptured in late October, 2001 approximately 37 and 45 miles from the release location.

Round Whitefish. Round whitefish were encountered in low numbers in all habitats except perched lakes. They were most abundant in the Tingmiaqsiugvik (Ublutuochoch River), followed by the Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek) nets (Figure 12). Captured round whitefish covered a broad size range, from 40 to 400 mm, with no size range being dominant

(Figure 13). Large individuals were especially abundant in the Tingmiaqsiugvik (Ublutuooh River).

Tags were applied to 68 round whitefish, with none recovered to date. Round whitefish rarely enter the subsistence catch, thus recoveries are not expected during the Nuiqsut fall fishery.

Least Cisco. Least cisco were most abundant in lake habitats, including both tapped and perched lakes (Table 4). There was an early season movement in Uvlutuuq (Fish Creek), then an upstream movement in the Tingmiaqsiugvik (Ublutuooh River) during the July sampling period (Figures 14 and 15). Aside from these two periods, few were caught in river channels. They were present in MC7916 during all sampling periods, over a broad size range (Figure 15). By the Aug/Sep sampling period, young-of-the-year had grown large enough to be caught by the fyke nets, and again were most abundant in MC7916.

Tags were applied to 77 least cisco, with 1 recovered. The recovered fish was tagged in lake MC7916 and was recovered in the Nuiqsut fall fishery, near Nanuk Lake, on October 30, 2001. The recovery location was approximately 26 river miles from the release location.

Burbot. Ten burbot were caught by fyke net during the study. Five additional burbot were captured by hoop traps set by ADF&G personnel who were applying radio tags. The burbot were scattered through all of the sampling areas except for the Tingmiaqsiugvik (Ublutuooh River) (Table 4). Burbot are often associated with dark areas, which are rare in the shallow, clear water of the Tingmiaqsiugvik (Ublutuooh River). The captured burbot covered a range of sizes from young fish (four were between 112 to 167 mm), to large adults up to 820 mm. Eleven of the large burbot were tagged, however none were recovered to date.

Lake Volumes

Fourteen lakes in the eastern NPR-A study area were evaluated as potential water-source lakes (Table 12). Some of the lakes had previously been surveyed for use during exploration, while others were surveyed for the first time in 2002. Information on depth distribution and fish presence were used to evaluate the volumes of water potentially available for use (Table 13). All of the lakes contained ninespine stickleback, with one (M9914) supporting a few juvenile arctic grayling, and four containing Alaska blackfish. The area likely to be available for ice aggregate ranged from 1.4 to 192 acres (Table 14).

The 14 lakes surveyed during 2002 could provide up to 149.34 million gallons of water for use, with up to 820.5 acres available for removing chips for ice aggregate.

Alpine West Aquatic Habitats

Alpine West contains a variety of aquatic habitats, ranging from deep lakes, to tapped lakes, river channel, and numerous shallow ponds (Figure 17). Deep (10-17 ft) lakes are found along

the west bank of the Nigliq Channel near the proposed road crossing. These lakes all retained an ice cover into late June, 2002, which indicates deeper water than nearby ice-free lakes and ponds. Previously sampling identified broad whitefish, least cisco and ninespine stickleback from these lakes (Moulton 2000a).

A branch of the Nigliq Channel with an associated tapped lake lie immediately west of the Nigliq Channel in the Alpine West area. These habitats are likely to contain the suite of species associated with other river channels and tapped lakes in the delta, including broad whitefish, humpback whitefish, arctic cisco, least cisco, round whitefish, and rainbow smelt. The numerous shallow lakes and ponds likely do not support fish other than ninespine stickleback.

CONCLUSIONS

The sampling in eastern NPR-A during 2001-2002 indicated that the main river channels of Fish and Iqalliqpiq (Judy Creek) are sparsely used by fish during the summer and likely serve primarily as migration corridors for fish moving between various other habitats, such as clear water streams, tapped lakes and perched lakes. The unstable channels of Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek) likely limit productivity, and the prey is probably limited compared to other habitats.

The Tingmiaqsiugvik (Ublutuooh River), in contrast to Uvlutuuq (Fish Creek) and Iqalliqpiq (Judy Creek), is heavily used by arctic grayling, humpback whitefish and broad whitefish, with round whitefish and least cisco also present during summer. A high percentage of the fish in the Tingmiaqsiugvik (Ublutuooh River) were large fish. It is likely that this high density of large fish reduces the value of the drainage as a rearing area as predation is likely to be intense. Arctic grayling, round whitefish and least cisco, in particular, are known to be opportunistic feeders that prey heavily on young fishes. Clearwater tributaries to Uvlutuuq (Fish Creek) supported high density of juvenile arctic grayling.

Lakes connected to the rivers also provide important fish habitat, as evidenced by the heavy use of the tapped lake MC7916, and the perched lakes M9909 and M9910. The value of the lake increases as predictability of access increases. Access to lake M9911 was apparently less frequent than that for the other two perched lakes as few fish were caught. Inadequate access is likely the cause for the low fish densities because the lake has a maximum depth of 15.3 feet, which should be adequate to overwinter fish that gain access. Lakes remote from stream systems supported ninespine stickleback, with some also containing Alaska blackfish, while lakes with seasonal connections to stream systems also supported low densities of juvenile arctic grayling.

LITERATURE CITED

- Bendock, T.N. and J. Burr. 1984. Freshwater fish distributions in the Central Arctic Coastal Plain (Ikpikpuk River to Colville River). Alaska Department of Fish and Game, Sport Fish Division, Fairbanks, AK. 52p.
- Bendock, T.N. and J. Burr. 1985. Freshwater fish distributions in the Central Arctic Coastal Plain (Topagoruk River to Ikpikpuk River). Alaska Department of Fish and Game, Sport Fish Division, Fairbanks, AK. 30p.
- Craig, P.C. 1984. Fish use of coastal waters of the Alaskan Beaufort Sea: a review. *Transactions of the American Fisheries Society* 113:265-282.
- Dietzmann, J.C. and J.W. Aldrich. 2001. 2001 Hydrologic assessment. Fish Creek, Judy Creek and the Tingmiaqsiugvik (Ublutuoch River). North Slope, Alaska. Report by URS Corp. to Phillips Alaska, Inc. Fairbanks, AK.
- Dietzmann, J.C. and D.J. Helmericks. 2003. 2002 Hydrologic and hydraulic assessment. Fish Creek, Judy Creek and the Ublutuoch River. North Slope, Alaska. Report by URS Corp. to Phillips Alaska, Inc. Fairbanks, AK.
- MBJ (Michael Baker Jr., Inc). 2003. Recommended lake volume estimation methods and survey procedures for North Slope lakes. Prepared by Michael Baker Jr., Inc. for ConocoPhillips. Anchorage, AK. 12 p+appendices.
- McElderry, H.I. and P.C. Craig. 1981. A fish survey in the lower Colville River drainage with an analysis of spawning use by Arctic and least cisco. Appendix 2. Final Report, Simpson Lagoon (Part 4, Fish). In: *Environmental Assessment of the Alaskan Continental Shelf, Final Reports (Vol. 7)*. BLM/NOAA OCSEAP, Boulder, Colorado. p. 657-678.
- Moulton, L.L. 2000a. Fish utilization of lakes in eastern NPR-A – 1999. Report by MJM Research to ARCO Alaska Inc. Lopez Island, WA. 248 p.
- Moulton, L.L. 2000b. Fish utilization of lakes in eastern NPR-A – 1999-2000. Report by MJM Research to ARCO Alaska Inc. Lopez Island, WA. 124 p.
- Moulton, L.L. 2001a. Fish utilization of lakes in eastern NPR-A: 1999-2001. Report by MJM Research to Phillips Alaska Inc. Lopez Island, WA. 83p.
- Moulton, L.L. 2001b. Harvest estimate and associated information for the 2000 Colville River fall fishery. Report by MJM Research to Phillips Alaska, Inc and BP Exploration (Alaska). Lopez Island, WA. 53p. + appendices.
- Moulton, L.L. 2002. Baseline surveys of fish habitats in eastern NPR-A: 2001. Report by MJM

- Research to Phillips Alaska, Inc. Lopez, Island., WA. 130p.
- Moulton, L.L. 2002. Fish utilization of lakes in eastern NPR-A: 1999-2001. Report by MJM Research to Phillips Alaska, Inc. Lopez, Island., WA. 83p.
- Netsch, N., E. Crateau, G. Love and N. Swanton. 1977. Freshwater fisheries reconnaissance of the coastal plain of National Petroleum Reserve-Alaska (NPR-A), July and August 1977. Preliminary report. USDI: US Fish and Wildlife Service. Anchorage, AK. 214p.
- Power, G. 1997. A review of fish ecology in arctic North America. Pages 13-39 in J. Reynolds, editor. Fish ecology in arctic North America. American Fisheries Society Symposium 19, Bethesda, MD.

Table 1. Fyke net stations occupied during 2001-2002 in eastern NPR-A.
(datum = NAD27)

Station	Location ¹	Habitat	Latitude	Longitude
F1	Fish Ck - RM 18.4 (h)	River Channel	70.29577	151.59743
F1A	Fish Ck - RM 19.2	River Channel	70.29155	151.62658
F2A	Fish Ck - RM 26.5	River Channel	70.25568	151.74540
F3	Fish Ck - RM 32.4 (h)	River Channel	70.27018	151.87253
F4	Fish Ck - RM 43.3 (h)	River Channel	70.25123	152.03190
J3	Judy Ck - RM 21.8 (h)	River Channel	70.22058	151.84137
J3A	Judy Ck - RM 21.6	River Channel	70.21970	151.83133
U1	Ublutuoch R. - RM 15.4	River Channel	70.22847	151.29937
U2	Ublutuoch R. - RM 13.5 (h)	River Channel	70.24320	151.29890
M0142	lower Ublutuoch R.	Tapped Lake	70.31843	151.33052
MC7916A	MC7916	Tapped Lake	70.30400	151.44372
MC7916B	MC7916	Tapped Lake	70.30575	151.45483
MC7916C	MC7916	Tapped Lake	70.30563	151.45123
M9909A	M9909	Perched Lake	70.26811	151.66485
M9909B	M9909	Perched Lake	70.26876	151.65316
M9910A	M9910	Perched Lake	70.25772	151.70222
M9910B	M9910	Perched Lake	70.24866	151.71669
M9911A	M9911	Perched Lake	70.26286	151.69296
M9911B	M9911	Perched Lake	70.26095	151.69701
CK16A	Fish Ck Trib	River Channel	70.29034	151.48212
CK16B	Fish Ck Trib	River Channel	70.26921	151.48392
CK17A	Fish Ck Trib	River Channel	70.27584	151.56946
CK17B	Fish Ck Trib	River Channel	70.26772	151.57947
M0201A	Fish Ck Trib	River Channel	70.27110	151.57614
M9914A	M9914	Drainage Lake	70.23671	151.63681
L9807A	L9807	Lake	70.25859	151.12105
L9817A	L9817	Lake	70.23150	151.34450
M0024A	M0024	Lake	70.21343	151.65614
M9912A	M9912	Lake	70.25106	151.55942
M9922A	M9922	Lake	70.22532	151.59133
M9923A	M9923	Lake	70.23043	151.50883
M9924A	M9924	Lake	70.26529	151.50832
M9925A	M9925	Lake	70.24907	151.47438
N7797A	Oil Lake	Lake	70.30174	151.16100
N7797B	Oil Lake	Lake	70.30067	151.18039
M0254A	M0254	Lake	70.25330	151.58513
M0255A	M0255	Lake	70.25229	151.60969
M0256A	M0256	Lake	70.24436	151.61259

¹ RM - river mile, (h) = hydrology cross-section described in Dietzmann and Aldrich (2001)

Table 2. Fishing effort at fyke net stations sampled in eastern NPR-A during 2001-2002.

Habitat	Station	Location	Period Sampled	Fyke Net Effort (hours)
Streams				
	F1	Fish Ck	Jun 20-23, 2001	99.8
	F1A	Fish Ck	Jun 26-28, 2001	64.9
	F2A	Fish Ck	Jul 21-30, 2001 Aug 25-Sep 2, 2001	241.2 181.3
	F3	Fish Ck	Jul 19-30, 2001 Aug 25-Sep 2, 2001	289.7 212.6
	F4	Fish Ck	Jun 20-28, 2001	214.3
	J3	Judy Ck	Jun 20-23, 2001 Jul 20-30, 2001 Aug 25-Sep 2, 2001	96.3 263.9 183.5
	J3A	Mouth of clear creek off Judy Ck	Jun 24-28, 2001	117.6
	U1	Ublutuoch R upstream of ice road crossing	Jun 20-28, 2001	213.6
	U2	Ublutuoch R upstream of ice road crossing	Jul 20-30, 2001 Aug 25-Sep 2, 2001	256.7 183.4
			Jun 21-27, 2002 Jul 20-Aug 6, 2002	163.5 426.8
	CK16A	Tributary to Fish Creek	Jun 21-27, 2002 Jul 20-27, 2002	164.5 188.4
	CK16B	Tributary to Fish Creek	Jun 21-27, 2002 Jul 20-27, 2002	165.8 189.5
	CK17A	Tributary to Fish Creek	Jun 21-27, 2002 Jul 20-28, 2002	162.3 211.2
	CK17B	Tributary to Fish Creek	Jun 25-27, 2002 Jul 20-28, 2002	70.3 211.4
	M0201A	Lake on Tributary to Fish Creek	Jun 22-24, 2002	72.8

Table 2. Fishing effort at fyke net stations sampled in eastern NPR-A during 2001-2002.

Habitat	Station	Location	Period Sampled	Fyke Net Effort (hours)
Tapped Lakes				
	M0142	Tapped lake off Ublutuoch R.	Jun 22-23, 2001	47.3
	MC7916A	Tapped lake off Fish Ck	Jun 23-24, 2001	47.2
	MC7916B	Tapped lake off Fish Ck	Jun 24-28, 2001	116.4
	MC7916C	Tapped lake off Fish Ck	Jun 25-28, 2001 Jul 20-30, 2001 Aug 25-31, 2001	92.0 292.9 159.7
Tundra Lakes				
	M9909A	Lake near Fish Ck/Judy Ck confluence	Jul 30-Aug 3, 2001	120.7
	M9909B		Jul 30-Aug 3, 2001	120.6
	M9910A	Lake near Fish Ck/Judy Ck confluence	Jul 27-Aug 3, 2001	188.9
	M9910B		Jul 27-Aug 3, 2001	187.1
	M9911A	Lake near Fish Ck/Judy Ck confluence	Jul 27-29, 2001	67.9
	M9911B		Jul 27-29, 2001	67.7
	M9914A	Lake on Tributary to Fish Creek	Jun 21-27, 2002 Jul 20-29, 2002	161.9 235.1
	L9807F		Jul 30-Aug 3, 2002	114.8
	L9817F		Jul 30-Aug 4, 2002	140.5
	M0024F		Jul 29-Aug 2, 2002	115.1
	M9912F		Jul 28-Aug 2, 2002	136.7
	M9922F		Jul 28-Aug 2, 2002	135.9
	M9923F		Jul 29-Aug 2, 2002	116.0
	M9924F		Aug 3-6, 2002	91.8
	M9925F		Aug 3-6, 2002	92.1
	Oil1	N7797 (Oil Lake)	Jul 19, 2002	21.5
	Oil2	N7797 (Oil Lake)	Jul 19, 2002	21.6
	M0254F		Aug 3-6, 2002	69.8
	M0255F		Aug 3-4, 2002	44.3
	M0256F		Aug 5-6, 2002	47.1

Table 3. Means and ranges of water chemistry parameters measured at NPR-A fyke net sampling sites, 2001-2002.

Station	Location	Date Range	Water Temperature		Dissolved Oxygen		Specific Conductance		pH		Turbidity	
			mean	range (°C)	mean	range (mg/l)	mean	range (microS/cm)	mean	range	mean	range (NTU)
M0142	Tapped Lake off Ublutuoch R	Jun 21-23, 2001	6.8	5.7-6.6	11.5	10.9-11.7	96	96-97	8.00	7.92-8.07	17.6	16.8-18.3
MC7916A	Tapped Lake off Fish Ck	Jun 22-24, 2001	7.5	7.0-8.0	12.2	11.6-12.6	123	121-124	7.96	7.91-8.00	5.2	4.4-6.3
MC7916B		Jun 24-28, 2001	5.2	4.2-5.6	12.5	12.1-13.3	110	107-113	7.91	7.74-7.97	4.0	3.3-4.8
MC7916C		Jun 25-28, 2001	5.4	4.9-5.8	12.3	12.0-12.8	110	106-112	7.84	7.70-7.96	3.9	3.0-5.5
		Jul 18-30, 2001	13.1	9.1-16.6	9.7	8.4-11.7	129	117-133	8.03	7.94-8.09	6.3	2.9-17.3
		Aug 25-31, 2001	4.5	3.6-5.2	12.2	11.8-12.6	143	135-152	7.98	7.72-8.07	2.5	1.8-3.2
F1	Fish Ck	Jun 19-24, 2001	8.9	7.4-10.2	10.7	10.3-11.1	94	93-98	8.03	7.90-8.06	14.2	10.4-20.1
F1A	Fish Ck	Jun 25-28, 2001	10.6	7.4-14.7	11.0	10.3-11.8	99	93-109	8.05	7.90-8.12	16.9	10.4-23.2
F2	Fish Ck	Jul 18-20, 2001	15.3	15.1-15.6	8.7	8.7-8.8	125	125	8.12	8.06-8.19	6.5	5.3-8.5
F2A	Fish Ck	Jul 21-30, 2001	12.7	7.6-17.0	9.9	8.8-10.6	138	127-143	8.10	7.95-8.21	5.1	2.8-8.9
		Aug 25-Sep 2, 2001	5.1	3.6-5.9	11.7	10.8-12.8	139	138-140	7.91	7.76-7.98	4.1	3.2-5.8
F3	Fish Ck	Jul 18-30, 2001	13.1	7.3-16.5	9.6	8.4-11.0	128	117-128	8.10	7.99-8.16	6.5	4.1-13.2
		Aug 25-Sep 2, 2001	5.4	3.9-6.7	11.6	10.0-12.9	129	128-130	7.92	7.67-8.01	3.7	3.1-5.4
F4	Fish Ck	Jun 19-28, 2001	10.4	7.5-12.9	11.3	10.6-12.1	95	83-112	8.06	8.00-8.14	13.3	9.2-18.2
J3	Judy Ck	Jun 19-24, 2001	9.9	7.8-13.2	11.0	10.3-11.6	100	96-106	7.95	7.61-8.05	14.5	0.8-23.2
		Jul 19-30, 2001	13.0	7.3-17.6	9.9	8.2-11.1	162	146-172	8.14	8.02-8.25	3.8	2.7-6.0
		Aug 25-Sep 2, 2001	5.9	4.1-7.9	11.8	10.7-12.8	159	153-165	7.94	7.81-8.00	4.4	3.5-6.6
J3A	Judy Ck	Jun 25-28, 2001	11.7	11.1-13.0	10.0	9.8-10.4	113	108-117	7.65	7.57-7.68	1.7	1.0-2.9
CK16A	Trib. To Fish Ck	Jun 20-27, 2002	7.5	4.7-12.7	10.6	9.7-11.6	103	100-104	7.41	7.09-7.79	0.6	0.4-1.4
		Jul 20-27, 2002	12.0	8.1-16.6	10.0	8.2-11.1	122	120-125	7.39	7.21-7.49	1.5	1.3-1.8
CK16B	Trib. To Fish Ck	Jun 20-27, 2002	8.3	5.3-13.5	10.6	9.7-11.6	100	92-104	7.45	7.22-7.77	0.6	0.4-1.4
		Jul 20-27, 2002	13.3	8.9-19.3	10.2	8.3-11.7	133	128-136	7.39	7.26-7.47	1.5	1.3-1.8
CK17A	Trib. To Fish Ck	Jun 20-27, 2002	7.1	4.5-11.9	11.1	9.5-12.2	92	89-94	7.38	7.18-7.85	0.6	0.5-0.9
		Jul 20-28, 2002	11.6	8.1-16.4	10.3	8.7-11.8	118	106-125	7.42	7.23-7.64	1.3	1.0-1.7

Table 3. Means and ranges of water chemistry parameters measured at NPR-A fyke net sampling sites, 2001-2002.

Station	Location	Date Range	Water Temperature		Dissolved Oxygen		Specific Conductance		pH		Turbidity	
			mean	range (°C)	mean	range (mg/l)	mean	range (microS/cm)	mean	range	mean	range (NTU)
CK17B	Trib. To Fish Ck	Jun 24-27, 2002	8.5	6.9-11.3	9.7	8.0-11.2	87	85-89	7.31	7.11-7.70	0.7	0.5-1.0
		Jul 20-28, 2002	10.6	6.8-16.3	9.7	7.7-11.1	112	107-118	7.43	7.24-7.70	1.5	1.3-1.7
U1	Ublutuoch R	Jun 19-28, 2001	10.7	7.5-12.5	10.4	9.8-11.1	81	78-81	7.70	7.55-7.77	1.3	1.1-1.7
U2		Jul 19-30, 2001	13.8	8.8-18.0	9.7	8.3-10.7	104	93-1090	7.89	7.81-7.99	1.1	0.8-1.5
		Aug 25-Sep 2, 2001	5.5	4.0-6.1	11.6	10.6-12.4	116	114-121	7.72	7.44-7.93	1.3	1.1-1.6
U2	Ublutuoch R	Jun 20-27, 2002	9.3	7.0-12.7	10.8	9.9-11.7	93	90.5-95.6	7.65	7.43-8.31	1.3	0.9-3.5
		Jul 20-Aug 6, 2002	13.5	8.1-20.1	10.3	8.5-11.8	114	103-124	7.80	7.30-8.28	1.4	1.1-2.4
M9909	Perched Lakes near Fish/Judy confluence	Jul 30-Aug 3, 2001	9.7	8.9-10.5	9.7	9.1-10.4	197	191-212	7.95	7.88-8.02	3.6	1.5-13.7
M9910		Jul 27-Aug 3, 2001	10.1	6.8-14.0	9.6	8.6-10.8	145	140-160	7.95	7.76-8.09	2.3	1.1-5.1
M9911		Jul 27-29, 2001	12.2	10.8-13.3	9.4	8.8-10.1	160	159-162	8.11	8.08-8.14	1.9	1.1-2.9
M0201	Drainage Lake	Jun 21-24, 2002	6.6	5.9-7.4	11.8	11.3-11.9	93	92-94	7.59	7.40-7.95	1.8	0.7-4.1
M9914A	Thaw Lake	Jun 20-27, 2002	6.2	3.5-10.0	12.0	10.4-13.2	64	62-66	7.58	7.20-8.01	1.6	1.2-2.3
		Jul 20-29, 2002	13.2	9.1-18.5	10.1	9.1-11.6	88	86-92	7.54	7.33-7.94	1.6	1.1-2.2
L9807A	Thaw Lake	Jul 30-Aug 3, 2002	13.8	12.3-16.0	9.9	9.1-10.9	148	137-152	8.18	8.13-8.26	1.3	1.0-1.7
L9817A	Thaw Lake	Jul 30-Aug 4, 2002	13.9	12.1-15.9	10.1	9.4-11.3	237	222-244	8.17	8.04-8.26	1.3	1.2-1.5
M0024A	Thaw Lake	Jul 29-Aug 2, 2002	11.7	9.4-13.8	10.9	10.3-11.3	109	104-113	8.03	7.92-8.17	0.9	0.8-1.0
M0254A	Thaw Lake	Aug 3-6, 2002	13.3	10.4-15.1	10.0	9.9-10.3	117	116-118	7.82	7.58-8.09	1.1	0.8-1.4
M0255A	Thaw Lake	Aug 3-4, 2002	15.6	15.4-15.8	9.2	9.0-9.5	104	104-104	8.05	7.99-8.11	1.6	1.3-1.8
M0256A	Thaw Lake	Aug 3-4, 2002	12.3	11.4-13.2	10.0	9.5-10.5	88	87-90	7.83	7.73-7.92	1.2	1.1-1.4
M9912A	Thaw Lake	Jul 28-Aug 2, 2002	12.0	9.9-14.7	10.3	9.8-10.9	94	90-97	8.15	7.83-8.44	1.4	1.2-1.7
M9922A	Thaw Lake	Jul 28-Aug 2, 2002	11.1	7.3-14.1	10.7	9.6-11.4	152	144-159	7.91	7.70-8.03	2.0	1.7-2.8
M9923A	Thaw Lake	Jul 29-Aug 2, 2002	12.1	9.9-13.9	11.0	9.8-11.7	256	244-265	8.18	8.04-8.24	1.9	1.5-2.7
M9924A	Thaw Lake	Aug 3-6, 2002	12.5	7.7-15.9	9.5	8.9-10.6	220	217-222	7.82	7.64-7.96	8.8	4.2-16.8
M9925A	Thaw Lake	Aug 3-6, 2002	11.6	6.1-16.1	10.0	8.0-11.5	314	308-317	8.03	7.82-8.28	8.5	6.2-11.8
N7797	Thaw Lake	Jul 19, 2002	18.0	17.9-18.1	9.4	9.4-9.5	199	198-200	7.81	7.70-7.92	2.2	1.9-2.5

Table 4. Fish caught by fyke net in eastern NPR-A, 2001-2002.

Number of Fish

Species	2001	2001	2001	2002	2001	2001	2002	2002	Total 2001-2002 NPR-A
	Fish Ck	Judy Ck	Ublutuoch River	Ublutuoch River	Tapped Lakes	Perched Lakes	Fish Ck Tributaries	Tundra Lakes	
Chum Salmon	0	0	1	0	0	0	0	0	1
Broad whitefish	44	7	121	155	1,644	1	0	0	1,972
Humpback whitefish	3	1	192	5	77	4	0	0	282
Arctic cisco	5	0	0	0	40	0	0	0	45
Least cisco	141	35	37	66	664	187	0	0	1,130
Round whitefish	18	38	70	11	18	0	0	0	155
Dolly Varden char	1	0	0	0	0	0	0	0	1
Arctic grayling	238	105	660	630	223	100	766	5	2,727
Burbot	4	1	0	0	2	3	0	0	10
Alaska blackfish	1	0	0	0	26	4	76	118	225
Rainbow smelt	0	0	0	0	2	0	0	0	2
Fourhorn sculpin	0	0	0	0	4	0	0	0	4
Slimy sculpin	8	1	7	7	9	3	0	0	35
Ninespine stickleback	80	5	52	15	191	393	8,815	49,050	58,601
Number of Fish	543	193	1,140	889	2,900	695	9,657	49,173	65,190
Number of Species	11	8	8	7	12	8	3	3	14
Effort (hrs)	1,303.7	661.3	653.7	590.3	755.5	752.8	1,363.4	1,566	7,647

Catch Rate (fish per day)

Species	2001	2001	2001	2002	2001	2001	2002	2002
	Fish Ck	Judy Ck	Ublutuoch River	Ublutuoch River	Tapped Lakes	Perched Lakes	Fish Ck Tributaries	Tundra Lakes
Chum Salmon	0.0	0.0	0.04	0.00	0.0	0.0	0.0	0.0
Broad whitefish	0.81	0.3	4.4	6.3	52.2	0.0	0.0	0.0
Humpback whitefish	0.06	0.0	7.0	0.2	2.4	0.13	0.0	0.0
Arctic cisco	0.09	0.0	0.0	0.0	1.3	0.0	0.0	0.0
Least cisco	2.6	1.3	1.4	2.7	21.1	6.0	0.0	0.0
Round whitefish	0.3	1.4	2.6	0.4	0.6	0.0	0.0	0.0
Dolly Varden char	0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling	4.4	3.8	24.2	25.6	7.1	3.2	13.5	0.1
Burbot	0.07	0.0	0.0	0.0	0.06	0.10	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.8	0.13	1.34	1.81
Rainbow smelt	0.0	0.0	0.0	0.0	0.06	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0	0.0	0.0	0.13	0.0	0.0	0.0
Slimy sculpin	0.15	0.0	0.3	0.3	0.3	0.10	0.0	0.0
Ninespine stickleback	1.5	0.2	1.9	0.6	6.1	12.5	155.2	751.5
Total CPUE	10.0	7.0	41.9	36.1	92.1	22.2	170.0	753.4

Table 5. Fish caught by fyke net at Uvlutuuq (Fish Creek)/Iqalliqliq (Judy Creek) stations in eastern NPR-A, 2001-2002.

Species	Fish Creek/Judy Creek											
	F1	F1A	F2A		F3		F4	J3			J3A	Fish Ck/
	June Total	June Total	July Total	Aug/Sep Total	July Total	Aug/Sep Total	June Total	June Total	July Total	Aug/Sep Total	June Total	Judy Ck Total
Chum Salmon	0	0	0	0	0	0	0	0	0	0	0	0
Broad whitefish	3	4	2	6	8	16	5	0	5	2	0	51
Humpback whitefish	0	0	2	0	0	1	0	0	1	0	0	4
Arctic cisco	2	0	1	0	0	0	2	0	0	0	0	5
Least cisco	56	15	1	3	0	4	62	14	14	4	3	176
Round whitefish	7	0	3	0	7	0	1	0	36	2	0	56
Dolly Varden char	0	0	0	1	0	0	0	0	0	0	0	1
Arctic grayling	24	22	13	10	28	17	124	5	22	22	56	343
Burbot	0	0	1	1	1	1	0	0	0	0	1	5
Alaska blackfish	0	1	0	0	0	0	0	0	0	0	0	1
Rainbow smelt	0	0	0	0	0	0	0	0	0	0	0	0
Fourhorn sculpin	0	0	0	0	0	0	0	0	0	0	0	0
Slimy sculpin	5	0	0	0	0	3	0	0	1	0	0	9
Ninespine stickleback	14	6	6	21	1	2	30	1	1	3	0	85
Effort (hrs)	99.8	64.9	241.2	181.3	289.7	212.6	214.3	96.3	263.9	183.5	117.6	1,965.0

Table 6. Fish caught by fyke net at Tingmiaqsiugvik (Ublutuoch River) stations in eastern NPR-A, 2001-2002.

Species	Ublutuoch River							
	June Total	2001 July Total	Aug/Sep Total	Ublutuoch 2001 Total	June Total	2002 July Total	Aug Total	Ublutuoch 2002 Total
Chum Salmon	0	0	1	1	0	0	0	0
Broad whitefish	2	114	5	121	4	36	115	155
Humpback whitefish	2	189	1	192	4	1	0	5
Least cisco	0	37	0	37	2	4	60	66
Round whitefish	14	47	9	70	2	9	0	11
Arctic grayling	415	191	54	660	363	207	60	630
Slimy sculpin	7	0	0	7	4	2	1	7
Ninespine stickleback	51	1	0	52	0	6	9	15
Effort (hrs)	213.6	256.7	183.4	653.7	163.5	283.3	143.4	590.3

Table 7. Fish caught by fyke net at tapped, perched and drainage lakes in eastern NPR-A, 2001-2002.

Species	Tapped Lakes						Perched Lakes				Drainage Lake	
	M0142	MC7916A	MC7916B	MC7916C			Tapped Lake	M9909 Lake	M9910 Lake	M9911 Lake	M0201 Lake	
	June Total	June Total	June Total	June Total	July Total	Aug/Sep Total	Total	Total	Total	Total	Total	
Chum Salmon	0	0	0	0	0	0	0	0	0	0	0	0
Broad whitefish	104	1	8	6	667	858	1,644	1	0	0	0	0
Humpback whitefish	13	1	38	8	11	6	77	0	4	0	0	0
Arctic cisco	37	0	0	0	3	0	40	0	0	0	0	0
Least cisco	347	0	15	18	93	191	664	184	1	2	0	0
Round whitefish	1	0	3	1	8	5	18	0	0	0	0	0
Dolly Varden char	0	0	0	0	0	0	0	0	0	0	0	0
Arctic grayling	26	3	10	10	152	22	223	0	100	0	0	42
Burbot	0	0	0	0	0	2	2	3	0	0	0	0
Alaska blackfish	0	0	2	3	0	21	26	1	1	2	0	0
Rainbow smelt	0	0	0	0	1	1	2	0	0	0	0	0
Fourhorn sculpin	4	0	0	0	0	0	4	0	0	0	0	0
Slimy sculpin	1	0	0	0	1	7	9	3	0	0	0	0
Ninespine stickleback	6	6	5	8	19	147	191	71	247	75	58	
Effort (hrs)	47.3	47.2	116.4	92.0	292.9	159.7	755.5	241.2	376.0	135.6	72.8	

Table 8. Fish catches by fyke net in tundra lakes in eastern NPRA lakes, 2002.

Lake	Sample Period	Duration (hours)	Species	Number Caught	Catch per Day
L9807	Jul 30-Aug 3	114.8	Ninespine stickleback	183	38.3
L9817	Jul 30-Aug 4	140.5	Ninespine stickleback	31,754	5,423
M9912	Jul 28-Aug 2	136.7	Ninespine stickleback	76	13.3
			Alaska blackfish	53	9.3
M9914	Jun 21-27	161.9	Ninespine stickleback	49	7.3
			Alaska blackfish	2	0.3
			Arctic grayling	2	0.3
	Jul 20-29	235.1	Ninespine stickleback	507	51.8
			Alaska blackfish	4	0.4
			Arctic grayling	3	0.3
M9922	Jul 28-Aug 2	135.9	Ninespine stickleback	199	35.1
M9923	Jul 29-Aug 2	116.0	Ninespine stickleback	632	130.8
M9924	Aug 2-6	68.0	Ninespine stickleback	3,133	819.5
M0024	Jul 29-Aug 2	115.1	Ninespine stickleback	778	162.2
M0254	Aug 3-6	92.3	Ninespine stickleback	1,400	364.2
			Alaska blackfish	58	15.1
M0255	Aug 3-4	44.3	Ninespine stickleback	142	77.0
M0256	Aug 5-6	47.1	Ninespine stickleback	554	282.4
			Alaska blackfish	1	0.5
N7797	Jul 19	43.1	Ninespine stickleback	7,400	4,122

Table 9. Numbers of tagged fish released and recaptured from fyke net stations in eastern NPR-A, 2001.

(recaptures at the same station on the day after release are not included)

Tags Released

Release Station	Broad whitefish	Humpback whitefish	Least cisco	Round whitefish	Arctic grayling	Burbot
F1				1	4	
F2A	1	2	1		10	1
F2B						1
F3	3			1	18	3
F4			7		2	
J3		1	4	17	23	2
J3A					9	1
U1	2	2		9	55	
U2	102	175	9	28	127	
MC7916	15	58	36	6	29	
M0142		1	3		1	
M9909	1		13			3
M9910		4	1		39	
Total Released:	124	243	74	62	317	11

Tags Recaptured

Release Station	Broad whitefish	Humpback whitefish	Least cisco	Round whitefish	Arctic grayling	Burbot
F1						
F2A						
F2B						
F3					1	
F4						
J3						
J3A					2	
U1					2	
U2	1	2			3	
MC7916			1		3	
M0142						
M9909						
M9910					10	
Total Recaptured:	1	2	1	0	21	0

Table 10. Numbers of tagged fish released and recaptured from fyke net stations in eastern NPR-A, 2002.

(recaptures at the same station on the day after release are not included)

Tags Released

Release Station	Broad whitefish	Humpback whitefish	Least cisco	Round whitefish	Arctic grayling
CK17A					12
CK17B					6
M0201A					3
UBLU2	5	5	3	6	87
Total Released:	5	5	3	6	108

2001 Tags Recaptured

Release Station	Broad whitefish	Humpback whitefish	Least cisco	Round whitefish	Arctic grayling
CK17A					1
CK17B					
M0201A					
UBLU2					3
Total Recaptured:	0	0	0	0	4

2002 Tags Recaptured

Release Station	Broad whitefish	Humpback whitefish	Least cisco	Round whitefish	Arctic grayling
CK17A					1
CK17B					1
M0201A					
UBLU2					1
Total Recaptured:	0	0	0	0	3

Table 11. Release and recapture locations of recovered tagged fish, 2001-2002.
(recaptures at the same station on the day after release are not included)

Species	Release Site	Release Date	Recapture Site ¹	Recapture Date	Days Out	Distance between sites (miles)
Broad whitefish	U2	7/26/2001	Upper Nigliq	10/20/2001	86	44.8
Humpback whitefish	U2	7/26/2001	Upper Nigliq	10/31/2001	97	44.8
	U2	7/28/2001	Nanuk	10/30/2001	94	37.0
Least cisco	MC7916	6/24/2001	Nanuk	10/30/2001	128	26.0
Arctic grayling	F2A	8/27/2001	U2	6/24/2002	301	29.7
	F2A	7/27/2001	U2	7/22/2002	360	29.7
	F3	7/27/2001	F3	8/27/2001	31	0.0
	J3A	6/24/2001	J3	8/26/2001	63	0.2
	J3A	6/26/2001	F3	7/28/2001	32	9.8
	U1	6/27/2001	U2	7/27/2001	30	1.9
	U1	6/25/2001	U2	9/1/2001	68	1.9
	U1	6/25/2001	U2	6/25/2002	365	1.9
	U2	7/23/2001	U2	8/25/2001	33	0.0
	U2	7/23/2001	U2	8/28/2001	36	0.0
	U2	7/26/2001	U2	9/2/2001	38	0.0
	U2	6/21/2002	U2	6/22/2002	1	0.0
	MC7916	7/25/2001	MC7916	7/28/2001	3	0.0
	MC7916	7/28/2001	CK17A	6/23/2002	330	10.4
	MC7916	7/26/2001	MC7916	7/29/2001	3	0.0
	MC7916	7/24/2001	F2A	9/2/2001	40	16.5
	M9910A	7/27/2001	M9910A	7/29/2001	2	0.0
	M9910A	7/27/2001	M9910A	7/30/2001	3	0.0
	M9910A	7/27/2001	M9910B	7/31/2001	4	0.7
	M9910A	7/27/2001	M9910A	8/2/2001	6	0.0
	M9910A	7/27/2001	M9910A	8/3/2001	7	0.0
	M9910A	7/27/2001	M9910B	8/3/2001	7	0.7
	M9910B	7/27/2001	M9910A	7/29/2001	2	0.7
	M9910B	7/27/2001	M9910A	7/29/2001	2	0.7
	M9910B	7/27/2001	M9910A	7/30/2001	3	0.7
	M9910B	7/29/2001	M9910A	7/31/2001	2	0.7
	CK17A	6/23/2002	CK17B	6/26/2002	3	0.8
CK17B	7/22/2002	CK17B	7/24/2002	2	0.0	

¹ Upper Nigliq and Nanuk are Nuiqsut fishing areas on the Nechelik Channel as described in Moulton (2001b).

Table 12. Volumes of 14 lakes sampled in eastern NPRA, 2002.

Lake Name	Latitude (NAD27)	Longitude	Town	Range	Section	Surface Area (acres)	Maximum Depth (feet)	Calculated Volume (mill. gals)
L9807	70.26131	151.10809	10N/11N	4E	4/33/34	66.3	10.1	223.78
L9817	70.23343	151.33681	10N	3E	10	63.5	8.9	101.09
L9823	70.25120	151.29850	10N	3E	2	26.1	13.5	12.73
L9911	70.17049	151.78475	9N/10N	1E	35/36/1/2	14.8	7.6	1585.78
M9912	70.25211	151.55356	10N	2E	2	159.3	9.6	61.93
M9914	70.23333	151.62855	10N	2E	9/10	43.4	6.4	205.08
M9922	70.22878	151.58368	10N	2E	10/11/14/15	87.0	6.1	246.94
M9923	70.22787	151.52110	10N	2E	12/13	43.6	6.7	289.60
M0024	70.21116	151.64799	10N	2E	16/21	38.2	8.2	236.93
M0201	70.26982	151.57185	11N	2E	35	14.7	3.7	not estimated
M0254	70.65837	-154.50146	10N	2E	3	162.0	12.7	59.40
M0256	70.64890	-154.50451	10N	2E	3	219.1	9.0	48.00
MC7916	70.29944	151.46012	11N	2E	17/18/19/20	100.4	8.9	605.37
MC7917	70.29113	151.52595	11N	3E	23/24	614.4	12.9	605.92

Table 13. Estimated water volumes available for winter withdrawal from surveyed lakes in the eastern NPR-A study area, based on 2002 depth surveys.

(available water based on 15% of winter volume deeper than 7 ft when sensitive species are present, 30% of winter volume deeper than 5 ft when only resistant fish are present).

Lake	Surface Area (acres)	Max. Depth (feet)	Calculated Volume (mil. gals)	Sensitive Fish Species Present ¹	Resistant Fish Species Present ²	15% of 7 ft Winter Volume (mil. gals)	30% of 5 ft Winter Volume (mil. gals)	Available Water (mil. gals)
L9807	66.3	10.1	223.78	None	NSSB		8.21	8.21
L9817	63.5	8.9	101.09	None	NSSB		4.85	4.85
L9823	26.1	13.5	12.73	None	NSSB		1.20	1.20
L9911	14.8	7.6	1585.78	not sampled	not sampled		59.08	59.08
M9912	159.3	9.6	61.93	None	NSSB, BKFH		3.36	3.36
M9914	43.4	6.4	205.08	GRAY	NSSB, BKFH	0.00		0.00
M9922	87.0	6.1	246.94	None	NSSB		1.32	1.32
M9923	43.6	6.7	289.60	None	NSSB		4.69	4.69
M0024	38.2	8.2	236.93	None	NSSB		11.35	11.35
M0201	14.7	3.7	not estimated	GRAY	NSSB			0.00
M0254	162.0	12.7	59.40	None	NSSB, BKFH		2.91	2.91
M0256	219.1	9.0	48.00	None	NSSB		37.67	37.67
MC7916	100.4	8.9	605.37	BDWF, LSCS	NSSB, BKFH	2.33		2.33
MC7917	614.4	12.9	605.92	LSCS		12.37		12.37

¹ BDWF = broad whitefish, LSCS = least cisco, LKTR = lake trout

² NSSB = ninespine stickleback, BKFH = Alaska blackfish

³ No = lake does not represent fish habitat, Yes = fish present during survey, Y? = fish not caught but lake has potential to be fish habitat.

Table 14. Estimated area available for removing ice aggregate, based on the area covered by water shallower than 4 feet, from 14 lakes in eastern NPR-A.

Lake	Surface Area (acres)	Max. Depth (feet)	Acres covered by Water shallower 4 feet
L9807	66.3	10.1	31.8
L9817	63.5	8.9	17.1
L9823	26.1	13.5	1.4
L9911	14.8	7.6	181.8
M9912	159.3	9.6	5.6
M9914	43.4	6.4	50.5
M9922	87.0	6.1	63.1
M9923	43.6	6.7	118.8
M0024	38.2	8.2	35.8
M0201	14.7	3.7	14.7
M0254	162.0	12.7	8.8
M0256	219.1	9.0	9.2
MC7916	100.4	8.9	192.3
MC7917	614.4	12.9	89.6

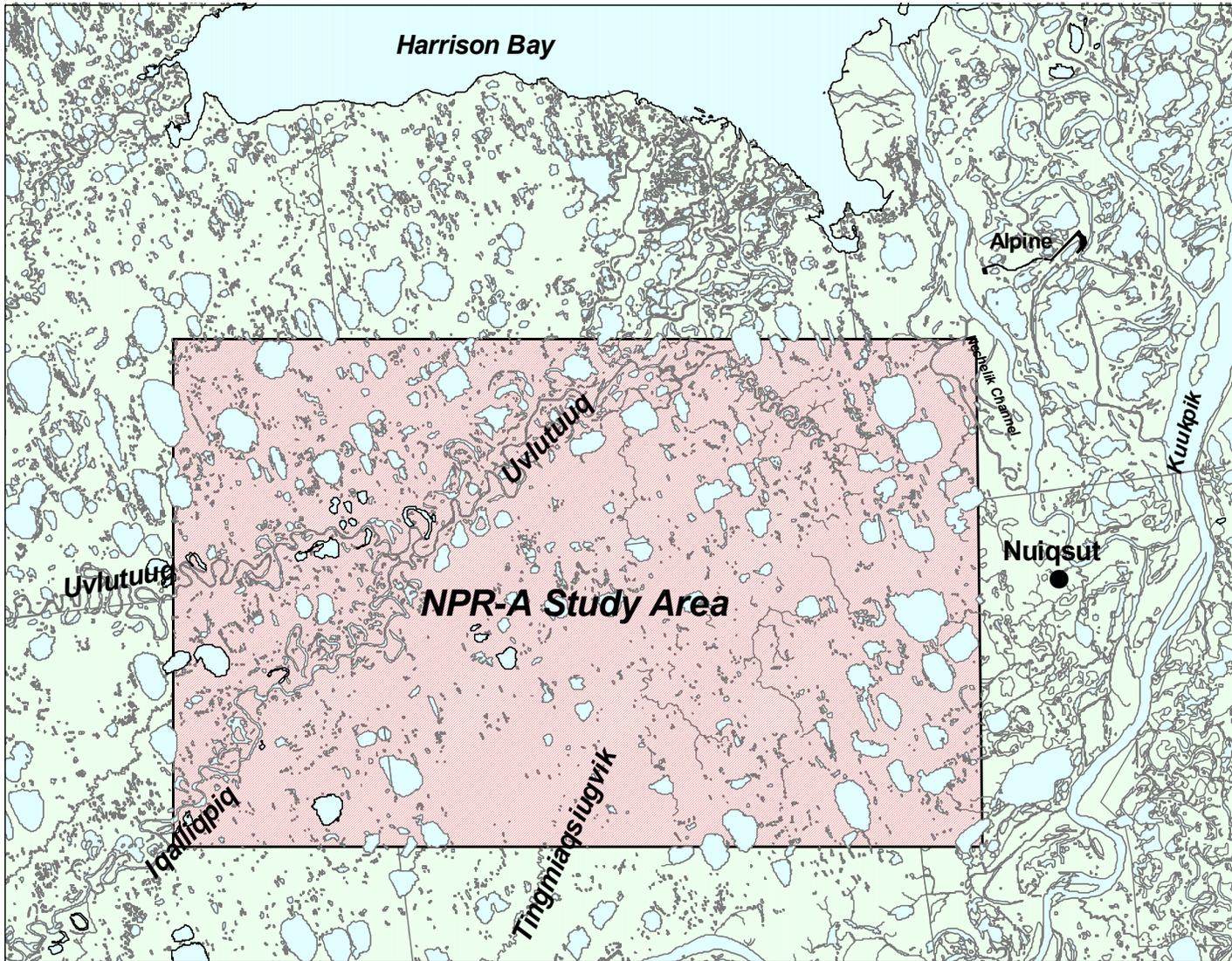


Figure 1. General location of the eastern NPR-A study area, Alaska, 2001-2002.

