

# **REVISION LOG**

| Version # | Date          | Revised By                    | Approved By                | Revised Section  |
|-----------|---------------|-------------------------------|----------------------------|--|
| 0         | 13 Apr 2021   | Gisele Rehe, P.Ag.,<br>B.I.T. | Patty Burt, RP Bio,<br>AQP |  |
| 1         | 15 April 2021 | Patty Burt, RP Bio,<br>AQP    | Werner Beukes, RP,<br>Bio  | Section 2.2<br>provided by PGC.<br>Replaced Figure in<br>Appendix 1  |
| 2         | 23 April 2021 | Patty Burt, RP Bio,<br>AQP    | Werner Beukes, RP,<br>Bio  | See Provincial<br>comment spread<br>sheet DB-TMS-<br>0921  |
| 3         | 04 May 2021   | Patty Burt, RP Bio,<br>AQP    | Werner Beukes, RP,<br>Bio  | Appendix 1: Key Plan Drawing has been updated to provide reference to the L numbers Section 4.1 comment added, and Photo 30 added. Section 4.2 Details revised to better |
|           |               |                               |                            | reflect the activities at the time and the intent.   |
|           |               |                               |                            | Table 1: Item 59 & Section 4.3 additional information about ESC added  |
|           |               |                               |                            | Section 4.4 Typing error corrected   |
|           |               |                               |                            | Section 4.4<br>Additional water  |

|  |  | monitoring drawing added   |
|--|--|--|
|  |  | Section 4.8 comment added  |
|  |  | Section 6<br>Concluding remarks<br>section added. TOC<br>updated                     |
|  |  | Appendix 3 Wildlife acronyms/species codes added                                     |
|  |  | Permit tracking table resized to 11 x 17. Golder arch. permit 12.2 information added |
|  |  |  |

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# **Appendices**

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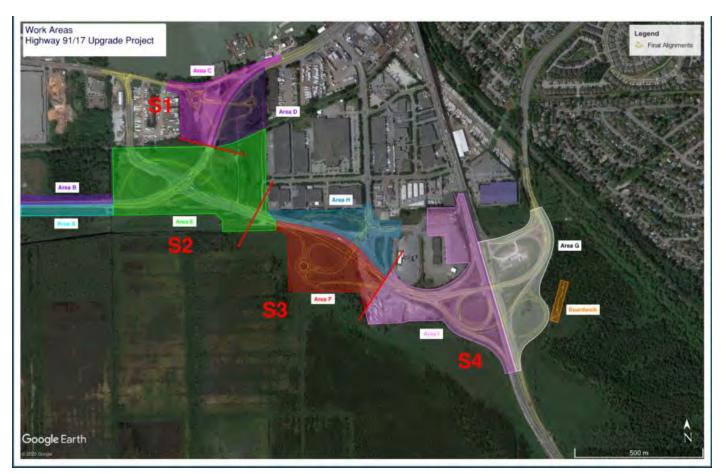
Appendix 7 Water Quality Data
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## 1.0 INTRODUCTION

This report covers all activities from 01 to 31 2021. During this period works occurred in Areas B, C, E, F, G, H, I, and Highway 99. For the purposes of this report, the following areas shall be defined as:

- Area B: 96<sup>th</sup> Street ditch
- Area C: Portion of River Road West of Highway 17 (Includes L250, L275, L325, L350, part of L375)
- Area E: Sunbury Mounds L500, L575, L550 and Highway 99
- Area F: MKDelta (L1150S/1160/1170/1400) and C01 detour
- Area G: Delta Nature Reserve (L2300/2400)
- Area H: L1300 Weigh Scale
- Area I = West side of Hwy 91, truck parking area, E02 and E04 Detour
- Truckstop B01 Detour Nordel Way



**Figure 1: Approximate Work Area Locations** 

A Key Plan has been included showing the project alignments (See Appendix 1).



## 2.0 CONSTRUCTION ACTIVITIES

### 2.1 Activities for this Period

### The following works took place within Section 1 from 01 to 31 March 2021:

#### Area C

- Menard was on site, while the stone column operations were ongoing (Photo 1).
- New background noise monitoring was conducted.
- Excavation/preload removal for Culvert 105 began along the L350/L325 (west roundabout) (Photo 2 and 3).
- Removal of crushed rock stockpiles conducted by Menard. Removal of preload top layer.
- Stormwater tie-in installations completed for post fish salvages at the River Road West ditches.
- Jacob Brothers operations ongoing for culvert (Photos 4 & 5).
- Fish salvage was conducted in the L325 ditches.

## The following works took place within Section 2 from 01 to 31 March 2021:

### Area A

- No works were completed in Area A.

#### Area B

- Installation of silt fence along L400 ditch and preload sand were relocated from River Road West for placement of second lift was completed (Photo 6).
- Repairs to subgrade settlement on previously placed fill at the L100 (Photo 7 & 8).
- Ongoing Stage 2 placement at L100.

#### Area D

- No works were completed in Area D.

### Area E

- Removal of temporary sand stockpiles at the L575 (Photo 9).
- Culvert pipe installation ongoing (Photo 10).
- Excavated contaminated material was being placed on the LLDP Enviro Liner membrane in the storm pipe trench.
- Culvert pipe installation ongoing (Photo 11) at the L550 and all excavated contaminated material has been placed on the LLDP Enviro Liner membrane.
- Storm 200 culvert installation ongoing (Photo 12) and all excavated contaminated material has been placed on the LLDP.
- Enviro Liner membrane at the L550 (Photo 13). Installation complete 19 March.
- Culvert pipe installation completed and all excavated contaminated material has been placed on the LLDP membrane at the L550. Menard operations ongoing at the L575 (Photo 14).
- Stormtec water treatment facility demobilized.
- Cutting of Asphalt with saw occurred and no dust issues were noted. Site visit was held by TWE for the C03
  detour works.

### Hwy 99

Sand loading continued from Hwy 99.

## The following works took place in Section 3 from 01 to 31 March 2021:

## Area F

- Delta Aggregates continued delivering, stockpiling, and relocating preload sand.
- Menard remobilized and continuing operations at the L1160. Crews removed the culvert to be filled in at the L1200.
- Delta Aggregates continued delivering sand from Hwy 99 (Photo 15), stockpiling, and relocating preload sand at the L1150 roundabout.



- Removing riprap from the ditch at L1145 was conducted (Photo 16).
- Preload placement continued at L1160 and L1170.
- Access road in L1170 was built.

## Area H

- Prepping site for culvert installation at the L1300. Bird sweep was conducted at the L1300.

### The following works took place in Section 4 from 01 to 31 March 2021:

### <u>Area I</u>

- Removal of concrete median at the E04 detour (Photo 17), placement of final lift of preload sand above culvert and ditch (Photo 18).
- Relocation of electrical connections, removal of median at the E04 detour, placement of final lift of preload sand above culvert and ditch continued.
- Ditch infilling at the L2100. Installation of settlement gauges.
- Fine grading, milling was completed and the removal of the median and sand/gravel placement from the old median area.
- Paving of Detour E04 was completed (Photo 19). E04 Detour was opened and is now online.
- Ditch infilling was ongoing at the L2100 (Photo 20).
- Menard commencing works to L600 for stone column installation. Preparations were made to start at the L2100 alignment construction and pre-load placement.
- Preload hauling and placement continued at the L2100, the placement of geogrid within the newest sand lift.

#### Area G

- Installation of membrane liner and removal of the dewatering ditch at the L2300 (Photo 21) was completed.
- Placement preload and compaction sand began at the L2300 (Photo 22).
- Installing geo-membrane (Photo 23 and 24). Filling low spots along L2300/L2400. Placed and compacted sand at L600.
- Placing preload sand, installing geo membrane & Menard mobilizing at the L2300 (Photo 25). Stone column installation commenced.
- Embankment placement continued at the L2300 (Photo 26 and 27). Geogrid, fabric, embankment sand placement continued at the L2400.
- Saw cutting of the Hwy 91 shoulder for Menard on L600 (north). Embankment placement continued at the L2300 (Photo 28). Embankment sand placement at L2400 stockpiling of surcharge gravel commenced. Menard was on site working at the drilling site (Photo 29).
- Installation of grid liners and L2300 embankment lift. Removal of asphalt was done, and road plates were installed for Menard operations. No dewatering was done on the site.

### New Truckstop B01 Detour Nordel Way

Inspection was held with no issues were observed or were noted. Area inspected and no issues were noted.
 The 'no oil change' signs were installed.

## 2.2 Upcoming Activities

#### Section 1:

- Completion of preload removal from the new road alignments (L250, L295, L325, L350, L375)
- Installations of catch basins and permanent drainage structures to commence
- Commencement with the construction of gabion wall and culvert installation at L275
- Completion of embankment fill work at bridge platform as well as L325/L350
- Bridge (south side) construction to continue with MSE wall panel installations and first concrete pours scheduled.

## Section 2:

- L575 Preload removal to start and installation of manholes & headwalls to commence



- L550E Preload removal to commence, roadway construction of Detour C03 to be completed.
- L550W-Subgrade embankment fill to start and installation of permanent stormwater and culverts to commence.
- Stone columns test trials and embankment fill to commence at L500W

#### Section 3:

- Utility relocations to occur at L1150
- Weigh scale east approach placement of preload and embankment fill to start
- L1400/L1170/L1150 continue to monitor preload settlement.
- Fish salvages to be completed for Silda ditch and the remaining ditches at L1190 and L1300

#### Section 4:

- L600W stone column installation to be completed
- L600E Subgrade Embankment fill will be placed and compacted
- L600WExcavation to be completed and stone column installation to commence
- Complete placement of geomembrane and preload sand.
- Ongoing preload settlement will be monitored at L2300 & L2400
- Preload and surcharge removal to commence at L2200 and permanent drainage and stormwater structures will be installed.
- Completion of temporary wall along L2100

## 3.0 ENVIRONMENTAL ISSUES

### 3.1 Environmental Incidents

At approximately 13:45 on 23 March 2021, a spill occurred at the L2400 (G) when a dump truck was unloading sand for preload placement. The hydraulic oil spill released approximately 10 L to the asphalt. The asphalt was covered in fine sand which absorbed the spilled material. Spill pads were immediately deployed, and the contaminated sand was excavated and bagged by hand and stored on site for later disposal to an appropriate off-site facility.

At approximately 21:45 on 23 March 2021, a tandem truck was offloading preload sand at the L2300 (G). While lifting the load box a hydraulic line burst open causing approximately 3-5 L of hydraulic fluid to spill onto the asphalt area. Absorbent pads were placed at the spill area and all contaminated soils were removed. A hazardous waste pickup is scheduled by Tervita.

On night shift of March 29/30 a mechanical failure on a dump truck occurred at Area G. An engine seal failure caused an early warning indicator to the driver. The truck was shut down and a drip tray was placed under the affected area. No oil was spilled on the preload sand. The mechanic started with repairs and the truck was taken out of service.

## 3.2 Non-Compliance

No Environmental Non-Compliance Reports were issued or received during the reporting period.

#### 3.3 Non-Conformance

No non-conformances were issued or received during the reporting period.

## 3.4 Opportunities for Improvement

Weekly reports are being reviewed to make sure that information is not stale.



#### 3.5 **Outstanding Environmental Issues**

The following ongoing monitoring is being conducted (Table 1):

| Item No | Date     | Eues Tracking Table  Environmental Issue or Required Action  | Corrective Action   | Projected<br>Closure<br>Date | Open/<br>Closed | Comments  |
|---------|----------|--|---|------------------------------|-----------------|---|
| 59      | 2 March  | Inadequate ESC<br>measures in areas<br>L400 and L475   | ESC measures are required to reduce the possibility of a deleterious substance release.   | 19 March                     | Open            | A Construction Manager has been notified of the issue which is ~40% resolved, to be fully completed once the resources become available. See Section 4.3.   |
| 60      | 10 March | CB inserts on<br>River Road West<br>were damaged<br>and require<br>immediate<br>replacement.   |   | 15 March                     | Open            | Foreman notified and the CB inserts will be replaced. In discussion with PGC it was confirmed that there is currently no activity in that area. CB drainage lines will be disconnected soon. Increased road sweeping has been implemented during night shift to limit the amount of sediment in the L325 jug handle |
| 61      | 17 March | An unsorted trash can was overflowing at Area C.   | Sort waste streams appropriately, including hazardous wastes such as spent oil containers.  | 24 March                     | Closed          | MESL has notified the PGC environmental site representative and corrective actions are expected shortly.  |
| 62      | 23 March | A spill occurred at<br>the L2400 (G)<br>when a dump<br>truck was<br>unloading sand for<br>preload<br>placement.                                  | Spill pads were immediately deployed, and the contaminated sand was excavated by hand bagged and stored on site for later disposal to an appropriate off-site facility. | 23 March                     | Closed          | A hazardous waste pickup is scheduled by Tervita.   |
| 63      | 23 March | A hydraulic line<br>burst open<br>causing<br>approximately 3-5<br>L of hydraulic fluid<br>to spill onto the<br>asphalt area at<br>the L2300 (G). | Spill pads were immediately deployed, and the contaminated sand was excavated by hand bagged and stored on site for later disposal to an appropriate off-site facility. | 23 March                     | Closed          | A hazardous waste pickup is scheduled by Tervita.   |
| 64      | 26 March | Diesel spill.  | Contain and remove the contaminated material.   | 26 March                     | Closed          | The spill was contained and remediated by Menard.   |



## 4.0 ENVIRONMENTAL MONITORING AND INSPECTION RESULTS

Daily site inspections were held during the reporting period by PGC (a representative was available during the day and night shift, as applicable). PGC also conducted a Spill Response Toolbox meeting to remind crews of the appropriate protocols (see *Appendix E*). All operators and equipment were visited/inspected numerous times to ensure that all BMPs are adhered to. Regular equipment inspections are being done and kept on record by PGC.

MESL conducted a field visit on the afternoon of 4, 10, 17, 25 & 31 March 2021. PGC has indicated that all equipment is checked prior to arriving onsite to ensure that it is free of excess grease, leaks, and foreign materials. Machinery is also checked to ensure they are equipped with a spill kit, spill tray and fire extinguisher. Inspections were done on Delta Aggregate equipment pre-trip inspection sheets and are available on request.

## 4.1 Air Quality and Dust Control

Water trucks are onsite and are put into use during drier periods for dust suppression (Photo 30).

## 4.2 Noise and Vibration Management

Elevated noise levels were measured across the project site, while no active construction was occurring. These measurements were taken to determine if the elevated noise levels measured in March were a result of construction activities or due to the higher volumes of traffic observed since the initial baseline results were taken. All monitoring locations, during dayshift and nightshift, will be measured when no active construction is occurring.

PGC has re-captured all the baseline noise data to reflect more realistic noise data after the COVID-19 restrictions have been lifted. All data was captured in areas where no construction activities were taking place and it was noted that there has been a significant increase in the ambient noise data originating mostly from traffic in the near vicinity of the project

An official letter will be submitted to the Province to highlight the changes and will provide more information about the request to resubmit the project baseline data. Once approved, future noise data will be compared to the new baseline data to ensure that the project remains compliant based on more representative baseline data.

Noise monitoring to establish baseline ambient data was conducted during this reporting period and presented in Table 2 and Table 2A (baseline only). Table 2 provides the baseline data collected in February 2021 and the data results, in comparison on 05 March 2021.

**Table 2 Noise Data Results** 

| Start    | 1           | Danasistias                              | Ambient Neise   | CD0                                   | В            | aseline (D   | ay)          | Results (Day) |              |             |
|----------|-------------|--|---|---------------------------------------|--------------|--------------|--------------|---------------|--------------|-------------|
| Time     | Location    | Description                              | Ambient Noise   | GPS                                   | Avg.<br>(dB) | Min.<br>(dB) | Max.<br>(dB) | Avg.<br>(dB)  | Min.<br>(dB) | Max<br>(dB) |
| Day (5 N | March 2021) |  |   |                                       |              |              |              |               |              |             |
| 08:37    | 1           | River Road West<br>(Section 1)           | Light traffic and<br>pile driving by<br>Menard at the<br>L275 | 49.154475 LAT,<br>-122.956270<br>LONG | 59.0         | 54.2         | 75.0         | 67.3          | 62.1         | 81.8        |
| 09:14    | 3           | Nordel Way Bog<br>Area (Section 3)       | Light traffic, no<br>construction<br>activities               | 49.150918 LAT,<br>-122.930019<br>LONG | 71.9         | 53.4         | 92.3         | 75.2          | 65.8         | 90.4        |
| 13:35    | 4           | Nordel<br>underpass South<br>(Section 4) | Light road traffic,<br>no construction<br>activities          | 49.144217 LAT,<br>-122.939296<br>LONG | 60.4         | 43.9         | 81.5         | 72.9          | 67.3         | 95.4        |



Table 2A Noise Data Baseline - Day (March 2021)

| Start        |                                     | 0.00          |   | 2-02-03-0-7   |  | 100                                   | Baseline (Day) |              |             |  |
|--------------|-------------------------------------|---------------|---|---|--|---------------------------------------|----------------|--------------|-------------|--|
| Time         | Date                                | Location      | Description   | Ambient Noise   | Conditions   | GPS                                   | Avg.<br>(Db)   | Min.<br>(Db) | Max<br>(Db) |  |
| 14:12        |                                     |               | Nordel Underpass<br>South (Section 4)   | No work activity-<br>Light traffic only-<br>new baseline data   | Overcast and dry and 12°C  | 49.144217 LAT,<br>-122.939296<br>LONG | 68.1           | 64.7         | 73.9        |  |
| 14:46        | 10-Mar-21                           | 2             | Sunbury Mounds<br>(Section 2)   | No work activity-<br>Light traffic only-<br>new baseline data   | Overcast and dry and 12°C  | 49.146065 LAT,<br>-122.933375<br>LONG | 73.6           | 65.8         | 86.7        |  |
| 13:36        | 15-Mar-21                           | 3             | Nordel Way Bog<br>Area (Section 3)  | No work activity-<br>Street traffic only-<br>new baseline data  | Clear and<br>sunny and<br>16°C   | 49.150918 LAT,<br>-122.930019<br>LONG | 74.8           | 66.9         | 85.8        |  |
| 15:10        | 17-Mar-21                           | 4             | Nordel underpass<br>South (Section 4)   | No- construction activities. Traffic related noise  | Sunny, clear<br>skies, 18°C  | 49.144217 LAT,<br>-122.939296<br>LONG | 68.1           | 64.7         | 73.9        |  |
| 14:39        | 15-Mar-21                           | 5             | Nordel Road<br>Interchange<br>(Section 4)   | d No work activity- Clear and 49.147559 LAT,  |  | 73                                    | 65.3           | 83.4         |             |  |
| 13:00        | 16-Mar-21                           | 6             | Nordel Way North (Section 4)  Runners and people on bicycles  Clear and sunny and 16℃  Clear and sunny and 16℃  LONG    |   | 76   | 69.4                                  | 87.5           |              |             |  |
| Noise I      | Data Baseline                       | e – Night (Ma | arch 2021)  |   |  |                                       |                |              |             |  |
| 0:15:<br>00  | 12-Mar-21                           | 1             | River Road West<br>(Section 1)  | Few isolated cars<br>driving by on River<br>road  | Clear skies,<br>3°C  | 49.154475 LAT,<br>-122.956270<br>LONG | 57.1           | 47.9         | 72.9        |  |
| 0:45:<br>00  | 12-Mar-21                           | 2             | Sunbury Mounds<br>(Section 2)   | Usual traffic- trucks cars and one transit bus  | Usual traffic- trucks cars and one Clear skies, 49.146065 LAT, -122.933375 |                                       | 60.5           | 51.9         | 74.9        |  |
| 1:30:<br>00  | 12-Mar-21                           | 3             | Nordel Way Bog<br>Area (Section 3)  | No activities in<br>Area F. Traffic<br>passing by on Hwy<br>91C   | Clear skies,<br>3°C  | 49.150918 LAT,<br>-122.930019<br>LONG | 68.2           | 53.3         | 93.9        |  |
| 2:15:<br>00  | 1 1 Mar 21 1 4                      |               | Nordel underpass<br>South (Section 4)   | No construction activities near monitoring station. Trucks are using airbrakes in the near vicinity.  Detour was opened | Clear skies, 3°C   | 49.144217 LAT,<br>-122.939296<br>LONG | 60.2           | 54.9         | 87.9        |  |
| 2:55:<br>00  | Nordel Road Interchange (Section 4) |               | Limited activities in Area G. Traffic passing by on E01 and Nordel Way. Trucks are using airbrakes in the near vicinity | Clear skies,<br>3°C   | 49.147559 LAT,<br>-122.942917<br>LONG                                      | 63.9                                  | 49.8           | 84.9         |             |  |
| 23:30<br>:00 | 11-Mar-21                           | 6             | Nordel Way North<br>(Section 4)   | Normal traffic- no construction activities  | Clear skies,<br>3°C  | 49.148053 LAT,<br>-122.935132<br>LONG | 78.6           | 52.3         | 73.2        |  |

## 4.3 Erosion and Sediment Control

Daily monitoring is done by PGC Environmental Representatives, Site Supervisors, and Foreman to ensure the installed sediment fences are fully functional in affected areas. Sediment control fences had been installed in active areas to prevent sediment run-off from clearing and grubbing activities in addition to containment of preload, stockpiles, and isolation of wildlife. MESL inspected the silt fencing which appeared to be in overall good condition, PGC continues to inspect fencing and direct repairs as needed. Inactive stockpiles had been covered with poly sheeting, particularly in areas where they were near aquatic resources.



Paved surfaces were observed in overall clean condition and TSI has been routinely observed at the site actively sweeping public roadways. PGC has indicated that paved surfaces are also swept at the end of each shift. Most areas were relatively stable having been covered with preload sand which was generally absorbed the erosive forces of the rain and was well draining.

The environmental coordinator identified two ditches that required improvements. In the L100/L400 ditch, the rock check dam at 96<sup>th</sup> Ditch will be improved. At the L475, existing straw waddles in the ditch are showing wear and will be replaced and a gravel berm will be added, which is about 40% completed (Item 59).

MESL noted damaged CB inserts along River Road West (C) which require immediate replacement (Photo 31 & 32). This observation has been added as Action Item #60 in Table 1 above. Discussions with PGC occurred the week of 05 April 2020 and the issue will be rectified 12 April 2021.

## 4.4 Water Quality Management

The new water settling pond at the E01 in Section 4 is being closely monitored 24 hours a day to observe the efficiency of the system and the quality of water potentially discharging from it.

No water was discharged from the Stormtec water treatment facility, as a result water samples were not taken.

No pumping activities occurred this period. Other samples were collected from monitoring points throughout the site for weekly baseline data collection. The results of this data collection are presented in Appendix 7 (locations of sampling are presented in Figure 2).



March 4, 2021





March 10, 17 and 25



March 31, 2021

Figure 2: Current water sampling locations for March 2021.

## 4.5 Wildlife and Habitat Management

A beaver lodge in the middle of the L2300 is isolated due to increasing preload (Photo 33). Recent beaver activity was detected in which tracks led over the preload and sediment fencing and into the adjacent DNR. As these animals are generally nocturnal, operators during night works must be very vigilant to avoid collisions with individuals at this



crossing. This information has been shared with construction crews. The PGC Environmental Monitor reported a beaver running across the preload sand at Area G, and the beaver continued into the DNR.

A green-wing teal carcass was observed on a graveled surface at Area E, next to a pallet of sandbags (Photo 34). The carcass appeared to be intact (no evidence of predation); however, the cause of death is unknown. At this time, the death is presumed to be attributed to natural causes; however, it is recommended that this area be inspected over the next few weeks to ensure no other waterfowl or birds are found in this condition. This observation has been added to *Appendix A*.

McElhanney conducted a nest sweep in advance of minor clearing works at the L1300 (H). No nests were detected.

## 4.6 Vegetation Management

PGC has indicated that known occurrences of Japanese knotweed will be monitored for regrowth during spring of 2021.

## 4.7 Fisheries Habitat Management

Brybil conducted a fish salvage during the reporting period for the L325 ditches along River Road West. The results of this salvage will be issued in the April 2021 monthly report.

## 4.8 Concrete Works and Grouting Management

To date on this project there has been no concrete works or grouting activities. Tentatively, this type of works are scheduled for the last week of April at the S1 bridge and the 105 Culvert.

## 4.9 Waste Management

In general, yellow wheelie bins were readily available and fully stocked at each active work location while mobile equipment was also equipped with spill kits. PGC has provided checklists and ensures that any depleted supplies within these bins are restocked immediately (as per the inventory posted on the inside of the lid).

Overall housekeeping and waste management has improved; with garbage and recyclable products being sorted into the appropriate receptacles. In general, trash was not observed in construction areas with exception to small quantities of waste materials suspected to have been discarded by passing motorists.

Hydrocarbon wastes were neatly stored in labelled drums near the site office which were covered and protected from rain. Zip tied hazardous waste bags containing used spill pads and contaminated soils are stored under the tent by office muster point to stop rain reaching and spreading beyond spill trays.

Some idle or otherwise stationary equipment (such as light standards) lacked drip trays (Photo 35 & 36). In general, drip tray usage has improved over the most recent observation periods.

A trash can was observed at Area C which was overflowing and did not appear to be sorted as it contained cardboard, waste oil containers, and plastics. This issue has been assigned Action Item #61 and has been added to *Table 1*.

Table 3: Hazardous Waste Storage and Disposal Tracking

| Date   | Location | Haz-Material | Volume         | Comments | Date of  |
|--------|----------|--------------|----------------|----------|----------|
| (2020) | Location | Stored       | m <sup>3</sup> | Comments | Disposal |



| 13 July        | PGC Site<br>Office Yard         | Spent absorbents  | N/A                                  | Approximately 2-3 L of diesel was spilled on the pavement. Spent absorbents to be collected by Tervita.                                       | TBD                                  |
|----------------|---------------------------------|---|--------------------------------------|---|--------------------------------------|
| 28 July        | L575 Preload<br>Area            | Spent absorbents  | N/A                                  | Less than 1L of oil to spill tray,<br>absorbent pads used to mitigate spill to<br>ground. Spent absorbent pads to be<br>collected by Tervita. | TBD                                  |
| 17 Sept        | Burns Bog<br>perimeter<br>ditch | Spent Absorbents  | N/A                                  | ~100 mL of engine oil to water. Spent absorbent pads to be collected by Tervita.  | TBD                                  |
| 21 Sept        | Site office<br>waste area       | Spent Absorbents  | N/A                                  | Excess pads that were placed in spill trays. Spent absorbent pads to be collected by Tervita.   | 24 September<br>2020-3 barrels       |
| 24 Sept        | Site office<br>waste area       | Spent Absorbents  | N/A                                  | Excess pads that were placed in spill trays. Spent absorbent pads to be collected by Tervita.   | 24 September<br>2020-3 barrels       |
| 24 Sept        | Site office<br>waste area       | Used aerosols   | N/A                                  | Spray paint cans that had collected to date.  | 24 September<br>2020-3/4 of a<br>bin |
| 25 Oct         | PGC Site<br>Office Yard         | Used aerosol paint<br>cans, contaminated<br>soil and plastic oil<br>containers.                               | 55 m <sup>3</sup>                    | Spray paint cans that had collected to date, damaged drum with the soil and empty containers.   | 25 October<br>2020                   |
| 3 Nov          | Site office<br>waste area       | Wood waste bin  | N/A                                  | Pallets and other wood by products  | 3 November<br>2020                   |
| 2 Dec          | Site office<br>waste area       | Spent absorbents,<br>drum contaminated<br>soil, plastic oil<br>containers, bags<br>with contaminated<br>soil. | 1.7 m³                               | Used spill response materials and contaminated soils.   | 02 December<br>2020                  |
| 11 Feb         | PGC Site<br>Office Yard         | Used spill pads,<br>used aerosols, oily<br>plastics and<br>contaminated soil                                  |                                      | Aerosols taken to recycling depot by PGC, spill pads, oily plastic and soil removed from site by Tervita                                      | 11 February<br>2020                  |
| 21 March<br>21 | PGC Site<br>Office Yard         | Hazardous Waste   | All hazardous waste was removed from |   | 21 March 2021                        |

## 4.10 Spill Management and Emergency Response

No emergency responses were recorded during this reporting period

## 4.11 Contaminated Sites Management

PGC inspected all secondary containments and emptied excess water which had accumulated from recent rainfall. PGC indicated that this neglect was mentioned to the foremen at the site.

A new contaminated soil bin (1 m³) arrived at the site 02 March 2021, which will be able to store larger quantities, if need be.

Contaminated Sites tracking is documented in Table 4.



**Table 4: Contaminated Sites Tracking** 

| Date          | Soil   | Water  |
|---------------|--|--|
| Section 1     | •  |  |
|               | Nothing to report this period.   |  |
| Section 2     | <u> </u>   |  |
| March 1, 2021 | ~380 m³ of inferred contaminated material excavated from STM 200 trench. This material was placed on the LLDPE Enviro Liner in the storm trench from STA 210+00 to STA 227+00. A 1m clean cap was placed over this material.   | No groundwater encountered. No treatment or pumping occurring this period. |
| March 2, 2021 | ~480 m³ of inferred contaminated material excavated from STM 200 trench. This material was placed on the LLDPE Enviro Liner in the storm trench from STA 227+00 to STA 240+00. A 1m clean cap was placed over this material.   |  |
| March 3, 2021 | ~470 m³ of inferred contaminated material excavated from STM 200 trench. This material was placed on the LLDPE Enviro Liner in the storm trench from STA 240+00 to STA 255+00. A 1m clean cap was placed over this material.   |  |
| March 4, 2021 | ~230 m³ of inferred contaminated material excavated from STM 200 trench. This material was placed on the LLDEP Enviro Liner in the storm trench from STA 255+00 to STA 269+00.   |  |
| March 5, 2021 | ~470m3 of inferred contaminated soil excavated. This material was placed in the trench on top of the LLDPE.  Brybil onsite and collected 4 samples of the inferred contaminated material in the trench line and of the clean cap material. The material was tested for LEPH/BTEX, PAHS, VOC/VPH and metals. Results pending. |  |
| 08 March 2021 | $\sim\!\!510~\text{m}^3$ of contaminated material excavated from STM 200 trench. No sampling conducted.  | No groundwater encountered. No treatment or pumping occurring this period. |
| 09 March 2021 | ~170 m³ of contaminated material excavated from STM 200 trench. No sampling conducted.   |  |
| 10 March 2021 | ~550 m³ of contaminated material excavated from STM 200 trench. No sampling conducted.   |  |
| 11 March 2021 | ~660 m³ of contaminated material excavated from STM 200 trench. No sampling conducted.   |  |
| 12 March 2021 | ~240 m³ of contaminated material excavated from STM 200 trench. No sampling conducted.   |  |
| 22 March 2021 | ~660 m³ of contaminated material excavated from STM 200 trench. No testing performed on this material. In-situ data from the Stage 2 PSI report is used to characterize the material.  | No groundwater encountered. No treatment or pumping occurring this period. |
| Section 3     |  |  |
|               | Nothing to report this period.   | Nothing to report this period.   |
| Section 4     | •  |  |
|               | Nothing to report this period.   | Nothing to report this period.   |

## 5.0 ENVIRONMENTAL PERMITS

# 5.1 Status Update

A Permit Tracker is provided in Appendix 4. Renewal of the FLNRORD wildlife salvage permit was submitted 31 March 2021. Golder Section 12.2 permit has been extended from 31 March 2021 to 30 June 2021 while the Kleanza submission (#20A0278) continues to be reviewed.

A Permit Conditions Tracker is included as Appendix 5 outlining all DFO and WSA permit terms and conditions.



#### 5.2 **Status of the Table of Commitments and Assurances**

The status of completed and ongoing commitments in the Table of Commitments and Assurances is provided in Appendix 6.

#### **CONCLUDING REMARKS** 6.0

Although minor deficiencies were noted, they are being addressed in a timely fashion, with the exception of the CB inserts. Active construction areas were compliant with pertinent guidance documents and legislation.

#### 7.0 **SITE PHOTOS**



Photo 1. Menard operations ongoing at the L275 (C).





Photo 3. Preload removal ongoing at the L325(C).



Photo 4. Preload removal in progress at L325 (C).









Photo 6. Ditch silt fence ESC installed at the L400 (B).



Photo 7. Repairs done to subgrade settlement issues over catch basin pipes at the L100 (B).



Photo 8. ESC measures are being installed in the L400 ditch (B).





Photo 10. Culvert installation ongoing at the L550 (E)..





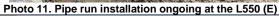




Photo 12. Culvert pipe run installation ongoing at the L550 (E).





Photo 14. Ongoing operations at L575 (E).



Photo 15. Offloading of preload sand from Hwy 99 at the L1400 (F).



Photo 16. Area F ditch rip rap removed at the L1145 (F).





Photo 17. Removal of concrete barriers and grinding of asphalt and median removal at the E04 Detour (I).



Photo 18. Delivery of preload sand, compaction, and final lift prior to surcharge at the L2100 (I).



Photo 19. Paving activities commenced at E04 at the L2100 (I).







Photo 22. Placing preload at the L2100 (G).









Photo 24. Placement of preload sand continued at the L2300 (G).



Photo 25. Preload placement ongoing at the L2300 (G).



Photo 26. Placement and compaction of preload sand continued at the L2300 (G).



Highway 5 Connector Delenger N 49 8 40 W 122 83 Pl Mar 21 2921 at 10:12:23 Pl Photo 28. Placement and compaction of preload sand at L2300 (G).







Photo 30. Example of water truck usage for dust supression.





Photo 32. Damaged CB inserts on River Road West (C).



Mar 15 2021 11199 01 and

Photo 34. A dead green-wing teal observed on graveled surface (E).





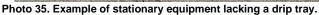
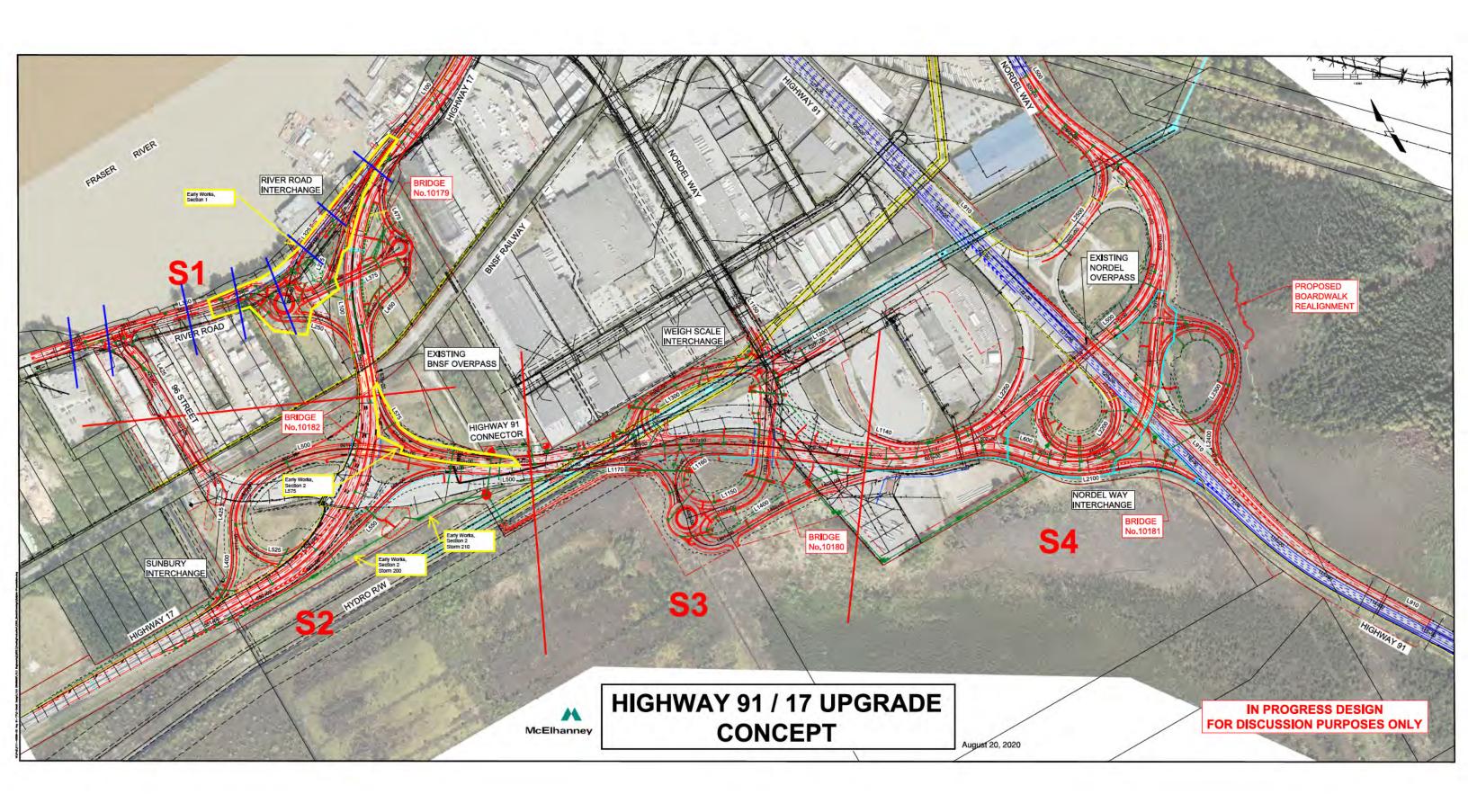




Photo 36. Drip trays are lacking throughout the Site, particularly for light stands

# **APPENDIX 1: KEY PLAN DRAWING**



# **APPENDIX 2: SPILL AND INCIDENT TRACKER**

|    |          |          |                  |      |             |       |                 |                         |   | W97T                                   | Tak                        |              |                         |   |   |  |
|----|----------|----------|------------------|------|-------------|-------|-----------------|-------------------------|---|--|----------------------------|--------------|-------------------------|---|---|--|
|    | a e ve   |          | a e a a a a ss e |      | A x<br>T me |       | 10.4            | ass a                   | es ve   |  | Am )                       | Te           | T e me                  | 252 2 5   | A Take  | e veAsae mee   |
| 2  | 4- an-2  | 4- an-2  | 5- an-2          | Nght | 203-2 00    | gc    | De ta Agg egate | Mino spil < )           | Hyd auic ine b oke  | S3 400                                 | <500m                      | Hyd aulc lud | Rock t unik (Vo vo - 3) | No mal wea and ea on<br>moving machine pa s<br>(ftyd au ic ine) un o seen<br>ci curretances | saking hyd asi ir in reckoud du ting p a shift in spection Ope as on shift dhem the market in impection Ope as on shift dhem the market in in the sake of the sake on or and on their sake on or and on their be last. Machine was pa ked with 1 short up how east was count and on the looked post on A spill toy was puece be one the last, and containmanded was one of the sake and containmanded of the sake | S- an 2  |
| 22 | 6- an-2  | 6- an-2  | 6- an-2          | Day  | 90-930      | gc    |                 | Mino spil < }           | Hyd auic ine b oke  | S2 500 p.e oad                         | <500m                      | Hydaulc lud  |                         | No mal wea and ea on<br>moving machine pa s<br>(flyd au ic ine) un o seen<br>ci curretances | eaking lyst asic I ne nected on boom duing<br>ope alon Ope a on Other on machine<br>mmed lably and p aced spil pads on the eak<br>source and on the leak<br>Machine was taken out o se voe and a spit in<br>was paced been the leak Contaminated pads<br>and sand be on we ellemout of sposal<br>Machine spie de the bid on the side of the<br>Machine spie de the bid on the<br>day.   | 6-an 2   |
| 23 | 2- an-2  | 2- an-2  |                  | Nght | 00 0 -00 30 | GC    |                 |                         | Sity wale eleased to 96th St<br>ditch                                   | S2 adjacent to 96th st di ch           | unknown quanti y o<br>wate | si ty wate   |                         | not olowing sit plactices<br>No EM plesent Wolking<br>duling heavy an event                 | Wo k was immed ate y stopped and pumps<br>u ned o   | an 7 - EM will be plesent oliope a lons to esume with a dewale ingiplan in place   |
| 24 | 4 an-2   | 4- an-2  | 4- an-2          | Day  | 43 - 500    | gc    |                 | Spil( -5)               | Hyd auic hose b oke   | S2 500 p e oad                         | <5                         | Hydaulc lud  | Dump t usk              | No mal wea and ea on<br>moving machine pa s<br>(hyd au ic na) un o seen<br>ci cumstances    | Hyd act is to st wife a lising box o duringt uck<br>or load sand. Machine was immediately u ned<br>or hyd act out op hed orto machine and<br>p eload sand. Spil pads we e-applied to ground<br>and machine. Contaminated sand that had<br>also bed of was quicky emoved and bagged<br>or disposal Of was uly ceaned or machine<br>and su ounding ground.  | ucking company took machine out o se voe and will complete lepail so si e  |
| 25 | 0- eb-2  | 0- ab-2  | - eb 2           | Nght | 33 -400     | gc    | No del udring   | Spi1( -5)               | andern tuck, alled to owe<br>box causing cols on will bidge             | Unde side o the No del Way<br>ove pada | 3-4                        | Hyd aufc Iud | Dump t uck              | Damage to the b idge and the luid e ease  | It is unce at this point what immediate act on<br>was already the action of an oil the form<br>occur of his incident is our entry unche<br>mosts gain in he dayshift is eve other sign<br>on the asightal and he cost shoulds. As carrap<br>was installed and go onimally 23 and or<br>contaminates not leave order or aims preced no<br>contaminates only was order or aims preced no<br>contaminates only was order or aims preced no<br>contaminates only though one was preceded<br>and began into the preceded and<br>polyethera plast or he emousl on the<br>contaminates only the GC se vice p oxide<br>has been equested.   | Incident is as ently under needigation   |
| 26 | 6- eb-2  | 6- eb-2  | 6- eb 2          | Nght | 0 - 30      | gc    | Deta Agg egate  | Mino spil < )           | Mechanical atu e caused oil to<br>spill no spill ay                     | 400 p e load                           | арр сх: 500ml              | Engine oil   | Rock t uck (Ve ve - 3)  | Mechanical aiu e  | At app oxma e y 5 pm a small amount o<br>engine ol sp led onto the placed p eads sand<br>flow ass because o a mechanical a u e o a<br>stat ona y cek t uck not n use he oll was<br>d pp mg not bre dipt ay and app comstelly 500<br>mm o oil was sp led on he p e oad su ace  | Equipment maintenance  |
| 27 | 7- eb-2  | 7- eb-2  | 7- ab 2          | Day  | 83-900      | GC    | No and          | Mino spi1 < )           | Mechanical alu e caused<br>hyd aut e of to sp II nto<br>excava o bucket | -550 culve t instalat on               | арр ох 500ml               | Hydaulc lud  | Excess o (CA 328D)      | Mechanical aiu e  | At app ox ma e y 8 57am a spil occu ed du ng a<br>bucket change on an ecoseuto which soil ed in<br>ses ham o liyfe auto oil making con act with<br>he go and uciliy the ecoseto a m was above<br>he bucket and the maps by o he hyd auto of<br>dipped into he econvato bucket. Spil pads<br>we e mined ately deployed, and the spil was<br>cleaned up.  | he Excava o was epai ed  |
| 28 | 23-Ma -2 | 23-Ma -2 | 23 Ma 2          | Nght | 33 - 400    | gc    | No and          | a ge Spil (5 -<br>999 ) | Mechanical also e caused<br>hydiaulic of to spill into aspha t          | -2400 on the Higway o amp              | арр ох. 0                  | Hydaulc lud  | Hault uck               | Mechanical aiu e  | All app crems ay 3.45 a spil occur and when a<br>dump t cub was unloading sand o p elabed<br>p acement. The hyd suic o Ispil eleased<br>app crems ay 0 or the asphat t cub's yhe<br>saightat was cove ed in line sand which alloo bed<br>he spiled make ill Spil pads we or immedately<br>dep cycle and the contaminated sand was<br>excessived by hard bagged and sto den sie o<br>alte disposal to an app op also o ste aci by  | he Cump trusk was emoved om sie and senf to a acily o epails   |
| 29 | 23-Ma -2 | 23-Ma -2 | 23 Ma 2          | Nght | 2 3 -22 00  | gc    | No del uoking   | Spil( -5)               | Mechanical also e caused<br>hyd auto of to spill into aspha t           | -2400 on the higway o amp              | 3.5                        | Hydaulc lud  | Hault uck               | Mechanical aiu e  | At age come e y 2 e 5 a andem t usit was busy<br>o loading p eload sand- Whi e it in githe load box<br>a hyd assir line but of open coasing age or mission;<br>3-5 or hyd assir land o spill ordor the asphat<br>a ca Albo berry padit we e p acodd at he spill<br>a ca and all contaminated so to we e emoved. A<br>haza doza wasta p class p schedued by e vi a   | he Dump trudi was emoved om sie and sent to a ecit y o epails  |
| 30 | 26-Ma -2 | 26-Ma -2 | 26 Ma 2          | Day  | 60 - 630    | GC -  | Mena d          | age Spil (5 -<br>999)   | Mechanical also e cassed a<br>diesel spill onto so l                    | 9 0 on the shoude o the oed            | арр сх. 0-20               | Desel uel    | Dump udk                | Mechanical aiu e  | All app comes ay 5 00 a sgil occur ed when a dump tuck do wo the oad he sgil e assed app come ay 20 o deselt to the g ound he sgil data each the near by was every and the sgil was contained to the remed as a as Mena il mineralizedly esponded to the incisent and corta ned the sgil 1 pads booms and a fra year we inmediately deployed and the containmand out of the containmand out of the containmand out of the containmand out of the containmand out was executed with a tryld owns and seen o - slee o disposal o an app op a e o - slee actly   | uck immed a ey emoved om ste and will be<br>epai ed by a mechanic in the mo ring   |
| 3  | 4-Ap -2  | 4 Ap -2  | 4-Ap-2           | Day  | 53 - 600    | gc gc | Deta Agg egate  | a ge Spil (5 - 99 9 )   | Mechanical also cassed a<br>tyd aufo o i sp II orto so i                | 400 on the sand p a cad hauf<br>cad    | арр ох 5- 0                | Hyd aufc lud | Wae uck                 | Mechanical alu e  | As ago or man ay \$500 a spil coccup est when a<br>we I tusk explained a mechanical size a<br>while by projected. O data to present has<br>the projected of the projected of the project<br>of the gound. He spil did not appeal to a set<br>any mat by such ways and he spil seaso<br>mented shall separated of the incident and<br>ration of the spil separate has been appealed<br>rational the spil separate has been appealed<br>to the project that the project<br>project that would be spil separate<br>the accommendated soll waste bin. He so I will<br>set and if you a side data.   | To Wise - cak weep lasted on it is end the course on the able way apped nays placts to prevent mis and consultant place. The consultant place is a consultant place in the consultant place is a consultant place in the consultant place in the consultant place is a consultant place in the consultant place in the consultant place is a consultant place in the consultant place in the consultant place is a consultant place in the consultant place in the consultant place is a consultant place in the consultant place in the consultant place is a consultant place in the consultant place in the consultant place is a consultant place in the consultant place in the consultant place is a consultant place in the consultant place in the consultant place is a consultant place in the consultant place in the consultant place is a consultant place in the consultant place in the consultant place is a consultant place in the consultant place in the consultant place is a consultant place in the consultant place in the consultant place is a consultant place in the consultant place in the consultant place is a consultant place in the consultant place in the consultant place in the consultant place is a consultant place in the consultan |

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# **APPENDIX 3: WILDLIFE SALVAGE RESULTS**

## Area C1

| Day       | Time (hr) | Trap      | Species          | Body length<br>(mm) | Total length<br>(mm) | Weight (g) | Notes   | Initials |
|-----------|-----------|-----------|------------------|---------------------|----------------------|------------|---|----------|
| 30-Apr-20 | 6:35      | P1        | Common Shrew     | 60                  | 100                  |            | relocated   | PM, NS   |
| 30-Apr-20 | 7:13      | P14       | Common Shrew     | 45                  | 80                   |            | relocated   | PM, NS   |
| 30-Apr-20 | 7:31      | P22       | Common Shrew     | 50                  | 100                  |            | Distinct next fringe and dark fringes along the thighs and back | PM, NS   |
| 3-May-20  | 6:30      | <b>S7</b> | PEMA             |                     |                      |            | relocated   | JC       |
| 3-May-20  | 22:00     | P13       | Common Shrew     | 50                  | 100                  |            | relocated   | SB, JW   |
| 3-May-20  | 22:00     | P13       | Common Shrew     | 50                  | 95                   |            | relocated   | SB, JW   |
| 4-May-20  | 6:20      | S3        | PEMA             |                     |                      |            | escaped   | NS       |
| 4-May-20  | 6:35      | <b>S4</b> | PEMA             |                     |                      |            | escaped   | NS       |
| 4-May-20  | 6:50      | <b>S7</b> | PEMA             |                     |                      |            | relocated   | NS       |
| 4-May-20  | 7:20      | M3        | green frog (juv) |                     |                      |            | euthanized  | NS       |
| 5-May-20  | 6:29      | S3        | PEMA             |                     |                      |            | relocated   | NS       |
| 5-May-20  | 6:45      | S9        | PEMA             |                     |                      |            | relocated   | NS       |
| 5-May-20  | 22:15     | P8        | PEMA             |                     |                      |            | escaped   | JC, JW   |
| 5-May-20  | 22:30     | <b>S9</b> | PEMA             |                     |                      |            | relocated   | JC, JW   |
| 5-May-20  | 22:40     | M2        | green frog       |                     |                      |            | escaped   | JC, JW   |
| 5-May-20  | 22:45     | S11       | PEMA             |                     |                      |            | relocated   | JC, JW   |
| 6-May-20  | 6:36      | S3        | PEMA             |                     |                      |            | relocated   | NS, PM   |
| 6-May-20  | 14:50     | P13       | Common Shrew     | 40                  | 70                   |            | white belly; relocated  | JC       |
| 7-May-20  | 6:50      | M3        | green frog       |                     |                      |            | euthanized  | JC, PM   |
| 7-May-20  | 14:45     | M6        | green frog       |                     |                      |            | escaped; traps closed   | NS, JC   |

Area D1

| Day       | Time (hr) | Trap   | Species         | Body<br>length<br>(mm) | Total<br>length<br>(mm) | Weight (g) | Photo # | Notes                     | Initials |
|-----------|-----------|--------|-----------------|------------------------|-------------------------|------------|---------|---------------------------|----------|
| 20-May-20 | 14:30     | DS5    | Creeping vole?  |                        |                         |            |         | no red on back; relocated | NS       |
| 21-May-20 | 6:15      | DS1    | PEMA            |                        |                         |            |         | relocated                 | NS       |
| 21-May-20 | 14:15     | DS1    | common shrew    | 45                     | 90                      |            |         | white belly; relocated    | JC       |
| 21-May-20 | 14:30     | DP4    | common shrew    | 50                     | 90                      |            |         | white belly; relocated    | JC       |
| 22-May-20 | 14:20     | DS1    | Townsend's vole | 80                     | 120                     |            |         | no red on back; relocated | NS       |
| 23-May-20 | 14:00     | CLOSED |                 |                        |                         |            |         |                           |          |

