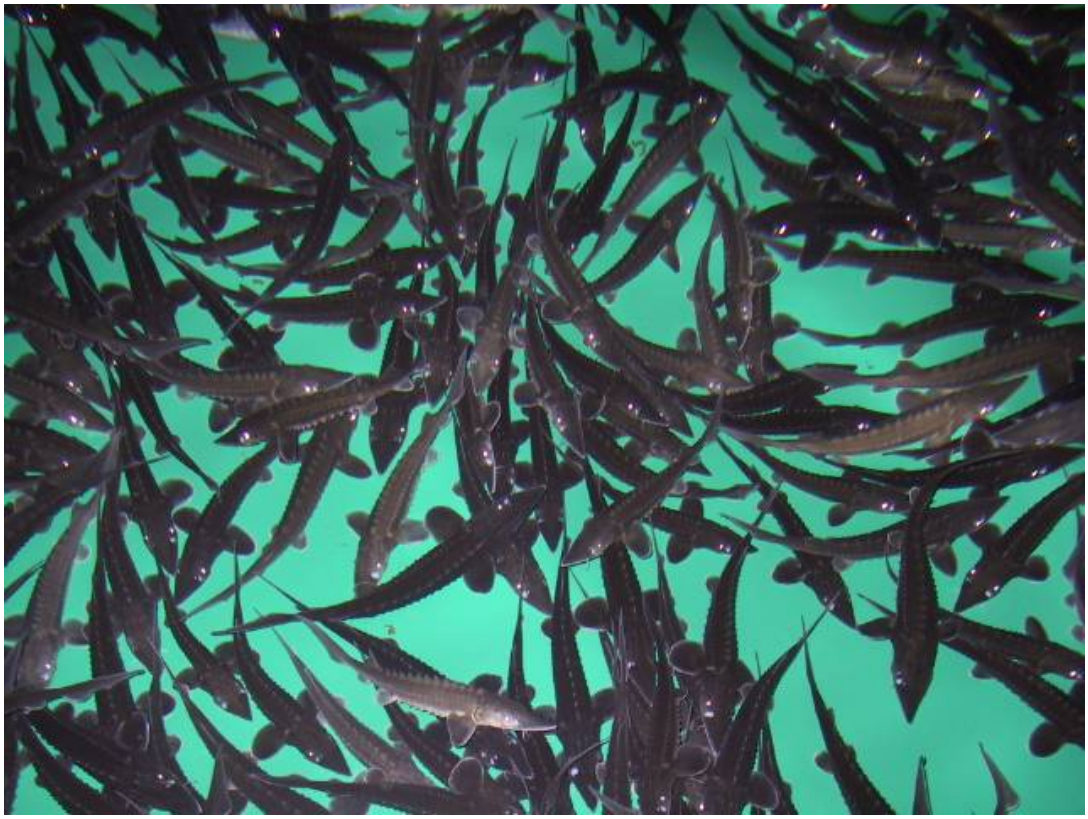
Kootenay White Sturgeon Juvenile Sampling in British Columbia, 2007-08



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Abstract

Juvenile white sturgeon (*Acipenser transmontanus*) were sampled in the Kootenay drainage from the Canada – U.S. border to the Creston Delta in Kootenay Lake. Gill nets were set 158 times between July 18 and August 30, 2007. A total of 220 net-hours of effort resulted in a catch of 194 juvenile sturgeon and a catch per unit effort (CPUE) of 0.880 fish per net-hour. None of the juveniles captured in 2007 were previously unmarked wild juveniles. In addition to juvenile captures, one wild adult sturgeon was also captured during netting efforts. Sturgeon were captured at all 14 sampling sites, with the highest catch rates observed on the Creston Delta, river kilometre (RKM) 130, and sites near recent hatchery releases in 2007. Juvenile white sturgeon captured in 2007 ranged in length from 195 to 885 mm fork length (mean 383 mm) and in weight from 40 to 5350 g (mean 551 g). The age of juveniles with a previous capture history ranged from 2 to 12 years and were at large between release or capture and recapture for 8 to 3601 days (mean 1508 days). Annual growth rates of these fish ranged in length from 29 to 111 mm/yr (mean 65 mm/yr) and in weight from 0 to 722 g/yr (mean 111 g/yr). A total of three recaptures lost weight since release or previous recapture, however these were in year recaptures, captured less than a month at large and therefore may have reflected feeding conditions at the time of first capture and not actual loss of body weight in an entire year. The relative weight (WR) of juveniles captured in 2007 ranged from 65 to 120%, with a mean WR of 83.8 %.

1.0 Introduction

White sturgeon (*Acipenser transmontanus*) occur along the Pacific coast of North America from central California to the Aleutian Islands. In south-eastern British Columbia, the range of this species extends into Kootenay Lake and the Kootenay River (spelled Kootenai in the U.S.), located in the upper Columbia River basin. The Kootenay population is distinct from other Columbia River sturgeon (Anders *et al.* 2000), having been isolated by Bonnington Falls since the last glaciation (Northcote 1973). The range of this population is now further restricted by several dams, which have also altered river and lake environments. The Kootenay population is presently distributed from Kootenai Falls, Montana, downstream through Kootenay Lake to Corra Linn Dam on the lower West Arm of Kootenay Lake, British Columbia (Figure 1).

The Kootenay River white sturgeon population began to experience recruitment failure during the 1950's to mid-1960's (Partridge 1983, Paragamian et al 2005). Libby Dam, located on the Kootenai River system upstream of Kootenai Falls in Montana, began operations in 1972 and has been linked to recent, more extensive problems with recruitment (U.S. Fish and Wildlife Service 1999). The population has now been listed as endangered in the U.S. under the Endangered Species Act (U.S. Fish and Wildlife Service 1999) and in Canada under the Species at Risk Act (SARA). A Recovery Plan has been implemented in the U.S., providing direction for ongoing studies, modifications to Libby Dam operations and conservation aquaculture operations (U.S. Fish and Wildlife Service 1999) and in Canada, work is also currently underway to complete a Recovery Plan.

Concern for Kootenay River white sturgeon has prompted initiation of detailed studies in both Idaho and British Columbia. Co-operative investigations by the Idaho Department of Fish and Game (IDFG), the Kootenay Tribe of Idaho (KTOI) and the B.C. Ministry of Environment (MOE) began in 1994 with funding from the Bonneville Power Administration (Columbia Basin Fish and Wildlife Authority).

Studies have included juvenile white sturgeon sampling, which has been completed annually since 1998 in the Kootenay River between the Canada – U.S. border and the Creston Delta at the south end of Kootenay Lake. Recent studies on the Kootenay River (Neufeld and Spence 2004a and 2004b, Neufeld 2005, Paragamian et *al.* 1999 and Scarnecchia 1999) have identified gill nets and ultrasonic telemetry as particularly useful techniques in describing behaviour and habitat use patterns. Also, on the Columbia River, gill nets are now frequently used in place of bottom trawls to sample juvenile sturgeon (Kern *et al.* 2001, Golder Associates Ltd. 2003, 2004). These sampling techniques now form the basis of juvenile white sturgeon assessments in B.C.

Studies completed in 2006 were aimed at assessing progress in the recovery of Kootenay River white sturgeon within B.C. Specifically, our objectives were to:

- index natural recruitment events in the Kootenay River;
- describe population trends related to age, growth, size, distribution, survival and abundance of both hatchery and wild juvenile white sturgeon; and,
- determine large scale habitat use and movement patterns of wild and hatchery produced juveniles.

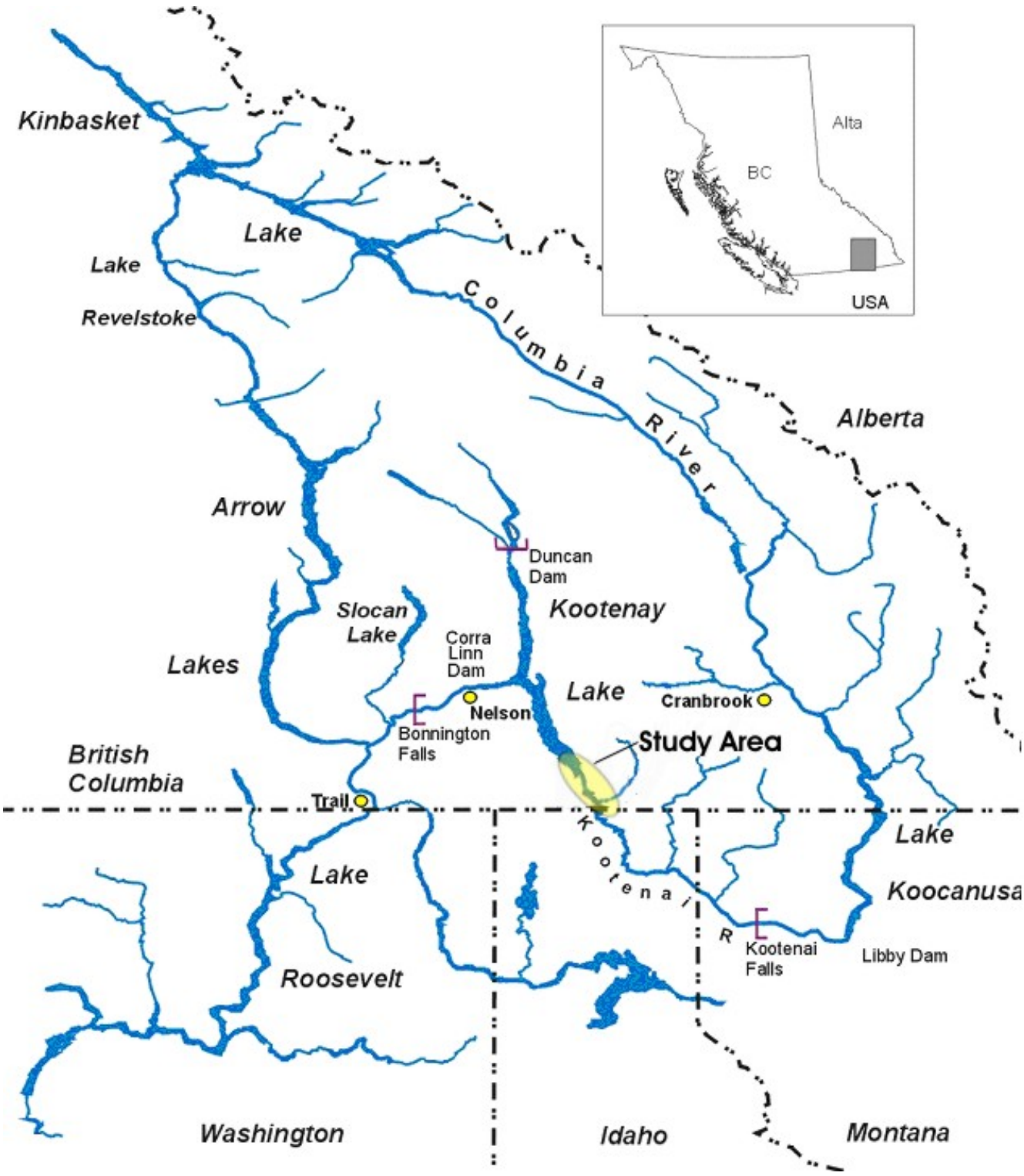

Figure 1. Location of juvenile white sturgeon studies in the Kootenay basin in B.C.

2.0 Study Area

The Canadian portion of the Kootenay white sturgeon range is located in south-eastern British Columbia, immediately north of the State of Idaho. The Kootenay River enters Kootenay Lake at its southern tip. The lake is also fed by the Lardeau and Duncan rivers at the north end, and numerous other much smaller tributaries. The outlet of Kootenay Lake flows from the lake's mid-point for approximately 70 km in a westerly direction, eventually descending over a series of dams and entering the Columbia River near Castlegar. These dams, as well as a dam on Lardeau/Duncan system, currently restrict distribution of white sturgeon in the Kootenay system within B.C. A more detailed description of Kootenay Lake can be found in Daley *et al*. (1981).

The present study was conducted in a portion of the present range of Kootenay white sturgeon, and included 50 km of Kootenay River from the Canada - U.S. border, downstream to, and including the entrance to Kootenay Lake. The area where the river enters Kootenay Lake is referred to locally as the Creston Delta. The study area continued north from the Kootenay River outlet to include the entire Creston Delta (approximately 5 km; Figure 1).

3.0 Methods

3.1 Sampling Locations

A total of 14 locations were selected for gill net sampling in 2007 and were similar to sampling efforts in previous years (e.g. Neufeld 2007; Figure 2, Table 1). These sites included both index and secondary sites. Index sites were selected based on previous sampling programs as the areas of highest capture efficiency and sites which were fishable during high flow events. Selection of these sites allowed the capture of relatively large numbers of juveniles to provide estimation of both survival and growth. However, we recognized that sampling only the most productive habitat may not provide representative data on habitat use, growth and survival and also may skew population estimates. Secondary sampling locations were therefore also included in sampling efforts. Approximately 24 net hours of effort were completed at index sites while approximately 12 net hours were completed in secondary locations. The order in which sites were sampled was selected randomly.

3.2 Sampling Gear

Juvenile sampling was conducted from a 7.0 m boat. Set and pull times were also recorded for each set. Maximum and minimum depths as well as set locations were recorded for all net sets using a GPS capable depth sounder (Garmin GPSMAP 182C). Set areas were occasionally limited by bottom conditions; nets were not set in areas with high concentrations of woody debris because of potential problems with lost or damaged gear.

