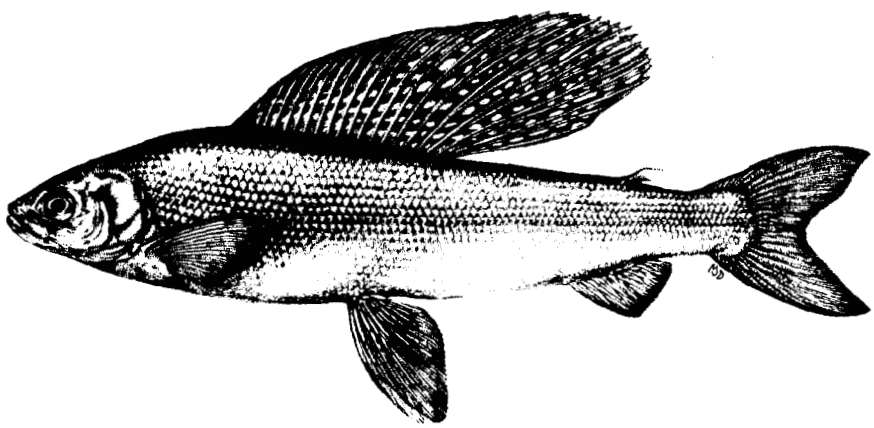
Technical Report No. 97-2

FISHERIES USE OF THE FORT KNOX WATER SUPPLY RESERVOIR 1996

by Alvin G. Ott and Alan H. Townsend



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Alaska Department of Fish and Game

Habitat and Restoration Division

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Janet Kowalski
Director
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Alaska Department of Fish and Game

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Acknowledgments

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Executive Summary

The total time from initial site clearing to completion of the water supply dam was about 18 months. Minor water quality problems associated with stream diversions and dewatering of the work area were experienced during construction. Extensive groundwater flow below the dam maintained flow in Fish Creek during upstream construction dewatering activities. Water quality in Lower Fish Creek improved substantially during summer 1996. Concerns over fish entrapment in the spillway and armored outlet structure were not realized because natural groundwater inundated the catchment basin and provided continuous surface flow.

Upper Last Chance Creek was used extensively by Arctic grayling (*Thymallus arcticus*) for spawning and rearing in 1994 and 1995 but not in 1996. During winter 1995-1996, snowfall was minimal and massive aufeis 3 to 4 m thick remained in late May in Last Chance Creek. Water quality was highly degraded by erosion of ice-rich soils until mid-summer. A combination of sediments, aufeis, and cold water temperatures caused Arctic grayling to avoid the creek. Even after water in Last Chance Creek cleared and warmed, Arctic grayling did not enter the creek. Favorable rearing conditions in the reservoir is the most likely reason for lack of fish use during late summer 1996.

Growth rates were determined for individually tagged burbot (*Lota lota*) in the reservoir. Average growth for burbot tagged in May 1995 and recaptured in November 1995 was 30 mm. Burbot caught in May 1996 had an average growth of 50 mm since May 1995. Burbot caught in August 1996 averaged 300 mm in length and exhibited an average growth of 101 mm since May 1995. Young-of-the-year burbot first appeared in fyke-net catches in August 1996. The young-of-the-year burbot increased in length from an average of 98.1 mm in early August to 121.7 mm by late August. Small burbot were abundant in the reservoir, with highest concentrations found in Solo Creek Bay and along the gravel shoals near the Pump House. This year class is expected to remain abundant in succeeding years.

Arctic grayling were collected in June 1996 to determine age at length before potential changes in growth rate induced by the reservoir occurred. The Arctic grayling were difficult to age because of unusually variable growth rates and growth patterns. All fish

appeared to grow rapidly for the first two years. After age 2, growth patterns changed. We concluded that the two primary factors affecting the highly variable growth after age 2 were habitat selection and use, and the onset of sexual maturity. Arctic grayling grew 40 mm between late June and late August 1996. We predicted growth rates for Arctic grayling would increase substantially after the reservoir filled and available habitat and benthic invertebrate production increased. We found at least a two-fold increase in Arctic grayling growth rate the first summer as the reservoir was filling with water.

In summer 1996, our population estimate using fyke-nets for Arctic grayling $\geq$150 mm was 4,748 with a 95% confidence interval (CI) of 3,824 to 5,672 fish. We estimated the Arctic grayling population at 3,475 with a 95% CI (2,552 to 4,398) using the boat-mounted electrofisher. In 1993, we collaborated with FGMI, to establish a goal of creating a viable Arctic grayling population in the reservoir from fish trapped upstream of the water supply dam. Our goal was to reach a density of 10 to 20 Arctic grayling >200 mm per hectare of surface area (i.e., 800 to 1,600 Arctic grayling greater than 200 mm for the reservoir) ten years after project completion (FGMI 1993). Our 1996 findings suggest that the goal envisioned in 1993 is already achieved.

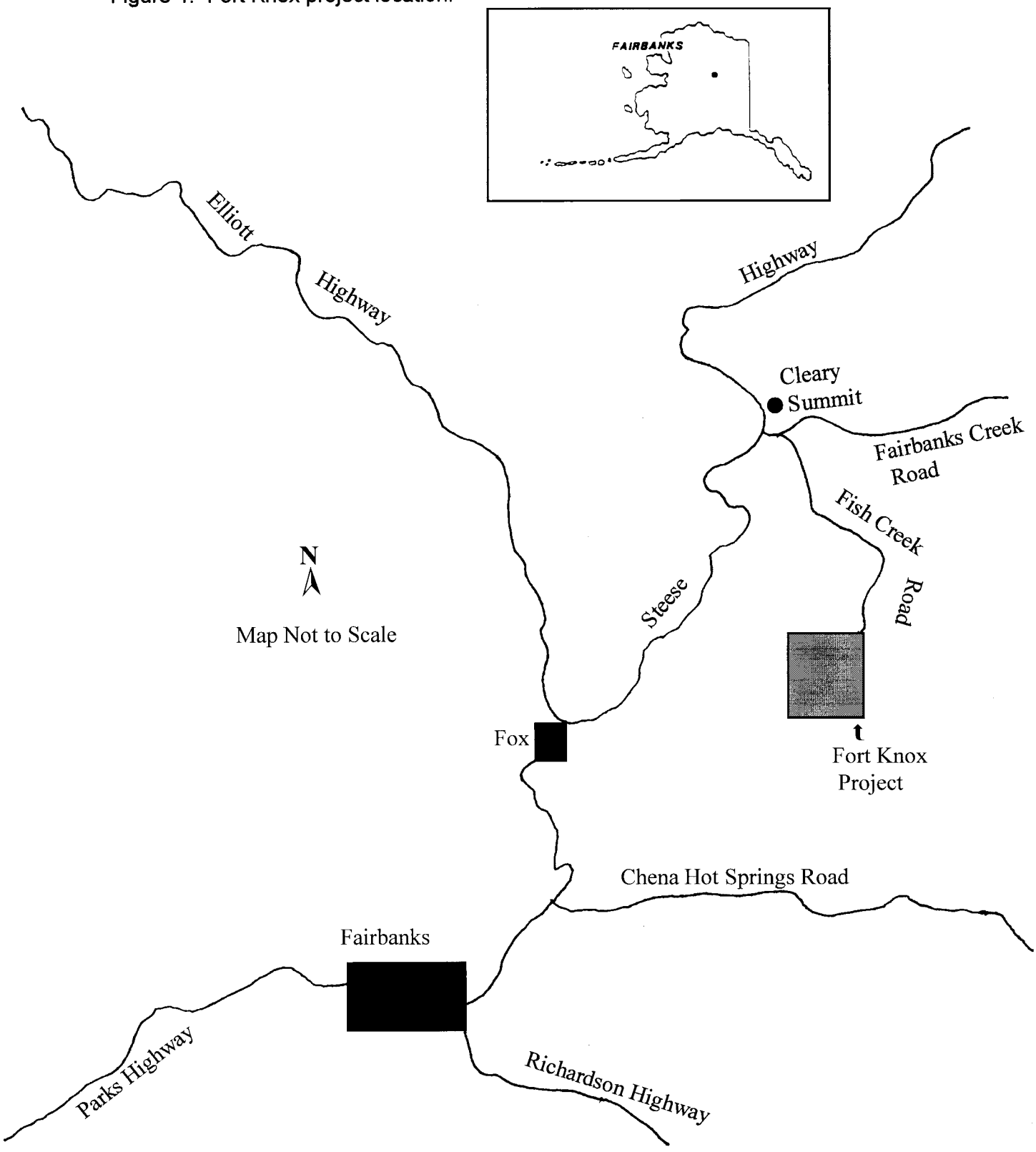
Introduction

Fairbanks Gold Mining Inc. (FGMI) began construction of the Fort Knox hard-rock gold mine in spring 1995. The mine is located in the headwaters of the Fish Creek drainage about 25 km northeast of Fairbanks (Figure 1). The project includes an open-pit mine, mill, tailing impoundment, water supply reservoir, and related facilities. A description of construction activities during 1995 at the reservoir was presented by Ott and Weber Scannell (1996). Water impoundment began in the reservoir in November 1995. Construction of the dam and spillway was complete by July 1996. Water levels in the reservoir reached a maximum elevation of 1017.5 ft before pumping began to move water to the tailing impoundment in July 1996. FGMI estimates that the reservoir will fill and flow over the spillway low-flow channel during breakup in 1997.

Environmental baseline studies began in 1989. Our fisheries study was initiated in 1992 and focused on streams in and downstream of the project area (Weber Scannell and Ott 1993). In 1993, stream sampling continued and we began to collect fisheries data in abandoned settling ponds and mine cuts that would be flooded by the reservoir (Weber Scannell and Ott 1994). In 1994, we established and sampled stream reaches above and below the area that would be flooded by the reservoir (Ott et al. 1995). We continued to sample these sites in 1995 (Ott and Weber Scannell 1996). In 1995 we also estimated the size of the population of Arctic grayling and burbot that would be available to colonize the reservoir, and we began to monitor construction activities (Ott and Weber Scannell 1996).

Our report is divided into two parts. In Part 1 we summarize our monitoring of construction activities at the water supply dam. Results of our fisheries work which focused on the flooding reservoir are presented in Part 2. Some of the predictions made with respect to fisheries use of the reservoir are discussed in light of our 1996 findings.

Figure 1. Fort Knox project location.



Part 1: 1996 Water Supply Dam Construction Activities

We continued to monitor construction activities at the water supply dam site in 1996. On January 9, 1996, water continued to pond in the reservoir and ice extended to the reservoir drawdown pipe and valve system. Water and ice was beginning to inundate Polar Pond #1. The temporary culvert in Solo Creek had been removed. Flow (0.6 cfs) in the seepage channel below the dam was clear and 4°C, indicating groundwater sources. All flow from Solo and Last Chance Creeks, and some from Fish Creek below the tailing impoundment, was being captured behind the dam.

The reservoir was examined several times in February 1996. Water continued to enter the reservoir beneath ice cover. Aufeis in tributary streams (Solo Creek) was extensive due, in part, to minimal snow cover. Flow in the seepage channel below the dam remained constant and clear.

In April 1996, work resumed on the dam. Aufeis in Solo and Last Chance Creeks continued to grow, with aufeis reaching the top of the 3.6 m diameter culvert installed in Solo Creek. Keiwit Pacific Company (KPC), the subcontractor responsible for dam construction, excavated overburden and pumped meltwater from the dam spillway. Dewatering of the work area was necessary through breakup, with a maximum pumping rate of about 2 cfs (1000 gpm).

In late April 1996, KPC was pouring spillway concrete, excavating material at the bottom end of the spillway, pumping seepage water from the work area, and constructing a rock-lined channel from the spillway to Fish Creek. A settling pond was constructed to treat water pumped from the work area. We requested remedial work on April 22, 1996, to minimize erosion occurring in constructed diversion ditches. By early May 1996, KPC had lined the recently constructed diversion ditch with rock but some of the seepage flow (about 1 cfs) leaked under the rock liner and caused sediments to enter the water.

The reservoir continued to fill rapidly and on May 8, 1996, water had reached an elevation of 1005.5 ft, and both Polar Ponds #1 and #2 were inundated. Maximum pool elevation will be 1021.0 ft. Water quality below the work area at the dam appeared good with only a slight discoloration. Work on the spillway continued.

In late May 1996, aufeis in Last Chance Creek was still 3 to 4 m thick. Massive aufeis was present in Solo Creek but all water was passing through the causeway culvert. On June 20, 1996, the catchment basin at the base of the spillway was nearly complete and work was underway on the walls. Water elevation was 1015 ft in the reservoir. Water quality in the lower part of the reservoir was improving.

Beginning in July, water was pumped from the reservoir to the tailing impoundment at a daily rate of 18,495 m^3 (15 acre-feet). We estimated drawdown in the reservoir over a three week period during dry conditions at 0.5 m.

By July 25, the construction zone below the reservoir had been regraded and some reseeding had occurred. We estimated that nearly 30% of the disturbed area will revegetate naturally due to existing moisture and the presence of fines and organic material. Regrading of the construction area looked excellent (Figure 2). An estimated surface discharge of four cfs of water covered the entire spillway outlet. Existing groundwater and flow ensure that fish will not be entraped in the catchment basin and armored rock outlet (Figure 3).

On July 31, 1996, we observed that the entire reservoir, including water from Fish Creek, was stained but clear. These waters had cleared since the July 25, 1996 site visit. Water levels in the reservoir had reached a maximum elevation of 1017.5 ft by late fall. Pumping from the reservoir to the tailing impoundment continued until November 5, 1996, and produced the final water elevation of 1011 ft. Water use to support mine operations (e.g., fire suppression) continued with a drawdown of 0.1 ft per month.

The total time from initial site clearing to completion of the water supply dam was about 18 months. Minor water quality problems associated with stream diversions and dewatering of the work area were experienced during the construction phase (Ott and Weber Scannell 1996). The reservoir should fill and begin to flow over and through the spillway during or shortly after spring breakup in 1997. Concerns over fish entrapment in the spillway and the armored outlet structure due to shallow water were not realized because natural groundwater inundated the catchment basin and provided continuous surface flow. Water quality in Lower Fish Creek improved substantially during summer 1996. The constructed channel connecting the catchment basin to Fish Creek (Figure 3) provides unimpeded movement of fish.

Figure 2. The construction zone adjacent to the catchment basin was regraded and with the natural moisture, fines, and organic materials present, natural revegetation should occur rapidly (top and bottom photos, July 1996).

Figure 3. The completed spillway and the upper portion of the catchment basin (top photo) and the constructed outlet channel connecting the catchment basin with Fish Creek (bottom photo) will provide fish passage.

Part 2: 1996 Fisheries Studies

Methods

Sampling Sites

Baseline sampling sites (Upper Last Chance Creek, Bear Creek, and Lower Fish Creek) were established in 1994 to assess effects of the project on water quality and use of the streams by fish. In 1996, we sampled Last Chance and Lower Fish Creeks once. Fish catch data from pool-riffle sequences were combined for purposes of analyses due to significant annual, natural changes in stream character in the sample reaches (Figure 4).

Water Quality

Temperature was measured with an analog mercury thermometer or a digital thermometer. Temperature, flow, turbidity, and total suspended solids were measured in Fish Creek just upstream of Fairbanks Creek. Water level was measured with a pressure transducer and automated recorder, calibrated with stream flow measurements taken throughout the year. Water was sampled for turbidity and total suspended solids four times daily with an automated water sampler. Daily water samples were composited into one sample to give average values for the day.

Fish

We sampled fish by electrofishing, fyke-nets, hoop traps, minnow traps, and visual observation. In 1996, most fish were collected with fyke-nets. Arctic grayling were marked with an adipose fin clip and those greater than 149 mm were tagged with numbered *Fine Fabric Floy-tags*. We captured, identified, measured [fork length for Arctic grayling (*Thymallus arcticus*), round whitefish (*Prosopium cylindraceum*), and longnose sucker (*Catostomus catostomus*); total length for burbot (*Lota lota*) and slimy sculpin (*Cottus cognatus*)], and released fish. In spring 1996, a sample of Arctic grayling was retained for age determination.

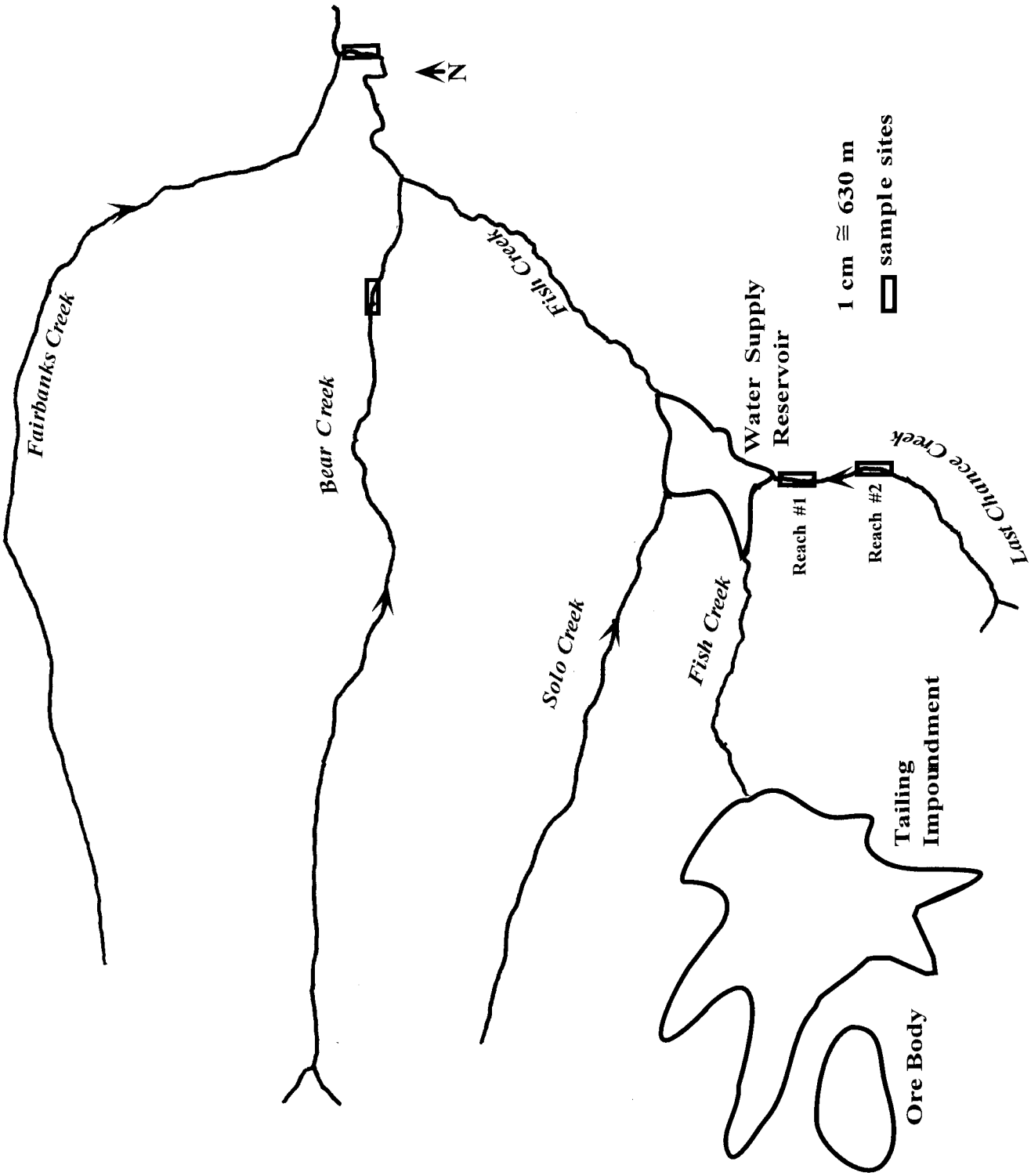


Figure 4. Fish sample sites for post-construction monitoring in the Fish Creek drainage.