Area E1

| AI CU LI  |           |      |                 |                |                |            |          |                           |           |
|-----------|-----------|------|-----------------|----------------|----------------|------------|----------|---------------------------|-----------|
| Day       | Time (hr) | Trap | Species         | Body           | Total          | Weight (g) | Photo #  | Notes                     | Initials  |
| Day       | rime (m)  | пар  | Species         | length<br>(mm) | length<br>(mm) | weight (g) | riioto # | Notes                     | iiiitiais |
| 19-May-20 | 22:00     | ES40 | PEMA            |                |                |            |          |                           | SB, PJM   |
| 21-May-20 | 7:17      | ES4  | PEMA            |                |                |            |          | relocated                 | NS        |
| 21-May-20 | 7:48      | ES13 | PEMA            |                |                |            |          | relocated                 | NS        |
| 21-May-20 | 8:03      | ES22 | PEMA            |                |                |            |          | relocated                 | NS        |
| 21-May-20 | 8:08      | ES28 | PEMA            |                |                |            |          | relocated                 | NS        |
| 21-May-20 | 8:34      | ES40 | PEMA            |                |                |            |          | relocated                 | NS        |
| 21-May-20 | 23:15     | ES30 | PEMA            |                |                |            |          | relocated                 | JC/PM     |
| 22-May-20 | 6:52      | EP1  | common shrew    | 40             | 80             |            |          | relocated                 | NS        |
| 22-May-20 | 7:00      | ES3  | townsend's vole | 100            | 140            |            |          | no red on back; relocated | NS        |
| 22-May-20 | 7:04      | ES4  | PEMA            |                |                |            |          | relocated                 | NS        |
| 22-May-20 | 7:37      | ES33 | PEMA            |                |                |            |          | relocated                 | NS        |
| 23-May-20 | 6:45      | EP1  | common shrew    | 50             | 100            |            |          | white belly               | JC        |
| 23-May-20 | 7:00      | ES9  | house mouse?    |                |                |            |          | grey, small ears          | JC        |
| 23-May-20 | 7:15      | EP5  | common shrew    | 60             | 110            |            |          | white belly               | JC        |
| 23-May-20 | 7:15      | EP5  | common shrew    | 40             | 80             |            |          | white belly               | JC        |
| 23-May-20 | 7:45      | ES33 | house mouse?    |                |                |            |          | escaped                   | JC        |
| 24-May-20 | 6:18      | ES3  | PEMA            |                |                |            |          | relocated                 | NS        |
| 25-May-20 | 6:00      | EP1  | common shrew    | 40             | 80             |            |          | relocated                 | NS/JC     |
| 25-May-20 | 6:00      | EP1  | common shrew    | 50             | 90             |            |          | relocated                 | NS/JC     |
| 25-May-20 | 6:00      | ES3  | PEMA            |                |                |            |          | relocated                 | NS/JC     |
| 25-May-20 | 6:15      | EP5  | common shrew    | 40             | 75             |            |          | relocated                 | NS/JC     |
| 25-May-20 | 6:15      | EP5  | common shrew    | 50             | 85             |            |          | relocated                 | NS/JC     |
| 25-May-20 | 6:15      | EP5  | common shrew    | 50             | 50             |            |          | relocated                 | NS/JC     |
| 26-May-20 | 6:20      | ES22 | PEMA            |                |                |            |          | relocated                 | NS        |
|           |           |      |                 |                |                |            |          |                           |           |

## Area D2

| Day       | Time (hr) | Trap | Species      | Body<br>length<br>(mm) | Total<br>length<br>(mm) | Weight (g) | Photo # | Notes  | Initials |                  |
|-----------|-----------|------|--------------|------------------------|-------------------------|------------|---------|--|----------|------------------|
| 11-Aug-20 | 15:15 F   | P14  | Sorex sp.    | 50                     | 40                      |            |         | relocated  | NS       |                  |
| 11-Aug-20 | 15:15 F   | P14  | Sorex sp.    | 50                     | 40                      |            |         | slightly darker w/ lighter belly                       | NS       |                  |
| 11-Aug-20 | 22:33 F   | P14  | Sorex sp.    | 35                     | 40                      |            |         |  | PM/SB    | **PEMA was       |
| 12-Aug-20 | 6:25 9    | 54B  | PEMA         |                        |                         |            |         | relocated  | NS       | frequently       |
| 12-Aug-20 | 7:10 9    | 530  | PEMA         |                        |                         |            |         | relocated  | NS       | misidentified as |
| 12-Aug-20 | 14:30 F   | P8   | Sorex sp.    | 50                     | 30                      |            |         |  | PM       | MUMU on data     |
| 12-Aug-20 | 22:54 9   | 531  | Sorex sp.    | 45                     | 45                      |            |         |  | SB/KD    | sheets;          |
| 12-Aug-20 | 23:07 9   | 536  | PEMA         |                        |                         |            |         |  | SB/KD    | corrected here   |
| 13-Aug-20 | 6:50 5    | 521  | PEMA         |                        |                         |            |         | mortality  | NS       |                  |
| 13-Aug-20 | 7:15 F    | 28   | Sorex sp.    | 45                     | 30                      |            |         | relocated  | NS       |                  |
| 13-Aug-20 | 7:28 9    | 534  | PEMA         |                        |                         |            |         | relocated  | NS       |                  |
| 13-Aug-20 | 7:31 9    | 536  | Rat          |                        |                         |            |         |  | NS       |                  |
| 13-Aug-20 | 14:33 F   | P17  | Sorex sp.    | 45                     | 30                      |            |         |  | PM       |                  |
| 13-Aug-20 | 15:03 9   |      | Sorex sp.    | 50                     | 45                      |            |         |  | PM       |                  |
| 13-Aug-20 | 22:14 F   | P11  | Sorex sp.    | 45                     | 50                      |            |         | mortality  | SB       |                  |
| 13-Aug-20 |           | P17  | Sorex sp.    | 50                     | 50                      |            |         |  | SB       |                  |
| 13-Aug-20 | 22:29 F   | 217  | Sorex sp.    | 45                     | 50                      |            |         |  | SB       |                  |
| 13-Aug-20 | 22:41 9   |      | PEMA?        |                        |                         |            |         |  | SB       |                  |
| 14-Aug-20 | 6:20 F    |      | Sorex sp.    |                        |                         |            |         |  | PJM      |                  |
| 14-Aug-20 | 7:20 5    |      | Sorex sp.    |                        |                         |            |         | mortality  | PJM      |                  |
| 14-Aug-20 | 7:30 9    |      | PEMA         |                        |                         |            |         |  | PJM      |                  |
| 14-Aug-20 | 7:40 F    |      | Sorex sp.    |                        |                         |            |         |  | PJM      |                  |
| 14-Aug-20 | 7:55 9    |      | PEMA         |                        |                         |            |         |  | PJM      |                  |
| 14-Aug-20 | 8:00 5    |      | PEMA         |                        |                         |            |         |  | PJM      |                  |
| 14-Aug-20 | 14:31 F   |      | garter snake |                        |                         |            |         | escaped when lifted lid                                | PM       |                  |
| 14-Aug-20 | 14:45 F   |      | Sorex sp.    | 45                     | 35                      |            |         |  | PM       |                  |
| 14-Aug-20 | 14:45 F   |      | Sorex sp.    | 45                     | 30                      |            |         |  | PM       |                  |
| 14-Aug-20 | 14:45 F   |      | PEMA         |                        |                         |            |         | mortality; appears to have been predated by the shrews | PM       |                  |
| 14-Aug-20 | 22:33 9   |      | PEMA         |                        |                         |            |         |  | SB/KD    |                  |
| 15-Aug-20 | 6:55 9    |      | PEMA         |                        |                         |            |         | mortality  | NS       |                  |
| 15-Aug-20 | 7:35 F    |      | Sorex sp.    | 50                     | 40                      |            |         | mortality  | NS       |                  |
| 15-Aug-20 | 7:50 9    |      | PEMA         | 45                     |                         |            |         | mortality  | NS       |                  |
| 15-Aug-20 | 14:00 F   |      | Sorex sp.    | 45                     | 45                      |            |         |  | SB       |                  |
| 15-Aug-20 | 22:00 F   |      | Sorex sp.    | 45                     | 45                      |            |         |  | SB/JW    |                  |
| 15-Aug-20 | 22:00 F   |      | Sorex sp.    | 45                     | 45                      |            |         | lital a horacon hinds flavorance.                      | SB/JW    |                  |
| 15-Aug-20 | 22:00 9   |      | bird sp.     |                        |                         |            |         | little brown bird; flew away                           | SB/JW    |                  |
| 16-Aug-20 | 8:00 9    |      | PEMA         |                        |                         |            |         | relocated  | NS       |                  |
| 16-Aug-20 | 14:26 9   |      | Sorex sp.    | 50                     | 45                      |            |         |  | PM       |                  |
| 16-Aug-20 | 22:00 5   |      | PEMA         |                        |                         |            |         | 1.1.2  | SB/JW    |                  |
| 16-Aug-20 | 22:00 F   | 25   | PEMA         |                        |                         |            |         | baby?  | SB/JW    |                  |

| 16-Aug-20 | 22:00 P10 | Pacific treefrog |    |    |   | SB/JW |
|-----------|-----------|------------------|----|----|---|-------|
| 16-Aug-20 | 22:00 S24 | PEMA             |    |    |   | SB/JW |
| 16-Aug-20 | 22:00 S34 | PEMA             |    |    |   | SB/JW |
| 16-Aug-20 | 22:00 S36 | PEMA             |    |    |   | SB/JW |
| 17-Aug-20 | 7:25 S18  | PEMA             |    |    |   | NS    |
| 17-Aug-20 | 7:35 P21  | Sorex sp.        | 60 | 50 | relocated   | NS    |
| 17-Aug-20 | 7:50 P24  | Sorex sp.        | 50 | 50 | darker; light underside; relocated                  | NS    |
| 17-Aug-20 | 7:50 P24  | Sorex sp.        | 60 | 50 | lighter brown; relocated                            | NS    |
| 17-Aug-20 | 8:25 S34  | PEMA             |    |    | relocated   | NS    |
| 17-Aug-20 | 8:30 S36  | PEMA             |    |    | weird growth on right side of belly, near hing legs | NS    |
| 17-Aug-20 | 22:15 S4B | PEMA             |    |    |   | PM/JC |
| 17-Aug-20 | 22:25 S8  | PEMA             |    |    | escaped   | PM/JC |
| 17-Aug-20 | 22:30 S14 | PEMA             |    |    |   | PM/JC |
| 17-Aug-20 | 22:45 S19 | PEMA             |    |    |   | PM/JC |
| 17-Aug-20 | 22:45 S20 | PEMA             |    |    |   | PM/JC |
| 17-Aug-20 | 22:55 S24 | PEMA             |    |    |   | PM/JC |
| 17-Aug-20 | 23:10 P24 | Sorex sp.        | 40 | 35 |   | PM/JC |
| 17-Aug-20 | 23:20 S37 | PEMA             |    |    |   | PM/JC |
| 17-Aug-20 | 23:25 S34 | PEMA             |    |    |   | PM/JC |
| 17-Aug-20 | 23:30 S29 | Sorex sp.        | 35 | 35 |   | PM/JC |
| 17-Aug-20 | 23:30 S31 | Sorex sp.        | 50 | 40 | almost dead, attempted to revive but died           | PM/JC |
| 18-Aug-20 | 6:10 S1   | PEMA             |    |    |   | NS    |
| 18-Aug-20 | 6:25 S4B  | PEMA             |    |    |   | NS    |
| 18-Aug-20 | 6:40 P11  | Creeping vole    | 70 | 40 | relocated   | NS    |
| 18-Aug-20 | 7:00 S13  | PEMA             |    |    | small; relocated                                    | NS    |
| 18-Aug-20 | 7:10 S14  | PEMA             |    |    | relocated   | NS    |
| 18-Aug-20 | 7:30 S23  | PEMA             |    |    | small; relocated                                    | NS    |
| 18-Aug-20 | 7:45 S22  | PEMA             |    |    | relocated   | NS    |
| 18-Aug-20 | 7:50 P24  | Sorex sp.        | 60 | 40 | relocated   | NS    |
| 18-Aug-20 | 7:50 P24  | Sorex sp.        | 60 | 50 | relocated   | NS    |
| 18-Aug-20 | 7:50 P24  | Sorex sp.        | 60 | 50 | relocated   | NS    |
| 18-Aug-20 | 8:15 S32  | PEMA             |    |    | relocated   | NS    |
| 18-Aug-20 | 14:20 S4  | Sorex sp.        | 50 | 40 | fed mealworm  | JC    |
| 18-Aug-20 | 14:30 P6  | Peromyscus sp.   |    |    | grey; large hind legs; long tail; ears flat to head | JC    |
| 18-Aug-20 | 15:30 S22 | Sorex sp.        | 45 | 40 | mortality   | JC    |
| 18-Aug-20 | 15:45 S24 | Sorex sp.        | 50 | 35 | mortality   | JC    |
| 18-Aug-20 | 16:10 S33 | Sorex sp.        | 45 | 35 |   | JC    |
| 18-Aug-20 | 16:15 S36 | Sorex sp.        | 40 | 40 | fed mealworm  | JC    |
| 18-Aug-20 | 22:09 S1  | PEMA             |    |    |   | JC/JG |
| 18-Aug-20 | 22:19 S7  | PEMA             |    |    |   | JC/JG |
| 18-Aug-20 | 22:28 S9  | PEMA             |    |    |   | JC/JG |
| 18-Aug-20 | 23:02 S20 | PEMA             |    |    |   | JC/JG |
| 18-Aug-20 | 23:04 P21 | Sorex sp.        | 40 | 40 |   | JC/JG |
| 18-Aug-20 | 23:12 S22 | Sorex sp.        | 50 | 40 |   | JC/JG |
|           |           |                  |    |    |   |       |

| 18-Aug-20 | 23:23 S22B | Sorex sp.    | 45 | 40 | mortality                    | JC/JG |
|-----------|------------|--------------|----|----|------------------------------|-------|
| 18-Aug-20 | 23:29 S24  | PEMA         |    |    |                              | JC/JG |
| 18-Aug-20 | 23:30 P26  | Sorex sp.    | 40 | 40 |                              | JC/JG |
| 18-Aug-20 | 23:38 S25  | PEMA         |    |    |                              | JC/JG |
| 18-Aug-20 | 23:52 S32  | Sorex sp.    | 40 | 40 |                              | JC/JG |
| 18-Aug-20 | 23:54 S34  | PEMA         |    |    |                              | JC/JG |
| 19-Aug-20 | 0:04 S36   | PEMA         |    |    |                              | JC/JG |
| 19-Aug-20 | 0:07 S37   | PEMA         |    |    | growth on right side         | JC/JG |
| 19-Aug-20 | 0:15 S14   | PEMA         |    |    |                              | JC/JG |
| 19-Aug-20 | 6:15 S1    | PEMA         |    |    | relocated                    | NS    |
| 19-Aug-20 | 6:25 S3    | PEMA         |    |    | relocated                    | NS    |
| 19-Aug-20 | 7:30 S21   | PEMA         |    |    | relocated                    | NS    |
| 19-Aug-20 | 7:35 S22   | PEMA         |    |    | mortality                    | NS    |
| 19-Aug-20 | 7:45 S24   | PEMA         |    |    | relocated                    | NS    |
| 19-Aug-20 | 7:50 S25   | PEMA         |    |    | relocated                    | NS    |
| 19-Aug-20 | 7:55 S26   | Sorex sp.    | 50 | 40 | mortality                    | NS    |
| 19-Aug-20 | 8:05 P28   | Sorex sp.    | 50 | 50 | relocated                    | NS    |
| 19-Aug-20 | 8:30 S32   | Sorex sp.    | 50 | 40 | mortality                    | NS    |
| 19-Aug-20 | 8:38 P30   | Sorex sp.    | 60 | 50 | relocated                    | NS    |
| 19-Aug-20 | 8:45 S36   | PEMA         |    |    | relocated                    | NS    |
| 19-Aug-20 | 14:20 S3   | Sorex sp.    |    |    | mortality                    | PJM   |
| 19-Aug-20 | 14:30 P2   | garter snake |    |    | relocated                    | PJM   |
| 19-Aug-20 | 15:50 P23  | Sorex sp.    |    |    | fed mealworm; relocated      | PJM   |
| 19-Aug-20 | 16:20 S24  | bird sp.     |    |    | flew away                    | PJM   |
| 19-Aug-20 | 16:50 S37  | Sorex sp.    |    |    | mortality                    | PJM   |
| 19-Aug-20 | 22:09 S2   | Sorex sp.    | 40 | 35 |                              | PM/JG |
| 19-Aug-20 | 22:19 S7   | PEMA         |    |    |                              | PM/JG |
| 19-Aug-20 | 22:33 S13  | Sorex sp.    | 40 | 40 |                              | PM/JG |
| 19-Aug-20 | 22:56 P23  | Sorex sp.    | 35 | 40 |                              | PM/JG |
| 19-Aug-20 | 22:56 S22  | Sorex sp.    | 40 | 40 |                              | PM/JG |
| 19-Aug-20 | 23:08 S4   | PEMA         |    |    |                              | PM/JG |
| 19-Aug-20 | 23:23 S23  | PEMA         |    |    |                              | PM/JG |
| 19-Aug-20 | 23:18 S26  | PEMA         |    |    |                              | PM/JG |
| 19-Aug-20 | 23:35 P30  | Sorex sp.    | 40 | 40 |                              | PM/JG |
| 19-Aug-20 | 23:39 S34  | PEMA         |    |    |                              | PM/JG |
| 20-Aug-20 | 6:25 P1    | Sorex sp.    |    |    | escaped                      | NS    |
| 20-Aug-20 | 6:25 P1    | Sorex sp.    | 60 | 50 | relocated                    | NS    |
| 20-Aug-20 | 6:55 S7    | PEMA         |    |    | relocated                    | NS    |
| 20-Aug-20 | 7:10 S9    | Sorex sp.    | 60 | 50 | relocated                    | NS    |
| 20-Aug-20 | 7:20 P14   | Sorex sp.    | 50 | 40 | relocated                    | NS    |
| 20-Aug-20 | 7:35 P16   | Sorex sp.    | 50 | 40 | relocated                    | NS    |
| 20-Aug-20 | 8:05 P23   | Sorex sp.    | 50 | 40 | relocated                    | NS    |
| 20-Aug-20 | 8:05 P23   | Sorex sp.    | 55 | 45 | relocated                    | NS    |
| 20-Aug-20 | 8:05 P23   | Sorex sp.    | 45 | 40 | mortality; other 2 eating it | NS    |

| 20-Aug-20 | 8:25 P24   | Sorex sp. | 50 | 40 | relocated                       | NS     |
|-----------|------------|-----------|----|----|---------------------------------|--------|
| 20-Aug-20 | 8:40 P26   | Sorex sp. | 50 | 50 | relocated                       | NS     |
| 20-Aug-20 | 8:40 P26   | Sorex sp. | 45 | 40 | mortality; slug feeding on it   | NS     |
| 20-Aug-20 | 8:50 S25   | PEMA      |    |    | relocated                       | NS     |
| 20-Aug-20 | 8:55 S26   | Sorex sp. | 60 | 50 | relocated                       | NS     |
| 20-Aug-20 | 9:10 S28   | Sorex sp. | 50 | 50 | relocated                       | NS     |
| 20-Aug-20 | 9:25 S32   | Sorex sp. | 60 | 50 | relocated                       | NS     |
| 20-Aug-20 | 9:35 S34   | PEMA      |    |    | relocated                       | NS     |
| 20-Aug-20 | 14:30 S6   | Sorex sp. |    |    | fed mealworm; relocated         | PJM    |
| 20-Aug-20 | 15:00 S9   | Sorex sp. |    |    | relocated                       | PJM    |
| 20-Aug-20 | 15:20 P16  | Sorex sp. |    |    | relocated                       | PJM    |
| 20-Aug-20 | 15:50 S23  | Sorex sp. |    |    | fed mealworm; relocated         | PJM    |
| 20-Aug-20 | 22:10 S2   | Sorex sp. | 60 | 50 |                                 | PM/JG  |
| 20-Aug-20 | 22:26 S9   | Sorex sp. | 40 | 40 |                                 | PM/JG  |
| 20-Aug-20 | 22:29 S10  | PEMA      |    |    |                                 | PM/JG  |
| 20-Aug-20 | 22:33 S12  | Sorex sp. | 50 | 45 |                                 | PM/JG  |
| 20-Aug-20 | 22:43 P16  | Sorex sp. | 60 | 40 |                                 | PM/JG  |
| 20-Aug-20 | 22:50 S16  | PEMA      |    |    |                                 | PM/JG  |
| 20-Aug-20 | 22:57 P20  | Sorex sp. | 60 | 50 |                                 | PM/JG  |
| 20-Aug-20 | 23:08 S23  | PEMA      |    |    |                                 | PM/JG  |
| 20-Aug-20 | 23:14 S22B | Sorex sp. | 60 | 45 | mortality                       | PM/JG  |
| 20-Aug-20 | 23:20 S26  | PEMA      |    |    |                                 | PM/JG  |
| 20-Aug-20 | 23:26 S34  | Sorex sp. | 60 | 45 |                                 | PM/JG  |
| 20-Aug-20 | 23:40 P29  | Sorex sp. | 60 | 40 |                                 | PM/JG  |
| 21-Aug-20 | 6:15 P1    | Sorex sp. | 45 | 40 |                                 | JC     |
| 21-Aug-20 | 7:00 P11   | Sorex sp. | 50 | 40 |                                 | JC     |
| 21-Aug-20 | 7:20 S15   | Sorex sp. | 45 | 35 | mortality                       | JC     |
| 21-Aug-20 | 7:40 P20   | Sorex sp. | 40 | 40 |                                 | JC     |
| 21-Aug-20 | 8:00 P23   | Sorex sp. | 50 | 40 |                                 | JC     |
| 21-Aug-20 | 8:15 P22   | Sorex sp. | 50 | 45 |                                 | JC     |
| 21-Aug-20 | 8:15 S21   | PEMA      |    |    |                                 | JC     |
| 21-Aug-20 | 8:45 S35   | PEMA      |    |    |                                 | JC     |
| 21-Aug-20 | 14:45 S3   | Sorex sp. | 45 | 45 | relocated                       | NS     |
| 21-Aug-20 | 15:00 S5   | Sorex sp. | 50 | 45 | mortality                       | NS     |
| 21-Aug-20 | 15:15 S8   | Sorex sp. | 50 | 50 | relocated                       | NS     |
| 21-Aug-20 | 16:15 S27  | Sorex sp. | 45 | 45 | mortality                       | NS     |
| 21-Aug-20 | 16:45 S31  | Sorex sp. | 45 | 45 | mortality                       | NS     |
| 21-Aug-20 | 22:00 S2   | Sorex sp. | 40 | 40 | relocated to east side of Silda | PJM/JG |
| 21-Aug-20 | 22:10 S4   | Sorex sp. | 40 | 40 | relocated to east side of Silda | PJM/JG |
| 21-Aug-20 | 22:15 S7   | PEMA .    |    |    | relocated                       | PJM/JG |
| 21-Aug-20 | 22:20 S9   | PEMA      |    |    | relocated                       | PJM/JG |
| 21-Aug-20 | 22:30 S13  | PEMA      |    |    | relocated south of site         | PJM/JG |
| 21-Aug-20 | 22:30 P14  | Sorex sp. | 40 | 35 | relocated south of site         | PJM/JG |
| 21-Aug-20 | 22:45 S20  | Sorex sp. | 40 | 30 | relocated                       | PJM/JG |
| -         |            | •         |    |    |                                 |        |
|           |            |           |    |    |                                 |        |

| 21-Aug-20 | 23:00 S26  | Sorex sp. | 50 | 40 | relocated                                  | PJM/JG     |
|-----------|------------|-----------|----|----|--|------------|
| 21-Aug-20 | 23:10 P27  | Sorex sp. |    |    | relocated                                  | PJM/JG     |
| 22-Aug-20 | 6:20 S4    | PEMA      |    |    | relocated                                  | NS         |
| 22-Aug-20 | 6:25 S4B   | PEMA      |    |    | relocated                                  | NS         |
| 22-Aug-20 | 6:30 S5    | PEMA      |    |    | relocated                                  | NS         |
| 22-Aug-20 | 6:35 S6    | PEMA      |    |    | relocated                                  | NS         |
| 22-Aug-20 | 7:05 S13   | Sorex sp. | 45 | 40 | mortality; trap had been thrown/moved      | NS         |
| 22-Aug-20 | 7:10 S14   | PEMA      |    |    | relocated                                  | NS         |
| 22-Aug-20 | 7:40 S18   | PEMA      |    |    | relocated                                  | NS         |
| 22-Aug-20 | 7:50 S21   | PEMA      |    |    | relocated                                  | NS         |
| 22-Aug-20 | 7:52 S23   | PEMA      |    |    | relocated                                  | NS         |
| 22-Aug-20 | 7:55 S22B  | Sorex sp. | 45 | 40 | mortality                                  | NS         |
| 22-Aug-20 | 8:10 P24   | Sorex sp. | 45 | 40 | relocated                                  | NS         |
| 22-Aug-20 | 8:10 P24   | Sorex sp. | 50 | 50 | relocated                                  | NS         |
| 22-Aug-20 | 8:20 P26   | Sorex sp. | 50 | 50 | relocated                                  | NS         |
| 22-Aug-20 | 8:35 P28   | Sorex sp. | 50 | 50 | relocated                                  | NS         |
| 22-Aug-20 | 8:50 S32   | PEMA      |    |    | relocated                                  | NS         |
| 22-Aug-20 | 14:30 P1   | Sorex sp. | 40 | 40 |  | JC         |
| 22-Aug-20 | 14:35 S4   | Sorex sp. | 50 | 40 |  | JC         |
| 22-Aug-20 | 14:40 P2   | Sorex sp. | 45 | 45 |  | JC         |
| 22-Aug-20 | 22:00 S4   | PEMA      |    |    |  | KD/JC      |
| 22-Aug-20 | 22:03 S4B  | PEMA      |    |    |  | KD/JC      |
| 22-Aug-20 | 22:16 S12B | Sorex sp. | 50 | 40 |  | KD/JC      |
| 22-Aug-20 | 22:18 S13  | PEMA      |    |    |  | KD/JC      |
| 22-Aug-20 | 22:30 P23  | Sorex sp. | 45 | 45 |  | KD/JC      |
| 22-Aug-20 | 23:08 S35  | PEMA      |    |    |  | KD/JC      |
| 22-Aug-20 | 23:10 S36  | PEMA      |    |    |  | KD/JC      |
| 22-Aug-20 | 23:15 S37  | Sorex sp. | 40 | 45 |  | KD/JC      |
| 23-Aug-20 | 6:30 S13   | PEMA      |    |    | relocated to south side of railroad tracks | PJM        |
| 23-Aug-20 | 6:45 S14   | PEMA      |    |    | relocated to south side of railroad tracks | PJM        |
| 23-Aug-20 | 6:50 S12B  | PEMA      |    |    | relocated to south side of railroad tracks | PJM        |
| 23-Aug-20 | 7:20 S21   | PEMA      |    |    | mortality                                  | PJM        |
| 23-Aug-20 | 7:40 P30   | Sorex sp. | 45 | 40 | relocated to east side of Silda            | PJM        |
| 23-Aug-20 | 7:45 P32   | PEMA      |    |    | escaped                                    | PJM        |
| 23-Aug-20 | 8:00 P37   | PEMA      |    |    | escaped                                    | PJM        |
| 23-Aug-20 | 14:50 S12B | Sorex sp. |    |    | mortality                                  | PM         |
| 23-Aug-20 | 14:54 P14  | Sorex sp. | 50 | 50 |  | PM         |
| 23-Aug-20 | 15:03 S15  | PEMA      |    |    |  | PM         |
| 23-Aug-20 | 15:08 S16  | Sorex sp. | 40 | 40 |  | PM         |
| 23-Aug-20 | 22:00 S2   | Sorex sp. | 45 | 40 |  | KD/PM      |
| 23-Aug-20 | 22:10 S10  | Sorex sp. | 45 | 40 | signs of stress                            | KD/PM      |
| 23-Aug-20 | 22:15 S13  | Sorex sp. | 45 | 40 | Č  | KD/PM      |
| 23-Aug-20 | 22:20 S14  | Sorex sp. | 45 | 40 | mortality                                  | KD/PM      |
| 23-Aug-20 | 22:22 S15  | Sorex sp. | 40 | 40 | •  | ,<br>KD/PM |
| . 0       |            | - r-      |    |    |  | •          |

| 23-Aug-20 | 23:00 S21 | PEMA      |    |    |           | KD/PM  |
|-----------|-----------|-----------|----|----|-----------|--------|
| 23-Aug-20 | 23:20 S35 | PEMA      |    |    |           | KD/PM  |
| 23-Aug-20 | 23:30 S37 | PEMA      |    |    |           | KD/PM  |
| 24-Aug-20 | 6:25 S2   | Sorex sp. | 50 | 50 | relocated | NS/PJM |
| 24-Aug-20 | 6:45 S12B | Sorex sp. | 45 | 45 | relocated | NS/PJM |
| 24-Aug-20 | 7:10 S21  | PEMA      |    |    | relocated | NS/PJM |
| 24-Aug-20 | 7:15 P23  | Sorex sp. | 50 | 50 | relocated | NS/PJM |

Area B1

| Time (hr) | Trap  | Species  | Body<br>length<br>(mm)  | Total<br>length<br>(mm)  | Weight (g)   | Photo #  |   | Notes   | Initials   |
|-----------|---|--|---|--|--|--|---|---|--|
| 16:25 B1  | LP3   | MITO   |   |  |  |  |   |   | PM   |
|           |   |  |   |  |  |  |   |   | SB, JW   |
|           |   |  |   |  |  |  |   |   | JC   |
|           |   | •  |   |  |  |  |   |   | JC, JG   |
|           |   |  | 50  | 45   |  |  | mortality   |   | JC, JG   |
|           |   | PEMA .   |   |  |  |  | ,   |   | JC, JG   |
| 9:25 B1   | LS1   | PEMA   |   |  |  |  |   |   | NS   |
| 9:30 B1   | LS2   | PEMA   |   |  |  |  |   |   | NS   |
| 9:40 B1   | LS3   | PEMA   |   |  |  |  |   |   | NS   |
| 17:20 B1  | LP1   | garter snake   |   |  |  |  |   |   | PJM  |
| 0:05 B1   | LS4   | PEMA   |   |  |  |  |   |   | PM, JG   |
| 0:10 B1   | LS3   | PEMA   |   |  |  |  |   |   | PM, JG   |
| 0:15 B1   | LS1   | PEMA   |   |  |  |  |   |   | PM, JG   |
| 10:10 B1  | LS1   | PEMA   |   |  |  |  |   |   | NS   |
| 0:05 B1   | LS3   | PEMA   |   |  |  |  |   |   | PM, JG   |
| 0:10 B1   | LS1   | PEMA   |   |  |  |  |   |   | PM, JG   |
| 9:00 B1   | LS1   | PEMA   |   |  |  |  |   |   | JC   |
| 9:05 B1   | LP1   | Sorex sp   | 40  | 35   |  |  |   |   | JC   |
| 23:45 B1  | LS1   | PEMA   |   |  |  |  |   |   | PJM, JG  |
| 23:45 B1  | LS3   | PEMA   |   |  |  |  |   |   | PJM, JG  |
| 9:30 B1   | LS1   | PEMA   |   |  |  |  |   |   | NS   |
| 9:35 B1   | LS3   | PEMA   |   |  |  |  |   |   | NS   |
|           | 16:25 B1 22:00 B1 17:00 B1 0:45 B1 0:50 B1 0:55 B1 9:25 B1 9:30 B1 9:40 B1 17:20 B1 0:05 B1 0:10 B1 0:10 B1 0:05 B1 0:10 B1 23:45 B1 23:45 B1 9:30 B1 | Time (hr) Trap  16:25 B1P3 22:00 B1S3 17:00 B1P3 0:45 B1S4 0:50 B1S3 0:55 B1S2 9:25 B1S1 9:30 B1S2 9:40 B1S3 17:20 B1P1 0:05 B1S4 0:10 B1S3 0:15 B1S1 10:10 B1S1 0:05 B1S3 0:10 B1S1 23:45 B1S1 23:45 B1S3 9:30 B1S1 9:35 B1S3 | 16:25 B1P3 MITO 22:00 B1S3 PEMA 17:00 B1P3 garter snake 0:45 B1S4 PEMA 0:50 B1S3 Sorex sp 0:55 B1S2 PEMA 9:25 B1S1 PEMA 9:30 B1S2 PEMA 9:40 B1S3 PEMA 17:20 B1P1 garter snake 0:05 B1S4 PEMA 0:10 B1S3 PEMA 0:10 B1S1 PEMA 10:10 B1S1 PEMA 0:05 B1S1 PEMA 0:05 B1S1 PEMA 0:05 B1S3 PEMA 0:05 B1S1 PEMA 0:10 B1S1 PEMA | Time (hr)         Trap         Species         length (mm)           16:25         B1P3         MITO         70           22:00         B1S3         PEMA         70           22:00         B1S3         PEMA         70           22:00         B1S3         PEMA         70           17:00         B1P3         garter snake         70           0:45         B1S3         PEMA         70           0:55         B1S3         PEMA         70           9:30         B1S2         PEMA         70           9:40         B1S3         PEMA         70         70           9:40         B1S3         PEMA         70         < | Time (hr)         Trap         Species         length (mm)         length (mm)           16:25         B1P3         MITO         70         30           22:00         B1S3         PEMA         70         30           17:00         B1P3         garter snake         70         30           0:45         B1S3         PEMA         70         30           0:45         B1P3         garter snake         70         30           0:45         B1S3         PEMA         70         30           0:50         B1S3         PEMA         70         30           0:50         B1S3         PEMA         70         30         45           0:55         B1S2         PEMA         70         45         45         45         45         45         45         45         45         45         45         45         45         45         45         45         45         45         46         45         46         48         46         48         48         48         48         48         48         48         48         48         48         48         48         48         48         48         48 | Time (hr)         Trap         Species (mm)         length (mm)         Weight (g)           16:25         B1P3         MITO         70         30           22:00         B1S3         PEMA         70         30           17:00         B1P3         garter snake         60         60         60         60           0:45         B1S4         PEMA         70         45         70 | Time (hr)         Trap         Species         length (mm)         Weight (g)         Photo # (mm)           16:25         B1P3         MITO         70         30           22:00         B1S3         PEMA         70         30           17:00         B1P3         garter snake         70         30           0:45         B1S4         PEMA         70         45           0:50         B1S3         Sorex sp         50         45           0:55         B1S2         PEMA         70         45           9:30         B1S2         PEMA         70         45           9:30         B1S2         PEMA         70         45           9:30         B1S3         PEMA         70 | Time (hr)         Trap         Species         length (mm)         Weight (g)         Photo #           16:25         B1P3         MITO         70         30           22:00         B1S3         PEMA         70         30           17:00         B1P3         garter snake         70         30         7 | Time (hr)         Trap         Species (mm)         length (mm)         Weight (g)         Photo #         Notes           16:25         B1P3         MITO         70         30         30         70         30         70         30         70         30         70 |

### Areas B2a

| Day      | Time (hr) Tr | rap Species   | Body<br>length<br>(mm) | Total<br>length<br>(mm) | Weight (g) | Photo # | Notes                       | Initials |
|----------|--------------|---------------|------------------------|-------------------------|------------|---------|-----------------------------|----------|
| 2-Sep-20 | 0:38 S1      | PEMA          |                        |                         |            |         |                             | PM, JG   |
| 2-Sep-20 | 7:30 S1      | PEMA          |                        |                         |            |         | relocated                   | PJM, NS  |
| 2-Sep-20 | 7:40 P5      | Sorex sp.     |                        |                         |            |         | mortality; voucher specimen | PJM, NS  |
| 2-Sep-20 | 7:00 M2      | green frog    |                        |                         |            |         | escaped                     | PJM, NS  |
| 3-Sep-20 | 7:50 M2      | NW salamander |                        |                         |            |         | relocated                   | NS, PJ   |
| 5-Sep-20 | 1:40 S5      | PEMA          |                        |                         |            |         |                             | JC, PM   |
| 5-Sep-20 | 6:00 S6      | PEMA          |                        |                         |            |         | young; grey pelage          | NS, TP   |
| 6-Sep-20 | 6:45 S6      | PEMA          |                        |                         |            |         | immature; relocated         | TP, PM   |
| 6-Sep-20 | 19:25 M3     | garter snake  |                        |                         |            |         |                             | PM, MT   |
| 7-Sep-20 | 1:31 S4      | PEMA          |                        |                         |            |         |                             | PM, MT   |
| 7-Sep-20 | 7:20 S5      | PEMA          |                        |                         |            |         | relocated                   | PJM, JZ  |
| 7-Sep-20 | 19:00 P4     | garter snake  |                        |                         |            |         |                             | TP       |
| 8-Sep-20 | 13:00 P9     | PEMA          |                        |                         |            |         | mortality; buried offsite   | PJM, ML  |

Area G1

|          |           |      |                      | Body           | Total          |            |         |                   |          |
|----------|-----------|------|----------------------|----------------|----------------|------------|---------|-------------------|----------|
| Day      | Time (hr) | Trap | Species              | length<br>(mm) | length<br>(mm) | Weight (g) | Photo # | Notes             | Initials |
| 2-Sep-20 | 1:50      | P12  | MIOR                 |                |                |            |         | (creeping vole)   | PM, JG   |
| 3-Sep-20 | 6:50      | P23  | Sorex sp.            | 55             | 45             |            |         | relocated         | NS, PJ   |
| 3-Sep-20 | 7:10      | M1   | green frog           |                |                |            |         | tadpole           | NS, PJ   |
| 3-Sep-20 | 7:20      | M4   | NW Salamander        |                |                |            |         | relocated         | NS, PJ   |
| 3-Sep-20 | 12:35     | M3   | NW Salamander        |                |                |            |         |                   | NS, RW   |
| 4-Sep-20 | 6:25      | M2   | green frog           |                |                |            |         |                   | NS, PJ   |
| 4-Sep-20 | 6:40      | P18  | Sorex sp.            | 45             | 40             |            |         |                   | NS, PJ   |
| 4-Sep-20 | 6:55      | M1   | green frog           |                |                |            |         | tadpole           | NS, PJ   |
| 4-Sep-20 | 7:00      | M4   | green frog           |                |                |            |         | tadpole           | NS, PJ   |
| 5-Sep-20 | 0:30      | M1   | Long-toed Salamander |                |                |            |         | tadpole           | JC, PM   |
| 5-Sep-20 | 0:50      | M2   | NW Salamander        |                |                |            |         | tadpole           | JC, PM   |
| 5-Sep-20 | 0:50      | M2   | NW Salamander        |                |                |            |         | tadpole           | JC, PM   |
| 5-Sep-20 | 12:35     | M1   | green frog           |                |                |            |         | adult; euthanized | JC, PM   |
| 6-Sep-20 | 0:18      | P23  | Sorex sp.            | 50             | 40             |            |         |                   | JC, MT   |
| 6-Sep-20 | 12:10     | M1   | NW Salamander        |                |                |            |         | juvenile          | TP       |
| 6-Sep-20 | 18:50     | M3   | green frog           |                |                |            |         |                   | PM, MT   |
| 7-Sep-20 | 0:34      | P20  | Sorex sp.            | 50             | 45             |            |         |                   | PM, MT   |
| 7-Sep-20 | 0:57      | S5   | PEMA                 |                |                |            |         |                   | PM, MT   |
| 7-Sep-20 | 1:06      | M3   | NW Salamander        |                |                |            |         |                   | PM, MT   |
| 7-Sep-20 | 6:50      | S7   | PEMA                 |                |                |            |         |                   | PJM, JZ  |
| 7-Sep-20 | 12:39     | M3   | NW Salamander        |                |                |            |         |                   | JC, AD   |
| 8-Sep-20 | 6:20      | P9   | Sorex sp.            | 60             | 55             |            |         |                   | NS, PJ   |
| 8-Sep-20 | 18:30     | M3   | NW Salamander        |                |                |            |         |                   | RD       |
| 9-Sep-20 | 6:20      | M4   | Long-toed Salamander |                |                |            |         | tadpole           | PJM, NS  |
| 9-Sep-20 | 6:40      | P22  | Sorex sp.            | 40             | 40             |            |         |                   | PJM, NS  |
|          |           |      |                      |                |                |            |         |                   |          |

Area F1

| Day       | Time (hr) 1 | rap Species          | Body<br>length<br>(mm) | Total<br>length<br>(mm) | Weight (g) | Photo #       | Notes | Initials |
|-----------|-------------|----------------------|------------------------|-------------------------|------------|---------------|-------|----------|
| 3-Sep-20  | 13:40 M2    | green frog           |                        |                         |            | escaped       |       | NS, RW   |
| 3-Sep-20  | 14:00 M3    | green frog           |                        |                         |            | escaped       |       | NS, RW   |
| 4-Sep-20  | 8:00 S6     | Sorex sp.            | 55                     | 45                      |            | relocated     |       | NS, PJ   |
| 4-Sep-20  | 13:40 M3    | green frog           |                        |                         |            | euthanized    |       | PJM, RW  |
| 5-Sep-20  | 2:20 S1     | PEMA                 |                        |                         |            |               |       | JC, PM   |
| 5-Sep-20  | 2:30 M4     | NW Salamander        |                        |                         |            |               |       | JC, PM   |
| 5-Sep-20  | 3:00 P10    | Sorex sp.            | 40                     | 40                      |            |               |       | JC, PM   |
| 5-Sep-20  | 19:15 M3    | green frog           |                        |                         |            | escaped       |       | RW       |
| 6-Sep-20  | 1:51 P10    | Sorex sp.            | 50                     | 45                      |            |               |       | JC, MT   |
| 6-Sep-20  | 1:51 P10    | Sorex sp.            | 45                     | 40                      |            |               |       | JC, MT   |
| 6-Sep-20  | 19:50 M3    | green frog           |                        |                         |            |               |       | PM, MT   |
| 7-Sep-20  | 2:17 M4     | NW Salamander        |                        |                         |            |               |       | PM, MT   |
| 7-Sep-20  | 13:23 M3    | Salamander sp        |                        |                         |            |               |       | JC, AP   |
| 7-Sep-20  | 13:23 M3    | Vole sp.             |                        |                         |            |               |       | JC, AP   |
| 8-Sep-20  | 7:10 M3     | green frog           |                        |                         |            | tadpole       |       | NS, PJ   |
| 9-Sep-20  | 1:30 P11    | Sorex sp.            | 45                     | 40                      |            | mortality     |       | PM, JG   |
| 9-Sep-20  | 1:38 P12    | Sorex sp.            | 45                     | 40                      |            |               |       | PM, JG   |
| 10-Sep-20 | 6:30 P10    | Sorex sp.            | 50                     | 40                      |            | relocated     |       | NS       |
| 10-Sep-20 | 7:00 M4     | <b>NW Salamander</b> |                        |                         |            | relocated     |       | NS       |
| 11-Sep-20 | 6:30 M3     | green frog           |                        |                         |            | escaped minno | ow    | NS, JC   |
| 11-Sep-20 | 6:30 M3     | NW Salamander        |                        |                         |            | relocated     |       | NS, JC   |

Area I3

|           |           |      |           | Body   | Total  |            |        |                                       |              |
|-----------|-----------|------|-----------|--------|--------|------------|--------|---------------------------------------|--------------|
| Day       | Time (hr) | Trap | Species   | length | length | Weight (g) | Photo# | Notes                                 | Initials     |
|           |           |      |           | (mm)   | (mm)   |            |        |                                       |              |
| 17-Sep-20 | 0:38 P    | 12   | M-SOVA    | 50     | 100    | )          |        | Sorex vagrans; dark brown, beige bell | y TP, MT, LS |
| 17-Sep-20 | 19:20 S   | 3    | Sorex sp. | 50     | 95     |            |        |                                       | ADP, PM, SP  |
| 18-Sep-20 | 0:36 P    | 8    | M-SOBE    |        |        |            |        | mortality; voucher specimen           | TP, MT, SS   |
| 19-Sep-20 | 9:21 P    | 3    | M-SOBE    | 65-70  | 125    |            |        |                                       | SS, LS       |
| 20-Sep-20 | 19:37 S   | 3    | Sorex sp. | 40     | 80     | )          |        | dorsal - light brown/ grey underbelly | KD, SS       |
| 21-Sep-20 | 1:50 S    | 3    | PEMA      |        |        |            |        |                                       | PM, MT, JC   |
| 21-Sep-20 | 13:45 S   | 4    | Sorex sp. | 45     | 90     | )          |        |                                       | NS, JZ       |
| 22-Sep-20 | 19:50 S   | 4    | Sorex sp. | 45     | 90     |            |        |                                       | PM, ADP      |
| 23-Sep-20 | 0:29 S    | 4    | Sorex sp. | 50     | 95     |            |        |                                       | MT, TP       |
| 23-Sep-20 | 0:53 P    | 3    | Sorex sp. | 45     | 85     |            |        |                                       | MT, TP       |
| 23-Sep-20 | 8:40 S    | 4    | Sorex sp. | 40     | 80     | )          |        | relocated                             | NS, RT       |
| 23-Sep-20 | 9:05 P    | 7    | Sorex sp. | 50     | 95     |            |        | relocated                             | NS, RT       |
| 23-Sep-20 | 9:05 P    | 7    | Sorex sp. | 45     | 85     |            |        | relocated                             | NS, RT       |
| 23-Sep-20 | 9:05 P    | 7    | Sorex sp. | 50     | 95     |            |        | relocated                             | NS, RT       |
| 30-Sep-20 | 7:20 P    | 8    | Sorex sp. | 55     | 100    | )          |        |                                       | NS, LS       |
| 30-Sep-20 | 19:10 P   | 12   | Sorex sp. | 45     | 85     |            |        |                                       | JC, SP       |
| 1-Oct-20  | 0:15 S    | 5    | M-RARA    |        |        |            |        | black rat; jumped out                 | TP, PM       |
| 1-Oct-20  | 0:21 P    | 12   | Sorex sp. |        |        |            |        |                                       | TP, PM       |
|           |           |      |           |        |        |            |        |                                       |              |

## Areas E2 and E3

| Day       | Time (hr) | Trap        | Species   | Body<br>length<br>(mm) | Total<br>length<br>(mm) | Weight (g) | Photo# | Notes                             | Initials |
|-----------|-----------|-------------|-----------|------------------------|-------------------------|------------|--------|-----------------------------------|----------|
| 6-Oct-20  | 18:43 N   | <b>И</b> 2  | A-RACL    | ()                     | ()                      |            |        |                                   | JB, ADP  |
| 7-Oct-20  |           |             | A-AMGR    |                        |                         |            |        |                                   | TP, JC   |
| 7-Oct-20  | 0:25 F    | 98          | PEMA      |                        |                         |            |        |                                   | TP, JC   |
| 7-Oct-20  | 0:37 S    | S30         | PEMA      |                        |                         |            |        | subadult                          | TP, JC   |
| 7-Oct-20  | 0:52 S    | S21         | PEMA      |                        |                         |            |        | subadult                          | TP, JC   |
| 7-Oct-20  | 6:22 S    | 88          | PEMA      |                        |                         |            |        |                                   | NS, LS   |
| 7-Oct-20  | 6:28 S    | 310         | PEMA      |                        |                         |            |        |                                   | NS, LS   |
| 7-Oct-20  | 12:20 S   | 88          | PEMA      |                        |                         |            |        |                                   | PJM, AW  |
| 7-Oct-20  | 18:35 N   | <b>√</b> 14 | RACL      |                        |                         |            |        |                                   | PM, JG   |
| 8-Oct-20  | 0:25 S    | 510         | PEMA      |                        |                         |            |        |                                   | TP, JC   |
| 8-Oct-20  | 0:30 N    | <b>V</b> 13 | AMGR      |                        |                         |            |        |                                   | TP, JC   |
| 8-Oct-20  | 6:23 F    | P10         | Sorex sp. | 45                     | 85                      |            |        | brown dorsal; tan ventral         | SS, LS   |
| 8-Oct-20  | 7:06 S    | 31          | PEMA      |                        |                         |            |        |                                   | SS, LS   |
| 8-Oct-20  | 12:30 N   | <b>√</b> 14 | A-AMGR    |                        |                         |            |        | tadpole                           | NS, PJ   |
| 8-Oct-20  | 17:55 N   | <b>V</b> 13 | A-RACL    |                        |                         |            |        |                                   | JB, SPE  |
| 9-Oct-20  |           |             | PEMA      |                        |                         |            |        |                                   | JC, PM   |
| 9-Oct-20  |           |             | PEMA      |                        |                         |            |        |                                   | SS, NS   |
| 9-Oct-20  |           |             | Sorex sp. | 55                     | 100                     | )          |        | closed traps due to rain          | NS, RW   |
| 11-Oct-20 |           |             | Sorex sp. |                        |                         |            |        |                                   | TP, SP   |
| 11-Oct-20 |           |             | PEMA      |                        |                         |            |        |                                   | TP, SP   |
| 11-Oct-20 |           |             | PEMA      |                        |                         |            |        |                                   | TP, SP   |
| 11-Oct-20 |           |             | PEMA      |                        |                         |            |        |                                   | TP, SP   |
| 11-Oct-20 | 0:45 S    |             | PEMA      |                        |                         |            |        |                                   | TP, SP   |
| 11-Oct-20 |           | 526         | PEMA      |                        |                         |            |        |                                   | NS       |
| 11-Oct-20 | 12:00     |             |           |                        |                         |            |        | traps closed due to forecast rain | SS, SPE  |
| 14-Oct-20 |           |             | A-AMGR    |                        |                         |            |        |                                   | JC, SB   |
| 14-Oct-20 |           |             | PEMA      |                        |                         |            |        |                                   | JC, SB   |
| 14-Oct-20 |           |             | Sorex sp. | 50                     | 100                     |            |        |                                   | JC, SB   |
| 14-Oct-20 | 6:28 S    |             | PEMA      |                        |                         |            |        |                                   | NS, LS   |
| 14-Oct-20 | 6:45 S    | 519         | PEMA      |                        |                         |            |        |                                   | NS, LS   |

| 15-Oct-20 | 0:15 \$18 | PEMA      |    |     | young     | TP, JC |
|-----------|-----------|-----------|----|-----|-----------|--------|
| 15-Oct-20 | 0:20 S19  | PEMA      |    |     | young     | TP, JC |
| 15-Oct-20 | 0:30 S26  | PEMA      |    |     | subadult  | TP, JC |
| 15-Oct-20 | 6:49 S26  | PEMA      |    |     |           | SS, PJ |
| 16-Oct-20 | 0:17 P30  | Sorex sp. | 50 | 100 |           | PM, JG |
| 16-Oct-20 | 0:17 P30  | Sorex sp. | 45 | 90  |           | PM, JG |
| 16-Oct-20 | 0:42 S20  | PEMA      |    |     |           | PM, JG |
| 16-Oct-20 | 6:28 S19  | PEMA      |    |     | mortality | NS, LS |
| 16-Oct-20 | 12:50 S29 | PEMA      |    |     |           | JC, RW |
| 17-Oct-20 | 0:19 P27  | Sorex sp. |    |     |           | TP, SP |
| 17-Oct-20 | 0:50 S26  | PEMA      |    |     | mortality | TP, SP |

