# Appendix for Model 03050208

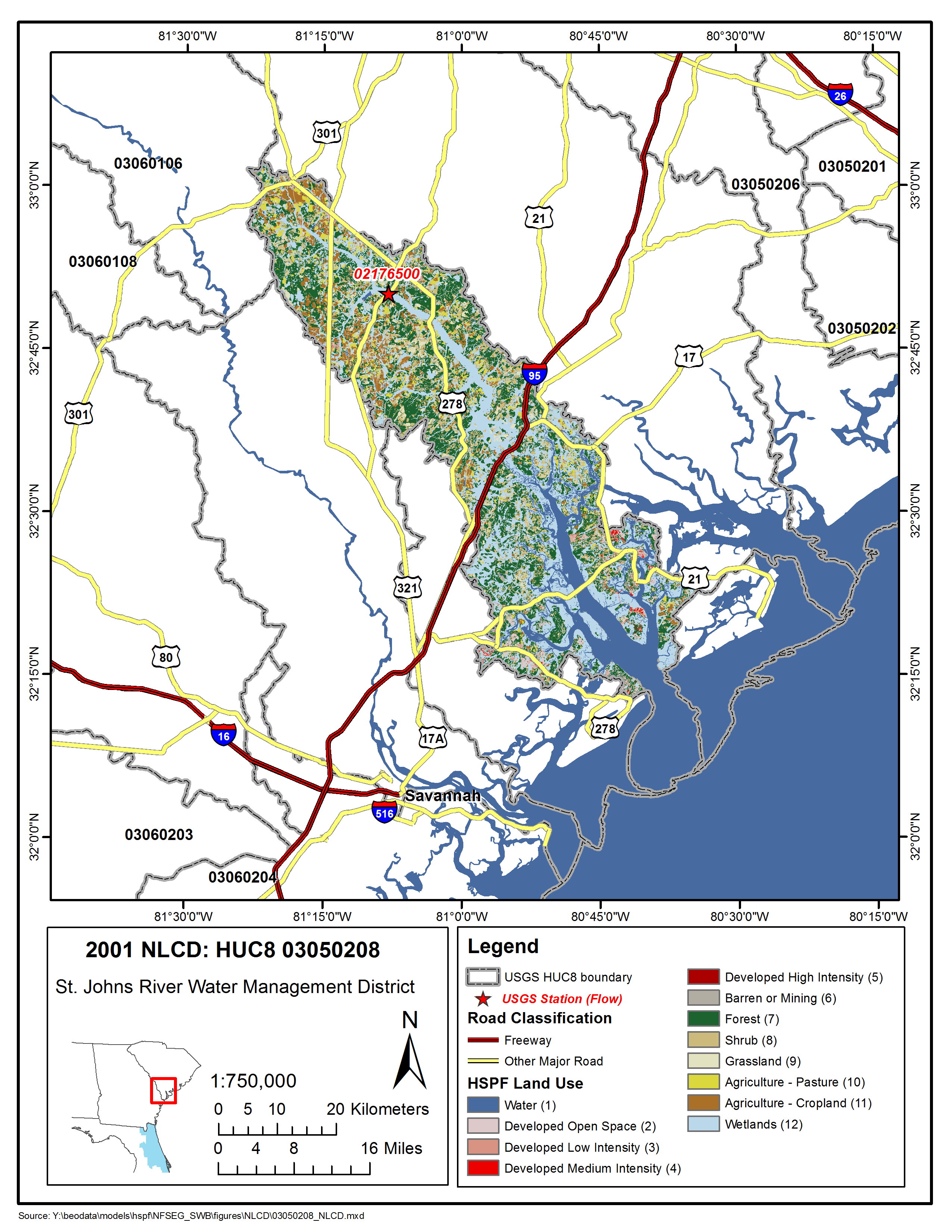


Figure 03050208-1: Land Cover from the National Land Cover Database.

