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Table 1: Water Levels and Discharge Measurements Recorded in 2012, 2013 and 2014

| Station | Date | Staff Gauge (m) | Discharge (m ³ /s) |
|--|--------------------|---------------------|-------------------------------|
| Bogg Creek Downstream (HSKY_001) | 22-Jul-12 13:45 | 0.074 ³ | 0.03 |
| | 30-Jul-12 14:20 | 0.055 ³ | 0.02 |
| | 15-Sep-12 15:34 | 0.581 ³ | 2.6* |
| | 18-Jun-13 20:44 | 0.412 ³ | 1.21 |
| | 16-Jul-13 14:23 | 0.344 ³ | 0.84 |
| | 9-Oct-13 12:15 | 0.277 ³ | 0.54 |
| | 5-Jun-14 13:30 | 0.394 | No Measurement |
| Bogg Creek Upstream (at bridge) (HSKY_001B) | 18-Jun-13 16:55 | 0.617 ⁵ | 1.08 |
| | 16-Jul-13 13:05 | 0.509 ⁵ | 0.54 |
| | 9-Oct-13 10:28 | 0.404 ⁵ | 0.41 |
| | 5-Jun-14 11:00 | 0.585 | 0.82 |
| | 23-Jul-14 14:15 | 0.088 | 0.02 |
| | 8-Oct-14 15:30 | 0.412 | 0.20 |
| Slater River Downstream (HSKY_002) | 22-Jul-12 18:00 | -0.022 ⁴ | 0.02 |
| | 30-Jul-12 13:20 | -0.006 ⁴ | 0.04 |
| | 15-Sep-12 13:43 | 0.623 ⁴ | 5.12* |
| | 19-Jun-13 16:18 | 0.242 ⁴ | 1.89 |
| | 16-Jul-13 16:36 | 0.179 ⁴ | 1.09 |
| | 9-Oct-13 15:17 | 0.197 ⁴ | 1.27 |
| | 5-Jun-14 15:30 | 0.072 | 1.78 |
| | 23-Jul-14 12:00 | 0.002 ⁸ | 0.07 |
| Slater River Upstream (near proposed bridge) (HSKY_002B) | 8-Oct-14 14:30 | 0.012 | 0.64 |
| | 19-Jun-13 13:49 | 0.543 ⁶ | 1.46 |
| | 16-Jul-13 15:44 | 0.356 ⁶ | 0.78 |
| | 9-Oct-13 14:04 | 0.522 ⁶ | 0.94 |
| | 5-Jun-14 17:00 | 0.472 | No Measurement |
| Little Bear River (HSKY_003) | 8-Oct-14 13:15 | 0.362 | No Measurement |
| | 23-Jul-12 15:40 | 0.077 ² | 10.54 |
| | 30-Jul-12 12:00 | 0.075 ² | 10.20 |
| | 15-Sep-12 11:27 | 0.602 ² | No Measurement ¹ |
| | 20-Jun-13 13:05 | 0.289 | 29.46 |
| | 16-Jul-13 17:42 | 0.098 | 16.06 |
| | 9-Oct-13 16:36 | 0.100 | 16.17 |
| | 5-Jun-14 19:15 | 0.104 ⁷ | 14.64 |
| | 23-Jul-14 11:00 | 0.083 ⁷ | 12.38 |
| 8-Oct-14 10:15 | 0.053 ⁷ | 8.82 | |

*values likely underestimated, as flow measurements across complete cross-section could not be completed due to very high water levels

¹No measurement was obtained due to very high water levels

²Adjusted water level (2012 gauge taken out by ice): 0.213m subtracted from 2012 values

³Adjusted water level (2012 gauge taken out by ice): 0.260m subtracted from 2012 values; then 0.044m subtracted from 2012/13 values

⁴Adjusted water level (2012 gauge shifted; affected by ice): 0.172m subtracted from 2012 values; then 0.050m subtracted from 2012/13 values

⁵Adjusted water level: 0.036m subtracted from 2013 values

⁶Adjusted water level: 0.066m subtracted from 2013 values

⁷No longer a staff gauge at this site; water levels in 2014 derived from current linear regression formula (interpolated from Q)

