Keeyask Generation Project

Aquatic Effects Monitoring Plan

Benthic Macroinvertebrate Monitoring Report

AEMP-2020-10

KEEYASK

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KEEYASK GENERATION PROJECT

AQUATIC EFFECTS MONITORING PLAN

REPORT #AEMP-2020-10

BENTHIC MACROINVERTEBRATE MONITORING IN THE NELSON RIVER, 2019: YEAR 6 CONSTRUCTION

Prepared for

Manitoba Hydro

By

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June 2020

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SUMMARY

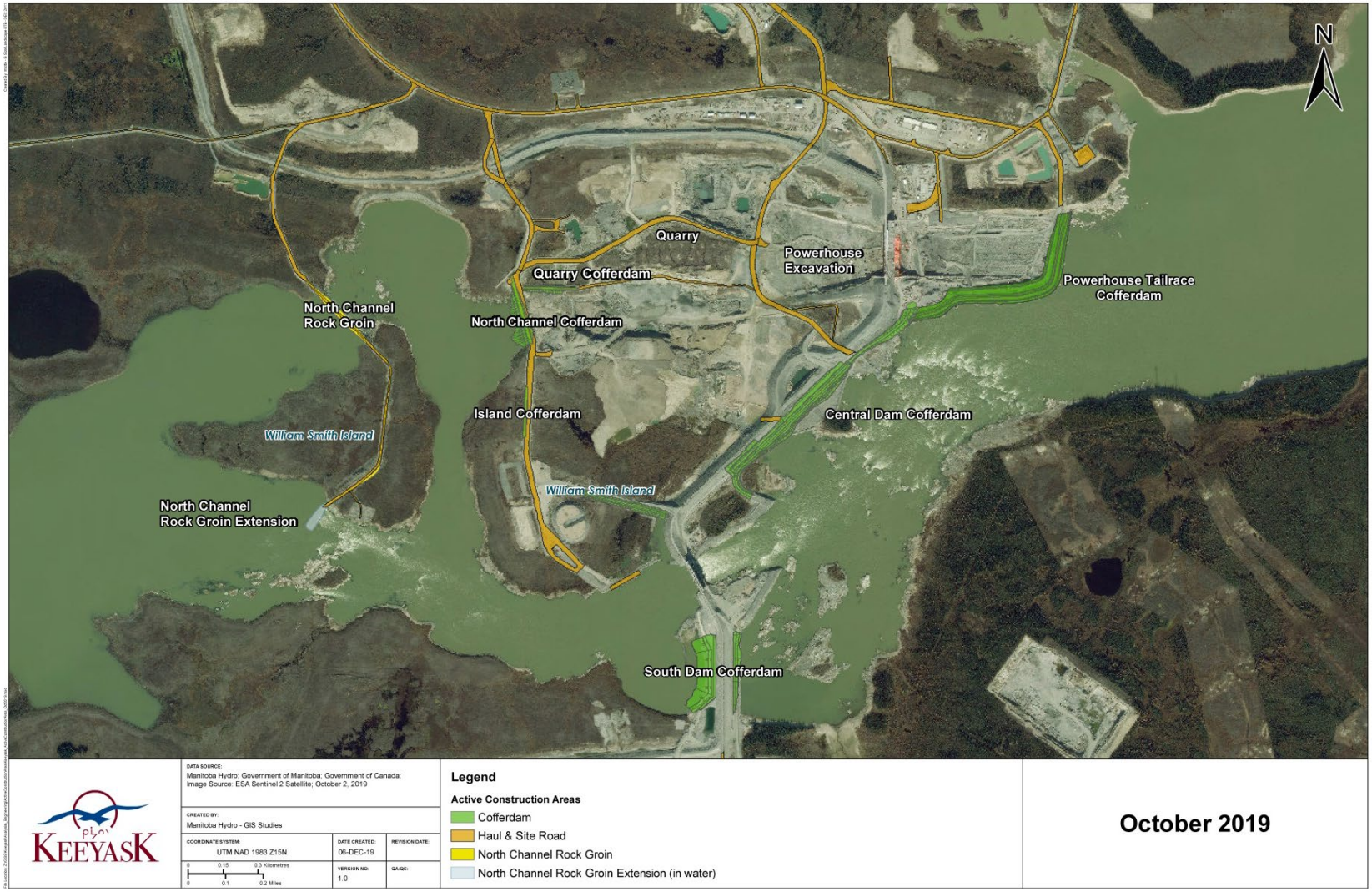
Background

The Keeyask Hydropower Limited Partnership (KHLP) was required to prepare a plan to monitor the effects of construction and operation of the Keeyask Generating Station (GS) on the environment. Besides measuring the accuracy of the predictions made and actual effects of the GS on the environment, monitoring results will provide information on how construction and operation of the GS will affect the environment and if more needs to be done to reduce harmful effects.

Construction of the Keeyask GS began in mid-July 2014 with the construction of cofferdams that blocked flow in the north and central channels of Gull Rapids (see instream structures map below). During the winter of 2015/2016 the Spillway Cofferdam, which partially blocks the south channel, was constructed. Beginning late in 2016 and continuing in 2017, the Tailrace Cofferdam was constructed. Work was completed in fall 2017 with the exception of an opening that was left to allow fish movement into and out of the cofferdam over the 2017/18 winter. This opening was closed in spring 2018, and the area was dewatered. The spillway was commissioned in August 2018. The South Dam Cofferdam was completed in fall 2018, blocking the channel and forcing the entire flow of the river through the spillway. Almost all work in 2019 was in the dry. The construction activities included the excavation of the tailrace, construction of the tailrace spawning shoal, and completion of the dams and dykes (see figure on next page).

Benthic macroinvertebrates (BMIs) are tiny animals without backbones, such as insect larvae and clams, which live in, or on, the bottom sediments of lakes and rivers. The BMI community is an important part of the overall plan to monitor the effects of construction and operation of the Keeyask GS on the aquatic environment. BMIs are often used to determine the health of lakes and rivers, and are used in monitoring programs all over the world. BMI monitoring at the Keeyask GS includes counting mayflies, stoneflies, caddisflies and fingernail clams each year because they are sensitive to changes in their environment. Observing changes in their numbers is very helpful because these insects spend the early part of their lives in or on the bottom sediments and are sensitive to changes in the environment. BMIs are also a valuable food source for fish, including Lake Sturgeon, and important in describing the quality of habitat for fish.

This report describes the results of the BMI community monitoring conducted during fall 2019 (sixth year of construction at Gull Rapids). Samples were collected upstream of physical effects of the Project in Split Lake, immediately downstream of construction activities in the Nelson River, and farther downstream in Stephens Lake.



Map of instream structures at the Keeyask generating station site, October 2019.

Mayfly

Stonefly

Caddisfly

photo credits Karl Kroeker

Why is the study being done?

The study is being done to address a key question:

Are construction activities changing the numbers and/or kinds of BMIs living in the bottom sediments of the Nelson River downstream of the Keeyask GS into Stephens Lake in comparison to either upstream and/or pre-construction conditions?

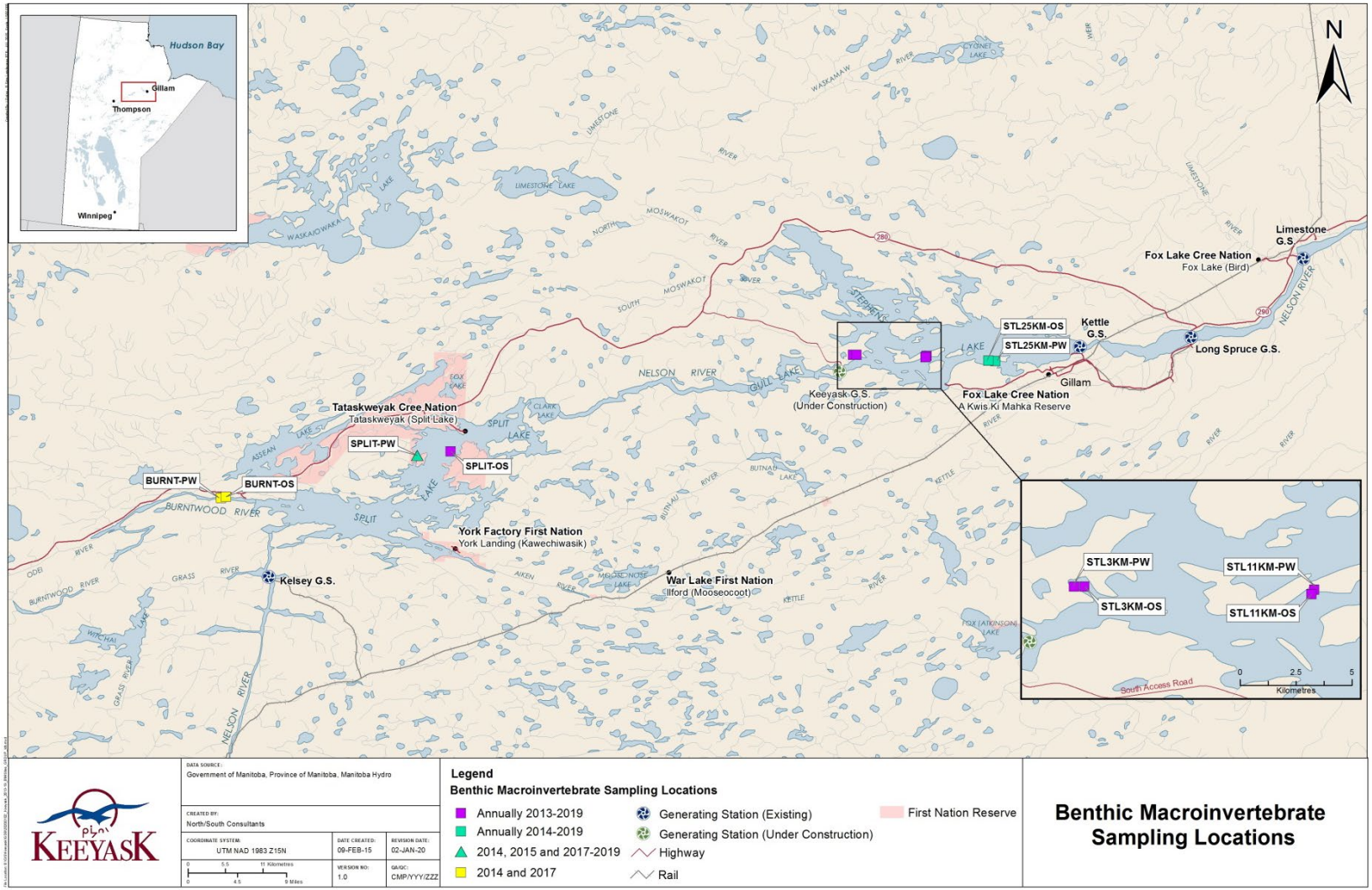
When construction work is done in a lake or river, sediments (the mud at the bottom of a lake or river) often get disturbed and mixed into the water. Sediments mixed in the water will travel downstream with the current and eventually settle to the bottom. To understand if the numbers and kinds of BMIs changed downstream of the GS construction site, BMIs are sampled at locations in the Nelson River and Stephens Lake. Increased sediments in the water may lead to negative effects including decreases in the numbers of fingernail clams and mayflies.

What was done?

BMIs were collected in late September of 2019 in three areas downstream of Gull Rapids. The areas were approximately 3 kilometres (km), 11 km, and 25 km downstream of the construction site at Gull Rapids (see map below). Within each sampling area, BMIs were sampled from both nearshore (close to the shoreline in shallow water) and offshore (far from the shoreline in deeper water). Five stations were sampled with a dredge (see photo below) to collect bottom sediments and BMIs in these two habitat types.

Collecting a benthic macroinvertebrate grab with an Ekman dredge.

BMIs were also sampled in Split Lake in late August 2019 as an example of conditions within an area where BMIs were unaffected by construction.



Locations of the reference and impact BMI sampling areas at the Burntwood River, Split Lake, and the sites downstream of Gull Rapids in Stephens Lake: 2013 (pre-construction) and 2014-2019 (Years 1-6 construction).

What was found?

Nearshore Habitat

- In 2019, the kinds of BMIs in nearshore habitat at 3 km downstream of Gull Rapids were similar to pre-construction (2013), and their numbers had either stayed the same or increased.
- The 2019 nearshore samples collected at 11 km downstream of Gull Rapids, mayflies, stoneflies and caddisflies made up a smaller proportion of organisms than they did in 2013.
- Results from nearshore habitat at 25 km downstream of Gull Rapids were not noticeably different from most other years of construction monitoring.

Offshore Habitat

- At the 3 km downstream offshore site, there was an increase in fingernail clams in 2019 compared to pre-construction, but the numbers of all other BMIs were similar to 2013.
- The 2019 offshore samples collected at 11 km downstream of Gull Rapids, mayflies, stoneflies and caddisflies made up a smaller proportion of organisms in samples than they did in 2013.
- Compared to some previous years of construction monitoring, 2019 samples collected from offshore habitat at 25 km downstream of Gull Rapids contained fewer mayflies, stoneflies and caddisflies compared to the number of other types of BMIs in samples.

What does it mean?

While changes in the BMI community have been observed at all three sites in Stephens Lake since construction began in 2014, the site closest to the construction activities at Gull Rapids (3 km downstream) has generally shown increases in the BMI community compared to 2013 pre-construction. This is a positive change. Negative impacts should have been highest at this site if sediment inputs from construction were harming the BMIs. The decreases in BMIs seen at Stephens Lake 11 km and 25 km are similar to some of the year-to-year differences seen over time at the upstream site on Split Lake, where there are no effects of construction. Because of the similar differences seen at Split Lake, and the fact that negative effects were not seen at the site closest to construction, the changes recorded at the Stephens Lake 11 and 25 km sites are likely not due to sediment inputs from construction.

What will be done next?

BMI monitoring will be conducted in August/September of 2020.

ACKNOWLEDGEMENTS

We would like to thank Manitoba Hydro for the opportunity and resources to conduct this study. Jason Beardy and Graydon Brightnose of Tataskweyak Cree Nation are thanked for their assistance in conducting the field work.

The collection of biological samples described in this report was authorized by Manitoba Agriculture and Resource Development (formerly Manitoba Sustainable Development), Fisheries Branch, under terms of the Scientific Collection Permit #18-19.

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1.0 INTRODUCTION

The Keeyask Generation Project (the Project) is a 695-megawatt (MW) hydroelectric generating station at Gull (Keeyask) Rapids on the lower Nelson River in northern Manitoba. The Project is approximately 725 kilometres (km) northeast of Winnipeg, 35 km upstream of the existing Kettle Generating Station, where Gull Lake flows into Stephens Lake, 60 km east of the community of Split Lake, 180 km east-northeast of Thompson and 30 km west of Gillam (Map 1). Construction of the Project began in July 2014.

The *Keeyask Generation Project: Response to EIS Guidelines*, completed in June 2012, provides a summary of predicted effects and planned mitigation for the Project. Technical supporting information for the aquatic environment, including a description of the environmental setting, effects and mitigation, and a summary of proposed monitoring and follow-up programs is provided in the *Keeyask Generation Project Environmental Impact Statement: Aquatic Environment Supporting Volume* (AE SV). As part of the licencing process for the Project, an *Aquatic Effects Monitoring Plan* (AEMP) was developed detailing the monitoring activities of various components of the aquatic environment including the focus of this report, specifically monitoring the benthic macroinvertebrate (BMI) community, for the construction and operation phases of the Project.

Construction monitoring of the BMI community specifically addresses the biological effects of increases in total suspended solids (TSS) due to in-stream work on the Nelson River (Map 2). Monitoring of BMI occurred immediately downstream of instream construction activities where effects, should they be measurable, would be greatest. Locations farther downstream in Stephens Lake were also sampled. Benthic macroinvertebrates were also assessed upstream of physical effects of the Project (Split Lake and the Burntwood River) using data collected as part of Manitoba and Manitoba Hydro's Coordinated Aquatic Monitoring Program (CAMP); these sites provide an ongoing reference to support the assessment of Project effects on BMIs throughout construction and into operation.

The key questions during construction phase monitoring are:

- *To what degree will benthic invertebrate abundance and/or community composition change during construction activities in comparison to either upstream or pre-Project conditions?*
- *Are there any unexpected effects on benthic macroinvertebrates that may be related to GS construction activities?*

Unlike water or sediment, where protection of aquatic life guidelines may be used to develop triggers or thresholds for an assessment of effects, there are no universal benchmarks for BMI metrics such as abundance and diversity. Rather, the magnitude of change or difference relative to expected conditions is used to establish an appropriate benchmark for biological variables. Based on guidance provided in the Metal Mining Environmental Effects Monitoring (EEM)

document (EC 2012) and scientific literature, experience with other AEMPs (*e.g.*, Azimuth 2012), and power analysis utilizing CAMP data, an effect size of ±50 percent (%) change in the mean of a metric was chosen as the benchmark for comparison to reference areas and/or pre-construction data. This was deemed most appropriate for the Keeyask AEMP (KHLP 2015) as it is realistically achievable with a well-designed program.

The following report presents the results of BMI monitoring completed in the fall of 2019 during Year 6 of construction. Results are assessed using the framework summarized in Section 3.4.1 and detailed in the AEMP.

2.0 STUDY SETTING

The study area for the 2019 BMI construction monitoring program included Split Lake, downstream of Gull Rapids on the Nelson River, and Stephens Lake (Map 1).

Split Lake is immediately downstream of the Kelsey GS at the confluence of the Burntwood and Nelson rivers (Map 1). Due to large inflows from the Nelson and Burntwood rivers, the lake has a detectable current in several locations. Split Lake has maximum and mean depths of 28.0 m and 3.9 m respectively, at a water surface elevation of 167.0 m above sea level (ASL) (Lawrence *et al.* 1999). The surface area of Split Lake was determined to be 26,100 hectare (ha) (excluding islands), with a total shoreline length, including islands, of 940.0 km (Lawrence *et al.* 1999). The numerous islands in Split Lake represent 411.6 km of the total shoreline.

Gull Rapids is located approximately 3 km downstream of Caribou Island on the Nelson River (Map 1). The rapids are approximately 2 km in length, and the river elevation drops approximately 11 m along its 2 km length. Two large islands and several small islands occur within the rapids, prior to the river narrowing; these features are within the Project footprint and have been substantially altered during construction (Map 2). A summary of construction activities at Gull Rapids is provided in Section 2.1. Gull Rapids is now referred to as the Keeyask GS.

Just below the Keeyask GS, the Nelson River enters Stephens Lake (Map 1). Construction has altered the flow distribution immediately downstream of Gull Rapids and all flow now passes via the Keeyask GS spillway (see Section 2.1).

Stephens Lake was formed in 1971 by construction of the Kettle GS. Construction of the Kettle GS flooded Moose Nose Lake (north arm) and several other small lakes that previously drained into the Nelson River, as well as the old channels of the Nelson River that now lie within the southern portion of the lake (Map 1). Major tributaries of Stephens Lake include the North and South Moswakot rivers that enter the north arm of the lake. Looking Back Creek is a second order stream that drains into the north arm of Stephens Lake (Map 1). Kettle GS is located approximately 40 km downstream of the Keeyask GS.

2.1 CONSTRUCTION SUMMARY

Construction of the Keeyask GS began in mid-July 2014 with the construction of cofferdams in the north and central channels of Gull Rapids (Map 2). These cofferdams resulted in the dewatering of the north and central channels and the diversion of all flow to the south channel. Construction of the Spillway Cofferdam (SWCD), which extends into the south channel of Gull Rapids, was completed in 2015. The rock placement for the inner and outer groins of the Tailrace Cofferdam (TRCD) started in late 2016 and the impervious fill placement was

completed in fall 2017. An opening was created to allow fish to move freely over the winter of 2017–2018. The opening was closed in spring 2018 and dewatering of the TRCD occurred in July, at which time a fish salvage was completed. In preparation for commissioning of the spillway, the SWCD was watered-up on both sides of the structure in June 2018. Removal of the SWCD started in early July and continued into August. The spillway was commissioned between August 3 and 7, 2018. Closing the south channel with the upstream South Dam Cofferdam (SDCD) commenced at the beginning of August and river closure was achieved on August 16. This closure and the work that continued to seal the cofferdam forced the entire river flow through the spillway. The downstream SDCD was completed in September and the area between the two cofferdams was dewatered, allowing for fish salvage to be completed by late September 2018. Work continued on the upstream SDCD until it was complete in late fall 2018. Almost all work in 2019 was in the dry. The construction activities included the excavation of the tailrace, construction of the tailrace spawning shoal, and completion of the dams and dykes.

2.2 FLOWS AND WATER LEVELS

From October 2018 to October 2019, calculated Split Lake outflows ranged from about 2,600 to 3,700 m^3/s. However, over most of the period, outflows ranged from approximately 3,000 to 3,500 m^3/s and were near the historical annual median flow of approximately 3,300 m^3/s. Outflow increased from about 2,600 to 3,600 m^3/s from October to December 2018, and then was variable through the remainder of the winter period. Between June and September 2019, the flow generally ranged from 3,300 to 3,500 m^3/s. Flows dropped to about 2,900 m^3/s in early October 2019 before rising again to almost 3,700 m^3/s by the end of the month. Water levels varied in conjunction with flows, ranging from about 153.2–155.0 m ASL on Gull Lake.

3.0 METHODS

The following sections provide a description of the study design, sampling sites, field and laboratory methods, and data analysis methods for the BMI construction monitoring program.

3.1 STUDY DESIGN

The AEMP sampling design is comparable to the current CAMP design, such that data generated by the latter program will be used to augment AEMP reporting. Sampling areas (*i.e.*, polygons) were stratified by water depth and constrained by other aquatic habitat attributes (*e.g.*, substrate type, presence/absence of aquatic plants, water velocity, *etc.*) such that sampling areas represent the predominant habitat types(s). Sampling downstream of the construction site follows a gradient design: it extends from the area of maximum predicted sediment deposition at the inlet of Stephens Lake, where effects are most likely (near-field), out into the south basin of the lake (mid-field and far-field sites). Sampling conducted in 2013 (pre-construction/baseline) was based on the sampling design refined during AEMP development in an attempt to minimize the inherent variability within the benthic invertebrate data. As such, 2013 results are directly comparable to data collected during the six years of construction (2014–2019). The construction monitoring program is designed to facilitate comparisons of BMI metrics spatially (*i.e.*, upstream and downstream of construction activities) to delineate Project-related effects. Specifically, the program is designed to facilitate statistical comparisons of community metrics in reference areas to those monitored downstream of construction activities (*i.e.*, areas that are predicted to be most affected by the Project). The overall objectives of monitoring during the construction period are to determine if instream activities result in or contribute to exceedances of the benchmark and to confirm predictions in the AE SV.

3.2 SAMPLING LOCATIONS

Benthic macroinvertebrate sampling has been conducted in late August/September from 2013–2019 (Table 1). Reference sites upstream of the Project area are sampled under CAMP (Split Lake is sampled annually and the Burntwood River is sampled on a 3-year rotational basis that began in 2014; Map 3) and AEMP monitoring sites downstream of Gull Rapids into Stephens Lake (at approximately 3 km, 11 km, and 25 km downstream of the construction site; Map 3) are sampled annually. In most years, a total of 40 samples are collected (10 at each site), but a total of 50 were collected in those years that the Burntwood River was also sampled (2014 and 2017).

Note that Stephens Lake 25 km downstream sites (nearshore and offshore habitats) were added after 2013 to address concerns with unanticipated downstream effects. Split Lake

nearshore habitat was also not sampled in 2013. In 2016, nearshore habitat in Split Lake was not sampled for logistical reasons.

Within each sampling polygon, samples were collected from the nearshore in predominantly wetted (PW) habitat and in the deeper offshore (OS) habitat. For PW habitat, water depths of between 1 and 3 m, areas with consistent water movement (*i.e.*, standing water, low water velocity), and homogeneous substrate were targeted; areas with aquatic macrophyte beds were avoided. For the OS, sampling sites were constrained by the same habitat attributes, with the exception of water depth, which was between 3 and 10 m. The spatial extent of a polygon was at least 100 m x 100 m, and large enough to adequately accommodate five replicate stations. For pre-construction and construction monitoring, the locations of the five replicate stations were established by field crews and selected based on specific habitat attributes (*i.e.*, water depth, substrate type, absence of aquatic plants, water velocity) and the spatial separation criteria outlined in Metal Mining Technical Guidance for EEM (EC 2012). By EEM definition, a replicate station is a specific, fixed sampling location within an area that can be recognized, re-sampled, and defined quantitatively (*e.g.*, UTM position and a written description). The geographic extent of each replicate station was minimally 10 m x 10 m and separated from other replicate stations by at least 20 m. Within the habitat type(s), a replicate station consisted of three (construction) to five (pre-construction) randomly collected benthic invertebrate sub-samples; the sub-samples were composited to provide an estimate of the benthic community at each station. Field sub-samples were collected using a random number table and from designated sampling locations around an anchored boat within the 10 m x 10 m replicate station area.

3.3 FIELD SAMPLING AND LABORATORY METHODS

3.3.1 SUPPORTING *IN SITU* MEASUREMENTS AND SEDIMENT SAMPLING

Supporting environmental variables measured/recorded at each replicate station included:

- Water temperature (using a hand-held thermometer for water surface measurement);
- UTM position (using a hand-held GPS receiver);
- Water transparency (using a Secchi disk);
- Water velocity (using a Swoffer current velocity meter at approximately 20 centimetres [cm] below water surface or visually estimated);
- Aquatic macrophytes (description of relative abundance and dominant type); and
- Dominant and secondary substrate types.

An additional benthic grab was taken at each replicate station and sub-sampled with a 5 cm diameter core tube (0.002 square metres [m^2] surface area) to provide a sample of approximately 100 millilitres (mL) of sediment to characterize the general type of sediments in terms of total organic carbon (TOC) content and particle size composition. Sediment samples were sent frozen in coolers to the North/South Consultants Inc. (NSC) laboratory (Winnipeg, MB) and stored frozen/cold pending submission to the analytical laboratory. Sediment laboratory analyses were conducted by ALS Laboratory Group (ALS; Winnipeg, MB).

Supporting environmental variables measured/recorded at each sub-sample/grab site included:

- Water depth (using a hand-held depth sounder or metered benthic dredge rope);
- Presence/absence of aquatic macrophytes in sub-sample; and
- Substrate composition (visual description *e.g.*, percent cobble, gravel, silt, *etc.*).

3.3.2 BENTHIC MACROINVERTEBRATES

Benthic invertebrates were sampled at sites using either a petite Ponar dredge or an Ekman dredge (both with an area of 0.023 m^2). All sites were accessed by boat.

At each site within a replicate station, one benthic invertebrate sample was retrieved to the surface and carefully sieved through a 500 micrometre (or micron; µm) mesh rinsing bag. An acceptable sample required that the jaws be completely closed upon retrieval. If the jaws were not completely closed, the sample was discarded into a bucket (and disposed of once sampling was completed) and the procedure was repeated. All sampling equipment was rinsed before sampling at the next site. All material retained by the screen, including invertebrates, was transferred to labelled plastic jars and fixed with 10% formaldehyde. Fixed samples were shipped to the NSC laboratory (Winnipeg, MB) for processing.

At the laboratory, samples from all locations were rinsed with water through a 500 µm sieve and sorted under a 3X magnifying lamp. The invertebrates were transferred to 70% ethanol prior to being identified to the appropriate taxonomic level. A Leica Mz125 microscope (maximum 100x magnification) and reference texts from Clifford (1991), Merritt and Cummins (1996), Peckarsky *et al.* (1990), Smith (2001), Stewart and Stark (2002), and Wiggins (2004) were used for taxonomic identification. Scientific names used followed the Integrated Taxonomic Information System (ITIS 2018) classification. Invertebrates were identified to major group (subclass, order, or family) and Ephemeroptera were identified to genus. All invertebrate identification and enumeration was performed by an invertebrate taxonomist at NSC.

All samples were processed following NSC's Quality Assurance/Quality Control (QA/QC) guidelines (Appendix 1). All sorted samples were checked by a second laboratory technician (QA/QC technician). Additional invertebrates collected during the QA/QC process were combined with the original sample, but counted separately. Sorting efficiency must be ≥ 95%. The QA/QC technician checked on a tray-by-tray basis so that the sample was handled as few

times as possible; the QA/QC technician sorted any remaining invertebrates from the tray and recorded the number of missed invertebrates per tray. The QA/QC technician also checked the bench sheet data to ensure it matched the sample data. Ten percent (10%) of the in-house identifications were randomly selected and re-identified by a taxonomist from ALS Laboratories Inc. for QA/QC. The accuracy of the sample subset was assessed for identification and enumeration. The target overall accuracy level for in-house invertebrate identifications and enumeration was 95%. Corrected identifications and enumeration values were used in place of any data discrepancies.

All sorted samples will be retained and archived for the duration of the construction phase should further identification be required. A reference collection of benthic invertebrates will be maintained to ensure taxonomic consistency throughout the monitoring program duration.

3.4 DATA ANALYSIS

3.4.1 BENTHIC MACROINVERTEBRATES

To prepare the data for analysis, abundance of invertebrates was converted to density (number of invertebrates per square metre [individuals/m^2]) by dividing the total number of invertebrates by the number of subsamples (3), and then dividing that by the area of the sampling device (0.023 m^2). The mean, standard deviation (±SD), standard error (±SE), median, minimum, maximum, coefficient of variation (COV; %), and mean ±50% were calculated to characterize each aquatic habitat type sampled within a polygon for each waterbody.

Benthic invertebrate community descriptors were calculated for each replicate station and habitat type. Composition metrics included:

- Total macroinvertebrate density;
- Densities and relative proportions of major groups (non-Insecta: Oligochaeta, Amphipoda, Bivalvia, Gastropoda; Insecta: Chironomidae, Ephemeroptera, Plecoptera, Trichoptera);
- Percent Ephemeroptera;
- Percent Ephemeroptera, Plecoptera, and Trichoptera (EPT) (EPT index; Sullivan *et al.* 2004);
- Percent of total organisms made up of Oligochaeta and Chironomidae; and
- Ratio of EPT to Chironomidae.

Richness measures included:

- Total taxonomic richness (family-level; total number of invertebrate families within a habitat polygon; Barbour *et al.* 1999; Klemm *et al.* 2002; Resh *et al.* 1997); and

- EPT richness (family-level; total number of families of Ephemeroptera, Plecoptera, and Trichoptera within a habitat polygon).

Diversity indices included:

- Simpson's Diversity Index (EC 2012; Magurran 1988, 2004; Mandaville 2002).

The AEMP identified the following BMI community metrics (which are sensitive to environmental change) and a benchmark to focus the monitoring program and provide a framework for adaptive management:

- Total macroinvertebrate density;
- Total taxonomic richness; and
- Simpson's Diversity Index.

Results of the BMI monitoring program are subject to the steps outlined in Figure 1. This framework prescribes data analysis methods and other tasks to be undertaken based on results of the monitoring program. Step 1 of the framework entails comparison of the mean values of replicate samples for metrics to the benchmark identified in the AEMP. If the benchmark is not exceeded, the assessment would proceed to Response Level 1: trend analysis. If the benchmark is exceeded, the assessment would proceed to Step 2: determination of whether there is a statistical difference between upstream and downstream areas (*i.e.*, control-impact) and/or relative to pre-construction conditions (before-after). If a statistical difference is not observed, the assessment would proceed to Response Level 1. Where statistical differences are identified, the assessment would proceed to Step 3, in which a determination of cause (*i.e.*, is the difference Project-related?) would be undertaken.

All metrics were reviewed and compared to the benchmark (*i.e.*, ±50% change in the mean of a metric in comparison to each previous year of monitoring data) to identify the potential for effects on the BMI community. For each metric that exceeded the benchmark, a statistical comparison between every year of data was undertaken. Prior to statistical analyses, macroinvertebrate metrics were tested for normality and homogeneity of variances and where the assumptions were met, were compared through a t-test or an Analysis of Variance (ANOVA) with Bonferroni pairwise comparison ($\alpha = 0.05$). Where these assumptions were not met, non-parametric analyses were applied such as the Mann-Whitney U-test or Kruskal-Wallis test followed by Dunn's multiple pairwise comparisons procedure ($\alpha = 0.05$). When data are non-normal, non-parametric tests are more powerful than parametric ones, *i.e.*, non-parametric analyses may be able to detect significant differences in the data when parametric analyses would not (Zar 1999). Non-parametric analyses are performed on ranks of the data and therefore do not require transformation of data; thus, all analyses are performed on the raw data. Since 2015, to reduce the likelihood of false-positives, the Bonferroni Correction has been applied when more than two years of data are compared. In these cases, a modified significance level (MSL) was obtained by dividing the critical p value (α) by the number of samples being compared. All analyses were performed using a current version of XLStat.

During the analyses conducted in support of this report, the power analyses conducted in support of the Keeyask Generation Project AEMP were revisited and, based on the consistency of data collected from Split Lake for the Keeyask EIS, it was determined that a measure of change benchmark of ±25% was more appropriate for two of the three metrics that are sensitive to environmental change: total taxonomic richness and Simpson's Diversity index. Results from all years of monitoring were assessed using this new, more stringent benchmark, and any changes/trends that were identified as a result of this adjustment are highlighted in the discussion of this report.

3.4.2 SUPPORTING SEDIMENTS

Summary statistics (mean, ±SD, ±SE, median, minimum, and maximum, and COV [%]) were calculated to characterize the general type of sediments observed in each aquatic habitat type sampled within a polygon. To facilitate these calculations, any parameters measured below the analytical detection limit were assigned a value of one-half the detection limit.

Statistical comparisons (ANOVA, Mann-Whitney or Kruskal-Wallis; as described in Section 3.4.1) were conducted to determine if changes to substrate composition and TOC that had occurred between monitoring years were statistically significant. In monitoring conducted prior to 2017 (Zrum and Gill 2015, 2016; Dawson 2017), only those results that exhibited a change that exceeded a ±50% difference in the mean of a metric between years were selected for further statistical analyses. However, since 2017 (Dawson 2018; Dawson 2019), statistical comparisons have been applied to all sediment data. The 50% difference was identified specifically for benthic invertebrate data, as the target minimum difference that could be detected with the sample size in the study.

4.0 RESULTS

4.1 BENTHIC MACROINVERTEBRATES

Environmental conditions at each replicate station from 2013 to 2019 are presented in Table 1. Benthic macroinvertebrate data for individual replicate stations sampled in each year are presented in Appendix 2. Summary statistics for metrics not presented in the following sections are provided in Appendix 3A (nearshore habitat) and Appendix 3B (offshore habitat). The text in Sections 4.1.1 and 4.1.2 compares the 2019 monitoring results to baseline (2013; where available) and also highlights differences between 2019 and previous years of construction monitoring (2014–2018). Increases or decreases compared to the magnitude of change benchmark (± 25% or ±50%) are highlighted, and an indication of whether or not those changes are statistically significant is provided. Only statistically significant decreases in a metric outside the benchmark suggest negatively impacts the BMI community. When the results from a particular year are not mentioned, it means they were similar to what was seen in 2019. Trends in the data over time are also described.

Differences between the BMI communities in Split Lake (reference) and Stephens Lake (impact) were noted for the pre-construction program (Zrum and Gill 2015). For example, the mean total macroinvertebrate density in offshore habitat at the 3 km and 11 km downstream sites in Stephens Lake in 2013 was more than 50% lower than the mean total macroinvertebrate density in offshore habitat in Split Lake in the same year, a difference that already exceeded the benchmark and construction had yet to begin. As such, assessment of construction effects could not be based on a direct upstream/downstream comparison; instead, the identification of potential effects of construction-related activities on downstream BMIs was based on changes over time within a given polygon. However, data collected from the reference waterbodies can be used to identify changes in BMI metrics that occur in waterbodies throughout the study area and are therefore likely due to changes in environmental conditions that are not related to construction (*e.g.*, water temperature). For this reason, results from sites downstream of the construction site are discussed first in the sections below, followed by results from the upstream reference sites to provide regional context.

4.1.1 KEY METRICS

As described in Section 3.4.1, total macroinvertebrate density, total taxonomic richness, and Simpson's Diversity index were selected as indicators of construction effects because of their sensitivity to environmental change.

4.1.1.1 TOTAL MACROINVERTEBRATE DENSITY

4.1.1.1.1 NEARSHORE HABITAT

In Stephens Lake at 3 km downstream of the construction site (Stephens Lake 3 km), mean total macroinvertebrate density has been consistent from 2013–2019, never exceeding the ±50% benchmark between years (Table 2; Figure 2). Mean total invertebrate density at 11 km downstream of the construction site (Stephens Lake 11 km) was higher in 2019 than in all previous years sampled, including pre-project (2013). It exceeded the 50% benchmark compared to all previous years of construction monitoring (2014–2018), but none of these differences were statistically significant (Table 3; Figure 2; Appendix 3A). Average total density of macroinvertebrates at 25 km downstream of the construction site (Stephens Lake 25 km) has varied from year-to-year during the monitoring program. The 2019 mean was not significantly different from previous years' means; however, it was more than 50% greater than the 2016 and 2017 means (Table 4; Figure 2).

Mean macroinvertebrate density in Split Lake was similar in 2017, 2018 and 2019. Mean density in 2019 was more than 50% higher than the 2014 mean and more than 50% lower than the 2015 mean, but these differences were not statistically significant (Table 5; Figure 2; Appendix 3A).

4.1.1.1.2 OFFSHORE HABITAT

Mean total macroinvertebrate density at Stephens Lake 3 km was higher in 2019 than all other years sampled, exceeding the 50% benchmark compared to all years except 2014. The difference between the 2015 and 2019 means was statistically significantly (Table 2; Figure 3; Appendix 3B). Total macroinvertebrate density at Stephens Lake 11 km was also highest in 2019. The 2019 mean was more than 50% higher than the 2014, 2015 and 2016 means, and the difference between the 2014 and 2019 means was statistically significant (Table 3; Figure 3). Mean total macroinvertebrate abundance at Stephens Lake 25 km has been consistent throughout construction monitoring, never exceeding the ±50% benchmark between years (Table 4; Figure 3).

At Split Lake, mean total invertebrate density in 2013 and 2014 was much higher (outside the ±50% benchmark) than subsequent years of monitoring. However, these differences were not statistically significant, and mean density has been consistent every year since 2016 (Table 5; Figure 3; Appendix 3B).

4.1.1.2 TOTAL TAXONOMIC RICHNESS

4.1.1.2.1 NEARSHORE HABITAT

At Stephens Lake 3 km, mean total taxonomic richness (at the family level) has been variable over time: the 2019 mean was lower than the 2013 (pre-project), 2014 and 2016 means (but

within the ±25% benchmark) and was more than 25% higher than the 2015, 2017 and 2018 means. None of differences were statistically significant (Table 2; Figure 4; Appendix 3A). At Stephens Lake 11 km, richness in 2019 was similar to the pre-project mean and the 2017 and 2018 means and more than 25% higher than the 2014, 2015 and 2016 means, but not significantly different (Table 3; Figure 4; Appendix 3A). Mean total richness at Stephens Lake 25 km in 2019 was within the benchmark compared to all other years of monitoring except 2016, when richness was unusually low, but no difference was statistically significant) (Table 4; Figure 4).

Mean total richness in Split Lake increased slightly in 2019 compared to 2018, but was still lower than the first three years of sampling (2014, 2015 and 2017), below the 25% benchmark for 2015 and 2017, and significantly lower than 2015 (Table 5; Figure 4; Appendix 3A).

4.1.1.2.2 OFFSHORE HABITAT

In 2019, mean total taxonomic richness at Stephens Lake 3 km was similar to the 2013 and 2018 means (but slightly lower), higher than the 2017 mean (but within the benchmark), and more than 25% higher than the 2014, 2015 and 2016 means. The difference between 2015 and 2019 was statistically significant (Table 2; Figure 5; Appendix 3B). Mean total richness at Stephens Lake 11 km has been consistent since 2016, with the 2019 mean higher than 2013, 2014 and 2015, and exceeding the +25% benchmark compared to 2013 and 2015 (Table 3; Figure 5). At Stephens Lake 25 km, mean total richness was higher in 2019 than all previous years of monitoring, exceeding the +25% benchmark compared to all years except 2017, but only significantly different from the 2015 mean (Table 4; Figure 5).

In 2019, mean total taxonomic richness in Split Lake was lower than all previous years of monitoring, but very similar to 2018. It was more than 25% lower than the 2013, 2014, 2015 and 2017 means; however, only the difference between 2015 and 2019 was statistically significant (Table 5; Figure 5).

4.1.1.3 SIMPSON'S DIVERSITY INDEX

4.1.1.3.1 NEARSHORE HABITAT

Mean Simpson's diversity at Stephens Lake 3 km in 2019 was higher than all other years and exceeded the 25% benchmark compared to 2015, 2017 and 2018; however, it was only significantly different from the 2015 mean (Table 2; Figure 6; Appendix 3A). At Stephens Lake 11 km, mean Simpson's diversity has continued to increase each year and was significantly higher in 2019 than the pre-project (2013) mean (Table 3; Figure 6). Mean Simpson's diversity at Stephens Lake 25 km has been consistent over time and has remained within the benchmark between years (Table 4; Figure 6).

Mean Simpson's diversity in nearshore habitat in Split Lake has been fairly consistent over time: the 2019 mean did not exceed the ±25% benchmark compared to any of the previous years of construction monitoring (Table 5; Figure 6; Appendix 3A).

4.1.1.3.2 OFFSHORE HABITAT

In 2019, mean Simpson's diversity was higher than all previous years at both Stephens Lake 3 km and Stephens Lake 11 km. At 3 km, the 2019 mean exceeded the 25% benchmark compared to 2013, 2014, 2015 and 2016 and the difference between 2015 and 2019 was statistically significant (Table 2; Figure 7; Appendix 3B). At Stephens Lake 11 km, mean Simpson's diversity in 2019 was significantly higher than the pre-project (2013) mean (Table 3; Figure 7). The 2019 mean was also significantly higher than the 2014 mean. Mean Simpson's diversity at Stephens Lake 25 km was similar to all other years of monitoring except it was more than 25% lower than the 2016 mean, a statistically significant difference (Table 4; Figure 7).

Mean Simpson's diversity in the offshore habitat of Split Lake was slightly higher in 2019 than in 2018 but was lower than all previous years sampled and was more than 25% lower than 2013 and 2014, although these differences were not statistically significant (Table 5; Figure 7; Appendix 3B).

4.1.2 ADDITIONAL METRICS

Benthic macroinvertebrate metrics expected to be negatively affected by increases in TSS include a decrease in Ephemeroptera (mayfly) abundance, % EPT (% mayfly, stonefly, and caddisfly), and Pisidiidae (fingernail clam) abundance; as such, they are presented in the following sections.

4.1.2.1 EPHEMEROPTERA DENSITY

4.1.2.1.1 NEARSHORE HABITAT

Ephemeroptera density at 3 km Stephens Lake has been variable throughout the years of monitoring. Mean density in 2019 was within ±50% of the 2014, 2017 and 2018 means, but more than 50% higher than the 2013, 2015 and 2016 means (differences that were not statistically significant) (Table 2; Figure 8; Appendix 3A). Mean Ephemeroptera density at Stephens Lake 11 km in 2013 (pre-project) was more than 50% higher than all subsequent years of monitoring, but the 2013 and 2019 means were not significantly different (Figure 8). The 2019 mean was also more than 50% higher than the 2016 and 2018 means, but these differences were not statistically significant either. (Table 3; Figure 8). Mean Ephemeroptera abundance at Stephens Lake 25 km in 2019 was not significantly different from any other year, but it was more than 50% higher than the 2016 mean, and more than 50% lower than the 2015 mean (Table 4; Figure 8).

In 2019, mean Ephemeroptera abundance in Split Lake nearshore habitat was not outside the ±50% benchmark compared to previous years of monitoring (Table 5; Figure 8; Appendix 3A).

4.1.2.1.2 OFFSHORE HABITAT

Since 2017, mean Ephemeroptera density in offshore habitat at Stephens Lake 3 km has been fairly consistent, but the 2019 mean was more than 50% higher than the 2013, 2014, 2015 and 2016 means, and was significantly different from 2015 when mean Ephemeroptera density was 0.0 (Table 2; Figure 9; Appendix 3B). Mean Ephemeroptera density at Stephens Lake 11 km in 2019 was similar to the means observed in 2014, 2015, 2016 and 2017, but more than 50% greater than the mean for 2018 and more than 50% lower than the 2013 mean. None of these differences were statistically significant (Table 3; Figure 9). In 2019, mean Ephemeroptera density at Stephens Lake 25 km was lower than all previous years of monitoring, and outside the 50% benchmark relative to all years except 2018 (Table 4; Figure 9). The 2019 mean was significantly lower than the 2014, 2016 and 2017 means (Appendix 3B).

Mean Ephemeroptera density in offshore habitat in Split Lake in 2019 was lower than most other years of monitoring but was only more than 50% lower than the 2013 mean (a difference that was not statistically significant) (Table 5; Figure 9).

4.1.2.2 PERCENT EPT

4.1.2.2.1 NEARSHORE HABITAT

In 2019, mean % EPT at Stephens Lake 3 km was similar to 2014, 2017 and 2018, but more than 50% higher than the 2013, 2015 and 2016 means, and significantly different from 2015 (Table 2; Figure 10; Appendix 3A). Mean % EPT at Stephens Lake 11 km in 2019 was lower than all previous years of monitoring and was significantly lower than the 2013 mean (Table 3; Figure 10). The 2019 mean at Stephens Lake 25 km was within the ±50% benchmark compared to all other years except 2015 and 2017, which were higher but not significantly different (Table 4; Figure 10; Appendix 3A).

Mean % EPT in nearshore habitat in Split Lake in 2019 was similar to the first three years of monitoring (2014, 2015 and 2017) but was more than 50% lower than the 2018 mean (not significantly different) (Table 5; Figure 10; Appendix 3A).

4.1.2.2.2 OFFSHORE HABITAT

Mean % EPT in 2019 at Stephens Lake 3 km was similar to the 2017 and 2018 means (within the 50% benchmark) but more than 50% higher than the means from 2013 to 2016 (differences were not statistically significant) (Table 2; Figure 11, Appendix 3B). At Stephens Lake 11 km, mean % EPT in 2019 was also similar to 2017 and 2018, but the 2019 mean was more than 50% lower than the means from 2013 to 2016, and was significantly different from the 2013, 2014 and 2016 means (Table 3; Figure 11; Appendix 3B). Mean % EPT at Stephens Lake 25

km decreased in 2019 compared to previous years, and was more than 50% lower than the 2014, 2016, and 2017 means. In all three years, the difference was statistically significant (Table 4; Figure 11; Appendix 3B).

In Split Lake in 2019, mean % EPT in offshore habitat was similar to the 2013, 2016, 2017 and 2018 means, but was more than 50% higher than the 2014 and 2015 means (Table 5; Figure 11). The 2019 mean was not significantly different from any other year (Appendix 3B).

4.1.2.3 PISIDIIDAE DENSITY

4.1.2.3.1 NEARSHORE HABITAT

In 2019, mean Pisidiidae density at Stephens Lake 3 km was more than 50% higher than all other years sampled, and was significantly different from the 2017 mean (Table 2; Figure 12; Appendix 3A). At Stephens Lake 11 km, mean Pisidiidae density in 2019 was similar to 2018 and more than 50% higher than the calculated means from 2013, 2014, 2015, 2016 and 2017, but none of these differences were statistically significant (Table 3; Figure 12). At Stephens Lake 25 km, mean Pisidiidae density in 2019 was similar to all other years sampled except it was more than 50% higher than the 2016 mean. This difference was not statistically significant (Table 4, Figure 12, Appendix 3A).

Mean Pisidiidae density in nearshore habitat in Split Lake in 2019 was more than 50% higher than the 2014 and 2018 means, and more than 50% lower than the 2015 and 2017 means (Table 5; Figure 12). None of these differences were statistically significant.

4.1.2.3.2 OFFSHORE HABITAT

Mean Pisidiidae density at Stephens Lake 3 km was more than 50% higher in 2019 than all other years sampled and the difference was statistically significant compared to the pre-project (2013) and second year of construction (2015) means (Table 2; Figure 13; Appendix 3B). Pisidiidae have been completely absent from offshore habitat in Stephens Lake 11 km in all years (Table 3; Figure 13). In 2019, low numbers of Pisidiidae were captured at Stephens Lake 25 km for the first time since 2014 but the mean density was not significantly different from previous years (Table 4; Figure 13; Appendix 3B).

In Split Lake, Pisidiidae density in offshore habitat in 2013 was high and has decreased over the years to a complete absence in 2017 and 2019, with very low numbers captured in 2018. Mean Pisidiidae density in 2019 was significantly lower than in 2013 and 2014 (Table 5; Figure 13; Appendix 3B).

4.2 SUPPORTING SEDIMENTS

Sediment data for individual replicate stations sampled in 2013 (pre-construction) and 2014–2019 (construction monitoring) are presented in Appendix 2. As in 2018, sediment composition has been analysed to highlight statistically significant changes.

4.2.1 TOC (%)

4.2.1.1 NEARSHORE HABITAT

At all nearshore sites monitored in 2019, % TOC was higher than in 2018, but there were no significant differences between 2019 results and previous years' means, including 2013 (Figure 14; Appendix 3A).

4.2.1.2 OFFSHORE HABITAT

Mean % TOC in offshore habitat at sites downstream of construction and in Split Lake in 2019 was not significantly different from any of the previous years of sampling (Figure 15; Appendix 3B).

4.2.2 SAND (%)

4.2.2.1 NEARSHORE HABITAT

In 2019, mean % sand in nearshore habitats in Stephens Lake was not significantly different than any previous years of study. In Split Lake, mean % sand in 2019 was lower than all other years sampled and was significantly lower than the 2017 mean (Figure 16; Appendix 3A).

4.2.2.2 OFFSHORE HABITAT

At Stephens Lake 3 km, mean % sand in 2019 samples was similar to 2017 and 2018 and was significantly higher than the pre-project (2013) mean (Figure 17; Appendix 3B). In all years of sampling, the mean % sand at Stephens Lake 11 km was very low (< 1%), with no significant difference between years. Sand also comprised a very low proportion of the sediment at Stephens Lake 25 km in all sampling years (< 2%), but the 2016, 2017, 2018 and 2019 means were significantly higher than the 2014 mean. Because these values were all so low, the change in laboratory detection limit in 2016 may have been at least partially responsible for this reported increase. The mean % sand in samples collected from offshore habitat in Spilt Lake was consistent between years.

4.2.3 SILT (%)

4.2.3.1 NEARSHORE HABITAT

In 2019, mean % silt at Stephens Lake 11 km and 25 km was not significantly different from previous years of monitoring; however, the mean % silt in samples from Stephens Lake 3 km in 2019 was significantly higher than in 2013, 2015 and 2016. Mean % silt in nearshore habitat at Split Lake in 2019 was higher than all other years; however the 2019 mean only differed significantly from 2017 (Figure 16; Appendix 3A).

4.2.3.2 OFFSHORE HABITAT

The mean % silt in samples collected offshore at Stephens Lake 3 km was not significantly different between years (Figure 17; Appendix 3B). Mean % silt in samples from Stephens Lake 11 km offshore was quite variable and the 2019 mean was significantly higher than the 2013, 2014 and 2016 means. The 2019 mean percentage of silt at Stephens Lake 25 km also varied over the years of sampling, however only differed significantly from 2016. Mean % silt in samples collected from offshore habitat in Split Lake in 2019 was similar to 2018, and was significantly higher than the 2014 mean.

4.2.4 CLAY (%)

4.2.4.1 NEARSHORE HABITAT

On Stephens Lake, the pattern observed for % silt in 2019 was also seen for % clay: no significant differences were measured at Stephens Lake 11 km or 25 km, but at Stephens Lake 3 km there were statistically significant differences. As in 2017 and 2018, the % clay in 2019 was significantly lower than in previous sampling years (*i.e.*, 2013, 2015, and 2016) (Figure 16; Appendix 3A). Mean % clay in nearshore habitat at Split Lake in 2019 was higher than all other years; however the 2019 mean only differed significantly from 2017.

4.2.4.2 OFFSHORE HABITAT

Mean % clay in offshore samples at Stephens Lake 3 km was lower in 2019 than all previous sampling years, and significantly lower than the 2013 and 2015 means (Figure 17; Appendix 3B). At Stephens Lake 11 km, mean % clay was significantly lower in 2019 than in 2013, 2014 and 2016. Clay content was highly variable between the years at Stephens Lake 25 km, however 2019 was only significantly lower than 2016. Offshore samples collected from Split Lake in 2019 contained a much lower proportion of clay than in previous years, and was significantly lower than in 2014 and 2016.