Area F2

| Day       | Time (hr) | Tron | Charles   | Body           | Total          | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | Dhoto # | Notes                                   | Initiala     |
|-----------|-----------|------|-----------|----------------|----------------|--|---------|---|--------------|
| Day       | Time (hr) | Trap | Species   | length<br>(mm) | length<br>(mm) | Weight (g)                             | Photo # | Notes                                   | Initials     |
| 16-Sep-20 | 18:58 F   | P27  | Sorex sp. |                |                |  |         |   | TP, SP, RD   |
| 17-Sep-20 | 0:29 F    | P12  | Sorex sp. |                |                |  |         |   | TP, SS, MT   |
| 17-Sep-20 | 0:39 F    | P16  | Sorex sp. |                |                |  |         |   | TP, SS, MT   |
| 17-Sep-20 | 0:39 F    | P16  | Sorex sp. |                |                |  |         |   | TP, SS, MT   |
| 17-Sep-20 | 0:49 F    | P27  | Sorex sp. |                |                |  |         |   | TP, SS, MT   |
| 17-Sep-20 | 0:55 \$   | 617  | PEMA      |                |                |  |         |   | TP, SS, MT   |
| 17-Sep-20 | 6:30 F    | P12  | Sorex sp. | 50             | 90             | 7                                      |         | mortality; brown top, silver bottom     | SS, JB, PJ   |
| 17-Sep-20 | 7:00 S    |      | Sorex sp. | 55             | 100            |  |         | brown dorsal, silver ventral, relocated | SS, JB, PJ   |
| 18-Sep-20 | 0:35 F    | P13  | Sorex sp. | 52             | 89             |  |         | brown dorsal, cream ventral             | SS, MT, TP   |
| 18-Sep-20 | 0:46 F    | P16  | Sorex sp. | 50             | 100            |  |         | brown dorsal, silver ventral            | SS, MT, TP   |
| 18-Sep-20 | 1:15 S    | 517  | Sorex sp. | 50             | 90             |  |         | brown dorsal, silver ventral            | SS, MT, TP   |
| 18-Sep-20 | 1:25 F    |      | Sorex sp. |                |                |  |         | escaped; brown dorsal, cream ventral    | SS, MT, TP   |
| 18-Sep-20 | 6:26 F    |      | Sorex sp. | 55             | 100            |  |         |   | JZ, NS, JB   |
| 18-Sep-20 | 6:33 F    |      | Sorex sp. | 60             | 110            |  |         |   | JZ, NS, JB   |
| 18-Sep-20 | 12:30 S   |      | Sorex sp. | 60             | 100            |  |         |   | RW, NS, LS   |
| 18-Sep-20 | 18:21 S   |      | Sorex sp. | 50             | 85             |  |         |   | ADP, PM, PJM |
| 18-Sep-20 | 18:32 F   |      | Sorex sp. | 40             | 75             |  |         |   | ADP, PM, PJM |
| 18-Sep-20 | 18:59 F   |      | Sorex sp. | 50             | 85             |  |         |   | ADP, PM, PJM |
| 19-Sep-20 | 0:56 F    |      | Sorex sp. |                |                |  |         | s.vagrans/monticolus type               | TP, SP       |
| 19-Sep-20 | 1:14 \$   |      | Sorex sp. |                |                |  |         | s.vagrans/monticolus type               | TP, SP       |
| 19-Sep-20 | 1:20 F    |      | Sorex sp. |                |                |  |         | s.vagrans/monticolus type               | TP, SP       |
| 19-Sep-20 | 1:56 F    |      | Sorex sp. |                |                |  |         | s.vagrans/monticolus type               | TP, SP       |
| 19-Sep-20 | 1:56 F    |      | Sorex sp. |                |                |  |         | s.vagrans/monticolus type               | TP, SP       |
| 19-Sep-20 | 2:15 F    |      | Sorex sp. |                |                |  |         |   | TP, SP       |
| 19-Sep-20 | 6:15 F    |      | Sorex sp. | 55             | 95             |  |         | brown dorsal, silver ventral            | SS, LS       |
| 19-Sep-20 | 7:30 F    |      | Sorex sp. | 50             | 90             |  |         | brown dorsal, beige ventral             | SS, LS       |
| 19-Sep-20 | 7:38 F    |      | Sorex sp. | 45             | 80             |  |         | brown dorsal, silver ventral            | SS, LS       |
| 19-Sep-20 | 8:13 F    | P57  | Sorex sp. | 45             | 85             |  |         | brown dorsal, silver ventral            | SS, LS       |

| TP, SP PM, SP PM, SP PM, SP PM, SP PM, SP LS, NS LS, NS LS, NS LS, NS LS, NS                        |
|---|
| PM, SP<br>PM, SP<br>PM, SP<br>PM, SP<br>LS, NS<br>LS, NS<br>LS, NS<br>- lighter<br>LS, NS<br>LS, NS |
| PM, SP<br>PM, SP<br>PM, SP<br>LS, NS<br>LS, NS<br>LS, NS<br>- lighter<br>LS, NS<br>LS, NS           |
| PM, SP<br>PM, SP<br>LS, NS<br>LS, NS<br>LS, NS<br>- lighter<br>LS, NS<br>LS, NS                     |
| PM, SP<br>LS, NS<br>LS, NS<br>LS, NS<br>- lighter<br>LS, NS<br>LS, NS                               |
| LS, NS<br>LS, NS<br>LS, NS<br>- lighter<br>LS, NS<br>LS, NS   |
| LS, NS<br>LS, NS<br>- lighter<br>LS, NS<br>LS, NS   |
| LS, NS<br>- lighter<br>LS, NS<br>LS, NS   |
| - lighter<br>LS, NS<br>LS, NS   |
| LS, NS<br>LS, NS  |
| LS, NS  |
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| liaht   |
| - light   |
| LS, NS  |
| LS, NS  |
| LS, NS  |
| SS, PJM   |
| SS, PJM   |
| SS, KD  |
| PM, MT, JC  |
| PJ, JB  |
| PJ, JB  |
| PJ, JB  |
| PJ, JB  |
| NS, JZ  |
| NS, JZ  |
| RD, PJM   |
| RD, PJM   |
| 170, 1 3171   |
| JC, PM, TP  |
|   |

| 22-Sep-20 | 0:50 P17   | Sorex sp. | 45 | 90  |                                     | JC, PM, TP |
|-----------|------------|-----------|----|-----|-------------------------------------|------------|
| 22-Sep-20 | 1:15 P29B  | Sorex sp. | 50 | 90  |                                     | JC, PM, TP |
| 22-Sep-20 | 6:18 P2    | Sorex sp. | 50 | 90  | D=brown/v=cream; escaped            | SS, LS     |
| 22-Sep-20 | 6:53 P13   | Sorex sp. | 50 | 90  | D=brown/v=cream                     | SS, LS     |
| 22-Sep-20 | 6:31 S17   | Sorex sp. | 50 | 95  | D=brown/v=beige                     | SS, LS     |
|           |            |           |    |     | D=brown/v=lighter brown; lrg eyes & |            |
| 22-Sep-20 | 6:45 S18   | PEMA      | 60 | 120 | ears                                | SS, LS     |
| 22-Sep-20 | 8:17 P69   | Sorex sp. | 45 | 85  | D=brown/v=grey/silver               | SS, LS     |
| 22-Sep-20 | 12:30 P19  | Sorex sp. | 40 | 75  | light belly; relocated              | AW, PJM    |
| 22-Sep-20 | 12:50 S19  | Sorex sp. | 45 | 85  | light belly; relocated              | AW, PJM    |
| 22-Sep-20 | 18:26 P17  | Sorex sp. | 50 | 95  |                                     | ADP, PM    |
| 22-Sep-20 | 18:43 P40B | Sorex sp. | 50 | 90  |                                     | ADP, PM    |
| 22-Sep-20 | 18:43 P40B | Sorex sp. | 55 | 100 |                                     | ADP, PM    |
| 22-Sep-20 | 18:56 P48  | Sorex sp. | 40 | 80  |                                     | ADP, PM    |
| 23-Sep-20 | 0:25 P7    | Sorex sp. |    |     |                                     | TP, MT     |
| 23-Sep-20 | 0:32 P10   | Sorex sp. |    |     |                                     | TP, MT     |
| 23-Sep-20 | 0:32 P10   | Sorex sp. |    |     |                                     | TP, MT     |
| 23-Sep-20 | 0:45 P17   | Sorex sp. |    |     |                                     | TP, MT     |
| 23-Sep-20 | 1:15 S25   | PEMA      |    |     |                                     | TP, MT     |
| 23-Sep-20 | 1:37 P58   | Sorex sp. |    |     |                                     | TP, MT     |
| 23-Sep-20 | 6:20 P2    | Sorex sp. | 50 | 100 | relocated                           | NS, RT     |
| 23-Sep-20 | 6:20 P2    | Sorex sp. | 50 | 95  | relocated                           | NS, RT     |
| 23-Sep-20 | 6:30 P3    | Sorex sp. | 45 | 85  | relocated                           | NS, RT     |
| 23-Sep-20 | 6:40 P5    | Sorex sp. | 50 | 90  | relocated                           | NS, RT     |
| 23-Sep-20 | 6:48 P6    | Sorex sp. | 45 | 85  | relocated                           | NS, RT     |
| 23-Sep-20 | 6:59 P11   | Sorex sp. | 45 | 85  | relocated                           | NS, RT     |
| 23-Sep-20 | 7:05 P12   | Sorex sp. | 55 | 105 | relocated                           | NS, RT     |
| 23-Sep-20 | 7:10 P16   | Sorex sp. | 60 | 110 | relocated                           | NS, RT     |
| 23-Sep-20 | 7:15 P17   | Sorex sp. | 45 | 85  | relocated                           | NS, RT     |
| 23-Sep-20 | 7:15 P17   | Sorex sp. | 50 | 95  | relocated                           | NS, RT     |
| 23-Sep-20 | 7:35 S22   | Sorex sp. | 45 | 80  | relocated                           | NS, RT     |
| 23-Sep-20 | 7:40 P43   | Sorex sp. | 45 | 85  | relocated                           | NS, RT     |
| 23-Sep-20 | 7:50 P49A  | Sorex sp. | 55 | 105 | relocated                           | NS, RT     |
| 23-Sep-20 | 8:00 P54   | Sorex sp. | 55 | 100 | relocated                           | NS, RT     |
|           |            |           |    |     |                                     |            |

| 23-Sep-20 | 8:03 P56  | Sorex sp. | 50  | 90  | relocated                   | NS, RT     |
|-----------|-----------|-----------|-----|-----|-----------------------------|------------|
| 28-Sep-20 | 18:24 P16 | Sorex sp. | 50  | 100 |                             | PM, ADP    |
| 28-Sep-20 | 19:09 S24 | Sorex sp. | 50  | 95  |                             | PM, ADP    |
| 29-Sep-20 | 1:41 P41  | Sorex sp. | 40  | 80  |                             | MT, JG     |
| 29-Sep-20 | 6:37 P20  | SOBE      | 100 | 170 | mortality; voucher specimen | JZ, JC     |
| 29-Sep-20 | 6:58 P29B | Sorex sp. | 40  | 80  |                             | JZ, JC     |
| 30-Sep-20 | 23:30 P1  | Sorex sp. |     |     |                             | TP, JG, MT |
| 30-Sep-20 | 0:45 P7   | Sorex sp. |     |     |                             | TP, JG, MT |
| 1-Oct-20  | 0:34 P10  | Sorex sp. | 50  | 95  |                             | PM, TP     |
| 1-Oct-20  | 0:56 P29B | Sorex sp. | 50  | 95  |                             | PM, TP     |
|           |           |           |     |     |                             |            |

## Area G2 and Boardwalk

|           |           |                |                | Body           | Total          |            |         |                                      |               |
|-----------|-----------|----------------|----------------|----------------|----------------|------------|---------|--------------------------------------|---------------|
| Day       | Time (hr) | Trap           | Species        | length<br>(mm) | length<br>(mm) | Weight (g) | Photo # | Notes                                | Initials      |
| 6-Oct-20  | 20:14 F   | P19            | Sorex sp.      | 40             | 80             |            |         |                                      | JB, ADP       |
| 6-Oct-20  | 20:14 F   | P19            | Sorex sp.      | 40             | 80             |            |         |                                      | JB, ADP       |
| 7-Oct-20  | 2:05 \$   | S15            | PEMA           |                |                |            |         | subadult                             | TP, JC        |
| 7-Oct-20  | 2:10 N    | M2             | A-RAAU         |                |                |            |         | red-legged frog; relocated           | TP, JC        |
| 7-Oct-20  | 2:15 \$   | 66             | PEMA           |                |                |            |         | adult                                | TP, JC        |
| 7-Oct-20  | 7:40 F    | P12            | A-AMGR         |                |                |            |         |                                      | NS, LS        |
| 7-Oct-20  | 7:55 N    | M2             | A-AMGR         |                |                |            |         |                                      | NS, LS        |
| 8-Oct-20  | 7:55 N    | <b>M</b> 1     | A-AMGR         | 100            | 100            |            |         | relocated                            | SS, LS        |
| 8-Oct-20  | 7:55 N    | M1             | A-AMGR         | 25             | 25             |            |         | relocated                            | SS, LS        |
| 8-Oct-20  | 8:33 \$   | 54             | PEMA           |                |                |            |         | relocated                            | SS, LS        |
| 9-Oct-20  | 1:10 F    | P12            | Sorex sp.      | 50             | 95             |            |         |                                      | PM, JC        |
| 9-Oct-20  | 1:25 F    | -3             | A-RACL         |                |                |            |         | euthanized                           | PM, JC        |
| 9-Oct-20  | 1:35 N    | M2             | A-RAAU         |                |                |            |         | relocated                            | PM, JC        |
| 9-Oct-20  | 7:30 F    | -2             | A-RACL         |                |                |            |         |                                      | NS, SS        |
| 9-Oct-20  | 7:35 N    | M2             | A-RACL         |                |                |            |         |                                      | NS, SS        |
| 9-Oct-20  | 8:20 \$   | S6B            | PEMA           |                |                |            |         | mortality                            | NS, SS        |
| 9-Oct-20  | 13:20 N   | M1             | garter snake   |                |                |            |         | escaped                              | NS, RW        |
| 9-Oct-20  | 13:25 N   | M3             | fish sp.       |                |                |            |         | relocated; traps close due to foreca | st rai NS, RW |
| 11-Oct-20 | 1:39 \$   | S15            | PEMA           |                |                |            |         |                                      | TP, SP        |
| 11-Oct-20 | 2:00 F    | P19            | Microtus sp.   |                |                |            |         | Creeping vole?                       | TP, SP        |
| 11-Oct-20 | 2:05 N    | <b>M</b> 1     | A-AMGR         |                |                |            |         |                                      | TP, SP        |
| 11-Oct-20 | 2:40 N    | M2             | A-AMGR         |                |                |            |         |                                      | TP, SP        |
| 11-Oct-20 | 2:40 F    | P21            | A-AMGR         |                |                |            |         |                                      | TP, SP        |
| 11-Oct-20 | 8:20 F    | 9              | Sorex sp.      | 45             | 85             |            |         |                                      | NS            |
| 11-Oct-20 | 8:40 F    | -1             | A-AMGR         |                |                |            |         |                                      | NS            |
| 11-Oct-20 | 9:20 \$   | S7             | PEMA           |                |                |            |         |                                      | NS            |
| 11-Oct-20 | 12:00     |                |                |                |                |            |         | traps closed due to forecast rain    | SS, SPE       |
| 13-Oct-20 | 19:30 F   |                | Salamander sp. |                |                |            |         |                                      | JB, SP        |
| 14-Oct-20 | 1:00 F    |                | A-AMGR         |                |                |            |         |                                      | JC, SB        |
| 14-Oct-20 | 1:00 F    | <del>-</del> 1 | A-AMGR         |                |                |            |         |                                      | JC, SB        |

| 14-Oct-20 | 1:30 M3  | A-AMGR    |    |    |  | JC, SB    |
|-----------|----------|-----------|----|----|--|-----------|
| 14-Oct-20 | 1:30 M3  | A-AMGR    |    |    |  | JC, SB    |
| 14-Oct-20 | 1:30 M3  | A-AMGR    |    |    |  | JC, SB    |
| 15-Oct-20 | 7:40 F3  | A-AMGR    |    |    |  | NS, LS    |
| 15-Oct-20 | 1:30 M2  | A-AMGR    |    |    |  | TP, JC    |
| 15-Oct-20 | 1:30 M2  | A-AMGR    |    |    |  | TP, JC    |
| 15-Oct-20 | 7:53 M4  | A-AMGR    |    |    | SNV: 75 mm                             | SS, PJ    |
| 15-Oct-20 | 8:05 M1  | A-AMGR    |    |    | SNV: 110 mm                            | SS, PJ    |
| 15-Oct-20 | 8:38 P34 | Sorex sp. | 50 | 93 | dark brown dorsal; light cream ventral | SS, PJ    |
| 16-Oct-20 | 1:30 P19 | Sorex sp. | 45 | 85 |  | PM, JG    |
| 16-Oct-20 | 7:29 M1  | A-AMGR    |    |    |  | NS, LS    |
| 16-Oct-20 | 7:37 M4  | A-AMGR    |    |    |  | NS, LS    |
| 16-Oct-20 | 8:00 F5  | A-AMGR    |    |    |  | NS, LS    |
| 17-Oct-20 | 1:08 F1  | A-AMGR    |    |    |  | TP, SP    |
| 17-Oct-20 | 1:08 F1  | A-AMGR    |    |    |  | TP, SP    |
| 17-Oct-20 | 7:46 F1  | A-AMGR    |    |    |  | SS        |
| 17-Oct-20 | 8:02 P17 | A-RAAU    |    |    |  | SS        |
| 17-Oct-20 | 12:00    |           |    |    | Traps closed/pulled; only minnows and  | f JC, SPE |
| 18-Oct-20 | 12:02 M1 | F-TSB     |    |    |  | SS        |
| 18-Oct-20 | 12:03 F5 | A-RAAU    |    |    | relocated                              | SS        |
| 18-Oct-20 | 12:18 F3 | A-RAAU    |    |    | relocated                              | SS        |
| 18-Oct-20 | 12:35 M2 | A-RAAU    |    |    | relocated                              | SS        |
| 18-Oct-20 | 12:35 M2 | A-AMGR    |    |    |  | SS        |
| 19-Oct-20 | 8:00     |           |    |    | No captures; minnows & funnel traps p  | u NS      |
|           |          |           |    |    |  |           |

# Area H

|           |           |      |         | Body   | Total  |            |        |              |          |
|-----------|-----------|------|---------|--------|--------|------------|--------|--------------|----------|
| Day       | Time (hr) | Trap | Species | length | length | Weight (g) | Photo# | Notes        | Initials |
|           |           |      |         | (mm)   | (mm)   |            |        |              |          |
| 22-Oct-20 | 6:22 S2   |      | PEMA    |        |        |            |        |              | SS, LS   |
| 22-Oct-20 | 7:20 M2   | 2    | A-AMGR  |        |        |            |        |              | SS, LS   |
| 24-Oct-20 | 0:25 S8   |      | PEMA    |        |        |            |        |              | TP, SP   |
| 26-Oct-20 | 18:45 M3  | 3    | A-AMGR  |        |        |            |        | larval stage | JB, PJ   |
| 27-Oct-20 | 6:25 S3   |      | PEMA    |        |        |            |        |              | SS, ADP  |
| 28-Oct-20 | 18:30 S20 | 0    | sparrow |        |        |            |        | released     | JB, SPE  |
| 29-Oct-20 | 12:30 M3  | 3    | A-AMGR  |        |        |            |        | small        | JC, LS   |
| 30-Oct-20 | 6:15 S2:  | 3    | PEMA    |        |        |            |        |              | NS, LS   |

## Area B2b

| D         | T: (I) T       | C!        | Body           | Total          | \\\\-\!\=\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | DI 1 - // | Notes                                     | 1               |
|-----------|----------------|-----------|----------------|----------------|---|-----------|---|-----------------|
| Day       | Time (hr) Trap | Species   | length<br>(mm) | length<br>(mm) | Weight (g)                              | Photo #   | Notes                                     | Initials        |
| 23-Oct-20 | 1:16 P1        | Sorex sp. | 45             | 90             | )                                       |           |   | PM, MT          |
| 27-Oct-20 | 1:08 S3        | PEMA      |                |                |   |           |   | SB, MT          |
| 27-Oct-20 | 1:15 S4        | PEMA      |                |                |   |           |   | SB, MT          |
| 27-Oct-20 | 7:26 S6        | PEMA      |                |                |   |           |   | SS, ADP         |
| 27-Oct-20 | 18:34 S3       | Wren sp.  |                |                |   |           | flew away                                 | JB, KD          |
| 28-Oct-20 | 0:39 P4        | A-RACL    |                |                |   |           |   | TP, JG          |
| 28-Oct-20 | 6:50 P16       | Sorex sp. | 50             | 90             | )                                       |           |   | NS, LS          |
|           |                |           |                |                |   |           | Brown dorsal / silver ventral; Grovesnail |                 |
| 29-Oct-20 | 7:15 P10       | Sorex sp. | 60             | 105            | i                                       |           | observed adj to pitfall                   | SS, PJ          |
| 29-Oct-20 | 7:15 P10       | Sorex sp. | 60             | 100            | )                                       |           | Brown dorsal / silver ventral             | SS, PJ          |
|           |                |           |                |                |   |           | relocated to 96th St ditch, north of      |                 |
| 30-Oct-20 | 7:34 P3        | A-AMGR    |                |                |   |           | isolation                                 | NS, JG, LS, ADP |
|           |                |           |                |                |   |           | relocated to 96th St ditch, north of      |                 |
| 30-Oct-20 | 7:35 P5A       | A-AMGR    |                |                |   |           | isolation                                 | NS, JG, LS, ADP |
| 30-Oct-20 | 7:38 S4        | PEMA      |                |                |   |           |   | NS, JG, LS, ADP |
| 30-Oct-20 | 7:41 S5        | PEMA      |                |                |   |           |   | NS, JG, LS, ADP |

## **Wildlife Species Codes**

PEMA: North American Deer Mouse

MITO: Townsend vole

MIOR: Creeping vole

SOVA: Vagrant shrew

SOBE: Pacific water shrew

RARA: Roof rat

RACL: Green frog

AMGR: Northwestern salamander

RAAU: Northern red-legged frog

## **APPENDIX 4: PERMIT TRACKER**

| McElhanney   |  |  |  |  |   |  |   |  |                            |  |  |  |  |  |  |
|--|--|--|--|--|---|--|---|--|----------------------------|--|--|--|--|--|--|
|  |  |  |  |  |   |  |   | mits and Approvals Tran                              |                            | tion Only  |  |  |  | _  |  |
| Area Section See Description   | Work Description   | Convert Status   | arget Subtrassion Des<br>to C. V   | ER & Days)   | Agency Substitution Ag<br>Date  | guncys Approval Process Ins<br>(Days) "  | Regulater ranking Number  | Antic pated Approval Date Sec 11 WSA Not in          | - Approximation            | Pernt Numbers  | Actual Approval Date   | Enhancement Hanagement Plan<br>Anticipated Saltrelasion Date | Enhancement Hanagement Plan<br>Anticopeled Approval Date | Approved Expiration  | Kden   |
| A 3 90th St and Dish   | Sto means outfall couth of Hay 17  | Obtained<br>Obtained   | 14-Feb 20  | 20-Feb-2020  | 21-Feb-2020   | 6  | 100110655   | 6-Ap -3030   | 1-May-2020                 | 100110655  | 8-Ap-20  | N/A  | N/A  | May 02, 2020-May 02, 202<br>May 02, 2020-May 02, 202                       | Please note that the sta 1 date o May 2, 2020  1. Please note that the sta 1 date o May 2, 2020  |
|  |  |  |  | 1  |   |  |   | Sec 11 VSA App                                       | OV III                     |  | -140   |  |  |  | P = by Letter send to ITARCRD by the P ovince Ap 124, 2020. It Reddington p ovided G Consultation aco als. Meeting with ITARCRD May 30, 2020. Hold letter accessed May   |
| B 2 96th 3: set Dich   | Shey 17 Culve t Dates on (L106/L400)  Culve t Dates on Downst earn of New 91C and load of 8  | Under Regulato y Review - assigned to a Water Office  Under Regulato y Review - assigned to a Water Office   | 14-Feb 20  | 20-feb-2020<br>20-feb-2020   | 21-Feb-2020<br>21-Feb-2020  | 140  | 100311219   | 15-64-2020<br>15-64-2020                             | 23-ini-2020<br>22-ini-2020 | 2007795  | 25-lui 20<br>25-lui 20   | 4-Dec-30   | 2-R6-21  | 11-0e-31   | seponded on laws E, 2000. Conf. met one of exprise laws 15, 2000. Date we will take to July 15, 2000. RAMIDED toke 19 14524.  You by these send to RAMIDED by the You sow AP 124, 2000. It finded replay no or deal of Consultation word. Meeting with RAMIDED May 20, 2000. Hold letter as weed May seponded on laws 8, 2000. Conf. met on of exprise laws 83, 2000. Conf. on weard to July 15, 2000. RAMIDED toke 1 14524.   |
|  |  |  | 22.04.20   | 20-Feb-2020  | 21-Feb-2020   | - 10   | IOMITATIO.  | N. C. STORY  |                            |  | 23-let 20  | 100  | 100  | 31-0ec-31  | P o by Lette send to FLMICRO by the P ovince Ap i 24, 2000, it Reddington pior ded is Consultation lette dischering with FLMICRO May 20, 2020. Hold lette let event May seponded on June 8, 2020. Confirmation of lette pt on June 15, 2020. Date let sed to July 15, 2000. FLMICRO Job 8 I 14324 Amendment sent to the stoll mouths I nto 5 ids 0   |
| D I Side Ditch wetland   | Roundabour and Ramp Foc oachment (J. 375, L475, L450)  Block og of the Dich. ourdabout and new pack a Bog (L1400, L1150, L1160, L1170)   | Under Regulato y Review - and goled to a Water Office  Linder Regulato y Review - and goled to a Water Office  | 21-Feb 20<br>21-Feb 20   | 26-140-2020  | 28-Feb-2020   | 140  | 10011219  | 17-44-2020   | 21-Aur-2020                | 2007783  | 17-Aug-20  | 4-0e-30  | 2-96-21  | 31-0ao33   | August 2005  P o ty letts send to TARRORD by the P or son Ap 124, 2000. It Redd repton p or ded it Consultation aco ds. Meeting with FLARDRD May 20, 2020. Hold letter ac eved May apposed on Laws 3, 2020. Cold mate on of early on Laws 13, 2020.  |
| is 3 West Ditch/FC39 and We sh Stale Road<br>No del Ditch, West Ditch, and unnamed   | EC259 Ciffeet diches, west dich and st earn to 5 lds Dich and load (0.1300)  | Under Regulato y Nev ew- assigned to a Water Office  | 11-Ma -20  | 16-Ma -2020  | 17-Ma -2020   | 340  | 100112729   | 6-Aug-2020   | 23-Aug-2020                | 2007755  | 21-hue-20  | 4-Dec-30   | 2-Reb-21   | 31-0ec-33  | P or by Letter send to FLRECOTO by the P ov non Ap 124, 2000. It Reddington provided if Consultation records. Meeting with FLRECOTO May 20, 2000. Hold letter at event May exponed on laws 3, 2000. Confirmation of exist pin laws 13, 2000.  P or by Uniter sends FLRECOTO by the P oven Ap 124, 2000. It Reddington p ovided if Consultation and du. Meeting with FLRECOTO May 20, 2000. Noted letter as event May.  |
| G A De to Nature e Rents we  | Road and districtions on ISW colone of No delinte change (2100, (2200, (2250))) Road and districtions (SC colone) of No delinte change (2300, (2400))  | Under Regulato y Review - assigned to a Water Office  Under Regulato y Review - assigned to a Water Office   | 5-Ma -20<br>21-Feb 20  | 9-Ma -2020<br>26-Feb-2020  | 11-Ma -2020<br>26-Pab-2020  | 140  | 100312676   | 29-ai-2020   | 21-Aug-2020<br>21-Aug-2020 | 2007770  | 20-Aug-20<br>17-Aug-20   | 4-Dec-30   | 2-Reb-21<br>2-Reb-21                                     | 31-0e-31<br>31-0e-31   | exponded on larse 3, 2000. Cond mat an off each pt on larse 13, 2000.  P on youther send in FUNDION by the P over set in 124, 2000. It had inglore p or side of Committee on each dishesting with FUNDION May 22, 2000. Hald letter on world May appointed on larse 3, 2000. Control match of each per bins 1, 2000. Committee, 3, 2000. Indications or world.   |
|  | <u> </u>   |  |  |  |   | 4-4  |   | DFO Request for                                      | Coviere                    |  |  |  |  |  | Province advised that Boardeville Ville Intermed From scrook Office Changes Clark Product.  DEG has done in most that the project submits on expures a more data but ye was Will not be invited in gardening state, they come do this all ower open. Will not be   |
| A 2 90th 52 and Dich   | Sto mwate outfall south of Hwy 17 Hwy 17 Culve + Dates on (L100/L400)  | Lette to Avo d and Mit gate Lette to Avo d and Mit gate  | 14-Feb 20<br>14-Feb 20   | 20-Feb-2020<br>20-Feb-2020   | 21-6ab-2020<br>21-6ab-2020  | 60   | 20-H7AC-00095<br>20-H7AC-00094  | . 11-Ap -2000<br>21-Ap -2000                         | 15-Am-2020                 | 20-HPAC-00694<br>20-HPAC-00694                         | 17-lun-20<br>17-lun-20   | N/A  | N/A<br>N/A   | Dec-23   | add total into provided by May 22. Received letter to Auro d and Mit gate.  100 has date on part that their plant solves and any are a more data let are Will not be any one proper shall they come do the all more protect. Make new th 100 on May  |
| C Rve Road D th  | Culve 1 installat con  | Latte to Avo dand Mit gate   | 14-Fac 20  | 20-Feb-2020  | 21-Feb-2020   | 60   | 20-1179/C-00094   | 71-Ap -2000  | 25-Mrp-2020                | 20-HPAC-00095  | 15-May-20  | N/A  | N/A  | 21-240-21  | and to could shop to ded by May 25. New seed labels to Mand send life gate.  OFF that does not be that the project business on says as a more desirable, on a Will not be an evering sets atting, they come doe this self-own pajorit, They and approved date to meeting, May 27, 2000. More was these to have durant May gate.  OFF this does not set that the project business on one oper as now a dated for mem. Will not be an evering separating, they come do this all conspright. What may with DFO on May   |
| D 3 Skia Ditch   | Roundabout Enc eachment ( east)  | Latter to Avoid and Mitigate   | 14-Feb 20  | 20-Feb-2020  | 25-Feb-2020   | 60   | 20-H7AC-00094   | 21-Ap -2026  | 15-An-2020                 | 25-HPAC-00694  | 17-har-20  | N/A  | N/A  | Dec-23   | add tonal rato p or dad by May 22 face wed lette to Avoid and Mit gate.  DEO has deem in raid that the project submission ago, mis mine a data lad in you. Will not be inviewing sapa state, they conside this all one project. Meeting with DEO on May  |
| E Side Ditch   | Culve 1 Diseas on Downet earn of Hely 99C.  Block or of the 0 tch. oundebout and new part = Box (19400 19150 19150 19150).   | Latte to Avoid and Mitigate  Latte to Avoid and Mitigate   | 14-Feb 20<br>21-Feb 20   | 20-Feb-2020<br>26-Feb-2020   | 21-Feb-2020<br>28-Feb-2020  | 90   | 20-HPAC-00094<br>20-HPAC-00303  | 28-de -2000  | 15-na-1000                 | 20-HPAC-00000  | 17-lus-20<br>2-hi-20   | N/A  | N/A<br>N/A   | Dec-23   | add coal after provided by this 22. Takes well limbs to American State (and Mirgole  DFO has dolern in bed from the griphets with a sich says, we also a detail and on an AMT port be any own righter, they come did to all one project. Meeting with DFO on Mandel coal after provided by May 22. Takes well limbs to American State (and the provided by May 22. Takes well limbs to America |
| West 0 tch/FC/39 and Weigh Scale Road  | EC236 Offset d inher, west d tick and at earn to 5 ide D tick and load (I.1200)  | Latte to Avo dand Mit gate   | 11-Ma -20  | 16-Ma -2020  | 17-Ma -2020   | 60   | 20-HPMC-00250   | 16-May-2020  |                            | 26-HPAC-00250  | 6Aug-20  | N/A  | N/A  | Dec-23   | DRO has side in set that the p oject subm is on equi as a mole distalled, no we. Will not be, average againstig they conside this all one p oject. Meeting with TEO on Manadot onal info p ovided by May 22  |
| No del Ditch, West Ditch, and unnamed ditches by FC239   | Read and disch elecation (SW coine of No del Into change L2103, L2203, L2250)  | Letter to Avoid and Mitigate   | 25-Feb 20  | 9-Ma -2020   | 11-Ma -2020   | 60   | 20-HPAC-00349   | 10-May-3020  | AN .                       | 20-HPAC-00349  | 6-Aug-20   | N/A  | N/A  | Dec-23   | DFO has done in neaf that the polect submits on maguines a more black led, no www.Will not be no were agreepe stating, they come do to all one-polect. Menting with DFO on May additional into pion deed by May 22.  |
| G De la Natu e Assu es   | Road and distriction (SZ coine of No delinte change L2000, L2400)  | Lattle to Avoid and Mitigate   | 25-feb 20  | 26-Feb-2020  | 26-Feb-2020   | œ.   | 25-HPAC-0035H   | 26-Ap -2026<br>DFO Authoriza                         |                            | 20-HPAC-00304  | 5-16-30  | N/A  | N/A  | Dec-23   | DRO has determ neal that the project subm is on equi as a mole distalled, as mu. Will not be leviesing safety, they conside this all one project. Neeling with DRO on Maradist consisting provided by May 22. Received letter to Manufacture.  |
| A 2 Sitch Street Disch   | Sio means outfall touth of Ney 17  | Pending outcome of DFO Request fo Review-No Authorist on equiled   |  |  |   | sci  | NA.   | NA.  | NA NA                      | NA.  | NA.  | N/A  | N/A  | NA   | Fac wed Lette to Avoid and Mit gate on June 17, 2000 not need to us Author sation  |
| II 2 Rich St and Dish  | Heay 17 Culve 1 Extens on (1.100/1.400)  Culve 1 Installat ons   | Pending outcome of DPO Request fo Review-No Authorize on equiled  Pending outcome of DPO Request for Review-No Authorize on equiled  |  |  |   | 20   | NA NA   | M.   | NA.                        | NA.  | NA.  | N/A  | N/A<br>N/A   | NA NA  | Rec wed Lette to Avoid and Mit gate on lane 17, 2020 not need for an Author set on  Rec wed Lette to Avoid and Mit gate on Mary 25, 2020 not need to an Author set on  |
| D 3 Side Date  | Soundshout for pachment ( pad)   | Pending outcome of OFO Request fo Review-No Author set on equiled  |  |  |   | 20   | NA .  | N.   | NA.                        |  | NA.  | N/A  | N/A  | NA .   | Fact med Latte to Avoid and Mitigate on June 17, 2020 not need to us Author set on   |
| F 3 Side Deth F 3 EW But on Rog Permeter Deth  | Gaine t Ditens on Downst earn of Hew SUC.  Block og of the Ditch, candabout and new card a Bog (L1400, L1150, L1160, L1170)  | Pending outcome of DFO Request to New eve-No Autho ast on equiled  Pending outcome of DFO Request to New eve-No Autho ast on equiled   |  |  |   | - 20<br>- 20   | NA  |  | NA.                        |  | - M  | N/A  | N/A  | NA.  | Box exect lette to Another Mit pate on June 17, 2020 not need to an Author pation. Sec exect lette to Another Mit pate on July 2, 2020 not need to an Author pation.   |
| H West DistriPTC 29 and Weigh Scale Road No del Distri, West Distri, and unnamed   | FC359 Officer of transe, went of transe and to earn to 5 ide D transe card (L1200)   | Pending cutcome of DFD Request fo Review-No Author set on equiled  |  |  | 1   | 90   | NA NA   | M  | NA.                        | NA.  | NA .   | N/A  | N/A  | NA.  | Next exect Letter to Auroid and Mit gast on August 6, 2020 not need to an Audho cast on  |
| i A dishes by FC230  G 4 Deta Natu e Rese ye   | Read and distri electric on (SW colors of No del Interchange (2000, 12200, 12250)  | Pending outcome of DFO Request fo Review-No Author set on equiled.  Pending outcome of DFO Request for Review-No Author set on equiled.  |  |  |   | 90   | NA.   | M.   | NA NA                      | NA.  | NA.  | N/A  | N/A  | NA NA  | There meditates to Aurid and Mit gate on August 6, 2020 not need to an Author part on  |
| A 2 DOth St and Disch  | Road and disth elecation (ST coine of No del links change (2300, (2400))  Sto mente outfall routh of Hwy 17  | Obta ned   | 27-ism   |  | 30-lan-2020   | и  | 500308507 FLARORD   | Scientific Collection Fish 5<br>13-Feb-2020          | alrage Pernets<br>NA       | SU20-601411/00AB-31-3020                               | 24-Feb-20  | N/A  | N/A  | RINKORD/OFG Sept 10, 20  | Dec each latte to Anold and Mit gate on July 2, 2020 not need for an Author cation  2. Submitted under the FINEDOD'S continuate webgo tall using NE account and (seed to DFD- acceled).  |
| C 2 River Road Ditrh   | Sher 17 Cates 1 Dates: on (L100) 4000<br>Calve 1 Installed one   | Obtained   | 27-isn<br>27-isn<br>27-  |  | 30-lan-3020<br>30-lan-3020  | и  | 100308107 FLARORD<br>100308107 FLARORD<br>100308107 FLARORD   | 13-Feb-2020<br>13-Feb-2020<br>-01-F - 2020           | NA<br>NA                   | 51/20-601411/01AB-31-2020<br>51/20-601411/01AB-31-2020 | 24-Feb-20<br>24-Feb-20   | N/A<br>N/A<br>N/A  | N/A<br>N/A<br>N/A  | PLNRORD/DFO Seet 30, 20  | 22 Subm thad under the FIARDORD F configurate weekon tall us ma AC account and framed to DEC-ace and<br>22 Subm thad under the FIARDORD F configurate weekon tall using AC account and framed to DEC-ace and   |
| E 2 Stde Ditch  F 3 FW Bu na Ros Pe mete Otch  | to the state of the state of the state  Stock of Determine of the State  Stock og of the Otch, ourdebout and new past o Bog (L1400, L1150, L1160, L1170)   | Citta ned  | 27-ian   |  | 20-1-2020<br>20-1an-2020<br>20-1an-2020   | и  | SOCIORED FUNEDAD  | 15-Feb-2020<br>13-Feb-2020                           | NA.                        | 9120-601411/0148-31-2020<br>9120-601411/0148-31-2020   | 24-740-20  | N/A  | N/A  |  | 5 to A TANAGOR C TO TO TANAGOR TO |
| West Distry/FC239 and Weigh Scale Road  No del Distry, West Disch, and unnamed   | FC239 Offset disches, west disch and stiesen to Side Disch and load (L1300)  | Obta nad   | 27-lan<br>27-lan   |  | 30-ian-3030   | 14   | 200 XORIO7 FLAROND<br>200 XORIO7 FLAROND  | 13-Feb-2020  | NA.                        | SU20-601411/30/AB-31-3030                              | 24-Feb-20<br>24-Feb-20   | N/A<br>N/A   | N/A  | RANDORD/DFG Sept 30, 20  | 22 Submitted under the FINTORD F continues webportal using All account and faund to DFO- sce and   |
| 1 4 dithes by FC239 G 4 De ta Natu e Rese ye   | Road and ditch elecation (SW coins of No del Intel change L2105, L2205, L2205)<br>Road and ditch elecation (SE coins of No del Intel change L2300, L2400)  | Obtained Obtained  | 27-lan<br>27-lan   |  | 30-lan-3020<br>30-lan-2020  | и  | 100308107 FLARORD<br>100308107 FLARORD  | 13-Feb-2020<br>13-Feb-2020<br>WMMI & Salvage P       | NA<br>NA                   | SU20-601411/0048-31-2020<br>SU20-601411/0048-31-2020   | 24-Feb-20<br>24-Feb-20   | N/A<br>N/A   | N/A<br>N/A   | FLMRORD/OFO Sept 30, 20<br>FLMRORD/OFO Sept 30, 20                         | 2 Submitted under the FUNTOMD F continuate webported using AE account and flexible to SFC- accessed.  22 Submitted under the FUNTOMD F continuate swebported using AE account and flexible to SFC- accessed.   |
| A 2 DOCH SE AME DISCH  | Six reveale outfall south of Ney 17  | Obtained   | 27-lan   |  | 1/30/2020, Received<br>March 31, 2021<br>1/30/2020, Received  | 90   | 3000001475/100344520  | 4/29/2020/TBD to somesi                              | NA.                        | 5100-601719  | 8-Ap -20   | N/A  | N/A  | 6-Ap -21   | Submitted under the TIANIORD F continuate wedge tall as ag All account. Reversil application submitted March 31, 2021  |
| B 2 90th Steet Dish  | Shey 3.7 Culve t Estess on<br>Culve t Installation   | Obtained Obtained  | 27-isn<br>27-isn   |  | Ma ch 31, 2021<br>1/30/2020, Recental<br>Ma ch 31, 2021   | 90   | 10010M25/1003M520   | 4/29/2020/TBD to ensemi<br>4/29/2020/TBD to ensemi   | NA NA                      | 5L20-801719<br>5L20-801719                             | 8-Ap -20<br>8-Ap -20   | N/A  | N/A<br>N/A   | 6-Ap -21<br>6-Ap -21   | Submitted under the FUNDORDF continues weekpoilable up Affactorum. Remeasilappication without the March 21, 2021.  Submitted under the FUNDORDF continues weekpoilable up Affactorum. Remeasilappication submitted March 21, 2021.   |
| I el peb   | * IF * N + 4   | and a  | 27-ise   |  | 30 / 3036<br>1/30/2020, Renewal   | 49   | 100308-36<br>100308425/100344520  | 20 2020<br>4/29/2020/TB0 to snewal                   |                            | 5U20-601719  | 8-Ap-20  | 8/3  | N/A  | 6-Ap-21  | S * * NATORICE S 11 5 *  |
| F DW flu ne flog Pe make Dtch  | Cuive 1 Datest on downst earn of Hey SLC  Block og of the 0 tch, our debout and new oad o Bog (L1400, L1150, L1150, L1170)   | Otto ned   | 27-lan   |  | Ma ch 51, 2021<br>1/30/2020, Renewal<br>Ma ch 31, 2021<br>1/30/2020, Renewal  | 90   | 100108425/100364526   | 4/29/2020/TSD16 eneed                                | NA.                        | SLI20-601719   | 8-Ap -20   | N/A  | N/A  | 6-Ap -21   | Siden that under the FLMKORD FrontCounter webportal on ny Aff account. Renewal application submitted March 21, 2001.  Siden that under the FLMKORD FrontCounter webportal on ny Aff account. Renewal application submitted March 21, 2001.   |
| H West Disch/FC239 and Weigh Scale Road No. del Disch, West Disch, and unnamed   | FC239 Offset ditches, west ditch and at earn to 5 lde Ditch and load (L1300)   | Observed   | 27-lan   |  | Ma ch 31, 2021<br>1/30/2020, Senescal   | 90   | 30010IM25/100344520   | 4/29/2020/TBD to somesi                              | NA.                        | 5000-601719  | 8-Ap -20   | N/A  | N/A  | 5-Ap -21   | Subm their under the FINNIOND F conticuenter swebpo tail using All account. Renewell application submitted Marich 31, 2001   |
| A disthes by FC239  E 4 De to Natu e Rme ve  | Road and disth elecation (SW coins of No del Into change 1,2100, 1,2200, 1,2250)<br>Road and disth elecation (SE coins of No del Into change 1,2300, 1,2400)   | Obtained<br>Obtained   | 27-ian<br>27-ian   |  | Ma ch 11, 2021<br>1/30/2020; Renewal<br>Ma ch 31, 2021  | 90   |   | 4/25/2020/T80 fo meetal<br>4/25/2020/T80 fo meetal   | NA.                        | 5120-601719<br>5120-601719                             | 6-Ap -20<br>6-Ap -20   | N/A  | N/A  | 6-Ap -21<br>6-Ap -21   | Salam thad under the FLANDROF continues webpo talux on AC account. Remeasi application submitted Maich 21, 2001  Salam thad under the FLANDROF continues webpo talux on AC account. Remeasi application submitted Maich 21, 2001.  |
|  | Segment 1. No th and South   | Ţ  |  | 1  |   |  | Hight   | ay User raffic Control Permits<br>Sile RI & Cassific | for Site overagetions      |  |  |  |  |  |  |
| 1 5 1 5 5 5  | E 11 N th E h  |  |  |  |   | +  |   |  |                            |  |  |  |  |  |  |
| I Contam rated So I and G oundwate   | Utility t enches a contain nated to is   |  |  |  |   | ,  |   | Notice of interpretant R                             | ermidation                 |  |  |  |  |  |  |
| 1 Contain safed So I and G condente  | Contamented wide management Section 4 Stone column a ex Chance Find  |  |  |  |   | 7  |   |  |                            |  |  |  |  |  |  |
|  | Canon Fed  |  |  | -  |   | 7.   |   |  |                            |  |  |  |  |  |  |
| Contain nated So I and G oundwate     Contain nated So I and G oundwate  | California   |  |  |  |   |  |   |  |                            |  |  |  |  |  | Request sent to P ovince (MOT) to lass stance with leaching EW for status of application. Call into Lucy Hewlett for lan update as of 20201000   |
| Contain nated So I and G oundwate     Contain nated So I and G oundwate  Contain nated So I and G oundwate  Contain nated So I and G oundwate  | Segment 1 and 2  |  | 17-tun   |  | 11-Aug-2020   | 60   |   | 3-60v-2020   | 11-iss-2021                |  |  |  |  |  | GI-Dec-2020 Lucy contacted to conf on that ENV has necewed the payment for the AP application. Requested that she follow up with the next step in the piccess.   |
| Contain named to I and Coordwate   | Segment and 2  6 A 2   | Best 1 Underly best on a set chapse and 2 or or continues  | 2013   | 15.86 - 20   | 34 3030   | 60<br>42   | 06.756.0011   | 3-60-2020<br>23-0-2020<br>Environmental Manager      |                            |  | 27-de -20  |  |  |  | GL-Grac-2000 Curry contacted to conf in that TAN has not well the payment for the A.P application. Requested that she follow up with the next step is the piccess.   |
| 1 Conten meted to land Counteres 1 Counten meted to land Counteres 1 to 4 COMP 1 to 4 COMP 1 to 4 Will 8 Foredu m. 1 to 4 Will 8 Foredu m.  | Signment law 2 (2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4  | No. 3 - Undertail benefit on a set chapper and F or an automorph<br>No. 3 - Updated based on p or an of chapper and F or or or convents<br>No. 3 - Opdated based on p or and chapper and F or or or convents.  |  | 13-Ma -20  | 20-Ma -20<br>20-Ma -20<br>20-Ma -20<br>20-Ma -20  | 20<br>20<br>30<br>30   | 06-TMS-0031<br>26-TMS-0031<br>06-TMS-0031   | 22043000   |                            |  | 27-8e -20<br>27-8e -20<br>27-8p -20  |  |  | NA<br>NA<br>NA   |  |
| 1 Centers named to tract C members 1 Centers named to tract C members 1 Centers named to the C members 1 Centers named to tract C members 1 Centers named to tract C members 1 to C TAPP 1 | Ag calls a Mit part on Plan A Calls 19 and Case of Plan A Calls 19 and Case of Plan Classes 2 And Management Plan Classes 2 And Management Plan Contract and A Michael and Weller Management Plan  | Rev 5 - Updated based on p o est changes and P ov on comments Rev 5 - Updated based on p o est changes and P ov on comments Rev 5 - Updated based on p o est changes and P ov on comments Rev 5 - Updated based on p o est changes and P ov on comments  | 11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20   | 13-Ma -20<br>13-Ma -20<br>12-Ma -20<br>13-Ma -20   | 20-Ma -20<br>20-Ma -20<br>20-Ma -20<br>20-Ma -20<br>20-Ma -20<br>20-Ma -20  | 60<br>45<br>30<br>30<br>30<br>30<br>30<br>30<br>30   | 06-TMS-0031<br>08-TMS-0031<br>06-TMS-0031<br>06-TMS-0031  | 22043000   |                            |  | 27-Ap -20<br>27-Ap -20<br>27-Ap -20<br>27-Ap -20   |  |  | NA<br>NA   | GO-Co-CODD Lay contributed to cut in the DAViae. So well the payment for the AF aggl cut on. Requested that shark low gir with the sent step, in the piccess.    Individual document file-Submitted by Davier Interest in the SOC on May in Mil. 2000   Individual document file-Submitted by Davier Interest Interes |
| 1 Conten mend to land Counterer 1 Intel Counter 1 Intel Counter 1 Intel Will Freedom 1 Inte | E calle e Mit get on Flan A cash i yed can Case of Flan Case of the Management Flan Cases and Ma | Rest - Lyptoine based on pile act changes and if on or comments.<br>Rest - Lyptoine based on pile act changes and if or or comments.<br>Rest - Lyptoine based on pile act changes and if or or comments.<br>Rest - Lyptoine based on pile act changes and if or or comments.<br>Rest - Lyptoine based on pile act changes and if or or comments.<br>Rest - Lyptoine based on pile act changes and if or or comments.<br>Rest - Lyptoine based on pile act changes and if or or comments.   | 11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20  | 13-Ma - 20<br>13-Ma - 20<br>13-Ma - 20<br>13-Ma - 20<br>13-Ma - 20<br>13-Ma - 20<br>13-Ma - 20   | 20-Ma -20<br>20-Ma -20  | 60<br>20<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30   | 26-TMS-0031<br>36-TMS-0031<br>36-TMS-0031<br>36-TMS-0031<br>36-TMS-0031<br>36-TMS-0031<br>36-TMS-0031   | 22043000   |                            |  | 27-4p -20<br>27-4p -20<br>27-4p -20<br>27-4p -20<br>27-4p -20<br>27-4p -20<br>27-4p -20<br>27-4p -20   |  |  | NA<br>NA<br>NA<br>NA   | Single-District Controlled in Controlled in Controlled District Co |
| 1 Content needed to tent Of mendester 1 to 1 COMP 1 to 1 C | Ag colles a Mit part on Flare A. Quality and Court Cole of Plane Floration of Plane Flora | Rev 3 - Updated based on p o est changes and P or or comments.  Rev 5 - Updated based on p o est changes and P or or comments.  Rev 5 - Updated based on p o est changes and P or or comments.  Rev 5 - Updated based on p o est changes and P or or comments.  Rev 5 - Updated based on p o est changes and P or or comments.  Rev 5 - Updated based on p o est changes and P or or comments.  Rev 5 - Updated based on p o est changes and P or or comments.   | 11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20<br>11-Ma -20   | 15-Ma -20<br>15-Ma -20<br>15-Ma -20<br>15-Ma -20<br>15-Ma -20<br>15-Ma -20   | 20 Ms -20<br>20 Ms -20  | 00<br>40<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30   | 06-TMS-0031<br>08-TMS-0031<br>08-TMS-0031<br>06-TMS-0031<br>08-TMS-0031<br>08-TMS-0031  | 22043000   |                            |  | 27-4p -20<br>27-4p -20<br>27-4p -20<br>27-4p -20<br>27-4p -20<br>27-4p -20<br>27-4p -20  |  |  | NA<br>NA   | GO-Dec-2000 Lays contributed to cut in that DNV bits was well the payment for the A.P. aggl cut on. Requested that sharks low up with the east step, in the process.    Individual document file-Submitted by Diese present in the SOC on May in 16, 2000   Injudicular document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated document file-Submitted by Diese present in the SOC on May in 16, 2000   Optionated Diese present in the SOC on May in 16, 2000   Optionated Diese present in the SOC on May in 16, 2000   Optionated Diese present in the SOC on May in 16, 2000   Optionated Diese present in the SOC on May in 16, 2000   Optionated Diese present in the SOC on May in 16, 2000   Optionated Diese present in 16, 2000   Optionated Diese pre |
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## **APPENDIX 5: PERMIT CONDITIONS TRACKER**

Subject: River Road Interchange (Section 1), Site C -Watercourse Infilling and Highway Upgrades, Fraser River, Delta - Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

| 1 The removal of or disturbance to riparian vegetation should be kept to a minimum during the works.  | 000                    |
|---|------------------------|
| The removal of or distarbance to riparian regetation should be kept to a minimum during the works.  | PGC                    |
| 2 Whenever possible, works are to be conducted when the watercourse is dry.   | PGC                    |
| If works are not conducted in the dry, works are to be conducted in isolation of flow and the following measures are to be implemented:   | PGC                    |
| An appropriately qualified professional is to conduct a fish salvage of the isolated work area. Choose low impact salvage methods such as minnow trapping and   |                        |
| a seining before opting for higher impact electrofishing. In the event that isolation is breached, stop work and repeat fish salvage efforts.   | Brybil                 |
| b Dewater the isolated area gradually to reduce the potential for stranding fish.   | PGC                    |
| Ensure bypass pump intakes and outlets are located within the confines of the fish-isolated work area (i.e., to prevent fish impingement on pump intakes, and to prevent dewatering areas where fish may be present). Ensure pumps are screened to prevent entrainment or impingement of fish in accordance with DFO's interim c code of practice for End-of-pipe Fish Protection Screens for Small Water Intakes in Freshwater (https://www.dfo-mpo.gc.ca/pnw-ppe/codes/screen-ecraneng.html). | PGC/Brybil             |
| When diverting watercourse flows, maintain an appropriate depth and flow (i.e., base flow) for the protection of fish and fish habitat downstream of the isolated   | i daj bi ybii          |
|   | PGC                    |
|   | PGC                    |
|   | PGC                    |
|   | PGC                    |
| Ensure that material such as rock, riprap, or other materials placed on the banks or within the active channel or floodplain of the watercourse is inert and free of silt,  |                        |
| overburden, debris, or other substances deleterious to aquatic life.  | PGC                    |
| 8 Minimize the introduction of sediments (e.g., silts, clays and sand) into the watercourse or downstream reaches of the watercourse.   | PGC                    |
| 9 Develop and implement an erosion and sediment control plan to avoid and minimize the introduction of sediment into or induced sedimentation in the watercourse.   | PGC                    |
| , ,   | PGC                    |
|   | PGC                    |
| Works should be monitored full-time during start-up and any instream works or sensitive activity. The environmental monitor must be an appropriately qualified  |                        |
|   | PGC, weekly audit MESL |
| 3 While the Program recommends works be conducted during the least risk to fish instream work window of August 1 – September 15 where possible. It is recognized instream works will be required to commence upland works. Therefore, if works are proposed for outside the least risk window, work should especially be conducted  |                        |
| under the direction of an appropriately qualified professional as per item 12 above.  | PGC                    |
| 4 Monitor before, during, and after all phases of construction to ensure that fish do not become trapped/isolated, stranded, or entrained within the project area.  | PGC, weekly audit MESL |
| 5 If fish are observed at the site, or upstream or downstream of the site, work should be halted. Works may only resume following implementation of appropriate mitigation measures and under the direction of an appropriately qualified professional.   | PGC                    |
|   | PGC                    |