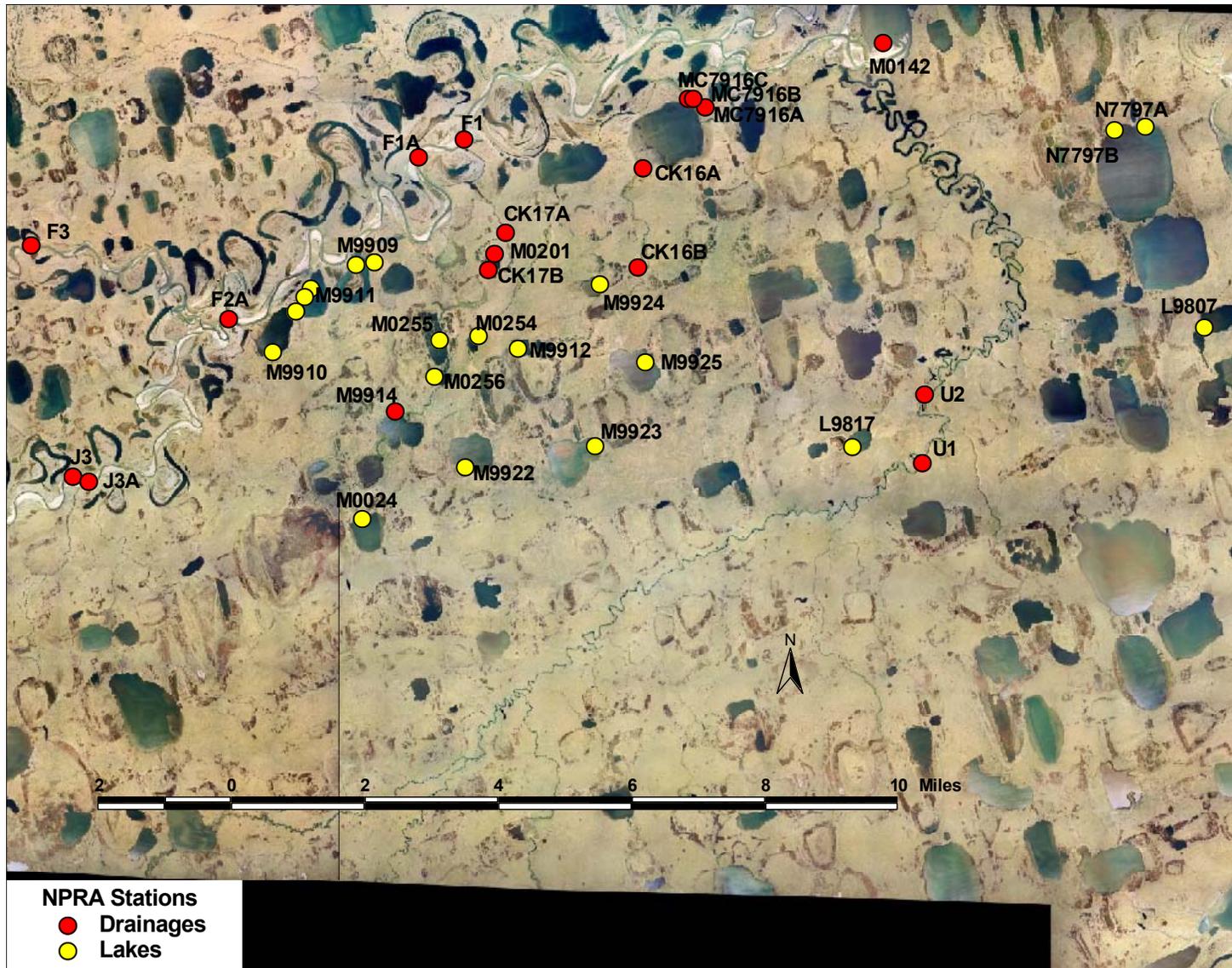


Figure 2. Fyke net locations in the eastern NPR-A study area, 2001-2002.

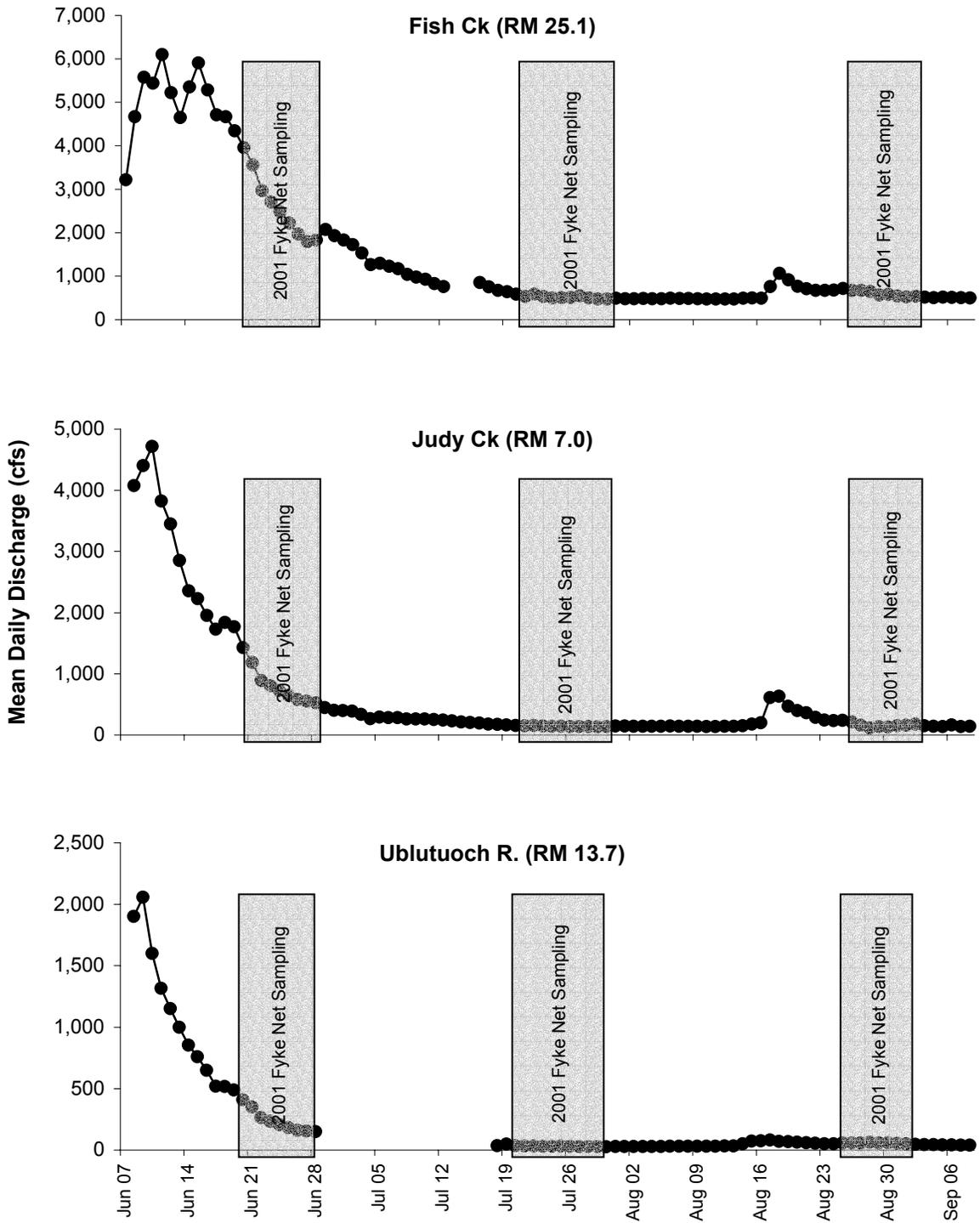


Figure 3. Discharge patterns in creeks sampled in eastern NPR-A during 2001, shaded bars indicate fyke net sampling periods (discharges from Dietzmann and Aldrich 2001, note change of scale between streams).

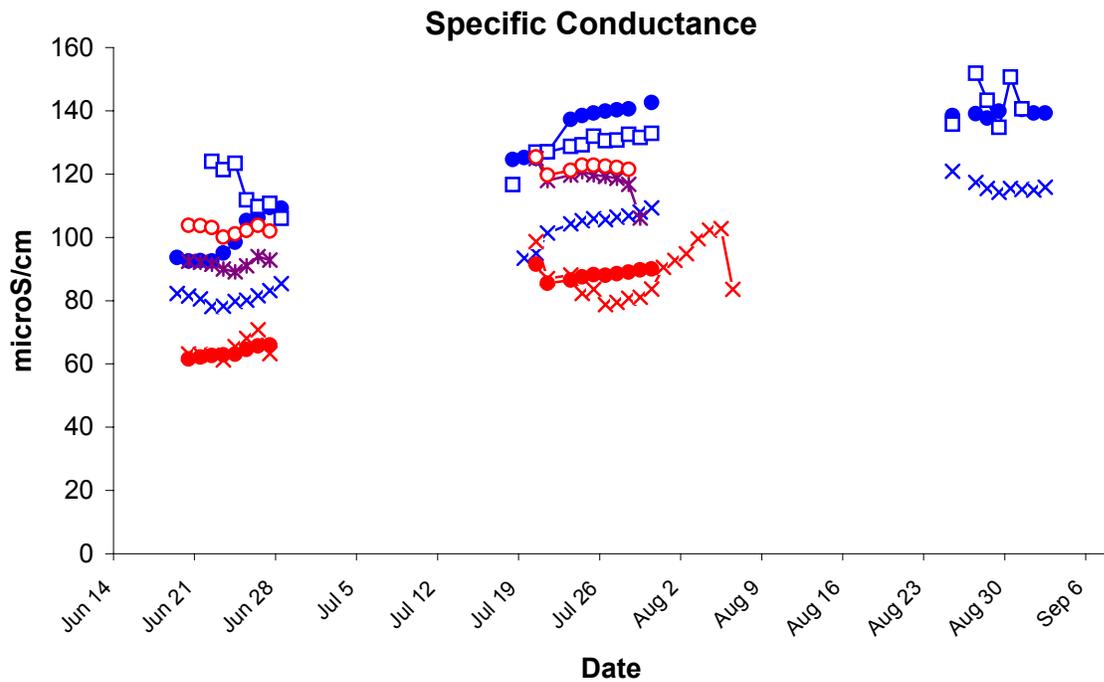
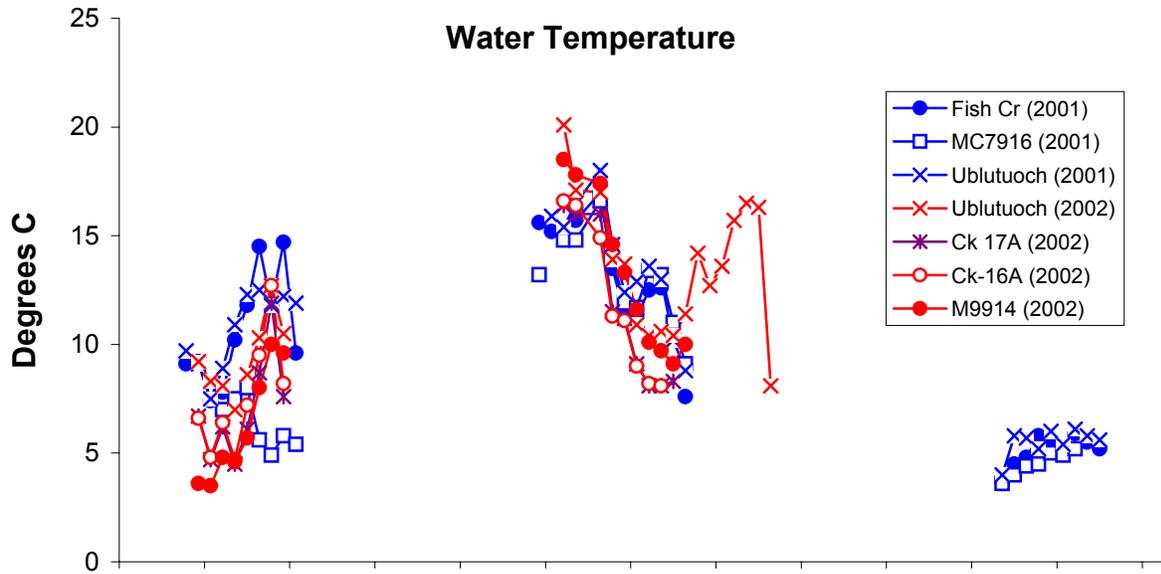


Figure 4. Water temperature and specific conductance at selected stations sampled in the eastern NPR-A study area, 2001-2002.

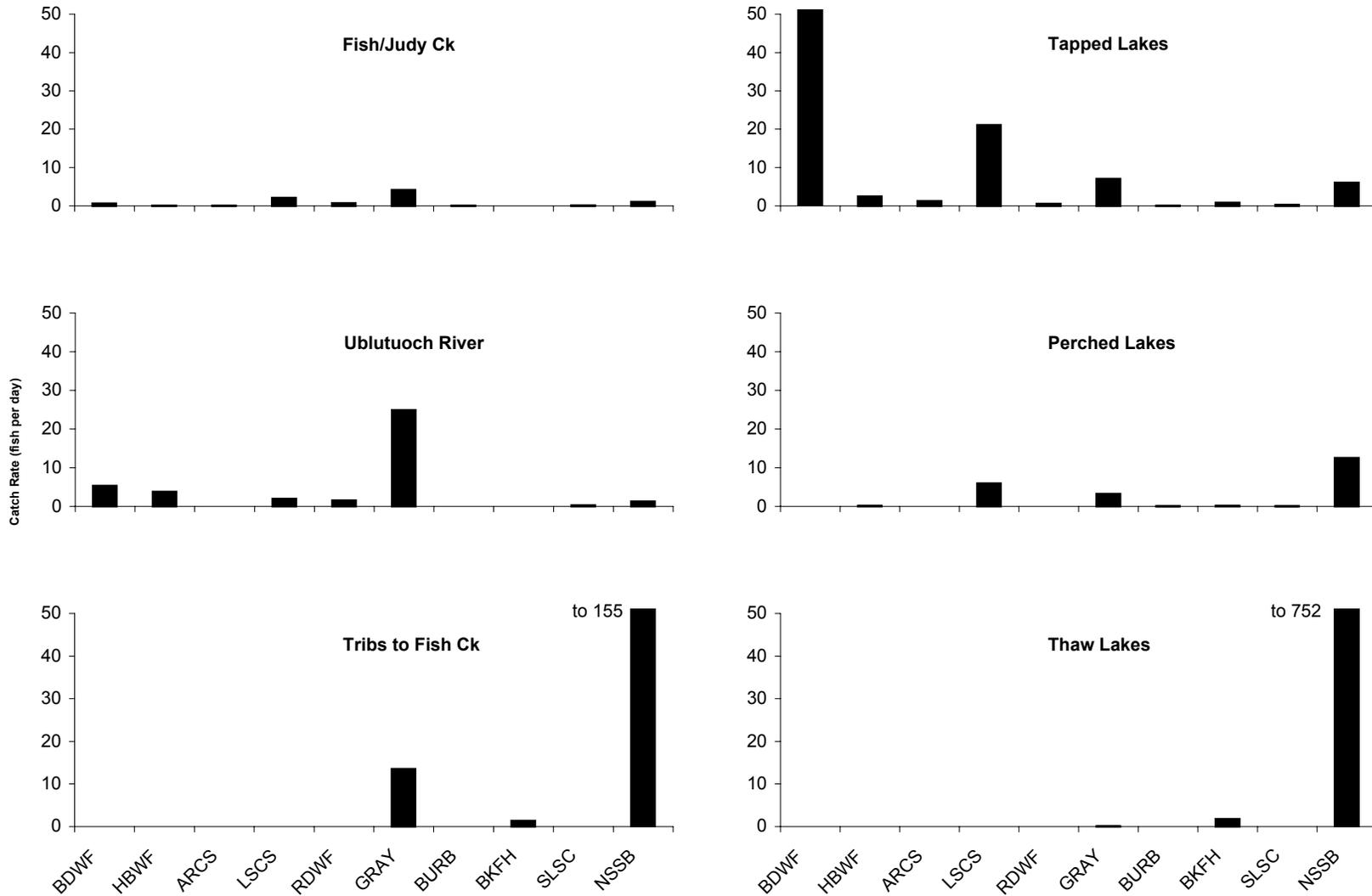


Figure 5. Differences in catch rate of fish species caught during fyke net sampling in six habitat types in eastern NPR-A, during 2001-2002.

BDWF = broad whitefish
 HBWF = humpback whitefish
 ARCS = arctic cisco

LSCS = least cisco
 RDWF = round whitefish
 GRAY = arctic grayling

BURB = burbot
 BKFH = Alaska blackfish
 SLSC = slimy sculpin

NSSB = ninespine stickleback

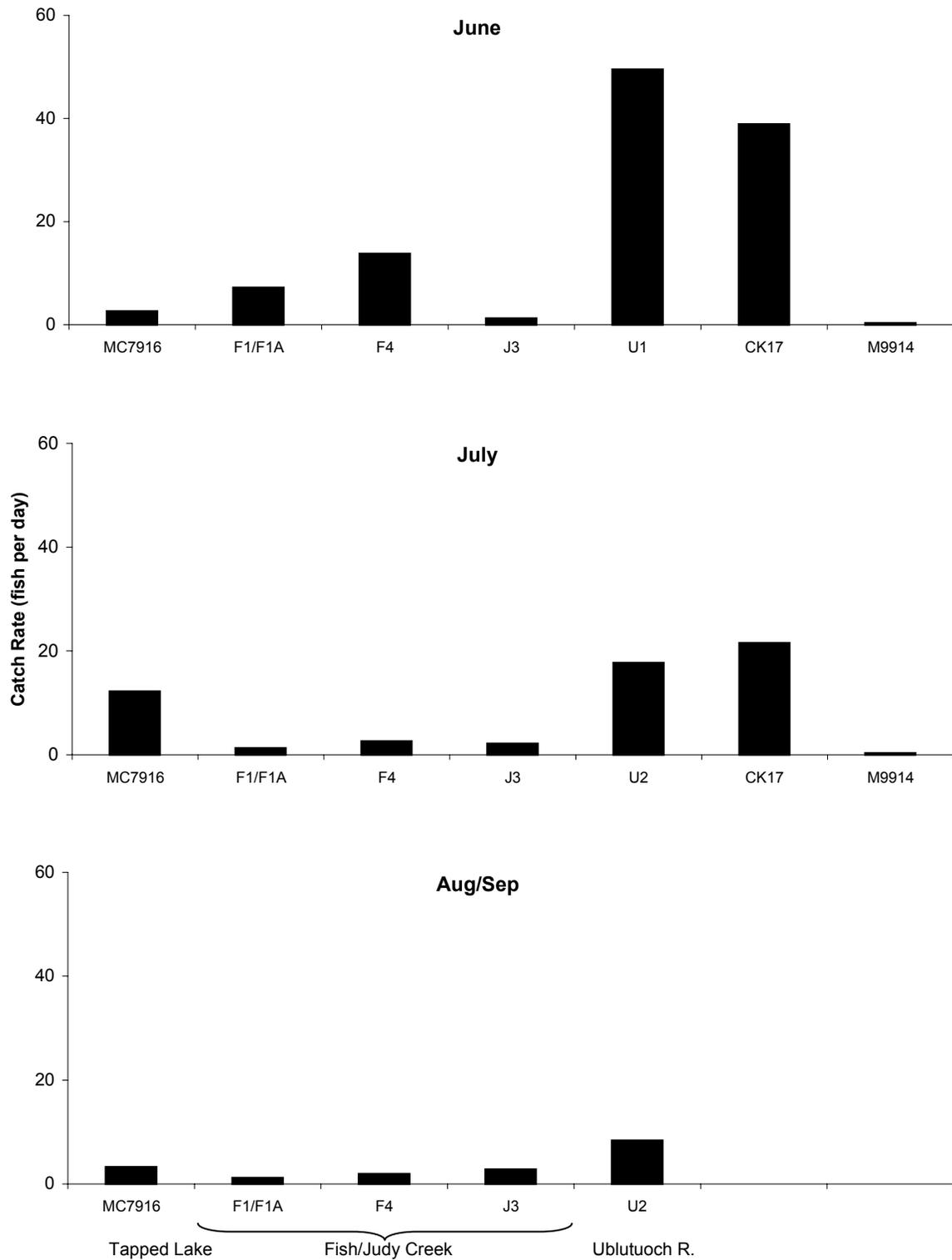


Figure 7. Mean catch rate of arctic grayling at fyke net stations in eastern NPR-A, 2001-2002.

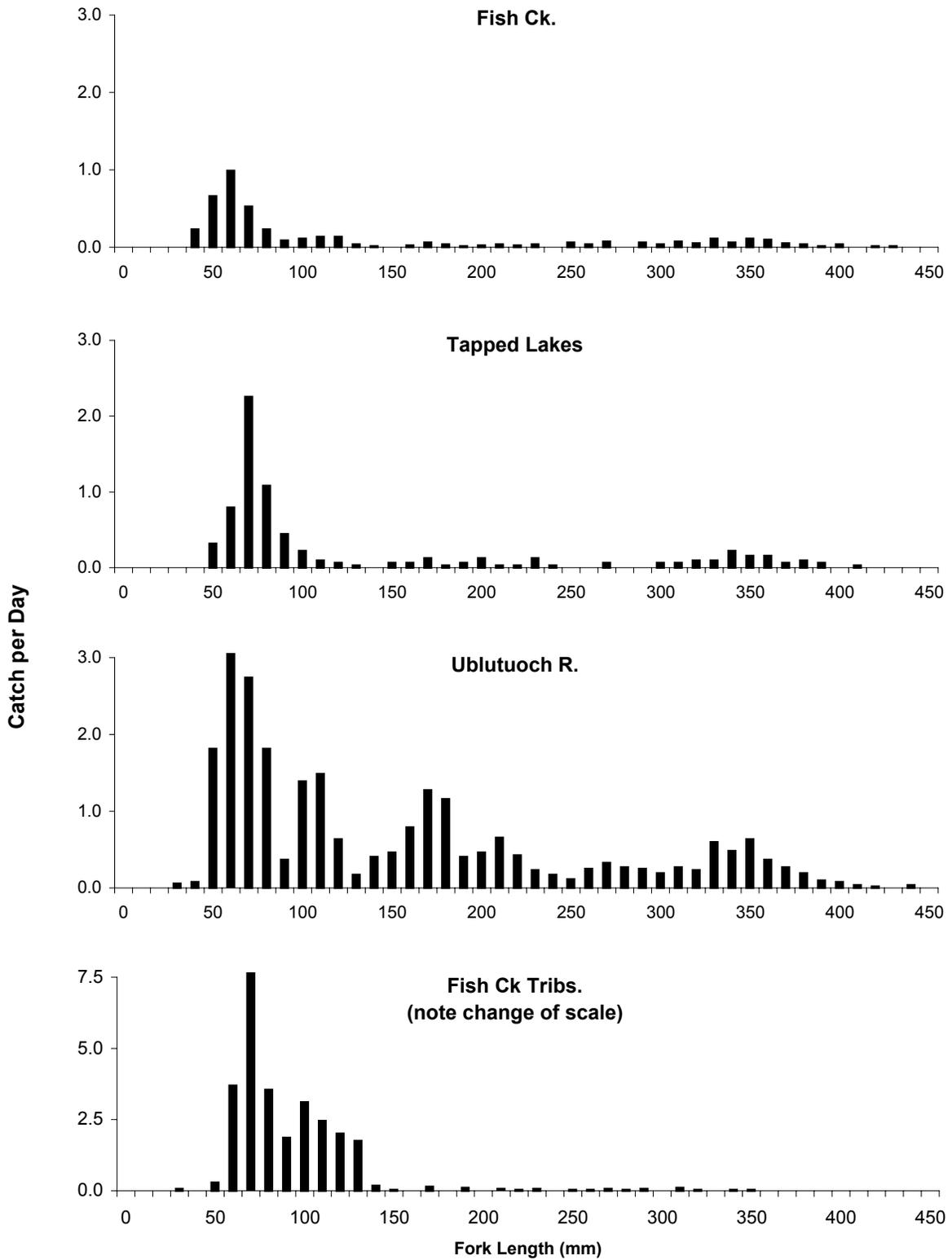


Figure 8. Length frequency of arctic grayling caught by fyke net in eastern NPR-A, 2001-2002.

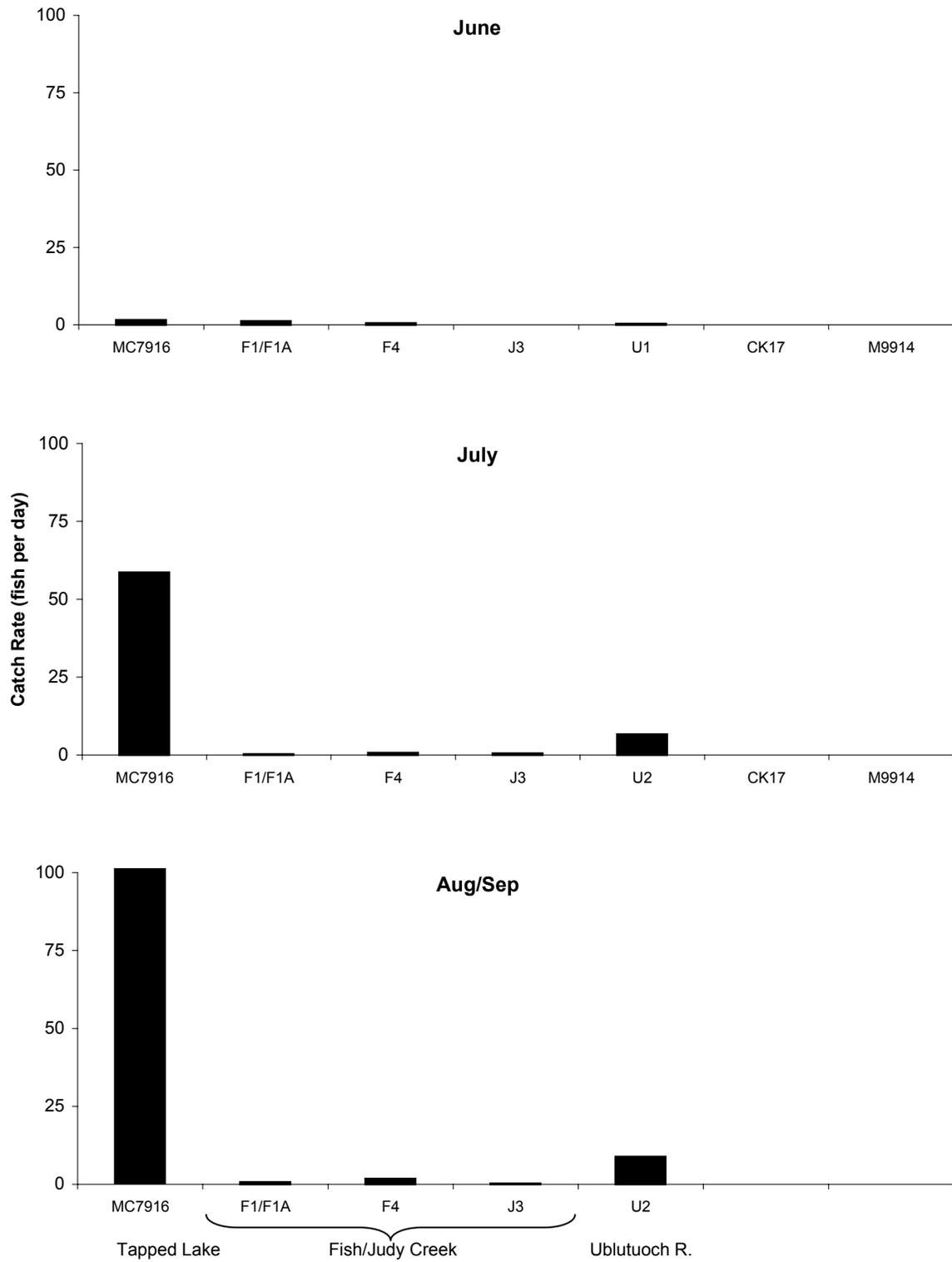


Figure 9. Mean catch rate of broad whitefish at fyke net stations in eastern NPR-A, 2001-2002.

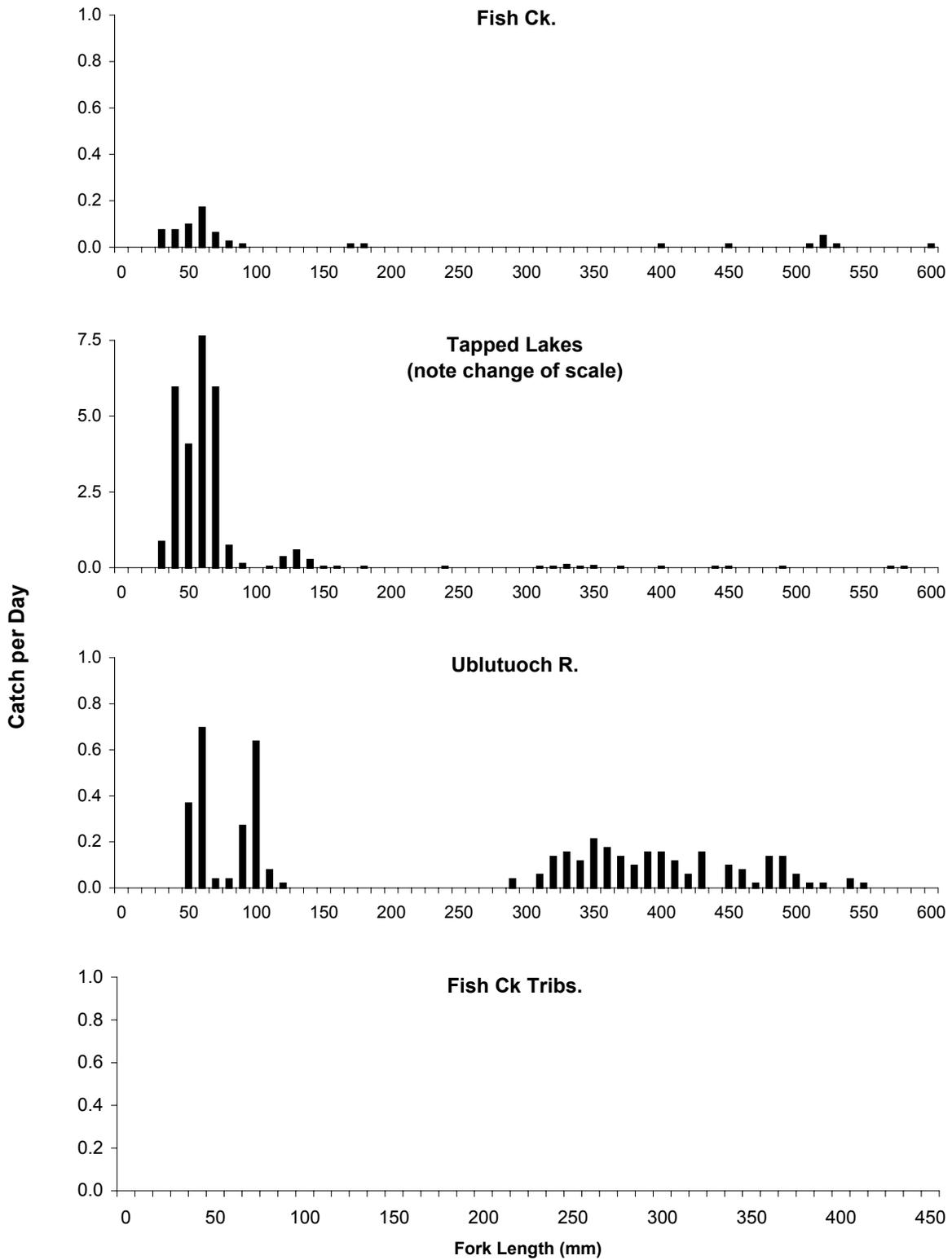


Figure 10. Length frequency of broad whitefish caught by fyke net in eastern NPR-A, 2001-2002.

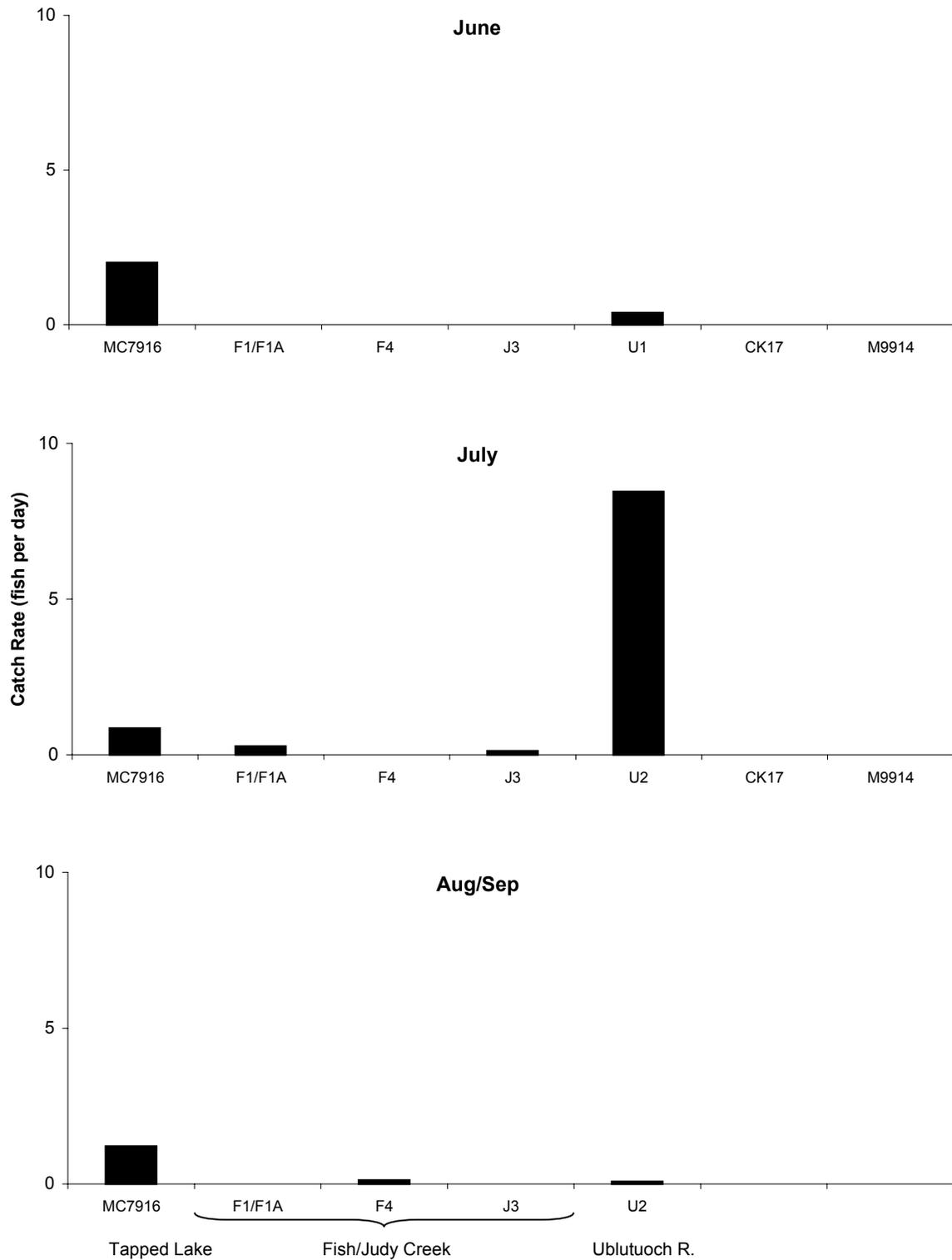


Figure 11. Mean catch rate of humpback whitefish at fyke net stations in eastern NPR-A, 2001-2002.

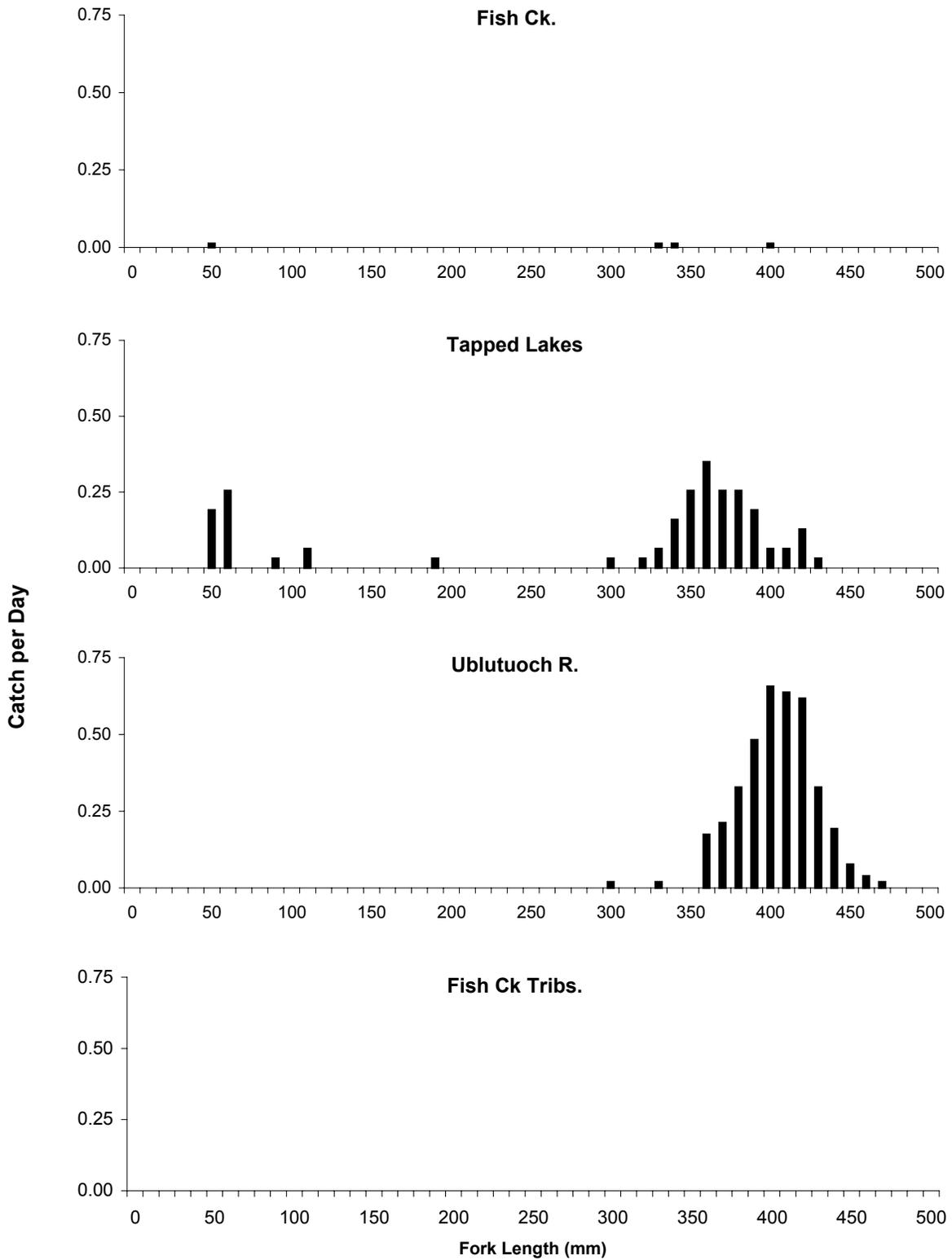


Figure 12. Length frequency of humpback whitefish caught by fyke net in eastern NPR-A, 2001-2002.

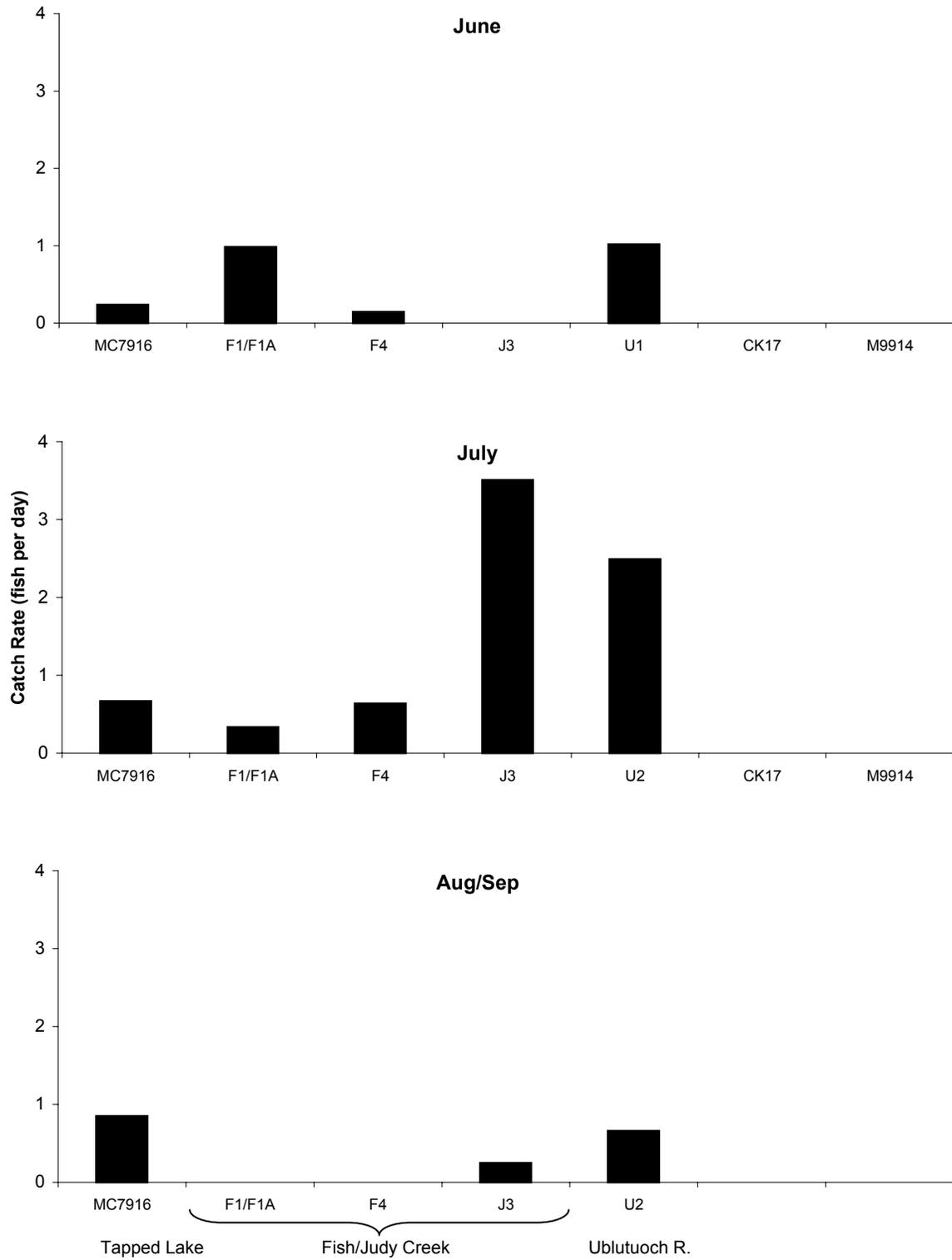


Figure 13. Mean catch rate of round whitefish at fyke net stations in eastern NPR-A, 2001-2002.

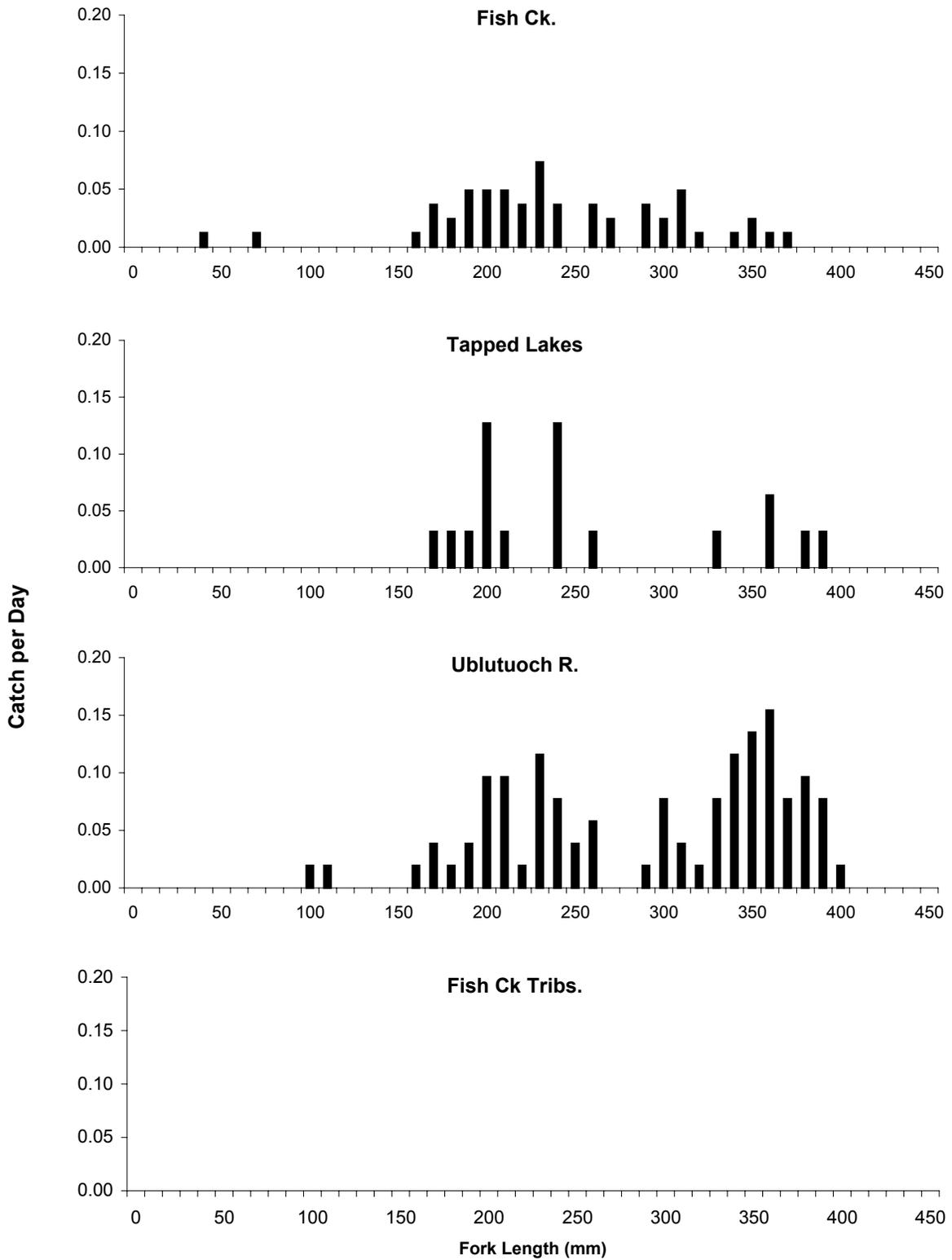


Figure 14. Length frequency of round whitefish caught by fyke net in eastern NPR-A, 2001-2002.