A single pass upstream was made with a Smith-Root model 15-A backpack electrofisher to collect fish from streams. During the fall 1996 recapture event in the reservoir, two separate sampling techniques were used: fyke-nets, and a pulsed-DC (direct current) electrofishing system mounted on a 6.1 m-long boat (Clark 1995). During the fall recapture event in the reservoir, Arctic grayling were checked for marks; unmarked fish were released untagged.

Two sizes of fyke-net were used. Net size (wings, mesh, and center leads) was the same except for entrance frames. Entrance frames were either 0.9 m or 1.2 m square. Fyke-nets were 3.7 m long, had five hoops, a 1.8 m cod end, and 0.9 m by 7.6 m net wings attached to the entrance frame. The center lead was 30.4 m and was deployed to the maximum extent possible without submerging the top of the entrance frame. Nets were set with the center lead either perpendicular or at an angle to shore, depending upon distance to deep water.

We used minnow and hoop traps baited with salmon roe and fish to collect burbot in the reservoir. Traps were fished 24 hr and rebaited if reset.

We estimated the population size of Arctic grayling in the reservoir with Chapman's modification of the Peterson mark-recapture technique (Chapman 1951). During the mark event, fish were captured with fyke-nets. During the recapture event, fyke-nets and a boat-mounted electrofisher were used. Formulas used to estimate the population, the variance of the estimate, and the 95% confidence interval (CI) were presented in our 1996 report (Ott and Weber Scannell 1996).

A sample of Arctic grayling (68 fish) was caught in spring 1996 and retained for age analyses. Ages were determined by three people counting scale and otolith annuli. Scales and otoliths were difficult to read because of varying rates of growth in individual fish and different patterns of growth among fish.

Results and Discussion

Water Quality

Fish Creek

The ADNR, Division of Mining and Water Management has operated an automated water sampler for turbidity and total suspended solids (TSS) and a recording flow meter in Fish Creek near Fairbanks Creek since 1992. In 1992 and 1993, with active placer mining occurring, the median turbidities in Fish Creek were 180 and 75 NTU (Table 1). In 1994 there was no active placer mining and median turbidities decreased to 4.9 NTU. The median turbidity in 1995 during the construction phase of the freshwater and tailing dams was 88 NTU. Median turbidity dropped to 4.3 NTU in 1996 when flow from Upper Fish Creek was contained by the water supply dam (Appendix 1). A maximum TSS of 1130 was recorded in 1996 (Appendix 1). High TSS concentrations coincided with increased stream discharge and probably reflect resuspension of sediments in the Fish Creek floodplain.

Table 1. Summary of water quality data for Fish Creek, 1992-1996.

Year	Average Summer Flow (cfs)	Maximum NTU	Median NTU	Maximum TSS (mg/L)	Median TSS (mg/L)
1996	19.2	70	4.3	1130	8.2
1995	41.3	220	90	505	82.2
1994	41.9	27	4.9	191	14.5
1993	38.2	290	75	1790	173
1992	50.4	2900	180	2320	188

Fisheries

Upper Last Chance and Lower Fish Creeks

We electrofished sample reaches in Upper Last Chance and Lower Fish Creeks once during summer 1996 (Tables 2 and 3). Time constraints and several storm events limited sampling to a single sample event in Upper Last Chance and Lower Fish Creeks and not at all in Bear Creek. Fish use of Upper Last Chance Creek in summer 1996 was greatly reduced from previous years (Table 2). We electrofished Reach #1 and did not capture any fish. We did not see any fish during June, July, and August visual surveys.

During winter 1995-1996, snowfall was minimal until mid-January and aufeis was extensive in the upper Fish Creek drainage. Massive aufeis 3 to 4 m thick was still present in late May and water was highly turbid until mid-summer in Upper Last Chance Creek. Water quality degradation was caused by erosion of ice-rich soils as the entire flow of Upper Last Chance Creek went subsurface through a settling pond. Creek water upstream of the abandoned pond was clear; settleable solids below the pond were estimated at >100 ml/L. Large deposits of organic material were present in the creek, on the aufeis, and along the banks below the abandoned pond. The combination of sediments, aufeis, and cold water temperatures appear to have caused Arctic grayling to avoid the creek. Even after water in Last Chance Creek cleared and warmed, Arctic grayling did not enter the creek. We believe fish remained in the reservoir's more favorable rearing habitat.

Fort Knox Reservoir, Burbot

Burbot use of the Lower Last Chance Creek Pond and Polar Ponds #1 and #2 was reported by Ott and Weber Scannell (1996). In summer 1996, impoundment of water by the water supply dam resulted in the inundation of these ponds, and Polar Pond #3. Water levels reached a maximum elevation of 1017.5 ft when pumping to move water to the tailing impoundment began in July. Water levels decreased in the reservoir by about 0.5 m during a dry period but rainfall events in August brought water levels back to elevation 1017.5 ft.

Table 2. Number of fish caught, excluding young-of-the-year Arctic grayling, in Last Chance Creek upstream of the projected reservoir using an electrofisher (1994-1996).

Date Sampled	Sample Site (Reach)	AG	BB	Total Fish
5/10/94	#1	118	0	118
7/7/94	#1	68	0	68
8/4/94	#1	130	5	135
9/5/94	#1	114	4	118
5/17/95	#1	102	1	103
6/15/95	#1	105	4	109
7/10/95	#1	99	3	102
8/7/95	#1	97	8	105
7/11/96	#1	0	0	0
5/10/94	#2	26	0	26
5/18/94	#2	55	0	55
5/26/94	#2	32	0	32
7/7/94	#2	41	0	41
8/4/94	#2	67	0	67
9/5/94	#2	65	0	65
5/17/95	#2	110	0	110
6/15/95	#2	63	0	63
7/10/95	#2	68	1	69
8/7/95	#2	44	4	48

AG = Arctic grayling, BB = burbot

Table 3. Number of fish caught, excluding young-of-the-year Arctic grayling, in Lower Fish Creek (1992-1996).

Sample Date	AG	SS	RWF	BB	LNS	Total Fish
7/22/92	9	1	7	1	4	22
8/26/92	14	4	4	2	0	24
5/18/93	9	1	0	0	0	10
6/17/93	22	3	9	0	0	34
7/13/93	40	37	26	2	0	105
8/10/93	14	29	10	2	0	55
5/17/94	26	4	2	1	0	33
7/5/94	20	3	18	2	0	43
8/3/94	5	1	8	1	0	15
9/6/94	20	3	29	0	0	52
5/16/95	36	11	9	0	0	56
6/14/95	25	22	16	2	0	65
7/13/95	46	38	30	9	1	124
8/9/95	58	77	55	2	0	192
7/9/96	12	3	15	0	0	30

AG = Arctic grayling, SS = slimy sculpin, RWF = round whitefish
BB = burbot, and LNS = longnose sucker

We sampled in early spring 1996 for juvenile burbot (Evenson 1996). The primary objective was to catch 15 burbot injected in spring 1995 with oxytetracyclene (OTC), a chemical marker that provides a reference mark in otoliths and scales for calculating rates of growth. Gear was set on May 21 and checked on May 22 and 23. Eighty-six burbot were captured (Table 4) with minnow traps, and small and large hoop traps. The smallest burbot collected in the May 1996 sample event was 195 mm, although a large number of fish less than 150 mm were caught during a similar sampling event in May 1995 (Evenson 1996). The small burbot (100 - 200 mm) in 1995 were probably age 2 and 3 and a lack of fish in this size class in 1996 may indicate a lack of recruitment from winter 1994 and 1995 spawning (Evenson 1996).

Table 4. Catch of burbot in the reservoir in May 1996 using minnow traps and hoop nets.

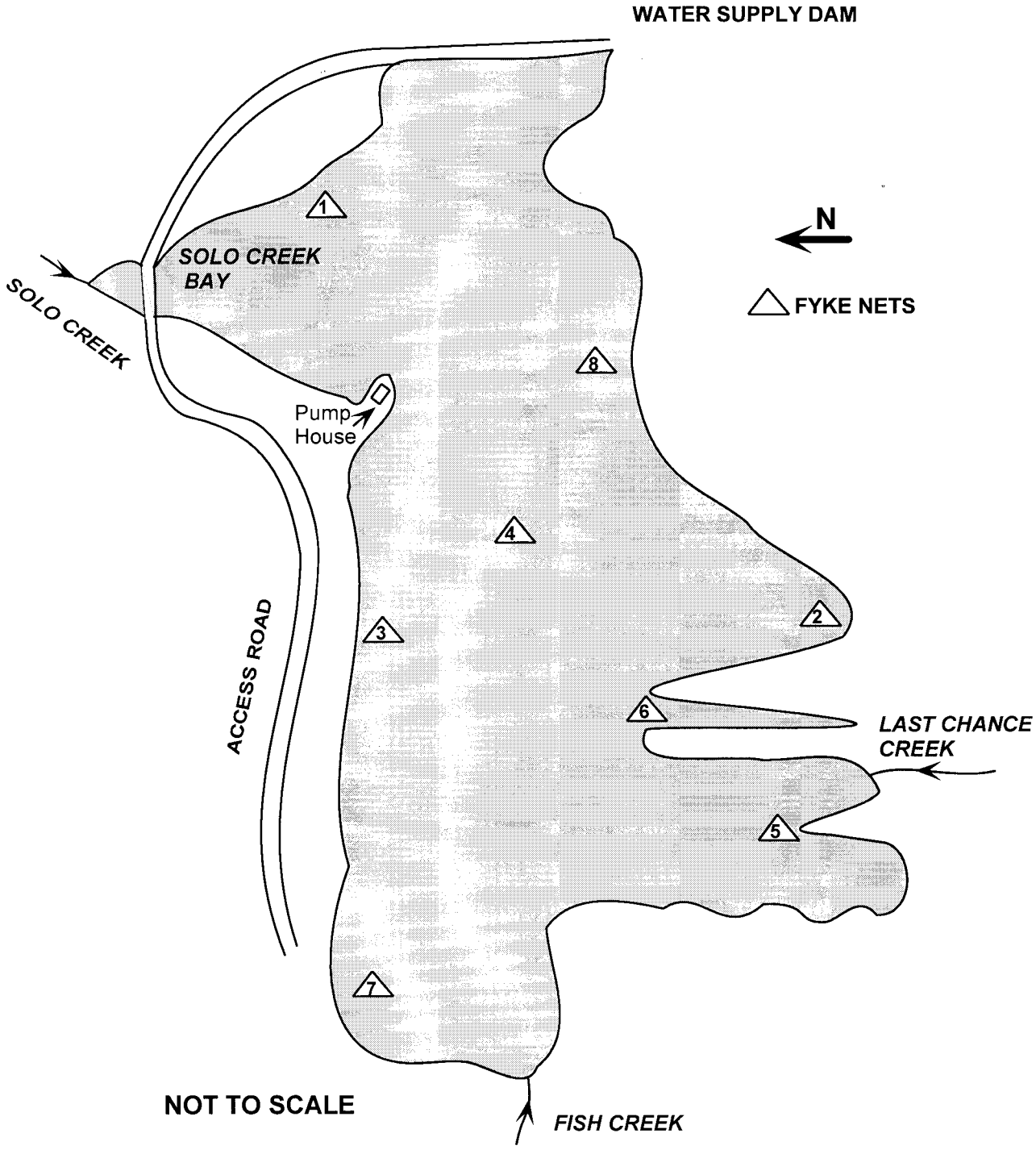
Gear Type	Number of Traps Set	Catch (May 22)	Catch (May 23)	Catch (Total)	Mean CPUE (BB/trap/day)
Minnow	8	18	5	23	1.4
Small Hoop	11	36	19	55	2.5
Large Hoop	4	6	2	8	1.0

Growth information was obtained from recaptured burbot originally tagged in May 1995 in Polar Ponds #1 and #2 (Table 5). Recaptures were made in November 1995 (with minnow traps fished under ice cover), in the reservoir in May 1996 (Evenson 1996), and in the reservoir (with fyke-nets) in August 1996 (Figure 5). Average growth for burbot tagged in May 1995 and recaptured in November 1995 was 30 mm. Burbot caught in May 1996 had an average growth of 50 mm since May 1995. Burbot in August 1996 averaged 300 mm long and exhibited an average growth of 101 mm since May 1995. Some of the tagged burbot caught in November 1995 and May 1996 were retained for age determination. Recaptured burbot in August 1996 were released.

Table 5. Growth (mm) for burbot originally tagged in Polar Ponds #1 and #2 in May 1995 and recaptured in the ponds (November 1995) and reservoir (May and August 1996).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)	Growth (mm)
11947	OR	238	5/10/95	Polar 1	11/30/95	Polar 2	252	14
11860	OR	204	5/10/95	Polar 2	11/30/95	Polar 2	275	71
6607	OR	217	5/18/95	Polar 2	11/30/95	Polar 2	234	17
6616	OR	242	5/18/95	Polar 2	11/30/95	Polar 2	273	31
6626	OR	259	5/18/95	Polar 2	11/30/95	Polar 2	260	1
6649	OR	201	5/18/95	Polar 2	11/30/95	Polar 2	230	29
6664	OR	236	5/18/95	Polar 2	11/30/95	Polar 2	288	52
6666	OR	224	5/18/95	Polar 2	11/30/95	Polar 2	247	23
6708	OR	281	5/18/95	Polar 2	11/30/95	Polar 2	309	28
6719	OR	244	5/18/95	Polar 2	11/30/95	Polar 2	280	36
11909	OR	201	5/10/95	Polar 1	5/22/96	FW Pond	261	60
11914	OR	256	5/10/95	Polar 1	5/22/96	FW Pond	342	86
11922	OR	242	5/10/95	Polar 1	5/22/96	FW Pond	280	38
11930	OR	222	5/10/95	Polar 1	5/22/96	FW Pond	234	12
11971	OR	194	5/10/95	Polar 1	5/23/96	FW Pond	248	54
11981	OR	192	5/10/95	Polar 1	5/22/96	FW Pond	250	58
11883	OR	224	5/10/95	Polar 2	5/23/96	FW Pond	289	65
11982	OR	324	5/10/95	Polar 2	5/22/96	FW Pond	428	104
11989	OR	230	5/10/95	Polar 2	5/23/96	FW Pond	289	59
11831	OR	216	5/18/95	Polar 1	5/22/96	FW Pond	262	46
11842	OR	206	5/18/95	Polar 1	5/22/96	FW Pond	273	67
6619	OR	184	5/18/95	Polar 2	5/23/96	FW Pond	212	28
6632	OR	251	5/18/95	Polar 2	5/22/96	FW Pond	285	34
6660	OR	242	5/18/95	Polar 2	5/23/96	FW Pond	271	29
6665	OR	210	5/18/95	Polar 2	5/22/96	FW Pond	245	35
6716	OR	234	5/18/95	Polar 2	5/22/96	FW Pond	265	31
11861	OR	216	5/18/95	Polar 2	5/22/96	FW Pond	262	46
11903	OR	283	5/10/95	Polar 1	8/6/96	FW Pond #6	438	155
11845	OR	156	5/10/95	Polar 2	8/7/96	FW Pond #1	272	116
6680	OR	152	5/18/95	Polar 1	8/8/96	FW Pond #6	267	115
6615	OR	167	5/18/95	Polar 2	8/8/96	FW Pond #6	244	77
6702	OR	211	5/18/95	Polar 2	8/8/96	FW Pond #2	272	61
11840	OR	210	5/18/95	Polar 1	8/16/96	FW Pond #7	291	81
11892	OR	223	5/10/95	Polar 2	8/27/96	FW Pond #1	283	60
11895	OR	215	5/10/95	Polar 2	8/27/96	FW Pond #3	305	90
6682	OR	177	5/18/95	Polar 1	8/28/96	FW Pond #3	287	110
6683	OR	182	5/18/95	Polar 1	8/29/96	FW Pond #5	307	125
11934	OR	183	5/10/95	Polar 1	8/29/96	FW Pond #2	290	107
11850	OR	152	5/10/95	Polar 2	8/29/96	FW Pond #3	285	133
11891	OR	203	5/10/95	Polar 2	8/29/96	FW Pond #1	304	101
11893	OR	226	5/10/95	Polar 2	8/29/96	FW Pond #8	360	134
11911	OR	222	5/10/95	Polar 1	8/30/96	FW Pond #8	297	75
11953	OR	229	5/10/95	Polar 1	8/30/96	FW Pond #5	300	71

Figure 5. Fyke-net sites in the Fort Knox reservoir.



Fyke-nets were fished for 24 hr, checked, and reset in June and August 1996 in the reservoir (Figure 5). Burbot catches were low in June but increased in August. Catch per unit effort was <1.0 in June, with the exception of one net fished on June 5 (Table 6). Catch rates in August were fairly consistent, ranging from 4 to 5.4 burbot per trap day, with the exception of one trap in mid-August which caught nine burbot (Table 6 and Appendix 2).