⁸Staff Gauge out of water; water level derived from current linear regression formula (interpolated from Q)

Table 2: Basin Areas

| Point | Area (km ²) |
|--|-------------------------|
| Bogg Creek (complete) | 192.5 |
| Bogg Creek (above HSKY_001 station) | 191.2 |
| Bogg Creek (above HSKY_001B station) | 150.5 |
| Slater River (complete) | 261.2 |
| Slater River (above HSKY_002 station) | 200.9 |
| Slater River (above HSKY_002B station) | 166.8 |
| Little Bear River (complete) | 2209.3 |
| Little Bear River (above HSKY_003 station) | 2058.9 |

Table 3: Stage-Discharge Curve for Bogg Creek (HSKY_001)

| Stage, H (meters) | Discharge, Q (m ³ /s) |
|-------------------|----------------------------------|
| 0.0 | 0.00055 |
| 0.1 | 0.0593 |
| 0.2 | 0.252 |
| 0.3 | 0.609 |
| 0.4 | 1.15 |
| 0.5 | 1.9 |
| 0.6 | 2.87 |
| 0.7 | 4.06 |

Where, a = 8.829; b = 2.316; e = -0.015

Table 4: Stage-Discharge Curve for Bogg Creek at Bridge (HSKY_001B)

| Stage, H (meters) | Discharge, Q (m ³ /s) |
|-------------------|----------------------------------|
| 0.0 | 0.00753 |
| 0.1 | 0.0227 |
| 0.2 | 0.058 |
| 0.3 | 0.131 |
| 0.4 | 0.27 |
| 0.5 | 0.517 |
| 0.6 | 0.932 |
| 0.7 | 1.6 |

Where, a = 0.444; b = 6.318; e = -0.525

Table 5: Stage-Discharge Curve for Slater River (HSKY_002)

| Stage, H (meters) | Discharge, Q (m ³ /s) |
|-------------------|----------------------------------|
| -0.1 | 0.00355 |
| 0.0 | 0.111 |
| 0.1 | 0.479 |
| 0.2 | 1.23 |
| 0.3 | 2.46 |
| 0.4 | 4.28 |
| 0.5 | 6.76 |
| 0.6 | 9.99 |

Where, a = 22.567; b = 2.687; e = -0.138

Table 6: Stage-Discharge Curve for Slater River near Proposed Bridge (HSKY_002B)

| Stage, H (meters) | Discharge, Q (m ³ /s) |
|-------------------|----------------------------------|
| 0.1 | 0.357 |
| 0.2 | 0.49 |
| 0.3 | 0.655 |
| 0.4 | 0.856 |
| 0.5 | 1.1 |
| 0.6 | 1.38 |
| 0.7 | 1.71 |
| 0.8 | 2.1 |

Where, a = 0.346; b = 3.364; e = -0.909

Table 7: Stage-Discharge Curve for Little Bear River (HSKY_003)

| Stage, H (meters) | Discharge, Q (m ³ /s) |
|-------------------|----------------------------------|
| 0.0 | 5.61 |
| 0.1 | 13.7 |
| 0.2 | 22.9 |
| 0.3 | 33.0 |
| 0.4 | 43.8 |

Where, a = 105.744; b = 1.261; e = -0.097

Table 8: Sample Locations and Coordinates

| Name | Northing | Easting |
|----------------|----------|---------|
| HSKY_001 | 7215428 | 630465 |
| HSKY_001B/C | 7216703 | 625727 |
| HSKY_002 | 7205644 | 630032 |
| HSKY_002b | 7205108 | 629160 |
| HSKY_003 | 7193837 | 645799 |
| HSKY_004 | 7230350 | 611329 |
| HSKY_005 | 7227266 | 610762 |
| HSKY_006 | 7222241 | 611315 |
| HSKY_007 | 7218980 | 611301 |
| HSKY_008 | 7199245 | 612532 |
| HSKY_009 | 7196982 | 606403 |
| HSKY_010 | 7181471 | 611460 |
| HSKY_011 | 7179459 | 611340 |
| HSKY_012 | 7186562 | 622498 |
| HSKY_013 | 7197331 | 617433 |
| HSKY_014 | 7198999 | 618867 |
| HSKY_015 | 7178663 | 624746 |
| HSKY_016 (WS5) | 7194810 | 629154 |
| HSKY_017 | 7188526 | 639306 |
| HSKY_018 | 7187751 | 639828 |
| HSKY_019 | 7194935 | 641221 |
| HSKY_020 | 7188242 | 647513 |
| HSKY_021 | 7190889 | 652397 |
| HSKY_022 | 7184500 | 654528 |
| HSKY_023 | 7204193 | 631388 |
| HSKY_024 | 7203363 | 635224 |
| HSKY_025 | 7202005 | 640242 |

