# Appendix for Model 03060202

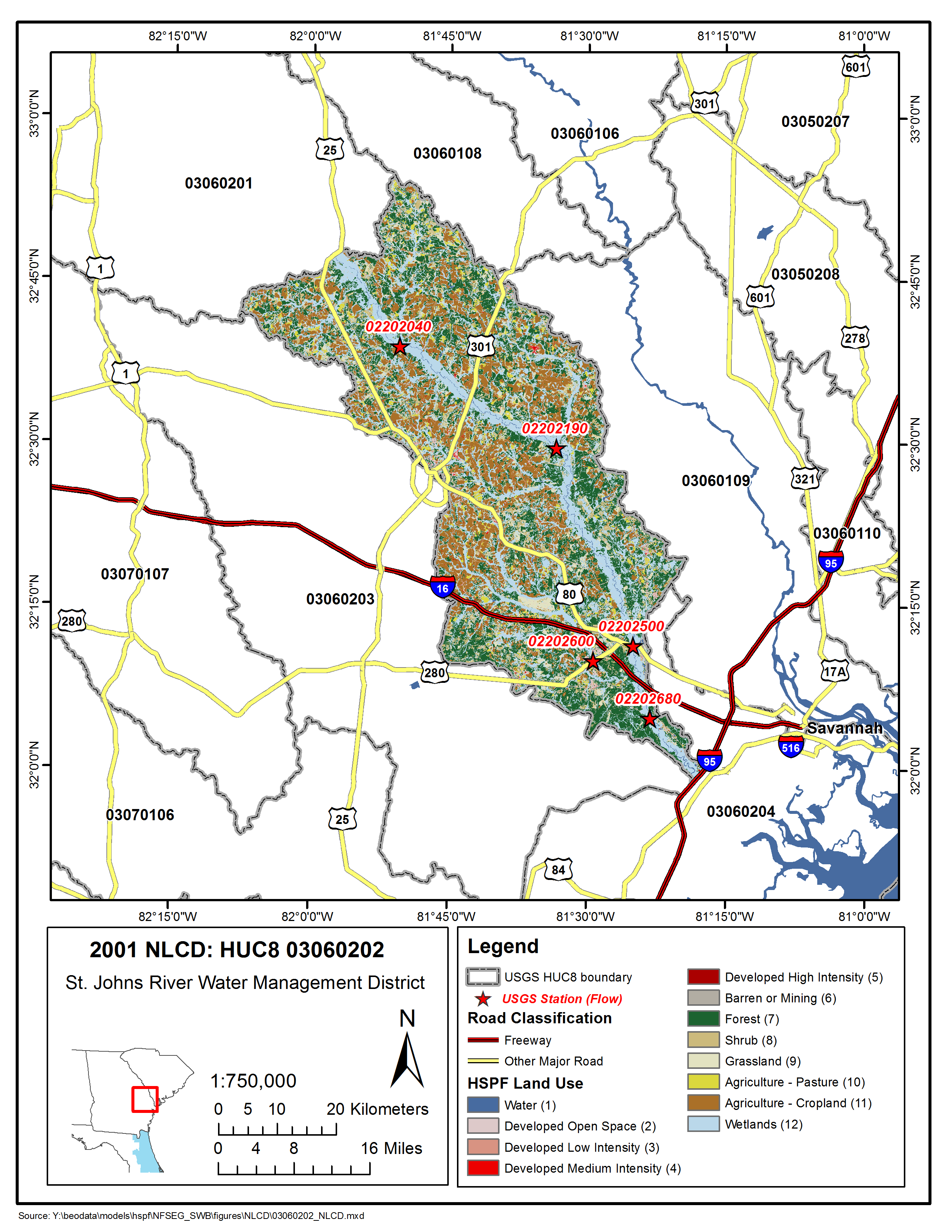


Figure 03060202-1: Land Cover from the National Land Cover Database.

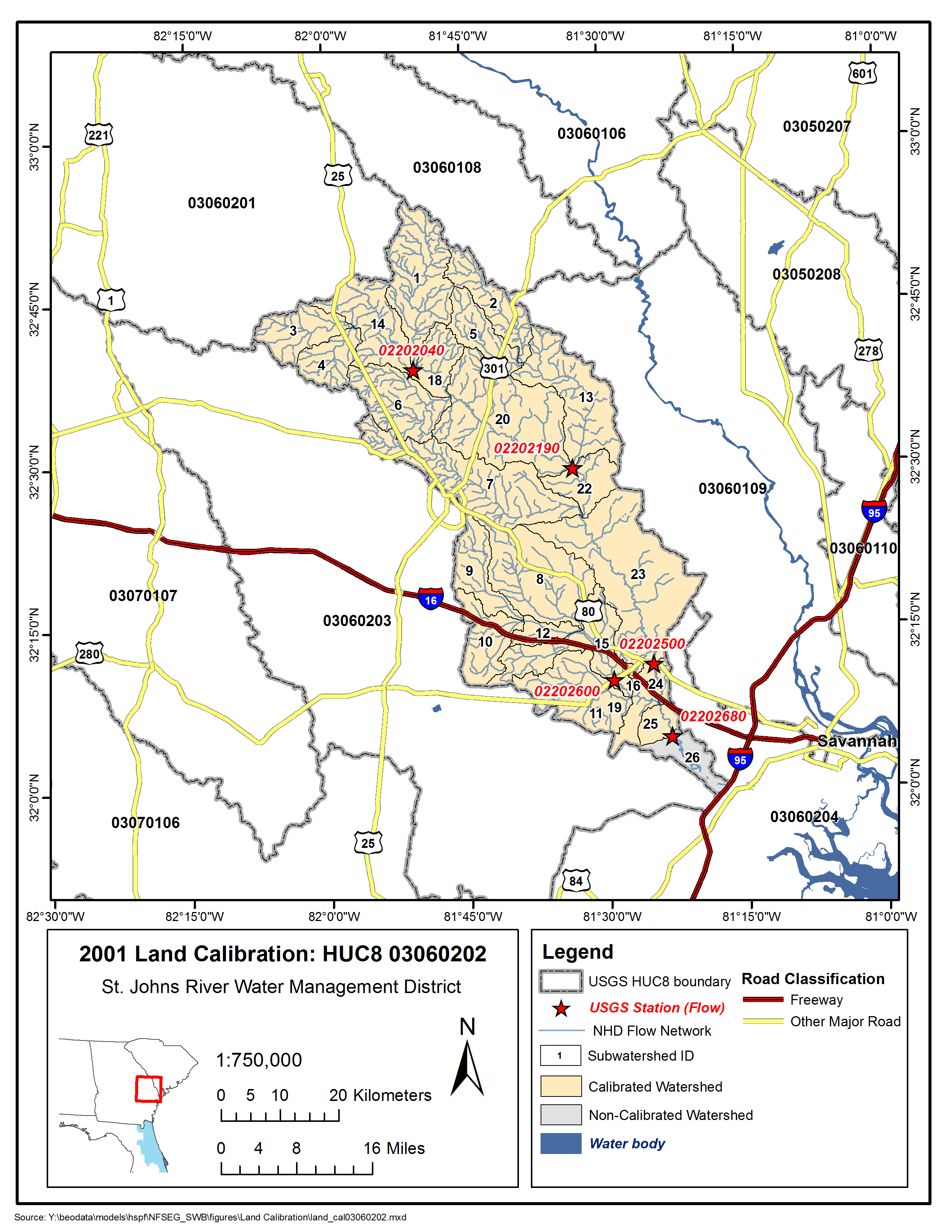


Figure 03060202-2: Calibrated sub-watersheds.