Small burbot (<150 mm) were not found until the August sample period. We believe these fish were spawned in February 1996. Calculated catch rates for these burbot are lower than the actual catch due to predation in the fyke-net by larger burbot. The boat-mounted electrofisher in the reservoir in September 1996 discovered abundant small burbot. Small burbot were seen along the entire margin of the reservoir except along the face of the dam. High concentrations were present in Solo Creek Bay and along the gravel shoals near the Pump House. In areas of high concentration, it was common to see 10 to 20 small burbot roll from the effects of the electrofisher. Assuming the under 150 mm fish group is the same age class, fish in this age class increased in size from an average of 98.1 mm in early August to 121.7 mm by late August (Figure 6 and Appendix 3). If survival of this year class is good, we would expect to see abundant small burbot in spring 1997.

Figure 6. Length (minumum, mean, and maximum) of young-of-the-year burbot captured with fyke-nets in August 1996.

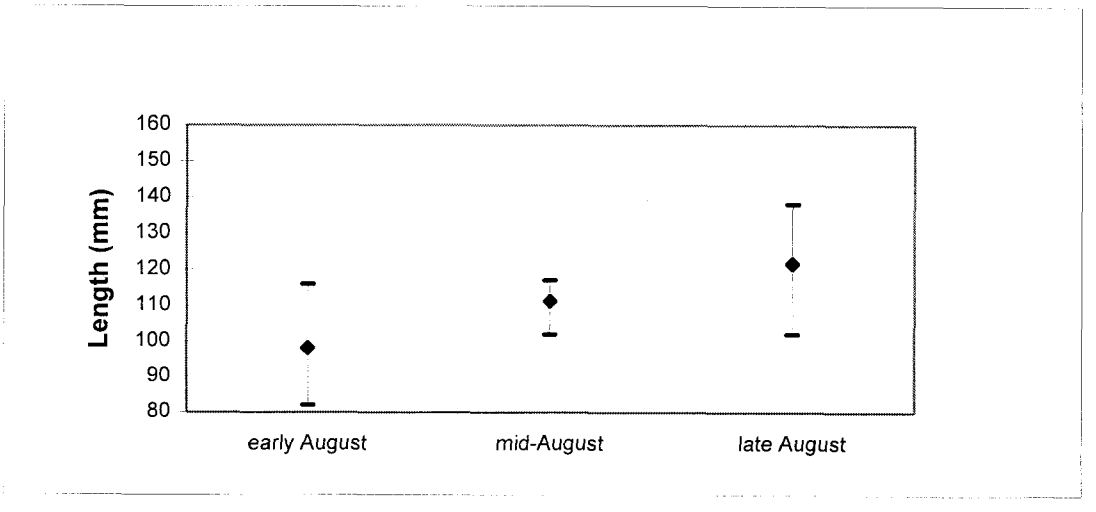


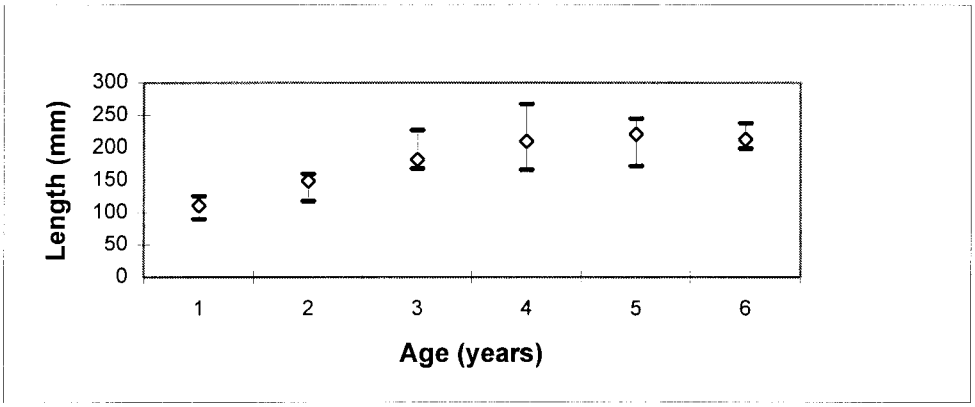
Table 6. Catch of burbot in unbaited fyke-nets fished in the Fort Knox reservoir.

Sample Date	Number of Nets	Number of Burbot (<200 mm)	Number of Burbot (>200 mm)	CPUE (BB/trap/day)
6/5/96	1	0	4	4.0
6/26/96	2	0	1	0.5
6/27/96	2	0	0	0.0
6/28/96	2	0	1	0.5
8/6/96	4	2	14	4.0
8/7/96	5	11	12	4.6
8/8/96	5	9	18	5.4
8/16/96	1	8	1	9.0
8/27/96	5	8	19	5.4
8/28/96	5	3	20	4.6
8/29/96	5	5	21	5.2
8/30/96	5	1	22	4.6

Fort Knox Reservoir, Arctic Grayling

Sixty-eight Arctic grayling were captured in June 1996 and retained to determine age structure and length frequency before the influence of the new reservoir (Figure 7).

Figure 7. The maximum, minimum, and average length (mm) at age for Arctic grayling collected in June 1996 in the reservoir.

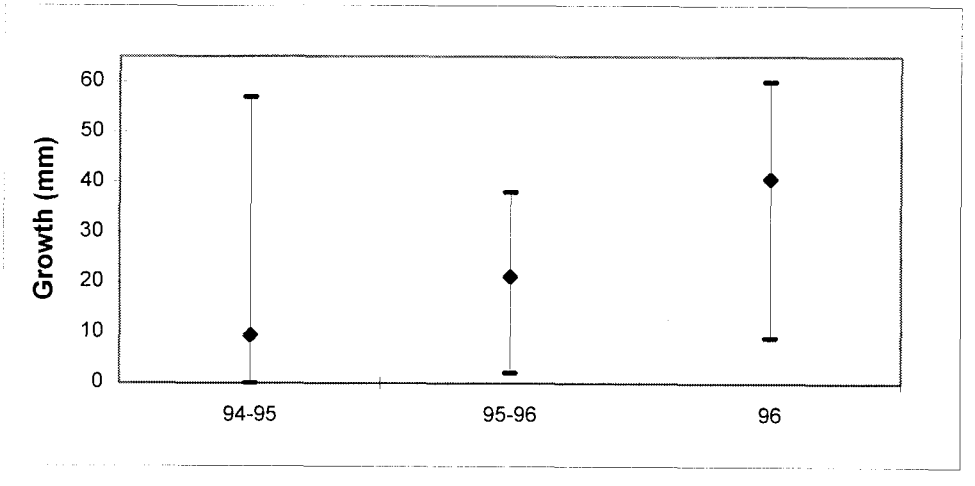


The Arctic grayling collected from the Fort Knox reservoir were difficult to age because of unusually variable growth rates and growth patterns among years and between fish after age 2. All fish appeared to grow rapidly for the first two years. After age 2, growth patterns changed. The variable growth patterns observed on both scales and otoliths may be explained by the habitats used by individual fish prior to flooding of the reservoir and sexual maturation. Habitats used by Arctic grayling included flooded old placer mine cuts, flooded settling ponds, outlet and inlet channels from flooded settling ponds, beaver ponds, and streams. The flooded old placer mine cuts (Upper and Lower Last Chance Creek Ponds) were deep (4 m), stained, and contained shallow water habitat with emergent vegetation. The flooded settling ponds had variable depths (<0.5 m to 3.0 m) with turbid waters. Streams used included Last Chance Creek where five beaver ponds existed, and Upper Last Chance Creek where extensive placer mining had occurred and riparian habitat had been altered. Solo Creek had several beaver dams, was unmined, and flowed through ice-rich permafrost soils.

Generally, the larger Arctic grayling were found in stream habitats (Solo and Last Chance Creeks). The pond habitats were warmer (15 to 20°C) than streams (4.6 to 12.6°C). The warmer water and likely higher productivity of the ponds enhanced the growth of small fish (young-of-the-year to age 2) while the larger Arctic grayling left pond habitats to enter the streams. Most of the Arctic grayling were mature at 170 mm (about age 3). Once they matured, it is likely that a significant amount of Arctic grayling energy was used for reproduction. We conclude that two primary factors affecting the highly variable growth after age 2 were habitat selection and use, and the onset of sexual maturity.

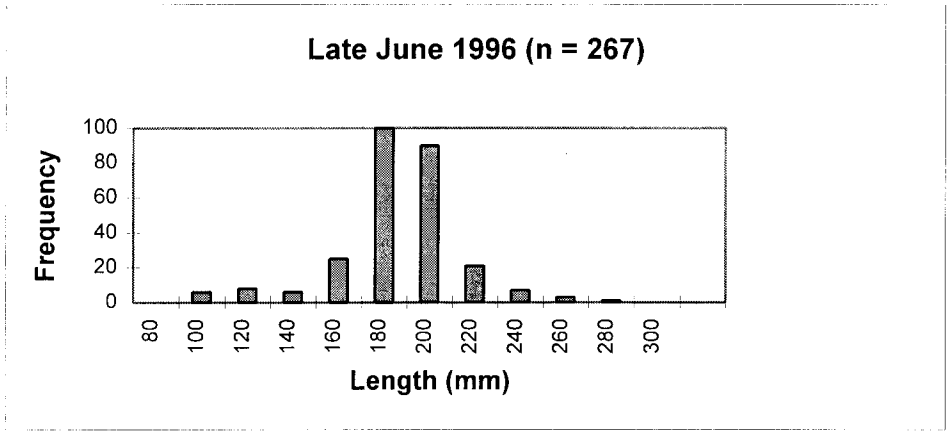
In summer 1996, we estimated Arctic grayling growth rates in the reservoir (Figures 8 and 9). Average growth rates for fish at large about 1 yr were 9 mm (from 1994 to 1995) and 21 mm (from 1995 to 1996). Average growth of Arctic grayling in the reservoir during summer 1996 was 41 mm (Figure 8), a substantial increase in growth compared with pre-reservoir conditions.

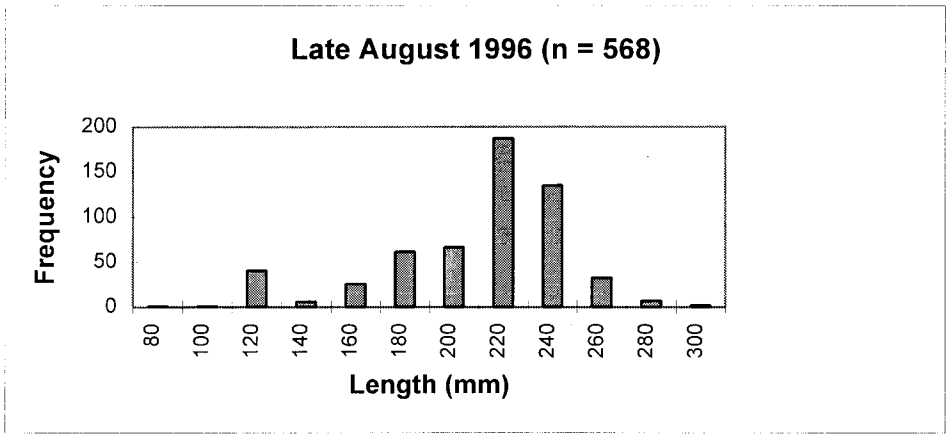
Figure 8. The minimum, maximum, and mean growth of Arctic grayling in upper Fish Creek and the Fort Knox reservoir from 1994 to 1996.



The length-frequency distribution for fyke-net caught Arctic grayling in late June and late August 1996 shows an average growth in the 60-day period of 40 mm (Figure 9).

Figure 9. Length-frequency distribution of fyke-net caught Arctic grayling in the reservoir.





The dominant size classes in late June were 180 and 200 mm, and by August, these fish were 220 to 240 mm long. Young-of-the-year Arctic grayling also were found beginning in late June, and by late August, most of these fish were in the 110 to 120 mm range.

We predicted that growth rates for Arctic grayling would increase after the reservoir filled and available habitat and benthic invertebrate production increased. We found at least a two-fold increase in Arctic grayling growth rates in summer 1996 when the reservoir was filling with water. Holmes et al. (1986) reported Goodpaster River average Arctic grayling growth of 18 mm (age 3), 12 mm (age 4), 8 mm (age 5), and 15 mm (age 6) from June 25-26 to August 6-8, 1985. The Fort Knox Arctic grayling in the 180 to 240 mm size class were most likely age 3 to 6.

Catch per unit of effort (fyke-net fished for 24 hr) ranged from a low of 23.8 to a high of 56.5 (Table 7 and Appendix 4). Actual catches of small Arctic grayling were higher than shown due to predation in the net by burbot. We estimated that in 1995, before flooding the reservoir, there were 1,723 Arctic grayling <150 mm and 4,358 ≥150 mm upstream of the dam (Ott and Weber Scannell 1996). Our 1996 population estimate using fyke-nets for Arctic grayling ≥150 mm was 4,748 with a 95% CI of 3,824 to 5,672 fish. We estimated the Arctic grayling population at 3,475 with a 95% CI (2,552 to 4,398) using the boat-mounted electrofisher for recapture. A population estimate for fish <150 mm could not be made because of a low catch and low recapture of only one marked fish. We found several dead Arctic grayling in spring 1996. We speculated that winter mortality may have been high during the winter of 1995/1996 due to a lack of snow, extensive aufeis buildup in Solo and Last Chance Creeks, and the continued freezing and overflow of water that occurred as the reservoir slowly filled with water. However, if our population estimates for Arctic grayling ≥150 mm are accurate, then actual mortalities may not have been high.

We plan to continue to sample Arctic grayling and burbot in the reservoir to monitor population size, growth, and recruitment. In 1993, working in cooperation with FGMI, our goal was to establish a viable Arctic grayling population in the reservoir from fish trapped upstream of the dam. Our goal was to reach a density of 10 to 20 Arctic grayling >200 mm per hectare of surface area (i.e., 800 to 1,600 Arctic grayling greater than 200 mm for the reservoir) ten years after project completion (FGMI 1993). Our findings in 1996 suggest that this goal has been achieved.

Table 7. Catch of Arctic grayling in fyke-nets fished in the Fort Knox reservoir.

Sample Date	Number of Nets	Number of Grayling (<150 mm)	Number of Grayling (>150 mm)	CPUE (AG/trap/day)
6/26/96	2	6	57	31.5
6/27/96	2	6	85	45.5
6/28/96	2	9	104	56.5
8/6/96	4	17	201	54.5
8/7/96	5	17	123	28.0
8/8/96	5	6	140	29.2
8/27/96	5	16	150	33.2
8/28/96	5	18	109	25.4
8/29/96	5	11	145	31.2
8/30/96	5	9	110	23.8

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Appendix 1

Flow (cubic feet per second), turbidity (NTU), and total suspended solids (TSS) in Fish Creek near Fairbanks Creek 1996.

Date	Q (cfs)	Turbidity (NTU)	TSS (mg/L)
13-Jun-96	40	--	--
14-Jun-96	42	5.4	36.9
15-Jun-96	36	3.6	35.8
16-Jun-96	32	4.3	21.1
17-Jun-96	29	3.7	18.1
18-Jun-96	26	3.7	14.0
19-Jun-96	24	3.5	10.9
20-Jun-96	22	3.7	14.6
21-Jun-96	21	6.2	27.0
22-Jun-96	20	4.9	9.57
23-Jun-96	18	4.6	11.5
24-Jun-96	18	4.2	9.12
25-Jun-96	19	4.5	6.63
26-Jun-96	17	5.0	9.07
27-Jun-96	16	5.6	14.4
28-Jun-96	15	7.2	9.11
29-Jun-96	19	6.2	8.25
30-Jun-96	20	5.5	6.92
1-Jul-96	53	50	340
2-Jul-96	36	18	163
3-Jul-96	30	10	50.6
4-Jul-96	24	6.3	23.3
5-Jul-96	20	5.7	21.3
6-Jul-96	17	5.7	15.6
7-Jul-96	15	4.9	14.6
8-Jul-96	21	4.1	9.84
9-Jul-96	42	8.8	14.1
10-Jul-96	69	70	1130
11-Jul-96	41	30	253
12-Jul-96	31	7.9	50.3
13-Jul-96	26	5.1	21.5
14-Jul-96	25	5.2	12.5
15-Jul-96	28	3.8	12.0
16-Jul-96	23	6.5	12.4
17-Jul-96	15	5.2	8.66
18-Jul-96	18	5.1	12.2
19-Jul-96	17	4.8	5.23
20-Jul-96	15	5.0	4.95
21-Jul-96	14	4.8	4.04
22-Jul-96	13	4.3	3.73
23-Jul-96	14	4.1	2.76
24-Jul-96	11	4.3	2.60
25-Jul-96	11	4.4	4.15
26-Jul-96	10	3.9	6.70

Appendix 1 (continued).

Date	Q (cfs)	Turbidity (NTU)	TSS (mg/L)
27-Jul-96	10	3.1	5.88
28-Jul-96	9.1	2.9	2.82
29-Jul-96	8.5	2.9	3.49
30-Jul-96	9.7	3.5	4.31
31-Jul-96	9.1	3.6	4.92
1-Aug-96	9.7	3.9	3.93
2-Aug-96	23	4.0	6.22
3-Aug-96	21	5.8	15.9
4-Aug-96	16	4.7	8.05
5-Aug-96	14	3.4	4.13
6-Aug-96	19	3.7	4.42
7-Aug-96	17	3.3	6.03
8-Aug-96	18	3.1	2.28
9-Aug-96	67	30	304
10-Aug-96	64	30	389
11-Aug-96	41	15	160
12-Aug-96	31	5.1	35.7
13-Aug-96	25	3.7	15.8
14-Aug-96	22	2.9	7.96
15-Aug-96	19	2.7	4.76
16-Aug-96	19	3.1	6.15
17-Aug-96	18	3.0	4.71
18-Aug-96	17	3.3	5.45
19-Aug-96	14	3.6	4.78
20-Aug-96	11	--	--
21-Aug-96	9.1	--	--
22-Aug-96	8.5	--	--
23-Aug-96	7.3	--	--
24-Aug-96	6.0	--	--
25-Aug-96	9.1	--	--
26-Aug-96	15	--	--
27-Aug-96	13	--	--
28-Aug-96	10	--	--
29-Aug-96	9.1	--	--
30-Aug-96	14	--	--
31-Aug-96	13	--	--
1-Sep-96	11	--	--
2-Sep-96	11	--	--
3-Sep-96	11	--	--
4-Sep-96	10	2.6	2.19
5-Sep-96	10	2.1	3.67
6-Sep-96	10	2.8	4.06
7-Sep-96	9.1	5.5	4.89
8-Sep-96	7.9	--	--

Appendix 1 (concluded).