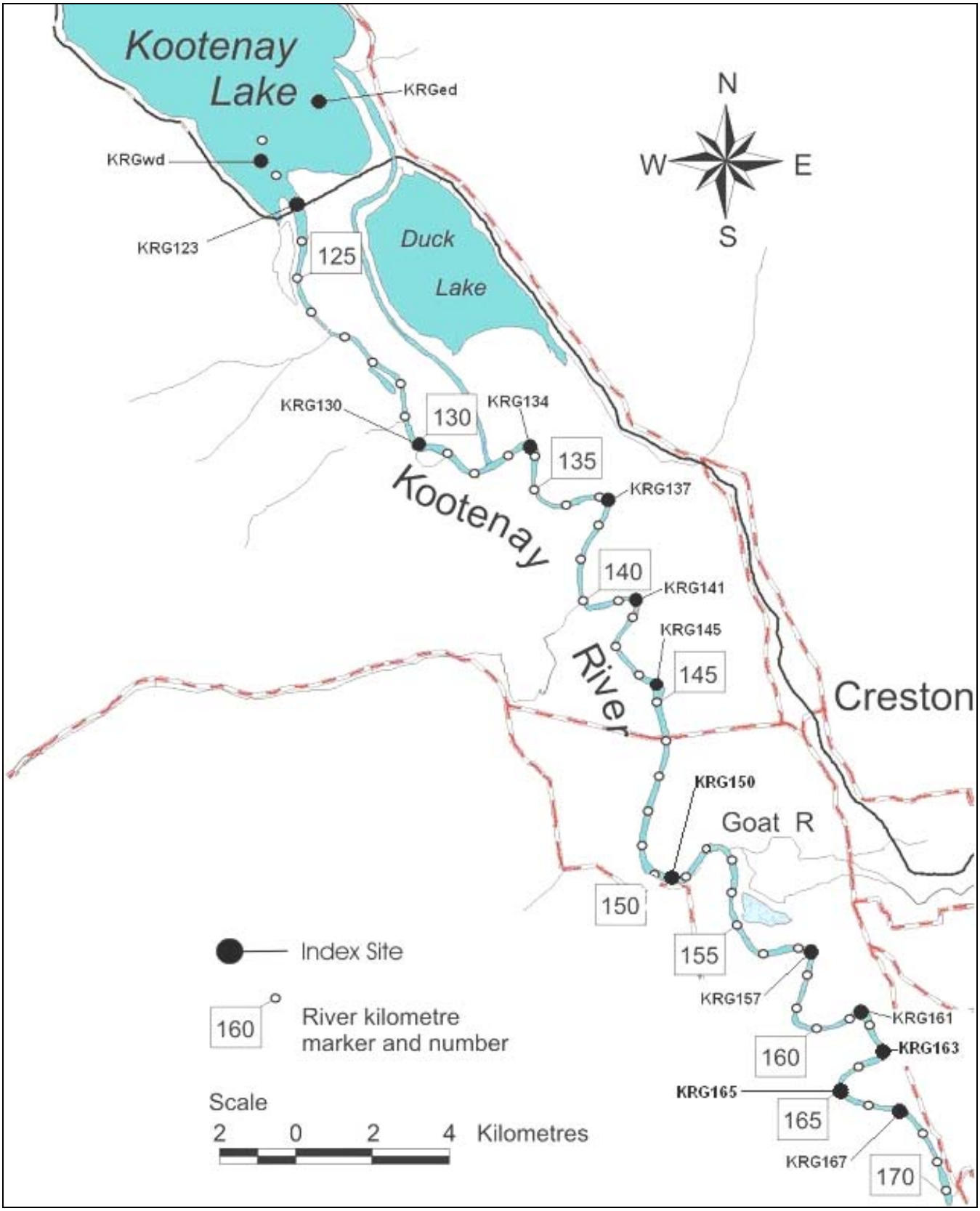

Figure 2. Juvenile white sturgeon river kilometre (RKM) and gill net sampling index site locations on the Kootenay River and Creston Delta.

Table 1. Juvenile white sturgeon gill net sites (site code and location).

Index Site Code	Location			Site Type
	RKM	Eastings	Northings	
KRGed	120	Various	Various	Index
KRGwd	121	Various	Various	Index
KRG123	123	Various	Various	Secondary
KRG130	130	525263	5448969	Index
KRG134	133.7	528255	5448474	Index
KRG137	137.4	529943	5446872	Index
KRG141	141.5	530358	5444119	Secondary
KRG145	144.8	530270	5442262	Index
KRG150	150	530902	5436778	Secondary
KRG157	157.3	533574	5434480	Secondary
KRG161	161.4	534653	5432776	Index
KRG163	163	535174	5431769	Secondary
KRG165	165	533817	5430828	Index
KRG167	167	Various	Various	Secondary

To avoid problems associated with size selectivity by gill-net mesh size (McCombie and Berst 1969, Hamley 1975 and references therein, Hilborn and Walters 1992, Burner *et al*. 2000), stretch measure nets of 5.1, 10.2 and 15.2 cm were employed for sampling and detailed methods can be found in Neufeld and Spence (2004a, 2004b) and (Neufeld 2006). Considering that the key objective was to index natural recruitment, crews fished two 5.1 cm nets (targeting the youngest age classes) and only one each of the 10.2 and 15.2 cm nets each day. These four nets were fished continuously as a group over the day, with mesh sizes selected randomly for each set. The target length of sets was 90 minutes, although it was recognized that water conditions, weather and catches could result in a range of set durations. Sets typically ranged between 60 and 120 minutes.

3.3 Biological Sampling

All captured white sturgeon were brought into the boat for sampling. Smaller juveniles were placed in a plastic container filled with water while larger juveniles and all adults were placed in a waterproof stretcher, with enough water to allow for respiration. Fresh water was frequently added to the stretcher during the processing period. Sturgeon were processed following standardized methods described fully in Neufeld and Spence (2004b). After processing, sturgeon were returned to the water and released once normal respiration, orientation and swimming behaviour were established.

4.0 Results

4.1 Effort and Catch

In 2007, gill nets were set 158 times between July 18 and August 30. A total of 220 net-hours of effort resulted in a catch of 194 juvenile sturgeon (Appendices A and B) and a catch per unit effort (CPUE) of 0.881 fish per net-hour. None of the juveniles captured in 2007 were previously unmarked wild juveniles. In addition to juveniles, one adult sturgeon was also captured during netting efforts (Appendix C).

4.2 By-Catch

A total of 89 fish were collected incidentally during this study, for a by-catch capture rate of 0.405 fish per net-hour (Appendix D). Species captured included longnose sucker (*Catostomus catostomus*), largescale sucker (*C. macrocheilus*), peamouth (*Mylocheilus caurinus*), northern pikeminnow (*Ptychocheilus oregonensis*), mountain whitefish (*Prosopium williamsoni*), rainbow trout (*Oncorhynchus mykiss*) and bull trout *(Salvelinus confluentus*). Peamouth accounted for the highest number of captures (57%), although northern pikeminnow, whitefish and longnose suckers were also captured frequently (14, 13 and 10%, respectively; Figure 3).

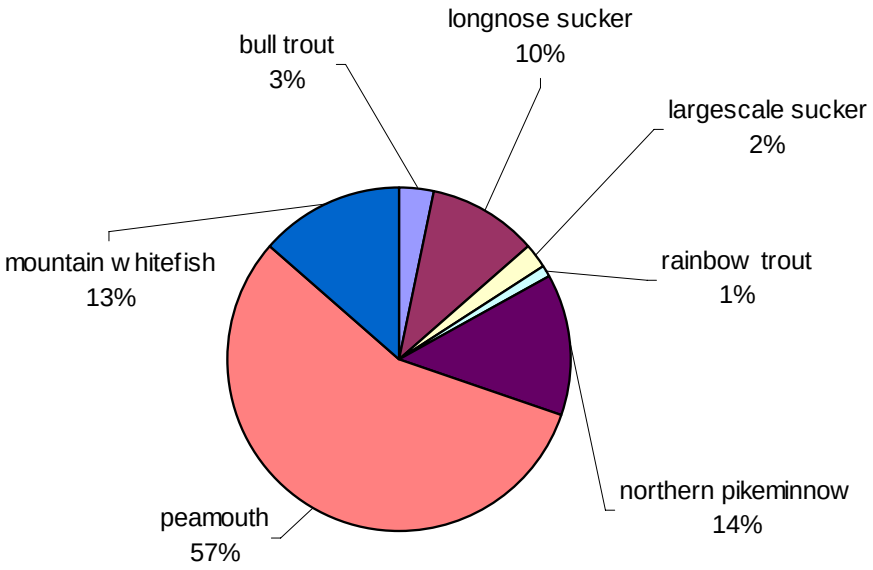

Figure 3. Relative frequency of incidental captures by species during sturgeon gill net sampling efforts in 2007.

4.3 Sturgeon Capture Locations

Sturgeon were captured at all 14 sampling sites (Table 2; Figure 4 and 5). Catch rates were variable by sampling location although higher catches were observed near recent hatchery release sites, the Creston Delta and one large eddy in the main river. Sites downstream of a recent hatchery release with high catch rates included sites at RKM 141 and 145 (hatchery release in Canada at RKM 150). Catch rates were relatively low at RKM 134, 157, 163 and 167. The variability in catch rates reflects diversity in habitat suitability, proximity to a recent hatchery release site, and possible other variability associated with weather, flows, temperature or other factors on the day of sampling.

Table 2. Summary of catch and catch rate of white sturgeon, by sample location, in Kootenay River and Lake, 2007.

Index Site Code	Location (RKM)	Number of Sets	Number of Net Captures	Effort (net-hours)	CPUE (fish/net hr)
KRGed	120	14	38	19.1	1.99
KRGwd	121	14	45	18.9	2.38
KRG123	123	7	4	11.6	0.35
KRG130	130	16	21	22.2	0.94
KRG134	133.7	8	1	12.9	0.08
KRG137	137.4	15	4	22.3	0.18
KRG141	141.5	16	26	18.3	1.42
KRG145	144.8	4	10	7.5	1.34
KRG150	150	8	15	14.2	1.06
KRG157	157.3	8	6	12.3	0.49
KRG161	161.4	16	10	20.2	0.49
KRG163	163	8	2	8.8	0.23
KRG165	165	16	8	22.1	0.36
KRG167	167	8	4	9.2	0.44
Total		**158**	**194**	**220**	**0.88**

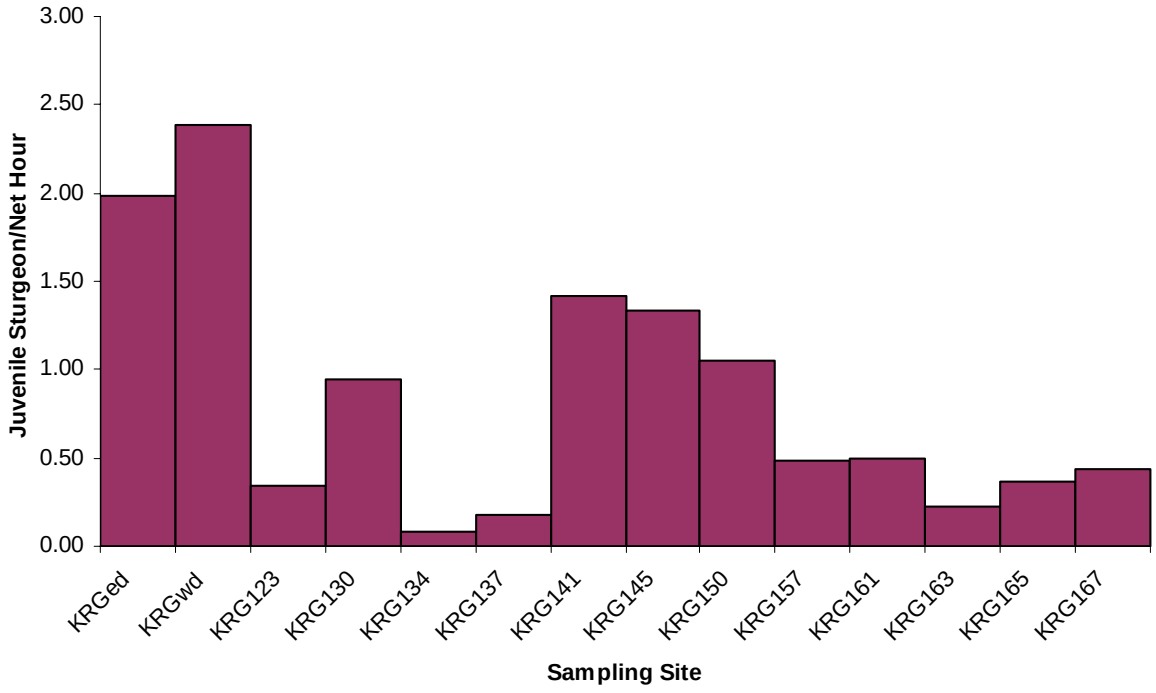

Figure 4. Catch per unit effort (CPUE; effort = 1 net hour) of juvenile sturgeon stratified by sample location from sampling efforts in 2007 (see Table 1 for sample site locations).