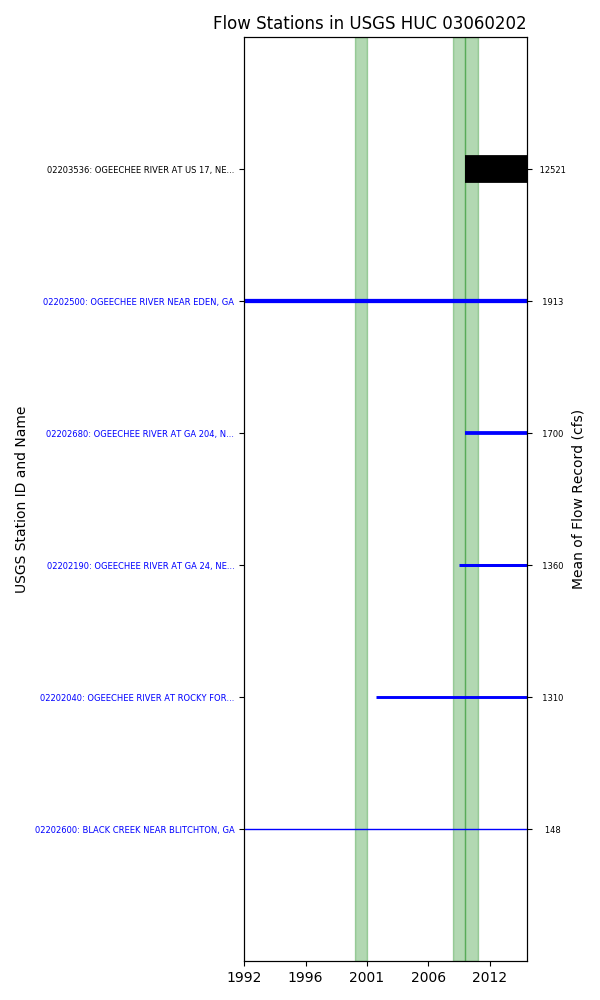


Figure 03060202-3: Station period of record. Blue color identifies gauges used for calibration.

## HSPF Reach 14, USGS Gauge 02202040

Table 03060202-1: Comparison Statistics Between HSPF Reach 14 and USGS Gauge 02202040.

|  |  |
| --- | --- |
| Statistic | Value |
| Bias | -0.51 |
| Standard error | 489.82 |
| Relative bias | -0.00 |
| Relative standard error | 0.33 |
| Nash-Sutcliffe coefficient | 0.89 |
| Coefficient of efficiency | 0.74 |
| Index of agreement | 0.87 |

Table 03060202-2: Hydrologic Indices Between USGS Gauge 02202040 and HSPF Reach 14.

|  |  |  |  |
| --- | --- | --- | --- |
| Hydrologic Index and description (Olden and Poff, 2003) | Observed 02202040 | Simulated Reach 14 | Percent Difference |
| MA1: Mean, all daily flows | 1302.63 | 1282.90 | -1.51 |
| MA2: Median, all daily flows | 544.00 | 638.00 | 17.28 |
| MA3: CV, all daily flows | 97.80 | 99.66 | 1.90 |
| MA4: CV, log of all daily flows | 116.86 | 112.69 | -3.56 |
| MA5: Mean daily flow / median daily flow | 2.39 | 2.01 | -16.02 |
| MA9: (Q10 - Q90) / median daily flow | 6.10 | 5.03 | -17.46 |
| MA10: (Q20 - Q80) / median daily flow | 3.29 | 3.04 | -7.37 |
| MA11: (Q25 - Q75) / median daily flow | 2.52 | 2.40 | -4.60 |
| MA12: Mean monthly flow, January | 1427.87 | 1525.94 | 6.87 |
| MA13: Mean monthly flow, February | 1913.50 | 1876.29 | -1.94 |
| MA14: Mean monthly flow, March | 2472.76 | 2274.78 | -8.01 |
| MA15: Mean monthly flow, April | 1966.81 | 1590.94 | -19.11 |
| MA16: Mean monthly flow, May | 897.74 | 875.40 | -2.49 |
| MA17: Mean monthly flow, June | 974.87 | 985.97 | 1.14 |
| MA18: Mean monthly flow, July | 915.14 | 837.13 | -8.52 |
| MA19: Mean monthly flow, August | 759.18 | 741.21 | -2.37 |
| MA20: Mean monthly flow, September | 372.99 | 548.47 | 47.05 |
| MA21: Mean monthly flow, October | 456.20 | 517.59 | 13.46 |
| MA22: Mean monthly flow, November | 461.83 | 571.36 | 23.72 |
| MA23: Mean monthly flow, December | 1113.42 | 1381.83 | 24.11 |
| ML1: Mean minimum monthly flow, January | 953.67 | 1050.96 | 10.20 |
| ML2: Mean minimum monthly flow, February | 1122.45 | 992.80 | -11.55 |
| ML3: Mean minimum monthly flow, March | 1438.18 | 1314.03 | -8.63 |
| ML4: Mean minimum monthly flow, April | 824.45 | 754.80 | -8.45 |
| ML5: Mean minimum monthly flow, May | 465.18 | 491.00 | 5.55 |
| ML6: Mean minimum monthly flow, June | 348.00 | 341.82 | -1.78 |
| ML7: Mean minimum monthly flow, July | 511.00 | 495.98 | -2.94 |
| ML8: Mean minimum monthly flow, August | 322.73 | 343.88 | 6.55 |
| ML9: Mean minimum monthly flow, September | 192.83 | 197.42 | 2.38 |
| ML10: Mean minimum monthly flow, October | 222.75 | 212.39 | -4.65 |
| ML11: Mean minimum monthly flow, November | 288.67 | 318.02 | 10.17 |
| ML12: Mean minimum monthly flow, December | 513.42 | 514.82 | 0.27 |
| ML13: CV of minimum monthly flows | 111.17 | 117.93 | 6.09 |
| ML14: Mean minimum daily flow / mean median annual flow | 0.26 | 0.17 | -34.72 |
| ML15: Mean minimum annual flow / mean annual flow | 0.18 | 0.13 | -29.62 |
| ML16: Median minimum annual flow / median annual flow | 0.17 | 0.06 | -64.56 |
| ML20: Ratio of baseflow volume to total flow volume | 0.63 | 0.59 | -6.46 |
| ML22: Mean annual minimum flow divided by catchment area | 1.34 | 1.40 | 4.32 |
| RA1: Mean of positive changes from one day to next (rise rate) | 163.22 | 252.66 |  |
| RA2: CV, mean of positive changes from one day to next (rise rate) | 237.69 | 321.93 |  |
| RA3: Mean of negative changes from one day to next (fall rate) | 117.49 | 121.85 |  |
| RA4: CV, mean of negative changes from one day to next (fall rate) | 201.24 | 230.61 |  |
| RA5: Ratio of days that are higher than previous day | 0.41 | 0.33 |  |
| RA6: Median of difference in log of flows over two consecutive days of rising | 0.06 | 0.07 |  |
| RA7: Median of difference in log of flows over two consecutive days of falling | 0.06 | 0.06 |  |
| RA8: Number of flow reversals from one day to the next | 52.08 | 41.15 |  |
| RA9: CV, number of flow reversals from one day to the next | 41.62 | 44.96 |  |

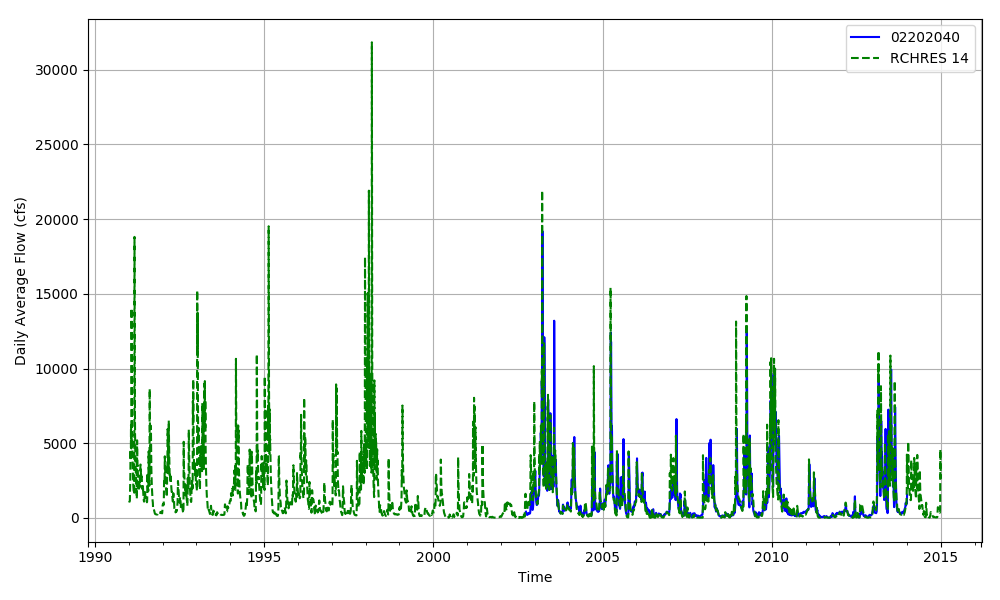


Figure 03060202-4: Daily flow for HSFP reach 14 and USGS station 02202040.

