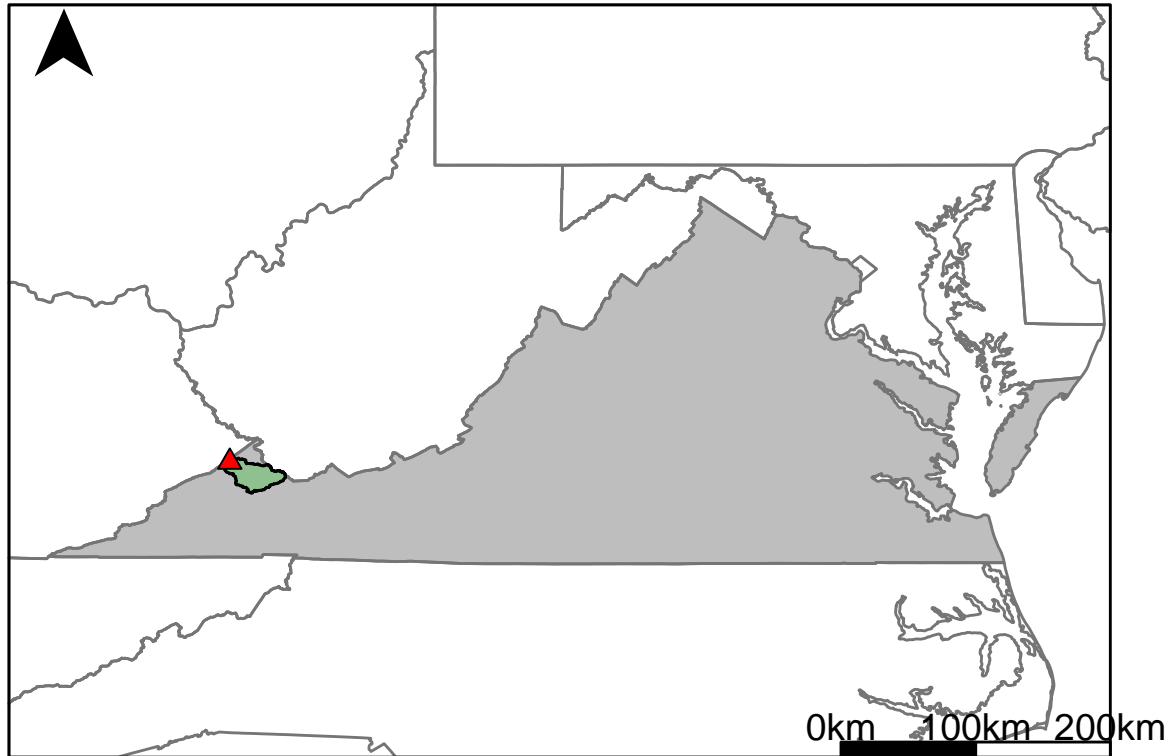


## 03207800 vs. BS3\_8350\_8330



This river segment follows part of the flow of the Levisa Fork of the Big Sandy River. The gage is located in Buchanan County, VA (Lat 37°21'13", Long 82°11'45") approximately 40 miles northeast of Norton, VA. Drainage area is 297 sq. miles. This gage started taking data in 1967 and is still taking data. This area is not regulated and should not have any anthropogenic alterations to the flow. The average daily discharge error between the model and gage data for the 20 year timespan was -0.8%, with 56.2% of its rolling three month time spans above 20% error.

**Table 1: Monthly Low Flows**

|               | USGS Gage | Model | Pct. Error |
|---------------|-----------|-------|------------|
| Jan. Low Flow | 32        | 54.7  | -70.9      |
| Feb. Low Flow | 38        | 63.8  | -67.9      |
| Mar. Low Flow | 88        | 169   | -92        |
| Apr. Low Flow | 140       | 265   | -89.3      |
| May Low Flow  | 250       | 327   | -30.8      |
| Jun. Low Flow | 264       | 321   | -21.6      |
| Jul. Low Flow | 272       | 253   | 6.99       |
| Aug. Low Flow | 154       | 167   | -8.44      |
| Sep. Low Flow | 90        | 118   | -31.1      |
| Oct. Low Flow | 62.8      | 6.21  | 90.1       |
| Nov. Low Flow | 53        | 18.6  | 64.9       |
| Dec. Low Flow | 33        | 12    | 63.6       |

