Site C Clean Energy Project

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

Construction Year 8 (2022)

Kevin Little, BSc, RPBio
WSP Canada Inc.

Dustin Ford, RPBio
WSP Canada Inc.

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REPORT

Peace River Large Fish Indexing Survey

2022 Investigations (Mon-2, Task 2a)

Submitted to:

Nich Burnett

BC Hydro
333 Dunsmuir St., 13th Floor
Vancouver, British Columbia
V6B 5R3 Canada

Submitted by:

WSP Canada Inc.

201 Columbia Ave. Castlegar, BC V1N 1A8 Canada

604-533-2992

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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. For the quantitative predictions of fish biomass downstream of the Project, each fish species was assigned to one of three 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*]); and
- **Group 3** included planktivorous species (i.e., Kokanee [*Oncorhynchus nerka*] and Lake Whitefish [*Coregonus clupeaformis*]).

While not expressly stated in the EIS, all remaining Peace River fish species were combined into a fourth group:

- **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 was conducted annually between 2015 and 2022 (Golder and Gazey 2016–2020; Golder 2021a, 2022a). 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).

On 3 October 2020, the Project entered the river diversion phase of construction. On this date, the entire flow of the Peace River was diverted into two tunnels routed along the left downstream bank of the Peace River to allow for further construction activities associated with the Project's development. The diversion tunnels allow for downstream fish movement, but do not allow for upstream movement due to high water velocities within the tunnels. Upstream fish movement is facilitated by the temporary upstream fish passage facility (TUF), which operates from 1 April to 31 October each year.

Data collected from 2002 to 2020 represents baseline data collected prior to the onset of river diversion. The 2021 and 2022 studies represent two years of data collected after the commencement of the river diversion phase of Project construction. The EIS did not include predictions of fish biomass during the river diversion phase of the Project's development. As such, analyses to test the management hypotheses were not conducted during the present study year.

In 2022, sampling for the Indexing Survey was conducted from 17 August to 5 October in six different sections of the Peace River (Sections 1, 3, 5, 6, 7, and 9), which were the same sections sampled annually 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 select fish, and indicator species were marked with half-duplex (HDX) passive integrated transponder (PIT) tags. In 2022, 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, length-weight relationships, length-at-age summaries, Fulton's condition factor, and relative weight. These metrics were compared to results from 2002 to 2021.

In response to low Goldeye catch during the Indexing Survey 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 Survey was considered 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 2022, the Goldeye and Walleye Survey was conducted over four days between mid-May and late June.

Overall, results from 2022 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 2022 survey and key trends observed over the 21-year monitoring period are summarized as follows:

- In 2022, mean daily discharge in the Peace River was much greater than the historical average (2002–2021) for most of April and May. During the sampling period, discharge in the Peace River was above the historical average and flows abruptly increased to near historical highs near the end 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, Longnose Sucker, Walleye, and White Sucker.

- Arctic Grayling and Mountain Whitefish were most frequently encountered in Sections 1, 3, and 5. For both species, catch rates within these sections were higher from 2002 to 2011 compared to 2012 to 2022. In recent years (i.e., since 2015), Arctic Grayling catch rates declined in Section 3 and were variable but low in Sections 1 and 5. Since 2015, Mountain Whitefish catch rates in Sections 1, 3, and 5 were low, and in 2022, Mountain Whitefish catch rates in these sections were lower than any previous year. In addition, Mountain Whitefish catch rates declined each year from 2018 to 2022 in Sections 6, 7, and 9.
- Catch rates of Rainbow Trout fluctuated annually between 2015 and 2018, however, catch rates generally declined between 2018 and 2022, and in 2022, catch rates were lower than all previous years, indicating a recent decline in abundance.
- Samples sizes of captured fish were low for Burbot, Goldeye, and Northern Pike, which confounds inter-year comparisons of catch data. The available data did not suggest any substantial changes in abundance over time for these species.
- Analyses of size- and age-structure, and body condition of fish populations suggested few differences between 2022 and earlier study years for nearly all species and metrics. Exceptions included smaller than typical age-1 and age-2 Arctic Grayling in 2022 compared to previous study years, and lower body condition in 2022 for Longnose Sucker, Mountain Whitefish, and White Sucker in Section 5 compared to other sections in 2022, and compared to most previous years. These results indicate poor growing conditions for these species in 2022 within Section 5.

Table E1: Status of hypotheses from Peace River Large Fish Indexing Survey (Mon-2, Task 2a) after 2022.

Mon-2 Management Question	Management Hypotheses Relevant to Task 2a	2022 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 following 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 following 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 following 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.
	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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Jeanine Horseman	Technician

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Dustin Ford	Project Manager	Shawn Redden	Project Director
Gary Ash	Senior Biologist	Demitria Burgoon	Fisheries Biologist
Carrie McAllister	Project Coordinator	Beth Thompson	Indigenous Relations
Kevin Little	Biologist/Author	Corby Shurgot	Biological Technician
Cameron MacKenzie	Biologist	Geoff Sawatzky	Biological Technician
Angela Melney	Biologist	Sima Usvyatsov	Biologist
Josh Sutherby	Biologist	Theresa Chicote	Biologist
Rachael Jones	Biologist	Geraldine Davis	Biological Technician
Bee Davis	Biological Technician	Natasha Audy	Biological Technician
Amy Cardinal	Biological Technician	Chloe Denny	GIS Technician
Jon Wenzel	Warehouse Coordinator	Laurie Ell	Office Administrator
Dennis Hartford	Warehouse Coordinator		

LIST OF ACRONYMS AND ABBREVIATIONS

Acronym	Description
CPUE	Catch-per-unit-effort
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
TUF	Temporary Upstream Fish Passage Facility
WLR	Water License Requirements
YOY	Young-of-the-year

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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*], and

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[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).

Walleye [*Sander vitreus*]), Group 2 fishes included species considered “passage sensitive” (i.e., Arctic Grayling [*Thymallus arcticus*], Bull Trout [*Salvelinus confluentus*], and Mountain Whitefish [*Prosopium williamsoni*]), and 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. 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, Golder 2021a, Golder 2022a). Changes in methodologies, objectives, and study areas over 22 years of sampling limits the compatibility of some aspects of the dataset.

Sampling conducted in 2021 and 2022 represents two years of sampling conducted after the Project entered the diversion phase of construction, which commenced on 3 October 2020. On this date, the entire flow of the Peace River was diverted into two tunnels routed along the left downstream bank of the Peace River, to allow for further construction activities associated with the Project. The diversion tunnels allow for downstream fish movement, but do not allow for upstream movement due to high water velocities within the tunnels. Upstream fish movement is facilitated by the temporary upstream fish passage facility (TUF) operated by BC Hydro from 1 April to 31 October each year (McMillen and BC Hydro 2021). During periods when the TUF is not operating between April and October (e.g., shut down for maintenance work), or operating at reduced efficiency (e.g., high discharge reduces attracting flows), the TUF is supported by contingent boat electroshocking surveys (WSP 2023a). During these surveys, fish situated immediately downstream of the Project are captured and transported to upstream release locations.

In 2022, the Indexing Survey collected various biological samples from select fish for laboratory analysis. These included hard structures (i.e., fin rays, scales, or otoliths) for ageing, and tissue samples for stable isotope analysis, genetic, and mercury analyses. A subset of the collected ageing structures were analyzed and reported under this program. All other samples were provided to BC Hydro and may be used to further characterize Peace River fish populations by other components of the FAHMFP. The analysis and interpretation of these other samples are not discussed in this report.

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

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 (e.g., Whelan et al. 2022; WSP 2023c).

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 Table 1.

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.

Table 1: Short- and long-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)		Long-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**

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. For the 2022 study year, data analyses included catch rate (i.e., catch-per-unit-effort) to assess relative abundance over time and various metrics to assess the general health and composition of fish populations, including size and age-structure, growth, and body condition. Other detailed analyses, including capture-recapture population estimates, and more extensive analyses of catch, life history, and environmental data were not conducted in 2022 but will be conducted in future study years.

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, increasing sampling efficiency by sampling when turbidity is typically low, and reducing potential sampling effects to Bull Trout by sampling when adult Bull Trout are less commonly encountered 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 2021, Walleye catch during all sessions and sections combined averaged 270 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 six individuals and ranged from a low of no catch in 2018 to a high of 14 individuals in 2019. Due to consistently low Goldeye catch during the Indexing Survey, the contingent assessment was conducted in 2022.

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 River and most downstream approximately 1.0 km of the 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.

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 occurs, scheduled for fall 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 2021, Sections 1a, 2, 4, and 8 were excluded from the 2022 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, 2011a, 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 each year of the Indexing Survey, the same sites were sampled within each section, with a few exceptions. As an example, in 2020, Site 0502 was not sampled due to nearby construction activities associated with the Project's development. Following the completion of the construction activities, Site 0502 was sampled during the 2021 and 2022 survey years.

Table 2: Location and distance from WAC Bennett Dam of Peace River sample sections as delineated by Mainstream (2012)

Section Number	Location	River Kilometre[a]		Number of Sites Sampled in 2022[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	16
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	Many Islands Park area	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 (17 August to 5 October) not the contingent assessment for Goldeye and Walleye in May and June.
[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.

For the Indexing Survey, 99 sites were sampled within the six sections of the Peace River in 2022 (Appendix A, Figures A1 to A6). The length of sites varied from 124 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 ranged from 330 to 600 m in length, and the one site in the Kiskatinaw River ranged from 124 to 1240 m in length. The sites in the Beatton River and Kiskatinaw River occasionally differed in length between sample sessions depending on water levels at the time of sampling (i.e., during low water levels, access to the farthest upstream extent of these sites was not possible, and in these instances, the length of site that could not be sampled was noted). Site descriptions and UTM locations for all 99 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 2022 study period (Table 3), with the exception of Site 0518 that could only be sampled five times and Site 0512 that could only be sampled three times. Due to the presence of instream construction within the site area, Site 0518 was not sampled in Session 5 and Site 0512 was not sampled in Session 1, 5, and 6. Each sample session took between 6 and 13 days to complete. Each section within each session was sampled over 1 to 9 days (Table 3).

Table 3: Summary of boat electroshocking sample sessions conducted in the Peace River, 2022.

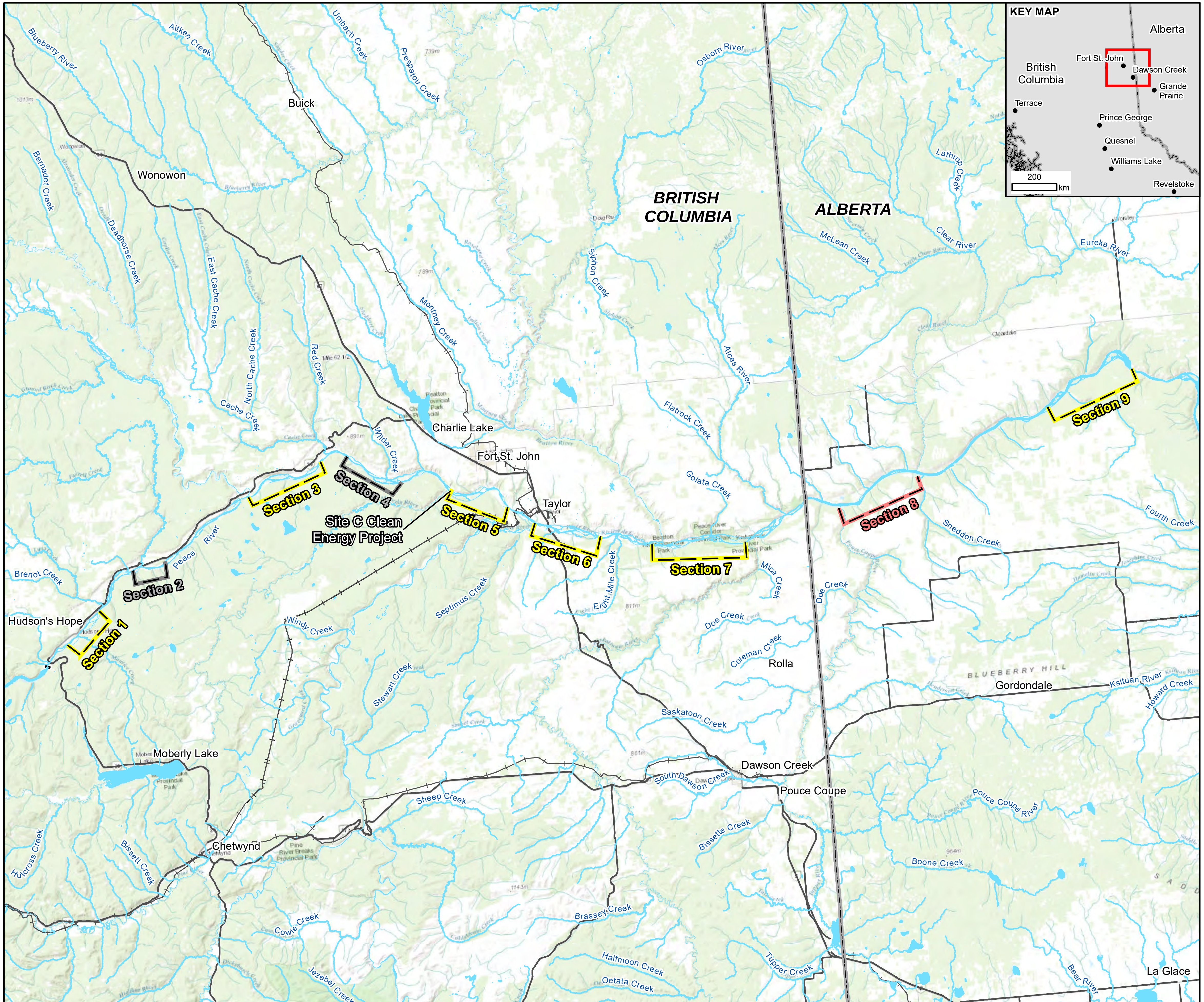
Session	Start Date	End Date	Section					
			1	3	5	6	7	9
1	17 Aug	27 Aug	17 – 19 Aug	20 – 22 Aug	21 – 23 Aug	24 – 25 Aug	26 – 27 Aug	23 – 24 Aug
2	25 Aug	3 Sept	25 – 29 Aug	30 – 31 Aug	28 – 30 Aug	1 – 2 Sept	3 Sept	1 – 2 Sept
3	5 Sept	10 Sept	5 – 6 Sept	6 – 7 Sept	5 – 6 Sept	7 – 8 Sept	9 – 10 Sept	8 – 9 Sept
4	10 Sept	18 Sept	10 – 18 Sept	11 – 13 Sept	11 – 13 Sept	13 – 15 Sept	15 – 16 Sept	14 Sept
5	16 Sept	28 Sept	26 – 27 Sept	16 – 17 Sept	19 – 22 Sept	19 – 24 Sept	24 – 25 Sept	28 Sept
6	29 Sept	5 Oct	4 Oct	29 Sept	30 Sept - 1 Oct	1 – 2 Oct	2 – 3 Oct	5 Oct

1.4.2 Goldeye and Walleye Survey

Two boat electroshocking sessions were conducted as part of the Goldeye and Walleye Survey. Session 1 occurred on 15 and 16 May and Session 2 was conducted on 29 and 30 June (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, 2022.

Session	Tributary						
	Section 7				Section 8		
	Six Mile Creek	Eight Mile Creek	Beatton River	Kiskatinaw River	Alces River	Pouce Coupe River	Clear River
1	15 May	15 May	15 May	16 May	16 May	16 May	16 May
2	30 June	30 June	30 June	30 June	29 June	29 June	29 June



LEGEND

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

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 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

COORDINATE SYSTEM: NAD 1983 BC ENVIRONMENT ALBERS

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, 2022

CONSULTANT

YYYY-MM-DD	2023-05-19
DESIGNED	DF
PREPARED	CD
REVIEWED	KL
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2022	0	1

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

PATH: \\golder.gds\gal\burnaby\CAD-GIS\Client\BC_Hydro\Peace_River_GMS\99_PROJECTS\19121769_PeaceRiver_GMS\02_PRODUCTION\MXD\Report\2022\19121769_FIG1_PEACE_RIVER_OVERVIEW_2022.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, Station 07EF001 was decommissioned and releases from PCD were used for years 2019 to 2022 to calculate discharge values in Sections 1. No major tributaries flow into the Peace River between PCD and the former 07EF001 station location. As such, the two datasets are similar.

Discharge 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; Golder 2021a, 2022a) 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, 2022

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 manoeuvering 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; Golder 2021a; Golder 2022a) 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, shallow water depths preventing boat access, and boat manoeuvering to avoid total dissolved gas sampling stations.

Table 6: Number and lengths of sites sampled by boat electroshocking during the Peace River Large Fish Indexing Survey, 2022.[a]

Section	Number of Sites	Site Length (m)		
		Minimum	Average	Maximum
1	15	500	860	1200
3	15	950	1338	1900
5	16	128	873	1780
6	18	250	968	1500
7	19	124	904	1400
9	16	160	965	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 1640 m in length (average length = 730 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 2.0 A and as high as 4.0 A at some sites based on local water conditions and the electroshocking unit employed.

The electroshocker settings used in 2014 to 2022 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 2022 (i.e., the 2014–2022 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.

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 Arctic Grayling, 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. In 2022, a subset of the collected scale and fin rays were examined and assigned ages, the remaining ageing structures were archived for long-term storage by BC Hydro for potential future analysis (i.e., microchemistry or ageing analysis).

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 glass 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 labelled by sample crew and unique fish number ID 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.

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 a suitable amount of 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 2022, 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 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 by examining 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; WSP 2023b) were accurately assigned ages based on each individual'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 the 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 2022, the smallest Bull Trout recorded in the Peace River mainstem during the Indexing Survey was 137 mm FL, and 229 Bull Trout less than 240 mm FL were recorded in all eight 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 2022 were used for age-0 to age-2 Bull Trout (Golder 2018–2020, 2021b, 2022b, WSP 2023b), 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 section 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 micrometres (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 x L) / 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 (only individuals less than 240 mm FL and/or inter-year recaptures), Goldeye, Northern Pike, and Rainbow Trout that were captured, except in cases where ageing structures were too poor quality to assign an age. In total, 425 Mountain Whitefish scale samples and 41 Walleye fin rays were analyzed, which represented 11% of the total number of Mountain Whitefish captured and 19% of the total number of Walleye captured in 2022. Ageing structures from Mountain Whitefish and Walleye aged in 2022 were from randomly selected, first-time capture individuals. All Mountain Whitefish scale samples selected for ageing were collected during Session 1 of 2022 (17 to 27 August).

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 Bull Trout, Mountain Whitefish, 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, fin erosion, lesions, and tumor (DELT) were recorded based on the external anomalies' categories provided in Ohio EPA (1996). Data collected for each fish in 2022 were consistent with previous study years (e.g., Golder 2022a).

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, Lake Trout, Mountain Whitefish, Northern Pike, Rainbow Trout, and Walleye that were greater than 119 mm in length and all Largescale Sucker, Longnose Sucker, 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 2022b):

- Fish between 120 and 149 mm FL received 12 mm long PIT tags (12.0 mm x 2.12 mm HDX+)
- Fish between 150 and 199 mm FL received 14 mm long PIT tags (14.0 mm x 3.00 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 2022; 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., Putt et al. 2023) and the TUF as part of the Site C Fishway Effectiveness Monitoring Program (Mon-13; e.g., Moniz et al. 2022). In 2022, 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.

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.

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.

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 (Attachment A), 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, Golder 2021a, Golder 2022a). 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 (Biomark HPR Lite FDX/HDX handheld 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 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 2022. All analyses were conducted in the software R version 4.0.3 (R Core Team 2022).

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, 2001 to 2022 (Appendix C, Figure C1)
- habitat variables recorded at each sample site, 2022 (Appendix D, Table D1)
- percent composition of the catch by study year (2002 to 2022) by section (Appendix E, Tables E1 and E2)
- catch rates for all species by session and site, 2022 (Appendix E, Tables E3 and E4)
- summary of captured and recaptured fish by species and session, 2022 (Appendix E, Table E5)
- length-frequency histograms, age-frequency histograms, length-weight regressions, and natural log-transformed relationships between weight and length 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 2022 (Appendix F, Figures F1 to F44)

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, 2011a, 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 Surveys (Golder 2018–2020, 2021b, 2022b, WSP 2023b), 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 farther away from the netter and are less visible in turbid conditions. As such, observed fish were not included in the catch rate from 2019 to 2022 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 (Section 1.4.2).

2.2.4 Size and Age Structure

Length-frequency distributions were constructed for each year (Section 1 and 3 combined and Section 5, 6, 7, and 9 combined), all years combined but separately for each section, and by section within 2022. 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 for each year (Section 1 and 3 combined and Section 5, 6, 7, and 9 combined), for all years combined separated by section, and by section within 2022.

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 2022, where sample sizes were sufficient. Where sample size was insufficient to produce growth curve estimates for each section in 2022 (Arctic Grayling and Bull Trout), growth curves were estimated for each section, all years combined. 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 on 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 following 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 2022, mean daily discharge in the Peace River (i.e., discharge through PCD) was greater than the historical average (i.e., period of 2002 to 2021) for most of April and May and less than the historical average for June and July. For the remainder of year, the discharge was near average with some abrupt flow fluctuations, particularly in October (Figure 2; Appendix C, Figure C1). For most of the 2022 sample period, discharge in the Peace River was above the historical average and flows abruptly increased to near historical highs near the end of the sampling period (Figure 2).

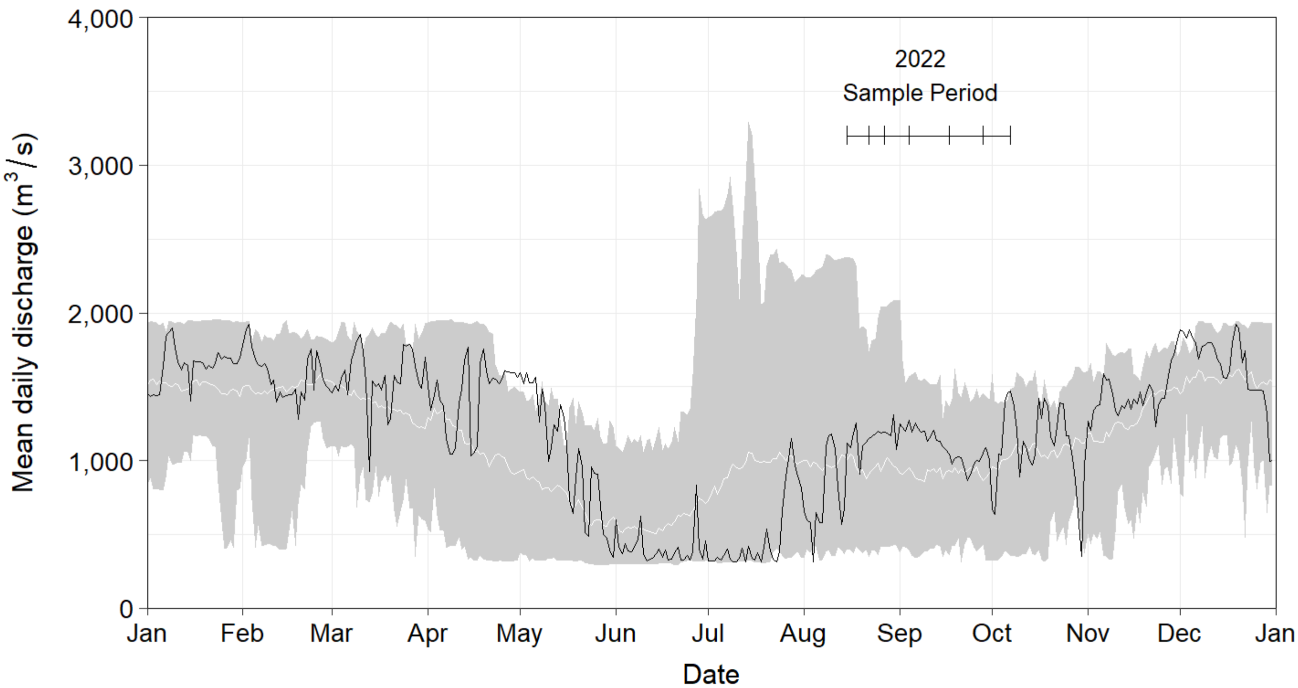


Figure 2: Mean daily discharge (m^3/s) for the Peace River at Peace Canyon Dam, 2022 (black line). The shaded area represents minimum and maximum mean daily discharge values recorded at the dam from 2002 to 2021. The white line represents average mean daily discharge values over the same time period. Vertical lines on the sample period bar represent the approximate start and end times of each sample session.

During most of the 2022 study period, flows were relatively stable with minimal daily fluctuations (Figure 3). When daily fluctuations did occur, they were most apparent in Section 1 compared to sections further downstream.

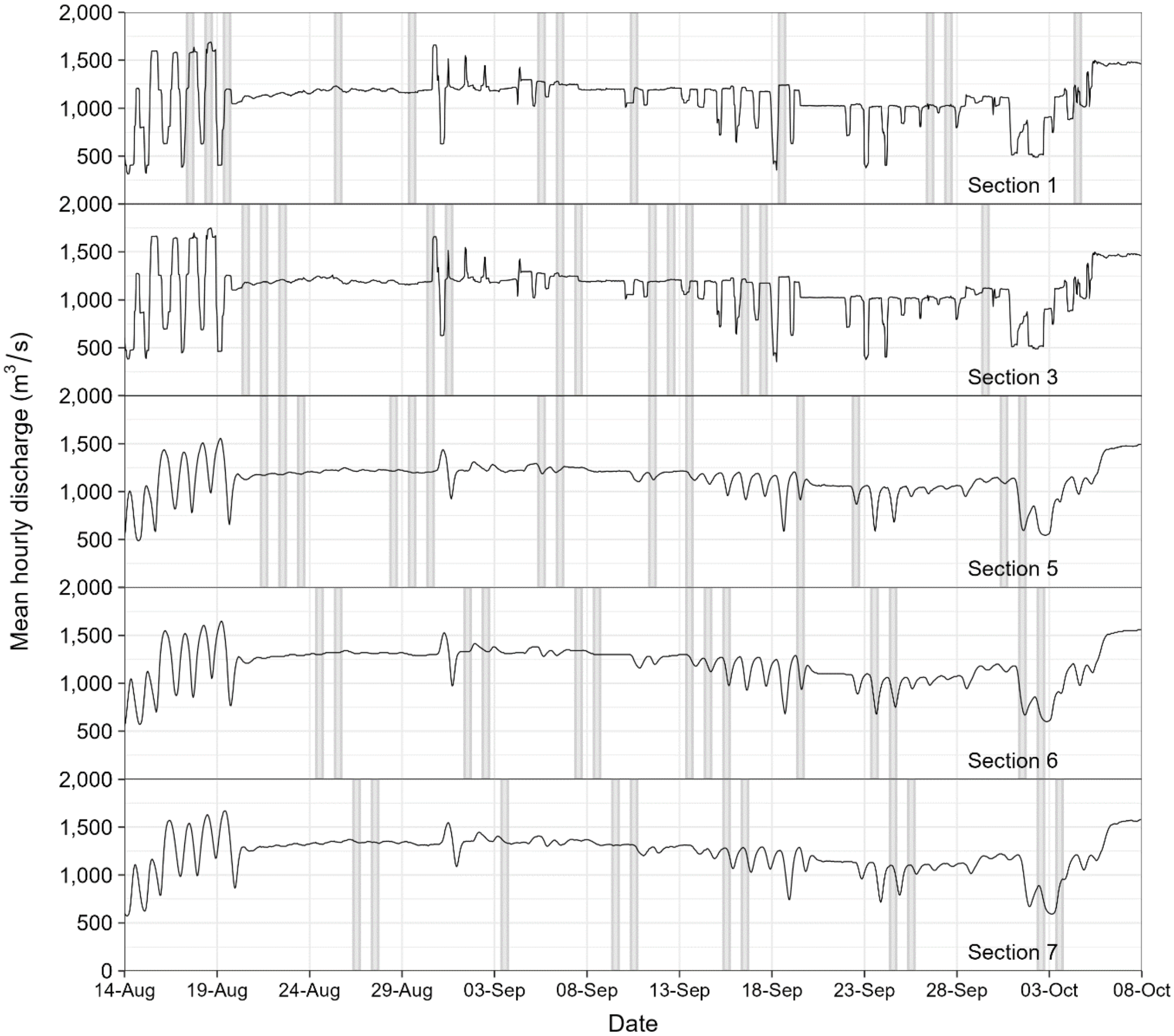


Figure 3: Hourly discharge by river section in the Peace River, 17 August to 5 October 2022. The shaded areas represent the approximate timing of daily sampling (from 9:00 am to 5:00 pm). Section 3 data represent approximate values as detailed in Section 2.1.1. Data for Section 9 are not available for 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 A9. Overall, habitat data recorded during 2022 Indexing Survey did not suggest any substantial changes to fish habitat in any section when compared to earlier study years that could not be attributed to ongoing construction activities associated with the development of the Project.

3.2 General Characteristics of the Fish Community

In 2022, 10,379 fish from 23 different species were captured in the Peace River and select tributary confluences, excluding within-year recaptured fish (Table 9). These values do not include fish that were observed but avoided capture. Catch was greatest in Section 5 (26% of the total catch), followed by Section 6 (20% of the total catch), and was lowest in Section 9 with 7% of the total catch (Table 9).

Group 4 fish were most common and comprised 55% of the total catch, with Longnose Sucker representing 74% of the captured fish in Group 4. Group 2 fish were the second most abundant group and comprised 41% of the total catch, with Mountain Whitefish representing 94% of the captured fish in Group 2. Group 1 fish contributed 3% to the total catch and was dominated by Walleye (64% of the Group 1 catch) and Rainbow Trout (24% of the Group 1 catch). Group 3 fish were infrequently captured, with most of the catch limited to the upstream sections of the study area. Of the 23 species captured, 11 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).

Total catch in 2022 was lower than previous years. In Sections 1, 3, and 5 combined (Appendix E, Table E1), the total catch (3,479 fish) was lower than all previous years since 2002 (range: 4,546–10,699 fish). This was mostly attributed to low catch of Mountain Whitefish in 2022, which are the most commonly captured species in these sections in all years. The catch of sucker species was also lower in 2022 (708 fish) than previous years when sucker species were targeted (range: 963 to 1,777 fish; 2015 to 2021). In Sections 6, 7, and 9 combined (Appendix E, Table E2), total catch (6,906 fish) was within the range of fish captured in previous years back to 2015 (range: 6,681–10,748 fish) when the sampling methods changed, including when sucker species were targeted. However, the catch of Mountain Whitefish (1,627 fish) in Sections 6, 7, and 9 combined was lower than all previous years (range: 2,534–5,018 fish). Catch of sucker species in Sections 6, 7, and 9 was similar in 2022 to previous years since 2015. Although there was variability in the relative abundance of other species (discussed in the following sections), the low catch and differences in percent composition in 2022 relative to previous years (Appendix E, Table E1 and E2) was primarily attributed to Mountain Whitefish and sucker species.

Table 9: Number of fish caught by boat electroshocking and their frequency of occurrence in sampled sections of the Peace River, 17 August to 5 October 2022.

Group[a]	Species	Section												All Sections		
		1		3		5		6		7		9				
		n[b]	%[c]	n[b]	%[c]	n[b]	%[c]	n[b]	%[c]	n[b]	%[c]	n[b]	%[c]	n[b]	%[c]	%[d]
1	Burbot	0	0	0	0	11	20	0	0	0	0	1	3	12	4	<1
	Goldeye	0	0	0	0	0	0	0	0	0	0	1	3	1	<1	<1
	Lake Trout	1	2	0	0	0	0	0	0	0	0	0	0	1	<1	<1
	Northern Pike	0	0	0	0	15	27	7	14	2	2	3	8	27	8	<1
	Rainbow Trout	50	98	27	100	4	7	0	0	0	0	0	0	81	24	1
	Walleye	0	0	0	0	25	45	44	86	114	98	33	87	216	64	2
Group 1 Subtotal		51	100	27	100	55	100	51	100	116	100	38	100	338	100	3
2	Arctic Grayling	1	<1	5	<1	9	1	0	0	1	<1	0	0	16	<1	<1
	Bull Trout	50	4	99	8	34	4	29	6	22	6	9	7	243	6	2
	Mountain Whitefish	1,320	96	1,095	91	745	95	425	94	338	94	119	93	4,042	94	39
Group 2 Subtotal		1,371	100	1,199	100	788	100	454	100	361	100	128	100	4,301	100	41
3	Kokanee	16	100	1	100	0	0	2	100	0	0	1	100	20	100	<1
Group 3 Subtotal		16	100	1	100	0	0	2	100	0	0	1	100	20	100	<1
4	Flathead Chub	0	0	0	0	0	0	0	0	0	0	3	1	3	<1	<1
	Lake Chub	0	0	6	1	0	0	9	1	18	2	27	5	60	1	1
	Largescale Sucker	38	21	259	41	186	10	206	13	106	11	21	4	816	14	8
	Longnose Dace	1	1	3	<1	9	<1	6	<1	25	3	14	3	58	1	1
	Longnose Sucker	92	51	310	49	1,414	77	1,236	80	769	78	395	73	4,216	74	41
	Northern Pikeminnow	5	3	38	6	44	2	22	1	27	3	13	2	149	3	1
	Peamouth	0	0	0	0	1	<1	0	0	0	0	0	0	1	<1	<1
	Prickly Sculpin	8	4	3	<1	2	<1	0	0	0	0	0	0	13	<1	<1
	Redside Shiner	1	1	7	1	59	3	16	1	18	2	8	1	109	2	1
	Slimy Sculpin	27	15	6	1	10	1	3	<1	8	1	4	1	58	1	1
	Spottail Shiner	0	0	0	0	5	<1	14	1	5	1	13	2	37	1	<1
	Trout-perch	0	0	0	0	0	0	1	<1	0	0	13	2	14	<1	<1
	White Sucker	7	4	2	<1	107	6	32	2	11	1	27	5	186	3	2
Group 4 Subtotal		179	100	634	100	1,837	100	1,545	100	987	100	538	100	5,720	100	55
All species		1,617	16	1,861	18	2,680	26	2,052	20	1,464	14	705	7	10,379	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

In 2022, 16 Arctic Grayling were captured (excluding within-year recaptures) during the Indexing Survey (Table 9). Fork lengths of Arctic Grayling ranged between 162 and 368 mm and weights ranged between 59 and 657 g. Thirteen Arctic Grayling were assigned ages using scale samples and inter-year recapture data. Ages ranged between age-1 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, 17 August to 5 October 2022.

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	–	–	–	–	–	–	–	–	–
1	184 ± 32	162 – 207	2	84 ± 35	59 – 108	2	1.30 ± 0.12	1.22 – 1.39	2
2	252 ± 21	218 – 293	9	190 ± 64	100 – 319	9	1.14 ± 0.11	0.97 – 1.32	9
3	–	–	–	–	–	–	–	–	–
4	–	–	–	–	–	–	–	–	–
5	354 ± 21	339 – 368	2	548 ± 155	438 – 657	2	1.22 ± 0.14	1.12 – 1.32	2

[a] Number of individuals sampled.

The Arctic Grayling age classes (Table 10) and length-frequencies (Figure 4) indicate that primarily juveniles (age-1 to age-2) were present in the study area in 2022. Young-of-Year (YOY; age-0) Arctic Grayling were not captured during the present study period and adult (age-4+) captures were low (n = 2). Historical length-frequency data (Appendix F, Figure F1 and F2) showed a variety of length groupings during most study years.

Arctic Grayling were captured in Sections 1, 3, 5, and 7, with the majority (56%) occurring in Section 5 (Figure 5). In 2022, in all sections combined, the most abundant age-class was age-2 which corresponds to a large percentage of age-1 fish captured in 2021 (Golder 2022a). These findings suggest that 2020 was a year with strong recruitment (Appendix F, Figure F3 and F4).

Length-at-age and von Bertalanffy growth curves in 2022 showed that mean length-at-age and growth of Arctic Grayling were slightly lower than most 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 2022, the mean length-at-age of age-1 and age-2 Arctic Grayling was lower than the historic mean.

In 2022, the exponent of length-weight regressions (b) for Arctic Grayling captured in Section 3 (b = 3.01) was greater than in Section 5 (b = 2.55, Figure 9), suggesting that Arctic Grayling in Section 5 were skinnier than those captured in Section 3. The exponent of length-weight regressions (b) was greater than 3.0 in most years (Appendix F, Figure F5), indicating slightly positive allometric growth (i.e., fish become more rotund as they increase in length).

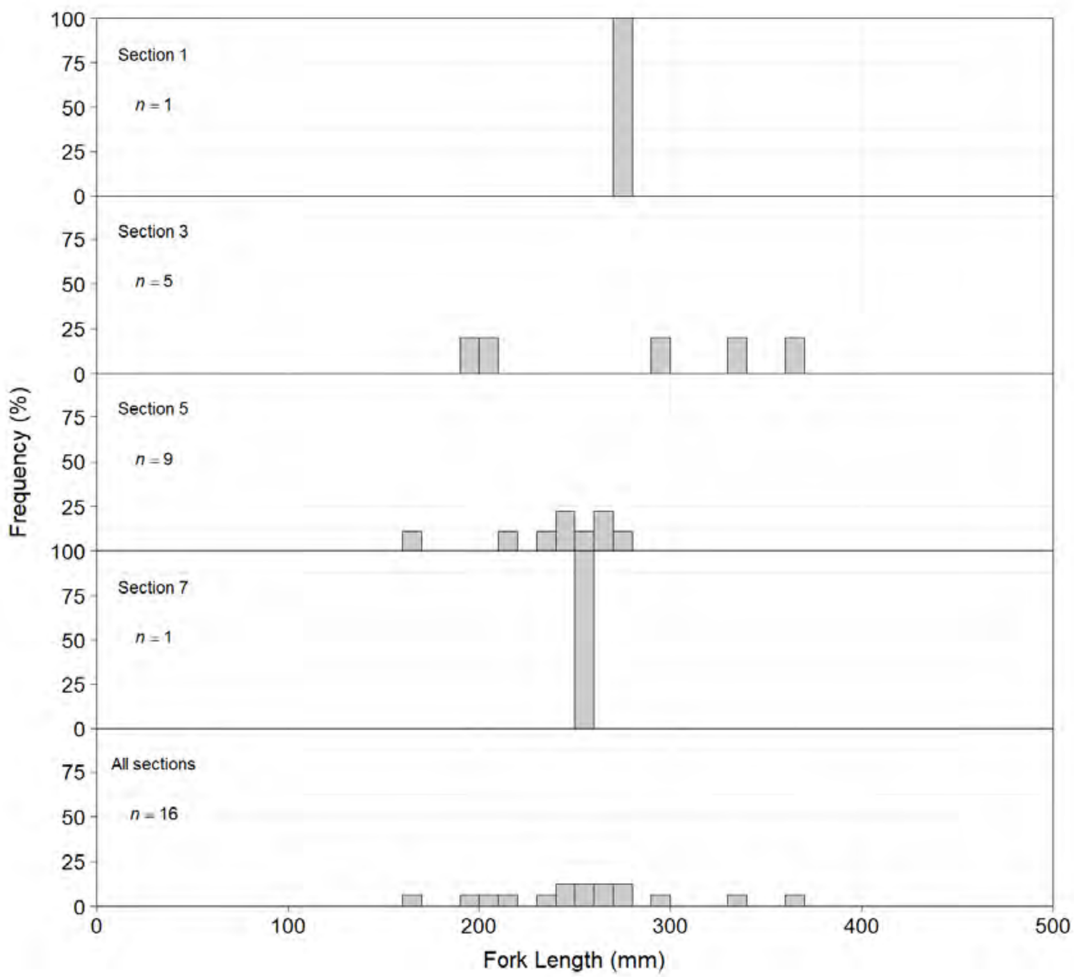


Figure 4: Length-frequency distribution for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

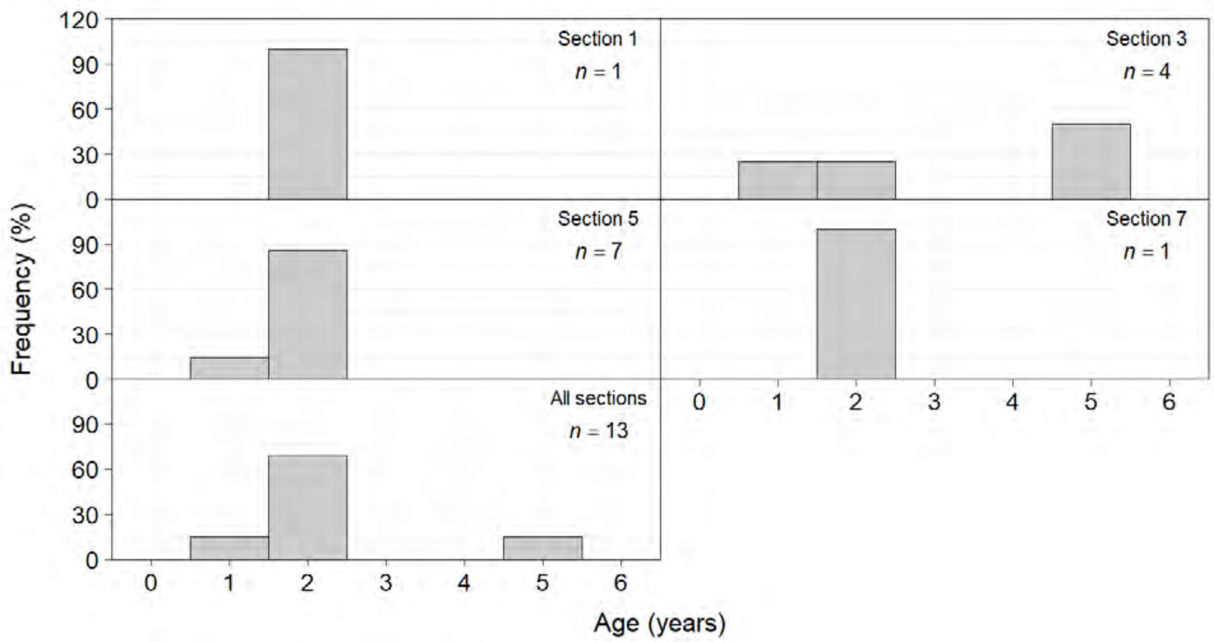


Figure 5: Age-frequency distributions for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

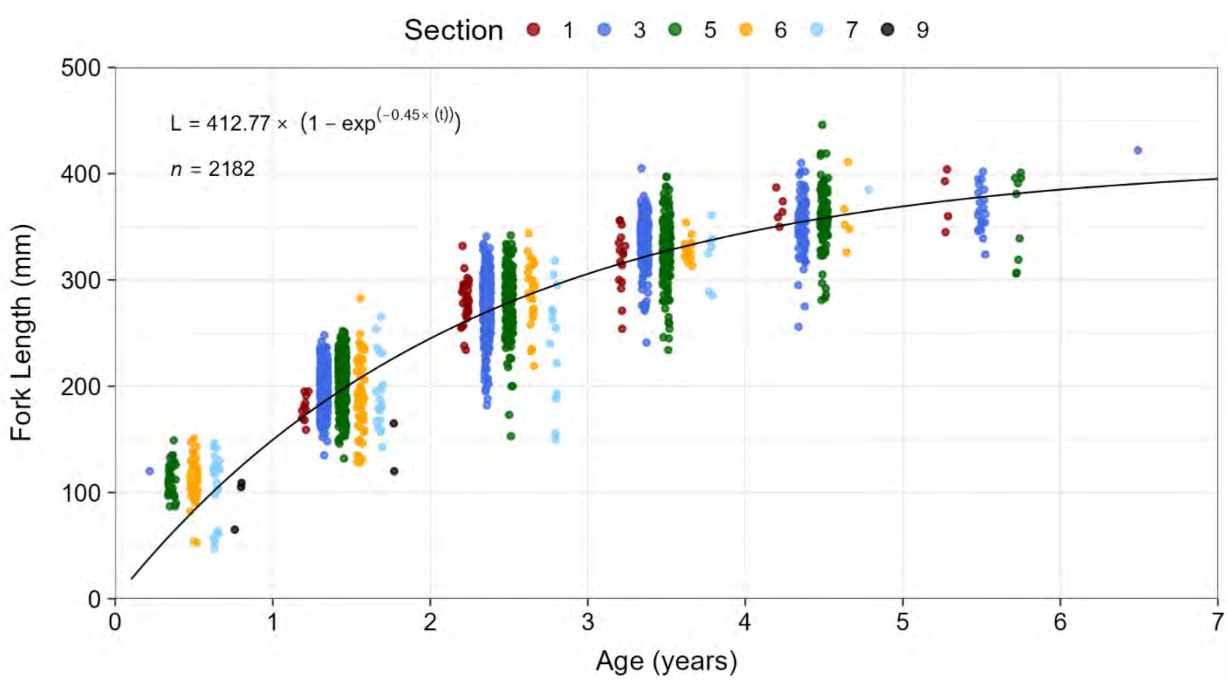


Figure 6: Length-at-age data for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. Data points from each section are offset to prevent overlap.

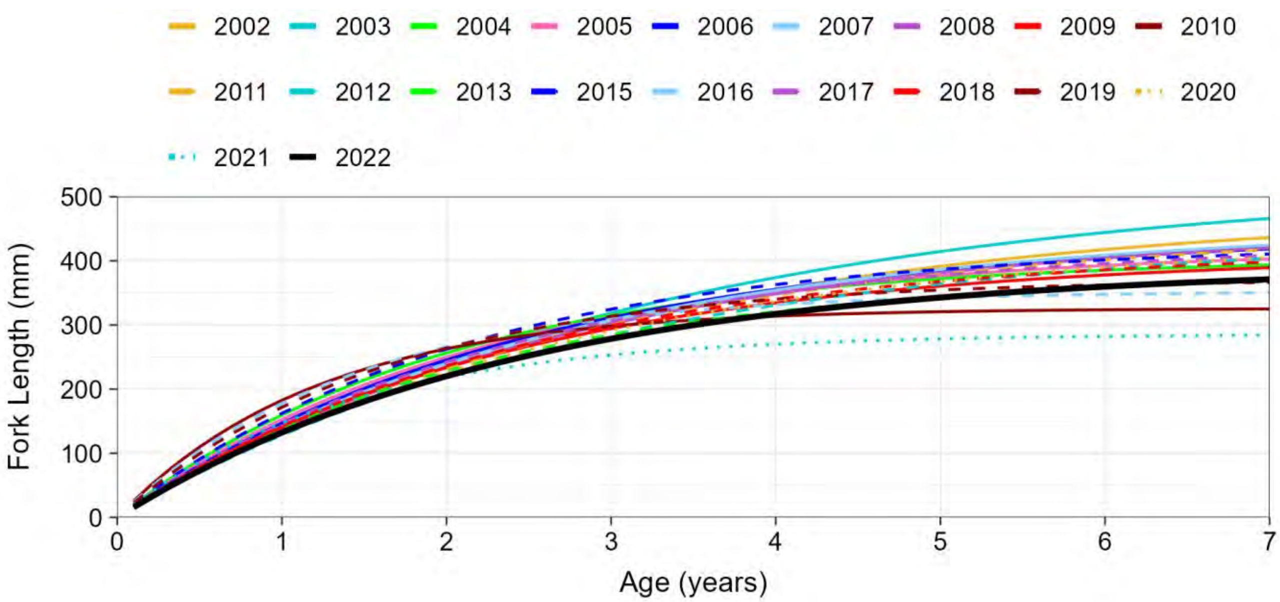


Figure 7: von Bertalanffy growth curves for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022.

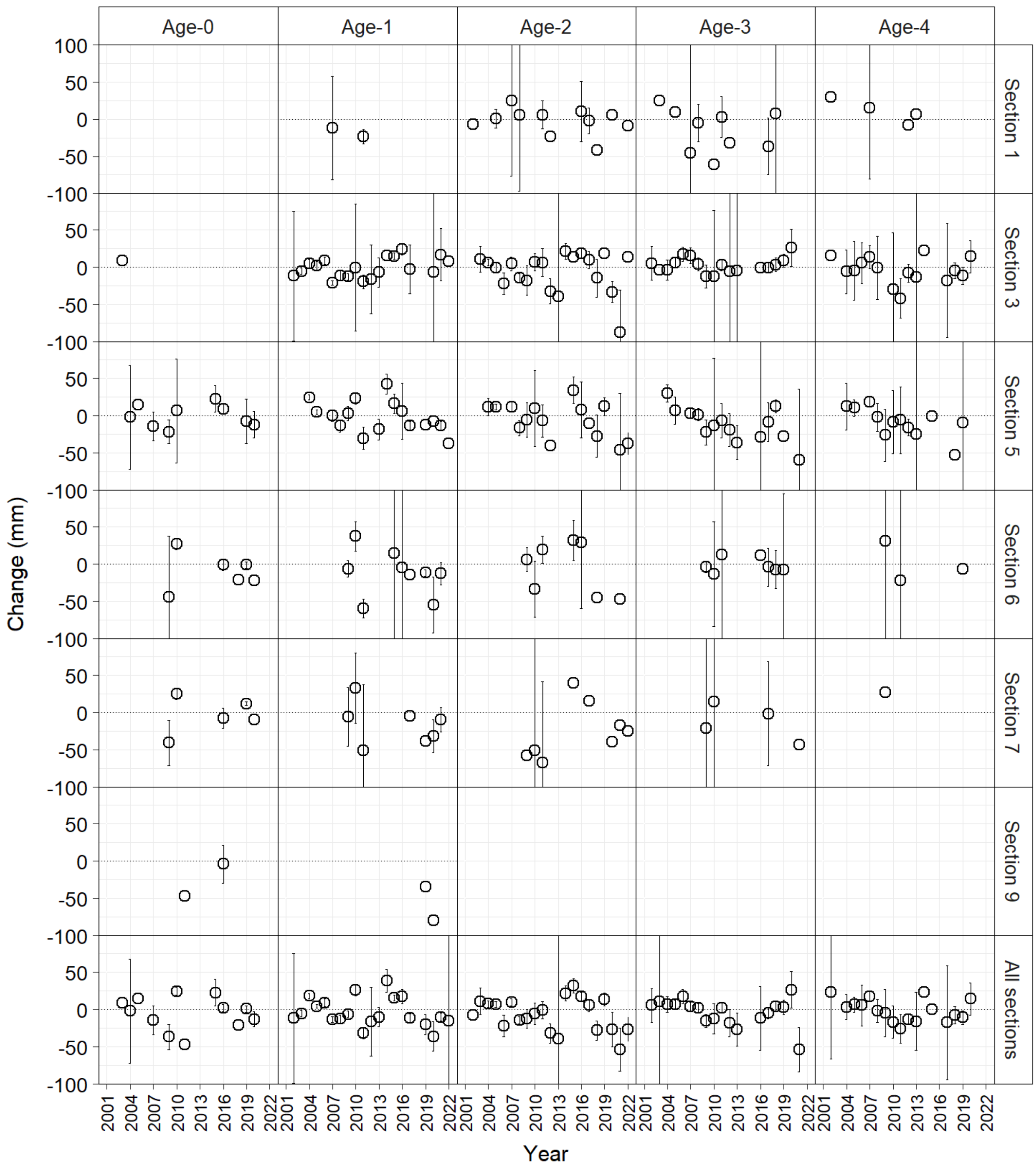


Figure 8: Change in mean length-at-age for Arctic Grayling captured by boat electroshocking in the Peace River, 2002 to 2022. Change is defined as the difference between the annual estimate and the estimate of all years combined. Error bars represent 95% confidence intervals. For Sections 6, 7, and 9, 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, 2011a, 2013).

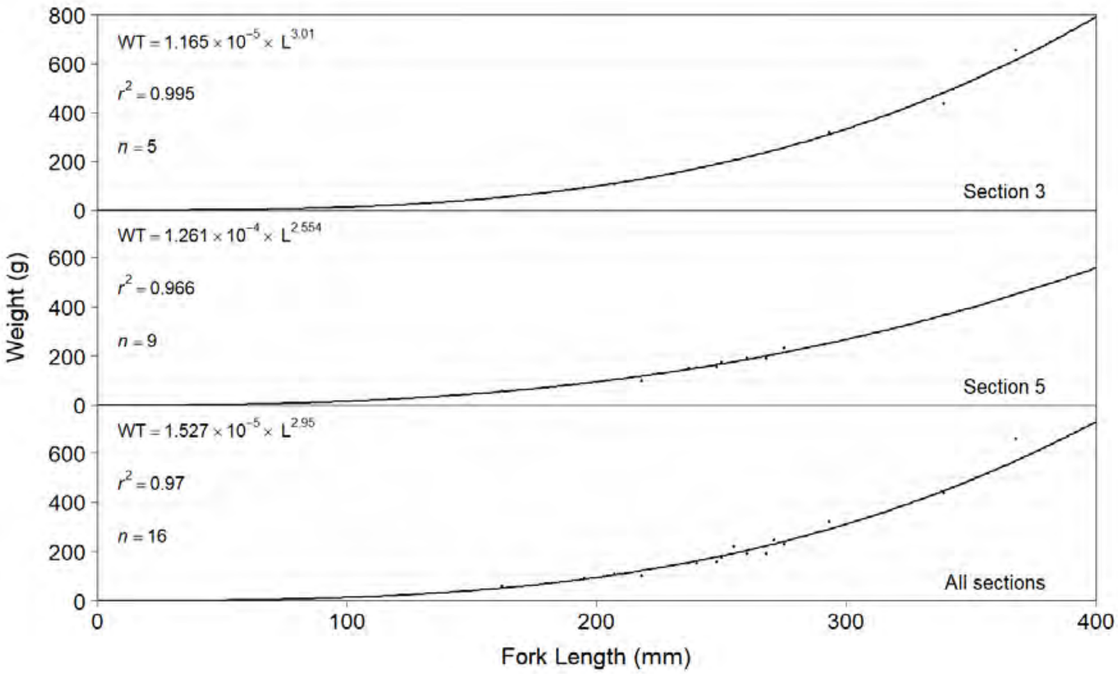


Figure 9: Length-weight regressions for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

The body condition (*K*) of Arctic Grayling captured in 2022 ranged from 0.97 to 1.39 (Table 10). Among individual sections there were no sustained, long-term trends in the body condition of Arctic Grayling between 2002 and 2022 (Figure 10). The mean values of Fulton's condition factor (*K*) and relative weight for all sections combined were generally lower from 2019 to 2022 compared to previous years (Figure 10). Between 2002 and 2018, the average relative weight (all sections combined) was 103%, and between 2019 and 2022 the average relative weight (all sections combined) was 95%, indicating that Arctic Grayling were, on average, more slender over the last four years compared to previous years.

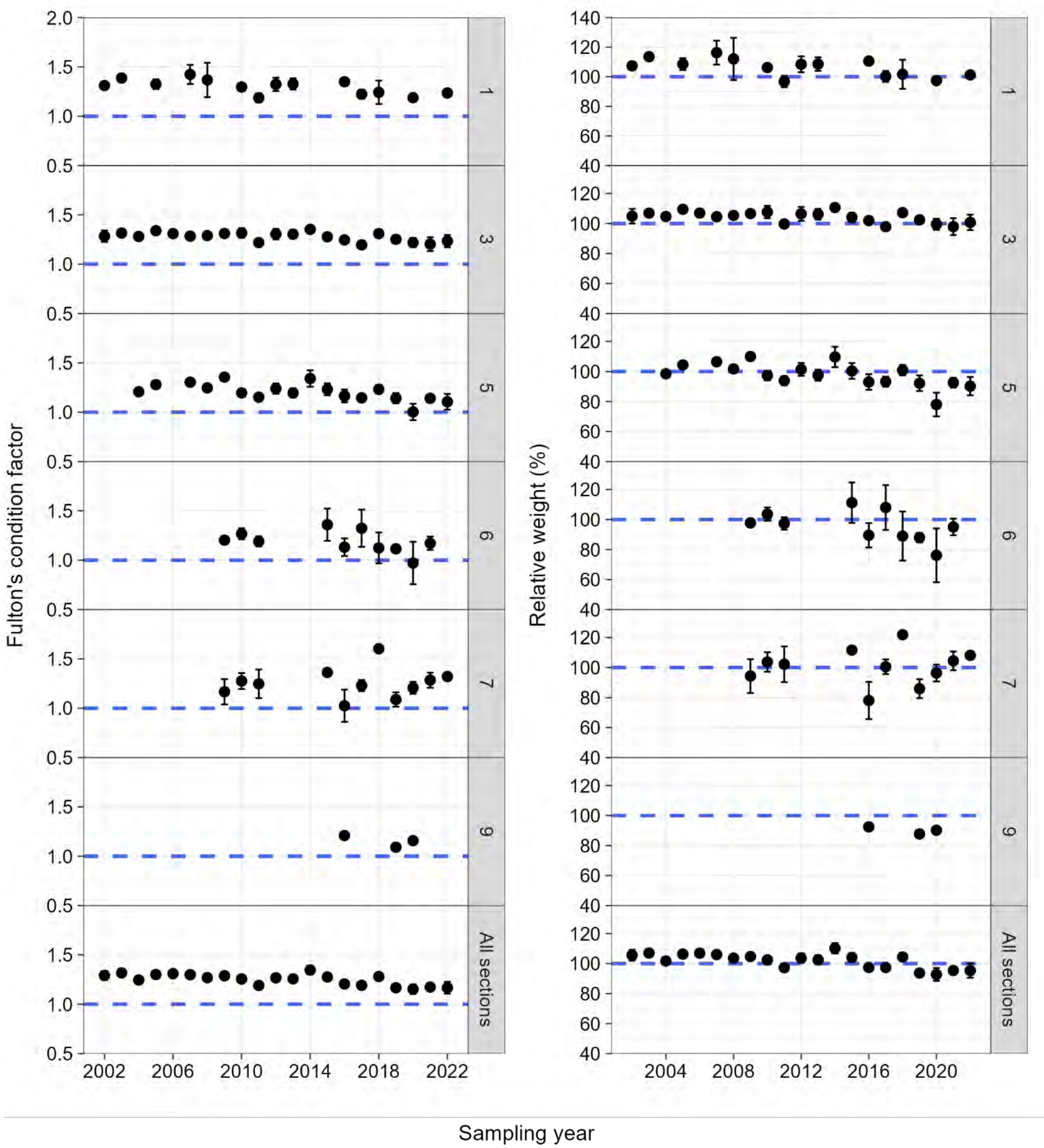


Figure 10: Mean Fulton's body condition factor (*K*) with 95% confidence intervals (CIs) (left pane) and mean relative weight (%) with 95% confidence intervals (right pane) for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. For Sections 6 and 7, 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, 2011a, 2013).

3.3.2 Catch Rate

Arctic Grayling were frequently recorded in Sections 3 and 5 between 2002 and 2022, and were sporadically recorded in Section 1 during this same time period. Sections 6, 7, and 9 were not consistently sampled prior to 2015 (Figure 11).

Arctic Grayling catch rates in Section 1 have been generally low, with annual catch-per-unit-effort (CPUE) values less than 2 fish/km-h during all years. Arctic Grayling catch rates have been highest in Sections 3 and 5. In Section 3, Arctic Grayling CPUE was generally higher from 2002 to 2011 (mean = 3.2 fish/km-h) compared to 2012 to 2022 (mean = 0.9 fish/km-h). In 2022, the catch rate for Arctic Grayling in Section 3 was 0.2 fish/km-h, representing the second lowest catch rate recorded in this section. A similar pattern in Arctic Grayling catch rate was observed in Section 5. The highest Arctic Grayling catch rate in Section 5 was in 2007, where CPUE was 17.1 fish/km-h. Catch rate in Section 5 was generally higher between 2004 and 2013 (mean = 7.5 fish/km-h) compared to 2014 to 2022 (mean = 1.4 fish/km-h). In 2022, the catch rate for Arctic Grayling in Section 5 was 0.7 fish/km-h. The catch rate of Arctic Grayling in Sections 6, 7, and 9 has been consistently low compared to catch rates in the upstream sections.

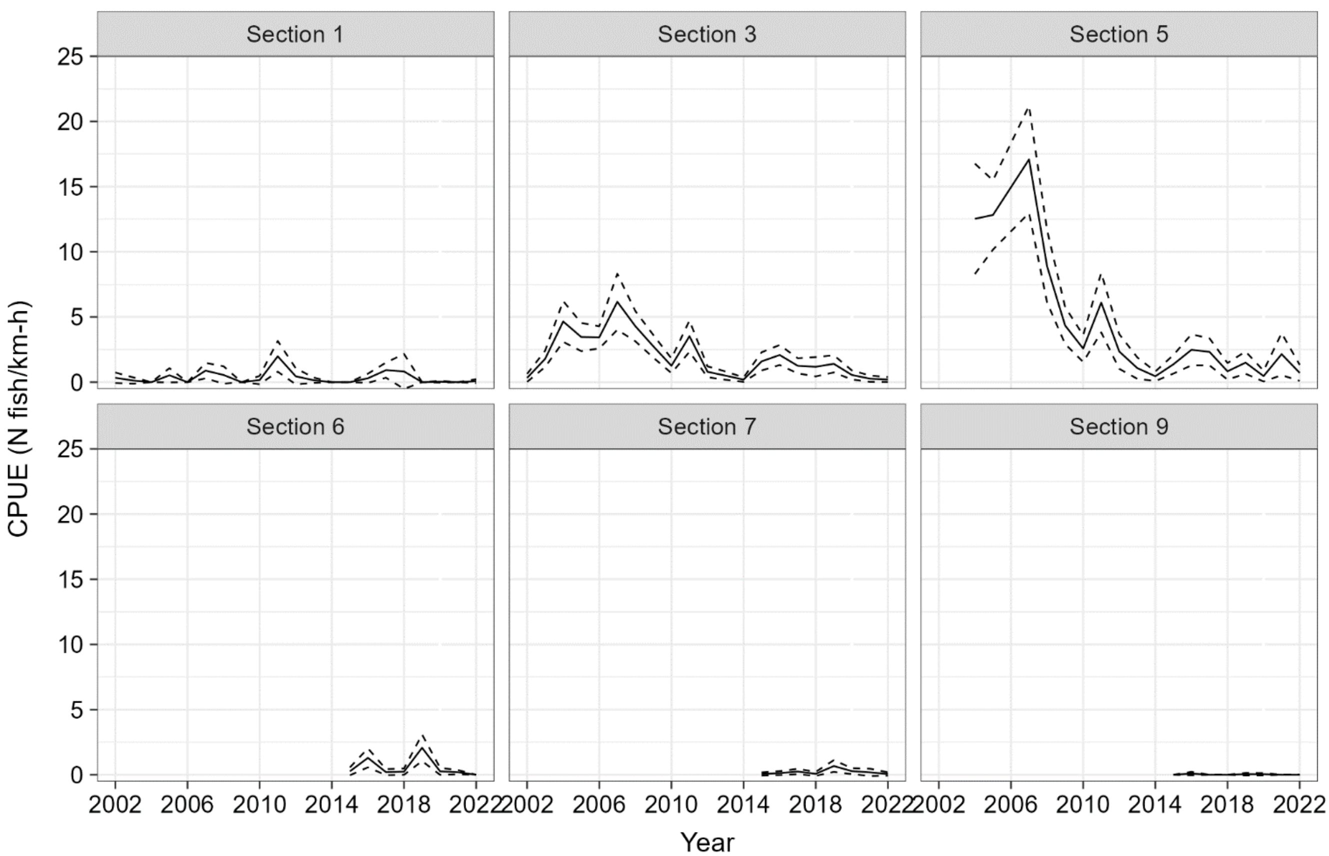


Figure 11: Mean annual catch rates (CPUE) for Arctic Grayling captured by boat electroshocking in Sections 1, 3, 5, 6, 7, and 9 of the Peace River, 2002 to 2022. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. Sections 6, 7, and 9 were not sampled prior to 2015.

3.4 Bull Trout

3.4.1 Biological Characteristics

During the 2022 survey, 243 Bull Trout were captured (i.e., excluding within-year recaptures; Table 9). Bull Trout were most abundant in Section 3 (99 individuals) and were similarly abundant in Sections 1, 5, 6, and 7 (range = 22 to 50 individuals). Consistent with previous years, Bull Trout were least abundant in Section 9 (9 individuals). Fork lengths ranged between 164 and 894 mm, and weights ranged between 38 and 6719 g.

Length-frequency histograms suggest similar size distributions in all sections (Figure 12). More than half of the Bull Trout captured (68%) were between 200 and 400 mm FL (i.e., subadults between age-4 and age-5), 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 (i.e., adults older than approximately age-6) represented 15% of the Bull Trout catch in 2022, 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 potentially less abundant than during other seasons 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; WSP 2023b).

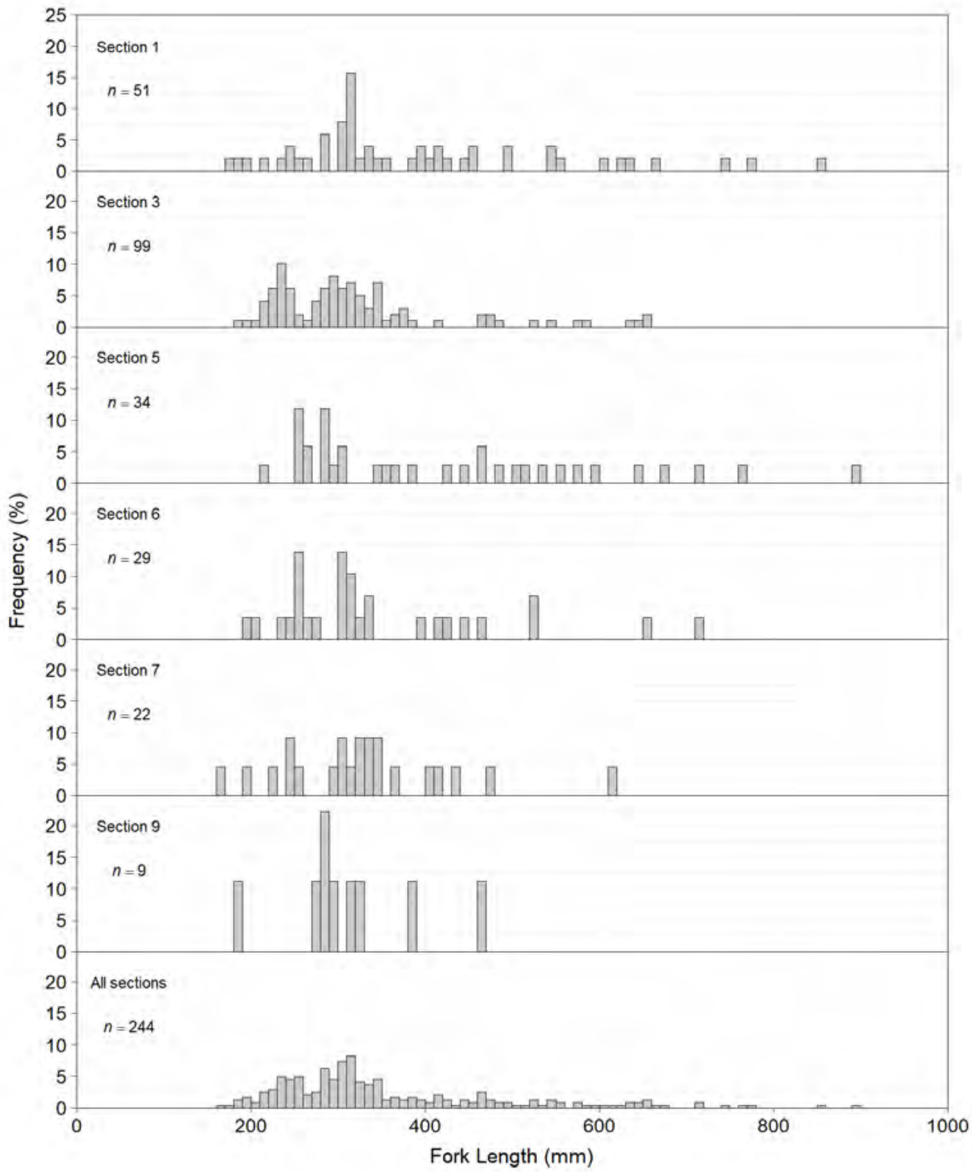


Figure 12: Length-frequency distributions for Bull Trout captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

Ages were not assigned to Bull Trout using analysis of fin rays because of inconsistencies in annuli production that were observed during previous years. In 2022, the dataset for age-related analyses for Bull Trout included individuals classified as age-3 based on their fork length (less than 240 mm). These data were supplemented with length-at-age data collected between 2017 and 2022 as part of the Tributary Survey (Golder 2018–2020, 2021b, 2022b, WSP 2023b), data collected during Site C baseline studies (Mainstream 2010, 2011a, 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 2022, and age-3 and older individuals captured in the Peace River between 2002 and 2022, resulting in a combined dataset of 4,301 ages.

Length-at-age data indicate a change in Bull Trout growth rate at age-3, which is when Bull Trout migrate to the Peace River after rearing in select tributaries (Figure 13). Based on length-frequency data, age-0 Bull Trout in the Chowade River and Cypress and Fiddes creeks are approximately 40 to 50 mm FL by late July (WSP 2023b). 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* = 7), but the limited data suggest an increase in growth rate to approximately 100 mm per year in the Peace River mainstem (Figure 13).

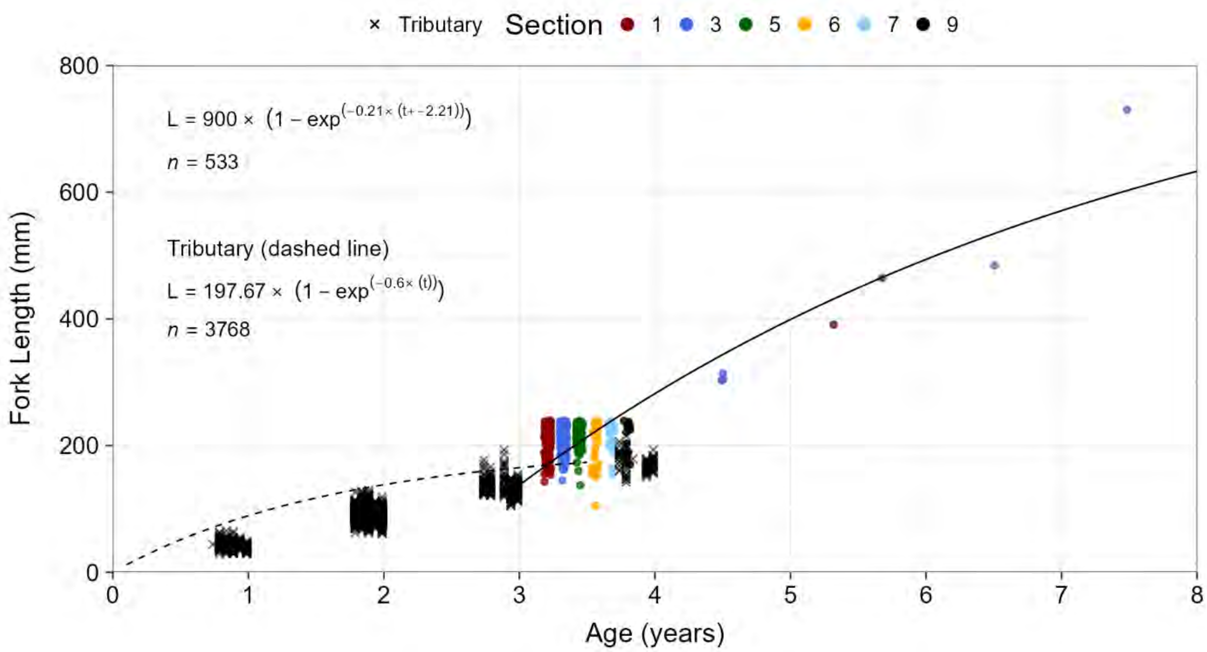


Figure 13: von Bertalanffy growth curve for Bull Trout captured in the Peace River watershed between 2002 and 2022. Figure includes data from the current Indexing Survey and data collected during the Site C Reservoir Tributaries Fish Population Indexing Survey (Golder 2018–2020, 2021b, 2022b, WSP 2023b) and Site C baseline studies (Mainstream 2010, 2011a, 2013). Data were plotted using the "jitter" function in R to prevent multiple years of data from overlapping on the plot.

In 2022, length-weight regressions were similar among sections, with typical values of the exponent (*b*) near 3.0, suggesting isometric growth (i.e., no change in body shape with increase in length) (Figure 14). There has been little variation in Bull Trout length-weight regressions among historical study years suggesting similar patterns of growth from year to year within the Peace River Bull Trout population (Appendix F, Figure F9).

In all sections combined, body condition (*K*) and relative weight were generally lower from 2016 to 2022 when compared to earlier study 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 9 in 2022 compared to previous years.

During most study years, body condition estimates were greater for Section 1 (range = 1.02 to 1.13) than for other sections (range = 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%.

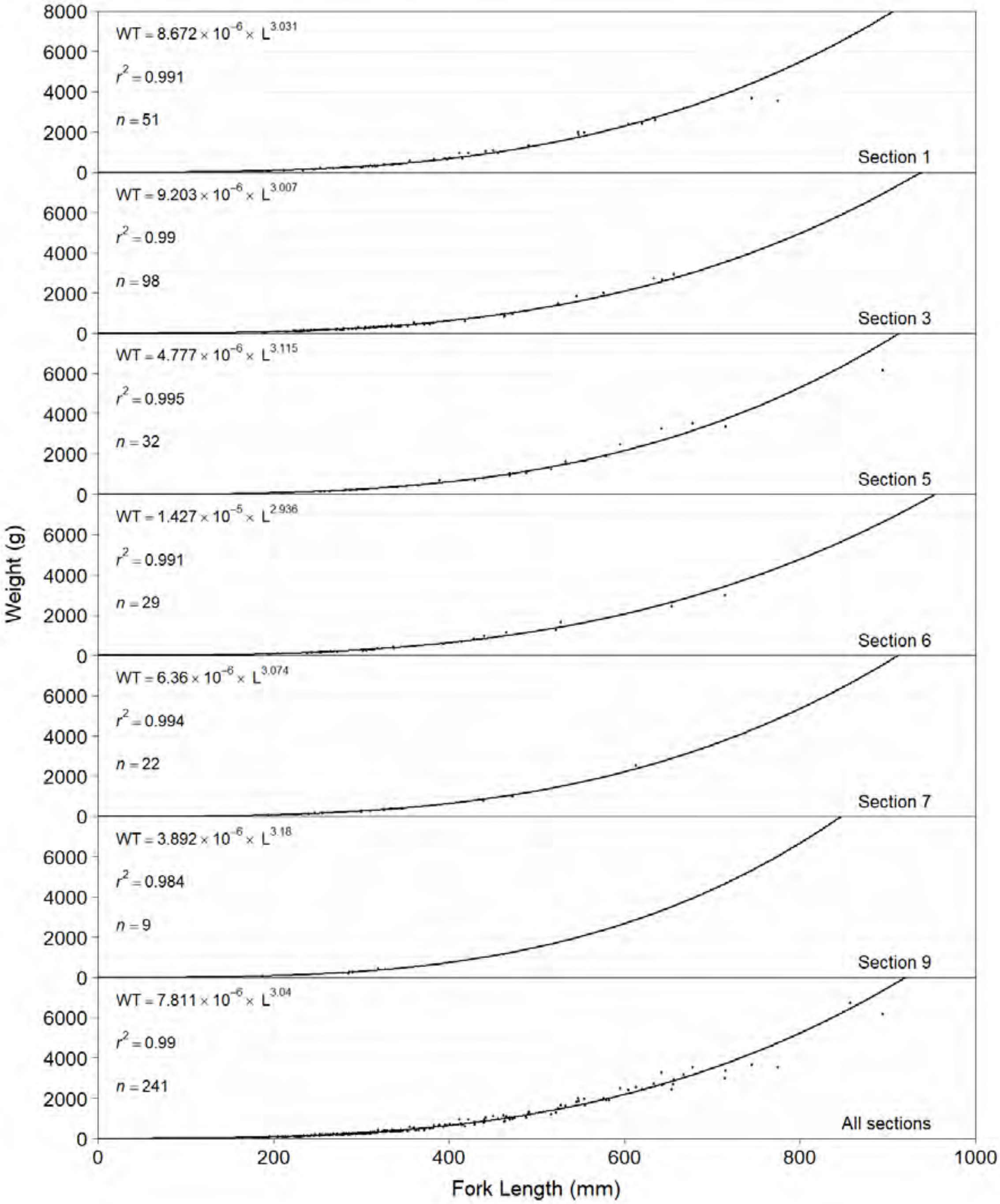


Figure 14: Length-weight regressions for Bull Trout captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

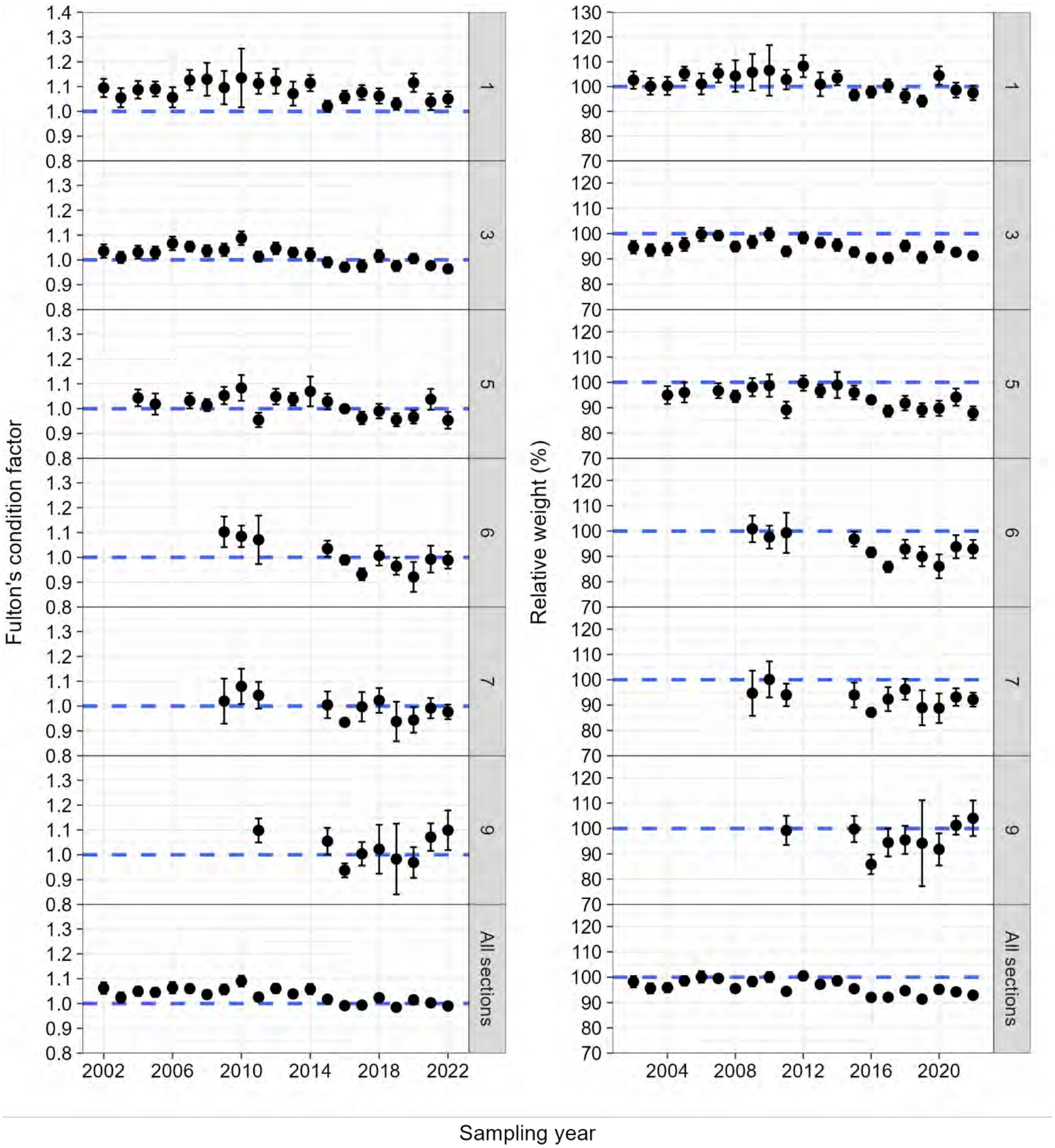


Figure 15: Mean Fulton's body condition factor (*K*) with 95% confidence intervals (left pane) and mean relative weight (%) with 95% CI values (right pane) for Bull Trout captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. For Sections 6, 7, and 9, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011a, 2013).

3.4.2 Catch Rate

Bull Trout catch rates have varied over time among sections (Figure 16). In Section 1, Bull Trout catch rates were higher from 2014 to 2022 (mean = 5.5 fish/km-h) compared to 2002 to 2013 (mean = 3.2 fish/km-h), indicating an increase in Bull Trout abundance in Section 1 in recent years. In 2022, CPUE for Bull Trout in Section 1 was 4.7 fish/km-h and showed little variation over the past three years. Bull Trout catch rates in Section 3 and Section 5 have been variable throughout the study period. Over all years combined, CPUE for Bull Trout was 3.9 fish/km-h (range = 2.3 to 7.0 fish/km-h) in Section 3 and 3.6 fish/km-h (range = 1.8 to 6.5 fish/km-h) in Section 5. In 2022, CPUE was 4.3 fish/km-h in Section 3 and 3.0 fish/km-h in Section 5.

In Sections 6, 7, and 9, Bull Trout catch rates were low compared to upstream sections. In Section 6, Bull Trout catch rates declined from a high of 3.2 fish/km-h in 2016 to a low of 0.8 fish/km-h in 2020, suggesting a decline in Bull Trout abundance within Section 6 over this time period. CPUE for Bull Trout in Section 6 was 1.6 fish/km-h in 2022. Catch rates were similar among years in Section 7 and 9. Between 2015 and 2022 the mean catch rate in Section 7 was 1.1 fish/km-h and in Section 9 the mean catch rate was 0.6 fish/km-h. The low catch rates in these sections suggest low abundance of Bull Trout within these sections.

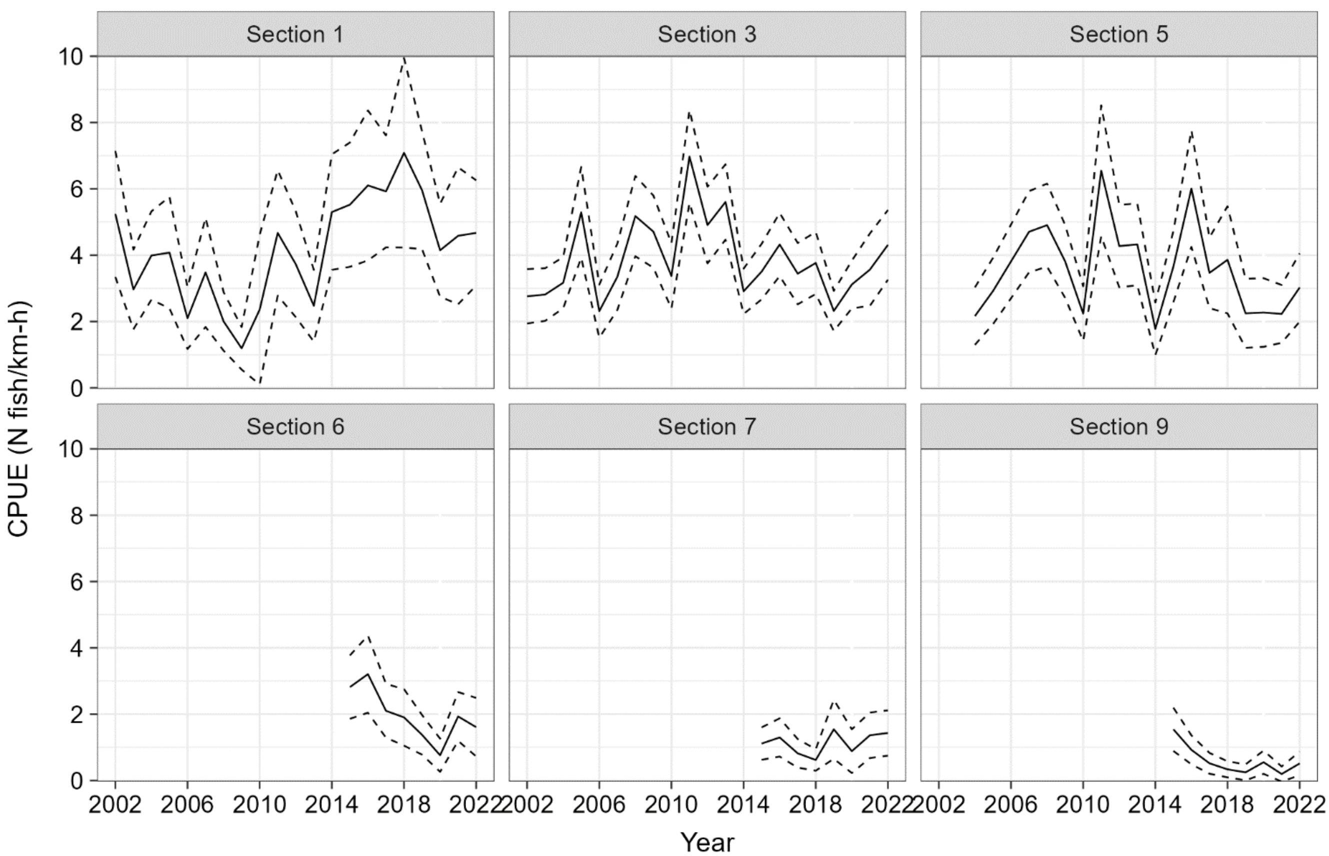


Figure 16: Mean annual catch rates (CPUE) for Bull Trout captured by boat electroshocking in Sections 1, 3, 5, 6, 7, and 9 of the Peace River, 2002 to 2022. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. Sections 6, 7, and 9 were not sampled prior to 2015.

3.5 Burbot

3.5.1 Biological Characteristics

In 2022, 12 Burbot were captured (i.e., excluding within-year recaptures; Table 9), and an additional 6 Burbot were observed but avoided capture. Total lengths of Burbot ranged between 256 and 357 mm (Figure 17) and weights ranged between 80 and 268 g. Ageing structures were not collected from Burbot.

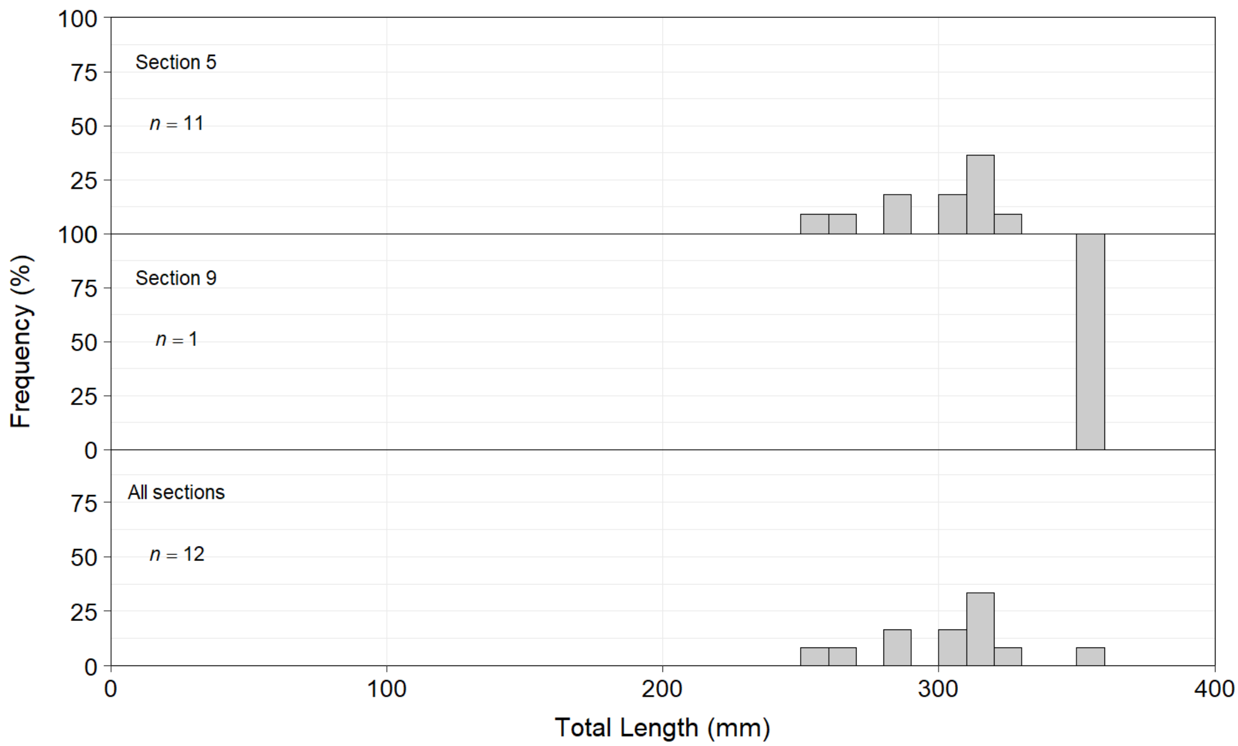


Figure 17: Length-frequency distributions for Burbot captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

All but one Burbot was captured in Section 5, indicating a higher abundance within this section compared to other sections of the Peace River. All Burbot captured in 2022 were greater than 200 mm TL (Figure 17). Since 2002, only 5% of all Burbot captured were less than 200 mm TL. This finding, 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); therefore, greater Burbot catch 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

Total catch of Burbot is low compared to most other species. The catch rate of Burbot was highest in 2019 (0.7 fish/km-h) and has generally declined since then (Figure 18). No change in catch rate was observed between 2020 and 2021 (0.2 fish/km-h), but in 2022, catch rate for Burbot declined to 0.1 fish/km-h). Burbot were not consistently targeted prior to 2015; therefore, the 2002 to 2014 study years were excluded from the analysis.

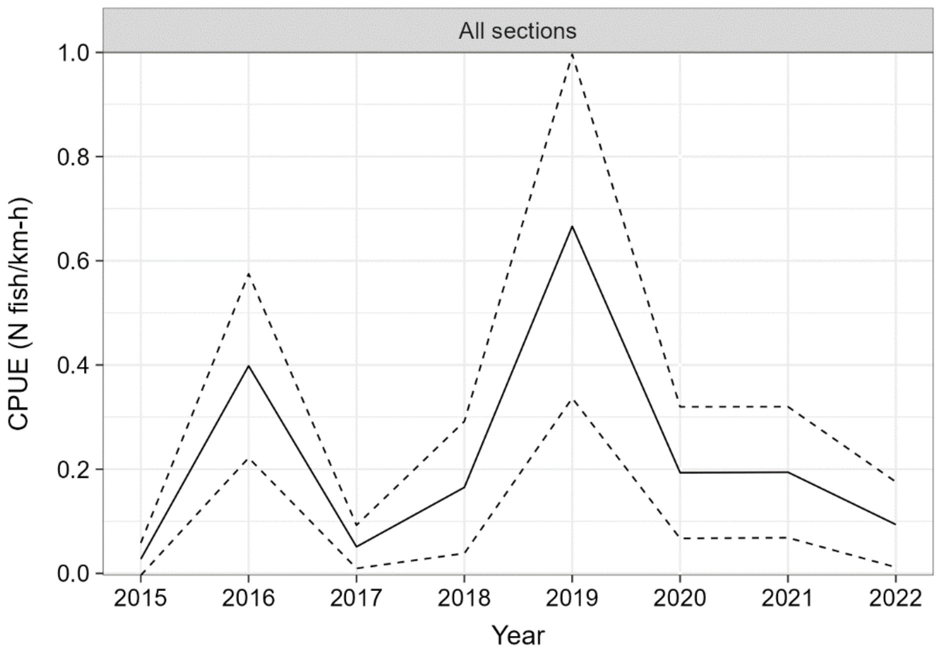


Figure 18: Mean annual catch rates (CPUE) for Burbot captured by boat electroshocking in all sections of the Peace River combined, 2015 to 2022. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because Burbot were not actively targeted during these study years.

3.6 Goldeye

3.6.1 Biological Characteristics

One Goldeye was captured and two others were observed but avoided capture during the 2022 Indexing Survey. The single captured Goldeye had a fork length of 382 mm, a weight of 601 g, and a body condition (*K*) of 1.08, indicating good health. Scale samples were collected from this individual; however, an age could not be determined due to a lack of a consensus age between the agers (i.e., all three agers identified a different age for the same scale sample). A fin ray sample was also collected from this individual and it has been stored for potential microchemical analysis. Length-frequency histograms and body condition summaries are not presented.

All Goldeye captured or observed during the 2022 Indexing Survey were in Section 9. During the 21-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) and during Offset Effectiveness Monitoring (West et al. 2021).

In addition to the Goldeye identified during the 2022 Indexing Survey, six Goldeye were captured during the spring Goldeye and Walleye Survey in 2022 (see Section 3.14).

3.6.2 Catch Rate

Goldeye were first encountered during the Indexing Survey in 2015, when consistent sampling in Sections 6, 7, and 9 began. Between 2015 and 2018, Goldeye catch rates were low (less than 0.1 fish/km-h; Figure 19). Higher catch rates were observed between 2019 and 2021 (range: 0.08 to 0.12 fish/km-h). Catch rate for Goldeye declined to near zero in 2022.

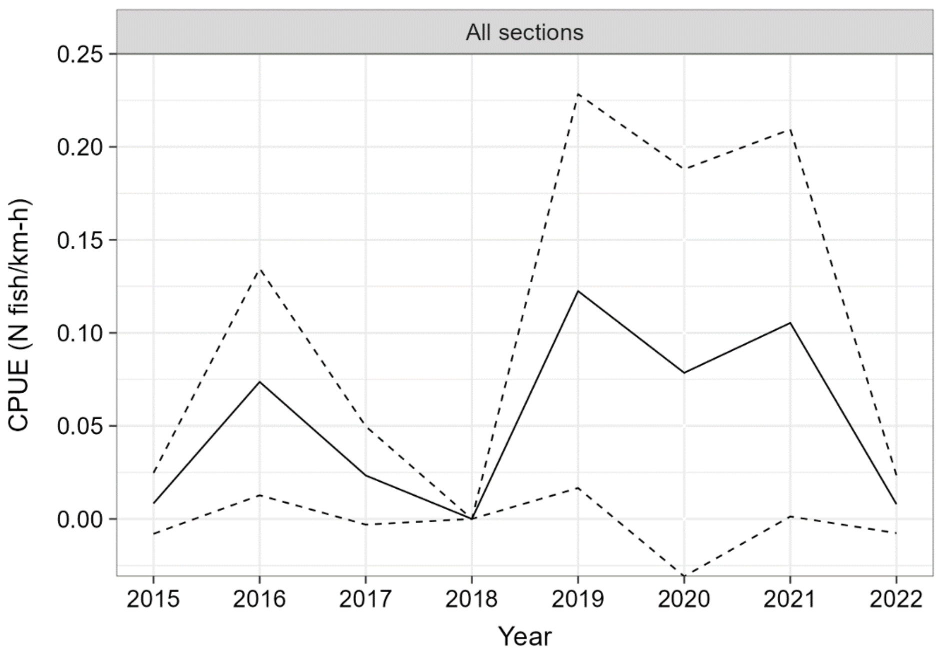


Figure 19: Mean annual catch rates (CPUE) for Goldeye captured by boat electroshocking in all sections of the Peace River combined, 2015 to 2022. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from 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 2022 survey, 816 Largescale Sucker were captured (i.e., excluding within-year recaptures; Table 9). Of these, 716 were measured for length and weight. Fork lengths ranged between 69 and 610 mm, and weights ranged between 28 and 2604 g.

Length-frequency histograms for Largescale Sucker suggest differences in length distribution among sections (Figure 20). Largescale Sucker smaller than 300 mm FL were most abundant in Section 3 and Section 9. In Sections 1, 5, 6, and 7, most Largescale Sucker captured were greater than 400 mm, suggesting these sections are more commonly used by adults. These results are consistent with study results from 2015 to 2021 (Golder and Gazey 2016–2020, Golder 2021a and 2022a).

In 2022, mean body condition (*K*) was low in Section 3, 5 and 6, yet remained comparable to values observed from 2016 to 2021 (Figure 21). Since 2016, mean body condition has been lower than the long-term average in Section 3, 5, 6, and 7, indicating lower fish health over this period compared to previous years. Long-term trends in Largescale Sucker body condition were less apparent in Section 1 and 9. Relative weights were not calculated for Largescale Sucker.

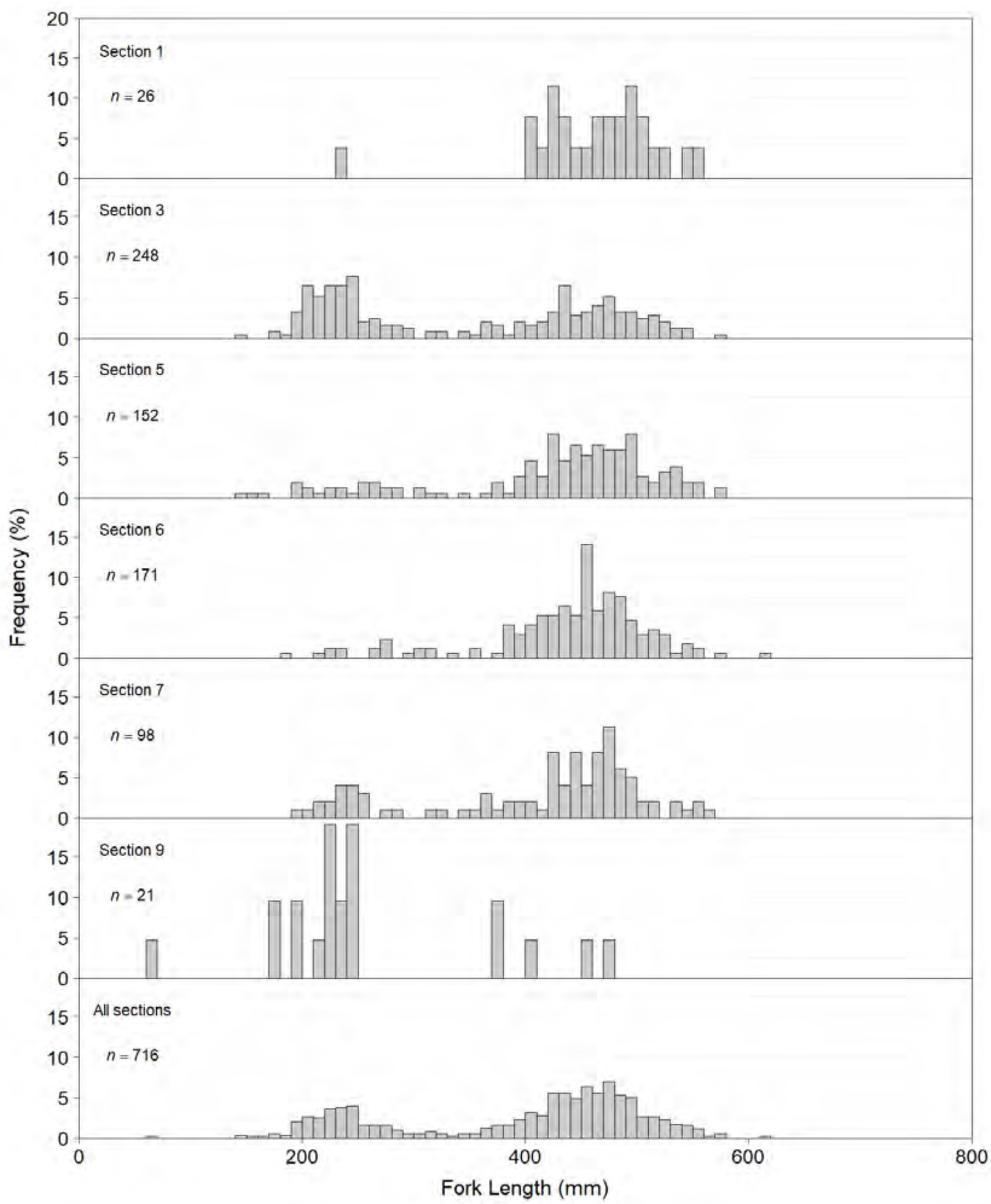


Figure 20: Length-frequency distributions for Largescale Sucker captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

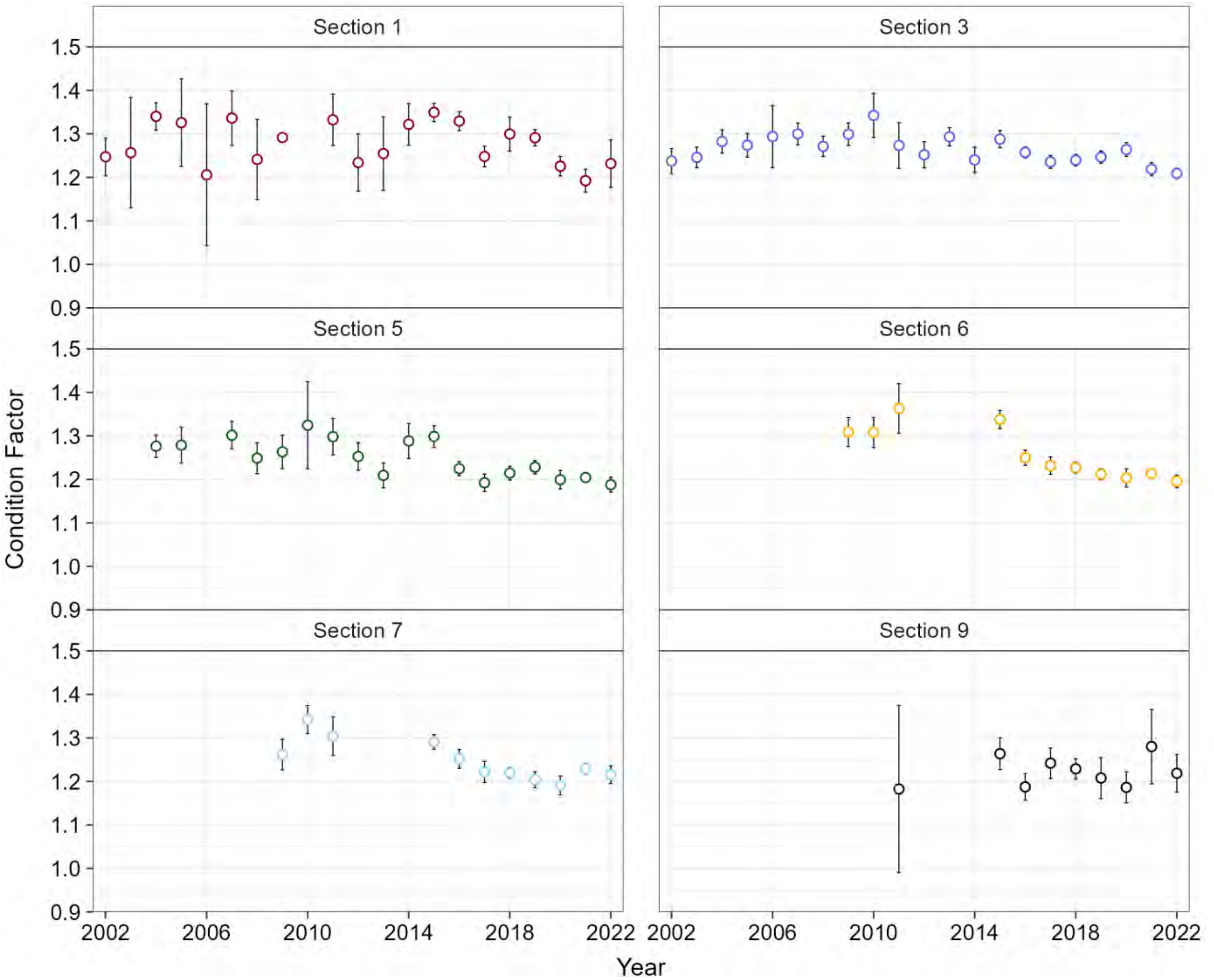


Figure 21: Mean Fulton's body condition factor (*K*) with 95% confidence intervals for Largescale Sucker captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. For Sections 6, 7, and 9, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011a, 2013).

In 2022, the length-weight regression exponent for Largescale Sucker was near 3.0 for most sections, suggesting isometric growth (i.e., no change in body shape with increase in length) (Figure 22). The length-weight regression exponent was highest in Section 1 (*b* = 3.2), indicating Largescale Sucker within this section were generally fatter than those captured in other sections of the Peace River. In 2022, the length-weight relationship was similar to previous study years, and substantial changes over time were not observed (Appendix F, Figure F23).

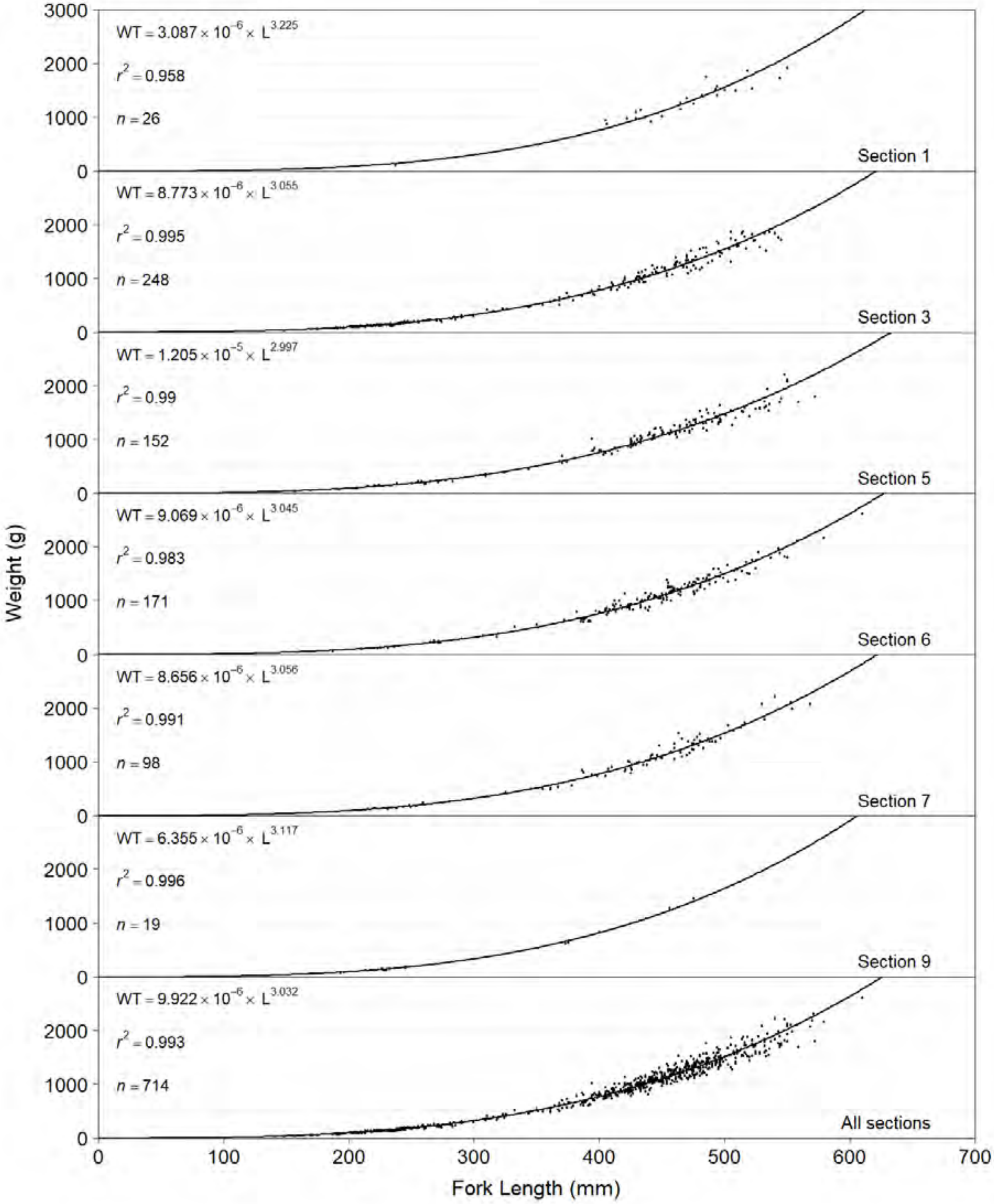


Figure 22: Length-weight regressions for Largescale Sucker captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

3.7.2 Catch Rate

Catch rates of Largescale Sucker varied among years but the trends were similar between most sections (Figure 23). Mean catch rate was higher in 2021 than previous years in Sections 5, 6, and 7 but decreased to near-average values in these sections in 2022. In Section 1, the mean catch rate of Largescale Sucker was lower in 2022 than all previous years when sucker species were targeted. In Section 9, catch rates of Largescale Sucker were consistently lower than other sections, but the mean value in 2022 (1.0 fish/km-h) was lower than all previous years (range: 1.2–4.6 fish/km-h). Largescale Sucker were not consistently targeted prior to 2015; therefore, the 2002 to 2014 study years were excluded from this analysis.

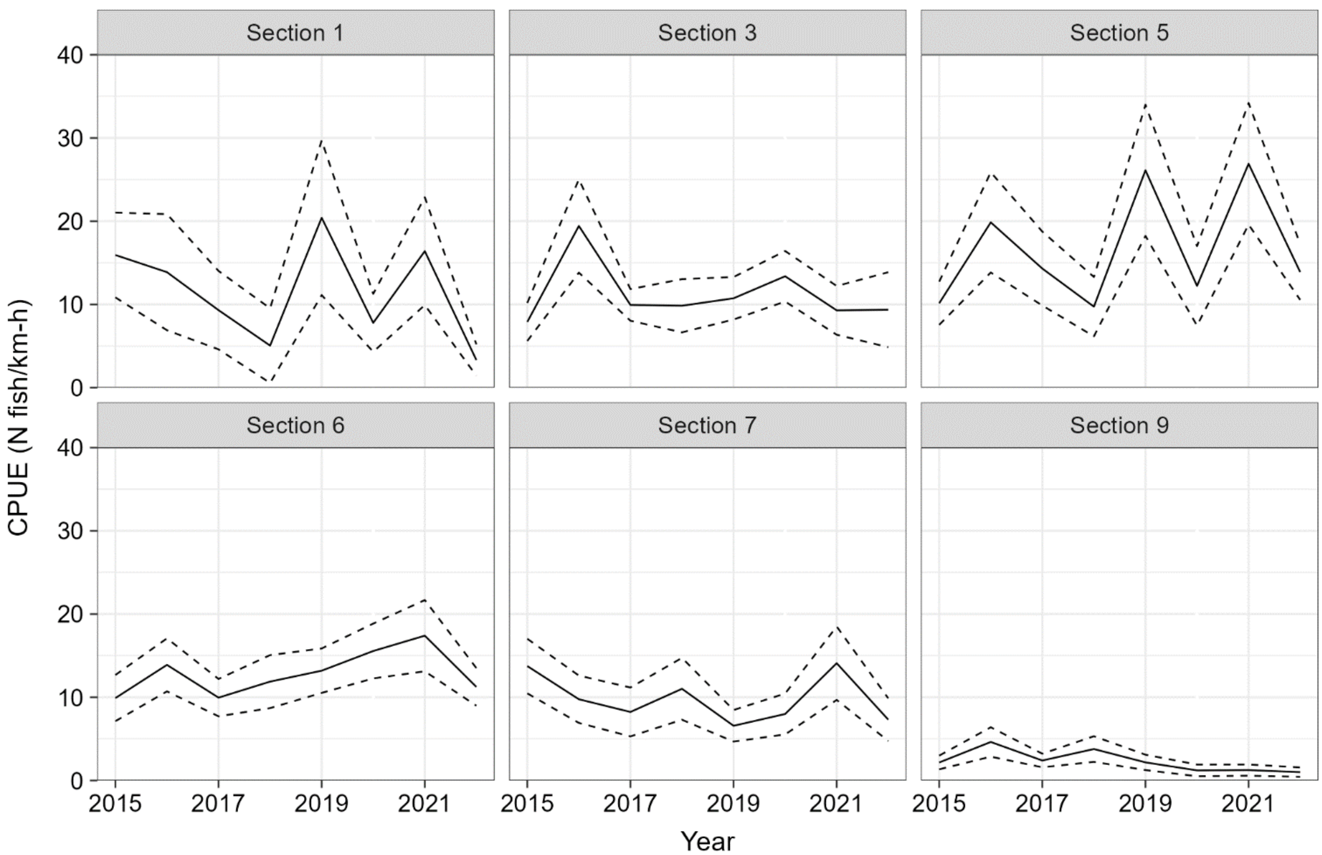


Figure 23: Mean annual catch rates (CPUE) for Largescale Sucker captured by boat electroshocking in Sections 1, 3, 5, 6, 7, and 9 of the Peace River, 2015 to 2022. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because Sections 6, 7, and 9 were not sampled during these years and Largescale Sucker were not consistently targeted prior to 2015.

