Site C Clean Energy Project

Peace River Large Fish Indexing Survey (Mon-2, Task 2a)

Construction Year 6 (2020)

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REPORT

Peace River Large Fish Indexing Survey

2020 Investigations (Mon-2, Task 2a)

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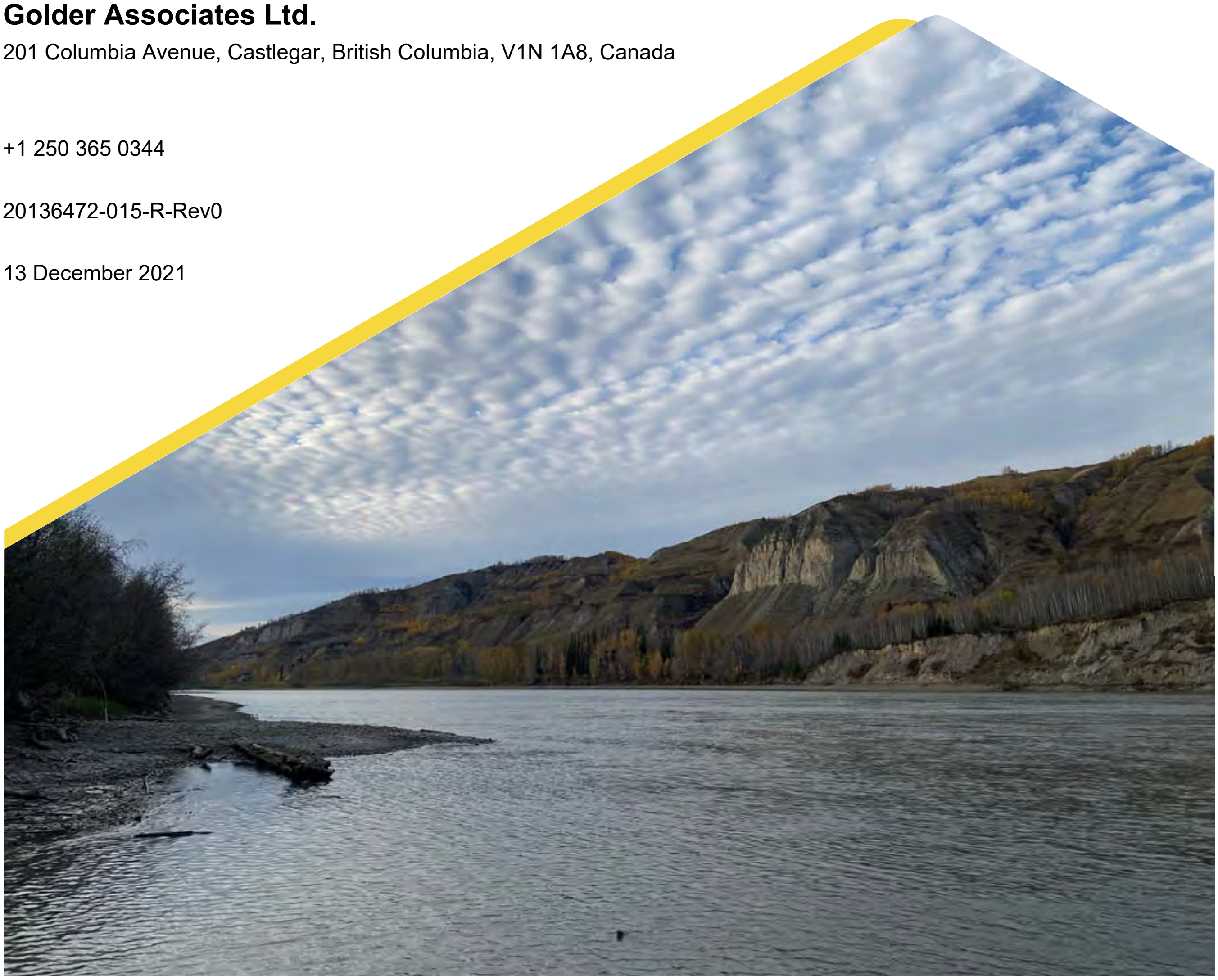

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Executive Summary

The Site C Clean Energy Project (the Project), including Project construction, reservoir filling, and operation, could affect fish and fish habitat via three key pathways: changes to fish habitat (including nutrient concentrations and lower trophic biota), changes to fish health and fish survival, and changes to fish movement. These pathways are examined in detail in Volume 2 of the Project's Environmental Impact Statement (EIS; BC Hydro 2013). The EIS makes both qualitative and quantitative predictions of fish production in the Peace River downstream of the Project.

Quantitative predictions of fish biomass downstream of the Project were generated as part of the EIS. For these predictions, each fish species was assigned to one of four groups: Group 1 consisted of large-bodied fish typically targeted by anglers (i.e., Burbot [*Lota lota*], Goldeye [*Hiodon alosoides*], Lake Trout [*Salvelinus namaycush*], Northern Pike [*Esox lucius*], Rainbow Trout [*Oncorhynchus mykiss*], and Walleye [*Sander vitreus*]); Group 2 included species considered "passage sensitive" (i.e., Arctic Grayling [*Thymallus arcticus*], Bull Trout [*Salvelinus confluentus*], and Mountain Whitefish [*Prosopium williamsoni*]); Group 3 included planktivorous species (i.e., Kokanee [*Oncorhynchus nerka*] and Lake Whitefish [*Coregonus clupeaformis*]); and Group 4 fish consisted of all remaining species (i.e., Northern Pikeminnow [*Ptychocheilus oregonensis*], sucker species, and small-bodied fish species). Relative to pre-Project estimates, the EIS predicted decreased biomass of Group 1 fishes over the short- (10 years) and long-term (greater than 30 years), increased biomass of Group 2 fishes over the short- and long-term, similar biomasses of Group 3 fishes over the short- and long-term, and decreased biomass of Group 4 fishes over the short- and long-term.

The objective of the Peace River Large Fish Indexing Survey (hereafter, Indexing Survey) is to validate EIS predictions and address uncertainties identified in the EIS regarding the Project's effects on fish in the Peace River. The status of the Indexing Survey's progress towards testing each of the applicable hypotheses listed in BC Hydro's Site C Fisheries and Aquatic Habitat Monitoring and Follow-up Program (FAHMFP; BC Hydro 2015) is presented in Table E1.

The Indexing Survey was initiated in 2015 and has been conducted annually (Golder and Gazey 2016–2020). It is the continuation and expansion of two previous programs conducted using similar methods. These included BC Hydro's Large River Fish Indexing Program (2001–2007; P&E 2002; P&E and Gazey 2003; Mainstream and Gazey 2004–2008) and the Peace River Fish Index (2008–2014; Mainstream and Gazey 2009–2014; Golder and Gazey 2015).

In 2020, sampling for the Indexing Survey was conducted from 21 August to 7 October in six different sections of the Peace River (Sections 1, 3, 5, 6, 7, and 9), which were the same sections sampled in all years since 2015. All large-bodied fish species were monitored; however, the monitoring program focused on seven indicator species of most interest to regulatory agencies, which are: Arctic Grayling, Bull Trout, Burbot, Goldeye, Mountain Whitefish, Rainbow Trout, and Walleye. Fish were captured by boat electroshocking and measured for length and weight. Ageing structures were collected from most fish, and indicator species were marked with half-duplex (HDX) passive integrated transponder (PIT) tags. In 2020, catch rates were used to assess changes in relative abundance for all species with sufficient catch data. Analyses to assess population structure included length and age distributions, the length-weight relationship, length-at-age, Fulton's condition factor, and relative weight. These metrics were compared to results from 2002 to 2019.

In response to low Goldeye catch during the Indexing Surveys from 2015 to 2017, the Goldeye and Walleye Survey was implemented annually beginning in 2018 to increase Goldeye catch. While initially intended to target both Goldeye and Walleye, the survey was modified to attempt to increase Goldeye catch; Walleye catch during the Indexing Surveys was sufficient to adequately monitor this species. The Goldeye and Walleye Survey consisted of boat electroshocking surveys near the confluences of select Peace River tributaries (Six Mile and Eight Mile creeks, and the Alces, Beatton, Clear, Kiskatinaw, and Pouce Coupe rivers) that were known or suspected feeding areas for Goldeye. Goldeye are seasonal residents that migrate upstream into the study area in the early spring to spawn. After spawning, Goldeye remain near the confluences of select tributaries to feed until water clarity increases, at which time, they migrate downstream to more turbid locations. The objective of the Goldeye and Walleye Survey was to catch these fish prior to their downstream migration. In 2020, the Goldeye and Walleye Survey was conducted over four days in late April to late May.

Overall, results from 2020 indicated a stable population for most fish species in the Peace River, with most population metrics falling within the ranges of values recorded during previous study years. Key results from the 2020 survey and key trends observed over the 19-year monitoring period are summarized as follows:

- In 2020, mean daily discharge in the Peace River was much greater than the historical average (2002–2019) from mid-July to early September, but fell within the range of historical values for the majority of the sampling period.
- Catch rates were used to assess annual trends in relative abundance, with a focus on years since 2015, which are years when sampling was conducted in six different sections of the Peace River.
- Catch rates suggested stable abundance since 2015 for many fish species including Bull Trout, Largescale Sucker (*Catostomus macrocheilus*), Mountain Whitefish, Rainbow Trout, and Walleye.
- In Sections 1, 3, and 5 combined, where the majority of Arctic Grayling are captured each year, catch rate decreased from 2016 (1.6 fish/km-h) to 2020 (0.3 fish/km-h), suggesting a possible decline in abundance in the study area, although overlapping confidence intervals for catch rate suggested the change was not statistically significant. This change in catch rate corresponded to a decrease in catch of Arctic Grayling in Sections 1, 3, and 5 from 85 individuals (within-year recaptures excluded) in 2016 to 27 individuals in 2020.
- Catch rates of Longnose Sucker (*Catostomus catostomus*) decreased from 2015 to 2018 but have been stable since 2018. The catch rate of White Sucker (*Catostomus commersonii*) generally decreased since 2015, with most of the decrease occurring between 2015 and 2016.
- Samples sizes of captured fish were low for Burbot, Goldeye, and Northern Pike, which makes inter-year comparisons of catch or catch rate less reliable. The available data did not suggest any changes in abundance since 2015 for these species.
- Analyses of size- and age-structure, and body condition of fish populations suggested few differences between 2020 and previous years for nearly all species and metrics. Exceptions included the body condition, relative weight, and mean length at age-1 for Arctic Grayling and Mountain Whitefish, which were all lower in 2020 than all previous years since 2002. These results may indicate poorer conditions for growth in 2020 than previous years.

Data collected from 2002 to 2020 will represent the baseline, pre-Project state of the Peace River fish community. Management hypotheses will be statistically tested after the river diversion phase of construction (i.e., after 2020).

Table E1: Status of hypotheses from Peace River Large Fish Indexing Survey (Mon-2, Task 2a) after 2020.

Mon-2 Management Question	Management Hypotheses Relevant to Task 2a	2020 Status
How does the Project affect fish in the Peace River between the Project and the Many Islands area in Alberta during the short (10 years after Project operations begin) and longer (30 years after Project operations begin) term?	**H_1:** Post-Project total fish biomass in the Peace River between the Project and the Many Islands area in Alberta will be less than pre-Project conditions (current = 37.42 t; at 10 years of operations = 30.78 t; >30 years of operations = 30.79 t).	The hypothesis has not been tested. Methodologies employed under Task 2a have been similar to those employed during pre-Project baseline studies. Data collected to date are consistent with baseline data and should allow comparisons between pre-Project data and data collected during construction and operation.
	H_2: Post-Project harvestable fish biomass in the Peace River between the Project and the Many Islands area in Alberta will be greater than pre-Project estimates of harvestable fish biomass (current = 13.93 t; at 10 years of operations = 18.77 t; >30 years of operations = 18.78 t).	The hypothesis has not been tested. Methodologies employed under Task 2a have been similar to those employed during pre-Project baseline studies. Data collected to date are consistent with baseline data and should allow comparisons between pre-Project data and data collected during construction and operation.
	H_3: Post-Project biomass of each fish species in the Peace River between the Project and the Many Islands area in Alberta will be consistent with biomass estimates in the EIS.	The hypothesis has not been tested. Methodologies employed under Task 2a have been similar to those employed during pre-Project baseline studies. Data collected to date are consistent with baseline data and should allow comparisons between pre-Project data and data collected during construction and operation for most fish species. For less common indicator species, especially Burbot and Goldeye, it is likely that detecting changes in abundance or biomass will rely on indices such catch rate, as the survey in its current format is unlikely to generate precise abundance estimates from capture-recapture data.

Mon-2 Management Question	Management Hypotheses Relevant to Task 2a	2020 Status
	H_4: Changes in post-Project fish community composition in the Peace River between the Project and the Many Islands area in Alberta will be consistent with EIS predictions.	The hypothesis has not been tested. In its current format, the survey is expected to provide data suitable for testing this hypothesis.
	H_5: The fish community can support angling effort that is similar to baseline conditions.	The hypothesis has not been tested. The survey, in its current format, is expected to generate species abundance estimates of most harvestable fish species. These estimates, in conjunction with angling pressure data generated by the Peace River Creel Survey (Mon-2, Task 2c), will be used to test the hypothesis.

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LIST OF ACRONYMS AND ABBREVIATIONS

Acronym	Description
DELT	Deformities, Erosion, Lesions, and Tumor
EAC	Environmental Assessment Certificate
EIS	Environmental Impact Statement
FAHMFP	Site C Fisheries and Aquatic Habitat Monitoring and Follow-up Program
FDS	Federal Decision Statement
FDX	Full-Duplex
GPP	Generator Powered Pulsator
HDX	Half-Duplex
Indexing Survey	Peace River Large Fish Indexing Survey
Mon-2	Peace River Fish Community Monitoring Program
PCD	Peace Canyon Dam
PIT	Passive Integrated Transponder
Project	Site C Clean Energy Project
Tributary Survey	Site C Reservoir Tributary Fish Population Indexing Survey
WLR	Water License Requirements

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1.0 INTRODUCTION

Potential effects of the Site C Clean Energy Project (the Project) on fish[1] and fish habitat[2] are described in Volume 2 of the Project's Environmental Impact Statement (EIS) as follows[3]:

> The Project has the potential to affect fish habitat in two ways. The Project may destroy fish habitat by placing a permanent physical structure on that habitat, or the Project may alter fish habitat by changing the physical or chemical characteristics of that habitat in such a way as to make it unusable by fish. Destruction or alteration of important habitats may be critical to the sustainability of a species population.
>
> The Project may affect fish health and survival. It may cause direct mortality of fish or indirect mortality of fish by changing system productivity, food resource type and abundance, and environmental conditions on which fish depend (e.g., water temperature).
>
> The Project may affect fish movement by physically blocking upstream and downstream migration of fish or by causing water velocities that exceed the swimming capabilities of fish, which results in hindered or blocked upstream migration of fish. Blocked or hindered fish movement has consequences to the species population. Fish may not be able to access important habitats in a timely manner or not at all (e.g., spawning habitats). Blocked fish movement may result in genetic fragmentation of the population.

Condition No. 7 of the Project's Provincial Environmental Assessment Certificate (EAC), Schedule B states the following:

> The EAC Holder must develop a Fisheries and Aquatic Habitat Monitoring and Follow-up Program [FAHMFP] to assess the effectiveness of measures to mitigate Project effects on healthy fish populations in the Peace River and tributaries, and, if recommended by a QEP [Qualified Environmental Professional] or FLNRO [BC Ministry of Forests, Lands and Natural Resource Operations], to assess the need to adjust those measures to adequately mitigate the Project's effects.

Furthermore, the Project's Federal Decision Statement (FDS) states that a plan should be developed that addresses the following:

> Condition No. 8.4.3: an approach to monitor changes to fish and fish habitat baseline conditions in the Local Assessment Area (LAA); and
>
> Condition No. 8.4.4: an approach to monitor and evaluate the effectiveness of mitigation or offsetting measures and to verify the accuracy of the predictions made during the environmental assessment on fish and fish habitat.

The Peace River Large Fish Indexing Survey (hereafter Indexing Survey) is designed to provide supporting data to address the EAC and FDS conditions detailed above. Specifically, the Indexing Survey represents Task 2a of the Peace River Fish Community Monitoring Program (Mon-2) within the FAHMFP (BC Hydro 2015). The intent of the Indexing Survey is to "monitor the response of large-bodied fish species in the Peace River to the Project" (BC Hydro 2015).

For the EIS, each large-bodied fish species was assigned to one of three groups (Golder et al. 2012): Group 1 fishes included species typically targeted by anglers (i.e., Burbot [*Lota lota*], Goldeye [*Hiodon alosoides*], Lake Trout [*Salvelinus namaycush*], Northern Pike [*Esox lucius*], Rainbow Trout [*Oncorhynchus mykiss*], Walleye [*Sander vitreus*]), Group 2 fishes included species considered "passage sensitive" (i.e., Arctic Grayling [*Thymallus arcticus*], Bull Trout [*Salvelinus confluentus*], Mountain Whitefish [*Prosopium williamsoni*]), and

[1] Fish includes fish abundance, biomass, composition, health, and survival.

[2] Fish habitat includes water quality, sediment quality, lower trophic levels (periphyton and benthic invertebrates), and physical habitat.

[3] EIS, Volume 2, Section 12.1.2 (BC Hydro 2013).

Group 3 fishes included planktivorous species (i.e., Kokanee [*Oncorhynchus nerka*] and Lake Whitefish [*Coregonus clupeaformis*]). The three Peace River sucker species (i.e., Largescale Sucker [*Catostomus macrocheilus*], Longnose Sucker [*Catostomus catostomus*], and White Sucker [*Catostomus commersonii*]), Northern Pikeminnow[4] [*Ptychocheilus oregonensis*], and all small-bodied fish species were considered Group 4.

The Indexing Survey will monitor the response of all large-bodied fish species to the Project over the short term (10 years after Project operations begin) and longer term (30 years after the Project operations begin), but focuses on collecting data that quantify the relative and absolute abundances and spatial distribution of seven indicator species. The seven indicator species are Arctic Grayling, Bull Trout, Burbot, Goldeye, Mountain Whitefish, Rainbow Trout, and Walleye (*Sander vitreus*). These species were identified in local provincial management objectives (BC Ministry of Environment 2009; BC Government 2011) as species of interest to recreational anglers and harvested by Aboriginal groups, and were the focus of the Project's EIS effects assessment (BC Hydro 2013).

In 2008, BC Hydro implemented the Peace River Fish Index (GMSMON-2), an annual program designed to monitor Arctic Grayling, Bull Trout, and Mountain Whitefish populations in the Peace River downstream of Peace Canyon Dam (PCD) and their responses to instream physical works designed to improve fish habitat in select side channel areas (Mainstream and Gazey 2009–2014; Golder and Gazey 2015). Data collected under GMSMON-2 and its predecessor, the Peace River Fish Community Indexing Program (P&E 2002; P&E and Gazey 2003; Mainstream and Gazey 2004–2008), provide an annual dataset for the fish community within the study area beginning in 2001 that can be compared to data collected during the current monitoring program (Golder and Gazey 2016–2020). Changes in methodologies, objectives, and study areas over 19 years of sampling limits the compatibility of some aspects of the dataset.

In 2020, the program collected various biological samples from select fish for potential laboratory analysis. These included tissue samples for stable isotope analysis, genetic, and mercury analyses, and hard structure samples (i.e., fin rays or otoliths) for microchemistry analysis. All samples were provided to BC Hydro and will be used to further characterize Peace River fish populations by other components of the FAHMFP. The analysis and interpretation of these samples is not discussed in this report.

Field crews implanted radio telemetry tags into a subset of the Arctic Grayling, Bull Trout, Burbot, Rainbow Trout, and Walleye captured during the Indexing Survey. These fish were implanted with radio telemetry tags to support the FAHMFP; however, the analysis and interpretation of telemetry data are not discussed in this report.

Field crews collected additional data at some sites to support offset effectiveness monitoring (Mon-2, Task 2d of the FAHMFP) related to the Project. Results associated with offset effectiveness monitoring are presented in a separate report (West et al. 2021).

[4] EIS, Volume 2, Section 12.3.2.2 (BC Hydro 2013).

1.1 Key Management Question

The overarching management question for the Peace River Fish Community Monitoring Program is as follows:

1) How does the Project affect fish in the Peace River between the Project and the Many Islands area in Alberta during the short (10 years after Project operations begin) and longer (30 years after Project operations begin) term?

1.2 Management Hypotheses

The Peace River Fish Community Monitoring Program's overarching management question will be addressed by testing a series of management hypotheses using predictions made in the Project's EIS. These predictions are summarized in Mon-2 of the FAHMFP as presented in the Table 1.

Table 1: Short and longer term predictions of fish biomass (metric tonnes - t) for pre- and post-Project conditions for the Peace River from the Project to the Many Islands area in Alberta. Fish biomass is presented for the "Most Likely" scenario (plus a minimum to maximum range). Data were summarized from Mon-2 of the FAHMFP (BC Hydro 2015).

Species Group	Species Name	Pre-Project Biomass (t)	Post-Project Biomass (t)			
			Short Term (in 10 Years)		Longer Term (> 30 Years)	
			Most Likely	Range	Most Likely	Range
1	Walleye	3.38	1.69	0.34–1.69	1.69	0.34–1.69
	Lake Trout	0.00	0.00	0.00–0.01	0.00	0.00–0.01
	Rainbow Trout	0.17	0.35	0.17–0.35	0.35	0.17–0.35
	Northern Pike	0.74	0.37	0.37–0.74	0.37	0.37–0.74
	Burbot	0.10	0.05	0.01–0.05	0.05	0.01–0.05
Group 1 Subtotal		**4.39**	**2.46**	**0.89–2.83**	**2.46**	**0.89–2.83**
2	Bull Trout	1.49	1.23	1.23–2.54	1.23	1.23–2.54
	Arctic Grayling	0.64	0.32	0.06–0.64	0.32	0.06–0.64
	Mountain Whitefish	7.38	14.74	14.74–14.74	14.74	14.74–14.74
Group 2 Subtotal		**9.50**	**16.29**	**16.03–17.91**	**16.29**	**16.03–17.91**
3	Kokanee	0.03	0.01	0.00–0.02	0.03	0.01–0.04
	Lake Whitefish	0.00	0.01	0.00–0.01	0.00	0.00–0.01
Group 3 Subtotal		**0.03**	**0.02**	**0.01–0.03**	**0.03**	**0.01–0.04**
Total Harvestable Fish Biomass		**13.93**	**18.77**	**16.94–20.78**	**18.78**	**16.94–20.79**
4	Sucker Species	21.74	10.87	10.87–10.87	10.87	10.87–10.87
	Small-bodied Fish	0.87	0.70	0.43–0.87	0.70	0.43–0.87
	Northern Pikeminnow	0.87	0.44	0.26–0.52	0.44	0.26–0.52
Group 4 Subtotal		**23.49**	**12.01**	**11.57–12.27**	**12.01**	**11.57–12.27**
Total Fish Biomass		**37.42**	**30.78**	**28.50–33.05**	**30.79**	**28.50–33.06**

Management hypotheses detailed within the Peace River Fish Community Monitoring Program that will be tested using data collected during the Indexing Survey are as follows:

H_1: Post-Project total fish biomass in the Peace River between the Project and the Many Islands area in Alberta will be less than pre-Project conditions (current = 37.42 t; at 10 years of operations = 30.78 t; >30 years of operations = 30.79 t).

H_2: Post-Project harvestable fish biomass in the Peace River between the Project and the Many Islands area in Alberta will be greater than pre-Project estimates of harvestable fish biomass (current = 13.93 t; at 10 years of operations = 18.77 t; >30 years of operations = 18.78 t).

H_3: Post-Project biomass of each fish species in the Peace River between the Project and the Many Islands area in Alberta will be consistent with biomass estimates in the EIS.

H_4: Changes in post-Project fish community composition in the Peace River between the Project and the Many Islands area in Alberta will be consistent with EIS predictions.

H_5: The fish community can support angling effort that is similar to baseline conditions.

1.3 Study Objectives

The objective of the Indexing Survey is to validate predictions and address uncertainties identified in the EIS regarding the Project's effects on fish in the Peace River and to assess the effectiveness of fish and fish habitat mitigation measures. The purpose of the Indexing Survey is to monitor the response of large-bodied fish species in the Peace River to the construction and operation of the Project. The Indexing Survey will incorporate data previously collected during BC Hydro's WLR (Water License Requirements) Peace River Fish Index (GMSMON-2) and its predecessor, the Peace River Fish Community Indexing Program.

Field work for the Indexing Survey was conducted from late summer to early fall (i.e., mid-August to early October). Sampling was conducted during this time period for several reasons, including ensuring compatibility with historical datasets (e.g., Golder and Gazey 2018), increasing sampling efficiency by sampling when turbidity is typically low, and reducing potential sampling effects to Bull Trout by sampling when spawning Bull Trout are not present in the Peace River mainstem (i.e., when they are spawning in select tributaries). The mid-August to early October study period for the Indexing Survey occurs after most Goldeye and Walleye migrate downstream out of the study area. As such, Mon-2 included contingent sampling for these species as follows:

> If catch data from [2016] and [2017] suggest that the mid-August to late September time period will not yield sufficient data to monitor the Peace River Goldeye and Walleye populations (i.e., if less than 20 Goldeye or Walleye are captured during either study year), an additional field program will be implemented beginning in [2018] that focuses on these species. This contingent assessment will consist of boat electroshocking in the spring (i.e., mid-May to early June) near the confluences of major Peace River tributaries in Sections 7 and 8 (Mainstream 2012) as data indicate high Goldeye and Walleye catch rates surrounding most tributary confluences in these sections during the spring season (Mainstream 2013).

Between 2015 (i.e., the initial study year for the Indexing Survey) and 2019, Walleye catch during all sessions and sections combined averaged 278 individuals and ranged from a low of 116 individuals in 2015 to a high of 389 individuals in 2017. As such, the contingent assessment was not required for this species. However, over the same time period, average Goldeye catch was three individuals and ranged from a low of no catch in 2018 to a high of eight individuals in 2016. Due to consistently low Goldeye catch during the Indexing Survey, the contingent assessment was implemented in 2020.

1.4 Study Area and Study Period

1.4.1 Indexing Survey

The study area for the Indexing Survey includes an approximately 205 km section of the Peace River from near the outlet of PCD (river kilometre [River Km] 25 as measured downstream from WAC Bennett Dam) downstream to the Many Islands area in Alberta (River Km 230; Figure 1; Appendix A Figures A1 to A6). The spatial extent of the program is consistent with the spatial boundaries for the effects assessment in the EIS, which was guided by physical modelling and fisheries studies.

The mainstem of the Peace River between PCD and the Many Islands area in Alberta was delineated into sections (Table 2) using information provided by Mainstream (2012). The upstream boundary of Section 5 was moved approximately 5 km downstream relative to Mainstream's classification to more closely align with the location of the Project, as described below. The most downstream approximately 2 km of the Pine River was included in the study area and sampled as part of Section 6. The most downstream approximately 0.5 km of the Beatton and Kiskatinaw rivers were included in the study area and sampled as part of Section 7. A summary of historical datasets by section, year, study period, and effort (number of days of sampling) is provided in Appendix B, Table B1.

Table 2: Location and distance from WAC Bennett Dam of Peace River sample sections as delineated by Mainstream (2012) with the exception of Section 5.

Section Number	Location	River Kilometre[a]		Number of Sites Sampled in 2020[b]
		Upstream	Downstream	
1a	Peace River Canyon area	20.4	25.0	0
1	Downstream end of Peace River Canyon to the Lynx Creek confluence area	25.0	34.0	15
2	Lynx Creek confluence area downstream to the Halfway River confluence area	34.0	65.8	0
3	Halfway River confluence area downstream to the Cache Creek confluence area	65.8	82.1	15
4	Cache Creek Confluence area downstream to the Moberly River confluence area	82.1	105.0	0
5[c]	Moberly River confluence area downstream to near the Canadian National Railway bridge	105.0	117.7	15
6	Pine River confluence area downstream to the Six Mile Creek confluence area	121.5	134.0	18
7	Beatton River confluence area downstream to the Kiskatinaw River confluence area	140.0	158.0	19
8	Pouce Coupe River confluence area downstream to the Clear River confluence area	174.0	187.7	0
9	Dunvegan West Wildland Provincial Park boundary downstream to Many Islands Park	217.5	231.0	16

[a] River Km values as measured from the base of WAC Bennett Dam (River Km 0.0).
[b] Includes only fall sampling (21 August to 7 October) not the contingent assessment for Goldeye and Walleye in April and May.
[c] The upstream boundary of Section 5 was moved approximately 5 km downstream to more closely align with the location of the Site C dam site.

As detailed in the FAHMFP, only Sections 1, 3, 5, 6, 7, and 9 (Appendix A, Figures A1 to A6, Table A1) were selected for long-term monitoring under the Indexing Survey. Sections 1 and 3 are situated upstream of the Project and are scheduled to be sampled during the current program until the reservoir filling stage of the Project's development in 2023. These sections will be sampled to monitor potential effects of construction (i.e., creation of the diversion headpond and river diversion) on the Peace River fish community. Sections 5, 6, 7, and 9 are scheduled to be sampled annually as part of the Indexing Survey until 2053.

Similar to study years 2015 to 2019, Sections 1a, 2, 4, and 8 were excluded from the 2020 Indexing Survey for several reasons, including the following: the limited amount of historical data available for these sections, the short lineal length of river they represent (Section 1a only), low historical catch rates (Mainstream 2010, 2011, 2013), and the similarity of their habitats relative to adjacent sections. Small portions of Section 8 near the Clear River and Pouce Coupe River confluences were sampled as part of the Goldeye and Walleye Survey (Section 1.4.2). During most historical study years, the same sites were sampled within each section. Sites sampled in 2020 were identical to sites sampled in 2019.

For the Indexing Survey, 98 sites were sampled within the six sections of the Peace River in 2020 (Appendix A, Figures A1 to A6). The length of sites varied from 40 to 1900 m and consisted of the nearshore area along a bank of the river. The two sites in the Pine River were 1000 and 1500 m in length, the two sites in the Beatton River were 430 and 600 m in length, and the one site in the Kiskatinaw River was 1240 m in length. Site descriptions and UTM locations for all 98 sites are included in Appendix A, Table A1.

A sample is defined as a single pass through a site while boat electroshocking (see Section 2.1.3). Field crews sampled each site six times (i.e., six sessions) over the study period in 2020 (Table 3). Each sample session took between 8 and 12 days to complete. Each section within each session was sampled over one to seven days (Table 3).

Table 3: Summary of boat electroshocking sample sessions conducted in the Peace River, 2020.

Session	Start Date	End Date	Section					
			1	3	5	6	7	9
1	21 Aug	28 Aug	21-22 Aug	23-26 Aug	25-26 Aug	21-22 Aug	23-24 Aug	27-28 Aug
2	27 Aug	07 Sep	29 Aug-1 Sep	30-31 Aug	1-2 Sep	27-28 Aug	29-30 Aug	2-7 Sep
3	08 Sep	17 Sep	9-11 Sep	12-15 Sep	12-14 Sep	8-14 Sep	14-16 Sep	16-17 Sep
4	17 Sep	26 Sep	18-22 Sep	20-23 Sep	21-24 Sep	17-21 Sep	25-26 Sep	24-25 Sep
5	26 Sep	02 Oct	26-27 Sep	28 Sep-2 Oct	27 Sep	28-29 Sep	29-30 Sep	1 Oct
6	03 Oct	07 Oct	3-4 Oct	4-5 Oct	5 Oct	3-4 Oct	4-6 Oct	7 Oct

1.4.2 Goldeye and Walleye Survey

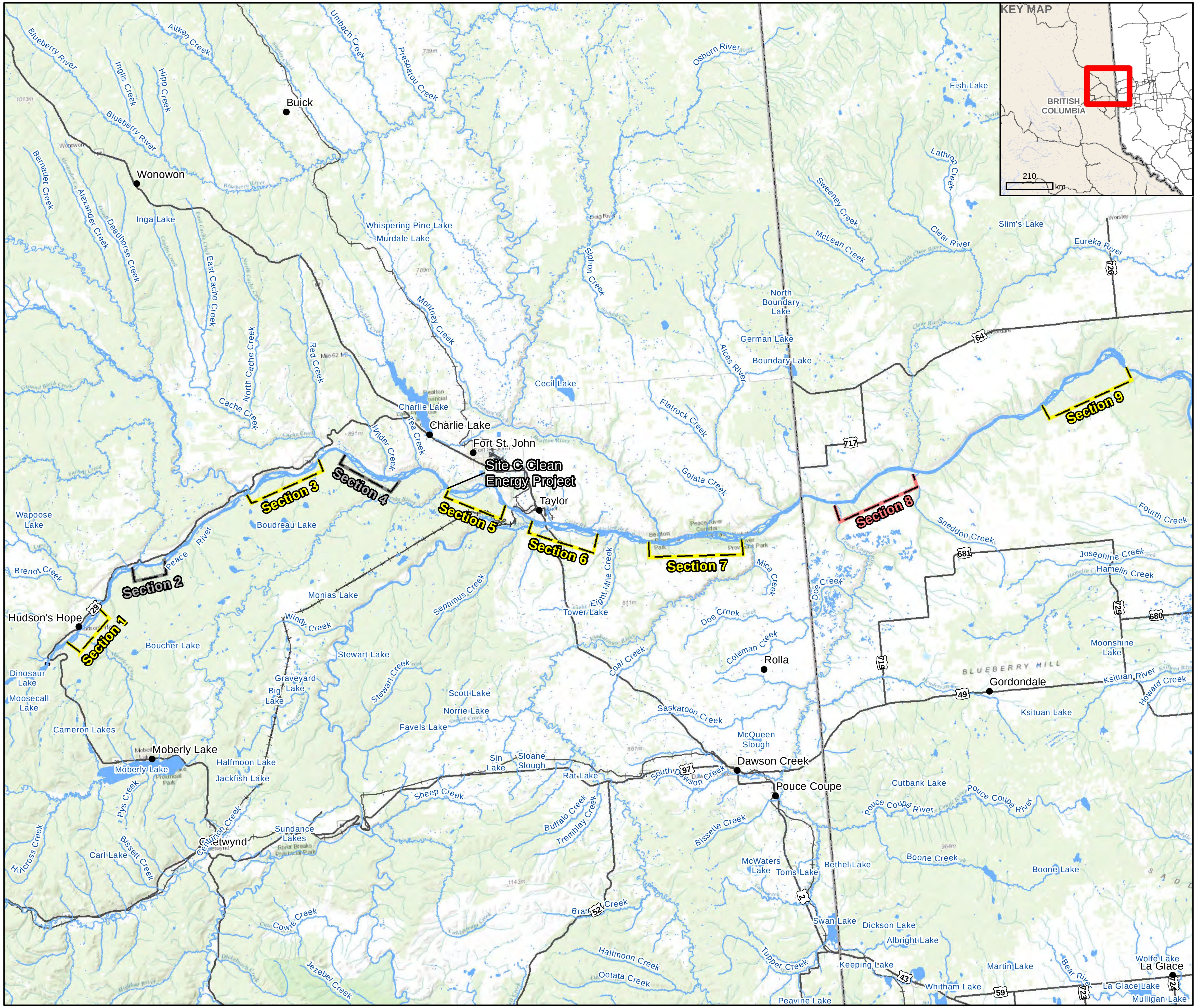
Two boat electroshocking sessions were conducted as part of the Goldeye and Walleye Survey. Session 1 began on 25 April; however, sampling was postponed after assessing three sites due to low water temperatures (i.e., temperatures lower than 5°C). Sampling resumed on 6 May. Session 2 was conducted on 24 and 25 May (Table 4). This survey was limited to the confluence areas of major tributaries in Sections 7 and 8, including Six Mile Creek, Eight Mile Creek, the Beatton River (split into two sites), the Kiskatinaw River, the Alces River, the Pouce Coupe River, and the Clear River (Appendix A, Figures A7 to A9; Table A2).

Table 4: Summary of boat electroshocking sample sessions conducted in the Peace River as part of the contingent Goldeye and Walleye Survey, 2020.

Session	Tributary						
	Section 7				Section 8		
	Six Mile Creek	Eight Mile Creek	Beatton River	Kiskatinaw River	Alces River	Pouce Coupe River	Clear River
1	25 Apr	25 Apr	25 Apr, 6 May[a]	6 May	6 May	6 May	6 May
2	24 May	24 May	24 May	24 May	25 May	25 May	25 May

[a] Site 07BEA01 in the Beatton River was sampled twice during the first Goldeye and Walleye Survey session.

In 2020, Fyke nets and hoop nets were experimentally deployed near the confluences of the Beatton, Clear, Pouce Coupe, and Alces rivers. All nets were deployed on 30 May, left to fish overnight, and were retrieved on 31 May.



LEGEND

- PLACE NAME
- DAM SECTION
- PROVINCIAL BOUNDARY
- WATERCOURSE
- WATERBODY
- RAILWAY
- ROAD

SAMPLING SECTIONS

- 1; 3; 5; 6; 7; 9
- 2; 4
- 8

0 10 20

1:625,000 METRES

REFERENCES

1. TRANSPORTATION, RAILWAY, HYDROLOGY AND TOPOGRPHY LAYERS CANVEC © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
2. DAM SITE OBTAINED FROM FROM GEOBASE®.
3.SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT
BC HYDRO

PROJECT
PEACE RIVER FISH COMMUNITY MONITORING PROGRAM (MON-2)

TITLE
OVERVIEW OF THE PEACE RIVER LARGE FISH INDEXING SURVEY (MON-2, TASK 2A) STUDY AREA, 2020

CONSULTANT

GOLDER

YYYY-MM-DD	2021-06-11
DESIGNED	DF
PREPARED	CD
REVIEWED	DR
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2020	0	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

PATH: \\golder.gds\gal\burnaby\CAD-GIS\Client\BC_Hydro\Peace_River_GMS\99_PROJECTS\19121769_PeaceRiver_GMSW2_PRODUCTION\MXD\Report\2020_Peace_Indexing_Report\19121769_FIG1_PEACE_RIVER_OVERVIEW_2020.mxd

2.0 METHODS

2.1 Data Collection

2.1.1 Discharge

Discharge data at hourly or five-minute intervals were obtained from several different Water Survey of Canada[5] gauging stations. Discharge values for Sections 1 and 3 prior to 2019 were calculated using data collected at the Water Survey of Canada Gauging Station 07EF001 (Peace River at Hudson Hope). In 2019 and 2020, Station 07EF001 was decommissioned and releases from PCD were used to calculate discharge values in Sections 1 and 3. No major tributaries flow into the Peace River between PCD and the former 07EF001 station location. As such, the two datasets are similar.

Releases from PCD were used to represent discharge in Section 1. Release data from PCD were combined with data from Station 07FA006 (Halfway River Near Farrell Creek) to represent discharge in Section 3. Data from Station 07FA004 (Peace River Above Pine River) were used to represent discharge in Section 5. Data from Station 07FD002 (Peace River Near Taylor) were used to represent discharge in Section 6. Data from Station 07FD010 (Peace River Above Alces River) were used to represent discharge in Section 7. Accurate discharge data for Section 9 were not available due to the locations of the nearest Peace River gauging stations relative to the inflow points of several large unmonitored tributaries.

2.1.2 Habitat Conditions

Habitat parameters recorded at each site (Table 5) included variables recorded during previous study years (Golder and Gazey 2015–2020) and variables recorded as part of other, similar BC Hydro programs on the Columbia River (i.e., CLBMON-16 [e.g., Golder et al. 2020a] and CLBMON-45 [e.g., Golder et al. 2020b]). These data were collected to provide a means of detecting changes in habitat availability or suitability in sample sites over time. Collected data were not intended to quantify habitat availability or imply habitat preferences.

The type and amount of instream cover for fish were qualitatively estimated at all sites. Water velocities were visually estimated and categorized at each site as low (less than 0.5 m/s), medium (0.5 to 1.0 m/s), or high (greater than 1.0 m/s). Water clarity was visually estimated and categorized at each site as low (less than 1.0 m depth), medium (1.0 to 3.0 m depth), or high (greater than 3.0 m depth). Where water depths were sufficient, water clarity was also estimated using a “Secchi Bar” that was manufactured based on the description provided by Mainstream and Gazey (2014). Mean and maximum sample depths were estimated by the boat operator based on the boat’s sonar depth display.

[5] Available for download at https://www.canada.ca/en/environment-climate-change/services/water-overview/quantity/monitoring/survey.html.

Table 5: Habitat variables and boat electroshocker settings recorded at each site during each sample session during the Peace River Large Fish Indexing Survey, 2020.

Variable	Description
Date	The date the site was sampled
Time	The time the site was sampled
Estimated Flow Category	A categorical ranking of PCD discharge (high; low; transitional) at the time of sampling
Air Temp	Air temperature at the time of sampling (to the nearest 1°C)
Water Temp	Water temperature at the time of sampling (to the nearest 0.1°C)
Conductivity	Water conductivity at the time of sampling (to the nearest 10 µS/cm)
Secchi Bar Depth	The Secchi Bar depth recorded at the time of sampling (to the nearest 0.1 m)
Cloud Cover	A categorical ranking of cloud cover (Clear = 0-10% cloud cover; Partly Cloudy = 10-50% cloud cover; Mostly Cloudy = 50-90% cloud cover; Overcast = 90-100% cloud cover)
Weather	A general description of the weather at the time of sampling (e.g., comments regarding wind, rain, smoke, or fog)
Water Surface Visibility	A categorical ranking of water surface visibility (low = waves; medium = small ripples; high = flat surface)
Boat Model	The model of boat used during sampling
Range	The range of voltage used during sampling (high or low)
Percent	The estimated duty cycle (as a percent) used during sampling
Amperes	The average amperes used during sampling
Mode	The mode (AC or DC) and frequency (in Hz) of current used during sampling
Length Sampled	The length of shoreline sampled (to the nearest 1 m)
Time Sampled	The duration of electroshocker operation (to the nearest 1 s)
Netter Skill	A categorical ranking of each netter's skill level (1 = few misses; 2 = misses common for difficult fish; 3 = misses are common for difficult and easy fish; 4 = most fish are missed)
Netter Observation Skill	A categorical ranking of each netter's observation skill level (1 = few misses; 2 = misses common for difficult fish; 3 = misses are common for difficult and easy fish; 4 = most fish are missed)
Mean Depth	The mean water depth sampled (to the nearest 0.1 m)
Maximum Depth	The maximum water depth sampled (to the nearest 0.1 m)
Water Clarity	A categorical ranking of water clarity (High = greater than 3.0 m visibility; Medium = 1.0 to 3.0 m visibility; Low = less than 1 m visibility)
Instream Velocity	A categorical ranking of water velocity (High = greater than 1.0 m/s; Medium = 0.5 to 1.0 m/s; Low = less than 0.5 m/s)
Instream Cover	The type (i.e., Interstices; Woody Debris; Cutbank; Turbulence; Flooded Terrestrial Vegetation; Aquatic Vegetation; Shallow Water; Deep Water) and amount (as a percent) of available instream cover
Crew	The field crew that conducted the sample
Sample Comments	Any additional comments regarding the sample

2.1.3 Fish Capture

Boat electroshocking was conducted at all sites along the channel margin, typically within a range of 0.5 to 2.0 m water depth. Each crew used Smith-Root high-output Generator Powered Pulsator (GPP 5.0) electroshockers (Smith-Root; Vancouver, WA, USA) operated from outboard jet-drive riverboats. The electroshocking procedure consisted of manoeuvring the boat downstream along the shoreline of each sample site. Field crews sampled large eddies (i.e., eddies longer than approximately two boat lengths) while travelling with the direction of water flow. Two crew members, positioned on netting platforms at the bow of each boat, netted stunned fish, while the third individual on each crew operated the boat and electroshocking unit. Netters attempted to capture all fish that were stunned by the electrical field. Captured fish were immediately placed into 175 L onboard live-wells equipped with freshwater pumps. Fish were netted one at a time and placed into the live-wells. Having more than one fish in a net at one time was avoided as much as possible. Fish that were positively identified but avoided capture were enumerated and recorded as “observed”. Netters attempted to collect a random sample of fish species and sizes; however, netters focused their effort on less common fish species (e.g., Arctic Grayling) or life stages (e.g., immature Bull Trout) when they were observed. This approach was employed during previous study years (Mainstream and Gazey 2014; Golder and Gazey 2015–2020) and may cause an overestimate of the relative abundance of these species and life stages; however, by maintaining this approach, the bias remains constant among study years.

Both the time sampled (seconds of electroshocker operation) and length of shoreline sampled (metres; Table 6) were recorded for each sample. The start and end location of each site was established prior to the start of the field program; however, if a complete site could not be sampled, the difference in distance between what was sampled and the established site length was estimated and recorded on the site form. This revised site length was used for that session in subsequent analyses. Reasons for field crews not being able to sample an entire site’s length included public on shore, beavers swimming in a site, and shallow water depths preventing boat access.

Table 6: Number and lengths of sites sampled by boat electroshocking during the Peace River Large Fish Indexing Survey, 2020.[a]

Section	Number of Sites	Site Length (m)		
		Minimum	Average	Maximum
1	15	400	851	1200
3	15	770	1331	1900
5	15	400	929	1810
6	18	300	965	1500
7	19	220	905	1400
9	16	130	958	1200

[a] Sites established and surveyed as part of the Goldeye and Walleye Survey were excluded from this table. These sites ranged between 310 and 1240 m in length (average length = 726 m).

Each boat electroshocking unit was operated at a frequency of 30 Hz with pulsed direct current. Amperage was adjusted as needed to achieve the desired effect on fishes, which was the minimum level of immobilization that allowed efficient capture and did not cause undesired outcomes such as immediate tetany or visible hemorrhaging (Martinez and Kolz 2009). An amperage of 3.0 A typically produced the desired effect on fishes; however, amperage was set as low at 1.5 A and as high as 4.6 A at some sites based on local water conditions and the electroshocking unit employed.

The electroshocker settings used in 2014 to 2020 were different when compared to the settings employed during previous study years (Mainstream and Gazey 2004–2014). Prior to 2014 (i.e., the 2002–2013 epoch), higher frequencies and higher amperages were used. The settings used from 2014 to 2020 (i.e., the 2014–2019 epoch) resulted in less electroshocking-induced injuries on large-bodied Rainbow Trout in studies conducted on the Columbia River (Golder 2004, 2005) and align with recommendations by Snyder (2003) for pulsed direct current and low frequencies for adult salmonids. Reducing the impacts of sampling will help ensure the long-term sustainability of the monitoring program.

Although electrical output varies with water conductivity, water depth, and water temperature, field crews attempted to maintain electrical output at similar levels for all sites over all sessions.

During the Goldeye and Walleye Survey, Fyke nets and hoop nets were experimentally deployed at the confluences of select tributaries in Sections 7 and 8. Fyke nets were deployed in the Alces, Beatton, Clear, and Pouce Coupe rivers; hoop nets were deployed at the Beatton River confluence only. Fyke nets were set at water depths and locations that the crew deemed likely to intersect Goldeye migrating upstream based on flow conditions observed at the time of deployment and at locations conducive to net installation. Wing nets were installed downstream of the entrance into each Fyke net. These wing nets were angled outward to direct upstream moving fish towards the Fyke net entrance. At the Beatton River sample location, site conditions were not conducive to installing wing nets, as such, the wing nets were removed from the Fyke net at this location. Hoop nets were deployed in laminar flowing, low velocity areas and were oriented with the net entrance facing upstream to intercept fish swimming downstream.

2.1.4 Ageing

Scale samples were collected from all captured Arctic Grayling, Goldeye, Kokanee, Mountain Whitefish (with the exceptions detailed in Section 2.1.5), and Rainbow Trout. Fin ray samples were collected from all initially captured Bull Trout, Goldeye, Lake Trout, Northern Pike, and Walleye. Otoliths were collected opportunistically from fish that succumbed to sampling. Ageing structures (i.e., scales, fin rays, and otoliths) were collected in accordance with the methods outlined in Mackay et al. (1990). All ageing structure samples were stored in appropriately labelled coin envelopes and archived for long-term storage for BC Hydro.

Scales were assigned an age by counting the number of growth annuli present on the scale following procedures outlined by Mackay et al. (1990). Scales were temporarily mounted between two slides and examined using a microscope. Where possible, several scales were examined, and the highest quality scale was photographed using a 3.1-megapixel digital macro camera (Leica EC3, Wetzlar, Germany) and saved as a JPEG-type picture file. All scale images were linked to the Peace River Large Fish Indexing Database (referred to as Attachment A) and provided to BC Hydro. All scales were examined independently by two experienced individuals, and ages were assigned. If the assigned ages differed between the two examiners, the sample was re-examined by a third examiner. If there was agreement between two of three examiners, then the consensus age was assigned to the fish. If there was not agreement between two of three examiners, then the fish was not assigned an age.

To continually increase the accuracy of ages assigned using fin rays, ageing methods were modified relative to previous study years based on lessons learned and literature reviews. These changes are described, where needed, in the following paragraphs. Fin rays were coated in epoxy and allowed to dry. Once dried, a rotary sectioning saw with a diamond blade (Buehler IsoMet Low Speed Saw; Lake Bluff, IL, USA) was used to create multiple cross-sections of each fin ray sample. The rotary sectioning saw allowed the thickness of cross-sections to be set to a standard width of 0.5 mm. This width allowed for maximum reflected or transmitted light to pass through the sections, making annuli more apparent when observed under a microscope (Watkins and Spencer 2009). In addition, the use of the rotary sectioning saw resulted in cross-sections with more polished surfaces (which reduced sanding and preparation time) compared to the jeweler's saw (Gesswein Canada; Toronto, Canada) used prior to 2017. The cross-sections were permanently mounted on a microscope slide using a clear coat nail polish and examined using a Leica S6D imaging microscope (Leica Microsystems Inc.; Concord, Canada). Where possible, several fin ray cross-sections were examined, and the cross-section with the most visible annuli was photographed with the microscope's integrated 3.1-megapixel digital macro camera (Leica EC3, Wetzlar, Germany). All fin ray cross sections were imaged using the maximum zoom possible.

Fin rays (excluding Walleye) were examined independently by two experienced individuals, and ages were assigned using counts of growth annuli. If the assigned ages differed between the two examiners, the sample was re-examined by a third examiner. If there was agreement between two of three examiners, then the consensus age was assigned to the fish. If there was not agreement between two of three examiners, then the fish was not assigned an age.

In 2020, ages were not assigned to Bull Trout using fin rays because of results from previous years that suggested that fin ray-based ages were not consistent or reliable for this species in the study area (Golder and Gazey 2020). Based on length-at-age data collected from age-0 to age-2 Bull Trout in the Halfway River watershed (e.g., Golder 2018), ages assigned to Bull Trout through fin ray analysis as part of the current project were underaged by one year. This was likely because the fin ray could not be collected close enough to the fish's body wall to capture the first annulus on the fin ray (i.e., the annulus closest to the focus of the fin ray). In addition, average length-at-age calculated using ages assigned using fin rays were not consistent with anticipated lengths based on inter-year capture-recapture data, suggesting inconsistent formation of annual growth rings (annuli) on fin rays of Bull Trout in the study area (Golder and Gazey 2020). Because of these inconsistencies, age-related analyses for Bull Trout are based on fork lengths (FL) at initial capture for immature individuals and inter-year recapture data as detailed below.

Immature Bull Trout encountered during the Site C Reservoir Tributary Fish Population Indexing Survey (Mon-1b, Task 2c; hereafter, Tributary Survey; Golder 2021a) were accurately assigned ages based on each fish's fork length, which was possible because of limited overlap in lengths between age-0 to age-3 age-classes. Age-4 and older Bull Trout were rarely encountered during the Tributary Survey because most immature Bull Trout migrate out of natal/rearing tributary by age-3. Data collected during the Tributary Survey indicate a maximum length for age-3 Bull Trout of approximately 240 mm FL. Between 2015 and 2020, the smallest Bull Trout recorded in the Peace River mainstem during the Indexing Survey was 137 mm FL, and 149 Bull Trout less than 240 mm FL were recorded in all six study years combined. Therefore, the majority of Bull Trout less than 240 mm FL encountered in the Peace River mainstem are likely age-3.

For the analysis of Bull Trout ages, all individuals less than 240 mm FL captured in the mainstem were classified as age-3. Individuals initially captured at less than 240 mm, and recaptured in a subsequent year were assigned an age based on the number of years between captures (i.e., age-3 plus the number of years at-large). For the analysis of growth using von Bertalanffy models, length-at-age data from the Tributary Survey from 2017 to 2020 were used for age-0 to age-2 Bull Trout (Golder 2018–2021a), to provide a more complete understanding of this species' growth and life history characteristics.

In 2015 and 2016, Walleye fin rays were aged using methods detailed by Mackay et al. (1990). However, Watkins and Spencer (2009) detailed methods for ageing Walleye fin rays that were shown to be more accurate than the methods detailed by Mackay et al. (1990) for northern populations of Walleye. As such, the methods detailed by Watkins and Spencer (2009) were employed after 2016 and are briefly described below. For fin rays collected from Walleye, each fin ray photograph was imported into ImageJ software (www.imagej.net) equipped with the Fiji microscope measurement tool plugin. This software allows the user to take measurements on microscope images. Prior to examining cross-section images in ImageJ, a calibration slide with a known length (i.e., a 1 mm scale with 0.01 mm divisions) was measured to set the scale for future measurements. For each imaged cross-section, the pelvic fin ray radius (PFRR) was measured in µm and the distance was plotted and saved on the cross-section image. The PFRR is the distance from the focus of the ray (i.e., the center of fin ray) to the end of the largest lobe of the ray. This measurement was then used to determine the radius distance from the focus to the first annulus using the following formula from Watkins and Spencer (2009):

(1) $Sc = (PFRR \times L_1) / Lc$

where Sc is the distance from the focus to the first annulus (in µm), PFRR is the pelvic fin ray radius (in µm), L_1 is the average fork length of a fish at age 1 (in mm), and L_c is the fork length of the fish when caught (in mm). The value of 188 mm was used for L_1 for all Walleye cross-section calculations based on results provided by Golder and Gazey (2018). Once Sc was determined for each cross-section, the distance was measured on the imaged cross-section in ImageJ. The Sc value was also plotted and saved on the cross-section image. The closest annulus visible to the measured Sc was considered the first annulus and the subsequent annuli moving outwards towards the end of the largest lobe of the fin ray were counted to determine age. All fin ray images with plotted PFRR and Sc were examined independently by two experienced individuals. If the assigned ages differed between the two examiners, the sample was re-examined by a third examiner. If there was agreement between two of three examiners, then the consensus age was assigned to the fish. If there was not agreement between two of three examiners, then the sample was rejected and the fish was not assigned an age.

While assigning ages, examiners were aware of the species of each sample but did not have other information about the fish, such as body size or capture history.

Ages were assigned to all Arctic Grayling, Bull Trout, Northern Pike, and Rainbow Trout that were captured, except in cases where ageing structures were too poor quality to assign an age. In total, 504 Mountain Whitefish scale samples and 118 Walleye fin rays were analyzed, which represented 6% of the total number of Mountain Whitefish captured and 49% of the total number of Walleye captured in 2020. Ageing structures from Mountain Whitefish and Walleye aged in 2020 were from randomly selected, first-time capture individuals. All Mountain Whitefish scale samples selected for ageing were collected during Session 1 of 2020 (21 to 28 August). After Session 1, scale samples were only collected from Mountain Whitefish that also received a PIT tag. As a result, including scale samples collected after Session 1 in age related analyses would have resulted in larger (i.e., taggable) fish being overrepresented in the sample.

In addition to ages assigned using scales and fin rays, ages were assigned to recaptured individuals that were aged from an earlier encounter based on the number of years between recaptures. These recapture-based ages were assigned for Arctic Grayling, Mountain Whitefish, Northern Pike, Rainbow Trout, and Walleye.

2.1.5 Fish Processing

A site form was completed at the end of each sampled site. Site habitat conditions and the number of fish observed were recorded before the start of fish processing for life history data (Table 7). All captured fish were enumerated and identified to species, and their physical condition and general health were recorded (i.e., any abnormalities were noted). For each captured fish, the severity of deformities, erosion, lesions, and tumor (DELT) were recorded based on the external anomalies' categories provided in Ohio EPA (1996). Data collected for each fish in 2020 were consistent with previous study years (e.g., Golder and Gazey 2020).

Table 7: Variables recorded for each fish captured during the Peace River Large Fish Indexing Survey.

Variable	Description
Species	The species of fish
Age-Class	A general size-class for the fish (e.g., YOY <120 mm FL, Immature <250 mm FL, and Adult ≥250 mm FL)
Length	The fork length of the fish to the nearest 1 mm (total lengths were recorded for Burbot and sculpin species)
Weight	The weight of the fish to the nearest 1 g
Sex and Maturity	The sex and maturity of the fish (determined where possible through external examination)
Ageing Method	The type of ageing structure collected if applicable (i.e., scale, fin ray, otolith)
Tag Colour/Type	The type (i.e., T-bar anchor or PIT tag) or colour (for T-bar anchor tags only) of tag applied or present at capture
Tag Number	The number of the applied tag or tag present at capture
Tag Scar	The presence of a scar from a previous tag application
Fin Clip	The presence of an adipose fin clip (only recorded if present without a tag)
Condition	The general condition of the fish (i.e., alive, dead, or unhealthy)
Preserve	Details regarding sample collection (if applicable)
Comments	Any additional comments regarding the fish

Fish were measured for fork length (FL) or total length (TL; for Burbot and sculpin species) to the nearest 1 mm and weighed to the nearest 1 g using an A&D Weighing™ (San Jose, CA, USA) digital scale (Model SK-5001WP; accuracy ±1 g). Data were entered directly into the Peace River Large Fish Indexing Database (provided to BC Hydro as Attachment A) using a laptop computer. All sampled fish were automatically assigned a unique identifying number by the database that provided a method of cataloguing associated ageing structures.

All Arctic Grayling, Bull Trout, Burbot, Goldeye, Mountain Whitefish, Rainbow Trout, and Walleye that were greater than 149 mm in length and all Lake Trout, Largescale Sucker, Longnose Sucker, Northern Pike, and White Sucker that were greater than 199 mm in length and in good condition following processing were marked with a half-duplex (HDX) PIT tag (ISO 11784/11785 compliant) (Oregon RFID, Portland, OR, USA). Tags were implanted within the left axial muscle below the dorsal fin origin and oriented parallel with the anteroposterior axis of the fish. All tags and tag applicators were immersed in an antiseptic (Super Germiphene™; Brantford, ON, Canada) and rinsed with distilled water prior to insertion. The size of PIT tag implanted was based on the length of the fish and was the same as other FAHMFP monitoring programs in the Peace River, such as the Tributary Survey (Golder 2021a):

- Fish between 150 and 199 mm FL received 12 mm long PIT tags (12.0 mm x 2.12 mm HDX+)
- Fish between 200 and 299 mm FL received 23 mm long PIT tags (23.0 mm x 3.65 mm HDX+)
- Fish greater than 300 mm FL received 32 mm long PIT tags (32.0 mm x 3.65 mm HDX+)

HDX PIT tags were applied from 2016 to 2020; full-duplex (FDX) PIT tags were applied prior to 2016. All HDX PIT tags that have been applied as part of this program are compatible with the PIT arrays installed in the Halfway River watershed as part of the Peace River Bull Trout Spawning Assessment (Mon-1b, Task 2b; e.g., Ramos-Espinoza et al. 2019) and the temporary upstream fish passage facility as part of the Site C Fishway Effectiveness Monitoring Program (Mon-13; e.g., Cook et al. 2021). In 2020, all fish of the targeted species and size were implanted with a

HDX tag, including recaptured fish that had previously been implanted with a FDX PIT tag. FDX and HDX tags do not interfere with each other; therefore, fish that are double-tagged with both tag types are readable by both the PIT arrays and handheld PIT tag readers.

PIT tags were read using a Biomark HPR Lite FDX/HDX handheld reader (Biomark, Inc., Boise, ID, USA). When fish that had both HDX and FDX tags were scanned, the HDX tag would most often be detected because of its longer read range, but occasionally only the previous FDX tag was detected. In either case, the fish could be linked to their previous encounter histories in the Peace River Large Fish Indexing Database.

As was done during previous study years, a simplified processing method was used for the more common species during Sessions 5 and 6. During Sessions 5 and 6, fish that did not have a PIT tag at capture were assigned a size category based on fork length (i.e., less than 150 mm, 150–199 mm, 200–299 mm, greater than or equal to 300 mm) and were released without recording lengths or weights, collecting scale samples, or implanting PIT tags. This allowed field crews to conduct the sessions over a shorter time period by reducing fish handling and fish processing time. During Sessions 5 and 6, this simplified fish processing procedure was used for Mountain Whitefish and all sucker species (Largescale Sucker, Longnose Sucker, and White Sucker). All other fish species were sampled using the full processing procedure.

To reduce the possibility of capturing the same fish at multiple sites in a single session, fish were released near the middle of the site where they were captured.

2.2 Data Analyses

2.2.1 Data Compilation and Validation

Data collected under the Indexing Survey were stored in the Peace River Large Fish Indexing Database, which contains historical data collected under the Large River Fish Indexing Program (P&E 2002; P&E and Gazey 2003; Mainstream and Gazey 2004–2008), the Peace River Fish Index (Mainstream and Gazey 2009–2014; Golder and Gazey 2015), and the Peace River Large Fish Indexing Survey (Golder and Gazey 2016–2020). The database is designed to allow most data to be entered directly by the crew while out in the field using Microsoft® Access 2010 software and contains several integrated features to ensure that data are entered correctly, consistently, and completely.

Various input validation rules programmed into the database checked each entry to verify that the data met specific criteria for that particular field. For example, all species codes were automatically checked upon entry against a list of accepted species codes that were saved as a reference table in the database; this feature forced the user to enter the correct species code for each species (e.g., Rainbow Trout had to be entered as “RB”; the database would not accept “RT”). Combo boxes were used to restrict data entry to a limited list of choices, which kept data consistent and decreased data entry time. For example, a combo box limited the choices for Cloud Cover to Clear, Partly Cloudy, Mostly Cloudy, or Overcast. The user had to select one of these choices, which decreased data entry time (e.g., by eliminating the need to type out “Partly Cloudy”) and ensured consistency in the data (e.g., by forcing the user to select “Partly Cloudy” instead of typing “Part Cloud” or “P.C.”). The database contained input masks that required the user to enter data in a pre-determined manner. For example, an input mask required the user to enter Sample Time in 24-hour short-time format (i.e., HH:mm:ss). Event procedures ensured data conformed to underlying data in the database. For example, after the user entered life history information for a particular fish, the database automatically calculated the body condition of that fish. If the body condition was outside a previously determined range for that species (based on the measurements of other fish in the database), a message box appeared on the screen informing the user of a possible data entry error. This allowed the user to double-check the species, length, and weight of the fish before it was released. The database also allowed a direct connection between the handheld PIT tag reader (Datamars DataTracer FDX/HDX reader) and the data entry form, which eliminated transcription errors associated with manually recording the 15-digit PIT tag numbers.

The database also included tools that allowed field crews to quickly query historical encounters of tagged fish while the fish was in-hand. This allowed the crew to determine if ageing structures, such as fin rays, had been previously collected from a fish or comment on the status of previously noted conditions (e.g., whether a damaged fin had properly healed). Quality Assurance/Quality Control (QA/QC) was conducted on the database before analyses. QA/QC included checks of capture codes and tag numbers for consistency and accuracy, checks of data ranges, visual inspection of plots, and removal of age-length and length-weight outliers, where applicable.

2.2.2 Analytical Approach

The analysis and report for the 2020 study year are simplified from previous years and include basic summaries of catch and fish life history. The relative abundance of fish was assessed using catch rate (i.e., catch-per-unit-effort) and percent composition of each species in the catch (Section 2.2.3). The general health and composition of fish populations were assessed using analyses of size and age-structure, growth, and body condition (Sections 2.2.4 to 2.2.6). Detailed analyses, including capture-recapture population estimates, and more extensive analyses of catch, life history, and environmental data were not conducted in 2020. All analyses were conducted in the software R version 4.0.3 (R Core Team 2020).

Various metrics were used to provide background information and descriptive summaries of fish populations. Although these summaries are important, not all of them are presented or specifically discussed in detail in this report. However, these metrics are provided in the appendices for reference purposes and are referred to when necessary to support or discount results of various analyses. Metrics presented in the appendices include the following:

- mean daily discharge in the Peace River, 2002 to 2020 (Appendix C, Figure C1)
- habitat variables recorded at each sample site (Appendix D, Table D1)
- percent composition of the catch by study year by section (Appendix E, Tables E1 and E2)
- catch rates for all species (Appendix E, Tables E3 and E4), 2020
- summary of captured and recaptured fish by species and session, 2020 (Appendix E, Table E5)
- length-frequency histograms, age-frequency histograms, and length-weight regressions by year or section for Arctic Grayling, Bull Trout, Largescale Sucker, Longnose Sucker, Mountain Whitefish, Northern Pike, Rainbow Trout, Walleye, and White Sucker where applicable, 2002 to 2020 (Appendix F, Figures F1 to F41)

For all figures in this report, sites are ordered by increasing distance from WAC Bennett Dam (River Km 0.0) based on the upstream boundary of each site.

As detailed in Section 1.4.1 and Appendix B, Table B1, not all sections were sampled during all study years. For figures and statistics related to fish life history (i.e., length, weight, and age), analyses were supplemented, when feasible, with data collected in Sections 6, 7, and 9 under the Peace River Fish Inventory in 2009, 2010, and 2011 (Mainstream 2010, 2011, 2013). The Peace River Fish Inventory employed similar capture techniques during similar times of the year. Because effort differed between the Peace River Fish Inventory and the current program, these data were not included in figures or statistics related to effort or fish counts. As detailed in Section 2.1.4, age-related analyses for Bull Trout were supplemented with data collected during the Tributary Survey (Golder 2021a), when possible.

Only the first encounter of within-year recaptures were included in age, length, weight, and growth analyses. All encounters of within-year recaptures were included in the calculation of catch rates.

2.2.3 Catch and Effort

Catch-per-unit-effort, referred to hereafter as catch rate, was expressed as the number of fish captured per kilometre of shoreline sampled per hour of electroshocker operation (units = number of fish/km-h). The catch rate for each session at each site was the sum of the number of fish captured per kilometre of shoreline sampled per hour of electroshocker operation. The average catch rate was calculated by averaging the catch rate from all sites and sessions. The standard error of catch rate was calculated using the square root of the variance of the catch rate from all sites for all sessions divided by the number of sampling events. Fish that were observed and positively identified but not captured were not included in the calculation of catch rate. Prior to 2019, catch rates were calculated using both captured fish and observed fish. A review of available data indicated that observed fish values could be influenced by water clarity as most of these fish are observed further away from the netter and are less visible in turbid conditions. As such, observed fish were not included in the catch rate in 2019 and 2020 and catch rates from prior study years were recalculated. This change in calculation method should be considered when comparing catch rates presented in this report to catch rates presented in reports prior to the 2019 study year.

The percent composition was calculated by dividing the catch of each species by the total catch. Percent composition included only fish captured during the fall Indexing Survey and did not include observed fish, within-year recaptured fish, or fish captured during the spring Goldeye and Walleye Survey.

2.2.4 Size and Age Structure

Length-frequency distributions were constructed for each year (all sections combined), all years combined but separately for each section, and by section within 2020. For all species, body lengths were plotted using 10 mm bins for the length-frequency histograms. Similar to length-frequency, age-frequency plots were constructed by year, for all years combined by section, and by section within 2020.

2.2.5 Body Condition

Weight-at-length is often used as an indicator of fish health, under the assumption that heavier fish for a given length are in better condition (Froese 2006). In this report, two indicators of body condition based on the length and weight of fish were used: Fulton’s body condition factor and relative weight.

Fulton's body condition factor (*K*; Murphy and Willis 1996) was calculated as follows:

$$K = (\frac{W_t}{L^3}) \times 100{,}000$$,

where W_t was a fish's weight (g) and *L* was a fish's fork length (mm). Mean values of condition factor were calculated for each year and section combination, along with their respective 95% confidence intervals. Plots of mean condition factor for all previous years by section were produced for all species that had sufficient data to assess trends.

Fulton's condition factor assumes that growth is isometric, meaning that fish do not change in shape or density as they increase in length, which is reflected by the cubed value of length in the equation. A limitation of Fulton's condition factor is that if the growth of a species or population is not isometric, then values of condition factor will change with increasing length, which makes comparisons of condition between groups of fish (e.g., years or sections) with different length-distributions biased (Blackwell et al. 2000). For this reason, relative weight was also used as an indicator of body condition.

Relative weight (W_r) was calculated for each fish to provide a comparison of individual fish weight to a standard weight (W_s) calculated for that length of fish. Relative weight was calculated as follows:

$$W_r = (\frac{W}{W_s}) \times 100$$

The W_s was calculated from a species-specific equation obtained from published literature (Table 8). As standard weight equations use total length, measured fork lengths were converted into total lengths using equations from the literature. Standard weight (W_s) equations are based on the 75th percentile weight-at-length calculated from individuals across the species' range. The use of the 75th percentile when developing the equation means that the W_s for a particular length and a value of W_r of 100% represent above-average body condition (Gerow et al. 2005). Values of W_r less than 100% indicate fish that have lower body condition (i.e., less plump) than the "above-average" standard, and values greater than 100% indicate fish than have greater body condition (more plump) than this standard. Mean relative weight values were calculated and plotted for each year and section combination, along with their respective 95% confidence intervals.

Table 8: Equations used for calculating standard weights of selected species of fish captured during the Peace River Large Fish Indexing Survey.

Species	Standard Weight Equation	Total Length Equation	Reference
Arctic Grayling	$log_{10}W_s = 5.279 + 3.096log_{10}TL$	$TL = 10.054 + 1.066FL$	Gilham et al. (2021)
Bull Trout	$log_{10}W_s = 5.327 + 3.115log_{10}TL$	$TL = 1.049FL$	Hyatt and Hubert (2000)
Mountain Whitefish	$log_{10}W_s = 5.086 + 3.036log_{10}TL$	$TL = 0.252 + 1.080FL$	Rogers et al. (1996)
Rainbow Trout	$log_{10}W_s = -5.023 + 3.024log_{10}TL$	$TL = -0.027 + 1.072FL$	Simpkins and Hubert (1996)
Walleye	$log_{10}W_s = -5.453 + 3.180log_{10}TL$	$TL = 1.060FL$	Murphy et al. (1990)

2.2.6 Growth

Length-at-age data were used to construct three-parameter von Bertalanffy growth models (Quinn and Deriso 1999) for all species of interest:

$$L_t = L_\infty(1 - e^{-K(t - t_0)})$$

where L_∞ is the asymptotic length of each species, *K* is the rate at which the fish approaches the asymptotic size (i.e., growth rate coefficient), and t_0 is the theoretical time when a fish has length zero. Non-linear regression in R was used to estimate the three parameters. Growth curves were estimated for each year (all sections combined) and separately for each section in 2020, where sample sizes were sufficient. For Rainbow Trout, a two-parameter von Bertalanffy curve (i.e., with the t_0 parameter set to zero) was used because the full model would not converge due to small sample sizes. Differences in *K* or L_∞ between years or sections are interpreted as differences in growth.

Differences in growth or size structure between years were also assessed based individual fork lengths in a particular year compared to mean fork length of other study years. For each study year *i*, the mean fork length of all study years excluding Year *i* was estimated, and the estimated mean was subtracted from the individual fork lengths sampled in Year *i*. The mean and 95% confidence intervals of the estimated differences in fork lengths were then calculated for each year. Differences in mean fork length between years could represent either changes in growth, or size-structure of the population.

Length-weight regressions (Murphy and Willis 1996) were calculated for all species of interest using the equation:

$$W = a \times L^b,$$

where *W* is weight (g), *L* is fork length (mm), and a and b are estimated coefficients. The relationship was transformed using the natural logarithm to linearize the relationship, resulting in the equation:

$$\ln(W) = \ln(a) + b \times \ln(L).$$

The length-weight relationship was used in this report to describe how each species changes in weight as they increase in length. Comparing the estimated coefficients (a and b) or predictions of weight-at-length can be used to assess differences in growth or condition between samples (e.g., years or sections), as was done in some previous years of the Indexing Survey (e.g., Golder and Gazey 2018). Use of the length-weight relationship to assess differences in body condition or growth between years was not conducted in this report.

3.0 RESULTS

3.1 Physical Parameters

3.1.1 Discharge

Discharge in the Peace River is regulated by the operations at WAC Bennett Dam and PCD. In most years, total river discharge gradually decreases from January to early June, increases from early June to mid-July, remains near stable from mid-July to early October, and increases from early October to late December. In 2020, mean daily discharge in the Peace River (i.e., discharge through PCD) was greater than the average of the 2002 to 2019 period from February to mid-April and lower than average in May and June (Figure 2; Appendix C, Figure C1). Discharge increased rapidly in early July and was greater than the historical (2002 to 2019) average during August. Discharge was within the range of the historical (2002 to 2019) daily values for most of the remainder of the year.

During the 2020 study period, mean daily discharge was greater than the previous historical (2002 to 2019) maximum during Session 1, decreased to near-average values during Sessions 2, 3, and 4, and was lower than average during Sessions 5 and 6 (Figure 2).

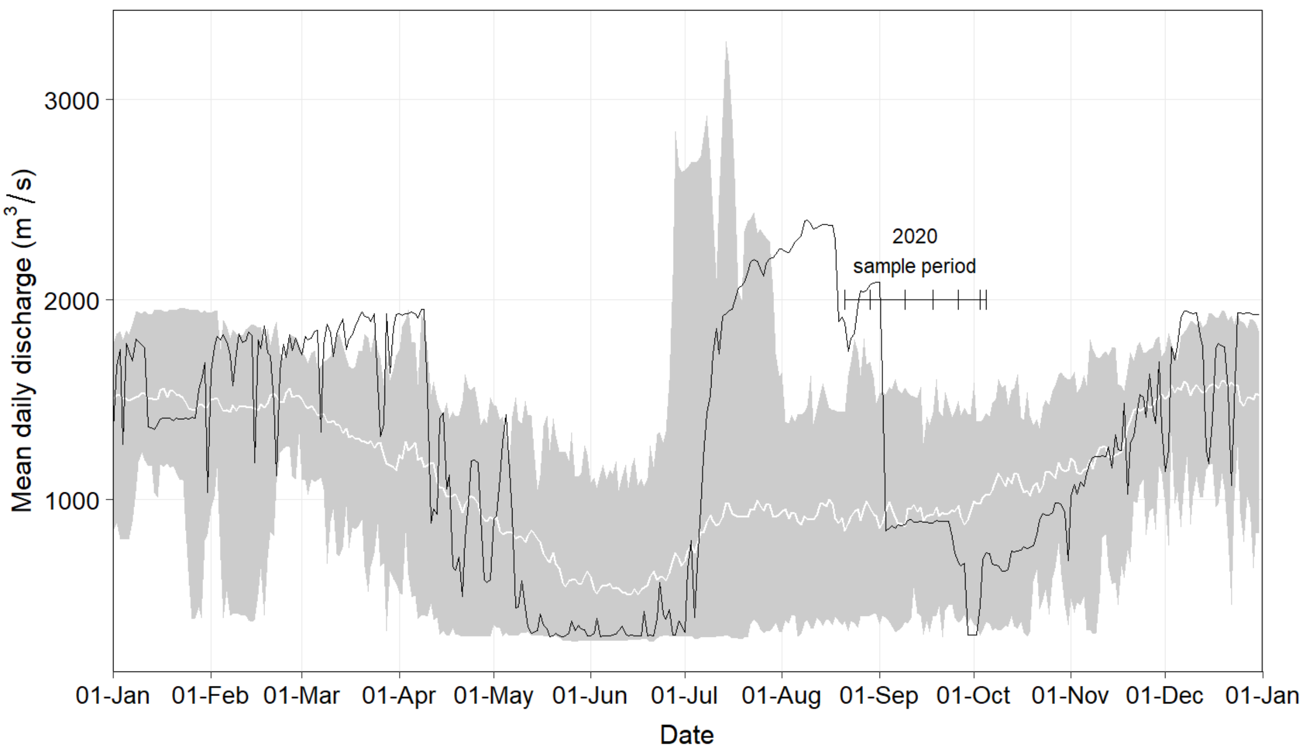


Figure 2: Mean daily discharge (m^3/s) for the Peace River at Peace Canyon Dam, 2020 (black line). The shaded area represents minimum and maximum mean daily discharge values recorded at the dam from 2002 to 2019. The white line represents average mean daily discharge values over the same time period. Vertical lines on the sample period bar represent the approximate start and end times of each sample session.

During the 2020 study period, discharge was relatively high (approximately 2000 m³/s in Section 1) from August 18 to September 1, then decreased on September 2 and remained low for the remainder of the sampling period (approximately 260 to 1000 m³/s; Figure 3). In many previous years, there was substantial within-day variability (up to 1000 m³/s variation) in discharge associated with hydropower generation at PCD (Golder and Gazey 2020). Little within-day variability was observed during the 2020 sampling period.

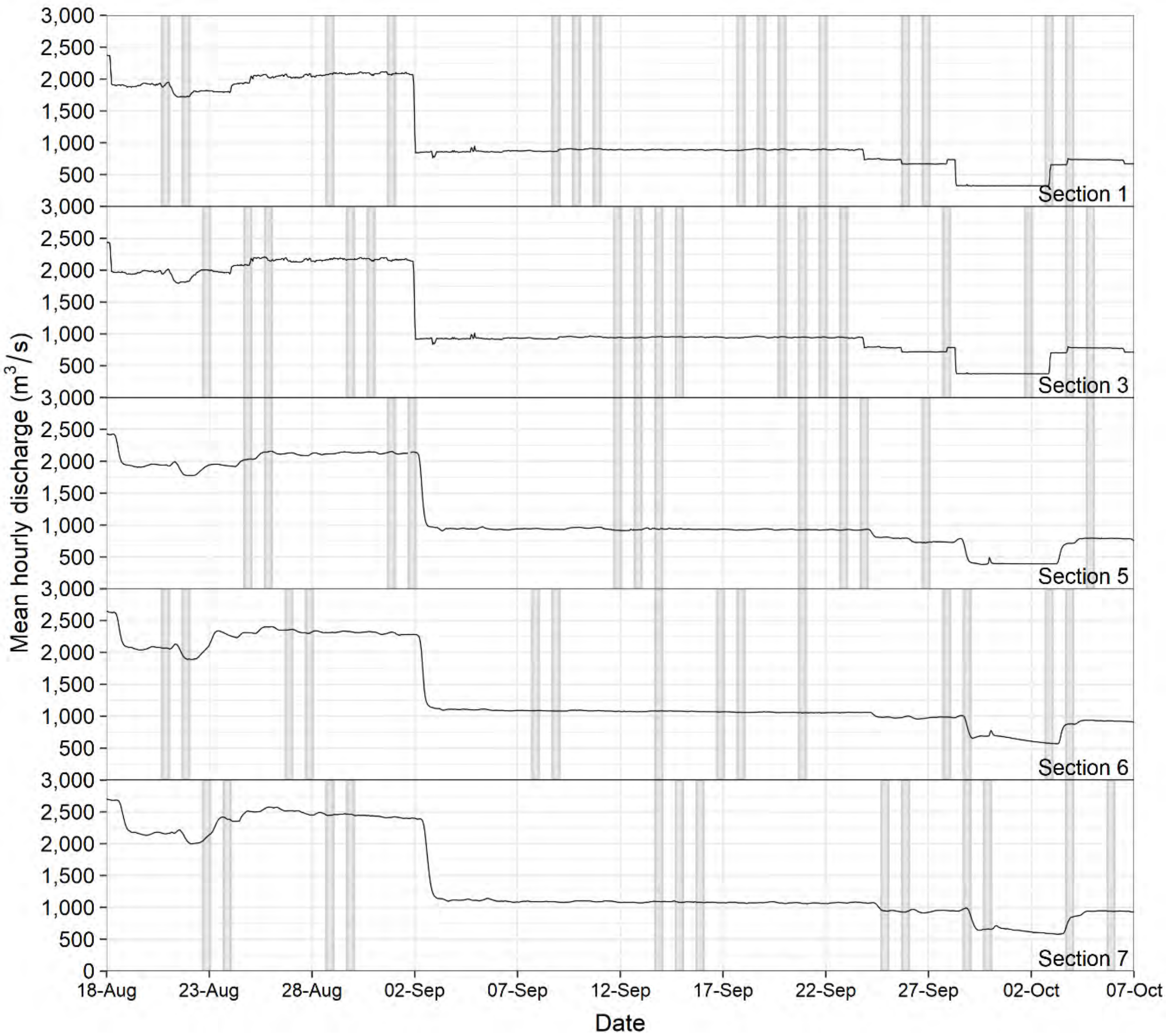


Figure 3: Hourly discharge by river section in the Peace River, 18 August to 7 October 2020. The shaded areas represent the approximate timing of daily sampling (from 9:00 am to 5:00 pm). Section 3 data represent approximate values as detailed in Section 2.1.1. Data for Section 9 are not available for the reasons provided in Section 2.1.1.

3.1.2 Habitat Variables

Mainstream (2012) provides a description of fish habitat available in the study area. Habitat variables collected at each site during the present study are provided in Appendix D, Table D1 and are also included in the Peace River Large Fish Indexing Database (Attachment A). Locations sampled as part of the Indexing Survey and the Goldeye and Walleye Survey are detailed in Appendix A, Table A1 and A2, respectively and illustrated in Appendix A, Figures A1 to A8. Overall, habitat data recorded during the 2020 Indexing Survey did not suggest any substantial changes to fish habitat in any sections when compared to 2019 data.

3.2 General Characteristics of the Fish Community

In 2020, 14,571 fish from 26 different species were captured in the Peace River and select tributary confluences (Table 9). These values do not include fish that were observed but avoided capture and do not include intra-year recaptured individuals. Catch was greatest in Sections 1 and 3 (both with 27% of the total catch) and lowest in Section 9 (6% of the total catch; Table 9). To align with classifications presented in the Site C EIS (Golder et al. 2012), each fish species was categorized into one of four groups. Group 1 consisted of large-bodied fish typically targeted by anglers (i.e., Burbot, Goldeye, Lake Trout, Northern Pike, Rainbow Trout, and Walleye). Group 2 included species considered “passage sensitive” (i.e., Arctic Grayling, Bull Trout, and Mountain Whitefish). Group 3 included planktivorous species (Kokanee and Lake Whitefish), and Group 4 fish consisted of all remaining species (i.e., Northern Pikeminnow, sucker species, and small-bodied fish species). Group 2 fish were most common and comprised 61% of the total catch, with Mountain Whitefish representing 97% of the captured fish in Group 2. Group 4 fish were the second most abundant group and comprised 35% of the total catch. The majority of the Group 4 catch was sucker species (90%). Group 1 fish contributed 3% to the total catch and was dominated by Walleye (57% of the Group 1 catch) and Rainbow Trout (33% of the Group 1 catch). Group 2 fish were infrequently captured, with most of the catch in the upstream sections of the study area. Sixteen of the twenty-six species captured comprised less than 1% of the total catch (Table 9). In general, cold-water species (as defined by Mainstream 2012), such as Bull Trout, Mountain Whitefish, and Rainbow Trout, were more common in upstream sections of the study area and cool-water species (Mainstream 2012), such as Northern Pike and Walleye, were more common in the downstream sections of the study area (Table 9).

Table 9: Number of fish caught by boat electroshocking and their frequency of occurrence in sampled sections of the Peace River, 21 August to 7 October 2020.

Group[a]	Species	Section 1		Section 3		Section 5		Section 6		Section 7		Section 9		All Sections		
		n[b]	%[c]	n[b]	%[c]	n[b]	%[c]	n[b]	%[c]	n[b]	%[c]	n[b]	%[c]	n[b]	%[c]	%[d]
1	Burbot	1	1	1	1	4	8			5	6	5	12	16	4	<1
	Goldeye											4	10	4	1	<1
	Lake Trout	1	1											1	<1	<1
	Northern Pike	1	1			9	18	7	9	3	3	1	2	21	5	<1
	Rainbow Trout	69	93	52	76	4	8	1	1	3	3			129	33	1
	Walleye	2	3	15	22	33	66	68	89	75	87	32	76	225	57	2
Group 1 Subtotal		74	100	68	100	50	100	76	100	86	100	42	100	396	100	3
2	Arctic Grayling	1	<1	20	1	6	1	4	<1	5	1	1	1	37	<1	<1
	Bull Trout	45	1	74	3	36	3	13	1	11	2	8	4	187	2	1
	Mountain Whitefish	3476	99	2646	97	987	96	943	98	446	97	169	95	8667	97	59
Group 2 Subtotal		3522	100	2740	100	1029	100	960	100	462	100	178	100	8891	100	61
3	Kokanee	30	100	8	100	2	100	6	100			2	100	48	100	<1
	Lake Whitefish													0	0	0
Group 3 Subtotal		30	100	8	100	2	100	6	100	0	0	2	100	48	100	<1
4	Flathead Chub			1	<1	2	<1	2	<1	46	5	29	4	80	2	1
	Lake Chub			2	<1	0	<1	6	<1	14	2	11	2	33	1	<1
	Largescale Sucker	76	30	301	29	143	14	320	23	125	15	19	3	984	19	7
	Longnose Dace					4	<1	14	1	16	2	2	<1	36	1	<1
	Longnose Sucker	154	61	638	60	734	72	895	64	611	71	577	87	3609	69	25
	Northern Pikeminnow	11	4	46	4	41	4	43	3	27	3	10	2	178	3	1
	Peamouth							2	<1					2	<1	<1
	Prickly Sculpin			3	<1	4	<1	1	<1	2	<1			10	<1	<1
	Redside Shiner			27	3	37	4	43	3	7	1	2	<1	116	2	1
	Slimy Sculpin	2	1	15	1	22	2	7	1	2	<1			48	1	<1
	Spoonhead Sculpin									1	<1			1	<1	<1
	Spottail Shiner					2	<1	3	<1			1	<1	6	<1	<1
	Trout-perch							12	1	2	<1	1	<1	15	<1	<1
	White Sucker	8	3	22	2	28	3	42	3	3	<1	12	2	115	2	1
	Yellow Perch					1	<1	2	<1					3	<1	<1
Group 4 Subtotal		251	100	1055	100	1018	100	1392	100	856	100	664	100	5236	100	35
All species		3877	27	3871	27	2099	14	2434	17	1404	10	886	6	14,571	100	100

[a] Based on the groupings detailed in Golder et al. (2012)[6].
[b] Includes fish captured and identified to species; does not include fish that avoided capture or within-year recaptured fish.
[c] Percent composition within each fish group.
[d] Percent composition of the total catch.

[6] EIS, Volume 2, Appendix P Part 3 (BC Hydro 2013).

3.3 Arctic Grayling

3.3.1 Biological Characteristics

Fork lengths of Arctic Grayling ranged between 87 and 385 mm; weights ranged between 7 and 738 g. Thirty-four Arctic Grayling were assigned ages using scale samples and inter-year recapture data. Ages ranged between age-0 and age-5 (Table 10).

Table 10: Average fork length, weight, and body condition by age for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

Age	Fork Length (mm)			Weight (g)			Body Condition (*K*)		
	Average ± SD	Range	*n*[a]	Average ± SD	Range	*n*[a]	Average ± SD	Range	*n*[a]
0	99 ± 10	87 – 113	6	10 ± 3	7 – 13	6	1.00 ± 0.12	0.83 – 1.19	6
1	164 ± 27	120 – 210	10	56 ± 31	14 – 120	10	1.15 ± 0.19	0.67 – 1.32	10
2	253 ± 19	240 – 285	5	199 ± 45	164 – 275	5	1.22 ± 0.10	1.09 – 1.34	5
3	358 ± 10	350 – 369	3	563 ± 14	550 – 578	3	1.24 ± 0.11	1.12 – 1.35	3
4	371 ± 21	331 – 385	6	607 ± 110	418 – 738	6	1.18 ± 0.11	0.99 – 1.30	6
5	346 ± 21	324 – 375	4	484 ± 91	395 – 569	4	1.16 ± 0.14	1.06 – 1.36	4

[a] Number of individuals sampled.

The number of Arctic Grayling by age-class (Table 10) and length-frequencies (Figure 4) indicate that both juvenile (age-0; < 120 mm FL) and older (age-2+) age-classes are present in the study area. Historical length-frequency data (Appendix F, Figure F1) showed a variety of length groupings during most study years. Length distributions did not overlap between age-0 to age-2 individuals but did overlap between age-3 and age-5 individuals, suggesting that Arctic Grayling reach sexual maturity in the Peace River at age-3 or older.

The interpretation of age-frequency distributions of Arctic Grayling by section was limited due to the low number of captured and aged individuals in most sections (Figure 5). In 2020 in all sections combined, the most abundant age-class was age-1. Arctic Grayling considered to be age-0 based on fork length (<120 mm) or scale ageing were captured in Sections 5, 6, and 7 but not in Sections 1, 3, or 9. In Sections 6, 7, and 9, the large percentage of age-1 in 2020 and age-0 in 2019 reflect a year of relatively strong recruitment in 2019 in downstream portions of the study area (Appendix F, Figure F4).

Length-at-age and von Bertalanffy growth curves in 2020 showed that mean length-at-age and growth of Arctic Grayling were within the range of values observed in previous study years (Figure 6 and Figure 7). Greater predicted asymptotic length in some years, such as 2003 and 2006 (Figure 7), may have been related to small sample sizes, rather than real differences in growth among years. Length-at-age varied among years but showed no long-term trends among study years (Figure 8). In 2020, the mean length-at-age of age-1 and age-2 Arctic Grayling was lower than most previous study years (Figure 8).

Length-weight regressions for Arctic Grayling had small sample sizes for most sections, which prevented meaningful comparisons among sections (Figure 9). There was little difference in length-weight regressions for Sections 1, 3, and 5 combined compared to Sections 6, 7, and 9 combined for years where data were available for all of these sections (2015 to 2020; Appendix F, Figure F5). The exponent of length-weight regressions was greater than 3.0 in most years indicating slightly positive allometric growth (i.e., fish become more rotund as they increase in length).

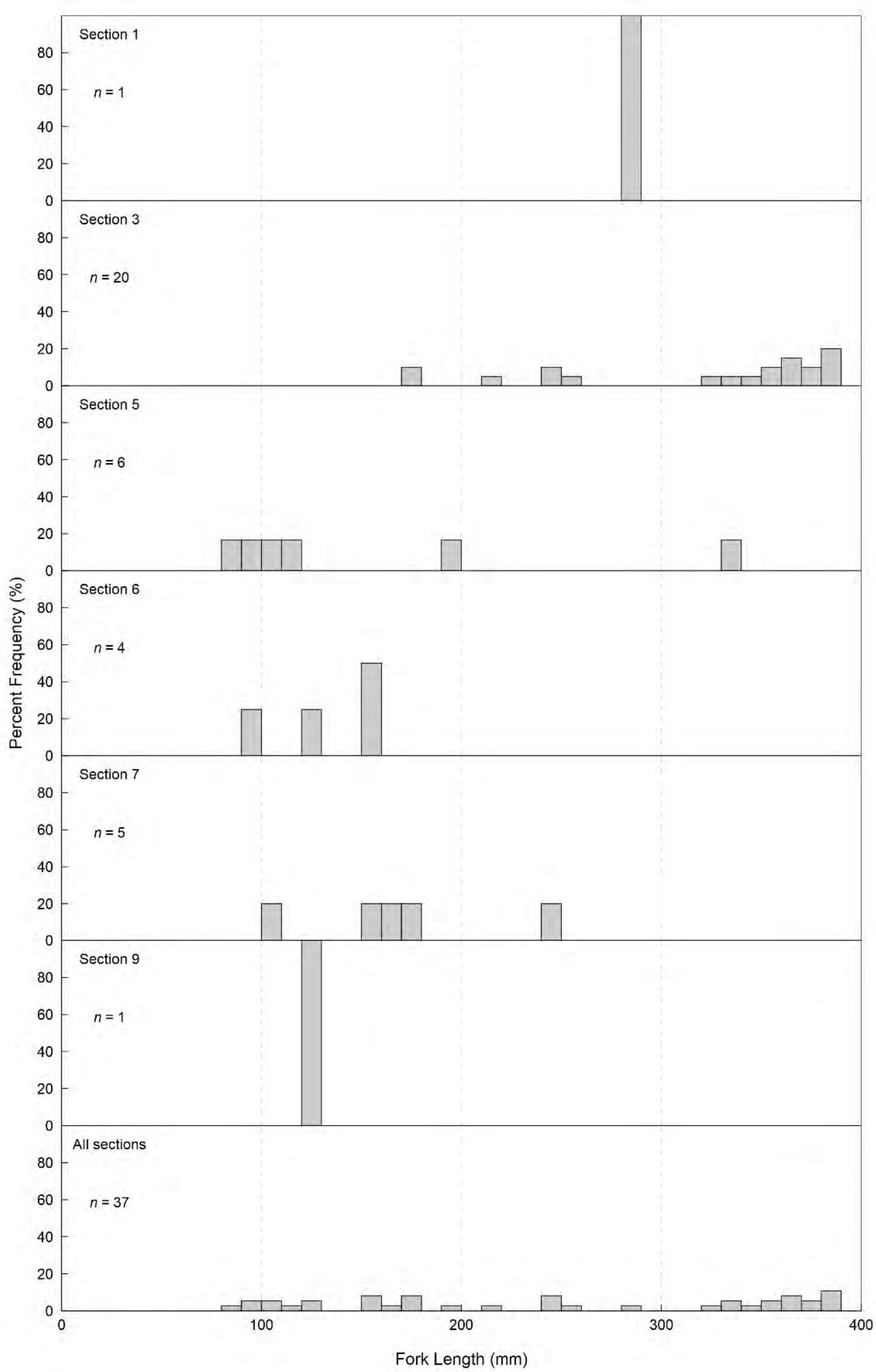


Figure 4: Length-frequency distribution for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

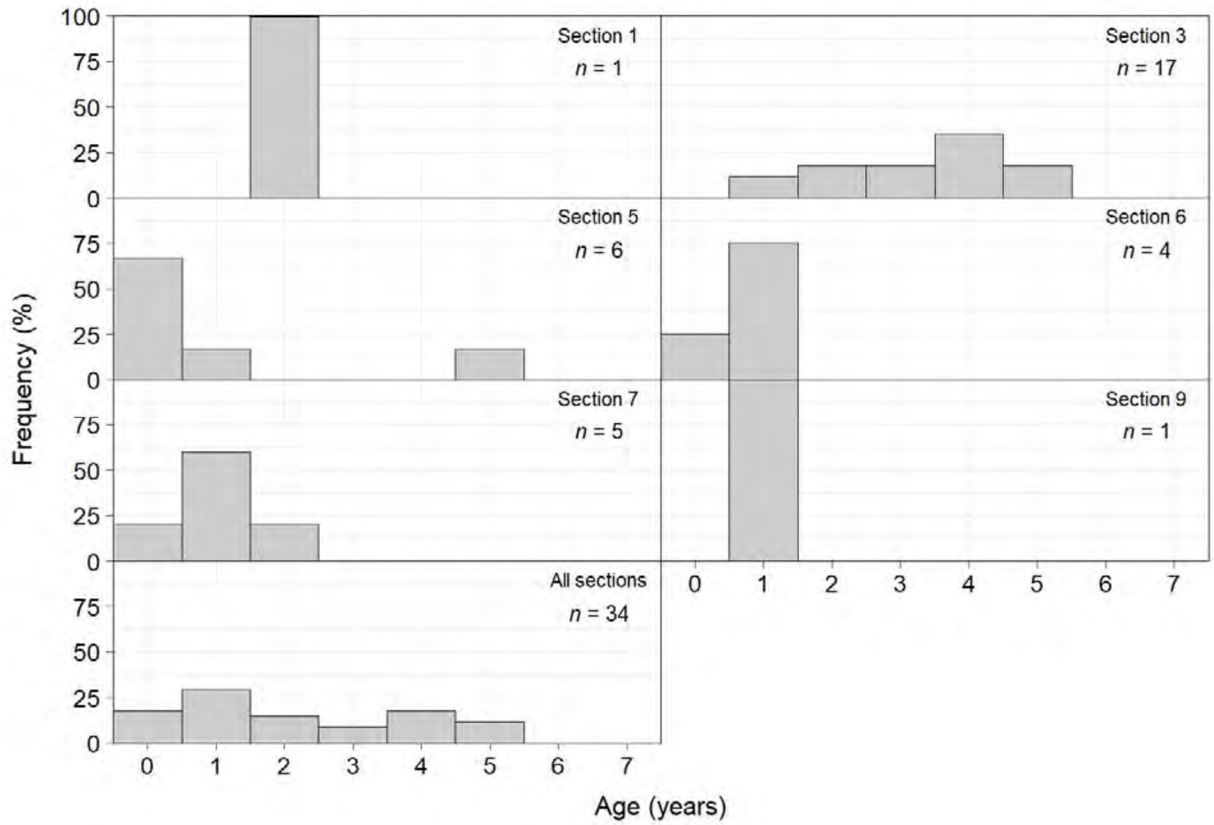


Figure 5: Age-frequency distributions for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

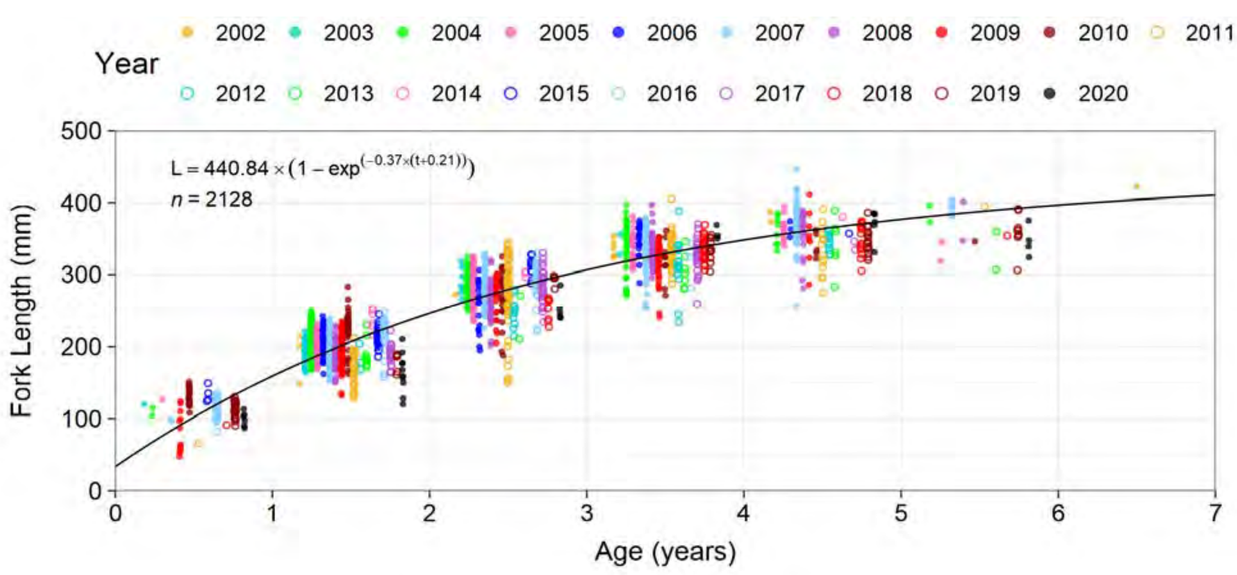


Figure 6: Length-at-age data for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. Data points from each year are offset to prevent overlap.

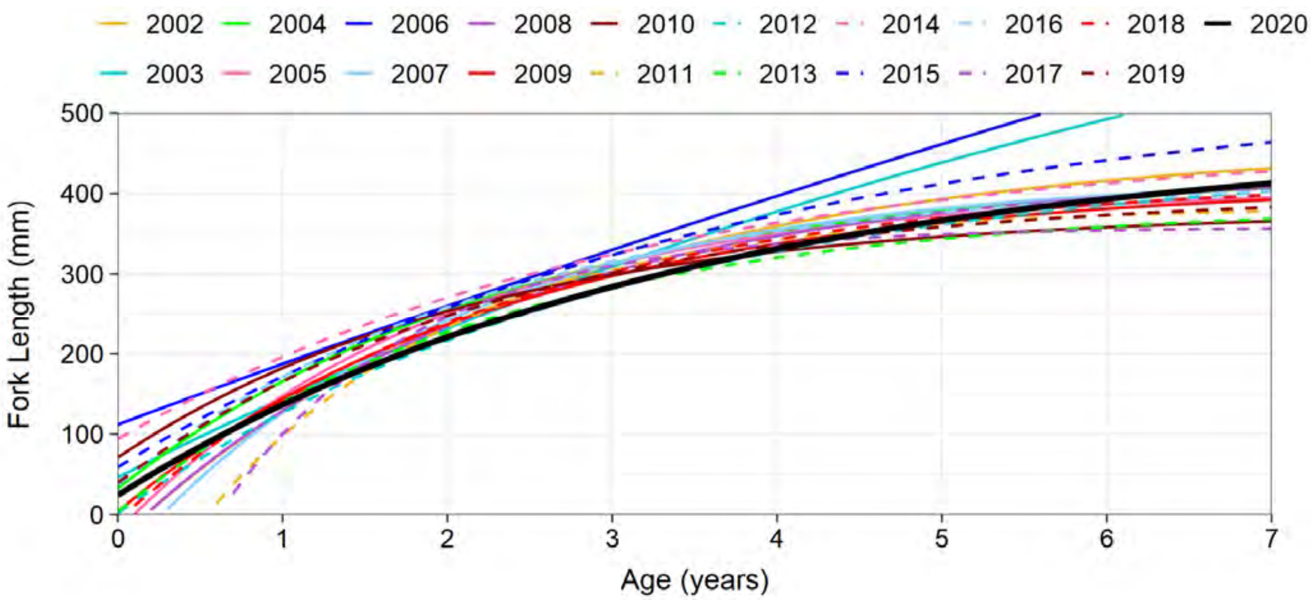


Figure 7: von Bertalanffy growth curves for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020.

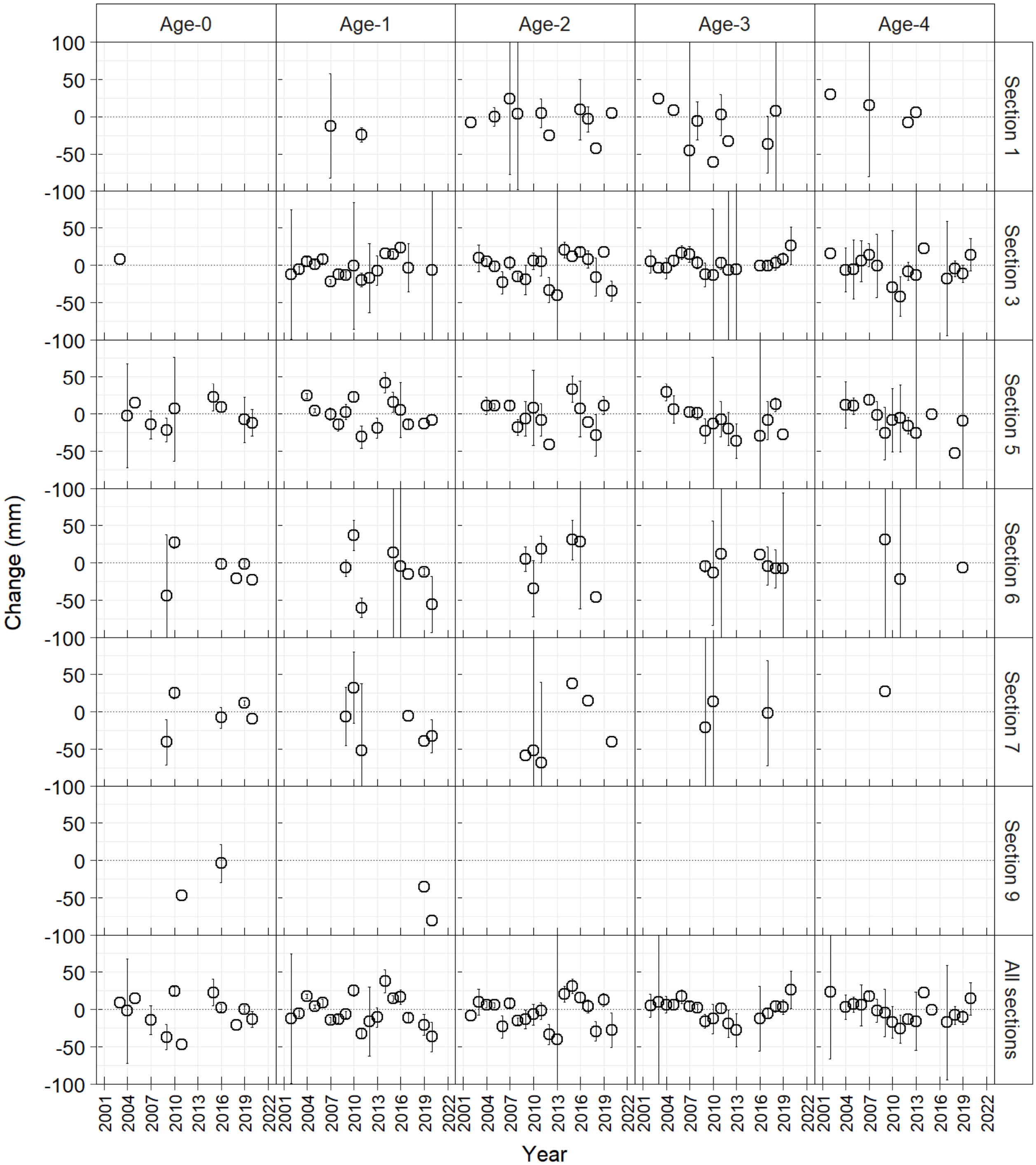


Figure 8: Change in mean length-at-age for Arctic Grayling captured by boat electroshocking in the Peace River, 2002 to 2020. Change is defined as the difference between the annual estimate and the estimate of all years combined. Error bars represent 95% confidence intervals. For Sections 6, 7, and 9, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011, 2013).

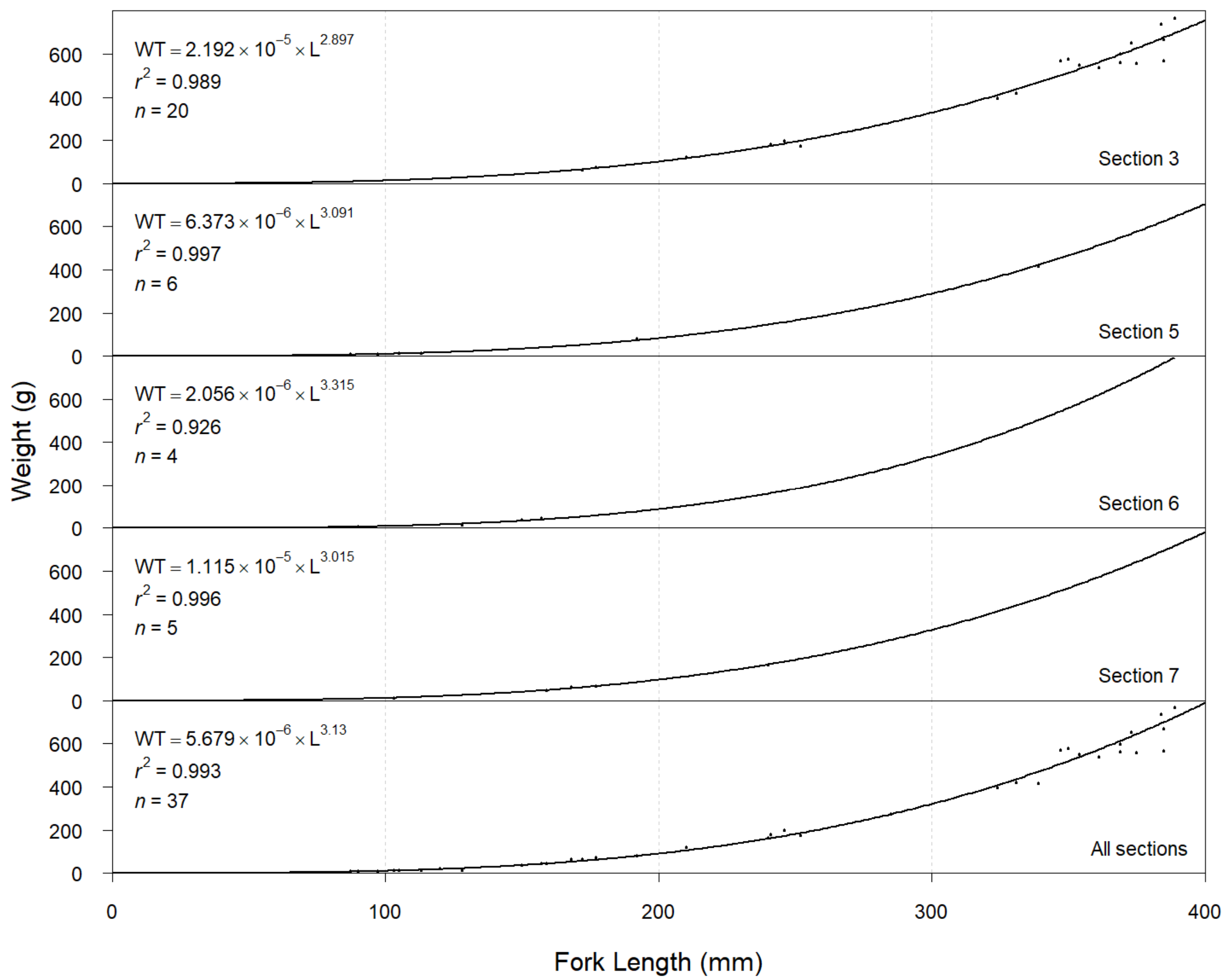


Figure 9: Length-weight regressions for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

The body condition (*K*) of Arctic Grayling captured in 2020 ranged from 0.83 to 1.36. Body condition was lower for age-0 Arctic Grayling than older age-classes (Table 10).

There were no sustained, long-term trends in the body condition of Arctic Grayling between 2002 and 2020 (Figure 10). However, mean values of both Fulton's condition factor (*K*) and relative weight were lower in 2019 and 2020 than previous years. Mean values of relative weight were near or greater than 100% in all years. A relative weight of 100% is based on the 75th percentile of weight-at-length from populations across the species' range and represents a benchmark of better-than-average body condition that is considered desirable for fisheries management (Blackwell et al. 2000); therefore, the relative weight of Arctic Grayling captured during the Indexing Survey suggest good body condition.

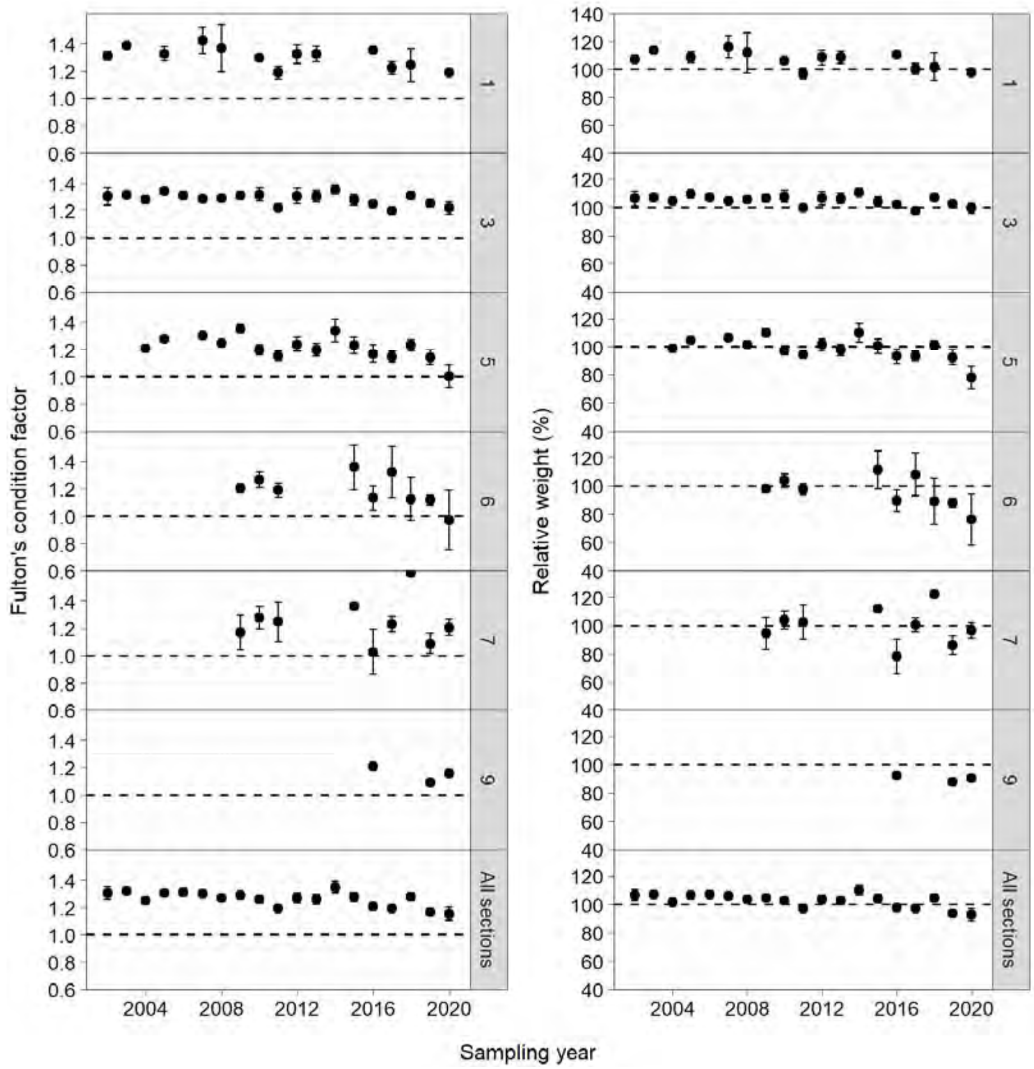


Figure 10: Mean Fulton's body condition factor (*K*) with 95% confidence intervals (CIs) (left pane) and mean relative weight (%) values (right pane) for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. For Sections 6 and 7, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011, 2013).

3.3.2 Catch Rate

Arctic Grayling were consistently captured between 2002 and 2020 in Sections 1, 3, and 5 and consistently captured between 2015 and 2020 in Sections 6, 7, and 9; therefore, changes in catch rates over time were compared for this species using these section groupings (Figure 11). Arctic Grayling catch rates in Sections 1, 3, and 5 declined between 2011 and 2014, increased between 2014 and 2016, and decreased from 2016 (1.6 fish/km-h) to 2020 (0.3 fish/km-h). Confidence intervals overlapped for estimates between 2015 and 2020 for Sections 1, 3, and 5, suggesting that the decrease during this time period was not statistically significant.

In Sections 6, 7, and 9, the catch rate of Arctic Grayling was similar in years between 2015 and 2020

(0.1–0.5 fish/km-h), with the exception of 2019, when catch rate was substantially higher (1.0 fish/km-h). Greater catch rate in 2019 was attributed largely to high catch of age-0 and age-1 individuals in Section 6 (Appendix F, Figure F4). During most study years, Arctic Grayling were more commonly recorded in upstream sections than downstream sections.

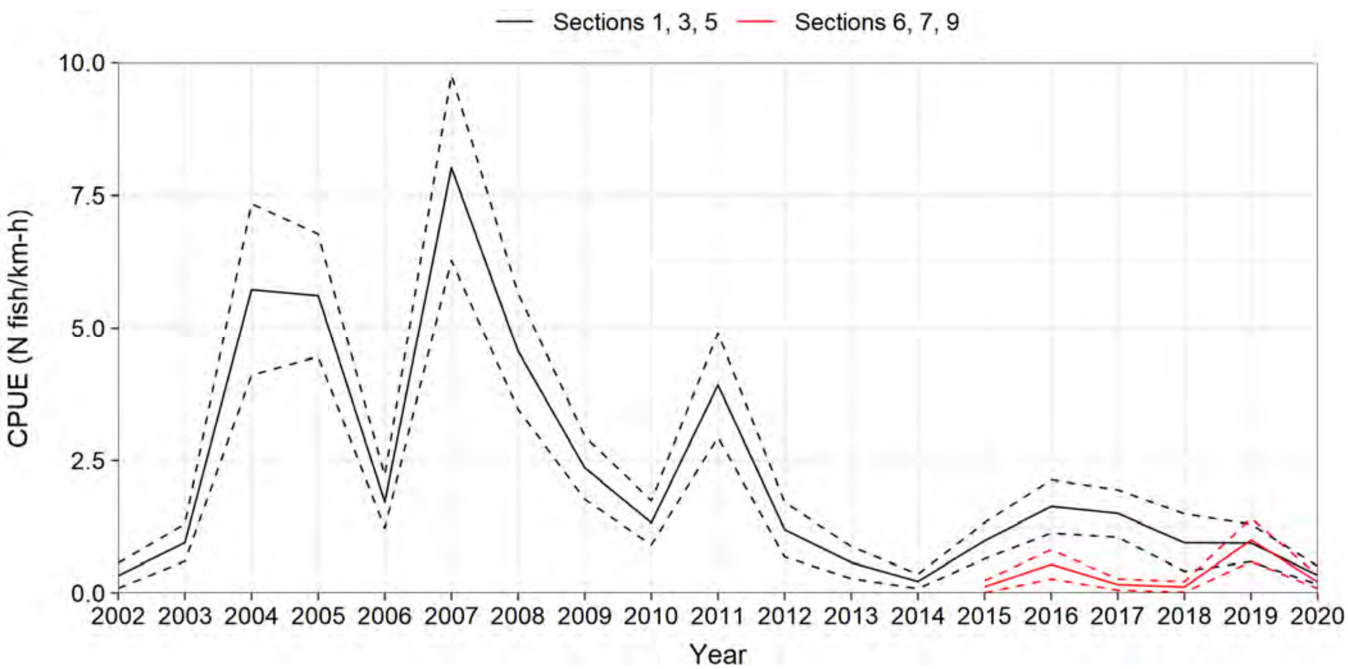


Figure 11: Mean annual catch rates (CPUE) for Arctic Grayling captured by boat electroshocking in Sections 1, 3, and 5 combined and Sections 6, 7, and 9 combined of the Peace River, 2002 to 2020. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. Sections 6, 7, and 9 were not consistently sampled prior to 2015.

3.4 Bull Trout

3.4.1 Biological Characteristics

During the 2020 survey, 187 Bull Trout were captured (i.e., excluding within-year recaptures; Table 9). Fewer Bull Trout were captured in Sections 6, 7, and 9 (range = 8 to 13 individuals) than in Sections 1, 3, and 5 (36 to 74 individuals). Fork lengths ranged between 137 and 865 mm and weights ranged between 28 and 6780 g.

Length-frequency histograms suggest similar size distributions in all sections (Figure 12). More than half of the Bull Trout captured (64%) were between 200 and 400 mm FL, which is consistent with historical results (Appendix F, Figures F7 and F8) and indicative of the use of the area by subadults during the study period. Fish larger than 500 mm FL represented 18% of the Bull Trout catch in 2020, which indicates that adult Bull Trout are also present in the study area during the late summer to fall. However, during the study period, large, sexually mature Bull Trout are less abundant than subadults in the Peace River mainstem because many adults are spawning in tributaries (mainly in the Halfway River watershed; Mainstream 2012). The absence of distinct modes in length-frequency histograms suggests variable growth rates and overlapping size distributions for individual age-classes (Figure 12). Previous studies suggest that juveniles rear in tributaries of the Peace River and most do not enter the Peace River mainstem until age-3 (Mainstream 2012; Golder 2021a).