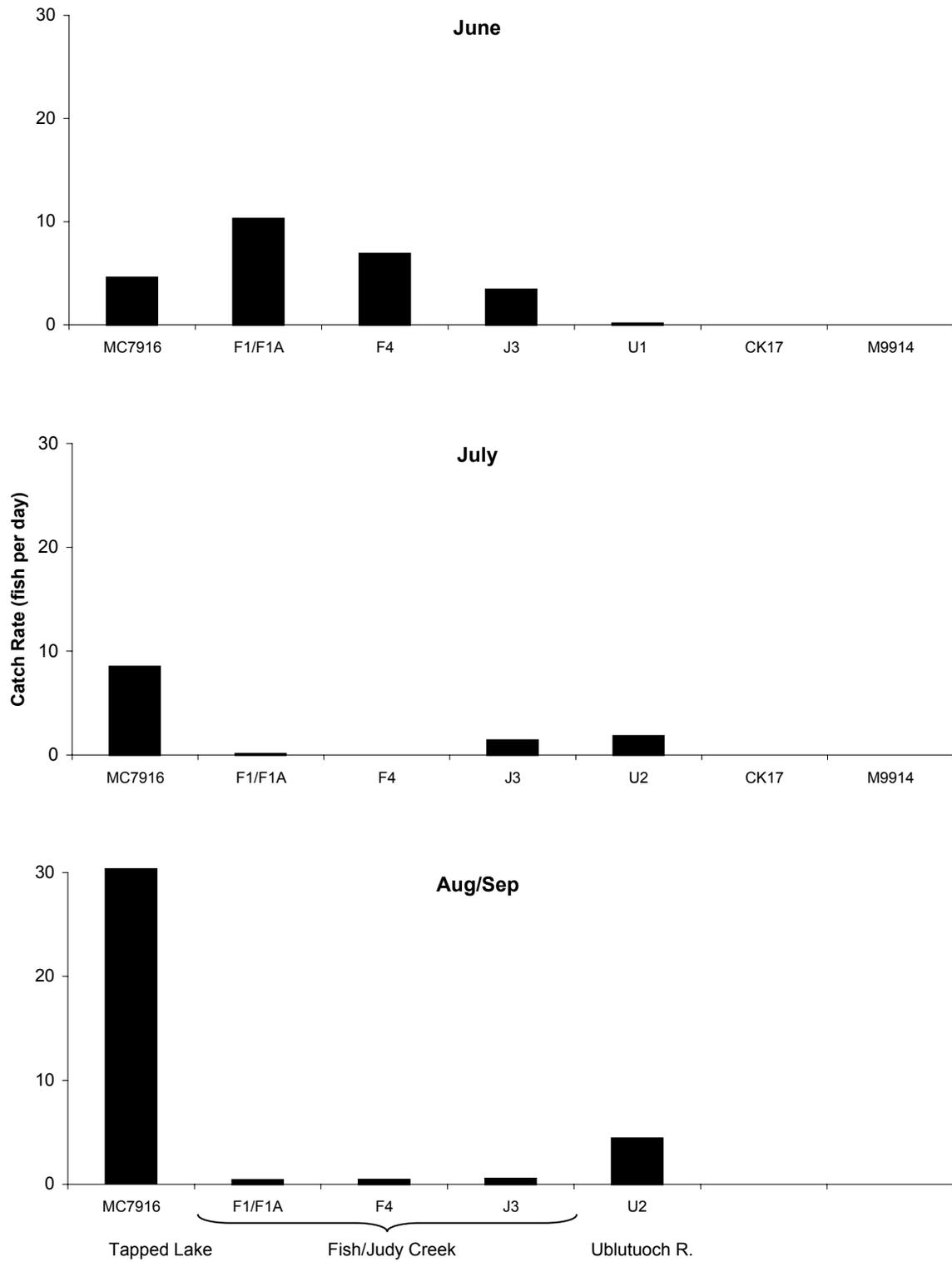


Figure 15. Mean catch rate of least cisco at fyke net stations in eastern NPR-A, 2001-2002.

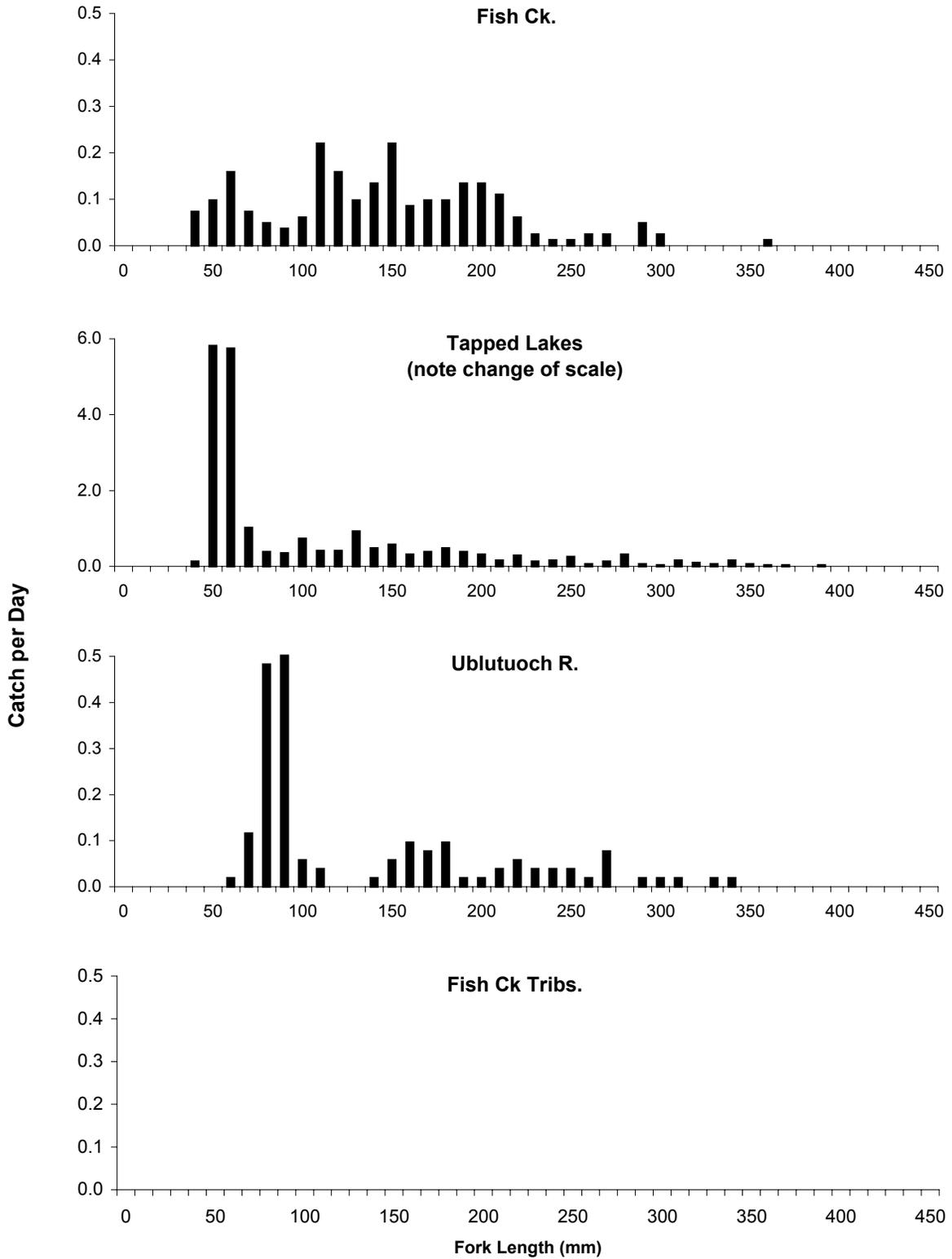


Figure 16. Length frequency of least cisco caught by fyke net in eastern NPR-A, 2001-2002.

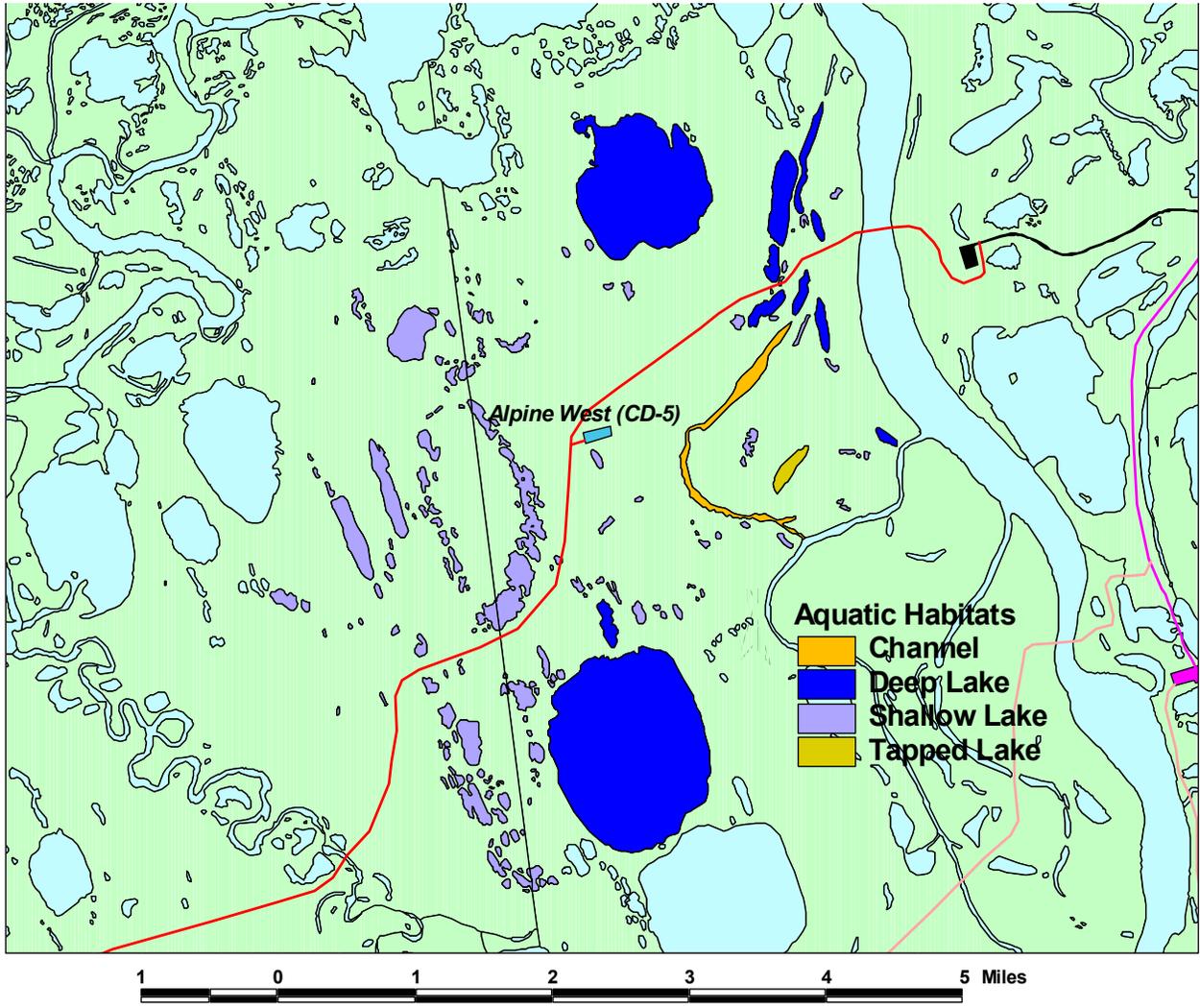


Figure 17. Aquatic habitats in the Alpine West portion of eastern NPR-A (proposed road and Alpine West pad are shown).

APPENDIX A
Results of Bathymetric Surveys in eastern NPR-A Lakes, 2002

Appendix Table A-1. Volume calculation for lakes surveyed during 2002 in eastern NPR-A.

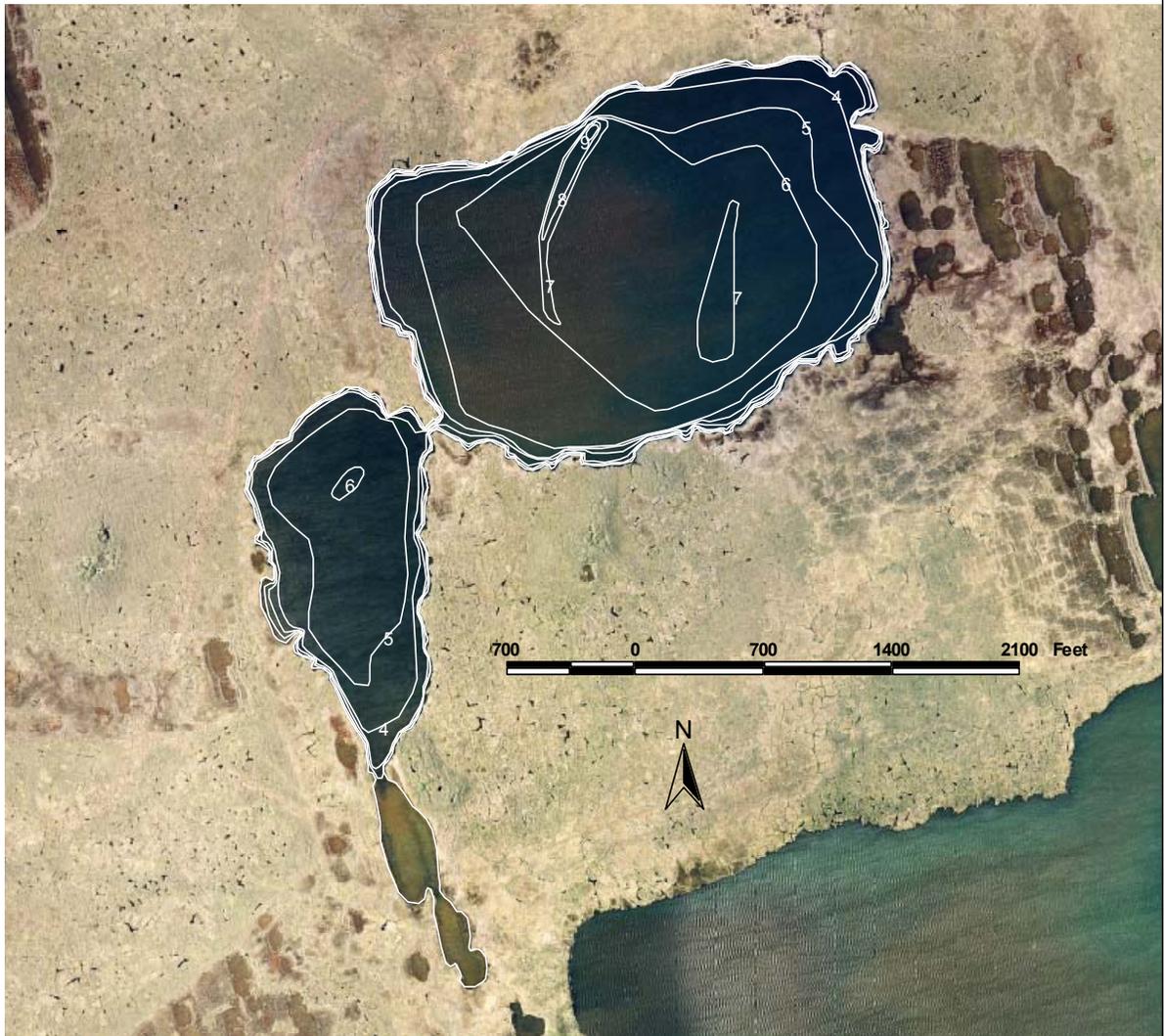
Lake	Depth Contour (feet)	Contour Area (acres)	Contour Volume (acre-ft)	Contour Volume (mill. gals)	Total Volume (mill. gals)	Volume deeper than 4 ft (mill. gals)	Volume deeper than 5 ft (mill. gals)	30% of Vol. deeper than 5 ft (mill. gals)	Volume deeper than 7 ft (mill. gals)	15% of Vol. deeper than 7 ft (mill. gals)
L9807	0	140.6	136.7	44.5	223.78	57.20	27.38	8.21	0.95	0.14
	1	132.8	131.3	42.8						
	2	129.8	126.9	41.4						
	3	124.1	116.3	37.9						
	4	108.7	91.5	29.8						
	5	75.3	59.7	19.4						
	6	45.3	21.4	7.0						
	7	4.6	2.5	0.8						
	8	0.9	0.4	0.1						
	9	0.1	0.03	0.01						
L9817	0	65.4	61.0	19.9	101.09	29.58	16.15	4.85	2.85	0.43
	1	56.8	55.4	18.1						
	2	54.1	52.9	17.2						
	3	51.7	50.0	16.3						
	4	48.4	41.2	13.4						
	5	34.4	26.2	8.5						
	6	18.7	14.6	4.8						
	7	10.9	7.3	2.4						
	8	4.3	1.4	0.5						
L9823	0	5.7	10.9	3.6	12.73	6.07	4.00	1.20	2.16	0.32
	2	5.2	9.5	3.1						
	4	4.3	7.3	2.4						
	6	3.0	5.3	1.7						
	8	2.3	4.0	1.3						
	10	1.7	1.8	0.6						
	12	0.3	0.2	0.1						
L9911	0	559.1	1,047.9	341.5	1,585.78	426.81	196.93	59.08	1.12	0.17
	1	489.6	910.9	296.8						
	2	422.1	821.3	267.6						
	3	399.3	776.4	253.0						
	4	377.3	705.5	229.9						
	5	328.7	474.4	154.6						
	6	156.2	126.5	41.2						
	7	5.2	3.4	1.1						
M9912	0	34.8	34.1	11.1	61.93	20.13	11.22	3.36	0.82	0.12
	1	33.4	32.9	10.7						
	2	32.4	31.4	10.2						
	3	30.5	29.8	9.7						
	4	29.2	27.3	8.9						
	5	25.5	22.2	7.2						
	6	19.0	9.7	3.2						
	7	2.8	2.1	0.7						
	8	1.4	0.5	0.1						

Appendix Table A-1. Volume calculation for lakes surveyed during 2002 in eastern NPR-A.

Lake	Depth Contour (feet)	Contour Area (acres)	Contour Volume (acre-ft)	Contour Volume (mill. gals)	Total Volume (mill. gals)	Volume deeper than 4 ft (mill. gals)	Volume deeper than 5 ft (mill. gals)	30% of Vol. deeper than 5 ft (mill. gals)	Volume deeper than 7 ft (mill. gals)	15% of Vol. deeper than 7 ft (mill. gals)
M9914	0	151.1	147.3	48.0	205.08	39.29	11.48	3.44	0.00	0.00
	1	143.4	135.7	44.2						
	2	128.2	119.8	39.0						
	3	111.5	106.0	34.5						
	4	100.6	85.3	27.8						
	5	70.9	33.0	10.8						
	6	6.6	2.2	0.7						
M9922	0	195.9	188.2	61.3	246.94	31.15	4.39	1.32	0.00	0.00
	1	180.5	172.7	56.3						
	2	165.0	158.7	51.7						
	3	152.6	142.6	46.5						
	4	132.8	82.1	26.8						
	5	40.4	13.5	4.4						
M9923	0	255.0	226.7	73.9	289.60	52.82	15.63	4.69	0.00	0.00
	1	199.5	188.4	61.4						
	2	177.5	166.0	54.1						
	3	154.8	145.4	47.4						
	4	136.3	114.1	37.2						
	5	93.3	44.6	14.5						
	6	10.0	3.3	1.1						
M0024	0	148.2	141.1	46.0	236.93	72.85	37.82	11.35	0.29	0.04
	1	134.2	128.3	41.8						
	2	122.6	119.6	39.0						
	3	116.6	114.5	37.3						
	4	112.4	107.5	35.0						
	5	102.6	86.4	28.1						
	6	71.1	28.8	9.4						
	7	2.4	0.9	0.3						
	8	0.03	0.01	0.00						
M0254	0	30.1	55.0	17.9	59.40	26.45	15.61	4.68	7.32	1.10
	2	25.0	46.1	15.0						
	4	21.2	38.0	12.4						
	6	16.9	28.6	9.3						
	8	11.8	12.8	4.2						
	10	2.3	1.7	0.6						
	12	0.04	0.03	0.01						
M0256	0	30.1	27.9	9.1	48.00	16.12	9.72	2.91	1.14	0.17
	1	25.8	24.9	8.1						
	2	24.0	23.3	7.6						
	3	22.6	21.7	7.1						
	4	20.8	19.7	6.4						
	5	18.5	16.6	5.4						
	6	14.7	9.8	3.2						
	7	5.6	3.1	1.0						
	8	1.2	0.4	0.1						

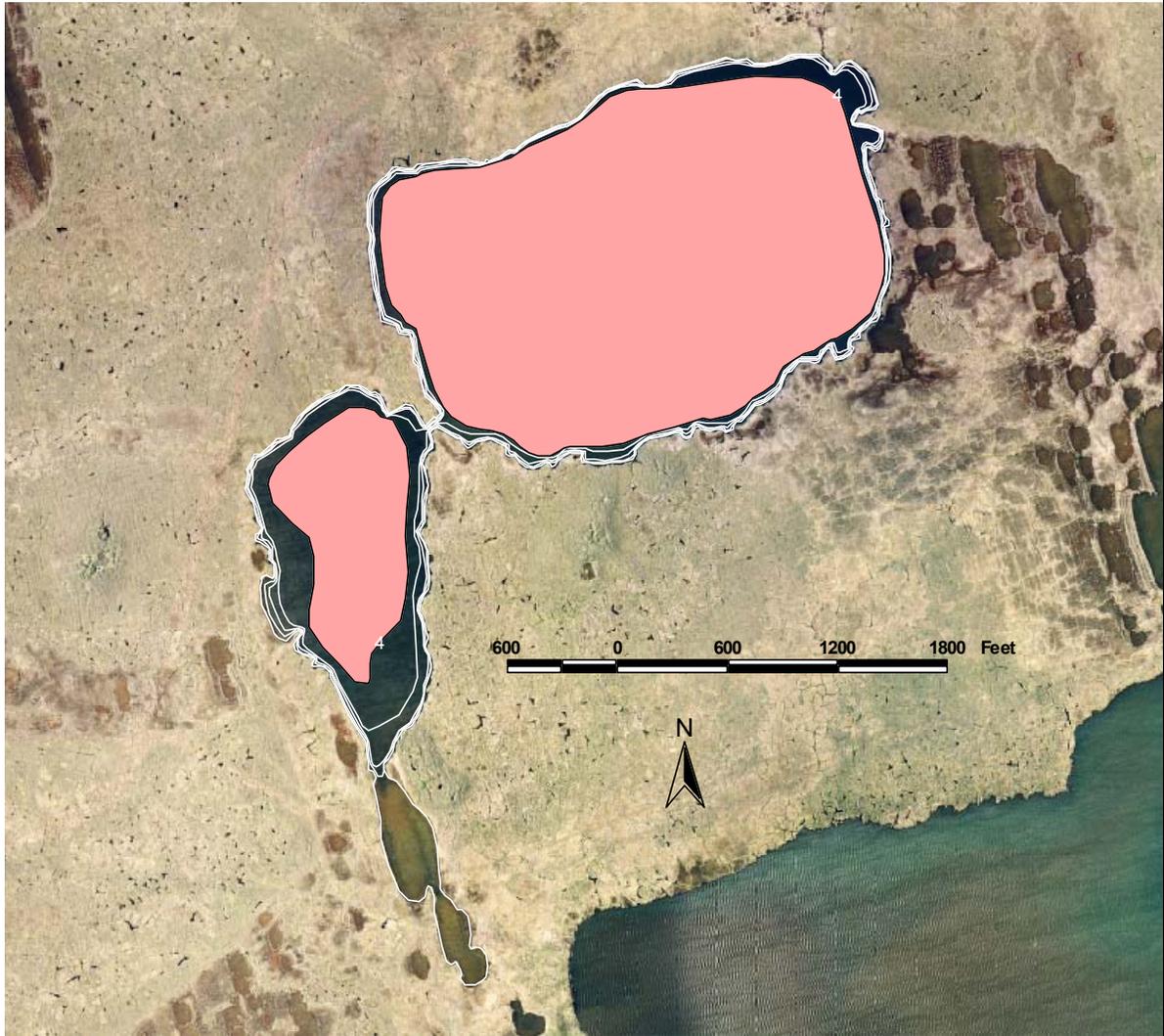
Appendix Table A-1. Volume calculation for lakes surveyed during 2002 in eastern NPR-A.

Lake	Depth Contour (feet)	Contour Area (acres)	Contour Volume (acre-ft)	Contour Volume (mill. gals)	Total Volume (mill. gals)	Volume deeper than 4 ft (mill. gals)	Volume deeper than 5 ft (mill. gals)	30% of Vol. deeper than 5 ft (mill. gals)	Volume deeper than 7 ft (mill. gals)	15% of Vol. deeper than 7 ft (mill. gals)
MC7916	0	419.6	399.1	130.1	605.37	197.06	125.58	37.67	15.50	2.33
	1	378.9	335.2	109.2						
	2	293.4	275.8	89.9						
	3	258.6	242.8	79.1						
	4	227.4	219.4	71.5						
	5	211.5	191.8	62.5						
	6	172.7	146.0	47.6						
	7	120.8	46.8	15.2						
	8	2.4	0.8	0.3						
MC7917	0	312.5	294.9	96.1	605.92	255.25	201.93	60.58	82.46	12.37
	1	277.7	262.5	85.5						
	2	247.5	240.3	78.3						
	3	233.1	228.0	74.3						
	4	222.9	214.1	69.8						
	5	205.4	194.7	63.5						
	6	184.3	171.9	56.0						
	7	159.7	127.0	41.4						
	8	96.8	75.7	24.7						
	9	56.4	35.6	11.6						
	10	18.3	11.5	3.8						
	11	5.9	3.0	1.0						
	12	0.9	0.3	0.1						



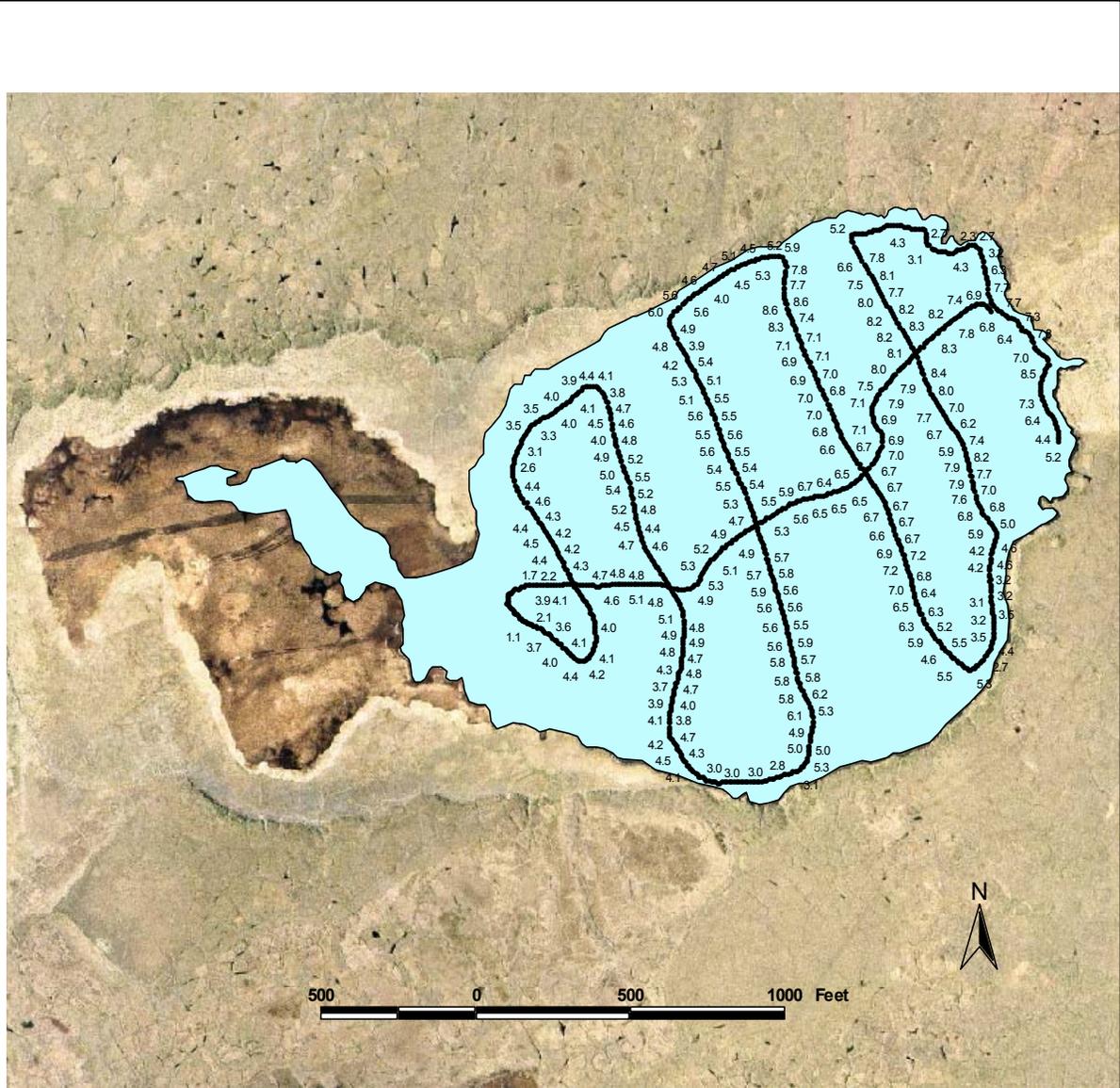
Depth contours of lake L9807, based on transects surveyed on Sep 4, 2002
(contours in 1 foot increments).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.

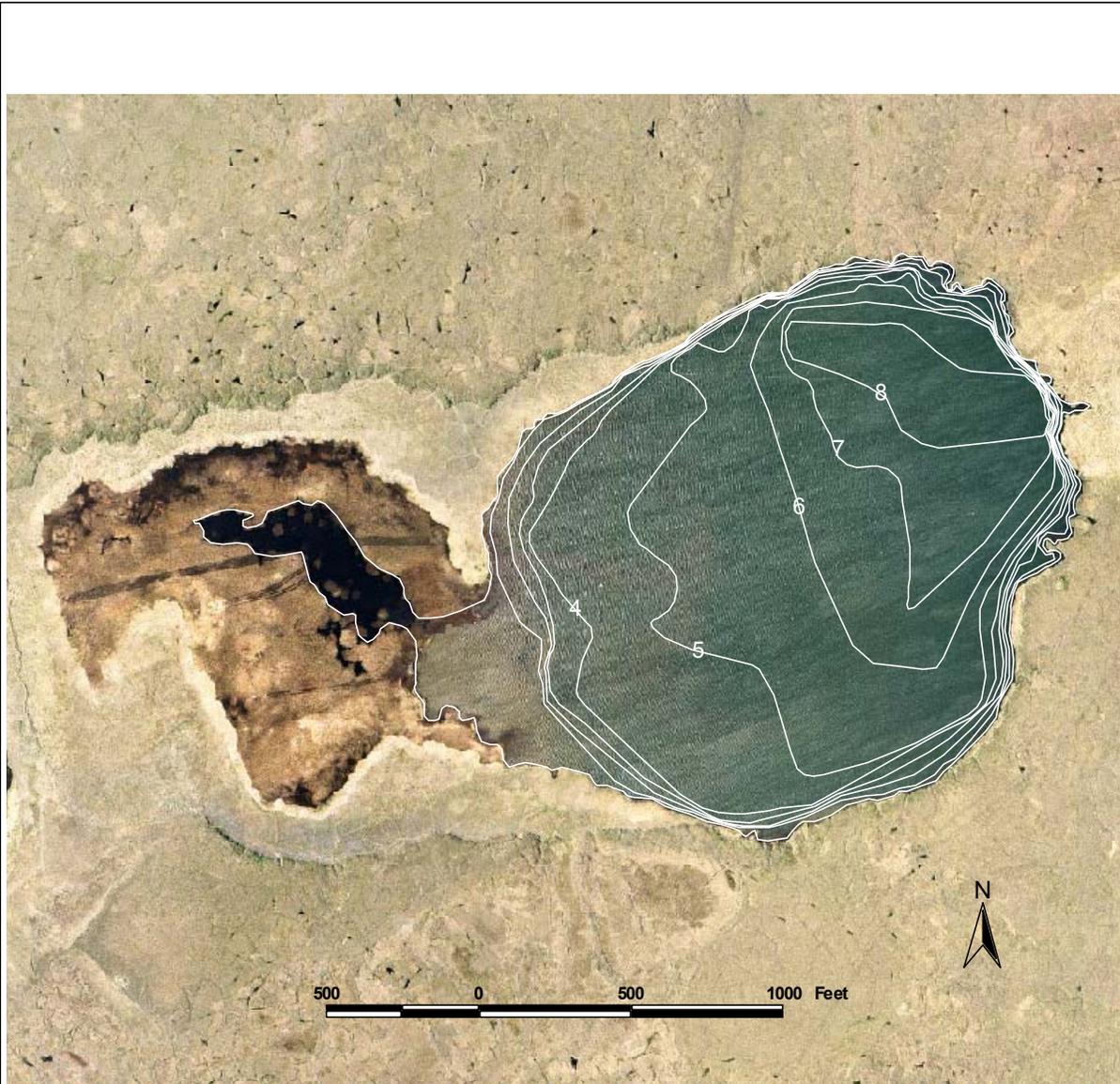


Shaded region of lake L9807 deeper than 4 ft (shaded), remainder of lake likely to be available for ice chips, based on transects surveyed on Sep 4, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Depth transects surveyed on lake L9817, Sep 3, 2002.
 (depths in feet)



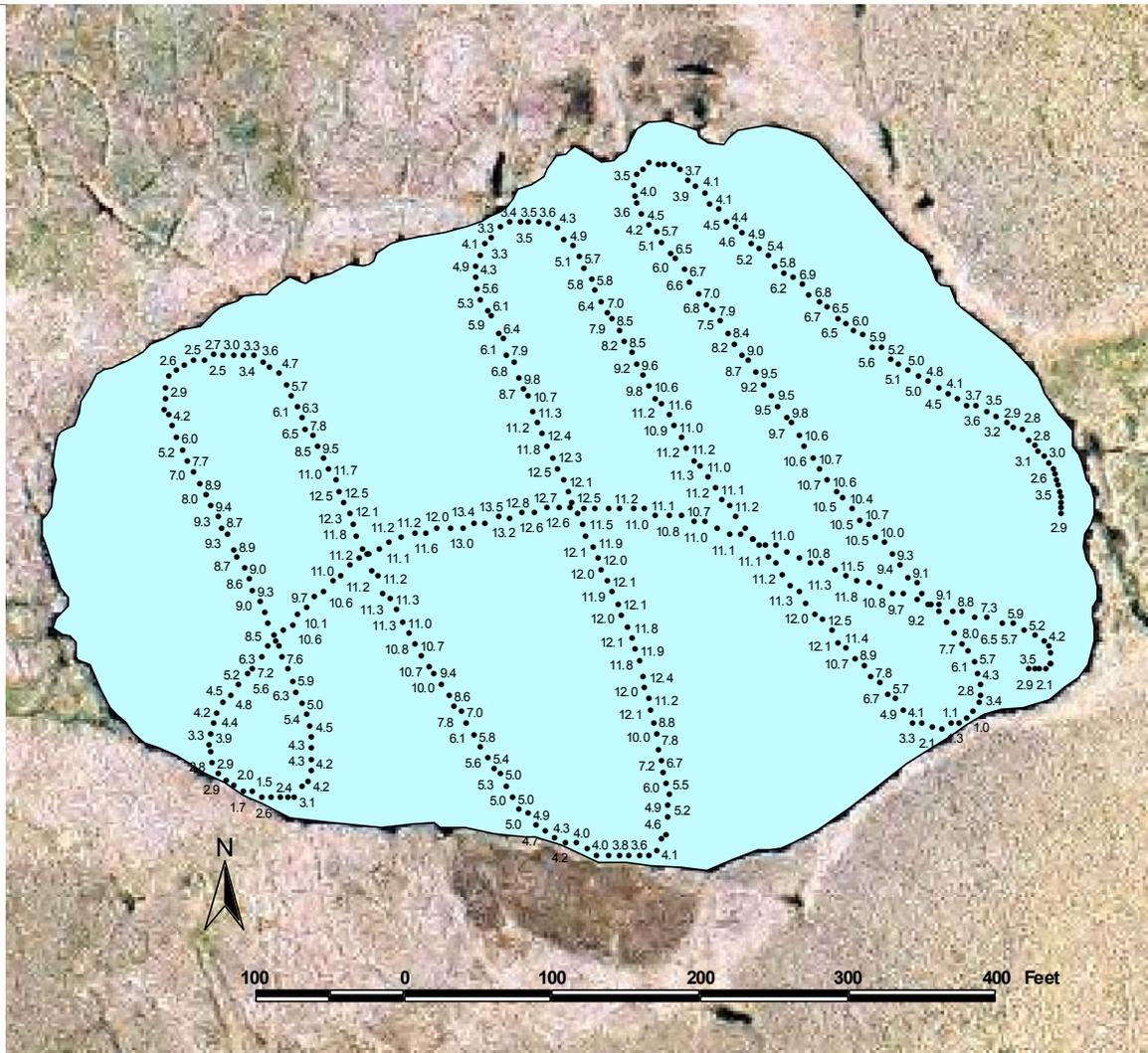
Depth contours of lake L9817, based on transects surveyed on Sep 3, 2002
(contours in 1 foot increments).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.

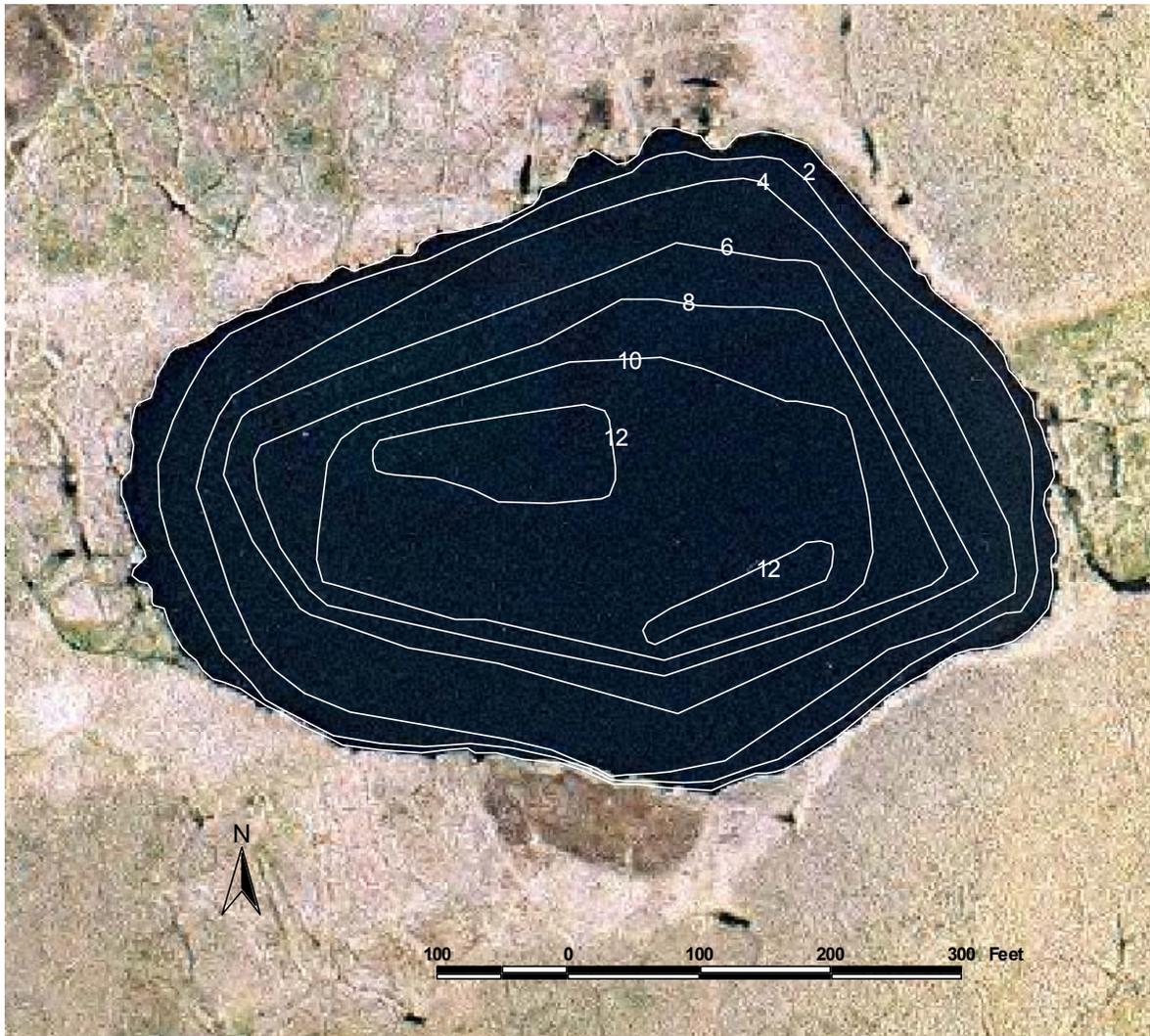


Shaded region of lake L9817 deeper than 4 ft (shaded), remainder of lake likely to be available for ice chips, based on transects surveyed on Sep 3, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Depth transects surveyed on lake L9823, Sep 4, 2002.
 (depths in feet)



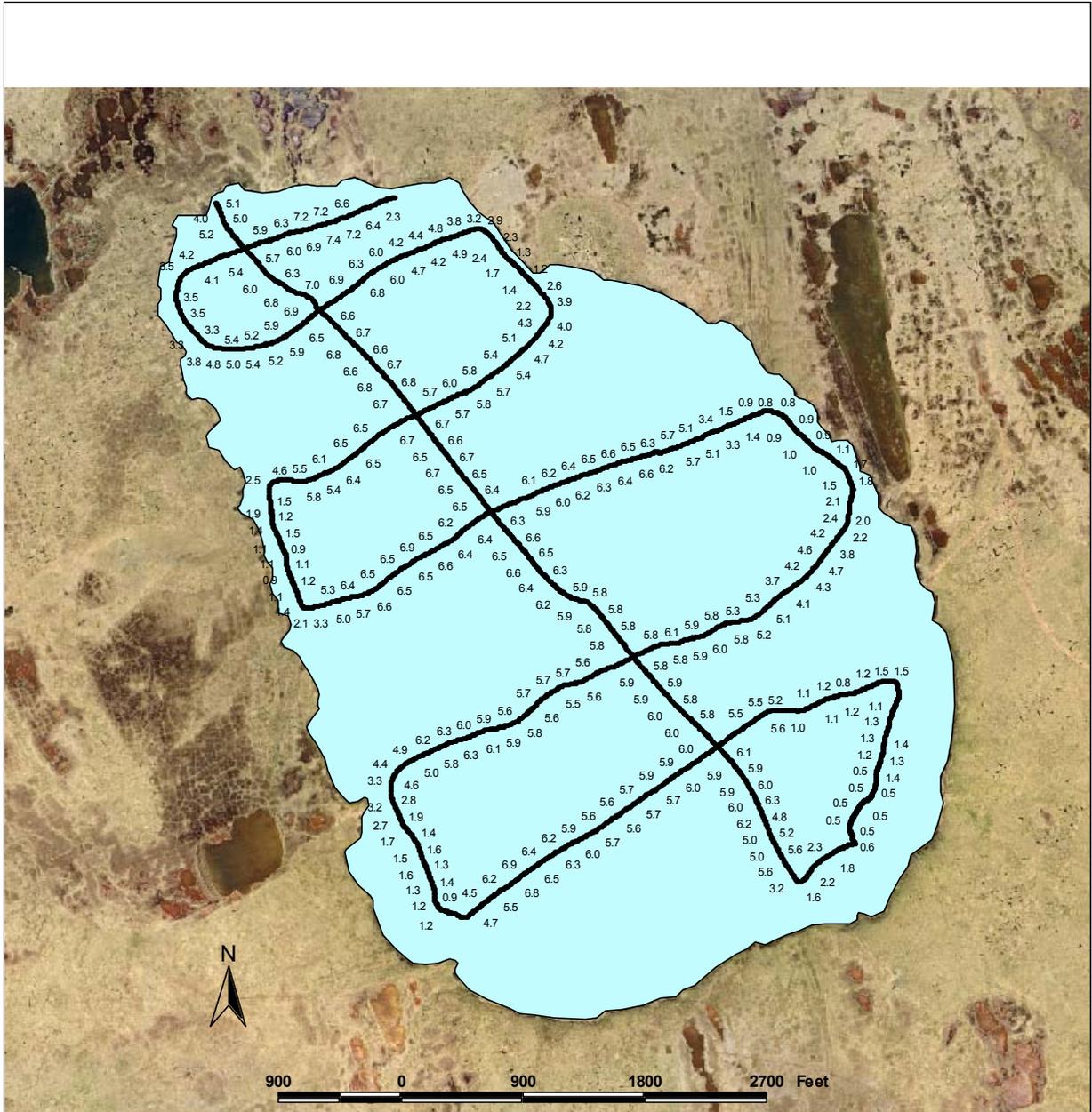
Depth contours of lake L9823, based on transects surveyed on Sep 4, 2002
(contours in 2 foot increments).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Shaded region of lake L9823 deeper than 4 ft (shaded), remainder of lake likely to be available for ice chips, based on transects surveyed on Sep. 4, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Depth transects surveyed on lake L9911, Aug 31, 2002
(depths in feet)