**Table 2: Monthly Average Flows**

|                   | USGS Gage | Model | Pct. Error |
|-------------------|-----------|-------|------------|
| Overall Mean Flow | 377       | 380   | -0.8       |
| Jan. Mean Flow    | 495       | 523   | -5.66      |
| Feb. Mean Flow    | 728       | 714   | 1.92       |
| Mar. Mean Flow    | 742       | 664   | 10.5       |
| Apr. Mean Flow    | 691       | 555   | 19.7       |
| May Mean Flow     | 505       | 465   | 7.92       |
| Jun. Mean Flow    | 295       | 283   | 4.07       |
| Jul. Mean Flow    | 193       | 192   | 0.52       |
| Aug. Mean Flow    | 138       | 172   | -24.6      |
| Sep. Mean Flow    | 88        | 136   | -54.5      |
| Oct. Mean Flow    | 110       | 185   | -68.2      |
| Nov. Mean Flow    | 199       | 271   | -36.2      |
| Dec. Mean Flow    | 362       | 423   | -16.9      |

**Table 3: Monthly High Flows**

|                | USGS Gage | Model | Pct. Error |
|----------------|-----------|-------|------------|
| Jan. High Flow | 186       | 225   | -21        |
| Feb. High Flow | 696       | 811   | -16.5      |
| Mar. High Flow | 1160      | 958   | 17.4       |
| Apr. High Flow | 1650      | 1360  | 17.6       |
| May High Flow  | 2960      | 1590  | 46.3       |
| Jun. High Flow | 2010      | 1710  | 14.9       |
| Jul. High Flow | 1270      | 1130  | 11         |
| Aug. High Flow | 1700      | 1270  | 25.3       |
| Sep. High Flow | 507       | 583   | -15        |
| Oct. High Flow | 588       | 422   | 28.2       |
| Nov. High Flow | 385       | 222   | 42.3       |
| Dec. High Flow | 207       | 230   | -11.1      |

**Table 4: Period Low Flows**

|                          | USGS Gage | Model | Pct. Error |
|--------------------------|-----------|-------|------------|
| Min. 1 Day Min           | 14        | 0     | 100        |
| Med. 1 Day Min           | 25.2      | 1.62  | 93.6       |
| Min. 3 Day Min           | 14.3      | 0     | 100        |
| Med. 3 Day Min           | 26.7      | 1.92  | 92.8       |
| Min. 7 Day Min           | 15.6      | 0     | 100        |
| Med. 7 Day Min           | 28.3      | 3.23  | 88.6       |
| Min. 30 Day Min          | 22.1      | 2.16  | 90.2       |
| Med. 30 Day Min          | 39.3      | 27.7  | 29.5       |
| Min. 90 Day Min          | 36.1      | 8.26  | 77.1       |
| Med. 90 Day Min          | 99.6      | 90    | 9.64       |
| 7Q10                     | 20.2      | 0     | 100        |
| Year of 90-Day Min. Flow | 1988      | 1988  | 0          |
| Drought Year Mean        | 121       | 380   | -214       |
| Mean Baseflow            | 175       | 201   | -14.9      |

**Table 5: Period High Flows**

|                 | USGS Gage | Model | Pct. Error |
|-----------------|-----------|-------|------------|
| Max. 1 Day Max  | 11200     | 11800 | -5.36      |
| Med. 1 Day Max  | 4510      | 5350  | -18.6      |
| Max. 3 Day Max  | 5880      | 6980  | -18.7      |
| Med. 3 Day Max  | 3110      | 3340  | -7.4       |
| Max. 7 Day Max  | 3520      | 4880  | -38.6      |
| Med. 7 Day Max  | 2040      | 2160  | -5.88      |
| Max. 30 Day Max | 2370      | 2330  | 1.69       |
| Med. 30 Day Max | 1120      | 986   | 12         |
| Max. 90 Day Max | 1360      | 1490  | -9.56      |
| Med. 90 Day Max | 778       | 716   | 7.97       |

Table 6: Non-Exceedance Flows

|                          | USGS Gage | Model | Pct. Error |
|--------------------------|-----------|-------|------------|
| 1% Non-Exceedance        | 23        | 0.7   | 96.9       |
| 5% Non-Exceedance        | 32        | 7.71  | 75.9       |
| 50% Non-Exceedance       | 188       | 245   | -30.3      |
| 95% Non-Exceedance       | 1250      | 1120  | 10.4       |
| 99% Non-Exceedance       | 2820      | 2850  | -1.06      |
| Sept. 10% Non-Exceedance | 2.43      | 2.36  | 2.88       |

