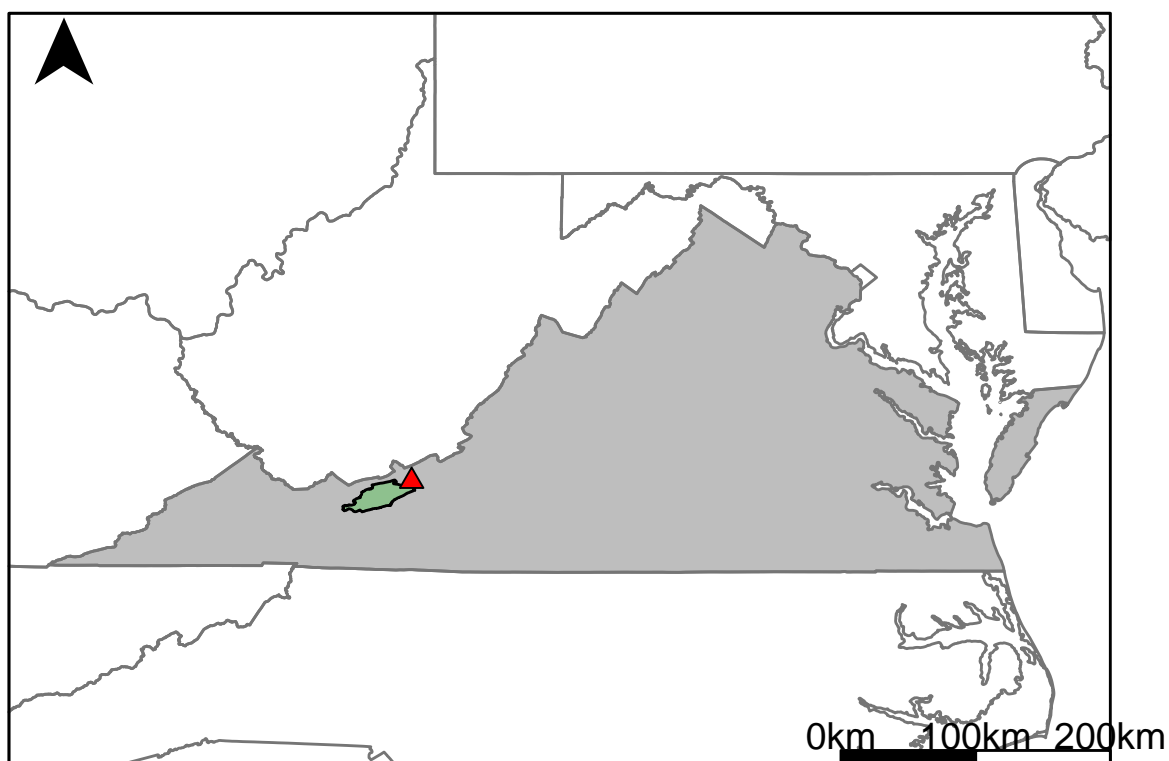


Appendix F.7: USGS Gage 03173000 vs. NR3_8290_8170



This river segment follows part of the flow of the Walker Creek, a tributary of the New River. The gage is located in Giles County, VA (Lat 37°16'05", Long 80°42'35") approximately 12 miles northwest of Radford, VA. Drainage area is 299 sq. miles. This gage started taking data in 1938 and is still taking data. There are no known anthropogenic alterations in this area that would affect the flow conditions. The average daily discharge error between the model and gage data for the 20 year timespan was -2.48%, with 45.8% of its rolling three month time spans above 20% error.

Table 1: Monthly Low Flows

	USGS Gage	Model	Pct. Error
Jan. Low Flow	44	32	27.3
Feb. Low Flow	53	81	-52.8
Mar. Low Flow	87	126	-44.8
Apr. Low Flow	115	178	-54.8
May Low Flow	177	258	-45.8
Jun. Low Flow	261	304	-16.5
Jul. Low Flow	213	210	1.41
Aug. Low Flow	132	123	6.82
Sep. Low Flow	91	74.3	18.4
Oct. Low Flow	58	33.5	42.2
Nov. Low Flow	51	39.8	22
Dec. Low Flow	43	34.3	20.2