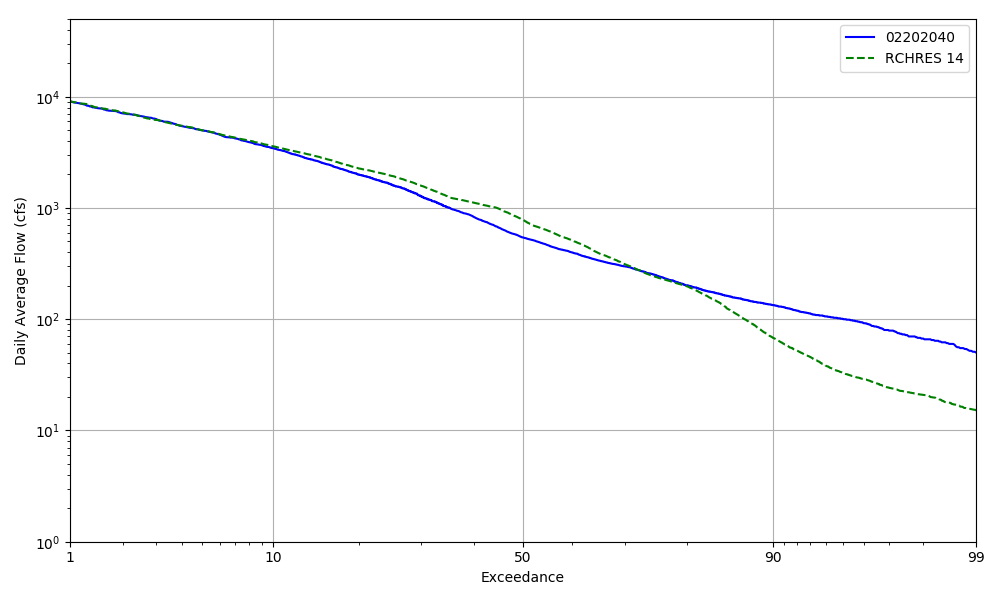


Figure 03060202-5: Daily exceedance for HSFP reach 14 and USGS station 02202040.

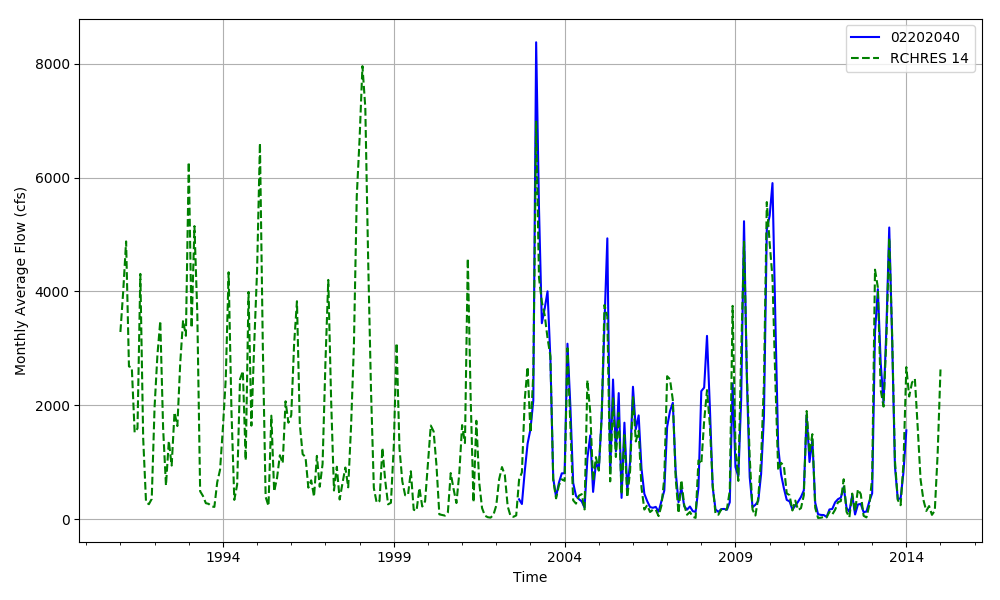


Figure 03060202-6: Monthly flow for HSFP reach 14 and USGS station 02202040.

## HSPF Reach 15, USGS Gauge 02202600

Table 03060202-3: Comparison Statistics Between HSPF Reach 15 and USGS Gauge 02202600.

|  |  |
| --- | --- |
| Statistic | Value |
| Bias | -17.46 |
| Standard error | 113.34 |
| Relative bias | -0.11 |
| Relative standard error | 0.43 |
| Nash-Sutcliffe coefficient | 0.81 |
| Coefficient of efficiency | 0.71 |
| Index of agreement | 0.84 |

Table 03060202-4: Hydrologic Indices Between USGS Gauge 02202600 and HSPF Reach 15.

|  |  |  |  |
| --- | --- | --- | --- |
| Hydrologic Index and description (Olden and Poff, 2003) | Observed 02202600 | Simulated Reach 15 | Percent Difference |
| MA1: Mean, all daily flows | 166.26 | 148.83 | -10.49 |
| MA2: Median, all daily flows | 29.00 | 49.78 | 71.67 |
| MA3: CV, all daily flows | 170.35 | 122.98 | -27.81 |
| MA4: CV, log of all daily flows | 178.56 | 136.61 | -23.49 |
| MA5: Mean daily flow / median daily flow | 5.73 | 2.99 | -47.86 |
| MA9: (Q10 - Q90) / median daily flow | 14.81 | 8.03 | -45.75 |
| MA10: (Q20 - Q80) / median daily flow | 6.54 | 4.32 | -33.94 |
| MA11: (Q25 - Q75) / median daily flow | 4.66 | 2.81 | -39.57 |
| MA12: Mean monthly flow, January | 234.47 | 210.67 | -10.15 |
| MA13: Mean monthly flow, February | 317.28 | 274.61 | -13.45 |
| MA14: Mean monthly flow, March | 283.38 | 247.72 | -12.58 |
| MA15: Mean monthly flow, April | 165.76 | 147.73 | -10.87 |
| MA16: Mean monthly flow, May | 76.48 | 71.38 | -6.67 |
| MA17: Mean monthly flow, June | 153.50 | 101.54 | -33.85 |
| MA18: Mean monthly flow, July | 101.96 | 93.44 | -8.35 |
| MA19: Mean monthly flow, August | 160.50 | 137.97 | -14.03 |
| MA20: Mean monthly flow, September | 53.15 | 78.93 | 48.52 |
| MA21: Mean monthly flow, October | 104.16 | 77.98 | -25.13 |
| MA22: Mean monthly flow, November | 66.94 | 79.81 | 19.23 |
| MA23: Mean monthly flow, December | 144.21 | 144.34 | 0.09 |
| ML1: Mean minimum monthly flow, January | 68.67 | 68.08 | -0.86 |
| ML2: Mean minimum monthly flow, February | 95.30 | 99.79 | 4.72 |
| ML3: Mean minimum monthly flow, March | 70.97 | 85.95 | 21.09 |
| ML4: Mean minimum monthly flow, April | 34.97 | 42.05 | 20.25 |
| ML5: Mean minimum monthly flow, May | 13.67 | 23.04 | 68.48 |
| ML6: Mean minimum monthly flow, June | 4.90 | 19.01 | 288.19 |
| ML7: Mean minimum monthly flow, July | 10.48 | 29.51 | 181.48 |
| ML8: Mean minimum monthly flow, August | 12.86 | 38.90 | 202.49 |
| ML9: Mean minimum monthly flow, September | 6.02 | 23.75 | 294.63 |
| ML10: Mean minimum monthly flow, October | 5.36 | 13.84 | 158.45 |
| ML11: Mean minimum monthly flow, November | 15.96 | 24.58 | 54.00 |
| ML12: Mean minimum monthly flow, December | 42.42 | 50.88 | 19.93 |
| ML13: CV of minimum monthly flows | 182.08 | 155.17 | -14.78 |
| ML14: Mean minimum daily flow / mean median annual flow | 0.07 | 0.07 | -2.58 |
| ML15: Mean minimum annual flow / mean annual flow | 0.02 | 0.03 | 41.18 |
| ML16: Median minimum annual flow / median annual flow | 0.02 | 0.05 | 229.40 |
| ML20: Ratio of baseflow volume to total flow volume | 0.30 | 0.44 | 44.83 |
| ML22: Mean annual minimum flow divided by catchment area | 0.01 | 0.06 | 358.13 |
| RA1: Mean of positive changes from one day to next (rise rate) | 70.93 | 54.53 |  |
| RA2: CV, mean of positive changes from one day to next (rise rate) | 418.33 | 354.63 |  |
| RA3: Mean of negative changes from one day to next (fall rate) | 38.79 | 21.21 |  |
| RA4: CV, mean of negative changes from one day to next (fall rate) | 373.20 | 373.54 |  |
| RA5: Ratio of days that are higher than previous day | 0.33 | 0.28 |  |
| RA6: Median of difference in log of flows over two consecutive days of rising | 0.20 | 0.17 |  |
| RA7: Median of difference in log of flows over two consecutive days of falling | 0.16 | 0.10 |  |
| RA8: Number of flow reversals from one day to the next | 82.67 | 71.29 |  |
| RA9: CV, number of flow reversals from one day to the next | 31.27 | 23.54 |  |