Fig. 1: Hydrograph

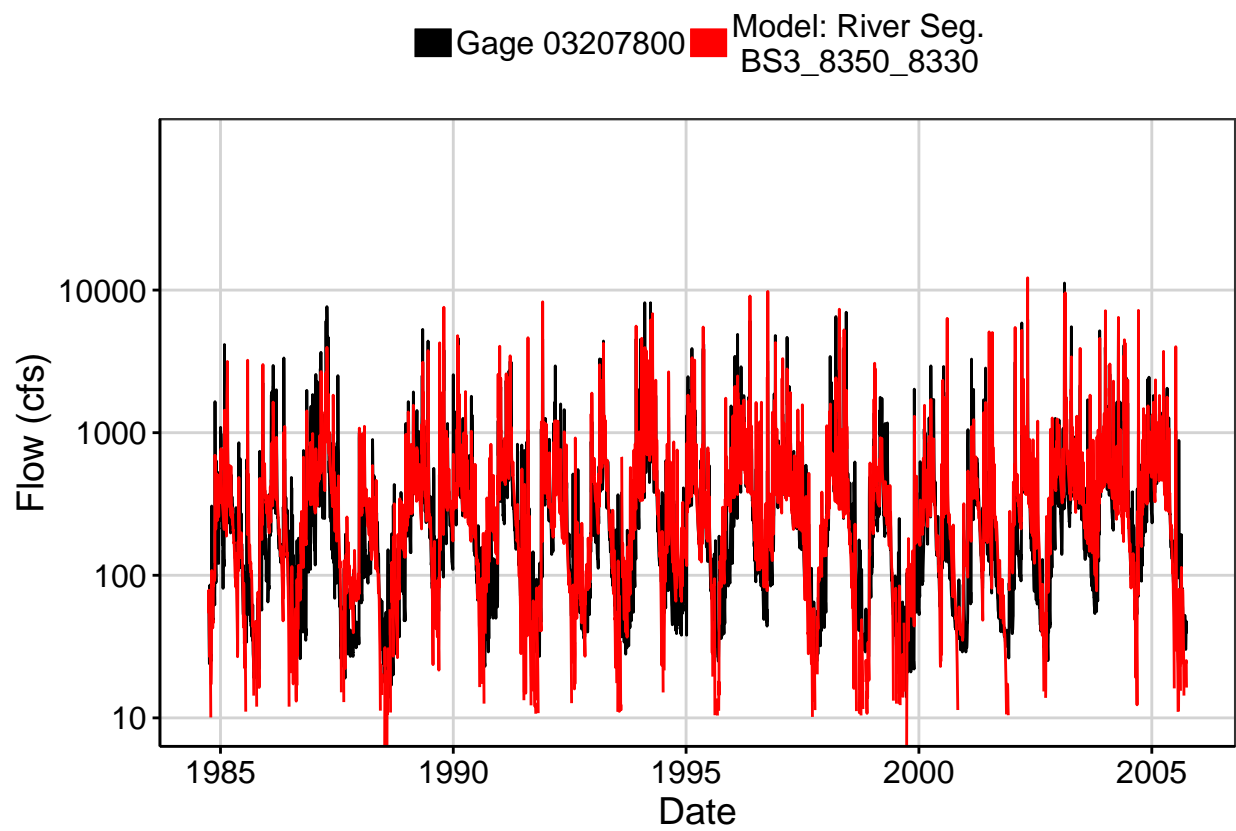


Fig. 2: Zoomed Hydrograph