5.0 DISCUSSION

5.1 STEPHENS LAKE

Samples collected from nearshore habitat at Stephens Lake 3 km in 2019 did not indicate negative changes to the BMI community: the six metrics used to monitor BMI community sensitivity to TSS (total invertebrate density, total taxonomic richness, Simpson's diversity index, Ephemeroptera density, % EPT and Pisidiidae density) did not exhibit any decreases relative to pre-project conditions (2013) (Table 2). All six metrics were either within the magnitude of change benchmark (±25% or ±50%) or they had increased by more than 50% compared to 2013, but none of the increases were statistically significant (Tables 2 and 6). Similar to the nearshore, samples collected from offshore habitat at Stephens Lake 3 km in 2019 did not show any decreases in the six selected BMI metrics compared to 2013. All parameters except total richness were above the magnitude of change benchmark (±25% or ±50%) relative to the 2013 mean (Table 6). The increase in Pisidiidae density was statistically significant.

Total invertebrate density in nearshore and offshore habitat at Stephens Lake 11 km was higher than baseline but still within the ±50% benchmark compared to 2013 (Tables 3 and 7; Appendices 3A and 3B). Because Ephemeroptera represented an unusually high proportion of the total organisms in samples collected at Stephens Lake 11 km in 2013, the average Ephemeroptera density in subsequent years' samples (including 2019) have consistently been more than 50% lower than the baseline mean, although these differences were not statistically significant in 2019 (Tables 3 and 7; Figures 8 and 9). In addition, the % EPT of samples collected in 2019 were significantly lower than baseline (Table 3; Figures 10 and 11). Conversely, Simpson's diversity was significantly higher in 2019 than 2013 (Table 3; Figures 6 and 7). Offshore substrate composition in 2019 was significantly different from baseline due to an increase in % silt and a decrease in % clay, but nearshore substrate composition was similar to baseline (Figures 16 and17; Appendices 3A and 3B). It is therefore likely that the decreases in Ephemeroptera observed both nearshore and offshore in 2019 were not caused by environmental changes that negatively impacted this species; instead, it was an artifact due to the collection of only one year of baseline data (2013) during a year when Ephemeroptera were unusually abundant at Stephens Lake 11 km.

Baseline data are not available for Stephens Lake 25 km, as sampling at this site was added to the monitoring program during the first year of the construction phase (2014). Results from nearshore habitat sites at Stephens Lake 25 km have been fairly consistent from year to year, except in 2016 when the majority of BMI metrics experienced a decrease which was attributed to low water levels that left some sites exposed for a portion of the open-water season (Table 4; Appendix 3A). In 2019, averages for the six BMI metrics that are negatively affected by increases in TSS were not significantly different from any other year of monitoring (Table 4).

Ephemeroptera density and % EPT in offshore habitat at Stephens Lake 25 km in 2019 were lower than all previous years of monitoring, and both metrics were significantly different from the 2014, 2016 and 2017 means (Table 4 Figures 5 and 7; Appendix 3B). Substrate conditions at this site have been variable over time, with 2019 samples exhibiting significantly higher % sand and % silt than 2014 and 2016, respectively, and a significantly lower % clay than 2016 (Figure 17; Appendix 3B). Considering that this site is the most remote from instream construction (of the three sites on Stephens Lake) and therefore the least likely to experience sediment deposition related to Project construction, and inter-annual changes in substrate are observed here more frequently than at Stephens Lake 3 km, these differences are probably due to the patchy nature of the substrate at this site, which can also result in patchy distribution of BMIs.

5.2 REFERENCE WATERBODY

Pre-construction sampling revealed inherent differences in the BMI communities in the main reference waterbody (Split Lake) and the impact waterbody (Stephens Lake) that preclude a direct upstream/downstream comparison (see Section 4.1). Identification of potential construction-related effects to benthos are limited to changes over time within each habitat polygon. Data collected from the reference waterbodies were instead used to provide context for changes observed at the Project affected sites. These upstream sites were used to illustrate the extent of between-year changes that might arise due to factors such as high- vs low-flow years, differences in the season hydrograph, weather, and other sources of between-year variations specific to the life cycles of BMIs.

Similar to Stephens Lake 25 km, baseline data are not available for nearshore habitat in Split Lake. The only statistically significant difference between 2019 and previous years of monitoring at the Split Lake nearshore site was a decrease in total taxonomic richness compared to 2015 (Table 5). It's possible that this change resulted from a shift in substrate composition: the average proportion of sand was 22% lower and the proportion of silt was 15% higher than any previous year of sampling, a statistically significant difference compared to 2017 (Figure 16; Appendix 3A). An examination of sampling location shows that samples were collected farther offshore in 2019 than any previous year of monitoring (Table 1). In offshore habitat in 2019, the six BMI metrics that are negatively affected by increases in TSS were all more than 50% lower than the 2013 mean except % EPT, and the decrease in Pisidiidae density was statistically significant (Table 5; Figure 11). Samples collected in 2019 contained a lower percentage of clay and higher percentage of silt substrate than 2013, which could explain the relative decrease in Pisidiidae (Figure 17; Appendix 3B).

5.3 KEY QUESTIONS

Two key questions were considered.

To what degree will benthic invertebrate abundance and/or community composition change during construction activities in comparison to either upstream or pre-project conditions?

The AE SV (KHLP 2012) considered the following pathways of effect during construction of the Project:

- Changes to water quality, such as increases in concentration of TSS and related variables (*e.g.*, turbidity). However, it was expected that measures to protect water quality would reduce the likelihood of any measurable effects on the BMI community; and
- Deposition of sediments in Stephens Lake. This was not expected to affect BMI as the total amount of sediments deposited was predicted to be very small (less than 0.6 cm thickness over the period of construction) and the composition of bottom substrate would not be changed.

Almost all construction in 2019 was conducted "in the dry", so sediment deposition due to construction was not expected. Sampling results supported this contention: TSS increases due to construction were not observed during water quality monitoring (Wyn 2020) and the results of BMI monitoring did not show consistent decreases in those metrics that are sensitive to TSS increases. At 3 km Stephens Lake, in both nearshore and offshore habitat, means of metrics were either similar to baseline or they had increased by more than 50%, and the offshore increase in Pisidiidae density was statistically significant. While some decreases in BMI metrics relative to 2013 were observed at Stephens Lake 11 km and 25 km, the measured decreases were unlikely to have resulted from construction impacts because the site closest to the construction site exhibited no negative impacts.

Are there any unexpected effects on benthic macroinvertebrates that may be related to GS construction activities?

No. The BMI program is based on a gradient design, and negative effects due to TSS inputs from construction would be greatest at the site closest to construction (Stephens Lake 3 km). In 2019, BMI monitoring in both nearshore and offshore habitat at Stephens Lake 3 km did not indicate any negative effects to the BMI community as a result of instream construction activities. The decreases in BMIs seen at Stephens Lake 11 km and 25 km are similar to some of the year-to-year differences seen at the upstream site on Split Lake, where there are no effects of construction. Because of the similar differences seen at Split Lake, and the fact that negative effects were not seen at the site closest to construction, the changes recorded at the Stephens Lake 11 and 25 km sites were likely related to inherent variability in the BMI community rather than an effect directly related to construction.

6.0 SUMMARY AND CONCLUSIONS

Benthic macroinvertebrates were sampled in mid-August and mid-September of 2019 (Year 6 of construction) in one area of Split Lake and three areas of Stephens Lake to monitor for effects from construction. The three areas in Stephens Lake were located approximately 3 km (near-field area), 11 km (mid-field area), and 25 km (far-field area) downstream of the instream construction site at the former Gull Rapids. Within each sampling area, BMIs were sampled from both nearshore (close to the shoreline in shallow water) and offshore (further from the shoreline in deeper water) habitat types. Five stations were sampled with a bottom dredge to collect bottom sediments and BMIs from each of these two habitat types. Sampling sites in Stephens Lake were wetted for the entire open-water season (Figure 18). Split Lake served as a reference area.

Changes in six BMI metrics that are negatively affected by increases to TSS were monitored relative to baseline conditions, with decreases interpreted as potential impacts of construction on the BMI community. Notable differences between 2019 and baseline (2013) results at 3 km, 11 km and 25 km downstream of Gull Rapids were as follows:

- In 2019, richness, diversity and Pisidiidae density all increased in nearshore Stephens Lake 3 km samples compared to 2018. As a result of these increases, all six metrics used to monitor BMI sensitivity to TSS were either within the magnitude of change benchmark relative to the 2013 mean, or they had exceeded it. Offshore samples in 2019 did not exhibit any decreases outside the magnitude of change benchmark compared to baseline, although Pisidiidae density remained significantly higher than baseline.
- As noted in 2018, the majority of differences from baseline at Stephens Lake 11 km are linked to decreases in mayfly density. Mayfly density has been lower than baseline in both nearshore and offshore habitat since 2014. In 2019, mayfly density in both habitat types was more than 50% lower than baseline, but due to a small increase between 2018 and 2019, the difference was no longer statistically significant. The statistically significant decreases in % EPT that were measured in both habitat types in 2018 persisted in 2019.
- Monitoring results from nearshore habitat at Stephens Lake 25 km only showed significant differences between years compared to 2016, when low water levels resulted in decreases outside the benchmark for nearly all metrics. Mayfly density and % EPT in offshore habitat at Stephens Lake 25 km have been inconsistent from year to year, likely as a result of the patchy nature of the sediments at this site.

Similar to previous years, monitoring results have indicated that the significant decreases in BMI metrics observed in Stephens Lake are unlikely to have resulted from construction activities, as

TSS increases due to construction were not observed (Wyn 2020), and negative changes to the BMI community were not detected at the site closest to construction (3 km downstream).

Overall, the lack of consistent changes in the BMI community in Stephens Lake, together with the variability observed in samples collected from Split Lake, make it unlikely that differences from the baseline at 3 km, 11 km, and 25 km downstream of Gull Rapids are the result of construction effects. Instead, patchy BMI distribution (both spatially and temporally), as the result of each species' unique growth and movement patterns, as well as the timing of their proliferation (which can vary from year to year), likely caused the observed inter-annual differences in BMI metrics.

The key questions related to BMI monitoring during construction are addressed below:

- *To what degree will benthic invertebrate abundance and/or community composition change during construction activities in comparison to either upstream or pre-project conditions?*

  Monitoring in 2019 did not identify changes to the BMI community that were linked with construction.

- *Are there any unexpected effects on benthic macroinvertebrates that may be related to GS construction activities?*

  BMI monitoring during construction has not detected any unexpected effects that may be related to instream construction.

Based on the analyses completed to date, no change to monitoring activity is anticipated. BMI monitoring will be conducted in late August of 2020 (Year 7 of construction) as set out in the AEMP.

7.0 LITERATURE CITED

Azimuth Consulting Group. 2012. Core receiving environment monitoring program (CREMP): Design document 2012. Prepared for Agnico-Eagle Mines Ltd., Baker Lake, Nunavut. December 2012.

Barbour, M.T., Gerritsen, J., Snyder, B.D. and Stribling, J.B. 1999. Rapid bioassessment protocols for use in streams and wadeable rivers: periphyton, benthic macroinvertebrates, and fish. Second Edition. EPA 841-B-99-002. U.S. Environmental Protection Agency, Office of Water; Washington, D.C.

Clifford, H.F. 1991. Aquatic invertebrates of Alberta: an illustrated guide. University of Alberta, Edmonton, Alberta. 538 pp.

Dawson, K. 2017. Benthic macroinvertebrate monitoring in the Nelson River 2016: Year 3 Construction. Keeyask Generation Project Aquatic Effects Monitoring Plan Report #AEMP-2017-08. A report prepared for Manitoba Hydro by North/South Consultants Inc., June 2017. xiii + 142 pp.

Dawson, K. 2018. Benthic macroinvertebrate monitoring in the Nelson River 2017: Year 4 Construction. Keeyask Generation Project Aquatic Effects Monitoring Plan Report #AEMP-2018-09. A report prepared for Manitoba Hydro by North/South Consultants Inc., June 2018. xiv + 206 pp.

Dawson, K. 2019. Benthic macroinvertebrate monitoring in the Nelson River 2018: Year 5 Construction. Keeyask Generation Project Aquatic Effects Monitoring Plan Report #AEMP-2019-08. A report prepared for Manitoba Hydro by North/South Consultants Inc., June 2019. xiv + 179 pp.

Environment Canada (EC). 2012. Metal mining technical guidance for Environmental Effects Monitoring. Environment Canada, Gatineau, QC.

Integrated Taxonomic Information System (ITIS). 2020. Available online: http://www.itis.gov/

Keeyask Hydropower Limited Partnership (KHLP). 2012. Keeyask Generation Project Environmental Impact Statement: Aquatic Environment Support Volume, Winnipeg, MB. 1,745 pp.

Keeyask Hydropower Limited Partnership (KHLP). 2015. Keeyask Generation Project Aquatic Effects Monitoring Plan (AEMP). Winnipeg, MB. 322 pp.

Klemm, D.J., Blocksom, K.A., Thoeny, W.T., Fulk, F.A., Herlihy, A.T., Kaufmann, P.R. and Cormier, S.M. 2002. Methods development and use of macroinvertebrates as indicators of ecological conditions for streams in the mid-Atlantic highlands region. Environmental Monitoring and Assessment 78: 169-212.

Lawrence, M.J., Fazakas, C.R., Zrum, L., Bezte, C.L. and Bernhardt, W.J. 1999. The Split Lake aquatic ecosystem: A synthesis of Split Lake biological and environmental data January 1997 – October 1998. A report prepared for the Tataskweyak Environmental Monitoring Agency. xii + 84 pp.

Magurran, A.E. 1988. Ecological diversity and its measurement. Princeton University Press, Princeton, New Jersey. 189 pp.

Magurran, A.E. 2004. Measuring biological diversity. Blackwell. Malden Massachusetts. 256 pp.

Mandaville, S.M. 2002. Benthic macroinvertebrates in freshwaters – taxa tolerance values, metrics, and protocols. Project H-1. Soil and Water Conservation Society of Metro Halifax. 48 pp. + appendices.

Merritt R.W. and Cummins, K.W. 1996. Aquatic insects of North America. Kendall/Hunt Publishing Company. Dubuque, Iowa. 862 pp.

Peckarsky B.L., Fraissinet, P.R., Penton, M.A. and Conklin, D.J., Jr. 1990. Freshwater macroinvertebrates of northeaster North America. Cornell University Press, Ithaca, New York. 442 pp.

Resh, V.H., Rosenberg, D.M. and Reynoldson, T.B. 1997. Selection of benthic macroinvertebrate metrics for monitoring water quality of the Fraser River, British Columbia: implications for both multimetric approaches and multivariate models. In Assessing the Biological Quality of Fresh Waters: Rivpacs and Other Techniques. Edited by J.F Wright, D.W. Sutcliffe, and M.T. Furse. Freshwater Biological Association, Ambleside, Cumbria, UK. 195-206 pp.

Smith, D.G. 2001. Pennak's Freshwater Invertebrates of the United States: Porifera to Crustacea. 4th edition. John Wiley & Sons Inc.: New York. 638 pp.

Stewart, K.W. and Stark, B.P. 2002. Nymphs of North American stonefly genera (Plecoptera). 2nd edition. The Caddis Press: Ohio. 510 pp.

Sullivan, S.M.P., Watzin, M.C. and Hession, W.C. 2004. Understanding stream geomorphic state in relation to ecological integrity: Evidence using habitat assessments and macroinvertebrates. Environmental Management 34: 669-683.

Wiggins, G.B. 2004. Caddisflies: the Underwater Architects. University of Toronto Press: Toronto. 292 pp.

Wyn, B. 2020. Results of water quality monitoring in the Nelson River, 2019: Year 6 Construction. Keeyask Generation Project Aquatic Effects Monitoring Plan Report #AEMP-2020-07. A report prepared for Manitoba Hydro by North/South Consultants Inc., June 2020. xxiii + 173 pp.

Zar, J.H. 1999. Biostatistical Analysis, Fourth Edition. Prentice-Hall, Upper Saddle River, N.J.

Zrum, L. and Gill, G. 2015. Benthic Macroinvertebrate monitoring in the Nelson River, 2014: Year 1 Construction. Keeyask Generation Project Aquatic Effects Monitoring Plan Report #AEMP-2015-07. A report prepared for Manitoba Hydro by North/South Consultants Inc., June 2015. 106 pp.

Zrum, L. and Gill, G. 2016. Benthic macroinvertebrate monitoring in the Nelson River 2015: Year 2 Construction. Keeyask Generation Project Aquatic Effects Monitoring Plan Report #AEMP-2016-08. A report prepared for Manitoba Hydro by North/South Consultants Inc., June 2016. 117 pp.

TABLES

Table 1. Coordinates and supporting habitat variables measured at benthic macroinvertebrate monitoring sites sampled in 2013 (pre-construction)[a,b], 2014 (Year 1 construction), 2015 (Year 2 construction), 2016 (Year 3 construction), 2017 (Year 4 construction), 2018 (Year 5 construction) and 2019 (Year 6 construction).

Waterbody	Site ID	Habitat Type	Study Year	Sample Date	UTM (NAD 83)			Water Temperature (ºC)	Mean Water Velocity (m/sec)	Mean Water Depth (m)	Mean Secchi Depth (m)	Substrate Description
					Zone	Easting	Northing					
Split Lake	SPLIT-PW	NRSH-PW	2014	23-Aug-14	14	673602	6232992	17	0.00	2.6	0.30	clay
			2015	23-Aug-15	14	673607	6232997	16	-	1.1	0.60	clay/OM
			2017	24-Aug-17	14	673612	6233004	18	0.00	1.9	0.67	clay/sand/OM
			2018	24-Aug-18	14	673658	6233005	15	0.15	1.3	0.41	clay/OM
			2019	22-Aug-19	14	673698	6233002	17	0.00	1.7	0.29	clay/OM
Split Lake	SPLIT-OS	OFFSH	2013	22-Aug-13	14	678461	6233976	17	0.00	7.4	0.46	clay
			2014	23-Aug-14	14	678466	6233977	18	0.00	7.8	0.52	clay
			2015	23-Aug-15	14	678468	6233975	16	-	5.9	0.60	clay
			2016	27-Aug-16	14	678463	6233981	18	0.07	7.0	0.50	clay/silt
			2017	24-Aug-17	14	678460	6233995	18	0.23	7.3	0.69	clay/shells
			2018	24-Aug-18	14	678462	6233995	14.5	0.15	6.5	0.43	clay/shells
			2019	22-Aug-19	14	678469	6234002	18.5	0.14	6.9	0.47	clay/shells
Stephens Lake	STL3KM-PW	NRSH-PW	2013	25-Sep-13	15	365672	6248917	14	0.00	2.8	0.33	clay
			2014	16-Sep-14	15	365666	6248912	10	0.00	2.8	0.30	silt/OM
			2015	20-Aug-15	15	365666	6248914	16	-	2.3	-	clay/OM/gravel
			2016	10-Sep-16	15	365664	6248906	15	0.05	2.5	0.40	silt/clay/OM
			2017	23-Sep-17	15	365672	6248915	12	0.07	2.2	0.48	silt/clay/sand
			2018	30-Aug-18	15	365675	6248915	15	0.02	2.6	0.38	clay/silt/sand/OM
			2019	22-Sep-19	15	365658	6248914	12.5	0.00	1.2	0.30	gravel/clay/silt/OM
Stephens Lake	STL3KM-OS	OFFSH	2013	25-Sep-13	15	366128	6248908	14	0.02	6.1	0.30	clay
			2014	16-Sep-14	15	366127	6248901	10	0.00	6.0	0.30	silt/clay
			2015	20-Aug-15	15	366125	6248901	16	-	5.3	-	clay
			2016	10-Sep-16	15	366122	6248910	15	0.08	5.6	0.40	silt/clay
			2017	23-Sep-17	15	366137	6248901	12	0.07	5.3	0.48	silt/clay/OM
			2018	30-Aug-18, 03-Sep-18	15	366130	6248912	15	0.03	5.7	0.48	clay/silt/OM
			2019	22-Sep-19	15	366121	6248907	12.5	0.00	4.0	0.50	silt/clay/OM/gravel
Stephens Lake	STL11KM-PW	NRSH-PW	2013	26-Sep-13	15	376454	6248753	11	0.00	2.4	0.58	clay
			2014	16-Sep-14	15	376451	6248753	10	0.00	2.2	0.30	silt/clay/OM
			2015	21-Aug-15	15	376445	6248747	16	-	2.1	-	clay
			2016	10-Sep-16	15	376455	6248750	15	0.05	1.7	0.43	sand/OM/silt
			2017	22-Sep-17	15	376450	6248761	12	0.05	2.1	0.48	clay/silt
			2018	30-Aug-18	15	376451	6248761	15	0.01	2.0	0.48	clay/silt/OM
			2019	21-Sep-19	15	376440	6248750	14	0.00	1.5	0.48	silt/gravel/sand/OM
Stephens Lake	STL11KM-OS	OFFSH	2013	26-Sep-13	15	376340	6248573	11	0.00	6.9	0.70	clay
			2014	16-Sep-14	15	376354	6248567	10	0.00	6.8	0.30	clay
			2015	20-Aug-15	15	376351	6248567	16	-	6.3	-	clay
			2016	10-Sep-16	15	376360	6248559	15	0.03	6.7	0.41	silt
			2017	22-Sep-17	15	385544	6248051	12	0.04	6.5	0.48	OM/sand/clay
			2018	30-Aug-18	15	376341	6248569	15	0.02	6.6	0.48	clay/silt/OM
			2019	21-Sep-19	15	376354	6248561	14	0.00	5.4	0.53	loose silt

Waterbody	Site ID	Habitat Type	Study Year	Sample Date	UTM (NAD 83)			Water Temperature (ºC)	Mean Water Velocity (m/sec)	Mean Water Depth (m)	Mean Secchi Depth (m)	Substrate Description
					Zone	Easting	Northing					
Stephens Lake	STL25KM-PW	NRSH-PW	2014	17-Sep-14	15	386545	6247951	10	0.00	2.5	0.35	silt/clay
			2015	08-Sep-15	15	386545	6247952	15.5	-	1.6	0.50	sand/clay/OM
			2016	10-Sep-16	15	386569	6247952	15	0.07	2.1	0.40	gravel/sand/silt/OM
			2017	22-Sep-17	15	386559	6247962	12	0.18	2.1	0.48	sand/silt/clay/OM
			2018	29-Aug-18	15	386556	6247965	15	0.02	2.2	0.48	sand/OM/clay
			2019	21-Sep-19	15	386543	6247953	13.5	0.00	1.7	0.50	sand/silt/gravel/OM
Stephens Lake	STL25KM-OS	OFFSH	2014	17-Sep-14	15	385548	6248048	10	0.00	9.1	0.35	clay
			2015	21-Aug-15	15	385549	6248050	16	-	8.9	-	clay
			2016	10-Sep-16	15	385559	6248050	15	0.06	9.1	0.42	silt/OM
			2017	22-Sep-17	15	385544	6248051	12	0.10	9.1	0.48	clay/silt/OM
			2018	29-Aug-18	15	385539	6248061	14	0.03	8.9	0.48	clay/silt/OM
			2019	21-Sep-19	15	385555	6248054	13.5	0.00	7.6	0.48	loose silt

- = not sampled
a. Stephens Lake sites 25 km downstream added after 2013 to address concerns with unanticipated downstream effects.
b. Split Lake predominantly wetted was first added to CAMP sampling in 2014, and could not be sampled in 2016 for logistical reasons.
OS = offshore.
PW = predominantly wetted (nearshore).
OM = organic matter.

Table 2: Comparison of Year 6 construction (2019) BMI monitoring results at 3 km downstream in Stephens Lake against baseline (2013) and Years 1–5 of construction monitoring (2014–2018) results for metrics expected to be negatively affected by increases in TSS.

Metrics	Magnitude of Change Benchmark	Nearshore 2019						Offshore 2019					
		2013	2014	2015	2016	2017	2018	2013	2014	2015	2016	2017	2018
Total Invertebrate Density	± 50%	√	√	√	√	√	√	↑	√	↑	↑	↑	↑
Total Taxonomic Richness	± 25%	√	√	↑	√	↑	↑	√	↑	↑	↑	√	√
Simpson's Diversity Index	± 25%	√	√	↑	√	↑	↑	↑	↑	↑	↑	√	√
Ephemeroptera Density	± 50%	↑	√	↑	↑	√	√	↑	↑	↑	↑	√	√
% EPT	± 50%	↑	√	↑	↑	√	√	↑	↑	↑	↑	√	√
Pisidiidae Density	± 50%	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑

√ = 2019 mean was within the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016, 2017, or 2018 mean.

↑ = 2019 mean increased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference not statistically significant).

↓ = 2019 mean decreased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference not statistically significant).

↑ = 2019 mean increased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference statistically significant).

↓ = 2019 mean decreased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference statistically significant).

Table 3: Comparison of Year 6 construction (2019) BMI monitoring results at 11 km downstream in Stephens Lake against baseline (2013) and Years 1–5 of construction monitoring (2014–2018) results for metrics expected to be negatively affected by increases in TSS.

Metrics	Magnitude of Change Benchmark	Nearshore 2019						Offshore 2019					
		2013	2014	2015	2016	2017	2018	2013	2014	2015	2016	2017	2018
Total Invertebrate Density	± 50%	√	↑	↑	↑	↑	↑	√	↑	↑	↑	√	√
Total Taxonomic Richness	± 25%	√	↑	↑	↑	√	√	↑	√	↑	√	√	√
Simpson's Diversity Index	± 25%	↑	√	√	√	√	√	↑	↑	√	↑	↑	√
Ephemeroptera Density	± 50%	↓	√	√	↑	√	↑	↓	√	√	√	√	↑
% EPT	± 50%	↓	↓	↓	√	√	√	↓	↓	↓	↓	√	√
Pisidiidae Density	± 50%	↑	↑	↑	↑	↑	√	√	√	√	√	√	√

√ = 2019 mean was within the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016, 2017, or 2018 mean.
↑ = 2019 mean increased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference not statistically significant).
↓ = 2019 mean decreased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference not statistically significant).
↑ = 2019 mean increased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference statistically significant).
↓ = 2019 mean decreased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference statistically significant).

Table 4: Comparison of Year 6 construction (2019) BMI monitoring results at 25 km downstream in Stephens Lake against Years 1–5 of construction monitoring (2014–2018) results for metrics expected to be negatively affected by increases in TSS.

Metrics	Magnitude of Change Benchmark	Nearshore 2019					Offshore 2019				
		2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Total Invertebrate Density	± 50%	√	√	↑	↑	√	√	√	√	√	√
Total Taxonomic Richness	± 25%	√	√	↑	√	√	↑	↑	↑	√	↑
Simpson's Diversity Index	± 25%	√	√	√	√	√	√	√	↓	√	√
Ephemeroptera Density	± 50%	√	↓	↑	√	√	↓	↓	↓	↓	√
% EPT	± 50%	√	↓	√	↓	√	↓	√	↓	↓	√
Pisidiidae Density	± 50%	√	√	↑	√	√	√	↑	↑	↑	↑

√ = 2019 mean was within the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016, 2017, or 2018 mean.
↑ = 2019 mean increased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference not statistically significant).
↓ = 2019 mean decreased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference not statistically significant).
↑ = 2019 mean increased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference statistically significant).
↓ = 2019 mean decreased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference statistically significant).

Table 5: Comparison of Year 6 construction (2019) BMI monitoring results in Split Lake against baseline (2013) and Years 1–5 of construction monitoring (2014–2018) results for metrics expected to be negatively affected by increases in TSS.

Metrics	Magnitude of Change Benchmark	Nearshore 2019				Offshore 2019					
		2014	2015	2017	2018	2013	2014	2015	2016	2017	2018
Total Invertebrate Density	± 50%	↑	↓	√	√	↓	↓	√	√	√	√
Total Taxonomic Richness	± 25%	√	↓	↓	√	↓	↓	↓	√	↓	√
Simpson's Diversity Index	± 25%	√	√	√	√	↓	↓	√	√	√	√
Ephemeroptera Density	± 50%	√	√	√	√	↓	√	√	√	√	√
% EPT	± 50%	√	√	√	↓	√	↑	↑	√	√	√
Pisidiidae Density	± 50%	↑	↓	↓	↑	↓	↓	↓	↓	√	↓

√ = 2019 mean was within the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016, 2017, or 2018 mean.
↑ = 2019 mean increased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference not statistically significant).
↓ = 2019 mean decreased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference not statistically significant).
↑ = 2019 mean increased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference statistically significant).
↓ = 2019 mean decreased by more than the magnitude of change benchmark relative to the 2013, 2014, 2015, 2016 2017, or 2018 mean (difference statistically significant).

Table 6: Summary of benchmark exceedances (compared to 2013 baseline) for metrics expected to be negatively affected by increases in TSS at 3 km downstream in Stephens Lake.

Metrics	Nearshore [1]			Offshore [1]		
	+MCB	-MCB	sig.	+MCB	-MCB	sig.
Total Invertebrate Density						
2014	N	N	-	N	N	-
2015	N	N	-	-	Y	N
2016	N	N	-	N	N	-
2017	N	N	-	N	N	-
2018	N	N	-	N	N	-
2019	N	N	-	Y	-	N
Total Taxonomic Richness						
2014	N	N	-	-	Y	N
2015	-	Y	N	-	Y	Y
2016	N	N	-	-	Y	N
2017	-	Y	N	N	N	-
2018	-	Y	N	N	N	-
2019	N	N	-	N	N	-
Simpson's Diversity Index						
2014	N	N	-	N	N	-
2015	-	Y	N	-	Y	N
2016	N	N	-	N	N	-
2017	-	Y	N	Y	-	N
2018	-	Y	N	N	N	-
2019	N	N	-	Y	-	N
Ephemeroptera Density						
2014	Y	-	N	N	N	-
2015	-	Y	N	-	Y	N
2016	Y	-	N	N	N	-
2017	Y	-	N	Y	-	N
2018	Y	-	N	Y	-	N
2019	Y	-	N	Y	-	N
Percent EPT						
2014	Y	-	N	N	N	-
2015	-	Y	N	Y	-	N
2016	N	N	-	N	N	-
2017	Y	-	N	Y	-	N
2018	Y	-	N	Y	-	N
2019	Y	-	N	Y	-	N
Pisidiidae Density						
2014	-	Y	N	Y	-	N
2015	-	Y	N	-	Y	N
2016	N	N	-	Y	-	N
2017	-	Y	N	Y	-	N
2018	-	Y	N	Y	-	N[2]
2019	Y	-	N	Y	-	Y

1 - MCB = magnitude of change benchmark; 25% for Total Taxonomic Richness and Simpson's Diversity Index, 50% for EPT and all density metrics.
2 - Due to inclusion of 2019 data, results of statistical comparisons may be different from previous years.
Y = yes, the benchmark was exceeded (or the exceedance was statistically significant).
N = no, the benchmark was not exceeded (or the exceedance was not statistically significant).

Table 7: Summary of benchmark exceedances (compared to 2013 baseline) for metrics expected to be negatively affected by increases in TSS at 11 km downstream in Stephens Lake.

Metrics	Nearshore [1]			Offshore [1]		
	+MCB	-MCB	sig.	+MCB	-MCB	sig.
Total Invertebrate Density						
2014	N	N	-	N	N	-
2015	-	Y	N	N	N	-
2016	-	Y	N[2]	N	N	-
2017	-	Y	N	N	N	-
2018	N	N	-	N	N	-
2019	N	N	-	N	N	-
Total Taxonomic Richness						
2014	N	N	-	N	N	-
2015	N	N	-	N	N	-
2016	N	N	-	Y	-	N
2017	N	N	-	Y	-	N
2018	N	N	-	Y	-	N
2019	N	N	-	Y	-	N
Simpson's Diversity Index						
2014	N	N	-	Y	-	N
2015	N	N	-	Y	-	Y
2016	Y	-	Y	Y	-	Y
2017	Y	-	Y	Y	-	Y
2018	Y	-	Y	Y	-	Y
2019	Y	-	Y	Y	-	Y
Ephemeroptera Density						
2014	-	Y	N	N	N	-
2015	-	Y	N	-	Y	N
2016	-	Y	Y	-	Y	N
2017	-	Y	N	-	Y	N
2018	-	Y	Y	-	Y	Y
2019	-	Y	N	-	Y	N
Percent EPT						
2014	N	N	-	N	N	-
2015	N	N	-	N	N	-
2016	-	Y	Y	N	N	-
2017	-	Y	N[2]	-	Y	Y
2018	-	Y	Y	-	Y	Y
2019	-	Y	Y	-	Y	Y
Pisidiidae Density						
2014	N	N	-	N	N	-
2015	N	N	-	N	N	-
2016	N	N	-	N	N	-
2017	Y	-	N	N	N	-
2018	Y	-	N	N	N	-
2019	Y	-	N	N	N	-

1 - MCB = magnitude of change benchmark; 25% for Total Taxonomic Richness and Simpson's Diversity Index, 50% for EPT and all density metrics.
2 – Due to inclusion of 2019 data, results of statistical comparison are different from previous years.
Y = yes, the benchmark was exceeded (or the exceedance was statistically significant).
N = no, the benchmark was not exceeded (or the exceedance was not statistically significant).

Table 8: Summary of offshore benchmark exceedances in the reference waterbody Split Lake (compared to 2013 baseline).

Metric	Offshore [1]		
	+MCB	-MCB	sig.
Total Invertebrate Density			
2014	N	N	-
2015	-	Y	N
2016	-	Y	Y
2017	-	Y	N[2]
2018	-	Y	N
2019	-	Y	N
Total Taxonomic Richness			
2014	N	N	-
2015	N	N	-
2016	N	N	-
2017	N	N	-
2018	-	Y	N
2019	-	Y	N
Simpson's Diversity Index			
2014	N	N	-
2015	N	N	-
2016	N	N	-
2017	N	N	-
2018	-	Y	N
2019	-	Y	N
Ephemeroptera Density			
2014	N	N	-
2015	-	Y	Y
2016	-	Y	N
2017	-	Y	N
2018	-	Y	N
2019	-	Y	N
Percent EPT			
2014	-	Y	N
2015	-	Y	N
2016	N	N	-
2017	N	N	-
2018	N	N	-
2019	N	N	-
Pisidiidae Density			
2014	N	N	-
2015	-	Y	N
2016	-	Y	N
2017	-	Y	Y
2018	-	Y	Y
2019	-	Y	Y

1 - MCB = magnitude of change benchmark; 25% for Total Taxonomic Richness and Simpson's Diversity Index, 50% for EPT and all density metrics.
2 - Due to inclusion of 2019 data, results of statistical comparisons may be different from previous years.
Y = yes, the benchmark was exceeded (or the exceedance was statistically significant).
N = no, the benchmark was not exceeded (or the exceedance was not statistically significant).

FIGURES

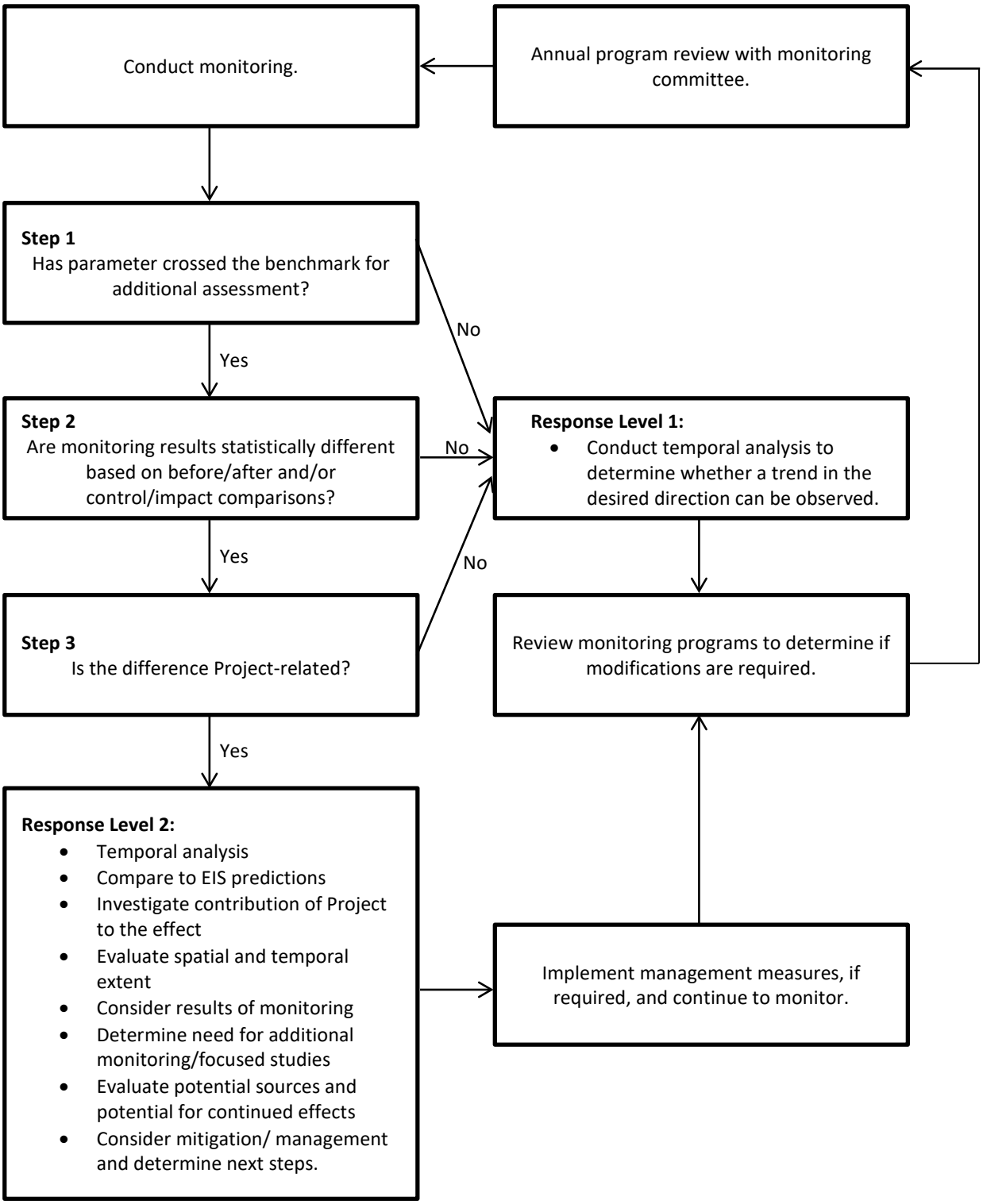


Figure 1: Benthic macroinvertebrate response framework.

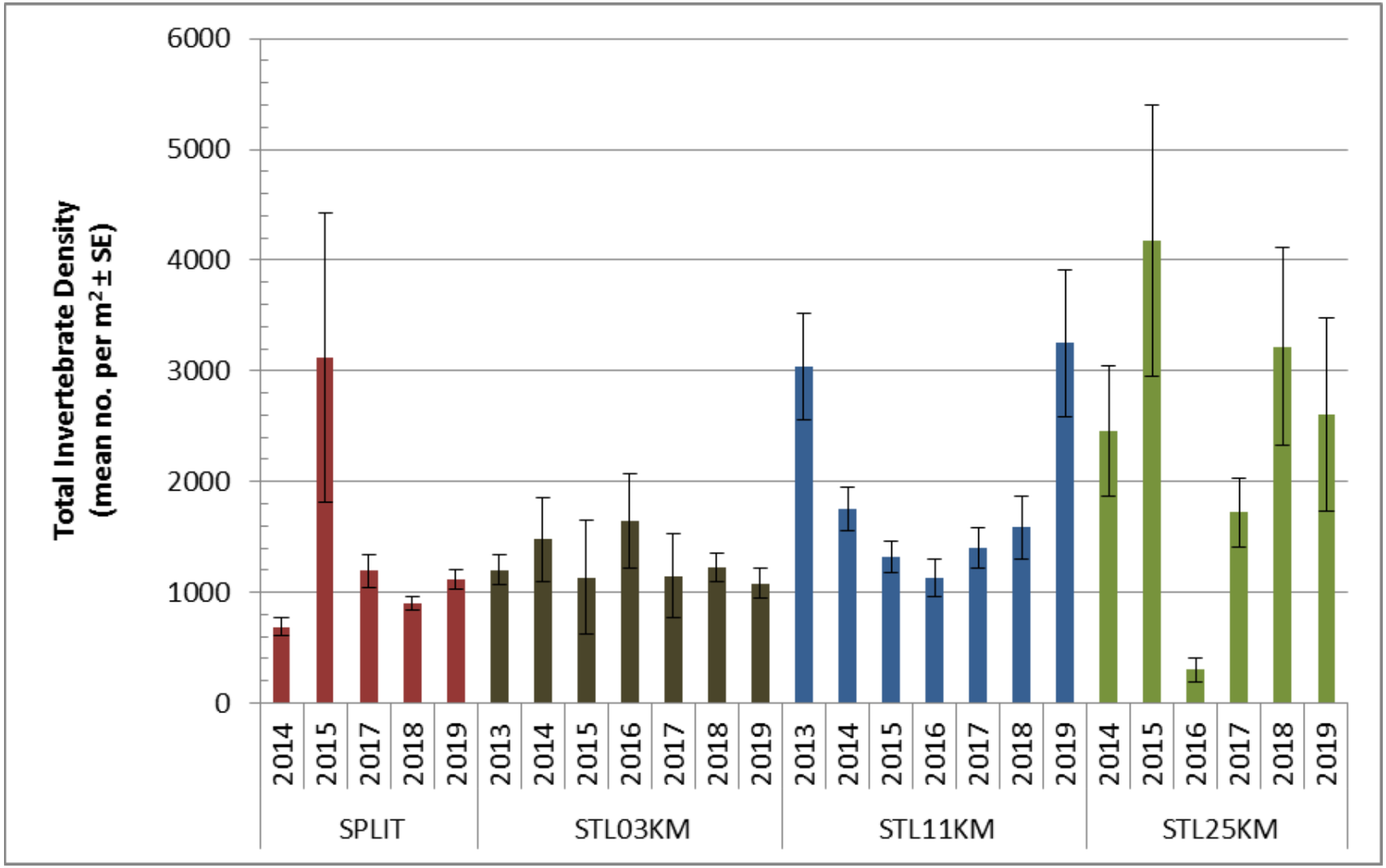


Figure 2: Total macroinvertebrate density (mean no. per m² ± SE) in nearshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).

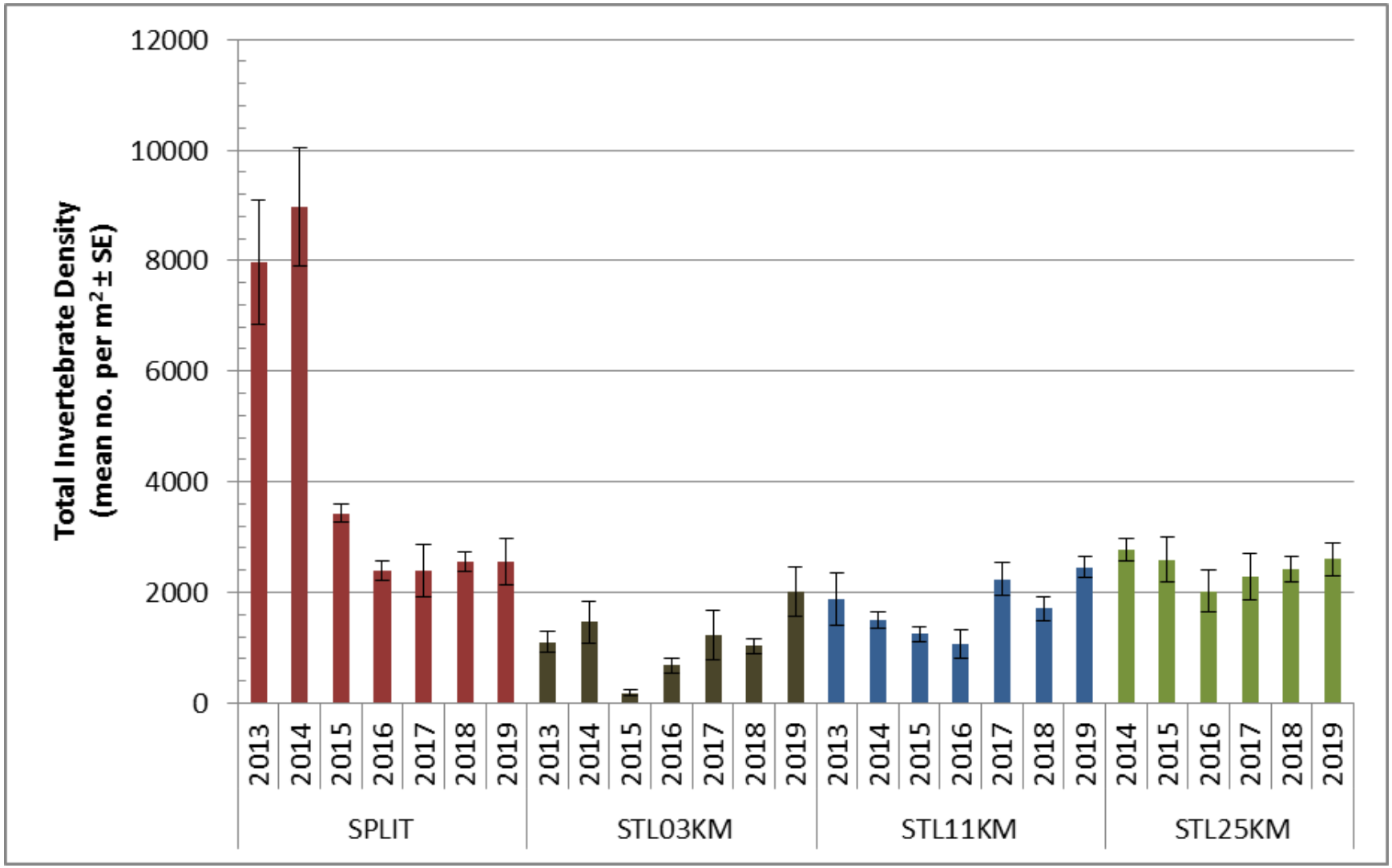


Figure 3: Total macroinvertebrate density (mean no. per m^2 ± SE) in offshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).

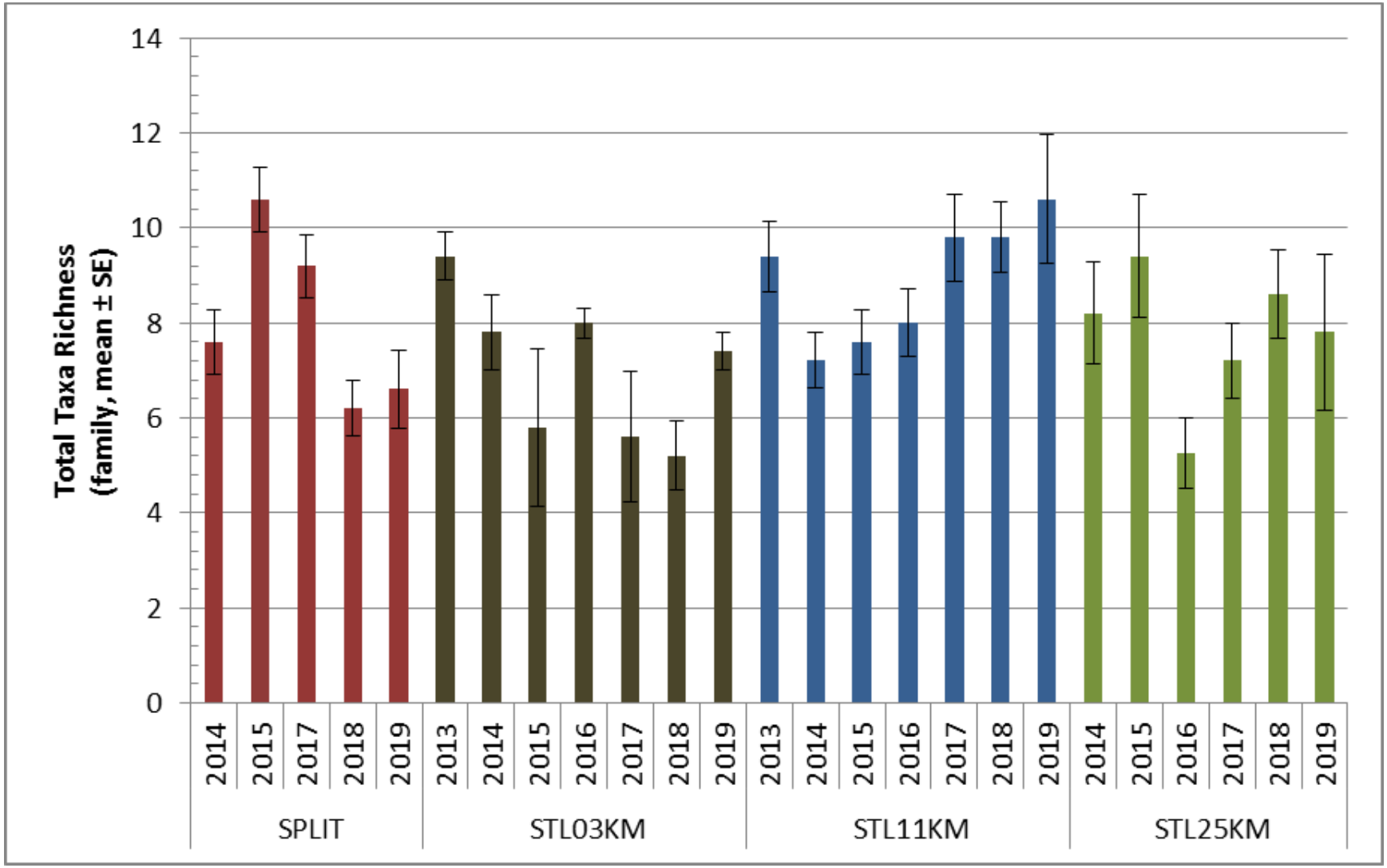


Figure 4: **Total richness (Family-level, mean ± SE) in nearshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).**

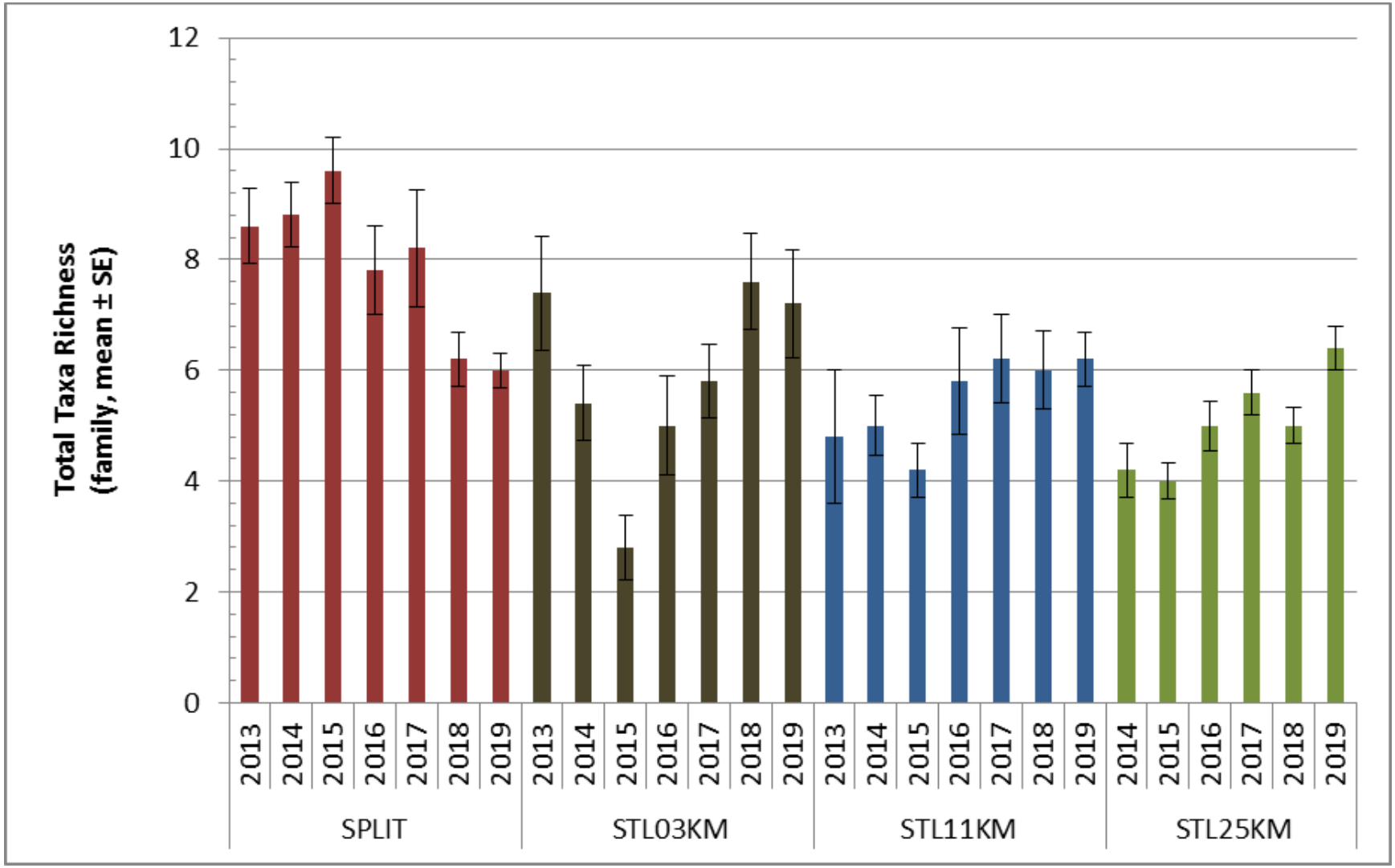


Figure 5: **Total richness (Family-level, mean ± SE) in offshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).**

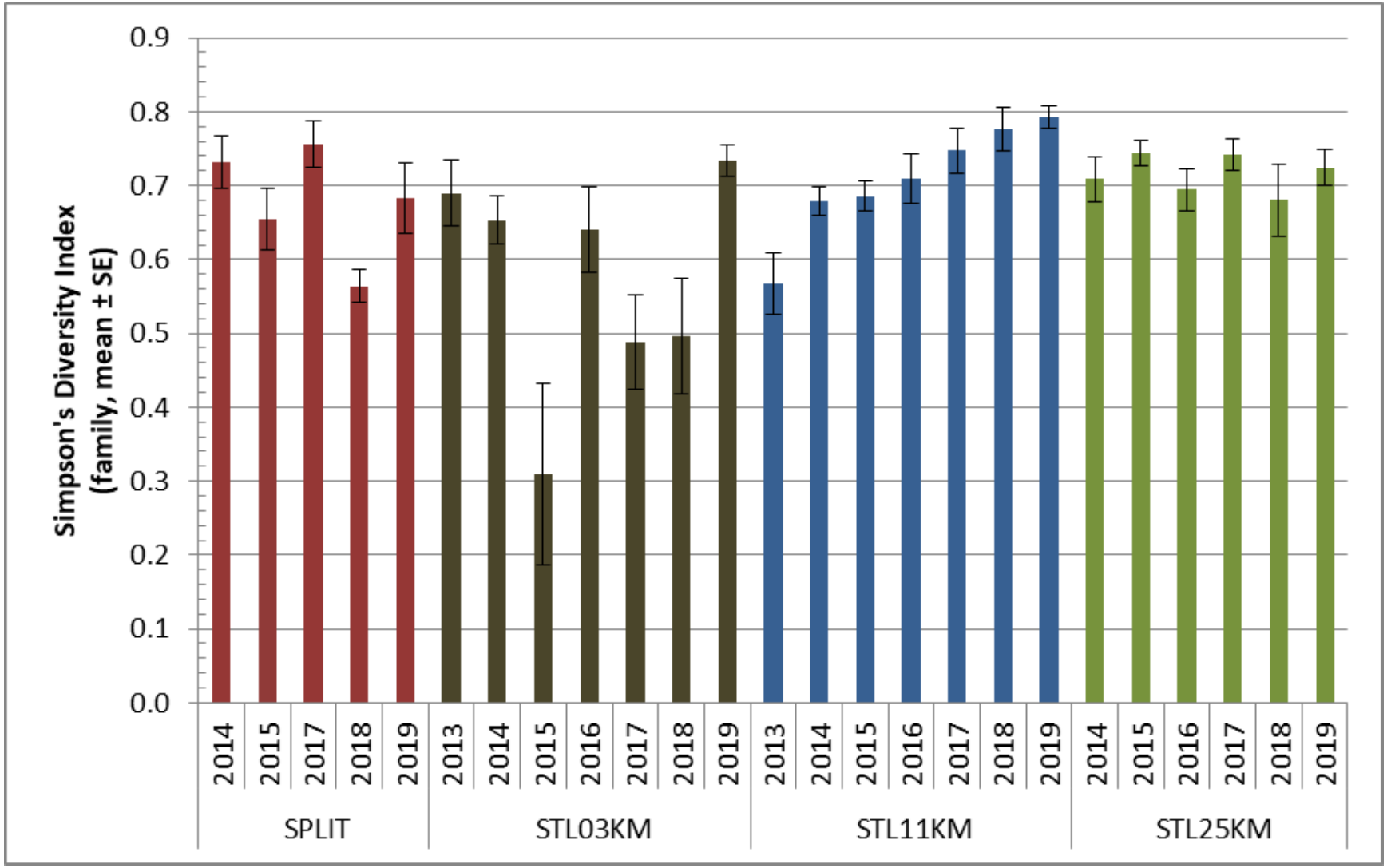


Figure 6: Simpson's diversity index (mean ± SE) in nearshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).