| Name | Northing | Easting |
|-----------------------|----------|---------|
| HSKY_026 | 7225389 | 619949 |
| HSKY_027 | 7221605 | 622502 |
| HSKY_028 ¹ | 7220048 | 625969 |
| HSKY_029 | 7221016 | 616408 |
| HSKY_030 | 7218067 | 623383 |
| HSKY_031 ¹ | 7211868 | 617877 |
| HSKY_032 | 7208516 | 627246 |
| HSKY_033 | 7206085 | 612051 |
| HSKY_034 | 7172125 | 626257 |
| HSKY_035 | 7176095 | 639501 |
| HSKY_036 | 7177859 | 647472 |
| HSKY_037 | 7176213 | 655495 |
| HSKY_038 | 7236879 | 608606 |
| HSKY_039 | 7201934 | 652468 |
| HSKY_040 (WS1) | 7213922 | 623747 |
| HSKY_041 (WS3) | 7206425 | 616679 |
| HSKY_042 (WS4) | 7203374 | 619395 |
| HSKY_043 (WS6) | 7197627 | 635452 |
| HSKY_044 | 620897 | 7212404 |
| HSKY_045 US/DS | 629262 | 7220922 |
| HSKY_046 US/DS | 619310 | 7211019 |
| AWR2 | 7219685 | 628973 |
| AWR3 | 7218741 | 627936 |
| AWR4 | 7217650 | 626976 |
| AWR5 | 7217109 | 626189 |

*Datum: North American 1983 (NAD83), Zone 9

Table 9: List of Final Certificate of Analysis (COAs)

| Certificate of Analysis Lab Work Order Number | Report Date | Version |
|---|-------------|-------------|
| 14E852279 | 18-Jun-14 | Final Rev 2 |
| 14E852297 | 29-Jun-14 | Final |
| 14E852625 | 28-Jun-14 | Final |
| 14E891683 | 14-Oct-14 | Final |
| 14E892494 | 14-Oct-14 | Final |
| 14E892748 | 14-Oct-14 | Final |

Table 10: Summary of Surface Water Quality - Field Screens (2012 -2014)

| Parameter | Minimum Concentration (mg/L unless noted) | Maximum Concentration (mg/L unless noted) | Number of Samples with Detection | Number of Samples with Exceedances |
|-------------------------------------|---|---|----------------------------------|------------------------------------|
| Conductivity | 7.45 µS/cm | 1135 µS/cm | 234 | NG |
| Dissolved oxygen | 0.08 mg/L | 24.40 mg/L | 234 | 60 |
| Dissolved oxygen (percent) | 0.7 % | 226.7 % | 234 | NG |
| Oxidation reduction potential (ORP) | -1185.5 mV ¹ | 272.0 mV | 234 | NG |
| pH | 3.26 pH units | 9.29 pH units | 234 | 39 |
| Salinity (as mass/volume) | 10 mg/L | 800 mg/L | 234 | NG |
| Temperature | 2.70 °C | 27.00 °C | 234 | 97 |
| Total dissolved solids | 16 mg/L | 611000 mg/L² | 221 | 31 |
| Turbidity | 0 NTU | 1859 NTU | 226 | NA |

¹ Result as recorded however result is lower than expected for this site.

- ORP result indicates a reducing solution.

² Results >100,000 mg/L are considered invalid.

NA = Not applicable

NG = No guidance level

Individual data compared to guideline values included in **Appendix C**.