3.8 Longnose Sucker

3.8.1 Biological Characteristics

During the 2022 survey, 4216 Longnose Sucker were captured (i.e., excluding within-year recaptures; Table 9). Of these, 3653 were measured for length and weight. Fork lengths ranged between 63 and 555 mm, and weights ranged between 3 and 1778 g.

For Longnose Sucker, a lack of distinct modes in length-frequency histograms for most sections suggest that the sample comprised of multiple age classes with overlapping length distributions (Figure 24). Distinct modes were more apparent in Section 9, with one mode visible between 60 and 120 mm FL (likely corresponding to age-1 fish) and another mode visible between 150 and 200 mm FL (likely corresponding to age-2 fish). Consistent with most previous years (Appendix F, Figures F17 and F18), the majority of Longnose Sucker captured in 2022 were between 350 and 450 mm FL in all sections. The length distribution differed between sections in 2022. In Sections 3 and 9, small Longnose Sucker (i.e., fish less than 350 mm FL) comprised a much larger proportion of the total catch compared to all other sections.

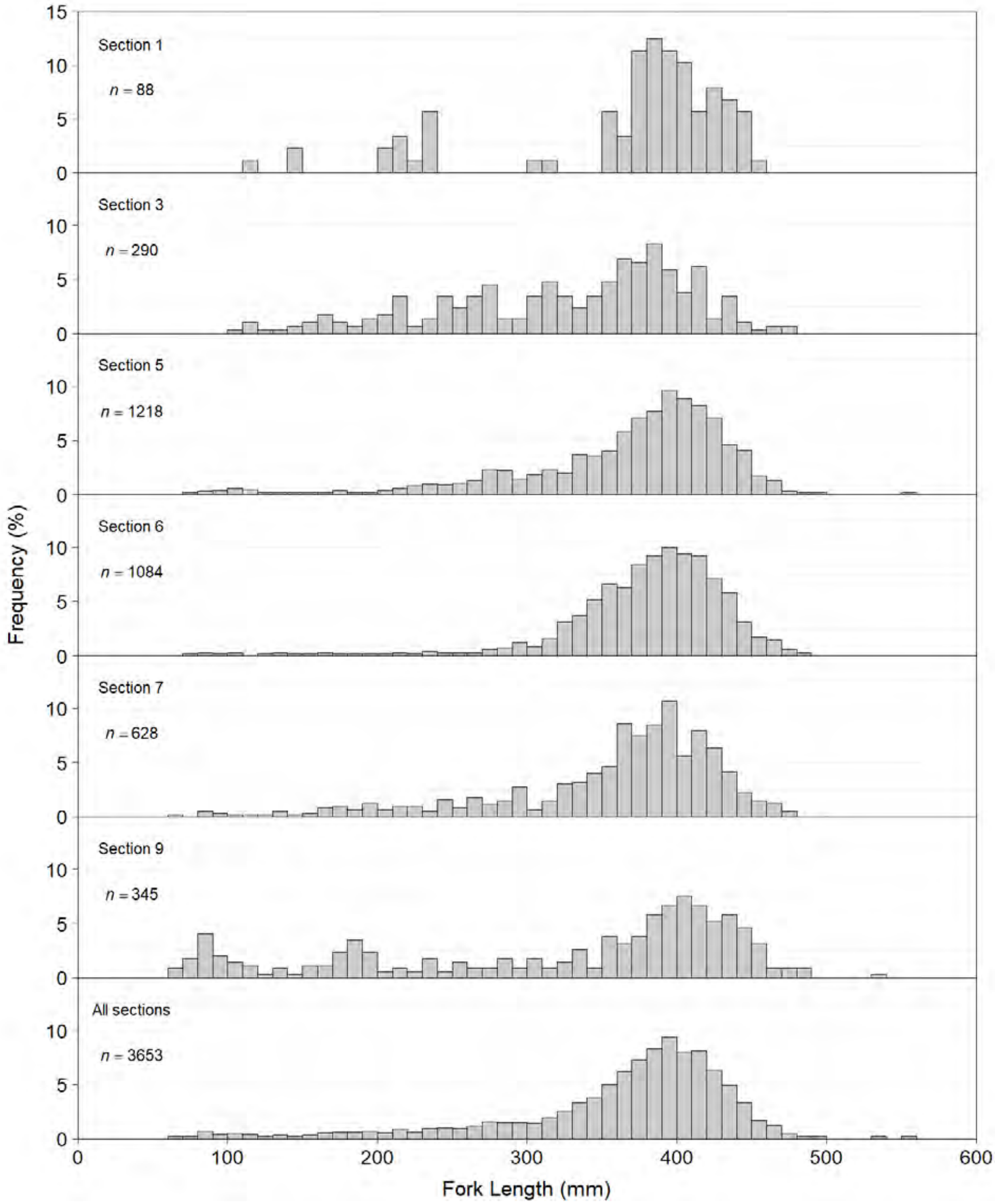


Figure 24: Length-frequency distributions for Longnose Sucker captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

The body condition of Longnose Sucker in Sections 1 and 5 increased between 2021 and 2022, following historically low condition values observed in these sections in 2021 (Figure 25). In Section 1, body condition (*K*) increased from an average of 1.17 in 2021 to an average of 1.26 in 2022, and in Section 5 body condition increased from 1.16 in 2021 to 1.20 in 2022; however, body condition values in 2022 were below the historical average for these two sections. In Sections 1, 5, 6, and 7, the body condition of Longnose Sucker was generally low between 2016 and 2022 compared to previous years. In Sections 3 and 9, the body condition of Longnose Sucker has remained stable over all study years relative to other sections.

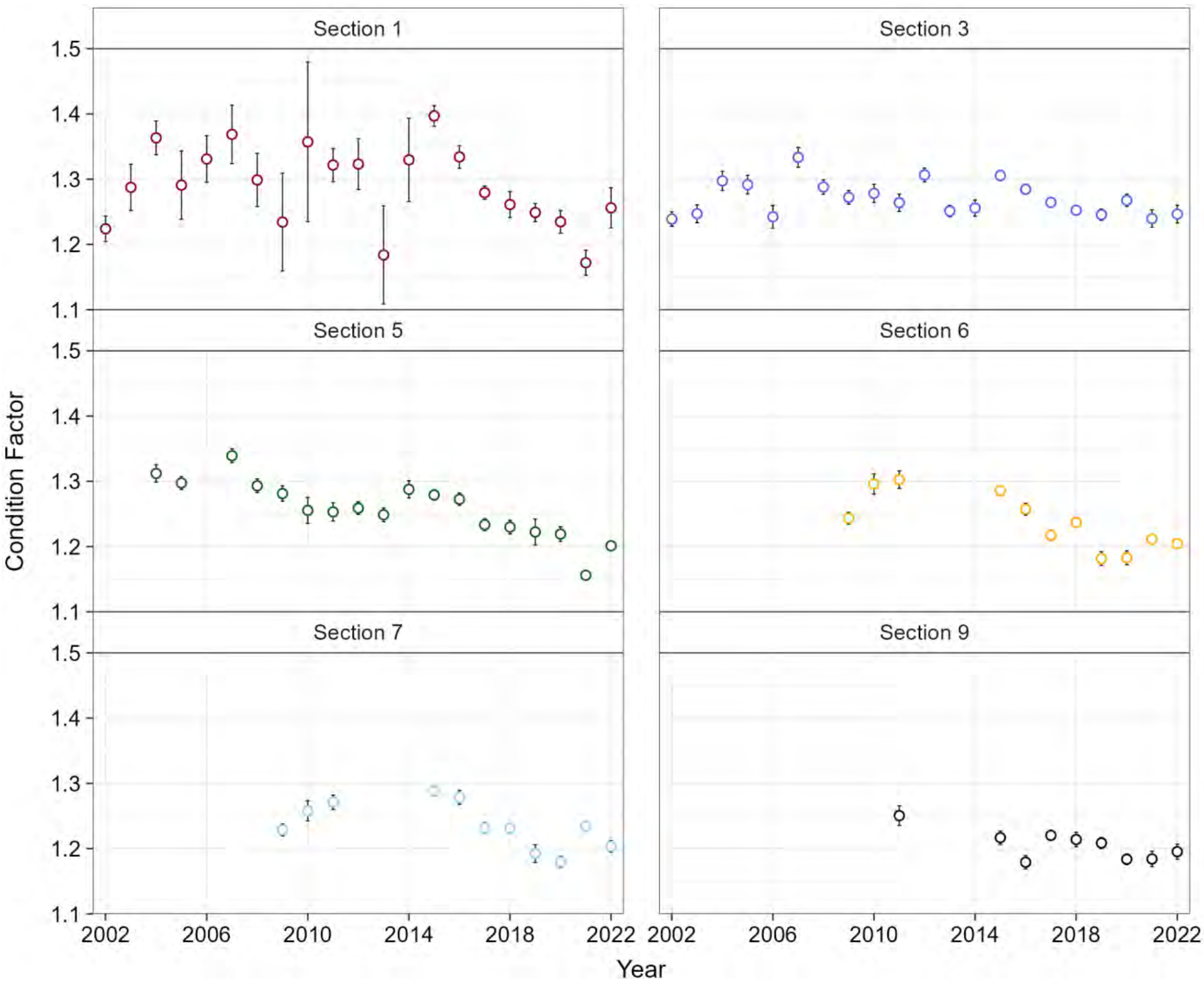


Figure 25: Mean Fulton's body condition factor (*K*) with 95% confidence intervals for Longnose Sucker captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. For Sections 6, 7, and 9, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011a, 2013).

In 2022, the length-weight relationship for Longnose Sucker was similar among sections (Figure 26). Values of the exponent in the length-weight relationship were near 3.0, indicating isometric growth (i.e., no change in body shape with increase in length). For all sections, the relationship in 2022 was similar to historical study years, which did not suggest any large or sustained trends over time (Appendix F, Figure F19).

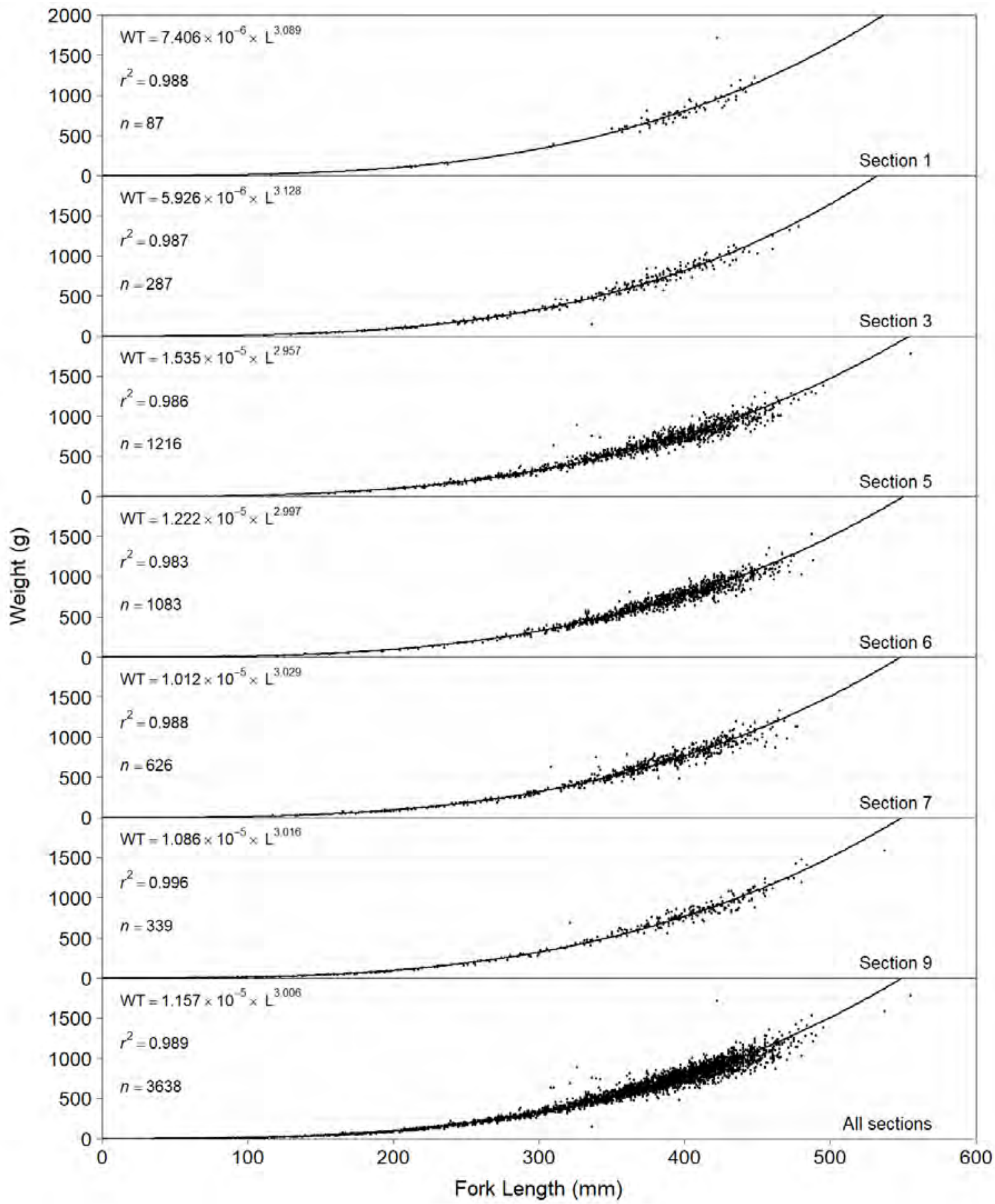


Figure 26: Length-weight regressions for Longnose Sucker captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

3.8.2 Catch Rate

Longnose Sucker are the most abundant of the three sucker species in the study area. The mean catch rate of Longnose Sucker followed a similar trend in Sections 1 and 3, with a general decline between 2015 and 2022 (Figure 27). In Sections 5 and 6, the mean catch rate increased substantially in 2021 and remained high in 2022. In Sections 7 and 9, the mean catch rate of Longnose Sucker in 2022 was within the range of values observed in previous years. Longnose Sucker were not consistently targeted prior to 2015; therefore, the 2002 to 2014 study years were excluded from this analysis.

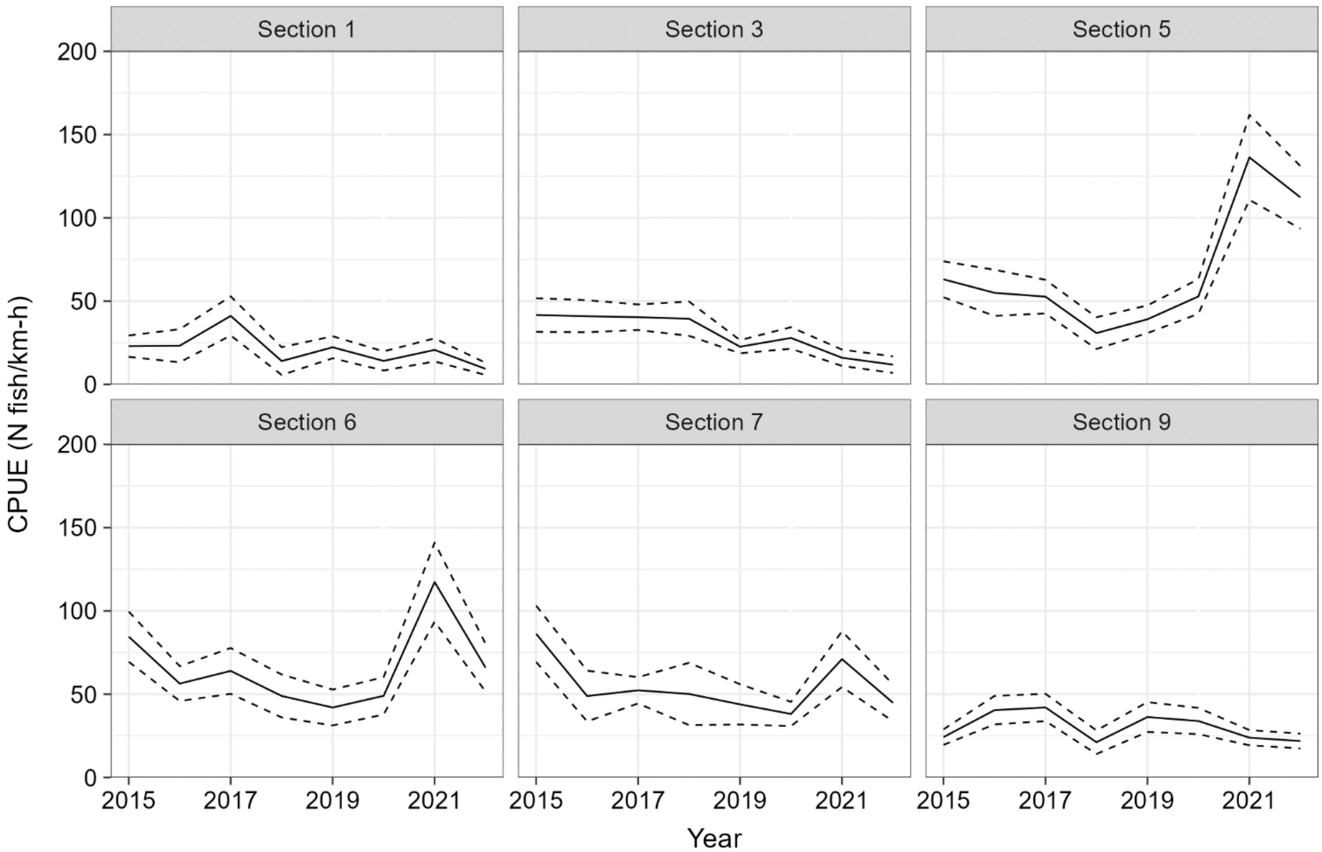


Figure 27: Mean annual catch rates (CPUE) for Longnose Sucker captured by boat electroshocking in Sections 1, 3, 5, 6, 7, and 9 of the Peace River, 2015 to 2022. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined.

3.9 Mountain Whitefish

3.9.1 Biological Characteristics

During the 2022 survey, 4042 Mountain Whitefish were captured (i.e., excluding within-year recaptures; Table 9) and 3220 of these were measured for length and weight. Lengths ranged between 50 and 498 mm FL, and weights ranged between 2 and 1516 g. Scale samples were analyzed from 425 individuals and additional ages were assigned using inter-year recaptures of previously aged fish, resulting in a total sample size of 481 ages. Assigned ages ranged between age-1 and age-17 (Scale samples were not collected from age-0 fish). Length, weight, and body condition by age-class are summarized in Table 11.

As in previous years, the length-frequency histogram for Mountain Whitefish (Figure 28) showed discrete modes for age-0 (60–110 mm FL) and age-1 (130–190 mm FL) age classes. In 2022, the majority of age-0 Mountain Whitefish were captured in Sections 3, 7, and 9. For fish larger than 200 mm FL, specific modes for age-classes were not identifiable due to overlapping length distributions for Mountain Whitefish age-2 and older (Figure 28 and Figure 29). Based on these results, and results from previous study years, growth slows considerably after approximately age-3 for this species, most likely due to fish reaching sexual maturity. Length distribution by age-class were generally similar between Sections 1 and 3 and Sections 5, 6, 7, and 9. Once exception included age-1 fish in Sections 5, 6, 7, and 9, which were generally smaller than age-1 fish in Sections 1 and 3 (Figure 29).

Table 11: Average fork length, weight, and body condition by age for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

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	–	–	–	–	–	–	–	–	–
1	151 ± 13	125 – 175	48	36 ± 11	20 – 63	47	1.04 ± 0.11	0.78 – 1.26	47
2	216 ± 19	180 – 259	30	114 ± 30	52 – 183	30	1.12 ± 0.11	0.89 – 1.42	30
3	260 ± 22	215 – 327	50	197 ± 52	110 – 358	50	1.10 ± 0.12	0.79 – 1.32	50
4	285 ± 22	232 – 355	106	254 ± 73	130 – 513	106	1.08 ± 0.14	0.79 – 1.47	106
5	307 ± 25	254 – 379	109	331 ± 94	164 – 660	108	1.12 ± 0.15	0.72 – 1.53	108
6	323 ± 32	265 – 413	56	372 ± 113	177 – 682	55	1.07 ± 0.15	0.79 – 1.41	55
7	334 ± 38	276 – 409	26	409 ± 175	192 – 794	26	1.05 ± 0.20	0.75 – 1.34	26
8	366 ± 41	268 – 437	16	550 ± 183	185 – 1012	16	1.08 ± 0.12	0.88 – 1.26	16
9	334 ± 39	297 – 408	12	445 ± 137	287 – 727	12	1.17 ± 0.12	0.90 – 1.31	12
10	372 ± 49	281 – 445	10	559 ± 215	289 – 927	10	1.06 ± 0.17	0.77 – 1.30	10
11	346 ± 29	316 – 390	6	481 ± 176	306 – 783	6	1.11 ± 0.12	0.95 – 1.32	6
12	340 ± 25	310 – 371	4	419 ± 155	247 – 555	4	1.03 ± 0.23	0.83 – 1.34	4
13	365 ± 44	317 – 412	5	606 ± 213	341 – 811	5	1.21 ± 0.15	1.07 – 1.46	5
14	330 ± 19	316 – 343	2	472	–	1	1.17	–	1
15	–	–	–	–	–	–	–	–	–
16	–	–	–	–	–	–	–	–	–
17	346	–	1	514	–	1	1.24	–	1

[a] Number of individuals sampled.

Based on the length-frequency histograms, the majority of age-0 Mountain Whitefish captured in 2022 were in Sections 3, 7, and 9 (Figure 28). During years when age-0 Mountain Whitefish were targeted during sampling (2014 to 2022), catch of this age-class was higher in 2014, 2015, 2019, and 2021 (Appendix F, Figures F11 to F14). Age-frequency distributions showed that juveniles and adults were present in all sections in 2022 (Figure 30).

The annual growth of Mountain Whitefish in the study area, as assessed using the von Bertalanffy growth curve, suggested slightly higher rates of growth for Sections 5 and 7, and similar rates of growth for all other sections (Figure 31). Some of the small differences in the growth curves among sections may be related to small sample sizes of the younger and older age classes. As in previous study years, Mountain Whitefish grew rapidly until age-3, 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-1 age classes in 2022 were smaller than most previous study years; whereas age-2 to age-4 age classes were equal to, or above the historical average (Figure 33).

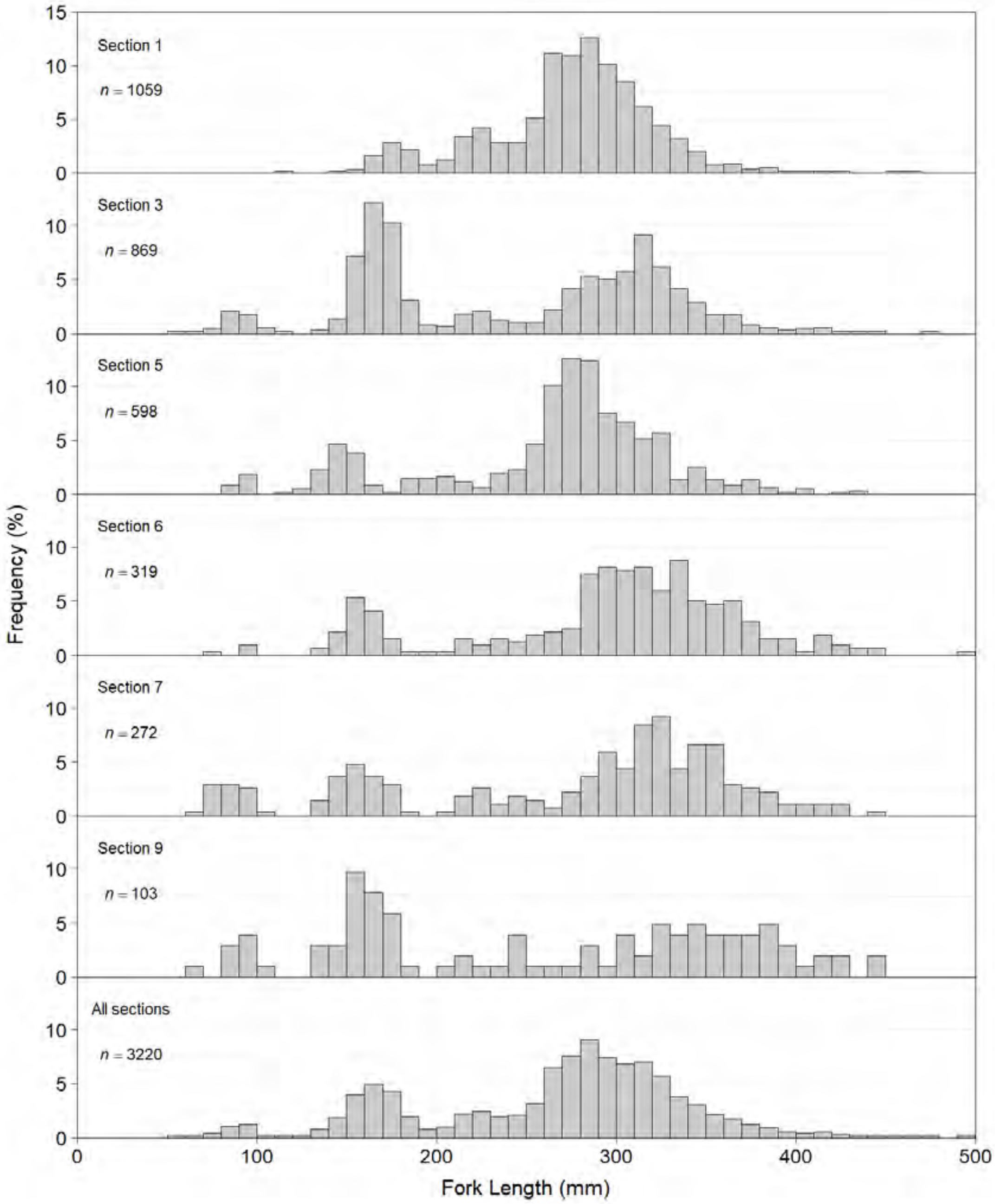


Figure 28: Length-frequency distributions for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

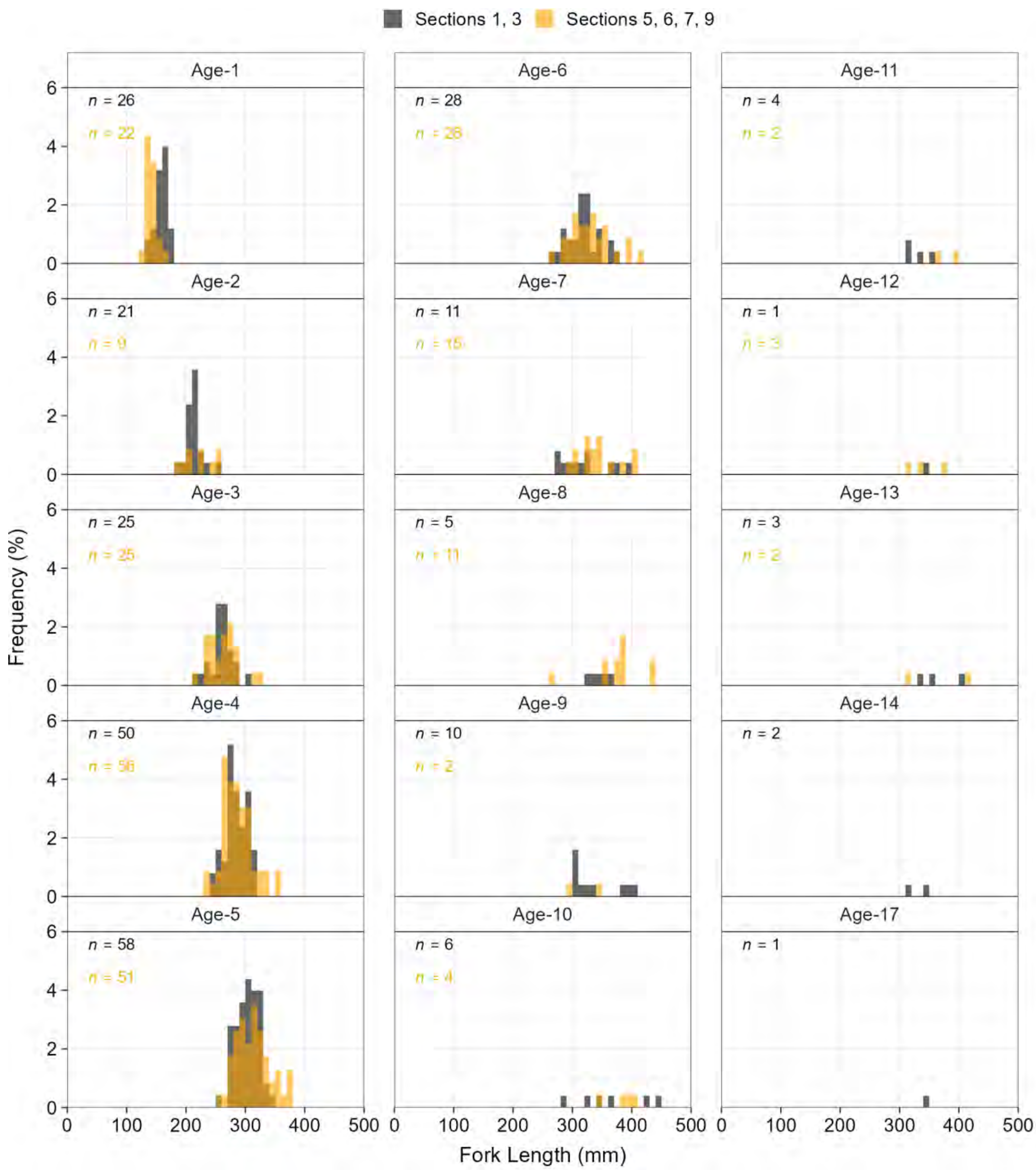


Figure 29: Length-at-age frequency distributions for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

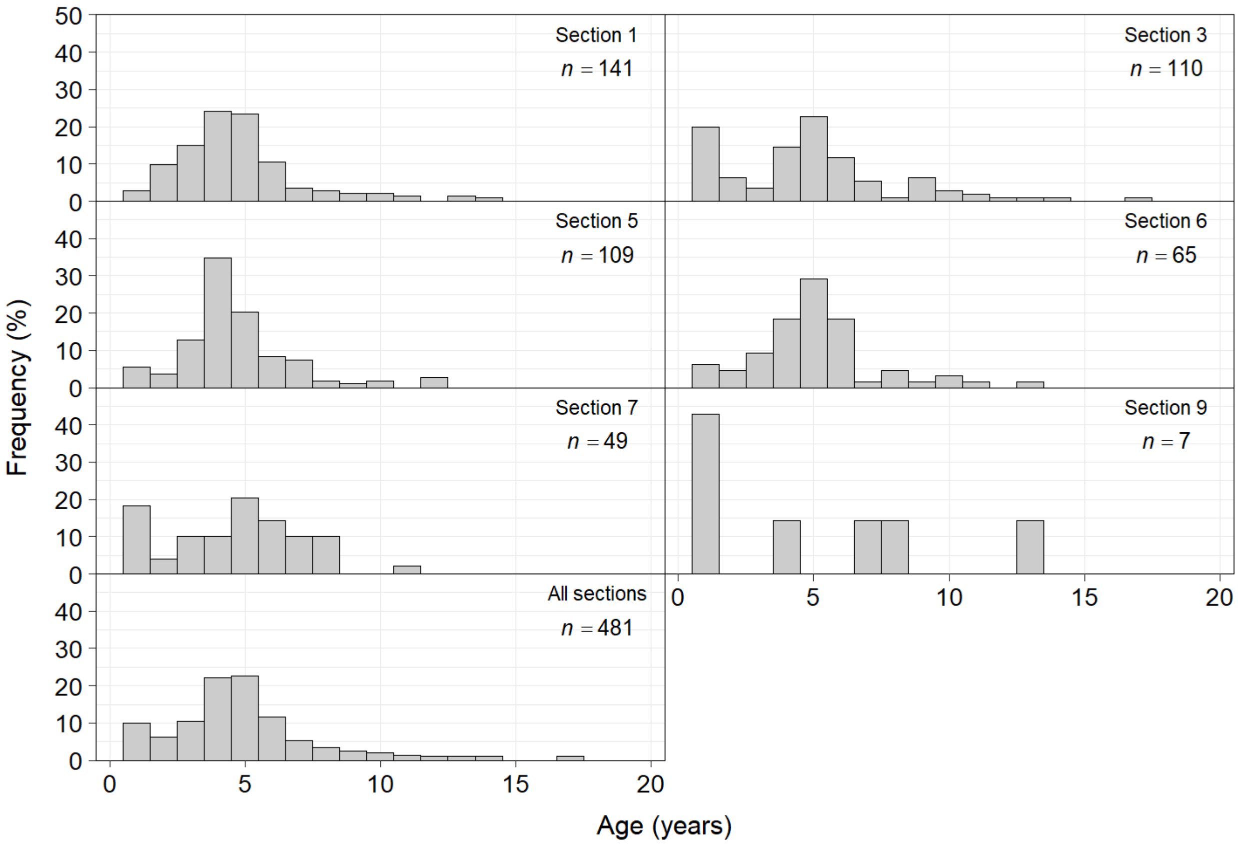


Figure 30: Age-frequency distributions for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

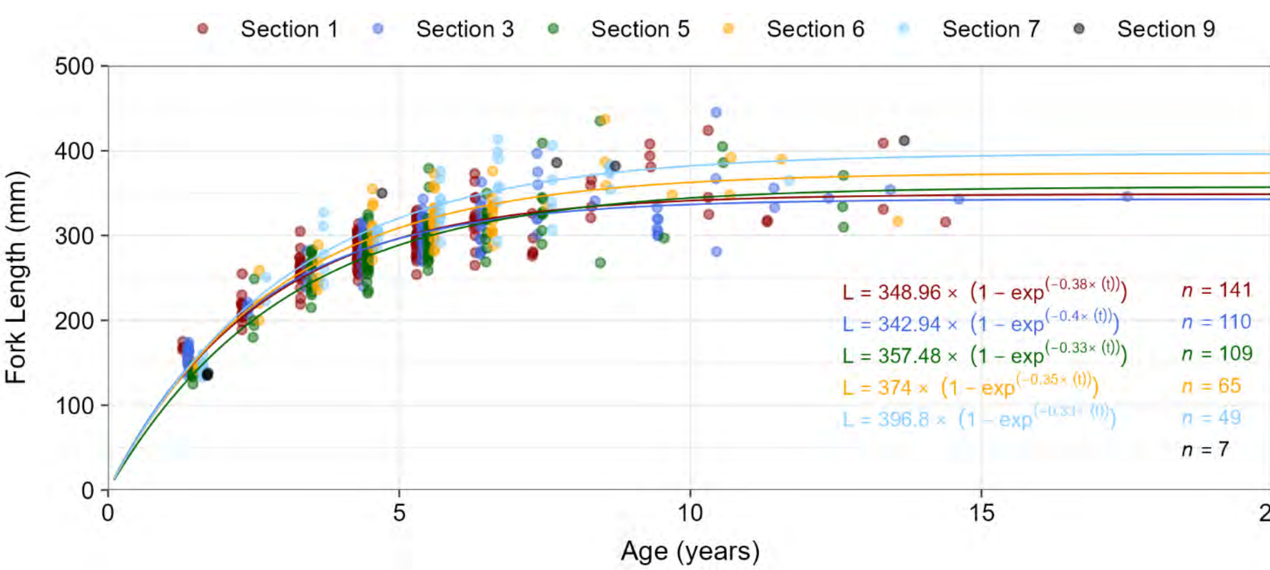


Figure 31: von Bertalanffy growth curve for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022. Growth curve not included for Section 9 due to low catch (*n* = 7).

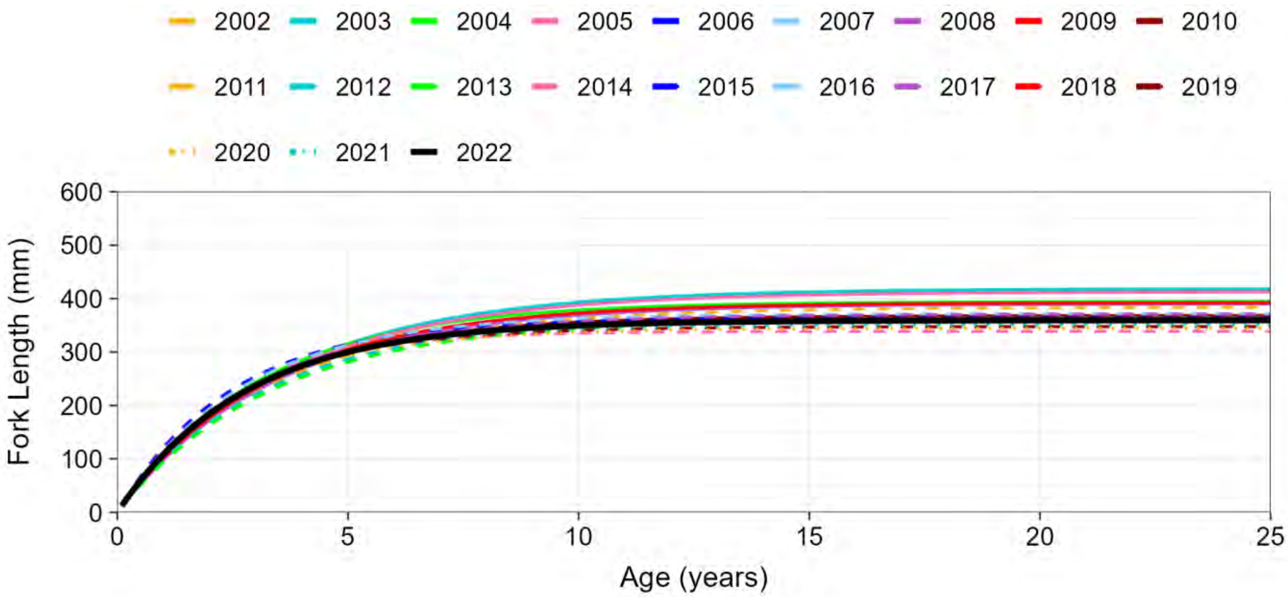


Figure 32: von Bertalanffy growth curve for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022.

In 2022, Mountain Whitefish condition factor was highest in Section 1 (*K* = 1.2) and lowest in Section 5 (*K* = 1.0) (Figure 34). Similarly, relative weight for Mountain Whitefish in 2022 was highest in Section 1 (93%) and lowest in Section 5 (77%). These findings suggest that Mountain Whitefish in Section 1 were more rotund than those in other sections, and Mountain Whitefish in Section 5 were skinnier than those in other sections.

Over the 21-year study period, the body condition and relative weight of Mountain Whitefish have varied (Figure 34), with high values occurring in 2014 and 2015 and low values occurring in 2011, 2017, and 2020. In recent years (2020 to 2022) Mountain Whitefish body condition and relative weight have increased to values slightly above the historical average (all sections combined).

Exponents for length-weight regressions were above 3.0 for all sections, with the exception of Section 5 (*b* = 2.90, Figure 34), providing further evidence that Mountain Whitefish within this section were generally more slender, compared to those in the rest of the study area. In most study years, the exponent for length-weight regressions were close to 3.0 (Appendix F, Figure 15), which suggests isometric growth and no change in body shape with increasing size. Length-weight regression parameters varied slightly among years but did not suggest any long-term changes.

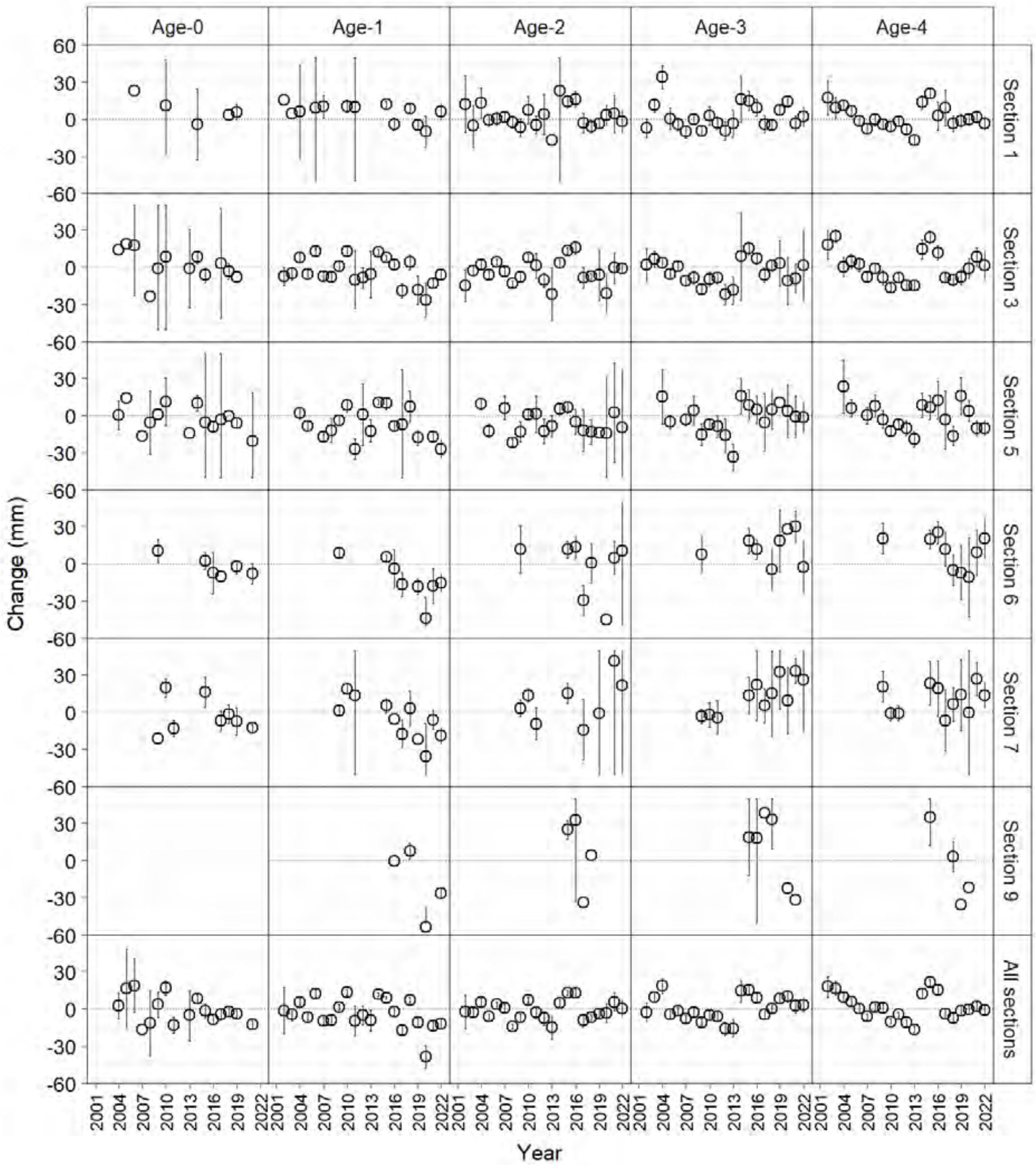


Figure 33: Change in mean length-at-age for Mountain Whitefish captured by boat electroshocking during the Peace River Fish Index, 2002 to 2022. Change is defined as the difference between the annual estimate and the estimate of all years and sections combined. Error bars represent 95% confidence intervals. 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, 2011a, 2013). Outlier values (>60 mm change; *n* = 3) were removed for plotting.

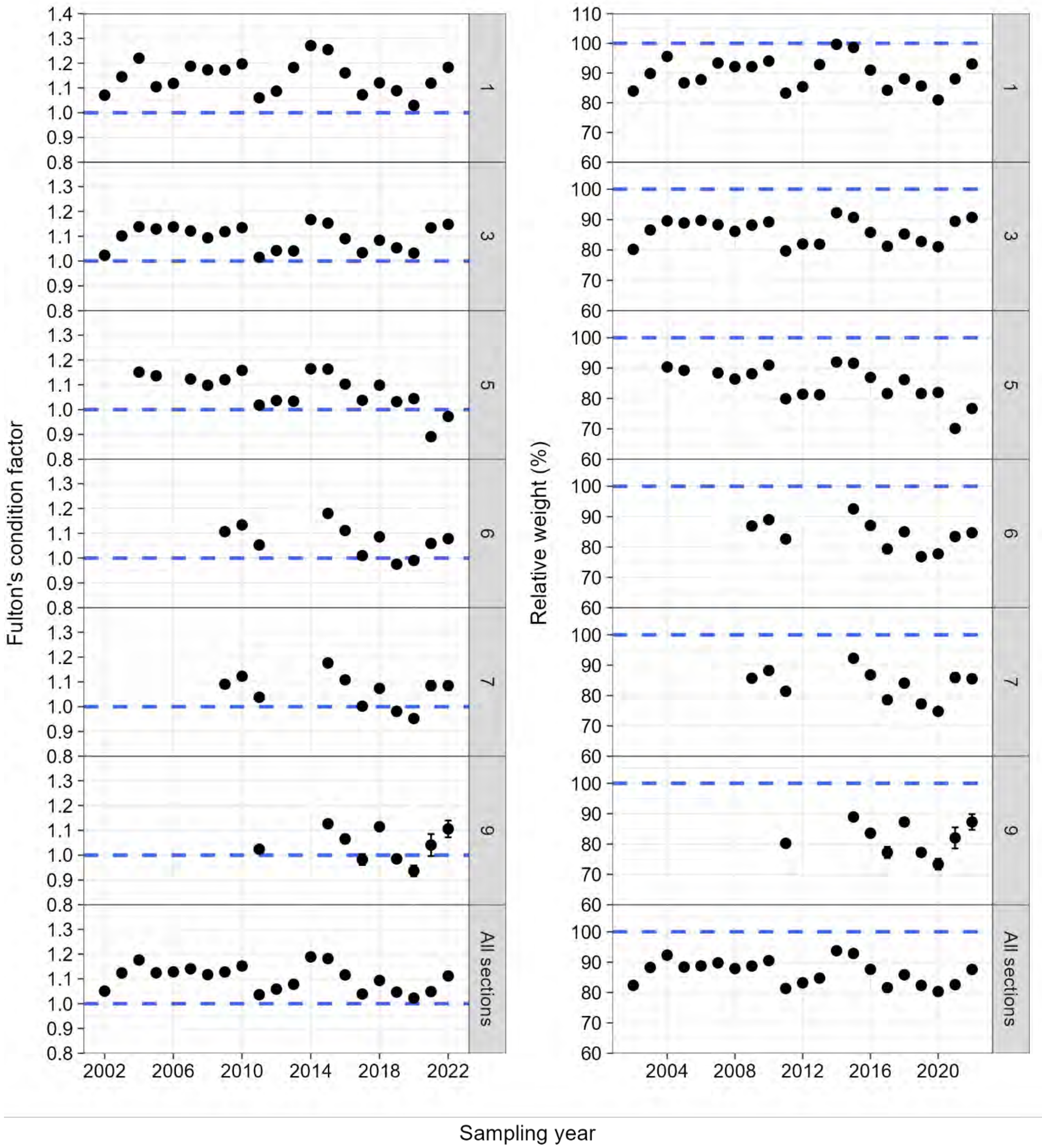


Figure 34: Mean Fulton's body condition factor (*K*) with 95% confidence intervals (CIs) (left pane) and mean relative weight (%) with 95% confidence intervals (right pane) for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. For Sections 6, 7, 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, 2011a, 2013).

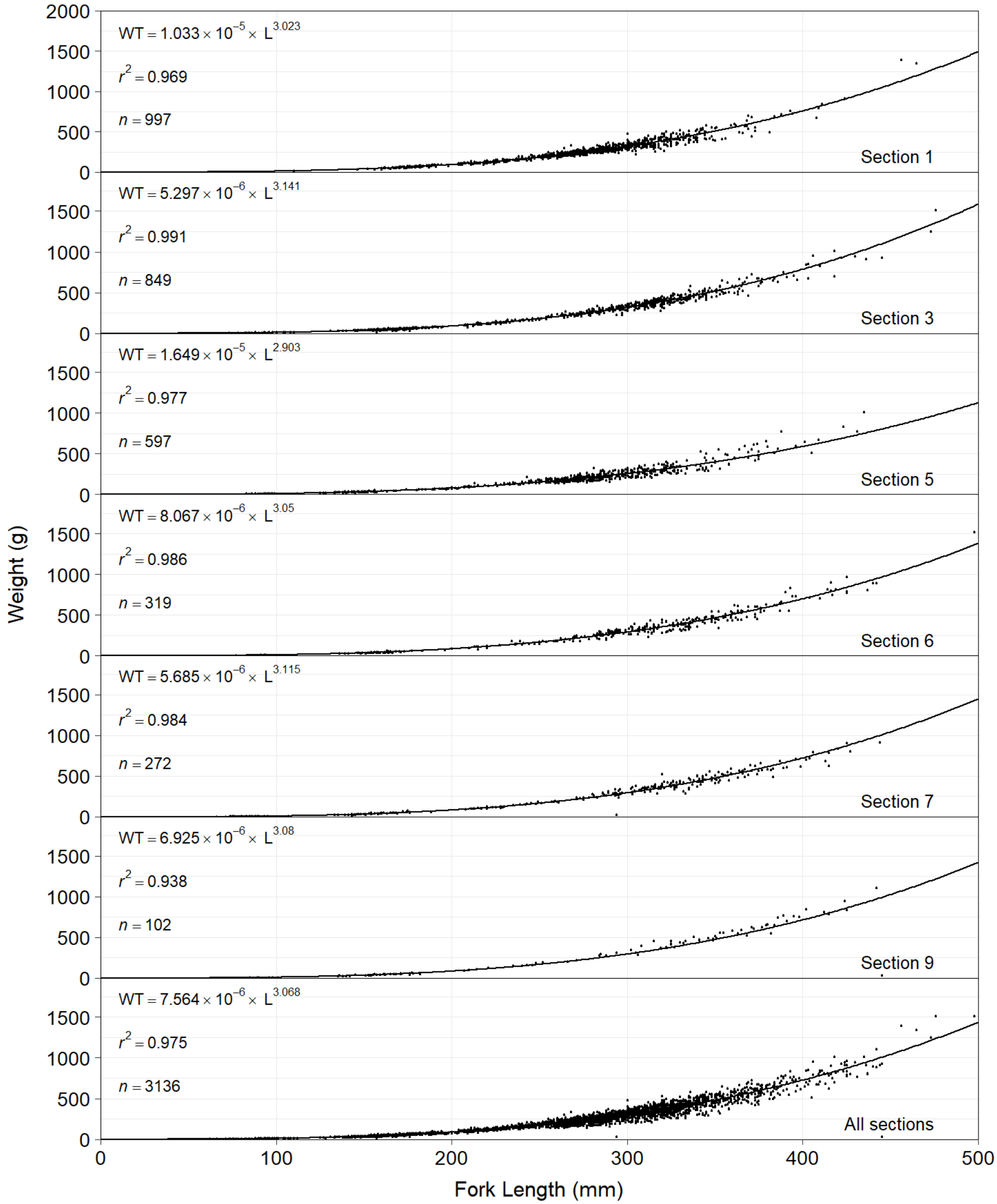


Figure 35: Length-weight regressions for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

3.9.2 Catch Rate

Catch rates for Mountain Whitefish have consistently been highest in Section 1 (Figure 36). In Section 1, CPUE values were generally higher from 2002 to 2013 (mean = 501 fish/km-h) and lower from 2014 to 2022 (mean = 390 fish/km-h). From 2019 to 2022, catch rates in Section 1 declined by 62%. In 2022, Mountain Whitefish catch rates in Section 1 were 159 fish/km-h, lower than any previous study year for this section.

Mountain Whitefish catch rates in Section 3, generally increased from 2002 to 2011, and generally decreased from 2012 to 2022. This trend was also apparent in Section 5. In 2022, CPUE in Section 3 (43 fish/km-h) and Section 5 (63 fish/km-h) were lower than all previous years and catch rates for both sections have declined since 2018.

Mountain Whitefish catch rates were typically lower in Sections 6, 7, and 9 compared to upstream sections. Catch rates also declined in Sections 6, 7, and 9 between 2018 and 2022 (Figure 36).

Overall, catch rate data indicate a decline in Mountain Whitefish abundance throughout the study area between 2018 and 2022.

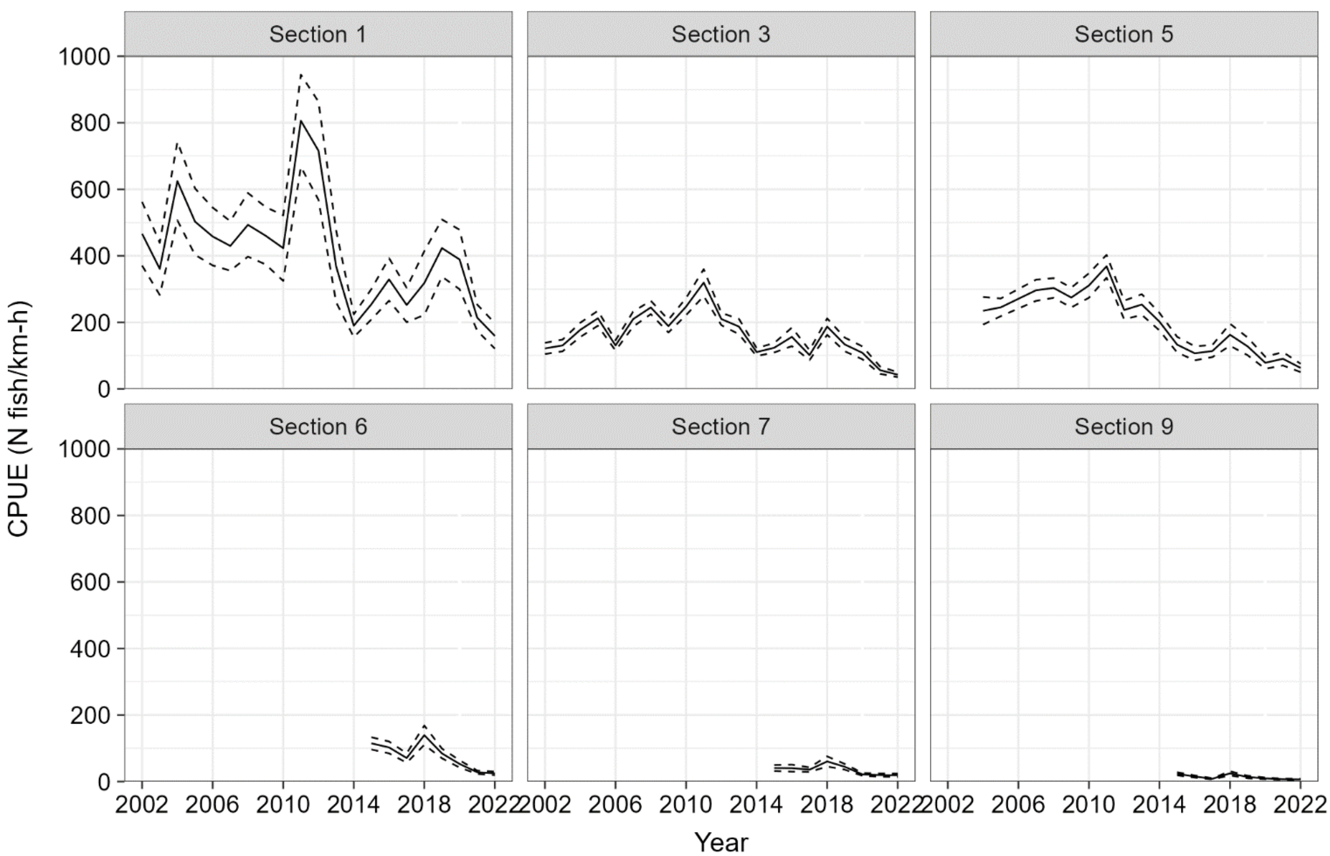


Figure 36: Mean annual catch rates (CPUE) for Mountain Whitefish captured by boat electroshocking in Sections 1, 3, 5, 6, 7, and 9 of the Peace River, 2002 to 2022. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. Sections 6, 7, and 9 were not consistently sampled prior to 2015.

3.10 Northern Pike

3.10.1 Biological Characteristics

During the 2022 survey, 27 Northern Pike were captured (i.e., excluding within-year recaptures). Fork lengths of captured Northern Pike ranged between 164 and 735 mm FL, weights ranged between 32 and 3036 g, and body condition (*K*) ranged between 0.62 and 1.05. Fin rays were collected from 24 individuals and were stored for potential future analysis.

Length-frequency data indicate that juvenile and adult life stages of Northern Pike are present in the study area (Figure 37); with the highest abundance recorded in Section 5. This result is consistent with the historical data. Section 5 accounts for the highest proportion (45%) of the Northern Pike catch since 2004. Northern Pike were not consistently targeted prior to 2015. Between 2015 and 2022, the number of captured Northern Pike that were less than 250 mm FL (i.e., fish likely to be either age-0 or age-1) was low (range = 0 to 8 individuals/year; Appendix F, Figures F25 and F26).

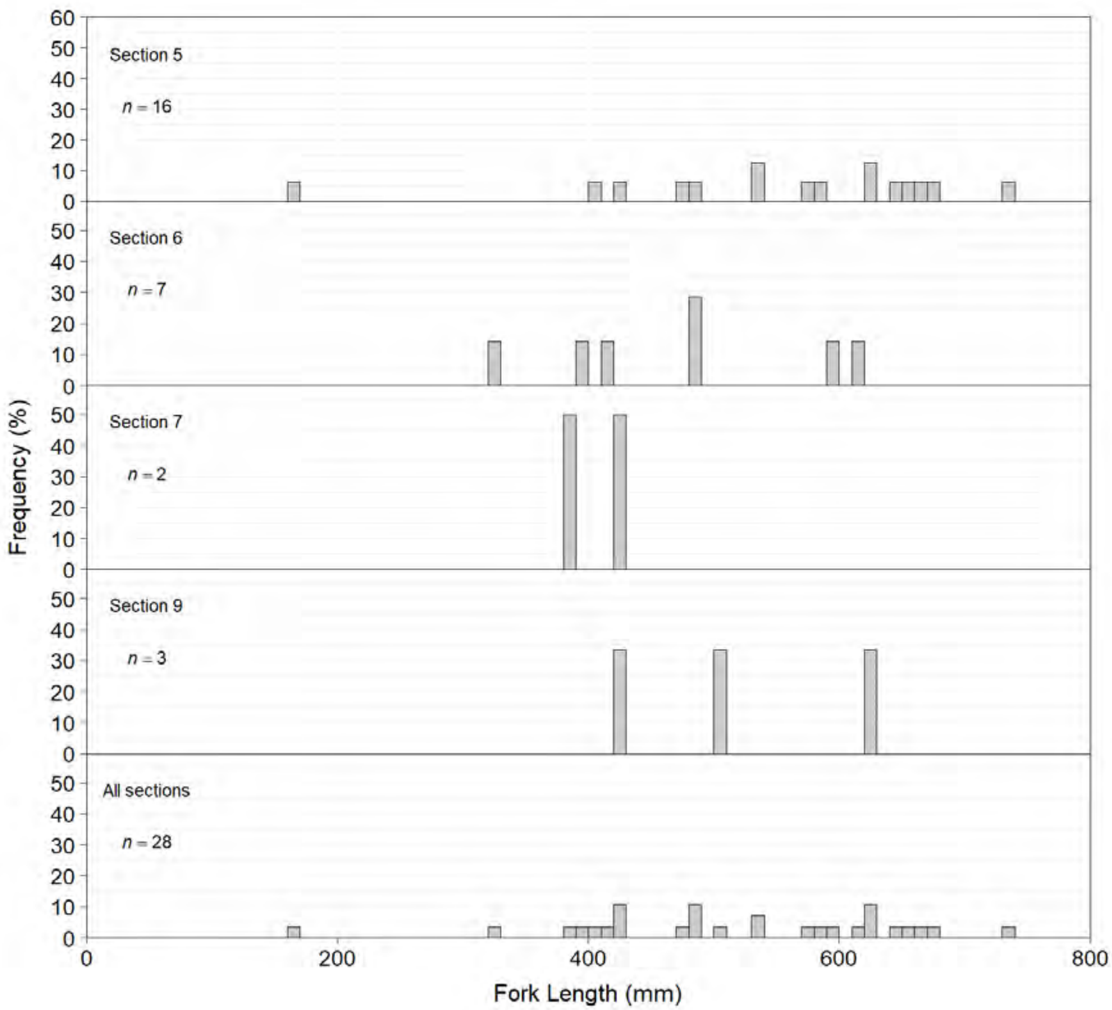


Figure 37: Length-frequency distributions for Northern Pike captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

In 2022, the mean body condition (*K*) of Northern Pike was similar to body condition values recorded among recent study years and sections (Figure 38). Body condition data for Northern Pike do not indicate any long-term trends in the study area.

In 2022, the length-weight relationship for Northern Pike was similar among sections (Figure 39). Values of the exponent in the length-weight relationship were slightly above 3.0 indicating positive allometric growth (i.e., fish being more rotund). Length-weight relationships for Northern Pike among years have varied, with exponents in the length-weight relationship ranging from 2.5 to 3.2 (Appendix F, Figure F27).

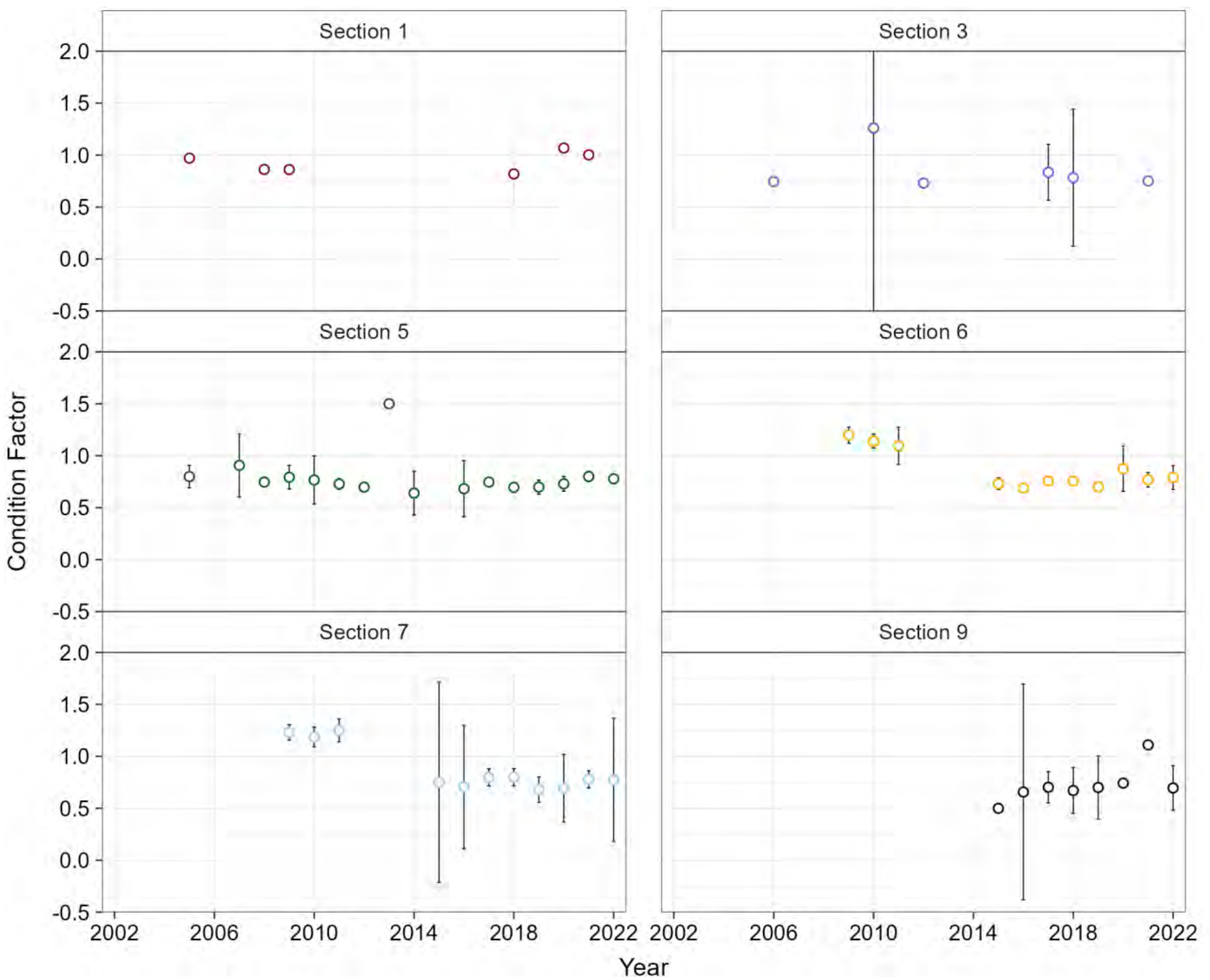


Figure 38: Mean Fulton's body condition factor (*K*) with 95% confidence intervals for Northern Pike captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. For Sections 6, 7, and 9, analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011a, 2013). The 95% CI of Section 3 values in 2010 extends from -1.14 to 3.66.

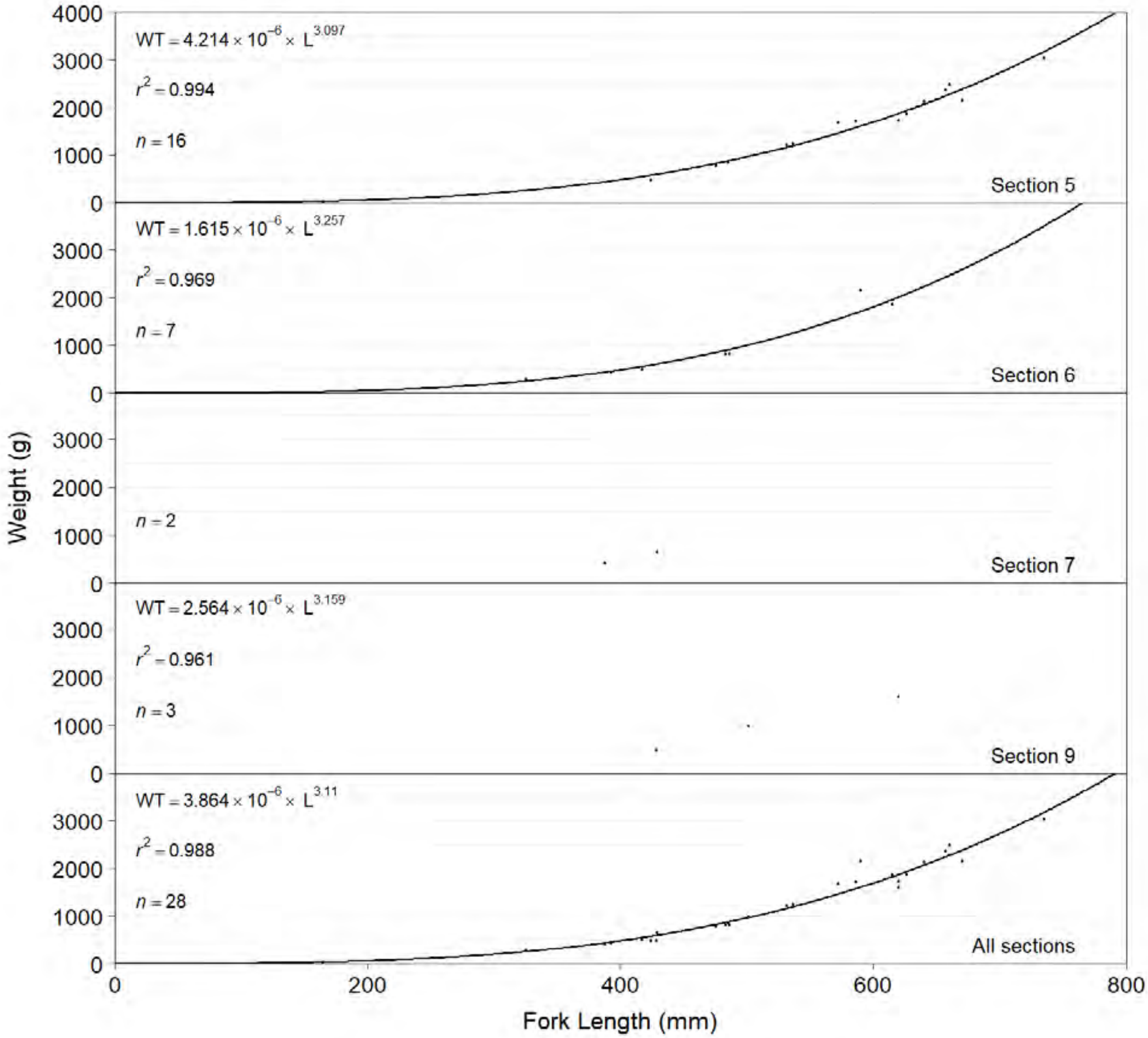


Figure 39: Length-weight regressions for Northern Pike captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

3.10.2 Catch Rate

Since 2015 (i.e., since sampling has been conducted in all six sections), catch rates for Northern Pike have ranged from 0.2 fish/km-h in 2016 to 0.6 fish/km-h in 2021 (all sections combined). In 2022, the catch rate for Northern Pike was 0.2 fish/km-h (Figure 40).

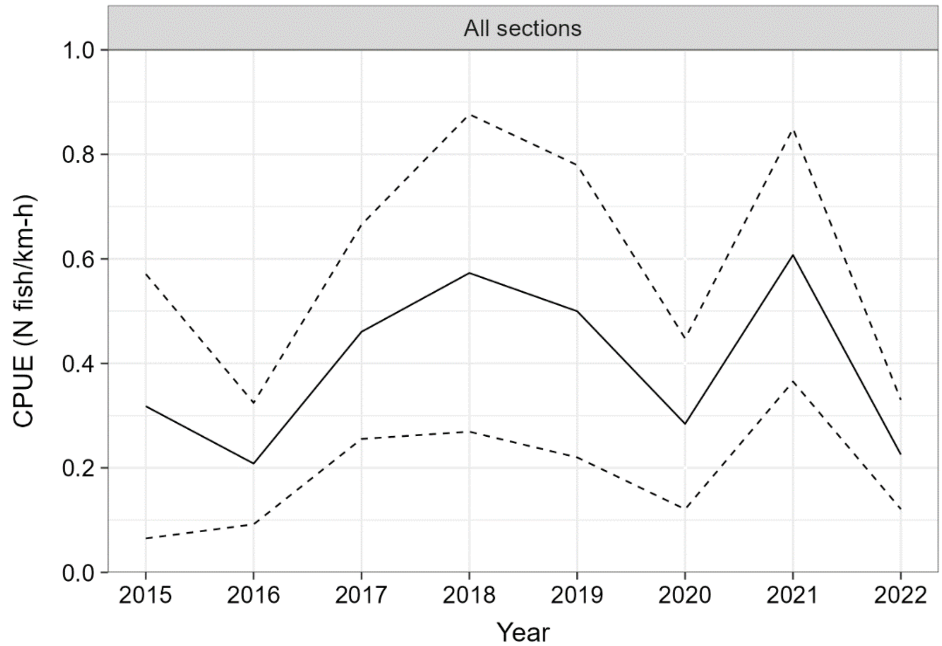


Figure 40: Mean annual catch rates (CPUE) for Northern Pike captured by boat electroshocking in all sections of the Peace River combined, 2015 to 2022. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because Northern Pike were not consistently targeted prior to 2015.

3.11 Rainbow Trout

3.11.1 Biological Characteristics

During the 2022 survey, 81 Rainbow Trout were captured (i.e., excluding within-year recaptures). All Rainbow Trout captured in 2022 were captured in Sections 1, 3, or 5; only 4 individuals were captured downstream of the Project (i.e., only 4 Rainbow Trout were captured in Section 5). Fork lengths ranged between 141 and 443 mm and weights ranged between 31 and 787 g (Table 12). Body condition (*K*) ranged between 0.92 and 1.63. Assigned ages ranged between age-1 and age-5.

In the length-frequency distribution for Rainbow Trout from all sections combined, a mode at approximately 150 mm represented age-1 individuals (Figure 41). Distinct modes for age-2 and older Rainbow Trout are difficult to discern in the length-frequency distribution, due to overlapping lengths between age groups. 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 (e.g., Golder and Gazey 2020). The growth rate and length-at-age of juvenile Rainbow Trout in tributaries to the Peace River varies among tributaries (WSP 2023b), which may contribute to the overlap in lengths between juvenile age classes after they migrate downstream into the Peace River mainstem.

Table 12: Average fork length, weight, and body condition by age for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

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	–	–	–	–	–	–	–	–	–
1	177 ± 32	141 – 227	13	76 ± 40	31 – 139	12	1.21 ± 0.2	0.94 – 1.63	12
2	249 ± 25	203 – 300	19	186 ± 52	99 – 289	19	1.18 ± 0.09	1.06 – 1.3	19
3	330 ± 30	254 – 380	22	412 ± 112	189 – 650	22	1.12 ± 0.12	0.92 – 1.41	22
4	368 ± 29	324 – 414	13	544 ± 132	374 – 787	13	1.07 ± 0.06	0.99 – 1.2	13
5	369 ± 17	348 – 394	5	559 ± 76	489 – 688	5	1.11 ± 0.07	1.03 – 1.19	5

[a] Number of individuals sampled.

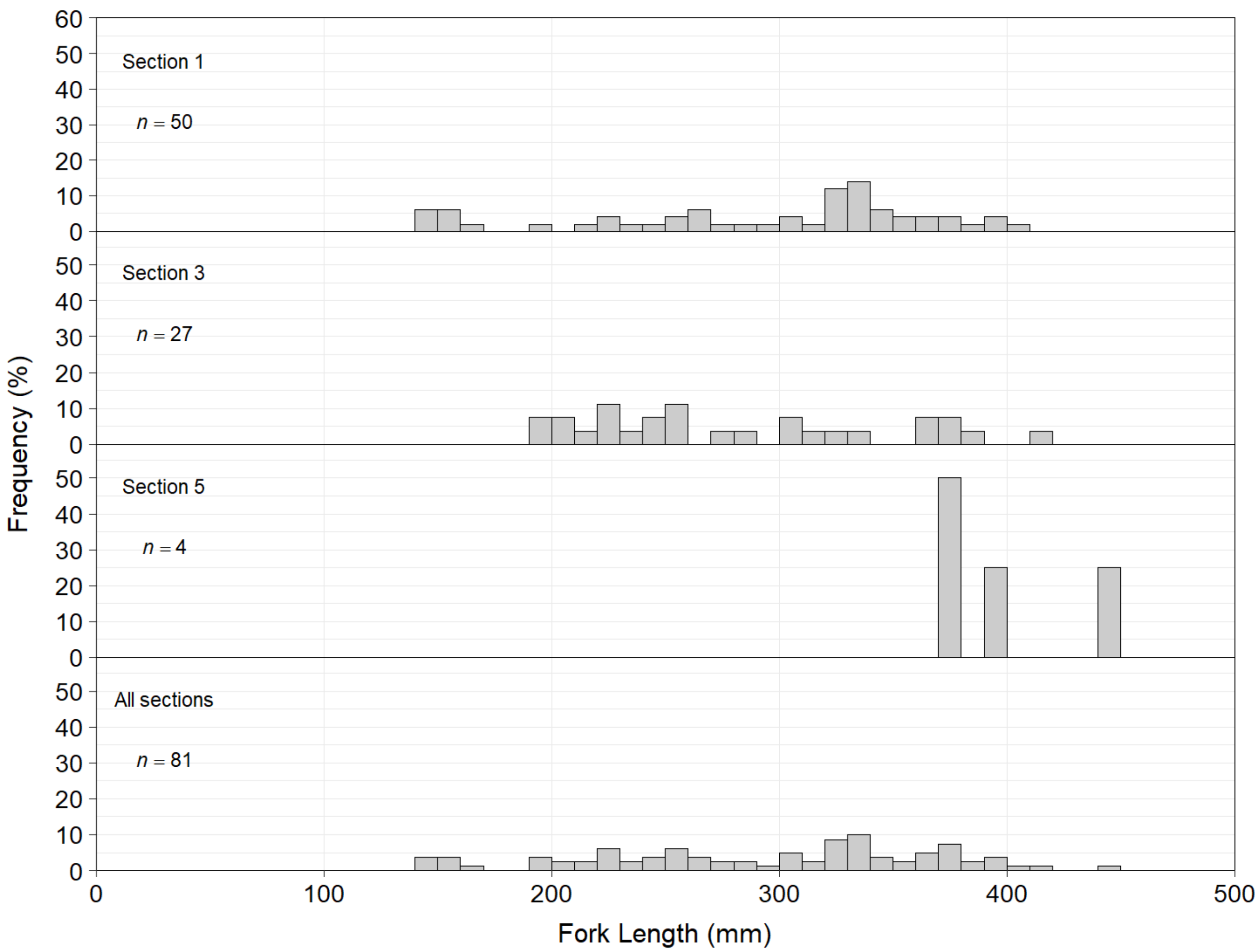


Figure 41: Length-frequency distributions for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

Age-0 Rainbow Trout were not captured during the 2022 Indexing Survey. 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 21-year study period. Age-0 Rainbow Trout are rare because this age-class likely remains in natal streams for their first year and have not yet migrated into the Peace River mainstem at the time of sampling (TrichAnalytics 2022; Mainstream 2011b). In 2022, age-2 and age-3 Rainbow Trout were the most common age classes in the study area, comprising 57% of the catch (Table 12, Figure 42).

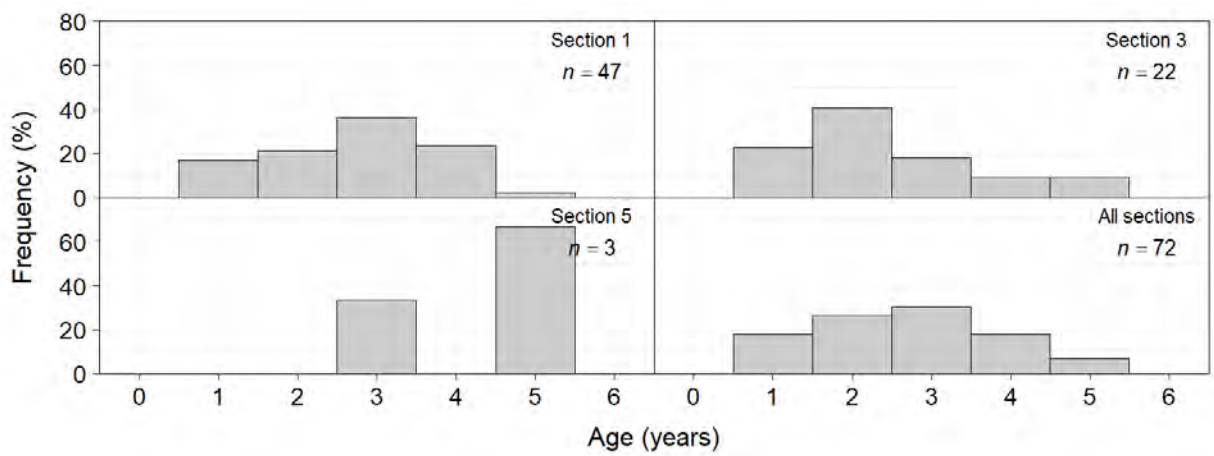


Figure 42: Age-frequency distributions for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

The von Bertalanffy model showed similar growth rates for Rainbow Trout in Section 1 and Section 3 (Figure 43). A von Bertalanffy growth curve was not created for Rainbow Trout captured downstream of Section 3, due to the low number of individuals recorded in these sections. Rainbow Trout growth in 2022 was near average when compared to growth curves from previous years (Figure 44). Small sample sizes, especially for the younger and older age classes, resulted in poor fits of the von Bertalanffy model during most study years. Differences in growth among years may be an artifact of small sample sizes as opposed to a reflection of actual changes in the population. Rainbow Trout were not a target species prior to 2015, when monitoring under the FAHMFP began, and consequently, sample sizes were too small to estimate a von Bertalanffy model for most years before 2015.

In 2022, mean body condition and relative weight were near the long-term average in Section 1 and Section 3 and below the long-term average in Section 5 (Figure 45); however, the Section 5 estimate was based on very few datapoints. For all sections combined, Rainbow Trout body condition and relative weight values were generally stable over all years of the study, with body condition (K) ranging from 1.1 to 1.3 and relative weight ranging from 83% to 95%.

The length-weight relationship in 2022 (all sections combined) had an exponent (b) of 2.9 (Figure 46), suggesting negative allometric growth (i.e., fish are generally slender). Sample sizes were too small (particularly for Section 5) for meaningful comparisons of length-weight relationship among sections (Figure 46). Over the historical study period (2002 to 2022), the average exponent of the length-weight relationship for Rainbow Trout was 2.9 in Sections 1 and 3 and was 3.0 in Sections 5, 6, 7, and 9 (Appendix F, Figure F33), indicating that Rainbow Trout in the upstream sections have been generally more slender compared to those captured in the downstream sections.

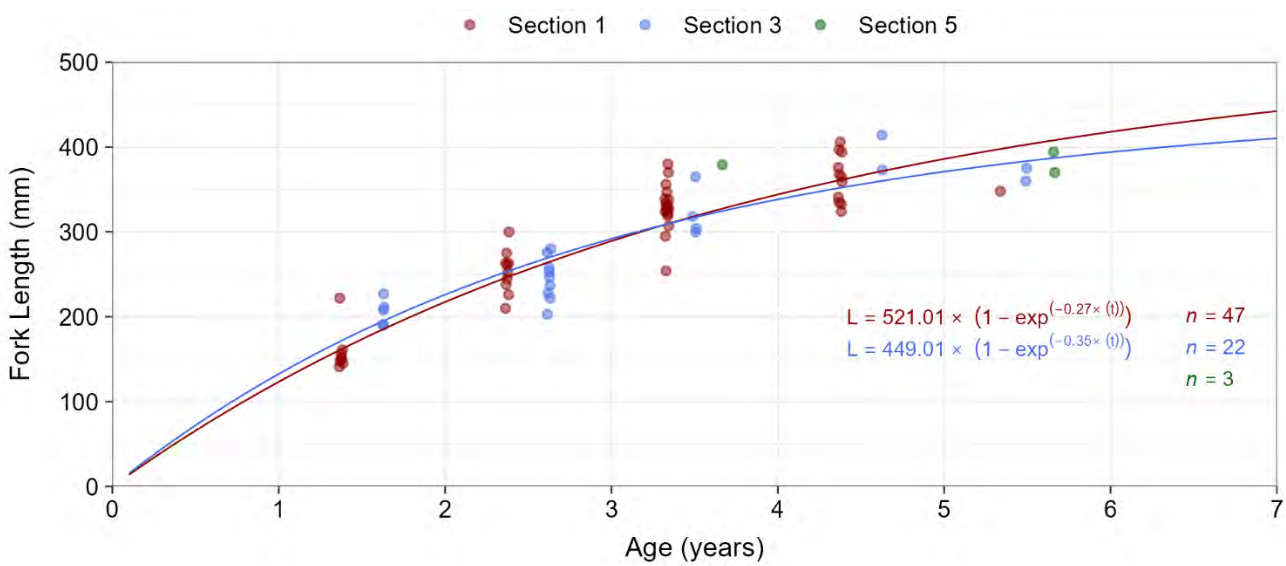


Figure 43: von Bertalanffy growth curve for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022. Growth curves not included for Section 5 due to low catch (*n* = 3).

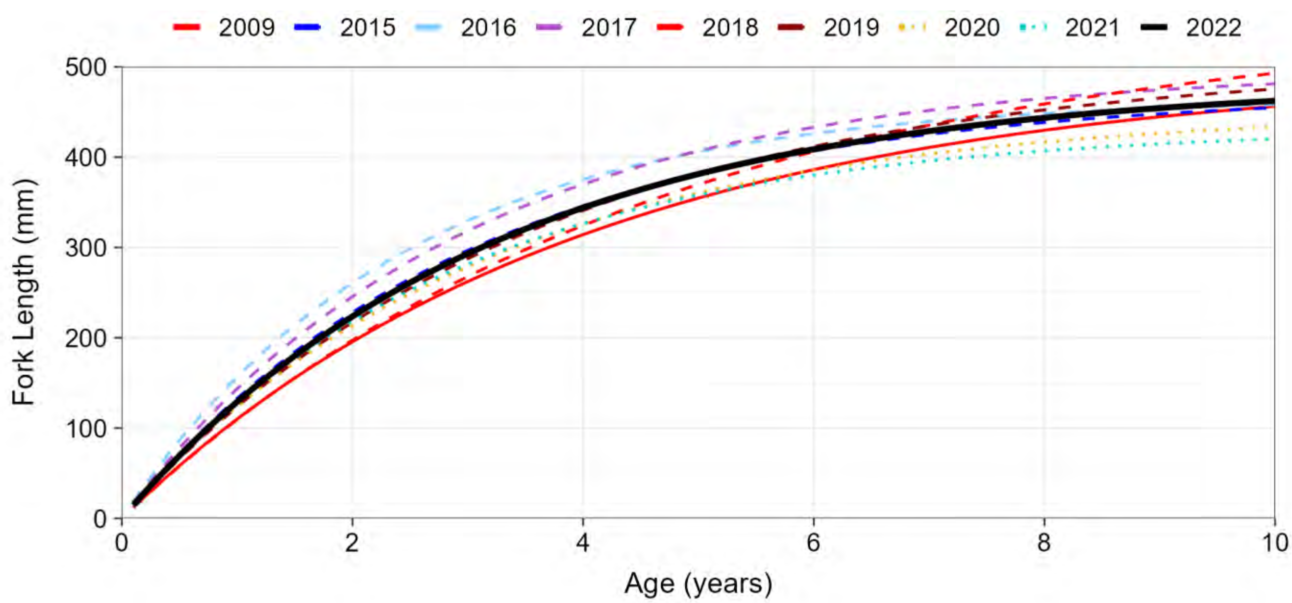


Figure 44: von Bertalanffy growth curve for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 2009 to 2022.

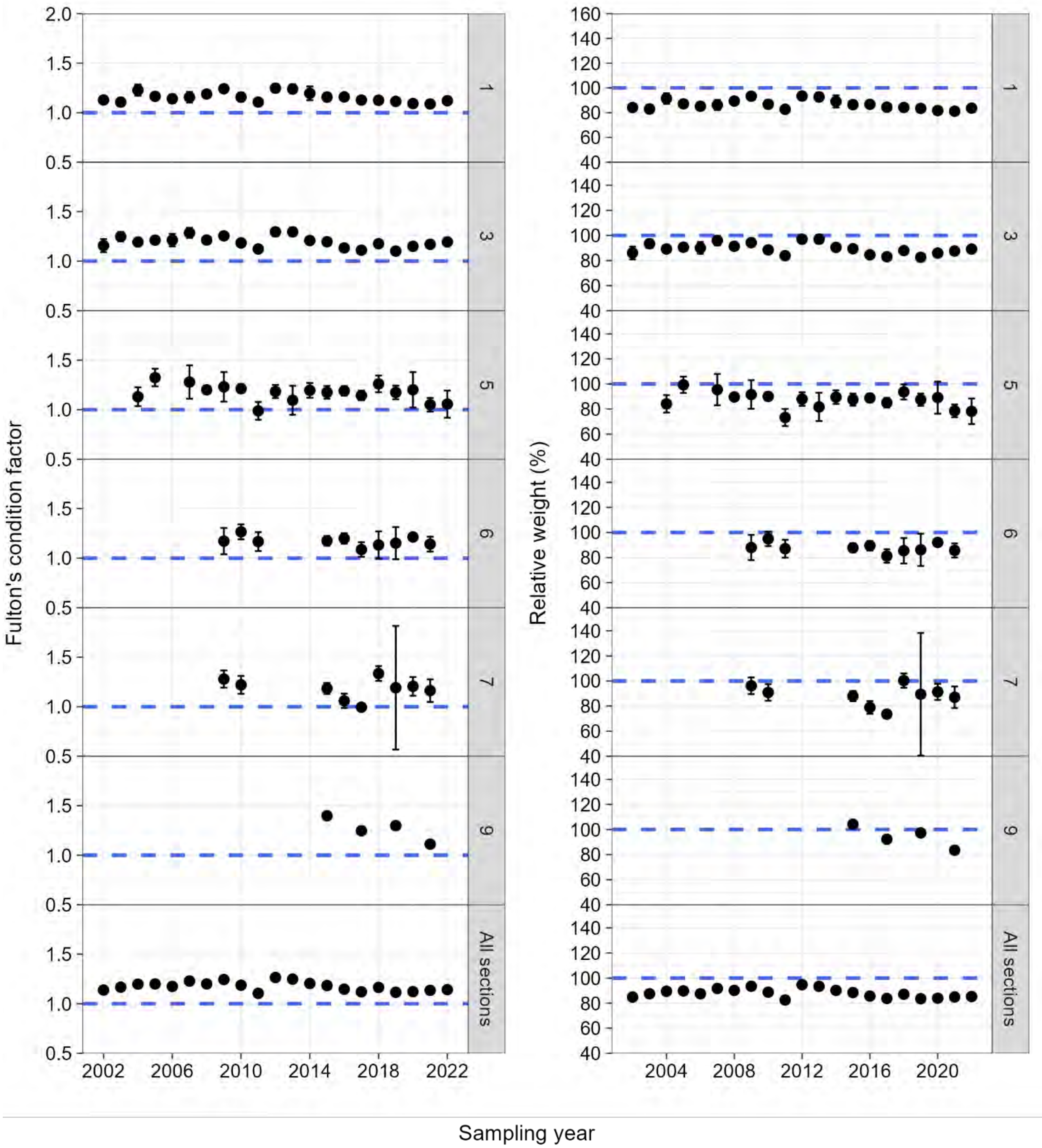


Figure 45: Mean Fulton's body condition factor (*K*) with 95% confidence intervals (left pane) and mean relative weight (%) with 95% CIs values (right pane) for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. For Sections 6, 7, and 9, the analysis 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, 2011a, 2013).

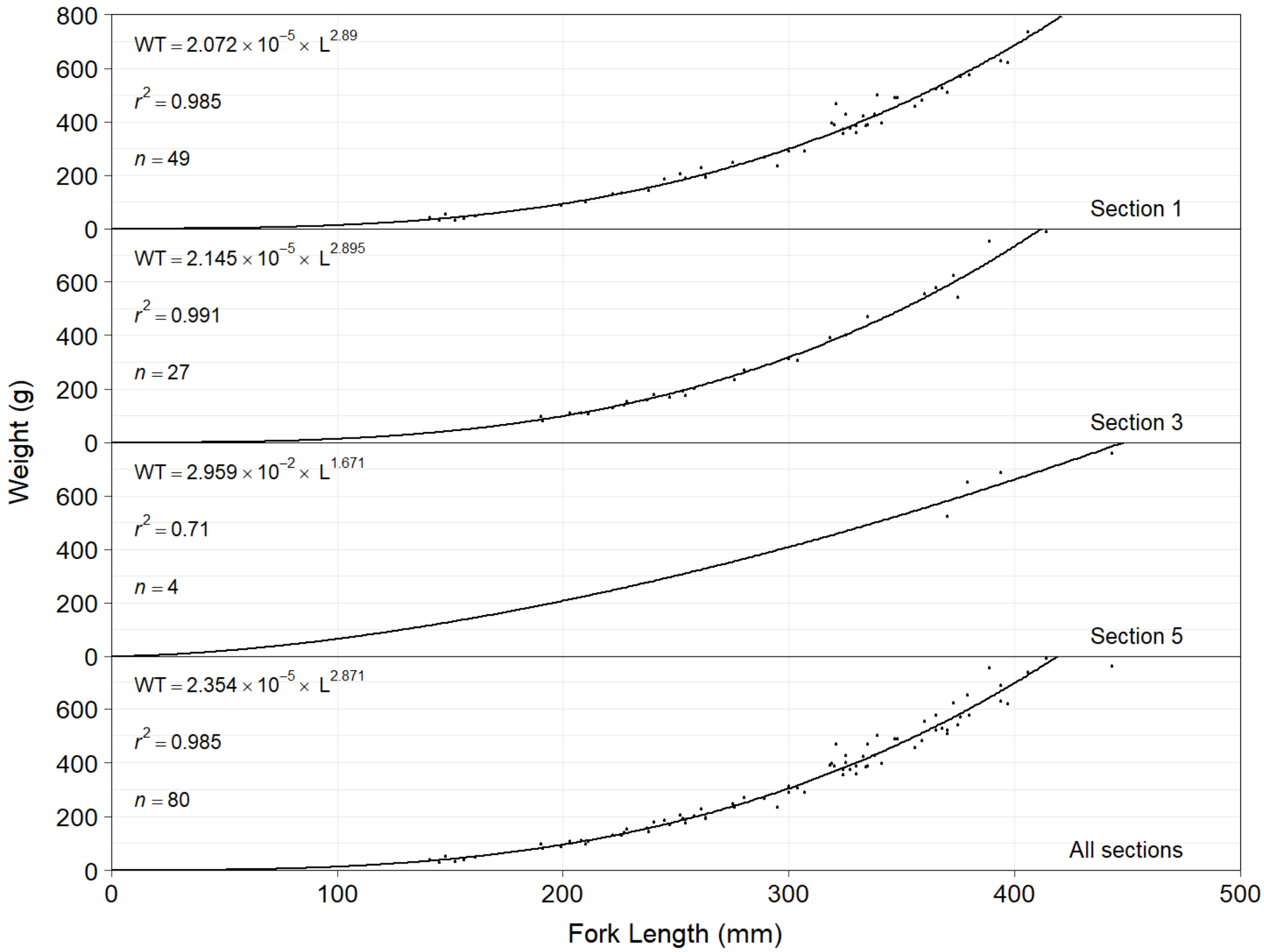


Figure 46: Length-weight regressions for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

3.11.2 Catch Rate

The catch rates of Rainbow Trout were highest in Section 1 and decreased with distance downstream (Figure 47). Mean catch rate decreased between 2018 and 2022 in Section 1 and decreased between 2015 and 2022 in Sections 3, 5. 6, and 7, suggesting a general decline in relative abundance in the study area. Catch rates are not shown for years prior to 2015 because all six sections were not consistently sampled during those years.

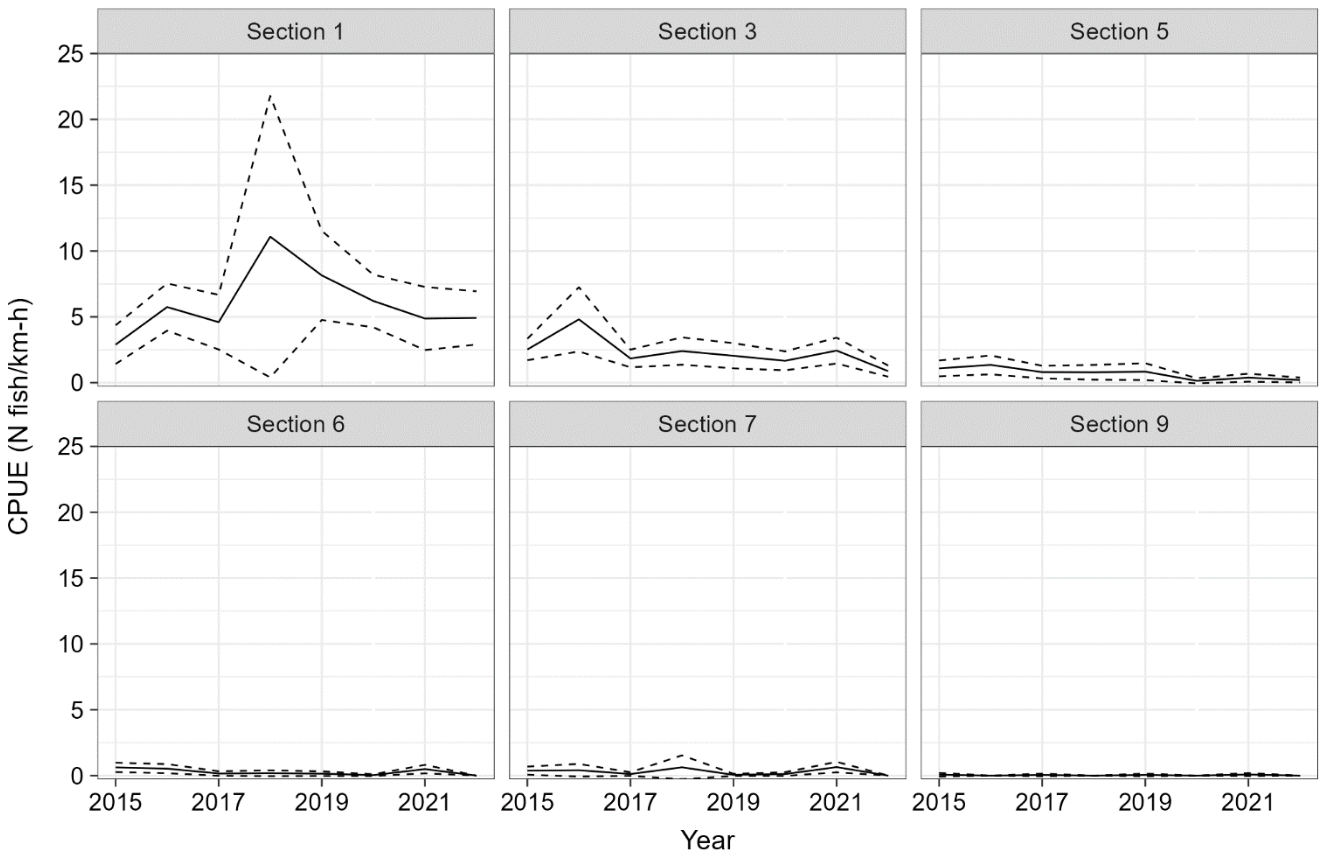


Figure 47: Mean annual catch rates (CPUE) for Rainbow Trout captured by boat electroshocking in Sections 1, 3, 5, 6, 7, and 9 of the Peace River, 2015 to 2022. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because Rainbow Trout were not consistently targeted prior to 2015.

3.12 Walleye

3.12.1 Biological Characteristics

During the 2022 survey, 216 Walleye were captured (i.e., excluding within-year recaptures), all of which were captured in Sections 5, 6, 7 and 9. Fork lengths of captured Walleye ranged between 191 and 715 mm, weights ranged between 64 and 5245 g, and body condition ranged from 0.85 to 1.43. Assigned ages ranged between age-1 to age-23 (Table 13).

In 2022, a single Walleye was captured in Section 9 with a length of 191 mm FL (likely corresponding to age-1). A mode representing the age-2 age-class (approximately 230 to 260 mm FL) was evident in the length-frequency histogram in all sections combined (Figure 48). The length ranges overlapped between adjacent age classes for all Walleye older than age-3 (Figure 49). The large percentage of age-2 and older fish suggests that the study area is primarily used by subadults and adults during the sampling period. Similar to results from 2021, small Walleye (i.e., fish less than approximately 250 mm FL) were only encountered in Sections 7 and 9. Based on analysis of fin rays collected from Walleye, the most dominant age class encountered in 2022 was age-4, followed by age-5 (Figure 50).

The oldest Walleye captured in 2023 was assigned an age of 23, which is the oldest age in the dataset. This individual was initially captured in 2012 and assigned an age of 12 based on fin ray analysis, and therefore was assigned an age of 23 in 2022 based on the previous fin ray analysis and the number of years elapsed. Between its initial capture in 2012 and its recapture in 2023, this fish grew 8 mm in fork length.

Table 13: Average fork length, weight, and body condition by age for Walleye captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

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	–	–	–	–	–	–	–	–	–
1	–	–	–	–	–	–	–	–	–
2	–	–	–	–	–	–	–	–	–
3	362 ± 34	320 – 414	5	523 ± 144	375 – 756	5	1.08 ± 0.09	0.99 – 1.20	5
4	361 ± 39	312 – 432	13	534 ± 201	320 – 876	13	1.08 ± 0.11	0.90 – 1.25	13
5	365 ± 27	326 – 410	11	538 ± 137	324 – 781	11	1.08 ± 0.09	0.85 – 1.16	11
6	404 ± 52	341 – 460	6	779 ± 242	475 – 1008	6	1.16 ± 0.11	1.02 – 1.36	6
7	425 ± 32	384 – 473	6	851 ± 177	638 – 1095	6	1.10 ± 0.04	1.03 – 1.13	6
8	407 ± 35	359 – 442	4	798 ± 228	546 – 1098	4	1.16 ± 0.08	1.10 – 1.27	4
9	440 ± 37	390 – 474	4	910 ± 222	673 – 1189	4	1.06 ± 0.08	0.99 – 1.13	4
10	543 ± 111	439 – 715	5	2087 ± 1800	918 – 5245	5	1.11 ± 0.21	0.92 – 1.43	5
11	490 ± 19	477 – 504	2	1420 ± 84	1361 – 1480	2	1.21 ± 0.21	1.06 – 1.36	2
12	–	–	–	–	–	–	–	–	–
13	576 ± 164	460 – 692	2	2398 ± 2051	948 – 3848	2	1.07 ± 0.13	0.97 – 1.16	2
14	531	–	1	1973	–	1	1.32	–	1
15	715	–	1	4169	–	1	1.14	–	1
16	671 ± 34	647 – 695	2	3462 ± 276	3266 – 3657	2	1.15 ± 0.08	1.09 – 1.21	2
17	–	–	–	–	–	–	–	–	–
18	–	–	–	–	–	–	–	–	–
19	–	–	–	–	–	–	–	–	–
20	–	–	–	–	–	–	–	–	–
21	–	–	–	–	–	–	–	–	–
22	–	–	–	–	–	–	–	–	–
23	464	–	1	862	–	1	0.86	–	1

[a] Number of individuals sampled.

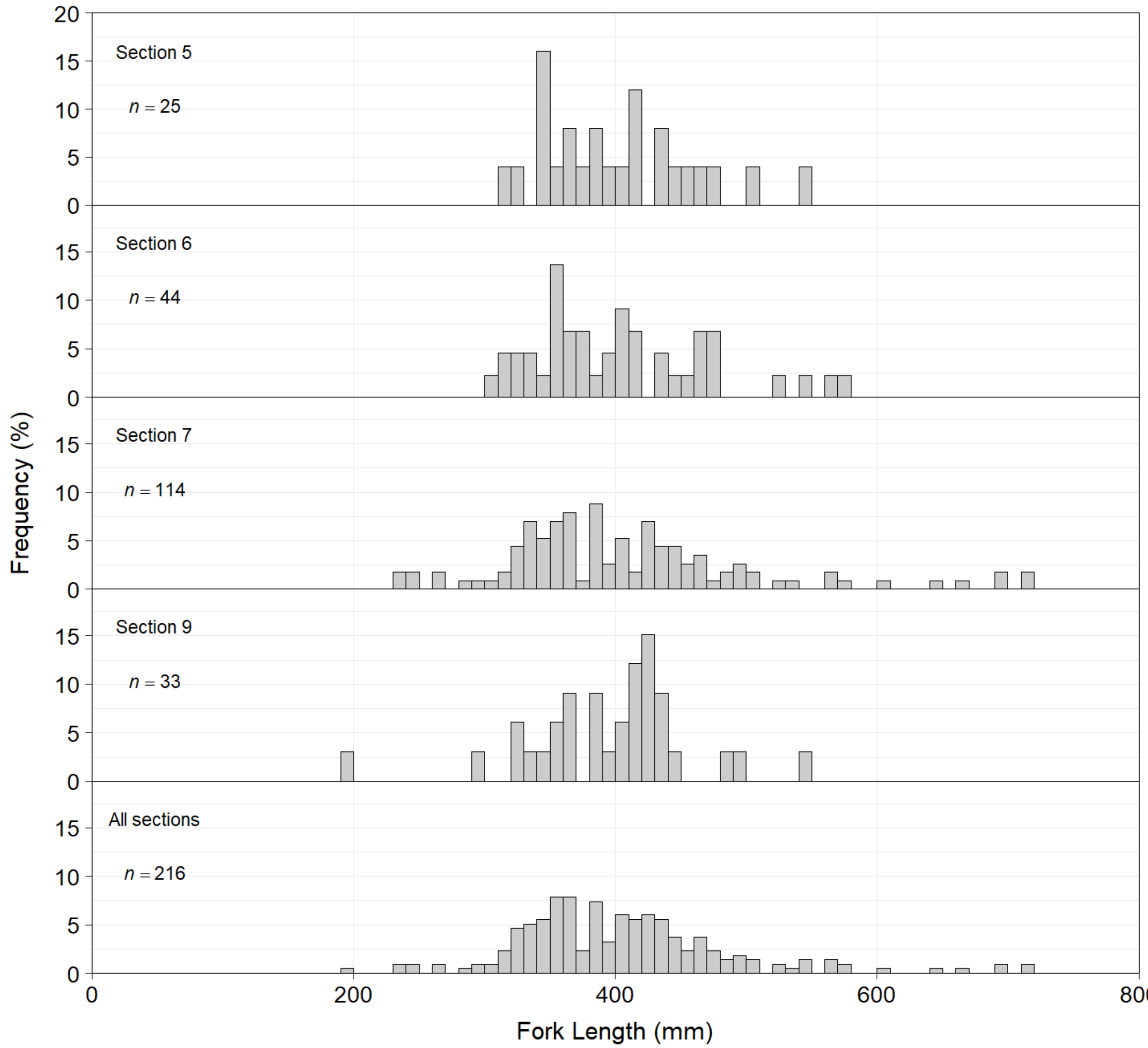


Figure 48: Length-frequency distributions for Walleye captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

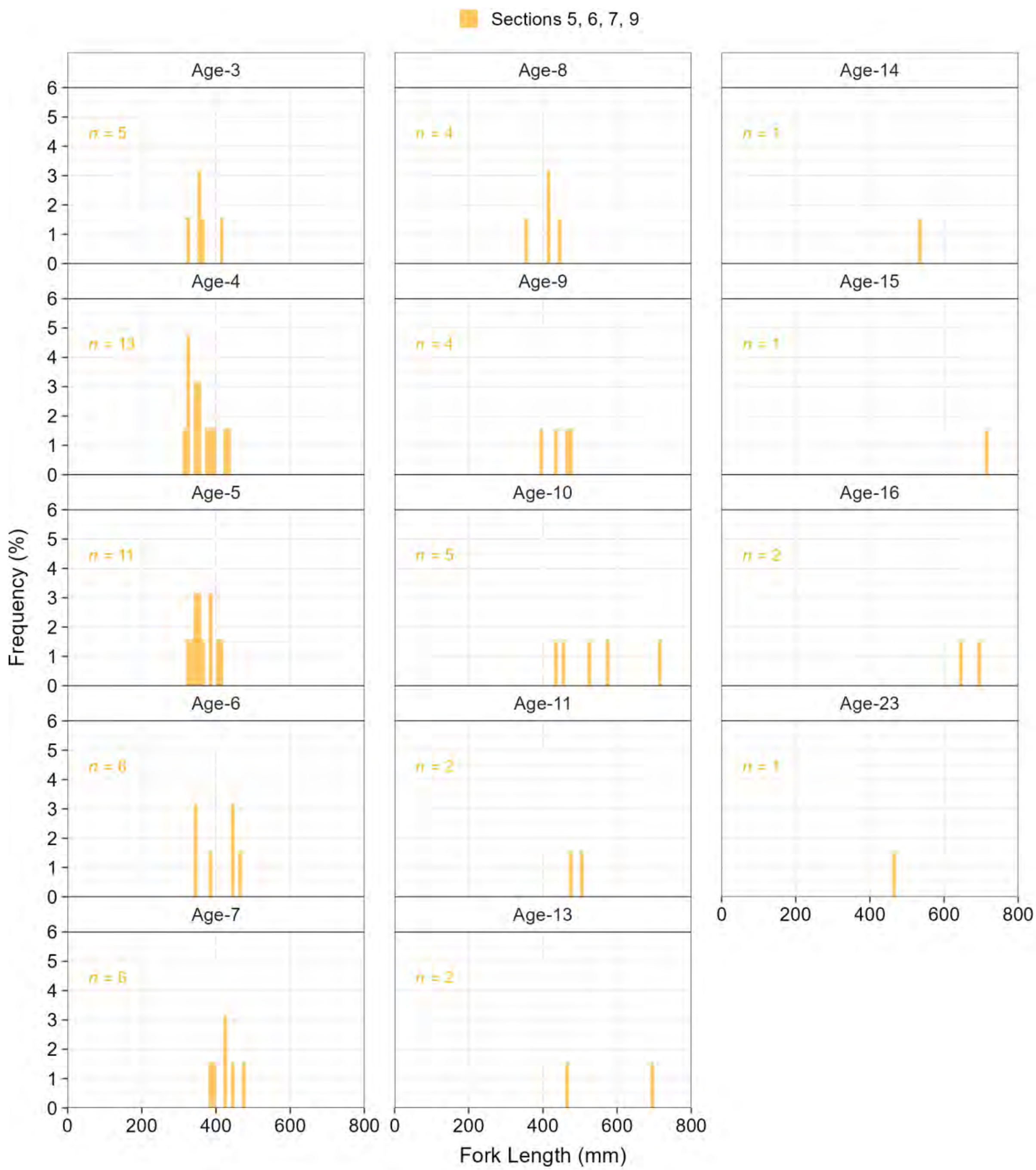


Figure 49: Length-at-age frequency distributions for Walleye captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

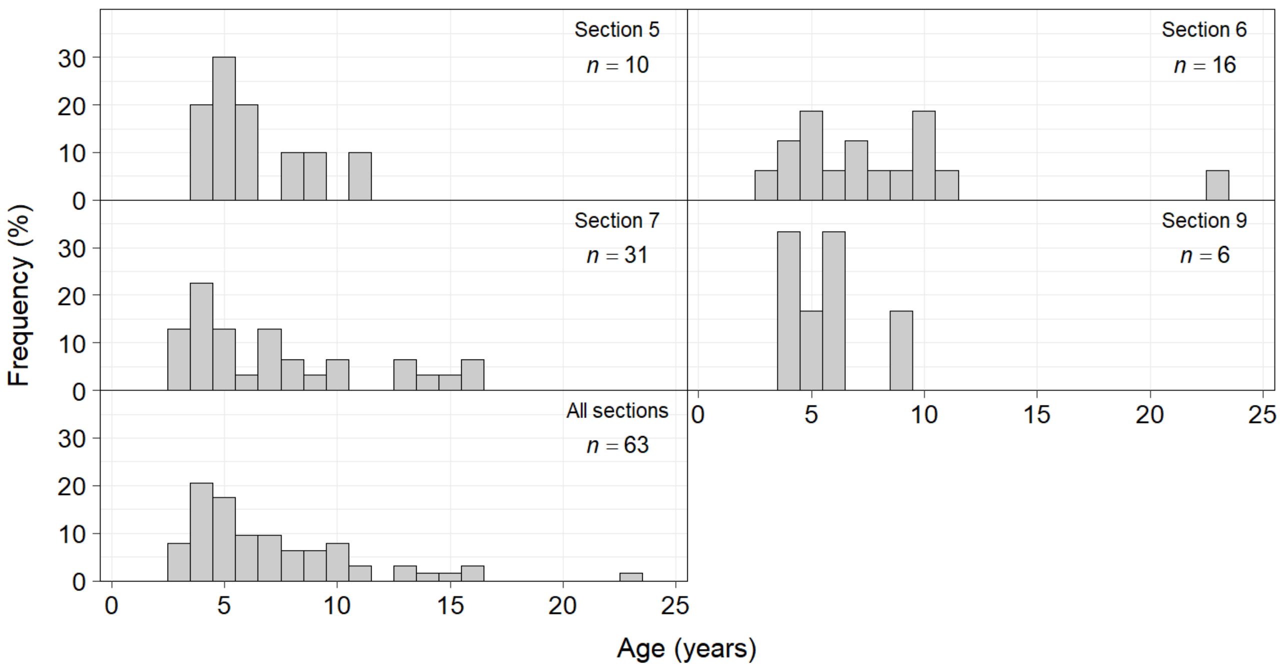


Figure 50: Age-frequency distributions for Walleye captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

Growth curves estimated for Walleye for 2022 using the von Bertalanffy method suggest differences among sections; however, these differences were likely caused by small sample sizes in the younger and older age classes (Figure 51). In particular, the limited catch of age-0 to age-2 individuals and the limited catch of larger fish (i.e., fish larger than 500 mm FL) may have biased these comparisons among sections. Walleye in the Peace River are highly mobile (Hatch et al. 2022). As such, comparisons of growth among sections for this species should be done with caution. Overall, Walleye captured in Section 7 had a higher growth rate compared to those captured in Section 6 (Figure 51).