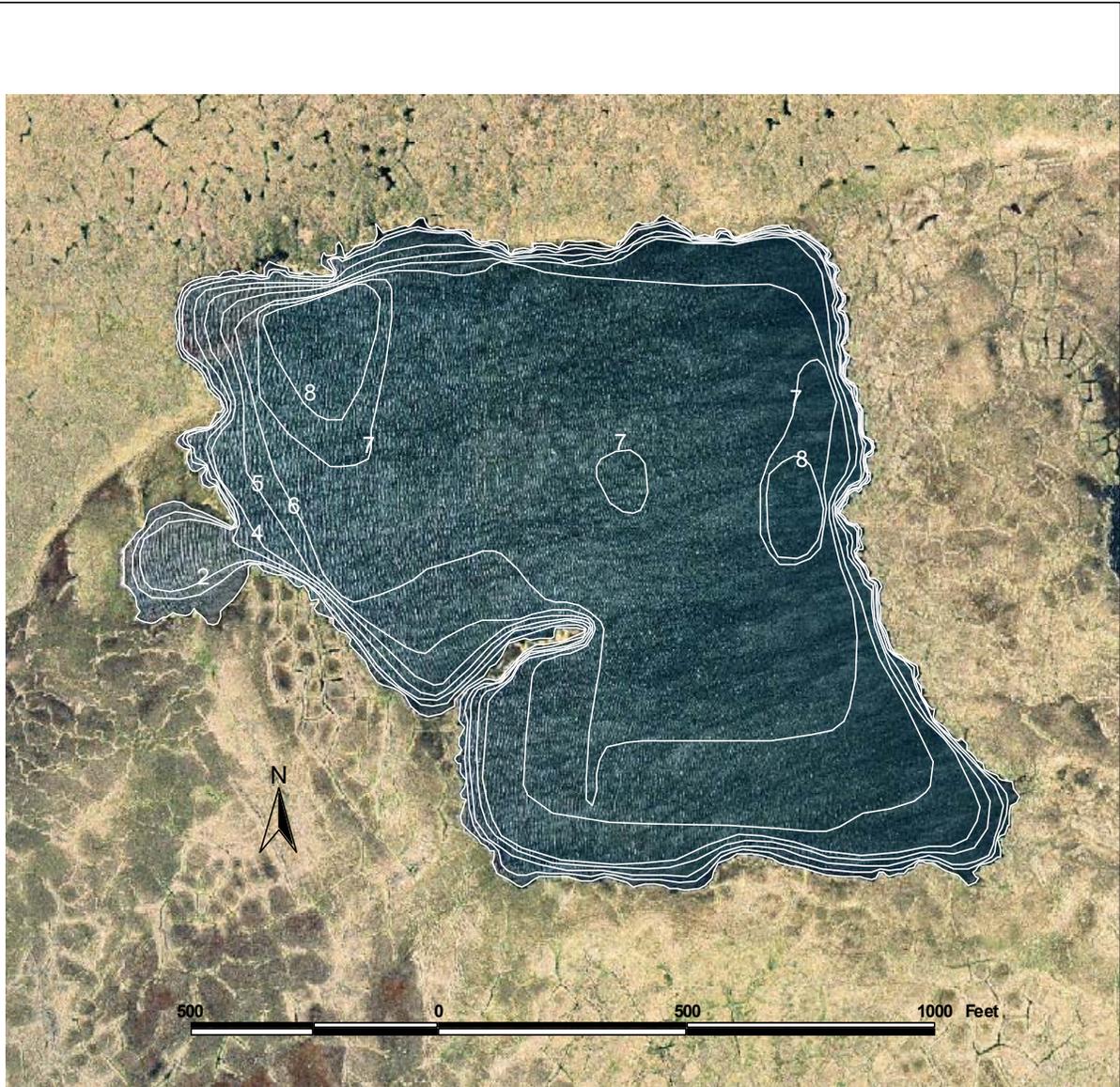
Depth contours of lake L9911, based on transects surveyed on Aug 31, 2002
(contours in 1 foot increments).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



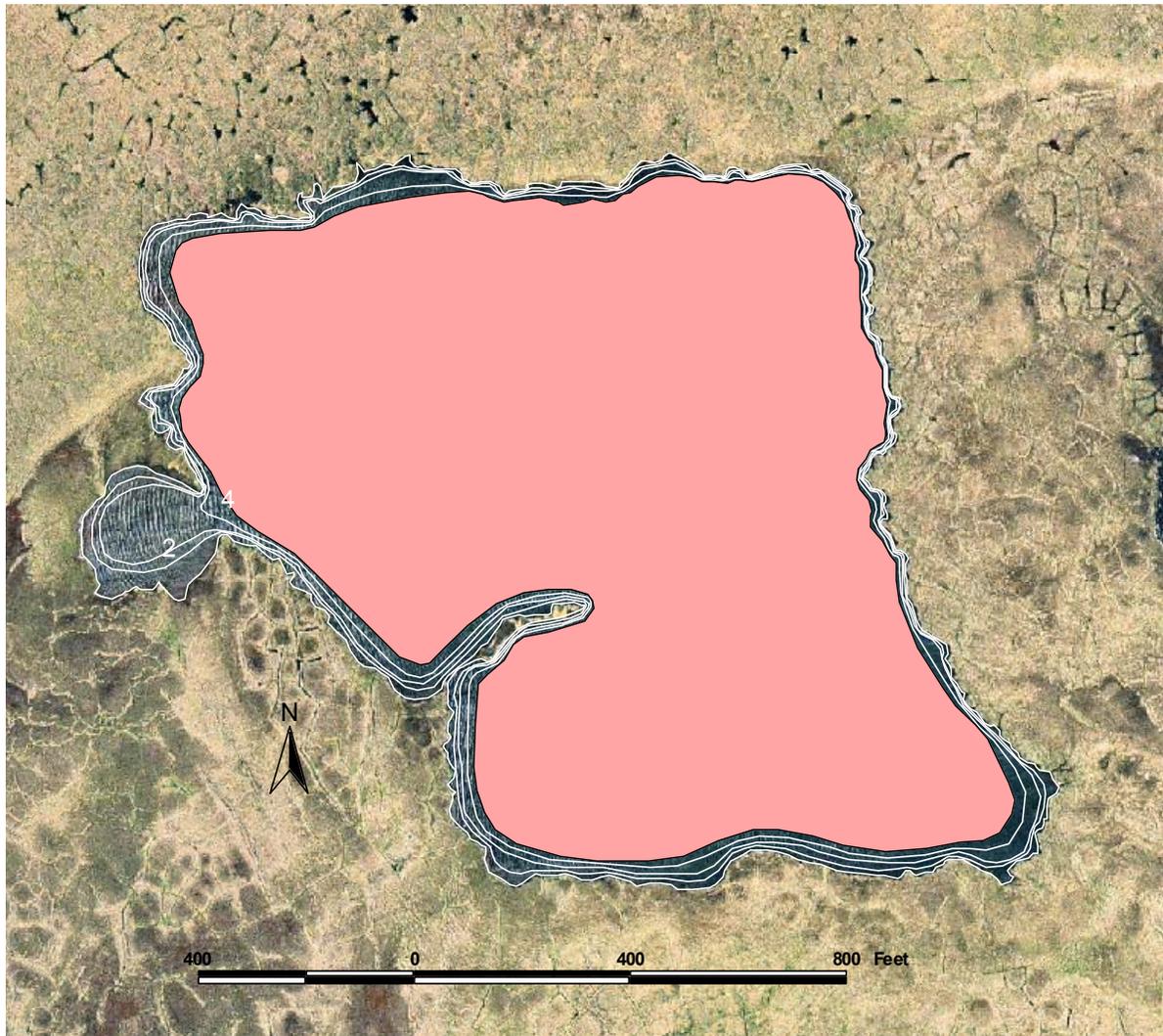
Shaded region of lake L9911 deeper than 4 ft (shaded), remainder of lake likely to be available for ice chips, based on transects surveyed on Aug 31, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



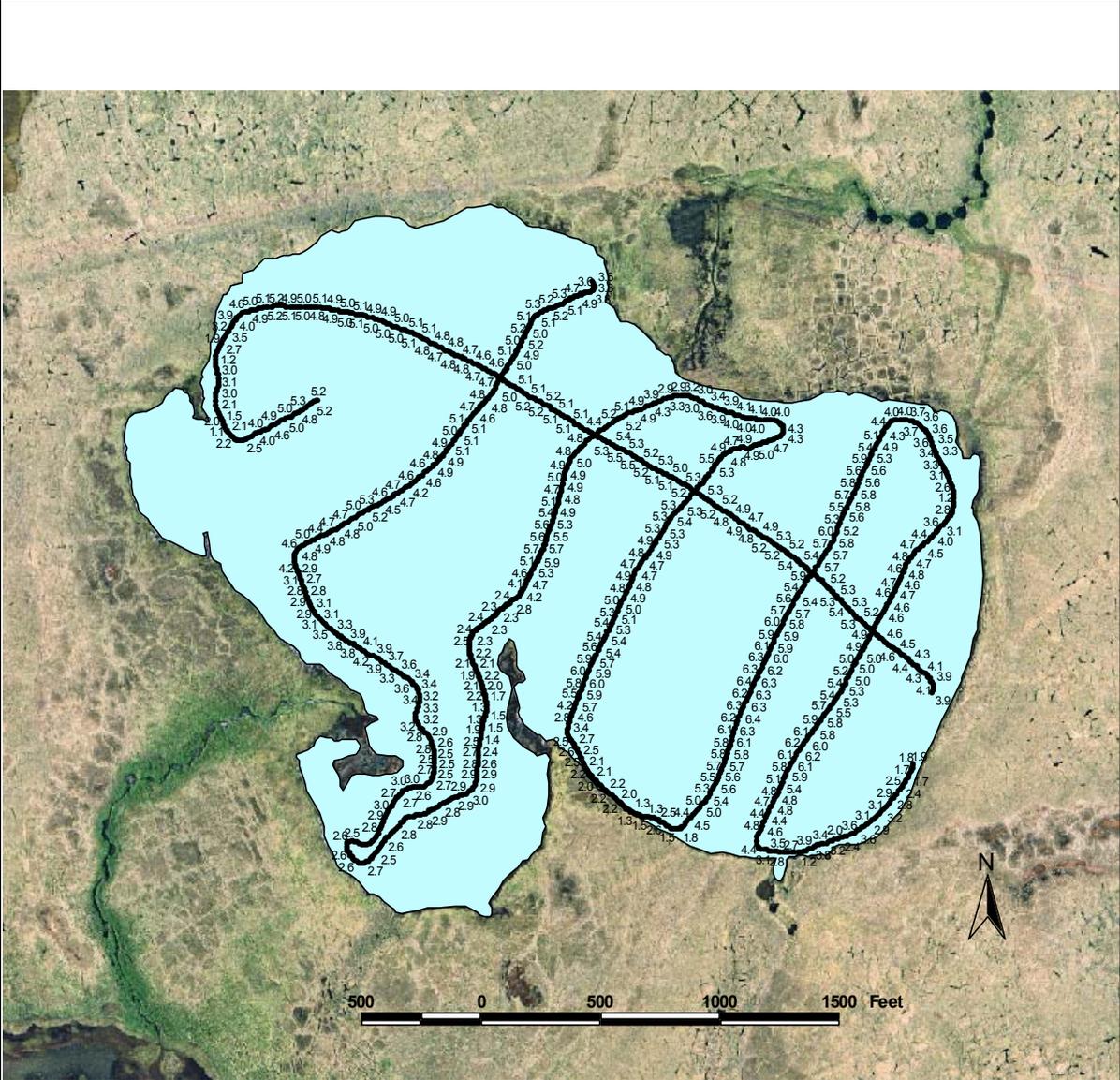
Depth contours of lake M9912, based on transects surveyed on Sep 3, 2002
(contours in 1 foot increments).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Shaded region of lake M9912 deeper than 4 ft (shaded), remainder of lake likely to be available for ice chips, based on transects surveyed on Sep. 3, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Depth transects surveyed on lake M9914, Sep 2, 2002
(depths in feet)



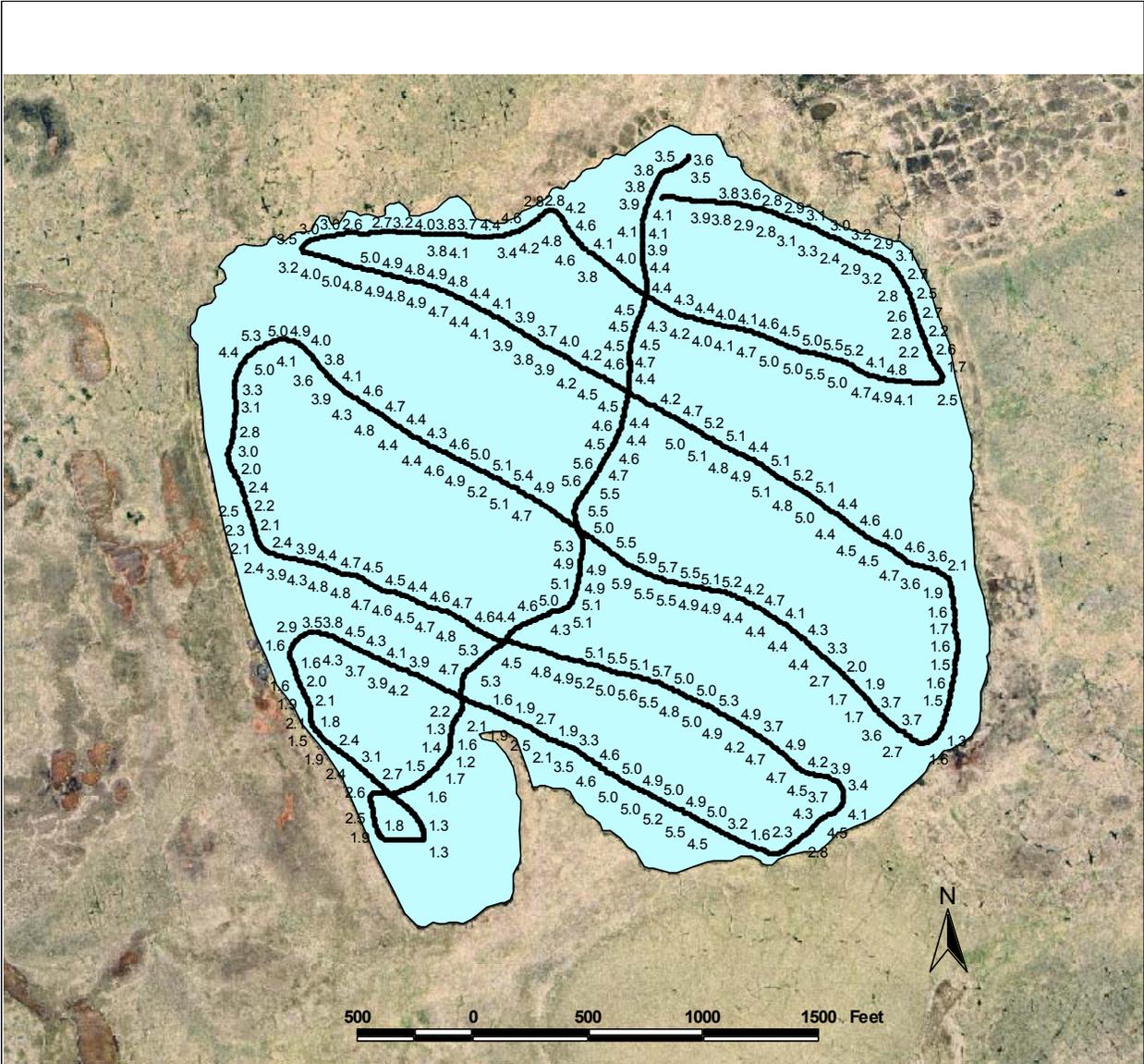
Depth contours of lake M9914, based on transects surveyed on Sep 2, 2002
(contours in 1 foot increments).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Shaded region of lake M9914 deeper than 4 ft (shaded), remainder of lake likely to be available for ice chips, based on transects surveyed on Sep. 2, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.

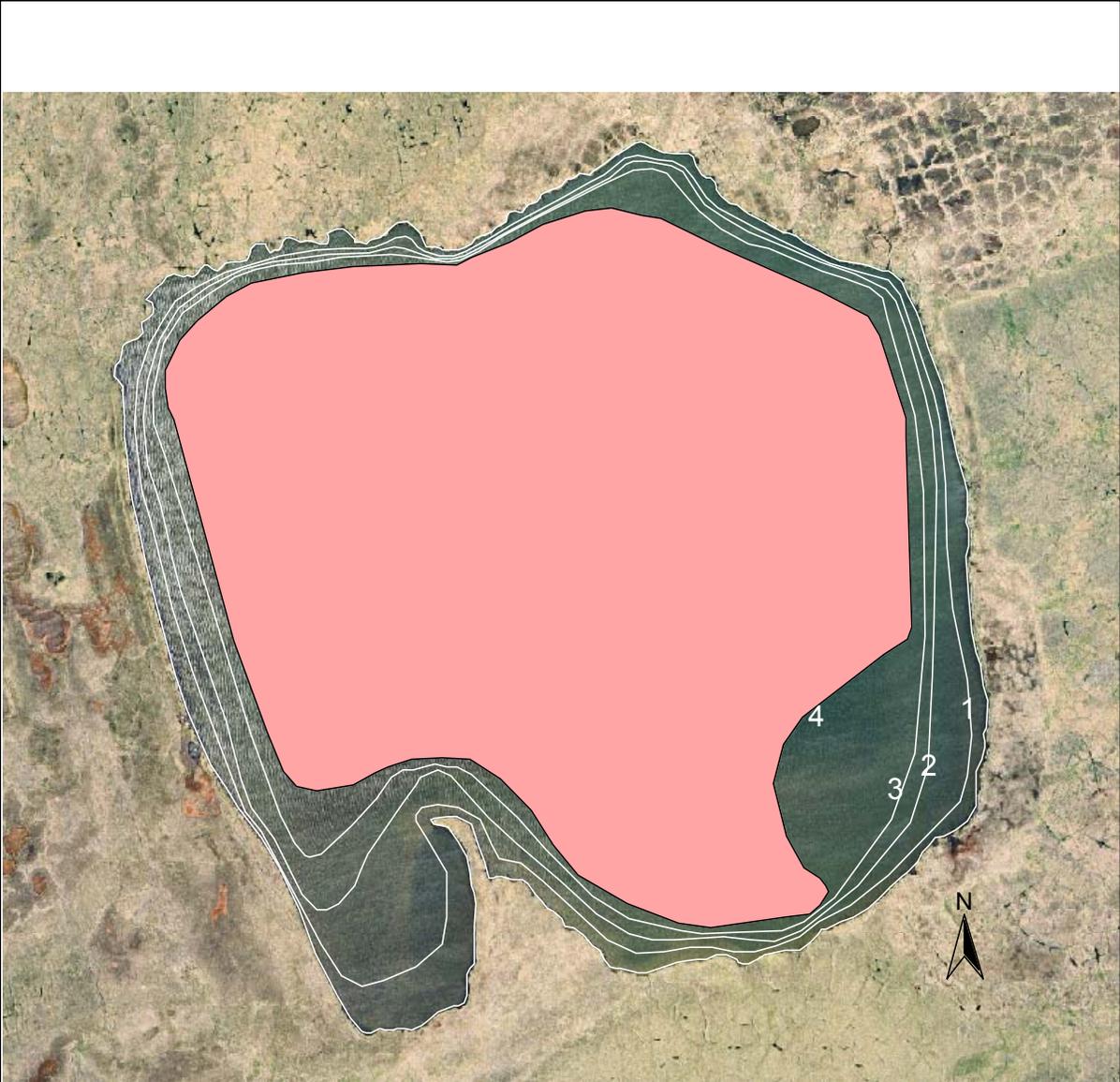


Depth transects surveyed on lake M9922, Sep 2, 2002
(depths in feet)



Depth contours of lake M9922, based on transects surveyed on Sep 2, 2002
(contours in 1 foot increments).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Shaded region of lake M9922 deeper than 4 ft (shaded), remainder of lake likely to be available for ice chips, based on transects surveyed on Sep. 2, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



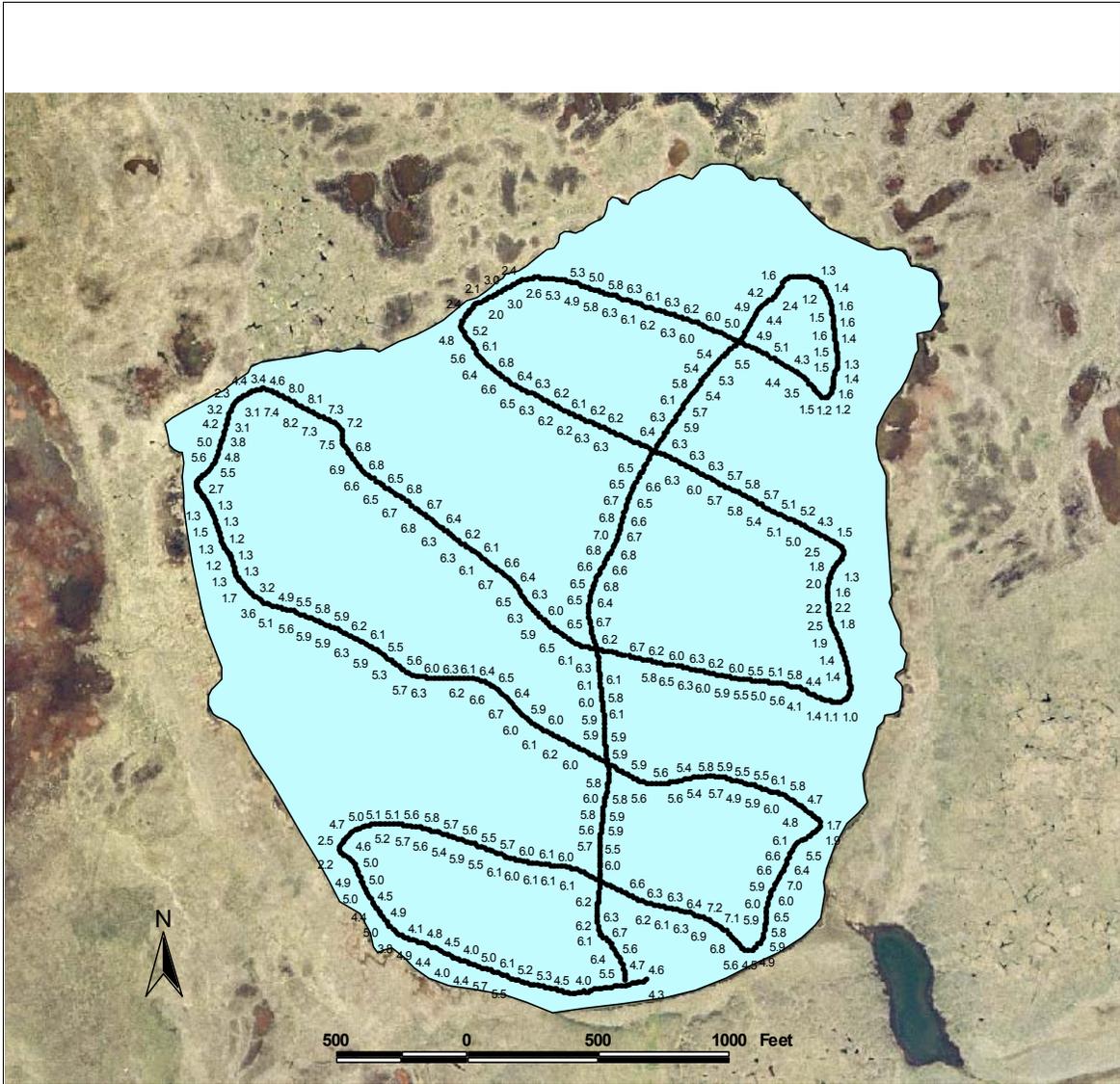
Depth contours of lake M9923, based on transects surveyed on Sep 3, 2002
(contours in 1 foot increments).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Shaded region of lake M9923 deeper than 4 ft (shaded), remainder of lake likely to be available for ice chips, based on transects surveyed on Sep. 3, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Depth transects surveyed on lake M0024, Sep 2, 2002
 (depths in feet)



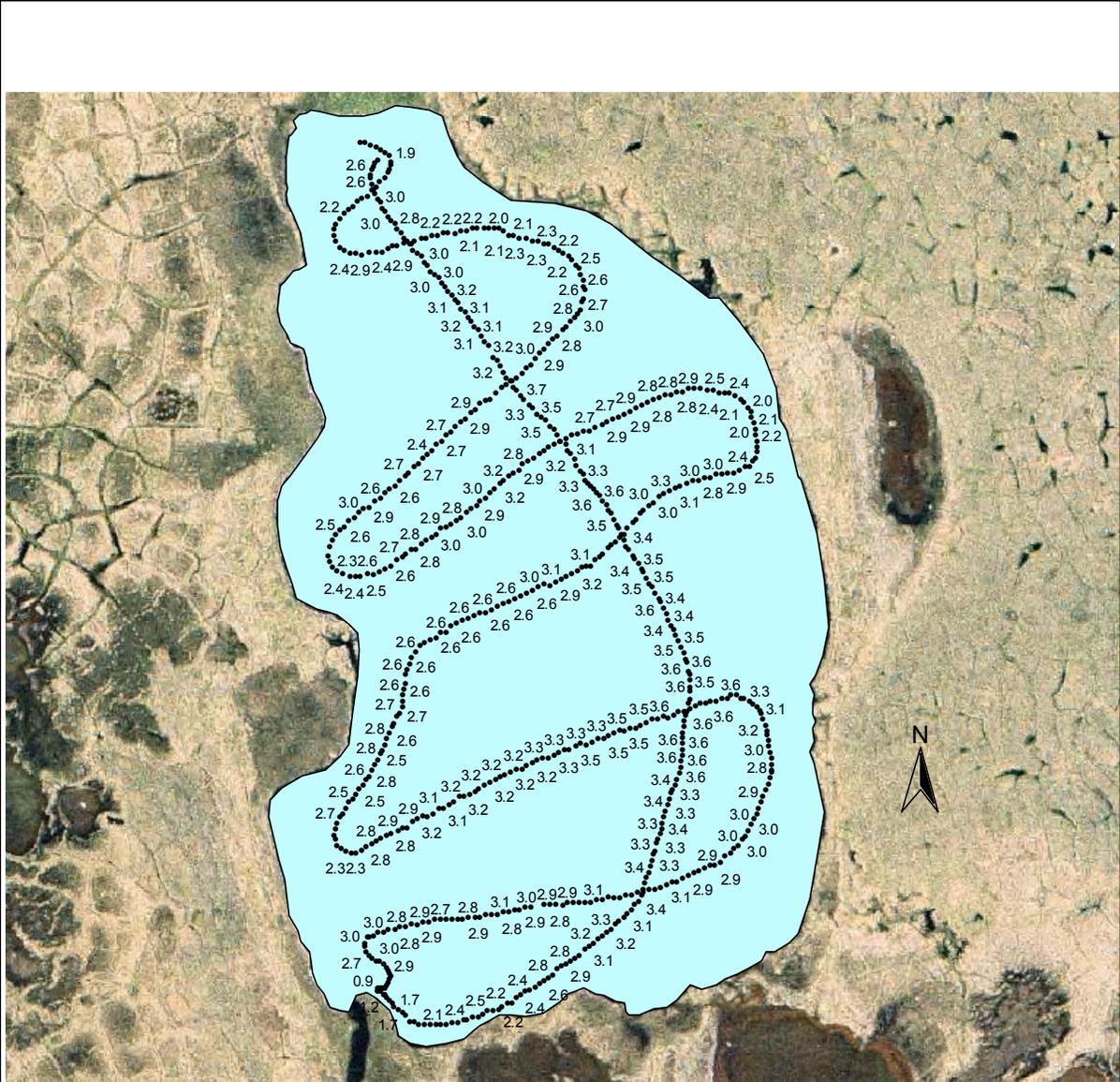
Depth contours of lake M0024, based on transects surveyed on Sep 2, 2002
(contours in 1 foot increments).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Shaded region of lake M0024 deeper than 4 ft (shaded), remainder of lake likely to be available for ice chips, based on transects surveyed on Sep. 2, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



200 0 200 400 Feet

Depth transects surveyed on lake M0201, Sep 5, 2002.
(depths in feet)



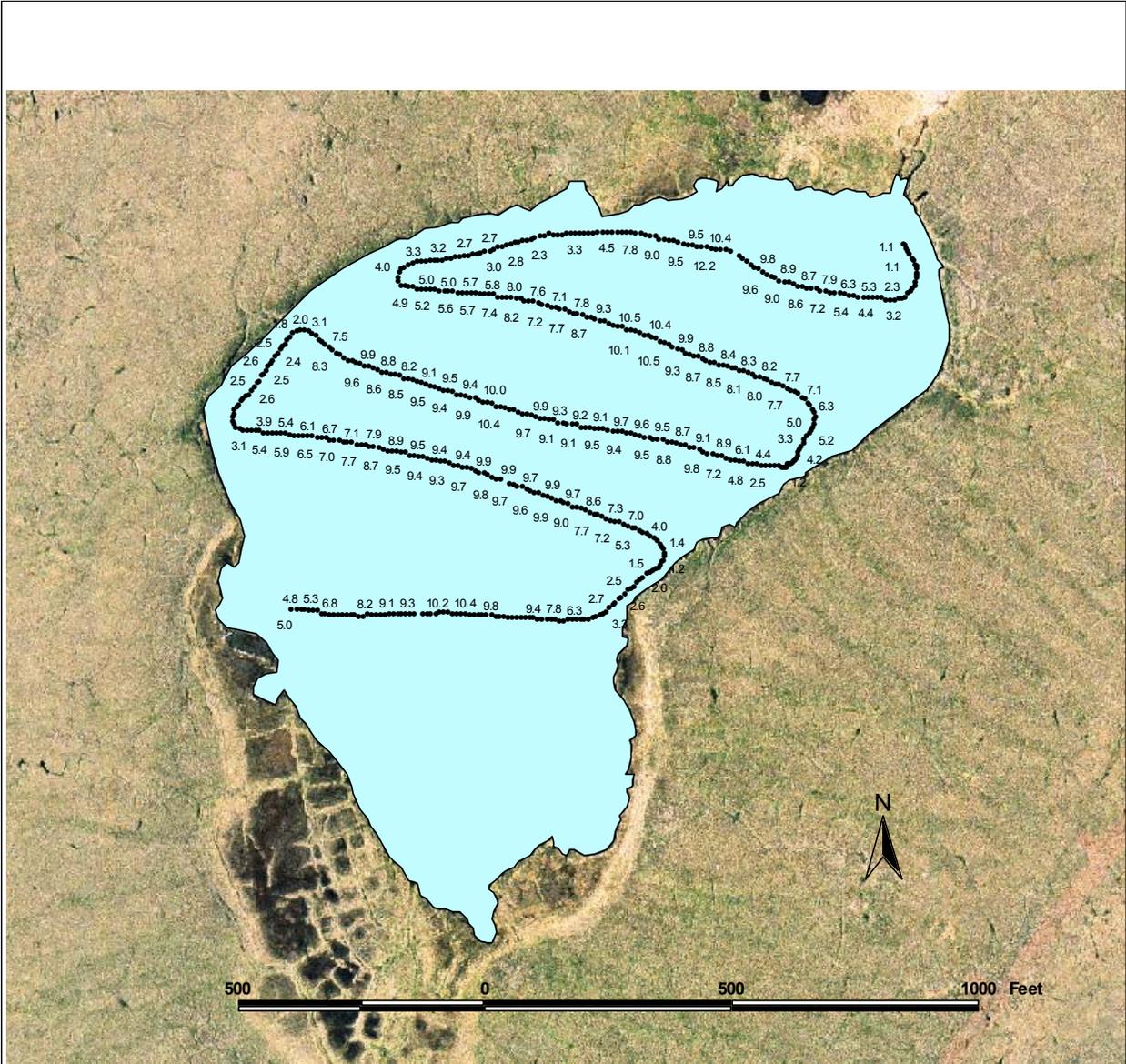
Depth contours of lake M0201, based on transects surveyed on Sep 5, 2002
(depth contours in 1 foot intervals).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.

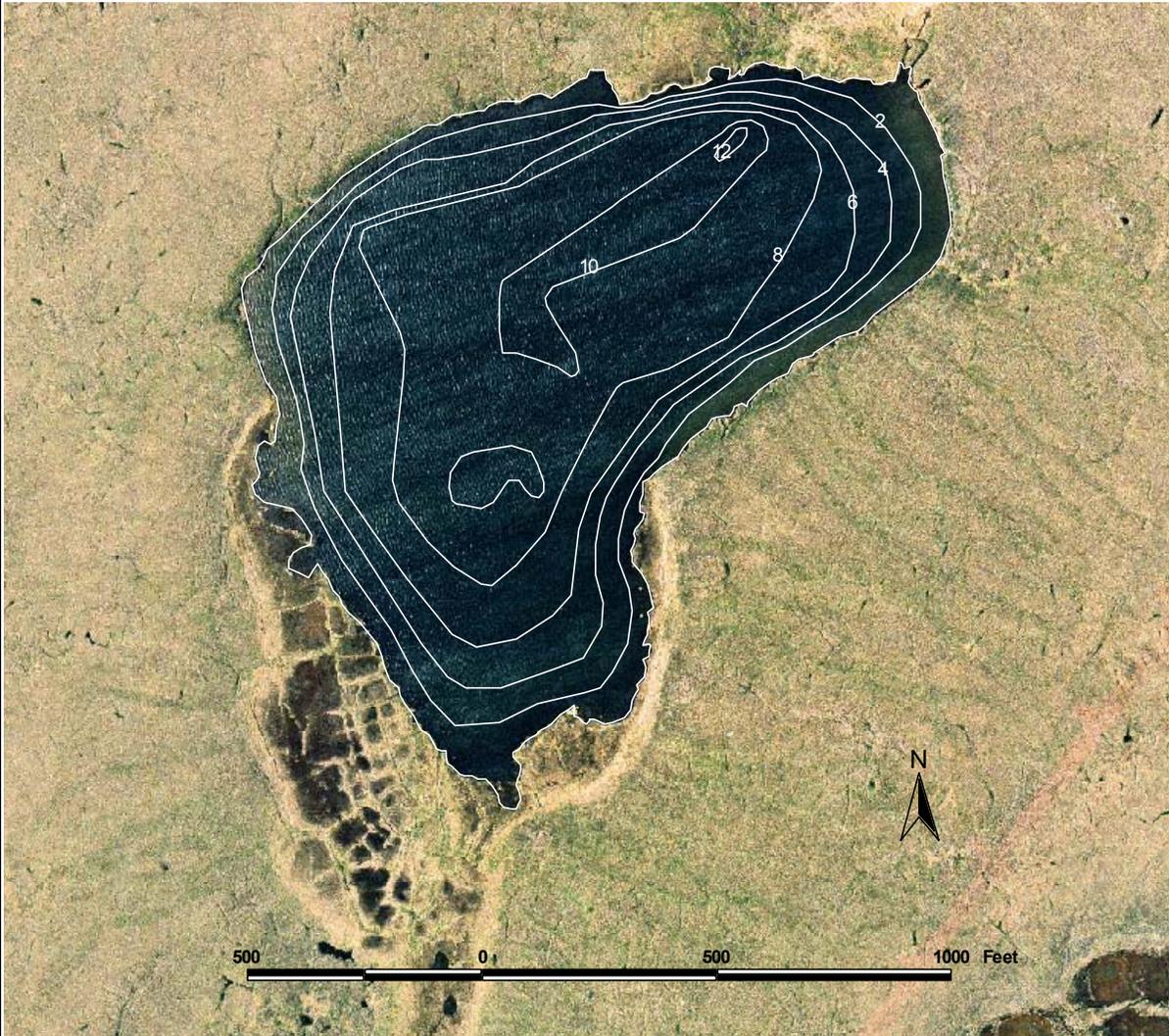


Lake M0201 had a maximum depth of less than 4 ft, thus is likely to be available for ice chips, based on transects surveyed on Sep. 5, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Depth transects surveyed on lake M0254, Sep 5, 2002.
 (depths in feet)



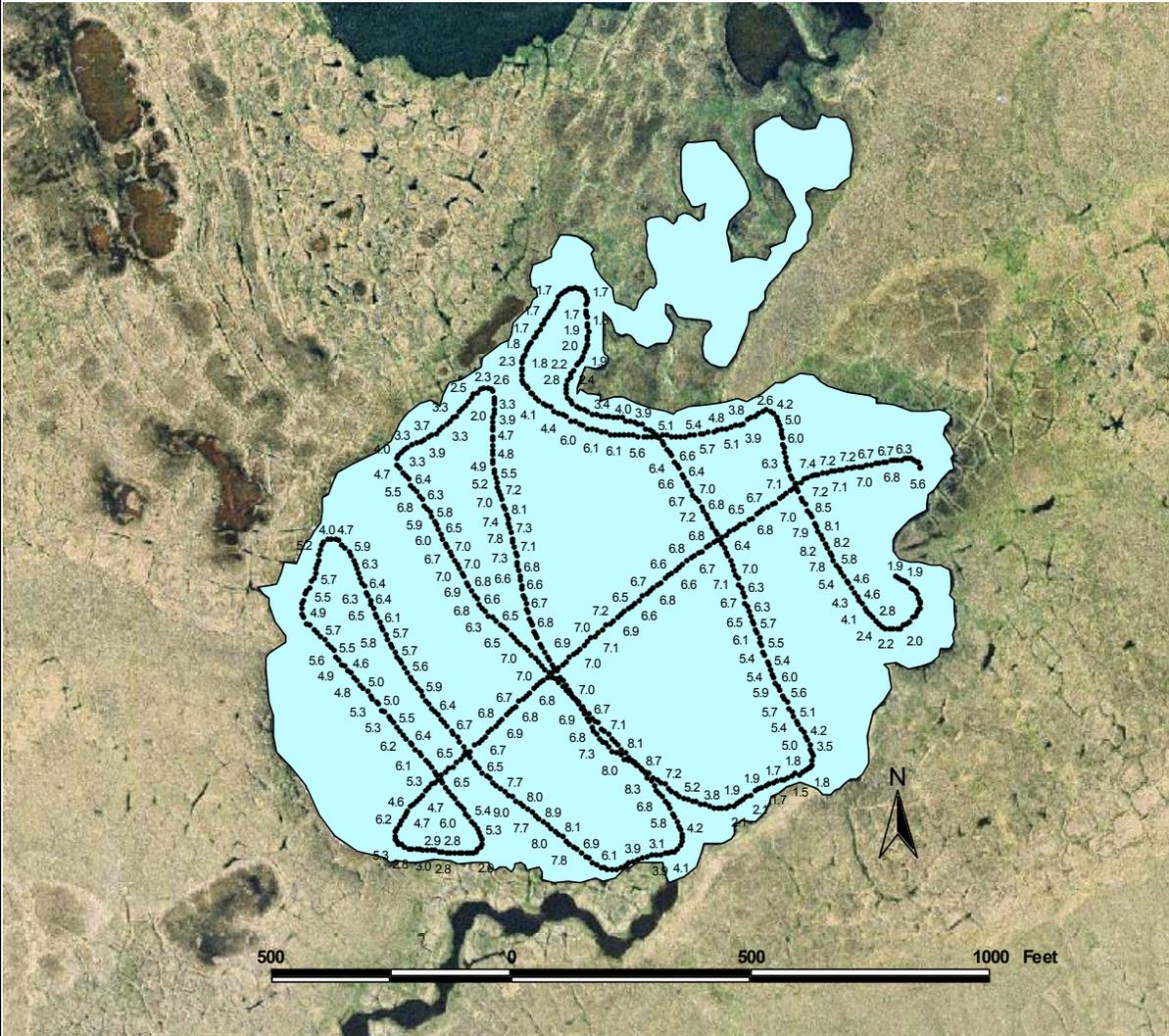
Depth contours of lake M0254, based on transects surveyed on Sep 5, 2002
(contours in 2 foot increments).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.

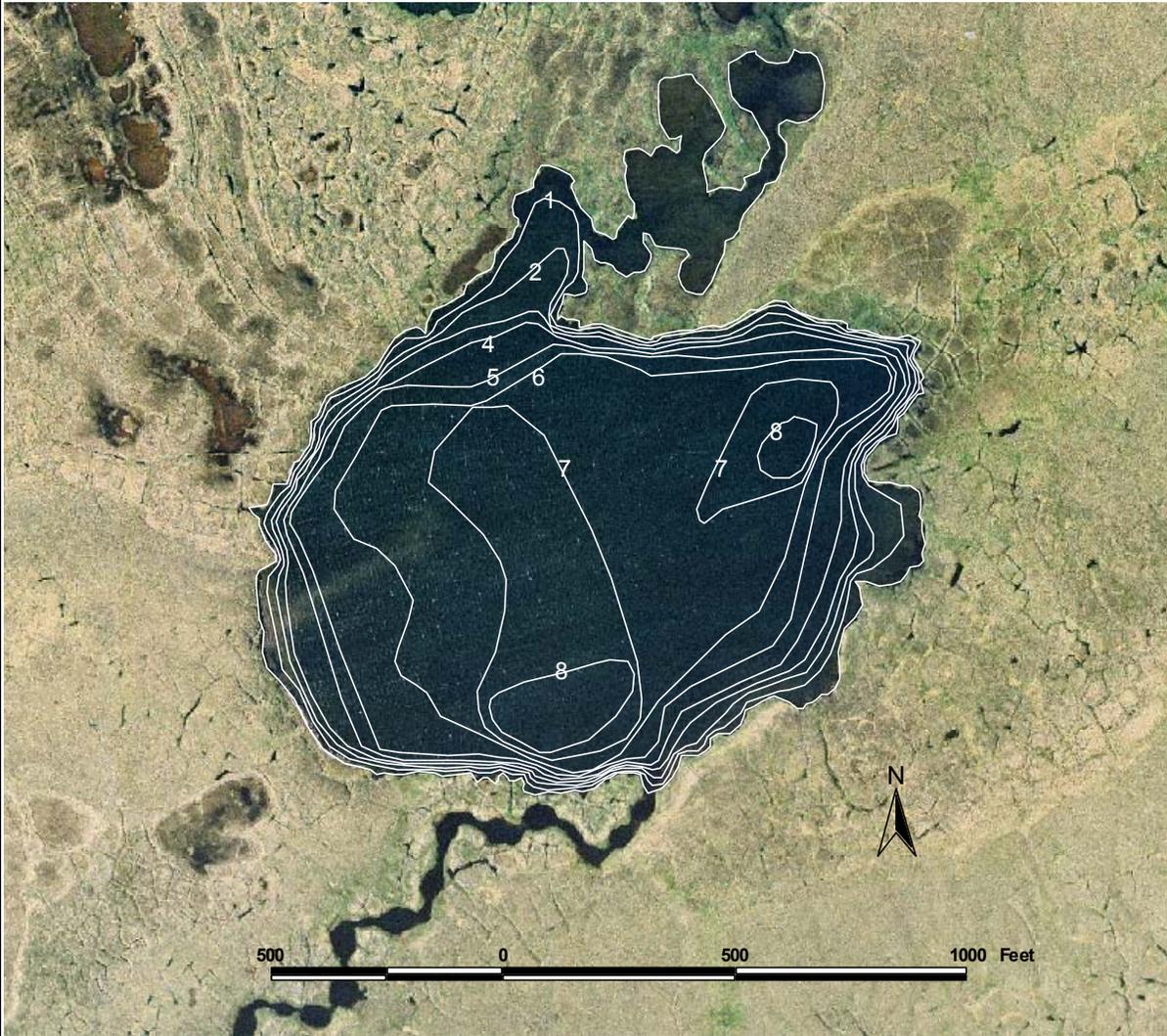


Shaded region of lake M0254 deeper than 4 ft (shaded), remainder of lake likely to be available for ice chips, based on transects surveyed on Sep. 5, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.

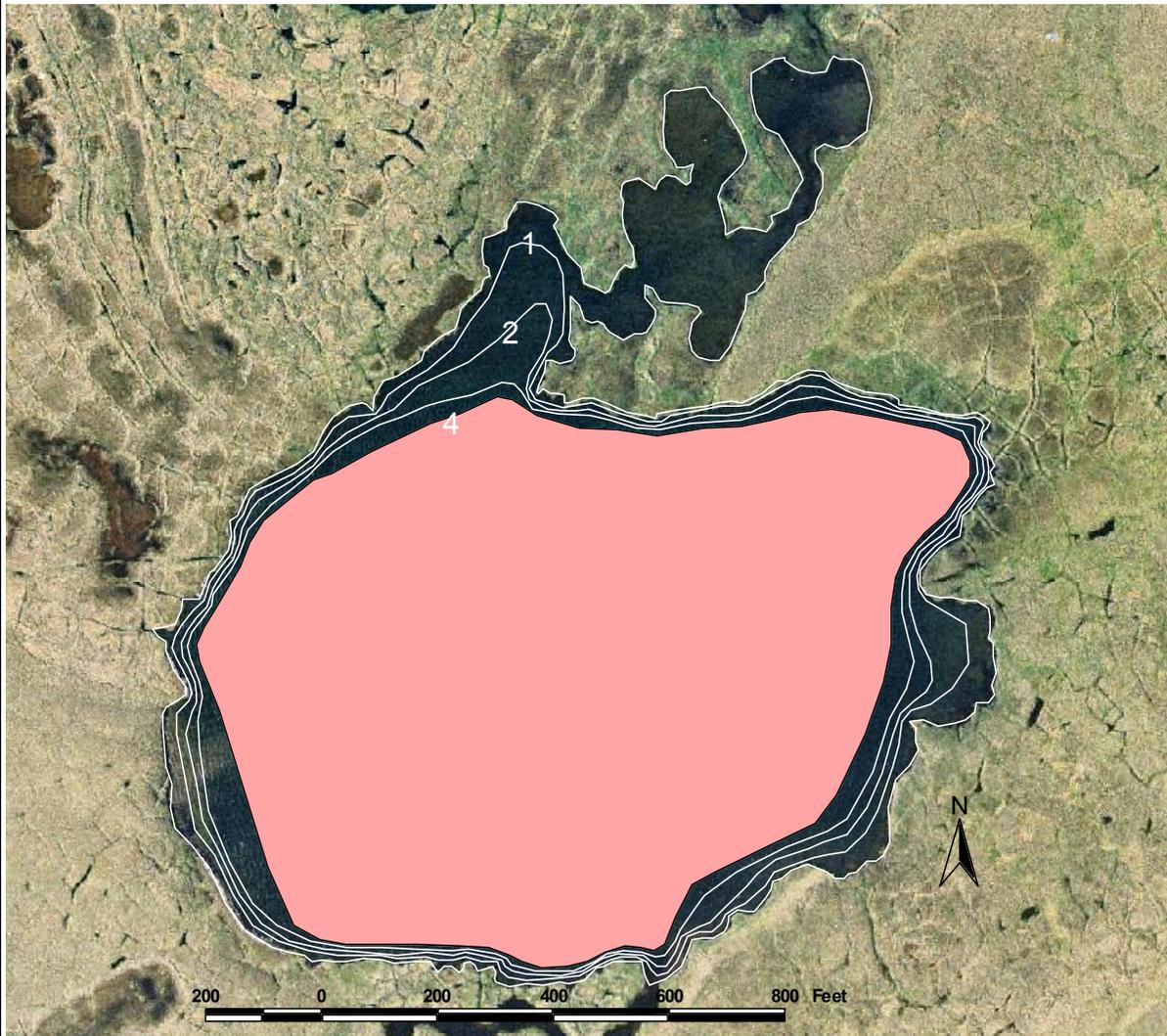


Depth transects surveyed on lake M0256, Sep 5, 2002
(depths in feet)



Depth contours of lake M0256, based on transects surveyed on Sep 5, 2002
(contours in 1 foot increments).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Shaded region of lake M0256 deeper than 4 ft (shaded), remainder of lake likely to be available for ice chips, based on transects surveyed on Sep. 5, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.