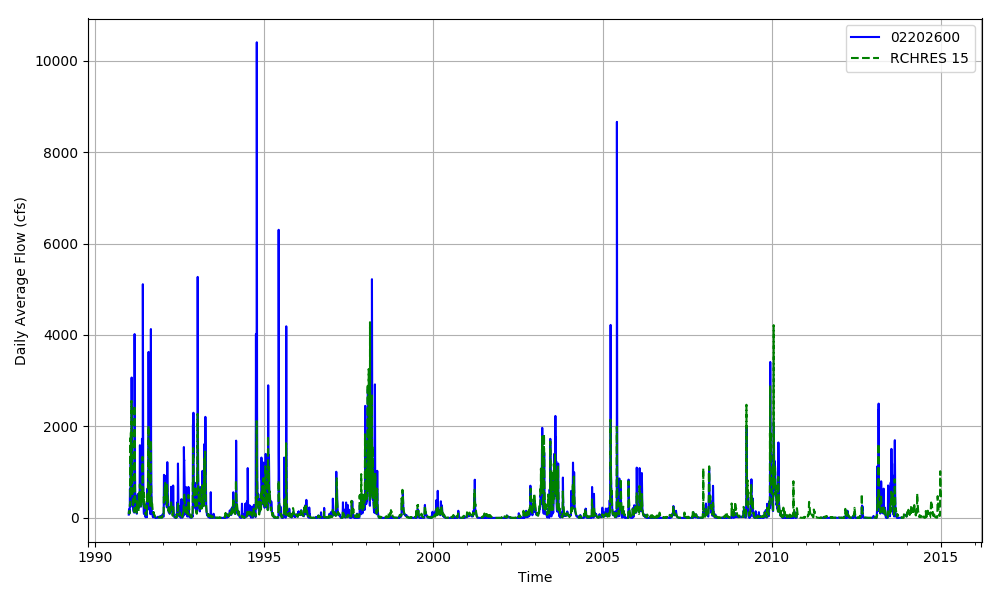


Figure 03060202-7: Daily flow for HSFP reach 15 and USGS station 02202600.

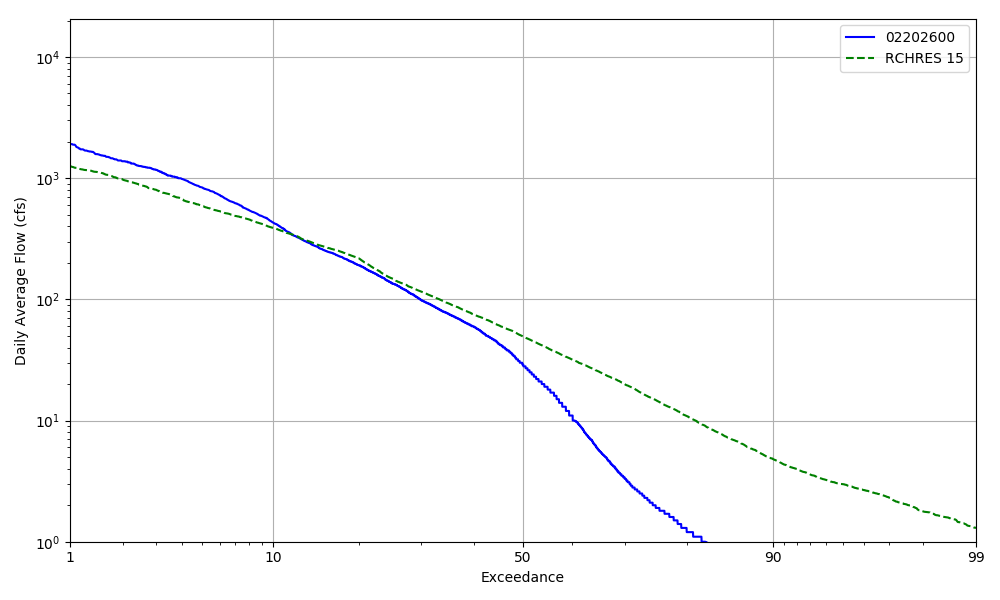


Figure 03060202-8: Daily exceedance for HSFP reach 15 and USGS station 02202600.

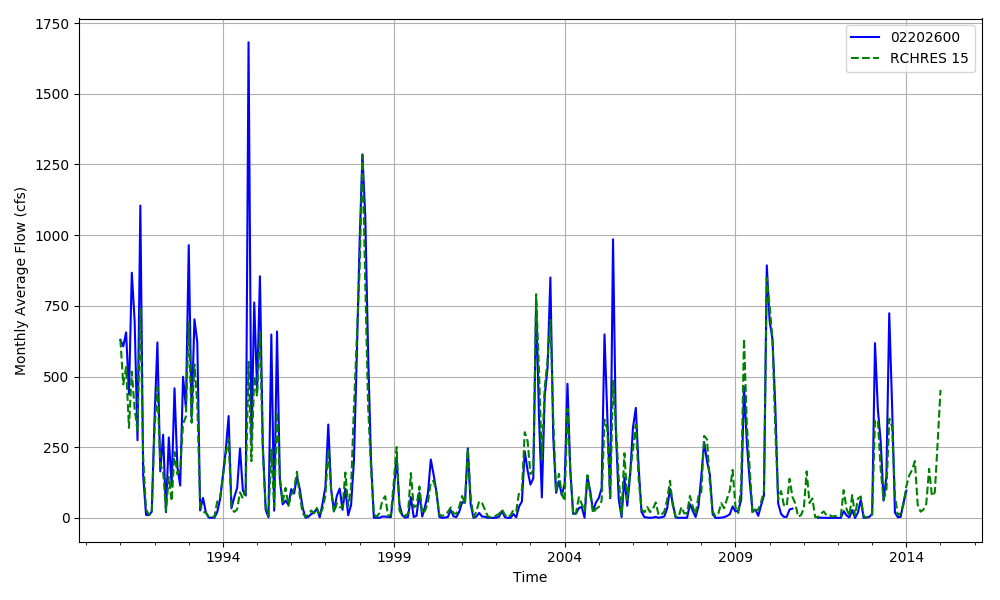


Figure 03060202-9: Monthly flow for HSFP reach 15 and USGS station 02202600.