Comparison of growth curves among years suggest some differences (Figure 52) but as with comparisons among sections, small sample sizes for the older and younger age classes may contribute to these apparent differences. Imprecision in age estimates, particularly for the older age classes, may have also contributed to the observed differences.

Mean body condition varied little among years and sections with confidence intervals overlapping for most estimates (Figure 53). From 2017 to 2022, Walleye body condition (all section combined) was relatively stable over this period, with an average condition factor (*K*) of 1.1. Relative weight values for Walleye had an average value of 91% for all sections combined over the 21-year study period (Figure 53). In 2022, the relative weight value for Walleye was 89%.

The length-weight relationship varied among sections with an exponent of 3.0 in Sections 5 and 6 and an exponent of 3.1 in Sections 7 and 9 (Figure 54). These data suggest that Walleye in the farthest downstream sections have a more rotund body shape (i.e., larger weight-at-length) than those in upstream sections.

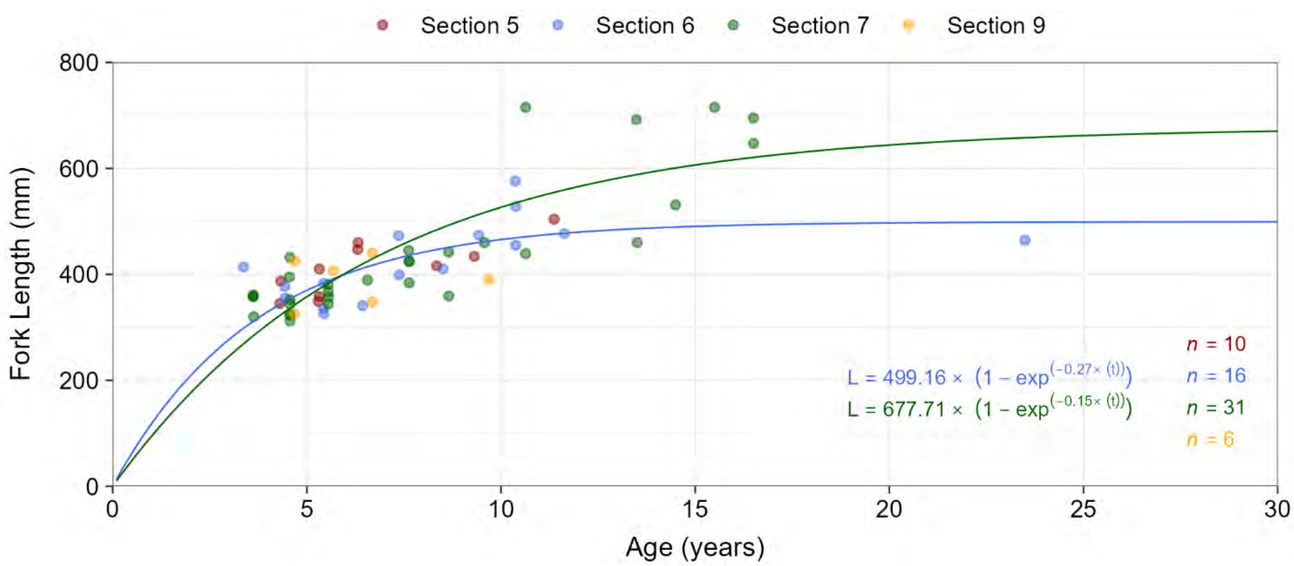


Figure 51: von Bertalanffy growth curve for Walleye captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022. Growth curves not included for Section 5 and 9 due to low catch.

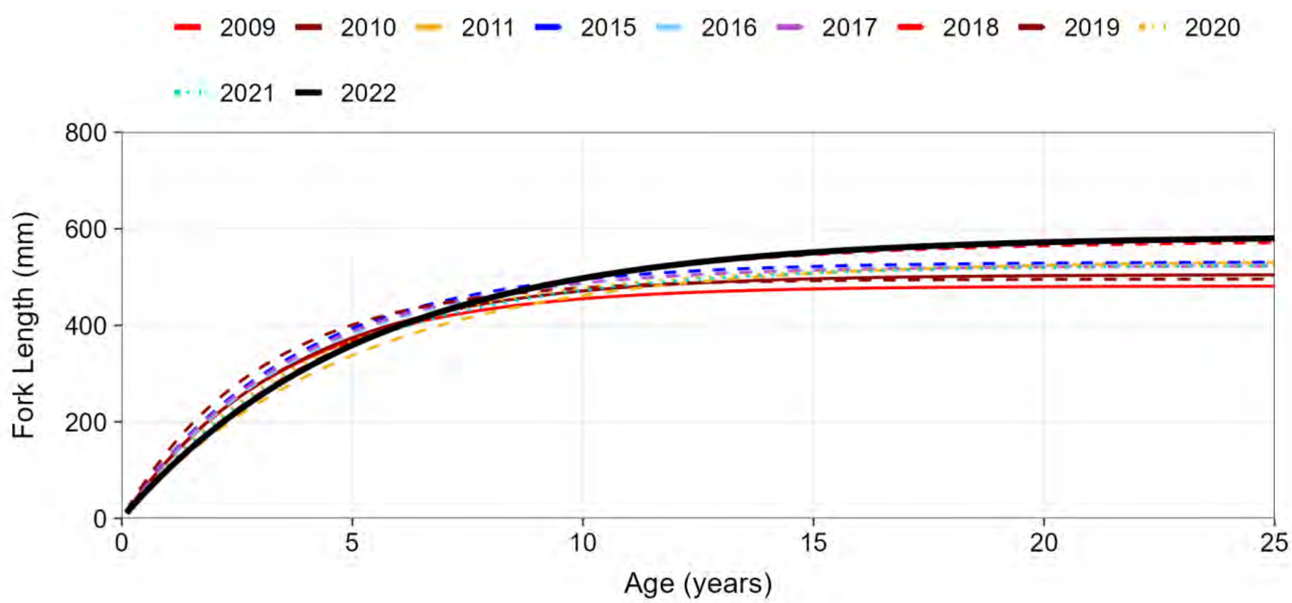


Figure 52: von Bertalanffy growth curve for Walleye captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022.

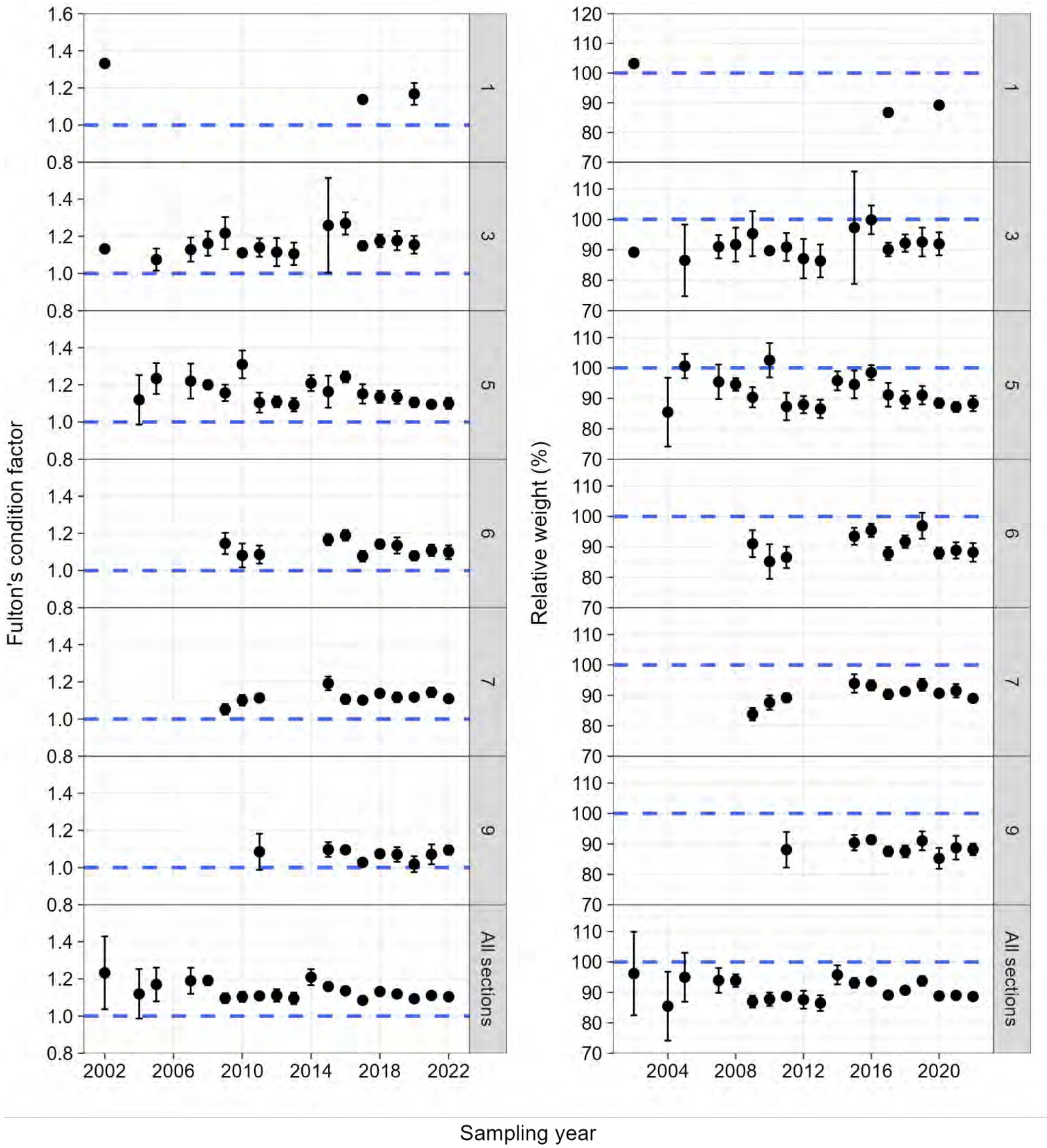


Figure 53: Mean Fulton's body condition factor (*K*) with 95% confidence intervals (left pane) and mean relative weight (%) with 95% CIs values (right pane) for Walleye captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. For Sections 6, 7, and 9, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011a, 2013).

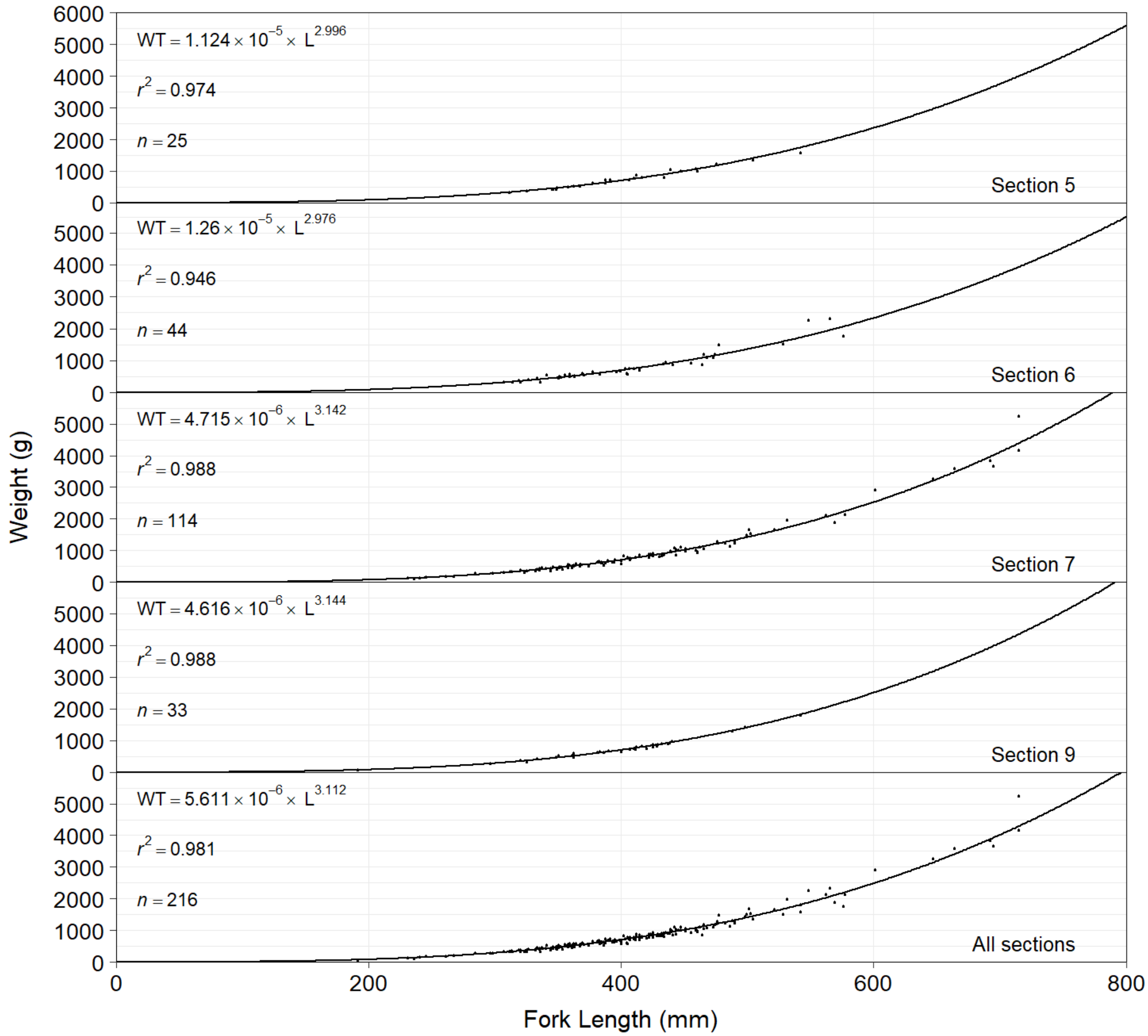


Figure 54: Length-weight regressions for Walleye captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

3.12.2 Catch Rate

In 2022, Walleye were captured in all sections of the study area except Sections 1 and 3. Since 2015 (the year Walleye began being targeted), the total number of Walleye encountered in these two sections (i.e., sections upstream of the Project) has consistently been low compared to downstream sections (Appendix E; Tables E1 and E2), indicating a preference for the downstream portion of the study area for this species.

Trends in the catch rate of Walleye between 2015 and 2022 varied among sections (Figure 55). In Section 5, mean catch rate was similar in most years (0.6–2.5 fish/km-h), except for 2021 when catch rate was higher (6.9 fish/km-h). In Section 7, where the catch rate of Walleye was consistently the highest, mean catch rate varied from a minimum of 2.0 fish/km-h in 2015 to a maximum of 26.0 fish/km-h in 2018 and was 14.1 fish/km-h in 2022. Catch rates suggested little change in relative abundance among years in Sections 6 and 9. Years prior to 2015 were excluded from catch rate analyses because this species was not consistently targeted and because Walleye were not commonly captured in Sections 1, 3, and 5, which were the only sections surveyed prior to 2015.

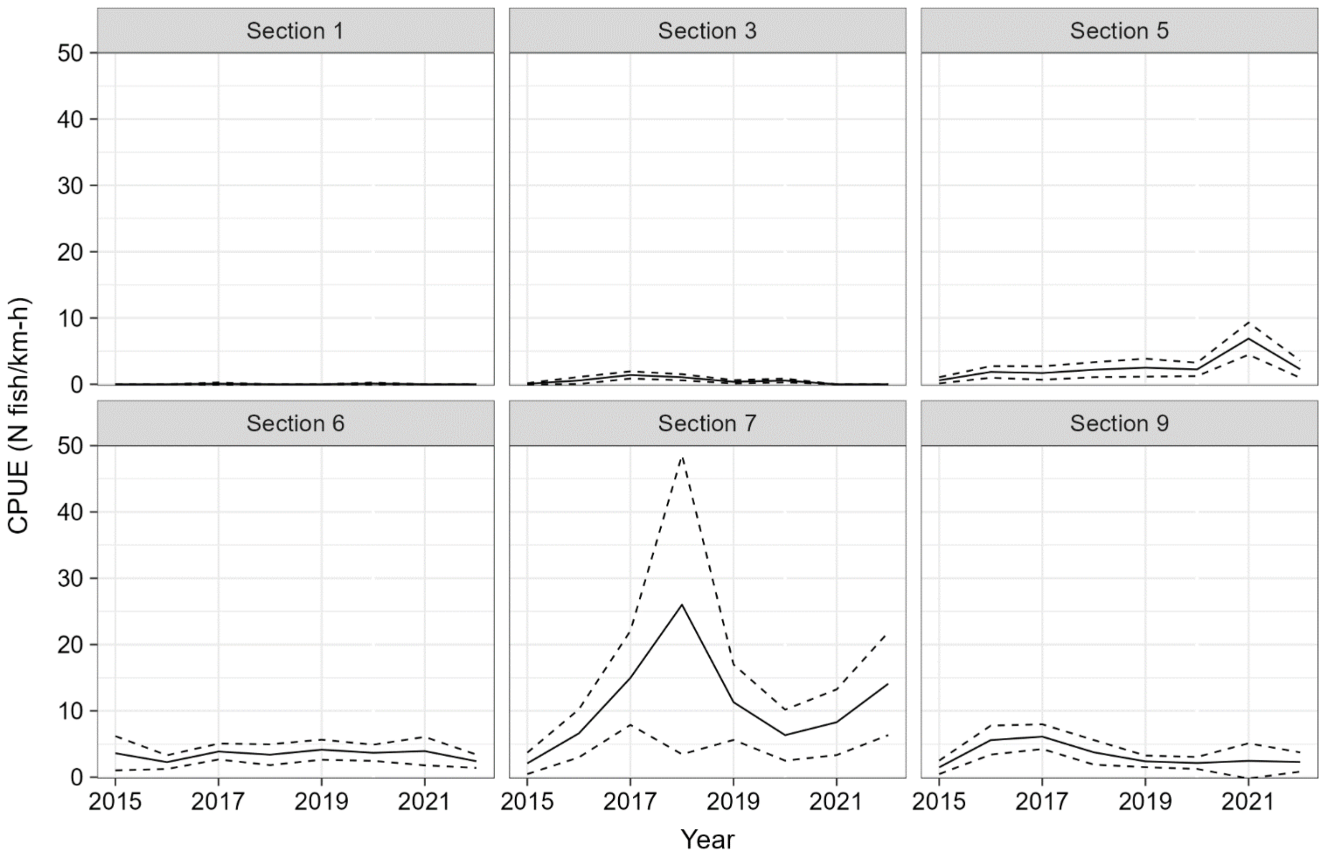


Figure 55: Mean annual catch rates (CPUE) for Walleye captured by boat electroshocking in Sections 1, 3, 5, 6, 7, and 9 of the Peace River, 2015 to 2022. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because Walleye were not consistently targeted prior to 2015.

3.13 White Sucker

3.13.1 Biological Characteristics

During the 2022 survey, 186 White Sucker were captured (i.e., excluding within-year recaptures; Table 9). Of these, 140 were measured for length and weight. Fork lengths ranged between 65 and 482 mm and weights ranged between 3 and 1604 g.

In 2022, four YOY White Sucker were captured with lengths ranging from 65 to 97 mm FL (Figure 56). Small White Sucker (i.e., fish less than 300 mm) were more common in Sections 5, 7, and 9 compared to other sections. Of all measured White Sucker, the majority (81%) were between 300 and 500 mm FL. This finding is consistent with previous years (Appendix F, Figure F41 and F42).

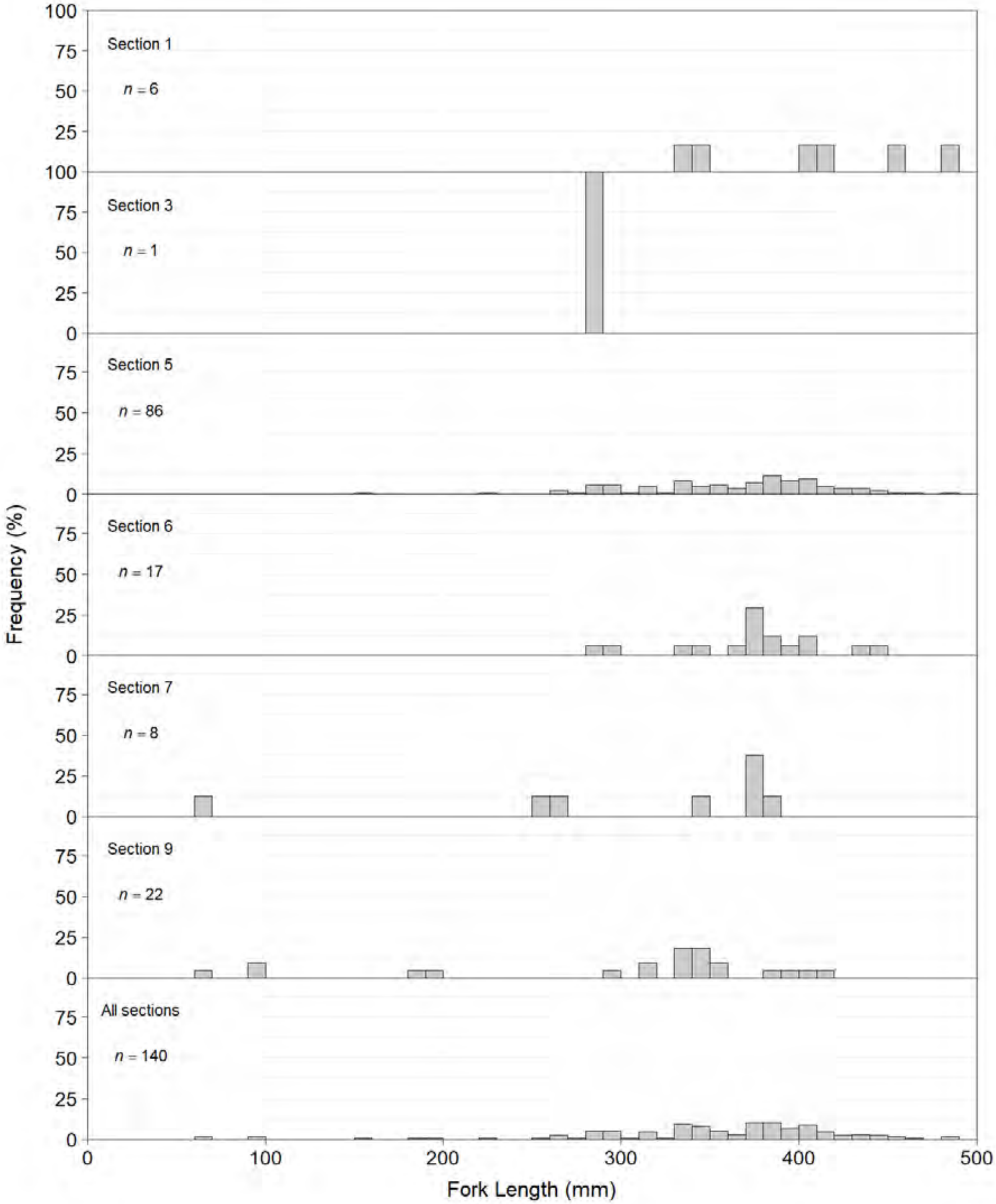


Figure 56: Length-frequency distributions for White Sucker captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

In 2022, the mean body condition (*K*) of White Sucker was near the long-term average values for most sections, with the exception of Section 5 (Figure 57). In Section 5, mean body condition in 2021 and 2022 (*K* = 1.21 and 1.23, respectively) was lower than all previous study years, indicating that White Sucker within this section were skinnier in recent years. Relative weights were not calculated for White Sucker.

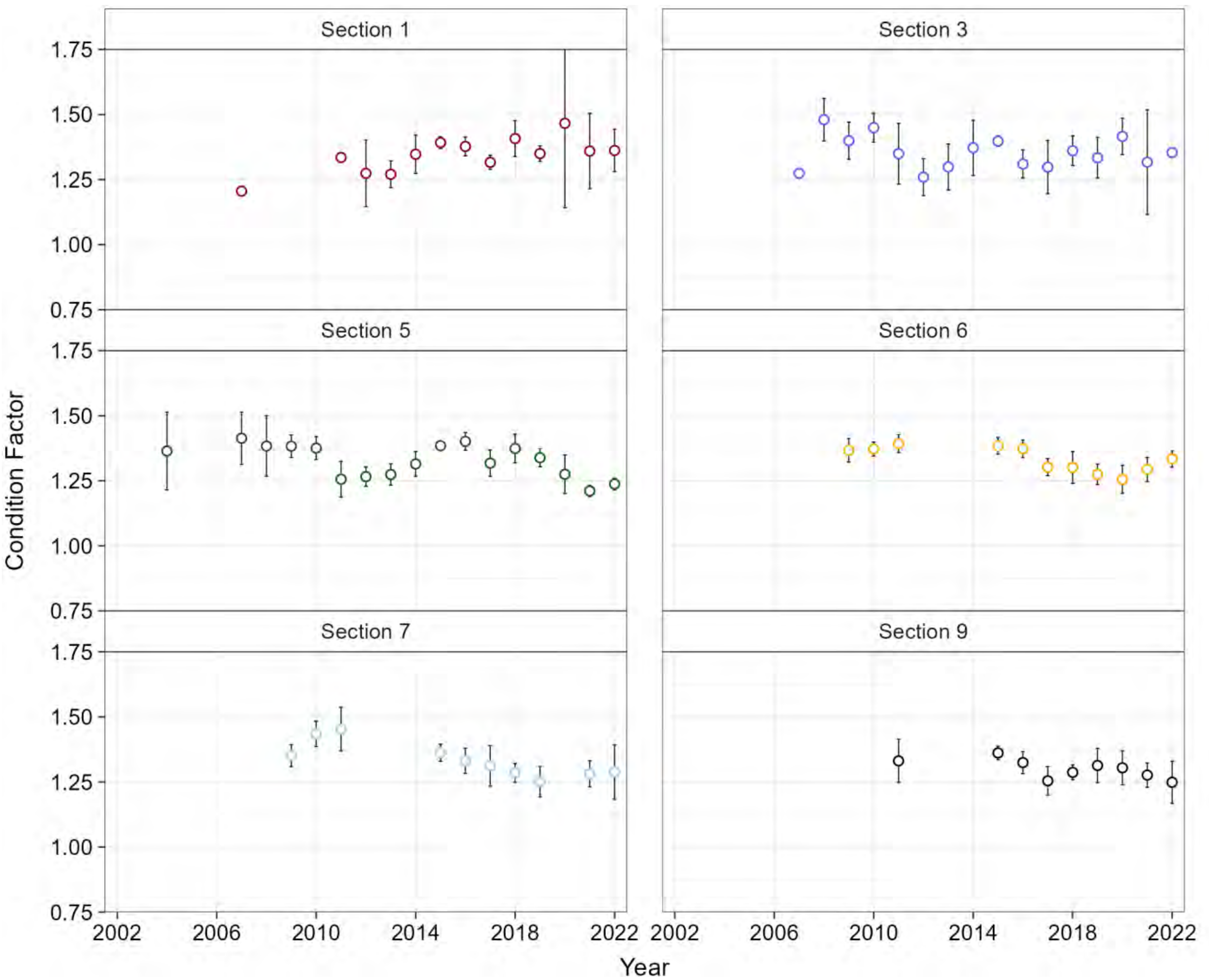


Figure 57: Mean Fulton's body condition factor (K) with 95% confidence intervals for White Sucker captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. For Sections 6, 7, and 9, the analysis was supplemented with data collected during boat electroshocking surveys conducted during the late summer to fall period of 2009, 2010, and 2011 by Mainstream (2010, 2011a, 2013).

Small sample sizes (particularly in Sections 1 and 7) limited meaningful comparisons of length-weight relationships among some sections; however, in general, the available data did not suggest any large differences in the length-weight relationship among sections (Figure 58). Length-weight relationships in 2022 were similar to previous years (Appendix F, Figure 43).

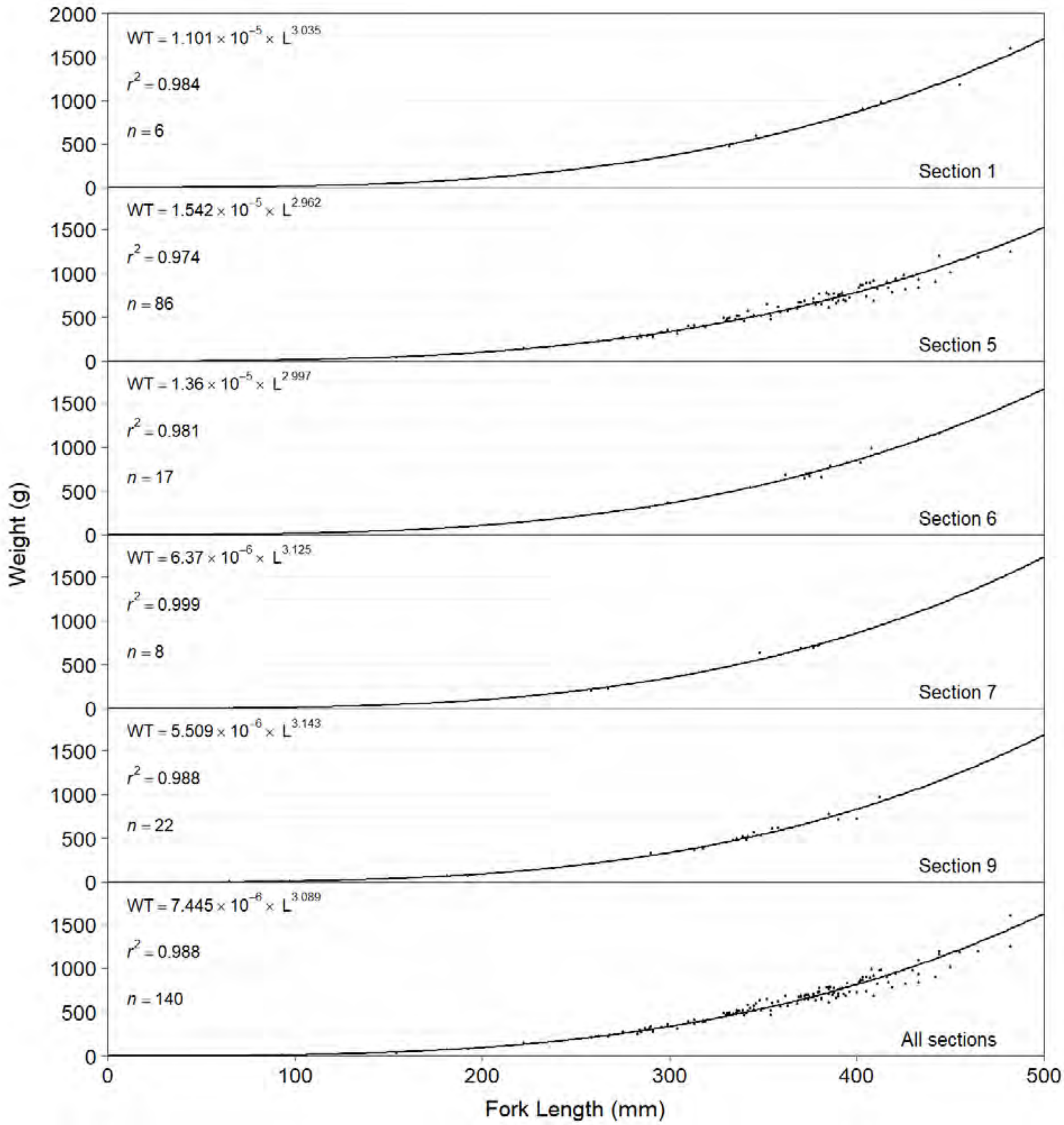


Figure 58: Length-weight regressions for White Sucker captured by boat electroshocking in sampled sections of the Peace River, 17 August to 5 October 2022.

3.13.2 Catch Rate

Trends in the catch rate of White Sucker between 2015 and 2022 varied among sections (Figure 59). The mean catch rate in Sections 1 and 3 decreased between 2015 (13.1 and 4.0 fish/km-h, respectively) and 2022 (0.7 and 0.1 fish/km-h, respectively). In Section 5, mean catch rate increased substantially in 2021 (19.8 fish/km-h) and remained relatively high in 2022 (9.6 fish/km-h) compared to most previous years . The mean catch rate of White Sucker in Sections 6, 7, and 9 varied over time with no consistent long-term trend.

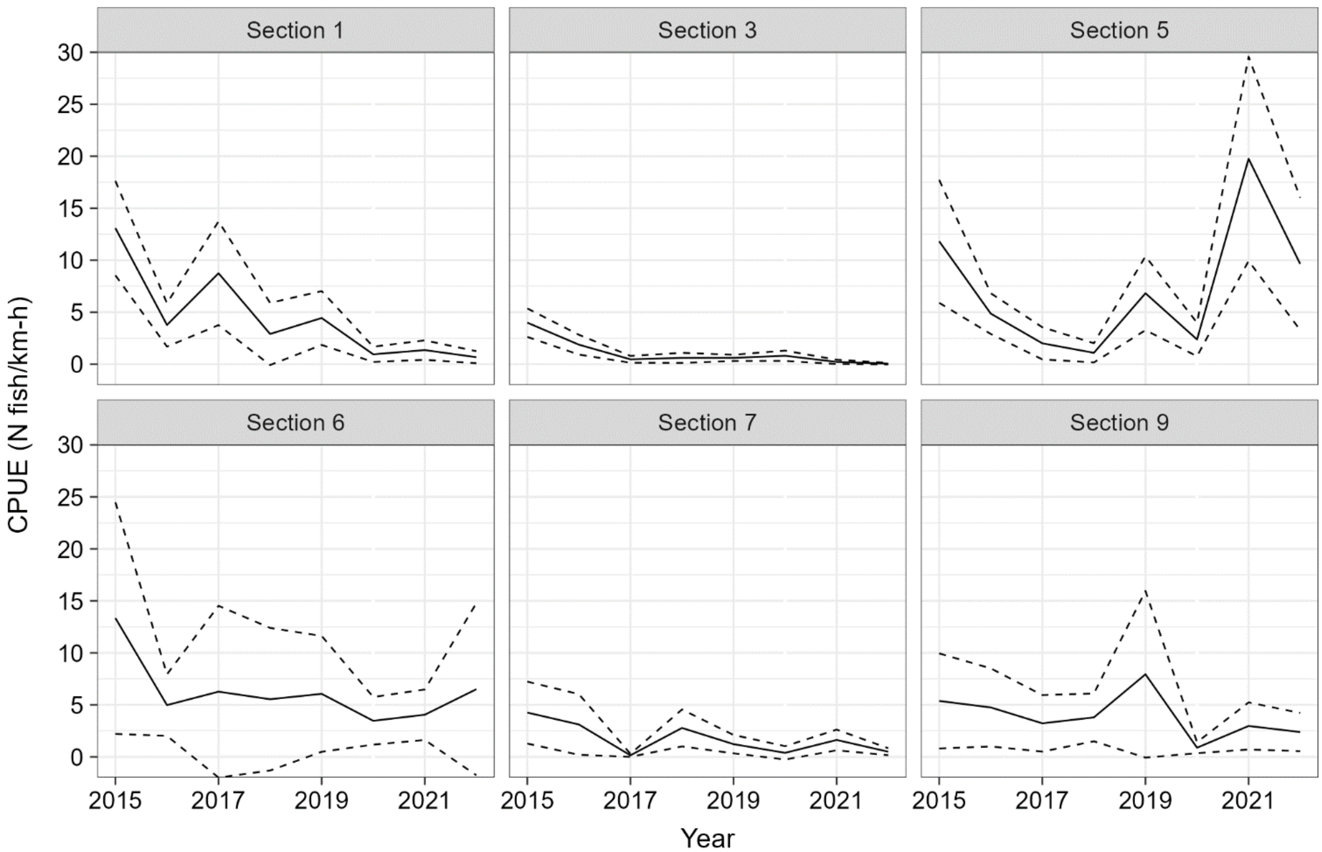


Figure 59: Mean annual catch rates (CPUE) for White Sucker captured by boat electroshocking in Section 1, 3, 5, 6, 7, and 9 of the Peace River, 2015 to 2022. The dashed lines denote 95% confidence intervals. Analysis included captured fish only and all sizes combined. The 2002 to 2014 study years were excluded from the analysis because White Sucker were not consistently targeted prior to 2015.

3.14 Goldeye and Walley Survey

In total, 18 Walleye and 6 Goldeye were captured during boat electroshocking surveys conducted as part of the 2022 Goldeye and Walleye Survey (Table 14). Of these, 83% of Walleye were captured near the mouth of the Beatton River (Sites 07BEA01 and 07BEA02), and all Goldeye were captured near the mouth of the Clear River (n = 4) and Pouce Coupe River (n = 2). Of the 18 Walleye captured, 8 were inter-year recaptures that had been caught and tagged in a previous year. All captured Goldeye had not been previously captured.

During the surveys, field crews specifically targeted Walleye and Goldeye; however, other indicator species were encountered, including Burbot, Mountain Whitefish, and Northern Pike (Table 14). All of the Walleye and Goldeye captured during the Goldeye and Walleye Survey were classified as adults based on body length (295 to 656 mm FL for Walleye, and 349 to 406 mm FL for Goldeye). Ages assigned to Walleye using fin ray analysis ranged from age-4 to age-14. Scale samples were used to age four of the six captured Goldeye, with ages ranging from age-13 to age-16. The range of lengths and ages of Walleye captured during the Goldeye and Walleye Survey were similar to those captured during the Indexing Survey, suggesting similar use of the area by these species during the spring to early summer season as the mid-summer to early fall season. Walleye and Goldeye spawn in the spring, shortly after ice-melt (McPhail 2007, Nelson and Paetz 1992). Although captured Walleye and Goldeye 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).

Table 14: Average fork length, weight, and body condition of indicator species captured by boat electroshocking during the Goldeye and Walleye Survey, 15 May to 30 June 2022

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]
Burbot	1	400 ± 30	358 - 430	4	419 ± 74	335 - 497	4	0.66 ± 0.12	0.52 - 0.83	4
Goldeye	1	369 ± 22	349 - 406	6	500 ± 99	394 - 670	6	0.98 ± 0.04	0.93 - 1.03	6
Mountain Whitefish	2	182 ± 91	96 - 390	16	119 ± 182	7 - 637	16	0.95 ± 0.16	0.73 - 1.21	16
Northern Pike	1	598 ± 88	535 - 660	2	1490 ± 518	1124 - 1856	2	0.69 ± 0.06	0.65 – 0.73	2
Walleye	1	430 ± 115	295 - 656	18	1066 ± 977	235 – 3094	18	1.07 ± 0.08	0.92 – 1.19	18

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

[b] Number of individuals sampled.

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, while data collected in 2021 and 2022 represent two years of sampling conducted after the commencement of the river diversion phase of Project construction (3 October 2020). Analyses to test the management hypotheses were not conducted during the present study as this will be conducted after dam completion and reservoir filling (proposed for fall 2023).

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 starting in 2015. Over the 21-year study period (2002 to 2022), small changes were occasionally made to the methods based on results of preceding study years or to better address each programs' management objectives. Examples of some of these changes include the sections of river sampled, 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), and implementing spring sampling sessions to target Goldeye and Walleye. 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 2022, 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 2014–2022 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 in the water. Greater power makes it easier to catch small fish (Dolan and Miranda 2003). Lower frequencies, which were used from 2014 to 2022, 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.

4.3 Arctic Grayling

Over the 21-year monitoring period, the catch rate of Arctic Grayling has generally declined, particularly in Sections 3 and 5, where this species is most commonly encountered. Catch rates were variable but higher from 2004 to 2011 and were variable but low in all years since 2012. In 2022, catch rates were particularly low. Total catch of Arctic Grayling has also declined recently, with a total catch of 16 fish in 2022; representing the second lowest annual catch of the 21-year monitoring period (i.e., when all six sections were sampled, Appendix E, Table E1 and E2). These findings suggest that Arctic Grayling in the Peace River have likely experienced a decline in abundance over the most recent approximately 10 years.

Arctic Grayling are known to spawn in the Moberly River (WSP 2023b; Mainstream 2012), which flows into the Peace River immediately upstream of the Project. After hatching, age-0 Arctic Grayling disperse downstream into the Peace River mainstem over the summer season. The success of these life stages (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). Age data from 2022 indicate that immature and adult age classes of Arctic Grayling are present in the study area; however, age-0 Arctic Grayling were not captured in 2021 or 2022, suggesting poor recruitment during these years. Sampling conducted in the Moberly River as part of the Tributary Survey (Mon-1b, Task 2c) captured 24 YOY in 2021 (Golder 2022b) and 4 YOY in 2022 (WSP 2023b), indicating a successful spawn in both years. The absence of YOY in the Indexing Survey catch in both 2021 and 2022 suggests limited downstream dispersion for these cohorts. The two age-1 Arctic Grayling that were captured in the Peace River in 2022 indicate that some fish from the 2021 brood year successfully dispersed downstream.

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 (Sections 6, 7, and 9) by Arctic Grayling is not fully understood. Since 3 October 2020, the entire flow of the Peace River has been diverted into two diversion tunnels. These tunnels allow downstream fish passage; however, fish are not able to move upstream due to high water velocities within the tunnels. Since 3 October 2020, fish have only been able to move to upstream of the Project with the assistance of transport from the TUF or Site C contingent boat electroshocking surveys. In 2022, fish transport activities commenced on 1 April and between 9 April and 31 May, 26 adult Arctic Grayling were transported from downstream of the Project to the Project forebay release location (BC Hydro 2022a, 2022b; WSP 2023b). An additional 38 Arctic Grayling were transported upstream between 1 June and 31 July (BC Hydro 2022c, 2022d). Furthermore, five Arctic Grayling that were captured in the Peace River and implanted with radio telemetry tags were detected in the Moberly River in 2022 (Hatch et al. 2023) providing evidence that individuals captured downstream of the Project and transported to the forebay release location successfully reached their spawning tributary. Based on the results of radio telemetry studies (Mon-1b, Task 2a), 20% of the radio-tagged Arctic Grayling with recorded spawning behaviour in the Moberly River (n = 20) are inhabiting areas of the Peace River downstream of the Project outside of the spawning period (Hatch et. al. 2023). These findings indicate that a portion of the Peace River Arctic Grayling population has moved downstream through the diversion tunnels after leaving their spawning tributary.

Indicators of body condition (i.e., Fulton's condition factor and relative weight) were low from 2019 to 2022 compared to earlier study years, indicating potentially poor growth conditions during those years. This finding is further supported by growth curves and length-at-age data that indicates that age-1 and age-2 Arctic Grayling were smaller in 2022 compared to previous years.

4.4 Bull Trout

Catch rate was used as an index of Bull Trout relative abundance. Over the 21-year study period, catch rates varied with limited long-term trends. An exception was in Section 1 where Bull Trout catch rates were generally higher from 2011 to 2022 compared to years prior to 2011. This result suggests that Bull Trout abundance in the uppermost section of the study area has increased in recent years.

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; Hatch et al 2020; WSP 2023b). During the August to September study period, the majority of older, mature Bull Trout have migrated into tributaries to spawn and are not common in the Peace River during the Indexing Survey. For these reasons, most Bull Trout encountered during the Indexing Survey were 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 Bull Trout catch 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.

As in 2020 and 2021, Bull Trout were not assigned ages using fin rays in 2022 because previous analyses indicated that ages assigned using this method were not consistent or reliable (Golder and Gazey 2020). Inaccurate age assignments using fin rays was attributed to the following: 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 2022, fish initially captured during the Indexing Survey and during baseline studies for the Project (Mainstream 2010, 2011a, 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 2022, 522 Bull Trout were recorded in the Peace River mainstem that had fork lengths less than 240 mm FL (range: 137 to 239 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 small. The dataset was supplemented with length-at-age data from age-0 to age-2 individuals collected from the Halfway River watershed (Golder 2018–2020, 2021b, 2022b; WSP 2023b) to provide a representative dataset that encompasses all age classes. Although the dataset was small for age-4 and older Bull Trout with ages assigned based on time between captures, this sample size (n = 7) 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.

In 2022, for the first time, an immature Bull Trout that was originally captured and tagged during the Tributary Survey (Mon-1b, Task 2c) was recaptured during the Indexing Survey. This individual was originally captured in 2018 in Cypress Creek at River Km 29.2 (as measured upstream from Cypress Creek's confluence with the Halfway River). At that time, it had a fork length of 101 mm, weighed 11 g, and was implanted with a PIT tag (tag number: 900226000980835). Based on its fork length, this fish was likely from the 2017 brood year (i.e., age-1). It was subsequently recaptured on 25 August 2022 in a side channel of the Peace River near River Km 26 (as measured downstream from WAC Bennett Dam). At that time, it had a fork length of 398 mm, weighed 651 g, and was surgically implanted with a radio telemetry tag (tag frequency: 149.400; tag code: 469). Over the approximately 4 years between capture and recapture, this fish travelled a minimum of 214 km and grew 297 mm. This fish was recaptured at the same Peace River location on both 5 and 26 September 2022 during subsequent surveys associated with the Indexing Survey.

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 and older cohort (i.e., Peace River mainstem growth). The increased growth rate in the Peace River may be related to the transition from a benthic diet to a fish-based diet. In waterbodies 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).

Body condition and relative weight values of Bull Trout were lower from 2016 to 2022 compared to years prior to 2016 (all sections combined). Overall, based on body condition metrics, Bull Trout in the Peace River are considered healthy.

4.5 Mountain Whitefish

In Sections 1, 3, and 5, where Mountain Whitefish were most abundant over the 21-year study period, catch rates were lower in 2022 than any previous year. Catch rates were also low in the downstream sections (Section 6, 7, and 9) and have generally declined since 2018. These findings indicate a recent decline in Mountain Whitefish abundance throughout the study area. Reasons for this apparent decline are not known. Since river diversion, which began on 3 October 2020, Mountain Whitefish downstream of the Project have been unable to access sections of the Peace River upstream of the Project without the assistance of the TUF or contingent boat electroshocking surveys. River diversion could potentially have affected the distribution or abundance of this species, and therefore the lower catch in 2021 and 2022, but decreased catch rates occurred prior to river diversion in 2019 and 2020.

In 2022, as well as previous years of the program, the catch and relative abundance of Mountain Whitefish were highest in Section 1, and abundance generally decreased with distance downstream. The spatial difference in Mountain Whitefish abundance may be attributed to increases in water temperature and turbidity (which both influence benthic productivity) with distance downstream or changes in habitat quality between upstream and downstream sections of the study area.

Indicators of body condition (Fulton’s condition factor and relative weight) were higher in 2022 than 2021 for all sections, indicating better growing conditions in 2022. Mountain Whitefish in Section 1 had the highest body condition (i.e., more rotund than individuals from other sections), and Mountain Whitefish in Section 5 had the lowest body condition (i.e., skinnier than individuals from other sections). The spatial difference in body condition may be related to differences in the abundance of food sources between sections. Mountain Whitefish feed on various life stages of aquatic insects (McPhail 2007) and elevated levels of sedimentation and turbidity can have a negative effect on primary productivity and benthic invertebrate abundance (Henley et al 2000; Schleppe et al. 2019). Section 1 generally has lower turbidity and sedimentation than downstream sections of the Peace River due to inputs of sediment from tributaries, especially the Halfway River, Pine River, and Beatton River (BC Hydro 2013); therefore, food availability for Mountain Whitefish in Section 1 may be higher than other sections.

4.6 Rainbow Trout

Catch data and catch rates indicated a general decline in the abundance of Rainbow Trout from 2018 to 2022. A similar trend was observed in the Tributary Surveys (Mob-1b, Task 2c) where sampling in Farrell and Maurice creeks (i.e., spawning tributaries of the Peace River Rainbow Trout population) showed a decline in the catch rate of immature Rainbow Trout between 2020 and 2022 (WSP 2023b).

Consistent with previous study years, the majority (95%) of 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, landslides (first encountered in 2014) in the Lynx Creek watershed may have left the system less suitable for Rainbow Trout. Lynx Creek has not been sampled as part of the Tributary Survey (Mon-1b, Task2c) because of the persistence of high turbidity and deposited sediment that prevented effective sampling and likely severely reduced habitat suitability for Rainbow Trout (WSP 2023b). As such, whether Lynx Creek is still used by the Peace River Rainbow Trout population is unknown. Rainbow Trout may be prioritizing other tributaries for spawning and rearing (i.e., Farrell and Maurice creeks). In 2022, for the first time, a Rainbow Trout that was originally captured and tagged during the Tributary Survey was subsequently captured during the Indexing Survey. This individual was originally captured in 2021 in Maurice Creek at River Km 2.0 (as measured upstream from Maurice Creek's confluence with the Peace River). At that time, it had a fork length of 107 mm, weighed 16 g, and was implanted with a PIT tag (tag number: 900226001617706). Based on its fork length, this fish was likely from the 2020 brood year (i.e., age-1). It was subsequently recaptured on 29 August 2022 in the Peace River near River Km 31. At that time, it had a fork length of 199 mm and weighed 88 g. Over the approximately 1 year between capture and recapture, this fish travelled a minimum of 6 km and grew 92 mm.

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. This overlap 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 were reported by WSP (2023b) for Colt, Kobes, Maurice, and Farrell creeks, and likely explain the overlapping lengths of age classes observed in the Peace River.

Body condition of Rainbow Trout has remained consistent over the 21-year monitoring period, and metrics suggest that Rainbow Trout from the Peace River are in healthy condition.

4.7 Walleye

Catch rates from 2015 to 2022 suggest a generally stable Walleye population, but with higher relative abundance in 2018 compared to other study years. The higher relative abundance in 2018 suggests a strong spawning cohort that year. Higher catch rates for age-2 Walleye in 2020 and higher catch rates for age-3 Walleye in 2021 also suggest higher recruitment during the 2018 spawning season.

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 (RRCS 1978; Mainstream 2012) and since 2017, these two sites have accounted for 19% of the Walleye catch. All other sites have each accounted for less than 5% of the total Walleye catch since 2017.

The Goldeye and Walleye Survey was conducted annually from 2018 to 2022 during the period from April to July. The number of Walleye captured during the Goldeye and Walleye Survey in 2022 (n = 18) was similar to the Walleye catch recorded in 2018 (n = 22), 2019 (n = 24), and 2020 (n = 22), but substantially lower than the catch recorded in 2021 (n = 57). The timing of the Goldeye and Walleye Survey varied each year to maximize the likelihood of encountering Goldeye. As such, Walleye catch during the Goldeye and Walleye Survey may have been influenced by the timing of sampling relative to the timing of spring spawning migrations (Hatch et al. 2022).

Indicators of body condition (i.e., Fulton's condition factor and relative weight) for Walleye have been stable over the study period and indicate good health for this species.

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 form a large component of the biomass (Golder et al. 2012) and 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 sucker species and river sections, during years when suckers were targeted (2015 to 2022). Catch rates of Largescale Sucker declined in 2022, after a year of high abundance in 2021 when catch rate was higher than all previous years (2015 to 2020) in most river sections. Catch rates in 2022 were lower than all previous years (2015 to 2021) in Section 1, but within the range of values observed in previous years in the other river sections. Reasons for the large variability in catch rate of Largescale Sucker in 2021 and 2022 are unknown. Catch rates of Longnose Sucker, the most abundant sucker species in the Peace River, followed different trends among sections. In Sections 1 and 3, there was a general decline between 2015 and 2022. In contrast, in Sections 5 and 6, catch rate increased substantially in 2021 and remained high in 2022. The catch rate of White Sucker followed a similar trend as Longnose Sucker, with declining catch rates between 2015 and 2022 in Sections 1 and 3, and high catch rates in Section 5 in 2021 and 2022. Although the trends varied between species and sections, catch rates suggested higher relative abundance of suckers in the section immediately downstream of the Project (Section 5) in the last two years (2021 and 2022), and a longer-term (2015–2022) decline in sucker abundance in Sections 1 and 3 upstream of the Project. If catch rates reflect real trends in absolute abundance, the different trends between Largescale Sucker versus Longnose and White Sucker 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 spatial distribution of suckers varied by species and life stage. During most study years, immature Largescale Sucker and Longnose Sucker were infrequently captured in Section 1 and were more common in downstream sections. In 2022, immature Largescale Sucker and Longnose Sucker were most common in Section 3 and Section 9. White Sucker was the least common of the three species in all six sections, and nearly all captured White Sucker were adults.

In most sections, the average body condition of Largescale Sucker and Longnose Sucker was low from 2016 to 2022 compared with earlier study years. Body condition of White Sucker was generally stable in all sections over the study period. One exception was Section 5, where body condition was low in both 2021 and 2022 for this species, suggesting poorer growing conditions in this section during these studies years.

4.9 Other Species

For two of the seven indicator species (Burbot and Goldeye), low catches prevented detailed analyses and interpretation of trends. In 2022, only 1 Goldeye and 12 Burbot were captured during the Indexing Survey.

The number of Burbot captured was low in most years, with annual catches typically less than 20 individuals, 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).

Burbot prefer deeper water during the daytime, and tetany (i.e., temporary paralysis), instead of galvanotaxis (i.e., directed swimming towards the anodes), is a common response by Burbot while conducting electroshocking surveys. For these reasons, Burbot that are observed during the Indexing Survey are typically further away from the netters, making them more difficult to net and reducing their catch rate. Due to typically low catch rates, 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 2022, one Goldeye were captured during the Indexing Survey and six 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 spawn in select tributaries, most notably the Beatton River (Mainstream 2011a). Microchemistry data from 13 Goldeye captured during the 2021 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 in Alberta (TrichAnalytics 2020).

Since 2015, the majority (82%) 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 potential 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 2022, 37 Spottail Shiner were encountered in Section 5 (*n* = 5), Section 6 (*n* = 14), Section 7 (*n* = 5), and Section 9 (*n* = 13). 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). Since 2015, no more than 15 Spottail Shiner have been captured annually during the Indexing Surveys, and this species has never been captured in Section 1 or 3.

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 operation of the Project.

Catch rates used to assess trends in relative abundance suggested stable abundance since 2015 for Bull Trout and Walleye. Catch rates for Arctic Grayling and Mountain Whitefish decreased during most successive years between 2015 and 2022, suggesting gradually declining abundance for both species. Similarly, catch rates for Rainbow Trout generally declined between 2018 and 2022. In 2022, the catch rates of Arctic Grayling and Mountain Whitefish were below the range of values recorded during previous study years for most sections. The catch rates of sucker species suggested higher relative abundance of the three sucker species in the section immediately downstream of the Project (Section 5) in 2021 and 2022 and a longer-term (2015–2022) decline in sucker abundance in Sections 1 and 3 upstream of the Project, with some variation around these general trends, depending on the species. Samples sizes of captured fish were low for Burbot, Goldeye, and Northern Pike, but the available data did not suggest any substantial changes in abundance since 2015.

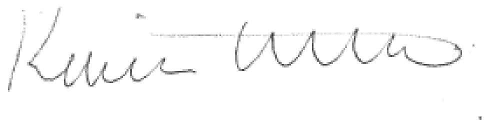
Analyses of size-structure, age-structure, and body condition of fish populations suggested few differences between 2022 and previous years for nearly all species and metrics. Exceptions included smaller than typical age-1 and age-2 Arctic Grayling in 2022 and lower body condition for Longnose Sucker, Mountain Whitefish, and White Sucker in Section 5 compared to other sections and compared to most previous years. These results indicate poor growing conditions for these species in 2022 within Section 5.

In 2022, the Goldeye and Walleye Survey involved four days of sampling in the spring near the confluences of seven tributaries of the Peace River that are known or potential spawning tributaries or feeding areas for Goldeye and Walleye. In total, 6 Goldeye and 18 Walleye were captured during the Goldeye and Walleye Survey in 2022. Despite the additional sampling effort, total Goldeye catch remained low, 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 you require further detail, please contact the undersigned.

WSP Canada Inc.



Kevin Little, BSc, RPBio
Senior Aquatic Biologist

Dustin Ford, BSc, RPBio
Principal, Senior Fisheries Biologist

KL/DF/lih

https://golderassociates.sharepoint.com/sites/124586/Project Files/6 Deliverables/Issued to Client_For WP/20136470-040-R-Rev0/20136470-040-R-Rev0-2022 Peace Indexing Rpt 20DEC_23.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 2022

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	0502	RDB	10	630016	6229305	106.2	10	630954	6229298	107.1	950
	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:

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	10	644400	6224099	123.0	1200
	0602	RDB	10	644567	6223590	123.3	10	645385	6223368	124.1	900
	0603	IRDB	10	646156	6223144	124.8	10	647208	6222813	125.9	1300
	0604	RDB	10	646546	6222599	125.4	10	647508	6222650	126.2	1000
	0605	IRDB	10	647888	6222979	126.5	10	648668	6223109	127.3	800
	0606	LDB	10	649302	6223371	127.1	10	650601	6222912	129.3	1400
	0607	IRDB	10	651250	6222649	130.0	10	652139	6222123	131.0	1000
	0608	RDB	10	647711	6222699	126.4	10	648681	6222855	127.3	1000
	0609	ILDB	10	649423	6223115	128.0	10	650300	6222732	129.0	1000
	0610	ILDB	10	650309	6222738	129.0	10	651089	6222427	129.9	850
	0611	ILDB	10	651070	6222442	129.9	10	651842	6221990	130.9	900
	0612	IRDB	10	652136	6222141	131.0	10	652937	6221822	132.0	850
	0613	RDB	10	653270	6221438	132.4	10	654182	6221491	133.2	900
	0614	IRDB	10	645301	6223722	123.5	10	646108	6223365	124.7	975
	06PIN01	RDB	10	641497	6223588	1.9[d]	10	642638	6224067	0.3[d]	1500
	06PIN02	RDB	10	642639	6224071	0.3[d]	10	643433	6224055	122.2	1000
	06SC036	IRDB	10	654048	6222162	133.3	10	654522	6222203	133.8	500
	06SC047	RDB	10	644017	6223518	122.8	10	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
	09SC053	RDB	11	360795	6239970	220.8	11	361029	6240059	221.1	260
	09SC061	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).

[f] River kilometres measured upstream from the Kiskatinaw 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 2022

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	830
	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	730
	07MileSix01	RDB	10	655486	6222037	134.7	10	655782	6222032	135.1	310
8	08CLE01	LDB	11	331479	6228739	187.4	11	332103	6228412	188.1	700
	08POC01	RDB	11	318808	6224656	173.6	11	319816	6224760	174.5	1100

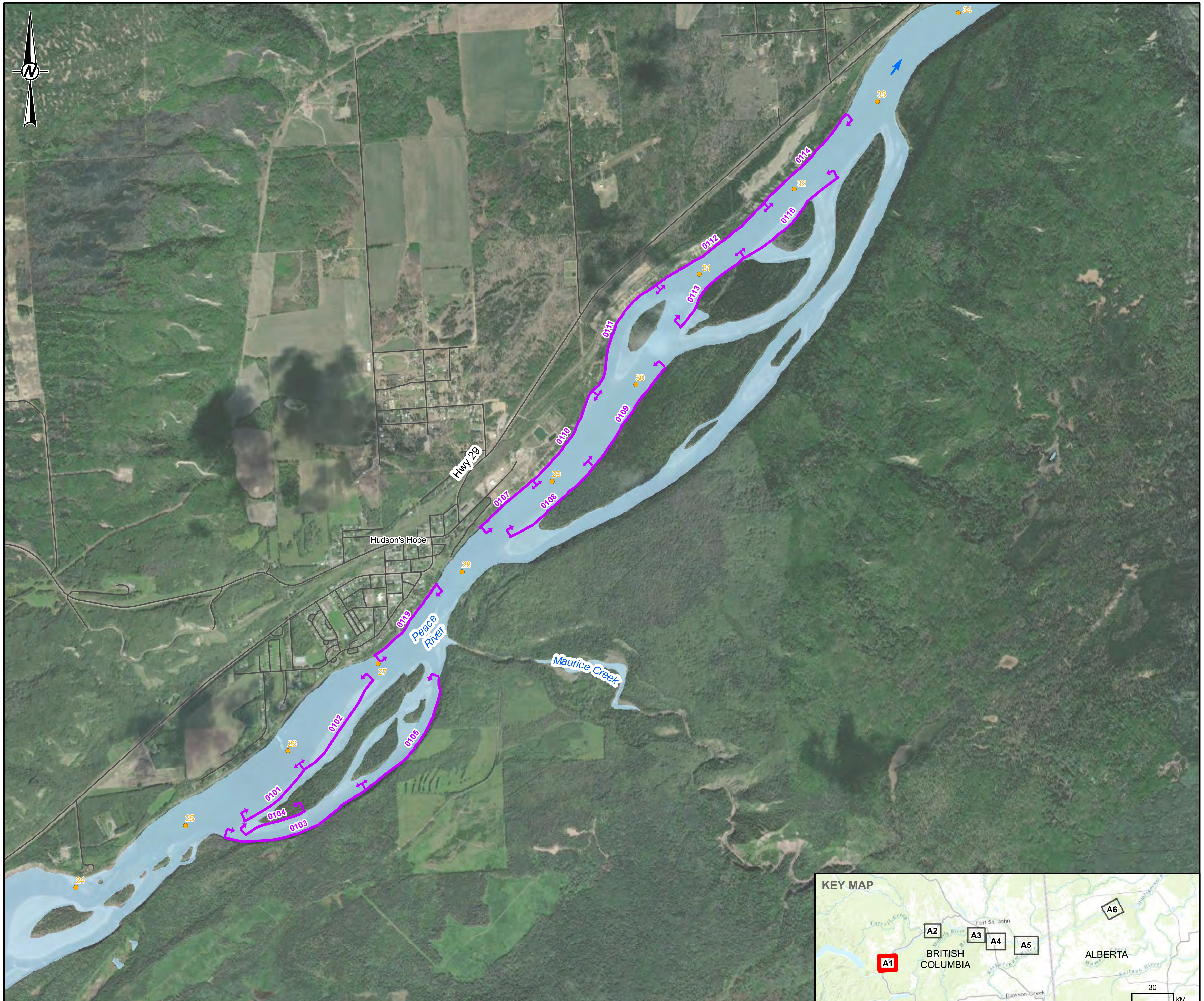
[a] RDB=Right bank as viewed facing downstream; LDB=Left bank as viewed facing downstream.

[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: 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

SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY

CLIENT
BC HYDRO

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

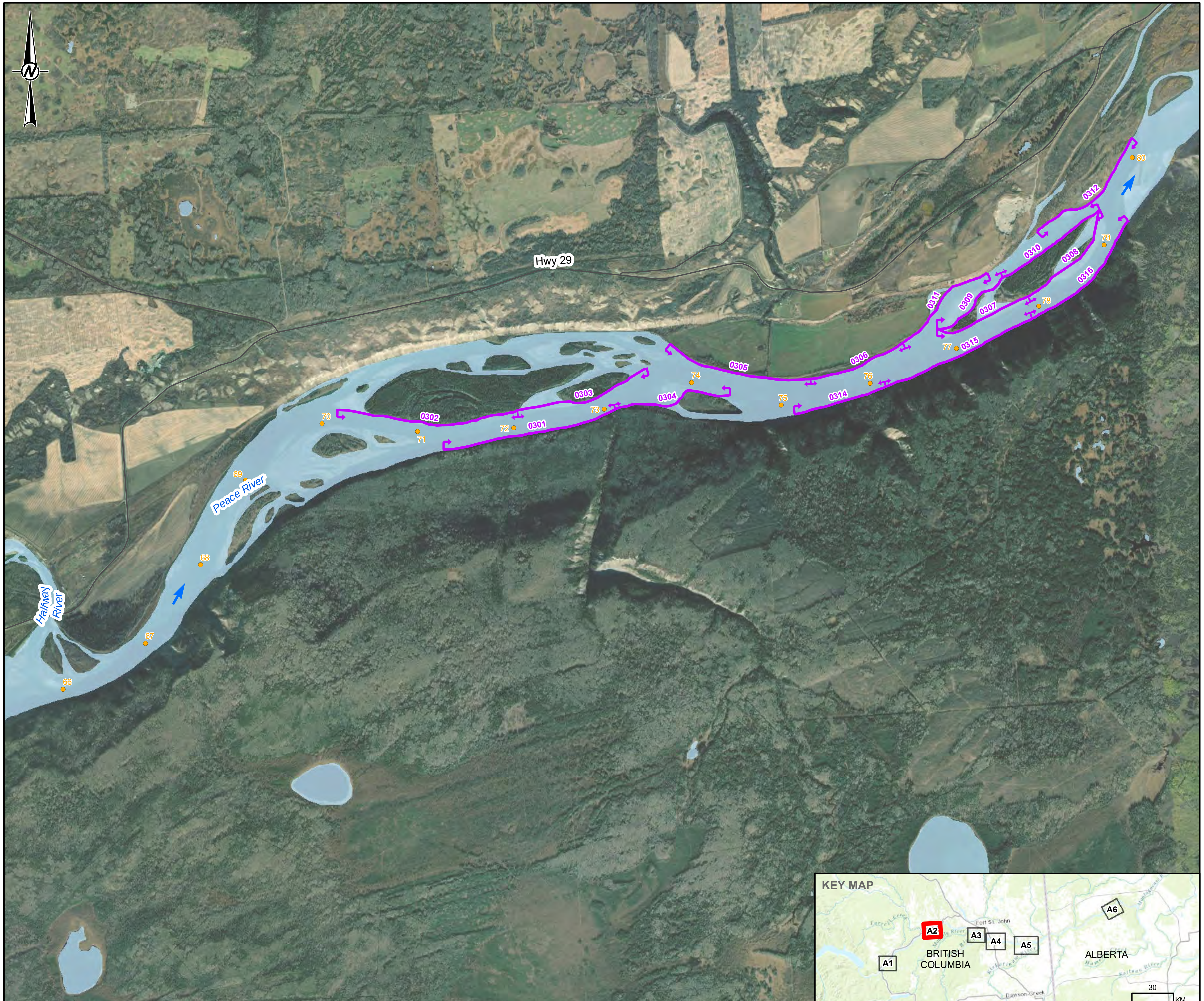
TITLE
SECTION 1 - PEACE RIVER LARGE FISH INDEXING SURVEY (TASK 2A)

CONSULTANT

wsp

YYYY-MM-DD	2023-05-19
DESIGNED	DF
PREPARED	CD
REVIEWED	KL
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2022	A	A1



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: 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
SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY

CLIENT
BC HYDRO

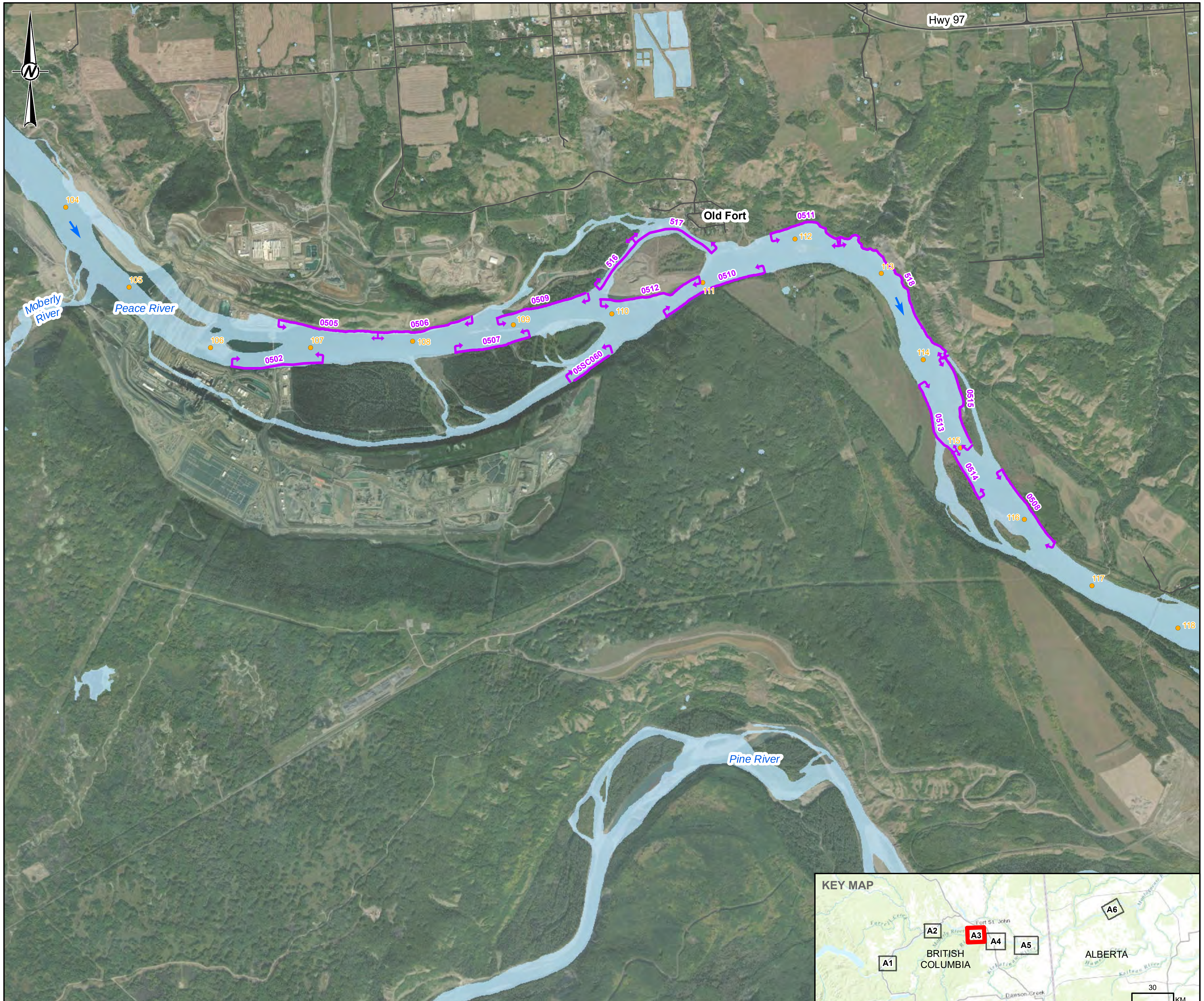
PROJECT
PEACE RIVER FISH COMMUNITY MONITORING PROGRAM (MON-2)

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

CONSULTANT

YYYY-MM-DD	2023-05-19
DESIGNED	DF
PREPARED	CD
REVIEWED	KL
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2022	A	A2



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: 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

SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, 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)

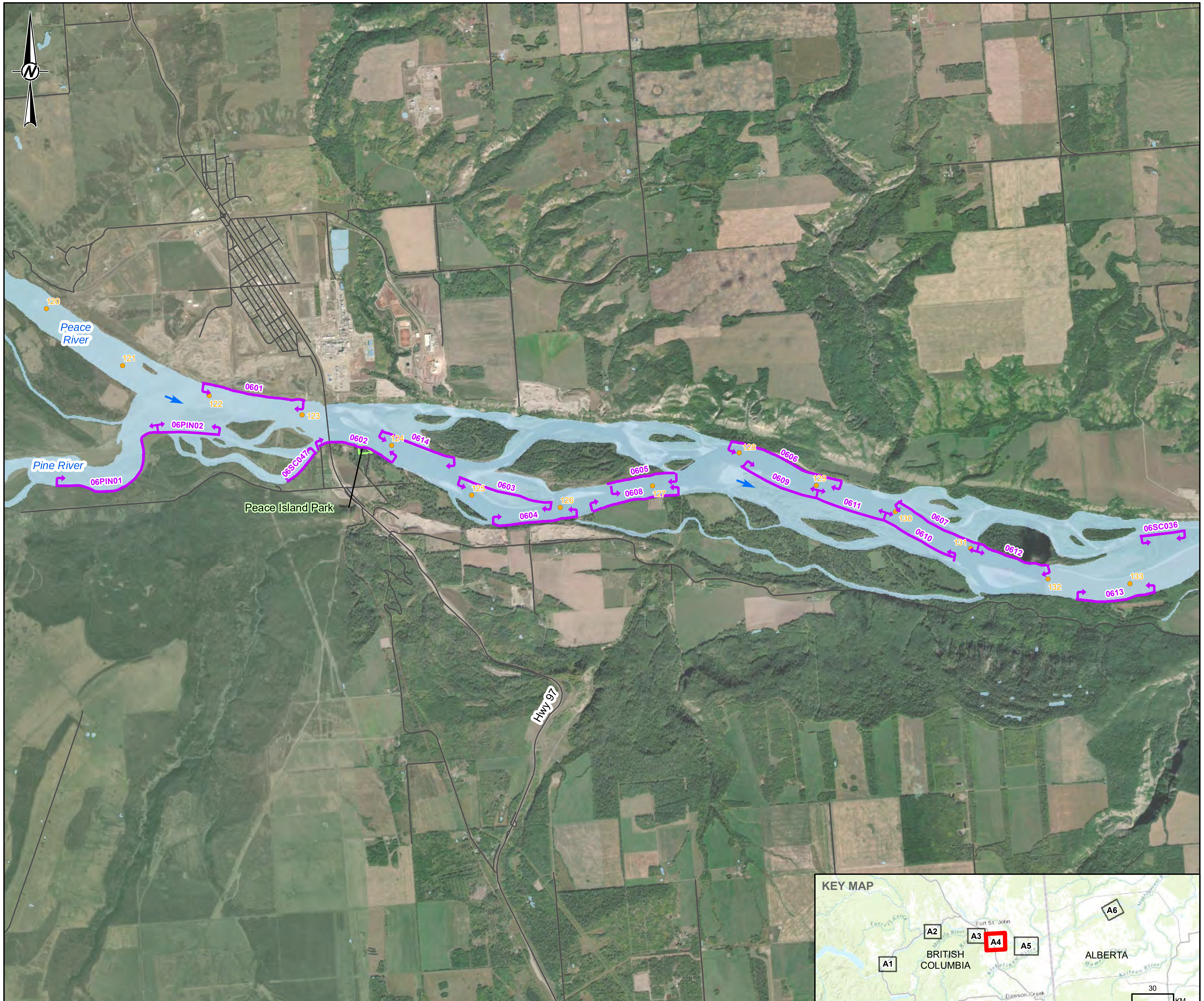
CONSULTANT

wsp

YYYY-MM-DD	2023-05-19
DESIGNED	DF
PREPARED	CD
REVIEWED	KL
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2022	A	**A3**

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

0 810 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: 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
SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY

CLIENT
BC HYDRO

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

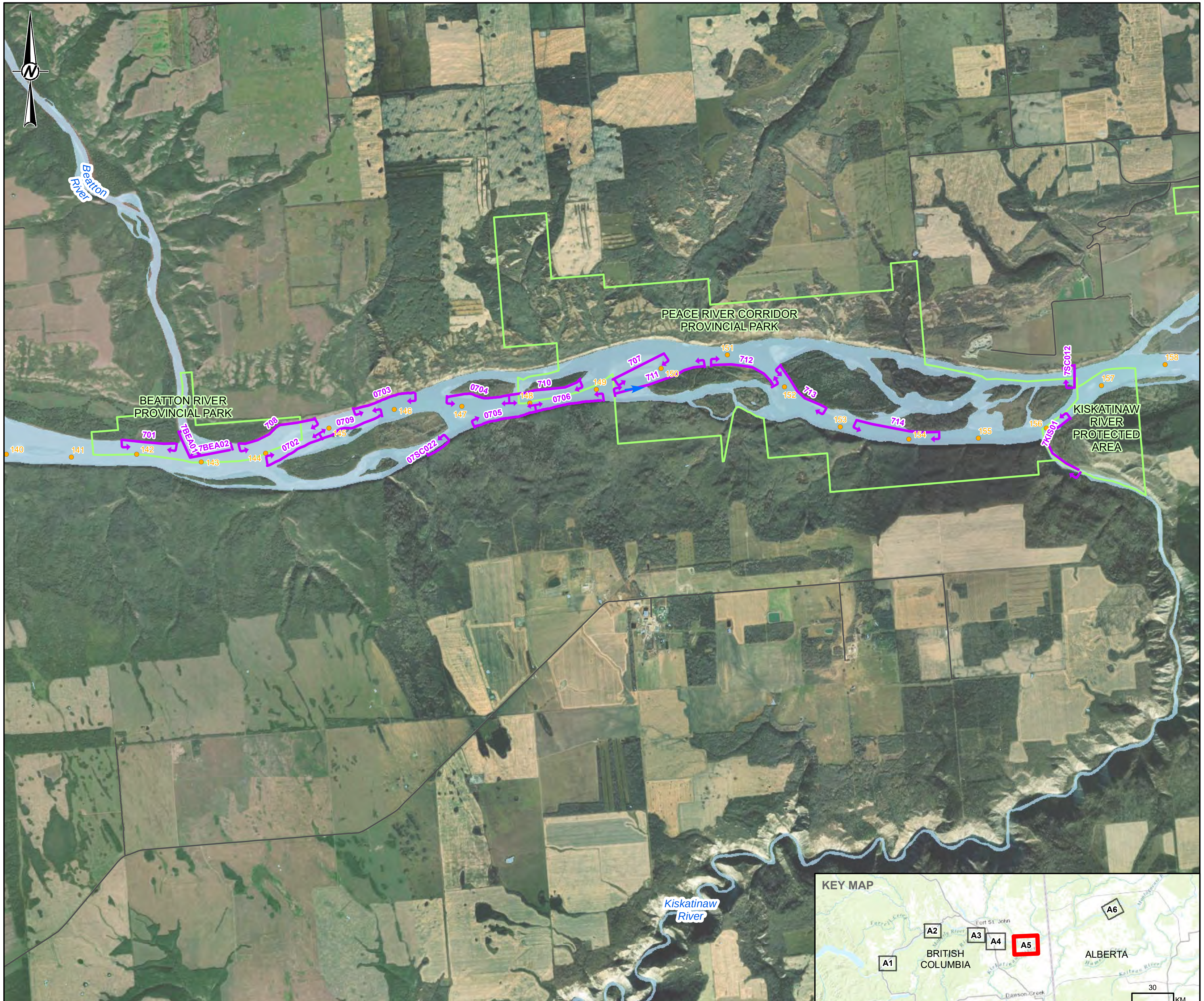
TITLE
SECTION 6 - PEACE RIVER LARGE FISH INDEXING SURVEY (TASK 2A)

CONSULTANT

YYYY-MM-DD	2023-05-19
DESIGNED	DF
PREPARED	CD
REVIEWED	KL
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2022	A	A4

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 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®.
5. 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

SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY

CLIENT

BC HYDRO

PROJECT

PEACE RIVER FISH COMMUNITY MONITORING PROGRAM (MON-2)

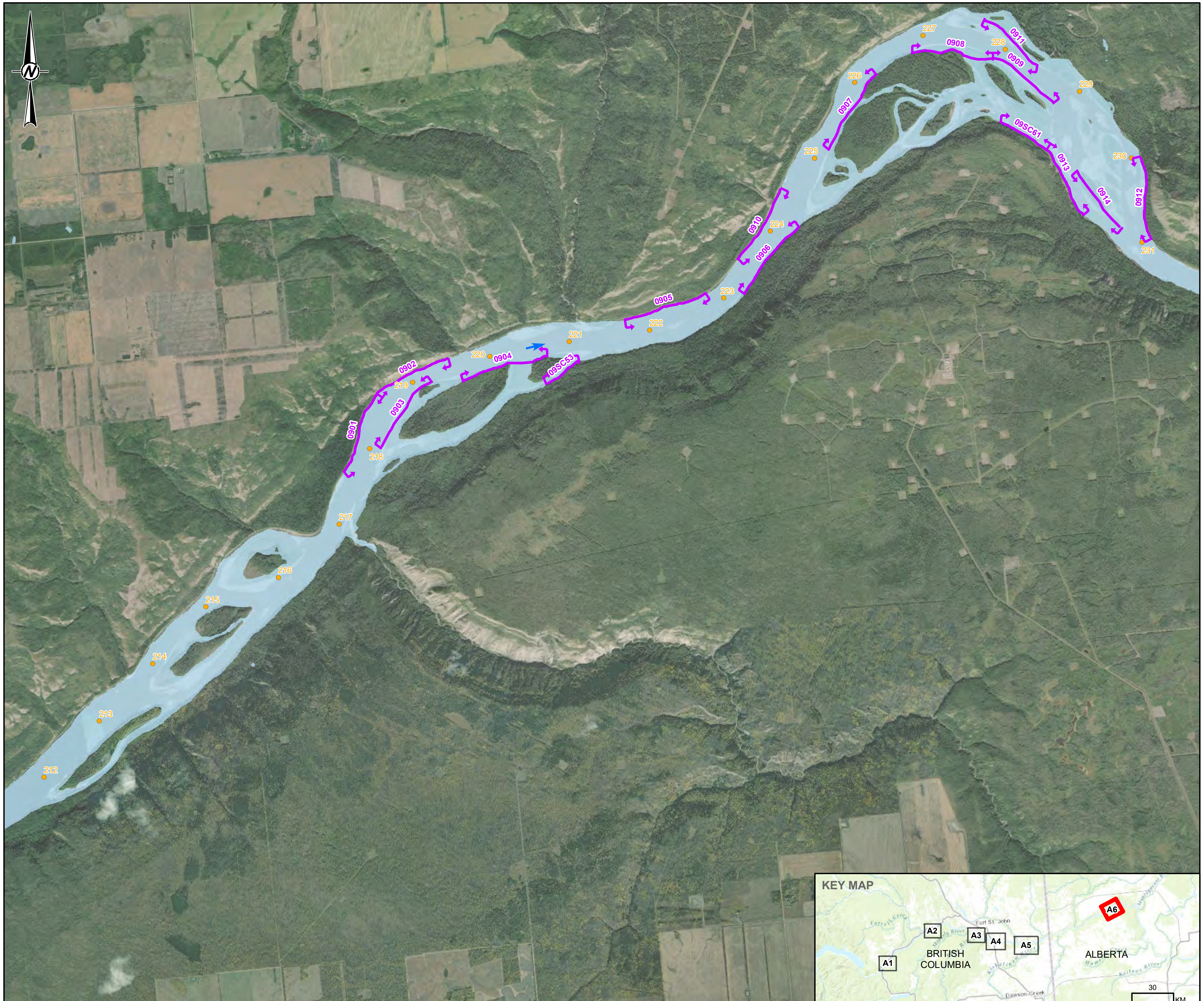
TITLE

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

CONSULTANT

YYYY-MM-DD	2023-05-19
DESIGNED	DF
PREPARED	CD
REVIEWED	KL
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2022	A	A5



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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4. DAM SECTION AND ISLANDS OBTAINED FROM FROM GEOBASE®.
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SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, AND THE GIS USER COMMUNITY

CLIENT
BC HYDRO

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

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

CONSULTANT
wsp

YYYY-MM-DD	2023-05-19
DESIGNED	DF
PREPARED	CD
REVIEWED	KL
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2022	A	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®.
5. 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

SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, 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

wsp

YYYY-MM-DD	2023-05-19
DESIGNED	DF
PREPARED	CD
REVIEWED	KL
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2022	A	A7

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®.
5. 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

SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, 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

YYYY-MM-DD	2023-05-19
DESIGNED	DF
PREPARED	CD
REVIEWED	KL
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2022	A	A8

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
- 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: 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

SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS, 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
wsp

YYYY-MM-DD	2023-05-19
DESIGNED	DF
PREPARED	CD
REVIEWED	KL
APPROVED	DF

PROJECT NO.	PHASE	REV.	FIGURE
20136470	2022	A	A9

PATH: \\golder.gds\gal\burnaby\CAD-GIS\Client\BC_Hydro\Peace_River_GMS\99_PROJECTS\19121769_PeaceRiver_GMS\02_PRODUCTION\MXD\Report\2022\19121769_FIG_A7_to_A9_PEACE_RIVER_SECTION_7_8_2022.mxd

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

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	1	2	3	4	5	6	7	8	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		Golder 2021a		Golder 2021a		Golder 2021a	Golder 2021a	Golder 2021a		Golder 2021a
2021	16-Aug to 8 Oct	48		Golder 2022a		Golder 2022a		Golder 2022a	Golder 2022a	Golder 2022a		Golder 2022a
2022	17-Aug to 5 Oct	47		Current Study Year		Current Study Year		Current Study Year	Current Study Year	Current Study Year		Current Study Year

APPENDIX C

Discharge

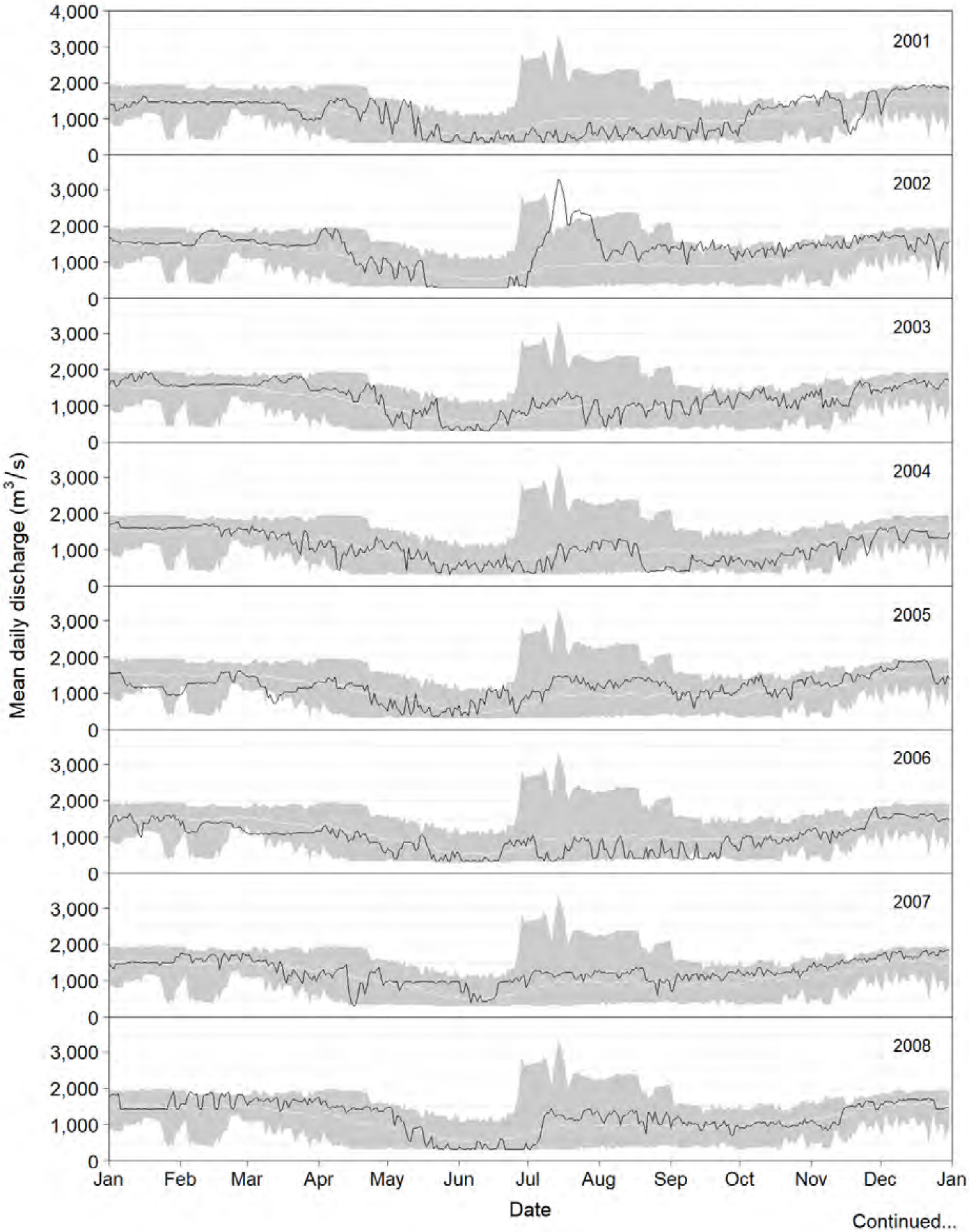

Figure C1: Mean daily discharge (m³/s) for the Peace River at Peace Canyon Dam (PCD; black line), 2001 to 2022. The shaded area represents minimum and maximum mean daily discharge recorded at PCD during other study years (i.e., 2001 and 2021). The white line represents average mean daily discharge over the same time period.

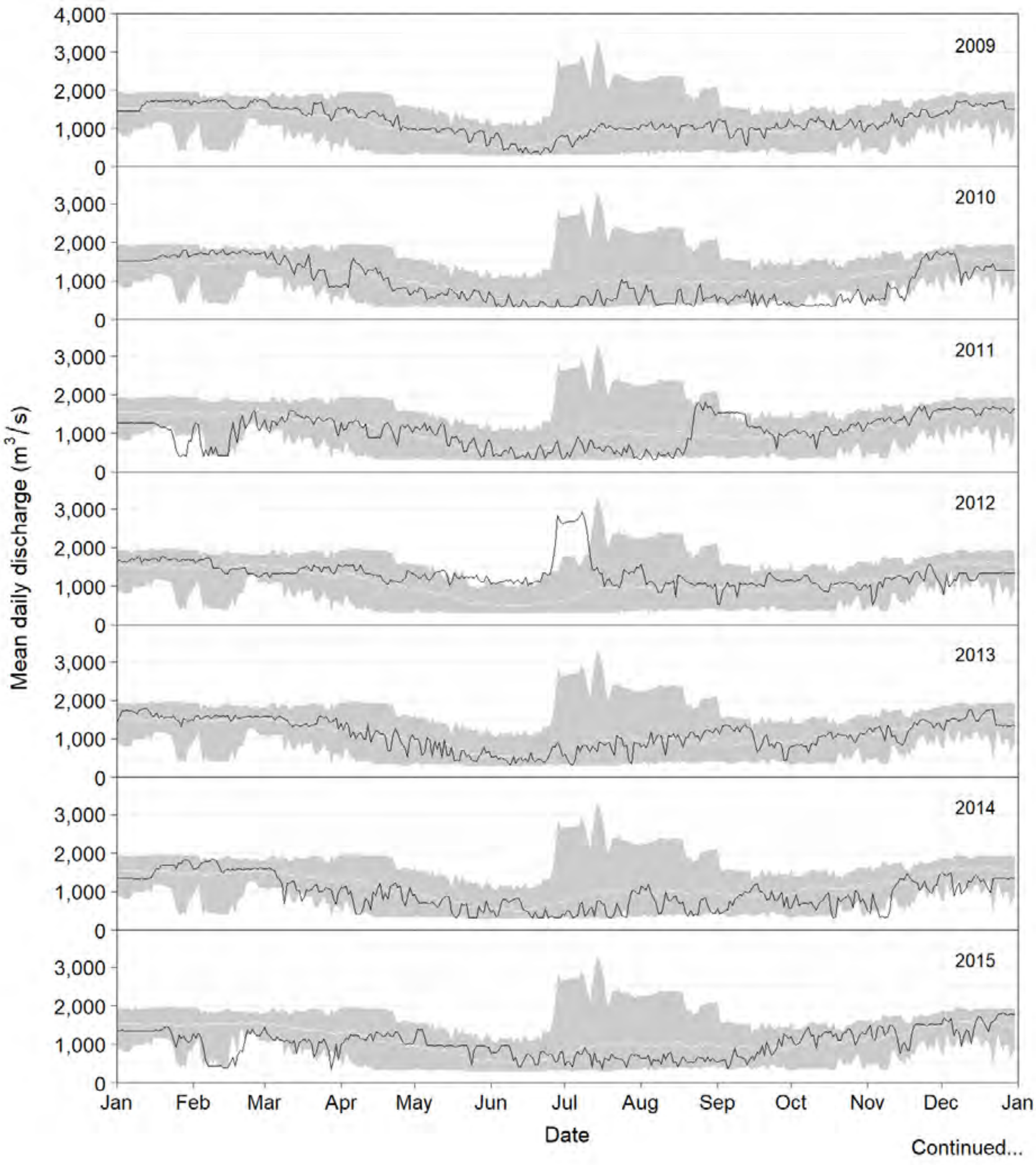

Figure C1: Continued.

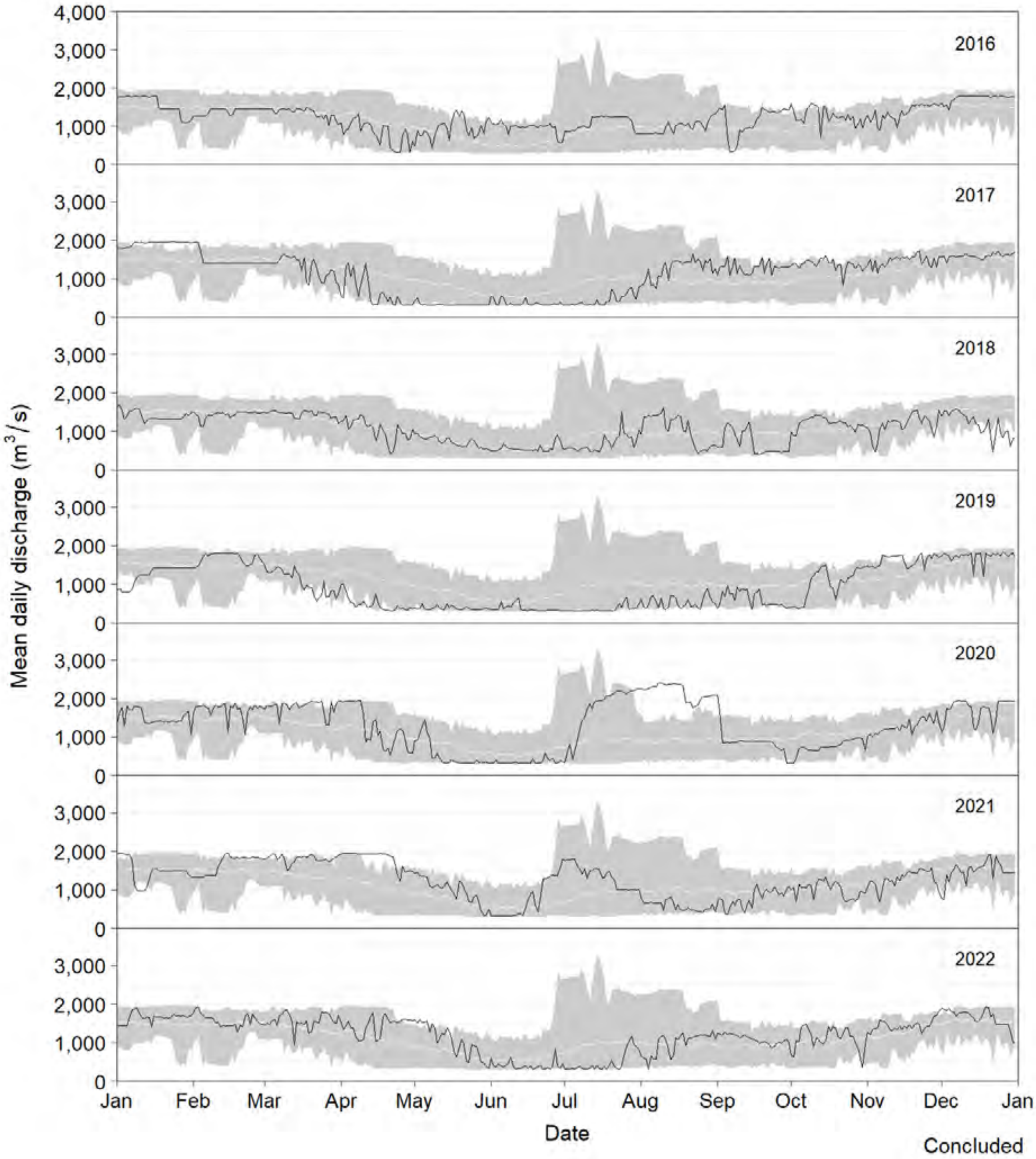

Figure C1: Concluded.

APPENDIX D

Habitat Data

Table D1 Summary of habitat variables recorded at boat electroshocking sites in the Peace River, 17 August to 05 October 2022.

