

# TOWN OF TORBAY

## Great Pond Fish and Fish Habitat



### **Town of Torbay**

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**December 10, 2021**

Project Number: TF1969415.2000





DRAFT

**Great Pond Fish and Fish Habitat**

Submitted to:

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## 1.0 INTRODUCTION

The Town of Torbay is currently investigating the possibility of using Great Pond as a future water supply to accommodate increased demand for potable water. Wood Environment & Infrastructure Solutions, a division of Wood Canada Limited (Wood) has been aiding in the investigations since 2019, when water level monitoring began. Water level has been monitored for over two years in the outflow of Great Pond with the objective of determining the long term capacity of Great Pond as a drinking water supply.



**Figure 1-1: Western shoreline of Great Pond, October 2021**

One of the possible public and regulatory issues with developing Great Pond as a water supply is the potential effect on fish and fish habitat. To better quantify the fish and fish habitat in the system, field surveys were completed during August 2021. Data collected throughout the Fish and Fish Habitat surveys will be incorporated into a Request for Project Review from Fisheries and Oceans Canada (DFO), which is part of the permitting phase for the Project. The Request for Project Review is anticipated to be prepared and submitted to DFO in early 2022.



## 2.0 METHODOLOGY

Presented below is a summary of the methodologies employed throughout the Great Pond fish and fish habitat sampling program. All field surveys were completed as per generally accepted techniques in the province of Newfoundland and Labrador (Scruton and Gibson 1995, Sooley et al. 1998, DFO 2012) and Wood Standard Operating Procedures (SOPs). All field staff involved in this program have been conducting similar programs throughout Newfoundland and Labrador for over 15 years.

### 2.1 Sample Areas

Field surveys completed in August 2021 were concentrated in Great Pond, the Great Pond Outflow and Big River downstream of Great Pond (Figure 2-1).

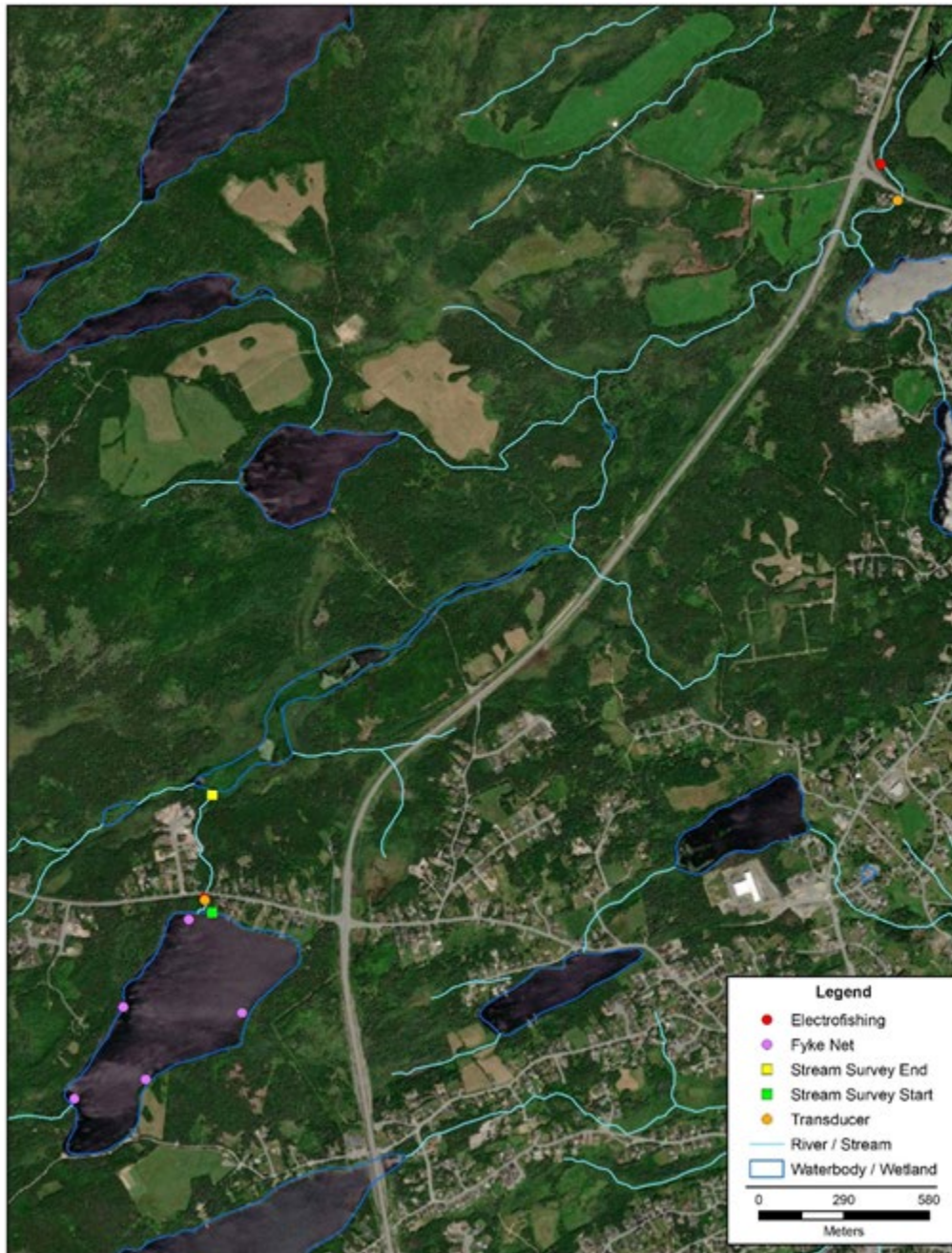
### 2.2 Riverine Habitat Assessment

Riverine habitat was surveyed in 2021 for physical habitat quantification, fish populations and benthic macroinvertebrate abundance and diversity. A summary of the methods used to measure each parameter is presented below.

#### 2.2.1 Stream Surveys

Stream surveys were conducted as part of electrofishing and stream habitat compensation monitoring. The methods used to classify and quantify the aquatic habitat were based on standardized DFO methodologies such as Scruton and Gibson (1995), Sooley et al. (1998) and DFO (2012). Survey data collection consisted of a series of measurements for each habitat reach including:

- ◆ Channel dimensions (channel width, wetted width, ice scour height);
  - ◆ Substrate composition (percentage of each class of substrate found within the stream bed, e.g., cobble, gravel);
  - ◆ Instream features (discharge, water depths and velocity);
  - ◆ Riparian vegetation (dominant species, percent cover, instream woody debris); and
  - ◆ Upstream and downstream photos at each transect.
- ◆ A general habitat description was also used to classify each section of stream with similar habitat features (e.g., pool, riffle, run) and the quantity of each in the surveyed section of the stream.



**Figure 2-1: Great Pond Fish and Fish Habitat Assessment sampling locations**

### 2.2.1 Instream Flow Monitoring

Habitat surveys at the outflow of Great Pond included an elevation survey that can be tied to existing LiDAR data. The elevation survey included a cross section of the base of the outlet river. Measurements were conducted using standard procedures as outlined in Sooley et al. (1998) and McCarthy et al. (2007). Standard measurements such as wetted width, water depth and mean water velocity were recorded across each transect. Depth was recorded using a metre stick while mean velocity will be recorded using a Global Flow Probe (Model 101a). Wood's standard flow equipment provides instantaneous calculation of mean water velocity at an accuracy of +0.01m/s. This data was also be used to calculate discharge rates for each survey transect.

A datalogger was installed at the outlet of Great Pond to conduct continuous flow monitoring. The elevation data collected from the datalogger was calibrated with flow data to create a flow curve.

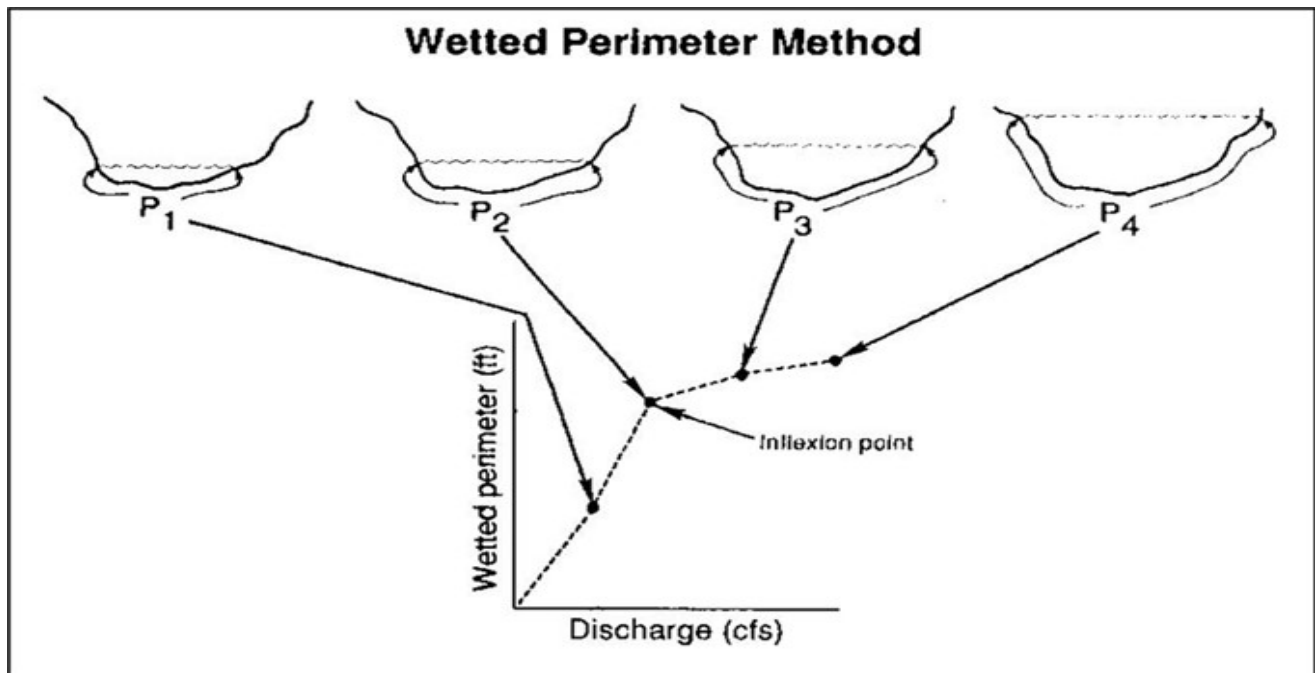
### 2.2.2 Wetted Perimeter Modelling

The Wetted Perimeter Method (WPM) is a fixed flow hydraulic rating method based on the hydraulic relationship between flow (i.e. discharge) and wetted river perimeter at selected transect(s) (Stalnaker et al. 1995). Using the relationship, the flow corresponding to the wetted perimeter (wetted width of the stream transect), which is needed to minimally protect all habitats, can be estimated. Figure 2-2 presents a schematic of a wetted perimeter/flow relationship and indicates the point of inflection for that relationship. The point of inflection is taken as the flow below which dewatering would take place rapidly for the represented habitat. Field surveys typically cover the range of natural flows. Where this is not achievable, Manning's equation can be applied to estimate extreme values. Manning's equation is given by:

$$V = \frac{R^{\frac{2}{3}} \times S^{\frac{1}{2}}}{n}$$

|   |                                          |
|---|------------------------------------------|
| V | Velocity (m/s)                           |
| R | Hydraulic Radius (area/wetted perimeter) |
| S | Slope                                    |
| n | Manning's n (roughness)                  |

The cross-sections, or transects, selected to determine the minimum flow for habitat protection is very important in this technique. The selected transects for assessment must stand as an index habitat for the rest of the river or river section being assessed (Stalnaker et al. 1995). Riffles are typically selected because cross sections in these areas exhibit sensitivity of width, depth and velocity to changes in flow. They are usually the shallowest habitat type found and as such, would indicate adequate water levels needed to protect all habitats. Therefore, once a minimum level of flow is estimated for a riffle, it is assumed that other habitat areas, such as pools and runs, are also satisfactorily protected. Because the shape of the channel can influence the results of the analysis, transects are usually located in areas that are wide, shallow, and rectangular.



**Figure 2-2: Example of wetted perimeter model to estimate instream flows (Nelson 1980)**

### 2.2.3 Fish Population Assessment

Riverine fish populations were sampled using quantitative electrofishing in Great Pond Outflow and Big River (Figure 2-1). Each electrofishing station was blocked off using barrier nets at the upstream and downstream boundaries. The isolated area was then electrofished with a minimum of four sweeps, or until the last sweep had a total catch of less than half of the previous sweep.

#### Population Estimates

Abundance and biomass estimates were calculated using the Zippen removal method using the FSA package (Ogle et al. 2019) for R (R Core Team 2019). This approach was applied to abundance and biomass of all species combined, and then estimates were calculated based on the proportion of the total catch for each species. This approach helps to overcome any issues associated with low catch rates of some species.

#### Fish Biometrics

Each fish captured during electrofishing was processed following the completion of each sweep. Processing included:

- ◆ Identification to species;
- ◆ Measuring to nearest millimeter; and,



- ◆ Weighing to nearest 0.1 gram.

Length (L) and weight (W) data was then used to calculate Fulton's Condition Factor (K; Peterson and Harmon 2005), which is length-weight relationship:

$$K = \frac{(W \times 10^5)}{L^3}$$

Smaller fish often have errors associated with the calculation of condition factors. Likewise, instrument error can also affect the data. In order to account for this, two conditions were considered;

- ◆ Fish smaller than 80mm in length were removed from estimates of fish condition as slight errors in the weights of these individuals could skew the estimates.
- ◆ Ranges were calculated using three standard deviations of the mean for each species and values outside of the calculated range were removed from further analysis as they most likely included errors in length and/or weight measures. This was completed separately for each species in order to account for varying body types.



