# Appendix for Model 03050207

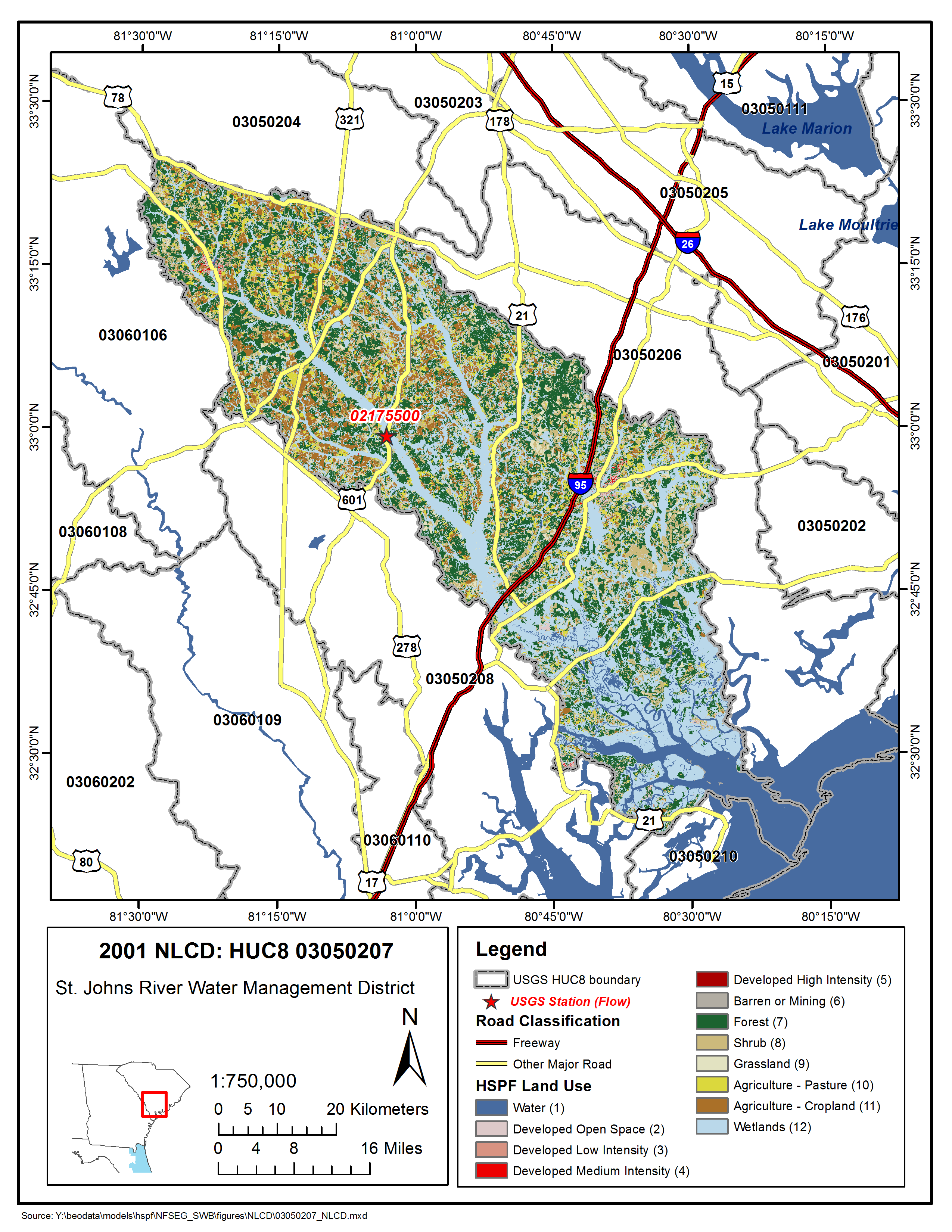


Figure 03050207-1: Land Cover from the National Land Cover Database.