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	29	11.4	190	Clear	Low	Low	n/a	10	0	0	0	0	0	90	0
1	119	2	30	10.5	110	Clear	High	Medium	n/a	20	0	0	0	0	0	80	0
1	119	3	15	12.1	190	Overcast	Low	High	n/a	50	0	0	0	0	10	40	0
1	119	4	20	13.8	190	Smoke	Medium	Medium	n/a	50	0	0	0	0	0	50	0
1	119	5	25	12.4	160	Overcast	Medium	High	2	60	0	0	0	0	10	30	0
1	119	6	11	11.5	170	Clear	High	Medium	n/a	50	0	0	0	0	0	50	0
1	116	1	25	11.9	190	Clear		Medium	n/a	50	0	10	10	10	10	10	0
1	116	2	20	9.9	180	Mostly cloudy	Medium	High	n/a	5	0	0	0	0	60	35	0
1	116	3	9	12.5	190	Clear	Medium	High	n/a	30	0	0	0	0	20	50	0
1	116	4	10	12.4	210	Overcast	Low	Medium	n/a	60	0	5	5	10	20	0	0
1	116	5	24	12.3	160	Clear	High	Medium	2	30	0	0	5	15	40	10	0
1	116	6	16	11.7	170	Overcast	High	Medium	n/a	40	0	0	0	20	30	10	0
1	114	1	30	12.5	170	Clear	Medium	Medium	n/a	25	0	10	10	5	0	50	0
1	114	2	18	9.7	180	Mostly cloudy	Medium	High	n/a	50	0	0	0	0	10	40	0
1	114	3	13	12.6	190	Clear	High	Low	n/a	15	0	5	0	0	40	40	0
1	114	4	12	12.3	210	Overcast	Low	Medium	n/a	70	0	0	5	5	0	20	0
1	114	5	25	12.5	170	Clear	Medium	High	1.9	40	0	0	0	10	10	40	0
1	114	6	17	11.7	170	Overcast	High	High	n/a	40	0	0	0	10	10	40	0
1	113	1	30	11.1	170	Clear	Medium	Medium	n/a	20	0	0	10	10	10	50	0
1	113	2	20	9.9	180	Mostly cloudy	Medium	High	n/a	20	0	0	0	0	20	60	0
1	113	3	9	12.5	190	Clear	Medium	High	n/a	40	0	0	0	0	10	50	0
1	113	4	10	12.3	210	Overcast	Medium	Medium	n/a	30	0	5	5	10	0	50	0
1	113	5	18	12.4	168	Clear	High	High	2	50	0	0	0	20	25	5	0
1	113	6	16	11.8	170	Clear	High	High	n/a	40	0	0	0	20	20	20	0
1	112	1	30	12.5	170	Clear	Medium	Medium	n/a	50	0	5	0	0	15	30	0
1	112	2	20	9.6	180	Mostly cloudy	High	High	n/a	40	0	0	0	0	20	40	0
1	112	3	13	12.0	190	Mostly cloudy	High	High	n/a	10	5	5	0	0	40	40	0
1	112	4	10	12.1	210	Mostly cloudy		Medium	n/a	70	5	0	5	5	0	15	0
1	112	5	23	12.3	170	Clear	High	High	1.9	30	0	0	0	10	20	40	0
1	112	6	17	11.7	170	Clear	High	High	n/a	40	0	0	0	10	10	40	0
1	111	1	30	12.5	170	Clear			n/a	85	0	0	0	0	5	10	0
1	111	2	20	9.6	180	Mostly cloudy	High	High	n/a	35	10	0	0	5	30	20	0
1	111	3	13	12.0	170	Mostly cloudy	High	High	n/a	10	5	5	0	0	40	40	0
1	111	4	10	12.1	210	Partly cloudy	Medium	Medium	n/a	60	10	10	5	5	0	10	0
1	111	5	15	12.0	170	Clear	High	High	1.9	50	0	5	0	0	20	25	0
1	111	6	14	11.7	170	Clear	High	High	n/a	30	0	10	0	5	25	30	0
1	110	1	15	11.2	190	Clear	Low	Low	n/a	50	0	5	5	0	0	40	0
1	110	2	30	9.7	110	Clear	High	Medium	n/a	50	0	0	0	0	0	50	0
1	110	3	15	12.1	170	Mostly cloudy	Medium	High	n/a	30	0	0	0	0	20	50	0
1	110	4	11	12.0	210	Clear	Low	Low	n/a	50	0	0	0	0	0	50	0
1	110	5	15	12.0	170	Clear	High	High	1.9	50	0	0	0	0	10	40	0
1	110	6	11	11.7	170	Clear	High	High	n/a	60	0	0	0	0	10	30	0
1	109	1	21	11.5	190	Clear	Low	Medium	n/a	70	0	0	10	0	10	10	0
1	109	2	18	9.4	180	Mostly cloudy	High	Medium	n/a	0	0	0	0	0	40	60	0
1	109	3	15	12.1	170	Mostly cloudy	Medium	High	n/a	20	0	0	0	0	40	40	0
1	109	4	16	13.8	170	Smoke	Low	Medium	n/a	70	0	0	0	10	10	10	0
1	109	5	18	12.1	160	Clear	High	Medium	2	30	0	0	0	20	30	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
1	109	6	15	11.7	170	Clear	High	Medium	n/a	40	0	0	0	10	10	40	0
1	108	1	18	11.4	190	Clear	Low	Low	n/a	65	5	0	10	0	10	10	0
1	108	2	15	9.4	180	Mostly cloudy	High	Medium	n/a	0	0	0	0	0	50	50	0
1	108	3	15	12.1	170	Overcast	Medium	High	n/a	20	0	0	0	0	40	40	0
1	108	4	16	13.8	190	Smoke	Low	Medium	n/a	80	0	0	0	0	10	10	0
1	108	5	24	12.5	160	Overcast	Medium	Low	1.1	20	0	0	0	30	30	20	0
1	108	6	11	11.6	170	Clear	High	Low	n/a	30	0	0	0	20	30	20	0
1	107	1	30	11.8	190	Clear	Low	Low	n/a	10	0	0	0	0	0	90	0
1	107	2	30	9.7	110	Clear	High	Medium	n/a	50	0	0	0	0	0	50	0
1	107	3	15	12.1	180	Mostly cloudy	Medium	High	n/a	30	0	0	0	0	20	50	0
1	107	4	8	12.0	210	Partly cloudy	Low	Medium	n/a	50	0	0	0	0	0	50	0
1	107	5	8	12.0	170	Fog	High	High	1.9	50	0	0	0	0	0	50	0
1	107	6	11	11.6	170	Clear	High	Medium	n/a	50	0	0	0	0	0	50	0
1	105	1	23	11.3	190	Clear	Medium	Medium	n/a	40	10	10	0	0	0	40	0
1	105	2	20	9.4	190	Clear	High	High	n/a	30	20	0	0	0	20	30	0
1	105	3	14	11.9	170	Mostly cloudy	Medium	High	n/a	20	10	10	0	5	45	10	0
1	105	4	20	13.8	190	Partly cloudy	Medium	High	n/a	50	10	20	0	0	0	20	0
1	105	5	13	12.1	160	Clear	High	High	1.1	50	0	20	0	0	20	10	0
1	105	6	7	11.5	170	Clear	High	High	n/a	50	0	30	0	0	10	10	0
1	104	1	20	11.2	190	Clear		Medium	n/a	45	0	5	10	20	0	20	0
1	104	2	20	9.6	190	Clear	High	Medium	n/a	0	0	0	0	10	45	45	0
1	104	3	15	12.0	190	Overcast	Medium	Medium	n/a	20	0	0	5	0	30	45	0
1	104	4	21	13.8	190	Partly cloudy	Medium	Medium	n/a	60	0	5	10	0	10	5	10
1	104	5	18	12.2	160	Clear	High	Medium	1.1	20	0	0	0	30	40	10	0
1	104	6	7	11.5	170	Clear	High	Medium	n/a	20	0	0	0	10	60	10	0
1	103	1	18	11.0	190	Clear	Medium	Medium	n/a	45	10	5	0	0	0	40	0
1	103	2	20	9.4	190	Clear	High	High	n/a	40	10	0	0	0	30	20	0
1	103	3	14	11.9	190	Clear		High	n/a	18	18	9	0	10	35	10	0
1	103	4	20	13.8	190		Medium	High	n/a	40	10	10	0	0	0	40	0
1	103	5	13	12.1	160	Clear	High	High	1.1	30	10	0	0	0	5	45	10
1	103	6	7	11.5	170	Clear	High	High	n/a	50	10	0	0	0	10	30	0
1	102	1	28	11.8	190	Clear	Medium	High	n/a	40	0	20	10	10	10	10	0
1	102	2	25	9.9	110	Clear		High	n/a	25	0	0	0	10	50	15	0
1	102	3	15	12.3	190	Overcast	Low	High	n/a	10	0	0	0	0	45	45	0
1	102	4	22	13.8	190	Partly cloudy	Medium	High	n/a	30	0	30	10	10	20	0	0
1	102	5	23	12.4	160	Clear	High	High	1.1	60	0	10	0	0	30	0	0
1	102	6	9	11.6	170	Clear	High	High	n/a	40	0	10	0	0	20	30	0
1	101	1	26	11.3	190	Clear	Medium	High	n/a	55	0	20	10	5	0	10	0
1	101	2	25	9.6	190	Clear	Medium	High	n/a	20	0	30	0	0	50	0	0
1	101	3	15	12.3	190	Overcast	Low	High	n/a	10	0	0	0	0	45	45	0
1	101	4	22	13.8	190	Partly cloudy	Medium	High	n/a	40	0	30	10	10	10	0	0
1	101	5	23	12.3	160	Clear	High	High	1.1	40	0	10	0	0	50	0	0
1	101	6	9	11.6	170	Clear	High	High	n/a	60	0	10	0	0	30	0	0
3	316	1	20	10.9	190	Partly cloudy	High	Medium	1.9	20	20	0	0	20	10	30	0
3	316	2	25	11.3	190	Mostly cloudy	High	High	2	10	20	0	0	0	20	50	0
3	316	3	18	13.3	220	Partly cloudy	High	Medium	n/a	5	10	5	0	5	40	35	0
3	316	4	18	13.6	190	Partly cloudy	Low	Medium	n/a	65	15	0	0	0	0	20	0
3	316	5	10	12.9	220	Overcast	Medium	Medium	1.7	10	0	30	0	0	30	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
3	316	6	18	12.1	160	Clear	High	High	n/a	30	5	0	0	5	10	50	0
3	315	1	20	10.9	190	Partly cloudy	High	Medium	n/a	20	20	10	0	10	0	40	0
3	315	2	25	11.4	190	Mostly cloudy	High	Medium	2	20	20	0	0	0	20	40	0
3	315	3	17	13.1	220	Mostly cloudy	High	Medium	n/a	10	20	10	5	5	25	25	0
3	315	4	20	13.5	200	Partly cloudy	Medium	Medium	2	10	20	0	10	0	10	50	0
3	315	5	10	12.2	230	Overcast	Low	Medium	n/a	35	10	0	0	0	0	50	5
3	315	6	18	12.1	160	Clear	High	Medium	n/a	30	20	0	0	5	5	40	0
3	314	1	20	10.7	190	Partly cloudy	High	Medium	n/a	50	10	0	0	0	0	40	0
3	314	2	25	11.8	170		Medium	High	1.2	10	10	1	5	5	49	15	5
3	314	3	17	13.1	220	Mostly cloudy	High	Medium	n/a	10	20	10	5	5	25	25	0
3	314	4	20	13.5	200	Partly cloudy	Medium	Medium	n/a	15	0	10	10	0	15	50	0
3	314	5	10	12.1	230	Overcast	Low	Medium	n/a	40	10	0	0	0	0	40	10
3	314	6	18	12.0	160	Clear	High	High	n/a	20	5	0	0	10	65	0	0
3	312	1	22	11.9	180	Clear	Medium	Medium	2	30	0	10	0	0	10	50	0
3	312	2	20	11.8	190	Mostly cloudy	High	Low	n/a	10	0	0	0	0	40	50	0
3	312	3	18	12.8	220	Clear	High	Medium	n/a	5	5	0	0	0	45	45	0
3	312	4	13	12.8	190	Partly cloudy	Medium	Medium	n/a	10	0	0	0	0	50	40	0
3	312	5	8	12.9	220	Overcast	Medium	Medium	1.7	60	0	5	0	0	30	5	0
3	312	6	18	12.2	160	Clear	High	High	n/a	40	0	0	0	10	20	30	0
3	311	1		14.9	190	Clear	Medium	Medium	n/a	10	0	0	0	20	20	50	0
3	311	2	24	13.1	170	Mostly cloudy	Medium	High	1.2	15	1	5	10	10	34	20	5
3	311	3	10	12.2	220	Clear	High	Low	n/a	5	5	0	0	0	45	45	0
3	311	4	10	12.5	190	Partly cloudy	Medium	Medium	n/a	30	0	10	0	0	30	30	0
3	311	5	8	11.3	230	Overcast	Medium	Medium	1.7	40	0	10	0	0	40	10	0
3	311	6	17	12.4	160	Clear	Medium	Medium	n/a	30	0	0	0	20	20	30	0
3	310	1	18	10.5	180	Clear	Medium	Medium	2	50	5	10	5	5	0	25	0
3	310	2	20	10.6	190	Partly cloudy	High	Low	n/a	0	0	0	0	0	50	50	0
3	310	3	14	12.6	220	Clear	High	Low	n/a	0	5	0	0	0	45	50	0
3	310	4	7	12.9	190	Partly cloudy	Medium	Medium	n/a	50	0	5	0	0	25	20	0
3	310	5	8	11.8	220	Overcast	Medium	Medium	1.7	40	0	0	0	0	30	30	0
3	310	6	18	17.2	160	Clear	High	Medium	n/a	30	0	0	0	20	20	30	0
3	309	1	16	10.6	180	Clear	Low	Medium	2	60	5	5	5	5	0	20	0
3	309	2	20	10.6	190	Partly cloudy	High	Low	n/a	20	0	0	0	0	80	0	0
3	309	3	12	12.6	220	Clear	High	Low	n/a	5	0	0	0	0	45	50	0
3	309	4	7	12.9	200	Partly cloudy	Medium	Medium	n/a	40	0	10	0	0	40	10	0
3	309	5	8	11.1	220	Overcast	Medium	Medium	1.7	25	0	10	0	0	30	35	0
3	309	6	18	12.3	160	Clear	High	Medium	n/a	30	0	0	0	20	20	30	0
3	308	1	26	12.9	190	Clear	Medium	Medium	n/a	35	0	0	0	20	30	15	0
3	308	2	20	11.6	180	Partly cloudy	Medium	Low	2	0	10	0	0	0	50	40	0
3	308	3	17	12.8	220	Clear	High	Medium	n/a	10	5	0	0	0	45	40	0
3	308	4	14	13.4	190	Partly cloudy	Medium	Medium	n/a	60	10	10	5	5	0	10	0
3	308	5	9	11.5	220	Overcast	Medium	Medium	1.7	30	0	0	0	0	40	30	0
3	308	6	18	12.2	160	Clear	High	Medium	n/a	30	0	0	0	20	30	20	0
3	307	1	25	12.9	190	Clear	Medium	Medium	n/a	10	0	0	0	10	60	20	0
3	307	2	20	11.6	180	Partly cloudy	Medium	Low	2	0	0	0	0	0	80	20	0
3	307	3	18	13.1	220	Clear	High	Medium	n/a	10	5	0	0	0	35	50	0
3	307	4	12	13.2	190	Mostly cloudy		Medium	n/a	70	10	0	0	0	10	10	0
3	307	5	9	11.5	220	Overcast	Medium	Medium	1.7	30	0	5	0	0	60	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
3	0307	6	18	12.0	160	Clear	High	Low	n/a	30	0	0	0	20	40	10	0
3	0306	1		14.9		Clear	Medium	Medium	n/a	25	0	0	0	20	50	5	0
3	0306	2	26	13.1	180	clear	Medium	High	n/a	30	2	1	5	5	52	5	0
3	0306	3	9	12.2	220	Clear	High	Low	n/a	5	5	0	0	0	45	45	0
3	0306	4	18	13.7	190	Mostly cloudy	Low	Medium	n/a	75	5	0	0	10	10	0	0
3	0306	5	8	11.6	240	Overcast		Medium	1.7	40	0	0	0	0	50	10	0
3	0306	6	16	12.2	160	Clear	High	Medium	n/a	20	5	0	0	10	50	15	0
3	0305	1	25	14.2	180	Clear		Medium	1.9	60	10	0	5	5	0	10	10
3	0305	2	26	12.5	180	Clear	Medium	High	n/a	20	5	5	5	10	20	35	0
3	0305	3	16	12.9	190	Overcast	High	Medium	n/a	20	0	0	0	0	40	40	0
3	0305	4	17	13.5	200	Partly cloudy	Medium	Medium	n/a	40	0	0	20	0	20	20	0
3	0305	5	10	11.6	230	Overcast	Low	Medium	n/a	80	0	0	0	0	0	10	10
3	0305	6	17	12.0	160	Clear	High	Medium	n/a	20	0	0	0	20	20	40	0
3	0304	1	21	12.2	190	Clear	Low	Medium	1.9	40	10	5	5	0	0	40	0
3	0304	2	24	10.5	180	clear	Medium	High	n/a	60	5	5	5	10	5	10	0
3	0304	3	18	12.8	190	Mostly cloudy	High	Medium	n/a	20	0	0	0	0	30	50	0
3	0304	4	15	13.0	200	Partly cloudy	Medium	Medium	n/a	30	0	10	0	0	30	30	0
3	0304	5	10	11.9	230	Overcast	Low	Medium	n/a	60	5	5	5	0	20	5	0
3	0304	6	15	11.9	160	Partly cloudy	High	Medium	n/a	20	0	0	0	20	40	20	0
3	0303	1	19	11.5	180	Clear	Low	Low	1.9	55	10	0	5	0	10	20	0
3	0303	2	25	12.5	180	Clear	Medium	High	n/a	30	5	5	5	5	20	30	0
3	0303	3	17	12.2	190	Partly cloudy	High	Medium	n/a	20	0	0	0	0	40	40	0
3	0303	4	15	13.0	200	Clear	Medium	Medium	n/a	50	0	0	0	0	50	0	0
3	0303	5	8	11.8	230	Mostly cloudy	Low	Medium	n/a	75	5	0	0	0	10	10	0
3	0303	6	14	11.8	160	Overcast	High	Medium	n/a	30	0	0	0	20	20	30	0
3	0302	1	19	11.4	180	Clear	Low	Low	1.9	40	5	10	0	5	10	30	0
3	0302	2	20	11.0	180	Clear		High	n/a	55	10	5	5	5	10	10	0
3	0302	3	17	12.2	190	Partly cloudy	High	Medium	n/a	20	0	0	0	0	40	40	0
3	0302	4	10	13.0	200		Medium	Medium	n/a	60	0	0	0	0	40	0	0
3	0302	5	7	11.5	230	Mostly cloudy	Low	Medium	n/a	60	5	5	0	0	10	20	0
3	0302	6	12	11.6	160	Overcast	High	Medium	n/a	40	0	0	0	0	20	40	0
3	0301	1	20	11.6	180	Clear	Low	Medium	1.9	25	15	5	0	5	0	50	0
3	0301	2	21	10.5	180	clear	Medium	High	n/a	40	5	5	5	20	15	10	0
3	0301	3	18	12.8	190	Mostly cloudy	High		n/a	20	0	0	0	0	40	40	0
3	0301	4	15	13.0	200	Partly cloudy	Medium	Medium	n/a	40	0	10	0	0	10	40	0
3	0301	5	8	11.8	230	Overcast		Medium	n/a	55	15	0	0	0	0	20	10
3	0301	6	13	11.7	160	Overcast	High	High	n/a	50	5	0	0	10	0	35	0
5	05SC060	1	28	12.8	180	Clear	High	Low	0.9	0	5	0	15	0	20	60	0
5	05SC060	2	19	10.5	170	Mostly cloudy	Medium	Low	1	0	5	0	30	5	30	30	0
5	05SC060	3	18	12.4	180	Mostly cloudy	Low	Low	0.8	0	5	0	20	10	20	45	0
5	05SC060	4	18	13.5	170	Clear	High	Low	1.7	0	10	0	20	0	30	40	0
5	05SC060	5	20	11.7	180	Partly cloudy	High	Low	1.1	0	5	0	30	0	40	25	0
5	05SC060	6	21	11.6	170	Clear	High	Low	1	0	10	0	20	0	0	0	70
5	0518	1	24	13.5	180	Clear	High	Medium	1.1	10	0	0	0	10	0	80	0
5	0518	2	17	9.9	170	Mostly cloudy	Medium	Medium	2.2	20	5	0	0	5	10	60	0
5	0518	3	15	12.1	180	Clear	Medium	Medium	0.8	25	5	0	0	10	10	50	0
5	0518	4	10	13.6	180	Partly cloudy		High	0.4	0	10	5	10	10	0	0	65
5	0518	6	21	11.7	170	Partly cloudy	High	Medium	1.5	20	15	0	0	5	20	40	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	517	1	25	11.4	170	Clear	High	Medium	2	30	2	0	0	3	25	40	0
5	517	2	19	10.6	170	Mostly cloudy	Medium	Medium	2	20	1	0	0	5	29	45	0
5	517	3	22	12.3	170	Partly cloudy	High	Medium	1.8	10	5	0	10	10	25	40	0
5	517	4	22	13.9	170	Clear	High	Medium	1.9	40	10	0	0	10	20	20	0
5	517	5	15	11.7	170	Partly cloudy	High	Medium	2	30	5	0	10	5	30	20	0
5	517	6	21	11.7	170	Clear	High	Medium	1.5	20	10	0	10	10	30	20	0
5	516	1	20	11.4	170	Clear	High	Medium	2	48	5	0	0	2	10	35	0
5	516	2	19	10.4	170	Mostly cloudy	Medium	Medium	2	30	5	0	0	0	40	25	0
5	516	3	20	12.2	170	Clear	High	Medium	1.8	30	20	0	0	0	20	30	0
5	516	4	20	13.6	170	Clear	High	Medium	1.9	25	10	0	0	0	35	30	0
5	516	5	12	11.2	170	Partly cloudy	High	Medium	n/a	30	5	0	0	0	30	35	0
5	516	6	18	11.5	170	Clear		Medium	1.5	40	5	0	0	5	20	30	0
5	515	1	24	13.5	180	Clear	Medium	Low	1.1	30	0	0	0	10	30	30	0
5	515	2	19	10.1	170	Partly cloudy	Medium	Medium	2.2	25	5	0	0	0	60	10	0
5	515	3	18	12.1	180	Clear	Medium	Medium	0.8	20	5	0	0	5	60	10	0
5	515	4	10	13.6	180	Clear	High	Medium	0.9	20	5	0	0	5	30	40	0
5	515	5	7	11.8	200	Partly cloudy	Medium	Medium	1.5	40	5	0	0	0	50	5	0
5	515	6	11	11.4	170	Fog	High	Medium	1.6	25	5	0	0	0	40	30	0
5	514	1	30	11.8	170	Clear	High	Low	2	50	0	0	0	0	40	10	0
5	514	2	18	10.3	170	Mostly cloudy	High	Low	1.6	20	0	0	0	10	60	10	0
5	514	3	18	12.3	180	Mostly cloudy	Low	Medium	1	25	5	0	0	10	50	10	0
5	514	4	18	13.9	170	Clear	High	Medium	1.6	20	5	0	0	5	50	20	0
5	514	5	12	12.0	200			Medium	1.2	40	0	0	0	0	60	0	0
5	514	6	12	11.4	170	clear	High	Low	1.4	50	0	0	0	0	50	0	0
5	513	1	29	13.8	170	Clear	Medium	Medium	1.2	30	0	0	0	10	20	40	0
5	513	2	18	10.0	170	Mostly cloudy	High	Low	1.6	40	0	0	0	10	30	20	0
5	513	3	18	12.3	180	Mostly cloudy	Low	Medium	1	30	5	0	0	10	50	5	0
5	513	4	17	13.9	170	Clear	High	Medium	1.6	25	5	0	0	5	45	20	0
5	513	5	10	11.9	200	Clear		Medium	1.2	40	0	0	0	0	50	10	0
5	513	6	12	11.3	170	Clear	High	Medium	1.4	45	0	0	0	0	45	10	0
5	512	2	18	10.7	170	Partly cloudy	Medium	Medium	1.6	60	0	0	0	0	10	30	0
5	512	3	20	12.3	170	Mostly cloudy	High	High	0.3	30	0	0	0	0	30	30	10
5	512	4	22	13.7	170	Clear	High	Medium	1.6	40	0	0	0	0	30	30	0
5	511	1	24	13.5	180	Clear	High	Medium	1.1	60	0	0	0	10	0	30	0
5	511	2	15	9.8	170	Partly cloudy	Medium	Medium	2.2	30	0	0	0	0	30	40	0
5	511	3	15	12.0	180	Clear	Medium	High	0.8	50	5	0	0	10	25	10	0
5	511	4	9	13.5	180	Partly cloudy	High	High	0.4	20	0	0	0	10	40	20	10
5	511	5	6	11.8	200	Partly cloudy	Medium	Medium	1.2	15	0	30	0	0	5	50	0
5	511	6	22	11.7	170	Partly cloudy		Medium	1.5	30	0	0	0	10	20	40	0
5	510	1	28	11.4	170	Clear	High	Medium	2	40	0	0	0	5	25	30	0
5	510	2	12	9.7	170		Medium	High	1	25	0	0	0	5	35	35	0
5	510	3	12	12.1	170	Clear	Medium	High	1	60	2	3	0	5	10	20	0
5	510	4	9	13.6	170	Mostly cloudy	High	High	1.6	40	5	0	0	5	20	30	0
5	510	5	23	11.7	180	Mostly cloudy	High	High	1.1	60	0	0	0	0	30	10	0
5	510	6	22	11.8	170	Clear	High	Medium	1	30	5	0	0	10	25	30	0
5	509	1	20	11.4	180	Clear	High	Medium	2	40	0	0	0	0	30	30	0
5	509	2	18	10.4	170	Clear	High	Medium	1.6	40	0	0	0	0	30	30	0
5	509	3	19	11.8	170	Clear	High	Medium	1.8	40	5	0	0	0	25	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	0509	4	19	13.4	170	Clear	High	Medium	1.9	30	0	0	0	0	40	30	0
5	0509	5	24	11.6	170	Partly cloudy	Medium	High	n/a	40	0	0	0	0	30	30	0
5	0509	6	18	11.3	170	Clear	High	High	1.5	30	0	0	0	0	30	40	0
5	0508	1	30	11.4	170	Clear	High	Medium	2	30	0	0	0	10	30	30	0
5	0508	2	16	10.0	180	Overcast	High	Medium	1.6	20	5	0	0	5	30	40	0
5	0508	3	19	12.3	170	Mostly cloudy	Medium	Medium	0.8	40	5	0	0	10	30	15	0
5	0508	4	20	13.8	180	Clear	High	Medium	0.9	30	5	0	0	5	40	20	0
5	0508	5	12	12.2	200	Clear	Low	Medium	1.2	40	0	0	0	0	10	50	0
5	0508	6	15	11.4	170	Clear	High	Medium	1.6	35	5	0	0	0	40	20	0
5	0507	1	28	12.8	170	Clear	High	Medium	1.1	60	0	0	0	0	10	30	0
5	0507	2	19	10.2	170	Overcast	Medium	High	1	30	0	0	0	0	30	40	0
5	0507	3	20	12.4	180	Overcast	Medium	High	0.8	40	5	0	0	5	30	20	0
5	0507	4	18	13.2	170	Clear	High	High	1.6	45	2	0	0	0	30	23	0
5	0507	5	23	11.6	170	Partly cloudy	Medium	High	1.1	30	0	0	0	0	40	30	0
5	0507	6	18	11.4	170	Clear	High	High	1	50	0	0	0	0	20	30	0
5	0506	1	19	11.4	180	Clear	High	Medium	2	50	0	0	0	0	0	50	0
5	0506	2	19	10.8	170	clear	Low	High	1.6	50	0	0	0	0	0	50	0
5	0506	3	18	11.8	170	Clear	High	Medium	1.8	60	5	0	0	0	15	20	0
5	0506	4	15	13.0	170	Overcast	Medium	Medium	1.9	60	5	0	0	0	5	30	0
5	0506	5	22	11.7	180	Overcast	Medium	Medium	2	50	0	0	0	0	0	50	0
5	0506	6	16	11.2	170	Clear	High	Medium	1.5	50	0	0	0	0	0	50	0
5	0505	1	30	11.4	170	Clear	High	High	2	50	0	0	0	0	0	50	0
5	0505	2	19	11.3	170	clear	Low	High	1.6	45	0	0	0	0	10	45	0
5	0505	3	18	11.8	170	Clear	High	Medium	1.8	60	5	0	0	0	5	30	0
5	0505	4	10	13.0	170	Overcast	Medium	High	1.9	60	5	0	0	0	5	30	0
5	0505	5	12	11.6	180	Partly cloudy	High	High	2	50	0	0	0	0	0	50	0
5	0505	6	9	11.2	170	Fog	High	Medium	1.5	60	0	0	0	0	10	30	0
5	0502	1	30	12.8	170	Clear		Medium	0.5	25	1	0	0	5	29	30	10
5	0502	2	17	16.5	170	Clear	High	High	1.6	30	0	0	0	0	40	30	0
5	0502	3	15	11.7	180	clear	Medium	High	1	30	5	0	0	0	25	40	0
5	0502	4	8	12.0	170	Overcast	Medium	High	1.6	45	5	0	0	0	20	30	0
5	0502	5	11	11.3	170	Partly cloudy	High	Medium	1.1	40	0	0	0	0	30	30	0
5	0502	6	9	11.1	170	Fog	High	Medium	1	55	5	0	0	0	20	20	0
6	06SC047	1	16	20.7	260	Clear	High	Low	1.6	5	5	0	0	10	10	70	0
6	06SC047	2	19	15.5	250	Clear	High	Low	1.6	0	5	0	0	5	30	60	0
6	06SC047	3	9	13.4	270	Clear	High	Low	1.6	5	5	0	10	5	30	45	0
6	06SC047	4	4	11.9	290	Fog	High	Low	n/a	10	5	0	5	5	30	45	0
6	06SC047	5	10	11.2	200	Overcast	Low	Low	1.2	50	10	0	0	0	20	10	10
6	06SC047	6	12	11.8	250	Clear	High	Low	2	10	20	0	0	0	20	50	0
6	06SC036	1	33	16.4	180	Clear	High	Low	2	10	5	0	30	0	45	10	0
6	06SC036	2	29	13.9	170	Clear	High	Low	1.9	10	5	0	20	0	40	25	0
6	06SC036	3	18	14.1	170	Mostly cloudy	Medium	Low	1.2	10	5	0	15	0	30	40	0
6	06SC036	4	17	12.5	180	Clear	High	Low	2.1	10	5	0	15	0	30	40	0
6	06SC036	5	17	10.7	200	Clear		Low	0.8	5	5	0	20	0	20	50	0
6	06SC036	6	20	13.2	220	Clear	High	Low	1	10	0	0	0	0	20	70	0
6	06PIN02	1	18	20.7	210	Clear	High	Medium	1.6	10	10	0	0	0	5	75	0
6	06PIN02	2	17	16.8	260	Clear	High	Medium	1.5	30	20	0	0	0	20	30	0
6	06PIN02	3	15	13.6	260	Clear	Medium	Medium	1.8	20	20	0	0	0	20	40	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	06PIN02	4	20	14.0	270	Clear	High	Medium	2.3	40	20	0	0	0	20	20	0
6	06PIN02	5	12	10.6	200	Mostly cloudy	Medium	Medium	1.4	25	20	0	0	0	25	30	0
6	06PIN02	6	22	12.6	300	Clear	High	Low	n/a	20	20	0	0	0	20	40	0
6	06PIN01	1	18	20.7	260	Clear	High	Medium	1.6	20	20	0	0	0	20	40	0
6	06PIN01	2	17	16.8	260	Clear	High	Medium	1.5	20	20	0	0	0	20	40	0
6	06PIN01	3	12	13.6	260	Clear	Medium	Medium	1.8	30	20	0	0	10	10	30	0
6	06PIN01	4	20	14.0	270	Clear	High	Low	n/a	30	20	0	0	0	20	30	0
6	06PIN01	5	12	10.5	200	Mostly cloudy	Medium	Low	1.5	40	0	0	0	0	10	50	0
6	06PIN01	6	2	12.4	300	Clear	High	Low	n/a	20	20	0	0	0	40	20	0
6	0614	1	27	11.9	180	Clear	High	Low	1.8	20	5	0	0	5	20	50	0
6	0614	2	18	12.9	170	Clear	High	Low	1.1	40	0	0	0	0	30	30	0
6	0614	3	16	13.5	170	Clear	Low	Medium	1.6	25	0	0	0	5	15	55	0
6	0614	4	9	12.7	180	Fog	High	Medium	2.2	20	5	0	0	5	10	60	0
6	0614	5	12	11.5	180	Partly cloudy	Medium	Medium	2	30	0	0	0	0	30	40	0
6	0614	6	24	12.0	160	Clear	Medium	Low	1.9	30	0	0	0	0	10	60	0
6	0613	1	33	14.9	200	Clear	High	Low	1.3	20	0	0	0	0	50	30	0
6	0613	2	29	13.5	200	Clear	High	Low	1.2	30	0	0	0	0	40	30	0
6	0613	3	20	13.9	190	Partly cloudy	Medium	Medium	1.4	30	0	0	0	0	40	30	0
6	0613	4	17	12.6	180	Clear	High	Medium	2.2	30	0	0	0	0	40	30	0
6	0613	5	17	11.4	180	Clear	Medium	Medium	1.9	40	0	0	0	0	30	30	0
6	0613	6	20	12.0	200	Clear	High	Medium	2	30	0	0	0	0	60	10	0
6	0612	1	30	12.1	180	Clear	High	Medium	1.3	35	5	0	0	0	30	30	0
6	0612	2	29	13.3	170	Clear	High	Medium	1.5	19	1	0	0	0	20	60	0
6	0612	3	20	14.2	170	Mostly cloudy	High	Medium	1.9	30	0	0	0	0	30	40	0
6	0612	4	15	12.5	170	Clear	High	Medium	2.3	30	0	0	0	0	30	40	0
6	0612	5	15	11.8	170	Clear	Medium	Medium	1.4	20	0	0	0	0	20	60	0
6	0612	6	15	12.1	170	Clear	High	Medium	2	40	0	0	0	0	20	40	0
6	0611	1	17	14.9	200	Clear	High	Low	1.3	30	5	0	0	5	40	20	0
6	0611	2	22	12.5	200	Clear	High	Low	1.2	20	0	0	5	0	65	10	0
6	0611	3	18	13.7	190	Clear	High	Low	1.4	20	5	0	0	5	40	30	0
6	0611	4	8	12.3	180	Clear	High	Low	2	25	5	0	0	5	40	25	0
6	0611	5	14	10.8	180	Clear	Medium	Low	1.9	55	5	0	0	0	30	30	-20
6	0611	6	14	11.9	200	Clear		Low	2	25	5	0	0	0	40	30	0
6	0610	1	25	14.9	200	Clear		Low	1.3	30	10	0	0	0	30	30	0
6	0610	2	27	13.4	200	Clear	High	Low	1.2	5	10	0	0	0	70	15	0
6	0610	3	19	13.9	190	Clear	High	Low	1.4	20	10	0	0	0	40	30	0
6	0610	4	10	12.3	180	Clear		Low	2.2	20	10	0	0	5	25	40	0
6	0610	5	15	10.8	180	Clear	High	Low	1.9	20	10	0	0	0	60	10	0
6	0610	6	15	11.9	200	Clear	High	Medium	2	20	20	0	0	0	20	40	0
6	0609	1	15	14.9	200	Clear		Low	1.3	30	5	0	0	0	55	10	0
6	0609	2	20	12.4	180	Clear	Medium	Low	1.2	20	5	0	0	5	60	10	0
6	0609	3	16	13.5	190	Clear	Medium	Low	1.4	30	5	0	0	5	50	10	0
6	0609	4	8	12.2	180	Fog	High	Low	2.3	25	5	0	0	5	40	25	0
6	0609	5	13	11.0	180	Clear	High	Low	1.9	20	0	0	0	0	50	30	0
6	0609	6	14	11.8	280	Clear	High	Low	2	30	5	0	0	0	30	35	0
6	0608	1	30	16.3	210	Clear	High	Medium	1.4	30	10	0	0	0	30	30	0
6	0608	2	22	13.8	200	Clear	High	Medium	1.4	30	0	0	0	0	60	10	0
6	0608	3	20	13.6	170	Partly cloudy	Medium	Medium	1.8	40	5	0	0	0	35	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.

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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	0608	4	19	12.8	200	Clear	High	Medium	2.2	30	5	0	0	0	40	25	0
6	0608	5	12	11.5	180	Partly cloudy	Medium	Medium	1.4	30	2	0	0	0	38	30	0
6	0608	6	22	12.1	200	Clear	Medium	Medium	2	30	5	0	0	0	60	5	0
6	0607	1	27	12.1	180	Clear	High	Medium	1.3	35	5	0	0	0	30	30	0
6	0607	2	27	12.9	170	Clear	High	Low	1.5	15	5	0	0	0	60	20	0
6	0607	3	20	13.7	170	Clear	High	Low	1.9	35	5	0	0	5	30	25	0
6	0607	4	23	13.3	190	clear	High	Low	2	25	5	0	0	0	30	40	0
6	0607	5	15	11.2	170	Clear	Medium	Low	1.1	30	10	0	0	0	40	20	0
6	0607	6	17	12.1	170	Clear	High	Low	2	40	1	0	0	0	29	30	0
6	0606	1	14	12.1	180	Fog	High	Medium	1.3	30	0	0	0	0	30	40	0
6	0606	2	20	12.1	170	Clear	High	Medium	1.5	30	0	0	0	0	40	30	0
6	0606	3	13	13.5	170	Clear	High	Medium	1.9	25	2	0	0	3	30	40	0
6	0606	4	23	13.5	180	Clear	High	Medium	2	30	0	0	0	0	40	30	0
6	0606	5	12	12.0	180	Partly cloudy	Low	Medium	2	35	5	0	0	0	30	30	0
6	0606	6	13	11.9	170	Clear	High	Medium	2	50	0	0	0	0	20	30	0
6	0605	1	30	16.9	180	Clear		Medium	1.8	30	0	0	0	0	35	35	0
6	0605	2	22	12.2	170	Partly cloudy		Low	1.1	30	5	0	0	0	45	20	0
6	0605	3	18	13.4	180	Partly cloudy	Medium	Medium	1.6	30	0	0	0	0	40	30	0
6	0605	4	22	12.8	180	clear	High	Medium	2.2	50	0	0	0	0	30	20	0
6	0605	5	14	11.6	180	Partly cloudy	Medium	Medium	2	30	0	0	0	0	20	50	0
6	0605	6	22	12.1	170	Clear	Medium	Medium	2	30	0	0	0	0	20	50	0
6	0604	1	30	16.3	210	Clear	High	High	1.4	30	10	0	0	0	30	30	0
6	0604	2	22	13.1	200	Clear	High	Medium	1.4	30	15	0	0	0	15	40	0
6	0604	3	17	13.6	170	Partly cloudy	Medium	High	1.8	30	30	0	0	0	10	30	0
6	0604	4	16	12.7	200	Clear	High	High	2.2	20	20	0	0	0	20	40	0
6	0604	5	12	11.7	180	Partly cloudy	Medium	High	1.4	40	20	0	0	0	10	30	0
6	0604	6	24	12.4	200	Clear	High	Medium	2	60	10	0	0	0	20	10	0
6	0603	1	27	11.9	180	Clear	High	Medium	1.8	30	0	0	0	0	30	40	0
6	0603	2	20	12.5	180	Clear	High	Low	1.1	30	0	0	0	0	60	10	0
6	0603	3	17	13.6	170	Clear	Medium	Medium	1.6	30	5	0	0	0	45	20	0
6	0603	4	9	13.0	180	Fog	High	Medium	2.2	30	0	0	0	0	40	30	0
6	0603	5	14	11.7	180	Partly cloudy	Medium	Medium	2	30	0	0	0	0	30	40	0
6	0603	6	24	12.1	160	Clear	High	Medium	1.9	30	5	0	0	0	20	45	0
6	0602	1	18	15.7	210		High	High	1.6	10	20	0	0	0	0	70	0
6	0602	2	19	13.7	180	Clear	High	Medium	1.2	30	20	0	0	5	5	40	0
6	0602	3	9	13.1	270	Clear	High	High	1.6	25	15	5	0	5	10	40	0
6	0602	4	4	12.7	290	Fog	High	High	n/a	15	20	5	0	5	5	50	0
6	0602	5	10	12.6	190	Overcast	High	High	1.4	30	15	0	0	5	10	40	0
6	0602	6	13	12.1	250	Clear	High	High	2	20	30	0	0	0	20	30	0
6	0601	1	18	11.9	180	Clear	High	Medium	1.8	45	5	0	0	5	0	45	0
6	0601	2	14	12.8	180	Clear	High	Medium	1.1	50	5	0	0	5	20	20	0
6	0601	3	15	13.1	170	Clear	Low	High	1.7	60	5	0	0	5	10	20	0
6	0601	4	19	13.7	180	Clear	High	High	1.4	50	5	0	0	5	10	30	0
6	0601	5	13	10.7	200	Mostly cloudy	Medium	Medium	1.5	20	0	5	0	0	0	75	0
6	0601	6	22	12.0	160	Clear	Medium	Medium	1.4	30	10	0	0	0	30	30	0
7	07SC022	1	27	13.5	180	Partly cloudy	High	Low	1.3	5	5	0	0	0	15	80	-5
7	07SC022	2							n/a	0	0	0	0	0	0	0	100
7	07SC022	3	12	13.1	180	clear	High	Low	1.6	10	10	0	0	0	0	60	20

[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	07SC022	4	10	12.3	170	Overcast	Medium	Low	1.7	20	10	0	0	0	10	60	0
7	07SC022	5	17	12.4	180	Overcast	Medium	Low	1.4	30	20	0	0	0	10	40	0
7	07SC022	6	22	12.8	170	Clear	High	Low	2	20	10	0	0	0	10	60	0
7	07SC012	1	15	12.2	190	Partly cloudy	High	Low	1.5	0	0	0	0	0	30	50	20
7	07SC012	2	22	14.5	210	Clear	High	Low	1.1	0	0	0	0	0	50	50	0
7	07SC012	3	20	14.0	180	Overcast	High	Low	1.6	5	10	0	0	0	5	80	0
7	07SC012	4	17	12.9	220	Partly cloudy	Medium	Medium	n/a	20	5	0	0	0	15	60	0
7	07SC012	5	20	12.4	180	Clear	Low	Low	1.3	15	5	0	0	0	20	60	0
7	07SC012	6	17	11.7	190	Clear	High	Low	1.9	30	10	0	0	0	20	40	0
7	07KIS01	1	18	16.6	300	Overcast	High	Medium	0.4	10	0	0	0	0	50	10	30
7	07KIS01	2	25	14.9	190			Low	1.1	5	10	0	0	0	40	30	15
7	07KIS01	3	22	14.1	180	Clear	High	Medium	1.2	50	5	0	0	0	15	30	0
7	07KIS01	4	17	12.7	220	Partly cloudy	Medium	Low	n/a	50	10	10	0	0	20	10	0
7	07KIS01	5	17	12.4	180	Partly cloudy		Medium	1.6	30	0	0	0	0	50	20	0
7	07KIS01	6	17	11.6	190	Clear	High	Medium	1.9	30	0	0	0	0	40	30	0
7	07BEA02	1	25	17.3	220	Clear	High	Medium	0.3	20	1	0	0	0	19	10	50
7	07BEA02	2	15	15.1	260	clear	High	Medium	0.4	18	2	0	0	0	30	20	30
7	07BEA02	3		13.2	330	Clear	High	Medium	0.6	5	5	0	0	0	30	30	30
7	07BEA02	4	20	13.3	340	Clear	High	Medium	0.7	10	10	0	0	0	40	20	20
7	07BEA02	5	12	11.7	430	Overcast	High	Low	0.7	25	5	0	0	0	25	25	20
7	07BEA02	6	12	11.2	190	Clear	High	Low	1.7	20	0	0	0	0	30	20	30
7	07BEA01	1	20	17.3	220	Clear	High	Low	0.3	0	5	0	0	0	30	30	35
7	07BEA01	2	15	14.8	260	clear	High	Low	0.4	10	10	0	0	0	40	10	30
7	07BEA01	3	3	13.0	330	Fog	High	Low	0.6	10	5	0	0	0	30	25	30
7	07BEA01	4	20	13.2	340	Clear	High	Low	0.7	10	10	0	0	5	30	20	25
7	07BEA01	5	12	11.1	430	Overcast	High	Low	0.7	25	5	0	0	0	25	20	25
7	07BEA01	6	22	13.3	460	Clear	High	Low	0.8	15	5	0	0	0	20	20	40
7	0714	1	15	12.1	190	Overcast	High	Low	2	10	0	0	0	0	80	10	0
7	0714	2	25	14.2	210	Clear	Medium	Low	1.1	5	0	5	0	0	50	25	15
7	0714	3	22	14.0	180	Clear	High	Low	1.6	20	0	0	0	0	20	60	0
7	0714	4	17	12.9	220	Partly cloudy	Medium	Medium	n/a	50	0	0	0	0	30	20	0
7	0714	5	17	12.4	170	Mostly cloudy	Medium	Medium	1.3	40	0	0	0	0	30	30	0
7	0714	6	17	11.6	190	Clear	High	Medium	1.9	35	5	0	0	0	30	40	-10
7	0713	1	18	12.1	190	Mostly cloudy	High	Medium	2	30	0	0	0	0	60	10	0
7	0713	2	23	13.9	210	Clear	High	Medium	1.1	10	5	5	0	0	55	10	15
7	0713	3	22	13.8	180	Clear	High	High	1.6	40	5	0	0	0	35	20	0
7	0713	4	17	12.9	220	Partly cloudy	Medium	Medium	n/a	10	5	5	0	0	40	40	0
7	0713	5	17	12.4	170	Mostly cloudy	Medium	Medium	1.3	60	0	0	0	0	20	20	0
7	0713	6	20	11.7	190	Clear	High	High	1.9	50	0	0	0	0	20	30	0
7	0712	1	20	13.1	190	Mostly cloudy	High	Low	2	20	20	0	0	0	50	10	0
7	0712	2	22	13.8	210	Clear	High	Low	1.1	5	5	0	0	0	50	25	15
7	0712	3	20	13.5	180	Clear	High	Low	1.6	40	5	0	0	0	25	30	0
7	0712	4	16	12.9	220	Partly cloudy	Medium	Medium	n/a	50	5	0	0	0	40	5	0
7	0712	5	17	12.3	180	Mostly cloudy	Medium	Medium	1.6	40	5	0	0	0	50	5	0
7	0712	6	20	11.4	190	Clear	High	Medium	1.9	30	10	0	0	0	20	40	0
7	0711	1	20	12.4	190	Mostly cloudy	High	Medium	2	20	10	0	0	0	30	40	0
7	0711	2	20	13.8	210	Clear	High	Low	1.1	5	5	0	0	0	50	25	15
7	0711	3	15	13.5	180	Clear	High	Medium	1.6	30	5	0	0	0	40	25	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	711	4	15	12.9	220	Partly cloudy	Medium	Medium	n/a	10	10	0	0	0	70	10	0
7	711	5	20	12.2	180	Mostly cloudy	Medium	Medium	1.6	50	5	0	0	0	35	10	0
7	711	6	20	11.4	190	Clear	High	Medium	1.9	40	0	0	0	0	30	30	0
7	710	1	16	19.8	190	Partly cloudy	High	Medium	2	0	0	0	0	0	70	30	0
7	710	2	30	14.0	170	clear	High	Low	1.5	25	5	0	0	0	30	40	0
7	710	3	10	13.0	180	Clear	Medium	Low	1.6	15	5	0	0	0	20	60	0
7	710	4	10	12.4	180	Overcast	Medium	Low	1.6	15	5	0	0	0	30	50	0
7	710	5	15	12.1	170		Medium	Low	1.3	25	5	0	0	0	30	40	0
7	710	6	20	11.5	190	Clear		Low	1.9	30	5	0	0	0	25	40	0
7	709	1	27	13.0	180	Partly cloudy	High	Low	1.4	30	0	0	0	0	40	30	0
7	709	2	25	14.0	170	clear	High	Low	1.1	20	0	0	0	0	60	20	0
7	709	3	22	13.6	170	Clear	High	Low	1.7	45	0	0	0	0	45	10	0
7	709	4	10	12.2	180	Overcast	High	Low	1.7	50	0	0	0	0	30	20	0
7	709	5	20	11.7	180	Clear	Medium	Medium	1.9	45	0	0	0	0	45	10	0
7	709	6	20	11.2	190	Clear	High	Medium	1.9	40	0	0	0	0	30	30	0
7	708	1	25	14.8	170	Clear	High	High	0.8	20	2	5	0	0	23	25	25
7	708	2	30	14.4	150	clear	High	High	1	20	5	0	0	0	10	40	25
7	708	3	19	13.6	170	Clear	High	High	1.6	30	0	0	0	0	10	30	30
7	708	4	20	14.3	170	Partly cloudy	High	High	1.7	20	0	0	0	0	30	30	20
7	708	5	20	11.9	190	Clear	Low	High	0.9	30	2	0	0	0	23	45	0
7	708	6	25	12.7	170	Clear	High	High	2	60	0	0	0	0	10	30	0
7	707	1	20	12.4	190	Mostly cloudy	High	Medium	2	0	0	0	0	0	80	20	0
7	707	2	19	14.5	210	Clear	High	Low	1.1	10	2	0	0	0	50	28	10
7	707	3	14	13.2	180	Clear	High	Low	1.6	20	0	0	0	0	30	50	0
7	707	4	12	12.2	220	Partly cloudy	Medium	Medium	n/a	34	0	0	0	0	33	33	0
7	707	5	17	12.2	170	Overcast	Medium	Medium	1.3	59	1	0	0	0	30	10	0
7	707	6	20	11.1	190	Clear	High	Medium	1.9	30	0	0	0	0	30	40	0
7	706	1	16	19.8	190	Overcast	High	Low	2	30	10	0	0	0	10	50	0
7	706	2	13	13.1	210	Clear	High	Low	1.1	20	10	5	0	10	25	25	5
7	706	3	13	13.0	180	Clear	High	Medium	1.6	30	30	0	0	0	10	30	0
7	706	4	12	12.2	220			Low	n/a	15	0	0	0	0	5	80	0
7	706	5	17	12.1	180	Overcast	High		1.6	30	20	0	0	0	20	30	0
7	706	6	20	11.2	190	Clear	High	Medium	1.9	30	20	0	0	0	20	0	30
7	705	1	16	10.7	190	Overcast	High	Medium	2	20	20	0	0	0	20	40	0
7	705	2	13	13.1	210			Low	1.1	20	10	5	0	10	25	25	5
7	705	3	12	13.0	180	Clear	High	High	1.6	40	20	0	0	0	10	30	0
7	705	4	10	12.2	220	Partly cloudy		Medium	n/a	50	0	0	0	0	10	40	0
7	705	5	17	12.1	180	Overcast	High	High	1.6	40	20	0	0	0	10	30	0
7	705	6	22	12.6	170	Clear	High	High	2	30	20	0	0	0	20	30	0
7	704	1	16	12.5	180	Overcast	High	Medium	1.5	0	0	0	0	0	20	80	0
7	704	2	30	14.0	170	clear	High	Medium	1.5	24	1	0	0	0	45	30	0
7	704	3	10	13.0	180	Clear	Medium	Medium	1.6	40	0	0	0	0	30	30	0
7	704	4	10	12.3	180	Overcast	Medium	Medium	1.6	40	0	0	0	0	40	20	0
7	704	5	15	12.1	170	Overcast	Medium	Medium	1.3	40	0	0	0	0	40	20	0
7	704	6	20	11.3	190	Clear	High	Medium	1.9	40	0	0	0	0	20	40	0
7	703	1	27	13.0	180	Partly cloudy	Medium	Low	0.8	20	0	0	0	0	20	30	30
7	703	2	25	14.0	170	clear	High	Medium	1	20	0	0	0	0	20	40	20
7	703	3	22	13.7	170	Clear	High	Low	1.6	40	0	0	0	0	30	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
7	0703	4	10	12.3	180	Overcast	High	Medium	1.6	40	5	0	0	0	25	30	0
7	0703	5	16	12.0	170	Mostly cloudy	High	Medium	1.3	30	0	0	0	0	30	40	0
7	0703	6	22	12.6	170	Clear	High	Low	2	30	0	0	0	0	30	40	0
7	0702	1	27	13.0	180	Partly cloudy	High	Medium	1.4	30	0	0	0	0	60	10	0
7	0702	2	18	14.3	170	Clear		Medium	1.1	30	0	0	0	0	60	10	0
7	0702	3	22	13.5	170	Clear	High	Medium	1.7	60	0	0	0	0	30	10	0
7	0702	4	10	12.4	180	Overcast	High	High	1.7	40	0	0	0	0	30	30	0
7	0702	5	20	11.6	180	Clear		Medium	1.9	70	0	0	0	0	20	10	0
7	0702	6	15	11.2	190	Clear	High	Medium	1.9	50	0	0	0	0	10	40	0
7	0701	1	19	11.5	190	Clear	High	Low	1.5	28	2	0	0	0	40	30	0
7	0701	2	28	14.0	170	Partly cloudy	High	Low	1.3	10	0	0	0	0	70	20	0
7	0701	3	3	13.2	190	Fog	High	Low	1.8	30	5	0	0	0	25	40	0
7	0701	4	20	12.7	180	Clear	High	Low	2.3	15	5	0	0	0	40	40	0
7	0701	5	20	11.7	180	Clear	Low	Low	1.4	30	5	0	0	0	50	15	0
7	0701	6	20	12.2	170	Clear		Low	1	23	2	0	0	0	25	50	0
9	09SC061	1	20	13.6	210	Clear	Low	Low	1.1	35	10	0	5	0	0	40	10
9	09SC061	2	28	12.7	210		High	Low	n/a	0	10	0	0	0	40	50	0
9	09SC061	3	17	13.0	320	Clear	Low	Medium	1.5	40	0	5	0	0	55	0	0
9	09SC061	4	22	14.0	230	Clear	Low	Low	n/a	55	10	0	0	5	10	20	0
9	09SC061	5	23	13.0	170		High	Low	1.5	15	5	0	0	0	20	60	0
9	09SC061	6	5	10.7	180	Overcast	High	Low	n/a	10	5	0	5	0	15	65	0
9	09SC053	1	28	16.8	210	Partly cloudy	High	Low	1.1	10	20	0	0	0	20	50	0
9	09SC053	2	22	14.0	200	Clear		Low	1.4	5	2	0	5	0	63	20	5
9	09SC053	3	13	13.4	190	Overcast	Low	Low	1.5	60	10	0	0	0	10	20	0
9	09SC053	4	12	13.0	230	Clear	Low	Low	n/a	50	5	0	0	0	15	30	0
9	09SC053	5	12	12.4	220	Overcast	High	Low	1.4	5	0	0	0	0	5	90	0
9	09SC053	6	10	10.9	180	Overcast	High	Low	n/a	5	0	0	0	0	5	90	0
9	0914	1	22	13.2	210	Clear		Medium	1.1	30	10	0	0	0	30	20	10
9	0914	2	30	12.8	210	Partly cloudy	High	Medium	1.8	0	5	0	0	5	60	30	0
9	0914	3	19	13.0	220	Clear	Medium	Medium	1.5	40	0	0	0	0	50	10	0
9	0914	4	20	13.7	230	Clear	Medium	Medium	n/a	60	10	0	0	0	10	10	10
9	0914	5	20	12.7	180	Overcast	High	Medium	1.9	0	0	0	0	0	0	0	100
9	0914	6	6	10.7	180	Overcast	High	Medium	n/a	10	5	0	0	5	20	60	0
9	0913	1	20	13.6	210	Clear	Medium	Medium	1.1	45	5	10	0	0	10	20	10
9	0913	2	25	12.8	210	Partly cloudy		Medium	1.8	20	10	0	0	0	30	40	0
9	0913	3	17	13.0	220	Clear	Medium	Medium	1.5	10	25	5	0	0	35	25	0
9	0913	4	21	14.0	230	Clear	Medium	Medium	n/a	30	30	0	0	10	0	30	0
9	0913	5	20	13.0	170	Overcast	High	High	1.5	35	5	0	0	0	30	30	0
9	0913	6	6	10.6	180	Overcast	High	High	n/a	50	10	0	0	0	20	20	0
9	0912	1	23	13.7	210	Clear	Low	Low	1.1	30	0	0	0	0	50	10	10
9	0912	2	25	13.1	210	Clear	High	Low	1.8	50	0	0	0	0	40	10	0
9	0912	3	19	13.0	220	Clear	Medium	Medium	1.5	30	0	10	0	0	40	20	0
9	0912	4	19	14.0	230	Clear	Low	Low	n/a	55	0	0	0	0	15	30	0
9	0912	5	20	12.9	180	Overcast	High	Medium	1.9	30	0	0	0	0	10	60	0
9	0912	6	6	10.8	180	Overcast	High	Medium	n/a	50	0	0	0	0	10	40	0
9	0911	1	16	13.4	210	Clear	Low	Low	1.1	50	0	0	0	0	40	10	0
9	0911	2	20	12.9	210			Medium	1.8	0	0	0	0	0	60	40	0
9	0911	3	15	13.5	220		High	Medium	1.5	60	0	0	0	0	15	25	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	911	4	22	13.8	230	Clear	Low	Low	n/a	80	0	0	0	0	10	10	0
9	911	5	20	13.1	180	Partly cloudy	High	Low	2	30	0	0	0	0	20	50	0
9	911	6	12	11.1	180	Overcast	High	Medium	n/a	20	0	0	0	0	30	50	0
9	910	1	28	14.4	210	Partly cloudy	High	Low	1.1	50	0	0	0	0	20	30	0
9	910	2	22	13.6	200	Clear	High	Low	1.4	30	2	2	0	0	39	25	2
9	910	3	2	13.8	210			Low	1.6	10	0	0	0	0	70	20	0
9	910	4	16	13.4	230	Clear	Low	Low	n/a	60	0	0	0	0	0	40	0
9	910	5	17	12.7	180	Overcast	High	Low	2.1	50	0	0	0	0	30	20	0
9	910	6	10	11.0	180	Overcast	High	Low	n/a	35	5	0	0	0	20	40	0
9	909	1	28	15.4	210	Mostly cloudy	High	Medium	1.1	40	0	0	0	0	40	20	0
9	909	2	20	12.9	210	Partly cloudy	High	Low	1.8	0	0	0	0	0	70	30	0
9	909	3	15	13.0	220	Clear	Medium	Medium	1.5	80	0	0	0	0	20	0	0
9	909	4	22	13.8	230	Clear	Low	Medium	n/a	60	5	0	0	0	15	20	0
9	909	5	23	12.8	170	Overcast	High	Low	1.5	30	0	0	0	0	60	10	0
9	909	6	5	10.5	180	Overcast	High	Low	n/a	35	5	0	0	0	50	10	0
9	908	1	28	15.4	210	Mostly cloudy	High	Medium	1.1	60	0	0	0	0	40	0	0
9	908	2	20	12.9	210	Partly cloudy	High	Low	1.8	0	0	0	0	0	60	40	0
9	908	3	14	12.0	210	Clear	Medium	Medium	1.5	40	0	0	0	0	60	0	0
9	908	4	22	13.8	230	Clear	Low	Low	n/a	60	5	0	0	0	5	30	0
9	908	5	20	12.7	170	Overcast	High	Low	1.5	50	0	0	0	0	45	5	0
9	908	6	12	11.1	180	Overcast	High	Low	n/a	40	0	0	0	0	45	15	0
9	907	1	28	14.8	210	Partly cloudy	High	Low	1.1	40	0	0	0	0	50	10	0
9	907	2	15	12.0	220	Partly cloudy	High	Low	1.8	0	0	0	0	0	60	40	0
9	907	3	8	13.0	210	Clear	Medium	Medium	1.5	90	0	0	0	0	5	5	0
9	907	4	20	13.7	230	Clear		Low	n/a	60	0	0	0	0	0	40	0
9	907	5	20	12.7	170	Partly cloudy	High	Low	1.5	20	0	0	0	0	70	10	0
9	907	6	12	11.1	180	Overcast	High	Low	n/a	30	0	0	0	0	40	30	0
9	906	1	28	16.1	210	Partly cloudy	High	Low	1.1	40	0	0	0	0	50	10	0
9	906	2	22	13.5	200	Partly cloudy	High	Low	1.4	40	2	2	0	0	55	1	0
9	906	3	3	13.8	210	Fog		Medium	1.6	10	0	0	0	0	80	10	0
9	906	4	18	13.6	230	Clear	Low	Low	n/a	50	0	0	0	0	50	0	0
9	906	5	15	12.7	170	Clear	High	Low	1.5	40	5	0	0	0	15	40	0
9	906	6	12	11.0	180	Overcast	High	Medium	n/a	35	5	0	0	0	30	30	0
9	905	1	25	14.5	210	Partly cloudy	High	Medium	1.1	60	0	0	0	0	10	30	0
9	905	2	24	13.5	200	Clear	High	Medium	1.4	20	2	10	2	0	44	20	2
9	905	3	14	13.2	190	Overcast		Medium	1.5	70	10	0	0	0	10	10	0
9	905	4	13	13.1	230	Clear		Medium	n/a	45	5	0	0	0	0	50	0
9	905	5	15	12.5	180	Partly cloudy	High	Medium	2.1	30	0	0	0	0	10	60	0
9	905	6	10	11.0	180	Overcast	Medium	Medium	n/a	40	0	0	0	0	20	40	0
9	904	1	28	13.7	210	Partly cloudy	High	Medium	1.1	30	0	0	0	0	30	40	0
9	904	2	21	13.3	200	Clear		Medium	1.4	20	2	5	0	5	61	2	5
9	904	3	15	13.2	190	Partly cloudy	Low	Medium	1.5	75	5	0	0	0	10	10	0
9	904	4	6	13.2	230	Clear		Medium	n/a	60	10	0	0	0	20	10	0
9	904	5	10	12.7	180	Clear	High	Low	1.4	30	0	0	0	0	50	20	0
9	904	6	10	11.0	180	Overcast	High	Medium	n/a	30	5	0	0	0	45	20	0
9	903	1	25	14.6	210	Clear	High	Medium	1.1	40	0	0	0	0	30	30	0
9	903	2	20	13.5	200	Clear	High	Medium	1.4	45	1	2	0	0	50	2	0
9	903	3	15	13.2	190	Mostly cloudy	Low		1.5	70	0	0	0	0	10	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 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	4	5	13.2	230	Fog	Low	Medium	n/a	70	0	0	0	0	20	10	0
9	903	5	10	12.4	180	Clear	High	Medium	1.4	45	0	0	0	0	45	10	0
9	903	6	10	10.9	180	Overcast	High	Medium	n/a	40	0	0	0	0	50	10	0
9	902	1	20	13.7	210	Clear	High	Medium	1.1	5	10	0	0	0	15	70	0
9	902	2	18	13.0	200	Clear	High	Medium	1.4	50	5	5	0	0	30	5	5
9	902	3	16	13.2	190	Partly cloudy	Low	Medium	1.5	60	10	0	0	0	5	25	0
9	902	4	4	13.2	230	Fog	Medium	Medium	n/a	55	10	5	0	0	0	30	0
9	902	5	9	12.4	180	Clear	High	Medium	2.1	30	0	0	0	0	10	60	0
9	902	6	6	10.9	180	Overcast	High	Medium	n/a	30	5	0	0	0	15	50	0
9	901	1	20	13.7	210	Clear	High	Medium	1.1	10	5	0	0	0	30	55	0
9	901	2	18	12.5	200	Clear		Medium	1.4	50	5	5	0	0	30	5	5
9	901	3	15	13.1	190	Partly cloudy	Low	Medium	1.5	70	10	0	0	0	10	10	0
9	901	4	3	13.2	230	Fog	Low	Medium	n/a	70	10	0	0	0	0	20	0
9	901	5	8	12.2	180	Clear	High	Medium	2.1	35	5	0	0	0	30	30	0
9	901	6	7	10.9	180	Overcast	High	Medium	n/a	20	5	0	0	0	20	55	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 and 3 of the Peace River, 2002 to 2022.

	2002		2003		2004		2005		2006		2007		2008		2009		2010		2011	
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]
Large-bodied																				
Arctic Grayling	12	*<1*	54	*1*	138	*2*	106	*1*	93	*1*	148	*2*	99	*1*	65	*1*	29	*<1*	90	*1*
Bull Trout	98	*2*	91	*1*	95	*1*	139	*2*	75	*1*	98	*1*	110	*1*	107	*1*	74	*1*	148	*1*
Burbot					2	*<1*			5	*<1*	3	*<1*			1	*<1*	1	*<1*	1	*<1*
Kokanee	23	*<1*	5	*<1*	12	*<1*	38	*<1*	11	*<1*	111	*1*	39	*<1*	17	*<1*	18	*<1*	70	*1*
Lake Trout											2	*<1*			2	*<1*	1	*<1*	2	*<1*
Lake Whitefish	2	*<1*	2	*<1*	4	*<1*			1	*<1*	4	*<1*	1	*<1*	2	*<1*			3	*<1*
Mountain Whitefish	5370	*88*	5660	*89*	8069	*91*	7974	*90*	6343	*93*	7365	*90*	8356	*90*	7111	*90*	7687	*93*	9877	*92*
Northern Pike							1	*<1*	1	*<1*			1	*<1*	2	*<1*	2	*<1*	1	*<1*
Northern Pikeminnow	20	*<1*	25	*<1*	33	*<1*	27	*<1*	6	*<1*	19	*<1*	21	*<1*	11	*<1*	13	*<1*	11	*<1*
Rainbow Trout	39	*1*	62	*1*	97	*1*	85	*1*	38	*1*	85	*1*	137	*1*	156	*2*	115	*1*	158	*1*
Sucker spp.[c]	522	*9*	435	*7*	463	*5*	463	*5*	237	*3*	311	*4*	557	*6*	416	*5*	300	*4*	330	*3*
Walleye	3	*<1*					2	*<1*			5	*<1*	15	*<1*	9	*<1*	1	*<1*	8	*<1*
Large-bodied subtotal	6089	*100*	6334	*100*	8913	*100*	8835	*100*	6810	*100*	8151	*100*	9336	*100*	7899	*100*	8241	*100*	10 699	*100*
Small-bodied																				
Flathead Chub																				
Lake Chub																				
Longnose Dace																				
Peamouth	3	*43*																		
Redside Shiner	2	*29*																		
Sculpin spp.[c]	2	*29*																		
Trout-perch																				
Small-bodied subtotal	7	*100*																		
All species	6096		6334		8913		8835		6810		8151		9336		7899		8241		10 699	

	2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022	
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]
Large-bodied																						
Arctic Grayling	20	*<1*	15	*<1*	5	*<1*	31	*<1*	57	*1*	54	*1*	39	*<1*	38	*<1*	21	*<1*	5	*<1*	6	*<1*
Bull Trout	143	*2*	136	*2*	124	*2*	131	*2*	141	*2*	138	*2*	131	*2*	126	*1*	119	*2*	119	*3*	150	*4*
Burbot	2	*<1*	1	*<1*											2	*<1*	2	*<1*	1	*<1*		
Kokanee	94	*1*	24	*<1*	20	*<1*	18	*<1*	19	*<1*	49	*1*	9	*<1*	15	*<1*	38	*<1*	20	*<1*	17	*<1*
Lake Trout	3	*<1*	4	*<1*	2	*<1*	3	*<1*	1	*<1*	1	*<1*			3	*<1*	1	*<1*	1	*<1*	1	*<1*
Lake Whitefish	2	*<1*					1	*<1*	1	*<1*			1	*<1*								
Mountain Whitefish	8546	*90*	5905	*87*	4739	*86*	5149	*72*	5935	*75*	4615	*68*	6226	*78*	7142	*80*	6122	*80*	3243	*72*	2415	*71*
Northern Pike	1	*<1*	1	*<1*							2	*<1*	4	*<1*			1	*<1*	2	*<1*		
Northern Pikeminnow	32	*<1*	29	*<1*	31	*1*	48	*1*	79	*1*	58	*1*	40	*1*	60	*1*	57	*1*	57	*1*	43	*1*
Rainbow Trout	130	*1*	61	*1*	97	*2*	91	*1*	161	*2*	102	*1*	129	*2*	142	*2*	121	*2*	105	*2*	77	*2*
Sucker spp.[c]	510	*5*	576	*9*	524	*9*	1665	*23*	1561	*20*	1777	*26*	1379	*17*	1431	*16*	1198	*16*	963	*21*	708	*21*
Walleye	21	*<1*	15	*<1*			2	*<1*	10	*<1*	35	*1*	25	*<1*	13	*<1*	17	*<1*				
Large-bodied subtotal	9504	*100*	6767	*100*	5542	*100*	7139	*100*	7965	*100*	6831	*100*	7983	*100*	8972	*100*	7697	*100*	4516	*100*	3417	*100*
Small-bodied																						
Flathead Chub													2	*3*	1	*1*	1	*2*				
Lake Chub					3	*5*	1	*5*			2	*4*	5	*6*	23	*23*	2	*4*	2	*7*	6	*10*
Longnose Dace									3	*10*	6	*13*			4	*4*			2	*7*	4	*6*
Peamouth	1	*100*	1	*100*							3	*6*							2	*7*		
Redside Shiner							1	*5*	8	*27*	5	*11*	36	*46*	32	*32*	27	*54*	4	*13*	8	*13*
Sculpin spp.[c]					62	*95*	20	*91*	19	*63*	31	*66*	36	*46*	38	*38*	20	*40*	20	*67*	44	*71*
Trout-perch															2	*2*						
Small-bodied subtotal	1	*100*	1	*100*	65	*100*	22	*100*	30	*100*	47	*100*	79	*100*	100	*100*	50	*100*	30	*100*	62	*100*
All species	9505		6768		5607		7161		7995		6878		8062		9072		7747		4546		3479	

[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 5, 6, 7, and 9 of the Peace River, 2004 to 2022.

	2004		2005		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022	
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]
Large-bodied																																				
Arctic Grayling	133	*5*	174	*5*	196	*5*	103	*3*	51	*2*	30	*1*	45	*1*	23	*1*	12	*<1*	5	*<1*	24	*<1*	54	*1*	33	*<1*	16	*<1*	63	*1*	16	*<1*	40	*<1*	10	*<1*
Bull Trout	25	*1*	35	*1*	55	*1*	57	*1*	37	*1*	22	*1*	58	*2*	43	*1*	44	*1*	19	*1*	126	*1*	154	*2*	99	*1*	83	*1*	74	*1*	61	*1*	101	*1*	94	*1*
Burbot	3	*<1*	2	*<1*	1	*<1*			1	*<1*	1	*<1*			1	*<1*			1	*<1*	2	*<1*	37	*<1*	6	*<1*	13	*<1*	45	*1*	14	*<1*	16	*<1*	12	*<1*
Goldeye																					1	*<1*	7	*<1*	3	*<1*			14	*<1*	4	*<1*	7	*<1*	1	*<1*
Kokanee	1	*<1*	1	*<1*	5	*<1*	5	*<1*	3	*<1*	2	*<1*	3	*<1*	5	*<1*	3	*<1*			3	*<1*	4	*<1*	7	*<1*	2	*<1*	2	*<1*	10	*<1*	7	*<1*	3	*<1*
Lake Trout	1	*<1*	1	*<1*					1	*<1*					1	*<1*	1	*<1*			1	*<1*					1	*<1*								
Lake Whitefish	3	*<1*											4	*<1*	1	*<1*							2	*<1*			2	*<1*	1	*<1*			1	*<1*		
Mountain Whitefish	2291	*79*	2640	*76*	3029	*79*	3159	*80*	2862	*85*	2929	*91*	3297	*86*	2279	*76*	2524	*82*	2534	*83*	4784	*46*	3838	*46*	3493	*42*	5018	*58*	3874	*50*	2489	*39*	2397	*23*	1627	*25*
Northern Pike	1	*<1*	3	*<1*	7	*<1*	7	*<1*	6	*<1*	2	*<1*	10	*<1*	6	*<1*	4	*<1*	4	*<1*	12	*<1*	16	*<1*	35	*<1*	30	*<1*	25	*<1*	18	*<1*	41	*<1*	28	*<1*
Northern Pikeminnow	21	*1*	6	*<1*	5	*<1*	7	*<1*	4	*<1*			10	*<1*	9	*<1*	8	*<1*	8	*<1*	203	*2*	131	*2*	137	*2*	83	*1*	123	*2*	120	*2*	193	*2*	106	*2*
Rainbow Trout	8	*<1*	6	*<1*	10	*<1*	25	*1*	8	*<1*	15	*<1*	13	*<1*	9	*<1*	6	*<1*	9	*<1*	38	*<1*	25	*<1*	20	*<1*	17	*<1*	15	*<1*	7	*<1*	27	*<1*	4	*<1*
Sucker spp.[c]	412	*14*	623	*18*	523	*14*	545	*14*	371	*11*	199	*6*	353	*9*	607	*20*	435	*14*	439	*14*	5180	*49*	3858	*46*	4207	*50*	3049	*35*	3241	*42*	3456	*54*	7325	*70*	4514	*68*
Walleye	6	*<1*	3	*<1*	12	*<1*	43	*1*	8	*<1*	2	*<1*	41	*1*	27	*1*	28	*1*	19	*1*	107	*1*	215	*3*	331	*4*	312	*4*	262	*3*	206	*3*	245	*2*	216	*3*
Large-bodied subtotal	2905	*100*	3494	*100*	3843	*100*	3951	*100*	3352	*100*	3202	*100*	3834	*100*	3011	*100*	3065	*98*	3038	*100*	10 481	*100*	8341	*100*	8371	*100*	8626	*100*	7739	*100*	6401	*100*	10 400	*98*	6615	*100*
Small-bodied																																				
Finescale Dace																					1	*<1*														
Flathead Chub													1	*100*							3	*1*	18	*6*	35	*9*	9	*8*	48	*12*	79	*28*	79	*22*	3	*1*
Lake Chub																			1	*5*	39	*15*	28	*9*	63	*17*	18	*15*	127	*32*	31	*11*	70	*20*	54	*19*
Longnose Dace																			2	*10*	12	*4*	13	*4*	37	*10*	5	*4*	14	*3*	36	*13*	64	*18*	54	*19*
Peamouth																									2	*1*					2	*1*	1	*<1*	1	*<1*
Redside Shiner																			1	*5*	151	*57*	157	*48*	177	*47*	18	*15*	101	*25*	78	*28*	80	*23*	101	*35*
Sculpin spp.[c]																			16	*80*	30	*11*	86	*26*	20	*5*	28	*24*	45	*11*	31	*11*	47	*13*	27	*9*
Spottail Shiner																					15	*6*	13	*4*	10	*3*	5	*4*	14	*3*	5	*2*	5	*1*	37	*13*
Trout-perch																					5	*2*	9	*3*	26	*7*	33	*28*	41	*10*	15	*5*	5	*1*	14	*5*
Yellow Perch					1	*100*															11	*4*	2	*1*	4	*1*	2	*2*	12	*3*	3	*1*	2	*1*		
Small-bodied subtotal					1	*100*							1	*100*					20	*100*	267	*100*	326	*100*	374	*100*	118	*100*	402	*100*	280	*100*	353	*100*	291	*100*
All species	2905		3494		3844		3951		3352		3202		3835		3011		3065		3058		10 748		8667		8745		8744		8141		6681		10 753		6906	

[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, 17 August to 05 October 2022.

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	18-Aug-22	211	0.60	0	0	0	0	0	0	0	0	0	0	0	0	17	483.41	0	0	0	0	0	0	0	0	0	0	17	483.41
		0102	18-Aug-22	301	0.98	0	0	0	0	0	0	0	0	0	0	0	0	13	159.47	0	0	0	0	0	0	0	0	0	0	13	159.47
		0103	18-Aug-22	471	1.20	0	0	0	0	0	0	0	0	0	0	0	0	10	63.69	0	0	0	0	0	0	5	31.85	0	0	15	95.54
		0104	18-Aug-22	229	0.50	0	0	0	0	0	0	0	0	0	0	0	0	4	125.76	0	0	0	0	0	0	1	31.44	0	0	5	157.21
		0105	18-Aug-22	383	1.10	0	0	0	0	0	0	0	0	0	0	0	0	18	153.81	0	0	0	0	0	0	0	0	0	0	18	153.81
		0107	18-Aug-22	427	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	76.64	0	0	0	0	5	76.64
		0108	19-Aug-22	491	0.85	0	0	0	0	0	0	0	0	0	0	0	0	5	43.13	0	0	0	0	0	0	0	0	0	0	5	43.13
		0109	19-Aug-22	486	0.98	0	0	0	0	0	0	0	0	0	0	0	0	29	220.32	0	0	0	0	1	7.6	5	37.99	0	0	35	265.91
		0110	19-Aug-22	468	0.65	0	0	1	11.83	0	0	0	0	0	0	0	0	6	71.01	0	0	0	0	0	0	0	0	0	0	7	82.84
		0111	17-Aug-22	464	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	7.76	0	0	0	0	0	0	0	0	0	0	1	7.76
		0112	17-Aug-22	453	1.07	0	0	0	0	0	0	0	0	0	0	0	0	1	7.43	0	0	0	0	0	0	3	22.28	0	0	4	29.71
		0113	17-Aug-22	333	0.75	0	0	1	14.41	0	0	0	0	0	0	0	0	11	158.56	0	0	0	0	0	0	2	28.83	0	0	14	201.8
		0114	17-Aug-22	421	0.95	0	0	0	0	0	0	0	0	0	0	0	0	2	18	0	0	0	0	1	9	3	27	0	0	6	54.01
		0116	19-Aug-22	447	0.98	0	0	1	8.18	0	0	0	0	0	0	0	0	10	81.76	0	0	0	0	0	0	0	0	0	0	11	89.94
		0119	18-Aug-22	475	0.75	0	0	0	0	0	0	0	0	0	0	0	0	1	10.11	0	0	0	0	0	0	0	0	0	0	1	10.11
	Session Summary			404	13.00	0	0	3	2.06	0	0	0	0	0	0	0	0	128	87.74	0	0	0	0	7	4.8	19	13.02	0	0	157	107.62
Section 1	2	0101	25-Aug-22	264	0.60	0	0	0	0	0	0	0	0	0	0	0	0	39	886.36	0	0	0	0	0	0	0	0	0	0	39	886.36
		0102	25-Aug-22	342	0.98	0	0	0	0	0	0	0	0	0	0	0	0	20	215.92	0	0	0	0	0	0	0	0	0	0	20	215.92
		0103	25-Aug-22	602	1.20	0	0	1	4.98	0	0	0	0	0	0	0	0	10	49.83	0	0	0	0	0	0	0	0	0	0	11	54.82
		0104	25-Aug-22	345	0.50	0	0	0	0	0	0	0	0	0	0	0	0	1	20.87	0	0	0	0	1	20.87	0	0	0	0	2	41.74
		0105	25-Aug-22	1072	1.10	0	0	0	0	0	0	0	0	0	0	0	0	9	27.48	0	0	0	0	0	0	1	3.05	0	0	10	30.53
		0107	25-Aug-22	501	0.55	0	0	1	13.06	0	0	0	0	2	26.13	0	0	1	13.06	0	0	0	0	2	26.13	1	13.06	0	0	7	91.45
		0108	29-Aug-22	619	0.85	0	0	0	0	0	0	0	0	0	0	0	0	10	68.42	0	0	0	0	0	0	0	0	0	0	10	68.42
		0109	29-Aug-22	708	0.98	0	0	0	0	0	0	0	0	0	0	0	0	27	140.81	0	0	0	0	1	5.22	0	0	0	0	28	146.02
		0110	25-Aug-22	690	0.65	0	0	0	0	0	0	0	0	1	8.03	0	0	2	16.05	0	0	1	8.03	1	8.03	4	32.11	0	0	9	72.24
		0111	29-Aug-22	677	1.00	0	0	0	0	0	0	0	0	0	0	0	0	11	58.49	0	0	0	0	1	5.32	0	0	0	0	12	63.81
		0112	29-Aug-22	716	1.07	0	0	1	4.7	0	0	0	0	0	0	0	0	13	61.09	0	0	0	0	2	9.4	0	0	0	0	16	75.18
		0113	29-Aug-22	478	0.75	0	0	3	30.13	0	0	0	0	0	0	0	0	30	301.26	0	0	0	0	1	10.04	0	0	0	0	34	341.42
		0114	29-Aug-22	594	0.95	0	0	0	0	0	0	0	0	0	0	0	0	17	108.45	0	0	0	0	3	19.14	1	6.38	0	0	21	133.97
		0116	29-Aug-22	531	0.98	1	6.88	0	0	0	0	0	0	0	0	0	0	12	82.59	0	0	0	0	0	0	0	0	0	0	13	89.48
		0119	25-Aug-22	927	0.75	0	0	1	5.18	0	0	0	0	0	0	0	0	6	31.07	0	0	0	0	2	10.36	4	20.71	0	0	13	67.31
	Session Summary			604.4	13.00	1	0.46	7	3.21	0	0	0	0	3	1.37	0	0	208	95.3	0	0	1	0.46	14	6.41	11	5.04	0	0	245	112.25
Section 1	3	0101	05-Sep-22	284	0.60	0	0	0	0	0	0	0	0	0	0	0	0	40	845.07	0	0	0	0	0	0	0	0	0	0	40	845.07
		0102	05-Sep-22	318	0.98	0	0	0	0	0	0	0	0	0	0	0	0	18	209	0	0	0	0	0	0	0	0	0	0	18	209
		0103	05-Sep-22	815	1.20	0	0	4	14.72	0	0	0	0	1	3.68	0	0	11	40.49	0	0	0	0	1	3.68	3	11.04	0	0	20	73.62
		0104	05-Sep-22	310	0.50	0	0	0	0	0	0	0	0	0	0	0	0	9	209.03	0	0	0	0	0	0	1	23.23	0	0	10	232.26
		0105	05-Sep-22	574	1.10	0	0	1	5.7	0	0	0	0	0	0	0	0	21	119.73	0	0	0	0	1	5.7	4	22.81	0	0	27	153.94
		0107	05-Sep-22	358	0.55	0	0	0	0	0	0	0	0	0	0	0	0	7	127.98	0	0	0	0	1	18.28	0	0	0	0	8	146.27
		0108	05-Sep-22	477	0.85	0	0	1	8.88	0	0	0	0	0	0	0	0	6	53.27	0	0	0	0	1	8.88	1	8.88	0	0	9	79.91
		0109	05-Sep-22	503	0.98	0	0	2	14.68	0	0	0	0	0	0	0	0	24	176.17	0	0	0	0	0	0	5	36.7	0	0	31	227.56
		0110	05-Sep-22	480	0.65	0	0	0	0	0	0	0	0	0	0	0	0	5	57.69	0	0	0	0	0	0	1	11.54	0	0	6	69.23
		0111	05-Sep-22	630	1.00	0	0	1	5.71	0	0	0	0	0	0	0	0	8	45.71	0	0	0	0	1	5.71	1	5.71	0	0	11	62.86
		0112	05-Sep-22	614	1.07	0	0	2	10.96	0	0	0	0	0	0	0	0	4	21.92	0	0	0	0	1	5.48	0	0	0	0	7	38.36
		0113	06-Sep-22	391	0.75	0	0	0	0	0	0	0	0	0	0	0	0	9	110.49	0	0	0	0	1	12.28	1	12.28	0	0	11	135.04
		0114	06-Sep-22	625	0.95	0	0	0	0	0	0	0	0	0	0	0	0	5	30.32	0	0	0	0	2	12.13	0	0	0	0	7	42.44
		0116	06-Sep-22	473	0.98	0	0	0	0	0	0	0	0	0	0	0	0	3	23.18	0	0	0	0	0	0	1	7.73	0	0	4	30.91
		0119	05-Sep-22	726	0.75	0	0	0	0	0	0	0	0	0	0	0	0	4	26.45	0	0	0	0	0	0	1	6.61	0	0	5	33.06
	Session Summary			505.2	13.00	0	0	11	6.03	0	0	0	0	1	0.55	0	0	174	95.38	0	0	0	0	9	4.93	19	10.41	0	0	214	117.3

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	10-Sep-22	257	0.60	0	0	0	0	0	0	0	0	0	0	0	0	42	980.54	0	0	0	0	0	0	0	0	0	0	42	980.54
		0102	10-Sep-22	340	0.98	0	0	0	0	0	0	0	0	0	0	0	0	36	390.95	0	0	0	0	0	0	0	0	0	0	36	390.95
		0103	10-Sep-22	617	1.20	0	0	0	0	0	0	0	0	1	4.86	0	0	20	97.24	0	0	0	0	1	4.86	2	9.72	0	0	24	116.69
		0104	10-Sep-22	355	0.50	0	0	0	0	0	0	0	0	0	0	0	0	13	263.66	0	0	0	0	0	0	2	40.56	0	0	15	304.23
		0105	10-Sep-22	459	1.10	0	0	0	0	0	0	0	0	0	0	0	0	6	42.78	0	0	0	0	0	0	3	21.39	0	0	9	64.17
		0107	18-Sep-22	381	0.55	0	0	0	0	0	0	0	0	0	0	0	0	7	120.26	0	0	0	0	0	0	0	0	0	0	7	120.26
		0108	10-Sep-22	578	0.85	0	0	0	0	0	0	0	0	0	0	0	0	8	58.62	0	0	0	0	0	0	15	109.91	0	0	23	168.53
		0109	10-Sep-22	516	0.98	0	0	0	0	0	0	0	0	0	0	0	0	26	186.05	0	0	0	0	0	0	3	21.47	0	0	29	207.51
		0110	18-Sep-22	586	0.65	0	0	0	0	0	0	0	0	0	0	0	0	7	66.16	0	0	0	0	1	9.45	1	9.45	0	0	9	85.06
		0111	18-Sep-22	695	1.00	0	0	0	0	0	0	0	0	0	0	0	0	13	67.34	0	0	0	0	0	0	0	0	0	0	13	67.34
		0112	18-Sep-22	574	1.07	0	0	1	5.86	0	0	0	0	1	5.86	0	0	25	146.54	0	0	0	0	0	0	3	17.58	0	0	30	175.84
		0113	18-Sep-22	352	0.75	0	0	0	0	0	0	0	0	0	0	0	0	12	163.64	0	0	0	0	0	0	6	81.82	0	0	18	245.45
		0114	18-Sep-22	484	0.95	0	0	0	0	0	0	0	0	0	0	0	0	14	109.61	0	0	0	0	0	0	3	23.49	0	0	17	133.1
		0116	18-Sep-22	613	0.98	0	0	1	5.96	0	0	0	0	0	0	0	0	15	89.43	0	0	0	0	0	0	3	17.89	0	0	19	113.28
		0119	10-Sep-22	708	0.75	0	0	1	6.78	0	0	0	0	0	0	0	0	8	54.24	0	0	0	0	0	0	4	27.12	0	0	13	88.14
	Session Summary			501	13.00	0	0	3	1.66	0	0	0	0	2	1.11	0	0	252	139.29	0	0	0	0	2	1.11	45	24.87	0	0	304	168.03
Section 1	5	0101	26-Sep-22	312	0.60	0	0	1	19.23	0	0	0	0	0	0	0	0	34	653.85	0	0	0	0	0	0	1	19.23	0	0	36	692.31
		0102	26-Sep-22	378	0.98	0	0	1	9.77	0	0	0	0	0	0	0	0	32	312.58	0	0	0	0	0	0	0	0	0	0	33	322.34
		0103	26-Sep-22	696	1.20	0	0	3	12.93	0	0	0	0	1	4.31	0	0	21	90.52	0	0	0	0	3	12.93	3	12.93	0	0	31	133.62
		0104	26-Sep-22	388	0.50	0	0	1	18.56	0	0	0	0	0	0	0	0	16	296.91	0	0	0	0	1	18.56	3	55.67	0	0	21	389.69
		0105	26-Sep-22	669	1.10	0	0	3	14.68	0	0	0	0	2	9.78	1	4.89	32	156.54	0	0	0	0	1	4.89	2	9.78	0	0	41	200.57
		0107	27-Sep-22	431	0.55	0	0	1	15.19	0	0	0	0	0	0	0	0	3	45.56	0	0	0	0	1	15.19	1	15.19	0	0	6	91.12
		0108	26-Sep-22	646	0.85	0	0	0	0	0	0	0	0	0	0	0	0	24	157.35	0	0	0	0	0	0	8	52.45	0	0	32	209.8
		0109	27-Sep-22	563	0.98	0	0	0	0	0	0	0	0	1	6.56	0	0	38	249.21	0	0	0	0	0	0	0	0	0	0	39	255.77
		0110	27-Sep-22	367	0.65	0	0	0	0	0	0	0	0	1	15.09	0	0	4	60.36	0	0	4	60.36	0	0	6	90.55	0	0	15	226.37
		0111	27-Sep-22	606	1.00	0	0	0	0	0	0	0	0	0	0	0	0	7	41.58	0	0	0	0	1	5.94	0	0	0	0	8	47.52
		0112	27-Sep-22	619	1.07	0	0	1	5.44	0	0	0	0	0	0	0	0	31	168.5	0	0	0	0	1	5.44	0	0	0	0	33	179.37
		0113	27-Sep-22	441	0.75	0	0	0	0	0	0	0	0	0	0	0	0	21	228.57	0	0	0	0	0	0	0	0	0	0	21	228.57
		0114	27-Sep-22	476	0.95	0	0	2	15.92	0	0	0	0	0	0	0	0	18	143.3	0	0	0	0	0	0	0	0	0	0	20	159.22
		0116	27-Sep-22	513	0.98	0	0	1	7.12	0	0	0	0	0	0	0	0	16	113.99	0	0	0	0	0	0	1	7.12	0	0	18	128.24
		0119	26-Sep-22	767	0.75	0	0	2	12.52	0	0	0	0	2	12.52	0	0	12	75.1	0	0	0	0	2	12.52	0	0	0	0	18	112.65
	Session Summary			524.8	13.00	0	0	16	8.44	0	0	0	0	7	3.69	1	0.53	309	163.05	0	0	4	2.11	10	5.28	25	13.19	0	0	372	196.29
Section 1	6	0101	04-Oct-22	281	0.60	0	0	0	0	0	0	0	0	0	0	0	0	28	597.86	0	0	0	0	0	0	0	0	0	0	28	597.86
		0102	04-Oct-22	326	0.98	0	0	0	0	0	0	0	0	0	0	0	0	33	373.76	0	0	0	0	0	0	0	0	0	0	33	373.76
		0103	04-Oct-22	599	1.20	0	0	0	0	0	0	0	0	0	0	0	0	16	80.13	0	0	0	0	0	0	0	0	0	0	16	80.13
		0104	04-Oct-22	327	0.50	0	0	0	0	0	0	0	0	1	22.02	0	0	13	286.24	0	0	0	0	0	0	1	22.02	0	0	15	330.28
		0105	04-Oct-22	460	1.10	0	0	0	0	0	0	0	0	1	7.11	0	0	33	234.78	0	0	0	0	1	7.11	0	0	0	0	35	249.01
		0107	04-Oct-22	389	0.55	0	0	0	0	0	0	0	0	0	0	0	0	2	33.65	0	0	0	0	1	16.83	1	16.83	0	0	4	67.31
		0108	04-Oct-22	583	0.85	0	0	0	0	0	0	0	0	0	0	0	0	23	167.09	0	0	0	0	0	0	1	7.26	0	0	24	174.35
		0109	04-Oct-22	581	0.98	0	0	1	6.36	0	0	0	0	0	0	0	0	40	254.2	0	0	0	0	1	6.36	0	0	0	0	42	266.91
		0110	04-Oct-22	569	0.65	0	0	4	38.93	0	0	0	0	0	0	0	0	12	116.8	0	0	0	0	1	9.73	2	19.47	0	0	19	184.94
		0111	04-Oct-22	537	1.00	0	0	2	13.41	0	0	0	0	0	0	0	0	9	60.34	0	0	0	0	2	13.41	1	6.7	0	0	14	93.85
		0112	04-Oct-22	620	1.07	0	0	2	10.85	0	0	0	0	0	0	0	0	20	108.53	0	0	0	0	1	5.43	0	0	0	0	23	124.81
		0113	04-Oct-22	449	0.75	0	0	1	10.69	0	0	0	0	0	0	0	0	28	299.33	0	0	0	0	0	0	1	10.69	0	0	30	320.71
		0114	04-Oct-22	531	0.95	0	0	1	7.14	0	0	0	0	0	0	0	0	23	164.14	0	0	0	0	2	14.27	0	0	0	0	26	185.55
		0116	04-Oct-22	598	0.98	0	0	0	0	0	0	0	0	0	0	0	0	17	103.9	0	0	0	0	0	0	11	67.23	0	0	28	171.13
		0119	04-Oct-22	640	0.75	0	0	4	30	0	0	0	0	1	7.5	0	0	5	37.5	0	0	0	0	0	0	0	0	0	0	10	75
	Session Summary			499.3	13.00	0	0	15	8.32	0	0	0	0	3	1.66	0	0	302	167.5	0	0	0	0	9	4.99	18	9.98	0	0	347	192.45
Section Total All Samples				45581	77.43	1	0	55	0	0	0	0	0	16	0	1	0	1373	0	0	0	5	0	51	0	137	0	0	0	1639	0
Section Average All Samples				506	0.86	0	0.09	1	5.05	0	0	0	0	0	1.47	0	0.09	15	126.16	0	0	0	0.46	1	4.69	2	12.59	0	0	18	150.6
Section Standard Error of Mean						0.01	0.08	0.1	0.81	0	0	0	0	0.05	0.47	0.01	0.05	1.17	19.53	0	0	0.05	0.68	0.09	1.03	0.26	2.2	0	0	1.18	19.18

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	20-Aug-22	983	1.80	0	0	3	6.1	0	0	0	0	0	0	0	0	9	18.31	0	0	0	0	3	6.1	3	6.1	0	0	18	36.62
		0302	20-Aug-22	789	1.90	0	0	2	4.8	0	0	0	0	0	0	0	0	3	7.2	0	0	0	0	0	0	4	9.61	0	0	9	21.61
		0303	20-Aug-22	711	1.45	0	0	0	0	0	0	0	0	0	0	0	0	2	6.98	0	0	0	0	0	0	9	31.43	0	0	11	38.41
		0304	20-Aug-22	700	1.35	0	0	0	0	0	0	0	0	0	0	0	0	14	53.33	0	0	0	0	0	0	3	11.43	0	0	17	64.76
		0305	20-Aug-22	962	1.55	0	0	1	2.41	0	0	0	0	0	0	0	0	10	24.14	0	0	5	12.07	0	0	128	309.03	0	0	144	347.66
		0307	21-Aug-22	651	0.95	0	0	2	11.64	0	0	0	0	0	0	0	0	9	52.39	0	0	0	0	0	0	21	122.24	0	0	32	186.27
		0308	21-Aug-22	756	1.35	0	0	0	0	0	0	0	0	0	0	0	0	10	35.27	0	0	0	0	0	0	3	10.58	0	0	13	45.86
		0309	22-Aug-22	478	0.95	0	0	2	15.86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	15.86
		0310	22-Aug-22	746	1.20	0	0	1	4.02	0	0	0	0	0	0	0	0	4	16.09	0	0	0	0	0	0	0	0	0	0	5	20.11
		0311	21-Aug-22	813	1.25	0	0	1	3.54	0	0	0	0	0	0	0	0	3	10.63	0	0	1	3.54	0	0	25	88.56	0	0	30	106.27
		0312	22-Aug-22	851	1.17	0	0	1	3.62	0	0	0	0	0	0	0	0	15	54.23	0	0	6	21.69	0	0	36	130.16	0	0	58	209.71
		0314	21-Aug-22	638	0.98	0	0	0	0	0	0	0	0	0	0	0	0	4	23.15	0	0	2	11.57	1	5.79	2	11.57	0	0	9	52.09
		0315	21-Aug-22	1330	1.70	0	0	0	0	0	0	0	0	0	0	0	0	6	9.55	0	0	0	0	1	1.59	11	17.51	0	0	18	28.66
		0316	21-Aug-22	913	1.48	1	2.67	2	5.35	0	0	0	0	0	0	0	0	12	32.08	0	0	0	0	2	5.35	4	10.69	0	0	21	56.14
	Session Summary			**808.6**	**19.00**	**1**	**0.23**	**15**	**3.51**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**101**	**23.67**	**0**	**0**	**14**	**3.28**	**7**	**1.64**	**249**	**58.35**	**0**	**0**	**387**	**90.68**
Section 3	2	0301	30-Aug-22	1195	1.80	0	0	1	1.67	0	0	0	0	0	0	0	0	7	11.72	0	0	0	0	2	3.35	0	0	0	0	10	16.74
		0302	30-Aug-22	861	1.90	0	0	4	8.8	0	0	0	0	0	0	0	0	9	19.81	0	0	0	0	0	0	5	11	0	0	18	39.61
		0303	30-Aug-22	809	1.45	0	0	2	6.14	0	0	0	0	0	0	0	0	13	39.9	0	0	0	0	0	0	1	3.07	0	0	16	49.1
		0304	30-Aug-22	1012	1.35	0	0	0	0	0	0	0	0	0	0	0	0	19	50.07	0	0	0	0	0	0	0	0	0	0	19	50.07
		0305	30-Aug-22	790	1.55	0	0	2	5.88	0	0	0	0	0	0	0	0	28	82.32	0	0	0	0	0	0	26	76.44	0	0	56	164.64
		0306	30-Aug-22	603	1.00	0	0	1	5.97	0	0	0	0	0	0	0	0	7	41.79	0	0	0	0	0	0	26	155.22	0	0	34	202.99
		0307	31-Aug-22	741	0.95	0	0	1	5.11	0	0	0	0	1	5.11	0	0	7	35.8	0	0	0	0	0	0	0	0	0	0	9	46.03
		0308	31-Aug-22	915	1.35	0	0	0	0	0	0	0	0	0	0	0	0	20	58.29	0	0	0	0	0	0	0	0	0	0	20	58.29
		0309	31-Aug-22	734	0.95	0	0	0	0	0	0	0	0	0	0	0	0	5	25.81	0	0	0	0	0	0	0	0	0	0	5	25.81
		0310	31-Aug-22	1020	1.20	0	0	1	2.94	0	0	0	0	0	0	0	0	17	50	0	0	0	0	0	0	0	0	0	0	18	52.94
		0311	30-Aug-22	721	1.25	0	0	1	3.99	0	0	0	0	0	0	0	0	10	39.94	0	0	1	3.99	0	0	8	31.96	0	0	20	79.89
		0312	31-Aug-22	1208	1.17	0	0	4	10.19	0	0	0	0	0	0	0	0	20	50.94	0	0	4	10.19	1	2.55	10	25.47	0	0	39	99.34
		0314	30-Aug-22	691	0.98	0	0	2	10.69	0	0	0	0	0	0	0	0	3	16.03	0	0	0	0	1	5.34	1	5.34	0	0	7	37.4
		0315	31-Aug-22	1528	1.70	0	0	2	2.77	0	0	0	0	0	0	0	0	14	19.4	0	0	2	2.77	3	4.16	4	5.54	0	0	25	34.65
		0316	31-Aug-22	1015	1.48	0	0	1	2.4	0	0	0	0	0	0	0	0	14	33.66	0	0	0	0	5	12.02	1	2.4	0	0	21	50.5
	Session Summary			**922.9**	**20.00**	**0**	**0**	**22**	**4.29**	**0**	**0**	**0**	**0**	**1**	**0.2**	**0**	**0**	**193**	**37.64**	**0**	**0**	**7**	**1.37**	**12**	**2.34**	**82**	**15.99**	**0**	**0**	**317**	**61.83**
Section 3	3	0301	06-Sep-22	1031	1.80	0	0	3	5.82	0	0	0	0	0	0	0	0	7	13.58	0	0	1	1.94	1	1.94	0	0	0	0	12	23.28
		0302	06-Sep-22	947	1.90	0	0	4	8	0	0	0	0	0	0	0	0	28	56.02	0	0	0	0	0	0	5	10	0	0	37	74.03
		0303	06-Sep-22	741	1.45	0	0	0	0	0	0	0	0	0	0	0	0	2	6.7	0	0	0	0	0	0	4	13.4	0	0	6	20.1
		0304	06-Sep-22	672	1.35	0	0	0	0	0	0	0	0	0	0	0	0	6	23.81	0	0	0	0	0	0	1	3.97	0	0	7	27.78
		0305	06-Sep-22	897	1.55	0	0	3	7.77	0	0	0	0	0	0	0	0	33	85.45	0	0	1	2.59	0	0	37	95.8	0	0	74	191.61
		0306	07-Sep-22	647	1.00	0	0	0	0	0	0	0	0	0	0	0	0	4	22.26	0	0	0	0	0	0	4	22.26	0	0	8	44.51
		0307	07-Sep-22	578	0.95	0	0	0	0	0	0	0	0	0	0	0	0	1	6.56	0	0	0	0	0	0	3	19.67	0	0	4	26.22
		0308	07-Sep-22	672	1.35	0	0	0	0	0	0	0	0	0	0	0	0	7	27.78	0	0	0	0	0	0	0	0	0	0	7	27.78
		0309	07-Sep-22	556	0.95	0	0	0	0	0	0	0	0	0	0	0	0	1	6.82	0	0	0	0	0	0	1	6.82	0	0	2	13.63
		0310	07-Sep-22	669	1.20	0	0	0	0	0	0	0	0	0	0	0	0	6	26.91	0	0	0	0	0	0	2	8.97	0	0	8	35.87
		0311	07-Sep-22	657	1.25	0	0	4	17.53	0	0	0	0	0	0	0	0	5	21.92	0	0	0	0	0	0	3	13.15	0	0	12	52.6
		0312	07-Sep-22	723	1.17	0	0	5	21.28	0	0	0	0	0	0	0	0	7	29.79	0	0	0	0	0	0	13	55.33	0	0	25	106.39
		0314	07-Sep-22	862	0.98	0	0	1	4.28	0	0	0	0	0	0	0	0	5	21.42	0	0	1	4.28	1	4.28	2	8.57	0	0	10	42.83
		0315	07-Sep-22	1202	1.70	0	0	2	3.52	0	0	0	0	0	0	0	0	10	17.62	0	0	2	3.52	1	1.76	4	7.05	0	0	19	33.47
		0316	07-Sep-22	844	1.48	1	2.89	4	11.57	0	0	0	0	0	0	0	0	18	52.05	0	0	1	2.89	2	5.78	3	8.68	0	0	29	83.86
	Session Summary			**779.9**	**20.00**	**1**	**0.23**	**26**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**140**	**32.31**	**0**	**0**	**6**	**1.38**	**5**	**1.15**	**82**	**18.93**	**0**	**0**	**260**	**60.01**

Table E3 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	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
						Number Caught (CPUE = no. fish/km/h)																									
Section 3	4	0301	11-Sep-22	1029	1.80	0	0	2	3.89	0	0	0	0	0	0	0	0	8	15.55	0	0	0	0	0	0	3	5.83	0	0	13	25.27
		0302	11-Sep-22	865	1.90	0	0	3	6.57	0	0	0	0	0	0	0	0	16	35.05	0	0	0	0	0	0	1	2.19	0	0	20	43.81
		0303	11-Sep-22	700	1.45	0	0	0	0	0	0	0	0	0	0	0	0	3	10.64	0	0	0	0	0	0	4	14.19	0	0	7	24.83
		0304	11-Sep-22	747	1.35	0	0	0	0	0	0	0	0	0	0	0	0	4	14.28	0	0	0	0	0	0	2	7.14	0	0	6	21.42
		0305	11-Sep-22	844	1.55	0	0	1	2.75	0	0	0	0	0	0	0	0	32	88.06	0	0	3	8.26	0	0	19	52.29	0	0	55	151.35
		0306	12-Sep-22	713	1.00	0	0	0	0	0	0	0	0	0	0	0	0	17	85.83	0	0	1	5.05	0	0	22	111.08	0	0	40	201.96
		0307	12-Sep-22	567	0.95	0	0	3	20.05	0	0	0	0	0	0	0	0	7	46.78	0	0	0	0	0	0	0	0	0	0	10	66.83
		0308	12-Sep-22	721	1.35	0	0	3	11.1	0	0	0	0	0	0	0	0	12	44.38	0	0	0	0	0	0	0	0	0	0	15	55.48
		0310	13-Sep-22	715	1.20	0	0	1	4.2	0	0	0	0	0	0	0	0	21	88.11	0	0	0	0	0	0	4	16.78	0	0	26	109.09
		0311	13-Sep-22	660	1.25	0	0	0	0	0	0	0	0	0	0	0	0	12	52.36	0	0	0	0	0	0	2	8.73	0	0	14	61.09
		0312	13-Sep-22	734	1.17	0	0	3	12.58	0	0	0	0	0	0	0	0	19	79.65	0	0	0	0	0	0	9	37.73	0	0	31	129.95
		0314	11-Sep-22	603	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6.12	0	0	2	12.25	0	0	3	18.37
		0315	11-Sep-22	1100	1.70	0	0	0	0	0	0	0	0	0	0	0	0	3	5.78	0	0	1	1.93	0	0	10	19.25	0	0	14	26.95
		0316	12-Sep-22	1043	1.48	1	2.34	0	0	0	0	0	0	0	0	0	0	17	39.78	0	0	1	2.34	1	2.34	4	9.36	0	0	24	56.16
	Session Summary			**788.6**	**19.00**	**1**	**0.24**	**16**	**3.84**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**171**	**41.09**	**0**	**0**	**7**	**1.68**	**1**	**0.24**	**82**	**19.7**	**0**	**0**	**278**	**66.79**
Section 3	5	0301	16-Sep-22	1133	1.80	0	0	0	0	0	0	0	0	0	0	0	0	7	12.36	0	0	0	0	1	1.77	0	0	0	0	8	14.12
		0302	16-Sep-22	916	1.90	0	0	1	2.07	0	0	0	0	0	0	0	0	23	47.58	0	0	0	0	0	0	6	12.41	0	0	30	62.05
		0303	16-Sep-22	745	1.45	0	0	1	3.33	0	0	0	0	0	0	0	0	10	33.33	0	0	1	3.33	0	0	2	6.67	0	0	14	46.66
		0304	16-Sep-22	841	1.35	0	0	3	9.51	0	0	0	0	0	0	0	0	8	25.37	0	0	0	0	0	0	1	3.17	0	0	12	38.05
		0305	16-Sep-22	889	1.55	0	0	0	0	0	0	0	0	0	0	0	0	66	172.43	0	0	1	2.61	0	0	13	33.96	0	0	80	209.01
		0306	17-Sep-22	612	1.00	0	0	1	5.88	0	0	0	0	0	0	0	0	23	135.29	0	0	0	0	0	0	4	23.53	0	0	28	164.71
		0307	17-Sep-22	617	0.95	1	6.14	1	6.14	0	0	0	0	0	0	0	0	14	85.98	0	0	0	0	0	0	1	6.14	0	0	17	104.41
		0308	17-Sep-22	711	1.35	0	0	1	3.75	0	0	0	0	0	0	0	0	18	67.51	0	0	0	0	0	0	0	0	0	0	19	71.26
		0309	17-Sep-22	514	0.95	0	0	0	0	0	0	0	0	0	0	0	0	8	58.98	0	0	0	0	0	0	1	7.37	0	0	9	66.35
		0310	17-Sep-22	712	1.20	0	0	3	12.64	0	0	0	0	0	0	0	0	14	58.99	0	0	0	0	0	0	1	4.21	0	0	18	75.84
		0311	17-Sep-22	673	1.25	0	0	1	4.28	0	0	0	0	0	0	0	0	29	124.1	0	0	0	0	0	0	0	0	0	0	30	128.38
		0312	17-Sep-22	802	1.17	0	0	2	7.67	0	0	0	0	0	0	0	0	30	115.1	0	0	1	3.84	0	0	6	23.02	0	0	39	149.63
		0314	16-Sep-22	738	0.98	0	0	2	10.01	0	0	0	0	0	0	0	0	12	60.04	0	0	0	0	1	5	0	0	0	0	15	75.05
		0315	16-Sep-22	1227	1.70	0	0	0	0	0	0	0	0	0	0	0	0	5	8.63	0	0	0	0	3	5.18	9	15.53	0	0	17	29.34
		0316	17-Sep-22	902	1.48	0	0	2	5.41	0	0	0	0	0	0	0	0	24	64.94	0	0	0	0	1	2.71	1	2.71	0	0	28	75.76
	Session Summary			**802.1**	**20.00**	**1**	**0.22**	**18**	**4.04**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**291**	**65.3**	**0**	**0**	**3**	**0.67**	**6**	**1.35**	**45**	**10.1**	**0**	**0**	**364**	**81.69**
Section 3	6	0301	29-Sep-22	958	1.80	0	0	0	0	0	0	0	0	0	0	0	0	10	20.88	0	0	0	0	0	0	0	0	0	0	10	20.88
		0302	29-Sep-22	948	1.90	0	0	6	11.99	0	0	0	0	0	0	0	0	44	87.94	0	0	0	0	0	0	2	4	0	0	52	103.93
		0303	29-Sep-22	751	1.45	0	0	2	6.61	0	0	0	0	0	0	0	0	21	69.42	0	0	0	0	0	0	0	0	0	0	23	76.04
		0304	29-Sep-22	748	1.35	0	0	0	0	0	0	0	0	0	0	0	0	17	60.61	0	0	0	0	0	0	0	0	0	0	17	60.61
		0305	29-Sep-22	853	1.55	0	0	2	5.45	0	0	0	0	0	0	0	0	59	160.65	0	0	0	0	0	0	11	29.95	0	0	72	196.04
		0306	29-Sep-22	625	1.00	0	0	0	0	0	0	0	0	0	0	0	0	4	23.04	0	0	0	0	0	0	2	11.52	0	0	6	34.56
		0307	29-Sep-22	614	0.95	0	0	0	0	0	0	0	0	0	0	0	0	6	37.03	0	0	0	0	0	0	0	0	0	0	6	37.03
		0308	29-Sep-22	680	1.35	0	0	0	0	0	0	0	0	0	0	0	0	16	62.75	0	0	0	0	0	0	0	0	0	0	16	62.75
		0309	29-Sep-22	562	0.95	0	0	0	0	0	0	0	0	0	0	0	0	2	13.49	0	0	0	0	0	0	0	0	0	0	2	13.49
		0310	29-Sep-22	732	1.20	1	4.1	1	4.1	0	0	0	0	0	0	0	0	19	77.87	0	0	0	0	0	0	0	0	0	0	21	86.07
		0311	29-Sep-22	688	1.25	0	0	4	16.74	0	0	0	0	0	0	0	0	22	92.09	0	0	0	0	0	0	5	20.93	0	0	31	129.77
		0312	29-Sep-22	803	1.17	0	0	2	7.66	0	0	0	0	0	0	0	0	15	57.48	0	0	0	0	0	0	6	22.99	0	0	23	88.13
		0314	29-Sep-22	573	0.98	0	0	0	0	0	0	0	0	0	0	0	0	4	25.78	0	0	1	6.44	0	0	1	6.44	0	0	6	38.66
		0315	29-Sep-22	1040	1.70	0	0	0	0	0	0	0	0	0	0	0	0	4	8.14	0	0	0	0	1	2.04	7	14.25	0	0	12	24.43
		0316	29-Sep-22	831	1.48	0	0	0	0	0	0	0	0	0	0	0	0	10	29.37	0	0	0	0	0	0	6	17.62	0	0	16	46.99
	Session Summary			**760.4**	**20.00**	**1**	**0.24**	**17**	**4.02**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**253**	**59.89**	**0**	**0**	**1**	**0.24**	**1**	**0.24**	**40**	**9.47**	**0**	**0**	**313**	**74.09**
Section Total All Samples				**71341**	**118.47**	**5**	**0**	**114**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1149**	**0**	**0**	**0**	**38**	**0**	**32**	**0**	**580**	**0**	**0**	**0**	**1919**	**0**
Section Average All Samples				**811**	**1.35**	**0**	**0.19**	**1**	**4.27**	**0**	**0**	**0**	**0**	**0**	**0.04**	**0**	**0**	**13**	**43.05**	**0**	**0**	**0**	**1.42**	**0**	**1.2**	**7**	**21.73**	**0**	**0**	**22**	**71.9**
Section Standard Error of Mean						**0.02**	**0.1**	**0.15**	**0.54**	**0**	**0**	**0**	**0**	**0.01**	**0.06**	**0**	**0**	**1.23**	**3.71**	**0**	**0**	**0.11**	**0.36**	**0.09**	**0.22**	**1.62**	**4.63**	**0**	**0**	**2.21**	**6.42**

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	0502	22-Aug-22	1357	0.95	0	0	1	2.79	0	0	0	0	0	0	0	0	2	5.59	2	5.59	0	0	0	0	14	39.1	0	0	19	53.06
		0505	23-Aug-22	1208	1.00	0	0	0	0	1	2.98	0	0	0	0	0	0	1	2.98	2	5.96	0	0	0	0	1	2.98	0	0	5	14.9
		0506	23-Aug-22	754	1.00	0	0	1	4.77	0	0	0	0	0	0	0	0	9	42.97	0	0	0	0	0	0	4	19.1	0	0	14	66.84
		0507	22-Aug-22	430	0.78	2	21.47	1	10.73	0	0	0	0	0	0	0	0	14	150.27	0	0	0	0	0	0	6	64.4	0	0	23	246.87
		0508	23-Aug-22	775	0.92	0	0	0	0	0	0	0	0	0	0	0	0	15	75.33	0	0	0	0	1	5.02	48	241.05	0	0	64	321.39
		0509	23-Aug-22	666	0.98	0	0	3	16.63	0	0	0	0	0	0	0	0	7	38.81	0	0	0	0	0	0	11	60.98	1	5.54	22	121.97
		0510	23-Aug-22	760	1.13	0	0	1	4.19	0	0	0	0	0	0	0	0	15	62.88	0	0	0	0	0	0	37	155.1	0	0	53	222.17
		0511	21-Aug-22	504	0.69	0	0	0	0	0	0	0	0	0	0	0	0	12	124.22	0	0	0	0	0	0	16	165.63	1	10.35	29	300.21
		0513	21-Aug-22	522	0.77	0	0	0	0	0	0	0	0	0	0	0	0	4	35.83	1	8.96	0	0	0	0	23	206	0	0	28	250.78
		0514	23-Aug-22	501	0.56	0	0	0	0	0	0	0	0	0	0	0	0	8	102.65	0	0	0	0	0	0	26	333.62	0	0	34	436.27
		0515	21-Aug-22	680	0.97	0	0	0	0	0	0	0	0	0	0	0	0	5	27.29	0	0	0	0	0	0	47	256.52	0	0	52	283.81
		0516	23-Aug-22	529	0.80	0	0	1	8.51	0	0	0	0	0	0	0	0	7	59.55	0	0	2	17.01	0	0	23	195.65	0	0	33	280.72
		0517	23-Aug-22	512	0.70	0	0	0	0	0	0	0	0	0	0	0	0	1	10.04	0	0	0	0	0	0	8	80.36	0	0	9	90.4
		0518	21-Aug-22	1307	1.78	0	0	0	0	0	0	0	0	0	0	0	0	13	20.12	0	0	0	0	0	0	26	40.23	2	3.09	41	63.44
		05SC060	22-Aug-22	607	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	145.47	1	11.19	14	156.66
	Session Summary			**740.8**	**14.00**	**2**	**0.69**	**8**	**2.78**	**1**	**0.35**	**0**	**0**	**0**	**0**	**0**	**0**	**113**	**39.22**	**5**	**1.74**	**2**	**0.69**	**1**	**0.35**	**303**	**105.18**	**5**	**1.74**	**440**	**152.73**
Section 5	2	0502	30-Aug-22	841	0.95	1	4.51	2	9.01	0	0	0	0	0	0	0	0	3	13.52	1	4.51	0	0	0	0	12	54.07	0	0	19	85.61
		0505	30-Aug-22	1076	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	6.69	0	0	2	6.69	0	0	1	3.35	0	0	5	16.73
		0506	30-Aug-22	918	1.00	0	0	0	0	3	11.76	0	0	0	0	0	0	2	7.84	1	3.92	1	3.92	0	0	3	11.76	0	0	10	39.22
		0507	29-Aug-22	381	0.78	0	0	1	12.11	0	0	0	0	0	0	0	0	13	157.48	0	0	0	0	0	0	1	12.11	0	0	15	181.71
		0508	29-Aug-22	751	0.92	0	0	1	5.18	0	0	0	0	0	0	0	0	10	51.82	0	0	0	0	1	5.18	35	181.38	0	0	47	243.57
		0509	30-Aug-22	657	0.98	0	0	1	5.62	0	0	0	0	0	0	0	0	14	78.68	0	0	0	0	0	0	11	61.82	1	5.62	27	151.74
		0510	28-Aug-22	1081	1.13	1	2.95	1	2.95	0	0	0	0	0	0	0	0	38	111.99	0	0	1	2.95	0	0	51	150.3	1	2.95	93	274.08
		0511	28-Aug-22	467	0.69	0	0	1	11.17	0	0	0	0	0	0	0	0	9	100.55	0	0	0	0	0	0	24	268.13	0	0	34	379.85
		0512	30-Aug-22	237	0.26	0	0	0	0	0	0	0	0	0	0	0	0	5	296.68	0	0	0	0	0	0	0	0	0	0	5	296.68
		0513	29-Aug-22	562	0.77	0	0	0	0	0	0	0	0	0	0	0	0	6	49.91	0	0	0	0	0	0	27	224.62	0	0	33	274.53
		0514	29-Aug-22	511	0.56	0	0	2	25.16	0	0	0	0	0	0	0	0	9	113.22	0	0	0	0	0	0	22	276.77	0	0	33	415.15
		0515	28-Aug-22	649	0.97	0	0	0	0	0	0	0	0	0	0	0	0	18	102.93	0	0	0	0	0	0	60	343.11	1	5.72	79	451.77
		0516	29-Aug-22	468	0.80	0	0	0	0	0	0	0	0	0	0	0	0	6	57.69	0	0	0	0	0	0	9	86.54	0	0	15	144.23
		0517	29-Aug-22	594	0.70	0	0	0	0	0	0	0	0	0	0	0	0	4	34.63	0	0	0	0	0	0	12	103.9	0	0	16	138.53
		0518	28-Aug-22	1310	1.78	1	1.54	2	3.09	0	0	0	0	0	0	0	0	23	35.51	0	0	0	0	0	0	23	35.51	1	1.54	50	77.19
		05SC060	29-Aug-22	483	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14.06	0	0	1	14.06
	Session Summary			**686.6**	**14.00**	**3**	**1.12**	**11**	**4.12**	**3**	**1.12**	**0**	**0**	**0**	**0**	**0**	**0**	**162**	**60.67**	**2**	**0.75**	**4**	**1.5**	**1**	**0.37**	**292**	**109.36**	**4**	**1.5**	**482**	**180.52**
Section 5	3	0502	06-Sep-22	774	0.95	0	0	0	0	1	4.9	0	0	0	0	0	0	3	14.69	1	4.9	2	9.79	0	0	21	102.82	0	0	28	137.09
		0505	06-Sep-22	1142	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	6.3	2	6.3	0	0	0	0	6	18.91	0	0	10	31.52
		0506	06-Sep-22	720	1.00	0	0	0	0	1	5	0	0	0	0	0	0	4	20	0	0	2	10	0	0	2	10	0	0	9	45
		0507	06-Sep-22	415	0.78	0	0	0	0	0	0	0	0	0	0	0	0	17	189.06	0	0	0	0	0	0	11	122.34	0	0	28	311.4
		0508	05-Sep-22	682	0.92	0	0	0	0	0	0	0	0	0	0	0	0	9	51.36	0	0	0	0	0	0	54	308.16	0	0	63	359.51
		0509	06-Sep-22	689	0.98	0	0	2	10.72	0	0	0	0	0	0	0	0	16	85.74	0	0	0	0	0	0	12	64.31	0	0	30	160.77
		0510	05-Sep-22	721	1.13	0	0	0	0	0	0	0	0	0	0	0	0	8	35.35	0	0	2	8.84	0	0	50	220.93	1	4.42	61	269.54
		0511	05-Sep-22	425	0.69	0	0	1	12.28	0	0	0	0	0	0	0	0	2	24.55	0	0	0	0	0	0	17	208.7	0	0	20	245.52
		0512	06-Sep-22	269	0.51	0	0	0	0	0	0	0	0	0	0	0	0	6	156.83	0	0	0	0	0	0	1	26.14	0	0	7	182.97
		0513	05-Sep-22	521	0.77	0	0	0	0	0	0	0	0	0	0	0	0	1	8.97	0	0	0	0	0	0	13	116.66	0	0	14	125.63
		0514	05-Sep-22	431	0.56	1	14.92	1	14.92	0	0	0	0	0	0	0	0	3	44.75	0	0	0	0	0	0	11	164.07	0	0	16	238.65
		0515	05-Sep-22	628	0.97	0	0	0	0	0	0	0	0	0	0	0	0	7	41.37	0	0	0	0	0	0	59	348.68	1	5.91	67	395.96
		0516	06-Sep-22	521	0.80	0	0	0	0	0	0	0	0	0	0	0	0	8	69.1	0	0	0	0	0	0	7	60.46	0	0	15	129.56
		0517	06-Sep-22	521	0.66	0	0	1	10.47	0	0	0	0	0	0	0	0	1	10.47	0	0	0	0	0	0	6	62.82	0	0	8	83.76
		0518	05-Sep-22	1166	1.78	0	0	0	0	0	0	0	0	0	0	0	0	5	8.67	0	0	2	3.47	0	0	21	36.43	0	0	28	48.57
		05SC060	05-Sep-22	472	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14.39	0	0	19	273.43	1	14.39	21	302.21
	Session Summary			**631.1**	**14.00**	**1**	**0.41**	**5**	**2.04**	**2**	**0.81**	**0**	**0**	**0**	**0**	**0**	**0**	**92**	**37.49**	**3**	**1.22**	**9**	**3.67**	**0**	**0**	**310**	**126.31**	**3**	**1.22**	**425**	**173.17**

Table E3 Continued.