**Figure 2-3: Sonar Equipment used in Great Pond, June 2020**

has been recorded at being less than one metre. The error associated with sonar depth detection has been given as 1 centimetre (cm); however, weather conditions such as wave height and variable water temperatures can also affect this slightly.

Quality assurance/quality control (QA/QC) was conducted on all data collected with respect to validity (e.g., positional data and/or depth data acquired) prior to contour generation. Water surface elevation was recorded before and after surveys to better tie generated contours to elevation datum. Final contours were completed and assessed using GIS to provide a bathymetric contour of the study area.

## 2.3 Lacustrine Habitat Assessment

All sampling was completed using standard fish and fish habitat monitoring methods (DFO n.d., Bradbury et al. 2001), and followed Wood SOPs.

### 2.3.1 Bathymetric Surveys

The bathymetric survey was conducted using a differential GPS sonar unit attached to a Zodiac style inflatable boat (Figure 2-3). The unit links GPS and sonar technology in a digital environment so that depths and location (differential GPS) are digitally mapped.

The Lowrance sonar/GPS unit was set up in the field to collect combined positional and depth data once every second. The boat was generally moving at a rate of less than 2 metres per second (m/s) for optimal coverage. The unit has been tested using known survey pin locations for positional accuracy and

### **2.3.2 Fish Population Assessment**

A total of 15 fyke net-nights were completed in the Great Pond between August 11-13, 2021. Fyke nets were fished for a minimum of 16 hours, which covered the dawn and dusk periods when fish are most active. All fish captured were marked with a small clip on the top of the caudal fin to identify recaptures. All fish were live released near the capture area, and during subsequent net checks, any recaptures were weighed, measured and noted as a recapture (see Section 2.2.4). Population estimates and confidence intervals were calculated using the Schnabel multiple mark-recapture method (Ricker 1977, Ogle 2016).

## 3.0 RESULTS

Fish and fish habitat was assessed in Great Pond, Great Pond Outflow and Big River during the summer of 2021.

### 3.1 Riverine Habitat Assessment

Habitat surveys, instream flow monitoring and fish populations were monitored in riverine habitats downstream of Great Pond. A summary of the results is provided below.

#### 3.1.1 Stream Surveys

In total, Great Pond Outflow was 484 m in length, with 17.4 habitat units (one unit = 100 m<sup>2</sup>). A summary of the habitat throughout Great Pond Outflow is presented in Table 3-1. The majority of the habitat present is classified as riffle (eight of 15 reaches), which is typically considered good salmonid rearing habitat (Grant and Lee 2004). There was also migratory habitat present in the form of cascades (three reaches) and rapids (one reach). Run (two reaches) and pool (one reach) made up the remaining habitat types. Overall, cobble, bedrock and rubble made up the majority of the substrate present throughout Great Pond Outflow. Gravel, used for Brook Trout spawning, was observed in low quantities, typically less than 20% coverage, with the exceptions of Reaches 5, 6 and 15, which had coverages ranging from 25% to 50%.

Stream survey data is presented in Appendix A, while representative photographs of each reach are presented in Appendix B.

#### 3.1.1 Instream Flow Monitoring

Pressure transducers were installed at the outflow of Great Pond (Figure 3-1), immediately downstream of Great Pond, and have been collecting data continuously since December 2019. One transducer is located in the stream, and measures water temperature and pressure, while a second sensor is located nearby to measure air pressure. This is used to calculate the depth of the transducer. During regular downloads, discharge transects (that measure flow rates in the stream) are also completed in order to develop a regression to estimate discharge based on water depth (Figure 3-2).

Using the water level-discharge relationship, discharge was calculated throughout the period December 2019 to early January 2021 (Figure 3-3 and Table 3-2). Figure 3-3 also presents the prorated discharge based on the gauging station in Northeast Pond River (Station # 02ZM006). Both methods of discharge estimation produced similar mean annual discharges.



**Figure 3-1: Pressure transducer installed in Great Pond Outflow**

**Table 3-1: Summary of habitat surveys completed in Great Pond Outflow, August 2021**

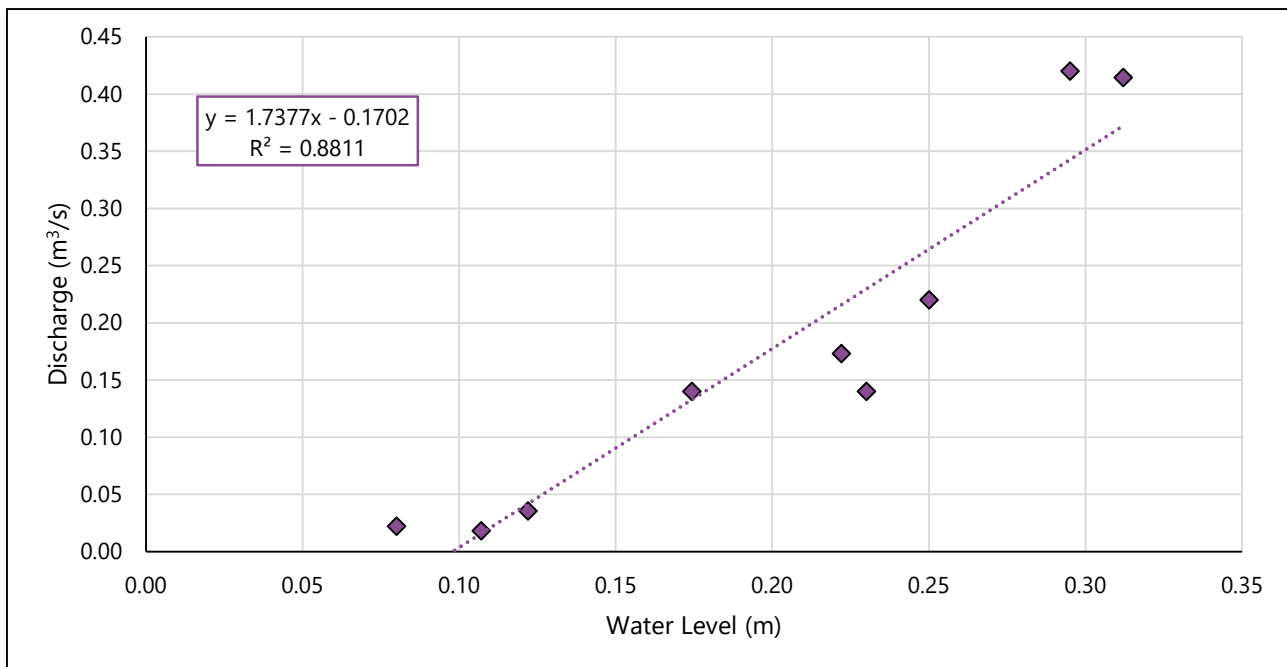
| Transect # | Section Length (m) | Wetted Width (m) | Channel Width (m) | Area (Units) | Depth (m) |         | Veolocity (m/s) |         | Substrate Composition (%)* |     |     |    |    |    |   |    |    |    |   |     |         | Habitat Classification | Dominant Riparian Vegetation |
|------------|--------------------|------------------|-------------------|--------------|-----------|---------|-----------------|---------|----------------------------|-----|-----|----|----|----|---|----|----|----|---|-----|---------|------------------------|------------------------------|
|            |                    |                  |                   |              | Average   | Maximum | Average         | Maximum | B                          | LgB | SmB | R  | C  | G  | S | St | Cl | D  | M | AqV |         |                        |                              |
| 1          | -                  | 2.9              | 3.8               | -            | 0.08      | 0.13    | 0.06            | 0.11    | 0                          | 0   | 10  | 40 | 40 | 10 | 0 | 0  | 0  | 0  | 0 | 0   | Riffle  | Grass                  |                              |
| 2          | 31                 | 3.8              | 5.6               | 1.18         | 0.05      | 0.10    | 0.10            | 0.35    | 0                          | 0   | 10  | 30 | 50 | 10 | 0 | 0  | 0  | 0  | 0 | 0   | Riffle  | Grass                  |                              |
| 3          | 33                 | 3.4              | 4.6               | 1.12         | 0.08      | 0.16    | 0.02            | 0.09    | 0                          | 0   | 15  | 35 | 40 | 10 | 0 | 0  | 0  | 0  | 0 | 0   | Riffle  | Grass                  |                              |
| 4          | 25                 | 3.5              | 4.1               | 0.88         | 0.10      | 0.13    | 0.05            | 0.16    | 0                          | 0   | 5   | 35 | 50 | 10 | 0 | 0  | 0  | 0  | 0 | 0   | Riffle  | Shrub                  |                              |
| 5          | 25                 | 3.7              | 5.5               | 0.93         | 0.06      | 0.10    | 0.07            | 0.22    | 0                          | 0   | 5   | 10 | 35 | 50 | 0 | 0  | 0  | 0  | 0 | 0   | Riffle  | Conifer                |                              |
| 6          | 45                 | 5.5              | 6.2               | 2.48         | 0.15      | 0.22    | 0.00            | 0.00    | 0                          | 0   | 10  | 15 | 40 | 35 | 0 | 0  | 0  | 0  | 0 | 0   | Riffle  | Shrub                  |                              |
| 7          | 40                 | 2.4              | 3.2               | 0.96         | 0.06      | 0.14    | 0.20            | 0.38    | 25                         | 10  | 15  | 20 | 25 | 5  | 0 | 0  | 0  | 0  | 0 | 0   | Riffle  | Conifer                |                              |
| 8          | 25                 | 3.7              | 4.8               | 0.93         | 0.23      | 0.44    | 0.00            | 0.00    | 5                          | 0   | 5   | 20 | 40 | 20 | 5 | 5  | 0  | 0  | 0 | 0   | Pool    | Conifer                |                              |
| 9          | 3                  | -                | -                 | -            | -         | 0.00    | -               | 0.00    | 100                        | 0   | 0   | 0  | 0  | 0  | 0 | 0  | 0  | 0  | 0 | 0   | Cascade | -                      |                              |
| 10         | 65                 | 3.3              | 4.2               | 2.15         | 0.06      | 0.12    | 0.11            | 0.60    | 10                         | 15  | 25  | 30 | 20 | 0  | 0 | 0  | 0  | 0  | 0 | 0   | Rapids  | Conifer                |                              |
| 11         | 17                 | 3.4              | 4.7               | 0.58         | 0.10      | 0.24    | 0.06            | 0.28    | 80                         | 5   | 10  | 5  | 0  | 0  | 0 | 0  | 0  | 0  | 0 | 0   | Cascade | Conifer                |                              |
| 12         | 10                 | 5.4              | 5.9               | 0.54         | 0.31      | 0.80    | 0.00            | 0.00    | 65                         | 0   | 10  | 10 | 0  | 10 | 0 | 0  | 0  | 5  | 0 | 0   | Run     | Grass                  |                              |
| 13         | 30                 | 4.0              | 4.7               | 1.20         | 0.13      | 0.23    | 0.01            | 0.05    | 75                         | 0   | 5   | 10 | 10 | 0  | 0 | 0  | 0  | 0  | 0 | 0   | Cascade | Conifer                |                              |
| 14         | 95                 | 3.7              | 5.0               | 3.52         | 0.09      | 0.15    | 0.04            | 0.09    | 0                          | 5   | 20  | 20 | 40 | 15 | 0 | 0  | 0  | 0  | 0 | 0   | Riffle  | Conifer                |                              |
| 15         | 25                 | 3.5              | 4.0               | 0.88         | 0.30      | 0.48    | 0.01            | 0.05    | 0                          | 0   | 0   | 0  | 35 | 25 | 0 | 20 | 0  | 20 | 0 | 0   | Run     | Grass                  |                              |

Note: Bolder lines indicate transects selected for Wetted Perimeter Modelling

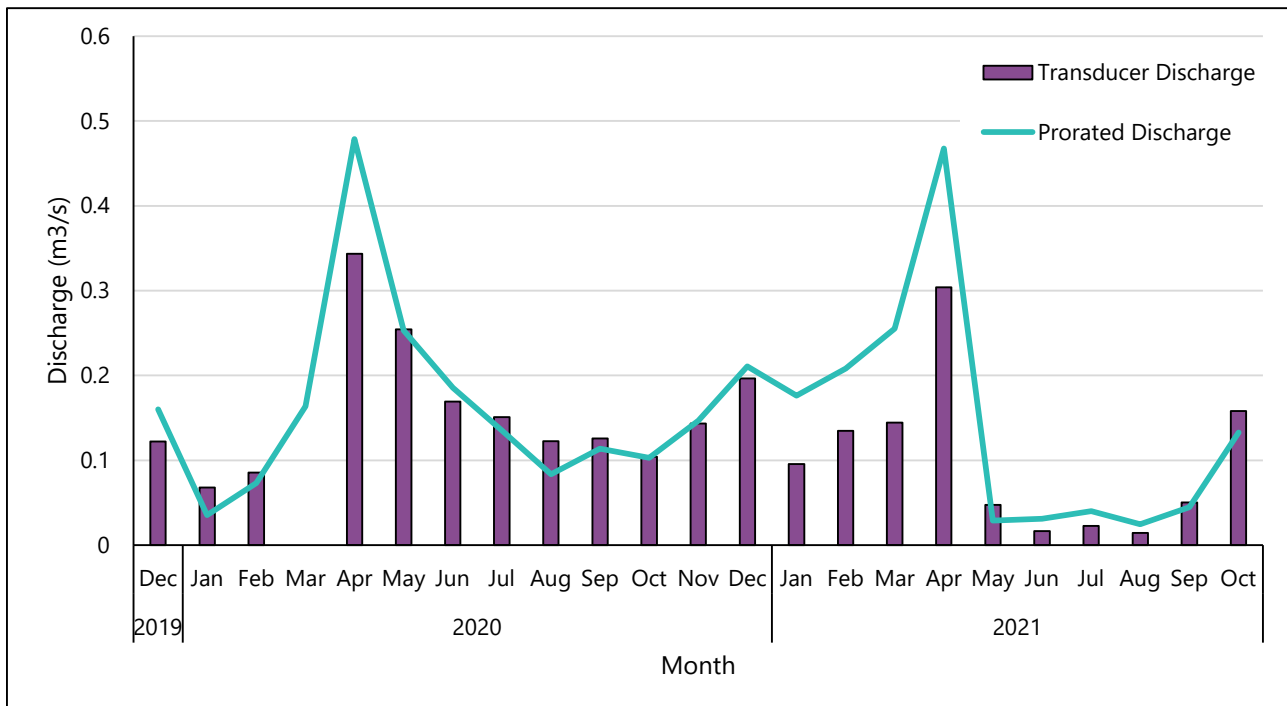
Substrate

|     |                |    |        |     |                    |
|-----|----------------|----|--------|-----|--------------------|
| B   | Bedrock        | C  | Cobble | Cl  | Clay               |
| LgB | Larger Boulder | G  | Gravel | D   | Detritus           |
| SmB | Small Boulder  | S  | Sand   | M   | Mud                |
| R   | Rubble         | St | Silt   | AqV | Aquatic Vegetation |