Table 2: Monthly Average Flows

	USGS Gage	Model	Pct. Error
Overall Mean Flow	323	331	-2.48
Jan. Mean Flow	440	452	-2.73
Feb. Mean Flow	557	604	-8.44
Mar. Mean Flow	641	615	4.06
Apr. Mean Flow	528	468	11.4
May Mean Flow	450	383	14.9
Jun. Mean Flow	276	284	-2.9
Jul. Mean Flow	132	161	-22
Aug. Mean Flow	115	142	-23.5
Sep. Mean Flow	137	174	-27
Oct. Mean Flow	125	174	-39.2
Nov. Mean Flow	198	223	-12.6
Dec. Mean Flow	296	314	-6.08

Table 3: Monthly High Flows

	USGS Gage	Model	Pct. Error
Jan. High Flow	94	125	-33
Feb. High Flow	352	350	0.57
Mar. High Flow	1070	537	49.8
Apr. High Flow	1430	1430	0
May High Flow	1350	1210	10.4
Jun. High Flow	2100	1460	30.5
Jul. High Flow	1150	999	13.1
Aug. High Flow	1310	906	30.8
Sep. High Flow	426	638	-49.8
Oct. High Flow	175	228	-30.3
Nov. High Flow	143	166	-16.1
Dec. High Flow	126	167	-32.5

Table 4: Period Low Flows

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	25	1.47	94.1
Med. 1 Day Min	40	10	75
Min. 3 Day Min	27.1	1.61	94.1
Med. 3 Day Min	40.7	10.5	74.2
Min. 7 Day Min	28.5	2.01	92.9
Med. 7 Day Min	41.3	11.9	71.2
Min. 30 Day Min	33.5	6.39	80.9
Med. 30 Day Min	47.7	27.9	41.5
Min. 90 Day Min	39.3	21.6	45
Med. 90 Day Min	71.1	68.4	3.8
7Q10	31.4	4.56	85.5
Year of 90-Day Min. Flow	1988	1988	0
Drought Year Mean	135	331	-145
Mean Baseflow	156	182	-16.7

Table 5: Period High Flows

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	14100	7340	47.9
Med. 1 Day Max	4560	3740	18
Max. 3 Day Max	6450	4610	28.5
Med. 3 Day Max	3130	2450	21.7
Max. 7 Day Max	3960	2630	33.6
Med. 7 Day Max	1920	1740	9.38
Max. 30 Day Max	1890	1610	14.8
Med. 30 Day Max	903	821	9.08
Max. 90 Day Max	1210	1110	8.26
Med. 90 Day Max	653	606	7.2

Table 6: Non-Exceedance Flows

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	34	8.87	73.9
5% Non-Exceedance	42	21.3	49.3
50% Non-Exceedance	154	204	-32.5
95% Non-Exceedance	1070	1030	3.74
99% Non-Exceedance	2430	2300	5.35
Sept. 10% Non-Exceedance	18	16.8	6.67