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	Number Caught (CPUE = no. fish/km/h) Arctic Grayling No.	CPUE	Bull Trout No.	CPUE	Burbot No.	CPUE	Goldeye No.	CPUE	Kokanee No.	CPUE	Lake Trout No.	CPUE	Mountain Whitefish No.	CPUE	Northern Pike No.	CPUE	Northern Pikeminnow No.	CPUE	Rainbow Trout No.	CPUE	Sucker spp. No.	CPUE	Walleye No.	CPUE	All Species No.	CPUE
Section 5	4	0502	11-Sep-22	815	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	13.95	0	0	0	0	11	51.15	1	4.65	15	69.74
		0505	11-Sep-22	1130	1.00	0	0	0	0	1	3.19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	38.23	0	0	13	41.42
		0506	11-Sep-22	734	1.00	0	0	0	0	0	0	0	0	0	0	0	0	5	24.52	0	0	1	4.9	0	0	7	34.33	0	0	13	63.76
		0507	11-Sep-22	445	0.78	0	0	0	0	0	0	0	0	0	0	0	0	18	186.69	0	0	0	0	0	0	4	41.49	0	0	22	228.18
		0508	13-Sep-22	710	0.92	1	5.48	0	0	0	0	0	0	0	0	0	0	15	82.22	0	0	2	10.96	0	0	48	263.11	0	0	66	361.78
		0509	11-Sep-22	677	0.98	0	0	2	10.91	0	0	0	0	0	0	0	0	10	54.54	0	0	0	0	0	0	17	92.72	0	0	29	158.16
		0510	13-Sep-22	722	1.13	0	0	0	0	0	0	0	0	0	0	0	0	17	75.01	0	0	1	4.41	0	0	51	225.04	0	0	69	304.46
		0511	13-Sep-22	455	0.69	0	0	0	0	0	0	0	0	0	0	0	0	7	80.27	0	0	2	22.93	0	0	30	344	0	0	39	447.2
		0512	11-Sep-22	204	0.13	0	0	0	0	0	0	0	0	0	0	0	0	1	137.87	0	0	0	0	0	0	1	137.87	0	0	2	275.74
		0513	13-Sep-22	482	0.77	0	0	1	9.7	0	0	0	0	0	0	0	0	4	38.8	0	0	0	0	0	0	29	281.3	0	0	34	329.79
		0514	13-Sep-22	423	0.56	0	0	0	0	0	0	0	0	0	0	0	0	6	91.19	0	0	0	0	0	0	16	243.16	0	0	22	334.35
		0515	13-Sep-22	555	0.97	0	0	0	0	0	0	0	0	0	0	0	0	8	53.5	0	0	0	0	0	0	31	207.3	0	0	39	260.8
		0516	11-Sep-22	534	0.80	0	0	0	0	0	0	0	0	0	0	0	0	3	25.28	0	0	2	16.85	0	0	8	67.42	0	0	13	109.55
		0517	11-Sep-22	533	0.58	0	0	0	0	0	0	0	0	0	0	0	0	2	23.29	0	0	0	0	0	0	5	58.23	0	0	7	81.52
		0518	13-Sep-22	1129	1.78	0	0	0	0	0	0	0	0	0	0	0	0	8	14.33	0	0	2	3.58	0	0	35	62.7	0	0	45	80.61
		05SC060	11-Sep-22	510	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	66.59	0	0	5	66.59
	Session Summary			**628.6**	**14.00**	**1**	**0.41**	**3**	**1.23**	**1**	**0.41**	**0**	**0**	**0**	**0**	**0**	**0**	**104**	**42.54**	**3**	**1.23**	**10**	**4.09**	**0**	**0**	**310**	**126.81**	**1**	**0.41**	**433**	**177.13**
Section 5	5	0502	22-Sep-22	840	0.95	0	0	1	4.51	0	0	0	0	0	0	0	0	8	36.09	0	0	0	0	0	0	27	121.8	1	4.51	37	166.92
		0505	22-Sep-22	1214	1.00	0	0	1	2.97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	29.65	0	0	11	32.62
		0506	22-Sep-22	743	1.00	0	0	0	0	1	4.85	0	0	0	0	0	0	1	4.85	0	0	0	0	0	0	10	48.45	0	0	12	58.14
		0507	22-Sep-22	471	0.78	0	0	1	9.8	0	0	0	0	0	0	0	0	31	303.77	0	0	0	0	0	0	16	156.79	0	0	48	470.36
		0508	19-Sep-22	473	0.92	0	0	0	0	0	0	0	0	0	0	0	0	7	57.6	0	0	1	8.23	0	0	9	74.05	0	0	17	139.88
		0509	22-Sep-22	643	0.98	0	0	0	0	0	0	0	0	0	0	0	0	15	86.13	0	0	0	0	0	0	19	109.1	0	0	34	195.24
		0510	22-Sep-22	859	1.13	0	0	2	7.42	0	0	0	0	0	0	0	0	22	81.59	0	0	1	3.71	1	3.71	33	122.39	1	3.71	60	222.53
		0511	19-Sep-22	451	0.72	0	0	0	0	0	0	0	0	0	0	0	0	1	11.09	0	0	1	11.09	0	0	13	144.12	0	0	15	166.3
		0513	19-Sep-22	359	0.77	0	0	0	0	0	0	0	0	0	0	0	0	6	78.14	1	13.02	0	0	0	0	18	234.42	0	0	25	325.58
		0514	19-Sep-22	339	0.56	0	0	0	0	0	0	0	0	0	0	0	0	2	37.93	0	0	0	0	0	0	12	227.56	0	0	14	265.49
		0515	19-Sep-22	496	0.97	0	0	1	7.48	0	0	0	0	0	0	0	0	12	89.79	0	0	0	0	0	0	16	119.72	0	0	29	216.99
		0516	22-Sep-22	654	0.80	0	0	0	0	0	0	0	0	0	0	0	0	20	137.61	0	0	4	27.52	0	0	17	116.97	0	0	41	282.11
		0517	22-Sep-22	719	0.70	0	0	0	0	0	0	0	0	0	0	0	0	10	71.53	0	0	0	0	0	0	15	107.29	0	0	25	178.82
		05SC060	22-Sep-22	503	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	553.66	3	40.51	44	594.17
	Session Summary			**626**	**12.00**	**0**	**0**	**6**	**2.88**	**1**	**0.48**	**0**	**0**	**0**	**0**	**0**	**0**	**135**	**64.7**	**1**	**0.48**	**7**	**3.35**	**1**	**0.48**	**256**	**122.68**	**5**	**2.4**	**412**	**197.44**
Section 5	6	0502	30-Sep-22	869	0.95	0	0	0	0	0	0	0	0	0	0	0	0	13	56.69	1	4.36	2	8.72	0	0	34	148.26	1	4.36	51	222.4
		0505	30-Sep-22	1113	1.00	0	0	1	3.23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3.23	10	32.35	0	0	12	38.81
		0506	30-Sep-22	748	1.00	0	0	0	0	4	19.25	0	0	0	0	0	0	6	28.88	0	0	1	4.81	0	0	13	62.57	0	0	24	115.51
		0507	30-Sep-22	441	0.78	1	10.47	0	0	0	0	0	0	0	0	0	0	19	198.85	0	0	0	0	0	0	16	167.45	0	0	36	376.77
		0508	01-Oct-22	722	0.92	0	0	1	5.39	0	0	0	0	0	0	0	0	20	107.81	1	5.39	1	5.39	0	0	14	75.47	0	0	37	199.45
		0509	30-Sep-22	624	0.98	0	0	1	5.92	0	0	0	0	0	0	0	0	25	147.93	0	0	1	5.92	0	0	12	71.01	0	0	39	230.77
		0510	30-Sep-22	756	1.13	1	4.21	2	8.43	0	0	0	0	0	0	0	0	11	46.35	0	0	1	4.21	0	0	70	294.99	0	0	85	358.2
		0511	30-Sep-22	458	0.69	0	0	1	11.39	0	0	0	0	0	0	0	0	4	45.57	0	0	1	11.39	0	0	20	227.83	1	11.39	27	307.58
		0513	01-Oct-22	459	0.77	0	0	0	0	0	0	0	0	0	0	0	0	12	122.23	0	0	0	0	0	0	21	213.9	1	10.19	34	346.32
		0514	01-Oct-22	444	0.56	0	0	1	14.48	0	0	0	0	0	0	0	0	11	159.27	0	0	0	0	0	0	17	246.14	2	28.96	31	448.84
		0515	01-Oct-22	572	0.97	0	0	1	6.49	0	0	0	0	0	0	0	0	4	25.95	0	0	0	0	0	0	10	64.88	0	0	15	97.33
		0516	30-Sep-22	615	0.80	0	0	0	0	0	0	0	0	0	0	0	0	15	109.76	0	0	1	7.32	0	0	14	102.44	0	0	30	219.51
		0517	30-Sep-22	631	0.70	0	0	0	0	0	0	0	0	0	0	0	0	10	81.5	0	0	0	0	0	0	4	32.6	0	0	14	114.1
		0518	30-Sep-22	1186	1.78	0	0	0	0	0	0	0	0	0	0	0	0	17	28.99	0	0	4	6.82	1	1.71	36	61.39	2	3.41	60	102.32
		05SC060	30-Sep-22	504	0.53	0	0	0	0	0	0	0	0	0	0	0	0	1	13.48	0	0	0	0	0	0	25	336.93	2	26.95	28	377.36
	Session Summary			**676.1**	**14.00**	**2**	**0.76**	**8**	**3.04**	**4**	**1.52**	**0**	**0**	**0**	**0**	**0**	**0**	**168**	**63.9**	**2**	**0.76**	**12**	**4.56**	**2**	**0.76**	**316**	**120.19**	**9**	**3.42**	**523**	**198.91**
Section Total All Samples				**61159**	**80.35**	**9**	**0**	**41**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**774**	**0**	**16**	**0**	**44**	**0**	**5**	**0**	**1787**	**0**	**27**	**0**	**2715**	**0**
Section Average All Samples				**665**	**0.87**	**0**	**0.61**	**0**	**2.76**	**0**	**0.81**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**52.15**	**0**	**1.08**	**0**	**2.96**	**0**	**0.34**	**19**	**120.4**	**0**	**1.82**	**30**	**182.93**
Section Standard Error of Mean						**0.03**	**0.31**	**0.07**	**0.52**	**0.06**	**0.26**	**0**	**0**	**0**	**0**	**0**	**0**	**0.77**	**6.4**	**0.05**	**0.27**	**0.09**	**0.55**	**0.02**	**0.09**	**1.61**	**11.12**	**0.06**	**0.66**	**2.06**	**13.46**

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	24-Aug-22	741	1.10	0	0	6	26.5	0	0	0	0	0	0	0	0	8	35.33	0	0	0	0	0	0	42	185.5	0	0	56	247.33
		0602	24-Aug-22	612	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6.54	0	0	1	6.54
		0603	24-Aug-22	765	1.30	0	0	1	3.62	0	0	0	0	0	0	0	0	2	7.24	0	0	0	0	0	0	57	206.33	0	0	60	217.19
		0604	24-Aug-22	676	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5.33	0	0	7	37.28	0	0	8	42.6
		0605	24-Aug-22	495	0.80	0	0	0	0	0	0	0	0	0	0	0	0	5	45.45	0	0	0	0	0	0	39	354.55	0	0	44	400
		0606	25-Aug-22	867	1.40	0	0	0	0	0	0	0	0	0	0	0	0	12	35.59	0	0	0	0	0	0	33	97.87	0	0	45	133.47
		0607	25-Aug-22	769	1.00	0	0	1	4.68	0	0	0	0	0	0	0	0	4	18.73	0	0	0	0	0	0	50	234.07	1	4.68	56	262.16
		0608	24-Aug-22	488	0.95	0	0	0	0	0	0	0	0	1	7.77	0	0	0	0	0	0	0	0	0	0	8	62.12	0	0	9	69.89
		0609	25-Aug-22	837	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	8.6	0	0	1	4.3	0	0	9	38.71	5	21.51	17	73.12
		0610	25-Aug-22	644	0.85	0	0	0	0	0	0	0	0	0	0	0	0	1	6.58	1	6.58	1	6.58	0	0	7	46.04	0	0	10	65.77
		0611	25-Aug-22	628	0.90	0	0	0	0	0	0	0	0	0	0	0	0	1	6.37	1	6.37	0	0	0	0	16	101.91	2	12.74	20	127.39
		0612	25-Aug-22	523	0.85	0	0	0	0	0	0	0	0	0	0	0	0	12	97.18	0	0	0	0	0	0	20	161.96	0	0	32	259.14
		0613	25-Aug-22	661	0.90	0	0	0	0	0	0	0	0	0	0	0	0	2	12.1	0	0	0	0	0	0	7	42.36	1	6.05	10	60.51
		0614	24-Aug-22	770	0.98	0	0	0	0	0	0	0	0	0	0	0	0	12	57.54	1	4.8	0	0	0	0	40	191.81	1	4.8	54	258.94
		06PIN01	24-Aug-22	1343	1.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1.79	1	1.79
	Session Summary			**721.3**	**15.00**	**0**	0	**8**	2.66	**0**	0	**0**	0	**1**	0.33	**0**	0	**61**	20.3	**3**	1	**3**	1	**0**	0	**336**	111.8	**11**	3.66	**423**	140.75
Section 6	2	0601	01-Sep-22	757	1.20	0	0	0	0	0	0	0	0	0	0	0	0	3	11.89	0	0	0	0	0	0	41	162.48	0	0	44	174.37
		0602	02-Sep-22	652	0.90	0	0	1	6.13	0	0	0	0	1	6.13	0	0	0	0	0	0	0	0	0	0	2	12.27	0	0	4	24.54
		0603	01-Sep-22	714	1.30	0	0	0	0	0	0	0	0	0	0	0	0	1	3.88	0	0	0	0	0	0	45	174.53	0	0	46	178.41
		0604	01-Sep-22	686	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	5.25	0	0	4	20.99	0	0	4	20.99	0	0	9	47.23
		0605	01-Sep-22	482	0.80	0	0	0	0	0	0	0	0	0	0	0	0	4	37.34	0	0	0	0	0	0	27	252.07	1	9.34	32	298.76
		0606	02-Sep-22	909	1.40	0	0	0	0	0	0	0	0	0	0	0	0	6	16.97	0	0	0	0	0	0	34	96.18	0	0	40	113.15
		0607	02-Sep-22	680	1.00	0	0	0	0	0	0	0	0	0	0	0	0	7	37.06	0	0	0	0	0	0	33	174.71	0	0	40	211.76
		0608	01-Sep-22	570	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	50.53	0	0	8	50.53
		0609	02-Sep-22	822	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	4.38	0	0	0	0	0	0	9	39.42	1	4.38	11	48.18
		0610	02-Sep-22	636	0.85	0	0	0	0	0	0	0	0	0	0	0	0	1	6.66	0	0	0	0	0	0	11	73.25	0	0	12	79.91
		0611	02-Sep-22	572	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	27.97	0	0	4	27.97
		0612	02-Sep-22	529	0.85	0	0	0	0	0	0	0	0	0	0	0	0	3	24.02	0	0	0	0	0	0	12	96.07	0	0	15	120.09
		0613	02-Sep-22	664	0.90	0	0	0	0	0	0	0	0	0	0	0	0	2	12.05	0	0	0	0	0	0	12	72.29	0	0	14	84.34
		0614	01-Sep-22	695	0.98	0	0	1	5.31	0	0	0	0	0	0	0	0	10	53.13	0	0	0	0	0	0	41	217.82	0	0	52	276.26
		06PIN01	01-Sep-22	1292	1.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3.72	0	0	2	3.72
		06PIN02	01-Sep-22	588	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	24.49	4	24.49
	Session Summary			**703**	**17.00**	**0**	0	**2**	0.6	**0**	0	**0**	0	**1**	0.3	**0**	0	**39**	11.75	**0**	0	**4**	1.2	**0**	0	**285**	85.85	**6**	1.81	**337**	101.51
Section 6	3	0601	07-Sep-22	661	1.20	0	0	0	0	0	0	0	0	0	0	0	0	2	9.08	0	0	0	0	0	0	22	99.85	1	4.54	25	113.46
		0602	07-Sep-22	572	0.88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7.15	1	7.15	2	14.3
		0603	07-Sep-22	708	1.30	0	0	1	3.91	0	0	0	0	0	0	0	0	3	11.73	0	0	0	0	0	0	53	207.3	0	0	57	222.95
		0604	07-Sep-22	615	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	11.71	0	0	2	11.71	0	0	4	23.41	0	0	8	46.83
		0605	07-Sep-22	454	0.80	0	0	0	0	0	0	0	0	0	0	0	0	5	49.56	0	0	0	0	0	0	17	168.5	0	0	22	218.06
		0606	08-Sep-22	872	1.40	0	0	0	0	0	0	0	0	0	0	0	0	6	17.69	0	0	0	0	0	0	27	79.62	1	2.95	34	100.26
		0607	08-Sep-22	649	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	5.55	0	0	0	0	0	0	27	149.77	0	0	28	155.32
		0608	07-Sep-22	559	1.00	0	0	0	0	0	0	0	0	0	0	0	0	7	45.08	0	0	0	0	0	0	5	32.2	0	0	12	77.28
		0609	08-Sep-22	703	1.00	0	0	0	0	0	0	0	0	0	0	0	0	3	15.36	0	0	0	0	0	0	7	35.85	0	0	10	51.21
		0610	08-Sep-22	617	0.85	0	0	0	0	0	0	0	0	0	0	0	0	1	6.86	0	0	1	6.86	0	0	4	27.46	0	0	6	41.19
		0611	08-Sep-22	559	0.90	0	0	0	0	0	0	0	0	0	0	0	0	6	42.93	0	0	0	0	0	0	4	28.62	0	0	10	71.56
		0612	08-Sep-22	524	0.85	0	0	0	0	0	0	0	0	0	0	0	0	5	40.41	0	0	0	0	0	0	26	210.15	0	0	31	250.56
		0613	08-Sep-22	636	0.90	0	0	0	0	0	0	0	0	0	0	0	0	3	18.87	0	0	0	0	0	0	6	37.74	0	0	9	56.6
		0614	07-Sep-22	630	0.98	0	0	1	5.86	0	0	0	0	0	0	0	0	7	41.03	0	0	0	0	0	0	20	117.22	1	5.86	29	169.96
		06PIN02	07-Sep-22	484	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	14.88	0	0	2	14.88
		06SC036	08-Sep-22	587	0.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	61.33	0	0	4	61.33
		06SC047	07-Sep-22	538	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	24.33	0	0	0	0	0	0	2	24.33
	Session Summary			**609.9**	**16.00**	**0**	0	**2**	0.74	**0**	0	**0**	0	**0**	0	**0**	0	**51**	18.81	**0**	0	**5**	1.84	**0**	0	**229**	84.48	**4**	1.48	**291**	107.35

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	13-Sep-22	745	1.20	0	0	0	0	0	0	0	0	0	0	0	0	5	20.13	0	0	3	12.08	0	0	32	128.86	0	0	40	161.07
		0602	14-Sep-22	633	0.90	0	0	1	6.32	0	0	0	0	0	0	0	0	3	18.96	0	0	0	0	0	0	0	0	2	12.64	6	37.91
		0603	14-Sep-22	688	1.30	0	0	0	0	0	0	0	0	0	0	0	0	1	4.03	0	0	0	0	0	0	49	197.23	1	4.03	51	205.28
		0604	14-Sep-22	649	1.00	0	0	0	0	0	0	0	0	0	0	0	0	8	44.38	0	0	0	0	0	0	5	27.73	1	5.55	14	77.66
		0605	14-Sep-22	499	0.80	0	0	0	0	0	0	0	0	0	0	0	0	11	99.2	0	0	0	0	0	0	31	279.56	0	0	42	378.76
		0606	14-Sep-22	942	1.40	0	0	0	0	0	0	0	0	0	0	0	0	10	27.3	0	0	0	0	0	0	19	51.87	0	0	29	79.16
		0607	14-Sep-22	738	1.00	0	0	0	0	0	0	0	0	0	0	0	0	3	14.63	0	0	0	0	0	0	36	175.61	2	9.76	41	200
		0608	14-Sep-22	600	1.00	0	0	0	0	0	0	0	0	0	0	0	0	10	60	0	0	0	0	0	0	8	48	0	0	18	108
		0609	15-Sep-22	769	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	9.36	0	0	1	4.68	0	0	6	28.09	3	14.04	12	56.18
		0610	15-Sep-22	620	0.85	0	0	0	0	0	0	0	0	0	0	0	0	6	40.99	0	0	0	0	0	0	4	27.32	0	0	10	68.31
		0611	15-Sep-22	580	0.90	0	0	0	0	0	0	0	0	0	0	0	0	4	27.59	0	0	0	0	0	0	0	0	1	6.9	5	34.48
		0612	15-Sep-22	538	0.85	0	0	0	0	0	0	0	0	0	0	0	0	4	31.49	0	0	0	0	0	0	31	244.04	0	0	35	275.53
		0613	15-Sep-22	646	0.90	0	0	0	0	0	0	0	0	0	0	0	0	4	24.77	0	0	0	0	0	0	4	24.77	0	0	8	49.54
		0614	14-Sep-22	574	0.98	0	0	0	0	0	0	0	0	0	0	0	0	16	102.92	0	0	0	0	0	0	6	38.6	0	0	22	141.52
		06PIN02	13-Sep-22	651	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5.53	0	0	1	5.53
	Session Summary			**658.1**	**15.00**	**0**	0	**1**	0.36	**0**	0	**0**	0	**0**	0	**0**	0	**87**	31.73	**0**	0	**4**	1.46	**0**	0	**232**	84.61	**10**	3.65	**334**	121.81
Section 6	5	0601	19-Sep-22	736	1.20	0	0	1	4.08	0	0	0	0	0	0	0	0	3	12.23	0	0	1	4.08	0	0	28	114.13	0	0	33	134.51
		0602	23-Sep-22	665	0.90	0	0	3	18.05	0	0	0	0	0	0	0	0	4	24.06	0	0	0	0	0	0	3	18.05	0	0	10	60.15
		0603	23-Sep-22	681	1.30	0	0	0	0	0	0	0	0	0	0	0	0	1	4.07	1	4.07	0	0	0	0	27	109.79	1	4.07	30	121.99
		0604	23-Sep-22	607	1.00	0	0	0	0	0	0	0	0	0	0	0	0	4	23.72	0	0	1	5.93	0	0	3	17.79	0	0	8	47.45
		0605	23-Sep-22	418	0.80	0	0	0	0	0	0	0	0	0	0	0	0	3	32.3	0	0	0	0	0	0	13	139.95	0	0	16	172.25
		0606	23-Sep-22	786	1.40	0	0	0	0	0	0	0	0	0	0	0	0	15	49.07	0	0	0	0	0	0	14	45.8	0	0	29	94.87
		0607	24-Sep-22	588	1.00	0	0	0	0	0	0	0	0	0	0	0	0	5	30.61	0	0	0	0	0	0	28	171.43	4	24.49	37	226.53
		0608	23-Sep-22	551	1.00	0	0	0	0	0	0	0	0	0	0	0	0	6	39.2	0	0	0	0	0	0	11	71.87	0	0	17	111.07
		0609	24-Sep-22	630	1.00	0	0	0	0	0	0	0	0	0	0	0	0	4	22.86	0	0	0	0	0	0	21	120	0	0	25	142.86
		0610	24-Sep-22	588	0.85	0	0	0	0	0	0	0	0	0	0	0	0	6	43.22	0	0	0	0	0	0	5	36.01	0	0	11	79.23
		0611	24-Sep-22	560	0.90	0	0	1	7.14	0	0	0	0	0	0	0	0	6	42.86	0	0	0	0	0	0	8	57.14	0	0	15	107.14
		0612	24-Sep-22	469	0.85	0	0	0	0	0	0	0	0	0	0	0	0	9	81.27	0	0	1	9.03	0	0	16	144.49	0	0	26	234.79
		0613	24-Sep-22	606	0.90	0	0	0	0	0	0	0	0	0	0	0	0	7	46.2	0	0	0	0	0	0	6	39.6	0	0	13	85.81
		0614	23-Sep-22	511	0.98	0	0	0	0	0	0	0	0	0	0	0	0	6	43.35	0	0	0	0	0	0	12	86.71	0	0	18	130.06
		06PIN01	19-Sep-22	1049	1.50	0	0	0	0	0	0	0	0	0	0	0	0	1	2.29	0	0	0	0	0	0	2	4.58	0	0	3	6.86
		06PIN02	19-Sep-22	587	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	12.27	0	0	0	0	0	0	2	12.27	0	0	4	24.53
		06SC036	24-Sep-22	452	0.40	0	0	0	0	0	0	0	0	0	0	0	0	1	19.91	0	0	0	0	0	0	6	119.47	1	19.91	8	159.29
		06SC047	19-Sep-22	460	0.55	0	0	2	28.46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	28.46	0	0	4	56.92
	Session Summary			**608**	**18.00**	**0**	0	**7**	2.3	**0**	0	**0**	0	**0**	0	**0**	0	**83**	27.3	**1**	0.33	**3**	0.99	**0**	0	**207**	68.09	**6**	1.97	**307**	100.99
Section 6	6	0601	01-Oct-22	719	1.15	0	0	3	13.06	0	0	0	0	0	0	0	0	9	39.18	0	0	3	13.06	0	0	18	78.37	0	0	33	143.68
		0602	02-Oct-22	610	0.90	0	0	1	6.56	0	0	0	0	0	0	0	0	3	19.67	0	0	0	0	0	0	2	13.11	1	6.56	7	45.9
		0603	01-Oct-22	890	1.30	0	0	0	0	0	0	0	0	0	0	0	0	4	12.45	0	0	0	0	0	0	22	68.45	0	0	26	80.9
		0604	01-Oct-22	625	1.00	0	0	0	0	0	0	0	0	0	0	0	0	5	28.8	0	0	0	0	0	0	11	63.36	0	0	16	92.16
		0605	01-Oct-22	486	0.80	0	0	0	0	0	0	0	0	0	0	0	0	14	129.63	0	0	0	0	0	0	35	324.07	0	0	49	453.7
		0606	02-Oct-22	847	1.40	0	0	3	9.11	0	0	0	0	0	0	0	0	22	66.79	0	0	0	0	0	0	25	75.9	0	0	50	151.8
		0607	02-Oct-22	676	1.00	0	0	0	0	0	0	0	0	0	0	0	0	3	15.98	0	0	0	0	0	0	14	74.56	0	0	17	90.53
		0608	01-Oct-22	568	1.00	0	0	0	0	0	0	0	0	0	0	0	0	13	82.39	0	0	0	0	0	0	5	31.69	0	0	18	114.08
		0609	02-Oct-22	656	1.00	0	0	0	0	0	0	0	0	0	0	0	0	12	65.85	0	0	0	0	0	0	18	98.78	2	10.98	32	175.61
		0610	02-Oct-22	634	0.85	0	0	1	6.68	0	0	0	0	0	0	0	0	7	46.76	0	0	0	0	0	0	3	20.04	0	0	11	73.48
		0611	02-Oct-22	619	0.90	0	0	0	0	0	0	0	0	0	0	0	0	3	19.39	0	0	0	0	0	0	2	12.92	1	6.46	6	38.77
		0612	02-Oct-22	500	0.85	0	0	0	0	0	0	0	0	0	0	0	0	15	127.06	0	0	0	0	0	0	20	169.41	0	0	35	296.47
		0613	02-Oct-22	653	0.90	0	0	2	12.25	0	0	0	0	0	0	0	0	1	6.13	0	0	0	0	0	0	17	104.13	3	18.38	23	140.89
		0614	01-Oct-22	616	0.98	0	0	1	5.99	0	0	0	0	0	0	0	0	11	65.93	2	11.99	0	0	0	0	42	251.75	0	0	56	335.66
		06PIN01	01-Oct-22	1007	1.45	0	0	0	0	0	0	0	0	0	0	0	0	1	2.47	0	0	0	0	0	0	1	2.47	0	0	2	4.93
		06PIN02	01-Oct-22	634	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	5.68	1	5.68	0	0	0	0	4	22.71	1	5.68	7	39.75
		06SC036	02-Oct-22	391	0.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	441.94	0	0	12	441.94
		06SC047	02-Oct-22	519	0.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	19.82	0	0	1	19.82
	Session Summary			**647.2**	**17.00**	**0**	0	**11**	3.6	**0**	0	**0**	0	**0**	0	**0**	0	**124**	40.57	**3**	0.98	**3**	0.98	**0**	0	**252**	82.45	**8**	2.62	**401**	131.21
Section Total All Samples				**64901**	**97.68**	**0**	0	**31**	0	**0**	0	**0**	0	**2**	0	**0**	0	**445**	0	**7**	0	**22**	0	**0**	0	**1541**	0	**45**	0	**2093**	0
Section Average All Samples				**656**	**0.99**	**0**	0	**0**	1.74	**0**	0	**0**	0	**0**	0.11	**0**	0	**4**	25	**0**	0.39	**0**	1.24	**0**	0	**16**	86.58	**0**	2.53	**21**	117.59
Section Standard Error of Mean						**0**	0	**0.09**	0.49	**0**	0	**0**	0	**0.01**	0.1	**0**	0	**0.45**	2.84	**0.03**	0.17	**0.07**	0.41	**0**	0	**1.47**	8.85	**0.1**	0.55	**1.67**	10.14

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

Section	Session	Site	Date	Time Sampled (s)	Length Sampled (km)	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	26-Aug-22	570	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	40.23	0	0	5	40.23
		0702	26-Aug-22	528	0.95	0	0	0	0	0	0	0	0	0	0	0	0	9	64.59	0	0	0	0	0	0	9	64.59	0	0	18	129.19
		0703	26-Aug-22	645	0.95	0	0	0	0	0	0	0	0	0	0	0	0	1	5.88	0	0	1	5.88	0	0	16	94	0	0	18	105.75
		0704	27-Aug-22	588	1.00	0	0	0	0	0	0	0	0	0	0	0	0	10	61.22	0	0	0	0	0	0	20	122.45	0	0	30	183.67
		0705	27-Aug-22	646	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	5.57	0	0	0	0	0	0	1	5.57	0	0	2	11.15
		0706	27-Aug-22	831	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.33	0	0	2	8.66	0	0	3	13
		0707	27-Aug-22	640	0.98	0	0	0	0	0	0	0	0	0	0	0	0	2	11.48	0	0	0	0	0	0	10	57.4	0	0	12	68.88
		0708	26-Aug-22	700	1.24	0	0	1	4.15	0	0	0	0	0	0	0	0	3	12.44	0	0	1	4.15	0	0	44	182.49	0	0	49	203.23
		0709	26-Aug-22	598	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	6.02	0	0	0	0	0	0	4	24.08	0	0	5	30.1
		0710	27-Aug-22	816	1.40	0	0	0	0	0	0	0	0	0	0	0	0	2	6.3	0	0	0	0	0	0	15	47.27	0	0	17	53.57
		0711	27-Aug-22	813	1.39	0	0	0	0	0	0	0	0	0	0	0	0	3	9.56	0	0	0	0	0	0	19	60.53	0	0	22	70.08
		0712	27-Aug-22	832	1.06	0	0	0	0	0	0	0	0	0	0	0	0	4	16.25	0	0	0	0	0	0	1	4.06	0	0	5	20.31
		0713	27-Aug-22	625	0.98	0	0	0	0	0	0	0	0	0	0	0	0	12	70.53	0	0	0	0	0	0	14	82.29	0	0	26	152.82
		0714	27-Aug-22	1158	1.27	0	0	0	0	0	0	0	0	0	0	0	0	6	14.63	0	0	0	0	0	0	14	34.14	0	0	20	48.77
		07BEA01	26-Aug-22	577	0.33	0	0	0	0	0	0	0	0	0	0	0	0	1	18.91	0	0	0	0	0	0	2	37.81	2	37.81	5	94.53
		07BEA02	26-Aug-22	323	0.60	0	0	0	0	0	0	0	0	0	0	0	0	1	18.58	0	0	2	37.15	0	0	18	334.37	0	0	21	390.09
		07KIS01	27-Aug-22	620	0.62	0	0	2	18.7	0	0	0	0	0	0	0	0	3	28.05	0	0	0	0	0	0	4	37.4	1	9.35	10	93.5
		07SC012	27-Aug-22	323	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	50.66	0	0	0	0	0	0	1	50.66
		07SC022	26-Aug-22	340	0.36	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
	Session Summary			**640.7**	**17.00**	**0**	**0**	**3**	**0.99**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**59**	**19.5**	**0**	**0**	**6**	**1.98**	**0**	**0**	**198**	**65.44**	**3**	**0.99**	**269**	**88.91**
Section 7	2	0701	03-Sep-22	587	0.78	0	0	0	0	0	0	0	0	0	0	0	0	1	7.81	0	0	0	0	0	0	5	39.06	0	0	6	46.88
		0702	03-Sep-22	513	0.95	1	7.39	0	0	0	0	0	0	0	0	0	0	6	44.32	0	0	0	0	0	0	1	7.39	0	0	8	59.1
		0703	03-Sep-22	703	0.95	0	0	1	5.39	0	0	0	0	0	0	0	0	0	0	0	0	1	5.39	0	0	15	80.86	1	5.39	18	97.03
		0704	03-Sep-22	638	1.00	0	0	1	5.64	0	0	0	0	0	0	0	0	6	33.86	0	0	0	0	0	0	17	95.92	0	0	24	135.42
		0705	03-Sep-22	818	1.00	0	0	3	13.2	0	0	0	0	0	0	0	0	3	13.2	0	0	1	4.4	0	0	5	22	1	4.4	13	57.21
		0706	03-Sep-22	1142	0.77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.09	0	0	17	69.6	3	12.28	21	85.97
		0707	03-Sep-22	725	0.98	0	0	0	0	0	0	0	0	0	0	0	0	4	20.27	0	0	0	0	0	0	5	25.33	0	0	9	45.6
		0708	03-Sep-22	690	1.24	0	0	0	0	0	0	0	0	0	0	0	0	3	12.62	0	0	0	0	0	0	36	151.47	1	4.21	40	168.3
		0709	03-Sep-22	600	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	0	0	0	0	6	36	0	0	7	42
		0710	03-Sep-22	765	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3.36	1	3.36	0	0	4	13.45	0	0	6	20.17
		0711	03-Sep-22	903	1.39	0	0	0	0	0	0	0	0	0	0	0	0	15	43.02	0	0	0	0	0	0	14	40.15	0	0	29	83.18
		0712	03-Sep-22	1047	1.06	0	0	0	0	0	0	0	0	0	0	0	0	10	32.29	0	0	0	0	0	0	5	16.14	0	0	15	48.43
		0713	03-Sep-22	606	0.98	0	0	1	6.06	0	0	0	0	0	0	0	0	12	72.74	0	0	0	0	0	0	9	54.56	0	0	22	133.36
		0714	03-Sep-22	994	1.27	0	0	0	0	0	0	0	0	0	0	0	0	3	8.52	0	0	0	0	0	0	14	39.77	0	0	17	48.29
		07BEA01	03-Sep-22	827	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	30.37	3	30.37
		07BEA02	03-Sep-22	235	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	127.66	4	102.13	9	229.79
		07KIS01	03-Sep-22	433	0.94	0	0	1	8.84	0	0	0	0	0	0	0	0	4	35.38	0	0	1	8.84	0	0	1	8.84	2	17.69	9	79.6
		07SC012	03-Sep-22	333	0.22	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
	Session Summary			**697.7**	**17.00**	**1**	**0.3**	**7**	**2.12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**68**	**20.64**	**1**	**0.3**	**5**	**1.52**	**0**	**0**	**159**	**48.26**	**15**	**4.55**	**256**	**77.7**
Section 7	3	0701	09-Sep-22	612	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	37.47	2	14.99	7	52.45
		0702	09-Sep-22	558	0.95	0	0	0	0	0	0	0	0	0	0	0	0	4	27.16	0	0	1	6.79	0	0	3	20.37	0	0	8	54.33
		0703	09-Sep-22	719	0.95	0	0	0	0	0	0	0	0	0	0	0	0	1	5.27	0	0	2	10.54	0	0	7	36.89	2	10.54	12	63.25
		0704	10-Sep-22	641	1.00	0	0	0	0	0	0	0	0	0	0	0	0	8	44.93	0	0	0	0	0	0	20	112.32	0	0	28	157.25
		0705	10-Sep-22	650	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	11.08	0	0	2	11.08
		0706	10-Sep-22	850	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.24	0	0	5	21.18	0	0	6	25.41
		0707	10-Sep-22	597	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	12.31	2	12.31
		0708	09-Sep-22	795	1.24	0	0	2	7.3	0	0	0	0	0	0	0	0	4	14.61	1	3.65	1	3.65	0	0	50	182.59	4	14.61	62	226.42
		0709	09-Sep-22	656	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	10.98	1	5.49	3	16.46
		0710	10-Sep-22	813	1.40	0	0	0	0	0	0	0	0	0	0	0	0	1	3.16	0	0	0	0	0	0	2	6.33	1	3.16	4	12.65
		0711	10-Sep-22	834	1.39	0	0	2	6.21	0	0	0	0	0	0	0	0	3	9.32	0	0	0	0	0	0	4	12.42	1	3.11	10	31.05
		0712	10-Sep-22	782	1.06	0	0	0	0	0	0	0	0	0	0	0	0	1	4.32	0	0	0	0	0	0	3	12.97	2	8.65	6	25.94
		0713	10-Sep-22	575	0.98	0	0	0	0	0	0	0	0	0	0	0	0	11	70.28	0	0	0	0	0	0	5	31.94	0	0	16	102.22
		0714	10-Sep-22	885	1.27	0	0	0	0	0	0	0	0	0	0	0	0	6	19.14	0	0	0	0	0	0	3	9.57	0	0	9	28.71
		07BEA01	09-Sep-22	701	0.43	0	0	0	0	0	0	0	0	0	0	0	0	1	11.94	0	0	0	0	0	0	0	0	5	59.72	6	71.66
		07BEA02	09-Sep-22	369	0.60	0	0	1	16.26	0	0	0	0	0	0	0	0	0	0	0	0	1	16.26	0	0	22	357.72	8	130.08	32	520.33
		07KIS01	10-Sep-22	493	0.12	0	0	0	0	0	0	0	0	0	0	0	0	3	176.67	0	0	0	0	0	0	0	0	1	58.89	4	235.56
		07SC012	10-Sep-22	352	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	139.46	0	0	3	139.46
		07SC022	10-Sep-22	408	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	24.51	0	0	1	24.51
	Session Summary			**646.8**	**17.00**	**0**	**0**	**5**	**1.64**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**43**	**14.08**	**1**	**0.33**	**6**	**1.96**	**0**	**0**	**137**	**44.85**	**29**	**9.49**	**221**	**72.36**

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	15-Sep-22	566	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8.1	1	8.1
		0703	16-Sep-22	704	0.95	0	0	1	5.38	0	0	0	0	0	0	0	0	5	26.91	0	0	0	0	0	0	10	53.83	0	0	16	86.12
		0704	16-Sep-22	625	1.00	0	0	1	5.76	0	0	0	0	0	0	0	0	1	5.76	0	0	3	17.28	0	0	27	155.52	0	0	32	184.32
		0705	15-Sep-22	587	1.00	0	0	0	0	0	0	0	0	0	0	0	0	3	18.4	0	0	0	0	0	0	2	12.27	0	0	5	30.66
		0706	15-Sep-22	822	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.38	0	0	4	17.52	0	0	5	21.9
		0707	15-Sep-22	508	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	14.46	0	0	2	14.46
		0708	15-Sep-22	747	1.24	0	0	0	0	0	0	0	0	0	0	0	0	3	11.66	0	0	0	0	0	0	29	112.71	1	3.89	33	128.25
		0709	16-Sep-22	596	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	6.04	0	0	0	0	0	0	3	18.12	1	6.04	5	30.2
		0710	16-Sep-22	805	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3.19	0	0	1	3.19
		0711	15-Sep-22	858	1.39	0	0	1	3.02	0	0	0	0	0	0	0	0	9	27.17	0	0	0	0	0	0	6	18.11	0	0	16	48.3
		0712	15-Sep-22	705	1.06	0	0	0	0	0	0	0	0	0	0	0	0	4	19.18	0	0	0	0	0	0	1	4.79	1	4.79	6	28.77
		0713	15-Sep-22	572	0.98	0	0	0	0	0	0	0	0	0	0	0	0	7	44.96	0	0	0	0	0	0	9	57.8	0	0	16	102.75
		0714	15-Sep-22	765	1.27	0	0	0	0	0	0	0	0	0	0	0	0	3	11.07	0	0	0	0	0	0	11	40.6	0	0	14	51.67
		07BEA01	15-Sep-22	760	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11.02	16	176.25	17	187.27
		07BEA02	15-Sep-22	379	0.60	0	0	0	0	0	0	0	0	0	0	0	0	3	47.49	0	0	0	0	0	0	10	158.31	11	174.14	24	379.95
	Session Summary			**666.6**	**15.00**	**0**	**0**	**3**	**1.08**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**39**	**14.04**	**0**	**0**	**4**	**1.44**	**0**	**0**	**116**	**41.76**	**31**	**11.16**	**193**	**69.49**
Section 7	5	0701	24-Sep-22	491	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	46.7	0	0	5	46.7
		0702	24-Sep-22	487	0.95	0	0	0	0	0	0	0	0	0	0	0	0	6	46.69	0	0	0	0	0	0	1	7.78	1	7.78	8	62.25
		0703	25-Sep-22	640	0.95	0	0	0	0	0	0	0	0	0	0	0	0	3	17.76	0	0	0	0	0	0	17	100.66	0	0	20	118.42
		0704	25-Sep-22	613	1.00	0	0	0	0	0	0	0	0	0	0	0	0	11	64.6	0	0	1	5.87	0	0	27	158.56	0	0	39	229.04
		0705	25-Sep-22	750	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	4.8	0	0	1	4.8	0	0	3	14.4	0	0	5	24
		0706	25-Sep-22	734	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9.81	0	0	10	49.05	0	0	12	58.86
		0707	25-Sep-22	514	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7.15	0	0	1	7.15
		0708	24-Sep-22	600	1.24	0	0	1	4.84	0	0	0	0	0	0	0	0	5	24.19	0	0	0	0	0	0	10	48.39	0	0	16	77.42
		0709	24-Sep-22	567	1.00	0	0	1	6.35	0	0	0	0	0	0	0	0	3	19.05	0	0	0	0	0	0	1	6.35	0	0	5	31.75
		0710	25-Sep-22	716	1.40	0	0	0	0	0	0	0	0	0	0	0	0	2	7.18	0	0	0	0	0	0	7	25.14	0	0	9	32.32
		0711	25-Sep-22	800	1.39	0	0	0	0	0	0	0	0	0	0	0	0	9	29.14	0	0	1	3.24	0	0	5	16.19	1	3.24	16	51.8
		0712	25-Sep-22	736	1.06	0	0	0	0	0	0	0	0	0	0	0	0	4	18.37	0	0	0	0	0	0	5	22.96	0	0	9	41.33
		0713	25-Sep-22	570	0.98	0	0	1	6.44	0	0	0	0	0	0	0	0	12	77.34	0	0	0	0	0	0	5	32.22	1	6.44	19	122.45
		0714	25-Sep-22	767	1.27	0	0	0	0	0	0	0	0	0	0	0	0	1	3.68	0	0	0	0	0	0	7	25.77	0	0	8	29.45
		07BEA01	25-Sep-22	686	0.33	0	0	0	0	0	0	0	0	0	0	0	0	1	15.9	0	0	0	0	0	0	3	47.71	15	238.54	19	302.15
		07BEA02	25-Sep-22	340	0.60	0	0	1	17.65	0	0	0	0	0	0	0	0	4	70.59	0	0	0	0	0	0	13	229.41	4	70.59	22	388.24
		07KIS01	25-Sep-22	278	0.51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	101.57	0	0	4	101.57
		07SC012	25-Sep-22	304	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	107.66	0	0	2	107.66
		07SC022	25-Sep-22	392	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	25.51	0	0	1	25.51
	Session Summary			**578.2**	**17.00**	**0**	**0**	**4**	**1.46**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**62**	**22.71**	**0**	**0**	**5**	**1.83**	**0**	**0**	**127**	**46.51**	**22**	**8.06**	**220**	**80.57**
Section 7	6	0702	03-Oct-22	538	0.95	0	0	0	0	0	0	0	0	0	0	0	0	4	28.17	0	0	0	0	0	0	2	14.09	0	0	6	42.26
		0703	02-Oct-22	694	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	169.27	1	5.46	32	174.73
		0704	03-Oct-22	619	1.00	0	0	0	0	0	0	0	0	0	0	0	0	16	93.05	0	0	0	0	0	0	11	63.97	0	0	27	157.03
		0705	02-Oct-22	663	1.00	0	0	0	0	0	0	0	0	0	0	0	0	4	21.72	0	0	0	0	0	0	4	21.72	0	0	8	43.44
		0706	03-Oct-22	858	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	4.2	0	0	1	4.2	0	0	41	172.03	0	0	43	180.42
		0707	03-Oct-22	520	0.98	0	0	0	0	0	0	0	0	0	0	0	0	2	14.13	0	0	0	0	0	0	6	42.39	0	0	8	56.51
		0708	02-Oct-22	655	1.24	0	0	1	4.43	0	0	0	0	0	0	0	0	9	39.89	0	0	0	0	0	0	32	141.84	0	0	42	186.16
		0709	03-Oct-22	669	1.00	0	0	0	0	0	0	0	0	0	0	0	0	4	21.52	0	0	0	0	0	0	2	10.76	1	5.38	7	37.67
		0710	03-Oct-22	788	1.40	0	0	0	0	0	0	0	0	0	0	0	0	4	13.05	0	0	0	0	0	0	4	13.05	1	3.26	9	29.37
		0711	03-Oct-22	777	1.39	0	0	1	3.33	0	0	0	0	0	0	0	0	7	23.33	0	0	0	0	0	0	8	26.67	0	0	16	53.33
		0712	03-Oct-22	705	1.06	0	0	0	0	0	0	0	0	0	0	0	0	9	43.15	0	0	0	0	0	0	2	9.59	0	0	11	52.74
		0713	03-Oct-22	510	0.98	0	0	2	14.41	0	0	0	0	0	0	0	0	12	86.43	0	0	0	0	0	0	11	79.23	0	0	25	180.07
		0714	03-Oct-22	742	1.27	0	0	0	0	0	0	0	0	0	0	0	0	5	19.03	0	0	0	0	0	0	9	34.25	0	0	14	53.27
		07BEA01	02-Oct-22	531	0.38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	142.73	8	142.73
		07BEA02	03-Oct-22	246	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	263.41	7	204.88	16	468.29
		07KIS01	03-Oct-22	313	0.49	0	0	0	0	0	0	0	0	0	0	0	0	3	70.42	0	0	0	0	0	0	4	93.89	0	0	7	164.31
		07SC022	02-Oct-22	403	0.36	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
	Session Summary			**601.8**	**16.00**	**0**	**0**	**4**	**1.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**80**	**29.91**	**0**	**0**	**1**	**0.37**	**0**	**0**	**176**	**65.8**	**18**	**6.73**	**279**	**104.31**
Section Total All Samples				**68237**	**98.96**	**1**	**0**	**26**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**351**	**0**	**2**	**0**	**27**	**0**	**0**	**0**	**913**	**0**	**118**	**0**	**1438**	**0**
Section Average All Samples				**638**	**0.92**	**0**	**0.06**	**0**	**1.48**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**20.01**	**0**	**0.11**	**0**	**1.54**	**0**	**0**	**9**	**52.06**	**1**	**6.73**	**13**	**81.99**
Section Standard Error of Mean						**0.01**	**0.07**	**0.05**	**0.37**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.37**	**2.64**	**0.01**	**0.05**	**0.05**	**0.64**	**0**	**0**	**0.97**	**6.6**	**0.26**	**4.2**	**1.14**	**9.54**

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	23-Aug-22	834	1.10	0	0	0	0	0	0	0	0	0	0	0	0	3	11.77	0	0	0	0	0	0	6	23.54	0	0	9	35.32
		0902	23-Aug-22	751	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	14.38	0	0	3	14.38
		0903	23-Aug-22	776	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	25.3	0	0	6	25.3
		0904	23-Aug-22	836	1.10	0	0	1	3.91	0	0	0	0	0	0	0	0	2	7.83	0	0	0	0	0	0	2	7.83	0	0	5	19.57
		0905	23-Aug-22	871	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	26.3	0	0	7	26.3
		0906	23-Aug-22	884	1.00	0	0	0	0	0	0	0	0	1	4.07	0	0	1	4.07	0	0	0	0	0	0	4	16.29	0	0	6	24.43
		0907	23-Aug-22	835	1.20	0	0	0	0	0	0	0	0	0	0	0	0	1	3.59	0	0	0	0	0	0	2	7.19	1	3.59	4	14.37
		0908	23-Aug-22	623	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	21.01	0	0	4	21.01
		0909	23-Aug-22	521	0.95	0	0	0	0	0	0	0	0	0	0	0	0	1	7.27	0	0	0	0	0	0	1	7.27	0	0	2	14.55
		0910	23-Aug-22	1088	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	12.03	0	0	4	12.03
		0911	24-Aug-22	633	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	51.18	0	0	9	51.18
		0912	24-Aug-22	726	1.10	0	0	0	0	0	0	0	0	0	0	0	0	3	13.52	0	0	1	4.51	0	0	8	36.06	0	0	12	54.09
		0913	24-Aug-22	562	0.90	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
		0914	24-Aug-22	552	0.95	0	0	0	0	0	0	0	0	0	0	0	0	2	13.73	0	0	0	0	0	0	7	48.05	0	0	9	61.78
		09SC061	24-Aug-22	714	0.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	14.94	1	7.47	3	22.41
	Session Summary			**747.1**	**15.00**	**0**	**0**	**1**	**0.32**	**0**	**0**	**0**	**0**	**1**	**0.32**	**0**	**0**	**13**	**4.18**	**0**	**0**	**1**	**0.32**	**0**	**0**	**65**	**20.88**	**2**	**0.64**	**83**	**26.66**
Section 9	2	0901	01-Sep-22	656	1.10	0	0	0	0	0	0	0	0	0	0	0	0	2	9.98	0	0	0	0	0	0	5	24.94	1	4.99	8	39.91
		0902	01-Sep-22	864	1.00	0	0	1	4.17	0	0	0	0	0	0	0	0	4	16.67	1	4.17	5	20.83	0	0	5	20.83	0	0	16	66.67
		0903	01-Sep-22	770	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	4.25	0	0	0	0	0	0	7	29.75	1	4.25	9	38.25
		0904	01-Sep-22	907	1.10	0	0	0	0	0	0	0	0	0	0	0	0	4	14.43	0	0	0	0	0	0	8	28.87	0	0	12	43.3
		0905	01-Sep-22	958	1.10	0	0	0	0	0	0	0	0	0	0	0	0	3	10.25	0	0	0	0	0	0	6	20.5	1	3.42	10	34.16
		0906	01-Sep-22	1164	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	6.19	0	0	0	0	0	0	19	58.76	1	3.09	22	68.04
		0907	02-Sep-22	1192	1.20	0	0	0	0	0	0	0	0	0	0	0	0	1	2.52	0	0	0	0	0	0	5	12.58	1	2.52	7	17.62
		0908	02-Sep-22	905	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	3.62	0	0	0	0	0	0	7	25.31	0	0	8	28.93
		0909	02-Sep-22	874	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	52.03	1	4.34	13	56.37
		0910	01-Sep-22	1514	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	2.16	1	2.16	0	0	0	0	7	15.13	1	2.16	10	21.62
		0911	02-Sep-22	821	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	8.77	0	0	0	0	0	0	27	118.39	0	0	29	127.16
		0912	02-Sep-22	974	1.10	0	0	0	0	0	0	0	0	0	0	0	0	3	10.08	1	3.36	0	0	0	0	13	43.68	1	3.36	18	60.48
		0913	02-Sep-22	727	0.90	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
		0914	02-Sep-22	198	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	95.69	0	0	5	95.69
		09SC053	01-Sep-22	415	0.26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	66.73	2	66.73
		09SC061	02-Sep-22	894	0.65	0	0	1	6.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6.2	0	0	2	12.39
	Session Summary			**864.6**	**16.00**	**0**	**0**	**2**	**0.52**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**6.25**	**3**	**0.78**	**5**	**1.3**	**0**	**0**	**127**	**33.05**	**10**	**2.6**	**171**	**44.5**
Section 9	3	0901	08-Sep-22	744	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	4.4	0	0	0	0	0	0	11	48.39	1	4.4	13	57.18
		0902	08-Sep-22	674	1.00	0	0	1	5.34	0	0	0	0	0	0	0	0	2	10.68	0	0	1	5.34	0	0	2	10.68	0	0	6	32.05
		0903	08-Sep-22	626	1.10	0	0	0	0	0	0	0	0	0	0	0	0	2	10.46	0	0	0	0	0	0	1	5.23	1	5.23	4	20.91
		0904	08-Sep-22	628	1.10	0	0	0	0	0	0	0	0	0	0	0	0	2	10.42	0	0	0	0	0	0	3	15.63	0	0	5	26.06
		0905	08-Sep-22	700	1.10	0	0	0	0	0	0	1	4.68	0	0	0	0	4	18.7	0	0	0	0	0	0	3	14.03	0	0	8	37.4
		0906	09-Sep-22	869	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	4.14	0	0	0	0	0	0	12	49.71	0	0	13	53.86
		0907	09-Sep-22	902	1.20	0	0	0	0	1	3.33	0	0	0	0	0	0	2	6.65	0	0	0	0	0	0	9	29.93	1	3.33	13	43.24
		0908	09-Sep-22	667	1.10	0	0	0	0	0	0	0	0	0	0	0	0	3	14.72	0	0	0	0	0	0	1	4.91	0	0	4	19.63
		0909	09-Sep-22	588	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	12.89	2	12.89
		0910	09-Sep-22	903	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7.25	1	3.62	3	10.87
		0911	09-Sep-22	526	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	6.84	0	0	0	0	0	0	10	68.44	0	0	11	75.29
		0913	09-Sep-22	584	0.90	0	0	0	0	0	0	0	0	0	0	0	0	1	6.85	0	0	0	0	0	0	2	13.7	0	0	3	20.55
		0914	09-Sep-22	491	0.95	0	0	0	0	0	0	0	0	0	0	0	0	5	38.59	0	0	2	15.44	0	0	18	138.92	0	0	25	192.95
		09SC053	08-Sep-22	515	0.26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	80.66	0	0	3	80.66
		09SC061	09-Sep-22	582	0.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	36.66	0	0	4	36.66
	Session Summary			**666.6**	**15.00**	**0**	**0**	**1**	**0.36**	**1**	**0.36**	**1**	**0.36**	**0**	**0**	**0**	**0**	**24**	**8.64**	**0**	**0**	**3**	**1.08**	**0**	**0**	**81**	**29.16**	**6**	**2.16**	**117**	**42.12**

Table E3 Concluded.

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	4	0901	14-Sep-22	662	1.10	0	0	0	0	0	0	0	0	0	0	0	0	2	9.89	0	0	0	0	0	0	3	14.83	2	9.89	7	34.61
		0902	14-Sep-22	752	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	4.79	0	0	2	9.57	0	0	12	57.45	0	0	15	71.81
		0903	14-Sep-22	719	1.10	0	0	0	0	0	0	0	0	0	0	0	0	2	9.1	0	0	0	0	0	0	7	31.86	1	4.55	10	45.52
		0904	14-Sep-22	804	1.10	0	0	0	0	0	0	0	0	0	0	0	0	3	12.21	0	0	0	0	0	0	3	12.21	1	4.07	7	28.49
		0905	14-Sep-22	815	1.10	0	0	0	0	0	0	0	0	0	0	0	0	3	12.05	0	0	0	0	0	0	5	20.08	2	8.03	10	40.16
		0906	14-Sep-22	827	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	8.71	0	0	0	0	0	0	2	8.71	0	0	4	17.41
		0907	14-Sep-22	844	1.20	0	0	0	0	0	0	0	0	0	0	0	0	2	7.11	0	0	1	3.55	0	0	3	10.66	2	7.11	8	28.44
		0908	14-Sep-22	658	1.10	0	0	1	4.97	0	0	0	0	0	0	0	0	2	9.95	0	0	0	0	0	0	5	24.87	0	0	8	39.79
		0909	14-Sep-22	601	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6.31	0	0	1	6.31
		0910	14-Sep-22	985	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	16.61	0	0	5	16.61
		0911	14-Sep-22	576	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	6.25	0	0	0	0	0	0	9	56.25	0	0	10	62.5
		0912	14-Sep-22	693	1.10	0	0	0	0	0	0	0	0	0	0	0	0	7	33.06	0	0	0	0	0	0	5	23.61	0	0	12	56.67
		0914	14-Sep-22	521	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7.27	0	0	4	29.09	1	7.27	6	43.64
		09SC061	14-Sep-22	652	0.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	57.26	0	0	7	57.26
	Session Summary			**722.1**	**14.00**	**0**	0	**1**	0.36	**0**	0	**0**	0	**0**	0	**0**	0	**25**	8.9	**0**	0	**4**	1.42	**0**	0	**71**	25.28	**9**	3.2	**110**	39.17
Section 9	5	0901	28-Sep-22	681	1.10	0	0	0	0	0	0	0	0	0	0	0	0	6	28.83	0	0	0	0	0	0	10	48.06	0	0	16	76.89
		0902	28-Sep-22	580	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	18.62	0	0	3	18.62
		0903	28-Sep-22	713	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	4.59	0	0	0	0	0	0	2	9.18	0	0	3	13.77
		0904	28-Sep-22	608	1.10	0	0	0	0	0	0	0	0	0	0	0	0	5	26.91	0	0	0	0	0	0	1	5.38	0	0	6	32.3
		0905	28-Sep-22	711	1.10	0	0	1	4.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9.21	0	0	3	13.81
		0906	28-Sep-22	922	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7.81	0	0	2	7.81
		0907	28-Sep-22	805	1.20	0	0	1	3.73	0	0	0	0	0	0	0	0	1	3.73	0	0	0	0	0	0	1	3.73	2	7.45	5	18.63
		0908	28-Sep-22	606	1.10	0	0	0	0	0	0	0	0	0	0	0	0	3	16.2	0	0	0	0	0	0	0	0	0	0	3	16.2
		0909	28-Sep-22	591	0.95	0	0	0	0	0	0	0	0	0	0	0	0	1	6.41	0	0	0	0	0	0	0	0	1	6.41	2	12.82
		0911	28-Sep-22	518	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	13.9	0	0	0	0	0	0	7	48.65	0	0	9	62.55
		0912	28-Sep-22	494	0.60	0	0	1	12.15	0	0	0	0	0	0	0	0	1	12.15	0	0	0	0	0	0	6	72.87	1	12.15	9	109.31
		0913	28-Sep-22	503	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	23.86	0	0	3	23.86
		0914	28-Sep-22	480	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	15.79	0	0	2	15.79
		09SC061	28-Sep-22	546	0.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	39.07	0	0	4	39.07
	Session Summary			**625.6**	**14.00**	**0**	0	**3**	1.23	**0**	0	**0**	0	**0**	0	**0**	0	**20**	8.22	**0**	0	**0**	0	**0**	0	**43**	17.67	**4**	1.64	**70**	28.77
Section 9	6	0901	05-Oct-22	759	1.10	0	0	1	4.31	0	0	0	0	0	0	0	0	7	30.18	0	0	0	0	0	0	12	51.74	0	0	20	86.24
		0902	05-Oct-22	647	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	22.26	0	0	4	22.26
		0903	05-Oct-22	704	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9.3	0	0	2	9.3
		0904	05-Oct-22	620	1.10	0	0	0	0	0	0	0	0	0	0	0	0	5	26.39	0	0	0	0	0	0	1	5.28	0	0	6	31.67
		0905	05-Oct-22	695	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	61.22	1	4.71	14	65.93
		0906	05-Oct-22	728	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	4.95	0	0	0	0	0	0	6	29.67	1	4.95	8	39.56
		0907	05-Oct-22	789	1.20	0	0	0	0	0	0	0	0	0	0	0	0	2	7.6	0	0	0	0	0	0	4	15.21	2	7.6	8	30.42
		0908	05-Oct-22	608	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	5.38	0	0	0	0	0	0	0	0	0	0	1	5.38
		0909	05-Oct-22	617	0.95	0	0	0	0	0	0	0	0	0	0	0	0	1	6.14	0	0	0	0	0	0	0	0	0	0	1	6.14
		0910	05-Oct-22	1020	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	12.83	0	0	4	12.83
		0911	05-Oct-22	635	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	11.34	0	0	0	0	0	0	7	39.69	0	0	9	51.02
		0912	05-Oct-22	444	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	54.05	0	0	4	54.05
		0913	05-Oct-22	530	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	30.19	0	0	4	30.19
		0914	05-Oct-22	505	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	15.01	0	0	2	15.01
		09SC053	05-Oct-22	248	0.20	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
		09SC061	05-Oct-22	586	0.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	18.2	0	0	2	18.2
	Session Summary			**633.4**	**15.00**	**0**	0	**1**	0.38	**0**	0	**0**	0	**0**	0	**0**	0	**19**	7.2	**0**	0	**0**	0	**0**	0	**65**	24.63	**4**	1.52	**89**	33.72
Section Total All Samples				**64040**	**88.84**	**0**	0	**9**	0	**1**	0	**1**	0	**1**	0	**0**	0	**125**	0	**3**	0	**13**	0	**0**	0	**452**	0	**35**	0	**640**	0
Section Average All Samples				**712**	**0.99**	**0**	0	**0**	0.51	**0**	0.06	**0**	0.06	**0**	0.06	**0**	0	**1**	7.11	**0**	0.17	**0**	0.74	**0**	0	**5**	25.72	**0**	1.99	**7**	36.42
Section Standard Error of Mean						**0**	0	**0.03**	0.19	**0.01**	0.04	**0.01**	0.05	**0.01**	0.05	**0**	0	**0.17**	0.87	**0.02**	0.06	**0.07**	0.32	**0**	0	**0.49**	2.72	**0.07**	0.79	**0.58**	3.17
All Sections Total All Samples				**375259**	**561.73**	16	0	276	0	13	0	1	0	20	0	1	0	4217	0.07	28	0	149	0	88	0	5410	0.09	225	0	10444	0.18
All Sections Average All Samples						0	0.15	0	2.67	0	0.13	0	0.01	0	0.19	0	0.01	7	40.76	0	0.27	0	1.44	0	0.85	10	52.29	0	2.17	18	100.95
All Sections Standard Error of Mean						0.01	0.06	0.04	0.22	0.01	0.04	0	0.01	0.01	0.08	0	0.01	0.38	3.98	0.01	0.06	0.03	0.21	0.02	0.18	0.55	3.36	0.06	0.84	0.7	5.27

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, 17 August to 05 October 2022.

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		Trout-perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 1	1	0101	18-Aug-22	211	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0102	18-Aug-22	301	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0103	18-Aug-22	471	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0104	18-Aug-22	229	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0105	18-Aug-22	383	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0107	18-Aug-22	427	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0108	19-Aug-22	491	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0109	19-Aug-22	486	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0110	19-Aug-22	468	0.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0111	17-Aug-22	464	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0112	17-Aug-22	453	1.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0113	17-Aug-22	333	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0114	17-Aug-22	421	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0116	19-Aug-22	447	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0119	18-Aug-22	475	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**404**	**13.00**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Section 1	2	0101	25-Aug-22	264	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0102	25-Aug-22	342	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0103	25-Aug-22	602	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0104	25-Aug-22	345	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0105	25-Aug-22	1072	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0107	25-Aug-22	501	0.55	0	0	0	0	0	0	0	0	1	13.06	0	0	0	0	0	0	1	13.06
		0108	29-Aug-22	619	0.85	0	0	0	0	0	0	0	0	1	6.84	0	0	0	0	0	0	1	6.84
		0109	29-Aug-22	708	0.98	0	0	0	0	0	0	0	0	2	10.43	0	0	0	0	0	0	2	10.43
		0110	25-Aug-22	690	0.65	0	0	0	0	0	0	0	0	3	24.08	0	0	0	0	0	0	3	24.08
		0111	29-Aug-22	677	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0112	29-Aug-22	716	1.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0113	29-Aug-22	478	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0114	29-Aug-22	594	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0116	29-Aug-22	531	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0119	25-Aug-22	927	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**604.4**	**13.00**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**3.21**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**3.21**
Section 1	3	0101	05-Sep-22	284	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0102	05-Sep-22	318	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0103	05-Sep-22	815	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0104	05-Sep-22	310	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0105	05-Sep-22	574	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0107	05-Sep-22	358	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0108	05-Sep-22	477	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0109	05-Sep-22	503	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0110	05-Sep-22	480	0.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0111	05-Sep-22	630	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0112	05-Sep-22	614	1.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0113	06-Sep-22	391	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0114	06-Sep-22	625	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0116	06-Sep-22	473	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0119	05-Sep-22	726	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**505.2**	**13.00**	**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		Trout-perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 1	4	0101	10-Sep-22	257	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0102	10-Sep-22	340	0.98	0	0	0	0	0	0	0	0	0	0	1	10.86	0	0	0	0	1	10.86
		0103	10-Sep-22	617	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0104	10-Sep-22	355	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0105	10-Sep-22	459	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0107	18-Sep-22	381	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0108	10-Sep-22	578	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0109	10-Sep-22	516	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0110	18-Sep-22	586	0.65	0	0	0	0	0	0	0	0	1	9.45	0	0	0	0	0	0	1	9.45
		0111	18-Sep-22	695	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0112	18-Sep-22	574	1.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0113	18-Sep-22	352	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0114	18-Sep-22	484	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0116	18-Sep-22	613	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0119	10-Sep-22	708	0.75	0	0	0	0	0	0	0	0	1	6.78	0	0	0	0	0	0	1	6.78
	Session Summary			**501**	**13.00**	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**2**	***1.11***	**1**	***0.55***	**0**	***0***	**0**	***0***	**3**	***1.66***
Section 1	5	0101	26-Sep-22	312	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0102	26-Sep-22	378	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0103	26-Sep-22	696	1.20	0	0	0	0	0	0	0	0	3	12.93	0	0	0	0	0	0	3	12.93
		0104	26-Sep-22	388	0.50	0	0	0	0	0	0	0	0	5	92.78	0	0	0	0	0	0	5	92.78
		0105	26-Sep-22	669	1.10	0	0	0	0	0	0	0	0	1	4.89	0	0	0	0	0	0	1	4.89
		0107	27-Sep-22	431	0.55	0	0	0	0	0	0	0	0	4	60.75	0	0	0	0	0	0	4	60.75
		0108	26-Sep-22	646	0.85	0	0	0	0	0	0	0	0	1	6.56	0	0	0	0	0	0	1	6.56
		0109	27-Sep-22	563	0.98	0	0	0	0	0	0	0	0	1	6.56	0	0	0	0	0	0	1	6.56
		0110	27-Sep-22	367	0.65	0	0	0	0	0	0	0	0	1	15.09	0	0	0	0	0	0	1	15.09
		0111	27-Sep-22	606	1.00	0	0	0	0	0	0	0	0	3	17.82	0	0	0	0	0	0	3	17.82
		0112	27-Sep-22	619	1.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0113	27-Sep-22	441	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0114	27-Sep-22	476	0.95	0	0	0	0	0	0	0	0	1	7.96	0	0	0	0	0	0	1	7.96
		0116	27-Sep-22	513	0.98	0	0	0	0	0	0	0	0	1	7.12	0	0	0	0	0	0	1	7.12
		0119	26-Sep-22	767	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**524.8**	**13.00**	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**21**	***11.08***	**0**	***0***	**0**	***0***	**0**	***0***	**21**	***11.08***
Section 1	6	0101	04-Oct-22	281	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0102	04-Oct-22	326	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0103	04-Oct-22	599	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0104	04-Oct-22	327	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0105	04-Oct-22	460	1.10	0	0	0	0	0	0	0	0	1	7.11	0	0	0	0	0	0	1	7.11
		0107	04-Oct-22	389	0.55	0	0	0	0	0	0	0	0	1	16.83	0	0	0	0	0	0	1	16.83
		0108	04-Oct-22	583	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0109	04-Oct-22	581	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0110	04-Oct-22	569	0.65	0	0	0	0	0	0	1	9.73	0	0	0	0	0	0	0	0	1	9.73
		0111	04-Oct-22	537	1.00	0	0	0	0	0	0	0	0	1	6.7	0	0	0	0	0	0	1	6.7
		0112	04-Oct-22	620	1.07	0	0	0	0	0	0	0	0	2	10.85	0	0	0	0	0	0	2	10.85
		0113	04-Oct-22	449	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0114	04-Oct-22	531	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0116	04-Oct-22	598	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0119	04-Oct-22	640	0.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**499.3**	**13.00**	**0**	***0***	**0**	***0***	**0**	***0***	**1**	***0.55***	**5**	***2.77***	**0**	***0***	**0**	***0***	**0**	***0***	**6**	***3.33***
Section Total All Samples				**45581**	**77.43**	**0**	***0***	**0**	***0***	**0**	***0***	**1**	***0***	**35**	***0***	**1**	***0***	**0**	***0***	**0**	***0***	**37**	***0***
Section Average All Samples				**506**	**0.86**	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0.09***	**0**	***3.22***	**0**	***0.09***	**0**	***0***	**0**	***0***	**0**	***3.4***
Section Standard Error of Mean						**0**	***0***	**0**	***0***	**0**	***0***	**0.01**	***0.11***	**0.1**	***1.3***	**0.01**	***0.12***	**0**	***0***	**0**	***0***	**0.1**	***1.3***

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		Trout-perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 3	1	0301	20-Aug-22	983	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0302	20-Aug-22	789	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0303	20-Aug-22	711	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0304	20-Aug-22	700	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0305	20-Aug-22	962	1.55	0	0	0	0	0	0	3	7.24	0	0	0	0	0	0	0	0	3	7.24
		0307	21-Aug-22	651	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0308	21-Aug-22	756	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0309	22-Aug-22	478	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0310	22-Aug-22	746	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0311	21-Aug-22	813	1.25	0	0	0	0	0	0	0	0	0	0	1	3.54	0	0	0	0	1	3.54
		0312	22-Aug-22	851	1.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0314	21-Aug-22	638	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0315	21-Aug-22	1330	1.70	0	0	0	0	0	0	0	0	1	1.59	0	0	0	0	0	0	1	1.59
		0316	21-Aug-22	913	1.48	0	0	0	0	0	0	0	0	1	2.67	0	0	0	0	0	0	1	2.67
	Session Summary			**808.6**	**19.00**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0.7**	**2**	**0.47**	**1**	**0.23**	**0**	**0**	**0**	**0**	**6**	**1.41**
Section 3	2	0301	30-Aug-22	1195	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0302	30-Aug-22	861	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0303	30-Aug-22	809	1.45	0	0	1	3.07	0	0	0	0	0	0	0	0	0	0	0	0	1	3.07
		0304	30-Aug-22	1012	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0305	30-Aug-22	790	1.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0306	30-Aug-22	603	1.00	0	0	0	0	0	0	1	5.97	0	0	0	0	0	0	0	0	1	5.97
		0307	31-Aug-22	741	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0308	31-Aug-22	915	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0309	31-Aug-22	734	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0310	31-Aug-22	1020	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0311	30-Aug-22	721	1.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0312	31-Aug-22	1208	1.17	0	0	0	0	0	0	0	0	0	0	2	5.09	0	0	0	0	2	5.09
		0314	30-Aug-22	691	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0315	31-Aug-22	1528	1.70	0	0	0	0	0	0	0	0	1	1.39	0	0	0	0	0	0	1	1.39
		0316	31-Aug-22	1015	1.48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**922.9**	**20.00**	**0**	**0**	**1**	**0.2**	**0**	**0**	**1**	**0.2**	**1**	**0.2**	**2**	**0.39**	**0**	**0**	**0**	**0**	**5**	**0.98**
Section 3	3	0301	06-Sep-22	1031	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0302	06-Sep-22	947	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0303	06-Sep-22	741	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0304	06-Sep-22	672	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0305	06-Sep-22	897	1.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0306	07-Sep-22	647	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0307	07-Sep-22	578	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0308	07-Sep-22	672	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0309	07-Sep-22	556	0.95	0	0	2	13.63	0	0	0	0	0	0	0	0	0	0	0	0	2	13.63
		0310	07-Sep-22	669	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0311	07-Sep-22	657	1.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0312	07-Sep-22	723	1.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0314	07-Sep-22	862	0.98	0	0	0	0	0	0	0	0	1	4.28	0	0	0	0	0	0	1	4.28
		0315	07-Sep-22	1202	1.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0316	07-Sep-22	844	1.48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**779.9**	**20.00**	**0**	**0**	**2**	**0.46**	**0**	**0**	**0**	**0**	**1**	**0.23**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0.69**

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		Trout-perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 3	4	0301	11-Sep-22	1029	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0302	11-Sep-22	865	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0303	11-Sep-22	700	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0304	11-Sep-22	747	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0305	11-Sep-22	844	1.55	0	0	1	2.75	0	0	0	0	0	0	0	0	0	0	0	0	1	2.75
		0306	12-Sep-22	713	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0307	12-Sep-22	567	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0308	12-Sep-22	721	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0310	13-Sep-22	715	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0311	13-Sep-22	660	1.25	0	0	0	0	0	0	1	4.36	0	0	0	0	0	0	0	0	1	4.36
		0312	13-Sep-22	734	1.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0314	11-Sep-22	603	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0315	11-Sep-22	1100	1.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0316	12-Sep-22	1043	1.48	0	0	0	0	0	0	2	4.68	0	0	0	0	0	0	0	0	2	4.68
	Session Summary			**788.6**	**19.00**	**0**	**0**	**1**	**0.24**	**0**	**0**	**3**	**0.72**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0.96**
Section 3	5	0301	16-Sep-22	1133	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0302	16-Sep-22	916	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0303	16-Sep-22	745	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0304	16-Sep-22	841	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0305	16-Sep-22	889	1.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0306	17-Sep-22	612	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0307	17-Sep-22	617	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0308	17-Sep-22	711	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0309	17-Sep-22	514	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0310	17-Sep-22	712	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0311	17-Sep-22	673	1.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0312	17-Sep-22	802	1.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0314	16-Sep-22	738	0.98	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	1	5
		0315	16-Sep-22	1227	1.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0316	17-Sep-22	902	1.48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**802.1**	**20.00**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0.22**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0.22**
Section 3	6	0301	29-Sep-22	958	1.80	0	0	0	0	0	0	0	0	1	2.09	0	0	0	0	0	0	1	2.09
		0302	29-Sep-22	948	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0303	29-Sep-22	751	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0304	29-Sep-22	748	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0305	29-Sep-22	853	1.55	0	0	1	2.72	0	0	0	0	0	0	0	0	0	0	0	0	1	2.72
		0306	29-Sep-22	625	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0307	29-Sep-22	614	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0308	29-Sep-22	680	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0309	29-Sep-22	562	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0310	29-Sep-22	732	1.20	0	0	0	0	0	0	0	0	1	4.1	0	0	0	0	0	0	1	4.1
		0311	29-Sep-22	688	1.25	0	0	1	4.19	0	0	0	0	0	0	0	0	0	0	0	0	1	4.19
		0312	29-Sep-22	803	1.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0314	29-Sep-22	573	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0315	29-Sep-22	1040	1.70	0	0	0	0	0	0	0	0	1	2.04	0	0	0	0	0	0	1	2.04
		0316	29-Sep-22	831	1.48	0	0	0	0	0	0	0	0	1	2.94	0	0	0	0	0	0	1	2.94
	Session Summary			**760.4**	**20.00**	**0**	**0**	**2**	**0.47**	**0**	**0**	**0**	**0**	**4**	**0.95**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**1.42**
Section Total All Samples				**71341**	**118.47**	**0**	**0**	**6**	**0**	**0**	**0**	**7**	**0**	**9**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**25**	**0**
Section Average All Samples				**811**	**1.35**	**0**	**0**	**0**	**0.22**	**0**	**0**	**0**	**0.26**	**0**	**0.34**	**0**	**0.11**	**0**	**0**	**0**	**0**	**0**	**0.94**
Section Standard Error of Mean						**0**	**0**	**0.03**	**0.17**	**0**	**0**	**0.04**	**0.13**	**0.03**	**0.1**	**0.03**	**0.07**	**0**	**0**	**0**	**0**	**0.06**	**0.23**

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		Trout-perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 5	1	0502	22-Aug-22	1357	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0505	23-Aug-22	1208	1.00	0	0	0	0	0	0	1	2.98	0	0	0	0	0	0	0	0	1	2.98
		0506	23-Aug-22	754	1.00	0	0	0	0	0	0	1	4.77	0	0	0	0	0	0	0	0	1	4.77
		0507	22-Aug-22	430	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0508	23-Aug-22	775	0.92	0	0	0	0	0	0	0	0	0	0	4	20.09	0	0	0	0	4	20.09
		0509	23-Aug-22	666	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0510	23-Aug-22	760	1.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0511	21-Aug-22	504	0.69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0513	21-Aug-22	522	0.77	0	0	0	0	0	0	6	53.74	0	0	0	0	0	0	0	0	6	53.74
		0514	23-Aug-22	501	0.56	0	0	0	0	0	0	0	0	0	0	1	12.83	0	0	0	0	1	12.83
		0515	21-Aug-22	680	0.97	0	0	0	0	0	0	0	0	0	0	1	5.46	0	0	0	0	1	5.46
		0516	23-Aug-22	529	0.80	0	0	0	0	0	0	1	8.51	0	0	0	0	0	0	0	0	1	8.51
		0517	23-Aug-22	512	0.70	0	0	0	0	0	0	0	0	0	0	1	10.04	0	0	0	0	1	10.04
		0518	21-Aug-22	1307	1.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		05SC060	22-Aug-22	607	0.53	0	0	0	0	0	0	15	167.85	0	0	0	0	1	11.19	0	0	16	179.04
	Session Summary			**740.8**	**14.00**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**8.33**	**0**	**0**	**7**	**2.43**	**1**	**0.35**	**0**	**0**	**32**	**11.11**
Section 5	2	0502	30-Aug-22	841	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0505	30-Aug-22	1076	1.00	0	0	0	0	0	0	1	3.35	0	0	0	0	0	0	0	0	1	3.35
		0506	30-Aug-22	918	1.00	0	0	0	0	0	0	1	3.92	1	3.92	0	0	0	0	0	0	2	7.84
		0507	29-Aug-22	381	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0508	29-Aug-22	751	0.92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0509	30-Aug-22	657	0.98	0	0	0	0	0	0	3	16.86	0	0	0	0	0	0	0	0	3	16.86
		0510	28-Aug-22	1081	1.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0511	28-Aug-22	467	0.69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0512	30-Aug-22	237	0.26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0513	29-Aug-22	562	0.77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0514	29-Aug-22	511	0.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0515	28-Aug-22	649	0.97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0516	29-Aug-22	468	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0517	29-Aug-22	594	0.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0518	28-Aug-22	1310	1.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		05SC060	29-Aug-22	483	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**686.6**	**14.00**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**1.87**	**1**	**0.37**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**2.25**
Section 5	3	0502	06-Sep-22	774	0.95	0	0	0	0	0	0	3	14.69	0	0	0	0	0	0	0	0	3	14.69
		0505	06-Sep-22	1142	1.00	0	0	0	0	0	0	0	0	1	3.15	0	0	0	0	0	0	1	3.15
		0506	06-Sep-22	720	1.00	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	1	5
		0507	06-Sep-22	415	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0508	05-Sep-22	682	0.92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0509	06-Sep-22	689	0.98	0	0	0	0	0	0	1	5.36	0	0	0	0	0	0	0	0	1	5.36
		0510	05-Sep-22	721	1.13	0	0	0	0	0	0	3	13.26	0	0	0	0	0	0	0	0	3	13.26
		0511	05-Sep-22	425	0.69	0	0	0	0	0	0	2	24.55	0	0	0	0	0	0	0	0	2	24.55
		0512	06-Sep-22	269	0.51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0513	05-Sep-22	521	0.77	0	0	0	0	0	0	1	8.97	0	0	0	0	1	8.97	0	0	2	17.95
		0514	05-Sep-22	431	0.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0515	05-Sep-22	628	0.97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0516	06-Sep-22	521	0.80	0	0	0	0	0	0	0	0	1	8.64	0	0	0	0	0	0	1	8.64
		0517	06-Sep-22	521	0.66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0518	05-Sep-22	1166	1.78	0	0	0	0	0	0	1	1.73	0	0	0	0	0	0	0	0	1	1.73
		05SC060	05-Sep-22	472	0.53	0	0	0	0	0	0	2	28.78	0	0	0	0	0	0	0	0	2	28.78
	Session Summary			**631.1**	**14.00**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**5.3**	**3**	**1.22**	**0**	**0**	**1**	**0.41**	**0**	**0**	**17**	**6.93**

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	Trout-perch No.	Trout-perch CPUE	All Species No.	All Species CPUE
Section 5	4	0502	11-Sep-22	815	0.95	0	0	0	0	0	0	1	4.65	0	0	0	0	0	0	0	0	1	4.65
		0505	11-Sep-22	1130	1.00	0	0	0	0	0	0	4	12.74	0	0	0	0	0	0	0	0	4	12.74
		0506	11-Sep-22	734	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0507	11-Sep-22	445	0.78	0	0	0	0	0	0	2	20.74	0	0	0	0	0	0	0	0	2	20.74
		0508	13-Sep-22	710	0.92	0	0	0	0	0	0	3	16.44	0	0	1	5.48	0	0	0	0	4	21.93
		0509	11-Sep-22	677	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0510	13-Sep-22	722	1.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0511	13-Sep-22	455	0.69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0512	11-Sep-22	204	0.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0513	13-Sep-22	482	0.77	0	0	0	0	0	0	0	0	1	9.7	0	0	2	19.4	0	0	3	29.1
		0514	13-Sep-22	423	0.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0515	13-Sep-22	555	0.97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0516	11-Sep-22	534	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0517	11-Sep-22	533	0.58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0518	13-Sep-22	1129	1.78	0	0	0	0	0	0	1	1.79	0	0	0	0	0	0	0	0	1	1.79
		05SC060	11-Sep-22	510	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**628.6**	**14.00**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**4.5**	**1**	**0.41**	**1**	**0.41**	**2**	**0.82**	**0**	**0**	**15**	**6.14**
Section 5	5	0502	22-Sep-22	840	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0505	22-Sep-22	1214	1.00	0	0	0	0	0	0	1	2.97	0	0	0	0	0	0	0	0	1	2.97
		0506	22-Sep-22	743	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0507	22-Sep-22	471	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0508	19-Sep-22	473	0.92	0	0	0	0	0	0	2	16.46	0	0	0	0	0	0	0	0	2	16.46
		0509	22-Sep-22	643	0.98	0	0	0	0	0	0	0	0	1	5.74	0	0	0	0	0	0	1	5.74
		0510	22-Sep-22	859	1.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0511	19-Sep-22	451	0.72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0513	19-Sep-22	359	0.77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0514	19-Sep-22	339	0.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0515	19-Sep-22	496	0.97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0516	22-Sep-22	654	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0517	22-Sep-22	719	0.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		05SC060	22-Sep-22	503	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**626**	**12.00**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1.44**	**1**	**0.48**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**1.92**
Section 5	6	0502	30-Sep-22	869	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0505	30-Sep-22	1113	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0506	30-Sep-22	748	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0507	30-Sep-22	441	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0508	01-Oct-22	722	0.92	0	0	0	0	0	0	0	0	1	5.39	0	0	1	5.39	0	0	2	10.78
		0509	30-Sep-22	624	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0510	30-Sep-22	756	1.13	0	0	0	0	0	0	2	8.43	0	0	0	0	0	0	0	0	2	8.43
		0511	30-Sep-22	458	0.69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0513	01-Oct-22	459	0.77	0	0	0	0	1	10.19	0	0	0	0	0	0	0	0	0	0	1	10.19
		0514	01-Oct-22	444	0.56	0	0	0	0	0	0	0	0	5	72.39	1	14.48	0	0	0	0	6	86.87
		0515	01-Oct-22	572	0.97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0516	30-Sep-22	615	0.80	0	0	0	0	0	0	1	7.32	0	0	0	0	0	0	0	0	1	7.32
		0517	30-Sep-22	631	0.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0518	30-Sep-22	1186	1.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		05SC060	30-Sep-22	504	0.53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**676.1**	**14.00**	**0**	**0**	**0**	**0**	**1**	**0.38**	**3**	**1.14**	**6**	**2.28**	**1**	**0.38**	**1**	**0.38**	**0**	**0**	**12**	**4.56**
Section Total All Samples				**61159**	**80.35**	**0**	**0**	**0**	**0**	**1**	**0**	**59**	**0**	**12**	**0**	**9**	**0**	**5**	**0**	**0**	**0**	**86**	**0**
Section Average All Samples				**665**	**0.87**	**0**	**0**	**0**	**0**	**0**	**0.07**	**1**	**3.98**	**0**	**0.81**	**0**	**0.61**	**0**	**0.34**	**0**	**0**	**1**	**5.79**
Section Standard Error of Mean						**0**	**0**	**0**	**0**	**0.01**	**0.11**	**0.19**	**1.97**	**0.06**	**0.8**	**0.05**	**0.33**	**0.03**	**0.27**	**0**	**0**	**0.21**	**2.28**

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		Trout-perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 6	1	0601	24-Aug-22	741	1.10	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0602	24-Aug-22	612	0.90	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0603	24-Aug-22	765	1.30	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	1	***3.62***	1	***3.62***
		0604	24-Aug-22	676	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	1	***5.33***	0	***0***	1	***5.33***
		0605	24-Aug-22	495	0.80	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	2	***18.18***	0	***0***	0	***0***	2	***18.18***
		0606	25-Aug-22	867	1.40	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0607	25-Aug-22	769	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0608	24-Aug-22	488	0.95	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0609	25-Aug-22	837	1.00	0	***0***	0	***0***	0	***0***	1	***4.3***	0	***0***	0	***0***	0	***0***	0	***0***	1	***4.3***
		0610	25-Aug-22	644	0.85	0	***0***	1	***6.58***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	1	***6.58***
		0611	25-Aug-22	628	0.90	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0612	25-Aug-22	523	0.85	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0613	25-Aug-22	661	0.90	0	***0***	2	***12.1***	0	***0***	0	***0***	0	***0***	1	***6.05***	0	***0***	0	***0***	3	***18.15***
		0614	24-Aug-22	770	0.98	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		06PIN01	24-Aug-22	1343	1.50	0	***0***	0	***0***	0	***0***	1	***1.79***	0	***0***	0	***0***	0	***0***	0	***0***	1	***1.79***
	Session Summary			**721.3**	**15.00**	**0**	***0***	**3**	***1***	**0**	***0***	**2**	***0.67***	**0**	***0***	**3**	***1***	**1**	***0.33***	**1**	***0.33***	**10**	***3.33***
Section 6	2	0601	01-Sep-22	757	1.20	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0602	02-Sep-22	652	0.90	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0603	01-Sep-22	714	1.30	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0604	01-Sep-22	686	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0605	01-Sep-22	482	0.80	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0606	02-Sep-22	909	1.40	0	***0***	0	***0***	0	***0***	1	***2.83***	0	***0***	0	***0***	0	***0***	0	***0***	1	***2.83***
		0607	02-Sep-22	680	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0608	01-Sep-22	570	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0609	02-Sep-22	822	1.00	0	***0***	0	***0***	0	***0***	1	***4.38***	0	***0***	0	***0***	0	***0***	0	***0***	1	***4.38***
		0610	02-Sep-22	636	0.85	0	***0***	1	***6.66***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	1	***6.66***
		0611	02-Sep-22	572	0.90	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0612	02-Sep-22	529	0.85	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0613	02-Sep-22	664	0.90	0	***0***	1	***6.02***	0	***0***	2	***12.05***	0	***0***	0	***0***	0	***0***	0	***0***	3	***18.07***
		0614	01-Sep-22	695	0.98	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		06PIN01	01-Sep-22	1292	1.50	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		06PIN02	01-Sep-22	588	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
	Session Summary			**703**	**17.00**	**0**	***0***	**2**	***0.6***	**0**	***0***	**4**	***1.2***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**6**	***1.81***
Section 6	3	0601	07-Sep-22	661	1.20	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0602	07-Sep-22	572	0.88	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0603	07-Sep-22	708	1.30	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0604	07-Sep-22	615	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0605	07-Sep-22	454	0.80	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0606	08-Sep-22	872	1.40	0	***0***	0	***0***	0	***0***	3	***8.85***	0	***0***	0	***0***	3	***8.85***	0	***0***	6	***17.69***
		0607	08-Sep-22	649	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0608	07-Sep-22	559	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	2	***12.88***	0	***0***	0	***0***	2	***12.88***
		0609	08-Sep-22	703	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0610	08-Sep-22	617	0.85	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0611	08-Sep-22	559	0.90	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0612	08-Sep-22	524	0.85	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0613	08-Sep-22	636	0.90	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		0614	07-Sep-22	630	0.98	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		06PIN02	07-Sep-22	484	1.00	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		06SC036	08-Sep-22	587	0.40	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
		06SC047	07-Sep-22	538	0.55	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***	0	***0***
	Session Summary			**609.9**	**16.00**	**0**	***0***	**0**	***0***	**0**	***0***	**3**	***1.11***	**0**	***0***	**2**	***0.74***	**3**	***1.11***	**0**	***0***	**8**	***2.95***

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		Trout-perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 6	4	0601	13-Sep-22	745	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0602	14-Sep-22	633	0.90	0	0	0	0	0	0	1	6.32	0	0	0	0	0	0	0	0	1	6.32
		0603	14-Sep-22	688	1.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0604	14-Sep-22	649	1.00	0	0	0	0	0	0	1	5.55	0	0	0	0	0	0	0	0	1	5.55
		0605	14-Sep-22	499	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0606	14-Sep-22	942	1.40	0	0	0	0	0	0	1	2.73	0	0	0	0	0	0	0	0	1	2.73
		0607	14-Sep-22	738	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0608	14-Sep-22	600	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0609	15-Sep-22	769	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0610	15-Sep-22	620	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0611	15-Sep-22	580	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0612	15-Sep-22	538	0.85	0	0	1	7.87	0	0	0	0	0	0	0	0	0	0	0	0	1	7.87
		0613	15-Sep-22	646	0.90	0	0	2	12.38	0	0	0	0	0	0	0	0	0	0	0	0	2	12.38
		0614	14-Sep-22	574	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06PIN02	13-Sep-22	651	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**658.1**	**15.00**	**0**	**0**	**3**	**1.09**	**0**	**0**	**3**	**1.09**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**2.19**
Section 6	5	0601	19-Sep-22	736	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0602	23-Sep-22	665	0.90	0	0	0	0	0	0	1	6.02	0	0	0	0	0	0	0	0	1	6.02
		0603	23-Sep-22	681	1.30	0	0	0	0	0	0	0	0	0	0	0	0	1	4.07	0	0	1	4.07
		0604	23-Sep-22	607	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0605	23-Sep-22	418	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0606	23-Sep-22	786	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0607	24-Sep-22	588	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0608	23-Sep-22	551	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0609	24-Sep-22	630	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0610	24-Sep-22	588	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0611	24-Sep-22	560	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0612	24-Sep-22	469	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0613	24-Sep-22	606	0.90	0	0	0	0	0	0	0	0	0	0	0	0	2	13.2	0	0	2	13.2
		0614	23-Sep-22	511	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06PIN01	19-Sep-22	1049	1.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06PIN02	19-Sep-22	587	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06SC036	24-Sep-22	452	0.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06SC047	19-Sep-22	460	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**608**	**18.00**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0.33**	**0**	**0**	**0**	**0**	**3**	**0.99**	**0**	**0**	**4**	**1.32**
Section 6	6	0601	01-Oct-22	719	1.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0602	02-Oct-22	610	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0603	01-Oct-22	890	1.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0604	01-Oct-22	625	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0605	01-Oct-22	486	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0606	02-Oct-22	847	1.40	0	0	1	3.04	0	0	2	6.07	0	0	0	0	1	3.04	0	0	4	12.14
		0607	02-Oct-22	676	1.00	0	0	0	0	0	0	0	0	1	5.33	0	0	0	0	0	0	1	5.33
		0608	01-Oct-22	568	1.00	0	0	0	0	0	0	0	0	0	0	1	6.34	0	0	0	0	1	6.34
		0609	02-Oct-22	656	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0610	02-Oct-22	634	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0611	02-Oct-22	619	0.90	0	0	0	0	0	0	0	0	2	12.92	0	0	0	0	0	0	2	12.92
		0612	02-Oct-22	500	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0613	02-Oct-22	653	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0614	01-Oct-22	616	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06PIN01	01-Oct-22	1007	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06PIN02	01-Oct-22	634	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		06SC036	02-Oct-22	391	0.25	0	0	0	0	0	0	1	36.83	0	0	0	0	6	220.97	0	0	7	257.8
		06SC047	02-Oct-22	519	0.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**647.2**	**17.00**	**0**	**0**	**1**	**0.33**	**0**	**0**	**3**	**0.98**	**3**	**0.98**	**1**	**0.33**	**7**	**2.29**	**0**	**0**	**15**	**4.91**
Section Total All Samples				**64901**	**97.68**	**0**	**0**	**9**	**0**	**0**	**0**	**16**	**0**	**3**	**0**	**6**	**0**	**14**	**0**	**1**	**0**	**49**	**0**
Section Average All Samples				**656**	**0.99**	**0**	**0**	**0**	**0.51**	**0**	**0**	**0**	**0.9**	**0**	**0.17**	**0**	**0.34**	**0**	**0.79**	**0**	**0.06**	**0**	**2.75**
Section Standard Error of Mean						**0**	**0**	**0.04**	**0.22**	**0**	**0**	**0.05**	**0.42**	**0.02**	**0.14**	**0.03**	**0.24**	**0.07**	**2.24**	**0.01**	**0.04**	**0.12**	**2.62**

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		Trout-perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 7	1	0701	26-Aug-22	570	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0702	26-Aug-22	528	0.95	0	0	1	7.18	0	0	0	0	0	0	0	0	0	0	0	0	1	7.18
		0703	26-Aug-22	645	0.95	0	0	1	5.88	0	0	0	0	0	0	0	0	0	0	0	0	1	5.88
		0704	27-Aug-22	588	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0705	27-Aug-22	646	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0706	27-Aug-22	831	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0707	27-Aug-22	640	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0708	26-Aug-22	700	1.24	0	0	1	4.15	0	0	0	0	0	0	0	0	0	0	0	0	1	4.15
		0709	26-Aug-22	598	1.00	0	0	0	0	0	0	0	0	0	0	1	6.02	0	0	0	0	1	6.02
		0710	27-Aug-22	816	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0711	27-Aug-22	813	1.39	0	0	0	0	0	0	1	3.19	0	0	0	0	0	0	0	0	1	3.19
		0712	27-Aug-22	832	1.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0713	27-Aug-22	625	0.98	0	0	0	0	0	0	0	0	0	0	1	5.88	0	0	0	0	1	5.88
		0714	27-Aug-22	1158	1.27	0	0	1	2.44	0	0	0	0	1	2.44	0	0	0	0	0	0	2	4.88
		07BEA01	26-Aug-22	577	0.33	0	0	1	18.91	0	0	0	0	0	0	0	0	0	0	0	0	1	18.91
		07BEA02	26-Aug-22	323	0.60	0	0	1	18.58	0	0	0	0	0	0	0	0	0	0	0	0	1	18.58
		07KIS01	27-Aug-22	620	0.62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC012	27-Aug-22	323	0.22	0	0	0	0	0	0	0	0	0	0	1	50.66	0	0	0	0	1	50.66
		07SC022	26-Aug-22	340	0.36	0	0	0	0	0	0	2	58.82	0	0	0	0	0	0	0	0	2	58.82
	Session Summary			**640.7**	**17.00**	**0**	**0**	**6**	**1.98**	**0**	**0**	**3**	**0.99**	**1**	**0.33**	**3**	**0.99**	**0**	**0**	**0**	**0**	**13**	**4.3**
Section 7	2	0701	03-Sep-22	587	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0702	03-Sep-22	513	0.95	0	0	3	22.16	0	0	0	0	0	0	1	7.39	0	0	0	0	4	29.55
		0703	03-Sep-22	703	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0704	03-Sep-22	638	1.00	0	0	0	0	0	0	0	0	1	5.64	0	0	0	0	0	0	1	5.64
		0705	03-Sep-22	818	1.00	0	0	1	4.4	0	0	0	0	0	0	0	0	0	0	0	0	1	4.4
		0706	03-Sep-22	1142	0.77	0	0	0	0	0	0	0	0	0	0	0	0	1	4.09	0	0	1	4.09
		0707	03-Sep-22	725	0.98	0	0	0	0	0	0	0	0	0	0	1	5.07	0	0	0	0	1	5.07
		0708	03-Sep-22	690	1.24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0709	03-Sep-22	600	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0710	03-Sep-22	765	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0711	03-Sep-22	903	1.39	0	0	0	0	0	0	0	0	0	0	1	2.87	0	0	0	0	1	2.87
		0712	03-Sep-22	1047	1.06	0	0	0	0	0	0	0	0	0	0	13	41.97	0	0	0	0	13	41.97
		0713	03-Sep-22	606	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0714	03-Sep-22	994	1.27	0	0	1	2.84	0	0	0	0	0	0	2	5.68	0	0	0	0	3	8.52
		07BEA01	03-Sep-22	827	0.43	0	0	0	0	0	0	4	40.49	0	0	0	0	0	0	0	0	4	40.49
		07BEA02	03-Sep-22	235	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07KIS01	03-Sep-22	433	0.94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC012	03-Sep-22	333	0.22	0	0	2	98.28	0	0	4	196.56	0	0	0	0	0	0	0	0	6	294.84
	Session Summary			**697.7**	**17.00**	**0**	**0**	**7**	**2.12**	**0**	**0**	**8**	**2.43**	**1**	**0.3**	**18**	**5.46**	**1**	**0.3**	**0**	**0**	**35**	**10.62**
Section 7	3	0701	09-Sep-22	612	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0702	09-Sep-22	558	0.95	0	0	0	0	0	0	0	0	1	6.79	0	0	0	0	0	0	1	6.79
		0703	09-Sep-22	719	0.95	0	0	0	0	0	0	1	5.27	0	0	0	0	0	0	0	0	1	5.27
		0704	10-Sep-22	641	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0705	10-Sep-22	650	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0706	10-Sep-22	850	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0707	10-Sep-22	597	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0708	09-Sep-22	795	1.24	0	0	0	0	0	0	2	7.3	0	0	0	0	2	7.3	0	0	4	14.61
		0709	09-Sep-22	656	1.00	0	0	0	0	0	0	0	0	1	5.49	1	5.49	0	0	0	0	2	10.98
		0710	10-Sep-22	813	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0711	10-Sep-22	834	1.39	0	0	1	3.11	0	0	0	0	0	0	0	0	0	0	0	0	1	3.11
		0712	10-Sep-22	782	1.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0713	10-Sep-22	575	0.98	0	0	0	0	0	0	0	0	0	0	1	6.39	0	0	0	0	1	6.39
		0714	10-Sep-22	885	1.27	0	0	0	0	0	0	0	0	1	3.19	0	0	0	0	0	0	1	3.19
		07BEA01	09-Sep-22	701	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07BEA02	09-Sep-22	369	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07KIS01	10-Sep-22	493	0.12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC012	10-Sep-22	352	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC022	10-Sep-22	408	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**646.8**	**17.00**	**0**	**0**	**1**	**0.33**	**0**	**0**	**3**	**0.98**	**3**	**0.98**	**2**	**0.65**	**2**	**0.65**	**0**	**0**	**11**	**3.6**

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		Trout-perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 7	4	0701	15-Sep-22	566	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0703	16-Sep-22	704	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0704	16-Sep-22	625	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0705	15-Sep-22	587	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0706	15-Sep-22	822	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0707	15-Sep-22	508	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0708	15-Sep-22	747	1.24	0	0	1	3.89	0	0	0	0	0	0	0	0	1	3.89	0	0	2	7.77
		0709	16-Sep-22	596	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0710	16-Sep-22	805	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0711	15-Sep-22	858	1.39	0	0	0	0	0	0	0	0	1	3.02	0	0	0	0	0	0	1	3.02
		0712	15-Sep-22	705	1.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0713	15-Sep-22	572	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0714	15-Sep-22	765	1.27	0	0	0	0	0	0	0	0	1	3.69	1	3.69	0	0	0	0	2	7.38
		07BEA01	15-Sep-22	760	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07BEA02	15-Sep-22	379	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**666.6**	**15.00**	**0**	**0**	**1**	**0.36**	**0**	**0**	**0**	**0**	**2**	**0.72**	**1**	**0.36**	**1**	**0.36**	**0**	**0**	**5**	**1.8**
Section 7	5	0701	24-Sep-22	491	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0702	24-Sep-22	487	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0703	25-Sep-22	640	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0704	25-Sep-22	613	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	5.87	0	0	1	5.87
		0705	25-Sep-22	750	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0706	25-Sep-22	734	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0707	25-Sep-22	514	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0708	24-Sep-22	600	1.24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0709	24-Sep-22	567	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0710	25-Sep-22	716	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0711	25-Sep-22	800	1.39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0712	25-Sep-22	736	1.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0713	25-Sep-22	570	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0714	25-Sep-22	767	1.27	0	0	0	0	0	0	0	0	1	3.68	0	0	0	0	0	0	1	3.68
		07BEA01	25-Sep-22	686	0.33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07BEA02	25-Sep-22	340	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07KIS01	25-Sep-22	278	0.51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC012	25-Sep-22	304	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC022	25-Sep-22	392	0.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**578.2**	**17.00**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0.37**	**0**	**0**	**1**	**0.37**	**0**	**0**	**2**	**0.73**
Section 7	6	0702	03-Oct-22	538	0.95	0	0	2	14.09	0	0	0	0	0	0	0	0	0	0	0	0	2	14.09
		0703	02-Oct-22	694	0.95	0	0	1	5.46	0	0	2	10.92	0	0	0	0	0	0	0	0	3	16.38
		0704	03-Oct-22	619	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0705	02-Oct-22	663	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0706	03-Oct-22	858	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0707	03-Oct-22	520	0.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0708	02-Oct-22	655	1.24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0709	03-Oct-22	669	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0710	03-Oct-22	788	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0711	03-Oct-22	777	1.39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0712	03-Oct-22	705	1.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0713	03-Oct-22	510	0.98	0	0	0	0	0	0	0	0	0	0	1	7.2	0	0	0	0	1	7.2
		0714	03-Oct-22	742	1.27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07BEA01	02-Oct-22	531	0.38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07BEA02	03-Oct-22	246	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07KIS01	03-Oct-22	313	0.49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		07SC022	02-Oct-22	403	0.36	0	0	0	0	0	0	2	49.63	0	0	0	0	0	0	0	0	2	49.63
	Session Summary			**601.8**	**16.00**	**0**	**0**	**3**	**1.12**	**0**	**0**	**4**	**1.5**	**0**	**0**	**1**	**0.37**	**0**	**0**	**0**	**0**	**8**	**2.99**
Section Total All Samples				**68237**	**98.96**	**0**	**0**	**18**	**0**	**0**	**0**	**18**	**0**	**8**	**0**	**25**	**0**	**5**	**0**	**0**	**0**	**74**	**0**
Section Average All Samples				**638**	**0.92**	**0**	**0**	**0**	**1.03**	**0**	**0**	**0**	**1.03**	**0**	**0.46**	**0**	**1.43**	**0**	**0.29**	**0**	**0**	**1**	**4.22**
Section Standard Error of Mean						**0**	**0**	**0.05**	**0.98**	**0**	**0**	**0.06**	**1.99**	**0.03**	**0.11**	**0.12**	**0.63**	**0.02**	**0.1**	**0**	**0**	**0.15**	**2.91**

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		Trout-perch		All Species	
						No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE	No.	CPUE
Section 9	1	0901	23-Aug-22	834	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3.92	1	3.92
		0902	23-Aug-22	751	1.00	0	0	0	0	0	0	2	9.59	0	0	0	0	0	0	0	0	2	9.59
		0903	23-Aug-22	776	1.10	0	0	0	0	0	0	2	8.43	0	0	0	0	0	0	0	0	2	8.43
		0904	23-Aug-22	836	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0905	23-Aug-22	871	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0906	23-Aug-22	884	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	4.07	0	0	1	4.07
		0907	23-Aug-22	835	1.20	0	0	0	0	0	0	0	0	0	0	1	3.59	0	0	0	0	1	3.59
		0908	23-Aug-22	623	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0909	23-Aug-22	521	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0910	23-Aug-22	1088	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0911	24-Aug-22	633	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0912	24-Aug-22	726	1.10	0	0	2	9.02	0	0	0	0	0	0	1	4.51	0	0	0	0	3	13.52
		0913	24-Aug-22	562	0.90	0	0	8	56.94	0	0	0	0	0	0	0	0	2	14.23	0	0	10	71.17
		0914	24-Aug-22	552	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		09SC061	24-Aug-22	714	0.68	0	0	1	7.47	0	0	0	0	0	0	0	0	0	0	0	0	1	7.47
	Session Summary			**747.1**	**15.00**	**0**	**0**	**11**	**3.53**	**0**	**0**	**4**	**1.28**	**0**	**0**	**2**	**0.64**	**3**	**0.96**	**1**	**0.32**	**21**	**6.75**
Section 9	2	0901	01-Sep-22	656	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0902	01-Sep-22	864	1.00	1	4.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.17
		0903	01-Sep-22	770	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0904	01-Sep-22	907	1.10	0	0	3	10.82	0	0	1	3.61	0	0	4	14.43	1	3.61	1	3.61	10	36.08
		0905	01-Sep-22	958	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0906	01-Sep-22	1164	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0907	02-Sep-22	1192	1.20	0	0	2	5.03	0	0	0	0	0	0	0	0	0	0	2	5.03	4	10.07
		0908	02-Sep-22	905	1.10	0	0	0	0	0	0	0	0	0	0	2	7.23	0	0	0	0	2	7.23
		0909	02-Sep-22	874	0.95	0	0	0	0	0	0	0	0	0	0	1	4.34	0	0	0	0	1	4.34
		0910	01-Sep-22	1514	1.10	0	0	1	2.16	0	0	0	0	0	0	0	0	1	2.16	2	4.32	4	8.65
		0911	02-Sep-22	821	1.00	1	4.38	3	13.15	0	0	0	0	1	4.38	1	4.38	4	17.54	4	17.54	14	61.39
		0912	02-Sep-22	974	1.10	0	0	0	0	0	0	0	0	1	3.36	1	3.36	0	0	0	0	2	6.72
		0913	02-Sep-22	727	0.90	0	0	0	0	0	0	0	0	1	5.5	0	0	0	0	0	0	1	5.5
		0914	02-Sep-22	198	0.95	0	0	0	0	0	0	1	19.14	0	0	1	19.14	0	0	2	38.28	4	76.56
		09SC053	01-Sep-22	415	0.26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		09SC061	02-Sep-22	894	0.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**864.6**	**16.00**	**2**	**0.52**	**9**	**2.34**	**0**	**0**	**2**	**0.52**	**3**	**0.78**	**10**	**2.6**	**6**	**1.56**	**11**	**2.86**	**43**	**11.19**
Section 9	3	0901	08-Sep-22	744	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0902	08-Sep-22	674	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0903	08-Sep-22	626	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0904	08-Sep-22	628	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0905	08-Sep-22	700	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0906	09-Sep-22	869	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0907	09-Sep-22	902	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0908	09-Sep-22	667	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0909	09-Sep-22	588	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0910	09-Sep-22	903	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0911	09-Sep-22	526	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0913	09-Sep-22	584	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0914	09-Sep-22	491	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		09SC053	08-Sep-22	515	0.26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	26.89	1	26.89
		09SC061	09-Sep-22	582	0.68	0	0	1	9.16	0	0	0	0	0	0	0	0	0	0	0	0	1	9.16
	Session Summary			**666.6**	**15.00**	**0**	**0**	**1**	**0.36**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0.36**	**2**	**0.72**

Table E4 Concluded.

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	Trout-perch No.	Trout-perch CPUE	All Species No.	All Species CPUE
						Number Caught (CPUE = no. fish/km/h)																	
Section 9	4	0901	14-Sep-22	662	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0902	14-Sep-22	752	1.00	1	4.79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4.79
		0903	14-Sep-22	719	1.10	0	0	0	0	0	0	0	0	0	0	1	4.55	0	0	0	0	1	4.55
		0904	14-Sep-22	804	1.10	0	0	0	0	0	0	0	0	0	0	0	0	2	8.14	0	0	2	8.14
		0905	14-Sep-22	815	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0906	14-Sep-22	827	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0907	14-Sep-22	844	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0908	14-Sep-22	658	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0909	14-Sep-22	601	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0910	14-Sep-22	985	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0911	14-Sep-22	576	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0912	14-Sep-22	693	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0914	14-Sep-22	521	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		09SC061	14-Sep-22	652	0.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**722.1**	**14.00**	**1**	***0.36***	**0**	***0***	**0**	***0***	**0**	***0***	**0**	***0***	**1**	***0.36***	**2**	***0.71***	**0**	***0***	**4**	***1.42***
Section 9	5	0901	28-Sep-22	681	1.10	0	0	1	4.81	0	0	0	0	0	0	0	0	1	4.81	0	0	2	9.61
		0902	28-Sep-22	580	1.00	0	0	3	18.62	0	0	0	0	0	0	0	0	0	0	0	0	3	18.62
		0903	28-Sep-22	713	1.10	0	0	1	4.59	0	0	0	0	0	0	0	0	0	0	0	0	1	4.59
		0904	28-Sep-22	608	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0905	28-Sep-22	711	1.10	0	0	0	0	0	0	0	0	1	4.6	0	0	0	0	0	0	1	4.6
		0906	28-Sep-22	922	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0907	28-Sep-22	805	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0908	28-Sep-22	606	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0909	28-Sep-22	591	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0911	28-Sep-22	518	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0912	28-Sep-22	494	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0913	28-Sep-22	503	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0914	28-Sep-22	480	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		09SC061	28-Sep-22	546	0.68	0	0	1	9.77	0	0	0	0	0	0	0	0	0	0	0	0	1	9.77
	Session Summary			**625.6**	**14.00**	**0**	***0***	**6**	***2.47***	**0**	***0***	**0**	***0***	**1**	***0.41***	**0**	***0***	**1**	***0.41***	**0**	***0***	**8**	***3.29***
Section 9	6	0901	05-Oct-22	759	1.10	0	0	0	0	0	0	0	0	0	0	0	0	1	4.31	0	0	1	4.31
		0902	05-Oct-22	647	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0903	05-Oct-22	704	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0904	05-Oct-22	620	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0905	05-Oct-22	695	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0906	05-Oct-22	728	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0907	05-Oct-22	789	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0908	05-Oct-22	608	1.10	0	0	0	0	0	0	0	0	0	0	1	5.38	0	0	0	0	1	5.38
		0909	05-Oct-22	617	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0910	05-Oct-22	1020	1.10	0	0	0	0	0	0	1	3.21	0	0	0	0	0	0	0	0	1	3.21
		0911	05-Oct-22	635	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0912	05-Oct-22	444	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0913	05-Oct-22	530	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0914	05-Oct-22	505	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		09SC053	05-Oct-22	248	0.20	0	0	0	0	0	0	1	72.58	0	0	0	0	0	0	0	0	1	72.58
		09SC061	05-Oct-22	586	0.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Session Summary			**633.4**	**15.00**	**0**	***0***	**0**	***0***	**0**	***0***	**2**	***0.76***	**0**	***0***	**1**	***0.38***	**1**	***0.38***	**0**	***0***	**4**	***1.52***
Section Total All Samples				**64040**	**88.84**	**3**	***0***	**27**	***0***	**0**	***0***	**8**	***0***	**4**	***0***	**14**	***0***	**13**	***0***	**13**	***0***	**82**	***0***
Section Average All Samples				**712**	**0.99**	**0**	***0.17***	**0**	***1.54***	**0**	***0***	**0**	***0.46***	**0**	***0.23***	**0**	***0.8***	**0**	***0.74***	**0**	***0.74***	**1**	***4.67***
Section Standard Error of Mean						**0.02**	***0.08***	**0.11**	***0.71***	**0**	***0***	**0.04**	***0.84***	**0.02**	***0.1***	**0.06**	***0.3***	**0.06**	***0.28***	**0.06**	***0.55***	**0.23**	***1.6***
All Sections Total All Samples				**375259**	**561.73**	***3***	***0***	***60***	***0***	***1***	***0***	***109***	***0***	***71***	***0***	***58***	***0***	***37***	***0***	***14***	***0***	***353***	***0.01***
All Sections Average All Samples						***0***	***0.03***	***0***	***0.58***	***0***	***0.01***	***0***	***1.05***	***0***	***0.69***	***0***	***0.56***	***0***	***0.36***	***0***	***0.14***	***1***	***3.41***
All Sections Standard Error of Mean						***0***	***0.01***	***0.02***	***0.22***	***0***	***0.02***	***0.04***	***0.52***	***0.02***	***0.25***	***0.03***	***0.15***	***0.02***	***0.4***	***0.01***	***0.09***	***0.06***	***0.87***

Table E5 Summary of the number (N) of fish captured and recaptured in sampled sections of the Peace River, 17 August to 05 October 2022.