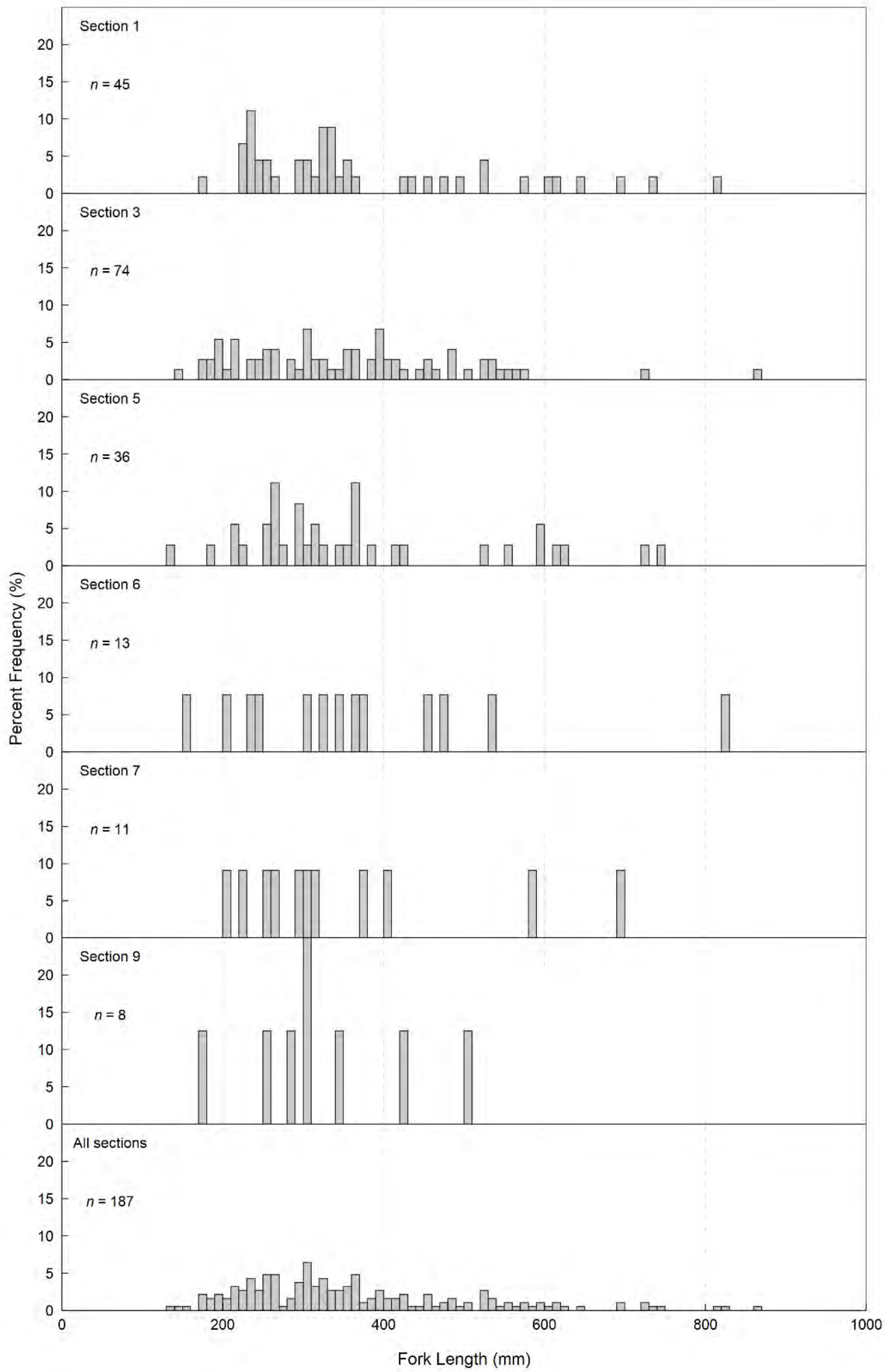


Figure 12: Length-frequency distributions for Bull Trout captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

Ages were not assigned to Bull Trout using analysis of fin rays because of inconsistencies in the age data observed during previous years. In 2020, the dataset for age-related analyses for Bull Trout included individuals classified as age-3 based on their fork length (<240 mm). These data were supplemented with length-at-age data collected between 2017 and 2020 as part of the Tributary Survey (Golder 2018–2021a), data collected during Site C baseline studies (Mainstream 2010, 2011, 2013), and ages calculated based on the number of years that inter-year recaptured fish were at-large. Analyses included age-0 to age-3 Bull Trout captured in the Halfway River watershed between 2017 and 2020, and age-3 and older individuals captured in the Peace River between 2002 and 2020, resulting in a combined dataset of 2132 ages.

Length-at-age data indicate a change in Bull Trout growth rate at age-3, which is related to Bull Trout migrating into the Peace River from rearing tributaries at this age (Figure 13). Based on length-frequency data, age-0 Bull Trout in the Chowade River and Cypress and Fiddes creeks are approximately 50 mm FL in length by late July (Golder 2021a). While rearing in tributaries, Bull Trout appear to grow, on average, 50 mm per year, from approximately 50 mm at age-0, to 100 mm at age-1, 150 mm at age-2, and 200 mm at age-3 (Figure 13). The sample size of age-4 and older Bull Trout that were assigned an age based on recapture history was very small (n = 6), but the limited data suggest an increase in growth rate to approximately 100 mm per year in the Peace River mainstem (Figure 13)

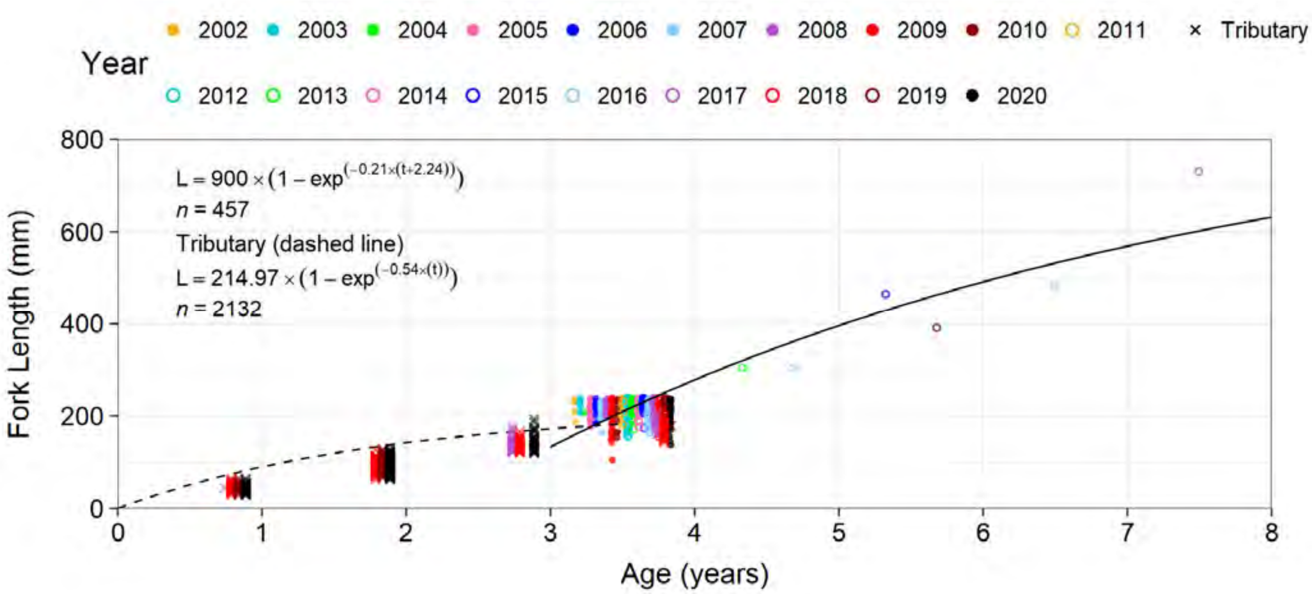


Figure 13: von Bertalanffy growth curve for Bull Trout captured in the Peace River watershed between 2002 and 2020. Figure includes data from the current Indexing Survey and data collected during the Site C Reservoir Tributaries Fish Population Indexing Survey (Golder 2018–2021a) and Site C baseline studies (Mainstream 2010, 2011, 2013).

In 2020, length-weight regressions were similar to historical study years (Appendix F, Figure F9) with typical values of the exponent (b) near 3.0, suggesting isometric growth (i.e., no change in body shape with increase in length). Length-weight regressions were similar among sections and did not suggest any substantial differences in the length-weight relationship among sections (Figure 14).

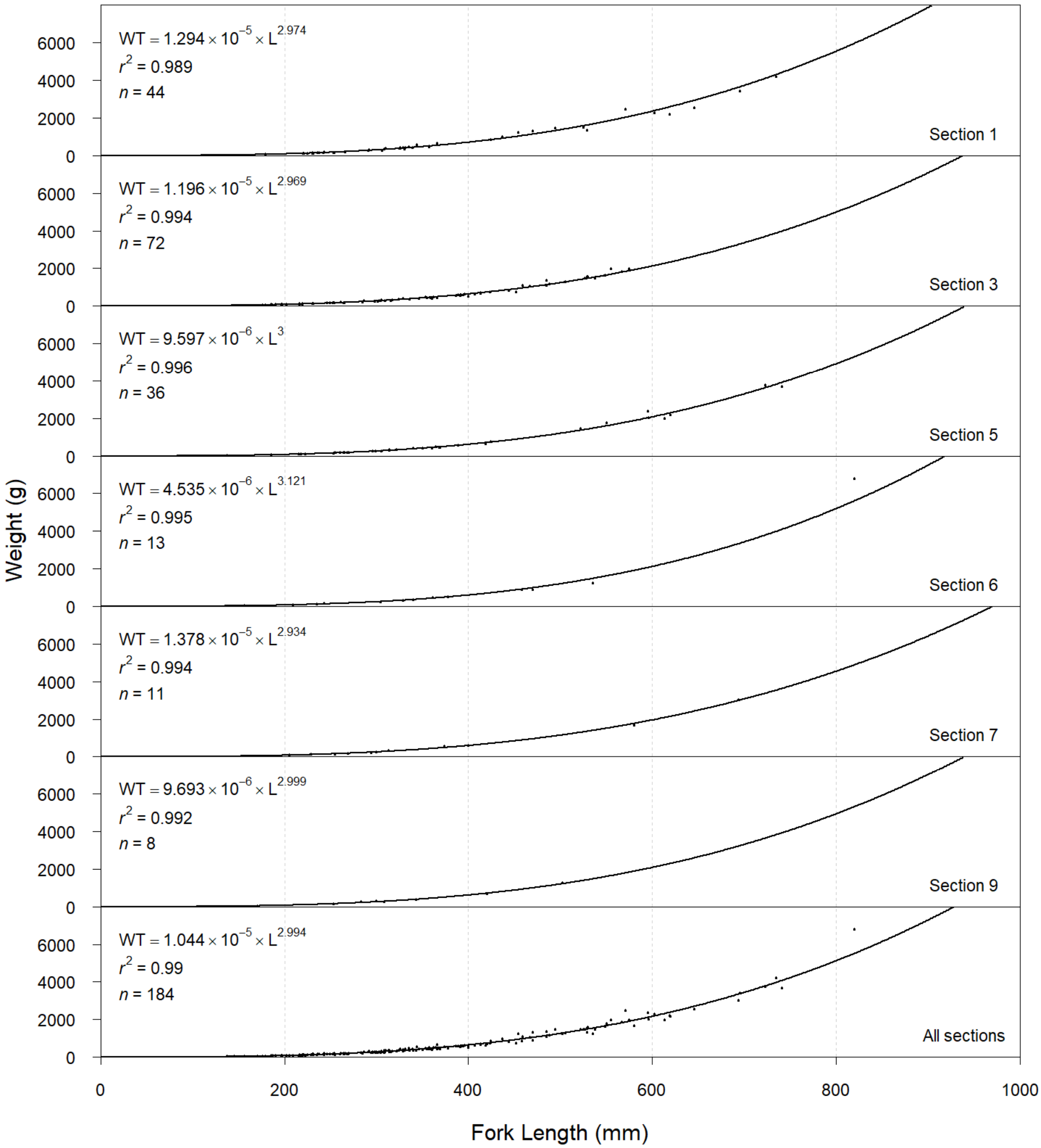


Figure 14: Length-weight regressions for Bull Trout captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

In all sections combined, mean values of both the body condition (*K*) and relative weight were lower in 2016 to 2020 than previous years (Figure 15). This trend was observed in most sections, although there were some exceptions, such as greater body condition and relative weight in Section 1 in 2020 compared to the previous five years.

During most study years, body condition estimates were greater for Section 1 (approximately 1.02 to 1.15) than the other sections (0.92 to 1.10). Relative weight estimates tracked closely with body condition estimates for most sections and study years. Over all sections combined, mean annual relative weights ranged from 91.3% to 100.5%.

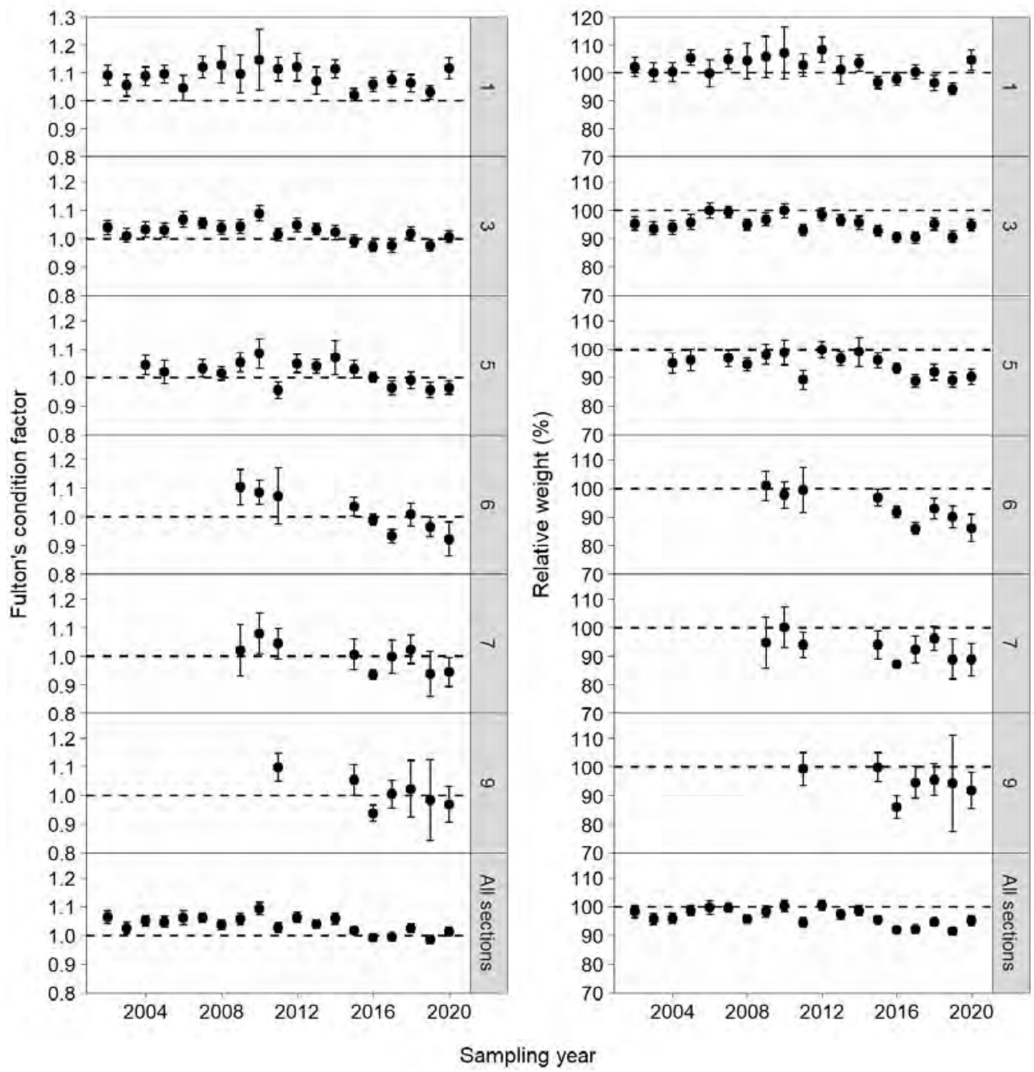


Figure 15: Mean Fulton's body condition factor (*K*) with 95% confidence intervals (CIs) (left pane) and mean relative weight (%) values (right pane) for Bull Trout captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. For Sections 6, 7, and 9, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011, 2013).

3.4.2 Catch Rate

Bull Trout were consistently captured between 2002 and 2020 in Sections 1, 3, and 5 and in Sections 6, 7, and 9; therefore, changes in catch rates over time were compared for this species using these section groupings (Figure 16). In Sections 1, 3, and 5, Bull Trout catch rates were relatively stable between 2002 and 2020, ranging from a low of approximately 2 fish/km-h in 2006 to a high of 6 fish/km-h in 2011. The catch rate of Bull Trout in 2020 (3 fish/km-h) was similar to the average catch rate recorded for this species over the previous 18 years.

From 2015 to 2020, catch rates of Bull Trout were lower in Sections 6, 7, and 9 than in Sections 1, 3, and 5. Catch rates for Sections 6, 7, and 9 indicate a gradual decline in Bull Trout abundance from 2016 (1.8 fish/km-h) to 2020 (0.7 fish/km-h).

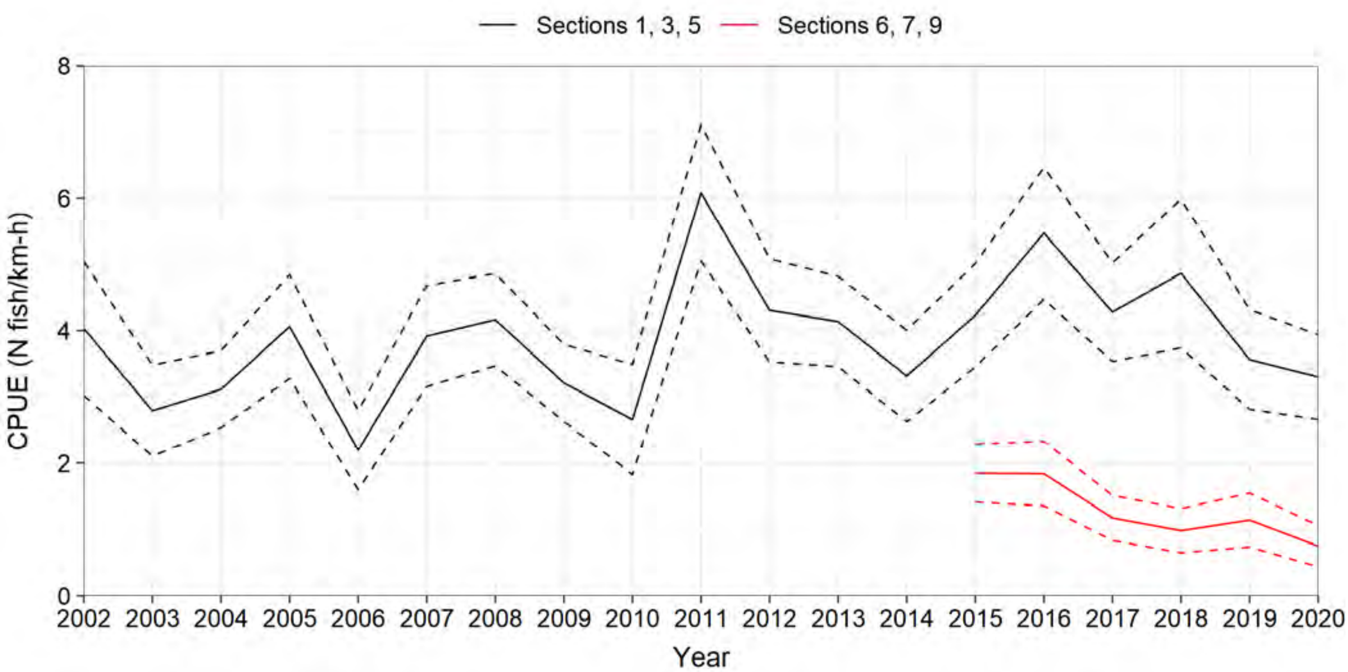


Figure 16: Mean annual catch rates (catch-per-unit effort [CPUE]) for Bull Trout captured by boat electroshocking in Sections 1, 3, and 5 combined and Sections 6, 7, and 9 combined of the Peace River, 2002 to 2020. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. Sections 6, 7, and 9 were not consistently sampled prior to 2015.

3.5 Burbot

3.5.1 Biological Characteristics

In 2020, 16 Burbot were captured and an additional 27 Burbot were observed but avoided capture. Total lengths of Burbot ranged between 230 and 620 mm (Figure 17) and weights ranged between 47 and 1678 g. Ageing structures were not collected from Burbot.

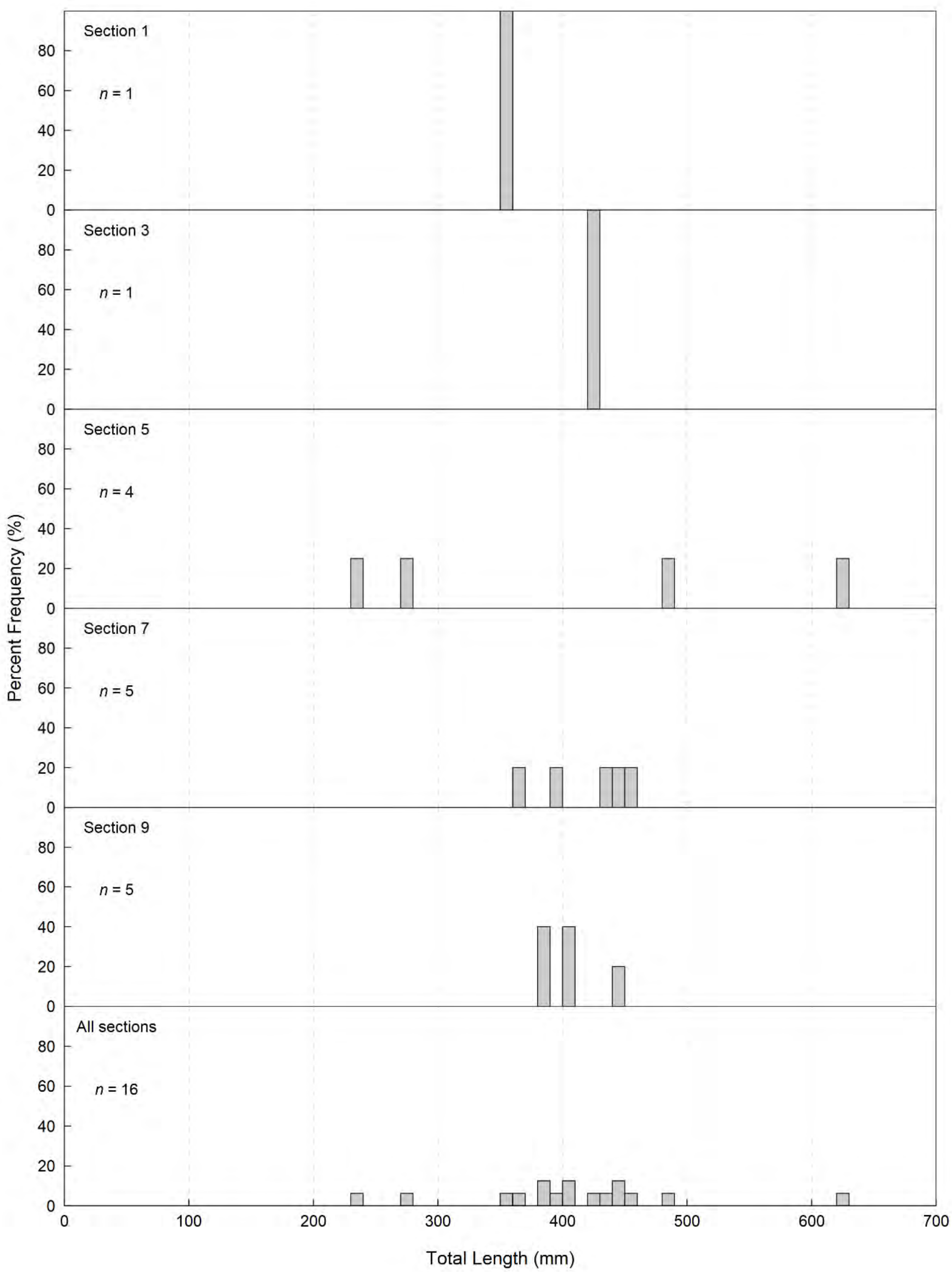


Figure 17: Length-frequency distributions for Burbot captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

Most (88%) of the Burbot captured in 2020 were larger than 300 mm TL. Age-0 Burbot (i.e., fish less than approximately 150 mm TL) were not recorded in 2020 (Figure 17). The variable catch rates of adult Burbot each year coupled with low age-0 encounter rates each year suggest that the area is primarily used by subadults and adults during the study period and that recorded densities may vary with habitat conditions. Greater Burbot catch typically occurs during turbid water years (e.g., 2016 and 2019; Attachment A); therefore, greater Burbot abundance in the mainsteam of the Peace River within the study area may not reflect greater Burbot abundance within the larger Peace River watershed.

3.5.2 Catch Rate

The catch rate of Burbot in 2020 was near average compared to previous years from 2015 to 2019 (Figure 18). Catch rate was much higher in 2019 (0.7 fish/km-h) than all other years (<0.4 fish/km-h). Burbot were encountered in all sections except Section 6 in 2020, with the greatest numbers captured in Sections 7 and 9 (Table 9). Greater catch of Burbot in Sections 7 and 9 may be indicative of this species' preference for cool/turbid waters, which are more common in the downstream portions of the study area (Mainstream 2012). Burbot were not consistently targeted prior to 2015; therefore, the 2002 to 2014 study years were excluded from the analysis.

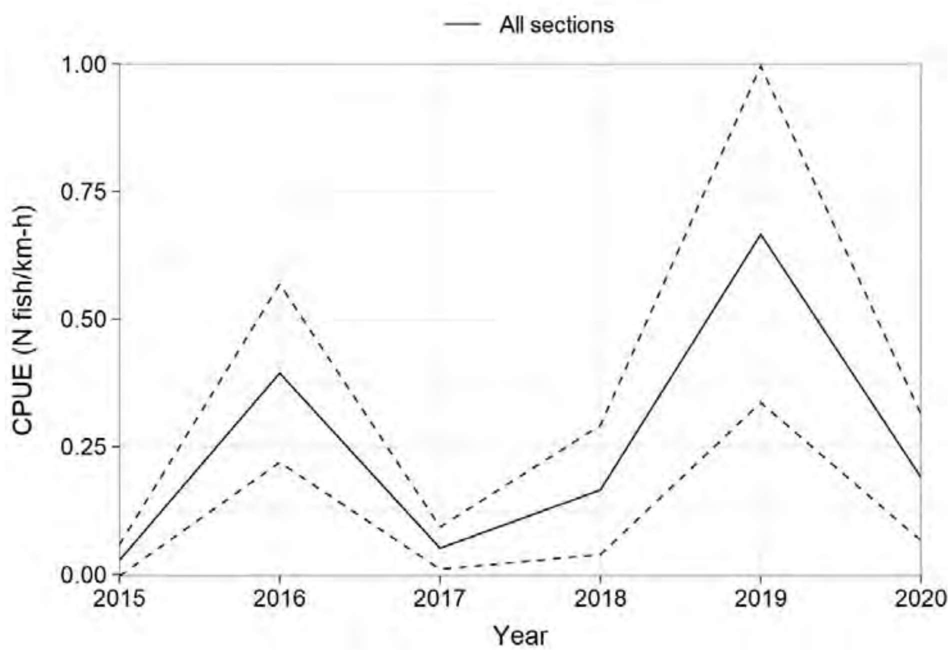


Figure 18: Mean annual catch rates (catch-per-unit effort [CPUE]) for Burbot captured by boat electroshocking in all sections of the Peace River combined, 2015 to 2020. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because Burbot were not actively targeted during these study years.

3.6 Goldeye

3.6.1 Biological Characteristics

Four Goldeye were captured and four were observed but not captured during the 2020 Indexing Survey. Goldeye were not captured or observed during the Goldeye and Walleye Survey in 2020 (see Section 3.14). Fork lengths of captured Goldeye ranged between 352 and 400 mm, and weights ranged between 525 and 828 g. Length frequency histograms and body condition summaries are not presented because they were generally uninformative due to the low number of captured fish. Length, weight, and ages of each captured Goldeye are presented in Table 11.

Table 11: Life history measurements and capture information for all Goldeye captured in 2020 as part of the Peace River Large Fish Indexing Survey.

Capture Date	Site Name	Fork Length (mm)	Weight (g)	Body Condition (*K*)	Age	Tag Number
27-Aug-20	0905	400	681	1.06	16	900230000209719
27-Aug-20	09SC053	395	737	1.20	-	900230000211392
16-Sep-20	0902	395	828	1.34	15	900230000269437
01-Oct-20	0911	352	525	1.20	-	900230000204095

Fin ray samples were collected from all four of the Goldeye captured in 2020. These samples were provided to BC Hydro for potential microchemical analysis. Two Goldeye were assigned ages based on scale samples, with ages of 15 and 16. The other two Goldeye were not assigned ages due to discrepancy between the ages assigned between different analysts. Scales are not the preferred structure for assigning ages to older Goldeye (MacKay et al. 1990), and these ages should be interpreted with caution. All Goldeye captured in 2020 were considered adults based on their fork length.

All of the Goldeye encountered during the 2020 Indexing Survey were captured in Section 9. During the 19-year Indexing Survey study period, Goldeye have not been recorded upstream of the Pine River confluence (i.e., upstream of Section 6); however, Goldeye were captured in Section 5 during a Peace River Fish Inventory Study (Mainstream 2010).

3.6.2 Catch Rate

Goldeye were first encountered during the Indexing Survey in 2015. Between 2015 and 2018, Goldeye catch rates were low (Figure 19). Although still low and uncertain, the catch rate for Goldeye in 2019 was more than three times the average rate recorded for this species between 2015 and 2018. In 2020, the number of Goldeye captured (n=4) and the Goldeye catch rate (0.08 fish/km-h) were within the range observed in previous years.

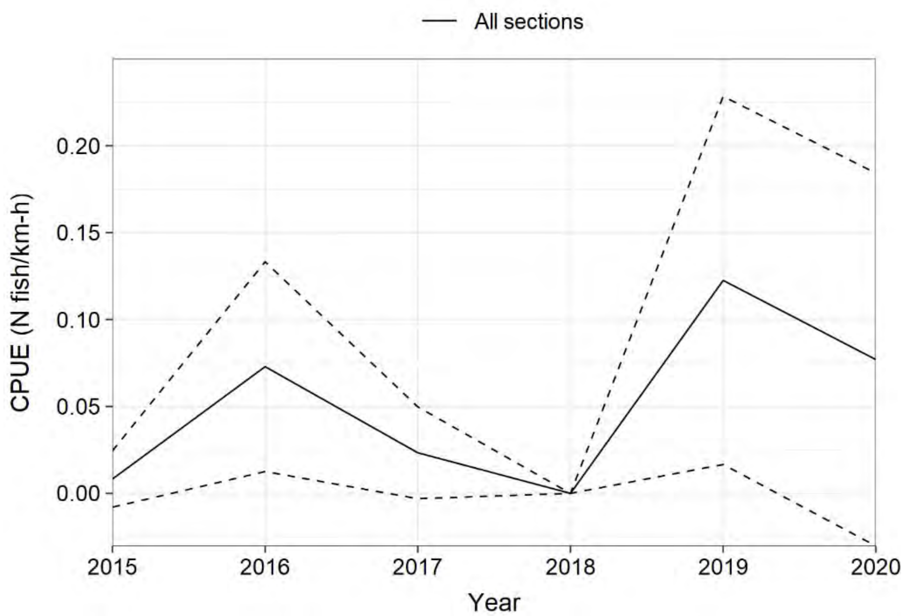


Figure 19: Mean annual catch rates (catch-per-unit effort [CPUE]) for Goldeye captured by boat electroshocking in all sections of the Peace River combined, 2015 to 2020. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because Sections 6, 7, and 9 were not sampled during these years.

3.7 Largescale Sucker

3.7.1 Biological Characteristics

During the 2020 survey, 984 Largescale Sucker were captured (i.e., excluding within-year recaptures; Table 9). Of these 984 fish, 674 were measured for length and weight. Fork lengths ranged between 85 and 594 mm, and weights ranged between 9 and 2473 g.

Length-frequency histograms for Largescale Sucker suggest some differences in length distribution among sections (Figure 20). Largescale Sucker smaller than 300 mm were not captured in Section 1 but were captured in all other sections. Nearly all of the captured Largescale Suckers were less than 400 mm in Section 9. Large fish (i.e., 400–600 mm FL) were the greatest percentage of the catch in Sections 1, 5, 6, and 7, which is consistent with study results from 2015 to 2019 (Golder and Gazey 2016–2020).

Mean body condition (*K*) in 2020 was near the long-term average in Sections 1, 3, and 9 (Figure 21). In Sections 5, 6, and 7, body condition was generally lower from 2016 to 2020 relative to earlier study years. As was observed for some other species (e.g., Figure 15), the mean body condition of Largescale Sucker was greater in Section 1 (K = 1.30) than all other sections downstream (K = 1.22 to 1.26). Relative weights were not calculated for Largescale Sucker.

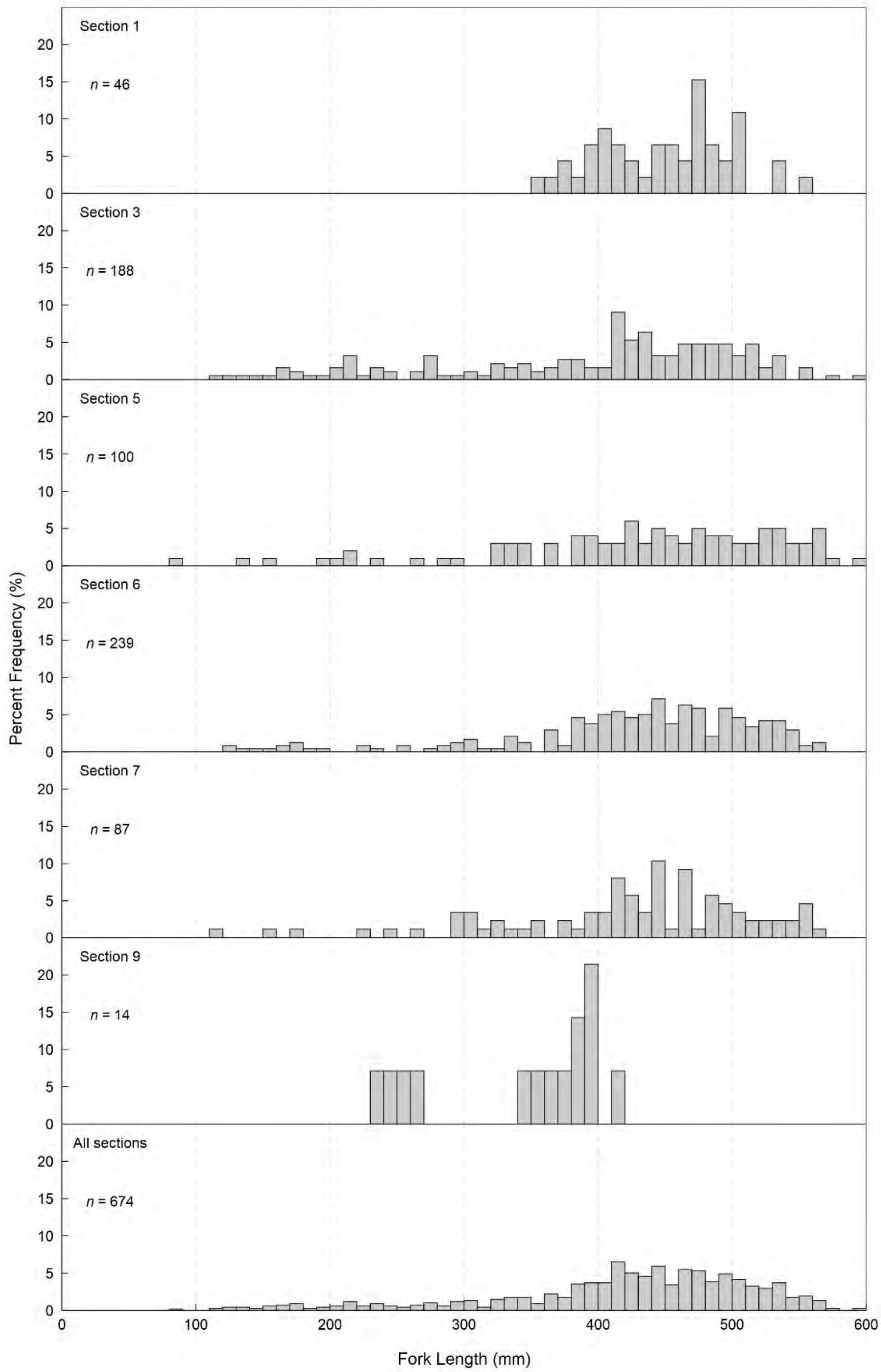


Figure 20: Length-frequency distributions for Largescale Sucker captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

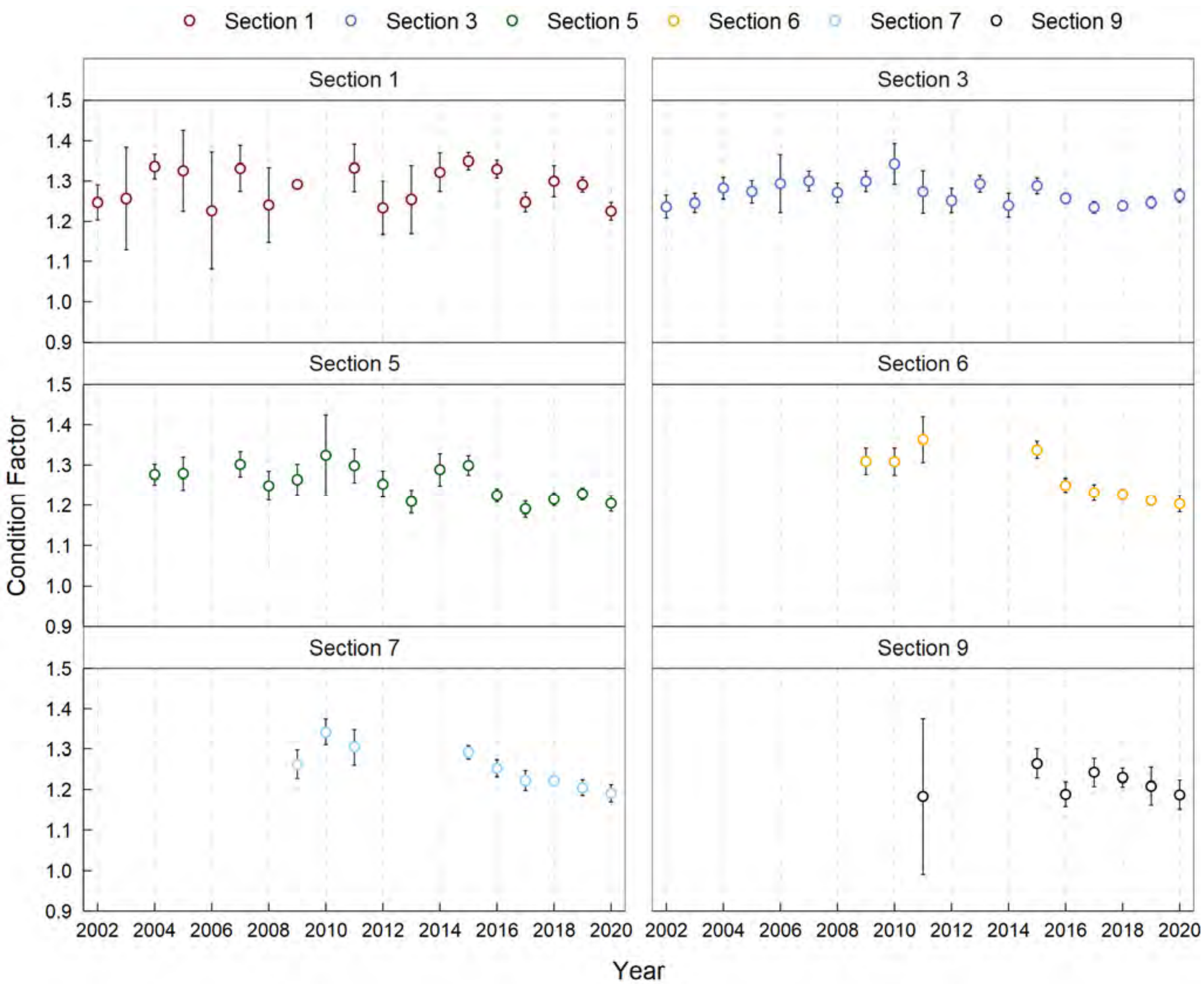


Figure 21: Mean Fulton's body condition factor (*K*) with 95% confidence intervals (CIs) for Largescale Sucker captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. For Sections 6, 7, and 9, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011, 2013).

In 2020, the length-weight regression for Largescale Sucker from all sections had an exponent of 2.997 (Figure 22) indicating near isometric growth. Values of the exponent were close to 3 in all sections, which does not suggest any large differences in the length-weight relationship between Largescale Sucker captured in different sections. In 2020, the length-weight relationship was similar to previous study years and did not suggest any large or sustained trends over time (Appendix F, Figure F23).

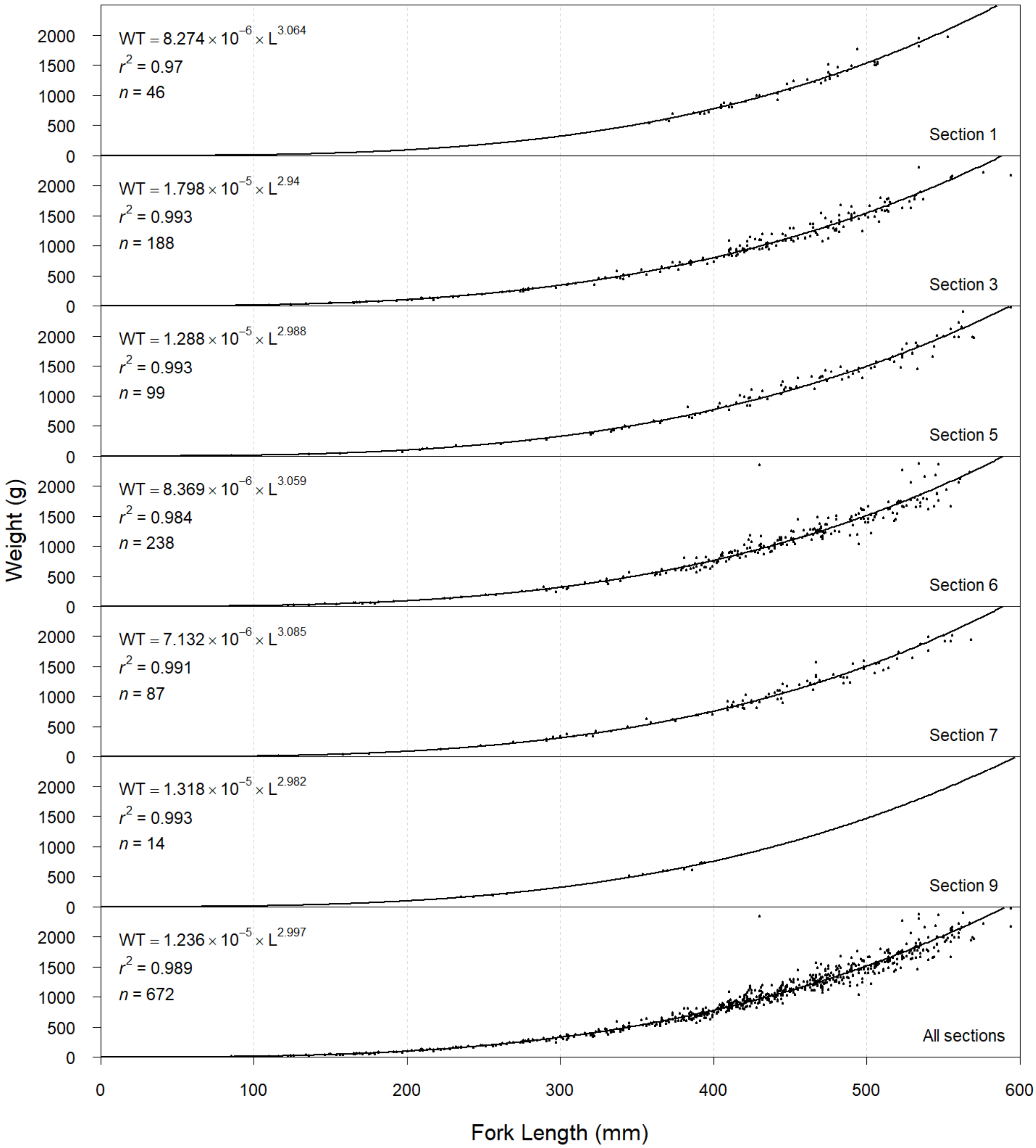


Figure 22: Length-weight regressions for Largescale Sucker captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

3.7.2 Catch Rate

Catch rates for Largescale Sucker were relatively stable from 2015 to 2020 and ranged between a low of 9 fish/km-h in 2018 and a high of 13 fish/km-h in 2016 (Figure 23). Largescale Sucker were not consistently targeted prior to 2015; therefore, the 2002 to 2014 study years were excluded from the analysis.

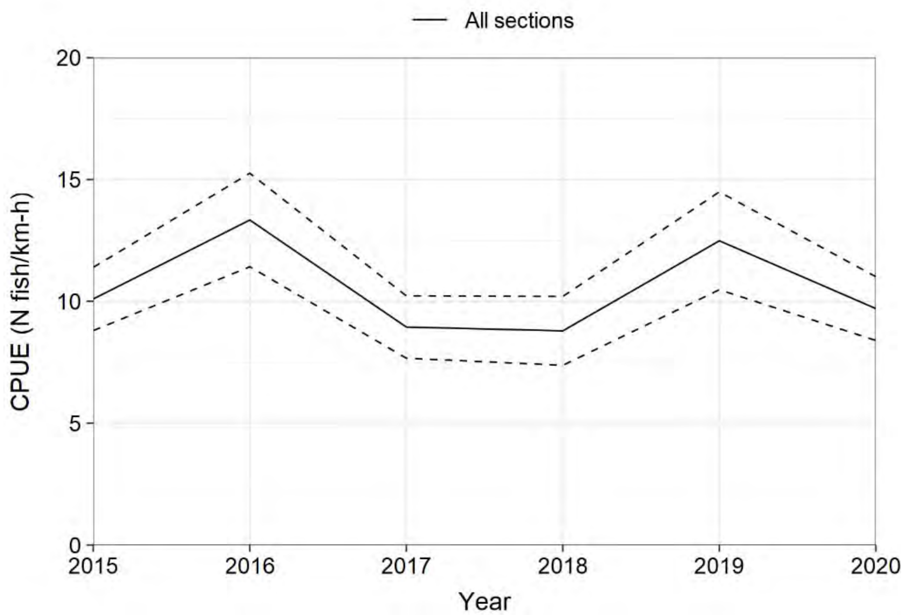


Figure 23: Mean annual catch rates (catch-per-unit effort [CPUE]) for Largescale Sucker captured by boat electroshocking in all sections of the Peace River combined, 2015 to 2020. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because Sections 6, 7, and 9 were not sampled during these years.

3.8 Longnose Sucker

3.8.1 Biological Characteristics

During the 2020 survey, 3609 Longnose Sucker were captured (i.e., excluding within-year recaptures; Table 9). Of these 3609 fish, 2601 were measured for length and weight. Fork lengths ranged between 75 and 515 mm, and weights ranged between 5 and 1764 g.

For Longnose Sucker, a lack of distinct modes in length-frequency histograms for most sections suggest that the sample comprised multiple age-classes with overlapping length distributions (Figure 24). Consistent with most previous years (Appendix F, Figures F17 and F18), the majority of Longnose Sucker captured in 2020 were between 350 and 450 mm FL in all sections. The length distribution was generally similar among sections in 2020, with the exception of a smaller percentage of small (<350 mm FL) Longnose Sucker in Section 1 than other sections.

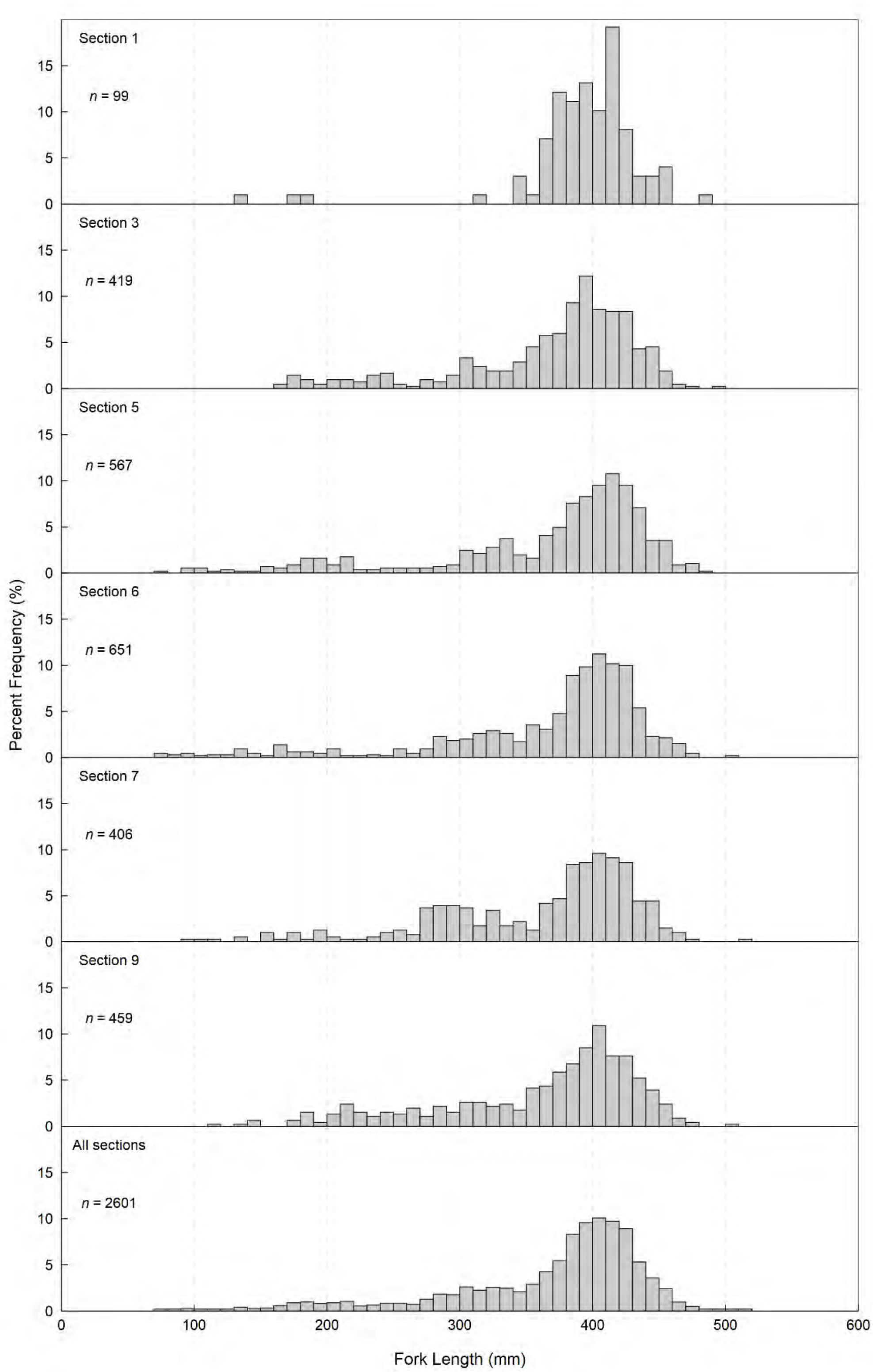


Figure 24: Length-frequency distributions for Longnose Sucker captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

The body condition of Longnose Sucker declined in most sections between 2015 and 2020 (Figure 25). The greatest declines over this time period were in Section 1 (K = 1.4 in 2015 and K = 1.24 in 2020) and Section 7 (K = 1.29 in 2015 and K = 1.18 in 2020). Body condition generally declined with increasing distance downstream of PCD with the greatest values recorded in Section 1 (K = 1.30) and the lowest values recorded in Section 9 (K = 1.20). A similar trend was observed in Largescale Sucker (Figure 21). Relative weights were not calculated for Longnose Sucker.

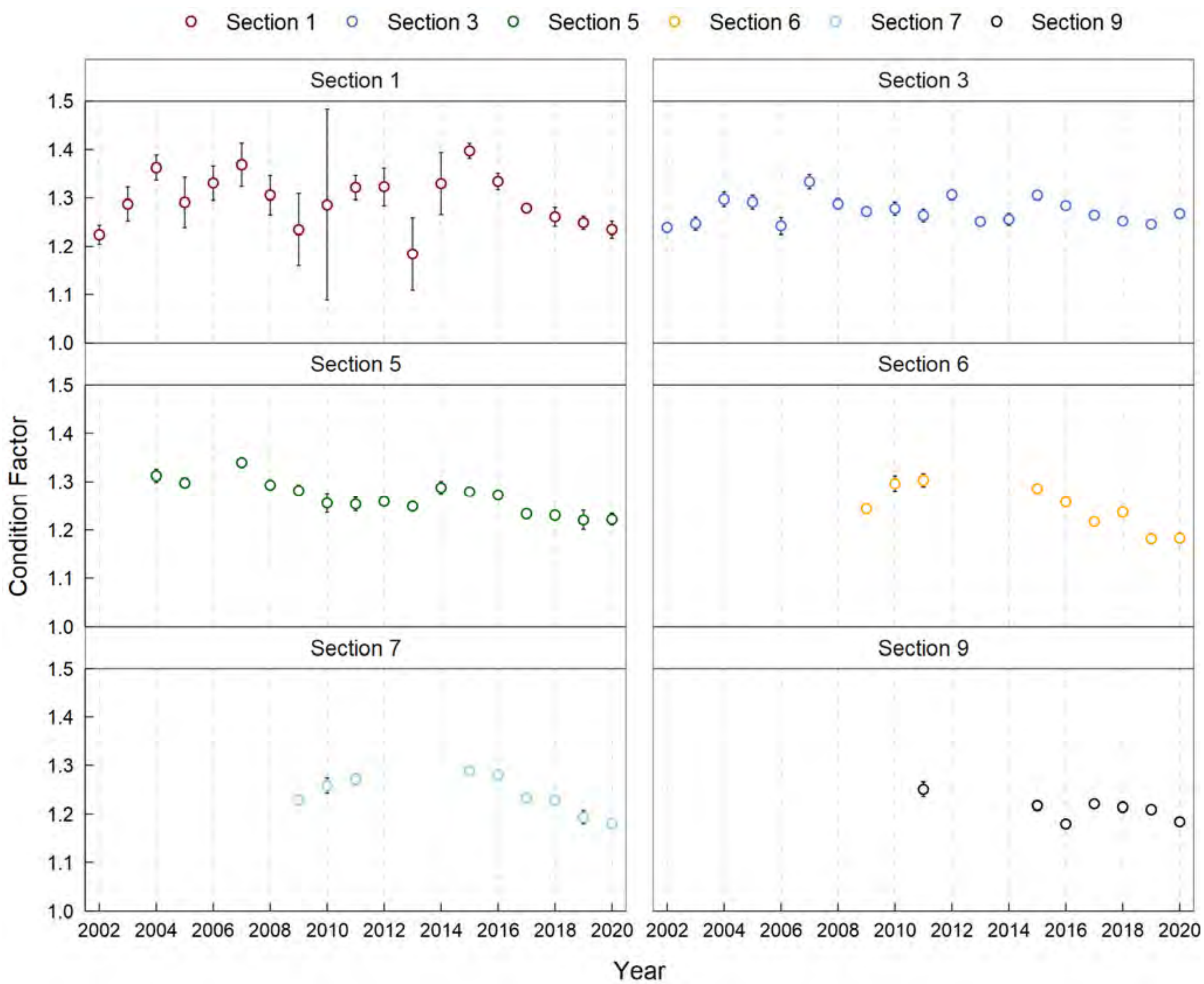


Figure 25: Mean Fulton's body condition factor (*K*) with 95% confidence intervals (CIs) for Longnose Sucker captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. For Sections 6, 7, and 9, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011, 2013).

In 2020, the length-weight relationship for Longnose Sucker was similar among sections (Figure 26). Values of the exponent in the length-weight relationship slightly greater than 3.0 indicate positive allometric growth (i.e., fish become more rotund as they increase in length). The relationship in 2020 was similar to historical study years, which did not suggest any large or sustained trends over time (Appendix F, Figure F19).

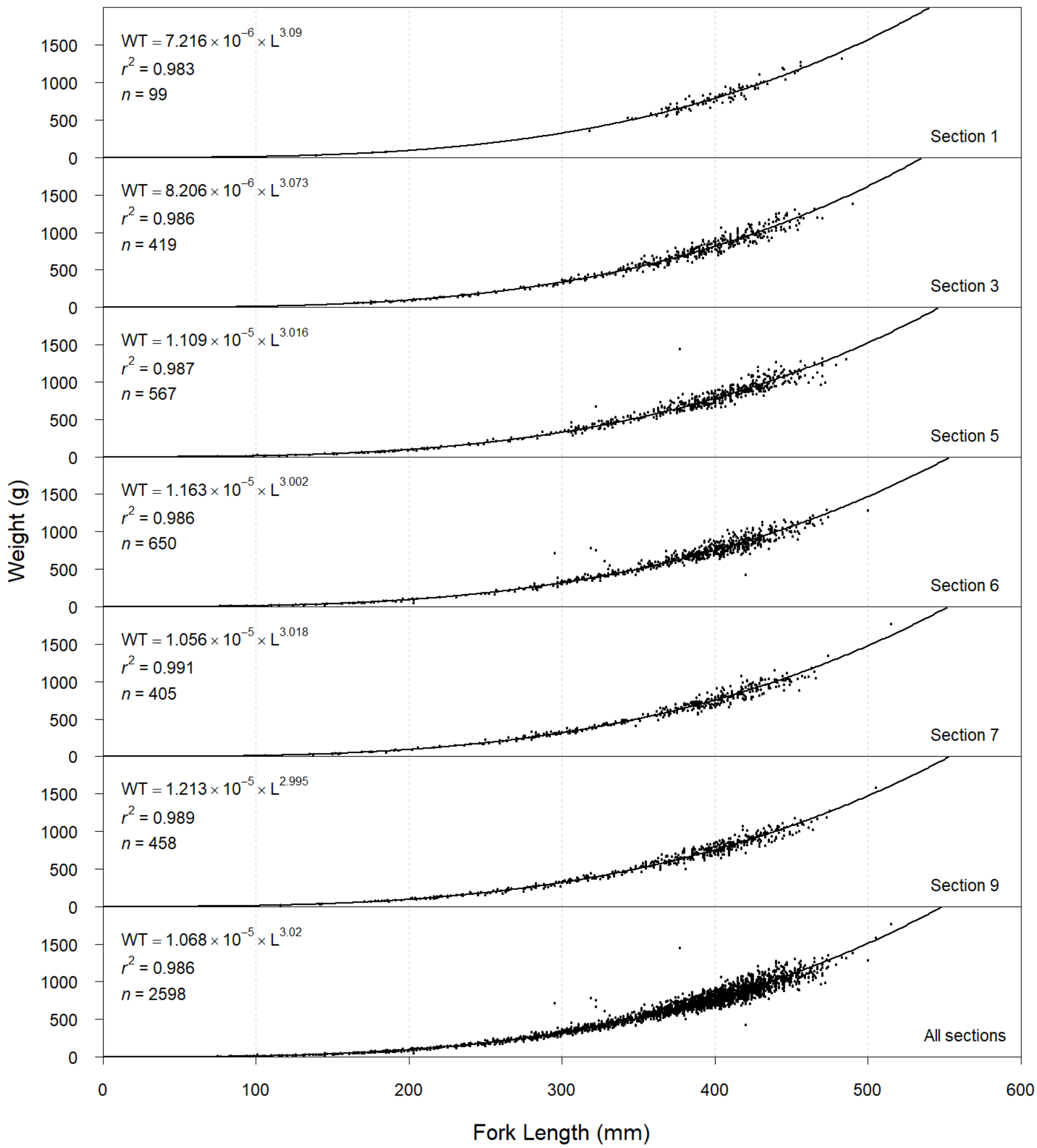


Figure 26: Length-weight regressions for Longnose Sucker captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

3.8.2 Catch Rate

Between 2015 and 2020, catch rates for Longnose Sucker generally declined from 55 fish/km-h in 2015 to 35 fish/km-h in 2019 and 36 fish/km-h in 2020 (Figure 27). Confidence intervals did not overlap between 2015 and 2020 estimates. Reasons for the decline are not known. Longnose Sucker were not consistently targeted prior to 2015; therefore, the 2002 to 2014 study years were excluded from the analysis.

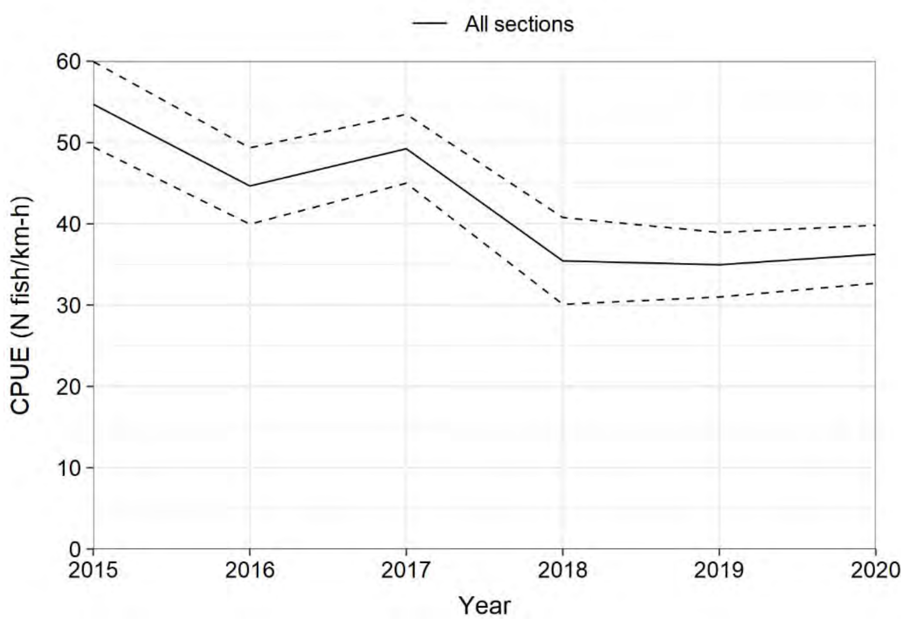


Figure 27: Mean annual catch rates (catch-per-unit effort [CPUE]) for Longnose Sucker captured by boat electroshocking in all sections of the Peace River combined, 2015 to 2020. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because Sections 6, 7, and 9 were not sampled during these years.

3.9 Mountain Whitefish

3.9.1 Biological Characteristics

During the 2020 survey, 8667 Mountain Whitefish were captured (i.e., excluding within-year recaptures; Table 9) and 6029 of these were measured for length and weight. Lengths ranged between 60 and 476 mm FL, and weights ranged between 1 and 1296 g. Scale samples were analyzed from 504 individuals and additional ages were assigned using inter-year recaptures of previously aged fish, resulting in a total sample size of 706. Assigned ages ranged between age-1 and age-18. Length, weight, and body condition by age-class are summarized in Table 12. One Mountain Whitefish with a fork length of 78 mm was assigned an age of 1 based on scale analysis, but based on the length-frequency histogram (Figure 28), individuals less than 100 mm were likely age-0.

Table 12: Average fork length, weight, and body condition by age for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

Age	Fork Length (mm)			Weight (g)			Body Condition (*K*)		
	Average ± SD	Range	*n*[a]	Average ± SD	Range	*n*[a]	Average ± SD	Range	*n*[a]
1	125 ± 22	78 – 168	23	19 ± 10	6 – 47	23	0.93 ± 0.26	0.40 – 1.64	23
2	212 ± 26	167 – 259	49	102 ± 42	19 – 180	49	1.02 ± 0.16	0.28 – 1.30	49
3	267 ± 23	196 – 316	94	202 ± 47	83 – 332	94	1.05 ± 0.10	0.74 – 1.32	94
4	285 ± 21	226 – 379	146	241 ± 47	114 – 406	146	1.03 ± 0.11	0.46 – 1.36	146
5	296 ± 21	256 – 345	103	263 ± 51	171 – 410	103	1.01 ± 0.11	0.77 – 1.24	103
6	312 ± 24	262 – 364	102	301 ± 63	185 – 543	102	0.99 ± 0.11	0.71 – 1.26	102
7	322 ± 33	261 – 429	55	330 ± 88	169 – 612	55	0.98 ± 0.12	0.74 – 1.21	55
8	336 ± 30	287 – 397	43	363 ± 96	219 – 688	43	0.95 ± 0.12	0.67 – 1.19	43
9	326 ± 26	284 – 398	29	330 ± 79	248 – 617	29	0.95 ± 0.12	0.70 – 1.26	29
10	341 ± 33	304 – 435	20	385 ± 178	266 – 972	20	0.92 ± 0.11	0.78 – 1.18	20
11	333 ± 34	296 – 418	13	362 ± 97	250 – 586	13	0.96 ± 0.10	0.80 – 1.10	13
12	332 ± 36	287 – 420	10	343 ± 86	261 – 545	10	0.94 ± 0.13	0.74 – 1.20	10
13	358 ± 46	325 – 462	8	467 ± 252	287 – 1046	8	0.96 ± 0.11	0.77 – 1.07	8
14	344 ± 23	324 – 370	3	404 ± 129	289 – 543	3	0.97 ± 0.11	0.85 – 1.07	3
15	369 ± 58	309 – 427	4	494 ± 216	260 – 768	4	0.94 ± 0.14	0.79 – 1.12	4
16	-	-	-	-	-	-	-	-	-
17	406 ± 72	355 – 457	2	595 ± 274	401 – 789	2	0.86 ± 0.05	0.83 – 0.90	2
18	469 ± 6	465 – 473	2	957 ± 160	844 – 1070	2	0.93 ± 0.12	0.84 – 1.01	2

[a] Number of individuals sampled.

For Mountain Whitefish, the length-frequency histogram (Figure 28) showed discrete modes for age-0 (60–100 mm FL) and age-1 (100–160 mm FL) age-classes. Another mode was present at approximately 190 mm, which likely represented age-2 individuals, but this age-class overlapped in length with older age-classes. All age-classes older than age-2 appeared to have overlapping length distributions (Figure 28 and Figure 29). Based on these and similar data from previous study years, growth slows considerably after approximately age-3 for this species, most likely due to fish reaching sexual maturity. The length distribution by age-class were similar between Sections 1, 3, and 5, and Sections 6, 7, and 9 (Figure 29).

In 2020, age-0 Mountain Whitefish (less than 100 mm FL) were captured in low numbers in Sections 3, 5, 6, and 7 and were not captured in Sections 1 and 9. In years since age-0 Mountain Whitefish were targeted during sampling (2014 to 2020), catch of this age-class was lower in 2016–2018 and 2020, and higher in 2015 and 2019 (Appendix F, Figures F11 to F14). Age-frequency distributions showed that juvenile and adults were present in all sections, but age-1 Mountain Whitefish comprised a greater percentage of the catch in Sections 6, 7, and 9 than in Sections 1, 3, and 5 (Figure 30).

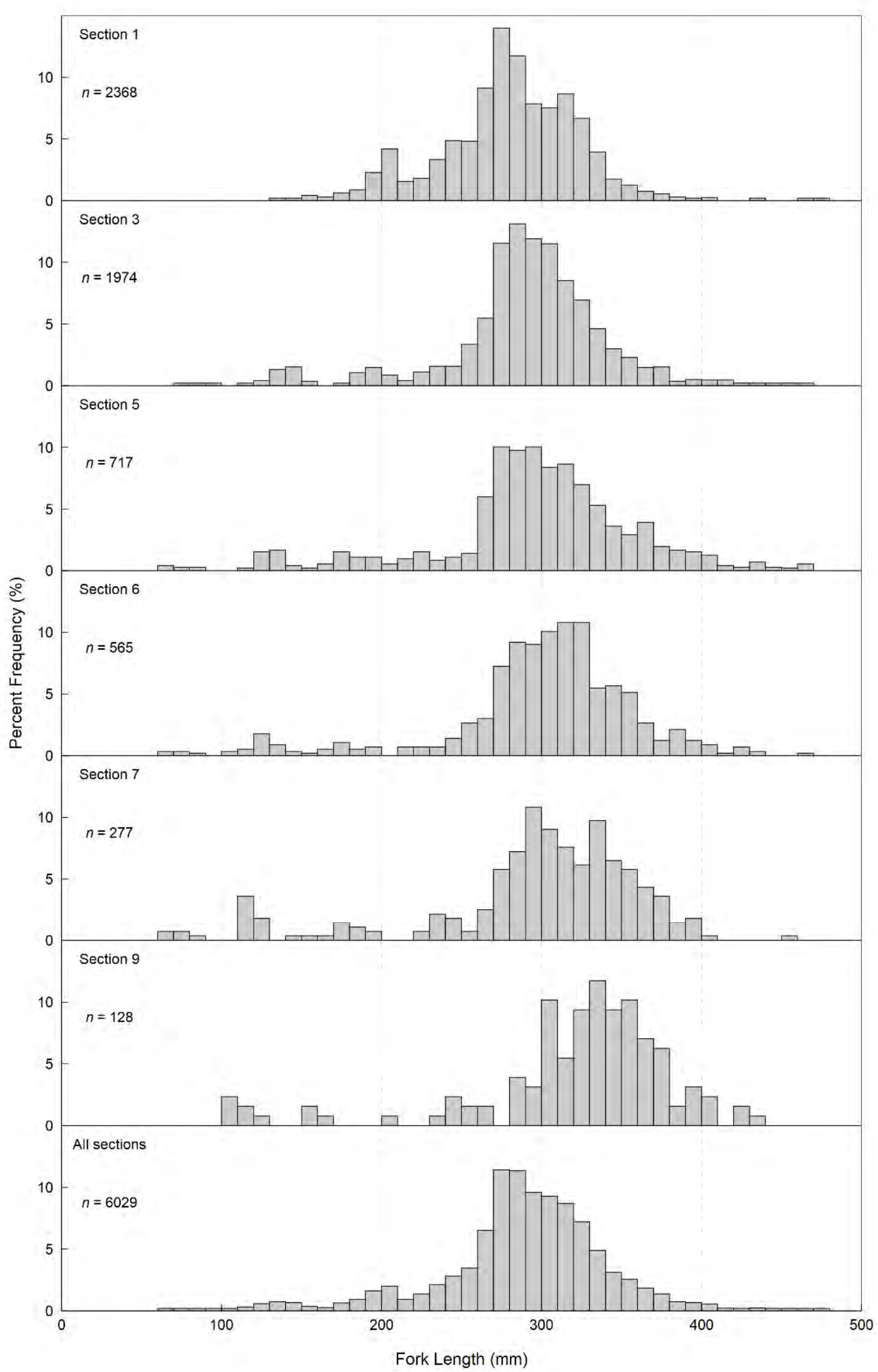


Figure 28: Length-frequency distributions for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

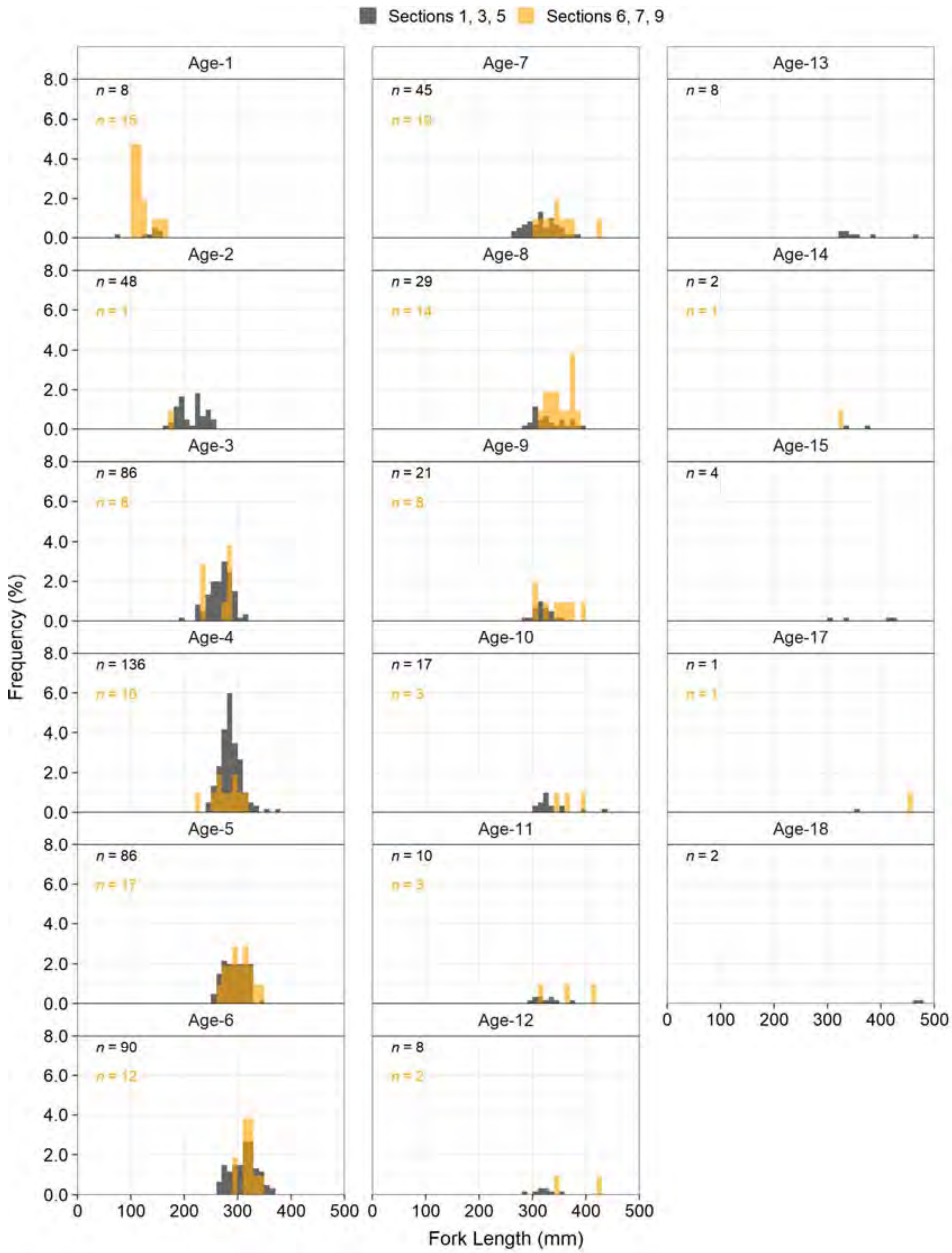


Figure 29: Length-at-age frequency distributions for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

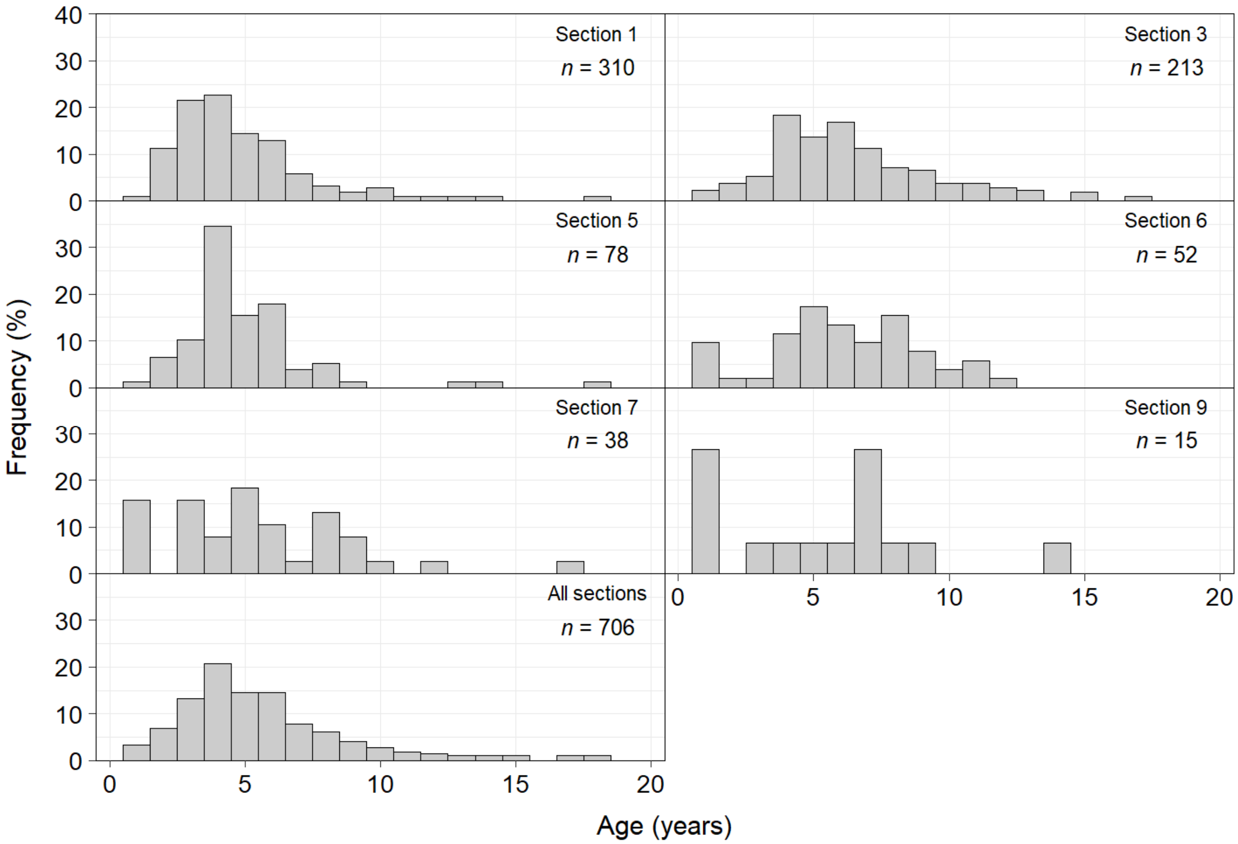


Figure 30: Age-frequency distributions for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

The annual growth of Mountain Whitefish in the study area, as assessed using the von Bertalanffy growth curve, suggested similar rates of growth among sections (Figure 31). Small differences in the growth curves among sections were likely related to small sample sizes of the youngest and oldest ages, rather than true differences in mean size-at-age. As in previous years of the study, Mountain Whitefish grew rapidly until age-4 or age-5, with lengths approaching an asymptote between age-5 and age-10 (Figure 32).

The average change in length-at-age analysis for Mountain Whitefish (Figure 33) was limited to individuals younger than age-5 due to the slow growth, wide range of lengths recorded, and unknown precision of ages assigned to older individuals. Overall (all sections combined), the age-2 through age-4 age-classes had greater mean lengths in 2014, 2015, and 2016 when compared to previous and later years, suggesting that these cohorts were approximately 10 to 20 mm larger in length, depending on the age group, relative to the 18-year average. Mean length-at-age of age-1 Mountain Whitefish was lower in 2020 than all previous years in all sections (Figure 33).

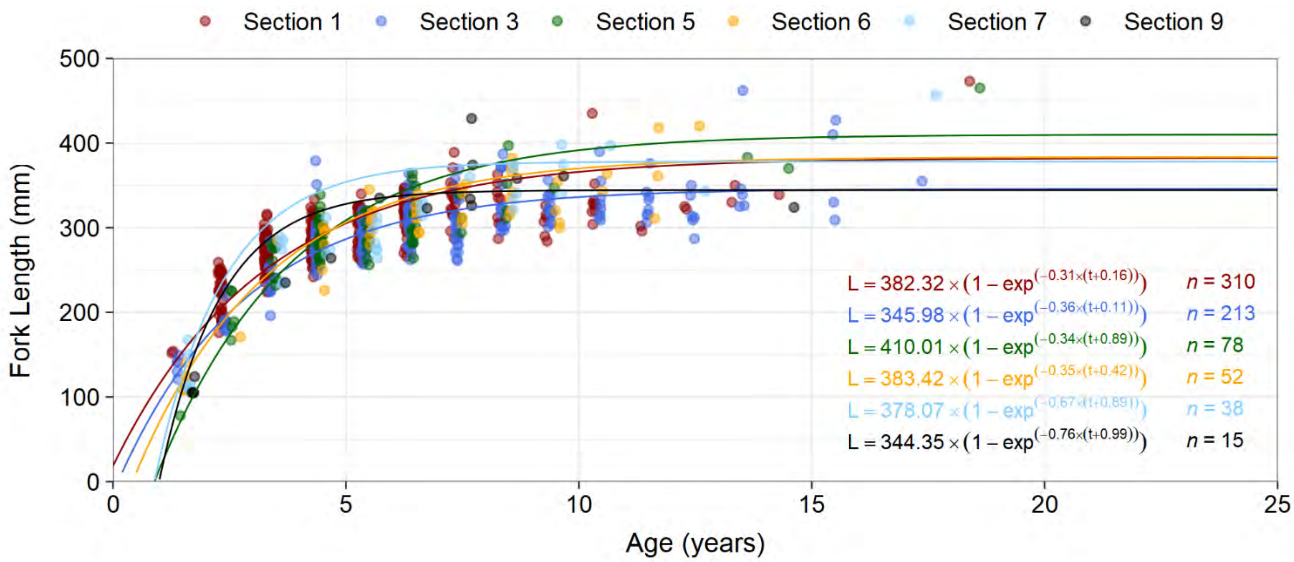


Figure 31: von Bertalanffy growth curve for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

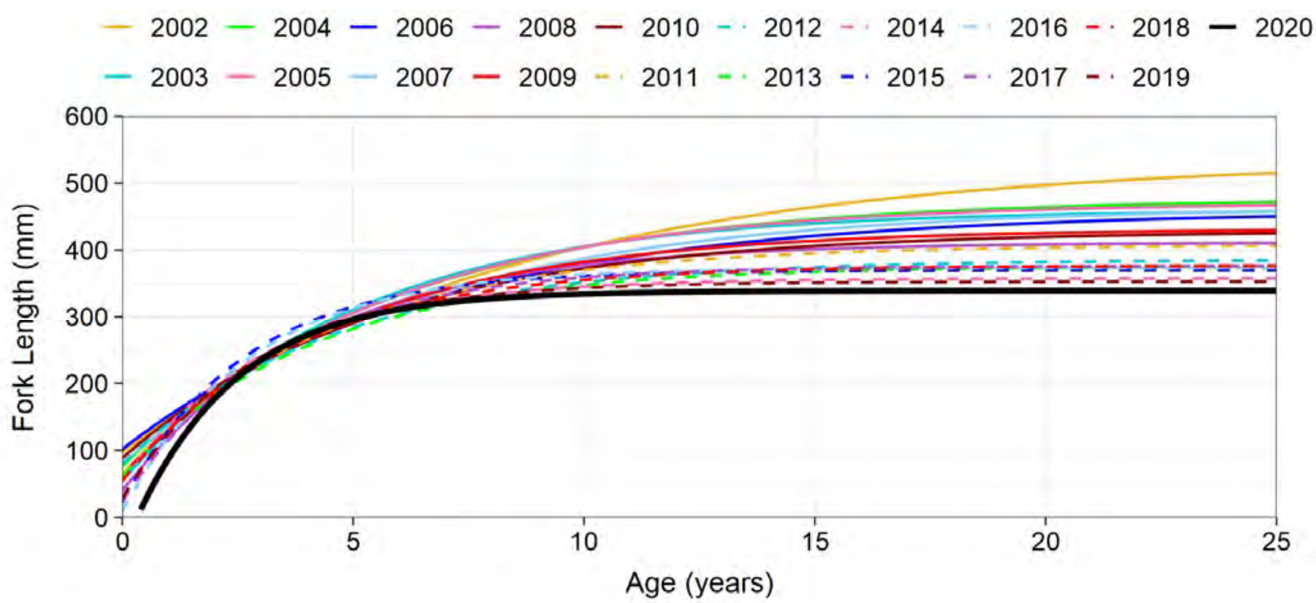


Figure 32: von Bertalanffy growth curve for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020.

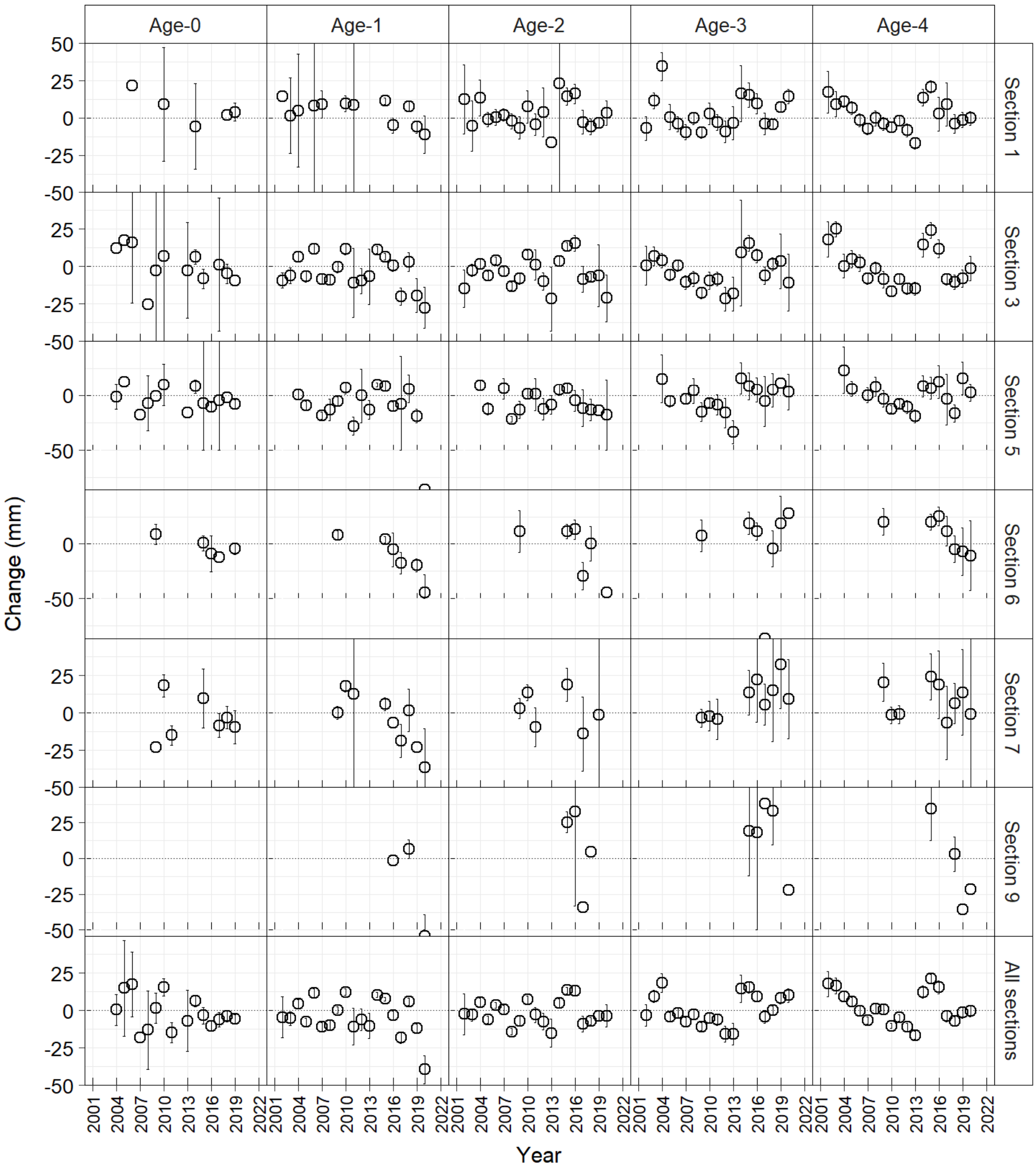


Figure 33: Change in mean length-at-age for Mountain Whitefish captured by boat electroshocking during the Peace River Fish Index, 2002 to 2020. Change is defined as the difference between the annual estimate and the estimate of all years and sections combined. Error bars represent 95% confidence intervals. For Sections 6 and 7, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011, 2013).

Historically, high mean body condition (*K*) was recorded for Mountain Whitefish from 2003 to 2010 and from 2014 to 2015, whereas lower mean body condition was recorded in 2002 and from 2011 to 2013. Body condition declined from 2015 to 2017 and remained relatively low from 2017 to 2020 (Figure 34). Mean body condition of Mountain Whitefish generally decreased from upstream to downstream, with the highest mean body condition (*K*) in Section 1 (mean = 1.14) and the lowest body condition in Section 9 (mean = 1.03). Compared to Arctic Grayling (Figure 10) and Bull Trout (Figure 15), Mountain Whitefish body condition was typically more variable among study years (Figure 34).

Trends in relative weight estimates tracked closely with body condition estimates in all sections and study years (Figure 34). Relative weights were near 100% in Section 1 in 2014 and 2015, indicating above-average condition in these years compared to values across the species' range. In most years and sections, relative weight ranged between 80% and 95%.

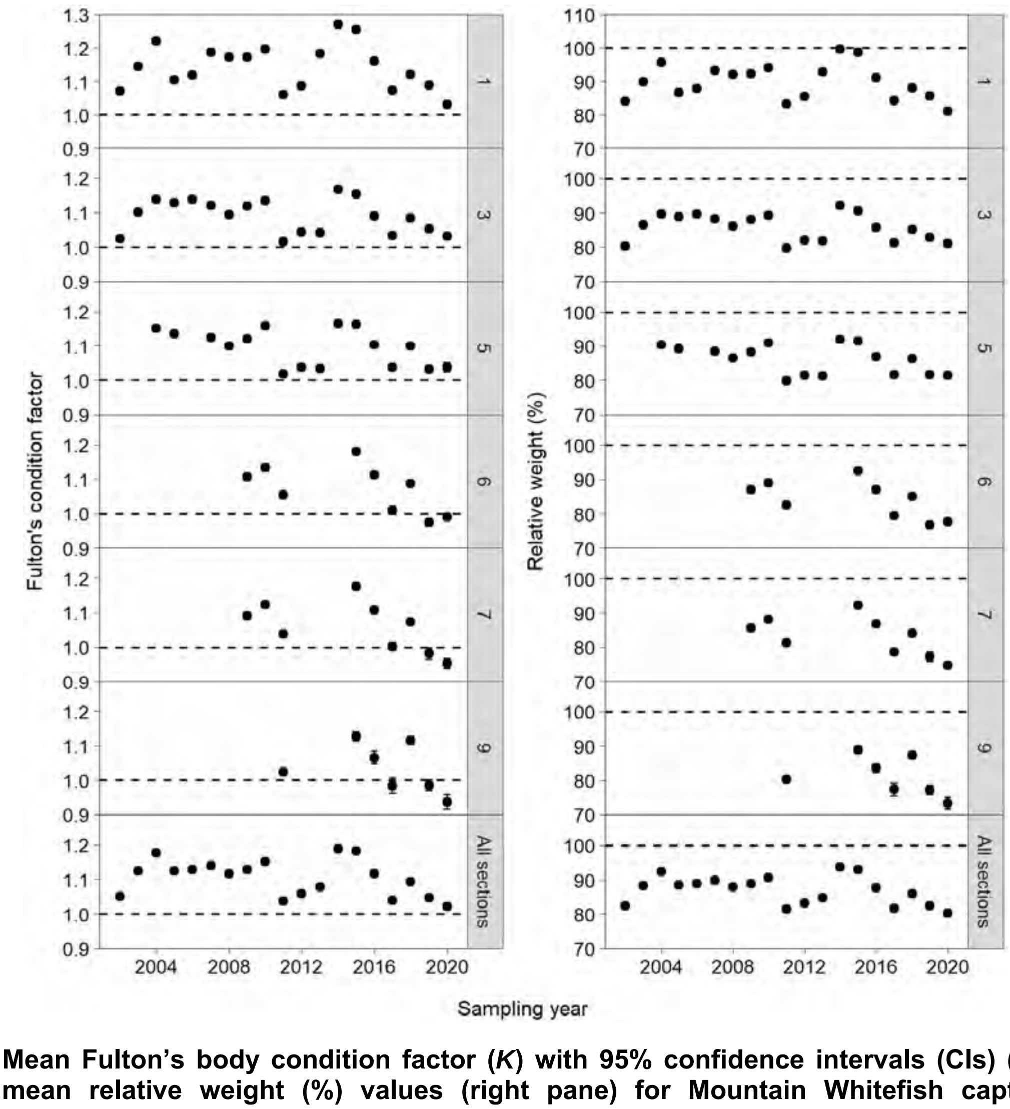


Figure 34: Mean Fulton's body condition factor (*K*) with 95% confidence intervals (CIs) (left pane) and mean relative weight (%) values (right pane) for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. For Sections 6, 7, and 9, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011, 2013).

Length-weight regressions had exponents close to 3.0 in most years (Figure 35; Appendix F, Figure F15), which suggests isometric growth and no change in body shape with increasing size. In 2020, the exponent of the regression was lower in Section 1 (2.78) than in other sections (range: 2.870 to 2.965), suggesting slightly more slender body shape as fish grow in Section 1. Length-weight regression parameters varied slightly among years but did not suggest any long-term patterns or trends (Appendix F, Figure F15).

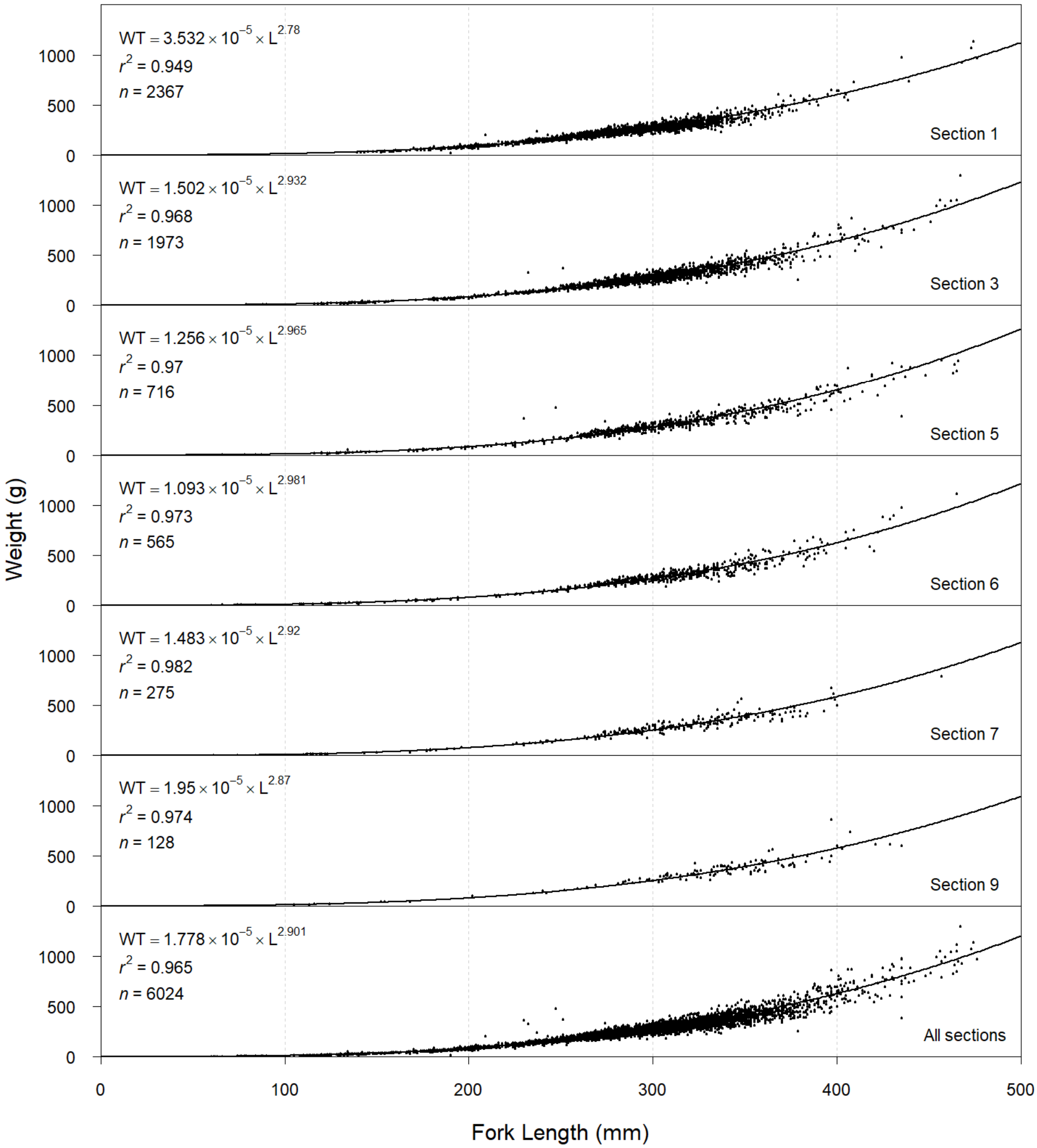


Figure 35: Length-weight regressions for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

3.9.2 Catch Rate

Mountain Whitefish were consistently captured between 2002 and 2020 in Sections 1, 3, and 5 and in Sections 6, 7, and 9; therefore, changes in catch rates over time were compared for this species using these section groupings (Figure 36). Mountain Whitefish catch rates were stable between 2002 and 2010, increased by 55% between 2010 and 2011, and decreased by 66% between 2011 and 2014. Catch rates of Mountain Whitefish were lower but stable from 2014 to 2020, averaging 190 fish/km-h over this seven year period.

Between 2015 and 2020, catch rates for Mountain Whitefish in Sections 6, 7, and 9 were, on average, 73% lower than catch rates recorded in Sections 1, 3, and 5 (Figure 43).

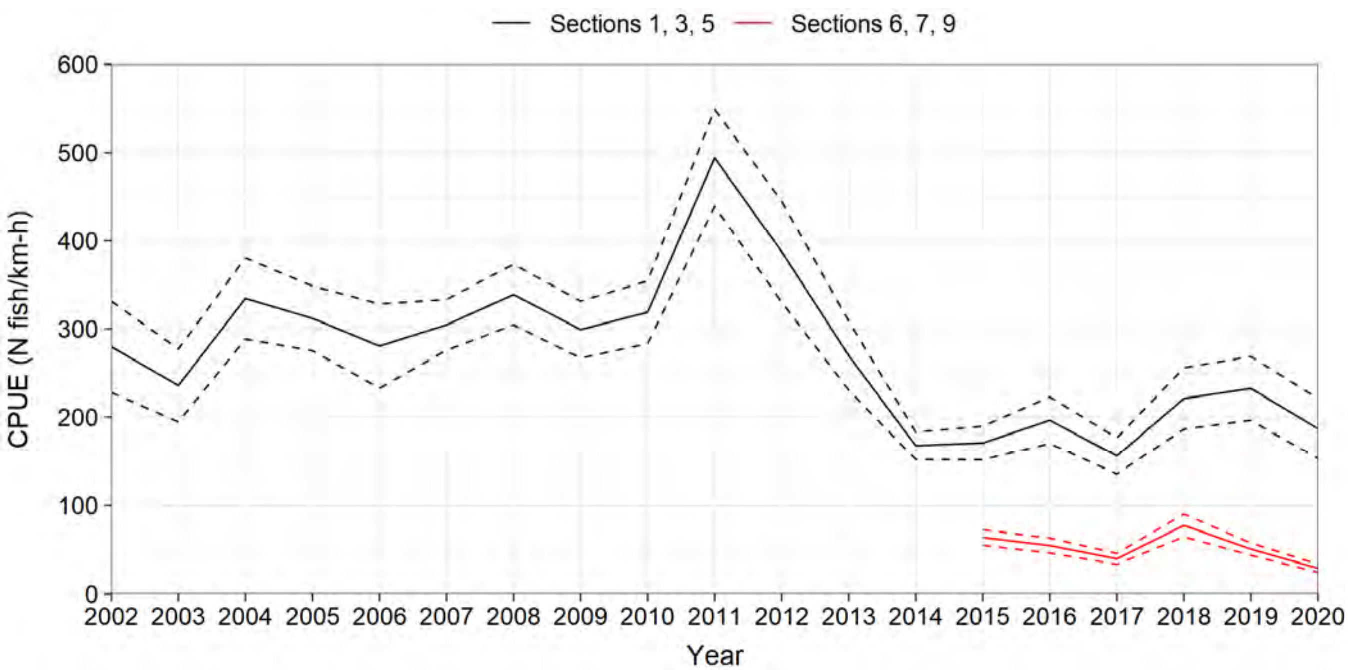


Figure 36: Mean annual catch rates (catch-per-unit effort [CPUE]) for Mountain Whitefish captured by boat electroshocking in Sections 1, 3, and 5 combined and Sections 6, 7, and 9 combined of the Peace River, 2002 to 2020. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. Sections 6, 7, and 9 were not consistently sampled prior to 2015.

3.10 Northern Pike

3.10.1 Biological Characteristics

During the 2020 survey, 22 Northern Pike were captured (i.e., excluding within-year recaptures) and all of these were measured for length and weight. One of these individuals was an inter-year recapture with a PIT tag number assigned to a Mountain Whitefish during an earlier study year; therefore this Northern Pike was not included in the species counts in Table 9. Fork lengths of captured Northern Pike in 2020 ranged between 310 and 848 mm FL, weights ranged between 221 and 4601 g, and body condition (*K*) ranged between 0.55 and 1.40. Fin rays were collected from 10 Northern Pike; these samples were not analyzed but were provided to BC Hydro for long-term storage.

Length-frequency data suggest that juvenile and adult life stages of Northern Pike are present in the study area (Figure 37); however, their distribution is largely limited to the study area's lower sections. Northern Pike were not recorded in Sections 1 or 3 in 2020 (Table 9) but were recorded in these two sections in low numbers in some previous years. Northern Pike were not consistently targeted prior to 2015. Between 2015 and 2020, the number of captured Northern Pike that were less than 250 mm FL (i.e., likely to be age-0 and age-1) was low (range = 0 to 8 individuals/year; Appendix F, Figures F25 and F26).

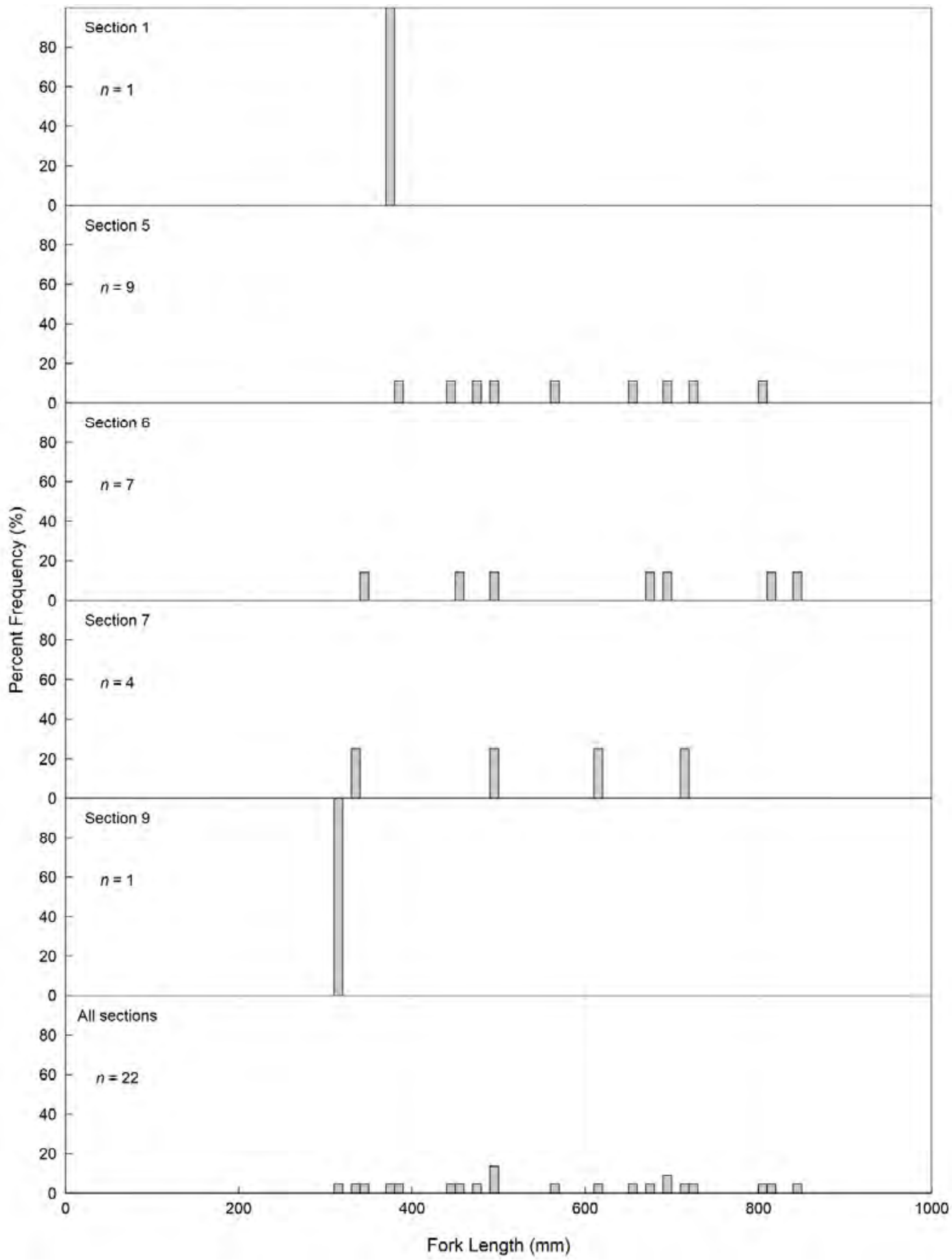


Figure 37: Length-frequency distributions for Northern Pike captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

The mean body condition (*K*) of Northern Pike in 2020 was consistent with mean body condition values recorded among recent study years and sections (Figure 38). Relative weight was not estimated for Northern Pike.

Length-weight relationships for Northern Pike in 2020 indicate negative allometric growth (*b* less than 3.0), where fish become more slender as they increase in length (Figure 39). Sample sizes were small and did not suggest any large differences in the length-weight relationship among sections (Figure 39; Appendix F, Figure F28) or years (Appendix F, Figure F27).

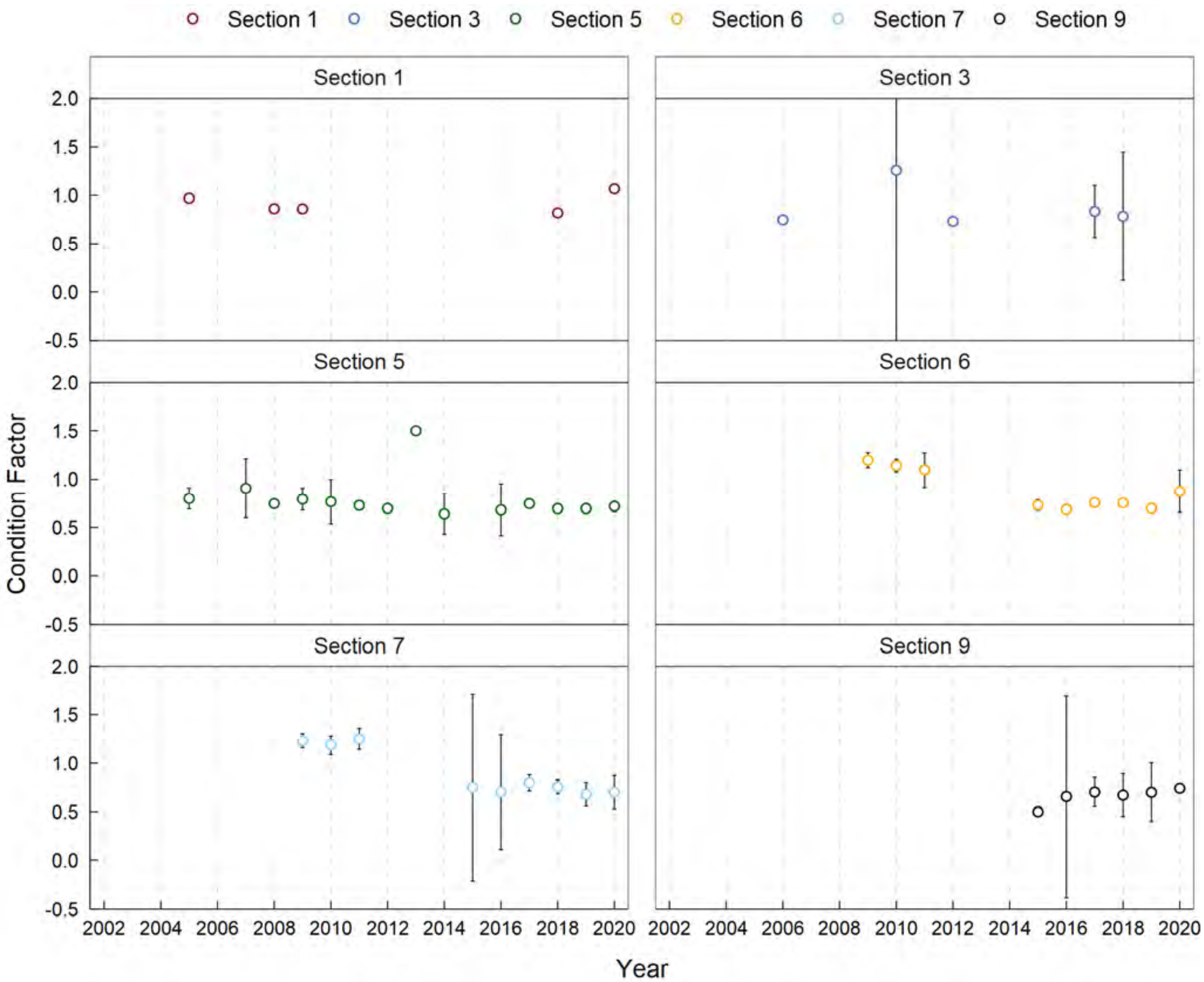


Figure 38: Mean Fulton's body condition factor (*K*) with 95% confidence intervals (CIs) for Northern Pike captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. For Sections 6, 7, and 9, analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011, 2013). The 95% CI of Section 3 values in 2010 extends from -1.14 to 3.66.

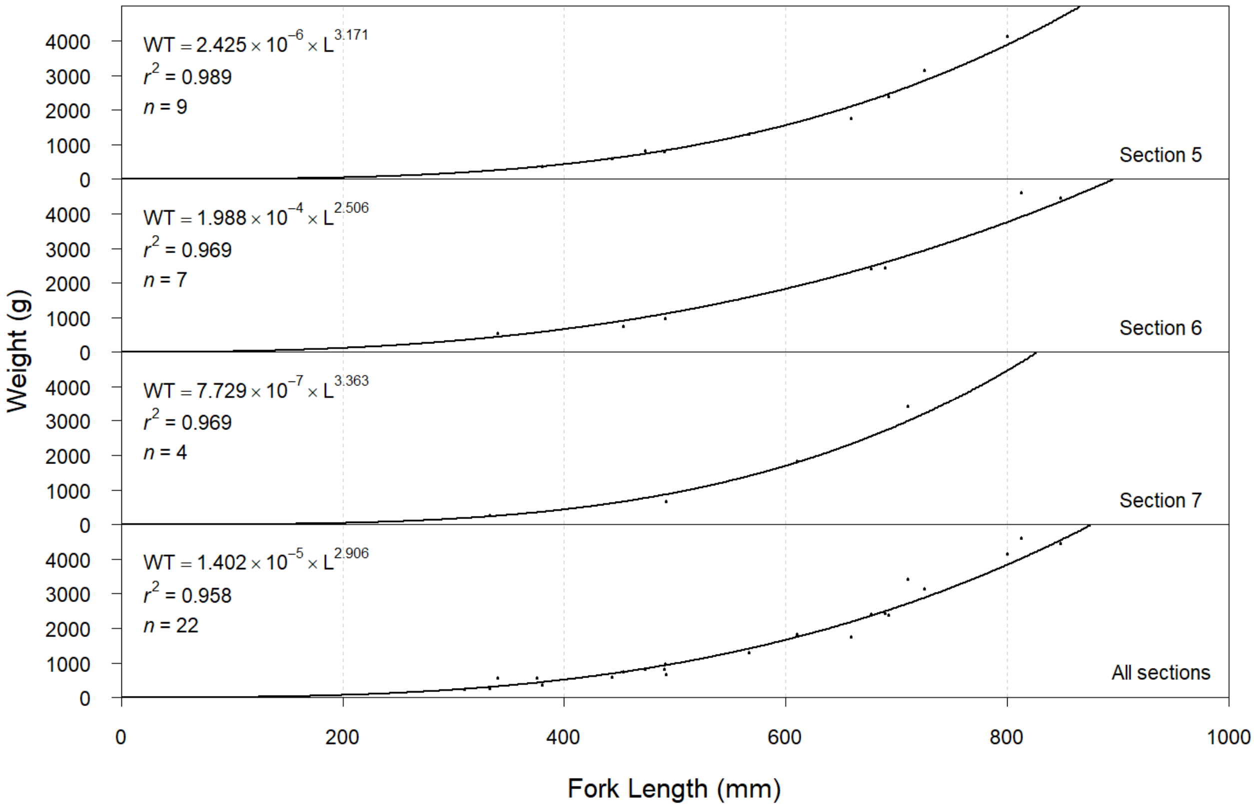


Figure 39: Length-weight regressions for Northern Pike captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

3.10.2 Catch Rate

In total, 22 Northern Pike were captured during the 2020 survey. Since 2015 (i.e., since sampling has been conducted in all six sections), 149 Northern Pike have been captured during the Indexing Survey. Of those 149 fish, 62 (42%) were recorded in Section 6. The remaining fish were recorded in Section 5 (n = 42; 28%), Section 7 (n = 25; 17%), Section 9 (n = 13; 9%), Section 3 (n = 5; 3%), and Section 1 (n = 2; 1%) (Attachment A). These data suggest a preference for the downstream portions of the study area for this species. Catch rate data suggest stable to increasing Northern Pike abundance between 2016 and 2018 and decreasing abundance from 2018 to 2020 (all sections combined); confidence intervals overlapped for all estimates (Figure 40).

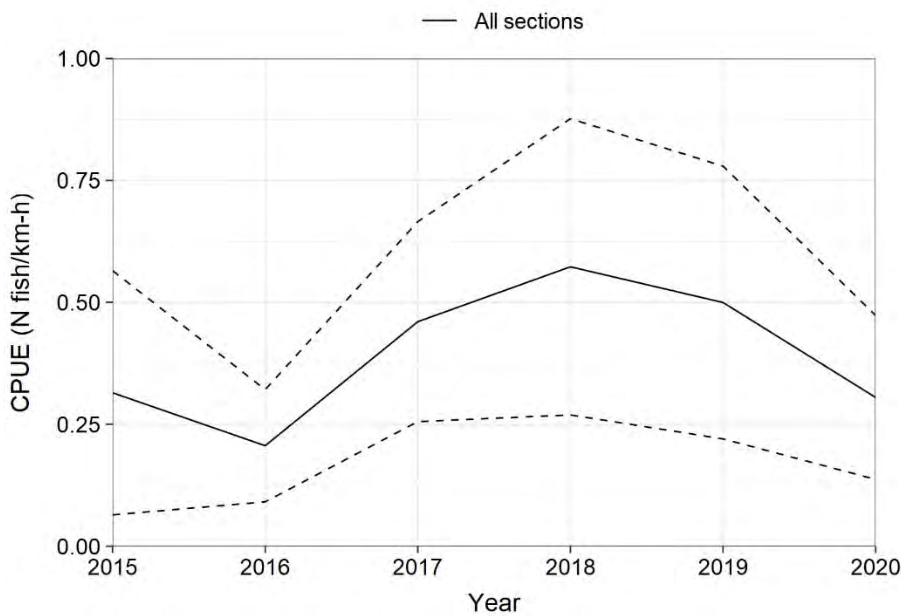


Figure 40: Mean annual catch rates (catch-per-unit effort [CPUE]) for Northern Pike captured by boat electroshocking in all sections of the Peace River combined, 2015 to 2020. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because Northern Pike were not consistently targeted prior to 2015.

Two Northern Pike were captured during the Goldeye and Walleye Survey in 2020. Both were adults (660 and 468 mm FL) captured at sites near the mouth of the Beatton River (Sites 07BEA01 and 07BEA02).

3.11 Rainbow Trout

3.11.1 Biological Characteristics

During the 2020 survey, 129 Rainbow Trout were captured (i.e., excluding within-year recaptures); all were measured for length and weight. Fork lengths ranged between 120 and 454 mm and weights ranged between 20 and 1223 g (Table 13). Body condition (*K*) ranged between 0.65 and 1.43. Assigned ages ranged between age-1 and age-7.

In the length-frequency distribution for Rainbow Trout from all sections combined, a mode at approximately 150 mm represented age-1 individuals (Figure 41). However, there was overlap in fork lengths of age-1 and age-2 Rainbow Trout, and between all adjacent age-classes older than age-2 (Table 13). This overlap in length distribution of young age-classes may be due to differences in length-at-age and growth rates among sections, as suggested in previous study years (Golder and Gazey 2020). The growth rate and length-at-age of juvenile Rainbow Trout in tributaries of the Peace River varied among tributaries (Golder 2021a), which may contribute to the overlap in lengths between juvenile age-classes after they migrate downstream into the mainstem of the Peace River.

Table 13: Average fork length, weight, and body condition by age for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

Age	Fork Length (mm)			Weight (g)			Body Condition (*K*)		
	Average ± SD	Range	*n*[a]	Average ± SD	Range	*n*[a]	Average ± SD	Range	*n*[a]
1	173 ± 36	120 – 225	21	68 ± 40	20 – 129	20	1.16 ± 0.12	0.95 – 1.43	20
2	246 ± 37	183 – 334	47	180 ± 90	65 – 472	47	1.13 ± 0.10	0.98 – 1.34	47
3	296 ± 43	203 – 397	32	296 ± 133	108 – 751	32	1.09 ± 0.11	0.82 – 1.31	32
4	349 ± 50	281 – 444	19	504 ± 243	265 – 1039	19	1.11 ± 0.11	0.92 – 1.33	19
5	388 ± 57	316 – 454	4	704 ± 384	404 – 1223	4	1.13 ± 0.24	0.78 – 1.31	4
6	-	-	-	-	-	-	-	-	-
7	384 ± 5	381 – 388	2	567 ± 297	357 – 777	2	0.99 ± 0.48	0.65 – 1.33	2

[a] Number of individuals sampled.

Age-0 Rainbow Trout were not captured during the Indexing Survey in 2020. Only two Rainbow Trout less than 100 mm in fork length (i.e., age-0) have been captured in the Peace River mainstem over the 19-year study period. Age-0 Rainbow Trout are likely rare because this age-class remains in natal streams for their first year and have not yet migrated into the Peace River mainstem at the time of sampling. Age-2 was the most common age-class of Rainbow Trout captured in the study area in 2020 (Figure 42).

The von Bertalanffy model suggests similar growths rate in Sections 1 and 3. Growth curves could not be estimated for other sections because of small sample sizes (Figure 43). Comparison of von Bertalanffy curves among years suggested similar growth of fish captured in 2020 when compared to most previous study years (Figure 44). Small sample sizes, especially for the youngest and oldest age-classes, resulted in poor fits of the von Bertalanffy model during most study years, which may explain differences in annual growth curves rather than actual differences in growth rates.