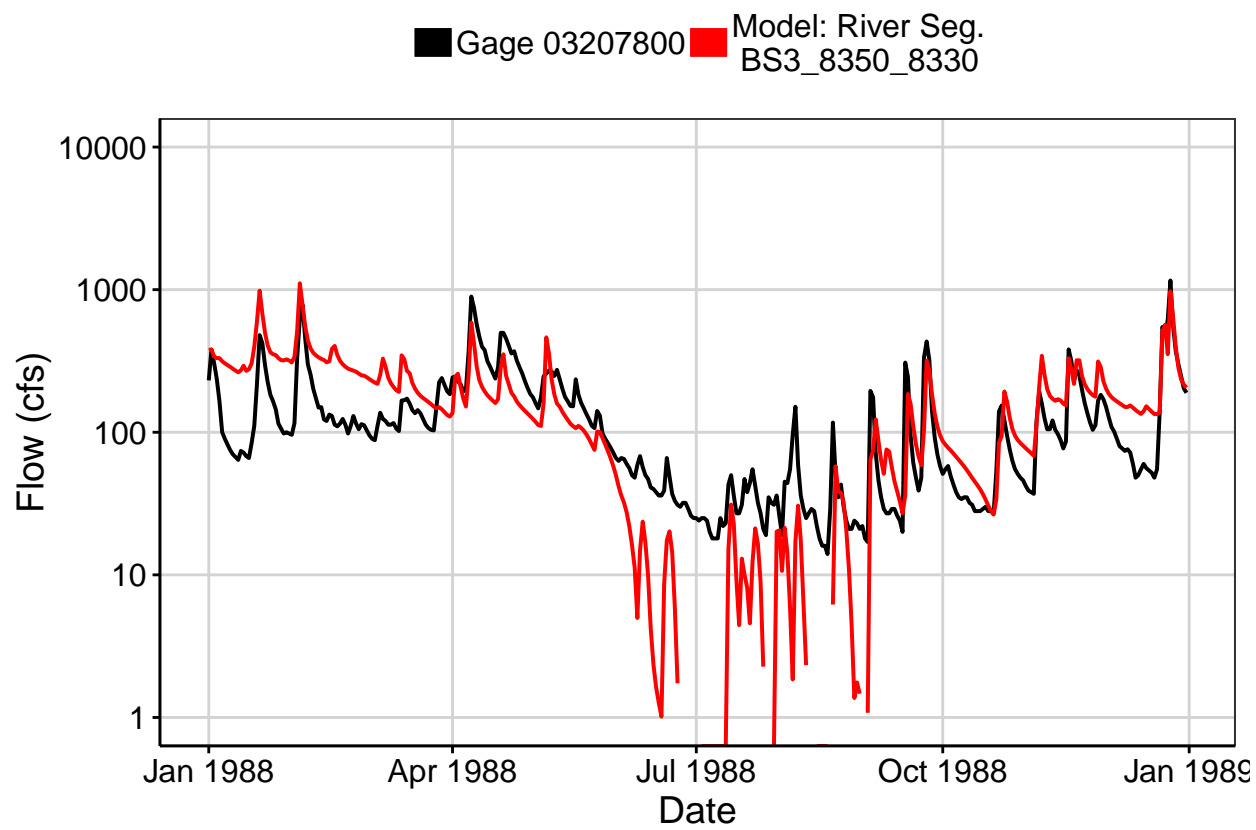


Fig. 3: Flow Exceedance

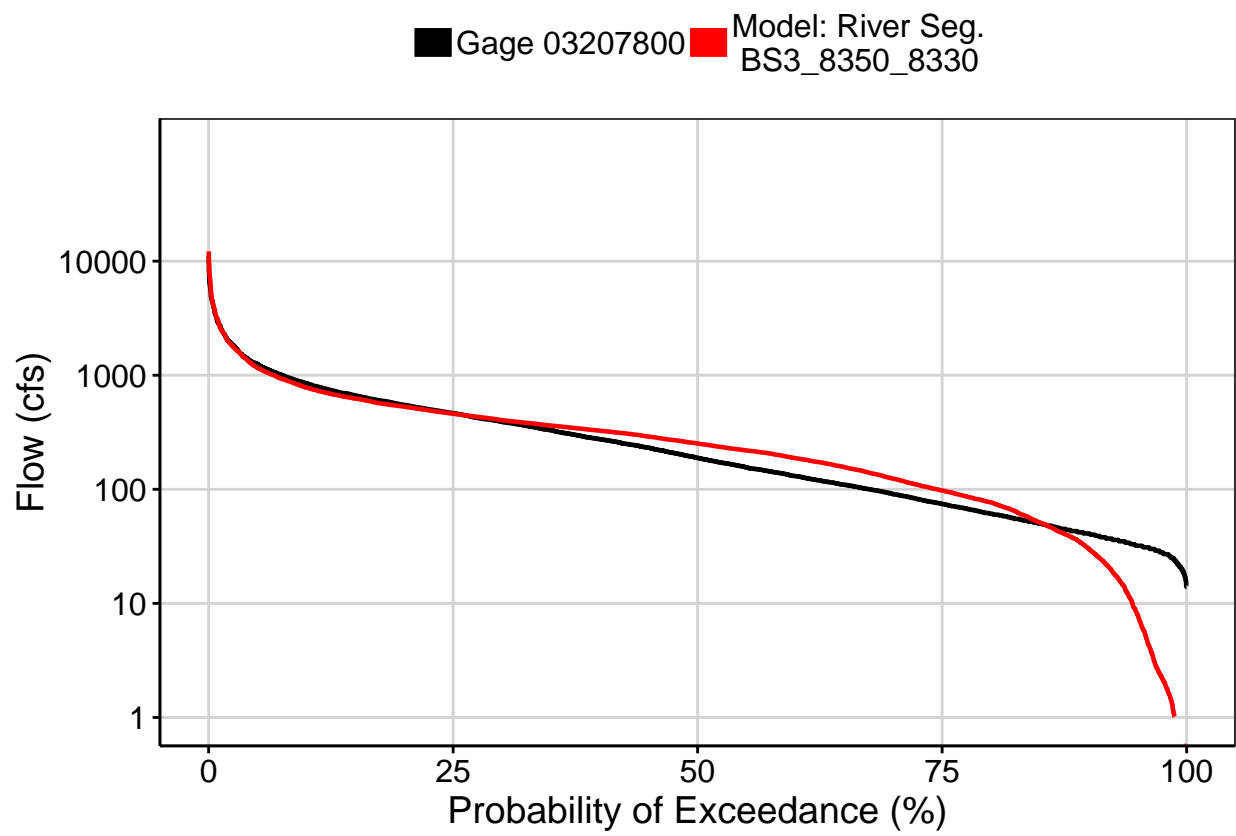


