# Appendix for Model 03130013

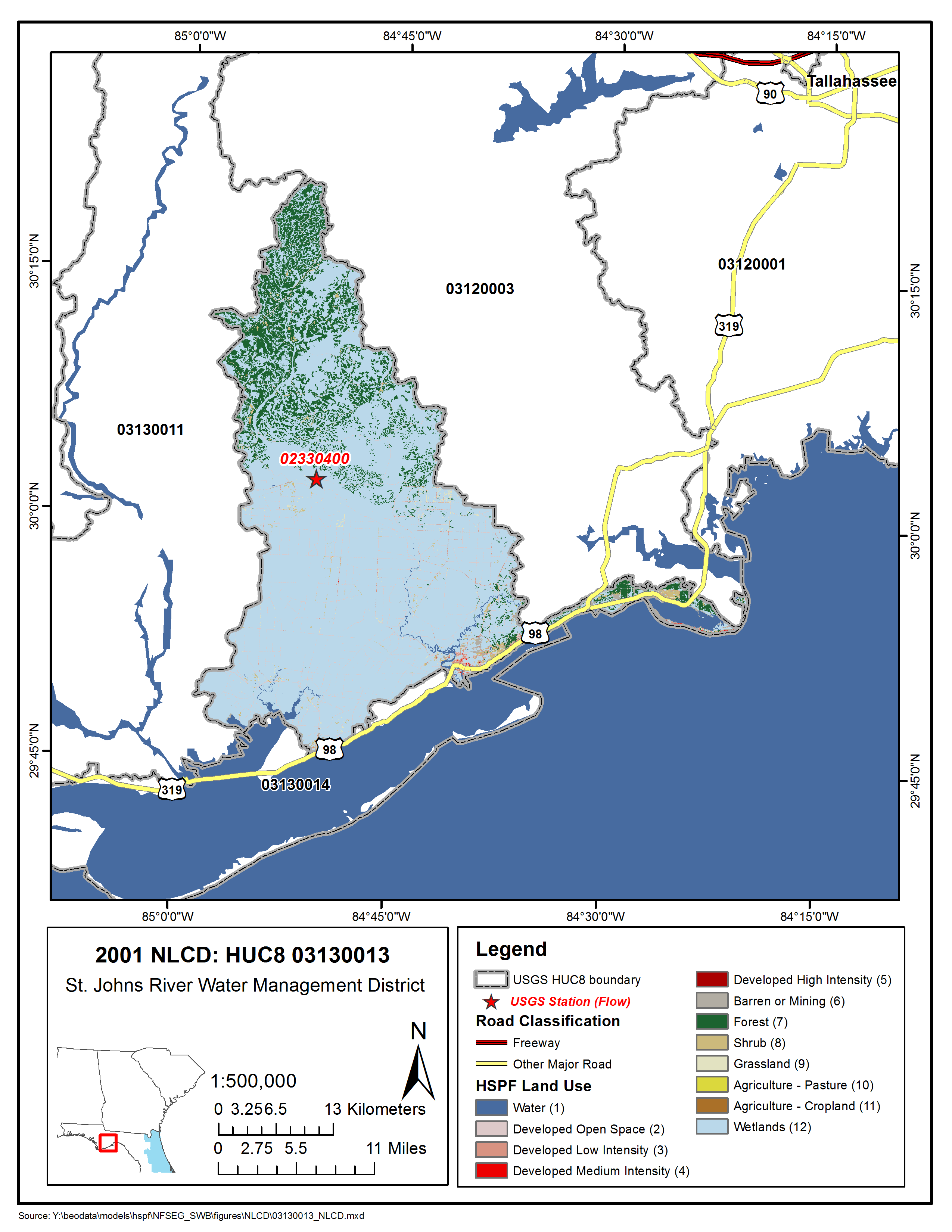


Figure 03130013-1: Land Cover from the National Land Cover Database.