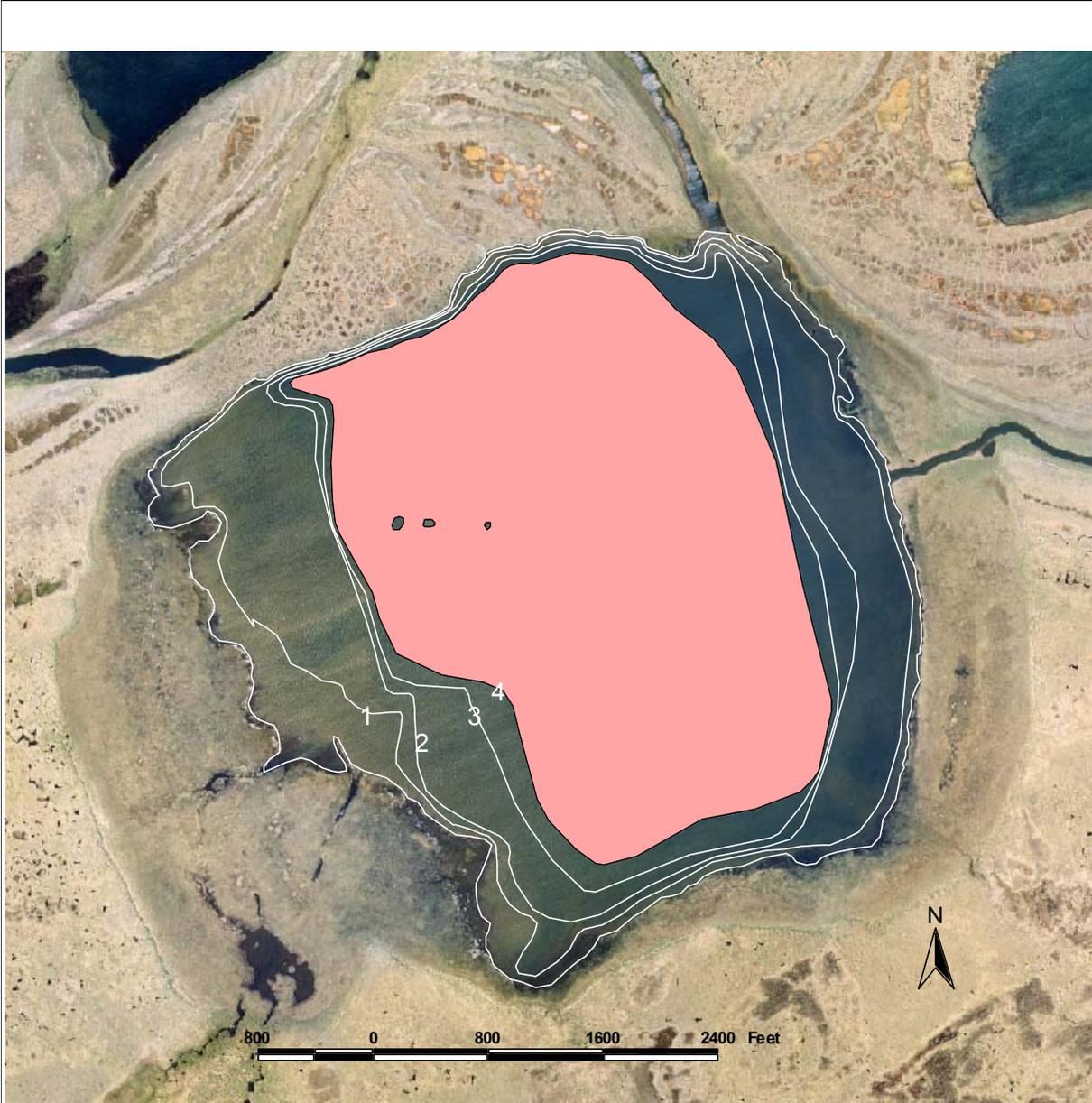


Depth transects surveyed on lake MC7916, Aug 31, 2002
(depths in feet)



Depth contours of lake MC7916, based on transects surveyed on Aug 31, 2002
(contours in 1 foot increments).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



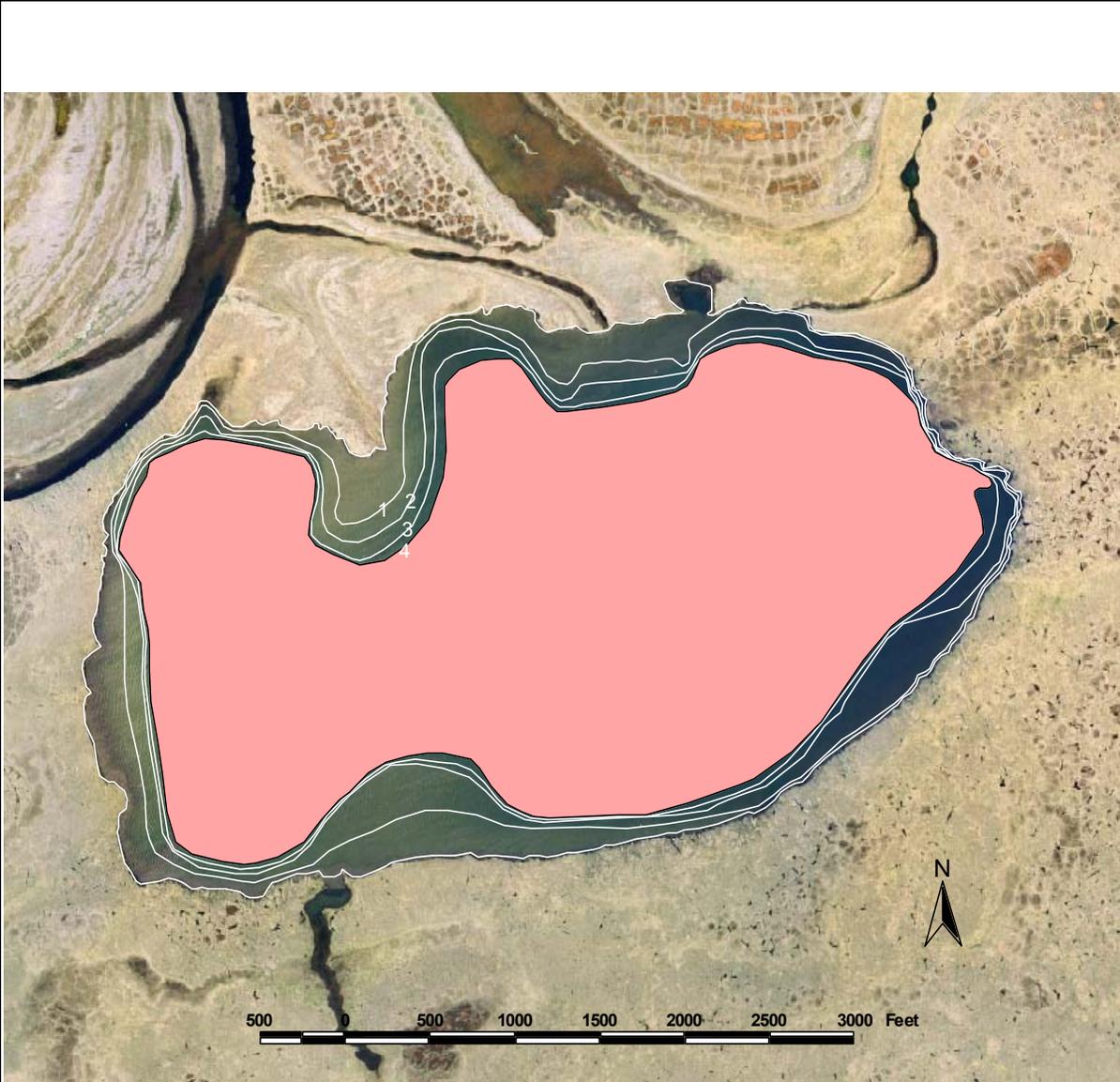
Shaded region of lake MC7916 deeper than 4 ft (shaded), remainder of lake likely to be available for ice chips, based on transects surveyed on Aug 31, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Depth contours of lake MC7917, based on transects surveyed on Sep 1, 2002
(contours in 1 foot increments).

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.



Shaded region of lake MC7917 deeper than 4 ft (shaded), remainder of lake likely to be available for ice chips, based on transects surveyed on Sep. 1, 2002.

Note: depth information is intended to support permitting.
This map should not be used for navigation or operation of heavy equipment.

APPENDIX B
Water chemistry from fyke net stations
in eastern NPR-A during 2001-2002

Appendix Table B-1. Mean daily discharge measurements from selected cross sections in eastern NPR-A, 2001 (data from Dietzman and Aldrich, 2001).

Date	Fish Ck RM 25.1 (cfs)	Judy Ck RM 7.0 (cfs)	Ublutuoch R. RM 13.7 (cfs)
Jun 07	3,214		
Jun 08	4,668	4,076	1,901
Jun 09	5,578	4,403	2,057
Jun 10	5,438	4,718	1,599
Jun 11	6,098	3,826	1,315
Jun 12	5,223	3,450	1,152
Jun 13	4,646	2,850	1,000
Jun 14	5,350	2,355	854
Jun 15	5,905	2,229	759
Jun 16	5,281	1,954	649
Jun 17	4,708	1,730	519
Jun 18	4,669	1,838	518
Jun 19	4,346	1,768	488
Jun 20	3,955	1,427	409
Jun 21	3,562	1,187	351
Jun 22	2,971	889	264
Jun 23	2,707	804	234
Jun 24	2,474	724	206
Jun 25	2,221	644	183
Jun 26	1,967	579	161
Jun 27	1,790	552	154
Jun 28	1,832	526	149
Jun 29	2,071	447	
Jun 30	1,926	403	
Jul 01	1,830	399	
Jul 02	1,725	389	
Jul 03	1,531	335	
Jul 04	1,266	267	
Jul 05	1,296	293	
Jul 06	1,227	283	
Jul 07	1,172	285	
Jul 08	1,038	263	
Jul 09	976	260	
Jul 10	926	263	
Jul 11	826	252	
Jul 12	762	241	
Jul 13		228	
Jul 14		211	
Jul 15		202	
Jul 16	852	196	
Jul 17	750	175	
Jul 18	675	171	35
Jul 19	642	163	48
Jul 20	587	155	36
Jul 21	528	150	32
Jul 22	585	156	33
Jul 23	526	147	30
Jul 24	496	143	31
Jul 25	507	142	32
Jul 26	513	139	30

Date	Fish Ck RM 25.1 (cfs)	Judy Ck RM 7.0 (cfs)	Ublutuoch R. RM 13.7 (cfs)
Jul 27	546	137	29
Jul 28	495	135	28
Jul 29	473	134	28
Jul 30	476	138	27
Jul 31	489	146	29
Aug 01	482	144	28
Aug 02	477	140	28
Aug 03	483	141	28
Aug 04	480	141	29
Aug 05	478	140	28
Aug 06	491	145	30
Aug 07	487	143	30
Aug 08	485	140	30
Aug 09	480	142	31
Aug 10	474	139	30
Aug 11	473	139	31
Aug 12	473	140	32
Aug 13	474	141	34
Aug 14	489	150	50
Aug 15	495	176	73
Aug 16	492	200	74
Aug 17	756	611	82
Aug 18	1,065	631	70
Aug 19	912	470	68
Aug 20	765	397	64
Aug 21	712	361	60
Aug 22	670	288	55
Aug 23	669	244	50
Aug 24	678	233	51
Aug 25	716	237	57
Aug 26	673	213	58
Aug 27	671	158	57
Aug 28	648	113	64
Aug 29	567	135	57
Aug 30	577	127	59
Aug 31	543	149	54
Sep 01	523	161	50
Sep 02	536	176	47
Sep 03	517	150	45
Sep 04	505	140	43
Sep 05	514	137	42
Sep 06	512	162	42
Sep 07	507	135	40
Sep 08	500	141	40

Appendix Table B-2. Water chemistry measured at NPR-A fyke net sampling sites, 2001

Station	Location	Date	Temp (°C)	Dissolved Oxygen		Specific Conductance (microS/cm)	pH	Turbidity (NTU)
				(mg/l)	(%)			
M0142	Tapped Lake off Ublutuoch R	6/21/2001	6.6	10.93	89.6	96.1		
		6/22/2001	5.7	11.73	93.5	96.9	8.07	18.3
		6/23/2001	8.0	11.70	100.1	96.4	7.92	16.8
MC7916A	Tapped Lake off Fish Ck	6/22/2001	7.0	12.50	102.7	124.0	8.00	6.3
		6/23/2001	7.5	12.57	105.1	121.4	7.91	4.9
		6/24/2001	8.0	11.61	98.4	123.4	7.96	4.4
MC7916B	Tapped Lake off Fish Ck	6/24/2001	4.2	12.57	97.3	109.8	7.88	3.3
		6/25/2001	5.6	13.30	106.9	111.4	7.97	4.5
		6/26/2001	5.6	12.21	96.8	113.3	7.97	3.3
		6/27/2001	5.3	12.53	99.5	106.8	7.74	4.8
		6/28/2001	5.5	12.13	96.8	106.6	7.93	4.0
MC7916C	Tapped Lake off Fish Ck	6/25/2001	5.6	12.07	102.0	111.8	7.96	3.0
		6/26/2001	4.9	12.80	100.8	109.7	7.85	5.5
		6/27/2001	5.8	12.28	98.3	110.7	7.83	3.2
		6/28/2001	5.4	12.02	95.6	106.0	7.70	4.0
		7/18/2001	13.2	9.50	90.5	116.7	8.07	3.0
		7/20/2001	14.8	8.40	80.4	126.9	8.00	3.0
		7/21/2001	14.8	9.14	89.2	127.1	8.04	16.2
		7/23/2001	16.6	9.78	98.0	128.8	8.09	17.3
		7/24/2001	13.9	9.00	88.9	129.2	8.04	4.2
		7/25/2001	11.9	9.31	87.2	131.9	8.01	6.5
		7/26/2001	11.7	11.68	112.1	130.6	8.08	4.3
		7/27/2001	13.4	10.38	99.1	130.8	8.00	2.9
		7/28/2001	13.2	9.32	89.6	132.6	8.00	3.5
		7/29/2001	11.0	9.80	93.3	131.6	8.00	3.7
		7/30/2001	9.1	10.24	89.0	132.8	7.94	4.8
		8/25/2001	3.6	12.57	95.4	135.8	7.72	2.6
		8/26/2001	4.0				8.05	2.6
		8/27/2001	4.4	11.96	92.6	151.8	7.85	2.0
		8/28/2001	4.5	12.47	96.8	143.3	7.93	1.8
		8/29/2001	5.0	11.81	92.4	134.8	8.06	3.1
8/30/2001	4.9	12.28	97.7	150.6	8.07	3.2		
8/31/2001	5.2	11.95	94.3	140.6	8.04	1.9		
F1	Fish Ck	6/19/2001	9.1	11.13	97.2	93.6		
		6/20/2001	9.2	10.47	91.3	92.5	7.90	23.2
		6/21/2001	7.4	11.14	92.9	92.6	8.04	23.2
		6/22/2001	7.8	11.81	99.4	92.5	8.06	20.2
		6/23/2001	10.2	11.53	103.1	95.1	8.06	20.1
		6/24/2001	11.8	10.35	96.1	98.4	8.05	18.6

Appendix Table B-2. Water chemistry measured at NPR-A fyke net sampling sites, 2001

Station	Location	Date	Temp (°C)	Dissolved Oxygen		Specific Conductance (microS/cm)	pH	Turbidity (NTU)		
				(mg/l)	(%)					
F1A	Fish Ck	6/25/2001	14.5	11.44	111.5	105.3	8.10	12.7		
		6/26/2001	11.8	11.05	102.8	106.2	8.02	11.6		
		6/27/2001	14.7	10.25	101.9	109.4	8.10	10.4		
		6/28/2001	9.6	11.02	97.1	109.2	8.12	12.0		
F2	Fish Ck	7/18/2001	15.6	8.76	88.0	124.6	8.19	5.8		
		7/19/2001	15.2	NS	NS	125.2	8.06	8.5		
		7/20/2001	15.1	8.65	85.5	125.0	8.09	5.3		
F2A	Fish Ck	7/21/2001	15.7	9.19	93.7	127.0	8.21	6.4		
		7/23/2001	17.0	8.95	94.4	137.3	8.16	8.9		
		7/24/2001	13.5	8.81	87.7	138.5	7.95	3.6		
		7/25/2001	11.4	10.11	92.2	139.3	8.16	5.2		
		7/26/2001	11.3	10.52	96.6	139.9	8.10	2.8		
		7/27/2001	12.5	10.39	97.3	140.3	8.05	5.0		
		7/28/2001	12.6	10.42	98.5	140.6	8.08	4.1		
		7/29/2001					8.13	5.1		
		7/30/2001	7.6	10.57	91.1	142.6	7.99	5.0		
		8/25/2001	3.6	12.51	94.7	138.5	7.76	5.8		
		8/26/2001	4.5				7.98	5.0		
		8/27/2001	4.8	12.82	99.3	139.0	7.85	4.0		
		8/28/2001	5.8	12.16	96.6	137.7	7.96	3.2		
		8/29/2001	5.5	10.81	86.5	139.9	7.90	4.0		
		8/31/2001	5.9	11.01	88.4	140.4	7.92	3.3		
		9/1/2001	5.5	10.82	85.8	139.3	7.87	3.8		
		9/2/2001	5.2	11.62	91.6	139.3	7.96	3.5		
		F3	Fish Ck	7/18/2001	15.8	8.40	86.0	117.7	8.16	7.2
				7/19/2001	15.4	NS	NS	117.4	8.09	6.5
7/20/2001	15.0			8.00	81.7	118.4	8.10	7.4		
7/21/2001	15.7			9.26	93.7	127.3	8.11	6.2		
7/23/2001	16.5			8.75	89.8	129.8	8.18	8.6		
7/24/2001	13.4			9.00	86.1	130.8	7.99	7.1		
7/25/2001	11.5			9.64	89.1	131.8	8.13	4.8		
7/26/2001	11.4			9.85	92.7	131.8	8.14	4.6		
7/27/2001	13.0			10.58	98.4	131.9	8.05	4.3		
7/28/2001	13.3			10.18	95.6	132.9	8.08	4.5		
7/29/2001	9.3			10.75	94.1	133.3	8.08	4.1		
7/30/2001	7.3			11.04	93.9	134.6	8.08	13.2		
8/25/2001	3.9			12.88	97.5	129.7	7.67	4.0		
8/26/2001	4.5						7.95	3.3		
8/27/2001	5.1			12.61	98.7	129.1	7.83	5.4		
8/28/2001	6.7			11.92	97.3	128.5	7.98	3.1		

Appendix Table B-2. Water chemistry measured at NPR-A fyke net sampling sites, 2001

Station	Location	Date	Temp (°C)	Dissolved Oxygen		Specific Conductance (microS/cm)	pH	Turbidity (NTU)
				(mg/l)	(%)			
F3	Fish Ck	8/29/2001	5.5	10.98	87.3	129.4	8.01	3.4
		8/30/2001	6.5	10.01	82.0	130.2	7.97	3.2
		8/31/2001	5.9	11.90	95.5	128.8		4.0
		9/1/2001	5.5	11.58	91.6	128.1	7.98	3.6
		9/2/2001	5.1	11.02	86.6	129.7	7.85	3.4
F4	Fish Ck	6/19/2001	9.2	11.72	102.1	82.6		
		6/20/2001	8.8	11.11	96.0	83.8	8.03	18.2
		6/21/2001	7.5	11.47	96.1	85.0	8.02	17.0
		6/22/2001	8.9	12.11	105.1	89.2	8.06	15.2
		6/23/2001	12.1	11.60	108.8	91.0	8.00	13.2
		6/24/2001	12.9	11.54	109.5	95.2	8.03	14.8
		6/25/2001	12.5	11.12	105.0	99.7	8.02	13.3
		6/26/2001	10.8	10.64	96.7	106.3	8.14	10.2
		6/27/2001	10.9	11.12	101.1	112.2	8.10	9.2
		6/28/2001	10.2	10.87	96.3	105.7	8.10	8.7
J3	Judy Ck	6/19/2001	9.5	10.46	91.8	98.4		
		6/20/2001	9.2	10.60	92.5	98.2	7.91	23.2
		6/21/2001	7.8	11.22	94.6	97.7	8.00	18.1
		6/22/2001	8.2	11.63	99.1	96.4	8.05	15.3
		6/23/2001	11.3	11.64	106.8	102.8	8.05	15.2
		6/24/2001	13.2	10.27	98.4	105.5	7.61	0.8
		7/19/2001	14.6	NS	NS	145.8	8.14	6.0
		7/20/2001	15.2	8.24	84.3	146.6	8.13	3.1
		7/21/2001	15.9	9.75	99.6	158.7	8.10	3.1
		7/23/2001	17.6	8.49	88.2	162.3	8.25	5.1
		7/24/2001	13.1	9.47	87.3	162.3	8.02	4.8
		7/25/2001	11.6	10.24	94.2	163.3	8.12	2.7
		7/26/2001	12.0	10.41	97.4	166.6	8.22	2.8
		7/27/2001	13.9	10.13	98.2	169.4	8.13	2.9
		7/28/2001	13.3	10.44	99.8	169.1	8.14	5.2
		7/29/2001	9.0	10.48	90.5	170.2	8.16	4.0
		7/30/2001	7.3	11.08	96.2	171.9	8.07	2.7
		8/25/2001	4.1	12.63	97.3	153.1	7.81	6.6
		8/26/2001	5.0				7.95	5.5
		8/27/2001	5.9	12.79	102.8	155.4	7.85	4.5
		8/28/2001	7.3	11.94	99.0	157.6	8.00	4.3
		8/29/2001	5.7	10.97	87.6	159.5	8.00	4.1
		8/30/2001	7.9	12.44	106.4	160.7	7.99	3.8
		8/31/2001	6.3	11.15	90.4	162.1	7.95	3.7
		9/1/2001	5.5	10.71	84.9	162.2	7.90	4.0
9/2/2001	5.0	11.62	91.1	164.7	7.99	3.5		

Appendix Table B-2. Water chemistry measured at NPR-A fyke net sampling sites, 2001

Station	Location	Date	Temp (°C)	Dissolved Oxygen		Specific Conductance (microS/cm)	pH	Turbidity (NTU)		
				(mg/l)	(%)					
J3A	Judy Ck	6/25/2001	13.0	9.85	93.7	108.2	7.67	1.3		
		6/26/2001	11.1	9.81	89.6	111.5	7.66	1.0		
		6/27/2001	11.4	10.16	93.2	114.6	7.57	1.5		
		6/28/2001	11.1	10.37	94.0	116.5	7.68	2.9		
U1	Ublutuoch R	6/19/2001	9.7	10.55	93.0	82.2				
		6/20/2001	9.1	9.98	86.8	81.4	7.55	1.3		
		6/21/2001	7.5	10.50	88.0	80.5	7.63	1.7		
		6/22/2001	8.9	11.13	96.2	78.1	7.76	1.3		
		6/23/2001	10.9	11.00	99.7	78.3	7.77	1.5		
		6/24/2001	12.3	10.24	96.3	79.7	7.62	1.4		
		6/25/2001	12.5	9.79	92.3	80.1	7.74	1.3		
		6/26/2001	11.8	9.87	91.4	81.6	7.74	1.1		
		6/27/2001	12.2	10.00	93.7	83.1	7.67	1.1		
		6/28/2001	11.9	10.45	96.9	85.4	7.74	1.1		
U2	Ublutuoch R	7/19/2001	15.9	NS	NS	93.4	7.93	1.0		
		7/20/2001	15.4	8.33	81.2	94.9	7.87	0.8		
		7/21/2001	16.5	9.05	94.4	101.4	7.99	1.5		
		7/23/2001	18.0	10.11	105.8	104.2	7.96	1.0		
		7/24/2001	14.6	8.94	88.0	105.3	7.84	0.8		
		7/25/2001	12.4	9.42	87.9	105.9	7.87	1.0		
		7/26/2001	12.9	10.01	94.3	105.6	7.97	1.4		
		7/27/2001	13.6	10.71	103.2	106.4	7.83	1.2		
		7/28/2001	13.0	10.17	96.7	106.8	7.81	1.1		
		7/29/2001	10.2	9.26	83.4	108.0	7.82	1.4		
		7/30/2001	8.8	10.51	90.3	109.3	7.84	1.4		
				8/25/2001	4.0	12.38	94.8	120.9	7.44	1.6
				8/26/2001	5.8				7.74	1.2
				8/27/2001	5.7	12.29	98.2	117.4	7.63	1.1
				8/28/2001	5.2	12.39	98.4	115.5	7.66	1.3
				8/29/2001	6.0	11.51	93.3	114.3	7.73	1.4
				8/30/2001	5.4	11.23	89.2	115.4	7.93	1.6
				8/31/2001	6.1	10.55	85.5	115.2	7.74	1.1
				9/1/2001	5.8	10.90	87.0	115.0	7.77	1.2
		9/2/2001	5.6	11.69	93.2	115.8	7.64	1.5		

Appendix Table B-3. Water chemistry measured at NPR-A fyke net sampling sites, 2002

Station	Location	Date	Temp (°C)	Dissolved Oxygen		Specific Conductance (microS/cm)	pH	Turbidity (NTU)
				(mg/l)	(%)			
CK16A	Beaded stream off Fish Creek	6/20/2002	6.6	9.67	78.9	103.8	7.79	1.4
		6/21/2002	4.8	11.16	87.4	103.7	7.75	0.7
		6/22/2002	6.4	11.20	91.1	103.1	7.22	0.5
		6/23/2002	4.7	10.99	86.0	100.1	7.09	0.5
		6/24/2002	7.2	11.56	96.1	101.1	7.13	0.6
		6/25/2002	9.5	10.12	89.2	102.2	7.34	0.4
		6/26/2002	12.7	9.83	93.0	103.8	7.60	0.4
		6/27/2002	8.2	10.15	86.3	102.0	7.33	0.5
		7/20/2002	16.6			125.4	7.42	1.3
		7/21/2002	16.4	9.52	97.5	119.7	7.37	1.3
		7/22/2002	14.9	8.15	80.8	121.2	7.37	1.4
		7/23/2002	11.3	9.96	91.3	122.8	7.21	1.5
		7/24/2002	11.1	10.29	94.0	122.8	7.38	1.6
		7/25/2002	9.0	9.81	85.2	122.5	7.39	1.6
		7/26/2002	8.2	11.01	93.7	122.1	7.47	1.8
7/27/2002	8.1	11.12	94.2	121.5	7.49	1.3		
CK16B	Beaded stream off Fish Creek	6/20/2002	7.1	10.48	88.5	102.9	7.77	1.4
		6/21/2002	5.9	11.58	93.3	102.5	7.71	0.5
		6/22/2002	6.8	11.34	92.6	104.4	7.39	0.5
		6/23/2002	5.3	11.22	89.5	102.6	7.22	0.5
		6/24/2002	7.9	9.92	98.9	98.4	7.22	0.5
		6/25/2002	10.1	10.84	96.4	92.1	7.41	0.4
		6/26/2002	13.5	9.73	93.6	96.2	7.45	0.4
		6/27/2002	9.8	9.86	87.1	99.3	7.39	0.5
		7/20/2002	19.3			133.2		
		7/21/2002	18.7	9.66	98.5	128.3	7.40	1.3
		7/22/2002	16.2	8.27	80.2	131.3	7.38	1.4
		7/23/2002	12.8	9.81	93.2	133.0	7.26	1.5
		7/24/2002	12.0	10.42	97.6	134.5	7.34	1.8
		7/25/2002	9.7	10.12	89.7	134.8	7.42	1.6
		7/26/2002	9.0	11.33	98.2	135.7	7.46	1.8
7/27/2002	8.9	11.72	101.3	136.3	7.47	1.6		
CK17A	Beaded stream off Fish Creek	6/20/2002	6.7	11.40	93.4	92.4	7.34	0.6
		6/21/2002	4.7	11.42	89.3	92.1	7.85	0.8
		6/22/2002	6.2	11.29	91.3	91.5	7.36	0.9
		6/23/2002	4.5	11.23	87.1	90.0	7.18	0.5
		6/24/2002	6.1	12.24	98.9	89.1	7.32	0.5
		6/25/2002	8.7	11.44	98.6	91.0	7.36	0.5
		6/26/2002	11.9	9.53	88.0	93.9	7.26	0.5
		6/27/2002	7.6	10.23	85.5	92.8	7.37	0.6
		7/20/2002	16.4	9.31	95.1	124.9		
		7/21/2002	16.0	9.03	91.3	118.0	7.38	1.4
7/22/2002	16.0	8.71	88.4	119.7	7.39	1.2		

Appendix Table B-3. Water chemistry measured at NPR-A fyke net sampling sites, 2002

Station	Location	Date	Temp (°C)	Dissolved Oxygen		Specific Conductance (microS/cm)	pH	Turbidity (NTU)
				(mg/l)	(%)			
CK17A	Beaded stream off Fish Creek	7/23/2002	11.5	9.49	88.2	120.8	7.23	1.7
		7/24/2002	11.2	10.58	96.7	119.8	7.37	1.2
		7/25/2002	9.1	10.29	89.0	119.3	7.40	1.3
		7/26/2002	8.1	11.49	97.4	118.7	7.46	1.7
		7/27/2002	8.1	11.84	100.0	116.8	7.50	1.1
		7/28/2002	8.3	11.64	99.2	106.1	7.64	1.0
CK17B	Beaded stream off Fish Creek	6/24/2002	6.9	11.21	92.6	84.5	7.16	0.5
		6/25/2002	8.6	10.18	88.2	85.3	7.11	0.8
		6/26/2002	11.3	7.99	73.1	88.9	7.70	1.0
		6/27/2002	7.0	9.56	79.0	88.5	7.25	0.6
		7/20/2002	16.3	9.06	92.7	117.7	7.48	1.5
		7/21/2002	14.6	8.56	85.6	111.6	7.40	1.3
		7/22/2002	14.4	7.74	78.8	113.2	7.40	1.6
		7/23/2002	10.3	9.16	81.6	113.7	7.24	1.7
		7/24/2002	11.0	10.29	94.1	113.2	7.39	1.7
		7/25/2002	8.1	10.18	85.8	111.2	7.41	1.6
		7/26/2002	7.5	11.06	92.7	109.6	7.42	1.7
		7/27/2002	6.8	10.44	86.1	108.5	7.46	1.4
		7/28/2002	6.8	10.67	87.5	106.6	7.70	1.3
U2	Ublutuoch R.	6/20/2002	9.2	10.33	89.8	90.5	8.31	3.5
		6/21/2002	8.3	11.23	95.6	92.4	7.72	1.1
		6/22/2002	8.1	11.17	96.4	92.5	7.54	1.0
		6/23/2002	7.0	11.40	94.0	93.3	7.48	0.9
		6/24/2002	8.6	11.72	100.4	95.6	7.43	1.1
		6/25/2002	10.3	10.31	92.1	94.7	7.52	0.9
		6/26/2002	12.7	9.91	93.6	92.5	7.64	0.9
		6/27/2002	10.5	10.09	90.7	91.6	7.58	1.0
		7/20/2002	20.1			108.8	7.65	1.3
		7/21/2002	17.1	9.13	94.7	102.5	7.45	1.3
		7/22/2002	17.0	8.52	88.0	103.9	7.40	1.3
		7/23/2002	13.9	9.68	93.8	104.2	7.30	1.3
		7/24/2002	13.7	10.31	99.6	106.5	7.39	2.4
		7/25/2002	10.9	9.98	90.3	107.9	7.46	1.4
		7/26/2002	10.4	11.02	98.5	110.1	7.51	1.5
		7/27/2002	10.6	11.30	101.7	111.6	7.52	1.4
		7/28/2002	10.4	11.82	105.7	112.7	7.75	1.4
		7/29/2002	11.4	11.37	103.9	113.2	8.09	1.4
		7/30/2002	14.2			113.8	8.28	1.3
		7/31/2002	12.7	11.31	106.2	121.2	8.12	1.4
8/1/2002	13.6	10.37	98.9	121.3	8.10	1.9		
8/2/2002	15.7	9.28	93.4	121.1	8.19	1.3		
8/3/2002	16.5	9.52	97.4	122.3	8.20	1.3		
8/4/2002	16.3	9.60	98.4	123.4	8.09	1.4		

Appendix Table B-3. Water chemistry measured at NPR-A fyke net sampling sites, 2002

Station	Location	Date	Temp (°C)	Dissolved Oxygen		Specific Conductance (microS/cm)	pH	Turbidity (NTU)
				(mg/l)	(%)			
U2	Ublutuoch R.	8/5/2002	10.8	10.25	92.5	123.8	7.98	1.1
		8/6/2002	8.1	10.98	92.9	123.6	7.97	1.1
L9807	Tundra Lake	7/30/2002	12.5			136.8	8.26	1.2
		7/31/2002	12.3	10.93	103.3	144.9	8.13	1.3
		8/1/2002	13.2	10.38	97.3	152.3	8.14	1.0
		8/2/2002	14.9	9.32	93.0	151.7	8.16	1.3
		8/3/2002	16.0	9.05	91.8	151.9	8.20	1.7
L9817	Tundra Lake	7/30/2002	12.5			222.0	8.21	1.3
		7/31/2002	12.1	11.27	104.8	236.5	8.10	1.2
		8/1/2002	12.7	10.26	95.5	238.2	8.25	1.3
		8/2/2002	15.2	9.43	94.3	238.6	8.15	1.2
		8/3/2002	15.9	9.72	98.8	240.6	8.26	1.3
		8/4/2002	15.2	9.84	98.1	243.9	8.04	1.5
M0024	Tundra Lake	7/29/2002	9.4	11.32	98.9	104.3	7.92	0.8
		7/30/2002	11.5	11.13	102.5	105.4	8.12	1.0
		7/31/2002	11.2	10.90	99.9	112.5	7.93	0.9
		8/1/2002	12.8	10.81	98.2	112.6	8.17	0.9
		8/2/2002	13.8	10.31	98.4	112.5	8.01	0.8
M0201	Drainage Lake on CK17	6/21/2002	6.2	11.92	97.5	93.0	7.95	4.1
		6/22/2002	6.8	11.90	97.8	93.5	7.58	0.7
		6/23/2002	5.9	11.31	90.60	91.9	7.40	1.0
		6/24/2002	7.4	11.89	99.3	93.2	7.41	1.5
M0254	Tundra Lake	8/3/2002	15.1	9.86	98.4	115.8	8.09	0.8
		8/4/2002	15.1	9.86	98.3	116.9	7.91	1.4
		8/5/2002	12.6	9.89	93.2	117.7	7.58	0.9
		8/6/2002	10.4	10.29	92.4	115.6	7.70	1.2
M0255	Tundra Lake	8/3/2002	15.8	8.99	90.6	103.8	8.11	1.8
		8/4/2002	15.4	9.46	94.6	104.2	7.99	1.3
M0256	Tundra Lake	8/5/2002	13.2	9.53	91.2	89.5	7.92	1.1
		8/6/2002	11.4	10.47	95.6	86.8	7.73	1.4
M9912	Tundra Lake	7/28/2002	9.9	10.53	93.0	89.9	7.83	1.2
		7/29/2002	10.1	10.86	96.2	89.9	8.30	1.2
		7/30/2002	12.7			90.5	8.44	1.7
		7/31/2002	11.8	10.30	94.6	96.6	8.36	1.7
		8/1/2002	12.8	9.78	91.3	97.0	8.09	1.6
		8/2/2002	14.7	10.14	98.1	97.1	7.90	1.4

Appendix Table B-3. Water chemistry measured at NPR-A fyke net sampling sites, 2002

Station	Location	Date	Temp (°C)	Dissolved Oxygen		Specific Conductance (microS/cm)	pH	Turbidity (NTU)
				(mg/l)	(%)			
M9914	Drainage Lake on CK17	6/20/2002	3.6	12.70	97.7	61.5	7.75	1.9
		6/21/2002	3.5	13.16	99.3	62.1	8.01	1.3
		6/22/2002	4.8	11.36	88.5	62.7	7.54	1.3
		6/23/2002	4.6	12.78	99.8	62.9	7.44	2.3
		6/24/2002	5.7	12.77	102.7	63.1	7.20	1.8
		6/25/2002	8.0	11.77	99.2	64.6	7.56	1.9
		6/26/2002	10.0	10.36	91.7	65.7	7.76	1.3
		6/27/2002	9.6	10.93	96.1	66.0	7.40	1.2
		7/20/2002	18.5	9.21	98.3	91.5	7.67	2.1
		7/21/2002	17.8	9.53	96.3	85.5	7.52	1.1
		7/22/2002	17.4	9.08	95.4	86.5	7.35	1.3
		7/23/2002	14.6	9.24	90.8	87.5	7.33	1.3
		7/24/2002	13.3	10.17	97.4	88.2	7.45	1.1
		7/25/2002	11.6	9.74	90.1	88.0	7.50	1.7
		7/26/2002	10.1	10.97	97.3	88.5	7.38	2.2
7/27/2002	9.7	10.41	92.0	89.0	7.48	1.8		
7/28/2002	9.1	11.57	101.5	89.7	7.77	1.6		
7/29/2002	10.0	11.12	98.7	90.0	7.94	1.4		
M9922	Tundra Lake	7/28/2002	7.3	11.39	94.2	143.9	7.70	1.8
		7/29/2002	9.1	11.27	97.6	144.8	7.85	2.8
		7/30/2002	11.9	11.27	104.9	146.3	8.03	1.7
		7/31/2002	11.2	10.33	94.1	157.6	7.90	2.0
		8/1/2002	13.2	10.12	96.7	158.4	8.02	2.0
8/2/2002	14.1	9.57	93.2	159.2	7.94	1.8		
M9923	Tundra Lake	7/29/2002	9.9	11.67	103.0	243.6	8.04	1.8
		7/30/2002	11.7	11.66	107.7	245.4	8.24	2.7
		7/31/2002	11.7	10.89	101.3	262.4	8.19	2.0
		8/1/2002	13.1			264.4	8.22	1.5
		8/2/2002	13.9	9.83	95.6	264.9	8.19	1.5
M9924	Tundra Lake	8/3/2002	15.9	8.90	90.5	217.8	7.96	4.2
		8/4/2002	15.6	8.85	89.3	222.4	7.78	16.8
		8/5/2002	10.7	9.73	87.8	221.9	7.88	7.4
		8/6/2002	7.7	10.60	89.2	217.2	7.64	6.8
M9925	Tundra Lake	8/3/2002	16.1	8.01	92.3	312.5	8.28	6.2
		8/4/2002	15.2	9.64	96.6	316.0	8.14	11.8
		8/5/2002	8.8	10.82	93.4	317.4	7.82	8.0
		8/6/2002	6.1	11.54	93.3	308.4	7.86	7.8
N7797A	Tundra Lake	7/19/2002	17.9	9.36	99.1	197.9	7.70	1.9
N7797B	(Oil lake)	7/19/2002	18.1	9.51	98.7	199.6	7.92	2.5

APPENDIX C
Fish caught by fyke net
in eastern NPR-A during 2001-2002

Appendix Table C-1. Fish catches in NPR-A fyke net sampling during June 2001.

Station F1/F1A (Fish Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish				3					4
Humpback whitefish									
Arctic cisco			1	1					
Least cisco	10	16	21	9			6		9
Round whitefish	4		2	1					
Dolly Varden char									
Arctic grayling	5	6	8	5			9		13
Burbot									
Alaska blackfish									1
Rainbow smelt									
Fourhorn sculpin									
Slimy sculpin		4	1						
Ninespine stickleback		10		4			2	2	2
Effort (hrs)	23.2	24.5	27.2	24.9			23.1	24.6	17.2

Station F1A (Fish Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish									4
Humpback whitefish									
Arctic cisco									
Least cisco							6		9
Round whitefish									
Dolly Varden char									
Arctic grayling							9		13
Burbot									
Alaska blackfish									1
Rainbow smelt									
Fourhorn sculpin									
Slimy sculpin									
Ninespine stickleback							2	2	2
Effort (hrs)							23.1	24.6	17.2

Appendix Table C-1. Fish catches in NPR-A fyke net sampling during June 2001.

Station F4 (Fish Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish			1			4			
Humpback whitefish									
Arctic cisco				2					
Least cisco	1		5	12	11	8	15	6	4
Round whitefish								1	
Dolly Varden char									
Arctic grayling	5		7	32	34	27	9	6	4
Burbot									
Alaska blackfish									
Rainbow smelt									
Fourhorn sculpin									
Slimy sculpin									
Ninespine stickleback			7	3	4	7	3	6	
Effort (hrs)	19.0	30.1	22.6	25.2	23.1	26.8	27.9	18.3	21.3

Station J3 (Judy Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish									
Humpback whitefish									
Arctic cisco									
Least cisco				14					
Round whitefish									
Dolly Varden char									
Arctic grayling		1	1	3					
Burbot									
Alaska blackfish									
Rainbow smelt									
Fourhorn sculpin									
Slimy sculpin									
Ninespine stickleback				1					
Effort (hrs)	20.8	29.8	21.2	24.6					

Appendix Table C-1. Fish catches in NPR-A fyke net sampling during June 2001.

Station J3A (mouth of clear creek off Judy Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish									
Humpback whitefish									
Arctic cisco									
Least cisco					3				
Round whitefish									
Dolly Varden char									
Arctic grayling					18	16	11	3	8
Burbot								1	
Alaska blackfish									
Rainbow smelt									
Fourhorn sculpin									
Slimy sculpin									
Ninespine stickleback									
Effort (hrs)					22.2	26.8	26.7	19.5	22.4

Station U1 (Ublutuoch R upstream of ice road crossing))

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Chum Salmon									
Broad whitefish							1	1	
Humpback whitefish							1	1	
Arctic cisco									
Least cisco									
Round whitefish	1	2	3		3		1	2	2
Dolly Varden char									
Arctic grayling	193	28	10	27	2	93	43	13	6
Burbot									
Alaska blackfish									
Arctic flounder									
Fourhorn sculpin									
Slimy sculpin			2	2		2		1	
Ninespine stickleback		33	3	9	5				1
Effort (hrs)	20.3	22.5	29.1	25.3	22.0	26.2	23.8	23.8	20.6

Appendix Table C-1. Fish catches in NPR-A fyke net sampling during June 2001.

Station M0142 (Tapped lake off Ublutuoch River)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish			62	42					
Humpback whitefish			6	7					
Arctic cisco			25	12					
Least cisco			198	149					
Round whitefish			1						
Dolly Varden char									
Arctic grayling			8	18					
Burbot									
Alaska blackfish									
Rainbow smelt									
Fourhorn sculpin			4						
Slimy sculpin			1						
Ninespine stickleback			1	5					
Effort (hrs)			22.7	24.6					

Station MC7916A (Tapped lake off Fish Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish				1					
Humpback whitefish				1					
Arctic cisco									
Least cisco									
Round whitefish									
Dolly Varden char									
Arctic grayling				1	2				
Burbot									
Alaska blackfish									
Rainbow smelt									
Fourhorn sculpin									
Slimy sculpin									
Ninespine stickleback						6			
Effort (hrs)				23.2	24.1				

Appendix Table C-1. Fish catches in NPR-A fyke net sampling during June 2001.

Station MC7916B (Tapped lake off Fish Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish					3	2	2		1
Humpback whitefish					27	8	1	1	1
Arctic cisco									
Least cisco					4	4			7
Round whitefish					1	1	1		
Dolly Varden char									
Arctic grayling					1	1	6	2	
Burbot									
Alaska blackfish							1		1
Rainbow smelt									
Fourhorn sculpin									
Slimy sculpin									
Ninespine stickleback									5
Effort (hrs)					21.2	24.2	28.0	22.3	20.6

Station MC7916C (Tapped lake off Fish Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish						5		1	
Humpback whitefish						8			
Arctic cisco									
Least cisco						5	6	5	2
Round whitefish							1		
Dolly Varden char									
Arctic grayling						3	1	4	2
Burbot									
Alaska blackfish						2	1		
Rainbow smelt									
Fourhorn sculpin									
Slimy sculpin									
Ninespine stickleback						2		5	1
Effort (hrs)						24.0	25.4	23.5	19.0

Appendix Table C-2. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling during June 2001.

Station F1/F1A (Fish Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish	0.0	0.0	0.0	2.9			0.0	0.0	5.6
Humpback whitefish	0.0	0.0	0.0	0.0			0.0	0.0	0.0
Arctic cisco	0.0	0.0	0.9	1.0			0.0	0.0	0.0
Least cisco	10.4	15.7	18.5	8.7			6.2	0.0	12.6
Round whitefish	4.1	0.0	1.8	1.0			0.0	0.0	0.0
Dolly Varden char	0.0	0.0	0.0	0.0			0.0	0.0	0.0
Arctic grayling	5.2	5.9	7.0	4.8			9.4	0.0	18.1
Burbot	0.0	0.0	0.0	0.0			0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0			0.0	0.0	1.4
Rainbow smelt	0.0	0.0	0.0	0.0			0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0	0.0	0.0			0.0	0.0	0.0
Slimy sculpin	0.0	3.9	0.9	0.0			0.0	0.0	0.0
Ninespine stickleback	0.0	9.8	0.0	3.9			2.1	2.0	2.8
Effort (hrs)	23.2	24.5	27.2	24.9			23.1	24.6	17.2

Station F4 (Fish Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish	0.0	0.0	1.1	0.0	0.0	3.6	0.0	0.0	0.0
Humpback whitefish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic cisco	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0
Least cisco	1.3	0.0	5.3	11.4	11.4	7.2	12.9	7.8	4.5
Round whitefish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Dolly Varden char	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling	6.3	0.0	7.4	30.4	35.4	24.2	7.7	7.8	4.5
Burbot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	0.0	0.0	7.4	2.9	4.2	6.3	2.6	7.8	0.0
Effort (hrs)	19.0	30.1	22.6	25.2	23.1	26.8	27.9	18.3	21.3

Appendix Table C-2. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling during June 2001.