Subject: Highway 91/17 - Site F - Wetland Infilling, Burns Bog Ditches, Delta - Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

| Conditions   | Responsibility         |
|--|------------------------|
| 1 The removal of or disturbance to riparian vegetation should be kept to a minimum during the works.   | PGC                    |
| 2 Whenever possible, works are to be conducted when the watercourse is dry.  | PGC                    |
| 3 If instream works are not conducted in the dry, works are to be conducted in isolation of flow and the following measures are to be implemented:                     | PGC                    |
| a  |                        |
| An appropriately qualified professional is to conduct a fish salvage of the isolated work area. Choose low impact salvage methods such as minnow trapping and          |                        |
| seining before opting for higher impact electrofishing. In the event that isolation is breached, stop work and repeat fish salvage efforts.                            | Brybil                 |
| b Dewater the isolated area gradually to reduce the potential for stranding fish.  | PGC                    |
| c Ensure bypass pump intakes and outlets are located within the confines of the fish-isolated work area (i.e., to prevent fish impingement on pump intakes, and to     |                        |
| prevent dewatering areas where fish may be present). Ensure pumps are screened to prevent entrainment or impingement of fish in accordance with DFO's interir          | n                      |
| code of practice for End-of-pipe Fish Protection Screens for Small Water Intakes in Freshwater (https://www.dfo-mpo.gc.ca/pnw-ppe/codes/screen-                        |                        |
| ecraneng.html).  | PGC/Brybil             |
| d When diverting watercourse flows, maintain an appropriate depth and flow (i.e., base flow) for the protection of fish and fish habitat downstream of the isolated    |                        |
| work area.   | PGC                    |
| 4 Complete the works as quickly as possible once they are started.   | PGC                    |
| 5 Undertake works during dry weather and low water conditions.   | PGC                    |
| 6 Equipment is to be situated in the dry watercourse channel within the footprint of the works or operated from the top of the bank.                                   | PGC                    |
| 7 Ensure that material such as rock, riprap, or other materials placed on the banks or within the active channel or floodplain of the watercourse is inert and free of |                        |
| silt, overburden, debris, or other substances deleterious to aquatic life.   | PGC                    |
| 8 Minimize the introduction of sediments (e.g., silts, clays and sand) into the watercourse or downstream reaches of the watercourse.                                  | PGC                    |
| 9 Develop and implement an erosion and sediment control plan to avoid and minimize the introduction of sediment into or induced sedimentation in the                   |                        |
| watercourse.   | PGC                    |
| 10   |                        |
| Do not deposit any substances deleterious to fish or fish habitat directly or indirectly into the watercourse or downstream reaches of the watercourse.                | PGC                    |
| 11 Develop and implement a response plan to avoid a spill of deleterious substances into the watercourse.  | PGC                    |
| 12 Works should be monitored full-time during start-up and any instream works or sensitive activity. The environmental monitor must be an appropriately qualified      |                        |
| professional and ensure mitigation measures are implemented for the protection of fish and fish habitat.   | PGC, weekly audit MESL |
| 13   |                        |
| The Program recommends works within fish-bearing or potentially fish-bearing watercourses be completed during the least risk to fish instream work window of           |                        |
| August 1 – September 15 where possible. However, it is recognized that there are proposed instream works outside this window. Therefore, if works are proposed         |                        |
| for outside this time window, additional measures should be implemented under the direction of an appropriately qualified professional, as per item 12 above.          | PGC                    |
| 14   |                        |
| Monitor before, during, and after all phases of construction to ensure that fish do not become trapped/isolated, stranded, or entrained within the project area.       | PGC, weekly audit MESL |
| 15 If fish are observed at the site, or upstream or downstream of the site, work should be halted. Works may only resume following implementation of appropriate       |                        |
| mitigation measures and under the direction of an appropriately qualified professional.  | PGC                    |
| 16 Ensure that when dewatering, site water is appropriately managed to prevent sediment laden water from entering downstream watercourses.                             | PGC                    |
| 17 Use non-acid rock drainage and metal leaching (non-ARD/ML) riprap.  |                        |

Subject: Highway 91/17 - Site G - Wetland Infilling, Burns Bog, Delta - Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

| Conditions   | Responsibility           |
|--|--------------------------|
| 1 The removal of or disturbance to riparian vegetation should be kept to a minimum during the works.   | PGC                      |
| 2 Whenever possible, works are to be conducted when the watercourse is dry.  | PGC                      |
| 3 If works in the roadside ditches are not conducted in the dry, works are to be conducted in isolation of flow. When diverting watercourse flows, maintain an         |                          |
| appropriate depth and flow (i.e., base flow) for the protection of fish and fish habitat downstream of the isolated work area.   | PGC                      |
| 4 Complete the works as quickly as possible once they are started.   | PGC                      |
| 5 Undertake works during dry weather and low water conditions.   | PGC                      |
| 6 Equipment is to be situated in the dry watercourse channel within the footprint of the works or operated from the top of the bank.                                   | PGC                      |
| 7 Ensure that material such as rock, riprap, or other materials placed on the banks or within the active channel or floodplain of the watercourse is inert and free of |                          |
| silt, overburden, debris, or other substances deleterious to aquatic life.   | PGC                      |
| 8 Minimize the introduction of sediments (e.g., silts, clays and sand) into the watercourse or downstream reaches of the watercourse.                                  | PGC                      |
| 9 Develop and implement an erosion and sediment control plan to avoid and minimize the introduction of sediment into or induced sedimentation in the                   | Brybil -develop          |
| watercourse.   | PGC - lead and implement |
| 10   |                          |
| Do not deposit any substances deleterious to fish or fish habitat directly or indirectly into the watercourse or downstream reaches of the watercourse.                | PGC                      |
| 11 Develop and implement a response plan to avoid a spill of deleterious substances into the watercourse.  | PGC, weekly audit MESL   |
| 12 Works should be monitored full-time during start-up and any instream works or sensitive activity. The environmental monitor must be an appropriately qualified      |                          |
| professional and ensure mitigation measures are implemented for the protection of fish and fish habitat.   | PGC, weekly audit MESL   |
| 13 If fish are observed at the site, or upstream or downstream of the site, work should be halted. Works may only resume under the direction of an appropriately       |                          |
| qualified professional, as per Item 12 above, with the following measures in place:  | PGC                      |
| a Works are to be conducted in isolation of flow.  | PGC                      |
| An appropriately qualified professional is to conduct a fish salvage of the isolated work area. Choose low impact salvage methods such as minnow trapping and          |                          |
| seining before opting for higher impact electrofishing. Use appropriate fish handling techniques and relocate salvaged fish to a nearby undisturbed location. In the   |                          |
| b event that isolation is breached, stop work and repeat fish salvage efforts.   | Brybil                   |
| c Dewater the isolated area gradually to reduce the potential for stranding fish.  | PGC                      |
| Ensure bypass pump intakes and outlets are located within the confines of the fish-isolated work area (i.e., to prevent fish impingement on pump intakes, and to       |                          |
| prevent dewatering areas where fish may be present). Ensure pumps are screened to prevent entrainment or impingement of fish in accordance with DFO's interim          |                          |
| code of practice for End-of-pipe Fish Protection Screens for Small Water Intakes in Freshwater (https://www.dfo-mpo.gc.ca/pnw-ppe/codes/screen-ecran-                  |                          |
| d eng.html).   | PGC, Brybil              |
| e Monitor before, during, and after all phases of construction to ensure that fish do not become trapped/isolated, stranded, or entrained within the project area.     | PGC                      |
| f Ensure that when dewatering, site water is appropriately managed to prevent sediment laden water from entering downstream watercourses.                              | PGC                      |
| g Ensure that flows are maintained to downstream fish habitat in East Ditch, West Ditch, Silda Ditch, and 96 Street Ditch.   | PGC                      |
| 14 Use non-acid rock drainage and metal leaching (non-ARD/ML) riprap.  | PGC                      |

Subject: Highway 91/17 - Sites A, B, D & E (Sections 1 and 2) -Watercourse Infilling and Highway Upgrades, Fraser River, Delta - Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

| Conditions   | Responsibility |
|--|----------------|
| 1 The removal of or disturbance to riparian vegetation should be kept to a minimum during the works.   | Responsibility |
| 2 Whenever possible, works are to be conducted when the watercourse is dry.  |                |
| 3 if works are not conducted in the dry, works are to be conducted in isolation of flow and the following measures are to be implemented:  |                |
| 3 II works are not considered in the dry, works are to be considered in solution of now and the following measures are to be implemented.  |                |
| An appropriately qualified professional is to conduct a fish salvage of the isolated work area. Choose low impact salvage methods such as minnow trapping and  |                |
| a seining before opting for higher impact electrofishing. In the event that isolation is breached, stop work and repeat fish salvage efforts.  |                |
| b Dewater the isolated area gradually to reduce the potential for stranding fish.  |                |
| b bewater the isolated area gradually to reduce the potential for straining lish.  |                |
| Ensure bypass pump intakes and outlets are located within the confines of the fish-isolated work area (i.e., to prevent fish impingement on pump intakes, and to   |                |
| prevent dewatering areas where fish may be present). Ensure pumps are screened to prevent entrainment or impingement of fish in accordance with DFO's interim  |                |
| c code of practice for End-of-pipe Fish Protection Screens for Small Water Intakes in Freshwater (https://www.dfo-mpo.gc.ca/pnw-ppe/codes/screen-ecraneng.html).   |                |
| When diverting watercourse flows, maintain an appropriate depth and flow (i.e., base flow) for the protection of fish and fish habitat downstream of the isolated  |                |
| which under this water course hows, maintain an appropriate deput and now (i.e., uase now) for the protection of itsin and itsin habitat downstream of the isolated disorder work area.  |                |
| 4 Complete the works as quickly as possible once they are started.   |                |
| Complete the works during dry weather and low water conditions.  Undertake works during dry weather and low water conditions.  |                |
| 6 Equipment is to be situated in the dry watercourse channel within the footprint of the works or operated from the top of the bank.   |                |
| 7 For works in fish-bearing waters, fish passage is to be maintained through any culverts in fish-bearing waters upon completion of works.   |                |
| 8 Ensure that material such as rock, riprap, or other materials placed on the banks or within the active channel or floodplain of the watercourse is inert and free of   |                |
| silt, overburden, debris, or other substances deleterious to aquatic life.   |                |
| 9 Minimize the introduction of sediments (e.g., silts, clays and sand) into the watercourse or downstream reaches of the watercourse.  |                |
| 10 Develop and implement an erosion and sediment control plan to avoid and minimize the introduction of sediment into or induced sedimentation in the  |                |
| watercourse.   |                |
| watercourse.   |                |
|  |                |
| Do not deposit any substances deleterious to fish or fish habitat directly or indirectly into the watercourse or downstream reaches of the watercourse.  |                |
| 12 Develop and implement a response plan to avoid a spill of deleterious substances into the watercourse.  13 Works should be monitored full-time during start-up and any instream works or sensitive activity. The environmental monitor must be an appropriately qualified |                |
|  |                |
| professional and ensure mitigation measures are implemented for the protection of fish and fish habitat.  14   |                |
|  |                |
| While the Program recommends works be conducted during the least risk to fish instream work window of August 1 – September 15 where possible. It is recognized   |                |
| that there are proposed instream works outside this window. Therefore, if works are proposed for outside the least risk window, work should especially be  |                |
| conducted under the direction of an appropriately qualified professional and additional measure should be implemented, as per item 13 above.   |                |
| 15   |                |
| Monitor before, during, and after all phases of construction to ensure that fish do not become trapped/isolated, stranded, or entrained within the project area  |                |
| 16 If fish are observed at the site, or upstream or downstream of the site, work should be halted. Works may only resume following implementation of appropriate   |                |
| mitigation measures and under the direction of an appropriately qualified professional.  |                |
| 17 Ensure that when dewatering, site water is appropriately managed to prevent sediment laden water from entering downstream watercourses.   |                |
| 18 Use non-acid rock drainage and metal leaching (non-ARD/ML) riprap.  |                |
|  |                |

Highway 91/17 Upgrades - Site I, Nordel Ditches & West Ditch - Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

| Conditions   | Responsibility         |
|--|------------------------|
| 1 The removal of or disturbance to riparian vegetation should be kept to a minimum during the works.   | PGC                    |
| 2 Whenever possible, works are to be conducted when the watercourse is dry.  | PGC                    |
| 3 If works are not conducted in the dry, works are to be conducted in isolation of flow and the following measures are to be implemented   | PGC/Brybil             |
| a An appropriately qualified professional is to conduct a fish salvage of the isolated work area. Choose low impact salvage methods such as minnow trapping and seining before opting for higher impact              |                        |
| electrofishing. In the event that isolation is breached, stop work and repeat fish salvage efforts.  | Brybil                 |
| b Dewater the isolated area gradually to reduce the potential for stranding fish.  | PGC                    |
| c Ensure bypass pump intakes and outlets are located within the confines of the fish-isolated work area (i.e., to prevent fish impingement on pump intakes, and to prevent dewatering areas where fish may be        |                        |
| present). Ensure pumps are screened to prevent entrainment or impingement of fish in accordance with DFO's interim code of practice for End-of-pipe Fish Protection Screens for Small Water Intakes in               |                        |
| Freshwater (https://www.dfompo.gc.ca/pnw-ppe/codes/screen-ecran-eng.html).   | PGC                    |
| d When diverting flows, maintain an appropriate depth and flow (i.e., base flow) for the protection of fish and fish habitat, both upstream and downstream of the isolated work area.                                | PGC                    |
| 4 Complete the works as quickly as possible once they are started.   | PGC                    |
| 5 Undertake works during dry weather and low water conditions.   | PGC                    |
| 6 Equipment is to be situated in the dry stream channel within the footprint of the works or operated from the top of the bank.  | PGC                    |
| 7 Ensure that material such as rock, riprap, or other materials placed on the banks or within the active channel or floodplain of the watercourse is inert and free of silt, overburden, debris, or other substances |                        |
| deleterious to aquatic life.   | PGC                    |
| 8 Minimize the introduction of sediments (e.g., silts, clays and sand) into the watercourse or downstream reaches of the watercourse.  | PGC                    |
| 9 Develop and implement an erosion and sediment control plan to avoid and minimize the introduction of sediment into or induced sedimentation in the watercourse.  | PGC                    |
| 10 Do not deposit any substances deleterious to fish or fish habitat directly or indirectly into the watercourse or downstream reaches of the watercourse.   | PGC                    |
| 11 Develop and implement a response plan to avoid a spill of deleterious substances into the watercourse.  | PGC                    |
| 12 Works should be monitored full-time during start-up and any instream works or sensitive activity. The environmental monitor must be an appropriately qualified professional and ensure mitigation measures        |                        |
| are implemented for the protection of fish and fish habitat.   | PGC, weekly audit MESL |
| 13 Monitor before, during, and after all phases of construction to ensure that fish do not become trapped/isolated, stranded, or entrained within the project area.  | PGC                    |
| 14 Ensure that when dewatering, site water is appropriately managed to prevent sediment laden water from entering downstream watercourses.   | PGC                    |
| 15 Use non-acid rock drainage and metal leaching (non-ARD/ML) rip rap.   | PGC                    |

Highway 91/17 Upgrades - Site H, Unnamed Tributary Ditches to Silda Ditch - Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

| Conditions   | Responsibility         |
|--|------------------------|
| 1 The removal of or disturbance to riparian vegetation should be kept to a minimum during the works.   | PGC                    |
| 2 Whenever possible, works are to be conducted when the watercourse is dry.  | PGC                    |
| 3 If works are not conducted in the dry, works are to be conducted in isolation of flow and the following measures are to be implemented:  | PGC/Brybil             |
| a An appropriately qualified professional is to conduct a fish salvage of the isolated work area. Choose low impact salvage methods such as minnow trapping and seining before opting for higher impact              |                        |
| electrofishing. In the event that isolation is breached, stop work and repeat fish salvage efforts.  | Brybil                 |
| b Dewater the isolated area gradually to reduce the potential for stranding fish.  | PGC                    |
| c Ensure bypass pump intakes and outlets are located within the confines of the fish-isolated work area (i.e., to prevent fish impingement on pump intakes, and to prevent dewatering areas where fish may be        |                        |
| present). Ensure pumps are screened to prevent entrainment or impingement of fish in accordance with DFO's interim code of practice for End-of-pipe Fish Protection Screens for Small Water Intakes in               |                        |
| Freshwater (https://www.dfompo.gc.ca/pnw-ppe/codes/screen-ecran-eng.html).   | PGC                    |
| d When diverting flows, maintain an appropriate depth and flow (i.e., base flow) for the protection of fish and fish habitat, both upstream and downstream of the isolated work area.                                | PGC                    |
| 4 Complete the works as quickly as possible once they are started.   | PGC                    |
| 5 Undertake works during dry weather and low water conditions.   | PGC                    |
| 6 Equipment is to be situated in the dry stream channel within the footprint of the works or operated from the top of the bank.  | PGC                    |
| 7 Ensure that material such as rock, riprap, or other materials placed on the banks or within the active channel or floodplain of the watercourse is inert and free of silt, overburden, debris, or other substances |                        |
| deleterious to aquatic life.   | PGC                    |
| 8 Minimize the introduction of sediments (e.g., silts, clays and sand) into the watercourse or downstream reaches of the watercourse.  | PGC                    |
| 9 Develop and implement an erosion and sediment control plan to avoid and minimize the introduction of sediment into or induced sedimentation in the watercourse.  | PGC                    |
| 10 Do not deposit any substances deleterious to fish or fish habitat directly or indirectly into the watercourse or downstream reaches of the watercourse.   | PGC                    |
| 11 Develop and implement a response plan to avoid a spill of deleterious substances into the watercourse.  | PGC                    |
| 12 Works should be monitored full-time during start-up and any instream works or sensitive activity. The environmental monitor must be an appropriately qualified professional and ensure mitigation measures        |                        |
| are implemented for the protection of fish and fish habitat.   | PGC, weekly audit MESL |
| 13 Monitor before, during, and after all phases of construction to ensure that fish do not become trapped/isolated, stranded, or entrained within the project area.  | PGC                    |
| 14 Ensure that when dewatering, site water is appropriately managed to prevent sediment laden water from entering downstream watercourses.   | PGC                    |
| 15 Use non-acid rock drainage and metal leaching (non-ARD/ML) rip rap.   | PGC                    |

#### WSA Notification 100310655

#### Notice to Habitat Officer / Changes in and about a Stream under Part 3 Water Sustainability Regulation

| Conditions  | Responsibility |
|---|----------------|
| 1 Any work associated with the proposed changes in and about a stream must not cause stream channel instability or increase the risk of sedimentation into the stream.                            | PGC            |
| 2 During work onsite, erosion and sediment control materials must be available on site at all times and must be installed if sedimentation is likely to occur into the stream. A contingency plan |                |
| must be developed outlining the measures to be taken by workers when carrying out any work to control erosion and sediment.   | PGC            |
| 3 Soil disturbance must not occur in heavy rain conditions and any soil removed must be placed in a location that ensures that sedimentor debris does not enter the stream.                       | PGC            |
| 4 Within a work area, water that contains sediment must be pumped to a vegetated area away from the stream where it can seep into the ground, or to a settling pond that is sufficiently far      |                |
| from the stream to allow sediment to settle out before the water returns to the stream.   | PGC            |
| 5 The disturbance of stream bank vegetation must not occur or be minimized as much as possible.   | PGC            |
| 6 Any areas that are disturbed during the work (such as exposed soil) must be promptly restored at a minimum to the pre-disturbance condition.  Note: Guidance                                    | s              |
| provided in the Enhancement Section of the Best Management Practices Instream Works   | PGC            |
| 7 If possible, work must be conducted on, and equipment located and operated from, dry land (no water present) and the worksite must be isolated from flowing water.                              | PGC            |
| 8   |                |
| Any equipment used in conducting work must be in good mechanical condition and, when operating in close proximity to the wetted perimeter of a stream, the operator must prevent entry            |                |
| of any substance, sediment, debris or material (e.g., hydrocarbons, silt) into the stream so as to prevent harm to fish, wildlife or the aquatic ecosystem of a stream. Note that Section 46 of   |                |
| the Water Sustainability Act prohibits the introduction of foreign matter into a stream. Failure to comply may result in a remediation order and it is also an offence to do so.                  | PGC            |
| 9 The original rate of water flow in the stream (existing prior to commencing work) must be maintained upstream and downstream of the worksite during all phases of instream activity             |                |
| associated with the work.   | PGC            |
| 10  | 1.00           |
| When work requires de-watering or isolation of the worksite in the stream, a permit for the salvage of fish and wildlife must be obtained prior to commencing work. All required salvage          |                |
| permits must be obtained from Front Counter BC: http://www.frontcounterbc.gov.bc.ca/. Any salvage must be carried out by a qualified environmental professional (such as an R.P.Bio.).            | Brybil         |
| 11 Following de-watering or isolation of the worksite, stream flow must be returned gradually to the de-watered or isolated area within the stream and not in a single sudden rush so as to avoi  | + '            |
| erosion of the stream channel and sediment delivery to the stream.  | PGC            |
| 12 The stream channel width must not change as a result of the work.  | PGC            |
| 13  | roc            |
| Any materials, such as riprap or gabion rock, placed within the stream must be clean and not contain substances that could be harmful to fish, wildlife or the aquatic ecosystem of the stream    | n lecc         |
| 14  | - FGC          |
| Any areas disturbed as part of the work must be restored as close as possible to their pre-disturbance condition. Any soil exposed at the worksite must be promptly re-vegetated.                 | PGC            |
| 15  | ruc            |
|   |                |
| Subject to section 16 and 17 below, the work must be completed during the timing window for the stream in respect of which the changes are proposed. The applicable timing window (by             |                |
| region and/or by stream) are specified in the following links (see below) and are designed to protect fish, wildlife or the aquatic ecosystem of a stream. To determine the timing window,        |                |
| please select the relevant region from the map: http://www.frontcounterbc ca/pdf/RegionMap.pdfand then determine the applicable timing window:*Regional Timing                                    |                |
| Windows:http://www2 gov.bc.ca/gov/content/environment/air-land-water/water-licensing-rights/working-around-water/regional-terms-conditions-timing-windows< <for td="" that<=""><td></td></for>    |                |
| region and for the stream where the proposed changes will be made. For projects proposed to take place outside these timing windows, please see section 16 and 17 below                           | PGC            |
|   | 200            |
| In addition to the timing windows specified in section 15 above, work may be carried out during the following times provided these requirements are met when the changes are carried out:         | PGC            |
| i. If the stream channel is naturally dry (no flow) or frozen to the bottom at the worksite and the instream work / activity associated with the proposed change will not adversely impact fish,  |                |
| wildlife or the aquatic ecosystem of the stream (e.g. not result in any substance, sediment, debris or other material entering or leaching into the stream that would adversely affect fish,      |                |
| wildlife or the aquatic ecosystem),   | PGC            |
| ii. In the construction of a winter crossing, the stream channel is frozen to the bottom at the worksite and related work does not adversely impact the stream channel (including stream bed an   | 1              |
| banks), or fish, wildlife or the aquatic ecosystem of the stream, or impede their passage (in both directions) in the stream.   | PGC            |
| 17  |                |
| If your work is proposed outside of the timing window (as described in section 15 above), you must retain a qualified environmental professional (such as an R.P. Bio.). The professional will    |                |
| be responsible for providing a written technical rational that assesses and addresses the risks of the proposed changes in and about a stream, including proposing site specific mitigation (e.g. | ·              |
| an Erosion Control Plan that identifies contingency measures and emergency procedures related to the proposal) and onsite monitoring of their implementation. This document must be               |                |
| submitted to the Habitat Officer via Front Counter B.C. with reference to your file number (shown on top of this document).   | PGC            |

# WSA Approval 2007795 Change Approval -Changes In and About 96th Street Ditch and Silda Ditch (Sites B, D, and E)

| Conditions   | Responsibility   |
|--|--|
| If land clearing is to occur within the breeding bird period (March 30 to August 16 in Zone A1, which includes the Lower Mainland and Fraser Valley), a nest survey must be conducted and a 10m no-clearing buffing placed around the nest until the nest is determined to be no longer active.  |  |
|  | PGC, Brybil  |
| d The work(s) authorized in this Approval shall be completed on or before Dec. 31, 2023.   | PGC  |
|  |  |
| All works associated with the Environmental Enhancement Management Plan, as outlined in clause (m) and required in clause (oo) below, shall be completed on or before December 31, 2033 (based on 10 years f Work in the stream and stream channel shall occur only during the periods outlined below, so that the fisheries interests are protected                                   | PGC, Brybil - development of plan PGC - implementation |
| 1 Instream work during the reduced risk instream work window shall occur during the period of August 1 to September 15; or   | Brybil/MESL - provide input                            |
| 2 Based on project justification and risk, instream work outside of the reduced risk instream work window (as stated above), subject to the following  |  |
| i An appropriately qualified professional shall provide advice to the holder of this Approval on the timing of the work based on the nature of the works, environmental values (including fish, amphibians, wildlife,  |  |
| any listed species present), water quality, channel stability, weather conditions, water levels, and any other relevant factors); and  |  |
| ii The Qualified Professional shall also provide additional construction mitigation advice to the holder of this Approval, and daily or full-time supervision of all work in or near the stream; and   |  |
| ii Work must be timed and planned appropriately, the stream must be completely dry or have marginal flows for the duration of the construction activities; and y The advice of the Qualified Professional on construction timing (as per (i) above) and mitigation measures (as per (ii) above), as well as the timing of work and the presence of the Qualified Professional, must be | II.  |
| Vine abunce of the goalmest Processional on Constitution unting (as per 1) above) and integration measures (as per 1) above), as well as the timing of work and the presence of the Qualities Processional, must be about the per 1) above). This documentation must be submitted as part of the post construction reporting for this project.   |  |
| E All machinery and equipment operating within the stream shall be clean, free of external grease, oil or fluid leaks and shall use biodegradable grease, oil and fluids.  | PGC  |
|  |  |
| Fuelling and servicing of vehicles and equipment must occur a minimum of 30 metres away from all streams, lakes and waterbodies. Keep a spill containment kit on site and train on site staff in its use.  |  |
| Immediately report any spill of a substance that is toxic, polluting, or deleterious to aquatic life of reportable quantities to the Dangerous Goods Incident Report 24-hour phone line at 1-800-663-3456.   | PGC  |
| The works shall not result in depressions that have the ability to trap fish and other aquatic life. The holder of this approval shall take reasonable care to avoid damaging any land, works, trees, or other property and shall make full compensation to the owners for any damage or loss resulting from the   | PGC  |
| The notice to this approval small that reasonable care to avoid damaging any land, works, drees, of other property and shall make full compensation to the owners for any damage or loss resulting from the exercise of the rights granted with this approval.   | PGC  |
| Riparian areas which are disturbed by the works shall be restored to their original condition and protected from erosion.  | PGC  |
| All material utilized during construction shall be contoured and placed in a stable area such that it is not able to mobilize, and it shall be managed to avoid entry into any stream or watercourse.  | PGC  |
| All works shall be completed in accordance with  | PGC  |
| ENG DWG Site E Culvert Plan and Profile, 2020-01-27 ENG DWG Site B Culvert Plan and Profile, 2020-01-27  | PGC<br>PGC   |
| ENG DWG Site D River Road Interchange Silda Wetland Encroachment, 2020-02-19   | PGC  |
| Report Section 11 Approval Application Highway 91/17 Upgrades, Section 1 And 2, By Brybil Projects Ltd., February 21, 2020   | PGC  |
| Stormwater Management Plan, McElhanney May 6, 2020   | PGC  |
| CEMP, 3rd Revision, May, 2020  | PGC  |
| 7 Surface Water Quality & Sediment Control Plan (of CEMP)  | PGC  |
| Brisheries Habitat Mitigation and Compensation Plan (of CEMP)  | PGC<br>PGC   |
| 9 Environmental Enhancement Management Plan (EEMP), Brybil Projects Ltd., June 2020<br>0 Memo Additional FLNRO Information, Dave Hayward, Brybil, June 8, 2020   | PGC  |
| The holder of this approval must adhere to the standards of professional accountability, as signed off by Qualified Professional(s), Dave Hayward and Rob Hoogendorn on June 2, 2020, regarding the Key Aquati   |  |
| Habitat Questions for Qualified Professionals specific to Bank Erosion Protection and Stream Diversion/In-filling, on behalf of the holder of this approval. It is the responsibility of the holder of this Approval to  |  |
| retain an appropriately qualified professional(s) for the relevant duration of works in order to uphold this signed professional assessment.   | PGC  |
| o All work shall be carried out in accordance with the Provincial "Standards and Best Practices for In-stream Works" (2004). The Provincial guidance document can be found at the following link   |  |
| http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf.  | PGC  |
| The holder of this Approval must hire an appropriately Qualified Professional to conduct Environmental Monitoring on all in-stream works authorized under this Approval. The Qualified Professional must be an applied scientist or technologist, acting alone or together with another  |  |
| appined Scientists for technologist, acting alone of together with another July 23, 2020 Job Number 1 14324 File Number 200779555 of 10 Ministry of Forests, Lands, Natural Resource Operations, and Rural Development Water Management Mailing Address 200-10428 153 Street,  |  |
| Surrey BC V3R 1E1 Location 200-10428 153 Street, Surrey BC V3R 1E1 Phone (604) 586-4400 Fax (604) 586-4444 Web https://www2.gov.bc.ca/gov/content/environment/air-land-water/waterqualified  |  |
| professional. He or she must be registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, acting under that association's code of ethics and   |  |
| subject to disciplinary action by that association. The Qualified Professional is responsible for observing the methods of construction and preparing information and reports on the compliance of the construction  |  |
| activities. The Qualified Professional shall   | PGC  |
| 1 Ensure all best management practices and mitigation measures are in place to avoid and minimize environmental impact on the land and on fish and fish habitat of the stream.   | PGC  |
| <ol> <li>Where applicable, assist in the isolation of the stream prior to the commencement of works.</li> <li>Implement and ensure erosion and sediment control measures are constructed, installed, and maintained appropriately for the full duration of instream works.</li> </ol>  | PGC<br>PGC   |
| 4 Supervise all instream works authorized under this Approval.   | PGC  |
| 5 When the works involve temporary diversions to isolate the work site,  | PGC  |
| i Monitor all diversion works daily to ensure pumps & flow by passes are inproper working condition;   | PGC  |
| ii Ensure diversion works that include pump intakes be screened for fish and aquatic species in accordance with the "Interim code of practice End-of-pipe fish protection screens for small water intakes in   | 100  |
| freshwater (Fisheries and Oceans Canada, 2020) and   | PGC<br>PGC   |
| ii Ensure fish are prevented from entering the works.  5 When the works involve dewatering or isolation of flow and the stream is known or suspected to contain fish and/or amphibians,  | PGC  |
| i Attend the site prior to conducting any instream works to complete fish and wildlife search and salveges;  | PGC, Brybil  |
| ii Obtain any permits needed prior to undertaking the salvage(s); and  | Brybil   |
| i inspect the extraction area for fish stranding at least once after water levels have declined.   | PGC,Brybil   |
| 7  |  |
| In the event of an environmental incident or non-compliance with any of the terms or conditions of this Approval, notify the Water Manager (SouthCoastWSAReporting@gov.bc.ca), within 24 hours.  | PGC  |
| 8 Be granted authority to stop the work authorized under this Approval if deemed necessary toaddress risks to the environment. The Qualified Professional or their designate (specified in writing) must be on site during all phases of construction in and around the stream to ensure this component is upheld.   | PGC, MESL  |
| ouring all phases or construction in and around net stream to ensure this component is upnead.  q Upon commencement of the project, the work shall be pursued to completion as quickly as possible.  | PGC, MESL  |
| r All equipment and machinery used in or near the stream channel   | PGC  |
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| Legend   |
|--|
| Difference between Approval<br>2007783 & 2007795 |
| Difference between Approval<br>2007749 & 2007795 |
| Difference between Approval<br>2007770 & 2007795 |
| Difference between Approval<br>2007755 & 2007795 |

| 2 Must have a spill containment kit readily accessible on-site;  | PGC                                     |
|--|---|
| 3 May not be refuelled within 30 meters of any watercourse; and  | PGC                                     |
| 4 Must use environmentally sensitive hydraulic fluids which are non-toxic to aquatic life and which are readily or inherently bio-degradable.  | PGC                                     |
| c  | 133                                     |
| Any spill of a substance that is toxic, polluting, or deleterious to aquatic life of reportable quantities must be reported to the Dangerous Goods Incident Report 24-hour phone line at 1-800-663-3456.   | PGC                                     |
| t  |   |
| Sediment and Erosion Control measures to prevent the release of silt, sediment or sediment-laden water must be in place before starting works that may result in sediment mobilization. Care shall be exercised  |   |
| during all phases of the work to prevent the release of silt, sediment, sediment, laden water, raw concrete, concrete leachate or any deleterious substances. All control measures must meet or surpass the  |   |
| Provincial "Standards and Best Practices for In-stream Works" (2004) and the "Land Development Guidelines for the Protection of Aquatic Habitat" (Fisheries and Oceans Canada and the British Columbia, 1993).   | PGC                                     |
| u Sediment removal boundaries must be clearly delineated prior to commencement of work. All sediment excavation for removal purposes shall be completed in isolation of the stream flows.  | PGC                                     |
| v Care shall be exercised during sediment screening so that fine size fractions are not introduced into wetted areas or left in dry areas of the stream channel following the completion of work.  | PGC                                     |
| we pischarge and runoff water from the site into any watercourse(s) must comply with the BC Approved Water Quality Guidelines for the Protection of Aquatic Life   | rec                                     |
|  |   |
| (https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water-quality-guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water-quality-guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water-quality-guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water-quality-guidelines/approved-water-quality-guidelines.   |   |
| water/water/waterquality/wqgs-wqos/approved-wqgs/turbitity-or.pdf) and/or the applicable Local Government Bylaw(s).  | PGC                                     |
| Water quality monitoring must be conducted by an appropriately qualified professional or their designated Environmental Monitor on every day in which instream works are being conducted. Measurements must  |   |
| be taken upstream of any works taking place and within the extent of the sedimentation downstream of where instream work is actively occurring. Measurements should be taken immediately prior to works  |   |
| beginning, and then at regular intervals until the works are completed and may require additional frequency during wet weather conditions. Wet weather conditions will be defined asbeing equal to or greater  |   |
| than 25 millimetres of rainfall within a24-hourperiod.   | PGC                                     |
| x All excavated material and debris shall be removed from the site or placed in a stable area above the high-watermark of the stream. Mitigative measures must be applied  |   |
| July 23, 2020 Job Number 114324 File Number 200779570f Ministry of Forests, Lands, Natural Resource Operations, and Rural Development Water Management Mailing Address 200-10428 153 Street, Surrey  |   |
| BC V3R 1E1 Location 200-10428 153 Street, Surrey BC V3R 1E1 Phone (604) 586-4400 Fax (604) 586-4444 Web https://www2.gov.bc.ca/gov/content/environment/air-land-water/waterto protect the  |   |
| BC V3X LEL LOCATION ZUU-10428 133 STEER, SUTTEY BC. V3X LEL PRODE (1904) 380-4440 Fax (1904) 380-4444 WEN RUED //WWW.Egov.Oc.Ca/gov/content/environment/ari-ain-water/vaetro protect me exxavated material and debris from erosion and reintroduction into the watercourse. These measures may include covering the material with erosion blankets, seeding and planting with native vegetation, or as   |   |
| - 「子子子」は「子子」「子子子」「子子子」「子子子」「子子子」「子子子」「子子子  | 200                                     |
| otherwise directed by a Qualified Professional.  | PGC                                     |
| y All material utilized during construction shall be contoured and placed in a stable area such that it is not able to mobilize and managed to avoid entry into any stream or watercourse.   | PGC                                     |
|  |   |
| Measures must be taken to ensure that no harmful material (e.g. fuel and other hydrocarbons, soil, road fill, or sediment) which could adversely impact water quality, fish and other aquatic life, and/or fish  |   |
| habitat, be allowed to enter the wetted perimeter as a result of the project activities. All staff must be trained in handling and applying a spill kit appropriately to any spills/incidents.   | PGC                                     |
| aa Site preparation is to be carried out from the banks of the stream, thus minimizing disturbance to the stream.  | PGC                                     |
| bb The holder of this Approval shall ensure that instream works are designed and installed so as not to restrict fish passage and/or lead to fish stranding.   | PGC                                     |
| cc All temporary works (including a ford, stream crossing and flow bypass) shall be removed on completion of the project, and the stream channel restored to its natural condition.  | PGC                                     |
|  |   |
| dd Vegetation along the banks of the stream shall be disturbed as little as possible. All disturbed areas must be restored using native vegetation that is suitable for the site conditions.   | PGC                                     |
| ee All disturbed areas of the banks of the stream shall be restored to their original condition.   | PGC                                     |
| ff The new channel of the stream must have greater or equal hydraulic capacity than the existing channel.  | MESL Design, PGC implementation         |
| gg The hydraulic capacity of installed culvert(s) must be equivalent to the hydraulic capacity of the stream channel or be capable of passing the 1 in 200 year maximum daily flow without the water level at the  |   |
| culvert(s) inlet exceeding the top of the culvert(s).  | MESL Design, PGC implementation         |
| hh Rock used as riprap shall be clean of any substances deleterious to aquatic life and shall be durable, angular in shape and suitably graded and sized to resist movement by stream flow. Any other engineering  |   |
| material required for the construction of the works shall be clean of any substances deleterious to aquatic life.  | PGC                                     |
| ii All rock used in the works shall be clean and free of sediment producing material, durable, non-acid generating and suitably graded.  | PGC                                     |
| Treated wood products shall not be used in any construction below the high-water mark of the stream channel.   | PGC                                     |
|  | 1.22                                    |
| kk Large woody debris and the stubs of large diameter trees must be left in place or retained on-site where it is safe to do so.   | PGC                                     |
| Il Care shall be exercised during pile driving to minimize potential adverse impacts to fish or wildlife. The following mitigation measures shall be implemented   | PGC                                     |
| 1 Where possible and feasible, piles should be installed using a vibratory hammer.   | PGC                                     |
| <ol> <li>Piles installed using an impact hammer must implement mitigation measures to reduce water pressure sound waves in excess of 30 kilopascals (kPa).</li> </ol>  | PGC                                     |
| 3 Mitigation measures such as bubble curtains, double wall piles, or isolation methods shall be implemented to avoid adverse impacts to fish.  | PGC                                     |
| 4 Where water pressure sound waves may exceed 30 kPa, isolation methods must be implemented to prevent fish and wildlife from entering the work area.  | PGC                                     |
| 5 Monitoring underwater sound wave levels must be conducted continuously and within 10 meters of the pile being driven to ensure levels do not exceed 30 kPa. The construction with timber piles does not require  |   |
| underwater sound monitoring.   |   |
|  | PCC .                                   |
|  | PGC                                     |
| 6 In the event that distressed, injured or dead fish are observed following the initiation of pile driving, work shall halt immediately and the holder of this Approval or appropriate designate must contact the Water  |   |
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| 3 Fish presence, species composition, and if fish stranding is occurring within the newly constructed channel.  | Province   |
|---|--|
| 4 Amphibian species presence by egg mass surveys,   | Province   |
| 5 Recommendations for adaptive management, such as additional channel complexing or modifications if required, to address habitat limitations such as insufficient flows, fish stranding, etc.,                           | Province   |
| 6 Monitoring, maintenance and implementation of the above recommendations if required.  | Province   |
| 7 Water quality monitoring including temperature, pH, Dissolved Oxygen, and turbidity.  | Province   |
| pp To address the permanent in stream and riparian impacts associated with the project, the holder of this Approval must  |  |
| 1 Retain one or more appropriately qualified professionals to develop an offsetting plan that includes  |  |
|   |  |
| The creation of a minimum of 206 mz of instream, 2,705 mz of wetland, and 1,082 mz riparian habitat that is like for like, or like for better habitat, in terms of structure, functionality (e.g., flow regime), and targ | et   |
| species. If the actual instream, wetland, and or riparian impact area is larger than estimated in "Environmental Enhancement Management Plan Hwy 91/17 Upgrade Project, Delta, BC. Submitted to Pacific                   | The state of the s |
| Gateway Constructors prepared by Brybil Projects Ltd. Dated June, 2020" the compensation works must offset the actual area lost using the above stated like for like for like for better guidelines.                      | Brybil/PGC   |
| ii A post-construction monitoring plan of the compensation works over 10 years following the completion of the offsetting measures.   | Province   |
| iii A commitment to prepare and submit annual post-construction monitoring reports at the end of every year of the monitoring program. A final monitoring report must be submitted upon completion of the annual          | al   |
| monitoring program or upon reaching the survivorship and/or functionality requirements if these were not met during the monitoring program.   | Province   |
| 2 Develop the offsetting plan in collaboration with interested First Nations and the Ministry of Forests, Lands, and Natural Resource Operations and Rural Development.   | Brybil/PGC   |
| 3 Submit an amendment to this approval, or a new Change Approval or a Water License, whichever is applicable to the offsetting proposal, to authorize the construction of the offsetting works. This application m        | ast  |
| be submitted to Front Counter BC and the tracking number must be provided to WaterActReferrals.LowerMainland@gov.bc.ca no later than December 31, 2020, unless otherwise specified in writing by the Water                | er   |
| Manager.  | Brybil/PGC   |

#### WSA Approval 2007783

#### Change Approval - Changes In and About East West Perimeter Ditch and Burns Bog (Site F)

| Conditions   | Responsibility |
|--|----------------|
| If land clearing is to occur within the breeding bird period (March 30 to August 16 in Zone A1, which includes the Lower Mainland and Fraser Valley), a nest survey must be conducted and a 10m no-clearing buffer placed around the nest until the nest is determined to be no longer active.   |                |
| The work(s) authorized in this Approval shall be completed on or before Dec. 31, 2023.   |                |
| All works associated with the Environmental Enhancement Management Plan, as outlined in clause (m) and requirements in clause (jj) below, shall be completed on or before December 31, 2033 (based on 10 years).   |                |
| Work in the stream and stream channel shall occur only during the periods outlined below, so that the fisheries interests are protected  |                |
| Instream work during the reduced risk instream work window shall occur during the period of August 1 to September 15; or   |                |
| Based on project justification and risk, instream work outside of the reduced risk instream work window (as stated above), subject to the following  |                |
| An appropriately qualified professional shall provide advice to the holder of this Approval on the timing of the work based on the nature of the works, environmental values (including fish, amphibians, wildlife, any  |                |
| listed species present), water quality, channel stability, weather conditions, water levels, and any other relevant factors); and  |                |
| i The Qualified Professional shall also provide additional construction mitigation advice to the holder of this Approval, and daily or full-time supervision of all work in or near the stream; and  |                |
| Work must be timed and planned appropriately, the stream must be completely dry or have marginal flows for the duration of the construction activities, and  |                |
| The advice of the Qualified Professional on construction timing (as per (i) above) and mitigation measures (as per (ii) above), as well as the timing of work and the presence of the Qualified Professional, must be  |                |
| documented in writing. This documentation must be submitted as part of the post construction reporting for this project.  All machinery and equipment operating within the stream shall be clean, free of external grease, oil or fluid leaks and shall use biodegradable grease, oil and fluids.  |                |
|  |                |
| Fuelling and servicing of vehicles and equipment must occur a minimum of 30 metres away from all streams, lakes and waterbodies. Keep a spill containment kit on site and train onsite staff in its use. Immediately   |                |
| report any spill of a substance that is toxic, polluting, or deleterious to aquatic life of reportable quantities to the Dangerous Goods Incident Report 24-hour phone line at 1-800-663-3456.  The works shall not result in depressions that have the ability to trap fish and other aquatic life.   |                |
| The works shall not result in depressions that have the abonty to rap itsn and other aquaticities.  The holder of this approval shall take reasonable care to avoid damaging any land, works, trees, or other property and shall make full compensation to the owners for any damage or loss resulting from the exercise   |                |
| of the rights granted with this approval.  |                |
| Riparian areas which are disturbed by the works shall be restored to their original condition and protected from erosion.  |                |
| All material utilized during construction shall be contoured and placed in a stable area such that it is not able to mobilize and managed to avoid entry into any stream or watercourse.   |                |
| All works shall be completed in accordance with  |                |
| Reference ENG DWGs Site F Key Plan/Drawing Index 2020-02-14; Plan 2020-02-14; Profiles 2020-02-14; Typical sections 2020-02-14; Culvert Plan and Profiles, 2020-02-14  |                |
| Report Section 11 Approval Application Highway 91/17 Upgrades, Section 3, Site F, By Brybil Projects Ltd., February 28, 2020   |                |
| Stormwater Management Plan, McElhanney May 6, 2020   |                |
| CEMP, 3rd Revision, May 2020   |                |
| Surface Water Quality & Sediment Control Plan (of CEMP)  |                |
| 5 Fisheries Habitat Mitigation and Compensation Plan (of CEMP) 7 Environmental Enhancement Management Plan (EEMP), Brybil Projects Ltd., June 2020   |                |
| Environmental Entianteement Management Fran (EEMP), propie Projects Ltd., June 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, June 8, 2020 Memo Additional FLNRO Information, Dave Hayward, Brybill, Memo Additional FLNRO Information, Dave Hayward, Brybill, Memo Additional FLNRO Information, Memo Ad |                |
| The holder of this approval must adhere to the standards of professional accountability, as signed off by Qualified Professional(s), Dave Hayward and Rob Hoogendorn on June 2, 2020, regarding the Key Aquatic  |                |
| Habitat Questions for Qualified Professionals specific to Bank Erosion Protection and Stram Diversion/Hilling, on behalf of this approval. It is the responsibility of the holder of this approval   |                |
| retain an appropriately qualified professional(s) for the relevant duration of works in order to uphold this signed professional assessment.   |                |
| All work shall be carried out in accordance with the Provincial "Standards and Best Practices for In-stream Works" (2004). The Provincial guidance document can be found at the following link   |                |
| http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf.  |                |
| The holder of this Approval must hire an appropriately Qualified Professional to conduct Environmental Monitoring on all in-stream works authorized under this Approval. The Qualified Professional must be an   |                |
| applied scientist or technologist, acting alone or together with another qualified professional. He or she must be registered and in good standing in British Columbia with an appropriate professional organization   |                |
| constituted under an Act, acting under that association's code of ethics and subject to disciplinary action by that association. The Qualified Professional is responsible for observing the methods of construction and   |                |
| preparing information and reports on the compliance of the construction activities. The Qualified Professional shall   |                |
| Ensure all best management practices and mitigation measures are in place to avoid and minimize environmental impact on the land and on fish and fish habitat of the stream.   |                |
| Where applicable, assist in the isolation of the stream prior to the commencement of works.  |                |
| Implement and ensure erosion and sediment control measures are constructed, installed, and maintained appropriately for the full duration of instream works.   |                |
| Supervise all instream works authorized under this Approval.  When the works involve temporary diversions to isolate the work site,  |                |
| when the works involve temporary coresions to globale the work of  |                |
| Monitor all diversion works daily to ensure pumps a frow pripasses are in proper working continued an investion work that include pump intakes be screened for fish and aquatic species in accordance with the "Interim code of practice. End-of-pipe fish protection screens for small water intakes in   |                |
| Listed eversion with the first state of the purp makes to science for its and aquain, species in accordance with the intentit code of practice. Library-pipe has protection scients for single makes in freshwater (Fisheries and Oceans Canada, 2020); and  |                |
| Ensure fish are prevented from entering the works.   |                |
| When the works involve dewatering or isolation of flow and the stream is known or suspected to contain fish and/or amphibians,   |                |
| Attend the site prior to conducting any instream works to complete fish and wildlife search and salvages;  |                |
| i Obtain any permits needed prior to undertaking the salvage(s); and   |                |
| Inspect the extraction area for fish stranding at least once after water levels have declined.   |                |
|  |                |
| 7 In the event of an environmental incident or non-compliance with any of the terms or conditions of this Approval, notify the Water Manager (SouthCoastWSAReporting@gov.bc.ca ), within 24 hours.  Be granted authority to stop the work authorized under this Approval if deemed necessary to address risks to the environment. The Qualified Professional or their designate (specified in writing) must be on site   |                |
| be granted authority to stop the work authorized under this approval in deemed necessary to address risks to the environment. The Qualified Professional or their designate (specimed in writing) must be on site of during all phases of construction in and around the stream to ensure this component is upheld.  |                |
| ournig aii pnases or construction in ano around the stream to ensure this component is upned.  Upon commencement of the project, the work shall be pursued to completion as quickly as possible.   |                |
| All equipment and machinery used in or near the stream channel   |                |
| Must be in good operating condition and free of leaks, excess oil and grease;  |                |
| Must have a spill containment kit readily accessible on-site;  |                |
| 3 May not be refuelled within 30 meters of any watercourse; and  |                |
|  |                |