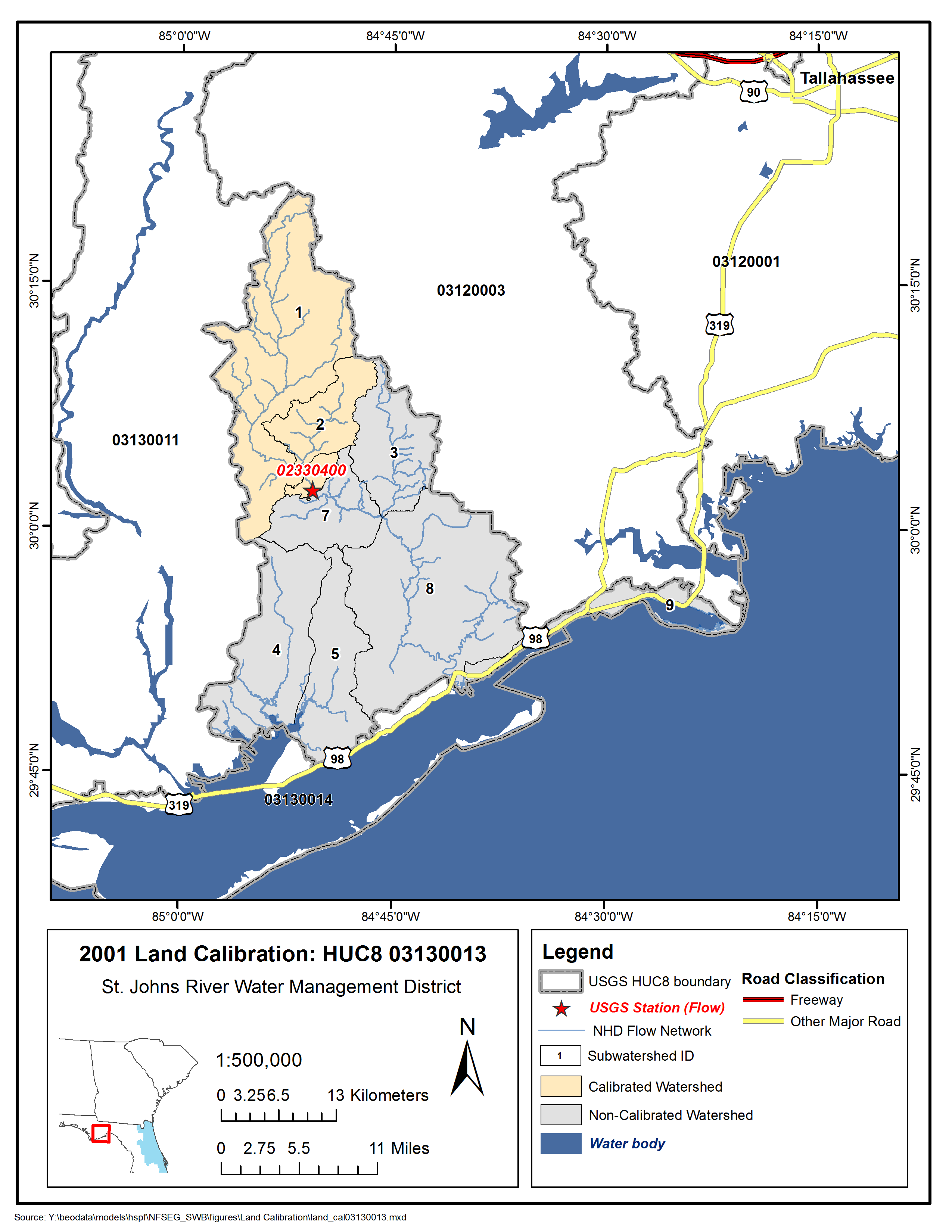


Figure 03130013-2: Calibrated sub-watersheds.