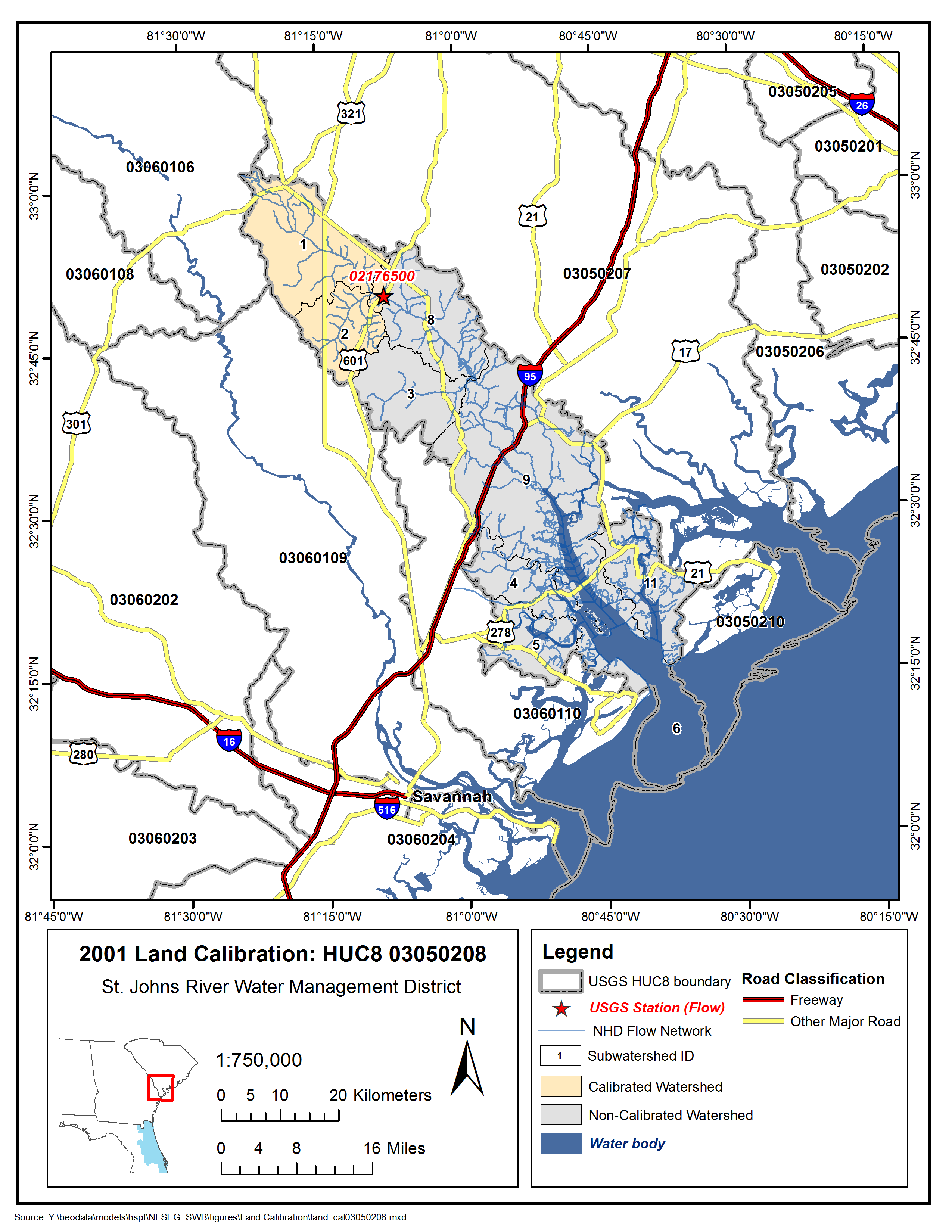


Figure 03050208-2: Calibrated sub-watersheds.