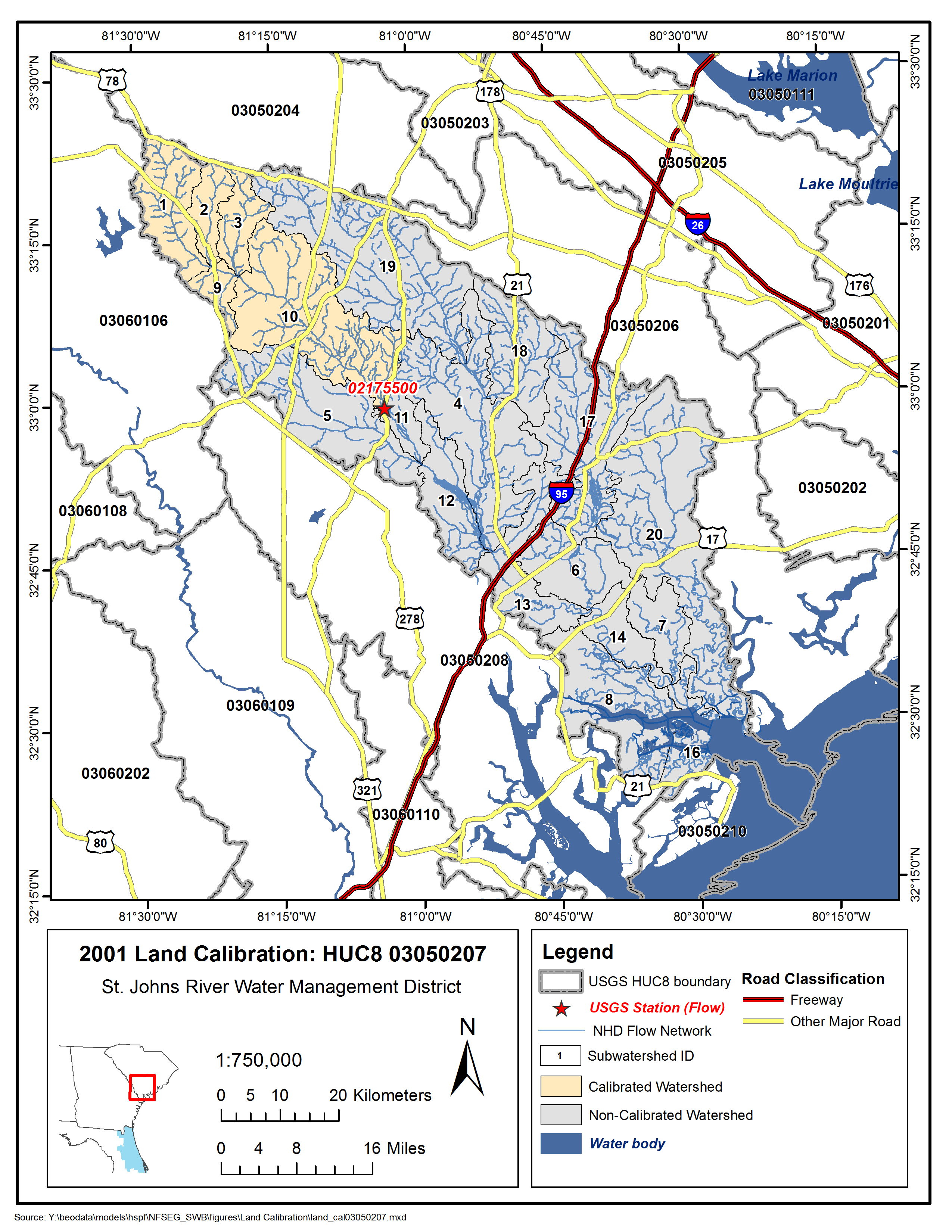


Figure 03050207-2: Calibrated sub-watersheds.