Fig. 4: Baseflow

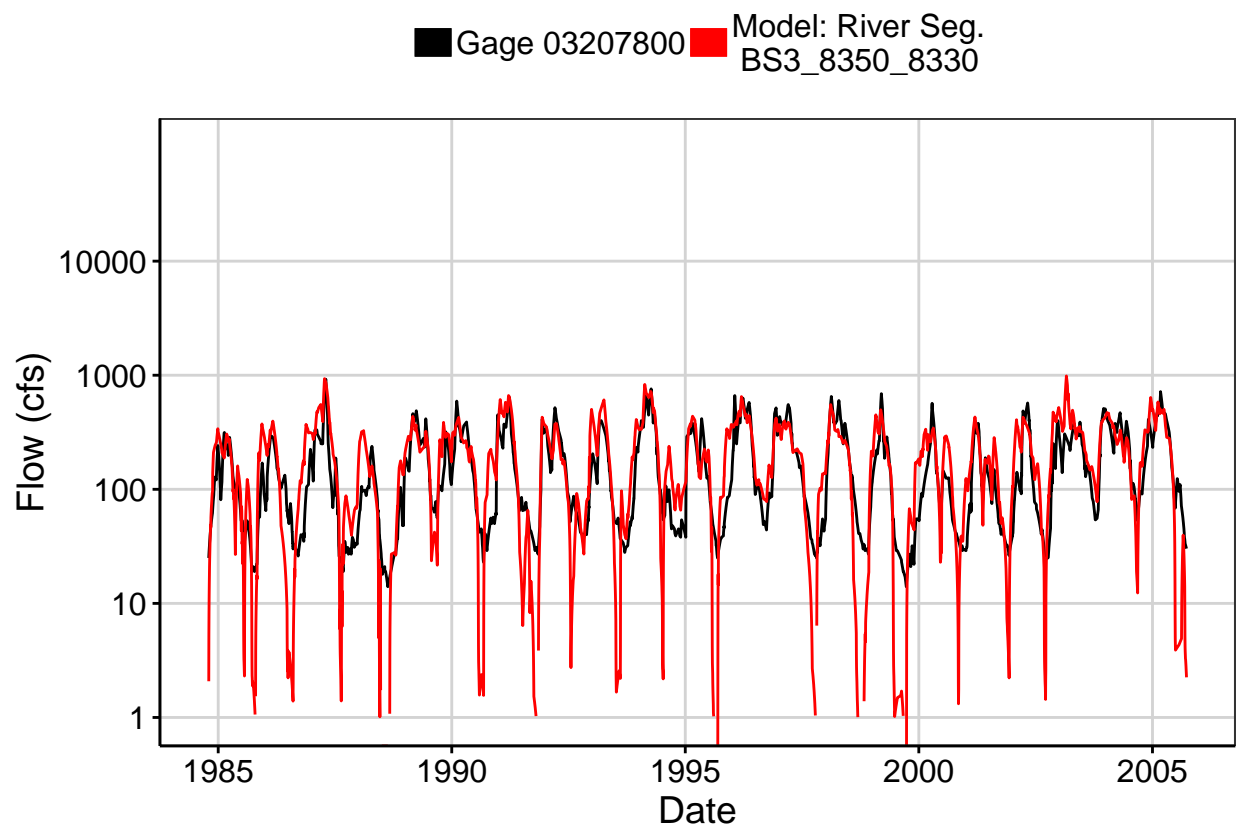


Fig. 5: Combined Baseflow