Station J3 (Judy Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish	0.0	0.0	0.0	0.0					
Humpback whitefish	0.0	0.0	0.0	0.0					
Arctic cisco	0.0	0.0	0.0	0.0					
Least cisco	0.0	0.0	0.0	13.7					
Round whitefish	0.0	0.0	0.0	0.0					
Dolly Varden char	0.0	0.0	0.0	0.0					
Arctic grayling	0.0	0.8	1.1	2.9					
Burbot	0.0	0.0	0.0	0.0					
Alaska blackfish	0.0	0.0	0.0	0.0					
Rainbow smelt	0.0	0.0	0.0	0.0					
Fourhorn sculpin	0.0	0.0	0.0	0.0					
Slimy sculpin	0.0	0.0	0.0	0.0					
Ninespine stickleback	0.0	0.0	0.0	1.0					
Effort (hrs)	20.8	29.8	21.2	24.6					

Station J3A (mouth of clear creek off Judy Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish					0.0	0.0	0.0	0.0	0.0
Humpback whitefish					0.0	0.0	0.0	0.0	0.0
Arctic cisco					0.0	0.0	0.0	0.0	0.0
Least cisco					3.2	0.0	0.0	0.0	0.0
Round whitefish					0.0	0.0	0.0	0.0	0.0
Dolly Varden char					0.0	0.0	0.0	0.0	0.0
Arctic grayling					19.5	14.3	9.9	3.7	8.6
Burbot					0.0	0.0	0.0	1.2	0.0
Alaska blackfish					0.0	0.0	0.0	0.0	0.0
Rainbow smelt					0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin					0.0	0.0	0.0	0.0	0.0
Slimy sculpin					0.0	0.0	0.0	0.0	0.0
Ninespine stickleback					0.0	0.0	0.0	0.0	0.0
Effort (hrs)					22.2	26.8	26.7	19.5	22.4

Appendix Table C-2. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling during June 2001.

Station U1 (Ublutuoch R upstream of ice road crossing)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0
Humpback whitefish	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0
Arctic cisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Least cisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Round whitefish	1.2	2.1	2.5	0.0	3.3	0.0	1.0	2.0	2.3
Dolly Varden char	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling	228.7	29.9	8.3	25.7	2.2	85.3	43.3	13.1	7.0
Burbot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin	0.0	0.0	1.7	1.9	0.0	1.8	0.0	1.0	0.0
Ninespine stickleback	0.0	35.2	2.5	8.6	5.5	0.0	0.0	0.0	1.2
Effort (hrs)	20.3	22.5	29.1	25.3	22.0	26.2	23.8	23.8	20.6

Station M0142 (Tapped lake off Ublutuoch River)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish			65.4	41.0					
Humpback whitefish			6.3	6.8					
Arctic cisco			26.4	11.7					
Least cisco			208.9	145.5					
Round whitefish			1.1	0.0					
Dolly Varden char			0.0	0.0					
Arctic grayling			8.4	17.6					
Burbot			0.0	0.0					
Alaska blackfish			0.0	0.0					
Rainbow smelt			0.0	0.0					
Fourhorn sculpin			4.2	0.0					
Slimy sculpin			1.1	0.0					
Ninespine stickleback			1.1	4.9					
Effort (hrs)			22.7	24.6					

Appendix Table C-2. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling during June 2001.

Station MC7916A (Tapped lake off Fish Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish				1.0	0.0				
Humpback whitefish				1.0	0.0				
Arctic cisco				0.0	0.0				
Least cisco				0.0	0.0				
Round whitefish				0.0	0.0				
Dolly Varden char				0.0	0.0				
Arctic grayling				1.0	2.0				
Burbot				0.0	0.0				
Alaska blackfish				0.0	0.0				
Rainbow smelt				0.0	0.0				
Fourhorn sculpin				0.0	0.0				
Slimy sculpin				0.0	0.0				
Ninespine stickleback				0.0	6.0				
Effort (hrs)				23.2	24.1				

Station MC7916B (Tapped lake off Fish Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish					3.4	2.0	1.7	0.0	1.2
Humpback whitefish					30.5	7.9	0.9	1.1	1.2
Arctic cisco					0.0	0.0	0.0	0.0	0.0
Least cisco					4.5	4.0	0.0	0.0	8.1
Round whitefish					1.1	1.0	0.9	0.0	0.0
Dolly Varden char					0.0	0.0	0.0	0.0	0.0
Arctic grayling					1.1	1.0	5.1	2.1	0.0
Burbot					0.0	0.0	0.0	0.0	0.0
Alaska blackfish					0.0	0.0	0.9	0.0	1.2
Rainbow smelt					0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin					0.0	0.0	0.0	0.0	0.0
Slimy sculpin					0.0	0.0	0.0	0.0	0.0
Ninespine stickleback					0.0	0.0	0.0	0.0	5.8
Effort (hrs)					21.2	24.2	28.0	22.3	20.6

Appendix Table C-2. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling during June 2001.

Station MC7916C (Tapped lake off Fish Ck)

Species	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28
Broad whitefish						5.0	0.0	1.0	0.0
Humpback whitefish						8.0	0.0	0.0	0.0
Arctic cisco						0.0	0.0	0.0	0.0
Least cisco						5.0	5.7	5.1	2.5
Round whitefish						0.0	0.9	0.0	0.0
Dolly Varden char						0.0	0.0	0.0	0.0
Arctic grayling						3.0	0.9	4.1	2.5
Burbot						0.0	0.0	0.0	0.0
Alaska blackfish						2.0	0.9	0.0	0.0
Rainbow smelt						0.0	0.0	0.0	0.0
Fourhorn sculpin						0.0	0.0	0.0	0.0
Slimy sculpin						0.0	0.0	0.0	0.0
Ninespine stickleback						2.0	0.0	5.1	1.3
Effort (hrs)						24.0	25.4	23.5	19.0

Appendix Table C-3. Fish catches in NPR-A fyke net sampling during July 2001.

Station F2A (Fish Ck)

Species	Jul 19	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
Broad whitefish						1			1			
Humpback whitefish						2						
Arctic cisco								1				
Least cisco								1				
Round whitefish							3					
Dolly Varden char												
Arctic grayling					3	1	3	1	1	1	1	2
Burbot									1			
Alaska blackfish												
Rainbow smelt												
Fourhorn sculpin												
Slimy sculpin												
Ninespine stickleback							2		1	3		
Effort (hrs)			25.8	--	53.2	19.8	24.0	26.3	22.1	23.0	23.5	23.5

Station F3 (Fish Ck)

Species	Jul 19	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
Broad whitefish	5						2	1				
Humpback whitefish												
Arctic cisco												
Least cisco												
Round whitefish				2				1	1	2		1
Dolly Varden char												
Arctic grayling	2	1	1		1	2	6	2	4	4	4	1
Burbot											1	
Alaska blackfish												
Rainbow smelt												
Fourhorn sculpin												
Slimy sculpin												
Ninespine stickleback	1											
Effort (hrs)	25.2	24.2	25.5	--	53.5	20.1	23.2	25.4	21.8	22.9	23.3	24.8

Appendix Table C-3. Fish catches in NPR-A fyke net sampling during July 2001.

Station J3 (Judy Ck)

Species	Jul 19	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
Broad whitefish			2								2	1
Humpback whitefish						1						
Arctic cisco												
Least cisco			1								10	3
Round whitefish					2	3		2			5	24
Dolly Varden char												
Arctic grayling		2	1		1	2		5	6		2	3
Burbot												
Alaska blackfish												
Rainbow smelt												
Fourhorn sculpin												
Slimy sculpin		1										
Ninespine stickleback							1					
Effort (hrs)		21.9	25.2	--	53.1	20.1	23.4	26.5	24.8	20.9	23.6	24.3

Station U2 (Ublutuoch R upstream of ice road crossing))

Species	Jul 19	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
Broad whitefish		4	2		26	6	4	33	17	20	2	
Humpback whitefish		1	1		13	3	2	61	58	48	1	1
Arctic cisco												
Least cisco		14	2		8	3	1	6	2	1		
Round whitefish		3			6	3		11	14	8	1	1
Dolly Varden char												
Arctic grayling		2	8		27	28	23	29	24	25	24	1
Burbot												
Alaska blackfish												
Rainbow smelt												
Fourhorn sculpin												
Slimy sculpin												
Ninespine stickleback								1				
Effort (hrs)		23.8	23.0	--	46.3	26.9	22.1	18.7	24.1	23.6	24.1	24.2

Appendix Table C-3. Fish catches in NPR-A fyke net sampling during July 2001.

Station MC7916C (Tapped lake off Fish Ck)

Species	Jul 19	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
Broad whitefish			21		71	2	49	413	19	3	28	61
Humpback whitefish			4		4			1	1	1		
Arctic cisco										3		
Least cisco		3	14		10	11	2	11		38	1	3
Round whitefish			3		2		1	1				1
Dolly Varden char												
Arctic grayling		38	26		18	23	3	8	11	7	8	10
Burbot												
Alaska blackfish												
Rainbow smelt		1										
Fourhorn sculpin												
Slimy sculpin												1
Ninespine stickleback			8				1	5	5			
Effort (hrs)		43.3	25.2	--	53.0	24.8	23.4	26.7	25.0	23.5	23.5	24.5

Appendix Table C-4. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling during July 2001.

Station F2A (Fish Ck)

Species	Jul 19	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
Broad whitefish			0.0		0.0	1.2	0.0	0.0	1.1	0.0	0.0	0.0
Humpback whitefish			0.0		0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Arctic cisco			0.0		0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
Least cisco			0.0		0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
Round whitefish			0.0		0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Dolly Varden char			0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling			0.0		1.4	1.2	3.0	0.9	1.1	1.0	1.0	2.0
Burbot			0.0		0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Alaska blackfish			0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt			0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin			0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin			0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback			0.0		0.0	0.0	2.0	0.0	1.1	3.1	0.0	0.0
Effort (hrs)			25.8	--	53.2	19.8	24.0	26.3	22.1	23.0	23.5	23.5

Station F3 (Fish Ck)

Species	Jul 19	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
Broad whitefish	4.8	0.0	0.0		0.0	0.0	2.1	0.9	0.0	0.0	0.0	0.0
Humpback whitefish	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic cisco	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Least cisco	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Round whitefish	0.0	0.0	1.9		0.0	0.0	0.0	0.9	1.1	2.1	0.0	1.0
Dolly Varden char	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling	1.9	1.0	0.9		0.4	2.4	6.2	1.9	4.4	4.2	4.1	1.0
Burbot	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Alaska blackfish	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	1.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Effort (hrs)	25.2	24.2	25.5	--	53.5	20.1	23.2	25.4	21.8	22.9	23.3	24.8

Appendix Table C-4. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling during July 2001.

Station J3 (Judy Ck)

Species	Jul 19	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
Broad whitefish		0.0	1.9		0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0
Humpback whitefish		0.0	0.0		0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0
Arctic cisco		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Least cisco		0.0	1.0		0.0	0.0	0.0	0.0	0.0	0.0	10.2	3.0
Round whitefish		0.0	0.0		0.9	3.6	0.0	1.8	0.0	0.0	5.1	23.7
Dolly Varden char		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling		2.2	1.0		0.5	2.4	0.0	4.5	5.8	0.0	2.0	3.0
Burbot		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin		1.1	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback		0.0	0.0		0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Effort (hrs)		21.9	25.2	--	53.1	20.1	23.4	26.5	24.8	20.9	23.6	24.3

Station U2 (Ublutuoch R upstream of ice road crossing))

Species	Jul 19	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
Broad whitefish		4.0	2.1		13.5	5.3	4.3	42.4	16.9	20.3	2.0	0.0
Humpback whitefish		1.0	1.0		6.7	2.7	2.2	78.4	57.7	48.7	1.0	1.0
Arctic cisco		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Least cisco		14.1	2.1		4.1	2.7	1.1	7.7	2.0	1.0	0.0	0.0
Round whitefish		3.0	0.0		3.1	2.7	0.0	14.1	13.9	8.1	1.0	1.0
Dolly Varden char		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling		2.0	8.3		14.0	25.0	25.0	37.3	23.9	25.4	23.9	1.0
Burbot		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback		0.0	0.0		0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0
Effort (hrs)		23.8	23.0	--	46.3	26.9	22.1	18.7	24.1	23.6	24.1	24.2

Appendix Table C-4. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling during July 2001.

Station MC7916C (Tapped lake off Fish Ck)

Species	Jul 19	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
Broad whitefish		0.0	20.0		32.2	1.9	50.2	371.7	18.2	3.1	28.6	59.8
Humpback whitefish		0.0	3.8		1.8	0.0	0.0	0.9	1.0	1.0	0.0	0.0
Arctic cisco		0.0	0.0		0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
Least cisco		1.7	13.3		4.5	10.7	2.0	9.9	0.0	38.8	1.0	2.9
Round whitefish		0.0	2.9		0.9	0.0	1.0	0.9	0.0	0.0	0.0	1.0
Dolly Varden char		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling		21.0	24.7		8.2	22.3	3.1	7.2	10.6	7.1	8.2	9.8
Burbot		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt		0.6	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Ninespine stickleback		0.0	7.6		0.0	0.0	1.0	4.5	4.8	0.0	0.0	0.0
Effort (hrs)		43.3	25.2	--	53.0	24.8	23.4	26.7	25.0	23.5	23.5	24.5

Appendix Table C-5. Fish catches in NPR-A fyke net sampling during August-September 2001.

Station F2A (Fish Ck)

Species	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Sep 01	Sep 02
Broad whitefish				1	3	1			1
Humpback whitefish									
Arctic cisco									
Least cisco		1					2		
Round whitefish									
Dolly Varden char							1		
Arctic grayling		1			5		2		2
Burbot		1							
Alaska blackfish									
Rainbow smelt									
Fourhorn sculpin									
Slimy sculpin									
Ninespine stickleback		1			2	5	5	7	1
Effort (hrs)	18.7	22.2	--	24.1	28.2	19.7	22.6	22.0	23.8

Station F3 (Fish Ck)

Species	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Sep 01	Sep 02
Broad whitefish			1	1	3	1	2	8	
Humpback whitefish		1							
Arctic cisco									
Least cisco					2			2	
Round whitefish									
Dolly Varden char									
Arctic grayling	3	2	5	1	1			3	2
Burbot						1	1		
Alaska blackfish									
Rainbow smelt									
Fourhorn sculpin									
Slimy sculpin	1								2
Ninespine stickleback									2
Effort (hrs)	20.3	22.5	25.5	25.1	27.2	24.0	22.5	22.0	23.5

Appendix Table C-5. Fish catches in NPR-A fyke net sampling during August-September 2001.

Station J3 (Judy Ck)

Species	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Sep 01	Sep 02
Broad whitefish					1	1			
Humpback whitefish									
Arctic cisco									
Least cisco	1			2				1	
Round whitefish				1					1
Dolly Varden char									
Arctic grayling		2		1	8	2	2	5	2
Burbot									
Alaska blackfish									
Rainbow smelt									
Fourhorn sculpin									
Slimy sculpin									
Ninespine stickleback							2		1
Effort (hrs)	22.3	22.2	--	24.3	26.7	21.5	21.5	21.0	24.0

Station U2 (Ublutuoch R upstream of ice road crossing))

Species	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Sep 01	Sep 02
Chum Salmon		1							
Broad whitefish		1			1		2		1
Humpback whitefish					1				
Arctic cisco									
Least cisco									
Round whitefish	1	8							
Dolly Varden char									
Arctic grayling	5	8		5	4	9	1	11	11
Burbot									
Alaska blackfish									
Rainbow smelt									
Fourhorn sculpin									
Slimy sculpin									
Ninespine stickleback									
Effort (hrs)	14.2	30.3	--	16.4	30.3	17.5	24.5	23.3	27.0

Appendix Table C-5. Fish catches in NPR-A fyke net sampling during August-September 2001.

Station MC7916C (Tapped lake off Fish Ck)

Species	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31
Broad whitefish	90	169	157	120	209	62	51
Humpback whitefish	6						
Arctic cisco							
Least cisco	46	35	32	16	20	24	18
Round whitefish	1	1	1			2	
Dolly Varden char							
Arctic grayling	4	3	2	3	6		4
Burbot			1	1			
Alaska blackfish	3		3	6	1	3	5
Rainbow smelt			1				
Fourhorn sculpin							
Slimy sculpin	2			1		4	
Ninespine stickleback	13	16	12	29	15	26	36
Effort (hrs)	17.1	21.2	26.7	23.3	29.4	19.1	23.0

Appendix Table C-6. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling during August-September 2001.

Station F2A (Fish Ck)

Species	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Sep 01	Sep 02
Broad whitefish	0.0	0.0		1.0	2.6	1.2	0.0	0.0	1.0
Humpback whitefish	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Arctic cisco	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Least cisco	0.0	1.1		0.0	0.0	0.0	2.1	0.0	0.0
Round whitefish	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Dolly Varden char	0.0	0.0		0.0	0.0	0.0	1.1	0.0	0.0
Arctic grayling	0.0	1.1		0.0	4.3	0.0	2.1	0.0	2.0
Burbot	0.0	1.1		0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	0.0	1.1		0.0	1.7	6.1	5.3	7.6	1.0
Effort (hrs)	18.7	22.2	--	24.1	28.2	19.7	22.6	22.0	23.8

Station F3 (Fish Ck)

Species	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Sep 01	Sep 02
Broad whitefish	0.0	0.0	0.9	1.0	2.7	1.0	2.1	8.7	0.0
Humpback whitefish	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic cisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Least cisco	0.0	0.0	0.0	0.0	1.8	0.0	0.0	2.2	0.0
Round whitefish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dolly Varden char	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling	3.5	2.1	4.7	1.0	0.9	0.0	0.0	3.3	2.0
Burbot	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Ninespine stickleback	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Effort (hrs)	20.3	22.5	25.5	25.1	27.2	24.0	22.5	22.0	23.5

Appendix Table C-6. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling during August-September 2001.

Station J3 (Judy Ck)

Species	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Sep 01	Sep 02
Broad whitefish	0.0	0.0		0.0	0.9	1.1	0.0	0.0	0.0
Humpback whitefish	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Arctic cisco	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Least cisco	1.1	0.0		2.0	0.0	0.0	0.0	1.1	0.0
Round whitefish	0.0	0.0		1.0	0.0	0.0	0.0	0.0	1.0
Dolly Varden char	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling	0.0	2.2		1.0	7.2	2.2	2.2	5.7	2.0
Burbot	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	0.0	0.0		0.0	0.0	0.0	2.2	0.0	1.0
Effort (hrs)	22.3	22.2	--	24.3	26.7	21.5	21.5	21.0	24.0

Station U2 (Ublutuoch R upstream of ice road crossing)

Species	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Sep 01	Sep 02
Chum Salmon	0.0	0.8		0.0	0.0	0.0	0.0	0.0	0.0
Broad whitefish	0.0	0.8		0.0	0.8	0.0	2.0	0.0	0.9
Humpback whitefish	0.0	0.0		0.0	0.8	0.0	0.0	0.0	0.0
Arctic cisco	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Least cisco	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Round whitefish	1.7	6.3		0.0	0.0	0.0	0.0	0.0	0.0
Dolly Varden char	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling	8.5	6.3		7.3	3.2	12.3	1.0	11.4	9.8
Burbot	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Effort (hrs)	14.2	30.3	--	16.4	30.3	17.5	24.5	23.3	27.0

Appendix Table C-6. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling during August-September 2001.

Station MC7916C (Tapped lake off Fish Ck)

Species	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31
Broad whitefish	126.4	191.6	141.3	123.9	170.5	78.0	53.2
Humpback whitefish	8.4	0.0	0.0	0.0	0.0	0.0	0.0
Arctic cisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Least cisco	64.6	39.7	28.8	16.5	16.3	30.2	18.8
Round whitefish	1.4	1.1	0.9	0.0	0.0	2.5	0.0
Dolly Varden char	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling	5.6	3.4	1.8	3.1	4.9	0.0	4.2
Burbot	0.0	0.0	0.9	1.0	0.0	0.0	0.0
Alaska blackfish	4.2	0.0	2.7	6.2	0.8	3.8	5.2
Rainbow smelt	0.0	0.0	0.9	0.0	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin	2.8	0.0	0.0	1.0	0.0	5.0	0.0
Ninespine stickleback	18.3	18.1	10.8	29.9	12.2	32.7	37.6
Effort (hrs)	17.1	21.2	26.7	23.3	29.4	19.1	23.0

Appendix Table C-7. Fish catches in NPR-A fyke net sampling at potential water-source lakes.

Station M9909A

Species	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03
Broad whitefish								
Humpback whitefish								
Arctic cisco								
Least cisco				27	9	42		3
Round whitefish								
Dolly Varden char								
Arctic grayling								
Burbot							1	
Alaska blackfish				1				
Rainbow smelt								
Fourhorn sculpin								
Slimy sculpin				1	1			1
Ninespine stickleback				9	26	10	1	3
Effort (hrs)				23.5	21.7	23.5	28.5	23.4

Station M9909B

Species	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03
Broad whitefish							1	
Humpback whitefish								
Arctic cisco								
Least cisco				30	12	27	34	
Round whitefish								
Dolly Varden char								
Arctic grayling								
Burbot				1				1
Alaska blackfish								
Rainbow smelt								
Fourhorn sculpin								
Slimy sculpin								
Ninespine stickleback				4	9	5	4	
Effort (hrs)				24.2	19.2	25.3	26.8	25.0

Appendix Table C-7. Fish catches in NPR-A fyke net sampling at potential water-source lakes.

Station M9910A

Species	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03
Broad whitefish								
Humpback whitefish	3	1						
Arctic cisco								
Least cisco						1		
Round whitefish								
Dolly Varden char								
Arctic grayling	19	5	10	9	4		6	3
Burbot								
Alaska blackfish								1
Rainbow smelt								
Fourhorn sculpin								
Slimy sculpin								
Ninespine stickleback	1	22	45	16	4	58	28	19
Effort (hrs)	19.9	23.1	24.3	23.6	25.2	21.2	29.4	22.2

Station M9910B

Species	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03
Broad whitefish								
Humpback whitefish								
Arctic cisco								
Least cisco								
Round whitefish								
Dolly Varden char								
Arctic grayling	30	3	3	1	1	2	3	1
Burbot								
Alaska blackfish								
Rainbow smelt								
Fourhorn sculpin								
Slimy sculpin								
Ninespine stickleback	1	2	6	11	8	16	10	
Effort (hrs)	22.1	20.2	26.4	21.5	27.5	19.9	30.5	19.0

Appendix Table C-7. Fish catches in NPR-A fyke net sampling at potential water-source lakes.

Station M9911A

Species	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03
Broad whitefish								
Humpback whitefish								
Arctic cisco								
Least cisco	1		1					
Round whitefish								
Dolly Varden char								
Arctic grayling								
Burbot								
Alaska blackfish	1							
Rainbow smelt								
Fourhorn sculpin								
Slimy sculpin								
Ninespine stickleback	15	9						
Effort (hrs)	20.2	26.3	21.5					

Station M9911B

Species	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03
Broad whitefish								
Humpback whitefish								
Arctic cisco								
Least cisco								
Round whitefish								
Dolly Varden char								
Arctic grayling								
Burbot								
Alaska blackfish		1						
Rainbow smelt								
Fourhorn sculpin								
Slimy sculpin								
Ninespine stickleback	24	20	7					
Effort (hrs)	20.5	25.0	22.2					

Appendix Table C-8. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling at potential water-source lakes, 2001.

Station M9909A

Species	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03
Broad whitefish				0.0	0.0	0.0	0.0	0.0
Humpback whitefish				0.0	0.0	0.0	0.0	0.0
Arctic cisco				0.0	0.0	0.0	0.0	0.0
Least cisco				27.6	9.9	42.8	0.0	3.1
Round whitefish				0.0	0.0	0.0	0.0	0.0
Dolly Varden char				0.0	0.0	0.0	0.0	0.0
Arctic grayling				0.0	0.0	0.0	0.0	0.0
Burbot				0.0	0.0	0.0	0.8	0.0
Alaska blackfish				1.0	0.0	0.0	0.0	0.0
Rainbow smelt				0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin				0.0	0.0	0.0	0.0	0.0
Slimy sculpin				1.0	1.1	0.0	0.0	1.0
Ninespine stickleback				9.2	28.7	10.2	0.8	3.1
Effort (hrs)				23.5	21.7	23.5	28.5	23.4

Station M9909B

Species	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03
Broad whitefish				0.0	0.0	0.0	0.9	0.0
Humpback whitefish				0.0	0.0	0.0	0.0	0.0
Arctic cisco				0.0	0.0	0.0	0.0	0.0
Least cisco				29.7	15.0	25.6	30.4	0.0
Round whitefish				0.0	0.0	0.0	0.0	0.0
Dolly Varden char				0.0	0.0	0.0	0.0	0.0
Arctic grayling				0.0	0.0	0.0	0.0	0.0
Burbot				1.0	0.0	0.0	0.0	1.0
Alaska blackfish				0.0	0.0	0.0	0.0	0.0
Rainbow smelt				0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin				0.0	0.0	0.0	0.0	0.0
Slimy sculpin				0.0	0.0	0.0	0.0	0.0
Ninespine stickleback				4.0	11.3	4.7	3.6	0.0
Effort (hrs)				24.2	19.2	25.3	26.8	25.0

Appendix Table C-8. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling at potential water-source lakes, 2001.

Station M9910A

Species	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03
Broad whitefish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Humpback whitefish	3.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic cisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Least cisco	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Round whitefish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dolly Varden char	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling	23.0	5.2	9.9	9.1	3.8	0.0	4.9	3.2
Burbot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Rainbow smelt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	1.2	22.8	44.5	16.3	3.8	65.7	22.9	20.5
Effort (hrs)	19.9	23.1	24.3	23.6	25.2	21.2	29.4	22.2

Station M9910B

Species	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03
Broad whitefish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Humpback whitefish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic cisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Least cisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Round whitefish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dolly Varden char	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling	32.6	3.6	2.7	1.1	0.9	2.4	2.4	1.3
Burbot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	1.1	2.4	5.5	12.3	7.0	19.3	7.9	0.0
Effort (hrs)	22.1	20.2	26.4	21.5	27.5	19.9	30.5	19.0

Appendix Table C-8. Fish catch rates (in fish per 24 hrs) in NPR-A fyke net sampling at potential water-source lakes, 2001.

Station M9911A

Species	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03
Broad whitefish	0.0	0.0	0.0					
Humpback whitefish	0.0	0.0	0.0					
Arctic cisco	0.0	0.0	0.0					
Least cisco	1.2	0.0	1.1					
Round whitefish	0.0	0.0	0.0					
Dolly Varden char	0.0	0.0	0.0					
Arctic grayling	0.0	0.0	0.0					
Burbot	0.0	0.0	0.0					
Alaska blackfish	1.2	0.0	0.0					
Rainbow smelt	0.0	0.0	0.0					
Fourhorn sculpin	0.0	0.0	0.0					
Slimy sculpin	0.0	0.0	0.0					
Ninespine stickleback	17.8	8.2	0.0					
Effort (hrs)	20.2	26.3	21.5					

Station M9911B

Species	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03
Broad whitefish	0.0	0.0	0.0					
Humpback whitefish	0.0	0.0	0.0					
Arctic cisco	0.0	0.0	0.0					
Least cisco	0.0	0.0	0.0					
Round whitefish	0.0	0.0	0.0					
Dolly Varden char	0.0	0.0	0.0					
Arctic grayling	0.0	0.0	0.0					
Burbot	0.0	0.0	0.0					
Alaska blackfish	0.0	1.0	0.0					
Rainbow smelt	0.0	0.0	0.0					
Fourhorn sculpin	0.0	0.0	0.0					
Slimy sculpin	0.0	0.0	0.0					
Ninespine stickleback	28.1	19.2	7.6					
Effort (hrs)	20.5	25.0	22.2					

Appendix Table C-9. Fish catches in NPR-A fyke net sampling during June 2002.

Station CK16A (Tributary of Fish Ck)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Arctic grayling	1	3			1		3
Alaska blackfish	3	1		2	3	18	
Ninespine stickleback	4	3	2	1	8	8	5
Effort (hrs)	19.7	24.2	24.1	25.2	22.8	24.3	24.2

Station CK16B (Tributary of Fish Ck)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Arctic grayling							
Alaska blackfish				2	1	5	
Ninespine stickleback	1	12	12	54	17	43	6
Effort (hrs)	20.8	24.2	24.1	25.3	22.9	24.2	24.2

Station CK17A (Tributary of Fish Ck)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Arctic grayling		13	10	6	16	76	129
Alaska blackfish							
Ninespine stickleback					3	5	1
Effort (hrs)	18.2	23.7	24.2	24.8	23.3	24.2	24.0

Station CK17B (Tributary of Fish Ck)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Arctic grayling					22	55	50
Alaska blackfish							
Ninespine stickleback					23	19	7
Effort (hrs)					21.9	24.0	24.3

Station M0201A (Drainage Lake on CK17)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Arctic grayling		24	10	8			
Alaska blackfish							
Ninespine stickleback		16	17	25			
Effort (hrs)		23.8	24.4	24.5			

Appendix Table C-9. Fish catches in NPR-A fyke net sampling during June 2002.

Station M9914A (Drainage Lake on CK17)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Arctic grayling					1		1
Alaska blackfish	1					1	
Ninespine stickleback	3	2	5	7	10	10	12
Effort (hrs)	18.3	22.8	24.6	24.4	23.3	24.0	24.4

Station U2 (Ublutuoch R.)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Broad whitefish						2	2
Humpback whitefish	1			1			2
Arctic cisco							
Least cisco						2	
Round whitefish			1		1		
Dolly Varden char							
Arctic grayling	46	46	14	10	42	79	126
Burbot							
Alaska blackfish							
Rainbow smelt							
Fourhorn sculpin				1	2		
Slimy sculpin							
Ninespine stickleback		1					
Effort (hrs)	18.8	24.3	23.6	25.4	23.0	24.3	24.0

Appendix Table C-10. Fish catches in NPR-A fyke net sampling during July-August, 2002.

Station CK16A (Tributary of Fish Ck)

Species	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27
Arctic grayling	1							
Alaska blackfish	4	10	12	1	7	1	1	2
Ninespine stickleback	2100	2493	2000	1700	5		4	7
Effort (hrs)	20.7	24.0	20.4	28.1	27.5	16.7	29.1	22.0

Station CK16B (Tributary of Fish Ck)

Species	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27
Arctic grayling				1				
Alaska blackfish	1			1				1
Ninespine stickleback	22	44	63	5	16	3		5
Effort (hrs)	22.1	24.0	19.8	28.0	27.4	16.7	29.1	22.4

Station CK17A (Tributary of Fish Ck)

Species	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28
Arctic grayling	48	22	76	21	15	7	14	9	13
Alaska blackfish									
Ninespine stickleback		2	1	1					
Effort (hrs)	20.8	23.3	20.6	28.3	27.6	16.7	28.9	22.0	23.1

Station CK17B (Tributary of Fish Ck)

Species	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28
Arctic grayling	43	36	15	7	5	2	14	28	4
Alaska blackfish									
Ninespine stickleback	24	24	38	16		3	3		2
Effort (hrs)	20.4	23.3	21.0	28.2	27.7	16.8	28.6	22.2	23.3

Station M9914A (Drainage Lake on CK17)

Species	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29
Arctic grayling		1			1			1		
Alaska blackfish				3			1			
Ninespine stickleback	134	87	197	68	3	1	7	2	5	3
Effort (hrs)	20.6	23.3	21.2	28.1	27.8	16.9	28.4	21.4	21.8	25.7

Appendix Table C-10. Fish catches in NPR-A fyke net sampling during July-August, 2002.

Station L9807 (Tundra Lake)

<u>Species</u>	<u>Jul 30</u>	<u>Jul 31</u>	<u>Aug 01</u>	<u>Aug 02</u>	<u>Aug 03</u>
Arctic grayling					
Alaska blackfish					
Ninespine stickleback	25	33	50	31	44
<u>Effort (hrs)</u>	<u>24.3</u>	<u>19.8</u>	<u>22.7</u>	<u>25.0</u>	<u>22.9</u>

Station L9817 (Tundra Lake)

<u>Species</u>	<u>Jul 30</u>	<u>Jul 31</u>	<u>Aug 01</u>	<u>Aug 02</u>	<u>Aug 03</u>	<u>Aug 04</u>
Arctic grayling						
Alaska blackfish						
Ninespine stickleback	100	154	6,000	3,000	15,000	7,500
<u>Effort (hrs)</u>	<u>25.1</u>	<u>19.5</u>	<u>22.5</u>	<u>25.2</u>	<u>22.7</u>	<u>25.6</u>

Station M0024 (Tundra Lake)

<u>Species</u>	<u>Jul 29</u>	<u>Jul 30</u>	<u>Jul 31</u>	<u>Aug 01</u>	<u>Aug 02</u>
Arctic grayling					
Alaska blackfish					
Ninespine stickleback	63	43	70	102	500
<u>Effort (hrs)</u>	<u>20.3</u>	<u>25.4</u>	<u>22.1</u>	<u>23.1</u>	<u>24.2</u>

Station M0254 (Tundra Lake)

<u>Species</u>	<u>Aug 03</u>	<u>Aug 04</u>	<u>Aug 05</u>	<u>Aug 06</u>
Arctic grayling				
Alaska blackfish	26	18	13	1
Ninespine stickleback	1000	263	53	84
<u>Effort (hrs)</u>	<u>19.7</u>	<u>25.6</u>	<u>22.4</u>	<u>24.6</u>

Station M0255 (Tundra Lake)

<u>Species</u>	<u>Aug 03</u>	<u>Aug 04</u>
Arctic grayling		
Alaska blackfish		
Ninespine stickleback	83	59
<u>Effort (hrs)</u>	<u>18.5</u>	<u>25.8</u>

Station M0256 (Tundra Lake)

<u>Species</u>	<u>Aug 05</u>	<u>Aug 06</u>
Arctic grayling		
Alaska blackfish		1
Ninespine stickleback	500	54
<u>Effort (hrs)</u>	<u>22.4</u>	<u>24.7</u>

Appendix Table C-10. Fish catches in NPR-A fyke net sampling during July-August, 2002.

Station M9912 (Tundra Lake)

Species	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02
Arctic grayling						
Alaska blackfish	4	6	6	7	23	7
Ninespine stickleback	9	10			14	43
Effort (hrs)	18.2	24.4	27.2	19.6	22.8	24.4

Station M9922 (Tundra Lake)

Species	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02
Arctic grayling						
Alaska blackfish						
Ninespine stickleback	3	11	5		93	87
Effort (hrs)	15.8	25.7	25.7	21.4	22.9	24.3

Station M9923 (Tundra Lake)

Species	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02
Arctic grayling					
Alaska blackfish					
Ninespine stickleback		3	18	500	111
Effort (hrs)	20.8	25.8	21.2	23.6	24.7

Station M9924 (Tundra Lake)

Species	Aug 03	Aug 04	Aug 05	Aug 06
Arctic grayling				
Alaska blackfish				
Ninespine stickleback	188	363	2500	82
Effort (hrs)	18.7	25.6	23.8	23.8

Station M9925 (Tundra Lake)

Species	Aug 03	Aug 04	Aug 05	Aug 06
Arctic grayling				
Alaska blackfish				
Ninespine stickleback	1000	408	750	85
Effort (hrs)	19.2	25.7	22.6	24.7

Station N7797 (Oil Lake)

Species	A	B
	Jul 19	Jul 19
Arctic grayling		
Alaska blackfish		
Ninespine stickleback	5400	2000
Effort (hrs)	21.5	21.6

Appendix Table C-10. Fish catches in NPR-A fyke net sampling during July-August, 2002.

Station U2 (Ublutuoch R.)

Species	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
Broad whitefish	4	1	3	1	11	16					
Humpback whitefish	1										
Arctic cisco											
Least cisco		1				1					
Round whitefish	4	2	1		1						
Dolly Varden char											
Arctic grayling	132	22	20	3	16	1	2	2	2	1	2
Burbot											
Alaska blackfish											
Rainbow smelt											
Fourhorn sculpin											
Slimy sculpin										1	1
Ninespine stickleback		7	3			2		1			
Effort (hrs)	23.8	18.8	24.1	25.1	28.3	18.7	29.3	22.8	21.8	24.1	27.2

Station U2 (Ublutuoch R.) - continued

Species	Jul 31	Aug 01	Aug 02	Aug 03	Aug 04	Aug 05	Aug 06
Broad whitefish		4	1	54	1	48	7
Humpback whitefish							
Arctic cisco							
Least cisco		18	2	39			1
Round whitefish	1						
Dolly Varden char							
Arctic grayling	4	14	9	16	19	1	1
Burbot							
Alaska blackfish							
Rainbow smelt							
Fourhorn sculpin							
Slimy sculpin			1				
Ninespine stickleback					9		
Effort (hrs)	19.6	23.6	25.3	22.3	25.8	22.4	24.0

Appendix Table C-11. Daily CPUE by station in NPR-A fyke net sampling during June 2002.

Station CK16A (Tributary of Fish Ck)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Arctic grayling	1.2	3.0	0.0	0.0	1.1	0.0	3.0
Alaska blackfish	3.7	1.0	0.0	1.9	3.2	17.8	0.0
Ninespine stickleback	4.9	3.0	2.0	1.0	8.4	7.9	4.9
Effort (hrs)	19.7	24.2	24.1	25.2	22.8	24.3	24.2

Station CK16B (Tributary of Fish Ck)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Arctic grayling	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	1.9	1.0	4.9	0.0
Ninespine stickleback	1.2	11.9	12.0	51.2	17.8	42.6	5.9
Effort (hrs)	20.8	24.2	24.1	25.3	22.9	24.2	24.2

Station CK17A (Tributary of Fish Ck)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Arctic grayling	0.0	13.2	9.9	5.8	16.5	75.5	129.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	0.0	0.0	0.0	0.0	3.1	5.0	1.0
Effort (hrs)	18.2	23.7	24.2	24.8	23.3	24.2	24.0

Station CK17B (Tributary of Fish Ck)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Arctic grayling					24.1	55.0	49.3
Alaska blackfish					0.0	0.0	0.0
Ninespine stickleback					25.2	19.0	6.9
Effort (hrs)					21.9	24.0	24.3

Station M0201A (Drainage Lake on CK17)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Arctic grayling		24.2	9.8	7.8			
Alaska blackfish		0.0	0.0	0.0			
Ninespine stickleback		16.1	16.7	24.5			
Effort (hrs)		23.8	24.4	24.5			

Appendix Table C-11. Daily CPUE by station in NPR-A fyke net sampling during June 2002.

Station M9914A (Drainage Lake on CK17)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Arctic grayling	0.0	0.0	0.0	0.0	1.0	0.0	1.0
Alaska blackfish	1.3	0.0	0.0	0.0	0.0	1.0	0.0
Ninespine stickleback	3.9	2.1	4.9	6.9	10.3	10.0	11.8
Effort (hrs)	18.3	22.8	24.6	24.4	23.3	24.0	24.4

Station U2 (Ublutuoch R.)

Species	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27
Broad whitefish	0.0	0.0	0.0	0.0	0.0	2.0	2.0
Humpback whitefish	1.3	0.0	0.0	0.9	0.0	0.0	2.0
Arctic cisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Least cisco	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Round whitefish	0.0	0.0	1.0	0.0	1.0	0.0	0.0
Dolly Varden char	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling	58.6	45.4	14.2	9.4	43.8	77.9	126.0
Burbot	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0	0.0	0.9	2.1	0.0	0.0
Slimy sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Effort (hrs)	18.8	24.3	23.6	25.4	23.0	24.3	24.0

Appendix Table C-12. Daily CPUE by station in NPR-A fyke net sampling during Jul-Aug 2002.

Station CK16A (Tributary of Fish Ck)

Species	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27
Arctic grayling	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	4.6	10.0	14.1	0.9	6.1	1.4	0.8	2.2
Ninespine stickleback	2438.7	2493.0	2351.0	1452.8	4.4	0.0	3.3	7.6
Effort (hrs)	20.7	24.0	20.4	28.1	27.5	16.7	29.1	22.0

Station CK16B (Tributary of Fish Ck)

Species	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27
Arctic grayling	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
Alaska blackfish	1.1	0.0	0.0	0.9	0.0	0.0	0.0	1.1
Ninespine stickleback	23.9	44.0	76.6	4.3	14.0	4.3	0.0	5.4
Effort (hrs)	22.1	24.0	19.8	28.0	27.4	16.7	29.1	22.4

Station CK17A (Tributary of Fish Ck)

Species	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28
Arctic grayling	55.5	22.7	88.6	17.8	13.1	10.0	11.6	9.8	13.5
Alaska blackfish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	0.0	2.1	1.2	0.8	0.0	0.0	0.0	0.0	0.0
Effort (hrs)	20.8	23.3	20.6	28.3	27.6	16.7	28.9	22.0	23.1

Station CK17B (Tributary of Fish Ck)

Species	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28
Arctic grayling	50.5	37.0	17.1	6.0	4.3	2.9	11.8	30.3	4.1
Alaska blackfish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	28.2	24.7	43.4	13.6	0.0	4.3	2.5	0.0	2.1
Effort (hrs)	20.4	23.3	21.0	28.2	27.7	16.8	28.6	22.2	23.3

Station M9914A (Drainage Lake on CK17)

Species	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29
Arctic grayling	0.0	1.0	0.0	0.0	0.9	0.0	0.0	1.1	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	2.6	0.0	0.0	0.8	0.0	0.0	0.0
Ninespine stickleback	156.2	89.8	223.4	58.1	2.6	1.4	5.9	2.2	5.5	2.8
Effort (hrs)	20.6	23.3	21.2	28.1	27.8	16.9	28.4	21.4	21.8	25.7

Appendix Table C-12. Daily CPUE by station in NPR-A fyke net sampling during Jul-Aug 2002.

Station L9807 (Tundra Lake)

Species	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03
Arctic grayling	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	24.7	40.1	52.7	29.8	46.1
Effort (hrs)	24.3	19.8	22.7	25.0	22.9

Station L9817 (Tundra Lake)

Species	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03	Aug 04
Arctic grayling	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	95.7	189.5	6400.0	2857.1	15882.4	7035.8
Effort (hrs)	25.1	19.5	22.5	25.2	22.7	25.6

Station M0024 (Tundra Lake)

Species	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02
Arctic grayling	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	74.7	40.6	76.1	106.1	494.8
Effort (hrs)	20.3	25.4	22.1	23.1	24.2

Station M0254 (Tundra Lake)

Species	Aug 03	Aug 04	Aug 05	Aug 06
Arctic grayling	0.0	0.0	0.0	0.0
Alaska blackfish	31.7	16.9	13.9	1.0
Ninespine stickleback	1220.3	246.7	56.7	82.0
Effort (hrs)	19.7	25.6	22.4	24.6

Station M0255 (Tundra Lake)

Species	Aug 03	Aug 04
Arctic grayling	0.0	0.0
Alaska blackfish	0.0	0.0
Ninespine stickleback	107.7	55.0
Effort (hrs)	18.5	25.8

Station M0256 (Tundra Lake)

Species	Aug 05	Aug 06
Arctic grayling	0.0	0.0
Alaska blackfish	0.0	1.0
Ninespine stickleback	535.3	52.5
Effort (hrs)	22.4	24.7

Appendix Table C-12. Daily CPUE by station in NPR-A fyke net sampling during Jul-Aug 2002.

Station M9912 (Tundra Lake)

Species	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02
Arctic grayling	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	5.3	5.9	5.3	8.6	24.2	6.9
Ninespine stickleback	11.9	9.8	0.0	0.0	14.7	42.3
Effort (hrs)	18.2	24.4	27.2	19.6	22.8	24.4

Station M9922 (Tundra Lake)

Species	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02
Arctic grayling	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	4.5	10.3	4.7	0.0	97.4	85.8
Effort (hrs)	15.8	25.7	25.7	21.4	22.9	24.3

Station M9923 (Tundra Lake)

Species	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02
Arctic grayling	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0
Ninespine stickleback	0.0	2.8	20.4	508.8	108.0
Effort (hrs)	20.8	25.8	21.2	23.6	24.7

Station M9924 (Tundra Lake)

Species	Aug 03	Aug 04	Aug 05	Aug 06
Arctic grayling	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0
Ninespine stickleback	241.7	340.5	2526.3	82.9
Effort (hrs)	18.7	25.6	23.8	23.8

Station M9925 (Tundra Lake)

Species	Aug 03	Aug 04	Aug 05	Aug 06
Arctic grayling	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0
Ninespine stickleback	1252.2	381.5	797.0	82.7
Effort (hrs)	19.2	25.7	22.6	24.7

Station N7797 (Oil Lake)

Species	A	B
	Jul 19	Jul 19
Arctic grayling	0.0	0.0
Alaska blackfish	0.0	0.0
Ninespine stickleback	6027.9	2223.9
Effort (hrs)	21.5	21.6

Appendix Table C-12. Daily CPUE by station in NPR-A fyke net sampling during Jul-Aug 2002.

Station U2 (Ublutuoch R.)