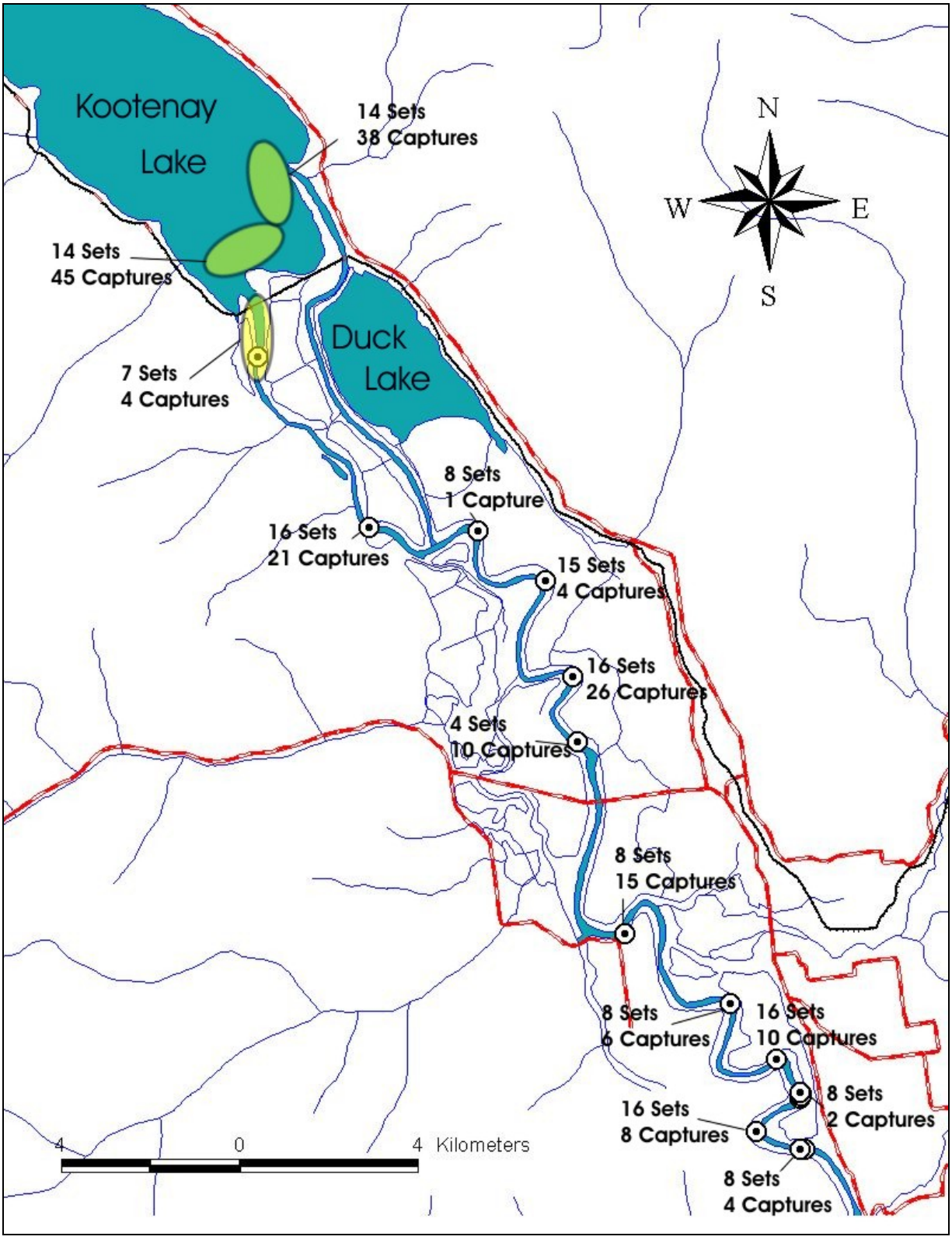

Figure 5. Frequency and location of gillnet sets and sturgeon captures during juvenile white sturgeon sampling on the Kootenay River, 2007.

4.4 Life History

The length of juvenile white sturgeon captured in 2007 ranged from 195 to 885 mm fork length (FL) with a mean of 383 mm (SE=10.7; Figure 6; Appendix B). Weights of these fish ranged from 40 to 5350 g with a mean of 551 g (SE=51.2; Appendix B). Many fish captured in 2007 were from the 2004, 2005 and 2006 brood year, most of which were not PIT tagged on release, and therefore there were many juveniles that were of an undetermined age (Figure 7). These fish were also mixed with an undetermined number of juveniles from other age classes that had lost their PIT tags. Although all hatchery fish are scute marked by year class, there is enough error both in initial marking as well as interpretation of marks in the field that brood year had error of at least +/- 1 year, and therefore ages were not assigned to these for analysis. These fish represented the majority of captures and are identified with an unknown age for analysis (Figure 7). Ages of captured juveniles with available age data in the in IDFG database ranged from 2 to 12 years (Figure 7) and no previously unmarked wild juveniles were captured in 2007.

Examination of the capture frequency by year class of juvenile white sturgeon captures in previous years (Neufeld 2006 and 2007) and again in 2007 in the Canadian study area showed few captures of juveniles from the 2001 and 2002 brood years and under-representation of several other recent years (2000 and 2003), despite large hatchery releases numbers from these brood years (Figure 7, Neufeld 2007) suggesting poor catchability or survival for these year classes. These catch curve trends were further evaluated in a recent analysis of hatchery release survival rates (Pyper 2006) which identified these underrepresented year classes as having poor survival in the first year of release.

Of the 194 juveniles captured in 2007, three (1.6 %) showed fin deformities. Fin deformities included two reduced and one missing pectoral fin. One additional juvenile was captured with a round piece of birch bark encircling its body. Some abrasion was noted on this fish as a result of this foreign material. The bark was removed and the fish was released.

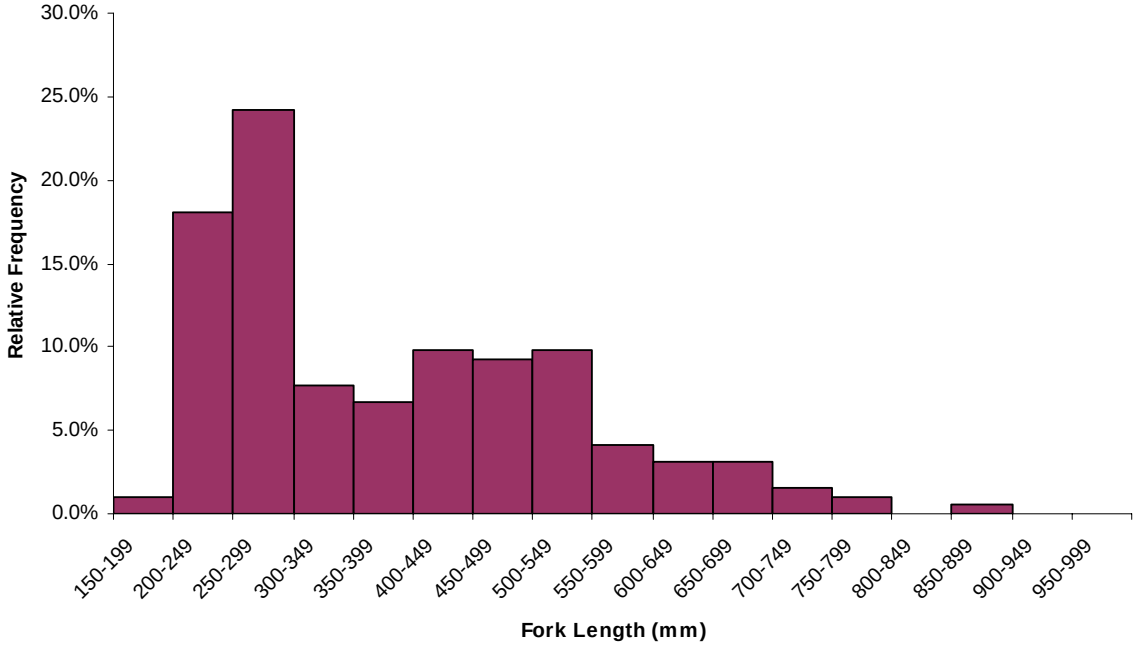

Figure 6. Length frequency histogram for juvenile white sturgeon captured in 2007.

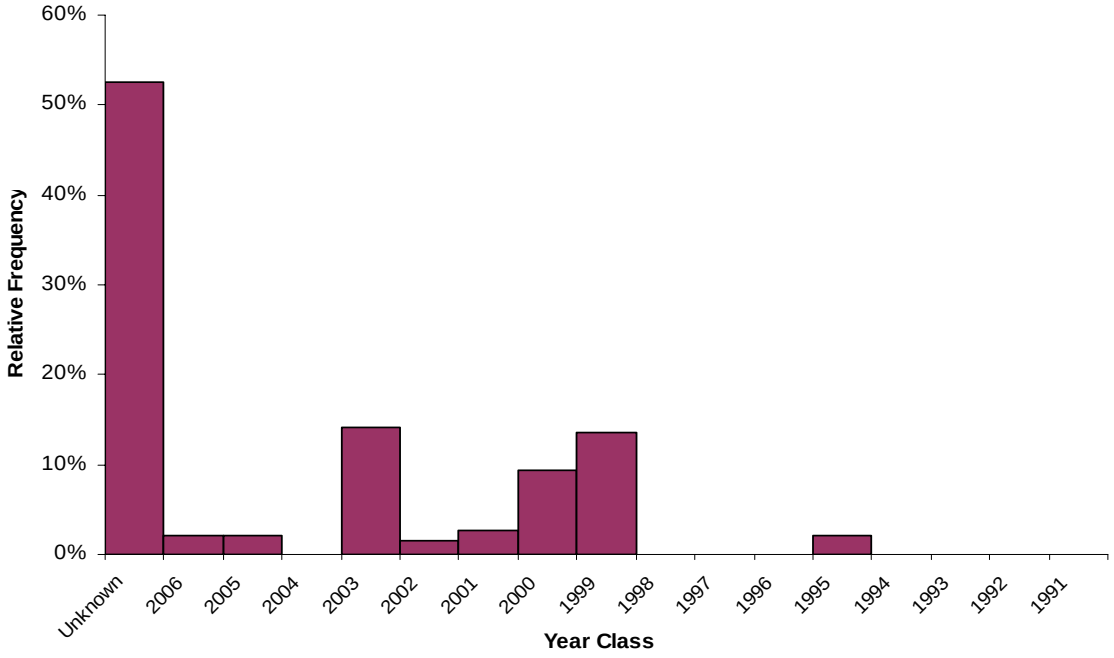

Figure 7. Age frequency histogram for juvenile white sturgeon captured in 2007, based on year class data from the IDFG database.

4.5 Recapture Information

Catch information from previous years sampling was summarized by matching PIT tag numbers to those recorded in the IDFG Kootenai white sturgeon database (Appendix E). Unfortunately, for 5 records, there was no match found in this database. The data from these fish did not match any record of tagged fish. Additionally, most juvenile sturgeon released between 2005 and 2007 (2004 to 2006 brood years) were not tagged with a PIT

tag upon release. Therefore, there was little or no recapture data from these brood years. Recapture analyses were completed without the data from these untagged recaptures or 5 juveniles without PIT tag matches in the database.

Assessment of the number of juvenile sturgeon captured with lost or non-functional PIT tags was not possible in 2007 because many of the 2004 to 2006 brood released were not PIT tagged on release. However, all hatchery reared juveniles could be identified by scute removal patterns and all captured fish were implanted with a new PIT tag if one was not present.

All juvenile sturgeon captured in 2007 were hatchery release recaptures or wild fish marked in previous years. The highest number of recaptures (57%) in 2007 were hatchery fish assumed to be from the 2004 to 2006 brood years; however, because most of these fish were not PIT tagged, some of these may have been fish from other brood years that had lost their PIT tag. One adult sturgeon was also captured in gill nets.

Recaptured juveniles were at large for 8 to 3601 days between captures (mean 1541 days). A total of 30% of recaptured juveniles with a location history were captured upstream from their previous capture or hatchery release location, while 70% were captured downstream. The mean distance travelled between release or previous capture and recapture was 24 km downstream, with a range of 130 km upstream to 124 km downstream (Figure 8).

Annual growth rates were determined from changes in length and weight, and the number of days at large of recaptured juveniles with a location history. The annual TL growth of recaptured juveniles ranged from 29 to 111 mm/yr (mean 65 mm/yr). The annual weight gain of juveniles ranged from 0 to 722 g/yr (mean 111 g/yr), while three of the recaptured juvenile sturgeon in 2007 lost weight between release and recapture. The three juveniles that lost weight were in year recaptures, captured less than a month at large and therefore may have reflected feeding conditions at the time of first capture and not actual loss of body weight on an annual basis.

Condition factor, recognized as an indicator of forage, feeding and health problems for wild fish and hatchery fish adapting to the natural environment (Ricker 1975; Ireland *et al*. 2001) was calculated for each recapture. The relative weight index (W_r) has become the primary method of comparing the condition of white sturgeon populations through most of their range (further described in Beamesderfer, 1993; Ireland *et al*. draft 2001; Neufeld and Spence 2004a). The Wr index for juvenile sturgeon captured in 2007 ranged from 65 to 121 % (mean 83.8 %). The mean change in relative weight for recaptures was -16 %, with a range of -57 to 33 %. In total, 86 % of recaptured sturgeon showed a decrease in relative weight between previous capture or release and recapture in 2007.