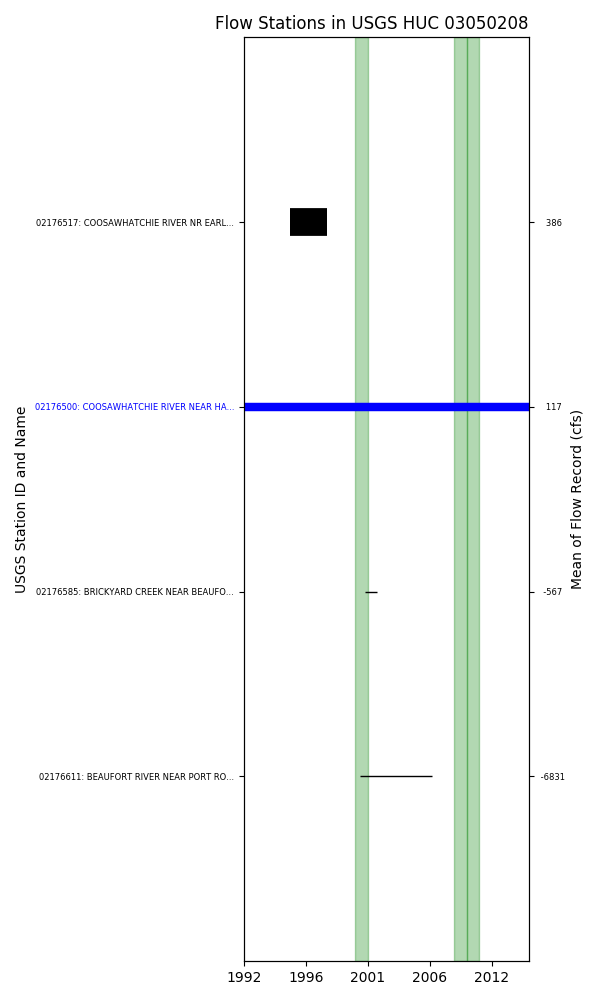


Figure 03050208-3: Station period of record. Blue color identifies gauges used for calibration.

## HSPF Reach 07, USGS Gauge 02176500

Table 03050208-1: Comparison Statistics Between HSPF Reach 07 and USGS Gauge 02176500.

|  |  |
| --- | --- |
| Statistic | Value |
| Bias | -15.29 |
| Standard error | 86.81 |
| Relative bias | -0.12 |
| Relative standard error | 0.48 |
| Nash-Sutcliffe coefficient | 0.77 |
| Kling-Gupta coefficient | 0.73 |
| Coefficient of efficiency | 0.58 |
| Index of agreement | 0.78 |

Table 03050208-2: Hydrologic Indices Between USGS Gauge 02176500 and HSPF Reach 07.

|  |  |  |  |
| --- | --- | --- | --- |
| Hydrologic Index and description (Olden and Poff, 2003) | Observed 02176500 | Simulated Reach 07 | Percent Difference |
| MA1: Mean, all daily flows | 122.50 | 107.18 | -12.51 |
| MA2: Median, all daily flows | 35.00 | 37.97 | 8.48 |
| MA3: CV, all daily flows | 143.58 | 114.92 | -19.96 |
| MA4: CV, log of all daily flows | 151.82 | 130.25 | -14.20 |
| MA5: Mean daily flow / median daily flow | 3.50 | 2.82 | -19.35 |
| MA9: (Q10 - Q90) / median daily flow | 9.58 | 7.61 | -20.51 |
| MA10: (Q20 - Q80) / median daily flow | 4.84 | 4.64 | -4.28 |
| MA11: (Q25 - Q75) / median daily flow | 3.53 | 3.50 | -0.70 |
| MA12: Mean monthly flow, January | 202.54 | 185.88 | -8.22 |
| MA13: Mean monthly flow, February | 263.79 | 214.62 | -18.64 |
| MA14: Mean monthly flow, March | 259.86 | 185.86 | -28.48 |
| MA15: Mean monthly flow, April | 148.22 | 97.70 | -34.08 |
| MA16: Mean monthly flow, May | 52.86 | 35.24 | -33.32 |
| MA17: Mean monthly flow, June | 51.17 | 61.67 | 20.51 |
| MA18: Mean monthly flow, July | 38.62 | 60.36 | 56.28 |
| MA19: Mean monthly flow, August | 89.28 | 103.16 | 15.55 |
| MA20: Mean monthly flow, September | 57.46 | 60.58 | 5.43 |
| MA21: Mean monthly flow, October | 64.07 | 56.87 | -11.23 |
| MA22: Mean monthly flow, November | 66.74 | 66.11 | -0.95 |
| MA23: Mean monthly flow, December | 124.44 | 114.82 | -7.73 |
| ML1: Mean minimum monthly flow, January | 79.42 | 79.85 | 0.54 |
| ML2: Mean minimum monthly flow, February | 112.28 | 99.15 | -11.69 |
| ML3: Mean minimum monthly flow, March | 88.75 | 62.30 | -29.81 |
| ML4: Mean minimum monthly flow, April | 41.85 | 31.37 | -25.03 |
| ML5: Mean minimum monthly flow, May | 9.25 | 8.94 | -3.33 |
| ML6: Mean minimum monthly flow, June | 5.46 | 7.59 | 39.07 |
| ML7: Mean minimum monthly flow, July | 6.30 | 20.04 | 218.10 |
| ML8: Mean minimum monthly flow, August | 16.73 | 30.98 | 85.13 |
| ML9: Mean minimum monthly flow, September | 13.10 | 13.30 | 1.51 |
| ML10: Mean minimum monthly flow, October | 8.31 | 11.82 | 42.32 |
| ML11: Mean minimum monthly flow, November | 25.83 | 28.43 | 10.05 |
| ML12: Mean minimum monthly flow, December | 57.35 | 50.43 | -12.06 |
| ML13: CV of minimum monthly flows | 170.24 | 167.54 | -1.58 |
| ML14: Mean minimum daily flow / mean median annual flow | 0.02 | 0.02 | 3.30 |
| ML15: Mean minimum annual flow / mean annual flow | 0.01 | 0.01 | -13.34 |
| ML16: Median minimum annual flow / median annual flow | 0.00 | 0.01 |  |
| ML20: Ratio of baseflow volume to total flow volume | 0.42 | 0.51 | 20.39 |
| ML22: Mean annual minimum flow divided by catchment area | 0.02 | 0.03 | 56.08 |
| RA1: Mean of positive changes from one day to next (rise rate) | 56.50 | 29.80 |  |
| RA2: CV, mean of positive changes from one day to next (rise rate) | 299.83 | 307.11 |  |
| RA3: Mean of negative changes from one day to next (fall rate) | 29.53 | 11.41 |  |
| RA4: CV, mean of negative changes from one day to next (fall rate) | 296.66 | 297.08 |  |
| RA5: Ratio of days that are higher than previous day | 0.28 | 0.27 |  |
| RA6: Median of difference in log of flows over two consecutive days of rising | 0.21 | 0.17 |  |
| RA7: Median of difference in log of flows over two consecutive days of falling | 0.15 | 0.10 |  |
| RA8: Number of flow reversals from one day to the next | 64.57 | 72.87 |  |
| RA9: CV, number of flow reversals from one day to the next | 27.40 | 19.72 |  |