# Legend Difference between Approval 2007795 & 2007793 Difference between Approval 2007798 & 2007783 Difference between Approval 2007790 & 2007783 Difference between Approval 2007755 & 2007783

|   | Sediment and Erosion Control measures to prevent the release of silt, sediment or sediment-laden water must be in place before starting works that may result in sediment mobilization. Care shall be exercised during all phases of the work to prevent the release of silt, sediment, sediment-laden water, raw concrete, concrete leachate or any deleterious substances. All control measures must meet or surpass the Provincial "Standards and Best Practices for In-stream Works" (2004) and the "Land Development Guidelines for the Protection of Aquatic Habitat" (Fisheries and Oceans Canada and the British Columbia, 1993).  |     |
|---|--|-----|
|   | t Sediment removal boundaries must be clearly delineated prior to commencement of work. All sediment excavation for removal purposes shall be completed in isolation of the stream flows.  |     |
|   | Discharge and runoff water from the site into any watercourse(s) must comply with the BC Approved Water Quality Guidelines for the Protection of Aquatic Life  |     |
|   | u (https://www2.gov.bc.ca/gov/content/environment/air-land-water/water-quality/water-quality-guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-  |     |
|   | water/waterquality/wqgs-wqos/approved-wqgs/turbitity-or.pdf) and/or the applicable Local Government Bylaw(s).  |     |
|   | Water quality monitoring must be conducted by an appropriately qualified professional or their designated Environmental Monitor on every day in which instream works are being conducted. Measurements must  |     |
|   | be taken upstream of any works taking place and within the extent of the sedimentation downstream of where instream work is actively occurring. Measurements should be taken immediately prior to works  |     |
|   |  |     |
|   | beginning, and then at regular intervals until the works are completed and may require additional frequency during wet weather conditions. Wet weather conditions will be defined as being equal to or greater   |     |
| _ | than 25 millimetres of rainfall within a 24 hour period.   |     |
|   | All excavated material and debris shall be removed from the site or placed in a stable area above the high water mark of the stream. Mitigative measures must be applied to protect the excavated material and   |     |
|   | v debris from erosion and reintroduction into the watercourse. These measures may include covering the material with erosion blankets, seeding and planting with native vegetation, or as otherwise directed by a  |     |
|   | Qualified Professional.  |     |
|   | w All material utilized during construction shall be contoured and placed in a stable area such that it is not able to mobilize and managed to avoid entry into any stream or watercourse.   |     |
|   | x Site preparation and construction of the works is to be carried out from the banks of the stream, thus minimizing disturbance to the stream.   |     |
|   | y The holder of this Approval shall ensure that instream works are designed and installed so as not to restrict fish passage and/or lead to fish stranding.  |     |
| _ |  |     |
| _ | 2 All temporary works (including a ford, stream crossing and flow bypass) shall be removed on completion of the project, and the stream channel restored to its natural condition.   |     |
|   | aa Vegetation along the banks of the stream shall be disturbed as little as possible. All disturbed areas must be restored using native vegetation that is suitable for the site conditions.   |     |
|   | bb The new channel of the stream must have greater or equal hydraulic capacity than the existing channel.  |     |
|   | The hydraulic capacity of installed culvert(s) must be equivalent to the hydraulic capacity of the stream channel or be capable of passing the 1 in 200 year maximum daily flow without the water level at the   |     |
|   | ct The hydraulic capacity of installed culvert(s) must be equivalent to the hydraulic capacity of the stream channel or be capable of passing the 1 in 200 year maximum daily flow without the water level at the culvert(s) inlet exceeding the top of the culvert(s).  |     |
|   | Dock used as gingan shall be clean of any substances deleterious to anuatic life and shall be durable angular in shape and suitably graded and sized to regist movement by stream flow. Any other engineering  |     |
|   | dd material required for the construction of the works shall be clean of any substances deleterious to aquatic life.   |     |
|   | ee Treated wood products shall not be used in any construction below the high-water merk of the stream channel.  | -   |
| _ |  |     |
| _ | ff Large woody debris and the stubs of large diameter trees must be left in place or retained on-site where it is safe to do so.   |     |
|   | gg Care shall be exercised during pile driving to minimize potential adverse impacts to fish or wildlife. The following mitigation measures shall be implemented   |     |
|   | 1 Where possible and feasible, piles should be installed using a vibratory hammer.   |     |
|   | <ol><li>Piles installed using an impact hammer must implement mitigation measures to reduce water pressure sound waves in excess of 30 kilopascals (kPa).</li></ol>  |     |
|   | 3 Mitigation measures such as bubble curtains, double wall piles, or isolation methods shall be implemented to avoid adverse impacts to fish.  |     |
|   | 4 Where water pressure sound waves may exceed 30 kPa, isolation methods must be implemented to prevent fish and wildlife from entering the work area.  |     |
|   | Monitoring underwater sound wave levels must be conducted continuously and within 10 meters of the pile being driven to ensure levels do not exceed 30 kPa. The construction with timber piles does not require  | i I |
|   | 5 underwater sound monitorine.   |     |
|   | underwater sound monitoring.   |     |
|   | In the event that distressed, injured or dead fish are observed following the initiation of pile driving, work shall half immediately and the holder of this Approval or appropriate designate must contact the Water  |     |
|   | Manager as soon as practicable for additional requirements before work is resumed.   |     |
|   | The holder of this Approval must provide a detailed post-construction report no later than December 1 of the year works were completed. The report must be labelled with this Approval file number and labelled in   |     |
|   | the subject line of the email and submitted to SouthCoastWSAReporting@gov.bc.ca.   |     |
|   | That report shall include a signed statement from an appropriately Qualified Professional summarizing  |     |
|   | 1 The in-stream works undertaken.  |     |
|   | 2 The timing of those works,   |     |
|   |  |     |
|   | 3 The total in-stream area directly affected,  |     |
|   | 4 The volume of gravel or sediment removed (if applicable),  | i I |
|   | 5 The frequency of monitoring including who the QP or EM was;  |     |
|   | 6 The turbidity reporting and accompanying data along with a description of any levels higher than the authorization and what immediate steps were taken (if applicable),  |     |
|   | 7 Representative site photographs;   |     |
|   | 8 Whether or not they observed or were otherwise aware of any non-compliance with the terms and conditions of this Approval; and   |     |
|   | 9 A description of any environmental incidents, non-compliance or other difficulties, and how these were addressed and reported.   |     |
|   | 3 A description of any environmental incluents, non-compliance or other dimicules, and now these were addressed and reported.  |     |
|   |  |     |
|   | The holder of this Approval must retain an appropriately Qualified Professional to design, implement and report on the effectiveness of mitigation, restoration, and/or offsetting measures required in this Approval.   |     |
|   | The effectiveness monitoring term required for this approval is 10 years, ending on Dec. 31, 2033, or 10 years following the completion of construction, whichever is later. Monitoring for riparian, instream, and  |     |
|   | wetland habitats should occur on years 1, 2, 3, 6, 7, and 10.  |     |
|   | Effectiveness Monitoring Reports shall be submitted no later than December 1 of each calendar year for the duration of monitoring. The reports shall be submitted via email to   |     |
|   | SouthCoastWSAReporting@gov.bc.ca, with the approval file number listed in the report and the subject line of the email.  |     |
|   | The reports shall include  |     |
|   | THE REPORTS SHALL INLUDE   |     |
|   |  |     |
|   | Documentation (including photographs) and summary of the survival of planted trees and shrubs. Tree survival rates must be 100%. Shrub and other plant survival rates must exceed 80%. Replanting may be   | i I |
|   | required to achieve this success rate. If the area is susceptible to invasive species, the riparian planting plan should be modified to include a denser plant spacing as well as additional monitoring and maintenance  |     |
|   | to ensure an adequate plant survival rate of 80% can be achieved. It is recommended that trees and shrubs be protected from beavers and voles with metal fencing and vole guards, respectively.  | 1   |
|   | 2 Observation and documentation (including photographs) related to flows and function of the restored or new channel and its features.   |     |
|   | 3 Fish presence, species composition, and if fish stranding is occurring within the newly constructed channel.   |     |
|   | 3 risp presence, perceis composition, and it has sal anong is occurring within the newly constructed channel.  4 Amphibian species presence by egg mass surveys,   |     |
|   |  |     |
|   | 5 Recommendations for adaptive management, such as additional channel complexing or modifications if required, to address habitat limitations such as insufficient flows, fish stranding, etc.,  |     |
|   | 6 Monitoring, maintenance and implementation of the above recommendations if required.   |     |
|   | 7 Water quality monitoring including temperature, pH, Dissolved Oxygen, and turbidity.   |     |
|   | jj To address the permanent instream and riparian impacts associated with the project, the holder of this Approval must  |     |
|   | I Retain one or more appropriately qualified professionals to develop an offsetting plan that includes   |     |
|   | The state of the s |     |
|   | The continue of an injurious of 201 m.) of instead on 1 520 m.) of instead and 53 m.) discripts habitat that is the facility of the facility o |     |
|   | The creation of a minimum of 382 m2 of instream, 21,648 m2 of wetland, and 52 m2 riparian habitat that is like for like, or like for better habitat, in terms of structure, functionality (e.g., flow regime), and target  |     |
|   | species. If the actual instream, wetland, and or riparian impact area is larger than estimated in "Environmental Enhancement Management Plan Hwy 91/17 Upgrade Project, Delta, BC. Submitted to Pacific  |     |
|   | Gateway Constructors prepared by Brybil Projects Ltd. Dated June, 2020" the compensation works must offset the actual area lost using the above stated like for like or like for better guidelines.  |     |
|   | A post-construction monitoring plan of the compensation works over 10 years following the completion of the offsetting measures. Monitoring must take place during the same time of year each year to provide  |     |
|   | ii comparable data. Monitoring of plant survival in riparian and wetland areas and of instream areas should be scheduled during the summer, during a period between high and low water (likely July). Results of   |     |
|   | initial monitoring will determine how much further monitoring may be required until enhancement habitats are self-sustaining.  |     |
|   | The place of a first part of the part of t |     |

| A commitment to prepare and submit annual post-construction monitoring reports at the end of every year of the monitoring program. A final monitoring report must be submitted upon completio        | n of the annual |
|--|-----------------|
| monitoring program or upon reaching the survivorship and/or functionality requirements if these were not met during the monitoring program.  | ap a read of    |
| 2 Develop the offsetting plan in collaboration with interested First Nations, local governments, and the Ministry of Forests, Lands, and Natural Resource Operations and Rural Development.          |                 |
| Submit an amendment to this approval, or a new Change Approval or a Water License, whichever is applicable to the offsetting proposal, to authorize the construction of the offsetting works. This a | pplication must |
| 3 be submitted to Front Counter BC and the tracking number must be provided to WaterActReferrals.LowerMainland@gov.bc.ca no later than December 31, 2020, unless otherwise specified in writin       | by the Water    |
| Manager.   | 2272            |
| kk. Effectiveness monitoring must take place during the same time of year each year to provide comparable data.  |                 |
| Monitoring of plant survival in riparian and wetland areas and of instream areas should be scheduled during the summer, during a period between high and low water (likely July). Targets include    |                 |
| 1 Plant survival is ≥ 80%; Tree survival rate of 100 %.  |                 |
| 2. Native plant cover is two thirds greater than invasive species cover within 5 years;  |                 |
| 3 Visual survey of LWD and boulders to confirm they are in place and intact, and that boulders are effectively creating riffles and pools, creating cover for fish and habitat for amphibians; and   |                 |
| 4 Fish are present in instream areas and there are no new barriers to movement.  |                 |

#### W5A Approval 2007749

#### Change Approval - Changes In and About a Stream (Site G)

| Conditions   | Responsibility |
|--|----------------|
| If land clearing is to occur within the breeding bird period (March 30 to August 16 in Zone A1, which includes the Lower Mainland and Fraser Valley), a nest survey must be conducted and a 10m no-clearing buffer placed around the nest until the nest is determined to be no longer active.   |                |
| The work(s) authorized in this Approval shall be completed on or before Dec. 31, 2023.   |                |
| All works associated with the Environmental Enhancement Management Plan, as outlined in clause (m) and requirements in clause (jj) below, shall be completed on or before December 31, 2033 (based on 10 years).   |                |
| Work in the stream and stream channel shall occur only during the periods outlined below, so that the fisheries interests are protected  |                |
| Instream work during the reduced risk instream work window shall occur during the period of August 1 to September 15; or   |                |
| Based on project justification and risk, instream work outside of the reduced risk instream work window (as stated above), subject to the following  |                |
| An appropriately qualified professional shall provide advice to the holder of this Approval on the timing of the work based on the nature of the works, environmental values (including fish, amphibians, wildlife, any  |                |
| listed species present), water quality, channel stability, weather conditions, water levels, and any other relevant factors); and The Qualified Professional shall also provide additional construction mitigation advice to the holder of this Approval, and daily or full-time supervision of all work in or near the stream; and  |                |
| Work must be timed and planned appropriately, the stream must be completely dry or have marginal flows for the duration of the construction activities; and  |                |
| The advice of the Qualified Professional on construction timing (as per (i) above) and mitigation measures (as per (ii) above), as well as the timing of work and the presence of the Qualified Professional, must be documented in writing. This documentation must be submitted as part of the post construction reporting for this project.   |                |
| Occumented in mying, mis occumentation must be sport in the post construction reporting for this post of the post  |                |
|  |                |
| ruelling and servicing of vehicles and equipment must occur a minimum of 30 metres away from all streams, lakes and waterbodies. Keep a spill containment kit on site and train onsite staff in its use. Immediately   |                |
| report any spill of a substance that is toxic, polluting, or deleterious to aquatic life of reportable quantities to the Dangerous Goods Incident Report 24-hour phone line at 1-800-663-3456.  The works shall not result in depressions that have the ability to trap fish and other aquatic life.   |                |
| The works small not it estimates the depressions that have the above the above to a part and another the above the a |                |
| of the rights granted with this approval.  |                |
| Riparian areas which are disturbed by the works shall be restored to their original condition and protected from erosion.  |                |
| All material utilized during construction shall be contoured and placed in a stable area such that it is not able to mobilize and managed to avoid entry into any stream or watercourse.  1 All works shall be completed in accordance with  |                |
| Au works shall be completed in accordance with  Reference Rho DWGS Site G Key Plan/Drawing Index 2020-02-14; Plan 2020-02-14; Profiles 2020-02-14; Typical sections 2020-02-14; Culvert Plan and Profiles, 2020-02-14  Reference Rho DWGS Site G Key Plan/Drawing Index 2020-02-14; Plan 2020-02-14; Typical sections 2020-02-14; Culvert Plan and Profiles, 2020-02-14  |                |
| 2 Report Section 11 Approval Application Highway 91/17 Upgrades, Section 4. Site 6, 88 Probli Projects Ltd., February 28, 2020   |                |
| 3 Stormwater Management Plan, McElhanney May 6, 2020   |                |
| 4 CEMP, 3rd Revision, May 2020   |                |
| 5 Surface Water Quality & Sediment Control Plan (of CEMP)  |                |
| 6 Fisheries Habitat Mitigation and Compensation Plan (of CEMP)   |                |
| 7 Environmental Enhancement Management Plan (EEMP), Brybil Projects Ltd., June 2020  |                |
| 8 Memo Additional FLNRO Information, Dave Hayward, Brybil, June 8, 2020  |                |
| The holder of this approval must adhere to the standards of professional accountability, as signed off by Qualified Professional(s), Dave Hayward and Rob Hoogendorn on June 2, 2020, regarding the Key Aquatic n Habitat Questions for Qualified Professionals specific to Bank Erosion Protection and Stream Diversion/In-filling, on behalf of the holder of this approval. It is the responsibility of the holder of this Approval to  |                |
| retain an appropriately qualified professional(s) for the relevant duration of works in order to uphold this signed professional assessment.   |                |
| All work shall be carried out in accordance with the Provincial "Standards and Best Practices for In-stream Works" (2004). The Provincial guidance document can be found at the following link  http://www.env.gov.bc.ca/wid/documents/bmp/iswstdsbpsmarch2004.pdf.  |                |
| The holder of this Approval must hire an appropriately Qualified Professional to conduct Environmental Monitoring on all in-stream works authorized under this Approval. The Qualified Professional must be an   |                |
| pplied scientist or technologist, acting alone or together with another qualified professional. He or she must be registered and in good standing in British Columbia with an appropriate professional organization  |                |
| constituted under an Act, acting under that association's code of ethics and subject to disciplinary action by that association. The Qualified Professional is responsible for observing the methods of construction and   |                |
| preparing information and reports on the compliance of the construction activities. The Qualified Professional shall   |                |
| 1 Ensure all best management practices and mitigation measures are in place to avoid and minimize environmental impact on the land and on fish and fish habitat of the stream.   |                |
| 2 Where applicable, assist in the isolation of the stream prior to the commencement of works.  |                |
| 3 Implement and ensure erosion and sediment control measures are constructed, installed, and maintained appropriately for the full duration of instream works.  4 Supervise all instream works authorized under this Approval.   |                |
| * Supervise air instream works autnorized under this Approval.  5 When the works involve temporary diversions to isolate the work site.  |                |
| i Monitor all (diversion works daily to ensure pumps & flow bypasses are in proper working condition;  |                |
| Ensure diversion works that include pump intakes be screened for fish and aquatic species in accordance with the "Interim code of practice End-of-pipe fish protection screens for small water intakes in  |                |
| freshwater" (Fisheries and Oceans Canada, 2020); and   |                |
| iii Ensure fish are prevented from entering the works.   |                |
| 6 When the works involve dewatering or isolation of flow and the stream is known or suspected to contain fish and/or amphibians,   |                |
| i Attend the site prior to conducting any instream works to complete fish and wildlife search and salvages;  |                |
| i Obtain any permits needed prior to undertaking the salvage(s); and   |                |
| i Inspect the extraction area for fish stranding at least once after water levels have declined.   |                |
| 7 In the event of an environmental incident or non-compliance with any of the terms or conditions of this Approval, notify the Water Manager (SouthCoastWSAReporting@gov.bc.ca), within 24 hours.  |                |
| Be granted authority to stop the work authorized under this Approval if deemed necessary to address risks to the environment. The Qualified Professional or their designate (specified in writing) must be on site   |                |
| 8 during all phases of construction in and around the stream to ensure this component is upheld.   |                |
| Upon commencement of the project, the work shall be pursued to completion as quickly as possible.  |                |
| r All equipment and machinery used in or near the stream channel   |                |
| 1 Must be in good operating condition and free of leaks, excess oil and grease; 2 Must have a spill containment kit readily accessible on-site;  |                |
| a music nave a spin contaminant for recessive on site;   |                |
| 3 May not be refuelled within 30 meters of any watercourse; and  |                |

# Legend Difference between Approval 2007795 & 2007749 Difference between Approval 2007783 & 2007749 Difference between Approval 2007770 & 2007749 Difference between Approval 2007775 & 2007749

| Sediment removal boundaries must be clearly delineated prior to commencement of work. All sediment excavation for removal purposes shall be completed in isolation of the stream flows.  |  |
|--|--|
| secument remove nouncaines must be clearly demanded prior to commencement or work. An secument extravation on remova purposes shall not completed in sociation of memory purposes shall not completed in sociation of memory purposes shall not completed in sociation of memory purposes shall not complete the sociation of the sociation of memory purposes shall not complete the sociation of the soc |  |
| Decinal ge and many water from the site and any watercourse) must compy with the bit approve water quanty quouemes on the processor quantum quant, the (https://www2.gov.bc.ca/gov/center/environment/air-land-inters/center-environment/air-land-inters/center-environment/air-land-inters/center-environment/air-land-intersection and the processor of  |  |
| water/water/waterquality/wqgs-wqos/approved-wqgs/turbitity-or.pdf) and/or the applicable Local Government Bylaw(s).  |  |
| Water quality monitoring must be conducted by an appropriately qualified professional or their designated Environmental Monitor on every day in which instream works are being conducted. Measurements must  |  |
| be taken upstream of any works taking place and within the extent of the sedimentation downstream of where instream work is actively occurring. Measurements should be taken immediately prior to works  |  |
| beginning, and then at regular intervals until the works are completed and may require additional frequency during wet weather conditions. Wet weather conditions will be defined as being equal to or greater   |  |
| than 25 millimetres of rainfall within a 24 hour period.  All excavated material and debris shall be removed from the site or placed in a stable area above the high water mark of the stream. Mitigative measures must be applied to protect the excavated material and   |  |
| an exacevate material and user is stand to remove in our time size or places in a source area above use rings water man to rine stream, morganize measures must be applied to protect the exacevate material and of the standard protection o |  |
| Qualified Professional.  |  |
| All material utilized during construction shall be contoured and placed in a stable area such that it is not able to mobilize and managed to avoid entry into any stream or watercourse.   |  |
| Site preparation and construction of the works is to be carried out from the banks of the stream, thus minimizing disturbance to the stream.  The holder of this Approval shall ensure that instream works are designed and installed so as not to restrict fish passage and/or lead to fish stranding.  |  |
| The noise of this Approval shall ensure that instream works are designed and instrained so as not to restrict this passage and/or read to this stranding.  All temporary works (including a ford, stream crossing and flow bypass) shall be removed on completion of the project, and the stream channel restored to its natural condition.  |  |
| Au temporary worst, including a total, steam closing and now opposals rate or emoved on competent of the property of the property of the stream chammer response to competent of the property of the stream shall be disturbed as little as possible. All disturbed areas must be restored using native vegetation and the stream shall be disturbed as little as possible. All disturbed areas must be restored using native vegetation in the switching for the site conditions.   |  |
| The new channel of the stream must have greater or equal hydraulic capacity than the existing channel.   |  |
| The hydraulic capacity of installed culvert(s) must be equivalent to the hydraulic capacity of the stream channel or be capable of passing the 1 in 200 year maximum daily flow without the water level at the   |  |
| culvert(s) inlet exceeding the top of the culvert(s).  |  |
| Rock used as riprap shall be clean of any substances deleterious to aquatic life and shall be durable, angular in shape and suitably graded and sized to resist movement by stream flow. Any other engineering   |  |
| material required for the construction of the works shall be clean of any substances deleterious to aquatic life.  |  |
| Treated wood products shall not be used in any construction below the high-water mark of the stream channel.   |  |
| Large woody debris and the stubs of large diameter trees must be left in place or retained on-site where it is safe to do so.  |  |
| Care shall be exercised during pile driving to minimize potential adverse impacts to fish or wildlife. The following mitigation measures shall be implemented  Where possible and feasible, piles should be installed using a vibratory hammer or helical (screw) method.  |  |
| Where possible and reasible, piles should be installed using a vibratory hammer or helical (screw) method using a vibratory hammer or helical (screw) method using a nimpact hammer must implement the following mitigation measures to reduce water pressure sound waves in excess of 30 kilopascals (kPa)  |  |
| Witigation measures such as bubble curtains, double wall piles, or isolation methods shall be implemented to avoid adverse impacts to fish.  Mitigation measures such as bubble curtains, double wall piles, or isolation methods shall be implemented to avoid adverse impacts to fish.   |  |
| Where water pressure sound waves may exceed 30 kPa, isolation methods must be implemented to prevent fish and wildlife from entering the work area.  |  |
| Monitoring underwater sound wave levels must be conducted continuously and within 10 meters of the pile being driven to ensure levels do not exceed 30 kPa. The construction with timber piles does not require  |  |
| underwater sound monitoring.   |  |
| In the event that distressed, injured or dead fish are observed following the initiation of pile driving, work shall halt immediately and the holder of this Approval or appropriate designate must contact the Water  |  |
| Manager as soon as practicable for additional requirements before work is resumed.   |  |
| The holder of this Approval must provide a detailed post-construction report no later than December 1 of the year works were completed. The report must be labelled with this Approval file number and labelled in   |  |
| the subject line of the email and submitted to SouthCoastWSAReporting@gov.bc.ca.   |  |
| That report shall include a signed statement from an appropriately Qualified Professional summarizing  |  |
| The in-stream works undertaken,  |  |
| The timing of those works,   |  |
| The total in-stream area directly affected, The volume of gravel or sediment removed (if applicable),  |  |
| The volume or grave or seament remove (in applicance), The frequency of monitoring including who the QP or EM was:   |  |
| The turbidity reporting and accompanying data along with a description of any levels higher than the authorization and what immediate steps were taken (if applicable),  Representative site photographs:  |  |
| representative site protographs; Whether or not they observed or were otherwise aware of any non-compliance with the terms and conditions of this Approval; and  |  |
| whether to not deploy described on the Contents and the C |  |
|  |  |
| The holder of this Approval must retain an appropriately Qualified Professional to design, implement and report on the effectiveness of mitigation, restoration, and/or offsetting measures required in this Approval.   |  |
| The effectiveness monitoring term required for this approval is 10 years, ending on Dec. 31, 2033, or 10 years following the completion of construction, whichever is later. Monitoring for riparian, instream, and  |  |
| wetland habitats should occur on years 1, 2, 3, 6, 7, and 10.  Effectiveness Monitoring Reports shall be submitted no later than December 1 of each calendar year for the duration of monitoring. The reports shall be submitted via email to  |  |
| Effectiveness Monitoring Reports shall be submitted no later than December 1 or each Calendar year for the duration or monitoring. The reports shall be submitted via email to SouthCoastWSAReporting@gow.bc.ca, with the approval file number listed in the report and the subject line of the email.   |  |
| South Construction (Construction of Construction of Constructi |  |
| The report of the medical control of the control of |  |
| Documentation (including photographs) and summary of the survival of planted trees and shrubs. Tree survival rates must be 100%. Shrub and other plant survival rates must exceed 80%. Replanting may be   |  |
| required to achieve this success rate. If the area is susceptible to invasive species, the riparian planting plan should be modified to include a denser plant spacing as well as additional monitoring and maintenance  |  |
| to ensure an adequate plant survival rate of 80% can be achieved. It is recommended that trees and shrubs be protected from beavers and voles with metal fencing and vole guards, respectively.  |  |
| Observation and documentation (including photographs) related to flows and function of the restored or new channel and its features.   |  |
| Fish presence, species composition, and if fish stranding is occurring within the newly constructed channel.   |  |
| Amphibian species presence by egg mass surveys,  |  |
| Recommendations for adaptive management, such as additional channel complexing or modifications if required, to address habitat limitations such as insufficient flows, fish stranding, etc.,  |  |
| Monitoring, maintenance and implementation of the above recommendations if required.   |  |
| Water quality monitoring including temperature, pH, Dissolved Oxygen, and turbidity.   |  |
| To address the permanent instream and riparian impacts associated with the project, the holder of this Approval must   |  |
| Retain one or more appropriately Qualified Professionals to develop an offsetting plan that includes   |  |
| The creation of a minimum of, 7,617 m2 of wetland habitat that is like for like, or like for better habitat, in terms of structure, functionality (e.g., flow regime), and target species. If the actual instream, wetland,  |  |
| and/or riparian impact area is larger than estimated in "Environmental Enhancement Management Plan Hwy 91/17 Upgrade Project, Delta, BC. Submitted to Pacific Gateway Constructors prepared by Brybil  |  |
| Projects Ltd. Dated June, 2020" the compensation works must offset the actual area lost using the above stated like for like or like for better guidelines.  |  |
| A post-construction monitoring plan of the compensation works over 10 years following the completion of the offsetting measures.  A commitment to prepare and submit annual post-construction monitoring reports at the end of every year of the monitoring program. A final monitoring report must be submitted upon completion of the annual   |  |
| A commitment to prepare and submit annual post-construction monitoring reports at the end of every year of the monitoring program. A final monitoring report must be submitted upon completion of the annual 1   |  |

|  | 지 않는 그 것이 하다 하고 되었는데 하고 있다. 그리는 그리는 이 아이들에게 되었다. 그리고 있다면 그렇지 하는데 되었다면 하는데 그리고 있다면 하는데 그리고 있다면 그렇다는데 그리고 있다면 그렇다는데 그렇다면 그렇다면 그렇다면 그렇다면 그렇다면 그렇다면 그렇다면 그렇다면 |  |
|--|---|--|
|  | icense, whichever is applicable to the offsetting proposal, to authorize the construction of the offsetting works. This application must                  |  |
| 3 be submitted to Front Counter BC and the tracking number must be provided to   | o WaterActReferrals.LowerMainland@gov.bc.ca no later than December 31, 2020, unless otherwise specified in writing by the Water                           |  |
| Manager.   |   |  |
|  | de angle en de la lace  |  |
| k Effectiveness monitoring must take place during the same time of year each yea   |   |  |
| Monitoring of plant curvival in riparian and wetland areas and of instream areas   | s should be scheduled during the summer, during a period between high and low water (likely July). Targets include  |  |
| monitoring or plant survivar in repartant and wettand areas and or instream areas  |   |  |
|  |   |  |
| 1 Plant survival is ≥ 80%; Tree survival rate of 100 %.  | ris;  |  |
| 1 Plant survival is 2 80%; Tree survival rate of 100 %. 2 Native plant cover is two thirds greater than invasive species cover within 5 year |   |  |
|  | that boulders are effectively   |  |

#### WSA Approval 2007770 Change Approval - Changes In and About a Stream (Site I)

| Conditions   | Responsibility |
|--|----------------|
| land clearing is to occur within the breeding bird period (March 30 to August 16 in Zone A1, which includes the Lower Mainland and Fraser Valley), a nest survey must be conducted and a 10m no-clearing   |                |
| uffer placed around the nest until the nest is determined to be no longer active.  |                |
| it is possible amphibians may be present in the streams, such as Nordel Ditches, an amphibian salvage must be undertaken prior to works taking place.  |                |
| ne works authorized shall be completed on or before December 31, 2023.   |                |
| works accordated with an authorized Environmental Enhancement Management Plan as outlined in clause (n) and required in clause (ff) below shall be completed on or before December 31, 2033 (based on  |                |
| years.   |                |
| ork in the stream and stream channel shall occur only during the periods outlined below, so that the fisheries interests are protected   |                |
| stream work during the reduced risk instream work window shall occur during the period of August 1 to September 30; or   |                |
| used on project justification and risk, instream work outside of the reduced risk instream work window (as stated above), subject to the following   |                |
| appropriately qualified professional shall provide advice to the holder of this Approval on the timing of the work based on the nature of the works, environmental values (including fish, amphibians, wildlife,   |                |
| y listed species present), water quality, channel stability, weather conditions, water levels, and any other relevant factors); and  |                |
| ne Qualified Professional shall also provide additional construction mitigation advice to the holder of this Approval, and daily or full-time supervision of all work in or near the stream; and   |                |
| ork must be timed and planned appropriately, the stream must be completely dry or have marginal flows for the duration of the construction activities; and   |                |
| e advice of the Qualified Professional on construction timing (as per (i) above) and mitigation measures (as per (ii) above), as well as the timing of work and the presence of the Qualified Professional, must be  |                |
| cumented in writing. This documentation must be submitted as part of the post construction reporting for this project.   |                |
| works shall be completed in accordance with  |                |
| ference ENG DWGs Site   Plan 2020-02-27, Profiles 2020-02-27, Typical Sections 2020-02-27, Culvert/ Storm Plans and Profiles 2020-02-27  |                |
| port Section 11 Approval Application Highway 91/17 Upgrades, Section 4, Site I, By Brybil Projects Ltd., March 10, 2020  |                |
| ormwater Management Plan, McElhanney May 6, 2020   |                |
| MP, 3rd Revision, May, 2020  |                |
| rface Water Quality & Sediment Control Plan (of CEMP)  |                |
| heries Habitat Mitigation and Compensation Plan (of CEMP)  |                |
| vironmental Enhancement Management Plan (EEMP), Brybil Projects Ltd., June 2020  |                |
| emo Additional FLNRO Information, Dave Hayward, Brybil, June 8, 2020   |                |
| e holder of this approval must adhere to the standards of professional accountability, as signed off by Qualified Professional(s), Dave Hayward and Rob Hoogendorn on June 2, 2020, regarding the Key Aquatic  |                |
| abitat Questions for Qualified Professionals specific to Bank Erosion Protection and Stream Diversion/In-filling, on behalf of the holder of this approval. It is the responsibility of the holder of this Approval to   |                |
| tain an appropriately qualified professional(s) for the relevant duration of works in order to uphold this signed professional assessment.   |                |
| work shall be carried out in accordance with the Provincial "Standards and Best Practices for In-stream Works" (2004). The Provincial guidance document can be found at the following link   |                |
| tp //www.env.gov.bc.ca/wid/documents/bmp/iswstdsbpsmarch2004.pdf.  |                |
| ne holder of this Approval must hire an appropriately Qualified Professional to conduct Environmental Monitoring on all in-stream works authorized under this Approval. The Qualified Professional must be an  |                |
| pplied scientist or technologist, acting alone or together with another qualified professional. He or she must be registered and in good standing in British Columbia with an appropriate professional organization  |                |
| instituted under an Act, acting under that association's code of ethics and subject to disciplinary action by that association. The Qualified Professional is responsible for observing the methods of construction  |                |
| d preparing information and reports on the compliance of the construction activities. The Qualified Professional shall   |                |
| isure all best management practices and mitigation measures are in place to avoid and minimize environmental impact on the land and on fish and fish habitat of the stream.  |                |
| here applicable, assist in the isolation of the stream prior to the commencement of works.   |                |
| plement and ensure erosion and sediment control measures are constructed, installed, and maintained appropriately for the full duration of instream works.   |                |
| pervise all instream works authorized under this Approval.   |                |
| hen the works involve temporary diversions to isolate the work site,   |                |
| tonitor all diversion works daily to ensure pumps & flow bypasses are in proper working condition;   |                |
| isure diversion works that include pump intakes be screened for fish and aquatic species in accordance with the "Interim code of practice End-of-pipe fish protection screens for small water intakes in   |                |
| sshwater" (Fisheries and Oceans Canada, 2020); and   |                |
| sure fish are prevented from entering the works.   |                |
| hen the works involve dewatering or isolation of flow and the stream is known or suspected to contain fish and/or amphibians,  |                |
| tend the site prior to conducting any instream works to complete fish and wildlife search and salvages;  |                |
| train any permits needed prior to undertaking the salvage(s); and  |                |
| spect the extraction area for fish stranding at least once after water levels have declined.   |                |
| the event of an environmental incident or non-compliance with any of the terms or conditions of this Approval, notify the Water Manager (SouthCoastWSAReporting@gov.bc.ca ), within 24 hours.  |                |
| granted authority to stop the work authorized under this Approval if deemed necessary to address risks to the environment. The Qualified Professional or their designate (specified in writing) must be on site  |                |
| granted authority to stop the work authorized under this Approval in deemed necessary to address risks to the environment. The Qualined Professional or their designate (specified in writing) must be on site initial planes of construction in and around the stream to ensure this component is upheld.   |                |
| In places or usual usual in an adound use seem to ensure this component is upinetu.  equipment and machinery used in or near the stream channel.   |                |
| equipment also maturine y uses in or inear uses use an artistic maturity in the control of the c |                |
| that the way good update in the content of the cont |                |
| us nave a spin commitment at resum accession or race, and an area of the spin or race, and a spin or race, |                |
| stu use environmentally sensitive hydraulic fluids which are non-toxic to aquatic life and which are readily or inherently bio-degradable.   |                |
|  |                |
| elling and servicing of vehicles and equipment must occur a minimum of 30 metres away from all streams, lakes and waterbodies. Keep a spill containment kit on site and train onsite staff in its use.   |                |
| amediately report any spill of a substance that is toxic, polluting, or deleterious to aquatic life of reportable quantities to the Dangerous Goods Incident Report 24-hour phone line at 1-800-663-3456.  |                |
| pon commencement of the project, the work shall be pursued to completion as quickly as possible.   |                |
|  |                |
| diment and Erosion Control measures to prevent the release of silt, sediment or sediment-laden water must be in place before starting works that may result in sediment mobilization. Care shall be exercised  |                |
| ring all phases of the work to prevent the release of silt, sediment, sediment-laden water, raw concrete, concrete leachate or any deleterious substances. All control measures must meet or surpass the   |                |
| ovincial "Standards and Best Practices for In-stream Works" (2004) and the "Land Development Guidelines for the Protection of Aquatic Habitat" (Fisheries and Oceans Canada and the British Columbia, 1993).   |                |
| diment removal boundaries must be clearly delineated prior to commencement of work. All sediment excavation for removal purposes shall be completed in isolation of the stream flows.  |                |
| excavated material and debris shall be removed from the site or placed in a stable area above the high water mark of the stream. Mitigative measures must be applied to protect the excavated material and   |                |
| ebris from erosion and reintroduction into the watercourse. These measures may include covering the material with erosion blankets, seeding and planting with native vegetation, or as otherwise directed by a   |                |
| ualified Professional.   |                |
| scharge and runoff water from the site into any watercourse(s) must comply with the BC Approved Water Quality Guidelines for the Protection of Aquatic Life  |                |
| ttps://www2.gov.bc.ca/gov/content/environment/air-land-water/water-quality-guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water-quality-guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water-quality-guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water-quality-guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water-quality-guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water-quality-guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-water-quality-guidelines/approved-water-guidelines/approved-water-guidelines/approved-water-guidelines/approved-water-guidelines/approved-water-guidelines/approved-water-guidelines/approved-water-guidelines/approved-water-guidelines/approved-water-guidelines/approved-water-guidelines/approved-w |                |

| Legend   |  |
|--|--|
| Difference between Approval<br>2007795 & 2007770 |  |
| Difference between Approval<br>2007783 & 2007770 |  |
| Difference between Approval<br>2007749 & 2007770 |  |
| Difference between Approval<br>2007755 & 2007749 |  |

Water quality monitoring must be conducted by an appropriately qualified professional or their designated Environmental Monitor on every day in which instream works are being conducted. Measurements must be taken upstream of any works taking place and within the extent of the sedimentation downstream of where instream work is actively occurring. Measurements should be taken immediately prior to works beginning, and then at regular intervals until the works are completed and may require additional frequency during wet weather conditions. Wet weather conditions will be defined as being equal to or greater than 25 millimetres of rainfall within a 24 hour period. The holder of this approval shall take reasonable care to avoid damaging any land, works, trees, or other property and shall make full compensation to the owners for any damage or loss resulting from the exercise of the rights granted with this approval. 5 Site preparation and construction of the works is to be carried out from the banks of the stream, thus minimizing disturbance to the stream. t The works shall not result in depressions that have the ability to trap fish and other aquatic life. u The holder of this Approval shall ensure that instream works are designed and installed so as not to restrict fish passage and/or lead to fish stranding. v All temporary works (including a ford, stream crossing and flow bypass) shall be removed on completion of the project, and the stream channel restored to its natural condition. w Riparian areas which are disturbed by the works shall be restored to their original condition and protected from erosion. x The new channel of the stream must have greater or equal hydraulic capacity than the existing channel. The hydraulic capacity of installed culvert(s) must be equivalent to the hydraulic capacity of the stream channel or be capable of passing the 1 in 200 year maximum daily flow without the water level at the y culvert(s) inlet exceeding the top of the culvert(s). Rock used as riprap shall be clean of any substances deleterious to aquatic life and shall be durable, angular in shape and suitably graded and sized to resist movement by stream flow. Any other engineering material required for the construction of the works shall be clean of any substances deleterious to aquatic life. aa All rock used in the works shall be clean and free of sediment producing material, durable, non-acid generating and suitably graded. bb Treated wood products shall not be used in any construction below the high-water mark of the stream channel cc Large woody debris and the stubs of large diameter trees must be left in place or retained on-site where it is safe to do so. dd Care shall be exercised during pile driving to minimize potential adverse impacts to fish or wildlife. The following mitigation measures shall be implemented

1 Where possible and feasible, piles should be installed using a vibratory hammer. 2 Piles installed using an impact hammer must implement mitigation measures to reduce water pressure sound waves in excess of 30 kilopascals (kPa). 3 Mitigation measures such as bubble curtains, double wall piles, or isolation methods shall be implemented to avoid adverse impacts to fish. 4 Where water pressure sound waves may exceed 30 kPa, isolation methods must be implemented to prevent fish and wildlife from entering the work area. Monitoring underwater sound wave levels must be conducted continuously and within 10 meters of the pile being driven to ensure levels do not exceed 30 kPa. The construction with timber piles does not require underwater sound monitoring. 6 In the event that distressed, injured or dead fish are observed following the initiation of pile driving, work shall halt immediately and the holder of this Approval or appropriate designate must contact the Water Manager as soon as practicable for additional requirements before work is resumed. lder of this Approval must provide a detailed post-construction report no later than December 1 of the year works were completed. The report must be labelled with this Approval file number and labelled ee in the subject line of the email and submitted to SouthCoastWSAReporting@gov.bc.ca. That report shall include a signed statement from an appropriately Qualified Professional summarizing 1 The in-stream works undertaken, 2 The timing of those works, 3 The total in-stream area directly affected. 4 The volume of gravel or sediment removed (if applicable), 5 The frequency of monitoring including who the OP or FM was-6 The turbidity reporting and accompanying data along with a description of any levels higher than the authorization and what immediate steps were taken (if applicable). 7 Representative site photographs; 8 Whether or not they observed or were otherwise aware of any non-compliance with the terms and conditions of this Approval; and 9 A description of any environmental incidents, non-compliance or other difficulties, and how these were addressed and reported. The holder of this Approval must retain an appropriately Qualified Professional to design, implement and report on the effectiveness of mitigation, restoration, and/or offsetting measures required in this Approval. The effectiveness monitoring term required for this approval is 10 years following the completion of construction of the offsetting habitat. Monitoring for riparian, instream, and wetland habitat should occur for 5 years, over a 10-year period following the completion of construction of the habitat offsetting unless a Qualified Professional deems the site functional prior to the end of the 5 years of monitoring. Monitoring must occur until the habitat is deemed functional at like for like or like for greater than the original habitat by a Qualified Professional Effectiveness Monitoring Reports shall be submitted no later than December 1 of each calendar year for the duration of monitoring. The reports shall be submitted via email to SouthCoastWSAReporting@gov.bc.ca, with the approval file number listed in the report and the subject line of the email. The reports shall include Documentation (including photographs) and summary of the survival of planted trees and shrubs. Tree survival rates must be 100%. Shrub and other plant survival rates must exceed 80%. Replanting may be required to achieve this success rate. If the area is susceptible to invasive species, the riparian planting plan should be modified to include a denser plant spacing as well as additional monitoring an to ensure an adequate plant survival rate of 80% can be achieved. It is recommended that trees and shrubs be protected from beavers and voles with metal fencing and vole guards, respectively. 2. Observation and documentation (including photographs) related to flows and function of the restored or new channel and its features. 3 Fish presence, species composition, and if fish stranding is occurring within the newly constructed channel. 4 Amphibian species presence by egg mass surveys. 5 Recommendations for adaptive management, such as additional channel complexing or modifications if required, to address habitat limitations such as insufficient flows, fish stranding, etc., 6 Monitoring, maintenance and implementation of the above recommendations if required. 7 Water quality monitoring including temperature, pH, Dissolved Oxygen, and turbidity. gg To address the permanent instream and riparian impacts associated with the project, the holder of this Approval must 1 Retain one or more appropriately qualified professionals to develop an offsetting plan that includes The creation of a minimum of 1,310 m2 of instream, 2,274 m2 of wetland, and 743 m2 riparian habitat that is like for like, or like for better habitat, in terms of structure, functionality (e.g., flow regime), and target species. If the actual instream, wetland, and or riparian impact area is larger than estimated in "Environmental Enhancement Management Plan Hwy 91/17 Upgrade Project, Delta, BC. Submitted to Pacific Gateway Constructors prepared by Brybil Projects Ltd. Dated June, 2020" the compensation works must offset the actual area lost using the above stated like for like or like for better guidelines. ii A post-construction monitoring plan of the compensation works over 10 years following the completion of the offsetting measures. A commitment to prepare and submit annual post-construction monitoring reports at the end of every year of the monitoring program. A final monitoring report must be submitted upon completion of the annual monitoring program or upon reaching the survivorship and/or functionality requirements if these were not met during the monitoring program. 2 Develop the offsetting plan in collaboration with interested First Nations, local governments, and the Ministry of Forests, Lands, and Natural Resource Operations and Rural Development. Submit an amendment to this approval, or a new Change Approval or a Water License, whichever is applicable to the offsetting proposal, to authorize the construction of the offsetting works. This application 3 must be submitted to Front Counter BC and the tracking number must be provided to WaterActReferrals.LowerMainland@gov bc. ca no later than December 31, 2020, unless otherwise specified in writing by the Water Manager. his Effectiveness monitoring must take place during the same time of year each year to provide comparable data. Monitoring of plant survival in riparian and wetland areas and of instream areas should be scheduled during the summer, during a period between high and low water (likely July). Results of initial monitoring will determine how much further monitoring may be required until enhancement habitats are self-sustaining. Targets include 1 Plant survival is ≥ 80%: Tree survival rate of 100 %. 2 Native plant cover is two thirds greater than invasive species cover within 5 years; 3 Visual survey of LWD and boulders to confirm they are in place and intact, and that boulders are effectively creating riffles and pools and creating cover for fish and habitat for amphibians; and 4 Fish are present in instream areas and there are no new barriers to movement

# WSA Approval 2007755 Change Approval - Changes In and About SEPR Offset site FC239, and drainage between SEPR Offset site FC239 and Silda Ditch (Site H)

| Conditions   | Responsibility |
|--|----------------|
| If land clearing is to occur within the breeding bird period (March 30 to August 16 in Zone A1, which includes the Lower Mainland and Fraser Valley), a nest survey must be conducted and a 10m no-clearing buffer   |                |
| placed around the nest until the nest is determined to be no longer active.  |                |
| The work(s) authorized in this Approval shall be completed on or before Dec. 31, 2023.   |                |
| All works associated with an Environmental Enhancement Management Plan, as outlined in clause (m) and requirements in clause (jj) below shall be completed on or before December 31, 2033 (based on 10   |                |
| Na morte associated with an Entimonimental Eminancement management Frait, as obtained in clause (in) and requirements in clause (III) and requirements in clause (III) below shan be completed on or before becening 121, 2023 [based on 10 below shan be completed on or before becening 121, 2023 [based on 10 below shan be completed on or below because 121, 2023 [based on 10 below shan be completed on or below because 121, 2023 [based on 10 below shan be completed on or below because 121, 2023 [based on 10 below shan be completed on or below because 121, 2023 [based on 10 below shan be completed on or below below shan below shanned by the complete of t |                |
| Work in the stream and stream channel shall occur only during the periods outlined below, so that the fisheries interests are protected  |                |
| Instream work during the reduced risk instream work window shall occur during the period of Austral to September 30: or  |                |
| Based on project justification and risk, instream work outside of the reduced risk instream work whole was stated above), subject to the following   |                |
| An appropriately qualified professional shall provide advice to the holder of this Approval on the timing of the work based on the nature of the works, environmental values (including fish, amphibians, wildlife, any  |                |
| listed species present), water quality, channel stability, weather conditions, water levels, and any other relevant factors); and  |                |
| The Qualified Professional shall also provide additional construction mitigation advice to the holder of this Approval, and daily or full-time supervision of all work in or near the stream; and  |                |
| The Qualities Protession and also provide automation integration may be completely from the supervisor of the former of the construction activities; and which were the former of the construction activities; and   |                |
| The advice of the Qualified Professional on construction timing (as per (i) above) and mitigation measures (as per (ii) above), as well as the timing of work and the presence of the Qualified Professional, must be  |                |
| documented in writing. This documentation must be submitted as part of the post construction reporting for this project.   |                |
| All machinery and equipment operating within the stream shall be clean, free of external grease, oil or fluid leaks and shall use biodegradable grease, oil and fluids.  |                |
|  |                |
| Fuelling and servicing of vehicles and equipment must occur a minimum of 30 metres away from all streams, lakes and waterbodies. Keep a spill containment kit on site and train onsite staff in its use. Immediately   |                |
| report any spill of a substance that is toxic, polluting, or deleterious to aquatic life of reportable quantities to the Dangerous Goods Incident Report 24-hour phone line at 1-800-663-3456.   |                |
| The works shall not result in depressions that have the ability to trap fish and other aquatic life.   |                |
| The holder of this approval shall take reasonable care to avoid damagine any land, works, trees, or other property and shall make full compensation to the owners for any damage or loss resulting from the exercise   |                |
| of the rights granted with this approval.  |                |
| Riparian areas which are disturbed by the works shall be restored to their original condition and protected from erosion.  |                |
| All material utilized during construction shall be contoured and placed in a stable area such that it is not able to mobilize and managed to avoid entry into any stream or watercourse.   |                |
| All works shall be completed in accordance with  |                |
| ENG DWG Stite H Key Plan/Drawing Index, by McElhanney, 2020-02-20  |                |
| ENG DWG Site H Plan, by McElhanney, 2020-02-20   |                |
| ENG DWG Site H Profile, by McElhanney, 2020-02-20  |                |
| ENG DWG Site H Typical Sections, by McElhanney, 2020-02-20   |                |
| ENG DWG Site H Culvert Plan and Profiles, by McElhanney, 2020-02-20  |                |
| Report Section 11 Approval Application Highway 91/17 Upgrades, Section 1 And 2, By Brybil Projects Ltd., February 21, 2020   |                |
| Stormwater Management Plan, McElhanney May 6, 2020   |                |
| CEMP, 3rd Revision, May 2020   |                |
| Surface Water Quality & Sediment Control Plan (of CEMP)  |                |
| Fisheries Habitat Mitigation and Compensation Plan (of CEMP)   |                |
| Environmental Enhancement Management Plan (EEMP), Brybil Projects Ltd., June 2020  |                |
| Memo Additional FLNRO Information, Dave Hayward, Brybil, June 8, 2020; and   |                |
| Any other documents related to the file No. 2007755.   |                |
| The holder of this approval must adhere to the standards of professional accountability, as signed off by Qualified Professional(s), Dave Hayward and Rob Hoogendorn on June 2, 2020, regarding the Key Aquatic  |                |
| Habitat Questions for Qualified Professionals specific to Bank Erosion Protection and Stream Diversion/In-filling, on behalf of the holder of this approval. It is the responsibility of the holder of this Approval to  |                |
| retain an appropriately qualified professional(s) for the relevant duration of works in order to uphold this signed professional assessment.   |                |
| All work shall be carried out in accordance with the Provincial "Standards and Best Practices for In-stream Works" (2004). The Provincial guidance document can be found at the following link   |                |
| http://www.env.gov.bc.ca/wid/documents/bmp/iswstdsbpsmarch2004.pdf.  |                |
| The holder of this Approval must hire an appropriately Qualified Professional to conduct Environmental Monitoring on all in-stream works authorized under this Approval. The Qualified Professional must be an   |                |
| applied scientist or technologist, acting alone or together with another qualified professional. He or she must be registered and in good standing in British Columbia with an appropriate professional organization   |                |
| approximately an Act, acting under that association's code of ethics and subject to disciplinary action by that association. The Qualified Professional is responsible for observing the methods of construction and   |                |
| Constituted unter an act, acting under this association is used in terms and subject to discipline for preparing information and reports on the compliance of the construction and subject to discipline for preparing information and reports on the compliance of the construction activities. The Qualified Professional shall  |                |
| preparing innormation and reports on the Compliance of our Control Con |                |
| Ensure an uest management practices and mingation measures are in pract to ordinary and minimize environmental impact on the raind and on rish and isn named or the scream.  Where applicable, assist in the isolation of the stream prior to the commencement of works.   |                |
| where a appraison, so associative isosonour or the automatic prior to the commencement on works.  Implement and ensure erosion and sediment control measures are constructed, installed, and maintained appropriately for the full duration of instream works.   |                |
| Impremental and cases authorized under this Approval.  |                |
| Super vice ail inscream works automated under this Approval. When the works involve temporary diversions to isolate the work site,   |                |
| when the works involve temporary diversions to busines the work site.  Monitor all diversion works daily to ensure pumps & flow bypasses are in proper working condition;  |                |
| Monitor an oversion works during the instance plants as in two bigosess are in proper working continuon;  Ensure diversion works that include pump intribates be screened for fish and aquatic species in accordance with the "Interim code of practice. End-of-pipe fish protection screens for small water intakes in  |                |
| Ensure unresidun works than include pump innanes de suceried for instantia aquaix. Species in accordance with the internit code or practice. End-on-pipe tish protection screens for small water incases in freshwater (Fisheries and Oceans Canada, 2020); and  |                |
|  |                |
|  |                |
| Ensure fish are prevented from entering the works.   |                |
| Ensure fish are prevented from entering the works.  When the works involve dewatering or isolation of flow and the stream is known or suspected to contain fish and/or amphibians,   |                |
| Ensure fish are prevented from entering the works.  When the works involve dewatering or isolation of flow and the stream is known or suspected to contain fish and/or amphibians,  Attend the site prior to conducting any instream works to complete fish and wildlife search and salvages;  |                |
| Ensure fish are prevented from entering the works.  When the works involve dewatering or isolation of flow and the stream is known or suspected to contain fish and/or amphibians,  Attend the site prior to conducting any instream works to complete fish and wildlife search and salvages;  Obtain any permits needed prior to undertaking the salvage(s); and  |                |
| Ensure fish are prevented from entering the works.  When the works involve dewatering or isolation of flow and the stream is known or suspected to contain fish and/or amphibians,  Attend the site prior to conducting any instream works to complete fish and wildlife search and salvages;  |                |
| Ensure fish are prevented from entering the works.  When the works involve dewatering or isolation of flow and the stream is known or suspected to contain fish and/or amphibians,  Attend the site prior to conducting any instream works to complete fish and wildlife search and salvages;  Obtain any permits needed prior to undertaking the salvage(s); and  Inspect the extraction area for fish stranding at least once after water levels have declined.  |                |
| Ensure fish are prevented from entering the works.  When the works involve dewatering or isolation of flow and the stream is known or suspected to contain fish and/or amphibians,  Attend the site prior to conducting any instream works to complete fish and wildlife search and salvages;  Obtain any permits needed prior to undertaking the salvage(s); and  Inspect the extraction area for fish stranding at least once after water levels have declined.  |                |
| Ensure fish are prevented from entering the works.  When the works involve dewatering or isolation of flow and the stream is known or suspected to contain fish and/or amphibians,  Attend the site prior to conducting any instream works to complete fish and wildlife search and salvages;  Obtain any permits needed prior to undertaking the salvage(s), and  Inspect the extraction area for fish stranding at least once after water levels have declined.  In the event of an environmental incident or non-compliance with any of the terms or conditions of this Approval, notify the Water Manager (SouthCoastWSAReporting@gov.bc.ca), within 24 hours.  Be granted authority to stop the work authorized under this Approval if deemed necessary to address risks to the environment. The Qualified Professional or their designate (specified in writing) must be on site   |                |
| Ensure fish are prevented from entering the works.  When the works involve dewatering or isolation of flow and the stream is known or suspected to contain fish and/or amphibians,  Attend the site prior to conducting any instream works to complete fish and wildlife search and salvages;  Obtain any permits needed prior to undertaking the salvage(s); and  inspect the extraction area for fish stranding at least once after water levels have declined.  In the event of an environmental incident or non-compliance with any of the terms or conditions of this Approval, notify the Water Manager (SouthCoastWSAReporting@gov.bc.ca), within 24 hours.  Be granted authority to stop the work authorized under this Approval if deemed necessary to address risks to the environment. The Qualified Professional or their designate (specified in writing) must be on site during all phases of construction in and around the stream to ensure this component is upheld.  |                |
| Ensure fish are prevented from entering the works.  When the works involve dewatering or isolation of flow and the stream is known or suspected to contain fish and/or amphibians,  Attend the site prior to conducting any instream works to complete fish and wildlife search and salvages;  Obtain any permits needed prior to undertaking the salvage(s), and  Inspect the extraction area for fish stranding at least once after water levels have declined.  In the event of an environmental incident or non-compliance with any of the terms or conditions of this Approval, notify the Water Manager (SouthCoastWSAReporting@gov.bc.ca), within 24 hours.  Be granted authority to stop the work authorized under this Approval if deemed necessary to address risks to the environment. The Qualified Professional or their designate (specified in writing) must be on site   |                |