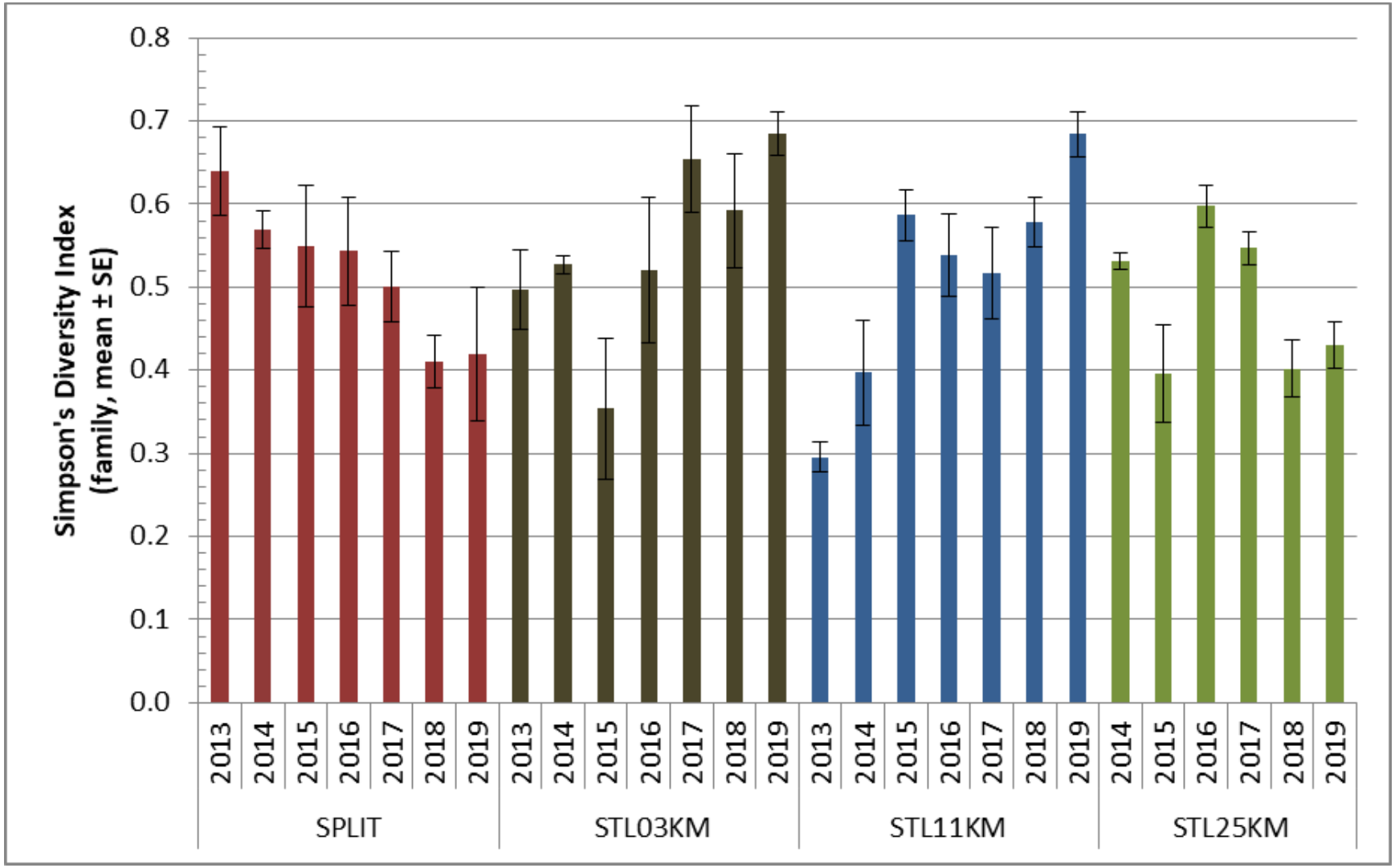


Figure 7: Simpson's diversity index (mean ± SE) in offshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).

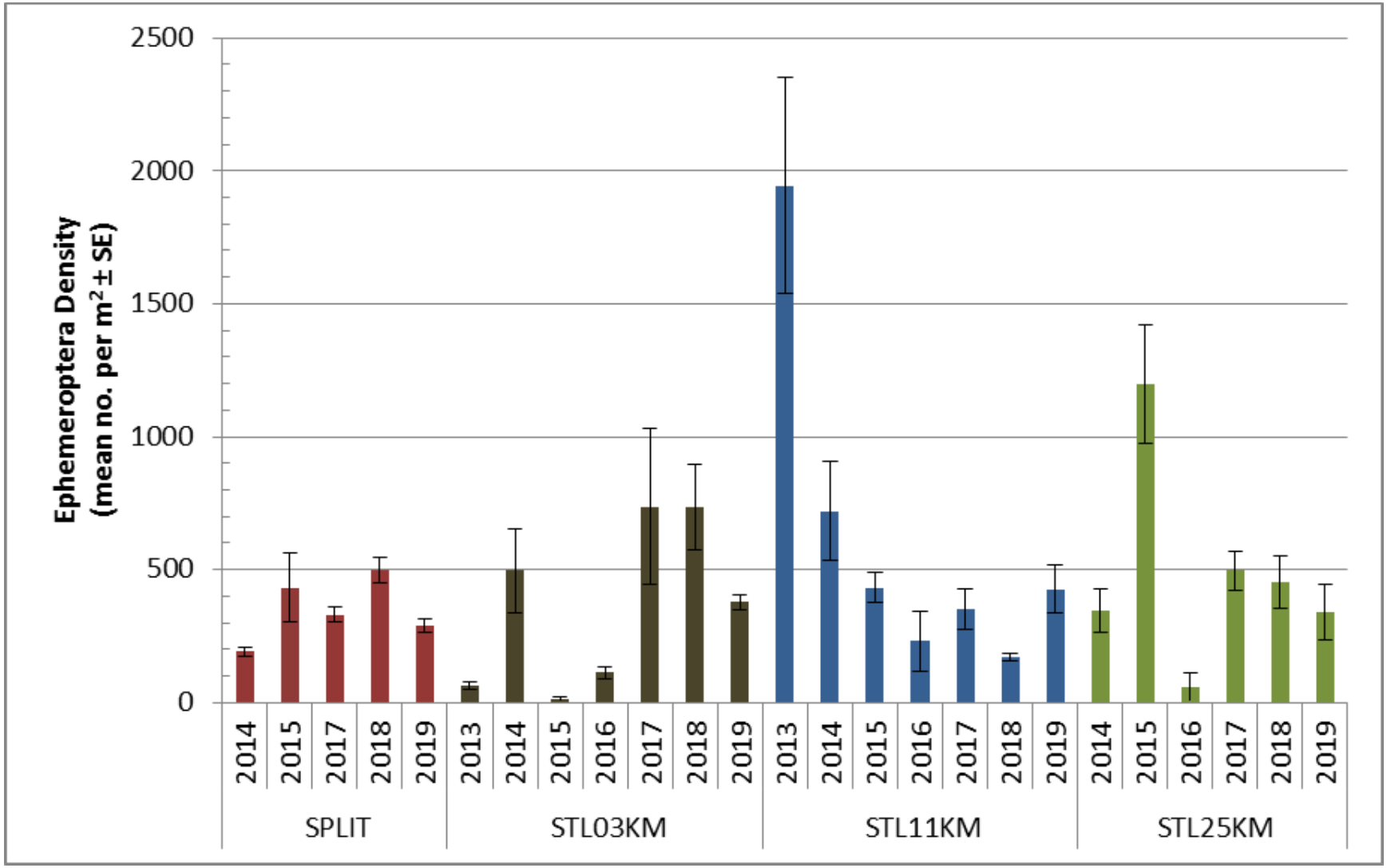


Figure 8: **Ephemeroptera density (mean no. per m^2 ± SE) in nearshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).**

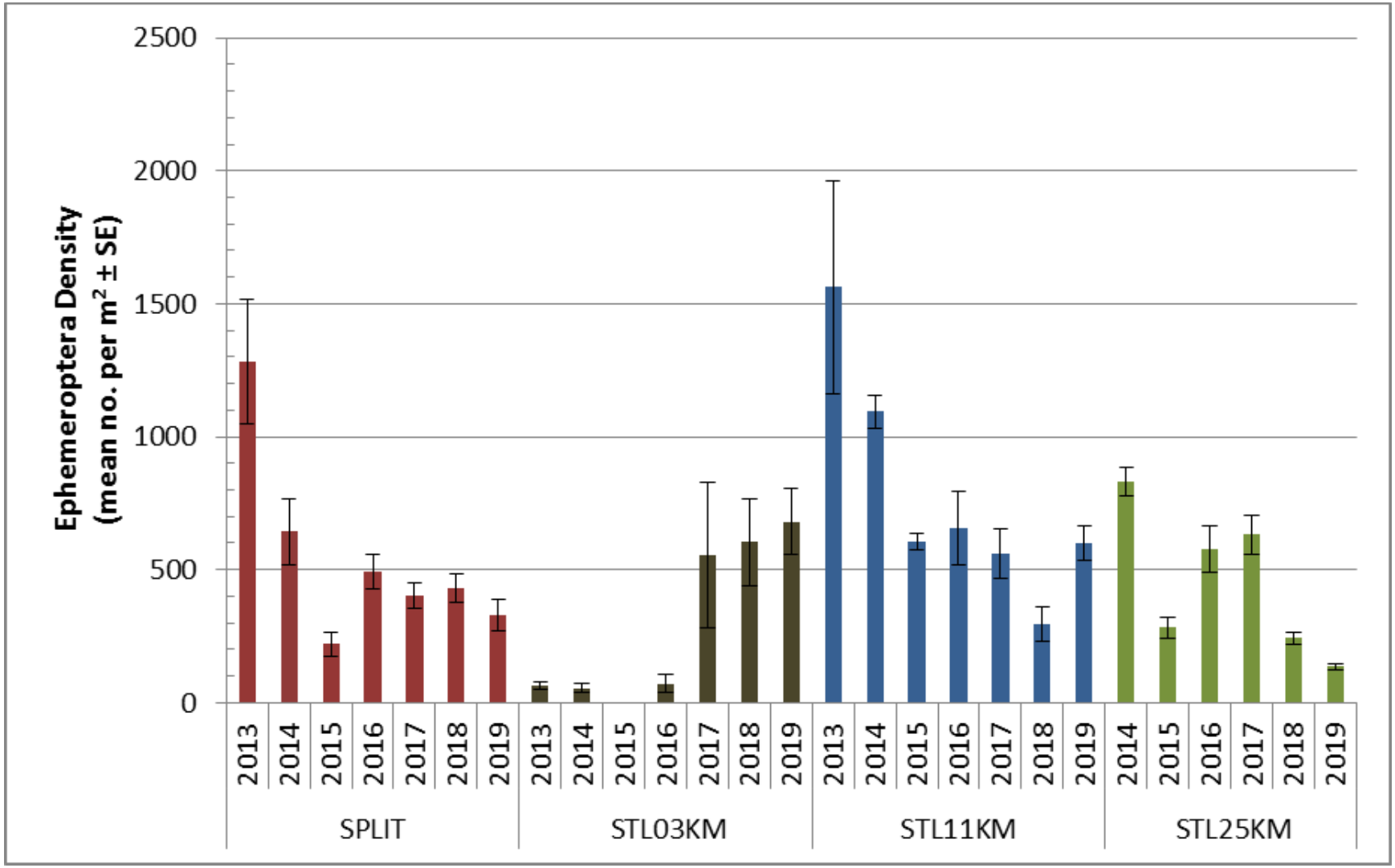


Figure 9: Ephemeroptera density (mean no. per m^2 ± SE) in offshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).

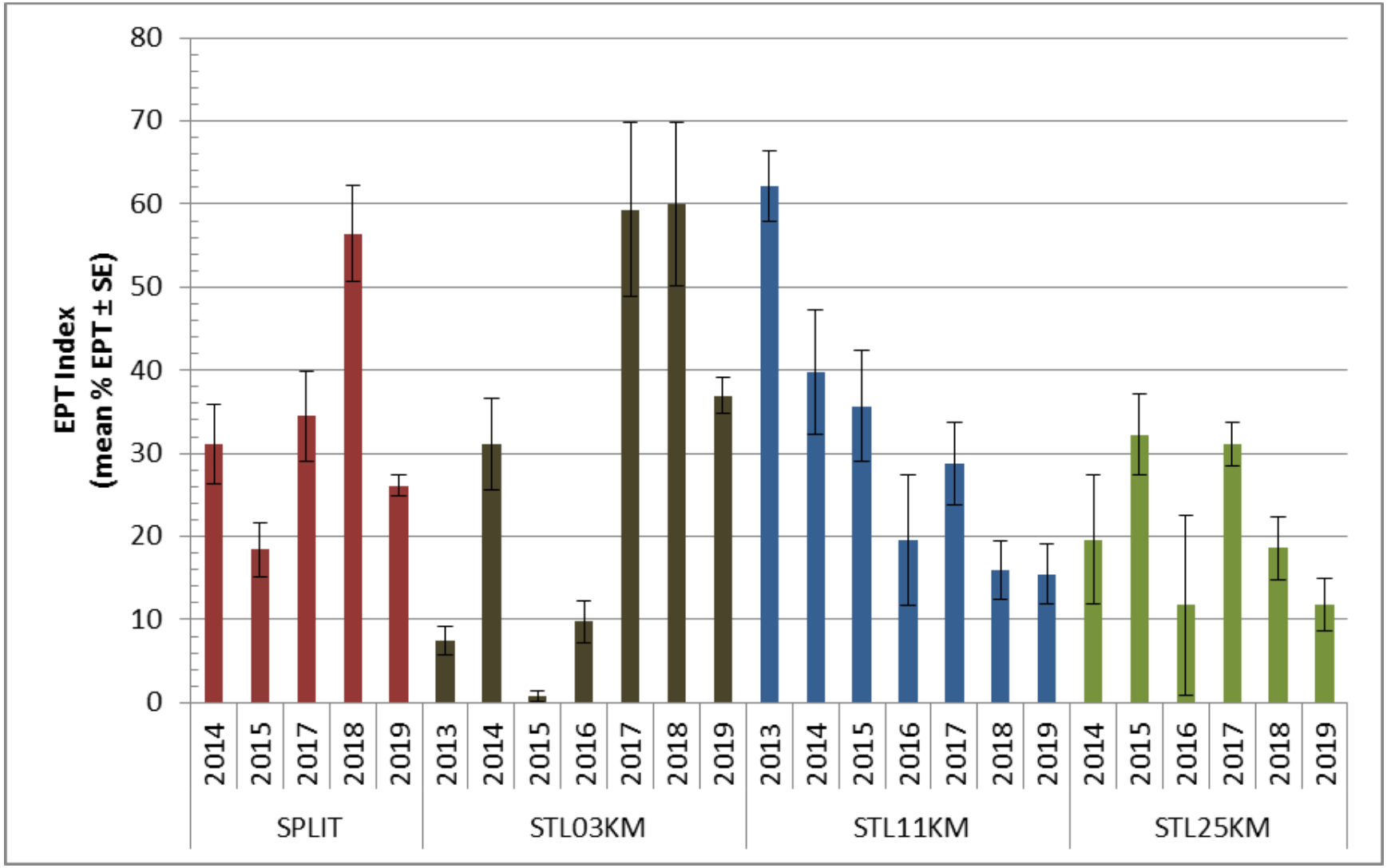


Figure 10: Percent EPT (mean ± SE) in nearshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).

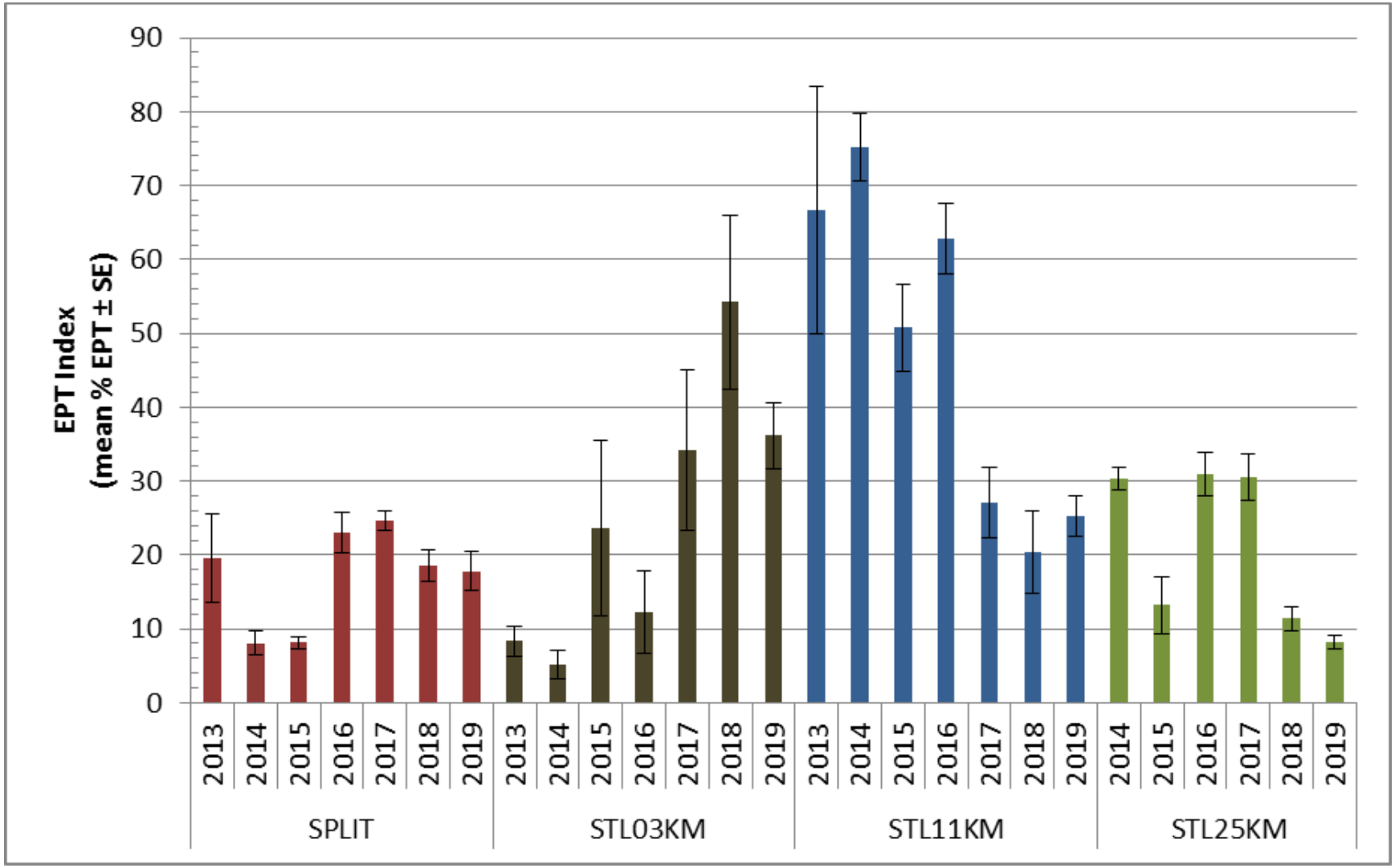


Figure 11: Percent EPT (mean ± SE) in offshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).

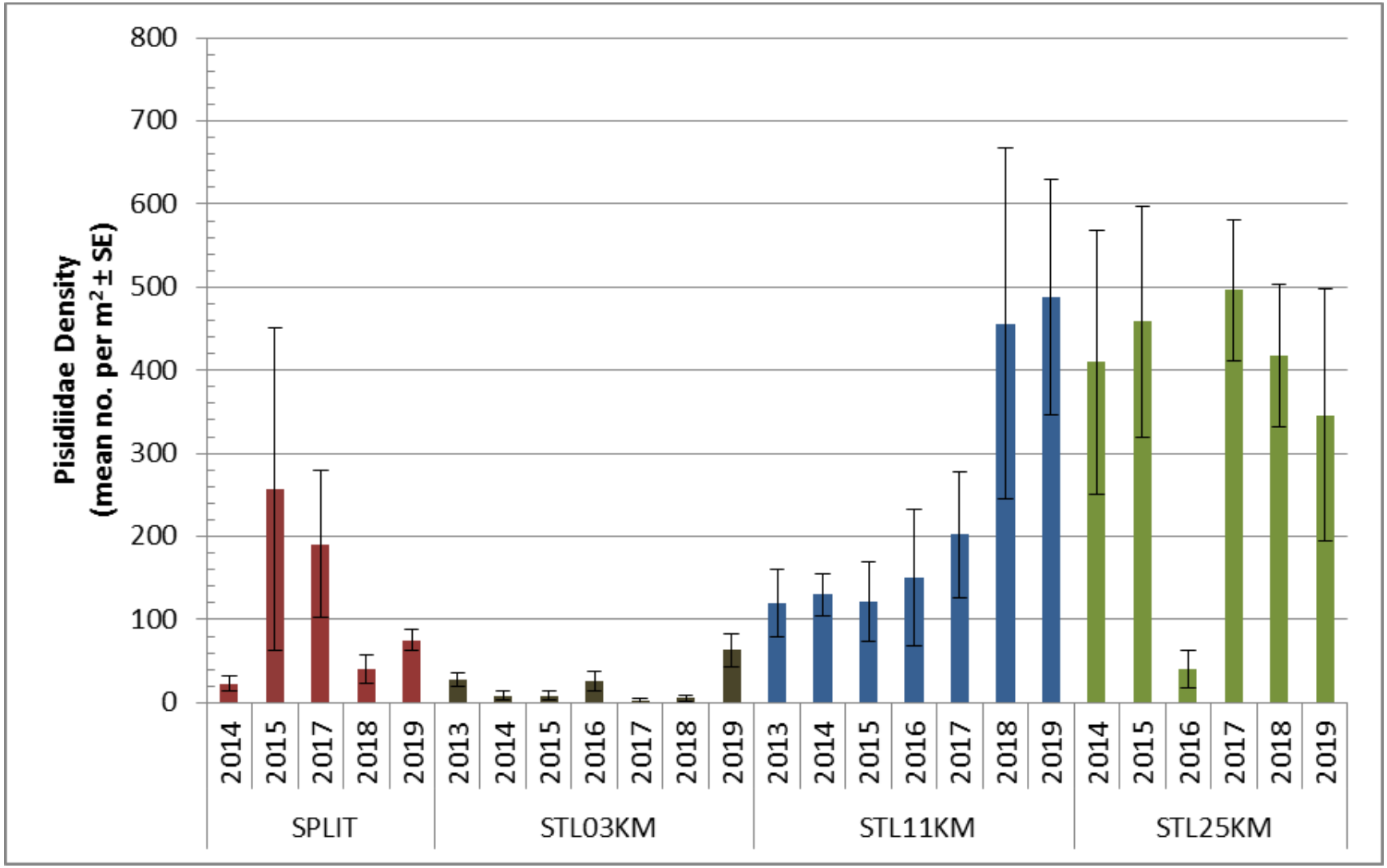


Figure 12: Pisidiidae density (mean no. per m² ± SE) in nearshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).

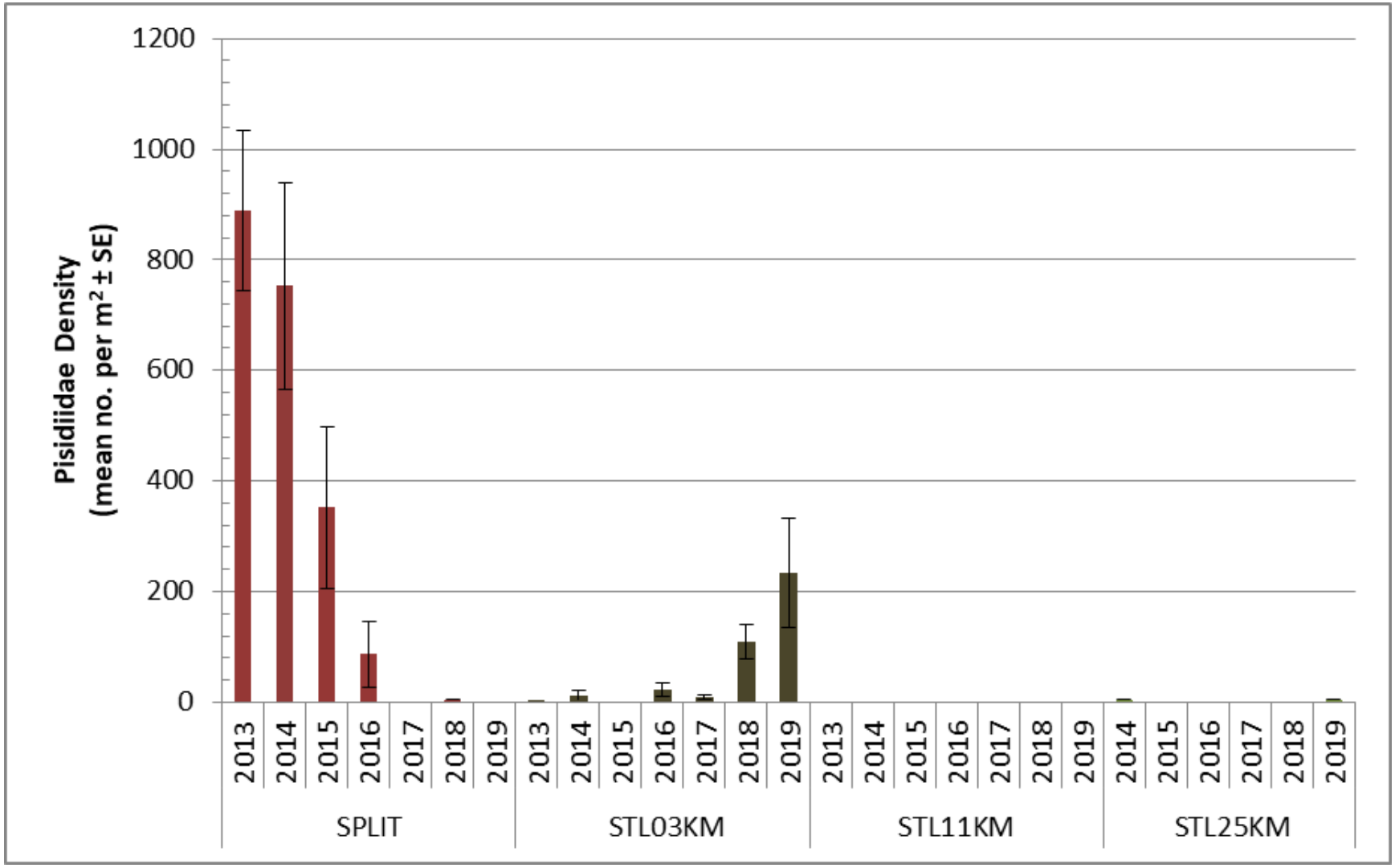


Figure 13: Pisidiidae density (mean no. per m² ± SE) in offshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).

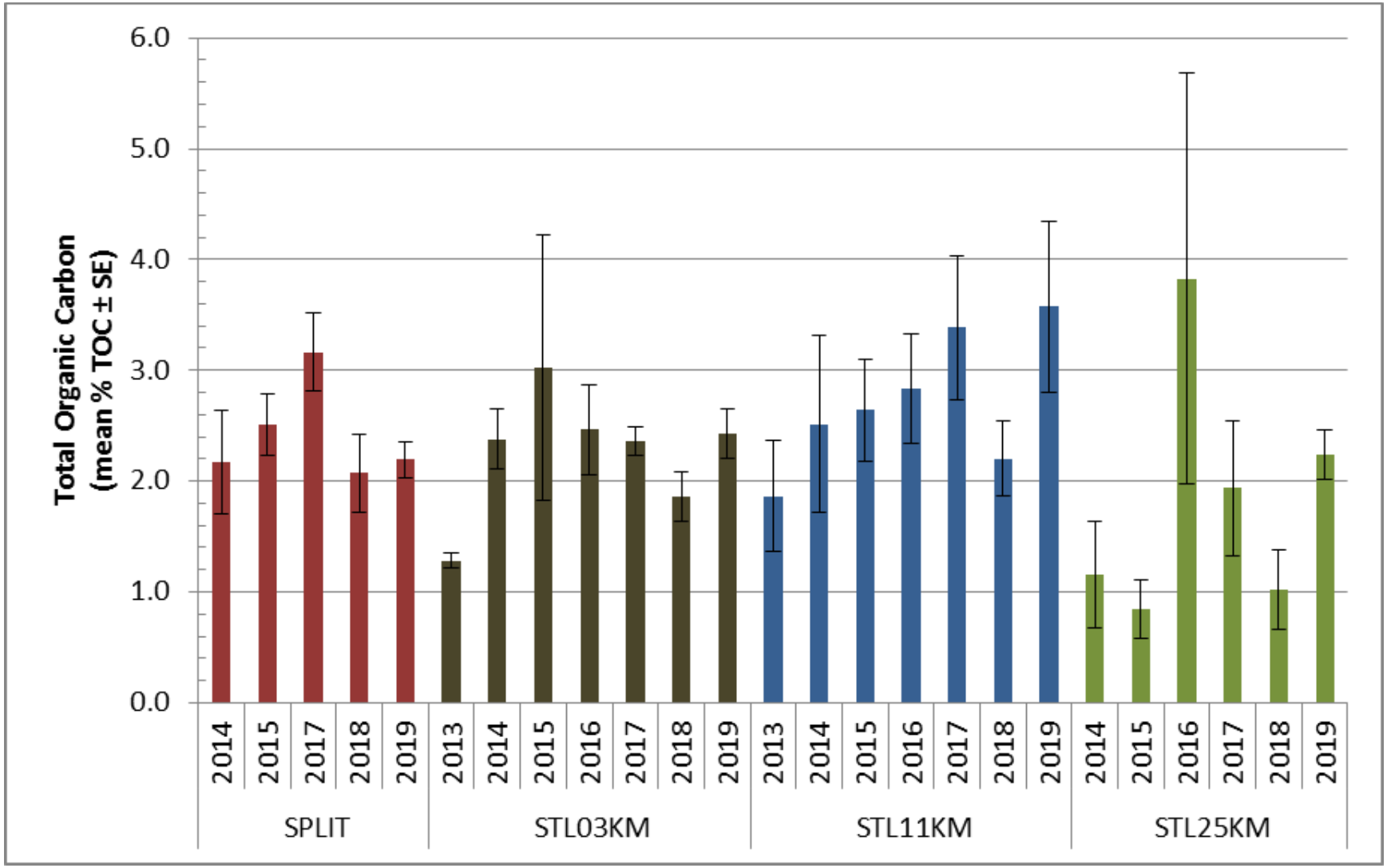


Figure 14: Percent TOC (mean ± SE) in nearshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).

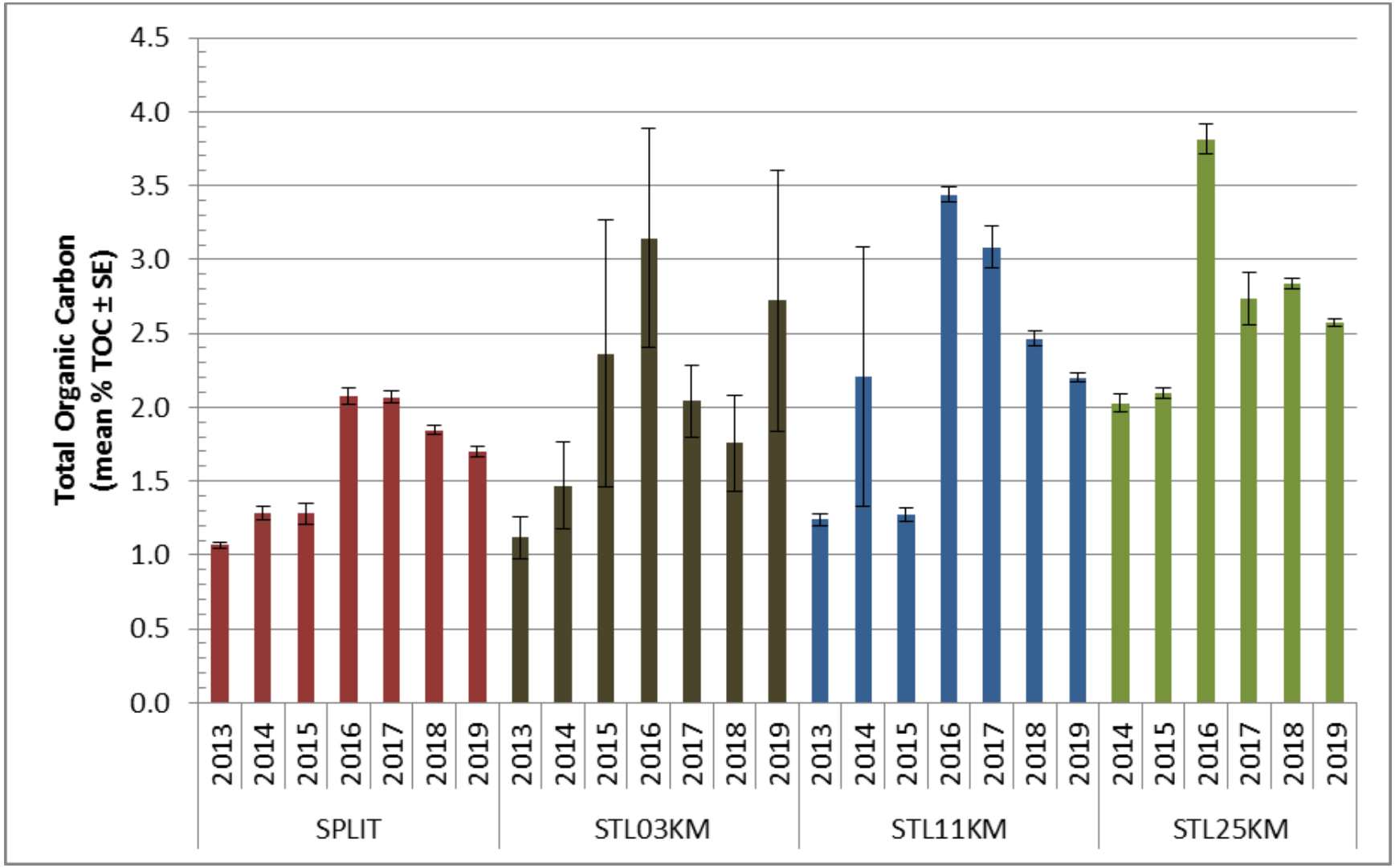


Figure 15: Percent TOC (mean ± SE) in offshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction)

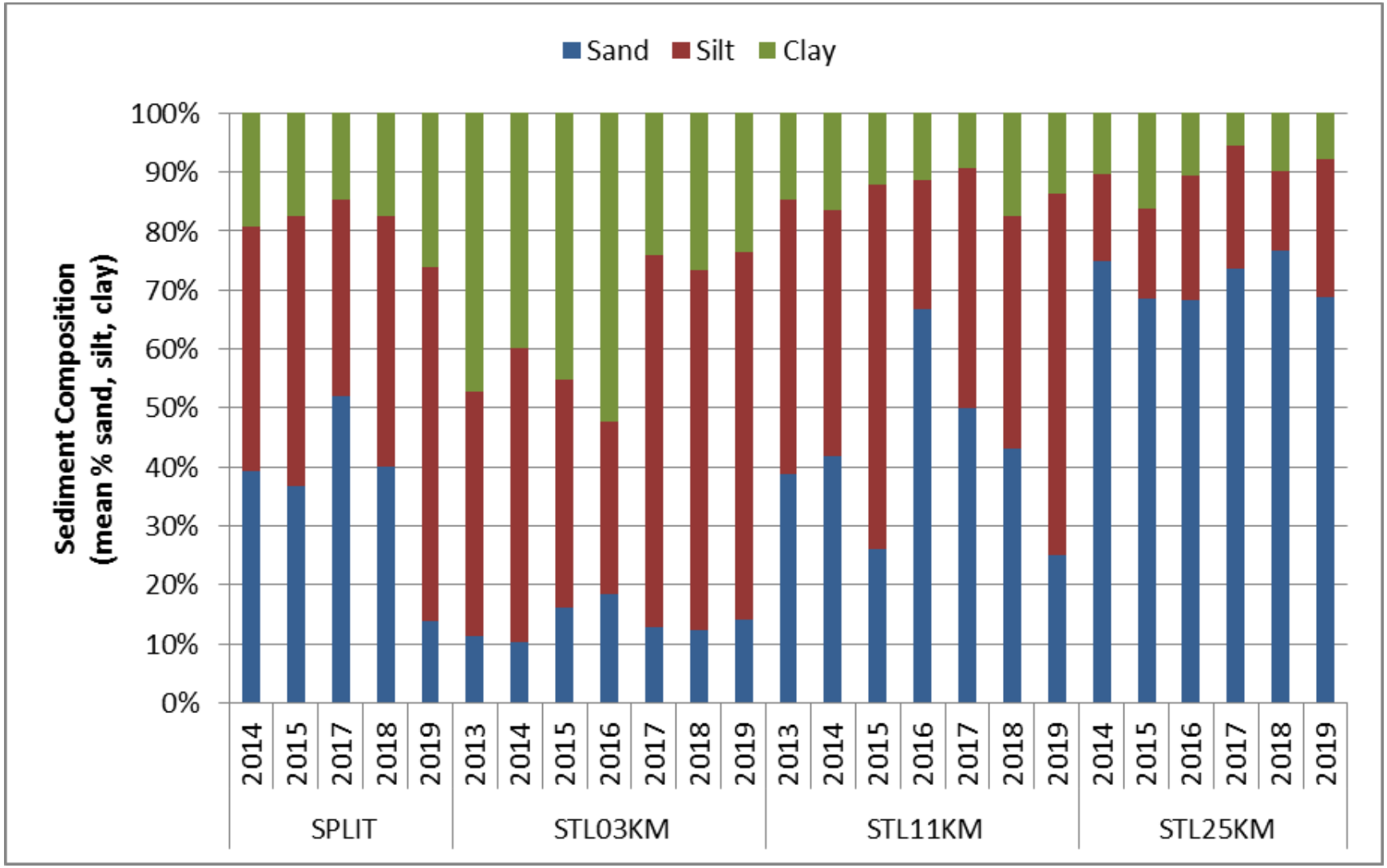


Figure 16: Sediment composition (mean ± SE) in nearshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).

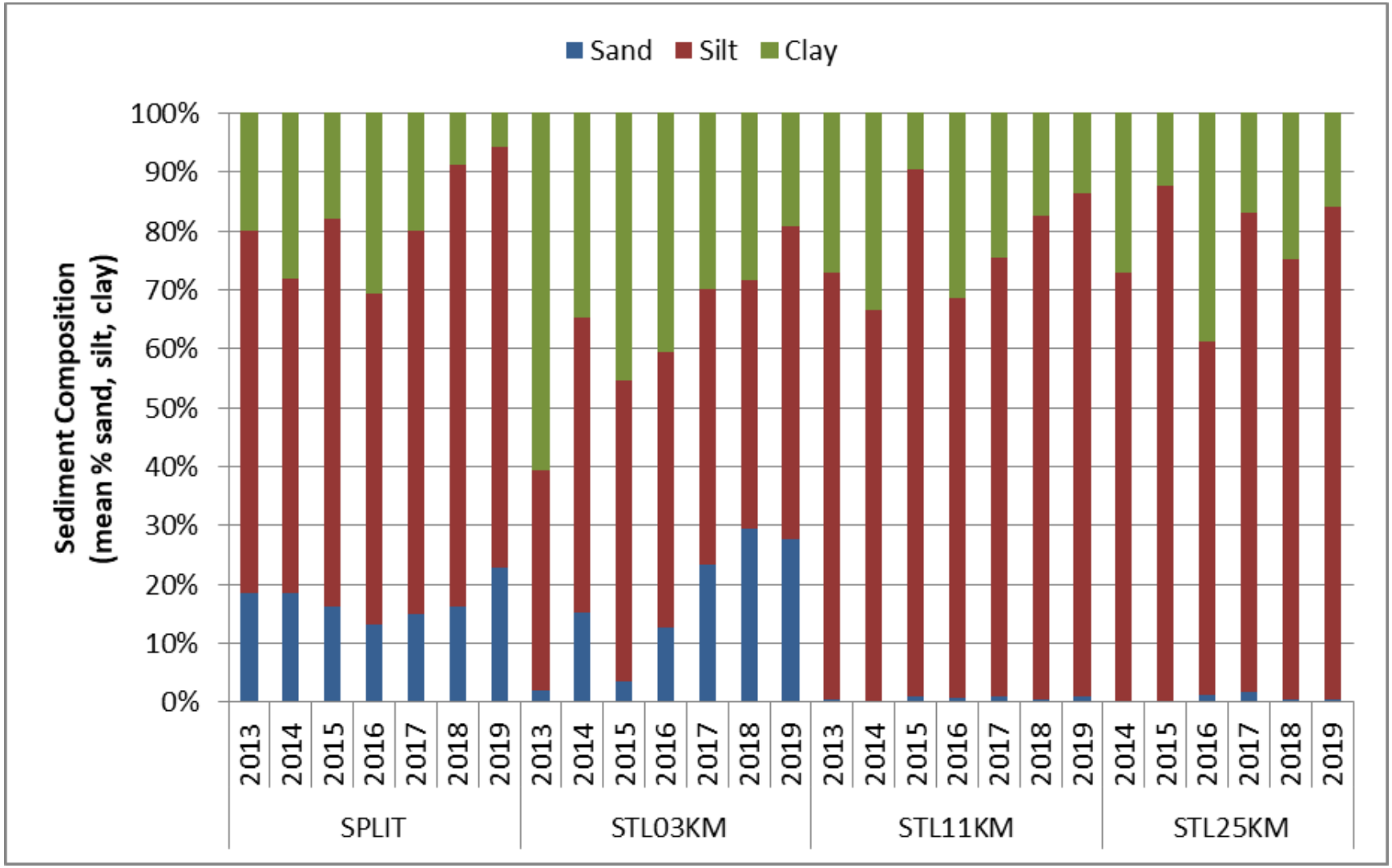
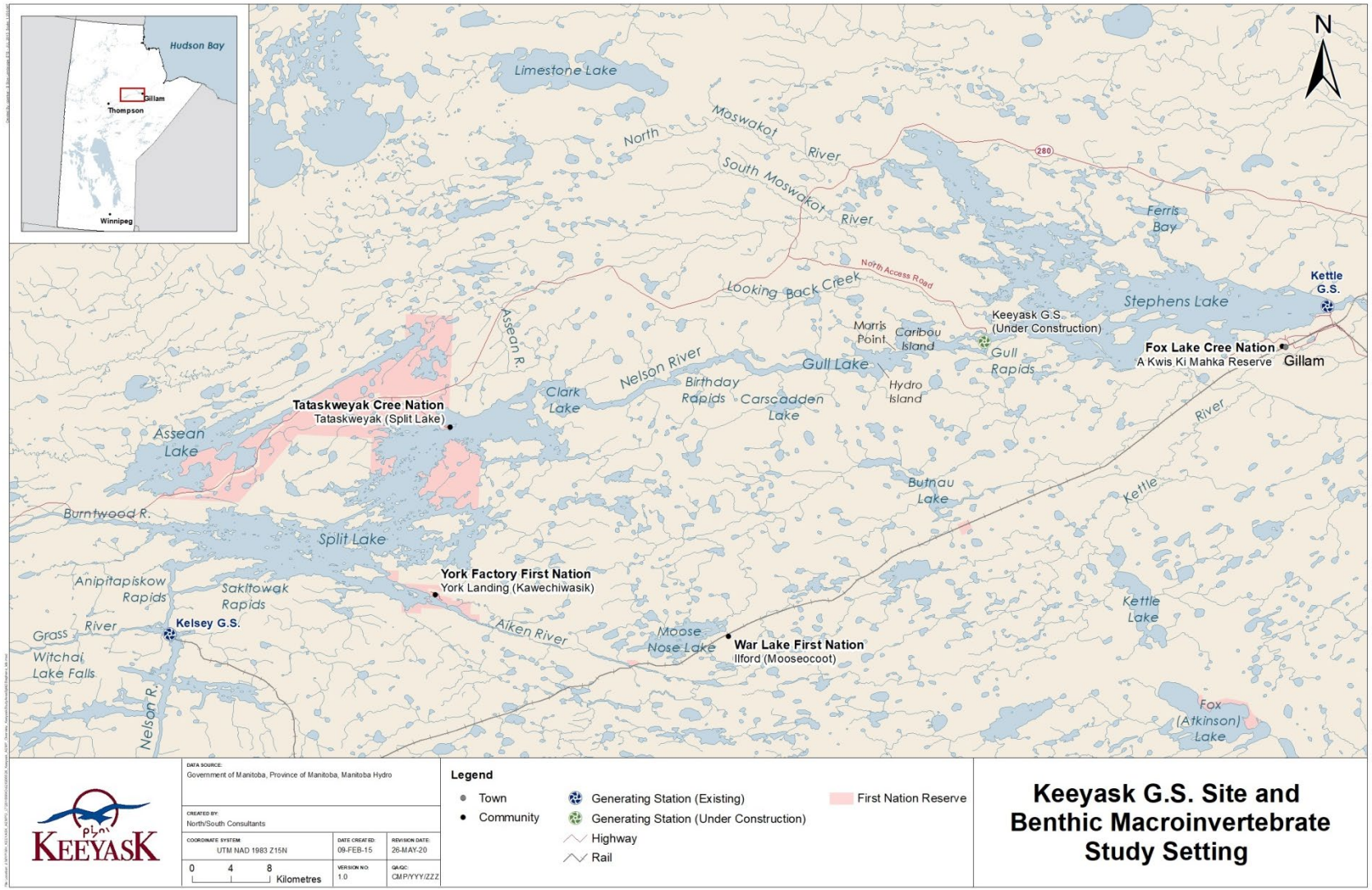
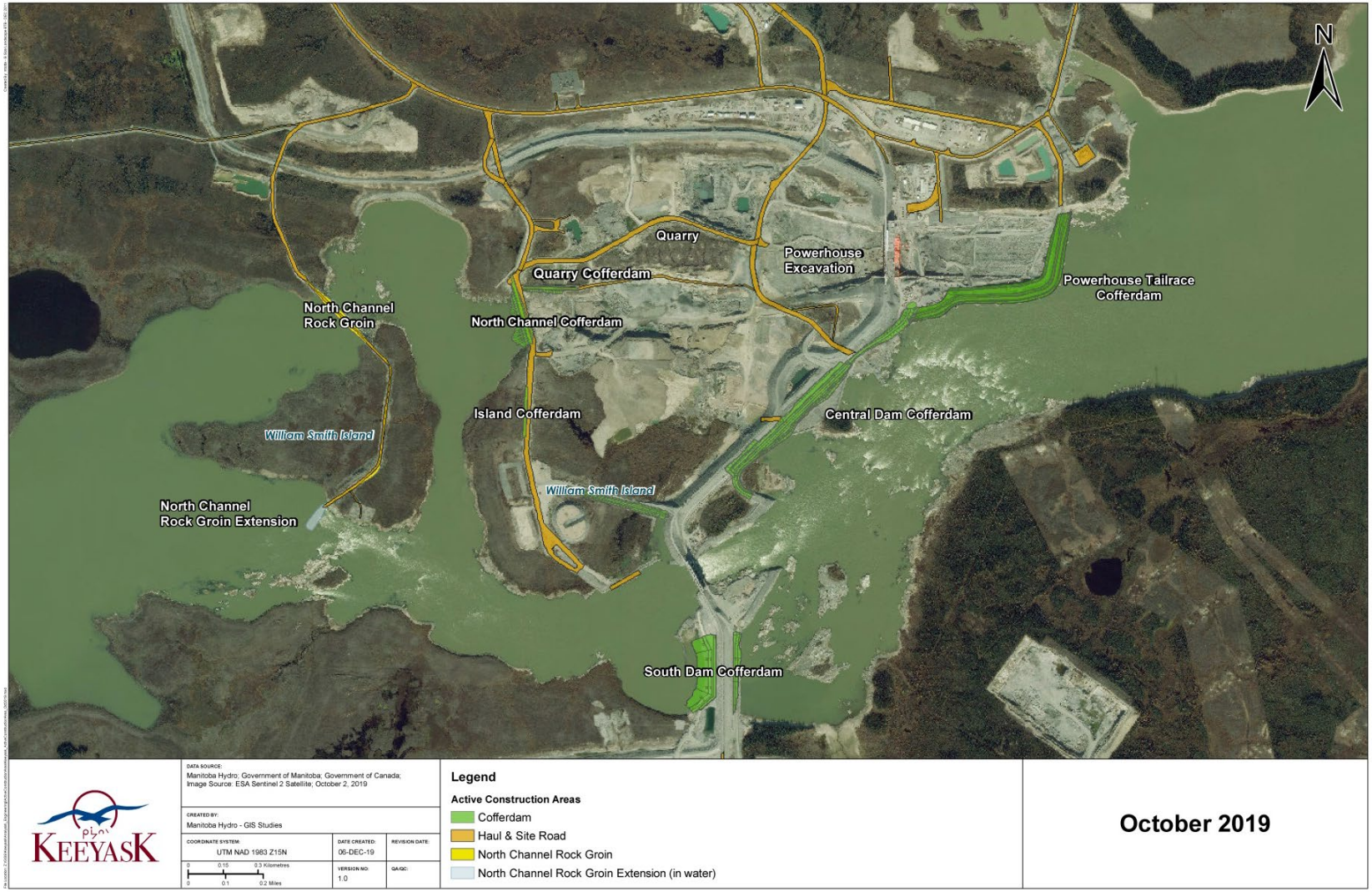


Figure 17: Substrate composition (mean ± SE) in offshore habitat in 2013 (pre-construction) and 2014, 2015, 2016, 2017, 2018 and 2019 (construction).