Date	Q (cfs)	Turbidity (NTU)	TSS (mg/L)
9-Sep-96	8.5	2.8	3.88
10-Sep-96	8.5	--	--
11-Sep-96	8.5	--	--
12-Sep-96	7.9	--	--
13-Sep-96	7.9	2.0	2.01
14-Sep-96	8.5	2.5	2.50
15-Sep-96	7.9	3.0	4.21
16-Sep-96	7.3	2.4	3.98
17-Sep-96	7.3	2.4	3.91
18-Sep-96	7.3	3.2	3.68

Appendix 2

Burbot length and catch in fyke-nets fished in the reservoir during summer 1996.

Fyke Net Location	Capture Date	Length (mm)	Total Catch/ Day/Fyke Net
#1	6/26/96		0
#1	6/27/96		0
#1	6/28/96		0
#1	8/6/96	98	7
#1	8/6/96	260	
#1	8/6/96	270	
#1	8/6/96	271	
#1	8/6/96	280	
#1	8/6/96	289	
#1	8/6/96	292	
#1	8/7/96	88	5
#1	8/7/96	88	
#1	8/7/96	91	
#1	8/7/96	272	
#1	8/7/96	300	
#1	8/8/96	97	5
#1	8/8/96	99	
#1	8/8/96	101	
#1	8/8/96	101	
#1	8/8/96	235	
#1	8/27/96	120	7
#1	8/27/96	127	
#1	8/27/96	134	
#1	8/27/96	283	
#1	8/27/96	294	
#1	8/27/96	315	
#1	8/27/96	380	
#1	8/28/96	138	3
#1	8/28/96	310	
#1	8/28/96	317	
#1	8/29/96	102	5
#1	8/29/96	116	
#1	8/29/96	131	
#1	8/29/96	276	
#1	8/29/96	304	

Appendix 2 (continued).

Fyke Net Location	Capture Date	Length (mm)	Total Catch/ Day/Fyke Net
#1	8/30/96	120	3
#1	8/30/96	280	
#1	8/30/96	295	
#2	6/26/96	222	1
#2	6/27/96		0
#2	6/28/96	252	1
#2	8/6/96	438	3
#2	8/6/96	307	
#2	8/6/96	252	
#2	8/7/96	97	9
#2	8/7/96	105	
#2	8/7/96	254	
#2	8/7/96	255	
#2	8/7/96	270	
#2	8/7/96	283	
#2	8/7/96	291	
#2	8/7/96	294	
#2	8/7/96	338	
#2	8/8/96	116	4
#2	8/8/96	236	
#2	8/8/96	254	
#2	8/8/96	272	
#2	8/27/96	308	3
#2	8/27/96	312	
#2	8/27/96	348	
#2	8/28/96	280	2
#2	8/28/96	322	
#2	8/29/96	122	4
#2	8/29/96	264	
#2	8/29/96	290	
#2	8/29/96	310	
#2	8/30/96	262	1
#3	8/6/96	97	0

Appendix 2 (continued).

Fyke Net Location	Capture Date	Length (mm)	Total Catch/ Day/Fyke Net
#3	8/7/96	100	3
#3	8/7/96	102	
#3	8/7/96	244	
#3	8/8/96	96	8
#3	8/8/96	98	
#3	8/8/96	102	
#3	8/8/96	199	
#3	8/8/96	249	
#3	8/8/96	251	
#3	8/8/96	267	
#3	8/8/96	275	
#3	8/27/96	130	3
#3	8/27/96	302	
#3	8/27/96	305	
#3	8/28/96	122	7
#3	8/28/96	267	
#3	8/28/96	280	
#3	8/28/96	287	
#3	8/28/96	299	
#3	8/28/96	308	
#3	8/28/96	316	
#3	8/29/96	285	4
#3	8/29/96	300	
#3	8/29/96	303	
#3	8/29/96	320	
#3	8/30/96	305	3
#3	8/30/96	315	
#3	8/30/96	340	
#4	8/7/96	82	1
#5	6/5/96	144	4
#5	6/5/96	154	
#5	6/5/96	172	
#5	6/5/96	185	

Appendix 2 (continued).

Fyke Net Location	Capture Date	Length (mm)	Total Catch/ Day/Fyke Net
#5	8/6/96	100	5
#5	8/6/96	262	
#5	8/6/96	302	
#5	8/6/96	305	
#5	8/6/96	363	
#5	8/8/96	94	6
#5	8/8/96	201	
#5	8/8/96	240	
#5	8/8/96	243	
#5	8/8/96	300	
#5	8/8/96	344	
#5	8/27/96	262	9
#5	8/27/96	270	
#5	8/27/96	283	
#5	8/27/96	290	
#5	8/27/96	290	
#5	8/27/96	290	
#5	8/27/96	312	
#5	8/27/96	322	
#5	8/27/96	410	
#5	8/28/96	245	10
#5	8/28/96	282	
#5	8/28/96	292	
#5	8/28/96	306	
#5	8/28/96	310	
#5	8/28/96	313	
#5	8/28/96	337	
#5	8/28/96	420	
#5	8/28/96	460	
#5	8/28/96	560	
#5	8/29/96	115	7
#5	8/29/96	307	
#5	8/29/96	315	
#5	8/29/96	317	
#5	8/29/96	333	
#5	8/29/96	370	
#5	8/29/96	465	

Appendix 2 (continued).

Fyke Net Location	Capture Date	Length (mm)	Total Catch/ Day/Fyke Net
#5	8/30/96	270	11
#5	8/30/96	290	
#5	8/30/96	300	
#5	8/30/96	317	
#5	8/30/96	320	
#5	8/30/96	320	
#5	8/30/96	325	
#5	8/30/96	330	
#5	8/30/96	360	
#5	8/30/96	390	
#5	8/30/96	395	
#6	8/7/96	92	5
#6	8/7/96	102	
#6	8/7/96	110	
#6	8/7/96	266	
#6	8/7/96	450	
#6	8/8/96	244	4
#6	8/8/96	254	
#6	8/8/96	267	
#6	8/8/96	450	
#7	8/16/96	102	9
#7	8/16/96	107	
#7	8/16/96	110	
#7	8/16/96	110	
#7	8/16/96	113	
#7	8/16/96	115	
#7	8/16/96	116	
#7	8/16/96	117	
#7	8/16/96	291	
#7	8/27/96	112	5
#7	8/27/96	115	
#7	8/27/96	122	
#7	8/27/96	127	
#7	8/27/96	287	
#7	8/28/96	116	

Appendix 2 (concluded).

Fyke Net Location	Capture Date	Length (mm)	Total Catch/ Day/Fyke Net
#8	8/29/96	282	6
#8	8/29/96	283	
#8	8/29/96	288	
#8	8/29/96	290	
#8	8/29/96	320	
#8	8/29/96	360	
#8	8/30/96	260	5
#8	8/30/96	270	
#8	8/30/96	280	
#8	8/30/96	285	
#8	8/30/96	297	

Appendix 3

Length of young-of-the-year burbot caught in fyke-nets fished in the reservoir during August 1996.

Date	Length (mm)	Date	Length (mm)	Date	Length (mm)
early-Aug	82	mid-Aug	102	late-Aug	102
	88		107		112
	88		110		115
	91		110		115
	92		113		116
	94		115		116
	96		116		120
	97		117		120
	97				122
	97				122
	98				122
	98				127
	99				127
	100				130
	100				131
	101				134
	101				138
	102				
	102				
	102				
	105				
	110				
	116				
average	98		111		122
SD	7		5		9

Appendix 4

Arctic grayling length and catch in fyke-nets fished in the reservoir during summer 1996.

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
7165	OR	182	6/26/96	Fyke Net 1			
6966	OR	182	6/26/96	Fyke Net 1	8/30/96	Fyke Net 3	232
19001	BL	181	6/26/96	Fyke Net 1	9/6/96	FW Pond	222
19002	BL	232	6/26/96	Fyke Net 1	8/7/96	Fyke Net 1	248
19003	BL	172	6/26/96	Fyke Net 1	8/30/96	Fyke Net 3	224
					9/6/96	FW Pond	227
19004	BL	181	6/26/96	Fyke Net 1	8/7/96	Fyke Net 2	193
19005	BL	190	6/26/96	Fyke Net 1			
19006	BL	201	6/26/96	Fyke Net 1	8/6/96	Fyke Net 2	229
19007	BL	177	6/26/96	Fyke Net 1	8/28/96	Fyke Net 5	230
19008	BL	204	6/26/96	Fyke Net 1			
19009	BL	166	6/26/96	Fyke Net 1	9/6/96	FW Pond	219
19010	BL	200	6/26/96	Fyke Net 1			
19011	BL	184	6/26/96	Fyke Net 1	8/7/96	Fyke Net 2	195
					8/27/96	Fyke Net 2	200
19012	BL	185	6/26/96	Fyke Net 1	8/6/96	Fyke Net 3	217
19013	BL	169	6/26/96	Fyke Net 1			
19014	BL	187	6/26/96	Fyke Net 1			
19015	BL	190	6/26/96	Fyke Net 1	8/6/96	Fyke Net 1	229
19016	BL	192	6/26/96	Fyke Net 1			
19017	BL	184	6/26/96	Fyke Net 1			
19018	BL	183	6/26/96	Fyke Net 1	9/6/96	FW Pond	223
19019	BL	180	6/26/96	Fyke Net 1			
19020	BL	183	6/26/96	Fyke Net 1			
19021	BL	163	6/26/96	Fyke Net 1			
		90	6/26/96	Fyke Net 1			
		113	6/26/96	Fyke Net 1			
22	W	198	6/26/96	Fyke Net 2			
7014	OR	181	6/26/96	Fyke Net 2			
6918	OR	191	6/26/96	Fyke Net 2			
6282	OR	206	6/26/96	Fyke Net 2	8/29/96	Fyke Net 1	249
19022	BL	190	6/26/96	Fyke Net 2	8/6/96	Fyke Net 3	222
19023	BL	241	6/26/96	Fyke Net 2			
19024	BL	210	6/26/96	Fyke Net 2			
19025	BL	174	6/26/96	Fyke Net 2			
19026	BL	195	6/26/96	Fyke Net 2			
19027	BL	174	6/26/96	Fyke Net 2			
19028	BL	211	6/26/96	Fyke Net 2			
19029	BL	187	6/26/96	Fyke Net 2			
19030	BL	178	6/26/96	Fyke Net 2			
19031	BL	175	6/26/96	Fyke Net 2			
19032	BL	185	6/26/96	Fyke Net 2			
19033	BL	180	6/26/96	Fyke Net 2	8/28/96	Fyke Net 5	213

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19034	BL	167	6/26/96	Fyke Net 2			
19035	BL	197	6/26/96	Fyke Net 2			
19036	BL	167	6/26/96	Fyke Net 2			
19037	BL	169	6/26/96	Fyke Net 2			
19038	BL	175	6/26/96	Fyke Net 2			
19039	BL	193	6/26/96	Fyke Net 2			
19040	BL	195	6/26/96	Fyke Net 2	8/7/96	Fyke Net 3	224
19041	BL	185	6/26/96	Fyke Net 2			
19042	BL	196	6/26/96	Fyke Net 2			
19043	BL	172	6/26/96	Fyke Net 2	9/6/96	FW Pond	225
19044	BL	167	6/26/96	Fyke Net 2			
19045	BL	170	6/26/96	Fyke Net 2			
19046	BL	163	6/26/96	Fyke Net 2			
19047	BL	174	6/26/96	Fyke Net 2			
19048	BL	158	6/26/96	Fyke Net 2	8/27/96	Fyke Net 3	212
19049	BL	160	6/26/96	Fyke Net 2			
19050	BL	174	6/26/96	Fyke Net 2	8/8/96	Fyke Net 1	210
		87	6/26/96	Fyke Net 2			
		155	6/26/96	Fyke Net 2			
		116	6/26/96	Fyke Net 2			
		129	6/26/96	Fyke Net 2			
		141	6/26/96	Fyke Net 2			
19051	BL	159	6/27/96	Fyke Net 1			
19052	BL	206	6/27/96	Fyke Net 1			
19053	BL	185	6/27/96	Fyke Net 1			
19054	BL	191	6/27/96	Fyke Net 1			
19055	BL	167	6/27/96	Fyke Net 1	8/6/96	Fyke Net 3	195
19056	BL	170	6/27/96	Fyke Net 1			
		117	6/27/96	Fyke Net 1			
		91	6/27/96	Fyke Net 1			
6815	OR	194	6/27/96	Fyke Net 2			
7282	OR	179	6/27/96	Fyke Net 2			
6100	OR	191	6/27/96	Fyke Net 2			
3195	Y	191	6/27/96	Fyke Net 2	8/8/96	Fyke Net 6	214
					9/6/96	FW Pond	219
6561	OR	232	6/27/96	Fyke Net 2			
19057	BL	196	6/27/96	Fyke Net 2	8/28/96	Fyke Net 3	209
19058	BL	212	6/27/96	Fyke Net 2			
19059	BL	210	6/27/96	Fyke Net 2			
19060	BL	200	6/27/96	Fyke Net 2	8/6/96	Fyke Net 1	216
19061	BL	214	6/27/96	Fyke Net 2			
19062	BL	154	6/27/96	Fyke Net 2			
19063	BL	162	6/27/96	Fyke Net 2			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19064	BL	193	6/27/96	Fyke Net 2	8/6/96	Fyke Net 3	224
19065	BL	196	6/27/96	Fyke Net 2	8/8/96	Fyke Net 2	227
					9/6/96	FW Pond	244
19066	BL	170	6/27/96	Fyke Net 2			
19067	BL	163	6/27/96	Fyke Net 2			
19068	BL	196	6/27/96	Fyke Net 2			
19069	BL	161	6/27/96	Fyke Net 2	8/8/96	Fyke Net 1	171
19070	BL	163	6/27/96	Fyke Net 2			
19071	BL	187	6/27/96	Fyke Net 2			
19072	BL	183	6/27/96	Fyke Net 2	9/6/96	FW Pond	228
19073	BL	165	6/27/96	Fyke Net 2			
19074	BL	169	6/27/96	Fyke Net 2			
19075	BL	156	6/27/96	Fyke Net 2			
19076	BL	172	6/27/96	Fyke Net 2			
19077	BL	175	6/27/96	Fyke Net 2	8/8/96	Fyke Net 1	210
19078	BL	180	6/27/96	Fyke Net 2	8/27/96	Fyke Net 3	220
19079	BL	173	6/27/96	Fyke Net 2			
19080	BL	189	6/27/96	Fyke Net 2			
19081	BL	200	6/27/96	Fyke Net 2			
19082	BL	162	6/27/96	Fyke Net 2	8/27/96	Fyke Net 3	205
19083	BL	178	6/27/96	Fyke Net 2			
19084	BL	165	6/27/96	Fyke Net 2			
19085	BL	166	6/27/96	Fyke Net 2	8/27/96	Fyke Net 1	204
19086	BL	199	6/27/96	Fyke Net 2	8/29/96	Fyke Net 1	219
					9/6/96	FW Pond	221
19087	BL	180	6/27/96	Fyke Net 2			
19088	BL	160	6/27/96	Fyke Net 2			
19089	BL	168	6/27/96	Fyke Net 2			
19090	BL	171	6/27/96	Fyke Net 2			
19091	BL	179	6/27/96	Fyke Net 2	8/8/96	Fyke Net 1	213
19092	BL	170	6/27/96	Fyke Net 2	8/27/96	Fyke Net 1	211
19093	BL	182	6/27/96	Fyke Net 2	9/6/96	FW Pond	236
19094	BL	175	6/27/96	Fyke Net 2	8/7/96	Fyke Net 2	199
					8/29/96	Fyke Net 3	235
19095	BL	169	6/27/96	Fyke Net 2			
19096	BL	173	6/27/96	Fyke Net 2			
19097	BL	196	6/27/96	Fyke Net 2			
19098	BL	178	6/27/96	Fyke Net 2			
19099	BL	171	6/27/96	Fyke Net 2			
19100	BL	193	6/27/96	Fyke Net 2			
19101	BL	170	6/27/96	Fyke Net 2			
19102	BL	176	6/27/96	Fyke Net 2	8/29/96	Fyke Net 8	204
19103	BL	191	6/27/96	Fyke Net 2	9/6/96	FW Pond	236
19105	BL	184	6/27/96	Fyke Net 2			
19106	BL	161	6/27/96	Fyke Net 2	8/28/96	Fyke Net 3	209

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19107	BL	173	6/27/96	Fyke Net 2			
19108	BL	186	6/27/96	Fyke Net 2	8/8/96	Fyke Net 2	210
19109	BL	190	6/27/96	Fyke Net 2	8/8/96	Fyke Net 6	208
					9/6/96	FW Pond	205
19110	BL	200	6/27/96	Fyke Net 2			
19111	BL	181	6/27/96	Fyke Net 2			
19112	BL	170	6/27/96	Fyke Net 2			
19113	BL	169	6/27/96	Fyke Net 2			
19114	BL	211	6/27/96	Fyke Net 2			
19115	BL	172	6/27/96	Fyke Net 2			
19116	BL	192	6/27/96	Fyke Net 2			
19117	BL	181	6/27/96	Fyke Net 2			
19118	BL	173	6/27/96	Fyke Net 2			
19119	BL	181	6/27/96	Fyke Net 2	8/6/96	Fyke Net 1	220
19120	BL	184	6/27/96	Fyke Net 2	8/7/96	Fyke Net 3	220
19121	BL	187	6/27/96	Fyke Net 2			
19122	BL	186	6/27/96	Fyke Net 2			
19123	BL	179	6/27/96	Fyke Net 2			
19124	BL	190	6/27/96	Fyke Net 2	8/8/96	Fyke Net 2	219
19125	BL	163	6/27/96	Fyke Net 2			
19126	BL	180	6/27/96	Fyke Net 2			
19127	BL	170	6/27/96	Fyke Net 2			
19128	BL	150	6/27/96	Fyke Net 2			
19129	BL	154	6/27/96	Fyke Net 2			
		104	6/27/96	Fyke Net 2			
		91	6/27/96	Fyke Net 2			
		108	6/27/96	Fyke Net 2			
		118	6/27/96	Fyke Net 2			
		233	6/27/96	Fyke Net 2			
		231	6/27/96	Fyke Net 2			
7513	OR	184	6/28/96	Fyke Net 1	8/8/96	Fyke Net 1	220
6215	OR	240	6/28/96	Fyke Net 1			
6862	OR	182	6/28/96	Fyke Net 1			
6750	OR	184	6/28/96	Fyke Net 1	8/8/96	Fyke Net 1	205
6881	OR	199	6/28/96	Fyke Net 1			
19130	BL	180	6/28/96	Fyke Net 1			
19131	BL	175	6/28/96	Fyke Net 1	8/28/96	Fyke Net 3	228
19132	BL	178	6/28/96	Fyke Net 1	8/7/96	Fyke Net 3	210
19133	BL	155	6/28/96	Fyke Net 1	8/8/96	Fyke Net 1	181
19134	BL	158	6/28/96	Fyke Net 1			
19135	BL	200	6/28/96	Fyke Net 1	9/6/96	FW Pond	226
19136	BL	150	6/28/96	Fyke Net 1			
19137	BL	171	6/28/96	Fyke Net 1			
19138	BL	178	6/28/96	Fyke Net 1	8/7/96	Fyke Net 4	215