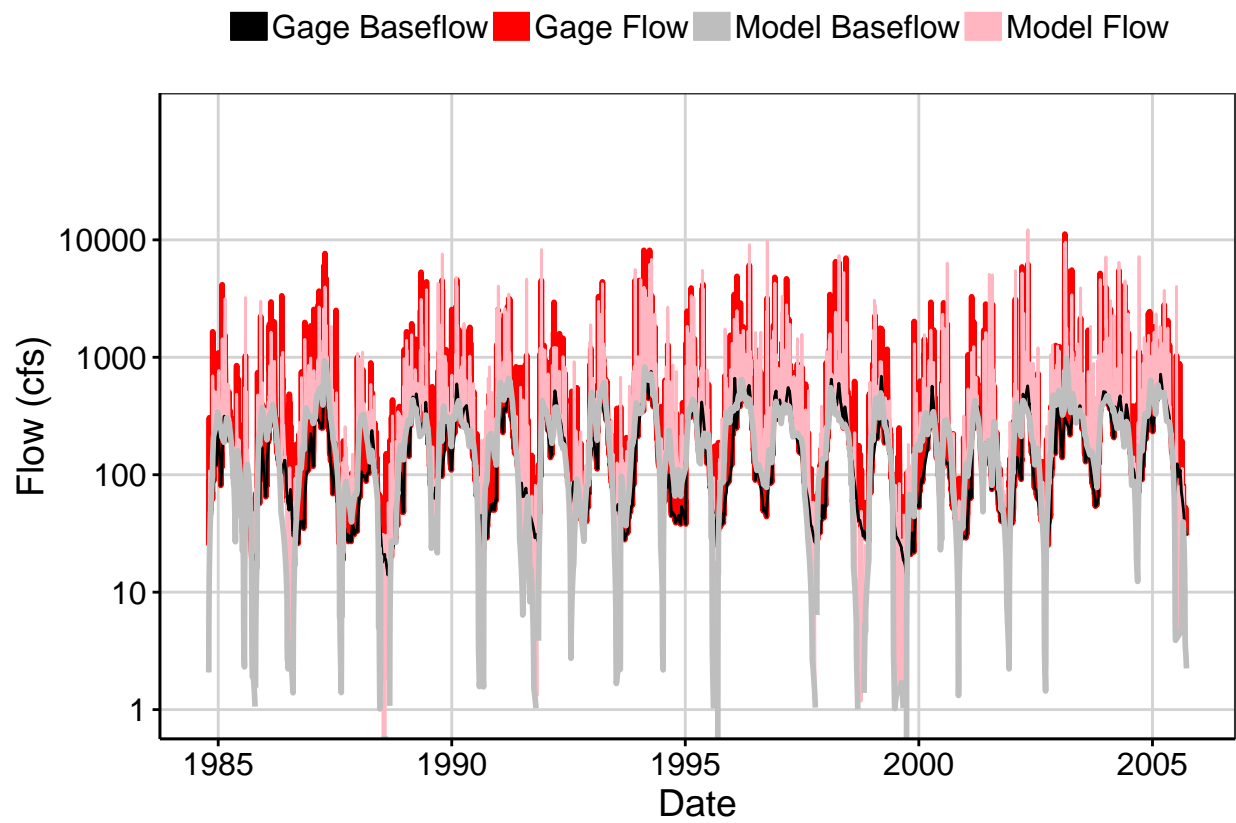




Fig. 6: Largest Error Segment

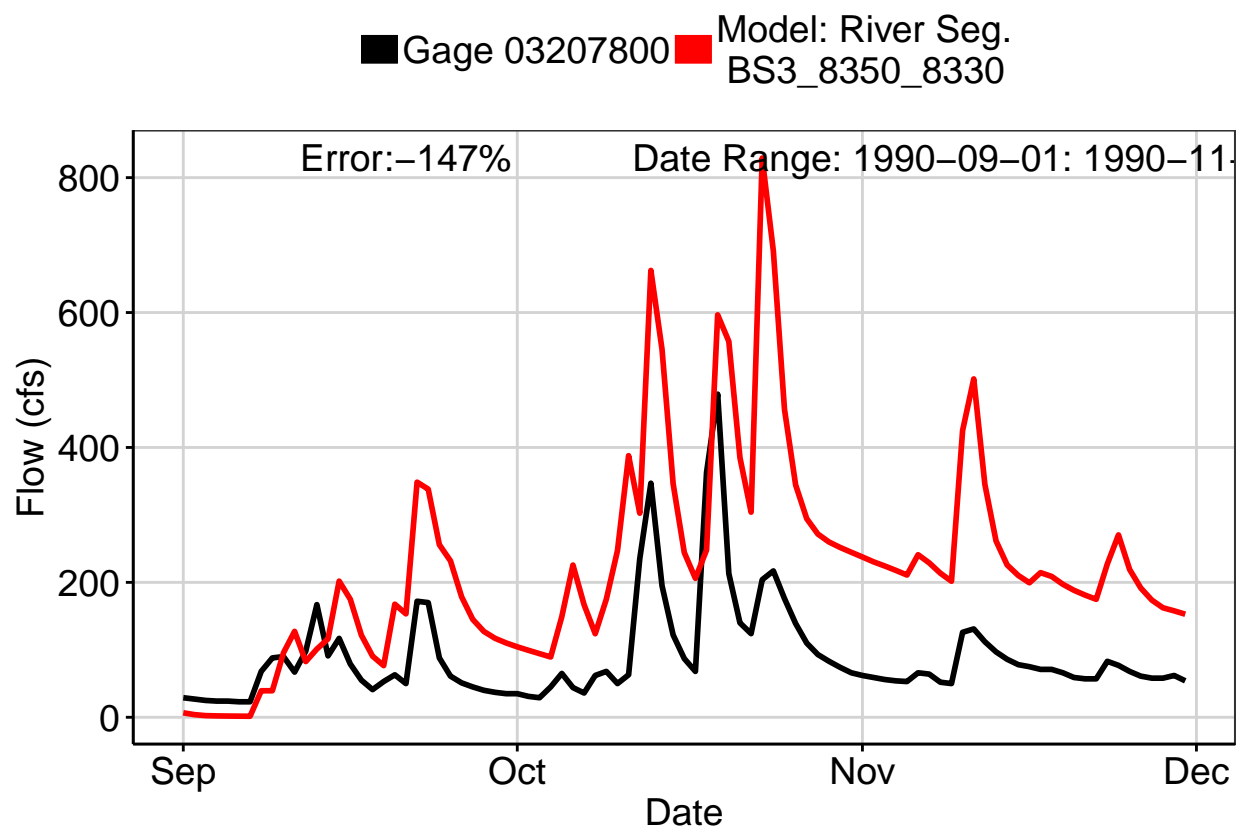