Table 11: Summary of Surface Water Quality - Routine (2012 -2014)

| Parameter | Minimum Concentration (mg/L unless noted) | Maximum Concentration (mg/L unless noted) | Number of Samples with Detection | Number of Samples with Exceedances |
|---|---|---|----------------------------------|------------------------------------|
| Alkalinity (phenolphthalein, as CaCO ₃) | <5 | 9 | 1 | 0 |
| Alkalinity (total, as CaCO ₃) | <5 | 234 | 224 | NG |
| Bicarbonate (HCO ₃) | 6 | 276 | 225 | 0 |
| Biochemical oxygen demand (BOD) | 2.0 | 671 | 61 | NG |
| Carbonate (CO ₃) | <5.0 | 11 | 2 | 0 |
| Chloride | <0.50 | 175 | 146 | 7 |
| Conductivity | 25.5 | 1190 | 225 | NG |
| Dissolved inorganic carbon | <0.50 | 47.4 | 169 | NG |
| Dissolved organic carbon | <1 | 62.8 | 171 | NG |
| Fluoride | <0.020 | 0.217 | 142 | 21 |
| Hardness, total (dissolved as CaCO ₃) | 12.6 | 338 | 225 | NG |
| Hardness, Total (total as CaCO ₃) | 15.2 | 431 | 96 | NG |
| Hydroxide (OH) | - | - | 0 | NG |
| Ionic balance (percent) | 41.3 % | 462 % | 194 | NG |
| Nitrogen, Ammonia (total, as N) | 0.0050 | 2.33 | 146 | 1 (calc) |
| Total kjeldahl nitrogen | <0.050 | 22.4 | 150 | NG |
| Nitrate (as N) | <0.02 | 0.307 | 8 | 0 |
| Nitrate + Nitrite (as N) | <0.02 | 0.307 | 4 | 0 |
| Orthophosphate (dissolved, as P) | 0.0010 | 0.0141 | 25 | NG |
| pH | 5.13 pH units | 8.91 pH units | 225 | 6 |
| Sulphate | <0.50 | 307 | 210 | 0 |
| Total dissolved solids (computed) | 9.6 | 661 | 225 | 12 |
| Total suspended solids | 2 | 4140 | 156 | 0 |
| Turbidity | 0.9 NTU | 4000 NTU | 177 | 0 |

NG = No guidance level

calc = guideline has to be calculated based on other parameters.

Bolded = Parameters with concentrations above guideline values.

Individual data compared to guideline values included in **Appendix C**.

Table 12: Summary of Surface Water Quality - Total and Dissolved Metals, Phosphorus and Methylmercury (2012 -2014)