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19139	BL	212	6/28/96	Fyke Net 1	8/8/96	Fyke Net 3	237
19140	BL	190	6/28/96	Fyke Net 1			
19141	BL	153	6/28/96	Fyke Net 1	9/6/96	FW Pond	205
19142	BL	173	6/28/96	Fyke Net 1	8/27/96	Fyke Net 3	220
19143	BL	185	6/28/96	Fyke Net 1			
19144	BL	172	6/28/96	Fyke Net 1			
19145	BL	210	6/28/96	Fyke Net 1			
19146	BL	168	6/28/96	Fyke Net 1			
19147	BL	173	6/28/96	Fyke Net 1	8/30/96	Fyke Net 1	218
19148	BL	171	6/28/96	Fyke Net 1			
19149	BL	171	6/28/96	Fyke Net 1			
19150	BL	163	6/28/96	Fyke Net 1			
19151	BL	171	6/28/96	Fyke Net 1			
19152	BL	181	6/28/96	Fyke Net 1			
19153	BL	157	6/28/96	Fyke Net 1			
19154	BL	193	6/28/96	Fyke Net 1	8/30/96	Fyke Net 8	222
19155	BL	155	6/28/96	Fyke Net 1			
19156	BL	165	6/28/96	Fyke Net 1			
19157	BL	205	6/28/96	Fyke Net 1	8/27/96	Fyke Net 1	245
19158	BL	162	6/28/96	Fyke Net 1	8/29/96	Fyke Net 3	210
19159	BL	191	6/28/96	Fyke Net 1			
19161	BL	204	6/28/96	Fyke Net 1			
19162	BL	166	6/28/96	Fyke Net 1	8/30/96	Fyke Net 3	214
19163	BL	173	6/28/96	Fyke Net 1	8/7/96	Fyke Net 1	195
					8/30/96	Fyke Net 8	205
19164	BL	159	6/28/96	Fyke Net 1	8/6/96	Fyke Net 2	181
19165	BL	155	6/28/96	Fyke Net 1	8/6/96	Fyke Net 1	165
					8/27/96	Fyke Net 1	173
19166	BL	186	6/28/96	Fyke Net 1	8/8/96	Fyke Net 1	200
19167	BL	214	6/28/96	Fyke Net 1	8/27/96	Fyke Net 1	220
19168	BL	194	6/28/96	Fyke Net 1			
19169	BL	194	6/28/96	Fyke Net 1	8/27/96	Fyke Net 3	242
19170	BL	203	6/28/96	Fyke Net 1			
19171	BL	172	6/28/96	Fyke Net 1			
19172	BL	189	6/28/96	Fyke Net 1			
19173	BL	177	6/28/96	Fyke Net 1	8/28/96	Fyke Net 3	220
19174	BL	161	6/28/96	Fyke Net 1			
19175	BL	154	6/28/96	Fyke Net 1			
19176	BL	186	6/28/96	Fyke Net 1	8/6/96	Fyke Net 3	192
19177	BL	173	6/28/96	Fyke Net 1			
19178	BL	197	6/28/96	Fyke Net 1			
19179	BL	183	6/28/96	Fyke Net 1			
19180	BL	174	6/28/96	Fyke Net 1			
19181	BL	189	6/28/96	Fyke Net 1			
19182	BL	173	6/28/96	Fyke Net 1			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19183	BL	174	6/28/96	Fyke Net 1	8/28/96	Fyke Net 3	234
19184	BL	189	6/28/96	Fyke Net 1			
19185	BL	190	6/28/96	Fyke Net 1	9/6/96	FW Pond	229
19186	BL	172	6/28/96	Fyke Net 1			
		128	6/28/96	Fyke Net 1			
		168	6/28/96	Fyke Net 1			
		127	6/28/96	Fyke Net 1			
		251	6/28/96	Fyke Net 1			
		88	6/28/96	Fyke Net 1			
		122	6/28/96	Fyke Net 1			
		242	6/28/96	Fyke Net 1			
		131	6/28/96	Fyke Net 1			
		268	6/28/96	Fyke Net 1			
		221	6/28/96	Fyke Net 1			
6882	OR	177	6/28/96	Fyke Net 2			
6030	OR	185	6/28/96	Fyke Net 2			
6361	OR	187	6/28/96	Fyke Net 2			
6773	OR	186	6/28/96	Fyke Net 2	9/6/96	FW Pond	226
7086	OR	192	6/28/96	Fyke Net 2			
6312	OR	218	6/28/96	Fyke Net 2			
3185	Y	195	6/28/96	Fyke Net 2	8/6/95	Fyke Net 2	226
7245	OR	187	6/28/96	Fyke Net 2			
19160	BL	185	6/28/96	Fyke Net 2			
19187	BL	178	6/28/96	Fyke Net 2			
19188	BL	209	6/28/96	Fyke Net 2			
19189	BL	189	6/28/96	Fyke Net 2			
19190	BL	165	6/28/96	Fyke Net 2			
19191	BL	190	6/28/96	Fyke Net 2	8/6/96	Fyke Net 1	215
19192	BL	160	6/28/96	Fyke Net 2			
19193	BL	168	6/28/96	Fyke Net 2			
19194	BL	170	6/28/96	Fyke Net 2			
19195	BL	187	6/28/96	Fyke Net 2			
19196	BL	172	6/28/96	Fyke Net 2	8/6/96	Fyke Net 5	203
19197	BL	158	6/28/96	Fyke Net 2			
19198	BL	163	6/28/96	Fyke Net 2			
19199	BL	206	6/28/96	Fyke Net 2			
19200	BL	190	6/28/96	Fyke Net 2	8/8/96	Fyke Net 5	206
19201	BL	194	6/28/96	Fyke Net 2			
19202	BL	152	6/28/96	Fyke Net 2			
19203	BL	159	6/28/96	Fyke Net 2	8/29/96	Fyke Net 3	197
19204	BL	157	6/28/96	Fyke Net 2			
19205	BL	165	6/28/96	Fyke Net 2			
19206	BL	179	6/28/96	Fyke Net 2			
19207	BL	209	6/28/96	Fyke Net 2	8/8/96	Fyke Net 5	215

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
					9/6/96	FW Pond	218
19208	BL	174	6/28/96	Fyke Net 2			
19209	BL	166	6/28/96	Fyke Net 2	8/29/96	Fyke Net 8	205
19210	BL	186	6/28/96	Fyke Net 2	8/8/96	Fyke Net 5	223
19211	BL	170	6/28/96	Fyke Net 2	8/29/96	Fyke Net 3	228
19212	BL	169	6/28/96	Fyke Net 2			
19213	BL	202	6/28/96	Fyke Net 2			
19214	BL	158	6/28/96	Fyke Net 2			
		239					
		118					
		97					
		112					
		129					
19264	BL	170	8/6/96	Fyke Net 1			
6059	OR	217	8/6/96	Fyke Net 1			
19265	BL	191	8/6/96	Fyke Net 1			
19266	BL	209	8/6/96	Fyke Net 1			
19267	BL	191	8/6/96	Fyke Net 1			
19268	BL	222	8/6/96	Fyke Net 1			
19269	BL	229	8/6/96	Fyke Net 1			
19270	BL	212	8/6/96	Fyke Net 1			
19271	BL	206	8/6/96	Fyke Net 1			
19272	BL	213	8/6/96	Fyke Net 1			
19273	BL	211	8/6/96	Fyke Net 1			
19274	BL	207	8/6/96	Fyke Net 1			
19275	BL	229	8/6/96	Fyke Net 1			
19276	BL	191	8/6/96	Fyke Net 1			
19277	BL	200	8/6/96	Fyke Net 1	9/6/96	FW Pond	222
19278	BL	202	8/6/96	Fyke Net 1			
19279	BL	226	8/6/96	Fyke Net 1			
6975	OR	240	8/6/96	Fyke Net 1			
19280	BL	190	8/6/96	Fyke Net 1	8/27/96	Fyke Net 3	209
19281	BL	189	8/6/96	Fyke Net 1			
19282	BL	214	8/6/96	Fyke Net 1	9/6/96	FW Pond	224
19283	BL	154	8/6/96	Fyke Net 1			
19284	BL	234	8/6/96	Fyke Net 1			
19285	BL	210	8/6/96	Fyke Net 1			
338	W	234	8/6/96	Fyke Net 1			
19286	BL	215	8/6/96	Fyke Net 1	9/6/96	FW Pond	225
19287	BL	215	8/6/96	Fyke Net 1			
19288	BL	208	8/6/96	Fyke Net 1			
19289	BL	251	8/6/96	Fyke Net 1			
19290	BL	217	8/6/96	Fyke Net 1			
19291	BL	180	8/6/96	Fyke Net 1			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19292	BL	209	8/6/96	Fyke Net 1	8/30/96	Fyke Net 3	224
19293	BL	212	8/6/96	Fyke Net 1			
6228	OR	239	8/6/96	Fyke Net 1			
19294	BL	218	8/6/96	Fyke Net 1			
19295	BL	224	8/6/96	Fyke Net 1			
19296	BL	191	8/6/96	Fyke Net 1	8/27/96	Fyke Net 1	205
19297	BL	194	8/6/96	Fyke Net 1	8/30/96	Fyke Net 3	204
19298	BL	213	8/6/96	Fyke Net 1			
19299	BL	220	8/6/96	Fyke Net 1	8/28/96	Fyke Net 5	230
19300	BL	188	8/6/96	Fyke Net 1			
19301	BL	216	8/6/96	Fyke Net 1			
19302	BL	198	8/6/96	Fyke Net 1	9/6/96	FW Pond	208
19303	BL	200	8/6/96	Fyke Net 1			
19304	BL	217	8/6/96	Fyke Net 1			
19305	BL	222	8/6/96	Fyke Net 1	8/28/96	Fyke Net 3	230
19306	BL	224	8/6/96	Fyke Net 1	9/6/96	FW Pond	240
19307	BL	203	8/6/96	Fyke Net 1			
19308	BL	206	8/6/96	Fyke Net 1	8/27/96	Fyke Net 5	210
19309	BL	206	8/6/96	Fyke Net 1			
19310	BL	219	8/6/96	Fyke Net 1			
19311	BL	202	8/6/96	Fyke Net 1			
19312	BL	203	8/6/96	Fyke Net 1			
19313	BL	218	8/6/96	Fyke Net 1			
19314	BL	207	8/6/96	Fyke Net 1			
19315	BL	222	8/6/96	Fyke Net 1			
19316	BL	225	8/6/96	Fyke Net 1			
19317	BL	164	8/6/96	Fyke Net 1			
6824	OR	214	8/6/96	Fyke Net 1			
19318	BL	214	8/6/96	Fyke Net 1			
19319	BL	207	8/6/96	Fyke Net 1			
19320	BL	169	8/6/96	Fyke Net 1			
19321	BL	168	8/6/96	Fyke Net 1			
19322	BL	179	8/6/96	Fyke Net 1	8/27/96	Fyke Net 1	188
19323	BL	217	8/6/96	Fyke Net 1			
19324	BL	174	8/6/96	Fyke Net 1			
19325	BL	189	8/6/96	Fyke Net 1			
19326	BL	192	8/6/96	Fyke Net 1			
19327	BL	166	8/6/96	Fyke Net 1			
19328	BL	198	8/6/96	Fyke Net 1			
19329	BL	223	8/6/96	Fyke Net 1			
19330	BL	196	8/6/96	Fyke Net 1			
19331	BL	217	8/6/96	Fyke Net 1			
19332	BL	198	8/6/96	Fyke Net 1	8/27/96	Fyke Net 1	214
19333	BL	221	8/6/96	Fyke Net 1			
19334	BL	220	8/6/96	Fyke Net 1			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19335	BL	154	8/6/96	Fyke Net 1	8/29/96	Fyke Net 5	162
19336	BL	189	8/6/96	Fyke Net 1	8/30/96	Fyke Net 1	203
19337	BL	226	8/6/96	Fyke Net 1			
19338	BL	202	8/6/96	Fyke Net 1	9/6/96	FW Pond	224
19339	BL	221	8/6/96	Fyke Net 1			
19340	BL	239	8/6/96	Fyke Net 1			
19341	BL	203	8/6/96	Fyke Net 1	8/27/96	Fyke Net 1	216
19342	BL	222	8/6/96	Fyke Net 1			
19343	BL	228	8/6/96	Fyke Net 1			
19344	BL	216	8/6/96	Fyke Net 1			
19345	BL	205	8/6/96	Fyke Net 1			
19346	BL	238	8/6/96	Fyke Net 1			
19347	BL	226	8/6/96	Fyke Net 1			
19348	BL	179	8/6/96	Fyke Net 1			
19349	BL	215	8/6/96	Fyke Net 1			
19350	BL	188	8/6/96	Fyke Net 1			
19351	BL	211	8/6/96	Fyke Net 1			
19352	BL	219	8/6/96	Fyke Net 1	8/29/96	Fyke Net 8	231
19353	BL	192	8/6/96	Fyke Net 1			
19354	BL	158	8/6/96	Fyke Net 1			
19355	BL	220	8/6/96	Fyke Net 1			
19356	BL	238	8/6/96	Fyke Net 1			
19357	BL	200	8/6/96	Fyke Net 1			
19358	BL	184	8/6/96	Fyke Net 1	8/28/96	Fyke Net 3	198
19359	BL	209	8/6/96	Fyke Net 1			
19360	BL	211	8/6/96	Fyke Net 1			
19361	BL	214	8/6/96	Fyke Net 1			
19362	BL	190	8/6/96	Fyke Net 1			
19363	BL	237	8/6/96	Fyke Net 1			
19364	BL	224	8/6/96	Fyke Net 1			
19365	BL	222	8/6/96	Fyke Net 1			
19366	BL	171	8/6/96	Fyke Net 1			
19367	BL	200	8/6/96	Fyke Net 1			
19368	BL	190	8/6/96	Fyke Net 1			
6369	OR	202	8/6/96	Fyke Net 1			
19165	BL	165	8/6/96	Fyke Net 1			
19015	BL	229	8/6/96	Fyke Net 1			
19119	BL	220	8/6/96	Fyke Net 1			
19191	BL	215	8/6/96	Fyke Net 1			
19060	BL	216	8/6/96	Fyke Net 1			
		137	8/6/96	Fyke Net 1			
		147	8/6/96	Fyke Net 1			
		98	8/6/96	Fyke Net 1			
19369	BL	231	8/6/96	Fyke Net 2			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19370	BL	199	8/6/96	Fyke Net 2	8/28/96	Fyke Net 5	209
19371	BL	212	8/6/96	Fyke Net 2	9/6/96	FW Pond	221
19372	BL	218	8/6/96	Fyke Net 2			
19373	BL	201	8/6/96	Fyke Net 2			
19374	BL	189	8/6/96	Fyke Net 2			
6779	OR	229	8/6/96	Fyke Net 2			
6806	OR	201	8/6/96	Fyke Net 2			
6474	OR	200	8/6/96	Fyke Net 2			
224	W	233	8/6/96	Fyke Net 2	8/28/96	Fyke Net 5	239
19375	BL	164	8/6/96	Fyke Net 2			
19376	BL	218	8/6/96	Fyke Net 2	8/29/96	Fyke Net 2	220
					9/6/96	FW Pond	218
19377	BL	221	8/6/96	Fyke Net 2			
19378	BL	229	8/6/96	Fyke Net 2			
19380	BL	233	8/6/96	Fyke Net 2	8/28/96	Fyke Net 5	241
19381	BL	232	8/6/96	Fyke Net 2			
6590	OR	228	8/6/96	Fyke Net 2	8/27/96	Fyke Net 1	230
19383	BL	224	8/6/96	Fyke Net 2			
19384	BL	224	8/6/96	Fyke Net 2			
6970	OR	212	8/6/96	Fyke Net 2			
19006	BL	229	8/6/96	Fyke Net 2			
3185	Y	226	8/6/96	Fyke Net 2			
19164	BL	181	8/6/96	Fyke Net 2			
19224	BL	207	8/6/96	Fyke Net 3			
19225	BL	196	8/6/96	Fyke Net 3			
19226	BL	204	8/6/96	Fyke Net 3			
19227	BL	224	8/6/96	Fyke Net 3			
19228	BL	206	8/6/96	Fyke Net 3			
6148	OR	207	8/6/96	Fyke Net 3			
19229	BL	218	8/6/96	Fyke Net 3			
19230	BL	197	8/6/96	Fyke Net 3			
19231	BL	205	8/6/96	Fyke Net 3			
19232	BL	214	8/6/96	Fyke Net 3			
19233	BL	195	8/6/96	Fyke Net 3			
19234	BL	225	8/6/96	Fyke Net 3			
19235	BL	221	8/6/96	Fyke Net 3			
19236	BL	212	8/6/96	Fyke Net 3			
19237	BL	197	8/6/96	Fyke Net 3			
19238	BL	189	8/6/96	Fyke Net 3			
6466	OR	209	8/6/96	Fyke Net 3			
19240	BL	198	8/6/96	Fyke Net 3			
19241	BL	194	8/6/96	Fyke Net 3			
19242	BL	177	8/6/96	Fyke Net 3			
19243	BL	231	8/6/96	Fyke Net 3			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19244	BL	211	8/6/96	Fyke Net 3			
19245	BL	182	8/6/96	Fyke Net 3			
19246	BL	200	8/6/96	Fyke Net 3			
19247	BL	190	8/6/96	Fyke Net 3			
19248	BL	171	8/6/96	Fyke Net 3			
19249	BL	210	8/6/96	Fyke Net 3			
19250	BL	234	8/6/96	Fyke Net 3			
19239	BL	200	8/6/96	Fyke Net 3			
19251	BL	210	8/6/96	Fyke Net 3			
19252	BL	218	8/6/96	Fyke Net 3			
19253	BL	211	8/6/96	Fyke Net 3			
19254	BL	213	8/6/96	Fyke Net 3			
19255	BL	180	8/6/96	Fyke Net 3			
19256	BL	185	8/6/96	Fyke Net 3			
19257	BL	216	8/6/96	Fyke Net 3			
19258	BL	194	8/6/96	Fyke Net 3			
19259	BL	196	8/6/96	Fyke Net 3			
19260	BL	192	8/6/96	Fyke Net 3			
19261	BL	205	8/6/96	Fyke Net 3	8/27/96	Fyke Net 1	217
19262	BL	214	8/6/96	Fyke Net 3			
19263	BL	205	8/6/96	Fyke Net 3			
19012	BL	217	8/6/96	Fyke Net 3			
19064	BL	224	8/6/96	Fyke Net 3			
19022	BL	222	8/6/96	Fyke Net 3			
19176	BL	192	8/6/96	Fyke Net 3			
19055	BL	195	8/6/96	Fyke Net 3			
		84	8/6/96	Fyke Net 3			
		62	8/6/96	Fyke Net 3			
		95	8/6/96	Fyke Net 3			
		92	8/6/96	Fyke Net 3			
		96	8/6/96	Fyke Net 3			
		87	8/6/96	Fyke Net 3			
		92	8/6/96	Fyke Net 3			
		76	8/6/96	Fyke Net 3			
		77	8/6/96	Fyke Net 3			
		94	8/6/96	Fyke Net 3			
19386	BL	269	8/6/96	Fyke Net 5			
6795	OR	212	8/6/96	Fyke Net 5			
19387	BL	222	8/6/96	Fyke Net 5			
19388	BL	159	8/6/96	Fyke Net 5			
99	W	191	8/6/96	Fyke Net 5			
19388	BL	159	8/6/96	Fyke Net 5			
19389	BL	220	8/6/96	Fyke Net 5			
19391	BL	217	8/6/96	Fyke Net 5			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19393	BL	152	8/6/96	Fyke Net 5			
19394	BL	216	8/6/96	Fyke Net 5			
19395	BL	169	8/6/96	Fyke Net 5			
19396	BL	219	8/6/96	Fyke Net 5			
19397	BL	145	8/6/96	Fyke Net 5			
19398	BL	158	8/6/96	Fyke Net 5			
19196	BL	203	8/6/96	Fyke Net 5			
		148	8/6/96	Fyke Net 5			
		140	8/6/96	Fyke Net 5			
		138	8/6/96	Fyke Net 5			
		130	8/6/96	Fyke Net 5			
6305	OR	235	8/7/96	Fyke Net 1			
19416	BL	205	8/7/96	Fyke Net 1			
19417	BL	220	8/7/96	Fyke Net 1			
19418	BL	208	8/7/96	Fyke Net 1			
19419	BL	189	8/7/96	Fyke Net 1			
19420	BL	225	8/7/96	Fyke Net 1			
19421	BL	219	8/7/96	Fyke Net 1			
19422	BL	208	8/7/96	Fyke Net 1			
19423	BL	156	8/7/96	Fyke Net 1			
19424	BL	227	8/7/96	Fyke Net 1			
19425	BL	254	8/7/96	Fyke Net 1			
19426	BL	218	8/7/96	Fyke Net 1			
19428	BL	196	8/7/96	Fyke Net 1			
19429	BL	169	8/7/96	Fyke Net 1			
19430	BL	193	8/7/96	Fyke Net 1			
19431	BL	196	8/7/96	Fyke Net 1	8/27/96	Fyke Net 1	209
19432	BL	201	8/7/96	Fyke Net 1			
19433	BL	214	8/7/96	Fyke Net 1			
19434	BL	151	8/7/96	Fyke Net 1	8/30/96	Fyke Net 3	161
19435	BL	153	8/7/96	Fyke Net 1			
19436	BL	274	8/7/96	Fyke Net 1			
6869	OR	202	8/7/96	Fyke Net 1	8/27/96	Fyke Net 1	216
19437	BL	214	8/7/96	Fyke Net 1			
19438	BL	225	8/7/96	Fyke Net 1			
19439	BL	191	8/7/96	Fyke Net 1			
19440	BL	182	8/7/96	Fyke Net 1	8/28/96	Fyke Net 3	191
19441	BL	152	8/7/96	Fyke Net 1			
19442	BL	215	8/7/96	Fyke Net 1			
3878	Y	250	8/7/96	Fyke Net 1			
19443	BL	210	8/7/96	Fyke Net 1			
19444	BL	214	8/7/96	Fyke Net 1			
19445	BL	224	8/7/96	Fyke Net 1			
19447	BL	205	8/7/96	Fyke Net 1	8/29/96	Fyke Net 3	214