MAPS

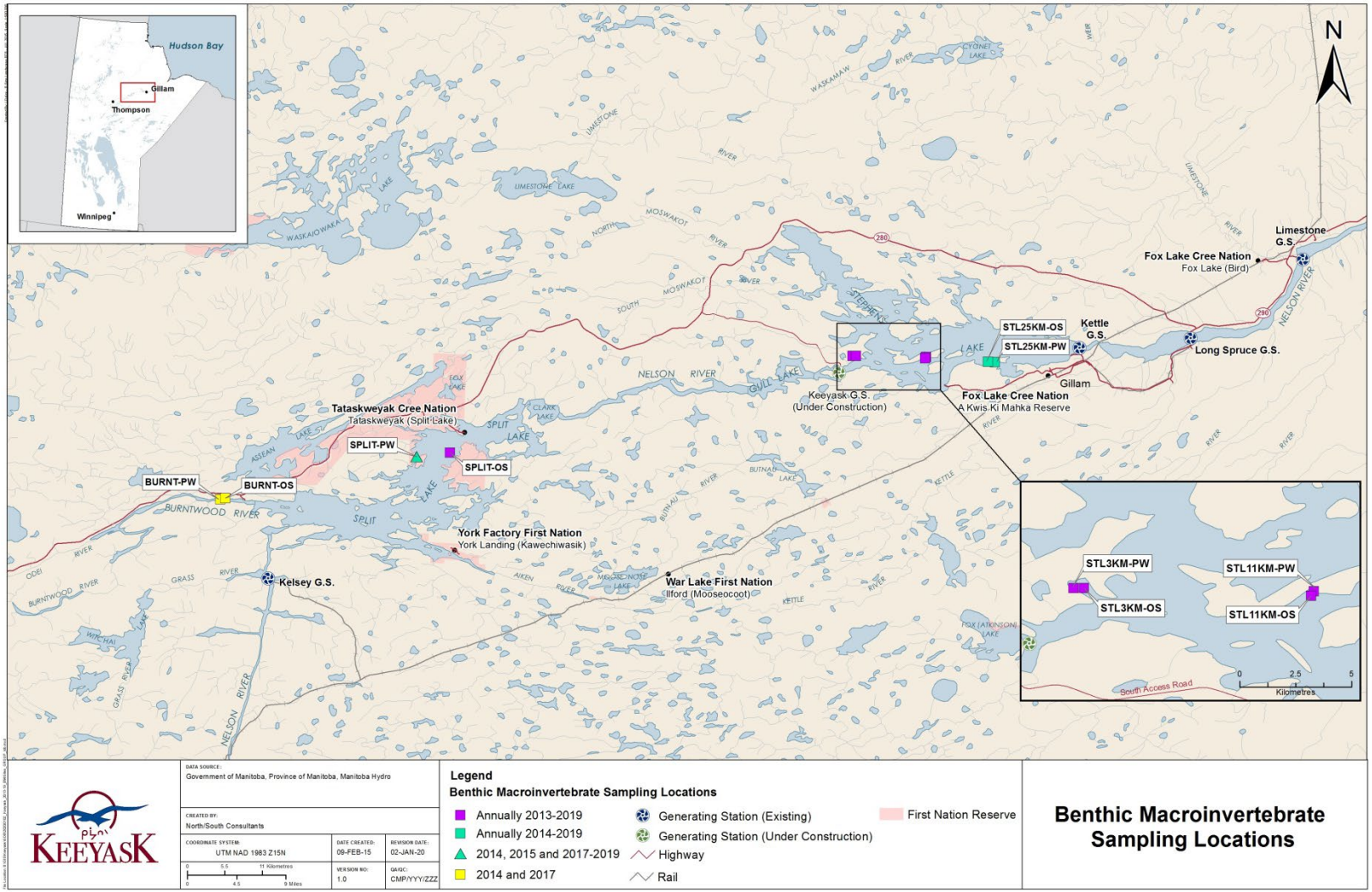


Map 1: Map of the Nelson River showing the site of the Keeyask Generating Station and the benthic macroinvertebrate monitoring study setting.



Satellite Imagery - October, 2019

Map 2: Map of instream structures at the Keeyask Generating Station site, October 2019.



Map 3: Benthic macroinvertebrate sampling locations during pre-construction (2013) and construction (2014–2019).

APPENDICES

APPENDIX 1: QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PROCEDURES FOR AQUATIC MACROINVERTEBRATE SAMPLE PROCESSING

Detailed sample processing protocols are developed on a by-project-basis depending on the specific needs of each client. The following provides an overview of standard QA/QC procedures employed for each project.

Large &/or Rare Search for Samples Requiring Sub-Sampling

- Sample is washed and sieved using appropriate sized mesh;
- Entire sample is scanned for large &/or rare invertebrates in an appropriately sized tray. This scan is conducted on a per sample basis to avoid under-representing taxa that tend to occur singly or in few numbers that may be missed as a result of sub-sampling;
- Large organisms tend to occur in small numbers (*e.g.*, Belostomatidae, crayfish); these organisms are rare in relation to the overall number of organisms in the sample being processed. Based on the overall number of organisms in the sample, if an organism tends to occur rarely with respect to the rest of the organisms in the sample, this organism is removed (or more, if > 1) and retained in a separate vial for taxonomic identification; and
- Large &/or rare organisms are not included in the split correction and this is indicated clearly on the bench sheet. It is noted that there is a separate vial containing large &/or rare organisms.

Sample Processing

Sub-Sampling

- Most samples are sub-sampled (unless requested by the client) to decrease processing time. A minimum of 300 organisms processed ensures the inclusion of more rare taxa and permits comparisons of richness among sites;
- The entire sample is examined in a large tray and estimate the number of splits necessary to produce the appropriate number of aliquots needed to achieve a 300-organism target;
- If a sample contains > 300 organisms, large &/or rare invertebrates and any small fish are removed from the whole sample before sub-sampling (see above);
- When > 300 organisms are present, the sample is split into halves. In order to reduce any bias created by the mixing/splitting process, the well-cleaned and mixed sample is split using a 1.0 or 4.0 L [specific to sample volume] Folsom Plankton Splitter. Each sub-sample is subsequently sorted until at least 300 animals are counted. When the 300-organism count

is achieved part way through a sub-sample, the remainder of this fraction is sorted so that a known fraction is sorted. All splitting information is recorded on the bench sheet.

- In sparse samples (*i.e.*, containing ~300 animals or less), the entire sample is processed;
- To be counted, a specimen must have enough intact body parts to permit its identification to the targeted level, and it must have a head (this prevents a body and detached head from being counted as two animals);
- Larval exuviae (exoskeleton remains), and empty shells (snails and clams) and cases (caddisflies) are not counted in the 300-fixed count. If there are no "live" molluscs in the sample, a few empty shells are set aside for identification; these are placed into vial with the large &/or rare specimens;
- The taxa Porifera, Nemata, Copepoda, Cladocera, Rotifera, Platyhelminthes, Ostracoda, and non-aquatic (terrestrial) taxa are not included in the 300 organism count because they are not considered as part of the benthic macroinvertebrate community. Typically, they are counted and their numbers recorded on the bench sheet.

Sorting Samples

- Sorting aquatic samples involves removing aquatic macroinvertebrates from organic and inorganic materials within each sample;
- All sorting is conducted with a 3x desktop magnifier or stereomicroscope [specific to Project];
- All sorted samples are checked by a 2nd laboratory technician (QA/QC technician);
- Any additional invertebrates collected during the QA/QC process are combined with the original sample, but counted separately;
- Sorting efficiency must be ≥ 95%. The QA/QC technician checks on a tray-by-tray basis so that the sample is handled as few times as possible; the QA/QC technician will sort any remaining invertebrates from the tray and record the number of missed invertebrates per tray;
- The QA/QC technician will also check the bench sheet data to ensure it matches the sample data; and
- Sorted invertebrate samples are stored in 70% ethanol prior to delivery to the taxonomist.

Verification of Taxonomic Identification

- NSC taxonomists regularly communicate with external taxonomic specialists to ensure accuracy and consistency.

Sample Identifications

- Samples are identified to the appropriate taxonomic level [specific to client] by an in-house or external taxonomist. Ten percent (10%) of the in-house identifications are randomly

selected and sent to an external taxonomy specialist for QA/QC. The accuracy of the sample subset is assessed for identification and enumeration; all unknown invertebrates are sent to an external specialist; incorrect identifications and/or enumeration discrepancies are noted on the laboratory datasheet;

- The target overall accuracy level for in-house invertebrate identifications and enumeration is 95% at the Family level and 90% at the Genus level. Corrected identifications and enumeration values received from the external taxonomist are used in place of in-house data discrepancies. If the average error rate of audited samples is outside the target, the entire project must be re-identified by someone other than the original taxonomist.

Data Processing

- Data from field books and laboratory bench sheets are entered into an MS Excel® data template;
- Data templates specify the Project Name, Study Area, Site Location/Description, GPS coordinates (Global Positioning System), Site Label, Sampling Date, Time of Day, Gear Type, Sieve Mesh Size in Field/Laboratory, Presence or Absence of Vegetation/Algae, Water Temperature, Water Depth, Velocity, Substrate Type, Number of Splits, Taxonomic List, Life Stage, and Enumeration List;
- A 2nd and 3rd technician sequentially verify all entered data and formulae to original field book and laboratory bench sheets (*i.e.*, verification is done twice) and a final verification is conducted by the project biologist and/or report author.

APPENDIX 2:
MEANS OF BENTHIC MACROINVERTEBRATE METRICS AND SUPPORTING SEDIMENT RESULTS BY REPLICATE STATION FOR 2013 (PRE-CONSTRUCTION), 2014 (YEAR 1 CONSTRUCTION), 2015 (YEAR 2 CONSTRUCTION), 2016 (YEAR 3 CONSTRUCTION), 2017 (YEAR 4 CONSTRUCTION), 2018 (YEAR 5 CONSTRUCTION) AND 2019 (YEAR 6 CONSTRUCTION)

Note: site results continue over seven pages.

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Invertebrate Density	Oligochaeta Density	Amphipoda Density	Pisidiidae Density	Gastropoda Density
Units					no. per m²	no. per m²	no. per m²	no. per m²	no. per m²
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP1	808	14	115	0	144
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP2	721	0	0	29	29
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP3	649	144	0	14	58
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP4	866	29	0	58	202
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP5	404	14	0	14	14
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R1	2323	29	87	43	115
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R2	2222	159	14	144	29
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R3	1111	289	0	72	43
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R4	1659	43	0	0	289
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R5	8281	1039	0	1024	390
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R1	1010	0	29	87	130
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R2	1443	115	0	404	72
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R3	1226	375	0	58	0
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R4	736	43	0	0	58
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R5	1544	159	14	404	87
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R1	938	0	0	43	14
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R2	678	0	0	101	43
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R3	909	0	0	0	14
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R4	1053	0	0	29	58
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R5	909	0	0	29	29
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R1	1356	0	0	43	43

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Invertebrate Density	Oligochaeta Density	Amphipoda Density	Pisidiidae Density	Gastropoda Density
Units					no. per m²	no. per m²	no. per m²	no. per m²	no. per m²
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R2	1183	0	0	58	245
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R3	952	0	0	115	188
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R4	1212	0	0	87	159
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R5	895	14	0	72	159
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP1	1264	164	9	35	338
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP2	1524	26	0	26	866
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP3	727	17	0	52	216
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP4	1143	35	0	9	511
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP5	1368	156	0	17	883
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP1	779	0	0	0	43
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP2	476	58	0	29	87
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP3	2352	231	0	0	289
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP4	2280	101	0	0	188
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP5	1515	144	14	14	231
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R1	216	14	0	0	0
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R2	3015	14	14	29	14
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R3	231	29	0	0	72
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R4	1414	101	0	14	245
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R5	808	0	0	0	14
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R1	1428	0	14	0	87
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R2	707	29	0	29	144
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R3	1154	159	14	58	101
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R4	1746	87	0	43	317
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R5	3203	87	0	0	851
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R1	2150	43	29	0	0
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R2	404	0	0	0	14
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R3	693	43	0	0	0
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R4	505	0	0	0	0
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R5	1991	14	0	14	101
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R1	1327	0	0	14	0
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R2	1197	14	0	14	29
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R3	1414	14	0	0	14
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R4	736	0	0	0	0
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R5	1443	14	0	0	303
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R1	678	14	0	87	43
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R2	1140	29	72	29	14
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R3	995	173	0	29	43
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R4	1515	115	0	43	130
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R5	1082	144	0	130	115
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP1	3298	78	0	242	416
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP2	2329	130	0	156	649

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Invertebrate Density	Oligochaeta Density	Amphipoda Density	Pisidiidae Density	Gastropoda Density
Units					no. per m²	no. per m²	no. per m²	no. per m²	no. per m²
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP3	3740	312	9	139	641
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP4	1567	78	0	26	476
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP5	4242	130	0	35	286
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP1	1832	58	29	173	390
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP2	1529	58	0	144	433
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP3	2496	115	0	159	808
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP4	1472	0	0	29	606
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP5	1428	144	0	144	43
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R1	1443	14	87	188	274
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R2	1010	0	0	274	115
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R3	1284	43	0	29	144
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R4	1068	29	0	43	87
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R5	1803	115	0	72	216
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R1	1558	101	29	476	361
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R2	851	14	0	101	664
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R3	721	130	29	58	188
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R4	1515	130	0	43	87
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R5	995	260	0	72	29
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	1861	14	260	447	14
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	765	43	43	231	87
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	1313	159	0	231	332
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	1630	0	0	101	216
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	1414	14	14	0	476
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R1	2236	14	87	952	332
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R2	1962	101	0	981	375
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R3	967	29	0	231	173
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R4	837	29	0	101	303
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R5	1919	0	0	14	1197
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R1	3924	43	447	952	1385
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R2	2135	72	29	548	707
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R3	5179	361	87	548	1082
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R4	3578	317	0	260	1399
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R5	1428	43	14	130	144
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP1	1169	14	43	188	707
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP2	2669	462	0	332	1039
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP3	2727	245	0	274	1197
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP4	1313	188	0	216	159
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP5	4429	476	14	1039	2539
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R1	1457	43	14	620	260
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R2	4357	375	0	361	1068
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R3	3203	130	0	72	1573

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Invertebrate Density	Oligochaeta Density	Amphipoda Density	Pisidiidae Density	Gastropoda Density
Units					no. per m²	no. per m²	no. per m²	no. per m²	no. per m²
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R4	3174	346	0	346	433
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R5	8685	346	29	895	3347
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R1	491	43	14	43	0
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R3	491	14	0	101	101
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R4	72	0	29	14	0
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R5	159	0	14	0	72
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R1	779	0	0	346	173
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R2	2669	0	0	519	1241
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R3	1472	29	0	303	404
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R4	1645	87	0	534	173
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R5	2049	87	0	779	418
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R1	649	0	14	274	130
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R2	2308	303	0	216	981
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R3	4299	245	0	375	3059
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R4	2914	72	0	678	837
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R5	5915	606	0	548	3708
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R1	115	0	0	29	58
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R2	1154	58	0	101	476
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R3	4141	159	0	447	2078
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R4	2929	72	0	274	1558
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R5	4703	130	0	880	2193
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP1	4040	14	1544	332	130
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP2	9248	29	1818	1125	4069
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP3	7517	58	1919	1111	2626
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP4	10806	0	895	895	6983
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP5	8281	29	895	981	5800
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP1	6175	29	1371	260	3506
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP2	7012	29	1212	649	4415
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP3	11311	58	2308	1125	6983
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP4	11311	29	1241	1241	6896
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP5	9060	0	1789	491	6233
Split Lake	OFFSH	2015	reference	SPLIT-OS-R1	3939	14	2193	534	87
Split Lake	OFFSH	2015	reference	SPLIT-OS-R2	3506	0	1601	750	202
Split Lake	OFFSH	2015	reference	SPLIT-OS-R3	3477	29	2684	0	29
Split Lake	OFFSH	2015	reference	SPLIT-OS-R4	3001	29	1616	447	58
Split Lake	OFFSH	2015	reference	SPLIT-OS-R5	3246	14	2583	29	87
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP1	1962	43	1226	0	14
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP2	2958	29	1573	303	58
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP3	2222	29	1385	0	0
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP4	2712	29	1457	130	173
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP5	2106	43	1746	0	0

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Invertebrate Density	Oligochaeta Density	Amphipoda Density	Pisidiidae Density	Gastropoda Density
Units					no. per m²	no. per m²	no. per m²	no. per m²	no. per m²
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP1	3102	101	1991	0	0
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP2	3852	72	2698	0	0
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP3	1371	43	822	0	0
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP4	1443	0	952	0	14
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP5	2207	0	1731	0	0
Split Lake	OFFSH	2018	reference	SPLIT-OS-R1	2121	0	1688	0	0
Split Lake	OFFSH	2018	reference	SPLIT-OS-R2	3015	0	2323	0	0
Split Lake	OFFSH	2018	reference	SPLIT-OS-R3	2395	0	1775	0	0
Split Lake	OFFSH	2018	reference	SPLIT-OS-R4	2352	29	1515	14	0
Split Lake	OFFSH	2018	reference	SPLIT-OS-R5	2914	29	2251	0	0
Split Lake	OFFSH	2019	reference	SPLIT-OS-R1	2554	0	1991	0	0
Split Lake	OFFSH	2019	reference	SPLIT-OS-R2	2222	14	1832	0	0
Split Lake	OFFSH	2019	reference	SPLIT-OS-R3	1183	29	534	0	159
Split Lake	OFFSH	2019	reference	SPLIT-OS-R4	3333	29	2583	0	0
Split Lake	OFFSH	2019	reference	SPLIT-OS-R5	3477	0	2871	0	14
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP1	1394	0	9	0	744
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP2	710	9	0	0	164
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP3	822	0	0	0	424
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP4	900	17	0	0	121
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP5	1679	35	0	9	156
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP1	404	0	0	14	216
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP2	1082	14	29	0	202
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP3	1428	0	43	0	491
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP4	2684	29	14	43	1630
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP5	1731	0	14	0	1111
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R1	159	0	0	0	29
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R2	346	0	14	0	14
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R3	43	0	0	0	0
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R4	72	0	0	0	0
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R5	303	0	0	0	0
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R1	505	0	43	0	433
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R2	1197	29	29	14	620
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R3	447	0	43	0	202
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R4	649	0	0	43	491
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R5	577	0	0	58	361
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R1	2106	115	0	14	14
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R2	923	29	14	0	231
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R3	462	0	0	0	101
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R4	2482	0	0	14	1212
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R5	173	0	0	14	115
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R1	1125	0	0	29	130

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Invertebrate Density	Oligochaeta Density	Amphipoda Density	Pisidiidae Density	Gastropoda Density
Units					no. per m²	no. per m²	no. per m²	no. per m²	no. per m²
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R2	1313	0	0	87	87
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R3	1154	29	14	101	101
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R4	1053	29	14	115	72
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R5	505	0	0	216	144
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R1	851	0	0	72	245
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R2	1948	72	0	159	433
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R3	2207	0	0	144	1212
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R4	1558	0	14	173	779
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R5	3549	87	14	620	1111
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP1	2190	0	130	0	52
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP2	2225	9	130	0	9
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP3	2779	26	69	0	9
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP4	2199	35	69	0	0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP5	0	0	0	0	0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP1	1284	0	202	0	43
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP2	1818	14	361	0	0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP3	1890	14	433	0	0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP4	1140	0	72	0	0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP5	1313	0	72	0	0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R1	1702	0	765	0	29
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R2	1111	0	491	0	0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R3	1414	0	433	0	0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R4	895	0	115	0	0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R5	1125	0	159	0	0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R1	736	0	231	0	115
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R2	1977	14	317	0	115
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R3	505	0	87	0	14
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R4	1284	0	332	0	14
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R5	866	0	144	0	0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R1	2554	0	1876	0	72
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R2	3232	14	2323	0	101
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R3	1472	0	1039	0	14
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R4	1876	0	1111	0	14
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R5	2078	14	534	0	115
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R1	1933	0	1342	0	317
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R2	1818	0	1082	0	188
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R3	2251	29	1486	0	274
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R4	981	0	462	0	14
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R5	1544	0	736	0	43
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R1	2121	0	721	0	462
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R2	3015	14	1558	0	418

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Invertebrate Density	Oligochaeta Density	Amphipoda Density	Pisidiidae Density	Gastropoda Density
Units					no. per m²	no. per m²	no. per m²	no. per m²	no. per m²
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R3	2265	0	909	0	476
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R4	2106	0	909	0	159
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R5	2770	14	1587	0	216
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP1	2857	0	1616	14	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP2	3102	14	2020	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP3	3232	43	2034	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP4	2135	0	1226	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP5	2510	0	1544	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R1	3434	0	2871	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R2	2453	0	2005	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R3	3419	14	2813	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R4	1255	0	707	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R5	2409	0	1659	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R1	2294	0	1298	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R2	1241	0	548	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R3	2871	0	1544	0	29
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R4	995	0	447	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R5	2669	0	1702	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R1	1327	0	736	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R2	3434	0	2280	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R3	1645	0	995	0	14
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R4	3116	0	2020	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R5	1904	0	938	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R1	2453	0	2020	0	29
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R2	2510	0	1847	0	14
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R3	2409	0	1847	0	173
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R4	3059	0	2409	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R5	1674	0	1111	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R1	2251	0	1717	0	87
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R2	1861	0	1457	0	0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R3	2929	0	1919	14	476
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R4	3564	29	2640	0	101
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R5	2409	0	1803	0	115

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Chironomidae Density	Ephemeroptera Density	Plecoptera Density	Trichoptera Density	EPT Density
Units					no. per m²	no. per m²	no. per m²	no. per m²	no. per m²
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP1	274	216	0	14	231
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP2	390	159	0	0	159
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP3	159	159	0	14	173
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP4	231	245	0	0	245
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP5	144	188	0	14	202
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R1	1601	202	0	43	245
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R2	1241	433	0	14	447
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R3	361	245	0	58	303
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R4	822	361	0	14	375
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R5	4386	923	0	29	952
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R1	260	289	0	101	390
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R2	317	390	0	87	476
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R3	433	245	0	43	289
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R4	216	375	0	14	390
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R5	476	361	0	14	375
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R1	260	577	0	0	577
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R2	0	447	0	0	447
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R3	462	346	0	0	346
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R4	361	505	0	0	505
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R5	173	620	0	0	620
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R1	880	375	0	0	375
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R2	577	274	0	0	274
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R3	361	216	0	14	231
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R4	563	303	0	0	303
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R5	274	274	0	0	274
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP1	398	69	0	43	113
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP2	398	104	0	0	104
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP3	208	69	0	26	95
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP4	390	43	0	9	52
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP5	190	35	0	17	52
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP1	491	202	0	14	216
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP2	245	58	0	0	58
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP3	837	923	0	14	938
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP4	1183	664	0	87	750
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP5	462	635	0	14	649
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R1	188	0	0	0	0
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R2	2886	14	0	14	29
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R3	115	0	0	0	0
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R4	952	43	0	0	43
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R5	794	0	0	0	0
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R1	1039	115	0	0	115
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R2	346	72	0	14	87

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Chironomidae Density	Ephemeroptera Density	Plecoptera Density	Trichoptera Density	EPT Density
Units					no. per m²	no. per m²	no. per m²	no. per m²	no. per m²
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R3	447	159	0	29	188
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R4	895	173	0	14	188
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R5	1962	43	0	0	43
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R1	332	1674	0	0	1674
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R2	216	115	0	0	115
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R3	303	317	0	0	317
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R4	58	418	0	14	433
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R5	620	1154	0	14	1169
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R1	115	1082	0	0	1082
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R2	592	491	0	14	505
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R3	188	1169	0	0	1169
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R4	202	418	0	0	418
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R5	548	519	0	0	519
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R1	159	289	0	14	303
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R2	519	390	0	0	390
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R3	303	361	0	0	361
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R4	649	462	0	29	491
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R5	216	390	0	14	404
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP1	173	2329	0	9	2337
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP2	147	1229	0	9	1238
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP3	225	2372	0	9	2381
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP4	147	788	0	17	805
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP5	718	3004	0	35	3038
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP1	216	952	0	0	952
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP2	58	822	0	0	822
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP3	188	1226	0	0	1226
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP4	606	216	0	14	231
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP5	606	375	0	29	404
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R1	519	361	0	0	361
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R2	87	462	0	0	462
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R3	433	592	0	0	592
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R4	346	491	0	14	505
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R5	1039	260	0	0	260
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R1	101	447	0	0	447
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R2	14	29	0	14	43
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R3	289	0	0	29	29
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R4	433	548	0	144	693
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R5	491	130	0	14	144
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	534	563	0	14	577
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	72	274	0	0	274
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	346	202	0	0	202
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	938	216	0	101	317

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Chironomidae Density	Ephemeroptera Density	Plecoptera Density	Trichoptera Density	EPT Density
Units					no. per m²	no. per m²	no. per m²	no. per m²	no. per m²
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	289	505	0	87	592
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R1	577	202	0	29	231
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R2	159	202	0	29	231
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R3	274	173	0	72	245
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R4	101	159	0	43	202
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R5	505	130	0	43	173
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R1	664	390	0	0	390
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R2	563	159	0	0	159
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R3	1876	721	0	144	866
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R4	981	491	0	43	534
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R5	606	375	0	29	404
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP1	0	202	0	0	202
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP2	505	231	0	43	274
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP3	491	404	0	14	418
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP4	101	649	0	0	649
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP5	101	245	0	0	245
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R1	72	433	0	0	433
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R2	808	1587	0	29	1616
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R3	462	952	0	0	952
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R4	534	1486	0	14	1500
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R5	2395	1529	0	0	1529
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R1	173	216	0	0	216
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R3	260	14	0	0	14
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R4	29	0	0	0	0
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R5	58	0	0	0	0
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R1	14	231	14	0	245
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R2	274	577	0	29	606
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R3	260	462	0	0	462
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R4	173	606	0	43	649
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R5	130	606	0	14	620
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R1	58	159	0	0	159
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R2	202	534	0	14	548
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R3	159	332	0	87	418
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R4	563	750	0	0	750
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R5	505	491	0	29	519
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R1	29	0	0	0	0
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R2	289	216	0	0	216
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R3	736	577	0	0	577
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R4	548	390	0	29	418
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R5	866	519	0	58	577
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP1	216	1587	0	101	1688
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP2	462	1558	0	58	1616

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Chironomidae Density	Ephemeroptera Density	Plecoptera Density	Trichoptera Density	EPT Density
Units					no. per m²	no. per m²	no. per m²	no. per m²	no. per m²
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP3	418	1298	0	58	1356
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP4	346	1587	0	87	1674
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP5	144	375	0	58	433
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP1	159	808	0	0	808
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP2	72	534	0	58	592
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP3	231	491	0	87	577
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP4	173	1039	0	58	1096
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP5	144	346	0	29	375
Split Lake	OFFSH	2015	reference	SPLIT-OS-R1	563	361	0	43	404
Split Lake	OFFSH	2015	reference	SPLIT-OS-R2	592	130	0	101	231
Split Lake	OFFSH	2015	reference	SPLIT-OS-R3	404	159	0	72	231
Split Lake	OFFSH	2015	reference	SPLIT-OS-R4	505	274	0	29	303
Split Lake	OFFSH	2015	reference	SPLIT-OS-R5	245	173	0	58	231
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP1	159	491	0	29	519
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP2	231	592	0	43	635
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP3	115	462	0	202	664
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP4	159	649	0	0	649
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP5	0	274	0	14	289
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP1	173	462	0	346	808
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP2	58	548	0	404	952
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP3	115	289	0	101	390
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP4	87	303	0	43	346
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP5	14	418	0	29	447
Split Lake	OFFSH	2018	reference	SPLIT-OS-R1	115	231	0	29	260
Split Lake	OFFSH	2018	reference	SPLIT-OS-R2	72	505	0	87	592
Split Lake	OFFSH	2018	reference	SPLIT-OS-R3	144	404	0	58	462
Split Lake	OFFSH	2018	reference	SPLIT-OS-R4	202	519	0	58	577
Split Lake	OFFSH	2018	reference	SPLIT-OS-R5	87	491	0	14	505
Split Lake	OFFSH	2019	reference	SPLIT-OS-R1	58	390	0	115	505
Split Lake	OFFSH	2019	reference	SPLIT-OS-R2	72	231	0	43	274
Split Lake	OFFSH	2019	reference	SPLIT-OS-R3	144	159	0	159	317
Split Lake	OFFSH	2019	reference	SPLIT-OS-R4	173	491	0	43	534
Split Lake	OFFSH	2019	reference	SPLIT-OS-R5	87	375	0	115	491
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP1	493	69	0	43	113
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP2	424	95	0	9	104
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP3	364	9	0	9	17
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP4	684	52	0	26	78
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP5	1324	95	0	43	139
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP1	173	0	0	0	0
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP2	721	101	0	14	115
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP3	794	87	0	14	101
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP4	909	43	0	14	58

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Chironomidae Density	Ephemeroptera Density	Plecoptera Density	Trichoptera Density	EPT Density
Units					no. per m²	no. per m²	no. per m²	no. per m²	no. per m²
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP5	505	43	0	58	101
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R1	87	0	0	43	43
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R2	289	0	0	14	14
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R3	0	0	0	29	29
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R4	58	0	0	14	14
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R5	289	0	0	0	0
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R1	0	29	0	0	29
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R2	202	188	0	72	260
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R3	58	115	0	14	130
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R4	101	14	0	0	14
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R5	144	14	0	0	14
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R1	476	1428	0	0	1428
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R2	317	274	0	29	303
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R3	130	115	0	29	144
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R4	245	952	0	14	967
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R5	29	0	0	0	0
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R1	202	664	0	58	721
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R2	101	1039	0	0	1039
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R3	115	765	0	14	779
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R4	202	505	0	14	519
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R5	72	43	0	14	58
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R1	87	433	0	0	433
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R2	418	822	0	0	822
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R3	159	649	0	0	649
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R4	159	418	0	0	418
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R5	577	1082	0	29	1111
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP1	173	1801	0	0	1801
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP2	242	1818	0	0	1818
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP3	390	2277	0	0	2277
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP4	164	1922	0	0	1922
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP5	0	0	0	0	0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP1	72	938	0	14	952
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP2	188	1241	0	0	1241
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP3	216	1226	0	0	1226
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP4	29	1039	0	0	1039
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP5	173	1024	0	0	1024
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R1	289	606	0	0	606
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R2	101	491	0	0	491
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R3	317	664	0	0	664
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R4	144	620	0	0	620
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R5	303	649	0	0	649
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R1	14	375	0	0	375

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Chironomidae Density	Ephemeroptera Density	Plecoptera Density	Trichoptera Density	EPT Density
Units					no. per m²	no. per m²	no. per m²	no. per m²	no. per m²
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R2	375	1082	0	0	1082
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R3	43	332	0	0	332
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R4	87	808	0	14	822
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R5	43	678	0	0	678
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R1	159	447	0	0	447
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R2	173	620	0	0	620
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R3	87	274	0	43	317
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R4	72	649	0	14	664
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R5	491	808	0	58	866
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R1	87	173	0	14	188
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R2	260	289	0	0	289
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R3	245	188	0	14	202
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R4	202	303	0	0	303
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R5	173	534	0	14	548
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R1	317	563	0	29	592
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R2	202	794	0	0	794
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R3	346	491	0	14	505
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R4	332	693	0	0	693
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R5	491	462	0	0	462
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP1	245	967	0	0	967
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP2	216	851	0	0	851
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP3	231	909	0	0	909
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP4	173	736	0	0	736
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP5	274	693	0	0	693
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R1	188	375	0	0	375
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R2	260	188	0	0	188
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R3	404	188	0	0	188
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R4	202	332	0	14	346
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R5	390	332	0	14	346
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R1	245	736	0	0	736
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R2	274	404	0	14	418
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R3	707	563	0	14	577
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R4	159	375	0	0	375
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R5	115	808	0	29	837
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R1	101	462	0	14	476
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R2	289	837	0	14	851
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R3	115	476	0	43	519
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R4	375	678	0	14	693
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R5	216	707	0	29	736
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R1	130	260	0	14	274
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R2	346	260	0	43	303
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R3	231	159	0	0	159

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Chironomidae Density	Ephemeroptera Density	Plecoptera Density	Trichoptera Density	EPT Density
Units					**no. per m²**	**no. per m²**	**no. per m²**	**no. per m²**	**no. per m²**
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R4	346	274	0	29	303
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R5	274	260	0	29	289
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R1	231	130	0	72	202
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R2	188	173	0	29	202
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R3	346	144	0	14	159
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R4	462	101	0	216	317
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R5	317	130	0	29	159

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Ratio of EPT to Chironomidae	Percent Ephemeroptera	Percent EPT (EPT Index)	Percent of Oligochaeta and Chironomidae
Units					-	%	%	%
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP1	0.84	27	29	36
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP2	0.41	22	22	54
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP3	1.09	24	27	47
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP4	1.06	28	28	30
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP5	1.40	46	50	39
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R1	0.15	9	11	70
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R2	0.36	19	20	63
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R3	0.84	22	27	58
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R4	0.46	22	23	52
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R5	0.22	11	11	66
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R1	1.50	29	39	26
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R2	1.50	27	33	30
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R3	0.67	20	24	66
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R4	1.80	51	53	35
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R5	0.79	23	24	41
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R1	2.22	62	62	28
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R2		66	66	0
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R3	0.75	38	38	51
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R4	1.40	48	48	34
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R5	3.58	68	68	19
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R1	0.43	28	28	65
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R2	0.48	23	23	49
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R3	0.64	23	24	38
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R4	0.54	25	25	46
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R5	1.00	31	31	32
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP1	0.28	5	9	45
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP2	0.26	7	7	28
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP3	0.46	10	13	31
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP4	0.13	4	5	37
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP5	0.27	3	4	25
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP1	0.44	26	28	63
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP2	0.24	12	12	64
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP3	1.12	39	40	45
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP4	0.63	29	33	56
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP5	1.41	42	43	40
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R1		0	0	93
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R2	0.01	0	1	96
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R3		0	0	63
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R4	0.05	3	3	74
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R5		0	0	98

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Ratio of EPT to Chironomidae	Percent Ephemeroptera	Percent EPT (EPT Index)	Percent of Oligochaeta and Chironomidae
Units					-	%	%	%
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R1	0.11	8	8	73
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R2	0.25	10	12	53
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R3	29.00	14	16	53
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R4	0.21	10	11	56
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R5	0.02	1	1	64
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R1	5.04	78	78	17
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R2	0.53	29	29	54
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R3	1.05	46	46	50
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R4	7.50	83	86	11
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R5	1.88	58	59	32
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R1	9.38	82	82	9
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R2	0.85	41	42	51
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R3	6.23	83	83	14
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R4	2.07	57	57	27
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R5	0.95	36	36	39
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R1	1.91	43	45	26
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R2	0.75	34	34	48
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R3	1.19	36	36	48
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R4	0.76	30	32	50
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R5	1.87	36	37	33
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP1	13.50	71	71	8
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP2	8.41	53	53	12
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP3	10.58	63	64	14
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP4	5.47	50	51	14
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP5	4.23	71	72	20
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP1	4.40	52	52	15
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP2	14.25	54	54	8
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP3	6.54	49	49	12
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP4	0.38	15	16	41
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP5	0.67	26	28	53
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R1	0.69	25	25	37
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R2	5.33	46	46	9
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R3	1.37	46	46	37
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R4	1.46	46	47	35
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R5	0.25	14	14	64
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R1	4.43	29	29	13
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R2	3.00	3	5	3
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R3	0.10	0	4	58
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R4	1.60	36	46	37
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R5	0.29	13	14	75

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Ratio of EPT to Chironomidae	Percent Ephemeroptera	Percent EPT (EPT Index)	Percent of Oligochaeta and Chironomidae
Units					-	%	%	%
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	1.08	30	31	29
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	3.80	36	36	15
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	0.58	15	15	38
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	0.34	13	19	58
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	2.05	36	42	21
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R1	0.40	9	10	26
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R2	1.45	10	12	13
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R3	0.89	18	25	31
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R4	2.00	19	24	16
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R5	0.34	7	9	26
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R1	0.59	10	10	18
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R2	0.28	7	7	30
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R3	0.46	14	17	43
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R4	0.54	14	15	36
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R5	0.67	26	28	45
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP1		17	17	1
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP2	0.54	9	10	36
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP3	0.85	15	15	27
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP4	6.43	49	49	22
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP5	2.43	6	6	13
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R1	6.00	30	30	8
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R2	2.00	36	37	27
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R3	2.06	30	30	18
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R4	2.81	47	47	28
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R5	0.64	18	18	32
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R1	1.25	44	44	44
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R3	0.06	3	3	56
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R4		0	0	40
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R5		0	0	36
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R1	17.00	30	31	2
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R2	2.21	22	23	10
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R3	1.78	31	31	20
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R4	3.75	37	39	16
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R5	4.78	30	30	11
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R1	2.75	24	24	9
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R2	2.71	23	24	22
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R3	2.64	8	10	9
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R4	1.33	26	26	22
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R5	1.03	8	9	19
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R1	0.00	0	0	25

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Ratio of EPT to Chironomidae	Percent Ephemeroptera	Percent EPT (EPT Index)	Percent of Oligochaeta and Chironomidae
Units					-	%	%	%
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R2	0.75	19	19	30
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R3	0.78	14	14	22
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R4	0.76	13	14	21
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R5	0.67	11	12	21
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP1	7.80	39	42	6
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP2	3.50	17	17	5
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP3	3.24	17	18	6
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP4	4.83	15	15	3
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP5	3.00	5	5	2
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP1	5.09	13	13	3
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP2	8.20	8	8	1
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP3	2.50	4	5	3
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP4	6.33	9	10	2
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP5	2.60	4	4	2
Split Lake	OFFSH	2015	reference	SPLIT-OS-R1	0.72	9	10	15
Split Lake	OFFSH	2015	reference	SPLIT-OS-R2	0.39	4	7	17
Split Lake	OFFSH	2015	reference	SPLIT-OS-R3	0.57	5	7	12
Split Lake	OFFSH	2015	reference	SPLIT-OS-R4	0.60	9	10	18
Split Lake	OFFSH	2015	reference	SPLIT-OS-R5	0.94	5	7	8
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP1	3.27	25	26	10
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP2	2.75	20	21	9
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP3	5.75	21	30	6
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP4	4.09	24	24	7
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP5		13	14	2
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP1	4.67	15	26	9
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP2	16.50	14	25	3
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP3	3.38	21	28	12
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP4	4.00	21	24	6
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP5	31.00	19	20	1
Split Lake	OFFSH	2018	reference	SPLIT-OS-R1	2.25	11	12	5
Split Lake	OFFSH	2018	reference	SPLIT-OS-R2	8.20	17	20	2
Split Lake	OFFSH	2018	reference	SPLIT-OS-R3	3.20	17	19	6
Split Lake	OFFSH	2018	reference	SPLIT-OS-R4	2.86	22	25	10
Split Lake	OFFSH	2018	reference	SPLIT-OS-R5	5.83	17	17	4
Split Lake	OFFSH	2019	reference	SPLIT-OS-R1	8.75	15	20	2
Split Lake	OFFSH	2019	reference	SPLIT-OS-R2	3.80	10	12	4
Split Lake	OFFSH	2019	reference	SPLIT-OS-R3	2.20	13	27	15
Split Lake	OFFSH	2019	reference	SPLIT-OS-R4	3.08	15	16	6
Split Lake	OFFSH	2019	reference	SPLIT-OS-R5	5.67	11	14	2
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP1	0.23	5	8	35

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Ratio of EPT to Chironomidae	Percent Ephemeroptera	Percent EPT (EPT Index)	Percent of Oligochaeta and Chironomidae
Units					-	%	%	%
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP2	0.24	13	15	61
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP3	0.05	1	2	44
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP4	0.11	6	9	78
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP5	0.10	6	8	81
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP1		0	0	43
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP2	0.16	9	11	68
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP3	0.13	6	7	56
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP4	0.06	2	2	35
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP5	0.20	3	6	29
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R1	0.50	0	27	55
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R2	0.05	0	4	83
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R3		0	67	0
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R4	0.25	0	20	80
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R5		0	0	95
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R1		6	6	0
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R2	1.29	16	22	19
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R3	2.25	26	29	13
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R4	0.14	2	2	16
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R5	0.10	3	3	25
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R1	3.00	68	68	28
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R2	0.95	30	33	38
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R3	1.11	25	31	28
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R4	3.94	38	39	10
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R5	0.00	0	0	17
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R1	3.57	59	64	18
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R2	10.29	79	79	8
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R3	6.75	66	68	13
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R4	2.57	48	49	22
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R5	0.80	9	11	14
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R1	5.00	51	51	10
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R2	1.97	42	42	25
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R3	4.09	29	29	7
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R4	2.64	27	27	10
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R5	1.93	30	31	19
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP1	10.40	82	82	8
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP2	7.50	82	82	11
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP3	5.84	82	82	15
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP4	11.68	87	87	9
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP5		0	0	0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP1	13.20	73	74	6

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Ratio of EPT to Chironomidae	Percent Ephemeroptera	Percent EPT (EPT Index)	Percent of Oligochaeta and Chironomidae
Units					-	%	%	%
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP2	6.62	68	68	11
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP3	5.67	65	65	12
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP4	36.00	91	91	3
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP5	5.92	78	78	13
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R1	2.10	36	36	17
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R2	4.86	44	44	9
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R3	2.09	47	47	22
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R4	4.30	69	69	16
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R5	2.14	58	58	27
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R1	26.00	51	51	2
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R2	2.88	55	55	20
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R3	7.67	66	66	9
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R4	9.50	63	64	7
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R5	15.67	78	78	5
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R1	2.82	18	18	6
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R2	3.58	19	19	6
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R3	3.67	19	22	6
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R4	9.20	35	35	4
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R5	1.76	39	42	24
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R1	2.17	9	10	4
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R2	1.11	16	16	14
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R3	0.82	8	9	12
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R4	1.50	31	31	21
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R5	3.17	35	36	11
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R1	1.86	27	28	15
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R2	3.93	26	26	7
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R3	1.46	22	22	15
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R4	2.09	33	33	16
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R5	0.94	17	17	18
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP1	3.94	34	34	9
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP2	3.93	27	27	7
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP3	3.94	28	28	8
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP4	4.25	34	34	8
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP5	2.53	28	28	11
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R1	2.00	11	11	5
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R2	0.72	8	8	11
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R3	0.46	5	5	12
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R4	1.71	26	28	16
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R5	0.89	14	14	16
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R1	3.00	32	32	11

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Ratio of EPT to Chironomidae	Percent Ephemeroptera	Percent EPT (EPT Index)	Percent of Oligochaeta and Chironomidae
Units					**-**	**%**	**%**	**%**
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R2	1.53	33	34	22
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R3	0.82	20	20	25
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R4	2.36	38	38	16
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R5	7.25	30	31	4
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R1	4.71	35	36	8
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R2	2.95	24	25	8
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R3	4.50	29	32	7
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R4	1.85	22	22	12
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R5	3.40	37	39	11
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R1	2.11	11	11	5
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R2	0.88	10	12	14
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R3	0.69	7	7	10
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R4	0.88	9	10	11
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R5	1.05	16	17	16
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R1	0.88	6	9	10
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R2	1.08	9	11	10
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R3	0.46	5	5	12
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R4	0.69	3	9	14
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R5	0.50	5	7	13

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Richness (Family-level)	EPT Richness (Family-level)	Simpson's Diversity Index
Units					-	-	-
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP1	8	2	0.77
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP2	6	1	0.64
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP3	10	2	0.81
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP4	7	1	0.78
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP5	7	2	0.65
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R1	11	2	0.51
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R2	11	2	0.64
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R3	11	1	0.77
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R4	8	1	0.67
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R5	12	2	0.67
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R1	11	5	0.83
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R2	10	4	0.80
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R3	9	3	0.74
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R4	7	2	0.65
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R5	9	2	0.77
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R1	6	1	0.54
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R2	5	1	0.53
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R3	5	1	0.59
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R4	7	1	0.64
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R5	8	2	0.52
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R1	5	1	0.50
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R2	5	1	0.68
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R3	6	1	0.75
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R4	8	1	0.71
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R5	9	1	0.78
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP1	11	3	0.79
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP2	8	1	0.61
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP3	9	3	0.78
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP4	10	3	0.69
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP5	9	2	0.57
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP1	6	2	0.53
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP2	6	1	0.68
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP3	9	2	0.70
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP4	10	4	0.64
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP5	8	2	0.71
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R1	3	0	0.24
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R2	8	1	0.08
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R3	5	0	0.67
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R4	11	2	0.52
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R5	2	0	0.04
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R1	7	1	0.45
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R2	9	2	0.72

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Richness (Family-level)	EPT Richness (Family-level)	Simpson's Diversity Index
Units					-	-	-
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R3	8	2	0.78
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R4	8	2	0.68
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R5	8	1	0.58
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R1	5	1	0.37
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R2	4	1	0.61
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R3	4	1	0.59
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R4	4	2	0.30
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R5	11	2	0.57
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R1	4	1	0.32
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R2	7	2	0.59
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R3	6	1	0.30
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R4	3	1	0.58
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R5	6	1	0.69
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R1	7	2	0.77
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R2	8	1	0.67
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R3	6	1	0.74
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R4	8	3	0.71
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R5	8	2	0.79
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP1	8	3	0.48
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP2	8	2	0.63
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP3	9	2	0.56
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP4	10	3	0.69
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP5	12	5	0.48
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP1	8	1	0.66
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP2	6	1	0.62
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP3	7	2	0.71
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP4	6	2	0.68
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP5	9	3	0.73
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R1	7	1	0.76
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R2	6	1	0.69
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R3	7	1	0.67
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R4	8	1	0.67
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R5	10	1	0.64
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R1	7	1	0.77
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R2	9	2	0.60
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R3	8	2	0.76
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R4	10	3	0.76
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R5	6	2	0.67
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	8	2	0.75
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	8	1	0.76
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	9	1	0.83
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	12	5	0.64

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Richness (Family-level)	EPT Richness (Family-level)	Simpson's Diversity Index
Units					-	-	-
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	12	4	0.76
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R1	12	4	0.73
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R2	8	2	0.71
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R3	9	2	0.82
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R4	9	2	0.87
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R5	11	4	0.75
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R1	7	1	0.81
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R2	8	1	0.79
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R3	14	4	0.82
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R4	13	4	0.81
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R5	11	2	0.74
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP1	8	2	0.76
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP2	10	4	0.76
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP3	11	2	0.73
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP4	5	1	0.69
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP5	7	1	0.60
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R1	7	1	0.70
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R2	12	2	0.77
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R3	7	1	0.74
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R4	8	1	0.72
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R5	13	2	0.79
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R1	6	2	0.71
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R3	6	1	0.65
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R4	3	0	0.65
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R5	6	0	0.77
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R1	5	2	0.67
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R2	7	2	0.80
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R3	6	1	0.77
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R4	9	2	0.74
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R5	9	2	0.73
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R1	6	1	0.71
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R2	10	2	0.77
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R3	11	3	0.54
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R4	7	1	0.79
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R5	9	2	0.59
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R1	3	0	0.63
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R2	6	1	0.74
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R3	12	2	0.73
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R4	7	2	0.75
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R5	11	3	0.77
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP1	10	3	0.69
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP2	10	2	0.72

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Richness (Family-level)	EPT Richness (Family-level)	Simpson's Diversity Index
Units					-	-	-
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP3	9	2	0.76
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP4	7	2	0.55
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP5	7	2	0.48
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP1	8	1	0.61
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP2	10	3	0.56
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP3	10	3	0.60
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP4	9	2	0.59
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP5	7	2	0.48
Split Lake	OFFSH	2015	reference	SPLIT-OS-R1	11	1	0.64
Split Lake	OFFSH	2015	reference	SPLIT-OS-R2	11	1	0.71
Split Lake	OFFSH	2015	reference	SPLIT-OS-R3	9	1	0.39
Split Lake	OFFSH	2015	reference	SPLIT-OS-R4	8	1	0.65
Split Lake	OFFSH	2015	reference	SPLIT-OS-R5	9	1	0.36
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP1	6	2	0.54
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP2	9	2	0.66
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP3	10	4	0.58
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP4	8	1	0.64
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP5	6	2	0.30
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP1	10	5	0.57
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP2	11	5	0.48
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP3	7	4	0.59
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP4	8	3	0.52
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP5	5	2	0.35
Split Lake	OFFSH	2018	reference	SPLIT-OS-R1	7	2	0.35
Split Lake	OFFSH	2018	reference	SPLIT-OS-R2	5	2	0.38
Split Lake	OFFSH	2018	reference	SPLIT-OS-R3	5	2	0.42
Split Lake	OFFSH	2018	reference	SPLIT-OS-R4	7	2	0.53
Split Lake	OFFSH	2018	reference	SPLIT-OS-R5	7	2	0.37
Split Lake	OFFSH	2019	reference	SPLIT-OS-R1	5	2	0.38
Split Lake	OFFSH	2019	reference	SPLIT-OS-R2	7	2	0.31
Split Lake	OFFSH	2019	reference	SPLIT-OS-R3	6	2	0.73
Split Lake	OFFSH	2019	reference	SPLIT-OS-R4	6	2	0.38
Split Lake	OFFSH	2019	reference	SPLIT-OS-R5	6	2	0.30
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP1	9	3	0.59
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP2	8	3	0.59
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP3	5	2	0.54
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP4	5	2	0.40
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP5	10	3	0.37
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP1	3	0	0.53
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP2	6	2	0.51
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP3	5	2	0.57
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP4	7	2	0.52