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	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 1 subtotal		1	1	0	0
	Section 3	1	1	0	-	1
		2	0	0	0	0
		3	1	1	0	0
		4	1	1	0	0
		5	1	1	0	0
		6	1	1	0	0
	Section 3 subtotal		5	4	0	1
	Section 5	1	2	1	-	1
		2	3	3	0	0
		3	1	1	0	0
		4	1	0	0	0
		5	0	0	0	0
		6	2	1	0	0
	Section 5 subtotal		9	6	0	1
	Section 6	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 6 subtotal		0	0	0	0
	Section 7	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 7 subtotal		1	1	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
Arctic Grayling Total			16	12	0	2

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	3	3	-	0
		2	7	6	0	1
		3	11	9	1	1
		4	3	2	0	1
		5	16	13	2	1
		6	15	10	1	4
	Section 1 subtotal		55	43	4	8
	Section 3	1	15	13	-	2
		2	22	21	0	1
		3	26	18	3	5
		4	16	12	3	1
		5	18	12	5	1
		6	17	12	4	1
	Section 3 subtotal		114	88	15	11
	Section 5	1	8	5	-	2
		2	11	9	0	2
		3	5	3	2	0
		4	3	1	2	0
		5	6	4	1	1
		6	8	7	1	0
	Section 5 subtotal		41	29	7	5
	Section 6	1	8	8	-	0
		2	2	1	0	1
		3	2	0	1	1
		4	1	1	0	0
		5	7	7	0	0
		6	11	9	1	1
	Section 6 subtotal		31	26	2	3
	Section 7	1	3	3	-	0
		2	7	5	0	2
		3	5	2	1	0
		4	3	2	1	0
		5	4	3	1	0
		6	4	3	1	0
	Section 7 subtotal		26	18	4	2
	Section 9	1	1	1	-	0
		2	2	2	0	0
		3	1	1	0	0
		4	1	1	0	0
		5	3	3	0	0
		6	1	1	0	0
	Section 9 subtotal		9	9	0	0
Bull Trout Total			276	213	32	29

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	6	6	-	0
		2	1	0	0	1
		3	2	2	0	0
		4	9	8	0	1
		5	7	7	0	0
		6	13	0	0	1
	Section 1 subtotal		38	23	0	3
	Section 3	1	110	93	-	7
		2	35	30	1	2
		3	44	41	2	0
		4	35	31	0	4
		5	24	21	0	2
		6	15	2	0	3
	Section 3 subtotal		263	218	4	18
	Section 5	1	18	16	-	1
		2	21	15	0	2
		3	32	25	2	4
		4	31	24	2	3
		5	44	38	0	5
		6	47	1	1	9
	Section 5 subtotal		193	119	5	24
	Section 6	1	31	22	-	7
		2	47	36	1	10
		3	28	22	2	2
		4	32	25	0	5
		5	35	27	3	5
		6	40	0	1	4
	Section 6 subtotal		213	132	7	33
	Section 7	1	23	18	-	4
		2	28	21	0	6
		3	20	13	1	6
		4	12	8	0	4
		5	14	12	0	2
		6	13	0	2	2
	Section 7 subtotal		110	72	3	24
	Section 9	1	4	3	-	0
		2	8	5	0	0
		3	6	6	0	0
		4	3	2	0	0
		5	0	0	0	0
		6	0	0	0	0
	Section 9 subtotal		21	16	0	0
Largescale Sucker Total			838	580	19	102

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	13	9	-	4
		2	10	10	0	0
		3	17	17	0	0
		4	34	29	0	4
		5	14	11	0	0
		6	4	0	0	0
	Section 1 subtotal		92	76	0	8
	Section 3	1	139	111	-	15
		2	47	35	1	6
		3	38	29	0	8
		4	46	35	1	4
		5	21	13	2	5
		6	24	3	1	0
	Section 3 subtotal		315	226	5	38
	Section 5	1	273	207	-	44
		2	267	210	11	32
		3	265	209	14	38
		4	261	199	17	34
		5	175	138	10	21
		6	243	7	17	23
	Section 5 subtotal		1484	970	70	192
	Section 6	1	301	240	-	45
		2	238	191	7	35
		3	197	153	11	29
		4	200	150	16	32
		5	164	129	7	23
		6	195	4	15	23
	Section 6 subtotal		1295	867	58	187
	Section 7	1	175	146	-	19
		2	130	93	3	21
		3	117	91	7	10
		4	100	72	4	17
		5	110	84	5	14
		6	160	0	4	15
	Section 7 subtotal		792	486	23	96
	Section 9	1	59	44	-	6
		2	112	59	1	8
		3	66	47	2	7
		4	65	48	2	4
		5	42	30	2	3
		6	60	0	2	8
	Section 9 subtotal		404	228	9	36
Longnose Sucker Total			4382	2853	165	557

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	128	100	-	27
		2	208	172	4	32
		3	174	137	8	29
		4	252	211	10	30
		5	309	257	17	34
		6	302	2	14	25
	Section 1 subtotal		1373	879	53	177
	Section 3	1	101	76	-	21
		2	193	143	4	27
		3	140	99	9	24
		4	171	126	9	27
		5	291	217	22	38
		6	253	1	10	16
	Section 3 subtotal		1149	662	54	153
	Section 5	1	113	93	-	17
		2	162	134	4	18
		3	92	76	7	8
		4	104	84	5	10
		5	135	107	5	10
		6	168	3	7	11
	Section 5 subtotal		774	497	29	74
	Section 6	1	61	49	-	10
		2	39	21	0	15
		3	51	38	4	7
		4	87	53	5	24
		5	83	66	6	8
		6	124	0	5	13
	Section 6 subtotal		445	227	20	77
	Section 7	1	59	44	-	11
		2	68	44	2	11
		3	43	27	3	8
		4	39	30	0	3
		5	62	51	2	7
		6	80	1	6	7
	Section 7 subtotal		351	197	13	47
	Section 9	1	13	9	-	2
		2	24	17	1	3
		3	24	20	0	3
		4	25	17	2	2
		5	20	18	1	1
		6	19	0	2	1
	Section 9 subtotal		125	81	6	12
Mountain Whitefish Total			4217	2543	175	540

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	7	7	-	0
		2	14	13	0	1
		3	9	7	0	2
		4	2	2	0	0
		5	10	10	0	0
		6	9	8	1	0
	Section 1 subtotal		51	47	1	3
	Section 3	1	7	5	-	2
		2	12	9	2	1
		3	5	2	1	2
		4	1	0	1	0
		5	6	5	1	0
		6	1	1	0	0
	Section 3 subtotal		32	22	5	5
	Section 5	1	1	1	-	0
		2	1	0	0	1
		3	0	0	0	0
		4	0	0	0	0
		5	1	0	1	0
		6	2	1	0	1
	Section 5 subtotal		5	2	1	2
	Section 6	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 6 subtotal		0	0	0	0
	Section 7	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 7 subtotal		0	0	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			88	71	7	10

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	0	0	0	0
		3	0	0	0	0
		4	2	2	0	0
		5	4	4	0	0
		6	1	0	0	0
	Section 1 subtotal		7	6	0	0
	Section 3	1	0	0	-	0
		2	0	0	0	0
		3	0	0	0	0
		4	1	1	0	0
		5	0	0	0	0
		6	1	0	0	0
	Section 3 subtotal		2	1	0	0
	Section 5	1	12	9	-	1
		2	4	3	0	0
		3	13	12	0	1
		4	18	16	0	2
		5	37	33	0	4
		6	26	2	3	0
	Section 5 subtotal		110	75	3	8
	Section 6	1	4	4	-	0
		2	0	0	0	0
		3	4	4	0	0
		4	0	0	0	0
		5	8	6	0	1
		6	17	0	1	1
	Section 6 subtotal		33	14	1	2
	Section 7	1	0	0	-	0
		2	1	1	0	0
		3	0	0	0	0
		4	4	3	0	0
		5	3	3	0	0
		6	3	0	0	0
	Section 7 subtotal		11	7	0	0
	Section 9	1	2	2	-	0
		2	7	5	0	0
		3	9	6	0	0
		4	3	3	0	0
		5	1	0	0	1
		6	5	0	0	0
	Section 9 subtotal		27	16	0	1
White Sucker Total			190	119	4	11

APPENDIX F

Life History Information

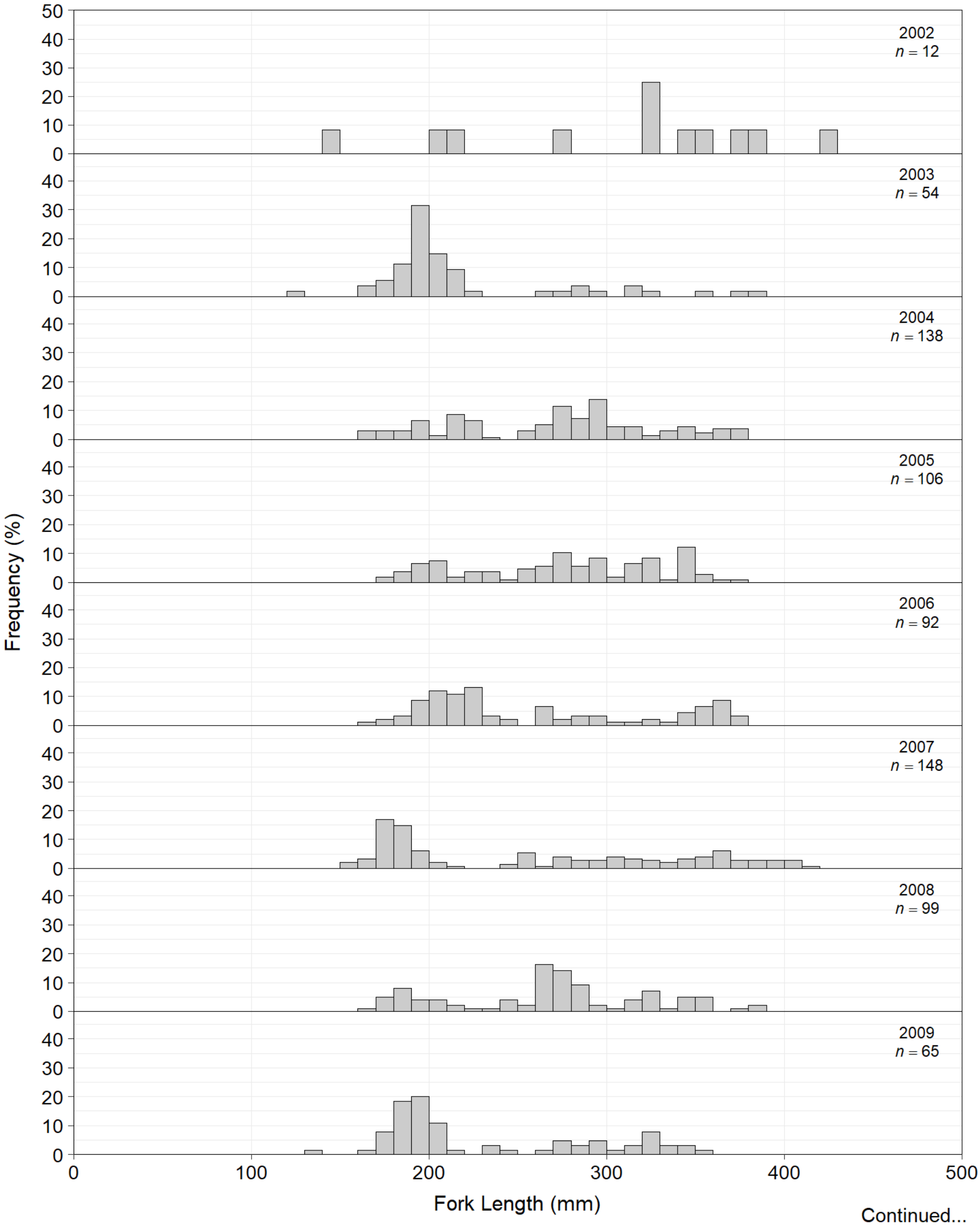

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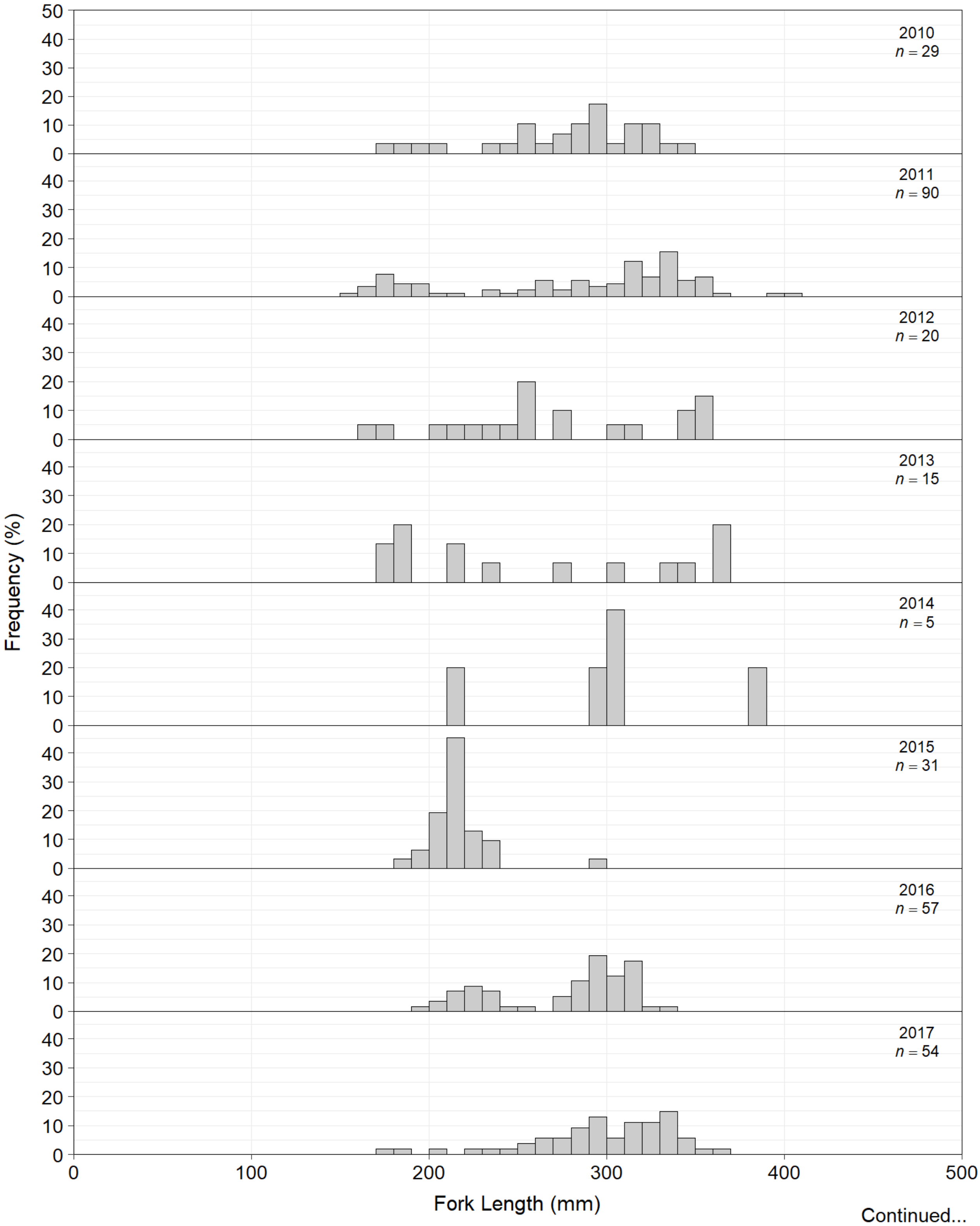
Figure F1: Length-frequency distributions by year for Arctic Grayling captured by boat electroshocking in Sections 1 and 3 of the Peace River, 2002 to 2022.



Continued...

Figure F1: Continued.

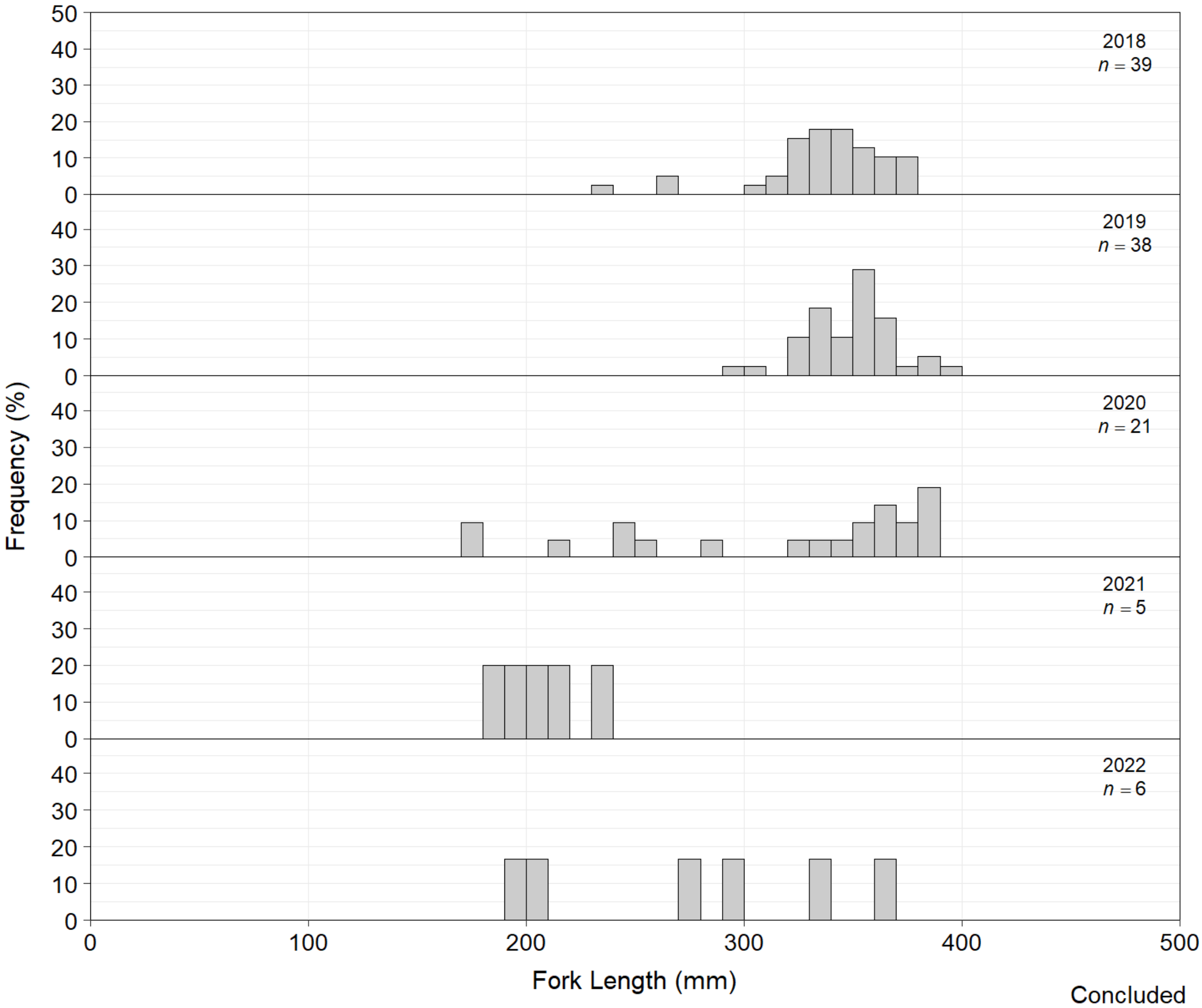


Figure F1: Concluded.

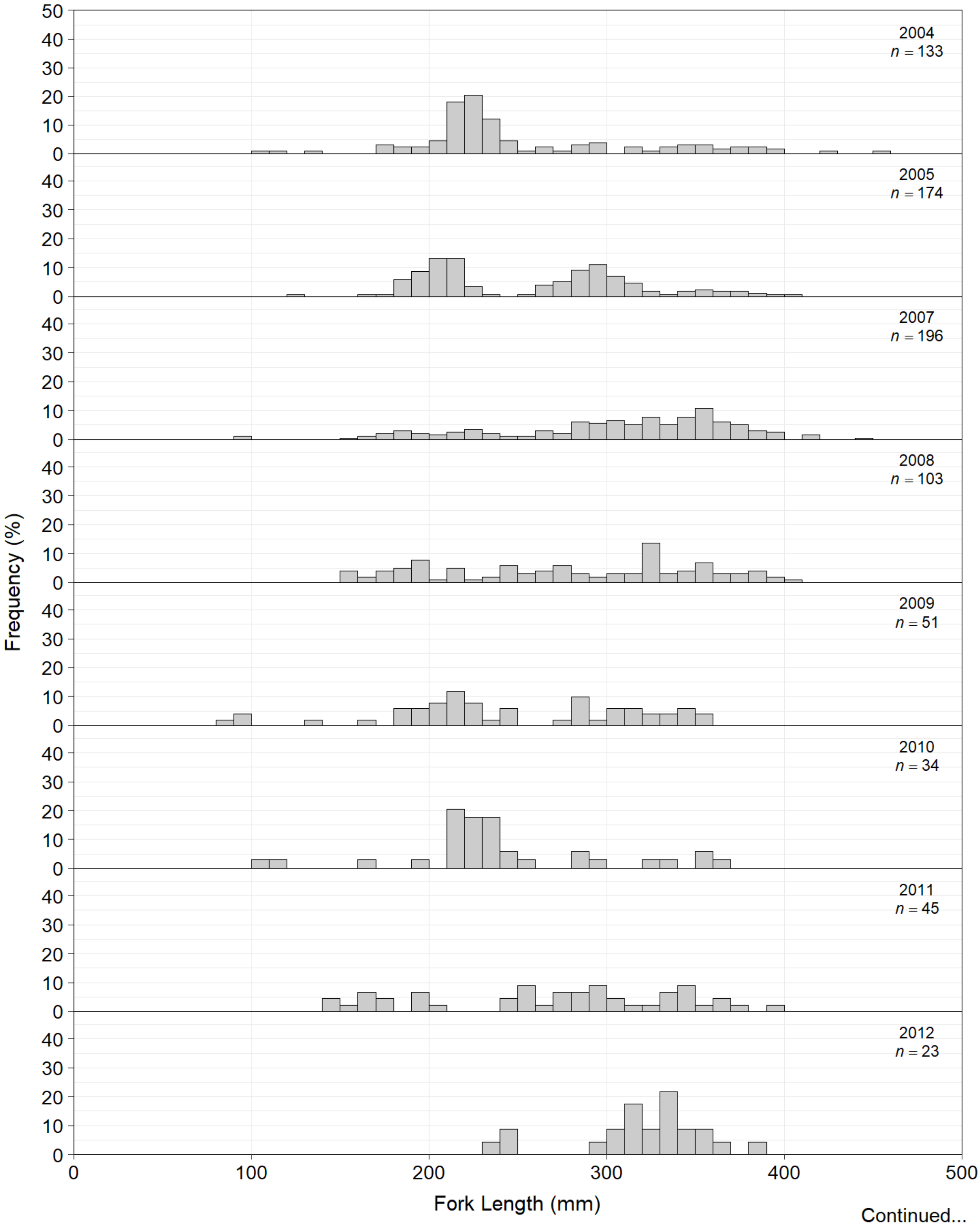


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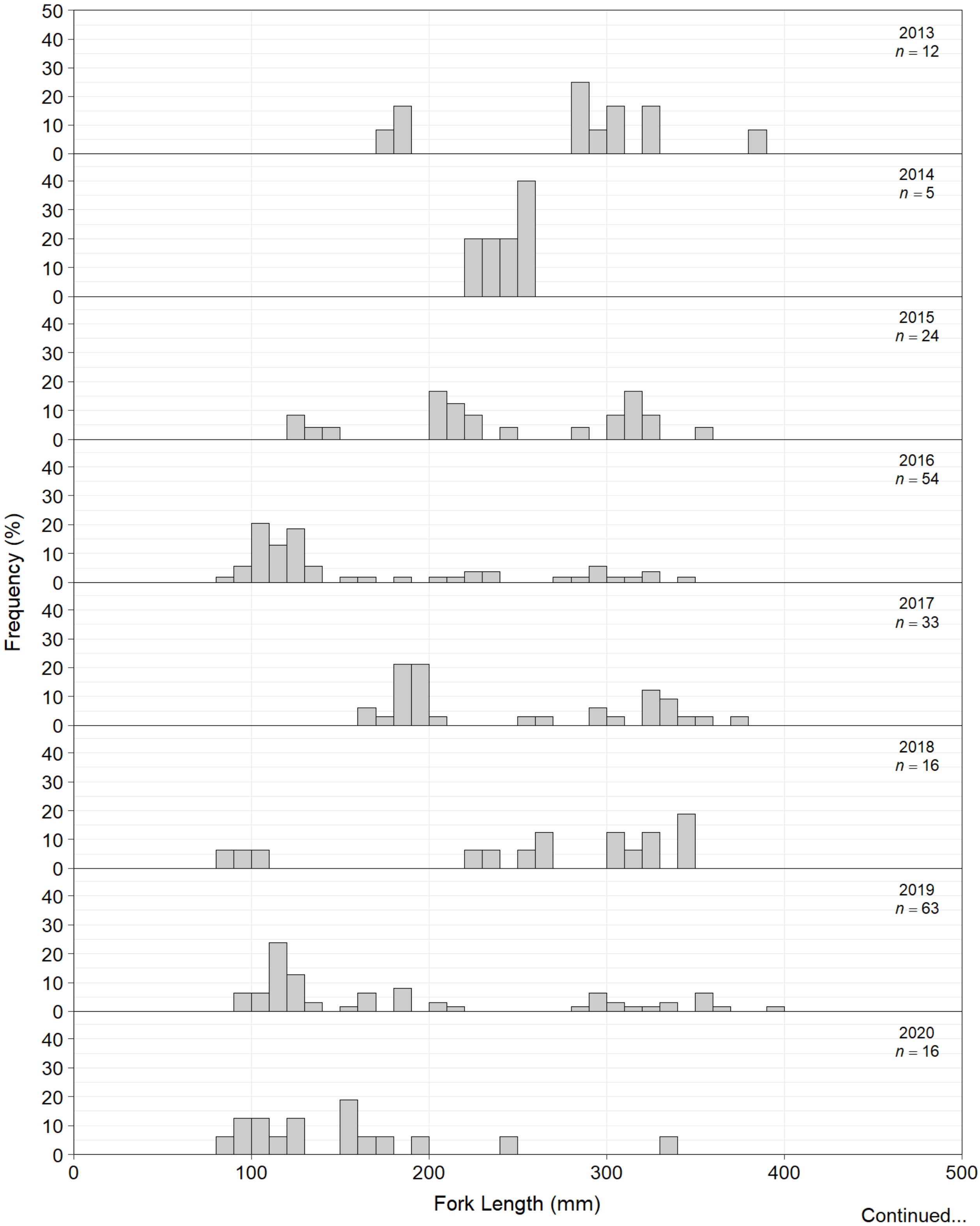
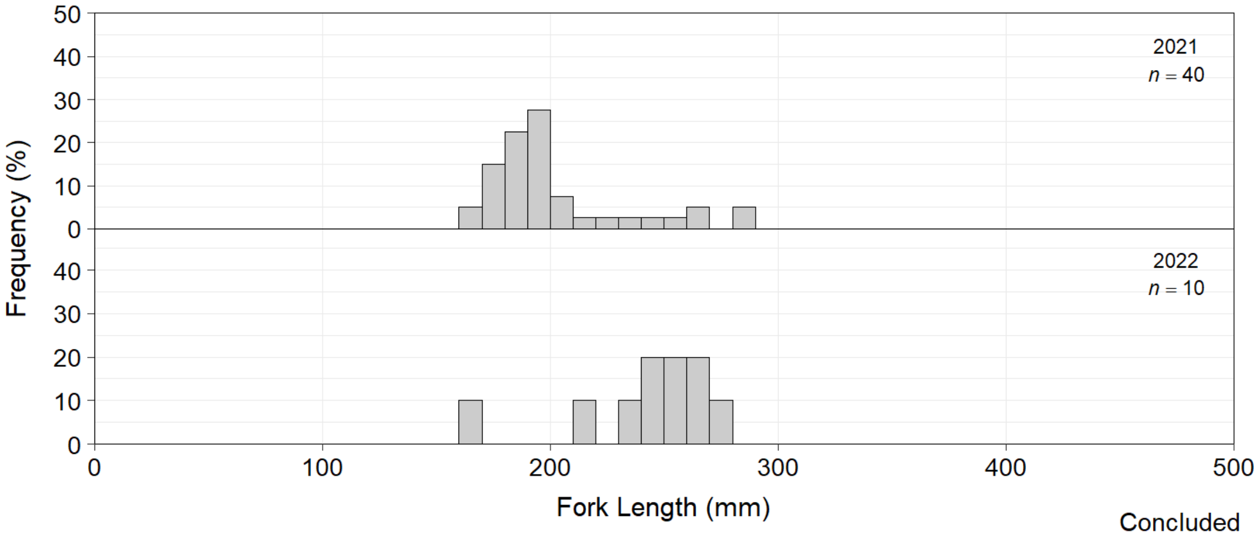
Figure F2: Length-frequency distributions by year for Arctic Grayling captured by boat electroshocking in Sections 5, 6, 7, and 9 of the Peace River, 2002 to 2022.



Continued...

Figure F2: Continued.



Concluded

Figure F2: Concluded.

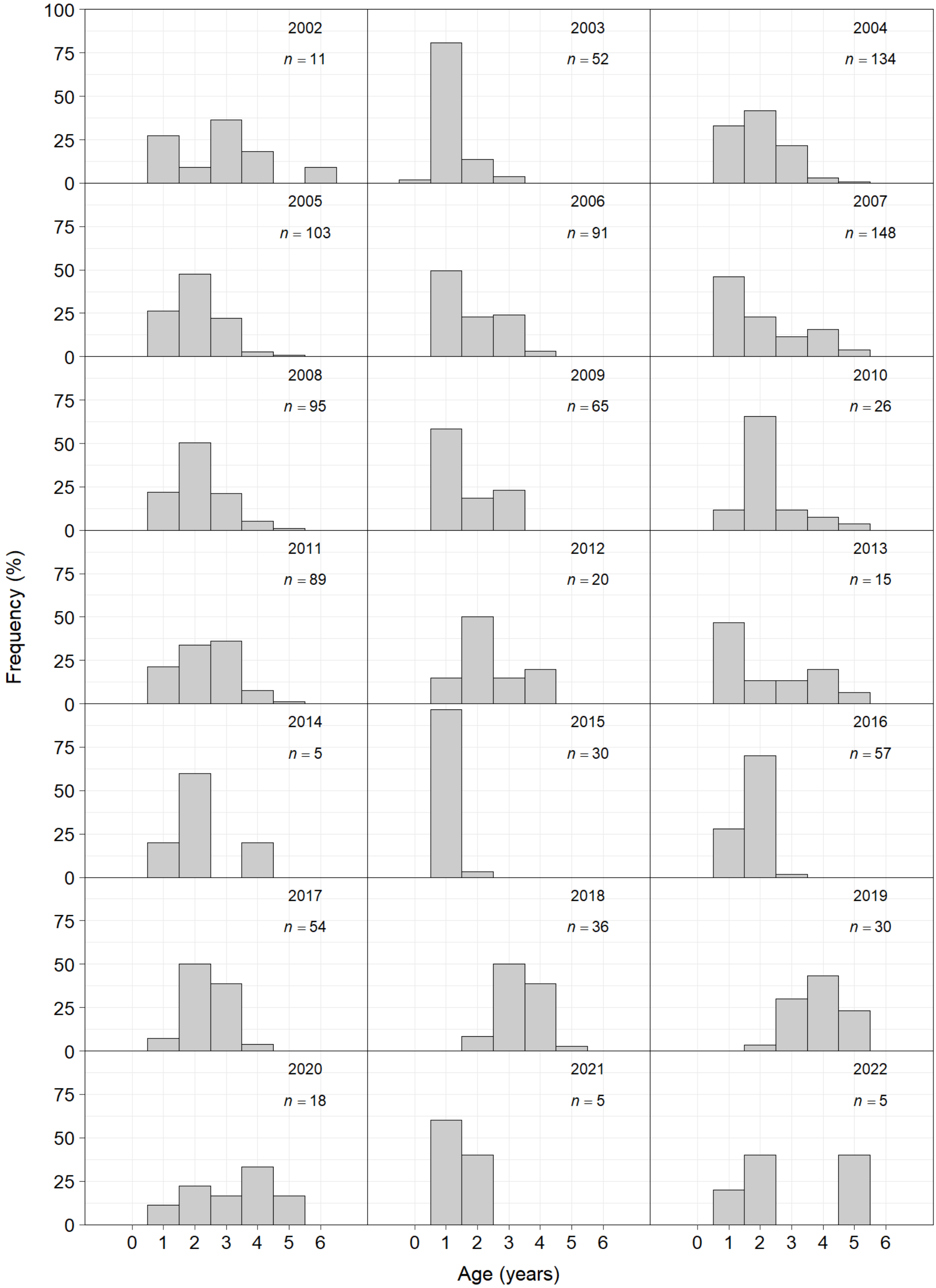


Figure F3: Age-frequency distributions by year for Arctic Grayling captured by boat electroshocking in Sections 1 and 3 of the Peace River, 2002 to 2022.

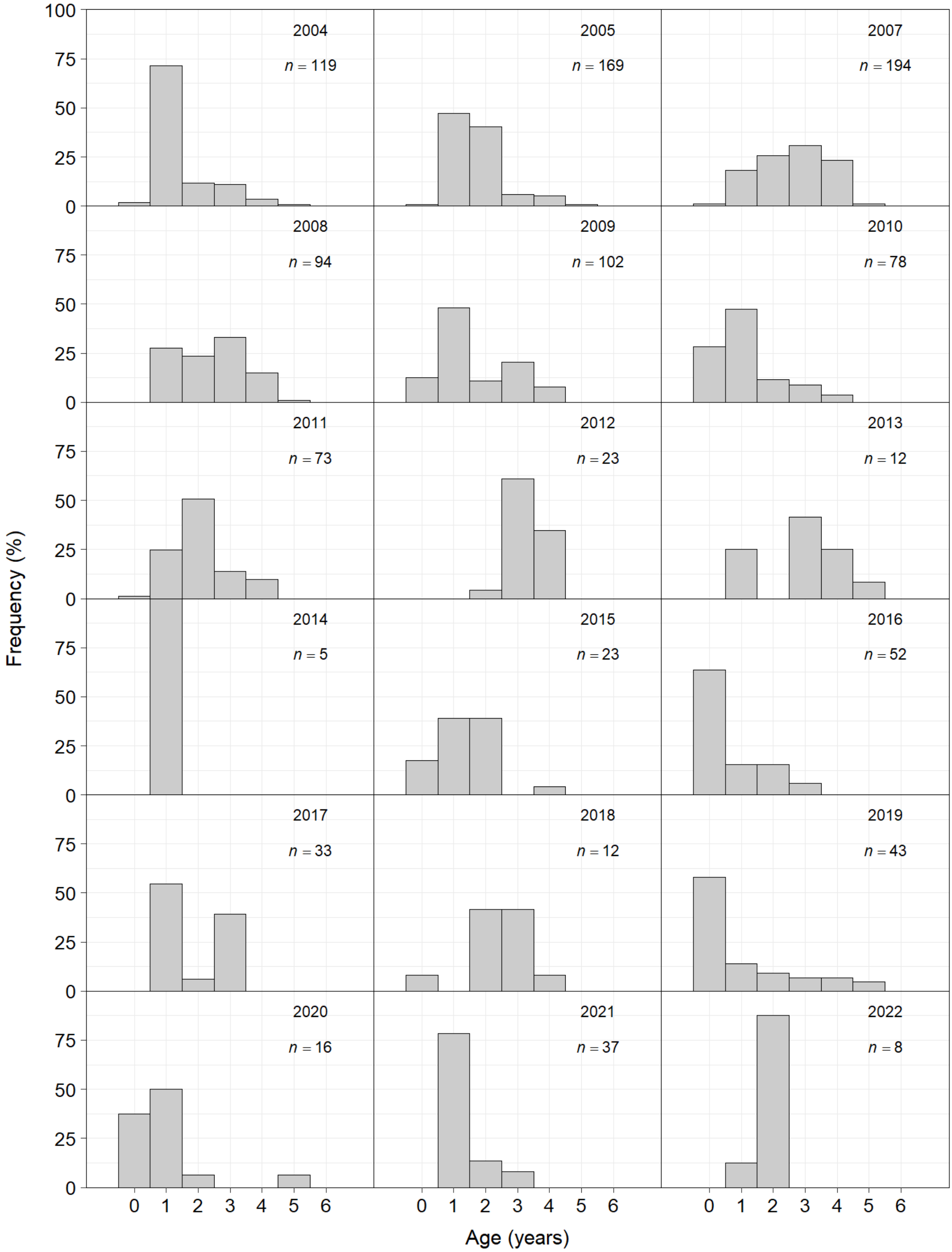


Figure F4: Age-frequency distributions by year for Arctic Grayling captured by boat electroshocking in Sections 5, 6, 7, and 9 of the Peace River, 2002 to 2022.

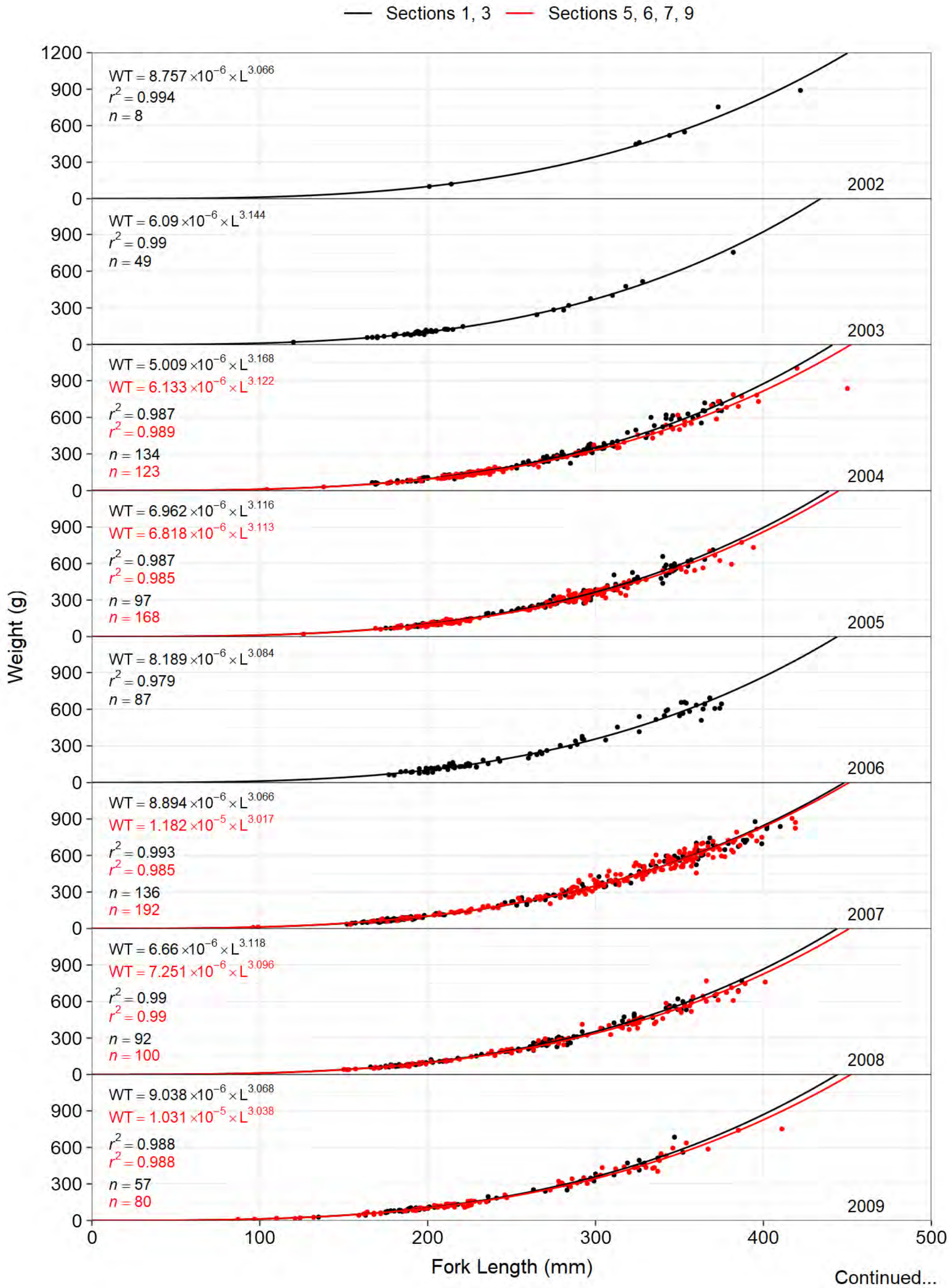


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Figure F5: Length-weight regressions for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).

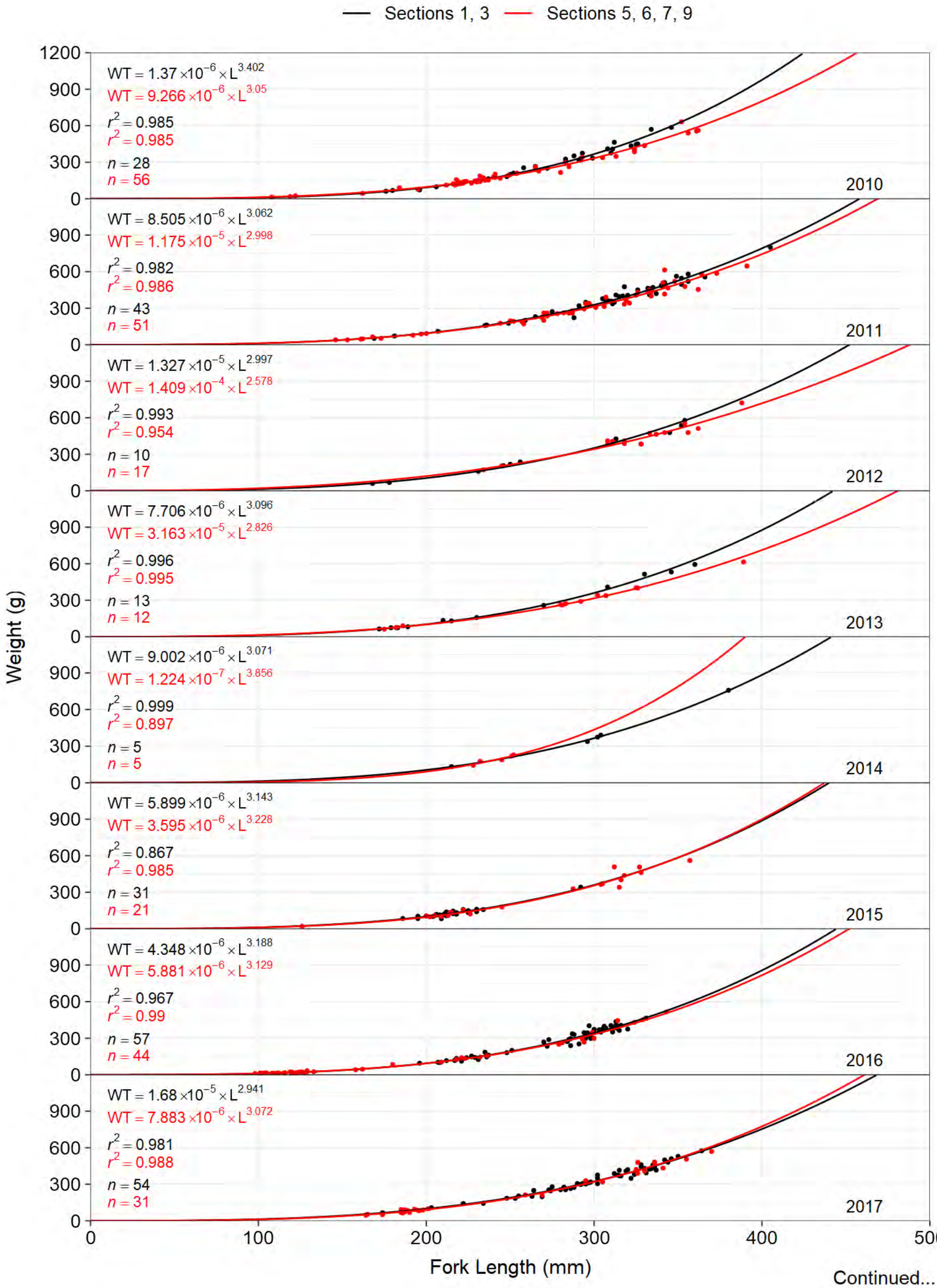

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Figure F5: Continued.

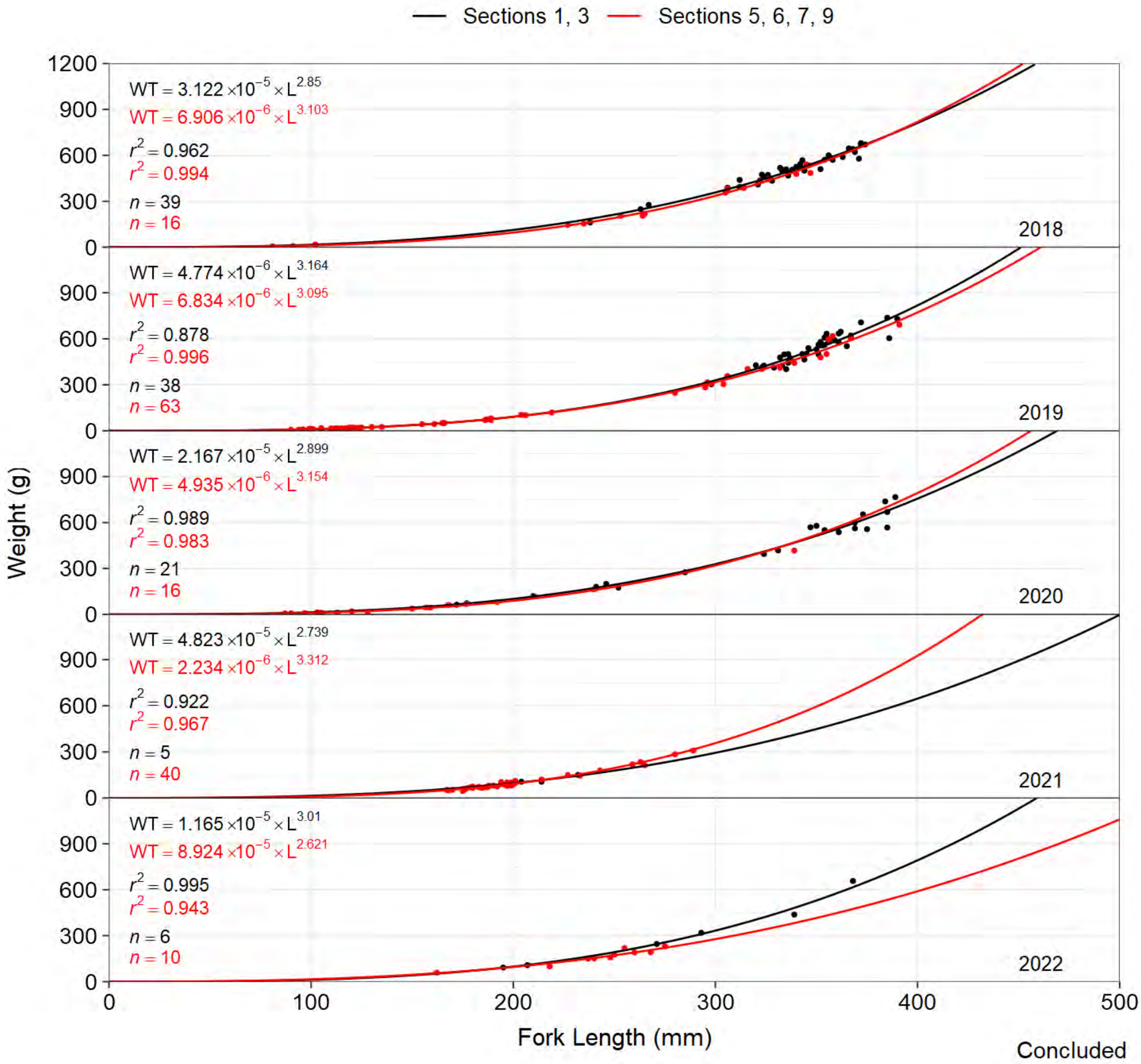

Figure F5: Concluded.

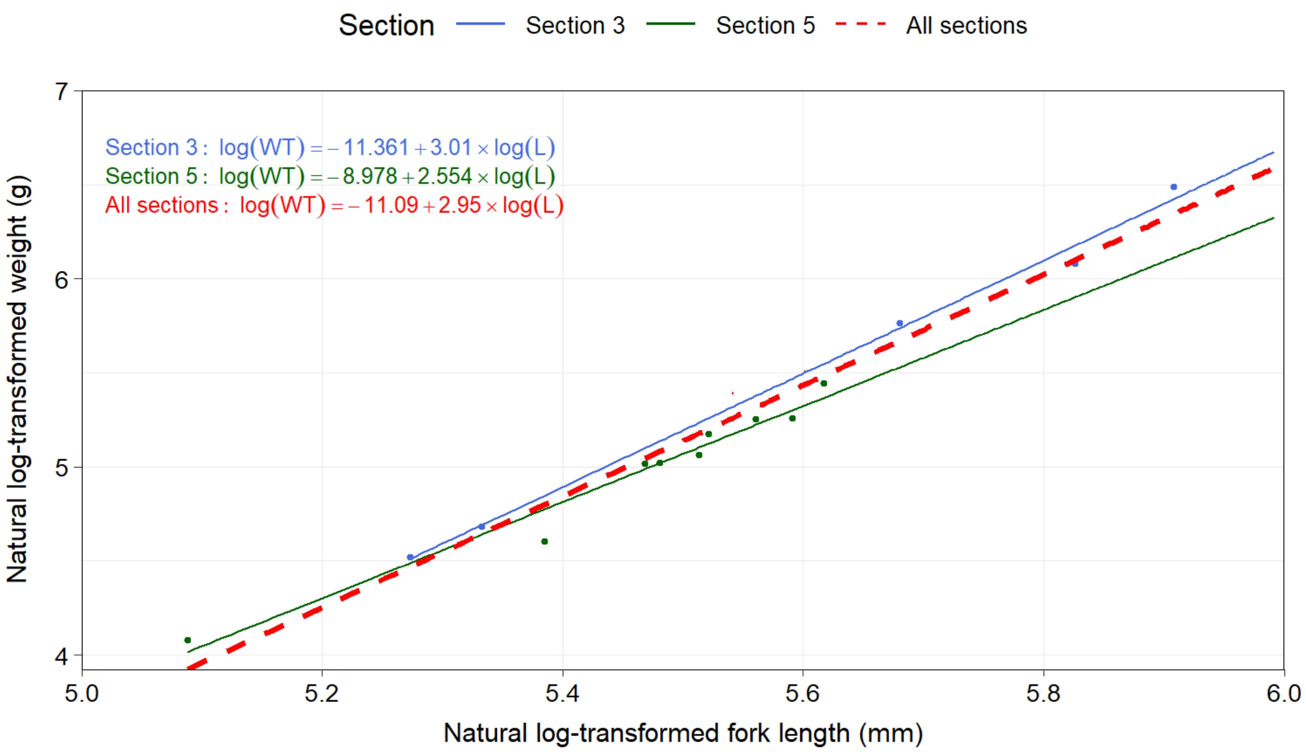

Figure F6: Log-log relationship between weight and fork length for Arctic Grayling captured by boat electroshocking in sampled sections of the Peace River, 2022.

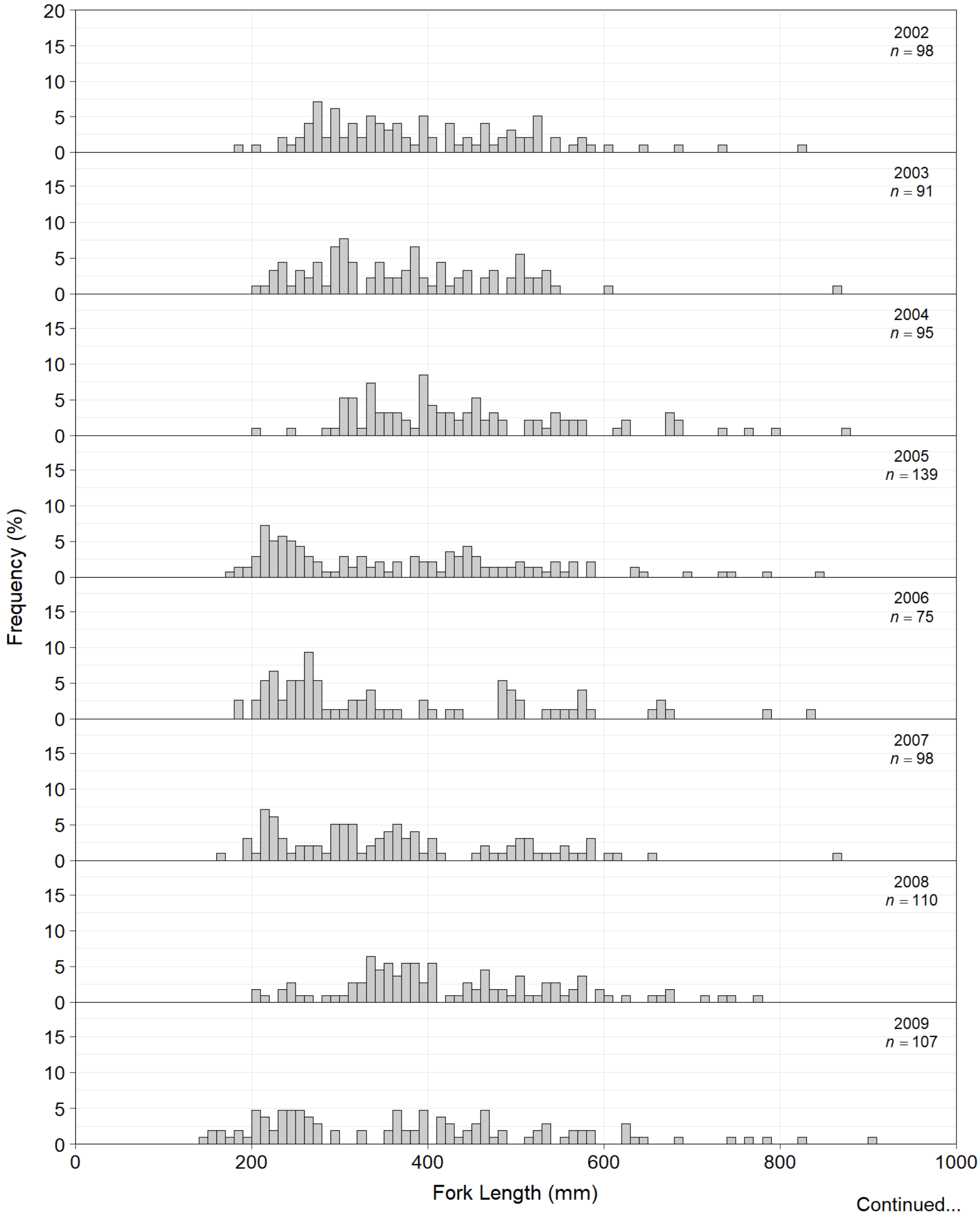

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Figure F7: Length-frequency distributions by year for Bull Trout captured by boat electroshocking in Sections 1 and 3 of the Peace River, 2002 to 2022.

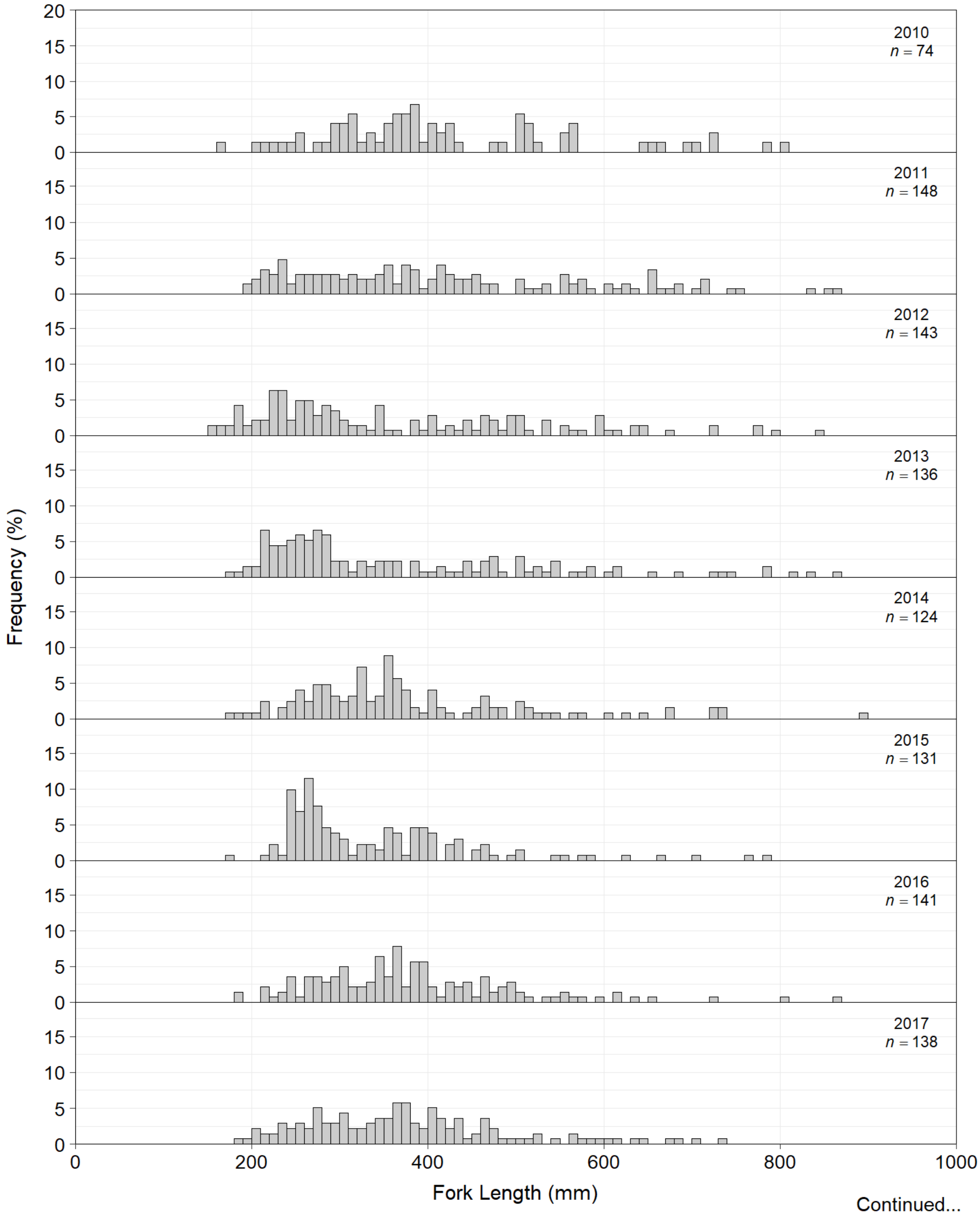

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Figure F7: Continued.

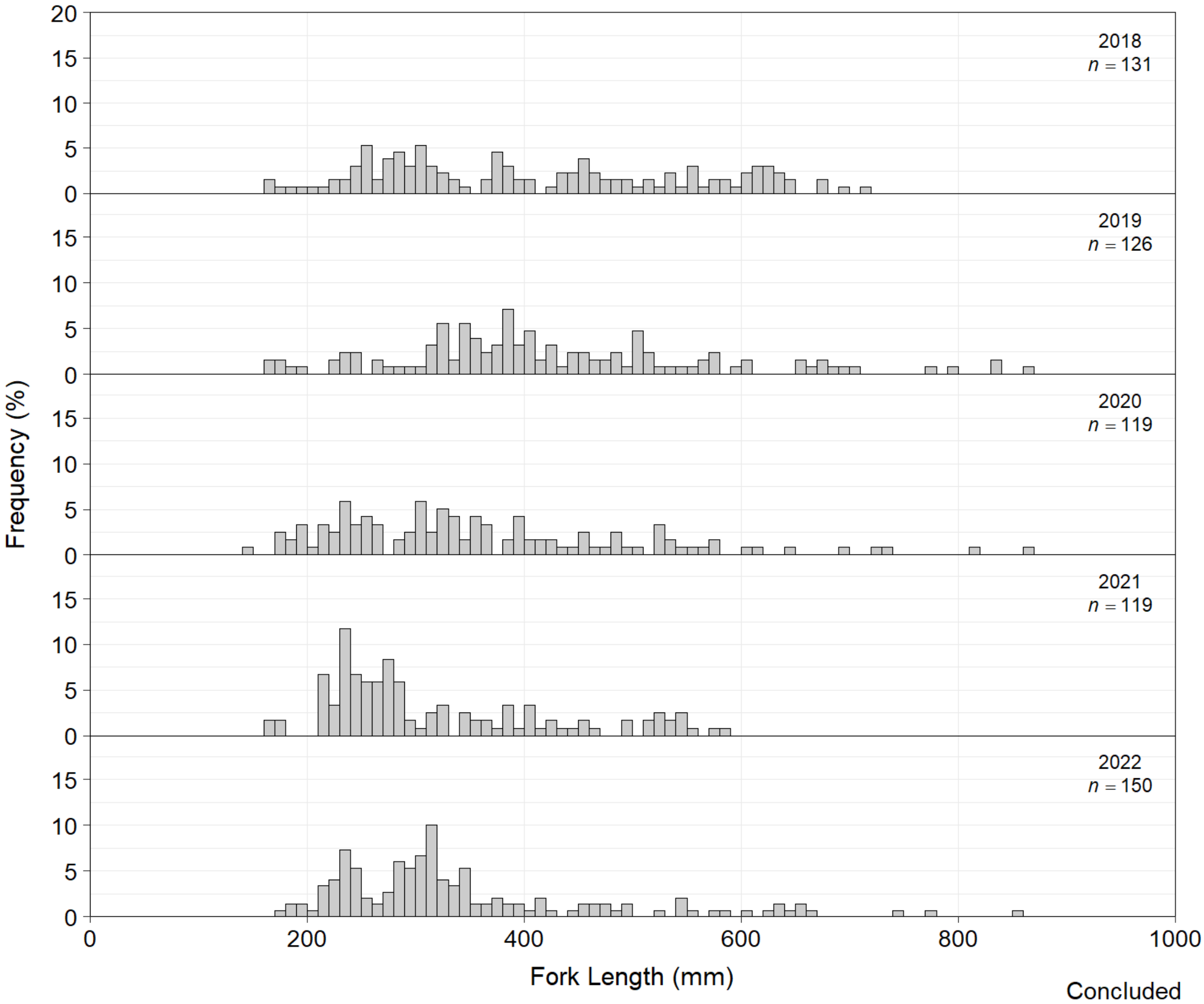

Figure F7: Concluded.

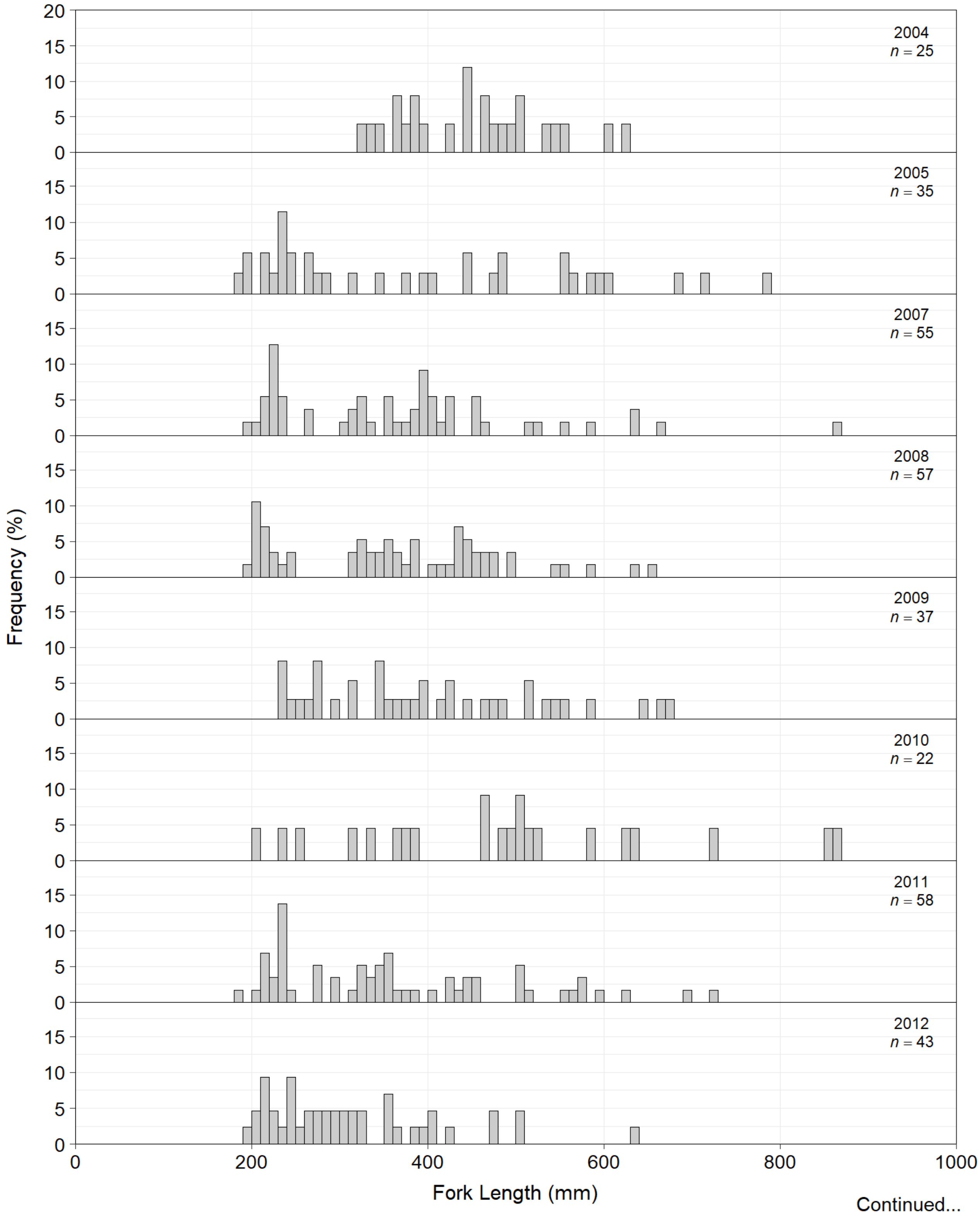

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Figure F8: Length-frequency distributions by year for Bull Trout captured by boat electroshocking in Sections 5, 6, 7, and 9 of the Peace River, 2002 to 2022.

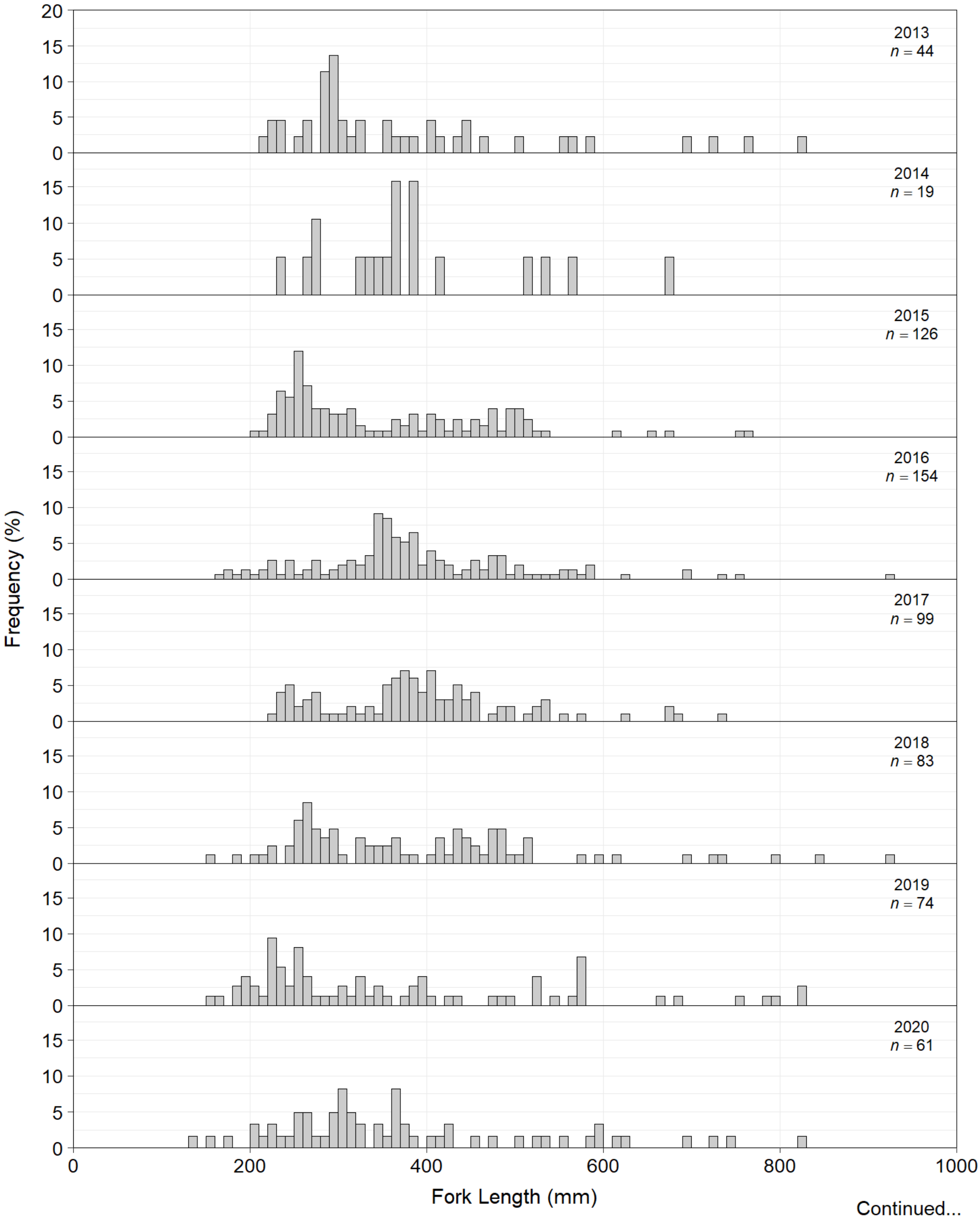

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Figure F8: Continued.

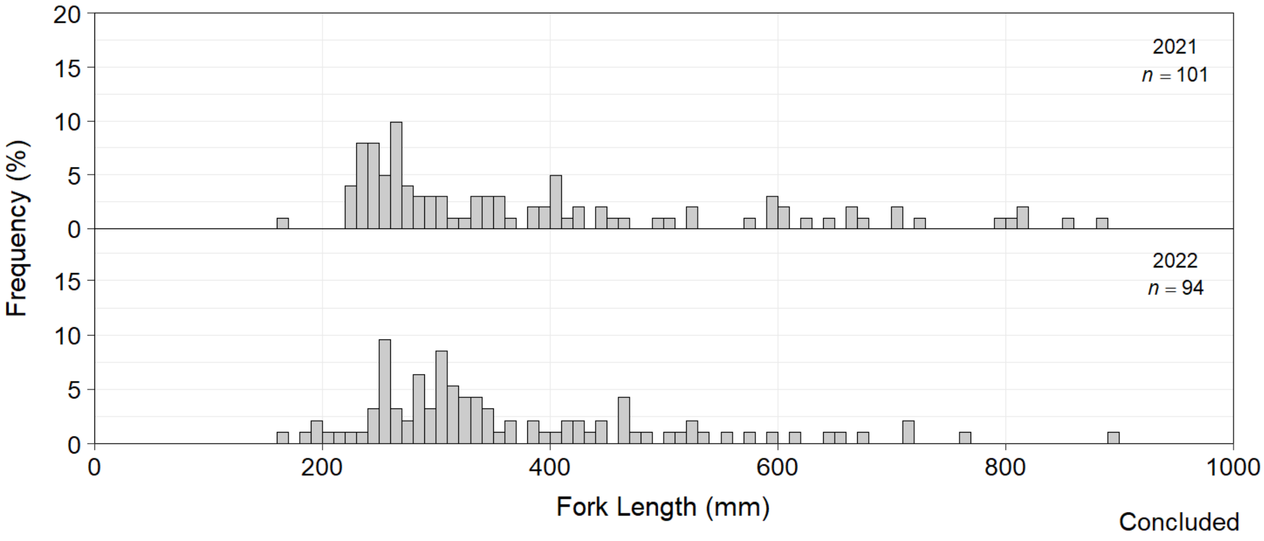

Figure F8: Concluded.

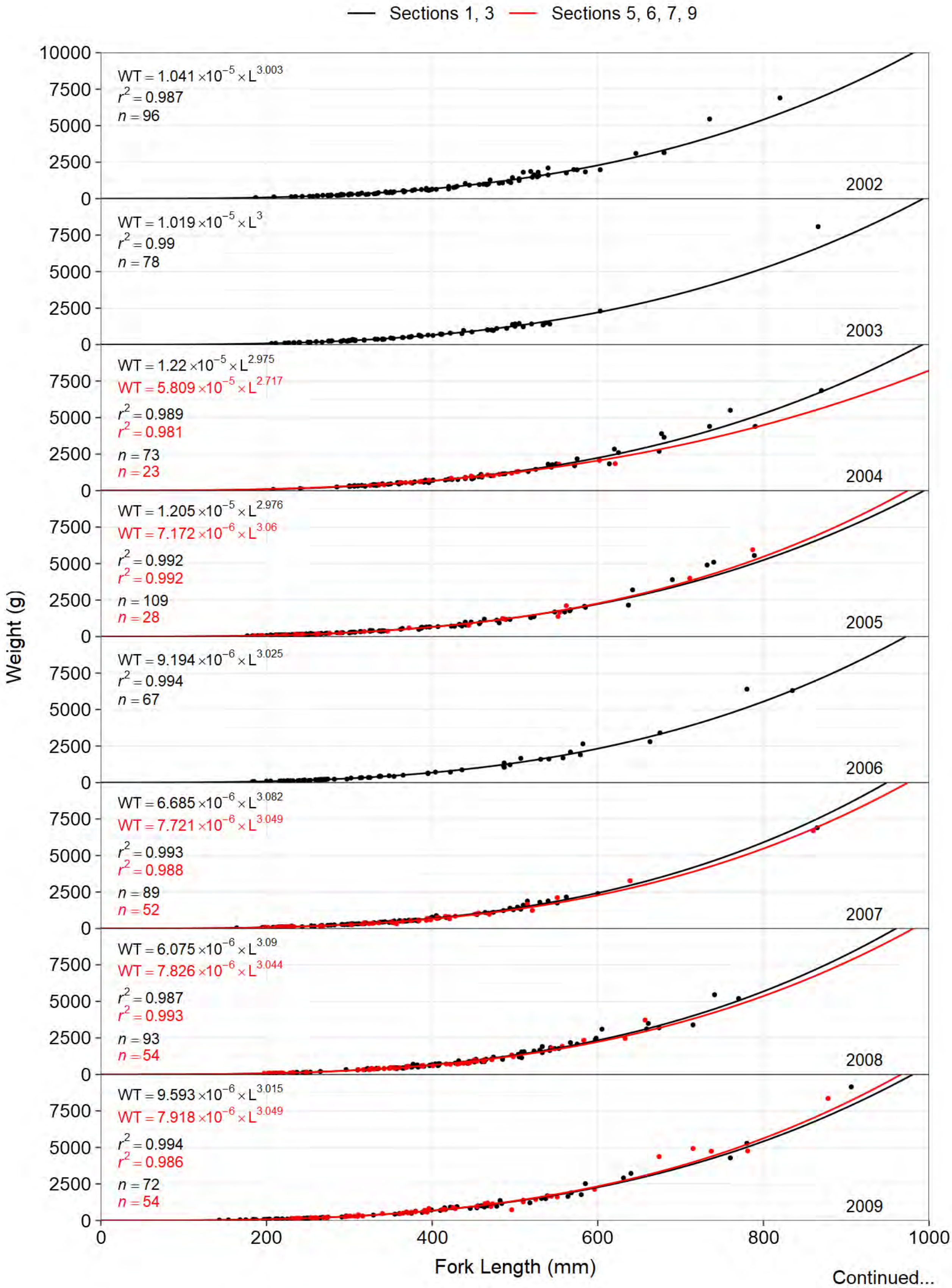

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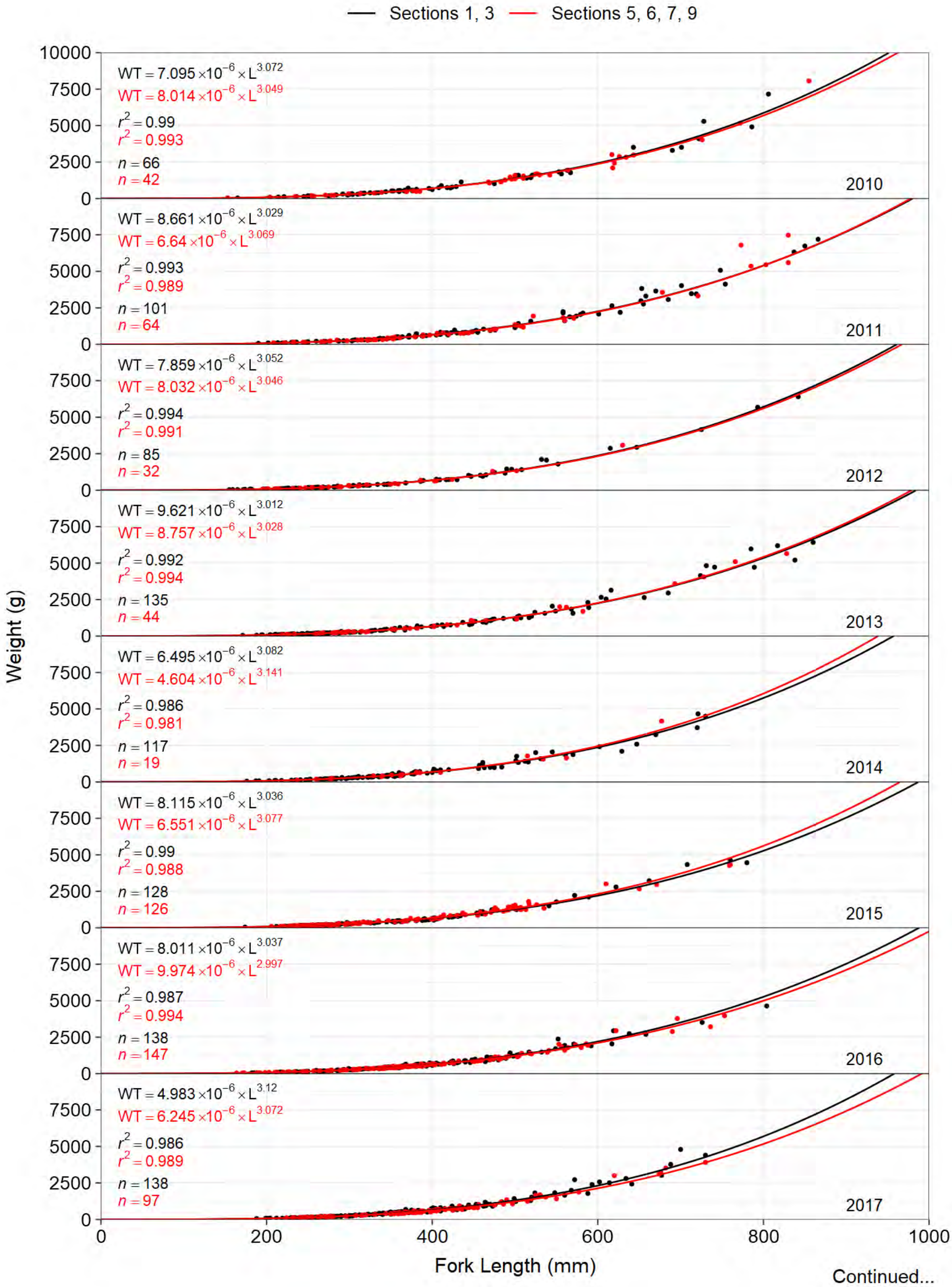
Figure F9: Length-weight regressions for Bull Trout captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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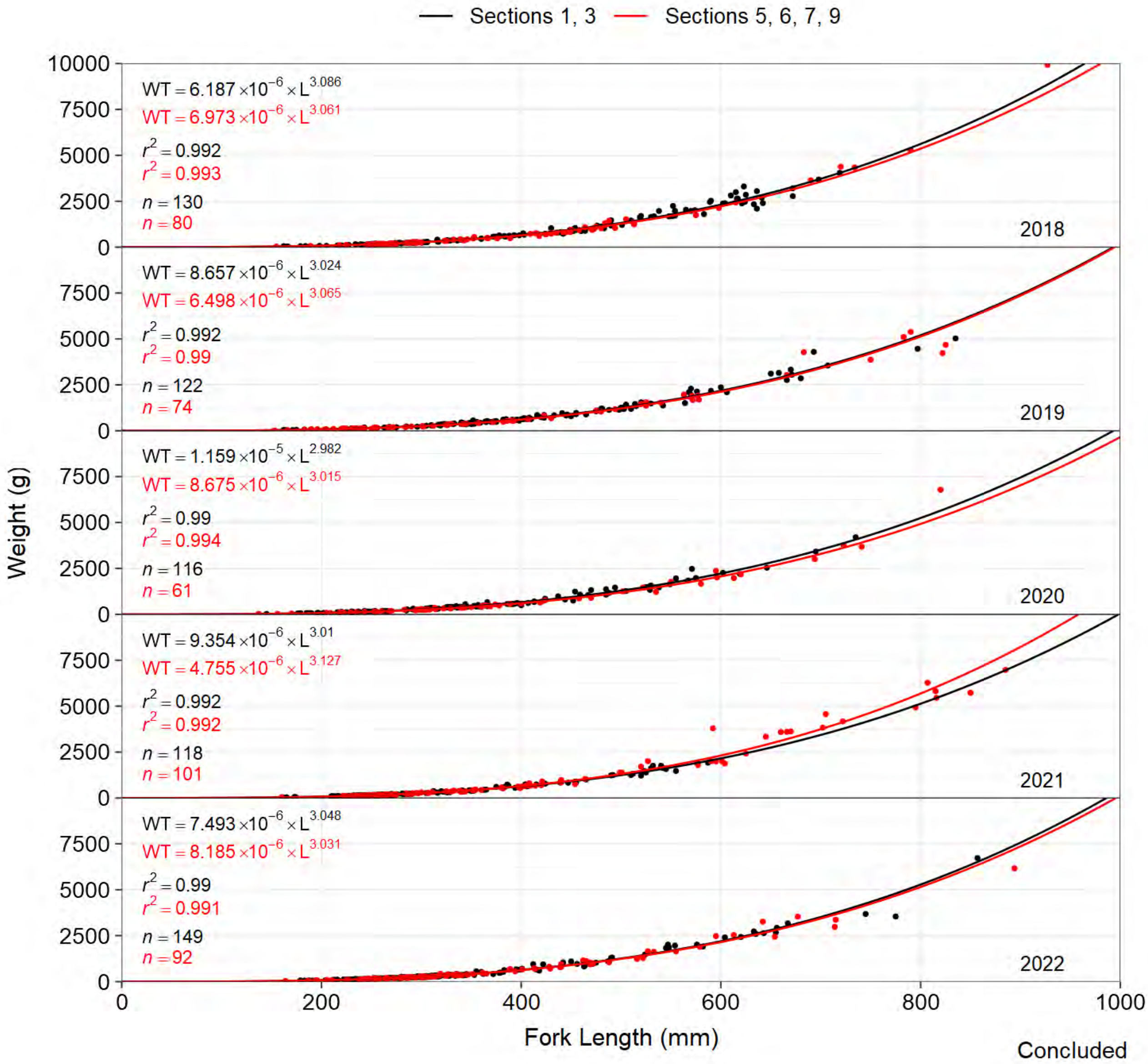

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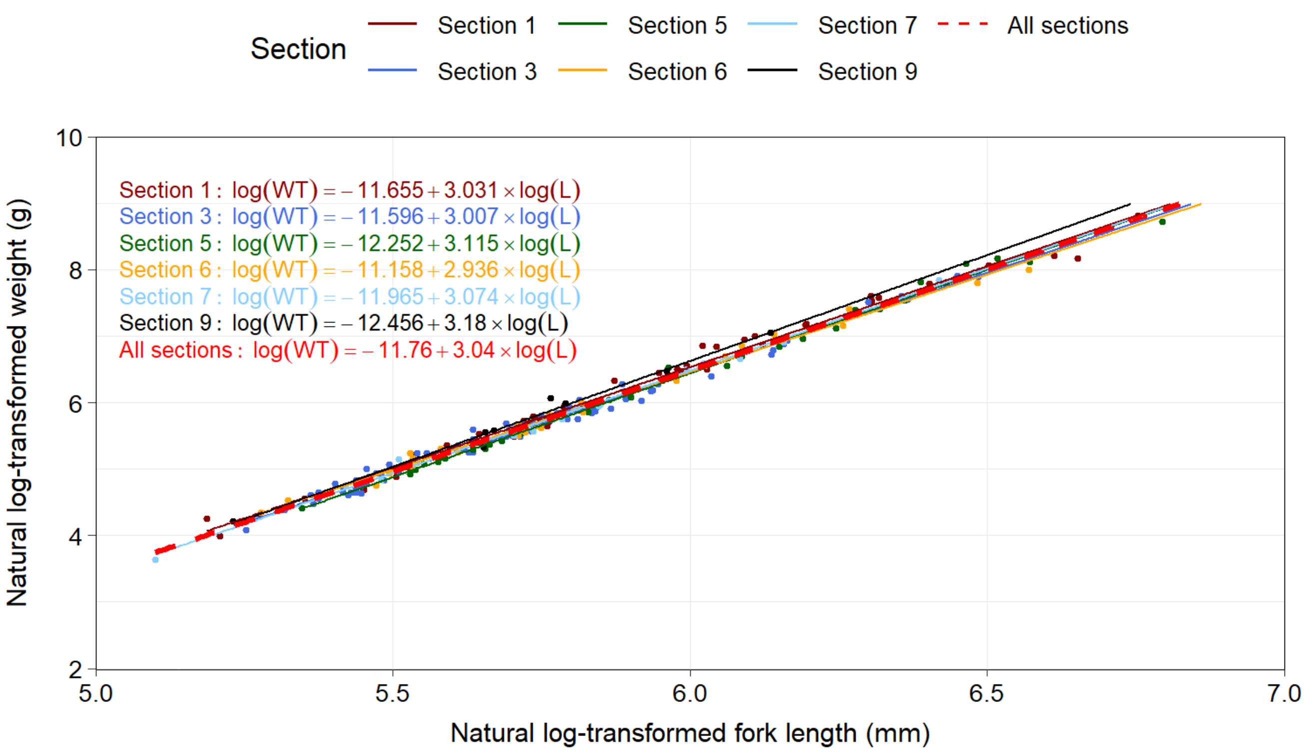

Figure F10: Log-log relationship between weight and fork length for Bull Trout captured by boat electroshocking in sampled sections of the Peace River, 2022.

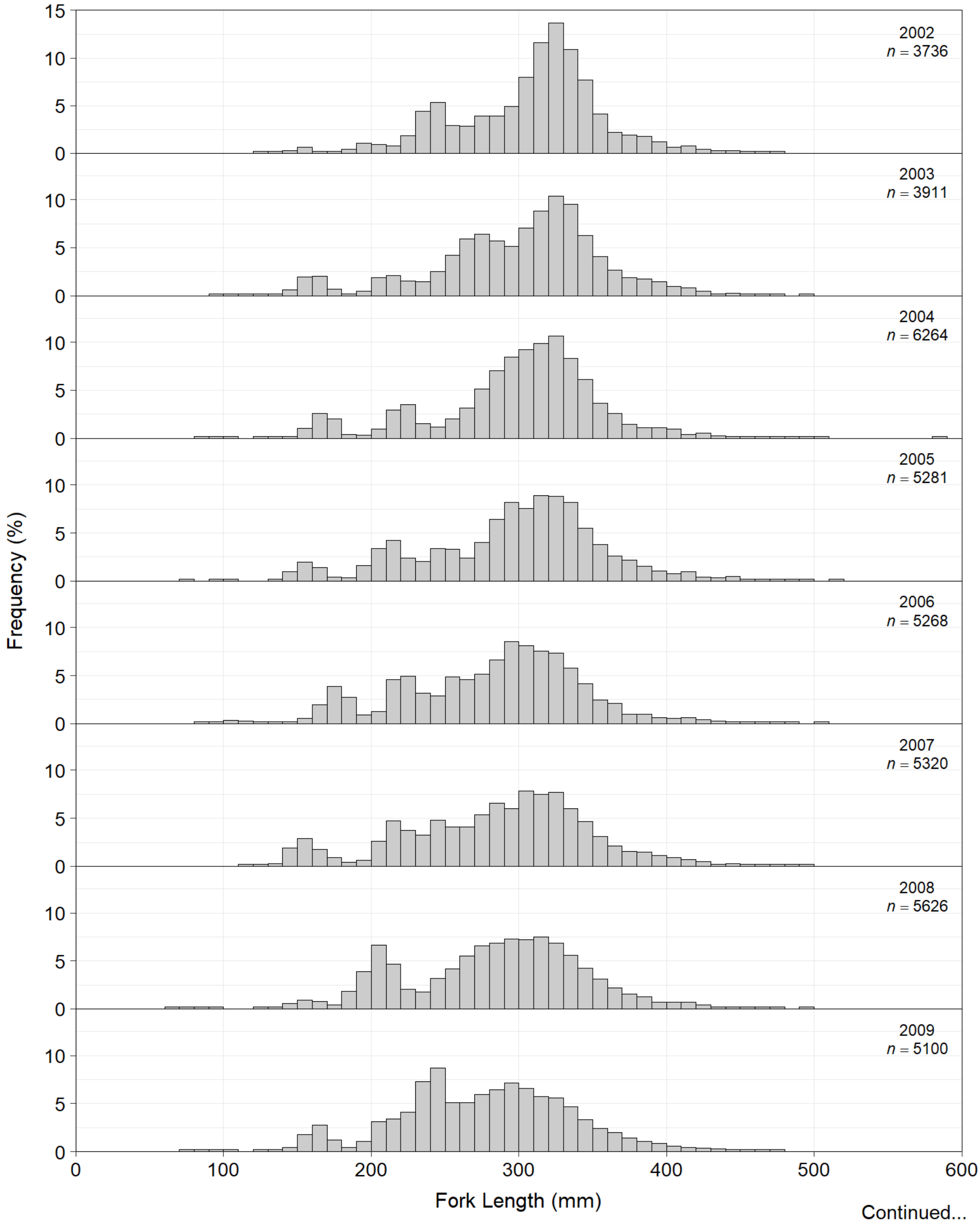

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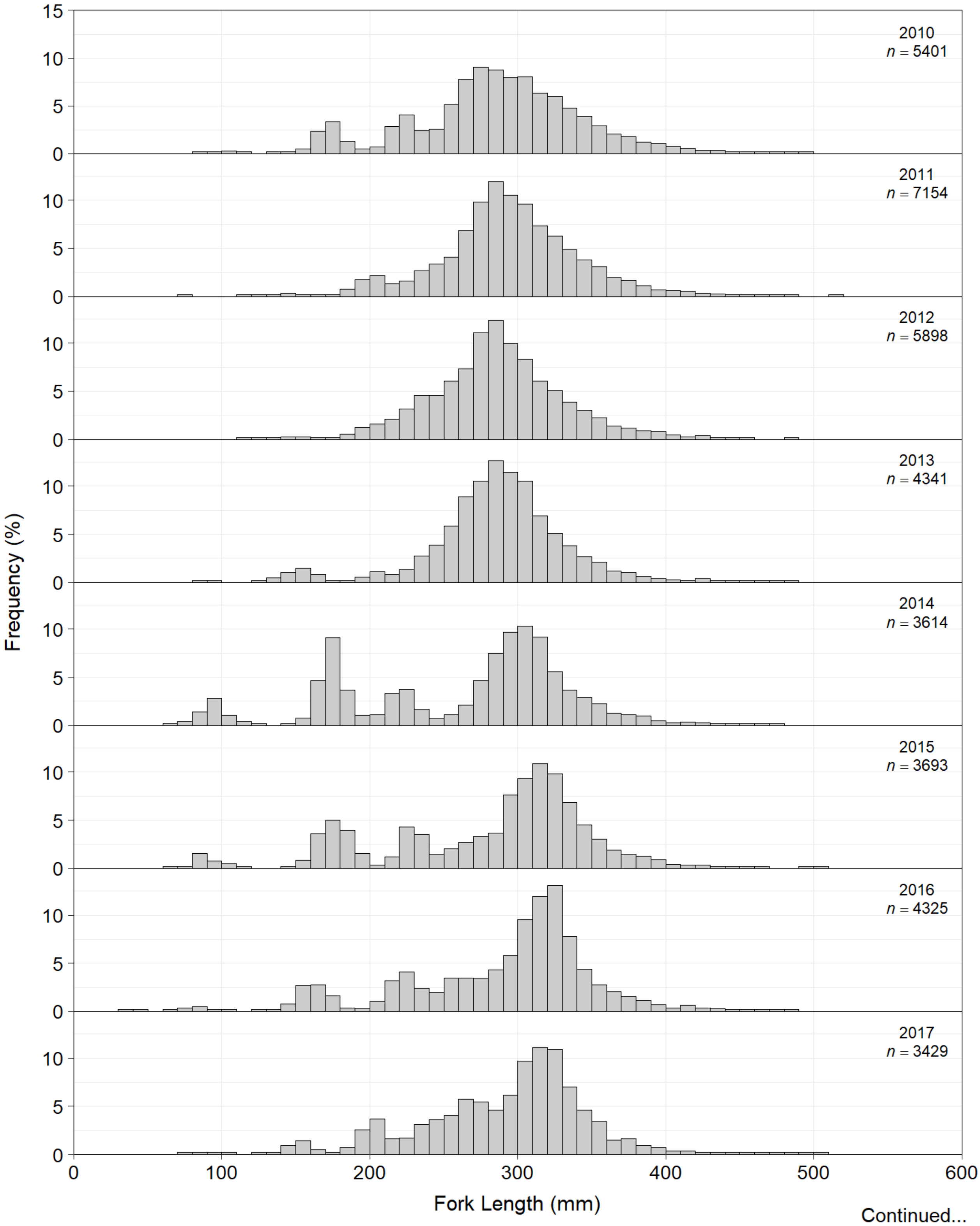
Figure F11: Length-frequency distributions by year for Mountain Whitefish captured by boat electroshocking in Sections 1 and 3 of the Peace River, 2002 to 2022.



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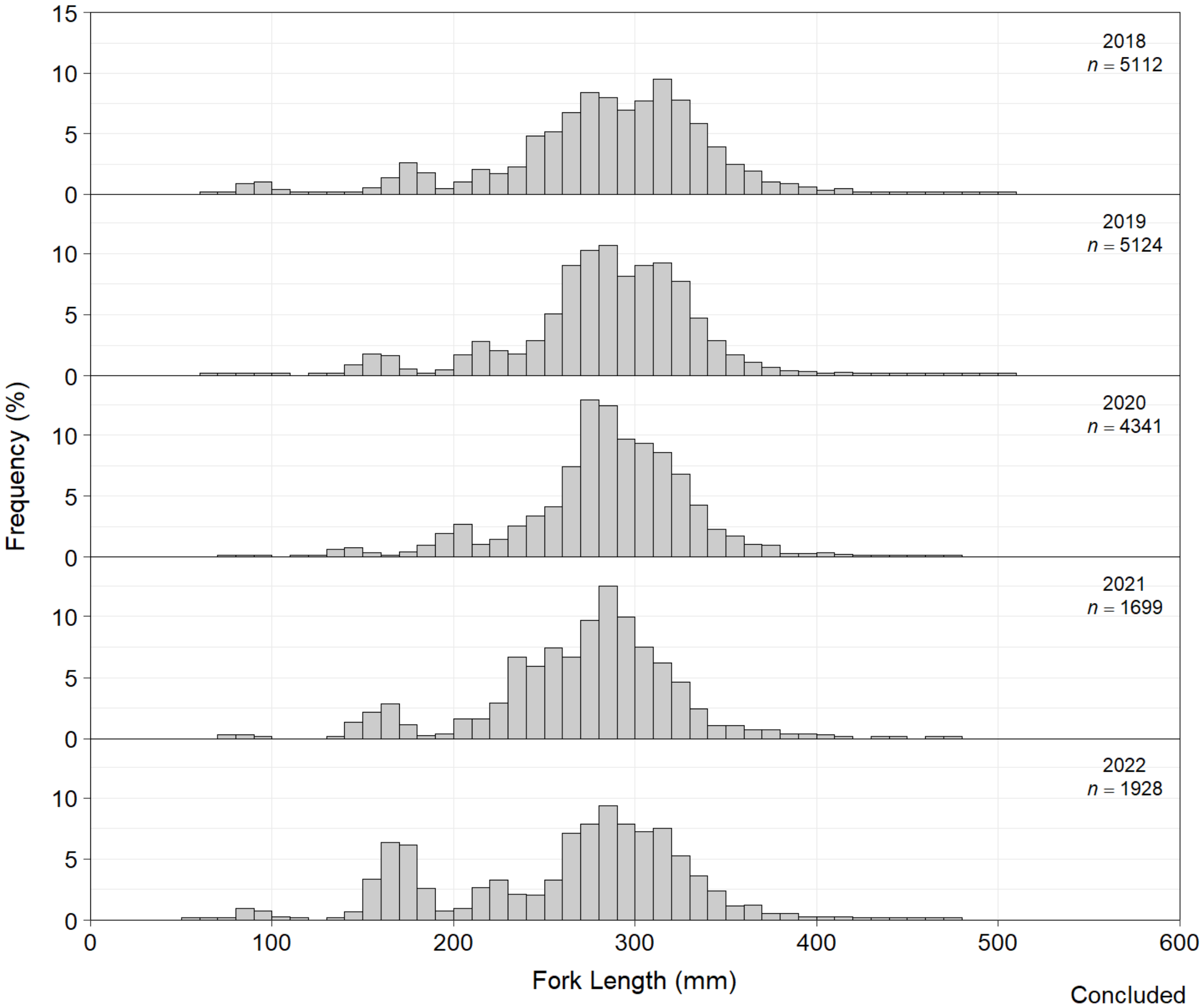

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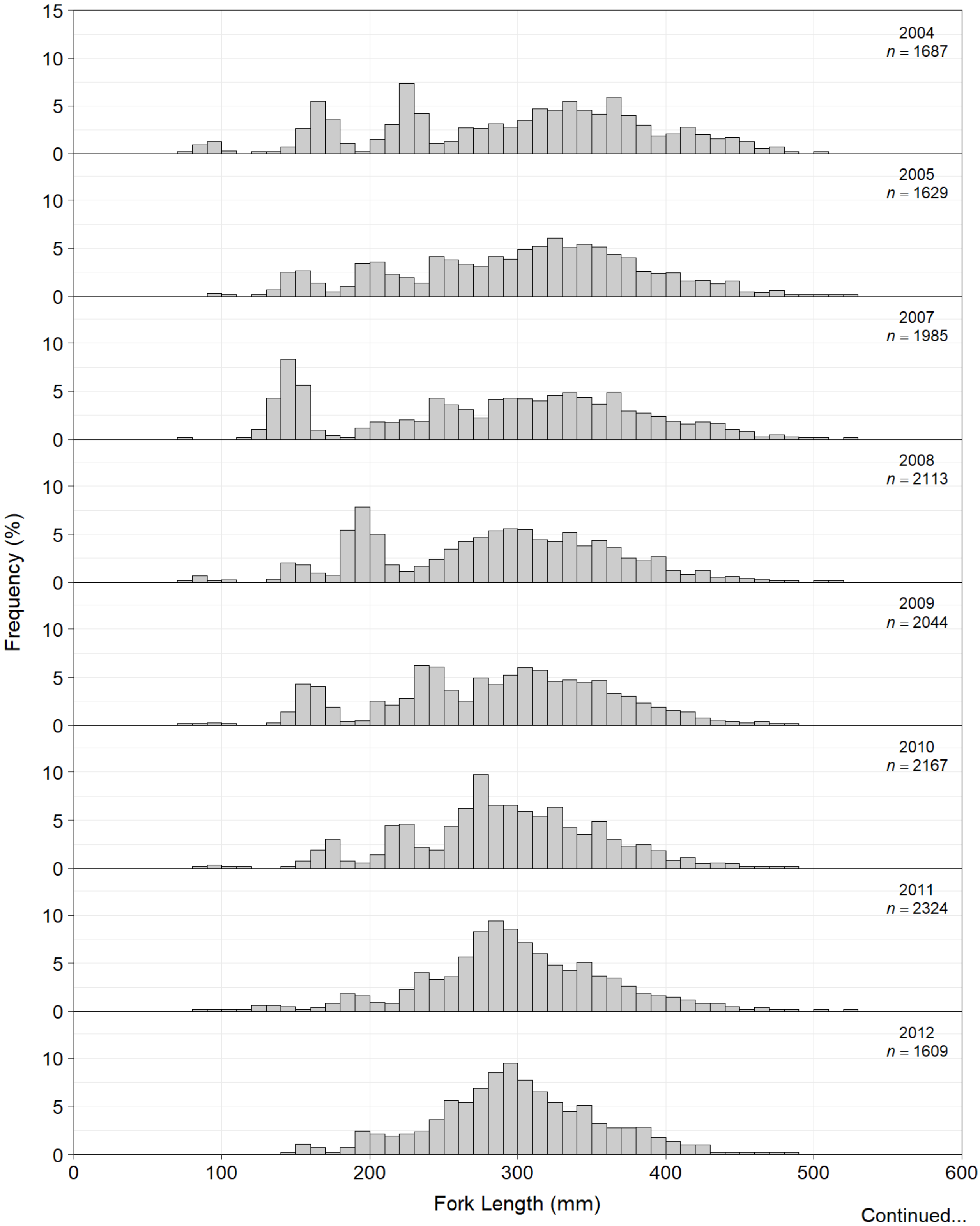

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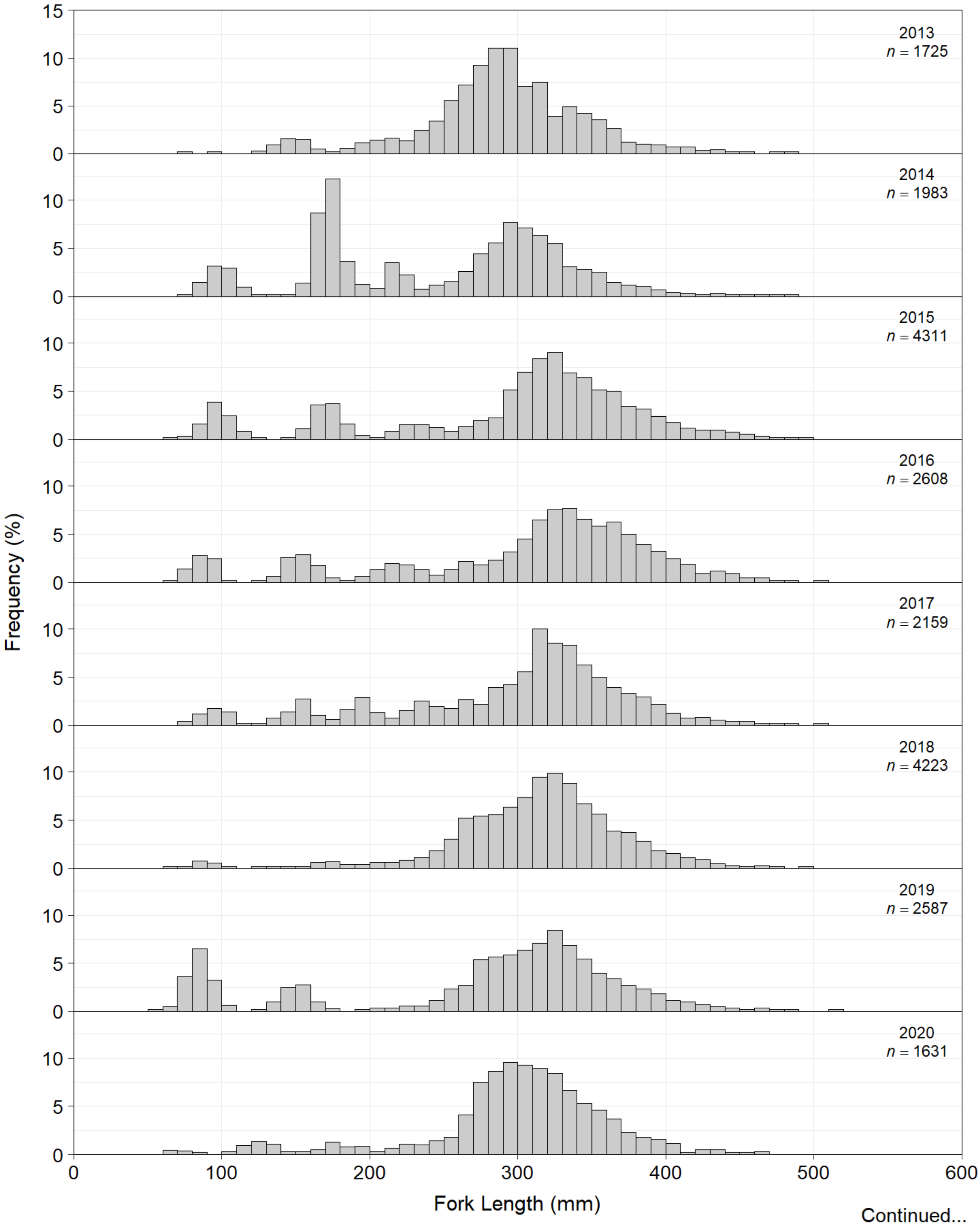
Figure F12: Length-frequency distributions by year for Mountain Whitefish captured by boat electroshocking in Sections 5, 6, 7, and 9 of the Peace River, 2002 to 2022.



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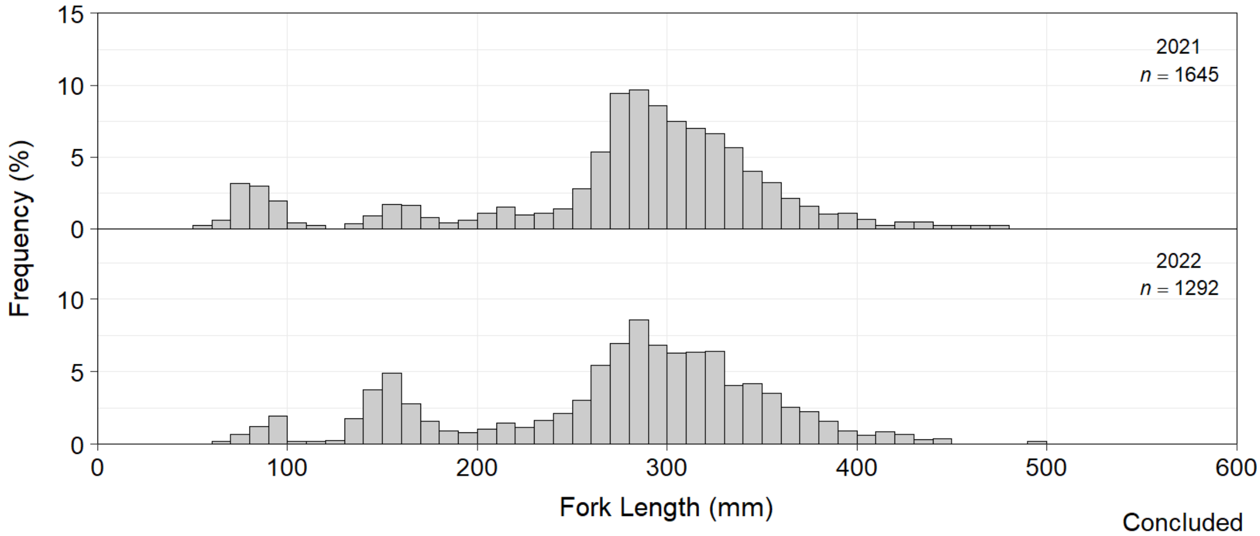

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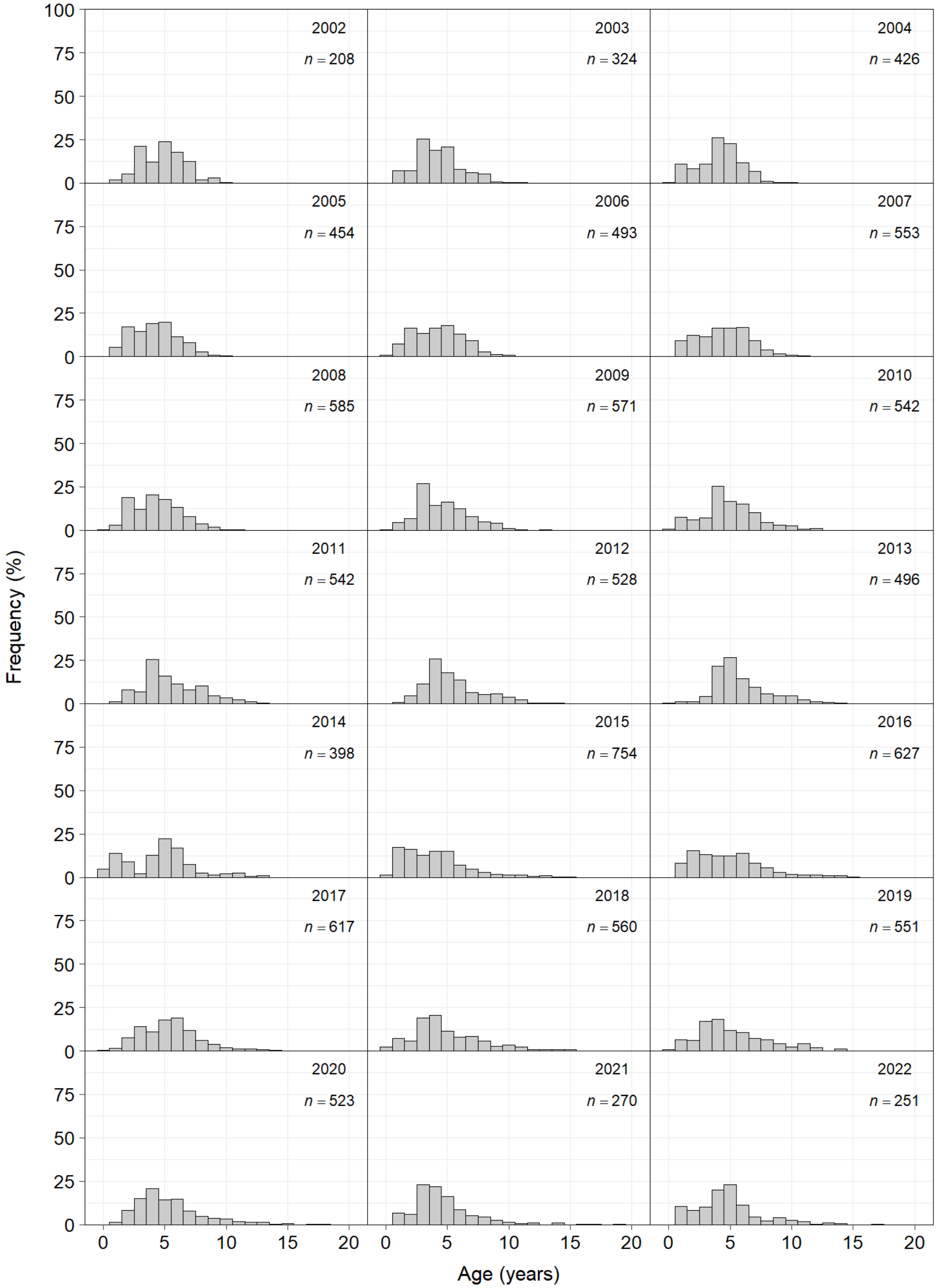

Figure F13: Age-frequency distributions by year for Mountain Whitefish captured by boat electroshocking in Sections 1 and 3 of the Peace River, 2002 to 2022.

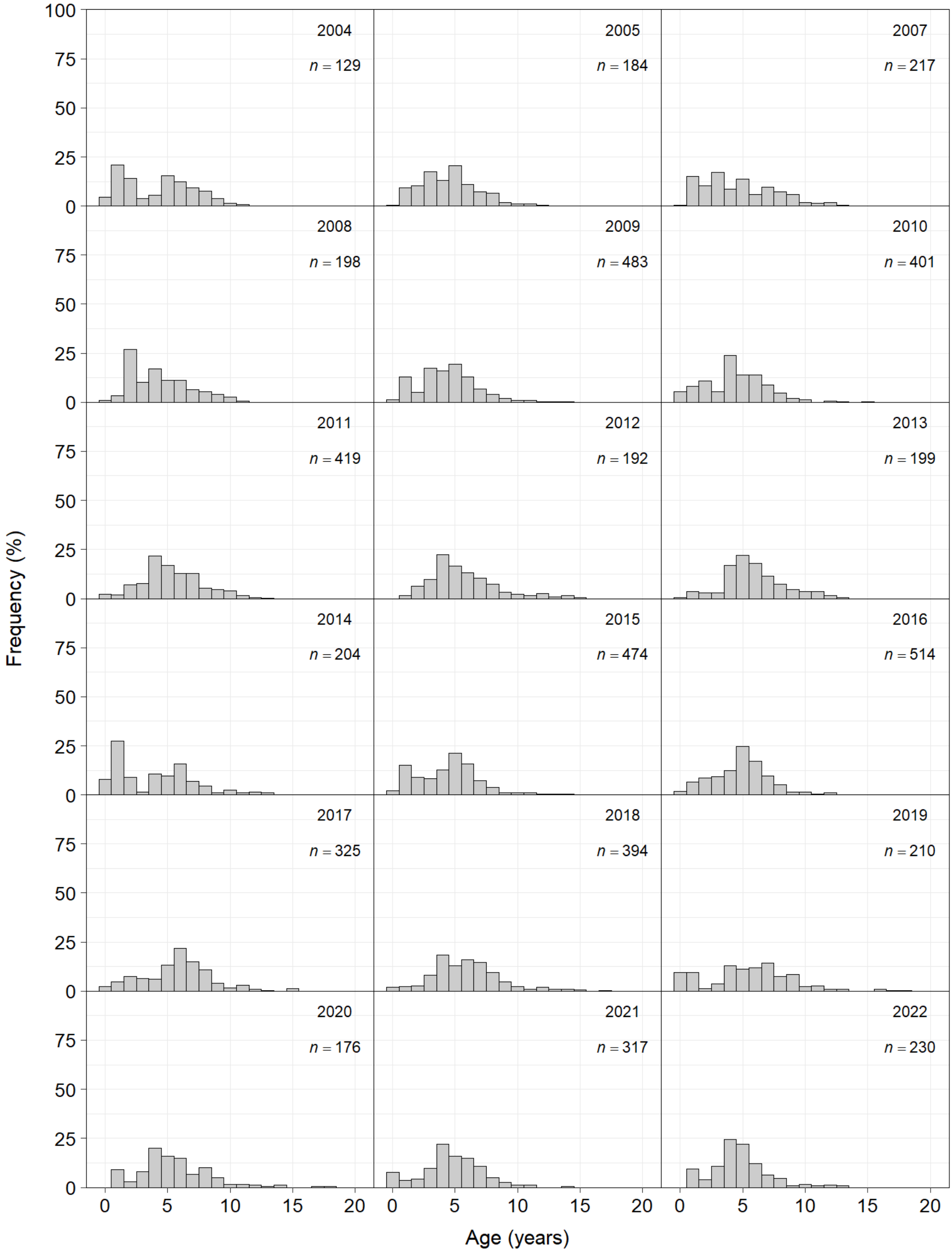

Figure F14: Age-frequency distributions by year for Mountain Whitefish captured by boat electroshocking in Sections 5, 6, 7, and 9 of the Peace River, 2002 to 2022.