**Figure 3-2: Discharge-water level relationship for Great Pond Outflow**



**Figure 3-3: Hydrograph for Great Pond Outflow, December 2019-October 2021**

**Table 3-2: Summary of estimated discharge from Great Pond, 2020-2021**

| Month            | 2020       |                    | 2021       |                    |
|------------------|------------|--------------------|------------|--------------------|
|                  | Transducer | Prorated Hydrology | Transducer | Prorated Hydrology |
| January          | 0.07       | 0.04               | 0.10       | 0.18               |
| February         | 0.09       | 0.07               | 0.13       | 0.21               |
| March            | -          | 0.16               | 0.14       | 0.26               |
| April            | 0.34       | 0.48               | 0.30       | 0.47               |
| May              | 0.25       | 0.25               | 0.05       | 0.03               |
| June             | 0.17       | 0.19               | 0.02       | 0.03               |
| July             | 0.15       | 0.14               | 0.02       | 0.04               |
| August           | 0.12       | 0.08               | 0.01       | 0.02               |
| September        | 0.13       | 0.11               | 0.05       | 0.04               |
| October          | 0.10       | 0.10               | 0.16       | 0.13               |
| November         | 0.14       | 0.15               | -          | -                  |
| December         | 0.20       | 0.21               | -          | -                  |
| Mean Annual Flow | 0.15       | 0.17               | 0.10       | 0.14               |

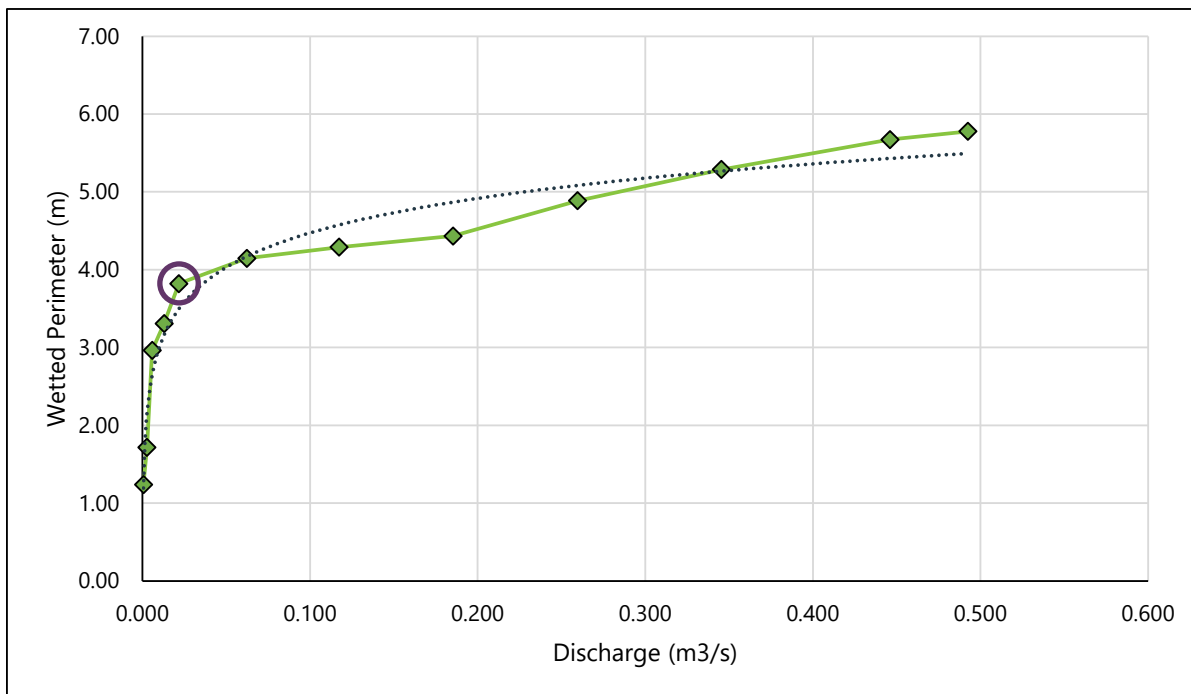
Note At time of preparation, only data up to October 22, 2021 was available

### 3.1.2 Wetted Perimeter Modelling

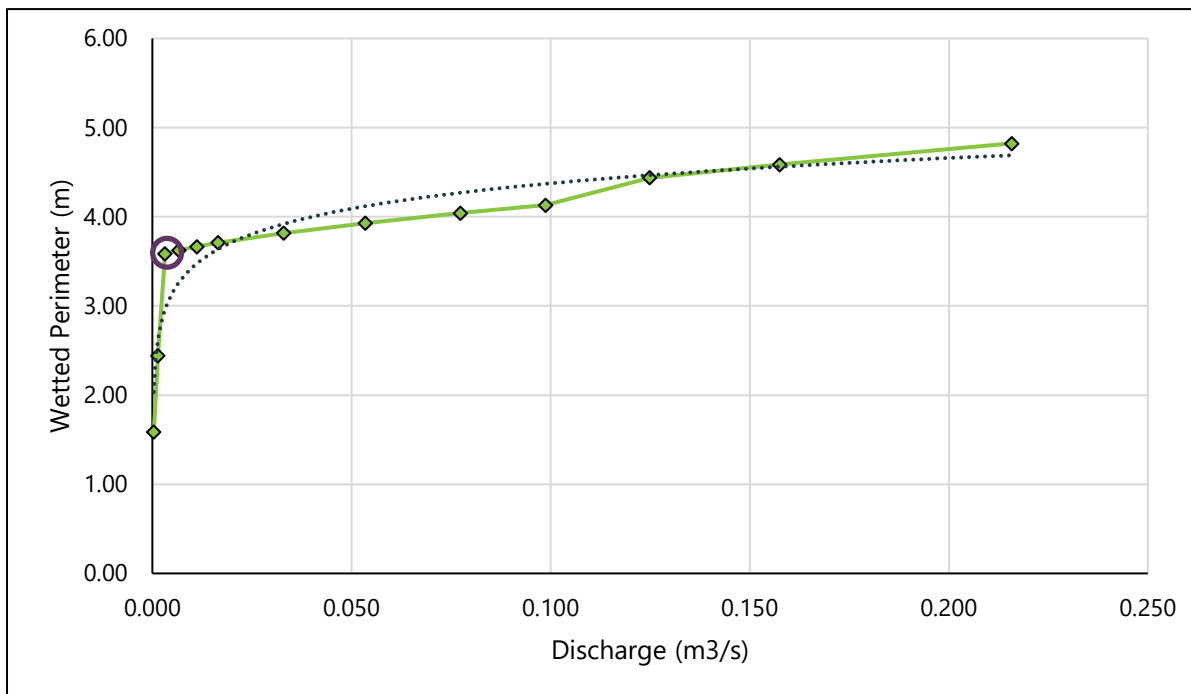
Wetted Perimeter Models (WPM) were completed for four representative transects; T2, T4, T5 and T14 (Table 3-3 and Figures 3-4 through 3-7). A model was also developed for T12, however, it was deemed to be an unsuitable location (i.e. channel shape and measured conditions did not result in an inflection point being determined). This location has not been included in any further summaries. Inflection point discharges ranged from 0.003-0.043 m<sup>3</sup>/s, with a mean inflection point discharge of 0.020m<sup>3</sup>/s (Table 3-3).

**Table 3-3: Summary of wetted perimeter models from Great Pond Outflow**

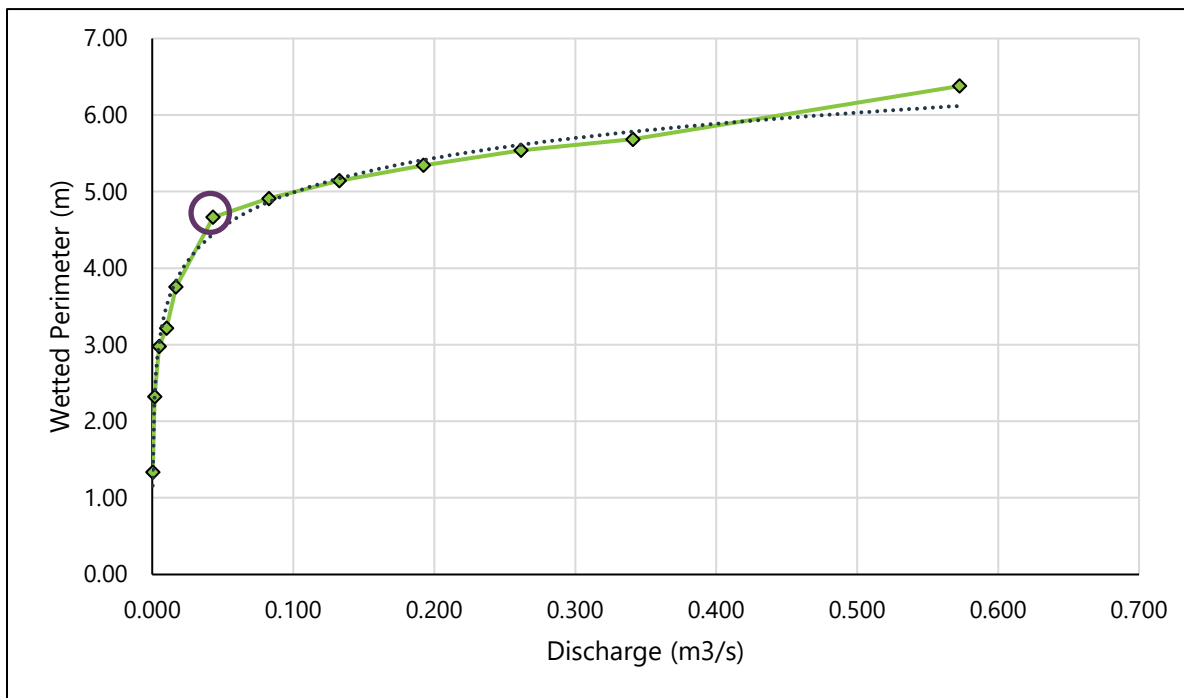
| Transect # | Measured  |                               | Inflection Point |                               |
|------------|-----------|-------------------------------|------------------|-------------------------------|
|            | Perimeter | Discharge (m <sup>3</sup> /s) | Perimeter        | Discharge (m <sup>3</sup> /s) |
| 2          | 3.82      | 0.022                         | 3.82             | 0.022                         |
| 4          | 3.71      | 0.017                         | 3.59             | 0.003                         |
| 5          | 3.75      | 0.017                         | 4.67             | 0.043                         |
| 14         | 3.77      | 0.015                         | 3.73             | 0.010                         |
| Mean       | -         | 0.018                         | -                | 0.020                         |



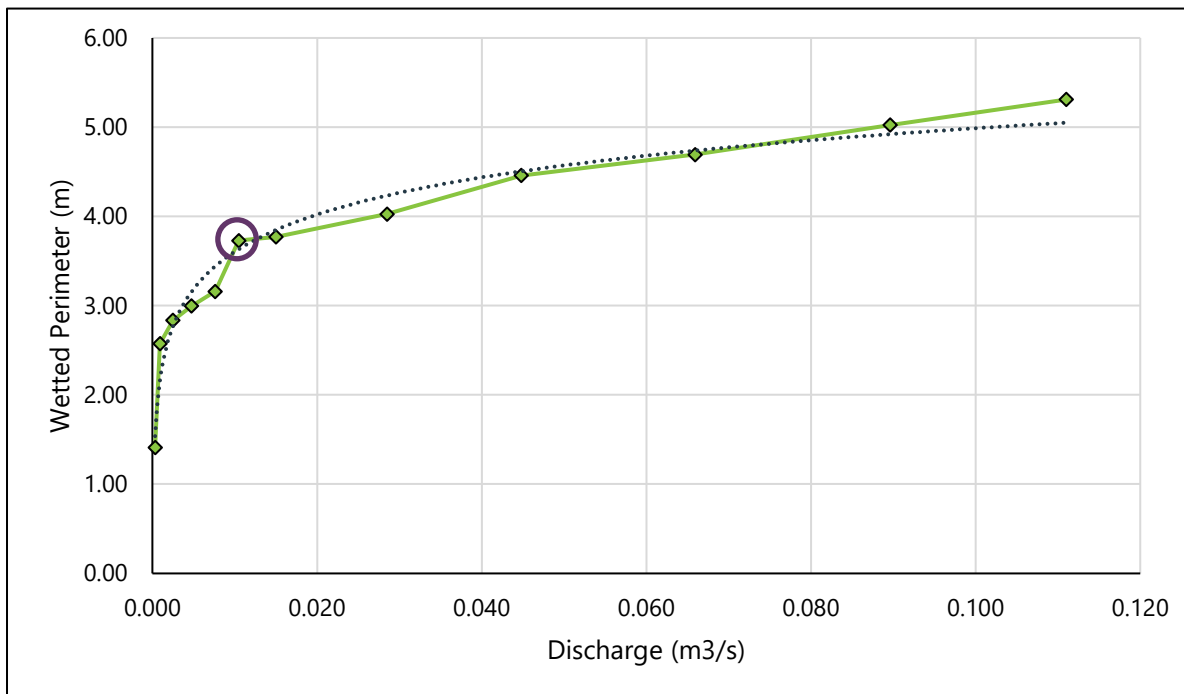
**Figure 3-4: Wetted perimeter model for T2, inflection point circled**



**Figure 3-5: Wetted perimeter model for T4, inflection point circled**



**Figure 3-6: Wetted perimeter model for T5, inflection point circled**



**Figure 3-7: Wetted perimeter model for T14, inflection point circled**

### 3.1.3 Fish Population Assessment

Two quantitative electrofishing stations were completed in Great Pond Outflow and Big River, downstream of Great Pond Outflow, during August 2021. Brook Trout (*Salvelinus fontinalis*), Rainbow Trout (*Oncorhynchus mykiss*) and Threespine Stickleback (*Gasterosteus aculeatus*) were captured in each location, with Brook Trout being the most abundant (Table 3-4).