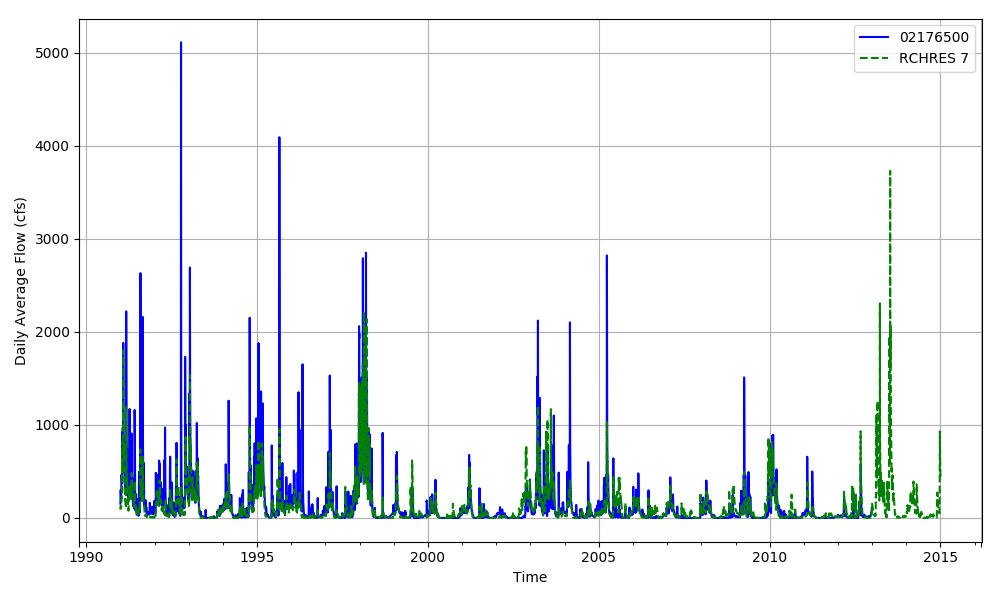


Figure 03050208-4: Daily flow for HSFP reach 07 and USGS station 02176500.