| Parameter | Minimum Concentration (mg/L unless noted) | Maximum Concentration (mg/L unless noted) | Number of Samples with Detection | Number of Samples with Exceedances |
|--|---|---|----------------------------------|------------------------------------|
| Aluminum (dissolved) | 0.004 | 3.58 | 198 | 26 |
| Aluminum (total) | 0.012 | 28.1 | 225 | 153 |
| Antimony (dissolved) | <0.00040 | 0.00153 | 6 | NG |
| Antimony (total) | <0.00040 | 0.001 | 6 | NG |
| Arsenic (dissolved) | <0.00040 | 0.00364 | 136 | 0 (calc) |
| Arsenic (total) | <0.00040 | 0.0264 | 194 | 11 (calc) |
| Barium (dissolved) | 0.0149 | 0.367 | 182 | 0 |
| Barium (total) | 0.0182 | 1.10 | 207 | 1 |
| Beryllium (dissolved) | - | - | 0 | NG |
| Beryllium (total) | 0.001 | 0.0018 | 2 | NG |
| Boron (dissolved) | 0.01 | 0.115 | 41 | 0 |
| Boron (total) | 0.01 | 0.306 | 44 | 0 |
| Cadmium (dissolved) | 0.000010 | 0.00020 | 82 | 5 (calc) |
| Cadmium (total) | <0.000010 | 0.00123 | 151 | 25 (calc) |
| Calcium (dissolved) | 2.77 | 94.6 | 225 | NG |
| Calcium (total) | 3.78 | 119 | 143 | NG |
| Chromium (dissolved) | <0.0010 | 0.0071 | 2 | 0 |
| Chromium (total) | 0.001 | 0.0538 | 55 | 7 |
| Chromium, hexavalent (Cr(VI)) (dissolved) | <0.0010 | 0.0011 | 1 | 1 |
| Chromium, hexavalent (Cr(VI)) (total) | 0.0010 | 0.0017 | 2 | 1 |
| Cobalt (dissolved) | <0.00019 | 0.0059 | 25 | NG |
| Cobalt (total) | 0.001 | 0.0314 | 47 | NG |
| Copper (dissolved) | 0.0010 | 0.0161 | 66 | 13 (calc) |
| Copper (total) | 0.0010 | 0.101 | 145 | 55 (calc) |
| Iron (dissolved) | <0.010 | 12.0 | 179 | 85 |
| Iron (total) | 0.031 | 85.3 | 222 | 192 |
| Lead (dissolved) | 0.00010 | 0.00873 | 36 | 1 |
| Lead (total) | <0.00010 | 0.0493 | 148 | 18 |
| Lithium (dissolved) | 0.001 | 0.0511 | 85 | NG |
| Lithium (total) | 0.001 | 0.103 | 81 | NG |
| Magnesium (dissolved) | 1.37 | 28.4 | 225 | NG |
| Magnesium (total) | 1.37 | 32.7 | 143 | NG |
| Manganese (dissolved) | <0.0020 | 0.387 | 191 | 54 |
| Manganese (total) | 0.0043 | 2.78 | 225 | 99 |
| Mercury (dissolved, ultra) | 0.00000050 | 0.0000400 | 19 | 1 |
| Mercury (total, ultra) | 0.00000085 | 0.000043 | 45 | 2 |
| Mercury (dissolved) | 0.0000010 | 0.000011 | 40 | 0 |
| Mercury (total) | <0.0000010 | 0.000140 | 57 | 2 |
| Methylmercury (dissolved) | <0.000000050 | 0.00000209 | 56 | 0 |
| Methylmercury (total) | <0.000000050 | 0.00000221 | 106 | 0 |
| Molybdenum (dissolved) | - | - | 0 | 0 |
| Molybdenum (total) | 0.003 | 0.003 | 1 | 0 |
| Nickel (dissolved) | 0.0020 | 0.0213 | 74 | 0 |
| Nickel (total) | 0.0020 | 0.105 | 94 | 0 |
| Phosphorus (total, by ICPMS/ICPOES) | 0.08 | 2.05 | 29 | 0 |
| Phosphorus (total, APHA 4500-P) | 0.020 | 3.37 | 115 | 0 |
| Potassium (dissolved) | <0.50 | 7.6 | 175 | NG |
| Potassium (total) | 0.21 | 6.60 | 125 | NG |
| Selenium (dissolved) | 0.00040 | 0.00119 | 16 | 1 |
| Selenium (total) | <0.00040 | 0.004 | 25 | 8 |
| Silicon (dissolved, as Si) | 0.039 | 8.04 | 41 | 0 |
| Silicon (total, as Si) | 0.421 | 25.3 | 41 | 0 |
| Silver (dissolved) | <0.000020 | 0.00006 | 2 | 0 |
| Silver (total) | <0.000020 | 0.000451 | 29 | 9 |
| Sodium (dissolved) | 0.6 | 140 | 194 | 0 |
| Sodium (total) | <0.6 | 124 | 176 | 0 |
| Strontium (dissolved) | 0.009 | 0.52 | 41 | 0 |

| | | | | |
|-------------------------|-------------------|---------------|------------|-----------|
| Strontium (total) | 0.014 | 0.76 | 41 | 0 |
| Thallium (dissolved) | - | - | 0 | NG |
| Thallium (total) | <0.00010 | 0.0005 | 7 | NG |
| Tin (dissolved) | - | - | 0 | NG |
| Tin (total) | <0.0001 | 0.00092 | 15 | NG |
| Titanium (dissolved) | 0.001 | 0.0041 | 38 | 0 |
| Titanium (total) | 0.0010 | 0.17 | 144 | 0 |
| Uranium (dissolved) | 0.00010 | 0.00243 | 75 | 0 |
| Uranium (total) | 0.00010 | 0.00431 | 107 | 0 |
| Vanadium (dissolved) | <0.0010 | 0.0137 | 7 | NG |
| Vanadium (total) | 0.001 | 0.0784 | 86 | NG |
| Zinc (dissolved) | <0.0020 | 0.0669 | 91 | 1 |
| Zinc (total) | 0.0040 | 0.372 | 195 | 34 |

NG = No Guidance Level

calc = guideline has to be calculated based on other parameters.