Fig. 7: Second Largest Error Segment

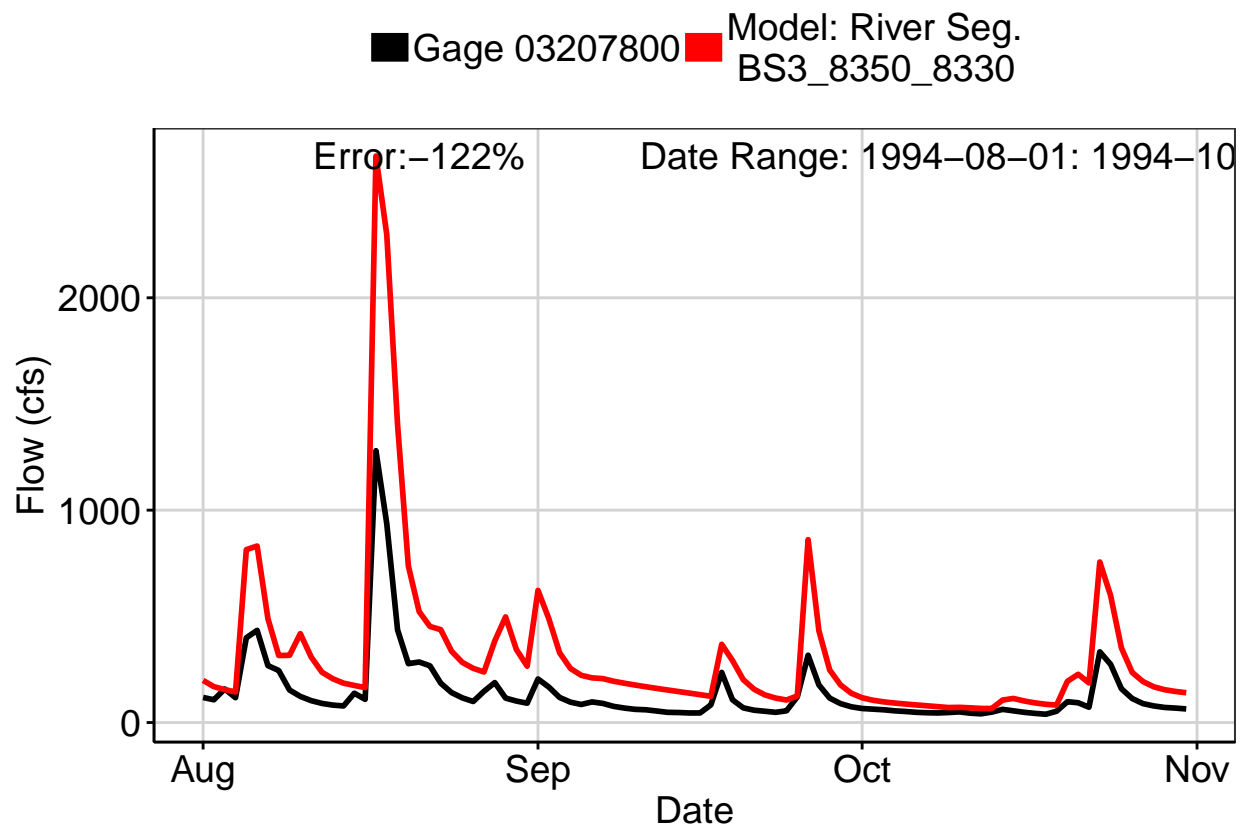