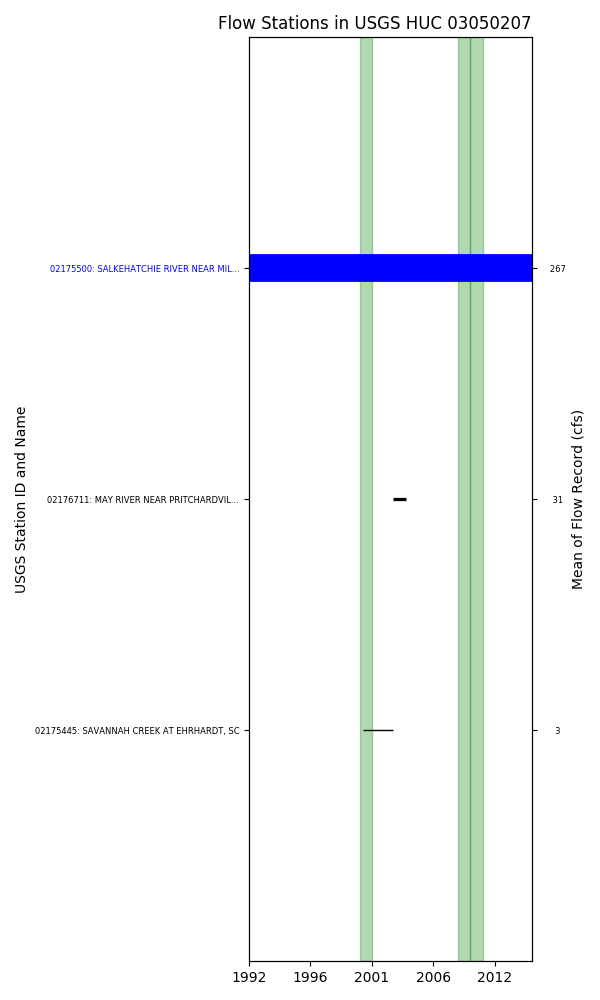


Figure 03050207-3: Station period of record. Blue color identifies gauges used for calibration.

## HSPF Reach 10, USGS Gauge 02175500

Table 03050207-1: Comparison Statistics Between HSPF Reach 10 and USGS Gauge 02175500.

|  |  |
| --- | --- |
| Statistic | Value |
| Bias | -11.78 |
| Standard error | 109.01 |
| Relative bias | -0.04 |
| Relative standard error | 0.49 |
| Nash-Sutcliffe coefficient | 0.76 |
| Kling-Gupta coefficient | 0.87 |
| Coefficient of efficiency | 0.47 |
| Index of agreement | 0.74 |

Table 03050207-2: Hydrologic Indices Between USGS Gauge 02175500 and HSPF Reach 10.

|  |  |  |  |
| --- | --- | --- | --- |
| Hydrologic Index and description (Olden and Poff, 2003) | Observed 02175500 | Simulated Reach 10 | Percent Difference |
| MA1: Mean, all daily flows | 279.32 | 267.61 | -4.19 |
| MA2: Median, all daily flows | 204.00 | 191.93 | -5.92 |
| MA3: CV, all daily flows | 71.91 | 69.36 | -3.54 |
| MA4: CV, log of all daily flows | 77.18 | 79.16 | 2.56 |
| MA5: Mean daily flow / median daily flow | 1.37 | 1.39 | 1.83 |
| MA9: (Q10 - Q90) / median daily flow | 2.52 | 2.75 | 8.76 |
| MA10: (Q20 - Q80) / median daily flow | 1.45 | 1.67 | 15.57 |
| MA11: (Q25 - Q75) / median daily flow | 1.13 | 1.24 | 10.29 |
| MA12: Mean monthly flow, January | 402.60 | 347.39 | -13.71 |
| MA13: Mean monthly flow, February | 419.68 | 389.56 | -7.18 |
| MA14: Mean monthly flow, March | 423.84 | 413.99 | -2.33 |
| MA15: Mean monthly flow, April | 306.17 | 296.59 | -3.13 |
| MA16: Mean monthly flow, May | 182.05 | 185.39 | 1.84 |
| MA17: Mean monthly flow, June | 194.51 | 225.75 | 16.06 |
| MA18: Mean monthly flow, July | 171.01 | 222.21 | 29.94 |
| MA19: Mean monthly flow, August | 238.54 | 246.19 | 3.21 |
| MA20: Mean monthly flow, September | 170.61 | 189.64 | 11.16 |
| MA21: Mean monthly flow, October | 188.12 | 177.95 | -5.40 |
| MA22: Mean monthly flow, November | 226.56 | 161.63 | -28.66 |
| MA23: Mean monthly flow, December | 304.57 | 236.30 | -22.41 |
| ML1: Mean minimum monthly flow, January | 255.39 | 202.74 | -20.62 |
| ML2: Mean minimum monthly flow, February | 280.82 | 241.61 | -13.96 |
| ML3: Mean minimum monthly flow, March | 264.95 | 239.45 | -9.63 |
| ML4: Mean minimum monthly flow, April | 165.59 | 160.12 | -3.30 |
| ML5: Mean minimum monthly flow, May | 90.91 | 102.76 | 13.03 |
| ML6: Mean minimum monthly flow, June | 73.39 | 104.80 | 42.80 |
| ML7: Mean minimum monthly flow, July | 67.80 | 143.52 | 111.67 |
| ML8: Mean minimum monthly flow, August | 95.09 | 146.79 | 54.38 |
| ML9: Mean minimum monthly flow, September | 84.77 | 89.84 | 5.98 |
| ML10: Mean minimum monthly flow, October | 99.05 | 81.76 | -17.46 |
| ML11: Mean minimum monthly flow, November | 148.32 | 93.32 | -37.08 |
| ML12: Mean minimum monthly flow, December | 214.55 | 134.32 | -37.39 |
| ML13: CV of minimum monthly flows | 80.86 | 90.51 | 11.93 |
| ML14: Mean minimum daily flow / mean median annual flow | 0.18 | 0.14 | -18.50 |
| ML15: Mean minimum annual flow / mean annual flow | 0.15 | 0.12 | -22.52 |
| ML16: Median minimum annual flow / median annual flow | 0.16 | 0.15 | -10.07 |
| ML20: Ratio of baseflow volume to total flow volume | 0.66 | 0.68 | 3.27 |
| ML22: Mean annual minimum flow divided by catchment area | 0.44 | 0.34 | -23.57 |
| RA1: Mean of positive changes from one day to next (rise rate) | 42.68 | 34.91 |  |
| RA2: CV, mean of positive changes from one day to next (rise rate) | 243.57 | 275.84 |  |
| RA3: Mean of negative changes from one day to next (fall rate) | 29.27 | 16.73 |  |
| RA4: CV, mean of negative changes from one day to next (fall rate) | 194.73 | 227.89 |  |
| RA5: Ratio of days that are higher than previous day | 0.39 | 0.32 |  |
| RA6: Median of difference in log of flows over two consecutive days of rising | 0.08 | 0.07 |  |
| RA7: Median of difference in log of flows over two consecutive days of falling | 0.07 | 0.05 |  |
| RA8: Number of flow reversals from one day to the next | 75.43 | 58.78 |  |
| RA9: CV, number of flow reversals from one day to the next | 19.11 | 24.97 |  |