Bolded = Parameters with concentrations above guideline values.

Individual data compared to guideline values included in **Appendix C**.

Table 13: Summary of Surface Water Quality - CCME Hydrocarbons, VOCs, Glycols, and Methanol Results (2012 -2014)

| Parameter | Minimum Concentration (mg/L unless noted) | Maximum Concentration (mg/L unless noted) | Number of Samples with Detection | Number of Samples with Exceedances |
|-------------------------------------|---|---|----------------------------------|------------------------------------|
| CCME Hydrocarbons | | | | |
| Benzene | - | - | 0 | 0 |
| Ethylbenzene | - | - | 0 | 0 |
| F1 (C6-C10) | <0.10 | 0.18 | 1 | NG |
| F1-BTEX | <0.10 | 0.18 | 1 | NG |
| F2 (>C10-C16) | <0.1 | 2.4 | 1 | NG |
| F3 (>C16-C34) | 0.1 | 8.9 | 9 | NG |
| F4 (>C34-C50) | <0.1 | 3.9 | 1 | NG |
| Toluene | <0.0003 | 0.00808 | 6 | 4 |
| m,p-Xylene (sum of isomers) | - | - | 0 | NG |
| o-Xylene | - | - | 0 | NG |
| Xylenes | - | - | 0 | 0 |
| Volatile Organic Compounds | | | | |
| 1,1,1,2-Tetrachloroethane | - | - | 0 | NG |
| 1,1,1-Trichloroethane | - | - | 0 | NG |
| 1,1,2,2-Tetrachloroethane | - | - | 0 | NG |
| 1,1,2-Trichloroethane | - | - | 0 | NG |
| 1,1-Dichloroethane | - | - | 0 | NG |
| 1,1-Dichloroethylene | - | - | 0 | 0 |
| 1,1-Dichloropropene | - | - | 0 | NG |
| 1,2,3-Trichlorobenzene | - | - | 0 | 0 |
| 1,2,3-Trichloropropane | - | - | 0 | NG |
| 1,2,4-Trichlorobenzene | - | - | 0 | 0 |
| 1,2,4-Trimethylbenzene | - | - | 0 | NG |
| Dibromochloropropane | - | - | 0 | NG |
| Ethylene dibromide | - | - | 0 | NG |
| 1,2-Dichlorobenzene | - | - | 0 | 0 |
| 1,2-Dichloroethane | - | - | 0 | 0 |
| 1,2-Dichloropropane | - | - | 0 | NG |
| 1,3,5-Trimethylbenzene (Mesitylene) | - | - | 0 | NG |
| 1,3-Dichlorobenzene | - | - | 0 | 0 |
| 1,3-Dichloropropane | - | - | 0 | NG |
| 1,4-Dichlorobenzene | - | - | 0 | 0 |
| 2,2-Dichloropropane | - | - | 0 | NG |
| o-Chlorotoluene | - | - | 0 | NG |
| p-Chlorotoluene | - | - | 0 | NG |
| Bromobenzene | - | - | 0 | NG |
| Bromochloromethane | - | - | 0 | NG |
| Carbon tetrachloride | - | - | 0 | 0 |

