

In situ parameters, fecal coliforms, majority ions and PTE during the dry season (may, 2022).

| | Coliforms | T | pH | TDS | EC | Ca ²⁺ | Mg ²⁺ | Na ⁺ | K ⁺ | NO ₃ ⁻ | Cl ⁻ | HCO ₃ ⁻ | SO ₄ ²⁻ | B | Mn | Ba | Fe | Zn | F ⁻ | Li | Sr | Ni | Si | Al | Cd |
|-------------------|----------------|-------|---------|-------|--------|------------------|------------------|-----------------|----------------|------------------------------|-----------------|-------------------------------|-------------------------------|-------|---------|------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| | CFU/ 100 ml | °C | | mg/L | (µS/m) | | | | | | | mg/L | | | | | | | | | | | | | |
| NOM-127-SSA1-2021 | 0 | ----- | 6.5-8.5 | 1000 | ----- | ----- | ----- | ----- | ---- | 11 | ----- | ----- | 400 | ----- | 0.15 | 1.3 | 0.30 | ----- | 1.5 | ----- | ----- | 0.07 | ----- | 0.2 | 0.005 |
| WHO 2017 | 0 | ----- | 7-8 | 1000 | ----- | ----- | ----- | 200 | ---- | 50 | 250* | ----- | 250 | ----- | 0.1-0.4 | 2.4 | 0.30* | 3-5 | ----- | ----- | ----- | 0.07 | ----- | | 0.003 |
| BC1 | 0 | 20.2 | 6.5 | 42.8 | 86.3 | 19.4 | 0.2 | 4.4 | 1.4 | 0.9 | 1.5 | 75.3 | 1.1 | 2.4 | <1.c. | 0.02 | <1.c. | 0.003 | 0.141 | 0.007 | 0.02 | <1.c. | 28.1 | <1.c. | <1.c. |
| BC2 | 0 | 24.6 | 7.2 | 329.9 | 672.3 | 135.0 | 9.7 | 12.4 | 0.7 | 26.0 | 34.3 | 354.5 | 82.0 | <1.c. | <1.c. | 0.18 | <1.c. | <1.c. | 0.457 | 0.020 | 0.43 | <1.c. | 11.4 | <1.c. | <1.c. |
| BC3 | 87 | 23.4 | 6.9 | 253.7 | 516.8 | 108.2 | 11.0 | 2.9 | 0.7 | 5.11 | 5.5 | 381.2 | 15.0 | 0.05 | 0.002 | 0.09 | 0.01 | 0.002 | 0.216 | 0.007 | 0.18 | <1.c. | 7.4 | <1.c. | <1.c. |
| BC4 | 45 | 16.8 | 7.0 | 20.5 | 40.8 | 13.5 | 0.1 | 5.3 | 1.3 | 0.7 | 1.6 | 58.3 | <1.c. | 0.01 | 0.001 | 0.03 | 0.03 | <1.c. | 0.103 | 0.001 | 0.02 | <1.c. | 21.9 | 0.02 | 0.02 |
| BC5 | 26 | 20.6 | 6.6 | 214.7 | 437.1 | 71.0 | 15.7 | 8.3 | 2.5 | 5.3 | 3.1 | 325.4 | 14.0 | <1.c. | 0.011 | 0.13 | 0.04 | 0.007 | 0.285 | 0.002 | 0.33 | <1.c. | 29.1 | <1.c. | <1.c. |
| BC6 | 870 | 21.5 | 6.9 | 140.0 | 284.7 | 82.4 | 2.3 | 13.2 | 2.3 | 1.0 | 2.5 | 359.3 | 5.0 | 0.01 | 0.027 | 0.05 | 0.41 | 0.005 | 0.323 | 0.008 | 0.23 | <1.c. | 31.9 | 0.09 | 0.09 |