## HSPF Reach 21, USGS Gauge 02202190

Table 03060202-5: Comparison Statistics Between HSPF Reach 21 and USGS Gauge 02202190.

|  |  |
| --- | --- |
| Statistic | Value |
| Bias | 121.10 |
| Standard error | 566.10 |
| Relative bias | 0.09 |
| Relative standard error | 0.33 |
| Nash-Sutcliffe coefficient | 0.89 |
| Coefficient of efficiency | 0.78 |
| Index of agreement | 0.89 |

Table 03060202-6: Hydrologic Indices Between USGS Gauge 02202190 and HSPF Reach 21.

|  |  |  |  |
| --- | --- | --- | --- |
| Hydrologic Index and description (Olden and Poff, 2003) | Observed 02202190 | Simulated Reach 21 | Percent Difference |
| MA1: Mean, all daily flows | 1304.82 | 1380.20 | 5.78 |
| MA2: Median, all daily flows | 399.00 | 510.11 | 27.85 |
| MA3: CV, all daily flows | 83.54 | 95.00 | 13.72 |
| MA4: CV, log of all daily flows | 142.00 | 142.84 | 0.59 |
| MA5: Mean daily flow / median daily flow | 3.27 | 2.71 | -17.26 |
| MA9: (Q10 - Q90) / median daily flow | 10.06 | 7.75 | -22.97 |
| MA10: (Q20 - Q80) / median daily flow | 4.75 | 3.67 | -22.83 |
| MA11: (Q25 - Q75) / median daily flow | 2.70 | 2.41 | -10.70 |
| MA12: Mean monthly flow, January | 1413.28 | 1912.48 | 35.32 |
| MA13: Mean monthly flow, February | 2016.54 | 2221.47 | 10.16 |
| MA14: Mean monthly flow, March | 1793.95 | 1738.12 | -3.11 |
| MA15: Mean monthly flow, April | 1169.65 | 993.61 | -15.05 |
| MA16: Mean monthly flow, May | 628.51 | 631.59 | 0.49 |
| MA17: Mean monthly flow, June | 837.11 | 984.02 | 17.55 |
| MA18: Mean monthly flow, July | 1263.98 | 1295.48 | 2.49 |
| MA19: Mean monthly flow, August | 797.23 | 917.29 | 15.06 |
| MA20: Mean monthly flow, September | 380.45 | 413.82 | 8.77 |
| MA21: Mean monthly flow, October | 297.26 | 358.10 | 20.47 |
| MA22: Mean monthly flow, November | 450.93 | 504.95 | 11.98 |
| MA23: Mean monthly flow, December | 1139.10 | 1347.37 | 18.28 |
| ML1: Mean minimum monthly flow, January | 1016.00 | 1340.78 | 31.97 |
| ML2: Mean minimum monthly flow, February | 1232.25 | 985.01 | -20.06 |
| ML3: Mean minimum monthly flow, March | 1588.25 | 1464.51 | -7.79 |
| ML4: Mean minimum monthly flow, April | 759.00 | 664.70 | -12.42 |
| ML5: Mean minimum monthly flow, May | 351.75 | 486.99 | 38.45 |
| ML6: Mean minimum monthly flow, June | 225.40 | 393.73 | 74.68 |
| ML7: Mean minimum monthly flow, July | 807.20 | 812.34 | 0.64 |
| ML8: Mean minimum monthly flow, August | 331.00 | 380.00 | 14.80 |
| ML9: Mean minimum monthly flow, September | 206.80 | 174.84 | -15.45 |
| ML10: Mean minimum monthly flow, October | 233.20 | 220.05 | -5.64 |
| ML11: Mean minimum monthly flow, November | 266.60 | 320.40 | 20.18 |
| ML12: Mean minimum monthly flow, December | 610.60 | 488.42 | -20.01 |
| ML13: CV of minimum monthly flows | 138.47 | 139.41 | 0.68 |
| ML14: Mean minimum daily flow / mean median annual flow | 0.29 | 0.18 | -37.21 |
| ML15: Mean minimum annual flow / mean annual flow | 0.21 | 0.10 | -51.04 |
| ML16: Median minimum annual flow / median annual flow | 0.16 | 0.07 | -56.15 |
| ML20: Ratio of baseflow volume to total flow volume | 0.61 | 0.51 | -15.70 |
| ML22: Mean annual minimum flow divided by catchment area | 1.15 | 0.62 | -46.19 |
| RA1: Mean of positive changes from one day to next (rise rate) | 134.00 | 245.40 |  |
| RA2: CV, mean of positive changes from one day to next (rise rate) | 224.32 | 305.33 |  |
| RA3: Mean of negative changes from one day to next (fall rate) | 100.50 | 141.02 |  |
| RA4: CV, mean of negative changes from one day to next (fall rate) | 200.98 | 228.29 |  |
| RA5: Ratio of days that are higher than previous day | 0.42 | 0.37 |  |
| RA6: Median of difference in log of flows over two consecutive days of rising | 0.06 | 0.08 |  |
| RA7: Median of difference in log of flows over two consecutive days of falling | 0.06 | 0.06 |  |
| RA8: Number of flow reversals from one day to the next | 40.67 | 34.83 |  |
| RA9: CV, number of flow reversals from one day to the next | 51.92 | 59.93 |  |

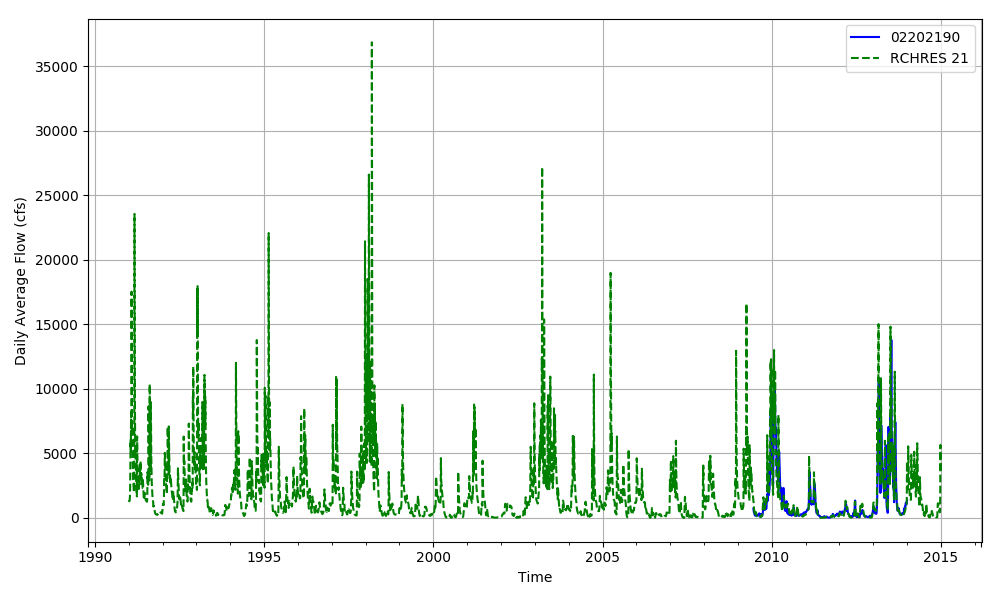


Figure 03060202-10: Daily flow for HSFP reach 21 and USGS station 02202190.

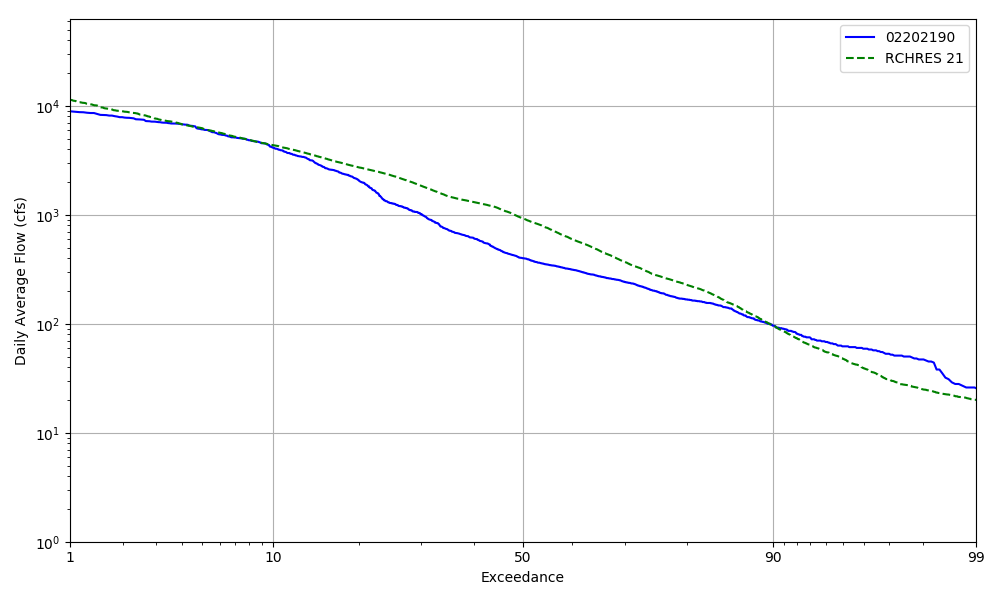


Figure 03060202-11: Daily exceedance for HSFP reach 21 and USGS station 02202190.