Fig. 1: Hydrograph

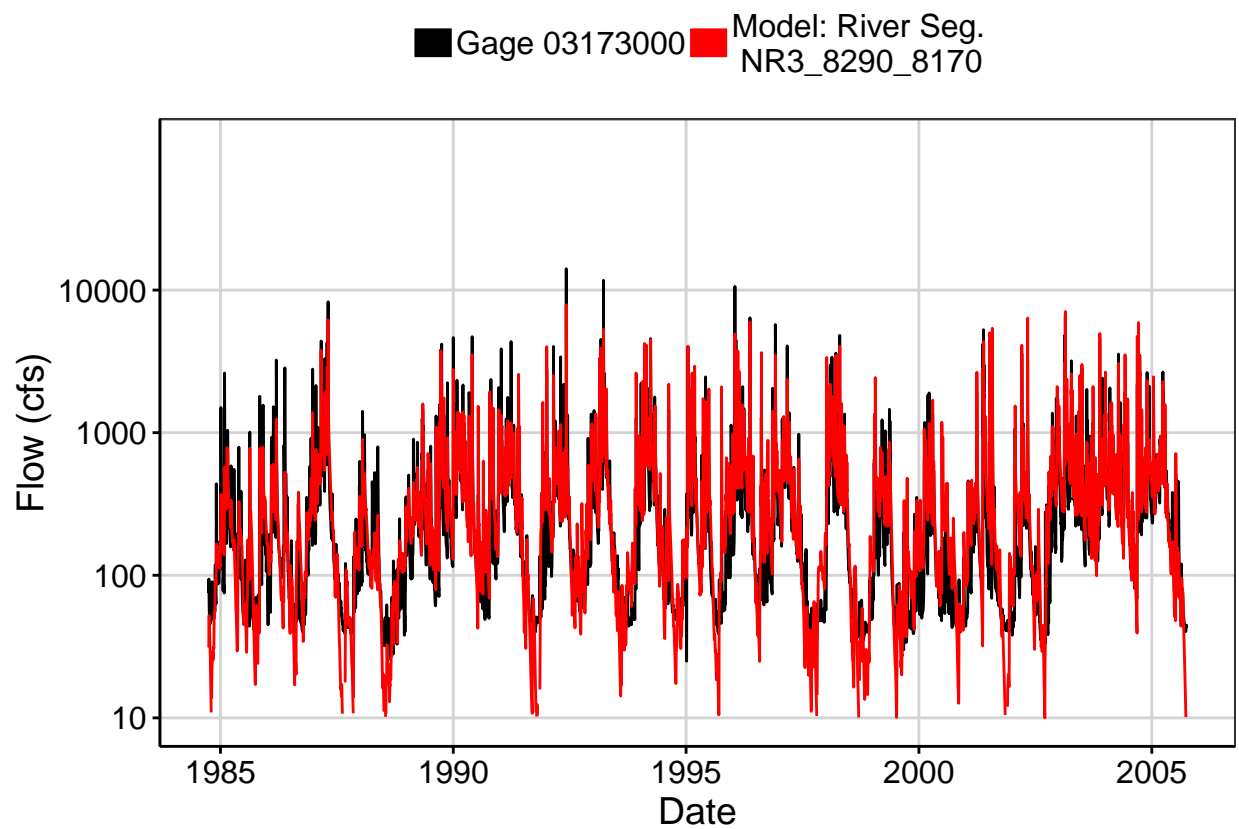


Fig. 2: Zoomed Hydrograph