**Table 3-4: Summary of population and biomass estimates in the Great Pond Outflow and Big River, August 2021**

| Location           | Species                | Population Estimate<br>(fish/habitat unit) |            |      | Biomass Estimate<br>(grams/habitat unit) |            |       |
|--------------------|------------------------|--------------------------------------------|------------|------|------------------------------------------|------------|-------|
|                    |                        | Station #1                                 | Station #2 | Mean | Station #1                               | Station #2 | Mean  |
| Great Pond Outflow | Brook Trout            | 59.5                                       | 25.3       | 42.4 | 207.7                                    | 117.4      | 162.6 |
|                    | Rainbow Trout          | 2.6                                        | 14.2       | 8.4  | 4.3                                      | 70.9       | 37.7  |
|                    | Threespine Stickleback | 38.8                                       | 35.5       | 37.2 | 37.1                                     | 85.2       | 61.2  |
| Big River          | Brook Trout            | 12.1                                       | 14.5       | 13.3 | 190.3                                    | 321.3      | 255.8 |
|                    | Rainbow Trout          | 26.8                                       | 24.2       | 25.5 | 382.9                                    | 609.8      | 496.4 |
|                    | Threespine Stickleback | 14.7                                       | 14.5       | 14.6 | 7.5                                      | 8.2        | 7.8   |

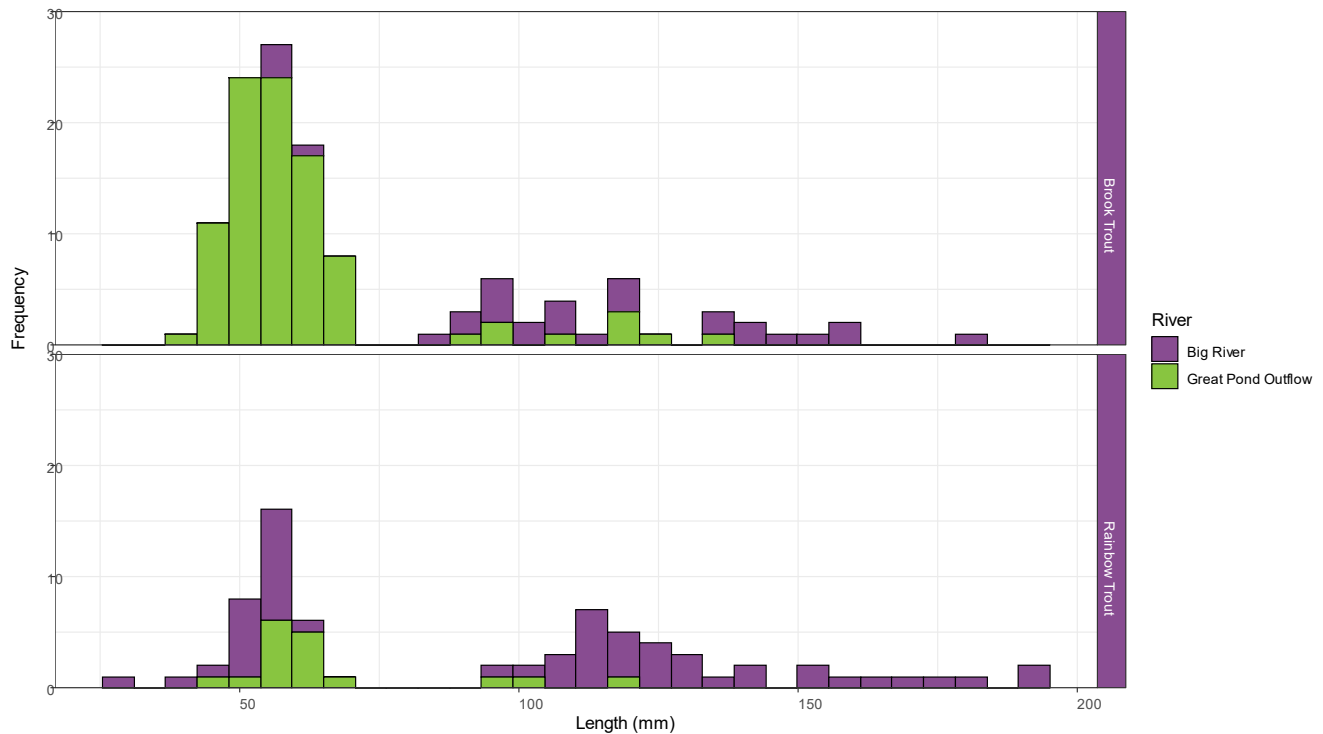
Overall, Brook Trout and Rainbow Trout were larger in Big River than Great Pond Outflow (Table 3-5). On average, salmonids in each sampling location were in good condition ( $K \geq 1.00$ ). Rainbow Trout had similar condition in each location ( $p = 0.90$ ), while Brook Trout had higher condition in Great Pond Outflow ( $p < 0.05$ ). The majority of the Brook Trout captured in Great Pond Outflow were young-of-year (YOY; Figure 3-8) indicating that this area may primarily be used for spawning and rearing. Brook Trout spawning behaviour was observed in Great Pond Outflow, primarily downstream of Bauline Line during field surveys in October 2021.

Electrofishing data is presented in Appendix C.

**Table 3-5: Summary of biometrics in Great Pond Outflow and Big River, August 2021**

| Location           | Species                | Mean Length (mm) | Mean Weight (g) | Mean Condition (K) |
|--------------------|------------------------|------------------|-----------------|--------------------|
| Great Pond Outflow | Brook Trout            | 61.0             | 3.8             | 1.29 (9)           |
|                    | Rainbow Trout          | 66.4             | 4.6             | 1.27 (3)           |
|                    | Threespine Stickleback | 63.0             | 1.6             | -                  |
| Big River          | Brook Trout            | 111.7            | 19.5            | 1.10 (24)          |
|                    | Rainbow Trout          | 102.1            | 19.6            | 1.16 (33)          |
|                    | Threespine Stickleback | 32.8             | 0.6             | -                  |

Note Number of fish included in condition factor (as per section 2.2.4) summaries presented in brackets.



**Figure 3-8: Length distributions of salmonids from Great Pond Outflow and Big River, August 2021**



## **3.2 Lacustrine Habitat Assessment**

Lacustrine habitats surveys were completed in Great Pond with bathymetric surveys being completed in June 2020, and fish surveys completed in August 2021. A summary of the results is presented below.

### **3.2.1 Bathymetric Surveys**

A bathymetric survey of Great Pond was completed by Wood staff on June 5, 2020 (Figure 3-9) to support the development of a geo-referenced bathymetric contour map of the water supply. At the time of the bathymetric survey (June 5, 2020), the measured water surface elevation was 117.75 m. The lowest measured elevation at the bottom of the pond was 109.6 m, resulting in a maximum water depth at the time of survey of approximately 8.2 m. The deepest portion of the pond is in the northwest corner, which will be beneficial if any future intake is to be sited near the outlet of the pond.

### **3.2.1 Fish Population Assessment**

Brook Trout and Threespine Stickleback were the only species captured, with Stickleback accounting for most of the total catch and total biomass (Table 3-6). Due to the quantities of Stickleback captured, total catch was estimated based on total biomass and mean weight per individual. All Brook Trout captured were marked with a small fin clip on the top caudal fin to identify any recaptured fish. Throughout the netting, there were no recaptures observed. Therefore, to calculate a population estimate, a single recapture was assumed, yielding a population estimate of 575 Brook Trout (95% Confidence Interval 175-1,122).

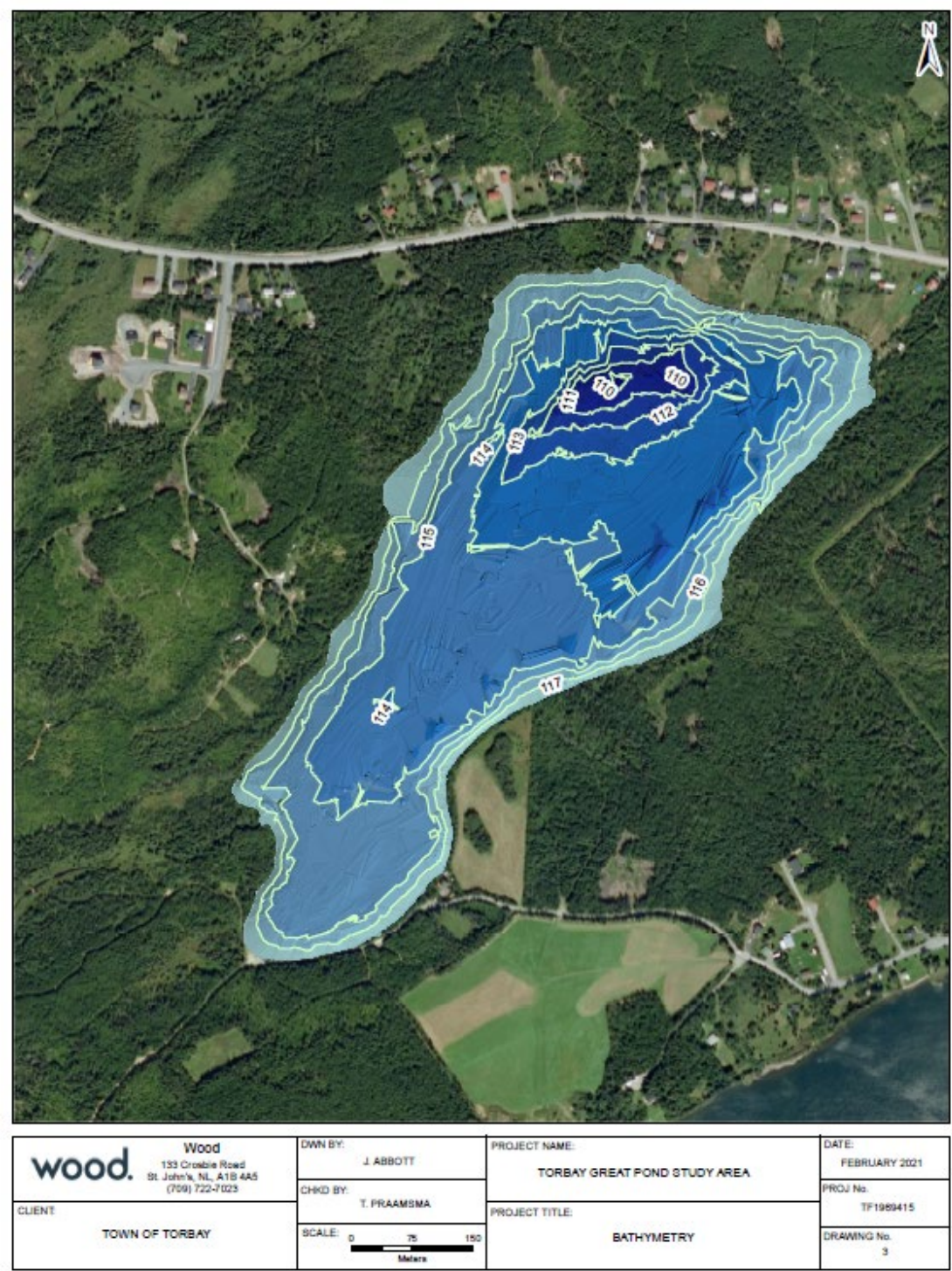


Figure 3-9: Bathymetric map of Great Pond

**Table 3-6: Summary of catch-per-unit-effort in Great Pond, August 2021**

| Species                | Abundance           |                          | Biomass     |                           |
|------------------------|---------------------|--------------------------|-------------|---------------------------|
|                        | Total Catch         | CPUE<br>(fish/net-night) | Total Catch | CPUE<br>(grams/net-night) |
| Brook Trout            | 62                  | 4.13                     | 9,397.6     | 626.51                    |
| Threespine Stickleback | 34,190 <sup>1</sup> | 2,279.33                 | 70,608.6    | 4,707.24                  |

Brook Trout had a mean length of 218mm and a mean weight of 161.8g. Following the removal of outliers, 59 Brook Trout were included in condition analysis, and had a mean condition of 1.29. All Brook Trout included in the analysis had condition factors greater than 1.00, indicating they are in good condition.