| BC7 | 67 | 21.2 | 7.7 | 260.5 | 530.6 | 116.4 | 8.6 | 19.3 | <1.c. | 0.8 | 8.1 | 444.3 | 26.0 | 0.01 | 0.015 | 0.01 | 0.01 | 0.004 | 0.408 | 0.012 | 0.22 | <1.c. | 14.3 | <1.c. | <1.c. |
| BC8 | 0 | 20.6 | 6.5 | 284.7 | 580.1 | 135.5 | 6.2 | 5.4 | 6.4 | 4.4 | 3.1 | 466.1 | 32.0 | 0.01 | <1.c. | 0.03 | <1.c. | 0.017 | 0.425 | 0.014 | 0.32 | <1.c. | 7.1 | <1.c. | <1.c. |
| BC9 | 27 | 17.5 | 7.2 | 184.2 | 375.0 | 112.0 | 5.3 | 3.3 | 0.6 | 0.6 | 2.2 | 273.1 | 51.0 | 0.03 | 0.002 | 0.04 | 0.01 | 0.012 | 0.192 | 0.012 | 0.23 | <1.c. | 8.3 | <1.c. | <1.c. |
| BC10 | 45 | 23.3 | 7.9 | 144.3 | 293.4 | 81.0 | 1.4 | 7.9 | <1.c. | 9.6 | 1.7 | 279.2 | 3.0 | 0.21 | <1.c. | 0.03 | <1.c. | <1.c. | 0.126 | 0.001 | 0.06 | <1.c. | 5.7 | <1.c. | <1.c. |
| BC11 | 28 | 23.5 | 6.6 | 282.1 | 574.8 | 138.0 | 10.3 | 6.4 | <1.c. | 1.0 | 2.1 | 519.5 | 12.2 | <1.c. | 0.001 | 0.05 | 0.01 | 0.007 | 0.366 | 0.013 | 0.58 | <1.c. | 14.6 | <1.c. | <1.c. |
| BC12 | 310 | 25.4 | 7.0 | 223.2 | 454.6 | 101.1 | 6.1 | 1.5 | <1.c. | 3.8 | 2.2 | 299.0 | 5.6 | <1.c. | 0.001 | 0.05 | <1.c. | 0.009 | 0.170 | 0.003 | 0.13 | <1.c. | 9.3 | <1.c. | <1.c. |
| BC13 | 870 | 20.6 | 6.08 | 57.9 | 116.2 | 41.0 | 0.3 | 12.0 | 0.9 | 8.7 | 4.4 | 121.4 | 9.3 | <1.c. | <1.c. | 0.01 | 0.01 | <1.c. | 0.119 | 0.005 | 0.02 | <1.c. | 24.3 | 0.04 | <1.c. |
| BC14 | 13 | 21.9 | 6.2 | 81.4 | 165.1 | 28.5 | 9.0 | 8.0 | 0.9 | 6.3 | 1.5 | 157.8 | 1.9 | 0.01 | <1.c. | 0.01 | <1.c. | 0.003 | 0.090 | 0.010 | 0.13 | <1.c. | 42.1 | <1.c. | <1.c. |
| BC15 | 22 | 26.0 | 7.3 | 287.8 | 586.3 | 130.5 | 12.4 | 6.6 | <1.c. | 21.6 | 2.0 | 430.4 | 47.9 | <1.c. | <1.c. | 0.03 | <1.c. | <1.c. | 0.249 | 0.017 | 0.46 | <1.c. | 12.4 | <1.c. | <1.c. |
| BC16 | 16 | 24.5 | 7.1 | 135.1 | 247.7 | 59.9 | 1.0 | 14.3 | 0.6 | 2.0 | 2.2 | 233.1 | 8.4 | <1.c. | <1.c. | 0.01 | <1.c. | 0.004 | 0.209 | 0.029 | 0.13 | <1.c. | 33.0 | <1.c. | <1.c. |
| BC17 | 39 | 24.2 | 7.1 | 478.0 | 974.0 | 164.1 | 14.7 | 29.3 | 3.3 | 0.56 | 36.5 | 291.3 | 241.7 | 0.01 | 0.115 | 0.02 | 0.003 | 0.823 | 0.467 | 0.069 | 0.41 | 0.010 | 11.6 | <1.c. | 0.012 |
| BC18 | 19 | 28.1 | 6.7 | 632.1 | 1289 | 239.4 | 55.9 | 17.9 | 1.8 | 9.2 | 19.7 | 341.5 | 574.5 | 0.12 | 0.001 | 0.02 | 0.004 | 0.014 | 0.546 | 0.063 | 2.30 | <1.c. | 10.1 | <1.c. | <1.c. |