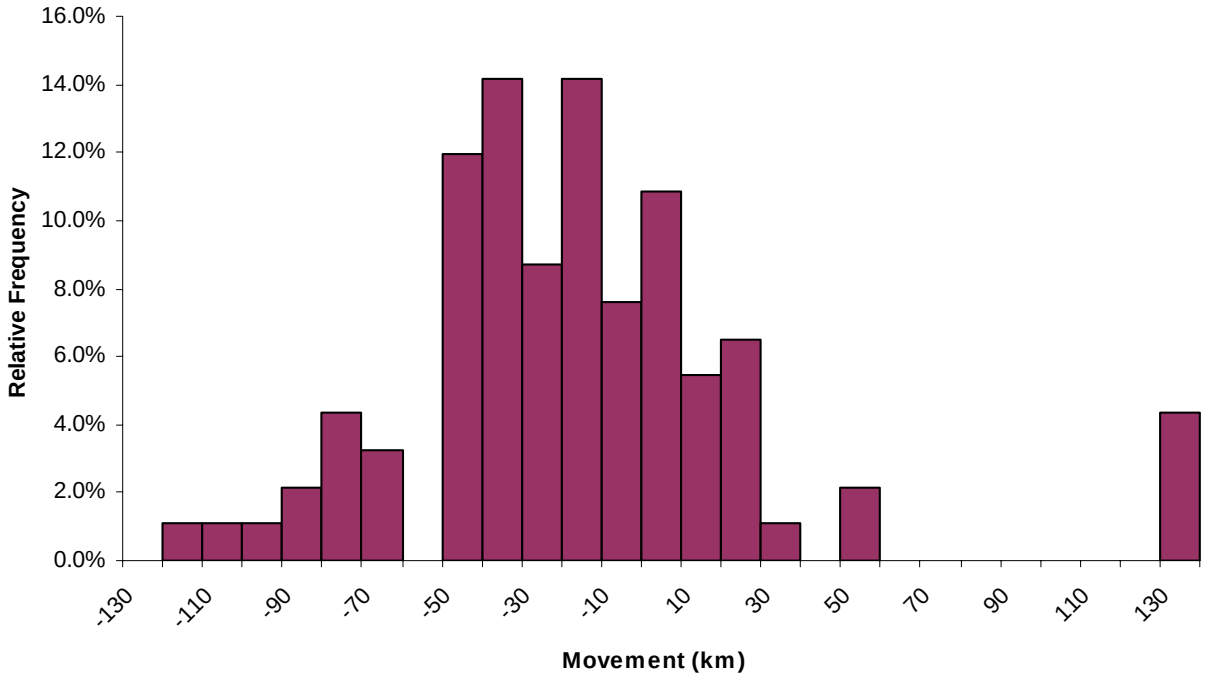

Figure 8. The relative frequency of distance moved between previous capture or release location and 2007 capture location (- denotes a downstream movement).

5.0 Discussion

5.1 Distribution of Catch

Catch rates differed significantly by location. Sites in the river nearest the BC hatchery release point (RKM 141, 145 and 150) and those in Kootenay Lake near the Creston Delta had the highest catch rates. This trend was also noted during sampling in 2004 through 2006 (Neufeld 2005, 2006 and 2007). However, the east delta site (KRGed) had much higher catch rates in 2006 and 2007 than previous years. It was not clear why this site was more productive; however it is probable that as the number of fish and the corresponding density increases in Kootenay Lake that catch rates in some of these previously underutilized sites will increase.

5.2 Life History

Although some annual variation occurs in the length of juvenile white sturgeon captured on the Kootenay due to the effect of recent hatchery releases (smaller fish), the length of juveniles in 2007 were generally similar to those captured during previous years. The majority of recaptures in 2007 were hatchery fish from the 2003-2006 brood years (71%), however identification of the actual year class was not possible due to concerns around the accuracy of using only scute markings; many of these years were not PIT tagged. Larger fish from the 1999 and 2000 brood years were also captured frequently (14 and 9% respectively).

The mean rate of growth in length for all juvenile sturgeon captured in 2007 was similar to annual growth rates recorded in many previous hatchery assessments (Neufeld 2005 and 2007, Ireland *et al*. 2002) and higher than those recorded between 1998 and 2003 (Neufeld and Spence 2002, 2004a, 2004b). Although observed growth rates in 2007 were similar to many previous Kootenay samples, they were still much lower than those observed on the upper Columbia River in B.C. (Golder Associates Ltd. 2003, 2004, 2005, 2006, 2007 *Draft*). The mean daily growth rate of upper Columbia hatchery juveniles was between 220 to 360 mm/year in recent years, up to ten times greater than Kootenay juveniles.

The mean weight growth for all juvenile sturgeon captured in 2007 was slightly lower than the rate observed in 2006 (Neufeld 2007), but similar to most previous years sampling (Neufeld and Spence 2002, 2004a, 2004b, Neufeld 2005 and 2006). This growth rate was still significantly lower than the 206 g/yr average growth increment of Kootenay River fish captured after up to 8 years at-large since 1990 (Ireland *et al*. 2002). The difference in growth rate compared to this baseline may again be the result of higher numbers of young fish in our sample than these early sampling efforts, as little or no weight gain often occurs among fish within the first years after release (Ireland *et al.* 2002). The weight growth rates observed on the Kootenay in all years of sampling are again much lower than those observed on the upper Columbia River in B.C. As in the case of growth in length, weight gain among these hatchery released juveniles was several fold greater that the best annual growth observed on the Kootenay River (Golder Associates Ltd. 2003, 2004, 2006, *draft* 2007).

The mean relative weight at recapture for all juveniles in 2007 was similar to captures in previous years (Neufeld and Spence 2002, 2004a, 2004b, Neufeld 2005 and 2006). The relative weights at recapture in 2007 were generally less than relative weights at the time of original hatchery release or previous capture, as noted in previous studies. In 2007, 86% of juveniles recaptured showed a decrease in relative weight. Ireland *et al.* (2002) also reported that 77% of hatchery fish lost weight between release and recapture, as was the trend in previous sampling years (Neufeld and Spence 2002, 2004a, b, Neufeld 2005, 2006 and 2007). Although it is common for many juveniles to show a decrease in relative weight between release and recapture on the Kootenay River, this is not the trend observed on the upper Columbia River. In juvenile sampling efforts on that system (Golder Associates Ltd. 2003, 2004, 2006, *draft* 2007), all juvenile sturgeon recaptured showed significant growth in both length and weight, and a decrease in relative weight was rarely observed in juvenile recaptures.

Differences in growth rate and relative weight between these two populations suggests a significant difference in juvenile food availability. *Mysis relicta* entrained from Kootenay Lake and Arrow Lakes Reservoir are abundant in the upper Columbia and appear to represent virtually the entire diet of juvenile white sturgeon that area (Golder Associates Ltd. 2003, 2004). Similar prey are not available to white sturgeon in the Kootenay River, and likely do not comprise a significant portion of their diet in Kootenay Lake.

5.3 Movements Based on Recaptures

Juveniles were captured both upstream (30%) and downstream (70%) of their previous capture or hatchery release location. A number of these fish moved long distances, travelling as far as 130 km upstream to a maximum of 124 km downstream. Although almost 50% of juveniles showed upstream movement in 2004 (Neufeld 2005) the majority of recaptures in previous years showed downstream movement (Vandenbos and Spence 2001, Neufeld and Spence 2004a, b, Neufeld 2006 and 2007). In these years, it was noted that the majority of sampling programs and hatchery releases had taken place in Idaho, upstream of the study area. This increased the probability that recaptures would have been originally captured upstream, and thus observed movement patterns may have been an artefact of the previous sampling programs and stocking locations. Intensive sampling in BC started in 2001, and therefore the effect of initial sampling efforts in Idaho are assumed to have less of an effect on this movement analysis every year. Gill net sampling in 2004 around recent Canadian hatchery release sites, as well as subsequent sonic tagging, confirmed that the prevalence of downstream movements observed in previous programs on the Kootenay were most likely a stocking and sampling location artefact, and that juveniles move both up and downstream regularly (Neufeld 2005). However, the most common movements remain in a downstream direction (70-85 % of detections, Neufeld 2006 and 2007).

6.0 Recommendations

- Gill nets with 5.1, 10.2 and 15.2 cm stretched measure should continue to be used in future sampling projects to avoid identified biases associated with mesh size selectivity.

- Although a stratified sampling program targeting an even spatial distribution of sampling effort implemented every 4 years (such as that used in 2001) to track possible changes in habitat use as the number of juveniles in the population grows has been suggested in previous recommendations, continuation of the index approach used this year is suggested in future sampling. Although changes in habitat use are important to identify, this is better approached using telemetry methods, and standardized annual gill netting methods will assist in avoiding biases in mark-recapture estimates in the future.

- Changes to the structure of sampling methods should only be considered following the completion of detailed survival estimates currently underway to investigate survival trends (Beamsderfer, pers com, Pyper 2006.) following the recommendations from this work.

Acknowledgements

Don Miller of Kootenay Wildlife Services assisted in much of the fieldwork. Colin Spence (MoE) provided technical experience during this project. Vaughn Paragamian and Pete Rust (IDFG), Sue Ireland (KTOI) as well as Colin Spence (MoE) provided administrative support and technical direction. In addition, the Bonneville Power Administration (Northwest Power and Conservation Council's Fish and Wildlife Program) funded the project through the Idaho Department of Fish and Game and the Kootenai Tribe of Idaho.

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Appendices

Appendix A. Summary of gill net set data.

Date	Site[1] ID	Temp. (C)	Mesh (in)	Set Time (Minutes)	Depth Min	Depth Max	Location[2] Eastings	Location[2] Northings
18-Jul-07	167	17.5	6	65	8.0	13.4		
18-Jul-07	167	17.5	2	69	10.0	14.8		
18-Jul-07	167	17.5	2	71	10.0	17.3		
18-Jul-07	167	17.5	4	74	10.0	17.4		
18-Jul-07	167	17.5	6	67	11.6	19.8		
18-Jul-07	167	17.5	2	66	15.0	18.7		
18-Jul-07	167	17.5	2	69	17.0	18.2		
18-Jul-07	167	17.5	4	69	13.8	16.4		
19-Jul-07	165	16.8	2	61	7.0	15.8		
19-Jul-07	165	16.8	2	69	10.0	21.6		
19-Jul-07	165	16.8	6	79	10.0	22.0		
19-Jul-07	165	16.8	4	76	10.0	20.0		
19-Jul-07	165	16.8	2	67	19.1	20.9		
19-Jul-07	165	16.8	2	62	21.1	24.0		
19-Jul-07	165	16.8	6	65	19.1	23.1		
19-Jul-07	165	16.8	4	62	10.0	19.1		
20-Jul-07	ED	23.0	6	78	9.0	12.5	524041	5458658
20-Jul-07	ED	23.0	2	80	10.0	13.9	524056	5458570
20-Jul-07	ED	23.0	2	76	10.0	12.5	524044	5458415
20-Jul-07	ED	23.0	4	80	7.5	9.5	524959	5458274
20-Jul-07	ED	23.0	6	68	13.5	18.5	524041	5458658
20-Jul-07	ED	23.0	2	65	15.0	18.5	524056	5458570
20-Jul-07	ED	23.0	2	66	13.0	15.0	524044	5458415
20-Jul-07	ED	23.0	4	63	4.5	6.8	524959	5458274
23-Jul-07	163	17.4	4	64	15.9	21.6		
23-Jul-07	163	17.4	2	68	13.8	19.3		
23-Jul-07	163	17.4	2	74	6.2	17.7		
23-Jul-07	163	17.4	6	79	10.8	17.8		
23-Jul-07	163	17.4	4	61	24.0	29.0		
23-Jul-07	163	17.4	2	60	18.3	19.0		
23-Jul-07	163	17.4	2	58	13.0	18.5		
23-Jul-07	163	17.4	6	64	11.0	13.2		
24-Jul-07	141	18.1	6	75	10.0	22.6		
24-Jul-07	141	18.1	2	77	10.0	24.0		
24-Jul-07	141	18.1	2	80	11.0	21.0		
24-Jul-07	141	18.1	4	85	10.0	18.2		
24-Jul-07	141	18.1	6	61	26.0	28.0		
24-Jul-07	141	18.1	2	63	18.1	24.0		
24-Jul-07	141	18.1	2	60	16.2	16.9		
24-Jul-07	141	18.1	4	55	16.0	18.0		
25-Jul-07	161	18.2	2	60	10.2	12.0		
25-Jul-07	161	18.2	2	77	8.7	16.2		
25-Jul-07	161	18.2	4	84	6.0	13.5		
25-Jul-07	161	18.2	6	90	10.0	17.5		
25-Jul-07	161	18.2	2	60	24.0	26.5		
25-Jul-07	161	18.2	2	57	20.0	23.5		
25-Jul-07	161	18.2	4	60	11.0	19.0		
25-Jul-07	161	18.2	6	60	15.0	22.5		