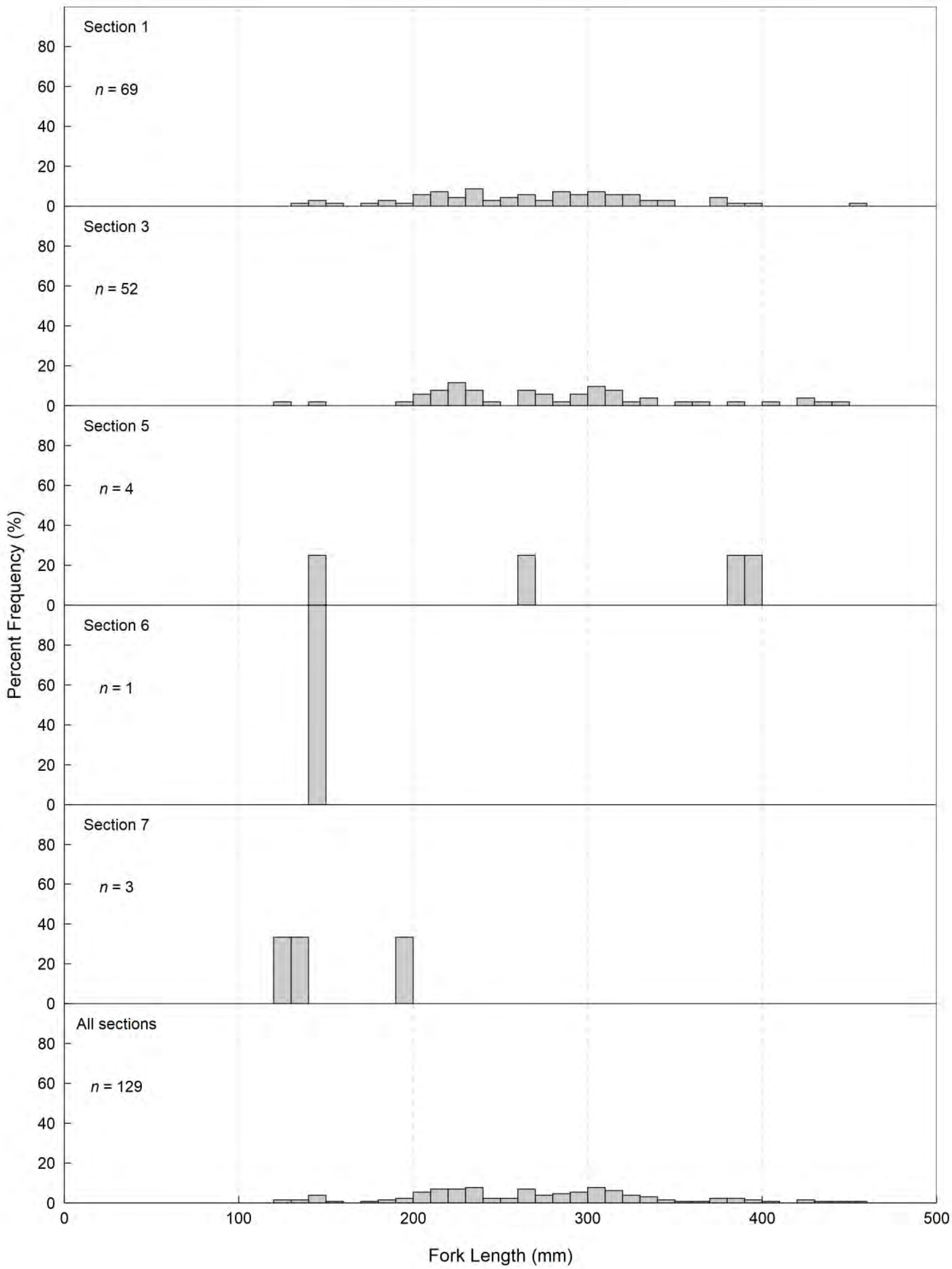


Figure 41: Length-frequency distributions for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

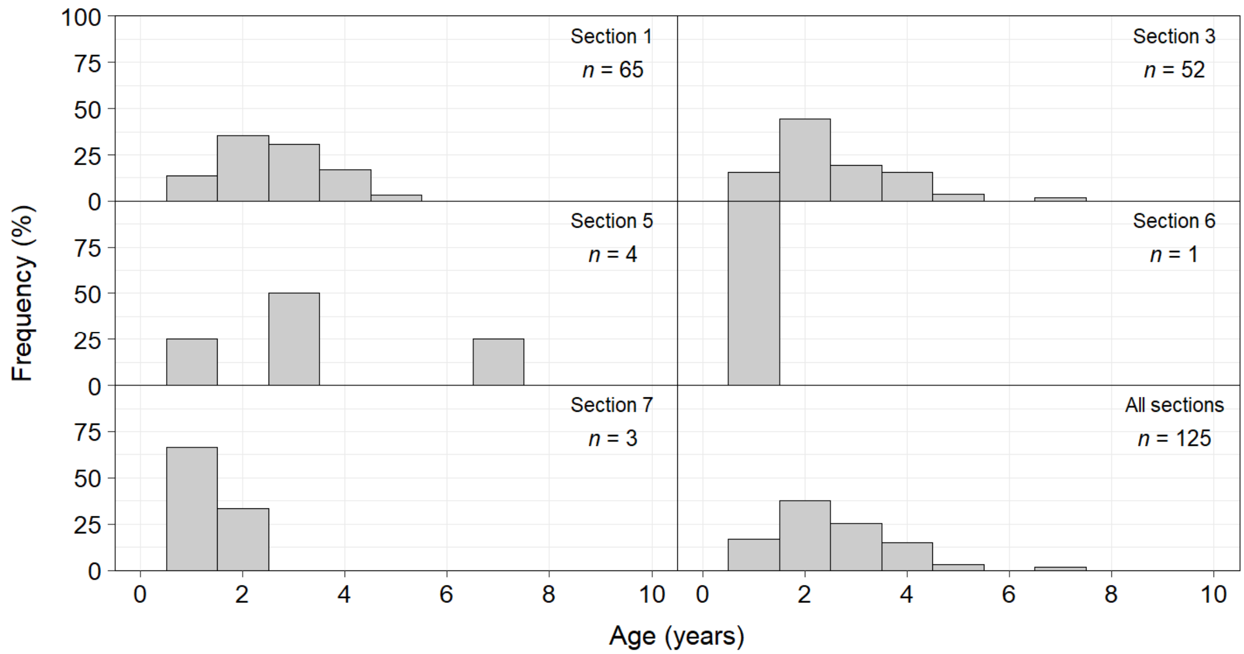


Figure 42: Age-frequency distributions for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

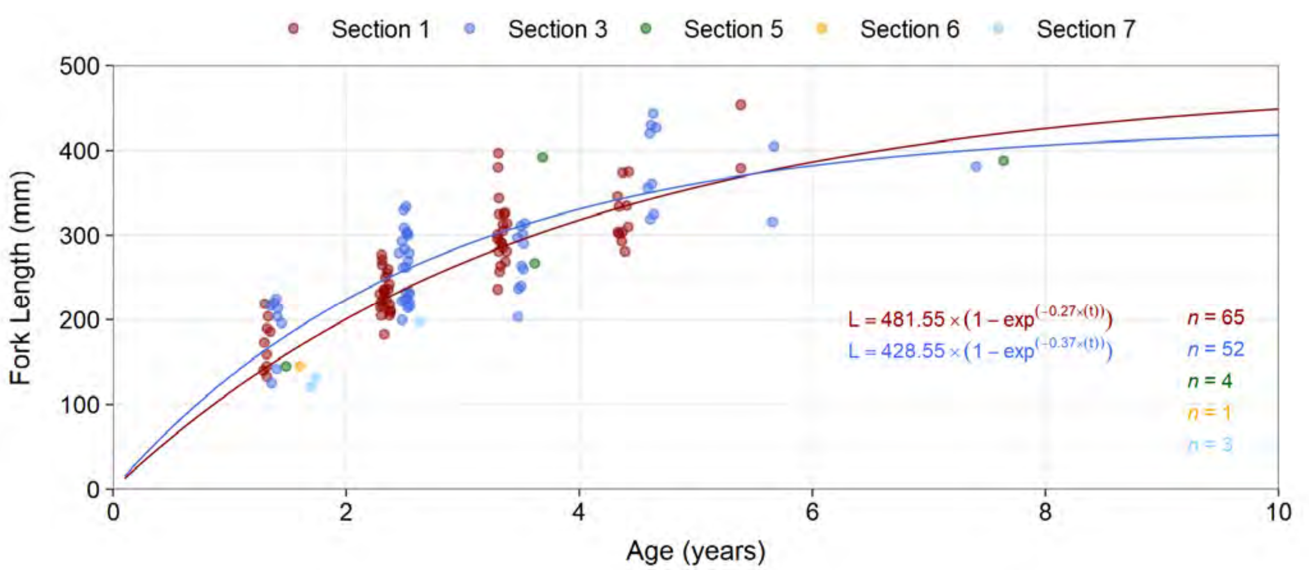


Figure 43: von Bertalanffy growth curve for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

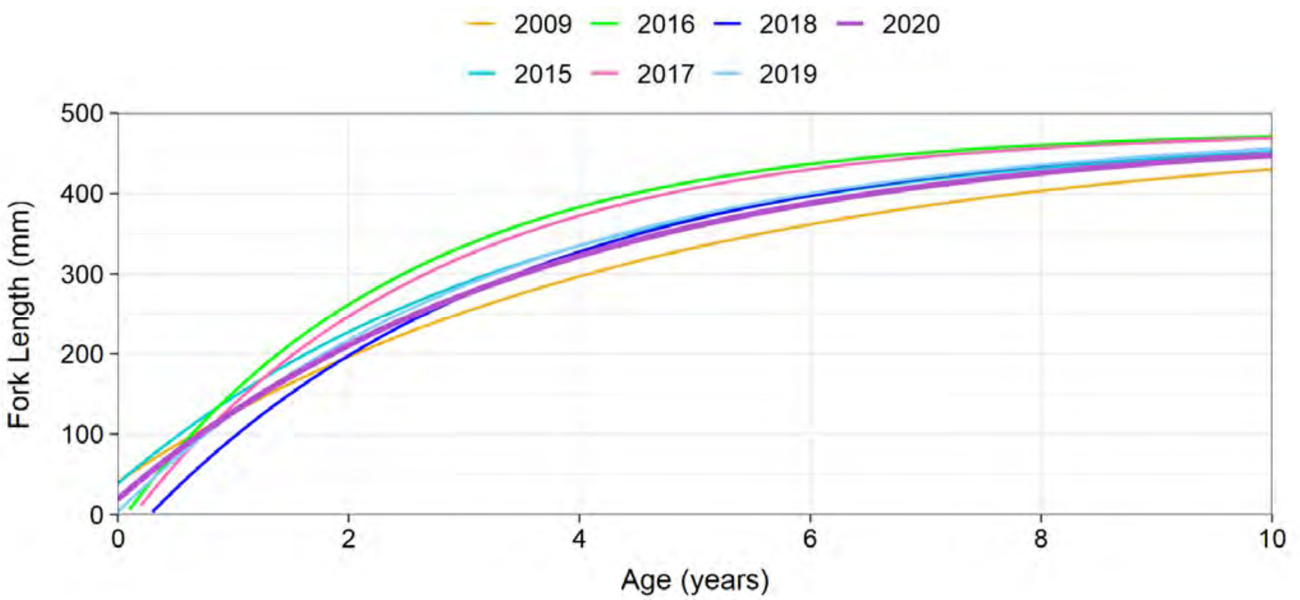


Figure 44: von Bertalanffy growth curve for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 2009 to 2020.

In Sections 1, 3, 5, and 6, mean body condition and relative weight were similar among years and sections, with overlapping confidence intervals for most estimates (Figure 45). For Sections 7 and 9, sample sizes were too small (i.e., 1 to 7 fish per year in each section) to reliably assess trends over time. For all sections combined, mean annual values of relative weight ranged from 83% to 95%.

The length-weight relationship in 2020 (all sections combined) had an exponent (b) close to 3.0, suggesting isometric growth (Figure 46), which was similar to Rainbow Trout captured in previous years since 2002 (Appendix F, Figure F31). Sample sizes were too small for meaningful comparisons of length-weight relationship among sections (Figure 46).

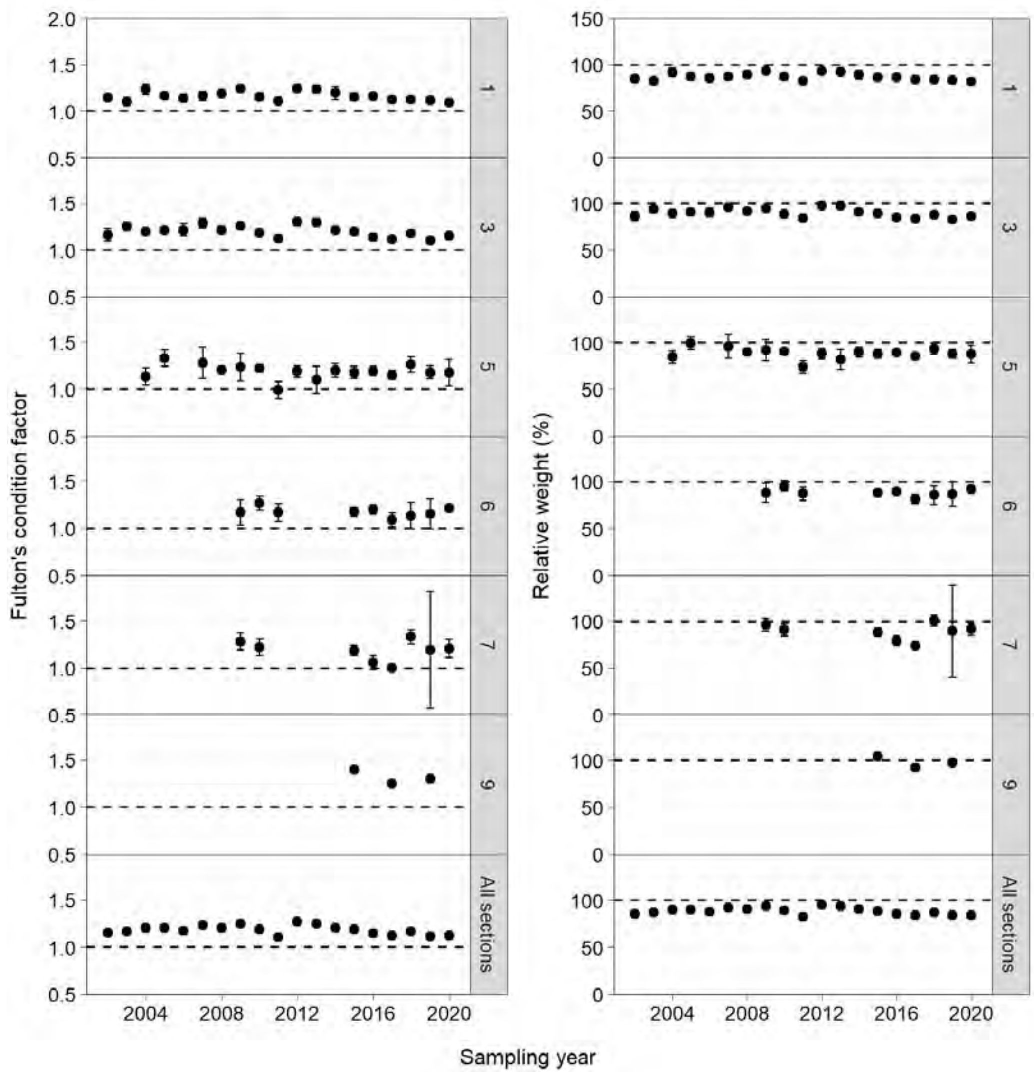


Figure 45: Mean Fulton's body condition factor (*K*) with 95% confidence intervals (CIs) (left pane) and mean relative weight (%) values (right pane) for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. For Sections 6, 7, and 9, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011, 2013).

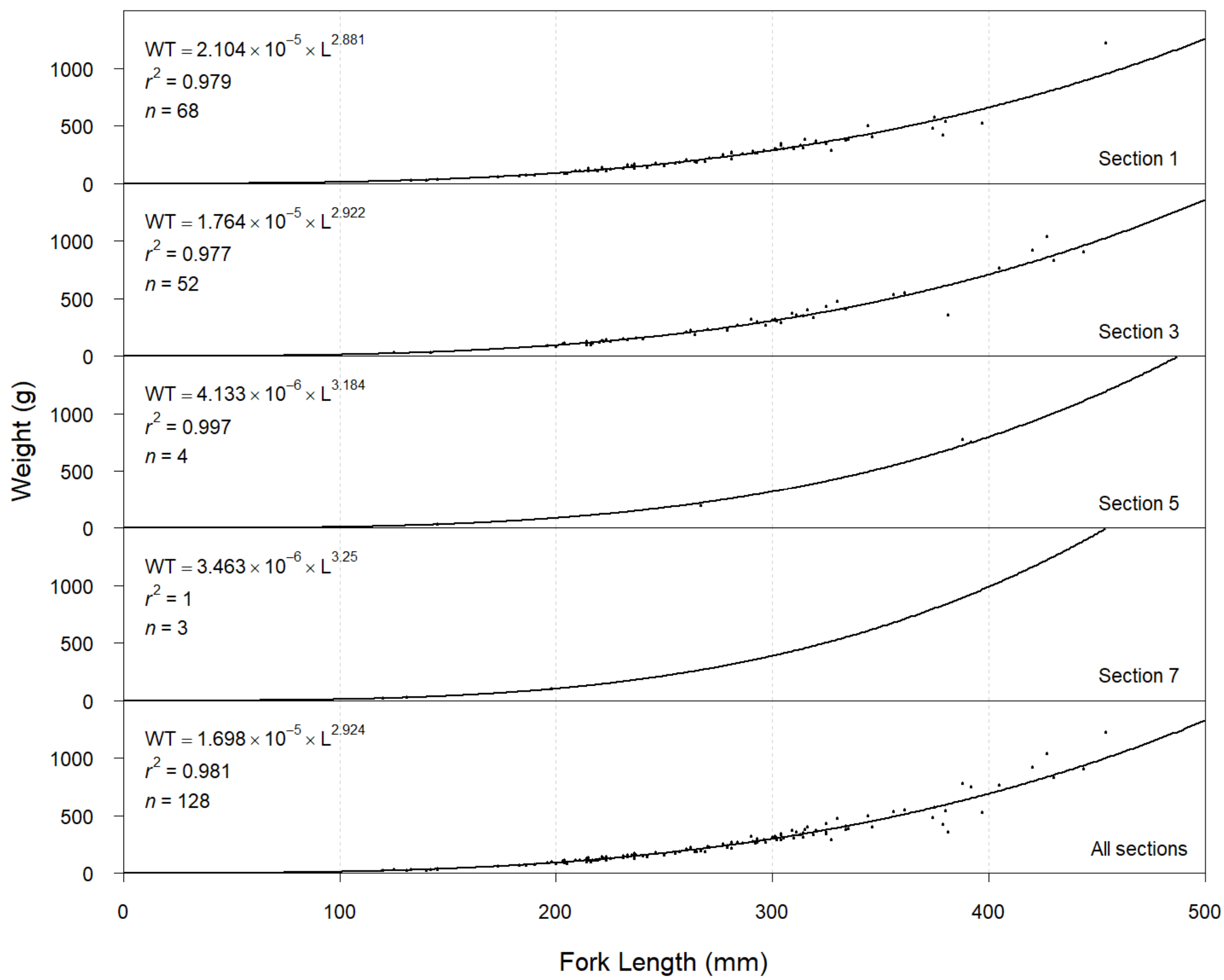


Figure 46: Length-weight regressions for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

3.11.2 Catch Rate

Between 2002 and 2020, the total catch of Rainbow Trout in all sections combined has ranged from a low of 67 individuals in 2013 to a high of 186 individuals in 2016 (average = 129 individuals, excluding within-year recaptures; Appendix E, Tables E1 and E2). Rainbow Trout were most commonly recorded in Section 3 (47% of the total Rainbow Trout catch), followed by Section 1 (38%), and Section 5 (8%). Rainbow Trout were less common downstream of Section 5, and their frequency declined with increased distance from Section 5 (4% in Section 6, 2% in Section 7, and less than 1% in Section 9). Only three Rainbow Trout were captured in Section 9 between 2015 and 2020 combined (Attachment A). In 2020, 93% of the Rainbow Trout catch was recorded in the upstream two sections (53% in Section 1 and 40% in Section 3; Table 9). These data demonstrate that Rainbow

Trout are more abundant in the upstream sections of the study area than downstream sections. Catch rates suggest stable Rainbow Trout abundance between 2015 and 2020 (all sections combined). Confidence intervals overlapped for all estimates and were generally narrow for all years except 2018 (Figure 47).

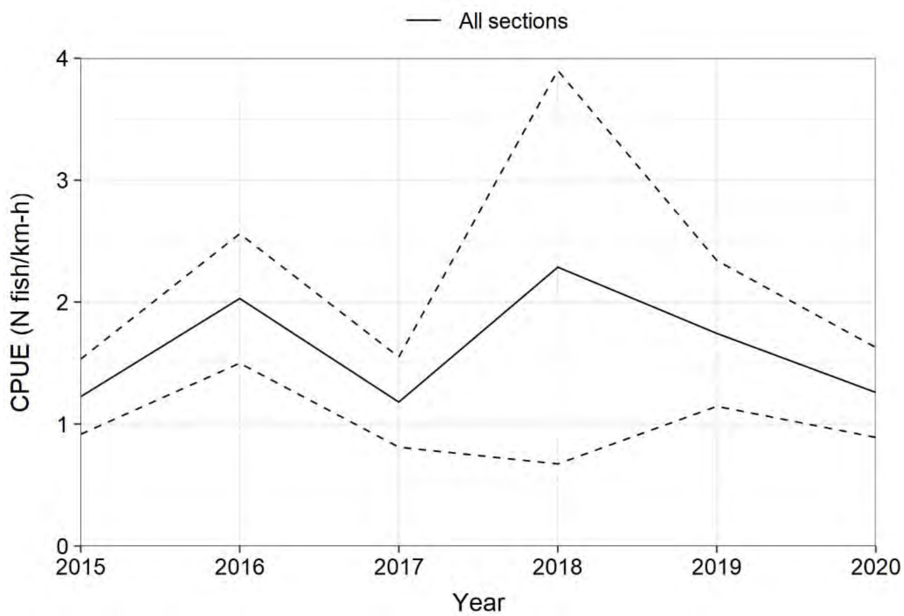


Figure 47: Mean annual catch rates (catch-per-unit effort [CPUE]) for Rainbow Trout captured by boat electroshocking in all sections of the Peace River combined, 2015 to 2020. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because Rainbow Trout were not consistently targeted prior to 2015.

3.12 Walleye

3.12.1 Biological Characteristics

During the 2020 survey, 226 Walleye were captured (i.e., excluding within-year recaptures) and they were all measured for length and weight. One of these individuals was an inter-year recapture with a PIT tag number assigned to a Mountain Whitefish in an earlier year; therefore, this Walleye was not included in the species counts in Table 9. Fork lengths of captured Walleye ranged between 132 and 679 mm, and weights ranged between 14 and 3327 g (Table 14). Assigned ages ranged from age-0 to age-21.

A mode representing the age-0 age-class (132 to 167 mm FL) was evident in the length-frequency histogram in all sections combined (Figure 48). Between 2015 and 2020, the abundance of age-0 Walleye in the catch varied and was substantially higher in 2017 (n = 40) and 2019 (n = 44) compared to 2015 (n = 5), 2016 (n = 1), and 2018 (n = 4) and 2020 (n = 1) (Appendix F, Figures F35 and F36).

The length ranges overlapped between adjacent age-classes for all Walleye older than age-1 (Figure 49 and Figure 50). In 2020, the majority of Walleye captured were age-2 or older (95%), and larger than 250 mm in fork length (94%). The large percentage of age-2 and older fish suggests that the study area is primarily used by adults during the sampling period. Consistent with previous study years, small Walleye (i.e., fish less than approximately 250 mm FL) were only encountered in downstream sections (Appendix F, Figures F33 and F34).

Table 14: Average fork length, weight, and body condition by age for Walleye captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

Age	Fork Length (mm)			Weight (g)			Body Condition (*K*)		
	Average ± SD	Range	*n*[a]	Average ± SD	Range	*n*[a]	Average ± SD	Range	*n*[a]
0	136	–	1	19	–	1	0.76	–	1
1	200 ± 1	199 – 200	2	75 ± 1	74 – 76	2	0.94 ± 0.01	0.94 – 0.95	2
2	269 ± 22	244 – 302	14	211 ± 53	133 – 296	14	1.06 ± 0.06	0.92 – 1.15	14
3	313 ± 22	278 – 347	10	329 ± 70	213 – 430	10	1.06 ± 0.04	0.99 – 1.11	10
4	345 ± 28	277 – 385	18	481 ± 94	297 – 643	18	1.19 ± 0.36	0.87 – 2.58	18
5	372 ± 21	332 – 426	28	575 ± 117	430 – 951	28	1.11 ± 0.07	0.97 – 1.23	28
6	399 ± 40	341 – 461	12	704 ± 246	378 – 1229	12	1.07 ± 0.10	0.90 – 1.30	12
7	435 ± 47	363 – 537	15	963 ± 386	539 – 1847	15	1.12 ± 0.07	1.03 – 1.27	15
8	473 ± 41	440 – 533	4	1236 ± 378	911 – 1767	4	1.15 ± 0.12	0.97 – 1.23	4
9	483 ± 45	405 – 535	6	1305 ± 353	821 – 1903	6	1.14 ± 0.12	0.93 – 1.24	6
10	470 ± 20	451 – 492	4	1283 ± 252	973 – 1558	4	1.22 ± 0.11	1.06 – 1.31	4
11	552 ± 109	475 – 629	2	2282 ± 1478	1237 – 3327	2	1.25 ± 0.13	1.15 – 1.34	2
-	-	-	-	-	-	-	-	-	-
13	631	–	1	3009	–	1	1.20	–	1
-	-	-	-	-	-	-	-	-	-
21	545	–	1	1924	–	1	1.19	–	1

[a] Number of individuals sampled.

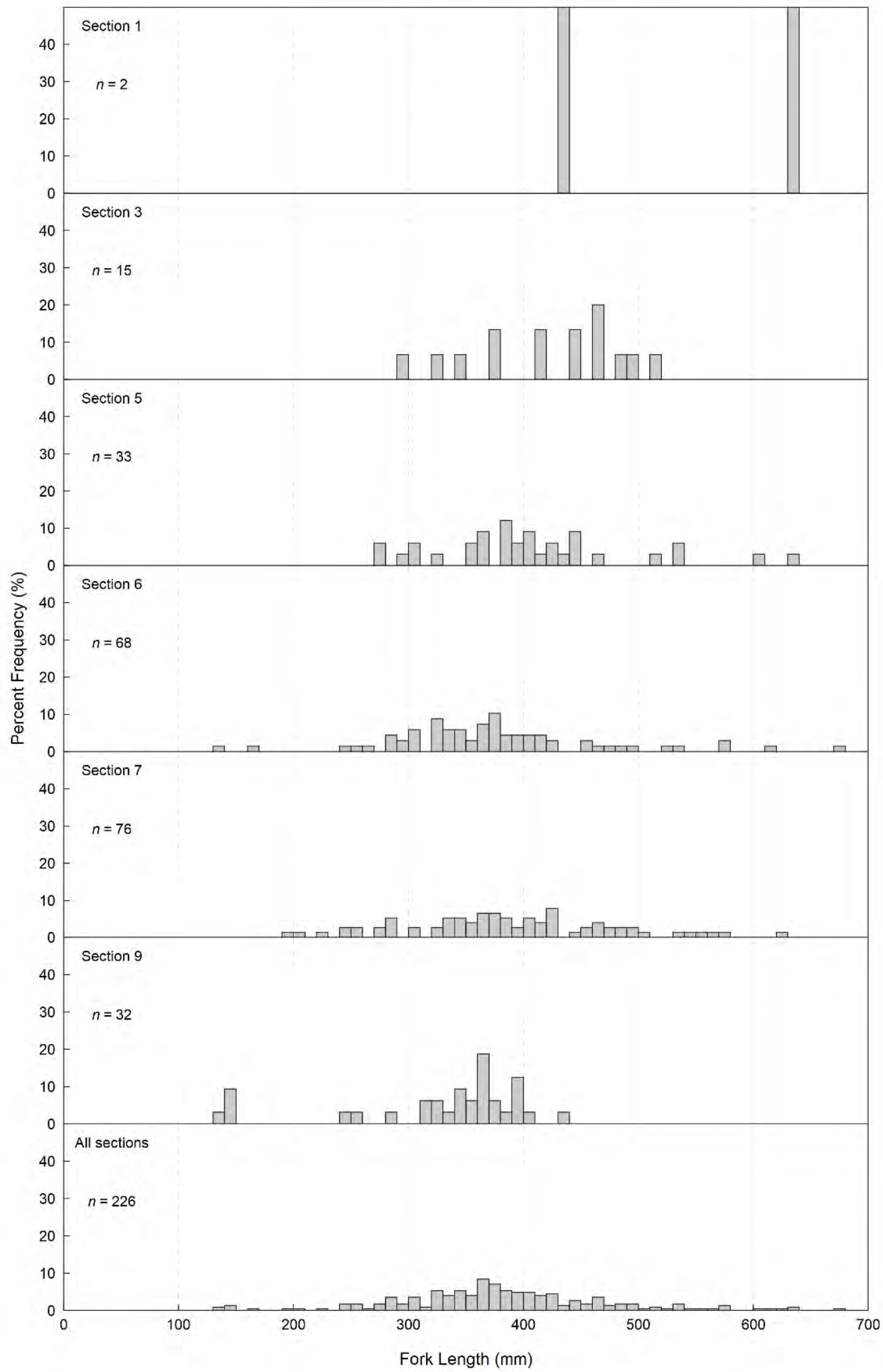


Figure 48: Length-frequency distributions for Walleye captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

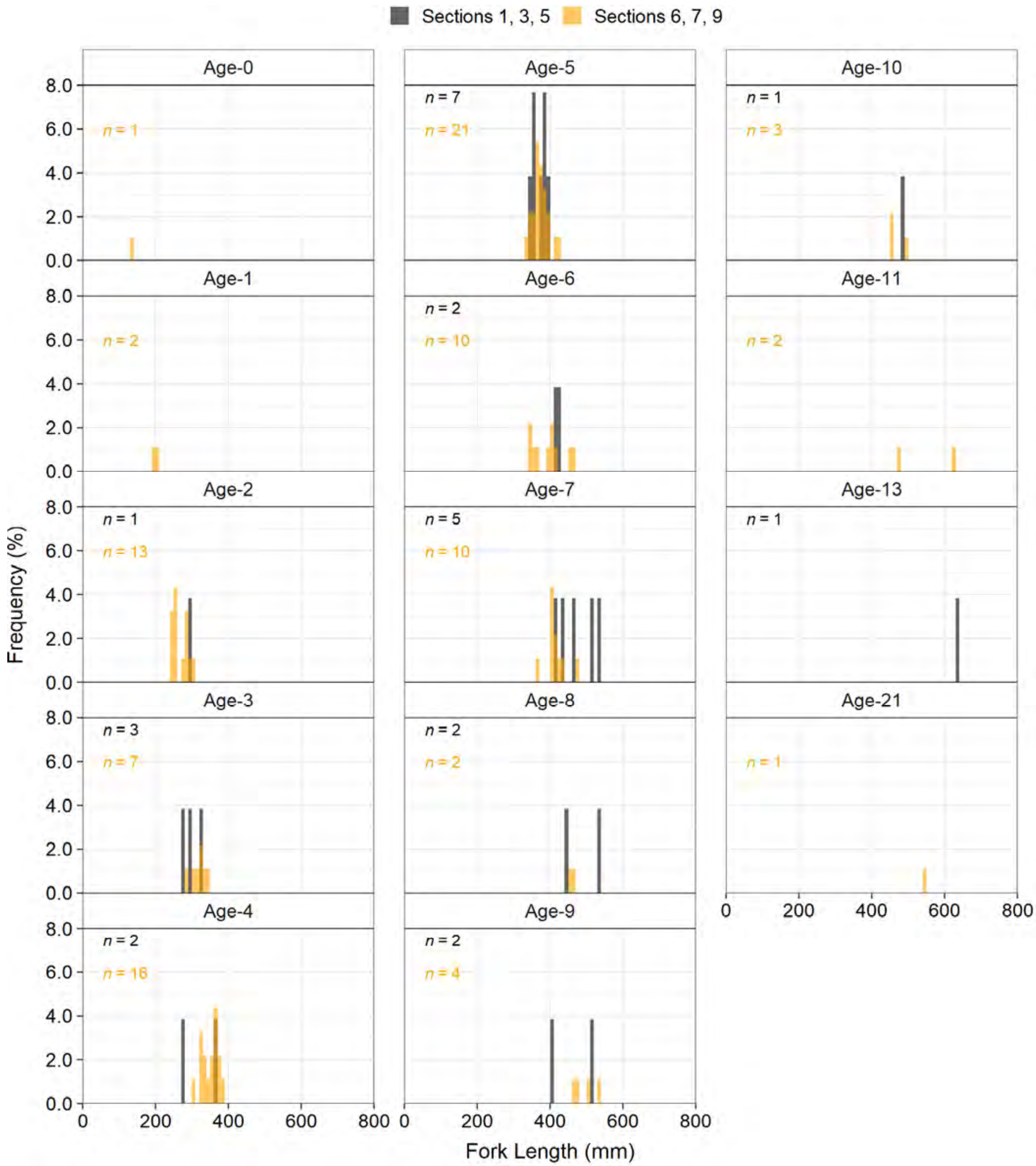


Figure 49: Length-at-age frequency distributions for Walleye captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

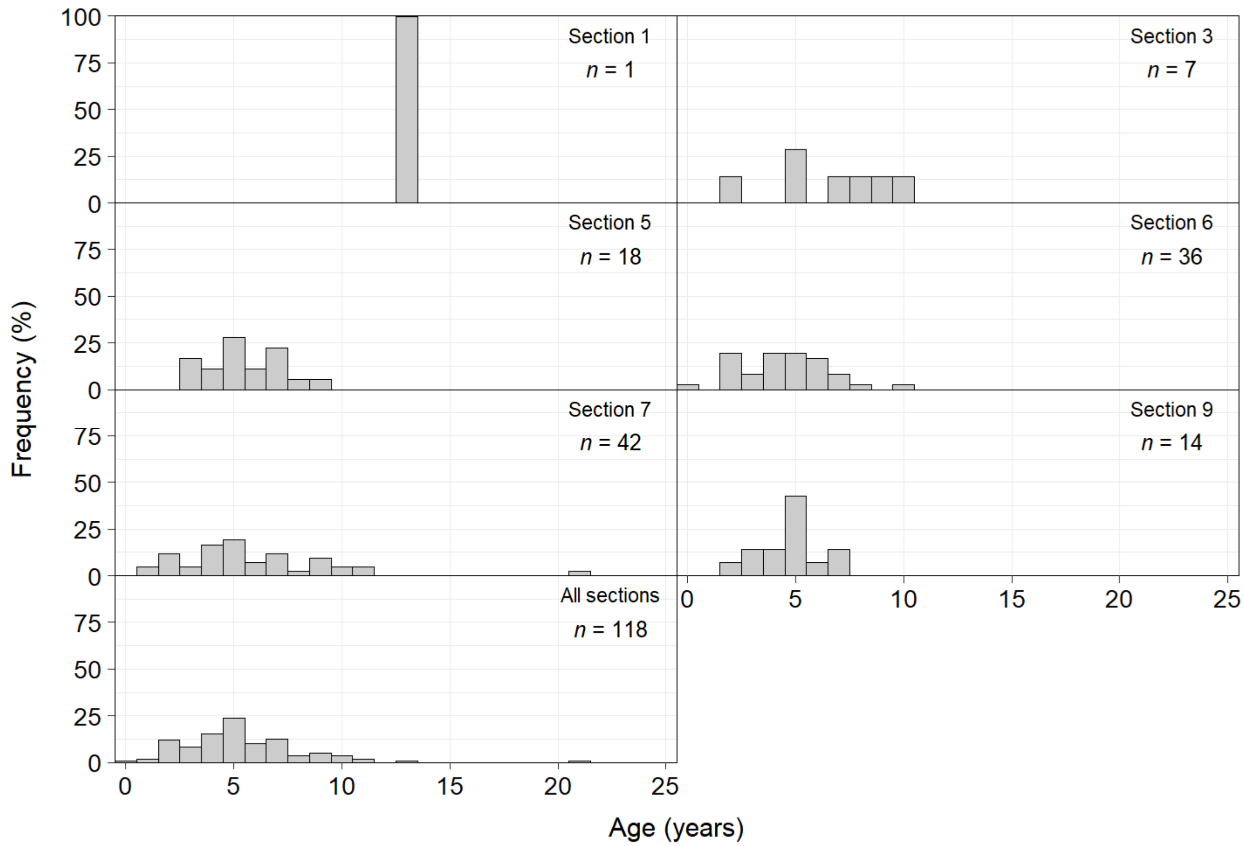


Figure 50: Age-frequency distributions for Walleye captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

Growth curves estimated for 2020 using the von Bertalanffy method suggested differences among sections, but these differences in the curves were caused by small sample sizes in the youngest and oldest age-classes (Figure 51). In particular, the absence of age-1 and age-2 individuals in some sections may have biased these comparisons among sections. Overall, length-at-age was similar among sections, suggesting similar rates of growth. Comparison of growth curves among years suggest some differences (Figure 52) but as with comparisons among sections, small sample sizes for the oldest and youngest age-classes may explain these differences, rather than real variation in growth rates. Imprecision in age estimates, particularly for the oldest age-classes that tend to be underestimated due to lack of annulus formation, may also contribute to the differences.

Mean body condition varied little among years and sections with confidence intervals overlapping for most estimates (Figure 53). Relative weight calculations tracked closely with body condition estimates and averaged approximately 96% for all sections combined over the 19-year study period. The length weight-relationship was also similar among sections (Figure 54; Appendix F, Figure F38) and years (Appendix F, Figure F37), with typical values of the exponent of 3.2. In 2016 to 2020, the exponent was greater for Sections 6, 7, and 9 combined, than in Sections 1, 3, and 5 combined (Appendix F, Figure F37), which suggests a more rotund body shape (i.e., larger weight-at-length) as fish grow in length in the downstream portions than upstream portions of the study area.

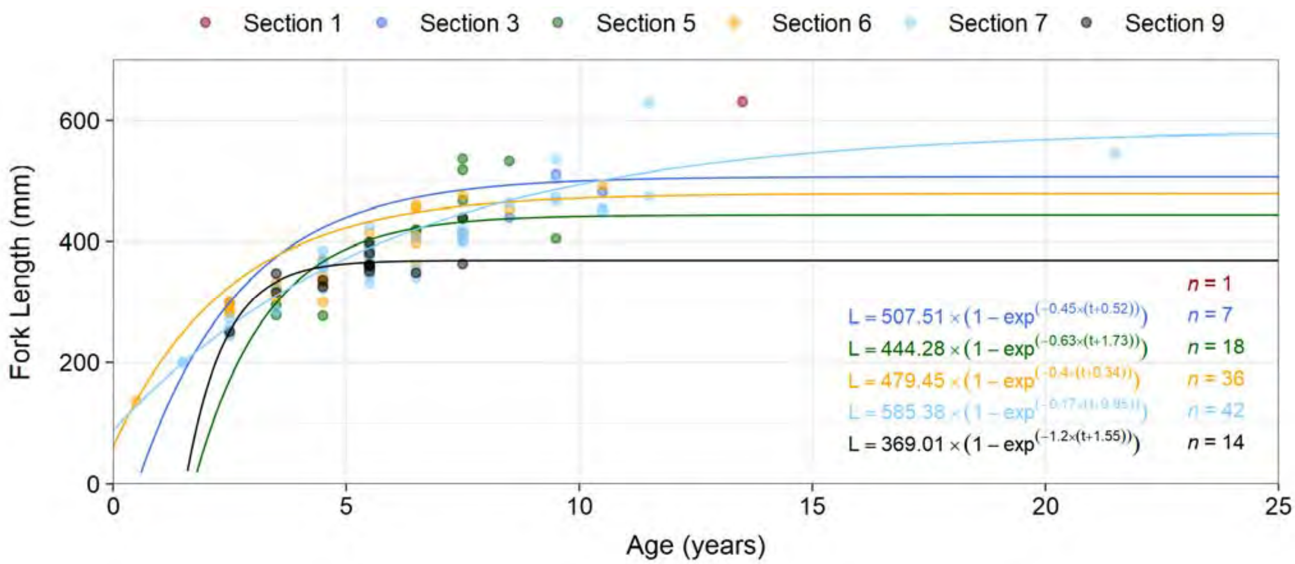


Figure 51: von Bertalanffy growth curve for Walleye captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

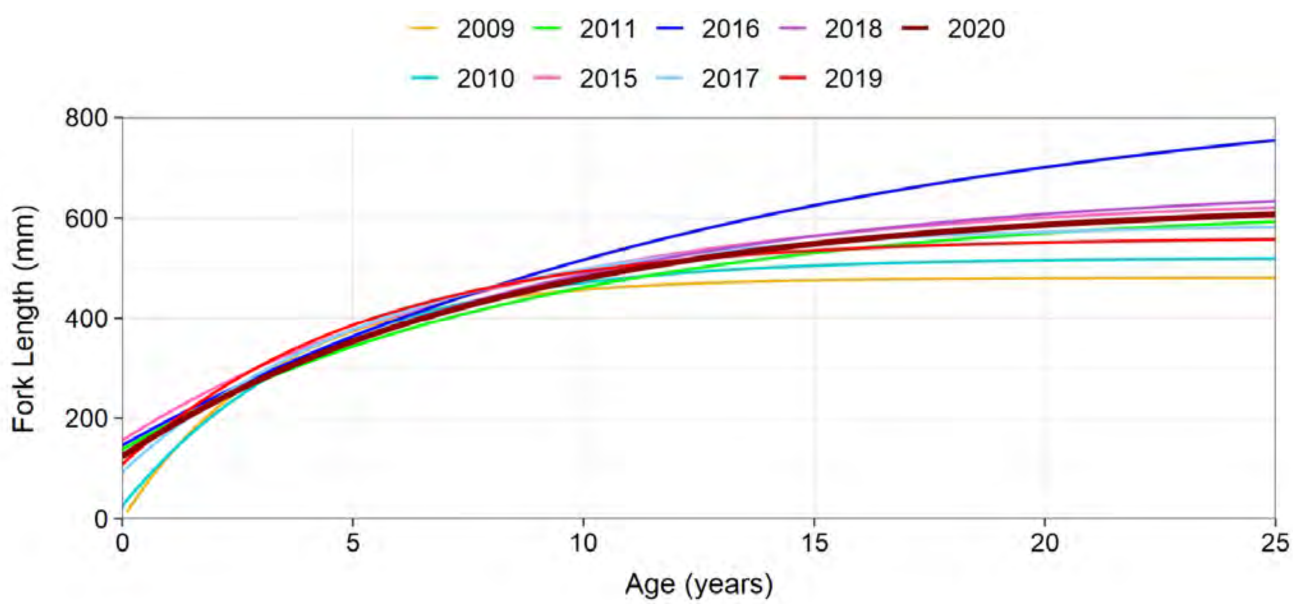


Figure 52: von Bertalanffy growth curve for Walleye captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020.

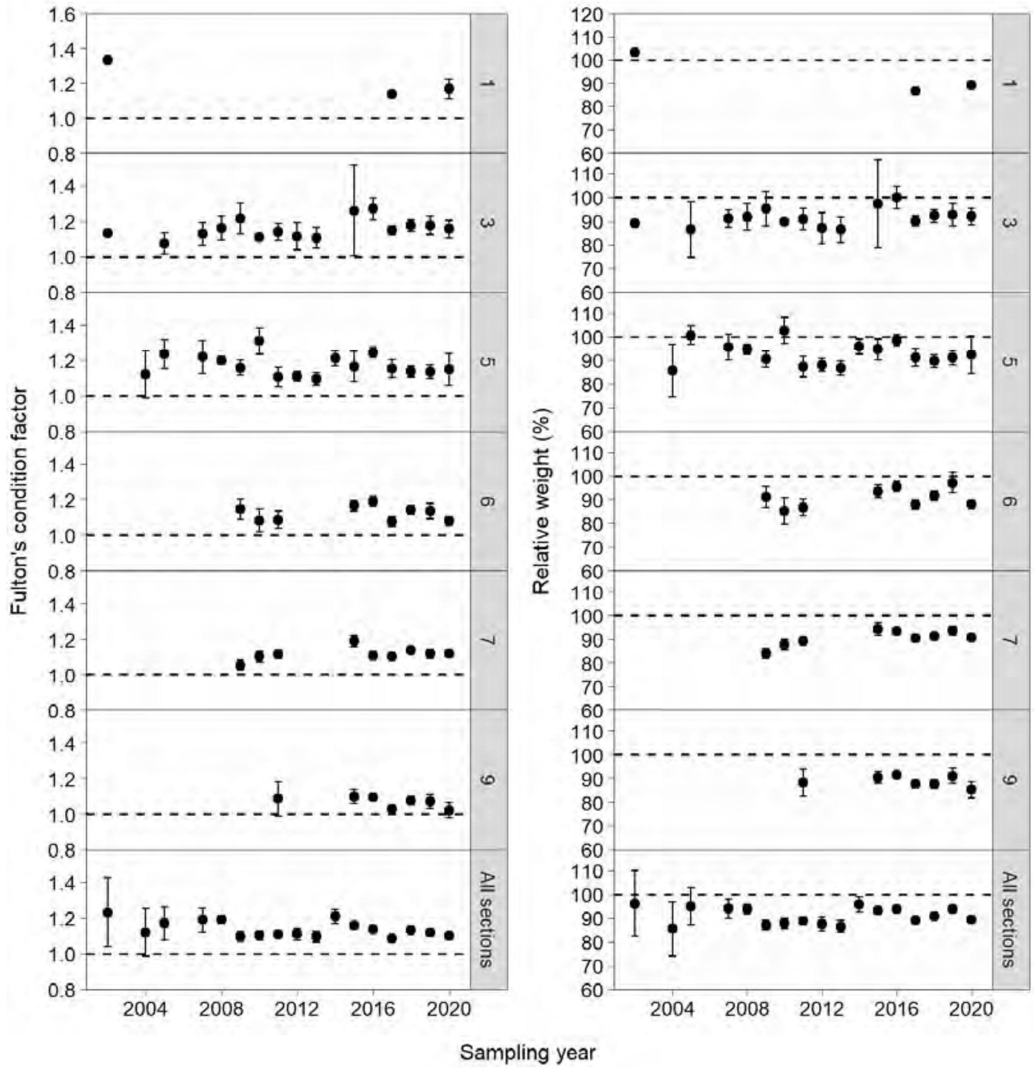


Figure 53: Mean Fulton's body condition factor (*K*) with 95% confidence intervals (Cis) (left pane) and mean relative weight (%) values (right pane) for Walleye captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. For Sections 6, 7, and 9, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011, 2013).

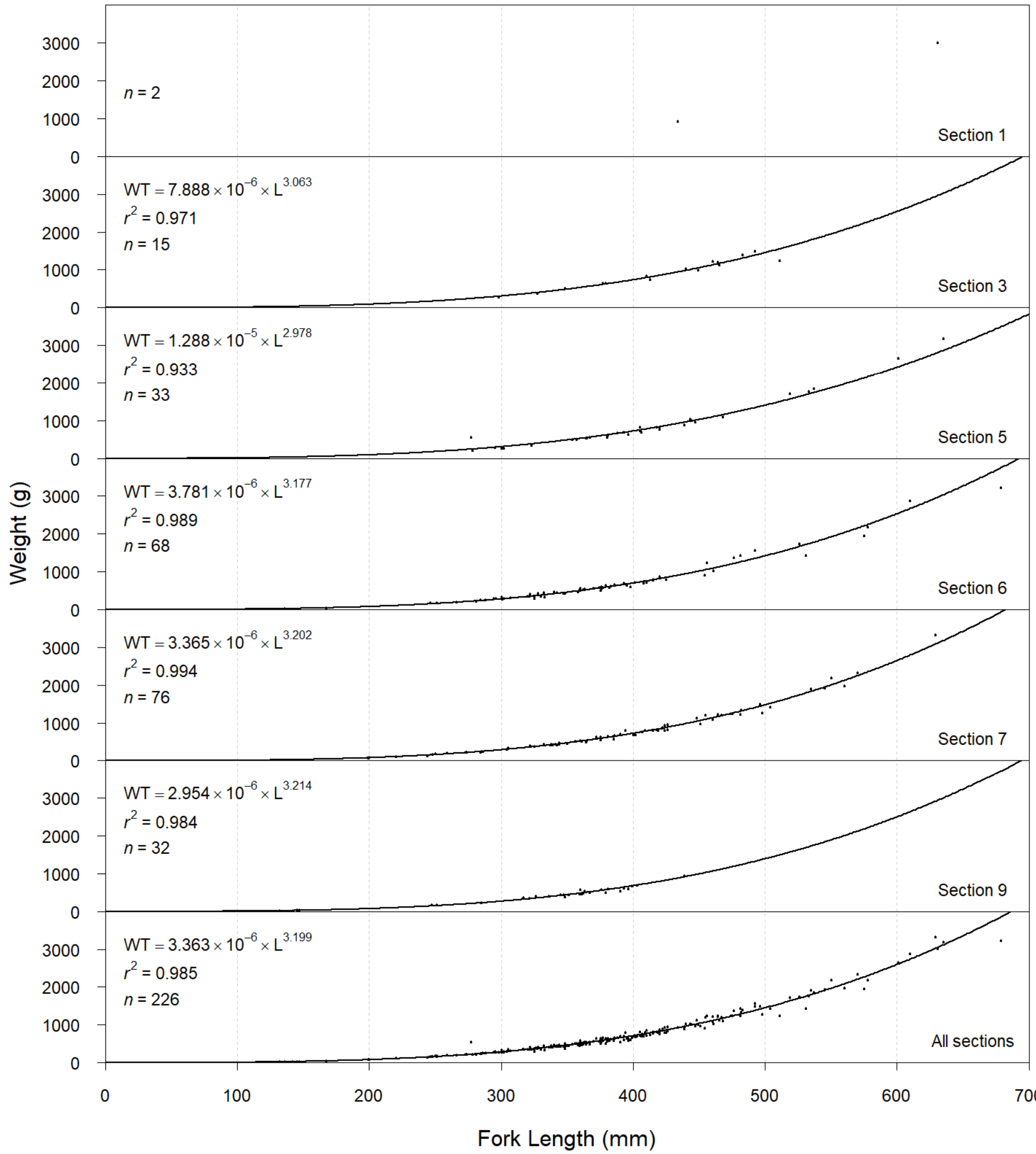


Figure 54: Length-weight regressions for Walleye captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

3.12.2 Catch Rate

Between 2002 and 2014, Walleye were not consistently targeted. In all sampled sections combined, total catch excluding within-year recaptures ranged between 115 and 372 individuals between 2015 and 2020 (average = 261 fish/year; Appendix E, Tables E1 and E2). Years prior to 2015 were excluded from catch rate analyses (Figure 55) because the species was not consistently targeted and because Walleye were not commonly recorded in Sections 1, 3, and 5, which were the only sections surveyed prior to 2015. Catch rate data suggested increasing Walleye abundance between 2015 and 2018 (all sections combined) and declining abundance between 2018 and 2020. Confidence intervals overlapped for most estimates and were generally narrow for all years except 2018 (Figure 55).

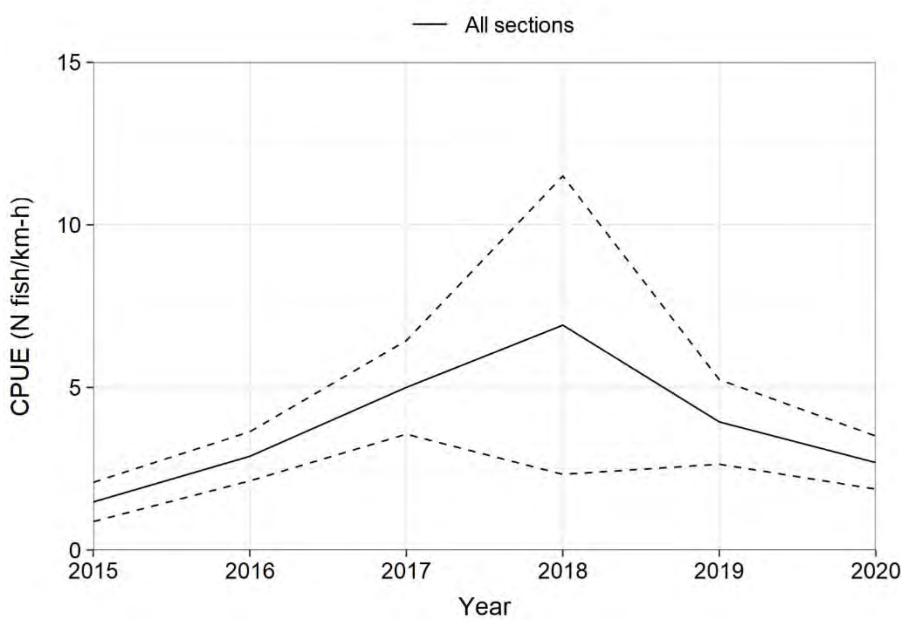


Figure 55: Mean annual catch rates (catch-per-unit effort [CPUE]) for Walleye captured by boat electroshocking in all sections of the Peace River combined, 2015 to 2020. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because Walleye were not consistently targeted prior to 2015.

In 2020, 17 Walleye were captured in Sections 1 and 3, which are upstream of the Project. Only six Walleye have been recorded upstream of the Halfway River confluence (i.e., in Section 1) since the program began in 2002, two of which were in 2020. Catch data for Walleye indicate a preference for the downstream portions of the study area for this species (Table 9).

Twenty-two Walleye were captured during the Goldeye and Walleye Survey. Of the 22 Walleye, 17 were captured near the mouth of Beatton River (Site 07BEA01), and the remaining 5 were captured at sites near the mouths of the Alces, Clear, Kiskatinaw, and Pouce Coupe rivers. Seven of the 22 Walleye were inter-year recaptures that had been caught and tagged in a previous year. Walleye captured during this survey ranged in size from 280 to 561 mm FL and ranged in age from age-3 to age-11.

3.13 White Sucker

3.13.1 Biological Characteristics

During the 2020 survey, 115 White Sucker were captured (i.e., excluding within-year recaptures; Table 9). Of these 115 fish, 79 were measured for length and weight. Fork lengths ranged between 141 and 460 mm and weights ranged between 31 and 1431 g.

Most (87%) of the White Sucker captured in 2020 were between 300 and 500 mm FL. Length-frequency histograms suggested similar length distributions among sections (Figure 56), except that White Sucker less than 300 mm FL were not captured in Sections 1, 3, and 7. This result is consistent with previous study years, as small White Sucker were often not captured in the upstream sections of the study area (Appendix F, Figure F39 and F40).

The mean body condition (*K*) of White Sucker varied little among sections or years with typical values of 1.3 and a range of 1.2 to 1.5 (Figure 57). Relative weights were not calculated for White Sucker.

The length-weight relationship in 2020 was similar to previous years (Appendix F, Figure F41). Small sample sizes limited meaningful comparisons of length-weight relationships among some sections. However, in general, the available data did not suggest any large differences in length-weight among sections (Figure 58).

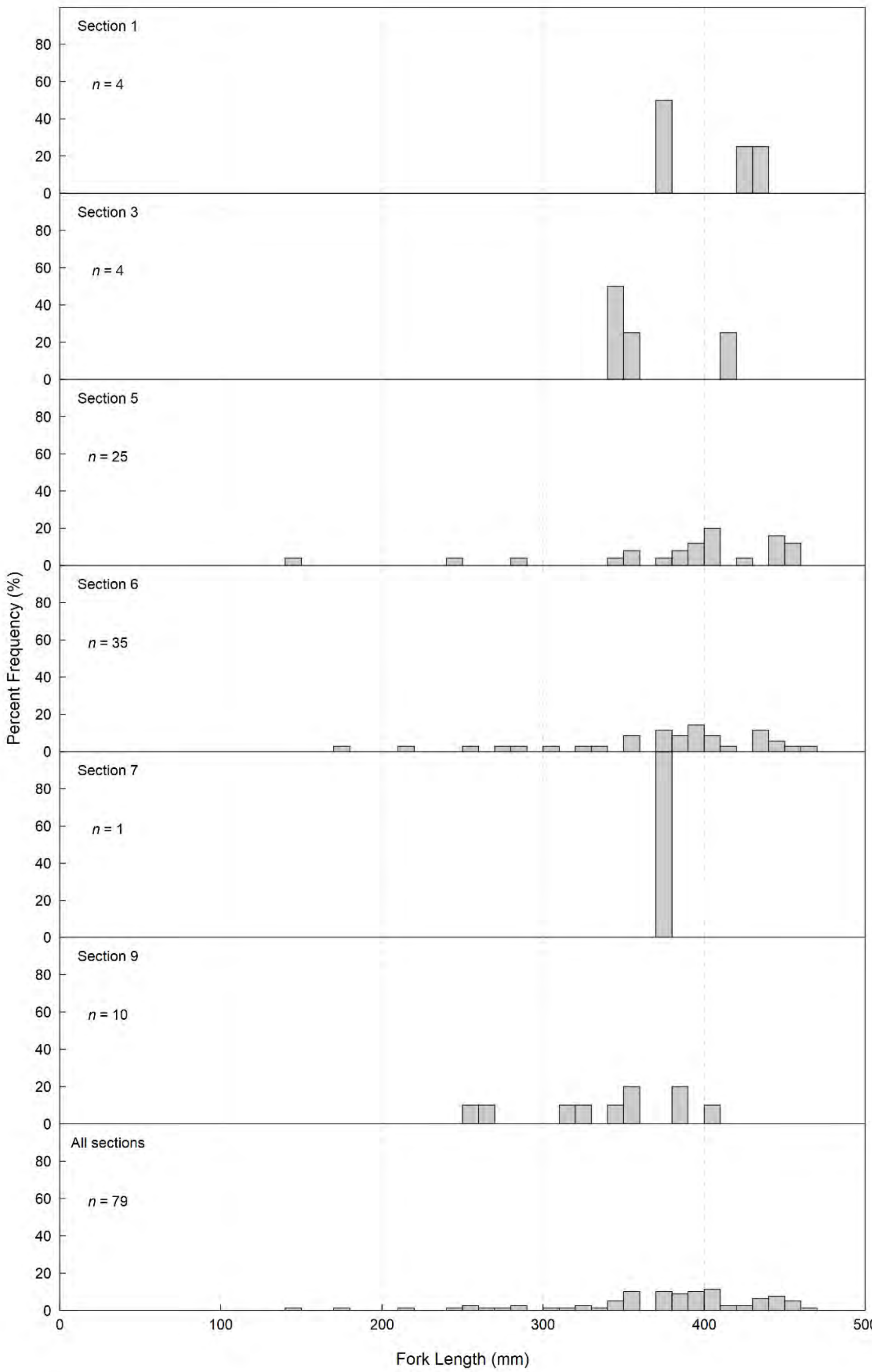


Figure 56: Length-frequency distributions for White Sucker captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

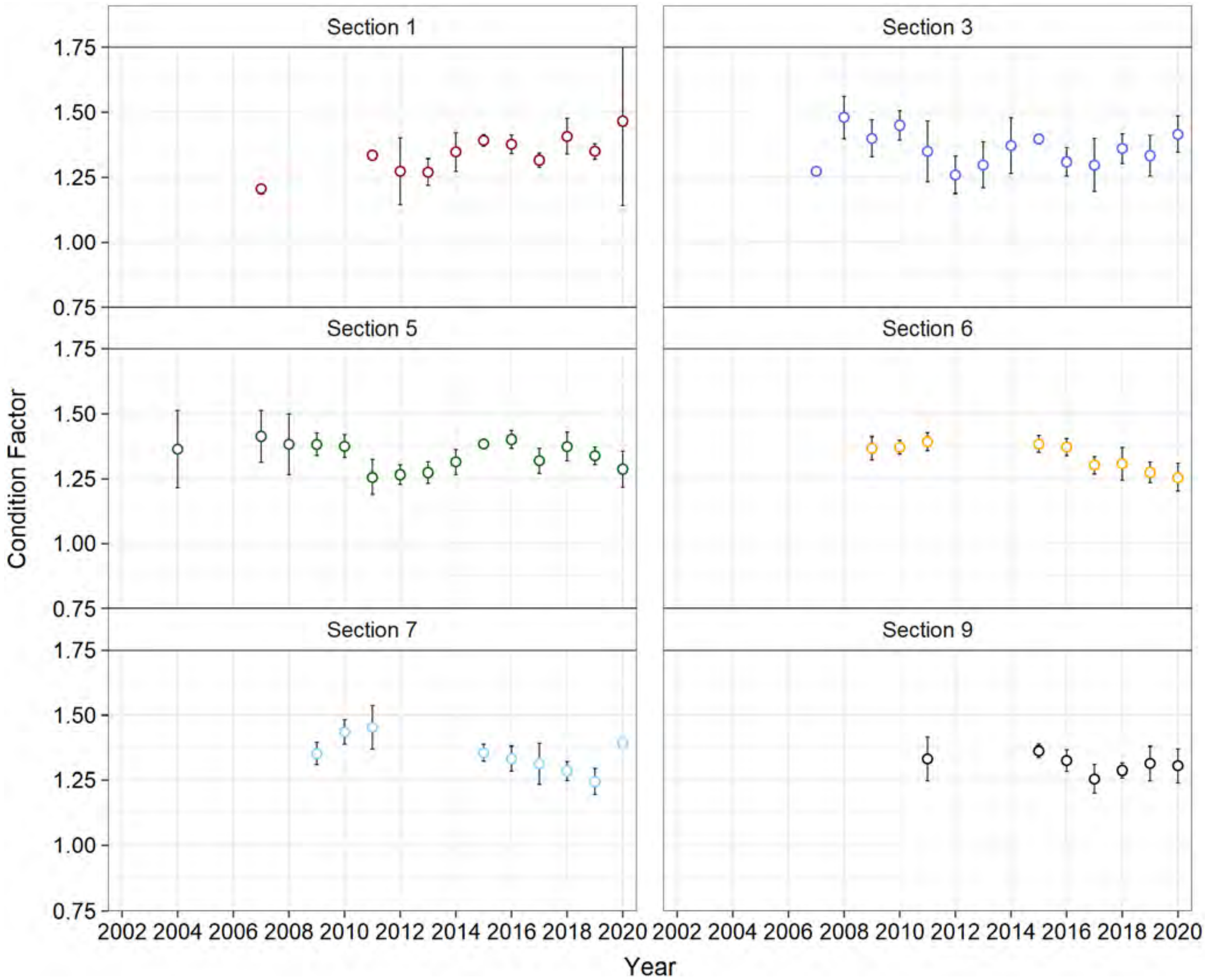


Figure 57: Mean Fulton's body condition factor (K) with 95% confidence intervals (Cis) for White Sucker captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. For Sections 6, 7, and 9, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011, 2013).

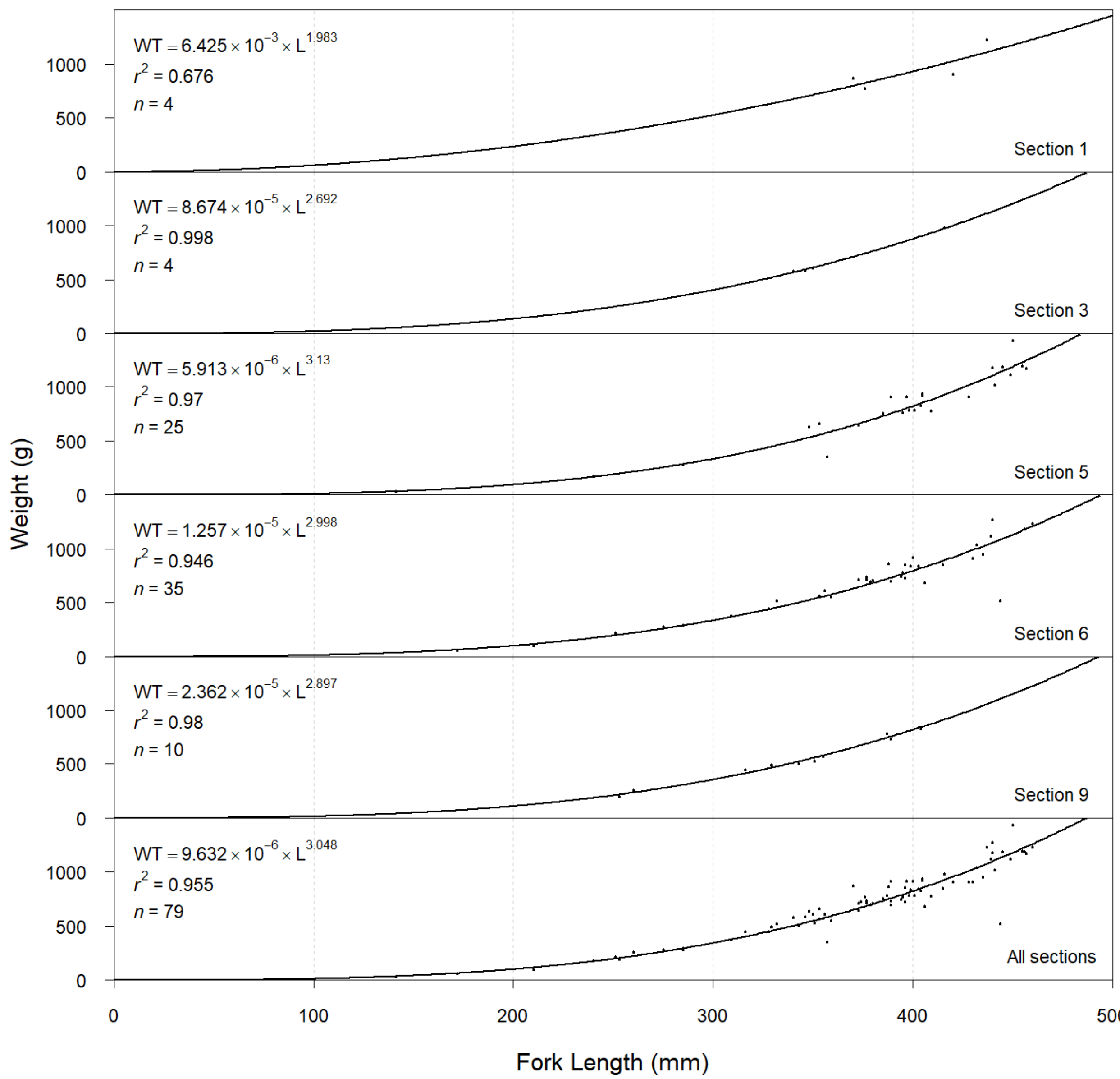


Figure 58: Length-weight regressions for White Sucker captured by boat electroshocking in sampled sections of the Peace River, 21 August to 7 October 2020.

3.13.2 Catch Rate

In 2020, 115 White Sucker were captured during the Indexing Survey. During years when all sections were sampled (2015 to 2020), catch of White Sucker was relatively evenly distributed through the study area, with 19% recorded in Section 1, 15% recorded in Section 3, 21% recorded in Section 5, 20% recorded in Section 6, 10% recorded in Section 7, and 15% recorded in Section 9. Catch rates suggested declining White Sucker abundance between 2015 and 2018, a small increase in abundance in 2019, and a decrease in 2020 (all sections combined); confidence intervals overlapped for all estimates with the exception of the 2015 estimate (Figure 59).

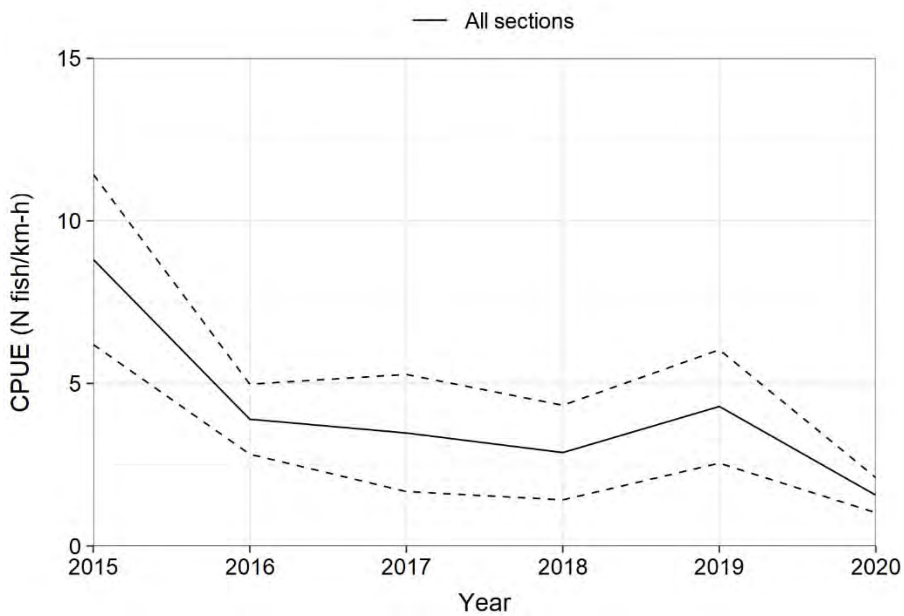


Figure 59: Mean annual catch rates (catch-per-unit effort [CPUE]) for White Sucker captured by boat electroshocking in all sections of the Peace River combined, 2015 to 2020. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because Walleye were not consistently targeted prior to 2015.

3.14 Goldeye and Walleye Survey

A total of 22 Walleye were captured during boat electroshocking surveys conducted as part of the 2020 Goldeye and Walleye Survey; Goldeye were not captured or observed (Table 15). Field crews only attempted to net indicator species (Arctic Grayling, Bull Trout, Burbot, Goldeye, Mountain Whitefish, Rainbow Trout, and Walleye); however, two Northern Pike and one Northern Pikeminnow were captured incidentally. All of the Walleye captured during the Goldeye and Walleye Survey were classified as adults based on body length (280 to 561 mm FL). Ages assigned to Walleye using fin ray analysis ranged from age-3 to age-11. These ranges of lengths and ages of Walleye captured during the spring survey were similar to those captured during the Indexing Survey, suggesting similar uses of the area by this species during the spring to early summer season as the mid-summer to early fall season. Walleye spawn in the spring when water temperatures are around 5°C (Nelson and Paetz 1992). Although captured Walleye were not assessed for sexual maturity during the survey, none of the captured fish showed obvious signs of being in spawning condition (e.g., expressing gametes when handled).

Average body condition (*K*) of Walleye during the Goldeye and Walleye Survey in April and May (Table 15) was lower than during the Indexing Survey in August and September (Table 14).

Table 15: Average fork length, weight, and body condition of fish captured by boat electroshocking during the Goldeye and Walleye Survey, 25 April to 25 May 2020.

Species	Group[a]	Fork Length (mm)			Weight (g)			Body Condition (*K*)		
		Average ± SD	Range	*n*[b]	Average ± SD	Range	*n*[b]	Average ± SD	Range	*n*[b]
Northern Pike	1	564 ± 136	468–660	2	1200 ± 938	536–1863	2	0.59 ± 0.09	0.52–0.65	2
Northern Pikeminnow	4	540	-	1	907	-	1	1.08	-	1
Walleye	1	423 ± 72	280–561	22	907 ± 448	202–1928	22	1.11 ± 0.11	0.92–1.4	22

[a] As assigned by Golder et al. (2012).

[b] Number of individuals sampled.

Two Walleye were captured during the Fyke netting and hoop netting component of the Goldeye and Walleye Survey. One Walleye was captured in a Fyke net installed on the Beatton River. It had a fork length of 271 mm, a weighed of 175 g, and was implanted with an HDX PIT tag (Tag Number 900230000202592). The second Walleye was captured in a Fyke net installed on the Pouce Coupe River. It had a fork length of 252 mm, weighed 138 g, and was also implanted with an HDX PIT tag (Tag Number 900230000202390). A summary of Fyke net and hoop net effort is provided in Table 16. In addition to the two Walleye detailed above, the following fish were captured during the 2020 Fyke netting and hoop netting program: 6 Trout-perch (*Percopsis omiscomaycus*), 4 Burbot, 3 Flathead Chub (*Platygobio gracilis*), 3 Lake Chub (*Couesius plumbeus*), 3 Northern Pike, 2 Longnose Sucker, 1 Northern Pikeminnow, and 1 Redside Shiner. During the Fyke netting and hoop netting component, the incidental catch was enumerated and released without processing. The Fyke netting and hoop netting component of the Goldeye and Walleye Survey is not expected to continue after 2020; therefore, catch and effort data from this component were not included in any of the other 2020 analyses or summaries.

Table 16: Summary of Fyke net and Hoop net effort deployed during the 2020 Goldeye and Walleye Survey.

Site	UTM			Set Depth (m)	Set		Pull		Soak Time
	Zone	Easting	Northing		Date	Time	Date	Time	
BEAFN01	10V	662452	6220580	0.9	30-May-20	12:20	31-May-21	10:30	22:10
BEAHN01	10V	663088	6220680	1.2	30-May-20	12:48	31-May-21	10:48	22:00
BEAHN02	10V	662993	6220308	1.1	30-May-20	13:02	31-May-21	10:57	21:55
CLEFN01	11V	331853	6228687	1.3	30-May-20	15:51	31-May-21	12:33	20:42
POUFN01	11V	319113	6224534	1.5	30-May-20	17:20	31-May-21	13:38	20:18
ALCFN01	10V	683056	6224211	0.5	30-May-20	19:15	31-May-21	14:28	19:13

4.0 DISCUSSION

4.1 Management Hypotheses

Management hypotheses for this monitoring program relate to the predicted changes in the biomass and community composition of fish in the Peace River during the construction and operation of the Project.
Data collected from 2002 to 2020 represent the baseline, pre-Project state of the Peace River fish community. Currently, management hypotheses are not scheduled to be statistically tested until after the river diversion phase of construction (i.e., after 2020). Instead, effort has focused on developing analyses and metrics that will eventually be used to test the management hypotheses.

4.2 Annual Sampling Consistency

Field methods employed during the Indexing Survey were standardized in 2002; these methods were carried over to the GMSMON-2 program in 2008 and to the current program in 2015. Over the 19-year study period (2002 to 2020), small changes were occasionally made to the methods based on results of preceding study years or to better address each program's management objectives. Examples of some of these changes include the sections of river sampled and the types of tags deployed (T-bar anchor tags initially, changing to full-duplex PIT tags in 2004, and to half-duplex PIT tags in 2016). For a long-term monitoring program, changes to methods, which also includes changes in handling procedures (such as additive effects associated with collecting tissue or stomach content samples), have the potential to confound results and hinder the identification of patterns and trends in the data through changes in behavior, health, or survival. Changes made between 2002 and 2013 are discussed in previous reports. In 2020, boat electroshocking methods adhered to methods developed by Mainstream and Gazey (2014) and subsequently modified in 2014 to reduce electroshocker related injuries to fish.
These modifications included operating the electroshocking equipment at a lower frequency (30 Hz compared to 60 Hz) and amperage (a range 2.0–4.2 A compared to 3.2–5.2 A). Studies from other river systems indicate that salmonids, particularly larger salmonids, are less likely to be injured (e.g., branding, internal hemorrhaging, or spinal injuries) at the lower operational settings (Snyder 2003; Golder 2004, 2005).

Previous analysis on the catchability of fish in the Peace River identified that CPUE for Mountain Whitefish, Arctic Grayling and Rainbow Trout was lower from 2014 to 2018 compared to years prior to 2014 (ESSA et al. 2019), indicating a possible effect of changes in electroshocking settings; however, it is not known whether the difference in electroshocker settings used in 2014–2020 versus 2002–2013 resulted in differences in the rates of injury, survival, and recapture of sampled fishes. An integrated population model for Mountain Whitefish indicated differences in selectivity between the two epochs for this species (Golder and Gazey 2020). From 2014 to 2019, selectivity was more uniform across size classes when compared to 2002–2013 (Golder and Gazey 2020).
Higher frequencies, which were used from 2002–2013, result in greater electrical power. Greater power makes it easier to catch small fish (Dolan and Miranda 2003). Lower frequencies, which were used from 2014 to 2020, have less electrical power, reducing the small fish catch and increasing the portion of large fish in the catch.
The change in selectivity confounds comparisons between the two epochs but could prove beneficial to long-term study results, due to reduced injury or mortality associated with electroshocking. Increased selectivity for younger age-classes, particularly age-2 fish because they are young but still large enough to tag, would increase the precision of age-based metrics, including length-at-age, annual growth, recruitment, and inter-annual survival, and improve the precision of the synthesis model (Golder and Gazey 2020).

4.3 Arctic Grayling

Over the 19-year monitoring period, the catch rate of Arctic Grayling has generally declined. Catch rates were variable but higher from 2004 to 2011 and were variable but low in all years since 2012. Arctic Grayling catch rates decreased from 2016 (1.6 fish/km-h) to 2020 (0.3 fish/km-h).

In all study years, the majority of Arctic Grayling were captured in the upstream portions of the study area (Sections 1, 3, and 5). Use of the downstream portions of the study area by Arctic Grayling is not fully understood. Between 2015 and 2020, the number of Arctic Grayling captured each year downstream of the Project was typically low, with the exception of 2019. The majority (85%) of the Arctic Grayling captured downstream of the Project in 2019 were age-0 and age-1. These catch data from 2019 suggest that the downstream portions of the study area may contain important rearing habitat for this species. The low numbers of immature Arctic Grayling in the downstream sections prior to 2019 may have been due to lower recruitment. Additional years of data are required to fully understand the importance of Sections 6, 7, and 9 to Arctic Grayling.

Age data indicate that all age-classes of Arctic Grayling are present in the study area up to age-7. Low catch in many study years makes it difficult to track the relative abundance of cohorts through time to identify years with relatively strong or weak recruitment. However, there were some exceptions, where cohorts could be tracked through time, such as poor recruitment from the 2017 brood year, as suggested by the catch of zero age-0 fish in 2017, zero age-1 in 2018, and low catch of age-2 in 2019. In Sections 6, 7, and 9 combined, the unusually large number of age-0 Arctic Grayling in 2019 was followed by a large percentage of age-1 fish in that portion of the study area in 2020, suggesting greater-than-average recruitment from that cohort.

Additional years of data from downstream sections could be used to assess the movement and distribution of Arctic Grayling within the study area in response to the construction and operation of the Project. It is anticipated that low recapture rates will result in uncertain capture-recapture abundance estimates for this species during the construction and operation of the Project. Therefore, changes in abundance over time for this species should be assessed using indicators of relative abundance, such as catch rate or the relative strengths of individual age-classes. The anticipated reliance on relative abundance metrics highlights the importance of maintaining consistent sampling effort and methods across study years.

Indicators of growth and body condition, including length-at-age, Fulton's condition factor, and relative weight were all lower in 2019 and 2020 than previous years. This may indicate poor conditions for the growth of Arctic Grayling in the study area over the last two years. Overall, values of relative weight were near or greater than 100%, which suggests good condition of Arctic Grayling in the study area compared to populations of this species across its range (Gilham et al. 2021).

The bulk of the Arctic Grayling population spawns in tributaries of the Peace River, most notably the Moberly River (Mainstream 2012). After hatching, age-0 Arctic Grayling disperse downstream into the Peace River mainstem over the summer season. The success of these life stages of Arctic Grayling (i.e., spawning and age-0 dispersal) is paramount to sustaining the Peace River Arctic Grayling population. These early life history stages are also highly susceptible to environmental perturbation (McPhail 2007). Low abundance of a particular cohort, such as the 2011, 2015, and 2017 brood years (Appendix F, Figure F3), could be related to poor environmental conditions during the spring and summer of the cohort’s spawning year. In each of 2011, 2015, and 2017, discharges from the Moberly River were substantially greater than average during the spring (Water Office 2019), suggesting a possible correlation between Moberly River water levels and the spawning/incubation or downstream dispersal success of age-0 Arctic Grayling.

4.4 Bull Trout

Catch rate was used as an index of relative abundance and did not suggest any substantial or sustained changes in Bull Trout abundance when compared to historical data.

Age-0 to age-2 Bull Trout are not typically captured in the Peace River mainstem during Indexing Surveys. Young Bull Trout are known to rear in Peace River tributaries, most notably tributaries to the Halfway River (Geraldes and Taylor 2020). During the August to September study period, older, mature Bull Trout have migrated into tributaries to spawn and are not present in the Peace River during the Indexing Survey. For these reasons, the Bull Trout population sampled during the Indexing Survey was largely composed of subadults that were old enough to have migrated out of their natal streams but had not yet reached sexual maturity. A small portion of the sampled population may have included adult fish that had forgone spawning (i.e., skip spawners) and Bull Trout that had either not yet migrated into tributaries to spawn or had already returned to the Peace River after spawning.

Bull Trout were not assigned ages using fin rays in 2020 because previous analyses indicated that ages assigned using this method were not consistent or reliable (Golder and Gazey 2020). Inaccurate age assignment of Bull Trout using fin rays was attributed to: 1) inconsistent annuli development on fin rays, particularly in older individuals with slower growth rates; 2) the youngest annuli not being evident in fin rays because the rays could not always be collected close enough to the body wall of the fish; and, 3) frequent and irregular growth checks that could be mistaken for annuli (most likely related to frequent migrations into and out of spawning tributaries). Otoliths (MacKay et al. 1990; Zymonas and McMahon 2009) and vertebrae (Gust 2001) are more accurate methods for ageing Bull Trout but both require lethal sampling. For age-related analyses of Bull Trout in 2020, fish initially captured during the Indexing Survey and during baseline studies for the Project (Mainstream 2010, 2011, 2013) that were less than 240 mm FL were assigned an age of age-3 for the reasons detailed in Section 2.1.4. Age-4 Bull Trout were expected to be larger than 240 mm FL and age-0 to age-2 individuals were not expected to be present in the Peace River mainstem.

Between 2002 and 2020, 446 Bull Trout were recorded in the Peace River mainstem that had fork lengths less than 240 mm FL. This dataset should be considered an approximation of true age-3 fish. An unknown number of age-4 Bull Trout in the Peace River could be smaller than 240 mm FL and an unknown number of age-3 Bull Trout could be larger than 240 mm FL. Based on length-frequency and annual growth data from recaptured individuals, these portions of the population are expected to be quite small. The dataset was supplemented with length-at-age data from age-0 to age-2 individuals collected from the Halfway River watershed (Golder 2018–2021a) to provide a representative dataset that encompasses all age-classes. Although the dataset was small (n = 6) for age-4 and older Bull Trout with ages assigned based on time between captures, this sample size is expected to increase in future years as immature Bull Trout that were tagged at a known age in the Halfway River watershed are encountered in the Peace River and as more fish initially tagged as age-3 individuals are recaptured.

Length-at-age data indicate slower growth rates for Bull Trout in tributaries when compared to Bull Trout in the Peace River mainstem. von Bertalanffy growth curves fit the data better when the population was split into an age-0 to age-3 cohort (i.e., tributary growth) and an age-3 to age-8 cohort (i.e., Peace River mainstem growth). The increased growth rate in the Peace River may be related to the transition from a benthic to a fish-based diet. In water-bodies where suitable prey fish are present, the transition to a fish-based diet typically occurs when Bull Trout are between 100 and 200 mm in fork length (Stewart et al. 1982; Boag 1987; Pratt 1992; as cited in McPhail and Baxter 1996).

Similar to most previous study years, the body condition (i.e., weight-at-length) of Bull Trout was higher in Section 1 than most other sections. Reasons for higher body condition in Section 1 are not known. Potential reasons include additional feeding opportunities from dead and injured fish entrained through PCD or colder water temperatures in Section 1, relative to downstream sections, which could result in lower metabolic rates while fish ingest the same amount of food.

4.5 Mountain Whitefish

Catch rates were similar in all years since 2014, suggesting a stable population in recent years. Catch rates were greater between 2002 and 2013 than between 2014 and 2020. This finding is supported by ESSA et al. (2019), which found that CPUE for Mountain Whitefish was greater in years prior to 2014 compared to years after 2014. This difference could be related to a change in electrofishing settings (i.e., reduced amperage and pulse frequency) which was initiated in 2014 to reduce potential electroshocker related injuries to fish. Abundance estimates using capture-recapture methods, which estimate and account for differences in capture efficiency, did not suggest lower abundance in 2014–2019 than in 2002–2013 (Golder and Gazey 2020). This supports the idea that the difference in catch rates was likely due to the change in methods, and not a difference in abundance of Mountain Whitefish.

In 2020, as well as previous years of the program, the catch and relative abundance of Mountain Whitefish were greatest in Section 1, and generally decreased with distance downstream. Reasons for this trend are not definitively known. However, habitat quality and environmental factors, such as water temperature, which generally increases with distance downstream, may explain the decreasing trend in Mountain Whitefish abundance with distance downstream from PCD.

Previous studies found that the abundance of Mountain Whitefish in the study area appeared to be related to water levels, with higher densities generally observed when water levels were lower (e.g., Golder and Gazey 2017). Mainstream and Gazey (2011) postulated that, at lower water levels, side channel habitats become isolated or unsuitable for use by Mountain Whitefish, thereby concentrating fish in remaining portions of the study area, where they are more susceptible to capture during the Indexing Survey. This hypothesis was supported by data from 2010, 2011, 2016, and 2018 that recorded high Mountain Whitefish abundance estimates in years when, for a substantial portion of the study period, flows remained below the historical seasonal average (Appendix C, Figure C1). In years with lower population abundance estimates (i.e., 2012–2015), flows ranged from above average to below average and the relationship between flow and abundance estimates was less evident. In 2020, discharge in the Peace River ranged from greater than historical averages at the start of the study period, to less than average at the end of the study period. Capture-recapture abundance estimates were not produced in 2020, but catch rates indicated near-average abundance that was similar to recent years of monitoring. Presently, it is difficult to conclude whether variation in capture-recapture abundance estimates represent real trends in fish abundance in the Peace River. Based on conclusions in ESSA et al. (2019), the variation is unlikely to be related to differences in water levels.

Indicators of growth and body condition, including Fulton's condition factor, relative weight, and the mean length of age-1 fish, were all lower in 2020 than most previous years. This trend was also observed for Arctic Grayling and may indicate poor conditions for the growth of insectivorous fishes in the study area over the last two years.

Consistent with previous study years, the average body condition of Mountain Whitefish was greatest in the upstream sections and lowest in the downstream-most sections of the study area. Water temperatures in the study area are coldest in Section 1 and generally increase with distance downstream (Golder 2021b), which may be a contributing factor to the trend in decreasing body condition. Warmer water temperatures are associated with greater metabolic rates in Mountain Whitefish (Challenger 2019) and other species (e.g., Bull Trout; Mesa et al. 2013). Therefore, if all other variables that could affect bioenergetics, such as prey availability and consumption rates, were constant, then greater body condition would be expected in colder water temperatures of the upper section of the Peace River than further downstream where temperatures are warmer. A previous study demonstrated reduced body condition of Largemouth Bass (*Micropterus salmoides*) in areas of a lake that had warmer water temperature due to industrial effluent than in unaffected reference areas, which was attributed to temperature-related changes in metabolism (Gibbons et al. 1978).

4.6 Rainbow Trout

Catch data and catch rates did not suggest any substantial changes in the abundance of Rainbow Trout between 2015 and 2020. Consistent with previous studies, over 80% of the encountered Rainbow Trout were recorded in the upstream two sections of the study area. The higher abundance of Rainbow Trout in these sections was attributed to feeding and rearing habitat provided by tributaries to the Peace River in the upstream portion of the study area. Lynx Creek, which flows into the Peace River in Section 1, is one of three known spawning and rearing streams for Peace River Rainbow Trout (RRCS 1978; Mainstream 2012). However, recent landslides in the Lynx Creek watershed may have left the system less suitable for Rainbow Trout. Lynx Creek was not sampled in 2020 as part of the Tributary Survey because of the persistence of high turbidity and deposited sediment that prevented effective sampling and likely severely reduces habitat suitability for Rainbow Trout. The extent that Rainbow Trout spawn in Lynx Creek relative to the other two streams (i.e., Maurice and Farrell creeks) is unknown. As such, the long-term effects, if any, that the landslide will have on the Peace River Rainbow Trout population is also unknown.

The range of body lengths of Rainbow Trout captured in the Peace River overlapped between age-classes as young as age-1, which makes it difficult to validate assigned ages through length-frequency comparisons. The overlapping length distributions may be because the population sampled in the Peace River represents juveniles reared in different spawning tributaries, and growth rates during early life varied among tributaries. Substantial differences in length-at-age of age-0 and age-1 Rainbow Trout between Colt, Kobes, Maurice, and Farrell creeks were reported in the Tributary Survey (Golder 2021a) and likely explain the overlapping lengths observed in the Peace River.

4.7 Walleye

Catch rates from 2015 to 2020 suggest a generally stable population, but with greater relative abundance in 2018 than other years. The large catch of age-1 Walleye in 2019 may be related to the large number of adults (i.e., potential spawners) encountered the previous year, as indicated by high catch rate in 2018. The high percentage of age-2 Walleye captured in 2020 also suggested relatively strong recruitment from the 2018 cohort (i.e., fish that hatched in 2018). If the 2018 brood year did result in greater than average recruitment, then overall catch and catch rate of Walleye would be expected to increase in future years as these fish grow to a size that is more effectively sampled by the boat electroshocker.

Beginning in 2017, the Indexing Survey has included two sites near the Beatton River's confluence with the Peace River (i.e., 07BEA01 and 07BEA02). This confluence area is a known feeding area for Walleye (Mainstream 2012) and since 2017, these two sites have accounted for 18% of the Walleye catch.

The Goldeye and Walleye Survey was implemented annually beginning in 2018 in response to low Goldeye catch rates during the Indexing Survey. The number of Walleye captured during the Goldeye and Walleye Survey was similar in all three years it was conducted (22 in 2018, 24 in 2019, 22 in 2020) and Walleye catch rates during the Goldeye and Walleye Survey were similar to catch rates recorded during the Indexing Survey. During future study years, the Goldeye and Walleye Survey should be tailored as needed to maximize Goldeye catch rates, provided Walleye catches remain relatively high during the Indexing Survey.

4.8 Sucker Species

Although none of the sucker species are considered indicator species under this program's objectives, all adult large-bodied fishes are monitored as part of the program to test Management Hypothesis #4 regarding fish community structure. Sucker species may be useful for detecting changes in the fish community in the study area for several reasons. Suckers can contribute substantially to ecosystem function through nutrient cycling, affect the invertebrate communities through grazing, and serve as prey items (both as eggs and fish) for other fish species (Cooke et al. 2005). For these reasons, and their low trophic position as grazers, suckers can be an important sentinel species for monitoring changes in fish communities and ecosystems (Cooke et al. 2005).
Suckers (all species combined) are common in the Peace River catch data and their large sample sizes and recapture rates will likely result in greater precision in estimates of fish population metrics and greater power to detect change as a result of the construction and operation of the Project when compared to some less abundant indicator fish species.

Catch rates were used as an index of relative abundance and suggested different trends between species during years when suckers were targeted (2015 to 2020). Catch rates of Largescale Sucker varied little and suggested stable abundance. Catch rates of Longnose Sucker decreased from 2015 to 2018 but have been stable since 2018. The catch rate of White Sucker was greater in 2015, with lower but stable values in all other years since 2016. If catch rates reflect real trends in abundance, the different trends between species could be caused by differences in ecological niches and life history, as has been reported for sympatric sucker species in other watersheds (Laub and Budy 2015; Clark-Barkalow et al. 2020).

The distribution of suckers varied by species, life-stage, and section. During most study years, immature Largescale Sucker and Longnose Sucker were infrequently captured in Section 1 and were more common in Section 9. White Sucker was the least common of the three species in all six sections, and nearly all captured White Sucker were adults.

4.9 Other Species

For two of the seven indicator species (Burbot and Goldeye), low catches prevented detailed analyses and interpretation of trends. In 2020, only 4 Goldeye and 16 Burbot were captured.

The number of Burbot captured was low in most years, with typical catches of less than 20, with the exception of 2016 (n = 37) and 2019 (n = 47). Reduced habitat quality in the Moberly River, resulting in Burbot moving into the Peace River, was identified as a possible factor contributing to the higher Burbot catch in 2016 (Golder and Gazey 2017). Higher than average discharge in the Moberly River in 2016 and 2019 during the sampling period was also considered a possible factor leading to greater catch of Burbot in the Peace River during these years (Golder and Gazey 2020).

Given Burbot's preference for deeper water during the daytime, boat electroshocking is not an ideal capture method for this species. Due to typically low catch numbers, it is unlikely that Burbot catches will allow for meaningful inter-annual comparisons of life history metrics or abundance during future years of the study.

In 2020, 4 Goldeye were captured during the Indexing Survey and none were captured during the Goldeye and Walleye Survey. Goldeye are seasonal residents in the study area, migrating upstream into the study area in the spring to feed in select tributaries, most notably the Beatton River (Mainstream 2011). Microchemistry data from 13 Goldeye captured during the Indexing Survey indicated that all 13 fish originated from the Smoky River, which flows into the Peace River approximately 284 km downstream of the Project (TrichAnalytics 2020).

Since 2015, nearly all of the Goldeye captured during the Indexing Survey were in Section 9. Those captured during the Goldeye and Walleye Survey were at sites near the confluences of the Beatton, Clear, and Pouce Coupe rivers. These rivers have been previously identified as important spawning tributaries and recruitment sources for the Peace River Goldeye population (Mainstream 2012).

The Indexing Survey in its current form will likely continue to catch small numbers of Goldeye and is unlikely to generate enough data to allow for meaningful inter-annual comparisons of life history metrics or abundance levels for this species in future study years.

In 2020, 6 Spottail Shiner were encountered in Sections 5 (n = 2), 6 (n = 3), and 9 (n = 1). Spottail Shiner is a species of conservation concern and is on the Provincial red list[7]. Spottail Shiner are not native in the Peace River, and those present likely originated from a population introduced into Charlie Lake, which flows into the Beatton River (McPhail 2007).

[7] http://www.speciesatriskbc.ca/node/9189.

5.0 CONCLUSIONS

Sampling conducted since 2002 provides a long-term, annual dataset that can be used to estimate the abundance, spatial distribution, body condition, and growth rates of large-bodied fish populations in the Peace River prior to and during construction of the Project. During future study years, data from this program will be used to test management hypotheses about predicted changes in biomass and fish community composition in the Peace River during and after the construction and operation of the Project.

Catch rates used to assess trends in relative abundance suggested stable abundance since 2015 for many fish species including Bull Trout, Largescale Sucker, Mountain Whitefish, Rainbow Trout, and Walleye. Arctic Grayling, Longnose Sucker, and White Sucker had decreases in catch rate that suggested declining abundance during some or all years since 2015. Samples sizes of captured fish were low for Burbot, Goldeye, and Northern Pike, but the available data did not suggest any changes in abundance since 2015.

Analyses of size- and age-structure, and body condition of fish populations suggested few differences between 2020 and previous years for nearly all species and metrics. Exceptions included the body condition, relative weight, and mean length of age-1 fish for Arctic Grayling and Mountain Whitefish, which were all lower in 2020 than all previous years since 2002. These results may indicate poorer conditions for growth of these species in 2020.

The Goldeye and Walleye Survey in 2020 involved four days of sampling in the spring near the confluences of seven tributaries of the Peace River that are known or suspected to be spawning tributaries or feeding areas for Goldeye and Walleye. Goldeye were not captured during the Goldeye and Walleye Survey in 2020 and only 5 were captured during this survey in 2019. Alternative fish capture techniques, or additional sampling sites and days could be considered to attempt to increase catch of Goldeye in future years, although these changes may not improve catches dramatically, as densities of this species appear to be very low in the study area. Because of the low catches, the program is likely to only detect large changes in population abundance for this species.

6.0 CLOSURE

We trust that this report provides the information required. If there are any questions or require further detail, please contact the undersigned.

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https://golderassociates.sharepoint.com/sites/124586/project files/6 deliverables/issued to client_for wp/20136470-015-r-rev0/20136470-015-r-rev0-2020 site c fish indexing 13dec_21.docx

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APPENDIX A

Maps and UTM Locations

Table A1. Location and distance from WAC Bennett Dam of Peace River boat electroshocking sites sampled in 2020.

Section	Site Name	Bank[a]	Upper Site Limit				Lower Site Limit				Site Length (m)
			Zone[b]	Easting	Northing	River Km[c]	Zone[b]	Easting	Northing	River Km[c]	
1	0101	ILDB	10	566453	6207858	25.4	10	566936	6208239	25.9	600
	0102	ILDB	10	566936	6208240	25.9	10	567497	6208907	26.9	975
	0103	RDB	10	566302	6207742	25.3	10	567401	6208075	26.2	1200
	0104	IRDB	10	566460	6207754	25.4	10	566934	6207880	25.8	500
	0105	RDB	10	567402	6208074	26.2	10	568000	6208913	27.3	1100
	0107	LDB	10	568372	6210050	28.4	10	568798	6210402	28.9	550
	0108	RDB	10	568605	6209966	28.5	10	569259	6210477	29.3	850
	0109	RDB	10	569260	6210478	29.3	10	569850	6211235	30.3	975
	0110	LDB	10	568798	6210403	28.9	10	569302	6211053	29.7	650
	0111	LDB	10	569302	6211053	29.7	10	569825	6211869	30.7	1000
	0112	LDB	10	569824	6211868	30.7	10	570686	6212472	31.8	1070
	0113	RDB	10	569994	6211528	30.6	10	570510	6212043	31.3	750
	0114	LDB	10	570686	6212474	31.8	10	571342	6213121	32.8	950
	0116	RDB	10	570511	6212043	31.3	10	571265	6212633	32.3	985
	0119	LDB	10	567516	6209096	27.0	10	568019	6209628	27.8	750
3	0301	RDB	10	600824	6232860	71.3	10	602606	6233198	73.1	1800
	0302	IRDB	10	599753	6233307	70.2	10	601597	6233232	72.0	1900
	0303	IRDB	10	601597	6233232	72.0	10	602930	6233597	73.6	1450
	0304	ILDB	10	602583	6233193	73.1	10	603787	6233290	74.5	1350
	0305	LDB	10	603204	6233827	73.8	10	604640	6233426	75.4	1550
	0306	LDB	10	604655	6233435	75.4	10	605586	6233750	76.5	1000
	0307	IRDB	10	605976	6233888	77.0	10	606935	6234160	78.0	950
	0308	IRDB	10	606935	6234158	78.0	10	607692	6235034	79.4	1350
	0309	ILDB	10	605976	6233878	77.0	10	606666	6234387	77.8	950
	0310	ILDB	10	606662	6234395	77.8	10	607691	6235034	79.4	1200
	0311	LDB	10	605585	6233743	76.5	10	606512	6234441	77.7	1250
	0312	LDB	10	607058	6234840	78.6	10	608047	6235753	80.2	1170
	0314	RDB	10	604468	6233079	75.1	10	605400	6233321	76.1	975
	0315	RDB	10	605400	6233320	76.1	10	606956	6233951	77.9	1700
	0316	RDB	10	606956	6233951	77.9	10	607974	6234928	79.3	1475
5	0505	LDB	10	630553	6229765	106.7	10	631540	6229590	107.7	1000
	0506	LDB	10	631539	6229590	107.7	10	632491	6229713	108.6	1000
	0507	RDB	10	632339	6229356	108.4	10	633099	6229489	109.1	780
	0508	LDB	10	637926	6227901	115.5	10	638432	6227150	116.4	925
	0509	IRDB	10	632785	6229686	108.9	10	633704	6229905	109.8	975
	0510	RDB	10	634530	6229634	110.5	10	635555	6230048	111.6	1130
	0511	LDB	10	635651	6230419	111.8	10	636334	6230361	112.4	720
	0512	IRDB	10	633855	6229835	110.0	10	634872	6230026	111.0	1280
	0513	RDB	10	637113	6228814	114.2	10	637433	6228125	115.0	770
	0514	ILDB	10	637427	6228123	115.0	10	637735	6227647	115.5	560
	0515	IRDB	10	637376	6229072	114.1	10	637591	6228192	115.0	970
	0516	ILDB	10	633861	6229939	110.2	10	634404	6230473	111.0	800
	0517	ILDB	10	634513	6230626	111.0	10	635000	6230250	111.6	700
	0518	LDB	10	636334	6230361	112.5	10	637373	6229072	114.1	1810
	05SC060	RDB	10	633456	6229118	58.7	10	633909	6229258	58.3	530

[a] RDB=Right bank as viewed facing downstream; LDB=Left bank as viewed facing downstream; IRDB=Right bank of island as viewed facing downstream; ILDB=Left bank of island as viewed facing downstream.

[b] NAD 83.

[c] River kilometres measured downstream from WAC Bennett Dam (RiverKm 0.0).

Continued . . .

Table A1. Concluded.

Section	Site Name	Bank[a]	Upper Site Limit				Lower Site Limit				Site Length (m)
			Zone[b]	Easting	Northing	River Km[c]	Zone[b]	Easting	Northing	River Km[c]	
6	0601	LDB	10	643238	6224330	122.0	10V	644400	6224099	123.0	1200
	0602	RDB	10	644567	6223590	123.3	10V	645385	6223368	124.1	900
	0603	IRDB	10	646156	6223144	124.8	10V	647208	6222813	125.9	1300
	0604	RDB	10	646546	6222599	125.4	10V	647508	6222650	126.2	1000
	0605	IRDB	10	647888	6222979	126.5	10V	648668	6223109	127.3	800
	0606	LDB	10	649302	6223371	127.1	10V	650601	6222912	129.3	1400
	0607	IRDB	10	651250	6222649	130.0	10V	652139	6222123	131.0	1000
	0608	RDB	10	647711	6222699	126.4	10V	648681	6222855	127.3	1000
	0609	ILDB	10	649423	6223115	128.0	10V	650300	6222732	129.0	1000
	0610	ILDB	10	650309	6222738	129.0	10V	651089	6222427	129.9	850
	0611	ILDB	10	651070	6222442	129.9	10V	651842	6221990	130.9	900
	0612	IRDB	10	652136	6222141	131.0	10V	652937	6221822	132.0	850
	0613	RDB	10	653270	6221438	132.4	10V	654182	6221491	133.2	900
	0614	IRDB	10	645301	6223722	123.5	10V	646108	6223365	124.7	975
	06PIN01	RDB	10	641497	6223588	1.9[d]	10V	642638	6224067	0.3[d]	1500
	06PIN02	RDB	10	642639	6224071	0.3[d]	10V	643433	6224055	122.2	1000
	06SC036	IRDB	10	654048	6222162	133.3	10V	654522	6222203	133.8	500
	06SC047	RDB	10	644017	6223518	122.8	10V	644510	6223546	123.2	550
7	0701	LDB	10	662099	6220280	141.8	10	662869	6220173	142.5	785
	0702	IRDB	10	664322	6219824	144.0	10	665185	6220188	144.8	950
	0703	LDB	10	665724	6220631	145.5	10	666643	6220828	146.4	950
	0704	IRDB	10	667149	6220752	146.8	10	668100	6220738	147.7	1000
	0705	RDB	10	667571	6220294	147.2	10	668547	6220497	148.1	1000
	0706	RDB	10	668544	6220498	148.1	10	669537	6220614	149.0	1000
	0707	IRDB	10	669735	6220916	149.3	10	670551	6221286	150.1	980
	0708	LDB	10	663908	6220160	143.6	10	665071	6220480	144.8	1240
	0709	IRDB	10	665176	6220191	144.8	10	666096	6220512	145.7	1000
	0710	IRDB	10	668109	6220743	147.7	10	669272	6220889	148.8	1400
	0711	ILDB	10	669781	6220712	149.3	10	671111	6221081	150.6	1390
	0712	ILDB	10	671288	6221104	150.8	10	672241	6220774	151.9	1065
	0713	IRDB	10	672355	6221006	151.7	10	672991	6220293	152.7	980
	0714	IRDB	10	673481	6220112	153.2	10	674730	6219912	154.4	1275
	07BEA01	LDB	10	662969	6220383	0.4[e]	10	663146	6220001	0.0[e]	430
	07BEA02	LDB	10	663146	6220001	143.9	10	663728	6220100	143.5	600
	07KIS01	RDB	10	676794	6219192	1.0[f]	10	676743	6220010	157.7	1300
	07SC012	LDB	10	676579	6220730	156.4	10	676792	6220831	156.6	220
	07SC022	RDB	10	666832	6219962	146.3	10	667130	6220145	146.7	360
9	0901	LDB	11	357843	6239030	217.6	11	358391	6239968	218.7	1100
	0902	LDB	11	358391	6239968	218.6	11	359350	6240287	219.5	1000
	0903	ILDB	11	358363	6239289	218.1	11	359084	6240016	219.2	1100
	0904	ILDB	11	359520	6240016	219.4	11	360625	6240169	220.7	1100
	0905	LDB	11	361692	6240512	221.7	11	362771	6240709	222.9	1100
	0906	RDB	11	363235	6241089	223.5	11	363870	6241929	224.6	1000
	0907	ILDB	11	364583	6242344	225.2	11	365319	6243257	226.3	1200
	0908	ILDB	11	365837	6243458	226.6	11	366849	6243231	228.0	1100
	0909	ILDB	11	366849	6243231	228.0	11	367534	6242583	228.9	950
	0910	LDB	11	363258	6240685	223.3	11	364070	6241393	224.3	1100
	0911	IRDB	11	366799	6243728	227.6	11	367379	6243081	228.4	1000
	0912	LDB	11	368560	6241724	230.0	11	368549	6240689	231.0	1100
	0913	RDB	11	367347	6241966	229.5	11	367721	6241096	230.5	1000
	0914	IRDB	11	367734	6241649	230.0	11	368179	6240875	230.8	950
	09SC53	RDB	11	360795	6239970	220.8	11	361029	6240059	221.1	260
	09SC61	RDB	11	366861	6242408	228.6	11	367347	6241966	229.4	675

[a] RDB=Right bank as viewed facing downstream; LDB=Left bank as viewed facing downstream; IRDB=Right bank of island as viewed facing downstream; ILDB=Left bank of island as viewed facing downstream.

[b] NAD 83.

[c] River kilometres measured downstream from WAC Bennett Dam (RiverKm 0.0).

[d] River kilometres measured upstream from the Pine River's confluence with the Peace River (RiverKm 0.0).

[e] River kilometres measured upstream from the Beatton River's confluence with the Peace River (RiverKm 0.0).

Table A2 Location and distance from WAC Bennett Dam of Peace River boat electroshocking sites sampled for Goldeye and Walleye in 2020.

Section	Site Name	Bank[a]	Upper Site Limit				Lower Site Limit				Site Length (m)
			Zone[b]	Easting	Northing	River Km[c]	Zone[b]	Easting	Northing	River Km[c]	
7	07ALC01	LDB	10	682614	6223992	163.5	10	683384	6224198	164.3	796
	07BEA01	LDB	10	662969	6220383	0.4[d]	10	663146	6220001	0.0[d]	430
	07BEA02	LDB	10	663146	6220001	143.9	10	663728	6220100	143.5	600
	07KIS01	RDB	10	676794	6219192	1.0[e]	10	676743	6220010	157.7	1300
	07MileEight01	RDB	10	655782	6222032	135.1	10	656456	6221827	135.8	700
	07MileSix01	RDB	10	655486	6222037	134.7	10	655782	6222032	135.1	300
8	08CLEA01	LDB	11	331479	6228739	187.4	11	332103	6228412	188.1	700
	08POC01	RDB	11	318808	6224656	173.6	11	319816	6224760	174.5	1035

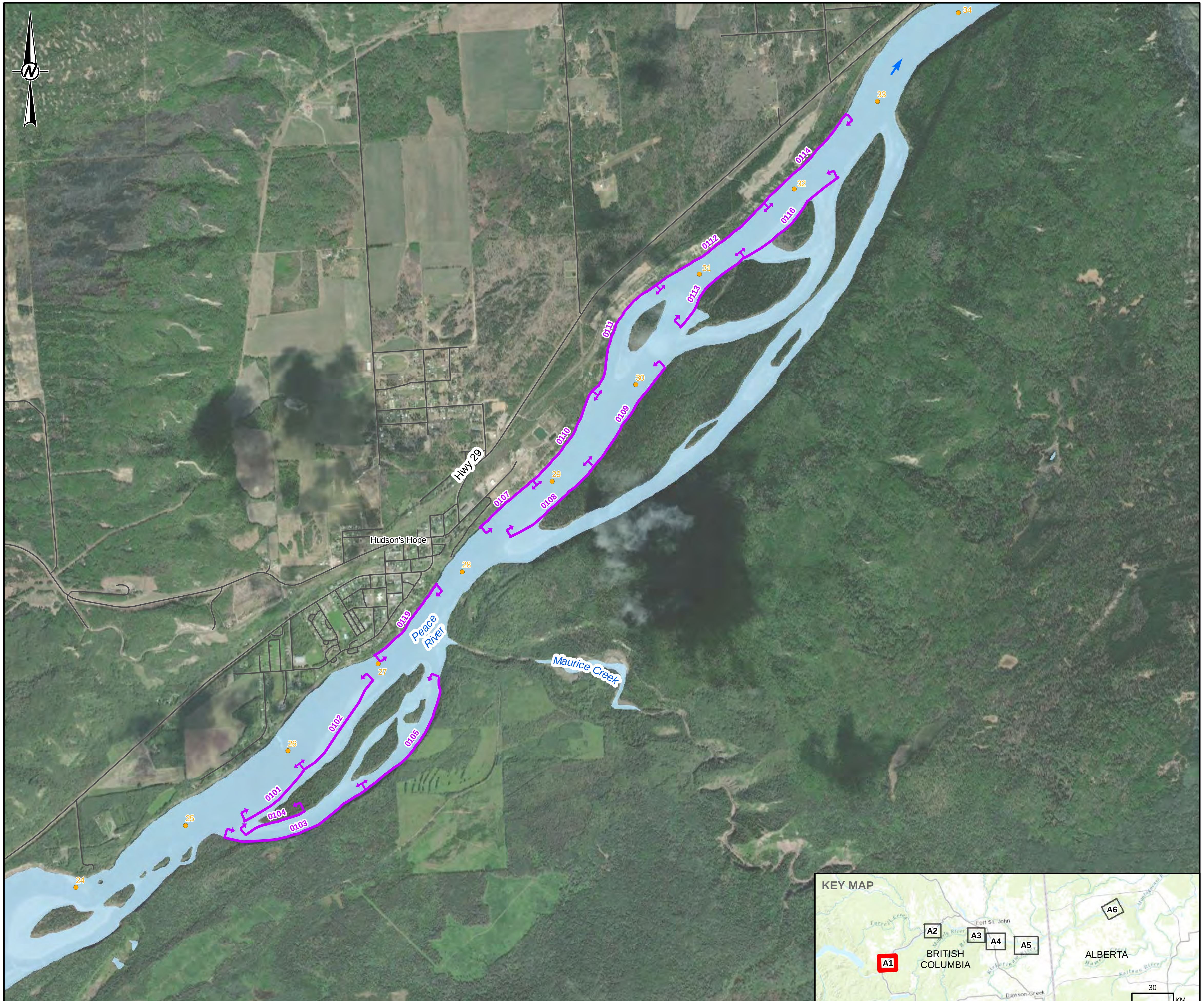
[a] RDB=Right bank as viewed facing downstream; LDB=Left bank as viewed facing downstream.

[b] NAD 83.

[c] River kilometres measured downstream from WAC Bennett Dam (RiverKm 0.0).

[d] River kilometres measured upstream from the Beatton River's confluence with the Peace River (RiverKm 0.0).

[e] River kilometres measured upstream from the Kiskatinaw River's confluence with the Peace River (RiverKm 0.0).