| BC19 | 2300 | 26.6 | 6.8 | 271.4 | 552.8 | 103.1 | 24.2 | 1.1 | <1.c. | 1.8 | 1.2 | 439.6 | 2.6 | 0.10 | <1.c. | 0.02 | <1.c. | <1.c. | 0.076 | 0.001 | 0.12 | <1.c. | 4.5 | <1.c. | <1.c. |
| BC20 | 20 | 26.6 | 6.9 | 291.9 | 594.7 | 105.9 | 15.2 | 18.9 | 1.1 | 2.5 | 7.9 | 360.6 | 44.8 | <1.c. | 0.002 | 0.02 | <1.c. | <1.c. | 0.208 | 0.002 | 0.56 | <1.c. | 28.5 | <1.c. | <1.c. |
| Min | 0 | 16.8 | 6.08 | 20.52 | 40.86 | 13.50 | 0.14 | 1.1 | 0.6 | 0.56 | 1.2 | 58.26 | 1.1 | 0.01 | 0.001 | 0.01 | 0.003 | 0.002 | 0.07 | 0.001 | 0.024 | 0.010 | 4.50 | 0.023 | 0.012 |
| Max | 2300 | 28.1 | 7.91 | 632.1 | 1289 | 239.4 | 55.9 | 29.3 | 6.40 | 26.0 | 36.5 | 519.5 | 574.5 | 2.4 | 0.115 | 0.18 | 0.410 | 0.823 | 0.54 | 0.069 | 2.306 | 0.010 | 42.10 | 0.094 | 0.012 |
| Mean | 240.2 | 22.8 | 6.90 | 230.8 | 468.6 | 99.29 | 10.4 | 9.92 | 1.75 | 5.62 | 7.16 | 310.5 | 58.90 | 0.24 | 0.016 | 0.04 | 0.055 | 0.070 | 0.25 | 0.014 | 0.349 | 0.010 | 17.76 | 0.055 | 0.012 |

*Recommendations of WHO 2017. <1.c: Below the quantification limit. BC3 and BC12 springs are intended for recreational purposes

In situ parameters, fecal coliforms, majority ions and PTE during the rainy season (august, 2022).

| | Coliforms | T | pH | TDS | EC | Ca ²⁺ | Mg ²⁺ | Na ⁺ | K ⁺ | NO ₃ ⁻ | Cl ⁻ | HCO ₃ ⁻ | SO ₄ ²⁻ | B | Mn | Ba | Fe | Z | F ⁻ | Li | Sr | Ni | Si | Al | Cd |
|-------------------|----------------|-------|----------------|-------------|--------|------------------|------------------|-----------------|----------------|------------------------------|-----------------|-------------------------------|-------------------------------|-------|-------------|------------|--------------|------------|----------------|-------|-------|-------------|-------|------------|--------------|
| | CFU/ 100 ml | °C | | mg/L | (µS/m) | | | | | | | mg/L | | | | | | | | | | | | | |
| NOM-127-SSA1-2021 | | ----- | 6.5-8.5 | 1000 | ----- | ----- | ----- | ----- | ---- | 11 | ----- | ----- | 400 | ----- | 0.15 | 1.3 | 0.30 | ----- | 1.5 | ----- | ----- | 0.07 | ----- | 0.2 | 0.005 |
| WHO 2017 | | ----- | 7-8 | 1000 | ----- | ----- | ----- | 200 | ---- | 50 | 250* | ----- | 250 | ----- | ----- | 2.4 | 0.03* | 3-5 | ----- | ----- | ----- | 0.07 | ----- | | 0.003 |