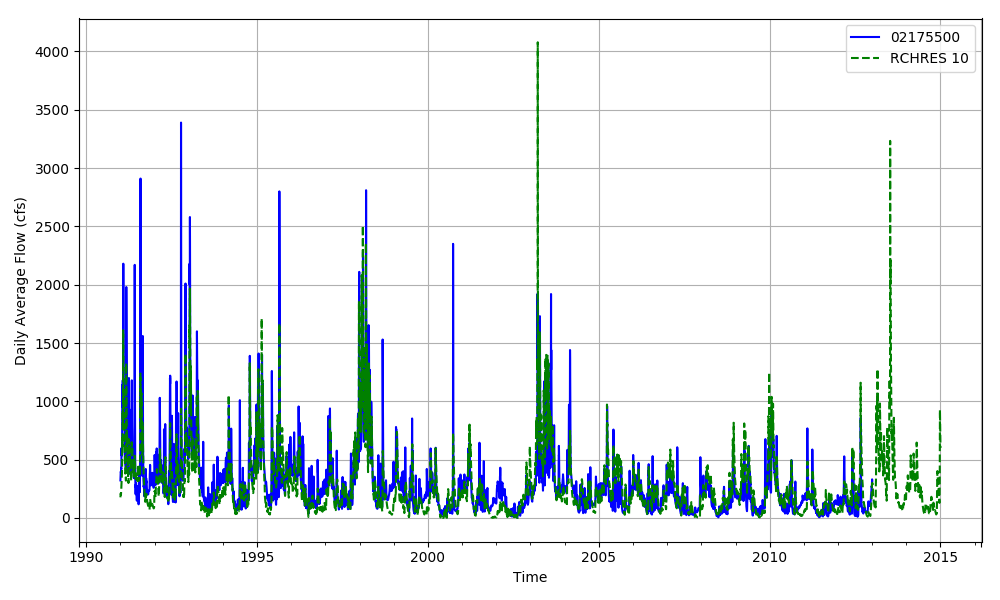


Figure 03050207-4: Daily flow for HSFP reach 10 and USGS station 02175500.