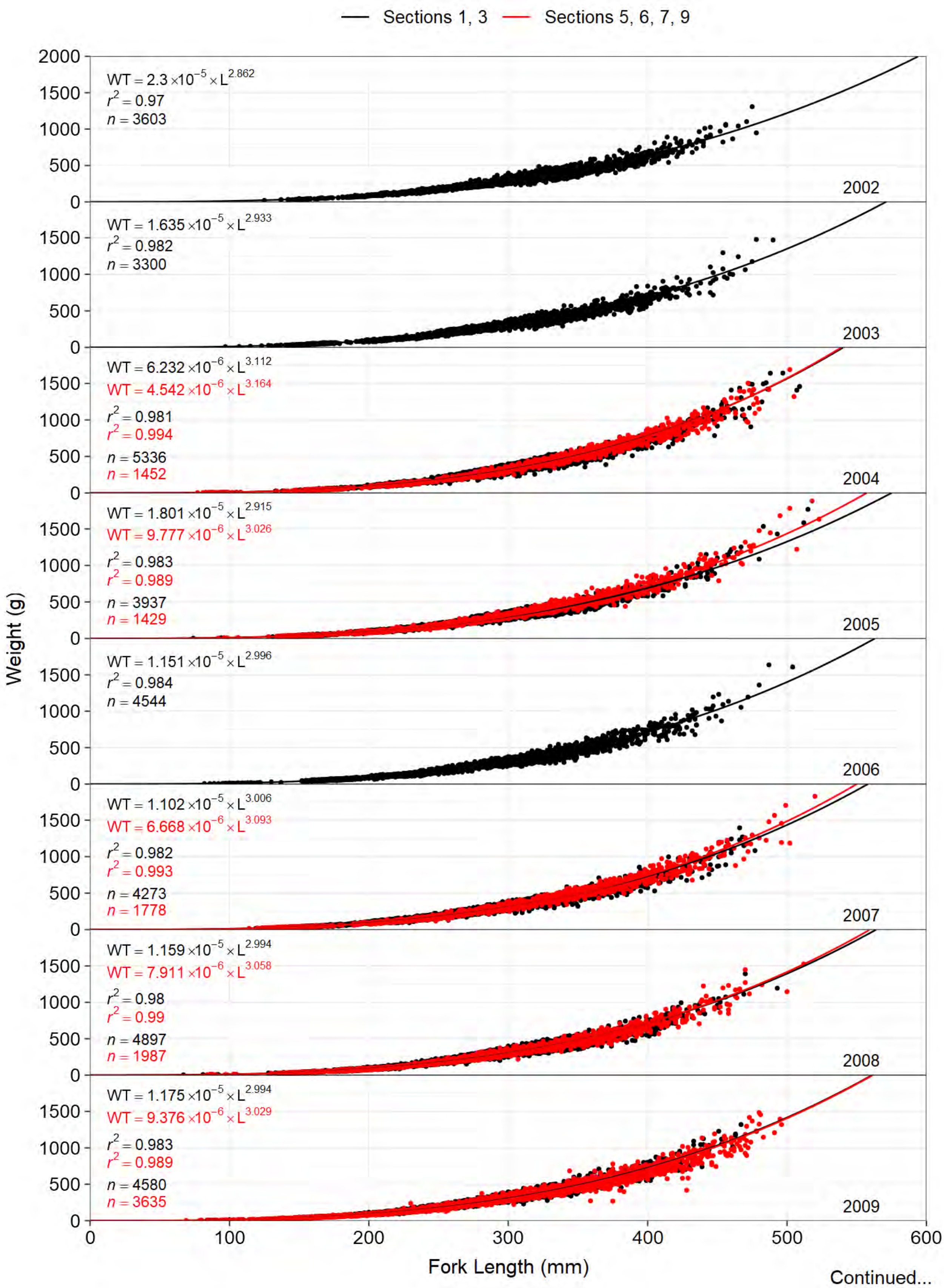

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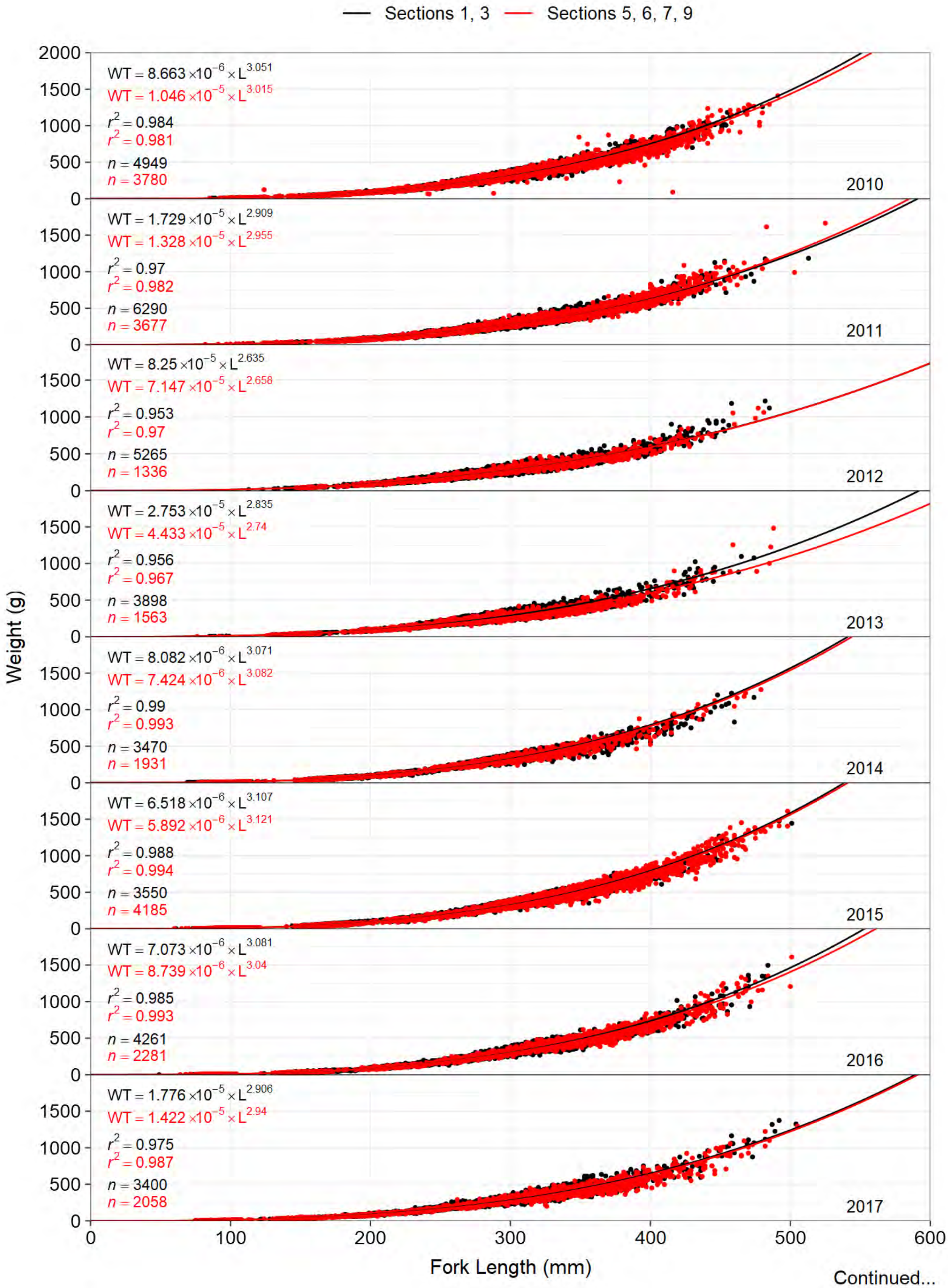
Figure F15: Length-weight regressions for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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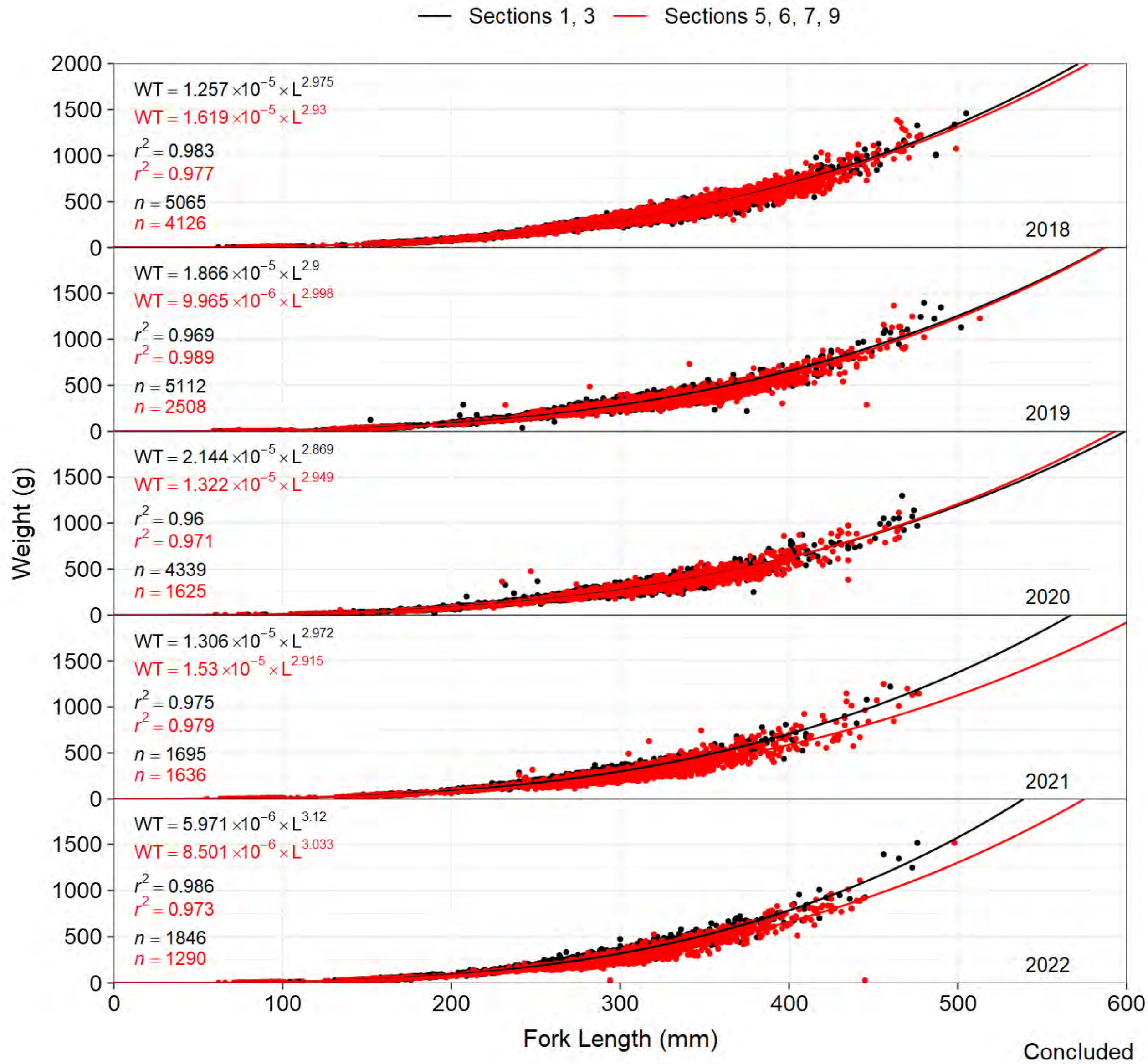

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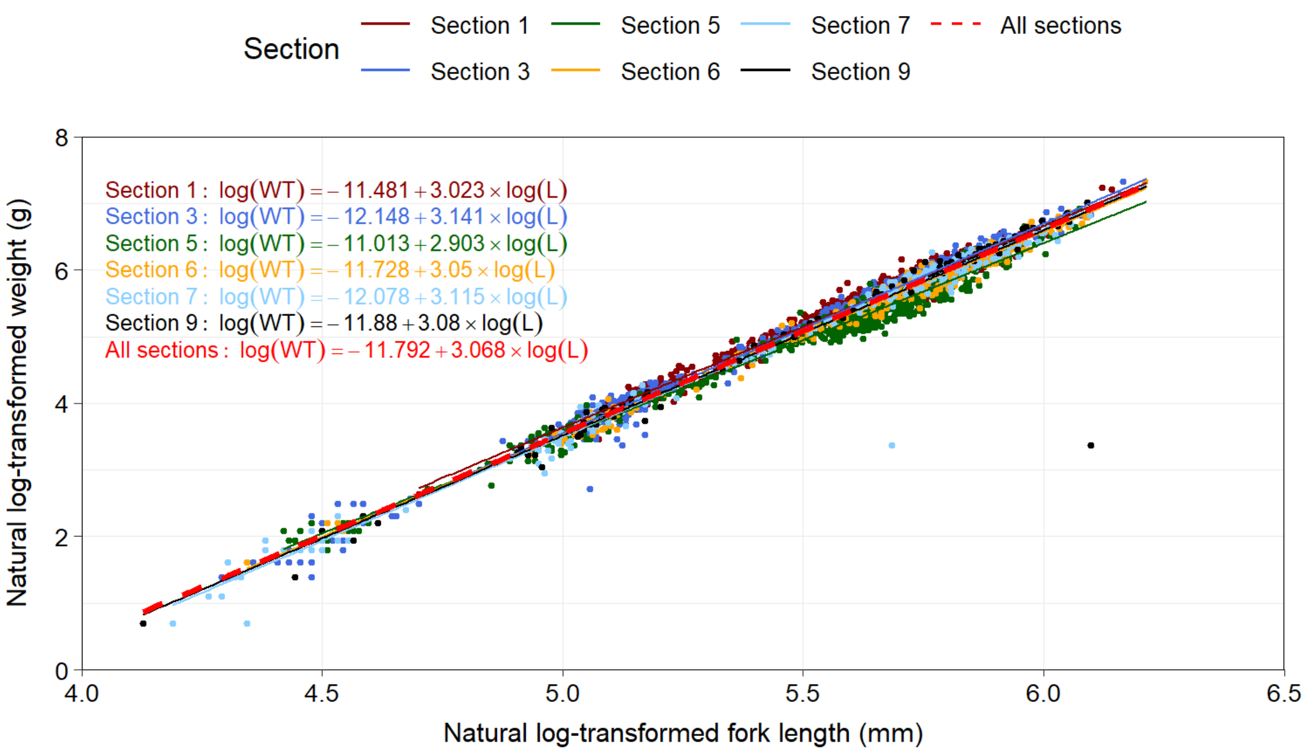

Figure F16: Log-log relationship between weight and fork length for Mountain Whitefish captured by boat electroshocking in sampled sections of the Peace River, 2022.

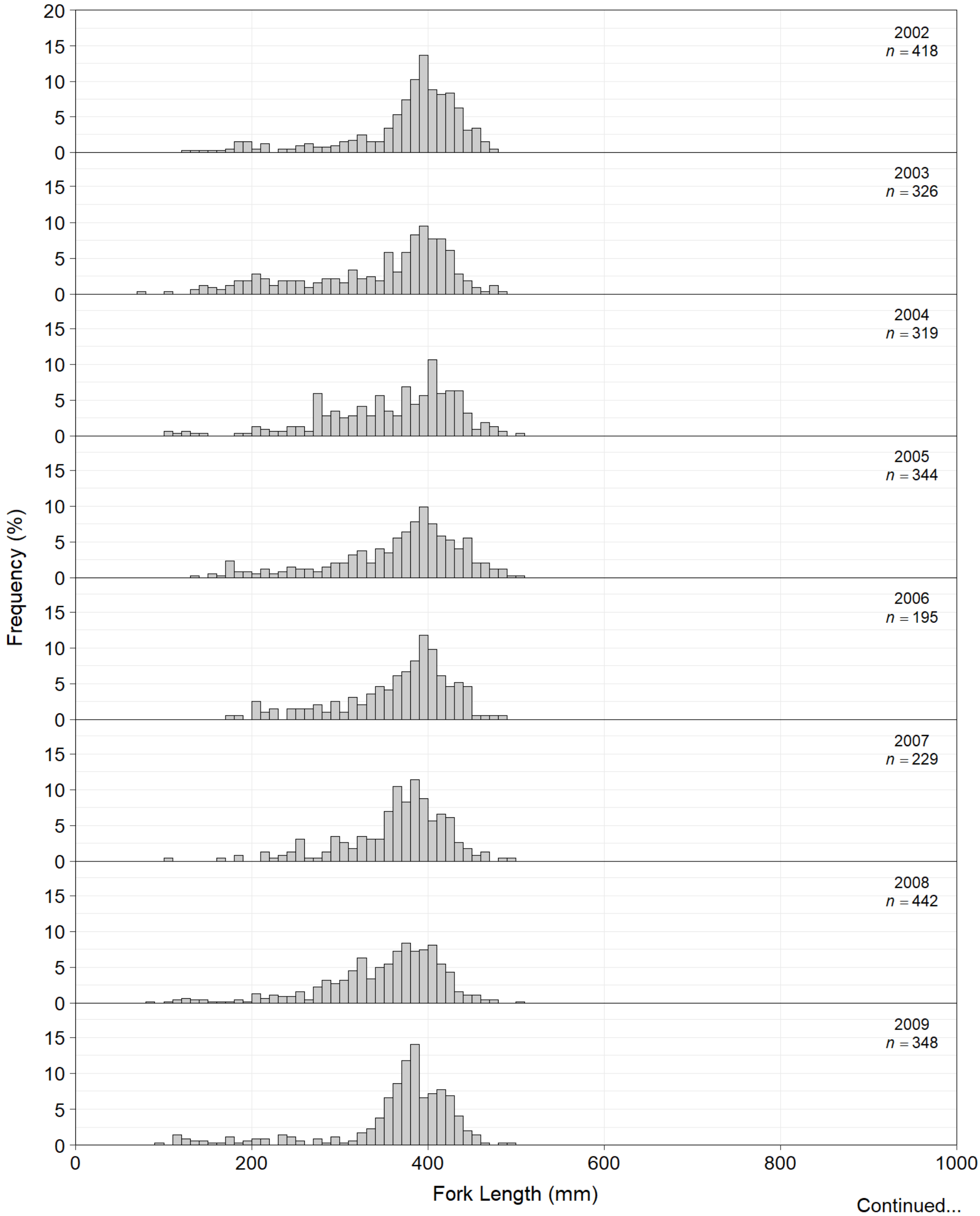

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Figure F17: Length-frequency distributions by year for Longnose Sucker captured by boat electroshocking in Sections 1 and 3 of the Peace River, 2002 to 2022.

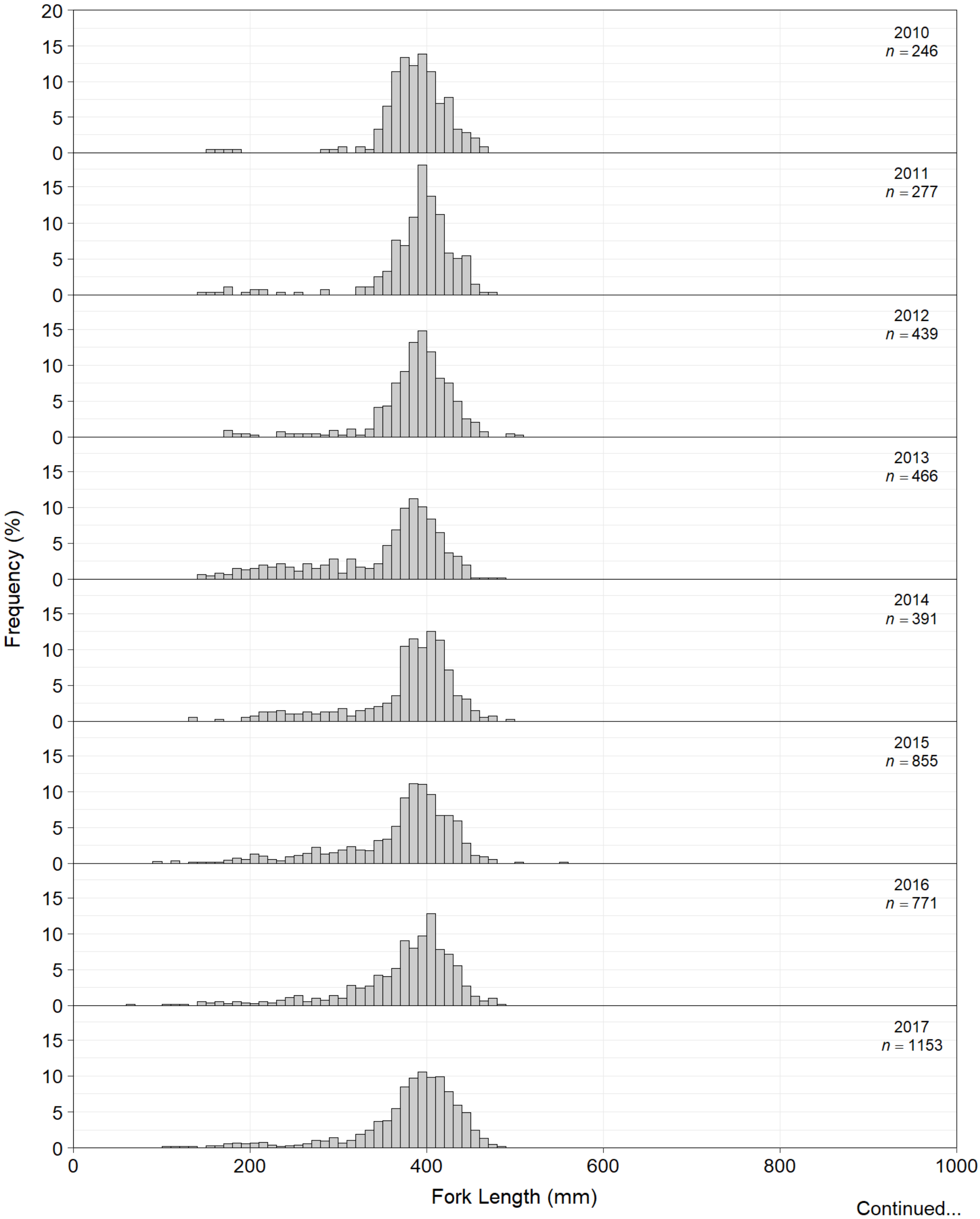

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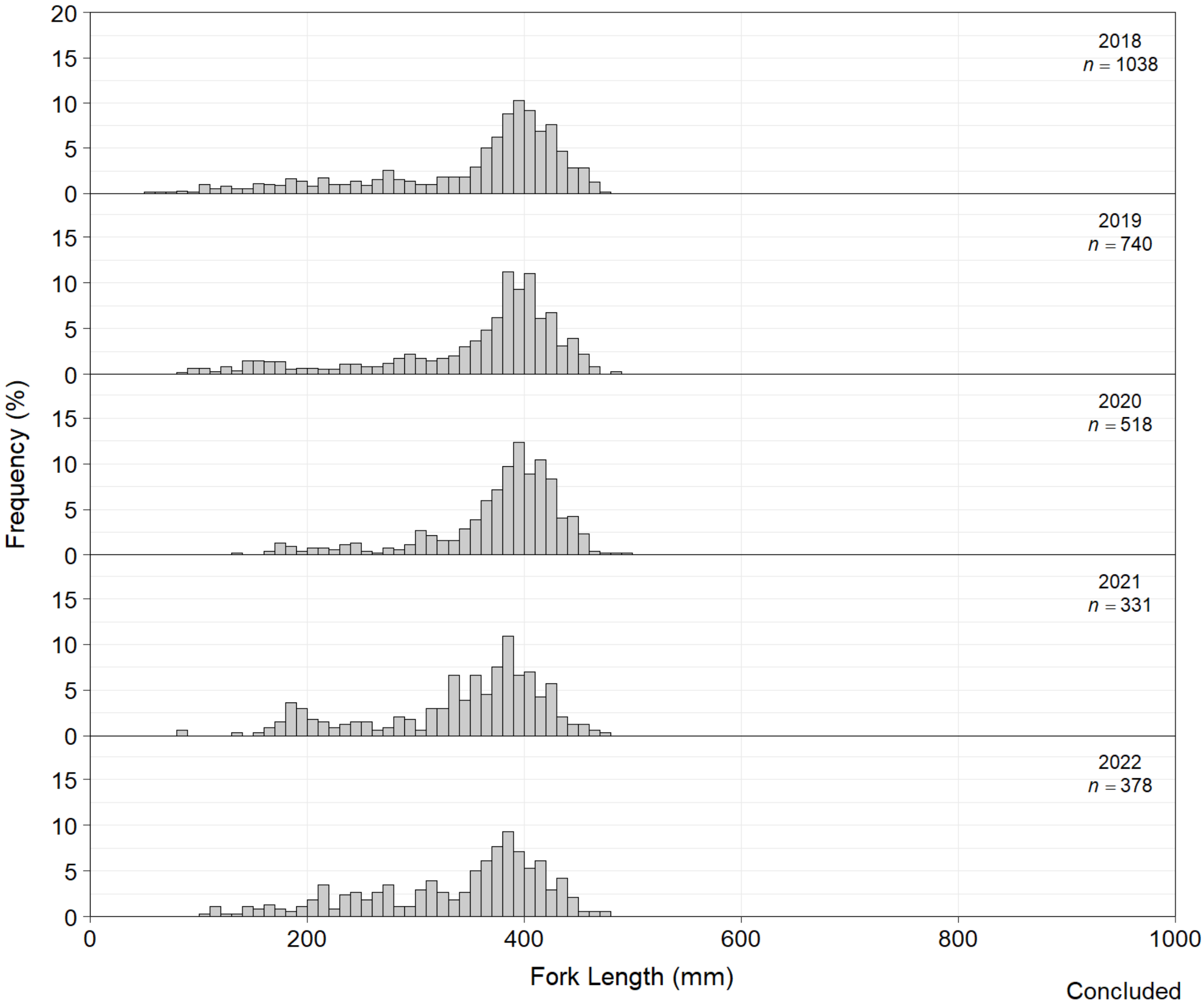
Figure F17: Continued.



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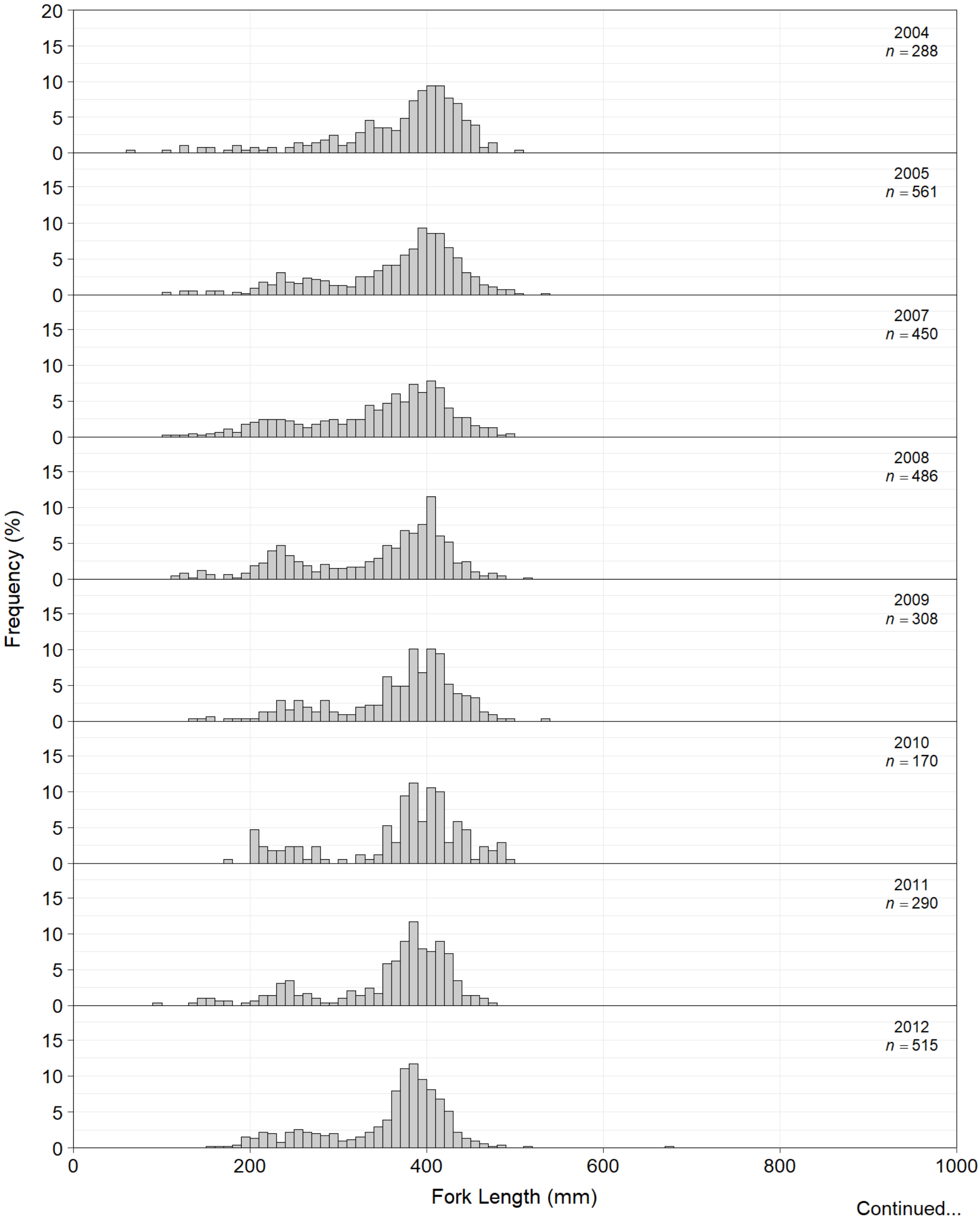

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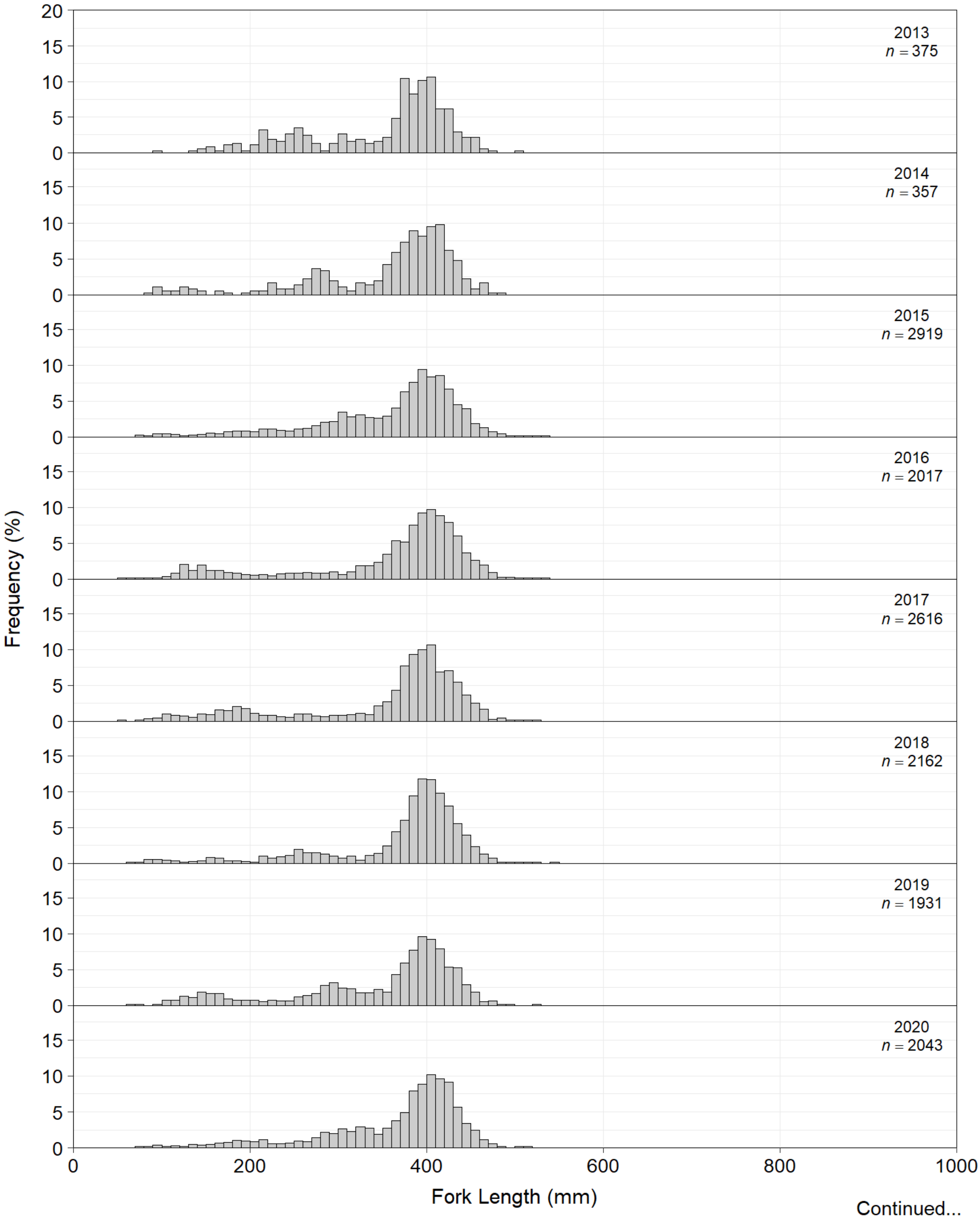
Figure F18: Length-frequency distributions by year for Longnose Sucker captured by boat electroshocking in Sections 5, 6, 7, and 9 of the Peace River, 2002 to 2022.



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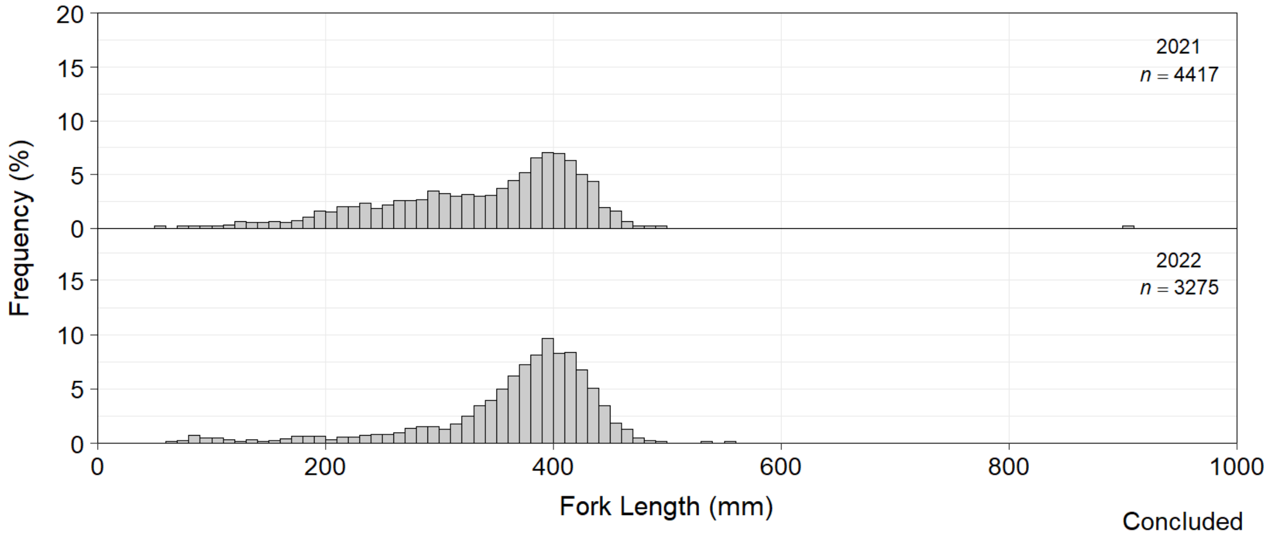

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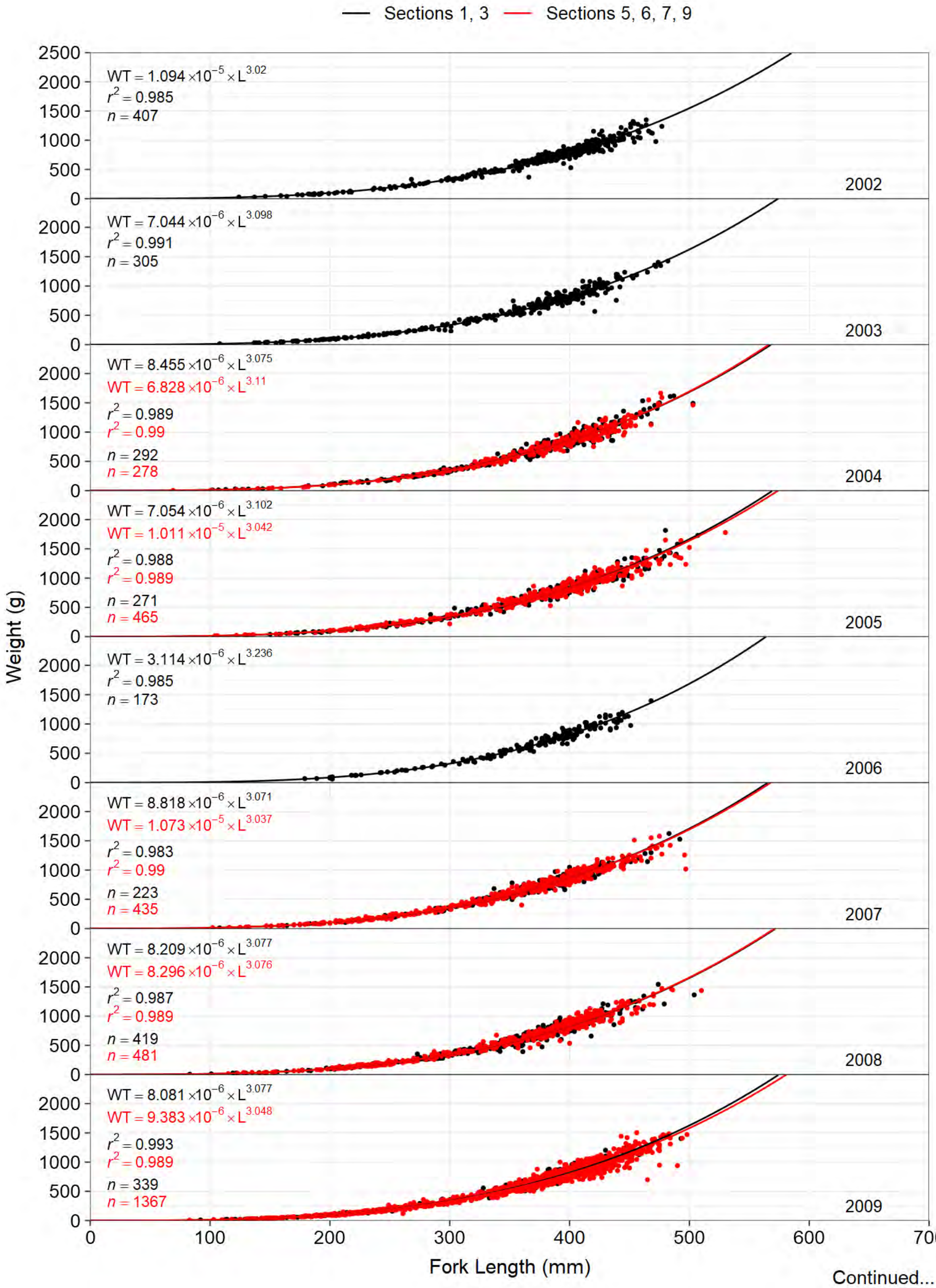

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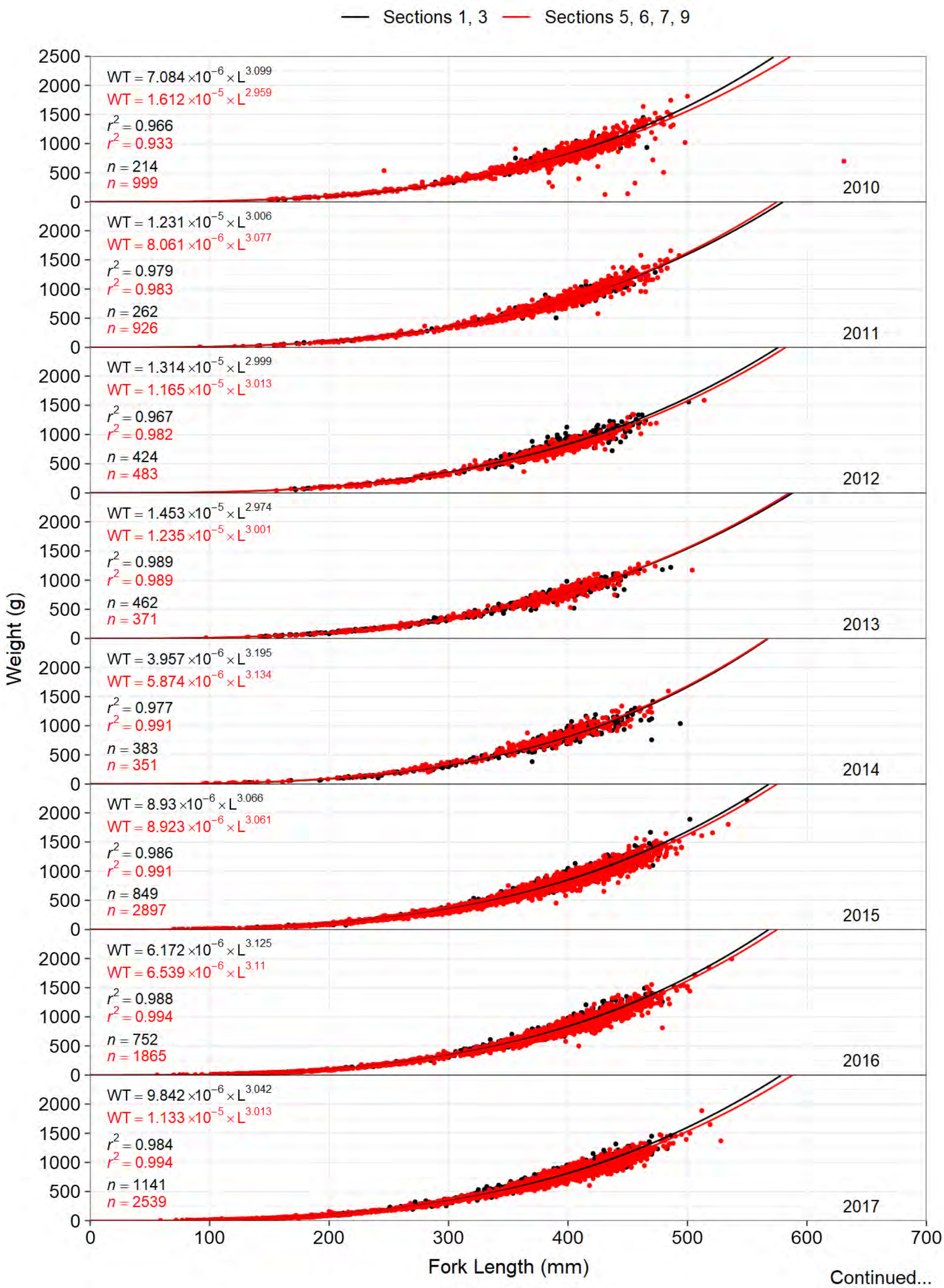
Figure F19: Length-weight regressions for Longnose Sucker captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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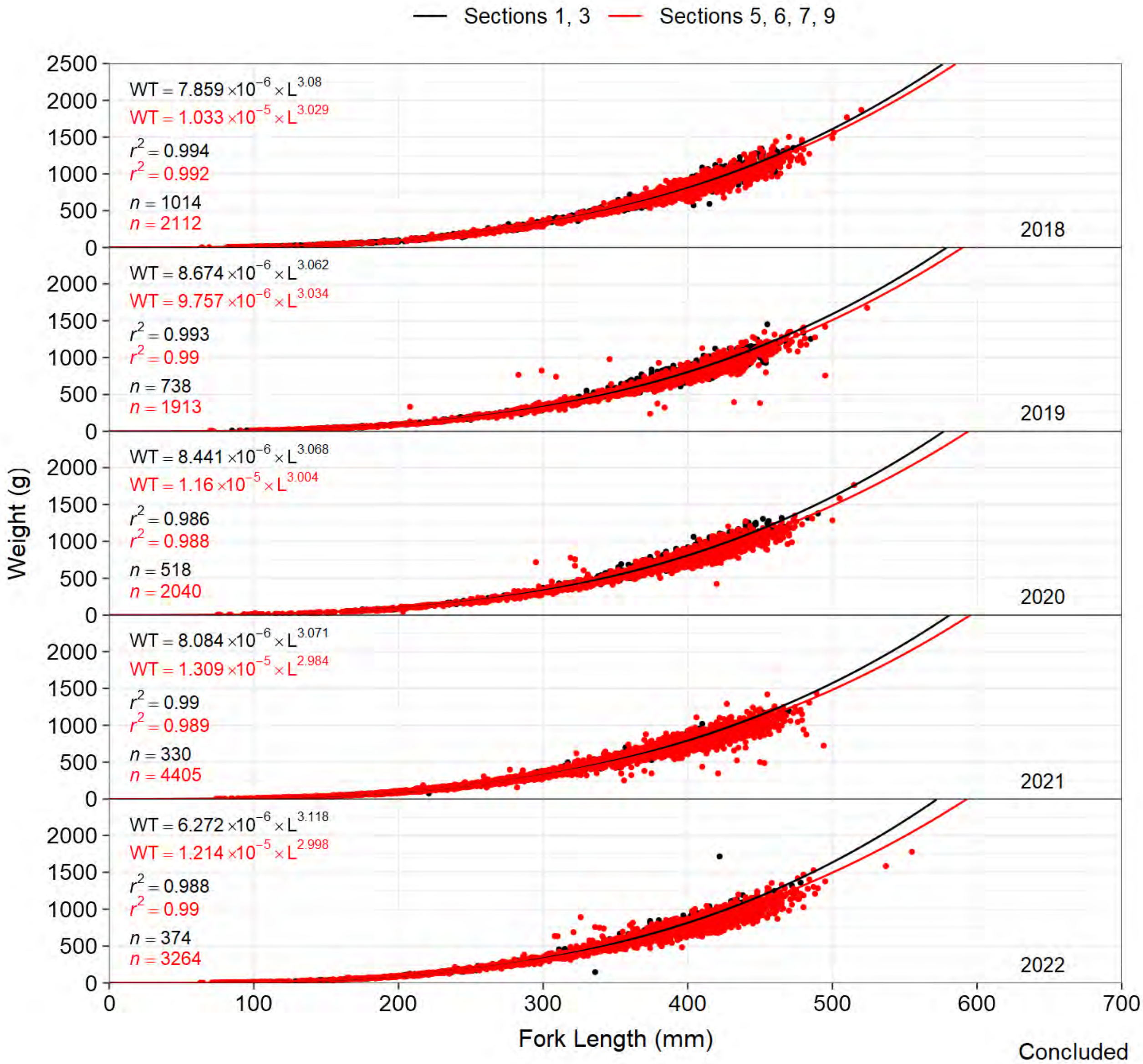

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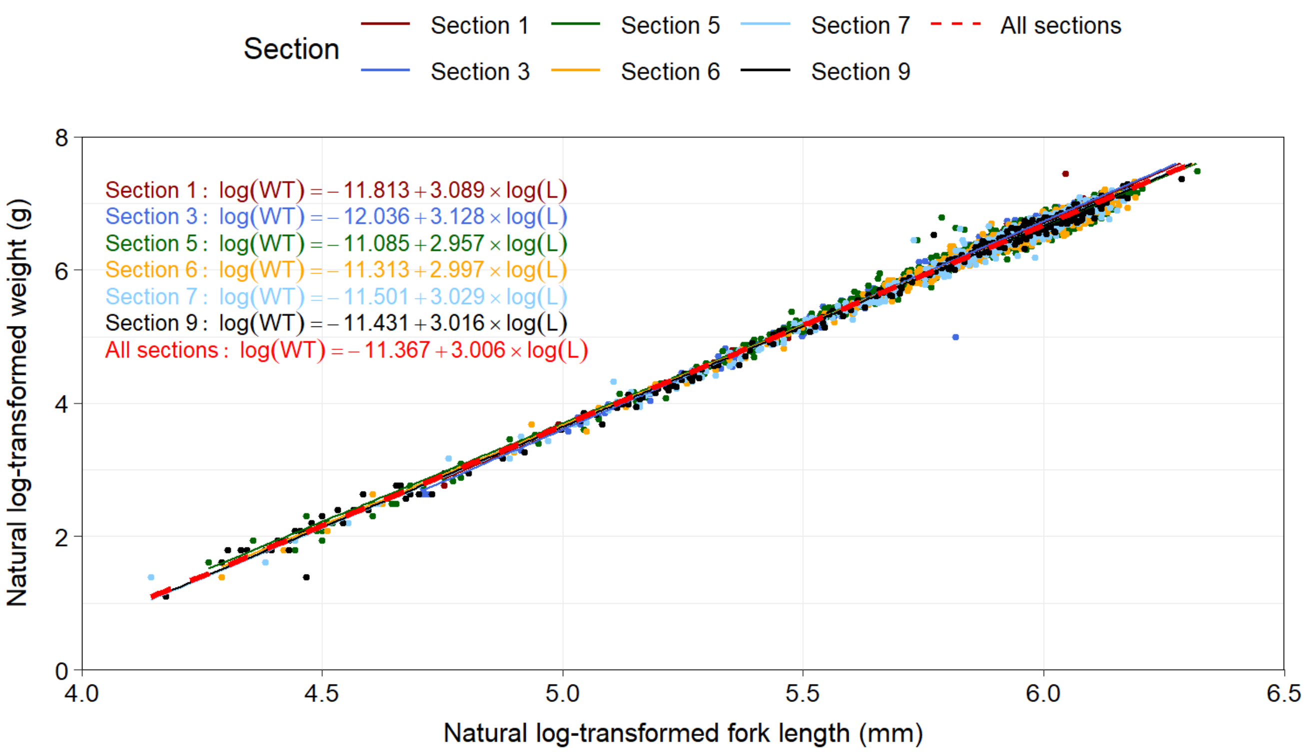

Figure F20: Log-log relationship between weight and fork length for Longnose Sucker captured by boat electroshocking in sampled sections of the Peace River, 2022.

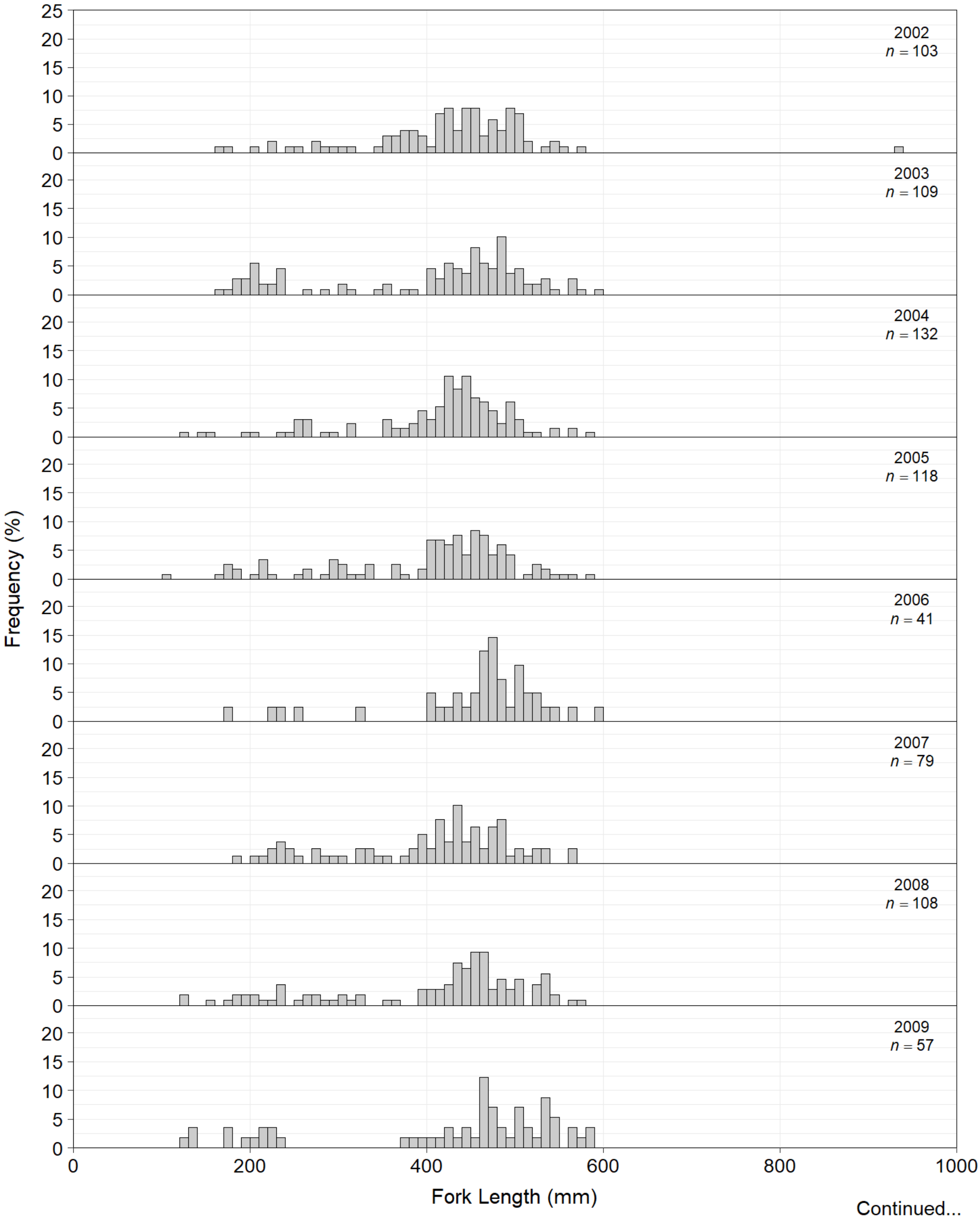

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Figure F21: Length-frequency distributions by year for Largescale Sucker captured by boat electroshocking in Sections 1 and 3 of the Peace River, 2002 to 2022.

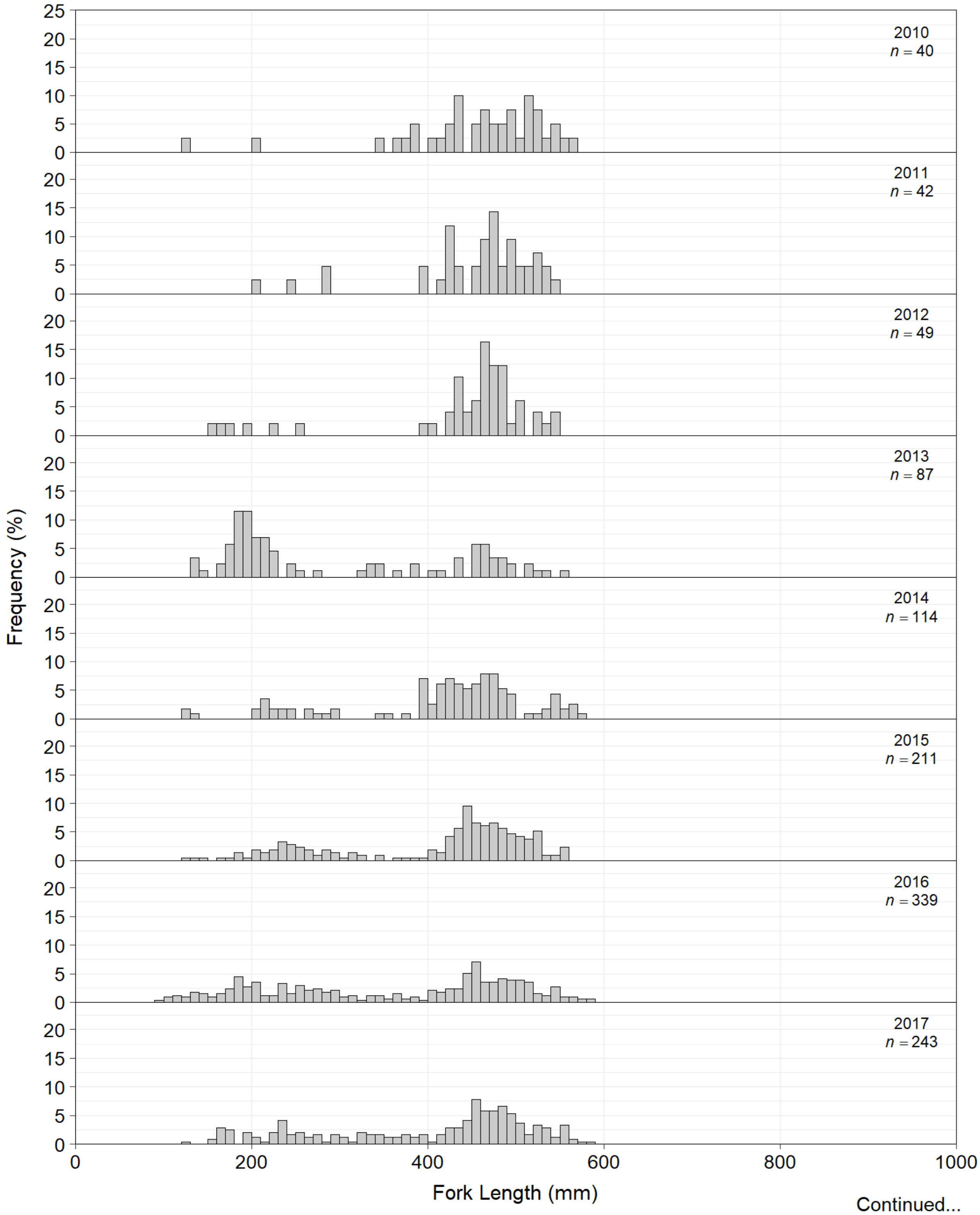

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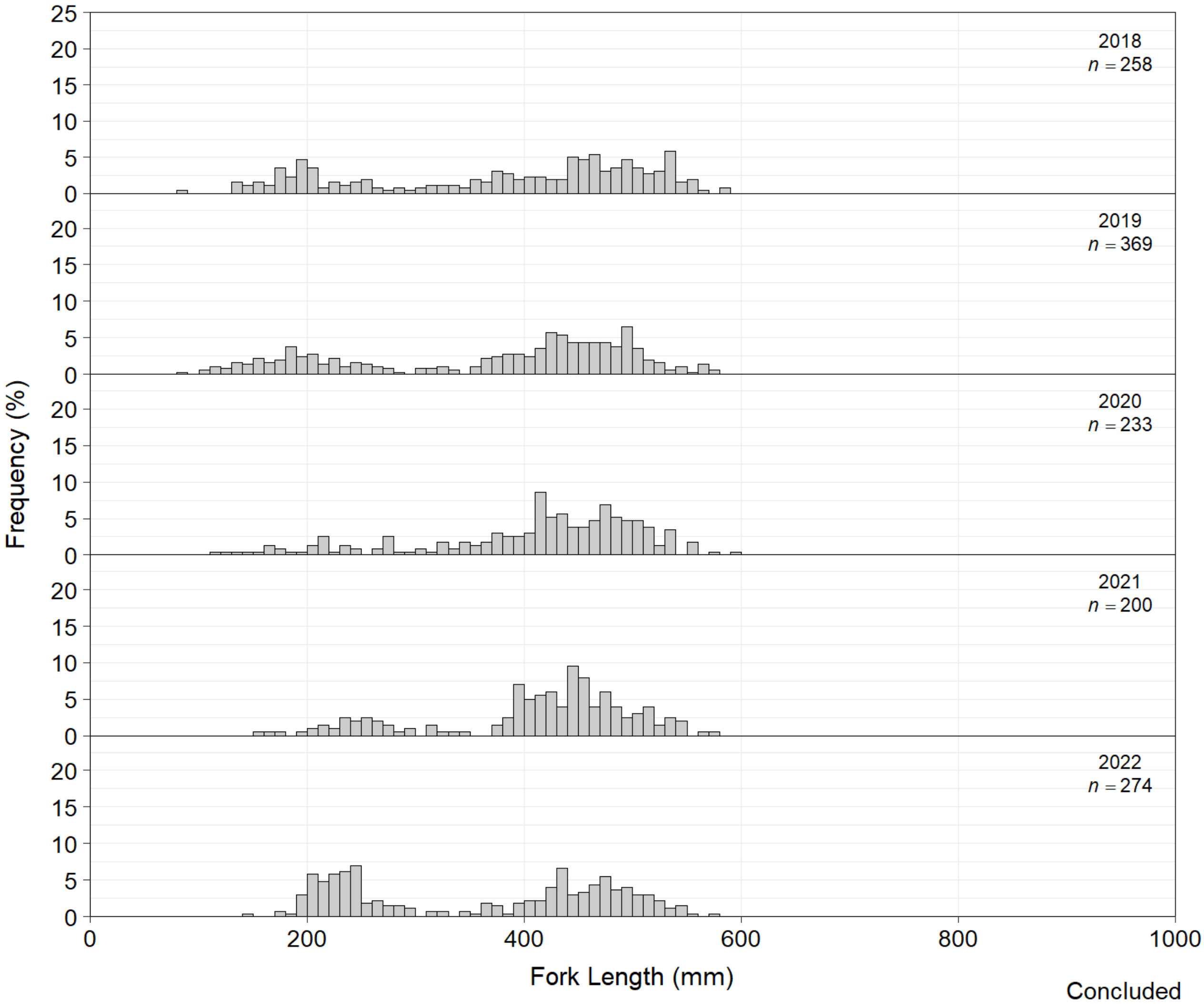
Figure F21: Continued.



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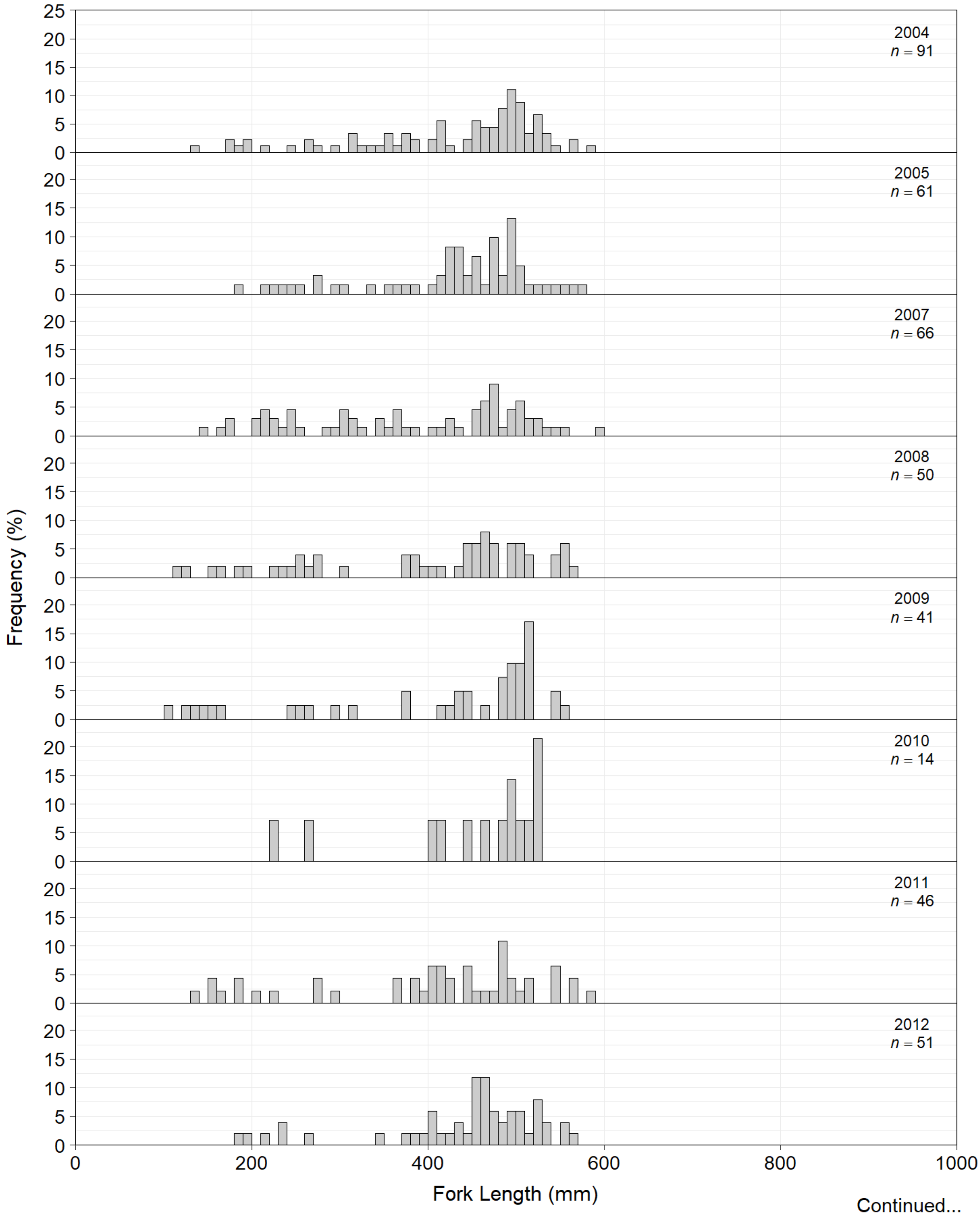

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Figure F22: Length-frequency distributions by year for Largescale Sucker captured by boat electroshocking in Sections 5, 6, 7, and 9 of the Peace River, 2002 to 2022.

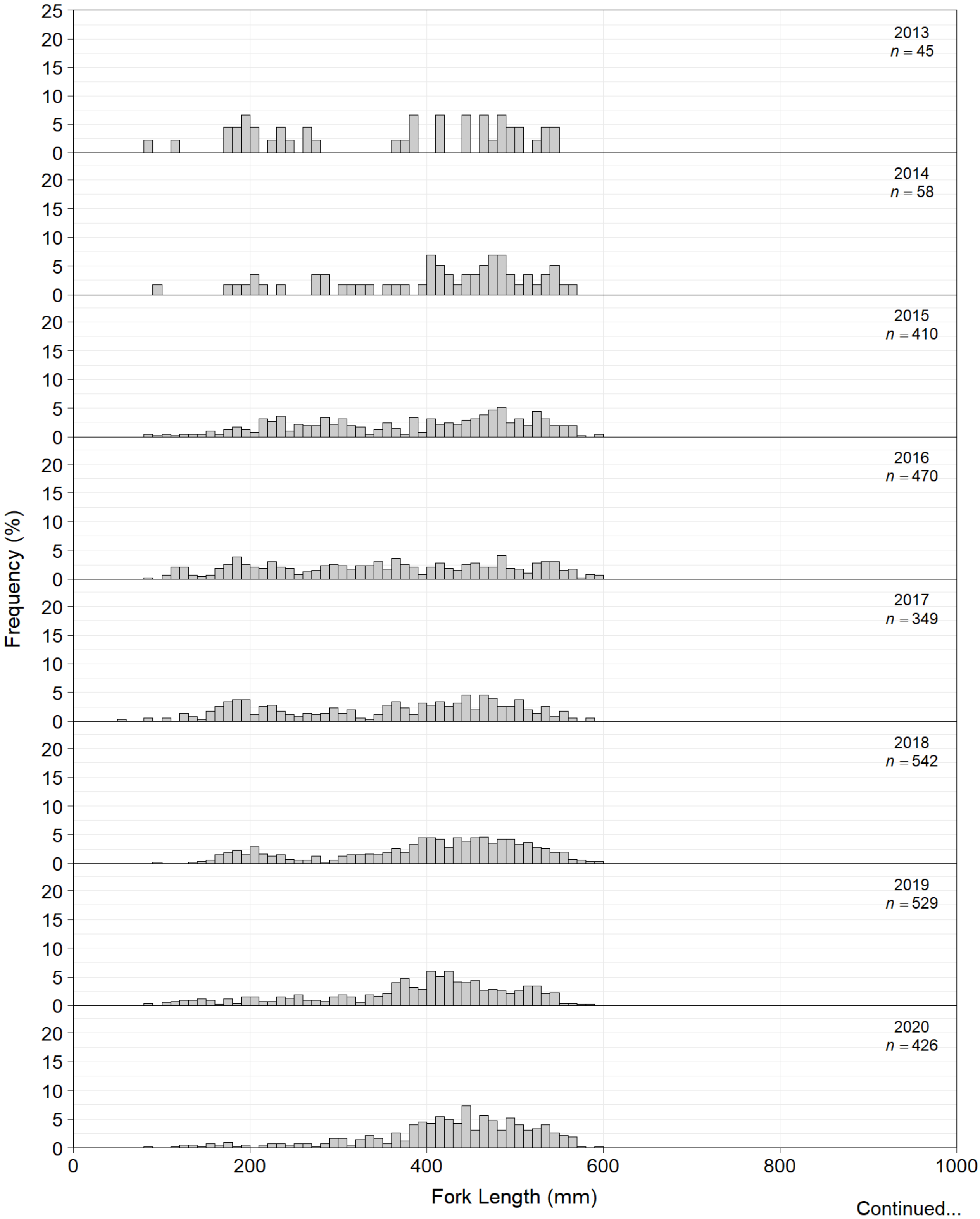

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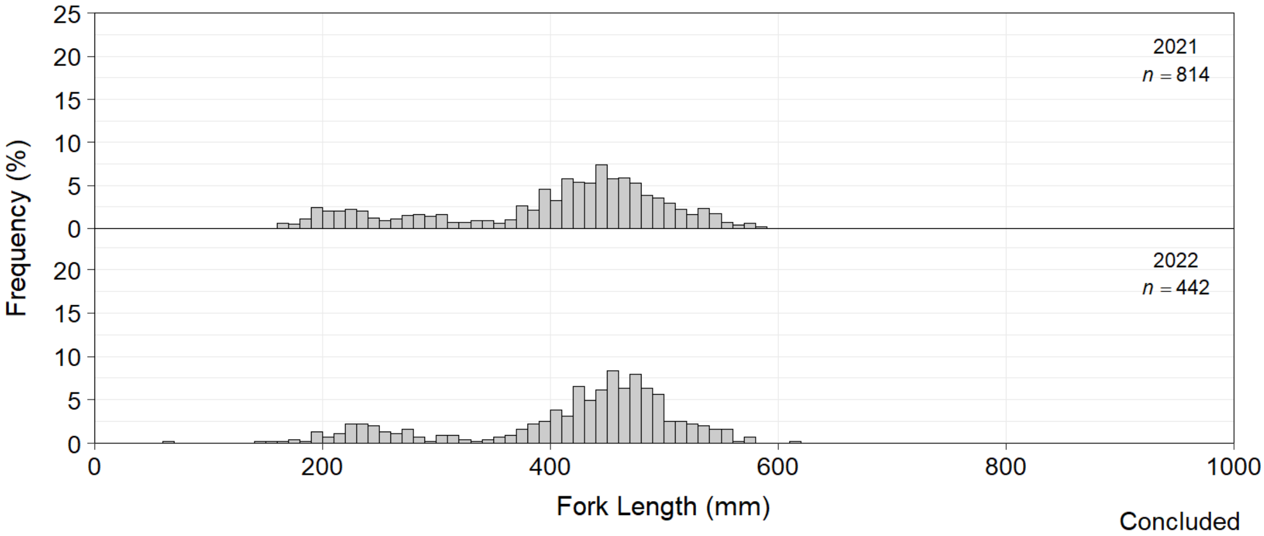
Figure F22: Continued.



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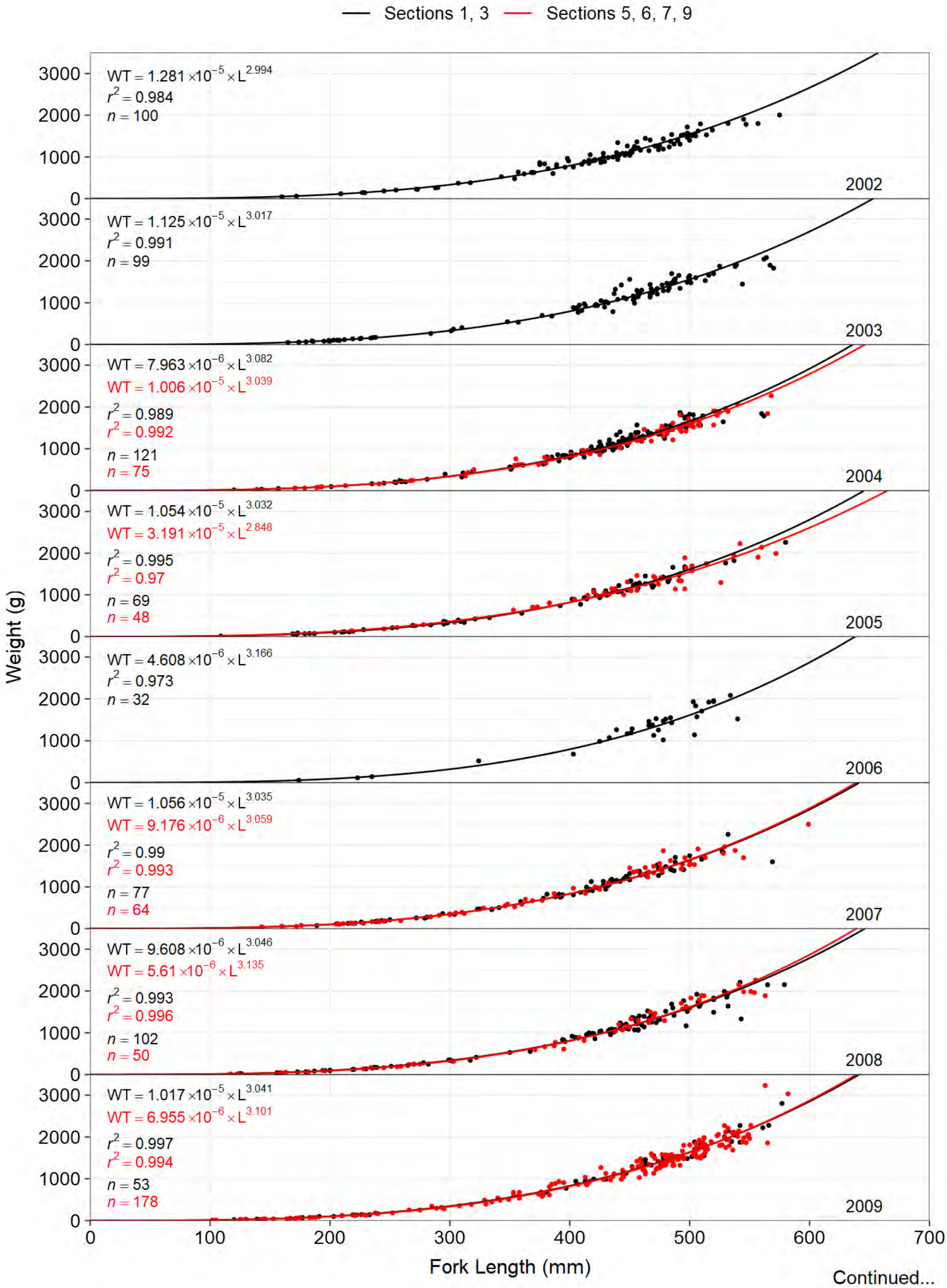

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Figure F23: Length-weight regressions for Largescale Sucker captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).

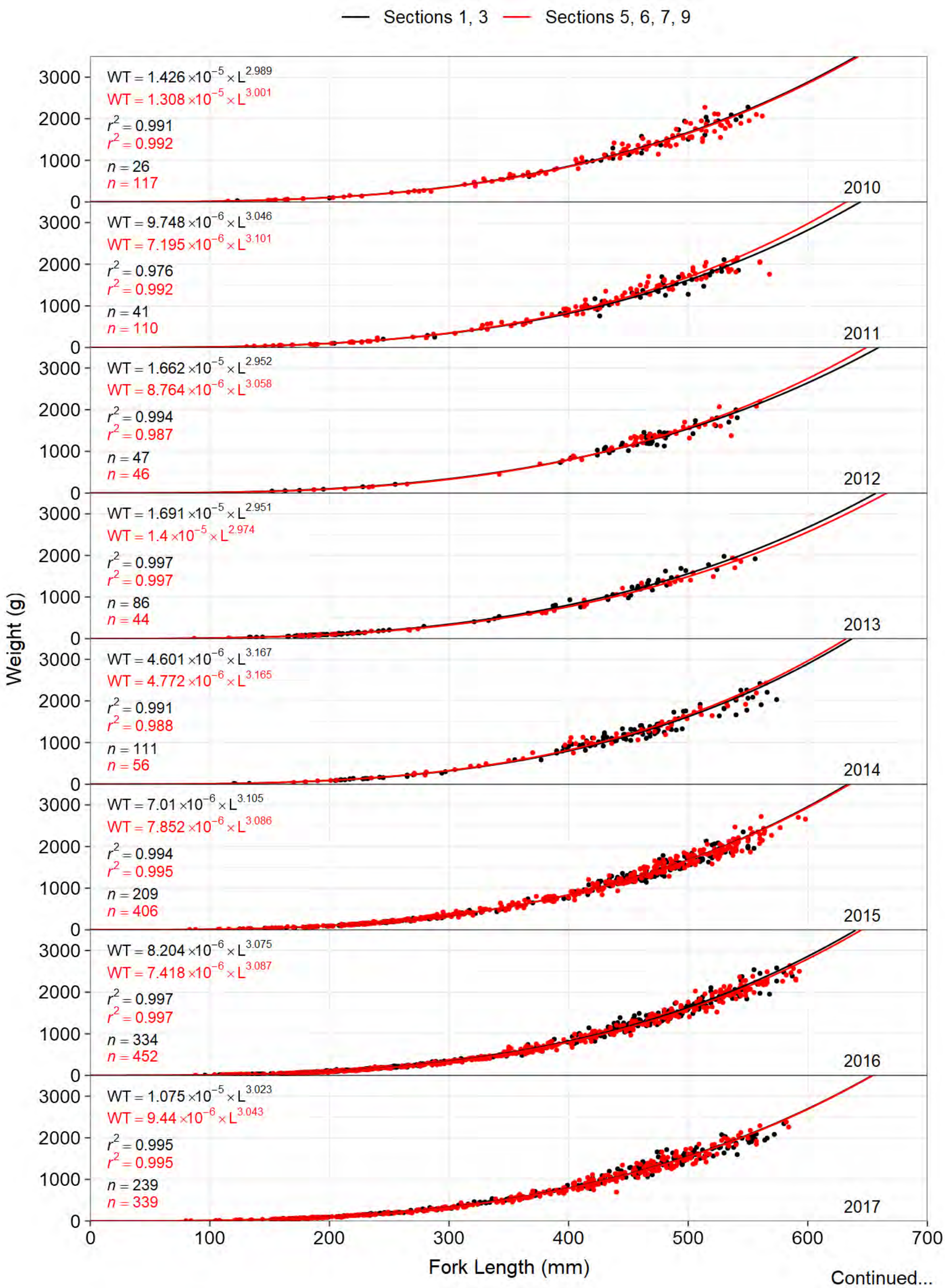

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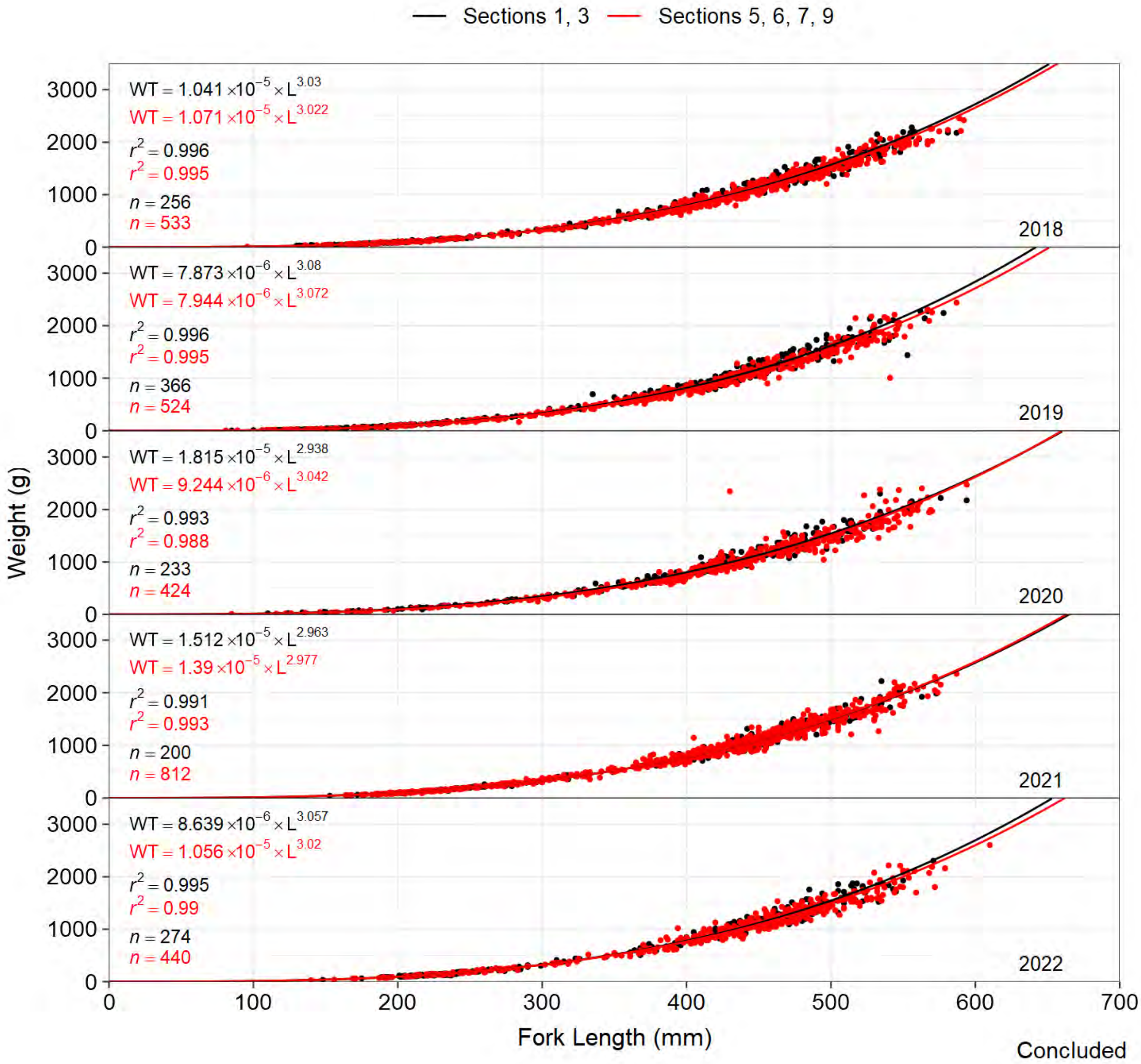
Figure F23: Continued.



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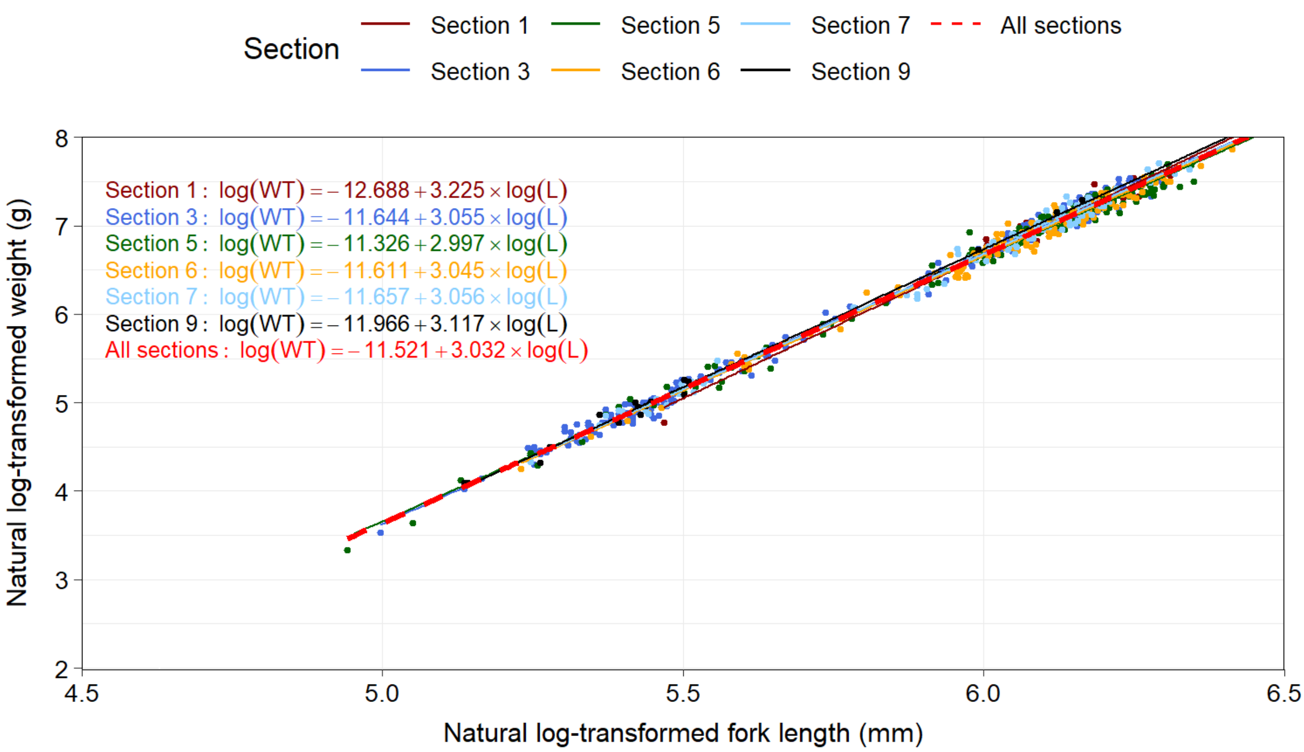

Figure F24: Log-log relationship between weight and fork length for Largescale Sucker captured by boat electroshocking in sampled sections of the Peace River, 2022.

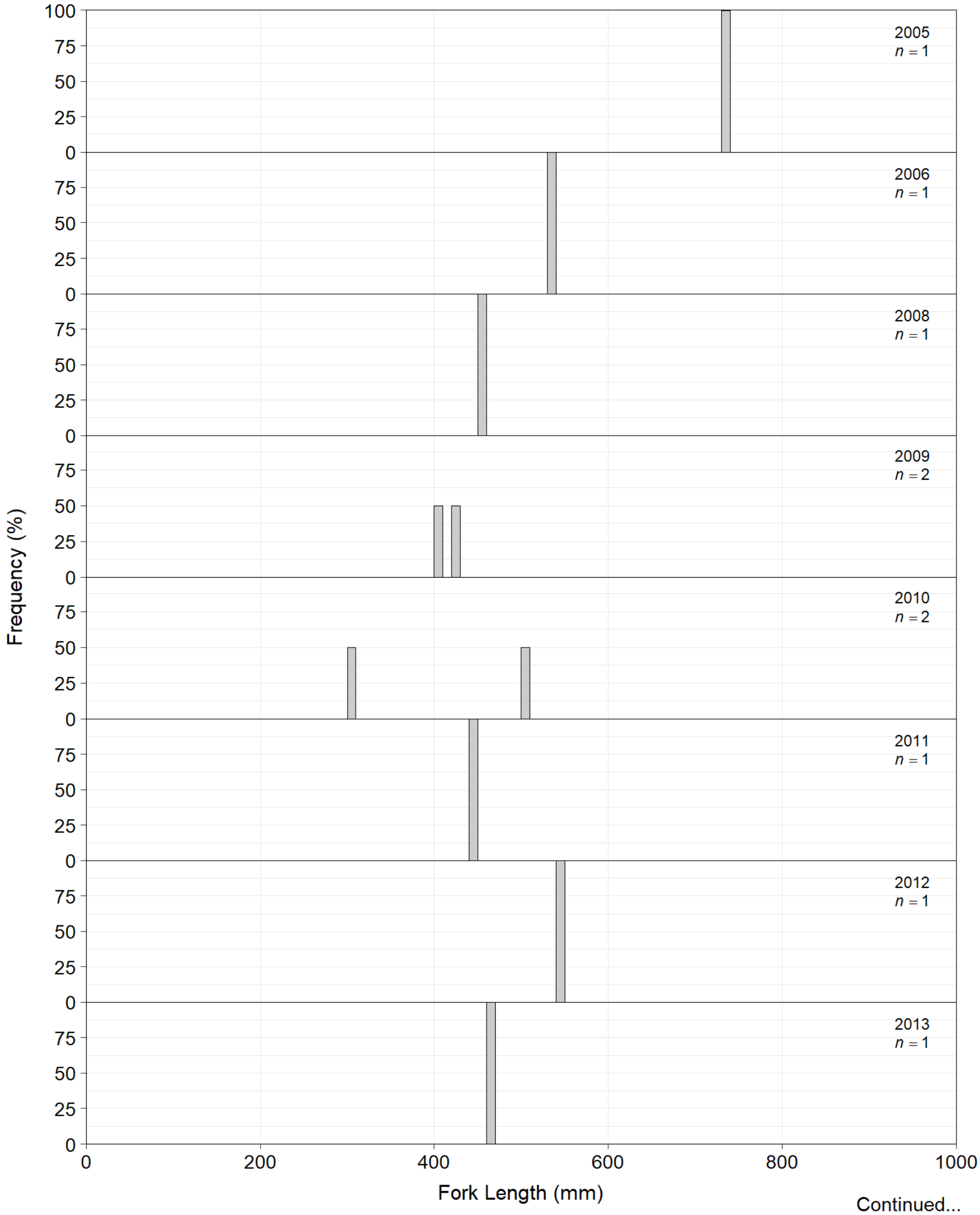

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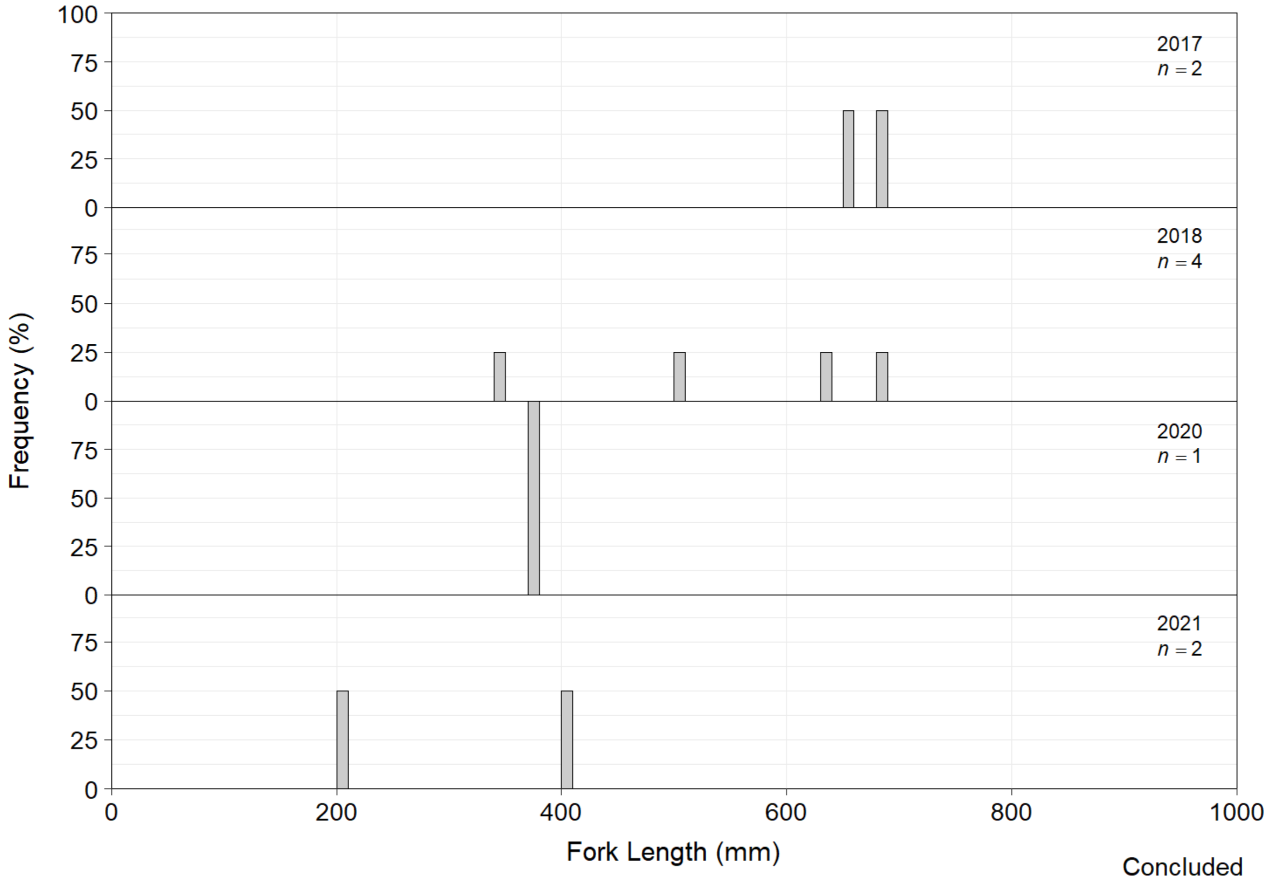
Figure F25: Length-frequency distributions by year for Northern Pike captured by boat electroshocking in Sections 1 and 3 of the Peace River, 2002 to 2022.



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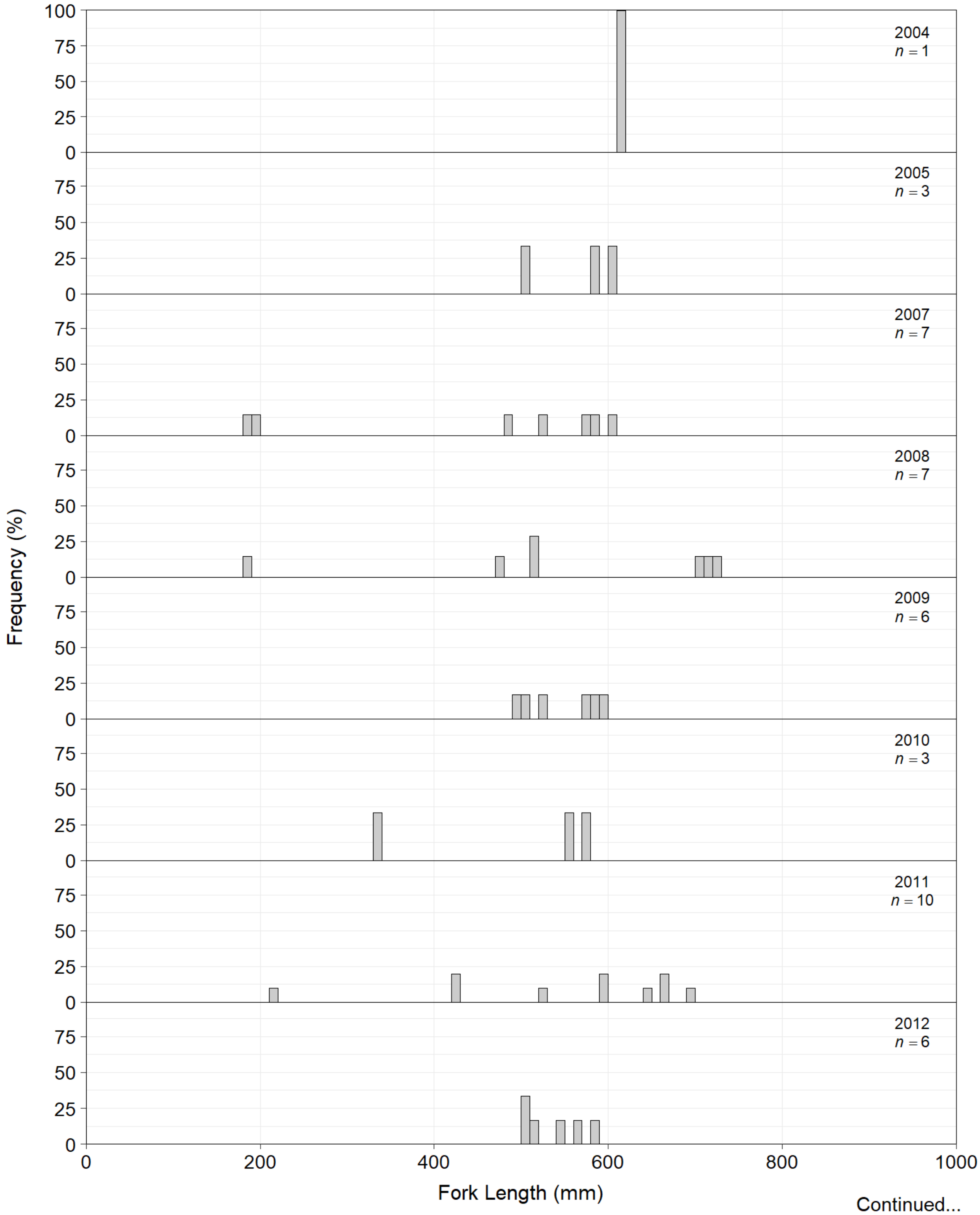

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Figure F26: Length-frequency distributions by year for Northern Pike captured by boat electroshocking in Sections 5, 6, 7, and 9 of the Peace River, 2002 to 2022.

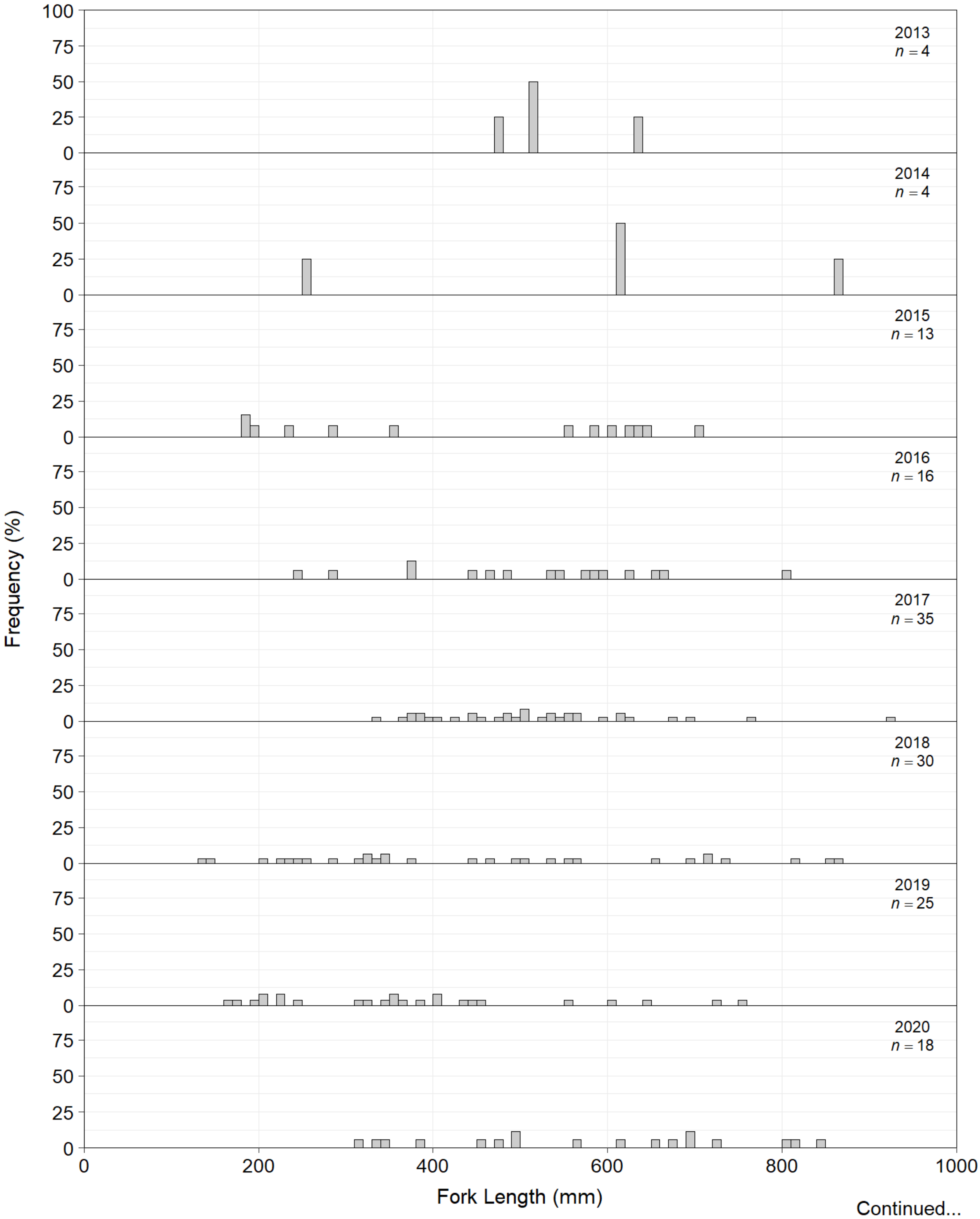

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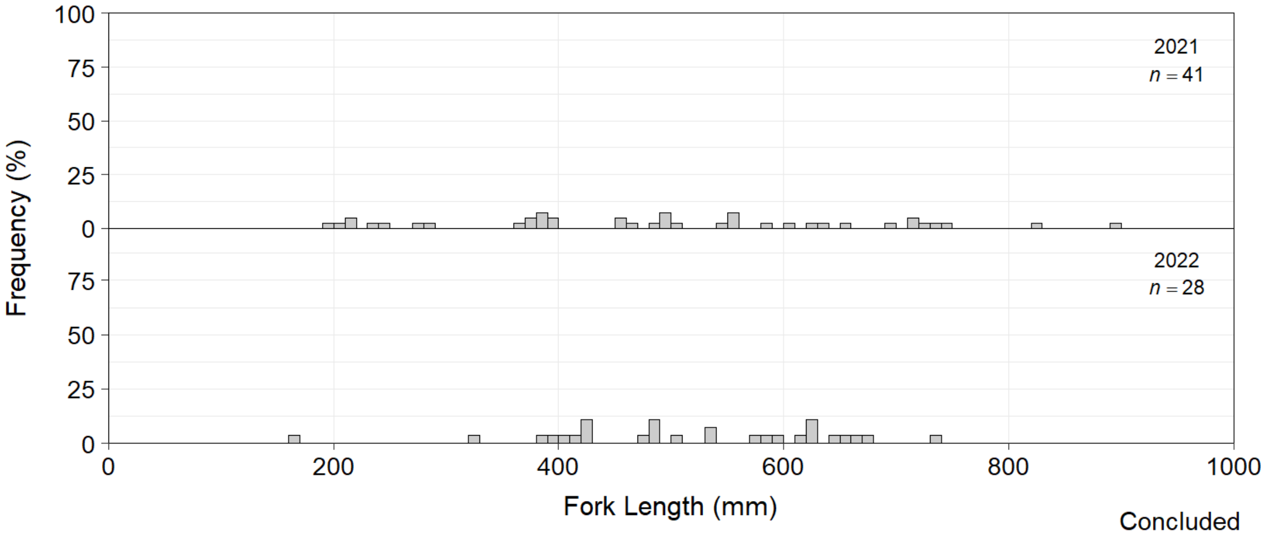
Figure F26: Continued.



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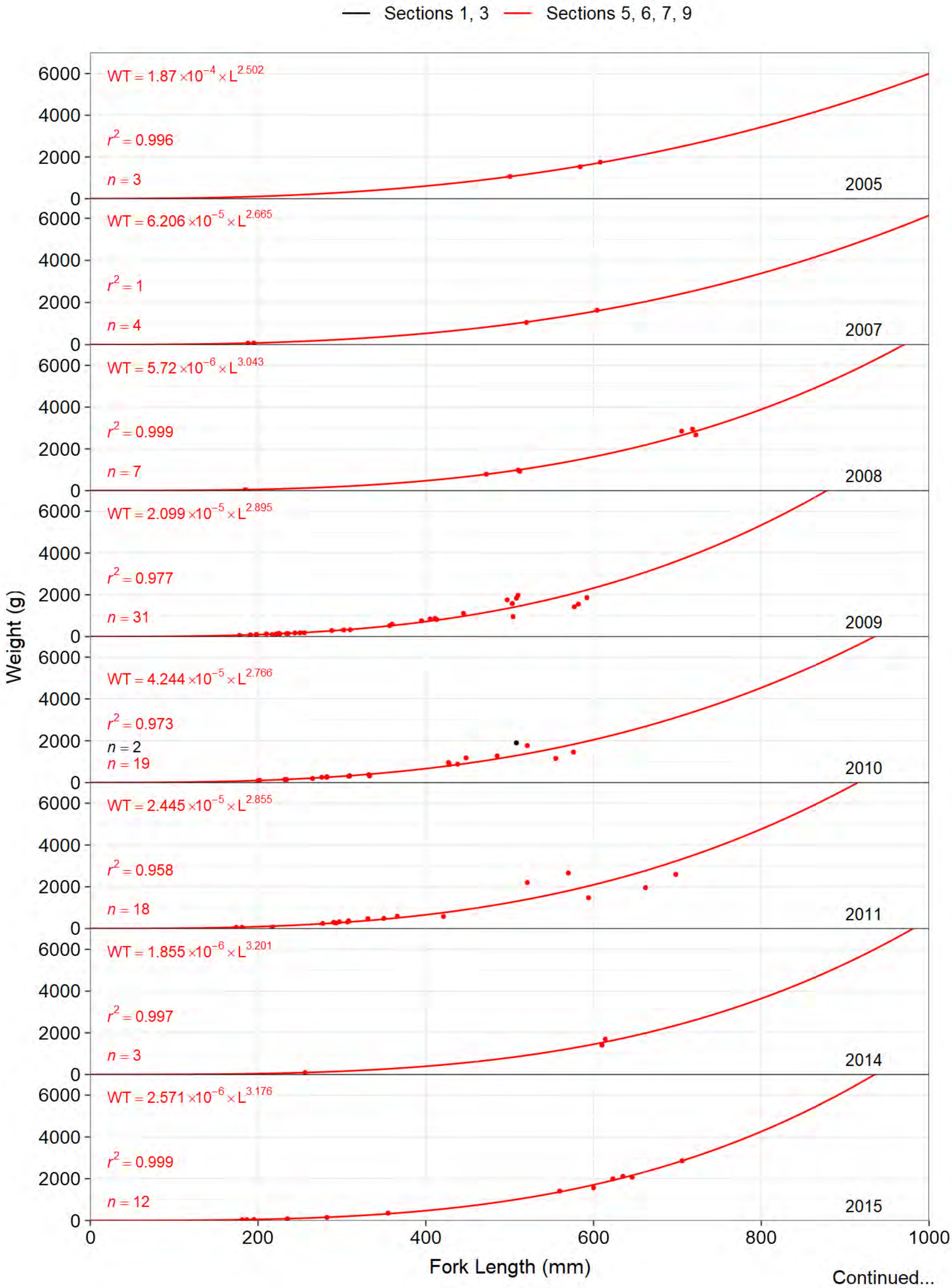

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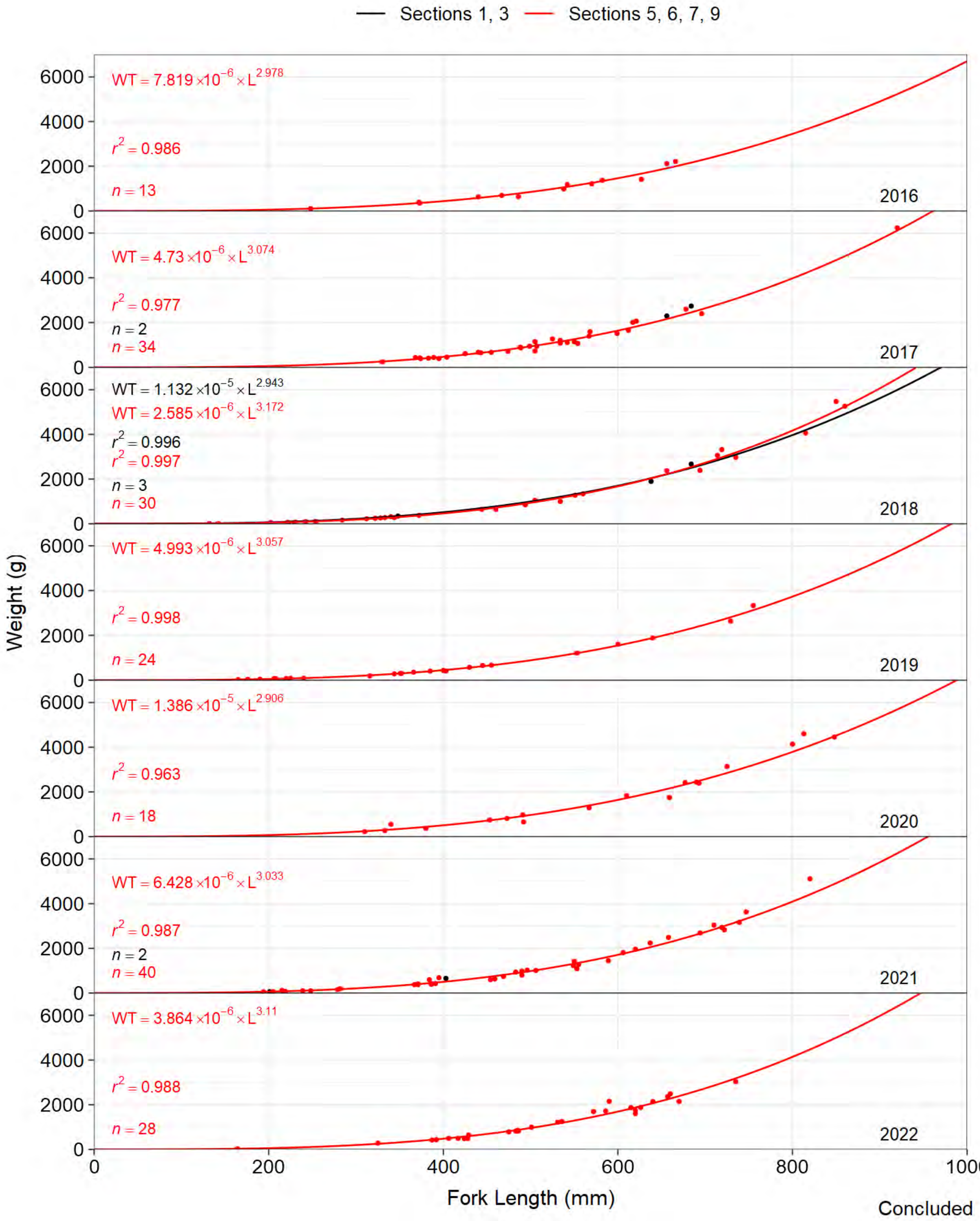
Figure F27: Length-weight regressions for Northern Pike captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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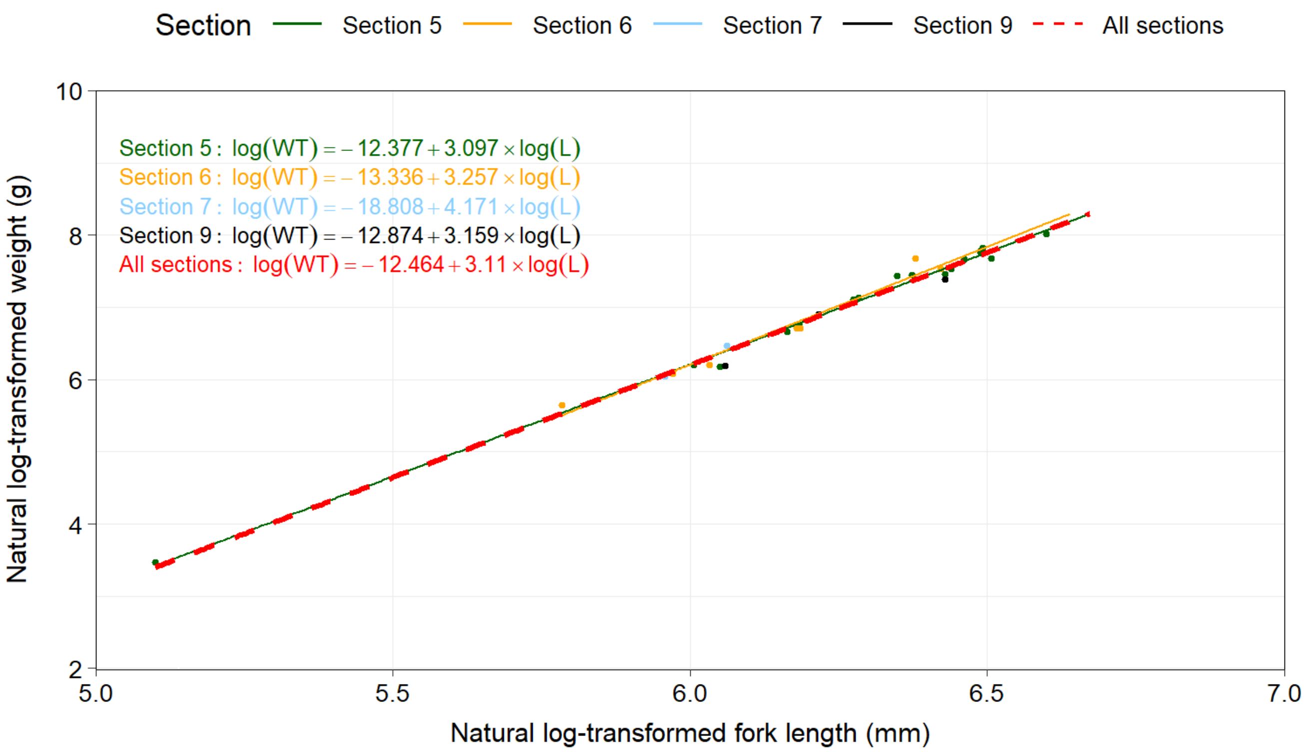

Figure F28: Log-log relationship between weight and fork length for Northern Pike captured by boat electroshocking in sampled sections of the Peace River, 2022.