| BC1 | 7 | 19.8 | 6.5 | 47 | 95.0 | 13.0 | 0.2 | 8.5 | 2.9 | 0.3 | 0.4 | 72.8 | 0.3 | <1.c. | <1.c. | 0.02 | <1.c. | 0.008 | <1.c. | 0.008 | 0.030 | 0.013 | 31.0 | <1.c. | <1.c. |
| BC2 | 20 | 22 | 6.6 | 1.2 | 40.03 | 133.6 | 9.3 | 24.6 | 1.4 | 42.1 | 36.6 | 325.3 | 69.1 | 0.06 | <1.c. | 0.18 | <1.c. | 0.004 | 0.348 | 0.022 | 0.470 | 0.006 | 13.1 | <1.c. | <1.c. |
| BC3 | 288 | 23.4 | 6.6 | 265.3 | 540.4 | 114.6 | 7.5 | 3.0 | 0.8 | 7.5 | 2.3 | 410.7 | 11.3 | <1.c. | <1.c. | 0.04 | <1.c. | <1.c. | 0.076 | 0.002 | 0.136 | <1.c. | 6.7 | <1.c. | <1.c. |
| BC4 | 10 | 16.8 | 7.0 | 24.45 | 48.8 | 13.6 | 0.2 | 5.8 | 2.7 | 0.2 | 0.3 | 55.6 | 0.4 | <1.c. | 0.001 | 0.03 | 0.05 | <1.c. | <1.c. | 0.001 | 0.029 | 0.010 | 23.3 | 0.023 | 0.02 |
| BC5 | 103 | 20.7 | 6.4 | 230.8 | 470.0 | 72.0 | 12.3 | 14.9 | 5.3 | 1.4 | 2.0 | 339.9 | 11.6 | <1.c. | 0.06 | 0.11 | 0.12 | <1.c. | 0.118 | 0.002 | 0.324 | 0.011 | 26.0 | <1.c. | <1.c. |
| BC6 | 400 | 20.5 | 6.1 | 167.1 | 334.9 | 82.9 | 7.6 | 25.7 | 4.1 | 3.0 | 3.3 | 351.0 | 32.4 | <1.c. | 0.07 | 0.06 | 0.96 | 0.008 | 0.134 | 0.007 | 0.223 | 0.013 | 31.2 | 0.094 | 0.09 |
| BC7 | 400 | 19.7 | 7.5 | 588.6 | 1200 | 119.7 | 10.3 | 34.8 | 0.8 | 5.3 | 25.7 | 468.6 | 34.9 | <1.c. | 0.02 | 0.01 | 0.01 | <1.c. | 0.291 | 0.015 | 0.287 | 0.007 | 16.0 | <1.c. | <1.c. |
| BC8 | 10 | 20.4 | 6.4 | 330.5 | 673.5 | 134.2 | 5.9 | 2.6 | 0.7 | 5.0 | 1.6 | 434.6 | 30.8 | 0.02 | 0.001 | 0.03 | <1.c. | 0.27 | 0.349 | 0.015 | 0.344 | <1.c. | 7.4 | <1.c. | <1.c. |
| BC9 | 520 | 16.4 | 7.1 | 197.1 | 401.3 | 73.7 | 4.4 | 3.0 | 1.2 | 1.5 | 0.8 | 216.1 | 37.1 | 0.09 | 0.001 | 0.04 | 0.01 | 0.008 | 0.067 | 0.008 | 0.233 | <1.c. | 8.8 | <1.c. | <1.c. |
| BC10 | 3 | 24.7 | 7.5 | 175.6 | 357.4 | 97.5 | 1.3 | 2.0 | 0.6 | 12.4 | 1.2 | 315.6 | 6.5 | <1.c. | <1.c. | 0.03 | <1.c. | 0.008 | <1.c. | 0.001 | 0.076 | <1.c. | 6.0 | <1.c. | <1.c. |
| BC11 | 30 | 24.4 | 6.7 | 303.8 | 619.1 | 144.0 | 6.2 | 6.1 | 0.04 | 0.7 | 0.4 | 517.1 | 10.8 | <1.c. | 0.001 | 0.05 | <1.c. | 0.004 | 0.379 | 0.013 | 0.576 | 0.006 | 15.0 | <1.c. | <1.c. |
| BC12 | 160 | 23.7 | 6.6 | 277.0 | 564.3 | 123.5 | 6.4 | 6.8 | 1.0 | 4.2 | 1.0 | 461.3 | 4.5 | <1.c. | 0.001 | 0.05 | <1.c. | 0.006 | 0.079 | 0.003 | 0.157 | 0.005 | 10.8 | <1.c. | <1.c. |