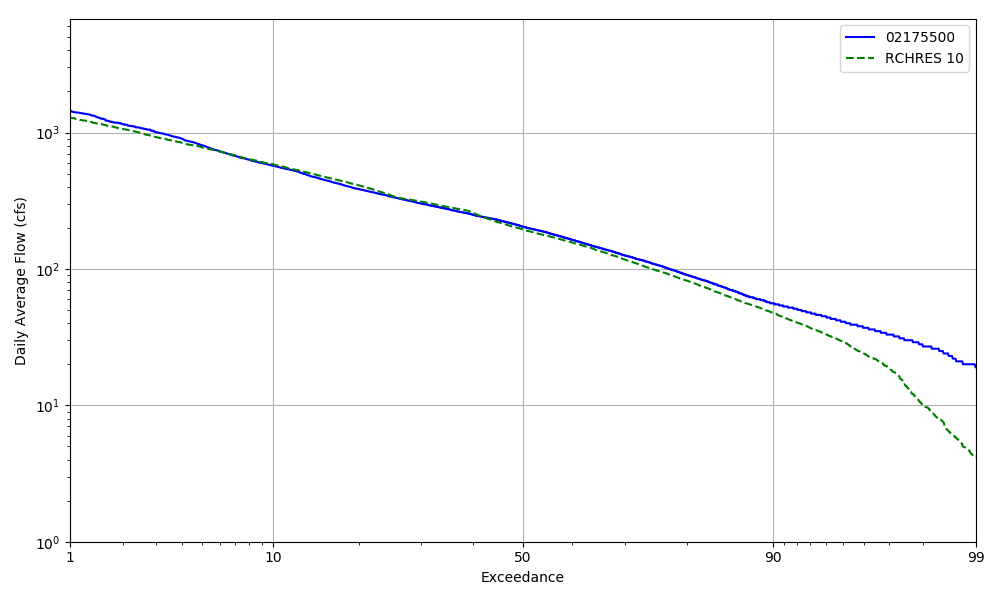


Figure 03050207-5: Daily exceedance for HSFP reach 10 and USGS station 02175500.

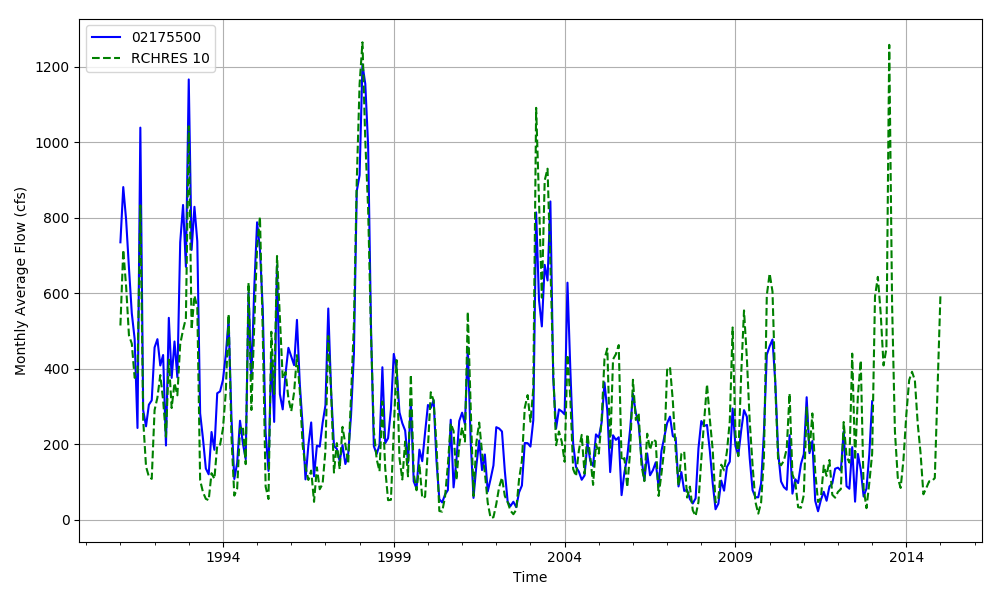


Figure 03050207-6: Monthly flow for HSFP reach 10 and USGS station 02175500.