LEGEND

- RIVER KILOMETRE AS MEASURED DOWNSTREAM FROM W.A.C. BENNETT DAM
- FLOW DIRECTION
- 0110 BOAT ELECTROSHOCKING SITE

BASE DATA

- ROAD
- WATERBODY

0 540 1,080

1:30,000 Metres

REFERENCES

1. TRANSPORTATION, HYDROLOGY AND TOPOGRPHY LAYERS CANVEC © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
2. RAILROAD OBTAINED FROM IHS ENERGY.
3. RIVER KILOMETER MARKERS OBTAINED FROM BC HYDRO.
4. DAM SECTION AND ISLANDS OBTAINED FROM FROM GEOBASE®.
5. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT
BC HYDRO

PROJECT
PEACE RIVER FISH COMMUNITY MONITORING PROGRAM (MON-2)

TITLE
SECTION 1 - PEACE RIVER LARGE FISH INDEXING SURVEY (TASK 2A)

CONSULTANT
GOLDER

YYYY-MM-DD	2021-05-29
DESIGNED	DF
PREPARED	CD
REVIEWED	DR
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2020	0	A1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

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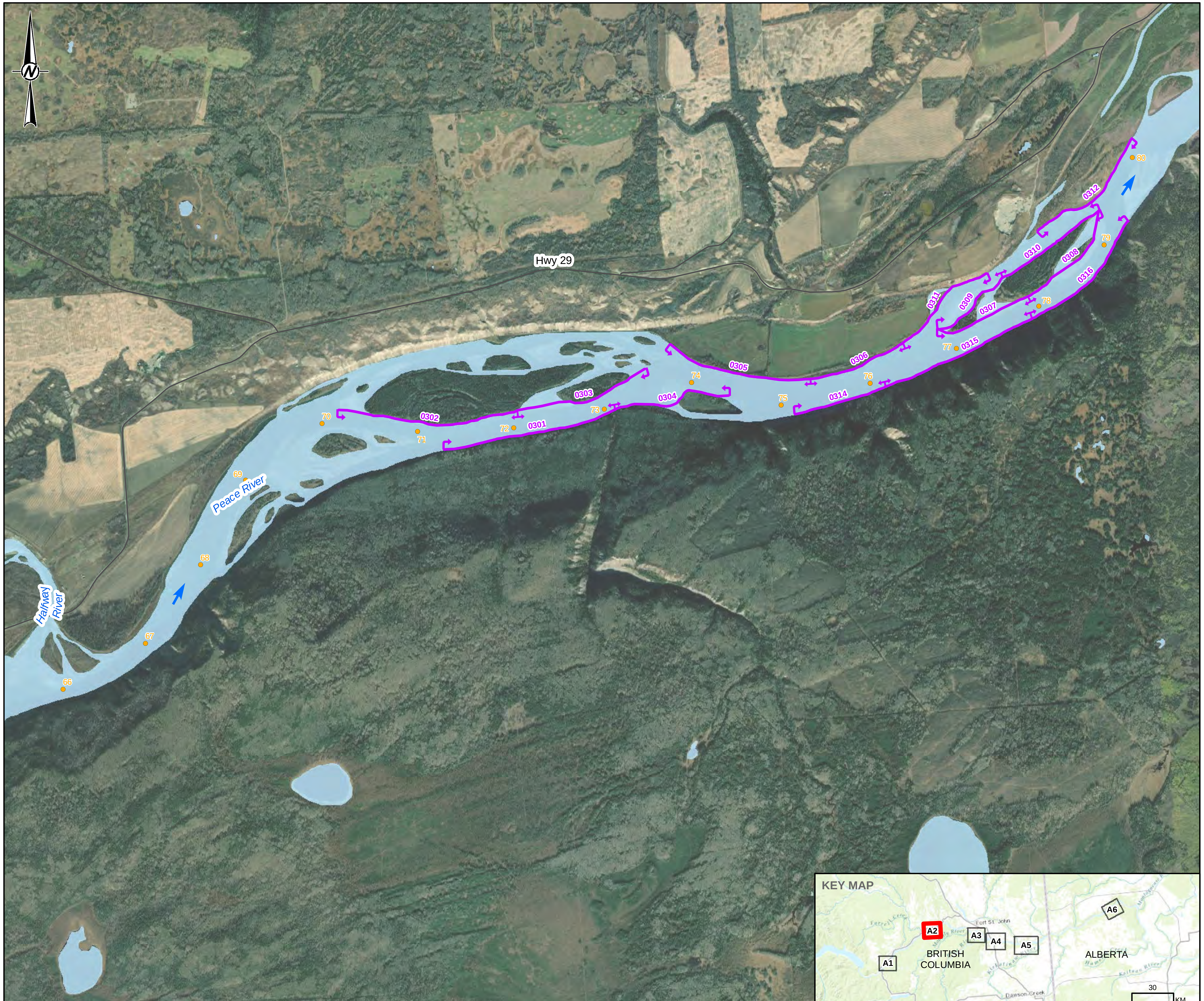

LEGEND

- RIVER KILOMETRE AS MEASURED DOWNSTREAM FROM W.A.C. BENNETT DAM
- FLOW DIRECTION
- 0110 BOAT ELECTROSHOCKING SITE

BASE DATA

- ROAD
- WATERBODY

0 720 1,440

1:40,000 Metres

REFERENCES

1. TRANSPORTATION, HYDROLOGY AND TOPOGRPHY LAYERS CANVEC © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
2. RAILROAD OBTAINED FROM IHS ENERGY.
3. RIVER KILOMETER MARKERS OBTAINED FROM BC HYDRO.
4. DAM SECTION AND ISLANDS OBTAINED FROM FROM GEOBASE®.
5. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT
BC HYDRO

PROJECT
PEACE RIVER FISH COMMUNITY MONITORING PROGRAM (MON-2)

TITLE
SECTION 3 - PEACE RIVER LARGE FISH INDEXING SURVEY (TASK 2A)

CONSULTANT
GOLDER

YYYY-MM-DD	2021-05-29
DESIGNED	DF
PREPARED	CD
REVIEWED	DR
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2020	0	A2

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25mm

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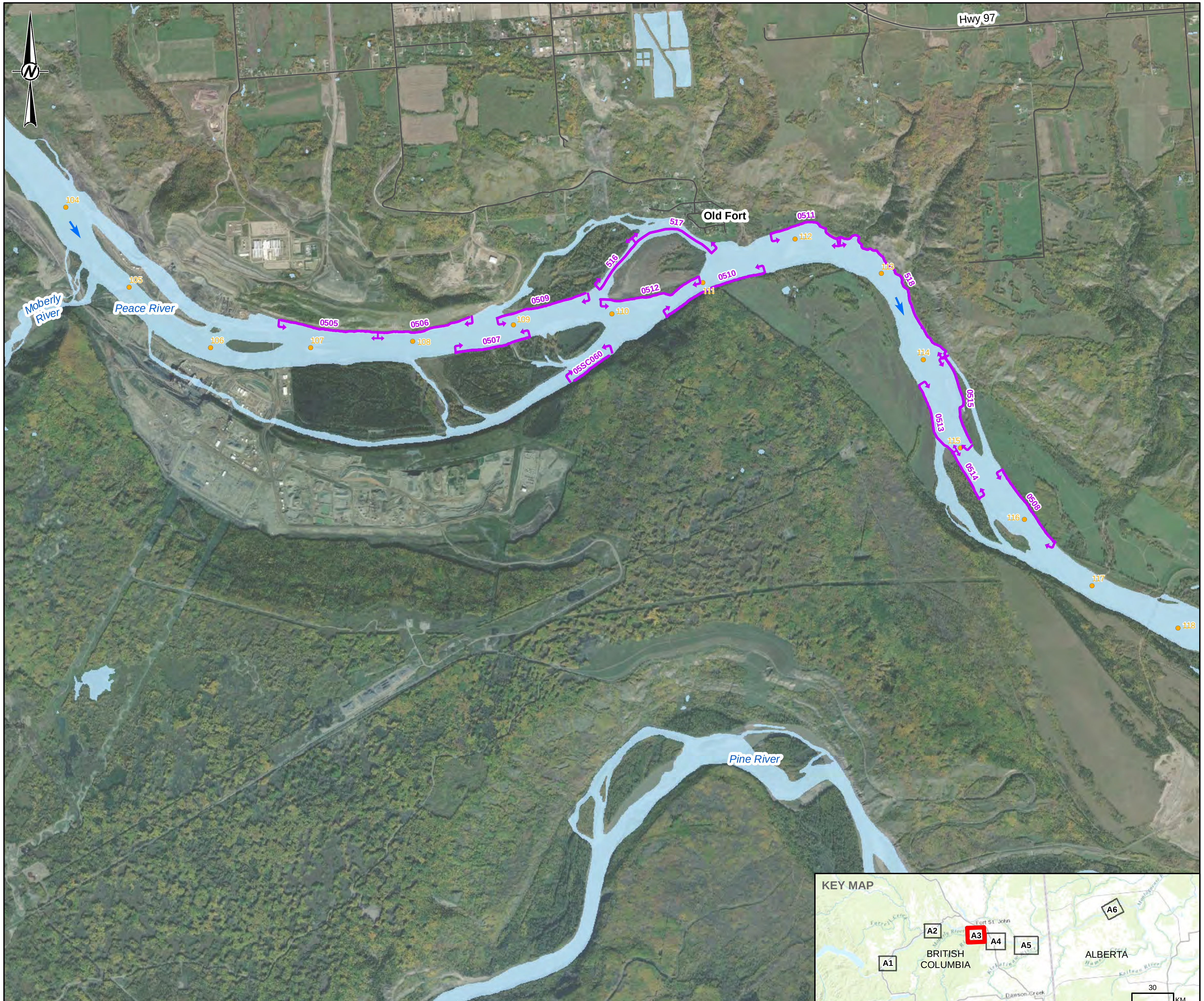

LEGEND

RIVER KILOMETRE AS MEASURED DOWNSTREAM FROM W.A.C. BENNETT DAM

FLOW DIRECTION

0110 BOAT ELECTROSHOCKING SITE

BASE DATA

ROAD

WATERBODY

0 720 1,440

1:40,000 Metres

REFERENCES

1. TRANSPORTATION, HYDROLOGY AND TOPOGRPHY LAYERS CANVEC © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
2. RAILROAD OBTAINED FROM IHS ENERGY.
3. RIVER KILOMETER MARKERS OBTAINED FROM BC HYDRO.
4. DAM SECTION AND ISLANDS OBTAINED FROM FROM GEOBASE®.
5. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT
BC HYDRO

PROJECT
PEACE RIVER FISH COMMUNITY MONITORING PROGRAM (MON-2)

TITLE
SECTION 5 - PEACE RIVER LARGE FISH INDEXING SURVEY (TASK 2A)

CONSULTANT
GOLDER

YYYY-MM-DD	2021-05-29
DESIGNED	DF
PREPARED	CD
REVIEWED	DR
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2020	0	A3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

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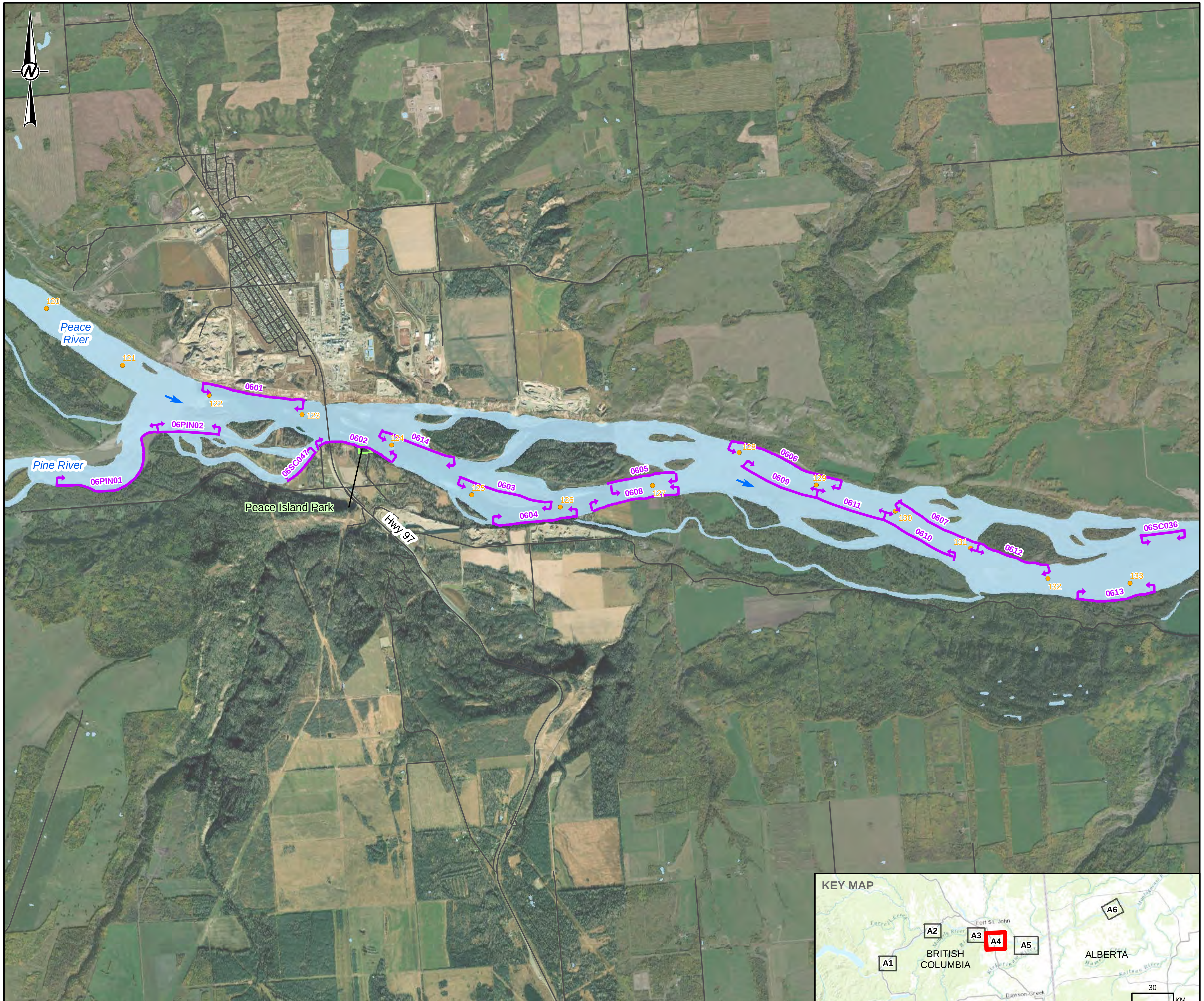

LEGEND

- RIVER KILOMETRE AS MEASURED DOWNSTREAM FROM W.A.C. BENNETT DAM
- FLOW DIRECTION
- 0110 BOAT ELECTROSHOCKING SITE

BASE DATA

- ROAD
- PROVINCIAL PARK AND PROTECTED AREA
- WATERBODY

0 810 1,620

1:45,000 Metres

REFERENCES

1. TRANSPORTATION, HYDROLOGY AND TOPOGRPHY LAYERS CANVEC © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
2. RAILROAD OBTAINED FROM IHS ENERGY.
3. RIVER KILOMETER MARKERS OBTAINED FROM BC HYDRO.
4. DAM SECTION AND ISLANDS OBTAINED FROM FROM GEOBASE®.
5. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT
BC HYDRO

PROJECT
PEACE RIVER FISH COMMUNITY MONITORING PROGRAM (MON-2)

TITLE
SECTION 6 - PEACE RIVER LARGE FISH INDEXING SURVEY (TASK 2A)

CONSULTANT
GOLDER

YYYY-MM-DD	2021-05-29
DESIGNED	DF
PREPARED	CD
REVIEWED	DR
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2020	0	A4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25mm
0

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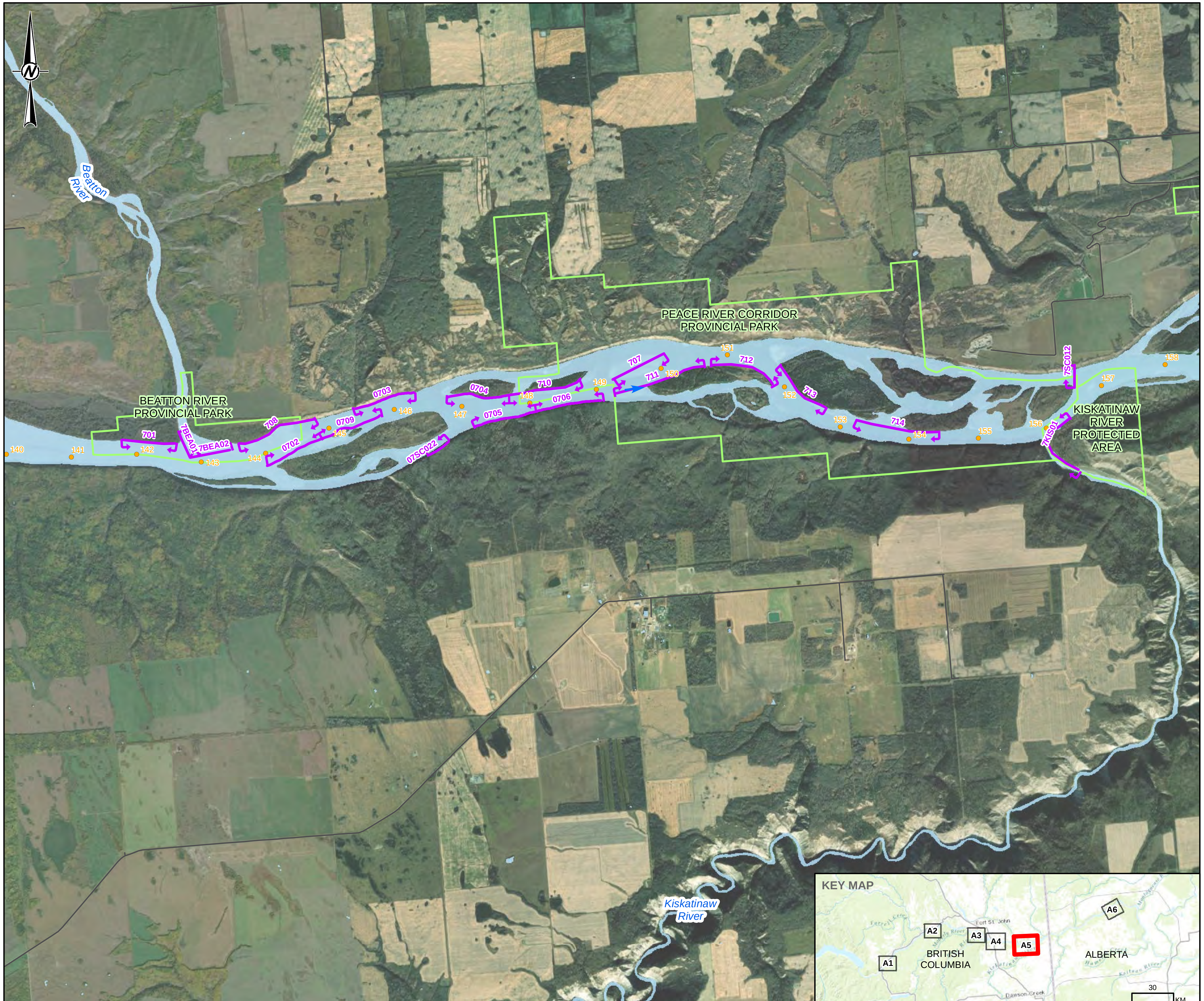

LEGEND

- RIVER KILOMETRE AS MEASURED DOWNSTREAM FROM W.A.C. BENNETT DAM
- FLOW DIRECTION
- 0110 BOAT ELECTROSHOCKING SITE

BASE DATA

- ROAD
- PROVINCIAL PARK AND PROTECTED AREA
- WATERBODY

0 1,000 2,000

1:60,000 Metres

REFERENCES

1. TRANSPORTATION, HYDROLOGY AND TOPOGRPHY LAYERS CANVEC © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
2. RAILROAD OBTAINED FROM IHS ENERGY.
3. RIVER KILOMETER MARKERS OBTAINED FROM BC HYDRO.
4. DAM SECTION AND ISLANDS OBTAINED FROM FROM GEOBASE®.
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PROJECT

PEACE RIVER FISH COMMUNITY MONITORING PROGRAM (MON-2)

TITLE

SECTION 7 - PEACE RIVER LARGE FISH INDEXING SURVEY (TASK 2A)

CONSULTANT

GOLDER

YYYY-MM-DD	2021-05-29
DESIGNED	DF
PREPARED	CD
REVIEWED	DR
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2020	0	A5

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25mm

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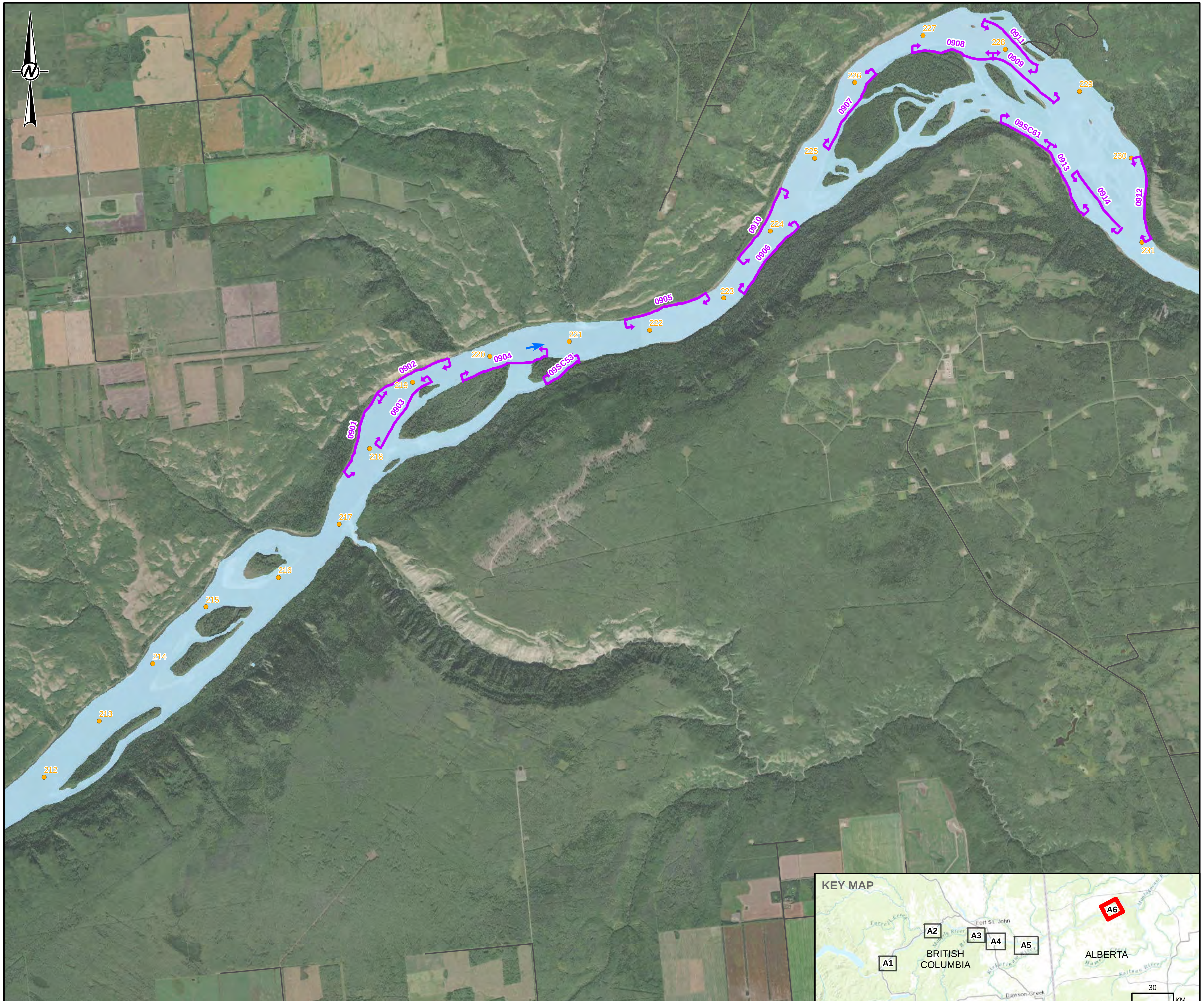

LEGEND

- RIVER KILOMETRE AS MEASURED DOWNSTREAM FROM W.A.C. BENNETT DAM
- FLOW DIRECTION
- 0110 BOAT ELECTROSHOCKING SITE

BASE DATA

- ROAD
- WATERBODY

0 900 1,800

1:50,000 Metres

REFERENCES

1. TRANSPORTATION, HYDROLOGY AND TOPOGRPHY LAYERS CANVEC © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
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3. RIVER KILOMETER MARKERS OBTAINED FROM BC HYDRO.
4. DAM SECTION AND ISLANDS OBTAINED FROM FROM GEOBASE®.
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PROJECT
PEACE RIVER FISH COMMUNITY MONITORING PROGRAM (MON-2)

TITLE
SECTION 9 - PEACE RIVER LARGE FISH INDEXING SURVEY (TASK 2A)

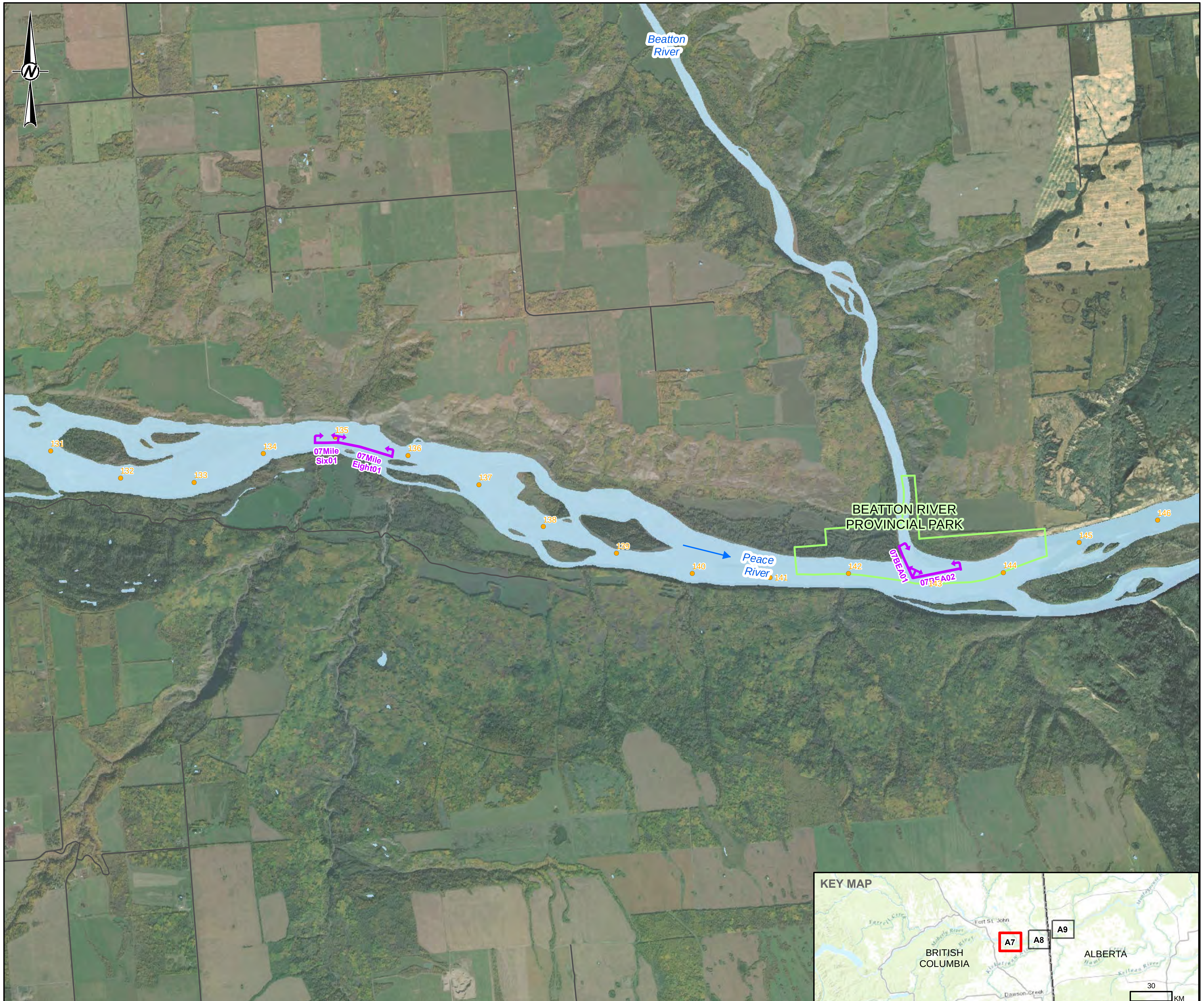
CONSULTANT
GOLDER

YYYY-MM-DD	2021-05-29
DESIGNED	DF
PREPARED	CD
REVIEWED	DR
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2020	0	A6

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm



LEGEND

RIVER KILOMETRE AS MEASURED DOWNSTREAM FROM W.A.C. BENNETT DAM

FLOW DIRECTION

0110 BOAT ELECTROSHOCKING SITE

BASE DATA

ROAD

PROVINCIAL PARK AND PROTECTED AREA

WATERBODY

0 750 1,500

1:50,000 Metres

REFERENCES

1. TRANSPORTATION, HYDROLOGY AND TOPOGRPHY LAYERS CANVEC © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
2. RAILROAD OBTAINED FROM IHS ENERGY.
3. RIVER KILOMETER MARKERS OBTAINED FROM BC HYDRO.
4. DAM SECTION AND ISLANDS OBTAINED FROM FROM GEOBASE®.
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COORDINATE SYSTEM: NAD 1983 BC ENVIRONMENT ALBERS

CLIENT
BC HYDRO

PROJECT
PEACE RIVER FISH COMMUNITY MONITORING PROGRAM (MON-2)

TITLE
SECTION 7 – PEACE RIVER LARGE FISH INDEXING SUIRVEY (TASK 2A) GOLDEYE AND WALLEYE SAMPLING SITES

CONSULTANT

GOLDER

YYYY-MM-DD	2021-05-29
DESIGNED	DF
PREPARED	CD
REVIEWED	DR
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2020	0	A7

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

LEGEND

- RIVER KILOMETRE AS MEASURED DOWNSTREAM FROM W.A.C. BENNETT DAM
- FLOW DIRECTION
- 0110 BOAT ELECTROSHOCKING SITE

BASE DATA

- ROAD
- PROVINCIAL PARK AND PROTECTED AREA
- WATERBODY

0 750 1,500

1:50,000 Metres

REFERENCES

1. TRANSPORTATION, HYDROLOGY AND TOPOGRPHY LAYERS CANVEC © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
2. RAILROAD OBTAINED FROM IHS ENERGY.
3. RIVER KILOMETER MARKERS OBTAINED FROM BC HYDRO.
4. DAM SECTION AND ISLANDS OBTAINED FROM FROM GEOBASE®.
5. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

COORDINATE SYSTEM: NAD 1983 BC ENVIRONMENT ALBERS

CLIENT
BC HYDRO

PROJECT
PEACE RIVER FISH COMMUNITY MONITORING PROGRAM (MON-2)

TITLE
SECTION 7 – PEACE RIVER LARGE FISH INDEXING SUIRVEY (TASK 2A) GOLDEYE AND WALLEYE SAMPLING SITES

CONSULTANT

GOLDER

YYYY-MM-DD	2021-05-29
DESIGNED	DF
PREPARED	CD
REVIEWED	DR
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2020	0	A8

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

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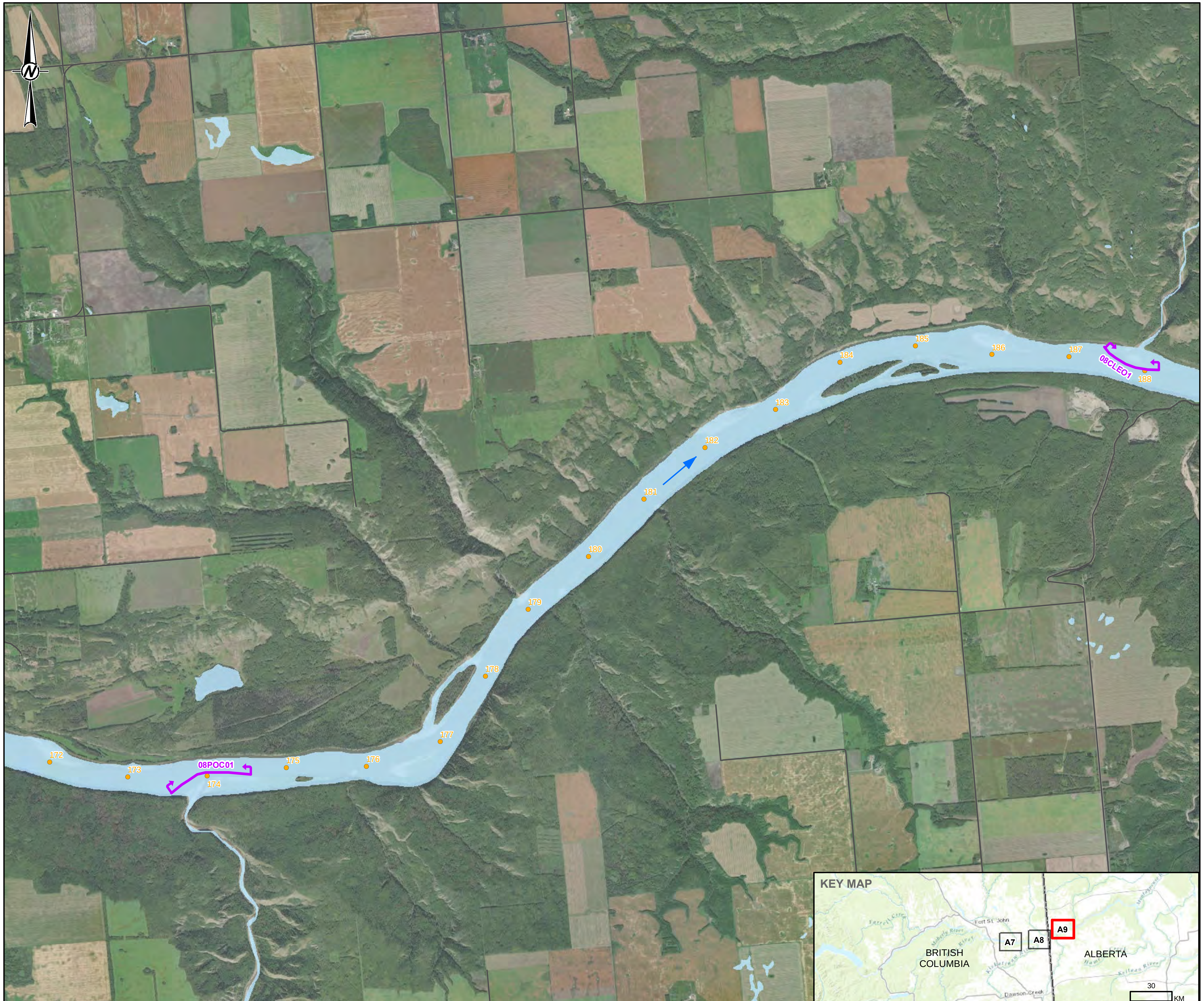

LEGEND

RIVER KILOMETRE AS MEASURED DOWNSTREAM FROM W.A.C. BENNETT DAM

FLOW DIRECTION

0110 BOAT ELECTROSHOCKING SITE

BASE DATA

ROAD

WATERBODY

0 750 1,500

1:50,000 Metres

REFERENCES

1. TRANSPORTATION, HYDROLOGY AND TOPOGRPHY LAYERS CANVEC © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.
2. RAILROAD OBTAINED FROM IHS ENERGY.
3. RIVER KILOMETER MARKERS OBTAINED FROM BC HYDRO.
4. DAM SECTION AND ISLANDS OBTAINED FROM FROM GEOBASE®.
5. SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

COORDINATE SYSTEM: NAD 1983 BC ENVIRONMENT ALBERS

CLIENT

BC HYDRO

PROJECT

PEACE RIVER FISH COMMUNITY MONITORING PROGRAM (MON-2)

TITLE

SECTION 8 – PEACE RIVER LARGE FISH INDEXING SUIRVEY (TASK 2A) GOLDEYE AND WALLEYE SAMPLING SITES

CONSULTANT

GOLDER

YYYY-MM-DD	2021-05-29
DESIGNED	DF
PREPARED	CD
REVIEWED	DR
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2020	0	A9

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

APPENDIX B

Historical Datasets

Table B1 Summary of historical datasets by sample section as delineated in Mainstream (2012). The summary is limited to studies that used similar capture techniques (i.e., boat electroshocking) during similar times of the year (i.e., August to October) when compared to the current program.

Year	Study Period	Effort (# of Days)	Section 1a	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Section 8	Section 9
2002	21-Aug to 1-Oct	43		P&E and Gazey 2003	P&E and Gazey 2003	P&E and Gazey 2003	P&E and Gazey 2003					
2003	22-Aug to 2-Oct	48		Mainstream and Gazey 2004	Mainstream and Gazey 2004	Mainstream and Gazey 2004	Mainstream and Gazey 2004					
2004	24-Aug to 6-Oct	36		Mainstream and Gazey 2005		Mainstream and Gazey 2005		Mainstream and Gazey 2005				
2005	17-Aug to 26-Sep	33		Mainstream and Gazey 2006		Mainstream and Gazey 2006		Mainstream and Gazey 2006				
2006	16-Aug to 21-Sep	36		Mainstream and Gazey 2007	Mainstream and Gazey 2007	Mainstream and Gazey 2007						
2007	22-Aug to 24-Sep	30		Mainstream and Gazey 2008		Mainstream and Gazey 2008		Mainstream and Gazey 2008				
2008	20-Aug to 20-Sep	32		Mainstream and Gazey 2009		Mainstream and Gazey 2009		Mainstream and Gazey 2009				
2009	18-Aug to 27-Sep	37	Mainstream 2010a	Mainstream and Gazey 2010; Mainstream 2010a	Mainstream 2010a	Mainstream and Gazey 2010; Mainstream 2010a		Mainstream and Gazey 2010; Mainstream 2010a	Mainstream 2010a	Mainstream 2010a		
2010	24-Aug to 19-Oct	40	Mainstream 2011a	Mainstream and Gazey 2011; Mainstream 2011a	Mainstream 2011a	Mainstream and Gazey 2011; Mainstream 2011a		Mainstream and Gazey 2011; Mainstream 2011a	Mainstream 2011a	Mainstream 2011a	Mainstream 2011a	
2011	24-Aug to 19-Oct	37	Mainstream 2013a	Mainstream and Gazey 2012; Mainstream 2013a	Mainstream 2013a	Mainstream and Gazey 2012; Mainstream 2013a		Mainstream and Gazey 2012; Mainstream 2013a	Mainstream 2013a	Mainstream 2013a	Mainstream 2013a	Mainstream 2013a
2012	23-Aug to 21-Sep	30		Mainstream and Gazey 2013		Mainstream and Gazey 2013		Mainstream and Gazey 2013				
2013	24-Aug to 26-Sep	30		Mainstream and Gazey 2014		Mainstream and Gazey 2014		Mainstream and Gazey 2014				
2014	25-Aug to 4-Oct	35		Golder and Gazey 2015		Golder and Gazey 2015		Golder and Gazey 2015				
2015	25-Aug to 7-Oct	39		Golder and Gazey 2016		Golder and Gazey 2016		Golder and Gazey 2016	Golder and Gazey 2016	Golder and Gazey 2016		Golder and Gazey 2016
2016	23-Aug to 1-Oct	39		Golder and Gazey 2017		Golder and Gazey 2017		Golder and Gazey 2017	Golder and Gazey 2017	Golder and Gazey 2017		Golder and Gazey 2017
2017	21-Aug to 4-Oct	39		Golder and Gazey 2018		Golder and Gazey 2018		Golder and Gazey 2018	Golder and Gazey 2018	Golder and Gazey 2018		Golder and Gazey 2018
2018	27-Aug to 10-Oct	41		Golder and Gazey 2019		Golder and Gazey 2019		Golder and Gazey 2019	Golder and Gazey 2019	Golder and Gazey 2019		Golder and Gazey 2019
2019	20-Aug to 14-Oct	56		Golder and Gazey 2020		Golder and Gazey 2020		Golder and Gazey 2020	Golder and Gazey 2020	Golder and Gazey 2020		Golder and Gazey 2020
2020	21-Aug to 7-Oct	48		Current Study Year		Current Study Year		Current Study Year	Current Study Year	Current Study Year		Current Study Year

APPENDIX C

Discharge Summaries

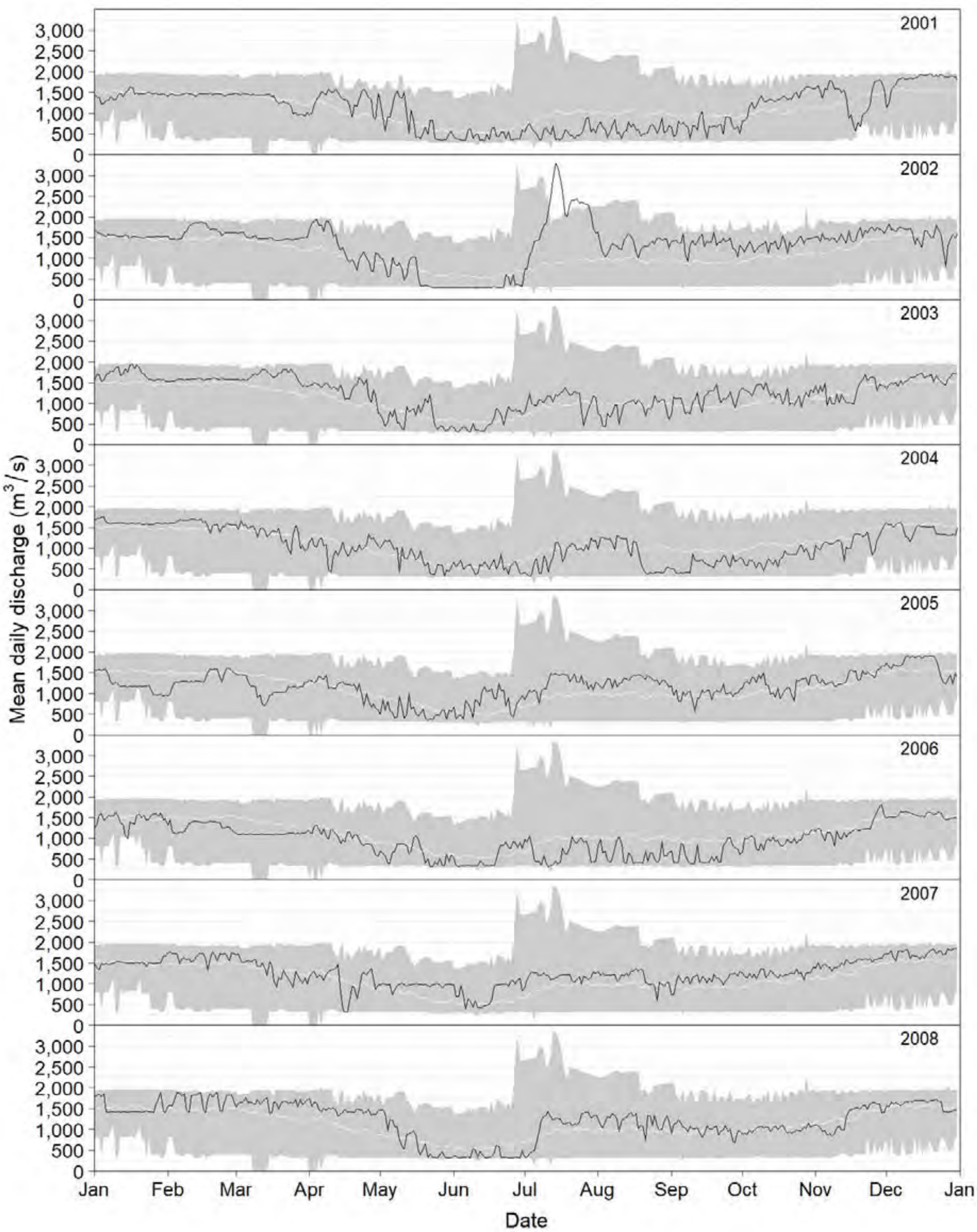

Figure C1: Mean daily discharge (m³/s) for the Peace River at Peace Canyon Dam (PCD; black line), 2001 to 2020. The shaded area represents minimum and maximum mean daily discharge recorded at PCD during other study years between 2001 and 2019. The white line represents average mean daily discharge over the same time period.

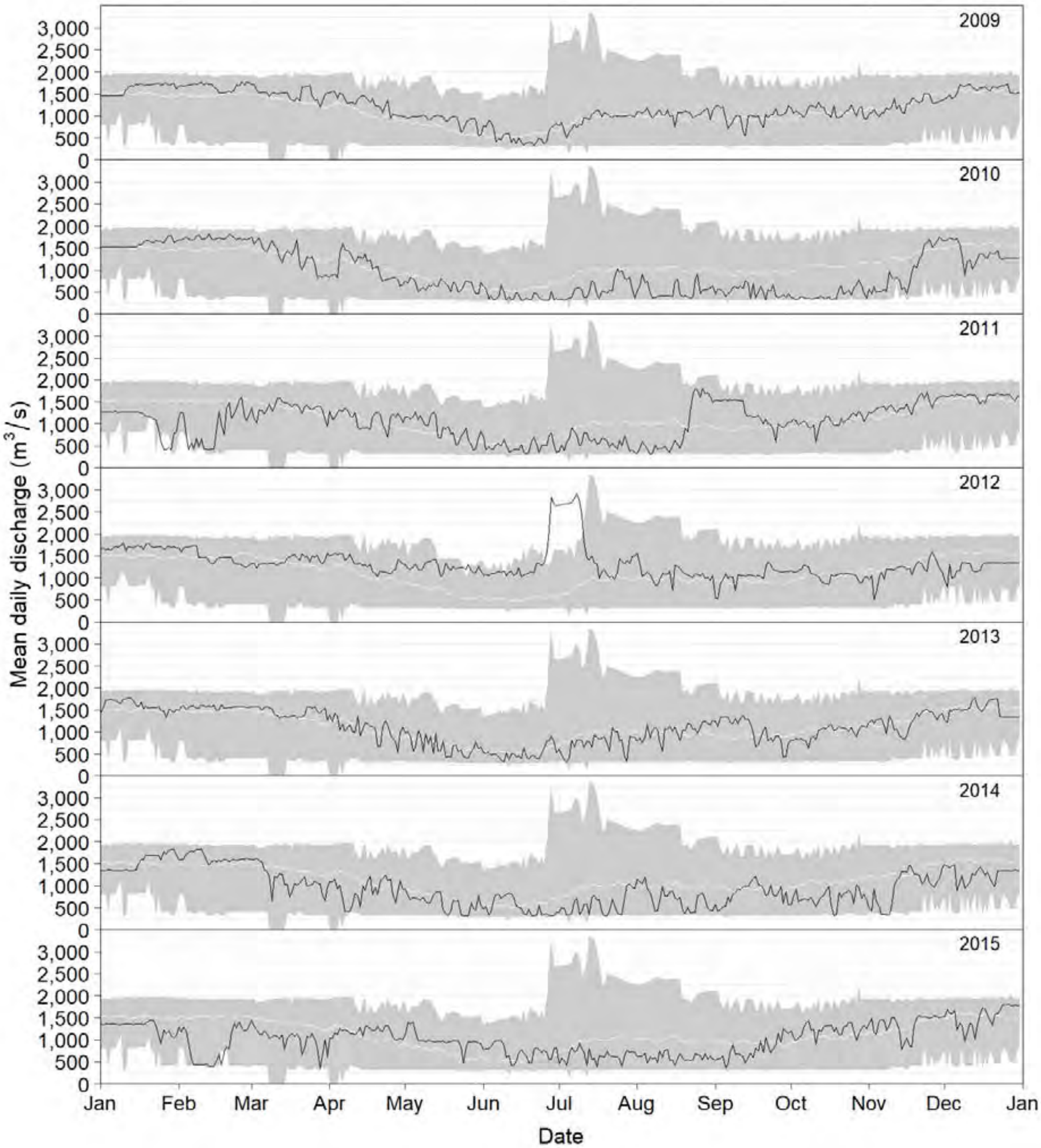

Figure C1: **Continued.**

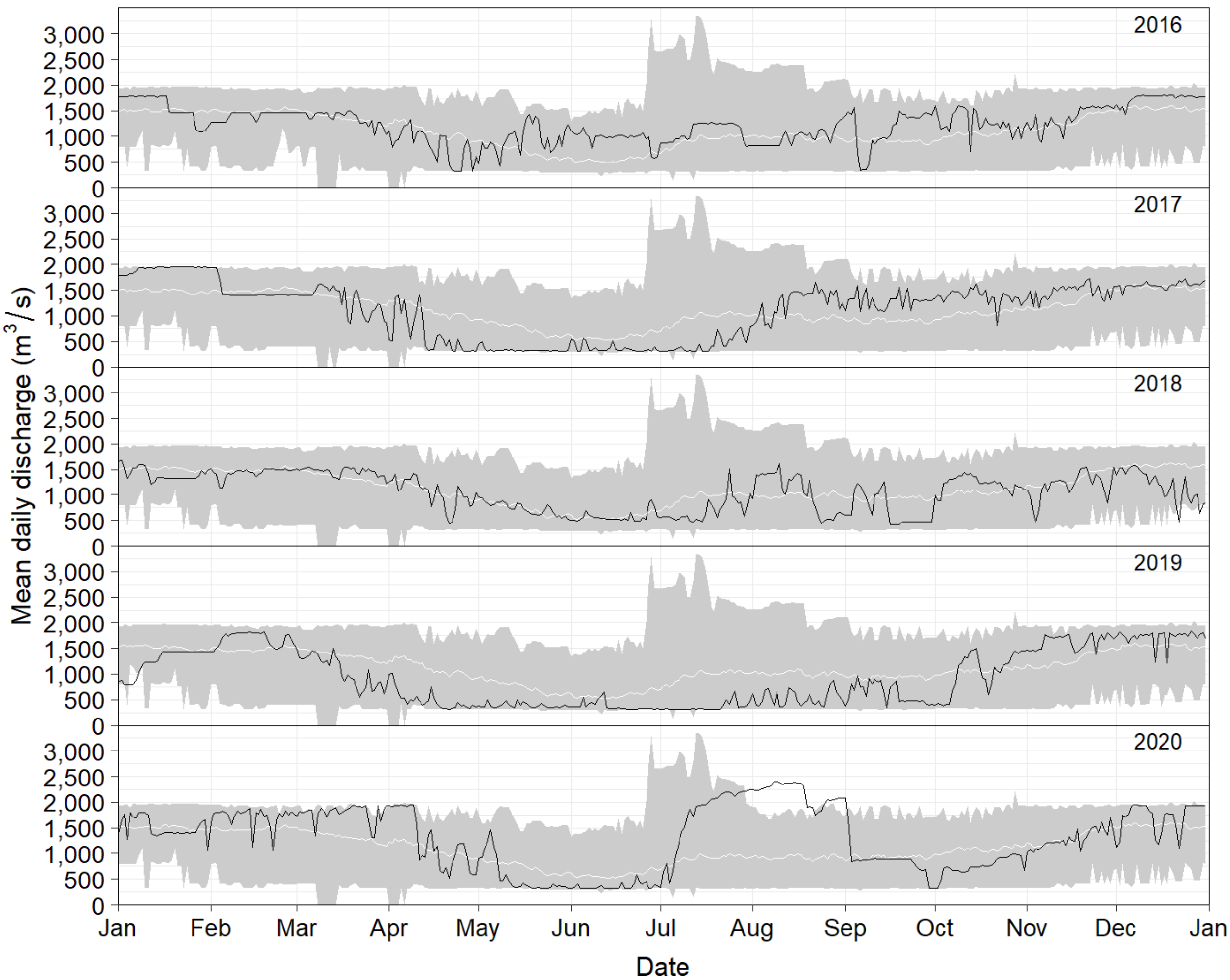

Figure C1: **Concluded.**

APPENDIX D

Habitat Data

Table D1 Summary of habitat variables recorded at boat electroshocking sites in the Peace River, 21 August to 07 October 2020.

Section	Site[a]	Session	Air Temperature (°C)	Water Temperature (°C)	Conductivity (μS /cm)	Cloud Cover[b]	Water Clarity[d]	Instream Velocity[c]	Secchi Bar Depth (m)	Cover Types (%)							
										Substrate Interstices	Woody Debris	Turbulence	Aquatic Vegetation	Terrestrial Vegetation	Shallow Water	Deep Water	Other Cover
1	119	1	13	10.5	160	Partly cloudy	Medium	High	1.6	35	0	25	15	0	0	25	0
1	119	2	19	11.3	160	Partly cloudy	Medium	High	1.7	30	0	20	0	0	0	50	0
1	119	3	20	12.0	170	Clear	Low	High	2.1	55	5	30	0	0	0	10	0
1	119	4	10	9.8	205	Clear	Medium	High	1.8	50	5	25	0	0	0	20	0
1	119	5	15	9.5	180	Mostly cloudy	Low	High	2.1	65	5	10	0	0	0	30	-10
1	119	6	14	9.8	190	Clear	Medium	Medium	1.7	55	5	10	0	0	10	20	0
1	116	1	11	11.8	160	Overcast	Medium	High	1.6	20	5	15	40	0	10	10	0
1	116	2	22	11.7	150	Partly cloudy	Medium	High	2.0	70	5	0	0	10	0	15	0
1	116	3	18	12.0	180	Mostly cloudy	Medium	Medium	1.8	60	5	5	5	0	20	5	0
1	116	4	10	10.9	170	Clear	High	Low	1.7	40	0	0	15	0	40	5	0
1	116	5	9	9.5	220	Overcast	Medium	Medium	1.7	40	0	10	0	0	40	10	0
1	116	6	20	10.3	190	Mostly cloudy	Medium	Medium	1.7	90	0	0	0	0	0	10	0
1	114	1	11	11.5	160	Overcast	Medium	High	1.6	25	0	30	20	0	0	25	0
1	114	2	15	11.6	150	Mostly cloudy	Medium	High	2.0	50	5	10	5	5	5	20	0
1	114	3	15	12.0	180	Mostly cloudy	Medium	Medium	1.8	65	0	5	5	0	10	15	0
1	114	4	12	11.2	170	Partly cloudy	High	Medium	1.8	70	0	0	0	0	20	10	0
1	114	5	9	9.5	220	Overcast	Medium	Medium	1.7	65	5	5	0	0	10	15	0
1	114	6	22	10.7	190	Clear	Low	Medium	1.7	80	0	5	0	0	10	5	0
1	113	1	11	11.8	160	Overcast	Medium	High	1.6	40	0	20	25	0	15	0	0
1	113	2	22	11.4	150	Partly cloudy	Medium	High	2.0	70	0	10	0	10	0	10	0
1	113	3	18	12.0	180	Mostly cloudy	Medium	Medium	1.8	60	5	10	5	0	10	10	0
1	113	4	11	10.1		Partly cloudy	Medium	Medium	1.5	45	5	10	0	0	30	10	0
1	113	5	9	9.5	220	Overcast	Low	Medium	1.7	35	0	20	0	0	35	10	0
1	113	6	23	10.7	190	Clear	Medium	Medium	1.7	90	0	0	0	0	10	0	0
1	112	1	11	11.5	160	Overcast	Medium	High	1.6	30	0	35	10	0	0	25	0
1	112	2	25	11.4	150	Partly cloudy	Medium	High	2.0	75	0	10	0	10	0	5	0
1	112	3	15	12.0	180	Overcast	Medium	Medium	1.8	65	2	10	3	0	5	15	0
1	112	4	15		205	Partly cloudy	Medium	Medium	1.8	70	5	15	0	0	0	10	0
1	112	5	10	9.5	220	Partly cloudy	Medium	Medium	1.7	0	0	5	0	0	10	20	65
1	112	6	20	10.6	190		Low	Medium	1.7	60	0	10	0	0	30	0	0
1	111	1	11	11.5	160	Overcast	Medium	High	1.6	30	0	20	15	0	5	30	0
1	111	2	25	11.4	150	Partly cloudy	Medium	High	2.0	75	0	10	0	5	0	10	0
1	111	3	15	12.0	180	Mostly cloudy	Medium	Medium	1.8	55	5	10	5	0	10	15	0
1	111	4	12	10.1	205	Partly cloudy	Medium	High	1.8	40	5	20	0	0	25	10	0
1	111	5	10	9.5	220	Partly cloudy	Medium	Medium	1.7	50	0	10	0	0	10	30	0
1	111	6	18	11.2	190	Partly cloudy	Low	Low	1.7	80	0	0	0	0	15	5	0
1	110	1	11	11.6	160	Overcast	Medium	High	1.6	35	0	30	25	0	10	0	0
1	110	2	20	11.4	150	Partly cloudy	Medium	High	2.0	65	0	5	0	20	10	0	0
1	110	3	25	12.0	170	Clear	Medium	High	2.1	60	5	25	5	0	5	0	0
1	110	4	10	9.9	205	Mostly cloudy	Medium	High	1.8	45	5	20	5	0	15	10	0
1	110	5	12	9.5	180	Partly cloudy	Low	Medium	2.1	75	0	5	0	0	10	10	0
1	110	6	16	9.9	190	Clear	Low	Low	1.7	35	5	5	0	0	40	15	0
1	109	1	11	11.8	160	Overcast	Medium	High	1.6	20	5	25	35	0	15	0	0
1	109	2	19	11.4	170	Mostly cloudy	Medium	High	1.7	45	5	10	15	0	20	5	0
1	109	3	15	11.0	180	Mostly cloudy	Low	Medium	1.8	65	5	5	5	0	10	10	0
1	109	4	8	9.8		Partly cloudy	Low	Low	1.5	45	5	0	0	0	40	10	0
1	109	5	10	9.5	220	Partly cloudy	Low	Low	1.7	50	0	0	0	0	50	0	0

[a] See Appendix A, Figures A1 to A6 for sample site locations.

Continued...

[b] Clear = <10%; Partly Cloudy = 10-50%; Mostly Cloudy = 50-90%; Overcast = >90%.

[c] High = >1.0 m/s; Medium = 0.5-1.0 m/s; Low = <0.5 m/s.

[d] High = >3.0 m; Medium = 1.0-3.0 m; Low = <1.0 m.

Table D1 Continued.

Section	Site[a]	Session	Air Temperature (°C)	Water Temperature (°C)	Conductivity (µS /cm)	Cloud Cover[b]	Water Clarity[d]	Instream Velocity[c]	Secchi Bar Depth (m)	Cover Types (%)							
										Substrate Interstices	Woody Debris	Turbulence	Aquatic Vegetation	Terrestrial Vegetation	Shallow Water	Deep Water	Other Cover
1	109	6	15	10.0	190	Partly cloudy	Low	Low	1.7	70	0	0	0	0	30	0	0
1	108	1	12	11.8	160	Overcast	Medium	High	1.6	50	0	10	30	0	0	10	0
1	108	2	18	11.4	170	Mostly cloudy	Medium	High	1.7	25	0	50	20	0	0	5	0
1	108	3	12		180	Overcast	Medium	Medium	1.8	70	5	0	5	0	10	10	0
1	108	4	8	9.8		Partly cloudy	Medium	Low	1.5	40	5	0	0	0	50	5	0
1	108	5	10	9.5	220	Partly cloudy	Low	Low	1.7	70	0	0	0	0	30	0	0
1	108	6	16	10.0	190	Clear	Low	Low	1.7	80	0	0	0	0	20	0	0
1	107	1	11	11.5	160	Overcast	Medium	High	1.6	50	0	20	15	0	5	10	0
1	107	2	20	11.4	150	Partly cloudy	Medium	High	2.0	70	0	10	0	10	0	10	0
1	107	3	25	12.0	170	Clear	Medium	Medium	2.1	35	0	30	5	0	5	25	0
1	107	4	10	9.8	205	Clear	Medium	High	1.8	35	5	30	0	0	5	25	0
1	107	5	15	9.5	180	Mostly cloudy	Low	Medium	2.1	70	5	5	0	0	5	15	0
1	107	6	15	9.8	190		Medium	Medium	1.7	55	5	5	0	0	10	25	0
1	105	1	10	10.5	160	Overcast	Medium	High	1.6	50	0	35	0	0	15	0	0
1	105	2	18	11.4	160	Partly cloudy	Medium	High	1.7	20	10	35	5	0	10	20	0
1	105	3	20	10.0		Clear	Medium	High	3.0	75	0	10	0	0	15	0	0
1	105	4	12	9.7	200	Clear	Medium	High	1.8	65	0	10	0	0	25	0	0
1	105	5	10	9.5	180	Partly cloudy	Medium	Medium	2.1	25	5	20	0	0	50	0	0
1	105	6	12	9.6	190	Mostly cloudy	Medium	High	2.1	70	5	15	0	0	10	0	0
1	104	1	10	10.5	160	Overcast	Medium	High	1.6	45	0	20	25	0	10	0	0
1	104	2	21	11.3	170	Partly cloudy	Medium	High	1.7	30	0	10	10	50	0	0	0
1	104	3	12		170	Clear	Medium	Medium	2.1	55	0	10	5	0	30	0	0
1	104	4	14	10.0	200	Clear	Medium	Medium	1.8	75	5	0	5	0	15	0	0
1	104	5	8	9.5	180	Partly cloudy	Medium	Medium	2.1	60	0	10	0	0	15	15	0
1	104	6	16	9.8	190	Mostly cloudy	Medium	Medium	1.7	80	0	10	0	0	10	0	0
1	103	1	10	10.5	160	Overcast	Medium	High	1.6	35	0	40	10	0	0	15	0
1	103	2	21	11.3	170	Clear	Medium	High	1.7	50	5	0	10	0	10	25	0
1	103	3	21			Clear	Medium	High	2.0	60	5	20	5	0	10	0	0
1	103	4	5	9.6	200	Partly cloudy	Medium	High	1.8	30	0	30	0	0	35	5	0
1	103	5	8	9.5	180	Partly cloudy	Medium	Medium	2.1	55	10	15	0	0	10	10	0
1	103	6	18	9.8	190	Mostly cloudy	Medium	High	1.7	60	10	10	0	0	10	10	0
1	102	1	10	10.6	160	Mostly cloudy	Medium	High	1.6	25	0	45	15	0	15	0	0
1	102	2	17	11.3	160	Partly cloudy	Low	High	1.7	70	0	10	5	5	0	10	0
1	102	3	18	11.0	170	Clear	Low	High	2.1	60	0	25	5	0	10	0	0
1	102	4	15	10.3	250	Clear	Low	High	1.8	33	0	33	0	0	33	0	1
1	102	5	15	9.5	180	Mostly cloudy	Low	High	2.1	20	0	50	0	0	30	0	0
1	102	6	11	9.7	190	Clear	Medium	High	1.7	20	0	40	0	0	40	0	0
1	101	1	11	10.6	160	Mostly cloudy	Medium	High	1.6	35	0	30	15	0	20	0	0
1	101	2	12	11.3	160	Partly cloudy	Medium	High	1.4	85	0	10	0	0	0	5	0
1	101	3	15	11.0	170		Medium	High	2.1	45	0	30	5	0	20	0	0
1	101	4	15	10.2	200	Clear	Low	High	1.8	10	0	80	0	0	10	0	0
1	101	5	10	9.5	180	Mostly cloudy	Medium	High	2.1	20	0	40	0	0	40	0	0
1	101	6	10	9.5	190	Mostly cloudy	Medium	High	2.1	90	0	10	0	0	0	0	0
3	316	1	15	11.4	170	Partly cloudy	Medium	Medium	0.8	60	5	10	20	0	0	5	0
3	316	2	10	12.9	170	Overcast	High	High	0.8	20	10	10	0	20	10	30	0
3	316	3	5	9.2		Overcast	Medium	Medium	0.7	40	10	10	0	0	10	40	-10
3	316	4	8	9.9	190	Partly cloudy	Medium	Medium	1.1	65	10	5	0	0	10	10	0
3	316	5	14		220	Clear	Medium	High	0.3	70	5	15	0	0	10	0	0

[a] See Appendix A, Figures A1 to A6 for sample site locations.
[b] Clear = <10%; Partly Cloudy = 10-50%; Mostly Cloudy = 50-90%; Overcast = >90%.
[c] High = >1.0 m/s; Medium = 0.5-1.0 m/s; Low = <0.5 m/s.
[d] High = >3.0 m; Medium = 1.0-3.0 m; Low = <1.0 m.

Continued...

Table D1 Continued.

Section	Site[a]	Session	Air Temperature (°C)	Water Temperature (°C)	Conductivity (µS /cm)	Cloud Cover[b]	Water Clarity[d]	Instream Velocity[c]	Secchi Bar Depth (m)	Cover Types (%)							
										Substrate Interstices	Woody Debris	Turbulence	Aquatic Vegetation	Terrestrial Vegetation	Shallow Water	Deep Water	Other Cover
3	316	6	15	9.9	190	Partly cloudy	Medium	High	0.3	75	10	10	0	0	5	0	0
3	315	1	11	9.8	170	Clear	High	Medium	0.8	40	10	5	5	0	0	40	0
3	315	2	8	12.8	170	Overcast	High	Medium	0.8	0	10	0	0	20	5	65	0
3	315	3	5	9.2		Overcast	Medium	Medium	0.7	30	15	15	0	0	0	40	0
3	315	4	8	9.9	190	Partly cloudy	Medium	Medium	1.1	60	10	5	0	0	15	10	0
3	315	5	14		190	Overcast	Medium	Medium	1	60	15	5	0	0	10	10	0
3	315	6	15	9.9	190	Partly cloudy	Medium	Medium	0.8	90	5	0	0	0	0	5	0
3	314	1	13	11.2	170	Partly cloudy	Medium	Medium	0.8	65	10	5	10	0	0	10	0
3	314	2	8	12.6	170	Overcast	High	High	0.8	20	1	10	0	10	4	55	0
3	314	3	5	9.2		Overcast	Medium	Medium	0.7	45	5	5	0	0	5	40	0
3	314	4	7	10.0	190	Clear	Low	Medium	1.1	55	0	15	0	0	15	15	0
3	314	5	10	9.5	190	Overcast	Medium	Medium	1	55	5	5	0	0	10	25	0
3	314	6	15	9.8	190	Partly cloudy	Medium	Medium	0.8	80	5	5	0	0	5	5	0
3	312	1	15	12.0	200	Mostly cloudy	Medium	Medium	0.2	70	5	5	0	10	10	0	0
3	312	2	10	13.2	220		Low	High	0.6	20	5	0	0	10	50	15	0
3	312	3	8	8.2	220	Mostly cloudy	Medium	Medium	0.4	60	0	15	0	0	25	0	0
3	312	4	10	9.6	190	Overcast	Medium	Medium	1.2	30	5	5	0	0	30	30	0
3	312	5	15	9.4	220	Partly cloudy	Medium	Low	0.3	60	5	5	0	0	0	0	30
3	312	6	17	9.7	200	Clear	Medium	Medium	n/a	75	5	10	5	0	5	0	0
3	311	1	9	10.9	230	Mostly cloudy	Medium	Medium	0.2	75	5	5	0	10	0	5	0
3	311	2	10	12.7	220	Mostly cloudy	Medium	High	0.6	20	5	10	0	20	5	40	0
3	311	3	10	10.4	190	Overcast	Medium	High	n/a	70	0	10	0	0	10	10	0
3	311	4	12	9.2	300	Partly cloudy	Medium	High	0.3	95	0	0	5	0	0	0	0
3	311	5	15	10.2	220	Clear	Medium	Medium	0.3	30	0	10	0	0	20	0	40
3	311	6	12	9.1	200	Overcast	Medium	Medium	0.3	85	5	0	5	0	0	5	0
3	310	1	12	11.0	230	Mostly cloudy	Medium	Medium	1.2	80	5	5	5	5	0	0	0
3	310	2	10	13.3	220		Low	High	0.6	20	5	0	0	15	50	10	0
3	310	3	5	8.2	220	Overcast	Medium	Medium	0.4	70	5	5	0	0	15	5	0
3	310	4	16	10.1	300	Partly cloudy	Medium	Medium	0.3	75	5	15	5	0	0	0	0
3	310	5	15	9.5	220	Partly cloudy	Medium	Low	0.3	0	0	10	0	0	0	0	90
3	310	6	16	9.8	200	Clear	Medium	High	0.3	80	5	10	0	0	0	5	0
3	309	1	10	11.2	230	Mostly cloudy	Medium	Medium	1.1	50	10	5	0	30	5	0	0
3	309	2	10	13.2	220	Partly cloudy	Medium	High	0.6	25	5	0	0	10	50	10	0
3	309	3	3	8.2	220	Overcast	Medium	Medium	0.4	70	0	0	0	0	25	5	0
3	309	4	15	9.3	300	Partly cloudy	Medium	Medium	0.3	80	5	10	0	0	5	0	0
3	309	5	15	9.4	220	Partly cloudy	Medium	Medium	1.3	45	5	10	0	0	10	0	30
3	309	6	15	9.6	200	Partly cloudy	Medium	Medium	0.3	80	5	0	5	0	5	5	0
3	308	1	15	9.8	170	Clear	Medium	Medium	0.8	30	0	0	0	60	10	0	0
3	308	2	10	13.0	160	Overcast	High	Medium	1.5	5	0	0	0	30	60	5	0
3	308	3	3	8.2	220	Overcast	Medium	Medium	0.4	55	0	5	0	0	40	0	0
3	308	4	8	9.7	190	Overcast	Low	Low	1.2	50	5	5	0	0	30	10	0
3	308	5	12	9.2	220	Clear	Medium	Medium	0.3	60	5	0	0	0	5	0	30
3	308	6	15	9.4	200	Mostly cloudy	Medium	Medium	0.3	80	5	5	0	0	5	5	0
3	307	1	15	9.8	170	Clear	Medium	Medium	0.8	45	0	0	0	50	5	0	0
3	307	2	8	12.8	160	Overcast	High	Medium	1.5	23	2	0	0	20	50	5	0
3	307	3	8	9.1		Overcast	Medium	Medium	0.7	70	0	0	0	0	30	0	0
3	307	4	6	9.7	190	Overcast	Low	Low	1.2	40	10	0	0	0	50	0	0
3	307	5	11		220	Clear	Medium	Low	0.3	65	0	0	0	0	10	0	25

[a] See Appendix A, Figures A1 to A6 for sample site locations.
[b] Clear = <10%; Partly Cloudy = 10-50%; Mostly Cloudy = 50-90%; Overcast = >90%.
[c] High = >1.0 m/s; Medium = 0.5-1.0 m/s; Low = <0.5 m/s.
[d] High = >3.0 m; Medium = 1.0-3.0 m; Low = <1.0 m.

Continued...

Table D1 Continued.

Section	Site[a]	Session	Air Temperature (°C)	Water Temperature (°C)	Conductivity (µS /cm)	Cloud Cover[b]	Water Clarity[d]	Instream Velocity[c]	Secchi Bar Depth (m)	Cover Types (%)							
										Substrate Interstices	Woody Debris	Turbulence	Aquatic Vegetation	Terrestrial Vegetation	Shallow Water	Deep Water	Other Cover
3	0307	6	11	9.3	200	Overcast	Low	Medium	0.3	85	5	0	0	0	10	0	0
3	0306	1	15	9.8	160	Mostly cloudy	Medium	Medium	0.0	80	10	0	0	0	10	0	0
3	0306	2	24	11.7	220	Partly cloudy	Medium	Medium	0.4	50	0	10	0	10	0	30	0
3	0306	3	10	10.4	190	Overcast	Medium	Low	0.9	45	5	5	5	0	10	0	30
3	0306	4	10	9.0	300	Partly cloudy	Medium	Low	0.3	60	10	0	5	0	25	0	0
3	0306	5	10	8.5	220	Clear	Medium	Medium	0.3	50	5	0	0	0	5	0	40
3	0306	6	11	9.5	200	Overcast	Low	Low	0.3	90	5	0	0	0	5	0	0
3	0305	1	15	10.3	160		Medium	Medium	0.0	80	10	0	0	0	10	0	0
3	0305	2	22	11.7	220	Partly cloudy	Medium	Medium	0.4	60	0	0	0	10	0	30	0
3	0305	3	10	10.2	190	Overcast	Medium	Medium	0.9	75	5	5	10	0	5	0	0
3	0305	4	8	8.8	300	Partly cloudy	Medium	Medium	0.3	80	5	0	5	0	10	0	0
3	0305	5	5	7.8	220	Clear	Medium	Medium	0.3	65	0	0	0	0	10	0	25
3	0305	6	15	9.8	190	Partly cloudy	Medium	Medium	0.3	80	5	0	5	0	5	5	0
3	0304	1	10	11.9	170	Clear	High	Medium	0.8	65	0	10	5	0	0	20	0
3	0304	2	21	11.6	160	Clear	Medium	Medium	1.4	70	0	10	0	10	0	10	0
3	0304	3	10	10.3	190	Overcast	Low	Medium	0.9	80	0	0	0	0	10	10	0
3	0304	4	5	9.7	190	Clear	Medium	Medium	1.1	75	5	10	5	0	5	0	0
3	0304	5	10	9.5	190	Overcast	Medium	Medium	1.0	60	0	5	0	0	30	5	0
3	0304	6	15	9.8	190	Partly cloudy	Medium	High	0.8	70	5	10	5	0	0	10	0
3	0303	1	10	9.8	160	Clear	Medium	Medium	0.4	75	5	5	0	5	10	0	0
3	0303	2	21	11.0	160	Clear	Medium	High	1.4	70	0	5	0	10	0	15	0
3	0303	3	15	10.7	180	Mostly cloudy	Medium	Medium	1.2	60	5	10	5	0	20	0	0
3	0303	4	20	10.3		Partly cloudy	Medium	Medium	1.1	50	5	5	0	0	30	10	0
3	0303	5	10	9.5	190	Overcast	Medium	Medium	1.0	70	5	5	0	0	10	10	0
3	0303	6	15	9.7	200	Mostly cloudy	Medium	High	0.8	70	5	5	0	0	10	10	0
3	0302	1	8	9.8	160	Clear	Medium	Medium	0.4	60	5	0	10	10	5	10	0
3	0302	2	15	10.9	160	Clear	Medium	High	1.4	45	5	0	0	25	0	25	0
3	0302	3	10	11.0	180	Mostly cloudy	Medium	Medium	1.2	65	5	20	0	0	10	0	0
3	0302	4	20	10.3		Partly cloudy	Medium	Medium	1.1	25	10	5	0	0	30	30	0
3	0302	5	13	9.5	190	Overcast	Medium	Medium	1.0	70	5	5	0	0	10	10	0
3	0302	6	12	9.5	200	Mostly cloudy	Medium	High	0.8	75	5	5	0	0	10	5	0
3	0301	1	9	11.1	170	Partly cloudy	High	Medium	0.8	50	0	5	10	0	0	35	0
3	0301	2	25	11.7	160	Clear	Medium	High	1.4	50	0	0	0	10	0	40	0
3	0301	3	15	10.5	180	Overcast	Medium	Medium	1.2	70	0	10	0	0	10	10	0
3	0301	4	19	10.6		Mostly cloudy	Medium	Medium	1.1	35	5	10	0	0	20	30	0
3	0301	5	10	9.5	190	Overcast	Medium	Medium	1.0	55	5	5	0	0	5	30	0
3	0301	6	12	9.7	190	Partly cloudy	Medium	Medium	0.8	70	10	5	0	0	0	15	0
5	OEM-USC	1	20	12.7	180	Partly cloudy	High	High	0.3	20	30	0	0	0	10	40	0
5	OEM-USC	2	17	13.4	160	Clear	High	High	0.5	10	10	10	0	0	0	70	0
5	OEM-USC	3	5	10.4	180	Overcast	High	Medium	0.6	20	20	0	0	0	40	20	0
5	OEM-USC	4	12	11.1	190		High	High	0.2	25	5	20	0	0	10	40	0
5	OEM-MS	1	20	12.8	180	Overcast	High	Medium	0.4	0	0	0	0	0	20	80	0
5	OEM-MS	2	18	12.8	160	Clear	High	High	0.5	20	0	0	0	0	60	20	0
5	OEM-MS	3	5	10.6	180	Overcast	High	Medium	0.6	0	0	0	0	0	40	60	0
5	OEM-MS	4	10	10.8	190	Overcast	High	High	1.1	30	0	0	0	0	20	50	0
5	OEM-DSC	1	20	12.8	180	Mostly cloudy	High	Medium	0.3	5	20	0	0	0	10	65	0
5	OEM-DSC	2	17	13.4	160	Clear	High	High	0.5	30	10	0	0	0	0	60	0
5	OEM-DSC	3	5	10.2	180	Overcast	High	Low	0.6	0	20	0	0	0	50	30	0

[a] See Appendix A, Figures A1 to A6 for sample site locations.

[b] Clear = <10%; Partly Cloudy = 10-50%; Mostly Cloudy = 50-90%; Overcast = >90%.

[c] High = >1.0 m/s; Medium = 0.5-1.0 m/s; Low = <0.5 m/s.

[d] High = >3.0 m; Medium = 1.0-3.0 m; Low = <1.0 m.

Continued...

Table D1 Continued.

Section	Site[a]	Session	Air Temperature (°C)	Water Temperature (°C)	Conductivity (µS /cm)	Cloud Cover[b]	Water Clarity[d]	Instream Velocity[c]	Secchi Bar Depth (m)	Cover Types (%)							
										Substrate Interstices	Woody Debris	Turbulence	Aquatic Vegetation	Terrestrial Vegetation	Shallow Water	Deep Water	Other Cover
5	OEM-DSC	4	8	10.8	190	Overcast	High	Medium	1.0	20	10	0	0	0	50	20	0
5	05SC060	1	20	12.9	180	Mostly cloudy	High	Low	0.4	0	10	0	0	0	0	90	0
5	05SC060	2	17	12.9	160	Clear	Medium	Low	0.8	0	5	0	20	30	10	35	0
5	05SC060	3	5	10.2	180		High	Low	0.6	0	20	0	0	0	60	20	0
5	05SC060	4	10	10.9	190	Overcast	High	Low	1.1	0	2	0	18	0	75	5	0
5	05SC060	6	15	10.7	180	Clear	Low	Low	0.2	0	5	0	10	0	85	0	0
5	0518	1	20	11.8	180	Partly cloudy	High	Medium	0.2	0	10	10	0	10	20	50	0
5	0518	2	17	12.7	170	Mostly cloudy	High	High	0.5	5	5	5	0	5	20	60	0
5	0518	3	12	11.9	180	Overcast	High	Low	0.8	30	0	0	0	0	30	40	0
5	0518	4	9	10.9	180	Overcast	High	Medium	0.6	5	0	0	0	5	10	80	0
5	0518	5	10	10.3	190	Overcast	Low	Low	0.8	30	5	5	0	0	30	30	0
5	0518	6	15	10.8	190	Mostly cloudy	Low	Medium	0.8	20	10	0	0	0	30	40	0
5	0517	1	20	13.0	180	Partly cloudy	High	Low	0.4	0	0	0	0	20	20	60	0
5	0517	2	17	12.8	170	Overcast	Medium	High	0.5	0	5	10	0	10	25	50	0
5	0517	3	4	9.5	210	Overcast	High	Low	0.6	0	0	0	0	10	20	70	0
5	0517	4	12	11.4	170	Overcast	Medium	Low	0.8	10	0	0	0	0	45	45	0
5	0517	5	10	10.8	210	Overcast	High	Low	0.8	10	0	0	0	0	30	60	0
5	0517	6	15	11.0	190	Mostly cloudy	Medium	Low	0.8	20	0	0	0	0	70	10	0
5	0516	1	20	13.0	180	Partly cloudy	High	Medium	0.4	0	10	0	0	0	80	10	0
5	0516	2	15	12.8	170	Overcast	Medium	High	0.5	0	10	0	0	30	0	60	0
5	0516	3	4	9.5	210	Overcast	High	Medium	0.6	0	0	0	0	10	70	20	0
5	0516	4	11	10.8	190	Partly cloudy	High	Medium	0.7	25	5	0	0	0	60	10	0
5	0515	1	20	13.5	180	Mostly cloudy	High	Medium	0.2	0	37	0	0	0	25	38	0
5	0515	2	17	12.6	170	Clear	Medium	Medium	0.5	20	5	0	0	20	40	15	0
5	0515	3	10	11.9	190	Mostly cloudy	High	Low	0.8	35	2	0	0	0	60	3	0
5	0515	4	15	11.4	180	Clear	High	Low	0.8	50	0	0	0	0	50	0	0
5	0515	5	10	10.2	190	Overcast	Medium	Low	0.8	45	5	0	0	0	45	5	0
5	0515	6	15	10.8	190	Clear	Medium	Medium	0.8	50	0	0	0	0	50	0	0
5	0514	1	20	11.8	180	Mostly cloudy	High	Medium	0.2	10	0	0	0	30	40	20	0
5	0514	2	17	12.8	160	Clear	Medium	Medium	1.0	0	5	0	0	20	70	5	0
5	0514	3	8	11.6	190	Overcast	High	Medium	1.1	50	0	0	0	0	50	0	0
5	0514	4	15	11.6	170	Clear	High	Low	0.8	30	0	0	0	0	60	10	0
5	0514	5	10	10.3	190	Overcast	High	Low	0.9	35	0	0	0	0	60	5	0
5	0514	6	11	10.9	180	Clear	Medium	Low	0.4	45	0	0	0	0	45	10	0
5	0513	1	20	11.8	180	Mostly cloudy	High	Medium	0.2	0	0	0	0	20	50	30	0
5	0513	2	15	12.7	160	Clear	Medium	Medium	1.0	0	0	0	0	20	75	5	0
5	0513	3	8	11.5	190	Overcast	High	Medium	1.1	35	1	0	0	0	60	4	0
5	0513	4	9	10.9	190	Overcast	High	Low	0.9	30	0	0	0	0	70	0	0
5	0513	5	10	10.3	190	Overcast	Medium	Medium	0.9	50	0	0	0	0	50	0	0
5	0513	6	15	10.9	180	Clear	Medium	Medium	0.4	50	0	0	0	0	40	10	0
5	0512	1	20	12.5	180		High	Medium	0.3	0	0	0	0	10	70	20	0
5	0512	2	17	12.9	160	Partly cloudy	High	Medium	0.6	20	5	0	0	20	50	5	0
5	0512	3	4	9.5	200	Overcast	High	Medium	0.6	0	0	0	0	0	80	20	0
5	0512	4	15	11.5	180	Mostly cloudy	Medium	Medium	0.6	40	0	0	0	0	40	20	0
5	0512	5	10	10.3	210		High	Medium	0.8	30	0	0	0	0	60	10	0
5	0512	6	15	10.5	190	Partly cloudy	Medium	Medium	0.8	40	2	0	0	0	43	20	-5
5	0511	1	20	11.8	180	Partly cloudy	High	Medium	0.3	0	0	0	0	20	60	20	0
5	0511	2	15	12.8	170	Partly cloudy	Low	High	0.5	10	0	10	0	10	10	60	0

[a] See Appendix A, Figures A1 to A6 for sample site locations.

[b] Clear = <10%; Partly Cloudy = 10-50%; Mostly Cloudy = 50-90%; Overcast = >90%.

[c] High = >1.0 m/s; Medium = 0.5-1.0 m/s; Low = <0.5 m/s.

[d] High = >3.0 m; Medium = 1.0-3.0 m; Low = <1.0 m.

Continued...

Table D1 Continued.

Section	Site[a]	Session	Air Temperature (°C)	Water Temperature (°C)	Conductivity (µS /cm)	Cloud Cover[b]	Water Clarity[d]	Instream Velocity[c]	Secchi Bar Depth (m)	Cover Types (%)							
										Substrate Interstices	Woody Debris	Turbulence	Aquatic Vegetation	Terrestrial Vegetation	Shallow Water	Deep Water	Other Cover
5	0511	3	12	11.8	190	Overcast	High	Medium	0.8	55	1	0	0	0	40	4	0
5	0511	4	12	11.2	180	Overcast	High	Medium	0.6	35	2	3	0	0	50	10	0
5	0511	5	10	10.3	210	Overcast	High	Medium	0.8	30	5	0	0	5	30	30	0
5	0511	6	15	10.8	190	Overcast	Low	Medium	0.8	40	5	5	0	0	20	20	10
5	0510	1	20	13.3	180	Mostly cloudy	High	Medium	0.3	10	0	5	0	10	60	15	0
5	0510	2	17	13.3	160	Partly cloudy	High	High	0.5	5	5	0	0	30	50	10	0
5	0510	3	5	10.6	180	Overcast	High	Medium	0.6	30	10	0	0	0	30	30	0
5	0510	4	15	11.7	170	Mostly cloudy	Medium	Medium	n/a	30	5	0	0	5	30	30	0
5	0510	5	10	10.2	190	Overcast	High	Low	0.9	25	1	0	0	0	70	4	0
5	0510	6	15	10.8	180	Clear	Low	Medium	0.2	45	5	0	0	0	45	5	0
5	0509	1	20		180	Partly cloudy	High	Medium	0.3	0	0	0	0	0	50	50	0
5	0509	2	17	12.9	180	Clear	High	Medium	0.6	25	2	0	0	13	5	55	0
5	0509	3	5	10.6	180	Overcast	High	Medium	0.6	0	10	0	0	0	40	50	0
5	0509	4	10	10.8	190	Overcast	High	Medium	0.7	45	1	0	0	0	50	4	0
5	0509	5	15	10.3	210	Overcast	High	Medium	0.8	30	0	0	0	0	60	10	0
5	0509	6	15	10.3	190	Overcast	Medium	Medium	0.8	40	5	0	0	0	45	10	0
5	0508	1	16	12.5	180	Clear	High	Medium	0.2	0	10	0	0	30	10	50	0
5	0508	2	14	12.5	170	Clear	Medium	Medium	0.5	13	2	0	0	30	50	5	0
5	0508	3	7	11.6	190	Overcast	High	Medium	0.8	30	1	0	0	0	65	4	0
5	0508	4	15	11.2	180	Mostly cloudy	High	Low	0.8	35	1	0	0	0	60	4	0
5	0508	5	10	10.3	190	Overcast	Medium	Low	0.8	47	1	0	0	0	48	4	0
5	0508	6	12	10.8	190	Clear	Medium	Low	0.8	45	5	0	0	0	45	5	0
5	0507	1	20	12.3	180	Partly cloudy	High	Medium	0.3	0	0	0	0	20	40	40	0
5	0507	2	17	12.6	160	Clear	High	High	0.5	10	5	0	0	5	60	20	0
5	0507	3	5	10.3	180	Overcast	High	Medium	0.6	0	0	0	0	0	60	40	0
5	0507	4	8	10.8	190	Overcast	High	Medium	1.1	40	0	0	0	0	50	10	0
5	0507	5	8	10.3	190	Overcast	High	Medium	0.9	30	0	0	0	0	70	0	0
5	0507	6	15	10.5	180	Clear	Medium	Medium	0.4	50	0	10	0	0	40	0	0
5	0506	1	12	12.5	180	Partly cloudy	High	Medium	0.3	80	0	0	0	0	10	10	0
5	0506	2	17	12.4	180	Clear	High	High	0.6	40	5	5	0	0	0	50	0
5	0506	3	5	11.3	200	Overcast	High	Low	0.6	40	0	0	0	0	0	60	0
5	0506	4	8	10.8	190	Overcast	High	Low	0.7	49	1	0	0	0	0	50	0
5	0506	5	8	10.3	210	Fog	High	Low	0.8	45	0	0	0	0	10	45	0
5	0506	6	14	10.4	190	Overcast	Medium	High	0.8	45	0	5	0	0	0	50	0
5	0505	1	18	12.1	180	Mostly cloudy	High	Medium	0.4	40	0	10	0	0	10	40	0
5	0505	2	12	12.3	180	Clear	High	High	0.6	50	5	15	0	0	5	25	0
5	0505	3	10	10.4	200	Overcast	Medium	Low	0.6	65	0	0	0	0	5	30	0
5	0505	4	8	10.7	190	Overcast	High	Medium	0.7	50	5	0	0	0	5	40	0
5	0505	5	7	10.2	210	Fog	High	Medium	0.8	47	2	0	0	0	3	48	0
5	0505	6	14	10.3	190	Overcast	Medium	High	0.8	35	5	20	0	0	20	20	0
6	06SC047	1	13	14.9	260	Overcast	High	Medium	0.6	0	0	0	0	30	0	70	0
6	06SC047	2	20	13.5	230	Clear	High	Low	0.2	0	20	0	0	0	10	70	0
6	06SC047	3	18	13.9	280	Clear	High	Low	0.7	5	10	0	5	0	55	15	10
6	06SC047	4	15	11.2	300	Clear	High	Low	0.7	5	5	0	0	0	40	50	0
6	06SC047	5	12	9.1	230	Overcast	High	Low	0.6	0	2	0	10	3	50	35	0
6	06SC047	6	7	8.5	420	Clear	High	Low	0.4	10	0	0	0	0	70	20	0
6	06SC036	1	11	13.1	170	Overcast	Low	Low	0.3	0	5	0	0	5	5	85	0
6	06SC036	2	17	13.2	180	Mostly cloudy	Medium	Low	0.6	5	5	0	0	0	15	75	0

[a] See Appendix A, Figures A1 to A6 for sample site locations.

[b] Clear = <10%; Partly Cloudy = 10-50%; Mostly Cloudy = 50-90%; Overcast = >90%.

[c] High = >1.0 m/s; Medium = 0.5-1.0 m/s; Low = <0.5 m/s.

[d] High = >3.0 m; Medium = 1.0-3.0 m; Low = <1.0 m.

Continued...

Table D1 Continued.

Section	Site[a]	Session	Air Temperature (°C)	Water Temperature (°C)	Conductivity (µS /cm)	Cloud Cover[b]	Water Clarity[d]	Instream Velocity[c]	Secchi Bar Depth (m)	Cover Types (%)							
										Substrate Interstices	Woody Debris	Turbulence	Aquatic Vegetation	Terrestrial Vegetation	Shallow Water	Deep Water	Other Cover
6	06SC036	3	10	9.8	240	Overcast	High	Low	0.6	0	0	0	0	0	50	50	0
6	06SC036	4	15	13.5	300	Clear	High	Low	1.1	0	10	0	0	0	30	60	0
6	06SC036	5	12	10.1	360		Medium	Low	0.6	25	5	0	0	0	50	20	0
6	06SC036	6	12	11.9	600		Medium	Low	0.6	20	5	0	0	0	20	55	0
6	06PIN02	1	13	15.7	260	Overcast	Medium	Medium	0.6	20	10	0	0	0	30	40	0
6	06PIN02	2	18	12.5	260	Clear	High	Low	0.3	0	20	0	0	0	20	60	0
6	06PIN02	3	18	13.6	280	Clear	High	Medium	0.7	30	5	0	0	0	60	5	0
6	06PIN02	4	10	10.7	300	Clear	High	Medium	0.7	10	30	0	0	0	30	30	0
6	06PIN02	5	12	8.7	240	Overcast	High	Medium	0.6	30	10	0	0	0	50	10	0
6	06PIN02	6	10	9.3	240	Clear	High	Low	0.5	30	20	0	0	0	40	10	0
6	06PIN01	1	13	15.2	260	Overcast	Medium	Low	0.6	20	25	0	0	0	25	30	0
6	06PIN01	2	18	12.5	260	Clear	High	Low	0.3	0	30	0	0	0	10	60	0
6	06PIN01	3	17	13.5	280	Clear	High	Medium	0.7	30	15	0	0	0	50	5	0
6	06PIN01	4	8	10.3	300	Fog	High	Low	0.7	30	20	0	0	0	40	10	0
6	06PIN01	5	12	8.7	240	Overcast	Medium	Medium	0.4	30	10	0	0	0	50	10	0
6	06PIN01	6	8	9.3	240	Clear	High	Medium	0.5	40	10	5	0	0	20	25	0
6	0614	1	13	13.3	180	Overcast	Medium	Medium	0.8	10	0	0	0	10	30	40	10
6	0614	2	20	12.6	160	Clear	High	Medium	0.4	0	0	0	0	30	60	10	0
6	0614	3	20	13.1	180	Clear	High	Low	0.7	20	1	0	0	0	70	9	0
6	0614	4	15	10.8	180		High	Low	0.5	49	1	0	0	0	40	10	0
6	0614	5	12	10.1	190	Overcast	High	Low	0.8	20	0	0	0	0	70	10	0
6	0614	6	12	10.7	210	Clear	High	Low	0.7	23	2	5	0	0	65	5	0
6	0613	1	11	13.4	180	Overcast	Medium	Medium	0.1	0	0	0	0	5	95	0	0
6	0613	2	15	13.2	190	Overcast	Medium	Medium	0.7	15	5	0	0	10	25	45	0
6	0613	3	24	13.7	180	Clear	High	Medium	0.8	50	0	0	0	0	45	5	0
6	0613	4	15	11.2	230	Clear	High	Low	0.8	10	15	0	0	0	45	30	0
6	0613	5	12	9.7	200	Clear	High	Low	0.4	45	0	0	0	0	45	10	0
6	0613	6	12	11.1	200	Overcast	High	Low	0.7	70	0	0	0	0	25	5	0
6	0612	1	11	13.0	180	Overcast	Medium	Medium	0.3	30	0	0	0	10	55	5	0
6	0612	2	15	13.0	190	Overcast	Medium	Medium	0.7	25	2	0	0	3	60	10	0
6	0612	3	24	13.9	190	Clear	High	Medium	0.7	35	2	0	0	0	60	3	0
6	0612	4	15	11.2	230	Clear	High	Medium	0.8	0	5	0	0	0	35	60	0
6	0612	5	12	10.3	190	Clear	High	Medium	0.7	44	1	0	0	0	45	10	0
6	0612	6	17	11.8	210	Partly cloudy	High	Medium	0.7	50	0	0	0	0	50	0	0
6	0611	1	12	13.5	190	Mostly cloudy	Medium	Low	0.2	0	0	0	0	10	80	10	0
6	0611	2	8	13.0	190	Overcast	Medium	Low	0.7	10	5	0	0	10	55	20	0
6	0611	3	20	14.7	180	Clear	High	Low	0.8	35	5	0	0	0	60	0	0
6	0611	4	15	11.9	230	Clear	High	Low	0.8	0	0	0	0	0	90	10	0
6	0611	5	12	9.8	230	Partly cloudy	High	Low	0.5	45	5	0	0	0	45	5	0
6	0611	6	17	11.2	200	Clear	Medium	Low	0.4	45	0	0	0	0	45	10	0
6	0610	1	12	14.0	190	Mostly cloudy	Medium	Medium	0.2	10	5	0	0	5	75	5	0
6	0610	2	10	13.0	190	Overcast	Medium	Medium	0.7	25	5	0	0	10	50	10	0
6	0610	3	20	15.0	180	Clear	High	Low	0.8	40	10	0	0	0	50	0	0
6	0610	4	12	11.6	220	Clear	Medium	Low	0.9	50	5	0	0	0	40	5	0
6	0610	5	12	9.8	230	Partly cloudy	High	Low	0.5	45	5	0	0	0	45	5	0
6	0610	6	17		200	Clear	Medium	Low	0.5	45	5	0	0	0	45	5	0
6	0609	1	11	13.5	190	Mostly cloudy	Medium	Medium	0.2	5	0	0	0	10	80	5	0
6	0609	2	8	12.7	190	Overcast	Medium	Low	0.7	5	5	0	0	10	75	5	0

[a] See Appendix A, Figures A1 to A6 for sample site locations.

[b] Clear = <10%; Partly Cloudy = 10-50%; Mostly Cloudy = 50-90%; Overcast = >90%.

[c] High = >1.0 m/s; Medium = 0.5-1.0 m/s; Low = <0.5 m/s.

[d] High = >3.0 m; Medium = 1.0-3.0 m; Low = <1.0 m.

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Table D1 Continued.

Section	Site[a]	Session	Air Temperature (°C)	Water Temperature (°C)	Conductivity (µS /cm)	Cloud Cover[b]	Water Clarity[d]	Instream Velocity[c]	Secchi Bar Depth (m)	Cover Types (%)							
										Substrate Interstices	Woody Debris	Turbulence	Aquatic Vegetation	Terrestrial Vegetation	Shallow Water	Deep Water	Other Cover
6	609	3	20	12.8	180	Clear	High	Low	0.8	15	1	0	0	0	80	4	0
6	609	4	12	11.3	220	Partly cloudy	High	Low	0.9	25	2	0	0	0	70	3	0
6	609	5	12	10.1	230	Mostly cloudy	Medium	Low	0.5	45	5	0	0	0	45	5	0
6	609	6	11	10.8	220	Mostly cloudy	High	Low	0.5	50	0	0	0	0	50	0	0
6	608	1	12	12.9	190	Mostly cloudy	Medium	Medium	0.2	30	0	0	0	10	50	10	0
6	608	2	20	12.6	160	Partly cloudy	High	Medium	0.4	0	10	0	0	30	5	55	0
6	608	3	16	12.6	180	Clear	High	Medium	0.8	50	0	0	0	0	50	0	0
6	608	4	15	11.6	220	Clear	High	Medium	0.9	45	2	0	0	0	50	3	0
6	608	5	12	9.3	230	Overcast	High	Medium	0.5	50	0	0	0	0	50	0	0
6	608	6	15		200	Partly cloudy	High	Low	0.4	45	1	0	0	0	50	4	0
6	607	1	11	12.8	180	Overcast	Medium	Medium	0.3	28	2	0	0	0	65	5	0
6	607	2	12	13.0	190	Overcast	Medium	Medium	0.7	30	5	0	0	0	60	5	0
6	607	3	23	13.3	190	Clear	High	Low	0.7	0	5	0	0	0	90	5	0
6	607	4	17	11.2	230	Clear	High	Low	0.8	0	5	0	0	0	90	5	0
6	607	5	11	10.3	190	Clear	High	Low	0.7	23	2	0	0	0	65	10	0
6	607	6	12	10.9	210	Overcast	High	Low	0.6	50	2	0	0	0	38	10	0
6	606	1	11	12.7	180	Overcast	Medium	Medium	0.3	25	1	0	0	4	65	5	0
6	606	2	8	12.7	190	Overcast	High	Medium	0.6	24	1	0	0	5	55	15	0
6	606	3	20	12.9	190	Clear	High	Medium	0.5	40	5	0	0	0	50	5	0
6	606	4	10	11.2	200	Clear	High	Medium	0.8	40	2	0	0	0	40	18	0
6	606	5	14	10.5	190	Overcast	High	Medium	0.8	45	5	0	0	0	45	5	0
6	606	6	17	11.4	200		Medium	Medium	0.7	45	5	0	0	0	40	10	0
6	605	1	13	13.7	180	Overcast	Medium	Medium	0.8	25	0	0	0	20	50	5	0
6	605	2	23	12.6	160	Partly cloudy	High	Medium	0.4	0	5	0	10	0	85	0	0
6	605	3	18	12.5	190	Clear	High	Medium	0.5	45	0	0	0	0	50	5	0
6	605	4	8	11.0	200	Clear	High	Low	0.8	50	0	0	0	0	40	10	0
6	605	5	7	10.1	190	Mostly cloudy	High	Low	0.7	45	0	0	0	0	50	5	0
6	605	6	17	11.3	200		Medium	Medium	0.7	45	0	0	0	0	50	5	0
6	604	1	13	14.3	200	Overcast	Medium	High	0.6	5	10	0	0	10	0	75	0
6	604	2	22	12.6	160	Partly cloudy	High	Medium	0.4	0	0	0	0	30	5	65	0
6	604	3	24	13.3	230	Clear	High	Medium	0.7	30	2	3	0	0	40	25	0
6	604	4	15	10.9	230		High	Low	0.8	0	20	0	0	0	50	30	0
6	604	5	12	9.4	230	Overcast	High	Medium	0.5	30	15	0	0	0	50	5	0
6	604	6	15	11.0	200	Clear	High	Low	0.4	40	10	0	0	0	40	10	0
6	603	1	13	13.4	180	Overcast	Medium	Medium	0.8	25	5	0	0	10	50	10	0
6	603	2	20	12.6	160	Clear	High	Medium	0.4	0	0	0	0	20	60	20	0
6	603	3	22	13.1	180	Clear	High	Low	0.7	43	2	0	0	0	50	5	0
6	603	4	7	10.6	200	Fog	High	Low	0.7	0	10	0	0	0	75	15	0
6	603	5	12	10.4	190	Overcast	High	Low	0.8	35	0	0	0	0	60	5	0
6	603	6	12	11.2	210	Clear	High	Low	0.7	39	1	0	0	0	55	5	0
6	602	1	11	14.9	270	Overcast	High	High	0.1	5	20	0	0	5	0	70	0
6	602	2	19	12.6	160	Clear	High	Medium	0.4	10	20	0	0	10	0	60	0
6	602	3	20	13.6	230	Clear	High	Medium	0.8	10	15	5	0	5	5	60	0
6	602	4	17	11.1	220	Clear	High	Medium	0.6	25	15	10	0	0	10	40	0
6	602	5	12	9.0	230	Overcast	High	Medium	0.5	40	15	5	0	0	20	20	0
6	602	6	7	9.7	240	Clear	High	Medium	0.4	40	15	5	0	0	20	20	0
6	601	1	13	13.3	170	Overcast	Medium	High	0.8	30	5	5	0	5	0	55	0
6	601	2	20	12.5	180	Clear	High	Medium	0.6	20	10	0	0	0	20	50	0

[a] See Appendix A, Figures A1 to A6 for sample site locations.

[b] Clear = <10%; Partly Cloudy = 10-50%; Mostly Cloudy = 50-90%; Overcast = >90%.

[c] High = >1.0 m/s; Medium = 0.5-1.0 m/s; Low = <0.5 m/s.

[d] High = >3.0 m; Medium = 1.0-3.0 m; Low = <1.0 m.

Continued...

Table D1 Continued.

Section	Site[a]	Session	Air Temperature (°C)	Water Temperature (°C)	Conductivity (µS /cm)	Cloud Cover[b]	Water Clarity[d]	Instream Velocity[c]	Secchi Bar Depth (m)	Cover Types (%)							
										Substrate Interstices	Woody Debris	Turbulence	Aquatic Vegetation	Terrestrial Vegetation	Shallow Water	Deep Water	Other Cover
6	0601	3	18	12.5	190	Clear	High	Medium	0.8	25	1	0	0	0	50	24	0
6	0601	4	15	10.4	190		High	Low	0.5	49	1	5	0	0	5	40	0
6	0601	5	12	10.1	190	Overcast	High	Medium	0.8	39	1	0	0	0	30	30	0
6	0601	6	12	10.3	190	Clear	High	Medium	0.6	29	1	0	0	0	30	40	0
7	07SC022	1	17	12.7	190	Partly cloudy	High	Low	0.2	0	2	0	0	8	0	90	0
7	07SC022	2	15	12.4	180	Clear	High	Low	0.5	0	10	0	0	10	60	20	0
7	07SC022	3	5	9.5	200	Partly cloudy	High	Low	0.4	0	20	0	0	0	10	70	0
7	07SC022	4	10	11.1	210	Overcast	High	Low	0.7	25	5	0	0	0	15	55	0
7	07SC022	5	0	8.2	240	Clear	High	Low	0.8	25	5	0	0	0	30	60	-20
7	07SC022	6	15	11.3	210		Medium	Low	0.4	20	10	0	0	0	30	40	0
7	07SC012	1	14	12.5	190	Partly cloudy	High	Low	0.2	0	5	0	0	20	25	50	0
7	07SC012	2	15	12.6	180	Overcast	High	Medium	0.6	0	5	0	0	10	45	40	0
7	07SC012	3	15	10.5	190	Clear	High	Low	0.5	0	30	0	0	0	20	50	0
7	07SC012	4	12	10.4	190	Mostly cloudy	Medium	Low	0.6	8	2	0	0	0	10	80	0
7	07SC012	5	15	9.8	200	Clear	High	Low	0.5	15	5	0	0	0	10	70	0
7	07SC012	6	15	10.5	200	Mostly cloudy	High	Low	0.8	23	2	0	0	0	25	50	0
7	07KIS01	1	15	15.0	450	Mostly cloudy	High	Medium	0.1	5	5	0	0	0	85	5	0
7	07KIS01	2	15	13.1	470	Overcast	High	Medium	0.3	10	1	0	0	0	79	10	0
7	07KIS01	3	15	10.8	420	Clear	High	Low	0.6	49	1	0	0	0	50	0	0
7	07KIS01	4	11	10.4	480	Mostly cloudy	Low	Medium	0.5	20	0	0	0	0	70	10	0
7	07KIS01	5	15	9.4	380	Clear	High	Medium	0.5	30	0	0	0	0	60	10	0
7	07KIS01	6	15	10.5	470	Mostly cloudy	High	Medium	0.8	20	0	10	0	0	60	10	0
7	07BEA02	1	10	14.1	230	Clear	High	Medium	0.2	24	1	0	0	0	70	5	0
7	07BEA02	2	10	13.1	120	Mostly cloudy	Medium	Medium	0.0	0	5	0	0	0	25	70	0
7	07BEA02	3	10	9.9	210	Overcast	High	Medium	0.2	0	5	0	0	0	35	60	0
7	07BEA02	4	8	10.0	200	Overcast	Medium	Low	0.3	10	0	0	0	0	80	10	0
7	07BEA02	5	15	9.8	200	Clear	High	Medium	0.2	0	5	0	0	0	90	5	0
7	07BEA02	6	15	10.2	200	Overcast	High	Low	0.2	20	0	0	0	0	80	0	0
7	07BEA01	1	10	14.1	230	Clear	High	Low	0.2	20	5	0	0	5	50	20	0
7	07BEA01	2	10	13.1	120	Mostly cloudy	Medium	Low	0.0	5	5	0	0	10	5	75	0
7	07BEA01	3	10	9.9	210	Overcast	High	Low	0.2	0	0	0	0	0	50	50	0
7	07BEA01	4	8	8.9	200	Clear	Low	Low	0.2	20	0	0	0	0	20	60	0
7	07BEA01	5	15	9.8	200	Clear	High	Low	0.2	30	0	0	0	0	30	40	0
7	07BEA01	6	10	8.9	210	Clear	High	Low	0.3	25	5	0	0	0	70	0	0
7	0714	1	14	11.7	190	Partly cloudy	High	Medium	0.2	5	0	0	0	15	75	5	0
7	0714	2	15	12.7	180	Overcast	High	Medium	0.7	5	5	0	0	10	60	20	0
7	0714	3	15	10.5	190	Clear	High	Low	0.5	0	0	0	0	0	90	10	0
7	0714	4	12	10.5	190	Partly cloudy	Medium	Medium	0.6	22	3	0	0	0	70	5	0
7	0714	5	10	9.6	230	Clear	High	Low	0.5	33	2	0	0	0	55	10	0
7	0714	6	15	10.6	200	Partly cloudy	Medium	Low	0.8	55	0	0	0	0	40	5	0
7	0713	1	11	11.8	190	Overcast	High	Medium	0.2	25	0	0	0	5	70	0	0
7	0713	2	16	12.7	180	Mostly cloudy	High	Medium	0.7	25	5	0	0	10	60	0	0
7	0713	3	10	10.2	190	Clear	High	Medium	0.5	0	0	0	0	0	100	0	0
7	0713	4	11	10.5	190	Partly cloudy	Low	Medium	0.6	30	0	0	0	0	50	20	0
7	0713	5	7	9.7	230	Clear	High	Medium	0.5	35	0	0	0	0	60	5	0
7	0713	6	15	10.6	200	Clear	Medium	Medium	0.8	40	0	0	0	0	50	10	0
7	0712	1	10	12.2	210	Overcast	Medium	Medium	0.1	5	5	0	0	10	75	5	0
7	0712	2	17	12.7	180	Clear	High	Medium	0.6	0	10	0	0	10	75	5	0

[a] See Appendix A, Figures A1 to A6 for sample site locations.
[b] Clear = <10%; Partly Cloudy = 10-50%; Mostly Cloudy = 50-90%; Overcast = >90%.
[c] High = >1.0 m/s; Medium = 0.5-1.0 m/s; Low = <0.5 m/s.
[d] High = >3.0 m; Medium = 1.0-3.0 m; Low = <1.0 m.

Continued...

Table D1 Continued.

Section	Site[a]	Session	Air Temperature (°C)	Water Temperature (°C)	Conductivity (µS /cm)	Cloud Cover[b]	Water Clarity[d]	Instream Velocity[c]	Secchi Bar Depth (m)	Cover Types (%)							
										Substrate Interstices	Woody Debris	Turbulence	Aquatic Vegetation	Terrestrial Vegetation	Shallow Water	Deep Water	Other Cover
7	712	3	10	9.5	230	Clear	High	Low	0.5	39	1	0	0	0	60	0	0
7	712	4	10	10.4	200		Low	Low	0.7	40	5	0	0	0	50	5	0
7	712	5	5	9.2	240		High	Low	0.8	25	5	0	0	0	60	10	0
7	712	6	15	10.3	200	Clear	Medium	Low	0.8	30	5	0	0	0	60	5	0
7	711	1	10	12.1	210	Overcast	Medium	High	0.1	25	5	0	0	15	50	5	0
7	711	2	17	12.7	180	Clear	High	Medium	0.6	35	5	0	0	5	50	5	0
7	711	3	10	9.5	230	Partly cloudy	High	Low	0.5	0	5	0	0	0	90	5	0
7	711	4	10	10.3	200	Clear	Medium	Medium	0.7	35	2	0	0	0	60	3	0
7	711	5	5	9.3	240	Clear	High	Medium	0.8	30	0	0	0	0	60	10	0
7	711	6	15	10.3	200	Clear	Medium	Medium	0.8								100
7	710	1	10	11.5	190	Overcast	Medium	Low	0.2	0	1	0	0	0	69	30	0
7	710	2	15	12.4	180	Clear	High	Low	0.7	5	5	0	0	10	60	20	0
7	710	3	10	9.6	200	Partly cloudy	Low	Low	0.4	0	10	0	0	0	70	20	0
7	710	4	10	10.2	190	Clear	Low	Low	0.6	5	5	0	0	0	80	10	0
7	710	5	1	9.1	230	Clear	Medium	Low	0.5	10	1	0	0	0	79	10	0
7	710	6	12	10.4	200	Clear	Medium	Low	0.8	15	0	0	0	0	80	5	0
7	709	1	14	12.8	190	Mostly cloudy	High	Medium	0.2	15	0	0	0	5	80	0	0
7	709	2	15	13.0	180	Overcast	Medium	Medium	0.4	60	5	0	0	5	30	0	0
7	709	3	5	9.8	200	Partly cloudy	High	Low	0.4	0	0	0	0	0	90	10	0
7	709	4	10	11.0	210	Overcast	High	Low	0.8	50	0	0	0	0	50	0	0
7	709	5	12	10.3	200	Clear	High	Low	0.6	50	0	0	0	0	50	0	0
7	709	6	15	11.2	200		Medium	Low	0.4	40	0	0	0	0	40	20	0
7	708	1	12	13.1	180	Partly cloudy	High	High	0.3	65	5	0	0	5	5	20	0
7	708	2	15	13.3	140	Overcast	Medium	High	0.1	20	2	10	0	3	5	60	0
7	708	3	5	9.7	200	Overcast	High	Medium	0.3	0	40	0	0	0	30	30	0
7	708	4	10	10.6	200	Overcast	High	High	0.6	30	0	10	0	0	30	60	-30
7	708	5	15	10.5	200	Clear	High	High	0.2	30	5	5	0	0	0	60	0
7	708	6	15	10.5	210	Overcast	High	High	0.2	30	0	10	0	0	10	50	0
7	707	1	10	11.5	190	Overcast	Medium	Medium	0.2	30	0	0	0	5	60	5	0
7	707	2	17	12.7	180	Clear	High	Medium	0.7	20	1	0	0	10	60	9	0
7	707	3	10	9.3	210	Clear	High	Low	0.5	0	10	0	0	0	70	20	0
7	707	4	10		190	Clear	Medium	Low	0.6	40	0	0	0	0	50	10	0
7	707	5	1	9.1	230	Clear	High	Low	0.5	30	0	0	0	0	50	20	0
7	707	6	15	10.5	200	Clear	Medium	Low	0.8	45	0	0	0	0	45	10	0
7	706	1	17	13.0	190	Partly cloudy	High	Medium	0.2	5	10	0	0	10	30	45	0
7	706	2	15	12.5	180	Clear	High	Medium	0.6	0	10	0	0	10	20	60	0
7	706	3	10	9.4	200	Partly cloudy	High	Low	0.4	0	30	0	0	0	10	60	0
7	706	4	10	11.0	200	Overcast	High	Low	0.8	35	5	0	0	0	30	30	0
7	706	5	0	9.0	230	Clear	High	Low	0.8	30	10	0	0	0	30	30	0
7	706	6	15	11.2	210	Overcast	Medium	Low	0.4	40	15	0	0	0	10	35	0
7	705	1	17	13.1	190	Partly cloudy	High	High	0.2	5	18	5	0	18	0	54	0
7	705	2	15	12.4	180	Clear	High	High	0.5	5	15	0	0	20	10	50	0
7	705	3	10	9.4	200	Partly cloudy	High	Medium	0.4	0	20	0	0	0	30	50	0
7	705	4	10	11.0	200	Overcast	High	Medium	0.8	40	5	0	0	0	25	30	0
7	705	5	0	8.6	240	Clear	High	Medium	0.8	30	10	0	0	0	20	30	10
7	705	6	15	11.3	210	Overcast	Medium	Medium	n/a	30	15	15	0	0	10	30	0
7	704	1	17	12.8	180	Partly cloudy	High	Medium	0.2	25	1	0	0	10	60	4	0
7	704	2	12	12.2	180	Clear	High	Medium	0.7	25	1	0	0	4	50	20	0

[a] See Appendix A, Figures A1 to A6 for sample site locations.

[b] Clear = <10%; Partly Cloudy = 10-50%; Mostly Cloudy = 50-90%; Overcast = >90%.

[c] High = >1.0 m/s; Medium = 0.5-1.0 m/s; Low = <0.5 m/s.

[d] High = >3.0 m; Medium = 1.0-3.0 m; Low = <1.0 m.

Continued...

Table D1 Continued.

Section	Site[a]	Session	Air Temperature (°C)	Water Temperature (°C)	Conductivity (µS /cm)	Cloud Cover[b]	Water Clarity[d]	Instream Velocity[c]	Secchi Bar Depth (m)	Cover Types (%)							
										Substrate Interstices	Woody Debris	Turbulence	Aquatic Vegetation	Terrestrial Vegetation	Shallow Water	Deep Water	Other Cover
7	0704	3	10	9.5	200	Partly cloudy	High	Medium	0.4	0	20	0	0	0	60	20	0
7	0704	4	10	11.1	200	Overcast	High	Low	0.6	35	0	0	0	0	60	5	0
7	0704	5	12	10.7	200	Clear	High	Low	0.6	35	0	0	0	0	60	5	0
7	0704	6	15	10.2	200	Clear	Medium	Medium	0.7	50	0	0	0	0	50	0	0
7	0703	1	14	12.5	180	Mostly cloudy	High	Medium	0.2	20	0	0	0	5	70	5	0
7	0703	2	10	13.1	170	Overcast	Medium	Medium	0.1	5	5	0	0	5	5	80	0
7	0703	3	5	9.3	200	Partly cloudy	High	Low	0.3	10	10	0	0	0	60	20	0
7	0703	4	10	10.9	200	Overcast	High	Low	0.6	30	0	0	0	0	70	0	0
7	0703	5	12	10.5	200	Clear	High	Low	0.2	60	0	0	0	0	40	0	0
7	0703	6	15	11.3	210	Clear	Low	Low	n/a	40	0	0	0	0	50	10	0
7	0702	1	12	12.7	190	Mostly cloudy	High	Medium	0.2	45	0	0	0	5	45	5	0
7	0702	2	15	13.1	180	Overcast	Medium	Medium	0.4	30	0	0	0	0	60	10	0
7	0702	3	5	9.8	200	Mostly cloudy	High	Low	0.4	0	0	0	0	0	90	10	0
7	0702	4	10	11.0	210	Overcast	High	Medium	0.8	35	0	0	0	0	60	5	0
7	0702	5	15	10.3	200	Clear	High	High	0.6	45	0	0	0	0	50	5	0
7	0702	6	15	11.1	200	Partly cloudy	Medium	Medium	0.4	50	0	0	0	0	50	0	0
7	0701	1	10	12.1	170	Clear	High	Low	0.3	0	1	0	0	0	94	5	0
7	0701	2	8	13.0	180	Partly cloudy	Medium	Low	0.7	0	5	0	0	5	45	45	0
7	0701	3	5	9.6	200	Overcast	High	Low	0.6	0	20	0	0	0	60	20	0
7	0701	4	6	10.8	190	Partly cloudy	Medium	Low	0.9	10	2	0	0	0	85	3	0
7	0701	5	15	10.3	190	Clear	High	Low	0.7	38	2	0	0	0	60	0	0
7	0701	6	15	11.1	210	Overcast	High	Low	0.4	70	0	0	0	0	25	5	0
9	09SC061	1	12	11.7	180	Mostly cloudy	Medium	Medium	0.2	100	0	0	0	0	0	0	0
9	09SC061	2	15	14.6	200	Clear	Medium	Low	0.5	5	0	0	5	0	90	0	0
9	09SC061	3	2	8.7	260	Mostly cloudy	Low	Low	0.5	55	5	0	0	0	20	20	0
9	09SC061	4	12	10.1	220		High	Low	0.7	40	0	0	0	0	55	5	0
9	09SC061	6	10	10.2	220	Overcast	High	Low	0.7	10	0	0	0	0	80	10	0
9	09SC053	1	15	12.1	170	Partly cloudy	Medium	High	0.2	100	0	0	0	0	0	0	0
9	09SC053	2	18	12.2	170	Partly cloudy	Medium	Low	0.7	30	5	0	5	0	0	0	60
9	09SC053	3	10	10.4	240	Clear	Medium	Low	0.3	80	0	0	0	0	20	0	0
9	09SC053	4	12	10.0	220	Overcast	High	Low	0.6	25	0	0	0	0	75	0	0
9	09SC053	6	5	8.8	200	Clear	High	Low	0.8	5	5	0	0	0	70	20	0
9	0914	1	12	11.7	180	Mostly cloudy	Medium	High	0.2	45	5	5	0	5	0	45	-5
9	0914	2	18	12.2	170	Partly cloudy	Medium	High	0.7	20	5	15	0	0	0	20	40
9	0914	3	6	9.0	260	Partly cloudy	Medium	Medium	0.5	30	10	10	0	0	20	30	0
9	0914	4	15	10.2	220	Overcast	Medium	Medium	0.7	40	0	0	0	0	50	10	0
9	0914	5	15	9.0	220	Partly cloudy	Medium	High	0.2	50	0	0	0	0	5	10	35
9	0914	6	10	10.0	200	Overcast	High	High	0.8	30	5	5	0	0	50	10	0
9	0913	1	12	11.7	180	Mostly cloudy	Medium	Medium	0.2	90	0	0	0	0	0	10	0
9	0913	2	19	12.2	170	Partly cloudy	Medium	High	0.7	10	0	5	10	5	0	5	65
9	0913	3	4	8.8	260	Mostly cloudy	Medium	Medium	0.5	35	10	5	0	0	20	30	0
9	0913	4	15	10.2	220	Mostly cloudy	Medium	Medium	0.7	50	0	0	0	0	40	10	0
9	0913	5	15	9.0	220	Partly cloudy	Medium	High	0.2	70	0	0	0	0	0	0	30
9	0913	6	10	10.9	220	Overcast	Medium	Medium	0.7	30	5	10	0	0	30	25	0
9	0912	1	12	11.7	180	Mostly cloudy	Medium	Medium	0.2	70	0	10	0	10	0	10	0
9	0912	2	18	12.2	170	Partly cloudy	Medium	Medium	0.7	40	0	0	5	0	10	0	45
9	0912	3	6	9.0	260	Partly cloudy	Low	Medium	0.5	50	5	0	0	0	5	40	0
9	0912	4	12	10.7	220	Overcast	Medium	Medium	0.7	35	0	0	5	0	0	60	0

[a] See Appendix A, Figures A1 to A6 for sample site locations.
[b] Clear = <10%; Partly Cloudy = 10-50%; Mostly Cloudy = 50-90%; Overcast = >90%.
[c] High = >1.0 m/s; Medium = 0.5-1.0 m/s; Low = <0.5 m/s.
[d] High = >3.0 m; Medium = 1.0-3.0 m; Low = <1.0 m.

Continued...

Table D1 Continued.

Section	Site[a]	Session	Air Temperature (°C)	Water Temperature (°C)	Conductivity (µS /cm)	Cloud Cover[b]	Water Clarity[d]	Instream Velocity[c]	Secchi Bar Depth (m)	Cover Types (%)							
										Substrate Interstices	Woody Debris	Turbulence	Aquatic Vegetation	Terrestrial Vegetation	Shallow Water	Deep Water	Other Cover
9	912	6	10	10.0	220	Overcast	High	Low	0.8	40	0	0	0	0	10	50	0
9	911	1	12	11.7	180	Partly cloudy	Medium	Medium	n/a	85	5	5	0	5	0	0	0
9	911	2	20	12.2	170	Partly cloudy	Medium	Medium	0.7	35	0	0	0	5	10	0	50
9	911	3	17	10.1	240	Partly cloudy	Medium	Medium	0.3	70	0	15	0	0	15	0	0
9	911	4	2	9.4	220	Fog	Medium	Low	0.7	90	0	0	0	0	10	0	0
9	911	5	15	9.2	220	Partly cloudy	Medium	High	0.2	40	0	0	0	0	5	0	55
9	911	6	10	10.1	220	Partly cloudy	High	Low	0.8	30	0	0	0	0	50	20	0
9	910	1	18	12.9	170	Partly cloudy	Medium	High	0.2	55	0	30	0	0	0	15	0
9	910	2	17	14.1	200	Clear	Medium	Low	0.5	20	0	0	0	0	30	50	0
9	910	3	15	10.7	240	Clear	Medium	Low	0.3	80	0	0	0	0	10	10	0
9	910	4	12	10.4	220	Mostly cloudy	Medium	Medium	0.6	30	0	0	0	0	60	10	0
9	910	5	15	8.7	220	Clear	Medium	Low	0.2	30	0	0	0	0	30	0	40
9	910	6	10	9.8	220	Clear	High	Low	0.8	40	0	0	0	0	60	0	0
9	909	1	7	11.7	180	Overcast	High	Medium	0.2	85	0	0	5	10	0	0	0
9	909	2	18	11.9	170	Partly cloudy	Medium	Medium	0.7	30	0	0	0	0	0	0	70
9	909	3	18	10.2	240	Clear	Medium	Medium	0.3	85	0	0	0	0	15	0	0
9	909	4	10	10.1	220	Partly cloudy	Medium	Medium	0.7	70	5	0	5	0	15	5	0
9	909	5	15	8.9	220	Partly cloudy	Medium	Medium	0.2	60	0	0	0	0	5	5	30
9	909	6	10	10.0	200	Mostly cloudy	Medium	Low	0.7	30	5	0	0	0	50	15	0
9	908	1	7	11.9	180	Overcast	High	Medium	0.2	85	0	5	0	5	0	5	0
9	908	2	17	11.8	170		Medium	Medium	0.6	90	0	5	0	5	0	0	0
9	908	3	18	11.1	240	Clear	Medium	Medium	0.3	80	0	0	0	0	20	0	0
9	908	4	5	9.8	220	Partly cloudy	Medium	Medium	0.7	80	5	0	5	0	10	0	0
9	908	5	16	8.8	220	Partly cloudy	Medium	Medium	0.2	60	0	0	0	0	5	0	35
9	908	6	10	10.0	220	Partly cloudy	High	Low	0.7	25	0	0	0	0	70	5	0
9	907	1	7	11.9	180	Overcast	Medium	Medium	0.2	85	0	5	0	5	0	5	0
9	907	2	18	11.7	170	Mostly cloudy	Medium	Medium	0.6	40	0	0	0	0	0	0	60
9	907	3	18	9.6	240	Clear	Medium	Medium	0.3	95	0	0	0	0	5	0	0
9	907	4	10	12.3	220	Partly cloudy	Medium	Low	0.6	50	0	0	0	0	50	0	0
9	907	5	15	9.0	220	Clear	Medium	Medium	0.2	30	0	0	0	0	30	0	40
9	907	6	10	9.8	200	Clear	High	Low	0.7	50	0	0	0	0	50	0	0
9	906	1	19	13.0	170	Partly cloudy	Medium	High	0.2	50	0	40	0	0	0	10	0
9	906	2	18	14.3	200	Clear	Medium	Low	0.5	30	0	0	0	0	70	0	0
9	906	3	15	9.8	240	Clear	Medium	Low	0.3	80	0	0	0	0	20	0	0
9	906	4	10	10.3	220	Overcast	Medium	Low	0.6	25	0	0	0	0	75	0	0
9	906	5	12	8.6	220	Clear	Low	Low	0.2	35	0	0	0	0	0	25	40
9	906	6	9	9.8	220	Clear	High	Low	0.7	10	0	0	0	0	80	10	0
9	905	1	18	12.4	170	Partly cloudy	Medium	High	0.2	40	0	10	0	0	0	50	0
9	905	2	17	13.9	200	Clear	Medium	Low	0.5	30	0	0	0	0	40	30	0
9	905	3	15	10.4	240	Clear	Medium	Medium	0.3	90	0	0	0	0	0	10	0
9	905	4	12	10.0	220	Overcast	Medium	Medium	0.6	65	0	5	0	0	25	5	0
9	905	6	5	9.6	220	Partly cloudy	High	Low	0.8	60	0	0	0	0	10	30	0
9	904	1	14	12.4	170		Medium	High	0.2	50	0	40	0	0	0	10	0
9	904	2	12	14.3	200	Clear	Medium	Low	0.5	40	0	0	0	0	50	10	0
9	904	3	10	9.3	240	Clear	Medium	Medium	0.3	65	0	5	0	0	30	0	0
9	904	4	8	10.0	220	Overcast	Medium	Medium	0.6	50	0	0	0	0	50	0	0
9	904	5	11	8.6	220	Clear	Medium	Medium	0.2	45	0	0	0	0	25	0	30
9	904	6	2	9.7	220	Clear	High	Low	0.8	45	0	0	0	0	45	10	0

[a] See Appendix A, Figures A1 to A6 for sample site locations.
[b] Clear = <10%; Partly Cloudy = 10-50%; Mostly Cloudy = 50-90%; Overcast = >90%.
[c] High = >1.0 m/s; Medium = 0.5-1.0 m/s; Low = <0.5 m/s.
[d] High = >3.0 m; Medium = 1.0-3.0 m; Low = <1.0 m.

Continued...

Table D1 Concluded.

Section	Site[a]	Session	Air Temperature (°C)	Water Temperature (°C)	Conductivity (µS /cm)	Cloud Cover[b]	Water Clarity[d]	Instream Velocity[c]	Secchi Bar Depth (m)	Cover Types (%)							
										Substrate Interstices	Woody Debris	Turbulence	Aquatic Vegetation	Terrestrial Vegetation	Shallow Water	Deep Water	Other Cover
9	903	1	14	12.4	170	Partly cloudy	Medium	High	0.2	80	0	20	0	0	0	0	0
9	903	2	12	13.5	200	Clear	Medium	Low	0.5	50	0	0	0	0	50	0	0
9	903	3	8	9.1	240	Clear	Medium	Medium	0.3	70	0	5	0	0	25	0	0
9	903	4	8	9.7	220	Overcast	Medium	Medium	0.6	45	0	0	0	0	50	5	0
9	903	5	10	8.7	220	Clear	Medium	Low	0.2	70	0	0	0	0	10	0	20
9	903	6	1		220	Clear	High	Low	0.8	30	0	0	0	0	60	10	0
9	902	1	15	12.2	170	Partly cloudy	Medium	High	0.2	50	0	25	0	0	0	25	0
9	902	2	12	13.8	200	Clear	High	Low	0.5	60	0	0	0	0	30	10	0
9	902	3	2	8.8	240	Clear	Medium	Medium	0.3	75	0	0	0	0	0	25	0
9	902	4	8	9.7	220	Overcast	Medium	Medium	0.6	50	0	0	0	0	5	15	30
9	902	5	8	8.5	230	Clear	Medium	Medium	0.2	50	0	0	0	0	0	20	30
9	902	6	1	9.7	220	Clear	High	Medium	0.8	45	0	0	0	0	5	50	0
9	901	1	15	12.2	170	Partly cloudy	Medium	High	0.2	80	0	15	0	0	0	5	0
9	901	2	11	13.1	200	Clear	High	Low	0.5	20	0	0	0	0	70	10	0
9	901	3	0	8.8	240	Clear	Medium	Low	0.3	75	0	0	0	0	25	0	0
9	901	4	8	9.8	220	Overcast	Medium	Low	0.6	33	0	0	0	0	33	33	1
9	901	5	8	8.4	230	Clear	Medium	Medium	0.2	50	0	0	0	0	0	0	50
9	901	6	0	9.6	220	Clear	High	Low	0.8	30	0	0	0	0	60	10	0

[a] See Appendix A, Figures A1 to A6 for sample site locations.
[b] Clear = <10%; Partly Cloudy = 10-50%; Mostly Cloudy = 50-90%; Overcast = >90%.
[c] High = >1.0 m/s; Medium = 0.5-1.0 m/s; Low = <0.5 m/s.
[d] High = >3.0 m; Medium = 1.0-3.0 m; Low = <1.0 m.

APPENDIX E

Catch and Effort Data

Table E1 Number of fish caught during boat electroshocking surveys and their frequency of occurrence in Sections 1, 3, and 5 of the Peace River, 2002 to 2020.

	2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020	
Species	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]	n^a	%[b]
Large-bodied																																						
Arctic Grayling	13	*<1*	54	*1*	271	*2*	280	*2*	93	*1*	344	*3*	202	*2*	116	*1*	59	*1*	135	*1*	43	*<1*	27	*<1*	10	*<1*	48	*<1*	85	*1*	80	*1*	49	*<1*	52	*<1*	27	*<1*
Bull Trout	105	*2*	91	*1*	122	*1*	175	*1*	76	*1*	156	*1*	170	*1*	144	*1*	97	*1*	206	*1*	186	*1*	180	*2*	143	*2*	169	*2*	205	*2*	180	*2*	167	*2*	152	*1*	155	*2*
Burbot					5	*<1*	2	*<1*	5	*<1*	4	*<1*			2	*<1*	2	*<1*	1	*<1*	3	*<1*	1	*<1*	1	*<1*			3	*<1*	2	*<1*	4	*<1*	10	*<1*	6	*<1*
Kokanee	24	*<1*	5	*<1*	18	*<1*	43	*<1*	16	*<1*	154	*1*	49	*<1*	28	*<1*	25	*<1*	73	*1*	99	*1*	27	*<1*	20	*<1*	20	*<1*	21	*<1*	51	*1*	11	*<1*	16	*<1*	40	*<1*
Lake Trout					1	*<1*	1	*<1*			2	*<1*			3	*<1*	1	*<1*	2	*<1*	4	*<1*	5	*<1*	2	*<1*	3	*<1*	1	*<1*	1	*<1*			3	*<1*	1	*<1*
Lake Whitefish	2	*<1*	2	*<1*	13	*<1*			1	*<1*	4	*<1*	1	*<1*	3	*<1*			7	*<1*	3	*<1*					1	*<1*	3	*<1*			1	*<1*	1	*<1*		
Mountain Whitefish	5496	*88*	5686	*89*	10 418	*88*	10 658	*86*	6365	*93*	10 436	*86*	11 565	*87*	10 005	*89*	10 632	*93*	13 174	*91*	10 825	*86*	8429	*86*	7274	*85*	6729	*67*	7104	*70*	5968	*65*	7825	*77*	8254	*76*	7109	*73*
Northern Pike					1	*<1*	4	*<1*	1	*<1*	7	*<1*	8	*<1*	8	*<1*	4	*<1*	11	*<1*	7	*<1*	5	*<1*	4	*<1*			4	*<1*	11	*<1*	18	*<1*	5	*<1*	10	*<1*
Northern Pikeminnow	20	*<1*	25	*<1*	57	*<1*	34	*<1*	6	*<1*	24	*<1*	28	*<1*	16	*<1*	13	*<1*	21	*<1*	41	*<1*	37	*<1*	39	*<1*	102	*1*	122	*1*	78	*1*	48	*<1*	109	*1*	98	*1*
Rainbow Trout	50	*1*	63	*1*	107	*1*	94	*1*	39	*1*	102	*1*	169	*1*	165	*1*	131	*1*	171	*1*	139	*1*	67	*1*	106	*1*	105	*1*	176	*2*	115	*1*	140	*1*	151	*1*	125	*1*
Sucker spp.[c]	533	*9*	435	*7*	879	*7*	1088	*9*	238	*3*	835	*7*	1103	*8*	787	*7*	500	*4*	683	*5*	1117	*9*	1011	*10*	963	*11*	2822	*28*	2454	*24*	2571	*28*	1821	*18*	2088	*19*	2104	*22*
Walleye	3	*<1*			6	*<1*	5	*<1*			17	*<1*	58	*<1*	17	*<1*	3	*<1*	49	*<1*	48	*<1*	43	*<1*	19	*<1*	12	*<1*	33	*<1*	60	*1*	54	*1*	35	*<1*	50	*1*
Large-bodied subtotal	6246	*100*	6361	*100*	11 898	*100*	12 384	*100*	6840	*100*	12 085	*100*	13 353	*100*	11 294	*100*	11 467	*100*	14 533	*100*	12 515	*98*	9832	*100*	8581	*100*	10 011	*100*	10 211	*100*	9117	*100*	10 138	*100*	10 876	*98*	9725	*100*
Small-bodied																																						
Flathead Chub																			1	*100*											1	*1*	3	*2*	3	*2*	3	*2*
Lake Chub																									4	*5*	1	*1*	2	*1*	3	*3*	5	*4*	26	*14*	2	*2*
Longnose Dace																									2	*2*	3	*4*	7	*5*	8	*7*			6	*3*	4	*3*
Peamouth	3	*43*																			1	*100*	1	*100*							4	*4*						
Redside Shiner	2	*29*																							1	*1*	15	*20*	71	*51*	49	*44*	44	*35*	75	*41*	64	*52*
Sculpin spp.[c]	2	*29*																							78	*92*	44	*58*	53	*38*	42	*38*	58	*46*	60	*33*	46	*38*
Spottail Shiner																											5	*7*	4	*3*	2	*2*	2	*2*	3	*2*	2	*2*
Troutperch																																	12	*10*	8	*4*		
Yellow Perch											1	*100*															8	*11*	2	*1*	2	*2*	2	*2*	1	*1*	1	*1*
Small-bodied subtotal	7	*100*									1	*100*							1	*100*	1	*100*	1	*100*	85	*100*	76	*100*	139	*100*	111	*100*	126	*100*	182	*100*	122	*100*
All species	6253		6361		11 898		12 384		6840		12 086		13 353		11 294		11 467		14 534		12 516		9833		8666		10 087		10 350		9228		10 264		11 058		9847	

[a] Includes fish captured and identified to species; does not include fish recaptured within the year.
[b] Percent composition of large-bodied or small-bodied catch.
[c] Species combined for table or not identified to species.