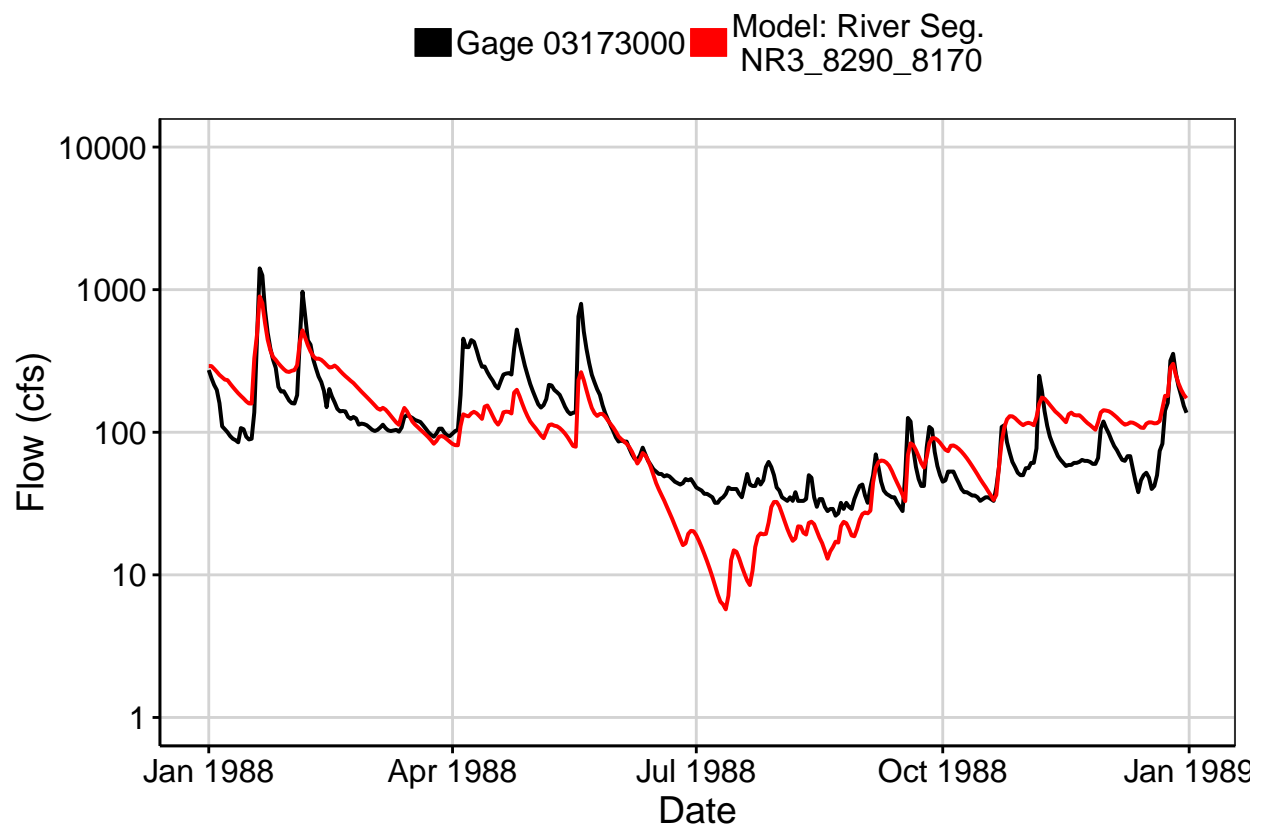


Fig. 3: Flow Exceedance

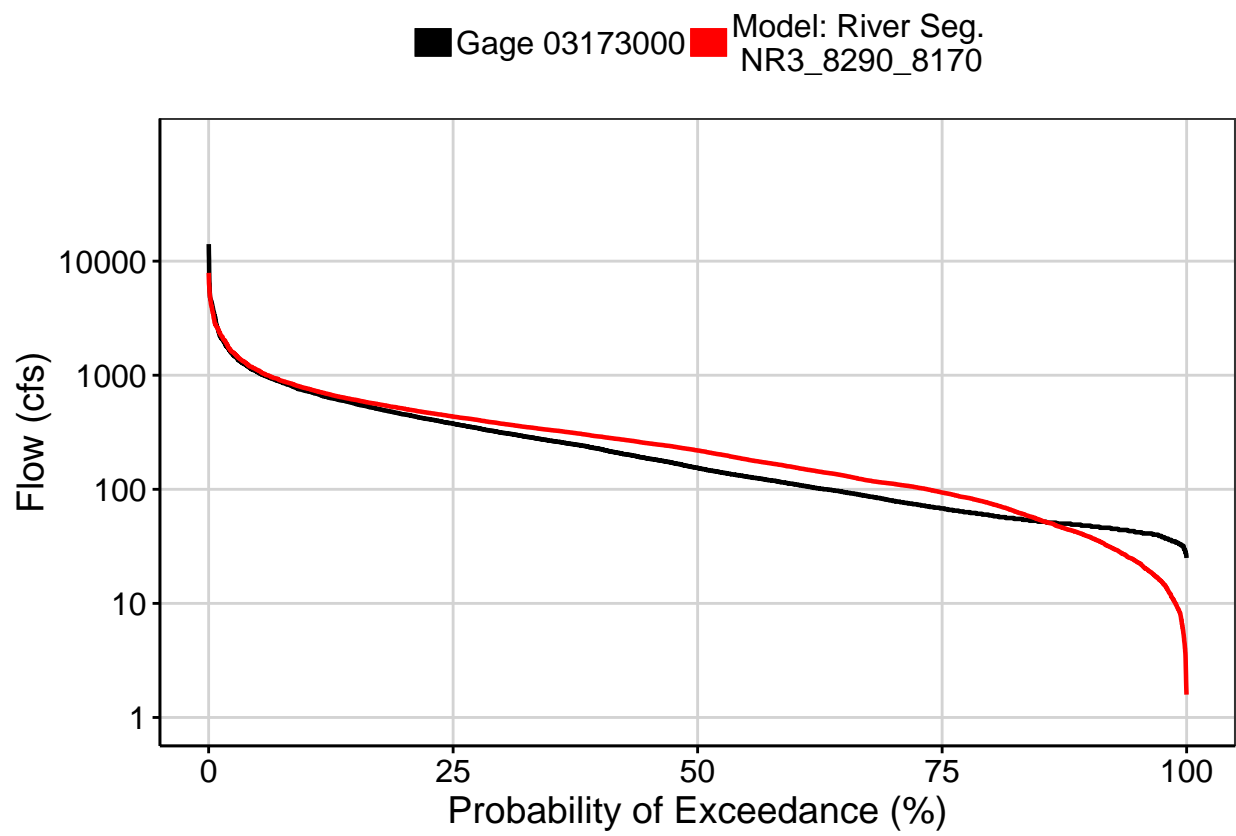