Date	Site[1] ID	Temp. (C)	Mesh (in)	Set Time (Minutes)	Depth		Location[2]	
					Min	Max	Eastings	Northings
28-Jul-07	141	18.2	4	58	6.0	12.5		
28-Jul-07	141	18.2	2	60	14.6	16.7		
28-Jul-07	141	18.2	2	60	10.0	16.0		
28-Jul-07	141	18.2	6	61	10.0	19.0		
28-Jul-07	141	18.2	4	60	10.0	10.8		
28-Jul-07	141	18.2	2	62	8.3	12.0		
28-Jul-07	141	18.2	2	90	16.0	25.0		
28-Jul-07	141	18.2	6	90	10.0	21.3		
30-Jul-07	137	18.0	6	83	10.9	13.2		
30-Jul-07	137	18.0	2	87	10.0	11.6		
30-Jul-07	137	18.0	4	94	10.0	18.8		
30-Jul-07	137	18.0	2	101	11.0	18.0		
30-Jul-07	137	18.0	6	94	12.0	15.1		
30-Jul-07	137	18.0	2	68	11.7	15.0		
30-Jul-07	137	18.0	2	70	14.6	18.7		
31-Jul-07	123	19.7	2	92	13.5	21.1	522976	5455617
31-Jul-07	123	19.7	6	104	14.0	19.1	522995	5455679
31-Jul-07	123	19.7	4	110	14.2	16.3	522958	5455704
31-Jul-07	123	19.7	2	141	10.0	18.9	522760	5454046
31-Jul-07	123	19.7	6	96	14.3	16.1	523047	5455594
31-Jul-07	123	19.7	4	76	5.7	7.3	522905	5454787
31-Jul-07	123	19.7	2	74	14.7	19.0	522771	5454146
03-Aug-07	150	18.6	4	80	9.8	18.0		
03-Aug-07	150	18.6	6	88	7.5	14.3		
03-Aug-07	150	18.6	2	90	8.0	15.6		
03-Aug-07	150	18.6	2	103	9.7	17.3		
03-Aug-07	150	18.6	4	130	16.1	22.6		
03-Aug-07	150	18.6	6	127	19.0	21.6		
03-Aug-07	150	18.6	2	122	8.6	10.9		
03-Aug-07	150	18.6	2	112	10.1	16.9		
08-Aug-07	ED	18.8	2	73	2.7	8.2	524070	5458391
08-Aug-07	ED	18.8	6	93	4.2	8.7	542105	5458444
08-Aug-07	ED	18.8	2	99	4.3	11.5	523889	5458199
08-Aug-07	ED	18.8	4	127	4.9	10.1	523626	5458061
08-Aug-07	ED	18.8	2	80	10.0	14.7	523978	5458330
08-Aug-07	ED	18.8	6	100	10.6	16.3	524030	5458414
09-Aug-07	WD	16.8	6	70	4.7	7.8	523237	5457975
09-Aug-07	WD	16.8	4	70	5.8	9.3	523040	5457955
09-Aug-07	WD	16.8	2	74	5.7	8.9	522877	5457807
09-Aug-07	WD	16.8	2	76	11.0	18.4	522621	5457723
09-Aug-07	WD	16.8	6	71	10.5	13.5	523200	5458054
09-Aug-07	WD	16.8	4	73	11.6	12.6	523034	5457993
09-Aug-07	WD	16.8	2	73	10.0	13.6	522825	5457864
09-Aug-07	WD	16.8	2	70	10.5	16.9	522514	5457347
13-Aug-07	165	15.5	4	90	8.6	16.9		
13-Aug-07	165	15.5	2	90	12.0	19.6		
13-Aug-07	165	15.5	6	96	13.0	22.9		
13-Aug-07	165	15.5	2	101	13.3	23.0		

Date	Site[1] ID	Temp. (C)	Mesh (in)	Set Time (Minutes)	Depth		Location[2]	
					Min	Max	Eastings	Northings
13-Aug-07	165	15.5	4	100	17.6	20.1		
13-Aug-07	165	15.5	2	100	5.0	17.5		
13-Aug-07	165	15.5	6	102	6.0	13.5		
13-Aug-07	165	15.5	2	108	13.5	23.4		
14-Aug-07	145	16.0	2	110	10.0	19.5		
14-Aug-07	145	16.0	6	120	6.5	16.8		
14-Aug-07	145	16.0	2	121	10.0	11.5		
14-Aug-07	145	16.0	4	137	12.7	12.8		
15-Aug-07	157	17.8	2	93	8.0	17.0		
15-Aug-07	157	17.8	4	113	10.0	19.6		
15-Aug-07	157	17.8	2	108	16.0	17.7		
15-Aug-07	157	17.8	6	118	10.0	15.3		
15-Aug-07	157	17.8	2	88	18.2	20.1		
15-Aug-07	157	17.8	4	75	19.1	23.4		
15-Aug-07	157	17.8	2	72	10.0	17.4		
15-Aug-07	157	17.8	6	71	11.4	12.4		
16-Aug-07	WD	19.8	6	75	5.0	9.0	522767	5457744
16-Aug-07	WD	19.8	2	79	6.6	10.0	522668	5457662
16-Aug-07	WD	19.8	4	85	10.0	12.2	522567	5457266
16-Aug-07	WD	19.8	2	118	8.0	14.2	522499	5457171
16-Aug-07	WD	19.8	6	90	11.1	18.1	522702	5457806
16-Aug-07	WD	19.8	2	110	10.0	16.5	522668	5457662
17-Aug-07	130	17.4	2	80	6.0	25.0		
17-Aug-07	130	17.4	6	87	10.0	21.2		
17-Aug-07	130	17.4	2	90	12.6	19.6		
17-Aug-07	130	17.4	4	90	6.0	15.6		
17-Aug-07	130	17.4	2	80	13.6	23.9		
17-Aug-07	130	17.4	6	79	16.5	25.9		
17-Aug-07	130	17.4	2	80	16.1	22.3		
17-Aug-07	130	17.4	4	80	16.8	22.6		
20-Aug-07	134	16.0	4	93	11.0	13.1		
20-Aug-07	134	16.0	2	99	17.0	20.7		
20-Aug-07	134	16.0	2	105	14.0	18.6		
20-Aug-07	134	16.0	6	112	15.0	21.7		
20-Aug-07	134	16.0	4	92	18.0	25.0		
20-Aug-07	134	16.0	2	88	22.0	27.0		
20-Aug-07	134	16.0	2	92	10.0	15.1		
20-Aug-07	134	16.0	6	93	20.0	30.2		
21-Aug-07	137	16.5	2	90	10.0	14.7		
21-Aug-07	137	16.5	2	90	8.0	11.8		
21-Aug-07	137	16.5	6	92	8.0	16.1		
21-Aug-07	137	16.5	4	96	8.0	17.2		
21-Aug-07	137	16.5	2	90	11.0	14.0		
21-Aug-07	137	16.5	2	90	15.0	15.8		
21-Aug-07	137	16.5	6	92	15.3	21.1		
21-Aug-07	137	16.5	4	98	12.0	21.2		
22-Aug-07	161	15.7	6	88	13.1	24.1		
22-Aug-07	161	15.7	4	98	7.0	17.2		

Date	Site[1] ID	Temp. (C)	Mesh (in)	Set Time (Minutes)	Depth		Location[2]	
					Min	Max	Eastings	Northings
22-Aug-07	161	15.7	2	100	7.9	22.2		
22-Aug-07	161	15.7	2	115	10.2	17.7		
22-Aug-07	161	15.7	4	79	22.8	28.2		
22-Aug-07	161	15.7	6	65	10.5	23.9		
22-Aug-07	161	15.7	2	60	8.7	19.0		
22-Aug-07	161	15.7	2	60	13.5	19.3		
30-Aug-07	130	16.5	2	74	7.0	32.0		
30-Aug-07	130	16.5	2	93	9.0	30.0		
30-Aug-07	130	16.5	6	98	9.0	29.7		
30-Aug-07	130	16.5	4	125	7.0	26.0		
30-Aug-07	130	16.5	2	85	13.0	22.0		
30-Aug-07	130	16.5	2	75	15.0	27.0		
30-Aug-07	130	16.5	6	58	16.0	27.0		
30-Aug-07	130	16.5	4	60	21.0	17.3		

[1] For Site ID, see Figure 2, Table 1.
[2] All locations in UTM Zone 11.

Appendix B. Juvenile sturgeon capture information.

Date	Location[1] (RKM)	Set[2] ID #	Length (mm) Fork	Length (mm) Total	Weight (g)	Missing Scutes L#	Missing Scutes R#	Pit Tag #	New PIT Y/N	Comments
18-Jul-07	167	4	310	360	155	1/7	-	142276237A	N	
18-Jul-07	167	4	300	317	160	1/6	-	142722762A	N	
18-Jul-07	167	8	294	343	160	1/6	-	141715731A	Y	
18-Jul-07	167	8	273	319	110	1/7	-	142737214A	N	
19-Jul-07	165	9	280	326	100	1/7	-	142462716A	Y	
19-Jul-07	165	10	254	300	90	1/7	-	142866210A	Y	
19-Jul-07	165	12	309	355	170	1/6	-	142246671A	Y	
19-Jul-07	165	14	254	299	80	1/7	-	142253620A	Y	
20-Jul-07	ED	20	420	480	500	9	10	142162286A	Y	
20-Jul-07	ED	20	505	580	850	9	9	423D5B0A7D	N	
20-Jul-07	ED	20	465	538	925	10	11	127514755A	N	
20-Jul-07	ED	20	543	634	1000	2	-	134626321A	N	
20-Jul-07	ED	20	484	566	900	1/5	-	141276794a	N	
20-Jul-07	ED	20	680	795	2100	9	9	423D3B4123	N	
20-Jul-07	ED	20	523	575	1100	9	9	127664740A	N	
20-Jul-07	ED	20	454	540	900	1/5	-	141215532A	N	
20-Jul-07	ED	20	410	476	650	1/5	-	142545683A	Y	
20-Jul-07	ED	24	435	509	600	10	10	127675221A	N	
20-Jul-07	ED	24	742	875	2950	10	10	42421B3674	N	
20-Jul-07	ED	24	783	897	3300	9	5	504E677E78	N	
20-Jul-07	ED	24	680	790	2150	10	10	423E340C1E	N	
20-Jul-07	ED	24	650	745	1900	9	9	423D21243C	N	
20-Jul-07	ED	24	520	603	1000	10	10	131109547A	N	
20-Jul-07	ED	24	462	536	800	10	10	131113486A	N	
20-Jul-07	ED	24	540	633	1000	11	11	42403C174B	N	
20-Jul-07	ED	24	440	505	500	1/5	-	141275474A	N	
20-Jul-07	ED	24	500	578	750	10	10	423D421444	N	
20-Jul-07	ED	24	424	495	440	1/5	-	142269353A	N	
20-Jul-07	ED	24	500	576	800	9	9	423D4C785E	Y	
20-Jul-07	ED	24	476	550	700	9	10	424050190E	N	
20-Jul-07	ED	24	434	500	530	1/5	-	141475583A	N	
23-Jul-07	163	29	271	319	115	1/7	-	142279231A	Y	
23-Jul-07	163	32	302	346	165	1/6	-	142729233A	Y	

Date	Location[1] (RKM)	Set[2] ID #	Length (mm) Fork	Length (mm) Total	Weight (g)	Missing Scutes L#	Missing Scutes R#	Pit Tag #	New PIT Y/N	Comments
24-Jul-07	141	33	285	335	125	1/7	-	142212457A	Y	
24-Jul-07	141	34	295	350	150	2/8	-	142448125A	Y	
24-Jul-07	141	34	265	316	105	1/7	-	142254712A	Y	
24-Jul-07	141	35	222	257	60	1/8	-	142417520A	Y	
24-Jul-07	141	35	216	250	55	1/8	-	142758563A	Y	
24-Jul-07	141	35	220	251	60	1/8	-	142453127A	Y	
24-Jul-07	141	40	488	571	600	10	11	423D5B1366	N	
24-Jul-07	141	38	270	315	105	1/8	-	142757261A	Y	
24-Jul-07	141	38	271	315	110	1/8	-	142412527A	Y	
24-Jul-07	141	38	210	242	55	1/8	-	142863545A	Y	
24-Jul-07	141	38	200	235	45	1/8	-	142762585A	Y	
25-Jul-07	161	41	263	309	110	1/7	-	142464120A	Y	
25-Jul-07	161	41	277	329	130	1/7	-	142465453A	Y	
25-Jul-07	161	41	264	305	100	9	-	142737360A	Y	
25-Jul-07	161	41	223	262	65	1/7	-	142275334A	Y	
25-Jul-07	161	42	463	538	550	10	9	4240255E78	N	
25-Jul-07	161	45	255	300	100	1/7	-	142723313A	Y	
28-Jul-07	141	49	280	330	125	1/7	-	142251572A	Y	
28-Jul-07	141	50	220	254	70	1/8	-	142247234A	Y	
28-Jul-07	141	50	380	440	320	1/5	-	141471266A	Y	
28-Jul-07	141	52	560	652	1000	9	3	4240295D34	N	
28-Jul-07	141	53	270	311	130	1/5	-	141231450A	N	
28-Jul-07	141	53	300	343	160	1/7	-	142462630A	Y	
28-Jul-07	141	54	205	240	50	1/8	-	142436571A	Y	
28-Jul-07	141	54	225	260	65	1/8	-	136827731A	N	
28-Jul-07	141	54	240	282	80	1/8	-	142736273A	N	
28-Jul-07	141	54	195	230	40	1/8	-	142254716A	Y	
28-Jul-07	141	54	212	242	50	1/8	-	142274615A	Y	
28-Jul-07	141	54	206	242	55	1/8	-	142447255A	Y	
28-Jul-07	141	55	212	252	65	1/9	-	142259535A	Y	
28-Jul-07	141	56	310	365	185	1/5	-	141254515A	N	
28-Jul-07	141	56	310	361	155	1/7	-	142447627A	Y	
30-Jul-07	137	62	255	305	90	1/8	-	142275662A	Y	