| | | | | |
|------------------------------------|-------------------|--------------|------------|------------|
| Monochlorobenzene | - | - | 0 | 0 |
| Chloroethane | - | - | 0 | NG |
| Chloromethane | - | - | 0 | NG |
| cis-1,2-Dichloroethylene | - | - | 0 | NG |
| cis-1,3-Dichloropropene | - | - | 0 | NG |
| Dibromomethane | - | - | 0 | NG |
| Dichlorodifluoromethane | - | - | 0 | NG |
| Hexachlorobutadiene | - | - | 0 | 0 |
| Isopropylbenzene (Cumene) | - | - | 0 | NG |
| n-Butylbenzene | - | - | 0 | NG |
| n-Propylbenzene | - | - | 0 | NG |
| p-Isopropyltoluene | - | - | 0 | NG |
| sec-Butylbenzene | - | - | 0 | NG |
| Phenols (4AAP) | <0.0010 | 0.069 | 139 | 102 |
| Styrene | - | - | 0 | 0 |
| tert-Butylbenzene | - | - | 0 | NG |
| Tetrachloroethylene (PCE) | - | - | 0 | 0 |
| trans-1,2-Dichloroethylene | - | - | 0 | NG |
| trans-1,3-Dichloropropene | - | - | 0 | NG |
| Trichloroethylene (TCE) | - | - | 0 | 0 |
| Trichlorofluoromethane | - | - | 0 | NG |
| Vinyl chloride | - | - | 0 | 0 |
| Trihalomethanes | | | | |
| Bromodichloromethane | - | - | 0 | 0 |
| Bromoform | - | - | 0 | 0 |
| Chloroform | <0.0010 | 0.0013 | 1 | 0 |
| Dibromochloromethane | - | - | 0 | 0 |
| Total Trihalomethanes (calculated) | - | - | 0 | 0 |
| Glycols and Methanol | | | | |
| Diethylene glycol | - | - | 0 | NG |
| Ethylene glycol | - | - | 0 | 0 |
| Propylene glycol | - | - | 0 | 0 |
| Tetraethylene glycol | - | - | 0 | NG |
| Triethylene glycol | - | - | 0 | NG |
| Methanol | <1.0 | 1.6 | 3 | 0 |

*BTEX – benzene, toluene, ethylbenzene, xylenes

NG = No Guidance Level

Bolded = Parameters with concentrations above guideline values.

Individual data compared to guideline values included in **Appendix C**.

Table 14: Summary of Surface Water Quality - Polycyclic Aromatic Hydrocarbons (PAH) (2012 -2013)

| Parameter | Minimum Concentration (mg/L unless noted) | Maximum Concentration (mg/L unless noted) | Number of Samples with Detection | Number of Samples with Exceedances |
|---|---|---|----------------------------------|------------------------------------|
| Acenaphthene | - | - | 0 | 0 |
| Acenaphthylene | - | - | 0 | NG |
| Acridine | - | - | 0 | 0 |
| Anthracene | - | - | 0 | 0 |
| Benzo[a]anthracene | - | - | 0 | 0 |
| Benzo[a]pyrene | - | - | 0 | 0 |
| Benzo[b]fluoranthene + Benzo[j]fluoranthene | - | - | 0 | NG |
| Benzo[g,h,i]perylene | - | - | 0 | NG |
| Benzo[k]fluoranthene | - | - | 0 | NG |
| Chrysene | - | - | 0 | NG |
| Dibenz[a,h]anthracene | - | - | 0 | NG |
| Fluoranthene | - | - | 0 | 0 |
| Fluorene | <0.00001 | 0.00004 | 1 | 0 |
| Indeno[1,2,3-cd]pyrene | - | - | 0 | NG |
| 1-Methylnaphthalene | - | - | 0 | NG |
| 2-Methylnaphthalene | <0.000010 | 0.000022 | 2 | NG |
| Naphthalene | <0.00001 | 0.000052 | 1 | NG |
| Phenanthrene | <0.00001 | 0.000054 | 1 | 0 |
| Pyrene | <0.000010 | 0.000030 | 2 | 1 |
| Quinoline | - | - | 0 | 0 |

NG = No Guidance Level

Bolded = Parameters with concentrations above guideline values.

Individual data compared to guideline values included in **Appendix C**.