| BC13 | 360 | 21.7 | 6.1 | 94.0 | 188.0 | 10.2 | 1.3 | 22.3 | 3.2 | 22.3 | 4.4 | 55.8 | 18.3 | <1.c. | 0.001 | 0.03 | 0.01 | 0.01 | <1.c. | 0.004 | 0.070 | 0.009 | 22.3 | 0.048 | <1.c. |
| BC14 | 10 | 22 | 7.1 | 93.7 | 190.1 | 16.7 | 8.0 | 13.9 | 1.9 | 5.5 | 1.0 | 136.0 | 2.0 | <1.c. | <1.c. | 0.01 | <1.c. | <1.c. | 0.074 | 0.010 | 0.144 | 0.017 | 44.0 | <1.c. | <1.c. |
| BC15 | 360 | 22 | 6.6 | 354.0 | 721.4 | 121.6 | 12.4 | 12.2 | 0.4 | 18.4 | 1.0 | 410.3 | 42.4 | <1.c. | <1.c. | 0.03 | <1.c. | 0.004 | 0.216 | 0.018 | 0.511 | 0.005 | 13.8 | <1.c. | <1.c. |
| BC16 | 40 | 21.4 | 7.0 | 168.9 | 343.7 | 56.2 | 0.9 | 25.3 | 1.1 | 2.2 | 3.2 | 245.2 | 10.1 | <1.c. | <1.c. | 0.01 | <1.c. | <1.c. | 0.148 | 0.032 | 0.152 | 0.013 | 35.9 | <1.c. | <1.c. |
| BC17 | 30 | 23.1 | 7.0 | 472.0 | 949.0 | 133.9 | 15.0 | 53.4 | 7.9 | 2.1 | 31.6 | 327.8 | 210.0 | 0.13 | 0.001 | 0.01 | <1.c. | 0.10 | 0.490 | 0.075 | 0.401 | 0.009 | 12.4 | <1.c. | 0.012 |
| BC18 | 640 | 23.1 | 6.6 | 649.0 | 136.0 | 229.5 | 59.6 | 19.2 | 2.1 | 5.1 | 21.0 | 395.7 | 570.6 | 0.09 | 0.02 | 0.02 | 0.07 | 0.01 | 0.472 | 0.055 | 2.205 | 0.005 | 11.0 | <1.c. | <1.c. |
| BC19 | 120 | 23.8 | 7.2 | 257.0 | 514.0 | 105.1 | 15.8 | 0.9 | 0.2 | 1.2 | 0.5 | 429.7 | 3.5 | <1.c. | <1.c. | 0.02 | <1.c. | 0.007 | 0.065 | 0.001 | 0.072 | <1.c. | 4.2 | <1.c. | <1.c. |
| BC20 | 600 | 24.0 | 6.8 | 443.0 | 886.0 | 162.4 | 16.7 | 16.2 | 2.5 | 18.7 | 39.5 | 362.4 | 93.3 | <1.c. | 0.15 | 0.08 | 0.01 | 0.004 | 0.268 | 0.001 | 0.879 | 0.009 | 24.2 | <1.c. | <1.c. |
| Min | 3 | 16.4 | 6.1 | 1.2 | 40.03 | 10.2 | 0.2 | 0.9 | 0.04 | 0.2 | 0.3 | 55.6 | 0.3 | 0.02 | 0.001 | 0.01 | 0.01 | 0.004 | 0.065 | 0.001 | 0.029 | 0.005 | 4.2 | 0.023 | 0.012 |
| Max | 640 | 24.7 | 7.5 | 649.0 | 1200 | 229.5 | 59.6 | 53.4 | 7.9 | 42.1 | 39.5 | 517.1 | 570.6 | 0.13 | 0.15 | 0.18 | 0.96 | 0.273 | 0.490 | 0.075 | 2.205 | 0.017 | 44 | 0.094 | 0.012 |
| Mean | 205.55 | 21.6 | 6.7 | 257.0 | 463.6 | 97.9 | 10.1 | 15.1 | 2.0 | 7.9 | 8.9 | 316.6 | 69.9 | 0.08 | 0.02 | 0.04 | 0.15 | 0.03 | 0.223 | 0.015 | 0.366 | 0.009 | 18.1 | 0.05 | 0.012 |

* Recommendations of WHO 2017. <1.c.: Below the quantification limit. BC3 and BC12 springs are intended for recreational purposes.