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Richness (Family-level)	EPT Richness (Family-level)	Simpson's Diversity Index
Units					-	-	-
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP5	6	2	0.51
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R1	3	0	0.60
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R2	5	0	0.30
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R3	2	0	0.45
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R4	2	0	0.32
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R5	2	0	0.09
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R1	3	1	0.26
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R2	8	2	0.71
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R3	6	2	0.70
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R4	4	1	0.40
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R5	4	1	0.54
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R1	6	1	0.49
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R2	8	2	0.75
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R3	5	2	0.79
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R4	6	2	0.72
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R5	4	0	0.52
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R1	7	2	0.61
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R2	5	1	0.36
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R3	9	2	0.54
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R4	10	2	0.71
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R5	7	2	0.74
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R1	6	1	0.67
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R2	6	1	0.72
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R3	7	1	0.62
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R4	6	1	0.66
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R5	11	2	0.77
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP1	6	1	0.31
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP2	6	1	0.32
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP3	6	1	0.31
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP4	6	2	0.24
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP5	0	0	
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP1	6	2	0.44
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP2	6	1	0.49
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP3	5	1	0.52
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP4	3	1	0.16
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP5	5	1	0.37
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R1	6	1	0.64
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R2	4	1	0.60
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R3	3	1	0.64
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R4	4	1	0.48
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R5	4	1	0.58
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R1	4	1	0.62

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Richness (Family-level)	EPT Richness (Family-level)	Simpson's Diversity Index
Units					-	-	-
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R2	8	1	0.64
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R3	7	1	0.54
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R4	7	2	0.54
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R5	3	1	0.36
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R1	4	1	0.43
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R2	6	1	0.44
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R3	6	2	0.46
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R4	6	2	0.53
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R5	9	2	0.72
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R1	6	2	0.49
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R2	5	1	0.59
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R3	8	2	0.53
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R4	4	1	0.64
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R5	7	2	0.64
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R1	7	2	0.76
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R2	7	1	0.65
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R3	7	2	0.73
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R4	5	1	0.68
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R5	5	1	0.61
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP1	5	1	0.56
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP2	5	1	0.50
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP3	5	1	0.52
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP4	3	1	0.55
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP5	3	1	0.53
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R1	4	1	0.29
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R2	3	1	0.31
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R3	4	1	0.31
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R4	4	1	0.59
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R5	5	1	0.48
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R1	5	1	0.59
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R2	4	2	0.65
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R3	6	2	0.61
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R4	4	1	0.63
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R5	6	2	0.51
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R1	5	2	0.57
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R2	5	2	0.49
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R3	5	2	0.54
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R4	7	2	0.52
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R5	6	3	0.61
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R1	5	2	0.31
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R2	5	2	0.43
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R3	5	1	0.40

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Total Richness (Family-level)	EPT Richness (Family-level)	Simpson's Diversity Index
Units					-	-	-
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R4	6	4	0.36
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R5	4	2	0.51
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R1	6	2	0.40
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R2	5	2	0.37
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R3	7	2	0.53
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R4	7	2	0.43
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R5	7	2	0.42

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Water Depth	Total Organic Carbon	Sand	Silt	Clay
Units					metres	%	%	%	%
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP1	2.6	3.97	25.9	49.1	25.0
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP2	2.9	1.51	55.0	30.0	15.0
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP3	2.6	2.21	40.6	40.0	19.4
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP4	2.4	1.65	33.6	47.3	19.1
Split Lake	NRSH-PW	2014	reference	SPLIT-PW-REP5	2.5	1.51	41.4	40.2	18.4
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R1	0.9	2.67	24.5	53.0	22.5
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R2	1.1	3.26	29.3	46.6	24.0
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R3	1.2	2.78	29.6	57.6	12.8
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R4	1.0	1.67	41.8	41.8	16.4
Split Lake	NRSH-PW	2015	reference	SPLIT-PW-R5	1.1	2.17	58.2	29.8	12.0
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R1	1.8	3.58	37.7	46.4	15.9
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R2	1.4	2.85	63.6	22.7	13.6
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R3	2.4	4.09	35.8	45.3	18.9
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R4	2.3	2.01	70.3	21.6	8.1
Split Lake	NRSH-PW	2017	reference	SPLIT-PW-R5	1.7	3.29	52.4	30.8	16.8
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R1	1.2	2.94	22.7	62.9	14.5
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R2	1.3	2.51	24.3	52.6	23.1
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R3	1.3	2.45	27.4	43.0	29.5
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R4	1.3	1.36	62.5	25.5	12.0
Split Lake	NRSH-PW	2018	reference	SPLIT-PW-R5	1.3	1.09	63.5	27.6	8.9
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R1	1.7	2.34	1.5	70.0	28.4
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R2	1.7	2.58	0.5	78.5	21.1
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R3	1.7	2.41	1.4	68.8	29.8
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R4	1.8	1.91	30.2	40.7	29.1
Split Lake	NRSH-PW	2019	reference	SPLIT-PW-R5	1.8	1.73	36.1	41.9	22.0
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP1	3.0	1.48	12.6	42.8	44.6
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP2	2.8	1.13	11.4	42.8	45.8
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP3	3.1	1.14	9.4	38.2	52.4
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP4	2.6	1.25	10.2	40.7	49.1
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL3KM-PW-REP5	2.5	1.41	12.5	42.8	44.7
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP1	3.0	1.96	3.5	61.2	35.3
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP2	3.1	1.67	11.8	50.8	37.3
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP3	3.0	3.13	7.8	43.5	48.6
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP4	2.7	2.84	9.6	52.2	38.2
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL3KM-PW-REP5	2.2	2.28	18.2	42.1	39.7
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R1	2.4	6.83	7.4	48.7	43.9
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R2	2.8	0.89	30.6	20.3	49.1
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R3	2.7	1.16	21.6	40.4	38.0
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R4	2.2	4.89	12.2	51.1	36.8
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-3KM-PW-R5	1.4	1.36	8.7	33.0	58.3
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R1	2.6	3.32	10.6	36.5	52.9

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Water Depth	Total Organic Carbon	Sand	Silt	Clay
Units					metres	%	%	%	%
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R2	2.8	1.59	49.1	15.9	35.0
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R3	2.7	3.43	13.4	41.3	45.2
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R4	2.6	1.49	11.8	21.6	66.6
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-3KM-PW-R5	1.8	2.48	7.4	30.7	61.9
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R1	2.3	2.03	8.1	66.2	25.7
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R2	2.8	2.54	6.8	68.0	25.2
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R3	2.3	2.64	17.4	61.1	21.6
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R4	2.1	2.08	14.3	55.2	30.5
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-3KM-PW-R5	1.4	2.52	17.3	64.9	17.8
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R1	2.6	1.16	17.7	37.2	45.1
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R2	3.1	1.62	14.0	58.2	27.8
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R3	2.8	2.44	7.4	73.2	19.5
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R4	2.8	2.18	10.0	69.1	20.9
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-3KM-PW-R5	1.7	1.89	12.0	68.3	19.7
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R1	1.2	2.90	13.3	54.6	32.1
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R2	1.2	2.23	12.8	60.1	27.1
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R3	1.2	1.83	18.1	66.1	15.8
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R4	1.3	2.16	18.6	59.7	21.7
Stephens Lake 3 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-3KM-PW-R5	1.2	3.00	7.0	71.7	21.4
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP1	3.0	1.97	4.0	71.0	25.0
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP2	2.2	0.49	75.7	16.5	7.8
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP3	2.2	1.57	54.6	33.5	11.9
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP4	2.1	1.68	49.6	40.3	10.1
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2013	impact	STL11KM-PW-REP5	2.6	3.61	10.3	71.6	18.1
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP1	3.4	2.47	35.7	51.0	13.3
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP2	2.1	1.26	52.9	34.9	12.2
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP3	2.0	1.59	54.6	35.2	10.2
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP4	1.9	1.64	55.5	36.1	8.4
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL11KM-PW-REP5	1.5	5.60	10.6	51.4	37.9
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R1	3.5	2.35	1.2	83.1	15.7
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R2	1.8	1.04	65.0	26.5	8.5
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R3	2.2	3.78	3.8	87.7	8.5
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R4	1.8	3.16	18.8	70.3	10.9
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-11KM-PW-R5	1.1	2.87	40.8	42.7	16.5
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R1	2.7	4.42	35.5	46.6	17.9
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R2	1.6	2.90	68.8	17.7	13.6
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R3	1.2	1.65	91.5	4.2	4.4
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R4	1.9	3.28	70.3	21.6	8.1
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-11KM-PW-R5	1.2	1.94	68.4	18.2	13.4
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	4.2	4.26	1.8	83.3	14.8
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	2.1	1.56	66.8	24.9	8.4

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Water Depth	Total Organic Carbon	Sand	Silt	Clay
Units					metres	%	%	%	%
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	1.2	3.45	62.7	32.9	4.4
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	1.9	5.23	57.4	34.9	7.7
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-11KM-PW-R1	1.2	2.42	61.4	26.9	11.7
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R1	3.3	3.30	1.3	80.6	18.2
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R2	1.9	1.60	59.9	28.4	11.7
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R3	1.6	1.48	70.9	20.8	8.3
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R4	1.8	2.63	47.5	39.3	13.2
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-11KM-PW-R5	1.2	2.01	36.1	27.8	36.1
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R1	2.3	2.60	1.0	85.7	13.3
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R2	1.3	2.87	26.8	63.5	9.7
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R3	1.2	4.04	30.4	56.7	13.0
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R4	1.1	1.99	65.1	24.3	10.6
Stephens Lake 11 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-11KM-PW-R5	1.5	6.36	1.7	76.0	22.3
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP1	2.9	0.36	54.0	18.8	27.2
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP2	2.5	2.52	74.1	17.7	8.3
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP3	1.9	0.35	90.4	5.4	4.2
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP4	3.2	2.15	65.7	27.4	6.9
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2014	impact	STL25KM-PW-REP5	2.3	0.40	90.1	4.7	5.2
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R1	2.0	0.74	16.0	25.1	58.9
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R2	1.3	0.90	78.2	15.4	6.4
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R3	1.0	0.24	87.4	9.7	2.9
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R4	2.4	1.80	72.0	19.5	8.5
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2015	impact	STL-25KM-PW-R5	1.1	0.53	88.6	7.7	3.7
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R1	3.5	7.11	42.9	35.5	21.6
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R3	1.5	0.69	95.7	2.6	1.7
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R4	3.1	3.67	65.9	25.8	8.3
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2016	impact	STL-25KM-PW-R5	1.3				
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R1	3.0	1.46	49.7	46.3	4.0
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R2	1.7	1.59	82.3	13.1	4.6
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R3	1.5	1.29	83.3	11.5	5.2
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R4	3.0	4.35	63.5	26.1	10.4
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2017	impact	STL-25KM-PW-R5	1.3	1.00	89.2	7.5	3.3
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R1	3.1	1.49	37.6	33.6	28.7
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R2	1.5	0.60	92.6	3.8	3.6
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R3	1.9	0.55	90.2	5.7	4.0
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R4	3.0	2.22	67.7	22.4	9.9
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2018	impact	STL-25KM-PW-R5	1.6	0.24	95.1	2.0	2.8
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R1	1.6	2.73	56.5	31.8	11.7
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R2	1.8	2.36	61.2	31.1	7.7
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R3	1.4	1.46	82.4	12.6	4.9
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R4	1.9	2.05	76.2	18.1	5.6

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Water Depth	Total Organic Carbon	Sand	Silt	Clay
Units					**metres**	**%**	**%**	**%**	**%**
Stephens Lake 25 km downstream of Gull Rapids	NRSH-PW	2019	impact	STL-25KM-PW-R5	1.9	2.60	67.8	22.9	9.2
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP1	7.0	1.08	17.8	66.0	16.2
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP2	6.3	1.15	17.6	79.7	2.7
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP3	9.1	1.04	19.0	50.5	30.4
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP4	6.4	1.01	19.5	55.2	25.3
Split Lake	OFFSH	2013	reference	SPLIT-OS-REP5	8.3	1.05	19.0	55.6	25.4
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP1	7.2	1.34	19.5	50.0	30.5
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP2	6.8	1.31	14.8	56.6	28.6
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP3	9.3	1.32	17.7	53.5	28.8
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP4	6.9	1.10	24.2	54.8	20.9
Split Lake	OFFSH	2014	reference	SPLIT-OS-REP5	8.9	1.33	16.4	52.2	31.4
Split Lake	OFFSH	2015	reference	SPLIT-OS-R1	6.1	1.53	11.9	77.7	10.3
Split Lake	OFFSH	2015	reference	SPLIT-OS-R2	5.9	1.31	18.8	58.7	22.5
Split Lake	OFFSH	2015	reference	SPLIT-OS-R3	6.5	1.08	22.1	59.0	18.8
Split Lake	OFFSH	2015	reference	SPLIT-OS-R4	5.7	1.24	12.9	62.4	24.7
Split Lake	OFFSH	2015	reference	SPLIT-OS-R5	5.4	1.24	15.2	71.3	13.5
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP1	6.9	2.13	18.4	54.0	27.6
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP2	6.2	2.00	14.8	56.2	29.0
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP3	9.4	1.90	7.7	53.9	38.4
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP4	6.2	2.15	11.5	57.6	30.9
Split Lake	OFFSH	2016	reference	SPLIT-OS-REP5	6.3	2.19	13.8	58.4	27.8
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP1	7.5	1.99	16.5	53.9	29.7
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP2	6.3	2.11	15.7	71.7	12.6
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP3	9.4	2.01	17.9	68.9	13.2
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP4	6.7	2.02	14.8	54.8	30.3
Split Lake	OFFSH	2017	reference	SPLIT-OS-REP5	6.4	2.21	10.2	75.1	14.7
Split Lake	OFFSH	2018	reference	SPLIT-OS-R1	6.0	1.86	25.4	70.0	4.6
Split Lake	OFFSH	2018	reference	SPLIT-OS-R2	5.6	1.95	16.1	79.2	4.7
Split Lake	OFFSH	2018	reference	SPLIT-OS-R3	8.4	1.77	10.7	80.5	8.8
Split Lake	OFFSH	2018	reference	SPLIT-OS-R4	7.5	1.80	14.6	76.6	8.9
Split Lake	OFFSH	2018	reference	SPLIT-OS-R5	4.9	1.84	14.5	68.1	17.4
Split Lake	OFFSH	2019	reference	SPLIT-OS-R1	6.4	1.60	23.4	71.2	5.4
Split Lake	OFFSH	2019	reference	SPLIT-OS-R2	5.3	1.78	20.9	74.4	4.7
Split Lake	OFFSH	2019	reference	SPLIT-OS-R3	8.6	1.64	29.2	61.7	9.0
Split Lake	OFFSH	2019	reference	SPLIT-OS-R4	7.9	1.70	23.5	72.0	4.5
Split Lake	OFFSH	2019	reference	SPLIT-OS-R5	6.1	1.78	17.4	77.3	5.4
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP1	6.3	1.16	1.1	45.3	53.7
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP2	6.0	0.75	2.1	40.2	57.6
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP3	6.0	1.59	3.5	21.5	75.0
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP4	6.2	1.16	1.7	52.3	46.1
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2013	impact	STL3KM-OS-REP5	6.2	0.93	1.9	26.7	71.4

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Water Depth	Total Organic Carbon	Sand	Silt	Clay
Units					metres	%	%	%	%
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP1	6.5	1.67	14.8	46.8	38.5
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP2	6.1	2.43	9.6	51.8	38.6
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP3	6.1	0.77	45.2	30.6	24.2
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP4	5.1	0.96	2.2	61.3	36.5
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2014	impact	STL3KM-OS-REP5	6.3	1.51	4.1	59.9	36.0
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R1	5.7	3.75	0.5	64.6	34.9
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R2	5.2	4.98	3.5	65.6	30.8
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R3	5.3	2.23	8.8	48.8	42.4
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R4	4.9	0.27	0.8	49.5	49.7
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2015	impact	STL-3KM-OS-R5	5.4	0.59	4.3	27.2	68.6
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R1	6.0	2.47	11.8	40.4	47.8
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R2	5.2	5.37	6.2	59.9	33.9
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R3	5.7	2.53	8.9	50.9	40.2
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R4	4.9		2.4	51.0	46.6
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2016	impact	STL-3KM-OS-R5	6.0	2.21	33.5	32.1	34.4
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R1	6.2	2.17	17.4	58.2	24.5
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R2	5.1	2.80	24.3	55.4	20.3
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R3	5.3	2.00	43.8	34.5	21.7
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R4	4.5	1.96	20.3	44.0	35.7
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2017	impact	STL-3KM-OS-R5	5.3	1.27	10.8	41.7	47.6
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R1	6.3	1.66	31.0	40.5	28.5
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R2	5.0	2.63	20.9	53.1	26.0
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R3	5.5	2.31	18.3	65.8	15.8
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R4	5.6	1.38	54.9	21.9	23.3
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2018	impact	STL-3KM-OS-R5	5.8	0.80	22.2	29.5	48.3
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R1	4.1	6.12	14.4	69.4	16.2
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R2	3.7	2.75	19.5	51.8	28.7
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R3	3.8	1.51	32.1	53.9	14.0
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R4	3.7	1.95	31.8	54.4	13.8
Stephens Lake 3 km downstream of Gull Rapids	OFFSH	2019	impact	STL-3KM-OS-R5	4.7	1.27	41.1	36.0	23.0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP1	6.6	1.11	0.5	73.7	25.8
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP2	7.3	1.36	0.5	75.7	23.7
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP3	7.1	1.23	0.6	75.1	24.3
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP4	7.2	1.20	0.5	69.8	29.7
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2013	impact	STL11KM-OS-REP5	6.6	1.30	0.3	68.1	31.7
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP1	6.4	1.48	0.5	67.4	32.1
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP2	6.8	5.71	0.1	59.9	40.0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP3	6.5	1.30	0.4	67.3	32.3
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP4	7.6	1.28	0.3	68.6	31.2
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2014	impact	STL11KM-OS-REP5	6.9	1.27	0.2	68.2	31.6
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R1	5.9	1.38	1.4	97.5	1.1

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Water Depth	Total Organic Carbon	Sand	Silt	Clay
Units					**metres**	**%**	**%**	**%**	**%**
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R2	6.3	1.22	0.9	89.5	9.7
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R3	6.6	1.40	1.0	98.5	0.5
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R4	6.8	1.19	0.6	84.8	14.6
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2015	impact	STL-11KM-OS-R5	6.1	1.19	0.6	77.1	22.2
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R1	6.3	3.48	1.1	67.2	31.7
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R2	6.3	3.51	1.5	70.1	28.5
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R3	7.2	3.41	**0.5**	67.4	31.8
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R4	6.8	3.25	**0.5**	66.7	32.5
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2016	impact	STL-11KM-OS-R5	7.2	3.53	**0.5**	66.7	32.8
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R1	5.8	2.98	1.5	74.9	23.6
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R2	6.3	2.91	1.8	80.8	17.4
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R3	6.8	2.94	**0.5**	78.2	21.0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R4	6.7	2.93	**0.5**	66.0	33.1
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2017	impact	STL-11KM-OS-R5	6.8	3.65	**0.5**	71.6	27.7
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R1	6.1	2.61	**0.5**	88.1	11.0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R2	6.8	2.53	**0.5**	87.6	11.6
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R3	6.7	2.41	**0.5**	72.7	26.8
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R4	6.8	2.34	**0.5**	81.3	18.2
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2018	impact	STL-11KM-OS-R5	6.8	2.43	**0.5**	80.7	19.0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R1	5.0	2.30	**1.7**	85.1	13.3
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R2	5.9	2.14	**1.6**	87.5	11.0
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R3	5.3	2.25	**0.5**	84.8	14.5
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R4	5.3	2.17	**0.5**	85.4	13.7
Stephens Lake 11 km downstream of Gull Rapids	OFFSH	2019	impact	STL-11KM-OS-R5	5.4	2.14	**0.5**	83.3	16.2
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP1	9.1	1.88	0.1	76.7	23.1
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP2	9.2	1.93	0.2	76.6	23.2
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP3	8.6	2.23	0.3	71.5	28.2
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP4	9.5	2.01	0.1	66.2	33.6
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2014	impact	STL25KM-OS-REP5	9.2	2.09	0.1	72.3	27.6
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R1	9.0	2.04	0.3	89.1	10.6
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R2	8.5	2.09	0.4	94.3	5.4
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R3	8.6	2.22	0.2	85.2	14.6
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R4	9.3	2.11	0.3	85.9	13.9
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2015	impact	STL-S-OS-R5	8.9	2.00	0.4	82.3	17.3
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R1	9.4	3.68	**0.5**	60.1	39.6
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R2	8.9	3.57	**0.5**	60.7	38.9
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R3	5.8	4.16	4.1	55.7	40.2
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R4	9.6	3.85	**0.5**	63.6	36.1
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2016	impact	STL-25KM-OS-R5	9.4	3.82	**0.5**	60.6	39.3
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R1	8.8	3.08	**0.5**	84.5	15.0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R2	9.3	3.00	**0.5**	85.0	14.7

Waterbody/Site Location	Habitat Type	Study Year	Site Type	Site ID	Water Depth	Total Organic Carbon	Sand	Silt	Clay
Units					**metres**	**%**	**%**	**%**	**%**
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R3	8.3	2.29	4.0	69.2	26.7
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R4	9.7	2.31	3.3	81.1	15.6
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2017	impact	STL-25KM-OS-R5	9.1	3.00	**0.5**	87.0	12.4
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R1	8.6	2.83	**0.5**	84.3	15.5
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R2	8.9	2.72	**0.5**	78.7	20.8
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R3	8.5	2.85	**0.5**	63.2	36.5
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R4	9.5	2.86	**0.5**	83.3	16.4
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2018	impact	STL-25KM-OS-R5	8.8	2.94	**0.5**	64.2	35.5
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R1	7.4	2.53	**0.5**	75.7	24.0
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R2	7.7	2.65	**0.5**	86.8	12.9
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R3	7.5	2.62	**0.5**	82.4	17.1
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R4	8.1	2.54	**0.5**	85.7	14.1
Stephens Lake 25 km downstream of Gull Rapids	OFFSH	2019	impact	STL-25KM-OS-R5	7.5	2.53	**0.5**	87.9	12.0

APPENDIX 3A: SUMMARY STATISTICS FOR ADDITIONAL METRICS IN NEARSHORE HABITAT FOR 2013 (PRE-CONSTRUCTION), 2014 (YEAR 1 CONSTRUCTION), 2015 (YEAR 2 CONSTRUCTION), 2016 (YEAR 3 CONSTRUCTION), 2017 (YEAR 4 CONSTRUCTION), 2018 (YEAR 5 CONSTRUCTION) AND 2019 (YEAR 6 CONSTRUCTION)

Note: results for each parameter continue over two or three pages.

Site (habitat type)	**SPLIT (nearshore)**				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Total Invertebrate Density (no. per m^2)**				
n	5	5	5	5	5
Mean	689.64	3119.23	1191.71	897.40	1119.58
Minimum	403.97	1110.92	735.80	678.00	894.51
Maximum	865.65	8281.39	1543.74	1053.00	1356.19
Median	721.38	2221.84	1226.34	909.00	1183.06
Standard deviation (n-1)	179.74	2926.29	327.51	136.26	191.84
Standard error of the mean	80.38	1308.68	146.47	60.94	85.79
COV (%)	26.06	93.81	27.48	15.18	17.13
+50% Mean	1034.45	4678.84	1787.57	1346.10	1679.36
-50% Mean	344.82	1559.61	595.86	448.70	559.79
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2015)	Yes (2014,2015)
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	Yes 0.0001 (2014)	No 0.014 (2014) 0.169 (2015)	No 0.008 (2015)	No 0.025 (2014) 0.112 (2015)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Invertebrate Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1204.99	1480.26	1136.89	1647.62	1148.43	1223.40	1082.06
Minimum	727.15	476.11	216.41	706.95	403.97	736.00	678.09
Maximum	1523.55	2351.69	3015.35	3202.91	2149.70	1443.00	1514.89
Median	1263.85	1514.89	807.94	1428.32	692.52	1327.00	1082.06
Standard deviation (n-1)	301.52	851.38	1159.93	949.34	849.79	288.77	300.56
Standard error of the mean	134.84	380.75	518.74	424.56	380.04	129.14	134.42
COV (%)	25.02	57.52	102.03	57.62	74.00	23.60	27.78
+50% Mean	1807.48	2220.39	1705.33	2471.43	1722.65	1835.10	1623.10
-50% Mean	602.49	740.13	568.44	823.81	574.22	611.70	541.03
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)	No (all)
Modified Significance Level				N/A			
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Invertebrate Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	3034.97	1751.50	1321.56	1128.23	1396.58	1584.20	3249.08
Minimum	1566.83	1428.32	1009.93	721.38	764.66	837.00	1428.32
Maximum	4241.69	2495.96	1803.44	1558.17	1861.15	2236.00	5179.48
Median	3298.13	1529.32	1284.05	995.50	1413.90	1919.00	3578.02
Standard deviation (n-1)	1081.24	445.22	320.12	385.43	411.42	636.18	1487.13
Standard error of the mean	483.55	199.11	143.16	172.37	183.99	284.51	665.07
COV (%)	35.63	25.42	24.22	34.16	29.46	40.16	45.77
+50% Mean	4552.46	2627.25	1982.34	1692.35	2094.88	2376.30	4873.61
-50% Mean	1517.49	875.75	660.78	564.12	698.29	792.10	1624.54
Benchmark Exceedance (temporal comparison)	-	No	Yes (2013)	Yes (2013)	Yes (2013)	No (all)	Yes (2014-2018)
Modified Significance Level				0.0024			
Significant Inter-annual Difference[1]	-	N/A	No 0.008 (2013)	No 0.010 (2013)	No 0.002 (2013)	N/A	No 0.185 (2014) 0.015 (2015) 0.004 (2016) 0.026(2017) 0.096 (2018)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Invertebrate Density (no. per m²)**					
n	5	5	4	5	5	5
Mean	2461.33	4175.32	302.98	1722.65	3217.00	2608.49
Minimum	1168.63	1457.18	72.14	779.09	649.00	115.42
Maximum	4429.25	8685.36	490.54	2669.09	5915.00	4703.37
Median	2669.09	3202.91	324.62	1644.74	2914.00	2928.79
Standard deviation (n-1)	1320.63	2725.34	219.44	700.26	1997.66	1947.38
Standard error of the mean	590.61	1218.81	109.72	313.17	893.38	870.89
COV (%)	53.66	65.27	72.43	40.65	62.10	74.66
+50% Mean	3692.00	6262.98	454.47	2583.97	4825.50	3912.74
-50% Mean	1230.67	2087.66	151.49	861.32	1608.50	1304.25
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2015, 2016)	Yes (2016, 2017)	Yes (2016, 2017)
Modified Significance Level	0.0030					
Significant Inter-annual Difference[1]	-	No 0.134 (2014)	Yes 0.078 (2014) 0.003 (2015)	No 0.036 (2015) 0.237 (2016)	No 0.020 (2016) 0.189 (2017)	No 0.061 (2016) 0.430 (2017)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Total Richness (Family level)**				
n	5	5	5	5	5
Mean	7.60	10.60	9.20	6.20	6.60
Minimum	6.00	8.00	7.00	5.00	5.00
Maximum	10.00	12.00	11.00	8.00	9.00
Median	7.00	11.00	9.00	6.00	6.00
Standard deviation (n-1)	1.52	1.52	1.48	1.30	1.82
Standard error of the mean	0.68	0.68	0.66	0.58	0.81
COV (%)	19.95	14.31	16.12	21.03	27.52
+25% Mean	9.50	13.25	11.50	7.75	8.25
-25% Mean	5.70	7.95	6.90	4.65	4.9500
Benchmark Exceedance (temporal comparison)	-	Yes	No (both)	Yes (2015, 2017)	Yes (2015, 2017)
Modified Significance Level			0.0050		
Significant Inter-annual Difference[1]	-	No 0.006 (2014)	N/A	Yes 0.0002 (2015) 0.006 (2017)	Yes 0.001 (2015) 0.015 (2017)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Richness (Family level)**						
n	5	5	5	5	5	5	5
Mean	9.40	7.80	5.80	8.00	5.60	5.20	7.40
Minimum	8.00	6.00	2.00	7.00	4.00	3.00	6.00
Maximum	11.00	10.00	11.00	9.00	11.00	7.00	8.00
Median	9.00	8.00	5.00	8.00	4.00	6.00	8.00
Standard deviation (n-1)	1.14	1.79	3.70	0.71	3.05	1.64	0.89
Standard error of the mean	0.51	0.80	1.66	0.32	1.36	0.73	0.40
COV (%)	12.13	22.93	63.82	8.84	54.46	31.60	12.09
+25% Mean	11.75	9.75	7.25	10.00	7.00	6.50	9.25
-25% Mean	7.05	5.85	4.35	6.00	4.20	3.90	5.5500
Benchmark Exceedance (temporal comparison)	-	No	Yes (2013, 2014)	Yes (2015)	Yes (2013, 2014, 2016)	Yes (2013, 2014, 2016)	Yes (2015, 2017, 2018)
Modified Significance Level				0.0020			
Significant Inter-annual Difference[1]	-	N/A	No 0.012 (2013) 0.147 (2014)	No 0.112 (2015)	No 0.008 (2013) 0.112 (2014) 0.084 (2016)	No 0.004 (2013) 0.063 (2014) 0.046 (2016)	No 0.243 (2015) 0.190 (2017) 0.112 (2018)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Richness (Family level)**						
n	5	5	5	5	5	5	5
Mean	9.40	7.20	7.60	8.20	9.80	9.80	10.60
Minimum	8.00	6.00	6.00	5.00	8.00	8.00	7.00
Maximum	12.00	9.00	10.00	10.00	12.00	12.00	14.00
Median	9.00	7.00	7.00	8.00	9.00	9.00	11.00
Standard deviation (n-1)	1.67	1.30	1.52	2.05	2.05	1.64	3.05
Standard error of the mean	0.75	0.58	0.68	0.92	0.92	0.73	1.36
COV (%)	17.80	18.11	19.95	24.99	20.91	16.77	28.77
+25% Mean	11.75	9.00	9.50	10.25	12.25	12.25	13.25
-25% Mean	7.05	5.40	5.70	6.15	7.35	7.35	7.95
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	Yes (2014, 2015)	Yes (2014, 2015)	Yes (2014, 2015, 2016)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	No 0.042 (2014) 0.080 (2015)	No 0.030 (2014) 0.058 (2015)	No 0.026 (2014) 0.052 (2015) 0.137 (2016)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Richness (Family level)**					
n	5	5	4	5	5	5
Mean	8.20	9.40	5.25	7.20	8.60	7.80
Minimum	5.00	7.00	3.00	5.00	6.00	3.00
Maximum	11.00	13.00	6.00	9.00	11.00	12.00
Median	8.00	8.00	6.00	7.00	9.00	7.00
Standard deviation (n-1)	2.39	2.88	1.50	1.79	2.07	3.70
Standard error of the mean	1.07	1.29	0.75	0.80	0.93	1.66
COV (%)	29.12	30.65	28.57	24.85	24.11	47.45
+25% Mean	10.25	11.75	6.56	9.00	10.75	9.75
-25% Mean	6.15	7.05	3.94	5.40	6.45	5.85
Benchmark Exceedance (temporal comparison)	-	No	Yes (2014, 2015)	Yes (2016)	Yes (2016)	Yes (2016)
Modified Significance Level	0.0030					
Significant Inter-annual Difference[1]	-	N/A	No 0.096 (2014) 0.023 (2015)	No 0.263 (2016)	No 0.061 (2016)	No 0.147

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Simpson's Diversity Index**				
n	5	5	5	5	5
Mean	0.73	0.65	0.76	0.56	0.68
Minimum	0.64	0.51	0.65	0.52	0.50
Maximum	0.81	0.77	0.83	0.64	0.78
Median	0.77	0.67	0.77	0.54	0.71
Standard deviation (n-1)	0.08	0.09	0.07	0.05	0.11
Standard error of the mean	0.04	0.04	0.03	0.02	0.05
COV (%)	10.74	14.42	9.28	8.92	15.90
+25% Mean	0.92	0.82	0.95	0.71	0.85
-25% Mean	0.55	0.49	0.57	0.42	0.51
Benchmark Exceedance (temporal comparison)	-	No	No (both)	Yes (2017)	No
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	N/A	N/A	Yes 0.002 (2017)	N/A

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Simpson's Diversity Index**						
n	5	5	5	5	5	5	5
Mean	0.69	0.65	0.31	0.64	0.49	0.50	0.73
Minimum	0.57	0.53	0.04	0.45	0.30	0.30	0.67
Maximum	0.79	0.71	0.67	0.78	0.61	0.69	0.79
Median	0.69	0.68	0.24	0.68	0.57	0.58	0.74
Standard deviation (n-1)	0.10	0.07	0.28	0.13	0.14	0.18	0.05
Standard error of the mean	0.04	0.03	0.12	0.06	0.06	0.08	0.02
COV (%)	14.40	10.95	88.93	20.09	29.40	35.34	6.58
+25% Mean	0.86	0.82	0.39	0.80	0.61	0.62	0.92
-25% Mean	0.52	0.49	0.23	0.48	0.37	0.37	0.55
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2015)	Yes (2013-2015)	Yes (2013, 2015)	Yes (2015, 2017, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.008 (2013) 0.033 (2014)	No 0.033 (2015)	No 0.042 (2013) 0.130 (2014) 0.537 (2015)	No 0.073 (2013) 0.388 (2015)	Yes 0.001(2015) 0.008 (2017) 0.016 (2018)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Simpson's Diversity Index**						
n	5	5	5	5	5	5	5
Mean	0.57	0.68	0.69	0.71	0.75	0.78	0.79
Minimum	0.48	0.62	0.64	0.60	0.64	0.71	0.74
Maximum	0.69	0.73	0.76	0.77	0.83	0.87	0.82
Median	0.56	0.68	0.67	0.76	0.76	0.75	0.81
Standard deviation (n-1)	0.09	0.04	0.05	0.08	0.07	0.07	0.03
Standard error of the mean	0.04	0.02	0.02	0.03	0.03	0.03	0.02
COV (%)	16.29	6.23	6.89	10.66	9.03	8.63	4.28
+25% Mean	0.71	0.85	0.86	0.89	0.93	0.97	0.99
-25% Mean	0.43	0.51	0.51	0.53	0.56	0.58	0.59
Benchmark Exceedance (temporal comparison)	-	No	No (both)	Yes (2013)	Yes (2013)	Yes (2013)	Yes (2013)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	N/A	N/A	Yes 0.001 (2013)	Yes 0.0001 (2013)	Yes < 0.0001 (2013)	Yes < 0.0001 (2013)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Simpson's Diversity Index**					
n	5	5	4	5	5	5
Mean	0.71	0.74	0.69	0.74	0.68	0.72
Minimum	0.60	0.70	0.65	0.67	0.54	0.63
Maximum	0.76	0.79	0.77	0.80	0.79	0.77
Median	0.73	0.74	0.68	0.74	0.71	0.74
Standard deviation (n-1)	0.07	0.04	0.06	0.05	0.11	0.05
Standard error of the mean	0.03	0.02	0.03	0.02	0.05	0.02
COV (%)	9.45	5.17	7.95	6.32	16.24	7.44
+25% Mean	0.89	0.93	0.87	0.93	0.85	0.90
-25% Mean	0.53	0.56	0.52	0.56	0.51	0.54
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)
Modified Significance Level	N/A					
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Ephemeroptera Density (no. per m²)**				
n	5	5	5	5	5
Mean	193.33	432.83	331.83	499.00	288.55
Minimum	158.70	201.99	245.27	346.00	216.41
Maximum	245.27	923.36	389.54	620.00	375.12
Median	187.56	360.69	360.69	505.00	274.12
Standard deviation (n-1)	37.62	289.09	62.06	108.25	57.71
Standard error of the mean	16.83	129.29	27.75	48.41	25.81
COV (%)	19.46	66.79	18.70	21.69	20.00
+50% Mean	289.99	649.24	497.75	748.50	432.83
-50% Mean	96.66	216.41	165.92	249.50	144.28
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2014)	Yes (2014, 2017)	No
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	No 0.030 (2014)	No 0.023 (2014)	Yes 0.0003 (2014) 0.190 (2017)	N/A

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ephemeroptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	64.06	496.31	11.54	112.53	735.80	735.80	378.00
Minimum	34.63	57.71	0.00	43.28	115.42	418.00	288.55
Maximum	103.88	923.36	43.28	173.13	1673.59	1169.00	461.68
Median	69.25	634.81	0.00	115.42	418.40	519.00	389.54
Standard deviation (n-1)	27.10	356.57	18.81	55.32	654.82	358.97	62.39
Standard error of the mean	12.12	159.46	8.41	24.74	292.85	160.54	27.90
COV (%)	42.30	71.84	162.98	49.15	88.99	48.79	16.51
+50% Mean	96.09	744.46	17.31	168.80	1103.70	1103.70	567.00
-50% Mean	32.03	248.15	5.77	56.27	367.90	367.90	189.00
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (all)	Yes (2013, 2015, 2016)	Yes (2013, 2015, 2016)	Yes (2013, 2015, 2016)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.026 (2013)	Yes 0.396 (2013) 0.002 (2014)	No 0.497 (2013) 0.123 (2014) 0.126 (2015)	Yes 0.011 (2013) 0.001 (2015) 0.062 (2016)	Yes 0.002 (2013) < 0.0001 (2015) 0.016 (2016)	No 0.042 (2013) 0.004 (2015) 0.174 (2016)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ephemeroptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1944.25	718.49	432.83	230.84	352.03	173.20	427.05
Minimum	787.74	216.41	259.70	0.00	201.99	130.00	158.70
Maximum	3003.81	1226.34	591.53	548.25	562.67	202.00	721.38
Median	2328.60	822.37	461.68	129.85	274.12	173.00	389.54
Standard deviation (n-1)	908.57	416.33	127.01	250.93	169.36	30.52	204.19
Standard error of the mean	406.33	186.19	56.80	112.22	75.74	13.65	91.32
COV (%)	46.73	57.94	29.34	108.70	48.11	17.62	47.81
+50% Mean	2916.38	1077.74	649.24	346.26	528.05	259.80	640.58
-50% Mean	972.13	359.25	216.41	115.42	176.02	86.60	213.53
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2013)	Yes (2013, 2014)	Yes (2013, 2014, 2016)	Yes (2013, 2014, 2015, 2017)	Yes (2013, 2016, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.170 (2013)	No 0.040 (2013)	Yes 0.0005 (2013) 0.034 (2014)	No 0.013 (2013) 0.266 (2014) 0.316 (2016)	Yes 0.0001 (2013) 0.012 (2014) 0.066 (2015) 0.160 (2017)	No 0.023 (2013) 0.223 (2016) 0.105 (2018)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ephemeroptera Density (no. per m²)**					
n	5	5	4	5	5	5
Mean	346.26	1197.48	57.71	496.31	453.20	340.49
Minimum	201.99	432.83	0.00	230.84	159.00	0.00
Maximum	649.24	1587.03	216.41	605.96	750.00	577.10
Median	245.27	1486.03	7.21	577.10	491.00	389.54
Standard deviation (n-1)	186.72	497.49	106.02	159.88	222.09	235.44
Standard error of the mean	83.51	222.48	53.01	71.50	99.32	105.29
COV (%)	53.93	41.54	183.71	32.21	49.00	69.15
+50% Mean	519.39	1796.23	86.57	744.46	679.80	510.73
-50% Mean	173.13	598.74	28.86	248.15	226.60	170.24
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2015, 2016)	Yes (2015, 2016)	Yes (2015, 2016)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	N/A	No 0.025 (2014)	Yes 0.119 (2014) 0.0002 (2015)	No 0.206 (2015) 0.013 (2016)	No 0.081 (2015) 0.042 (2016)	No 0.017 (2015) 0.156 (2016)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Percent EPT (EPT Index)**				
n	5	5	5	5	5
Mean	31.11	18.41	34.47	56.40	26.14
Minimum	22.00	10.56	23.53	38.00	23.17
Maximum	50.00	27.27	52.94	68.00	30.65
Median	28.33	20.13	33.00	62.00	25.00
Standard deviation (n-1)	10.88	7.22	12.08	12.92	3.01
Standard error of the mean	4.87	3.23	5.40	5.78	1.35
COV (%)	34.98	39.21	35.03	22.90	11.53
+50% Mean	46.67	27.62	51.70	84.60	39.22
-50% Mean	15.56	9.21	17.23	28.20	13.07
Benchmark Exceedance (temporal comparison)	-	No	Yes (2015)	Yes (2014, 2015, 2017)	Yes (2018)
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	N/A	No 0.028 (2015)	Yes 0.053 (2014) 0.0002 (2015) 0.122 (2017)	No 0.014 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent EPT (EPT Index)**						
n	5	5	5	5	5	5	5
Mean	7.43	31.11	0.80	9.73	59.33	60.00	36.96
Minimum	3.80	12.12	0.00	1.35	28.57	36.00	32.38
Maximum	13.10	42.86	3.06	16.25	85.71	83.00	44.68
Median	6.82	32.91	0.00	10.74	58.70	57.00	36.23
Standard deviation (n-1)	3.75	12.14	1.33	5.54	23.28	21.92	4.72
Standard error of the mean	1.68	5.43	0.59	2.48	10.41	9.80	2.11
COV (%)	50.42	39.03	165.29	56.92	39.24	36.53	12.76
+50% Mean	11.15	46.66	1.21	14.60	89.00	90.00	55.44
-50% Mean	3.72	15.55	0.40	4.87	29.67	30.00	18.48
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2014, 2015)	Yes (all)	Yes (2013, 2014, 2015, 2016)	Yes (2013, 2015, 2016)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.108 (2013)	No 0.294 (2013) 0.008 (2014)	No 0.165 (2014) 0.206 (2015)	Yes 0.003 (2013) 0.184 (2014) < 0.0001 (2015) 0.007 (2016)	Yes 0.003 (2013) 0.184 (2014) < 0.0001 (2015) 0.007 (2016)	Yes 0.045 (2013) 0.002 (2015) 0.073 (2016)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent EPT (EPT Index)**						
n	5	5	5	5	5	5	5
Mean	62.14	39.77	35.70	19.60	28.71	16.00	15.45
Minimum	51.38	15.69	14.40	4.00	15.38	9.00	7.43
Maximum	71.63	53.77	47.30	45.71	41.84	25.00	28.28
Median	63.66	49.13	45.71	14.49	31.01	12.00	14.92
Standard deviation (n-1)	9.55	16.92	15.09	17.64	11.09	7.84	8.08
Standard error of the mean	4.27	7.56	6.75	7.89	4.96	3.51	3.61
COV (%)	15.37	42.53	42.26	90.01	38.61	49.01	52.30
+50% Mean	93.21	59.65	53.54	29.40	43.06	24.00	23.18
-50% Mean	31.07	19.88	17.85	9.80	14.35	8.00	7.73
Benchmark Exceedance (temporal comparison)	-	No	No (both)	Yes (2013, 2014)	Yes (2013)	Yes (2013, 2014, 2015)	Yes (2013, 2014, 2015)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	N/A	Yes 0.001 (2013) 0.048 (2014)	No 0.028 (2013)	Yes 0.0005 (2013) 0.026 (2014) 0.099 (2015)	Yes 0.001 (2013) 0.028 (2014) 0.105 (2015)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent EPT (EPT Index)**					
n	5	5	4	5	5	5
Mean	19.58	32.28	11.76	31.06	18.60	11.85
Minimum	5.54	17.61	0.00	22.70	9.00	0.00
Maximum	49.45	47.27	44.12	39.47	26.00	18.75
Median	15.34	29.73	1.47	31.37	24.00	13.94
Standard deviation (n-1)	17.32	10.91	21.61	5.95	8.35	7.04
Standard error of the mean	7.74	4.88	10.81	2.66	3.74	3.15
COV (%)	88.45	33.80	183.71	19.15	44.92	59.45
+50% Mean	29.37	48.42	17.65	46.59	27.90	17.77
-50% Mean	9.79	16.14	5.88	15.53	9.30	5.92
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2015)	Yes (2014, 2016)	Yes (2016)	Yes (2015, 2017)
Modified Significance Level	0.0030					
Significant Inter-annual Difference[1]	-	No 0.127 (2014)	No 0.024 (2015)	No 0.165 (2014) 0.033 (2016)	No 0.430 (2016)	No 0.018 (2015) 0.025 (2017)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Pisidiidae Density (no. per m²)**				
n	5	5	5	5	5
Mean	23.08	256.81	190.44	40.40	75.02
Minimum	0.00	0.00	0.00	0.00	43.28
Maximum	57.71	1024.35	403.97	101.00	115.42
Median	14.43	72.14	86.57	29.00	72.14
Standard deviation (n-1)	21.88	432.27	197.40	37.32	27.75
Standard error of the mean	9.79	193.32	88.28	16.69	12.41
COV (%)	94.79	168.32	103.65	92.38	36.99
+50% Mean	34.63	385.21	285.66	60.60	112.53
-50% Mean	11.54	128.40	95.22	20.20	37.51
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2014)	Yes (2014, 2015, 2017)	Yes (all)
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	No 0.074 (2014)	No 0.043 (2014)	No 0.502 (2014) 0.307 (2015) 0.248 (2017)	No 0.043 (2014) 0.813 (2015) 1.000 (2017) 0.161 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Pisidiidae Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	27.70	8.66	8.66	25.97	2.89	5.60	63.48
Minimum	8.66	0.00	0.00	0.00	0.00	0.00	28.86
Maximum	51.94	28.86	28.86	57.71	14.43	14.00	129.85
Median	25.97	0.00	0.00	28.86	0.00	0.00	43.28
Standard deviation (n-1)	16.65	12.90	12.90	25.81	6.45	7.67	44.00
Standard error of the mean	7.45	5.77	5.77	11.54	2.89	3.43	19.68
COV (%)	60.11	149.07	149.07	99.38	223.61	136.93	69.31
+50% Mean	41.55	12.98	12.98	38.95	4.33	8.40	95.22
-50% Mean	13.85	4.33	4.33	12.98	1.44	2.80	31.74
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2013)	Yes (2014, 2015)	Yes (all)	Yes (2013, 2016, 2017)	Yes (all)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.101 (2013)	No 0.101 (2013)	No 0.260 (2014) 0.260 (2015)	No 0.024 (2013) 0.541 (2014) 0.541 (2015) 0.082 (2016)	No 0.043 (2013) 0.131 (2016) 0.822 (2017)	Yes 0.385 (2013) 0.012 (2014) 0.012 (2015) 0.167 (2016) 0.002 (2017) 0.004 (2018)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Pisidiidae Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	119.46	129.85	121.19	150.05	201.99	455.80	487.65
Minimum	25.97	28.86	28.86	43.28	0.00	14.00	129.85
Maximum	242.38	173.13	274.12	476.11	447.25	981.00	952.22
Median	138.50	144.28	72.14	72.14	230.84	231.00	548.25
Standard deviation (n-1)	90.46	57.71	105.82	183.52	167.94	472.67	317.47
Standard error of the mean	40.45	25.81	47.33	82.07	75.11	211.38	141.98
COV (%)	75.72	44.44	87.32	122.31	83.15	103.70	65.10
+50% Mean	179.19	194.77	181.79	225.07	302.98	683.70	731.48
-50% Mean	59.73	64.92	60.60	75.02	100.99	227.90	243.83
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	Yes (2013-2015)	Yes (all)	Yes (2013-2017)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	No 0.547 (2013) 0.781 (2014) 0.6.00 (2015)	No 0.229 (2013) 0.379 (2014) 0.260 (2015) 0.223 (2016) 0.547 (2017)	No 0.033 (2013) 0.071 (2014) 0.040 (2015) 0.032 (2016) 0.126 (2017)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Pisidiidae Density (no. per m²)**					
n	5	5	4	5	5	5
Mean	409.74	458.80	39.68	496.31	418.20	346.26
Minimum	187.56	72.14	0.00	302.98	216.00	28.86
Maximum	1038.78	894.51	100.99	779.09	678.00	880.08
Median	274.12	360.69	28.86	519.39	375.00	274.12
Standard deviation (n-1)	355.98	311.35	44.66	188.28	192.28	339.58
Standard error of the mean	159.20	139.24	22.33	84.20	85.99	151.87
COV (%)	86.88	67.86	112.57	37.94	45.98	98.07
+50% Mean	614.61	688.19	59.51	744.46	627.30	519.39
-50% Mean	204.87	229.40	19.84	248.15	209.10	173.13
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2016)	Yes (2016)	Yes (2016)
Modified Significance Level	0.0030					
Significant Inter-annual Difference[1]	N/A	N/A	No 0.051 (2014) 0.029 (2015)	No 0.018 (2016)	No 0.046 (2016)	No 0.102 (2016)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Water Depth (m)**				
n	5	5	5	5	5
Mean	2.60	1.07	1.92	1.28	1.74
Minimum	2.40	0.93	1.40	1.20	1.70
Maximum	2.90	1.17	2.40	1.30	1.80
Median	2.60	1.10	1.80	1.30	1.70
Standard deviation (n-1)	0.19	0.09	0.42	0.04	0.05
Standard error of the mean	0.08	0.04	0.19	0.02	0.02
COV (%)	7.20	8.27	21.91	3.49	3.15
+50% Mean	3.90	1.60	2.88	1.92	2.61
-50% Mean	1.30	0.53	0.96	0.64	0.87
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2015)	Yes (2014)	Yes (2015)
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	Yes < 0.0001 (2014)	Yes 0.004 (2015)	Yes 0.001 (2014)	No 0.010 (2015)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Water Depth (m)**						
n	5	5	5	5	5	5	5
Mean	2.79	2.81	2.30	2.50	2.18	2.60	1.22
Minimum	2.50	2.23	1.37	1.80	1.40	1.70	1.20
Maximum	3.08	3.07	2.80	2.80	2.80	3.10	1.30
Median	2.82	3.03	2.40	2.60	2.30	2.80	1.20
Standard deviation (n-1)	0.25	0.36	0.58	0.40	0.51	0.53	0.04
Standard error of the mean	0.11	0.16	0.26	0.18	0.23	0.24	0.02
COV (%)	9.11	12.69	25.06	16.00	23.25	20.53	3.67
+50% Mean	4.18	4.22	3.45	3.75	3.27	3.90	1.83
-50% Mean	1.39	1.41	1.15	1.25	1.09	1.30	0.61
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)	Yes (2013, 2014, 2016, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A	Yes 0.001 (2013) 0.0004 (2014) 0.014 (2016) 0.002 (2018)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Water Depth (m)**						
n	5	5	5	5	5	5	5
Mean	2.41	2.18	2.10	1.72	2.12	1.96	1.48
Minimum	2.14	1.47	1.13	1.20	1.20	1.20	1.10
Maximum	3.00	3.43	3.50	2.70	4.20	3.30	2.30
Median	2.18	2.00	1.83	1.60	1.90	1.80	1.30
Standard deviation (n-1)	0.37	0.74	0.87	0.62	1.23	0.80	0.48
Standard error of the mean	0.17	0.33	0.39	0.28	0.55	0.36	0.22
COV (%)	15.36	34.12	41.56	36.17	58.10	40.59	32.54
+50% Mean	3.62	3.27	3.15	2.58	3.18	2.94	2.22
-50% Mean	1.21	1.09	1.05	0.86	1.06	0.98	0.74
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)	No (all)
Modified Significance Level	N/A						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Water Depth (m)**					
n	5	5	4	5	5	5
Mean	2.55	1.56	2.35	2.10	2.22	1.72
Minimum	1.90	1.03	1.30	1.30	1.50	1.40
Maximum	3.20	2.40	3.50	3.00	3.10	1.90
Median	2.50	1.27	2.30	1.70	1.90	1.80
Standard deviation (n-1)	0.51	0.62	1.11	0.83	0.77	0.22
Standard error of the mean	0.23	0.28	0.56	0.37	0.35	0.10
COV (%)	19.91	39.73	47.32	39.70	34.80	12.60
+50% Mean	3.82	2.34	3.53	3.15	3.33	2.58
-50% Mean	1.27	0.78	1.18	1.05	1.11	0.86
Benchmark Exceedance (temporal comparison)	-	No	Yes (2015)	No (all)	No (all)	No (all)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	N/A	No 0.150 (2015)	N/A	N/A	N/A