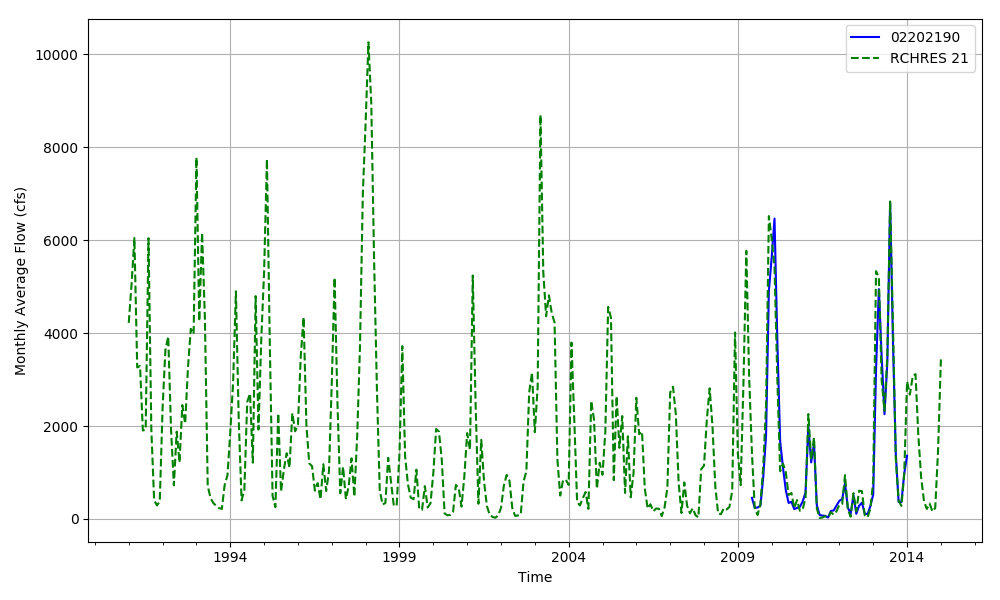


Figure 03060202-12: Monthly flow for HSFP reach 21 and USGS station 02202190.

## HSPF Reach 23, USGS Gauge 02202500

Table 03060202-7: Comparison Statistics Between HSPF Reach 23 and USGS Gauge 02202500.

|  |  |
| --- | --- |
| Statistic | Value |
| Bias | -75.31 |
| Standard error | 786.84 |
| Relative bias | -0.04 |
| Relative standard error | 0.32 |
| Nash-Sutcliffe coefficient | 0.89 |
| Coefficient of efficiency | 0.73 |
| Index of agreement | 0.86 |

Table 03060202-8: Hydrologic Indices Between USGS Gauge 02202500 and HSPF Reach 23.

|  |  |  |  |
| --- | --- | --- | --- |
| Hydrologic Index and description (Olden and Poff, 2003) | Observed 02202500 | Simulated Reach 23 | Percent Difference |
| MA1: Mean, all daily flows | 2011.21 | 1927.88 | -4.14 |
| MA2: Median, all daily flows | 944.00 | 1081.39 | 14.55 |
| MA3: CV, all daily flows | 101.22 | 103.97 | 2.71 |
| MA4: CV, log of all daily flows | 111.97 | 109.82 | -1.91 |
| MA5: Mean daily flow / median daily flow | 2.13 | 1.78 | -16.32 |
| MA9: (Q10 - Q90) / median daily flow | 5.08 | 4.36 | -14.03 |
| MA10: (Q20 - Q80) / median daily flow | 2.85 | 2.50 | -11.97 |
| MA11: (Q25 - Q75) / median daily flow | 2.25 | 1.97 | -12.47 |
| MA12: Mean monthly flow, January | 2774.16 | 2829.50 | 1.99 |
| MA13: Mean monthly flow, February | 3780.32 | 3660.43 | -3.17 |
| MA14: Mean monthly flow, March | 4299.58 | 3895.77 | -9.39 |
| MA15: Mean monthly flow, April | 3199.30 | 2363.55 | -26.12 |
| MA16: Mean monthly flow, May | 1311.65 | 1166.95 | -11.03 |
| MA17: Mean monthly flow, June | 1213.69 | 1233.53 | 1.63 |
| MA18: Mean monthly flow, July | 1141.89 | 1166.63 | 2.17 |
| MA19: Mean monthly flow, August | 1353.11 | 1350.14 | -0.22 |
| MA20: Mean monthly flow, September | 857.77 | 858.89 | 0.13 |
| MA21: Mean monthly flow, October | 952.94 | 1057.19 | 10.94 |
| MA22: Mean monthly flow, November | 833.79 | 1042.12 | 24.99 |
| MA23: Mean monthly flow, December | 1595.98 | 1820.30 | 14.06 |
| ML1: Mean minimum monthly flow, January | 1457.29 | 1397.78 | -4.08 |
| ML2: Mean minimum monthly flow, February | 2248.09 | 1750.25 | -22.15 |
| ML3: Mean minimum monthly flow, March | 2193.52 | 1883.35 | -14.14 |
| ML4: Mean minimum monthly flow, April | 1488.39 | 1108.25 | -25.54 |
| ML5: Mean minimum monthly flow, May | 685.87 | 573.99 | -16.31 |
| ML6: Mean minimum monthly flow, June | 493.52 | 428.71 | -13.13 |
| ML7: Mean minimum monthly flow, July | 675.65 | 647.70 | -4.14 |
| ML8: Mean minimum monthly flow, August | 591.00 | 629.40 | 6.50 |
| ML9: Mean minimum monthly flow, September | 355.00 | 369.04 | 3.95 |
| ML10: Mean minimum monthly flow, October | 371.70 | 444.73 | 19.65 |
| ML11: Mean minimum monthly flow, November | 511.78 | 564.21 | 10.24 |
| ML12: Mean minimum monthly flow, December | 942.83 | 874.88 | -7.21 |
| ML13: CV of minimum monthly flows | 116.75 | 108.41 | -7.14 |
| ML14: Mean minimum daily flow / mean median annual flow | 0.19 | 0.13 | -32.32 |
| ML15: Mean minimum annual flow / mean annual flow | 0.12 | 0.09 | -29.91 |
| ML16: Median minimum annual flow / median annual flow | 0.19 | 0.09 | -53.26 |
| ML20: Ratio of baseflow volume to total flow volume | 0.65 | 0.59 | -9.03 |
| ML22: Mean annual minimum flow divided by catchment area | 2.10 | 1.77 | -15.91 |
| RA1: Mean of positive changes from one day to next (rise rate) | 192.99 | 336.82 |  |
| RA2: CV, mean of positive changes from one day to next (rise rate) | 273.85 | 317.53 |  |
| RA3: Mean of negative changes from one day to next (fall rate) | 151.79 | 180.63 |  |
| RA4: CV, mean of negative changes from one day to next (fall rate) | 222.15 | 240.64 |  |
| RA5: Ratio of days that are higher than previous day | 0.43 | 0.35 |  |
| RA6: Median of difference in log of flows over two consecutive days of rising | 0.05 | 0.06 |  |
| RA7: Median of difference in log of flows over two consecutive days of falling | 0.05 | 0.05 |  |
| RA8: Number of flow reversals from one day to the next | 48.96 | 39.46 |  |
| RA9: CV, number of flow reversals from one day to the next | 22.41 | 30.82 |  |

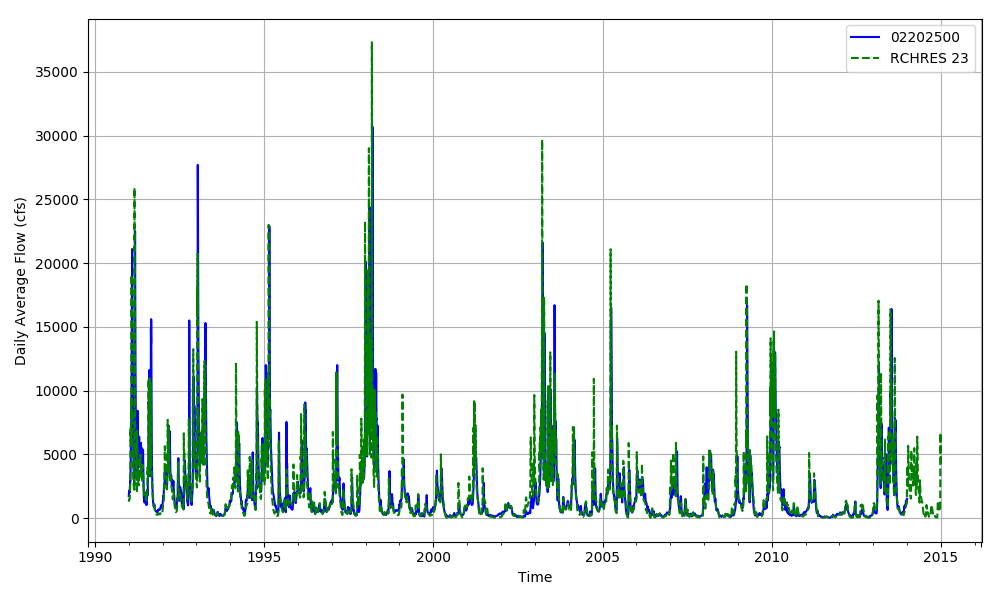


Figure 03060202-13: Daily flow for HSFP reach 23 and USGS station 02202500.