Table E2 Number of fish caught during boat electroshocking surveys and their frequency of occurrence in Sections 6, 7, and 9 of the Peace River, 2015 to 2020.

	2015		2016		2017		2018		2019		2020	
Species	*n*[a]	%[b]	*n*[a]	%[b]	*n*[a]	%[b]	*n*[a]	%[b]	*n*[a]	%[b]	*n*[a]	%[b]
Large-bodied												
Arctic Grayling	7	*<1*	26	*<1*	7	*<1*	6	*<1*	49	*1*	10	*<1*
Bull Trout	88	*1*	90	*1*	57	*1*	47	*1*	48	*1*	32	*1*
Burbot	2	*<1*	34	*1*	4	*<1*	9	*<1*	37	*1*	10	*<1*
Goldeye	1	*<1*	7	*<1*	3	*<1*			14	*<1*	4	*<1*
Kokanee	1	*<1*	2	*<1*	5	*<1*			1	*<1*	8	*<1*
Lake Trout	1	*<1*					1	*<1*				
Lake Whitefish							2	*<1*				
Mountain Whitefish	3250	*42*	2679	*44*	2141	*35*	3419	*53*	2764	*47*	1558	*35*
Northern Pike	12	*<1*	12	*<1*	26	*<1*	16	*<1*	20	*<1*	11	*<1*
Northern Pikeminnow	151	*2*	88	*1*	117	*2*	75	*1*	74	*1*	80	*2*
Rainbow Trout	24	*<1*	10	*<1*	7	*<1*	6	*<1*	6	*<1*	4	*<1*
Sucker spp.[c]	4073	*53*	2988	*49*	3412	*56*	2607	*40*	2585	*44*	2604	*58*
Walleye	102	*1*	194	*3*	306	*5*	283	*4*	240	*4*	175	*4*
Large-bodied subtotal	7712	*100*	6130	*100*	6085	*100*	6471	*100*	5838	*100*	4496	*100*
Small-bodied												
Finescale Dace	1	*<1*										
Flathead Chub	3	*1*	18	*8*	34	*11*	8	*11*	46	*14*	77	*34*
Lake Chub	40	*19*	26	*12*	62	*20*	18	*25*	124	*39*	31	*14*
Longnose Dace	9	*4*	9	*4*	35	*11*	5	*7*	12	*4*	32	*14*
Peamouth					1	*<1*					2	*1*
Redside Shiner	137	*64*	95	*43*	133	*43*	10	*14*	58	*18*	52	*23*
Sculpin spp.[c]	6	*3*	55	*25*	9	*3*	6	*8*	23	*7*	13	*6*
Spottail Shiner	10	*5*	9	*4*	8	*3*	3	*4*	11	*3*	4	*2*
Troutperch	5	*2*	9	*4*	26	*8*	21	*30*	35	*11*	15	*7*
Yellow Perch	3	*1*			2	*1*			11	*3*	2	*1*
Small-bodied subtotal	214	*100*	221	*100*	310	*100*	71	*100*	320	*100*	228	*100*
All species	7926		6351		6395		6542		6158		4724	

[a] Includes fish captured and identified to species; does not include fish recaptured within the year.
[b] Percent composition of large-bodied or small-bodied catch.
[c] Species combined for table or not identified to species.

Table E3 Summary of boat electroshocking large-bodied catch (only includes fish captured and identified to species) and catch-per-unit-effort (CPUE = no. fish/km/hour) in the Peace River, 21 August to 07 October 2020.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h) Arctic Grayling		Bull Trout		Burbot		Goldeye		Kokanee		Lake Trout		Mountain Whitefish		Northern Pike		Northern Pikeminnow		Rainbow Trout		Sucker spp.		Walleye		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 1	1	0101	22-Aug-20	240	0.60	0	0	0	0	0	0	0	0	0	0	0	0	26	650	0	0	0	0	0	0	0	0	0	0	26	650
		0102	22-Aug-20	286	0.98	0	0	0	0	0	0	0	0	0	0	0	0	52	671.33	0	0	0	0	0	0	0	0	0	0	52	671.33
		0103	22-Aug-20	553	1.20	0	0	1	5.42	0	0	0	0	1	5.42	0	0	8	43.4	0	0	0	0	0	0	0	0	0	0	10	54.25
		0104	22-Aug-20	318	0.50	0	0	0	0	0	0	0	0	1	22.64	0	0	23	520.75	0	0	0	0	2	45.28	1	22.64	0	0	27	611.32
		0105	22-Aug-20	326	1.10	0	0	0	0	0	0	0	0	0	0	0	0	2	20.08	0	0	0	0	0	0	0	0	0	0	2	20.08
		0107	21-Aug-20	355	0.55	0	0	1	18.44	0	0	0	0	1	18.44	0	0	12	221.25	0	0	0	0	2	36.88	0	0	0	0	16	295.01
		0108	21-Aug-20	458	0.85	0	0	1	9.25	0	0	0	0	0	0	0	0	18	166.45	0	0	1	9.25	0	0	3	27.74	0	0	23	212.69
		0109	21-Aug-20	448	0.98	0	0	1	8.24	0	0	0	0	0	0	0	0	19	156.59	0	0	0	0	0	0	0	0	0	0	20	164.84
		0110	21-Aug-20	634	0.65	0	0	0	0	0	0	0	0	2	17.47	0	0	26	227.13	0	0	0	0	1	8.74	0	0	0	0	29	253.34
		0111	21-Aug-20	621	1.00	0	0	0	0	0	0	0	0	0	0	0	0	12	69.57	0	0	0	0	0	0	0	0	0	0	12	69.57
		0112	21-Aug-20	519	1.07	0	0	0	0	0	0	0	0	0	0	0	0	28	181.51	0	0	0	0	0	0	0	0	0	0	28	181.51
		0113	21-Aug-20	319	0.75	0	0	0	0	0	0	0	0	1	15.05	0	0	11	165.52	0	0	0	0	0	0	1	15.05	0	0	13	195.61
		0114	21-Aug-20	522	0.95	0	0	0	0	0	0	0	0	0	0	0	0	13	94.37	0	0	0	0	3	21.78	0	0	0	0	16	116.15
		0116	21-Aug-20	432	0.98	0	0	0	0	0	0	0	0	0	0	0	0	14	118.44	0	0	0	0	1	8.46	1	8.46	0	0	16	135.36
		0119	22-Aug-20	306	0.84	0	0	0	0	0	0	0	0	0	0	0	0	18	253.61	0	0	0	0	2	28.18	0	0	0	0	20	281.79
	Session Summary			422.5	13.00	0	0	4	2.62	0	0	0	0	6	3.93	0	0	282	184.83	0	0	1	0.66	11	7.21	6	3.93	0	0	310	203.19
Section 1	2	0101	29-Aug-20	223	0.60	0	0	0	0	0	0	0	0	0	0	0	0	45	1210.76	0	0	0	0	0	0	0	0	0	0	45	1210.76
		0102	29-Aug-20	296	0.98	0	0	0	0	0	0	0	0	0	0	0	0	20	249.48	0	0	0	0	0	0	0	0	0	0	20	249.48
		0103	29-Aug-20	620	1.20	0	0	1	4.84	0	0	0	0	2	9.68	0	0	35	169.35	0	0	0	0	1	4.84	0	0	0	0	39	188.71
		0104	29-Aug-20	299	0.50	0	0	0	0	0	0	0	0	0	0	0	0	20	481.61	0	0	0	0	0	0	10	240.8	0	0	30	722.41
		0105	29-Aug-20	399	1.10	0	0	1	8.2	0	0	0	0	0	0	0	0	9	73.82	0	0	0	0	0	0	0	0	0	0	10	82.02
		0107	01-Sep-20	335	0.55	0	0	0	0	0	0	0	0	1	19.54	0	0	4	78.15	0	0	0	0	0	0	1	19.54	0	0	6	117.23
		0108	29-Aug-20	492	0.85	0	0	0	0	0	0	0	0	2	17.22	0	0	27	232.42	0	0	0	0	0	0	4	34.43	0	0	33	284.07
		0109	29-Aug-20	460	0.98	0	0	1	8.03	0	0	0	0	3	24.08	0	0	24	192.64	0	0	0	0	4	32.11	2	16.05	0	0	34	272.91
		0110	01-Sep-20	480	0.65	0	0	0	0	0	0	0	0	1	11.54	0	0	3	34.62	0	0	0	0	1	11.54	2	23.08	0	0	7	80.77
		0111	01-Sep-20	565	1.00	0	0	0	0	0	0	0	0	0	0	0	0	11	70.09	0	0	0	0	0	0	0	0	0	0	11	70.09
		0112	01-Sep-20	535	1.07	0	0	0	0	0	0	0	0	2	12.58	0	0	2	12.58	0	0	0	0	1	6.29	1	6.29	0	0	6	37.73
		0113	01-Sep-20	400	0.75	0	0	0	0	0	0	0	0	0	0	0	0	10	120	0	0	0	0	0	0	0	0	0	0	10	120
		0114	01-Sep-20	505	0.95	0	0	0	0	0	0	0	0	0	0	0	0	7	52.53	0	0	0	0	0	0	0	0	0	0	7	52.53
		0116	01-Sep-20	491	0.98	0	0	1	7.44	0	0	0	0	0	0	0	0	11	81.88	0	0	2	14.89	0	0	8	59.55	0	0	22	163.76
		0119	29-Aug-20	395	0.75	0	0	0	0	0	0	0	0	1	12.15	0	0	15	182.28	0	0	0	0	1	12.15	0	0	0	0	17	206.58
	Session Summary			433	13.00	0	0	4	2.56	0	0	0	0	12	7.67	0	0	243	155.41	0	0	2	1.28	8	5.12	28	17.91	0	0	297	189.94
Section 1	3	0101	10-Sep-20	249	0.60	0	0	0	0	0	0	0	0	0	0	0	0	45	1084.34	0	0	0	0	0	0	0	0	0	0	45	1084.34
		0102	10-Sep-20	319	0.98	0	0	0	0	0	0	0	0	0	0	0	0	59	682.9	0	0	0	0	0	0	0	0	0	0	59	682.9
		0103	09-Sep-20	711	1.20	0	0	1	4.22	0	0	0	0	1	4.22	0	0	54	227.85	0	0	0	0	1	4.22	1	4.22	0	0	58	244.73
		0104	10-Sep-20	400	0.40	0	0	0	0	0	0	0	0	0	0	0	0	30	675	0	0	1	22.5	1	22.5	5	112.5	0	0	37	832.5
		0105	09-Sep-20	472	0.98	0	0	2	15.57	0	0	0	0	0	0	0	0	22	171.22	0	0	0	0	4	31.13	0	0	0	0	28	217.92
		0107	10-Sep-20	475	0.55	0	0	0	0	0	0	0	0	1	13.78	0	0	11	151.58	0	0	0	0	0	0	0	0	0	0	12	165.36
		0108	11-Sep-20	708	0.85	0	0	0	0	0	0	0	0	0	0	0	0	10	59.82	0	0	1	5.98	0	0	5	29.91	0	0	16	95.71
		0109	11-Sep-20	545	0.98	0	0	0	0	0	0	0	0	0	0	0	0	37	250.67	0	0	0	0	0	0	1	6.77	0	0	38	257.45
		0110	10-Sep-20	515	0.65	0	0	0	0	0	0	0	0	1	10.75	0	0	43	462.43	0	0	0	0	0	0	0	0	0	0	44	473.19
		0111	11-Sep-20	606	1.00	0	0	0	0	0	0	0	0	0	0	0	0	59	350.5	0	0	0	0	3	17.82	0	0	0	0	62	368.32
		0112	11-Sep-20	543	1.01	0	0	0	0	0	0	0	0	0	0	0	0	111	728.63	0	0	0	0	0	0	5	32.82	0	0	116	761.45
		0113	11-Sep-20	398	0.75	0	0	1	12.06	0	0	0	0	0	0	0	0	30	361.81	0	0	0	0	0	0	3	36.18	0	0	34	410.05
		0114	11-Sep-20	512	0.95	0	0	0	0	0	0	0	0	0	0	0	0	97	717.93	0	0	0	0	1	7.4	1	7.4	0	0	99	732.73
		0116	11-Sep-20	536	0.98	0	0	1	6.82	0	0	0	0	0	0	0	0	67	456.85	0	0	0	0	0	0	4	27.27	0	0	72	490.95
		0119	10-Sep-20	505	0.75	0	0	3	28.51	0	0	0	0	0	0	0	0	25	237.62	0	0	0	0	1	9.5	0	0	0	0	29	275.64
	Session Summary			499.6	13.00	0	0	8	4.43	0	0	0	0	3	1.66	0	0	700	388	0	0	2	1.11	11	6.1	25	13.86	0	0	749	415.16

Table E3 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h)																									
						Arctic Grayling		Bull Trout		Burbot		Goldeye		Kokanee		Lake Trout		Mountain Whitefish		Northern Pike		Northern Pikeminnow		Rainbow Trout		Sucker spp.		Walleye		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 1	4	0101	18-Sep-20	303	0.60	0	0	0	0	0	0	0	0	0	0	1	19.8	142	2811.88	0	0	0	0	0	0	0	0	0	0	143	2831.68
		0102	18-Sep-20	355	0.98	0	0	0	0	0	0	0	0	0	0	0	0	118	1227.3	0	0	0	0	0	0	0	0	0	0	118	1227.3
		0103	18-Sep-20	785	1.20	0	0	1	3.82	0	0	0	0	0	0	0	0	60	229.3	0	0	0	0	2	7.64	16	61.15	1	3.82	80	305.73
		0104	18-Sep-20	426	0.50	0	0	2	33.8	0	0	0	0	2	33.8	0	0	57	963.38	1	16.9	0	0	0	0	8	135.21	0	0	70	1183.1
		0105	18-Sep-20	535	1.10	0	0	1	6.12	0	0	0	0	1	6.12	0	0	49	299.75	0	0	1	6.12	2	12.23	8	48.94	0	0	62	379.27
		0107	19-Sep-20	450	0.55	0	0	0	0	0	0	0	0	1	14.55	0	0	20	290.91	0	0	0	0	1	14.55	6	87.27	0	0	28	407.27
		0108	20-Sep-20	679	0.85	0	0	0	0	0	0	0	0	0	0	0	0	6	37.43	0	0	0	0	0	0	1	6.24	0	0	7	43.66
		0109	20-Sep-20	624	0.98	0	0	0	0	0	0	0	0	0	0	0	0	102	603.55	0	0	0	0	1	5.92	9	53.25	0	0	112	662.72
		0110	19-Sep-20	502	0.65	0	0	0	0	0	0	0	0	2	22.07	0	0	85	937.79	0	0	0	0	0	0	0	0	0	0	87	959.85
		0111	19-Sep-20	694	1.00	0	0	0	0	0	0	0	0	0	0	0	0	71	368.3	0	0	0	0	4	20.75	12	62.25	0	0	87	451.3
		0112	19-Sep-20	703	1.07	0	0	1	4.79	0	0	0	0	0	0	0	0	112	536.02	0	0	0	0	3	14.36	3	14.36	0	0	119	569.52
		0113	20-Sep-20	421	0.75	0	0	1	11.4	0	0	0	0	0	0	0	0	28	319.24	0	0	0	0	0	0	10	114.01	0	0	39	444.66
		0114	22-Sep-20	483	0.95	0	0	2	15.69	0	0	0	0	0	0	0	0	73	572.74	0	0	0	0	0	0	2	15.69	0	0	77	604.12
		0116	22-Sep-20	581	0.98	0	0	2	12.58	0	0	0	0	0	0	0	0	42	264.2	0	0	1	6.29	0	0	8	50.32	1	6.29	54	339.69
		0119	19-Sep-20	547	0.75	0	0	0	0	0	0	0	0	0	0	0	0	28	245.7	0	0	0	0	2	17.55	1	8.78	0	0	31	272.03
	Session Summary			539.2	13.00	0	0	10	5.14	0	0	0	0	6	3.08	1	0.51	993	509.99	1	0.51	2	1.03	15	7.7	84	43.14	2	1.03	1114	572.13
Section 1	5	0101	26-Sep-20	272	0.60	0	0	0	0	0	0	0	0	0	0	0	0	79	1742.65	0	0	0	0	0	0	1	22.06	0	0	80	1764.71
		0102	26-Sep-20	364	0.98	0	0	0	0	0	0	0	0	0	0	0	0	104	1054.95	0	0	0	0	0	0	0	0	0	0	104	1054.95
		0103	26-Sep-20	904	1.20	0	0	1	3.32	0	0	0	0	0	0	0	0	71	235.62	0	0	0	0	4	13.27	0	0	0	0	76	252.21
		0104	26-Sep-20	393	0.50	0	0	0	0	0	0	0	0	1	18.32	0	0	12	219.85	0	0	0	0	1	18.32	3	54.96	0	0	17	311.45
		0105	26-Sep-20	550	1.10	0	0	0	0	0	0	0	0	0	0	0	0	20	119.01	0	0	0	0	0	0	3	17.85	0	0	23	136.86
		0107	26-Sep-20	512	0.55	0	0	1	12.78	0	0	0	0	0	0	0	0	21	268.47	0	0	0	0	0	0	0	0	0	0	22	281.25
		0108	27-Sep-20	711	0.85	0	0	0	0	0	0	0	0	0	0	0	0	2	11.91	0	0	1	5.96	1	5.96	17	101.27	0	0	21	125.09
		0109	27-Sep-20	663	0.98	0	0	0	0	0	0	0	0	0	0	0	0	29	161.5	0	0	0	0	0	0	1	5.57	0	0	30	167.07
		0110	26-Sep-20	628	0.65	0	0	0	0	0	0	0	0	0	0	0	0	55	485.06	0	0	0	0	1	8.82	4	35.28	0	0	60	529.15
		0111	27-Sep-20	830	1.00	0	0	0	0	0	0	0	0	0	0	0	0	71	307.95	0	0	0	0	0	0	2	8.67	0	0	73	316.63
		0112	27-Sep-20	845	1.07	0	0	2	7.96	0	0	0	0	0	0	0	0	95	378.26	0	0	0	0	5	19.91	1	3.98	0	0	103	410.11
		0113	27-Sep-20	381	0.75	0	0	0	0	0	0	0	0	0	0	0	0	16	201.57	0	0	0	0	0	0	1	12.6	0	0	17	214.17
		0114	27-Sep-20	598	0.95	0	0	1	6.34	0	0	0	0	0	0	0	0	56	354.87	0	0	0	0	0	0	0	0	0	0	57	361.2
		0116	27-Sep-20	562	0.98	0	0	0	0	0	0	0	0	0	0	0	0	17	110.56	0	0	0	0	0	0	2	13.01	0	0	19	123.56
		0119	26-Sep-20	535	0.63	0	0	0	0	0	0	0	0	0	0	0	0	23	245.66	0	0	0	0	1	10.68	0	0	0	0	24	256.34
	Session Summary			583.2	13.00	0	0	5	2.37	0	0	0	0	1	0.47	0	0	671	318.61	0	0	1	0.47	13	6.17	35	16.62	0	0	726	344.73
Section 1	6	0101	04-Oct-20	258	0.60	0	0	0	0	0	0	0	0	0	0	0	0	50	1162.79	0	0	0	0	0	0	0	0	0	0	50	1162.79
		0102	03-Oct-20	420	0.98	0	0	0	0	0	0	0	0	0	0	0	0	57	501.1	0	0	0	0	0	0	0	0	0	0	57	501.1
		0103	03-Oct-20	961	1.20	1	3.12	2	6.24	0	0	0	0	0	0	0	0	69	215.4	0	0	0	0	2	6.24	3	9.37	0	0	77	240.37
		0104	03-Oct-20	432	0.50	0	0	1	16.67	0	0	0	0	0	0	0	0	38	633.33	0	0	0	0	0	0	2	33.33	0	0	41	683.33
		0105	04-Oct-20	541	1.10	0	0	2	12.1	0	0	0	0	0	0	0	0	37	223.83	0	0	0	0	1	6.05	6	36.3	0	0	46	278.27
		0107	03-Oct-20	672	0.55	0	0	0	0	0	0	0	0	1	9.74	0	0	7	68.18	0	0	0	0	0	0	2	19.48	0	0	10	97.4
		0108	03-Oct-20	819	0.85	0	0	0	0	0	0	0	0	1	5.17	0	0	2	10.34	0	0	0	0	0	0	0	0	0	0	3	15.51
		0109	03-Oct-20	739	0.98	0	0	0	0	0	0	0	0	0	0	0	0	34	169.88	0	0	3	14.99	0	0	27	134.9	0	0	64	319.77
		0110	03-Oct-20	755	0.65	0	0	0	0	0	0	0	0	0	0	0	0	22	161.39	0	0	0	0	0	0	3	22.01	0	0	25	183.39
		0111	03-Oct-20	651	0.45	0	0	0	0	1	12.29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	24.58	0	0	3	36.87
		0112	03-Oct-20	770	1.07	0	0	1	4.37	0	0	0	0	0	0	0	0	116	506.86	0	0	0	0	3	13.11	8	34.96	0	0	128	559.29
		0113	03-Oct-20	462	0.75	0	0	2	20.78	0	0	0	0	0	0	0	0	37	384.42	0	0	0	0	1	10.39	0	0	0	0	40	415.58
		0114	03-Oct-20	666	0.95	0	0	3	17.07	0	0	0	0	0	0	0	0	73	415.36	0	0	0	0	3	17.07	6	34.14	0	0	85	483.64
		0116	03-Oct-20	514	0.98	0	0	1	7.11	0	0	0	0	0	0	0	0	8	56.88	0	0	0	0	0	0	0	0	0	0	9	63.99
		0119	03-Oct-20	832	0.75	0	0	2	11.54	0	0	0	0	0	0	0	0	37	213.46	0	0	0	0	1	5.77	1	5.77	0	0	41	236.54
	Session Summary			632.8	12.00	1	0.47	14	6.64	1	0.47	0	0	2	0.95	0	0	587	278.29	0	0	3	1.42	11	5.21	60	28.45	0	0	679	321.9
Section Total All Samples				46654	76.56	1	0	45	0	1	0	0	0	30	0	1	0	3476	0	1	0	11	0	69	0	238	0	2	0	3875	0
Section Average All Samples				518	0.85	0	0.09	0	4.08	0	0.09	0	0	0	2.72	0	0.09	39	315.52	0	0.09	0	1	1	6.26	3	21.6	0	0.18	43	351.73
Section Standard Error of Mean						0.01	0.03	0.08	0.71	0.01	0.14	0	0	0.07	0.77	0.01	0.22	3.41	43.93	0.01	0.19	0.05	0.37	0.13	1.01	0.46	4.06	0.02	0.08	3.52	44.2

Table E3 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h)																									
						Arctic Grayling		Bull Trout		Burbot		Goldeye		Kokanee		Lake Trout		Mountain Whitefish		Northern Pike		Northern Pikeminnow		Rainbow Trout		Sucker spp.		Walleye		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 3	1	0301	25-Aug-20	781	1.80	0	0	0	0	0	0	0	0	0	0	0	0	8	20.49	0	0	0	0	0	0	0	0	0	0	8	20.49
		0302	23-Aug-20	788	1.90	0	0	0	0	0	0	0	0	0	0	0	0	10	24.04	0	0	0	0	0	0	7	16.83	0	0	17	40.88
		0303	23-Aug-20	651	1.45	0	0	0	0	1	3.81	0	0	0	0	0	0	23	87.72	0	0	0	0	0	0	3	11.44	0	0	27	102.97
		0304	25-Aug-20	581	1.35	0	0	0	0	0	0	0	0	0	0	0	0	3	13.77	0	0	0	0	0	0	4	18.36	0	0	7	32.13
		0305	23-Aug-20	743	1.55	0	0	0	0	0	0	0	0	0	0	0	0	1	3.13	0	0	2	6.25	0	0	7	21.88	0	0	10	31.26
		0306	23-Aug-20	582	1.00	0	0	0	0	0	0	0	0	0	0	0	0	5	30.93	0	0	0	0	0	0	9	55.67	0	0	14	86.6
		0307	25-Aug-20	487	0.95	0	0	0	0	0	0	0	0	0	0	0	0	12	93.38	0	0	0	0	0	0	13	101.16	0	0	25	194.53
		0308	25-Aug-20	685	1.35	0	0	0	0	0	0	0	0	0	0	0	0	10	38.93	0	0	1	3.89	0	0	13	50.61	0	0	24	93.43
		0309	26-Aug-20	518	0.95	0	0	0	0	0	0	0	0	0	0	0	0	12	87.79	0	0	0	0	0	0	13	95.1	0	0	25	182.89
		0310	26-Aug-20	594	1.20	0	0	0	0	0	0	0	0	1	5.05	0	0	17	85.86	0	0	0	0	0	0	0	0	0	0	18	90.91
		0311	26-Aug-20	553	1.25	0	0	0	0	0	0	0	0	0	0	0	0	2	10.42	0	0	0	0	0	0	8	41.66	0	0	10	52.08
		0312	26-Aug-20	673	1.17	0	0	2	9.14	0	0	0	0	0	0	0	0	7	32	0	0	1	4.57	0	0	15	68.58	0	0	25	114.3
		0314	25-Aug-20	654	0.98	0	0	0	0	0	0	0	0	0	0	0	0	2	11.29	0	0	0	0	0	0	0	0	0	0	2	11.29
		0315	25-Aug-20	905	1.70	1	2.34	0	0	0	0	0	0	0	0	0	0	6	14.04	0	0	0	0	0	0	2	4.68	0	0	9	21.06
		0316	25-Aug-20	718	1.48	1	3.4	0	0	0	0	0	0	0	0	0	0	20	67.99	0	0	0	0	1	3.4	0	0	0	0	22	74.78
	Session Summary			**660.9**	**20.00**	**2**	**0.54**	**2**	**0.54**	**1**	**0.27**	**0**	**0**	**1**	**0.27**	**0**	**0**	**138**	**37.59**	**0**	**0**	**4**	**1.09**	**1**	**0.27**	**94**	**25.6**	**0**	**0**	**243**	**66.18**
Section 3	2	0301	30-Aug-20	795	1.80	0	0	0	0	0	0	0	0	0	0	0	0	12	30.19	0	0	1	2.52	1	2.52	1	2.52	0	0	15	37.74
		0302	30-Aug-20	823	1.90	0	0	1	2.3	0	0	0	0	0	0	0	0	22	50.65	0	0	1	2.3	0	0	0	0	1	2.3	25	57.56
		0303	30-Aug-20	725	1.45	0	0	1	3.42	0	0	0	0	0	0	0	0	14	47.94	0	0	0	0	0	0	2	6.85	0	0	17	58.22
		0304	30-Aug-20	722	1.35	0	0	0	0	0	0	0	0	0	0	0	0	14	51.71	0	0	0	0	0	0	13	48.01	0	0	27	99.72
		0305	30-Aug-20	725	1.55	0	0	0	0	0	0	0	0	0	0	0	0	8	25.63	0	0	2	6.41	0	0	20	64.07	0	0	30	96.11
		0306	30-Aug-20	564	1.00	0	0	1	6.38	0	0	0	0	1	6.38	0	0	7	44.68	0	0	3	19.15	0	0	28	178.72	0	0	40	255.32
		0307	31-Aug-20	563	0.95	0	0	1	6.73	0	0	0	0	1	6.73	0	0	16	107.69	0	0	0	0	0	0	7	47.12	0	0	25	168.27
		0308	31-Aug-20	707	1.35	0	0	0	0	0	0	0	0	0	0	0	0	21	79.21	0	0	0	0	0	0	3	11.32	0	0	24	90.52
		0309	31-Aug-20	496	0.95	0	0	1	7.64	0	0	0	0	0	0	0	0	3	22.92	0	0	0	0	0	0	3	22.92	0	0	7	53.48
		0310	31-Aug-20	591	1.20	0	0	0	0	0	0	0	0	0	0	0	0	3	15.23	0	0	0	0	0	0	0	0	0	0	3	15.23
		0311	31-Aug-20	634	1.25	0	0	3	13.63	0	0	0	0	0	0	0	0	10	45.43	0	0	0	0	0	0	2	9.09	0	0	15	68.14
		0312	31-Aug-20	726	1.17	0	0	1	4.24	0	0	0	0	0	0	0	0	3	12.71	0	0	2	8.48	0	0	6	25.43	0	0	12	50.86
		0314	31-Aug-20	564	0.98	0	0	1	6.55	0	0	0	0	0	0	0	0	6	39.28	0	0	1	6.55	0	0	0	0	0	0	8	52.37
		0315	31-Aug-20	1095	1.70	0	0	0	0	0	0	0	0	0	0	0	0	25	48.35	0	0	0	0	1	1.93	6	11.6	0	0	32	61.89
		0316	31-Aug-20	922	1.48	2	5.29	0	0	0	0	0	0	0	0	0	0	34	90	0	0	1	2.65	1	2.65	1	2.65	0	0	39	103.24
	Session Summary			**710.1**	**20.00**	**2**	**0.51**	**10**	**2.53**	**0**	**0**	**0**	**0**	**2**	**0.51**	**0**	**0**	**198**	**50.19**	**0**	**0**	**11**	**2.79**	**3**	**0.76**	**92**	**23.32**	**1**	**0.25**	**319**	**80.86**
Section 3	3	0301	12-Sep-20	1239	1.80	1	1.61	3	4.84	0	0	0	0	0	0	0	0	38	61.34	0	0	0	0	4	6.46	4	6.46	0	0	50	80.71
		0302	12-Sep-20	1158	1.90	1	1.64	1	1.64	0	0	0	0	1	1.64	0	0	59	96.54	0	0	1	1.64	0	0	14	22.91	0	0	77	125.99
		0303	12-Sep-20	826	1.45	0	0	0	0	0	0	0	0	1	3.01	0	0	51	153.29	0	0	2	6.01	1	3.01	33	99.19	1	3.01	89	267.51
		0304	13-Sep-20	829	1.30	0	0	1	3.34	0	0	0	0	0	0	0	0	35	116.92	0	0	0	0	0	0	6	20.04	0	0	42	140.3
		0305	13-Sep-20	978	1.55	0	0	5	11.87	0	0	0	0	0	0	0	0	83	197.11	0	0	2	4.75	0	0	28	66.5	1	2.37	119	282.6
		0306	13-Sep-20	775	1.00	0	0	1	4.65	0	0	0	0	0	0	0	0	28	130.06	0	0	1	4.65	0	0	28	130.06	0	0	58	269.42
		0307	14-Sep-20	794	0.95	1	4.77	1	4.77	0	0	0	0	0	0	0	0	142	677.71	0	0	4	19.09	1	4.77	20	95.45	0	0	169	806.58
		0308	15-Sep-20	764	1.35	0	0	0	0	0	0	0	0	0	0	0	0	96	335.08	0	0	0	0	1	3.49	10	34.9	0	0	107	373.47
		0309	15-Sep-20	587	0.95	0	0	0	0	0	0	0	0	0	0	0	0	31	200.13	0	0	0	0	0	0	7	45.19	1	6.46	39	251.77
		0310	15-Sep-20	955	1.20	0	0	3	9.42	0	0	0	0	0	0	0	0	57	179.06	0	0	0	0	1	3.14	9	28.27	0	0	70	219.9
		0311	13-Sep-20	784	1.25	0	0	3	11.02	0	0	0	0	1	3.67	0	0	30	110.2	0	0	1	3.67	0	0	22	80.82	0	0	57	209.39
		0312	15-Sep-20	906	1.17	0	0	0	0	0	0	0	0	0	0	0	0	40	135.85	0	0	1	3.4	0	0	12	40.75	1	3.4	54	183.39
		0314	14-Sep-20	581	0.98	0	0	1	6.36	0	0	0	0	0	0	0	0	20	127.1	0	0	1	6.36	0	0	4	25.42	0	0	26	165.23
		0315	14-Sep-20	1245	1.70	0	0	1	1.7	0	0	0	0	0	0	0	0	100	170.09	0	0	0	0	2	3.4	8	13.61	0	0	111	188.8
		0316	14-Sep-20	888	1.48	0	0	0	0	0	0	0	0	0	0	0	0	33	90.7	0	0	0	0	0	0	5	13.74	0	0	38	104.44
	Session Summary			**887.3**	**20.00**	**3**	**0.61**	**20**	**4.06**	**0**	**0**	**0**	**0**	**3**	**0.61**	**0**	**0**	**843**	**171.01**	**0**	**0**	**13**	**2.64**	**10**	**2.03**	**210**	**42.6**	**4**	**0.81**	**1106**	**224.37**

Table E3 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h)																									
						Arctic Grayling		Bull Trout		Burbot		Goldeye		Kokanee		Lake Trout		Mountain Whitefish		Northern Pike		Northern Pikeminnow		Rainbow Trout		Sucker spp.		Walleye		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 3	4	0301	20-Sep-20	1076	1.80	2	3.72	1	1.86	0	0	0	0	0	0	0	0	29	53.9	0	0	0	0	5	9.29	7	13.01	1	1.86	45	83.64
		0302	20-Sep-20	862	1.90	0	0	0	0	0	0	0	0	0	0	0	0	53	116.5	0	0	0	0	0	0	5	10.99	0	0	58	127.49
		0303	20-Sep-20	781	1.45	0	0	1	3.18	0	0	0	0	0	0	0	0	43	136.69	0	0	0	0	0	0	23	73.12	0	0	67	212.99
		0304	21-Sep-20	904	1.35	0	0	0	0	0	0	0	0	0	0	0	0	49	144.54	0	0	0	0	0	0	0	0	0	0	49	144.54
		0305	22-Sep-20	1022	1.55	0	0	0	0	0	0	0	0	1	2.27	0	0	36	81.81	0	0	3	6.82	0	0	6	13.64	1	2.27	47	106.81
		0306	22-Sep-20	744	1.00	0	0	2	9.68	0	0	0	0	0	0	0	0	29	140.32	0	0	0	0	0	0	10	48.39	0	0	41	198.39
		0307	23-Sep-20	761	0.95	0	0	0	0	0	0	0	0	0	0	0	0	51	253.96	0	0	2	9.96	0	0	27	134.45	1	4.98	81	403.35
		0308	23-Sep-20	699	1.35	0	0	0	0	0	0	0	0	0	0	0	0	44	167.86	0	0	0	0	0	0	8	30.52	0	0	52	198.38
		0309	22-Sep-20	601	0.95	0	0	1	6.31	0	0	0	0	0	0	0	0	20	126.11	0	0	0	0	0	0	7	44.14	0	0	28	176.55
		0310	22-Sep-20	842	1.20	0	0	0	0	0	0	0	0	0	0	0	0	65	231.59	0	0	1	3.56	3	10.69	1	3.56	0	0	70	249.41
		0311	22-Sep-20	722	1.25	0	0	1	3.99	0	0	0	0	0	0	0	0	22	87.76	0	0	2	7.98	0	0	26	103.71	0	0	51	203.43
		0312	23-Sep-20	1019	1.17	0	0	1	3.02	0	0	0	0	0	0	0	0	48	144.94	0	0	3	9.06	0	0	15	45.29	1	3.02	68	205.33
		0314	21-Sep-20	837	0.98	1	4.41	0	0	0	0	0	0	0	0	0	0	25	110.28	0	0	0	0	2	8.82	12	52.94	1	4.41	41	180.87
		0315	21-Sep-20	1437	1.70	0	0	0	0	0	0	0	0	0	0	0	0	38	56	0	0	0	0	1	1.47	12	17.68	1	1.47	52	76.63
		0316	21-Sep-20	1127	1.48	2	4.33	5	10.83	0	0	0	0	0	0	0	0	33	71.47	0	0	0	0	5	10.83	10	21.66	0	0	55	119.11
	Session Summary			**895.6**	**20.00**	**5**	**1**	**12**	**2.41**	**0**	**0**	**0**	**0**	**1**	**0.2**	**0**	**0**	**585**	**117.57**	**0**	**0**	**11**	**2.21**	**16**	**3.22**	**169**	**33.97**	**6**	**1.21**	**805**	**161.79**
Section 3	5	0301	28-Sep-20	1283	1.80	0	0	4	6.24	0	0	0	0	0	0	0	0	33	51.44	0	0	0	0	3	4.68	7	10.91	1	1.56	48	74.82
		0302	28-Sep-20	993	1.90	0	0	2	3.82	0	0	0	0	0	0	0	0	69	131.66	0	0	1	1.91	2	3.82	14	26.71	0	0	88	167.91
		0303	28-Sep-20	786	1.45	0	0	1	3.16	0	0	0	0	0	0	0	0	43	135.83	0	0	0	0	1	3.16	39	123.19	0	0	84	265.33
		0304	28-Sep-20	718	1.35	0	0	0	0	0	0	0	0	0	0	0	0	31	115.13	0	0	0	0	0	0	3	11.14	1	3.71	35	129.99
		0305	02-Oct-20	976	1.35	0	0	0	0	0	0	0	0	0	0	0	0	38	103.83	0	0	0	0	0	0	11	30.05	1	2.73	50	136.61
		0306	02-Oct-20	761	1.00	0	0	0	0	0	0	0	0	0	0	0	0	4	18.92	0	0	0	0	0	0	2	9.46	0	0	6	28.38
		0307	02-Oct-20	656	0.95	0	0	1	5.78	0	0	0	0	0	0	0	0	20	115.53	0	0	0	0	0	0	23	132.86	0	0	44	254.17
		0308	02-Oct-20	681	1.35	0	0	1	3.92	0	0	0	0	0	0	0	0	21	82.23	0	0	0	0	0	0	10	39.16	0	0	32	125.31
		0309	02-Oct-20	798	0.95	0	0	0	0	0	0	0	0	0	0	0	0	11	52.24	0	0	0	0	0	0	9	42.74	0	0	20	94.97
		0310	02-Oct-20	773	1.20	0	0	0	0	0	0	0	0	0	0	0	0	25	97.02	0	0	0	0	0	0	10	38.81	0	0	35	135.83
		0311	02-Oct-20	821	1.25	0	0	1	3.51	0	0	0	0	0	0	0	0	4	14.03	0	0	2	7.02	0	0	11	38.59	0	0	18	63.14
		0312	02-Oct-20	696	0.77	0	0	0	0	0	0	0	0	0	0	0	0	11	73.89	0	0	1	6.72	0	0	8	53.74	0	0	20	134.35
		0314	28-Sep-20	831	0.98	0	0	1	4.44	0	0	0	0	0	0	0	0	19	84.42	0	0	0	0	2	8.89	6	26.66	0	0	28	124.41
		0315	28-Sep-20	1165	1.70	0	0	2	3.64	0	0	0	0	0	0	0	0	54	98.16	0	0	1	1.82	1	1.82	11	19.99	1	1.82	70	127.24
		0316	02-Oct-20	1083	1.48	5	11.27	1	2.25	0	0	0	0	0	0	0	0	48	108.17	0	0	0	0	2	4.51	25	56.34	0	0	81	182.54
	Session Summary			**868.1**	**19.00**	**5**	**1.09**	**14**	**3.06**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**431**	**94.07**	**0**	**0**	**5**	**1.09**	**11**	**2.4**	**189**	**41.25**	**4**	**0.87**	**659**	**143.83**
Section 3	6	0301	04-Oct-20	1057	1.80	0	0	1	1.89	0	0	0	0	0	0	0	0	41	77.58	0	0	0	0	3	5.68	10	18.92	0	0	55	104.07
		0302	04-Oct-20	886	1.90	0	0	2	4.28	0	0	0	0	0	0	0	0	34	72.71	0	0	0	0	0	0	18	38.49	0	0	54	115.48
		0303	04-Oct-20	657	1.45	0	0	1	3.78	0	0	0	0	0	0	0	0	19	71.8	0	0	0	0	0	0	8	30.23	0	0	28	105.81
		0304	04-Oct-20	571	1.35	0	0	0	0	0	0	0	0	0	0	0	0	4	18.68	0	0	0	0	0	0	5	23.35	0	0	9	42.03
		0305	04-Oct-20	814	1.55	0	0	1	2.85	0	0	0	0	0	0	0	0	48	136.96	0	0	1	2.85	0	0	11	31.39	0	0	61	174.05
		0306	05-Oct-20	841	1.00	0	0	1	4.28	0	0	0	0	1	4.28	0	0	36	154.1	0	0	0	0	0	0	19	81.33	0	0	57	244
		0307	05-Oct-20	676	0.95	0	0	0	0	0	0	0	0	0	0	0	0	26	145.75	0	0	0	0	0	0	15	84.09	0	0	41	229.83
		0308	05-Oct-20	674	1.35	0	0	1	3.96	0	0	0	0	0	0	0	0	37	146.39	0	0	0	0	0	0	4	15.83	0	0	42	166.17
		0309	05-Oct-20	694	0.95	0	0	0	0	0	0	0	0	0	0	0	0	23	125.59	0	0	0	0	0	0	5	27.3	0	0	28	152.89
		0310	05-Oct-20	781	1.20	0	0	1	3.84	0	0	0	0	0	0	0	0	28	107.55	0	0	0	0	0	0	3	11.52	0	0	32	122.92
		0311	05-Oct-20	815	1.25	0	0	3	10.6	0	0	0	0	0	0	0	0	19	67.14	0	0	1	3.53	0	0	10	35.34	0	0	33	116.61
		0312	05-Oct-20	784	1.17	0	0	2	7.85	0	0	0	0	0	0	0	0	38	149.14	0	0	0	0	0	0	11	43.17	0	0	51	200.16
		0314	04-Oct-20	757	0.98	0	0	1	4.88	0	0	0	0	0	0	0	0	25	121.94	0	0	0	0	1	4.88	23	112.18	0	0	50	243.88
		0315	04-Oct-20	1145	1.70	1	1.85	1	1.85	0	0	0	0	0	0	0	0	37	68.43	0	0	0	0	1	1.85	48	88.77	0	0	88	162.75
		0316	04-Oct-20	972	1.48	2	5.02	1	2.51	0	0	0	0	0	0	0	0	36	90.4	0	0	0	0	6	15.07	17	42.69	0	0	62	155.68
	Session Summary			**808.3**	**20.00**	**3**	**0.67**	**16**	**3.56**	**0**	**0**	**0**	**0**	**1**	**0.22**	**0**	**0**	**451**	**100.43**	**0**	**0**	**2**	**0.45**	**11**	**2.45**	**207**	**46.1**	**0**	**0**	**691**	**153.88**
Section Total All Samples				**72453**	**119.77**	**20**	**0**	**74**	**0**	**1**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**2646**	**0**	**0**	**0**	**46**	**0**	**52**	**0**	**961**	**0**	**15**	**0**	**3823**	**0**
Section Average All Samples				**805**	**1.33**	**0**	**0.75**	**1**	**2.76**	**0**	**0.04**	**0**	**0**	**0**	**0.3**	**0**	**0**	**29**	**98.8**	**0**	**0**	**1**	**1.72**	**1**	**1.94**	**11**	**35.88**	**0**	**0.56**	**42**	**142.75**
Section Standard Error of Mean						**0.07**	**0.18**	**0.12**	**0.36**	**0.01**	**0.04**	**0**	**0**	**0.03**	**0.14**	**0**	**0**	**2.49**	**9.01**	**0**	**0**	**0.09**	**0.39**	**0.13**	**0.31**	**0.98**	**3.93**	**0.04**	**0.13**	**3.05**	**11.19**

Table E3 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h)																									
						Arctic Grayling		Bull Trout		Burbot		Goldeye		Kokanee		Lake Trout		Mountain Whitefish		Northern Pike		Northern Pikeminnow		Rainbow Trout		Sucker spp.		Walleye		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 5	1	0505	26-Aug-20	905	1.00	0	0	1	3.98	0	0	0	0	0	0	0	0	1	3.98	0	0	0	0	0	0	11	43.76	1	3.98	14	55.69
		0506	26-Aug-20	679	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	5.3	0	0	0	0	0	0	6	31.81	0	0	7	37.11
		0507	26-Aug-20	397	0.78	0	0	1	11.63	0	0	0	0	0	0	0	0	8	93.01	0	0	0	0	0	0	5	58.13	0	0	14	162.76
		0508	25-Aug-20	579	0.92	0	0	0	0	1	6.72	0	0	0	0	0	0	10	67.22	0	0	0	0	0	0	9	60.5	0	0	20	134.43
		0509	26-Aug-20	552	0.98	0	0	1	6.69	0	0	0	0	0	0	0	0	14	93.65	0	0	2	13.38	0	0	7	46.82	0	0	24	160.54
		0510	25-Aug-20	636	1.13	0	0	0	0	0	0	0	0	0	0	0	0	8	40.07	0	0	1	5.01	0	0	10	50.09	0	0	19	95.17
		0511	25-Aug-20	612	0.70	0	0	0	0	0	0	0	0	0	0	0	0	2	16.69	0	0	0	0	0	0	3	25.03	1	8.34	6	50.06
		0512	25-Aug-20	452	1.28	0	0	0	0	0	0	0	0	0	0	0	0	12	74.67	0	0	0	0	0	0	8	49.78	1	6.22	21	130.67
		0513	25-Aug-20	405	0.77	0	0	0	0	0	0	0	0	0	0	0	0	11	126.98	0	0	0	0	0	0	6	69.26	0	0	17	196.25
		0514	25-Aug-20	416	0.56	0	0	0	0	0	0	0	0	1	15.45	0	0	7	108.17	0	0	1	15.45	0	0	9	139.08	0	0	18	278.16
		0515	25-Aug-20	682	0.97	0	0	0	0	0	0	0	0	0	0	0	0	17	92.51	0	0	0	0	0	0	32	174.14	0	0	49	266.65
		0516	26-Aug-20	582	0.80	0	0	0	0	0	0	0	0	0	0	0	0	3	23.2	0	0	0	0	0	0	0	0	0	0	3	23.2
		0517	26-Aug-20	254	0.70	0	0	0	0	0	0	0	0	0	0	0	0	1	20.25	0	0	0	0	0	0	7	141.73	1	20.25	9	182.23
		0518	25-Aug-20	1311	1.81	0	0	1	1.52	1	1.52	0	0	0	0	0	0	8	12.14	0	0	1	1.52	0	0	13	19.72	1	1.52	25	37.93
		OEM-DSC	26-Aug-20	465	0.76	0	0	0	0	0	0	0	0	0	0	0	0	4	40.75	0	0	0	0	0	0	3	30.56	0	0	7	71.31
		OEM-MS	26-Aug-20	352	0.74	0	0	0	0	0	0	0	0	0	0	0	0	5	69.1	0	0	0	0	0	0	10	138.21	0	0	15	207.31
		OEM-USC	26-Aug-20	541	1.01	0	0	0	0	0	0	0	0	0	0	0	0	2	13.18	0	0	0	0	0	0	1	6.59	0	0	3	19.77
	Session Summary			**577.6**	**16.00**	**0**	**0**	**4**	**1.56**	**2**	**0.78**	**0**	**0**	**1**	**0.39**	**0**	**0**	**114**	**44.41**	**0**	**0**	**5**	**1.95**	**0**	**0**	**140**	**54.54**	**5**	**1.95**	**271**	**105.57**
Section 5	2	0505	02-Sep-20	888	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	4.05	2	8.11	0	0	0	0	6	24.32	0	0	9	36.49
		0506	02-Sep-20	617	1.00	0	0	0	0	0	0	0	0	0	0	0	0	3	17.5	0	0	0	0	1	5.83	0	0	0	0	4	23.34
		0507	02-Sep-20	416	0.78	0	0	0	0	0	0	0	0	0	0	0	0	5	55.47	0	0	0	0	0	0	1	11.09	0	0	6	66.57
		0508	01-Sep-20	563	0.92	0	0	0	0	0	0	0	0	0	0	0	0	7	48.39	0	0	0	0	0	0	6	41.48	0	0	13	89.87
		0509	02-Sep-20	653	0.98	0	0	0	0	0	0	0	0	0	0	0	0	13	73.51	0	0	0	0	0	0	10	56.54	0	0	23	130.05
		0510	02-Sep-20	718	1.13	0	0	0	0	0	0	0	0	0	0	0	0	5	22.19	0	0	1	4.44	0	0	2	8.87	0	0	8	35.5
		0511	01-Sep-20	560	0.72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	35.71	1	8.93	5	44.64
		0512	02-Sep-20	540	1.28	0	0	0	0	0	0	0	0	0	0	0	0	8	41.67	0	0	0	0	0	0	9	46.88	1	5.21	18	93.75
		0513	01-Sep-20	433	0.77	0	0	0	0	0	0	0	0	0	0	0	0	8	86.38	0	0	0	0	0	0	3	32.39	0	0	11	118.77
		0514	01-Sep-20	345	0.56	0	0	0	0	0	0	0	0	0	0	0	0	10	186.34	0	0	0	0	0	0	3	55.9	0	0	13	242.24
		0515	01-Sep-20	566	0.97	0	0	0	0	0	0	0	0	0	0	0	0	15	98.36	0	0	0	0	0	0	36	236.06	0	0	51	334.41
		0516	01-Sep-20	344	0.80	0	0	0	0	0	0	0	0	0	0	0	0	2	26.16	0	0	0	0	0	0	2	26.16	0	0	4	52.33
		0517	01-Sep-20	505	0.70	0	0	0	0	0	0	0	0	0	0	0	0	1	10.18	0	0	0	0	0	0	11	112.02	0	0	12	122.21
		0518	01-Sep-20	1223	1.81	0	0	1	1.63	0	0	0	0	0	0	0	0	10	16.26	0	0	0	0	0	0	12	19.52	0	0	23	37.4
		05SC060	01-Sep-20	531	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	12.79	0	0	1	12.79
		OEM-DSC	02-Sep-20	428	0.76	0	0	0	0	0	0	0	0	0	0	0	0	4	44.27	0	0	0	0	0	0	2	22.13	0	0	6	66.4
		OEM-MS	02-Sep-20	399	0.74	0	0	1	12.19	0	0	0	0	0	0	0	0	1	12.19	0	0	0	0	0	0	2	24.39	0	0	4	48.77
		OEM-USC	02-Sep-20	485	1.01	0	0	0	0	0	0	0	0	0	0	0	0	2	14.7	0	0	0	0	0	0	3	22.05	0	0	5	36.75
	Session Summary			**567.4**	**16.00**	**0**	**0**	**2**	**0.79**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**95**	**37.67**	**2**	**0.79**	**1**	**0.4**	**1**	**0.4**	**113**	**44.81**	**2**	**0.79**	**216**	**85.65**
Section 5	3	0505	13-Sep-20	1283	1.00	0	0	0	0	1	2.81	0	0	0	0	0	0	5	14.03	0	0	0	0	0	0	5	14.03	0	0	11	30.87
		0506	13-Sep-20	826	1.00	0	0	1	4.36	0	0	0	0	0	0	0	0	4	17.43	0	0	0	0	0	0	4	17.43	0	0	9	39.23
		0507	13-Sep-20	474	0.78	1	9.74	0	0	0	0	0	0	0	0	0	0	14	136.32	1	9.74	0	0	0	0	2	19.47	0	0	18	175.27
		0508	12-Sep-20	721	0.92	0	0	1	5.4	0	0	0	0	0	0	0	0	18	97.16	1	5.4	1	5.4	0	0	14	75.57	0	0	35	188.93
		0509	13-Sep-20	685	0.98	0	0	0	0	0	0	0	0	0	0	0	0	10	53.9	0	0	2	10.78	0	0	5	26.95	1	5.39	18	97.02
		0510	13-Sep-20	555	1.06	0	0	1	6.12	0	0	0	0	0	0	0	0	16	97.91	0	0	0	0	0	0	0	0	0	0	17	104.03
		0511	12-Sep-20	532	0.72	0	0	0	0	0	0	0	0	0	0	0	0	4	37.59	0	0	0	0	0	0	12	112.78	0	0	16	150.38
		0512	14-Sep-20	786	1.28	0	0	0	0	0	0	0	0	0	0	0	0	33	118.08	0	0	1	3.58	0	0	12	42.94	1	3.58	47	168.18
		0513	12-Sep-20	544	0.77	0	0	0	0	0	0	0	0	0	0	0	0	29	249.24	0	0	0	0	0	0	8	68.75	0	0	37	317.99
		0514	12-Sep-20	462	0.56	0	0	0	0	0	0	0	0	0	0	0	0	35	487.01	0	0	0	0	0	0	17	236.55	0	0	52	723.56
		0515	12-Sep-20	735	0.97	0	0	0	0	0	0	0	0	0	0	0	0	45	227.22	0	0	0	0	0	0	45	227.22	1	5.05	91	459.5
		0516	14-Sep-20	518	0.79	0	0	1	8.8	0	0	0	0	1	8.8	0	0	9	79.18	0	0	1	8.8	0	0	7	61.58	0	0	19	167.15
		0517	14-Sep-20	677	0.69	0	0	0	0	0	0	0	0	0	0	0	0	8	61.65	0	0	1	7.71	0	0	6	46.24	0	0	15	115.6
		0518	12-Sep-20	1358	1.81	0	0	0	0	0	0	0	0	0	0	0	0	15	21.97	0	0	2	2.93	0	0	33	48.33	0	0	50	73.23
		05SC060	13-Sep-20	478	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	170.52	0	0	12	170.52
		OEM-DSC	13-Sep-20	495	0.71	0	0	0	0	0	0	0	0	0	0	0	0	1	10.24	0	0	0	0	0	0	1	10.24	0	0	2	20.49
		OEM-MS	13-Sep-20	551	0.74	0	0	2	17.66	0	0	0	0	0	0	0	0	12	105.95	0	0	1	8.83	1	8.83	6	52.97	1	8.83	23	203.07
		OEM-USC	13-Sep-20	627	1.01	0	0	2	11.37	0	0	0	0	0	0	0	0	8	45.48	0	0	0	0	0	0	3	17.05	0	0	13	73.9
	Session Summary			**683.7**	**16.00**	**1**	**0.33**	**8**	**2.63**	**1**	**0.33**	**0**	**0**	**1**	**0.33**	**0**	**0**	**266**	**87.54**	**2**	**0.66**	**9**	**2.96**	**1**	**0.33**	**192**	**63.19**	**4**	**1.32**	**485**	**159.61**

Table E3 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h)																									
						Arctic Grayling		Bull Trout		Burbot		Goldeye		Kokanee		Lake Trout		Mountain Whitefish		Northern Pike		Northern Pikeminnow		Rainbow Trout		Sucker spp.		Walleye		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 5	4	0505	23-Sep-20	1035	1.00	0	0	1	3.48	0	0	0	0	0	0	0	0	3	10.43	0	0	1	3.48	0	0	6	20.87	0	0	11	38.26
		0506	23-Sep-20	802	1.00	0	0	0	0	1	4.49	0	0	0	0	0	0	5	22.44	0	0	0	0	0	0	4	17.96	0	0	10	44.89
		0507	23-Sep-20	471	0.78	1	9.8	1	9.8	0	0	0	0	0	0	0	0	26	254.78	0	0	0	0	0	0	0	0	0	0	28	274.38
		0508	21-Sep-20	688	0.92	0	0	0	0	0	0	0	0	0	0	0	0	23	130.11	0	0	1	5.66	0	0	17	96.17	0	0	41	231.93
		0509	23-Sep-20	667	0.98	0	0	0	0	0	0	0	0	0	0	0	0	12	66.43	0	0	3	16.61	0	0	10	55.36	2	11.07	27	149.46
		0510	24-Sep-20	732	1.13	0	0	0	0	0	0	0	0	0	0	0	0	13	56.58	0	0	1	4.35	0	0	12	52.23	1	4.35	27	117.51
		0511	24-Sep-20	507	0.72	0	0	1	9.86	0	0	0	0	0	0	0	0	2	19.72	0	0	1	9.86	0	0	5	49.31	0	0	9	88.76
		0512	24-Sep-20	612	1.28	0	0	0	0	0	0	0	0	0	0	0	0	16	73.53	0	0	0	0	0	0	14	64.34	1	4.6	31	142.46
		0513	24-Sep-20	493	0.77	0	0	0	0	0	0	0	0	0	0	0	0	18	170.7	0	0	1	9.48	0	0	9	85.35	2	18.97	30	284.5
		0514	21-Sep-20	430	0.56	0	0	0	0	0	0	0	0	0	0	0	0	21	313.95	0	0	1	14.95	0	0	12	179.4	0	0	34	508.31
		0515	21-Sep-20	640	0.97	0	0	0	0	0	0	0	0	0	0	0	0	19	110.18	0	0	0	0	0	0	38	220.36	0	0	57	330.54
		0516	23-Sep-20	623	0.80	0	0	4	28.89	0	0	0	0	0	0	0	0	3	21.67	0	0	0	0	0	0	19	137.24	0	0	26	187.8
		0517	24-Sep-20	896	0.60	0	0	2	13.39	0	0	0	0	0	0	0	0	10	66.96	0	0	1	6.7	0	0	17	113.84	0	0	30	200.89
		0518	24-Sep-20	1335	1.81	0	0	0	0	0	0	0	0	0	0	0	0	9	13.41	0	0	1	1.49	0	0	15	22.35	0	0	25	37.25
		05SC060	23-Sep-20	549	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	173.21	0	0	14	173.21
		OEM-DSC	23-Sep-20	602	0.76	0	0	1	7.87	0	0	0	0	0	0	0	0	2	15.74	2	15.74	0	0	0	0	10	78.69	0	0	15	118.03
		OEM-MS	23-Sep-20	428	0.74	0	0	1	11.37	0	0	0	0	0	0	0	0	13	147.76	0	0	0	0	0	0	3	34.1	1	11.37	18	204.6
		OEM-USC	23-Sep-20	567	1.01	0	0	0	0	0	0	0	0	0	0	0	0	2	12.57	0	0	0	0	0	0	7	44	0	0	9	56.58
	Session Summary			**670.9**	**16.00**	**1**	**0.34**	**11**	**3.69**	**1**	**0.34**	**0**	**0**	**0**	**0**	**0**	**0**	**197**	**66.07**	**2**	**0.67**	**11**	**3.69**	**0**	**0**	**212**	**71.1**	**7**	**2.35**	**442**	**148.23**
Section 5	5	0505	27-Sep-20	1144	1.00	0	0	1	3.15	0	0	0	0	0	0	0	0	2	6.29	0	0	0	0	0	0	3	9.44	0	0	6	18.88
		0506	27-Sep-20	892	1.00	0	0	0	0	0	0	0	0	0	0	0	0	5	20.18	0	0	0	0	0	0	2	8.07	0	0	7	28.25
		0507	27-Sep-20	463	0.78	0	0	0	0	0	0	0	0	0	0	0	0	19	189.4	0	0	0	0	0	0	1	9.97	0	0	20	199.37
		0508	27-Sep-20	666	0.92	0	0	0	0	0	0	0	0	0	0	0	0	29	169.47	0	0	0	0	0	0	11	64.28	0	0	40	233.75
		0509	27-Sep-20	703	0.98	0	0	2	10.5	0	0	0	0	0	0	0	0	10	52.52	0	0	0	0	0	0	4	21.01	2	10.5	18	94.54
		0510	27-Sep-20	884	1.13	2	7.21	0	0	0	0	0	0	0	0	0	0	15	54.06	0	0	1	3.6	0	0	12	43.25	0	0	30	108.12
		0511	27-Sep-20	415	0.72	0	0	0	0	0	0	0	0	0	0	0	0	5	60.24	0	0	0	0	0	0	7	84.34	0	0	12	144.58
		0512	27-Sep-20	745	1.28	0	0	0	0	0	0	0	0	0	0	0	0	7	26.43	0	0	1	3.78	0	0	12	45.3	1	3.78	21	79.28
		0513	27-Sep-20	565	0.77	0	0	0	0	0	0	0	0	0	0	0	0	13	107.57	0	0	0	0	0	0	17	140.67	0	0	30	248.25
		0514	27-Sep-20	431	0.56	0	0	0	0	0	0	0	0	0	0	0	0	15	223.73	0	0	0	0	0	0	9	134.24	0	0	24	357.97
		0515	27-Sep-20	678	0.97	0	0	0	0	0	0	0	0	0	0	0	0	18	98.53	0	0	1	5.47	0	0	36	197.06	4	21.9	59	322.96
		0517	27-Sep-20	380	0.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	23.68	0	0	0	0	2	47.37	0	0	3	71.05
		0518	27-Sep-20	1262	1.81	0	0	0	0	0	0	0	0	0	0	0	0	9	14.18	0	0	2	3.15	0	0	14	22.06	1	1.58	26	40.98
	Session Summary			**709.8**	**12.00**	**2**	**0.85**	**3**	**1.27**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**147**	**62.13**	**1**	**0.42**	**5**	**2.11**	**0**	**0**	**130**	**54.95**	**8**	**3.38**	**296**	**125.11**
Section 5	6	0505	05-Oct-20	1110	1.00	0	0	0	0	0	0	0	0	0	0	0	0	7	22.7	0	0	1	3.24	2	6.49	1	3.24	0	0	11	35.68
		0506	05-Oct-20	881	1.00	0	0	2	8.17	0	0	0	0	0	0	0	0	10	40.86	0	0	1	4.09	0	0	4	16.35	0	0	17	69.47
		0507	05-Oct-20	477	0.78	1	9.68	1	9.68	0	0	0	0	0	0	0	0	5	48.38	0	0	0	0	0	0	2	19.35	0	0	9	87.08
		0508	05-Oct-20	704	0.92	0	0	0	0	0	0	0	0	0	0	0	0	41	226.66	0	0	2	11.06	0	0	17	93.98	0	0	60	331.7
		0509	05-Oct-20	889	0.98	0	0	0	0	0	0	0	0	0	0	0	0	12	49.84	0	0	1	4.15	0	0	6	24.92	2	8.31	21	87.22
		0510	05-Oct-20	712	1.13	0	0	2	8.95	0	0	0	0	0	0	0	0	14	62.64	0	0	1	4.47	0	0	21	93.96	0	0	38	170.03
		0511	05-Oct-20	470	0.72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10.64	0	0	1	10.64	0	0	2	21.28
		0512	05-Oct-20	718	1.28	1	3.92	1	3.92	0	0	0	0	0	0	0	0	25	97.93	2	7.83	0	0	0	0	12	47.01	3	11.75	44	172.35
		0513	05-Oct-20	539	0.77	0	0	0	0	0	0	0	0	0	0	0	0	10	86.74	0	0	1	8.67	0	0	8	69.39	1	8.67	20	173.48
		0514	05-Oct-20	430	0.56	0	0	1	14.95	0	0	0	0	0	0	0	0	8	119.6	0	0	0	0	0	0	11	164.45	0	0	20	299
		0515	05-Oct-20	597	0.97	0	0	1	6.22	0	0	0	0	0	0	0	0	22	136.77	0	0	1	6.22	0	0	16	99.47	0	0	40	248.67
		0517	05-Oct-20	384	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	56.25	0	0	3	56.25
		0518	05-Oct-20	1274	1.81	0	0	0	0	0	0	0	0	0	0	0	0	14	21.86	0	0	1	1.56	0	0	12	18.73	1	1.56	28	43.71
		05SC060	05-Oct-20	488	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	55.68	0	0	4	55.68
	Session Summary			**690.9**	**13.00**	**2**	**0.8**	**8**	**3.21**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**168**	**67.34**	**2**	**0.8**	**10**	**4.01**	**2**	**0.8**	**118**	**47.3**	**7**	**2.81**	**317**	**127.06**
Section Total All Samples				**63319**	**90.33**	**6**	**0**	**36**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**987**	**0**	**9**	**0**	**41**	**0**	**4**	**0**	**905**	**0**	**33**	**0**	**2027**	**0**
Section Average All Samples				**646**	**0.92**	**0**	**0.37**	**0**	**2.22**	**0**	**0.25**	**0**	**0**	**0**	**0.12**	**0**	**0**	**10**	**60.89**	**0**	**0.56**	**0**	**2.53**	**0**	**0.25**	**9**	**55.84**	**0**	**2.04**	**21**	**125.06**
Section Standard Error of Mean						**0.03**	**0.19**	**0.07**	**0.5**	**0.02**	**0.09**	**0**	**0**	**0.01**	**0.18**	**0**	**0**	**0.93**	**7.95**	**0.04**	**0.33**	**0.06**	**0.41**	**0.02**	**0.13**	**0.88**	**5.9**	**0.07**	**0.45**	**1.61**	**12.02**

Table E3 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h) Arctic Grayling		Bull Trout		Burbot		Goldeye		Kokanee		Lake Trout		Mountain Whitefish		Northern Pike		Northern Pikeminnow		Rainbow Trout		Sucker spp.		Walleye		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 6	1	0601	21-Aug-20	729	1.20	0	0	1	4.12	0	0	0	0	1	4.12	0	0	5	20.58	0	0	0	0	0	0	4	16.46	0	0	11	45.27
		0603	21-Aug-20	631	1.30	0	0	0	0	0	0	0	0	0	0	0	0	13	57.05	0	0	0	0	0	0	9	39.5	0	0	22	96.55
		0604	21-Aug-20	605	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	11.9	0	0	2	11.9
		0605	21-Aug-20	513	0.80	0	0	0	0	0	0	0	0	0	0	0	0	10	87.72	0	0	1	8.77	0	0	23	201.75	2	17.54	36	315.79
		0606	22-Aug-20	808	1.40	0	0	0	0	0	0	0	0	0	0	0	0	5	15.91	0	0	1	3.18	0	0	8	25.46	0	0	14	44.55
		0607	22-Aug-20	610	1.00	0	0	0	0	0	0	0	0	0	0	0	0	4	23.61	0	0	0	0	0	0	25	147.54	0	0	29	171.15
		0608	22-Aug-20	551	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	13.07	0	0	1	6.53	0	0	4	26.13	1	6.53	8	52.27
		0609	22-Aug-20	672	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5.36	0	0	16	85.71	1	5.36	18	96.43
		0610	22-Aug-20	515	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	49.34	0	0	6	49.34
		0611	22-Aug-20	533	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7.5	0	0	3	22.51	0	0	4	30.02
		0612	22-Aug-20	505	0.85	0	0	0	0	0	0	0	0	0	0	0	0	5	41.93	0	0	0	0	0	0	11	92.25	1	8.39	17	142.57
		0613	22-Aug-20	546	0.90	0	0	0	0	0	0	0	0	0	0	0	0	2	14.65	0	0	0	0	0	0	0	0	0	0	2	14.65
		0614	21-Aug-20	642	0.98	0	0	0	0	0	0	0	0	0	0	0	0	7	40.26	0	0	0	0	0	0	24	138.03	0	0	31	178.29
		06PIN01	21-Aug-20	1970	1.50	0	0	0	0	0	0	0	0	1	1.22	0	0	0	0	0	0	0	0	0	0	15	18.27	2	2.44	18	21.93
		06PIN02	21-Aug-20	460	1.00	0	0	1	7.83	0	0	0	0	0	0	0	0	0	0	0	0	1	7.83	0	0	2	15.65	0	0	4	31.3
		06SC036	22-Aug-20	562	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	76.87	1	12.81	7	89.68
		06SC047	21-Aug-20	401	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	16.32	0	0	3	48.97	0	0	4	65.29
	Session Summary			**661.9**	**17.00**	**0**	**0**	**2**	**0.64**	**0**	**0**	**0**	**0**	**2**	**0.64**	**0**	**0**	**53**	**16.96**	**0**	**0**	**7**	**2.24**	**0**	**0**	**161**	**51.51**	**8**	**2.56**	**233**	**74.54**
Section 6	2	0601	27-Aug-20	587	1.20	0	0	0	0	0	0	0	0	0	0	0	0	1	5.11	0	0	0	0	0	0	0	0	0	0	1	5.11
		0603	27-Aug-20	594	1.30	0	0	0	0	0	0	0	0	0	0	0	0	7	32.63	0	0	0	0	0	0	1	4.66	3	13.99	11	51.28
		0604	27-Aug-20	518	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	6.95	0	0	0	0	0	0	4	27.8	0	0	5	34.75
		0605	27-Aug-20	581	0.80	0	0	0	0	0	0	0	0	0	0	0	0	11	85.2	0	0	1	7.75	0	0	23	178.14	0	0	35	271.08
		0606	28-Aug-20	876	1.40	0	0	0	0	0	0	0	0	0	0	0	0	6	17.61	0	0	0	0	0	0	3	8.81	0	0	9	26.42
		0607	28-Aug-20	630	1.00	0	0	0	0	0	0	0	0	0	0	0	0	6	34.29	0	0	0	0	0	0	28	160	0	0	34	194.29
		0608	27-Aug-20	557	1.00	0	0	0	0	0	0	0	0	0	0	0	0	8	51.71	0	0	0	0	0	0	8	51.71	1	6.46	17	109.87
		0609	28-Aug-20	736	1.00	0	0	0	0	0	0	0	0	0	0	0	0	3	14.67	0	0	1	4.89	0	0	15	73.37	2	9.78	21	102.72
		0610	28-Aug-20	574	0.85	0	0	0	0	0	0	0	0	0	0	0	0	6	44.27	0	0	0	0	0	0	5	36.89	0	0	11	81.16
		0611	28-Aug-20	632	0.90	0	0	0	0	0	0	0	0	0	0	0	0	11	69.62	0	0	1	6.33	0	0	5	31.65	0	0	17	107.59
		0612	28-Aug-20	504	0.85	0	0	0	0	0	0	0	0	0	0	0	0	6	50.42	0	0	1	8.4	0	0	7	58.82	0	0	14	117.65
		0613	28-Aug-20	502	0.90	0	0	0	0	0	0	0	0	0	0	0	0	7	55.78	0	0	0	0	0	0	6	47.81	0	0	13	103.59
		0614	27-Aug-20	518	0.98	0	0	0	0	0	0	0	0	0	0	0	0	4	28.51	0	0	0	0	0	0	8	57.02	1	7.13	13	92.66
		06PIN01	27-Aug-20	1072	1.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.24	0	0	20	44.78	1	2.24	22	49.25
		06PIN02	27-Aug-20	432	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8.33	0	0	1	8.33
		06SC036	28-Aug-20	561	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	77.01	0	0	6	77.01
		06SC047	27-Aug-20	352	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	18.6	0	0	1	18.6	0	0	2	37.19
	Session Summary			**601.5**	**17.00**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**77**	**27.11**	**0**	**0**	**6**	**2.11**	**0**	**0**	**141**	**49.64**	**8**	**2.82**	**232**	**81.68**
Section 6	3	0601	08-Sep-20	813	1.20	0	0	0	0	0	0	0	0	0	0	0	0	3	11.07	0	0	0	0	0	0	6	22.14	0	0	9	33.21
		0602	08-Sep-20	599	0.90	0	0	1	6.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	13.36	3	20.03	6	40.07
		0603	08-Sep-20	775	1.30	1	3.57	1	3.57	0	0	0	0	0	0	0	0	16	57.17	0	0	0	0	0	0	23	82.18	0	0	41	146.5
		0604	08-Sep-20	684	1.00	0	0	1	5.26	0	0	0	0	0	0	0	0	5	26.32	0	0	0	0	0	0	7	36.84	0	0	13	68.42
		0605	09-Sep-20	491	0.80	1	9.16	0	0	0	0	0	0	0	0	0	0	36	329.94	0	0	0	0	0	0	20	183.3	0	0	57	522.4
		0607	09-Sep-20	692	1.00	0	0	0	0	0	0	0	0	0	0	0	0	10	52.02	0	0	0	0	0	0	38	197.69	1	5.2	49	254.91
		0608	09-Sep-20	586	1.00	0	0	0	0	0	0	0	0	0	0	0	0	21	129.01	0	0	0	0	0	0	6	36.86	0	0	27	165.87
		0609	09-Sep-20	810	1.00	0	0	0	0	0	0	0	0	0	0	0	0	6	26.67	0	0	0	0	0	0	22	97.78	3	13.33	31	137.78
		0610	09-Sep-20	555	0.85	0	0	0	0	0	0	0	0	0	0	0	0	7	53.42	0	0	0	0	0	0	5	38.16	5	38.16	17	129.73
		0611	09-Sep-20	625	0.90	0	0	0	0	0	0	0	0	0	0	0	0	1	6.4	0	0	1	6.4	0	0	4	25.6	2	12.8	8	51.2
		0612	09-Sep-20	566	0.85	1	7.48	0	0	0	0	0	0	0	0	0	0	12	89.79	0	0	0	0	0	0	25	187.07	1	7.48	39	291.83
		0613	09-Sep-20	636	0.90	0	0	0	0	0	0	0	0	0	0	0	0	12	75.47	0	0	2	12.58	0	0	4	25.16	1	6.29	19	119.5
		0614	08-Sep-20	625	0.98	0	0	0	0	0	0	0	0	0	0	0	0	13	76.8	0	0	0	0	0	0	14	82.71	0	0	27	159.51
		06PIN01	08-Sep-20	1050	1.50	0	0	0	0	0	0	0	0	0	0	0	0	2	4.57	0	0	4	9.14	0	0	25	57.14	1	2.29	32	73.14
		06PIN02	08-Sep-20	562	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	32.03	0	0	21	134.52	1	6.41	27	172.95
		06SC036	14-Sep-20	651	0.50	0	0	0	0	0	0	0	0	0	0	0	0	1	11.06	0	0	0	0	0	0	3	33.18	2	22.12	6	66.36
		06SC047	08-Sep-20	496	0.42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	34.98	0	0	2	34.98
	Session Summary			**659.8**	**16.00**	**3**	**1.02**	**3**	**1.02**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**145**	**49.45**	**0**	**0**	**12**	**4.09**	**0**	**0**	**227**	**77.41**	**20**	**6.82**	**410**	**139.82**

Table E3 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h)																									
						Arctic Grayling		Bull Trout		Burbot		Goldeye		Kokanee		Lake Trout		Mountain Whitefish		Northern Pike		Northern Pikeminnow		Rainbow Trout		Sucker spp.		Walleye		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 6	4	0601	17-Sep-20	937	1.20	0	0	1	3.2	0	0	0	0	0	0	0	0	13	41.62	0	0	2	6.4	0	0	6	19.21	0	0	22	70.44
		0602	17-Sep-20	659	0.90	0	0	1	6.07	0	0	0	0	0	0	0	0	2	12.14	1	6.07	0	0	0	0	1	6.07	2	12.14	7	42.49
		0603	18-Sep-20	927	1.20	0	0	0	0	0	0	0	0	0	0	0	0	23	74.43	1	3.24	0	0	0	0	41	132.69	0	0	65	210.36
		0604	18-Sep-20	754	1.00	0	0	0	0	0	0	0	0	0	0	0	0	13	62.07	0	0	0	0	0	0	3	14.32	0	0	16	76.39
		0605	21-Sep-20	554	0.80	0	0	0	0	0	0	0	0	0	0	0	0	22	178.7	0	0	1	8.12	0	0	16	129.96	0	0	39	316.79
		0606	21-Sep-20	933	1.40	0	0	1	2.76	0	0	0	0	0	0	0	0	20	55.12	0	0	0	0	0	0	19	52.37	0	0	40	110.24
		0607	18-Sep-20	823	1.00	0	0	0	0	0	0	0	0	0	0	0	0	20	87.48	0	0	0	0	0	0	77	336.82	2	8.75	99	433.05
		0608	21-Sep-20	591	1.00	0	0	0	0	0	0	0	0	0	0	0	0	13	79.19	0	0	1	6.09	0	0	7	42.64	0	0	21	127.92
		0609	21-Sep-20	867	1.00	0	0	0	0	0	0	0	0	0	0	0	0	8	33.22	1	4.15	0	0	0	0	33	137.02	1	4.15	43	178.55
		0610	21-Sep-20	593	0.85	0	0	0	0	0	0	0	0	0	0	0	0	12	85.71	0	0	0	0	0	0	10	71.42	2	14.28	24	171.41
		0611	18-Sep-20	488	0.85	0	0	0	0	0	0	0	0	0	0	0	0	7	60.75	0	0	2	17.36	0	0	18	156.22	0	0	27	234.33
		0612	18-Sep-20	553	0.85	0	0	0	0	0	0	0	0	0	0	0	0	15	114.88	0	0	1	7.66	0	0	13	99.56	0	0	29	222.1
		0613	18-Sep-20	796	0.90	0	0	0	0	0	0	0	0	1	5.03	0	0	9	45.23	0	0	0	0	0	0	3	15.08	0	0	13	65.33
		0614	17-Sep-20	650	0.98	0	0	1	5.68	0	0	0	0	0	0	0	0	19	107.93	0	0	0	0	0	0	44	249.94	0	0	64	363.55
		06PIN01	17-Sep-20	1182	1.50	0	0	0	0	0	0	0	0	0	0	0	0	12	24.37	0	0	1	2.03	0	0	14	28.43	2	4.06	29	58.88
		06PIN02	17-Sep-20	682	1.00	0	0	1	5.28	0	0	0	0	0	0	0	0	6	31.67	0	0	0	0	0	0	13	68.62	1	5.28	21	110.85
		06SC036	18-Sep-20	550	0.40	0	0	0	0	0	0	0	0	1	16.36	0	0	0	0	0	0	0	0	0	0	7	114.55	1	16.36	9	147.27
		06SC047	17-Sep-20	415	0.36	0	0	0	0	0	0	0	0	0	0	0	0	1	23.77	0	0	0	0	0	0	0	0	0	0	1	23.77
	Session Summary			**719.7**	**17.00**	**0**	**0**	**5**	**1.47**	**0**	**0**	**0**	**0**	**2**	**0.59**	**0**	**0**	**215**	**63.26**	**3**	**0.88**	**8**	**2.35**	**0**	**0**	**325**	**95.63**	**11**	**3.24**	**569**	**167.42**
Section 6	5	0601	28-Sep-20	820	1.20	0	0	0	0	0	0	0	0	0	0	0	0	13	47.56	0	0	1	3.66	1	3.66	6	21.95	0	0	21	76.83
		0602	28-Sep-20	563	0.88	0	0	0	0	0	0	0	0	0	0	0	0	1	7.31	0	0	0	0	0	0	1	7.31	1	7.31	3	21.92
		0603	28-Sep-20	759	1.30	0	0	0	0	0	0	0	0	0	0	0	0	13	47.43	0	0	0	0	0	0	33	120.4	1	3.65	47	171.48
		0604	28-Sep-20	638	1.00	0	0	0	0	0	0	0	0	0	0	0	0	3	16.93	0	0	0	0	0	0	3	16.93	1	5.64	7	39.5
		0605	29-Sep-20	547	0.80	0	0	0	0	0	0	0	0	0	0	0	0	30	246.8	0	0	0	0	0	0	26	213.89	0	0	56	460.69
		0606	28-Sep-20	882	1.40	0	0	1	2.92	0	0	0	0	0	0	0	0	19	55.39	0	0	0	0	0	0	13	37.9	0	0	33	96.21
		0607	29-Sep-20	672	1.00	0	0	0	0	0	0	0	0	0	0	0	0	18	96.43	0	0	0	0	0	0	32	171.43	3	16.07	53	283.93
		0608	28-Sep-20	516	1.00	0	0	0	0	0	0	0	0	0	0	0	0	19	132.56	0	0	0	0	0	0	4	27.91	0	0	23	160.47
		0609	28-Sep-20	762	1.00	0	0	0	0	0	0	0	0	0	0	0	0	17	80.31	0	0	0	0	0	0	12	56.69	1	4.72	30	141.73
		0610	28-Sep-20	544	0.85	0	0	0	0	0	0	0	0	0	0	0	0	5	38.93	0	0	0	0	0	0	5	38.93	0	0	10	77.85
		0611	28-Sep-20	580	0.90	0	0	0	0	0	0	0	0	0	0	0	0	12	82.76	0	0	0	0	0	0	8	55.17	1	6.9	21	144.83
		0612	29-Sep-20	500	0.85	1	8.47	0	0	0	0	0	0	0	0	0	0	23	194.82	1	8.47	0	0	0	0	18	152.47	0	0	43	364.24
		0613	29-Sep-20	608	0.90	0	0	0	0	0	0	0	0	0	0	0	0	9	59.21	0	0	1	6.58	0	0	4	26.32	0	0	14	92.11
		0614	28-Sep-20	686	0.98	0	0	0	0	0	0	0	0	0	0	0	0	14	75.35	0	0	0	0	0	0	23	123.79	4	21.53	41	220.68
		06PIN01	28-Sep-20	810	1.45	0	0	0	0	0	0	0	0	0	0	0	0	46	141	0	0	0	0	0	0	2	6.13	0	0	48	147.13
		06PIN02	28-Sep-20	520	1.00	0	0	0	0	0	0	0	0	0	0	0	0	17	117.69	0	0	1	6.92	0	0	1	6.92	0	0	19	131.54
		06SC036	29-Sep-20	464	0.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06SC047	28-Sep-20	477	0.34	0	0	1	22.53	0	0	0	0	1	22.53	0	0	0	0	1	22.53	0	0	0	0	2	45.06	0	0	5	112.64
	Session Summary			**630.4**	**17.00**	**1**	**0.34**	**2**	**0.67**	**0**	**0**	**0**	**0**	**1**	**0.34**	**0**	**0**	**259**	**87**	**2**	**0.67**	**3**	**1.01**	**1**	**0.34**	**193**	**64.83**	**12**	**4.03**	**474**	**159.23**
Section 6	6	0601	03-Oct-20	1028	1.20	0	0	0	0	0	0	0	0	1	2.92	0	0	4	11.67	0	0	2	5.84	0	0	34	99.22	0	0	41	119.65
		0602	03-Oct-20	615	0.90	0	0	0	0	0	0	0	0	0	0	0	0	11	71.54	0	0	0	0	0	0	1	6.5	0	0	12	78.05
		0603	03-Oct-20	920	1.30	0	0	0	0	0	0	0	0	0	0	0	0	3	9.03	0	0	0	0	0	0	36	108.36	3	9.03	42	126.42
		0604	03-Oct-20	650	0.98	0	0	0	0	0	0	0	0	0	0	0	0	6	33.91	0	0	0	0	0	0	2	11.3	0	0	8	45.21
		0605	03-Oct-20	490	0.80	0	0	0	0	0	0	0	0	0	0	0	0	13	119.39	0	0	1	9.18	0	0	2	18.37	0	0	16	146.94
		0606	03-Oct-20	897	1.40	0	0	0	0	0	0	0	0	0	0	0	0	12	34.4	0	0	0	0	0	0	25	71.67	0	0	37	106.07
		0607	04-Oct-20	741	1.00	0	0	0	0	0	0	0	0	0	0	0	0	3	14.57	0	0	0	0	0	0	11	53.44	0	0	14	68.02
		0608	03-Oct-20	560	1.00	0	0	0	0	0	0	0	0	0	0	0	0	15	96.43	0	0	0	0	0	0	5	32.14	1	6.43	21	135
		0609	04-Oct-20	733	1.00	0	0	0	0	0	0	0	0	0	0	0	0	9	44.2	2	9.82	0	0	0	0	2	9.82	1	4.91	14	68.76
		0610	03-Oct-20	673	0.85	0	0	0	0	0	0	0	0	0	0	0	0	6	37.76	0	0	0	0	0	0	8	50.35	0	0	14	88.1
		0611	03-Oct-20	620	0.90	0	0	0	0	0	0	0	0	0	0	0	0	13	83.87	0	0	0	0	0	0	12	77.42	0	0	25	161.29
		0612	03-Oct-20	516	0.85	0	0	0	0	0	0	0	0	0	0	0	0	15	123.12	0	0	1	8.21	0	0	23	188.78	0	0	39	320.11
		0613	04-Oct-20	699	0.90	0	0	0	0	0	0	0	0	0	0	0	0	13	74.39	0	0	0	0	0	0	10	57.22	0	0	23	131.62
		0614	03-Oct-20	669	0.98	0	0	0	0	0	0	0	0	0	0	0	0	11	60.71	0	0	1	5.52	0	0	30	165.57	3	16.56	45	248.36
		06PIN01	03-Oct-20	894	1.50	0	0	1	2.68	0	0	0	0	0	0	0	0	41	110.07	0	0	1	2.68	0	0	3	8.05	1	2.68	47	126.17
		06PIN02	03-Oct-20	582	0.98	0	0	0	0	0	0	0	0	0	0	0	0	19	119.92	0	0	1	6.31	0	0	3	18.94	0	0	23	145.17
		06SC036	04-Oct-20	438	0.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	54.79	0	0	2	54.79
		06SC047	03-Oct-20	489	0.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	21.03	0	0	1	21.03
	Session Summary			**678.6**	**17.00**	**0**	**0**	**1**	**0.31**	**0**	**0**	**0**	**0**	**1**	**0.31**	**0**	**0**	**194**	**60.54**	**2**	**0.62**	**7**	**2.18**	**0**	**0**	**210**	**65.53**	**9**	**2.81**	**424**	**132.31**
Section Total All Samples				**69211**	**101.05**	**4**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**943**	**0**	**7**	**0**	**43**	**0**	**1**	**0**	**1257**	**0**	**68**	**0**	**2342**	**0**
Section Average All Samples				**659**	**0.96**	**0**	**0.22**	**0**	**0.7**	**0**	**0**	**0**	**0**	**0**	**0.32**	**0**	**0**	**9**	**50.98**	**0**	**0.38**	**0**	**2.32**	**0**	**0.05**	**12**	**67.95**	**1**	**3.68**	**22**	**126.61**
Section Standard Error of Mean						**0.02**	**0.14**	**0.03**	**0.26**	**0**	**0**	**0**	**0**	**0.02**	**0.27**	**0**	**0**	**0.86**	**5.32**	**0.03**	**0.26**	**0.08**	**0.49**	**0.01**	**0.03**	**1.22**	**6.28**	**0.1**	**0.64**	**1.7**	**9.85**

Table E3 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h)																									
						Arctic Grayling		Bull Trout		Burbot		Goldeye		Kokanee		Lake Trout		Mountain Whitefish		Northern Pike		Northern Pikeminnow		Rainbow Trout		Sucker spp.		Walleye		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 7	1	0701	23-Aug-20	596	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	30.78	0	0	4	30.78
		0702	23-Aug-20	513	0.95	0	0	0	0	0	0	0	0	0	0	0	0	2	14.77	1	7.39	0	0	0	0	7	51.71	0	0	10	73.87
		0703	23-Aug-20	680	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	27.86	0	0	5	27.86
		0704	23-Aug-20	594	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	12.12	0	0	0	0	0	0	16	96.97	0	0	18	109.09
		0705	23-Aug-20	590	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	12.2	0	0	0	0	0	0	0	0	1	6.1	3	18.31
		0706	23-Aug-20	795	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.53	1	4.53	2	9.06
		0707	24-Aug-20	654	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	16.85	0	0	3	16.85
		0708	23-Aug-20	633	1.24	0	0	0	0	0	0	0	0	0	0	0	0	1	4.59	0	0	0	0	0	0	1	4.59	0	0	2	9.17
		0709	23-Aug-20	610	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	5.9	0	0	0	0	0	0	7	41.31	0	0	8	47.21
		0710	24-Aug-20	867	1.40	0	0	0	0	0	0	0	0	0	0	0	0	3	8.9	0	0	0	0	0	0	19	56.35	1	2.97	23	68.22
		0711	24-Aug-20	770	1.39	0	0	0	0	0	0	0	0	0	0	0	0	3	10.09	0	0	0	0	0	0	1	3.36	0	0	4	13.45
		0712	24-Aug-20	686	1.06	0	0	0	0	0	0	0	0	0	0	0	0	3	14.78	1	4.93	0	0	0	0	3	14.78	0	0	7	34.49
		0713	24-Aug-20	610	0.98	0	0	0	0	0	0	0	0	0	0	0	0	9	54.2	0	0	1	6.02	0	0	9	54.2	1	6.02	20	120.44
		0714	24-Aug-20	790	1.27	0	0	0	0	0	0	0	0	0	0	0	0	8	28.59	0	0	0	0	0	0	11	39.31	1	3.57	20	71.48
		07BEA01	23-Aug-20	615	0.42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	27.87	0	0	2	27.87
		07KIS01	24-Aug-20	731	0.88	0	0	0	0	2	11.19	0	0	0	0	0	0	0	0	0	0	2	11.19	0	0	4	22.39	1	5.6	9	50.37
		07SC012	24-Aug-20	308	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	106.26	0	0	2	106.26
		07SC022	23-Aug-20	379	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	26.39	0	0	1	26.39
	Session Summary			**634.5**	**17.00**	**0**	**0**	**0**	**0**	**2**	**0.67**	**0**	**0**	**0**	**0**	**0**	**0**	**34**	**11.35**	**2**	**0.67**	**3**	**1**	**0**	**0**	**96**	**32.04**	**6**	**2**	**143**	**47.73**
Section 7	2	0701	29-Aug-20	565	0.78	0	0	0	0	0	0	0	0	0	0	0	0	2	16.23	0	0	1	8.12	0	0	16	129.87	0	0	19	154.22
		0702	29-Aug-20	491	0.95	0	0	0	0	0	0	0	0	0	0	0	0	6	46.31	0	0	0	0	0	0	2	15.44	0	0	8	61.74
		0703	29-Aug-20	648	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	29.24	1	5.85	6	35.09
		0704	30-Aug-20	538	1.00	0	0	0	0	0	0	0	0	0	0	0	0	5	33.46	0	0	0	0	0	0	2	13.38	1	6.69	8	53.53
		0705	30-Aug-20	569	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6.33	0	0	1	6.33
		0706	30-Aug-20	712	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	10.11	0	0	0	0	0	0	0	0	0	0	2	10.11
		0707	30-Aug-20	642	0.98	0	0	0	0	0	0	0	0	0	0	0	0	1	5.72	0	0	0	0	0	0	15	85.83	0	0	16	91.55
		0708	29-Aug-20	673	1.24	0	0	0	0	1	4.31	0	0	0	0	0	0	0	0	0	0	1	4.31	0	0	1	4.31	1	4.31	4	17.26
		0709	29-Aug-20	610	1.00	0	0	0	0	0	0	0	0	0	0	0	0	10	59.02	0	0	0	0	0	0	22	129.84	0	0	32	188.85
		0710	30-Aug-20	828	1.40	0	0	0	0	0	0	0	0	0	0	0	0	5	15.53	0	0	0	0	0	0	21	65.22	0	0	26	80.75
		0711	30-Aug-20	827	1.39	0	0	0	0	0	0	0	0	0	0	0	0	15	46.98	0	0	0	0	0	0	3	9.4	0	0	18	56.37
		0712	30-Aug-20	670	1.06	0	0	0	0	0	0	0	0	0	0	0	0	8	40.36	0	0	0	0	0	0	5	25.23	0	0	13	65.59
		0713	30-Aug-20	571	0.98	0	0	0	0	0	0	0	0	0	0	0	0	6	38.6	0	0	0	0	0	0	3	19.3	0	0	9	57.9
		0714	30-Aug-20	720	1.27	0	0	0	0	0	0	0	0	0	0	0	0	4	15.69	0	0	0	0	1	3.92	5	19.61	0	0	10	39.22
		07BEA01	29-Aug-20	633	0.43	0	0	0	0	1	13.23	0	0	0	0	0	0	0	0	0	0	1	13.23	0	0	3	39.68	2	26.45	7	92.58
		07BEA02	29-Aug-20	222	0.60	0	0	0	0	1	27.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	27.03	0	0	2	54.05
		07KIS01	30-Aug-20	611	0.88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	20.09	0	0	3	20.09	2	13.39	8	53.56
		07SC012	30-Aug-20	315	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	155.84	0	0	3	155.84
		07SC022	30-Aug-20	336	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	29.76	0	0	1	29.76
	Session Summary			**588.5**	**18.00**	**0**	**0**	**0**	**0**	**3**	**1.02**	**0**	**0**	**0**	**0**	**0**	**0**	**64**	**21.75**	**0**	**0**	**6**	**2.04**	**1**	**0.34**	**112**	**38.06**	**7**	**2.38**	**193**	**65.59**
Section 7	3	0701	14-Sep-20	560	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	40.95	0	0	5	40.95
		0702	15-Sep-20	629	0.95	1	6.02	1	6.02	0	0	0	0	0	0	0	0	6	36.15	0	0	0	0	0	0	5	30.12	1	6.02	14	84.34
		0703	15-Sep-20	812	0.95	0	0	0	0	0	0	0	0	0	0	0	0	8	37.33	0	0	0	0	0	0	12	56	0	0	20	93.34
		0704	15-Sep-20	633	1.00	0	0	0	0	0	0	0	0	0	0	0	0	7	39.81	0	0	0	0	0	0	4	22.75	0	0	11	62.56
		0705	15-Sep-20	640	1.00	0	0	0	0	0	0	0	0	0	0	0	0	5	28.12	0	0	0	0	0	0	0	0	0	0	5	28.12
		0706	15-Sep-20	913	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	7.89	0	0	1	3.94	0	0	0	0	0	0	3	11.83
		0707	16-Sep-20	604	0.98	0	0	0	0	0	0	0	0	0	0	0	0	4	24.33	0	0	0	0	0	0	5	30.41	0	0	9	54.74
		0708	15-Sep-20	597	1.24	0	0	0	0	0	0	0	0	0	0	0	0	2	9.73	0	0	2	9.73	0	0	0	0	0	0	4	19.45
		0709	15-Sep-20	696	1.00	0	0	0	0	0	0	0	0	0	0	0	0	3	15.52	0	0	0	0	0	0	18	93.1	0	0	21	108.62
		0710	15-Sep-20	943	1.40	0	0	1	2.73	0	0	0	0	0	0	0	0	1	2.73	0	0	0	0	0	0	5	13.63	0	0	7	19.09
		0711	16-Sep-20	920	1.39	0	0	0	0	0	0	0	0	0	0	0	0	13	36.6	0	0	0	0	0	0	5	14.08	0	0	18	50.67
		0712	16-Sep-20	851	1.06	0	0	0	0	0	0	0	0	0	0	0	0	3	11.92	0	0	1	3.97	0	0	18	71.5	0	0	22	87.39
		0713	16-Sep-20	629	0.98	0	0	0	0	0	0	0	0	0	0	0	0	10	58.4	0	0	1	5.84	0	0	7	40.88	2	11.68	20	116.8
		0714	16-Sep-20	944	1.27	0	0	0	0	0	0	0	0	0	0	0	0	9	26.92	0	0	0	0	1	2.99	12	35.89	1	2.99	23	68.79
		07BEA01	14-Sep-20	360	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	93.02	0	0	4	93.02
		07BEA02	14-Sep-20	477	0.60	0	0	0	0	0	0	0	0	0	0	0	0	2	25.16	0	0	0	0	0	0	0	0	0	0	2	25.16
		07KIS01	16-Sep-20	389	0.56	0	0	1	16.53	0	0	0	0	0	0	0	0	1	16.53	0	0	0	0	0	0	18	297.47	1	16.53	21	347.04
		07SC012	16-Sep-20	483	0.22	0	0	0	0	0	0	0	0	0	0	0	0	1	33.88	0	0	0	0	0	0	3	101.64	1	33.88	5	169.4
		07SC022	15-Sep-20	407	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	24.57	0	0	0	0	0	0	1	24.57
	Session Summary			**657.2**	**17.00**	**1**	**0.32**	**3**	**0.97**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**77**	**24.81**	**0**	**0**	**6**	**1.93**	**1**	**0.32**	**121**	**38.99**	**6**	**1.93**	**215**	**69.28**

Table E3 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h)																									
						Arctic Grayling		Bull Trout		Burbot		Goldeye		Kokanee		Lake Trout		Mountain Whitefish		Northern Pike		Northern Pikeminnow		Rainbow Trout		Sucker spp.		Walleye		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 7	4	0701	25-Sep-20	642	0.78	0	0	0	0	0	0	0	0	0	0	0	0	1	7.14	0	0	0	0	0	0	11	78.58	0	0	12	85.72
		0702	25-Sep-20	577	0.95	0	0	0	0	0	0	0	0	0	0	0	0	9	59.11	0	0	0	0	0	0	8	52.54	1	6.57	18	118.22
		0703	25-Sep-20	761	0.95	0	0	0	0	0	0	0	0	0	0	0	0	4	19.92	0	0	0	0	0	0	8	39.84	1	4.98	13	64.73
		0704	25-Sep-20	743	1.00	0	0	0	0	0	0	0	0	0	0	0	0	9	43.61	0	0	0	0	0	0	19	92.06	0	0	28	135.67
		0705	25-Sep-20	657	1.00	0	0	0	0	0	0	0	0	0	0	0	0	4	21.92	0	0	0	0	0	0	0	0	1	5.48	5	27.4
		0706	25-Sep-20	928	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7.76	0	0	5	19.4	1	3.88	8	31.03
		0707	26-Sep-20	521	0.98	0	0	0	0	0	0	0	0	0	0	0	0	6	42.3	0	0	0	0	0	0	9	63.46	0	0	15	105.76
		0708	25-Sep-20	731	1.24	0	0	0	0	0	0	0	0	0	0	0	0	3	11.91	0	0	0	0	0	0	5	19.86	5	19.86	13	51.63
		0709	25-Sep-20	705	1.00	0	0	0	0	0	0	0	0	0	0	0	0	5	25.53	0	0	0	0	0	0	11	56.17	1	5.11	17	86.81
		0710	26-Sep-20	844	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	27.42	1	3.05	10	30.47
		0711	26-Sep-20	831	1.39	1	3.12	0	0	0	0	0	0	0	0	0	0	15	46.75	0	0	0	0	0	0	10	31.17	0	0	26	81.03
		0712	26-Sep-20	696	1.06	0	0	1	4.86	0	0	0	0	0	0	0	0	4	19.43	0	0	0	0	0	0	7	34	1	4.86	13	63.14
		0713	26-Sep-20	495	0.98	0	0	0	0	0	0	0	0	0	0	0	0	6	44.53	0	0	0	0	0	0	11	81.63	0	0	17	126.16
		0714	26-Sep-20	771	1.27	0	0	0	0	0	0	0	0	0	0	0	0	3	10.99	0	0	0	0	0	0	13	47.61	0	0	16	58.59
		07BEA01	26-Sep-20	364	0.39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07BEA02	25-Sep-20	316	0.50	0	0	0	0	0	0	0	0	0	0	0	0	1	22.78	0	0	0	0	0	0	0	0	0	0	1	22.78
		07KIS01	26-Sep-20	360	0.57	0	0	1	17.54	0	0	0	0	0	0	0	0	2	35.09	0	0	0	0	0	0	2	35.09	1	17.54	6	105.26
		07SC012	26-Sep-20	377	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	86.81	0	0	2	86.81
		07SC022	25-Sep-20	510	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	117.65	1	19.61	7	137.25
	Session Summary			**622.6**	**17.00**	**1**	**0.34**	**2**	**0.68**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**72**	**24.49**	**0**	**0**	**2**	**0.68**	**0**	**0**	**136**	**46.26**	**14**	**4.76**	**227**	**77.21**
Section 7	5	0701	29-Sep-20	611	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	105.08	1	7.51	15	112.59
		0702	29-Sep-20	589	0.95	0	0	1	6.43	0	0	0	0	0	0	0	0	15	96.51	0	0	0	0	1	6.43	6	38.6	0	0	23	147.98
		0703	29-Sep-20	754	0.95	0	0	0	0	0	0	0	0	0	0	0	0	9	45.23	0	0	0	0	0	0	5	25.13	1	5.03	15	75.39
		0704	29-Sep-20	719	1.00	0	0	0	0	0	0	0	0	0	0	0	0	4	20.03	0	0	0	0	0	0	18	90.13	0	0	22	110.15
		0705	30-Sep-20	688	1.00	1	5.23	0	0	0	0	0	0	0	0	0	0	6	31.4	0	0	0	0	0	0	3	15.7	0	0	10	52.33
		0706	30-Sep-20	965	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7.46	0	0	8	29.84	0	0	10	37.31
		0707	30-Sep-20	570	0.98	0	0	0	0	0	0	0	0	0	0	0	0	8	51.56	0	0	0	0	0	0	13	83.78	0	0	21	135.34
		0708	29-Sep-20	678	1.24	0	0	0	0	0	0	0	0	0	0	0	0	6	25.69	0	0	2	8.56	0	0	1	4.28	0	0	9	38.54
		0709	29-Sep-20	747	1.00	0	0	0	0	0	0	0	0	0	0	0	0	6	28.92	0	0	0	0	0	0	7	33.73	2	9.64	15	72.29
		0710	30-Sep-20	960	1.12	0	0	1	3.35	0	0	0	0	0	0	0	0	2	6.7	0	0	0	0	0	0	11	36.83	2	6.7	16	53.57
		0711	30-Sep-20	952	1.39	0	0	0	0	0	0	0	0	0	0	0	0	17	46.25	0	0	0	0	0	0	12	32.65	0	0	29	78.89
		0712	30-Sep-20	751	1.06	0	0	0	0	0	0	0	0	0	0	0	0	5	22.51	0	0	0	0	0	0	12	54.01	0	0	17	76.52
		0713	30-Sep-20	546	0.98	0	0	0	0	0	0	0	0	0	0	0	0	14	94.19	0	0	1	6.73	0	0	12	80.74	0	0	27	181.66
		0714	30-Sep-20	920	1.27	0	0	1	3.07	0	0	0	0	0	0	0	0	12	36.83	0	0	0	0	0	0	9	27.62	1	3.07	23	70.59
		07BEA01	29-Sep-20	433	0.23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	108.44	3	108.44
		07KIS01	30-Sep-20	411	0.56	0	0	0	0	0	0	0	0	0	0	0	0	1	15.5	0	0	0	0	0	0	3	46.51	0	0	4	62.01
		07SC012	30-Sep-20	447	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	109.82	0	0	3	109.82
		07SC022	30-Sep-20	480	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	20.83	0	0	0	0	0	0	0	0	1	20.83
	Session Summary			**678.9**	**16.00**	**1**	**0.33**	**3**	**0.99**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**105**	**34.8**	**1**	**0.33**	**5**	**1.66**	**1**	**0.33**	**137**	**45.4**	**10**	**3.31**	**263**	**87.16**
Section 7	6	0701	04-Oct-20	590	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	62.18	0	0	8	62.18
		0702	04-Oct-20	541	0.95	0	0	0	0	0	0	0	0	0	0	0	0	10	70.05	0	0	1	7	0	0	10	70.05	0	0	21	147.1
		0703	04-Oct-20	666	0.95	0	0	0	0	0	0	0	0	0	0	0	0	5	28.45	0	0	0	0	0	0	9	51.21	1	5.69	15	85.35
		0704	06-Oct-20	573	1.00	0	0	0	0	0	0	0	0	0	0	0	0	7	43.98	0	0	0	0	0	0	12	75.39	2	12.57	21	131.94
		0705	04-Oct-20	602	1.00	0	0	0	0	0	0	0	0	0	0	0	0	4	23.92	0	0	1	5.98	0	0	1	5.98	0	0	6	35.88
		0706	04-Oct-20	808	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	4.46	0	0	1	4.46	0	0	5	22.28	0	0	7	31.19
		0707	06-Oct-20	519	0.98	0	0	0	0	0	0	0	0	0	0	0	0	5	35.39	0	0	0	0	0	0	4	28.31	1	7.08	10	70.78
		0708	04-Oct-20	658	1.24	1	4.41	1	4.41	0	0	0	0	0	0	0	0	6	26.47	0	0	0	0	0	0	1	4.41	2	8.82	11	48.53
		0709	04-Oct-20	615	1.00	0	0	0	0	0	0	0	0	0	0	0	0	4	23.41	0	0	1	5.85	0	0	13	76.1	0	0	18	105.37
		0710	06-Oct-20	795	1.40	0	0	0	0	0	0	0	0	0	0	0	0	5	16.17	0	0	0	0	0	0	8	25.88	0	0	13	42.05
		0711	06-Oct-20	819	1.39	0	0	0	0	0	0	0	0	0	0	0	0	16	50.6	0	0	0	0	0	0	20	63.25	2	6.32	38	120.17
		0712	06-Oct-20	752	1.06	0	0	0	0	0	0	0	0	0	0	0	0	8	35.96	0	0	0	0	0	0	14	62.93	3	13.49	25	112.38
		0713	06-Oct-20	525	0.98	1	7	0	0	0	0	0	0	0	0	0	0	7	48.98	0	0	0	0	0	0	8	55.98	0	0	16	111.95
		0714	06-Oct-20	836	1.27	0	0	1	3.38	0	0	0	0	0	0	0	0	9	30.4	0	0	0	0	0	0	11	37.15	1	3.38	22	74.3
		07BEA01	06-Oct-20	1008	0.38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9.4	18	169.17	19	178.57
		07BEA02	04-Oct-20	171	0.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	46.78	2	93.57	3	140.35
		07KIS01	06-Oct-20	329	1.00	0	0	0	0	0	0	0	0	0	0	0	0	7	76.6	0	0	0	0	0	0	4	43.77	0	0	11	120.36
		07SC012	06-Oct-20	355	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	230.47	0	0	5	230.47
		07SC022	04-Oct-20	383	0.36	0	0	1	26.11	0	0	0	0	0	0	0	0	0	0	0	0	1	26.11	0	0	2	52.22	0	0	4	104.44
	Session Summary			**607.6**	**17.00**	**2**	**0.7**	**3**	**1.05**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**94**	**32.76**	**0**	**0**	**5**	**1.74**	**0**	**0**	**137**	**47.75**	**32**	**11.15**	**273**	**95.15**
Section Total All Samples				**70684**	**102.17**	**5**	**0**	**11**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**446**	**0**	**3**	**0**	**27**	**0**	**3**	**0**	**739**	**0**	**75**	**0**	**1314**	**0**
Section Average All Samples				**631**	**0.91**	**0**	**0.28**	**0**	**0.61**	**0**	**0.28**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**24.9**	**0**	**0.17**	**0**	**1.51**	**0**	**0.17**	**7**	**41.26**	**1**	**4.19**	**12**	**73.37**
Section Standard Error of Mean						**0.02**	**0.1**	**0.03**	**0.33**	**0.02**	**0.29**	**0**	**0**	**0**	**0**	**0**	**0**	**0.4**	**2.03**	**0.02**	**0.2**	**0.05**	**0.43**	**0.02**	**0.07**	**0.54**	**4.28**	**0.18**	**1.99**	**0.79**	**5**

Table E3 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h)																									
						Arctic Grayling		Bull Trout		Burbot		Goldeye		Kokanee		Lake Trout		Mountain Whitefish		Northern Pike		Northern Pikeminnow		Rainbow Trout		Sucker spp.		Walleye		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 9	1	0901	27-Aug-20	628	1.10	0	0	0	0	1	5.21	0	0	0	0	0	0	1	5.21	0	0	0	0	0	0	0	0	1	5.21	3	15.63
		0903	27-Aug-20	552	1.10	0	0	0	0	0	0	0	0	0	0	0	0	2	11.86	0	0	0	0	0	0	7	41.5	1	5.93	10	59.29
		0904	27-Aug-20	587	1.10	0	0	0	0	0	0	0	0	0	0	0	0	3	16.73	0	0	0	0	0	0	2	11.15	1	5.58	6	33.45
		0905	27-Aug-20	674	1.10	0	0	0	0	1	4.86	1	4.86	0	0	0	0	0	0	0	0	0	0	0	0	5	24.28	0	0	7	33.99
		0906	27-Aug-20	806	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	62.53	0	0	14	62.53
		0907	28-Aug-20	800	1.20	0	0	0	0	0	0	0	0	0	0	0	0	3	11.25	0	0	1	3.75	0	0	15	56.25	0	0	19	71.25
		0908	28-Aug-20	705	1.10	0	0	0	0	0	0	0	0	0	0	0	0	4	18.57	0	0	1	4.64	0	0	14	64.99	1	4.64	20	92.84
		0909	28-Aug-20	597	0.95	0	0	0	0	0	0	0	0	0	0	0	0	3	19.04	0	0	0	0	0	0	21	133.3	1	6.35	25	158.69
		0910	27-Aug-20	882	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	37.11	0	0	10	37.11
		0911	28-Aug-20	594	1.00	0	0	0	0	0	0	0	0	0	0	0	0	3	18.18	1	6.06	0	0	0	0	15	90.91	0	0	19	115.15
		0912	28-Aug-20	661	1.10	0	0	0	0	0	0	0	0	0	0	0	0	2	9.9	0	0	0	0	0	0	13	64.37	0	0	15	74.27
		0914	28-Aug-20	445	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	25.55	0	0	3	25.55
		09SC053	27-Aug-20	441	0.26	0	0	0	0	0	0	1	31.4	0	0	0	0	0	0	0	0	0	0	0	0	4	125.59	0	0	5	156.99
	Session Summary			**644**	**13.00**	**0**	0	**0**	0	**2**	0.86	**2**	0.86	**0**	0	**0**	0	**21**	9.03	**1**	0.43	**2**	0.86	**0**	0	**123**	52.89	**5**	2.15	**156**	67.08
Section 9	2	0901	07-Sep-20	744	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	4.4	0	0	0	0	0	0	2	8.8	0	0	3	13.2
		0903	07-Sep-20	773	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.23	0	0	13	55.04	0	0	14	59.27
		0904	07-Sep-20	741	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	4.42	0	0	0	0	0	0	4	17.67	1	4.42	6	26.5
		0905	07-Sep-20	774	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	4.23	0	0	0	0	0	0	9	38.05	0	0	10	42.28
		0906	07-Sep-20	721	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9.99	0	0	2	9.99
		0907	02-Sep-20	720	1.20	1	4.17	0	0	0	0	0	0	0	0	0	0	2	8.33	0	0	0	0	0	0	17	70.83	0	0	20	83.33
		0908	02-Sep-20	593	1.10	0	0	1	5.52	0	0	0	0	0	0	0	0	2	11.04	0	0	0	0	0	0	29	160.05	4	22.08	36	198.68
		0909	02-Sep-20	508	0.95	0	0	0	0	0	0	0	0	0	0	0	0	1	7.46	0	0	1	7.46	0	0	26	193.95	1	7.46	29	216.33
		0910	07-Sep-20	1036	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6.32	0	0	2	6.32
		0911	02-Sep-20	521	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	13.82	0	0	1	6.91	0	0	15	103.65	3	20.73	21	145.11
		0912	02-Sep-20	648	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	5.05	0	0	0	0	0	0	7	35.35	0	0	8	40.4
		0913	02-Sep-20	584	0.90	0	0	0	0	0	0	0	0	0	0	0	0	1	6.85	0	0	0	0	0	0	1	6.85	0	0	2	13.7
		09SC061	07-Sep-20	329	0.62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	17.79	1	17.79
	Session Summary			**668.6**	**13.00**	**1**	0.41	**1**	0.41	**0**	0	**0**	0	**0**	0	**0**	0	**12**	4.97	**0**	0	**3**	1.24	**0**	0	**127**	52.6	**10**	4.14	**154**	63.78
Section 9	3	0901	16-Sep-20	654	1.10	0	0	0	0	1	5	0	0	0	0	0	0	12	60.05	0	0	0	0	0	0	11	55.05	0	0	24	120.1
		0902	16-Sep-20	696	1.00	0	0	2	10.34	0	0	1	5.17	0	0	0	0	2	10.34	0	0	1	5.17	0	0	4	20.69	0	0	10	51.72
		0903	16-Sep-20	706	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	23.18	1	4.64	6	27.81
		0904	16-Sep-20	730	1.10	0	0	0	0	0	0	0	0	0	0	0	0	4	17.93	0	0	0	0	0	0	9	40.35	0	0	13	58.28
		0905	16-Sep-20	796	1.10	0	0	0	0	0	0	0	0	0	0	0	0	4	16.45	0	0	0	0	0	0	1	4.11	0	0	5	20.56
		0906	16-Sep-20	692	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5.2	0	0	1	5.2
		0907	16-Sep-20	836	1.20	0	0	0	0	0	0	0	0	0	0	0	0	3	10.77	0	0	0	0	0	0	9	32.3	0	0	12	43.06
		0908	16-Sep-20	763	1.10	0	0	0	0	0	0	0	0	0	0	0	0	6	25.74	0	0	0	0	0	0	18	77.21	0	0	24	102.94
		0909	16-Sep-20	656	0.95	0	0	0	0	0	0	0	0	0	0	0	0	2	11.55	0	0	0	0	0	0	3	17.33	0	0	5	28.88
		0911	16-Sep-20	596	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	12.08	0	0	0	0	0	0	15	90.6	0	0	17	102.68
		0912	17-Sep-20	571	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10.51	0	0	1	10.51	1	10.51	3	31.52
		0913	17-Sep-20	802	0.90	0	0	1	4.99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.99	0	0	2	9.98
		0914	17-Sep-20	630	0.95	0	0	0	0	0	0	0	0	0	0	0	0	1	6.02	0	0	0	0	0	0	1	6.02	0	0	2	12.03
		09SC061	17-Sep-20	841	0.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	19.02	0	0	3	19.02
	Session Summary			**712.1**	**14.00**	**0**	0	**3**	1.08	**1**	0.36	**1**	0.36	**0**	0	**0**	0	**36**	13	**0**	0	**2**	0.72	**0**	0	**82**	29.61	**2**	0.72	**127**	45.86

Table E3 Concluded.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h) Arctic Grayling No.	Arctic Grayling CPUE	Bull Trout No.	Bull Trout CPUE	Burbot No.	Burbot CPUE	Goldeye No.	Goldeye CPUE	Kokanee No.	Kokanee CPUE	Lake Trout No.	Lake Trout CPUE	Mountain Whitefish No.	Mountain Whitefish CPUE	Northern Pike No.	Northern Pike CPUE	Northern Pikeminnow No.	Northern Pikeminnow CPUE	Rainbow Trout No.	Rainbow Trout CPUE	Sucker spp. No.	Sucker spp. CPUE	Walleye No.	Walleye CPUE	All Species No.	All Species CPUE
Section 9	4	0901	24-Sep-20	652	1.10	0	0	0	0	0	0	0	0	0	0	0	0	4	20.08	0	0	0	0	0	0	5	25.1	0	0	9	45.18
		0902	24-Sep-20	785	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	4.59	0	0	1	4.59	0	0	8	36.69	0	0	10	45.86
		0903	24-Sep-20	753	1.10	0	0	0	0	0	0	0	0	0	0	0	0	4	17.39	0	0	0	0	0	0	9	39.12	1	4.35	14	60.85
		0904	24-Sep-20	826	1.10	0	0	0	0	0	0	0	0	1	3.96	0	0	4	15.85	0	0	0	0	0	0	8	31.7	1	3.96	14	55.47
		0905	24-Sep-20	819	1.10	0	0	0	0	0	0	0	0	0	0	0	0	5	19.98	0	0	0	0	0	0	13	51.95	2	7.99	20	79.92
		0906	24-Sep-20	731	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	4.92	0	0	0	0	0	0	1	4.92	1	4.92	3	14.77
		0907	24-Sep-20	863	1.20	0	0	0	0	0	0	0	0	0	0	0	0	4	13.9	0	0	0	0	0	0	20	69.52	1	3.48	25	86.91
		0908	25-Sep-20	856	1.10	0	0	1	3.82	0	0	0	0	0	0	0	0	14	53.53	0	0	0	0	0	0	9	34.41	0	0	24	91.76
		0909	25-Sep-20	725	0.95	0	0	0	0	0	0	0	0	0	0	0	0	4	20.91	0	0	0	0	0	0	11	57.5	0	0	15	78.4
		0910	24-Sep-20	1019	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	3.21	0	0	0	0	0	0	5	16.06	0	0	6	19.27
		0911	25-Sep-20	743	1.00	0	0	0	0	0	0	0	0	0	0	0	0	6	29.07	0	0	0	0	0	0	34	164.74	2	9.69	42	203.5
		0913	25-Sep-20	653	0.90	0	0	0	0	0	0	0	0	0	0	0	0	3	18.38	0	0	0	0	0	0	11	67.38	0	0	14	85.76
		0914	25-Sep-20	538	0.95	0	0	0	0	0	0	0	0	0	0	0	0	1	7.04	0	0	0	0	0	0	3	21.13	1	7.04	5	35.22
		09SC061	25-Sep-20	802	0.68	0	0	0	0	1	6.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	26.6	1	6.65	6	39.9
	Session Summary			**768.9**	**14.00**	**0**	**0**	**1**	**0.33**	**1**	**0.33**	**0**	**0**	**1**	**0.33**	**0**	**0**	**52**	**17.39**	**0**	**0**	**1**	**0.33**	**0**	**0**	**141**	**47.15**	**10**	**3.34**	**207**	**69.23**
Section 9	5	0901	01-Oct-20	769	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	4.26	0	0	0	0	0	0	1	4.26	0	0	2	8.51
		0902	01-Oct-20	762	1.00	0	0	0	0	0	0	0	0	0	0	0	0	3	14.17	0	0	0	0	0	0	1	4.72	0	0	4	18.9
		0903	01-Oct-20	343	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	29.15	0	0	1	29.15
		0904	01-Oct-20	826	0.98	0	0	0	0	0	0	0	0	0	0	0	0	3	13.34	0	0	0	0	0	0	2	8.89	0	0	5	22.24
		0907	01-Oct-20	965	1.20	0	0	0	0	0	0	0	0	0	0	0	0	2	6.22	0	0	0	0	0	0	6	18.65	0	0	8	24.87
		0908	01-Oct-20	654	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0	1	5
		0909	01-Oct-20	843	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.5	1	4.5	2	8.99
		0910	01-Oct-20	962	1.10	0	0	1	3.4	0	0	0	0	0	0	0	0	0	0	0	0	1	3.4	0	0	1	3.4	0	0	3	10.21
		0911	01-Oct-20	857	1.00	0	0	0	0	0	0	1	4.2	0	0	0	0	5	21	0	0	0	0	0	0	14	58.81	0	0	20	84.01
		0913	01-Oct-20	425	0.80	0	0	0	0	0	0	0	0	0	0	0	0	1	10.59	0	0	0	0	0	0	0	0	0	0	1	10.59
	Session Summary			**740.6**	**10.00**	**0**	**0**	**1**	**0.49**	**0**	**0**	**1**	**0.49**	**0**	**0**	**0**	**0**	**15**	**7.29**	**0**	**0**	**1**	**0.49**	**0**	**0**	**28**	**13.61**	**1**	**0.49**	**47**	**22.85**
Section 9	6	0901	07-Oct-20	758	1.10	0	0	0	0	0	0	0	0	0	0	0	0	5	21.59	0	0	1	4.32	0	0	7	30.22	0	0	13	56.13
		0902	07-Oct-20	649	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	5.55	0	0	0	0	0	0	11	61.02	0	0	12	66.56
		0903	07-Oct-20	674	1.10	0	0	0	0	0	0	0	0	1	4.86	0	0	1	4.86	0	0	0	0	0	0	5	24.28	0	0	7	33.99
		0904	07-Oct-20	668	1.10	0	0	0	0	0	0	0	0	0	0	0	0	4	19.6	0	0	0	0	0	0	2	9.8	0	0	6	29.4
		0905	07-Oct-20	890	1.10	0	0	1	3.68	0	0	0	0	0	0	0	0	6	22.06	0	0	0	0	0	0	13	47.8	0	0	20	73.54
		0906	07-Oct-20	971	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	22.25	0	0	6	22.25
		0907	07-Oct-20	935	1.20	0	0	1	3.21	1	3.21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	12.83	2	6.42	8	25.67
		0908	07-Oct-20	688	1.10	0	0	0	0	0	0	0	0	0	0	0	0	6	28.54	0	0	0	0	0	0	14	66.6	0	0	20	95.14
		0909	07-Oct-20	723	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	41.93	1	5.24	9	47.17
		0910	07-Oct-20	832	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	3.93	0	0	0	0	0	0	5	19.67	0	0	6	23.6
		0911	07-Oct-20	593	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	12.14	0	0	0	0	0	0	9	54.64	0	0	11	66.78
		0912	07-Oct-20	601	0.62	0	0	0	0	0	0	0	0	0	0	0	0	1	9.66	0	0	0	0	0	0	11	106.27	1	9.66	13	125.6
		0913	07-Oct-20	628	0.90	0	0	0	0	0	0	0	0	0	0	0	0	2	12.74	0	0	0	0	0	0	3	19.11	0	0	5	31.85
		0914	07-Oct-20	552	0.95	0	0	0	0	0	0	0	0	0	0	0	0	2	13.73	0	0	0	0	0	0	8	54.92	0	0	10	68.65
		09SC061	07-Oct-20	463	0.48	0	0	0	0	0	0	0	0	0	0	0	0	2	32.74	0	0	0	0	0	0	1	16.37	0	0	3	49.11
	Session Summary			**708.3**	**15.00**	**0**	**0**	**2**	**0.68**	**1**	**0.34**	**0**	**0**	**1**	**0.34**	**0**	**0**	**33**	**11.18**	**0**	**0**	**1**	**0.34**	**0**	**0**	**107**	**36.26**	**4**	**1.36**	**149**	**50.49**
Section Total All Samples				**55829**	**78.76**	**1**	**0**	**8**	**0**	**5**	**0**	**4**	**0**	**2**	**0**	**0**	**0**	**169**	**0**	**1**	**0**	**10**	**0**	**0**	**0**	**608**	**0**	**32**	**0**	**840**	**0**
Section Average All Samples				**707**	**1.00**	**0**	**0.06**	**0**	**0.52**	**0**	**0.32**	**0**	**0.26**	**0**	**0.13**	**0**	**0**	**2**	**10.93**	**0**	**0.06**	**0**	**0.65**	**0**	**0**	**8**	**39.31**	**0**	**2.07**	**11**	**54.31**
Section Standard Error of Mean						**0.01**	**0.05**	**0.04**	**0.18**	**0.03**	**0.14**	**0.02**	**0.41**	**0.02**	**0.08**	**0**	**0**	**0.28**	**1.27**	**0.01**	**0.08**	**0.04**	**0.22**	**0**	**0**	**0.78**	**4.5**	**0.08**	**0.52**	**0.97**	**5.32**
All Sections Total All Samples				**378150**	**568.64**	**37**	**0**	**187**	**0**	**16**	**0**	**4**	**0**	**48**	**0**	**1**	**0**	**8667**	**0.15**	**21**	**0**	**178**	**0**	**129**	**0**	**4708**	**0.08**	**225**	**0**	**14221**	**0.24**
All Sections Average All Samples						**0**	**0.36**	**0**	**1.8**	**0**	**0.15**	**0**	**0.04**	**0**	**0.46**	**0**	**0.01**	**15**	**83.29**	**0**	**0.2**	**0**	**1.71**	**0**	**1.24**	**8**	**45.24**	**0**	**2.16**	**25**	**136.66**
All Sections Standard Error of Mean						**0.01**	**0.05**	**0.03**	**0.18**	**0.01**	**0.07**	**0**	**0.06**	**0.01**	**0.14**	**0**	**0.03**	**0.89**	**8.81**	**0.01**	**0.09**	**0.03**	**0.17**	**0.03**	**0.19**	**0.37**	**2.13**	**0.04**	**0.43**	**1.02**	**9.08**