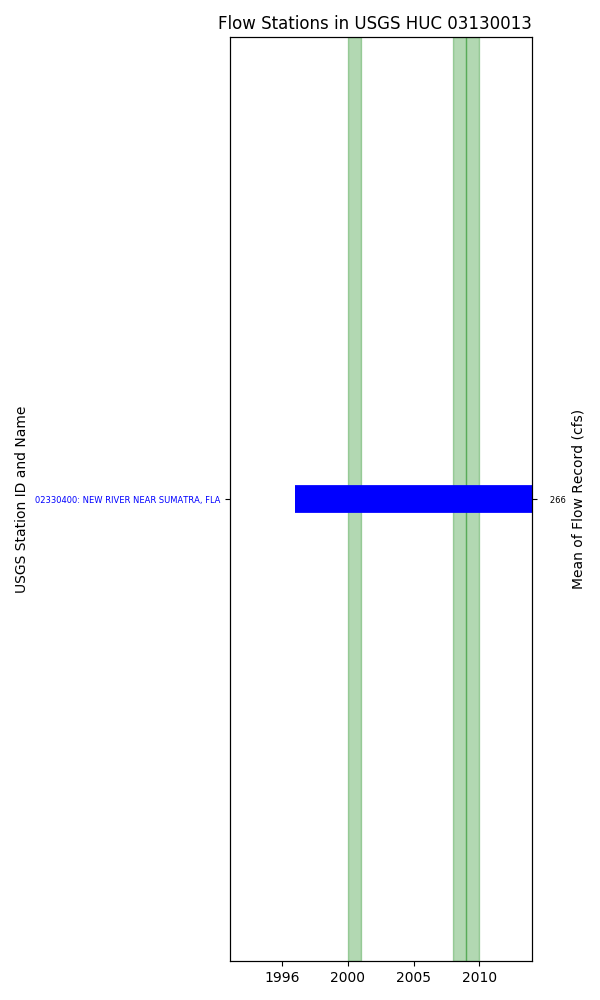


Figure 03130013-3: Station period of record. Blue color identifies gauges used for calibration.

## HSPF Reach 06, USGS Gauge 02330400

Table 03130013-1: Comparison Statistics Between HSPF Reach 06 and USGS Gauge 02330400.

|  |  |
| --- | --- |
| Statistic | Value |
| Bias | -38.13 |
| Standard error | 187.34 |
| Relative bias | -0.15 |
| Relative standard error | 0.61 |
| Nash-Sutcliffe coefficient | 0.63 |
| Kling-Gupta coefficient | 0.70 |
| Coefficient of efficiency | 0.55 |
| Index of agreement | 0.76 |

Table 03130013-2: Hydrologic Indices Between USGS Gauge 02330400 and HSPF Reach 06.

|  |  |  |  |
| --- | --- | --- | --- |
| Hydrologic Index and description (Olden and Poff, 2003) | Observed 02330400 | Simulated Reach 06 | Percent Difference |
| MA1: Mean, all daily flows | 259.05 | 215.08 | -16.98 |
| MA2: Median, all daily flows | 89.00 | 96.95 | 8.94 |
| MA3: CV, all daily flows | 148.81 | 131.43 | -11.68 |
| MA4: CV, log of all daily flows | 138.10 | 127.22 | -7.88 |
| MA5: Mean daily flow / median daily flow | 2.91 | 2.22 | -23.79 |
| MA9: (Q10 - Q90) / median daily flow | 8.24 | 6.07 | -26.25 |
| MA10: (Q20 - Q80) / median daily flow | 4.82 | 3.39 | -29.64 |
| MA11: (Q25 - Q75) / median daily flow | 3.59 | 2.66 | -25.99 |
| MA12: Mean monthly flow, January | 265.32 | 276.41 | 4.18 |
| MA13: Mean monthly flow, February | 310.33 | 348.49 | 12.30 |
| MA14: Mean monthly flow, March | 404.31 | 333.13 | -17.61 |
| MA15: Mean monthly flow, April | 171.96 | 171.30 | -0.38 |
| MA16: Mean monthly flow, May | 70.03 | 49.74 | -28.97 |
| MA17: Mean monthly flow, June | 147.24 | 90.07 | -38.83 |
| MA18: Mean monthly flow, July | 347.16 | 235.53 | -32.16 |
| MA19: Mean monthly flow, August | 445.70 | 283.98 | -36.28 |
| MA20: Mean monthly flow, September | 285.07 | 170.82 | -40.08 |
| MA21: Mean monthly flow, October | 134.33 | 123.22 | -8.27 |
| MA22: Mean monthly flow, November | 121.83 | 155.16 | 27.35 |
| MA23: Mean monthly flow, December | 225.23 | 260.66 | 15.73 |
| ML1: Mean minimum monthly flow, January | 91.38 | 135.32 | 48.08 |
| ML2: Mean minimum monthly flow, February | 115.92 | 129.78 | 11.96 |
| ML3: Mean minimum monthly flow, March | 118.54 | 141.30 | 19.20 |
| ML4: Mean minimum monthly flow, April | 23.62 | 30.05 | 27.21 |
| ML5: Mean minimum monthly flow, May | 3.41 | 3.59 | 5.30 |
| ML6: Mean minimum monthly flow, June | 5.70 | 9.79 | 71.62 |
| ML7: Mean minimum monthly flow, July | 107.19 | 71.25 | -33.53 |
| ML8: Mean minimum monthly flow, August | 133.63 | 78.61 | -41.17 |
| ML9: Mean minimum monthly flow, September | 41.53 | 27.59 | -33.56 |
| ML10: Mean minimum monthly flow, October | 15.54 | 23.91 | 53.91 |
| ML11: Mean minimum monthly flow, November | 32.01 | 63.01 | 96.87 |
| ML12: Mean minimum monthly flow, December | 61.72 | 95.49 | 54.71 |
| ML13: CV of minimum monthly flows | 178.87 | 165.72 | -7.35 |
| ML14: Mean minimum daily flow / mean median annual flow | 0.01 | 0.01 | 126.23 |
| ML15: Mean minimum annual flow / mean annual flow | 0.00 | 0.01 | 138.68 |
| ML16: Median minimum annual flow / median annual flow | 0.00 | 0.00 | 7055.09 |
| ML20: Ratio of baseflow volume to total flow volume | 0.41 | 0.49 | 20.07 |
| ML22: Mean annual minimum flow divided by catchment area | 0.01 | 0.02 | 147.99 |
| RA1: Mean of positive changes from one day to next (rise rate) | 65.53 | 67.71 |  |
| RA2: CV, mean of positive changes from one day to next (rise rate) | 242.71 | 243.33 |  |
| RA3: Mean of negative changes from one day to next (fall rate) | 31.87 | 25.92 |  |
| RA4: CV, mean of negative changes from one day to next (fall rate) | 188.20 | 189.74 |  |
| RA5: Ratio of days that are higher than previous day | 0.31 | 0.28 |  |
| RA6: Median of difference in log of flows over two consecutive days of rising | 0.19 | 0.20 |  |
| RA7: Median of difference in log of flows over two consecutive days of falling | 0.15 | 0.13 |  |
| RA8: Number of flow reversals from one day to the next | 60.22 | 56.94 |  |
| RA9: CV, number of flow reversals from one day to the next | 25.76 | 31.34 |  |