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19002	BL	248	8/7/96	Fyke Net 1			
19163	BL	195	8/7/96	Fyke Net 1			
		91	8/7/96	Fyke Net 1			
		89	8/7/96	Fyke Net 1			
		94	8/7/96	Fyke Net 1			
		72	8/7/96	Fyke Net 1			
		98	8/7/96	Fyke Net 1			
		98	8/7/96	Fyke Net 1			
		89	8/7/96	Fyke Net 1			
		92	8/7/96	Fyke Net 1			
		111	8/7/96	Fyke Net 1			
7319	OR	231	8/7/96	Fyke Net 2	8/29/96	Fyke Net 5	247
6097	OR	238	8/7/96	Fyke Net 2			
19448	BL	238	8/7/96	Fyke Net 2			
19449	BL	220	8/7/96	Fyke Net 2			
19450	BL	217	8/7/96	Fyke Net 2	9/6/96	FW Pond	229
19401	BL	166	8/7/96	Fyke Net 2			
19446	BL	193	8/7/96	Fyke Net 2			
19427	BL	200	8/7/96	Fyke Net 2	8/29/96	Fyke Net 5	211
19451	BL	219	8/7/96	Fyke Net 2			
19452	BL	210	8/7/96	Fyke Net 2			
19454	BL	223	8/7/96	Fyke Net 2			
19456	BL	194	8/7/96	Fyke Net 2			
19457	BL	191	8/7/96	Fyke Net 2			
19458	BL	188	8/7/96	Fyke Net 2			
19459	BL	198	8/7/96	Fyke Net 2			
19460	BL	170	8/7/96	Fyke Net 2			
6257	OR	258	8/7/96	Fyke Net 2			
19462	BL	197	8/7/96	Fyke Net 2			
19463	BL	175	8/7/96	Fyke Net 2			
19464	BL	210	8/7/96	Fyke Net 2			
19465	BL	212	8/7/96	Fyke Net 2	9/6/96	FW Pond	220
19466	BL	206	8/7/96	Fyke Net 2			
19467	BL	224	8/7/96	Fyke Net 2			
19468	BL	189	8/7/96	Fyke Net 2			
19469	BL	229	8/7/96	Fyke Net 2			
19470	BL	210	8/7/96	Fyke Net 2			
19471	BL	174	8/7/96	Fyke Net 2			
19472	BL	224	8/7/96	Fyke Net 2			
19473	BL	181	8/7/96	Fyke Net 2			
19474	BL	160	8/7/96	Fyke Net 2			
19475	BL	150	8/7/96	Fyke Net 2			
19476	BL	220	8/7/96	Fyke Net 2			
19478	BL	229	8/7/96	Fyke Net 2			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19479	BL	209	8/7/96	Fyke Net 2			
19480	BL	226	8/7/96	Fyke Net 2			
7300	OR	219	8/7/96	Fyke Net 2			
19481	BL	191	8/7/96	Fyke Net 2			
19482	BL	211	8/7/96	Fyke Net 2			
19483	BL	211	8/7/96	Fyke Net 2			
19011	BL	195	8/7/96	Fyke Net 2			
19004	BL	193	8/7/96	Fyke Net 2			
19094	BL	199	8/7/96	Fyke Net 2			
19399	BL	256	8/7/96	Fyke Net 3			
19400	BL	194	8/7/96	Fyke Net 3			
19385	BL	240	8/7/96	Fyke Net 3			
6299	OR	220	8/7/96	Fyke Net 3			
6741	OR	223	8/7/96	Fyke Net 3	8/28/96	Fyke Net 5	235
19390	BL	217	8/7/96	Fyke Net 3	8/29/96	Fyke Net 5	224
					9/6/96	FW Pond	226
19379	BL	192	8/7/96	Fyke Net 3	8/29/96	Fyke Net 1	196
19382	BL	214	8/7/96	Fyke Net 3			
19402	BL	245	8/7/96	Fyke Net 3	8/28/96	Fyke Net 5	252
7239	OR	226	8/7/96	Fyke Net 3			
19403	BL	196	8/7/96	Fyke Net 3	8/27/96	Fyke Net 1	200
19404	BL	215	8/7/96	Fyke Net 3			
19405	BL	198	8/7/96	Fyke Net 3			
19406	BL	179	8/7/96	Fyke Net 3			
19407	BL	208	8/7/96	Fyke Net 3			
19408	BL	152	8/7/96	Fyke Net 3			
19409	BL	200	8/7/96	Fyke Net 3			
19410	BL	240	8/7/96	Fyke Net 3	9/6/96	FW Pond	251
19411	BL	232	8/7/96	Fyke Net 3			
19412	BL	215	8/7/96	Fyke Net 3			
19413	BL	192	8/7/96	Fyke Net 3	8/30/96	Fyke Net 2	202
19414	BL	199	8/7/96	Fyke Net 3			
19415	BL	206	8/7/96	Fyke Net 3	8/28/96	Fyke Net 3	210
19120	BL	220	8/7/96	Fyke Net 3			
19132	BL	210	8/7/96	Fyke Net 3			
19040	BL	224	8/7/96	Fyke Net 3			
		90	8/7/96	Fyke Net 3			
		85	8/7/96	Fyke Net 3			
		92	8/7/96	Fyke Net 3			
		115	8/7/96	Fyke Net 3			
7501	OR	240	8/7/96	Fyke Net 4	8/28/96	Fyke Net 5	245
19495	BL	224	8/7/96	Fyke Net 4			
19496	BL	220	8/7/96	Fyke Net 4			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19497	BL	202	8/7/96	Fyke Net 4			
19498	BL	201	8/7/96	Fyke Net 4			
19499	BL	201	8/7/96	Fyke Net 4			
19500	BL	205	8/7/96	Fyke Net 4			
19461	BL	165	8/7/96	Fyke Net 4			
19138	BL	215	8/7/96	Fyke Net 4			
		148	8/7/96	Fyke Net 4			
		92	8/7/96	Fyke Net 4			
6917	OR	214	8/7/96	Fyke Net 5			
7076	OR	215	8/7/96	Fyke Net 5			
19484	BL	231	8/7/96	Fyke Net 5			
19485	BL	214	8/7/96	Fyke Net 5			
19486	BL	217	8/7/96	Fyke Net 5			
19487	BL	171	8/7/96	Fyke Net 5			
19488	BL	165	8/7/96	Fyke Net 5			
19489	BL	210	8/7/96	Fyke Net 5			
19491	BL	199	8/7/96	Fyke Net 5			
19493	BL	216	8/7/96	Fyke Net 5			
19494	BL	189	8/7/96	Fyke Net 5			
		148	8/7/96	Fyke Net 5			
		127	8/7/96	Fyke Net 5			
19490	BL	280	8/8/96	Fyke Net 1			
19455	BL	178	8/8/96	Fyke Net 1			
19501	BL	207	8/8/96	Fyke Net 1			
19502	BL	210	8/8/96	Fyke Net 1			
19503	BL	248	8/8/96	Fyke Net 1	8/30/96	Fyke Net 3	255
19504	BL	200	8/8/96	Fyke Net 1			
19505	BL	196	8/8/96	Fyke Net 1	9/6/96	FW Pond	204
19506	BL	197	8/8/96	Fyke Net 1			
19507	BL	154	8/8/96	Fyke Net 1	8/29/96	Fyke Net 2	168
19508	BL	198	8/8/96	Fyke Net 1			
19509	BL	162	8/8/96	Fyke Net 1			
19510	BL	180	8/8/96	Fyke Net 1			
19511	BL	200	8/8/96	Fyke Net 1			
19512	BL	153	8/8/96	Fyke Net 1			
19513	BL	240	8/8/96	Fyke Net 1			
19514	BL	223	8/8/96	Fyke Net 1	8/30/96	Fyke Net 3	237
19515	BL	205	8/8/96	Fyke Net 1			
19516	BL	205	8/8/96	Fyke Net 1			
6485	OR	210	8/8/96	Fyke Net 1			
19517	BL	206	8/8/96	Fyke Net 1			
19518	BL	207	8/8/96	Fyke Net 1	8/29/96	Fyke Net 5	212
19519	BL	205	8/8/96	Fyke Net 1			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
394	W	265	8/8/96	Fyke Net 1			
19520	BL	191	8/8/96	Fyke Net 1	8/29/96	Fyke Net 8	204
19521	BL	207	8/8/96	Fyke Net 1			
19522	BL	204	8/8/96	Fyke Net 1			
19523	BL	210	8/8/96	Fyke Net 1			
19524	BL	229	8/8/96	Fyke Net 1	9/6/96	FW Pond	243
19525	BL	189	8/8/96	Fyke Net 1			
19526	BL	191	8/8/96	Fyke Net 1			
19527	BL	218	8/8/96	Fyke Net 1			
19528	BL	199	8/8/96	Fyke Net 1			
6304	OR	225	8/8/96	Fyke Net 1			
6387	OR	234	8/8/96	Fyke Net 1			
19529	BL	216	8/8/96	Fyke Net 1	8/29/96	Fyke Net 5	224
19530	BL	211	8/8/96	Fyke Net 1			
19531	BL	180	8/8/96	Fyke Net 1			
19532	BL	165	8/8/96	Fyke Net 1	8/28/96	Fyke Net 1	179
19533	BL	256	8/8/96	Fyke Net 1			
433	W	227	8/8/96	Fyke Net 1			
19535	BL	182	8/8/96	Fyke Net 1			
19536	BL	209	8/8/96	Fyke Net 1			
19537	BL	199	8/8/96	Fyke Net 1			
19538	BL	158	8/8/96	Fyke Net 1			
19166	BL	200	8/8/96	Fyke Net 1			
19050	BL	210	8/8/96	Fyke Net 1			
6750	OR	205	8/8/96	Fyke Net 1			
19069	BL	171	8/8/96	Fyke Net 1			
19091	BL	213	8/8/96	Fyke Net 1			
19133	BL	181	8/8/96	Fyke Net 1			
7513	OR	220	8/8/96	Fyke Net 1			
19077	BL	210	8/8/96	Fyke Net 1			
		139	8/8/96	Fyke Net 1			
		87	8/8/96	Fyke Net 1			
3466	Y	215	8/8/96	Fyke Net 2			
19533	BL	213	8/8/96	Fyke Net 2			
19554	BL	204	8/8/96	Fyke Net 2			
6118	OR	231	8/8/96	Fyke Net 2			
19555	BL	200	8/8/96	Fyke Net 2			
19556	BL	206	8/8/96	Fyke Net 2			
19557	BL	233	8/8/96	Fyke Net 2			
19558	BL	221	8/8/96	Fyke Net 2			
19559	BL	227	8/8/96	Fyke Net 2			
6146	OR	224	8/8/96	Fyke Net 2			
19561	BL	235	8/8/96	Fyke Net 2			
19562	BL	210	8/8/96	Fyke Net 2			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19563	BL	211	8/8/96	Fyke Net 2			
19564	BL	220	8/8/96	Fyke Net 2			
19565	BL	194	8/8/96	Fyke Net 2			
19566	BL	198	8/8/96	Fyke Net 2			
19567	BL	188	8/8/96	Fyke Net 2			
19569	BL	184	8/8/96	Fyke Net 2	9/6/96	FW Pond	199
19570	BL	159	8/8/96	Fyke Net 2			
19571	BL	156	8/8/96	Fyke Net 2			
19574	BL	161	8/8/96	Fyke Net 2			
6730	OR	281	8/8/96	Fyke Net 2	9/6/96	FW Pond	290
6754	OR	215	8/8/96	Fyke Net 2	9/6/96	FW Pond	228
19575	BL	224	8/8/96	Fyke Net 2			
19577	BL	226	8/8/96	Fyke Net 2			
19579	BL	200	8/8/96	Fyke Net 2			
19580	BL	198	8/8/96	Fyke Net 2	9/6/96	FW Pond	203
19582	BL	158	8/8/96	Fyke Net 2			
19583	BL	207	8/8/96	Fyke Net 2			
19586	BL	212	8/8/96	Fyke Net 2			
19587	BL	196	8/8/96	Fyke Net 2			
19589	BL	216	8/8/96	Fyke Net 2			
6137	OR	215	8/8/96	Fyke Net 2			
19591	BL	218	8/8/96	Fyke Net 2			
19592	BL	238	8/8/96	Fyke Net 2			
19593	BL	198	8/8/96	Fyke Net 2			
19594	BL	240	8/8/96	Fyke Net 2			
19595	BL	201	8/8/96	Fyke Net 2			
19596	BL	188	8/8/96	Fyke Net 2			
19597	BL	208	8/8/96	Fyke Net 2			
19598	BL	189	8/8/96	Fyke Net 2			
2841	Y	212	8/8/96	Fyke Net 2	8/27/96	Fyke Net 2	224
19599	BL	194	8/8/96	Fyke Net 2			
19600	BL	190	8/8/96	Fyke Net 2			
19584	BL	229	8/8/96	Fyke Net 2			
19568	BL	211	8/8/96	Fyke Net 2			
19588	BL	225	8/8/96	Fyke Net 2			
19573	BL	222	8/8/96	Fyke Net 2			
19585	BL	213	8/8/96	Fyke Net 2			
19572	BL	221	8/8/96	Fyke Net 2			
19576	BL	230	8/8/96	Fyke Net 2			
19590	BL	212	8/8/96	Fyke Net 2	9/6/96	FW Pond	227
19065	BL	227	8/8/96	Fyke Net 2			
19108	BL	210	8/8/96	Fyke Net 2			
19124	BL	219	8/8/96	Fyke Net 2			
		84	8/8/96	Fyke Net 2			
		129	8/8/96	Fyke Net 2			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19477	BL	212	8/8/96	Fyke Net 3			
19453	BL	182	8/8/96	Fyke Net 3			
19492	BL	212	8/8/96	Fyke Net 3			
19139	BL	237	8/8/96	Fyke Net 3			
		56	8/8/96	Fyke Net 3			
6047	OR	223	8/8/96	Fyke Net 5			
3192	Y	191	8/8/96	Fyke Net 5			
19539	BL	226	8/8/96	Fyke Net 5			
19540	BL	192	8/8/96	Fyke Net 5			
19541	BL	247	8/8/96	Fyke Net 5			
19542	BL	222	8/8/96	Fyke Net 5			
19543	BL	236	8/8/96	Fyke Net 5			
19544	BL	211	8/8/96	Fyke Net 5			
19546	BL	215	8/8/96	Fyke Net 5			
19547	BL	198	8/8/96	Fyke Net 5			
6475	OR	214	8/8/96	Fyke Net 5			
6856	OR	203	8/8/96	Fyke Net 5	8/27/96	Fyke Net 3	213
19548	BL	204	8/8/96	Fyke Net 5			
19549	BL	220	8/8/96	Fyke Net 5			
19550	BL	178	8/8/96	Fyke Net 5			
19545	BL	176	8/8/96	Fyke Net 5			
19534	BL	152	8/8/96	Fyke Net 5			
19207	BL	215	8/8/96	Fyke Net 5			
19200	BL	206	8/8/96	Fyke Net 5			
19210	BL	223	8/8/96	Fyke Net 5			
19581	BL	204	8/8/96	Fyke Net 6			
19578	BL	205	8/8/96	Fyke Net 6			
19551	BL	227	8/8/96	Fyke Net 6			
19552	BL	216	8/8/96	Fyke Net 6			
19601	BL	190	8/8/96	Fyke Net 6	9/6/96	FW Pond	200
19602	BL	205	8/8/96	Fyke Net 6			
19603	BL	157	8/8/96	Fyke Net 6			
19109	BL	208	8/8/96	Fyke Net 6			
3195	Y	214	8/8/96	Fyke Net 6			
		96	8/8/96	Fyke Net 6			
		238	8/27/96	Fyke Net 1			
		199	8/27/96	Fyke Net 1			
		210	8/27/96	Fyke Net 1			
		202	8/27/96	Fyke Net 1			
		187	8/27/96	Fyke Net 1			
		167	8/27/96	Fyke Net 1			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
		163	8/27/96	Fyke Net 1			
		175	8/27/96	Fyke Net 1			
		160	8/27/96	Fyke Net 1			
		159	8/27/96	Fyke Net 1			
3216	Y	256	8/27/96	Fyke Net 1			
		212	8/27/96	Fyke Net 1			
		232	8/27/96	Fyke Net 1			
		210	8/27/96	Fyke Net 1			
		226	8/27/96	Fyke Net 1			
		196	8/27/96	Fyke Net 1			
		224	8/27/96	Fyke Net 1			
		218	8/27/96	Fyke Net 1			
		206	8/27/96	Fyke Net 1			
		152	8/27/96	Fyke Net 1			
		225	8/27/96	Fyke Net 1			
		232	8/27/96	Fyke Net 1			
		201	8/27/96	Fyke Net 1			
		174	8/27/96	Fyke Net 1			
		163	8/27/96	Fyke Net 1			
		200	8/27/96	Fyke Net 1			
		164	8/27/96	Fyke Net 1			
		174	8/27/96	Fyke Net 1			
		208	8/27/96	Fyke Net 1			
		211	8/27/96	Fyke Net 1			
		162	8/27/96	Fyke Net 1			
		197	8/27/96	Fyke Net 1			
		228	8/27/96	Fyke Net 1			
		220	8/27/96	Fyke Net 1			
		205	8/27/96	Fyke Net 1			
		212	8/27/96	Fyke Net 1			
		160	8/27/96	Fyke Net 1			
		206	8/27/96	Fyke Net 1			
		174	8/27/96	Fyke Net 1			
		163	8/27/96	Fyke Net 1			
		225	8/27/96	Fyke Net 1			
3359	Y	218	8/27/96	Fyke Net 1			
		184	8/27/96	Fyke Net 1			
		163	8/27/96	Fyke Net 1			
		175	8/27/96	Fyke Net 1			
		159	8/27/96	Fyke Net 1			
		159	8/27/96	Fyke Net 1			
19165	BL	173	8/27/96	Fyke Net 1			
19403	BL	200	8/27/96	Fyke Net 1			
19431	BL	209	8/27/96	Fyke Net 1			
19341	BL	216	8/27/96	Fyke Net 1			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19157	BL	245	8/27/96	Fyke Net 1			
19296	BL	205	8/27/96	Fyke Net 1			
19085	BL	204	8/27/96	Fyke Net 1			
6590	OR	230	8/27/96	Fyke Net 1			
19167	BL	220	8/27/96	Fyke Net 1			
19332	BL	214	8/27/96	Fyke Net 1			
19092	BL	211	8/27/96	Fyke Net 1			
19261	BL	217	8/27/96	Fyke Net 1			
19322	BL	188	8/27/96	Fyke Net 1			
		128	8/27/96	Fyke Net 1			
		108	8/27/96	Fyke Net 1			
		119	8/27/96	Fyke Net 1			
		109	8/27/96	Fyke Net 1			
		110	8/27/96	Fyke Net 1			
		110	8/27/96	Fyke Net 1			
		77	8/27/96	Fyke Net 1			
		241	8/27/96	Fyke Net 2			
		183	8/27/96	Fyke Net 2			
		163	8/27/96	Fyke Net 2			
		184	8/27/96	Fyke Net 2			
		215	8/27/96	Fyke Net 2			
		236	8/27/96	Fyke Net 2			
		217	8/27/96	Fyke Net 2			
		179	8/27/96	Fyke Net 2			
		206	8/27/96	Fyke Net 2			
		231	8/27/96	Fyke Net 2			
		176	8/27/96	Fyke Net 2			
		189	8/27/96	Fyke Net 2			
		220	8/27/96	Fyke Net 2			
		213	8/27/96	Fyke Net 2			
		208	8/27/96	Fyke Net 2			
19011	BL	200	8/27/96	Fyke Net 2			
2841	Y	224	8/27/96	Fyke Net 2			
		191	8/27/96	Fyke Net 3			
2830	Y	218	8/27/96	Fyke Net 3			
6246	OR	253	8/27/96	Fyke Net 3			
		159	8/27/96	Fyke Net 3			
		202	8/27/96	Fyke Net 3			
		261	8/27/96	Fyke Net 3			
		224	8/27/96	Fyke Net 3			
		184	8/27/96	Fyke Net 3			
		244	8/27/96	Fyke Net 3			
		186	8/27/96	Fyke Net 3			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
		236	8/27/96	Fyke Net 3			
		246	8/27/96	Fyke Net 3			
		229	8/27/96	Fyke Net 3			
		230	8/27/96	Fyke Net 3			
		233	8/27/96	Fyke Net 3			
		214	8/27/96	Fyke Net 3			
		225	8/27/96	Fyke Net 3			
		187	8/27/96	Fyke Net 3			
		223	8/27/96	Fyke Net 3			
		206	8/27/96	Fyke Net 3			
		191	8/27/96	Fyke Net 3			
		232	8/27/96	Fyke Net 3			
		222	8/27/96	Fyke Net 3			
		212	8/27/96	Fyke Net 3			
		187	8/27/96	Fyke Net 3			
		215	8/27/96	Fyke Net 3			
		233	8/27/96	Fyke Net 3			
		172	8/27/96	Fyke Net 3			
		172	8/27/96	Fyke Net 3			
		166	8/27/96	Fyke Net 3			
6767	OR	211	8/27/96	Fyke Net 3			
		247	8/27/96	Fyke Net 3			
		214	8/27/96	Fyke Net 3			
		229	8/27/96	Fyke Net 3			
		210	8/27/96	Fyke Net 3			
		174	8/27/96	Fyke Net 3			
19280	BL	209	8/27/96	Fyke Net 3			
19078	BL	220	8/27/96	Fyke Net 3			
19169	BL	242	8/27/96	Fyke Net 3			
19082	BL	205	8/27/96	Fyke Net 3			
19048	BL	212	8/27/96	Fyke Net 3			
6856	OR	213	8/27/96	Fyke Net 3			
19142	BL	220	8/27/96	Fyke Net 3			
		124					
		116					
		112					
		118					
		174	8/27/96	Fyke Net 5			
446	W	224	8/27/96	Fyke Net 5			
		223	8/27/96	Fyke Net 5			
		214	8/27/96	Fyke Net 5			
		213	8/27/96	Fyke Net 5			
6739	OR	286	8/27/96	Fyke Net 5			
		215	8/27/96	Fyke Net 5			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
		223	8/27/96	Fyke Net 5			
		218	8/27/96	Fyke Net 5			
		164	8/27/96	Fyke Net 5			
		155	8/27/96	Fyke Net 5			
		204	8/27/96	Fyke Net 5			
		213	8/27/96	Fyke Net 5			
		243	8/27/96	Fyke Net 5			
454	W	244	8/27/96	Fyke Net 5			
7060	OR	207	8/27/96	Fyke Net 5			
		205	8/27/96	Fyke Net 5			
		226	8/27/96	Fyke Net 5			
		176	8/27/96	Fyke Net 5			
659	W	224	8/27/96	Fyke Net 5			
		232	8/27/96	Fyke Net 5			
		250	8/27/96	Fyke Net 5			
6869	OR	216	8/27/96	Fyke Net 5			
19308	BL	210	8/27/96	Fyke Net 5			
		142	8/27/96	Fyke Net 5			
		111	8/27/96	Fyke Net 5			
2760	Y	219	8/27/96	Fyke Net 7			
		166	8/27/96	Fyke Net 7			
		182	8/27/96	Fyke Net 7			
		186	8/27/96	Fyke Net 7			
		189	8/27/96	Fyke Net 7			
		157	8/27/96	Fyke Net 7			
		148	8/27/96	Fyke Net 7			
		109	8/27/96	Fyke Net 7			
		109	8/27/96	Fyke Net 7			
		228	8/28/96	Fyke Net 1			
		220	8/28/96	Fyke Net 1			
		190	8/28/96	Fyke Net 1			
		204	8/28/96	Fyke Net 1			
		205	8/28/96	Fyke Net 1			