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Oligochaeta Density (no. per m²)**				
n	5	5	5	5	5
Mean	40.40	311.63	138.50	0.00	2.89
Minimum	0.00	28.86	0.00	0.00	0.00
Maximum	144.28	1038.78	375.12	0.00	14.43
Median	14.43	158.70	115.42	0.00	0.00
Standard deviation (n-1)	58.96	419.71	145.92	0.00	6.45
Standard error of the mean	26.37	187.70	65.26	0.00	2.89
COV (%)	145.95	134.68	105.36	-	223.61
+50% Mean	60.60	467.45	207.76	0.00	4.33
-50% Mean	20.20	155.82	69.25	0.00	1.44
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (all)	Yes (all)
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	No 0.126 (2014)	No 0.381 (2014) 0.515 (2015)	Yes 0.084 (2014) 0.001 (2015) 0.009 (2017)	Yes 0.144 (2014) 0.003 (2015) 0.019 (2017) 0.787 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Oligochaeta Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	79.64	106.76	31.74	72.14	20.20	8.40	95.22
Minimum	17.31	0.00	0.00	0.00	0.00	0.00	14.43
Maximum	164.47	230.84	100.99	158.70	43.28	14.00	173.13
Median	34.63	100.99	14.43	86.57	14.43	14.00	115.42
Standard deviation (n-1)	73.81	87.52	40.03	61.21	21.88	7.67	70.38
Standard error of the mean	33.01	39.14	17.90	27.37	9.79	3.43	31.48
COV (%)	92.68	81.98	126.13	84.85	108.33	91.29	73.92
+50% Mean	119.46	160.15	47.61	108.21	30.30	12.60	142.83
-50% Mean	39.82	53.38	15.87	36.07	10.10	4.20	47.61
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2015)	Yes (2013, 2014, 2016)	Yes (all)	Yes (2015, 2017, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.215 (2013) 0.188 (2014)	No 0.377 (2015)	No 0.114 (2013) 0.097 (2014) 0.221 (2016)	No 0.013 (2013) 0.011 (2014) 0.215 (2015) 0.034 (2016) 0.369 (2017)	No 0.163 (2015) 0.082 (2017) 0.008 (2018)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Oligochaeta Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	145.43	75.02	40.40	126.96	46.17	34.60	167.36
Minimum	77.91	0.00	0.00	14.43	0.00	0.00	43.28
Maximum	311.63	144.28	115.42	259.70	158.70	101.00	360.69
Median	129.85	57.71	28.86	129.85	14.43	29.00	72.14
Standard deviation (n-1)	96.47	56.25	44.93	88.00	64.84	39.03	157.91
Standard error of the mean	43.14	25.16	20.10	39.35	29.00	17.45	70.62
COV (%)	66.34	74.98	111.23	69.31	140.45	112.80	94.36
+50% Mean	218.14	112.53	60.60	190.44	69.25	51.90	251.04
-50% Mean	72.71	37.51	20.20	63.48	23.08	17.30	83.68
Benchmark Exceedance (temporal comparison)	-	No	Yes (2013)	Yes (2014, 2015)	Yes (2013, 2016)	Yes (2013, 2014, 2016)	Yes (2014, 2015, 2017, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.024 (2013)	No 0.487 (2014) 0.081 (2015)	No 0.033 (2013) 0.105 (2016)	No 0.017 (2013) 0.234 (2014) 0.059 (2016)	No 0.404 (2014) 0.059 (2015) 0.078 (2017) 0.043 (2018)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Oligochaeta Density (no. per m²)**					
n	5	5	4	5	5	5
Mean	277.01	248.15	14.43	40.40	245.20	83.68
Minimum	14.43	43.28	0.00	0.00	0.00	0.00
Maximum	476.11	375.12	43.28	86.57	606.00	158.70
Median	245.27	346.26	7.21	28.86	245.00	72.14
Standard deviation (n-1)	194.74	151.11	20.40	43.76	236.45	62.39
Standard error of the mean	87.09	67.58	10.20	19.57	105.74	27.90
COV (%)	70.30	60.89	141.42	108.33	96.43	74.56
+50% Mean	415.51	372.23	21.64	60.60	367.80	125.52
-50% Mean	138.50	124.08	7.21	20.20	122.60	41.84
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (all)	Yes (2016, 2017)	Yes (all)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	N/A	No 0.010 (2014) 0.012 (2015)	No 0.032 (2014) 0.037 (2015) 0.579 (2016)	No 0.040 (2016) 0.113 (2017)	No 0.151 (2014) 0.167 (2015) 0.221 (2016) 0.478 (2017) 0.380 (2018)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Amphipoda Density (no. per m²)**				
n	5	5	5	5	5
Mean	23.08	20.20	8.66	0.00	0.00
Minimum	0.00	0.00	0.00	0.00	0.00
Maximum	115.42	86.57	28.86	0.00	0.00
Median	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	51.62	37.62	12.90	0.00	0.00
Standard error of the mean	23.08	16.83	5.77	0.00	0.00
COV (%)	223.61	186.26	149.07	-	-
+50% Mean	34.63	30.30	12.98	0.00	0.00
-50% Mean	11.54	10.10	4.33	0.00	0.00
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (all)	Yes (2014, 2015, 2017)
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	N/A	No 0.580 (2014) 0.951 (2015)	No 0.373 (2014) 0.132 (2015) 0.148 (2017)	No 0.373 (2014) 0.132 (2015) 0.148 (2017) 1.000 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Amphipoda Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1.73	2.89	2.89	5.77	5.77	0.00	14.43
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	8.66	14.43	14.43	14.43	28.86	0.00	72.14
Median	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	3.87	6.45	6.45	7.90	12.90	0.00	32.26
Standard error of the mean	1.73	2.89	2.89	3.53	5.77	0.00	14.43
COV (%)	223.61	223.61	223.61	136.93	223.61	0.00	223.61
+50% Mean	2.60	4.33	4.33	8.66	8.66	0.00	21.64
-50% Mean	0.87	1.44	1.44	2.89	2.89	0.00	7.21
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2013)	Yes (all)	Yes (2013-2015)	Yes (all)	Yes (all)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.912 (2013)	No 0.912(2013)	No 0.388 (2013) 0.452 (2014) 0.452 (2015)	No 0.825 (2013) 0.912 (2014) 0.912 (2015)	No 0.521 (2013) 0.452 (2014) 0.452 (2015) 0.133 (2016) 0.388 (2017)	No 0.791 (2013) 0.877 (2014) 0.877 (2015) 0.550 (2016) 0.965 (2017) 0.365 (2018)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Amphipoda Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1.73	5.77	17.31	11.54	63.48	17.40	115.42
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	8.66	28.86	86.57	28.86	259.70	87.00	447.25
Median	0.00	0.00	0.00	0.00	14.43	0.00	28.86
Standard deviation (n-1)	3.87	12.90	38.71	15.80	111.10	38.91	188.39
Standard error of the mean	1.73	5.77	17.31	7.07	49.69	17.40	84.25
COV (%)	223.61	223.61	223.61	136.93	175.01	223.61	163.22
+50% Mean	2.6	8.66	25.97	17.31	95.22	26.10	173.13
-50% Mean	0.87	2.89	8.66	5.77	31.74	8.70	57.71
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2013, 2014)	Yes (all)	Yes (2013, 2014, 2016, 2017)	Yes (all)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.859 (2013)	No 0.776 (2013) 0.915 (2014)	No 0.444 (2013) 0.557 (2014)	No 0.126 (2013) 0.176 (2014) 0.213 (2015) 0.444 (2016)	No 0.722 (2013) 0.859 (2014) 0.682 (2016) 0.240 (2017)	No 0.034 (2013) 0.052 (2014) 0.067 (2015) 0.176 (2016) 0.557 (2017) 0.078 (2018)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Amphipoda Density (no. per m²)**					
n	5	5	4	5	5	5
Mean	11.54	8.66	14.43	0.00	2.80	0.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	43.28	28.86	28.86	0.00	14.00	0.00
Median	0.00	0.00	14.43	0.00	0.00	0.00
Standard deviation (n-1)	18.81	12.90	11.78	0.00	6.26	0.00
Standard error of the mean	8.41	5.77	5.89	0.00	2.80	0.00
COV (%)	162.98	149.07	81.65	0.00	223.61	-
+50% Mean	17.31	12.98	21.64	0.00	4.20	0.00
-50% Mean	5.77	4.33	7.21	0.00	1.40	0.00
Benchmark Exceedance (temporal comparison)	-	No	Yes (2015)	Yes (all)	Yes (all)	Yes (2014, 2015, 2016, 2018)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	N/A	No 0.278 (2015)	No 0.137 (2014) 0.156 (2015) 0.015 (2016)	No 0.333 (2014) 0.369 (2015) 0.053 (2016) 0.603 (2017)	No 0.137 (2014) 0.156 (2015) 0.015 (2016) 0.603 (2018)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Gastropoda Density (no. per m²)**				
n	5	5	5	5	5
Mean	89.45	173.13	69.25	31.60	158.70
Minimum	14.43	28.86	0.00	14.00	43.28
Maximum	201.99	389.54	129.85	58.00	245.27
Median	57.71	115.42	72.14	29.00	158.70
Standard deviation (n-1)	80.59	159.03	47.19	19.06	73.57
Standard error of the mean	36.04	71.12	21.11	8.52	32.90
COV (%)	90.09	91.86	68.15	60.32	46.35
+50% Mean	134.18	259.70	103.88	47.40	238.05
-50% Mean	44.73	86.57	34.63	15.80	79.35
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2015)	Yes (2014, 2015, 2017)	Yes (2014, 2017, 2018)
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	No 0.439 (2014)	No 0.355 (2015)	No 0.220 (2014) 0.046 (2015) 0.282 (2017)	No 0.176 (2014) 0.132 (2017) 0.010 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Gastropoda Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	562.67	167.36	69.25	300.09	23.08	69.20	69.25
Minimum	216.41	43.28	0.00	86.57	0.00	0.00	14.43
Maximum	882.96	288.55	245.27	851.22	100.99	303.00	129.85
Median	510.73	187.56	14.43	144.28	0.00	14.00	43.28
Standard deviation (n-1)	303.16	101.30	102.22	321.54	44.00	131.25	50.39
Standard error of the mean	135.58	45.30	45.71	143.80	19.68	58.70	22.54
COV (%)	53.88	60.53	147.61	107.15	190.60	189.66	72.77
+50% Mean	844.01	251.04	103.88	450.14	34.63	103.80	103.88
-50% Mean	281.34	83.68	34.63	150.05	11.54	34.60	34.63
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2014, 2015)	Yes (all)	Yes (2013, 2014, 2016, 2017)	Yes (2013, 2014, 2016, 2017)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.141 (2013)	No 0.005 (2013) 0.183 (2014)	No 0.665 (2014) 0.078 (2015)	Yes 0.0003 (2013) 0.030 (2014) 0.403 (2015) 0.009 (2016)	Yes 0.002 (2013) 0.092 (2014) 0.034 (2016) 0.631 (2017)	No 0.016 (2013) 0.345 (2014) 0.168 (2016) 0.221 (2017)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Gastropoda Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	493.42	455.91	167.36	265.47	225.07	476.00	943.56
Minimum	285.66	43.28	86.57	28.86	14.43	173.00	144.28
Maximum	649.24	807.94	274.12	663.67	476.11	1197.00	1399.47
Median	476.11	432.83	144.28	187.56	216.41	332.00	1082.06
Standard deviation (n-1)	154.49	283.57	76.75	255.78	185.77	410.04	528.39
Standard error of the mean	69.09	126.81	34.32	114.39	83.08	183.37	236.30
COV (%)	31.31	62.20	45.86	96.35	82.54	86.14	56.00
+50% Mean	740.13	683.86	251.04	398.20	337.60	714.00	1415.34
-50% Mean	246.71	227.95	83.68	132.73	112.53	238.00	471.78
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2015)	Yes (2013, 2014)	Yes (2015, 2016, 2017)	Yes (all)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.030 (2013) 0.073 (2014)	No 0.517 (2015)	No 0.079 (2013) 0.170 (2014)	No 0.115 (2015) 0.354 (2016) 0.247 (2017)	No 0.468(2013) 0.266 (2014) 0.004 (2015) 0.024 (2016) 0.013 (2017) 0.184 (2018)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Gastropoda Density (no. per m²)**					
n	5	5	4	5	5	5
Mean	1128.23	1335.99	43.28	481.88	1743.00	1272.51
Minimum	158.70	259.70	0.00	173.13	130.00	57.71
Maximum	2539.24	3347.18	100.99	1240.77	3708.00	2192.98
Median	1038.78	1067.64	36.07	403.97	981.00	1558.17
Standard deviation (n-1)	883.35	1239.66	51.35	440.64	1548.90	960.08
Standard error of the mean	395.05	554.39	25.67	197.06	692.69	429.36
COV (%)	78.29	92.79	118.63	91.44	88.86	75.45
+50% Mean	1692.35	2003.98	64.92	722.82	2614.50	1908.76
-50% Mean	564.12	667.99	21.64	240.94	871.50	636.25
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (all)	Yes (2014, 2016, 2017)	Yes (2016, 2017)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	N/A	No 0.013 (2014) 0.006 (2015)	No 0.353 (2014) 0.235 (2015) 0.107 (2016)	No 0.738 (2014) 0.005 (2016) 0.207 (2017)	No 0.011 (2016) 0.316 (2017)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Chironomidae Density (no. per m²)**				
n	5	5	5	5	5
Mean	239.50	1682.25	340.49	251.20	530.93
Minimum	144.28	360.69	216.41	0.00	274.12
Maximum	389.54	4385.96	476.11	462.00	880.08
Median	230.84	1240.77	317.41	260.00	562.67
Standard deviation (n-1)	99.23	1580.94	111.10	177.33	234.51
Standard error of the mean	44.37	707.02	49.69	79.31	104.88
COV (%)	41.43	93.98	32.63	70.59	44.17
+50% Mean	359.25	2523.37	510.73	376.80	796.40
-50% Mean	119.75	841.12	170.24	125.60	265.47
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2015)	Yes (2015)	Yes (all)
Modified Significance Level			0.0050		
Significant Inter-annual Difference[1]	-	Yes 0.003 (2014)	No 0.039 (2015)	No 0.009 (2015)	No 0.043 (2014) 0.345 (2015) 0.264 (2017) 0.094 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Chironomidae Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	316.83	643.47	986.84	937.79	305.86	329.00	369.34
Minimum	190.44	245.27	115.42	346.26	57.71	115.00	158.70
Maximum	398.20	1183.06	2885.50	1962.14	620.38	592.00	649.24
Median	389.54	490.54	793.51	894.51	302.98	202.00	302.98
Standard deviation (n-1)	107.70	368.62	1122.69	642.63	205.66	223.01	207.98
Standard error of the mean	48.17	164.85	502.08	287.39	91.97	99.73	93.01
COV (%)	33.99	57.29	113.77	68.53	67.24	67.78	56.31
+50% Mean	475.24	965.20	1480.26	1406.68	458.80	493.50	554.02
-50% Mean	158.41	321.73	493.42	468.89	152.93	164.50	184.67
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2013)	Yes (2014-2016)	Yes (2015, 2016)	Yes (2015, 2016)
Modified Significance Level				0.0024			
Significant Inter-annual Difference[1]	-	No 0.147 (2013)	No 0.323 (2013) 0.643 (2014)	No 0.056 (2013)	No 0.119 (2014) 0.273 (2015) 0.043 (2016)	No 0.253 (2015) 0.039 (2016)	No 0.450 (2015) 0.093 (2016)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Chironomidae Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	282.20	334.72	484.76	265.47	435.71	323.20	937.79
Minimum	147.16	57.71	86.57	14.43	72.14	101.00	562.67
Maximum	718.49	605.96	1038.78	490.54	937.79	577.00	1875.58
Median	173.13	216.41	432.83	288.55	346.26	274.00	663.67
Standard deviation (n-1)	245.96	254.72	349.49	205.71	325.40	209.89	549.38
Standard error of the mean	110.00	113.91	156.30	92.00	145.52	93.87	245.69
COV (%)	87.16	76.10	72.10	77.49	74.68	64.94	58.58
+50% Mean	423.30	502.08	727.15	398.20	653.57	484.80	1406.68
-50% Mean	141.10	167.36	242.38	132.73	217.86	161.60	468.89
Benchmark Exceedance (temporal comparison)	-	No	Yes (2013)	No (all)	Yes (2013, 2016)	No (all)	Yes (all)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.371 (2013)	N/A	No 0.478 (2013) 0.354 (2016)	N/A	No 0.011 (2013) 0.028 (2014) 0.099 (2015) 0.006 (2016) 0.066 (2017) 0.021 (2018)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Chironomidae Density (no. per m²)**					
n	5	5	4	5	5	5
Mean	239.50	854.11	129.85	170.24	297.40	493.42
Minimum	0.00	72.14	28.86	14.43	58.00	28.86
Maximum	504.96	2394.97	259.70	274.12	563.00	865.65
Median	100.99	533.82	115.42	173.13	202.00	548.25
Standard deviation (n-1)	239.38	900.62	106.67	105.73	223.16	338.42
Standard error of the mean	107.06	402.77	53.34	47.28	99.80	151.34
COV (%)	99.95	105.45	82.15	62.10	75.04	68.59
+50% Mean	359.25	1281.16	194.77	255.37	446.10	740.13
-50% Mean	119.75	427.05	64.92	85.12	148.70	246.71
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2015)	Yes (2015)	Yes (2015, 2016, 2017)	Yes (2014, 2016, 2017, 2018)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	No 0.087 (2014)	No 0.040 (2015)	No 0.075 (2015)	No 0.316 (2015) 0.266 (2016) 0.435 (2017)	No 0.137 (2014) 0.065 (2016) 0.119 (2017) 0.435 (2018)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Plecoptera Density (no. per m²)**				
n	5	5	5	5	5
Mean	0.00	0.00	0.00	0.00	0.00
Minimum	0.00	0.00	0.00	0.00	0.00
Maximum	0.00	0.00	0.00	0.00	0.00
Median	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	0.00	0.00	0.00	0.00	0.00
Standard error of the mean	0.00	0.00	0.00	0.00	0.00
COV (%)	-	-	-	-	-
+50% Mean	0.00	0.00	0.00	0.00	0.00
-50% Mean	0.00	0.00	0.00	0.00	0.00
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)
Modified Significance Level	N/A				
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Plecoptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard error of the mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	-	-	-	-	-	-	-
+50% Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-50% Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)	No (all)
Modified Significance Level	N/A						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Plecoptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard error of the mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	-	-	-	-	-	-	-
+50% Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-50% Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benchmark Exceedance (temporal comparison)	-	N/A	No (both)	No (all)	No (all)	No (all)	No (all)
Modified Significance Level	N/A						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Plecoptera Density (no. per m²)**					
n	5	5	4	5	5	5
Mean	0.00	0.00	0.00	2.89	0.00	0.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	0.00	0.00	0.00	14.43	0.00	0.00
Median	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	0.00	0.00	0.00	6.45	0.00	0.00
Standard error of the mean	0.00	0.00	0.00	2.89	0.00	0.00
COV (%)	-	-	-	223.61	-	-
+50% Mean	0.00	0.00	0.00	4.33	0.00	0.00
-50% Mean	0.00	0.00	0.00	1.44	0.00	0.00
Benchmark Exceedance (temporal comparison)	-	No	No (both)	Yes (all)	Yes (2017)	Yes (2017)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	N/A	N/A	No 0.089 (2014) 0.089 (2015) 0.108 (2016)	No 0.089 (2017)	No 0.089 (2017)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Trichoptera Density (no. per m²)**				
n	5	5	5	5	5
Mean	8.66	31.74	51.94	0.00	2.89
Minimum	0.00	14.43	14.43	0.00	0.00
Maximum	14.43	57.71	100.99	0.00	14.43
Median	14.43	28.86	43.28	0.00	0.00
Standard deviation (n-1)	7.90	18.81	40.29	0.00	6.45
Standard error of the mean	3.53	8.41	18.02	0.00	2.89
COV (%)	91.29	59.27	77.58	-	223.61
+50% Mean	12.98	47.61	77.91	0.00	4.33
-50% Mean	4.33	15.87	25.97	0.00	1.44
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2014, 2015, 2017)	Yes (all)
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	No 0.097 (2014)	No 0.053 (2014) 0.785 (2015)	Yes 0.173 (2014) 0.003 (2015) 0.001 (2017)	Yes 0.275 (2014) 0.006 (2015) 0.003 (2017) 0.785 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Trichoptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	19.04	25.97	2.89	11.54	5.77	2.80	11.54
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	43.28	86.57	14.43	28.86	14.43	14.00	28.86
Median	17.31	14.43	0.00	14.43	0.00	0.00	14.43
Standard deviation (n-1)	16.65	34.45	6.45	12.07	7.90	6.26	12.07
Standard error of the mean	7.45	15.40	2.89	5.40	3.53	2.80	5.40
COV (%)	87.43	132.64	223.61	104.58	136.93	223.61	104.58
+50% Mean	28.57	38.95	4.33	17.31	8.66	4.20	17.31
-50% Mean	9.52	12.98	1.44	5.77	2.89	1.40	5.77
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2014, 2015)	Yes (all)	Yes (2013, 2014, 2016, 2017)	Yes (2014, 2015, 2017, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.046 (2013) 0.051 (2014)	No 0.541 (2014) 0.181 (2015)	No 0.146 (2013) 0.161 (2014) 0.586 (2015) 0.428 (2016)	No 0.027 (2013) 0.031 (2014) 0.121 (2016) 0.448 (2017)	No 0.330 (2014) 0.330 (2015) 0.668 (2017) 0.235 (2018)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Trichoptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	15.58	8.66	2.89	40.40	40.40	43.20	43.28
Minimum	8.66	0.00	0.00	0.00	0.00	29.00	0.00
Maximum	34.63	28.86	14.43	144.28	100.99	72.00	144.28
Median	8.66	0.00	0.00	14.43	14.43	43.00	28.86
Standard deviation (n-1)	11.29	12.90	6.45	58.96	49.35	17.56	59.49
Standard error of the mean	5.05	5.77	2.89	26.37	22.07	7.85	26.60
COV (%)	72.44	149.07	223.61	145.95	122.16	40.64	137.44
+50% Mean	23.37	12.98	4.33	60.60	60.60	64.80	64.92
-50% Mean	7.79	4.33	1.44	20.20	20.20	21.60	21.64
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (all)	Yes (2013-2015)	Yes (2013-2015)	Yes (2013-2015)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.147 (2013) 0.592 (2014)	No 0.752 (2013) 0.218 (2014) 0.077 (2015)	No 0.850 (2013) 0.269 (2014) 0.101 (2015)	No 0.122 (2013) 0.014 (2014) 0.003 (2015)	No 0.752 (2013) 0.218 (2014) 0.077 (2015)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Trichoptera Density (no. per m²)**					
n	5	5	4	5	5	5
Mean	11.54	8.66	0.00	17.31	26.00	17.31
Minimum	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	43.28	28.86	0.00	43.28	87.00	57.71
Median	0.00	0.00	0.00	14.43	14.00	0.00
Standard deviation (n-1)	18.81	12.90	0.00	18.81	36.15	25.81
Standard error of the mean	8.41	5.77	0.00	8.41	16.16	11.54
COV (%)	162.98	149.07	-	108.65	139.02	149.07
+50% Mean	17.31	12.98	0.00	25.97	39.00	25.97
-50% Mean	5.77	4.33	0.00	8.66	13.00	8.66
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (all)	Yes (all)	Yes (2015, 2016)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	N/A	No 0.256 (2014) 0.317 (2015)	No 0.575 (2014) 0.480 (2015) 0.096 (2016)	No 0.506 (2014) 0.417 (2015) 0.078 (2016) 0.917 (2017)	No 0.787 (2015) 0.210 (2016)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**EPT Density (no. per m²)**				
n	5	5	5	5	5
Mean	201.99	464.57	383.77	499.00	291.44
Minimum	158.70	245.27	288.55	346.00	230.84
Maximum	245.27	952.22	476.11	620.00	375.12
Median	201.99	375.12	389.54	505.00	274.12
Standard deviation (n-1)	36.78	282.98	66.59	108.25	53.40
Standard error of the mean	16.45	126.55	29.78	48.41	23.88
COV (%)	18.21	60.91	17.35	21.69	18.32
+50% Mean	302.98	696.85	575.66	748.50	437.15
-50% Mean	100.99	232.28	191.89	249.50	145.72
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2014)	Yes (2014)	No
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	No 0.017 (2014)	No 0.084 (2014)	No 0.0084 (2014)	N/A

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	83.10	522.28	14.43	124.08	741.57	738.60	389.54
Minimum	51.94	57.71	0.00	43.28	115.42	418.00	302.98
Maximum	112.53	937.79	43.28	187.56	1673.59	1169.00	490.54
Median	95.22	649.24	0.00	115.42	432.83	519.00	389.54
Standard deviation (n-1)	29.10	370.85	20.40	63.38	655.43	356.63	68.44
Standard error of the mean	13.01	165.85	9.12	28.35	293.12	159.49	30.61
COV (%)	35.02	71.01	141.42	51.08	88.38	48.28	17.57
+50% Mean	124.65	783.41	21.64	186.11	1112.36	1107.90	584.31
-50% Mean	41.55	261.14	7.21	62.04	370.79	369.30	194.77
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2014, 2015)	Yes (2013, 2015, 2016)	Yes (2013, 2015, 2016)	Yes (2013, 2015, 2016)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.042 (2013)	Yes 0.273 (2013) 0.002 (2014)	No 0.095 (2014) 0.143 (2015)	Yes 0.018 (2013) 0.001 (2015) 0.046 (2016)	Yes 0.004 (2013) < 0.0001 (2015) 0.011 (2016)	No 0.064 (2013) 0.003 (2015) 0.138 (2016)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1959.83	727.15	435.71	271.24	392.43	216.40	470.34
Minimum	805.06	230.84	259.70	28.86	201.99	173.00	158.70
Maximum	3038.43	1226.34	591.53	692.52	591.53	245.00	865.65
Median	2337.26	822.37	461.68	144.28	317.41	231.00	403.97
Standard deviation (n-1)	913.45	406.10	128.80	289.52	180.03	28.88	259.01
Standard error of the mean	408.51	181.61	57.60	129.48	80.51	12.91	115.83
COV (%)	46.61	55.85	29.56	106.74	45.87	13.34	55.07
+50% Mean	2939.75	1090.72	653.57	406.86	588.64	324.60	705.51
-50% Mean	979.92	363.57	217.86	135.62	196.21	108.20	235.17
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2013)	Yes (2013, 2014)	Yes (2013)	Yes (2013, 2014, 2015)	Yes (2013, 2016, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.147 (2013)	No 0.034 (2013)	Yes 0.001 (2013) 0.052 (2014)	No 0.013 (2013)	Yes 0.0002 (2013) 0.026 (2014) 0.119 (2015)	No 0.026 (2013) 0.241 (2016) 0.147 (2018)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Density (no. per m²)**					
n	5	5	4	5	5	5
Mean	357.80	1206.14	57.71	516.51	478.80	357.80
Minimum	201.99	432.83	0.00	245.27	159.00	0.00
Maximum	649.24	1615.88	216.41	649.24	750.00	577.10
Median	274.12	1500.46	7.21	605.96	519.00	418.40
Standard deviation (n-1)	182.04	505.33	106.02	168.07	215.59	248.93
Standard error of the mean	81.41	225.99	53.01	75.16	96.42	111.33
COV (%)	50.88	41.90	183.71	32.54	45.03	69.57
+50% Mean	536.70	1809.21	86.57	774.76	718.20	536.70
-50% Mean	178.90	603.07	28.86	258.25	239.40	178.90
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2015, 2016)	Yes (2015, 2016)	Yes (2015, 2016)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	No 0.023 (2014)	Yes 0.123 (2014) 0.0002 (2015)	No 0.220 (2015) 0.012 (2016)	No 0.074 (2015) 0.046 (2016)	No 0.017 (2015) 0.151 (2016)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Ratio of EPT to Chironomidae**				
n	5	5	5	4	5
Mean	0.96	0.41	1.25	1.99	0.62
Minimum	0.41	0.15	0.67	0.75	0.43
Maximum	1.40	0.84	1.80	3.58	1.00
Median	1.06	0.36	1.50	1.81	0.54
Standard deviation (n-1)	0.37	0.27	0.50	1.22	0.23
Standard error of the mean	0.16	0.12	0.22	0.61	0.10
COV (%)	38.27	66.71	39.60	61.39	37.19
+50% Mean	1.44	0.61	1.88	2.98	0.92
-50% Mean	0.48	0.20	0.63	0.99	0.31
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2015)	Yes (all)	Yes (2015, 2017, 2018)
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	No 0.046 (2014)	No 0.007 (2015)	Yes 0.270 (2014) 0.003 (2015) 0.654 (2017)	No 0.395 (2015) 0.067 (2017) 0.029 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ratio of EPT to Chironomidae**						
n	5	5	2	5	5	5	5
Mean	0.28	0.77	0.03	5.92	3.20	3.90	1.29
Minimum	0.13	0.24	0.01	0.02	0.53	0.85	0.75
Maximum	0.46	1.41	0.05	29.00	7.50	9.38	1.91
Median	0.27	0.63	0.03	0.21	1.88	2.07	1.19
Standard deviation (n-1)	0.12	0.48	0.03	12.90	2.97	3.77	0.57
Standard error of the mean	0.05	0.22	0.02	5.77	1.33	1.69	0.26
COV (%)	41.16	63.17	90.42	218.01	92.87	96.73	44.09
+50% Mean	0.42	1.15	0.04	8.88	4.80	5.84	1.94
-50% Mean	0.14	0.38	0.01	2.96	1.60	1.95	0.65
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (all)	Yes (2013-2015)	Yes (2013-2015)	Yes (all)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.312 (2013)	No 0.333 (2013) 0.083 (2014)	No 0.893 (2013) 0.381 (2014) 0.285 (2015)	No 0.020 (2013) 0.189 (2014) 0.006 (2015)	No 0.010 (2013) 0.121 (2014) 0.004 (2015)	No 0.055 (2013) 0.363 (2014) 0.015 (2015) 0.074 (2016) 0.686 (2017) 0.522 (2018)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ratio of EPT to Chironomidae**						
n	5	5	5	5	5	5	5
Mean	8.44	5.25	1.82	1.88	1.57	1.02	0.51
Minimum	4.23	0.38	0.25	0.10	0.34	0.34	0.28
Maximum	13.50	14.25	5.33	4.43	3.80	2.00	0.67
Median	8.41	4.40	1.37	1.60	1.08	0.89	0.54
Standard deviation (n-1)	3.77	5.66	2.03	1.84	1.41	0.71	0.15
Standard error of the mean	1.68	2.53	0.91	0.82	0.63	0.32	0.07
COV (%)	44.63	107.85	111.26	97.52	89.66	69.75	28.84
+50% Mean	12.66	7.87	2.73	2.83	2.36	1.52	0.76
-50% Mean	4.22	2.62	0.91	0.94	0.79	0.51	0.25
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2013, 2014)	Yes (2013, 2014)	Yes (2013, 2014)	Yes (2013-2017)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.028 (2013) 0.363 (2014)	No 0.017 (2013) 0.273 (2014)	No 0.022 (2013) 0.316 (2014)	No 0.010 (2013) 0.190 (2014)	Yes 0.001 (2013) 0.042 (2014) 0.260 (2015) 0.347 (2016) 0.301 (2017)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ratio of EPT to Chironomidae**					
n	4	5	2	5	5	5
Mean	2.56	2.70	0.65	5.90	2.09	0.59
Minimum	0.54	0.64	0.06	1.78	1.03	0.00
Maximum	6.43	6.00	1.25	17.00	2.75	0.78
Median	1.64	2.06	0.65	3.75	2.64	0.75
Standard deviation (n-1)	2.71	2.00	0.84	6.32	0.84	0.33
Standard error of the mean	1.35	0.90	0.60	2.83	0.38	0.15
COV (%)	105.57	74.12	129.39	107.04	40.16	56.41
+50% Mean	3.84	4.05	0.98	8.85	3.14	0.89
-50% Mean	1.28	1.35	0.33	2.95	1.05	0.30
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (all)	Yes (2016, 2017)	Yes (2014, 2015, 2017, 2018)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	N/A	No 0.272 (2014) 0.139 (2015)	No 0.188 (2014) 0.345 (2015) 0.028 (2016)	No 0.131 (2016) 0.367 (2017)	No 0.179 (2014) 0.065 (2015) 0.006 (2017) 0.060 (2018)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Percent Ephemeroptera**				
n	5	5	5	5	5
Mean	29.60	16.63	29.98	56.40	25.84
Minimum	22.00	8.70	20.00	38.00	22.73
Maximum	46.43	22.08	50.98	68.00	30.65
Median	26.79	19.48	27.00	62.00	25.00
Standard deviation (n-1)	9.71	6.26	12.20	12.92	3.31
Standard error of the mean	4.34	2.80	5.46	5.78	1.48
COV (%)	32.80	37.66	40.69	22.90	12.82
+50% Mean	44.40	24.94	44.97	84.60	38.76
-50% Mean	14.80	8.31	14.99	28.20	12.92
Benchmark Exceedance (temporal comparison)	-	No	Yes (2015)	Yes (all)	Yes (2015, 2018)
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	N/A	No 0.035 (2015)	Yes 0.048 (2014) < 0.0001 (2015) 0.053 (2017)	No 0.059 (2015) 0.032 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent Ephemeroptera**						
n	5	5	5	5	5	5	5
Mean	5.63	29.67	0.71	8.66	58.62	59.80	35.89
Minimum	2.53	12.12	0.00	1.35	28.57	36.00	30.48
Maximum	9.52	41.90	3.06	13.75	82.86	83.00	42.55
Median	5.48	29.11	0.00	9.92	57.97	57.00	36.00
Standard deviation (n-1)	2.72	11.87	1.33	4.57	22.50	22.13	4.38
Standard error of the mean	1.22	5.31	0.60	2.04	10.06	9.90	1.96
COV (%)	48.32	40.03	188.12	52.79	38.38	37.01	12.21
+50% Mean	8.44	44.50	1.06	12.99	87.93	89.70	53.83
-50% Mean	2.81	14.83	0.35	4.33	29.31	29.90	17.94
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (all)	Yes (all)	Yes (2013-2016)	Yes (2013, 2015, 2016)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.073 (2013)	No 0.387 (2013) 0.008 (2014)	No 0.666 (2013) 0.174 (2014) 0.195 (2015)	Yes 0.002 (2013) 0.206 (2014) < 0.0001 (2015) 0.009 (2016)	Yes 0.002 (2013) 0.179 (2014) < 0.0001 (2015) 0.007 (2016)	Yes 0.030 (2013) 0.002 (2015) 0.081 (2016)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent Ephemeroptera**						
n	5	5	5	5	5	5	5
Mean	61.58	39.17	35.43	16.27	26.09	12.60	14.25
Minimum	50.28	14.71	14.40	0.00	13.27	7.00	7.43
Maximum	70.82	53.77	46.07	36.19	35.85	19.00	26.26
Median	63.43	49.13	45.71	13.04	30.23	10.00	13.71
Standard deviation (n-1)	9.69	17.62	14.84	15.75	11.00	5.50	7.24
Standard error of the mean	4.33	7.88	6.64	7.04	4.92	2.46	3.24
COV (%)	15.73	44.98	41.88	96.84	42.15	43.69	50.83
+50% Mean	92.37	58.75	53.14	24.40	39.14	18.90	21.38
-50% Mean	30.79	19.58	17.71	8.13	13.05	6.30	7.13
Benchmark Exceedance (temporal comparison)	-	No	No (both)	Yes (all)	Yes (2013, 2016)	Yes (2013, 2014, 2015, 2017)	Yes (2013-2015)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	N/A	Yes 0.001 (2013) 0.040 (2014) 0.109 (2015)	No 0.024 (2013) 0.294 (2016)	Yes 0.0003 (2013) 0.020 (2014) 0.060 (2015) 0.184 (2017)	Yes 0.001 (2013) 0.026 (2014) 0.076 (2015)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent Ephemeroptera**					
n	5	5	4	5	5	5
Mean	19.15	32.06	11.76	29.81	17.80	11.41
Minimum	5.54	17.61	0.00	21.62	8.00	0.00
Maximum	49.45	46.82	44.12	36.84	26.00	18.75
Median	14.81	29.73	1.47	29.63	23.00	13.30
Standard deviation (n-1)	17.58	10.69	21.61	5.46	9.01	6.97
Standard error of the mean	7.86	4.78	10.81	2.44	4.03	3.12
COV (%)	91.81	33.33	183.71	18.30	50.62	61.08
+50% Mean	28.72	48.08	17.65	44.71	26.70	17.11
-50% Mean	9.57	16.03	5.88	14.90	8.90	5.70
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2015)	Yes (2014, 2016)	Yes (2016)	Yes (2015, 2017)
Modified Significance Level	0.0030					
Significant Inter-annual Difference[1]	-	No 0.123 (2014)	No 0.026 (2015)	No 0.199 (2014) 0.046 (2016)	No 0.487 (2016)	No 0.017 (2015) 0.032 (2017)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Percent of Oligochaeta + Chironomidae**				
n	5	5	5	5	5
Mean	41.13	61.86	39.60	26.40	46.05
Minimum	30.00	52.17	25.71	0.00	32.26
Maximum	54.00	70.19	65.88	51.00	64.89
Median	39.29	62.99	35.29	28.00	46.43
Standard deviation (n-1)	9.39	6.88	15.78	18.82	12.45
Standard error of the mean	4.20	3.08	7.06	8.42	5.57
COV (%)	22.84	11.12	39.86	71.30	27.03
+50% Mean	61.70	92.79	59.40	39.60	69.07
-50% Mean	20.57	30.93	19.80	13.20	23.02
Benchmark Exceedance (temporal comparison)	-	Yes	No	Yes (2015)	Yes (2018)
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	No 0.025 (2014)	N/A	Yes 0.0005 (2015)	No 0.031 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent of Oligochaeta + Chironomidae**						
n	5	5	5	5	5	5	5
Mean	33.15	53.67	84.94	59.69	32.87	28.00	41.05
Minimum	25.32	40.00	62.50	52.50	11.43	9.00	25.53
Maximum	44.52	63.64	98.21	72.73	53.57	51.00	50.48
Median	30.95	56.33	93.33	56.20	31.88	27.00	47.83
Standard deviation (n-1)	7.74	10.58	15.70	8.60	18.84	17.38	11.01
Standard error of the mean	3.46	4.73	7.02	3.85	8.43	7.77	4.92
COV (%)	23.34	19.72	18.48	14.41	57.34	62.06	26.82
+50% Mean	49.73	80.50	127.41	89.54	49.30	42.00	61.58
-50% Mean	16.58	26.83	42.47	29.85	16.43	14.00	20.53
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2013)	Yes (2015)	Yes (2015, 2016)	Yes (2015)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	No 0.024 (2013)	Yes < 0.0001 (2013) 0.001 (2014)	Yes 0.004 (2013)	Yes < 0.0001 (2015)	Yes < 0.0001 (2015) 0.001 (2016)	Yes < 0.0001 (2015)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent of Oligochaeta + Chironomidae**						
n	5	5	5	5	5	5	5
Mean	13.64	25.67	36.36	37.37	32.39	22.40	34.53
Minimum	7.61	7.55	8.57	3.39	15.09	13.00	18.01
Maximum	20.00	52.53	64.00	75.36	57.52	31.00	45.45
Median	14.35	14.96	37.00	37.14	29.46	26.00	36.29
Standard deviation (n-1)	4.50	19.92	19.61	30.08	16.56	7.57	11.10
Standard error of the mean	2.01	8.91	8.77	13.45	7.40	3.39	4.96
COV (%)	32.95	77.62	53.94	80.49	51.11	33.79	32.15
+50% Mean	20.47	38.50	54.54	56.06	48.59	33.60	51.80
-50% Mean	6.82	12.83	18.18	18.69	16.20	11.20	17.27
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2013)	Yes (2013)	Yes (2013)	Yes (2013)	Yes (2013, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.260 (2013)	No 0.036 (2013)	No 0.068 (2013)	No 0.048 (2013)	No 0.287 (2013)	No 0.022 (2013) 0.222 (2018)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent of Oligochaeta + Chironomidae**					
n	5	5	4	5	5	5
Mean	19.89	22.57	44.09	11.62	16.20	23.79
Minimum	1.23	7.92	36.36	1.85	9.00	21.17
Maximum	36.22	31.56	55.88	19.61	22.00	30.00
Median	21.98	27.15	42.06	10.56	19.00	21.60
Standard deviation (n-1)	13.38	9.49	8.48	6.70	6.69	3.82
Standard error of the mean	5.98	4.24	4.24	3.00	2.99	1.71
COV (%)	67.29	42.03	19.22	57.67	41.27	16.07
+50% Mean	29.83	33.85	66.14	17.42	24.30	35.69
-50% Mean	9.94	11.28	22.05	5.81	8.10	11.90
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2016)	Yes (2016)	Yes (2017)
Modified Significance Level	0.0030					
Significant Inter-annual Difference[1]	-	N/A	Yes 0.0004 (2014) 0.001 (2015)	Yes < 0.0001 (2016)	Yes < 0.0001 (2016)	No 0.040 (2017)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**EPT Richness (Family level)**				
n	5	5	5	5	5
Mean	1.60	1.60	3.20	1.20	1.00
Minimum	1.00	1.00	2.00	1.00	1.00
Maximum	2.00	2.00	5.00	2.00	1.00
Median	2.00	2.00	3.00	1.00	1.00
Standard deviation (n-1)	0.55	0.55	1.30	0.45	0.00
Standard error of the mean	0.24	0.24	0.58	0.20	0.00
COV (%)	34.23	34.23	40.75	37.27	0.00
+50% Mean	2.40	2.40	4.80	1.80	1.50
-50% Mean	0.80	0.80	1.60	0.60	0.50
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2017)	Yes (2017)
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	-	N/A	No 0.057 (2014) 0.057 (2015)	Yes 0.003 (2017)	Yes 0.001 (2017)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Richness (Family level)**						
n	5	5	5	5	5	5	5
Mean	2.40	2.20	0.60	1.60	1.40	1.20	1.80
Minimum	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Maximum	3.00	4.00	2.00	2.00	2.00	2.00	3.00
Median	3.00	2.00	0.00	2.00	1.00	1.00	2.00
Standard deviation (n-1)	0.89	1.10	0.89	0.55	0.55	0.45	0.84
Standard error of the mean	0.40	0.49	0.40	0.24	0.24	0.20	0.37
COV (%)	37.27	49.79	149.07	34.23	39.12	37.27	46.48
+50% Mean	3.60	3.30	0.90	2.40	2.10	1.80	2.70
-50% Mean	1.20	1.10	0.30	0.80	0.70	0.60	0.90
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2015)	Yes (2015)	Yes (2015)	Yes (2015)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.003 (2013) 0.011 (2014)	No 0.085 (2015)	No 0.200 (2015)	No 0.402 (2015)	No 0.045 (2015)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Richness (Family level)**						
n	5	5	5	5	5	5	5
Mean	3.00	1.80	1.00	2.00	2.60	2.80	2.40
Minimum	2.00	1.00	1.00	1.00	1.00	2.00	1.00
Maximum	5.00	3.00	1.00	3.00	5.00	4.00	4.00
Median	3.00	2.00	1.00	2.00	2.00	2.00	2.00
Standard deviation (n-1)	1.22	0.84	0.00	0.71	1.82	1.10	1.52
Standard error of the mean	0.55	0.37	0.00	0.32	0.81	0.49	0.68
COV (%)	40.82	46.48	0.00	35.36	69.87	39.12	63.19
+50% Mean	4.5	2.70	1.50	3.00	3.90	4.20	3.60
-50% Mean	1.5	0.90	0.50	1.00	1.30	1.40	1.20
Benchmark Exceedance (temporal comparison)	-	No	Yes (2013)	Yes (2015)	Yes (2015)	Yes (2014, 2015)	Yes (2015)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.003 (2013)	No 0.071 (2015)	No 0.037 (2015)	No 0.186 (2014) 0.006 (2015)	No 0.049 (2015)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Richness (Family level)**					
n	5	5	4	5	5	5
Mean	2.00	1.40	0.75	1.80	1.80	1.60
Minimum	1.00	1.00	0.00	1.00	1.00	0.00
Maximum	4.00	2.00	2.00	2.00	3.00	3.00
Median	2.00	1.00	0.50	2.00	2.00	2.00
Standard deviation (n-1)	1.22	0.55	0.96	0.45	0.84	1.14
Standard error of the mean	0.55	0.24	0.48	0.20	0.37	0.51
COV (%)	61.24	39.12	127.66	24.85	46.48	71.26
+50% Mean	3.00	2.10	1.13	2.70	2.70	2.40
-50% Mean	1.00	0.70	0.38	0.90	0.90	0.80
Benchmark Exceedance (temporal comparison)	-	No	Yes (2014)	Yes (2016)	Yes (2016)	Yes (2016)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	N/A	No 0.088 (2014)	No 0.072 (2016)	No 0.099 (2016)	No 0.160 (2016)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Total Organic Carbon (TOC, %)**				
n	5	5	5	5	5
Mean	2.17	2.51	3.16	2.07	2.19
Minimum	1.51	1.67	2.01	1.09	1.73
Maximum	3.97	3.26	4.09	2.94	2.58
Median	1.65	2.67	3.29	2.45	2.34
Standard deviation (n-1)	1.05	0.61	0.79	0.80	0.36
Standard error of the mean	0.47	0.27	0.35	0.36	0.16
COV (%)	48.24	24.25	24.87	38.64	16.32
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	N/A	No 0.485 (2014)	No 0.051 (2014) 0.186 (2015)	No 0.836 (2014) 0.368 (2015) 0.033 (2017)	No 0.960 (2014) 0.516 (2015) 0.056 (2017) 0.798 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Organic Carbon (TOC, %)**						
n	5	5	5	5	5	5	5
Mean	1.28	2.38	3.03	2.46	2.36	1.86	2.42
Minimum	1.13	1.67	0.89	1.49	2.03	1.16	1.83
Maximum	1.48	3.13	6.83	3.43	2.64	2.44	3.00
Median	1.25	2.28	1.36	2.48	2.52	1.89	2.23
Standard deviation (n-1)	0.16	0.61	2.68	0.92	0.28	0.50	0.50
Standard error of the mean	0.07	0.27	1.20	0.41	0.13	0.22	0.23
COV (%)	12.33	25.47	88.62	37.33	12.04	26.74	20.82
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	N/A	No 0.011 (2013)	No 0.099 (2013) 0.379 (2014)	No 0.011 (2013) 1.000 (2014) 0.379 (2015)	No 0.009 (2013) 0.926 (2014) 0.331 (2015) 0.926 (2016)	No 0.151 (2013) 0.273 (2014) 0.829 (2015) 0.273 (2016) 0.235 (2017)	No 0.009 (2013) 0.926 (2014) 0.331 (2015) 0.926 (2016) 1.000 (2017) 0.235 (2018)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Organic Carbon (TOC, %)**						
n	5	5	5	5	5	5	5
Mean	1.86	2.51	2.64	2.84	3.38	2.20	3.57
Minimum	0.49	1.26	1.04	1.65	1.56	1.48	1.99
Maximum	3.61	5.60	3.78	4.42	5.23	3.30	6.36
Median	1.68	1.64	2.87	2.90	3.45	2.01	2.87
Standard deviation (n-1)	1.13	1.78	1.03	1.11	1.45	0.76	1.73
Standard error of the mean	0.50	0.80	0.46	0.50	0.65	0.34	0.77
COV (%)	60.39	70.98	39.12	39.08	42.91	34.47	48.35
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	N/A	No 0.711 (2013)	No 0.301 (2013) 0.507 (2014)	No 0.184 (2013) 0.339 (2014) 0.769 (2015)	No 0.096 (2013) 0.195 (2014) 0.527 (2015) 0.734 (2016)	No 0.666 (2013) 0.951 (2014) 0.547 (2015) 0.371 (2016) 0.217 (2017)	No 0.062 (2013) 0.134 (2014) 0.405 (2015) 0.589 (2016) 0.841 (2017) 0.151 (2018)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Organic Carbon (TOC, %)**					
n	5	5	3	5	5	5
Mean	1.16	0.84	3.82	1.94	1.02	2.24
Minimum	0.35	0.24	0.69	1.00	0.24	1.46
Maximum	2.52	1.80	7.11	4.35	2.22	2.73
Median	0.40	0.74	3.67	1.46	0.60	2.36
Standard deviation (n-1)	1.08	0.59	3.21	1.37	0.82	0.51
Standard error of the mean	0.48	0.26	1.85	0.61	0.37	0.23
COV (%)	93.80	70.04	84.03	70.50	80.05	22.64
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	N/A	No 0.744 (2014)	No 0.096 (2014) 0.051 (2015)	No 0.273 (2014) 0.155 (2015) 0.474 (2016)	No 0.954 (2014) 0.788 (2015) 0.086 (2016) 0.249 (2017)	No 0.057 (2014) 0.026 (2015) 0.987 (2016) 0.419 (2017) 0.050 (2018)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Sand (%)**				
n	5	5	5	5	5
Mean	39.30	36.68	51.96	40.08	13.94
Minimum	25.90	24.50	35.80	22.70	0.50
Maximum	55.00	58.20	70.30	63.50	36.10
Median	40.60	29.60	52.40	27.40	1.50
Standard deviation (n-1)	10.78	13.62	15.30	20.99	17.66
Standard error of the mean	4.82	6.09	6.84	9.39	7.90
COV (%)	27.42	37.14	29.45	52.38	126.72
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	N/A	No 0.799 (2014)	No 0.227 (2014) 0.148 (2015)	No 0.940 (2014) 0.741 (2015) 0.256 (2017)	Yes 0.021 (2014) 0.037 (2015) 0.001 (2017) 0.018 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Sand (%)**						
n	5	5	5	5	5	5	5
Mean	11.22	10.18	16.10	18.46	12.78	12.22	13.96
Minimum	9.38	3.46	7.40	7.40	6.80	7.40	7.00
Maximum	12.60	18.20	30.60	49.10	17.40	17.70	18.60
Median	11.40	9.60	12.20	11.80	14.30	12.00	13.30
Standard deviation (n-1)	1.41	5.43	9.82	17.27	5.04	3.92	4.71
Standard error of the mean	0.63	2.43	4.39	7.72	2.26	1.75	2.11
COV (%)	12.61	53.33	61.01	93.55	39.46	32.06	33.77
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	N/A	No 0.700 (2013)	No 0.517 (2013) 0.301 (2014)	No 0.632 (2013) 0.387 (2014) 0.865 (2015)	No 0.711 (2013) 0.449 (2014) 0.781 (2015) 0.914 (2016)	No 0.758 (2013) 0.487 (2014) 0.734 (2015) 0.865 (2016) 0.951 (2017)	No 0.339 (2013) 0.179 (2014) 0.758 (2015) 0.632 (2016) 0.558 (2017) 0.517 (2018)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Sand (%)**						
n	5	5	5	5	5	5	5
Mean	38.84	41.86	25.93	66.90	50.02	43.14	25.00
Minimum	4.01	10.60	1.22	35.50	1.80	1.30	1.00
Maximum	75.70	55.50	65.00	91.50	66.80	70.90	65.10
Median	49.60	52.90	18.80	68.80	61.40	47.50	26.80
Standard deviation (n-1)	30.62	19.27	26.92	20.05	27.16	26.79	26.26
Standard error of the mean	13.69	8.62	12.04	8.97	12.15	11.98	11.75
COV (%)	78.83	46.04	103.81	29.98	54.31	62.10	105.06
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	N/A	No 0.926 (2013)	No 0.413 (2013) 0.468 (2014)	No 0.099 (2013) 0.081 (2014) 0.014 (2015)	No 0.527 (2013) 0.468 (2014) 0.147 (2015) 0.308 (2016)	No 0.890 (2013) 0.817 (2014) 0.339 (2015) 0.130 (2016) 0.621 (2017)	No 0.331 (2013) 0.379 (2014) 0.877 (2015) 0.009 (2016) 0.109 (2017) 0.267 (2018)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Sand (%)**					
n	5	5	3	5	5	5
Mean	74.86	68.44	68.17	73.60	76.64	68.82
Minimum	54.00	16.00	42.90	49.70	37.60	56.50
Maximum	90.40	88.60	95.70	89.20	95.10	82.40
Median	74.10	78.20	65.90	82.30	90.20	67.80
Standard deviation (n-1)	15.76	30.10	26.47	16.48	24.41	10.60
Standard error of the mean	7.05	13.46	15.28	7.37	10.92	4.74
COV (%)	21.05	43.98	38.84	22.39	31.85	15.41
Modified Significance Level	0.0030					
Significant Inter-annual Difference[1]	N/A	No 0.638 (2014)	No 0.671 (2014) 0.986 (2015)	No 0.926 (2014) 0.705 (2015) 0.730 (2016)	No 0.896 (2014) 0.548 (2015) 0.591 (2016) 0.823 (2017)	No 0.658 (2014) 0.978 (2015) 0.967 (2016) 0.726 (2017) 0.567 (2018)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Silt (%)**				
n	5	5	5	5	5
Mean	41.32	45.76	33.36	42.32	59.98
Minimum	30.00	29.80	21.60	25.50	40.70
Maximum	49.10	57.60	46.40	62.90	78.50
Median	40.20	46.60	30.80	43.00	68.80
Standard deviation (n-1)	7.54	10.77	11.95	16.04	17.46
Standard error of the mean	3.37	4.82	5.34	7.17	7.81
COV (%)	18.25	23.53	35.82	37.90	29.11
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	N/A	No 0.602 (2014)	No 0.354 (2014) 0.155 (2015)	No 0.906 (2014) 0.686 (2015) 0.298 (2017)	Yes 0.038 (2014) 0.105 (2015) 0.005 (2017) 0.048 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Silt (%)**						
n	5	5	5	5	5	5	5
Mean	41.46	49.96	38.70	29.20	63.08	61.20	62.44
Minimum	38.20	42.10	20.30	15.90	55.20	37.20	54.60
Maximum	42.80	61.20	51.10	41.30	68.00	73.20	71.70
Median	42.80	50.80	40.40	30.70	64.90	68.30	60.10
Standard deviation (n-1)	2.04	7.67	12.53	10.45	5.08	14.51	6.59
Standard error of the mean	0.91	3.43	5.60	4.67	2.27	6.49	2.95
COV (%)	4.91	15.36	32.37	35.78	8.05	23.70	10.55
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	N/A	No 0.161 (2013)	No 0.643 (2013) 0.067 (2014)	Yes 0.047 (2013) 0.001 (2014) 0.118 (2015)	Yes 0.001 (2013) 0.034 (2014) 0.0003 (2015) < 0.0001 (2016)	Yes 0.002 (2013) 0.067 (2014) 0.001 (2015) < 0.0001 (2016) 0.752 (2017)	Yes 0.001 (2013) 0.043 (2014) 0.0004 (2015) < 0.0001 (2016) 0.914 (2017) 0.835 (2018)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Silt (%)**						
n	5	5	5	5	5	5	5
Mean	46.58	41.72	62.06	21.66	40.58	39.38	61.24
Minimum	16.50	34.90	26.50	4.20	24.90	20.80	24.30
Maximum	71.60	51.40	87.70	46.60	83.30	80.60	85.70
Median	40.30	36.10	70.30	18.20	32.90	28.40	63.50
Standard deviation (n-1)	24.17	8.67	26.49	15.45	24.23	23.97	23.49
Standard error of the mean	10.81	3.88	11.85	6.91	10.84	10.72	10.50
COV (%)	51.90	20.77	42.69	71.32	59.72	60.88	38.35
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	N/A	No 0.890 (2013)	No 0.339 (2013) 0.413 (2014)	No 0.079 (2013) 0.058 (2014) 0.007 (2015)	No 0.677 (2013) 0.579 (2014) 0.170 (2015) 0.179 (2016)	No 0.643 (2013) 0.547 (2014) 0.156 (2015) 0.195 (2016) 0.963 (2017)	No 0.371 (2013) 0.450 (2014) 0.951 (2015) 0.008 (2016) 0.190 (2017) 0.174 (2018)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Silt (%)**					
n	5	5	3	5	5	5
Mean	14.80	15.48	21.30	20.90	13.50	23.30
Minimum	4.72	7.68	2.60	7.50	2.00	12.60
Maximum	27.40	25.10	35.50	46.30	33.60	31.80
Median	17.70	15.40	25.80	13.10	5.70	22.90
Standard deviation (n-1)	9.66	7.12	16.91	15.82	13.88	8.29
Standard error of the mean	4.32	3.19	9.76	7.07	6.21	3.71
COV (%)	65.29	46.03	79.37	75.69	102.80	35.57
Modified Significance Level	0.0030					
Significant Inter-annual Difference[1]	N/A	No 0.930 (2014)	No 0.468 (2014) 0.515 (2015)	No 0.432 (2014) 0.484 (2015) 0.964 (2016)	No 0.866 (2014) 0.798 (2015) 0.385 (2016) 0.342 (2017)	No 0.277 (2014) 0.316 (2015) 0.822 (2016) 0.756 (2017) 0.212 (2018)