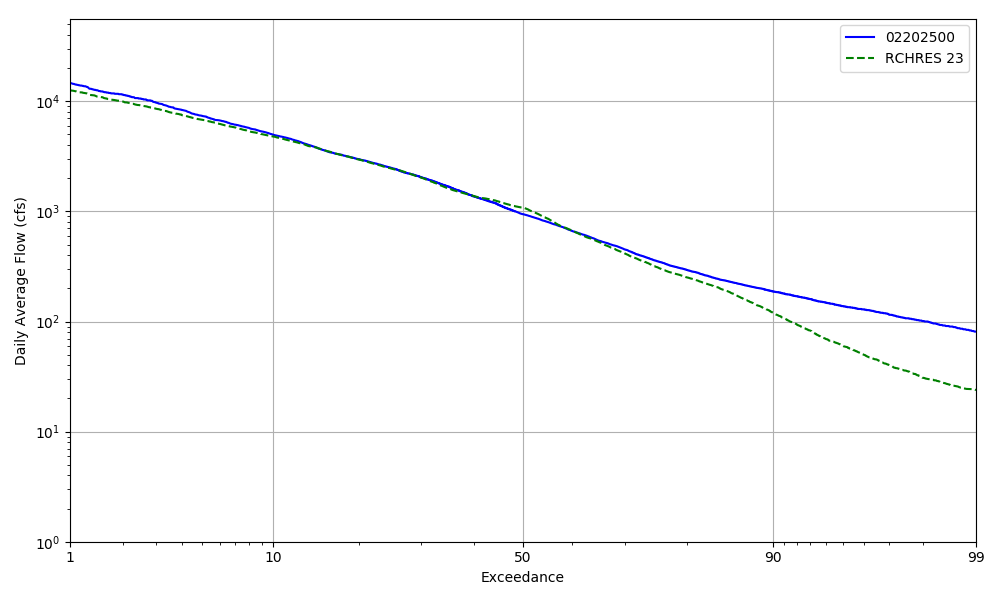


Figure 03060202-14: Daily exceedance for HSFP reach 23 and USGS station 02202500.

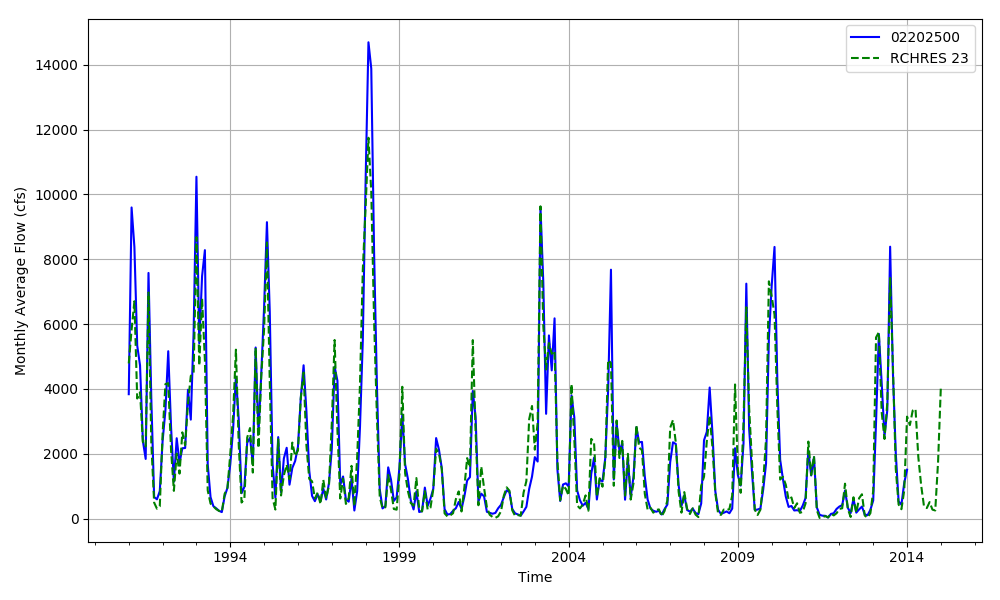


Figure 03060202-15: Monthly flow for HSFP reach 23 and USGS station 02202500.

## HSPF Reach 25, USGS Gauge 02202680

Table 03060202-9: Comparison Statistics Between HSPF Reach 25 and USGS Gauge 02202680.

|  |  |
| --- | --- |
| Statistic | Value |
| Bias | 150.90 |
| Standard error | 723.05 |
| Relative bias | 0.09 |
| Relative standard error | 0.30 |
| Nash-Sutcliffe coefficient | 0.91 |
| Coefficient of efficiency | 0.78 |
| Index of agreement | 0.89 |

Table 03060202-10: Hydrologic Indices Between USGS Gauge 02202680 and HSPF Reach 25.

|  |  |  |  |
| --- | --- | --- | --- |
| Hydrologic Index and description (Olden and Poff, 2003) | Observed 02202680 | Simulated Reach 25 | Percent Difference |
| MA1: Mean, all daily flows | 1629.45 | 1704.53 | 4.61 |
| MA2: Median, all daily flows | 484.00 | 606.49 | 25.31 |
| MA3: CV, all daily flows | 97.16 | 108.59 | 11.76 |
| MA4: CV, log of all daily flows | 147.66 | 144.50 | -2.14 |
| MA5: Mean daily flow / median daily flow | 3.37 | 2.81 | -16.52 |
| MA9: (Q10 - Q90) / median daily flow | 10.23 | 7.78 | -23.93 |
| MA10: (Q20 - Q80) / median daily flow | 4.75 | 3.82 | -19.63 |
| MA11: (Q25 - Q75) / median daily flow | 2.67 | 2.32 | -13.08 |
| MA12: Mean monthly flow, January | 2133.34 | 2770.59 | 29.87 |
| MA13: Mean monthly flow, February | 2876.67 | 3217.31 | 11.84 |
| MA14: Mean monthly flow, March | 2461.97 | 2550.30 | 3.59 |
| MA15: Mean monthly flow, April | 1671.07 | 1459.53 | -12.66 |
| MA16: Mean monthly flow, May | 842.33 | 864.54 | 2.64 |
| MA17: Mean monthly flow, June | 961.70 | 1116.16 | 16.06 |
| MA18: Mean monthly flow, July | 1790.37 | 1761.35 | -1.62 |
| MA19: Mean monthly flow, August | 1096.01 | 1347.96 | 22.99 |
| MA20: Mean monthly flow, September | 610.73 | 620.98 | 1.68 |
| MA21: Mean monthly flow, October | 216.99 | 261.77 | 20.64 |
| MA22: Mean monthly flow, November | 195.27 | 128.49 | -34.20 |
| MA23: Mean monthly flow, December | 2282.45 | 2548.97 | 11.68 |
| ML1: Mean minimum monthly flow, January | 1168.40 | 1567.55 | 34.16 |
| ML2: Mean minimum monthly flow, February | 1472.25 | 1220.39 | -17.11 |
| ML3: Mean minimum monthly flow, March | 1803.50 | 1747.06 | -3.13 |
| ML4: Mean minimum monthly flow, April | 1023.00 | 905.59 | -11.48 |
| ML5: Mean minimum monthly flow, May | 491.75 | 535.06 | 8.81 |
| ML6: Mean minimum monthly flow, June | 405.00 | 534.01 | 31.85 |
| ML7: Mean minimum monthly flow, July | 1165.50 | 1054.26 | -9.54 |
| ML8: Mean minimum monthly flow, August | 550.00 | 591.07 | 7.47 |
| ML9: Mean minimum monthly flow, September | 308.00 | 299.58 | -2.73 |
| ML10: Mean minimum monthly flow, October | 166.00 | 135.99 | -18.08 |
| ML11: Mean minimum monthly flow, November | 182.75 | 113.96 | -37.64 |
| ML12: Mean minimum monthly flow, December | 2046.80 | 1676.81 | -18.08 |
| ML13: CV of minimum monthly flows | 164.69 | 157.19 | -4.55 |
| ML14: Mean minimum daily flow / mean median annual flow | 0.23 | 0.16 | -31.07 |
| ML15: Mean minimum annual flow / mean annual flow | 0.17 | 0.11 | -35.47 |
| ML16: Median minimum annual flow / median annual flow | 0.14 | 0.09 | -34.46 |
| ML20: Ratio of baseflow volume to total flow volume | 0.70 | 0.62 | -10.44 |
| ML22: Mean annual minimum flow divided by catchment area | 1.36 | 0.87 | -35.80 |
| RA1: Mean of positive changes from one day to next (rise rate) | 130.62 | 281.62 |  |
| RA2: CV, mean of positive changes from one day to next (rise rate) | 231.62 | 329.17 |  |
| RA3: Mean of negative changes from one day to next (fall rate) | 108.92 | 175.77 |  |
| RA4: CV, mean of negative changes from one day to next (fall rate) | 179.78 | 243.67 |  |
| RA5: Ratio of days that are higher than previous day | 0.42 | 0.38 |  |
| RA6: Median of difference in log of flows over two consecutive days of rising | 0.05 | 0.06 |  |
| RA7: Median of difference in log of flows over two consecutive days of falling | 0.04 | 0.06 |  |
| RA8: Number of flow reversals from one day to the next | 44.80 | 35.00 |  |
| RA9: CV, number of flow reversals from one day to the next | 48.22 | 43.94 |  |