		267	8/28/96	Fyke Net 1			
		202	8/28/96	Fyke Net 1			
		195	8/28/96	Fyke Net 1			
		160	8/28/96	Fyke Net 1			
		211	8/28/96	Fyke Net 1			
		182	8/28/96	Fyke Net 1			
		182	8/28/96	Fyke Net 1			
		222	8/28/96	Fyke Net 1			
		196	8/28/96	Fyke Net 1			
		198	8/28/96	Fyke Net 1			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
		223	8/28/96	Fyke Net 1			
		211	8/28/96	Fyke Net 1			
		183	8/28/96	Fyke Net 1			
		205	8/28/96	Fyke Net 1			
19532	BL	179	8/28/96	Fyke Net 1			
		120	8/28/96	Fyke Net 1			
		111	8/28/96	Fyke Net 1			
		104	8/28/96	Fyke Net 1			
		119	8/28/96	Fyke Net 1			
		109	8/28/96	Fyke Net 1			
		103	8/28/96	Fyke Net 1			
		112	8/28/96	Fyke Net 1			
		146	8/28/96	Fyke Net 1			
		111	8/28/96	Fyke Net 1			
		114	8/28/96	Fyke Net 1			
		114	8/28/96	Fyke Net 1			
		112	8/28/96	Fyke Net 1			
		115	8/28/96	Fyke Net 1			
		105	8/28/96	Fyke Net 1			
		214	8/28/96	Fyke Net 2			
		263	8/28/96	Fyke Net 2			
		249	8/28/96	Fyke Net 2			
		194	8/28/96	Fyke Net 2			
		177	8/28/96	Fyke Net 2			
		195	8/28/96	Fyke Net 2			
		197	8/28/96	Fyke Net 2			
		164	8/28/96	Fyke Net 2			
		237	8/28/96	Fyke Net 3			
		206	8/28/96	Fyke Net 3			
		234	8/28/96	Fyke Net 3			
6845	OR	227	8/28/96	Fyke Net 3			
		221	8/28/96	Fyke Net 3			
		206	8/28/96	Fyke Net 3			
		220	8/28/96	Fyke Net 3			
		175	8/28/96	Fyke Net 3			
		160	8/28/96	Fyke Net 3			
		160	8/28/96	Fyke Net 3			
6967	OR	245	8/28/96	Fyke Net 3			
		224	8/28/96	Fyke Net 3			
		228	8/28/96	Fyke Net 3			
		228	8/28/96	Fyke Net 3			
		215	8/28/96	Fyke Net 3			
		216	8/28/96	Fyke Net 3			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
6822	OR	232	8/28/96	Fyke Net 3			
		210	8/28/96	Fyke Net 3			
		225	8/28/96	Fyke Net 3			
		201	8/28/96	Fyke Net 3			
		153	8/28/96	Fyke Net 3			
		216	8/28/96	Fyke Net 3			
		206	8/28/96	Fyke Net 3			
		240	8/28/96	Fyke Net 3			
		230	8/28/96	Fyke Net 3			
		195	8/28/96	Fyke Net 3			
		154	8/28/96	Fyke Net 3			
19183	BL	234	8/28/96	Fyke Net 3			
19106	BL	209	8/28/96	Fyke Net 3			
19415	BL	210	8/28/96	Fyke Net 3			
19440	BL	191	8/28/96	Fyke Net 3			
19057	BL	209	8/28/96	Fyke Net 3			
19305	BL	230	8/28/96	Fyke Net 3			
19358	BL	198	8/28/96	Fyke Net 3			
19173	BL	220	8/28/96	Fyke Net 3			
19131	BL	228	8/28/96	Fyke Net 3			
		114	8/28/96	Fyke Net 3			
		111	8/28/96	Fyke Net 3			
		156	8/28/96	Fyke Net 5			
7406	OR	238	8/28/96	Fyke Net 5			
6591	OR	230	8/28/96	Fyke Net 5			
2788	Y	223	8/28/96	Fyke Net 5			
6894	OR	230	8/28/96	Fyke Net 5			
		246	8/28/96	Fyke Net 5			
		212	8/28/96	Fyke Net 5			
		218	8/28/96	Fyke Net 5			
		212	8/28/96	Fyke Net 5			
		224	8/28/96	Fyke Net 5			
		246	8/28/96	Fyke Net 5			
		235	8/28/96	Fyke Net 5			
		213	8/28/96	Fyke Net 5			
		172	8/28/96	Fyke Net 5			
6320	OR	285	8/28/96	Fyke Net 5			
		210	8/28/96	Fyke Net 5			
		168	8/28/96	Fyke Net 5			
		228	8/28/96	Fyke Net 5			
		173	8/28/96	Fyke Net 5			
7234	OR	233	8/28/96	Fyke Net 5			
6394	OR	229	8/28/96	Fyke Net 5			
		212	8/28/96	Fyke Net 5			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
		223	8/28/96	Fyke Net 5			
		241	8/28/96	Fyke Net 5			
		230	8/28/96	Fyke Net 5			
6950	OR	236	8/28/96	Fyke Net 5			
		220	8/28/96	Fyke Net 5			
		224	8/28/96	Fyke Net 5			
		217	8/28/96	Fyke Net 5			
		218	8/28/96	Fyke Net 5			
		221	8/28/96	Fyke Net 5			
		236	8/28/96	Fyke Net 5			
		204	8/28/96	Fyke Net 5			
		222	8/28/96	Fyke Net 5			
		220	8/28/96	Fyke Net 5			
6741	OR	235	8/28/96	Fyke Net 5			
224	W	239	8/28/96	Fyke Net 5			
19402	BL	252	8/28/96	Fyke Net 5			
19380	BL	241	8/28/96	Fyke Net 5			
19033	BL	213	8/28/96	Fyke Net 5			
19007	BL	230	8/28/96	Fyke Net 5			
19370	BL	209	8/28/96	Fyke Net 5			
19299	BL	230	8/28/96	Fyke Net 5			
		211	8/28/96	Fyke Net 7			
		175	8/28/96	Fyke Net 7			
		112	8/28/96	Fyke Net 7			
		95	8/28/96	Fyke Net 7			
		211	8/29/96	Fyke Net 1			
		197	8/29/96	Fyke Net 1			
		174	8/29/96	Fyke Net 1			
		225	8/29/96	Fyke Net 1			
		215	8/29/96	Fyke Net 1			
		213	8/29/96	Fyke Net 1			
		216	8/29/96	Fyke Net 1			
		227	8/29/96	Fyke Net 1			
		235	8/29/96	Fyke Net 1			
		194	8/29/96	Fyke Net 1			
		209	8/29/96	Fyke Net 1			
		201	8/29/96	Fyke Net 1			
		174	8/29/96	Fyke Net 1			
		220	8/29/96	Fyke Net 1			
		184	8/29/96	Fyke Net 1			
		218	8/29/96	Fyke Net 1			
		230	8/29/96	Fyke Net 1			
		250	8/29/96	Fyke Net 1			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
		217	8/29/96	Fyke Net 1			
		211	8/29/96	Fyke Net 1			
		180	8/29/96	Fyke Net 1			
		186	8/29/96	Fyke Net 1			
		185	8/29/96	Fyke Net 1			
		228	8/29/96	Fyke Net 1			
6282	OR	249	8/29/96	Fyke Net 1			
19086	BL	219	8/29/96	Fyke Net 1			
19379	BL	196	8/29/96	Fyke Net 1			
		113	8/29/96	Fyke Net 1			
		110	8/29/96	Fyke Net 1			
		121	8/29/96	Fyke Net 1			
		108	8/29/96	Fyke Net 1			
		116	8/29/96	Fyke Net 1			
		200	8/29/96	Fyke Net 2			
		217	8/29/96	Fyke Net 2			
		173	8/29/96	Fyke Net 2			
		206	8/29/96	Fyke Net 2			
		177	8/29/96	Fyke Net 2			
		158	8/29/96	Fyke Net 2			
		181	8/29/96	Fyke Net 2			
		211	8/29/96	Fyke Net 2			
		249	8/29/96	Fyke Net 2			
		230	8/29/96	Fyke Net 2			
		178	8/29/96	Fyke Net 2			
		214	8/29/96	Fyke Net 2			
		191	8/29/96	Fyke Net 2			
		219	8/29/96	Fyke Net 2			
		194	8/29/96	Fyke Net 2			
		181	8/29/96	Fyke Net 2			
19376	BL	220	8/29/96	Fyke Net 2			
19507	BL	168	8/29/96	Fyke Net 2			
		183	8/29/96	Fyke Net 3			
		216	8/29/96	Fyke Net 3			
		230	8/29/96	Fyke Net 3			
		184	8/29/96	Fyke Net 3			
		216	8/29/96	Fyke Net 3			
		218	8/29/96	Fyke Net 3			
		171	8/29/96	Fyke Net 3			
		201	8/29/96	Fyke Net 3			
		209	8/29/96	Fyke Net 3			
		178	8/29/96	Fyke Net 3			
6843	OR	225	8/29/96	Fyke Net 3			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
6732	OR	228	8/29/96	Fyke Net 3			
		197	8/29/96	Fyke Net 3			
		207	8/29/96	Fyke Net 3			
		210	8/29/96	Fyke Net 3			
		243	8/29/96	Fyke Net 3			
		199	8/29/96	Fyke Net 3			
		199	8/29/96	Fyke Net 3			
		222	8/29/96	Fyke Net 3			
		193	8/29/96	Fyke Net 3			
		171	8/29/96	Fyke Net 3			
		160	8/29/96	Fyke Net 3			
19203	BL	197	8/29/96	Fyke Net 3			
19211	BL	228	8/29/96	Fyke Net 3			
19447	BL	214	8/29/96	Fyke Net 3			
19094	BL	235	8/29/96	Fyke Net 3			
19158	BL	210	8/29/96	Fyke Net 3			
		108	8/29/96	Fyke Net 3			
		119	8/29/96	Fyke Net 3			
		111	8/29/96	Fyke Net 3			
		131	8/29/96	Fyke Net 3			
		170	8/29/96	Fyke Net 5			
		225	8/29/96	Fyke Net 5			
		220	8/29/96	Fyke Net 5			
		242	8/29/96	Fyke Net 5			
		176	8/29/96	Fyke Net 5			
		200	8/29/96	Fyke Net 5			
		213	8/29/96	Fyke Net 5			
		201	8/29/96	Fyke Net 5			
		165	8/29/96	Fyke Net 5			
		220	8/29/96	Fyke Net 5			
		218	8/29/96	Fyke Net 5			
6004	OR	230	8/29/96	Fyke Net 5			
3244	Y	245	8/29/96	Fyke Net 5			
		204	8/29/96	Fyke Net 5			
		232	8/29/96	Fyke Net 5			
		213	8/29/96	Fyke Net 5			
		215	8/29/96	Fyke Net 5			
		201	8/29/96	Fyke Net 5			
		192	8/29/96	Fyke Net 5			
		222	8/29/96	Fyke Net 5			
		204	8/29/96	Fyke Net 5			
		221	8/29/96	Fyke Net 5			
		229	8/29/96	Fyke Net 5			
		232	8/29/96	Fyke Net 5			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
		210	8/29/96	Fyke Net 5			
		214	8/29/96	Fyke Net 5			
		216	8/29/96	Fyke Net 5			
19427	BL	211	8/29/96	Fyke Net 5			
7319	OR	247	8/29/96	Fyke Net 5			
19529	BL	224	8/29/96	Fyke Net 5			
19390	BL	224	8/29/96	Fyke Net 5			
19335	BL	162	8/29/96	Fyke Net 5			
19518	BL	212	8/29/96	Fyke Net 5			
		129					
		206	8/29/96	Fyke Net 8			
		209	8/29/96	Fyke Net 8			
		247	8/29/96	Fyke Net 8			
		235	8/29/96	Fyke Net 8			
		222	8/29/96	Fyke Net 8			
6792	OR	224	8/29/96	Fyke Net 8			
		218	8/29/96	Fyke Net 8			
		222	8/29/96	Fyke Net 8			
		237	8/29/96	Fyke Net 8			
		218	8/29/96	Fyke Net 8			
		174	8/29/96	Fyke Net 8			
		234	8/29/96	Fyke Net 8			
		262	8/29/96	Fyke Net 8			
		209	8/29/96	Fyke Net 8			
		200	8/29/96	Fyke Net 8			
		216	8/29/96	Fyke Net 8			
		188	8/29/96	Fyke Net 8			
6958	OR	204	8/29/96	Fyke Net 8			
		163	8/29/96	Fyke Net 8			
		211	8/29/96	Fyke Net 8			
		204	8/29/96	Fyke Net 8			
		213	8/29/96	Fyke Net 8			
		165	8/29/96	Fyke Net 8			
		222	8/29/96	Fyke Net 8			
		229	8/29/96	Fyke Net 8			
		210	8/29/96	Fyke Net 8			
		211	8/29/96	Fyke Net 8			
		215	8/29/96	Fyke Net 8			
		216	8/29/96	Fyke Net 8			
		238	8/29/96	Fyke Net 8			
		211	8/29/96	Fyke Net 8			
		166	8/29/96	Fyke Net 8			
		164	8/29/96	Fyke Net 8			
		199	8/29/96	Fyke Net 8			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
		218	8/29/96	Fyke Net 8			
		210	8/29/96	Fyke Net 8			
19520	BL	204	8/29/96	Fyke Net 8			
19209	BL	205	8/29/96	Fyke Net 8			
19352	BL	231	8/29/96	Fyke Net 8			
19102	BL	204	8/29/96	Fyke Net 8			
		136	8/29/96	Fyke Net 8			
		225	8/30/96	Fyke Net 1			
		202	8/30/96	Fyke Net 1			
		168	8/30/96	Fyke Net 1			
		230	8/30/96	Fyke Net 1			
		220	8/30/96	Fyke Net 1			
		185	8/30/96	Fyke Net 1			
6529	OR	210	8/30/96	Fyke Net 1			
		230	8/30/96	Fyke Net 1			
		222	8/30/96	Fyke Net 1			
		195	8/30/96	Fyke Net 1			
		196	8/30/96	Fyke Net 1			
		205	8/30/96	Fyke Net 1			
6241	OR	221	8/30/96	Fyke Net 1			
		212	8/30/96	Fyke Net 1			
		152	8/30/96	Fyke Net 1			
		178	8/30/96	Fyke Net 1			
		264	8/30/96	Fyke Net 1			
		223	8/30/96	Fyke Net 1			
		264	8/30/96	Fyke Net 1			
19336	BL	203	8/30/96	Fyke Net 1			
19147	BL	218	8/30/96	Fyke Net 1			
		111	8/30/96	Fyke Net 1			
		114	8/30/96	Fyke Net 1			
		228	8/30/96	Fyke Net 2			
		257	8/30/96	Fyke Net 2			
		225	8/30/96	Fyke Net 2			
		218	8/30/96	Fyke Net 2			
6486	OR	222	8/30/96	Fyke Net 2			
		223	8/30/96	Fyke Net 2			
		177	8/30/96	Fyke Net 2			
		220	8/30/96	Fyke Net 2			
		160	8/30/96	Fyke Net 2			
		218	8/30/96	Fyke Net 2			
		205	8/30/96	Fyke Net 2			
		218	8/30/96	Fyke Net 2			
		180	8/30/96	Fyke Net 2			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
		210	8/30/96	Fyke Net 2			
		200	8/30/96	Fyke Net 2			
		215	8/30/96	Fyke Net 2			
		233	8/30/96	Fyke Net 2			
		207	8/30/96	Fyke Net 2			
		227	8/30/96	Fyke Net 2			
		218	8/30/96	Fyke Net 2			
		230	8/30/96	Fyke Net 2			
6765	OR	212	8/30/96	Fyke Net 2			
19413	BL	202	8/30/96	Fyke Net 2			
		115	8/30/96	Fyke Net 2			
		115	8/30/96	Fyke Net 2			
		229	8/30/96	Fyke Net 3			
6091	OR	254	8/30/96	Fyke Net 3			
		230	8/30/96	Fyke Net 3			
		211	8/30/96	Fyke Net 3			
		242	8/30/96	Fyke Net 3			
		225	8/30/96	Fyke Net 3			
		190	8/30/96	Fyke Net 3			
		173	8/30/96	Fyke Net 3			
		168	8/30/96	Fyke Net 3			
		238	8/30/96	Fyke Net 3			
		229	8/30/96	Fyke Net 3			
		206	8/30/96	Fyke Net 3			
		208	8/30/96	Fyke Net 3			
		197	8/30/96	Fyke Net 3			
		224	8/30/96	Fyke Net 3			
		228	8/30/96	Fyke Net 3			
		242	8/30/96	Fyke Net 3			
		220	8/30/96	Fyke Net 3			
		216	8/30/96	Fyke Net 3			
		270	8/30/96	Fyke Net 3			
7117	OR	232	8/30/96	Fyke Net 3			
		224	8/30/96	Fyke Net 3			
		219	8/30/96	Fyke Net 3			
		224	8/30/96	Fyke Net 3			
		222	8/30/96	Fyke Net 3			
		240	8/30/96	Fyke Net 3			
19292	BL	224	8/30/96	Fyke Net 3			
19514	BL	237	8/30/96	Fyke Net 3			
19503	BL	255	8/30/96	Fyke Net 3			
19297	BL	204	8/30/96	Fyke Net 3			
6966	OR	232	8/30/96	Fyke Net 3			
19003	BL	224	8/30/96	Fyke Net 3			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
19162	BL	214	8/30/96	Fyke Net 3			
19434	BL	161	8/30/96	Fyke Net 3			
		111	8/30/96	Fyke Net 3			
		114	8/30/96	Fyke Net 3			
		224	8/30/96	Fyke Net 5			
		250	8/30/96	Fyke Net 5			
		198	8/30/96	Fyke Net 5			
520	W	224	8/30/96	Fyke Net 5			
		246	8/30/96	Fyke Net 5			
		215	8/30/96	Fyke Net 5			
		214	8/30/96	Fyke Net 5			
		214	8/30/96	Fyke Net 5			
840	W	233	8/30/96	Fyke Net 5			
		221	8/30/96	Fyke Net 8			
		152	8/30/96	Fyke Net 8			
		230	8/30/96	Fyke Net 8			
		188	8/30/96	Fyke Net 8			
		211	8/30/96	Fyke Net 8			
		207	8/30/96	Fyke Net 8			
		205	8/30/96	Fyke Net 8			
		213	8/30/96	Fyke Net 8			
7084	OR	231	8/30/96	Fyke Net 8			
		189	8/30/96	Fyke Net 8			
		205	8/30/96	Fyke Net 8			
		224	8/30/96	Fyke Net 8			
		184	8/30/96	Fyke Net 8			
		164	8/30/96	Fyke Net 8			
		208	8/30/96	Fyke Net 8			
		152	8/30/96	Fyke Net 8			
		217	8/30/96	Fyke Net 8			
		165	8/30/96	Fyke Net 8			
		170	8/30/96	Fyke Net 8			
		168	8/30/96	Fyke Net 8			
		221	8/30/96	Fyke Net 8			
19154	BL	222	8/30/96	Fyke Net 8			
19163	BL	205	8/30/96	Fyke Net 8			
		142	8/30/96	Fyke Net 8			
		112	8/30/96	Fyke Net 8			
		145	8/30/96	Fyke Net 8			
		242	9/6/96	FW Pond			
		212	9/6/96	FW Pond			
		221	9/6/96	FW Pond			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
		214	9/6/96	FW Pond			
		233	9/6/96	FW Pond			
		216	9/6/96	FW Pond			
		215	9/6/96	FW Pond			
		248	9/6/96	FW Pond			
		230	9/6/96	FW Pond			
		238	9/6/96	FW Pond			
		207	9/6/96	FW Pond			
		187	9/6/96	FW Pond			
		235	9/6/96	FW Pond			
		230	9/6/96	FW Pond			
		229	9/6/96	FW Pond			
		158	9/6/96	FW Pond			
		207	9/6/96	FW Pond			
		222	9/6/96	FW Pond			
		223	9/6/96	FW Pond			
6955	OR	222	9/6/96	FW Pond			
		192	9/6/96	FW Pond			
		230	9/6/96	FW Pond			
		284	9/6/96	FW Pond			
		221	9/6/96	FW Pond			
		220	9/6/96	FW Pond			
		215	9/6/96	FW Pond			
		234	9/6/96	FW Pond			
		213	9/6/96	FW Pond			
		205	9/6/96	FW Pond			
		230	9/6/96	FW Pond			
		176	9/6/96	FW Pond			
		217	9/6/96	FW Pond			
		219	9/6/96	FW Pond			
		209	9/6/96	FW Pond			
		245	9/6/96	FW Pond			
		202	9/6/96	FW Pond			
		186	9/6/96	FW Pond			
		238	9/6/96	FW Pond			
		223	9/6/96	FW Pond			
		199	9/6/96	FW Pond			
		210	9/6/96	FW Pond			
		169	9/6/96	FW Pond			
		221	9/6/96	FW Pond			
		204	9/6/96	FW Pond			
		237	9/6/96	FW Pond			
		174	9/6/96	FW Pond			
		250	9/6/96	FW Pond			
		202	9/6/96	FW Pond			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
6219	OR	260	9/6/96	FW Pond			
		253	9/6/96	FW Pond			
		231	9/6/96	FW Pond			
		220	9/6/96	FW Pond			
		204	9/6/96	FW Pond			
		188	9/6/96	FW Pond			
		191	9/6/96	FW Pond			
		229	9/6/96	FW Pond			
		228	9/6/96	FW Pond			
		180	9/6/96	FW Pond			
		196	9/6/96	FW Pond			
		213	9/6/96	FW Pond			
		237	9/6/96	FW Pond			
		201	9/6/96	FW Pond			
		240	9/6/96	FW Pond			
		205	9/6/96	FW Pond			
		229	9/6/96	FW Pond			
		244	9/6/96	FW Pond			
		216	9/6/96	FW Pond			
		227	9/6/96	FW Pond			
2898	Y	234	9/6/96	FW Pond			
		250	9/6/96	FW Pond			
		208	9/6/96	FW Pond			
		205	9/6/96	FW Pond			
		238	9/6/96	FW Pond			
		227	9/6/96	FW Pond			
		221	9/6/96	FW Pond			
		207	9/6/96	FW Pond			
6157	OR	233	9/6/96	FW Pond			
		221	9/6/96	FW Pond			
		236	9/6/96	FW Pond			
		212	9/6/96	FW Pond			
		236	9/6/96	FW Pond			
		205	9/6/96	FW Pond			
		234	9/6/96	FW Pond			
		218	9/6/96	FW Pond			
		209	9/6/96	FW Pond			
		219	9/6/96	FW Pond			
		234	9/6/96	FW Pond			
		204	9/6/96	FW Pond			
		234	9/6/96	FW Pond			
		262	9/6/96	FW Pond			
		223	9/6/96	FW Pond			
		199	9/6/96	FW Pond			
		232	9/6/96	FW Pond			