Site (habitat type)	SPLIT (nearshore)				
Year	**2014**	**2015**	**2017**	**2018**	**2019**
Metric	**Clay (%)**				
n	5	5	5	5	5
Mean	19.38	17.54	14.66	17.60	26.08
Minimum	15.00	12.00	8.10	8.90	21.10
Maximum	25.00	24.00	18.90	29.50	29.80
Median	19.10	16.40	15.90	14.50	28.40
Standard deviation (n-1)	3.60	5.50	4.13	8.49	4.18
Standard error of the mean	1.61	2.46	1.85	3.80	1.87
COV (%)	18.57	31.33	28.18	48.26	16.02
Modified Significance Level	0.0050				
Significant Inter-annual Difference[1]	N/A	No 0.601 (2014)	No 0.188 (2014) 0.415 (2015)	No 0.613 (2014) 0.986 (2015) 0.406 (2017)	Yes 0.067 (2014) 0.023 (2015) 0.004 (2017) 0.024 (2018)

Site (habitat type)	STL3KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Clay (%)**						
n	5	5	5	5	5	5	5
Mean	47.32	39.82	45.22	52.32	24.16	26.60	23.62
Minimum	44.60	35.30	36.80	35.00	17.80	19.50	15.80
Maximum	52.40	48.60	58.30	66.60	30.50	45.10	32.10
Median	45.80	38.20	43.90	52.90	25.20	20.90	21.70
Standard deviation (n-1)	3.37	5.16	8.82	12.72	4.76	10.89	6.20
Standard error of the mean	1.51	2.31	3.94	5.69	2.13	4.87	2.77
COV (%)	7.13	12.96	19.50	24.30	19.70	40.93	26.25
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	N/A	No 0.153 (2013)	No 0.684 (2013) 0.300 (2014)	No 0.336 (2013) 0.021 (2014) 0.176 (2015)	Yes < 0.0001 (2013) 0.005 (2014) 0.0003 (2015) < 0.0001 (2016)	Yes 0.0004 (2013) 0.015 (2014) 0.001 (2015) < 0.0001 (2016) 0.637 (2017)	Yes < 0.0001 (2013) 0.004 (2014) 0.0002 (2015) < 0.0001 (2016) 0.917 (2017) 0.564 (2018)

Site (habitat type)	STL11KM (nearshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Clay (%)**						
n	5	5	5	5	5	5	5
Mean	14.58	16.39	12.01	11.48	9.40	17.50	13.78
Minimum	7.82	8.36	8.46	4.40	4.40	8.30	9.70
Maximum	25.00	37.90	16.50	17.90	14.80	36.10	22.30
Median	11.90	12.20	10.90	13.40	8.40	13.20	13.00
Standard deviation (n-1)	6.96	12.17	3.88	5.27	3.98	10.99	5.00
Standard error of the mean	3.11	5.44	1.73	2.36	1.78	4.92	2.24
COV (%)	47.74	74.25	32.27	45.88	42.33	62.81	36.32
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	N/A	No 0.988 (2013)	No 0.805 (2013) 0.817 (2014)	No 0.700 (2013) 0.711 (2014) 0.890 (2015)	No 0.195 (2013) 0.200 (2014) 0.294 (2015) 0.363 (2016)	No 0.723 (2013) 0.711 (2014) 0.547 (2015) 0.459 (2016) 0.099 (2017)	No 0.938 (2013) 0.926 (2014) 0.746 (2015) 0.643 (2016) 0.170 (2017) 0.781 (2018)

Site (habitat type)	STL25KM (nearshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Clay (%)**					
n	5	5	3	5	5	5
Mean	10.34	16.09	10.53	5.50	9.80	7.82
Minimum	4.18	2.94	1.70	3.30	2.80	4.90
Maximum	27.20	58.90	21.60	10.40	28.70	11.70
Median	6.88	6.43	8.30	4.60	4.00	7.70
Standard deviation (n-1)	9.55	24.04	10.14	2.83	10.94	2.76
Standard error of the mean	4.27	10.75	5.85	1.26	4.89	1.23
COV (%)	92.42	149.42	96.23	51.43	111.58	35.27
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	N/A	No 0.729 (2014)	No 0.842 (2014) 0.920 (2015)	No 0.366 (2014) 0.577 (2015) 0.560 (2016)	No 0.501 (2014) 0.744 (2015) 0.702 (2016) 0.818 (2017)	No 0.818 (2014) 0.564 (2015) 0.689 (2016) 0.257 (2017) 0.366 (2018)

1 – due to inclusion of 2019 data, results of statistical comparisons may be different from previous years.

APPENDIX 3B: SUMMARY STATISTICS FOR ADDITIONAL METRICS IN OFFSHORE HABITAT FOR 2013 (PRE-CONSTRUCTION), 2014 (YEAR 1 CONSTRUCTION), 2015 (YEAR 2 CONSTRUCTION), 2016 (YEAR 3 CONSTRUCTION), 2017 (YEAR 4 CONSTRUCTION), 2018 (YEAR 5 CONSTRUCTION) AND 2019 (YEAR 6 CONSTRUCTION)

Note: results for each parameter continue over two or three pages.

Site (habitat type)	**SPLIT (offshore)**						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Invertebrate Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	7978.42	8973.92	3433.75	2392.08	2394.97	2559.40	2553.67
Minimum	4039.70	6174.98	3000.92	1962.14	1370.61	2121.00	1183.06
Maximum	10806.21	11311.17	3938.71	2957.64	3852.15	3015.00	3477.03
Median	8281.39	9060.48	3477.03	2221.84	2207.41	2395.00	2553.67
Standard deviation (n-1)	2521.25	2377.87	348.06	423.64	1074.05	385.86	928.48
Standard error of the mean	1127.54	1063.42	155.66	189.46	480.33	172.56	415.23
COV (%)	31.60	26.50	10.14	17.71	44.85	15.08	36.36
+50% Mean	11967.62	13460.87	5150.62	3588.12	3592.45	3839.10	3830.51
-50% Mean	3989.21	4486.96	1716.87	1196.04	1197.48	1279.70	1276.84
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2013, 2014)	Yes (2013, 2014)	Yes (2013, 2014)	Yes (2013, 2014)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.165 (2013) 0.123 (2014)	Yes 0.001 (2013) 0.001 (2014)	Yes 0.003 (2013) 0.002 (2014)	No 0.005 (2013) 0.003 (2014)	No 0.007 (2013) 0.004 (2014)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Invertebrate Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1101.11	1465.84	184.67	675.21	1229.22	1030.00	2022.74
Minimum	709.83	403.97	43.28	447.25	173.13	505.00	851.22
Maximum	1679.36	2683.52	346.26	1197.48	2481.53	1313.00	3549.17
Median	900.28	1428.32	158.70	577.10	923.36	1125.00	1947.71
Standard deviation (n-1)	415.67	841.05	135.50	301.67	1016.83	308.48	994.74
Standard error of the mean	185.89	376.13	60.60	134.91	454.74	137.96	444.86
COV (%)	37.75	57.38	73.37	44.68	82.72	29.95	49.18
+50% Mean	1651.66	2198.75	277.01	1012.81	1843.84	1545.00	3034.11
-50% Mean	550.55	732.92	92.34	337.60	614.61	515.00	1011.37
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2014, 2015)	Yes (2015, 2016)	Yes (2015, 2016)	Yes (2013, 2015-2018)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	N/A	No 0.038 (2013) 0.005 (2014)	No 0.071 (2014) 0.254 (2015)	No 0.019 (2015) 0.199 (2016)	No 0.055 (2015) 0.407 (2016)	Yes 0.037 (2013) 0.0002 (2015) 0.003 (2016) 0.070 (2017) 0.026 (2018)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Invertebrate Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1878.46	1488.92	1249.42	1073.41	2242.04	1705.40	2455.56
Minimum	0.00	1139.77	894.51	504.96	1471.61	981.00	2106.42
Maximum	2778.74	1890.00	1702.45	1976.57	3231.76	2251.00	3015.35
Median	2198.75	1312.90	1125.35	865.65	2077.56	1818.00	2265.12
Standard deviation (n-1)	1079.20	340.56	313.38	578.87	676.68	477.75	413.07
Standard error of the mean	482.63	152.30	140.15	258.88	302.62	213.65	184.73
COV (%)	57.45	22.87	25.08	53.93	30.18	28.01	16.82
+50% Mean	2817.69	2233.38	1874.13	1610.11	3363.05	2558.10	3683.34
-50% Mean	939.23	744.46	624.71	536.70	1121.02	852.70	1227.78
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	Yes (2014-2016)	Yes (2016)	Yes (2014-2016)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	No 0.059 (2014) 0.015 (2015) 0.005 (2016)	No 0.110 (2016)	Yes 0.001 (2014) 0.004 (2015) 0.018 (2016)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Invertebrate Density (no. per m²)**					
n	5	5	5	5	5	5
Mean	2767.20	2594.07	2014.08	2285.32	2421.00	2602.72
Minimum	2135.27	1255.19	995.50	1327.33	1674.00	1861.15
Maximum	3231.76	3433.75	2871.08	3433.75	3059.00	3563.60
Median	2856.65	2452.68	2293.98	1904.43	2453.00	2409.40
Standard deviation (n-1)	447.53	899.00	848.14	933.09	493.49	659.70
Standard error of the mean	200.14	402.04	379.30	417.29	220.70	295.03
COV (%)	16.17	34.66	42.11	40.83	20.38	25.35
+50% Mean	4150.80	3891.10	3021.12	3427.98	3631.50	3904.09
-50% Mean	1383.60	1297.03	1007.04	1142.66	1210.50	1301.36
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)
Modified Significance Level	0.0030					
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Richness (Family level)**						
n	5	5	5	5	5	5	5
Mean	8.60	8.80	9.60	7.80	8.20	6.20	6.00
Minimum	7.00	7.00	8.00	6.00	5.00	5.00	5.00
Maximum	10.00	10.00	11.00	10.00	11.00	7.00	7.00
Median	9.00	9.00	9.00	8.00	8.00	7.00	6.00
Standard deviation (n-1)	1.52	1.30	1.34	1.79	2.39	1.10	0.71
Standard error of the mean	0.68	0.58	0.60	0.80	1.07	0.49	0.32
COV (%)	17.63	14.82	13.98	22.93	29.12	17.67	11.79
+25% Mean	10.75	11.00	12.00	9.75	10.25	7.75	7.50
-25% Mean	6.45	6.60	7.20	5.85	6.15	4.65	4.50
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	Yes (2013-2015)	Yes (2013-2015, 2017)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	No 0.044 (2013) 0.028 (2014) 0.005 (2015)	Yes 0.022 (2013) 0.014 (2014) 0.002 (2015) 0.053 (2017)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Richness (Family level)**						
n	5	5	5	5	5	5	5
Mean	7.40	5.40	2.80	5.20	5.80	7.60	7.20
Minimum	5.00	3.00	2.00	3.00	4.00	5.00	6.00
Maximum	10.00	7.00	5.00	9.00	8.00	10.00	11.00
Median	8.00	6.00	2.00	4.00	6.00	7.00	6.00
Standard deviation (n-1)	2.30	1.52	1.30	2.39	1.48	1.95	2.17
Standard error of the mean	1.03	0.68	0.58	1.07	0.66	0.87	0.97
COV (%)	31.11	28.08	46.57	45.91	25.57	25.65	30.11
+25% Mean	9.25	6.75	3.50	6.50	7.25	9.50	9.00
-25% Mean	5.55	4.05	2.10	3.90	4.35	5.70	5.40
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2013, 2015)	Yes (2015)	Yes (2014-2017)	Yes (2014-2016)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	No 0.099 (2013)	Yes 0.001 (2013) 0.035 (2014)	No 0.050 (2013) 0.071 (2015)	No 0.016 (2015)	Yes 0.071 (2014) 0.0003 (2015) 0.035 (2016) 0.136 (2017)	Yes 0.136 (2014) 0.001 (2015) 0.071 (2016)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Richness (Family level)**						
n	5	5	5	5	5	5	5
Mean	4.80	5.00	4.20	6.00	6.20	6.00	6.20
Minimum	0.00	3.00	3.00	3.00	4.00	4.00	5.00
Maximum	6.00	6.00	6.00	9.00	9.00	8.00	7.00
Median	6.00	5.00	4.00	7.00	6.00	6.00	7.00
Standard deviation (n-1)	2.68	1.22	1.10	2.45	1.79	1.58	1.10
Standard error of the mean	1.20	0.55	0.49	1.10	0.80	0.71	0.49
COV (%)	55.90	24.49	26.08	40.82	28.85	26.35	17.67
+25% Mean	6.00	6.25	5.25	7.50	7.75	7.50	7.75
-25% Mean	3.60	3.75	3.15	4.50	4.65	4.50	4.65
Benchmark Exceedance (temporal comparison)	-	No	No	Yes (2013, 2015)	Yes (2013, 2015)	Yes (2013, 2015)	Yes (2013, 2015)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	N/A	N/A	No 0.375 (2013) 0.160 (2015)	No 0.217 (2013) 0.082 (2015)	No 0.288 (2013) 0.116 (2015)	No 0.217 (2013) 0.082 (2015)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Richness (Family level)**					
n	5	5	5	5	5	5
Mean	4.20	4.00	5.00	5.60	5.00	6.40
Minimum	3.00	3.00	4.00	5.00	4.00	5.00
Maximum	5.00	5.00	6.00	7.00	6.00	7.00
Median	5.00	4.00	5.00	5.00	5.00	7.00
Standard deviation (n-1)	1.10	0.71	1.00	0.89	0.71	0.89
Standard error of the mean	0.49	0.32	0.45	0.40	0.32	0.40
COV (%)	26.08	17.68	20.00	15.97	14.14	13.98
+25% Mean	5.25	5.00	6.25	7.00	6.25	8.00
-25% Mean	3.15	3.00	3.75	4.20	3.75	4.80
Benchmark Exceedance (temporal comparison)	-	No	Yes (2015)	Yes (2014, 2015)	Yes (2015)	Yes (2014-2016, 2018)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	N/A	No 0.139 (2015)	No 0.069 (2014) 0.020 (2015)	No 0.134 (2015)	Yes 0.005 (2014) 0.001 (2015) 0.069 (2016) 0.072 (2018)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Simpson's Diversity Index**						
n	5	5	5	5	5	5	5
Mean	0.64	0.57	0.55	0.54	0.50	0.41	0.42
Minimum	0.48	0.48	0.36	0.30	0.35	0.35	0.30
Maximum	0.76	0.61	0.71	0.66	0.59	0.53	0.73
Median	0.69	0.59	0.64	0.58	0.52	0.38	0.38
Standard deviation (n-1)	0.12	0.05	0.16	0.15	0.09	0.07	0.18
Standard error of the mean	0.05	0.02	0.07	0.07	0.04	0.03	0.08
COV (%)	18.67	9.05	29.89	26.97	18.81	17.50	42.65
+25% Mean	0.80	0.71	0.69	0.68	0.63	0.51	0.52
-25% Mean	0.48	0.43	0.41	0.41	0.38	0.31	0.31
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	Yes (2013-2016)	Yes (2013, 2014)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	No 0.008 (2013) 0.056 (2014) 0.091 (2015) 0.106 (2016)	No 0.010 (2013) 0.070 (2014)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Simpson's Diversity Index**						
n	5	5	5	5	5	5	5
Mean	0.50	0.53	0.35	0.52	0.65	0.59	0.68
Minimum	0.37	0.51	0.09	0.26	0.49	0.36	0.62
Maximum	0.59	0.57	0.60	0.71	0.79	0.74	0.77
Median	0.54	0.52	0.32	0.54	0.72	0.61	0.67
Standard deviation (n-1)	0.11	0.02	0.19	0.20	0.14	0.15	0.06
Standard error of the mean	0.05	0.01	0.08	0.09	0.06	0.07	0.03
COV (%)	21.36	4.61	53.47	37.61	21.73	25.71	8.49
+25% Mean	0.62	0.66	0.44	0.65	0.82	0.74	0.86
-25% Mean	0.37	0.40	0.27	0.39	0.49	0.44	0.51
Benchmark Exceedance (temporal comparison)	-	No	Yes (2013, 2014)	Yes (2015)	Yes (2013, 2015, 2016)	Yes (2015)	Yes (2013-2016)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	N/A	No 0.111 (2013) 0.056 (2014)	No 0.065 (2015)	Yes 0.083 (2013) 0.002 (2015) 0.138 (2016)	No 0.011 (2015)	Yes 0.040 (2013) 0.082 (2014) 0.001 (2015) 0.070 (2016)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Simpson's Diversity Index**						
n	4	5	5	5	5	5	5
Mean	0.30	0.40	0.59	0.54	0.52	0.58	0.68
Minimum	0.24	0.16	0.48	0.36	0.43	0.49	0.61
Maximum	0.32	0.52	0.64	0.64	0.72	0.64	0.76
Median	0.31	0.44	0.60	0.54	0.46	0.59	0.68
Standard deviation (n-1)	0.04	0.14	0.07	0.11	0.12	0.07	0.06
Standard error of the mean	0.02	0.06	0.03	0.05	0.05	0.03	0.03
COV (%)	11.92	35.73	11.46	20.62	23.67	11.57	8.98
+25% Mean	0.37	0.50	0.73	0.67	0.65	0.72	0.86
-25% Mean	0.22	0.30	0.44	0.40	0.39	0.43	0.51
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2013, 2014)	Yes (2013, 2014)	Yes (2013, 2014)	Yes (2013, 2014, 2016, 2017)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	No 0.123 (2013)	Yes 0.0001 (2013) 0.004 (2014)	Yes 0.001 (2013) 0.026 (2014)	Yes 0.002 (2013) 0.057 (2014)	Yes 0.0001 (2013) 0.006 (2014)	Yes < 0.0001 (2013) < 0.0001 (2014) 0.023 (2016) 0.010 (2017)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Simpson's Diversity Index**					
n	5	5	5	5	5	5
Mean	0.53	0.40	0.60	0.55	0.40	0.43
Minimum	0.50	0.29	0.51	0.49	0.31	0.37
Maximum	0.56	0.59	0.65	0.61	0.51	0.53
Median	0.53	0.31	0.61	0.54	0.40	0.42
Standard deviation (n-1)	0.02	0.13	0.06	0.04	0.08	0.06
Standard error of the mean	0.01	0.06	0.03	0.02	0.03	0.03
COV (%)	4.12	33.16	9.37	7.87	18.73	14.36
+25% Mean	0.66	0.50	0.75	0.68	0.50	0.54
-25% Mean	0.40	0.30	0.45	0.41	0.30	0.32
Benchmark Exceedance (temporal comparison)	-	Yes (2014)	Yes (2015)	Yes (2015)	Yes (2014, 2016, 2017)	Yes (2016)
Modified Significance Level	0.0030					
Significant Inter-annual Difference[1]	-	No 0.007 (2014)	Yes 0.0002 (2015)	No 0.003 (2015)	Yes 0.010 (2014) 0.0003 (2016) 0.005 (2017)	Yes 0.001 (2016)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ephemeroptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1281.16	643.47	219.30	493.42	403.97	430.00	328.95
Minimum	375.12	346.26	129.85	274.12	288.55	231.00	158.70
Maximum	1587.03	1038.78	360.69	649.24	548.25	519.00	490.54
Median	1558.17	533.82	173.13	490.54	418.40	491.00	375.12
Standard deviation (n-1)	520.83	277.07	95.92	144.06	109.40	119.94	132.78
Standard error of the mean	232.92	123.91	42.90	64.42	48.93	53.64	59.38
COV (%)	40.65	43.06	43.74	29.20	27.08	27.89	40.37
+50% Mean	1921.75	965.20	328.95	740.13	605.96	645.00	493.42
-50% Mean	640.58	321.73	109.65	246.71	201.99	215.00	164.47
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2013, 2015)	Yes (2013, 2015)	Yes (2013, 2015)	Yes (2013)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	N/A	N/A	Yes 0.0002 (2013) 0.005 (2014)	No 0.184 (2013) 0.017 (2015)	No 0.040 (2013) 0.095 (2015)	No 0.099 (2013) 0.039 (2015)	No 0.005 (2013)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ephemeroptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	64.06	54.82	0.00	72.14	554.02	603.20	680.98
Minimum	8.66	0.00	0.00	14.43	0.00	43.00	418.40
Maximum	95.22	100.99	0.00	187.56	1428.32	1039.00	1082.06
Median	69.25	43.28	0.00	28.86	274.12	664.00	649.24
Standard deviation (n-1)	36.01	40.03	0.00	77.02	612.50	368.53	279.46
Standard error of the mean	16.10	17.90	0.00	34.45	273.92	164.81	124.98
COV (%)	56.21	73.02	-	106.77	110.56	61.10	41.04
+50% Mean	96.09	82.24	0.00	108.21	831.02	904.80	1021.47
-50% Mean	32.03	27.41	0.00	36.07	277.01	301.60	340.49
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2015)	Yes (all)	Yes (2013-2016)	Yes (2013-2016)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	N/A	N/A	No 0.083 (2013) 0.137 (2014)	No 0.091 (2015)	No 0.209 (2013) 0.133 (2014) 0.003 (2015) 0.193 (2016)	Yes 0.088 (2013) 0.051 (2014) 0.001 (2015) 0.080 (2016)	Yes 0.035 (2013) 0.019 (2014) 0.0001 (2015) 0.031 (2016)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ephemeroptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1563.37	1093.61	605.96	655.01	559.79	297.40	600.18
Minimum	0.00	937.79	490.54	331.83	274.12	173.00	461.68
Maximum	2276.66	1240.77	663.67	1082.06	807.94	534.00	793.51
Median	1817.87	1038.78	620.38	678.09	620.38	289.00	562.67
Standard deviation (n-1)	894.76	133.56	68.44	311.88	204.65	144.50	140.10
Standard error of the mean	400.15	59.73	30.61	139.48	91.52	64.62	62.66
COV (%)	57.23	12.21	11.29	47.61	36.56	48.59	23.34
+50% Mean	2345.05	1640.41	908.93	982.51	839.68	446.10	900.28
-50% Mean	781.68	546.80	302.98	327.50	279.89	148.70	300.09
Benchmark Exceedance (temporal comparison)	-	No	Yes (2013)	Yes (2013)	Yes (2013)	Yes (2013-2016)	Yes (2013, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	N/A	N/A	No 0.099 (2013)	No 0.160 (2013)	No 0.054 (2013)	Yes 0.001 (2013) 0.0005 (2014) 0.105 (2015) 0.062 (2016)	No 0.092 (2013) 0.112 (2018)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ephemeroptera Density (no. per m²)**					
n	5	5	5	5	5	5
Mean	831.02	282.78	577.10	631.93	242.60	135.62
Minimum	692.52	187.56	375.12	461.68	159.00	100.99
Maximum	966.64	375.12	807.94	836.80	274.00	173.13
Median	851.22	331.83	562.67	678.09	260.00	129.85
Standard deviation (n-1)	115.24	88.70	193.30	160.46	47.13	26.21
Standard error of the mean	51.54	39.67	86.44	71.76	21.08	11.72
COV (%)	13.87	31.37	33.49	25.39	19.43	19.33
+50% Mean	1246.54	424.17	865.65	947.89	363.90	203.43
-50% Mean	415.51	141.39	288.55	315.96	121.30	67.81
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2015)	Yes (2015)	Yes (2014, 2016, 2017)	Yes (2014-2017)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	N/A	No 0.006 (2014)	No 0.102 (2015)	No 0.069 (2015)	Yes 0.002 (2014) 0.044 (2016) 0.028 (2017)	Yes < 0.0001 (2014) 0.136 (2015) 0.002 (2016) 0.001 (2017)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent EPT (EPT Index)**						
n	5	5	5	5	5	5	5
Mean	19.60	8.09	8.14	23.09	24.69	18.60	17.81
Minimum	5.23	4.14	6.58	13.70	20.26	12.00	12.34
Maximum	41.79	13.08	10.26	29.87	28.42	25.00	26.83
Median	17.47	8.44	7.11	23.94	24.72	19.00	16.02
Standard deviation (n-1)	13.44	3.61	1.87	6.10	2.99	4.72	5.75
Standard error of the mean	6.01	1.61	0.84	2.73	1.34	2.11	2.57
COV (%)	68.57	44.63	23.02	26.43	12.13	25.39	32.26
+50% Mean	29.40	12.14	12.21	34.63	37.03	27.90	26.72
-50% Mean	9.80	4.05	4.07	11.54	12.34	9.30	8.91
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2013)	Yes (2014, 2015)	Yes (2014, 2015)	Yes (2014, 2015)	Yes (2014, 2015)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	N/A	No 0.009 (2013)	No 0.010 (2013)	Yes 0.001 (2014) 0.001 (2015)	Yes 0.0004 (2014) 0.0004 (2015)	No 0.017 (2014) 0.017 (2015)	No 0.026 (2014) 0.027 (2015)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent EPT (EPT Index)**						
n	5	5	5	5	5	5	5
Mean	8.34	5.14	23.62	12.23	34.16	54.20	36.13
Minimum	2.11	0.00	0.00	2.22	0.00	11.00	26.85
Maximum	14.63	10.67	66.67	29.03	67.81	79.00	50.85
Median	8.25	5.83	20.00	5.71	32.81	64.00	31.30
Standard deviation (n-1)	4.43	4.19	26.53	12.34	24.15	26.43	10.10
Standard error of the mean	1.98	1.87	11.87	5.52	10.80	11.82	4.52
COV (%)	53.15	81.38	112.32	100.88	70.68	48.77	27.96
+50% Mean	12.51	7.72	35.43	18.35	51.25	81.30	54.19
-50% Mean	4.17	2.57	11.81	6.12	17.08	27.10	18.06
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2014)	Yes (2013, 2014, 2016)	Yes (all)	Yes (2013-2016)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.517 (2013) 0.241 (2014)	No 0.537 (2014)	No 0.108 (2013) 0.033 (2014) 0.130 (2016)	Yes 0.009 (2013) 0.002 (2014) 0.048 (2015) 0.011 (2016) 0.308 (2017)	No 0.043 (2013) 0.010 (2014) 0.165 (2015) 0.052 (2016)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent EPT (EPT Index)**						
n	5	5	5	5	5	5	5
Mean	66.65	75.29	50.75	62.76	27.07	20.40	25.21
Minimum	0.00	64.89	35.59	50.98	17.51	9.00	16.67
Maximum	87.40	91.14	69.35	78.33	41.67	36.00	32.88
Median	81.93	74.16	46.94	64.04	21.57	16.00	26.32
Standard deviation (n-1)	37.33	10.22	13.06	10.68	10.79	12.38	6.10
Standard error of the mean	16.70	4.57	5.84	4.77	4.83	5.54	2.73
COV (%)	56.01	13.57	25.73	17.01	39.87	60.69	24.19
+50% Mean	99.98	112.94	76.12	94.15	40.60	30.60	37.81
-50% Mean	33.33	37.65	25.37	31.38	13.53	10.20	12.60
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	Yes (2013, 2014, 2016)	Yes (2013-2016)	Yes (2013-2016)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	N/A	N/A	N/A	N/A	Yes 0.001 (2013) 0.0001 (2014) 0.003 (2016)	Yes 0.0002 (2013) < 0.0001 (2014) 0.010 (2015) 0.001 (2016)	Yes 0.001 (2013) < 0.0001 (2014) 0.027 (2015) 0.002 (2016)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent EPT (EPT Index)**					
n	5	5	5	5	5	5
Mean	30.29	13.20	30.99	30.62	11.40	8.15
Minimum	27.44	5.49	20.10	22.22	7.00	5.42
Maximum	34.46	27.59	37.68	38.64	17.00	10.85
Median	28.13	10.92	32.08	31.58	11.00	8.91
Standard deviation (n-1)	3.54	8.72	6.56	7.02	3.65	2.15
Standard error of the mean	1.58	3.90	2.93	3.14	1.63	0.96
COV (%)	11.68	66.02	21.17	22.93	31.99	26.37
+50% Mean	45.44	19.80	46.48	45.93	17.10	12.22
-50% Mean	15.15	6.60	15.49	15.31	5.70	4.07
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2015)	Yes (2015)	Yes (2014, 2016, 2017)	Yes (2014, 2016, 2017)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	N/A	No 0.024 (2014)	No 0.018 (2015)	No 0.020 (2015)	No 0.024 (2014) 0.018 (2016) 0.020 (2017)	Yes 0.002 (2014) 0.001 (2016) 0.002 (2017)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Pisidiidae Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	888.73	753.12	352.03	86.57	0.00	2.80	0.00
Minimum	331.83	259.70	0.00	0.00	0.00	0.00	0.00
Maximum	1125.35	1240.77	750.23	302.98	0.00	14.00	0.00
Median	981.07	649.24	447.25	0.00	0.00	0.00	0.00
Standard deviation (n-1)	325.60	418.20	327.51	133.41	0.00	6.26	0.00
Standard error of the mean	145.61	187.02	146.47	59.66	0.00	2.80	0.00
COV (%)	36.64	55.53	93.03	154.11	-	223.61	-
+50% Mean	1333.10	1129.67	528.05	129.85	0.00	4.20	0.00
-50% Mean	444.37	376.56	176.02	43.28	0.00	1.40	0.00
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (all)	Yes (all)	Yes (all)	Yes (2013-2016, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.184 (2013) 0.259 (2014)	No 0.010 (2013) 0.017 (2014) 0.207 (2015)	Yes 0.001 (2013) 0.001 (2014) 0.036 (2015) 0.407 (2016)	Yes 0.002 (2013) 0.004 (2014) 0.076 (2015) 0.607 (2016) 0.752 (2017)	Yes 0.001 (2013) 0.001 (2014) 0.036 (2015) 0.407 (2016) 0.752 (2018)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Pisidiidae Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1.73	11.54	0.00	23.08	8.66	109.60	233.73
Minimum	0.00	0.00	0.00	0.00	0.00	29.00	72.14
Maximum	8.66	43.28	0.00	57.71	14.43	216.00	620.38
Median	0.00	0.00	0.00	14.43	14.43	101.00	158.70
Standard deviation (n-1)	3.87	18.81	0.00	26.21	7.90	67.88	219.61
Standard error of the mean	1.73	8.41	0.00	11.72	3.53	30.36	98.21
COV (%)	223.61	162.98	-	113.54	91.29	61.94	93.96
+50% Mean	2.60	17.31	0.00	34.63	12.98	164.40	350.59
-50% Mean	0.87	5.77	0.00	11.54	4.33	54.80	116.86
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (all)	Yes (2013, 2015, 2016)	Yes (all)	Yes (all)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.537 (2013)	No 0.782 (2013) 0.371 (2014)	No 0.236 (2013) 0.570 (2014) 0.144 (2015)	No 0.398 (2013) 0.262 (2015) 0.733 (2016)	Yes 0.003 (2013) 0.016 (2014) 0.001 (2015) 0.066 (2016) 0.029 (2017)	Yes 0.001 (2013) 0.004 (2014) 0.0002 (2015) 0.022 (2016) 0.008 (2017) 0.649 (2018)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Pisidiidae Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard error of the mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	-	-	-	-	-	-	-
+50% Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-50% Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)	No (all)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Pisidiidae Density (no. per m²)**					
n	5	5	5	5	5	5
Mean	2.89	0.00	0.00	0.00	0.00	2.89
Minimum	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	14.43	0.00	0.00	0.00	0.00	14.43
Median	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	6.45	0.00	0.00	0.00	0.00	6.45
Standard error of the mean	2.89	0.00	0.00	0.00	0.00	2.89
COV (%)	223.61	-	-	-	-	223.61
+50% Mean	4.33	0.00	0.00	0.00	0.00	4.33
-50% Mean	1.44	0.00	0.00	0.00	0.00	1.44
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2014)	Yes (2014)	Yes (2014)	Yes (2015-2018)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	No 0.198 (2014)	No 0.198 (2014)	No 0.198 (2014)	No 0.198 (2014)	No 0.229 (2015) 0.229 (2016) 0.229 (2017) 0.229 (2018)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Water Depth (m)**						
n	5	5	5	5	5	5	5
Mean	7.42	7.82	5.91	7.00	7.26	6.48	6.87
Minimum	6.30	6.80	5.40	6.20	6.30	4.90	5.33
Maximum	9.10	9.30	6.47	9.40	9.40	8.40	8.63
Median	7.00	7.20	5.90	6.30	6.70	6.00	6.40
Standard deviation (n-1)	1.23	1.19	0.41	1.37	1.29	1.43	1.35
Standard error of the mean	0.55	0.53	0.18	0.61	0.57	0.64	0.60
COV (%)	16.60	15.17	6.90	19.61	17.71	22.13	19.64
+50% Mean	11.13	11.73	8.86	10.50	10.89	9.72	10.30
-50% Mean	3.71	3.91	2.95	3.50	3.63	3.24	3.43
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)	No (all)
Modified Significance Level	0.0024						
Significant Inter-annual Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Water Depth (m)**						
n	5	5	5	5	5	5	5
Mean	6.14	6.02	5.31	5.56	5.28	5.64	4.00
Minimum	5.98	5.10	4.90	4.90	4.50	5.00	3.70
Maximum	6.30	6.47	5.73	6.00	6.20	6.30	4.70
Median	6.16	6.13	5.33	5.70	5.30	5.60	3.80
Standard deviation (n-1)	0.13	0.53	0.30	0.49	0.61	0.47	0.42
Standard error of the mean	0.06	0.24	0.13	0.22	0.27	0.21	0.19
COV (%)	2.12	8.88	5.62	8.87	11.55	8.37	10.61
+50% Mean	9.21	9.03	7.97	8.34	7.92	8.46	6.00
-50% Mean	3.07	3.01	2.66	2.78	2.64	2.82	2.00
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)	No (all)
Modified Significance Level	0.0024						
Significant Inter-annual Difference	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Water Depth (m)**						
n	5	5	5	5	5	5	5
Mean	6.95	6.84	6.33	6.76	6.48	6.64	5.38
Minimum	6.58	6.40	5.90	6.30	5.80	6.10	5.00
Maximum	7.28	7.57	6.77	7.20	6.80	6.80	5.90
Median	7.06	6.83	6.33	6.80	6.70	6.80	5.30
Standard deviation (n-1)	0.33	0.45	0.35	0.45	0.43	0.30	0.33
Standard error of the mean	0.15	0.20	0.16	0.20	0.19	0.14	0.15
COV (%)	4.71	6.61	5.49	6.67	6.67	4.59	6.08
+50% Mean	10.42	10.26	9.50	10.14	9.72	9.96	8.07
-50% Mean	3.47	3.42	3.17	3.38	3.24	3.32	2.69
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)	No (all)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Water Depth (m)**					
n	5	5	5	5	5	5
Mean	9.13	8.84	8.62	9.04	8.86	7.64
Minimum	8.63	8.47	5.80	8.30	8.50	7.40
Maximum	9.53	9.33	9.60	9.70	9.50	8.10
Median	9.17	8.87	9.40	9.10	8.80	7.50
Standard deviation (n-1)	0.32	0.34	1.60	0.53	0.39	0.28
Standard error of the mean	0.14	0.15	0.71	0.24	0.17	0.12
COV (%)	3.54	3.90	18.53	5.83	4.41	3.66
+50% Mean	13.69	13.26	12.93	13.56	13.29	11.46
-50% Mean	4.56	4.42	4.31	4.52	4.43	3.82
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	N/A	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Oligochaeta Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	25.97	28.86	17.31	34.63	43.28	11.60	14.43
Minimum	0.00	0.00	0.00	28.86	0.00	0.00	0.00
Maximum	57.71	57.71	28.86	43.28	100.99	29.00	28.86
Median	28.86	28.86	14.43	28.86	43.28	0.00	14.43
Standard deviation (n-1)	21.40	20.40	12.07	7.90	44.47	15.88	14.43
Standard error of the mean	9.57	9.12	5.40	3.53	19.89	7.10	6.45
COV (%)	82.40	70.71	69.72	22.82	102.74	136.93	100.00
+50% Mean	38.95	43.28	25.97	51.94	64.92	17.40	21.64
-50% Mean	12.98	14.43	8.66	17.31	21.64	5.80	7.21
Benchmark Exceedance (temporal comparison)	-	No	No (both)	Yes (2015)	Yes (2013, 2015)	Yes (2013, 2014, 2016, 2017)	Yes (2016, 2017)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	N/A	N/A	N/A	No 0.116 (2015)	No 0.379 (2013) 0.307 (2015)	No 0.741 (2013) 0.278 (2014) 0.078 (2016) 0.226 (2017)	No 0.024 (2016) 0.087 (2017)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Oligochaeta Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	12.12	8.66	0.00	5.77	28.86	11.60	31.74
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	34.63	28.86	0.00	28.86	115.42	29.00	86.57
Median	8.66	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	14.49	12.90	0.00	12.90	49.98	15.88	43.76
Standard error of the mean	6.48	5.77	0.00	5.77	22.35	7.10	19.57
COV (%)	119.52	149.07	-	223.61	173.21	136.93	137.87
+50% Mean	18.18	12.98	0.00	8.66	43.28	17.40	47.61
-50% Mean	6.06	4.33	0.00	2.89	14.43	5.80	15.87
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2013, 2015)	Yes (all)	Yes (2015-2017)	Yes (2013-2016, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	N/A	N/A	No 0.093 (2013) 0.290 (2014)	No 0.274 (2013) 0.559 (2015)	No 0.798 (2013) 0.715 (2014) 0.155 (2015) 0.402 (2016)	No 0.743 (2013) 0.770 (2014) 0.177 (2015) 0.444 (2016) 0.942 (2017)	No 0.913 (2013) 0.610 (2014) 0.117 (2015) 0.325 (2016) 0.827 (2018)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Oligochaeta Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	13.85	5.77	0.00	2.89	5.77	5.80	5.77
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	34.63	14.43	0.00	14.43	14.43	29.00	14.43
Median	8.66	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	15.73	7.90	0.00	6.45	7.90	12.97	7.90
Standard error of the mean	7.03	3.53	0.00	2.89	3.53	5.80	3.53
COV (%)	113.54	136.93	-	223.61	136.93	223.61	136.93
+50% Mean	20.78	8.66	0.00	4.33	8.66	8.70	8.66
-50% Mean	6.93	2.89	0.00	1.44	2.89	2.90	2.89
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2013, 2015)	Yes (2013, 2015, 2016)	Yes (2013, 2015, 2016)	Yes (2013, 2015, 2016)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	N/A	No 0.441 (2013)	No 0.037 (2013) 0.189 (2014)	No 0.153 (2013) 0.511 (2015)	No 0.441 (2013) 0.189 (2015) 0.511 (2016)	No 0.202 (2013) 0.419 (2015) 0.881 (2016)	No 0.302 (2013) 0.293 (2015) 0.693 (2016)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Oligochaeta Density (no. per m²)**					
n	5	5	5	5	5	5
Mean	11.54	2.89	0.00	0.00	0.00	5.77
Minimum	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	43.28	14.43	0.00	0.00	0.00	28.86
Median	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	18.81	6.45	0.00	0.00	0.00	12.90
Standard error of the mean	8.41	2.89	0.00	0.00	0.00	5.77
COV (%)	162.98	223.61	-	-	-	223.61
+50% Mean	17.31	4.33	0.00	0.00	0.00	8.66
-50% Mean	5.77	1.44	0.00	0.00	0.00	2.89
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2014, 2015)	Yes (2014, 2015)	Yes (2015-2018)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	N/A	No 0.316 (2014)	No 0.064 (2014) 0.395 (2015)	No 0.064 (2014) 0.395 (2015)	No 0.064 (2014) 0.395 (2015)	No 0.927 (2015) 0.346 (2016) 0.346 (2017) 0.346 (2018)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Amphipoda Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1413.90	1584.14	2135.27	1477.38	1638.97	1910.40	1962.14
Minimum	894.51	1211.91	1601.45	1226.34	822.37	1515.00	533.82
Maximum	1918.86	2308.40	2683.52	1745.73	2697.95	2323.00	2871.08
Median	1543.74	1370.61	2192.98	1457.18	1731.30	1775.00	1991.00
Standard deviation (n-1)	493.60	465.99	514.46	195.60	773.36	357.21	904.00
Standard error of the mean	220.75	208.40	230.07	87.47	345.86	159.75	404.28
COV (%)	34.91	29.42	24.09	13.24	47.19	18.70	46.07
+50% Mean	2120.84	2376.21	3202.91	2216.07	2458.45	2865.60	2943.21
-50% Mean	706.95	792.07	1067.64	738.69	819.48	955.20	981.07
Benchmark Exceedance (temporal comparison)	-	No	Yes (2013)	No (all)	No (all)	No (all)	No (all)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	N/A	No 0.057 (2013)	N/A	N/A	N/A	N/A