Table E4 Summary of boat electroshocking small-bodied catch (only includes fish captured and identified to species) and catch-per-unit-effort (CPUE = no. fish/km/hour) in the Peace River, 21 August to 07 October 2020.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h)																			
						Flathead Chub		Lake Chub		Peamouth		Redside Shiner		Sculpin spp.		Shiner spp.		Spottail Shiner		Troutperch		Yellow Perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 1	1	0101	22-Aug-20	240	0.60	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0102	22-Aug-20	286	0.98	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0103	22-Aug-20	553	1.20	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0104	22-Aug-20	318	0.50	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0105	22-Aug-20	326	1.10	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0107	21-Aug-20	355	0.55	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0108	21-Aug-20	458	0.85	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0109	21-Aug-20	448	0.98	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0110	21-Aug-20	634	0.65	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0111	21-Aug-20	621	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0112	21-Aug-20	519	1.07	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0113	21-Aug-20	319	0.75	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0114	21-Aug-20	522	0.95	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0116	21-Aug-20	432	0.98	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0119	22-Aug-20	306	0.84	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
	Session Summary			**422.5**	**13.00**	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***
Section 1	2	0101	29-Aug-20	223	0.60	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0102	29-Aug-20	296	0.98	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0103	29-Aug-20	620	1.20	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0104	29-Aug-20	299	0.50	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0105	29-Aug-20	399	1.10	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0107	01-Sep-20	335	0.55	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0108	29-Aug-20	492	0.85	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0109	29-Aug-20	460	0.98	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0110	01-Sep-20	480	0.65	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0111	01-Sep-20	565	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0112	01-Sep-20	535	1.07	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0113	01-Sep-20	400	0.75	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0114	01-Sep-20	505	0.95	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0116	01-Sep-20	491	0.98	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0119	29-Aug-20	395	0.75	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
	Session Summary			**433**	**13.00**	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***
Section 1	3	0101	10-Sep-20	249	0.60	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0102	10-Sep-20	319	0.98	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0103	09-Sep-20	711	1.20	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0104	10-Sep-20	400	0.40	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0105	09-Sep-20	472	0.98	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0107	10-Sep-20	475	0.55	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0108	11-Sep-20	708	0.85	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0109	11-Sep-20	545	0.98	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0110	10-Sep-20	515	0.65	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0111	11-Sep-20	606	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0112	11-Sep-20	543	1.01	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0113	11-Sep-20	398	0.75	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0114	11-Sep-20	512	0.95	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0116	11-Sep-20	536	0.98	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0119	10-Sep-20	505	0.75	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
	Session Summary			**499.6**	**13.00**	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***

Table E4 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h)																			
						Flathead Chub		Lake Chub		Peamouth		Redside Shiner		Sculpin spp.		Shiner spp.		Spottail Shiner		Troutperch		Yellow Perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 1	4	0101	18-Sep-20	303	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0102	18-Sep-20	355	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0103	18-Sep-20	785	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0104	18-Sep-20	426	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0105	18-Sep-20	535	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0107	19-Sep-20	450	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0108	20-Sep-20	679	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0109	20-Sep-20	624	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0110	19-Sep-20	502	0.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0111	19-Sep-20	694	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0112	19-Sep-20	703	1.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0113	20-Sep-20	421	0.75	0	0	0	0	0	0	0	0	1	11.4	0	0	0	0	0	0	0	0	1	11.4
		0114	22-Sep-20	483	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0116	22-Sep-20	581	0.98	0	0	0	0	0	0	0	0	1	6.29	0	0	0	0	0	0	0	0	1	6.29
		0119	19-Sep-20	547	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**539.2**	**13.00**	**0**	0	**0**	0	**0**	0	**0**	0	**2**	1.03	**0**	0	**0**	0	**0**	0	**0**	0	**2**	1.03
Section 1	5	0101	26-Sep-20	272	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0102	26-Sep-20	364	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0103	26-Sep-20	904	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0104	26-Sep-20	393	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0105	26-Sep-20	550	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0107	26-Sep-20	512	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0108	27-Sep-20	711	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0109	27-Sep-20	663	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0110	26-Sep-20	628	0.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0111	27-Sep-20	830	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0112	27-Sep-20	845	1.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0113	27-Sep-20	381	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0114	27-Sep-20	598	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0116	27-Sep-20	562	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0119	26-Sep-20	535	0.63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**583.2**	**13.00**	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0
Section 1	6	0101	04-Oct-20	258	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0102	03-Oct-20	420	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0103	03-Oct-20	961	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0104	03-Oct-20	432	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0105	04-Oct-20	541	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0107	03-Oct-20	672	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0108	03-Oct-20	819	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0109	03-Oct-20	739	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0110	03-Oct-20	755	0.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0111	03-Oct-20	651	0.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0112	03-Oct-20	770	1.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0113	03-Oct-20	462	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0114	03-Oct-20	666	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0116	03-Oct-20	514	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0119	03-Oct-20	832	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**632.8**	**12.00**	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0
Section Total All Samples				**46654**	**76.56**	**0**	0	**0**	0	**0**	0	**0**	0	**2**	0	**0**	0	**0**	0	**0**	0	**0**	0	**2**	0
Section Average All Samples				**518**	**0.85**	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0.18	**0**	0	**0**	0	**0**	0	**0**	0	**0**	0.18
Section Standard Error of Mean						**0**	0	**0**	0	**0**	0	**0**	0	**0.02**	0.14	**0**	0	**0**	0	**0**	0	**0**	0	**0.02**	0.14

Table E4 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Flathead Chub No.	Flathead Chub CPUE	Lake Chub No.	Lake Chub CPUE	Peamouth No.	Peamouth CPUE	Redside Shiner No.	Redside Shiner CPUE	Sculpin spp. No.	Sculpin spp. CPUE	Shiner spp. No.	Shiner spp. CPUE	Spottail Shiner No.	Spottail Shiner CPUE	Troutperch No.	Troutperch CPUE	Yellow Perch No.	Yellow Perch CPUE	All Species No.	All Species CPUE
						Number Caught (CPUE = no. fish/km/h)																			
Section 3	1	0301	25-Aug-20	781	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0302	23-Aug-20	788	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0303	23-Aug-20	651	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0304	25-Aug-20	581	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0305	23-Aug-20	743	1.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0306	23-Aug-20	582	1.00	0	0	0	0	0	0	0	0	1	6.19	0	0	0	0	0	0	0	0	1	6.19
		0307	25-Aug-20	487	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0308	25-Aug-20	685	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0309	26-Aug-20	518	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0310	26-Aug-20	594	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0311	26-Aug-20	553	1.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0312	26-Aug-20	673	1.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0314	25-Aug-20	654	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0315	25-Aug-20	905	1.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0316	25-Aug-20	718	1.48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**660.9**	**20.00**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0.27**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0.27**
Section 3	2	0301	30-Aug-20	795	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0302	30-Aug-20	823	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0303	30-Aug-20	725	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0304	30-Aug-20	722	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0305	30-Aug-20	725	1.55	0	0	0	0	0	0	1	3.2	0	0	0	0	0	0	0	0	0	0	1	3.2
		0306	30-Aug-20	564	1.00	0	0	0	0	0	0	3	19.15	1	6.38	0	0	0	0	0	0	0	0	4	25.53
		0307	31-Aug-20	563	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0308	31-Aug-20	707	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0309	31-Aug-20	496	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0310	31-Aug-20	591	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0311	31-Aug-20	634	1.25	0	0	0	0	0	0	2	9.09	0	0	0	0	0	0	0	0	0	0	2	9.09
		0312	31-Aug-20	726	1.17	0	0	1	4.24	0	0	4	16.95	0	0	0	0	0	0	0	0	0	0	5	21.19
		0314	31-Aug-20	564	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0315	31-Aug-20	1095	1.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0316	31-Aug-20	922	1.48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**710.1**	**20.00**	**0**	**0**	**1**	**0.25**	**0**	**0**	**10**	**2.53**	**1**	**0.25**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**3.04**
Section 3	3	0301	12-Sep-20	1239	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0302	12-Sep-20	1158	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0303	12-Sep-20	826	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0304	13-Sep-20	829	1.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0305	13-Sep-20	978	1.55	0	0	0	0	0	0	3	7.12	0	0	0	0	0	0	0	0	0	0	3	7.12
		0306	13-Sep-20	775	1.00	0	0	0	0	0	0	1	4.65	2	9.29	0	0	0	0	0	0	0	0	3	13.94
		0307	14-Sep-20	794	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0308	15-Sep-20	764	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0309	15-Sep-20	587	0.95	0	0	0	0	0	0	1	6.46	0	0	0	0	0	0	0	0	0	0	1	6.46
		0310	15-Sep-20	955	1.20	0	0	1	3.14	0	0	8	25.13	0	0	0	0	0	0	0	0	0	0	9	28.27
		0311	13-Sep-20	784	1.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0312	15-Sep-20	906	1.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0314	14-Sep-20	581	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0315	14-Sep-20	1245	1.70	0	0	0	0	0	0	2	3.4	1	1.7	0	0	0	0	0	0	0	0	3	5.1
		0316	14-Sep-20	888	1.48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**887.3**	**20.00**	**0**	**0**	**1**	**0.2**	**0**	**0**	**15**	**3.04**	**3**	**0.61**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**3.85**

Table E4 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Flathead Chub No.	Flathead Chub CPUE	Lake Chub No.	Lake Chub CPUE	Peamouth No.	Peamouth CPUE	Redside Shiner No.	Redside Shiner CPUE	Sculpin spp. No.	Sculpin spp. CPUE	Shiner spp. No.	Shiner spp. CPUE	Spottail Shiner No.	Spottail Shiner CPUE	Troutperch No.	Troutperch CPUE	Yellow Perch No.	Yellow Perch CPUE	All Species No.	All Species CPUE
						Number Caught (CPUE = no. fish/km/h)																			
Section 3	4	0301	20-Sep-20	1076	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0302	20-Sep-20	862	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0303	20-Sep-20	781	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0304	21-Sep-20	904	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0305	22-Sep-20	1022	1.55	0	0	0	0	0	0	2	4.55	2	4.55	0	0	0	0	0	0	0	0	4	9.09
		0306	22-Sep-20	744	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0307	23-Sep-20	761	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0308	23-Sep-20	699	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0309	22-Sep-20	601	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0310	22-Sep-20	842	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0311	22-Sep-20	722	1.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0312	23-Sep-20	1019	1.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0314	21-Sep-20	837	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0315	21-Sep-20	1437	1.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0316	21-Sep-20	1127	1.48	0	0	0	0	0	0	0	0	1	2.17	0	0	0	0	0	0	0	0	1	2.17
	Session Summary			895.6	20.00	0	0	0	0	0	0	2	0.4	3	0.6	0	0	0	0	0	0	0	0	5	1
Section 3	5	0301	28-Sep-20	1283	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0302	28-Sep-20	993	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0303	28-Sep-20	786	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0304	28-Sep-20	718	1.35	0	0	0	0	0	0	0	0	1	3.71	0	0	0	0	0	0	0	0	1	3.71
		0305	02-Oct-20	976	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0306	02-Oct-20	761	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0307	02-Oct-20	656	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0308	02-Oct-20	681	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0309	02-Oct-20	798	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0310	02-Oct-20	773	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0311	02-Oct-20	821	1.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0312	02-Oct-20	696	0.77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0314	28-Sep-20	831	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0315	28-Sep-20	1165	1.70	0	0	0	0	0	0	0	0	6	10.91	0	0	0	0	0	0	0	0	6	10.91
		0316	02-Oct-20	1083	1.48	0	0	0	0	0	0	0	0	1	2.25	0	0	0	0	0	0	0	0	1	2.25
	Session Summary			868.1	19.00	0	0	0	0	0	0	0	0	8	1.75	0	0	0	0	0	0	0	0	8	1.75
Section 3	6	0301	04-Oct-20	1057	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0302	04-Oct-20	886	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0303	04-Oct-20	657	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0304	04-Oct-20	571	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0305	04-Oct-20	814	1.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0306	05-Oct-20	841	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0307	05-Oct-20	676	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0308	05-Oct-20	674	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0309	05-Oct-20	694	0.95	0	0	0	0	0	0	0	0	1	5.46	0	0	0	0	0	0	0	0	1	5.46
		0310	05-Oct-20	781	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0311	05-Oct-20	815	1.25	1	3.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3.53
		0312	05-Oct-20	784	1.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0314	04-Oct-20	757	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0315	04-Oct-20	1145	1.70	0	0	0	0	0	0	0	0	1	1.85	0	0	0	0	0	0	0	0	1	1.85
		0316	04-Oct-20	972	1.48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			808.3	20.00	1	0.22	0	0	0	0	0	0	2	0.45	0	0	0	0	0	0	0	0	3	0.67
Section Total All Samples				72453	119.77	1	0	2	0	0	0	27	0	18	0	0	0	0	0	0	0	0	0	48	0
Section Average All Samples				805	1.33	0	0.04	0	0.07	0	0	0	1.01	0	0.67	0	0	0	0	0	0	0	0	1	1.79
Section Standard Error of Mean						0.01	0.04	0.02	0.06	0	0	0.11	0.42	0.08	0.2	0	0	0	0	0	0	0	0	0.15	0.54

Table E4 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Flathead Chub No.	Flathead Chub CPUE	Lake Chub No.	Lake Chub CPUE	Peamouth No.	Peamouth CPUE	Redside Shiner No.	Redside Shiner CPUE	Sculpin spp. No.	Sculpin spp. CPUE	Shiner spp. No.	Shiner spp. CPUE	Spottail Shiner No.	Spottail Shiner CPUE	Troutperch No.	Troutperch CPUE	Yellow Perch No.	Yellow Perch CPUE	All Species No.	All Species CPUE
						Number Caught (CPUE = no. fish/km/h)																			
Section 5	1	0505	26-Aug-20	905	1.00	0	0	0	0	0	0	1	3.98	0	0	0	0	0	0	0	0	0	0	1	3.98
		0506	26-Aug-20	679	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0507	26-Aug-20	397	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0508	25-Aug-20	579	0.92	0	0	0	0	0	0	0	0	1	6.72	0	0	0	0	0	0	0	0	1	6.72
		0509	26-Aug-20	552	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0510	25-Aug-20	636	1.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0511	25-Aug-20	612	0.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0512	25-Aug-20	452	1.28	0	0	0	0	0	0	0	0	1	6.22	1	6.22	0	0	0	0	0	0	2	12.44
		0513	25-Aug-20	405	0.77	0	0	0	0	0	0	1	11.54	0	0	0	0	0	0	0	0	0	0	1	11.54
		0514	25-Aug-20	416	0.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0515	25-Aug-20	682	0.97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0516	26-Aug-20	582	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0517	26-Aug-20	254	0.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0518	25-Aug-20	1311	1.81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		OEM-DSC	26-Aug-20	465	0.76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		OEM-MS	26-Aug-20	352	0.74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		OEM-USC	26-Aug-20	541	1.01	0	0	0	0	0	0	1	6.59	1	6.59	0	0	0	0	0	0	0	0	2	13.18
	Session Summary			**577.6**	**16.00**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1.17**	**3**	**1.17**	**1**	**0.39**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**2.73**
Section 5	2	0505	02-Sep-20	888	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0506	02-Sep-20	617	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0507	02-Sep-20	416	0.78	0	0	0	0	0	0	0	0	0	0	1	11.09	0	0	0	0	0	0	1	11.09
		0508	01-Sep-20	563	0.92	0	0	0	0	0	0	1	6.91	0	0	0	0	0	0	0	0	0	0	1	6.91
		0509	02-Sep-20	653	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0510	02-Sep-20	718	1.13	0	0	0	0	0	0	0	0	1	4.44	2	8.87	0	0	0	0	0	0	3	13.31
		0511	01-Sep-20	560	0.72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0512	02-Sep-20	540	1.28	0	0	0	0	0	0	1	5.21	0	0	0	0	0	0	0	0	0	0	1	5.21
		0513	01-Sep-20	433	0.77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0514	01-Sep-20	345	0.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0515	01-Sep-20	566	0.97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0516	01-Sep-20	344	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0517	01-Sep-20	505	0.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0518	01-Sep-20	1223	1.81	0	0	0	0	0	0	1	1.63	0	0	0	0	0	0	0	0	0	0	1	1.63
		05SC060	01-Sep-20	531	0.53	0	0	0	0	0	0	1	12.79	0	0	0	0	0	0	0	0	0	0	1	12.79
		OEM-DSC	02-Sep-20	428	0.76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		OEM-MS	02-Sep-20	399	0.74	0	0	0	0	0	0	4	48.77	0	0	0	0	0	0	0	0	0	0	4	48.77
		OEM-USC	02-Sep-20	485	1.01	0	0	0	0	0	0	1	7.35	0	0	0	0	0	0	0	0	0	0	1	7.35
	Session Summary			**567.4**	**16.00**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**3.57**	**1**	**0.4**	**3**	**1.19**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**5.16**
Section 5	3	0505	13-Sep-20	1283	1.00	0	0	0	0	0	0	1	2.81	0	0	0	0	0	0	0	0	0	0	1	2.81
		0506	13-Sep-20	826	1.00	0	0	0	0	0	0	1	4.36	0	0	0	0	0	0	0	0	0	0	1	4.36
		0507	13-Sep-20	474	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0508	12-Sep-20	721	0.92	0	0	0	0	0	0	0	0	1	5.4	0	0	0	0	0	0	0	0	1	5.4
		0509	13-Sep-20	685	0.98	0	0	0	0	0	0	2	10.78	0	0	0	0	0	0	0	0	0	0	2	10.78
		0510	13-Sep-20	555	1.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0511	12-Sep-20	532	0.72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0512	14-Sep-20	786	1.28	0	0	0	0	0	0	1	3.58	0	0	0	0	0	0	0	0	0	0	1	3.58
		0513	12-Sep-20	544	0.77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0514	12-Sep-20	462	0.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0515	12-Sep-20	735	0.97	0	0	0	0	0	0	1	5.05	0	0	0	0	0	0	0	0	0	0	1	5.05
		0516	14-Sep-20	518	0.79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0517	14-Sep-20	677	0.69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0518	12-Sep-20	1358	1.81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		05SC060	13-Sep-20	478	0.53	0	0	0	0	0	0	0	0	0	0	0	0	1	14.21	0	0	0	0	1	14.21
		OEM-DSC	13-Sep-20	495	0.71	0	0	0	0	0	0	0	0	5	51.22	0	0	0	0	0	0	0	0	5	51.22
		OEM-MS	13-Sep-20	551	0.74	0	0	0	0	0	0	1	8.83	1	8.83	0	0	0	0	0	0	0	0	2	17.66
		OEM-USC	13-Sep-20	627	1.01	0	0	0	0	0	0	2	11.37	0	0	0	0	1	5.68	0	0	0	0	3	17.05
	Session Summary			**683.7**	**16.00**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**2.96**	**7**	**2.3**	**0**	**0**	**2**	**0.66**	**0**	**0**	**0**	**0**	**18**	**5.92**

Table E4 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h)																			
						Flathead Chub		Lake Chub		Peamouth		Redside Shiner		Sculpin spp.		Shiner spp.		Spottail Shiner		Troutperch		Yellow Perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 5	4	0505	23-Sep-20	1035	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0506	23-Sep-20	802	1.00	0	0	0	0	0	0	0	0	1	4.49	0	0	0	0	0	0	0	0	1	4.49
		0507	23-Sep-20	471	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0508	21-Sep-20	688	0.92	1	5.66	0	0	0	0	0	0	1	5.66	0	0	0	0	0	0	0	0	2	11.31
		0509	23-Sep-20	667	0.98	0	0	0	0	0	0	1	5.54	0	0	0	0	0	0	0	0	0	0	1	5.54
		0510	24-Sep-20	732	1.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0511	24-Sep-20	507	0.72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0512	24-Sep-20	612	1.28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0513	24-Sep-20	493	0.77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0514	21-Sep-20	430	0.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0515	21-Sep-20	640	0.97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0516	23-Sep-20	623	0.80	0	0	0	0	0	0	1	7.22	0	0	0	0	0	0	0	0	0	0	1	7.22
		0517	24-Sep-20	896	0.60	0	0	0	0	0	0	5	33.48	0	0	0	0	0	0	0	0	0	0	5	33.48
		0518	24-Sep-20	1335	1.81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		05SC060	23-Sep-20	549	0.53	0	0	0	0	0	0	2	24.74	0	0	0	0	0	0	0	0	1	12.37	3	37.12
		OEM-DSC	23-Sep-20	602	0.76	0	0	0	0	0	0	2	15.74	0	0	0	0	0	0	0	0	0	0	2	15.74
		OEM-MS	23-Sep-20	428	0.74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		OEM-USC	23-Sep-20	567	1.01	0	0	0	0	0	0	0	0	1	6.29	0	0	0	0	0	0	0	0	1	6.29
	Session Summary			**670.9**	**16.00**	**1**	**0.34**	**0**	**0**	**0**	**0**	**11**	**3.69**	**3**	**1.01**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0.34**	**16**	**5.37**
Section 5	5	0505	27-Sep-20	1144	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0506	27-Sep-20	892	1.00	0	0	0	0	0	0	1	4.04	2	8.07	0	0	0	0	0	0	0	0	3	12.11
		0507	27-Sep-20	463	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0508	27-Sep-20	666	0.92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0509	27-Sep-20	703	0.98	0	0	0	0	0	0	2	10.5	0	0	0	0	0	0	0	0	0	0	2	10.5
		0510	27-Sep-20	884	1.13	0	0	0	0	0	0	0	0	2	7.21	0	0	0	0	0	0	0	0	2	7.21
		0511	27-Sep-20	415	0.72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0512	27-Sep-20	745	1.28	0	0	0	0	0	0	0	0	1	3.78	0	0	0	0	0	0	0	0	1	3.78
		0513	27-Sep-20	565	0.77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0514	27-Sep-20	431	0.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0515	27-Sep-20	678	0.97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0517	27-Sep-20	380	0.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0518	27-Sep-20	1262	1.81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**709.8**	**12.00**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1.27**	**5**	**2.11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**3.38**
Section 5	6	0505	05-Oct-20	1110	1.00	0	0	0	0	0	0	0	0	1	3.24	0	0	0	0	0	0	0	0	1	3.24
		0506	05-Oct-20	881	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0507	05-Oct-20	477	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0508	05-Oct-20	704	0.92	0	0	0	0	0	0	0	0	3	16.58	0	0	0	0	0	0	0	0	3	16.58
		0509	05-Oct-20	889	0.98	0	0	0	0	0	0	1	4.15	1	4.15	0	0	0	0	0	0	0	0	2	8.31
		0510	05-Oct-20	712	1.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0511	05-Oct-20	470	0.72	0	0	0	0	0	0	0	0	1	10.64	0	0	0	0	0	0	0	0	1	10.64
		0512	05-Oct-20	718	1.28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0513	05-Oct-20	539	0.77	1	8.67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8.67
		0514	05-Oct-20	430	0.56	0	0	0	0	0	0	0	0	1	14.95	0	0	0	0	0	0	0	0	1	14.95
		0515	05-Oct-20	597	0.97	0	0	0	0	0	0	1	6.22	0	0	0	0	0	0	0	0	0	0	1	6.22
		0517	05-Oct-20	384	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0518	05-Oct-20	1274	1.81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		05SC060	05-Oct-20	488	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**690.9**	**13.00**	**1**	**0.4**	**0**	**0**	**0**	**0**	**2**	**0.8**	**7**	**2.81**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**4.01**
Section Total All Samples				**63319**	**90.33**	**2**	**0**	**0**	**0**	**0**	**0**	**37**	**0**	**26**	**0**	**4**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**72**	**0**
Section Average All Samples				**646**	**0.92**	**0**	**0.12**	**0**	**0**	**0**	**0**	**0**	**2.28**	**0**	**1.6**	**0**	**0.25**	**0**	**0.12**	**0**	**0**	**0**	**0.06**	**1**	**4.44**
Section Standard Error of Mean						**0.01**	**0.11**	**0**	**0**	**0**	**0**	**0.08**	**0.71**	**0.07**	**0.6**	**0.02**	**0.16**	**0.01**	**0.16**	**0**	**0**	**0.01**	**0.13**	**0.11**	**0.95**

Table E4 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h) Flathead Chub No.	Flathead Chub CPUE	Lake Chub No.	Lake Chub CPUE	Peamouth No.	Peamouth CPUE	Redside Shiner No.	Redside Shiner CPUE	Sculpin spp. No.	Sculpin spp. CPUE	Shiner spp. No.	Shiner spp. CPUE	Spottail Shiner No.	Spottail Shiner CPUE	Troutperch No.	Troutperch CPUE	Yellow Perch No.	Yellow Perch CPUE	All Species No.	All Species CPUE
Section 6	1	0601	21-Aug-20	729	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0603	21-Aug-20	631	1.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0604	21-Aug-20	605	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0605	21-Aug-20	513	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0606	22-Aug-20	808	1.40	0	0	1	3.18	0	0	1	3.18	0	0	0	0	0	0	0	0	0	0	2	6.36
		0607	22-Aug-20	610	1.00	0	0	0	0	0	0	0	0	0	0	2	11.8	0	0	0	0	0	0	2	11.8
		0608	22-Aug-20	551	1.00	0	0	0	0	0	0	0	0	0	0	1	6.53	0	0	0	0	0	0	1	6.53
		0609	22-Aug-20	672	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0610	22-Aug-20	515	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0611	22-Aug-20	533	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0612	22-Aug-20	505	0.85	0	0	0	0	0	0	2	16.77	0	0	0	0	0	0	0	0	1	8.39	3	25.16
		0613	22-Aug-20	546	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0614	21-Aug-20	642	0.98	0	0	1	5.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5.75
		06PIN01	21-Aug-20	1970	1.50	0	0	0	0	0	0	7	8.53	0	0	0	0	0	0	0	0	0	0	7	8.53
		06PIN02	21-Aug-20	460	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06SC036	22-Aug-20	562	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06SC047	21-Aug-20	401	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**661.9**	**17.00**	**0**	**0**	**2**	**0.64**	**0**	**0**	**10**	**3.2**	**0**	**0**	**3**	**0.96**	**0**	**0**	**0**	**0**	**1**	**0.32**	**16**	**5.12**
Section 6	2	0601	27-Aug-20	587	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0603	27-Aug-20	594	1.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0604	27-Aug-20	518	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0605	27-Aug-20	581	0.80	1	7.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7.75
		0606	28-Aug-20	876	1.40	0	0	0	0	0	0	3	8.81	0	0	0	0	0	0	0	0	0	0	3	8.81
		0607	28-Aug-20	630	1.00	0	0	0	0	0	0	1	5.71	0	0	1	5.71	0	0	0	0	0	0	2	11.43
		0608	27-Aug-20	557	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0609	28-Aug-20	736	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0610	28-Aug-20	574	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0611	28-Aug-20	632	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0612	28-Aug-20	504	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0613	28-Aug-20	502	0.90	0	0	0	0	0	0	1	7.97	0	0	0	0	0	0	0	0	0	0	1	7.97
		0614	27-Aug-20	518	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06PIN01	27-Aug-20	1072	1.50	0	0	0	0	0	0	1	2.24	0	0	0	0	0	0	0	0	0	0	1	2.24
		06PIN02	27-Aug-20	432	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06SC036	28-Aug-20	561	0.50	0	0	0	0	0	0	3	38.5	0	0	0	0	0	0	0	0	0	0	3	38.5
		06SC047	27-Aug-20	352	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**601.5**	**17.00**	**1**	**0.35**	**0**	**0**	**0**	**0**	**9**	**3.17**	**0**	**0**	**1**	**0.35**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**3.87**
Section 6	3	0601	08-Sep-20	813	1.20	0	0	0	0	0	0	1	3.69	2	7.38	0	0	0	0	0	0	0	0	3	11.07
		0602	08-Sep-20	599	0.90	0	0	0	0	0	0	4	26.71	0	0	0	0	0	0	0	0	0	0	4	26.71
		0603	08-Sep-20	775	1.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0604	08-Sep-20	684	1.00	0	0	0	0	0	0	1	5.26	0	0	0	0	0	0	0	0	0	0	1	5.26
		0605	09-Sep-20	491	0.80	0	0	0	0	0	0	1	9.16	0	0	2	18.33	0	0	0	0	0	0	3	27.49
		0607	09-Sep-20	692	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0608	09-Sep-20	586	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0609	09-Sep-20	810	1.00	0	0	0	0	0	0	1	4.44	0	0	0	0	0	0	0	0	0	0	1	4.44
		0610	09-Sep-20	555	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0611	09-Sep-20	625	0.90	0	0	0	0	0	0	1	6.4	0	0	0	0	0	0	0	0	0	0	1	6.4
		0612	09-Sep-20	566	0.85	0	0	2	14.97	0	0	0	0	0	0	0	0	1	7.48	0	0	0	0	3	22.45
		0613	09-Sep-20	636	0.90	0	0	1	6.29	0	0	1	6.29	0	0	0	0	0	0	0	0	0	0	2	12.58
		0614	08-Sep-20	625	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06PIN01	08-Sep-20	1050	1.50	0	0	0	0	0	0	1	2.29	0	0	0	0	0	0	1	2.29	0	0	2	4.57
		06PIN02	08-Sep-20	562	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06SC036	14-Sep-20	651	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06SC047	08-Sep-20	496	0.42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**659.8**	**16.00**	**0**	**0**	**3**	**1.02**	**0**	**0**	**11**	**3.75**	**2**	**0.68**	**2**	**0.68**	**1**	**0.34**	**1**	**0.34**	**0**	**0**	**20**	**6.82**

Table E4 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Flathead Chub		Lake Chub		Peamouth		Redside Shiner		Sculpin spp.		Shiner spp.		Spottail Shiner		Troutperch		Yellow Perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 6	4	0601	17-Sep-20	937	1.20	0	0	0	0	1	3.2	0	0	0	0	0	0	0	0	0	0	0	0	1	3.2
		0602	17-Sep-20	659	0.90	1	6.07	0	0	0	0	4	24.28	1	6.07	0	0	0	0	0	0	0	0	6	36.42
		0603	18-Sep-20	927	1.20	0	0	0	0	0	0	0	0	0	0	0	0	1	3.24	2	6.47	0	0	3	9.71
		0604	18-Sep-20	754	1.00	0	0	0	0	0	0	1	4.77	0	0	1	4.77	0	0	3	14.32	0	0	5	23.87
		0605	21-Sep-20	554	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0606	21-Sep-20	933	1.40	0	0	0	0	0	0	2	5.51	0	0	0	0	0	0	0	0	0	0	2	5.51
		0607	18-Sep-20	823	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0608	21-Sep-20	591	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0609	21-Sep-20	867	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8.3	0	0	2	8.3
		0610	21-Sep-20	593	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7.14	0	0	1	7.14
		0611	18-Sep-20	488	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0612	18-Sep-20	553	0.85	0	0	0	0	0	0	1	7.66	0	0	0	0	0	0	0	0	0	0	1	7.66
		0613	18-Sep-20	796	0.90	0	0	1	5.03	0	0	2	10.05	0	0	0	0	0	0	1	5.03	0	0	4	20.1
		0614	17-Sep-20	650	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5.68	0	0	1	5.68
		06PIN01	17-Sep-20	1182	1.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06PIN02	17-Sep-20	682	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06SC036	18-Sep-20	550	0.40	0	0	0	0	0	0	0	0	0	0	0	0	1	16.36	0	0	0	0	1	16.36
		06SC047	17-Sep-20	415	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**719.7**	**17.00**	**1**	**0.29**	**1**	**0.29**	**1**	**0.29**	**10**	**2.94**	**1**	**0.29**	**1**	**0.29**	**2**	**0.59**	**10**	**2.94**	**0**	**0**	**27**	**7.94**
Section 6	5	0601	28-Sep-20	820	1.20	0	0	0	0	0	0	0	0	2	7.32	0	0	0	0	0	0	0	0	2	7.32
		0602	28-Sep-20	563	0.88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0603	28-Sep-20	759	1.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0604	28-Sep-20	638	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0605	29-Sep-20	547	0.80	0	0	0	0	0	0	0	0	2	16.45	1	8.23	0	0	0	0	0	0	3	24.68
		0606	28-Sep-20	882	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0607	29-Sep-20	672	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0608	28-Sep-20	516	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0609	28-Sep-20	762	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0610	28-Sep-20	544	0.85	0	0	0	0	0	0	1	7.79	0	0	0	0	0	0	0	0	0	0	1	7.79
		0611	28-Sep-20	580	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0612	29-Sep-20	500	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0613	29-Sep-20	608	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0614	28-Sep-20	686	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06PIN01	28-Sep-20	810	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06PIN02	28-Sep-20	520	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06SC036	29-Sep-20	464	0.30	0	0	0	0	1	25.86	0	0	0	0	0	0	0	0	0	0	0	0	1	25.86
		06SC047	28-Sep-20	477	0.34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**630.4**	**17.00**	**0**	**0**	**0**	**0**	**1**	**0.34**	**1**	**0.34**	**4**	**1.34**	**1**	**0.34**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**2.35**
Section 6	6	0601	03-Oct-20	1028	1.20	0	0	0	0	0	0	0	0	1	2.92	0	0	0	0	0	0	0	0	1	2.92
		0602	03-Oct-20	615	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0603	03-Oct-20	920	1.30	0	0	0	0	0	0	0	0	0	0	2	6.02	0	0	1	3.01	0	0	3	9.03
		0604	03-Oct-20	650	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0605	03-Oct-20	490	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0606	03-Oct-20	897	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0607	04-Oct-20	741	1.00	0	0	0	0	0	0	0	0	0	0	1	4.86	0	0	0	0	0	0	1	4.86
		0608	03-Oct-20	560	1.00	0	0	0	0	0	0	0	0	0	0	3	19.29	0	0	0	0	0	0	3	19.29
		0609	04-Oct-20	733	1.00	0	0	0	0	0	0	1	4.91	0	0	0	0	0	0	0	0	0	0	1	4.91
		0610	03-Oct-20	673	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0611	03-Oct-20	620	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0612	03-Oct-20	516	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8.21	1	8.21
		0613	04-Oct-20	699	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0614	03-Oct-20	669	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06PIN01	03-Oct-20	894	1.50	0	0	0	0	0	0	1	2.68	0	0	0	0	0	0	0	0	0	0	1	2.68
		06PIN02	03-Oct-20	582	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06SC036	04-Oct-20	438	0.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06SC047	03-Oct-20	489	0.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**678.6**	**17.00**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0.62**	**1**	**0.31**	**6**	**1.87**	**0**	**0**	**1**	**0.31**	**1**	**0.31**	**11**	**3.43**
Section Total All Samples				**69211**	**101.05**	**2**	**0**	**6**	**0**	**2**	**0**	**43**	**0**	**8**	**0**	**14**	**0**	**3**	**0**	**12**	**0**	**2**	**0**	**92**	**0**
Section Average All Samples				**659**	**0.96**	**0**	**0.11**	**0**	**0.32**	**0**	**0.11**	**0**	**2.32**	**0**	**0.43**	**0**	**0.76**	**0**	**0.16**	**0**	**0.65**	**0**	**0.11**	**1**	**4.97**
Section Standard Error of Mean						**0.01**	**0.09**	**0.03**	**0.17**	**0.01**	**0.25**	**0.1**	**0.56**	**0.04**	**0.19**	**0.05**	**0.3**	**0.02**	**0.17**	**0.04**	**0.19**	**0.01**	**0.11**	**0.14**	**0.82**

Number Caught (CPUE = no. fish/km/h)

Table E4 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Flathead Chub No.	Flathead Chub CPUE	Lake Chub No.	Lake Chub CPUE	Peamouth No.	Peamouth CPUE	Redside Shiner No.	Redside Shiner CPUE	Sculpin spp. No.	Sculpin spp. CPUE	Shiner spp. No.	Shiner spp. CPUE	Spottail Shiner No.	Spottail Shiner CPUE	Troutperch No.	Troutperch CPUE	Yellow Perch No.	Yellow Perch CPUE	All Species No.	All Species CPUE
						Number Caught (CPUE = no. fish/km/h)																			
Section 7	1	0701	23-Aug-20	596	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0702	23-Aug-20	513	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0703	23-Aug-20	680	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0704	23-Aug-20	594	1.00	1	6.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6.06
		0705	23-Aug-20	590	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0706	23-Aug-20	795	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0707	24-Aug-20	654	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0708	23-Aug-20	633	1.24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0709	23-Aug-20	610	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0710	24-Aug-20	867	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0711	24-Aug-20	770	1.39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0712	24-Aug-20	686	1.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0713	24-Aug-20	610	0.98	0	0	0	0	0	0	0	0	0	0	1	6.02	0	0	0	0	0	0	1	6.02
		0714	24-Aug-20	790	1.27	1	3.57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3.57
		07BEA01	23-Aug-20	615	0.42	1	13.94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13.94
		07KIS01	24-Aug-20	731	0.88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC012	24-Aug-20	308	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC022	23-Aug-20	379	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**634.5**	**17.00**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0.33**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**1.34**
Section 7	2	0701	29-Aug-20	565	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0702	29-Aug-20	491	0.95	0	0	0	0	0	0	1	7.72	0	0	0	0	0	0	0	0	0	0	1	7.72
		0703	29-Aug-20	648	0.95	1	5.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5.85
		0704	30-Aug-20	538	1.00	0	0	2	13.38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	13.38
		0705	30-Aug-20	569	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0706	30-Aug-20	712	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0707	30-Aug-20	642	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0708	29-Aug-20	673	1.24	1	4.31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.31
		0709	29-Aug-20	610	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0710	30-Aug-20	828	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0711	30-Aug-20	827	1.39	0	0	0	0	0	0	1	3.13	0	0	0	0	0	0	0	0	0	0	1	3.13
		0712	30-Aug-20	670	1.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0713	30-Aug-20	571	0.98	1	6.43	1	6.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	12.87
		0714	30-Aug-20	720	1.27	0	0	0	0	0	0	1	3.92	0	0	0	0	0	0	0	0	0	0	1	3.92
		07BEA01	29-Aug-20	633	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07BEA02	29-Aug-20	222	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07KIS01	30-Aug-20	611	0.88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC012	30-Aug-20	315	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC022	30-Aug-20	336	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**588.5**	**18.00**	**3**	**1.02**	**3**	**1.02**	**0**	**0**	**3**	**1.02**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**3.06**
Section 7	3	0701	14-Sep-20	560	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0702	15-Sep-20	629	0.95	1	6.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6.02
		0703	15-Sep-20	812	0.95	2	9.33	1	4.67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	14
		0704	15-Sep-20	633	1.00	5	28.44	1	5.69	0	0	0	0	1	5.69	0	0	0	0	0	0	0	0	7	39.81
		0705	15-Sep-20	640	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0706	15-Sep-20	913	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0707	16-Sep-20	604	0.98	1	6.08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6.08
		0708	15-Sep-20	597	1.24	1	4.86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.86
		0709	15-Sep-20	696	1.00	0	0	0	0	0	0	0	0	0	0	2	10.34	0	0	0	0	0	0	2	10.34
		0710	15-Sep-20	943	1.40	0	0	1	2.73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.73
		0711	16-Sep-20	920	1.39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0712	16-Sep-20	851	1.06	0	0	1	3.97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3.97
		0713	16-Sep-20	629	0.98	0	0	0	0	0	0	1	5.84	0	0	4	23.36	0	0	1	5.84	0	0	6	35.04
		0714	16-Sep-20	944	1.27	3	8.97	1	2.99	0	0	1	2.99	0	0	1	2.99	0	0	0	0	0	0	6	17.95
		07BEA01	14-Sep-20	360	0.43	1	23.26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	23.26
		07BEA02	14-Sep-20	477	0.60	1	12.58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	12.58
		07KIS01	16-Sep-20	389	0.56	1	16.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	16.53
		07SC012	16-Sep-20	483	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC022	15-Sep-20	407	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**657.2**	**17.00**	**16**	**5.16**	**5**	**1.61**	**0**	**0**	**2**	**0.64**	**1**	**0.32**	**7**	**2.26**	**0**	**0**	**1**	**0.32**	**0**	**0**	**32**	**10.31**

Table E4 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Flathead Chub No.	Flathead Chub CPUE	Lake Chub No.	Lake Chub CPUE	Peamouth No.	Peamouth CPUE	Redside Shiner No.	Redside Shiner CPUE	Sculpin spp. No.	Sculpin spp. CPUE	Shiner spp. No.	Shiner spp. CPUE	Spottail Shiner No.	Spottail Shiner CPUE	Troutperch No.	Troutperch CPUE	Yellow Perch No.	Yellow Perch CPUE	All Species No.	All Species CPUE
						Number Caught (CPUE = no. fish/km/h)																			
Section 7	4	0701	25-Sep-20	642	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0702	25-Sep-20	577	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0703	25-Sep-20	761	0.95	3	14.94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	14.94
		0704	25-Sep-20	743	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0705	25-Sep-20	657	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0706	25-Sep-20	928	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0707	26-Sep-20	521	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0708	25-Sep-20	731	1.24	1	3.97	0	0	0	0	1	3.97	2	7.94	0	0	0	0	1	3.97	0	0	5	19.86
		0709	25-Sep-20	705	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0710	26-Sep-20	844	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0711	26-Sep-20	831	1.39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0712	26-Sep-20	696	1.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0713	26-Sep-20	495	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0714	26-Sep-20	771	1.27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07BEA01	26-Sep-20	364	0.39	1	25.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	25.36
		07BEA02	25-Sep-20	316	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07KIS01	26-Sep-20	360	0.57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC012	26-Sep-20	377	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC022	25-Sep-20	510	0.36	0	0	0	0	0	0	1	19.61	0	0	0	0	0	0	0	0	0	0	1	19.61
	Session Summary			**622.6**	**17.00**	**5**	**1.7**	**0**	**0**	**0**	**0**	**2**	**0.68**	**2**	**0.68**	**0**	**0**	**0**	**0**	**1**	**0.34**	**0**	**0**	**10**	**3.4**
Section 7	5	0701	29-Sep-20	611	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0702	29-Sep-20	589	0.95	0	0	2	12.87	0	0	0	0	0	0	1	6.43	0	0	0	0	0	0	3	19.3
		0703	29-Sep-20	754	0.95	4	20.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	20.1
		0704	29-Sep-20	719	1.00	0	0	1	5.01	0	0	0	0	1	5.01	0	0	0	0	0	0	0	0	2	10.01
		0705	30-Sep-20	688	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0706	30-Sep-20	965	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0707	30-Sep-20	570	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0708	29-Sep-20	678	1.24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0709	29-Sep-20	747	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0710	30-Sep-20	960	1.12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0711	30-Sep-20	952	1.39	0	0	0	0	0	0	0	0	1	2.72	1	2.72	0	0	0	0	0	0	2	5.44
		0712	30-Sep-20	751	1.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0713	30-Sep-20	546	0.98	0	0	0	0	0	0	0	0	0	0	5	33.64	0	0	0	0	0	0	5	33.64
		0714	30-Sep-20	920	1.27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07BEA01	29-Sep-20	433	0.23	1	36.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	36.15
		07KIS01	30-Sep-20	411	0.56	0	0	0	0	0	0	0	0	0	0	1	15.5	0	0	0	0	0	0	1	15.5
		07SC012	30-Sep-20	447	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC022	30-Sep-20	480	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**678.9**	**16.00**	**5**	**1.66**	**3**	**0.99**	**0**	**0**	**0**	**0**	**2**	**0.66**	**8**	**2.65**	**0**	**0**	**0**	**0**	**0**	**0**	**18**	**5.97**
Section 7	6	0701	04-Oct-20	590	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0702	04-Oct-20	541	0.95	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7
		0703	04-Oct-20	666	0.95	3	17.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	17.07
		0704	06-Oct-20	573	1.00	1	6.28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6.28
		0705	04-Oct-20	602	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0706	04-Oct-20	808	1.00	0	0	1	4.46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.46
		0707	06-Oct-20	519	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0708	04-Oct-20	658	1.24	0	0	1	4.41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.41
		0709	04-Oct-20	615	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0710	06-Oct-20	795	1.40	1	3.23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3.23
		0711	06-Oct-20	819	1.39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0712	06-Oct-20	752	1.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0713	06-Oct-20	525	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0714	06-Oct-20	836	1.27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07BEA01	06-Oct-20	1008	0.38	7	65.79	1	9.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	75.19
		07BEA02	04-Oct-20	171	0.45	1	46.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	46.78
		07KIS01	06-Oct-20	329	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC012	06-Oct-20	355	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC022	04-Oct-20	383	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**607.6**	**17.00**	**14**	**4.88**	**3**	**1.05**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**17**	**5.92**
Section Total All Samples				**70684**	**102.17**	**46**	**0**	**14**	**0**	**0**	**0**	**7**	**0**	**5**	**0**	**16**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**90**	**0**
Section Average All Samples				**631**	**0.91**	**0**	**2.57**	**0**	**0.78**	**0**	**0**	**0**	**0.39**	**0**	**0.28**	**0**	**0.89**	**0**	**0**	**0**	**0.11**	**0**	**0**	**1**	**5.03**
Section Standard Error of Mean						**0.1**	**0.92**	**0.04**	**0.21**	**0**	**0**	**0.02**	**0.2**	**0.02**	**0.1**	**0.06**	**0.4**	**0**	**0**	**0.01**	**0.06**	**0**	**0**	**0.15**	**1.1**

Table E4 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h) Flathead Chub		Lake Chub		Peamouth		Redside Shiner		Sculpin spp.		Shiner spp.		Spottail Shiner		Troutperch		Yellow Perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 9	1	0901	27-Aug-20	628	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0903	27-Aug-20	552	1.10	2	11.86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	11.86
		0904	27-Aug-20	587	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0905	27-Aug-20	674	1.10	0	0	1	4.86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.86
		0906	27-Aug-20	806	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0907	28-Aug-20	800	1.20	4	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	15
		0908	28-Aug-20	705	1.10	1	4.64	0	0	0	0	1	4.64	0	0	0	0	0	0	0	0	0	0	2	9.28
		0909	28-Aug-20	597	0.95	2	12.7	2	12.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	25.39
		0910	27-Aug-20	882	1.10	2	7.42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7.42
		0911	28-Aug-20	594	1.00	2	12.12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	12.12
		0912	28-Aug-20	661	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0914	28-Aug-20	445	0.95	1	8.52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8.52
		09SC053	27-Aug-20	441	0.26	1	31.4	0	0	0	0	0	0	0	0	0	0	1	31.4	0	0	0	0	2	62.79
	Session Summary			**644**	**13.00**	**15**	**6.45**	**3**	**1.29**	**0**	**0**	**1**	**0.43**	**0**	**0**	**0**	**0**	**1**	**0.43**	**0**	**0**	**0**	**0**	**20**	**8.6**
Section 9	2	0901	07-Sep-20	744	1.10	1	4.4	0	0	0	0	1	4.4	0	0	0	0	0	0	1	4.4	0	0	3	13.2
		0903	07-Sep-20	773	1.10	2	8.47	1	4.23	0	0	0	0	0	0	1	4.23	0	0	0	0	0	0	4	16.94
		0904	07-Sep-20	741	1.10	2	8.83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8.83
		0905	07-Sep-20	774	1.10	1	4.23	1	4.23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8.46
		0906	07-Sep-20	721	1.00	0	0	1	4.99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.99
		0907	02-Sep-20	720	1.20	3	12.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	12.5
		0908	02-Sep-20	593	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0909	02-Sep-20	508	0.95	1	7.46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7.46
		0910	07-Sep-20	1036	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0911	02-Sep-20	521	1.00	1	6.91	1	6.91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	13.82
		0912	02-Sep-20	648	1.10	0	0	1	5.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5.05
		0913	02-Sep-20	584	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		09SC061	07-Sep-20	329	0.62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**668.6**	**13.00**	**11**	**4.56**	**5**	**2.07**	**0**	**0**	**1**	**0.41**	**0**	**0**	**1**	**0.41**	**0**	**0**	**1**	**0.41**	**0**	**0**	**19**	**7.87**
Section 9	3	0901	16-Sep-20	654	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0902	16-Sep-20	696	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0903	16-Sep-20	706	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0904	16-Sep-20	730	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0905	16-Sep-20	796	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0906	16-Sep-20	692	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0907	16-Sep-20	836	1.20	1	3.59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3.59
		0908	16-Sep-20	763	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0909	16-Sep-20	656	0.95	1	5.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5.78
		0911	16-Sep-20	596	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0912	17-Sep-20	571	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0913	17-Sep-20	802	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0914	17-Sep-20	630	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		09SC061	17-Sep-20	841	0.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**712.1**	**14.00**	**2**	**0.72**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0.72**

Table E4 Concluded.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h) Flathead Chub No.	Flathead Chub CPUE	Lake Chub No.	Lake Chub CPUE	Peamouth No.	Peamouth CPUE	Redside Shiner No.	Redside Shiner CPUE	Sculpin spp. No.	Sculpin spp. CPUE	Shiner spp. No.	Shiner spp. CPUE	Spottail Shiner No.	Spottail Shiner CPUE	Troutperch No.	Troutperch CPUE	Yellow Perch No.	Yellow Perch CPUE	All Species No.	All Species CPUE
Section 9	4	0901	24-Sep-20	652	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0902	24-Sep-20	785	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0903	24-Sep-20	753	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0904	24-Sep-20	826	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0905	24-Sep-20	819	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0906	24-Sep-20	731	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0907	24-Sep-20	863	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0908	25-Sep-20	856	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0909	25-Sep-20	725	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0910	24-Sep-20	1019	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0911	25-Sep-20	743	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0913	25-Sep-20	653	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0914	25-Sep-20	538	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		09SC061	25-Sep-20	802	0.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**768.9**	**14.00**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Section 9	5	0901	01-Oct-20	769	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0902	01-Oct-20	762	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0903	01-Oct-20	343	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0904	01-Oct-20	826	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0907	01-Oct-20	965	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0908	01-Oct-20	654	1.10	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
		0909	01-Oct-20	843	0.95	1	4.5	1	4.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8.99
		0910	01-Oct-20	962	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0911	01-Oct-20	857	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0913	01-Oct-20	425	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**740.6**	**10.00**	**1**	**0.49**	**2**	**0.97**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1.46**
Section 9	6	0901	07-Oct-20	758	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0902	07-Oct-20	649	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0903	07-Oct-20	674	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0904	07-Oct-20	668	1.10	0	0	0	0	0	0	0	0	0	0	1	4.9	0	0	0	0	0	0	1	4.9
		0905	07-Oct-20	890	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0906	07-Oct-20	971	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0907	07-Oct-20	935	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0908	07-Oct-20	688	1.10	0	0	1	4.76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.76
		0909	07-Oct-20	723	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0910	07-Oct-20	832	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0911	07-Oct-20	593	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0912	07-Oct-20	601	0.62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0913	07-Oct-20	628	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0914	07-Oct-20	552	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		09SC061	07-Oct-20	463	0.48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**708.3**	**15.00**	**0**	**0**	**1**	**0.34**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0.34**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0.68**
Section Total All Samples				**55829**	**78.76**	**29**	**0**	**11**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**46**	**0**
Section Average All Samples				**707**	**1.00**	**0**	**1.87**	**0**	**0.71**	**0**	**0**	**0**	**0.13**	**0**	**0**	**0**	**0.13**	**0**	**0.06**	**0**	**0.06**	**0**	**0**	**1**	**2.97**
Section Standard Error of Mean						**0.09**	**0.56**	**0.04**	**0.24**	**0**	**0**	**0.02**	**0.08**	**0**	**0**	**0.02**	**0.08**	**0.01**	**0.4**	**0.01**	**0.06**	**0**	**0**	**0.12**	**0.95**
All Sections Total All Samples				**378150**	**568.64**	**80**	**0**	**33**	**0**	**2**	**0**	**116**	**0**	**59**	**0**	**36**	**0**	**6**	**0**	**15**	**0**	**3**	**0**	**350**	**0.01**
All Sections Average All Samples						**0**	**0.77**	**0**	**0.32**	**0**	**0.02**	**0**	**1.11**	**0**	**0.57**	**0**	**0.35**	**0**	**0.06**	**0**	**0.14**	**0**	**0.03**	**1**	**3.36**
All Sections Standard Error of Mean						**0.02**	**0.2**	**0.01**	**0.06**	**0**	**0.05**	**0.03**	**0.18**	**0.02**	**0.12**	**0.02**	**0.1**	**0**	**0.07**	**0.01**	**0.04**	**0**	**0.03**	**0.05**	**0.35**

Table E5 Summary of the number (N) of fish captured and recaptured in sampled sections of the Peace River, 21 August to 07 October 2020.

Species Name	Section	Session	N Captured	N Marked	N Recaptured (within year)	N Recaptured (between years)
Arctic Grayling	Section 1	1	0	0	-	0
		2	0	0	0	0
		3	0	0	0	0
		4	0	0	0	0
		5	0	0	0	0
		6	1	1	0	0
	Section 1 subtotal		1	1	0	0
	Section 3	1	2	1	-	1
		2	2	2	0	0
		3	3	2	0	1
		4	5	5	0	0
		5	5	5	0	0
		6	3	2	0	1
	Section 3 subtotal		20	17	0	3
	Section 5	1	0	0	-	0
		2	0	0	0	0
		3	1	1	0	0
		4	1	0	0	1
		5	2	2	0	0
		6	2	2	0	0
	Section 5 subtotal		6	5	0	1
	Section 6	1	0	0	-	0
		2	0	0	0	0
		3	3	3	0	0
		4	0	0	0	0
		5	1	1	0	0
		6	0	0	0	0
	Section 6 subtotal		4	4	0	0
	Section 7	1	0	0	-	0
		2	0	0	0	0
		3	1	1	0	0
		4	1	1	0	0
		5	2	1	1	0
		6	2	2	0	0
	Section 7 subtotal		6	5	1	0
	Section 9	1	0	0	-	0
		2	1	1	0	0
		3	0	0	0	0
		4	0	0	0	0
		5	0	0	0	0
		6	0	0	0	0
	Section 9 subtotal		1	1	0	0
Arctic Grayling Total			38	33	1	4

Continued...

Table E5 Continued.

Species Name	Section	Session	N Captured	N Marked	N Recaptured (within year)	N Recaptured (between years)
Bull Trout	Section 1	1	4	4	-	0
		2	4	2	0	2
		3	8	8	0	0
		4	11	9	1	1
		5	7	5	2	0
		6	14	12	0	2
	Section 1 subtotal		48	40	3	5
	Section 3	1	2	2	-	0
		2	10	6	0	4
		3	20	17	0	3
		4	16	8	4	4
		5	17	11	3	3
		6	19	13	3	3
	Section 3 subtotal		84	57	10	17
	Section 5	1	4	4	-	0
		2	2	2	0	0
		3	10	7	2	1
		4	12	9	1	2
		5	3	2	0	1
		6	9	5	1	3
	Section 5 subtotal		40	29	4	7
	Section 6	1	2	2	-	0
		2	0	0	0	0
		3	3	3	0	0
		4	5	5	0	0
		5	3	1	1	1
		6	1	1	0	0
	Section 6 subtotal		14	12	1	1
	Section 7	1	0	0	-	0
		2	0	0	0	0
		3	3	2	0	1
		4	2	2	0	0
		5	4	3	1	0
		6	3	3	0	0
	Section 7 subtotal		12	10	1	1
	Section 9	1	0	0	-	0
		2	1	1	0	0
		3	3	2	0	1
		4	3	1	2	0
		5	1	1	0	0
		6	3	2	1	0
	Section 9 subtotal		11	7	3	1
Bull Trout Total			209	155	22	32

Continued...

Table E5 Continued.

Species Name	Section	Session	N Captured	N Marked	N Recaptured (within year)	N Recaptured (between years)
Largescale Sucker	Section 1	1	1	0	-	1
		2	6	6	0	0
		3	5	5	0	0
		4	31	26	1	4
		5	17	16	0	1
		6	17	15	0	2
	Section 1 subtotal		77	68	1	8
	Section 3	1	34	32	-	2
		2	41	38	1	2
		3	61	53	0	8
		4	48	41	5	2
		5	52	47	2	3
		6	75	68	2	5
	Section 3 subtotal		311	279	10	22
	Section 5	1	17	16	-	1
		2	8	6	0	2
		3	34	31	0	3
		4	32	28	1	3
		5	28	23	1	4
		6	29	22	3	4
	Section 5 subtotal		148	126	5	17
	Section 6	1	35	31	-	4
		2	54	47	1	6
		3	61	53	1	7
		4	72	58	3	11
		5	49	36	6	7
		6	68	48	8	12
	Section 6 subtotal		339	273	19	47
	Section 7	1	6	5	-	0
		2	24	20	0	4
		3	21	17	0	4
		4	27	23	2	2
		5	29	23	0	6
		6	23	17	2	4
	Section 7 subtotal		130	105	5	20
	Section 9	1	5	5	-	0
		2	3	3	0	0
		3	4	4	0	0
		4	2	1	1	0
		5	2	1	0	1
		6	5	4	1	0
	Section 9 subtotal		21	18	2	1
Largescale Sucker Total			1026	869	42	115

Continued...

Table E5 Continued.

Species Name	Section	Session	N Captured	N Marked	N Recaptured (within year)	N Recaptured (between years)
Longnose Sucker	Section 1	1	5	5	-	0
		2	20	18	0	2
		3	20	18	0	2
		4	52	47	0	5
		5	18	18	0	0
		6	40	37	1	2
	Section 1 subtotal		155	143	1	11
	Section 3	1	60	51	-	8
		2	53	48	1	4
		3	153	135	5	13
		4	135	107	11	17
		5	140	112	10	18
		6	136	109	11	16
	Section 3 subtotal		677	562	39	76
	Section 5	1	119	103	-	16
		2	101	93	0	8
		3	154	131	5	18
		4	182	158	9	15
		5	106	90	4	12
		6	94	80	4	10
	Section 5 subtotal		756	655	22	79
	Section 6	1	116	98	-	18
		2	86	71	1	14
		3	165	143	4	18
		4	252	213	9	30
		5	154	121	10	23
		6	154	126	8	20
	Section 6 subtotal		927	772	32	123
	Section 7	1	92	86	-	5
		2	89	79	1	9
		3	101	87	2	12
		4	116	98	5	13
		5	110	97	4	9
		6	123	109	7	7
	Section 7 subtotal		631	556	20	55
	Section 9	1	118	100	-	18
		2	125	107	4	14
		3	77	64	1	12
		4	144	121	8	15
		5	27	23	1	3
		6	102	95	2	5
	Section 9 subtotal		593	510	16	67
Longnose Sucker Total			3739	3198	130	411

Continued...

Table E5 Continued.

Species Name	Section	Session	N Captured	N Marked	N Recaptured (within year)	N Recaptured (between years)
Mountain Whitefish	Section 1	1	282	238	-	43
		2	244	209	1	34
		3	714	600	14	100
		4	1043	858	50	135
		5	713	577	42	94
		6	620	531	33	56
	Section 1 subtotal		3616	3013	140	462
	Section 3	1	138	98	-	40
		2	200	133	2	65
		3	894	554	51	284
		4	662	406	77	179
		5	509	327	78	104
		6	522	346	71	105
	Section 3 subtotal		2925	1864	279	777
	Section 5	1	114	104	-	10
		2	97	79	2	16
		3	281	223	15	43
		4	209	158	12	39
		5	164	125	17	22
		6	181	147	13	21
	Section 5 subtotal		1046	836	59	151
	Section 6	1	53	45	-	8
		2	81	64	4	13
		3	149	127	4	18
		4	227	174	12	41
		5	281	215	22	44
		6	213	167	19	27
	Section 6 subtotal		1004	792	61	151
	Section 7	1	34	30	-	4
		2	68	54	4	10
		3	77	62	0	15
		4	74	58	2	14
		5	109	91	4	14
		6	104	81	10	13
	Section 7 subtotal		466	376	20	70
	Section 9	1	21	18	-	3
		2	12	12	0	0
		3	37	32	1	4
		4	57	47	5	5
		5	15	15	0	0
		6	37	27	4	6
	Section 9 subtotal		179	151	10	18
Mountain Whitefish Total			9236	7032	569	1629

Continued...

Table E5 Continued.

Species Name	Section	Session	N Captured	N Marked	N Recaptured (within year)	N Recaptured (between years)
Rainbow Trout	Section 1	1	11	11	-	0
		2	8	6	0	2
		3	11	11	0	0
		4	16	15	1	0
		5	14	12	1	1
		6	12	11	1	0
	Section 1 subtotal		72	66	3	3
	Section 3	1	1	1	-	0
		2	3	3	0	0
		3	12	9	2	1
		4	17	14	1	2
		5	14	11	3	0
		6	13	9	2	2
	Section 3 subtotal		60	47	8	5
	Section 5	1	0	0	-	0
		2	1	1	0	0
		3	1	1	0	0
		4	0	0	0	0
		5	0	0	0	0
		6	2	1	0	1
	Section 5 subtotal		4	3	0	1
	Section 6	1	0	0	-	0
		2	0	0	0	0
		3	0	0	0	0
		4	0	0	0	0
		5	1	1	0	0
		6	0	0	0	0
	Section 6 subtotal		1	1	0	0
	Section 7	1	0	0	-	0
		2	1	1	0	0
		3	1	1	0	0
		4	0	0	0	0
		5	1	1	0	0
		6	0	0	0	0
	Section 7 subtotal		3	3	0	0
	Section 9	1	0	0	-	0
		2	0	0	0	0
		3	0	0	0	0
		4	0	0	0	0
		5	0	0	0	0
		6	0	0	0	0
	Section 9 subtotal		0	0	0	0
Rainbow Trout Total			140	120	11	9

Continued...

Table E5 Concluded.

Species Name	Section	Session	N Captured	N Marked	N Recaptured (within year)	N Recaptured (between years)
White Sucker	Section 1	1	0	0	-	0
		2	2	2	0	0
		3	0	0	0	0
		4	2	1	0	1
		5	0	0	0	0
		6	4	4	0	0
	Section 1 subtotal		8	7	0	1
	Section 3	1	1	0	-	1
		2	0	0	0	0
		3	1	1	0	0
		4	2	2	0	0
		5	9	9	0	0
		6	9	9	0	0
	Section 3 subtotal		22	21	0	1
	Section 5	1	4	4	-	0
		2	4	3	0	1
		3	9	9	0	0
		4	8	8	0	0
		5	1	1	0	0
		6	2	2	0	0
	Section 5 subtotal		28	27	0	1
	Section 6	1	10	10	-	0
		2	3	3	0	0
		3	6	4	0	2
		4	14	12	1	1
		5	7	5	1	1
		6	4	2	0	2
	Section 6 subtotal		44	36	2	6
	Section 7	1	0	0	-	0
		2	0	0	0	0
		3	1	1	0	0
		4	0	0	0	0
		5	2	2	0	0
		6	0	0	0	0
	Section 7 subtotal		3	3	0	0
	Section 9	1	0	0	-	0
		2	3	3	0	0
		3	2	2	0	0
		4	4	4	0	0
		5	0	0	0	0
		6	4	2	1	1
	Section 9 subtotal		13	11	1	1
White Sucker Total			118	105	3	10

APPENDIX F

Life History Information

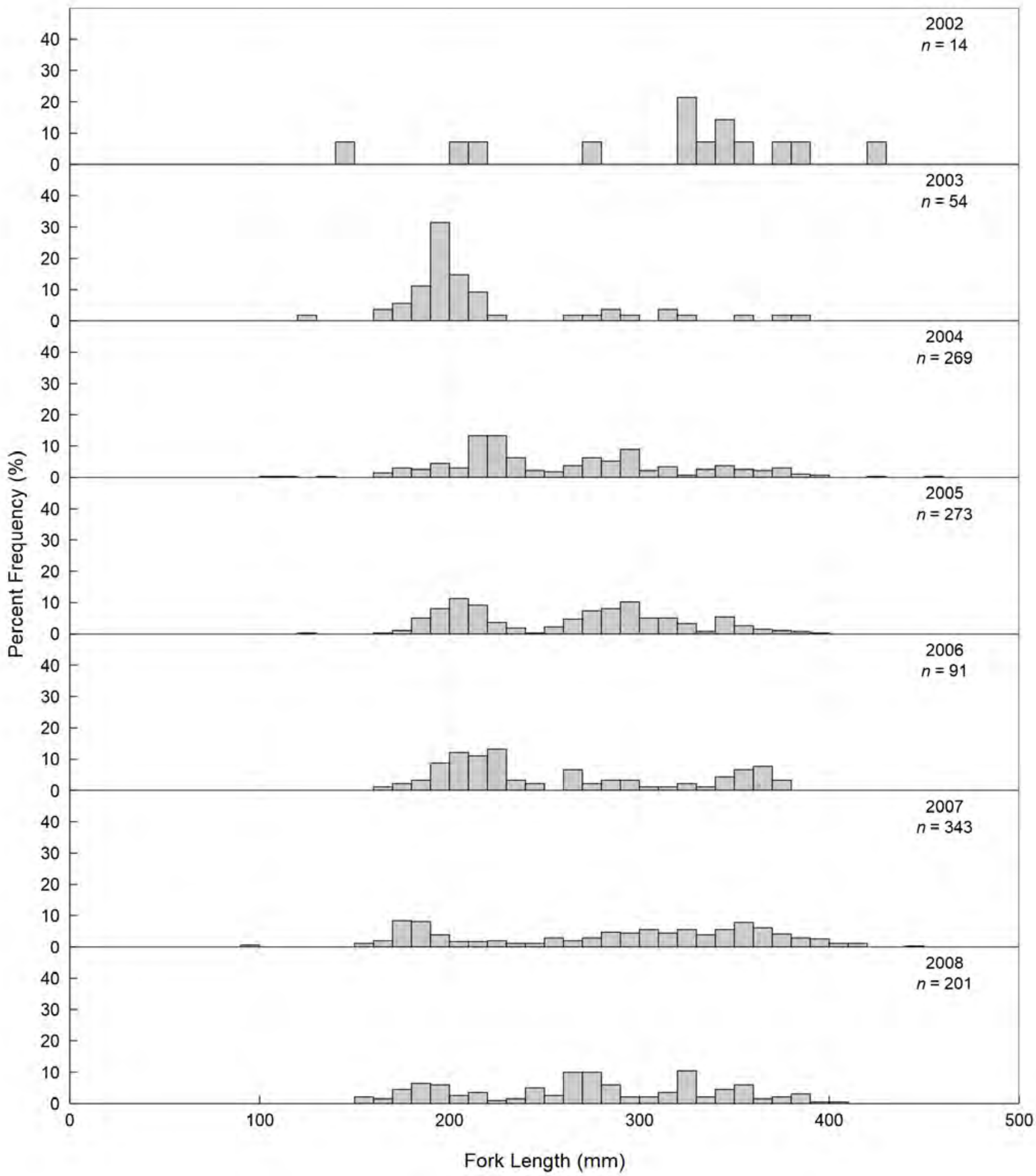
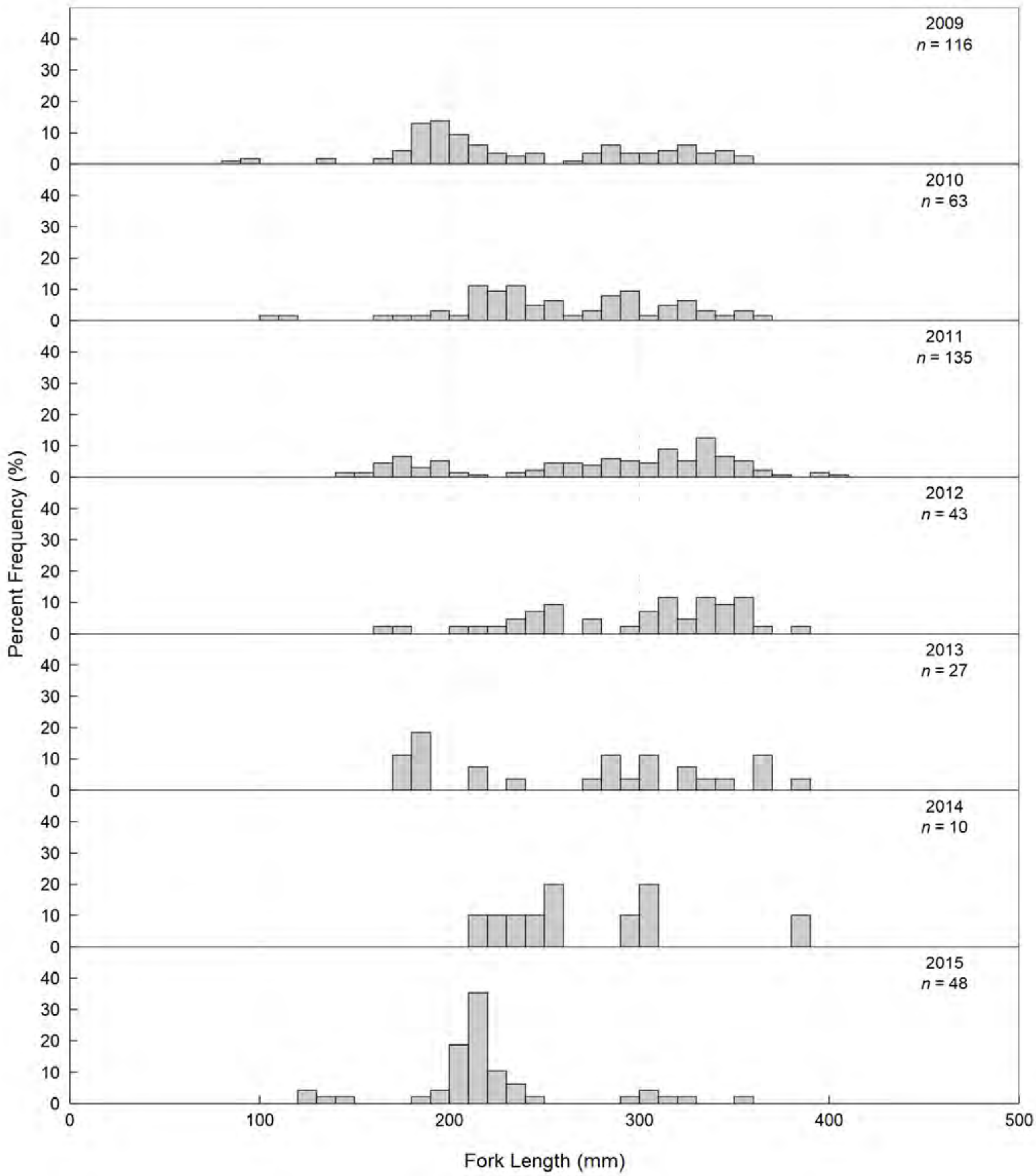


Figure F1: Length-frequency distributions by year for Arctic Grayling captured by boat electroshocking in Sections 1, 3, and 5 of the Peace River, 2002 to 2020.



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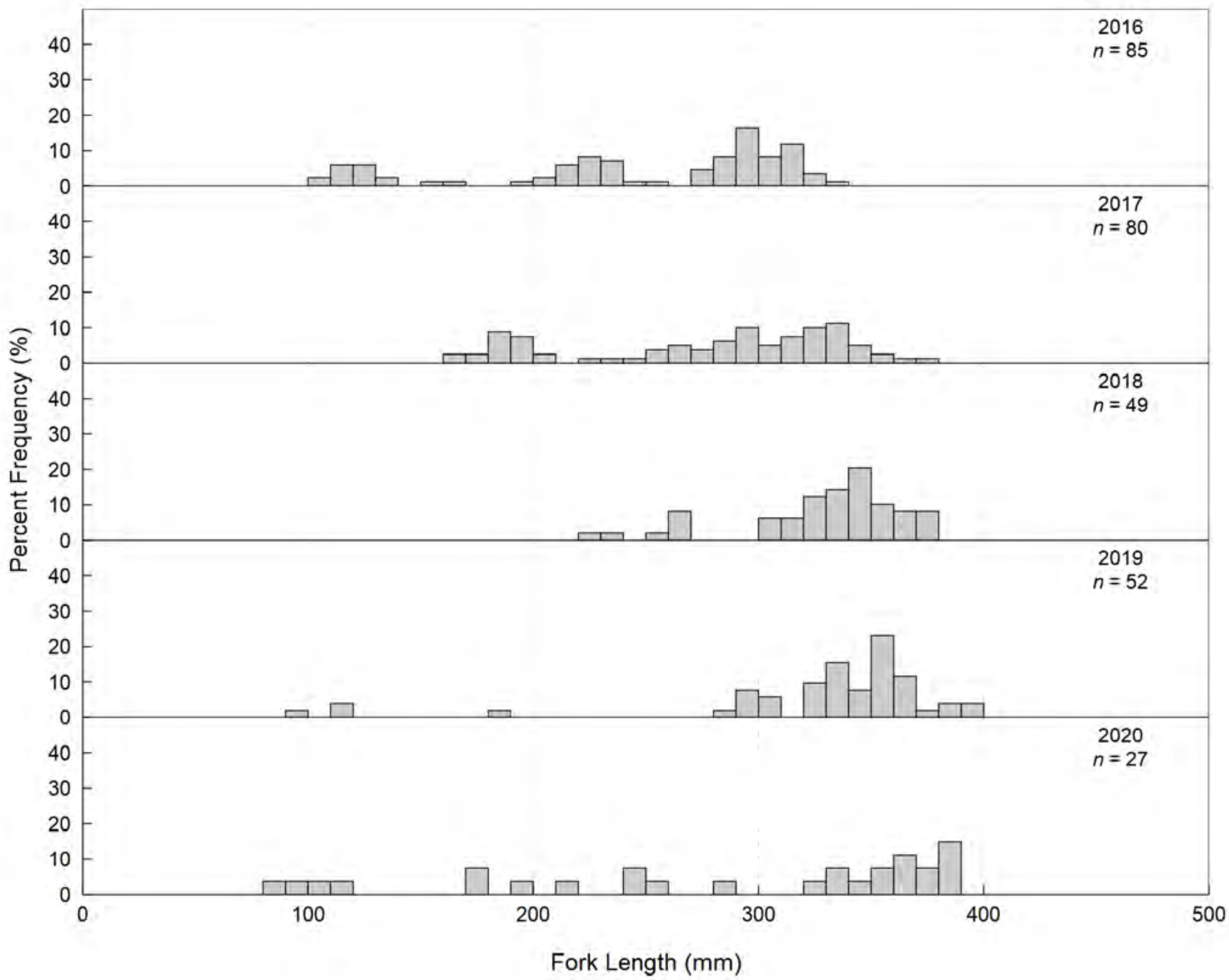

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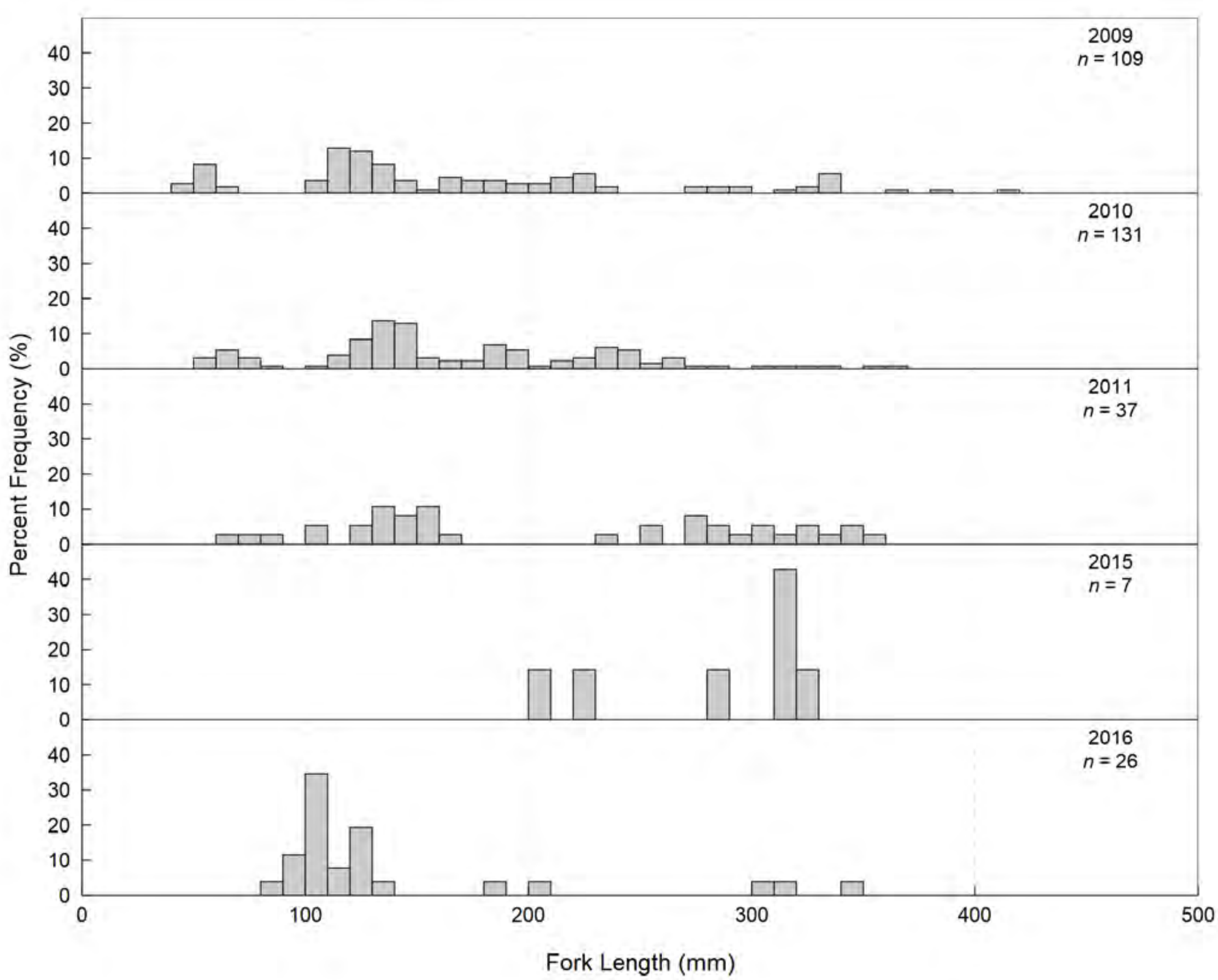
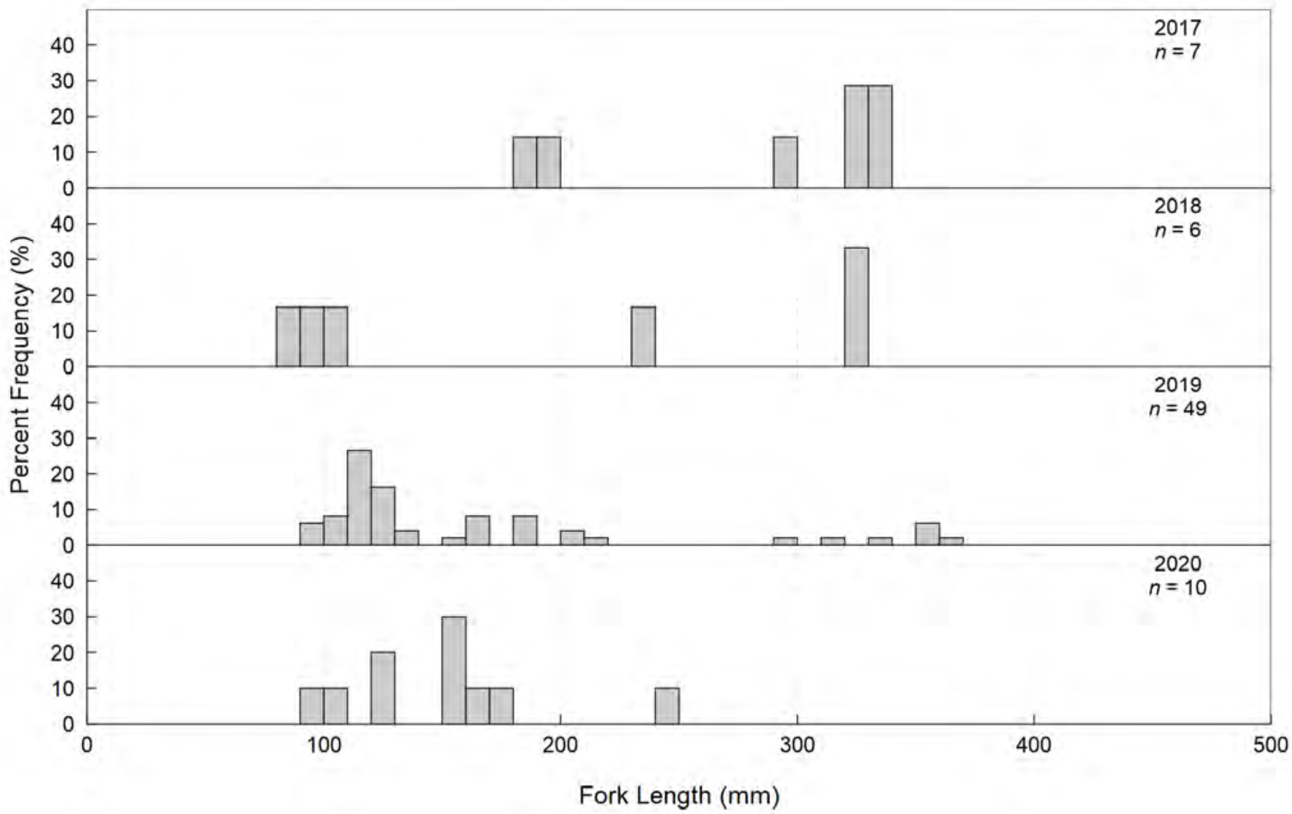


Figure F2: Length-frequency distributions by year for Arctic Grayling captured by boat electroshocking in Sections 6, 7, and 9 of the Peace River, 2009 to 2020. Data from 2009 to 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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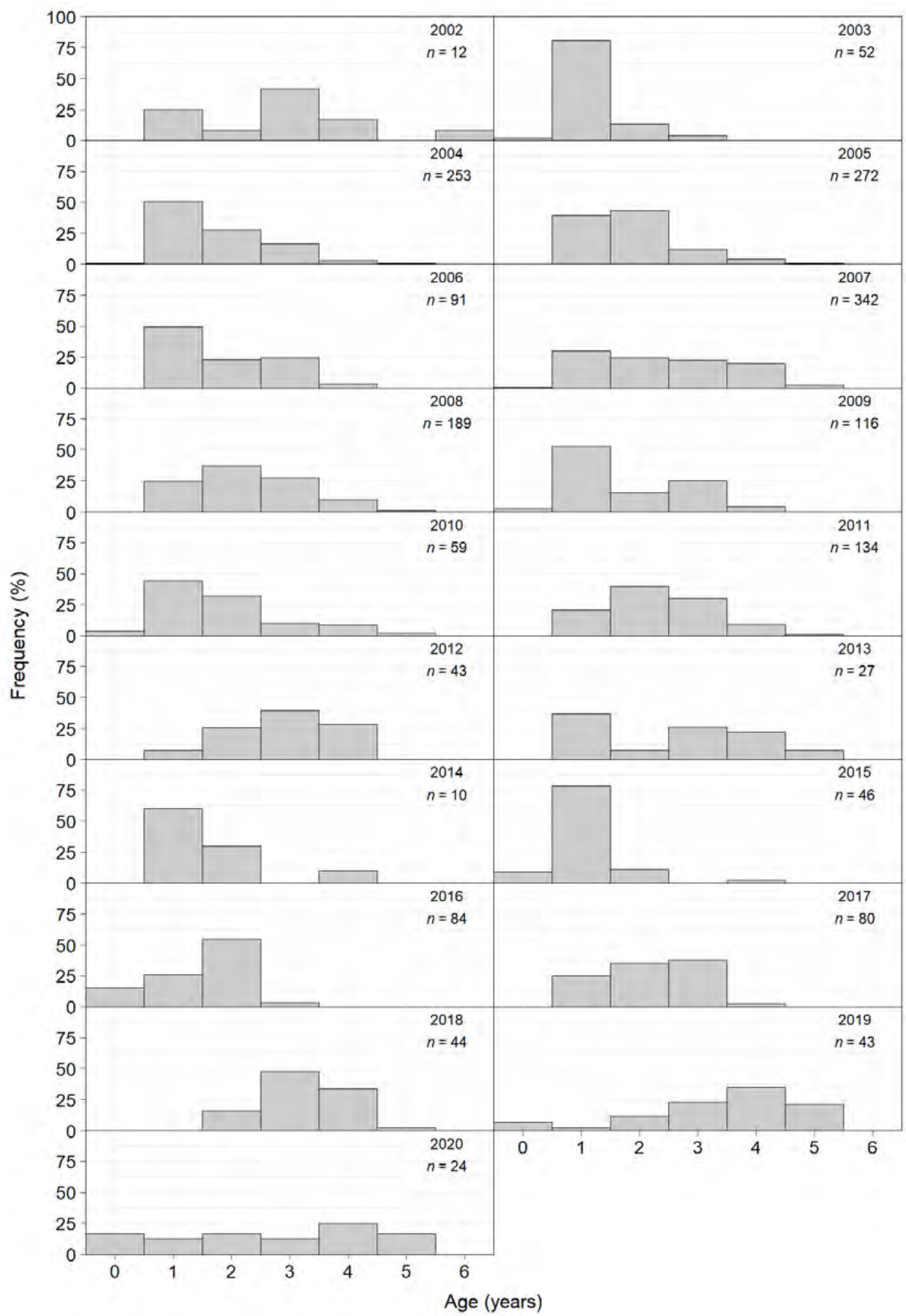


Figure F3: Age-frequency distributions by year for Arctic Grayling captured by boat electroshocking in Sections 1, 3, and 5 of the Peace River, 2002 to 2020.

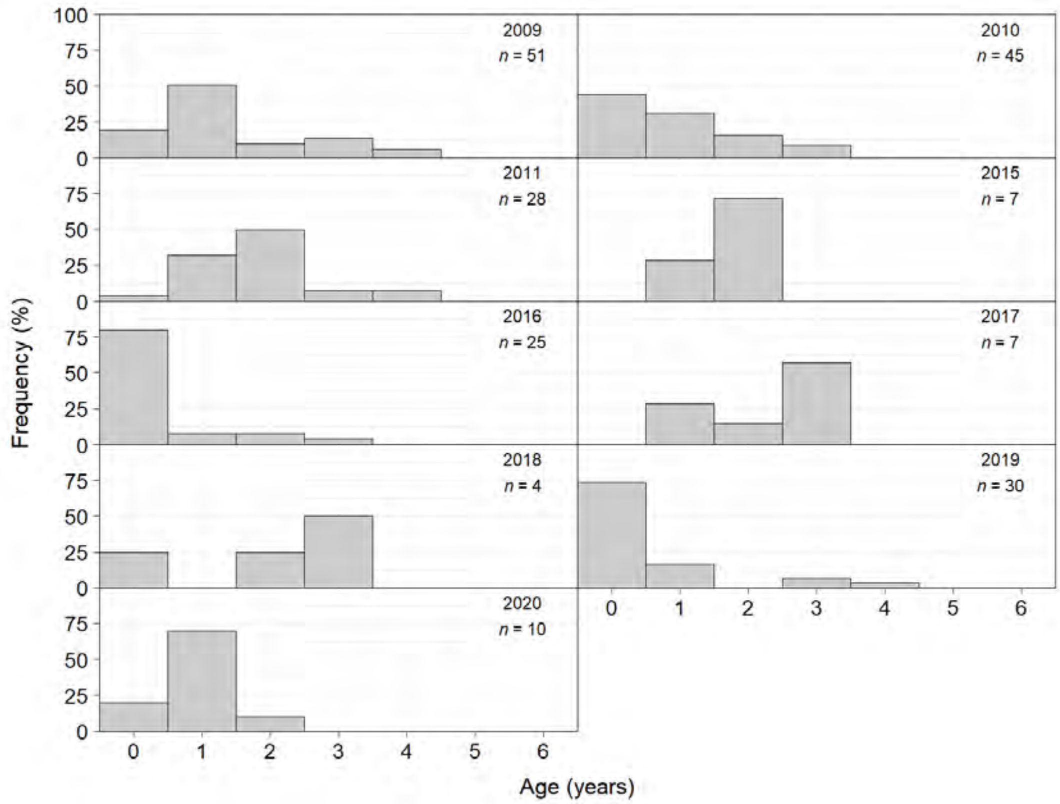


Figure F4: Age-frequency distributions by year for Arctic Grayling captured by boat electroshocking in Sections 6, 7, and 9 of the Peace River, 2009 to 2020. Data from 2009 to 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).

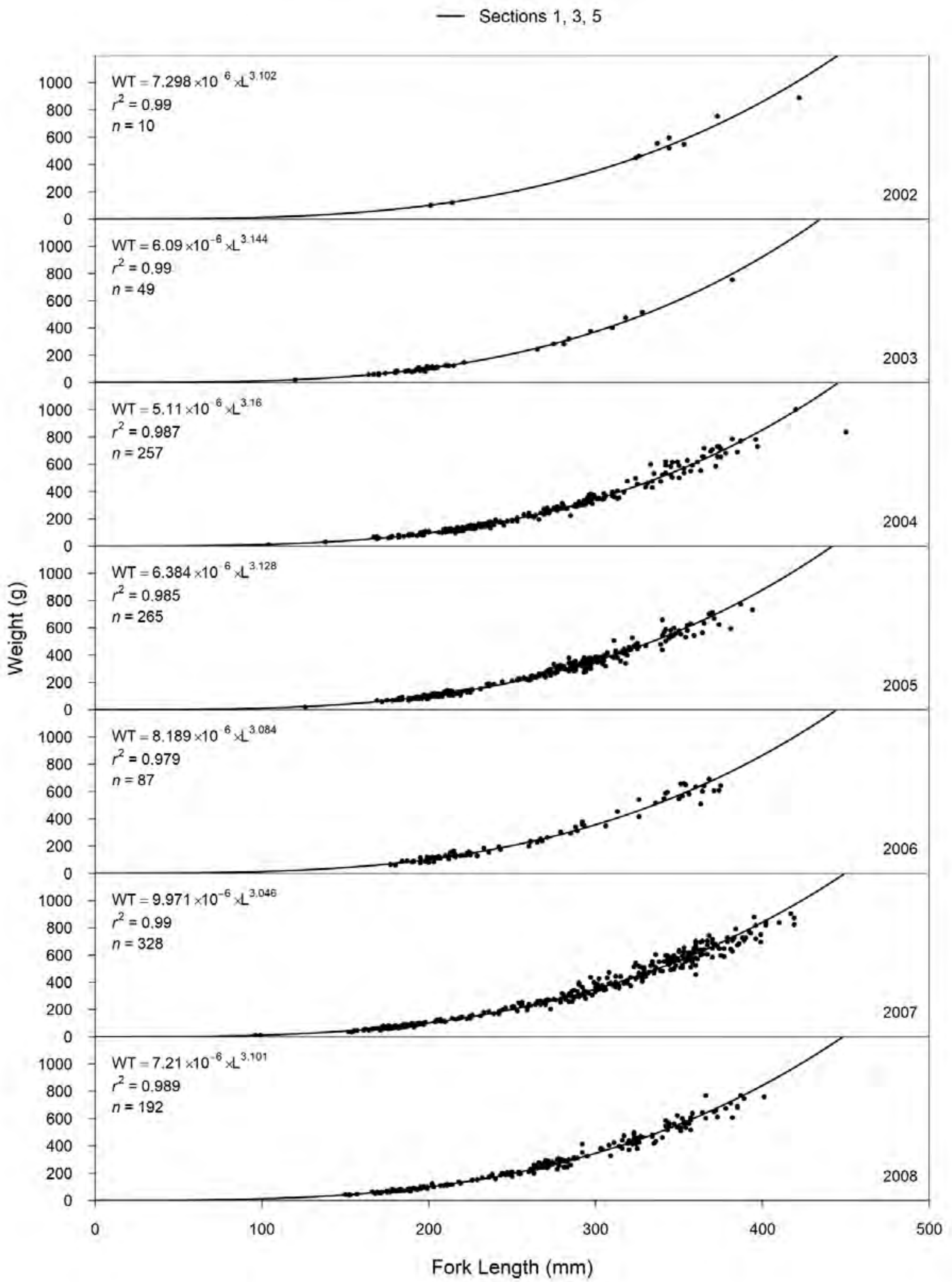
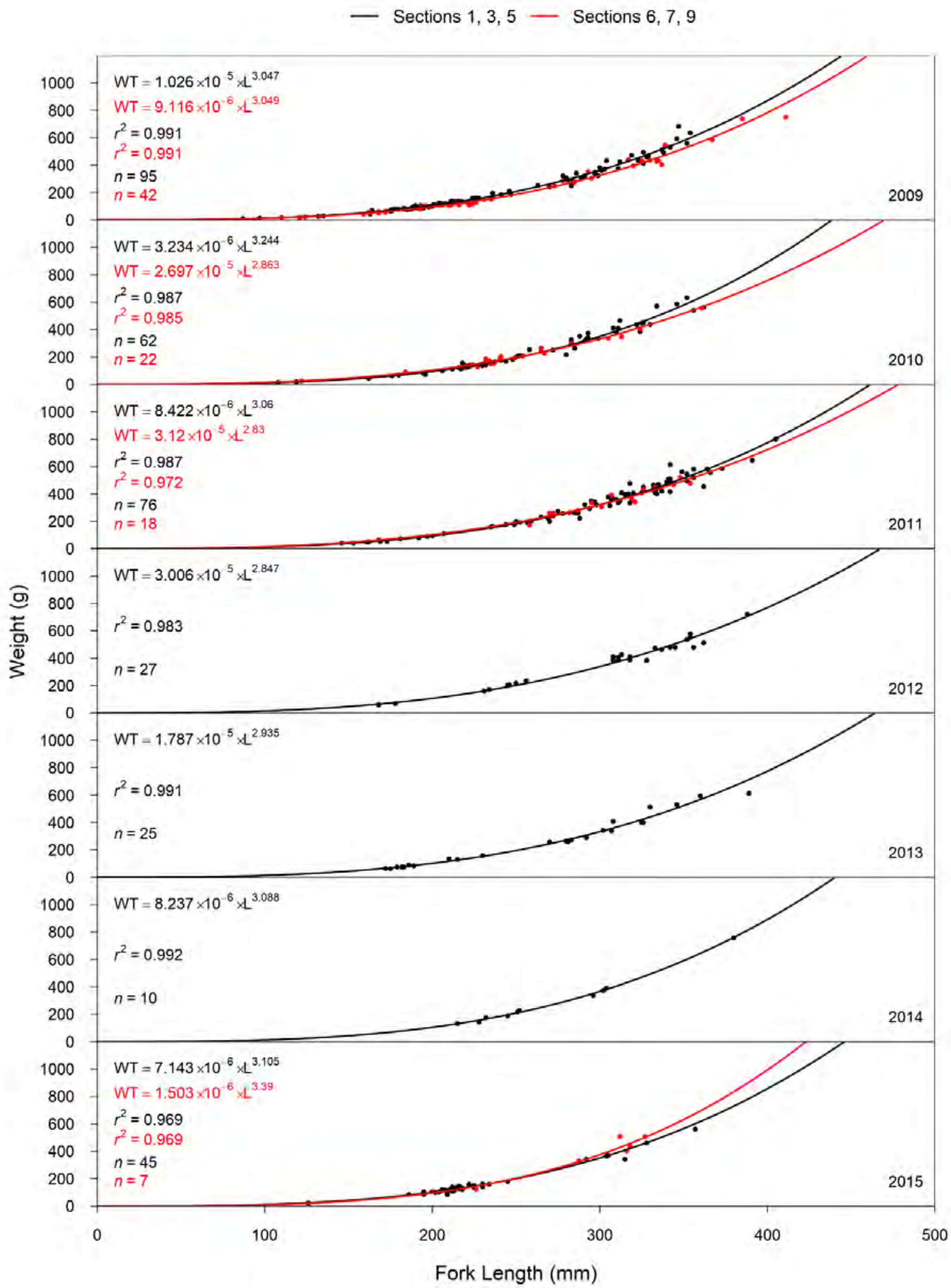


Figure F5: Length-weight regressions for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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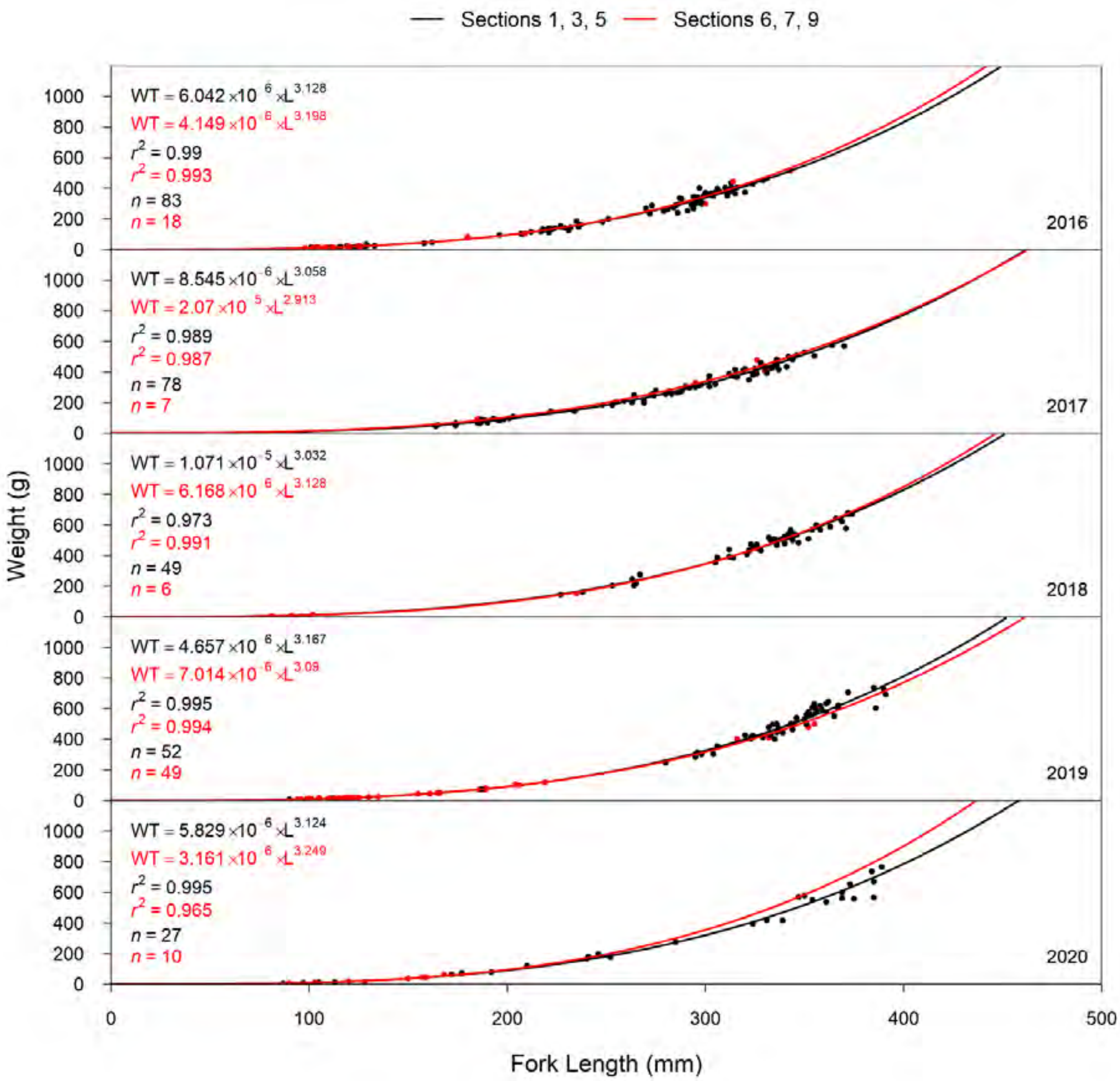

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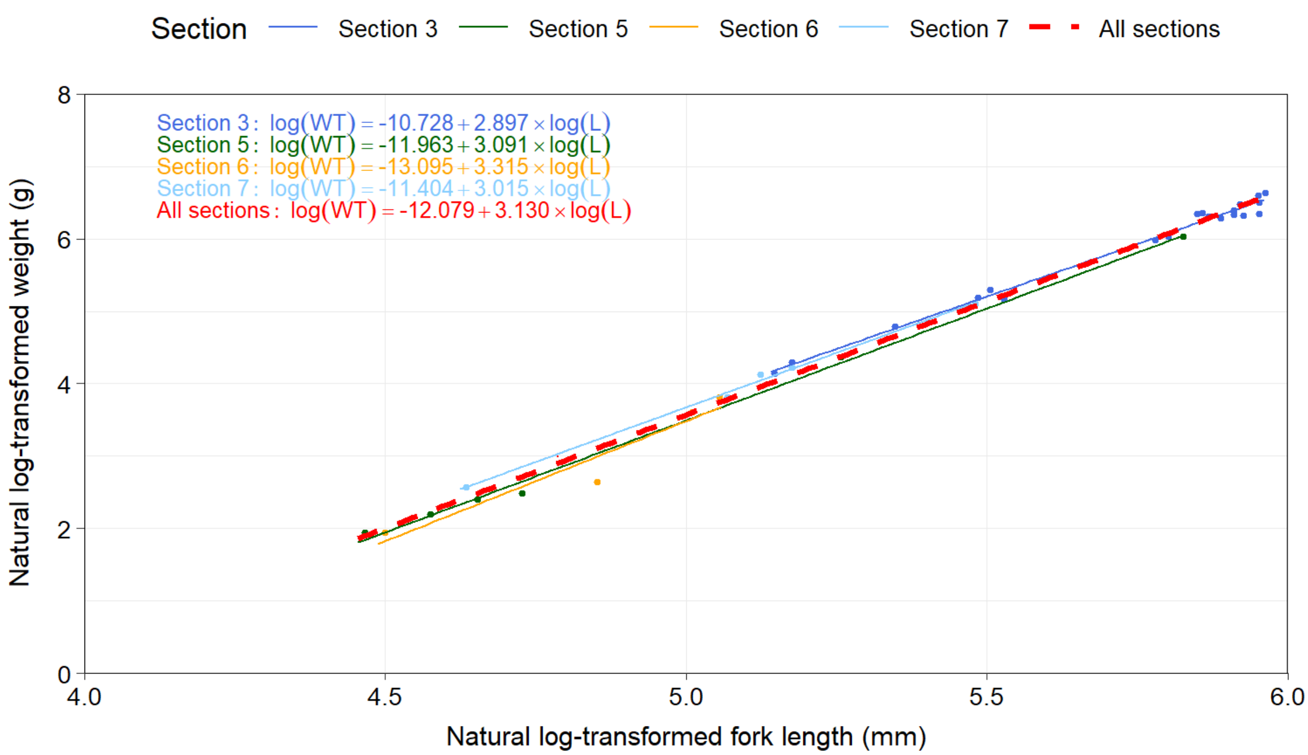


Figure F6: Log-log relationship between weight and fork length for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 2020.

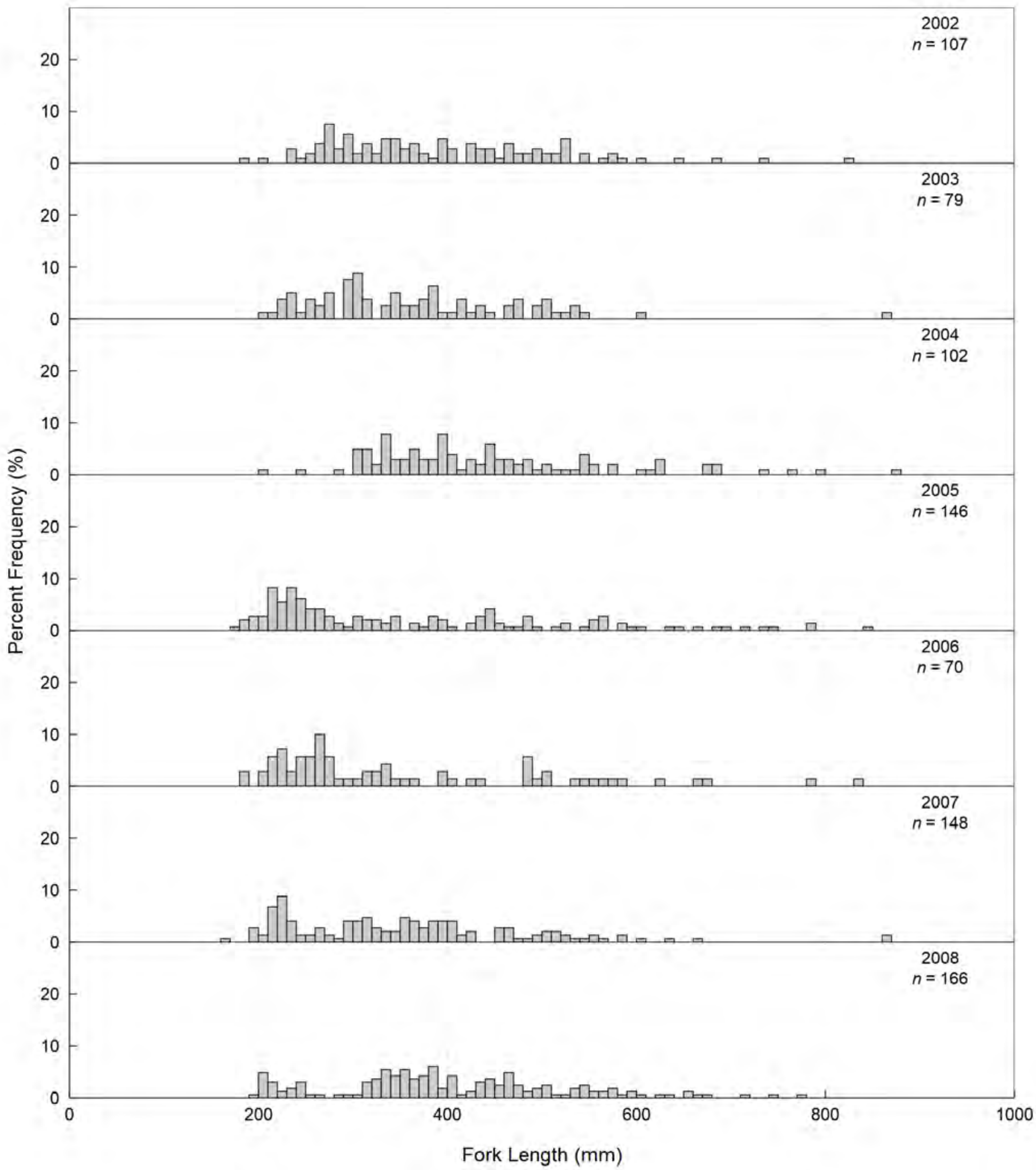
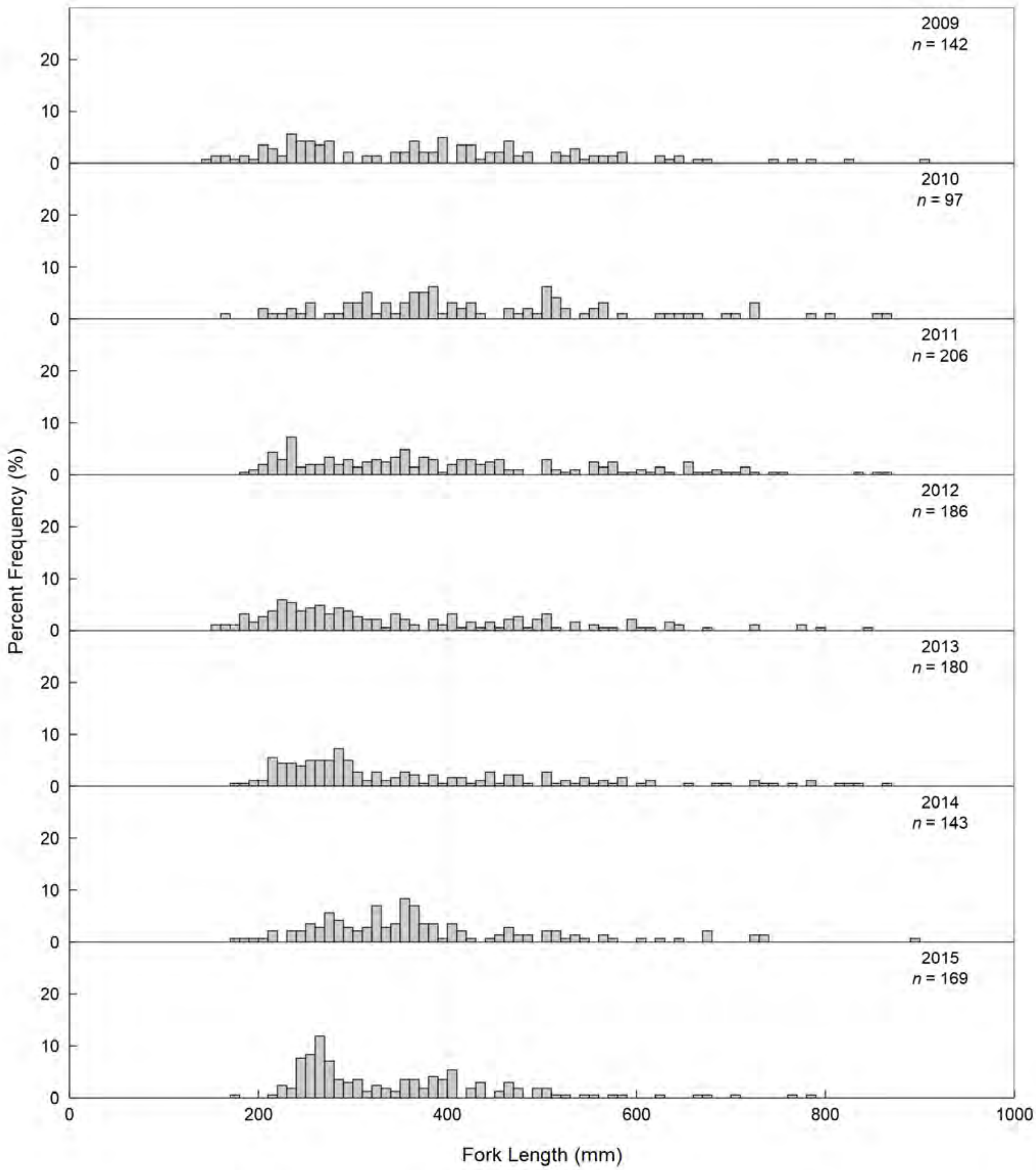


Figure F7: Length-frequency distributions by year for Bull Trout captured by boat electroshocking in Sections 1, 3, and 5 of the Peace River, 2002 to 2020.