### Legend Difference between Approval 2007795 & 2007755 Difference between Approval 2007783 & 2007755 Difference between Approval 2007749 & 2007755 Difference between Approval 2007770 & 2007755

| 3 may not be retuened within 30 meters of any watercourse; and 4 Must use environmentally sensitive bydraulic fluids which are non-toxic to aquatic life and which are readily or inherently bio-degradable.   |   |
|--|---|
|  |   |
| sediment and Erosion Control measures to prevent the release of silt, sediment or sediment-laden water must be in place before starting works that may result in sediment mobilization. Care shall be exercised  |   |
| during all phases of the work to prevent the release of silt, sediment, sediment-laden water, raw concrete, concrete leachate or any deleterious substances. All control measures must meet or surpass the   |   |
| Provincial "Standards and Best Practices for In-stream Works" (2004) and the "Land Development Guidelines for the Protection of Aquatic Habitat" (Fisheries and Oceans Canada and the British Columbia, 1993).   |   |
| t Sediment removal boundaries must be clearly delineated prior to commencement of work. All sediment excavation for removal purposes shall be completed in isolation of the stream flows.  Discharge and runoff water from the site into any watercourse(s) must comply with the BC Approved Water Quality Guidelines for the Protection of Aquatic Life   |   |
| u (https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality-guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-quality-guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-quality-guidelines/approved-water-quality-guidelines and https://www2.gov.bc.ca/assets/gov/environment/air-land-water-quality-guidelines/approved-water-guidelines/approved-water-guidelines/appr |   |
| water/ |   |
| be taken upstream of any works taking place and within the extent of the sedimentation downstream of where instream work is actively occurring. Measurements should be taken immediately prior to works  |   |
| beginning, and then at regular intervals until the works are completed and may require additional frequency during wet weather conditions. Wet weather conditions will be defined as being equal to or greater   |   |
| than 25 millimetres of rainfall within a 24 hour period.   |   |
| All excavated material and debris shall be removed from the site or placed in a stable area above the high water mark of the stream. Mitigative measures must be applied to protect the excavated material and   |   |
| v debris from erosion and reintroduction into the watercourse. These measures may include covering the material with erosion blankets, seeding and planting with native vegetation, or as otherwise directed by a  |   |
| Qualified Professional.  |   |
| w All material utilized during construction shall be contoured and placed in a stable area such that it is not able to mobilize and managed to avoid entry into any stream or watercourse.  x Site preparation and construction of the works is to be carried out from the banks of the stream, thus minimizing disturbance to the stream.   |   |
| x are preparation and construction or the works is to be carried out from the banks of the banks |   |
| y me noued or thus rupp rown small ensure that inside any works are designed and on bosonics of as not to restrict into passage annot need to risk standing.  2 All temporary works (including a ford, stream crossing and flow bypass) shall be removed on completion of the project, and the stream channel restored to its natural condition.   | - |
| aa Vegetation along the banks of the stream shall be disturbed as little as possible. All disturbed areas must be restored using native vegetation that is suitable for the site conditions.   |   |
| bb. The new channel of the stream must have greater or equal hydraulic capacity than the existing channel.   |   |
| The hydraulic capacity of installed culvert(s) must be equivalent to the hydraulic capacity of the stream channel or be capable of passing the 1 in 200 year maximum daily flow without the water level at the   |   |
| culvert(s) inlet exceeding the top of the culvert(s).  |   |
| Anock used as riprap shall be clean of any substances deleterious to aquatic life and shall be durable, angular in shape and suitably graded and sized to resist movement by stream flow. Any other engineering  |   |
| material required for the construction of the works shall be clean of any substances deleterious to aquatic life.  |   |
| ee All rock used in the works shall be clean and free of sediment producing material, durable, non-acid generating and suitably graded.  ff Treated wood products shall not be used in any construction below the high-water mark of the stream channel.   |   |
| IT Treated wood products shail not be used in any construction below the night-water mark of the stream channel.  Eg Large woody debris and the stubs of large diameter trees must be left in place or retained on-site where it is safe to do so.   |   |
| as tange woody because and the studies of tange unameter over missable event in the case that the ca |   |
| 1 Where possible and feasible, piles should be installed using a wibratory hammer.   |   |
| 2 Piles installed using an impact hammer must implement mitigation measures to reduce water pressure sound waves in excess of 30 kilopascals (kPa).  |   |
| 3 Mitigation measures such as bubble curtains, double wall piles, or isolation methods shall be implemented to avoid adverse impacts to fish.  |   |
| 4. Where water pressure sound waves may exceed 30 kPa, isolation methods must be implemented to prevent fish and wildlife from entering the work area.   |   |
| Monitoring underwater sound wave levels must be conducted continuously and within 10 meters of the pile being driven to ensure levels do not exceed 30 kPa. The construction with timber piles does not require  |   |
| underwater sound monitoring.   |   |
| 6 In the event that distressed, injured or dead fish are observed following the initiation of pile driving, work shall halt immediately and the holder of this Approval or appropriate designate must contact the Water Manager as soon as practicable for additional requirements before work is resumed.   |   |
| Manager a sound as practicative for administrative process. The holder of this Approval must provide a detailed post-construction report no later than December 1 of the year works were completed. The report must be labelled with this Approval file number and labelled in   | _ |
| in the solved time of the email and submitted to SouthCoastWSAReporting@ex.bc.ca.  |   |
| That report shall include a signed statement from an appropriately Qualified Professional summarizing  |   |
| 1 The in-stream works undertaken,  |   |
| 2 The timing of those works,   |   |
| 3 The total in-stream area directly affected,  |   |
| 4 The volume of gravel or sediment removed (if applicable),  |   |
| 5. The frequency of monitoring including who the QP or EM was;   |   |
|  |   |
| 6 The turbidity reporting and accompanying data along with a description of any levels higher than the authorization and what immediate steps were taken (if applicable),  |   |
| <ul> <li>6 The turbidity reporting and accompanying data along with a description of any levels higher than the authorization and what immediate steps were taken (if applicable),</li> <li>7 Representative site photographs;</li> </ul>  |   |
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| A post-construction monitoring plan of the compensation works over 10 years following the completion of the offsetting measures. Monitoring must take place during the same time of year each  |                    |
|--|--------------------|
| i comparable data. Monitoring of plant survival in riparian and wetland areas and of instream areas should be scheduled during the summer, during a period between high and low water (likely Ju<br>initial monitoring will determine how much further monitoring may be required until enhancement habitats are self-sustaining.  | y). Results of     |
| A commitment to prepare and submit annual post-construction monitoring reports at the end of every year of the monitoring program. A final monitoring report must be submitted upon comple   | tion of the annual |
| monitoring program or upon reaching the survivorship and/or functionality requirements if these were not met during the monitoring program.  | S-148, 7 .2        |
| 2 Develop the offsetting plan in collaboration with interested First Nations, local governments, and the Ministry of Forests, Lands, and Natural Resource Operations and Rural Development.  |                    |
| Submit an amendment to this approval, or a new Change Approval or a Water License, whichever is applicable to the offsetting proposal, to authorize the construction of the offsetting works. The  | s application must |
| be submitted to Front Counter BC and the tracking number must be provided to WaterActReferrals.LowerMainland@gov.bc.ca no later than December 31, 2020, unless otherwise specified in wr<br>Manager.   | ting by the Water  |
| Effectiveness monitoring must take place during the same time of year each year to provide comparable data.  |                    |
| Monitoring of plant survival in riparian and wetland areas and of instream areas should be scheduled during the summer, during a period between high and low water (likely July). Targets including the summer of th |                    |
| Plant survival is ≥ 80%; Tree survival rate of 100 %.  |                    |
| Native plant cover is two thirds greater than invasive species cover within 5 years;   |                    |
| Visual survey of LWD and boulders to confirm they are in place and intact, and that boulders are effectively creating riffles and pools, creating cover for fish and habitat for amphibians; and   |                    |
| 4 Fish are present in instream areas and there are no new barriers to movement   |                    |

## **APPENDIX 6: STATUS OF TOCA COMMITMENTS TABLE**

| D-4    | Objective Committee of S. Accommi  | Timing                         | Delivered            | Status Updat |          |
|--------|--|--------------------------------|----------------------|--------------|----------|
| Ref    | Objective Commitments & Assurances   |                                | Ву                   | Ongoing      | Complete |
| 1.0 Re | sponsible Environmental Management   |                                |                      |              |          |
| 1.1    | Develop, implement, and maintain an Environmental Management Plan (EMP) for the Project to demonstrate how the design, construction and operation, including maintenance, of the Project:  - Will be carried out to avoid or mitigate negative impacts;  - Will be carried out in an environmentally responsible manner, in accordance with DBSS 165 [Protection of the Environment];  - Will employ Best Management Practices (BMPs3); and  - Will comply with federal and provincial legislation, permits, approvals and authorizations, including the Environmental Assessment Certificate (EAC). | All phases                     | Contractor           | X            |          |
| 1.2    | Prepare and implement a Construction Environmental Management Plan (CEMP), (which is a component of the EMP), including relevant sub-plans, for the Project prior to the start of relevant construction activities.  | Pre-construction               | Contractor           | X            |          |
| 1.3    | Obtain required statutory permits, approvals, and authorizations before proceeding with construction that requires such permits.   | All phases                     | Contractor           | Х            |          |
| 1.4    | Adhere to the terms and conditions of the: EAC; federal screening report; the EMP; DBSS 165 [Protection of the Environment]; and any other applicable permits, licenses and approvals.   | Pre-construction, construction | Contractor           | Х            |          |
| 1.5    | Establish an Inter-Agency Environmental Review Committee (IAERC), in accordance with the Terms of Reference developed during Application review, to provide for agency review and comment on plans and designs prior to construction, including but not limited to:  - Detailed design of stormwater management infrastructure;  | Pre-construction, construction | MOTI /<br>Contractor | N/A          |          |

|        | Detailed vegetation and wildlife mitigation plans and mitigation monitoring plans; and     Environmental management plans.   | Commence of the  |            |     |
|--------|--|------------------|------------|-----|
| 1.6    | Provide all project related EMPs, including component EMPs, to applicable regulatory agencies in the IAERC for review and comment, at least 30 calendar days prior to the start of construction that requires such plans.  | Pre-construction | Contractor | N/A |
| 1.7    | Relevant sub-plans to be included in the CEMP will include those to address environmental issues identified in the Application and supporting documentation submitted to the EAO during the Application review, and described in the Application (Section 11, pg. 523), including but not limited to:  - Agriculture Mitigation Plan;  - Air Quality and Dust Control Plan;  - Archaeological Mitigation / Monitoring Plan;  - Construction and Hazardous Waste Management Plan;  - Contaminated Sites Management Plan;  - Contractor Awareness and Education Plan;  - Environmental Monitoring Plan;  - Fisheries Habitat Mitigation and Compensation Plan;  - Health and Safety Plan;  - Invasive Species Management Plan;  - Noise and Vibration Management Plan;  - Spill Management and Emergency Response Plan;  - Surface Water Quality and Sediment Control Plan;  - Wildlife and Habitat Management Plan. | Pre-construction | Contractor | X   |
| 1.8    | Manage contamination encountered during project development, regardless of the current assessment of potential contamination, in accordance with applicable regulatory requirements.   | All phases       | Contractor | ×   |
| 1.9    | Prepare and implement an Operational Environmental Management Plan, prior to operation and maintenance activities. Provide the operational EMP to relevant reviewing and regulatory agencies, for review and comment, at least 30 calendar days prior to the onset of operation and maintenance activities.  | Pre-construction | Contractor | TBD |
| 1.10   | At a minimum, review the Wildlife and Habitat Management Plan and modify if required, three years post- construction and make a decision regarding the next review date and/or determine the closure date for the plan(s). The method for review, modification, and decision on closure of the plan(s) will be defined by the applicable regulatory agencies within the IAERC  | Operations       | Contractor | N/A |
| 2.0 Mc | onitoring  |                  |            |     |
| 2.1    | Ensure that environmental monitoring and reporting for the Project will be conducted, with respect to the terms and conditions of the EAC and other regulatory permits, approvals and authorizations as applicable.  | Construction     | Contractor | Х   |
| 2.2    | Incorporate a monitoring component into all applicable sub-plans of the construction EMP developed for the construction phase of the Project.  | Pre-construction | Contractor | Х   |
| 2.3    | Outline in each of the sub-plans of the construction EMP: - Rationale for monitoring; - Parameters to be monitored;  | Pre-construction | Contractor | Х   |

|     | - Monitoring program details; and - Required follow-up actions.   |                                |                    |     |  |
|-----|---|--------------------------------|--------------------|-----|--|
| 2.4 | The Owner will engage an Environmental Monitor for the construction phases of the Project to undertake environmental monitoring activities and oversee implementation of each of component plans of the EMP developed for the Project. The Environmental Monitor will monitor, evaluate, and report to the owner on construction activities and the effectiveness of the environmental management strategies and mitigation measures, with respect to the terms and conditions of the Application and other regulatory Permits, Approvals and Authorizations that may apply. The Monitor will be responsible for making onsite decisions and taking on-site action to avoid/respond to potential environmental effects which could include temporary stop work orders if necessary. | Construction                   | Contractor         | Х   |  |
| 2.5 | Implement environmental quality management program through monitoring, auditing and reporting activities for the Project with respect to the terms and conditions of the EAC and other regulatory permits, approvals and authorizations.  | All phases                     | Contractor         | Х   |  |
|     | cident Management   | L                              |                    |     |  |
| 3.1 | Respond to environmental incidents, including spill incidents in accordance with the<br>Emergency Response Plan to minimize effects and risks to the general public, on-site<br>workers and the environment.  | All phases                     | Contractor         | Х   |  |
| 3.2 | Include protocols, consistent with the BC Spill Reporting Regulation, for reporting spills to appropriate emergency response authorities, including;  - The Provincial Emergency Program, in the case of any spills of reportable deleterious substances into waters frequented by fish, regardless of the amount of the spill; and  - To adjacent property owners and occupiers, including local government, where utilities cross the highway and there is a potential for an incident to extend beyond the Project boundaries.   | Pre-construction               | Contractor         | Х   |  |
| 3.3 | Train all field Project personnel regarding implementation of the Construction and Hazardous Waste Management and Spill Management and Emergency Response Plans.  | All phases                     | Contractor         | Х   |  |
| 3.4 | Incorporate relevant municipal contacts into the emergency contacts for the Construction and Hazardous Waste Management and Spill Management and Emergency Response Plans prepared for construction of the Project.   | Pre-construction               | Contractor         | Х   |  |
| 3.5 | Follow applicable DBSS 165 and Canadian Council of Ministers of Environment codes and procedures if temporary fuel storage/fueling facilities are required during construction. Where there is a difference in standards, the most stringent measure for environmental protection will take precedence.   | Construction                   | Contractor         | Х   |  |
|     | ommunity Consultation   |                                |                    |     |  |
| 4.1 | Consult with local governments, stakeholders and the public during all stages of Project development.   | Pre-construction; construction | MoT,<br>Contractor | Х   |  |
| 4.2 | Conduct community open houses and information sessions during the design review stage to obtain input on design refinements, during the preliminary and final design review stages.   | Pre-construction               | MoT,<br>Contractor | N/A |  |
| 4.3 | Provide regular public information updates on the progress of construction, the schedule, and upcoming milestones.  | Construction                   | MoT,<br>Contractor | Х   |  |

| 4.4    | Consult with the Corporation of Delta (CoD) and the City of Surrey (CoS) during all stages of project development and construction.  | Pre-construction; construction | Contractor         | Х   |   |
|--------|--|--------------------------------|--------------------|-----|---|
| 4.5    | Provide updated media information materials, as part of the Project commitment to making project information available to the public.  | All phases                     | Contractor         | Х   |   |
| 4.6    | Track project enquiries and responses.   | All phases                     | Contractor         | Х   |   |
| 4.7    | Discuss potential economic opportunities generated by the Project with participating First Nations throughout the Post-EA Certification, Design and Construction Phases of the Project.  | Pre-construction; construction | MoT,<br>Contractor | Х   |   |
| 4.8    | Obtain input from participating First Nations to identify appropriate measures to mitigate potential project related impacts on their previously identified interests in relation to fisheries and habitat matters.  | Pre-construction               | Contractor         | Х   |   |
| 5.0 St | ormwater Management  | •                              | •                  |     | • |
| 5.1    | Ensure that the design, construction and maintenance of stormwater management infrastructure for the Project takes an integrated approach to stormwater management and contributes to maintaining, or improving, drainage and water quality conditions directly adjacent to the corridor.  | All phases                     | Contractor         | TBD |   |
| 5.2    | Design, construct and maintain stormwater management infrastructure, such that it to meets the performance objectives outlined in the Stormwater Management Plan Outline (July, 2007) and the Application. Monitoring of the infrastructure will be undertaken to confirm performance objectives are met or, if necessary, additional steps are taken to ensure performance objectives are achieved. | All phases                     | Contractor         | X   |   |
| 5.3    | Consult with municipalities adjacent to the new construction area such that the approach to the management of stormwater and drainage design is complementary to, and can be integrated with, adjacent municipal stormwater infrastructure.  | Pre-construction               | Contractor         | TBD |   |
| 5.4    | Provide final designs for stormwater management infrastructure to relevant First Nations and reviewing and regulatory agencies for review and comment at least 30 calendar days prior to relevant construction activities in order to verify that the proposed infrastructure achieves agreed upon performance measures identified in the Stormwater Management Plan Outline (July 2007).            | Pre-construction               | Contractor         | TBD |   |
| 5.5    | Drain stormwater and road runoff away from red and blue listed plant communities and do not construct integrated stormwater management infrastructure in such habitat areas.   | Construction; operation        | Contractor         | TBD |   |
| 5.6    | Obtain input from participating First Nations regarding mitigation measures outlined in the stormwater and drainage plan and effective integration of those measures into the design and operation of the Project.   | Pre-construction               | Contractor         | TBD |   |
|        | riculture  |                                |                    |     |   |
| 6.1    | Consult with the Agricultural Land Commission (ALC), Ministry of Agriculture and Lands (MAL), Delta Farmers' Institute (DFI), individual farm owners and the CoD, through all future stages of Project development, construction and operation, to ensure impacts to agricultural lands and operations are minimized where possible and appropriately addressed where impacts are unavoidable.       | All phases                     | MoT,<br>Contractor | Х   |   |
| 6.2    | Obtain ALC approvals regarding areas within the Agricultural Land Reserve (ALR) required for the project, prior to construction.   | Pre-construction               | MoT,<br>Contractor |     | Х |

| 6.3 | Develop and implement an Agricultural Mitigation Plan as outlined in the Application that identifies potential impacts to agriculture as a result of project construction activities and measures for avoiding and addressing such impacts where possible. The scope will include those measures outlined in the Application and the Agricultural Enhancement Strategy (April 2008), including but not limited to mitigation measures focused on:  - Road access;  - Drainage and irrigation;  - Utilities; and  - Maintaining the agricultural land base. | Pre-construction                  | Contractor         | X |  |
|-----|--|-----------------------------------|--------------------|---|--|
| 6.4 | Finalize and implement specific agricultural enhancement initiatives, including but not limited to, compensation mechanisms focused on improving road access and drainage and irrigation, as part of the application process to the ALC and summarily as part of the Agricultural Enhancement Strategy (April 2008).   | Pre-construction; construction    | МоТ                | Х |  |
| 6.5 | Retain the services of a Professional Agrologist to:  - Liaise with the owner, Design-Builder and farmer(s);  - Oversee a consultation and dispute resolution process for individual farmers affected by the Project; and  - Oversee monitoring and effectiveness of measures proposed to address impacts to agriculture during design, construction and operation.  | All phases                        | МоТ                | Х |  |
| 6.6 | Avoid, to the extent possible, using agricultural lands outside of the Right-Of-Way (ROW), for staging areas. For all agricultural lands that are required for use as staging areas, implement construction BMPs (as noted in the Agriculture Mitigation Plan in the EMP) to manage potential construction related effects and restore lands to preconstruction condition, or better agricultural capability, upon completion of project works.  | Pre-construction; construction    | Contractor         | Х |  |
| 6.7 | Consult with individual farm owners, as well as MAL, ALC, CoD, DFI and other stakeholders, to identify potential impacts to agricultural operations and infrastructure and ensure that such impacts are avoided, mitigated for, or appropriately addressed during future stages of design and construction of the Project. The scope of potential impacts to farm operations includes, but is not limited to:  - Agricultural drainage;  - Utilities;  - Road Access; and  - Pollinators.  | Pre-construction;<br>construction | MoT;<br>contractor | X |  |
| 6.8 | Undertake reasonable measures to facilitate the consolidation of parcels of isolated agricultural lands, to promote continued agricultural use of such lands.  | All phases                        | МоТ                | Х |  |
| 6.9 | Undertake reasonable measure to minimize potential loss of ALR lands, including existing farm(s) by: - Refining the Project footprint where feasible; and - Optimizing use of existing ROW.  | Pre-construction; construction    | Contractor         | Х |  |
|     | r Quality  |                                   |                    |   |  |
| 7.1 | Ensure that the construction works and operations for the Project are conducted in compliance with environmental permits and approvals and that all reasonable measures are taken to address project-related effects on air quality.   | Construction, operation           | Contractor         | X |  |

| 7.2    | Develop and implement an Air Quality and Dust Control Plan for the construction phase of the project. The plan will:  - Include an air quality monitoring program with thresholds, which if exceeded, will trigger the implementation of additional mitigation and corrective measures;  - Commit to the best available, known and effective, measures for mitigating construction related air emissions, including diesel particulate matter (PM), as identified by relevant regulatory agencies. This would include, where practical, the use of diesel oxidation catalysts (DOCs) or diesel particulate filters (DPFs) on all on-road and off-road project equipment in combination with use of a B20 biodiesel blend;  - Include an anti-idling policy for construction equipment and other vehicles associated with construction related activities;  - Commit to fugitive dust minimization strategies (e.g. wheel wash and sweeping), and dust suppression techniques (e.g. watering) on roads; and  - Identify site specific considerations, where applicable, such as proximity to sensitive environmental or human receptors. | Pre-construction; construction | Contractor         | X |  |
|--------|---|--------------------------------|--------------------|---|--|
| 7.3    | Provide the Air Quality and Dust Control Plan to Metro Vancouver, Environment Canada (EC), Ministry of Environment (MoE), Transport Canada, Health Canada (HC) and other relevant agencies for review and comment at least 30 calendar days prior to relevant construction activities.  | Pre-construction               | MoT,<br>Contractor | X |  |
| 7.4    | Avoid burning as a means for disposing of land clearing debris.   | Construction                   | Contractor         | X |  |
|        | affic Management  | 1                              | 1                  |   |  |
| 8.1    | Ensure that the design of the Project is integrated with local road networks, and that construction of the proposed project includes measures for avoiding or minimizing impacts to local road networks.  | Pre-construction; construction | MoT,<br>Contractor | X |  |
| 8.2    | Prepare and implement a Traffic Management Plan in coordination with CoS and CoD to address construction related traffic conditions.  | Pre-construction; construction | Contractor         | Х |  |
| 8.3    | Consult with the CoD, CoS, MoT district office, and other stakeholders to design and construct project infrastructure so that it is effectively integrated with existing and planned local road networks.   | Pre-construction; construction | Contractor         | Х |  |
| 9.0 No | ise and Vibration   |                                |                    |   |  |
| 9.1    | Ensure that potential noise impacts associated with the project are considered and mitigation provided for during design, construction and operation of the project.  | All phases                     | Contractor         | X |  |
| 9.2    | Prepare and implement a Noise and Vibration Management Plan for the construction phase of the Project that will include specific mitigation measures, and locations where they will be applied to address construction related noise.   | Pre-construction; construction | Contractor         | Х |  |
| 9.3    | Prepare a noise complaint protocol as part of the CEMP Noise and Vibration Management Plan to respond in a timely manner to concerns and complaints raised by residents and take reasonable actions to reduce the Project-related construction noise in question.   | Pre-construction               | Contractor         | Х |  |
| 9.4    | Provide the construction Noise and Vibration Management Plan to the CoS, CoD and other stakeholders for review and comment 30 calendar days prior to the onset of relevant construction activities.   | Pre-construction               | Contractor         | Х |  |

| im<br>(1            | esign and construct mitigation measures to address potential operational noise npacts on residential areas as part of the project according to the MoT Noise Policy 993) [referenced as the Noise Policy in this Agreement].  | Pre-construction; construction | Contractor         | TBD |  |
|---------------------|---|--------------------------------|--------------------|-----|--|
| co<br>fu            | onduct noise monitoring at the baseline sites during the first year after construction is<br>omplete to assess the effectiveness of mitigation measures, with a commitment to<br>irther mitigation if necessary, technically feasible and practical.  | Operation                      | Contractor         | TBD |  |
|                     | onsult with the CoD and CoS to look for opportunities to use tree planting and indscaping to mitigate potential visual, noise and air quality impacts.  | Pre-construction; construction | Contractor         |     |  |
| nc                  | articipate in meetings with affected communities and residents to address site-specific<br>bise issues in the event that late evening or night time construction works prove<br>ecessary in the vicinity of residential areas.  | Pre-construction; construction | Contractor         | TBD |  |
| vio<br>for<br>ca    | erform pre-condition surveys to document existing state of buildings and facilities in the cinity of SFPR construction activities as per standard geotechnical BMPs. This will be the baseline conditions, against which post-construction condition surveys will be arried out to assess any vibration impacts to buildings and facilities as a result of roject construction. | Pre-construction               | Contractor         | Х   |  |
| co<br>vit           | lonitor ground vibrations, as per standard geotechnical BMPs, adjacent to buildings to onfirm that vibration levels are within ranges expected to avoid construction-related bration.   | Construction                   | Contractor         | Х   |  |
|                     | aminated Sites and Property Acquisition   | T                              |                    |     |  |
| wi                  | nsure that potential site contamination is investigated, and managed in compliance ith the Contaminated Sites Regulation (Environmental Management Act), during all tages of project development including property acquisition, design and construction.   | All phases                     | Contractor         | Х   |  |
| pr<br>co            | ssess all Tier 1 and Tier 2 properties required for the ROW for potential contamination rior to construction and take steps, as required, to investigate and address site ontamination that may exist.  | Pre-construction; construction | MoT;<br>Contractor | Х   |  |
| 10.3 Ma             | anage any contaminated groundwater encountered in accordance with the equirements of the Environmental Management Act and associated regulations.   | Pre-construction; construction | MoT;<br>Contractor | Х   |  |
| pc                  | ndertake risk assessment and remediation activities, as required, and manage otential contamination in compliance with the provincial Environmental Management ct and Contaminated Sites Regulation.  | Pre-construction; construction | MoT;<br>Contractor | Х   |  |
|                     | hould contaminated groundwater be identified along the route, include measures to ontrol/mitigate the potential for impacts to surface water in future stormwater design.   | All phases                     | MoT;<br>Contractor | Х   |  |
| co<br>Pr            | otify MoE of potential migration of contaminants from known or identified Tier 1 off-<br>orridor properties of concern discovered during supplementary investigations or<br>roject-related activities and use information to manage and mitigate contaminated sites<br>sues prior to construction.  | Pre-construction               | Contractor         | Х   |  |
| 10.7 As<br>Ha<br>Pl | s part of the CEMP, the Contaminated Sites Management, Construction and azardous Waste Management and Spill Management and Emergency Response lans, develop and implement a protocol for identifying and managing contaminated and otentially contaminated materials during the construction phase of the Project.  | Pre-construction; construction | Contractor         | Х   |  |
| 11.0 Fishe          | eries   |                                |                    |     |  |

| Ensure that all works and activities associated with the construction, operation and maintenance of the project are conducted in compliance with the Fisheries Act. This includes implementing mitigation measures and best management practices to ensure that the project does not cause any narm or mortality to fish, and that the project does not cause any harm or mortality to fish, and that the project does not cause any harm or mortality to fish, and that the project does not cause any harm or mortality to fish, and that the project does not cause or result in the deposit of a deleterious substance of any type, including sediment, into a watercourse that is frequented by fish.    11.2  |       |   |                  |            |     |  |
|---|-------|---|------------------|------------|-----|--|
| 11.2   Obtain an authorization under subsection 35(2) of the Fisheries Act for any unavoidable hamful alteration, disruption or destruction of fish habitat prior to relevant construction works or activities.  11.3   Develop and construct fish habitat compensation measures that offset all project impacts to fish habitat. These fish habitat compensation measures will be constructed by the proponent as directed by Fisheries and Oceans Canada and in accordance with any s. 35(2) Fisheries Act authorizations.  11.4   Implement appropriate measures to adequately mitigate the effects of the creation of impervious surfaces on volume of surface runoff, rate of runoff, and water quality. These will meet performance targets established in the Stormwater Management Plan Outline (July, 2007) for the project.  11.5   Establish and maintain riparian setback areas from drainage channels and watercourses in accordance with regulatory requirements.  11.6   Take all reasonable measures to prevent substances that may be harmful to fish from entering the aquatic environment at the construction sites in the proximity to fish and aquatic habitat, paying particular attention to discharges of suspended sediments, construction washe, handling of uncured concrete and other deleterious substances.  11.7   Construct bridges for watercourse crosses in the vicinity of Delta Ravines (i.e. Norum, McAdam, Collings, Neishan View and Gunderson Creeks), as shown in plans attached to the Application (Technical Volume 1) and over a minimum 45 m portion of the Fraser Heights Wetlands, using the design and the construction methods outlined in the draft Fraser Heights Wetlands Bridge Preliminary Design Report.  11.8   Obtain input from the Musqueam Indian Band and other participating First Nations.  11.9   Review with the applicable regulatory agencies, including opportunities for habitat to be constructed in advance of other Project construction (i.e. "habitat banking"), to determine the ratio of habitat types and to which drainage compensation will | 11.1  | maintenance of the project are conducted in compliance with the Fisheries Act. This includes implementing mitigation measures and best management practices to ensure that the project does not cause any unauthorized harmful alteration, disruption or destruction of fish habitat, that the project does not cause any harm or mortality to fish, and that the project does not cause or result in the deposit of a deleterious substance of | All phases       | Contractor | Х   |  |
| to fish habitat. These fish habitat compensation measures will be constructed by the proponent as directed by Fisheries and Oceans Canada and in accordance with any s. 35(2) Fisheries Act authorizations.  11.4 Implement appropriate measures to adequately mitigate the effects of the creation of my previous surfaces on volume of surface runoff, rate of runoff, and water quality. These will meet performance targets established in the Stormwater Management Plan Outline (July, 2007) for the project.  11.5 Establish and maintain riparian setback areas from drainage channels and watercourses in accordance with regulatory requirements.  11.6 Take all reasonable measures to prevent substances that may be harmful to fish from entering the aquatic environment at the construction sites in the proximity to fish and aquatic habitat, paying particular attention to discharges of suspended sediments, construction waste, handling of uncured concrete and other deleterious substances.  11.7 Construct bridges for watercourse crosses in the vicinity of Delta Ravines (i.e. Norum, McAdam, Collings, Nelson View and Gunderson Creeks), as shown in plans attached to the Application (Technical Volume 1) and over a minimum 450 m portion of the Fraser Heights Wetlands Bridge Preliminary Design Report.  11.8 Obtain input from the Musqueam Indian Band and other participating First Nations to identify appropriate measures to mitigate potential project related impacts on the identified interests of the Musqueam Band in relation to fisheries and habitat matters. Identify potential opportunities potential project related impacts on the identified interests of the Musqueam Indian Band or other participating First Nations.  11.9 Review with the applicable regulatory agencies, including but not limited to DFO and MOE, proposals for compensation habitat, including opportunities for habitat to be constructed in advance of other Project construction (i.e. "habitat banking"), to determine the ratio of habitat or position.                               |       | harmful alteration, disruption or destruction of fish habitat prior to relevant construction  | All phases       | Contractor |     |  |
| impervious surfaces on volume of surface runoff, rate of runoff, and water quality. These will meet performance targets established in the Stormwater Management Plan Outline (July, 2007) for the project.  11.5 Establish and maintain riparian setback areas from drainage channels and watercourses in accordance with regulatory requirements.  11.6 Take all reasonable measures to prevent substances that may be harmful to fish from entering the aquatic environment at the construction sites in the proximity to fish and aquatic habitat, paying particular attention to discharges of suspended sediments, construction waste, handling of uncured concrete and other deleterious substances.  11.7 Construct bridges for watercourse crosses in the vicinity of Delta Ravines (i.e. Norum, McAdam, Collings, Nelson View and Gunderson Creeks), as shown in plans attached to the Application (Technical Volume 1) and over a minimum 450 m portion of the Fraser Heights Wetlands, using the design and the construction methods outlined in the draft Fraser Heights Wetlands Bridge Preliminary Design Report.  11.8 Obtain input from the Musqueam Indian Band and other participating First Nations to identify appropriate measures to mitigate potential project related impacts on the identified interests of the Musqueam Band in relation to fisheries and habitat matters. Identify operatial opportunities for mutually agreeable opportunities to assist in advancing the fisheries interests of the Musqueam Indian Band or other participating First Nations.  11.9 Review with the applicable regulatory agencies, including but not limited to DFO and MOE, proposals for compensation habitat, including opportunities for habitat to be constructed in advance of other Project construction (i.e. "habitat banking"), to determine the ratio of habitat types and to which drainage compensation will apply.  | 11.3  | to fish habitat. These fish habitat compensation measures will be constructed by the proponent as directed by Fisheries and Oceans Canada and in accordance with any s.   | · ·              | Contractor | Х   |  |
| in accordance with regulatory requirements.  Construction; operation  Take all reasonable measures to prevent substances that may be harmful to fish from entering the aquatic environment at the construction sites in the proximity to fish and aquatic habitat, paying particular attention to discharges of suspended sediments, construction waste, handling of uncured concrete and other deleterious substances.  Construct bridges for watercourse crosses in the vicinity of Delta Ravines (i.e. Norum, McAdam, Collings, Nelson View and Gunderson Creeks), as shown in plans attached to the Application (Technical Volume 1) and over a minimum 450 m portion of the Fraser Heights Wetlands, using the design and the construction methods outlined in the draft Fraser Heights Wetlands Bridge Preliminary Design Report.  Obtain input from the Musqueam Indian Band and other participating First Nations to identify appropriate measures to mitigate potential project related impacts on the identified interests of the Musqueam Band in relation to fisheries and habitat matters. Identify potential opportunities for mutually agreeable opportunities to assist in advancing the fisheries interests of the Musqueam Indian Band or other participating First Nations.  Review with the applicable regulatory agencies, including but not limited to DFO and MOE, proposals for compensation habitat, including opportunities for habitat to be constructed in advance of other Project construction (i.e. "habitat banking"), to determine the ratio of habitat types and to which drainage compensation will apply.   | 11.4  | impervious surfaces on volume of surface runoff, rate of runoff, and water quality. These will meet performance targets established in the Stormwater Management Plan Outline   | construction;    | Contractor | TBD |  |
| entering the aquatic environment at the construction sites in the proximity to fish and aquatic habitat, paying particular attention to discharges of suspended sediments, construction waste, handling of uncured concrete and other deleterious substances.  11.7 Construct bridges for watercourse crosses in the vicinity of Delta Ravines (i.e. Norum, McAdam, Collings, Neison View and Gunderson Creeks), as shown in plans attached to the Application (Technical Volume 1) and over a minimum 450 m portion of the Fraser Heights Wetlands, using the design and the construction methods outlined in the draft Fraser Heights Wetlands Bridge Preliminary Design Report.  11.8 Obtain input from the Musqueam Indian Band and other participating First Nations to identify appropriate measures to mitigate potential project related impacts on the identified interests of the Musqueam Band in relation to fisheries and habitat matters. Identify potential opportunities for mutually agreeable opportunities to assist in advancing the fisheries interests of the Musqueam Indian Band or other participating First Nations.  11.9 Review with the applicable regulatory agencies, including but not limited to DFO and MOE, proposals for compensation habitat, including opportunities for habitat to be constructed in advance of other Project construction (i.e. "habitat banking"), to determine the ratio of habitat types and to which drainage compensation will apply.  | 11.5  |   | construction;    | Contractor | Х   |  |
| McAdam, Collings, Nelson View and Gunderson Creeks), as shown in plans attached to the Application (Technical Volume 1) and over a minimum 450 m portion of the Fraser Heights Wetlands, using the design and the construction methods outlined in the draft Fraser Heights Wetlands Bridge Preliminary Design Report.  11.8 Obtain input from the Musqueam Indian Band and other participating First Nations to identify appropriate measures to mitigate potential project related impacts on the identified interests of the Musqueam Band in relation to fisheries and habitat matters. Identify potential opportunities for mutually agreeable opportunities to assist in advancing the fisheries interests of the Musqueam Indian Band or other participating First Nations.  11.9 Review with the applicable regulatory agencies, including but not limited to DFO and MOE, proposals for compensation habitat, including opportunities for habitat to be constructed in advance of other Project construction (i.e. "habitat banking"), to determine the ratio of habitat types and to which drainage compensation will apply.  | 11.6  | entering the aquatic environment at the construction sites in the proximity to fish and aquatic habitat, paying particular attention to discharges of suspended sediments,  | Construction     | Contractor | Х   |  |
| identify appropriate measures to mitigate potential project related impacts on the identified interests of the Musqueam Band in relation to fisheries and habitat matters.  Identify potential opportunities for mutually agreeable opportunities to assist in advancing the fisheries interests of the Musqueam Indian Band or other participating First Nations.  11.9 Review with the applicable regulatory agencies, including but not limited to DFO and MOE, proposals for compensation habitat, including opportunities for habitat to be constructed in advance of other Project construction (i.e. "habitat banking"), to determine the ratio of habitat types and to which drainage compensation will apply.  | 11.7  | McAdam, Collings, Nelson View and Gunderson Creeks), as shown in plans attached to the Application (Technical Volume 1) and over a minimum 450 m portion of the Fraser Heights Wetlands, using the design and the construction methods outlined in the draft  |                  | Contractor | N/A |  |
| MOE, proposals for compensation habitat, including opportunities for habitat to be constructed in advance of other Project construction (i.e. "habitat banking"), to determine the ratio of habitat types and to which drainage compensation will apply.  | 11.8  | Obtain input from the Musqueam Indian Band and other participating First Nations to identify appropriate measures to mitigate potential project related impacts on the identified interests of the Musqueam Band in relation to fisheries and habitat matters. Identify potential opportunities for mutually agreeable opportunities to assist in advancing the fisheries interests of the Musqueam Indian Band or other participating          | All phases       | ·          | Х   |  |
|   | 11.9  | MOE, proposals for compensation habitat, including opportunities for habitat to be constructed in advance of other Project construction (i.e. "habitat banking"), to determine  | Pre-construction | Contractor | Х   |  |
|   | 11.10 |   | Construction     | Contractor | Х   |  |

| 11.11  | Retain maintenance responsibility for compensation sites within the Project limits. For sites constructed in areas outside of the Project limits, establish site-specific agreements for access and maintenance with the relevant stakeholder/landowner.   | Operations                        | Contractor |     |  |
|--------|--|-----------------------------------|------------|-----|--|
| 12.0 W | ater Quality   |                                   |            |     |  |
| 12.1   | Ensure that the construction works and operations for the Project are conducted in compliance with environmental requirements and BMPs in order to avoid impacts to water quality.   | All phases                        | Contractor | Х   |  |
| 12.2   | Develop and implement a Surface Water Quality and Sediment Control Plan and provide the plan for review and comment by relevant environmental agencies at least 30 calendar days prior to the start of relevant construction activities.   | Pre-construction                  | Contractor | Х   |  |
| 12.3   | Sample water from potentially impacted drinking water wells to assess potential adverse effects to water quality associated with during construction and operation phases of the project. Provide sampling water quality data to the local health authority for review and comment.  | Construction; operation           | Contractor | TBD |  |
| 12.4   | The Surface Water Quality and Sediment Control Plan will at a minimum:  - Identify requirements for additional water quality monitoring prior to and during construction to ensure preventative and mitigation measures can be taken as appropriate, to avoid impacts to water quality;  - Identify potential water quality contaminants of concern generated by construction activities and associated preventative and mitigative measures;  - Include a BMP maintenance plan to ensure BMPs implemented are functioning as designed and corrective actions are taken when required; and  - Be submitted to the applicable regulatory agencies at least 30 calendar days prior to start of construction activities for review.   | Pre-construction; construction    | Contractor | Х   |  |
| 13.0 W | lildlife and Vegetation  |                                   |            |     |  |
| 13.1   | Ensure that the design, construction, and operation of the project, avoids where practical and technically feasible, impacts to vegetation and wildlife.   | All phases                        | Contractor | Х   |  |
| 13.2   | Prepare and implement a Wildlife and Habitat Management Plan to avoid and, where necessary, mitigate potential impacts to vegetation, wildlife and wildlife habitat. Provide the Plan to relevant regulatory and reviewing agencies for review and comment at least 30 calendar days prior to relevant construction activities beginning. The Wildlife and Habitat Management Plan will include best practices including but not limited to those identified in the Application (Table 7.717, draft Wildlife Mitigation Crossing Plan (April 2007) [replaced by the Wildlife and Wildlife Habitat Mitigation Plan (September 2008)], and Zones of Influence memo (July 2007) [replaced by the Wildlife and Wildlife Habitat Mitigation Plan (September 2008)] in order to avoid, and where necessary, mitigate potential effects on vegetation and wildlife. This plan will also identify protocols for the survey and salvage of vegetation and wildlife as appropriate and required. | Pre-construction;<br>construction | Contractor | Х   |  |
| 13.3   | Develop and implement mitigation measures to avoid and minimize impacts to wildlife during construction and operation of the project including, but not limited to those measures identified in the Application (September, 2006), draft Wildlife Mitigation Crossing Plan (April 2007) [replaced by the Wildlife and Wildlife Habitat Mitigation Plan (September 2008)] and Zones of Influence Assessment memo (July 2007) [replaced by the Wildlife and Wildlife Habitat Mitigation Plan (September 2008)].  | Pre-construction; construction    | Contractor | X   |  |

| 13.4  | During the design phase, MoT will finalize its determination of the type and location of sound barriers to be constructed along the perimeter of Burns Bog. For the southwestern alignment (adjacent to Crescent Slough), this design will include the construction of a solid sound barrier or a barrier that will provide equivalent mitigation. MoT will ensure on-going consultation with TC, EC, MoE and other IAERC members as appropriate, during design regarding the proposed type and location of sound barriers to be installed around Burns Bog.  | Pre-construction | MoT,<br>Contractor | TBD |  |
|-------|---|------------------|--------------------|-----|--|
| 13.5  | Consult with the MoE and the Canadian Wildlife Service (CWS) of Environment Canada, to identify suitable compensation, including but not limited to that identified in the Wildlife and Habitat Management Plan and Habitat Compensation Plan (February, 2007) [replaced by Habitat Compensation Plan (May 2007)], to address residual effects on vegetation and wildlife as a result of the Project.   | Pre-construction | Contractor         | Х   |  |
| 13.6  | Work with reviewing and regulatory agencies to develop and implement a comprehensive and long term Mitigation Monitoring Plan (MMP) [currently known as the SFPR Vegetation and Wildlife Mitigation Monitoring Plan], based on the Vegetation and Wildlife Mitigation Monitoring Strategy (April 2007) [replaced by the SFPR Vegetation and Wildlife Mitigation Monitoring Plan], to monitor the effectiveness of proposed mitigation measures in addressing Project-related effects on vegetation and wildlife, including species at risk. Data collection and monitoring in support of the implementation of the MMP will begin prior to construction and continue for a period of time, to be determined with relevant regulatory agencies, during operation. Information collected in relation to the MMP will be used to guide detailed planning of mitigation, assess the effectiveness of such mitigation, and determine where additional measures may be required. The MMP will include scientifically defensible thresholds or performance measures to facilitate the evaluation of the effectiveness of mitigation. | All phases       | Contractor         | X   |  |
| 13.7  | Undertake site-specific vegetation surveys in accordance with the regionally supported Protocols for Rare Plants Surveys, to identify the presence and distribution of red- and blue-listed plants species prior to final design and construction. Provide information on the presence and distribution of such plants species to MoE for review and use the information to guide final design and construction to avoid or mitigate impacts to these species.  | Pre-construction | Contractor         | Х   |  |
| 13.8  | Avoid direct impacts to sensitive red and blue listed plant communities where possible and adhere to construction exclusion windows determined by regulators.   | Construction     | Contractor         | X   |  |
| 13.9  | Develop a plan for salvaging plants and seeds, for review by MoE, where impacts to red and blue listed plant species cannot be avoided, for replanting off-alignment.   | Pre-construction | Contractor         |     |  |
| 13.10 | Make all reasonable efforts to avoid impacts to confirmed streambank lupine habitat and confirmed stream bank lupine seed banks in the project corridor, as identified in consultation with the Streambank lupine recovery team, during design construction and operation of the Project. Where impacts to such areas cannot be avoided, work with the Ministry of Environment and the Streambank Lupine Recovery team to identify and carry out appropriate mitigation measures including, but not limited to, the stockpiling of soil containing streambank lupine seeds.   | Construction     | Contractor         | X   |  |

| 13.11 | Undertake pre-construction bird nest surveys and restrict clearing during the breeding season. Pre- construction bird nest surveys will include, but not necessarily be limited to the following:  - Conduct pre-construction raptor, heron or any listed species nest and roost tree surveys, consistent with applicable BMPs, to determine presence of active/inactive raptor and heron nests in the corridor and work scheduling with respect to the nest locations and applicable timing restrictions;  - Prepare pre-construction bird nest survey protocols should works include clearing of vegetation during the general bird breeding time period as determined by MOE;  - Conduct pre-construction bird nest surveys to the satisfaction of the MOE should the Design-Builder intend to seek approval from the MOE for vegetation clearing within the bird breeding time period (defined by MOE) in any year during the Term. | Pre-construction               | Contractor         | Х   |  |
|-------|---|--------------------------------|--------------------|-----|--|
| 13.12 | Consult with MoE on the development and implementation of an Invasive Species Management Plan to address potential effects of the project related to the spread of invasive plant and aquatic wildlife species within the project corridor.   | Pre-construction; construction | Contractor         | X   |  |
| 13.13 | Include large mammal crossings adjacent to the perimeter of Burns Bog. The final number and location of wildlife crossings will be identified in the Wildlife Mitigation Crossing Plan [replaced by the Wildlife and Wildlife Habitat Mitigation Plan (September 2008)] which will be finalized in consultation with MoE and EC.  | Pre-construction               | Contractor         | Х   |  |
| 13.14 | Follow the design criteria outlined in the MOT Manual of Aesthetic Design Practice and the MOT Landscape Policy and Design Standards that form the landscape and site restoration design criteria for the Project.  | Pre-construction; construction | Contractor         | Х   |  |
| 13.15 | Use data collected through the MOT administered Wildlife Accident Reporting System to identify areas of increased wildlife collisions and to monitor direct effects on wildlife.  | Operations                     | Contractor         | TBD |  |
| 13.16 | Identify the location of sensitive wildlife habitats, including but not limited to habitat for species at risk, red and blue listed plant communities and high biodiversity habitats, on detailed design drawings in order to avoid or minimize potential effects to these areas.  Decies at Risk   | Pre-construction               | Contractor         | Х   |  |
| 14.1  | Ensure that all reasonable measures are taken to avoid or lessen effects of the Project on listed wildlife species and their critical habitat and that potential effects that could occur are monitored. All mitigation and monitoring measures will be undertaken in a manner that is consistent with applicable recovery strategy and actions plans.  | Pre-construction; construction | MoT,<br>contractor | Х   |  |
| 14.2  | Undertake a salvage program for Pacific water shrew from, at a minimum, high and moderate-rated habitat adjacent to the SFPR. Other areas potentially requiring salvage will include lower-rated habitat, connected to higher-rated habitat, and will be determined in consultation with MoE and the PWS Recovery Team.   | Pre-construction; construction | Contractor         | Х   |  |
| 14.3  | Consult with MoE regarding the mitigation of potential effects on Pacific water shrew, and take all practical steps to apply the most recent Pacific water shrew best management practices to address potential effects, including identifying additional opportunities to avoid direct effects to areas, designated as critical habitat by the PWS Recovery Team, during design, construction and operation.   | Pre-construction; construction | Contractor         | TBD |  |

| 14.4  | Consult with MOE to develop a mitigation and compensation strategy for Pacific water shrew, where opportunities are available, based on habitat quality and connectivity to surrounding habitat. Undertake sampling program, where required, to determine the presence and distribution of Pacific water shrew to support detailed design of mitigation.   | Pre-construction; construction | MoT,<br>Contractor | TBD |  |
|-------|--|--------------------------------|--------------------|-----|--|
| 14.5  | Detailed design of wildlife crossing mitigation for southern red-backed vole (RBV) will be conducted assuming the presence of RBV in high and moderate rated habitat identified in the EA. Monitoring of the use of wildlife crossing structures will include provisions for assessing the use of such structures by RBV.  | Pre-construction               | Contractor         | TBD |  |
| 14.6  | Undertake a review of local museum specimens to confirm the distribution of <i>Sorex rowheri</i> within the Lower Fraser Valley. Where possible, use findings to support detailed design of mitigation.  | Pre-construction               | Contractor         | TBD |  |
| 14.7  | Use information obtained through the Mitigation Monitoring Plan [currently known as the SFPR Vegetation and Wildlife Mitigation Monitoring Plan (February 2008)] to support detailed planning of mitigation to address potential noise, visual and collision effects of the project on barn owl. Undertake long term monitoring of the effectiveness of such mitigation as part of the implementation of the Mitigation Monitoring Plan [currently known as the SFPR Vegetation and Wildlife Mitigation Monitoring Plan (February 2008)].  | All phases                     | Contractor         | TBD |  |
| 14.8  | Use information obtained through the Mitigation Monitoring Plan [currently known as the SFPR Vegetation and Wildlife Mitigation Monitoring Plan (February 2008)] to support detailed planning of mitigation, including pre-construction salvage where appropriate, to address potential effects of the project, including those related to collision and changes in hydrology, on red-legged frog and western toad. Undertake long term monitoring of the effectiveness of such mitigation as part of the implementation of the Mitigation Monitoring Plan [currently known as the SFPR Vegetation and Wildlife Mitigation Monitoring Plan (February 2008)]. | All phases                     | Contractor         | X   |  |
| 14.9  | Consult with MOE to plan and undertake at least one preconstruction, one construction and two operational inventories of at-risk aquatic insects in habitat known to or suspected of supporting such species and potentially affected by the project, including but not necessarily limited to the Fraser Heights Wetland, to confirm the findings of the environmental assessment and to monitor potential impacts of the project on aquatic insects.   | All phases                     | Contractor         | X   |  |
| 14.10 | Consult with the Canadian Wildlife Service to develop and implement a Mitigation Monitoring Plan [currently known as the SFPR Vegetation and Wildlife Mitigation Monitoring Plan] to monitor and assess the effectiveness of measures proposed to avoid or mitigate potential effects on Sandhill Crane. The Plan will identify: - species habitat requirements; - existing conditions in the project area; - potential project related effects and mitigation; - core indicators for assessing the effectiveness of mitigation; and - proposed study methodology and data interpretation and reporting protocols.   | Pre-construction; construction | МоТ                | TBD |  |
|       | urns Bog   |                                |                    |     |  |
| 15.1  | Avoid potentially significant impacts to hydrological and ecological values associated with Burns Bog (i.e. alignment refinements to avoid ecological and hydrological values, development of hydrological mitigation that meet the hydrologic objectives identified).   | All phases                     | MoT,<br>Contractor | X   |  |

| 15.2 | Consult with the MV, CoD, MoE, EC, and the Burns Bog Management Planning Committee (BBMPC) and Scientific Advisory Panel (SAP) to ensure design, construction and operation of the Project complements long term management objectives established for the Burns Bog Ecological Conservation Area.  | All phases              | Contractor | TBD |  |
|------|---|-------------------------|------------|-----|--|
| 15.3 | Consult with the reviewing agencies to finalize construction and post construction monitoring requirements related to Burns Bog including, but not limited to, those identified in the Vegetation and Wildlife Mitigation Monitoring Strategy (April 2007) [replaced by the SFPR Vegetation and Wildlife Mitigation Monitoring Plan]. Monitoring requirements with respect to Burns Bog will include but not be limited to those relating to: air quality, water quality, water levels, red-listed plant communities, and wildlife  | Construction, operation | Contractor | Х   |  |
| 15.4 | Share environmental data from Burns Bog collected as part of the development of the SFPR project, with agencies responsible for the management of the Burns Bog Ecological Conservancy Area in order to support the implementation of the long term management plan for the Bog.  | All phases              | Contractor | TBD |  |
| 15.5 | Design, construct and operate hydrology mitigation infrastructure, to mitigate potential effects of the project on the hydrology of Burns Bog, in a way that meets the following performance objectives:  - Site specific solutions – the design, construction and operation of hydrology mitigation will be based on, and take into account, site specific conditions.  - Compatibility between highway water management and bog water management – Providing for active water level controls in the Bog that are independent of SFPR-related water management.  - Prevention of mineral migration into the Bog. – Where indicated, providing a low permeability barrier between the SFPR highway ditch and the lagg ponds/ditches by: using material to construct the berm that supports appropriate vegetation on the berm and prevents the introduction of mineral material into the Bog; and maintaining hydraulic gradients so that Type 1 bog waters flow toward the highway at all times.  - Resilience – Providing a design that is sufficiently robust to maintain and actively manage water levels under average and extreme conditions and if Bog conditions change.  - Highway and mitigation construction does not preclude future restoration of Burns Bog – Providing flexibility of design that allows, for example, for future water control structures that allow for raising of water level as part of future bog restoration.  - Holistic design – Hydrology mitigation concepts are designed in way that ensure they will be compatible with, and help achieve multiple, mitigation requirements. As the design of hydrology mitigation is advanced, it will be documented in a Hydrology Work Plan [currently known as Hydrology Workplan (Burns Bog)]. This document will be finalized prior to commencement of pre-load activities around Burns Bog. | All phases              | МоТ        | TBD |  |
| 15.6 | Pre-load activities around Burns Bog, including areas north of the Highway 99 interchange and west of Nordel Way, will not commence until TC (and other decision-making authorities as required) has reviewed and is satisfied with the final Hydrology Work Plan and the status of the hydrology mitigation design.  | Pre-construction        | MoT        | TBD |  |

| 15.7  | Provide opportunities for the active involvement of agencies responsible for the management of the Burns Bog Ecological Conservancy Area, and the Scientific Advisory Panel (SAP), in the design, construction and operation of project related works adjacent to Burns Bog including but not limited to those proposed as mitigation for potential project related effects.   | All phases       | MoT,<br>contractor | TBD |  |
|-------|--|------------------|--------------------|-----|--|
| 15.8  | Consult with MV, CoD, EC and MoE on the development of a water balance model and a drainage model to support the design, construction and operation of hydrology mitigation infrastructure adjacent to Burns Bog and support implementation of the Burns Bog Ecological Conservancy Area Management Plan.  | Pre-construction | Contractor         | TBD |  |
| 15.9  | Finalize an Air Quality Management Plan [currently known as SFPR Air Quality Management Plan (Burns Bog Segment)], in consultation with TC, EC and other IAERC members as appropriate, prior to commencing pre-loading activities around Burns Bog. This document will identify all technically and economically feasible mitigation measures to be implemented to prevent generation and transmission of dust during the pre-load and construction phases of the project. | Pre-construction | MoT,<br>contractor |     |  |
| 15.10 | Collect a minimum of 4 months of baseline dust fall monitoring between June and September 2008. Following the collection of this information, the MoT will meet with TC and EC to discuss the baseline monitoring information collected and the approach for continued data collection, prior to the commencement of pre- loading activities around Burns Bog (i.e., north of the Highway 99 interchange and west of Nordel Way).  | Pre-construction | МоТ                |     |  |
| 15.11 | Work co-operatively with the Tsawwassen First Nation to maintain appropriate access for TFN members to Burns Bog to facilitate TFN's harvesting rights pursuant to the Tsawwassen Final Agreement.   | All phases       | MoT,<br>Contractor | TBD |  |
| 15.12 | Ensure that the development and operation of Stormwater management infrastructure does not compromise the ability to achieve hydrology mitigation objectives adjacent to Burns Bog.  | All phases       | MoT,<br>Contractor | TBD |  |
| 15.13 | Implement the monitoring and follow-up activities identified in the Screening document, for a period of five years after the project has commenced operation, to ensure the effectiveness of mitigation measures related to aerial deposition, hydrology, and Sandhill crane in the vicinity of Burns Bog.   | All phases       | MoT,<br>Contractor | TBD |  |
|       |  |                  |                    |     |  |
|       |  |                  |                    |     |  |



| 17.0 H | eritage  | Table 1                        |                    |     |
|--------|--|--------------------------------|--------------------|-----|
| 17.1   | Ensure that the design, construction and operation of the proposed project is advanced in a way that avoids, or minimizes potential impacts to heritage buildings  | All phases                     | MoT,<br>contractor | Х   |
| 17.2   | Consult with the Delta Heritage Advisory Commission and the Surrey Heritage Committee to define heritage interests and work with the Delta Museum and Archive to develop a photo record and inventory of potentially affected heritage houses.   | Pre-construction, construction | Contractor         | N/A |
| 17.3   | Prior to construction, undertake pre-condition surveys with respect to heritage buildings, as further described in commitment 9.9.   | Pre-construction               | Contractor         | N/A |
| 17.4   | Avoid, where practical and technically feasible, direct impacts to heritage buildings.   | All phases                     | Contractor         | NA/ |
| 18.0 N | avigable Waters  |                                |                    |     |
| 18.1   | Obtain regulatory approval related to crossings of designated Navigable Waters pursuant to the Navigable Waters Protection Act (NWPA), including but not necessarily limited to, McAdam Creek, Collings Creek, Manson Canal, and Crescent Slough, prior to commencement of works.  | Pre-construction, construction | MoT,<br>Contractor | N/A |
| 19.0 S | ocio-economic  |                                |                    |     |
| 19.1   | Mitigate potential Project-related visual/lighting impacts through use of screening, fencing and landscaping in consultation with local government. Use dark-sky compliant lighting for the Project.   | Pre-construction, construction | Contractor         | TBD |
| 19.2   | Manage potential impacts to emergency response services by: - Ensuring emergency response plans (including a Spill Response Management and Emergency Response Plan) are in place during the construction phase of the Project, and updated annually, at a minimum; - Consulting first responders in Traffic Management Plan development; and - Consulting with local fire departments to ensure adequate access. | Pre-construction, construction | Contractor         | Х   |
| 20.0 R |  |                                |                    |     |
| 20.1   | Avoid or minimize potential impacts from Project works and activities to rail corridors.   | All phases                     | Contractor         | X   |
| 20.2   | Notify Transport Canada of project works as required under the <i>Notice of Railway Works Regulations</i> . Notify the public and affected stakeholders in accordance with the <i>Railway Safety Act</i> .   | All phases                     | Contractor         | TBD |
| 20.3   | Comply with Canadian transportation standards and regulations as well as the design specifications of the respective railway with regard to vertical and horizontal railroad clearance of new or upgraded infrastructure.  | Pre-construction               | Contractor         | TBD |
| 20.4   | Minimize railroad closures during construction.  | Construction                   | Contractor         | Х   |