Species	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
Broad whitefish	4.0	1.3	3.0	1.0	9.3	20.6	0.0	0.0	0.0	0.0	0.0
Humpback whitefish	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic cisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Least cisco	0.0	1.3	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0
Round whitefish	4.0	2.5	1.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Dolly Varden char	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling	133.4	28.0	19.9	2.9	13.6	1.3	1.6	2.1	2.2	1.0	1.8
Burbot	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9
Ninespine stickleback	0.0	8.9	3.0	0.0	0.0	2.6	0.0	1.1	0.0	0.0	0.0
Effort (hrs)	23.8	18.8	24.1	25.1	28.3	18.7	29.3	22.8	21.8	24.1	27.2

Station U2 (Ublutuoch R.) - continued

Species	Jul 31	Aug 01	Aug 02	Aug 03	Aug 04	Aug 05	Aug 06
Broad whitefish	0.0	4.1	1.0	58.0	0.9	51.4	7.0
Humpback whitefish	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic cisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Least cisco	0.0	18.3	1.9	41.9	0.0	0.0	1.0
Round whitefish	1.2	0.0	0.0	0.0	0.0	0.0	0.0
Dolly Varden char	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arctic grayling	4.9	14.2	8.6	17.2	17.7	1.1	1.0
Burbot	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alaska blackfish	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainbow smelt	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fourhorn sculpin	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slimy sculpin	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Ninespine stickleback	0.0	0.0	0.0	0.0	8.4	0.0	0.0
Effort (hrs)	19.6	23.6	25.3	22.3	25.8	22.4	24.0

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
F1	6/20/2001	GRAY	270	MJM010001				
F1	6/20/2001	RDWF	255	MJM010002				
F1	6/20/2001	GRAY	323	MJM010003				
U1	6/20/2001	GRAY	311	MJM010004				
U1	6/20/2001	RDWF	370	MJM010005				
F1	6/21/2001	GRAY	345	MJM010007				
U1	6/21/2001	RDWF	382	MJM010006				
M0142	6/22/2001	LSCS	320	MJM010008				
M0142	6/22/2001	LSCS	308	MJM010009				
M0142	6/22/2001	HBWF	355	MJM010010				
M0142	6/22/2001	GRAY	342	MJM010013				
M0142	6/22/2001	LSCS	286	MJM010015				
F1	6/22/2001	GRAY	349	MJM010017				
F4	6/22/2001	LSCS	294	MJM010016				
U1	6/22/2001	RDWF	265	MJM010018				
U1	6/22/2001	GRAY	330	MJM010019				
U1	6/22/2001	GRAY	331	MJM010021				
U1	6/22/2001	RDWF	358	MJM010023				
U1	6/22/2001	RDWF	373	MJM010024				
MC7916A	6/23/2001	GRAY	348	MJM010025				
MC7916A	6/23/2001	HBWF	369	MJM010026				
F4	6/23/2001	LSCS	251	MJM010028				
F4	6/23/2001	LSCS	268	MJM010029				
F4	6/23/2001	GRAY	295	MJM010030				
J3	6/23/2001	LSCS	271	MJM010031				
J3	6/23/2001	LSCS	261	MJM010032				
J3	6/23/2001	LSCS	304	MJM010033				
U1	6/23/2001	GRAY	274	MJM010034				
U1	6/23/2001	GRAY	250	MJM010035				
U1	6/23/2001	GRAY	318	MJM010036				
U1	6/23/2001	GRAY	315	MJM010037				
MC7916B	6/24/2001	HBWF	345	MJM010038				
MC7916B	6/24/2001	HBWF	364	MJM010039				
MC7916B	6/24/2001	HBWF	382	MJM010040				
MC7916B	6/24/2001	HBWF	376	MJM010041				
MC7916B	6/24/2001	HBWF	344	MJM010042				
MC7916B	6/24/2001	HBWF	362	MJM010043				
MC7916B	6/24/2001	HBWF	356	MJM010044				
MC7916B	6/24/2001	HBWF	365	MJM010046				
MC7916B	6/24/2001	HBWF	394	MJM010047				
MC7916B	6/24/2001	HBWF	320	MJM010048				
MC7916B	6/24/2001	HBWF	383	MJM010049				
MC7916B	6/24/2001	HBWF	351	MJM010050				
MC7916B	6/24/2001	LSCS	324	MJM010051				
MC7916B	6/24/2001	HBWF	360	MJM010052				
MC7916B	6/24/2001	HBWF	385	MJM010053				
MC7916B	6/24/2001	HBWF	344	MJM010054				
MC7916B	6/24/2001	HBWF	368	MJM010055				
MC7916B	6/24/2001	RDWF	338	MJM010056				
MC7916B	6/24/2001	HBWF	394	MJM010057				
MC7916B	6/24/2001	HBWF	358	MJM010058				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
MC7916B	6/24/2001	HBWF	382	MJM010059				
MC7916B	6/24/2001	LSCS	319	MJM010060				
MC7916B	6/24/2001	HBWF	435	MJM010061				
MC7916B	6/24/2001	BDWF	376	MJM010062				
MC7916B	6/24/2001	LSCS	343	MJM010063				
MC7916B	6/24/2001	HBWF	421	MJM010064				
MC7916B	6/24/2001	BDWF	333	MJM010065				
MC7916B	6/24/2001	LSCS	280	MJM010066	Nanuk	10/30/2001	282	RECAP
MC7916B	6/24/2001	HBWF	353	MJM010067				
MC7916B	6/24/2001	HBWF	379	MJM010068				
MC7916B	6/24/2001	HBWF	373	MJM010069				
MC7916B	6/24/2001	HBWF	348	MJM010070				
MC7916B	6/24/2001	GRAY	343	MJM010071				
MC7916B	6/24/2001	HBWF	391	MJM010072				
MC7916B	6/24/2001	HBWF	390	MJM010073				
F4	6/24/2001	LSCS	294	MJM010034				
J3A	6/24/2001	GRAY	380	MJM010075				
J3A	6/24/2001	GRAY	390	MJM010076	J3	8/26/2001	388	RADIO,RECAP
U1	6/24/2001	GRAY	350	MJM010077				
MC7916B	6/25/2001	HBWF	406	MJM010078				
MC7916B	6/25/2001	BDWF	319	MJM010079				
MC7916B	6/25/2001	RDWF	392	MJM010080				
MC7916B	6/25/2001	LSCS	393	MJM010081				
MC7916B	6/25/2001	HBWF	387	MJM010082				
MC7916B	6/25/2001	HBWF	334	MJM010083				
MC7916B	6/25/2001	HBWF	406	MJM010084				
MC7916B	6/25/2001	HBWF	371	MJM010085				
MC7916B	6/25/2001	LSCS	342	MJM010086				
MC7916B	6/25/2001	HBWF	367	MJM010087				
MC7916B	6/25/2001	HBWF	370	MJM010088				
MC7916B	6/25/2001	LSCS	358	MJM010089				
MC7916B	6/25/2001	HBWF	421	MJM010090				
MC7916B	6/25/2001	BDWF	405	MJM010091				RADIO
MC7916C	6/25/2001	LSCS	316	MJM010092				
MC7916C	6/25/2001	HBWF	352	MJM010093				
MC7916C	6/25/2001	HBWF	410	MJM010094				
MC7916C	6/25/2001	BDWF	334	MJM010095				
MC7916C	6/25/2001	HBWF	365	MJM010096				
MC7916C	6/25/2001	HBWF	421	MJM010097				
MC7916C	6/25/2001	HBWF	387	MJM010098				
MC7916C	6/25/2001	HBWF	366	MJM010099				
MC7916C	6/25/2001	HBWF	363	MJM010100				
MC7916C	6/25/2001	HBWF	343	MJM010101				
MC7916C	6/25/2001	BDWF	492	MJM010102				RADIO
MC7916C	6/25/2001	BDWF	458	MJM010103				RADIO
MC7916C	6/25/2001	BDWF	440	MJM010104				RADIO
MC7916C	6/25/2001	BDWF	587	MJM010105				RADIO
F4	6/25/2001	LSCS	304	MJM010106				
F4	6/25/2001	LSCS	270	MJM010107				
F4	6/25/2001	LSCS	299	MJM010108				
J3A	6/25/2001	GRAY	334	MJM010109				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
J3A	6/25/2001	GRAY	400	MJM010110				
J3A	6/25/2001	GRAY	386	MJM010111				
U1	6/25/2001	GRAY	316	MJM010112				
U1	6/25/2001	GRAY	267	MJM010113				
U1	6/25/2001	GRAY	358	MJM010114				
U1	6/25/2001	GRAY	382	MJM010115				
U1	6/25/2001	GRAY	271	MJM010116				
U1	6/25/2001	GRAY	408	MJM010117				
U1	6/25/2001	GRAY	309	MJM010118				
U1	6/25/2001	GRAY	359	MJM010119				
U1	6/25/2001	GRAY	310	MJM010120				
U1	6/25/2001	GRAY	260	MJM010121				
U1	6/25/2001	GRAY	330	MJM010122				
U1	6/25/2001	GRAY	371	MJM010123				
U1	6/25/2001	GRAY	346	MJM010124				
U1	6/25/2001	GRAY	314	MJM010125				
U1	6/25/2001	GRAY	300	MJM010126				
U1	6/25/2001	GRAY	261	MJM010127				
U1	6/25/2001	GRAY	350	MJM010128				
U1	6/25/2001	GRAY	339	MJM010129				
U1	6/25/2001	GRAY	347	MJM010130				
U1	6/25/2001	GRAY	355	MJM010131				
U1	6/25/2001	GRAY	363	MJM010132				
U1	6/25/2001	GRAY	334	MJM010133	U2	9/1/2001	345	RECAP
U1	6/25/2001	GRAY	323	MJM010134				
U1	6/25/2001	GRAY	368	MJM010135				
U1	6/25/2001	GRAY	308	MJM010136				
U1	6/25/2001	GRAY	335	MJM010137				
U1	6/25/2001	GRAY	326	MJM010138				
U1	6/25/2001	GRAY	390	MJM010139				
U1	6/25/2001	GRAY	366	MJM010140				
U1	6/25/2001	GRAY	404	MJM010141				
MC7916B	6/26/2001	HBWF	395	MJM010147				
MC7916B	6/26/2001	RDWF	382	MJM010148				
MC7916B	6/26/2001	GRAY	344	MJM010149				
MC7916B	6/26/2001	GRAY	360	MJM010150				
MC7916B	6/26/2001	GRAY	313	MJM010151				
MC7916B	6/26/2001	GRAY	387	MJM010152				
MC7916B	6/26/2001	GRAY	372	MJM010153				
MC7916B	6/26/2001	BDWF	573	MJM010154				RADIO
MC7916C	6/26/2001	LSCS	284	MJM010142				
MC7916C	6/26/2001	LSCS	286	MJM010143				
MC7916C	6/26/2001	GRAY	411	MJM010144				
MC7916C	6/26/2001	LSCS	378	MJM010145				
MC7916C	6/26/2001	RDWF	367	MJM010146				
J3A	6/26/2001	GRAY	355	MJM010167				
J3A	6/26/2001	GRAY	350	MJM010168	F3	7/28/2001	350	RECAP
U1	6/26/2001	GRAY	256	MJM010155				
U1	6/26/2001	HBWF	361	MJM010156				
U1	6/26/2001	RDWF	354	MJM010157				
U1	6/26/2001	BDWF	329	MJM010158				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
U1	6/26/2001	GRAY	256	MJM010159				
U1	6/26/2001	GRAY	275	MJM010160				
U1	6/26/2001	GRAY	263	MJM010161				
U1	6/26/2001	GRAY	350	MJM010162				
U1	6/26/2001	GRAY	377	MJM010163				
U1	6/26/2001	GRAY	351	MJM010164				
U1	6/26/2001	GRAY	326	MJM010165				
U1	6/26/2001	GRAY	400	MJM010166				
MC7916B	6/27/2001	HBWF	374	MJM010169				
MC7916B	6/27/2001	GRAY	346	MJM010170				
MC7916B	6/27/2001	GRAY	387	MJM010171				
MC7916C	6/27/2001	LSCS	252	MJM010172				
MC7916C	6/27/2001	LSCS	251	MJM010173				
J3A	6/27/2001	GRAY	310	MJM010174				
J3A	6/27/2001	GRAY	332	MJM010175				
J3A	6/27/2001	BURB	710	MJM010176				RADIO
U1	6/27/2001	GRAY	262	MJM010177				
U1	6/27/2001	GRAY	340	MJM010178				
U1	6/27/2001	GRAY	294	MJM010179				
U1	6/27/2001	GRAY	337	MJM010180	U2	7/27/2001	338	RECAP
U1	6/27/2001	HBWF	382	MJM010181				
U1	6/27/2001	GRAY	358	MJM010182				
U1	6/27/2001	RDWF	378	MJM010183				
U1	6/27/2001	BDWF	523	MJM010184				RADIO
MC7916B	6/28/2001	LSCS	349	MJM010185				
MC7916B	6/28/2001	LSCS	369	MJM010186				
MC7916B	6/28/2001	HBWF	420	MJM010187				
F4	6/28/2001	GRAY	253	MJM010188				
U1	6/28/2001	GRAY	350	MJM010189				
U1	6/28/2001	GRAY	337	MJM010191				
U1	6/28/2001	GRAY	337	MJM010192				
U1	6/28/2001	RDWF	397	MJM010193				
U1	6/28/2001	RDWF	390	MJM010194				
M0101	7/14/2001	LSCS	398	MJM010401				
M0101	7/14/2001	LSCS	355	MJM010403				
M0101	7/14/2001	LSCS	377	MJM010405				
F3	7/20/2001	GRAY	313	MJM010517				
U2	7/20/2001	LSCS	272	MJM010195				
U2	7/20/2001	RDWF	347	MJM010196				
U2	7/20/2001	GRAY	297	MJM010197				
U2	7/20/2001	HBWF	435	MJM010198				
U2	7/20/2001	RDWF	256	MJM010199				
U2	7/20/2001	BDWF	540	MJM010200				RADIO
U2	7/20/2001	BDWF	505	MJM010518				RADIO
U2	7/20/2001	BDWF	431	MJM010519				RADIO
U2	7/20/2001	BDWF	459	MJM010520				RADIO
MC7916C	7/21/2001	GRAY	329	MJM010526				
MC7916C	7/21/2001	LSCS	337	MJM010527				
MC7916C	7/21/2001	HBWF	414	MJM010528				
MC7916C	7/21/2001	LSCS	317	MJM010529				
MC7916C	7/21/2001	LSCS	346	MJM010530				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
MC7916C	7/21/2001	LSCS	277	MJM010531				
MC7916C	7/21/2001	HBWF	334	MJM010532				
MC7916C	7/21/2001	LSCS	314	MJM010533				
MC7916C	7/21/2001	RDWF	264	MJM010534				
MC7916C	7/21/2001	HBWF	375	MJM010535				
MC7916C	7/21/2001	GRAY	394	MJM010536				
MC7916C	7/21/2001	GRAY	346	MJM010537				
MC7916C	7/21/2001	HBWF	357	MJM010538				
F3	7/21/2001	RDWF	311	MJM010539				
F3	7/21/2001	GRAY	366	MJM010540				
U2	7/21/2001	HBWF	397	MJM010541				
U2	7/21/2001	LSCS	259	MJM010542				
U2	7/21/2001	BDWF	357	MJM010546				
U2	7/21/2001	GRAY	354	MJM010547				
U2	7/21/2001	BDWF	434	MJM010548				RADIO
MC7916C	7/23/2001	HBWF	384	MJM010523				
MC7916C	7/23/2001	GRAY	356	MJM010524	MC7916C	7/24/2001	358	RECAP
MC7916C	7/23/2001	GRAY	309	MJM010525				
MC7916C	7/23/2001	GRAY	369	MJM010568				
MC7916C	7/23/2001	HBWF	305	MJM010593				
MC7916C	7/23/2001	LSCS	296	MJM010594				
MC7916C	7/23/2001	LSCS	324	MJM010595				
MC7916C	7/23/2001	HBWF	367	MJM010596				
MC7916C	7/23/2001	LSCS	282	MJM010597				
MC7916C	7/23/2001	LSCS	330	MJM010598				
MC7916C	7/23/2001	HBWF	396	MJM010599				
MC7916C	7/23/2001	LSCS	354	MJM010600				
U2	7/23/2001	HBWF	362	MJM010549				
U2	7/23/2001	BDWF	327	MJM010550				
U2	7/23/2001	BDWF	354	MJM010551				
U2	7/23/2001	GRAY	358	MJM010552				
U2	7/23/2001	HBWF	368	MJM010553				
U2	7/23/2001	BDWF	337	MJM010554				
U2	7/23/2001	BDWF	391	MJM010555				
U2	7/23/2001	BDWF	366	MJM010556				
U2	7/23/2001	BDWF	362	MJM010557				
U2	7/23/2001	BDWF	381	MJM010558				
U2	7/23/2001	LSCS	296	MJM010561				
U2	7/23/2001	BDWF	310	MJM010562				
U2	7/23/2001	GRAY	301	MJM010564				
U2	7/23/2001	BDWF	350	MJM010567				
U2	7/23/2001	GRAY	338	MJM010569				
U2	7/23/2001	BDWF	317	MJM010570				
U2	7/23/2001	GRAY	285	MJM010571	U2	7/24/2001	294	RECAP
U2	7/23/2001	GRAY	284	MJM010574				
U2	7/23/2001	RDWF	332	MJM010575				
U2	7/23/2001	GRAY	270	MJM010576	U2	8/28/2001	279	RECAP
U2	7/23/2001	GRAY	360	MJM010577				
U2	7/23/2001	RDWF	335	MJM010578				
U2	7/23/2001	HBWF	386	MJM010580				
U2	7/23/2001	GRAY	369	MJM010581	U2	8/25/2001	371	RADIO,RECAP

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
U2	7/23/2001	GRAY	343	MJM010582				
U2	7/23/2001	BDWF	373	MJM010583				
U2	7/23/2001	BDWF	342	MJM010584				
U2	7/23/2001	HBWF	420	MJM010585				
U2	7/23/2001	RDWF	310	MJM010586				
U2	7/23/2001	GRAY	312	MJM010587	U2	7/24/2001	316	RECAP
U2	7/23/2001	GRAY	415	MJM010589				
U2	7/23/2001	GRAY	357	MJM010590				
U2	7/23/2001	HBWF	396	MJM010591				
U2	7/23/2001	HBWF	430	MJM010592				
MC7916C	7/24/2001	LSCS	257	MJM010728				
MC7916C	7/24/2001	LSCS	266	MJM010729				
MC7916C	7/24/2001	LSCS	291	MJM010731				
MC7916C	7/24/2001	LSCS	254	MJM010733				
MC7916C	7/24/2001	GRAY	389	MJM010735				
MC7916C	7/24/2001	GRAY	332	MJM010736				
MC7916C	7/24/2001	GRAY	328	MJM010737				
MC7916C	7/24/2001	LSCS	288	MJM010738				
MC7916C	7/24/2001	LSCS	316	MJM010739				
MC7916C	7/24/2001	GRAY	273	MJM010742	F2A	9/2/2001	276	RECAP
F2A	7/24/2001	GRAY	273	MJM010743				
F2A	7/24/2001	HBWF	406	MJM010744				
F2A	7/24/2001	HBWF	347	MJM010745				
F3	7/24/2001	GRAY	318	MJM010747				
J3	7/24/2001	HBWF	339	MJM010748				
J3	7/24/2001	RDWF	272	MJM010749				
J3	7/24/2001	RDWF	291	MJM010826				
J3	7/24/2001	GRAY	278	MJM010827				
J3	7/24/2001	GRAY	346	MJM010831				
U2	7/24/2001	HBWF	415	MJM010701				
U2	7/24/2001	GRAY	341	MJM010702				
U2	7/24/2001	GRAY	307	MJM010703				
U2	7/24/2001	GRAY	273	MJM010704				
U2	7/24/2001	GRAY	365	MJM010705				
U2	7/24/2001	LSCS	251	MJM010706				
U2	7/24/2001	GRAY	380	MJM010707				
U2	7/24/2001	GRAY	326	MJM010708				
U2	7/24/2001	GRAY	285	MJM010709				
U2	7/24/2001	GRAY	281	MJM010710				
U2	7/24/2001	GRAY	289	MJM010711				
U2	7/24/2001	RDWF	362	MJM010712				
U2	7/24/2001	GRAY	281	MJM010713				
U2	7/24/2001	GRAY	279	MJM010714				
U2	7/24/2001	GRAY	342	MJM010715				
U2	7/24/2001	GRAY	341	MJM010716				
U2	7/24/2001	GRAY	312	MJM010717				
U2	7/24/2001	HBWF	404	MJM010718				
U2	7/24/2001	GRAY	367	MJM010719				
U2	7/24/2001	GRAY	358	MJM010720				
U2	7/24/2001	BDWF	370	MJM010721				
U2	7/24/2001	GRAY	395	MJM010722				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
U2	7/24/2001	GRAY	333	MJM010723				
U2	7/24/2001	GRAY	400	MJM010724				
U2	7/24/2001	BDWF	414	MJM010725				RADIO
U2	7/24/2001	BDWF	392	MJM010726				RADIO
U2	7/24/2001	BDWF	451	MJM010727				RADIO
MC7916C	7/25/2001	GRAY	332	MJM010835	MC7916C	7/28/2001	332	RECAP
MC7916C	7/25/2001	GRAY	275	MJM010837				
MC7916C	7/25/2001	RDWF	364	MJM010839				
F2A	7/25/2001	GRAY	332	MJM010842				
F2A	7/25/2001	GRAY	336	MJM010843				
F3	7/25/2001	GRAY	298	MJM010844				
F3	7/25/2001	GRAY	376	MJM010845				
F3	7/25/2001	GRAY	355	MJM010848				
F3	7/25/2001	GRAY	363	MJM010849				
F3	7/25/2001	GRAY	405	MJM010850				
U2	7/25/2001	BDWF	475	MJM010776				RADIO
U2	7/25/2001	BDWF	402	MJM010777				RADIO
U2	7/25/2001	BDWF	485	MJM010778				RADIO
U2	7/25/2001	HBWF	406	MJM010779				
U2	7/25/2001	HBWF	406	MJM010780	U2	7/26/2001	407	RECAP
U2	7/25/2001	GRAY	334	MJM010782				
U2	7/25/2001	GRAY	365	MJM010783				
U2	7/25/2001	GRAY	342	MJM010785				
U2	7/25/2001	GRAY	295	MJM010832				
U2	7/25/2001	GRAY	323	MJM010833				
U2	7/25/2001	LSCS	262	MJM010834				
U2	7/25/2001	BDWF	497	MJM010847				RADIO
MC7916C	7/26/2001	GRAY	356	MJM011051	MC7916C	7/29/2001	356	RECAP
MC7916C	7/26/2001	GRAY	361	MJM011052				
MC7916C	7/26/2001	HBWF	351	MJM011053				
MC7916C	7/26/2001	LSCS	287	MJM011054				
F2A	7/26/2001	LSCS	294	MJM011055				
J3	7/26/2001	GRAY	339	MJM011057				
J3	7/26/2001	RDWF	354	MJM011058				
U2	7/26/2001	HBWF	379	MJM010746				
U2	7/26/2001	HBWF	446	MJM010751				
U2	7/26/2001	HBWF	368	MJM010752				
U2	7/26/2001	BDWF	371	MJM010753				
U2	7/26/2001	HBWF	407	MJM010754				
U2	7/26/2001	HBWF	426	MJM010755				
U2	7/26/2001	GRAY	366	MJM010756				
U2	7/26/2001	HBWF	412	MJM010757				
U2	7/26/2001	BDWF	328	MJM010758				
U2	7/26/2001	HBWF	417	MJM010759				
U2	7/26/2001	HBWF	419	MJM010760				
U2	7/26/2001	HBWF	450	MJM010761	Upper Nigliq	10/31/2001		RECAP
U2	7/26/2001	RDWF	360	MJM010762				
U2	7/26/2001	RDWF	362	MJM010763				
U2	7/26/2001	HBWF	422	MJM010764				
U2	7/26/2001	BDWF	317	MJM010765				
U2	7/26/2001	GRAY	388	MJM010766				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
U2	7/26/2001	HBWF	425	MJM010767				
U2	7/26/2001	BDWF	406	MJM010768				
U2	7/26/2001	HBWF	389	MJM010769				
U2	7/26/2001	BDWF	338	MJM010770				
U2	7/26/2001	HBWF	404	MJM010771				
U2	7/26/2001	HBWF	421	MJM010772				
U2	7/26/2001	HBWF	393	MJM010773				
U2	7/26/2001	HBWF	383	MJM010774				
U2	7/26/2001	BDWF	324	MJM010775				
U2	7/26/2001	HBWF	415	MJM010786				
U2	7/26/2001	HBWF	437	MJM010787				
U2	7/26/2001	RDWF	345	MJM010788				
U2	7/26/2001	HBWF	411	MJM010789				
U2	7/26/2001	GRAY	339	MJM010790				
U2	7/26/2001	HBWF	421	MJM010791				
U2	7/26/2001	HBWF	400	MJM010792				
U2	7/26/2001	HBWF	409	MJM010793				
U2	7/26/2001	BDWF	371	MJM010794				
U2	7/26/2001	HBWF	374	MJM010795				
U2	7/26/2001	HBWF	413	MJM010796				
U2	7/26/2001	BDWF	389	MJM010797				
U2	7/26/2001	HBWF	376	MJM010798				
U2	7/26/2001	BDWF	297	MJM010799				
U2	7/26/2001	HBWF	407	MJM010800				
U2	7/26/2001	HBWF	431	MJM010801				
U2	7/26/2001	GRAY	350	MJM010802				
U2	7/26/2001	HBWF	429	MJM010803				
U2	7/26/2001	BDWF	436	MJM010804				
U2	7/26/2001	HBWF	416	MJM010805				
U2	7/26/2001	HBWF	404	MJM010806				
U2	7/26/2001	HBWF	390	MJM010807				
U2	7/26/2001	BDWF	412	MJM010808				
U2	7/26/2001	HBWF	417	MJM010809				
U2	7/26/2001	GRAY	349	MJM010810				
U2	7/26/2001	HBWF	413	MJM010811				
U2	7/26/2001	HBWF	384	MJM010812				
U2	7/26/2001	HBWF	424	MJM010813				
U2	7/26/2001	HBWF	427	MJM010814				
U2	7/26/2001	HBWF	395	MJM010815				
U2	7/26/2001	RDWF	351	MJM010816				
U2	7/26/2001	GRAY	347	MJM010817				
U2	7/26/2001	HBWF	443	MJM010818				
U2	7/26/2001	BDWF	368	MJM010819				
U2	7/26/2001	GRAY	421	MJM010820				
U2	7/26/2001	HBWF	414	MJM010821				
U2	7/26/2001	BDWF	366	MJM010822				
U2	7/26/2001	GRAY	350	MJM010823				
U2	7/26/2001	HBWF	422	MJM010824				
U2	7/26/2001	BDWF	427	MJM010825				
U2	7/26/2001	GRAY	347	MJM010851				
U2	7/26/2001	HBWF	417	MJM010852				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
U2	7/26/2001	BDWF	360	MJM010853				
U2	7/26/2001	HBWF	394	MJM010854				
U2	7/26/2001	BDWF	354	MJM010855				
U2	7/26/2001	BDWF	326	MJM010856				
U2	7/26/2001	HBWF	374	MJM010857				
U2	7/26/2001	HBWF	409	MJM010858				
U2	7/26/2001	BDWF	491	MJM010859				
U2	7/26/2001	BDWF	291	MJM010860				
U2	7/26/2001	GRAY	358	MJM010861				
U2	7/26/2001	GRAY	268	MJM010862				
U2	7/26/2001	GRAY	298	MJM010863				
U2	7/26/2001	BDWF	325	MJM010864				
U2	7/26/2001	GRAY	351	MJM010865				
U2	7/26/2001	GRAY	342	MJM010866				
U2	7/26/2001	BDWF	422	MJM010867				
U2	7/26/2001	HBWF	395	MJM010868				
U2	7/26/2001	BDWF	483	MJM010869				
U2	7/26/2001	HBWF	428	MJM010870				
U2	7/26/2001	BDWF	346	MJM010871	Upper Nigliq	10/20/2001	348	RECAP
U2	7/26/2001	GRAY	287	MJM010872				
U2	7/26/2001	BDWF	354	MJM010873				
U2	7/26/2001	GRAY	371	MJM010874				
U2	7/26/2001	HBWF	413	MJM010875				
U2	7/26/2001	BDWF	390	MJM010876				
U2	7/26/2001	GRAY	350	MJM010877	U2	9/2/2001	355	RECAP
U2	7/26/2001	HBWF	429	MJM010878				
U2	7/26/2001	HBWF	432	MJM010879				
U2	7/26/2001	GRAY	287	MJM010880				
U2	7/26/2001	HBWF	399	MJM010881				
U2	7/26/2001	HBWF	422	MJM010882				
U2	7/26/2001	HBWF	419	MJM010883				
U2	7/26/2001	GRAY	378	MJM010884				
U2	7/26/2001	BDWF	370	MJM010885				
U2	7/26/2001	BDWF	349	MJM010886				
U2	7/26/2001	BDWF	336	MJM010887				
U2	7/26/2001	HBWF	398	MJM010888				
U2	7/26/2001	RDWF	305	MJM010889	U2	7/27/2001	303	RECAP
U2	7/26/2001	BDWF	351	MJM010890				
U2	7/26/2001	HBWF	401	MJM010891				
U2	7/26/2001	RDWF	386	MJM010892				
U2	7/26/2001	BDWF	346	MJM010893				
U2	7/26/2001	HBWF	461	MJM010894				
U2	7/26/2001	BDWF	353	MJM010895				
U2	7/26/2001	BDWF	337	MJM010896				
U2	7/26/2001	BDWF	334	MJM010897				
U2	7/26/2001	LSCS	344	MJM010898				
U2	7/26/2001	HBWF	433	MJM010899				
U2	7/26/2001	LSCS	330	MJM010900				
MC7916C	7/27/2001	BDWF	359	MJM011044				
MC7916C	7/27/2001	HBWF	386	MJM011045				
MC7916C	7/27/2001	GRAY	392	MJM011046				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
F2A	7/27/2001	GRAY	271	MJM011038				
F2A	7/27/2001	BDWF	404	MJM011039				
F3	7/27/2001	GRAY	290	MJM011040	F3	8/27/2001	293	RECAP
F3	7/27/2001	GRAY	308	MJM011041				
F3	7/27/2001	GRAY	362	MJM011042				
F3	7/27/2001	GRAY	349	MJM011043	F3	7/28/2001	349	RECAP
J3	7/27/2001	GRAY	310	MJM011047				
J3	7/27/2001	GRAY	336	MJM011048				
M9910A	7/27/2001	HBWF	309	MJM010435				
M9910A	7/27/2001	HBWF	300	MJM010436				
M9910A	7/27/2001	GRAY	301	MJM010437	M9910A	7/29/2001	302	RECAP
M9910A	7/27/2001	GRAY	344	MJM010438	M9910A	8/3/2001	346	RECAP
M9910A	7/27/2001	GRAY	370	MJM010439	M9910A	8/2/2001	369	RECAP
M9910A	7/27/2001	GRAY	253	MJM010441				
M9910A	7/27/2001	GRAY	304	MJM010442	M9910A	7/30/2001	305	RECAP
M9910A	7/27/2001	GRAY	277	MJM010443				
M9910A	7/27/2001	GRAY	284	MJM010444				
M9910A	7/27/2001	GRAY	308	MJM010445				
M9910A	7/27/2001	GRAY	398	MJM010446				
M9910A	7/27/2001	GRAY	279	MJM010447				
M9910A	7/27/2001	GRAY	328	MJM010448	M9910A	7/28/2001	328	RECAP
M9910A	7/27/2001	HBWF	308	MJM010449				
M9910A	7/27/2001	GRAY	335	MJM010450	M9910B	8/3/2001	338	RECAP
M9910A	7/27/2001	GRAY	350	MJM010451	M9910B	7/31/2001	349	RECAP
M9910B	7/27/2001	GRAY	264	MJM010452				
M9910B	7/27/2001	GRAY	357	MJM010453				
M9910B	7/27/2001	GRAY	395	MJM010454				
M9910B	7/27/2001	GRAY	279	MJM010455				
M9910B	7/27/2001	GRAY	277	MJM010457				
M9910B	7/27/2001	GRAY	256	MJM010458	M9910A	7/29/2001	256	RECAP
M9910B	7/27/2001	GRAY	254	MJM010459				
M9910B	7/27/2001	GRAY	265	MJM010460				
M9910B	7/27/2001	GRAY	268	MJM010461				
M9910B	7/27/2001	GRAY	270	MJM010462				
M9910B	7/27/2001	GRAY	294	MJM010463				
M9910B	7/27/2001	GRAY	318	MJM010464				
M9910B	7/27/2001	GRAY	320	MJM010465	M9910A	7/30/2001	320	RECAP
M9910B	7/27/2001	GRAY	375	MJM010466	M9910A	7/29/2001	371	RECAP
U2	7/27/2001	HBWF	381	MJM010601				
U2	7/27/2001	HBWF	389	MJM010603				
U2	7/27/2001	GRAY	386	MJM010604				
U2	7/27/2001	BDWF	490	MJM010605				
U2	7/27/2001	RDWF	358	MJM010606				
U2	7/27/2001	HBWF	388	MJM010607				
U2	7/27/2001	HBWF	413	MJM010608				
U2	7/27/2001	HBWF	435	MJM010609				
U2	7/27/2001	GRAY	355	MJM010610				
U2	7/27/2001	HBWF	452	MJM010611				
U2	7/27/2001	HBWF	418	MJM010612				
U2	7/27/2001	HBWF	430	MJM010613				
U2	7/27/2001	GRAY	340	MJM010614				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
U2	7/27/2001	GRAY	339	MJM010615				
U2	7/27/2001	GRAY	371	MJM010616				
U2	7/27/2001	BDWF	398	MJM010617				
U2	7/27/2001	HBWF	441	MJM010618				
U2	7/27/2001	HBWF	403	MJM010619				
U2	7/27/2001	BDWF	366	MJM010620				
U2	7/27/2001	HBWF	369	MJM010621				
U2	7/27/2001	RDWF	407	MJM010623				
U2	7/27/2001	BDWF	339	MJM010624				
U2	7/27/2001	BDWF	326	MJM010625				
U2	7/27/2001	GRAY	350	MJM010626				
U2	7/27/2001	HBWF	406	MJM010627				
U2	7/27/2001	BDWF	370	MJM010628				
U2	7/27/2001	HBWF	398	MJM010630				
U2	7/27/2001	BDWF	361	MJM010631				
U2	7/27/2001	RDWF	395	MJM010632				
U2	7/27/2001	BDWF	501	MJM010633				
U2	7/27/2001	HBWF	413	MJM010634				
U2	7/27/2001	HBWF	402	MJM010635				
U2	7/27/2001	RDWF	346	MJM010636				
U2	7/27/2001	HBWF	382	MJM010638				
U2	7/27/2001	HBWF	396	MJM010639				
U2	7/27/2001	LSCS	270	MJM010640				
U2	7/27/2001	HBWF	414	MJM010641				
U2	7/27/2001	HBWF	441	MJM010642				
U2	7/27/2001	HBWF	368	MJM010643				
U2	7/27/2001	HBWF	411	MJM010644				
U2	7/27/2001	HBWF	366	MJM010645				
U2	7/27/2001	HBWF	400	MJM010646				
U2	7/27/2001	GRAY	356	MJM010647				
U2	7/27/2001	HBWF	387	MJM010648				
U2	7/27/2001	HBWF	431	MJM010649				
U2	7/27/2001	BDWF	410	MJM010650				
U2	7/27/2001	HBWF	408	MJM011001				
U2	7/27/2001	HBWF	385	MJM011002				
U2	7/27/2001	BDWF	407	MJM011003				
U2	7/27/2001	HBWF	455	MJM011004				
U2	7/27/2001	HBWF	427	MJM011005				
U2	7/27/2001	BDWF	393	MJM011006				
U2	7/27/2001	RDWF	383	MJM011007				
U2	7/27/2001	HBWF	366	MJM011008				
U2	7/27/2001	HBWF	397	MJM011009				
U2	7/27/2001	HBWF	449	MJM011010				
U2	7/27/2001	BDWF	495	MJM011011				
U2	7/27/2001	HBWF	409	MJM011012				
U2	7/27/2001	HBWF	407	MJM011013				
U2	7/27/2001	RDWF	395	MJM011014				
U2	7/27/2001	RDWF	366	MJM011015				
U2	7/27/2001	RDWF	359	MJM011016				
U2	7/27/2001	BDWF	352	MJM011017				
U2	7/27/2001	HBWF	400	MJM011018				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
U2	7/27/2001	GRAY	329	MJM011019				
U2	7/27/2001	HBWF	426	MJM011020				
U2	7/27/2001	HBWF	438	MJM011021				
U2	7/27/2001	HBWF	403	MJM011022				
U2	7/27/2001	HBWF	374	MJM011023				
U2	7/27/2001	RDWF	369	MJM011024				
U2	7/27/2001	HBWF	399	MJM011025				
U2	7/27/2001	HBWF	384	MJM011026				
U2	7/27/2001	HBWF	398	MJM011027				
U2	7/27/2001	HBWF	404	MJM011028				
U2	7/27/2001	BDWF	427	MJM011029				
U2	7/27/2001	HBWF	431	MJM011030				
U2	7/27/2001	HBWF	409	MJM011031				
U2	7/27/2001	GRAY	302	MJM011032				
U2	7/27/2001	HBWF	417	MJM011033				
U2	7/27/2001	HBWF	458	MJM011034				
U2	7/27/2001	HBWF	405	MJM011035				
U2	7/27/2001	HBWF	381	MJM011036				
U2	7/27/2001	HBWF	418	MJM011037				
U2	7/27/2001	LSCS	279	MJM011059				
U2	7/27/2001	GRAY	338	MJM011061				
U2	7/27/2001	BDWF	361	MJM011062				
U2	7/27/2001	HBWF	416	MJM011063				
U2	7/27/2001	RDWF	369	MJM011064				
U2	7/27/2001	BDWF	359	MJM011065				
U2	7/27/2001	HBWF	372	MJM011066				
U2	7/27/2001	HBWF	406	MJM011067				
U2	7/27/2001	HBWF	335	MJM011069				
U2	7/27/2001	GRAY	343	MJM011070				
U2	7/27/2001	HBWF	384	MJM011071				
U2	7/27/2001	HBWF	428	MJM011072				
U2	7/27/2001	BDWF	429	MJM011073				
U2	7/27/2001	GRAY	436	MJM011074				
U2	7/27/2001	HBWF	411	MJM011075				
MC7916C	7/28/2001	HBWF	372	MJM011401				
MC7916C	7/28/2001	LSCS	286	MJM011402				
MC7916C	7/28/2001	LSCS	265	MJM011403				
MC7916C	7/28/2001	LSCS	256	MJM011404				
MC7916C	7/28/2001	GRAY	373	MJM011405				
F2A	7/28/2001	GRAY	264	MJM011112				
F3	7/28/2001	GRAY	251	MJM011113				
F3	7/28/2001	GRAY	369	MJM011115				
M9910A	7/28/2001	GRAY	273	MJM010467				
M9910A	7/28/2001	HBWF	316	MJM010468				
U2	7/28/2001	HBWF	384	MJM010651				
U2	7/28/2001	HBWF	393	MJM010652				
U2	7/28/2001	GRAY	269	MJM010653				
U2	7/28/2001	HBWF	386	MJM010654				
U2	7/28/2001	HBWF	419	MJM010655				
U2	7/28/2001	RDWF	383	MJM010656				
U2	7/28/2001	RDWF	355	MJM010658				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
U2	7/28/2001	HBWF	406	MJM010659				
U2	7/28/2001	GRAY	271	MJM010660				
U2	7/28/2001	GRAY	266	MJM010661				
U2	7/28/2001	BDWF	366	MJM010662				
U2	7/28/2001	HBWF	446	MJM010663				
U2	7/28/2001	HBWF	394	MJM010664				
U2	7/28/2001	GRAY	339	MJM010665				
U2	7/28/2001	HBWF	402	MJM010666	Nanuk	10/30/2001		RECAP
U2	7/28/2001	GRAY	443	MJM010667	U2	7/29/2001	443	RECAP
U2	7/28/2001	BDWF	439	MJM010669				
U2	7/28/2001	BDWF	491	MJM010670				
U2	7/28/2001	HBWF	411	MJM010671				
U2	7/28/2001	GRAY	313	MJM010672				
U2	7/28/2001	GRAY	343	MJM010673				
U2	7/28/2001	HBWF	418	MJM010674				
U2	7/28/2001	BDWF	451	MJM010675				
U2	7/28/2001	HBWF	414	MJM010676				
U2	7/28/2001	HBWF	415	MJM010678				
U2	7/28/2001	HBWF	422	MJM010679				
U2	7/28/2001	GRAY	339	MJM010680				
U2	7/28/2001	HBWF	438	MJM010681				
U2	7/28/2001	BDWF	485	MJM010682				
U2	7/28/2001	HBWF	428	MJM010683				
U2	7/28/2001	BDWF	394	MJM010684				
U2	7/28/2001	HBWF	423	MJM010685				
U2	7/28/2001	HBWF	429	MJM010686				
U2	7/28/2001	HBWF	461	MJM010687				
U2	7/28/2001	HBWF	374	MJM010688				
U2	7/28/2001	HBWF	410	MJM010689				
U2	7/28/2001	HBWF	441	MJM010690				
U2	7/28/2001	BDWF	464	MJM010691				
U2	7/28/2001	BDWF	463	MJM010692				
U2	7/28/2001	BDWF	483	MJM010693				
U2	7/28/2001	RDWF	389	MJM010694				
U2	7/28/2001	BDWF	630	MJM010695				
U2	7/28/2001	HBWF	432	MJM010696				
U2	7/28/2001	HBWF	441	MJM010697				
U2	7/28/2001	HBWF	477	MJM010698				
U2	7/28/2001	HBWF	422	MJM010699				
U2	7/28/2001	BDWF	481	MJM011049				
U2	7/28/2001	HBWF	404	MJM011050				
U2	7/28/2001	HBWF	395	MJM011076				
U2	7/28/2001	BDWF	407	MJM011079				
U2	7/28/2001	HBWF	409	MJM011080				
U2	7/28/2001	BDWF	399	MJM011081				
U2	7/28/2001	HBWF	424	MJM011082				
U2	7/28/2001	HBWF	392	MJM011083				
U2	7/28/2001	HBWF	372	MJM011084				
U2	7/28/2001	GRAY	355	MJM011085				
U2	7/28/2001	HBWF	393	MJM011086				
U2	7/28/2001	HBWF	392	MJM011087				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
U2	7/28/2001	HBWF	379	MJM011089				
U2	7/28/2001	BDWF	401	MJM011090				
U2	7/28/2001	BDWF	406	MJM011091				
U2	7/28/2001	BDWF	498	MJM011092				
U2	7/28/2001	BDWF	452	MJM011093				
U2	7/28/2001	HBWF	429	MJM011094				
U2	7/28/2001	HBWF	400	MJM011095				
U2	7/28/2001	HBWF	404	MJM011096				
U2	7/28/2001	HBWF	398	MJM011097				
U2	7/28/2001	HBWF	441	MJM011099				
U2	7/28/2001	HBWF	424	MJM011100				
U2	7/28/2001	BDWF	519	MJM011101				
U2	7/28/2001	BDWF	419	MJM011102				
U2	7/28/2001	RDWF	359	MJM011104				
U2	7/28/2001	HBWF	390	MJM011105				
U2	7/28/2001	HBWF	389	MJM011106				
U2	7/28/2001	HBWF	371	MJM011107				
U2	7/28/2001	HBWF	412	MJM011108				
U2	7/28/2001	HBWF	392	MJM011109				
U2	7/28/2001	HBWF	428	MJM011110				
U2	7/28/2001	HBWF	432	MJM011111				
MC7916C	7/29/2001	GRAY	329	MJM011420				
MC7916C	7/29/2001	GRAY	317	MJM011422				
MC7916C	7/29/2001	GRAY	351	MJM011423				
MC7916C	7/29/2001	BDWF	336	MJM011425				
J3	7/29/2001	RDWF	273	MJM011415				
J3	7/29/2001	GRAY	274	MJM011416				
J3	7/29/2001	GRAY	356	MJM011418				
J3	7/29/2001	RDWF	264	MJM011419				
M9910A	7/29/2001	GRAY	279	MJM010469				
M9910A	7/29/2001	GRAY	260	MJM010470				
M9910A	7/29/2001	GRAY	271	MJM010471				
M9910B	7/29/2001	GRAY	381	MJM010472	M9910A	7/31/2001	382	RECAP
M9910B	7/29/2001	GRAY	407	MJM010473				
U2	7/29/2001	BDWF	460	MJM011406				
U2	7/29/2001	HBWF	400	MJM011407				
U2	7/29/2001	GRAY	390	MJM011408				
U2	7/29/2001	BDWF	455	MJM011409				
U2	7/29/2001	GRAY	364	MJM011410				
U2	7/29/2001	GRAY	343	MJM011411				
U2	7/29/2001	RDWF	361	MJM011412				
U2	7/29/2001	GRAY	281	MJM011413				
U2	7/29/2001	GRAY	280	MJM011414				
MC7916C	7/30/2001	BDWF	342	MJM011224				
F2A	7/30/2001	GRAY	321	MJM011204				
J3	7/30/2001	RDWF	291	MJM011205				
J3	7/30/2001	RDWF	341	MJM011206				
J3	7/30/2001	RDWF	308	MJM011207				
J3	7/30/2001	RDWF	314	MJM011209				
J3	7/30/2001	LSCS	362	MJM011211				
J3	7/30/2001	GRAY	320	MJM011213				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
J3	7/30/2001	RDWF	351	MJM011214				
J3	7/30/2001	RDWF	360	MJM011215				
J3	7/30/2001	RDWF	315	MJM011216				
J3	7/30/2001	RDWF	303	MJM011218				
J3	7/30/2001	RDWF	315	MJM011219				
J3	7/30/2001	RDWF	263	MJM011220				
J3	7/30/2001	RDWF	290	MJM011222				
J3	7/30/2001	RDWF	370	MJM011223				
M9909A	7/30/2001	LSCS	305	MJM010470				
M9909B	7/30/2001	LSCS	382	MJM010479				
M9909B	7/30/2001	LSCS	312	MJM010480				
M9909B	7/30/2001	LSCS	402	MJM010481				
M9909B	7/30/2001	LSCS	373	MJM010482				
M9909B	7/30/2001	LSCS	370	MJM010483				
M9909B	7/30/2001	BURB	730	MJM010484				
M9910A	7/30/2001	GRAY	253	MJM010441				
M9910A	7/30/2001	GRAY	268	MJM010475				
M9910A	7/30/2001	GRAY	267	MJM010477				
U2	7/30/2001	HBWF	371	MJM011201				
U2	7/30/2001	GRAY	375	MJM011202				
U2	7/30/2001	RDWF	371	MJM011203				
M9909B	7/31/2001	LSCS	331	MJM010485				
M9909B	7/31/2001	LSCS	349	MJM010486				
M9909B	7/31/2001	LSCS	395	MJM010487				
M9909B	7/31/2001	LSCS	391	MJM010488				
M9910A	7/31/2001	GRAY	282	MJM010489				
M9909A	8/1/2001	LSCS	265	MJM010492				
M9909B	8/1/2001	LSCS	369	MJM010493				
M9909B	8/1/2001	LSCS	380	MJM010494				
M9910A	8/1/2001	LSCS	298	MJM010491				
M9909A	8/2/2001	BURB	690	MJM010496				
M9909B	8/2/2001	BDWF	560	MJM010495				
M9910A	8/2/2001	GRAY	275	MJM010497				
M9909B	8/3/2001	BURB	820	MJM010499				
M9910A	8/3/2001	GRAY	305	MJM010305				
U2	8/25/2001	GRAY	365	MJM011329				RADIO
U2	8/25/2001	GRAY	334	MJM011330				RADIO
U2	8/25/2001	GRAY	338	MJM011331				RADIO
MC7916C	8/26/2001	LSCS	254	MJM011327				
MC7916C	8/26/2001	BDWF	326	MJM011328				
F2B	8/26/2001	BURB	462	MJM011326				RADIO
J3	8/26/2001	BURB	640	MJM011301				RADIO
J3	8/26/2001	GRAY	374	MJM011302				RADIO
J3	8/26/2001	GRAY	330	MJM011304				
J3	8/26/2001	GRAY	425	MJM011305				
J3	8/26/2001	GRAY	401	MJM011306				RADIO
J3	8/26/2001	GRAY	325	MJM011307				
U2	8/26/2001	GRAY	341	MJM011308				
U2	8/26/2001	GRAY	359	MJM011309				
U2	8/26/2001	GRAY	370	MJM011310				
U2	8/26/2001	GRAY	385	MJM011311				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
U2	8/26/2001	GRAY	335	MJM011312				
U2	8/26/2001	GRAY	331	MJM011313				
U2	8/26/2001	GRAY	347	MJM011314				
U2	8/26/2001	BDWF	555	MJM011315				RADIO
F2A	8/27/2001	GRAY	308	MJM011316				
F3	8/27/2001	GRAY	375	MJM011317				RADIO
F3	8/27/2001	GRAY	368	MJM011318				RADIO
F3	8/27/2001	GRAY	307	MJM011319				
MC7916C	8/28/2001	BDWF	356	MJM011323				
F2A	8/28/2001	BURB	455	MJM011324				RADIO
F3	8/28/2001	GRAY	319	MJM011325				
F3	8/28/2001	BDWF	456	MJM011351				
F3	8/28/2001	BURB	555	MJM011352				RADIO
J3	8/28/2001	GRAY	368	MJM011353				
J3	8/28/2001	GRAY	324	MJM011354				
J3	8/28/2001	GRAY	379	MJM011355				
U2	8/28/2001	GRAY	343	MJM011320				
U2	8/28/2001	GRAY	369	MJM011321				
U2	8/28/2001	GRAY	355	MJM011322				
F2A	8/29/2001	GRAY	265	MJM011361				
F2A	8/29/2001	GRAY	355	MJM011362				
F2A	8/29/2001	GRAY	290	MJM011363				
F3	8/29/2001	BDWF	514	MJM011364				
F3	8/29/2001	BDWF	532	MJM011365				
J3	8/29/2001	GRAY	365	MJM011366				
J3	8/29/2001	GRAY	345	MJM011367				
J3	8/29/2001	GRAY	340	MJM011368				
J3	8/29/2001	BURB	600	MJM011370				RADIO
U2	8/29/2001	GRAY	270	MJM011356				
U2	8/29/2001	GRAY	272	MJM011357				
U2	8/29/2001	GRAY	320	MJM011358				
U2	8/29/2001	HBWF	434	MJM011359				
U2	8/29/2001	BDWF	481	MJM011360				
F3	8/30/2001	BURB	598	MJM011380				RADIO
J3	8/30/2001	GRAY	310	MJM011381				
J3	8/30/2001	GRAY	357	MJM011382				
U2	8/30/2001	GRAY	337	MJM011371				
U2	8/30/2001	GRAY	357	MJM011372				
U2	8/30/2001	GRAY	372	MJM011373				
U2	8/30/2001	GRAY	339	MJM011374				
U2	8/30/2001	GRAY	385	MJM011375				
U2	8/30/2001	GRAY	345	MJM011376				
U2	8/30/2001	GRAY	325	MJM011377				
U2	8/30/2001	GRAY	317	MJM011378				
U2	8/30/2001	GRAY	262	MJM011379				
F3	8/31/2001	BURB	500	MJM011386				RADIO
J3	8/31/2001	GRAY	433	MJM011387				
U2	8/31/2001	GRAY	303	MJM011383				
U2	8/31/2001	BDWF	438	MJM011384				
U2	8/31/2001	BDWF	495	MJM011385				
J3	9/1/2001	GRAY	365	MJM011397				