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Amphipoda Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1.73	20.20	2.89	23.08	2.89	5.60	5.77
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	8.66	43.28	14.43	43.28	14.43	14.00	14.43
Median	0.00	14.43	0.00	28.86	0.00	0.00	0.00
Standard deviation (n-1)	3.87	16.45	6.45	21.88	6.45	7.67	7.90
Standard error of the mean	1.73	7.36	2.89	9.79	2.89	3.43	3.53
COV (%)	223.61	81.44	223.61	94.79	223.61	136.93	136.93
+50% Mean	2.60	30.30	4.33	34.63	4.33	8.40	8.66
-50% Mean	0.87	10.10	1.44	11.54	1.44	2.80	2.89
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2013, 2015)	Yes (2013, 2014, 2016)	Yes (all)	Yes (2013-2017)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.018 (2013)	No 0.821 (2013) 0.033 (2014)	No 0.053 (2013) 0.087 (2015)	No 0.821 (2013) 0.033 (2014) 0.087 (2016)	No 0.625 (2013) 0.062 (2014) 0.794 (2015) 0.148 (2016) 0.794 (2017)	No 0.530 (2013) 0.084 (2014) 0.688 (2015) 0.191 (2016) 0.688 (2017)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Amphipoda Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	79.64	227.95	392.43	222.18	1376.39	1021.60	1136.89
Minimum	0.00	72.14	115.42	86.57	533.82	462.00	721.38
Maximum	129.85	432.83	764.66	331.83	2322.83	1486.00	1587.03
Median	69.25	201.99	432.83	230.84	1110.92	1082.00	908.93
Standard deviation (n-1)	53.85	164.94	265.13	106.80	714.02	423.29	405.18
Standard error of the mean	24.08	73.76	118.57	47.76	319.32	189.30	181.20
COV (%)	67.62	72.36	67.56	48.07	51.88	41.43	35.64
+50% Mean	119.46	341.93	588.64	333.28	2064.58	1532.40	1705.33
-50% Mean	39.82	113.98	196.21	111.09	688.19	510.80	568.44
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2013)	Yes (all)	Yes (2013-2016)	Yes (2013-2016)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.331 (2013)	No 0.081 (2013) 0.440 (2014)	No 0.280 (2013)	Yes 0.0001 (2013) 0.005 (2014) 0.040 (2015) 0.007 (2016)	Yes 0.001 (2013) 0.018 (2014) 0.112 (2015) 0.024 (2016)	Yes 0.0004 (2013) 0.010 (2014) 0.071 (2015) 0.014 (2016)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Amphipoda Density (no. per m²)**					
n	5	5	5	5	5	5
Mean	1688.02	2011.20	1108.03	1393.70	1846.80	1907.32
Minimum	1226.34	706.95	447.25	735.80	1111.00	1457.18
Maximum	2034.28	2871.08	1702.45	2279.55	2409.00	2640.24
Median	1615.88	2005.42	1298.48	995.50	1847.00	1803.44
Standard deviation (n-1)	342.48	895.53	576.51	702.86	471.03	443.56
Standard error of the mean	153.16	400.49	257.82	314.33	210.65	198.37
COV (%)	20.29	44.53	52.03	50.43	25.51	23.26
+50% Mean	2532.03	3016.79	1662.05	2090.55	2770.20	2860.98
-50% Mean	844.01	1005.60	554.02	696.85	923.40	953.66
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	Yes (2016)	Yes (2016)
Modified Significance Level	0.0030					
Significant Inter-annual Difference[1]	N/A	N/A	N/A	N/A	No 0.064 (2016)	No 0.046 (2016)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Gastropoda Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	3921.40	5606.53	92.34	49.05	2.89	0.00	34.63
Minimum	129.85	3505.89	28.86	0.00	0.00	0.00	0.00
Maximum	6982.92	6982.92	201.99	173.13	14.43	0.00	158.70
Median	4068.56	6232.69	86.57	14.43	0.00	0.00	0.00
Standard deviation (n-1)	2691.54	1563.89	65.80	73.28	6.45	0.00	69.64
Standard error of the mean	1203.69	699.39	29.43	32.77	2.89	0.00	31.14
COV (%)	68.64	27.89	71.26	149.39	223.61	0.00	201.13
+50% Mean	5882.10	8409.80	138.50	73.58	4.33	-	51.94
-50% Mean	1960.70	2803.27	46.17	24.53	1.44	0.00	17.31
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2013, 2014)	Yes (all)	Yes (all)	Yes (2013-2015, 2017, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.219 (2013) 0.107 (2014)	No 0.028 (2013) 0.010 (2014)	Yes 0.002 (2013) 0.0004 (2014) 0.056 (2015) 0.347 (2016)	Yes 0.001 (2013) 0.0001 (2014) 0.028 (2015) 0.219 (2016) 0.774 (2017)	Yes 0.008 (2013) 0.002 (2014) 0.151 (2015) 0.632 (2017) 0.444 (2018)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Gastropoda Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	322.02	730.03	8.66	421.28	334.72	106.80	756.00
Minimum	121.19	201.99	0.00	201.99	14.43	72.00	245.27
Maximum	744.46	1630.31	28.86	620.38	1211.91	144.00	1211.91
Median	164.47	490.54	0.00	432.83	115.42	101.00	779.09
Standard deviation (n-1)	265.36	623.61	12.90	155.19	496.38	29.83	418.22
Standard error of the mean	118.67	278.89	5.77	69.40	221.99	13.34	187.04
COV (%)	82.40	85.42	149.07	36.84	148.30	27.93	55.32
+50% Mean	483.03	1095.05	12.98	631.93	502.08	160.20	1134.00
-50% Mean	161.01	365.02	4.33	210.64	167.36	53.40	378.00
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2015)	Yes (2014, 2015)	Yes (all)	Yes (2013, 2015-2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.294 (2013)	Yes 0.015 (2013) 0.001 (2014)	Yes 0.002 (2015)	No 0.119 (2014) 0.056 (2015)	No 0.184 (2013) 0.017 (2014) 0.273 (2015) 0.039 (2016) 0.413 (2017)	Yes 0.165 (2013) 0.0001 (2015) 0.517 (2016) 0.058 (2017) 0.007 (2018)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Gastropoda Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	13.85	8.66	5.77	51.94	63.48	167.20	346.26
Minimum	0.00	0.00	0.00	0.00	14.43	14.00	158.70
Maximum	51.94	43.28	28.86	115.42	115.42	317.00	476.11
Median	8.66	0.00	0.00	14.43	72.14	188.00	418.40
Standard deviation (n-1)	21.73	19.36	12.90	58.25	47.41	135.25	147.84
Standard error of the mean	9.72	8.66	5.77	26.05	21.20	60.49	66.12
COV (%)	156.87	223.61	223.61	112.15	74.69	80.89	42.70
+50% Mean	20.78	12.98	8.66	77.91	95.22	250.80	519.39
-50% Mean	6.93	4.33	2.89	25.97	31.74	83.60	173.13
Benchmark Exceedance (temporal comparison)	-	No	Yes (2013)	Yes (all)	Yes (2013-2015)	Yes (all)	Yes (all)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.616 (2013)	No 0.300 (2013) 0.140 (2014) 0.124 (2015)	No 0.149 (2013) 0.060 (2014) 0.052 (2015)	No 0.036 (2013) 0.011 (2014) 0.009 (2015) 0.286 (2016) 0.510 (2017)	Yes 0.002 (2013) 0.0003 (2014) 0.0002 (2015) 0.033 (2016) 0.084 (2017) 0.286 (2018)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Gastropoda Density (no. per m²)**					
n	5	5	5	5	5	5
Mean	0.00	0.00	5.77	2.89	43.20	155.82
Minimum	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	0.00	0.00	28.86	14.43	173.00	476.11
Median	0.00	0.00	0.00	0.00	14.00	100.99
Standard deviation (n-1)	0.00	0.00	12.90	6.45	73.54	184.59
Standard error of the mean	0.00	0.00	5.77	2.89	32.89	82.55
COV (%)	-	-	223.61	223.61	170.24	118.47
+50% Mean	0.00	0.00	8.66	4.33	64.80	233.73
-50% Mean	0.00	0.00	2.89	1.44	21.60	77.91
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (all)	Yes (all)	Yes (all)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	N/A	No 0.565 (2014) 0.565 (2015)	No 0.595 (2014) 0.595 (2015) 0.965 (2016)	No 0.057 (2014) 0.057 (2015) 0.184 (2016) 0.170 (2017)	Yes 0.003 (2014) 0.003 (2015) 0.017 (2016) 0.015 (2017) 0.288 (2018)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Chironomidae Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	317.41	155.82	461.68	132.73	89.45	124.00	106.76
Minimum	144.28	72.14	245.27	0.00	14.43	72.00	57.71
Maximum	461.68	230.84	591.53	230.84	173.13	202.00	173.13
Median	346.26	158.70	504.96	158.70	86.57	115.00	86.57
Standard deviation (n-1)	134.18	57.17	140.62	84.99	59.84	51.57	49.56
Standard error of the mean	60.01	25.57	62.89	38.01	26.76	23.06	22.16
COV (%)	42.28	36.69	30.46	64.03	66.89	41.59	46.42
+50% Mean	476.11	233.73	692.52	199.10	134.18	186.00	160.15
-50% Mean	158.70	77.91	230.84	66.37	44.73	62.00	53.38
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2014)	Yes (2013, 2015)	Yes (2013, 2015)	Yes (2013, 2015)	Yes (2013, 2015)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.190 (2013)	No 0.030 (2014)	No 0.102 (2013) 0.012 (2015)	Yes 0.009 (2013) 0.001 (2015)	Yes 0.036 (2013) 0.003 (2015)	Yes 0.022 (2013) 0.002 (2015)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Chironomidae Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	657.89	620.38	144.28	100.99	239.50	138.40	279.89
Minimum	363.57	173.13	0.00	0.00	28.86	72.00	86.57
Maximum	1324.45	908.93	288.55	201.99	476.11	202.00	577.10
Median	493.42	721.38	86.57	100.99	245.27	115.00	158.70
Standard deviation (n-1)	391.56	290.17	135.34	77.69	172.11	60.09	208.73
Standard error of the mean	175.11	129.77	60.53	34.75	76.97	26.87	93.35
COV (%)	59.52	46.77	93.81	76.93	71.86	43.42	74.57
+50% Mean	986.84	930.57	216.41	151.49	359.25	207.60	419.84
-50% Mean	328.95	310.19	72.14	50.50	119.75	69.20	139.95
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2013, 2014)	Yes (all)	Yes (2013, 2014)	Yes (2013-2016, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.007 (2013) 0.007 (2014)	Yes 0.002 (2013) 0.002 (2014)	No 0.069 (2013) 0.069 (2014) 0.371 (2015) 0.217 (2016)	No 0.014 (2013) 0.014 (2014)	No 0.108 (2013) 0.108 (2014) 0.266 (2015) 0.147 (2016) 0.387 (2018)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Chironomidae Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	193.91	135.62	230.84	112.53	196.21	193.40	337.60
Minimum	0.00	28.86	100.99	14.43	72.14	87.00	201.99
Maximum	389.54	216.41	317.41	375.12	490.54	260.00	490.54
Median	173.13	173.13	288.55	43.28	158.70	202.00	331.83
Standard deviation (n-1)	141.00	80.72	100.48	149.03	170.28	68.76	102.83
Standard error of the mean	63.06	36.10	44.93	66.65	76.15	30.75	45.99
COV (%)	72.71	59.52	43.53	132.43	86.78	35.55	30.46
+50% Mean	290.86	203.43	346.26	168.80	294.32	290.10	506.41
-50% Mean	96.95	67.81	115.42	56.27	98.11	96.70	168.80
Benchmark Exceedance (temporal comparison)	-	No	Yes (2014)	Yes (2015)	Yes (2016)	Yes (2016)	Yes (2013, 2014, 2016-2018)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	N/A	No 0.225 (2014)	No 0.134 (2015)	No 0.285 (2016)	No 0.301 (2016)	No 0.072 (2013) 0.014 (2014) 0.007 (2016) 0.076 (2017) 0.071 (2018)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Chironomidae Density (no. per m²)**					
n	5	5	5	5	5	5
Mean	227.95	288.55	300.09	219.30	265.40	308.75
Minimum	173.13	187.56	115.42	100.99	130.00	187.56
Maximum	274.12	403.97	706.95	375.12	346.00	461.68
Median	230.84	259.70	245.27	216.41	274.00	317.41
Standard deviation (n-1)	37.34	102.53	236.28	116.05	90.25	106.80
Standard error of the mean	16.70	45.85	105.67	51.90	40.36	47.76
COV (%)	16.38	35.53	78.73	52.92	34.01	34.59
+50% Mean	341.93	432.83	450.14	328.95	398.10	463.12
-50% Mean	113.98	144.28	150.05	109.65	132.70	154.37
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Plecoptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard error of the mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	-	-	-	-	-	-	-
+50% Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-50% Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)	No (all)
Modified Significance Level	N/A						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Plecoptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard error of the mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	-	-	-	-	-	-	-
+50% Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-50% Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)	No (all)
Modified Significance Level	N/A						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Plecoptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Median	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard error of the mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	-	-	-	-	-	-	-
+50% Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-50% Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)	No (all)
Modified Significance Level	N/A						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Plecoptera Density (no. per m²)**					
n	5	5	5	5	5	5
Mean	0.00	0.00	0.00	0.00	0.00	0.00
Minimum	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	0.00	0.00	0.00	0.00	0.00	0.00
Median	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation (n-1)	0.00	0.00	0.00	0.00	0.00	0.00
Standard error of the mean	0.00	0.00	0.00	0.00	0.00	0.00
COV (%)	-	-	-	-	-	-
+50% Mean	0.00	0.00	0.00	0.00	0.00	0.00
-50% Mean	0.00	0.00	0.00	0.00	0.00	0.00
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)
Modified Significance Level	N/A					
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Trichoptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	72.14	46.17	60.60	57.71	184.67	49.20	95.22
Minimum	57.71	0.00	28.86	0.00	28.86	14.00	43.28
Maximum	100.99	86.57	100.99	201.99	403.97	87.00	158.70
Median	57.71	57.71	57.71	28.86	100.99	58.00	115.42
Standard deviation (n-1)	20.40	32.90	27.75	82.25	177.11	28.42	50.60
Standard error of the mean	9.12	14.71	12.41	36.78	79.21	12.71	22.63
COV (%)	28.28	71.26	45.80	142.52	95.91	57.76	53.14
+50% Mean	108.21	69.25	90.89	86.57	277.01	73.80	142.83
-50% Mean	36.07	23.08	30.30	28.86	92.34	24.60	47.61
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	Yes (all)	Yes (2017)	Yes (2014-2016, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	No 0.654 (2013) 0.134 (2014) 0.346 (2015) 0.057 (2016)	No 0.266 (2017)	No 0.118 (2014) 0.315 (2015) 0.050 (2016) 0.240 (2018)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Trichoptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	25.97	20.20	20.20	17.31	14.43	20.00	5.77
Minimum	8.66	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	43.28	57.71	43.28	72.14	28.86	58.00	28.86
Median	25.97	14.43	14.43	0.00	14.43	14.00	0.00
Standard deviation (n-1)	17.31	21.88	16.45	31.28	14.43	22.09	12.90
Standard error of the mean	7.74	9.79	7.36	13.99	6.45	9.88	5.77
COV (%)	66.67	108.33	81.44	180.66	100.00	110.45	223.61
+50% Mean	38.95	30.30	30.30	25.97	21.64	30.00	8.66
-50% Mean	12.98	10.10	10.10	8.66	7.21	10.00	2.89
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	No (all)	No (all)	Yes (all)
Modified Significance Level	N/A						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	N/A	N/A	No 0.046 (2013) 0.110 (2014) 0.085 (2015) 0.457 (2016) 0.229 (2017) 0.248 (2018)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Trichoptera Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	0.00	2.89	0.00	2.89	23.08	8.40	8.66
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	0.00	14.43	0.00	14.43	57.71	14.00	28.86
Median	0.00	0.00	0.00	0.00	14.43	14.00	0.00
Standard deviation (n-1)	0.00	6.45	0.00	6.45	26.21	7.67	12.90
Standard error of the mean	0.00	2.89	0.00	2.89	11.72	3.43	5.77
COV (%)	-	223.61	-	223.61	113.54	91.29	149.07
+50% Mean	0.00	4.33	0.00	4.33	34.63	12.60	12.98
-50% Mean	0.00	1.44	0.00	1.44	11.54	4.20	4.33
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2014)	Yes (2013, 2015)	Yes (all)	Yes (all)	Yes (2013-2017)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.486 (2013)	No 0.486 (2014)	No 0.486 (2013) 0.486 (2015)	No 0.018 (2013) 0.096 (2014) 0.018 (2015) 0.096 (2016)	No 0.104 (2013) 0.353 (2014) 0.104 (2015) 0.353 (2016) 0.462 (2017)	No 0.163 (2013) 0.486 (2014) 0.163 (2015) 0.486 (2016) 0.333 (2017)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Trichoptera Density (no. per m²)**					
n	5	5	5	5	5	5
Mean	0.00	5.77	11.54	23.08	23.00	72.14
Minimum	0.00	0.00	0.00	14.43	0.00	14.43
Maximum	0.00	14.43	28.86	43.28	43.00	216.41
Median	0.00	0.00	14.43	14.43	29.00	28.86
Standard deviation (n-1)	0.00	7.90	12.07	12.90	16.45	83.51
Standard error of the mean	0.00	3.53	5.40	5.77	7.36	37.34
COV (%)	-	136.93	104.58	55.90	71.51	115.76
+50% Mean	0.00	8.66	17.31	34.63	34.50	108.21
-50% Mean	0.00	2.89	5.77	11.54	11.50	36.07
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (all)	Yes (2014-2016)	Yes (all)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	No 0.415 (2014)	No 0.143 (2014) 0.516 (2015)	No 0.007 (2014) 0.061 (2015) 0.221 (2016)	No 0.014 (2014) 0.103 (2015) 0.326 (2016)	Yes 0.002 (2014) 0.019 (2015) 0.091 (2016) 0.643 (2017) 0.481 (2018)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1353.30	689.64	279.89	551.13	588.64	479.20	424.17
Minimum	432.83	375.12	230.84	288.55	346.26	260.00	274.12
Maximum	1688.02	1096.49	403.97	663.67	952.22	592.00	533.82
Median	1615.88	591.53	230.84	634.81	447.25	505.00	490.54
Standard deviation (n-1)	531.71	274.20	76.07	157.52	273.25	133.51	119.23
Standard error of the mean	237.79	122.63	34.02	70.44	122.20	59.71	53.32
COV (%)	39.29	39.76	27.18	28.58	46.42	27.86	28.11
+50% Mean	2029.95	1034.45	419.84	826.70	882.96	718.80	636.25
-50% Mean	676.65	344.82	139.95	275.57	294.32	239.60	212.08
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2013, 2015)	Yes (2013, 2015)	Yes (2013, 2015)	Yes (2013, 2015)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	Yes 0.0002 (2013) 0.005 (2014)	No 0.174 (2013) 0.016 (2015)	No 0.090 (2013) 0.039 (2015)	No 0.045 (2013) 0.079 (2015)	No 0.012 (2013) 0.206 (2015)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	90.03	75.02	20.20	89.45	568.44	623.20	686.75
Minimum	17.31	0.00	0.00	14.43	0.00	58.00	418.40
Maximum	138.50	115.42	43.28	259.70	1428.32	1039.00	1110.92
Median	103.88	100.99	14.43	28.86	302.98	721.00	649.24
Standard deviation (n-1)	46.05	47.19	16.45	106.71	606.52	366.41	289.92
Standard error of the mean	20.59	21.11	7.36	47.72	271.24	163.87	129.66
COV (%)	51.15	62.91	81.44	119.29	106.70	58.80	42.22
+50% Mean	135.04	112.53	30.30	134.18	852.67	934.80	1030.12
-50% Mean	45.01	37.51	10.10	44.73	284.22	311.60	343.37
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2015)	Yes (all)	Yes (2013-2016)	Yes (2013-2016)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.169 (2013) 0.346 (2014)	No 0.354 (2015)	No 0.253 (2013) 0.115 (2014) 0.012 (2015) 0.112 (2016)	Yes 0.095 (2013) 0.036 (2014) 0.002 (2015) 0.034 (2016)	Yes 0.041 (2013) 0.013 (2014) 0.001 (2015) 0.013 (2016)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Density (no. per m²)**						
n	5	5	5	5	5	5	5
Mean	1563.37	1096.49	605.96	657.89	582.87	306.00	608.84
Minimum	0.00	952.22	490.54	331.83	317.41	188.00	461.68
Maximum	2276.66	1240.77	663.67	1082.06	865.65	548.00	793.51
Median	1817.87	1038.78	620.38	678.09	620.38	289.00	591.53
Standard deviation (n-1)	894.76	129.45	68.44	313.71	210.22	144.57	135.88
Standard error of the mean	400.15	57.89	30.61	140.30	94.01	64.65	60.77
COV (%)	57.23	11.81	11.29	47.68	36.07	47.25	22.32
+50% Mean	2345.05	1644.74	908.93	986.84	874.31	459.00	913.26
-50% Mean	781.68	548.25	302.98	328.95	291.44	153.00	304.42
Benchmark Exceedance (temporal comparison)	-	No	Yes (2013)	Yes (2013)	Yes (2013)	Yes (2013, 2014, 2016)	Yes (2013, 2018)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.090 (2013)	No 0.156 (2013)	No 0.069 (2013)	Yes 0.001 (2013) 0.0004 (2014) 0.056 (2016)	No 0.096 (2013) 0.096 (2018)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Density (no. per m²)**					
n	5	5	5	5	5	5
Mean	831.02	288.55	588.64	655.01	265.60	207.76
Minimum	692.52	187.56	375.12	476.11	159.00	158.70
Maximum	966.64	375.12	836.80	851.22	303.00	317.41
Median	851.22	346.26	577.10	692.52	289.00	201.99
Standard deviation (n-1)	115.24	92.94	198.71	155.59	60.78	65.00
Standard error of the mean	51.54	41.57	88.87	69.58	27.18	29.07
COV (%)	13.87	32.21	33.76	23.75	22.89	31.29
+50% Mean	1246.54	432.83	882.96	982.51	398.40	311.63
-50% Mean	415.51	144.28	294.32	327.50	132.80	103.88
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2015)	Yes (2015)	Yes (2014, 2016, 2017)	Yes (2014, 2016, 2017)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	No 0.004 (2014)	No 0.067 (2015)	No 0.034 (2015)	Yes 0.001 (2014) 0.027 (2016) 0.012 (2017)	Yes 0.0002 (2014) 0.007 (2016) 0.003 (2017)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ratio of EPT to Chironomidae**						
n	5	5	5	4	5	5	5
Mean	4.47	4.94	0.64	3.97	11.91	4.47	4.70
Minimum	3.00	2.50	0.39	2.75	3.38	2.25	2.20
Maximum	7.80	8.20	0.94	5.75	31.00	8.20	8.75
Median	3.50	5.09	0.60	3.68	4.67	3.20	3.80
Standard deviation (n-1)	1.99	2.45	0.20	1.31	11.97	2.49	2.60
Standard error of the mean	0.89	1.10	0.09	0.66	5.35	1.12	1.16
COV (%)	44.46	49.56	31.57	33.06	100.54	55.84	55.29
+50% Mean	6.71	7.42	0.97	5.95	17.86	6.70	7.05
-50% Mean	2.24	2.47	0.32	1.98	5.95	2.23	2.35
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2015)	Yes (all)	Yes (2015, 2017)	Yes (2015, 2017)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.009 (2013) 0.007 (2014)	No 0.022 (2015)	Yes 0.357 (2013) 0.409 (2014) 0.0004 (2015) 0.298 (2016)	No 0.019 (2015) 0.240 (2017)	No 0.011 (2015) 0.325 (2017)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ratio of EPT to Chironomidae**						
n	5	4	3	4	5	5	5
Mean	0.15	0.11	0.27	0.94	1.80	4.80	3.12
Minimum	0.05	0.00	0.05	0.10	0.00	0.80	1.93
Maximum	0.24	0.20	0.50	2.25	3.94	10.29	5.00
Median	0.11	0.13	0.25	0.71	1.11	3.57	2.64
Standard deviation (n-1)	0.09	0.08	0.23	1.03	1.62	3.76	1.37
Standard error of the mean	0.04	0.04	0.13	0.51	0.72	1.68	0.61
COV (%)	57.53	72.00	84.55	108.93	89.74	78.31	43.76
+50% Mean	0.22	0.17	0.40	1.42	2.70	7.19	4.69
-50% Mean	0.07	0.06	0.13	0.47	0.90	2.40	1.56
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (all)	Yes (all)	Yes (all)	Yes (2013-2017)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.688 (2013) 0.728 (2014)	No 0.346 (2013) 0.392 (2014) 0.657 (2015)	No 0.095 (2013) 0.125 (2014) 0.296 (2015) 0.528 (2016)	No 0.003 (2013) 0.005 (2014) 0.029 (2015) 0.060 (2016) 0.186 (2017)	No 0.004 (2013) 0.008 (2014) 0.039 (2015) 0.081 (2016) 0.237 (2017)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ratio of EPT to Chironomidae**						
n	4	5	5	5	5	5	5
Mean	8.86	13.48	3.10	12.34	4.21	1.75	2.06
Minimum	5.84	5.67	2.09	2.88	1.76	0.82	0.94
Maximum	11.68	36.00	4.86	26.00	9.20	3.17	3.93
Median	8.95	6.62	2.14	9.50	3.58	1.50	1.86
Standard deviation (n-1)	2.66	12.97	1.37	8.90	2.89	0.94	1.13
Standard error of the mean	1.33	5.80	0.61	3.98	1.29	0.42	0.51
COV (%)	30.08	96.20	44.08	72.12	68.80	53.56	55.17
+50% Mean	13.29	20.22	4.65	18.52	6.31	2.63	3.08
-50% Mean	4.43	6.74	1.55	6.17	2.10	0.88	1.03
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (2015)	Yes (2013, 2014, 2016)	Yes (2013, 2014, 2016, 2017)	Yes (2013, 2014, 2016, 2017)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.988 (2013)	No 0.057 (2013) 0.042 (2014)	No 0.042 (2015)	No 0.109 (2013) 0.086 (2014) 0.086 (2016)	Yes 0.004 (2013) 0.002 (2014) 0.002 (2016) 0.172 (2017)	No 0.005 (2013) 0.003 (2014) 0.003 (2016) 0.204 (2017)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Ratio of EPT to Chironomidae**					
n	5	5	5	5	5	5
Mean	3.72	1.16	2.99	3.48	1.12	0.72
Minimum	2.53	0.46	0.82	1.85	0.69	0.46
Maximum	4.25	2.00	7.25	4.71	2.11	1.08
Median	3.94	0.89	2.36	3.40	0.88	0.69
Standard deviation (n-1)	0.68	0.66	2.52	1.17	0.57	0.26
Standard error of the mean	0.30	0.30	1.13	0.53	0.25	0.12
COV (%)	18.28	57.32	84.25	33.74	50.52	36.06
+50% Mean	5.58	1.74	4.49	5.22	1.68	1.08
-50% Mean	1.86	0.58	1.50	1.74	0.56	0.36
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2015)	Yes (2015)	Yes (2014, 2016, 2017)	Yes (2014, 2016, 2017)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	No 0.011 (2014)	No 0.141 (2015)	No 0.018 (2015)	No 0.015 (2014) 0.172 (2016) 0.024 (2017)	Yes 0.001 (2014) 0.024 (2016) 0.002 (2017)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent Ephemeroptera**						
n	5	5	5	5	5	5	5
Mean	18.52	7.61	6.38	20.55	18.02	16.80	12.91
Minimum	4.53	3.82	3.70	13.01	14.23	11.00	10.39
Maximum	39.29	13.08	9.16	25.00	21.05	22.00	15.25
Median	16.85	7.61	5.33	20.78	18.95	17.00	13.41
Standard deviation (n-1)	12.71	3.79	2.59	4.70	3.28	3.90	2.23
Standard error of the mean	5.68	1.70	1.16	2.10	1.47	1.74	1.00
COV (%)	68.60	49.84	40.62	22.88	18.22	23.21	17.26
+50% Mean	27.79	11.41	9.57	30.82	27.04	25.20	19.37
-50% Mean	9.26	3.80	3.19	10.27	9.01	8.40	6.46
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2013)	Yes (2014, 2015)	Yes (2014, 2015)	Yes (2014, 2015)	Yes (2014, 2015)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.036 (2013)	No 0.019 (2013)	Yes 0.002 (2014) 0.001 (2015)	No 0.007 (2014) 0.003 (2015)	No 0.014 (2014) 0.007 (2015)	No 0.195 (2014) 0.123 (2015)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent Ephemeroptera**						
n	5	5	5	5	5	5	5
Mean	6.18	3.90	0.00	10.38	32.17	52.20	35.96
Minimum	1.05	0.00	0.00	2.22	0.00	9.00	26.85
Maximum	13.41	9.33	0.00	25.81	67.81	79.00	50.85
Median	5.67	2.50	0.00	5.71	29.69	59.00	30.49
Standard deviation (n-1)	4.49	3.76	0.00	10.20	24.50	26.64	10.21
Standard error of the mean	2.01	1.68	0.00	4.56	10.96	11.91	4.56
COV (%)	72.66	96.41	-	98.27	76.15	51.03	28.38
+50% Mean	9.26	5.85	0.00	15.57	48.26	78.30	53.95
-50% Mean	3.09	1.95	0.00	5.19	16.09	26.10	17.98
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (all)	Yes (all)	Yes (all)	Yes (2013-2016)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.114 (2013) 0.210 (2014)	No 0.768 (2013) 0.535 (2014) 0.061 (2015)	No 0.183 (2013) 0.097 (2014) 0.004 (2015) 0.299 (2016)	Yes 0.017 (2013) 0.007 (2014) < 0.0001 (2015) 0.036 (2016) 0.292 (2017)	Yes 0.044 (2013) 0.019 (2014) 0.0003 (2015) 0.085 (2016)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent Ephemeroptera**						
n	5	5	5	5	5	5	5
Mean	66.65	75.07	50.75	62.54	25.77	19.80	24.81
Minimum	0.00	64.89	35.59	50.98	17.51	8.00	16.67
Maximum	87.40	91.14	69.35	78.33	38.89	35.00	32.88
Median	81.93	73.03	46.94	62.92	19.20	16.00	26.32
Standard deviation (n-1)	37.33	10.26	13.06	10.65	10.16	12.52	6.05
Standard error of the mean	16.70	4.59	5.84	4.76	4.54	5.60	2.71
COV (%)	56.01	13.67	25.73	17.04	39.42	63.22	24.40
+50% Mean	99.98	112.60	76.12	93.81	38.65	29.70	37.21
-50% Mean	33.33	37.53	25.37	31.27	12.88	9.90	12.40
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	Yes (2013, 2014, 2016)	Yes (2013-2016)	Yes (2013-2016)
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	Yes 0.001 (2013) 0.0001 (2014) 0.002 (2016)	Yes 0.0002 (2013) < 0.0001 (2014) 0.008 (2015) 0.001 (2016)	Yes 0.001 (2013) < 0.0001 (2014) 0.024 (2015) 0.002 (2016)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent Ephemeroptera**					
n	5	5	5	5	5	5
Mean	30.29	12.85	30.44	29.40	10.60	5.64
Minimum	27.44	5.49	19.60	21.76	7.00	2.83
Maximum	34.46	26.44	37.68	37.12	16.00	9.30
Median	28.13	10.92	32.08	28.95	10.00	5.39
Standard deviation (n-1)	3.54	8.22	6.66	6.57	3.36	2.34
Standard error of the mean	1.58	3.68	2.98	2.94	1.50	1.05
COV (%)	11.68	63.98	21.87	22.34	31.71	41.43
+50% Mean	45.44	19.28	45.65	44.09	15.90	8.47
-50% Mean	15.15	6.43	15.22	14.70	5.30	2.82
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (2015)	Yes (2015)	Yes (2014, 2016, 2017)	Yes (2014-2017)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	No 0.031 (2014)	No 0.022 (2015)	No 0.034 (2015)	No 0.024 (2014) 0.016 (2016) 0.026 (2017)	Yes 0.001 (2014) 0.236 (2015) 0.0005 (2016) 0.001 (2017)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent of Oligochaeta + Chironomidae**						
n	5.00	5.00	5.00	5.00	5.00	5.00	5
Mean	4.53	2.08	13.95	6.91	6.09	5.40	5.87
Minimum	2.09	1.44	8.00	2.05	0.65	2.00	2.26
Maximum	6.33	3.04	17.79	10.29	11.58	10.00	14.63
Median	5.30	1.79	14.65	6.91	6.00	5.00	3.90
Standard deviation (n-1)	1.80	0.68	3.92	3.11	4.32	2.97	5.13
Standard error of the mean	0.81	0.31	1.75	1.39	1.93	1.33	2.29
COV (%)	39.75	32.87	28.09	45.03	70.95	54.93	87.40
+50% Mean	6.79	3.12	20.93	10.36	9.13	8.10	8.80
-50% Mean	2.26	1.04	6.98	3.45	3.04	2.70	2.93
Benchmark Exceedance (temporal comparison)	-	Yes	Yes (both)	Yes (all)	Yes (2014, 2015)	Yes (2014, 2015)	Yes (2014, 2015)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.233 (2013)	Yes 0.009 (2013) 0.0001 (2014)	No 0.337 (2013) 0.031 (2014) 0.097 (2015)	No 0.086 (2014) 0.037 (2015)	No 0.118 (2014) 0.025 (2015)	No 0.111 (2014) 0.027 (2015)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent of Oligochaeta + Chironomidae**						
n	5	5	5	5	5	5	5
Mean	59.88	46.11	62.62	14.55	24.05	15.00	14.29
Minimum	35.40	29.17	0.00	0.00	9.88	8.00	7.19
Maximum	80.93	68.00	95.24	25.00	37.50	22.00	25.19
Median	60.98	42.86	80.00	15.56	28.08	14.00	10.19
Standard deviation (n-1)	20.08	15.74	38.02	9.31	10.83	5.29	7.46
Standard error of the mean	8.98	7.04	17.00	4.17	4.84	2.37	3.33
COV (%)	33.54	34.13	60.71	64.02	45.02	35.28	52.19
+50% Mean	89.82	69.16	93.94	21.82	36.08	22.50	21.43
-50% Mean	29.94	23.05	31.31	7.27	12.03	7.50	7.14
Benchmark Exceedance (temporal comparison)	-	No	No (both)	Yes (all)	Yes (2013, 2015, 2016)	Yes (2013-2015)	Yes (2013-2015)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	N/A	No 0.006 (2013) 0.023 (2014) 0.018 (2015)	No 0.058 (2013) 0.127 (2015) 0.405 (2016)	No 0.005 (2013) 0.021 (2014) 0.016 (2015)	No 0.004 (2013) 0.015 (2014) 0.012 (2015)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent of Oligochaeta + Chironomidae**						
n	5	5	5	5	5	5	5
Mean	8.64	8.93	18.31	8.40	9.21	12.40	14.28
Minimum	0.00	2.53	9.09	1.96	3.85	4.00	7.18
Maximum	14.95	13.19	26.92	19.71	24.31	21.00	18.23
Median	9.06	11.11	16.95	6.74	5.88	12.00	15.29
Standard deviation (n-1)	5.53	4.63	6.76	6.78	8.49	6.11	4.17
Standard error of the mean	2.47	2.07	3.02	3.03	3.80	2.73	1.87
COV (%)	63.98	51.78	36.94	80.71	92.17	49.25	29.23
+50% Mean	12.96	13.40	27.46	12.59	13.82	18.60	21.42
-50% Mean	4.32	4.47	9.15	4.20	4.61	6.20	7.14
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2015)	No (all)	No (all)	Yes (2013, 2014, 2016, 2017)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.020 (2013) 0.025 (2014)	No 0.020 (2015)	N/A	N/A	No 0.156 (2013) 0.186 (2014) 0.156 (2016) 0.203 (2017)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Percent of Oligochaeta + Chironomidae**					
n	5	5	5	5	5	5
Mean	8.71	12.11	15.53	9.29	11.20	11.82
Minimum	7.44	5.46	4.32	7.02	5.00	10.08
Maximum	10.92	16.17	24.62	12.04	16.00	13.77
Median	8.48	12.24	15.94	8.40	11.00	11.82
Standard deviation (n-1)	1.32	4.44	8.29	2.27	4.21	1.67
Standard error of the mean	0.59	1.99	3.71	1.02	1.88	0.74
COV (%)	15.11	36.66	53.36	24.45	37.56	14.09
+50% Mean	13.06	18.16	23.30	13.93	16.80	17.73
-50% Mean	4.35	6.05	7.77	4.64	5.60	5.91
Benchmark Exceedance (temporal comparison)	-	No	Yes (2014)	No (all)	No (all)	No (all)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	N/A	No 0.020 (2014)	N/A	N/A	N/A

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Richness (Family level)**						
n	5	5	5	5	5	5	5
Mean	2.20	2.20	1.00	2.20	3.80	2.00	2.00
Minimum	2.00	1.00	1.00	1.00	2.00	2.00	2.00
Maximum	3.00	3.00	1.00	4.00	5.00	2.00	2.00
Median	2.00	2.00	1.00	2.00	4.00	2.00	2.00
Standard deviation (n-1)	0.45	0.84	0.00	1.10	1.30	0.00	0.00
Standard error of the mean	0.20	0.37	0.00	0.49	0.58	0.00	0.00
COV (%)	20.33	38.03	0.00	49.79	34.31	0.00	0.00
+50% Mean	3.30	3.30	1.50	3.30	5.70	3.00	3.00
-50% Mean	1.10	1.10	0.50	1.10	1.90	1.00	1.00
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2015)	Yes (all)	Yes (2015)	Yes (2015)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	No 0.006 (2013) 0.007 (2014)	No 0.018 (2015)	Yes 0.092 (2013) 0.082 (2014) < 0.0001 (2015) 0.041 (2016)	No 0.020 (2015)	No 0.020 (2015)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Richness (Family level)**						
n	5	5	5	5	5	5	5
Mean	2.60	1.60	0.00	1.40	1.40	1.80	1.20
Minimum	2.00	0.00	0.00	1.00	0.00	1.00	1.00
Maximum	3.00	2.00	0.00	2.00	2.00	2.00	2.00
Median	3.00	2.00	0.00	1.00	2.00	2.00	1.00
Standard deviation (n-1)	0.55	0.89	0.00	0.55	0.89	0.45	0.45
Standard error of the mean	0.24	0.40	0.00	0.24	0.40	0.20	0.20
COV (%)	21.07	55.90	-	39.12	63.89	24.85	37.27
+50% Mean	3.90	2.40	0.00	2.10	2.10	2.70	1.80
-50% Mean	1.30	0.80	0.00	0.70	0.70	0.90	0.60
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (2015)	Yes (2015)	Yes (2015)	Yes (2013, 2015)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	Yes < 0.0001 (2013) 0.007 (2014)	No 0.030 (2013) 0.032 (2015)	No 0.043 (2013) 0.022 (2015)	No 0.003 (2015) 0.411 (2016) 0.500 (2017)	No 0.010 (2013) 0.084 (2015)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Richness (Family level)**						
n	5	5	5	5	5	5	5
Mean	1.00	1.20	1.00	1.20	1.60	1.60	1.40
Minimum	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	2.00	2.00	1.00	2.00	2.00	2.00	2.00
Median	1.00	1.00	1.00	1.00	2.00	2.00	1.00
Standard deviation (n-1)	0.71	0.45	0.00	0.45	0.55	0.55	0.55
Standard error of the mean	0.32	0.20	0.00	0.20	0.24	0.24	0.24
COV (%)	70.71	37.27	0.00	37.27	34.23	34.23	39.12
+50% Mean	1.50	1.80	1.50	1.80	2.40	2.40	2.10
-50% Mean	0.50	0.60	0.50	0.60	0.80	0.80	0.70
Benchmark Exceedance (temporal comparison)	-	No	No (both)	No (all)	Yes (2013, 2015)	Yes (2013, 2015)	No (all)
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	N/A	N/A	N/A	No 0.086 (2013) 0.205 (2014) 0.057 (2015) 0.205 (2016)	No 0.086 (2013) 0.205 (2014) 0.057 (2015) 0.205 (2016)	N/A

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**EPT Richness (Family level)**					
n	5	5	5	5	5	5
Mean	1.00	1.00	1.60	2.20	2.20	2.00
Minimum	1.00	1.00	1.00	2.00	1.00	2.00
Maximum	1.00	1.00	2.00	3.00	4.00	2.00
Median	1.00	1.00	2.00	2.00	2.00	2.00
Standard deviation (n-1)	0.00	0.00	0.55	0.45	1.10	0.00
Standard error of the mean	0.00	0.00	0.24	0.20	0.49	0.00
COV (%)	0.00	0.00	34.23	20.33	49.79	0.00
+50% Mean	1.50	1.50	2.40	3.30	3.30	3.00
-50% Mean	0.50	0.50	0.80	1.10	1.10	1.00
Benchmark Exceedance (temporal comparison)	-	No	Yes (both)	Yes (all)	Yes (2014-2016)	Yes (2014, 2015)
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	N/A	No 0.091 (2014) 0.091 (2015)	Yes 0.002 (2014) 0.002 (2015) 0.147 (2016)	No 0.009 (2014) 0.009 (2015) 0.354 (2016)	No 0.005 (2014) 0.005 (2015)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Organic Carbon (TOC, %)**						
n	5	5	5	5	5	5	5
Mean	1.07	1.28	1.28	2.07	2.07	1.84	1.70
Minimum	1.01	1.10	1.08	1.90	1.99	1.77	1.60
Maximum	1.15	1.34	1.53	2.19	2.21	1.95	1.78
Median	1.05	1.32	1.24	2.13	2.02	1.84	1.70
Standard deviation (n-1)	0.05	0.10	0.16	0.12	0.09	0.07	0.08
Standard error of the mean	0.02	0.05	0.07	0.05	0.04	0.03	0.04
COV (%)	4.99	7.91	12.75	5.81	4.44	3.73	4.78
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.241 (2013)	No 0.362 (2013) 0.793 (2014)	Yes < 0.0001 (2013) 0.003 (2014) 0.001 (2015)	Yes < 0.0001 (2013) 0.003 (2014) 0.001 (2015) 1.00 (2016)	No 0.003 (2013) 0.071 (2014) 0.039 (2015) 0.241 (2016) 0.241 (2017)	No 0.021 (2013) 0.260 (2014) 0.165 (2015) 0.064 (2016) 0.064 (2017) 0.497 (2018)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Organic Carbon (TOC, %)**						
n	5	5	5	4	5	5	5
Mean	1.12	1.47	2.36	3.15	2.04	1.76	2.72
Minimum	0.75	0.77	0.27	2.21	1.27	0.80	1.27
Maximum	1.59	2.43	4.98	5.37	2.80	2.63	6.12
Median	1.16	1.51	2.23	2.50	2.00	1.66	1.95
Standard deviation (n-1)	0.32	0.65	2.02	1.49	0.55	0.73	1.98
Standard error of the mean	0.14	0.29	0.90	0.74	0.24	0.33	0.89
COV (%)	28.18	44.58	85.43	47.37	26.80	41.61	72.88
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.418 (2013)	No 0.127 (2013) 0.475 (2014)	No 0.005 (2013) 0.040 (2014) 0.168 (2015)	No 0.059 (2013) 0.280 (2014) 0.715 (2015) 0.302 (2016)	No 0.162 (2013) 0.557 (2014) 0.899 (2015) 0.134 (2016) 0.622 (2017)	No 0.042 (2013) 0.221 (2014) 0.611 (2015) 0.369 (2016) 0.886 (2017) 0.525 (2018)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Organic Carbon (TOC, %)**						
n	5	5	5	5	5	5	5
Mean	1.24	2.21	1.28	3.44	3.08	2.46	2.20
Minimum	1.11	1.27	1.19	3.25	2.91	2.34	2.14
Maximum	1.36	5.71	1.40	3.53	3.65	2.61	2.30
Median	1.23	1.30	1.22	3.48	2.94	2.43	2.17
Standard deviation (n-1)	0.10	1.96	0.11	0.11	0.32	0.11	0.07
Standard error of the mean	0.04	0.88	0.05	0.05	0.14	0.05	0.03
COV (%)	7.71	88.75	8.23	3.30	10.34	4.31	3.26
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.195 (2013)	No 0.914 (2013) 0.235 (2014)	Yes 0.0001 (2013) 0.012 (2014) 0.0002 (2015)	Yes 0.001 (2013) 0.040 (2014) 0.001 (2015) 0.643 (2016)	No 0.015 (2013) 0.260 (2014) 0.021 (2015) 0.165 (2016) 0.354 (2017)	No 0.099 (2013) 0.723 (2014) 0.123 (2015) 0.031 (2016) 0.090 (2017) 0.440 (2018)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Total Organic Carbon (TOC, %)**					
n	5	5	5	5	5	5
Mean	2.03	2.09	3.82	2.74	2.84	2.57
Minimum	1.88	2.00	3.57	2.29	2.72	2.53
Maximum	2.23	2.22	4.16	3.08	2.94	2.65
Median	2.01	2.09	3.82	3.00	2.85	2.54
Standard deviation (n-1)	0.14	0.08	0.22	0.40	0.08	0.06
Standard error of the mean	0.06	0.04	0.10	0.18	0.04	0.03
COV (%)	6.82	3.99	5.84	14.60	2.78	2.21
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	No 0.774 (2014)	Yes < 0.0001 (2014) < 0.0001 (2015)	No 0.010 (2014) 0.023 (2015) 0.106 (2016)	No 0.006 (2014) 0.014 (2015) 0.151 (2016) 0.857 (2017)	No 0.064 (2014) 0.118 (2015) 0.020 (2016) 0.472 (2017) 0.369 (2018)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Sand (%)**						
n	5	5	5	5	5	5	5
Mean	18.58	18.52	16.18	13.24	15.02	16.26	22.88
Minimum	17.60	14.80	11.90	7.70	10.20	10.70	17.40
Maximum	19.50	24.20	22.10	18.40	17.90	25.40	29.20
Median	19.00	17.70	15.20	13.80	15.70	14.60	23.40
Standard deviation (n-1)	0.83	3.61	4.24	3.97	2.93	5.48	4.32
Standard error of the mean	0.37	1.62	1.90	1.78	1.31	2.45	1.93
COV (%)	4.48	19.51	26.21	30.00	19.48	33.73	18.87
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	No 0.981 (2013)	No 0.347 (2013) 0.335 (2014)	No 0.038 (2013) 0.040 (2014) 0.240 (2015)	No 0.157 (2013) 0.164 (2014) 0.639 (2015) 0.473 (2016)	No 0.351 (2013) 0.364 (2014) 0.974 (2015) 0.227 (2016) 0.616 (2017)	No 0.090 (2013) 0.086 (2014) 0.011 (2015) 0.0005 (2016) 0.003 (2017) 0.011 (2018)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Sand (%)**						
n	5	5	5	5	5	5	5
Mean	2.05	15.17	3.57	12.56	23.32	29.46	27.78
Minimum	1.08	2.18	0.51	2.40	10.80	18.30	14.40
Maximum	3.51	45.20	8.79	33.50	43.80	54.90	41.10
Median	1.90	9.63	3.54	8.90	20.30	22.20	31.80
Standard deviation (n-1)	0.90	17.50	3.35	12.21	12.46	15.00	10.72
Standard error of the mean	0.40	7.83	1.50	5.46	5.57	6.71	4.79
COV (%)	43.99	115.35	93.85	97.20	53.44	50.92	38.60
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.060 (2013)	No 0711 (2013) 0.130 (2014)	No 0.073 (2013) 0.926 (2014) 0.156 (2015)	No 0.003 (2013) 0.294 (2014) 0.010 (2015) 0.254 (2016)	Yes 0.001 (2013) 0.139 (2014) 0.003 (2015) 0.116 (2016) 0.666 (2017)	Yes 0.001 (2013) 0.165 (2014) 0.004 (2015) 0.139 (2016) 0.734 (2017) 0.926 (2018)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Sand (%)**						
n	5	5	5	5	5	5	5
Mean	0.47	0.29	0.90	0.82	0.96	0.50	0.96
Minimum	0.27	0.11	0.61	0.50	0.50	0.50	0.50
Maximum	0.57	0.48	1.43	1.50	1.80	0.50	1.70
Median	0.50	0.29	0.88	0.50	0.50	0.50	0.50
Standard deviation (n-1)	0.12	0.15	0.33	0.46	0.64	0.00	0.63
Standard error of the mean	0.05	0.07	0.15	0.21	0.29	0.00	0.28
COV (%)	24.94	52.13	36.88	56.15	66.54	0.00	65.72
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.095 (2013)	Yes 0.037 (2013) 0.0002 (2014)	No 0.267 (2013) 0.005 (2014) 0.327 (2015)	No 0.193 (2013) 0.003 (2014) 0.431 (2015) 0.847 (2016)	No 0.898 (2013) 0.072 (2014) 0.050 (2015) 0.327 (2016) 0.241 (2017)	No 0.187 (2013) 0.003 (2014) 0.440 (2015) 0.834 (2016) 0.987 (2017) 0.234 (2018)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Sand (%)**					
n	5	5	5	5	5	5
Mean	0.18	0.30	1.22	1.76	0.50	0.50
Minimum	0.11	0.20	0.50	0.50	0.50	0.50
Maximum	0.31	0.38	4.10	4.00	0.50	0.50
Median	0.14	0.28	0.50	0.50	0.50	0.50
Standard deviation (n-1)	0.08	0.07	1.61	1.74	0.00	0.00
Standard error of the mean	0.04	0.03	0.72	0.78	0.00	0.00
COV (%)	46.98	24.48	131.96	99.03	0.00	0.00
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	No 0.500 (2014)	Yes 0.001 (2014) 0.005 (2015)	Yes 0.0002 (2014) 0.002 (2015) 0.751 (2016)	Yes 0.003 (2014) 0.019 (2015) 0.662 (2016) 0.451 (2017)	Yes 0.003 (2014) 0.019 (2015) 0.662 (2016) 0.451 (2017) 1.000 (2018)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Silt (%)**						
n	5	5	5	5	5	5	5
Mean	61.40	53.42	65.82	56.02	64.88	74.88	71.32
Minimum	50.50	50.00	58.70	53.90	53.90	68.10	61.70
Maximum	79.70	56.60	77.70	58.40	75.10	80.50	77.30
Median	55.60	53.50	62.40	56.20	68.90	76.60	72.00
Standard deviation (n-1)	11.69	2.51	8.37	2.05	9.87	5.54	5.88
Standard error of the mean	5.23	1.12	3.74	0.92	4.41	2.48	2.63
COV (%)	19.04	4.70	12.71	3.65	15.21	7.41	8.24
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.143 (2013)	No 0.323 (2013) 0.014 (2014)	No 0.468 (2013) 0.459 (2014) 0.087 (2015)	No 0.666 (2013) 0.058 (2014) 0.579 (2015) 0.247 (2016)	Yes 0.045 (2013) 0.001 (2014) 0.308 (2015) 0.006 (2016) 0.115 (2017)	Yes 0.115 (2013) 0.002 (2014) 0.558 (2015) 0.021 (2016) 0.253 (2017) 0.666 (2018)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Silt (%)**						
n	5	5	5	5	5	5	5
Mean	37.20	50.08	51.14	46.86	46.76	42.16	53.10
Minimum	21.50	30.60	27.20	32.10	34.50	21.90	36.00
Maximum	52.30	61.30	65.60	59.90	58.20	65.80	69.40
Median	40.20	51.80	49.50	50.90	44.00	40.50	53.90
Standard deviation (n-1)	12.84	12.40	15.58	10.76	9.86	17.69	11.85
Standard error of the mean	5.74	5.55	6.97	4.81	4.41	7.91	5.30
COV (%)	34.51	24.77	30.47	22.96	21.09	41.96	22.32
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	No 0.135 (2013)	No 0.107 (2013) 0.900(2014)	No 0.259 (2013) 0.704 (2014) 0.613 (2015)	No 0.263 (2013) 0.695 (2014) 0.605 (2015) 0.991 (2016)	No 0.559 (2013) 0.353 (2014) 0.293 (2015) 0.579 (2016) 0.587 (2017)	No 0.068 (2013) 0.721 (2014) 0.817 (2015) 0.463 (2016) 0.455 (2017) 0.202 (2018)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Silt (%)**						
n	5	5	5	5	5	5	5
Mean	72.48	66.28	89.48	67.62	74.30	82.08	85.22
Minimum	68.10	59.90	77.10	66.70	66.00	72.70	83.30
Maximum	75.70	68.60	98.50	70.10	80.80	88.10	87.50
Median	73.70	67.40	89.50	67.20	74.90	81.30	85.10
Standard deviation (n-1)	3.36	3.61	8.96	1.42	5.79	6.27	1.51
Standard error of the mean	1.50	1.61	4.01	0.64	2.59	2.80	0.67
COV (%)	4.63	5.44	10.01	2.10	7.79	7.64	1.77
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	No 0.064 (2013)	Yes < 0.0001 (2013) < 0.0001 (2014)	Yes 0.143 (2013) 0.681 (2014) < 0.0001 (2015)	Yes 0.577 (2013) 0.019 (2014) < 0.0001 (2015) 0.047 (2016)	Yes 0.006 (2013) < 0.0001 (2014) 0.029 (2015) 0.0001 (2016) 0.023 (2017)	Yes 0.0005 (2013) < 0.0001 (2014) 0.197 (2015) < 0.0001 (2016) 0.002 (2017) 0.338 (2018)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Silt (%)**					
n	5	5	5	5	5	5
Mean	72.66	87.36	60.14	81.36	74.74	83.70
Minimum	66.20	82.30	55.70	69.20	63.20	75.70
Maximum	76.70	94.30	63.60	87.00	84.30	87.90
Median	72.30	85.90	60.60	84.50	78.70	85.70
Standard deviation (n-1)	4.33	4.57	2.84	7.12	10.30	4.92
Standard error of the mean	1.94	2.04	1.27	3.18	4.61	2.20
COV (%)	5.96	5.23	4.72	8.75	13.79	5.88
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	No 0.015 (2014)	Yes 0.151 (2014) 0.0001 (2015)	No 0.161 (2014) 0.298 (2015) 0.005 (2016)	No 0.719 (2014) 0.037 (2015) 0.072 (2016) 0.298 (2017)	Yes 0.062 (2014) 0.565 (2015) 0.001 (2016) 0.641 (2017) 0.131 (2018)

Site (habitat type)	SPLIT (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Clay (%)**						
n	5	5	5	5	5	5	5
Mean	20.00	28.04	17.96	30.74	20.10	8.88	5.80
Minimum	2.72	20.90	10.30	27.60	12.60	4.60	4.50
Maximum	30.40	31.40	24.70	38.40	30.30	17.40	9.00
Median	25.30	28.80	18.80	29.00	14.70	8.80	5.40
Standard deviation (n-1)	10.94	4.16	6.03	4.48	9.07	5.21	1.83
Standard error of the mean	4.89	1.86	2.70	2.00	4.06	2.33	0.82
COV (%)	54.67	14.83	33.56	14.57	45.14	58.62	31.63
Modified Significance Level	0.0024						
Significant Inter-annual Difference[1]	-	No 0.165 (2013)	No 0.781 (2013) 0.096 (2014)	No 0.108 (2013) 0.829 (2014) 0.060 (2015)	No 0.853 (2013) 0.229 (2014) 0.643 (2015) 0.156 (2016)	Yes 0.112 (2013) 0.003 (2014) 0.190 (2015) 0.001 (2016) 0.076 (2017)	Yes 0.050 (2013) 0.001 (2014) 0.093 (2015) 0.0004 (2016) 0.032 (2017) 0.711 (2018)

Site (habitat type)	STL3KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Clay (%)**						
n	5	5	5	5	5	5	5
Mean	60.76	34.76	45.28	40.58	29.96	28.38	19.14
Minimum	46.10	24.20	30.80	33.90	20.30	15.80	13.80
Maximum	75.00	38.60	68.60	47.80	47.60	48.30	28.70
Median	57.60	36.50	42.40	40.20	24.50	26.00	16.20
Standard deviation (n-1)	12.15	6.02	14.91	6.54	11.57	12.11	6.52
Standard error of the mean	5.43	2.69	6.67	2.93	5.17	5.42	2.91
COV (%)	20.00	17.31	32.93	16.13	38.62	42.67	34.05
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	Yes 0.001 (2013)	No 0.027 (2013) 0.124 (2014)	No 0.005 (2013) 0.388 (2014) 0.485 (2015)	Yes < 0.0001 (2013) 0.476 (2014) 0.029 (2015) 0.121 (2016)	Yes < 0.0001 (2013) 0.345 (2014) 0.017 (2015) 0.077 (2016) 0.814 (2017)	Yes < 0.0001 (2013) 0.026 (2014) 0.0005 (2015) 0.003 (2016) 0.114 (2017) 0.175 (2018)

Site (habitat type)	STL11KM (offshore)						
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Clay (%)**						
n	5	5	5	5	5	5	5
Mean	27.04	33.44	9.62	31.46	24.56	17.32	13.74
Minimum	23.70	31.20	0.53	28.50	17.40	11.00	11.00
Maximum	31.70	40.00	22.20	32.80	33.10	26.80	16.20
Median	25.80	32.10	9.66	31.80	23.60	18.20	13.70
Standard deviation (n-1)	3.50	3.69	9.19	1.72	6.08	6.44	1.89
Standard error of the mean	1.57	1.65	4.11	0.77	2.72	2.88	0.85
COV (%)	12.94	11.04	95.57	5.46	24.74	37.21	13.78
Modified Significance Level	0.0020						
Significant Inter-annual Difference[1]	-	No 0.066 (2013)	Yes < 0.0001 (2013) < 0.0001 (2014)	Yes 0.197 (2013) 0.558 (2014) < 0.0001 (2015)	Yes 0.464 (2013) 0.013 (2014) 0.0001 (2015) 0.048 (2016)	Yes 0.007 (2013) < 0.0001 (2014) 0.029 (2015) 0.0002 (2016) 0.039 (2017)	Yes 0.0004 (2013) < 0.0001 (2014) 0.228 (2015) < 0.0001 (2016) 0.003 (2017) 0.293 (2018)

Site (habitat type)	STL25KM (offshore)					
Year	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Metric	**Clay (%)**					
n	5	5	5	5	5	5
Mean	27.14	12.35	38.82	16.88	24.94	16.02
Minimum	23.10	5.36	36.10	12.40	15.50	12.00
Maximum	33.60	17.30	40.20	26.70	36.50	24.00
Median	27.60	13.90	39.30	15.00	20.80	14.10
Standard deviation (n-1)	4.33	4.58	1.59	5.62	10.30	4.86
Standard error of the mean	1.94	2.05	0.71	2.51	4.61	2.17
COV (%)	15.95	37.08	4.10	33.31	41.30	30.33
Modified Significance Level	0.0033					
Significant Inter-annual Difference[1]	-	No 0.013 (2014)	Yes 0.172 (2014) 0.0001 (2015)	Yes 0.098 (2014) 0.409 (2015) 0.003 (2016)	No 0.693 (2014) 0.037 (2015) 0.078 (2016) 0.209 (2017)	Yes 0.057 (2014) 0.565 (2015) 0.001 (2016) 0.801 (2017) 0.131(2018)

1 – due to inclusion of 2019 data, results of statistical comparisons may be different from previous years.