Appendix 4 (continued).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
		217	9/6/96	FW Pond			
		227	9/6/96	FW Pond			
		204	9/6/96	FW Pond			
		229	9/6/96	FW Pond			
		170	9/6/96	FW Pond			
7209	OR	238	9/6/96	FW Pond			
6913	OR	209	9/6/96	FW Pond			
		229	9/6/96	FW Pond			
		207	9/6/96	FW Pond			
		201	9/6/96	FW Pond			
		224	9/6/96	FW Pond			
		195	9/6/96	FW Pond			
		237	9/6/96	FW Pond			
		235	9/6/96	FW Pond			
		214	9/6/96	FW Pond			
		224	9/6/96	FW Pond			
		208	9/6/96	FW Pond			
		213	9/6/96	FW Pond			
		248	9/6/96	FW Pond			
		220	9/6/96	FW Pond			
		226	9/6/96	FW Pond			
		233	9/6/96	FW Pond			
		178	9/6/96	FW Pond			
		251	9/6/96	FW Pond			
		208	9/6/96	FW Pond			
		204	9/6/96	FW Pond			
		176	9/6/96	FW Pond			
		201	9/6/96	FW Pond			
6760	OR	229	9/6/96	FW Pond			
		217	9/6/96	FW Pond			
		236	9/6/96	FW Pond			
		218	9/6/96	FW Pond			
		217	9/6/96	FW Pond			
		216	9/6/96	FW Pond			
		229	9/6/96	FW Pond			
		232	9/6/96	FW Pond			
849	W	214	9/6/96	FW Pond			
		238	9/6/96	FW Pond			
		233	9/6/96	FW Pond			
		236	9/6/96	FW Pond			
		214	9/6/96	FW Pond			
6016	OR	230	9/6/96	FW Pond			
		175	9/6/96	FW Pond			
		213	9/6/96	FW Pond			
		159	9/6/96	FW Pond			

Appendix 4 (concluded).

Tag Number	Color	Length (mm)	Date Captured	Site Captured	Recapture Date	Recapture Site	Length (mm)
		170	9/6/96	FW Pond			
		239	9/6/96	FW Pond			
		172	9/6/96	FW Pond			
6090	OR	201	9/6/96	FW Pond			
		230	9/6/96	FW Pond			
		227	9/6/96	FW Pond			
		185	9/6/96	FW Pond			
		219	9/6/96	FW Pond			
		193	9/6/96	FW Pond			
		150	9/6/96	FW Pond			
		242	9/6/96	FW Pond			
		222	9/6/96	FW Pond			
		195	9/6/96	FW Pond			
		166	9/6/96	FW Pond			
		244	9/6/96	FW Pond			
		242	9/6/96	FW Pond			
		224	9/6/96	FW Pond			
		113	9/6/96	FW Pond			
		119	9/6/96	FW Pond			