Date	Location[1] (RKM)	Set[2] ID #	Length (mm) Fork	Length (mm) Total	Weight (g)	Missing Scutes L#	Missing Scutes R#	Pit Tag #	New PIT Y/N	Comments
30-Jul-07	137	62	256	307	90	1/7	-	142173394A	Y	
30-Jul-07	123	64	885	1002	5350	9	6	504E6A5E34	N	deformed pec fins and reduced ~25%
30-Jul-07	123	65	280	330	135	1/7	-	142865673A	Y	
30-Jul-07	123	66	585	685	1500	9	10	127472231A	N	
30-Jul-07	123	67	321	375	200	12	12	142409156A	N	
3-Aug-07	150	71	217	254	60	1/7	-	142269471A	Y	
3-Aug-07	150	73	220	258	65	1/8	-	142247160A	Y	
3-Aug-07	150	73	230	266	75	1/8	-	136752391A	N	
3-Aug-07	150	73	211	242	55	1/7	-	142859480A	Y	
3-Aug-07	150	73	215	252	55	1/9	-	142446634A	Y	
3-Aug-07	150	74	214	234	50	1/8	-	142455632A	Y	deformed L pec fin and reduced ~25%
3-Aug-07	150	74	212	242	55	1/8	-	142247547A	Y	
3-Aug-07	150	75	277	327	115	1/7	-	142462511A	N	
3-Aug-07	150	77	210	242	60	1/8	-	142724093A	Y	
3-Aug-07	150	78	258	305	90	2/8	-	142456472A	Y	
3-Aug-07	150	78	209	241	55	1/8	-	142458590A	Y	
3-Aug-07	150	78	235	275	70	1/7	-	142452750A	Y	
3-Aug-07	150	78	224	264	65	1/8	-	142409217A	N	
3-Aug-07	150	78	203	240	50	1/8	-	142726367A	Y	
3-Aug-07	150	78	210	246	55	1/8	-	142463316A	Y	
8-Aug-07	ED	79	391	446	320	1/6	-	142751461A	Y	
8-Aug-07	ED	80	530	600	940	1/4	-	141271133A	N	IN YEAR RECAP?
8-Aug-07	ED	81	325	380	210	1/5	-	141714493A	N	
8-Aug-07	ED	81	428	498	520	11	10	7F7D3F6022	N	
8-Aug-07	ED	81	512	596	790	11	12	142166792A	Y	
8-Aug-07	ED	81	410	473	425	1/5	-	141245797A	N	
8-Aug-07	ED	82	648	758	1690	11	11	423D325C61	N	
8-Aug-07	ED	82	704	811	2150	10	10	42402F305A	N	
8-Aug-07	ED	82	677	784	2500	9	9	423D3F1706	N	
8-Aug-07	ED	82	550	642	1280	10	10	127456211A	N	
8-Aug-07	ED	82	405	453	365	1/6	-	142853550A	Y	
8-Aug-07	ED	82	430	496	510	2/5	-	134417616A	N	
8-Aug-07	ED	82	431	504	500	1/5	-	141411760A	N	
8-Aug-07	ED	82	489	559	700	2	-	134462134A	N	
8-Aug-07	ED	82	345	404	225	1/6	-	142209634A	Y	

Date	Location[1] (RKM)	Set[2] ID #	Length (mm) Fork	Length (mm) Total	Weight (g)	Missing Scutes L#	Missing Scutes R#	Pit Tag #	New PIT Y/N	Comments
13-Aug-07	165	94	365	415	295	1/5	-	141465557A	N	
13-Aug-07	165	96	280	328	110	1/7	-	142462716A	N	
13-Aug-07	165	96	290	331	130	1/7	-	142452751A	Y	
13-Aug-07	165	98	270	312	110	1/7	-	142452485A	Y	
14-Aug-07	145	101	275	320	105	1/7	-	142736611A	Y	
14-Aug-07	145	101	232	262	60	1/8	-	142412572A	Y	
14-Aug-07	145	101	233	275	60	1/8	-	142446352A	Y	
14-Aug-07	145	103	275	322	105	1/7	-	142163145A	Y	
14-Aug-07	145	103	242	286	70	2/8	-	142847337A	Y	
14-Aug-07	145	103	240	276	70	1/8	-	142859223A	Y	
14-Aug-07	145	103	250	287	75	1/8	-	142276364A	Y	
14-Aug-07	145	103	203	234	45	1/8	-	142169124A	Y	
14-Aug-07	145	104	230	261	65	1/8	-	142253346A	Y	
14-Aug-07	145	104	295	340	130	1/8	-	142274334A	Y	
15-Aug-07	157	105	500	587	800	9	9	4240450B30	N	
15-Aug-07	157	105	265	319	115	1/7	-	142451263A	Y	
15-Aug-07	157	105	290	340	130	1/7	-	142724091A	Y	
15-Aug-07	157	105	216	241	60	1/9	-	142259547A	Y	scute marking inacurate
15-Aug-07	157	107	290	348	130	1/7	-	142412271A	Y	
15-Aug-07	157	107	282	333	115	1/8	-	142453320A	Y	Missing R Pec fin
16-Aug-07	WD	114	475	546	850	10	10	130947243A	N	
16-Aug-07	WD	114	343	399	220	1/4	-	127549666A	N	
16-Aug-07	WD	115	527	611	950	10	10	423D367957	N	
16-Aug-07	WD	115	496	571	755	1/5	-	142271243A	Y	
16-Aug-07	WD	115	501	589	700	1/5	-	141275194A	N	
16-Aug-07	WD	115	514	603	870	1/5	-	141477144A	N	
16-Aug-07	WD	115	401	465	395	1/5	-	141265297A	N	
16-Aug-07	WD	115	533	617	900	1/5	-	141454452A	N	
16-Aug-07	WD	115	518	598	1050	9	10	130956194A	N	
16-Aug-07	WD	115	490	556	770	10	10	4240326547	N	
16-Aug-07	WD	115	607	705	1400	11	10	423D574C71	N	
16-Aug-07	WD	115	790	900	3000	9	5	504F3F710D	N	
16-Aug-07	WD	115	405	470	450	1/5	-	141466745A	N	

Date	Location[1]	Set[2]	Length (mm)		Weight	Missing Scutes		Pit Tag #	New PIT	Comments
	(RKM)	ID #	Fork	Total	(g)	L#	R#		Y/N	
16-Aug-07	WD	115	705	813	2100	10	10	42402F305A	N	
16-Aug-07	WD	116	580	667	1250	1/3	-	134411471A	N	
16-Aug-07	WD	116	605	692	1500	10	10	42404E5042	N	
16-Aug-07	WD	117	490	566	720	1/5	-	141422770A	N	
16-Aug-07	WD	117	681	791	2100	9	9	7F7E68752B	N	
16-Aug-07	WD	117	407	476	550	10	10	127776090A	N	
16-Aug-07	WD	117	550	640	1100	10	9	423E795645	N	
16-Aug-07	WD	117	606	695	1300	9	5	504D7D2B09	N	
16-Aug-07	WD	117	640	740	1650	9	9	423D46456C	N	
16-Aug-07	WD	117	671	782	2050	10	10	4241006C5A	N	
16-Aug-07	WD	117	559	646	1100	10	10	127716324A	N	
16-Aug-07	WD	117	520	609	850	9	10	127663150A	N	
16-Aug-07	WD	118	420	486	440	1/3	-	127673131A	N	
16-Aug-07	WD	118	379	447	305	1/5	-	141215163A	N	
16-Aug-07	WD	118	368	424	320	1/6	-	142269473A	Y	
16-Aug-07	WD	118	434	508	490	1/5	-	141418360A	N	
16-Aug-07	WD	118	476	565	650	1/5	-	141719513A	N	
16-Aug-07	WD	118	460	532	770	10	10	423D462435	N	
16-Aug-07	WD	118	480	571	710	11	10	127675444A	N	
16-Aug-07	WD	118	506	589	880	10	9	42401A0E2C	N	
16-Aug-07	WD	118	521	596	810	9	9	504D37284F	N	Fish had a birch bark ring around head (some infection noted)
16-Aug-07	WD	118	400	466	440	1/5	-	141264695A	N	
16-Aug-07	WD	118	416	491	430	2/7	-	142461731A	Y	
16-Aug-07	WD	118	422	492	440	1/5	-	142859690A	Y	
16-Aug-07	WD	118	585	690	1330	9	11	4240121760	N	
16-Aug-07	WD	118	590	696	1400	1/4	-	133671470A	N	
16-Aug-07	WD	118	564	655	1180	9	10	423D224338	N	
16-Aug-07	WD	118	563	655	1300	9	11	423D2A5963	N	
16-Aug-07	WD	118	521	601	1110	9	10	131435364A	N	
16-Aug-07	WD	118	541	628	1050	11	11	423D56411A	N	
16-Aug-07	WD	118	683	802	1900	9	9	423D3B4123	N	
16-Aug-07	WD	118	390	455	430	1/5	-	141472122A	N	
17-Aug-07	130	119	350	410	275	1/5	-	141266267A	N	

Date	Location[1]	Set[2]	Length (mm)		Weight	Missing Scutes		Pit Tag #	New PIT Y/N	Comments
	(RKM)	ID #	Fork	Total	(g)	L#	R#			
17-Aug-07	130	121	372	442	310	1/5	-	141462192A	N	
17-Aug-07	130	123	340	400	240	1/5	-	141266092A	N	
17-Aug-07	130	123	345	408	245	1/5	-	142735443A	Y	
17-Aug-07	130	123	272	324	115	1/7	-	142254114A	Y	
17-Aug-07	130	125	310	360	180	2/7	-	142735757A	Y	
17-Aug-07	130	125	300	353	145	1/7	-	142736470A	Y	
20-Aug-07	134	132	214	251	50	1/8	-	142745126a	Y	
21-Aug-07	137	139	251	289	80	1/8	-	142749363A	Y	
21-Aug-07	137	140	276	319	100	1/7	-	142726110A	Y	
22-Aug-07	161	145	251	296	85	1/8	-	142446737A	Y	
22-Aug-07	161	145	260	300	85	1/8	-	142447133A	Y	
22-Aug-07	161	145	302	354	132	1/7	-	142824353A	N	
22-Aug-07	161	147	310	361	147	1/6	-	142409332A	N	
30-Aug-07	130	151	287	333	125	1/7	-	142463156A	Y	
30-Aug-07	130	151	274	321	110	1/7	-	142254614A	Y	
30-Aug-07	130	151	380	443	300	1/4	-	130946551A	N	
30-Aug-07	130	152	360	423	300	1/5	-	141272696A	N	
30-Aug-07	130	152	362	422	270	1/5	-	141276265A	N	
30-Aug-07	130	152	254	301	104	1/7	-	142166660A	Y	
30-Aug-07	130	152	251	290	75	1/7	-	142246695A	Y	
30-Aug-07	130	153	432	553	500	9	10	127652326A	Y	
30-Aug-07	130	155	265	304	110	3/8	-	141265640A	Y	
30-Aug-07	130	156	232	273	70	3/8	-	142757397A	Y	
30-Aug-07	130	156	273	322	115	1/6	-	142279661A	Y	
30-Aug-07	130	156	398	461	325	1/5	-	142179223A	Y	
30-Aug-07	130	156	276	321	110	1/7	-	142453346A	Y	
30-Aug-07	130	157	385	451	300	12	9	142859383A	Y	

[1] For locations see Figure 2.
[2] For set information see appendix A.

Appendix C. Summary of adult sturgeon net capture data.

Date	Location [1] (RKM)	Set [2] ID	Length (cm) Fork	Length (cm) Total	Weight (kg)	Sex/ Matur	Scutes L#	Scutes R#	Pit Tag #	Comments
30-Aug-07	130	153	206	232	65	-	2	-	142212157A	New Fish/PIT Tag

[1] For locations see Figure 2.
[2] For set information see appendix A.

Appendix D. Summary of incidental gill net catch.