Fyke netting data is presented in Appendix D.

## 4.0 SUMMARY

There were 17.4 habitat units surveyed in Great Pond Outflow during August 2021, the majority of which have been characterized as riffle habitat. Riffle habitat is typically suitable for salmonid spawning and rearing. Electrofishing was completed in Great Pond Outflow and Big River, downstream of Great Pond. Brook Trout, Rainbow Trout and Threespine Stickleback were present in all electrofishing stations, with Brook Trout being the most abundant in both locations. Population estimates were higher for Brook Trout in Great Pond Outflow, while biomass estimates were higher in Big River. The majority of the Brook Trout captured in Great Pond Outflow were YOY, indicating that the area is suitable for spawning and juvenile rearing.

Within Great Pond, Brook Trout and Threespine Stickleback were the only species present, with Threespine Stickleback being significantly more abundant. Brook Trout captured in Great Pond were larger on average than those in Great Pond Outflow, with no YOY being observed, indicating Great Pond is primarily utilized by juvenile and adult Brook Trout.

### 4.1 Recommendations and Future Works

As part of the environmental assessment and permitting process for any project potentially affecting fish and fish habitat, the project may require provincial environmental assessment registration and a federal Fisheries and Oceans Request for Project Review. Field data collected during 2021 can be used to further quantify fish habitat should it be required. Habitat quantification would be used by DFO to determine potential HADD and possible offset requirements. Additional effort will be required to identify and design suitable design/offsets, if DFO determines offsets are required. Also note, any habitat offsets as part of a *Fisheries Act* authorization will also require public consultation and well as monitoring of habitat stability and suitability.

## 5.0 CLOSURE

We trust that you will find the information within this document satisfactory in meeting requirements and expectations. Should you have any questions or concerns regarding the information presented in this document, please do not hesitate to contact us at your convenience.

Sincerely

**Wood Environment & Infrastructure Solutions**

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## 6.0 REFERENCES

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**APPENDIX A**  
**STREAM SURVEY DATA**





## Stream Survey Data

| Transect # | GPS Coordinates |         |          | Section Length (m) | Wetted Width (m) | Channel Width (m) | Bank Heights (m) |      |      |      |      |      |
|------------|-----------------|---------|----------|--------------------|------------------|-------------------|------------------|------|------|------|------|------|
|            | Zone            | Easting | Northing |                    |                  |                   | L→               |      |      |      |      |      |
| 1          | 22T             | 367594  | 5280857  | 0                  | 2.9              | 3.8               | 0.00             | 0.08 | 0.10 | 0.24 |      | 0.00 |
| 2          | 22T             | 367570  | 5280878  | 31                 | 3.8              | 5.6               | 0.00             | 0.10 | 0.08 | 0.19 | 0.15 | 0.00 |
| 3          | 22T             | 367569  | 5280908  | 33                 | 3.4              | 4.6               | 0.00             | 0.10 | 0.09 | 0.10 | 0.02 | 0.00 |
| 4          | 22T             | 367578  | 5280932  | 25                 | 3.5              | 4.1               | 0.24             |      |      |      |      | 0.00 |
| 5          | 22T             | 367587  | 5280954  | 25                 | 3.7              | 5.5               | 0.00             | 0.07 | 0.12 | 0.42 | 0.43 | 0.00 |
| 6          | 22T             | 367594  | 5281011  | 45                 | 5.5              | 6.2               | 0.00             | 0.11 | 0.31 | 0.34 |      | 0.00 |
| 7          | 22T             | 367576  | 5281039  | 40                 | 2.4              | 3.2               | 0.00             | 0.12 | 0.26 | 0.45 | 0.40 | 0.00 |
| 8          | 22T             | 367553  | 5281040  | 25                 | 3.7              | 4.8               | 0.00             | 0.10 | 0.18 | 0.31 |      | 0.00 |
| 9          | 22T             | 367549  | 5281048  | 3                  |                  |                   |                  |      |      |      |      |      |
| 10         | 22T             | 367553  | 5281106  | 65                 | 3.3              | 4.2               | 0.00             | 0.09 | 0.21 | 0.35 |      | 0.00 |
| 11         | 22T             | 367544  | 5281124  | 17                 | 3.4              | 4.7               | 0.00             | 0.04 | 0.33 | 0.25 | 0.38 | 0.00 |
| 12         | 22T             | 367538  | 5281135  | 10                 | 5.4              | 5.9               | 0.32             |      |      |      |      | 0.00 |
| 13         | 22T             | 367541  | 5281164  | 30                 | 4.0              | 4.7               | 0.00             | 0.07 | 0.30 | 0.47 |      | 0.00 |
| 14         | 22T             | 367576  | 5281420  | 95                 | 3.7              | 5.0               | 0.00             | 0.06 | 0.10 | 0.24 |      | 0.00 |
| 15         | 22T             | 367605  | 5281257  | 25                 | 3.5              | 4.0               | 0.00             | 0.17 |      |      |      | 0.00 |

## Stream Survey Data

| Transect # |      |      |      |      | Bank Lengths (m) |      |      |      |      |      |      |      |
|------------|------|------|------|------|------------------|------|------|------|------|------|------|------|
|            | ←R   |      |      |      | L→               |      |      |      |      |      |      |      |
| 1          | 0.10 | 0.05 | 0.12 |      | 0.00             | 0.25 | 0.37 | 0.44 |      |      | 0.00 | 0.19 |
| 2          | 0.06 | 0.09 | 0.36 | 0.34 | 0.00             | 0.17 | 0.36 | 0.52 | 0.74 | 0.88 | 0.00 | 0.19 |
| 3          | 0.10 | 0.08 | 0.15 | 0.22 | 0.00             | 0.12 | 0.31 | 0.49 | 0.53 |      | 0.00 | 0.20 |
| 4          | 0.13 | 0.14 | 0.18 | 0.37 | 0.00             |      |      |      |      |      | 0.00 | 0.22 |
| 5          | 0.07 | 0.13 | 0.14 |      | 0.00             | 0.32 | 0.46 | 0.67 | 1.00 |      | 0.00 | 0.24 |
| 6          | 0.13 | 0.23 | 0.38 |      | 0.00             | 0.09 | 0.15 | 0.36 |      |      | 0.00 | 0.13 |
| 7          | 0.15 | 0.41 |      |      | 0.00             | 0.14 | 0.29 | 0.41 | 0.57 |      | 0.00 | 0.10 |
| 8          | 0.06 | 0.18 | 0.25 |      | 0.00             | 0.21 | 0.40 | 0.46 |      |      | 0.00 | 0.23 |
| 9          |      |      |      |      |                  |      |      |      |      |      |      |      |
| 10         | 0.17 | 0.25 | 0.37 |      | 0.00             | 0.23 | 0.45 | 0.50 |      |      | 0.00 | 0.16 |
| 11         | 0.09 | 0.24 | 0.27 |      | 0.00             | 0.15 | 0.35 | 0.73 | 1.00 |      | 0.00 | 0.10 |
| 12         | 0.10 | 0.09 | 0.19 |      | 0.00             |      |      |      |      |      | 0.00 | 0.12 |
| 13         | 0.13 | 0.24 | 0.40 |      | 0.00             | 0.15 | 0.25 | 0.44 |      |      | 0.00 | 0.14 |
| 14         | 0.25 | 0.36 | 0.56 | 0.81 | 0.00             | 0.25 | 0.38 | 0.52 |      |      | 0.00 | 0.25 |
| 15         | 0.20 |      |      |      | 0.00             | 0.27 |      |      |      |      | 0.00 | 0.20 |

Stream Survey Data

| Transect # |      |      |      | Length (m) |      |      |      |      |      |      |      |      |
|------------|------|------|------|------------|------|------|------|------|------|------|------|------|
|            | ←R   |      |      | 1          | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    |
| 1          | 0.35 | 0.45 |      | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 2.90 |      |      |
| 2          | 0.41 | 0.74 | 0.89 | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 | 3.80 |
| 3          | 0.37 | 0.52 | 0.66 | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.40 |      |
| 4          | 0.34 | 0.47 | 0.61 | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 |      |
| 5          | 0.46 | 0.84 |      | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 | 3.70 |
| 6          | 0.27 | 0.31 |      | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 | 4.00 |
| 7          | 0.22 |      |      | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.40 |      |      |      |
| 8          | 0.40 | 0.60 |      | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 | 3.70 |
| 9          |      |      |      |            |      |      |      |      |      |      |      |      |
| 10         | 0.27 | 0.39 |      | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.30 |      |
| 11         | 0.19 | 0.25 |      | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.40 |      |
| 12         | 0.37 | 0.50 |      | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 | 4.00 |
| 13         | 0.26 | 0.27 |      | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 | 4.00 |
| 14         | 0.36 | 0.56 | 0.81 | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 | 3.70 |
| 15         |      |      |      | 0.00       | 0.50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 |      |

## Stream Survey Data

| Transect # |      |      |      | Depth (m) |      |      |      |      |      |      |      |      |
|------------|------|------|------|-----------|------|------|------|------|------|------|------|------|
|            | 10   | 11   | 12   | 1         | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    |
| 1          |      |      |      | 0.02      | 0.09 | 0.13 | 0.13 | 0.11 | 0.09 | 0.01 |      |      |
| 2          |      |      |      | 0.00      | 0.05 | 0.04 | 0.06 | 0.09 | 0.10 | 0.09 | 0.02 | 0.01 |
| 3          |      |      |      | 0.00      | 0.03 | 0.10 | 0.11 | 0.10 | 0.16 | 0.09 | 0.02 |      |
| 4          |      |      |      | 0.09      | 0.13 | 0.12 | 0.07 | 0.06 | 0.08 | 0.10 | 0.11 |      |
| 5          |      |      |      | 0.02      | 0.02 | 0.08 | 0.05 | 0.07 | 0.10 | 0.09 | 0.08 | 0.02 |
| 6          | 4.50 | 5.00 | 5.50 | 0.02      | 0.12 | 0.12 | 0.15 | 0.18 | 0.17 | 0.14 | 0.18 | 0.19 |
| 7          |      |      |      | 0.05      | 0.05 | 0.14 | 0.04 | 0.04 | 0.05 |      |      |      |
| 8          |      |      |      | 0.10      | 0.23 | 0.44 | 0.37 | 0.42 | 0.28 | 0.15 | 0.07 | 0.02 |
| 9          |      |      |      |           |      |      |      |      |      |      |      |      |
| 10         |      |      |      | 0.02      | 0.04 | 0.12 | 0.09 | 0.09 | 0.05 | 0.02 | 0.03 |      |
| 11         |      |      |      | 0.00      | 0.07 | 0.06 | 0.24 | 0.24 | 0.11 | 0.09 | 0.02 |      |
| 12         | 4.50 | 5.00 | 5.40 | 0.00      | 0.16 | 0.12 | 0.21 | 0.38 | 0.42 | 0.60 | 0.80 | 0.70 |
| 13         |      |      |      | 0.11      | 0.17 | 0.21 | 0.23 | 0.17 | 0.15 | 0.04 | 0.07 | 0.02 |
| 14         |      |      |      | 0.02      | 0.04 | 0.15 | 0.10 | 0.10 | 0.15 | 0.14 | 0.08 | 0.02 |
| 15         |      |      |      | 0.12      | 0.38 | 0.47 | 0.46 | 0.48 | 0.38 | 0.09 | 0.02 |      |

Stream Survey Data

| Transect # |      |      |      | Average<br>Depth (m) | Velocity (m/s) |       |       |      |      |      |      |      |
|------------|------|------|------|----------------------|----------------|-------|-------|------|------|------|------|------|
|            | 10   | 11   | 12   |                      | 1              | 2     | 3     | 4    | 5    | 6    | 7    | 8    |
| 1          |      |      |      | 0.08                 | 0.000          | 0.090 | 0.110 | 0.11 | 0.08 | 0.00 | 0.00 |      |
| 2          |      |      |      | 0.05                 | 0.000          | 0.000 | 0.000 | 0.06 | 0.35 | 0.34 | 0.13 | 0.00 |
| 3          |      |      |      | 0.08                 | 0.000          | 0.000 | 0.000 | 0.09 | 0.04 | 0.00 | 0.00 | 0.00 |
| 4          |      |      |      | 0.10                 | 0.000          | 0.030 | 0.090 | 0.08 | 0.00 | 0.16 | 0.00 | 0.00 |
| 5          |      |      |      | 0.06                 | 0.000          | 0.000 | 0.110 | 0.00 | 0.09 | 0.22 | 0.10 | 0.12 |
| 6          | 0.22 | 0.19 | 0.09 | 0.15                 | 0.000          | 0.000 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7          |      |      |      | 0.06                 | 0.000          | 0.250 | 0.210 | 0.32 | 0.38 | 0.05 |      |      |
| 8          |      |      |      | 0.23                 | 0.000          | 0.000 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9          |      |      |      |                      |                |       |       |      |      |      |      |      |
| 10         |      |      |      | 0.06                 | 0.00           | 0.00  | 0.60  | 0.08 | 0.18 | 0.00 | 0.00 | 0.00 |
| 11         |      |      |      | 0.10                 | 0.00           | 0.00  | 0.00  | 0.00 | 0.00 | 0.17 | 0.28 | 0.00 |
| 12         | 0.19 | 0.05 | 0.04 | 0.31                 | 0.00           | 0.00  | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13         |      |      |      | 0.13                 | 0.00           | 0.05  | 0.03  | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 |
| 14         |      |      |      | 0.09                 | 0.00           | 0.00  | 0.09  | 0.09 | 0.08 | 0.00 | 0.07 | 0.06 |
| 15         |      |      |      | 0.30                 | 0.00           | 0.00  | 0.00  | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 |