Table 15: Groundwater/Permafrost Sample Locations

| Well ID | Type | Easting (m) | Northing (m) |
|--------------------|-----------------------|-------------|--------------|
| MW-01A MW-01T | Shallow Thermistor | 628329 | 7222199 |
| MW-04 | Thermistor | 625281 | 7221678 |
| MW-09A/B MW-09T | Bedrock Thermistor | 617272 | 7209151 |
| MW-11 | Thermistor | 615936 | 7207142 |
| MW-12 | Thermistor | 617575 | 7206707 |
| MW-16 | Thermistor | 626583 | 7200184 |
| MW-17T | Thermistor | 629183 | 7197831 |
| MW-19B MW-19T | Shallow Thermistor | 632819 | 7199044 |

Coordinates in NAD 83, UTM Zone 9N

'T' = Thermistors

'A' = Shallow

'B' = Bedrock

Table 16: Summary of Thermistor Data (2013-2014)

| | Therm 1 °C | Therm 2 °C | Therm 3 °C | Therm 4 °C | Therm 5 °C | Therm 6 °C |
|--------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| MW-01T | | | | | | |
| Minimum Temperature (°C) | -16.58 | -7.12 | -4.11 | -2.94 | -2.27 | -2.04 |
| Maximum Temperature (°C) | 8.6 | -0.97 | -1.39 | -1.48 | -1.5 | -1.58 |
| Sensor Depth (mbgl) | 0.75 | 2.75 | 4.75 | 6.75 | 8.75 | 10.75 |
| MW-04T | | | | | | |
| Minimum Temperature (°C) | -2.43 | -1.65 | -1.45 | -1.26 | -1.14 | -1.1 |
| Maximum Temperature (°C) | -1.08 | -1.08 | -1.2 | -1.08 | -0.83 | -0.69 |
| Sensor Depth (mbgl) | 4.80 | 6.80 | 8.80 | 10.80 | 12.80 | 14.80 |
| MW-09T | | | | | | |
| Minimum Temperature (°C) | -14.39 | -9.8 | -6.6 | -4.76 | -3.09 | -2.1 |
| Maximum Temperature (°C) | 9.42 | 1.76 | -0.44 | -0.86 | -0.96 | -0.97 |
| Sensor Depth (mbgl) | 0.85 | 1.60 | 2.35 | 3.10 | 3.85 | 4.60 |
| MW-11T | | | | | | |
| Minimum Temperature (°C) | -6.94 | -3.69 | -2.41 | -1.58 | -1.28 | -1.11 |
| Maximum Temperature (°C) | 1.64 | -0.4 | -0.33 | -0.22 | -0.2 | -0.24 |
| Sensor Depth (mbgl) | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 |
| MW-12T | | | | | | |
| Minimum Temperature (°C) | -2.63 | -1.08 | -0.71 | -0.56 | -0.48 | -0.42 |
| Maximum Temperature (°C) | -0.38 | -0.16 | -0.18 | -0.17 | -0.17 | -0.13 |
| Sensor Depth (mbgl) | 3.70 | 5.70 | 7.70 | 9.70 | 11.70 | 13.70 |
| MW-16T | | | | | | |
| Minimum Temperature (°C) | -7.46 | -4.98 | -3.8 | -2.97 | -2.42 | -2.13 |
| Maximum Temperature (°C) | -0.76 | -1.13 | -1.43 | -1.49 | -1.35 | -1.4 |
| Sensor Depth (mbgl) | 2.05 | 3.15 | 4.25 | 5.35 | 6.45 | 7.55 |
| MW-17T | | | | | | |
| Minimum Temperature (°C) | -0.1 | 0.02 | -0.02 | -0.06 | -0.09 | -0.17 |
| Maximum Temperature (°C) | 4.22 | 1.48 | 0.61 | 0.45 | 0.25 | -0.11 |
| Sensor Depth (mbgl) | 2.50 | 4.50 | 6.50 | 8.50 | 11.50 | 12.50 |
| MW-19T | | | | | | |
| Minimum Temperature (°C) | -2.68 | -0.03 | 0.23 | 0.41 | 0.57 | 0.71 |
| Maximum Temperature (°C) | 6.26 | 3.26 | 1.75 | 1.74 | 1.69 | 1.52 |
| Sensor Depth (mbgl) | 2.40 | 3.90 | 5.40 | 6.90 | 8.40 | 9.90 |