Date	Set ID #[1]	Species[2]	Length (mm)[3]
19-Jul-07	10	PMC	266
19-Jul-07	14	LSS	220
20-Jul-07	18	BT	460
20-Jul-07	18	WF	250
20-Jul-07	19	PMC	225
20-Jul-07	19	PMC	270
20-Jul-07	19	NPM	256
20-Jul-07	22	LNS	300
23-Jul-07	27	WF	225
23-Jul-07	27	WF	265
25-Jul-07	43	BT	575
28-Jul-07	54	LNS	230
31-Jul-07	64	PMC	255
31-Jul-07	64	LNS	232
31-Jul-07	64	LNS	248
31-Jul-07	66	NPM	472
31-Jul-07	67	LNS	268
31-Jul-07	67	LNS	260
31-Jul-07	70	LNS	235
03-Aug-07	73	WF	228
03-Aug-07	73	WF	235
08-Aug-07	79	BT	470
08-Aug-07	79	WF	280
08-Aug-07	79	WF	215
08-Aug-07	79	PMC	270
08-Aug-07	79	PMC	239
08-Aug-07	79	PMC	243
08-Aug-07	79	PMC	241
08-Aug-07	79	PMC	236
08-Aug-07	79	PMC	238
08-Aug-07	79	PMC	252
08-Aug-07	79	PMC	252
08-Aug-07	79	PMC	256
08-Aug-07	79	PMC	237
08-Aug-07	79	PMC	242
08-Aug-07	79	PMC	228
08-Aug-07	79	PMC	239
08-Aug-07	79	PMC	262
08-Aug-07	79	PMC	274
08-Aug-07	79	PMC	226
08-Aug-07	79	PMC	260
08-Aug-07	79	PMC	249
08-Aug-07	79	PMC	227
08-Aug-07	79	PMC	239
08-Aug-07	81	PMC	249
08-Aug-07	81	PMC	239
08-Aug-07	81	PMC	220
08-Aug-07	81	PMC	237
08-Aug-07	81	PMC	219
08-Aug-07	81	PMC	271
08-Aug-07	81	PMC	272
08-Aug-07	81	PMC	215
08-Aug-07	81	PMC	251
08-Aug-07	81	PMC	224
08-Aug-07	81	PMC	242
08-Aug-07	81	PMC	251
08-Aug-07	81	LSS	391
08-Aug-07	82	LNS	458
08-Aug-07	83	PMC	239
08-Aug-07	83	PMC	237
08-Aug-07	83	PMC	230
08-Aug-07	83	PMC	249
08-Aug-07	83	PMC	238
08-Aug-07	83	PMC	222
08-Aug-07	83	PMC	243
08-Aug-07	83	PMC	222
09-Aug-07	87	WF	285
09-Aug-07	90	LNS	470
16-Aug-07	114	RBT	330
16-Aug-07	114	WF	230
16-Aug-07	116	WF	252
16-Aug-07	116	PMC	240
16-Aug-07	116	PMC	257
16-Aug-07	116	WF	215
16-Aug-07	116	NPM	280
16-Aug-07	116	NPM	250
16-Aug-07	118	PMC	239
16-Aug-07	118	PMC	237
16-Aug-07	118	PMC	245
16-Aug-07	118	PMC	233
16-Aug-07	118	NPM	261
17-Aug-07	119	NPM	247
17-Aug-07	119	NPM	268
17-Aug-07	119	NPM	256
22-Aug-07	146	WF	258
30-Aug-07	152	NPM	235
30-Aug-07	152	NPM	247
30-Aug-07	152	NPM	224
30-Aug-07	153	NPM	249

[1] For set information see appendix A.

[2] Species where; WF = mountain whitefish, PMC = peamouth chub, NPM = northern pikeminnow, LNS = longnose sucker, LSS = largescale sucker, YP = yellow perch, BT= bull trout, RB = rainbow trout and SF = pumpkinseed.

[3] Length represents fork length.

Appendix E. Summary of sturgeon recapture and life history information.

Fish # [1]	PIT Tag #	Date	Rkm	TL(cm)	WT(kg)	Year class	Stock yr.	Released	Days at Large	Relative Weight		Growth/Year	
										Wr(%)	Change (%)	Tl (cm)	Mass (kg)
56896	142276237A	08-Feb-06	151		0.06	2005	2006	2006-02-08		n/a			
56896	142276237A	18-Jul-07	167	36.0	0.16				525	74.1	n/a	n/a	0.069
26738	127514755A	17-Jan-03	170	33.1	0.19	2000	2003	2003-01-17		120.2			
26738	127514755A	07-Sep-06	120	49.5	0.57	2000	2003	2006-09-07	1329	96.5	-23.7	4.5	0.103
26738	127514755A	20-Jul-07	120	53.8	0.93				316	120.7	24.2	5.0	0.416
47557	141276794A	17-Mar-04	144	27.0	0.10	2003	2004	2004-03-17		121.2			
47557	141276794a	20-Jul-07	120	56.6	0.90				1220	99.7	-21.5	8.9	0.239
8745	423D3B4123	09-Apr-01	170	40.0	0.25	1999	2001	2001-04-09		84.9			
8745	423D3B4123	20-Jul-07	120	79.5	2.10			2007-07-20	2293	77.6	-7.4	6.3	0.295
8745	423D3B4123	16-Aug-07	121	80.2	1.90				27	68.2	-9.3	9.5	-2.704
11231	127664740A	13-Sep-01	170	25.9	0.07	2000	2001	2001-09-13		94.8			
11231	127664740A	20-Jul-07	120	57.5	1.10				2136	115.8	21.0	5.4	0.176
43954	141215532A	28-Apr-04	151	24.5	0.07	2003	2004	2004-04-28		109.5			
43954	141215532A	20-Jul-07	120	54.0	0.90				1178	116.1	6.6	9.1	0.258
11570	127675221A	22-Nov-01	170	25.4	0.08	2000	2001	2001-11-22		115.1			
11570	127675221A	20-Jul-07	120	50.9	0.60				2066	93.7	-21.5	4.5	0.092
14999	42421B3674	06-Mar-02	76	27.5	0.08	2000	2002	2002-03-06		87.9			
14999	42421B3674	20-Jul-07	120	87.5	2.95				1962	79.9	-8.0	11.2	0.534
4325	504E677E78	04-Apr-97	245	22.5	0.04	1995	1997	1997-04-04		90.9			
4325	504E677E78	31-Jul-06	123	85.7	2.60	1995	1997	2006-07-31	3405	75.4	-15.5	6.8	0.274
4325	504E677E78	20-Jul-07	120	89.7	3.30				354	82.5	7.2	4.1	0.722
8235	423E340C1E	04-Apr-01	200	31.5	0.13	1999	2001	2001-04-04		98.8			
8235	423E340C1E	20-Jul-07	120	79.0	2.15				2298	81.1	-17.7	7.5	0.320
9203	423D21243C	03-Apr-01	170	25.5	0.07	1999	2001	2001-04-03		95.2			
9203	423D21243C	20-Jul-07	120	74.5	1.90				2299	86.6	-8.6	7.8	0.291
26523	131109547A	17-Jan-03	170	34.2	0.18	2000	2003	2003-01-17		101.2			
26523	131109547A	20-Jul-07	120	60.3	1.00				1645	90.3	-10.9	5.8	0.182
26179	131113486A	17-Jan-03	170	31.2	0.16	2000	2003	2003-01-17		121.0			
26179	131113486A	20-Jul-07	120	53.6	0.80				1645	105.7	-15.3	5.0	0.142
7314	42403C174B	28-Sep-00	170	24.5	0.06	1999	2000	2000-09-28		102.8			
7314	42403C174B	08-Aug-01	170	29.2	0.09	1999	2000	2001-08-08	314	80.0	-22.9	5.5	0.027
7314	42403C174B	20-Jul-07	120	63.3	1.00				2172	77.2	-2.8	5.7	0.154

Fish # [1]	PIT Tag #	Date	Rkm	TL(cm)	WT(kg)	Year class	Stock yr.	Released	Days at Large	Relative Weight		Growth/Year	
										Wr(%)	Change (%)	Tl (cm)	Mass (kg)
42368	141275474A	26-Apr-04	144	22.0	0.05	2003	2004	2004-04-26		105.7			
42368	141275474A	20-Jul-07	120	50.5	0.50				1180	80.1	-25.6	8.8	0.141
7884	423D421444	28-Sep-00	170	26.0	0.08	1999	2000	2000-09-28		104.0			
7884	423D421444	20-Jul-07	120	57.8	0.75				2486	77.6	-26.4	4.7	0.099
7751	424050190E	28-Sep-00	170	24.0	0.06	1999	2000	2000-09-28		104.6			
7751	424050190E	20-Jul-07	120	55.0	0.70				2486	85.1	-19.5	4.6	0.094
44347	141475583A	29-Apr-04	144	25.0	0.07	2003	2004	2004-04-29		101.0			
44347	141475583A	20-Jul-07	120	50.0	0.53				1177	87.6	-13.3	7.8	0.144
8953	423D5B1366	02-Apr-01	200	35.0	0.18	1999	2001	2001-04-02		94.1			
8953	423D5B1366	24-Jul-07	141	57.1	0.60				2304	64.6	-29.5	3.5	0.067
9478	4240255E78	03-Apr-01	170	29.0	0.09	1999	2001	2001-04-03		82.0			
9478	4240255E78	18-Jul-02	161	33.5	0.13	1999	2001	2002-07-18	471	75.4	-6.6	3.5	0.031
9478	4240255E78	25-Jul-07	161	53.8	0.55				1833	71.8	-3.6	4.0	0.085
7413	4240295D34	28-Sep-00	170	24.0	0.06	1999	2000	2000-09-28		102.8			
7413	4240295D34	28-Jul-07	141	65.2	1.00				2494	70.1	-32.7	6.0	0.138
46696	141231450A	25-Mar-04	151	20.5	0.04	2003	2004	2004-03-25		129.8			
46696	141231450A	28-Jul-07	141	31.1	0.13				1220	99.7	-30.1	3.2	0.026
57928	136827731A	23-Apr-07	151		0.04	2006	2007	2007-04-23		n/a			
57928	136827731A	28-Jul-07	141	26.0	0.07				96	89.0	n/a	n/a	0.091
58136	142736273A	23-Apr-07	151		0.06	2006	2007	2007-04-23		n/a			
58136	142736273A	28-Jul-07	141	28.2	0.08				96	84.2	n/a	n/a	0.076
42882	141254515A	28-Apr-04	151	24.0	0.05	2003	2004	2004-04-28		95.7			
42882	141254515A	12-Aug-05	141	28.2	0.07	2003	2004	2005-08-12	471	68.4	-27.3	3.3	0.009
4388	504E6A5E34	04-Apr-97	245	24.5	0.06	1995	1997	1997-04-04		101.2			
4388	504E6A5E34	05-Jul-00	225	48.2	0.50	1995	1997	2000-07-05	1188	93.1	-8.1	7.3	0.135
4388	504E6A5E34	30-Jul-07	123	100.2	5.35				2581	93.6	0.5	7.4	0.686
26385	127472231A	17-Jan-03	170	35.6	0.23	2000	2003	2003-01-17		115.3			
26385	127472231A	30-Jul-07	123	68.5	1.50				1655	89.7	-25.6	7.3	0.280
58072	136752391A	23-Apr-07	151		0.04	2006	2007	2007-04-23		n/a			
58072	136752391A	03-Aug-07	150	26.6	0.08				102	95.4	n/a	n/a	0.115
56738	142462511A	08-Feb-06	151		0.05	2005	2006	2006-02-08		n/a			
56738	142462511A	03-Aug-07	150	32.7	0.12				541	75.0	n/a	n/a	0.043
58118	142409217A	23-Apr-07	151		0.03	2006	2007	2007-04-23		n/a			
58118	142409217A	03-Aug-07	150	26.4	0.07				102	84.7	n/a	n/a	0.111

Fish # [1]	PIT Tag #	Date	Rkm	TL(cm)	WT(kg)	Year class	Stock yr.	Released	Days at Large	Relative Weight		Growth/Year	
										Wr(%)	Change (%)	Tl (cm)	Mass (kg)
48387	141271133A	17-Mar-04	144	23.0	0.05	2003	2004	2004-03-17		99.7			
48387	141271133A	08-Aug-07	120	60.0	0.94				1239	86.2	-13.4	10.9	0.262
45822	141714493A	12-Apr-04	151	21.0	0.04	2003	2004	2004-04-12		103.7			
45822	141714493A	08-Aug-07	120	38.0	0.21				1213	84.3	-19.4	5.1	0.052
25586	7F7D3F6022	24-Oct-02	177	24.2	0.05	2001	2002	2002-10-24		93.9			
25586	7F7D3F6022	08-Aug-07	120	49.8	0.52				1749	87.1	-6.8	5.3	0.097
50100	141245797A	24-Jun-04	144	26.0	0.07	2003	2004	2004-06-24		97.2			
50100	141245797A	08-Aug-07	120	47.3	0.43				1140	84.1	-13.1	6.8	0.113
8681	423D325C61	09-Apr-01	170	31.0	0.12	1999	2001	2001-04-09		91.7			
8681	423D325C61	24-Aug-01	175	35.3	0.17	1999	2001	2001-08-24	137	86.6	-5.1	11.5	0.138
8681	423D325C61	31-Jul-06	123	69.5	1.28	1999	2001	2006-07-31	1802	73.0	-13.6	6.9	0.225
8681	423D325C61	08-Aug-07	120	75.8	1.69				373	72.8	-0.2	6.2	0.401
9021	42402F305A	02-Apr-01	200	35.5	0.19	1999	2001	2001-04-02		93.0			
9021	42402F305A	08-Aug-07	120	81.1	2.15			2007-08-08	2319	74.5	-18.6	7.2	0.309
9021	42402F305A	16-Aug-07	121	81.3	2.10				8	72.2	-2.3	9.1	-2.281
8767	423D3F1706	02-Apr-01	200	38.0	0.24	1999	2001	2001-04-02		96.3			
8767	423D3F1706	08-Aug-07	120	78.4	2.50				2319	96.6	0.3	6.4	0.356
26315	127456211A	17-Jan-03	170	39.2	0.29	2000	2003	2003-01-17		105.6			
26315	127456211A	08-Aug-07	120	64.2	1.28				1664	94.4	-11.3	5.5	0.217
18962	134417616A	16-Sep-02	101	28.0	0.11	2001	2002	2002-09-16		114.2			
18962	134417616A	08-Aug-07	120	49.6	0.51				1787	86.6	-27.6	4.4	0.083
42470	141411760A	27-Apr-04	144	21.0	0.04	2003	2004	2004-04-27		101.0			
42470	141411760A	08-Aug-07	120	50.4	0.50				1198	80.6	-20.4	9.0	0.141
19478	134462134A	17-Sep-02	101	24.5	0.06	2001	2002	2002-09-17		101.2			
19478	134462134A	08-Aug-07	120	55.9	0.70				1786	80.7	-20.5	6.4	0.131
49121	141465557A	10-May-04	144	23.0	0.05	2003	2004	2004-05-10		109.9			
49121	141465557A	13-Aug-07	165	41.5	0.30				1190	89.1	-20.8	5.7	0.074
22245	142462716A	19-Jul-07	165	32.6	0.10			2007-07-19		65.9			
22301	142462716A	13-Aug-07	165	32.8	0.11				25	71.1	5.2	2.9	0.146
7296	4240450B30	28-Sep-00	170	24.0	0.06	1999	2000	2000-09-28		97.5			
7296	4240450B30	15-Aug-07	157	58.7	0.80				2512	78.8	-18.7	5.0	0.108
26799	130947243A	17-Jan-03	170	28.1	0.11	2000	2003	2003-01-17		122.2			
26799	130947243A	16-Aug-07	121	54.6	0.85				1672	105.8	-16.5	5.8	0.160
27650	127549666A	25-Mar-03	101	23.5	0.05	2002	2003	2003-03-25		92.6			
27650	127549666A	16-Aug-07	121	39.9	0.22				1605	75.4	-17.2	3.7	0.039