## Stream Survey Data

| Transect # |      |      |      |      | Average Velocity (m/s) | Substrate (%) |     |     |        |        |        |      |
|------------|------|------|------|------|------------------------|---------------|-----|-----|--------|--------|--------|------|
|            | 9    | 10   | 11   | 12   |                        | Bedrock       | LgB | SmB | Rubble | Cobble | Gravel | Sand |
| 1          |      |      |      |      | 0.06                   | 0             | 0   | 10  | 40     | 40     | 10     | 0    |
| 2          | 0.00 |      |      |      | 0.10                   | 0             | 0   | 10  | 30     | 50     | 10     | 0    |
| 3          |      |      |      |      | 0.02                   | 0             | 0   | 15  | 35     | 40     | 10     | 0    |
| 4          |      |      |      |      | 0.05                   | 0             | 0   | 5   | 35     | 50     | 10     | 0    |
| 5          | 0.00 |      |      |      | 0.07                   | 0             | 0   | 5   | 10     | 35     | 50     | 0    |
| 6          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00                   | 0             | 0   | 10  | 15     | 40     | 35     | 0    |
| 7          |      |      |      |      | 0.20                   | 25            | 10  | 15  | 20     | 25     | 5      | 0    |
| 8          | 0.00 |      |      |      | 0.00                   | 5             | 0   | 5   | 20     | 40     | 20     | 5    |
| 9          |      |      |      |      |                        | 100           | 0   | 0   | 0      | 0      | 0      | 0    |
| 10         |      |      |      |      | 0.11                   | 10            | 15  | 25  | 30     | 20     | 0      | 0    |
| 11         |      |      |      |      | 0.06                   | 80            | 5   | 10  | 5      | 0      | 0      | 0    |
| 12         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00                   | 65            | 0   | 10  | 10     | 0      | 10     | 0    |
| 13         | 0.00 |      |      |      | 0.01                   | 75            | 0   | 5   | 10     | 10     | 0      | 0    |
| 14         | 0.00 |      |      |      | 0.04                   | 0             | 5   | 20  | 20     | 40     | 15     | 0    |
| 15         |      |      |      |      | 0.01                   | 0             | 0   | 0   | 0      | 35     | 25     | 0    |

Stream Survey Data

| Transect # | Sediment |      |          |      |        |       | Bank       |            |                | Cover (%) |          |        |
|------------|----------|------|----------|------|--------|-------|------------|------------|----------------|-----------|----------|--------|
|            | Silt     | Clay | Detritus | Muck | Aq Veg | Total | Undercut L | Undercut R | Bank Stability | Instream  | Overhang | Canopy |
| 1          | 0        | 0    | 0        | 0    | 0      | 100   | 0          | 0          | Good           | 20        | 30       | 40     |
| 2          | 0        | 0    | 0        | 0    | 0      | 100   | 0          | 10         | Good           | 20        | 30       | 20     |
| 3          | 0        | 0    | 0        | 0    | 0      | 100   | 10         | 10         | Good           | 15        | 10       | 10     |
| 4          | 0        | 0    | 0        | 0    | 0      | 100   | 0          | 0          | Good           | 20        | 40       | 40     |
| 5          | 0        | 0    | 0        | 0    | 0      | 100   | 0          | 0          | Good           | 20        | 30       | 40     |
| 6          | 0        | 0    | 0        | 0    | 0      | 100   | 0          | 0          | Good           | 30        | 25       | 15     |
| 7          | 0        | 0    | 0        | 0    | 0      | 100   | 0          | 10         | Good           | 15        | 40       | 25     |
| 8          | 5        | 0    | 0        | 0    | 0      | 100   | 0          | 0          | Good           | 20        | 20       | 20     |
| 9          | 0        | 0    | 0        | 0    | 0      | 100   | 0          | 0          | Good           | 10        | 10       | 10     |
| 10         | 0        | 0    | 0        | 0    | 0      | 100   | 5          | 0          | Good           | 20        | 35       | 20     |
| 11         | 0        | 0    | 0        | 0    | 0      | 100   | 0          | 0          | Good           | 10        | 50       | 10     |
| 12         | 0        | 0    | 5        | 0    | 0      | 100   | 10         | 10         | Good           | 25        | 25       | 25     |
| 13         | 0        | 0    | 0        | 0    | 0      | 100   | 0          | 0          | Good           | 10        | 20       | 40     |
| 14         | 0        | 0    | 0        | 0    | 0      | 100   | 5          | 5          | Good           | 20        | 30       | 40     |
| 15         | 20       | 0    | 20       | 0    | 0      | 100   | 0          | 0          | Good           | 15        | 35       | 0      |

## Stream Survey Data

| Transect # | Total | Riparian Vegetation LHS (%) |           |       |       |     |        | Total | Riparian Vegetation RHS (%) |           |       |       |
|------------|-------|-----------------------------|-----------|-------|-------|-----|--------|-------|-----------------------------|-----------|-------|-------|
|            |       | Conifer                     | Deciduous | Shrub | Grass | Bog | No Veg |       | Conifer                     | Deciduous | Shrub | Grass |
| 1          | 90    | 15                          | 40        | 15    | 30    | 0   | 0      | 100   | 10                          | 30        | 15    | 45    |
| 2          | 70    | 10                          | 30        | 20    | 40    | 0   | 0      | 100   | 20                          | 20        | 20    | 40    |
| 3          | 35    | 10                          | 45        | 15    | 30    | 0   | 0      | 100   | 5                           | 10        | 35    | 50    |
| 4          | 100   | 35                          | 5         | 40    | 20    | 0   | 0      | 100   | 25                          | 10        | 25    | 40    |
| 5          | 90    | 40                          | 10        | 35    | 15    | 0   | 0      | 100   | 30                          | 5         | 15    | 50    |
| 6          | 70    | 25                          | 10        | 40    | 25    | 0   | 0      | 100   | 25                          | 15        | 35    | 25    |
| 7          | 80    | 40                          | 0         | 30    | 30    | 0   | 0      | 100   | 45                          | 0         | 20    | 35    |
| 8          | 60    | 30                          | 10        | 35    | 25    | 0   | 0      | 100   | 40                          | 10        | 20    | 20    |
| 9          | 30    | 0                           | 0         | 0     | 0     | 0   | 0      | 0     | 0                           | 0         | 0     | 0     |
| 10         | 75    | 45                          | 5         | 20    | 30    | 0   | 0      | 100   | 35                          | 5         | 10    | 40    |
| 11         | 70    | 45                          | 10        | 15    | 30    | 0   | 0      | 100   | 20                          | 5         | 45    | 30    |
| 12         | 75    | 30                          | 10        | 20    | 40    | 0   | 0      | 100   | 25                          | 25        | 20    | 30    |
| 13         | 70    | 40                          | 10        | 30    | 20    | 0   | 0      | 100   | 35                          | 0         | 30    | 35    |
| 14         | 90    | 50                          | 10        | 20    | 20    | 0   | 0      | 100   | 30                          | 0         | 45    | 25    |
| 15         | 50    | 5                           | 5         | 50    | 40    | 0   | 0      | 100   | 10                          | 0         | 30    | 60    |



Stream Survey Data

| Transect # | %   |        | Total | Comments                           |
|------------|-----|--------|-------|------------------------------------|
|            | Bog | No Veg |       |                                    |
| 1          | 0   | 0      | 100   |                                    |
| 2          | 0   | 0      | 100   |                                    |
| 3          | 0   | 0      | 100   |                                    |
| 4          | 0   | 0      | 100   |                                    |
| 5          | 0   | 0      | 100   |                                    |
| 6          | 0   | 0      | 100   |                                    |
| 7          | 0   | 0      | 100   |                                    |
| 8          | 0   | 10     | 100   |                                    |
| 9          | 0   | 0      | 0     |                                    |
| 10         | 0   | 0      | 90    |                                    |
| 11         | 0   | 0      | 100   | Series of small cascades and falls |
| 12         | 0   | 0      | 100   | Pool between two cascades          |
| 13         | 0   | 0      | 100   |                                    |
| 14         | 0   | 0      | 100   |                                    |
| 15         | 0   | 0      | 100   |                                    |

**APPENDIX B**  
**REPRESENTATIVE PHOTOGRAPHS**



## Representative Photos – Great Pond Outflow



*Photo 1: Great Pond Outflow Transect 1*



*Photo 2: Great Pond Outflow Transect 2*



## Representative Photos – Great Pond Outflow



*Photo 3: Great Pond Outflow Transect 3*



*Photo 4: Great Pond Outflow Transect 4*



## Representative Photos – Great Pond Outflow



*Photo 5: Great Pond Outflow Transect 5*



*Photo 6: Great Pond Outflow Transect 6*



## Representative Photos – Great Pond Outflow



*Photo 7: Great Pond Outflow Transect 7*



*Photo 8: Great Pond Outflow Transect 8*



## Representative Photos – Great Pond Outflow



*Photo 9: Great Pond Outflow Transect 9*



*Photo 10: Great Pond Outflow Transect 10*



## Representative Photos – Great Pond Outflow



*Photo 11: Great Pond Outflow Transect 11*



*Photo 12: Great Pond Outflow Transect 12*



## Representative Photos – Great Pond Outflow



*Photo 13: Great Pond Outflow Transect 13*



*Photo 14: Great Pond Outflow Transect 14*



## Representative Photos – Great Pond Outflow



*Photo 15: Great Pond Outflow Transect 15*

## **APPENDIX A**

### **ELECTROFISHING DATA**





| River Name | Station # | Station Type | Sweep | Station Area (m <sup>2</sup> ) | Electrofisher Time | Species | Count | Length (mm) | Weight (g) | Condition |
|------------|-----------|--------------|-------|--------------------------------|--------------------|---------|-------|-------------|------------|-----------|
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 122         | 21.8       | 1.20      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 134         | 27.1       | 1.13      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | SB      | 1     | 28          | 0.5        | 2.28      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 123         | 22.3       | 1.20      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 113         | 17.3       | 1.20      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | BK      | 1     | 95          | 8.4        | 0.98      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | BK      | 1     | 145         | 38.2       | 1.25      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 113         | 16.7       | 1.16      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | BK      | 1     | 158         | 47.6       | 1.21      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 117         | 18.6       | 1.16      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | SB      | 1     | 30          | 0.3        | 1.11      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | BK      | 1     | 109         | 13.6       | 1.05      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 56          | 1.9        | 1.08      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | BK      | 1     | 87          | 6.8        | 1.03      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 176         | 64.4       | 1.18      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | BK      | 1     | 63          | 2.8        | 1.12      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | BK      | 1     | 118         | 19.6       | 1.19      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | BK      | 1     | 103         | 11.4       | 1.04      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 56          | 2          | 1.14      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | SB      | 1     | 34          | 0.5        | 1.27      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 56          | 1.9        | 1.08      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 128         | 25.6       | 1.22      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 58          | 2.2        | 1.13      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 65          | 2.6        | 0.95      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 108         | 15.2       | 1.21      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 55          | 1.9        | 1.14      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | BK      | 1     | 119         | 19         | 1.13      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | BK      | 1     | 96          | 9.5        | 1.07      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 123         | 21.2       | 1.14      |
| Big River  | 1         | Quantitative | 1     | 123                            | 442                | RB      | 1     | 127         | 24.2       | 1.18      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | SB      | 1     | 24          | 0.1        | 0.72      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | SB      | 1     | 31          | 0.2        | 0.67      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | SB      | 1     | 43          | 0.6        | 0.75      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | SB      | 1     | 28          | 0.3        | 1.37      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | RB      | 1     | 166         | 56.7       | 1.24      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | SB      | 1     | 32          | 0.6        | 1.83      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | SB      | 1     | 24          | 0.1        | 0.72      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | SB      | 1     | 26          | 0.1        | 0.57      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | SB      | 1     | 36          | 0.4        | 0.86      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | SB      | 1     | 56          | 2.1        | 1.20      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | RB      | 1     | 121         | 21.1       | 1.19      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | RB      | 1     | 113         | 18.3       | 1.27      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | RB      | 1     | 154         | 42.2       | 1.16      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | RB      | 1     | 55          | 1.8        | 1.08      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | RB      | 1     | 28          | 0.1        | 0.46      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | SB      | 1     | 29          | 0.2        | 0.82      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | BK      | 1     | 90          | 8.6        | 1.18      |
| Big River  | 1         | Quantitative | 2     | 123                            | 454                | BK      | 1     | 143         | 32.7       | 1.12      |
| Big River  | 1         | Quantitative | 3     | 123                            | 505                | SB      | 1     | 56          | 1.1        | 0.63      |
| Big River  | 1         | Quantitative | 3     | 123                            | 505                | SB      | 1     | 22          | 0.1        | 0.94      |
| Big River  | 1         | Quantitative | 3     | 123                            | 505                | SB      | 1     | 48          | 1.8        | 1.63      |
| Big River  | 1         | Quantitative | 3     | 123                            | 505                | RB      | 1     | 49          | 1.3        | 1.10      |
| Big River  | 1         | Quantitative | 3     | 123                            | 505                | RB      | 1     | 54          | 1.9        | 1.21      |
| Big River  | 1         | Quantitative | 3     | 123                            | 505                | BK      | 1     | 101         | 11.4       | 1.11      |
| Big River  | 1         | Quantitative | 3     | 123                            | 505                | BK      | 1     | 56          | 1.8        | 1.02      |
| Big River  | 1         | Quantitative | 3     | 123                            | 505                | RB      | 1     | 109         | 15.4       | 1.19      |
| Big River  | 1         | Quantitative | 3     | 123                            | 505                | RB      | 1     | 51          | 1.6        | 1.21      |
| Big River  | 1         | Quantitative | 3     | 123                            | 505                | RB      | 1     | 49          | 1.7        | 1.44      |
| Big River  | 1         | Quantitative | 3     | 123                            | 505                | RB      | 1     | 49          | 1          | 0.85      |
| Big River  | 1         | Quantitative | 3     | 123                            | 505                | SB      | 1     | 26          | 0.1        | 0.57      |
| Big River  | 1         | Quantitative | 4     | 123                            | 367                | RB      | 1     | 51          | 1.3        | 0.98      |
| Big River  | 1         | Quantitative | 4     | 123                            | 367                | RB      | 1     | 114         | 14.4       | 0.97      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 151         | 36.4       | 1.06      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | BK      | 1     | 182         | 64.7       | 1.07      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | SB      | 1     | 22          | 0.1        | 0.94      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 99          | 19.2       | 1.98      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | BK      | 1     | 110         | 13.9       | 1.04      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 50          | 1          | 0.80      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | BK      | 1     | 110         | 14.5       | 1.09      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 46          | 1.2        | 1.23      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 112         | 26.1       | 1.86      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 96          | 10.6       | 1.20      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | BK      | 1     | 114         | 12.4       | 0.84      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | SB      | 1     | 38          | 0.6        | 1.09      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | BK      | 1     | 89          | 7.6        | 1.08      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | SB      | 1     | 23          | 0          | 0.00      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | SB      | 1     | 32          | 0.4        | 1.22      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | BK      | 1     | 143         | 34.6       | 1.18      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | BK      | 1     | 154         | 42.2       | 1.16      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 182         | 65.5       | 1.09      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 59          | 2.2        | 1.07      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 168         | 56         | 1.18      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 112         | 16         | 1.14      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 108         | 14.7       | 1.17      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | BK      | 1     | 160         | 46.4       | 1.13      |
| Big River  | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 58          | 1.4        | 0.72      |