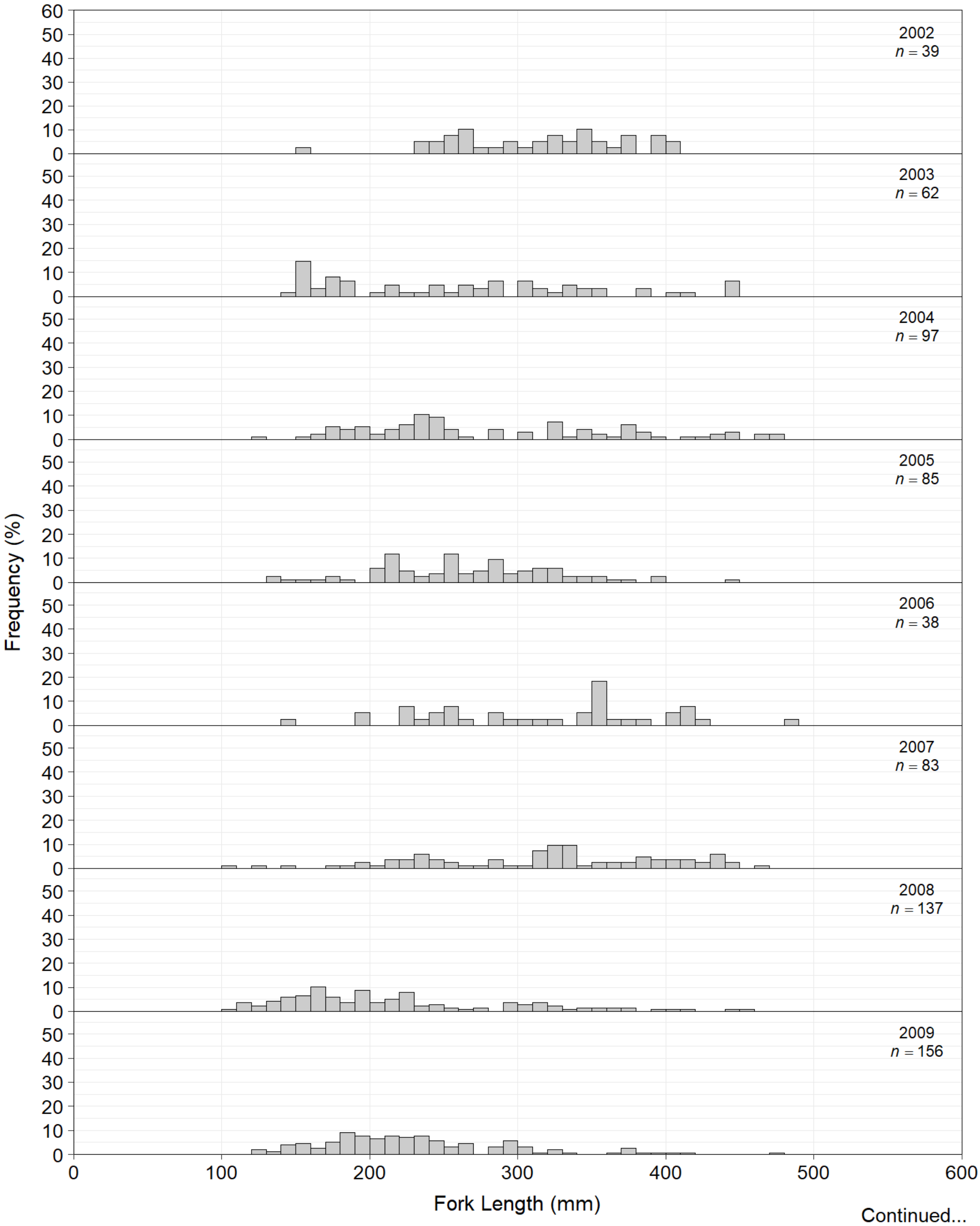

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Figure F29: Length-frequency distributions by year for Rainbow Trout captured by boat electroshocking in Sections 1 and 3 of the Peace River, 2002 to 2022.

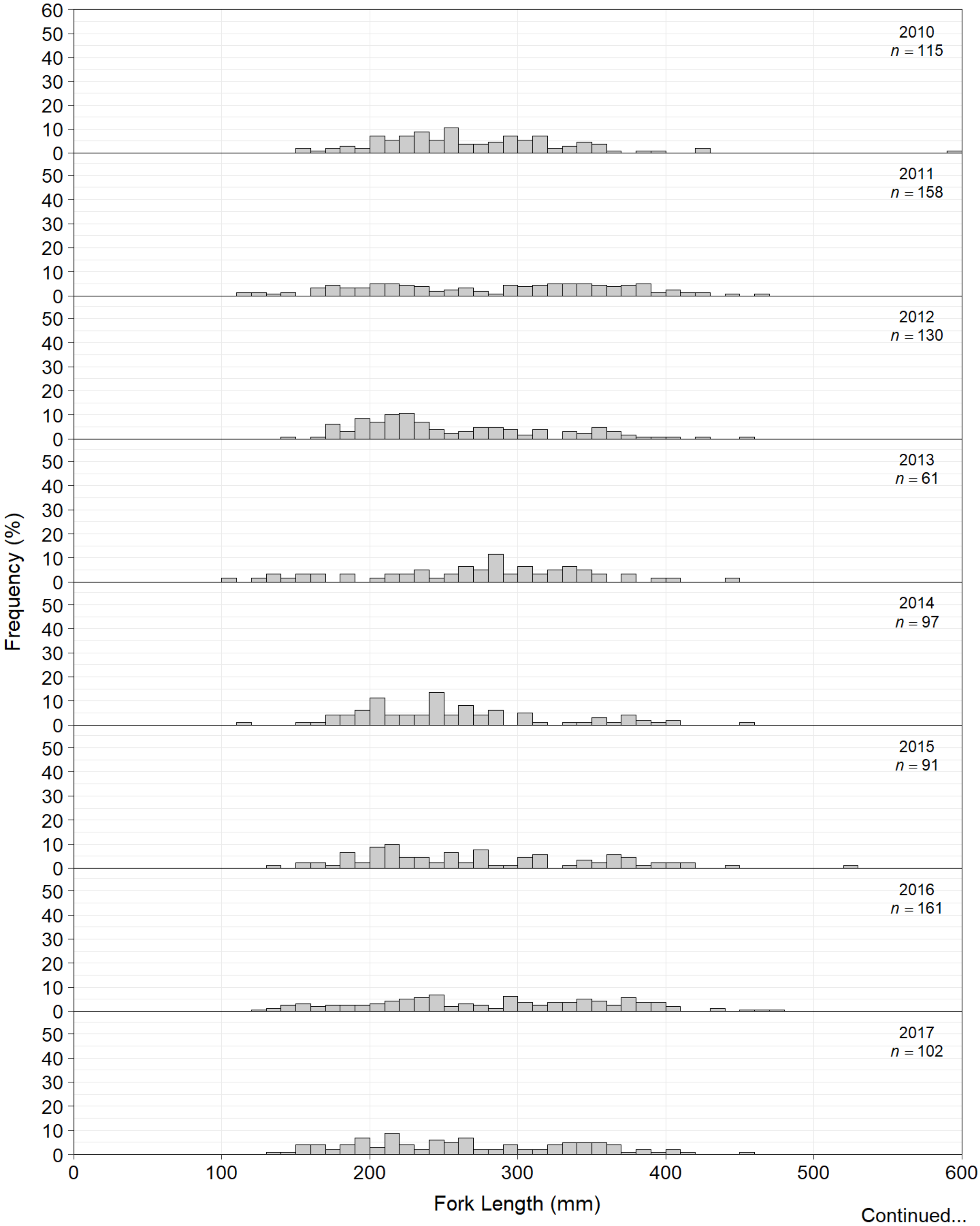

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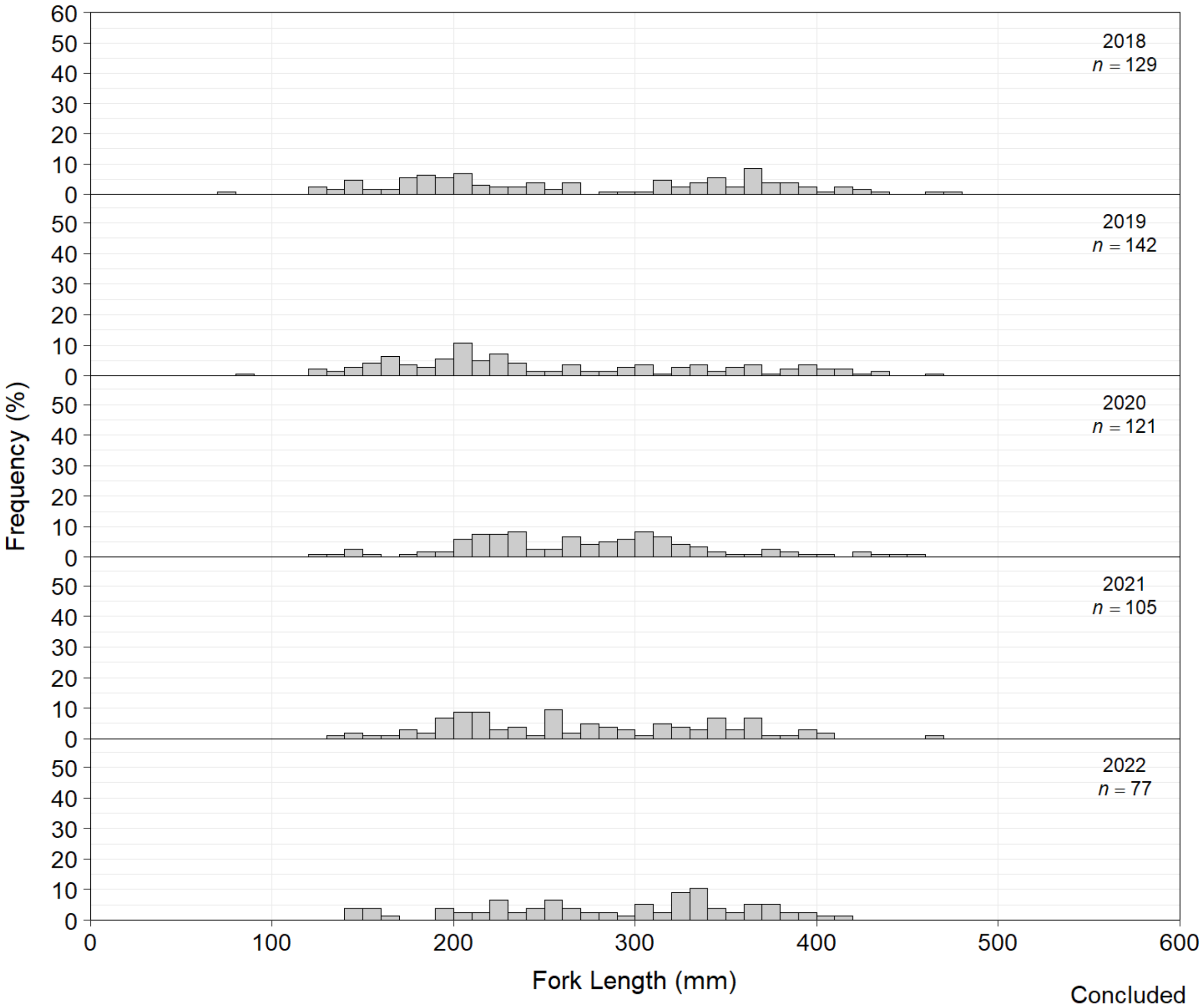
Figure F29: Continued.



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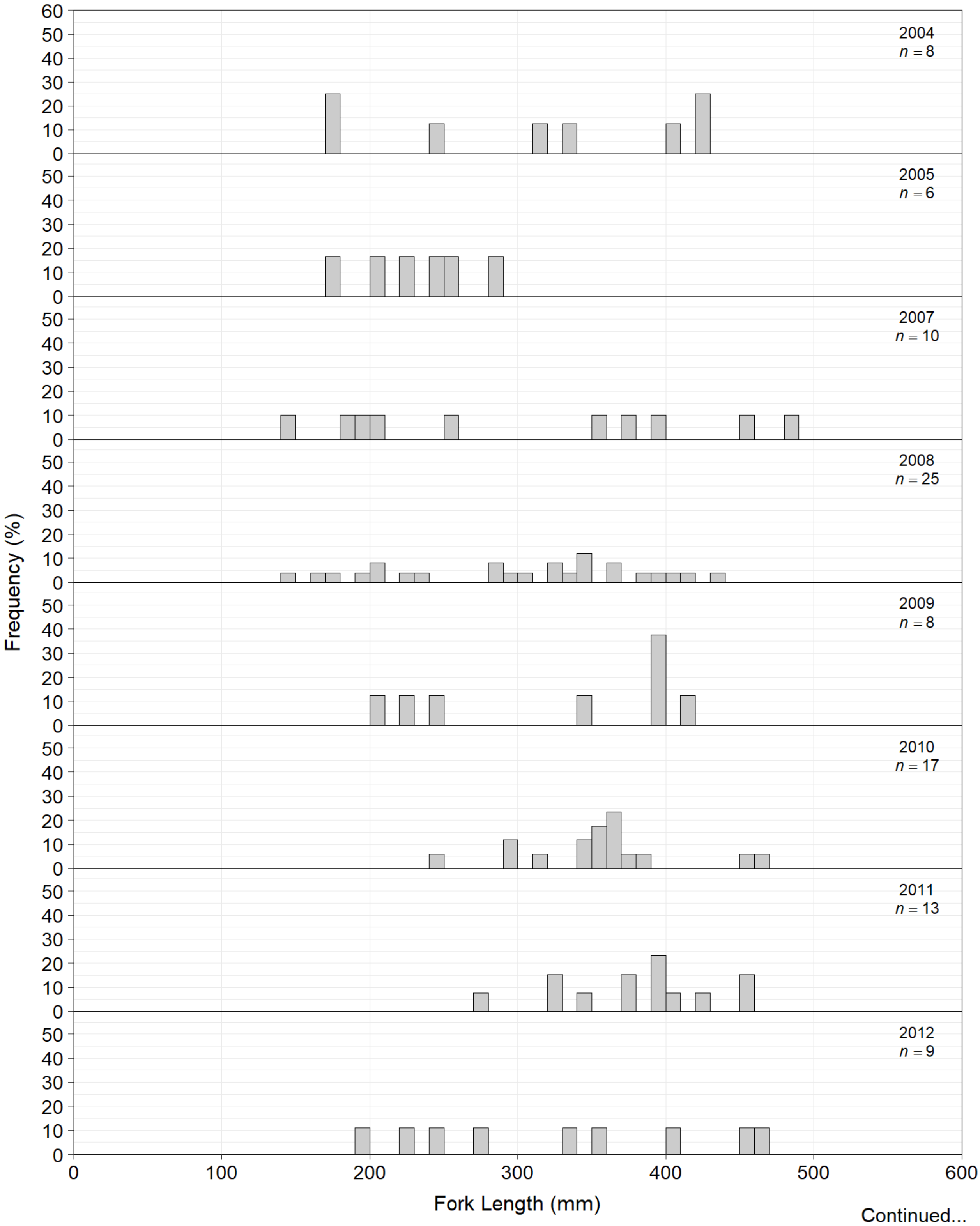

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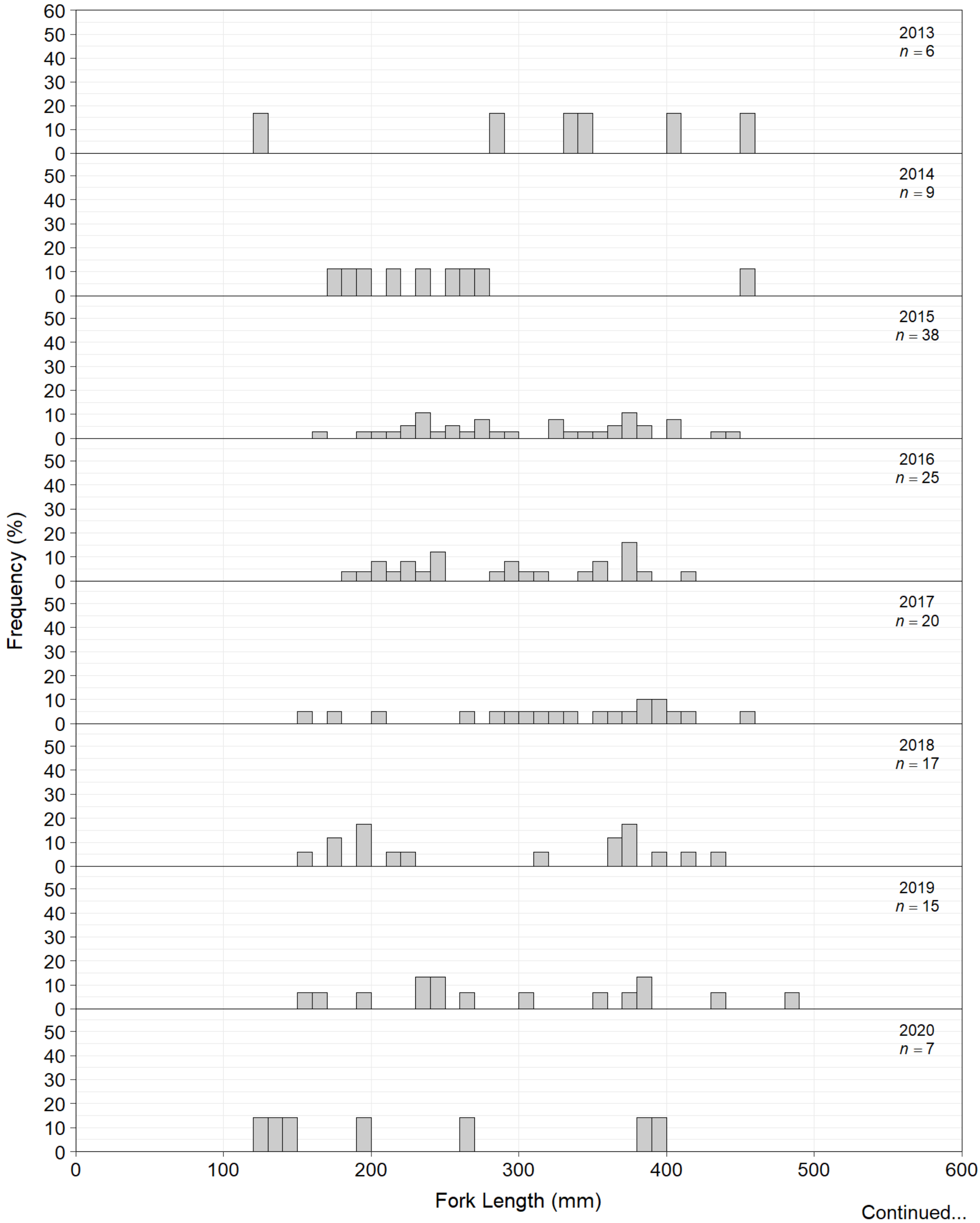
Figure F30: Length-frequency distributions by year for Rainbow Trout captured by boat electroshocking in Sections 5, 6, 7, and 9 of the Peace River, 2002 to 2022.



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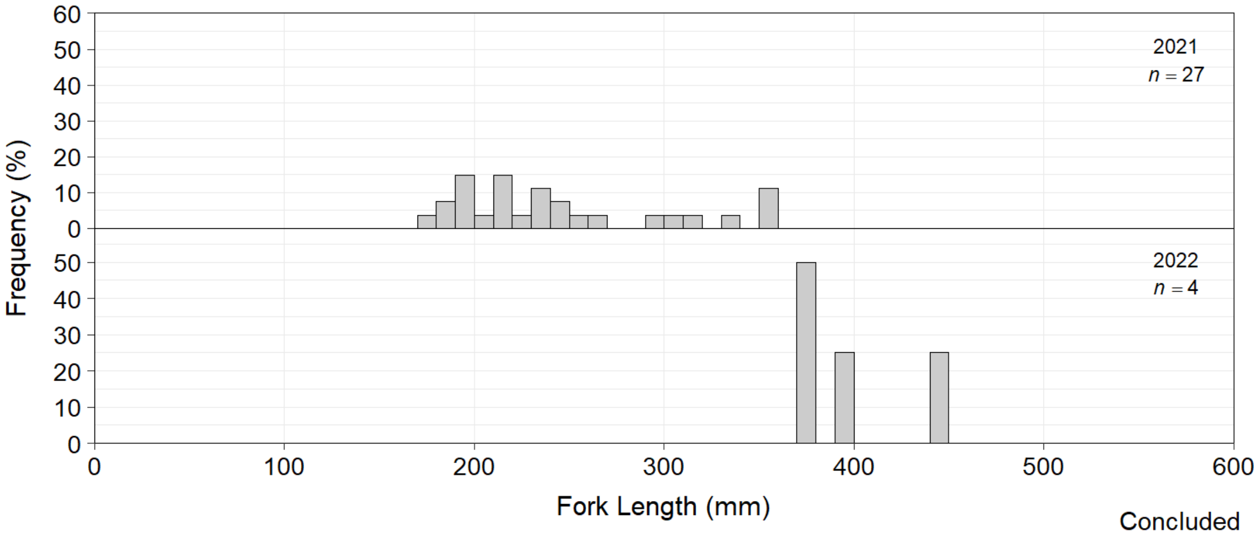

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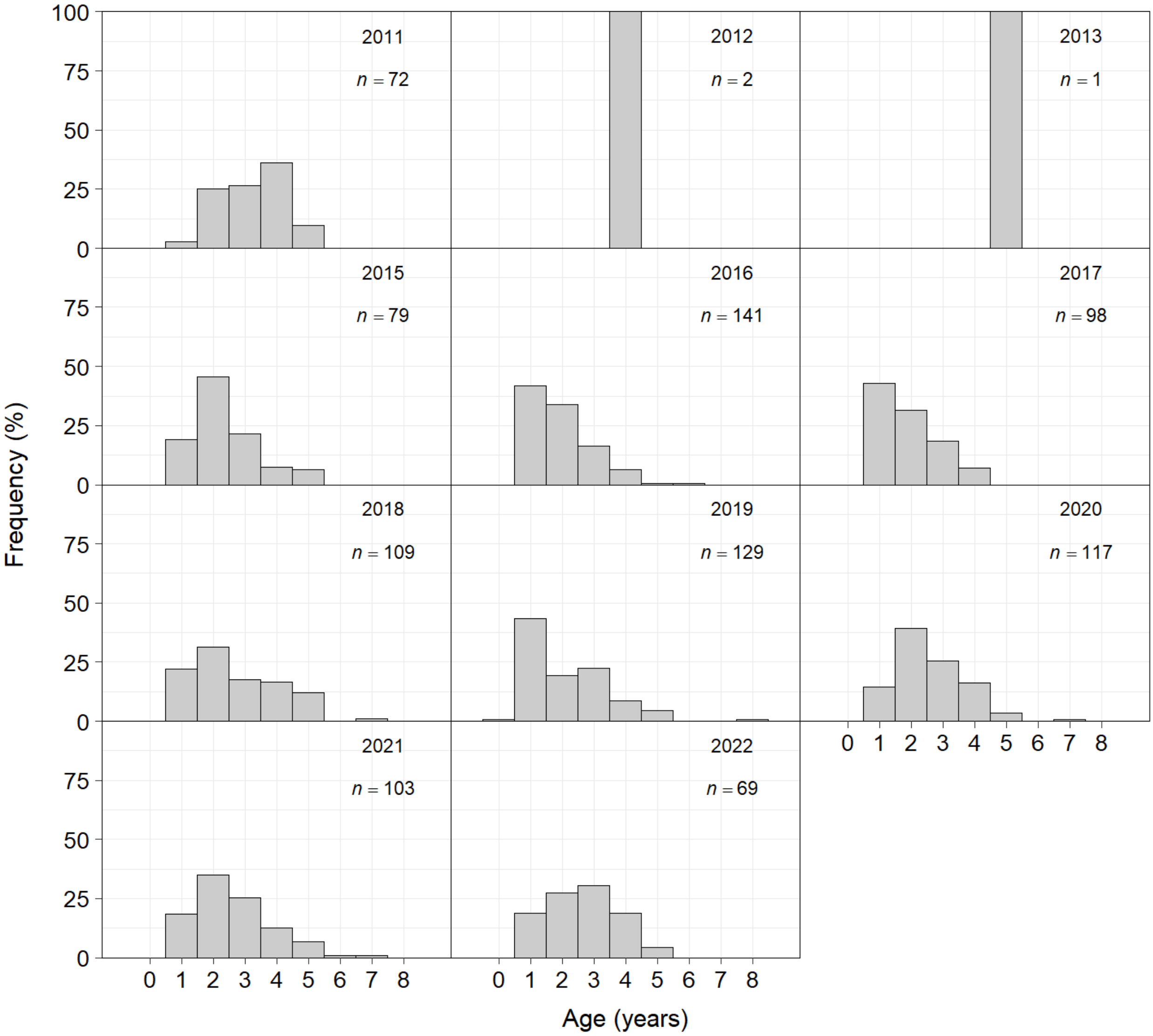

Figure F31: Age-frequency distributions by year for Rainbow Trout captured by boat electroshocking in Sections 1 and 3 of the Peace River, 2002 to 2022.

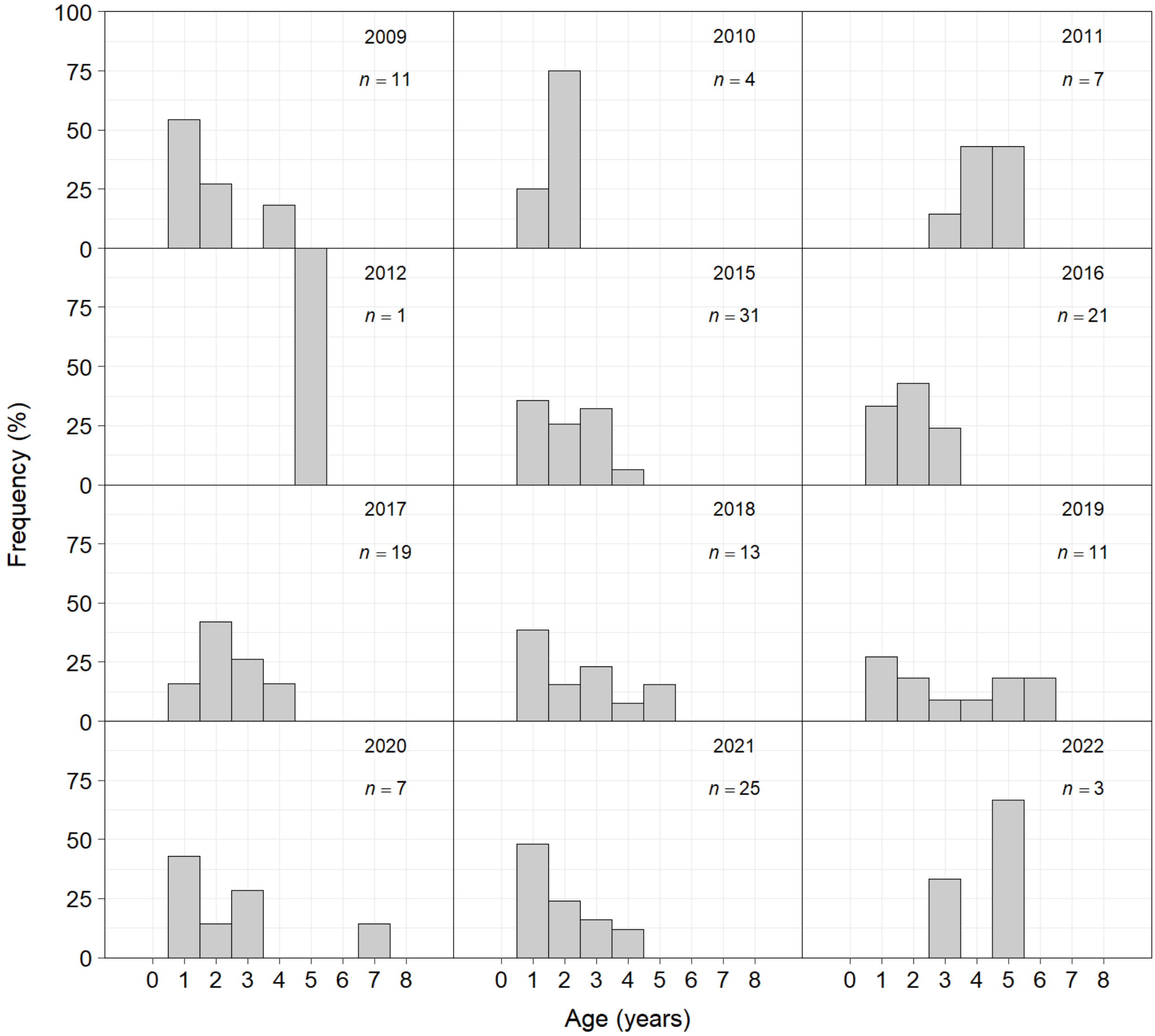

Figure F32: Age-frequency distributions by year for Rainbow Trout captured by boat electroshocking in Sections 5, 6, 7, and 9 of the Peace River, 2002 to 2022.

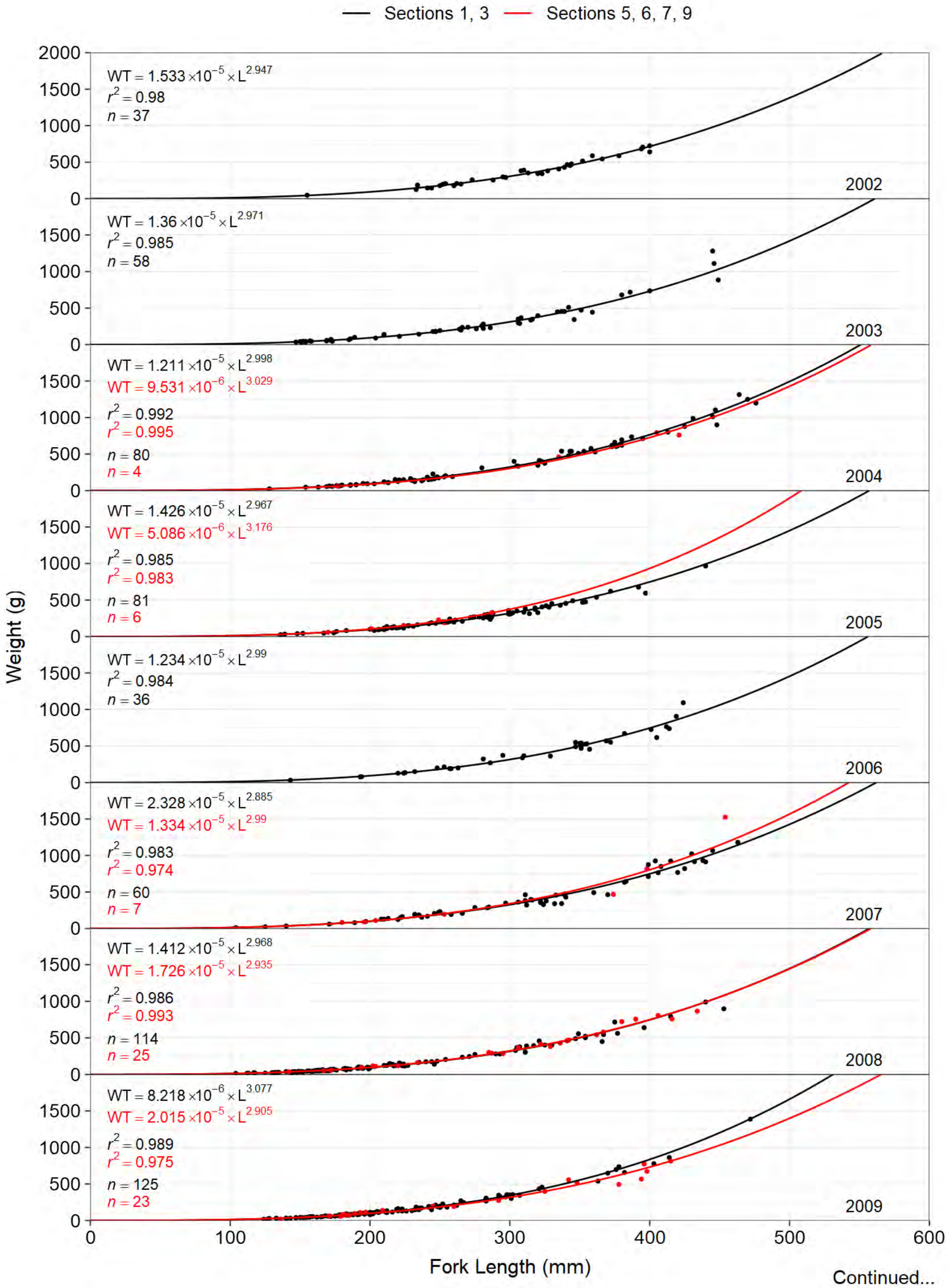

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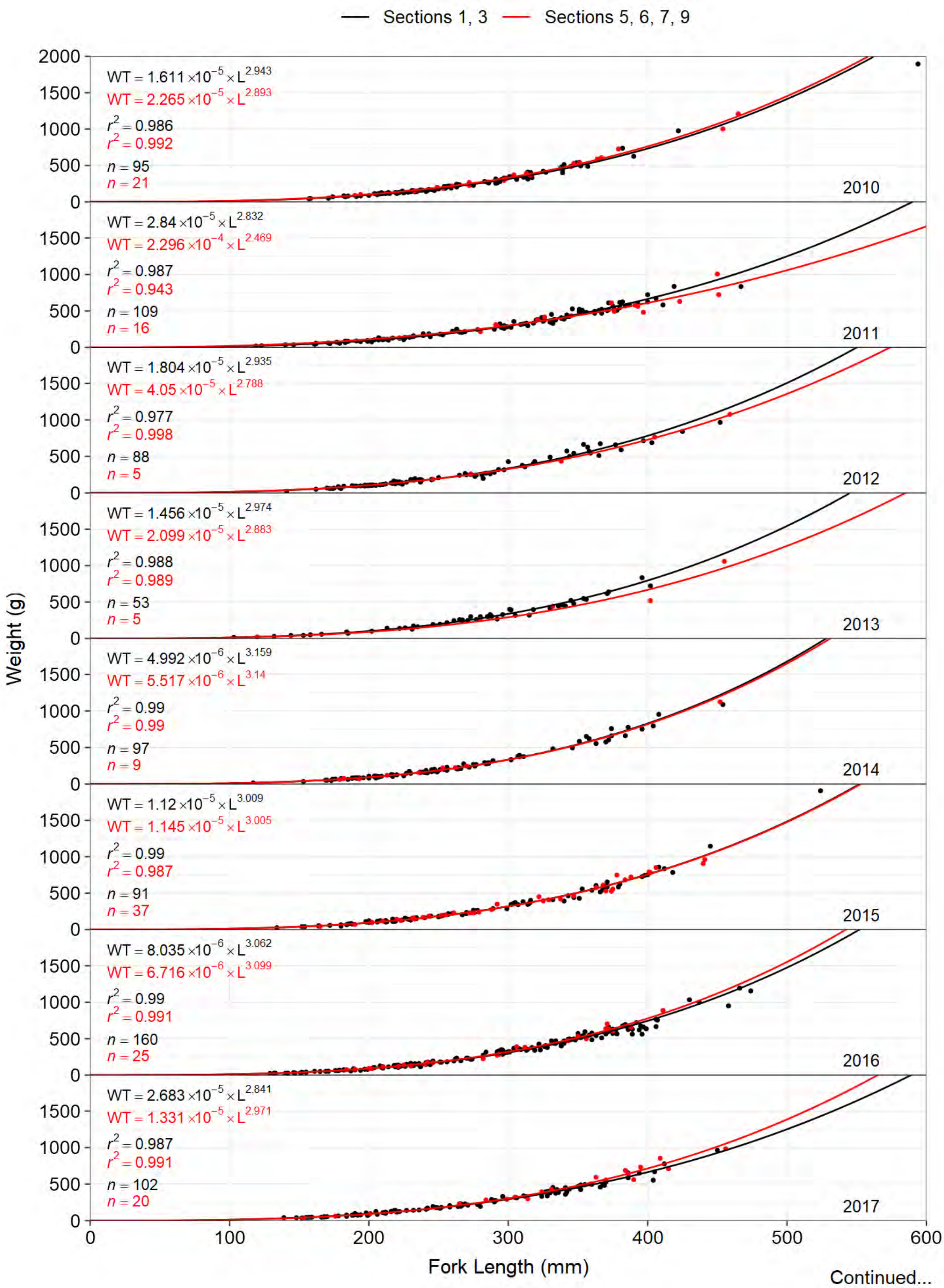
Figure F33: Length-weight regressions for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).



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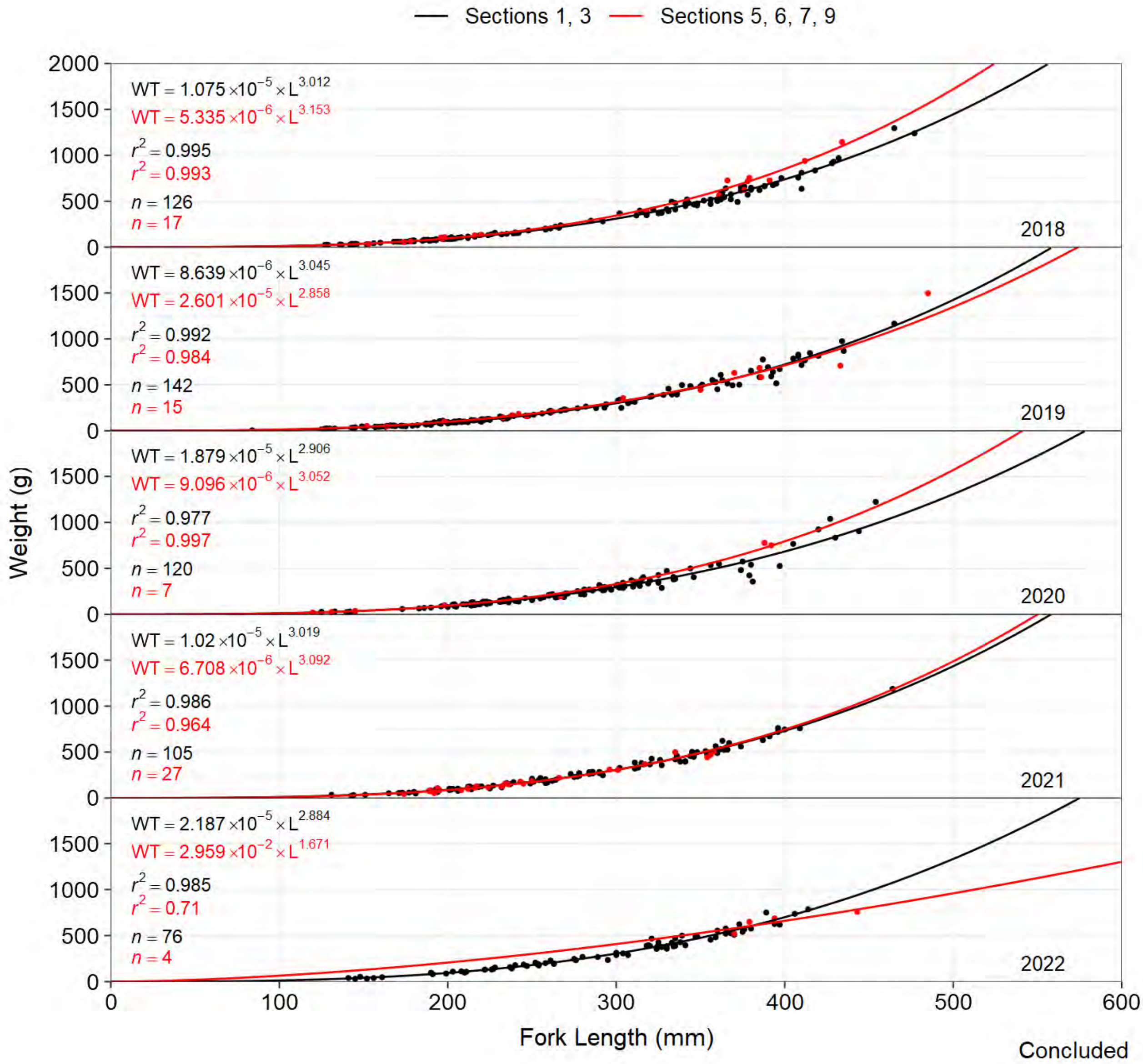

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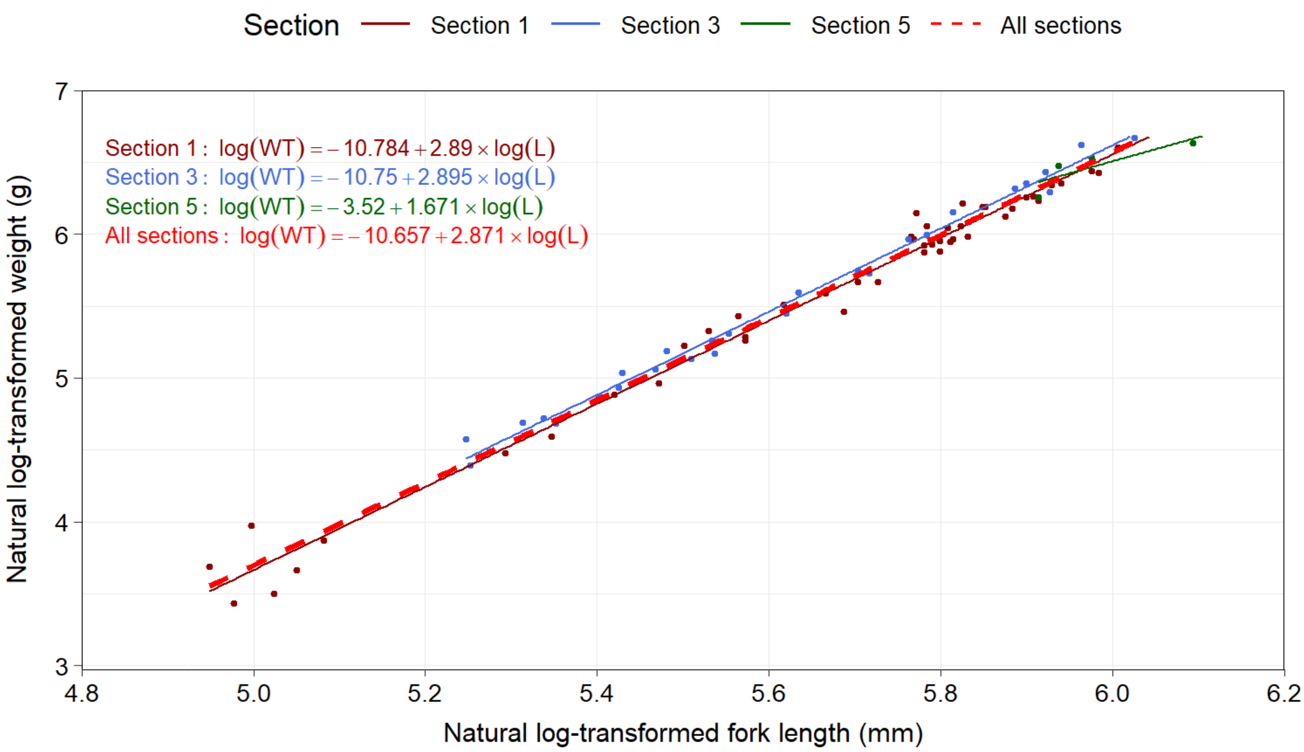

Figure F34: Log-log relationship between weight and fork length for Rainbow Trout captured by boat electroshocking in sampled sections of the Peace River, 2022.

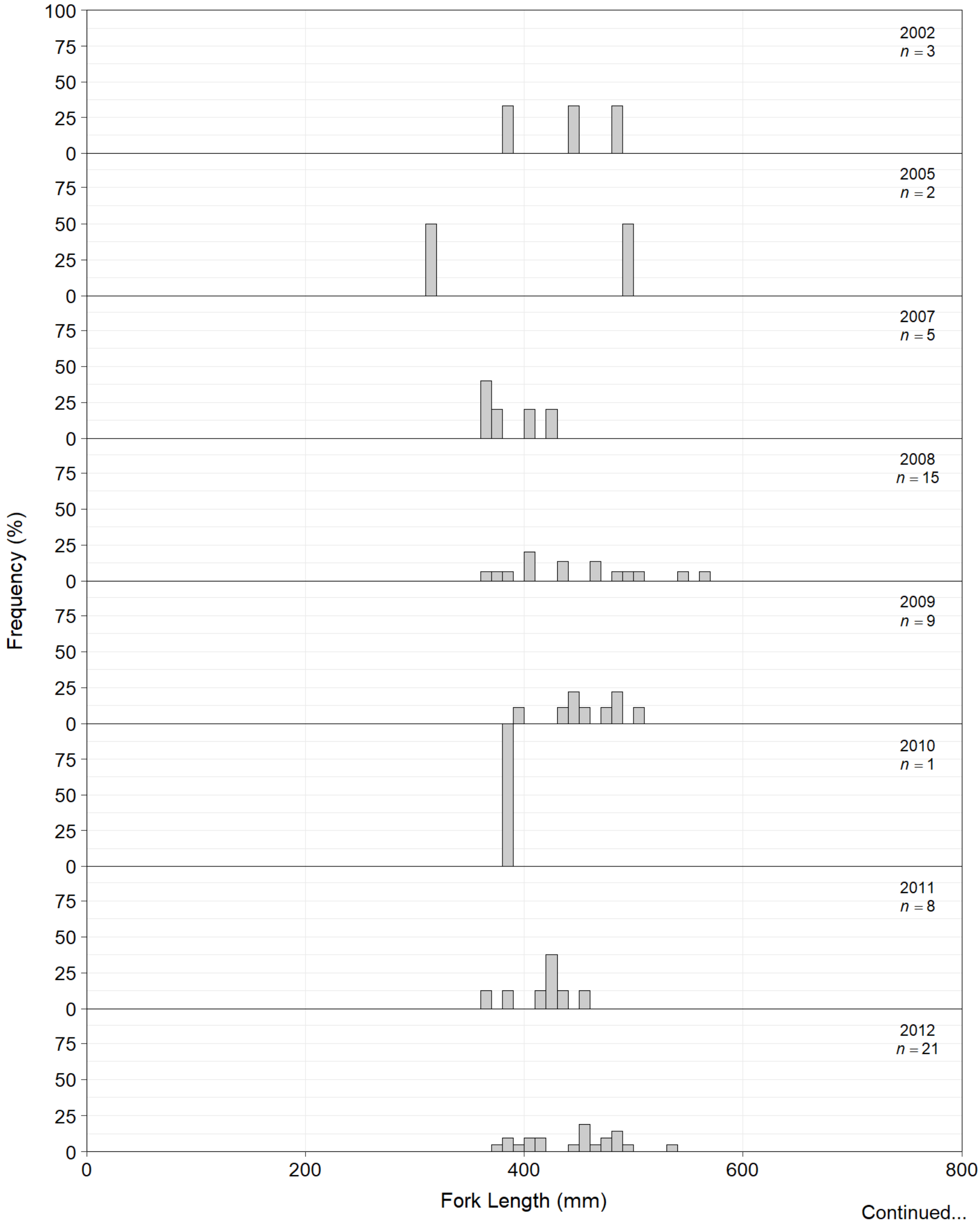

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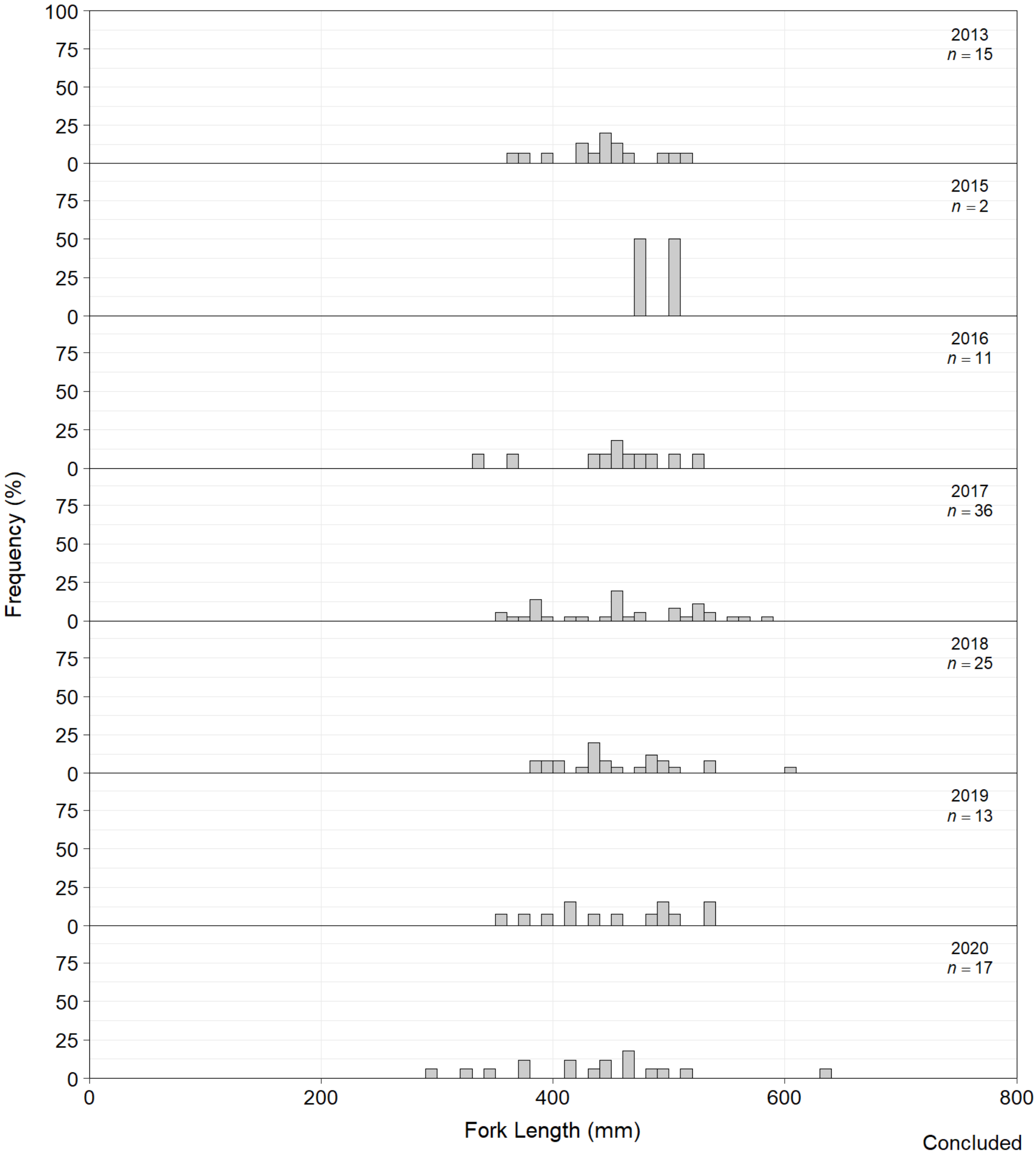
Figure F35: Length-frequency distributions by year for Walleye captured by boat electroshocking in Sections 1 and 3 of the Peace River, 2002 to 2022.



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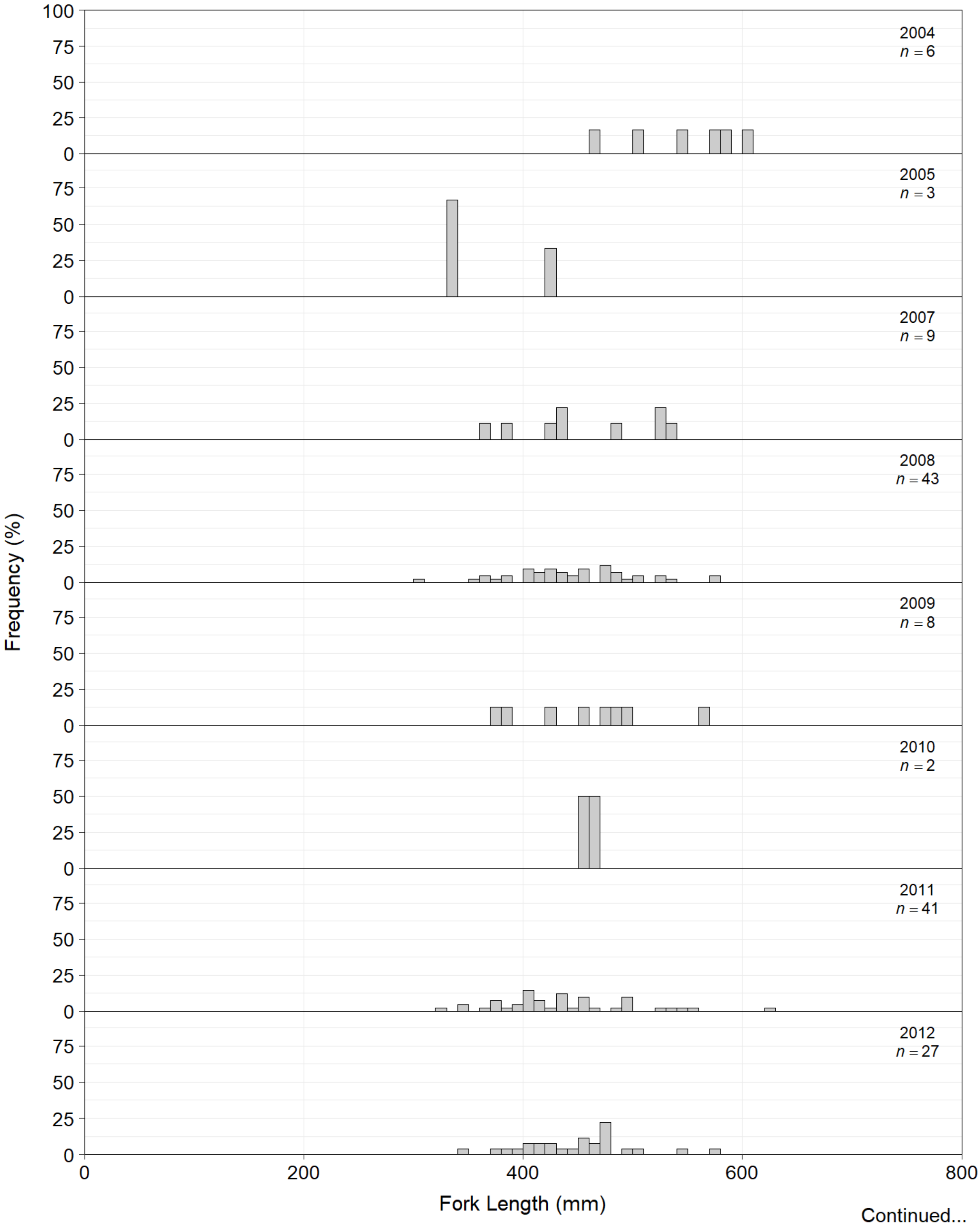

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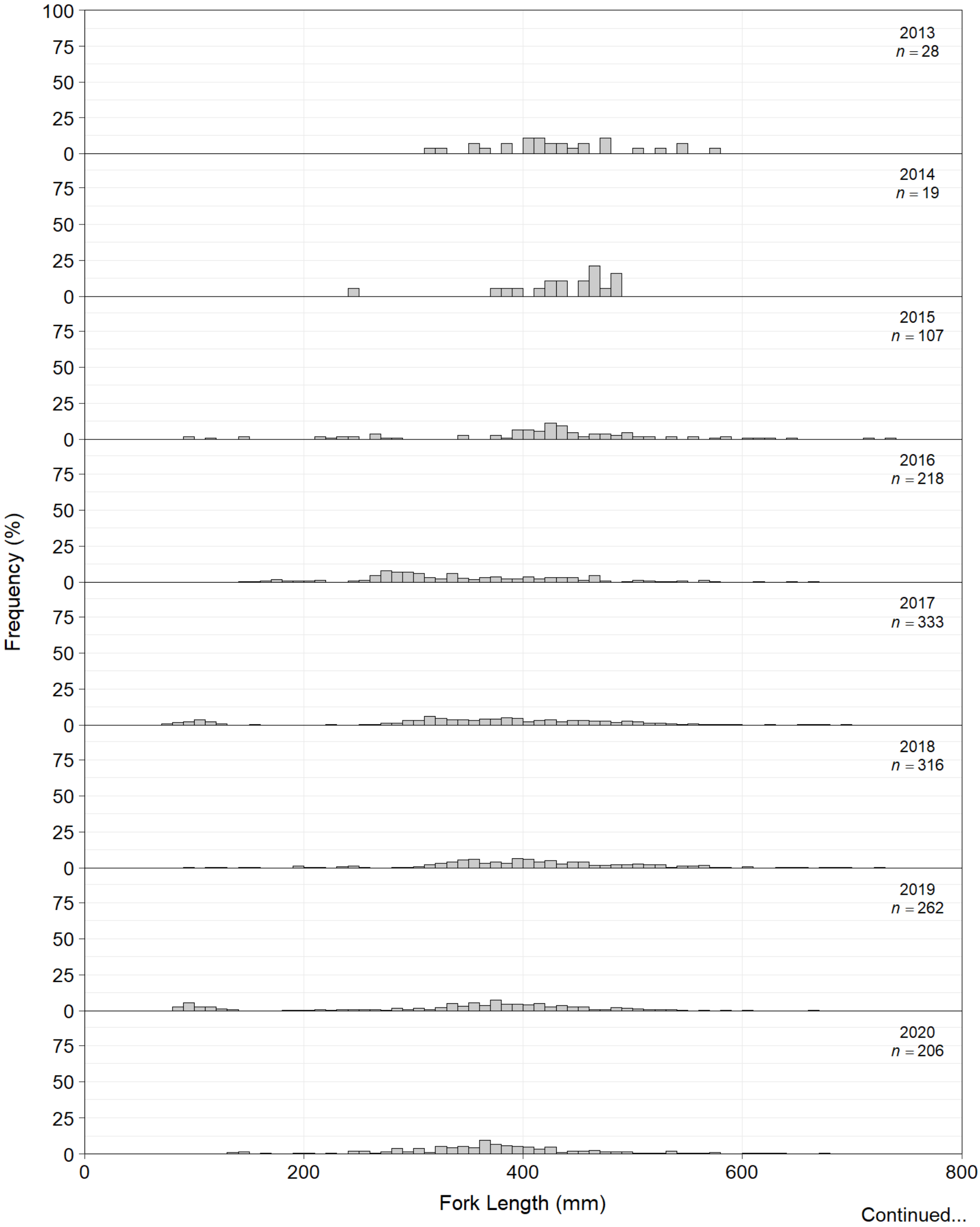
Figure F36: Length-frequency distributions by year for Walleye captured by boat electroshocking in Sections 5, 6, 7, and 9 of the Peace River, 2002 to 2022.



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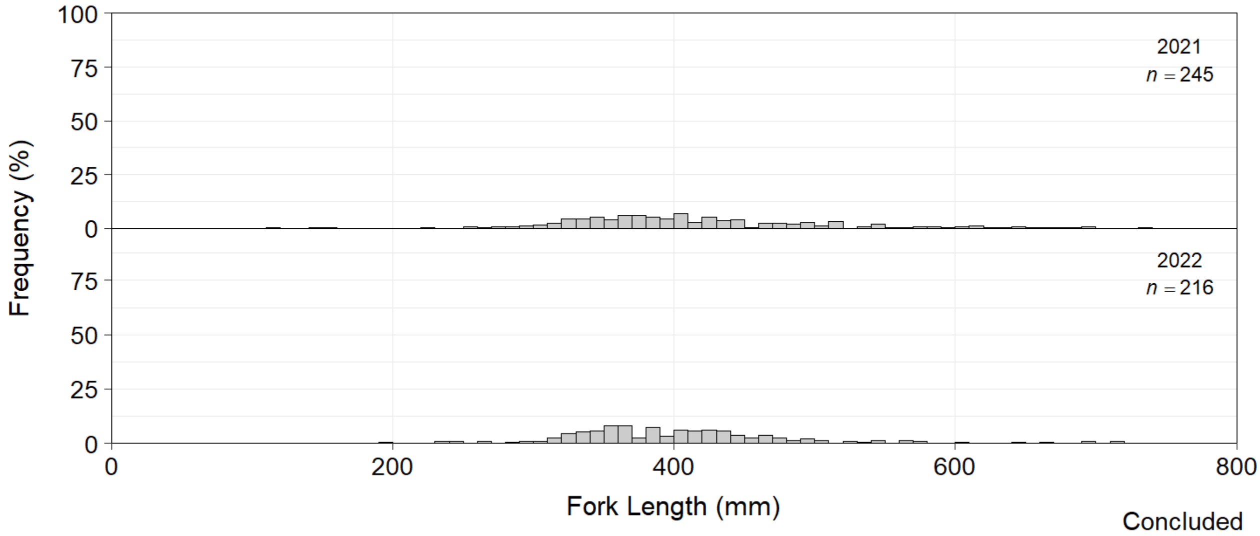

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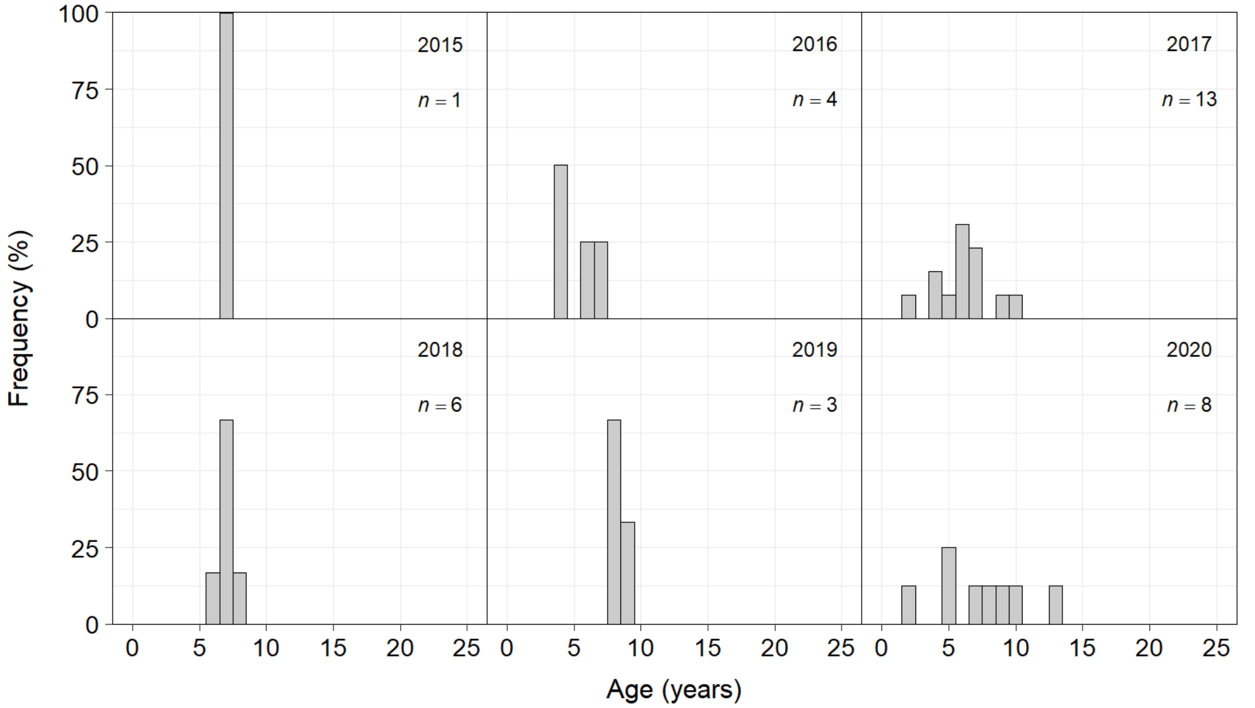


Figure F37: Age-frequency distributions by year for Walleye captured by boat electroshocking in Sections 1 and 3 of the Peace River, 2002 to 2022.

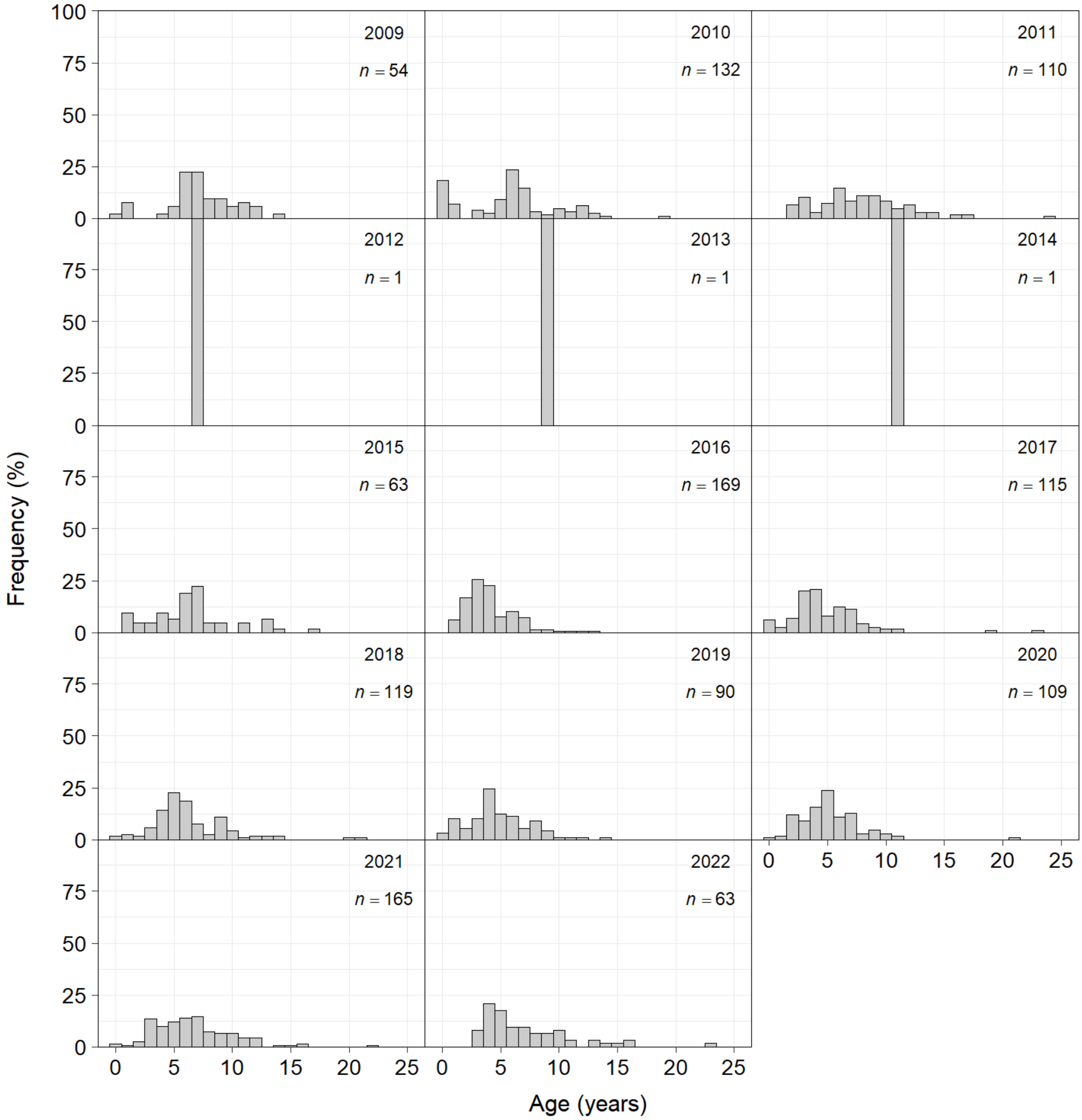
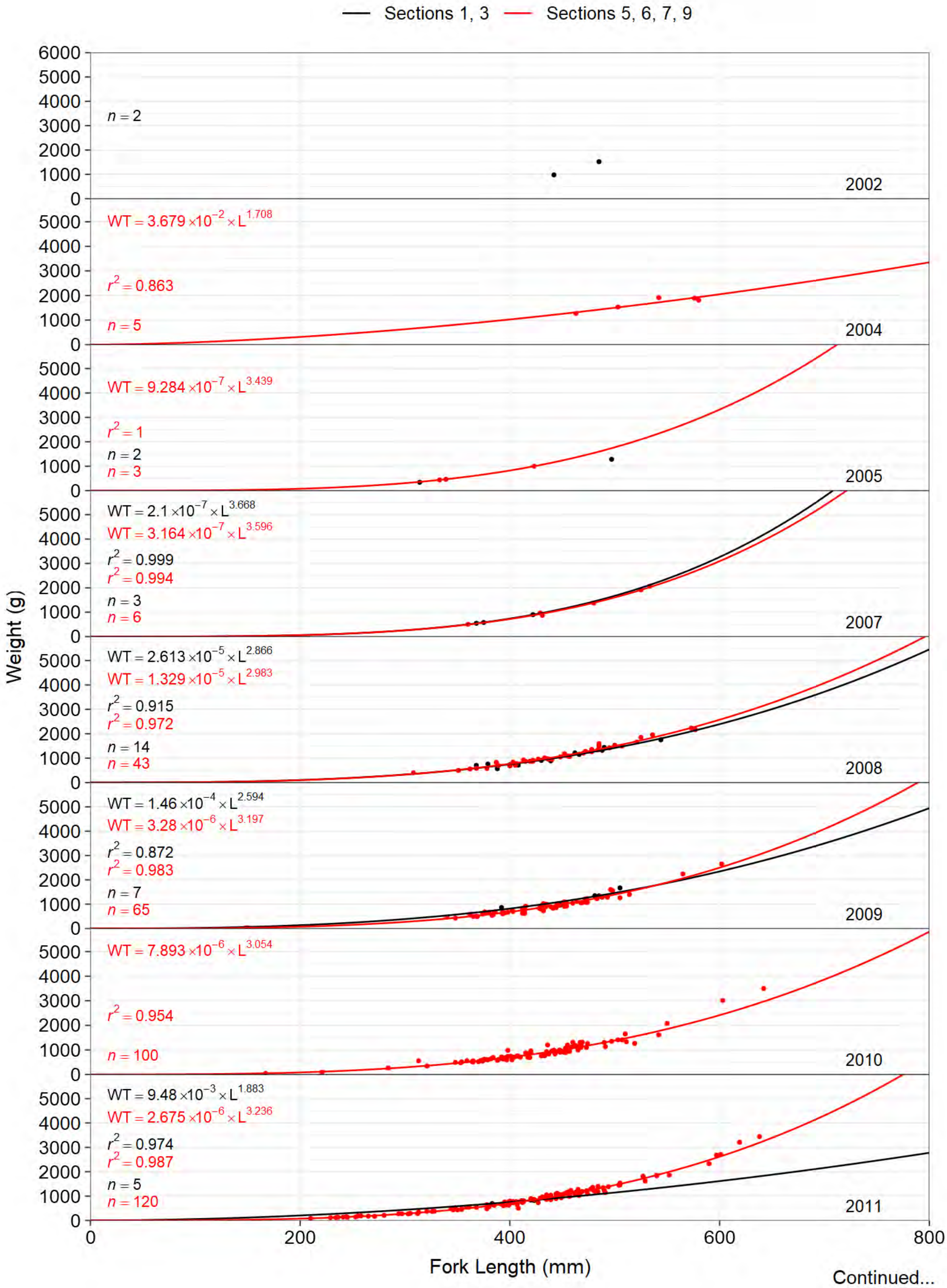
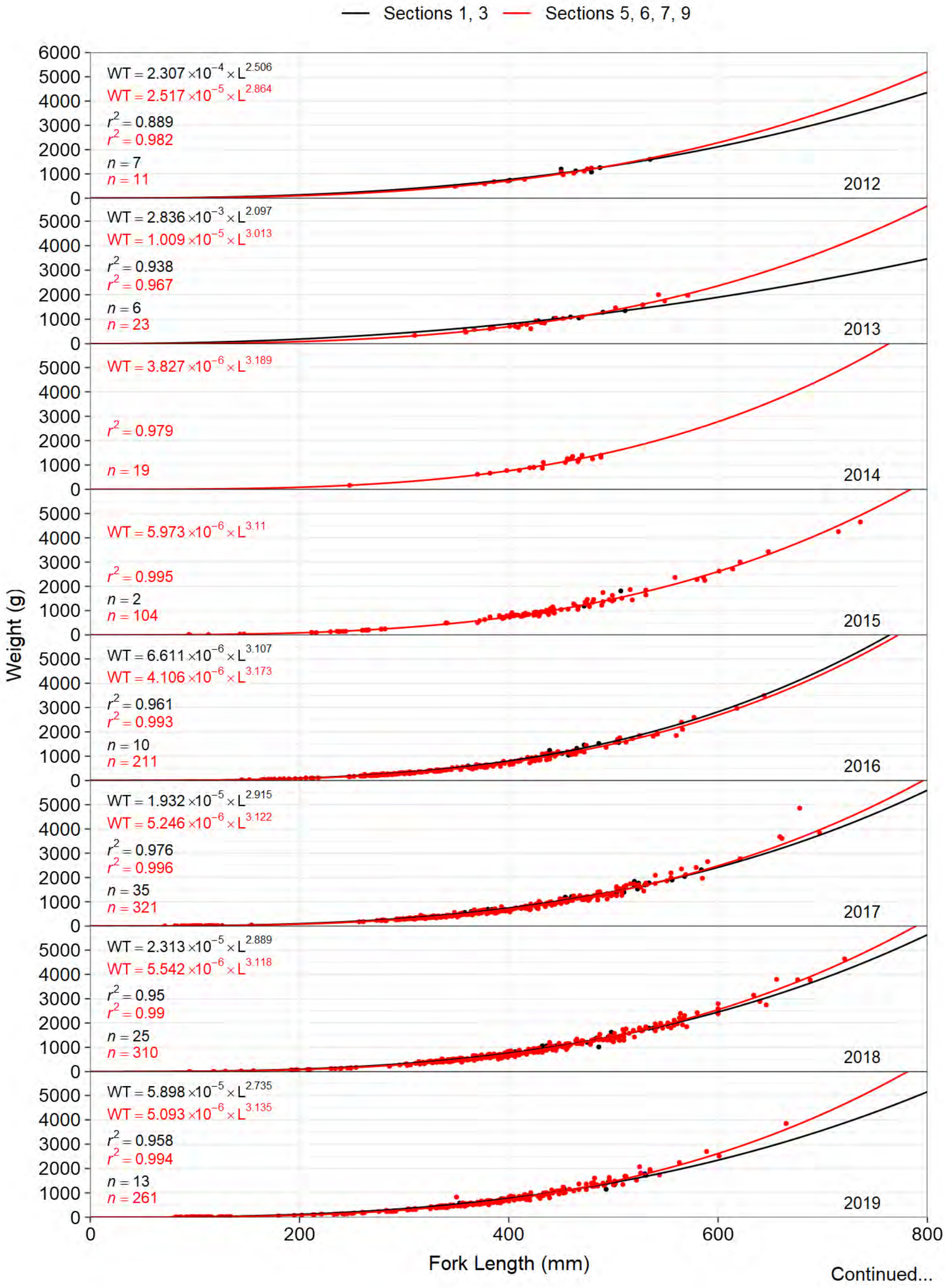


Figure F38: Age-frequency distributions by year for Walleye captured by boat electroshocking in Sections 5, 6, 7, and 9 of the Peace River, 2002 to 2022.



Continued...

Figure F39: Length-weight regressions for Walleye captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. 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).



Continued...

Figure F39: Continued.

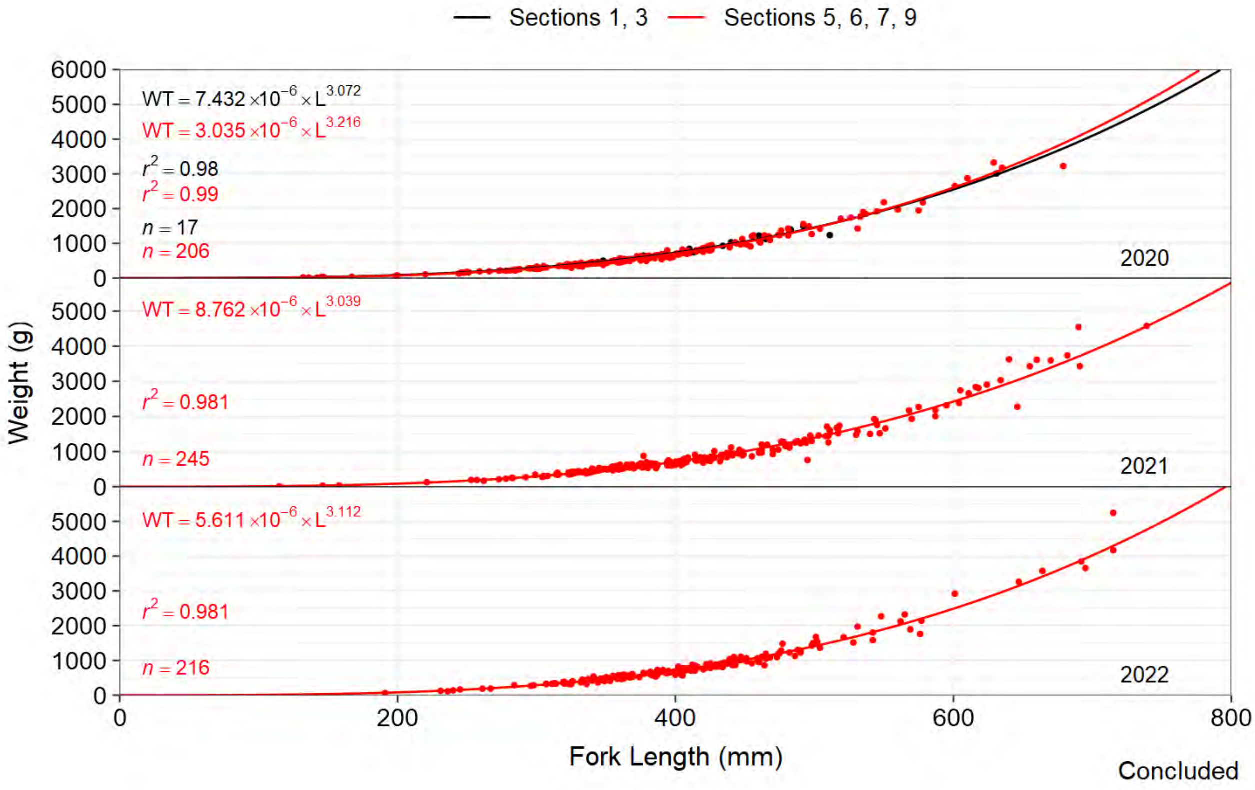


Figure F39: Concluded.

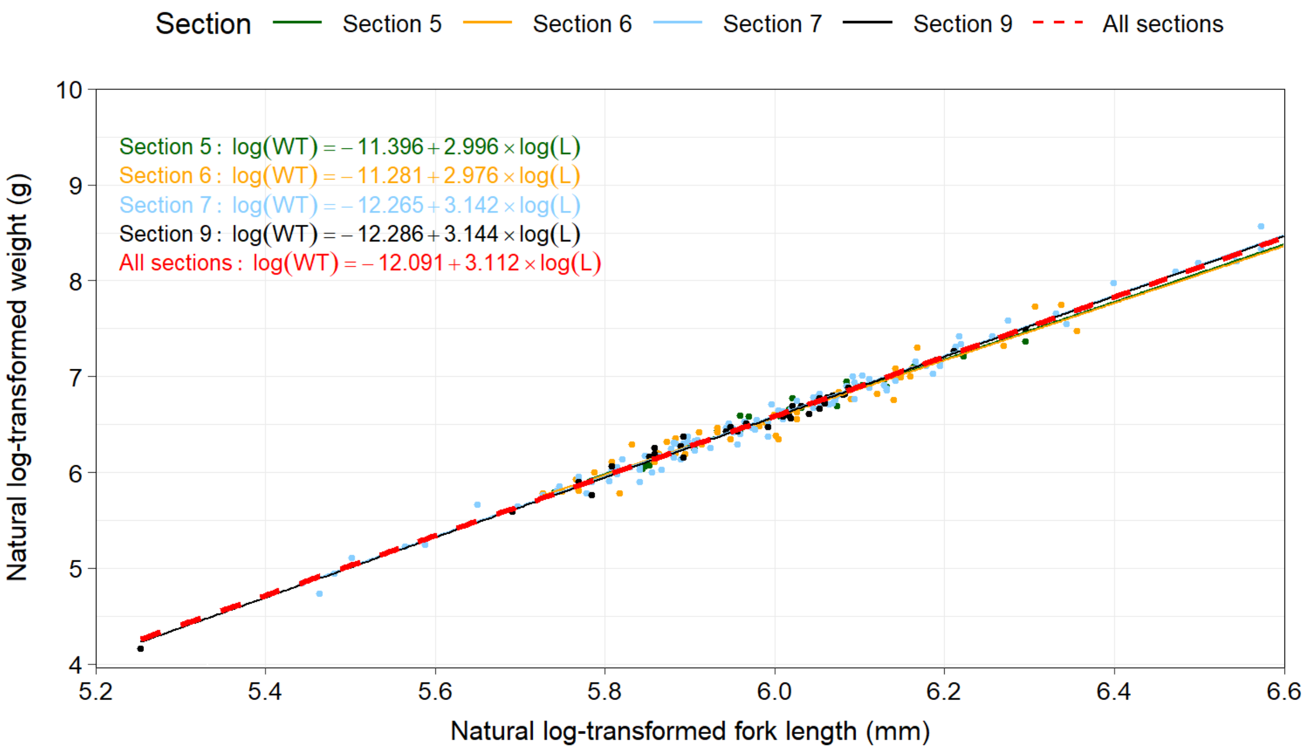


Figure F40: Log-log relationship between weight and fork length for Walleye captured by boat electroshocking in sampled sections of the Peace River, 2022.

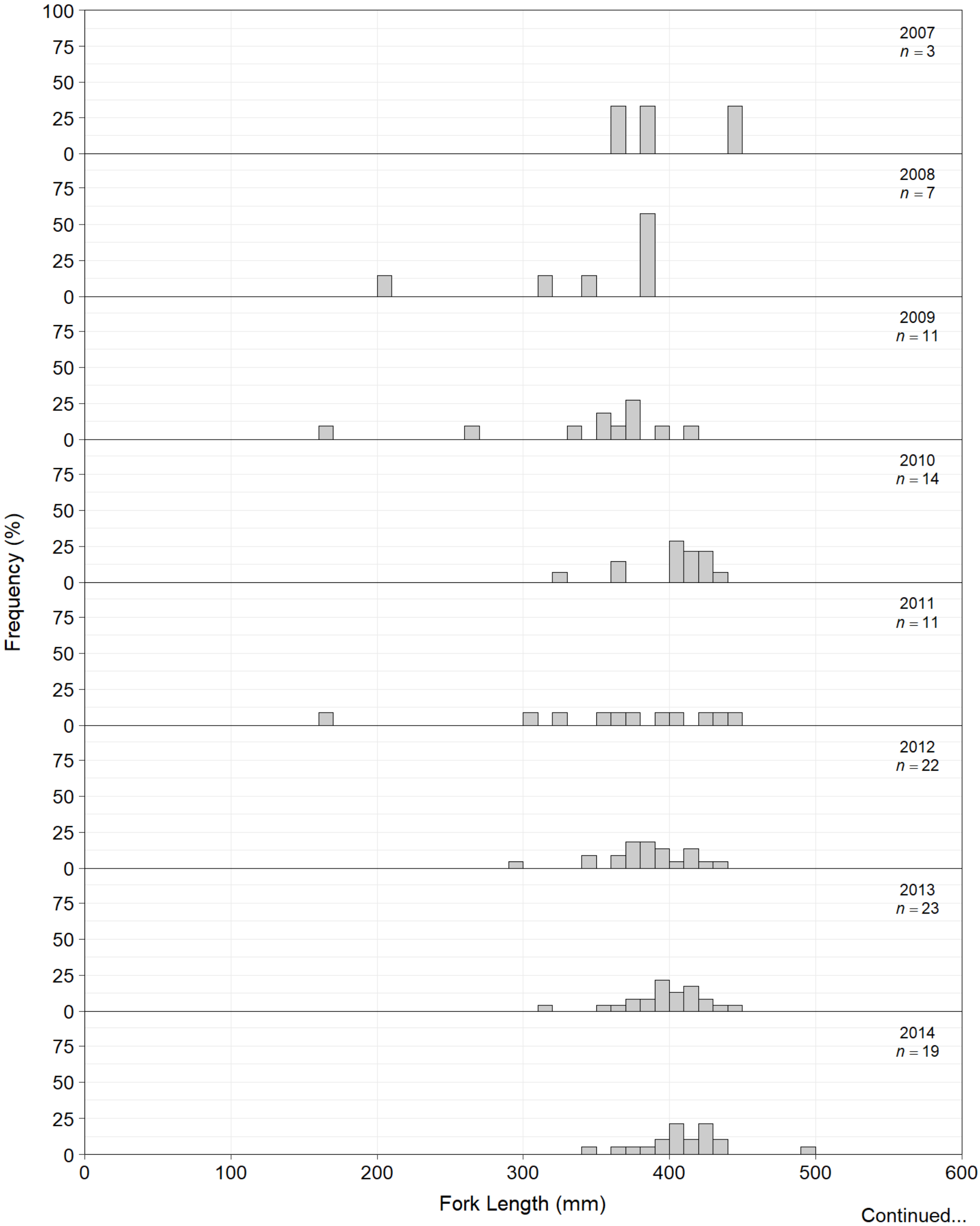


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Figure F41: Length-frequency distributions by year for White Sucker captured by boat electroshocking in Sections 1 and 3 of the Peace River, 2002 to 2022.

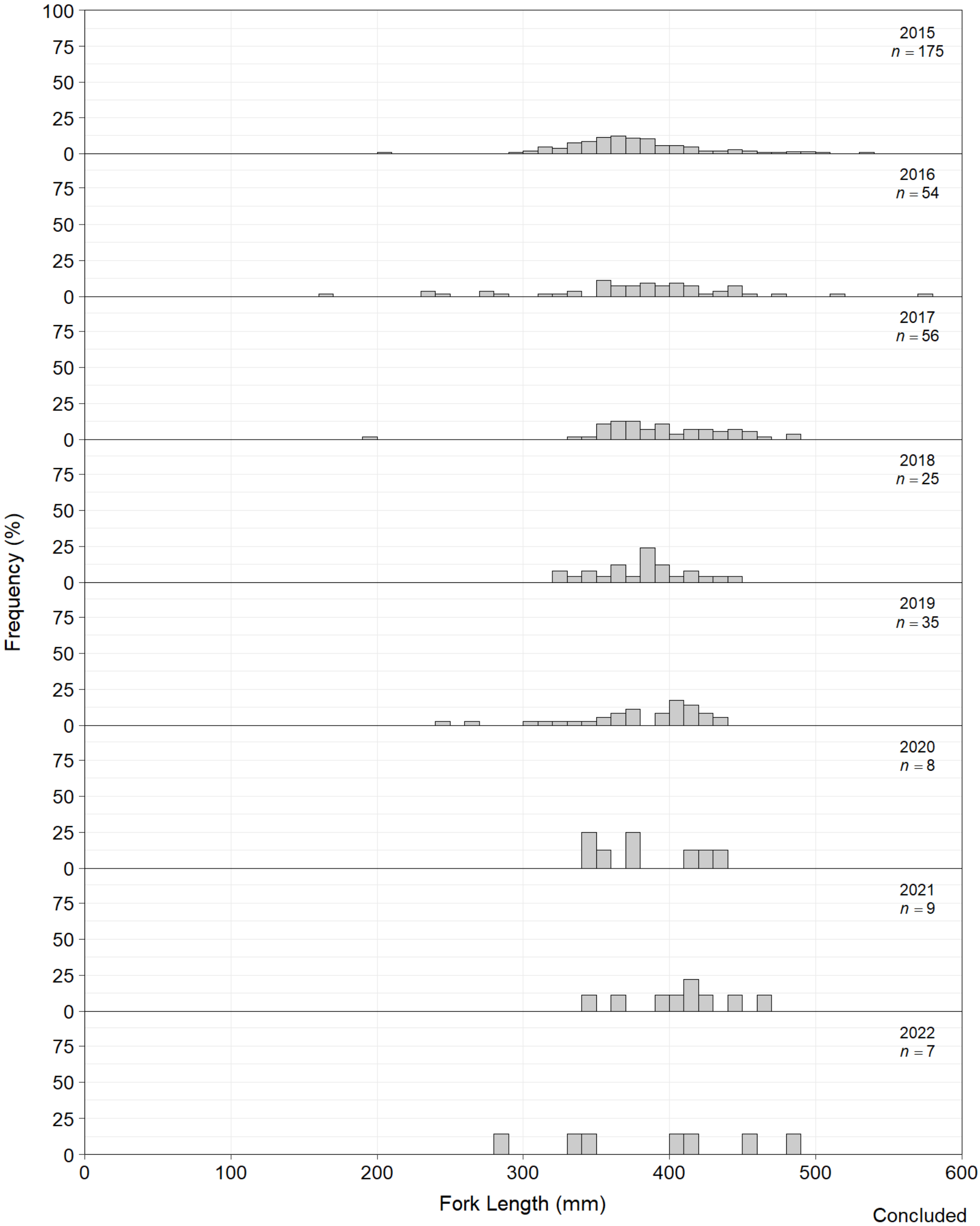

Figure F41: Concluded.

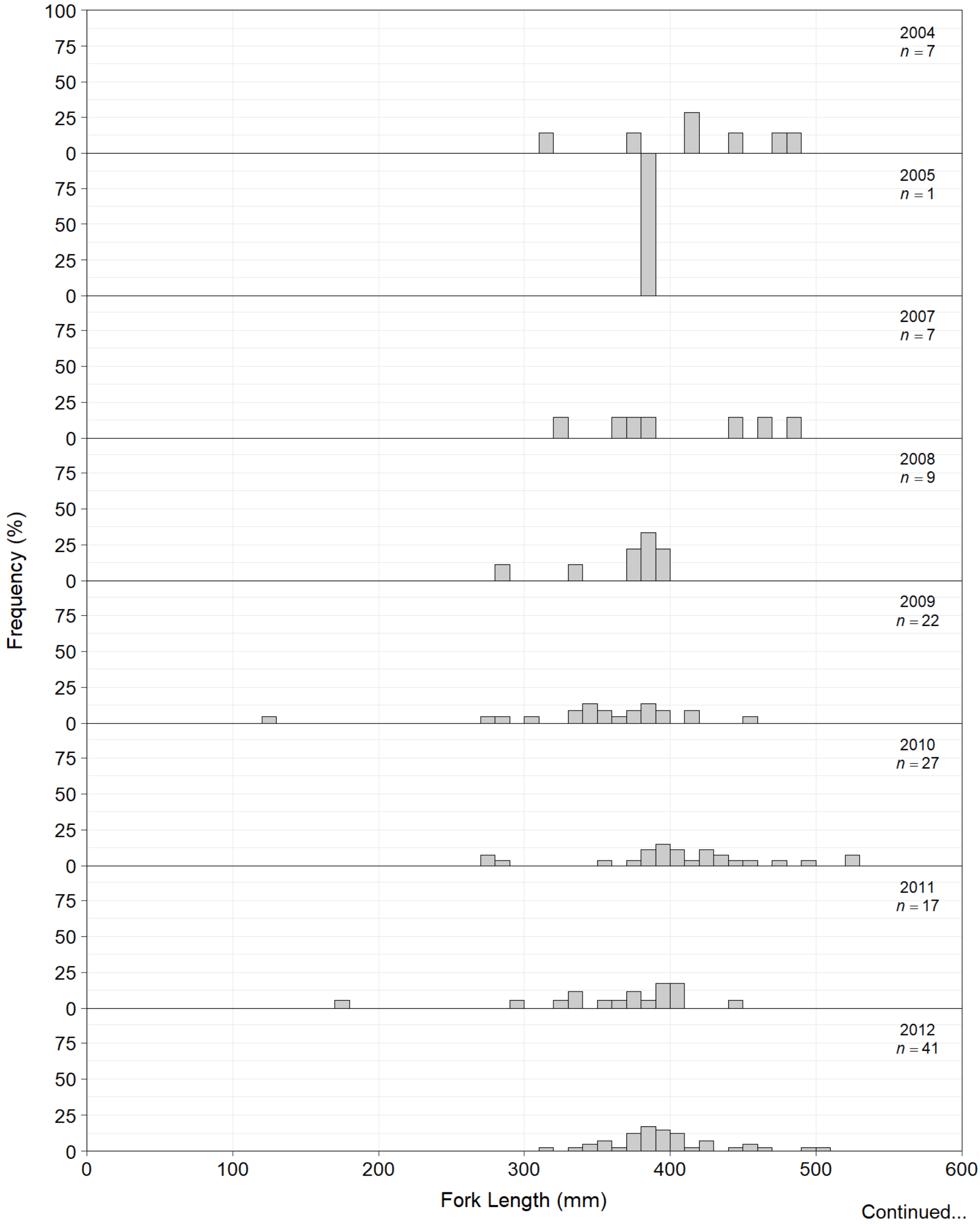

Figure F42: Length-frequency distributions by year for White Sucker captured by boat electroshocking in Sections 5, 6, 7, and 9 of the Peace River, 2002 to 2022.

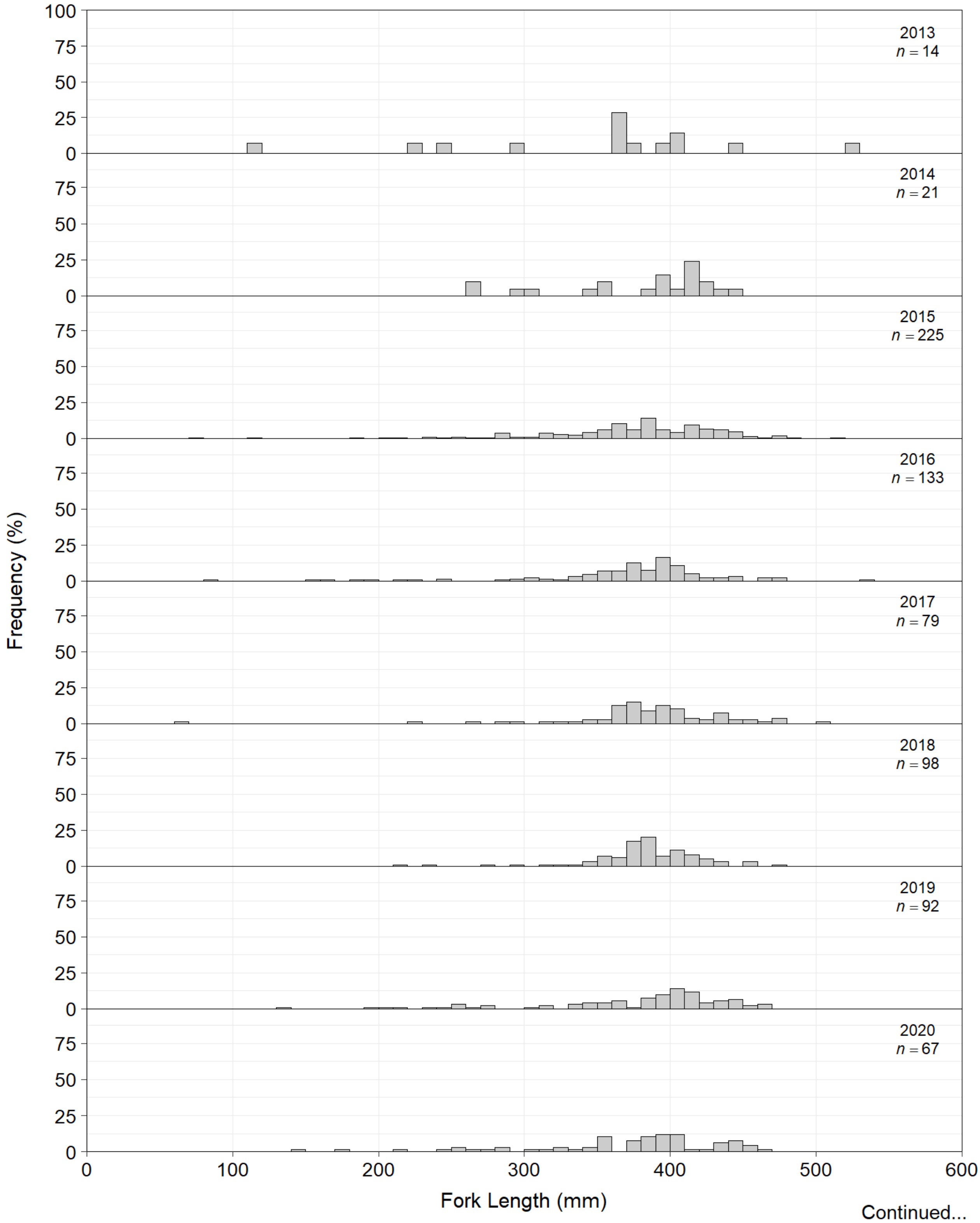

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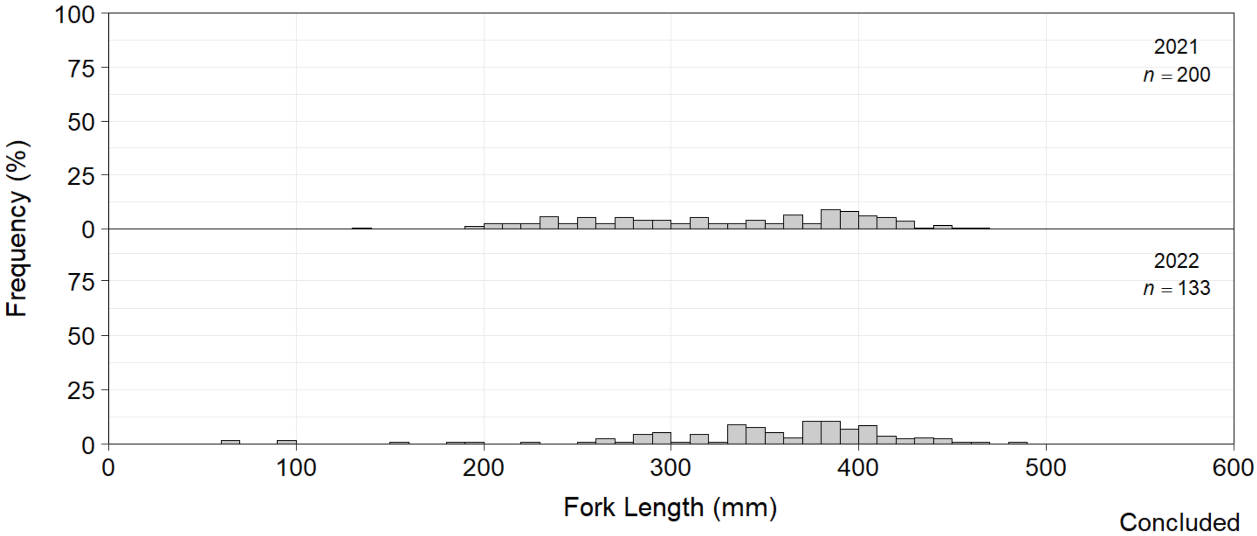
Figure F42: Continued.



Concluded

Figure F42: Concluded.

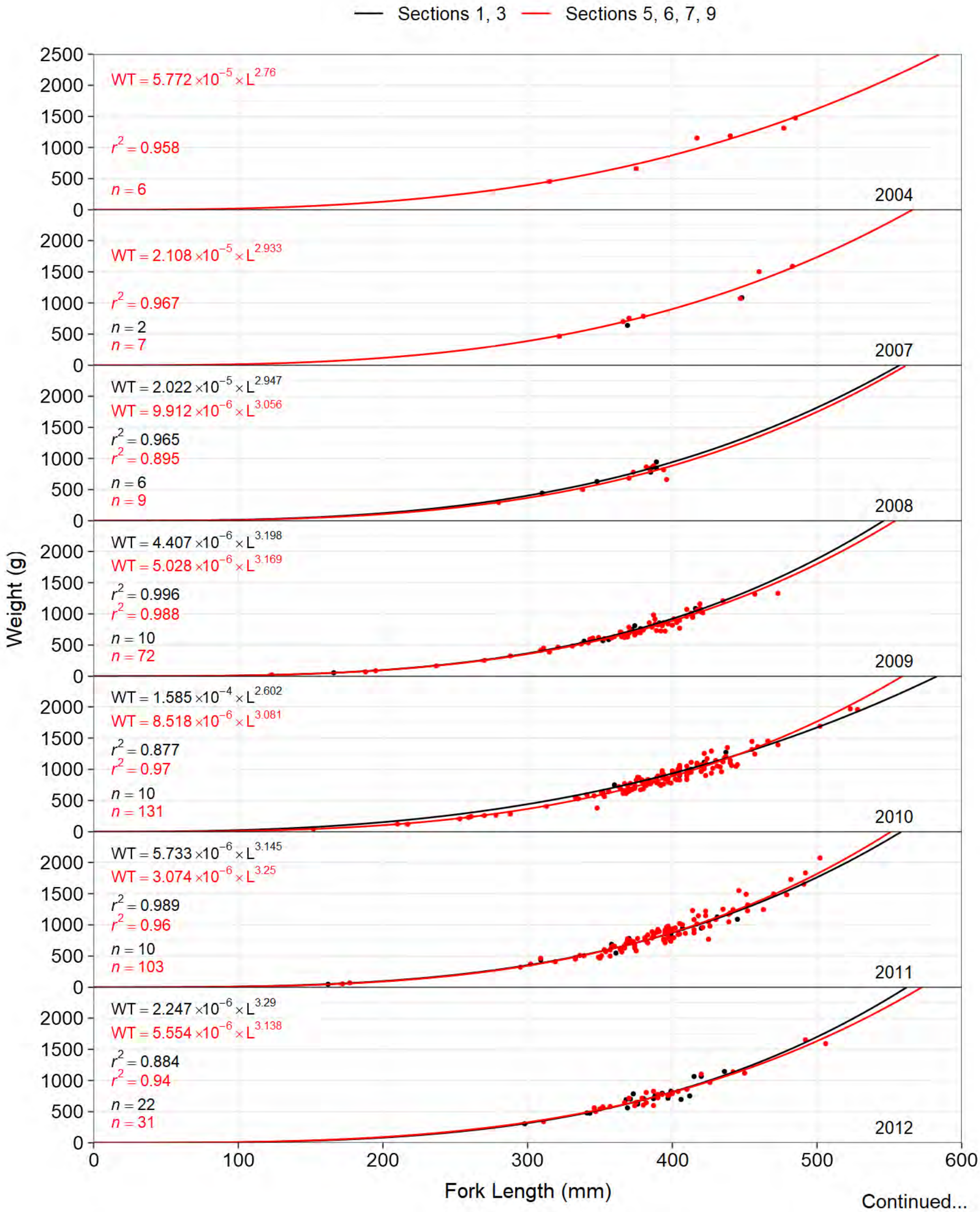


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Figure F43: Length-weight regressions for White Sucker captured by boat electroshocking in sampled sections of the Peace River, 2002 to 2022. Data from Sections 6, 7, and 9 in 2009, 2010, and 2011 courtesy of BC Hydro's Site C Peace River Fish Inventory (Mainstream 2010, 2011, 2013a).

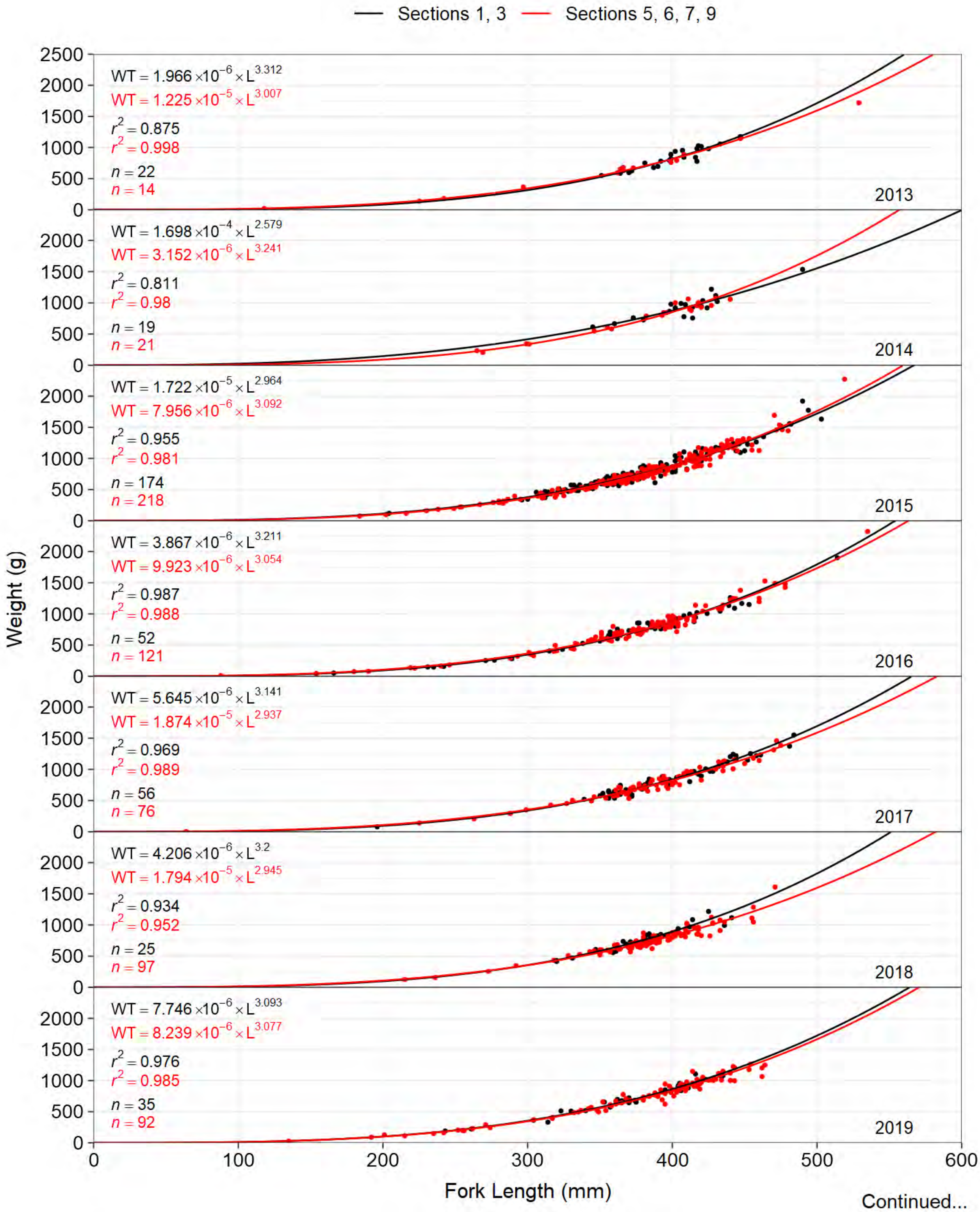

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Figure F43: Continued.

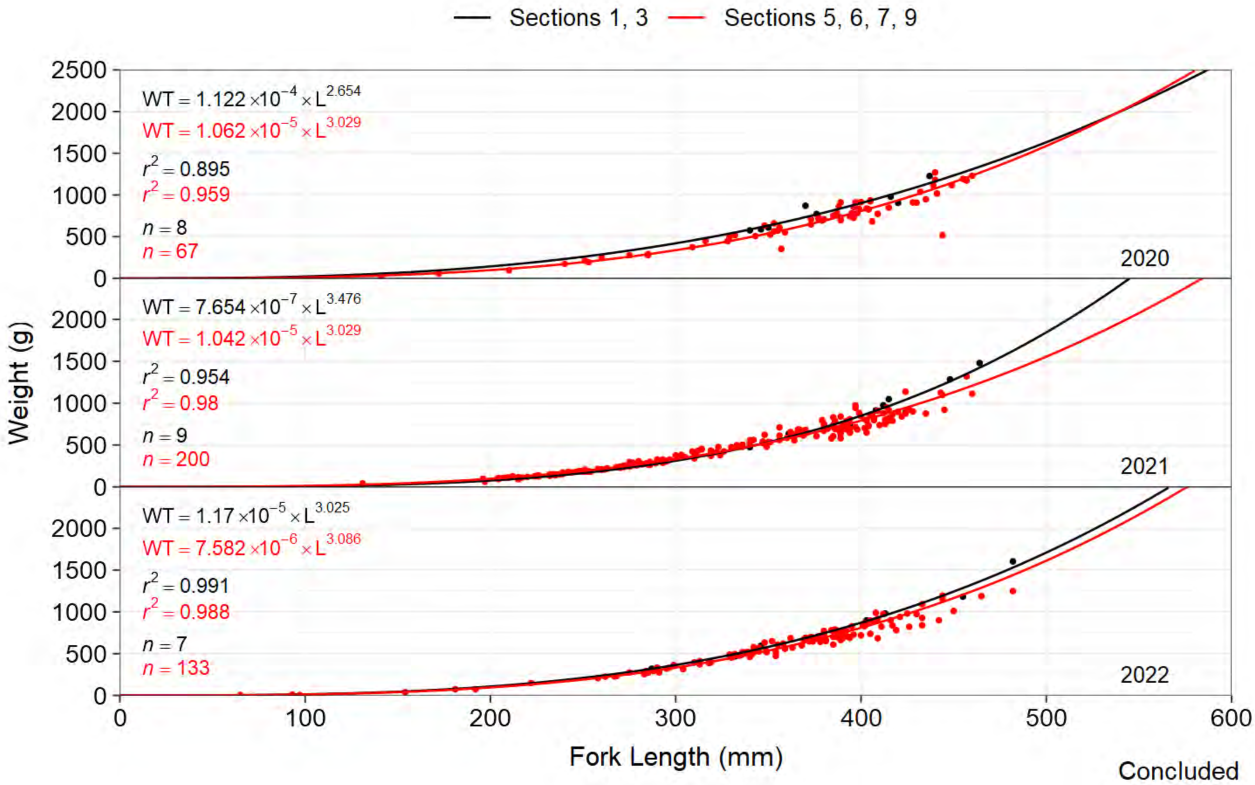

Figure F43: Concluded.

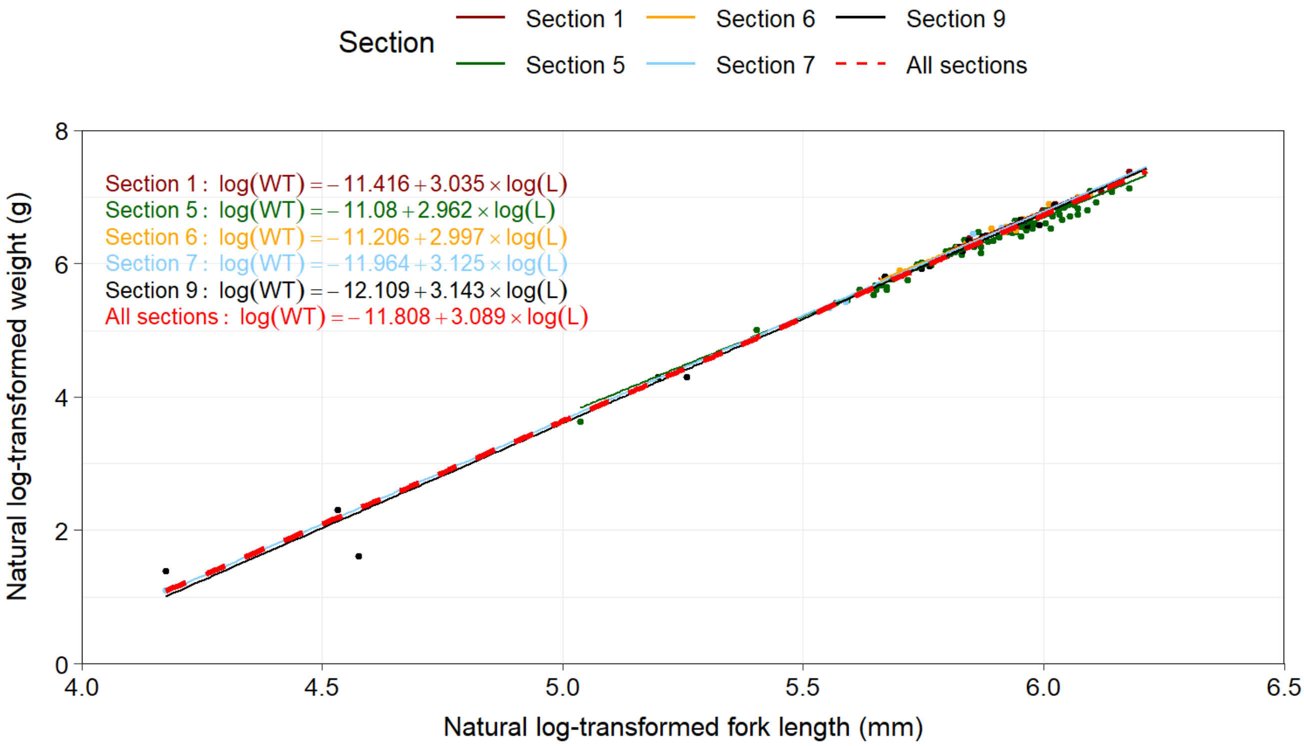

Figure F44: Log-log relationship between weight and fork length for White Sucker captured by boat electroshocking in sampled sections of the Peace River, 2022.

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