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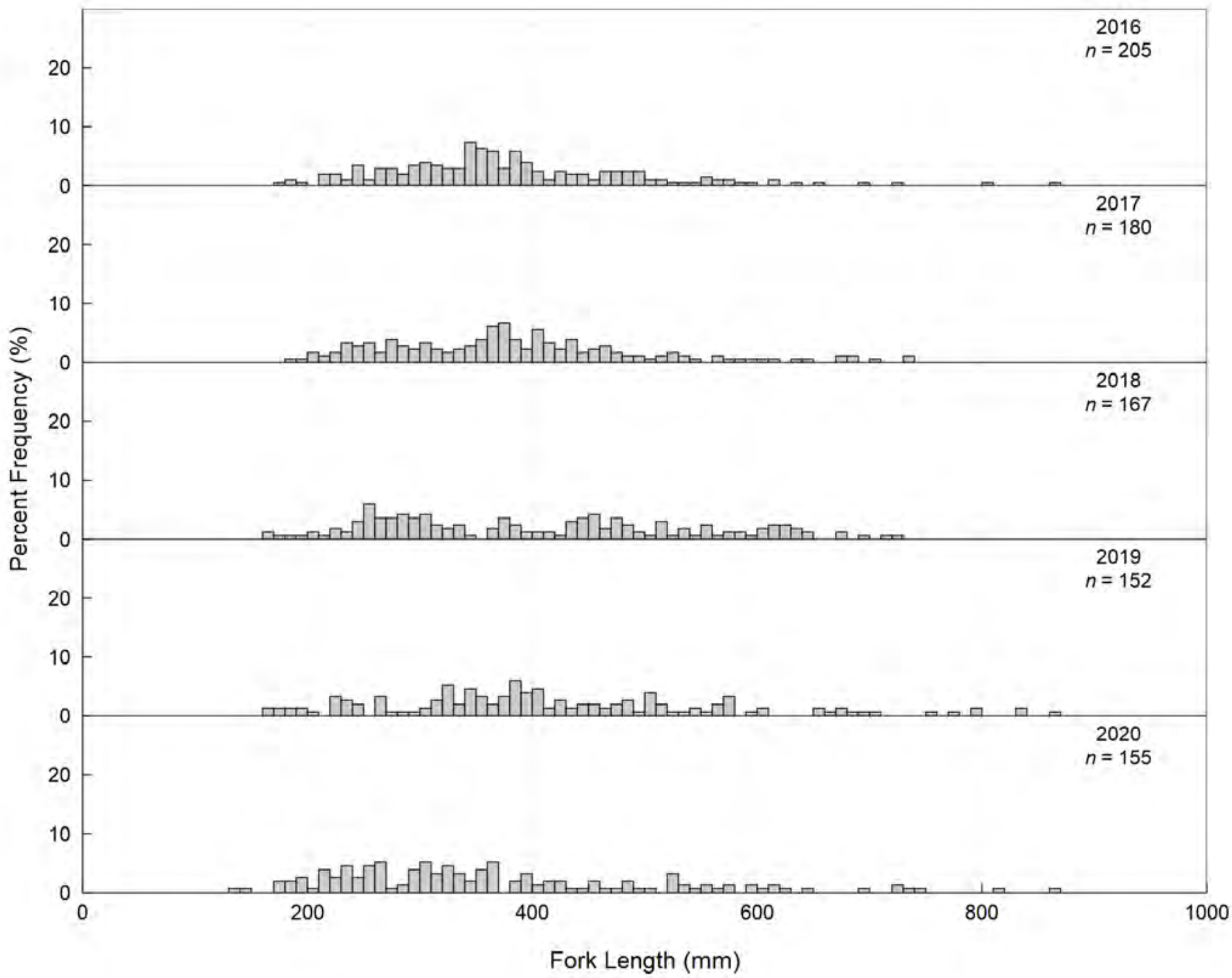

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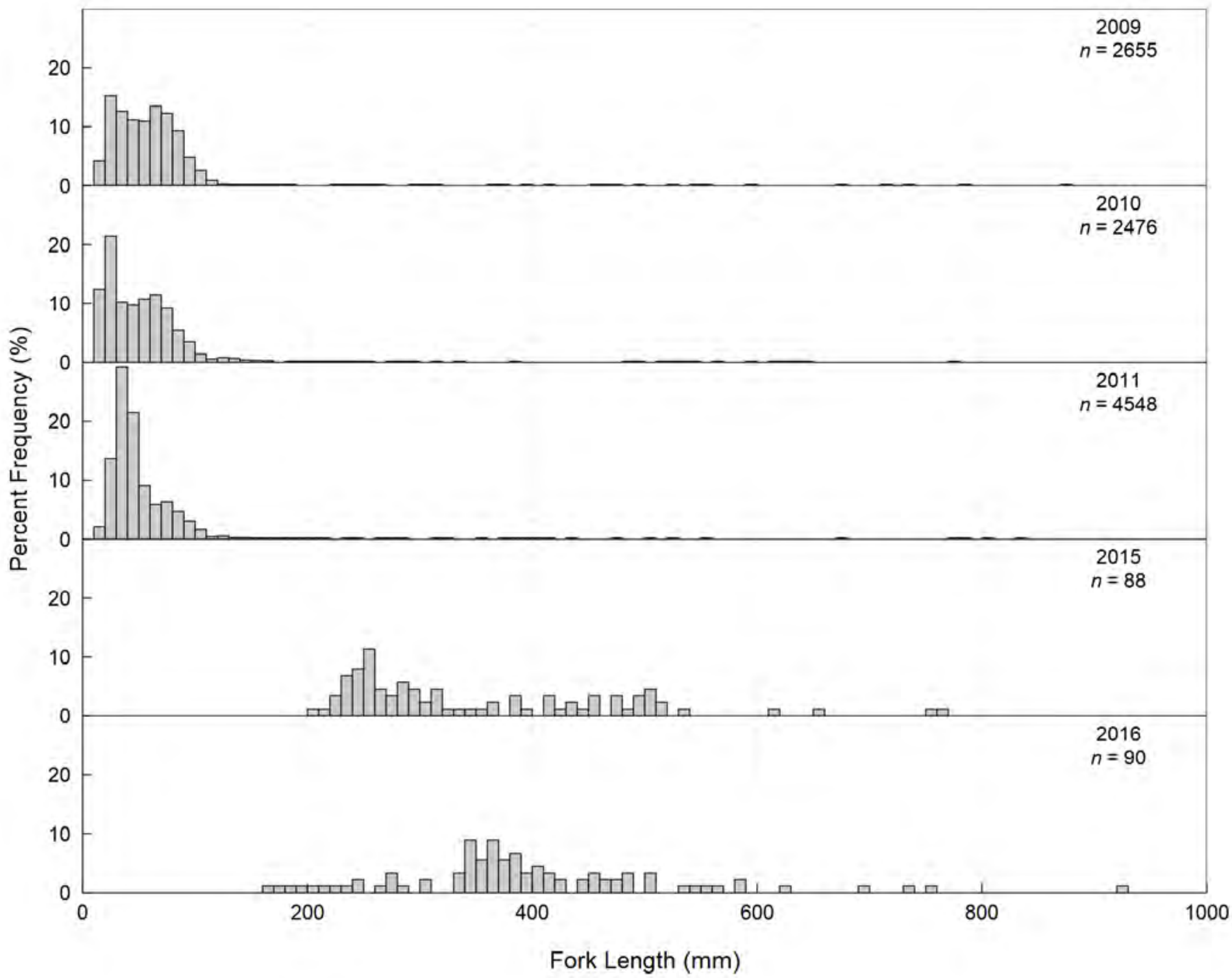
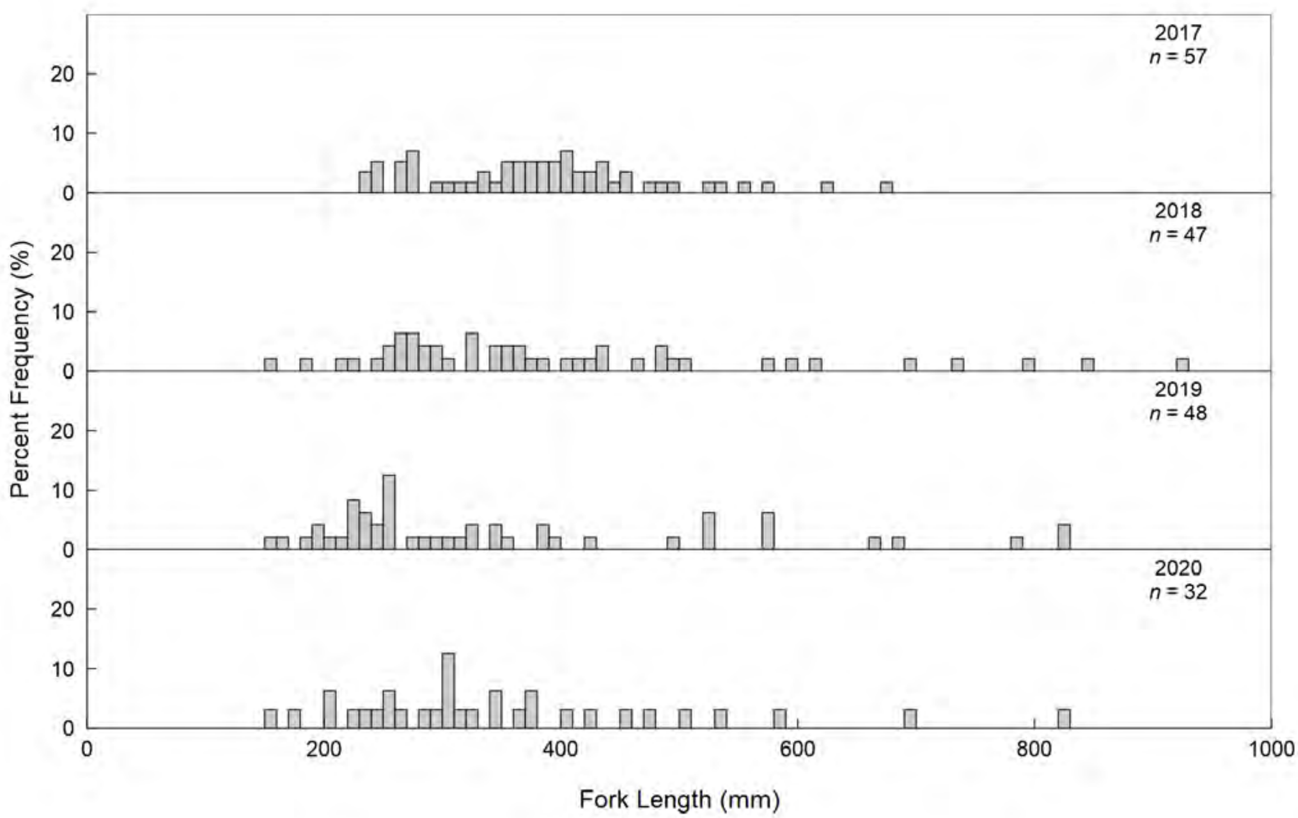


Figure F8: Length-frequency distributions by year for Bull Trout captured by boat electroshocking in Sections 6, 7, and 9 of the Peace River, 2002 to 2020. Data from 2009 to 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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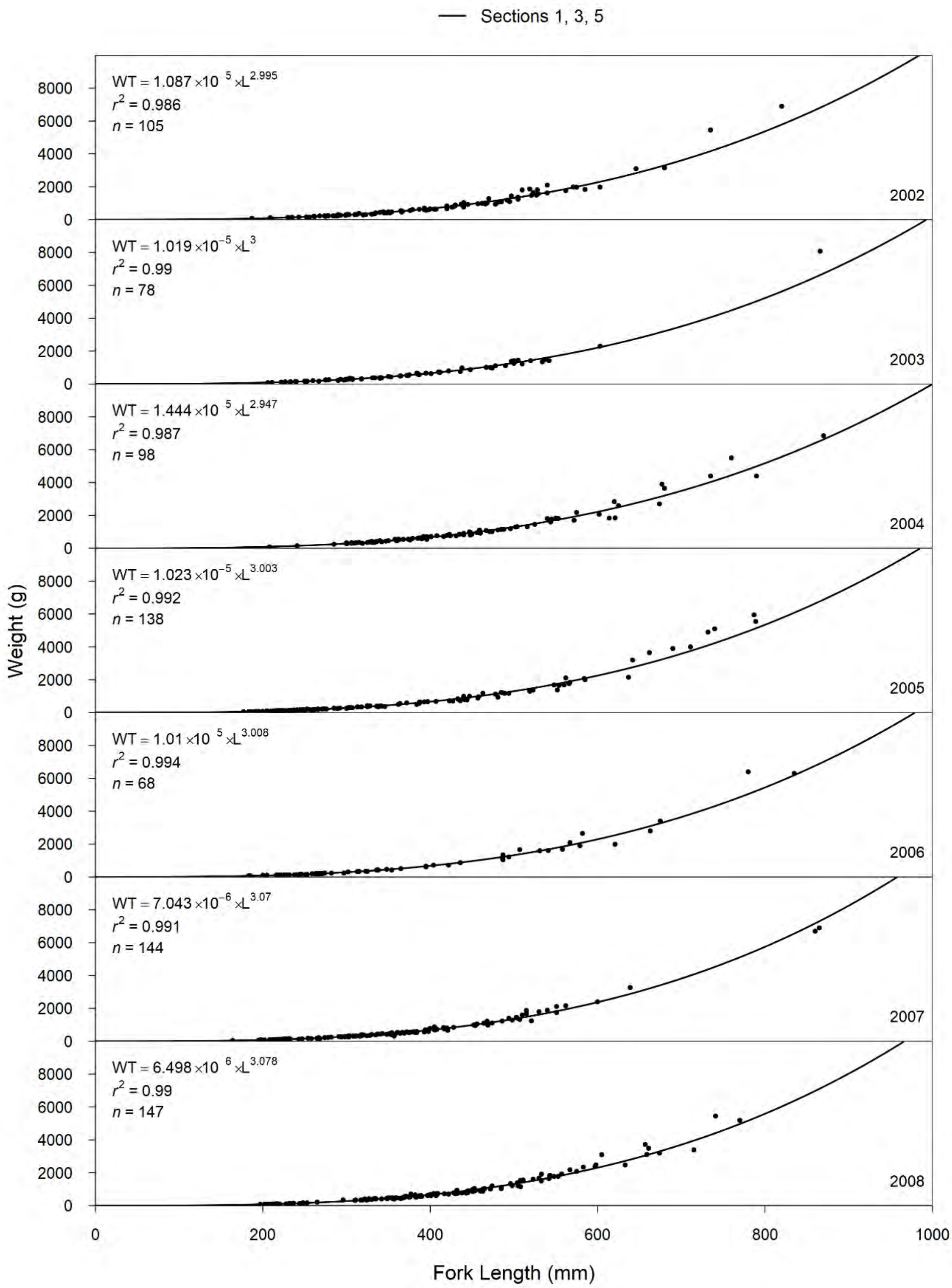
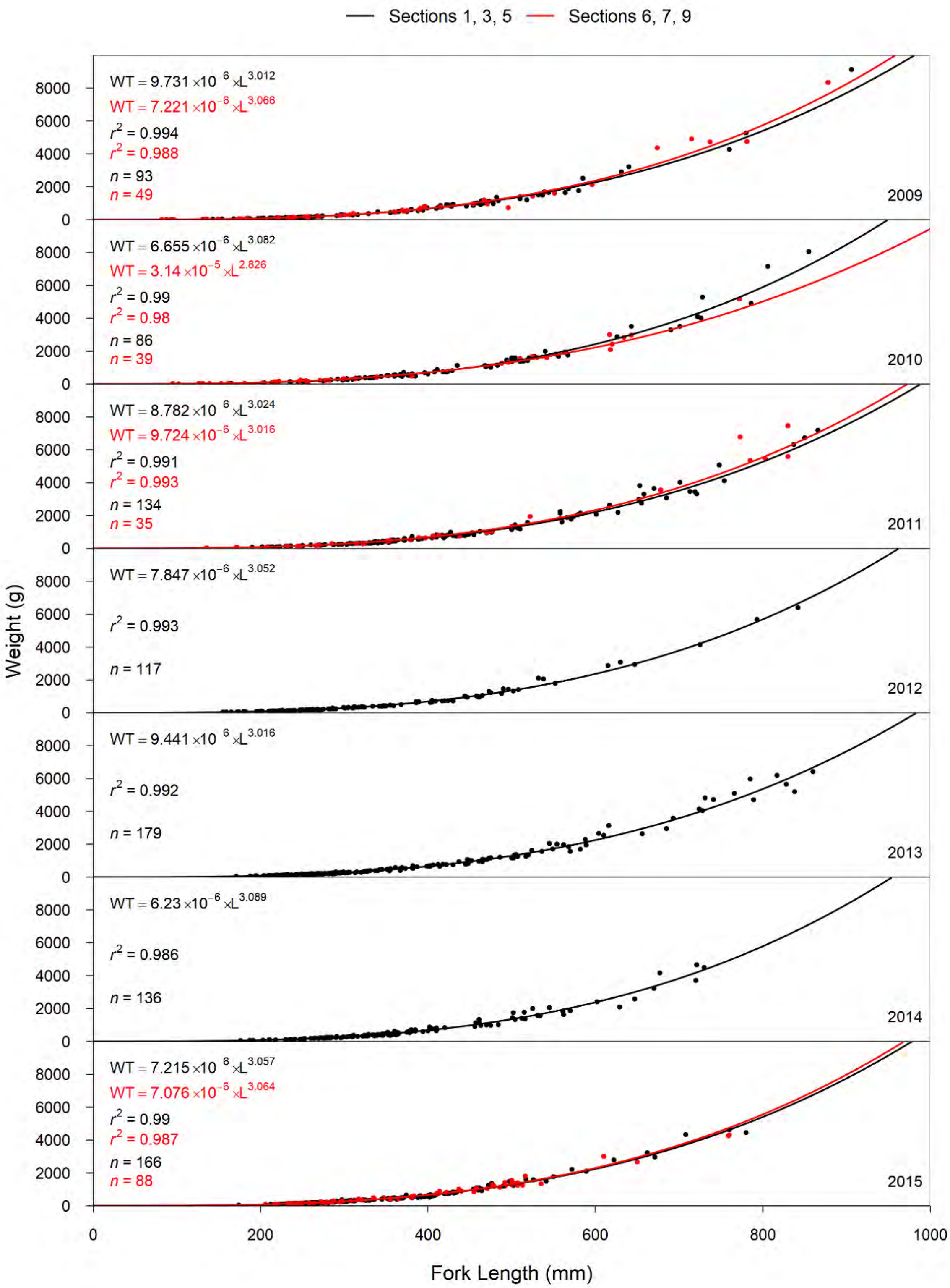


Figure F9: Length-weight regressions for Bull Trout captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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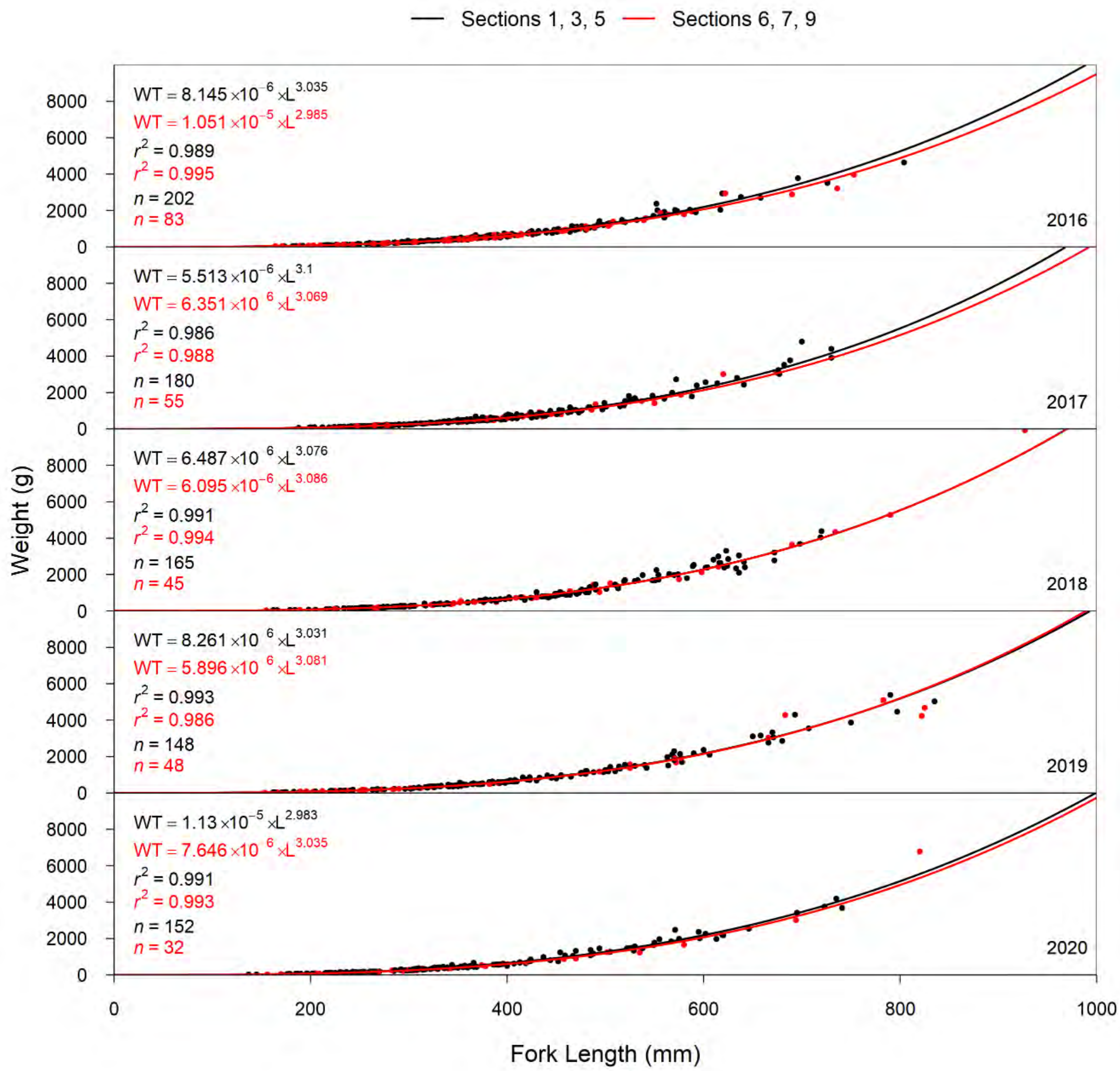

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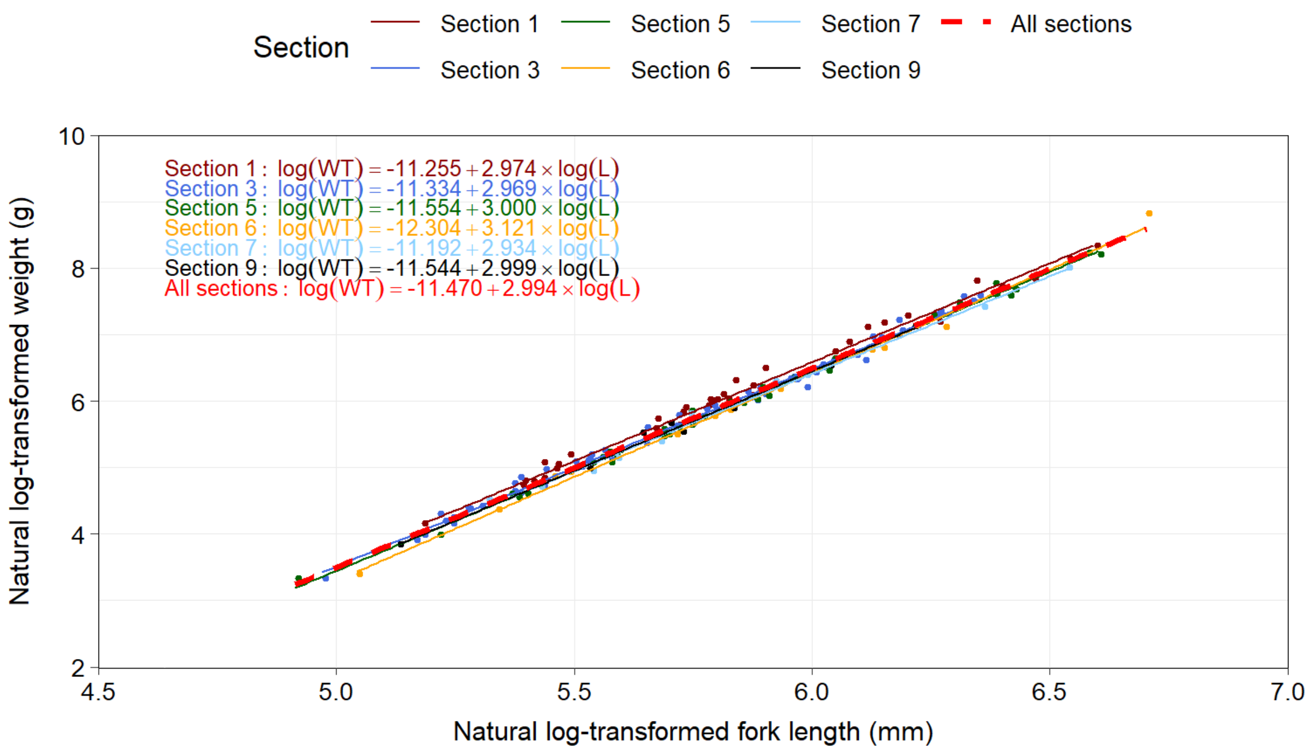


Figure F10: Log-log relationship between weight and fork length for Bull Trout captured by boat electroshocking in sampled sections of the Peace River, 2020.

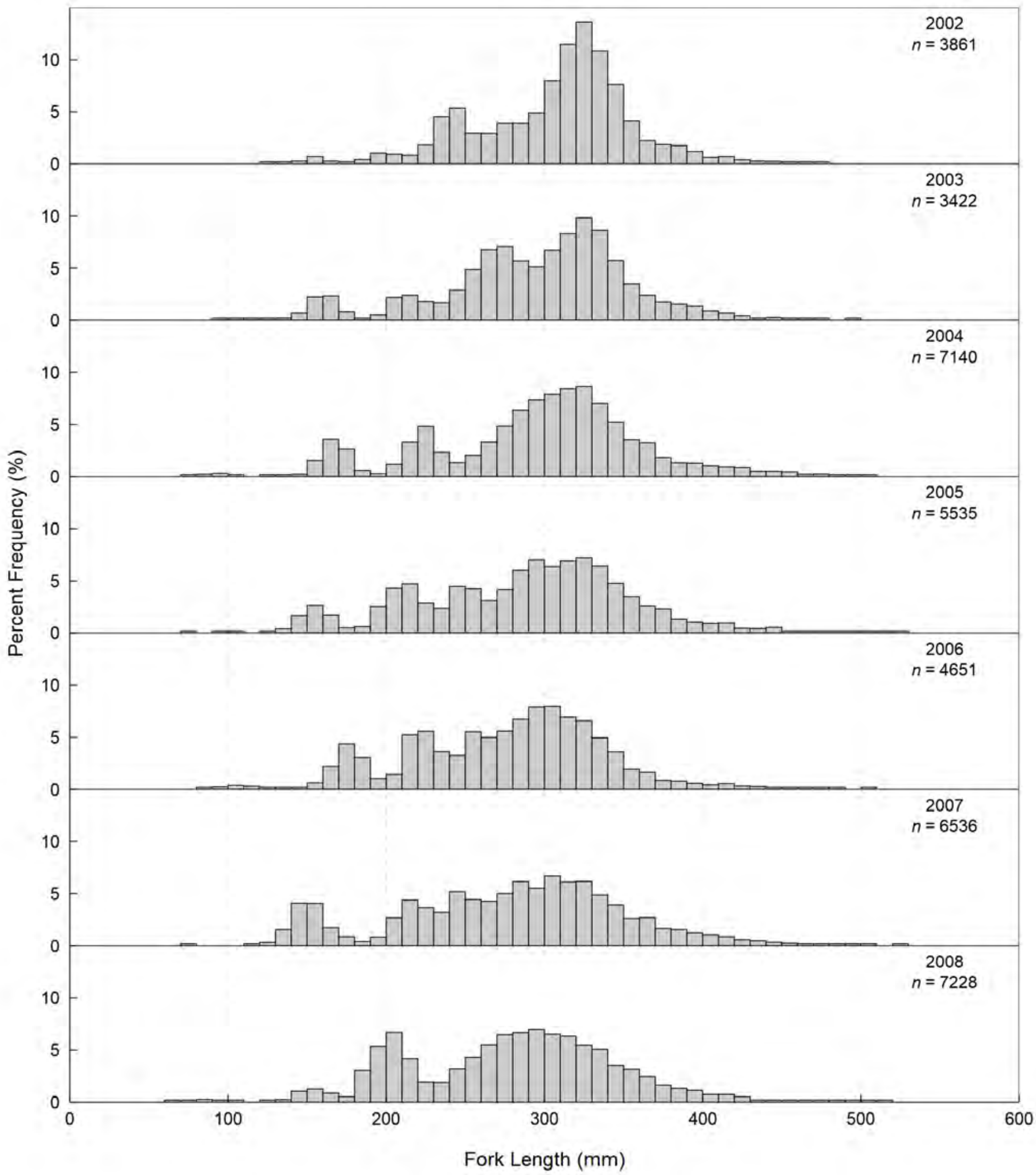


Figure F11: Length-frequency distributions by year for Mountain Whitefish captured by boat electroshocking in Sections 1, 3, and 5 of the Peace River, 2002 to 2020.

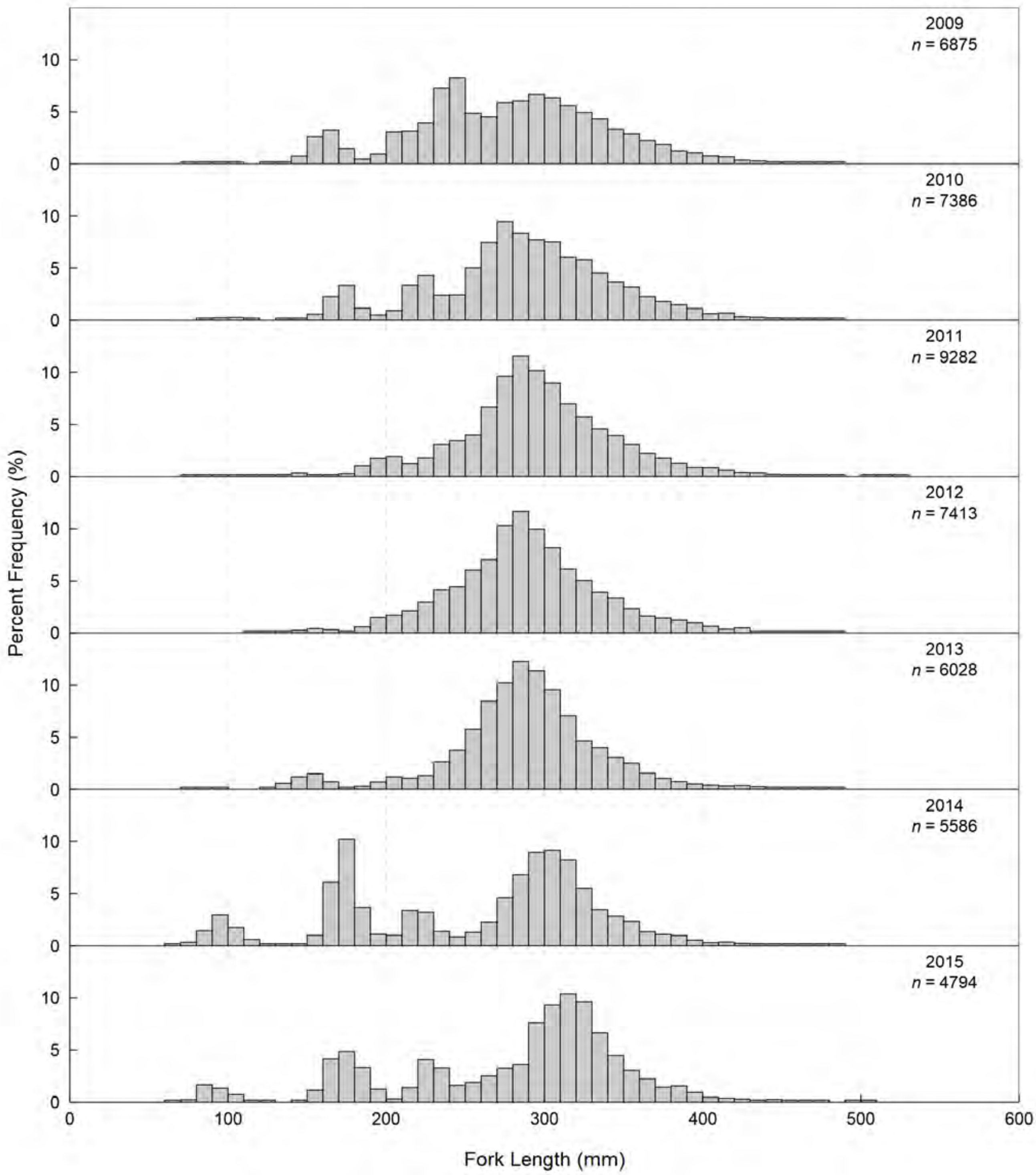
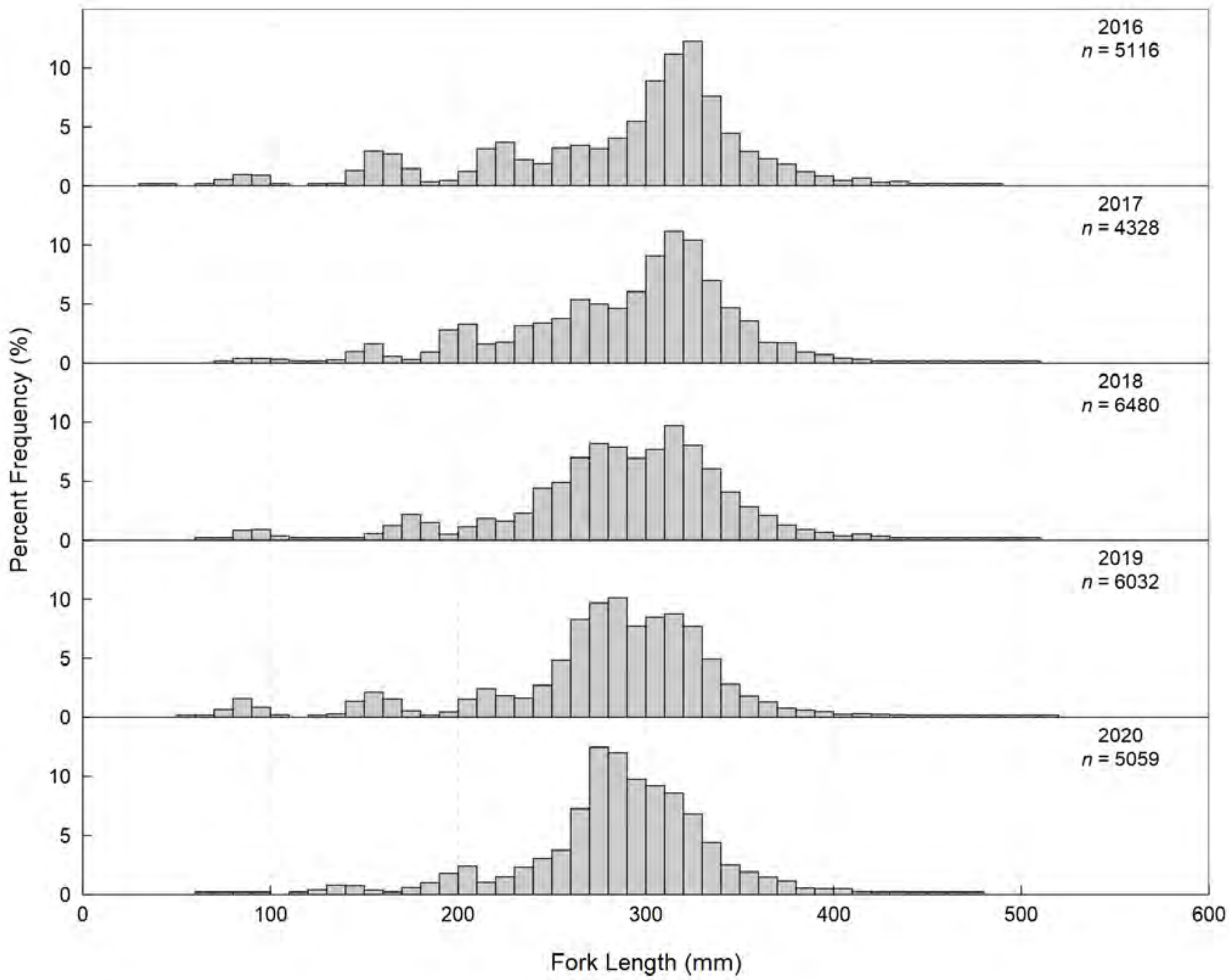


Figure F11: Continued.



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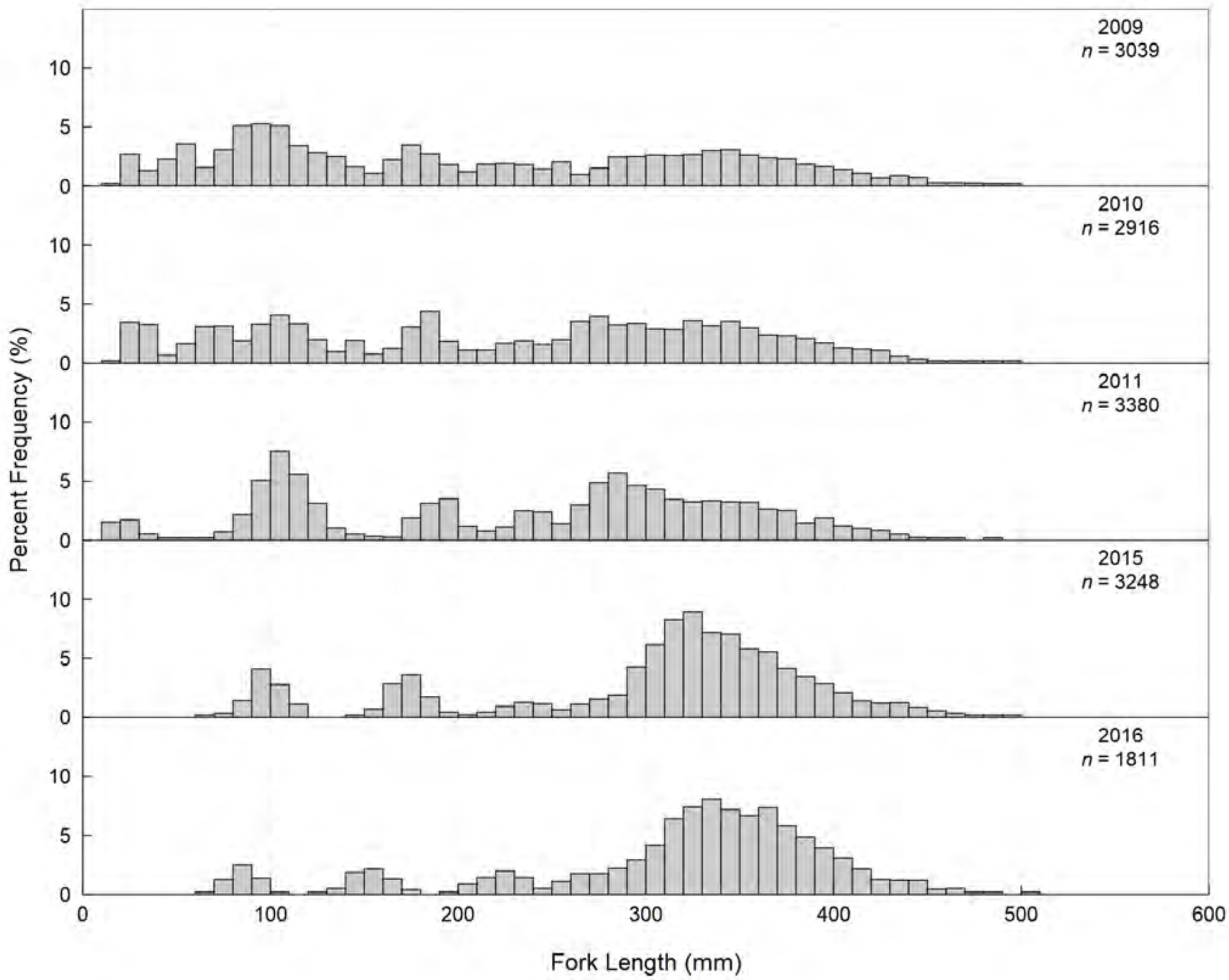
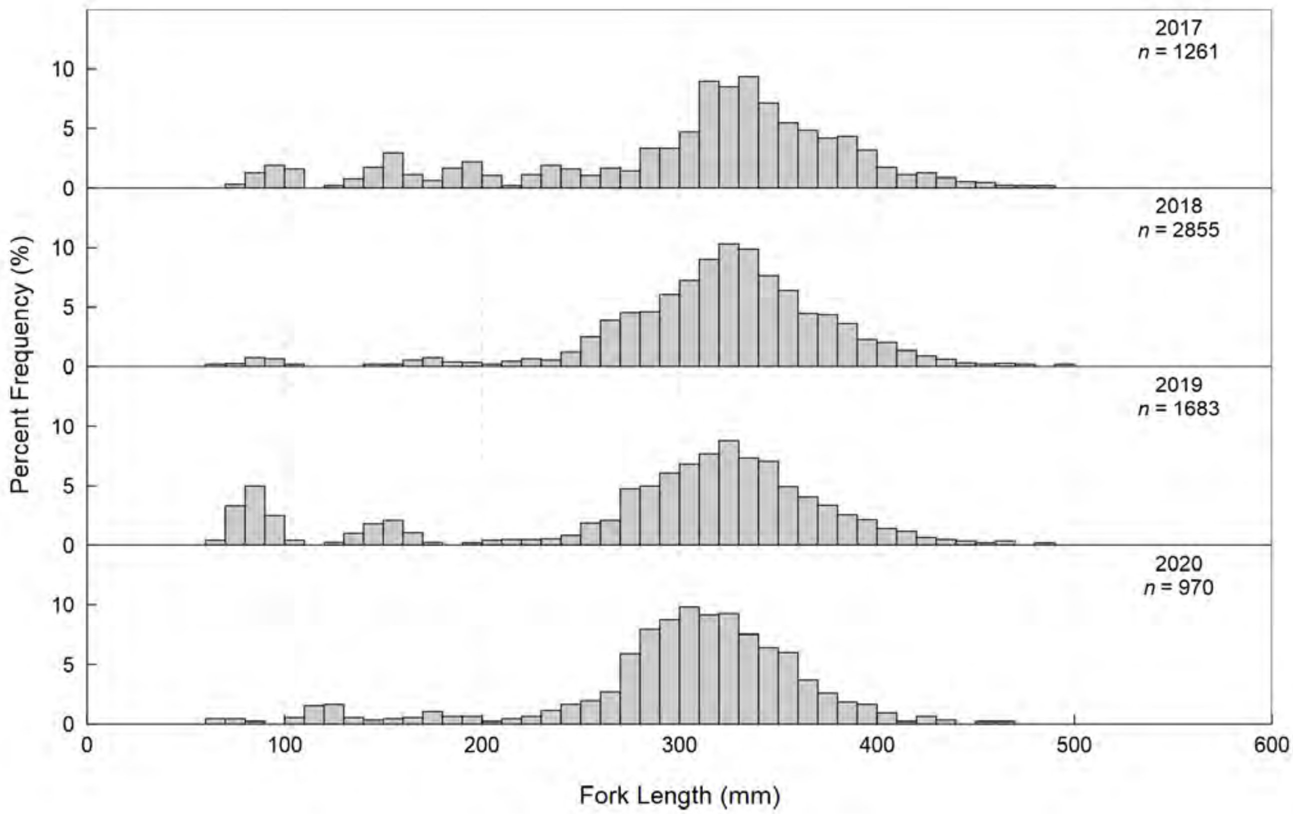


Figure F12: Length-frequency distributions by year for Mountain Whitefish captured by boat electroshocking in Sections 6, 7, and 9 of the Peace River, 2009 to 2020. Data from 2009 to 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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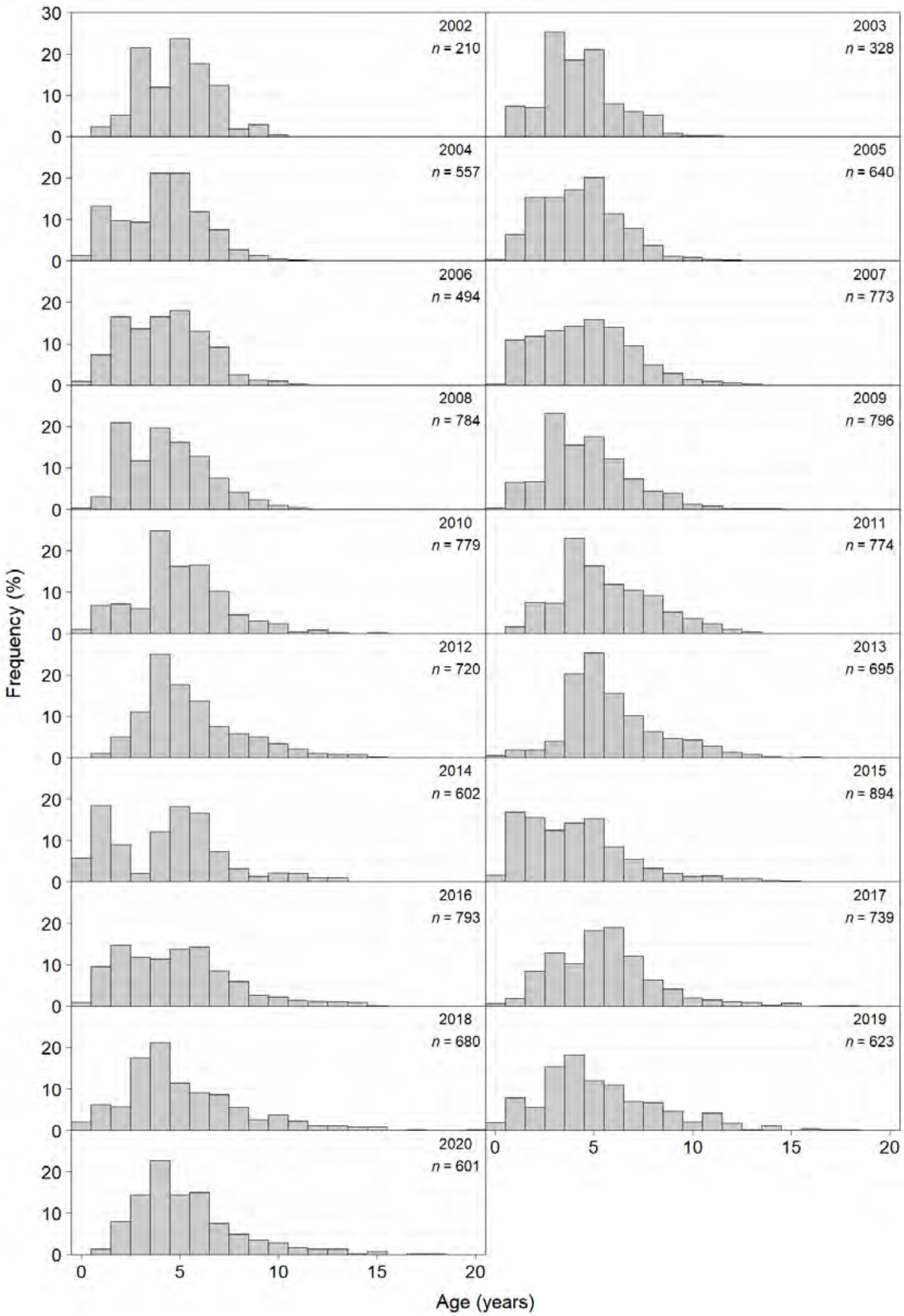


Figure F13: Age-frequency distributions by year for Mountain Whitefish captured by boat electroshocking in Sections 1, 3, and 5 of the Peace River, 2002 to 2020. Data from 2009 to 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).

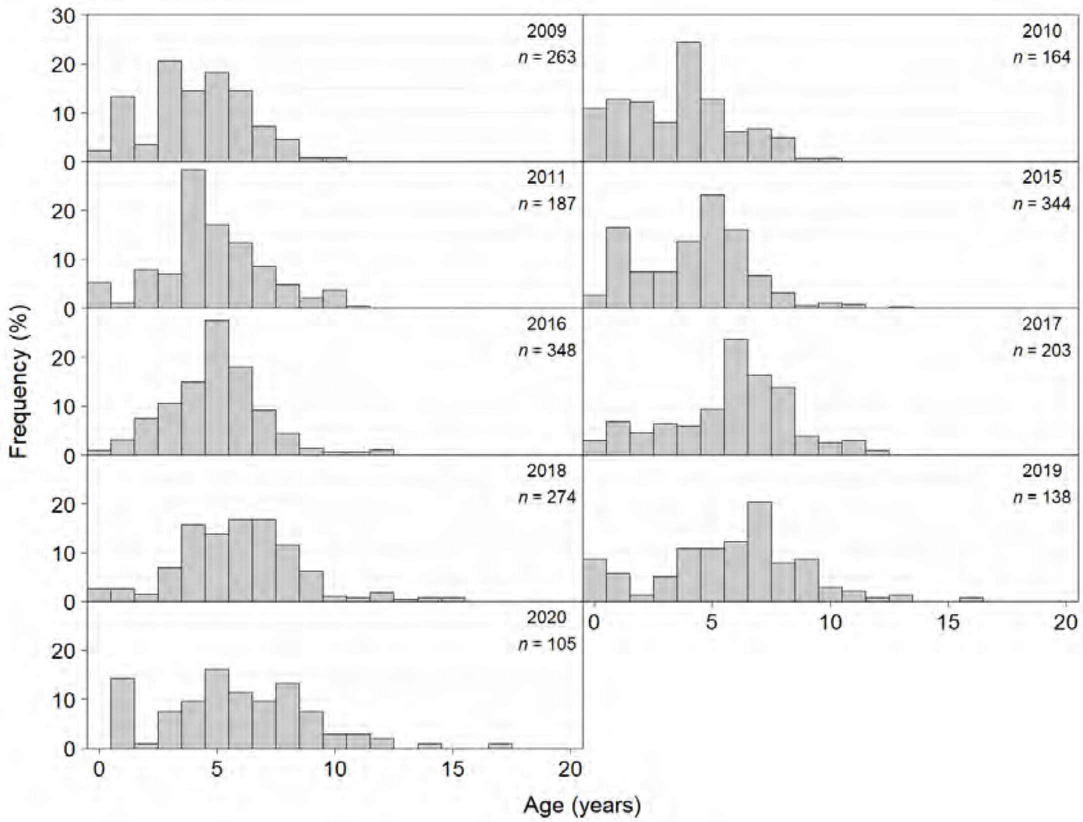


Figure F14: Age-frequency distributions by year for Mountain Whitefish captured by boat electroshocking in Sections 6, 7, and 9 of the Peace River, 2002 to 2020. Data from 2009 to 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).

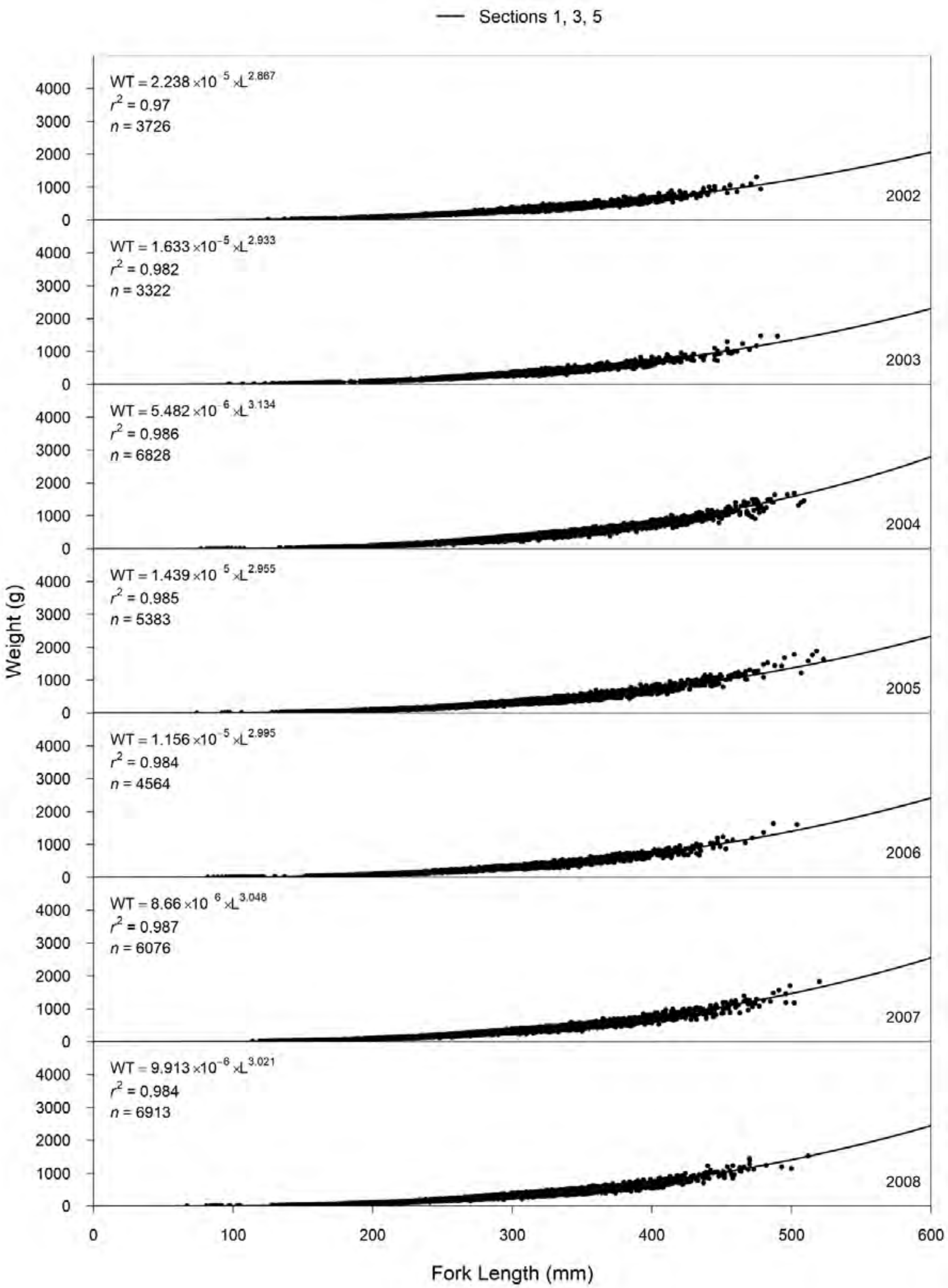
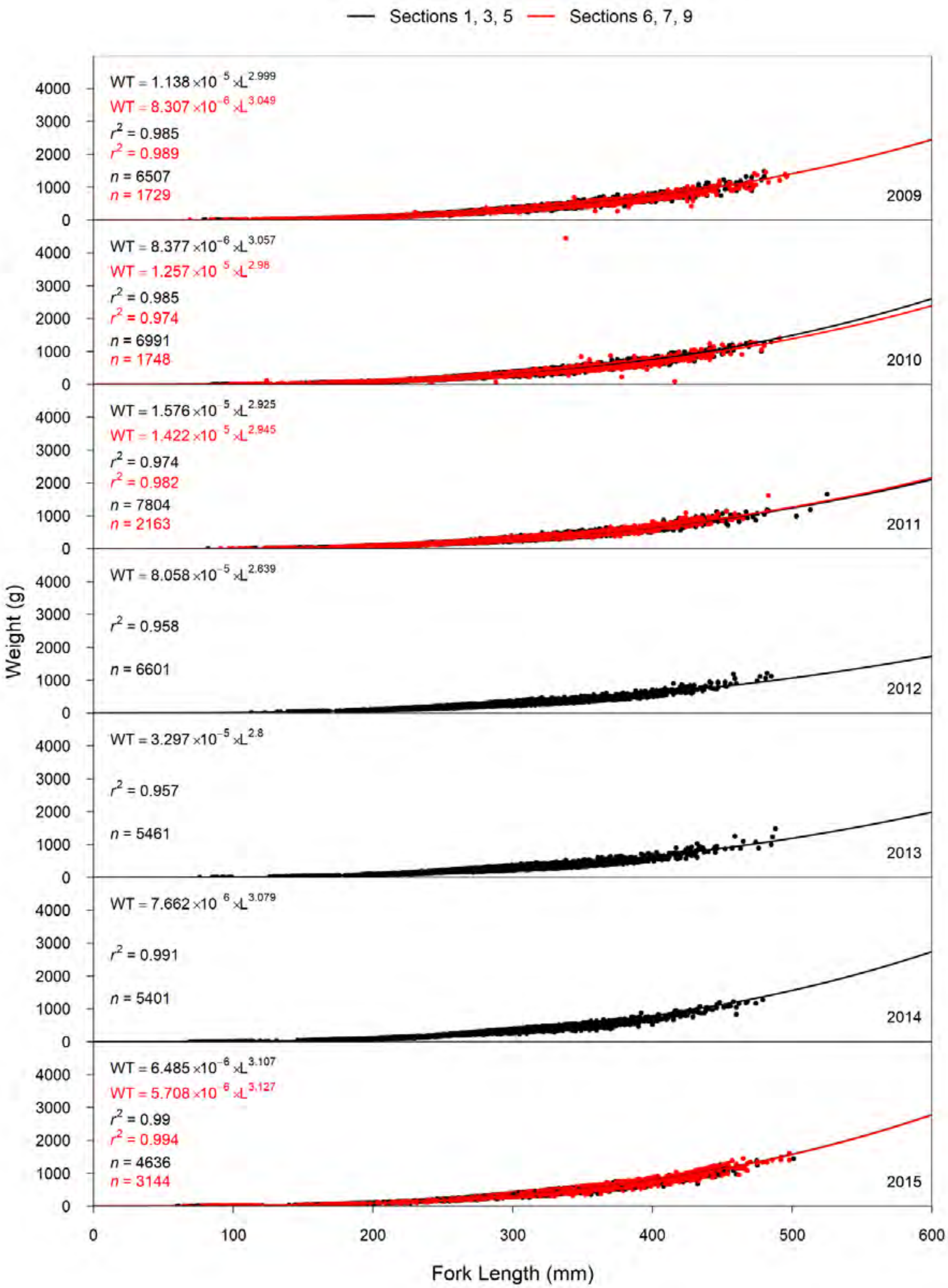


Figure F15: Length-weight regressions for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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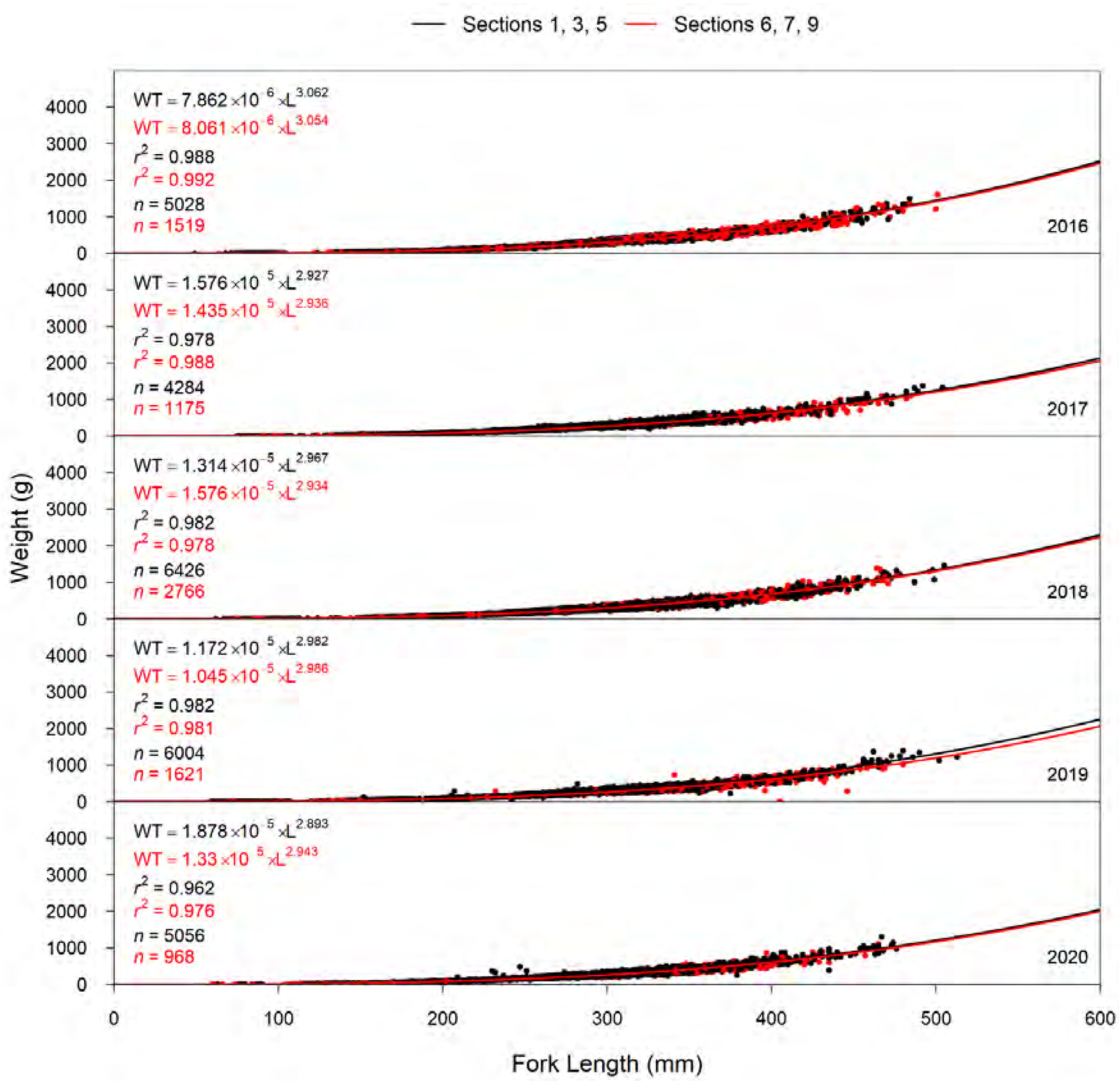

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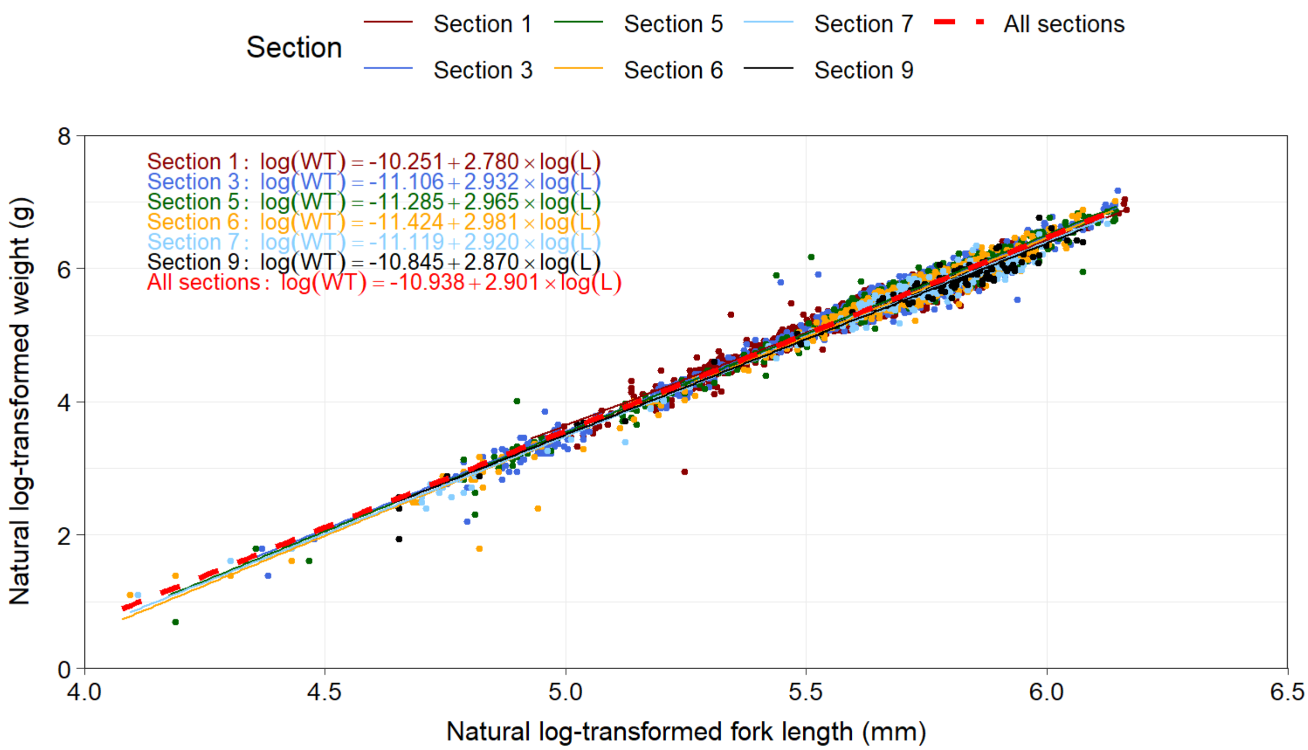


Figure F16: Log-log relationship between weight and fork length for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 2020.

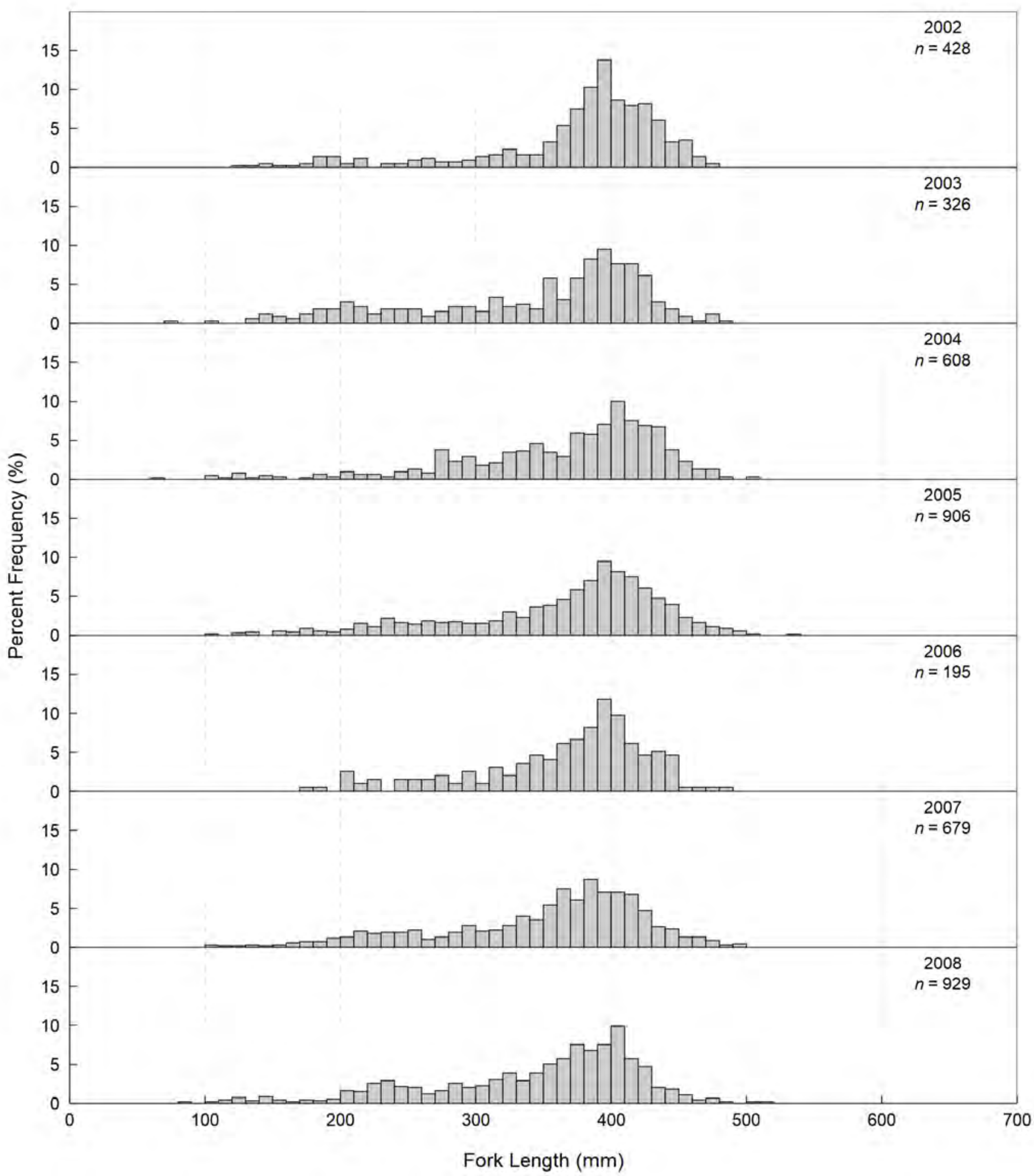


Figure F17: Length-frequency distributions by year for Longnose Sucker captured by boat electroshocking in Sections 1, 3, and 5 of the Peace River, 2002 to 2020.

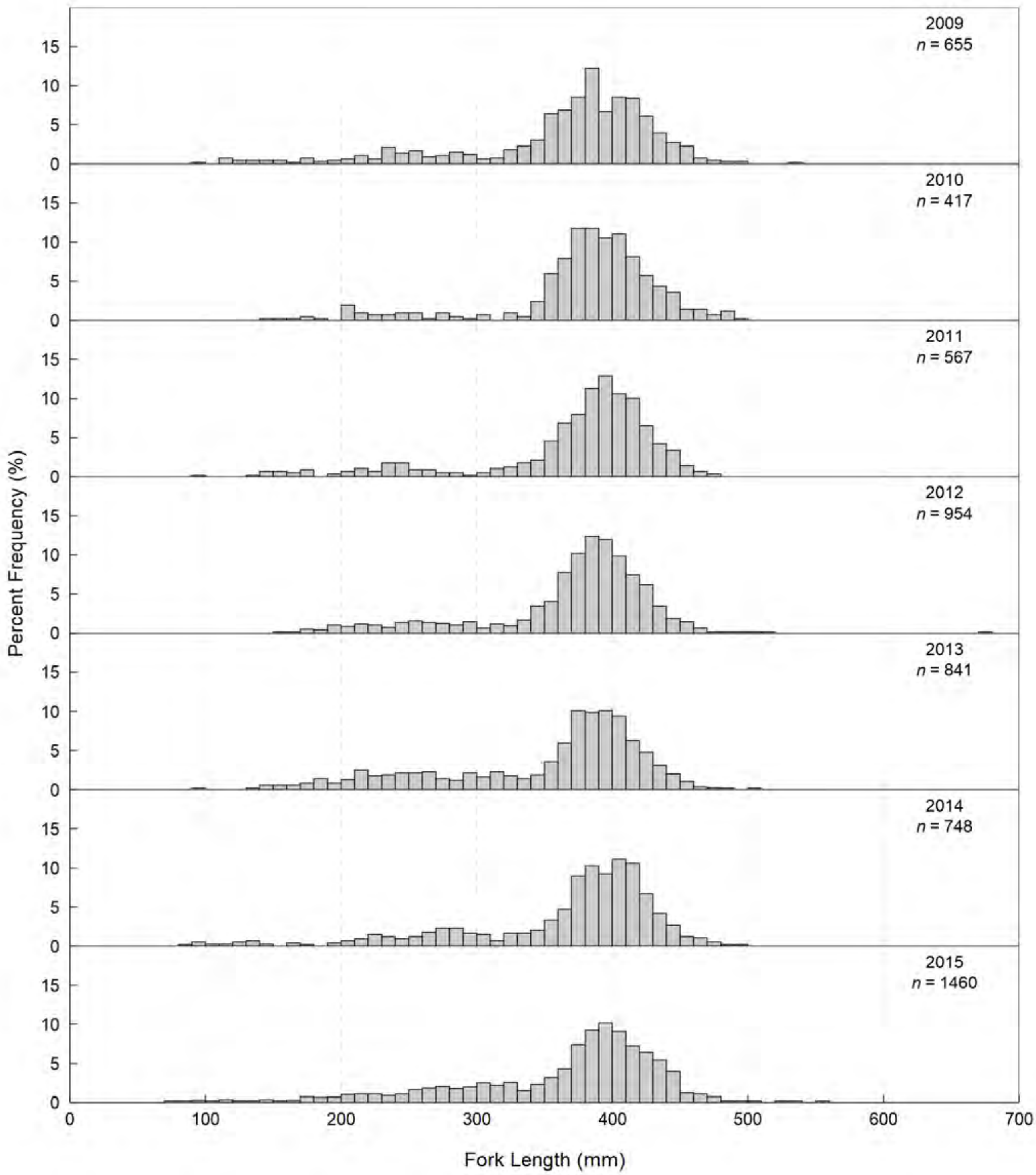
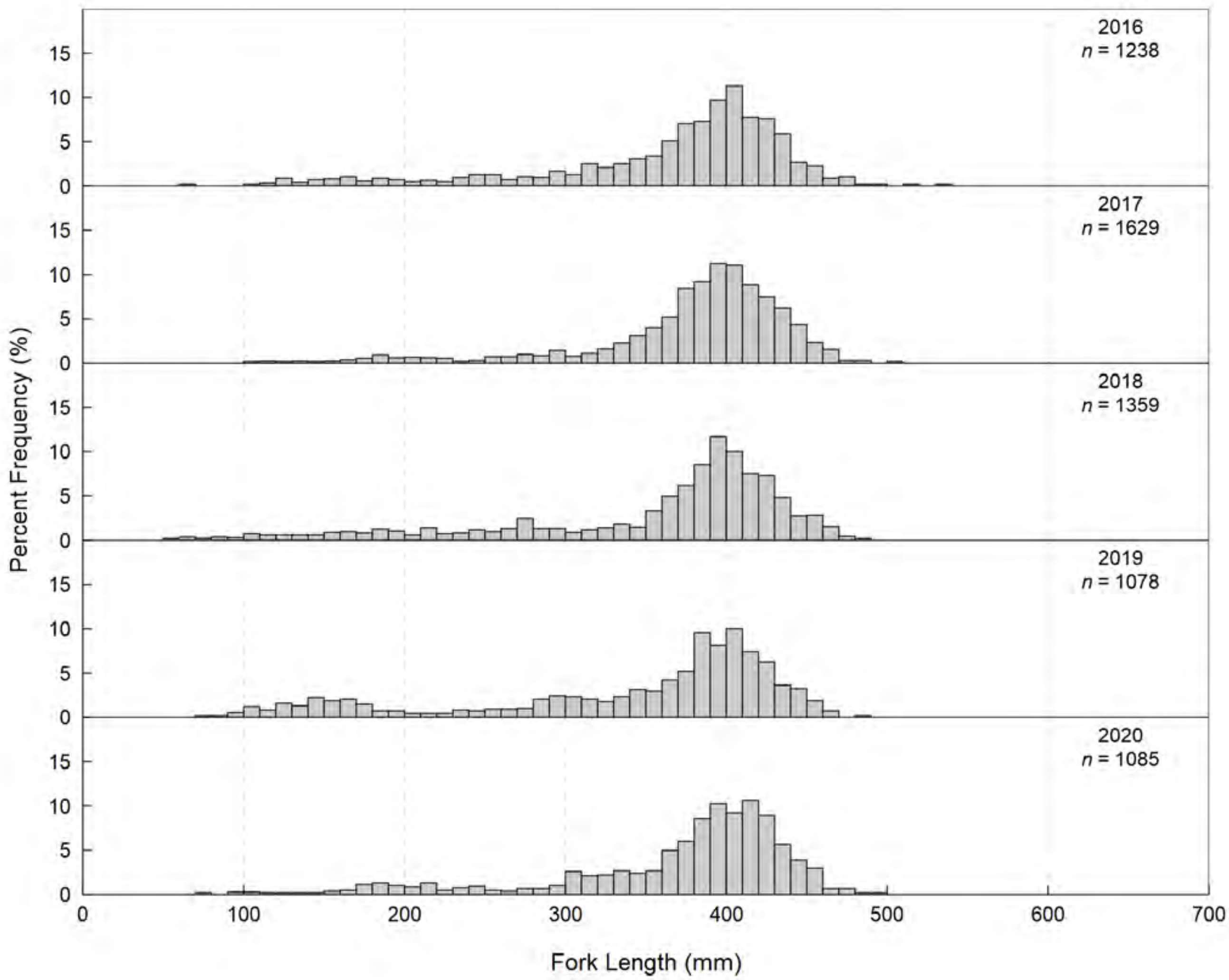


Figure F17: Continued.



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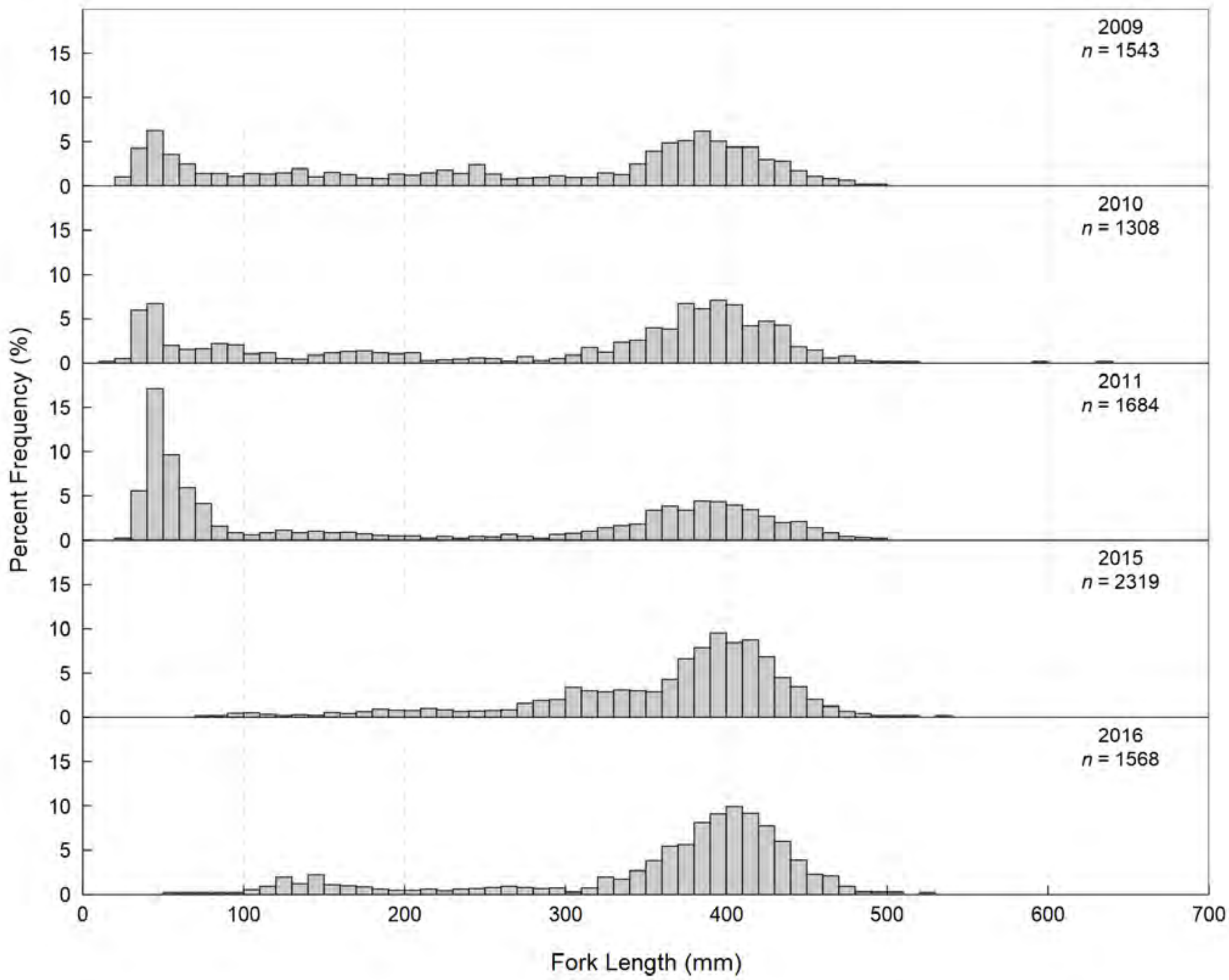
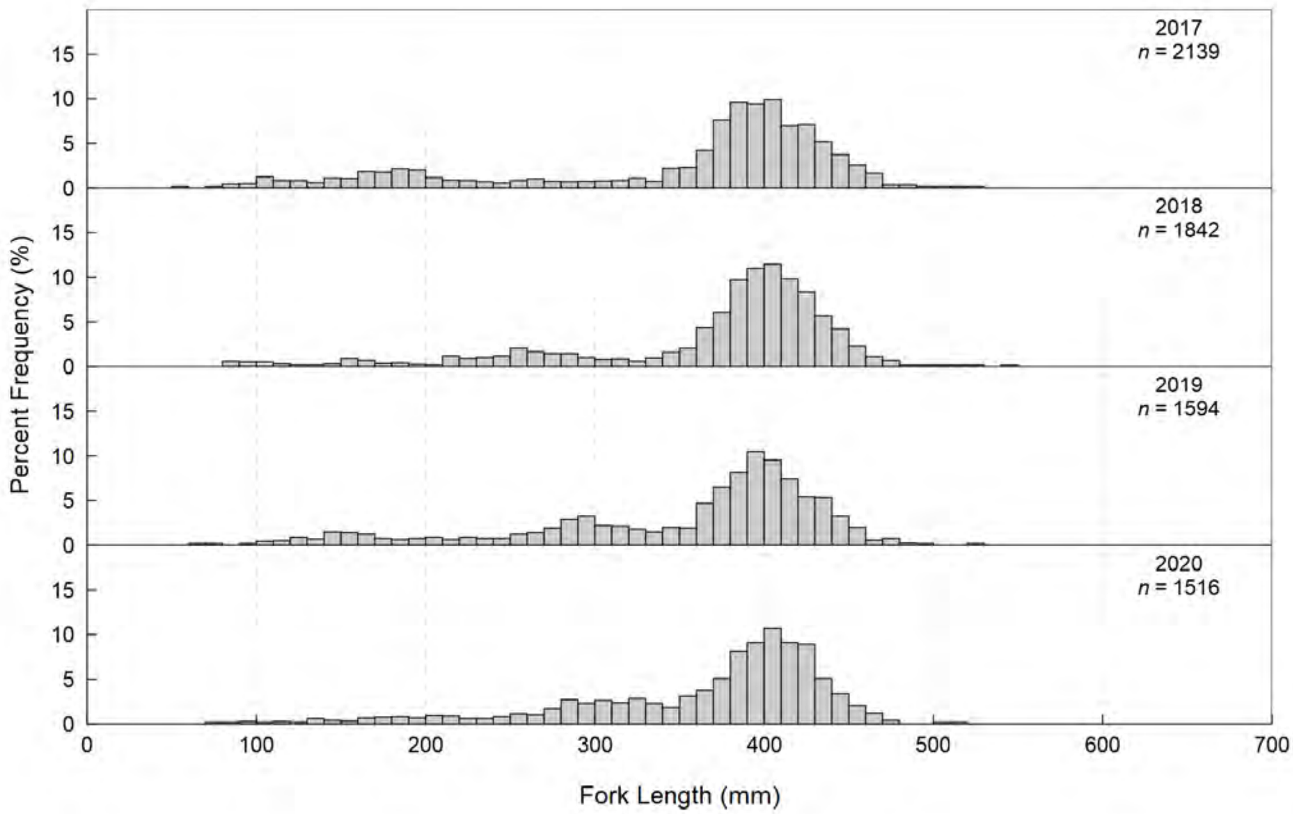


Figure F18: Length-frequency distributions by year for Longnose Sucker captured by boat electroshocking in sections 6, 7, and 9 of Peace River, 2002 to 2020. Data from 2009 to 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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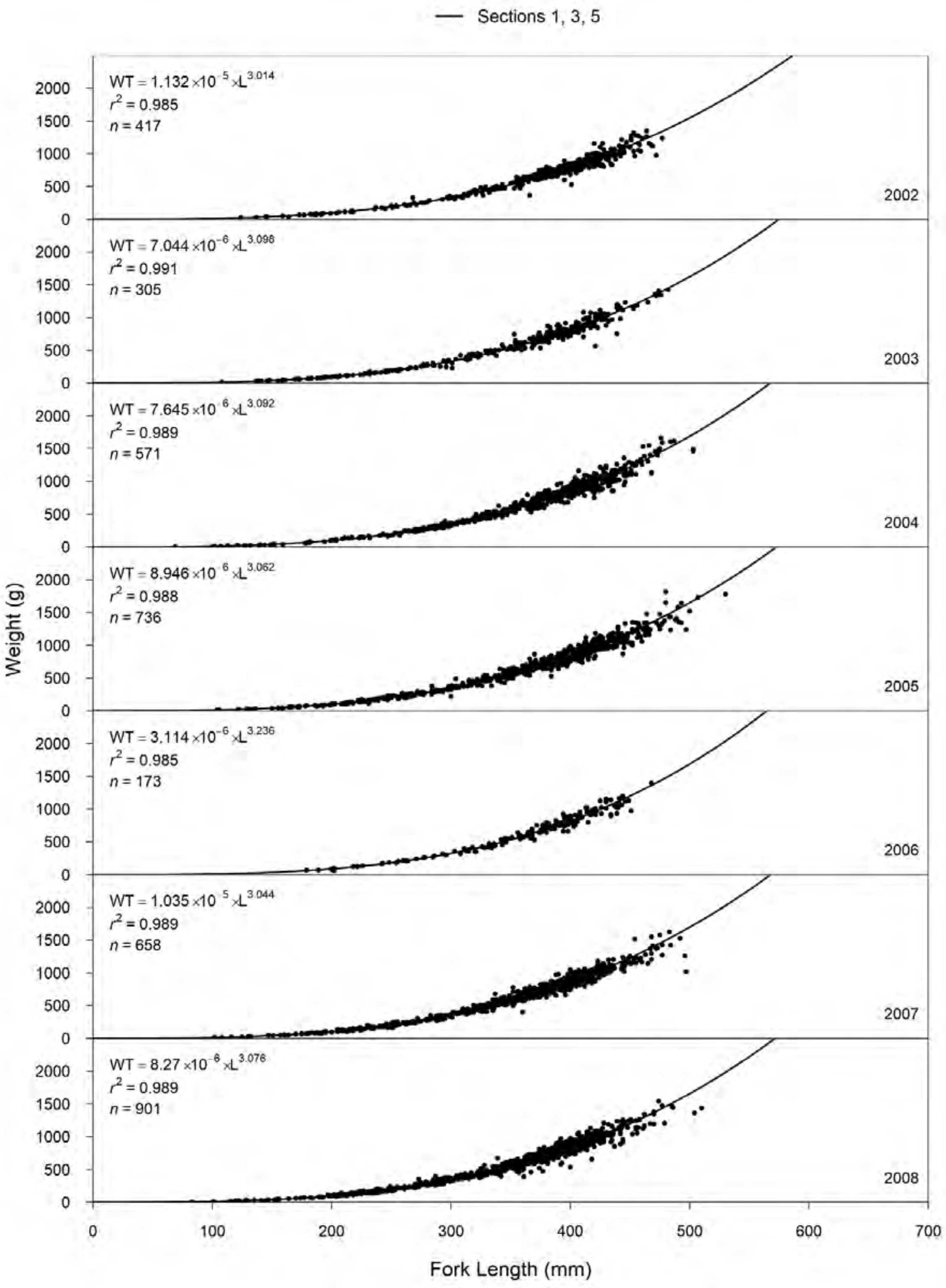
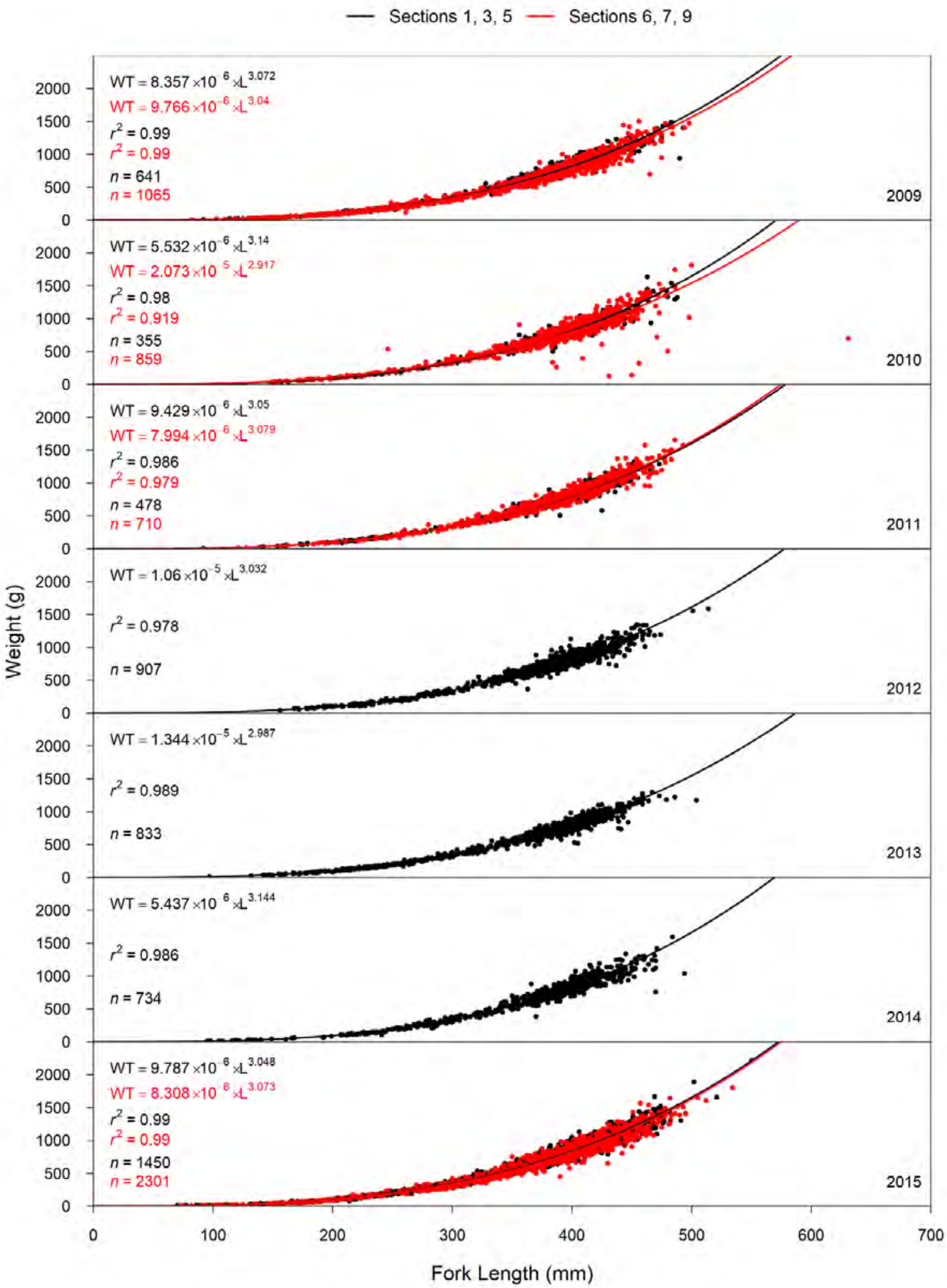


Figure F19: Length-weight regressions for Longnose Sucker captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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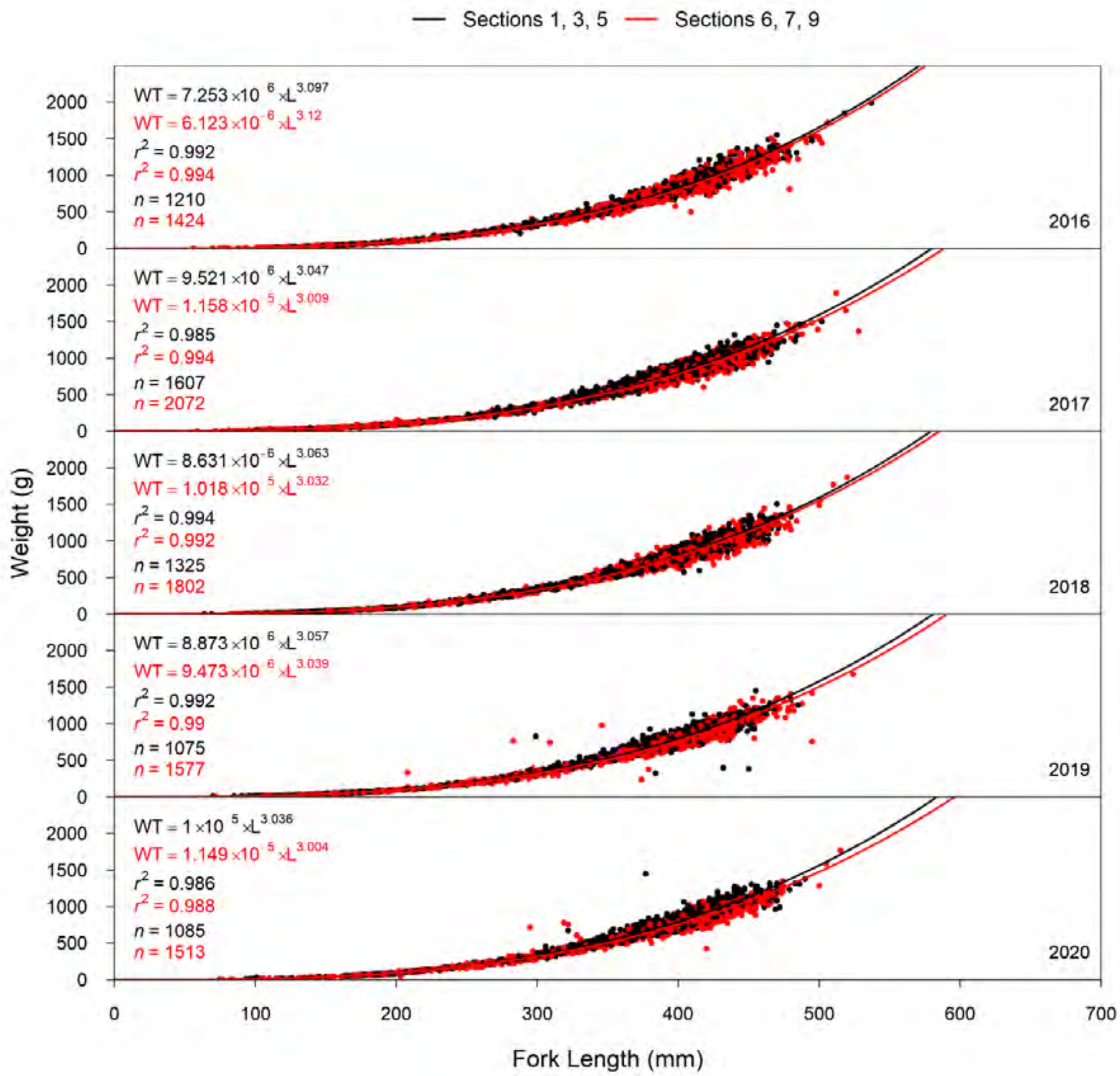

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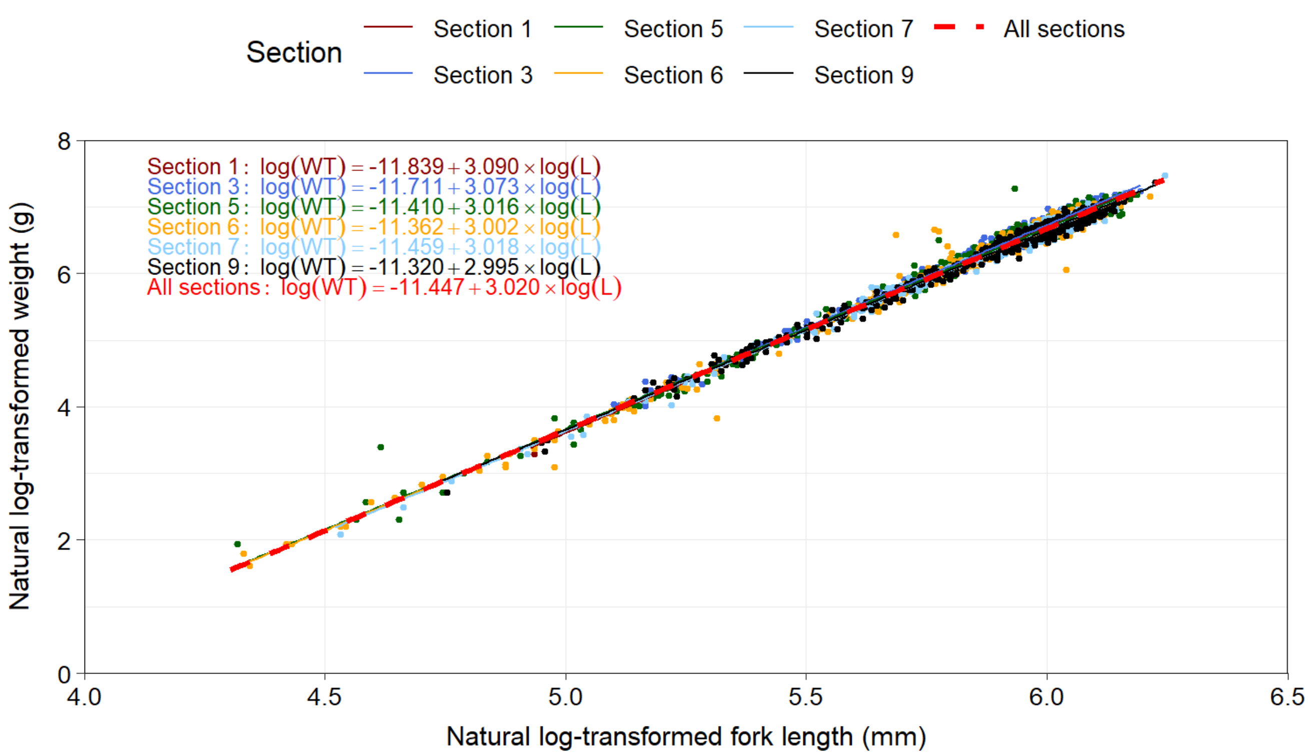


Figure F20: Log-log relationship between weight and fork length for Longnose Sucker captured by boat electroshocking in sampled sections of the Peace River, 2020.

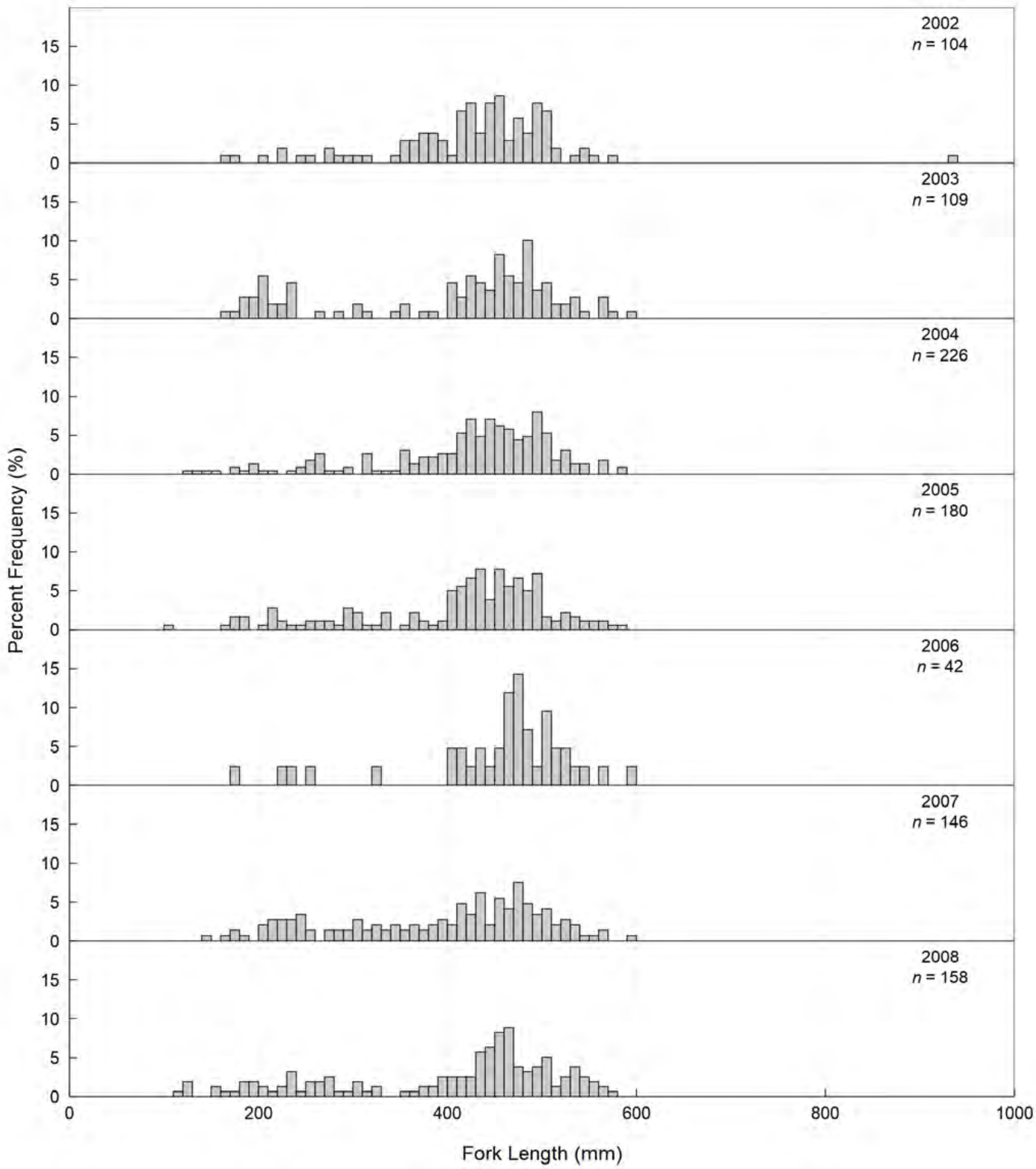
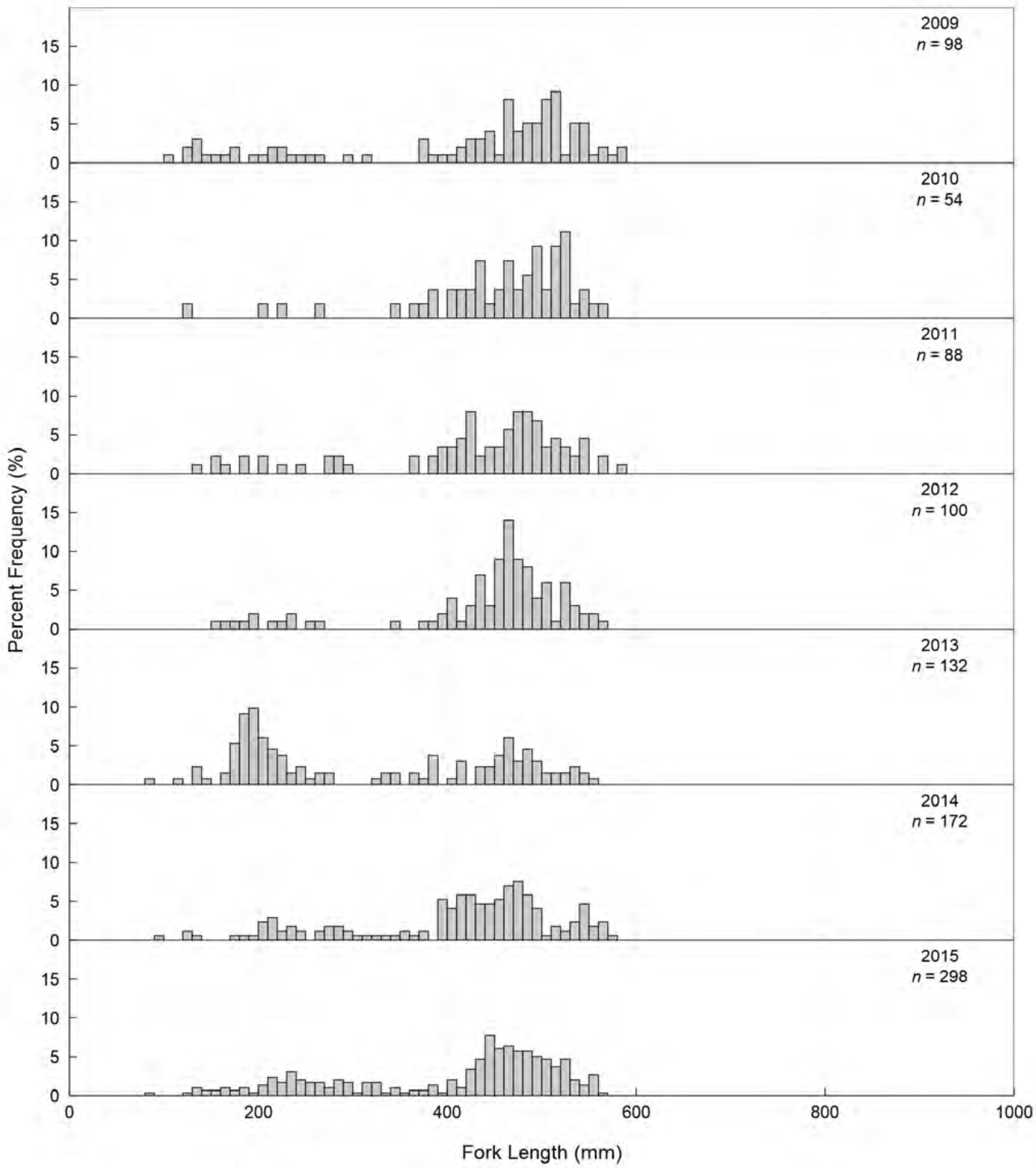


Figure F21: Length-frequency distributions by year for Largescale Sucker captured by boat electroshocking in Sections 1, 3, and 5 of the Peace River, 2002 to 2020.



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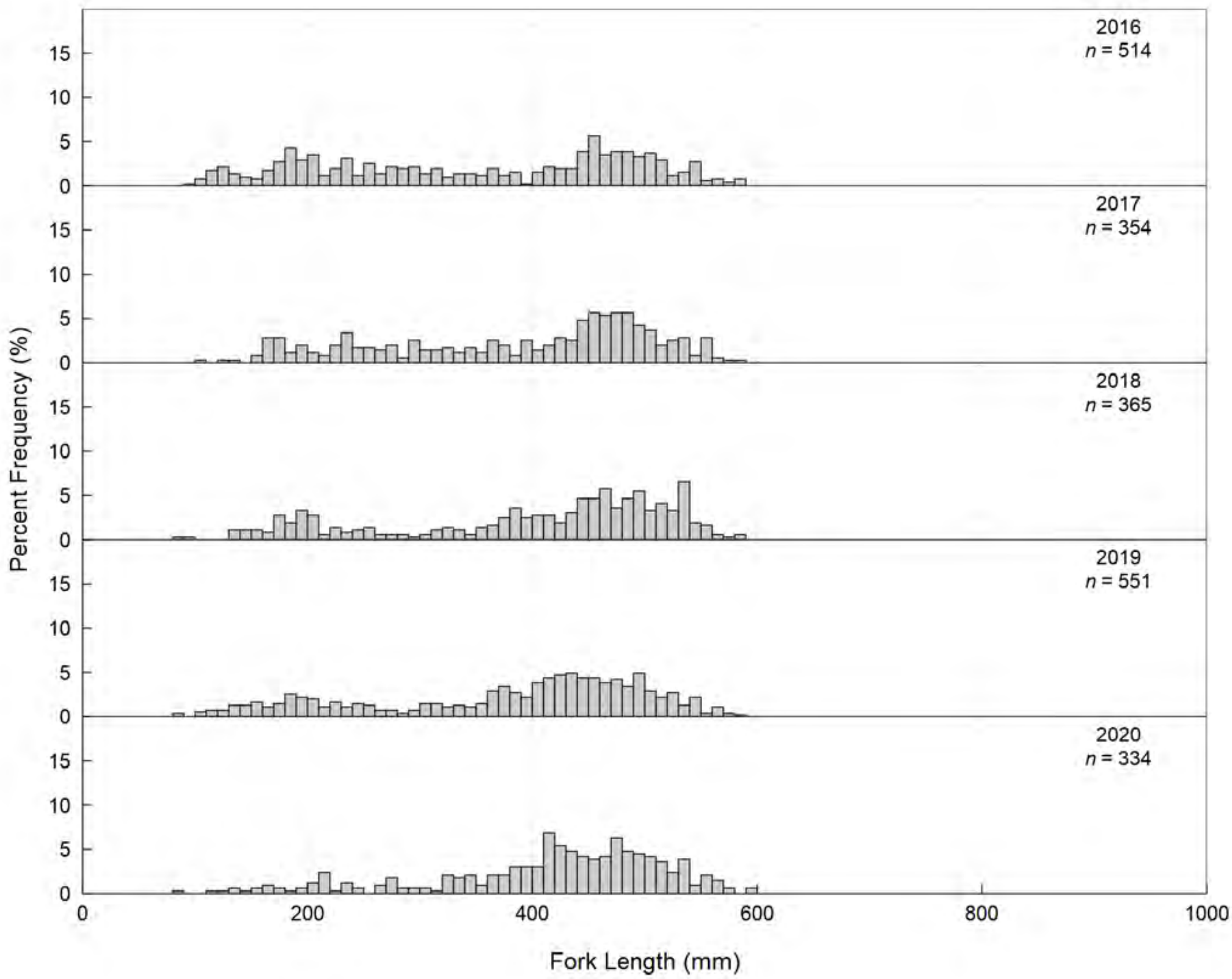

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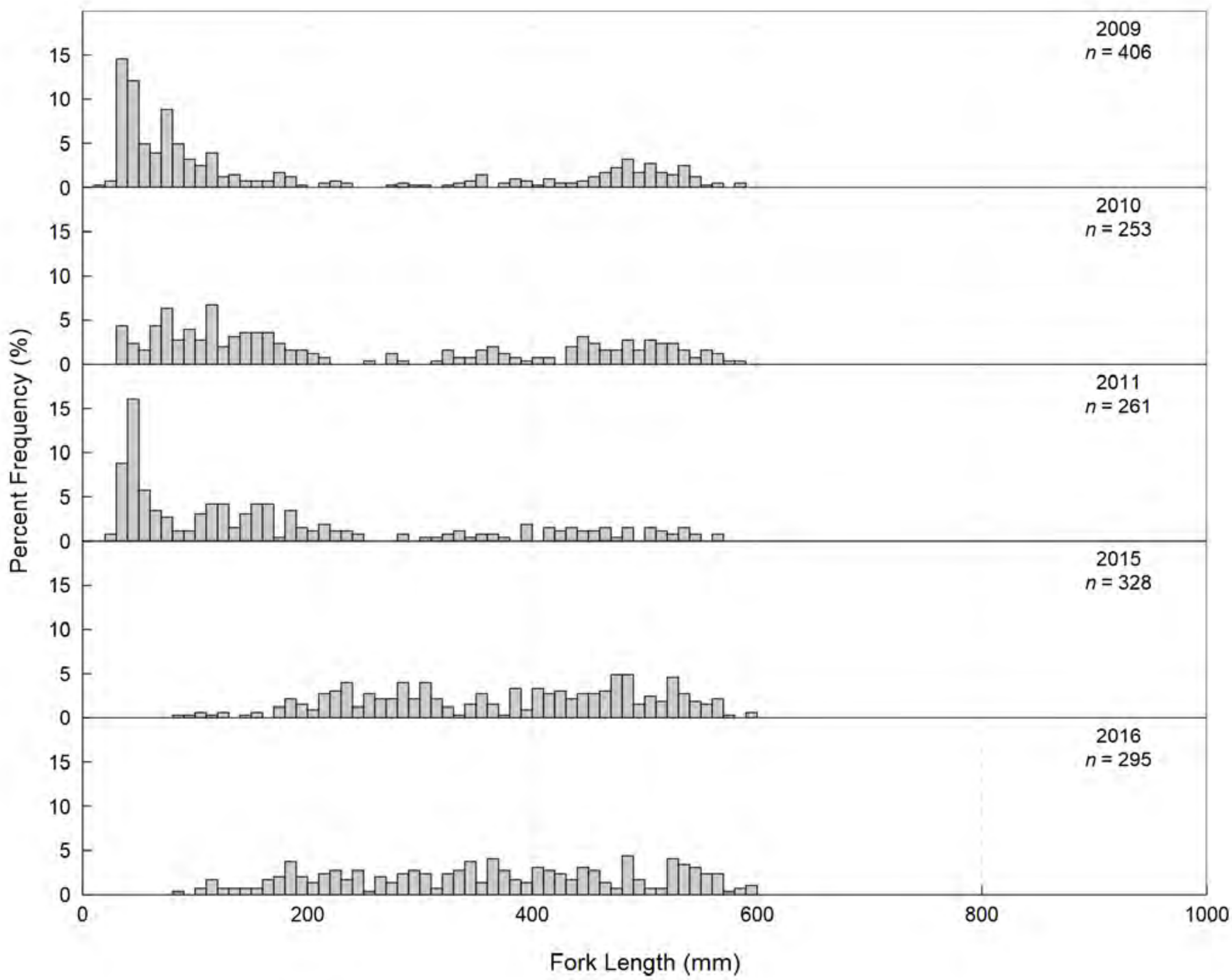
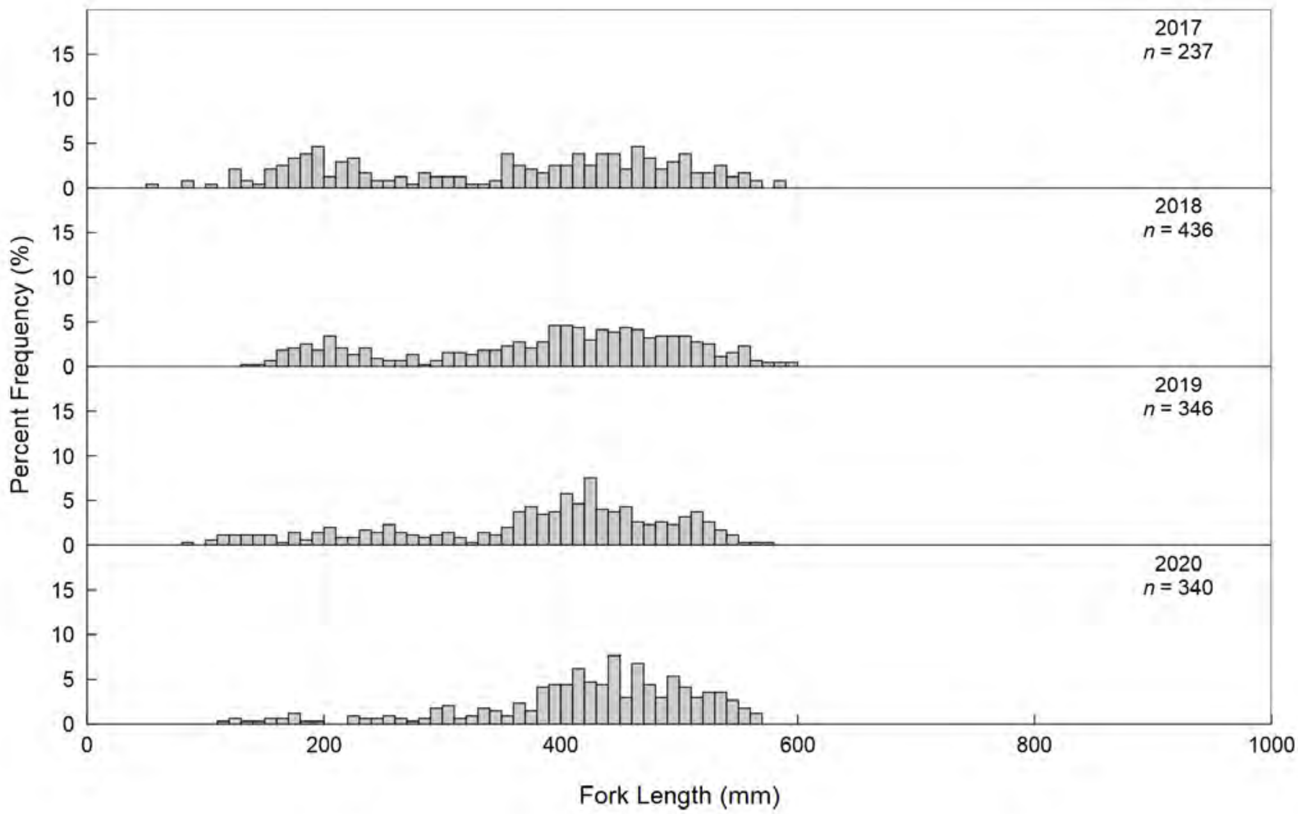


Figure F22: Length-frequency distributions by year for Largescale Sucker captured by boat electroshocking in Sections 6, 7, and 9 of the Peace River, 2009 to 2020. Data from 2009 to 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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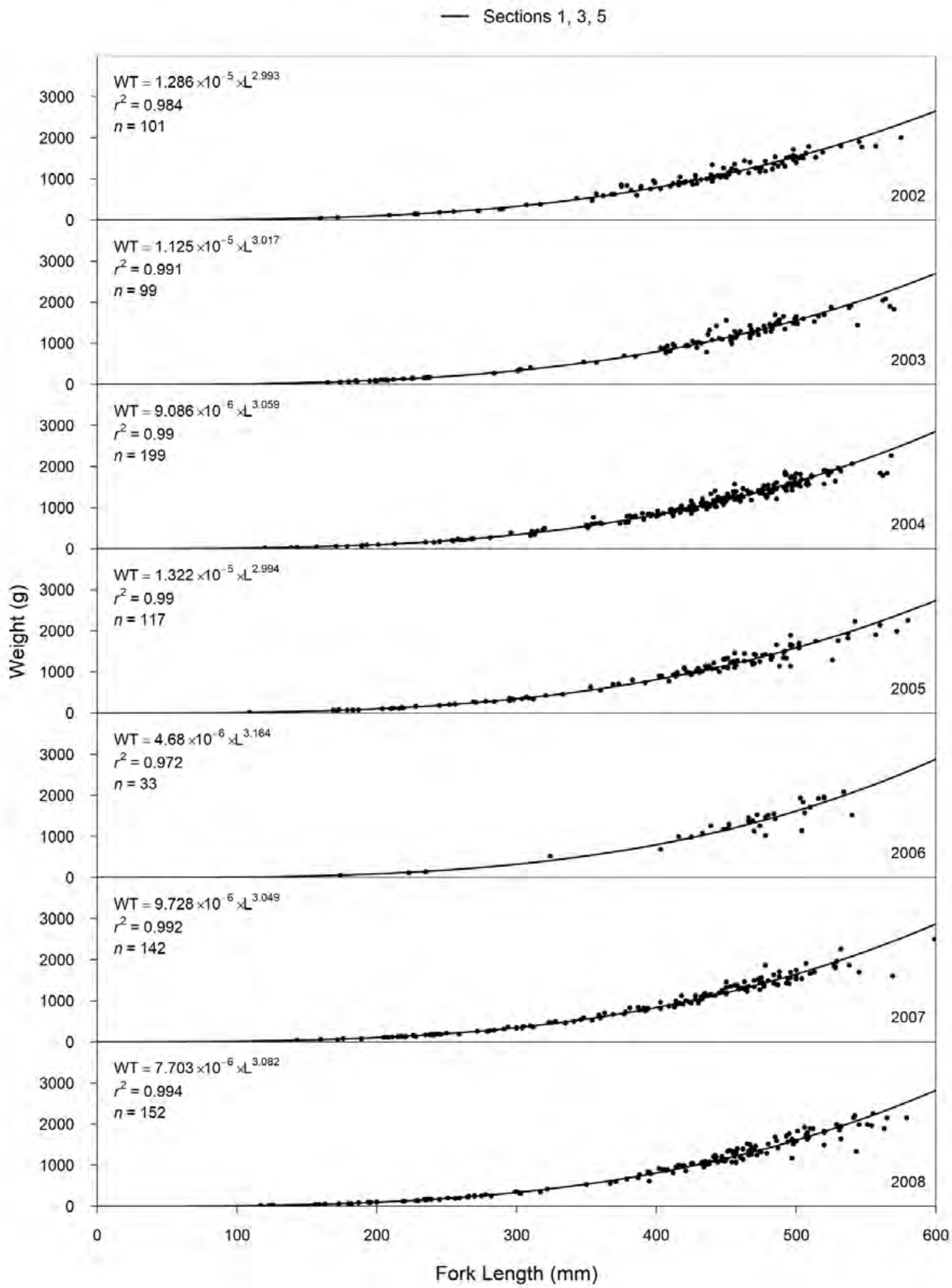
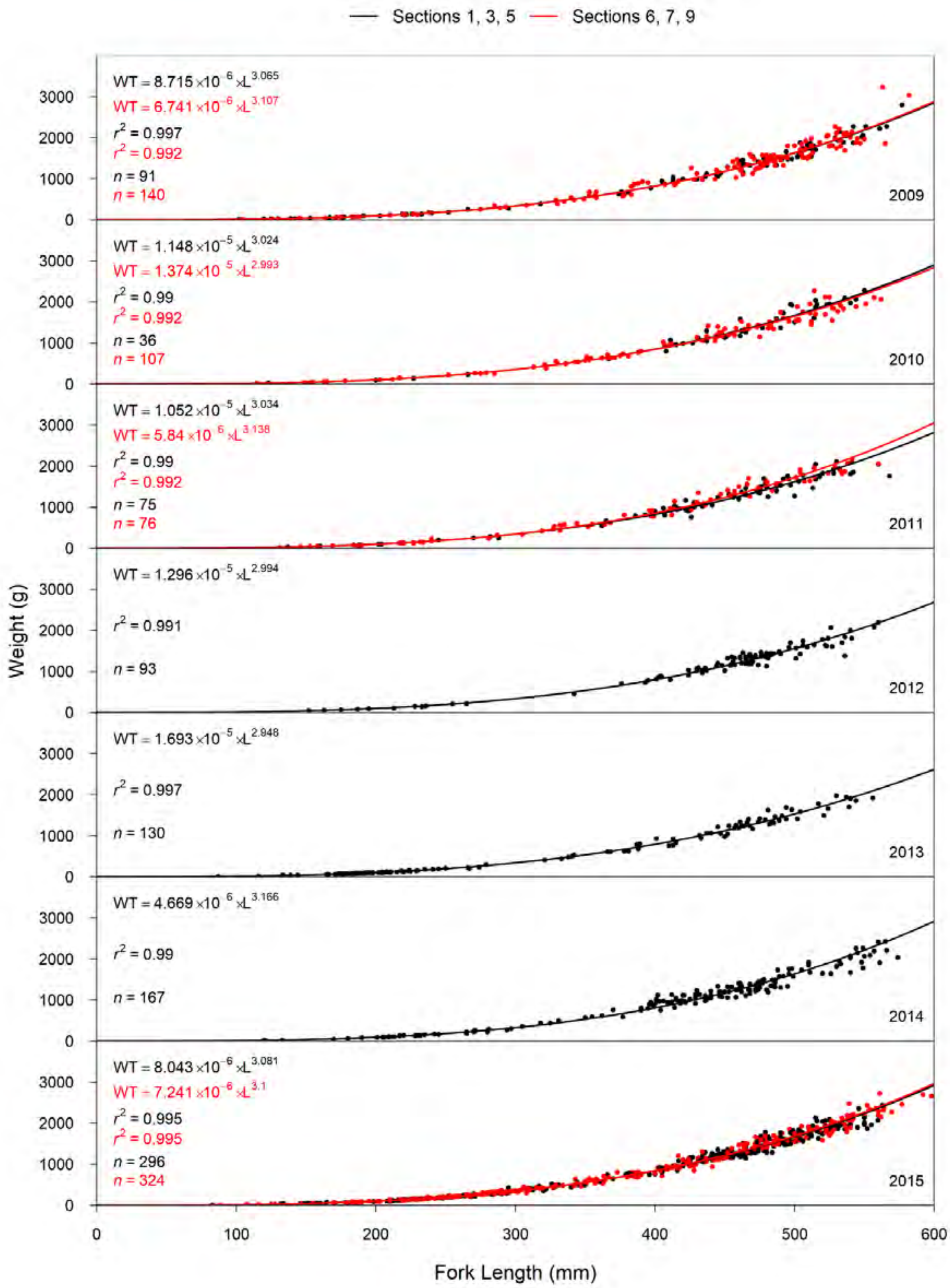


Figure F23: Length-weight regressions for Largescale Sucker captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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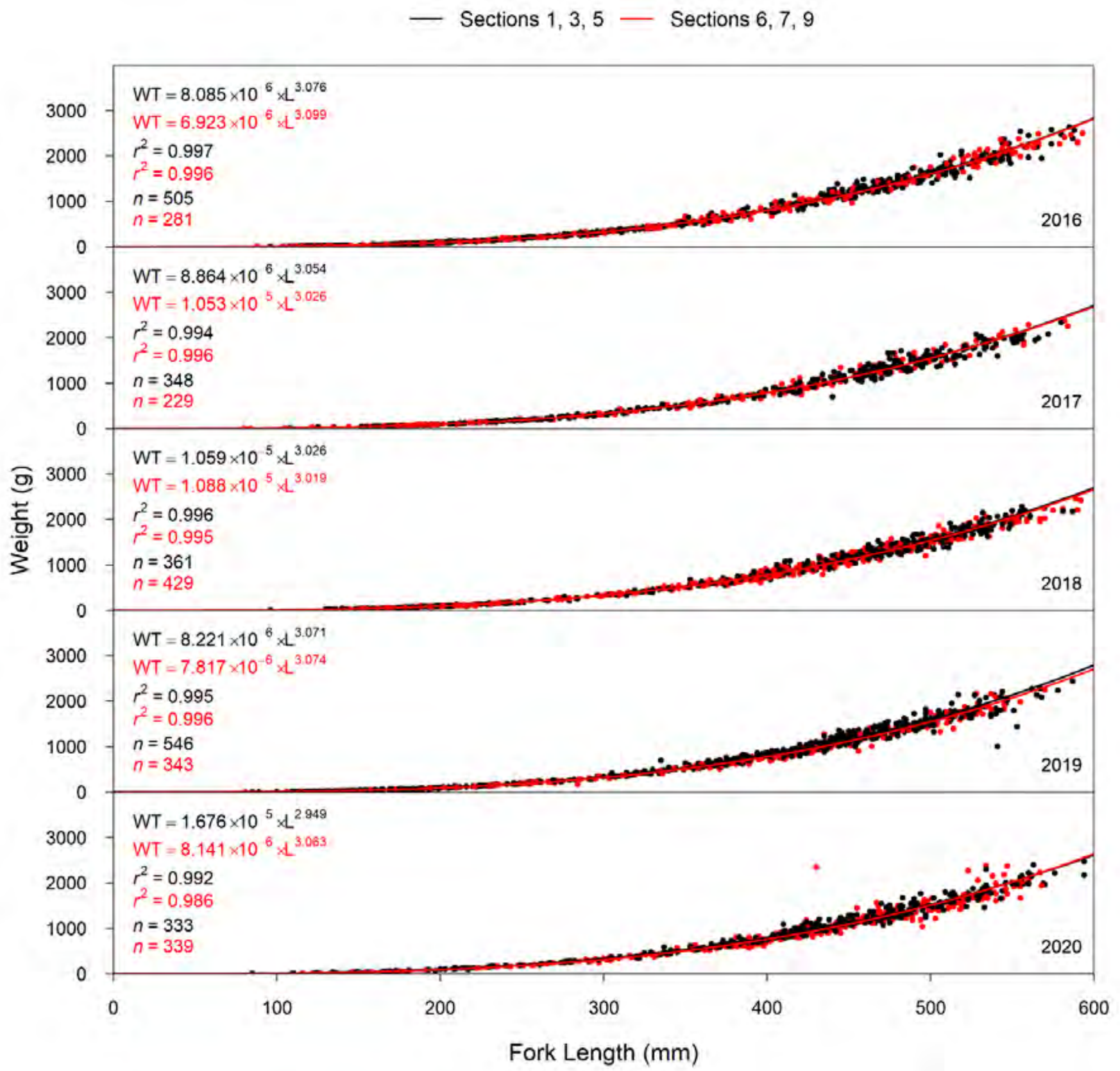

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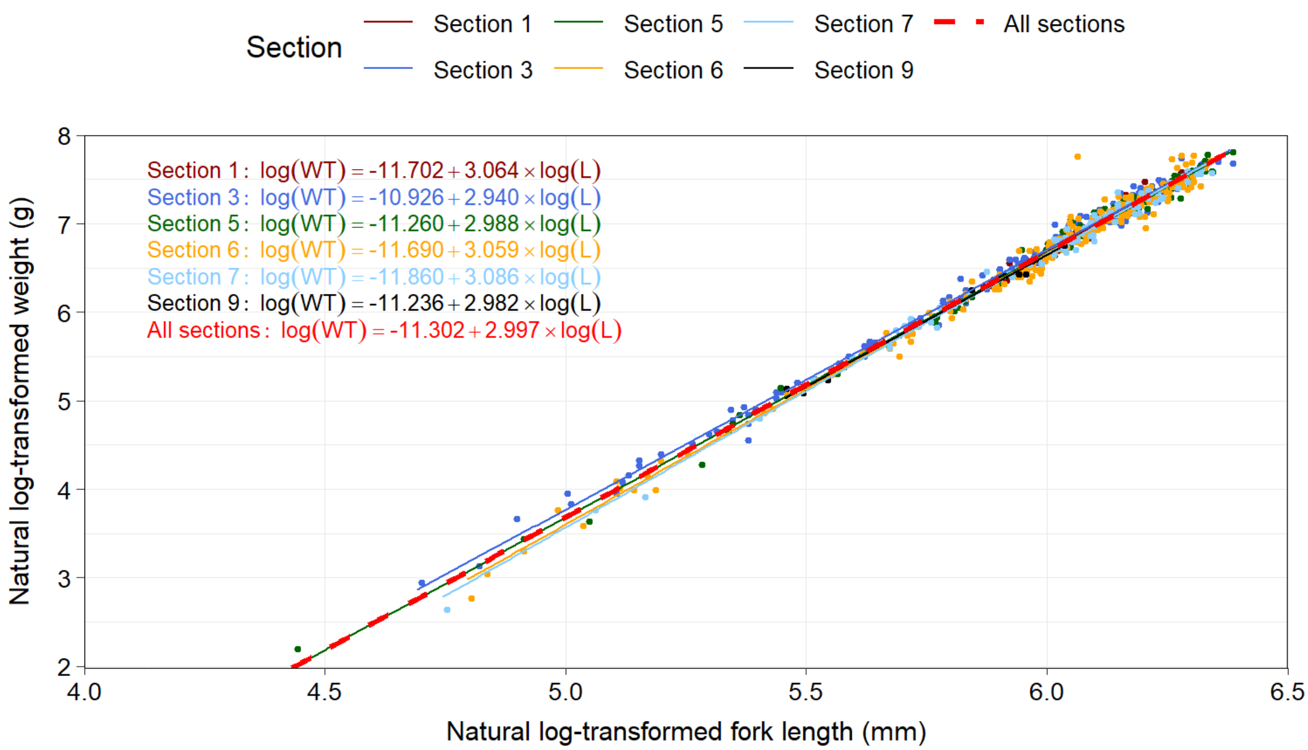


Figure F24: Log-log relationship between weight and fork length for Largescale Sucker captured by boat electroshocking in sampled sections of the Peace River, 2020.