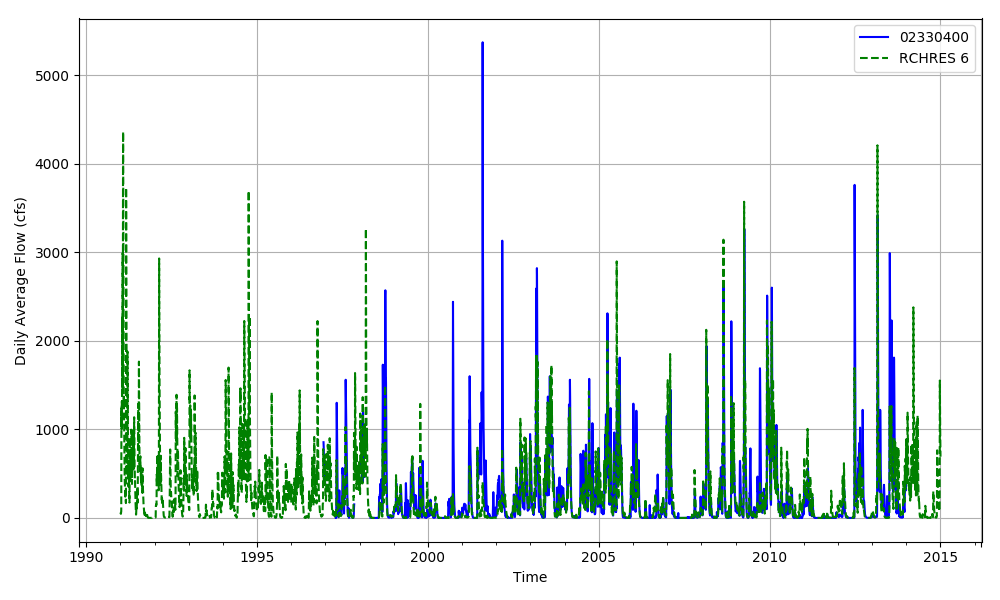


Figure 03130013-4: Daily flow for HSFP reach 06 and USGS station 02330400.