| River Name         | Station # | Station Type | Sweep | Station Area (m <sup>2</sup> ) | Electrofisher Time | Species | Count | Length (mm) | Weight (g) | Condition |
|--------------------|-----------|--------------|-------|--------------------------------|--------------------|---------|-------|-------------|------------|-----------|
| Big River          | 2         | Quantitative | 1     | 105                            | 505                | SB      | 1     | 23          | 0.1        | 0.82      |
| Big River          | 2         | Quantitative | 1     | 105                            | 505                | BK      | 1     | 136         | 27.3       | 1.09      |
| Big River          | 2         | Quantitative | 1     | 105                            | 505                | SB      | 1     | 26          | 0          | 0.00      |
| Big River          | 2         | Quantitative | 1     | 105                            | 505                | SB      | 1     | 26          | 0          | 0.00      |
| Big River          | 2         | Quantitative | 1     | 105                            | 505                | SB      | 1     | 23          | 0          | 0.00      |
| Big River          | 2         | Quantitative | 1     | 105                            | 505                | SB      | 1     | 68          | 2.8        | 0.89      |
| Big River          | 2         | Quantitative | 1     | 105                            | 505                | SB      | 1     | 27          | 0.1        | 0.51      |
| Big River          | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 132         | 24.7       | 1.07      |
| Big River          | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 132         | 26.4       | 1.15      |
| Big River          | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 116         | 17.6       | 1.13      |
| Big River          | 2         | Quantitative | 1     | 105                            | 505                | RB      | 1     | 139         | 34.9       | 1.30      |
| Big River          | 2         | Quantitative | 1     | 105                            | 505                | BK      | 1     | 119         | 17.4       | 1.03      |
| Big River          | 2         | Quantitative | 1     | 105                            | 505                | SB      | 1     | 59          | 1.9        | 0.93      |
| Big River          | 2         | Quantitative | 2     | 105                            | 416                | BK      | 1     | 95          | 8.9        | 1.04      |
| Big River          | 2         | Quantitative | 2     | 105                            | 416                | RB      | 1     | 143         | 32         | 1.09      |
| Big River          | 2         | Quantitative | 2     | 105                            | 416                | SB      | 1     | 23          | 0.1        | 0.82      |
| Big River          | 2         | Quantitative | 2     | 105                            | 416                | BK      | 1     | 58          | 2.2        | 1.13      |
| Big River          | 2         | Quantitative | 2     | 105                            | 416                | SB      | 1     | 31          | 0.2        | 0.67      |
| Big River          | 2         | Quantitative | 2     | 105                            | 416                | RB      | 1     | 192         | 81.7       | 1.15      |
| Big River          | 2         | Quantitative | 2     | 105                            | 416                | RB      | 1     | 157         | 47         | 1.21      |
| Big River          | 2         | Quantitative | 2     | 105                            | 416                | RB      | 1     | 116         | 16.3       | 1.04      |
| Big River          | 2         | Quantitative | 2     | 105                            | 416                | BK      | 1     | 95          | 9.6        | 1.12      |
| Big River          | 2         | Quantitative | 2     | 105                            | 416                | RB      | 1     | 42          | 0.9        | 1.21      |
| Big River          | 2         | Quantitative | 2     | 105                            | 416                | SB      | 1     | 26          | 0.1        | 0.57      |
| Big River          | 2         | Quantitative | 2     | 105                            | 416                | SB      | 1     | 28          | 0.1        | 0.46      |
| Big River          | 2         | Quantitative | 3     | 105                            | 462                | RB      | 1     | 52          | 1.3        | 0.92      |
| Big River          | 2         | Quantitative | 3     | 105                            | 462                | RB      | 1     | 113         | 18.5       | 1.28      |
| Big River          | 2         | Quantitative | 3     | 105                            | 462                | RB      | 1     | 192         | 77.3       | 1.09      |
| Big River          | 2         | Quantitative | 3     | 105                            | 462                | BK      | 1     | 138         | 29.1       | 1.11      |
| Big River          | 2         | Quantitative | 3     | 105                            | 462                | RB      | 1     | 59          | 2.3        | 1.12      |
| Big River          | 2         | Quantitative | 4     | 105                            | 387                | BK      | 1     | 55          | 1.8        | 1.08      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 58          | 1.9        | 0.97      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 57          | 2.2        | 1.19      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 59          | 2.5        | 1.22      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 51          | 1.5        | 1.13      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | SB      | 8     |             | 1.9        |           |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 120         | 21.3       | 1.23      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 55          | 2          | 1.20      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 48          | 1.2        | 1.09      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 44          | 0.9        | 1.06      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | SB      | 3     |             | 4.4        |           |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 65          | 3          | 1.09      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 65          | 3.2        | 1.17      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 52          | 1.8        | 1.28      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 55          | 2.1        | 1.26      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 60          | 2.7        | 1.25      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | SB      | 9     |             | 3.2        |           |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 63          | 2.7        | 1.08      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 58          | 1.7        | 0.87      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 52          | 1.7        | 1.21      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 60          | 2.4        | 1.11      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 49          | 1.2        | 1.02      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 54          | 1.5        | 0.95      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 66          | 3.8        | 1.32      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | SB      | 3     |             | 1.1        |           |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 68          | 3.2        | 1.02      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 49          | 1.6        | 1.36      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 59          | 2.4        | 1.17      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 50          | 1.5        | 1.20      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 52          | 1.9        | 1.35      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 58          | 2.2        | 1.13      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 64          | 3.8        | 1.45      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 135         | 35.2       | 1.43      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 60          | 2.9        | 1.34      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 58          | 2.2        | 1.13      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 64          | 3.3        | 1.26      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | SB      | 5     |             | 2          |           |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 52          | 1.6        | 1.14      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | RB      | 1     | 52          | 1.6        | 1.14      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 60          | 2.5        | 1.16      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 50          | 1.4        | 1.12      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 52          | 1.6        | 1.14      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | RB      | 1     | 60          | 2.3        | 1.06      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 50          | 2          | 1.60      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 60          | 2.3        | 1.06      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | RB      | 1     | 45          | 1.2        | 1.32      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 45          | 1.5        | 1.65      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 46          | 1          | 1.03      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 53          | 1.5        | 1.01      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | BK      | 1     | 48          | 1.2        | 1.09      |
| Great Pond Outflow | 1         | Quantitative | 1     | 119                            | 595                | SB      | 2     |             | 1          |           |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                            | 425                | BK      | 1     | 68          | 4.2        | 1.34      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                            | 425                | BK      | 1     | 51          | 1.6        | 1.21      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                            | 425                | SB      | 1     | 65          | 2.1        | 0.76      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                            | 425                | BK      | 1     | 51          | 1.4        | 1.06      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                            | 425                | BK      | 1     | 45          | 1.2        | 1.32      |

| River Name         | Station # | Station Type | Sweep | Station Area<br>(m <sup>2</sup> ) | Electrofisher<br>Time | Species | Count | Length (mm) | Weight (g) | Condition |
|--------------------|-----------|--------------|-------|-----------------------------------|-----------------------|---------|-------|-------------|------------|-----------|
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 50          | 1.6        | 1.28      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 50          | 1.6        | 1.28      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | SB      | 1     | 48          | 1.8        | 1.63      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 57          | 2.4        | 1.30      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 55          | 2.3        | 1.38      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | SB      | 1     | 76          | 4.5        | 1.03      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 48          | 1.3        | 1.18      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | SB      | 5     |             | 4.7        |           |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 119         | 25.9       | 1.54      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 50          | 1.4        | 1.12      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 95          | 8.9        | 1.04      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 65          | 3.8        | 1.38      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 48          | 1.2        | 1.09      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 63          | 3          | 1.20      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 56          | 2.2        | 1.25      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 68          | 4.1        | 1.30      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 58          | 2          | 1.03      |
| Great Pond Outflow | 1         | Quantitative | 2     | 119                               | 425                   | BK      | 1     | 54          | 1.9        | 1.21      |
| Great Pond Outflow | 1         | Quantitative | 3     | 119                               | 301                   | BK      | 1     | 66          | 3.5        | 1.22      |
| Great Pond Outflow | 1         | Quantitative | 3     | 119                               | 301                   | BK      | 1     | 67          | 4          | 1.33      |
| Great Pond Outflow | 1         | Quantitative | 3     | 119                               | 301                   | BK      | 1     | 51          | 1.7        | 1.28      |
| Great Pond Outflow | 1         | Quantitative | 3     | 119                               | 301                   | BK      | 1     | 54          | 1.7        | 1.08      |
| Great Pond Outflow | 1         | Quantitative | 3     | 119                               | 301                   | BK      | 1     | 59          | 2.1        | 1.02      |
| Great Pond Outflow | 1         | Quantitative | 3     | 119                               | 301                   | SB      | 6     |             | 13.3       |           |
| Great Pond Outflow | 1         | Quantitative | 3     | 119                               | 301                   | BK      | 1     | 70          | 4.6        | 1.34      |
| Great Pond Outflow | 1         | Quantitative | 3     | 119                               | 301                   | BK      | 1     | 50          | 1.3        | 1.04      |
| Great Pond Outflow | 1         | Quantitative | 3     | 119                               | 301                   | SB      | 4     |             | 2.5        |           |
| Great Pond Outflow | 1         | Quantitative | 4     | 119                               | 275                   | BK      | 1     | 92          | 7.7        | 0.99      |
| Great Pond Outflow | 1         | Quantitative | 4     | 119                               | 275                   | BK      | 1     | 50          | 1.3        | 1.04      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 124         | 24.7       | 1.30      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 45          | 1.1        | 1.21      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | SB      | 5     |             | 9.4        |           |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | RB      | 1     | 95          | 10.2       | 1.19      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | SB      | 2     |             | 7.7        |           |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 60          | 2.5        | 1.16      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 62          | 2.7        | 1.13      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 52          | 1.8        | 1.28      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | SB      | 8     |             | 19.5       |           |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 69          | 4.5        | 1.37      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 49          | 1.5        | 1.27      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | SB      | 2     |             | 5.2        |           |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 120         | 23.1       | 1.34      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 65          | 3.5        | 1.27      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | RB      | 1     | 120         | 24.7       | 1.43      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 110         | 17.3       | 1.30      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 94          | 12         | 1.44      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | RB      | 1     | 65          | 3.1        | 1.13      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 57          | 2          | 1.08      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 50          | 1.4        | 1.12      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 54          | 1.7        | 1.08      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 54          | 1.2        | 0.76      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 63          | 3          | 1.20      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | RB      | 1     | 68          | 3.2        | 1.02      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | BK      | 1     | 59          | 2.4        | 1.17      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | RB      | 1     | 58          | 2.1        | 1.08      |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 306                   | SB      | 4     |             | 10.1       |           |
| Great Pond Outflow | 2         | Quantitative | 1     | 104                               | 275                   | RB      | 1     | 56          | 1.9        | 1.08      |
| Great Pond Outflow | 2         | Quantitative | 2     | 104                               | 275                   | BK      | 1     | 45          | 1          | 1.10      |
| Great Pond Outflow | 2         | Quantitative | 2     | 104                               | 275                   | RB      | 1     | 60          | 2.1        | 0.97      |
| Great Pond Outflow | 2         | Quantitative | 2     | 104                               | 275                   | BK      | 1     | 42          | 1.2        | 1.62      |
| Great Pond Outflow | 2         | Quantitative | 2     | 104                               | 275                   | RB      | 1     | 55          | 1.3        | 0.78      |
| Great Pond Outflow | 2         | Quantitative | 2     | 104                               | 275                   | SB      | 5     |             | 14.1       |           |
| Great Pond Outflow | 2         | Quantitative | 2     | 104                               | 275                   | RB      | 1     | 61          | 2.4        | 1.06      |
| Great Pond Outflow | 2         | Quantitative | 3     | 104                               | 286                   | RB      | 1     | 65          | 3.3        | 1.20      |
| Great Pond Outflow | 2         | Quantitative | 3     | 104                               | 286                   | RB      | 1     | 55          | 2          | 1.20      |
| Great Pond Outflow | 2         | Quantitative | 3     | 104                               | 286                   | BK      | 1     | 62          | 2.7        | 1.13      |
| Great Pond Outflow | 2         | Quantitative | 3     | 104                               | 286                   | RB      | 1     | 57          | 2.2        | 1.19      |
| Great Pond Outflow | 2         | Quantitative | 3     | 104                               | 286                   | BK      | 1     | 58          | 2.1        | 1.08      |
| Great Pond Outflow | 2         | Quantitative | 3     | 104                               | 286                   | BK      | 1     | 55          | 2          | 1.20      |
| Great Pond Outflow | 2         | Quantitative | 3     | 104                               | 286                   | SB      | 8     |             | 14.4       |           |
| Great Pond Outflow | 2         | Quantitative | 3     | 104                               | 286                   | RB      | 1     | 57          | 2.3        | 1.24      |
| Great Pond Outflow | 2         | Quantitative | 3     | 104                               | 286                   | BK      | 1     | 55          | 2          | 1.20      |
| Great Pond Outflow | 2         | Quantitative | 3     | 104                               | 286                   | SB      | 4     |             | 6.7        |           |
| Great Pond Outflow | 2         | Quantitative | 4     | 104                               | 269                   | RB      | 1     | 99          | 11.6       | 1.20      |
| Great Pond Outflow | 2         | Quantitative | 4     | 104                               | 269                   | BK      | 1     | 47          | 1.2        | 1.16      |
| Great Pond Outflow | 2         | Quantitative | 4     | 104                               | 269                   | BK      | 1     | 52          | 1.4        | 1.00      |