# **APPENDIX 7: WATER QUALITY DATA**

| Site<br>Code | Site                 | Date       | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity<br>(mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments  |
|--------------|----------------------|------------|-------|-----------------------|-------------------------------|-------------------------|------|--------------|--------------------|---|
| WQ-<br>12    | Fortis<br>Culvert DS | 02/11/2020 | 01:00 | 9.6                   | 4.38                          | 0.35                    | 4.75 | 0.17         | 3.0                | Sampling done<br>during night<br>shift  |
| WQ-<br>12    | Fortis<br>Culvert DS | 02/11/2020 | 03:00 | 8.4                   | 4.25                          | 0.45                    | 4.80 | 0.25         | 5.2                | Sampling done<br>during night<br>shift  |
| WQ-2         | Silda Ditch<br>MS    | 02/11/2020 | 13:15 | 11.6                  | 4.98                          | 0.22                    | 7.20 | 0.16         | 7.9                |   |
| WQ-3         | Silda Ditch<br>DS    | 02/11/2020 | 13:20 | 11.7                  | 6.77                          | 0.16                    | 6.91 | 0.09         | 12.1               |   |
| WQ-4         | Fraser Rr            | 02/11/2020 | 13:00 | 11.4                  | 8.37                          | 0.26                    | 7.84 | 0.13         | 92.8               | High tide,<br>coming in   |
| WQ-<br>11    | Fortis<br>Culvert US | 02/11/2020 | 13:30 | 12.4                  | 4.06                          | 0.10                    | 5.08 | 0.06         | 3.0                | No instream<br>works today  |
| WQ-<br>12    | Fortis<br>Culvert DS | 02/11/2020 | 13:35 | 12.1                  | 5.98                          | 0.11                    | 4.71 | 0.05         | 3.5                | No instream works today.  |
| WQ-<br>11    | Fortis<br>Culvert US | 03/11/2020 | 01:30 | 11.4                  | 4.53                          | 0.80                    | 4.95 | 0.07         | 3.8                | Nightshift-<br>dewatering<br>and instream<br>works  |
| WQ-<br>12    | Fortis<br>Culvert DS | 03/11/2020 | 01:00 | 11.5                  | 4.09                          | 0.73                    | 4.85 | 0.11         | 5.9                | Nightshift-<br>dewatering<br>and instream<br>works  |
| WQ-2         | Silda Ditch<br>MS    | 03/11/2020 | 11:00 | 10.7                  | 7.00                          | 0.31                    | 6.69 | 0.15         | 36.2               | Heavy rain while sampling   |
| WQ-<br>12    | Fortis<br>Culvert DS | 02/11/2020 | 01:00 | 9.6                   | 4.38                          | 0.35                    | 4.75 | 0.17         | 3.0                | Sampling done<br>during night<br>shift  |
| WQ-3         | Silda Ditch<br>DS    | 03/11/2020 | 10:50 | 10.6                  | 6.99                          | 0.32                    | 6.67 | 0.16         | 64.5               | Heavy rain while sampling. Sand washouts noticed ~6 m US. Observed turbidity passing through straw waddle into stream from washout direction. Dispatched crew to rebuild washout, remove sediment in runoff path, and install ESC measures. |
| WQ-4         | Fraser Rr<br>Inlet   | 03/11/2020 | 10:00 | 10.6                  | 8.77                          | 0.16                    | 8.00 | 0.08         | 95.5               | going out.<br>Heavy rain<br>while<br>sampling.  |
| WQ-<br>11    | Fortis<br>Culvert US | 03/11/2020 | 10:30 | 9.6                   | 5.60                          | 0.10                    | 5.32 | 0.05         | 8.5                | Heavy rain<br>while<br>sampling. No<br>instream<br>works.   |
| WQ-          | Fortis               | 03/11/2020 | 10:30 | 9.1                   | 8.21                          | 0.10                    | 5.29 | 0.05         | 3.4                | Heavy rain  |

| Site<br>Code | Site                 | Date       | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity<br>(mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments   |
|--------------|----------------------|------------|-------|-----------------------|-------------------------------|-------------------------|------|--------------|--------------------|--|
|              |                      |            |       |                       | (1131-)                       |                         |      |              |                    | sampling. No<br>instream<br>works.   |
| WQ-2         | Silda Ditch<br>MS    | 04/11/2020 | 13:05 | 10.9                  | 4.23                          | 0.28                    | 6.73 | 0.12         | 19.8               | Heavy rain during sampling and Fraser River high tide moving out had an impact on the turbidity as water levels were higher than normal. |
| WQ-3         | Silda Ditch<br>DS    | 04/11/2020 | 13:00 | 11.1                  | 6.17                          | 0.22                    | 6.82 | 0.16         | 25.6               | Heavy rain during sampling and Fraser River high tide moving out had an impact on the turbidity as water levels were higher than normal. |
| WQ-4         | Fraser Rr<br>Inlet   | 04/11/2020 | 10:30 | 11.5                  | 7.85                          | 0.14                    | 7.95 | 0.07         | 70.6               | High tide,<br>going out.<br>Heavy rain<br>while<br>sampling.   |
| WQ-<br>11    | Fortis<br>Culvert US | 04/11/2020 | 11:15 | 11.2                  | 5.76                          | 0.11                    | 5.22 | 0.06         | 4.8                | No instream works.   |
| WQ-<br>12    | Fortis<br>Culvert DS | 04/11/2020 | 11:15 | 11.0                  | 7.22                          | 0.10                    | 5.06 | 0.05         | 2.6                | No instream works.   |
| WQ-2         | Silda Ditch<br>MS    | 05/11/2020 | 11:25 | 9.6                   | 4.97                          | 0.13                    | 6.79 | 0.08         | 5.9                |  |
| WQ-3         | Silda Ditch<br>DS    | 05/11/2020 | 11:30 | 9.5                   | 5.21                          | 0.13                    | 6.92 | 0.08         | 7.1                | Spillway<br>installed at<br>previous<br>washouts on<br>nightshift prior<br>to sampling   |
| WQ-4         | Fraser Rr<br>Inlet   | 05/11/2020 | 10:30 | 9.2                   | 8.49                          | 0.04                    | 7.59 | 0.04         | 70.6               | High tide  |
| WQ-<br>11    | Fortis<br>Culvert US | 05/11/2020 | 10:50 | 9.2                   | 5.09                          | 0.10                    | 5.46 | 0.05         | 2.9                | No instream works.   |
| WQ-<br>12    | Fortis<br>Culvert DS | 05/11/2020 | 10:45 | 9.4                   | 4.07                          | 0.10                    | 4.83 | 0.05         | 3.2                | No instream works.   |
| WQ-2         | Silda Ditch<br>MS    | 06/11/2020 | 10:00 | 9.4                   | 4.77                          | 0.14                    | 6.65 | 0.07         | 6.4                | 1,5115.  |
| WQ-3         | Silda Ditch<br>DS    | 06/11/2020 | 10:05 | 9.2                   | 5.96                          | 0.16                    | 6.68 | 0.08         | 6.8                |  |
| WQ-4         | Fraser Rr<br>Inlet   | 06/11/2020 | 10:20 | 9.2                   | 8.49                          | 0.04                    | 7.59 | 0.04         | 1.8                | High tide  |
| WQ-<br>11    | Fortis<br>Culvert US | 06/11/2020 | 10:55 | 9.2                   | 4.87                          | 0.10                    | 5.50 | 0.05         | 2.5                | No instream works  |
| WQ-<br>12    | Fortis<br>Culvert DS | 06/11/2020 | 11:00 | 9.5                   | 3.59                          | 0.09                    | 4.65 | 0.04         | 1.4                | No instream<br>works   |
| WQ-2         | Silda Ditch<br>MS    | 08/11/2020 | 13:00 | 7.1                   | 5.87                          | 0.13                    | 6.59 | 0.06         | 5.9                | -  |
| WQ-3         | Silda Ditch<br>DS    | 08/11/2020 | 13:05 | 7.6                   | 4.69                          | 0.15                    | 6.98 | 0.08         | 11.6               | ÷  |
| WQ-4         | Fraser Rr<br>Inlet   | 08/11/2020 | 12:00 | 8.9                   | 9.12                          | 0.06                    | 7.94 | 0.05         | 92.4               | High tide  |
| WQ-<br>11    | Fortis<br>Culvert US | 08/11/2020 | 12:10 | 7.4                   | 4.11                          | 0.10                    | 5.23 | 0.06         | 3.7                |  |

| Site<br>Code | Site                 | Date       | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity (mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments   |
|--------------|----------------------|------------|-------|-----------------------|-------------------------------|----------------------|------|--------------|--------------------|--|
| WQ-<br>12    | Fortis<br>Culvert DS | 08/11/2020 | 12:15 | 7.5                   | 3.90                          | 0.10                 | 4.99 | 0.05         | 3.6                | Sampling<br>location in<br>grass along<br>bank   |
| WQ-2         | Silda Ditch<br>MS    | 09/11/2020 | 12:00 | 7.4                   | 6.06                          | 0.33                 | 6.58 | 0.16         | 8.9                | -  |
| WQ-3         | Silda Ditch<br>DS    | 09/11/2020 | 11:55 | 7.4                   | 9.06                          | 0.34                 | 6.54 | 0.17         | 13.4               | -  |
| WQ-4         | Fraser Rr<br>Inlet   | 09/11/2020 | 10:45 | 8.7                   | 9.54                          | 0.14                 | 7.23 | 0.07         | 80.2               | Mid-tide,<br>coming in                           |
| WQ-<br>11    | Fortis<br>Culvert US | 09/11/2020 | 11:15 | 7.4                   | 5.59                          | 0.10                 | 5.20 | 0.05         | 4.1                |  |
| WQ-<br>12    | Fortis<br>Culvert DS | 09/11/2020 | 11:10 | 6.7                   | 5.22                          | 0.09                 | 4.71 | 0.05         | 1.8                | Sampling<br>location in<br>grass along<br>bank   |
| WQ-2         | Silda Ditch<br>MS    | 12/11/2020 | 12:25 | 6.9                   | 6.57                          | 0.29                 | 6.42 | 0.16         | 12.4               | Raining while sampling                           |
| WQ-3         | Silda Ditch<br>DS    | 12/11/2020 | 12:30 | 7.0                   | 8.73                          | 0.32                 | 6.71 | 0.16         | 20.1               | Raining while sampling                           |
| WQ-4         | Fraser Rr<br>Inlet   | 12/11/2020 | 8:00  | 7.9                   | 9.66                          | 0.15                 | 7.86 | 0.06         | 81.7               | Low tide,<br>coming in                           |
| WQ-2         | Silda Ditch<br>MS    | 13/11/2020 | 14:55 | 9.1                   | 7.77                          | 0.16                 | 6.46 | 0.08         | 12.2               | Ditch running<br>high ~50mm of<br>rain in 24 hrs |
| WQ-3         | Silda Ditch<br>DS    | 13/11/2020 | 15:00 | 10.3                  | 6.73                          | 0.15                 | 6.41 | 0.07         | 14.3               | Ditch running<br>high ~50mm of<br>rain in 24 hrs |
| WQ-4         | Fraser Rr<br>Inlet   | 13/11/2020 | 13:40 | 7.7                   | 9.05                          | 0.15                 | 7.18 | 0.07         | 47.0               | High tide,<br>coming in                          |
| WQ-2         | Silda Ditch<br>MS    | 16/11/2020 | 14:25 | 8.1                   | 7.83                          | 0.07                 | 5.52 | 0.04         | 4.3                | Ditch running<br>high, raining                   |
| WQ-3         | Silda Ditch<br>DS    | 16/11/2020 | 14:30 | 8.7                   | 6.73                          | 0.08                 | 5.66 | 0.04         | 5.2                | Ditch running high, raining                      |
| WQ-4         | Fraser Rr<br>Inlet   | 16/11/2020 | 13:30 | 8.9                   | 9.14                          | 0.19                 | 7.04 | 0.10         | 27.3*              | High-tide,<br>coming in,<br>raining              |
| WQ-2         | Silda Ditch<br>MS    | 17/11/2020 | 12:30 | 7.9                   | 7.13                          | 0.19                 | 5.67 | 0.09         | 4.0                | Ditch running<br>high, raining                   |
| WQ-3         | Silda Ditch<br>DS    | 17/11/2020 | 12:25 | 8.2                   | 5.84                          | 0.18                 | 5.92 | 0.09         | 5.8                | Ditch running<br>high, raining                   |
| WQ-4         | Fraser Rr<br>Inlet   | 17/11/2020 | 12:15 | 8.4                   | 8.99                          | 0.24                 | 7.26 | 0.12         | 43.8*              | High-tide,<br>coming in,<br>raining              |
| WQ-2         | Silda Ditch<br>MS    | 18/11/2020 | 15:35 | 9.2                   | 6.24                          | 0.11                 | 5.99 | 0.05         | 9.7                | Ditch running high, raining                      |
| WQ-3         | Silda Ditch<br>DS    | 18/11/2020 | 15:30 | 9.5                   | 6.39                          | 0.12                 | 6.23 | 0.06         | 14.2               | Ditch running<br>high, raining                   |
| WQ-4         | Fraser Rr<br>Inlet   | 18/11/2020 | 14:00 | 8.1                   | 8.16                          | 0.15                 | 6.91 | 0.07         | 23.3*              | High tide,<br>coming in,<br>raining              |
| WQ-2         | Silda Ditch<br>MS    | 19/11/2020 | 14:40 | 9.0                   | 6.03                          | 0.11                 | 5.95 | 0.06         | 9.2                | -  |
| WQ-3         | Silda Ditch<br>DS    | 19/11/2020 | 14:35 | 9.6                   | 4.51                          | 0.12                 | 6.17 | 0.06         | 6.9                | -  |
| WQ-4         | Fraser Rr<br>Inlet   | 19/11/2020 | 14:00 | 8.9                   | 8.49                          | 0.12                 | 6.76 | 0.06         | 17.5*              | High tide going<br>out                           |
| WQ-2         | Silda Ditch<br>MS    | 20/11/2020 | 11:45 | 8.6                   | 6.27                          | 0.11                 | 6.01 | 0.06         | 9.7                | 3  |
| WQ-3         | Silda Ditch<br>DS    | 20/11/2020 | 11:50 | 8.4                   | 5.12                          | 0.11                 | 6.12 | 0.05         | 8.7                | <u> </u>   |
| WQ-4         | Fraser Rr<br>Inlet   | 20/11/2020 | 11:00 | 8.8                   | 9.01                          | 0.13                 | 7.06 | 0.06         | 30.1*              | Mid-tide,<br>coming in                           |
| WQ-2         | Silda Ditch<br>MS    | 23/11/2020 | 16:00 | 8.2                   | 7.16                          | 0.25                 | 6.35 | 0.12         | 12.1               |  |

| Site<br>Code | Site                    | Date       | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity<br>(mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments   |
|--------------|-------------------------|------------|-------|-----------------------|-------------------------------|-------------------------|------|--------------|--------------------|--|
| WQ-3         | Silda Ditch<br>DS       | 23/11/2020 | 16:05 | 8.7                   | 5.38                          | 0.24                    | 6.28 | 0.12         | 8.3                |  |
| WQ-4         | Fraser Rr<br>Inlet      | 23/11/2020 | 12:30 | 8.4                   | 4.03                          | 0.13                    | 7.05 | 0.07         | 20.4               | High tide  |
| WQ-3         | West Ditch<br>(Area I3) | 23/11/2020 | 15:50 | 10.2                  | 4.53                          | 0.12                    | 6.14 | 0.06         | 6.7                |  |
| WQ-2         | Silda Ditch<br>MS       | 24/11/2020 | 13:20 | 8.9                   | 3.95                          | 0.24                    | 6.33 | 0.12         | 11.0               |  |
| WQ-3         | Silda Ditch<br>DS       | 24/11/2020 | 13:15 | 9.4                   | 4.25                          | 0.22                    | 6.58 | 0.11         | 10.0               |  |
| WQ-4         | Fraser Rr<br>Inlet      | 24/11/2020 | 11:50 | 8.7                   | 6.33                          | 0.14                    | 7.17 | 0.07         | 13.8               | High tide coming in  |
| WQ-2         | Silda Ditch<br>MS       | 25/11/2020 | 9:00  | 8.7                   | 4.12                          | 0.24                    | 6.29 | 0.13         | 7.6                | Table File.  |
| WQ-3         | Silda Ditch<br>DS       | 25/11/2020 | 9:05  | 9.1                   | 5.06                          | 0.23                    | 6.48 | 0.12         | 8.2                |  |
| WQ-4         | Fraser Rr<br>Inlet      | 25/11/2020 | 8:30  | 8.6                   | 8.97                          | 0.14                    | 7.03 | 0.07         | 14.9               | Mid-tide,<br>coming in   |
| WQ-2         | Silda Ditch<br>MS       | 26/11/2020 | 14:40 | 10.1                  | 9.24                          | 0.23                    | 6.13 | 0.11         | 8.3                | Raining while sampling   |
| WQ-3         | Silda Ditch<br>DS       | 26/11/2020 | 14:35 | 11.1                  | 4.69                          | 0.23                    | 6.29 | 0.11         | 7.3                | Raining while sampling   |
| WQ-4         | Fraser Rr<br>Inlet      | 26/11/2020 | 13:45 | 10.9                  | 8.35                          | 0.13                    | 6.93 | 0.07         | 11.2               | High tide<br>coming in.<br>Raining while<br>sampling.  |
| WQ-2         | Silda Ditch<br>MS       | 27/11/2020 | 7:45  | 8.8                   | 4.59                          | 0.24                    | 6.24 | 0.12         | 7.6                |  |
| WQ-3         | Silda Ditch<br>DS       | 27/11/2020 | 7:50  | 9.0                   | 5.19                          | 0.23                    | 6.51 | 0.12         | 8.4                |  |
| WQ-4         | Fraser Rr<br>Inlet      | 27/11/2020 | 8:00  | 8.6                   | 9.06                          | 0.14                    | 7.09 | 0.07         | 19.7               | Mid-tide going<br>out  |
| WQ-2         | Silda Ditch<br>MS       | 01/12/2020 | 9:45  | 8.8                   | 4.59                          | 0.24                    | 6.24 | 0.12         | 7.6                |  |
| WQ-3         | Silda Ditch<br>DS       | 01/12/2020 | 9:50  | 9.0                   | 5.19                          | 0.23                    | 6.51 | 0.12         | 8.4                |  |
| WQ-4         | Fraser Rr<br>Inlet      | 01/12/2020 | 9:00  | 8.6                   | 9.06                          | 0.14                    | 7.09 | 0.07         | 19.7               | High tide coming in  |
| WQ-2         | Silda Ditch<br>MS       | 03/12/2020 | 11:15 | 8.6                   | 4.61                          | 0.23                    | 6.16 | 0.12         | 7.1                |  |
| WQ-3         | Silda Ditch<br>DS       | 03/12/2020 | 11:20 | 8.5                   | 5.94                          | 0.24                    | 6.43 | 0.12         | 7.9                |  |
| WQ-4         | Fraser Rr<br>Inlet      | 03/12/2020 | 10:45 | 8.7                   | 8.77                          | 0.13                    | 7.39 | 0.07         | 22.5               | Mid tide going<br>out  |
| WQ-2         | Silda Ditch<br>MS       | 08/12/2020 | 14:40 | 10.1                  | 9.24                          | 0.23                    | 6.13 | 0.11         | 8.3                | -  |
| WQ-3         | Silda Ditch<br>DS       | 08/12/2020 | 14:35 | 11.1                  | 4.69                          | 0.23                    | 6.29 | 0.11         | 7.3                |  |
| WQ-4         | Fraser Rr<br>Inlet      | 08/12/2020 | 13:45 | 10.9                  | 8.35                          | 0.13                    | 6.93 | 0.07         | 11.2               | Mid tide going<br>out  |
| WQ-2         | Silda Ditch<br>MS       | 10/12/2020 | 12:30 | 10.4                  | 8.71                          | 0.24                    | 6.19 | 0.12         | 9.1                | -  |
| WQ-3         | Silda Ditch<br>DS       | 10/12/2020 | 12:35 | 11.3                  | 5.43                          | 0.23                    | 6.33 | 0.11         | 6.9                | (+)  |
| WQ-4         | Fraser Rr               | 10/12/2020 | 13:15 | 11.2                  | 9.12                          | 0.14                    | 6.98 | 0.07         | 13.9               | High tide  |
| WQ-2         | Silda Ditch<br>MS       | 15/12/2020 | 15:10 | 9_4                   | 6.69                          | 0.30                    | 6.41 | 0.15         | 10.9               |  |
| WQ-3         | Silda Ditch<br>DS       | 15/12/2020 | 15:15 | 11.1                  | 4.84                          | 0.31                    | 6.35 | 0.16         | 22.2*              | L kely due to<br>rain/wind with<br>potential to<br>disturb<br>sediment &<br>turbid river at<br>high tide |

| Site<br>Code | Site   | Date       | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity<br>(mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments  |
|--------------|--|------------|-------|-----------------------|-------------------------------|-------------------------|------|--------------|--------------------|---|
|              |  |            |       |                       | ,,                            |                         |      |              |                    | mixing at Site interface. No work occurring between mid-8 downstream locations. |
| WQ-4         | Fraser Rr<br>Inlet   | 15/12/2020 | 15:30 | 8.1                   | 5.67                          | 0.17                    | 7.30 | 0.08         | 37.1*              | High tide   |
| WQ-2         | Silda Ditch<br>MS  | 17/12/2020 | 13:45 | 10.2                  | 7.12                          | 0.20                    | 6.34 | 0.10         | 11.1               |   |
| WQ-3         | Silda Ditch<br>DS  | 17/12/2020 | 13:40 | 11.0                  | 7.01                          | 0.19                    | 6.37 | 0.09         | 10.40              |   |
| WQ-4         | Fraser Rr<br>Inlet   | 17/12/2020 | 14:00 | 7.3                   | 13.81                         | 0.13                    | 7.25 | 0.06         | 47.4*              | Mid tide, in flow   |
| WQ-2         | Silda Ditch<br>MS  | 22/12/2020 | 12:40 | 6.9                   | 12.28                         | 0.15                    | 6.31 | 0.08         | 3.8                |   |
| WQ-3         | Silda Ditch<br>DS  | 22/12/2020 | 12:35 | 7.2                   | 6.92                          | 0.26                    | 6.44 | 0.13         | 7.77               |   |
| WQ-4         | Fraser Rr  | 22/12/2020 | 12:10 | 7.3                   | 8.34                          | 0.13                    | 6.50 | 0.06         | 11.2               | High tide   |
| 2            | Silda ditch<br>midstream                                       | 05/01/2021 | 10:45 | 7.0                   | 9.63                          | 0.12                    | 6.77 | 0.06         | 8.7                |   |
| 3            | Silda ditch<br>downstream                                      | 05/01/2021 | 10:30 | 7.5                   | 7.70                          | 0.16                    | 6.64 | 0.08         | 10.30              |   |
| 4            | Fraser River   | 05/01/2021 | 10:20 | 7.6                   | 7.82                          | 0.36                    | 7.01 | 0.18         | 37.4               | Mid tide coming in  |
|              | S4 pump<br>intake  | 06/01/2021 | 7:30  | 8.29                  | -                             | 2                       | 1    | 2            | 4                  | -   |
|              | S4 pump<br>discharge<br>after<br>passing<br>through<br>channel | 06/01/2021 | 7:35  |                       | 10.6                          | 5/                      | 2    | 2 9          | -                  | -   |
|              | Cougar<br>Creek<br>upstream of<br>effluent                     | 06/01/2021 | 8:30  |                       | 2.36                          | -                       | -    | -            | -                  | -   |
|              | Cougar<br>Creek<br>downstream<br>of effluent                   | 06/01/2021 | 9:00  |                       | 3.60                          | 5                       | *    | -            | -                  | -   |
| 2            | Silda ditch<br>midstream                                       | 07/01/2021 | 13:35 | 7.2                   | 4.99                          | 0.14                    | 6.93 | 0.07         | 42.2               | High tide   |
| 3            | Silda ditch<br>downstream                                      | 07/01/2021 | 13:30 | 7.9                   | 5.82                          | 0.18                    | 6.71 | 0.09         | 7.94               |   |
| 4            | Fraser River   | 07/01/2021 | 13:00 | 7.6                   | 8.71                          | 0.34                    | 6.86 | 0.17         | 9.21               | High tide   |
| 2            | Silda ditch<br>midstream                                       | 2021/01/12 | 9:00  | 7.2                   | 3.67                          | 0.12                    | 6.58 | 0.06         | 10.4               |   |
| 3            | Silda ditch<br>downstream                                      | 2021/01/12 | 9:05  | 7.8                   | 4.83                          | 0.16                    | 6.79 | 0.08         | 7.94               |   |
| 4            | Fraser River   | 2021/01/12 | 8:30  | 7.6                   | 7.21                          | 0.32                    | 7.08 | 0.16         | 36.3               | Mid tide going out  |
| 13           | Cougar<br>Creek US   | 2021/01/13 | 13:30 |                       | 7                             | 4                       | -    | 8            | 3.64               | no pumping<br>from S4 for<br>past 48 hours                                      |
| 14           | Cougar<br>Creek DS   | 2021/01/13 | 13:40 |                       |                               | 2)                      |      | -            | 2.04               | no pumping<br>from S4 for<br>past 48 hours                                      |
| N/A          | 96 Street<br>Upstream  | 17-JAN-21  | 20:00 | 9.2                   | 6.25                          | 0.19                    | 6.23 | 0.25         | 2.8                | Dewatering activities   |
| N/A          | 96th Street<br>Downstream                                      | 17-JAN-21  | 20:15 | 9.5                   | 6.20                          | 0.10                    | 6.67 | 0.36         | 3.0                | Dewatering activities   |
| 2            | Silda Ditch<br>Midstream                                       | 18-JAN-21  | 10:00 | 6.4                   | 6.67                          | 0.37                    | 6.50 | 0.18         | 8.36               | -   |

| Site<br>Code | Site                          | Date      | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity<br>(mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments                 |
|--------------|-------------------------------|-----------|-------|-----------------------|-------------------------------|-------------------------|------|--------------|--------------------|--------------------------|
| 3            | Silda Ditch<br>Downstream     | 18-JAN-21 | 10:00 | 6.6                   | 8.22                          | 0.18                    | 6.74 | 0.09         | 13.10              | -                        |
| 4            | Fraser River                  | 18-JAN-21 | 10:30 | 5.4                   | 11.03                         | 0.13                    | 7.19 | 0.06         | 9.58               | Mid-tide going out       |
| 5            | 96 Street<br>Upstream         | 18-JAN-21 | 11:15 | 6.4                   | 7.12                          | 0.03                    | 4.51 | 0.02         | 1.30               | No dewatering activities |
| 6            | 96th Street<br>Downstream     | 18-JAN-21 | 11:00 | 6.4                   | 12.42                         | 0.05                    | 5.24 | 0.02         | 1.54               | No dewatering activities |
| 13           | Cougar<br>Creek<br>Upstream   | 18-JAN-21 | 10:15 | 6.8                   | 9.64                          | 0.20                    | 6.98 | 0.10         | 1.34               | No dewatering activities |
| 14           | Cougar<br>Creek<br>Downstream | 18-JAN-21 | 10:20 | 6.9                   | 9.24                          | 0.21                    | 7.02 | 0.11         | 2.24               | No dewatering activities |
| TEMP         | Α                             | 18-JAN-21 | 11:30 | 6.4                   | 8.39                          | 0.02                    | 4.29 | 0.01         | 0.77               | -                        |
| TEMP         | В                             | 18-JAN-21 | 11:20 | 6.8                   | 4.85                          | 0.21                    | 5.57 | 0.10         | 6.02               | 4                        |
| TEMP         | С                             | 18-JAN-21 | 11:50 | 7.0                   | 6.40                          | 0.11                    | 5.64 | 0.06         | 2.14               |                          |
| TEMP         | D                             | 18-JAN-21 | 11:55 | 6.7                   | 9.27                          | 0.10                    | 5.72 | 0.05         | 5.66               | -                        |
| TEMP         | E                             | 18-JAN-21 | 12:00 | 7.3                   | 10.60                         | 0.10                    | 5.52 | 0.05         | 2.29               | ÷                        |
| TEMP         | F                             | 18-JAN-21 | 12:30 | 7.6                   | 3.36                          | 0.14                    | 5.72 | 0.07         | 3.38               |                          |
| TEMP         | G                             | 18-JAN-21 | 12:40 | 7.1                   | 5.97                          | 0.37                    | 5.75 | 0.18         | 9.89               | -                        |
| TEMP         | Н                             | 18-JAN-21 | 13:00 | 9.2                   | 6.36                          | 0.19                    | 5.81 | 0.09         | 7.83               | -                        |
| TEMP         | 1                             | 18-JAN-21 | 12:55 | 8.2                   | 8.28                          | 0.08                    | 5.37 | 0.04         | 1.14               | -                        |
| TEMP         | J                             | 18-JAN-21 | 13:30 | 8.0                   | 6.43                          | 0.06                    | 5.34 | 0.03         | 1.14               | -                        |
| TEMP         | K                             | 18-JAN-21 | 13:20 | 7.4                   | 5.24                          | 0.11                    | 5.69 | 0.05         | 4.20               | i <del>)</del> ·         |
| TEMP         | L                             | 18-JAN-21 | 13:40 | 7.9                   | 3.72                          | 0.04                    | 3.94 | 0.02         | 1.74               | 4                        |
| TEMP         | M                             | 18-JAN-21 | 13:35 | 9.6                   | 4.80                          | 0.20                    | 5.64 | 0.10         | 1.90               | 3                        |
| TEMP         | N                             | 18-JAN-21 | 14:00 | 8.5                   | 5.63                          | 0.09                    | 5.31 | 0.05         | 1.02               | -                        |
| N/A          | 96 Street<br>Upstream         | 18-JAN-21 | 23:30 | 4.8                   | 6.66                          | 0.85                    | 6.63 | 0.15         | 3.6                | Dewatering activities    |
| N/A          | 96th Street<br>Downstream     | 18-JAN-21 | 23:45 | 4.2                   | 5.59                          | 0.59                    | 6.69 | 0.16         | 4.3                | Dewatering activities    |
| N/A          | 96 Street<br>Upstream         | 19-JAN-21 | 23:45 | 5.1                   | 6.00                          | 0.23                    | 6.60 | 0.45         | 4.6                | Dewatering activities    |
| N/A          | 96th Street<br>Downstream     | 19-JAN-21 | 23:15 | 5.3                   | 5.23                          | 0.22                    | 6.45 | 0.46         | 7.3                | Dewatering activities    |
| N/A          | Fraser River<br>Inlet         | 20-JAN-21 | 10:20 | 6.9                   | 5.29                          | 0.13                    | 6.91 | 0.06         | 8.78               |                          |
| N/A          | Cougar<br>Creek<br>Downstream | 20-JAN-21 | 10:20 | 8.8                   | 6.93                          | 0.22                    | 6.64 | 0.11         | 1.38               | No dewatering activities |
| N/A          | Cougar<br>Creek<br>Upstream   | 20-JAN-21 | 10:15 | 9.4                   | 6.62                          | 0.22                    | 6.43 | 0.11         | 1.67               | No dewatering activities |
| N/A          | 96th Street<br>Downstream     | 20-JAN-21 | 13:30 | 7.3                   | 0.48                          | 0.04                    | 5.50 | 0.02         | 0.96               | 4                        |
| N/A          | 96 Street<br>Upstream         | 20-JAN-21 | 13:45 | 7.4                   | 0.24                          | 0.04                    | 5.12 | 0.02         | 0.93               | ÷                        |
| N/A          | Silda Ditch<br>Midstream      | 20-JAN-21 | 12:35 | 9.0                   | 2.70                          | 0.42                    | 6.31 | 0.21         | 7.87               |                          |
| N/A          | Silda Ditch<br>Downstream     | 20-JAN-21 | 12:40 | 7.6                   | 2.95                          | 0.26                    | 6.50 | 0.13         | 9.26               | -                        |
| N/A          | 96 Street<br>Upstream         | 21-JAN-21 | 00:30 | 5.9                   | 7_01                          | 0.75                    | 6.03 | 0.35         | 1.8                | Dewatering activities    |
| N/A          | 96th Street<br>Downstream     | 21-JAN-21 | 00:55 | 4.7                   | 6.25                          | 0.34                    | 6.17 | 0.46         | 1.3                | Dewatering activities    |

| Site<br>Code | Site                      | Date      | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity<br>(mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments                  |
|--------------|---------------------------|-----------|-------|-----------------------|-------------------------------|-------------------------|------|--------------|--------------------|---------------------------|
| N/A          | 96 Street<br>Upstream     | 21-JAN-21 | 21:30 | 3.8                   | 3.45                          | 0.95                    | 5.67 | 0.32         | 1.90               | Dewatering activities     |
| N/A          | 96th Street<br>Downstream | 21-JAN-21 | 22:00 | 3.6                   | 4.05                          | 0.72                    | 6.04 | 0.35         | 1.25               | Dewatering activities     |
| NA           | 96 Street<br>US           | 24-Jan-21 | 23:30 | 2.3                   | 3.00                          | 0.23                    | 6.33 | 0.75         | 1.8                | Dewatering activities     |
| NA           | 96 Street<br>DS           | 24-Jan-21 | 23:55 | 2.5                   | 2.45                          | 0.19                    | 6.37 | 0.86         | 2.3                | Dewatering activities     |
| NA           | Silda Ditch<br>DS         | 25-Jan-21 | 11:05 | 6.8                   | 6.01                          | 0.51                    | 6.39 | 0.26         | 9.27               |                           |
| NA           | Silda Ditch<br>MS         | 25-Jan-21 | 11:00 | 6.8                   | 8.21                          | 0.52                    | 6.45 | 0.26         | 9.75               |                           |
| NA           | Fraser River<br>Inlet     | 25-Jan-21 | 11:40 | 6.1                   | 13.93                         | 1.17                    | 6.87 | 0.59         | 4.98               | Mid-tide going<br>out     |
| NA           | 96 Street<br>DS           | 25-Jan-21 | 12:00 | 5.5                   | 9.21                          | 0.06                    | 5.65 | 0.03         | 0.78               |                           |
| NA           | 96 Street<br>US           | 25-Jan-21 | 12:15 | 5.0                   | 5.91                          | 0.05                    | 5.11 | 0.03         | 0.99               |                           |
| NA           | Cougar Ck<br>DS           | 25-Jan-21 | 10:35 | 7.5                   | 13.25                         | 0.43                    | 6.56 | 0.21         | 4.46               |                           |
| NA           | Cougar Ck<br>US           | 25-Jan-21 | 10:40 | 8.2                   | 14.02                         | 0.41                    | 6.35 | 0.21         | 4.02               |                           |
| NA           | 96 Street<br>US           | 26-Jan-21 | 13:30 | 2.1                   | 1.11                          | 0.33                    | 6.63 | 0.88         | 0.9                | Dewatering activities     |
| NA           | 96 Street<br>DS           | 26-Jan-21 | 13:55 | 2.1                   | 1.98                          | 0.32                    | 6.39 | 0.79         | 1.3                | Dewatering activities     |
| NA           | 96 Street<br>DS           | 27-Jan-21 | 00:25 | 2.5                   | 7.31                          | 0.17                    | 5.95 | 0.63         | 2.90               | Dewatering activities     |
| NA           | 96 Street<br>US           | 27-Jan-21 | 00:45 | 2.3                   | 6.51                          | 0.25                    | 5.74 | 0.53         | 1.95               | Dewatering activities     |
| NA           | 96 Street<br>DS           | 28-Jan-21 | 02:00 | 4.1                   | 4.44                          | 0.22                    | 6.13 | 0.33         | 3.90               | Dewatering activities     |
| NA           | 96 Street<br>US           | 28-Jan-21 | 02:35 | 4.3                   | 7.90                          | 0.14                    | 6.00 | 0.48         | 2.10               | Dewatering activities     |
| NA           | Silda Ditch<br>DS         | 29-Jan-21 | 11:05 | 8.4                   | 8.38                          | 0.24                    | 6.27 | 0.12         | 7.56               |                           |
| NA           | Silda Ditch<br>MS         | 29-Jan-21 | 11:10 | 7.7                   | 3.28                          | 0.50                    | 6.30 | 0.25         | 15.60              |                           |
| NA           | Fraser Rr<br>Inlet        | 29-Jan-21 | 11:30 | 6.0                   | 7.91                          | 0.66                    | 6.71 | 0.33         | 8.37               |                           |
| NA           | 96 Stream<br>DS           | 29-Jan-21 | 11:45 | 6.0                   | 0.90                          | 0.05                    | 5.65 | 0.03         | 1.32               | Dewatering activities     |
| NA           | 96 Stream<br>DS           | 29-Jan-21 | 21:00 | 6.4                   | 2.41                          | 0.04                    | 5.19 | 0.02         | 1.12               | Dewatering activities     |
| NA           | 96 Street<br>DS           | 31-Jan-21 | 21:00 | 3.5                   | 0.33                          | 0.91                    | 5.78 | 0.23         | 1.89               | Dewatering activities     |
| NA           | 96 Street<br>US           | 31-Jan-21 | 21:45 | 3.2                   | 1.99                          | 0.67                    | 5.39 | 0.42         | 1.45               | Dewatering activities     |
| NA           | 96 Street<br>US           | 1-Feb-21  | 23:00 | 3.0                   | 0.11                          | 0.75                    | 5.89 | 0.08         | 2.90               | Dewatering activities     |
| NA           | 96 Street<br>DS           | 1-Feb-21  | 23:30 | 3.0                   | 0.89                          | 0.95                    | 5.79 | 0.06         | 1.90               | Dewatering activities     |
| NA           | 96 Street<br>US           | 2-Feb-21  | 15:17 | 7.5                   | ŧ                             | 0.06                    | 6.05 | 0.03         | 1.79               | DO meter not<br>recording |
| NA           | 96 Street<br>DS           | 2-Feb-21  | 15:34 | 8                     | +                             | 0.07                    | 6.07 | 0.03         | 3.84               | DO meter not recording    |
| NA           | Silda Ditch<br>US         | 3-Feb-21  | 12:20 | 8.9                   | 3.37                          | 0.3                     | 6.49 | 0.15         | 9.72               | Baseline                  |
| NA           | Silda Ditch<br>DS         | 3-Feb-21  | 11:30 | 7.6                   | 4.9                           | 0.29                    | 6.32 | 0.15         | 11.20              | Baseline                  |
| NA           | 96 Street<br>US           | 3-Feb-21  | 2:45  | 6.0                   | 0.55                          | 0.09                    | 6.04 | 0.44         | 2.10               | Dewatering activities     |
| NA           | 96 Street<br>DS           | 3-Feb-21  | 3:15  | 5.9                   | 0.47                          | 0.03                    | 6.02 | 0.56         | 2.16               | Dewatering activities     |

| Site<br>Code | Site                          | Date           | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity (mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments   |
|--------------|-------------------------------|----------------|-------|-----------------------|-------------------------------|----------------------|------|--------------|--------------------|--|
| NA           | 96 Street<br>US               | 3-Feb-21       | 4:41  | 5.5                   | 0.52                          | 0.45                 | 5.98 | 0.57         | 1.65               | Isolated ditch<br>tie in to 96<br>Street ditch   |
| NA           | 96 Street<br>DS               | 3-Feb-21       | 3:45  | 5.3                   | 0.59                          | 0.34                 | 5.90 | 0.78         | 2.35               | Isolated ditch<br>tie in to 96<br>Street ditch   |
| NA           | L1300 US                      | 3-Feb-21       | 22:00 | 6.2                   | 1.15                          | 0.14                 | 6.37 | 0.14         | 25.35              | Upcoming<br>ditch infilling<br>activities<br>baseline data<br>stagnant water           |
| NA           | L1300 DS                      | 3-Feb-21       | 22:30 | 6.2                   | 1.28                          | 0.59                 | 6.25 | 0.59         | 28.00              | Upcoming<br>ditch infilling<br>activities<br>baseline data<br>stagnant water           |
| NA           | Cougar Crk<br>US              | 4-Feb-21       | 11:12 | 8.2                   | 1.76                          | 0.20                 | 5.96 | 0.10         | 1.88               | Institute sampling   |
| NA           | Cougar Crk<br>DS              | 4-Feb-21       | 11:26 | 8.3                   | 0.81                          | 0.20                 | 5.94 | 0.10         | 1.92               | Institute<br>sampling  |
| NA           | L2100<br>Roadside<br>Ditch US | 2021-02-<br>08 | 1:00  | 7.4                   | 0.12                          | 0.30                 | 6.30 | 0.18         | 21.0               | Installing road<br>plates and<br>access pad  |
| NA           | L2100<br>Roadside<br>Ditch DS | 2021-02-<br>08 | 12:45 | 7.4                   | 0.13                          | 0.34                 | 6.25 | 0.20         | 25.23              | Installing road<br>plates and<br>access pad  |
| NA           | L2100<br>Roadside<br>Ditch US | 2021-02-<br>08 | 2:00  | 6.9                   | 0.10                          | 0.28                 | 6.60 | 0.17         | 21.0               | Installing road<br>plates and<br>access pad -<br>completed                             |
| NA           | L2100<br>Roadside<br>Ditch DS | 2021-02-<br>08 | 2:15  | 6.5                   | 0.12                          | 0.29                 | 6.75 | 0.25         | 23.5               | Installing road plates and access pad - completed                                      |
| NA           | L2100<br>Roadside<br>Ditch US | 2021-02-<br>09 | 21:00 | 6.8                   | 0.12                          | 0.45                 | 6.78 | 0.18         | 21.45              | Installing sand<br>access pad for<br>culvert<br>installation                           |
| NA           | L2100<br>Roadside<br>Ditch DS | 2021-02-<br>09 | 21:15 | 6.9                   | 0.34                          | 0.25                 | 6.34 | 0.23         | 25.10              | Installing sand<br>access pad for<br>culvert<br>installation                           |
| NA           | L2100<br>Roadside<br>Ditch US | 2021-02-<br>09 | 23:00 | 2.4                   | 0.11                          | 0.35                 | 6.30 | 0.20         | 21.39              | Installing sand<br>access pad for<br>culvert<br>installation                           |
| NA           | L2100<br>Roadside<br>Ditch DS | 2021-02-<br>09 | 23:15 | 2.5                   | 0.10                          | 0.27                 | 6.44 | 0.34         | 22.90              | Installing sand<br>access pad for<br>culvert<br>installation                           |
| NA           | Silda Ditch<br>DS             | 2021-02-<br>12 | 10:40 | 4.4                   | NA                            | 0.35                 | 6.79 | 0.18         | 9.04               | ÷  |
| NA           | Silda Ditch<br>MS             | 2021-02-<br>12 | 10:55 | 3.3                   | NA                            | 0.47                 | 6.73 | 0.23         | 8.91               | -  |
| NA           | Fraser River                  | 2021-02-<br>12 | 9:40  | 4.2                   | NA                            | 1.64                 | 6.72 | 0.82         | 1.19               | _  |
| NA           | 96 <sup>th</sup> Street       | 2021-02-<br>12 | 8:30  | 3.8                   | NA                            | 0.06                 | 6.25 | 0.03         | 2.75               | -7   |
| NA           | Silda Ditch<br>US             | 2021-02-<br>12 | 8:45  | 0.7                   | NA                            | 0.03                 | 4.70 | 0.01         | 2.18               | -  |
| NA           | L100 DS                       | 2021-02-<br>12 | 8:50  | 0.3                   | NA                            | 0.98                 | 6.21 | 0.52         | 59.8               | Broke ice to<br>get sample. No<br>works<br>occurring.<br>Resampling<br>will occur when |

| Site<br>Code | Site  | Date           | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity<br>(mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments  |
|--------------|---|----------------|-------|-----------------------|-------------------------------|-------------------------|------|--------------|--------------------|---|
|              |   |                |       |                       |                               |                         |      |              |                    | temperatures increase.  |
| NA           | L100 US   | 2021-02-<br>12 | 9:00  | 2,1                   | NA                            | 1.62                    | 6.44 | 0.81         | 79.6               | Broke ice to<br>get sample. No<br>works<br>occurring.<br>Resampling<br>will occur when<br>temperatures<br>increase. |
| NA           | Cougar<br>Creek US  | 2021-02-<br>12 | 13:33 | 4.9                   | NA                            | 0.25                    | 6.94 | 0.12         | 3.79               | New gravel fill<br>was placed on<br>the trail next to<br>the creek  |
| NA           | Cougar<br>Creek 10 m  | 2021-02-<br>12 | 13:40 | 3.0                   | NA                            | 0.25                    | 7.26 | 0.13         | 1.92               | Discharge   |
| NA           | Cougar<br>Creek 90 m  | 2021-02-<br>12 | 13:50 | 2.7                   | NA                            | 0.25                    | 7.30 | 0.12         | 1.61               | New gravel fill<br>was placed on<br>the trail next to<br>the creek  |
| NA           | E04 wet<br>area<br>discharge<br>L2100 (Pre<br>work<br>baseline) | 2021-02-<br>16 | 20:30 | 2.6                   |                               | 0.56                    | 6.23 | 0.19         | 18.9               | Baseline<br>discharge area<br>data  |
| NA           | E04 wet<br>area<br>discharge<br>L2100                           | 2021-02-<br>16 | 21:45 | 2.4                   | 5                             | 0.45                    | 6.45 | 0.18         | 22.3               | Discharge to vegetation   |
| NA           | E04 wet<br>area<br>discharge<br>L2100                           | 2021-02-<br>17 | 02:00 | 0.5                   | -                             | 0.42                    | 6.33 | 0.25         | 24.8               | Discharge to sediment bag   |
| NA           | E04 wet<br>area<br>discharge<br>L2100                           | 2021-02-<br>17 | 03:30 | 0.3                   | -                             | 0.14                    | 6.34 | 0.17         | 23.7               | Discharge to sediment bag   |
| NA           | E04 wet<br>area<br>discharge<br>L2100 (Pre<br>work<br>baseline) | 2021-02-<br>17 | 20:30 | 5.9                   | 4                             | 0.91                    | 6.25 | 0.37         | 25.5               | Discharge to<br>sediment bag -<br>low water<br>levels at<br>submersible<br>pump                                     |
| NA           | E04 wet<br>area<br>discharge<br>L2100                           | 2021-02-<br>18 | 02:30 | 2.4                   |                               | 0.14                    | 6.34 | 0.17         | 23.7               | Discharge to<br>sediment bag -<br>low water<br>levels at<br>submersible<br>pump                                     |
| NA           | E04 wet<br>area<br>discharge<br>L2100 (Pre<br>work<br>baseline) | 2021-02-<br>18 | 21:00 | 3.8                   |                               | 0.23                    | 6.67 | 0.22         | 22.8               | Baseline<br>discharge area<br>data  |
| NA           | E04 wet<br>area<br>discharge<br>L2100                           | 2021-02-<br>19 | 03:00 | 3.2                   | ŧ                             | 0.45                    | 6.53 | 0.36         | 23.7               | Discharge to<br>sediment bag -<br>low water<br>levels at<br>submersible<br>pump                                     |
| NA           | Cougar<br>Creek -<br>Upstream                                   | 2021-02-<br>19 | 09:50 | 8.4                   | }                             | 0.49                    | 6.38 | 0.24         | 3.60               | Baseline  |