Appendix Table C-13. Tagged fish released in eastern NPR-A during 2001.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes ³
U2	9/1/2001	GRAY	345	MJM011388				
U2	9/1/2001	GRAY	374	MJM011389				
U2	9/1/2001	GRAY	369	MJM011390				
U2	9/1/2001	GRAY	366	MJM011391				
U2	9/1/2001	GRAY	356	MJM011392				
U2	9/1/2001	GRAY	352	MJM011393				
U2	9/1/2001	GRAY	381	MJM011394				
U2	9/1/2001	GRAY	350	MJM011395				
U2	9/1/2001	GRAY	393	MJM011396	U2	9/2/2001	393	RECAP
U2	9/2/2001	GRAY	352	MJM011398				
U2	9/2/2001	GRAY	338	MJM011399				
U2	9/2/2001	GRAY	357	MJM011400				
U2	9/2/2001	GRAY	336	MJM011501				
U2	9/2/2001	GRAY	292	MJM011502				
U2	9/2/2001	GRAY	297	MJM011503				
U2	9/2/2001	GRAY	269	MJM011504				
U2	9/2/2001	GRAY	360	MJM011505				RADIO
U2	9/2/2001	BDWF	432	MJM011506				RADIO

¹ Species Codes:

BDWF = broad whitefish
 HBWF = humpback whitefish
 LSCS = least cisco
 RDWF = round whitefish
 GRAY = arctic grayling
 BURB = burbot

² Capture Station:

Nanuk - Nechelik Channel near outlet of Nanuk Lake
 Upper Nigliq - Nechleik Channel near Nuiqsut

³ Notes:

RECAP = tag recapture
 RADIO = radio tag applied

Appendix Table C-14. Tagged fish released in eastern NPR-A during 2002.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes
U1	6/25/2001	GRAY	309	MJM010118	U2	6/25/2002	319	Recapture
MC7916C	7/25/2001	GRAY	332	MJM010835	CK17A	6/23/2002	341	Recapture
F2A	7/27/2001	GRAY	271	MJM011038	U2	7/22/2002	302	Recapture
F2A	8/27/2001	GRAY	308	MJM011316	U2	6/24/2002	315	Recapture
U2	6/21/2002	GRAY	200	MJM020002				
U2	6/21/2002	GRAY	225	MJM020003				
U2	6/21/2002	GRAY	225	MJM020003	U2	6/22/2002	275	Recapture
U2	6/21/2002	GRAY	217	MJM020004				
U2	6/21/2002	GRAY	202	MJM020005				
U2	6/21/2002	GRAY	218	MJM020006				
U2	6/21/2002	GRAY	213	MJM020007				
U2	6/21/2002	GRAY	215	MJM020008				
U2	6/21/2002	GRAY	208	MJM020009				
U2	6/21/2002	GRAY	232	MJM020010				
U2	6/21/2002	GRAY	218	MJM020011				
U2	6/21/2002	GRAY	226	MJM020012				
U2	6/21/2002	GRAY	203	MJM020013				
U2	6/21/2002	HBWF	309	MJM020015				
U2	6/21/2002	GRAY	285	MJM020016				
U2	6/21/2002	GRAY	226	MJM020019				
U2	6/21/2002	GRAY	260	MJM020020				
U2	6/21/2002	GRAY	195	MJM020021				
U2	6/21/2002	GRAY	296	MJM020022				
U2	6/21/2002	GRAY	273	MJM020023				
U2	6/21/2002	GRAY	202	MJM020024				
U2	6/21/2002	GRAY	237	MJM020025				
U2	6/21/2002	GRAY	206	MJM020026				
U2	6/21/2002	GRAY	211	MJM020027				
U2	6/21/2002	GRAY	230	MJM020028				
U2	6/21/2002	GRAY	218	MJM020029				
U2	6/21/2002	GRAY	212	MJM020030				
U2	6/21/2002	GRAY	191	MJM020031				
U2	6/21/2002	GRAY	253	MJM020032				
U2	6/21/2002	GRAY	215	MJM020033				
U2	6/21/2002	GRAY	205	MJM020034				
U2	6/21/2002	GRAY	188	MJM020034				
U2	6/21/2002	GRAY	235	MJM020035				
U2	6/21/2002	GRAY	335	MJM020036				
M0201A	6/22/2002	GRAY	332	MJM020038				
M0201A	6/22/2002	GRAY	279	MJM020039				
CK17B	6/25/2002	GRAY	278	MJM020039				
CK17A	6/22/2002	GRAY	322	MJM020040				
CK17A	6/22/2002	GRAY	319	MJM020041				
U2	6/22/2002	GRAY	329	MJM020042				
U2	6/22/2002	GRAY	327	MJM020043				
U2	6/22/2002	GRAY	225	MJM020044				
U2	6/22/2002	GRAY	227	MJM020045				
U2	6/22/2002	GRAY	377	MJM020046				
U2	6/22/2002	GRAY	305	MJM020047				
U2	6/22/2002	GRAY	370	MJM020048				
U2	6/22/2002	GRAY	190	MJM020049				

Appendix Table C-14. Tagged fish released in eastern NPR-A during 2002.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes
U2	6/22/2002	GRAY	335	MJM020050				
U2	6/22/2002	GRAY	285	MJM020051				
U2	6/22/2002	GRAY	355	MJM020052				
CK17A	6/23/2002	GRAY	294	MJM020053				
CK17A	6/23/2002	GRAY	294	MJM020053	CK17B	6/26/2002	295	Recapture
CK17A	6/23/2002	GRAY	277	MJM020054				
CK17A	6/23/2002	GRAY	269	MJM020055				
U2	6/23/2002	GRAY	366	MJM020057				
U2	6/23/2002	RDWF	332	MJM020058				
U2	6/23/2002	GRAY	361	MJM020059				
U2	6/23/2002	GRAY	376	MJM020060				
M0201A	6/24/2002	GRAY	296	MJM020061				
U2	6/24/2002	GRAY	277	MJM020062				
U2	6/24/2002	GRAY	273	MJM020063				
U2	6/24/2002	HBWF	396	MJM020066				
CK17A	6/25/2002	GRAY	240	MJM020068				
U2	6/25/2002	RDWF	201	MJM020069				
U2	6/25/2002	GRAY	322	MJM020070				
U2	6/25/2002	GRAY	345	MJM020073				TAG SCAR
CK17B	6/26/2002	GRAY	239	MJM020074				
CK17B	6/26/2002	GRAY	315	MJM020076				
CK17B	6/26/2002	GRAY	316	MJM020077				
CK17A	6/26/2002	GRAY	215	MJM020092				
CK17A	6/26/2002	GRAY	252	MJM020093				
U2	6/26/2002	LSCS	272	MJM020094				
U2	6/26/2002	LSCS	312	MJM020098				
CK17A	6/27/2002	GRAY	197	MJM020099				
CK17A	6/27/2002	GRAY	225	MJM020100				
CK17A	6/27/2002	GRAY	356	MJM020101				
U2	6/27/2002	HBWF	393	MJM020102				
U2	6/27/2002	HBWF	420	MJM020104				
U2	6/27/2002	GRAY	245	MJM020105				
U2	6/27/2002	GRAY	181	MJM020107				
U2	6/27/2002	GRAY	236	MJM020108				
U2	6/27/2002	GRAY	347	MJM020109				
U2	6/27/2002	GRAY	340	MJM020110				
U2	6/27/2002	GRAY	386	MJM020111				
U2	7/20/2002	BDWF	344	MJM020445				
U2	7/20/2002	BDWF	331	MJM020446				
U2	7/20/2002	GRAY	238	MJM020447				
U2	7/20/2002	HBWF	424	MJM020448				
U2	7/20/2002	GRAY	360	MJM020450				
U2	7/20/2002	GRAY	297	MJM020451				
U2	7/20/2002	GRAY	300	MJM020453				
U2	7/20/2002	GRAY	225	MJM020454				
U2	7/20/2002	RDWF	234	MJM020455				
U2	7/20/2002	GRAY	270	MJM020456				
U2	7/20/2002	GRAY	235	MJM020457				
U2	7/21/2002	RDWF	256	MJM020458				
U2	7/21/2002	GRAY	290	MJM020459				
CK17B	7/22/2002	GRAY	190	MJM020460				

Appendix Table C-14. Tagged fish released in eastern NPR-A during 2002.

Release Station	Release Date	Species ¹	Fork Length (mm)	Tag Number	Capture Station ²	Capture Date	Capture Length	Notes
CK17B	7/22/2002	GRAY	190	MJM020460	CK17B	7/24/2002	192	Recapture
U2	7/22/2002	LSCS	307	MJM020461				
U2	7/22/2002	GRAY	235	MJM020462				
U2	7/22/2002	RDWF	268	MJM020463				
U2	7/22/2002	BDWF	380	MJM020464				
U2	7/22/2002	BDWF	347	MJM020466				
U2	7/22/2002	GRAY	268	MJM020467				
U2	7/22/2002	GRAY	185	MJM020468				
CK17A	7/23/2002	GRAY	210	MJM020478				
U2	7/27/2002	GRAY	278	MJM020484				
U2	7/28/2002	GRAY	189	MJM020485				
U2	7/28/2002	GRAY	384	MJM020486				
U2	7/31/2002	RDWF	308	MJM020488				
U2	7/31/2002	GRAY	295	MJM020490				
U2	8/1/2002	BDWF	437	MJM020492				Net Scars
U2	8/1/2002	GRAY	418	MJM020493				
U2	8/1/2002	GRAY	333	MJM020495				
U2	8/1/2002	GRAY	280	MJM020496				
U2	8/1/2002	GRAY	272	MJM020497				
U2	8/1/2002	GRAY	269	MJM020498				
U2	8/1/2002	GRAY	330	MJM020499				
U2	8/3/2002	GRAY	216	MJM020500				
U2	8/3/2002	GRAY	233	MJM020551				
U2	8/3/2002	GRAY	227	MJM020552				
U2	8/3/2002	GRAY	257	MJM020553				
U2	8/3/2002	GRAY	251	MJM020554				
U2	8/3/2002	GRAY	281	MJM020555				
U2	8/3/2002	GRAY	377	MJM020556				
U2	8/4/2002	GRAY	183	MJM020557				

¹ Species Codes:

BDWF = broad whitefish
 HBWF = humpback whitefish
 LSCS = least cisco
 RDWF = round whitefish
 GRAY = arctic grayling
 BURB = burbot

² Capture Station:

Nanuk - Nechelik Channel near outlet of Nanuk Lake
 Upper Nigliq - Nechleik Channel near Nuiqsut

APPENDIX D
Length frequencies of fish caught by fyke net
in eastern NPR-A during 2001-2002

Appendix Table D-1. Length frequencies of arctic grayling caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station F1					Station F1A		Station F2A							
	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 26	Jun 28	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
0															
10															
20															
30															
40															
50	1				1										8
60				3	3	1		4	4						
70	1	3						5	1	2		1			
80												1		1	1
90															
100															
110					1										
120			1												
130	1														
140															
150															
160				1											
170															
180															
190															
200										1					
210															
220				1											
230					1										
240															
250			1	1											
260															
270	1									1		1			
280															
290															
300															
310															
320															1
330	1									2					
340															
350			1	1											
360															
370															
380															
390															
400															
410															
420															
430															
440															
450															
460															
470															
480															
490															
500															
Total:	5	6	8	5	1	9	13	3	1	3	1	1	1	1	2

Appendix Table D-1. Length frequencies of arctic grayling caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station F2A				F2B	Station F3								
	Aug 27	Aug 29	Aug 31	Sep 02	Aug 26	Jul 19	Jul 20	Jul 21	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28
0														
10														
20														
30														
40														
50														
60														
70		1					1							
80			1		1				1	1	1	2		
90		1												
100			1											
110														
120														
130														
140														
150														
160														
170														
180														
190														
200														
210														
220														
230														
240														
250							1							1
260		1												
270				1										
280														
290			1								1		1	
300	1												1	
310							1			1				
320														
330														
340													1	1
350		1									1			1
360								1			1		1	1
370											1			
380														
390														
400											1			
410														
420														
430														
440														
450														
460														
470														
480														
490														
500														
Total:	1	5	2	1	1	2	1	1	1	2	6	2	4	4

Appendix Table D-1. Length frequencies of arctic grayling caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station F3									Station F4					
	Jul 29	Jul 30	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Sep 01	Sep 02	Jun 20	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26
0															
10															
20															
30															
40					1				2	2			3	2	
50			2					1	1		1		5	9	10
60						1					2	4	15	14	9
70	2	1		1							1	1	4	3	
80	1		1												
90	1											1			
100												2		1	
110													1	2	
120										1	1			2	1
130														1	1
140															
150															
160															
170															
180												1	1		1
190													1		
200															1
210											1				
220												1			
230												1			
240															
250															
260												1			
270															
280															
290						1						1			
300						1									
310							1								
320															
330															
340															
350															
360						1									
370						1									
380															
390															
400															
410															
420															
430															
440															
450															
460															
470															
480															
490															
500															
Total:	4	1	3	2	5	1	1	3	2	5	7	32	34	27	9

Appendix Table D-1. Length frequencies of arctic grayling caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station F4		Station J3												
	Jun 27	Jun 28	Jun 21	Jun 22	Jun 23	Jul 20	Jul 21	Jul 23	Jul 24	Jul 26	Jul 27	Jul 29	Jul 30	Aug 26	Aug 28
0															
10															
20															
30															
40															
50	2	1													
60	2	1			1						1				
70	1	1				1	1	1		2	1		1		
80										2	2				
90															
100															
110															
120															
130															
140			1												
150															
160						1									
170					2										
180															
190															
200															
210	1														
220															
230				1											
240															
250		1													
260															
270									1			1			
280															
290															
300															
310											1				
320													1	1	1
330										1	1			2	
340									1						
350												1			
360															1
370														1	1
380														1	
390															
400														1	
410															
420														1	
430															
440															
450															
460															
470															
480															
490															
500															
Total:	6	4	1	1	3	2	1	1	2	5	6	2	3	7	3

Appendix Table D-1. Length frequencies of arctic grayling caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station J3					Station J3A					Station M0142		MC7916A
	Aug 29	Aug 30	Aug 31	Sep 01	Sep 02	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28	Jun 22	Jun 23	Jun 23
0													
10													
20													
30													
40	1		2	5									
50	2				1			1	3	5	1	8	
60						6	3	2		2	3	4	
70						1	1	1	1	1		1	
80					1			1					
90	1					1	2					1	
100						3	2						
110	1					2	2	2					
120						3							
130													
140													
150													1
160													
170			1								1	1	
180	1						1					1	
190											1		
200											1	1	
210							1						
220											1		
230													
240													
250													
260													
270													
280													
290													
300													
310			1							1			
320													
330							1			1			
340	2										1		1
350			1					2					
360	1				1								
370													
380							1	1					
390							1						
400								1					
410													
420													
430				1									
440													
450													
460													
470													
480													
490													
500													
Total:	9	3	3	6	2	18	16	11	3	8	9	18	1

Appendix Table D-1. Length frequencies of arctic grayling caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station MC7916B				Station MC7916C												
	Jun 24	Jun 25	Jun 26	Jun 27	Jun 25	Jun 26	Jun 27	Jun 28	Jul 20	Jul 21	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	
0																	
10																	
20																	
30																	
40																	
50																	
60							1		11	4	1				1		
70									23	15	5	12	1	3	5	2	
80									4	4	7	4		3	4	1	
90																	
100							2										
110							1		1								
120							1		1								
130							1										
140																	
150																	
160												1					
170																	
180																	
190							1										
200																	
210				1													
220																	
230												1					
240			1														
250																	
260																	
270												1	1				
280																	
290																	
300											2						
310				1													
320										1		1					
330												1	1			1	
340	1			1	1					1						1	
350											1	1		1			
360				1							2			1		1	
370				1												1	
380				1	1							1					
390										1					1		
400																	
410							1										
420																	
430																	
440																	
450																	
460																	
470																	
480																	
490																	
500																	
Total:	1	1	6	2		3	1	5	2	38	26	18	23	3	8	11	7

Appendix Table D-1. Length frequencies of arctic grayling caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station MC7916C										Station U1				
	Jul 29	Jul 30	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31		Jun 20	Jun 21	Jun 22	Jun 23	Jun 24
0															
10															
20															
30															
40															
50															1
60															
70			4												
80	3	3						1							
90		2	2	1	2	3	3				1				
100				1				1	1	2	19	1	2	4	
110											28	1		4	
120											10			1	
130											2		1		
140											3			1	
150		1									12	3			
160			1								19	8	3	2	
170				1					1		37	8	1	5	
180											35	4	1	4	
190											9				1
200			1					1			4	1			
210											8	2			
220											5			1	
230	1								1	1					
240														1	
250														1	
260															
270														1	
280															
290															
300															
310		1									1			2	
320		1													
330													2		
340															
350		2													1
360															
370															
380															
390															
400															
410															
420															
430															
440															
450															
460															
470															
480															
490															
500															
Total:	8	10	4	3	2	3	6	3	4		193	28	10	27	2

Appendix Table D-1. Length frequencies of arctic grayling caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station U1				Station U2										
	Jun 25	Jun 26	Jun 27	Jun 28	Jul 20	Jul 21	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30	Aug 25
0															
10															
20															
30															
40															
50															
60							1								
70					1	4	2		4		3	3		4	
80						1	6	2	8	3	6	6	9		
90	1										1		2		
100	14	2	2				1								
110	17	4	1	1											
120	6	1	1							1					
130		1							2	1				1	
140	1						1	1	1	2		2			
150	1	1					1	1				1			
160	2	2													
170	3	3	2					1							
180	5	2						1	1	1		1			
190	1	3	1					1		1					
200	3	3					1	1				1	1	1	
210	2	6										1	1		1
220	3	4	1						1						
230													1		
240	4	1		1					1						
250		2													
260	3	1	1							1		2			
270	1	1						1	2				1		
280								2	4		2			2	
290			1			1			1	1	1				
300	3						1	1				1			
310	3							2	2				1		
320	2	2						1		1		1			
330	4		1	2			2	1	1	1	3	2			2
340	2		1				1	3	1	4	2	1	1		
350	4	2	1	1			1	3	1	5	3	1			
360	3						3	2	1	1			1		1
370	1	1								2	1			1	1
380	1							1		2	1				
390	1							1					1		
400	2	1						1							
410							1								
420										1					
430															
440												1	1		
450															
460															
470															
480															
490															
500															
Total:	93	43	13	6	2	8	27	28	23	29	24	25	24	1	5

Appendix Table D-1. Length frequencies of arctic grayling caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station U2						
	Aug 26	Aug 28	Aug 29	Aug 30	Aug 31	Sep 01	Sep 02
0							
10							
20							
30							
40							
50							
60							
70							
80							
90							
100							
110							
120							
130							
140	1						
150							
160							
170							
180							
190							
200		1					
210			1			1	
220							
230							1
240							
250							
260				1			1
270		1	2				
280							
290							2
300					1		
310				1			
320			1	1			
330	2			2			2
340	2	1		1		2	
350	1	1		1		3	3
360		1				2	1
370	1			1		1	
380	1					1	
390						1	1
400							
410							
420							
430							
440							
450							
460							
470							
480							
490							
500							
Total:	8	5	4	9	1	11	11

Appendix Table D-2. Length frequencies of Arctic grayling caught by fyke net during 2002.

Fork Length (mm)	CK16A					CK16B	CK17A							
	Jun 21	Jun 22	Jun 25	Jun 27	Jul 20	Jul 23	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jul 20	Jul 21
0														
10														
20														
30														
40														
50								1		3	1	3		
60	1	1					6	1		5	22	44	4	3
70							2		1		15	43	28	15
80				1	1				1	1	2	3	6	
90							1			4	9	7	4	1
100		1	1	1			1	1	3		10	17	1	
110		1						2	1	1	14	5	2	2
120								1		1	2	3	3	
130				1			1					1		1
140											1			
150														
160														
170											3			
180														
190												1		
200														
210											1			
220												1		
230										1				
240														
250											1			
260								1						
270								1						
280														
290								1						
300														
310							1							
320							1							
330														
340								1						
350												1		
360														
370														
380														
390														
400														
410														
420														
430														
440														
450														
Total:	1	3	1	3	1	1	13	10	6	16	81	129	48	22

Appendix Table D-2. Length frequencies of Arctic grayling caught by fyke net during 2002.

Fork Length (mm)	CK17A							CK17B						
	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jun 25	Jun 26	Jun 27	Jul 20	Jul 21	Jul 22	Jul 23
0														
10														
20														
30					1		1							
40														
50														
60	5							1	3	5	1		1	
70	36	6	5	2	4	1	3	5	10	4	18	5	5	2
80	22	8	5	2	4	1	3	1		5	4	5	2	2
90	5	1				1	4		3	2	1	2		1
100								7	20	18	3	3		
110	5	2						3	8	13	2	3		1
120	2	2	4	1	2		4	3	6	3	6	6	1	1
130	1	1	1	1	3	2	2		1		8	11	4	
140												1	1	
150														
160														
170								1						
180														
190													1	
200														
210		1												
220														
230									1					
240														
250														
260														
270								1						
280								1						
290									1					
300														
310									2					
320														
330														
340														
350														
360														
370														
380														
390														
400														
410														
420														
430														
440														
450														
Total:	76	21	15	7	14	9	13	23	55	50	43	36	15	7

Appendix Table D-2. Length frequencies of Arctic grayling caught by fyke net during 2002.

Fork Length (mm)	CK17B					M0201A			M9914A				
	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jun 22	Jun 23	Jun 24	Jun 25	Jun 27	Jul 21	Jul 24	Jul 27
0													
10													
20													
30													
40													
50								1					
60							1	2	3				
70	1	1		4	1	4	2						
80	2	1	2	14	1	1				1	1		1
90			1	3		2	2	1					
100					1	6	2	1					
110			2	1		5		1					
120			2	2		2	2	1					
130	1		5	3	1								
140			2			1					1	1	
150				1									
160													
170							1						
180													
190	1												
200													
210													
220													
230													
240													
250													
260													
270							1						
280													
290									1				
300													
310													
320													
330							1						
340													
350													
360													
370													
380													
390													
400													
410													
420													
430													
440													
450													
Total:	5	2	14	28	4	24	10	8	1	1	1	1	1

Appendix Table D-2. Length frequencies of Arctic grayling caught by fyke net during 2002.

Fork Length (mm)	Station U2													
	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26
0														
10														
20														
30														
40														1
50	4		4	2	8	33	43							
60	2	2	6	2	22	42	56	27	4	1		1		
70					2	2	4	68	8	11	1	7	1	1
80	1						1	20	3	2	1	7		
90	1	4			1		3	2	1		1			
100	3	11			4	1	8							
110	1	7	1		2		5		2	1				
120		3						4	2			1		
130		1												
140		1				1		2	1	1				
150	1	2		1										
160	1	1		1		1	1							
170		2				1		2						
180	1						1			1				
190	2	1				1								
200	7													
210	9													
220	3	2						1						
230	4						1	1	2		1			
240							1							
250	1													
260	1									1				
270	1	1		2				1						
280	1													
290	1			1		1		1	1					
300		1						1		1				
310				1	1									
320		2			1									
330	1	1												
340					1		2							
350		1												
360			2					1						
370		2	1											
380							1							
390														
400														
410														
420														
430														
440														
450														
Total:	46	46	14	10	42	84	127	132	22	20	3	16	1	2

Appendix Table D-2. Length frequencies of Arctic grayling caught by fyke net during 2002.

Fork Length (mm)	Station U2									
	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 01	Aug 02	Aug 03	Aug 04	Aug 06
0										
10										
20										
30	1						2			
40						1			1	1
50										
60				1			1		1	
70				1	1	3	1	4	6	
80			1		2	2	5	2	6	
90									1	
100										
110						1		1		
120						1			2	
130										
140								1	1	
150										
160										
170								1		
180		1							1	
190										
200										
210								1		
220								1		
230								1		
240										
250								2		
260						1				
270	1					1				
280						1		1		
290					1					
300										
310										
320										
330						2				
340										
350										
360										
370								1		
380		1								
390										
400										
410						1				
420										
430										
440										
450										
Total:	2	2	1	2	4	14	9	16	19	1

Appendix Table D-3. Length frequencies of broad whitefish caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station F1		F1A	Station F2A						Station F3			
	Jun 22	Jun 23	Jun 28	Jul 24	Jul 27	Aug 28	Aug 29	Aug 30	Sep 02	Jul 19	Jul 25	Jul 26	Aug 27
0													
10													
20													
30										4			
40				1		1	1	1		1	2	1	
50													
60	1						2	1	1				1
70			3										
80		2											
90			1										
100													
110													
120													
130													
140													
150													
160													
170	1												
180		1											
190													
200													
210													
220													
230													
240													
250													
260													
270													
280													
290													
300													
310													
320													
330													
340													
350													
360													
370													
380													
390													
400													
410						1							
420													
430													
440													
450													
460													
470													
480													
490													
500													
510													
520													
530							3						
540													
550													
560													
570													
580													
590													
600													
610													
620													
630													
640													
650													
Total:	2	3	4	1	1	1	6	1	1	5	2	1	1

Appendix Table D-3. Length frequencies of broad whitefish caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station F3					Station J3					MC7916A		
	Aug 28	Aug 29	Aug 30	Aug 31	Sep 01	Jul 21	Jul 29	Jul 30	Aug 29	Aug 30	Jun 22	Jun 23	Jun 23
0													
10													
20													
30						2							
40							1						
50					3		1		1			1	
60		1		2	5					1	4	10	
70			1					1			24	19	1
80											15	5	
90											1	2	
100													
110													
120											6		
130											14	3	
140											3	1	
150												1	
160											1		
170													
180											1		
190													
200													
210													
220													
230													
240													
250													
260													
270													
280													
290													
300													
310													
320													
330													
340													
350													
360													
370													
380													
390													
400													
410													
420													
430													
440													
450		1											
460													
470													
480													
490													
500													
510			1										
520									1				
530			1										
540													
550													
560													
570													
580													
590													
600									1				
610													
620													
630													
640									1				
650													
Total:	1	3	1	2	8	2	2	1	4	1	69	42	1

Appendix Table D-3. Length frequencies of broad whitefish caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station MC7916B				Station MC7916C								
	Jun 24	Jun 25	Jun 26	Jun 28	Jun 25	Jun 27	Jul 21	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28
0													
10													
20													
30							8	13		4	1	1	
40							10	57	2	43	40	11	2
50										2	8	6	1
60													
70													
80				1			1	1					
90								1					
100													
110													
120													
130													
140	1		1				2						
150													
160													
170													
180													
190													
200													
210													
220													
230													
240													
250													
260													
270													
280													
290													
300													
310			1										
320													
330	1						1						
340													
350												1	
360													
370	1												
380													
390													
400			1										
410													
420													
430													
440							1						
450							1						
460													
470													
480													
490							1						
500													
510													
520													
530													
540													
550													
560													
570				1									
580							1						
590													
600													
610													
620													
630													
640													
650													
Total:	3	2	2	1	5	1	21	71	2	49	49	19	3

Appendix Table D-3. Length frequencies of broad whitefish caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station MC7916C									Station U1		Station U2	
	Jul 29	Jul 30	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Jun 26	Jun 27	Jul 20	Jul 21
0													
10													
20													
30													
40		6	16										
50		7	44	9	21	3	8	7	10	1			
60				64	114	42	72	48	43	32			
70				17	32	9	39	20	8	18			
80													
90													
100													
110						1							
120						3			1				
130						1							
140													
150													
160													
170													
180													
190													
200													
210													
220													
230													
240						1							
250													
260													
270													
280													
290													
300													
310													
320					1					1			
330		1											
340			1										
350							1						1
360													
370													
380													
390													
400													
410													
420													
430												1	1
440													
450												1	
460													
470													
480													
490													
500												1	
510													
520											1		
530													
540												1	
550													
560													
570													
580													
590													
600													
610													
620													
630													
640													
650													
Total:	14	61	90	169	60	120	75	62	51	1	1	4	2

Appendix Table D-3. Length frequencies of broad whitefish caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station U2										
	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Aug 26	Aug 29	Aug 31	Sep 02
0											
10											
20											
30											
40											
50											
60											
70											
80											
90											
100		2					1				
110											
120											
130											
140											
150											
160											
170											
180											
190											
200											
210											
220											
230											
240											
250											
260											
270											
280											
290					2						
300											
310	2				1						
320	1				4	1					
330	2				4	1					
340	1				3						
350	4				4	2					
360	2				3	3	1				
370	2	1			3	1					
380	3				1						
390	2	1			1	2	2				
400	2		1		1	1	3				
410	2	1			1	1	1				
420					2	1					
430					1	1	1			1	1
440											
450		1					2	1			
460	1						2	1			
470				1							
480	1		1	1			3		1		
490			1	1		2	2			1	
500					1						
510							1				
520											
530											
540	1										
550								1			
560											
570											
580											
590											
600											
610											
620											
630							1				
640											
650											
Total:	26	6	4	33	17	20	2	1	1	2	1

Appendix Table D-4. Length frequencies of broad whitefish caught by fyke net during 2002.

Fork Length (mm)	Station U2												
	Jun 26	Jun 27	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Aug 01	Aug 02	Aug 03	Aug 04	Aug 06
0													
10													
20													
30													
40													
50											16	3	
60											26	5	5
70	1	1											
80	1					1							
90			1	1			5	3	2		2		
100			1				6	11	1	1	8		2
110								1			2	1	
120								1					
130													
140													
150													
160													
170													
180													
190													
200													
210													
220													
230													
240													
250													
260													
270													
280													
290													
300													
310													
320													
330			1										
340			1			1							
350													
360													
370													
380						1							
390													
400													
410													
420													
430									1				
440													
450													
460													
470													
480													
490													
500							1						
Total:	2	1	4	1	3	1	11	16	4	1	54	9	7

Appendix Table D-5. Length frequencies of humpback whitefish caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	F2A	Sta. F3	Sta. J3	Station M0142		MC7916A	Station MC7916B					Sta. MC7916C	
	Jul 24	Aug 26	Jul 24	Jun 22	Jun 23	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28	Jun 25	Jul 21
0													
10													
20													
30													
40													
50		1		1	3								
60				1	3								
70													
80													
90					1								
100													
110				2									
120													
130													
140													
150													
160													
170													
180													
190				1									
200													
210													
220													
230													
240													
250													
260													
270													
280													
290													
300													
310													
320							1						
330			1					1					1
340	1						4					1	
350				1			4					1	1
360						1	5	1				3	
370							3	2		1			1
380							4	1				1	
390							4		1				
400	1							2					
410												1	1
420							1	1			1	1	
430							1						
440													
450													
460													
470													
480													
490													
500													
Total:	2	1	1	6	7	1	27	8	1	1	1	8	4

Appendix Table D-5. Length frequencies of humpback whitefish caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station MC7916C					Station U1		Station U2									
	Jul 23	Jul 26	Jul 27	Jul 28	Aug 25	Jun 26	Jun 27	Jul 20	Jul 21	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	
0																	
10																	
20																	
30																	
40																	
50																2	
60																4	
70																	
80																	
90																	
100																	
110																	
120																	
130																	
140																	
150																	
160																	
170																	
180																	
190																	
200																	
210																	
220																	
230																	
240																	
250																	
260																	
270																	
280																	
290																	
300	1																
310																	
320																	
330														1			
340																	
350			1														
360	1						1			3			1	4			
370					1								4	2	4		
380	1		1										3	9	3		
390	1								1	1			8	5	9		
400											1	2	9	13	7	1	
410											2	1	14	9	7		
420											3	1	13	4	9		
430									1		2		5	5	3		
440											1		2	3	4		
450													1	3			
460													1		1		
470															1		
480																	
490																	
500																	
Total:	4	1	1	1	6		1	1	1	1	13	3	2	61	58	48	1

Appendix Table D-5. Length frequencies of humpback whitefish caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station U2	
	Jul 30	Aug 29
0		
10		
20		
30		
40		
50		
60		
70		
80		
90		
100		
110		
120		
130		
140		
150		
160		
170		
180		
190		
200		
210		
220		
230		
240		
250		
260		
270		
280		
290		
300		
310		
320		
330		
340		
350		
360		
370	1	
380		
390		
400		
410		
420		
430		1
440		
450		
460		
470		
480		
490		
500		
Total:	1	1

Appendix Table D-6. Length frequencies of humpback whitefish caught by fyke net during 2002.

Fork Length (mm)	Station U2			
	Jun 21	Jun 24	Jun 27	Jul 20
0				
10				
20				
30				
40				
50				
60				
70				
80				
90				
100				
110				
120				
130				
140				
150				
160				
170				
180				
190				
200				
210				
220				
230				
240				
250				
260				
270				
280				
290				
300	1			
310				
320				
330				
340				
350				
360				
370				
380				
390		1		
400			1	
410				
420			1	1
430				
440				
450				
460				
470				
480				
490				
500				
Total:	1	1	2	1

Appendix Table D-7. Length frequencies of round whitefish caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station F1		F2A	Station F3					F4	Station J3					M0142
	Jun 20	Jun 23	Jul 25	Jul 21	Jul 26	Jul 27	Jul 28	Jul 30	Jun 27	Jul 23	Jul 24	Jul 26	Jul 29	Jul 30	Jun 22
0															
10															
20															
30															
40							1								
50															
60															
70												1			
80															
90															
100															
110															
120															
130															
140															
150															
160		1													
170								1		1				1	
180			1												
190	1		1												2
200							1				1				2
210	1			1						1					1
220						1							1		1
230	1		1										1		3
240					1								1		1
250															
260	1												1		1
270											1		1		
280															
290											1				2
300															2
310				1											3
320									1						
330															
340															1
350												1			1
360															1
370															1
380															
390															
400															
410															
420															
430															
440															
450															
460															
470															
480															
490															
500															
Total:	4	1	3	2	1	1	2	1	1	2	3	2	5	24	1

Appendix Table D-7. Length frequencies of round whitefish caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station MC7916A			Station MC7916C										Station U1	
	Jun 24	Jun 25	Jun 26	Jun 26	Jul 21	Jul 23	Jul 25	Jul 26	Jul 30	Aug 25	Aug 26	Aug 27	Aug 30	Jun 20	Jun 21
0															
10															
20															
30															
40															
50															
60															
70															
80															
90															
100															
110															
120															
130															
140															
150															
160															
170											1				
180					1										
190						1									
200					1					1				1	
210												1			
220															
230															1
240						1		1	1				1		
250															
260					1										
270															
280															
290															
300															
310															
320															
330	1														
340															
350															
360					1			1							
370														1	
380															1
390		1													
400															
410															
420															
430															
440															
450															
460															
470															
480															
490															
500															
Total:	1	1	1	1	3	2	1	1	1	1	1	1	2	1	2

Appendix Table D-7. Length frequencies of round whitefish caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station U1					Station U2									
	Jun 22	Jun 24	Jun 26	Jun 27	Jun 28	Jul 20	Jul 23	Jul 24	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30	Aug 25	Aug 26
0															
10															
20															
30															
40															
50															
60															
70															
80															
90															
100											1				
110											1				
120															
130															
140															
150															
160															
170									1						
180								1							
190			1												
200			1				1		1		1				
210									2	1					
220										1					
230			1		1			1	1						
240									1	1	1				1
250							1								
260	1														1
270															
280															
290															1
300									1	1					1
310								1							1
320															1
330								2							1
340							1	2	1	1					1
350	1		1						1	2	2				
360								1	2	3		1		1	
370	1				1									1	
380									1	1	2				
390						2				2					
400										1					
410															
420															
430															
440															
450															
460															
470															
480															
490															
500															
Total:	3	3	1	2	2	3	6	3	11	14	8	1	1	1	8

Appendix Table D-8. Length frequencies of round whitefish caught by fyke net during 2002.

Fork Length (mm)	Station U2						
	Jun 23	Jun 25	Jul 20	Jul 21	Jul 22	Jul 24	Jul 31
0							
10							
20							
30							
40							
50							
60							
70							
80							
90							
100							
110							
120							
130							
140							
150							
160				1			
170				1			
180							
190					1		
200		1					
210				1			1
220							
230				1			
240							
250					1		
260						1	
270							
280							
290							
300							1
310							
320							
330		1					
340							
350							
360							
370							
380							
390							
400							
410							
420							
430							
440							
450							
460							
470							
480							
490							
500							
Total:	1	1	4	2	1	1	1

Appendix Table D-9. Length frequencies of least cisco caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station F1					Station F1A		Station F2A		F2B	Station F3		Station F4	
	Jun 20	Jun 21	Jun 22	Jun 23	Jun 24	Jun 26	Jun 28	Jul 26	Aug 31	Aug 26	Aug 29	Sep 01	Jun 20	Jun 22
0														
10														
20														
30														
40														
50								2	1			1		1
60								6	3					
70														
80														
90									2					
100					1									
110	2	2	4	2		1	1							
120		1	1	1		1	1							
130						1	1							
140		2		2		3	1							
150	2	2	1	1		1	1				2	1		1
160		1	4											
170		3	1	2										
180	2		2											
190	1	1	3		1									
200		1	1		1									2
210	2		3											
220	1	1												1
230		1	1											
240		1												
250														
260														
270														
280														
290									1					1
300														
310														
320														
330														
340														
350														
360														
370														
380														
390														
400														
Total:	10	16	21	9	2	15	9	0	3	1	2	2	1	5

Appendix Table D-9. Length frequencies of least cisco caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station F4						Station 3						J3A	
	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28	Jun 23	Jul 21	Jul 29	Jul 30	Aug 25	Aug 28	Sep 01	Jun 24
0														
10														
20														
30														
40		2				1			1			1		
50				1		2								
60		2	1	1										
70									6					
80				1					3					
90								1						
100	3					1								
110	2					1			2		1			
120	2	1			3	1	1							
130	1	1				1			2		1			
140		1			1				1					
150	1	1			2				1				1	
160	1			1										
170					2									
180					2						1		1	
190					1				3					
200		1			2				2			1		
210		1		1	1									1
220														2
230														
240														
250	1													
260	1								1					
270				1					1					
280														
290			1	1										
300				1					1					
310														
320														
330														
340														
350														
360										1				
370														
380														
390														
400														
Total:	12	11	8	15	6	4	14	1	10	3	1	2	1	3

Appendix Table D-9. Length frequencies of least cisco caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station M0142		Station MC7916B			Station MC7916C									
	Jun 22	Jun 23	Jun 24	Jun 25	Jun 28	Jun 25	Jun 26	Jun 27	Jun 28	Jul 20	Jul 21	Jul 23	Jul 24	Jul 25	Jul 26
0															
10															
20															
30															
40	1	2													
50	46	36													
60	55	69							2	2	1	1			
70	16	14						1							
80	3	4									2				2
90	3	3													2
100	11	7													1
110	10	3													
120	10	1									2				
130	16	8			1				1	1					1
140	8	1			1					1	1				1
150	3	1						1		1	1		1	1	
160	4							1					1	1	1
170	3										1				
180	1							1		1				1	
190	3				1										
200	1				1			1							
210	1				1										
220					1							1			2
230								1							
240											1		1		
250									2				3		
260													1		
270											1		1		
280	1		1					2				1	1		1
290												1	1		
300	1														
310			1					1			2		1		
320	1		1									1			
330											1	1			
340			1	1	1						1	1			
350				1								1			
360					1										
370								1							
380															
390				1											
400															
Total:	198	149	4	4	7	5	6	4	2	3	14	10	11	2	11

Appendix Table D-9. Length frequencies of least cisco caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station MC7916C										Station U2				
	Jul 28	Jul 29	Jul 30	Aug 25	Aug 26	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Jul 20	Jul 21	Jul 23	Jul 24	Jul 25
0															
10															
20															
30															
40															1
50				28	21	11	10	11	10	10					
60				8	4	11	4	6	13	5					
70						1									
80										1					
90				2		1									
100				2	1	1									
110															
120															
130	1														
140	1							1							
150	2		2		3	1				1					
160	1						1		1						
170	4			2	1		1						1		
180	4		1	1	1	1		1		1					
190	5			1		2									
200		1		1	3	2									
210	2							1					2		
220	4			1								1	1		
230	3													1	
240	3											1			
250	2				1									1	
260	1														1
270	2											1			
280	3														
290													1		
300															
310															
320															
330															
340															
350															
360															
370															
380															
390															
400															
Total:	38	1	3	46	35	32	16	20	24	18	14	2	8	3	1

Appendix Table D-9. Length frequencies of least cisco caught by fyke net in eastern NPR-A, 2001.

Fork Length (mm)	Station U2		
	Jul 26	Jul 27	Jul 28
0			
10			
20			
30			
40			
50			
60			
70			
80			
90			
100			
110			
120			
130			
140			
150			
160	1		
170			
180	1		
190			
200			
210			
220	1		
230			1
240	1		
250			
260			
270		2	
280			
290			
300			
310			
320			
330	1		
340	1		
350			
360			
370			
380			
390			
400			
Total:	6	2	1

Appendix Table D-10. Length frequencies of least cisco caught by fyke net during 2002.

Fork Length (mm)	Station U2							
	Jun 26	Jul 21	Jul 22	Jul 25	Aug 01	Aug 02	Aug 03	Aug 06
0								
10								
20								
30								
40								
50								
60							1	
70					1		5	
80				2	2	1	19	1
90				1	11	1	13	
100					3			
110					1		1	
120								
130								
140								
150								
160								
170			1					
180								
190								
200								
210								
220								
230								
240								
250								
260								
270		1						
280								
290								
300				1				
310		1						
320								
330								
340								
350								
360								
370								
380								
390								
400								
410								
420								
430								
440								
450								
460								
470								
480								
490								
500								
Total:	2	1	1	3	18	2	39	1

Appendix Table D-11. Length frequencies of Alaska blackfish caught by fyke net during 2002.

Fork Length (mm)	CK16A													CK16B	
	Jun 21	Jun 22	Jun 24	Jun 25	Jun 26	Jul 20	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jun 24	Jun 25
0															
10															
20															
30															
40															
50											1				
60	1			1	2			1						1	
70		1	1		8			1		1	1				1
80	2			1	2	1	5	5	1	3		1			
90				1	3			2		1			1		
100			1				3	1						1	
110					1	1		2							
120					1	2	1			1				1	
130															
140					1										
150								1							
160															
170															
180															
190															
200															
210															
220															
230															
240															
250															
260															
270															
280															
290															
300															
Total:	3	1	2	3	18	4	10	12	1	7	1	1	2	2	1

Appendix Table D-11. Length frequencies of Alaska blackfish caught by fyke net during 2002.

Fork Length (mm)	CK16B				M0254				M0256	M9912		
	Jun 26	Jul 20	Jul 23	Jul 27	Aug 03	Aug 04	Aug 05	Aug 06	Aug 06	Jul 28	Jul 29	Jul 30
0												
10												
20												
30												
40											1	
50												
60									1	1	3	1
70	2			1			1			1	1	
80	2											2
90	1				3	1						1
100					4	1				1	1	1
110					8	9		1				1
120					6	4						
130					4	2						
140		1	1		1							
150												
160												
170												
180												
190												
200												
210												
220												
230												
240												
250												
260												
270												
280												
290												
300												
Total:	5	1	1	1	26	18	0	1	1	3	6	6

Appendix Table D-11. Length frequencies of Alaska blackfish caught by fyke net during 2002.

Fork Length (mm)	M9912			M9914A		
	Jul 31	Aug 01	Aug 02	Jun 21	Jun 26	Jul 23
0						
10						
20						
30						
40	1					1
50		2				
60	3	3				
70	2	10	4			
80	1	2				
90		4	2			
100		1				
110		1	1			
120						
130					1	1
140						
150				1		1
160						
170						
180						
190						
200						
210						
220						
230						
240						
250						
260						
270						
280						
290						
300						
Total:	7	23	7	1	1	3

Appendix Table D-12. Length frequencies of slimy sculpin caught by fyke net during 2002.

Fork Length (mm)	Jun 22	Jun 24	Jun 25	Jul 30	Aug 02
0					
10					
20					
30					
40	1		1	1	1
50		1	1		
60					
70					
80					
90					
100					
110					
120					
130					
140					
150					
160					
170					
180					
190					
200					
210					
220					
230					
240					
250					
	1	1	2	1	1