Fish # [1]	PIT Tag #	Date	Rkm	TL(cm)	WT(kg)	Year class	Stock yr.	Released	Days at Large	Relative Weight		Growth/Year	
										Wr(%)	Change (%)	Tl (cm)	Mass (kg)
7550	423D367957	28-Sep-00	170	22.5	0.05	1999	2000	2000-09-28		107.0			
7550	423D367957	07-Sep-01		32.6	0.13	1999	2000	2001-09-07	344	82.4	-24.7	10.7	0.081
7550	423D367957	16-Aug-07	121	61.1	0.95				2169	82.2	-0.2	4.8	0.139
44164	141275194A	29-Apr-04	144	25.5	0.07	2003	2004	2004-04-29		94.7			
44164	141275194A	16-Aug-07	121	58.9	0.70				1204	68.2	-26.6	10.1	0.193
45567	141477144A	12-Apr-04	151	28.0	0.09	2003	2004	2004-04-12		100.2			
45567	141477144A	16-Aug-07	121	60.3	0.87				1221	78.5	-21.6	9.7	0.232
42477	141265297A	27-Apr-04	144	20.5	0.04	2003	2004	2004-04-27		103.3			
42477	141265297A	16-Aug-07	121	46.5	0.40				1206	82.6	-20.7	7.9	0.109
50055	141454452A	24-Jun-04	144	29.0	0.10	2003	2004	2004-06-24		96.2			
50055	141454452A	16-Aug-07	121	61.7	0.90				1148	75.4	-20.7	10.4	0.254
25913	130956194A	17-Jan-03	170	32.1	0.17	2000	2003	2003-01-17		114.4			
25913	130956194A	16-Aug-07	121	59.8	1.05				1672	97.4	-17.0	6.0	0.193
7787	4240326547	28-Sep-00	170	23.0	0.06	1999	2000	2000-09-28		118.0			
7787	4240326547	16-Aug-07	121	55.6	0.77				2513	90.4	-27.6	4.7	0.103
13511	423D574C71	02-Nov-01	204	27.5	0.08	2000	2001	2001-11-02		89.6			
13511	423D574C71	16-Aug-07	121	70.5	1.40				2113	76.3	-13.4	7.4	0.228
4633	504F3F710D	06-Oct-97	245	34.9	0.16	1995	1997	1997-10-06		84.5			
4633	504F3F710D	16-Aug-07	121	90.0	3.00				3601	74.2	-10.2	5.6	0.288
45485	141466745A	12-Apr-04	151	22.5	0.05	2003	2004	2004-04-12		98.3			
45485	141466745A	16-Aug-07	121	47.0	0.45				1221	90.9	-7.4	7.3	0.121
21709	134411471A	24-Sep-02	101	28.5	0.90	2001	2003	2002-09-24		n/a			
21709	134411471A	16-Aug-07	121	66.7	1.25				1787	81.4	n/a	7.8	0.071
12074	42404E5042	22-Oct-01	170	27.5	0.10	2000	2001	2001-10-22		108.7			
12074	42404E5042	16-Aug-07	121	69.2	1.50				2124	86.8	-21.9	7.2	0.241
45248	141422770A	12-Apr-04		27.5	0.09	2003	2004	2004-04-12		105.0			
45248	141422770A	16-Aug-07	121	56.6	0.72				1221	79.8	-25.3	8.7	0.188
8091	7F7E68752B	09-Apr-01		32.0	0.16	1999	2001	2001-04-09		109.9			
8091	7F7E68752B	16-Aug-07	121	79.1	2.10				2320	78.9	-31.1	7.4	0.306
26044	127776090A	17-Jan-03	170	28.5	0.12	2000	2003	2003-01-17		119.5			
26044	127776090A	16-Aug-07	121	47.6	0.55				1672	106.6	-12.9	4.2	0.094
7429	423E795645	28-Sep-00	170	24.0	0.05	1999	2000	2000-09-28		94.0			
7429	423E795645	16-Aug-07	121	64.0	1.10				2513	81.9	-12.1	5.8	0.152
3561	504D7D2B09	06-Oct-97	245	31.6	0.11	1995	1997	1997-10-06		78.6			
3561	504D7D2B09	05-Aug-98	215	37.8	0.10	1995	1997	1998-08-05	303	40.8	-37.8	7.5	-0.010
3561	504D7D2B09	16-Aug-07	121	69.5	1.30				3298	74.2	33.3	3.5	0.133

Fish # [1]	PIT Tag #	Date	Rkm	TL(cm)	WT(kg)	Year class	Stock yr.	Released	Days at Large	Relative Weight		Growth/Year	
										Wr(%)	Change (%)	Tl (cm)	Mass (kg)
8811	423D46456C	02-Apr-01	200	34.5	0.18	1999	2001	2001-04-02		98.8			
8811	423D46456C	08-Sep-06	118	69.8	1.70	1999	2001	2006-09-08	1985	95.6	-3.1	6.5	0.279
8811	423D46456C	16-Aug-07	121	74.0	1.65				342	76.9	-18.8	4.5	-0.053
7695	4241006C5A	28-Sep-00	170	26.5	0.08	1999	2000	2000-09-28		99.1			
7695	4241006C5A	16-Aug-07	121	78.2	2.05				2513	79.9	-19.2	7.5	0.287
10042	127716324A	10-Sep-01	200	22.0	0.05	2000	2001	2001-09-10		111.6			
10042	127716324A	16-Aug-07	121	64.6	1.10				2166	79.5	-32.1	7.2	0.177
10193	127663150A	10-Sep-01	200	20.4	0.04	2000	2001	2001-09-10		115.7			
10193	127663150A	16-Aug-07	121	60.9	0.85				2166	74.3	-41.4	6.8	0.137
20751	127673131A	19-Sep-02	101	27.5	0.79	2001	2003	2002-09-19		n/a			
20751	127673131A	31-Jul-06	123	38.8	0.20	2001	2003	2006-07-31	1411	73.2	n/a	2.9	-0.155
20751	127673131A	16-Aug-07	121	48.6	0.44				381	79.8	6.6	9.4	0.235
42793	141215163A	27-Apr-04	151	25.5	0.07	2003	2004	2004-04-27		97.6			
42793	141215163A	16-Aug-07	121	44.7	0.31				1206	72.4	-25.2	5.8	0.072
43171	141418360A	28-Apr-04	151	22.0	0.04	2003	2004	2004-04-28		98.6			
43171	141418360A	16-Aug-07	121	50.8	0.49				1205	77.0	-21.7	8.7	0.136
43490	141719513A	28-Apr-04	151	23.5	0.05	2003	2004	2004-04-28		98.7			
43490	141719513A	16-Aug-07	121	56.5	0.65				1205	72.4	-26.3	10.0	0.181
12200	423D462435	22-Oct-01	170	23.3	0.17	2000	2001	2001-10-22		n/a			
12200	423D462435	16-Aug-07	121	53.2	0.77				2124	104.2	n/a	5.1	0.104
10612	127675444A	12-Sep-01	200	26.8	0.08	2000	2001	2001-09-12		93.3			
10612	127675444A	18-Jul-03	196	34.3	0.13	2000	2001	2003-07-18	674	73.2	-20.1	4.1	0.030
10612	127675444A	16-Aug-07	121	57.1	0.71				1490	76.4	3.2	5.6	0.142
8373	42401A0E2C	04-Apr-01	200	31.0	0.12	1999	2001	2001-04-04		92.4			
8373	42401A0E2C	18-Aug-04	130	48.1	0.40	1999	2001	2004-08-18	1232	74.0	-18.4	5.1	0.082
8373	42401A0E2C	16-Aug-07	121	58.9	0.88				1093	85.7	11.7	3.6	0.162
6059	504D37284F	27-Oct-00	240	24.8	0.07	1999	2000	2000-10-27		106.5			
6059	504D37284F	16-Aug-07	121	59.6	0.81				2484	75.9	-30.6	5.1	0.109
49245	141264695A	10-May-04	144	24.0	0.07	2003	2004	2004-05-10		120.6			
49245	141264695A	16-Aug-07	121	46.6	0.44				1193	91.4	-29.2	6.9	0.114
9105	4240121760	03-Apr-01	170	27.5	0.08	1999	2001	2001-04-03		96.1			
9105	4240121760	16-Aug-07	121	69.0	1.33				2326	77.7	-18.5	6.5	0.195
28661	133671470A	24-Mar-03	101	26.8	0.08	2002	2003	2003-03-24		102.9			
28661	133671470A	16-Aug-07	121	69.6	1.40				1606	79.5	-23.4	9.7	0.299

Fish # [1]	PIT Tag #	Date	Rkm	TL(cm)	WT(kg)	Year class	Stock yr.	Released	Days at Large	Relative Weight		Growth/Year	
										Wr(%)	Change (%)	Tl (cm)	Mass (kg)
6844	423D224338	27-Sep-00	200	24.0	0.05	1999	2000	2000-09-27		88.6			
6844	423D224338	11-Aug-04	216	47.0	0.40	1999	2000	2004-08-11	1414	80.8	-7.9	5.9	0.090
6844	423D224338	16-Aug-07	121	65.5	1.18				1100	81.5	0.7	6.1	0.259
7698	423D2A5963	28-Sep-00	170	26.0	0.08	1999	2000	2000-09-28		112.2			
7698	423D2A5963	16-Aug-07	121	65.5	1.30				2513	89.8	-22.4	5.7	0.177
26729	131435364A	17-Jan-03	170	36.5	0.24	2000	2003	2003-01-17		110.7			
26729	131435364A	16-Aug-07	121	60.1	1.11				1672	101.3	-9.4	5.2	0.189
7634	423D56411A	28-Sep-00	170	24.0	0.06	1999	2000	2000-09-28		102.8			
7634	423D56411A	16-Aug-07	121	62.8	1.05				2513	83.1	-19.7	5.6	0.144
43408	141472122A	28-Apr-04	151	15.5	0.02	2003	2004	2004-04-28		109.3			
43408	141472122A	16-Aug-07	121	45.5	0.43				1205	96.4	-12.8	9.1	0.126
46093	141266267A	25-Mar-04	151	22.0	0.05	2003	2004	2004-03-25		117.4			
46093	141266267A	17-Aug-07	130	41.0	0.28				1240	86.4	-31.1	5.6	0.066
47806	141462192A	17-Mar-04		27.0	0.10	2003	2004	2004-03-17		115.1			
47806	141462192A	17-Aug-07	130	44.2	0.31				1248	76.4	-38.7	5.0	0.063
45410	141266092A	12-Apr-04	151	21.0	0.04	2003	2004	2004-04-12		103.7			
45410	141266092A	17-Aug-07	130	40.0	0.24				1222	81.6	-22.1	5.7	0.060
56886	142824353A	08-Feb-06	151		0.08	2005	2006	2006-02-08		n/a			
56886	142824353A	22-Aug-07	161	35.4	0.13				560	66.6	n/a	n/a	0.037
56757	142409332A	08-Feb-06	151		0.06	2005	2006	2006-02-08		n/a			
56757	142409332A	22-Aug-07	161	36.1	0.15				560	69.7	n/a	n/a	0.057
32786	130946551A	27-Mar-03	88	19.5	0.03	2002	2003	2003-03-27		100.6			
32786	130946551A	30-Aug-07	130	44.3	0.30				1617	73.4	-27.2	5.6	0.061
49117	141272696A	10-May-04	144	23.0	0.07	2003	2004	2004-05-10		142.4			
49117	141272696A	30-Aug-07	130	42.3	0.30				1207	85.2	-57.2	5.8	0.070
42506	141276265A	27-Apr-04	144	22.0	0.04	2003	2004	2004-04-27		96.3			
42506	141276265A	30-Aug-07	130	42.2	0.27				1220	77.2	-19.0	6.0	0.069
8494	423D5B0A7D	19-Apr-01	200	30.0	0.12	1999.00	2001	2001-04-19		101.4			
8494	423D5B0A7D	20-Jul-07	120	58.0	0.85				2283	87.0	-14.4	4.5	0.117

[1] Fish identification number from IDFG Database.