| Site<br>Code | Site                                  | Date           | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity<br>(mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments   |  |
|--------------|---------------------------------------|----------------|-------|-----------------------|-------------------------------|-------------------------|------|--------------|--------------------|--|--|
| NA           | Cougar<br>Creek – 10<br>m             | 2021-02-<br>19 | 10:00 | 7.1                   | =                             | 0.49                    | 6.46 | 0.24         | 3.49               | Baseline   |  |
| NA           | Cougar<br>Creek – 90<br>m             | 2021-02-<br>19 | 10:10 | 6.2                   | 2                             | 0.48                    | 6.60 | 0.24         | 3.20               | Baseline   |  |
| NA           | Fraser River<br>Inlet                 | 2021-02-<br>18 | 9:25  | 6.6                   |                               | 0.46                    | 6.43 | 0.23         | 6.0                | Baseline   |  |
| NA           | 96 St<br>downstream                   | 2021-02-<br>18 | 9:35  | 3.7                   | -                             | 0.04                    | 6.25 | 0.03         | 1.75               | Baseline   |  |
| NA           | 96 St<br>upstream                     | 2021-02-<br>18 | 9:45  | 3.2                   | 1                             | 0.05                    | 6.04 | 0.02         | 1.00               | Baseline   |  |
| NA           | Silda ditch<br>upstream               | 2021-02-<br>18 | 10:30 | 3.8                   | -                             | 0.79                    | 6.73 | 0.40         | 7.9                | Baseline   |  |
| NA           | Silda ditch<br>downstream             | 2021-02-<br>18 | 10:45 | 5.6                   | -                             | 0.81                    | 6.5  | 0.41         | 11.90              | Baseline   |  |
| NA           | E04 wet<br>area<br>discharge<br>L2100 | 2021-02-<br>21 | 21:15 | 8.78                  | -                             | 0.56                    | 6.62 | 0.34         | 11.8               | Discharge to<br>sediment bag<br>– large pool of<br>stagnant water<br>from weekend<br>rainfall                  |  |
| NA           | E04 wet<br>area<br>discharge<br>L2100 | 2021-02-<br>21 | 02:30 | 7.23                  | 3                             | 0.45                    | 6.53 | 0.36         | 12.7               | Discharge to<br>sediment bag<br>– large pool of<br>stagnant water<br>from weekend<br>rainfall                  |  |
| NA           | E04 wet<br>area<br>discharge<br>L2100 | 2021-02-<br>23 | 21:45 | 7.22                  |                               | 0.45                    | 6.23 | 0.23         | 10.9               | Discharge to<br>sediment bag<br>– limited<br>dewatering<br>due to low<br>levels of<br>groundwater in<br>trench |  |
| NA           | E04 wet<br>area<br>discharge<br>L2100 | 2021-02-<br>23 | 01:30 | 7.05                  | -                             | 0.67                    | 6.11 | 0.39         | 11.2               | Discharge to<br>sediment bag<br>– limited<br>dewatering<br>due to low<br>levels of<br>groundwater in<br>trench |  |
| NA           | E04 wet<br>area<br>discharge<br>L2100 | 2021-02-<br>23 | 22:30 | 7.05                  | -                             | 0.67                    | 6.11 | 0.39         | 11.2               | Discharge to sediment bag – limited dewatering due to low levels of groundwater in trench                      |  |
| NA           | E04 wet<br>area<br>discharge<br>L2100 | 2021-02-<br>24 | 02:45 | 5.25                  | 2                             | 0.33                    | 7.03 | 0.43         | 10.3               | Discharge to sediment bag — limited dewatering due to low levels of groundwater in trench                      |  |
| NA           | Fraser River<br>Inlet                 | 2021-02-       | 9:25  | 7.0                   | -                             | 0.24                    | 6.79 | 0.12         | 13.80              | -  |  |
| NA           | 96 Street<br>DS                       | 2021-02-<br>24 | 12:30 | 6.7                   | -                             | 0.05                    | 4.73 | 0.03         | 2.20               | -  |  |
| NA           | 96 Street<br>US                       | 2021-02-<br>24 | 12:45 | 6.3                   | i de                          | 0.04                    | 4.70 | 0.02         | 0.75               | 4  |  |

| Site<br>Code | Site                                  | Date           | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity<br>(mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments   |  |
|--------------|---------------------------------------|----------------|-------|-----------------------|-------------------------------|-------------------------|------|--------------|--------------------|--|--|
| NA           | Silda Ditch<br>US                     | 2021-02-<br>24 | 14:10 | 8.9                   | -                             | 0.78                    | 6.68 | 0.41         | 12.00              | -  |  |
| NA           | Silda Ditch<br>DS                     | 2021-02-<br>24 | 14:20 | 8.4                   | -                             | 0.71                    | 6.52 | 0.35         | 13.30              | -  |  |
| NA           | L100 DS                               | 2021-02-<br>24 | 13:10 | 7.0                   | į.                            | 0.83                    | 6.13 | 0.42         | 48.70              | 4  |  |
| NA           | L100 US                               | 2021-02-<br>24 | 13:15 | 7.8                   | L <sub>2</sub>                | 0.82                    | 6.15 | 0.45         | 42.30              | ÷  |  |
| NA           | Cougar<br>Creek US                    | 2021-02-<br>24 | 14:40 | 7.8                   | 1                             | 0.32                    | 7.16 | 0.16         | 1.37               | -  |  |
| NA           | Cougar<br>Creek 10m                   | 2021-02-<br>24 | 14:48 | 7.1                   | -                             | 0.32                    | 7.12 | 0.16         | 1.24               |  |  |
| NA           | Cougar<br>Creek 90m                   | 2021-02-<br>24 | 14:54 | 7.4                   | -                             | 0.32                    | 7.12 | 0.16         | 1.20               | :  |  |
| NA           | E04 wet<br>area<br>discharge<br>L2100 | 2021-02-       | 20:15 | 5.80                  |                               | 0.10                    | 7.13 | 0.13         | 10.9               | Discharge to sediment bag — limited dewatering due to low levels of groundwater in trench  |  |
| NA           | E04 wet<br>area<br>discharge<br>L2100 | 2021-02-<br>25 | 02:45 | 5.25                  |                               | 0.27                    | 7.01 | 0.3          | 12.2               | Discharge to sediment bag – limited dewatering due to low levels of groundwater in trench  |  |
| NA           | Fraser River<br>Inlet                 | 2021-03-<br>02 | 09:25 | 7.8                   | 2                             | 3.43                    | 6.68 | 1.71         | 16.40              | Low Tide -<br>2:27<br>High Tide -<br>21:02   |  |
| NA           | 96 Street<br>DS                       | 2021-03-<br>02 | 12:30 | 7.2                   | 1                             | 0.06                    | 6.11 | 0.03         | 2.83               | Low Tide -<br>2:27<br>High Tide -<br>21:02   |  |
| NA           | 96 Street<br>US                       | 2021-03-<br>02 | 12:45 | 7.8                   | 3                             | 0.06                    | 5.27 | 0.03         | 1.29               | Low Tide -<br>2:27<br>High Tide -<br>21:02   |  |
| NA           | L100 DS                               | 2021-03-<br>02 | 13:10 | 7.9                   |                               | 0.95                    | 6.15 | 0.48         | 82.0               | High turbidity recorded in ditch, water stagnant. Water quality tested in 96th St Ditch and no issues observed. ESC measures being added to ditch. |  |
| NA           | L100 US                               | 2021-03-<br>02 | 13:15 | 8.2                   | 3                             | 0.95                    | 6.23 | 0.49         | 102.3              | High turbidity recorded in ditch, water stagnant. Water quality tested in 96th St Ditch and no issues observed. ESC measures being added to ditch. |  |

| Site<br>Code | Site                  | Date           | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity (mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments   |  |
|--------------|-----------------------|----------------|-------|-----------------------|-------------------------------|----------------------|------|--------------|--------------------|--|--|
| NA           | Cougar<br>Creek US    | 2021-03-<br>04 | 14:40 | 8.4                   | -                             | 0.29                 | 6.40 | 0.15         | 1.52               |  |  |
| NA           | Cougar<br>Creek 10 m  | 2021-03-<br>04 | 14:48 | 7.9                   | -                             | 0.30                 | 6.62 | 0.30         | 1.85               | -  |  |
| NA           | Cougar<br>Creek 90 m  | 2021-03-<br>04 | 14:54 | 7.8                   | 1                             | 0.30                 | 6.69 | 0.15         | 1.90               |  |  |
| NA           | Silda Ditch<br>US     | 2021-03-<br>04 | 14:10 | 7.7                   |                               | 0.23                 | 6.18 | 0.14         | 6.43               | Low tide -<br>15:56<br>High tide -<br>22:57  |  |
| NA           | Silda Ditch<br>DS     | 2021-03-<br>04 | 14:20 | 7.7                   | -                             | 0.18                 | 6.14 | 0.09         | 5.64               | Low tide -<br>15:56<br>High tide –<br>22:57  |  |
| NA           | Fraser River<br>Inlet | 2021-03-<br>10 | 10:30 | 7.7                   | -                             | 4.00                 | 6.81 | 2.00         | 27.70              | Low tide –<br>10:30<br>High tide -<br>14:57  |  |
| NA           | 96 Street<br>DS       | 2021-03-<br>10 | 10:40 | 8.0                   | i <del>-</del>                | 0.12                 | 6.28 | 0.06         | 4.70               | 9  |  |
| NA           | 96 Street<br>US       | 2021-03-<br>10 | 10:50 | 7.9                   | -                             | 0.04                 | 5.47 | 0.02         | 0.98               | +  |  |
| NA           | Silda Ditch<br>US     | 2021-03-<br>10 | 11:45 | 7.8                   |                               | 0.67                 | 6.64 | 0.33         | 12.30              | Low tide –<br>10:30<br>High tide -<br>14:57  |  |
| NA           | Silda Ditch<br>DS     | 2021-03-<br>10 | 11:35 | 7.5                   |                               | 0.67                 | 6.73 | 0.33         | 12.30              | Low tide<br>10:30<br>High tide -<br>14:57  |  |
| NA           | L100 DS               | 2021-03-<br>10 | 11:35 | 7.5                   | ¥                             | 0.94                 | 6.30 | 0.47         | 99.30              | High turbidity recorded in ditch, water stagnant. Water quality tested in 96th St Ditch and no issues observed. ESC measures being added to ditch. Sediment fence added along the side of preload. |  |
| NA           | L100 US               | 2021-03-<br>10 | 11:10 | 8.0                   | -                             | 1.06                 | 6.31 | 0.53         | 80.20              | ğı   |  |
| NA           | Cougar<br>Creek US    | 2021-03-<br>10 | 11:20 | 10.1                  | ŧ .                           | 0.26                 | 6.61 | 0.13         | 2.38               | -  |  |
| NA           | Cougar<br>Creek 10 m  | 2021-03-<br>10 | 13:45 | 8.3                   | =                             | 0.26                 | 6.86 | 0.14         | 2.07               | +  |  |
| NA           | Cougar<br>Creek 90 m  | 2021-03-<br>10 | 13:50 | 8.9                   | -                             | 0.26                 | 6.97 | 0.13         | 1.65               | -  |  |
| NA           | L                     | 2021-03-<br>10 | 14:05 | 8.9                   | -                             | 7                    | 7.4  |              | 2 1                |  |  |
| NA           | М                     | 2021-03-<br>10 | 14:30 | -                     | -                             | 0.45                 | 6.05 | 0.20         | 4                  | +0   |  |
| NA           | N                     | 2021-03-<br>10 | 14:35 | Ţ.,                   | 1                             |                      | -    | 9            | 3 1                | 1  |  |
| NA           | к                     | 2021-03-<br>10 | 14:40 | -                     | 12-                           | 3.86                 | 7.48 | 1.98         | 2                  | ÷.   |  |
| NA           | к                     | 2021-03-<br>10 | 14:45 | -                     | -                             | 0.11                 | 6.02 | 0.06         |                    | =  |  |
| NA           | J                     | 2021-03-<br>10 | 14:50 | <u>_</u>              | (3-                           | 0.12                 | 5.82 | 0.06         | 3                  | 1  |  |

| Site<br>Code | Site                  | Date           | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity<br>(mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments  |
|--------------|-----------------------|----------------|-------|-----------------------|-------------------------------|-------------------------|------|--------------|--------------------|---|
| NA           | Fraser River<br>Inlet | 2021-03-<br>17 | 10:30 | 6.1                   | 11.62                         | 0.90                    | 7.20 | 0.45         | 11.50              | High tide - 8:57<br>Low tide -<br>16:41   |
| NA           | 96 Street<br>DS       | 2021-03-<br>17 | 10:45 | 7.2                   | 7.15                          | 0.11                    | 6.20 | 0.05         | 4.78               | -   |
| NA           | 96 Street<br>US       | 2021-03-<br>17 | 11:05 | 6.7                   | 4.88                          | 0.03                    | 4.50 | 0.02         | 4.51               | 2   |
| NA           | Silda Ditch<br>US     | 2021-03-<br>17 | 09:50 | 6.5                   | 11.40                         | 0.32                    | 7.21 | 0.16         | 12.50              | High tide - 8:57<br>Low tide -<br>16:41   |
| NA           | Silda Ditch<br>DS     | 2021-03-<br>17 | 10:10 | 7.7                   | 4.80                          | 0.72                    | 6.44 | 0.36         | 22.00              | High tide - 8:57<br>Low tide -<br>16:41   |
| NA           | L100 DS               | 2021-03-<br>17 | 11:10 | 6.2                   | 3.68                          | 0.84                    | 6.15 | 0.42         | 72.30              | Stagnant ditch. ESC measures have been installed including sediment fence and straw wattles. Check dam in place at the inlet to 96 <sup>th</sup> ditch. No water quality issues observed in 96 <sup>th</sup> ditch. |
| NA           | L100 US               | 2021-03-<br>17 | 11:40 | 6.8                   | 4.23                          | 0.88                    | 6.53 | 0.51         | 103.50             | Stagnant ditch. ESC measures have been installed including sediment fence and straw wattles. Check dam in place at the inlet to 96 <sup>th</sup> ditch. No water quality issues observed in 96 <sup>th</sup> ditch. |
| NA           | Cougar<br>Creek US    | 2021-03-<br>17 | 13:45 | 9.3                   | 9.36                          | 0.30                    | 6.89 | 0.15         | 3.19               | 41  |
| NA           | Cougar<br>Creek 10 m  | 2021-03-<br>17 | 13:50 | 8.8                   | 9.71                          | 0.28                    | 7.05 | 0.14         | 3.68               | -   |
| NA           | Cougar<br>Creek 90 m  | 2021-03-<br>17 | 14:05 | 8.8                   | 9.68                          | 0.28                    | 7.04 | 0.14         | 3.70               | 3   |
| NA           | Fraser River<br>Inlet | 2021-03-<br>25 | 9:10  | 6.1                   | 11.62                         | 0.90                    | 7.20 | 0.45         | 11.50              | Low tide -<br>10:02<br>High tide -<br>16:27   |
| NA           | 96 Street<br>DS       | 2021-03-<br>25 | 9:40  | 8.1                   | 6.13                          | 0.25                    | 6.31 | 0.12         | 5.24               |   |
| NA           | 96 Street<br>US       | 2021-03-<br>25 | 9:55  | 8.1                   | 5.37                          | 0.06                    | 5.08 | 0.03         | 1.39               |   |
| NA           | Silda Ditch<br>US     | 2021-03-<br>25 | 8:40  | 8.4                   | 5.64                          | 0.33                    | 6.38 | 0.17         | 24.50              | Low tide -<br>10:02<br>High tide -<br>16:27   |
| NA           | Silda Ditch<br>DS     | 2021-03-<br>25 | 8:50  | 8.9                   | 5.83                          | 0.28                    | 6.78 | 0.14         | 21.30              | Low tide -<br>10:02<br>High tide -<br>16:27   |
| NA           | L100 DS               | 2021-03-<br>25 | 10:00 | 7.9                   | 4.89                          | 0.76                    | 6.36 | 0.38         | 71.30              |   |

| Site<br>Code | Site   | Date              | Time  | Water<br>Temp<br>(°C) | Dissolved<br>Oxygen<br>(mg/L) | Conductivity<br>(mS/cm) | рН   | TDS<br>(ppt) | Turbidity<br>(NTU) | Comments   |
|--------------|--|-------------------|-------|-----------------------|-------------------------------|-------------------------|------|--------------|--------------------|--|
| NA           | L100 US                                      | 2021-03-<br>25    | 10:15 | 8.3                   | 5.44                          | 0.78                    | 6.53 | 0.36         | 88.60              |  |
| NA           | Cougar<br>Creek US                           | 2021-03-<br>25    | 14:00 | 10.7                  | 9.43                          | 0.20                    | 7.00 | 0.10         | 8.52               |  |
| NA           | Cougar<br>Creek 10 m                         | 2021-03-<br>25    | 14:10 | 10.4                  | 9.35                          | 0.20                    | 6.84 | 0.10         | 7.66               |  |
| NA           | Cougar<br>Creek 90 m                         | 2021-03-<br>25    | 14:20 | 10.4                  | 9.68                          | 0.20                    | 6.88 | 0.10         | 7.23               |  |
| NA           | Ditch<br>dewatering<br>for culvert<br>105 DS | March 30,<br>2021 | 9:30  | 8.3                   | 5.83                          | 0.13                    | 6.94 | 0.32         | 322                | Dewatering to the base of preload.   |
| NA           | Ditch<br>dewatering<br>for culvert<br>105 US | March 30,<br>2021 | 9:35  | 8.8                   | 5.32                          | 0.08                    | 6.88 | 0.12         | 64.3               | Dewatering to<br>a storm water<br>drain east of<br>the ditch.  |
| NA           | Ditch<br>dewatering<br>for culvert<br>105 DS | March 31,<br>2021 | 10:00 | 10.4                  |                               | 0.68                    | 6.33 | 0.33         | 384                | Measurement was taken at area where water was discharged into a temporary settlement area behind ESC fences. Water was dewatered into a settlement bag. Ditch is currently isolated and; no High NTU water was discharged downstream into the 96 street ditch catchment downstream of the isolated area. |
| NA           | Ditch<br>dewatering<br>for culvert<br>105 US | March 31,<br>2021 | 10:25 | 10.3                  |                               | 0.45                    | 6.27 | 0.24         | 3.10               |  |
| NA           | Fraser River<br>Inlet                        | 31-Mar-21         | 10:15 | 9.4                   | 10.58                         | 0.17                    | 7.03 | 0.08         | 30.50              | High tide<br>moving out  |
| NA           | 96 Street<br>DS                              | 31-Mar-21         | 10:30 | 8.7                   | 6.19                          | 0.06                    | 5.70 | 0.03         | 8.50               | High tide<br>moving out  |
| NA           | 96 Street<br>US                              | 31-Mar-21         | 10:45 | 8.6                   | 6.05                          | 0.03                    | 4.28 | 0.02         | 1.14               |  |
| NA           | L100 DS                                      | 31-Mar-21         | 10:50 | 7.8                   | 5.07                          | 1.08                    | 6.07 | 0.54         | 87.50              | High tide<br>moving out  |
| NA           | L100 US                                      | 31-Mar-21         | 11:05 | 8.5                   | 5.83                          | 1.88                    | 6.13 | 0.75         | 103.2              | High tide<br>moving out  |

\*Tide related and timing of the water sampling.

### **APPENDIX 8: TOOLBOX TRAINING RECORDS**



| Date: _ | Mar 3 <sup>rd</sup> , 2021 |  |
|---------|----------------------------|--|
| Forema  | n's Initials:              |  |

|                          |               |              | Weather                  |                          |                          |                   |
|--------------------------|---------------|--------------|--------------------------|--------------------------|--------------------------|-------------------|
| → Forecast               |               |              |                          | Hourly Forecas           | st Air Quality A         | Merts Jet Stream  |
|                          | Tue<br>2 Mar  | Wed<br>3 Mar | Thu<br>4 Mar             | Fri<br>5 Mar             | Sat<br>6 Mar             | Sun<br>7 Mar      |
|                          | *             | 466          | 400                      | edb.                     | 100                      | 40                |
|                          | 8°C           | 9°C          | 13°C                     | 10°C                     | 10°C                     | 9°C               |
|                          | Mainly cloudy | Cloudy       | Chance of showers        | Periods of rain          | Chance of snowers        | Chance of snowers |
| Tonight                  | Night         | Night        | Night                    | Night                    | Night                    |                   |
|                          |               | -46          | -42                      | 100                      | -4                       |                   |
| 3°C                      | 3°C           | 4°C          | 6°C                      | 4°C                      | 3°C                      |                   |
| 40%<br>Change of showers | Mainly cloudy | Cloudy       | 60%<br>Chance of showers | 70%<br>Chance of showers | 60%<br>Chance of showers |                   |

### SPILL RESPONSE ON SITE

Daily Notices/ Alerts

Proper spill response and reporting is a critical aspect in protecting our environment and staying compliant.

All spills must be reported to the Environmental team immediately when they occur.

When a spill occurs, the following procedure must be followed:

- 1. Ensure Safety (of yourself, co-workers, the public and environment)
- Stop the Flow (if possible and safe to do so)
- 3. Secure the Area (limit pedestrian and vehicle access to impacted areas)
- 4. Contain the Spill (using spill kit, spill tray, make every effort to contain the spill)
- 5. Notify & Report (immediately report to your supervisor and the PGC Environmental Representative)
- 6. Take photos for reference and;
- 7. Witness statements for larger incidents

For spills in watercourses use interlocking absorbent floating socks

For surface spills to ground use the white absorbent pads

For spills to water use the grey absorbent pads

Absorbent powder can be used and can be found in the PGC laydown area (Enviro-seacan)

All soil contaminated during the spill, must be removed, and properly disposed of (ensure the soil is removed to a depth where no residual contamination remains).

To protect the health and safety of yourself and your co-workers and to reduce the spread of COVID-19 on the project, all personnel must answer the following questions.

| In the past 14 days; have you:   | YES | NO  |
|--|-----|-----|
| Experienced a fever, cough, difficulty breathing or cold and flu-like symptoms?  |     | 1   |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |     | V   |
| Travelled outside the country?   |     | - 7 |
| Been in close contact with a person who recently travelled outside the country?  |     |     |
| Been contacted by a health authority regarding close contact with a confirmed case?  |     | 1   |



| Date: _ | Mar 3 <sup>rd</sup> , 2021_ |  |
|---------|-----------------------------|--|
| Forema  | n's Initials:               |  |

If anyone answered YES to any of the questions above, please isolate and contact site Health and Safety immediately

|      | To              | oolbox Sign On |
|------|-----------------|----------------|
| #    | Print Name      | Signature      |
| 1    | Part leah dale  |                |
| 2    | Com Store       | w              |
| 3    | Jamessey Joses  | AG.            |
| 4    | Toged Sonneidel | E Auf          |
| 5    | FERENSON,       | Wh-            |
| 6 C  | Aras Hatlen     |                |
| 7 5  | USAW CHERNERY   | Super Cheriley |
| 8 A  | dam Person      | Alt            |
|      | 1.105 Schmich   | The gay        |
| 10   | Aline Gubichian | office         |
| 11 - | Poprie Orchard  |                |
| 12   | John Johnson    | John .         |
| 13   | Do Mo           | My             |
| 14   | DEVIR CLASTE    | Stay ()        |
| 15   | TORDAN JOFFARES |                |
| 16   | Kenterbert      | 3              |
| 17   |                 |                |
| 18   |                 |                |
| 19   |                 |                |
| 20   |                 |                |
| 21   |                 |                |
| 22   |                 |                |
| 23   |                 |                |
| 24   | 3               |                |

|   | Additional Notes |  |
|---|------------------|--|
| * |                  |  |
|   |                  |  |



Date: \_\_\_Mar 3<sup>rd</sup>, 2021\_\_\_\_ Foreman's Initials: \_\_\_\_

If anyone answered YES to any of the questions above, please isolate and contact site Health and Safety immediately

All workers fit for duty?

|    |                | oolbox Sign On   |
|----|----------------|--|
| #  | Print Name     | Signature  |
| 1  | CHRIS THOMPSON |  |
| 2  | An milit       | and the same of th |
| 3  | J. JEFFARES    | CATA S   |
| 4  | SACK           | Va   |
| 5  | CONNER         |  |
| 6  | CAn            |  |
| 7  | RICK           |  |
| 8  | Stol Q         |  |
| 9  | MATT           |  |
| 10 | CHELSEA        | Colo   |
| 11 | Jany Xung      |  |
| 12 | 11             |  |
| 13 |                |  |
| 14 |                |  |
| 15 |                |  |
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| Additional Notes |                  |
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|                  |                  |
|                  | Additional Notes |



| Date: _ | Mar 3 <sup>rd</sup> , 2021 |  |
|---------|----------------------------|--|
| Forema  | n's Initials:              |  |

If anyone answered YES to <u>any of the questions above,</u> please isolate and contact site Health and Safety immediately

| Toolbox Sign On |            |           |
|-----------------|------------|-----------|
| #               | Print Name | Signature |
| 1               | Andrew K.  |           |
| 2               | JERAO M.   |           |
| 3               | ABDI       |           |
| 4               | Terrenc    |           |
| 5               | Kenny P.   |           |
| 6               | 7          |           |
| 7               |            |           |
| 8               |            |           |
| 9               |            |           |
| 10              |            |           |
| 11              |            |           |
| 12              |            |           |
| 13              |            |           |
| 14              |            |           |
| 15              |            |           |
| 16              |            |           |
| 17              |            |           |
| 18              |            |           |
| 19              |            |           |
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| 23              |            |           |
| 24              |            |           |

| Additional Notes |  |
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|                  |  |



Date: \_\_\_Mar 3<sup>rd</sup>, 2021\_\_\_\_ Foreman's Initials: \_\_\_\_

If anyone answered YES to any of the questions above, please isolate and contact site Health and Safety immediately

All workers fit for duty?

|        | Toolb      | ox Sign On |
|--------|------------|------------|
| #      | Print Name | Signature  |
| 1 Ku   | Habet      | 6.5/1      |
| 2 Torr |            |            |
| 3 TREC | CA. CLASEN |            |
| 4 NOM  |            | Market     |
| 5 M.O  | s Schmidd  | 68         |
| 6      |            |            |
| 7      |            |            |
| 8      |            |            |
| 9      |            |            |
| 10     |            |            |
| 11     |            |            |
| 12     |            |            |
| 13     |            |            |
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| 15     |            |            |
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| Additional Notes |  |
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|                  |  |
|                  |  |



| Date: _ | Mar 3 <sup>rd</sup> , 2021 |
|---------|----------------------------|
| Forema  | n's Initials:              |

If anyone answered YES to any of the questions above, please isolate and contact site Health and Safety immediately

All workers fit for duty?

|     | To               | oolbox Sign On  |
|-----|------------------|---|
| #   | Print Name       | Signature   |
| 1   | hon Il           | my Jay  |
| 2   | Low Kirky        | M-CK  |
| 3   | JASON SLOTH      |   |
| 4   | Rule wardruff    | The weady)  |
| 5   | Vanina Lavodelle | Herce Control of the |
| 6   | KEU (KENSEIRO    |   |
| 7 / | Mark Alton       | My cell   |
| 8   | thawn Holborn    |   |
| 9   | Chal King        | 1/1/  |
| 10  | John Johnson     | Gol   |
| 11  |                  |   |
| 12  |                  |   |
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| 22  |                  |   |
| 23  |                  |   |
| 24  | Jim Mimillan     | 1/2011  |

| Additional Notes |  |
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|                  |  |
|                  |  |
|                  |  |



Date: \_\_\_Mar 2<sup>nd</sup>, 2021\_\_\_\_ Foreman's Initials: \_\_\_\_\_

If anyone answered YES to <u>any of the questions above,</u> please isolate and contact site Health and Safety immediately

| Toolbox Sign On |              |           |  |  |
|-----------------|--------------|-----------|--|--|
| #               | Print Name   | Signature |  |  |
| 1               | erema Butter |           |  |  |
| 2 Ca            | a Dombrowski |           |  |  |
| 3 Har           | lon Foris    |           |  |  |
| 4 Vo            | edan Reid    | 7/        |  |  |
| 5               | 0.           |           |  |  |
| 6               |              |           |  |  |
| 7               |              |           |  |  |
| 8               |              |           |  |  |
| 9               |              |           |  |  |
| 10              |              |           |  |  |
| 11              |              |           |  |  |
| 12              |              |           |  |  |
| 13              |              |           |  |  |
| 14              |              |           |  |  |
| 15              |              |           |  |  |
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| 18              |              |           |  |  |
| 19              |              |           |  |  |
| 20              |              |           |  |  |
| 21              |              |           |  |  |
| 22              |              |           |  |  |
| 23              |              |           |  |  |
| 24              |              |           |  |  |

| Additional Notes |  |
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|                  |  |



Date: \_\_\_Mar 10<sup>th</sup>, 2021\_\_\_\_ Foreman's Initials: \_\_\_\_\_

|   | We               | ather                   |                         |
|---|------------------|-------------------------|-------------------------|
| Tue<br>Evening  | Tue<br>Overnight | Wed<br>Morning          | Wed<br>Afternoon        |
| A few showers   | Mainly clear     | A mix of sun and clouds | A mix of sun and clouds |
| Carlo | a                | 德                       |                         |
| 6°  | 2°               | 4°                      | 8°                      |

### **Daily Notices/ Alerts**

### **Birds and Bats**

#### Birds:

- The breeding season for birds on this site is March 15 August 15
- . No moving/removing nests or eggs. Contact the Environmental team if a nest or eggs are found
- The Migratory Bird Convention Act protects migrating birds, their nests, eggs and habitat from destruction
- REPORT ANY BIRDS STARTING A NEST BEFORE they lay eggs (Bird nests cannot be disturbed after eggs have been laid and a 30m no entry buffer zone will be created to protect the nest
- Some examples of birds at risk that you may encounter on this site could include Great blue herons, Falcons, Swans and Common Nighthawks

#### Bats:

- Active Bat Season is from April 15th to October 1st
- Species at Risk Bats are specially protected, and a buffer is required around a potential maternity roost.
- Half the bat species in BC are considered species at risk (vulnerable or threatened of becoming extirpated). With
  their important role in controlling nocturnal insect populations and cycling nutrients from wetlands to forests, bats are a
  critical part of our ecosystems.

#### Takeaways:

- Talk to your Superintendent and the Environmental Department prior to cutting any trees or vegetation
- Take extra precautions when working around trees
- Report any sightings or nesting activity
- If you see birds "hanging around" your work area or you see any nests/nesting activity in your work area, report it to Environment Department.
- Report any bird/bat sightings









Date: \_\_\_Mar 10<sup>th</sup>, 2021\_\_\_\_ Foreman's Initials: \_\_\_\_

To protect the health and safety of yourself and your co-workers and to reduce the spread of COVID-19 on the project, all personnel must answer the following questions.

| In the past 14 days; have you:   | YES | NO |
|--|-----|----|
| Experienced a fever, cough, difficulty breathing or cold and flu-like symptoms?  |     | 7  |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |     | 7  |
| Travelled outside the country?   |     | 4  |
| Been in close contact with a person who recently travelled outside the country?  |     | 7  |
| Been contacted by a health authority regarding close contact with a confirmed case?  |     | 9  |

If anyone answered YES to <u>any of the questions above</u> please isolate and contact site Health and Safety immediately

| All Workers lit for duty! | All workers fit for duty? | YES | NO |
|---------------------------|---------------------------|-----|----|
|---------------------------|---------------------------|-----|----|

|    | Toolbox Sign On    |           |  |  |
|----|--------------------|-----------|--|--|
| #  | Print Name         | Signature |  |  |
| 1  | CAKIS THOMPSON     |           |  |  |
| 2  | Baymon Ger - Triex | Le .      |  |  |
| 3  | SAGE               |           |  |  |
| 4  | MATT               |           |  |  |
| 5  | CHELSEA            |           |  |  |
| 6  | ANDREW             |           |  |  |
| 7  | CONNEL             |           |  |  |
| 8  | RICK               |           |  |  |
| 9  | SADIQ              |           |  |  |
| 10 | DAVE               |           |  |  |
| 11 | Rop                |           |  |  |
| 12 | KEN                |           |  |  |
| 13 | KEVIN              |           |  |  |
| 14 | GARRETT            |           |  |  |
| 15 | Jerry Ying         |           |  |  |
| 16 |                    |           |  |  |
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| 24 |                    |           |  |  |



| Date: _ | Mar 10 <sup>th</sup> , 2021 |
|---------|-----------------------------|
| Forema  | n's Initials:               |

To protect the health and safety of yourself and your co-workers and to reduce the spread of COVID-19 on the project, all personnel must answer the following questions.

| In the past 14 days; have you:   | YES | NO |
|--|-----|----|
| Experienced a fever, cough, difficulty breathing or cold and flu-like symptoms?  |     | X  |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |     | X  |
| Travelled outside the country?   |     | V  |
| Been in close contact with a person who recently travelled outside the country?  |     | 7  |
| Been contacted by a health authority regarding close contact with a confirmed case?  |     | ~  |

If anyone answered YES to <u>any of the questions above, please isolate and contact site Health and Safety immediately</u>

| All workers fit for duty? | YES | NO |
|---------------------------|-----|----|
|                           |     | /  |

|          | Toolbox Sign On  |           |  |  |  |
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| #        | Print Name       | Signature |  |  |  |
| 1        | Ched Kinky       | May       |  |  |  |
| 2        | KEN REDOCCOND    | 4         |  |  |  |
| 3        | Vanung Cardelle  | The       |  |  |  |
| 4        | GARU BAYNSTON    |           |  |  |  |
| 5        | Mark Alton       | mps als   |  |  |  |
| 6        | Vohn Ishinga     | yez-      |  |  |  |
| 7        |                  |           |  |  |  |
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| 18       |                  |           |  |  |  |
| 19       | Thousand Hollows | 112       |  |  |  |
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| 21       | Simplem, Ilan    | /m2-4     |  |  |  |
| 22       | -Kyun Kirlow     | 6 lbs /   |  |  |  |
| 23       | 7                | 12-1      |  |  |  |
| 24       |                  |           |  |  |  |



Date: \_\_\_Mar 10<sup>th</sup>, 2021\_\_\_\_\_ Foreman's Initials:

To protect the health and safety of yourself and your co-workers and to reduce the spread of COVID-19 on the project, all personnel must answer the following questions.

| In the past 14 days; have you:   | YES | NO |
|--|-----|----|
| Experienced a fever, cough, difficulty breathing or cold and flu-like symptoms?  |     | K  |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |     | K  |
| Travelled outside the country?   |     | ×  |
| Been in close contact with a person who recently travelled outside the country?  |     | ×  |
| Been contacted by a health authority regarding close contact with a confirmed case?  |     | K  |

If anyone answered YES to <u>any of the questions above,</u> please isolate and contact site Health and Safety immediately



|    | Toolbox Sign On   |                 |  |  |  |
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| #  | Print Name        | Signature       |  |  |  |
| 1  | Dunel Cake        |                 |  |  |  |
| 2  | DAUR Jean-Louis   | (2 ) col        |  |  |  |
| 3  | Cam Slate         |                 |  |  |  |
| 4  | Fred Singiples    | 77              |  |  |  |
| 5  | CHKIS, HEAROW     | 19              |  |  |  |
| 6  | reb Mirine        | 250             |  |  |  |
| 7  | Turne Ordiard     |                 |  |  |  |
| 8  | SUSAN CHORNESLY   | Seyan Chers, ly |  |  |  |
| 9  | Par Jeasuale      | - Andrews       |  |  |  |
| 10 | Jeremy Jores      | 99-19-1         |  |  |  |
| 11 | DEGINSON          | N A             |  |  |  |
| 12 | miles Schmid      | A G             |  |  |  |
| 13 | NIGER LUKAS       | The             |  |  |  |
| 14 | Kenn y Ponto      | 1 South         |  |  |  |
| 15 | Anasiasia Rolland | Molline         |  |  |  |
| 16 | Ken Herbert       |                 |  |  |  |
| 17 | John Johnson      | YEX.            |  |  |  |
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| Date: _ | Mar 10 <sup>th</sup> , 2021 |  |
|---------|-----------------------------|--|
| Forema  | n's Initials:               |  |

To protect the health and safety of yourself and your co-workers and to reduce the spread of COVID-19 on the project, all personnel must answer the following questions.

| In the past 14 days; have you:   | YES | NO |
|--|-----|----|
| Experienced a fever, cough, difficulty breathing or cold and flu-like symptoms?  |     | -/ |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |     | 1  |
| Travelled outside the country?   |     | 1  |
| Been in close contact with a person who recently travelled outside the country?  |     | 1  |
| Been contacted by a health authority regarding close contact with a confirmed case?  |     | 1  |

If anyone answered YES to <u>any of the questions above, please isolate and contact site Health and Safety immediately</u>

| All workers fit for duty? | YES | NO |
|---------------------------|-----|----|
|---------------------------|-----|----|

|    | Toolbox Sign On |           |  |  |  |
|----|-----------------|-----------|--|--|--|
| #  | Print Name      | Signature |  |  |  |
| 1  | Andres          |           |  |  |  |
| 2  | Jeradi          |           |  |  |  |
| 3  | Lesan           |           |  |  |  |
| 4  | Soe             |           |  |  |  |
| 5  | Terocuan        |           |  |  |  |
| 6  | Aldi            |           |  |  |  |
| 7  | Jeke            |           |  |  |  |
| 8  | Kylen           |           |  |  |  |
| 9  | Kenny           |           |  |  |  |
| 10 | Anastasia       |           |  |  |  |
| 11 |                 |           |  |  |  |
| 12 |                 |           |  |  |  |
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Date: \_\_\_Mar 9<sup>th</sup>, 2021\_\_\_\_ Foreman's Initials: \_\_\_\_

To protect the health and safety of yourself and your co-workers and to reduce the spread of COVID-19 on the project, all personnel must answer the following questions.

| In the past 14 days; have you:   | YES | NO |
|--|-----|----|
| Experienced a fever, cough, difficulty breathing or cold and flu-like symptoms?  |     | 1  |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |     | V  |
| Travelled outside the country?   |     | 1  |
| Been in close contact with a person who recently travelled outside the country?  |     | 1  |
| Been contacted by a health authority regarding close contact with a confirmed case?  |     | )  |

If anyone answered YES to <u>any of the questions above, please isolate and contact site Health and Safety immediately</u>

| All workers fit for duty? | YES | NO |
|---------------------------|-----|----|
| All workers fit for duty? | VES | NO |

|    | Toolbox Sign On         |           |  |  |
|----|-------------------------|-----------|--|--|
| #  | Print Name              | Signature |  |  |
| 1  | will Lawson             |           |  |  |
| 2  | Kam chang               |           |  |  |
| 3  | About salam             |           |  |  |
| 4  | Blanden Lindston        |           |  |  |
| 5  | Riel Lewis<br>Mutt chow |           |  |  |
| 6  | Mutt chow               |           |  |  |
| 7  |                         |           |  |  |
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Date: \_\_\_Mar 9<sup>th</sup>, 2021\_\_\_\_ Foreman's Initials:

To protect the health and safety of yourself and your co-workers and to reduce the spread of COVID-19 on the project, all personnel must answer the following questions.

| In the past 14 days; have you:   | YES | NO |
|--|-----|----|
| Experienced a fever, cough, difficulty breathing or cold and flu-like symptoms?  |     | ~  |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |     | i  |
| Travelled outside the country?   |     | -  |
| Been in close contact with a person who recently travelled outside the country?  |     | -  |
| Been contacted by a health authority regarding close contact with a confirmed case?  |     | 1  |

If anyone answered YES to <u>any of the questions above, please isolate and contact site Health and Safety</u> immediately

All workers fit for duty?

| Toolbox Sign On |                |           |  |  |  |
|-----------------|----------------|-----------|--|--|--|
| #               | Print Name     | Signature |  |  |  |
| 1               | Can Dopposisti | V         |  |  |  |
| 2               | Brady Ludwig   |           |  |  |  |
| 3               | Varhan Reid    | and a     |  |  |  |
| 4               | 0              |           |  |  |  |
| 5               |                |           |  |  |  |
| 6               |                |           |  |  |  |
| 7               |                |           |  |  |  |
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| 9               |                |           |  |  |  |
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| Date: _ | Mar 9 <sup>th</sup> , 2021 |   |
|---------|----------------------------|---|
| Forema  | n's Initials:              | - |

To protect the health and safety of yourself and your co-workers and to reduce the spread of COVID-19 on the project, all personnel must answer the following questions.

| In the past 14 days; have you:   | YES | NO |
|--|-----|----|
| Experienced a fever, cough, difficulty breathing or cold and flu-like symptoms?  |     | 1  |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |     | 11 |
| Travelled outside the country?   |     | 11 |
| Been in close contact with a person who recently travelled outside the country?  |     | 1/ |
| Been contacted by a health authority regarding close contact with a confirmed case?  |     | /  |

If anyone answered YES to <u>any of the questions above, please isolate and contact site Health and Safety immediately</u>

| All workers fit for duty? | YES | NO |
|---------------------------|-----|----|
|                           |     |    |

|    | Toolbox Sign On  |           |  |  |  |  |
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| #  | Print Name       | Signature |  |  |  |  |
| 1  | 13:11/henry      | may from  |  |  |  |  |
| 2  | Jener Reikes     | 41.       |  |  |  |  |
| 3  | Eric Your        | Hunny     |  |  |  |  |
| 4  | Licas Crace      |           |  |  |  |  |
| 5  | Russell Hodge    |           |  |  |  |  |
| 6  | Wes /            |           |  |  |  |  |
| 7  | Shawn Myers      |           |  |  |  |  |
| 8  | James Hauthman   |           |  |  |  |  |
| 9  | Ian              |           |  |  |  |  |
| 10 | Christma Schultz |           |  |  |  |  |
| 11 | 36556 Mesheiney  |           |  |  |  |  |
| 12 | Justin Kremyr    |           |  |  |  |  |
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Date: \_\_\_Mar 17<sup>th</sup>, 2021\_\_\_\_ Foreman's Initials: \_\_\_\_

| Weather        |                  |                |                  |  |
|----------------|------------------|----------------|------------------|--|
| Tue<br>Evening | Tue<br>Overnight | Wed<br>Morning | Wed<br>Afternoon |  |
| Partly cloudy  | Partly cloudy    | Mainly cloudy  | Mainly cloudy    |  |
| a              | 60               | شق             | ش                |  |
| 5°             | 3°               | 3°             | 10°              |  |

### Daily Notices/ Alerts

### Wildlife Awareness

We are approaching Springtime and wildlife will become more active as ambient temperatures increase.

All wildlife sightings must be reported to the PGC environmental team for record keeping. The project is known to house Species at Risk in bog-like areas including red-legged frog and pacific water shrew.



Red-legged Frog



Pacific Water Shrew

Please be vigilant between March and August to not harm wildlife in and near the project area. Buffer zones may be required when wildlife and/or nesting areas are observed within active construction areas.

All effort must be made to protect wildlife on the project site. Please notify the PGC environmental team when any wildlife is observed. The team will investigate the species present and provide guidance on additional mitigation measures if required.

Artificial nesting areas (equipment, cleared vegetation, spill trays etc.) must be inspected after weekends to ensure that no wildlife is harmed, harassed, or injured that might have settled in these artificial habitat-like areas.



| Date:  | _Mar 17 <sup>th</sup> , 2021 |  |
|--------|------------------------------|--|
| Forema | n's Initials:                |  |

To protect the health and safety of yourself and your co-workers and to reduce the spread of COVID-19 on the project, all personnel must answer the following questions.

| In the past 14 days; have you:   | YES | NO |
|--|-----|----|
| Experienced a fever, cough, difficulty breathing or cold and flu-like symptoms?  |     | -  |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |     | -  |
| Travelled outside the country?   |     |    |
| Been in close contact with a person who recently travelled outside the country?  |     |    |
| Been contacted by a health authority regarding close contact with a confirmed case?  |     |    |

If anyone answered YES to <u>any of the questions above, please isolate and contact site Health and Safety</u> immediately

| All workers fit for duty? | YES | NO |  |
|---------------------------|-----|----|--|
|                           |     |    |  |

| Toolbox Sign On |             |           |  |  |  |
|-----------------|-------------|-----------|--|--|--|
| #               | Print Name  | Signature |  |  |  |
| 1               | Jerael Mahi |           |  |  |  |
| 2               | Andrew K.   |           |  |  |  |
| 3               | Kyle P      |           |  |  |  |
| 4               | Ron (60)    |           |  |  |  |
| 5               | Terane      |           |  |  |  |
| 6               | Z08A        |           |  |  |  |
| 7               | Sch         |           |  |  |  |
| 8               | Torri a     |           |  |  |  |
| 9               | Joe H. (GD) |           |  |  |  |
| 10              |             |           |  |  |  |
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| Gateway      |  |
| Constructors |  |

| Date: _ | Mar 17 <sup>th</sup> , 2021 | _ |
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| Forema  | n's Initials:               |   |

ct the health and safety of yourself and your co-workers and to reduce the spread of 2-19 on the project, all personnel must answer the following questions.

| the past 14 days; have you:  | YES | NO |
|--|-----|----|
| xperienced a fever, cough, difficulty breathing or cold and flu-like symptoms?   |     | 1  |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |     | 1  |
| Travelled outside the country?   |     | 1  |
| Been in close contact with a person who recently travelled outside the country?  |     | 1  |
| Been contacted by a health authority regarding close contact with a confirmed case?  |     | 1  |

If anyone answered YES to <u>any of the questions above, please isolate and contact site Health and Safety immediately</u>

|    | Toolbox Sign On    |           |  |  |  |
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| #  | Print Name         | Signature |  |  |  |
| 1  | Jordan Street      | 95()      |  |  |  |
| 2  | Aune Ljubichich    | ( ) Aline |  |  |  |
| 3  | Asal Rahbari Solut | 201 Foots |  |  |  |
| 4  | Jouce Adams.       | CAL S.    |  |  |  |
| 5  | Fallen Eingroon    | Paul,     |  |  |  |
| 6  |                    |           |  |  |  |
| 7  |                    |           |  |  |  |
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|  | Additiona | al Notes |  |  |
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| Date: _ | _Mar 17th, 2  | 021 |
|---------|---------------|-----|
| Forema  | n's Initials: |     |

To protect the health and safety of yourself and your co-workers and to reduce the spread of COVID-19 on the project, all personnel must answer the following questions.

| In the past 14 days; have you:   | YES | NO |
|--|-----|----|
| Experienced a fever, cough, difficulty breathing or cold and flu-like symptoms?  |     | X  |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |     | X  |
| Travelled outside the country?   |     | X  |
| Been in close contact with a person who recently travelled outside the country?  |     | Y  |
| Been contacted by a health authority regarding close contact with a confirmed case?  |     | Y  |

If anyone answered YES to <u>any of the questions above</u>, please isolate and contact site Health and Safety immediately

| All workers fit for duty? | YES | NO |
|---------------------------|-----|----|
|                           |     |    |

|           | Toolbox            | Sign On  |
|-----------|--------------------|--|
| #         | Print Name         | Signature  |
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| Additional Notes |  |
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|                  |  |



Date: \_\_\_Mar 17<sup>th</sup>, 2021\_\_\_\_ Foreman's Initials: \_\_\_\_

To protect the health and safety of yourself and your co-workers and to reduce the spread of COVID-19 on the project, all personnel must answer the following questions.

| In the past 14 days; have you:   | YES | NO |
|--|-----|----|
| Experienced a fever, cough, difficulty breathing or cold and flu-like symptoms?  |     | 1  |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |     | 1  |
| Travelled outside the country?   |     | 1  |
| Been in close contact with a person who recently travelled outside the country?  |     | 1  |
| Been contacted by a health authority regarding close contact with a confirmed case?  |     | 7  |

If anyone answered YES to <u>any of the questions above, please isolate and contact site Health and Safety</u> immediately

| All workers fit for duty? | YES | NO |
|---------------------------|-----|----|
|                           |     |    |

|    | To              | oolbox Sign On |
|----|-----------------|----------------|
| #  | Print Name      | Signature      |
| 1  | CHUS THOMPSON   |                |
| 2  | T SELL<br>BRODY | 36/            |
| 3  | BRODY           |                |
| 4  | KEUIM           |                |
| 5  | RIEC            |                |
| 6  | CHELSE'A        |                |
| 7  | BRANDON         |                |
| 8  | MATT            |                |
| 9  | ANDREW          |                |
| 10 | DAVE            |                |
| 11 | CONNER          |                |
| 12 | Ros             |                |
| 13 | 1Cen            |                |
| 14 | MILES           |                |
| 15 | KATE            |                |
| 16 | Jan XIall       |                |
| 17 | 1, 3            |                |
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|  | Additional Notes |  |
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| Date: _ | Mar 17 <sup>th</sup> , 2021 |
|---------|-----------------------------|
| Forema  | n's Initials:               |

To protect the health and safety of yourself and your co-workers and to reduce the spread of COVID-19 on the project, all personnel must answer the following questions.

| In the past 14 days; have you:   |    | NO |
|--|----|----|
| Experienced a fever, cough, difficulty breathing or cold and flu-like symptoms?  |    |    |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |    |    |
| Travelled outside the country?   |    |    |
| Been in close contact with a person who recently travelled outside the country?  |    |    |
| Been contacted by a health authority regarding close contact with a confirmed case?  | -1 |    |

If anyone answered YES to <u>any of the questions above, please isolate and contact site Health and Safety immediately</u>

|    | Toolbox Sign On |                    |  |  |  |  |
|----|-----------------|--------------------|--|--|--|--|
| #  | Print Name      | Signature          |  |  |  |  |
| 1  | DARREN FERESCH  | 102                |  |  |  |  |
| 2  | Torrie Ordano   | 79/                |  |  |  |  |
| 3  | STEUR LEESON    |                    |  |  |  |  |
| 4  | Can Slats       |                    |  |  |  |  |
| 5  | Dowan Cheraly   | SUS AN CHERNET LLY |  |  |  |  |
| 6  | ALINE L         | Atoms              |  |  |  |  |
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|  | Additional Notes |  |
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| Date: _ | _Mar 1    | 7 <sup>th</sup> , | 2021 |  |
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| orema   | n's Initi | als               |      |  |

To protect the health and safety of yourself and your co-workers and to reduce the spread of COVID-19 on the project, all personnel must answer the following questions.

| In the past 14 days; have you:   |      | NO |
|--|------|----|
| Experienced a fever, cough, difficulty breathing or cold and flu-like symptoms?  | 11 1 | X  |
| Been in close contact with a person with COVID-19 (probable or confirmed) or who has symptoms compatible with COVID-19 (fever, cough, difficulty breathing)? |      | X  |
| Travelled outside the country?   |      | C  |
| Been in close contact with a person who recently travelled outside the country?  |      | t  |
| Been contacted by a health authority regarding close contact with a confirmed case?  |      | V  |

If anyone answered YES to <u>any of the questions above, please isolate and contact site Health and Safety immediately</u>



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| 1  | Tillt valle     | Signature   |
| 2  | 20400 Ildoma    | 100         |
| 3  | 1               |             |
| 4  | tallon Elnerson | Jan.        |
| 5  | NIGER LIEAS     | 1 All       |
| 6  | Jared Sameries  | 42          |
| 7  | Jesumy Jores    | Chill 1     |
| 8  | Ac Mandak       |             |
| 9  | ALINE V         |             |
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| Additional Notes |  |
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