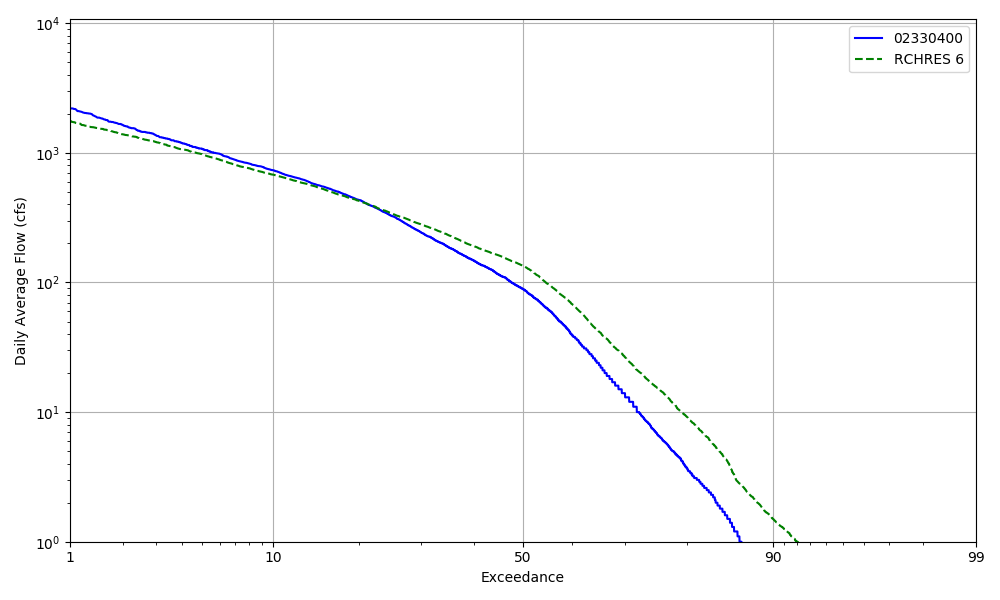


Figure 03130013-5: Daily exceedance for HSFP reach 06 and USGS station 02330400.

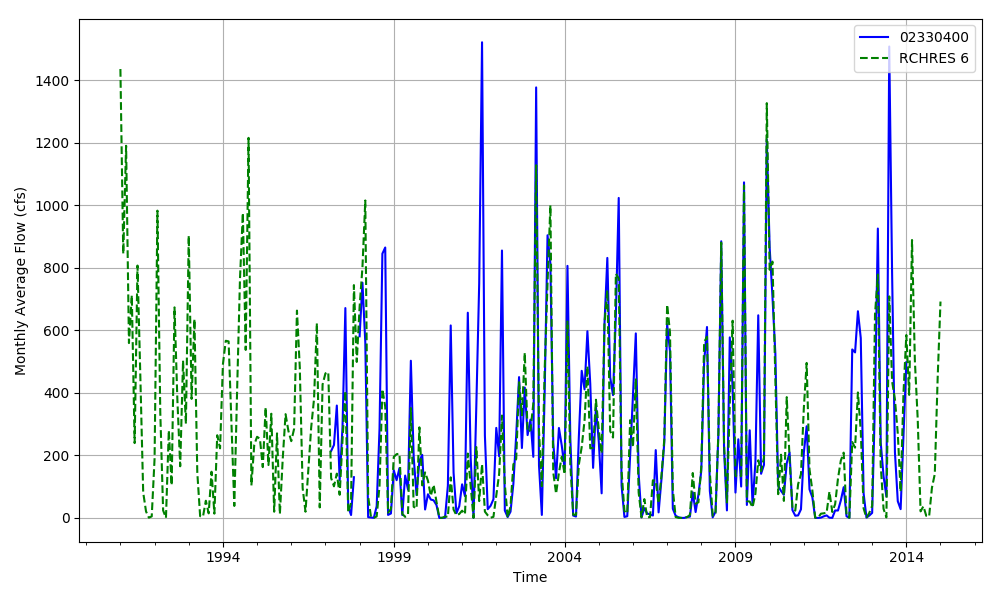


Figure 03130013-6: Monthly flow for HSFP reach 06 and USGS station 02330400.