Fig. 8: Third Largest Error Segment

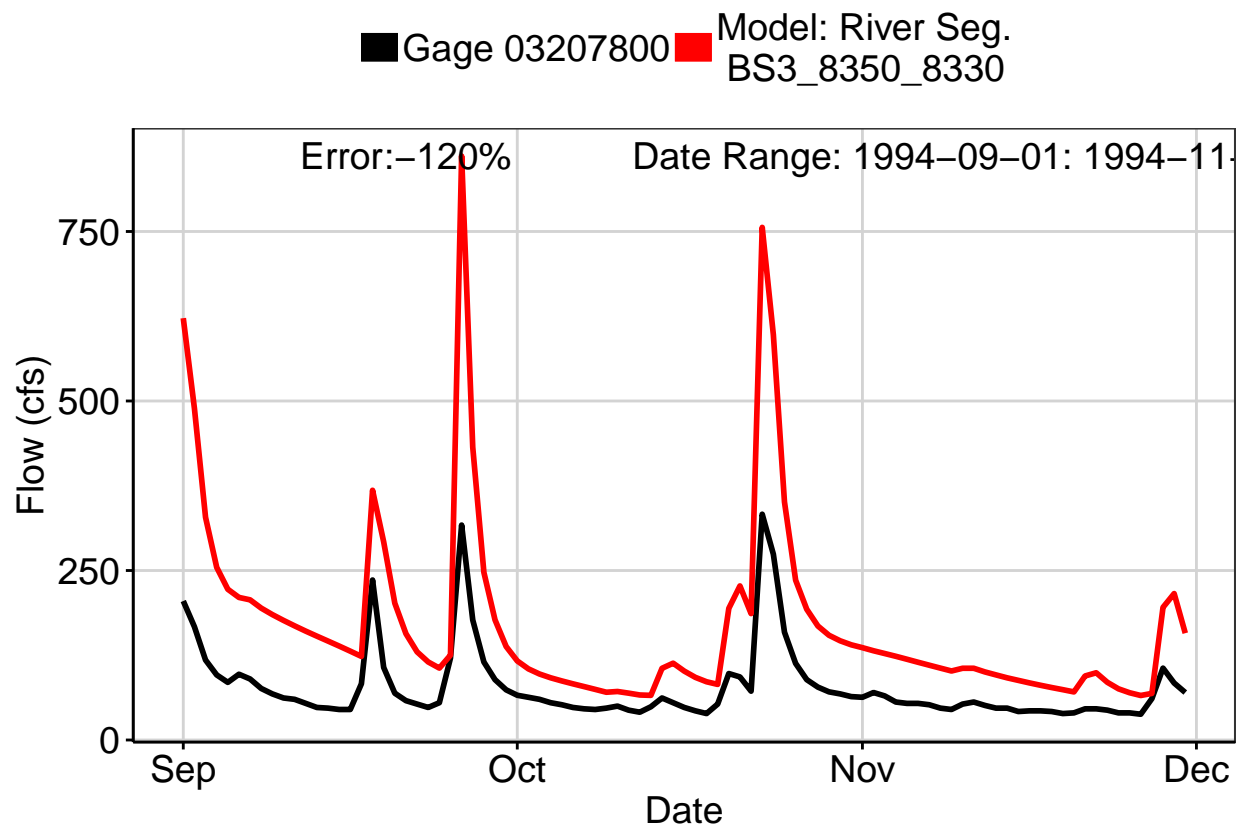


Fig. 9: Residuals Plot