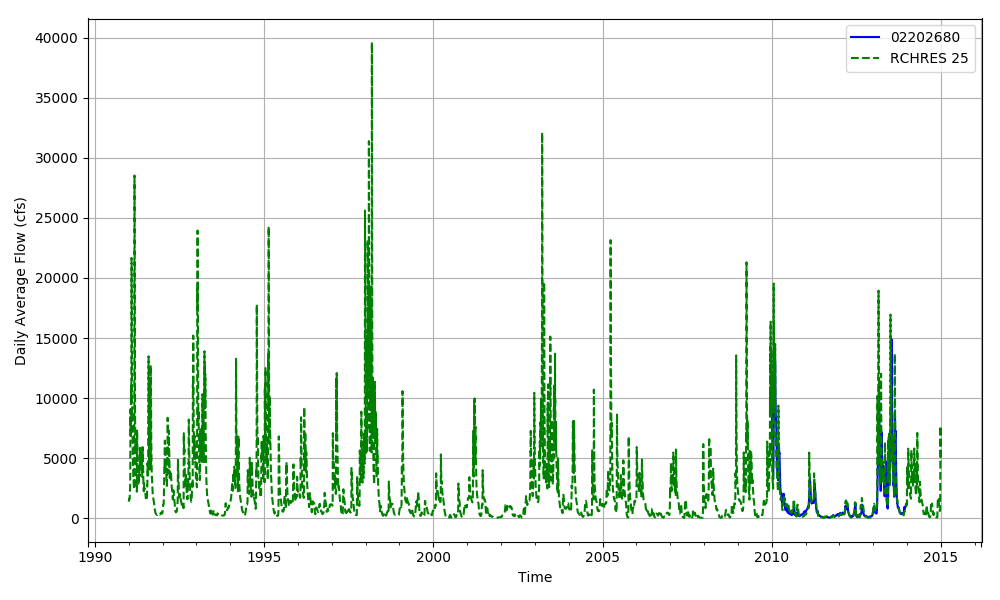


Figure 03060202-16: Daily flow for HSFP reach 25 and USGS station 02202680.

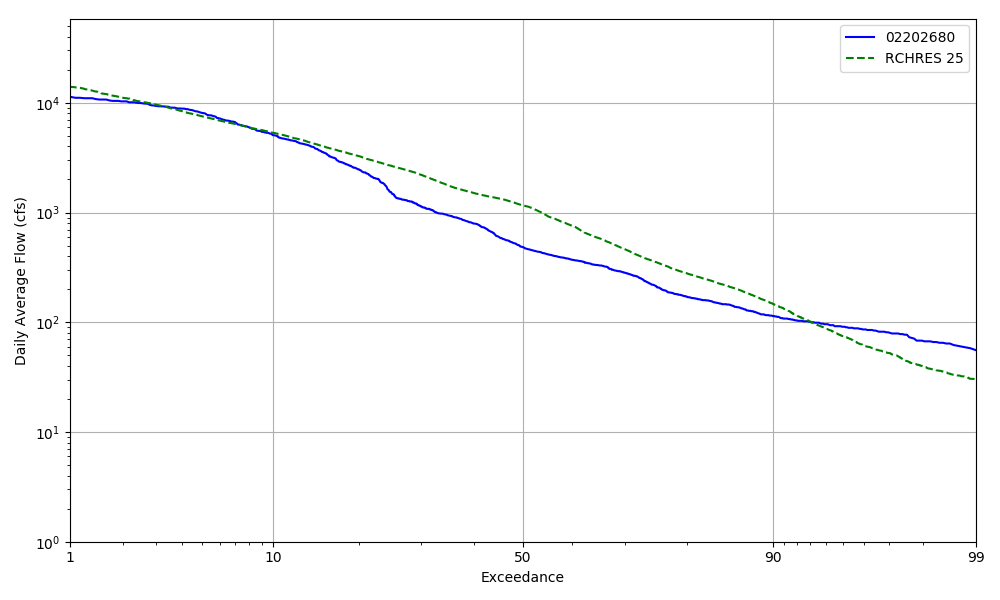


Figure 03060202-17: Daily exceedance for HSFP reach 25 and USGS station 02202680.

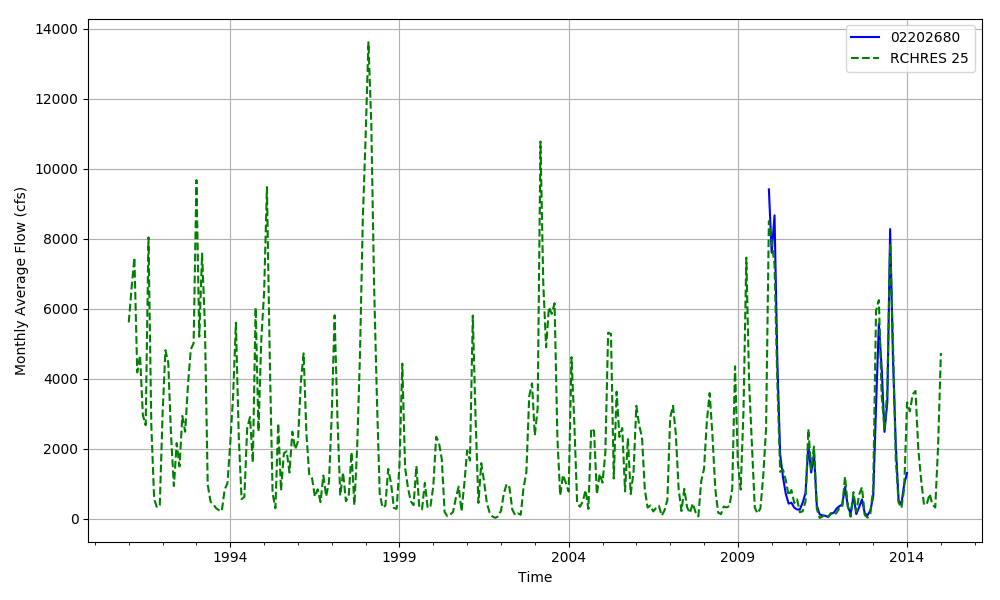


Figure 03060202-18: Monthly flow for HSFP reach 25 and USGS station 02202680.