## **APPENDIX A**

### **FYKE NETTING DATA**





## Fyke Netting Data

| Date      | Sample Location | Gear Type | Net ID | Northing | Easting | Zone | Species | Fish ID | Total Catch | Length (mm) | Weight (g) | Condition |
|-----------|-----------------|-----------|--------|----------|---------|------|---------|---------|-------------|-------------|------------|-----------|
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK01    | 1           | 162         | 46.4       | 1.09      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 207         |             | 427.6      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 187         |             | 387.0      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 334         |             | 690.6      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 353         |             | 729.6      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 268         |             | 552.8      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 224         |             | 461.8      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 183         |             | 377.0      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 110         |             | 226.6      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 120         |             | 248.8      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 90          |             | 185.7      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 62          |             | 128.9      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 3           |             | 8.1        |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK02    | 1           | 236         | 175.7      | 1.34      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK03    | 1           | 208         | 117.7      | 1.31      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK04    | 1           | 252         | 233.8      | 1.46      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK05    | 1           | 284         | 351.1      | 1.53      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK06    | 1           | 156         | 47.7       | 1.26      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK07    | 1           | 245         | 214.0      | 1.46      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK08    | 1           | 212         | 132.0      | 1.39      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK09    | 1           | 162         | 55.7       | 1.31      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK10    | 1           | 212         | 126.2      | 1.32      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK11    | 1           | 236         | 165.4      | 1.26      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK12    | 1           | 164         | 101.1      | 2.29      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK13    | 1           | 172         | 65.0       | 1.28      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK14    | 1           | 153         | 47.3       | 1.32      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK15    | 1           | 162         | 52.6       | 1.24      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | SB01    | 1           | 80          | 4.6        | 0.90      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | SB      | Batch   | 3574        |             | 7380       |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | SB      | Batch   | 142         |             | 293.8      |           |

## Fyke Netting Data

| Date      | Sample Location | Gear Type | Net ID | Northing | Easting | Zone | Species | Fish ID | Total Catch | Length (mm) | Weight (g) | Condition |
|-----------|-----------------|-----------|--------|----------|---------|------|---------|---------|-------------|-------------|------------|-----------|
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | SB      | Batch   | 188         |             | 387.2      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | SB      | Batch   | 129         |             | 266.1      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | SB      | Batch   | 122         |             | 252.6      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | SB      | Batch   | 96          |             | 198        |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | SB      | Batch   | 58          |             | 118.8      |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | SB      | Batch   | 45          |             | 93.7       |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | SB      | Batch   | 44          |             | 90.5       |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | SB      | Batch   | 19          |             | 38.6       |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | BK      | BK16    | 1           | 189         | 89.3       | 1.32      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | BK      | BK17    | 1           | 240         | 186.6      | 1.35      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | BK      | BK18    | 1           | 230         | 169.8      | 1.40      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | BK      | BK19    | 1           | 212         | 96.7       | 1.01      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | SB      | SB02    | 1           | 69          | 3.4        | 1.03      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | BK      | BK20    | 1           | 123         | 20.2       | 1.09      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | Batch   | 6455        |             | 13330.0    |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | BK      | BK21    | 1           | 219         | 130.9      | 1.25      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | BK      | BK22    | 1           | 165         | 51.7       | 1.15      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | BK      | BK23    | 1           | 144         | 33.9       | 1.14      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | BK      | BK24    | 1           | 232         | 160.7      | 1.29      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | SB      | Batch   | 1139        |             | 2352.0     |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | BK      | BK25    | 1           | 216         | 144.0      | 1.43      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | Batch   | 3564        |             | 7360.0     |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK26    | 1           | 226         | 138.3      | 1.20      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK27    | 1           | 301         | 383.8      | 1.41      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK28    | 1           | 243         | 196.7      | 1.37      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK29    | 1           | 236         | 197.8      | 1.50      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK30    | 1           | 218         | 131.0      | 1.26      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK31    | 1           | 258         | 220.6      | 1.28      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | Batch   | 727         |             | 1502.0     |           |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK32    | 1           | 221         | 135.7      | 1.26      |

## Fyke Netting Data

| Date      | Sample Location | Gear Type | Net ID | Northing | Easting | Zone | Species | Fish ID | Total Catch | Length (mm) | Weight (g) | Condition |
|-----------|-----------------|-----------|--------|----------|---------|------|---------|---------|-------------|-------------|------------|-----------|
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK33    | 1           | 276         | 263.7      | 1.25      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK34    | 1           | 267         | 239.4      | 1.26      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK35    | 1           | 282         | 264.3      | 1.18      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK36    | 1           | 210         | 123.4      | 1.33      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK37    | 1           | 222         | 157.4      | 1.44      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB03    | 1           | 71          | 4.5        | 1.26      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB04    | 1           | 59          | 3.0        | 1.46      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB05    | 1           | 60          | 3.1        | 1.44      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB06    | 1           | 52          | 2.6        | 1.85      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB07    | 1           | 53          | 2.7        | 1.81      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB08    | 1           | 65          | 3.4        | 1.24      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB09    | 1           | 54          | 1.6        | 1.02      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB10    | 1           | 46          | 1.3        | 1.34      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB11    | 1           | 48          | 1.3        | 1.18      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB12    | 1           | 39          | 0.6        | 1.01      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB13    | 1           | 84          | 7.5        | 1.27      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB14    | 1           | 57          | 1.5        | 0.81      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB15    | 1           | 58          | 1.7        | 0.87      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB16    | 1           | 48          | 0.8        | 0.72      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB17    | 1           | 76          | 3.8        | 0.87      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB18    | 1           | 52          | 1.4        | 1.00      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB19    | 1           | 57          | 2.4        | 1.30      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB20    | 1           | 43          | 1.5        | 1.89      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB21    | 1           | 44          | 1.9        | 2.23      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB22    | 1           | 58          | 1.7        | 0.87      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB23    | 1           | 53          | 1.8        | 1.21      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB24    | 1           | 46          | 1.4        | 1.44      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB25    | 1           | 43          | 2.2        | 2.77      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB26    | 1           | 51          | 1.5        | 1.13      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB27    | 1           | 51          | 2.3        | 1.73      |

## Fyke Netting Data

| Date      | Sample Location | Gear Type | Net ID | Northing | Easting | Zone | Species | Fish ID | Total Catch | Length (mm) | Weight (g) | Condition |
|-----------|-----------------|-----------|--------|----------|---------|------|---------|---------|-------------|-------------|------------|-----------|
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  |         | SB28    | 1           | 60          | 2.7        | 1.25      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB29    | 1           | 62          | 3.1        | 1.30      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB30    | 1           | 46          | 1.3        | 1.34      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB31    | 1           | 53          | 1.4        | 0.94      |
| 11-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | SB32    | 1           | 56          | 2.1        | 1.20      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 107         |             | 221.6      |           |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 107         |             | 221.7      |           |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 93          |             | 191.8      |           |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 27          |             | 56.4       |           |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | SB      | Batch   | 1511        |             | 3120.0     |           |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | BK      | BK01    | 1           | 126         | 21.6       | 1.08      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | BK      | BK02    | 1           | 298         | 303.7      | 1.15      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | SB      | Batch   | 3656        |             | 7550.0     |           |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | BK      | BK03    | 1           | 245         | 188.4      | 1.28      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | BK      | BK04    | 1           | 248         | 202.1      | 1.32      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | BK      | BK05    | 1           | 284         | 272.9      | 1.19      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | Batch   | 250         |             | 515.7      |           |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | Batch   | 260         |             | 536.7      |           |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | Batch   | 150         |             | 309.6      |           |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | Batch   | 136         |             | 280.7      |           |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | Batch   | 22          |             | 45.4       |           |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | Batch   | 156         |             | 321.7      |           |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | Batch   | 141         |             | 291.5      |           |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB01    | 1           | 59          | 1.5        | 0.73      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB02    | 1           | 46          | 1.0        | 1.03      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB03    | 1           | 76          | 3.9        | 0.89      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB04    | 1           | 63          | 3.2        | 1.28      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB05    | 1           | 24          | 0.1        | 0.72      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB06    | 1           | 29          | 0.3        | 1.23      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB07    | 1           | 38          | 1.1        | 2.00      |

## Fyke Netting Data

| Date      | Sample Location | Gear Type | Net ID | Northing | Easting | Zone | Species | Fish ID | Total Catch | Length (mm) | Weight (g) | Condition |
|-----------|-----------------|-----------|--------|----------|---------|------|---------|---------|-------------|-------------|------------|-----------|
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB08    | 1           | 52          | 1.6        | 1.14      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB09    | 1           | 54          | 1.6        | 1.02      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB10    | 1           | 55          | 2.4        | 1.44      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB11    | 1           | 63          | 1.8        | 0.72      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB12    | 1           | 55          | 1.6        | 0.96      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB13    | 1           | 56          | 1.4        | 0.80      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB14    | 1           | 53          | 1.7        | 1.14      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB15    | 1           | 22          | 0.1        | 0.94      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB16    | 1           | 53          | 2.1        | 1.41      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB17    | 1           | 53          | 1.9        | 1.28      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB18    | 1           | 44          | 1.4        | 1.64      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB19    | 1           | 49          | 1.1        | 0.93      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | SB20    | 1           | 61          | 2.1        | 0.93      |
| 12-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | BK      | BK06    | 1           | 178         | 67.2       | 1.19      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 1070        |             | 2210.0     |           |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | SB      | Batch   | 407         |             | 840.0      |           |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK01    | 1           | 252         |            | 0.00      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK02    | 1           | 185         |            | 0.00      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK03    | 1           | 136         | 29.7       | 1.18      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK04    | 1           | 237         | 188.3      | 1.41      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN01   | 5280295  | 367353  | 22T  | BK      | BK05    | 1           | 285         | 236.4      | 1.02      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | SB      | Batch   | 1893        |             | 3910.0     |           |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | BK      | BK06    | 1           | 249         | 213.4      | 1.38      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN02   | 5280235  | 367108  | 22T  | BK      | BK07    | 1           | 262         | 250.2      | 1.39      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | SB      | Batch   | 2823        |             | 5830.0     |           |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | SB      | Batch   | 402         |             | 830.0      |           |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | BK      | BK08    | 1           | 202         | 108.6      | 1.32      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | BK      | BK09    | 1           | 219         | 143.8      | 1.37      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | BK      | BK10    | 1           | 186         | 79.4       | 1.23      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN04   | 5280544  | 367283  | 22T  | BK      | BK11    | 1           | 143         | 32.2       | 1.10      |



Fyke Netting Data

| Date      | Sample Location | Gear Type | Net ID | Northing | Easting | Zone | Species | Fish ID | Total Catch | Length (mm) | Weight (g) | Condition |
|-----------|-----------------|-----------|--------|----------|---------|------|---------|---------|-------------|-------------|------------|-----------|
| 13-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | Batch   | 378         |             | 780.0      |           |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK12    | 1           | 235         | 176.3      | 1.36      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK13    | 1           | 223         | 119.7      | 1.08      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK14    | 1           | 179         | 72.3       | 1.26      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK15    | 1           | 282         | 276.7      | 1.23      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | BK      | BK16    | 1           | 182         | 78.6       | 1.30      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN05   | 5280836  | 367513  | 22T  | SB      | Batch   | 213         |             | 440.0      |           |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | Batch   | 1738        |             | 3590.0     |           |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | SB      | Batch   | 155         |             | 320.0      |           |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | BK      | BK17    | 1           | 228         | 155.4      | 1.31      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | BK      | BK18    | 1           | 243         | 177.8      | 1.24      |
| 13-Aug-21 | Great Pond      | Fyke Net  | FN03   | 5280514  | 367687  | 22T  | BK      | BK19    | 1           | 266         | 245.2      | 1.30      |