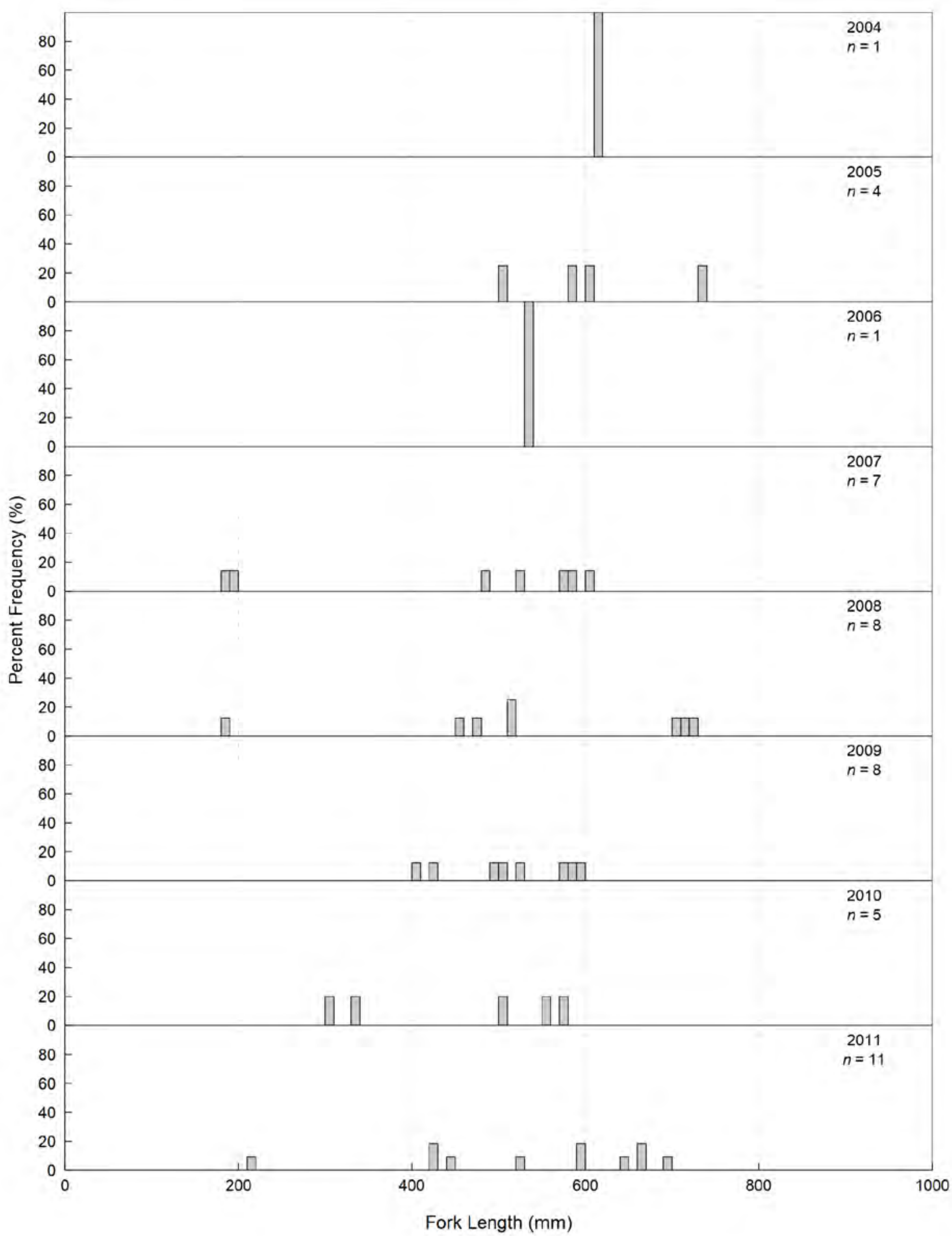
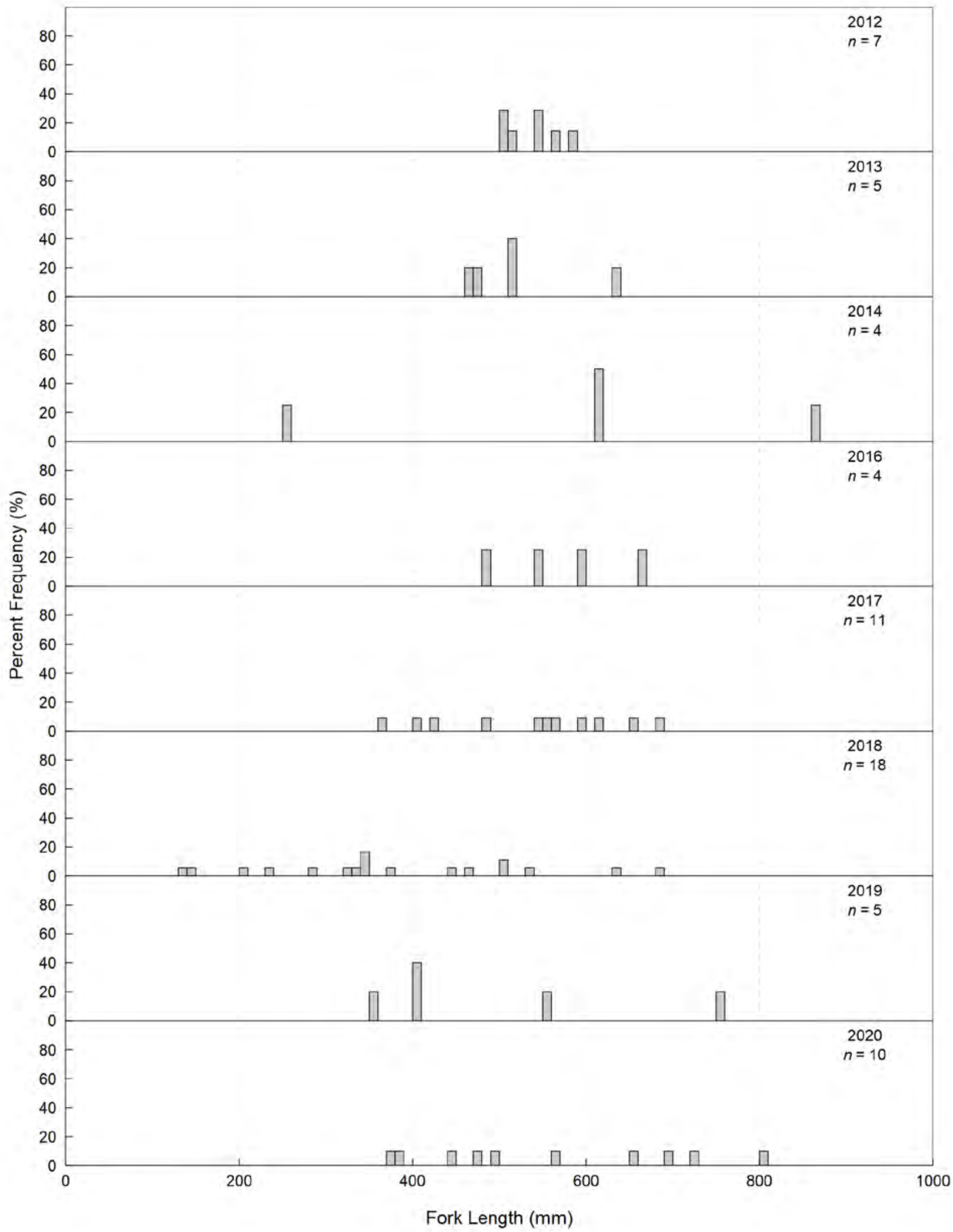


Figure F25: Length-frequency distributions by year for Northern Pike captured by boat electroshocking in Sections 1, 3, and 5 of the Peace River, 2002 to 2020.



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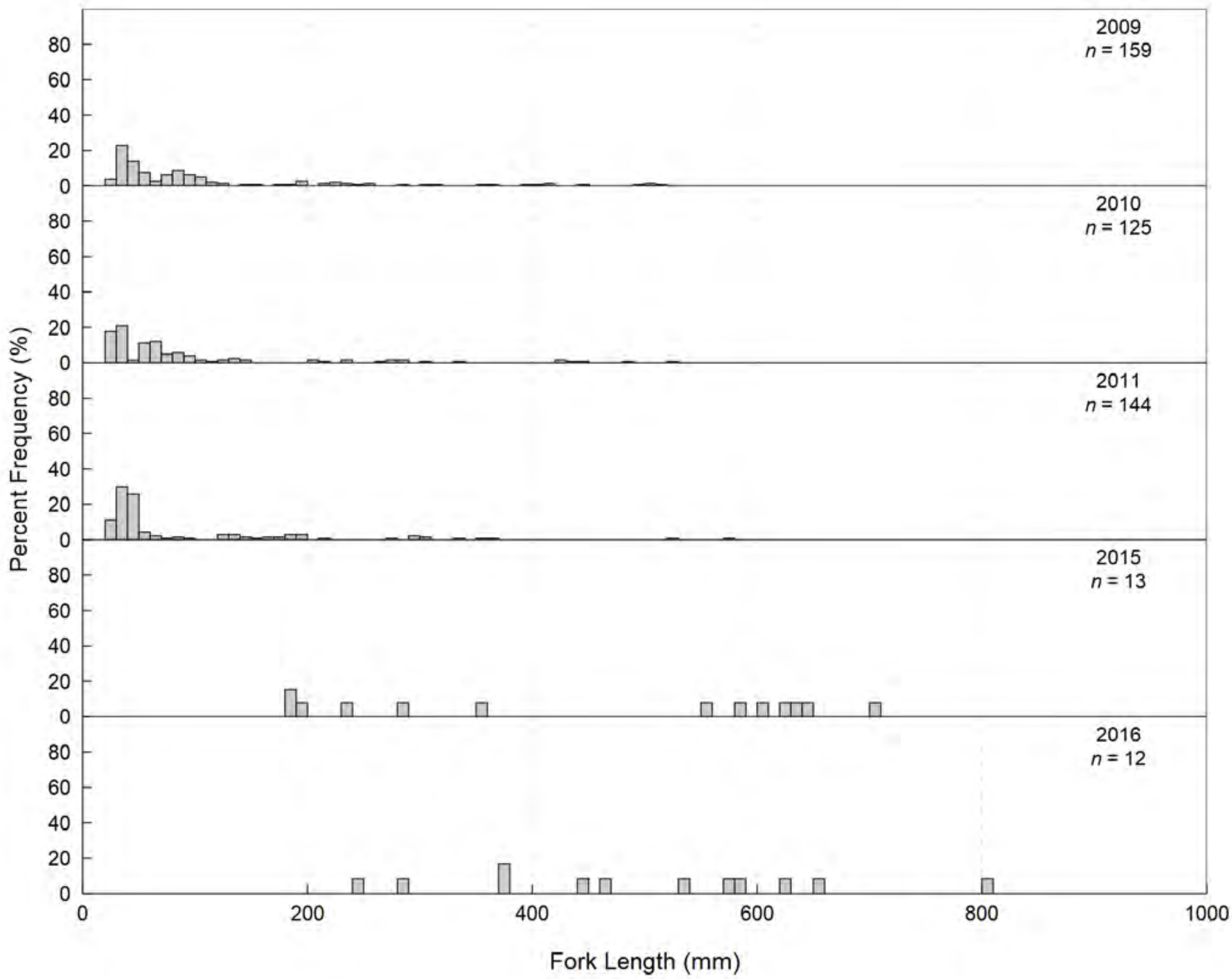
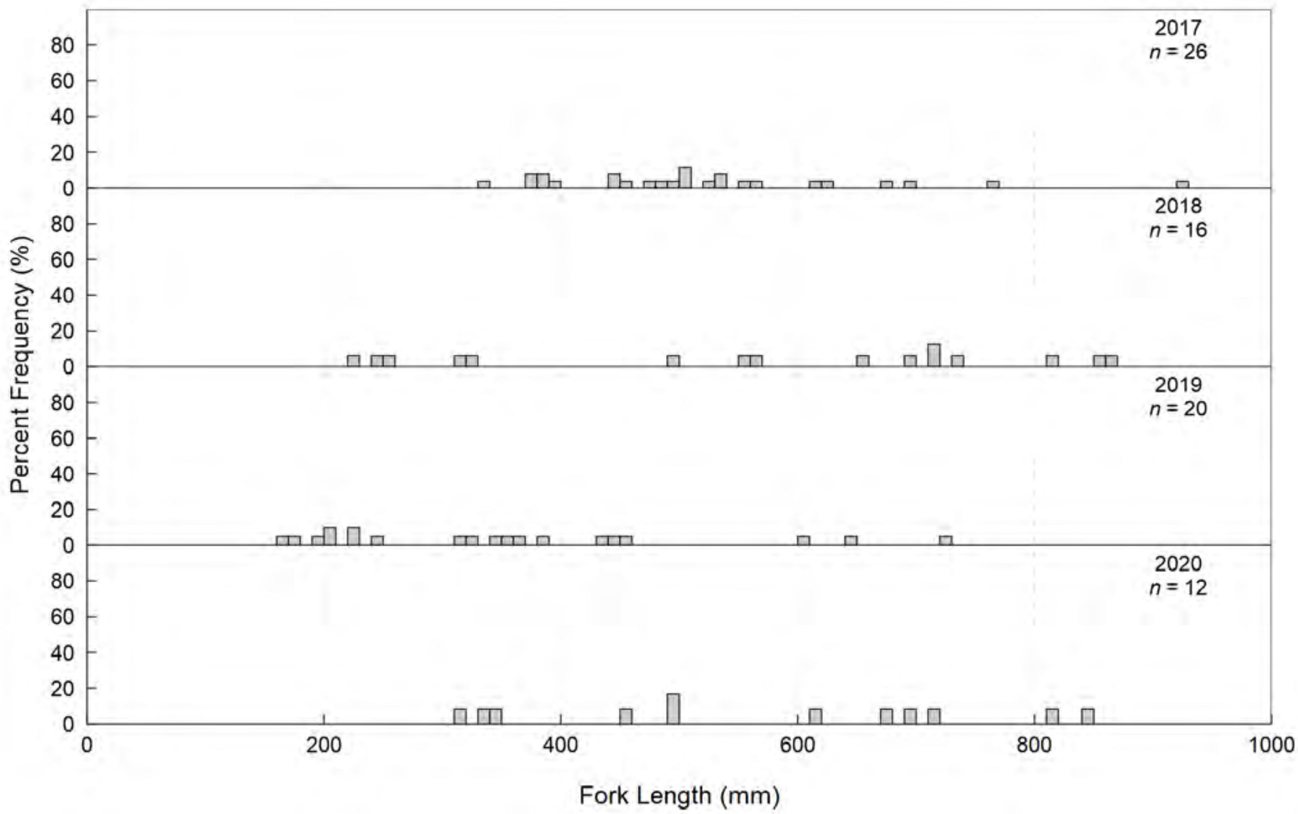


Figure F26: Length-frequency distributions by year for Northern Pike captured by boat electroshocking in Sections 6, 7, and 9 of the Peace River, 2009 to 2020. Data from 2009 to 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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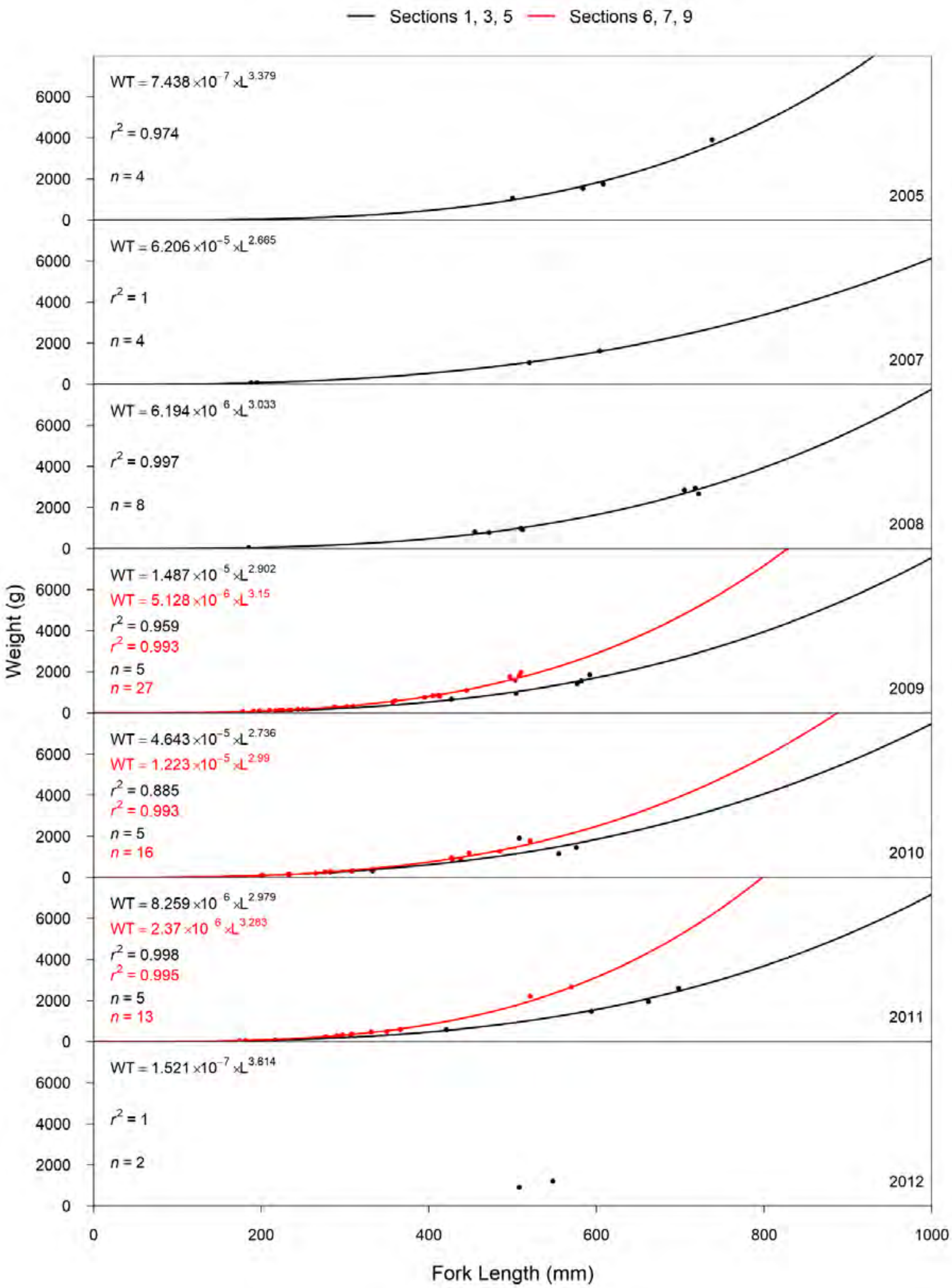
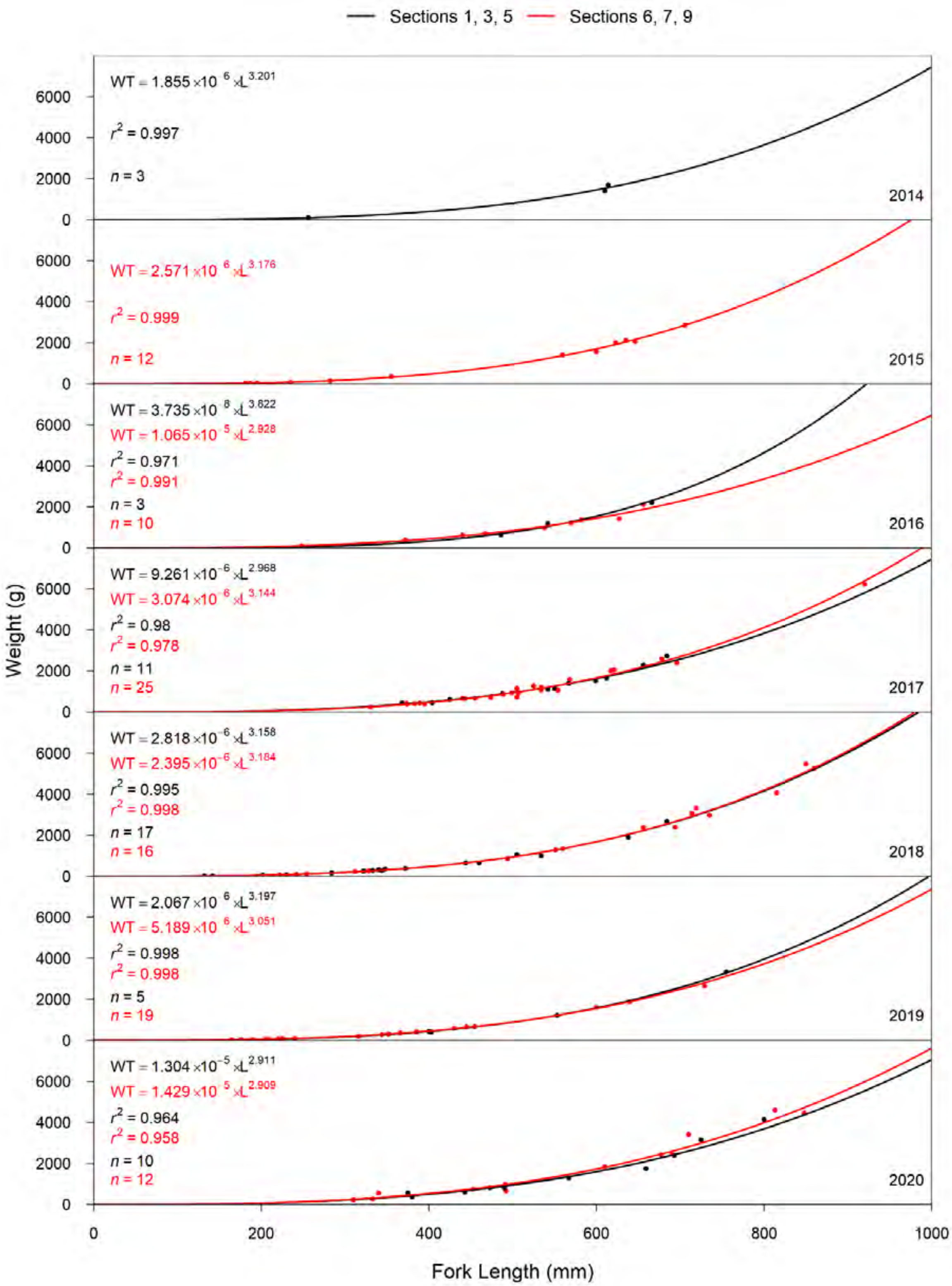


Figure F27: Length-weight regressions for Northern Pike captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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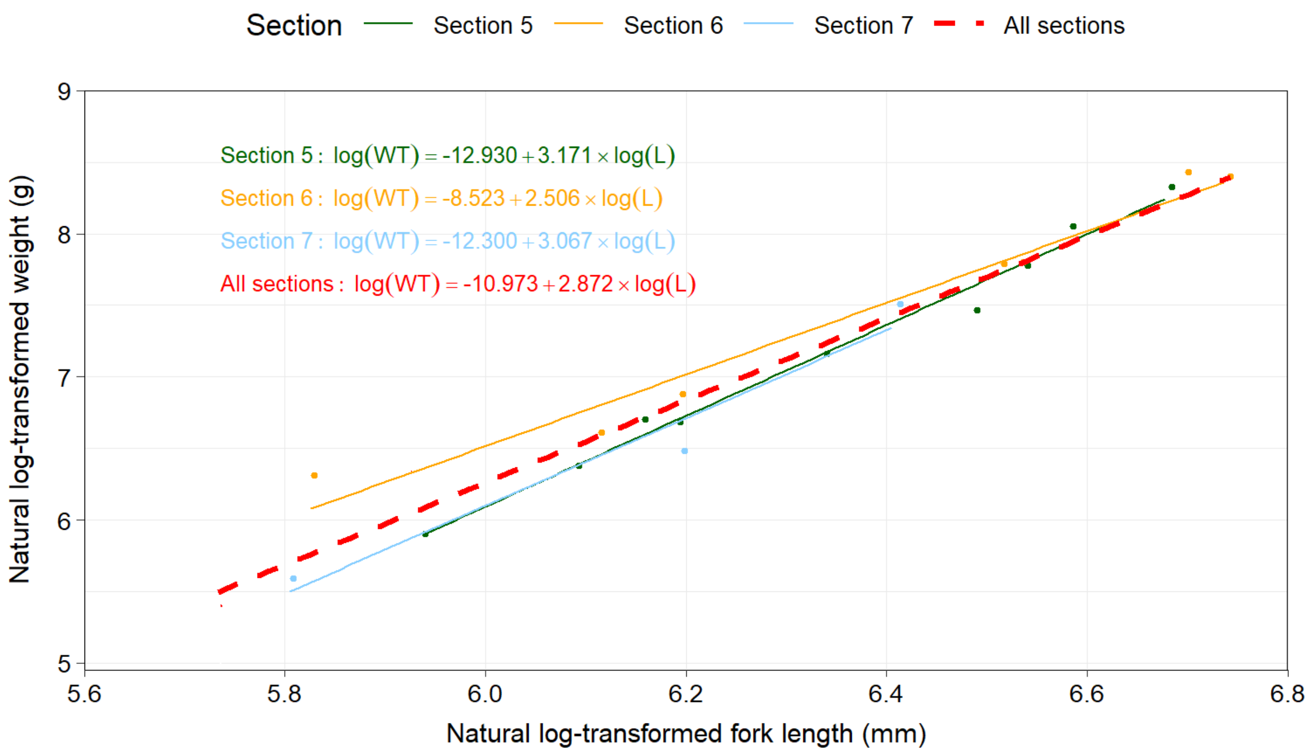

Figure F28: Log-log relationship between weight and fork length for Northern Pike captured by boat electroshocking in sampled sections of the Peace River, 2020.

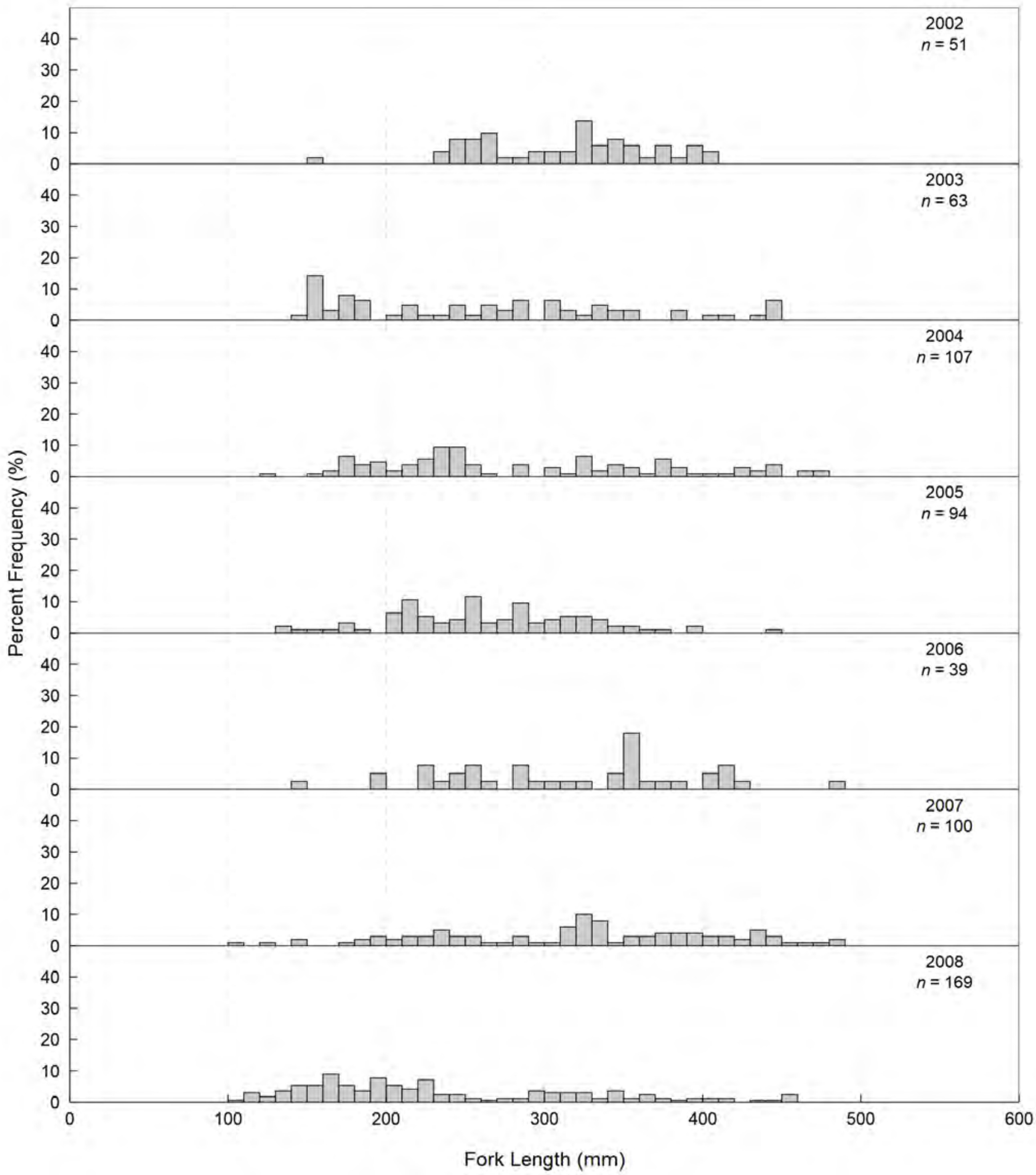

Figure F29: Length-frequency distributions by year for Rainbow Trout captured by boat electroshocking in Sections 1, 3, and 5 of the Peace River, 2002 to 2020.

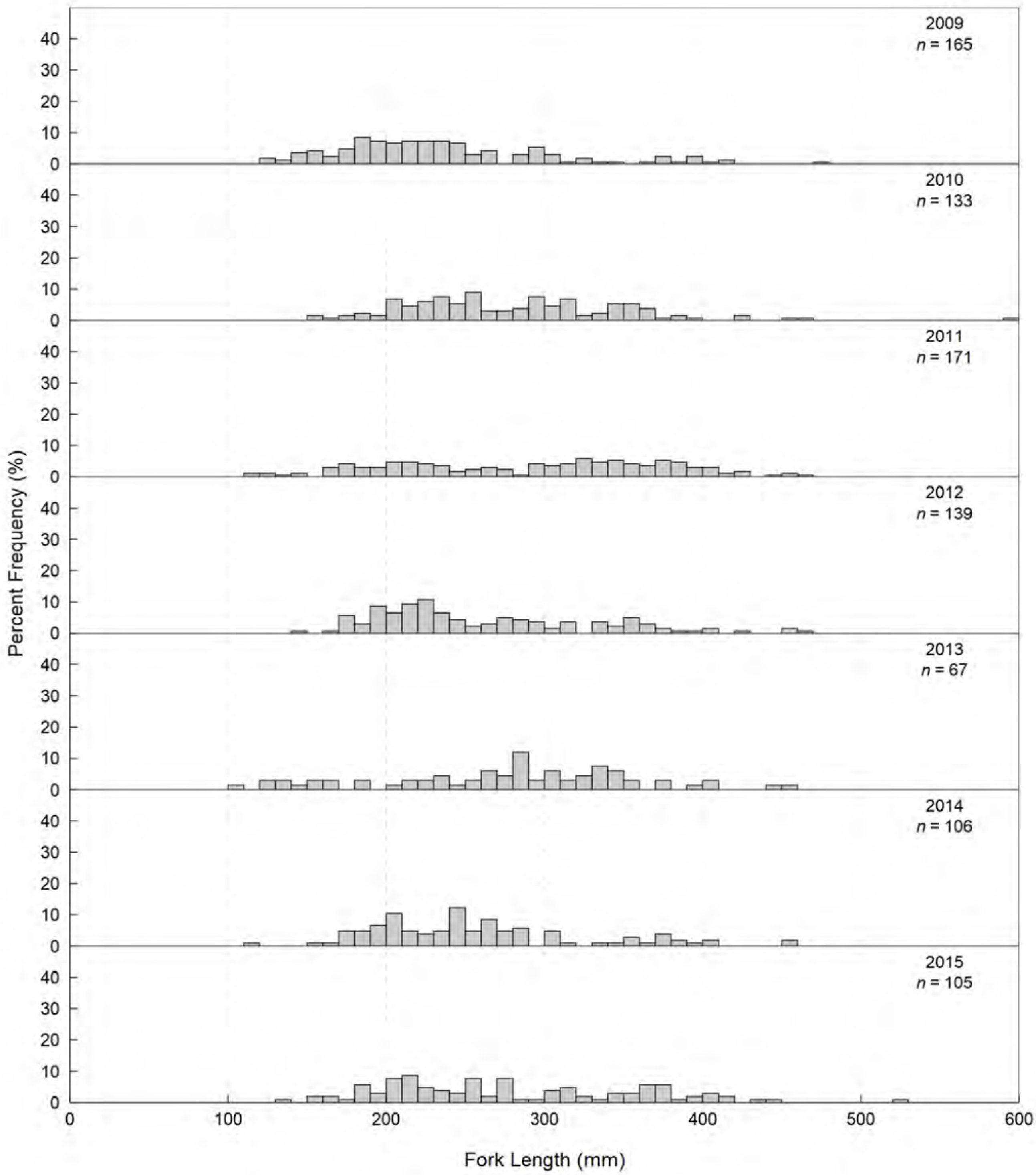

Figure F29: Continued.

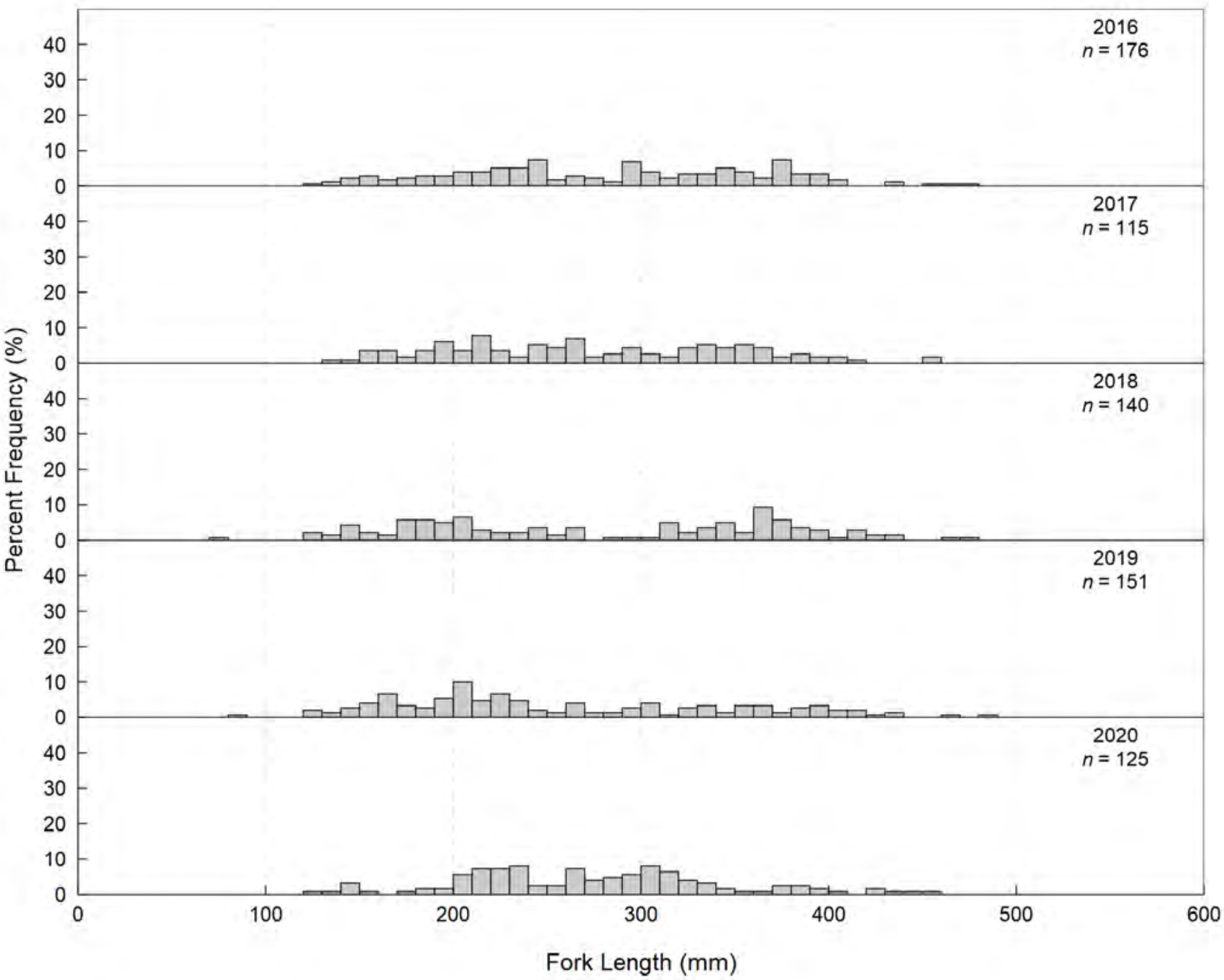

Figure F29: Concluded.

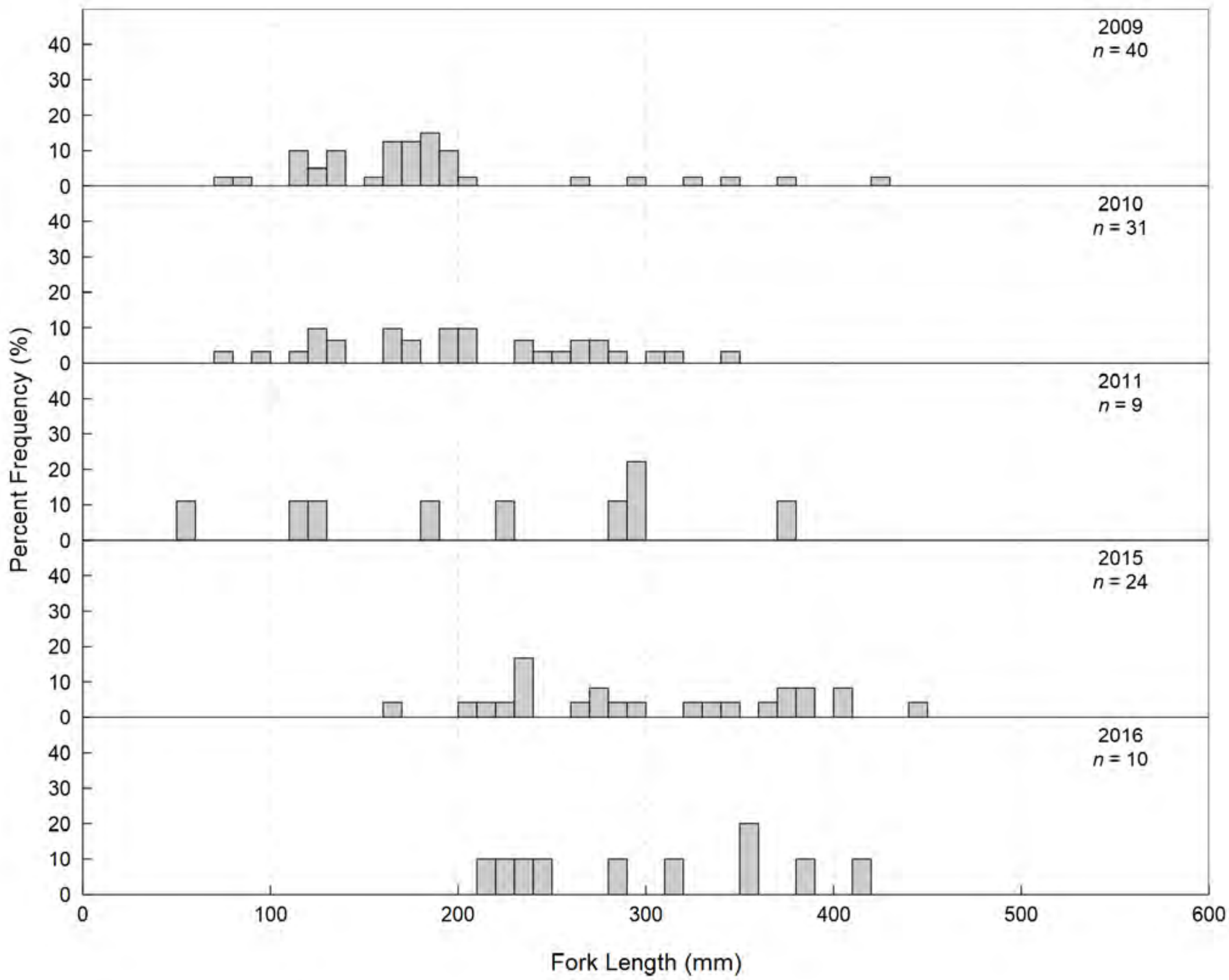

Figure F30: Length-frequency distributions by year for Rainbow Trout captured by boat electroshocking in Sections 6, 7, and 9 of the Peace River, 2002 to 2020. Data from 2009 to 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).

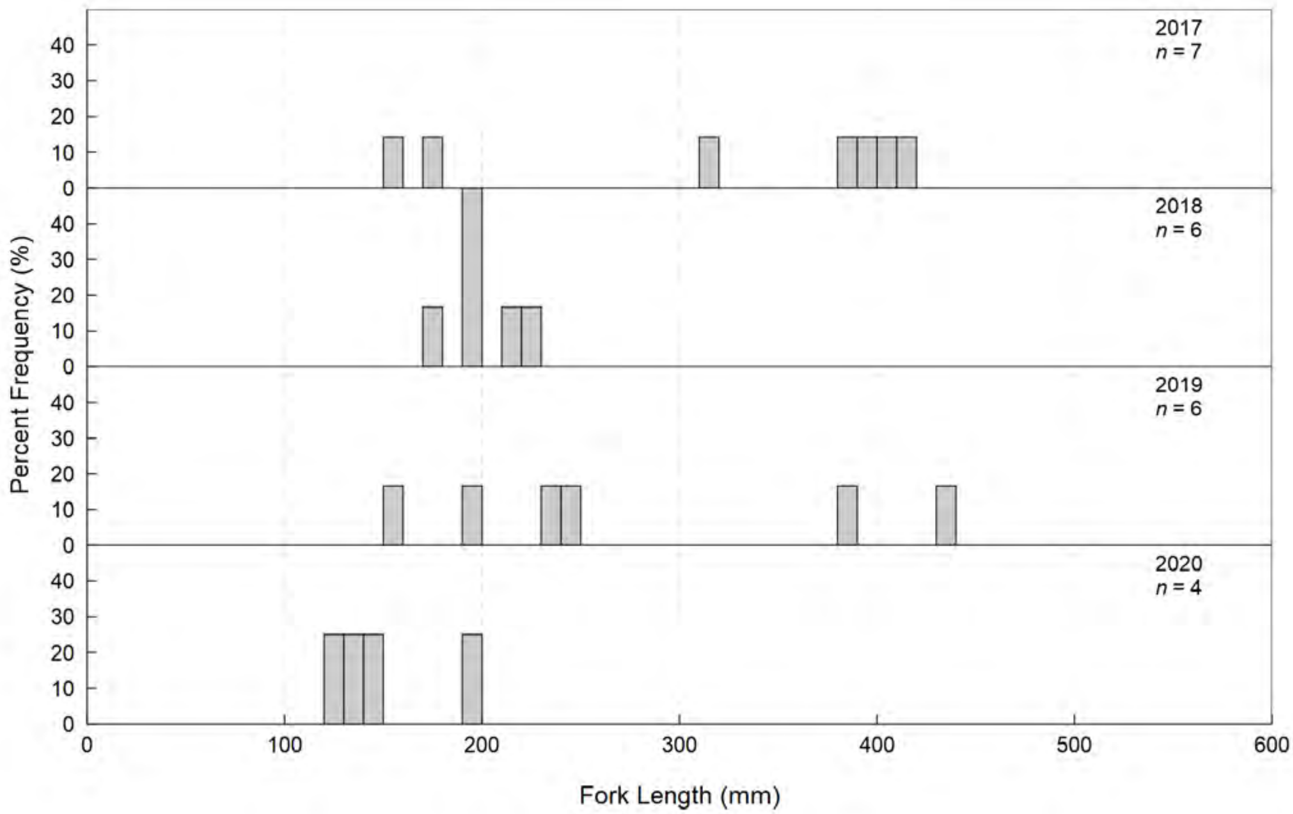

Figure F30: Concluded.

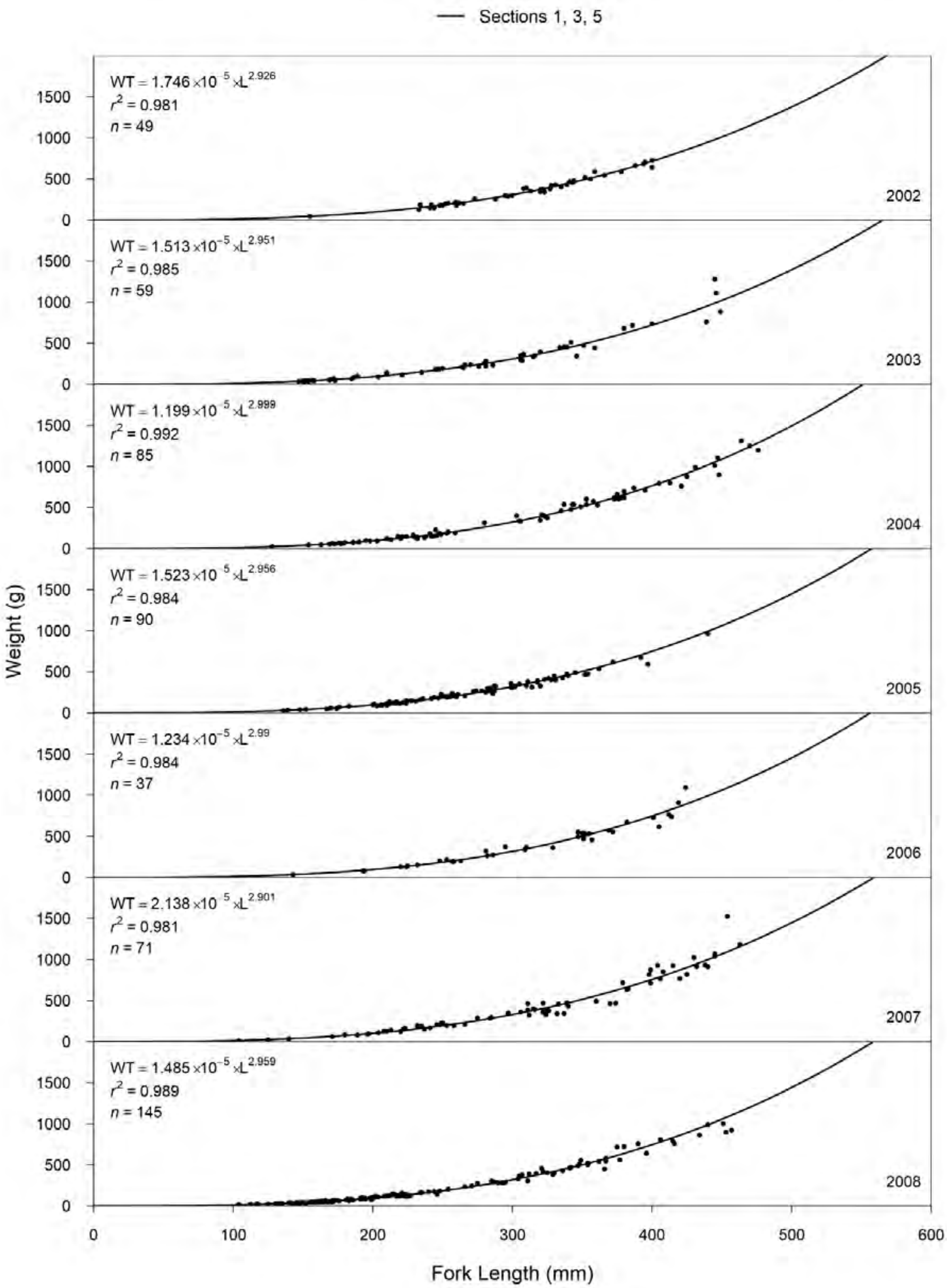

Figure F31: Length-weight regressions for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).

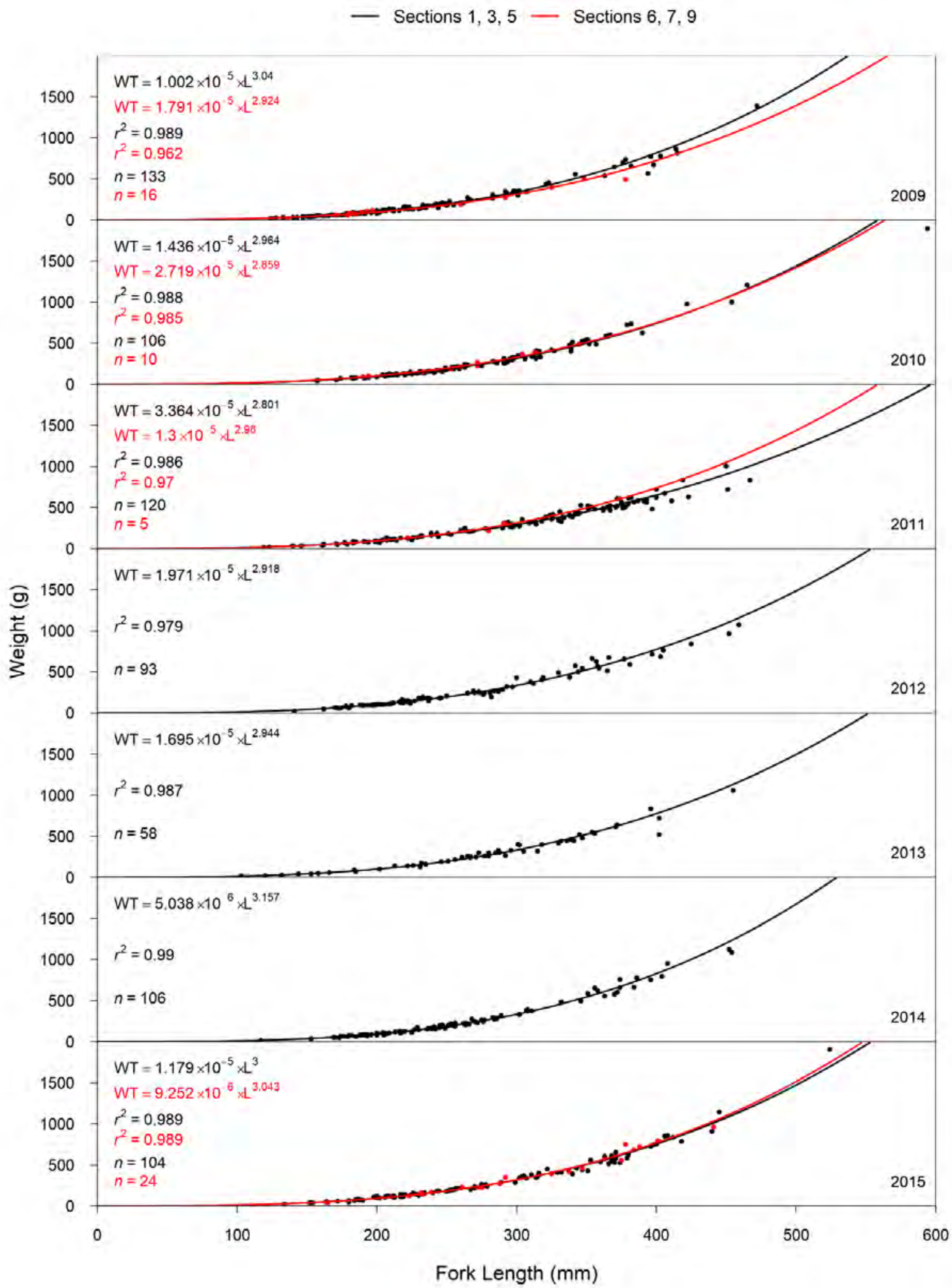

Figure F31: Continued.

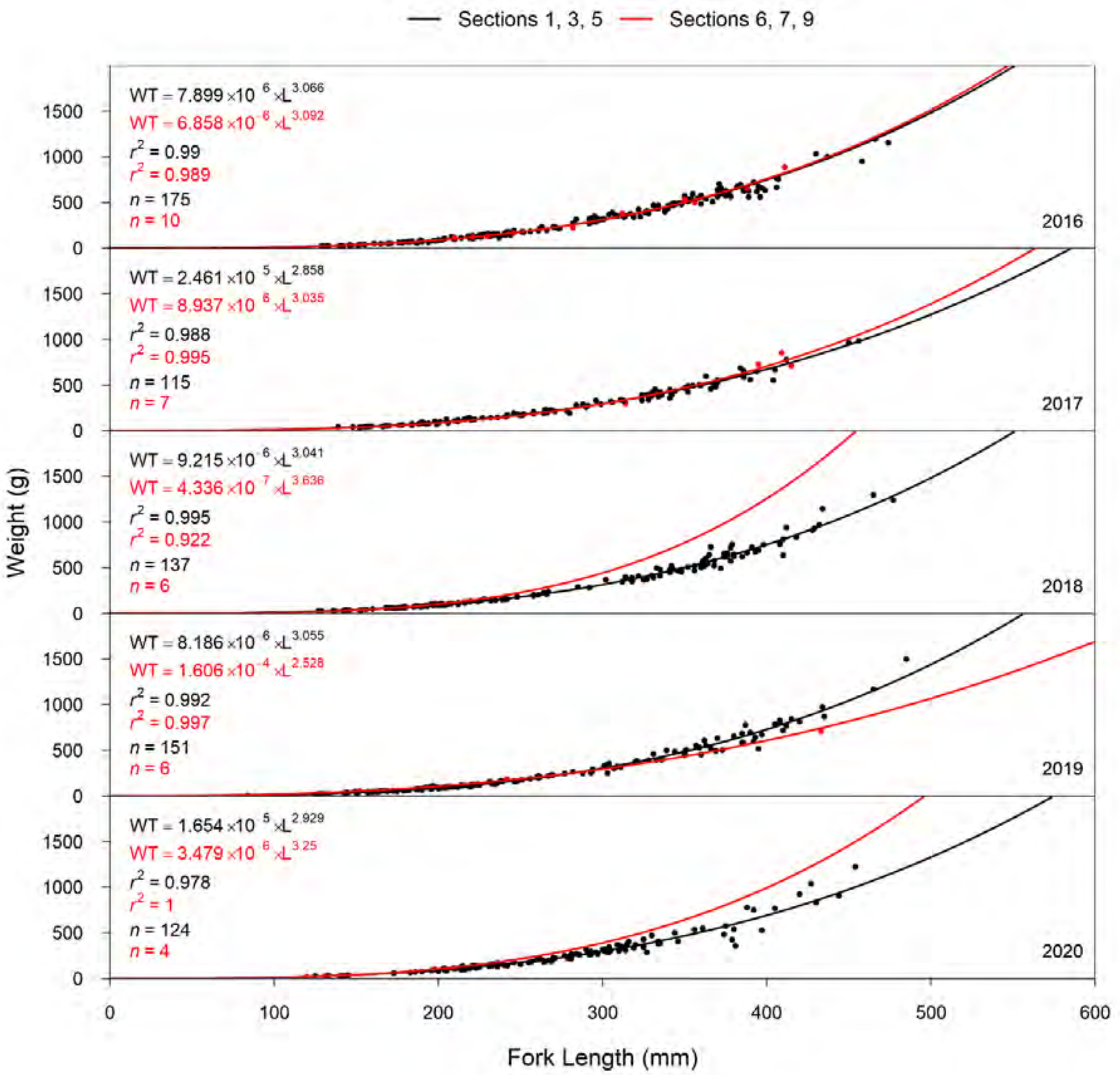

Figure F31: Concluded.

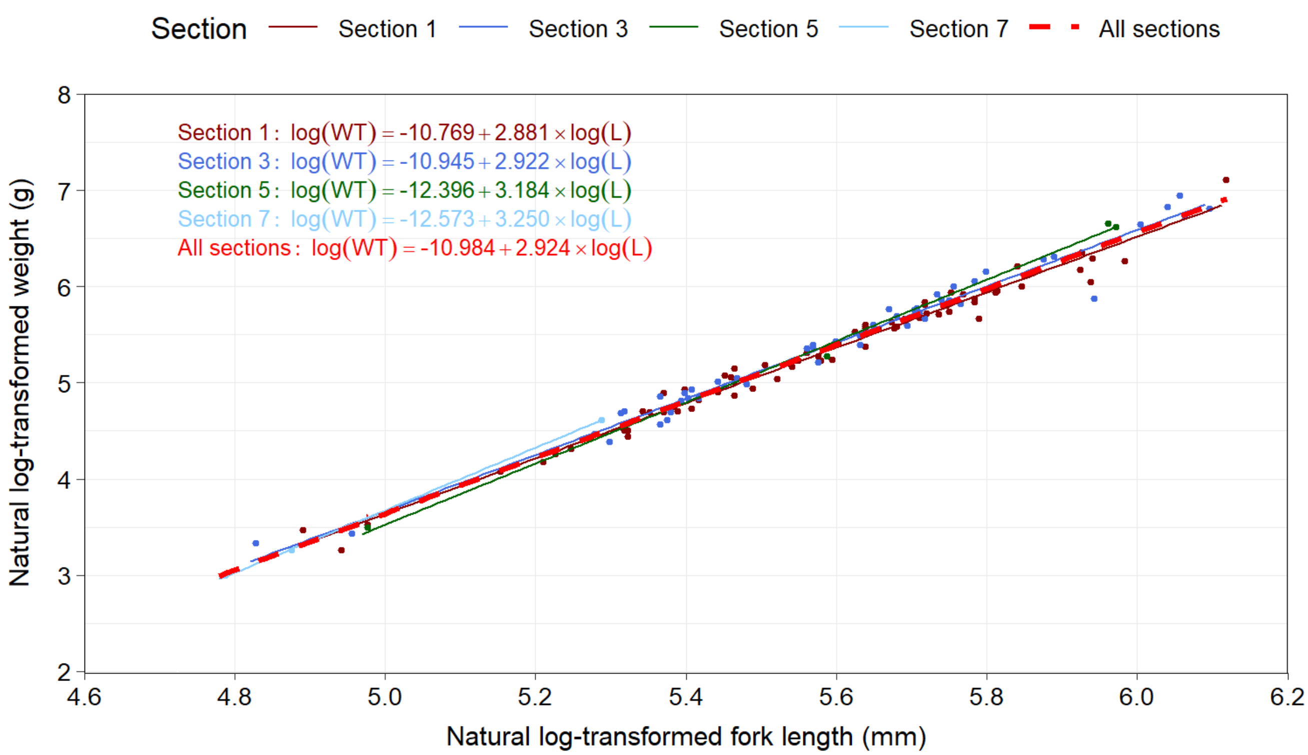

Figure F32: Log-log relationship between weight and fork length for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 2020.

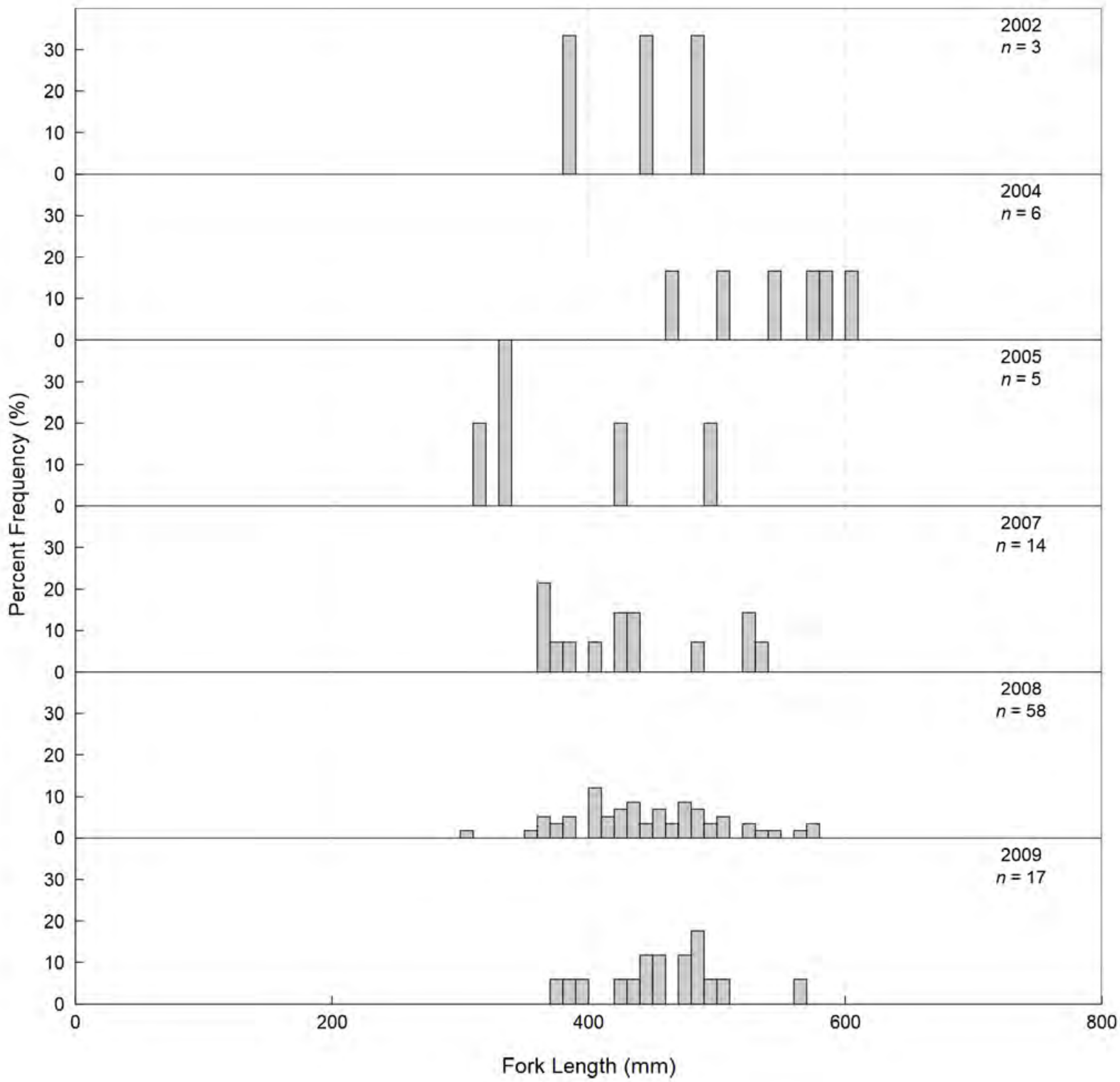

Figure F33: Length-frequency distributions by year for Walleye captured by boat electroshocking in Sections 1, 3, and 5 of the Peace River, 2002 to 2020.

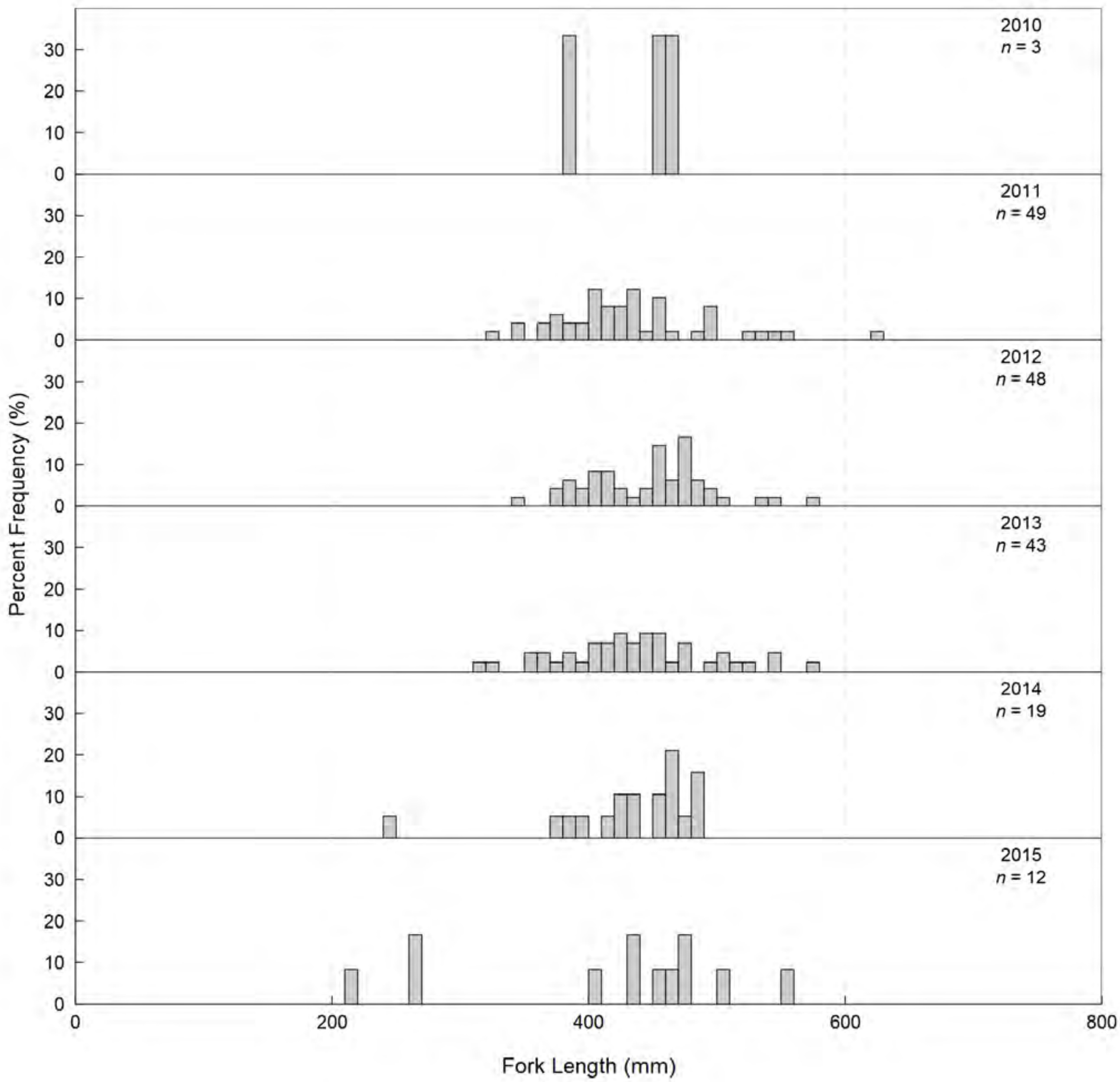

Figure F33: Continued.

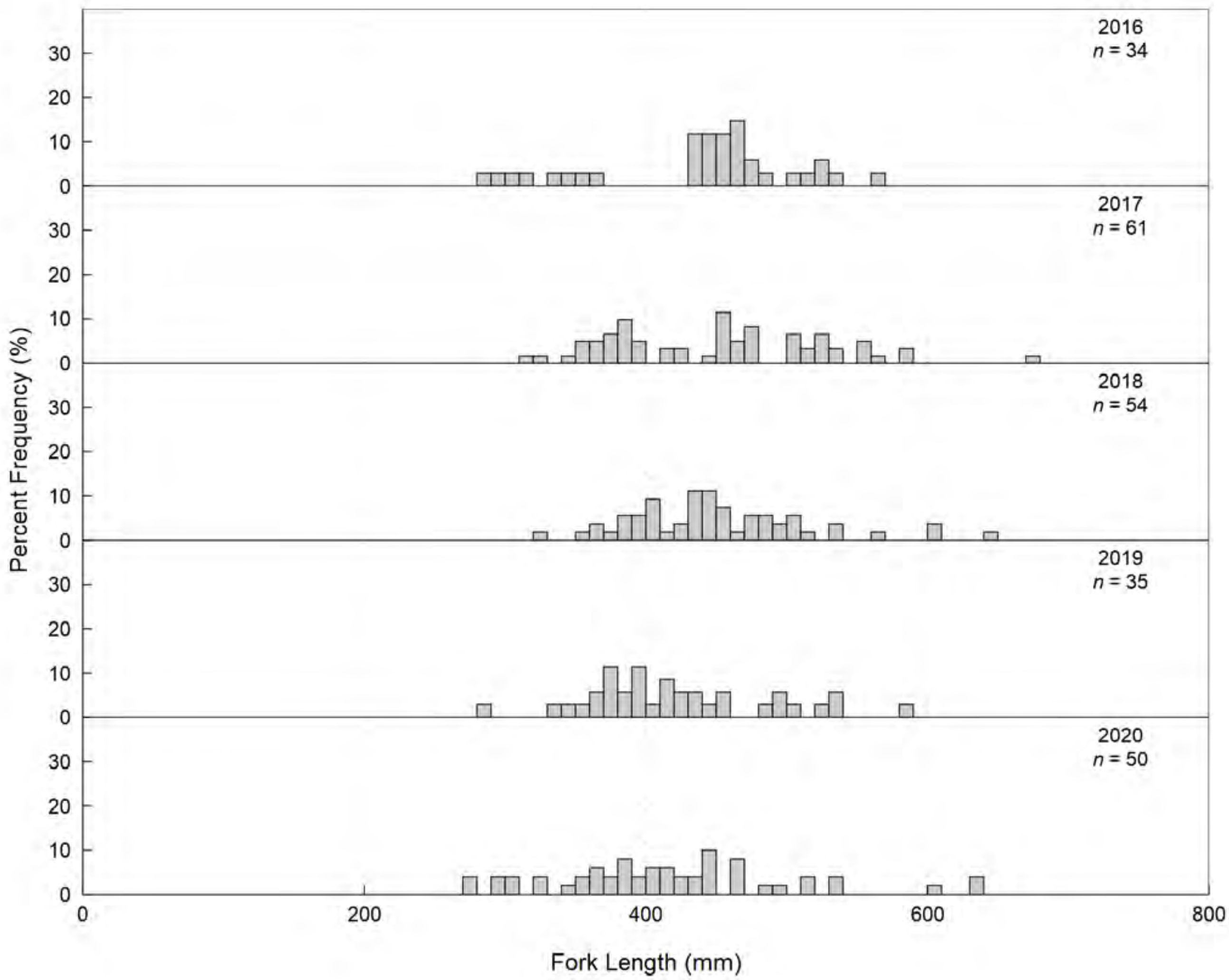

Figure F33: Concluded.

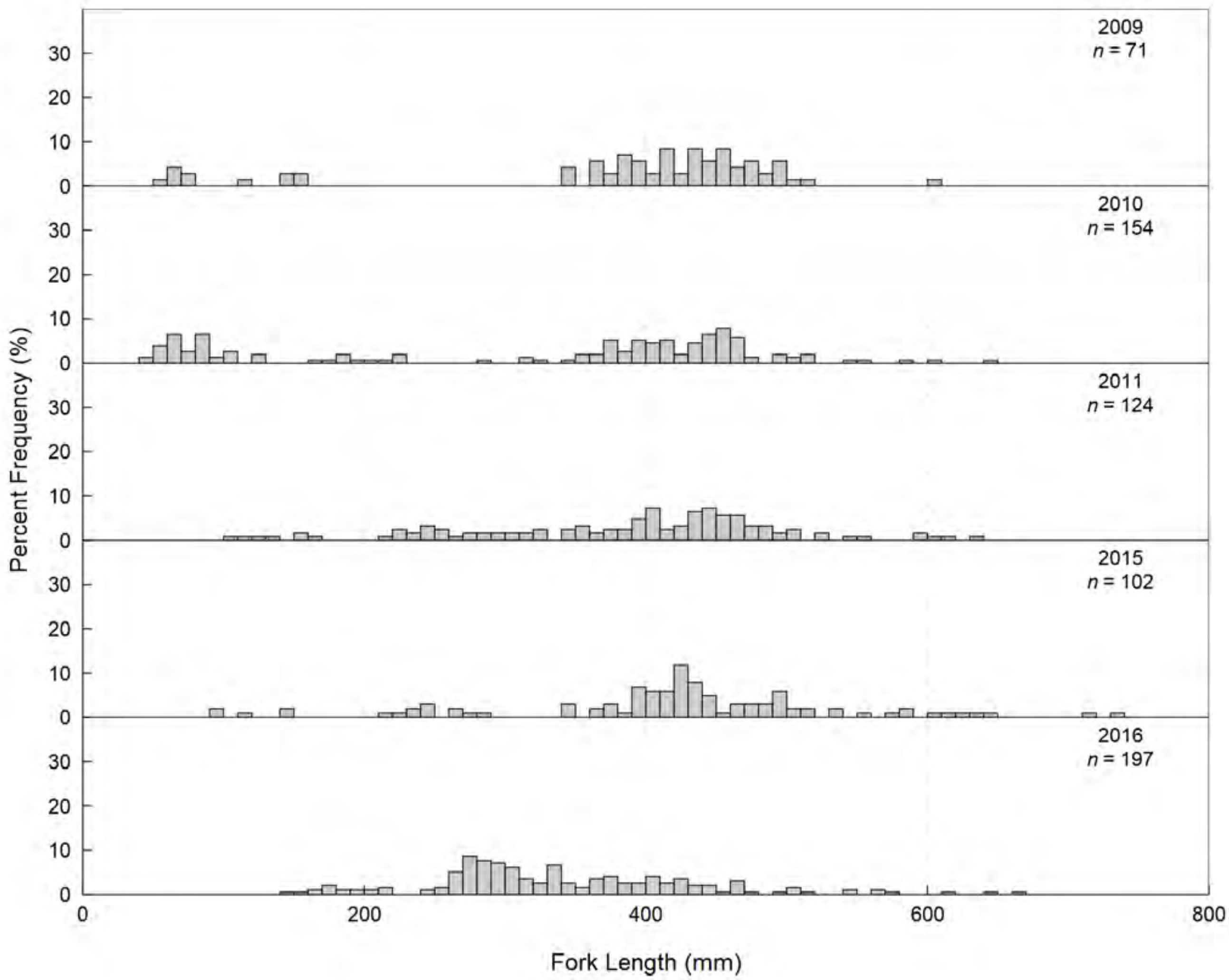

Figure F34: Length-frequency distributions by year for Walleye captured by boat electroshocking in Sections 6, 7, and 9 of the Peace River, 2002 to 2020. Data from 2009 to 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).

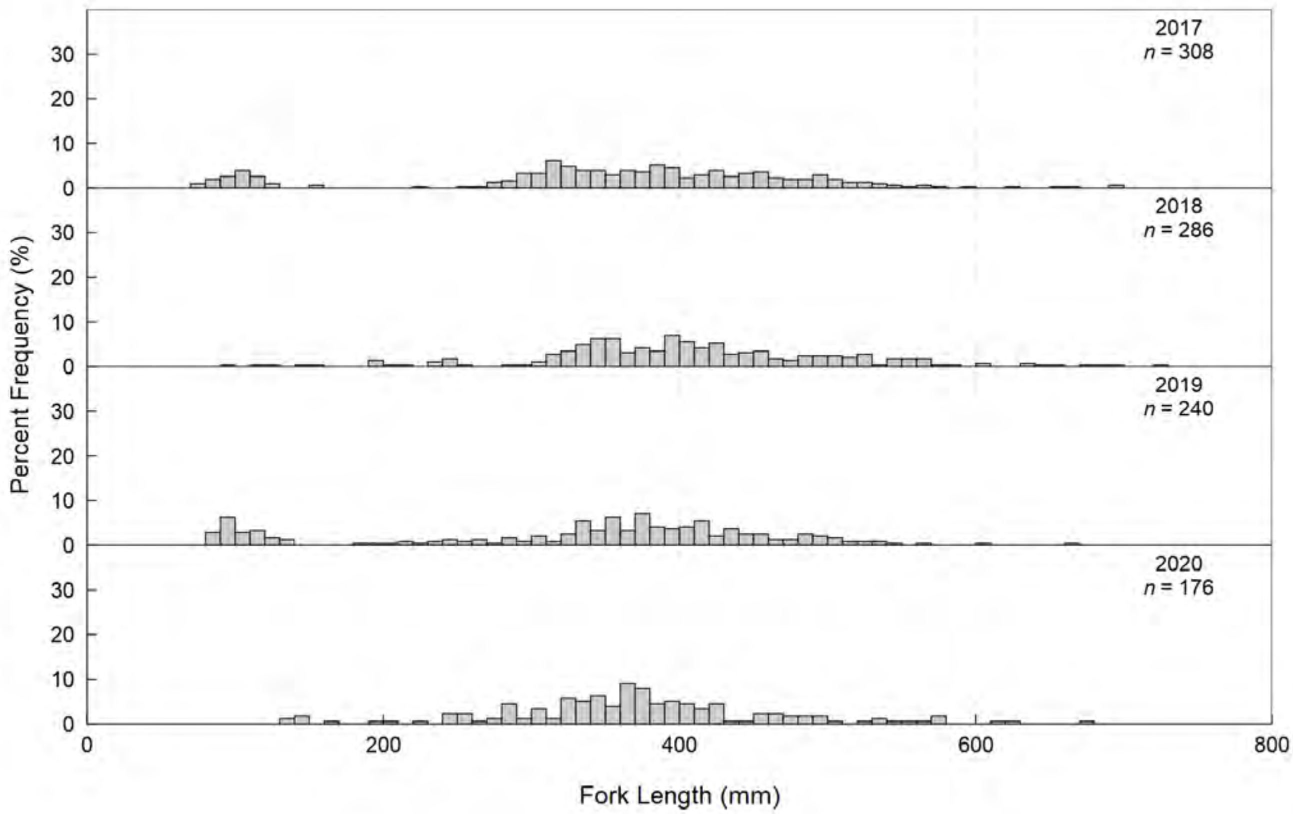

Figure F34: Concluded.

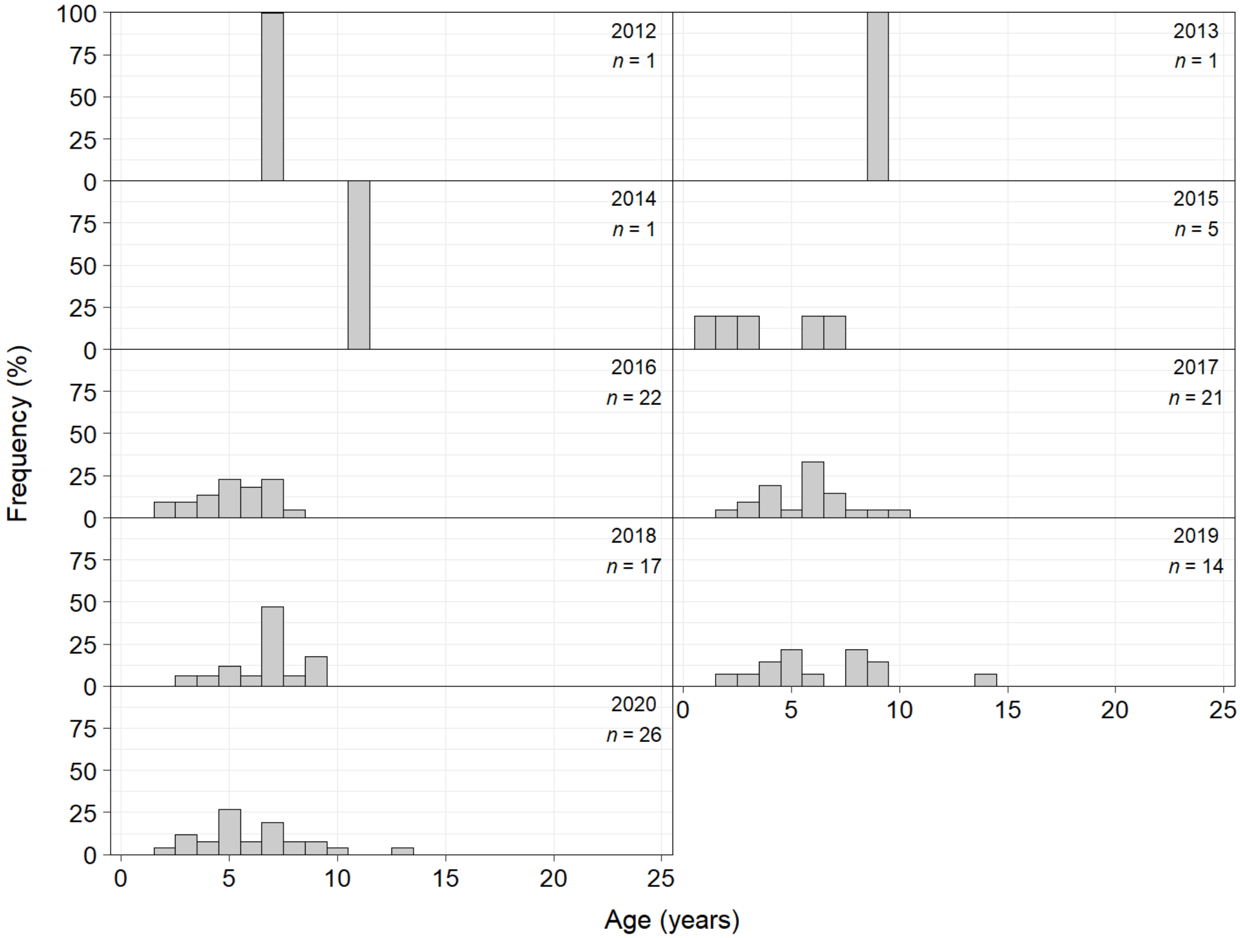

Figure F35: Age-frequency distributions by year for Walleye captured by boat electroshocking in Sections 1, 3, and 5 of the Peace River, 2002 to 2020.

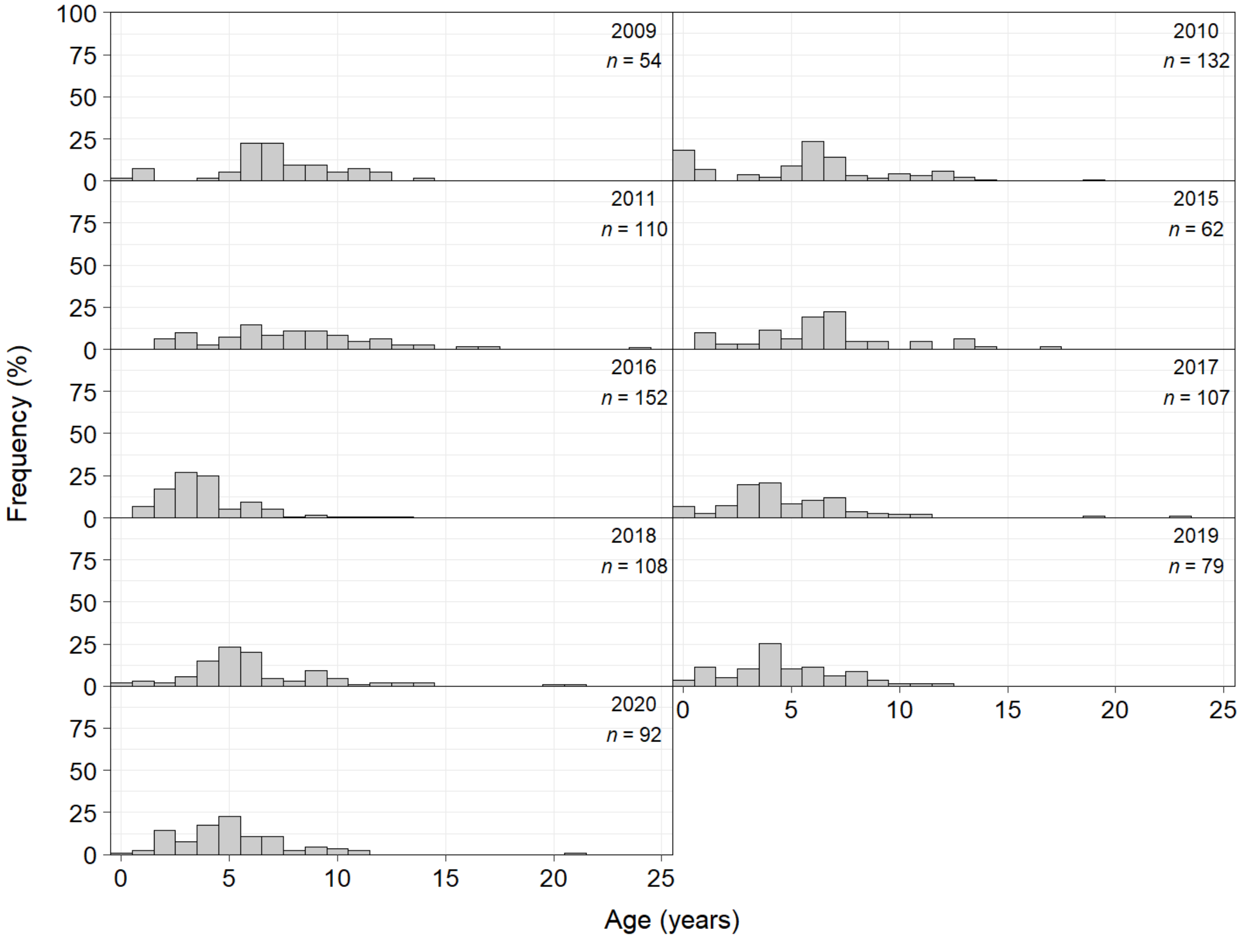

Figure F36: Age-frequency distributions by year for Walleye captured by boat electroshocking in Sections 6, 7, and 9 of the Peace River, 2002 to 2020. Data from 2009 to 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).

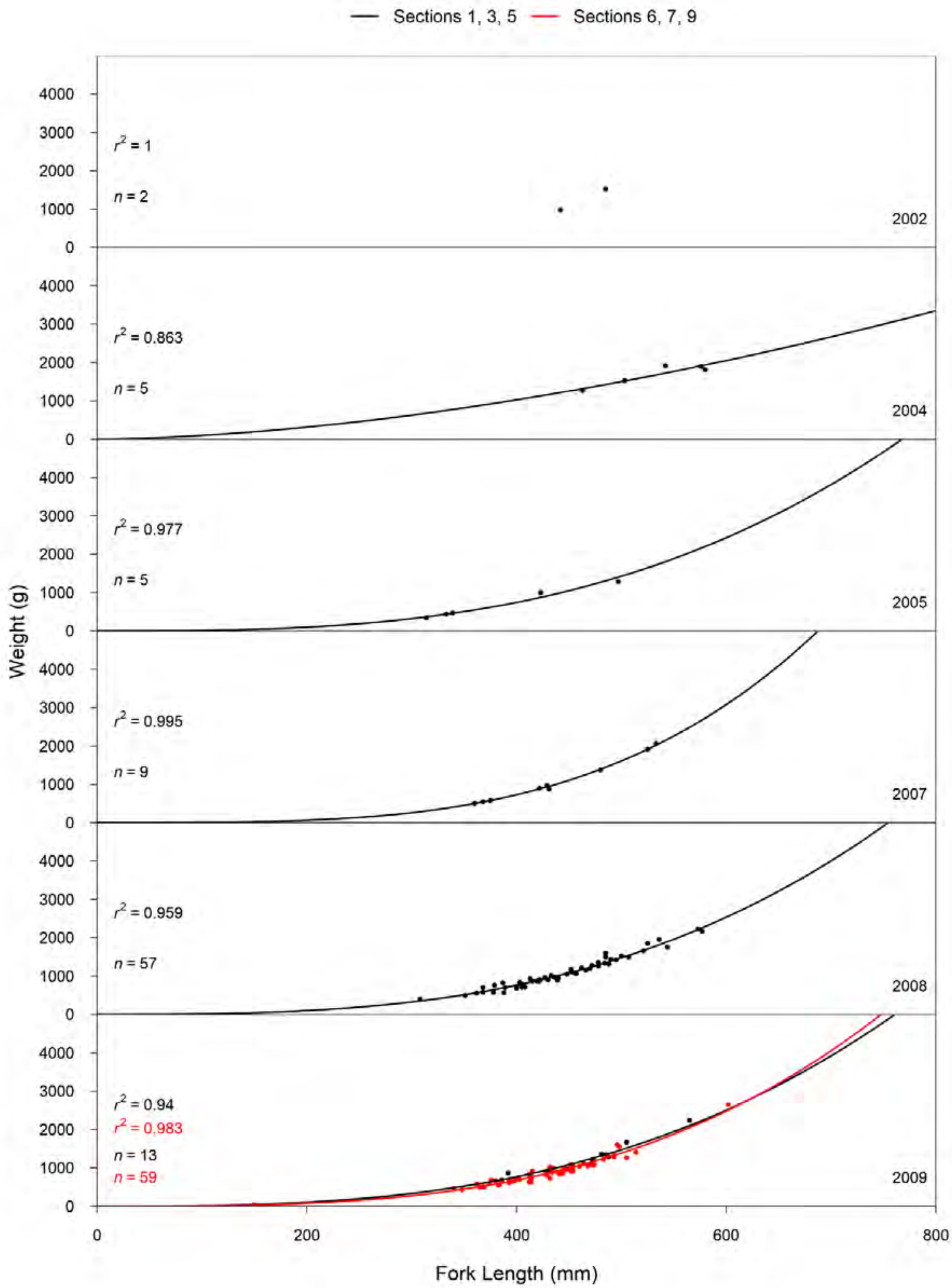

Figure F37: Length-weight regressions for Walleye captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).

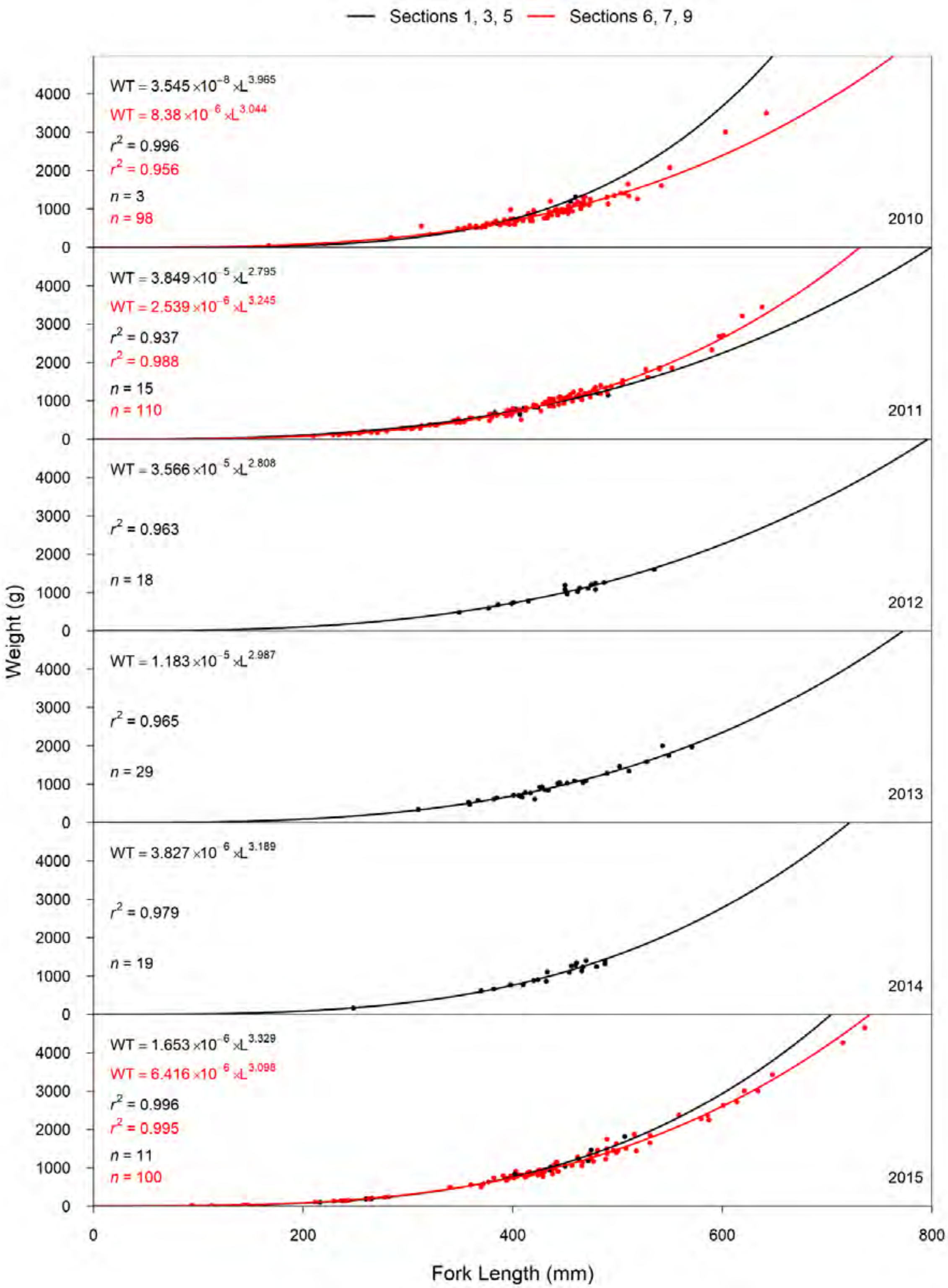

Figure F37: Continued.

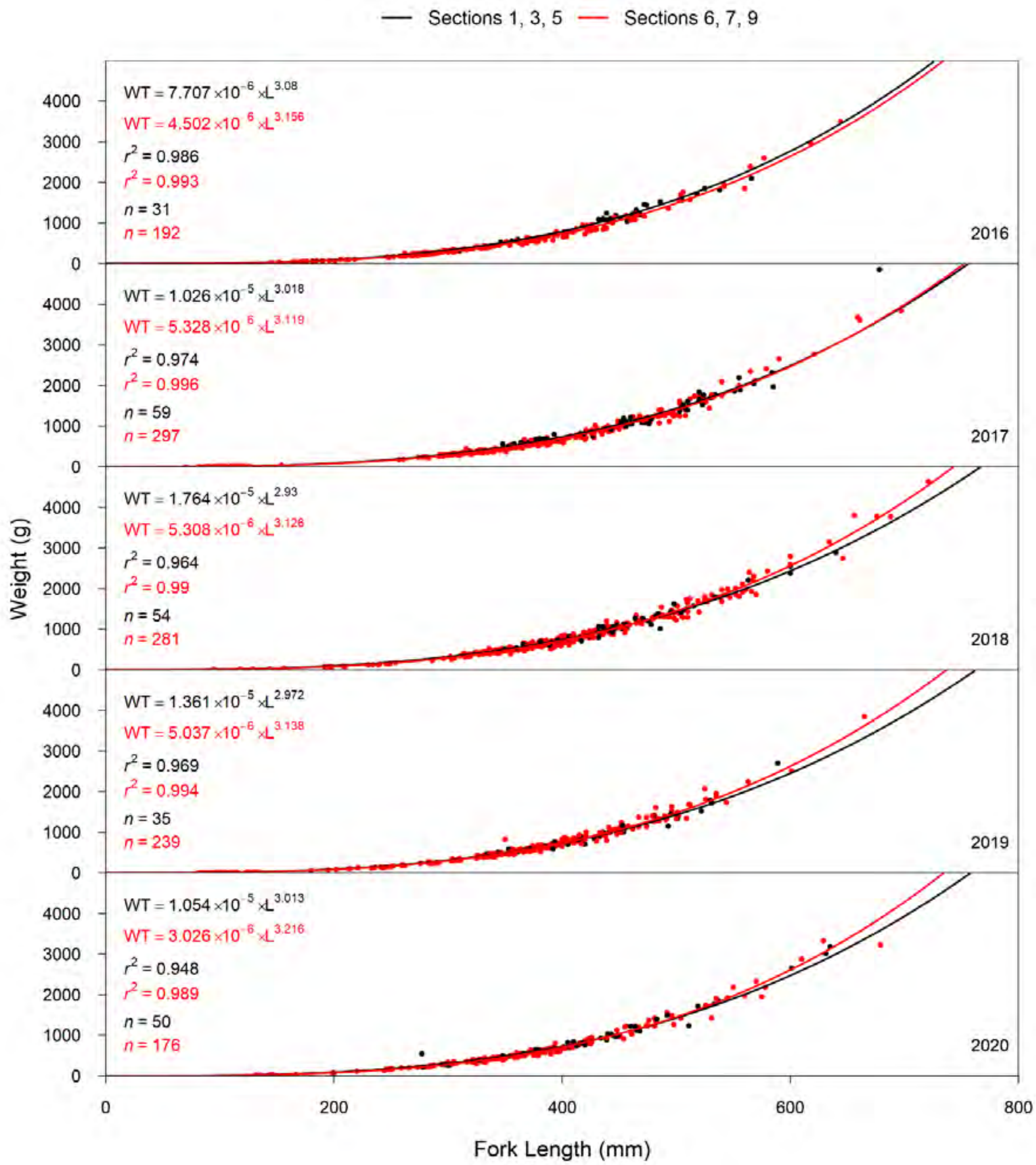

Figure F37: Concluded.

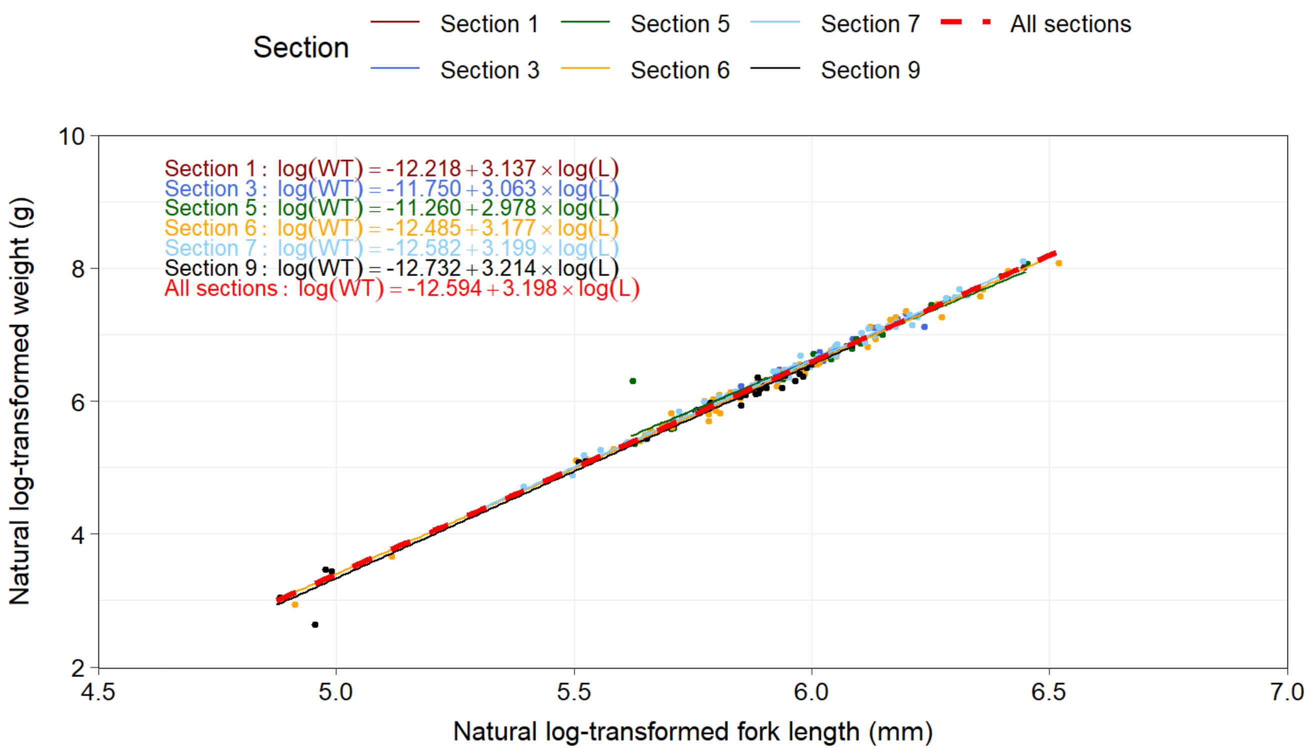

Figure F38: Log-log relationship between weight and fork length for Walleye captured by boat electroshocking in sampled sections of the Peace River, 2020.

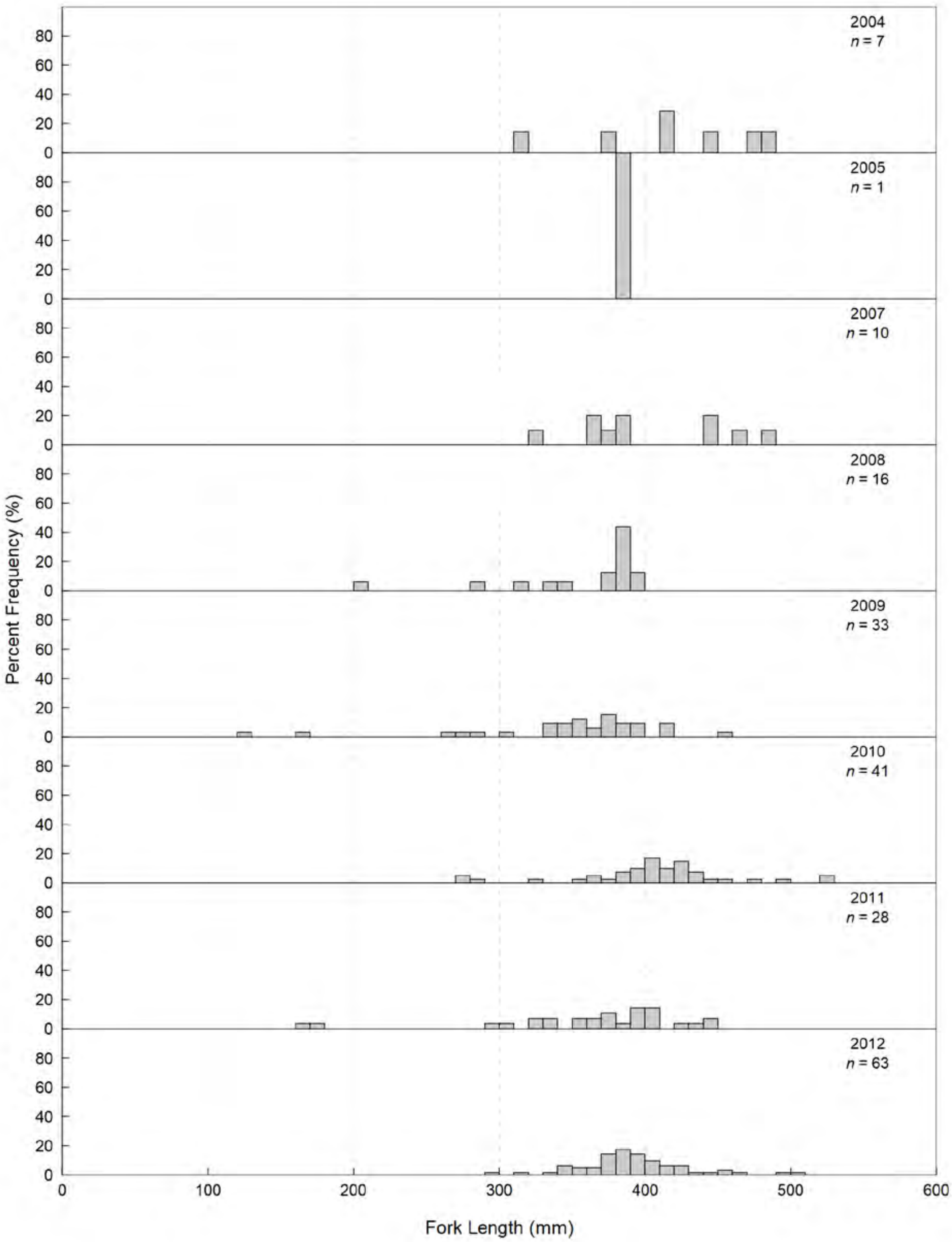

Figure F39: Length-frequency distributions by year for White Sucker captured by boat electroshocking in Sections 1, 3, and 5 of the Peace River, 2002 to 2020.

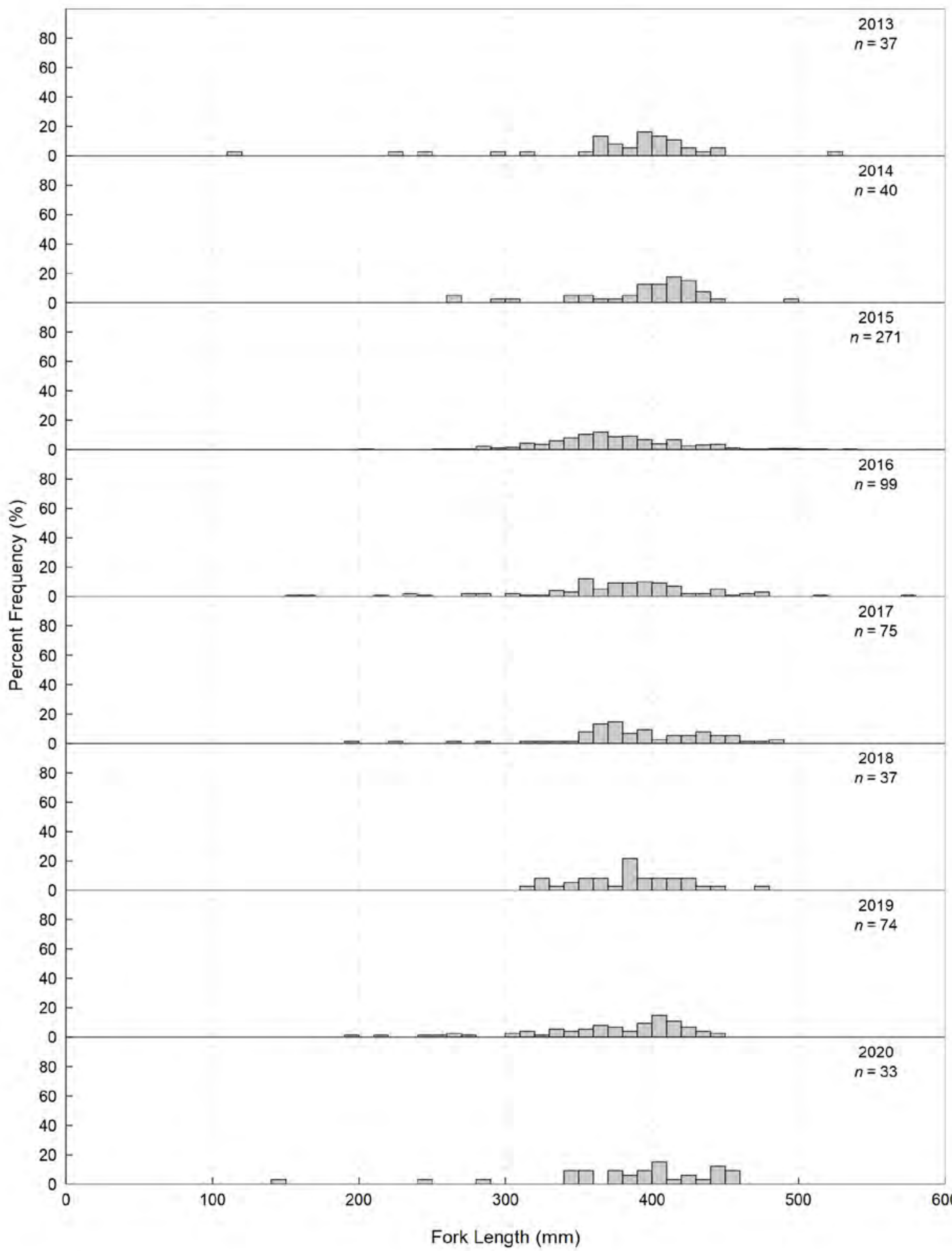

Figure F39: Concluded.

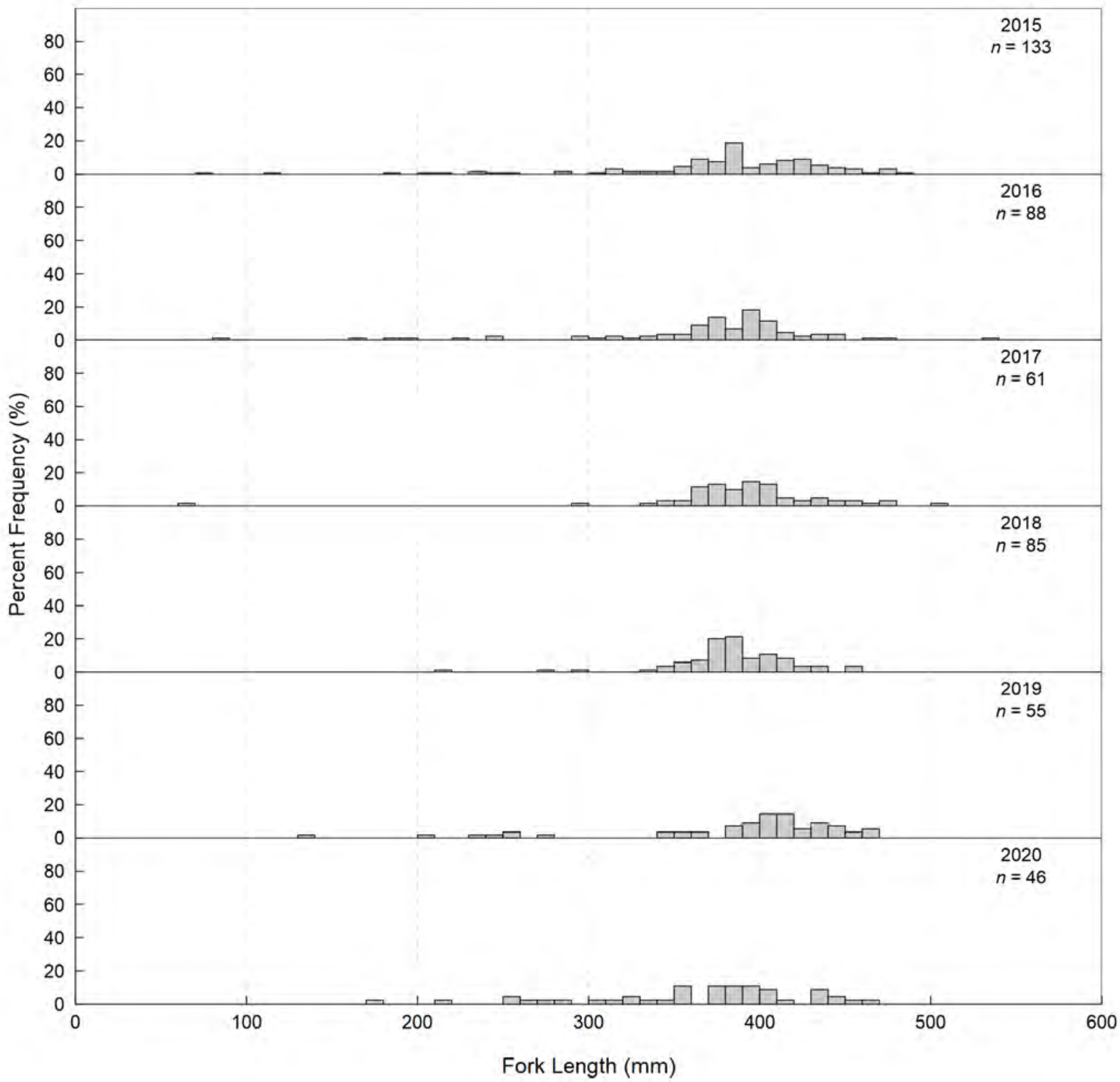

Figure F40: Length-frequency distributions by year for White Sucker captured by boat electroshocking in Sections 6, 7, and 9 of Peace River, 2020.

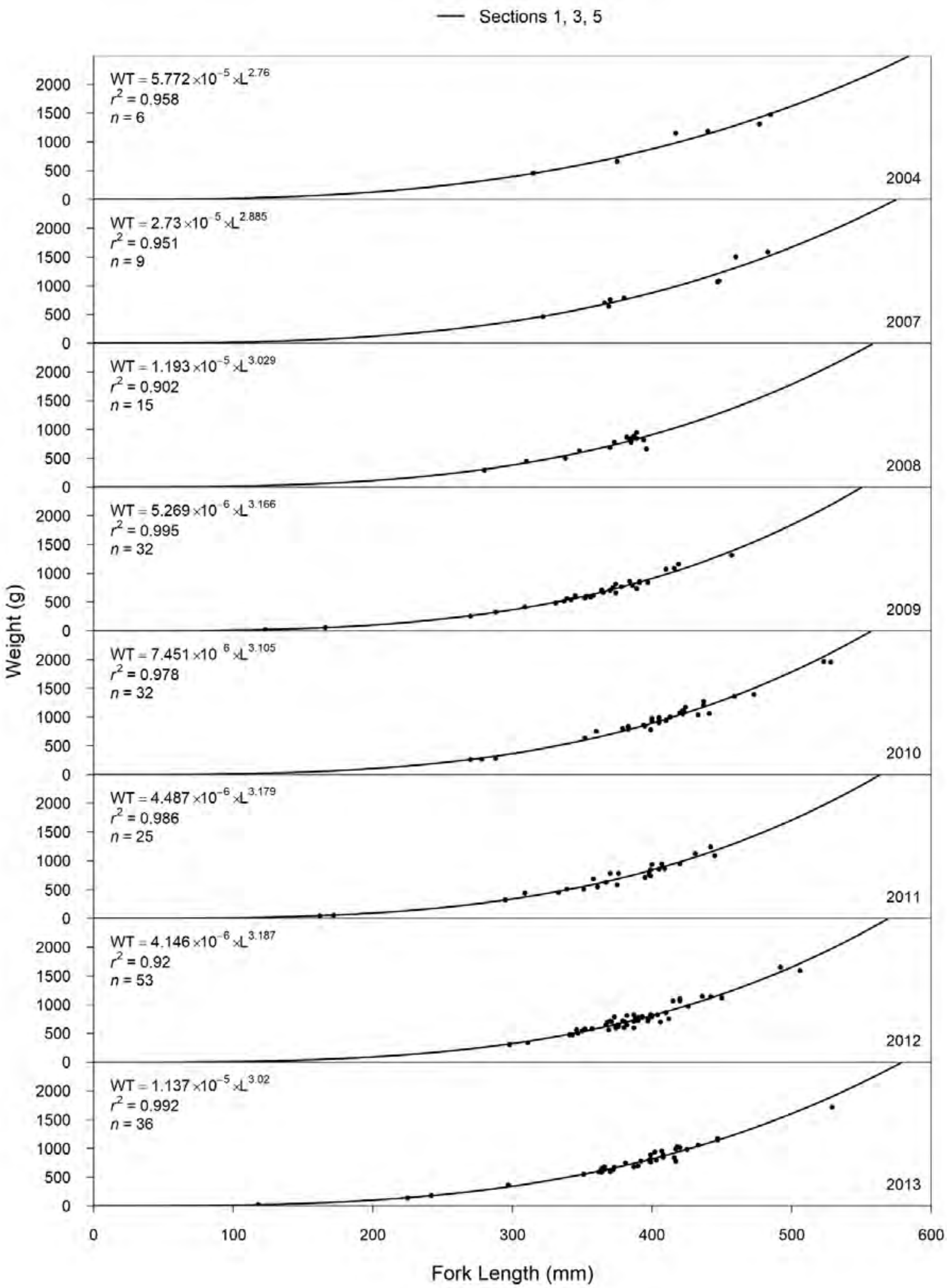

Figure F41: Length-weight regressions for White Sucker captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2020.

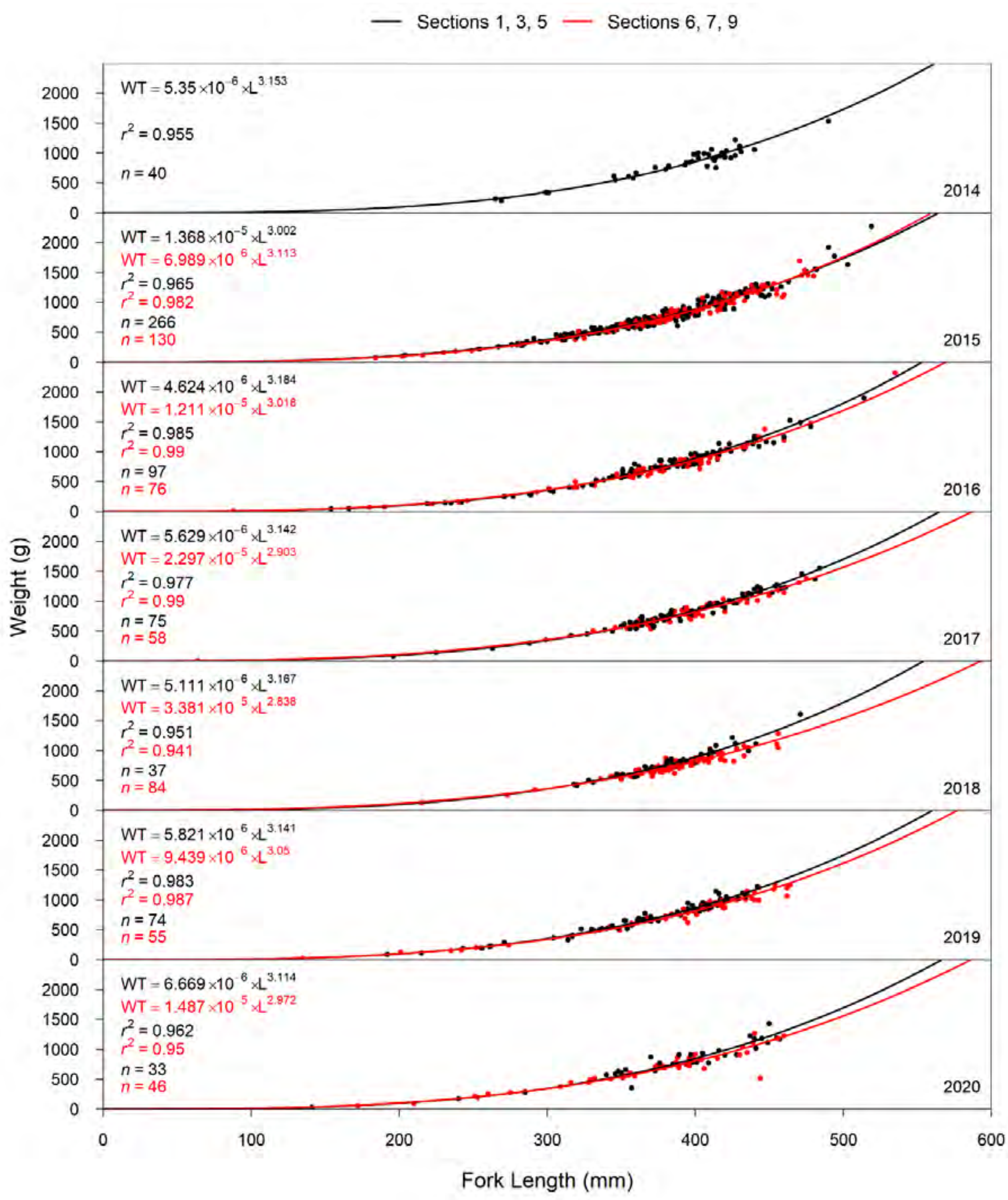

Figure F41: Concluded.

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