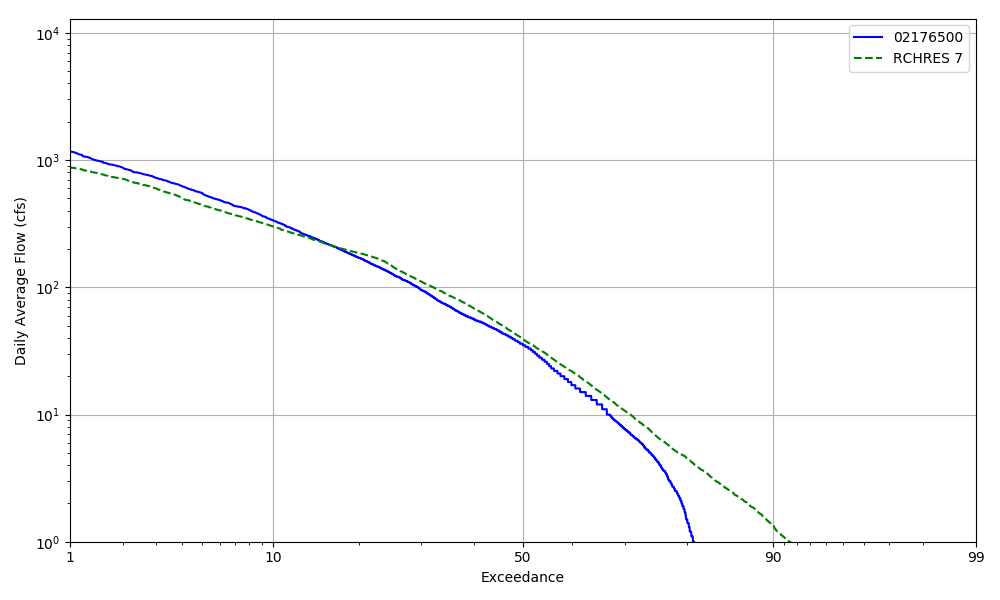


Figure 03050208-5: Daily exceedance for HSFP reach 07 and USGS station 02176500.

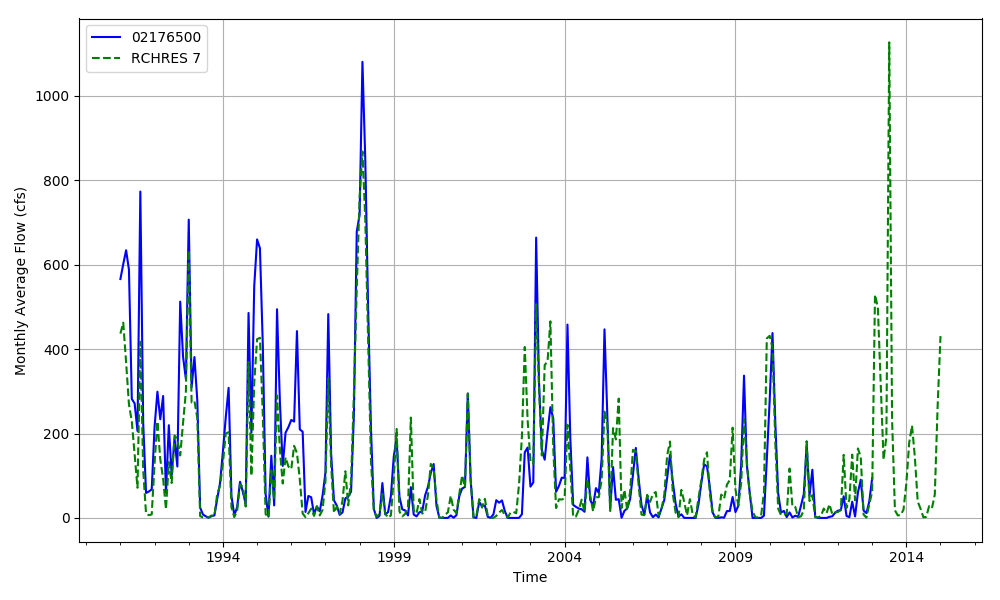


Figure 03050208-6: Monthly flow for HSFP reach 07 and USGS station 02176500.