Fig. 4: Baseflow

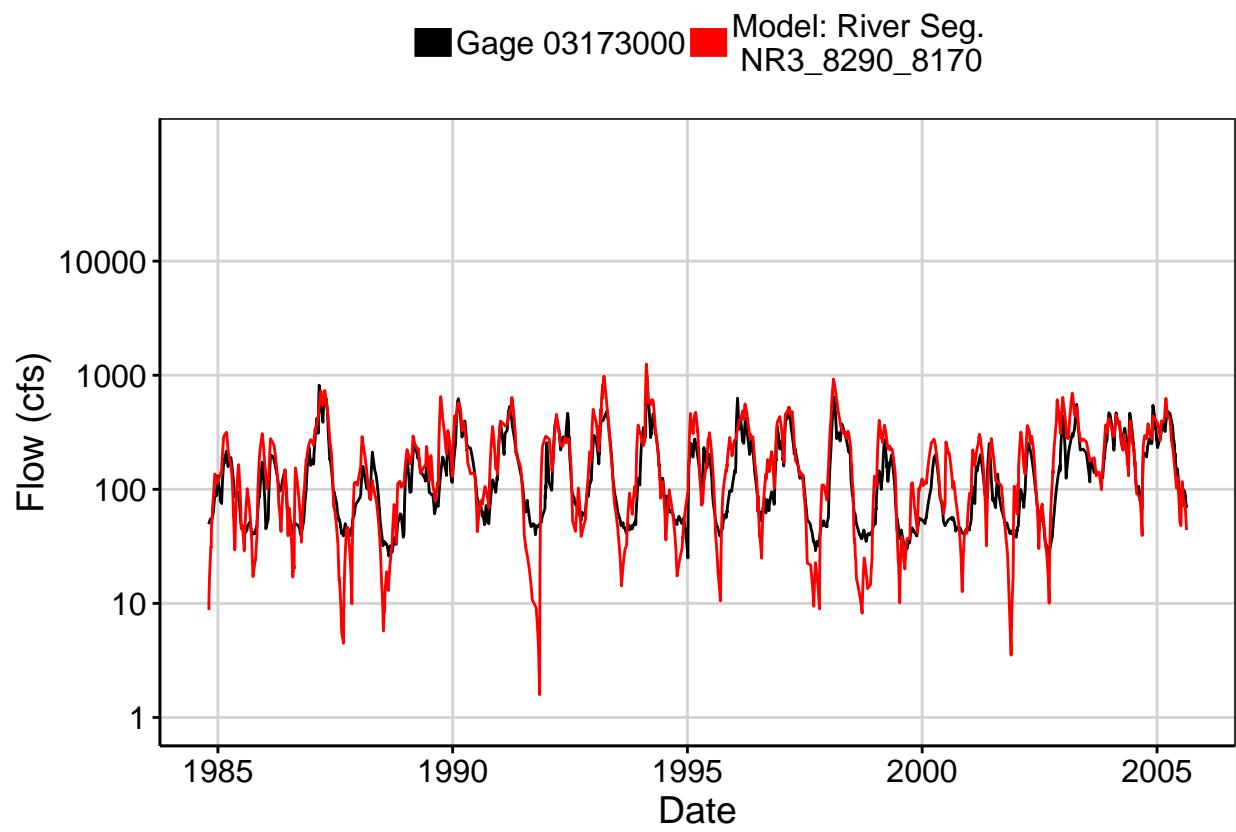


Fig. 5: Combined Baseflow

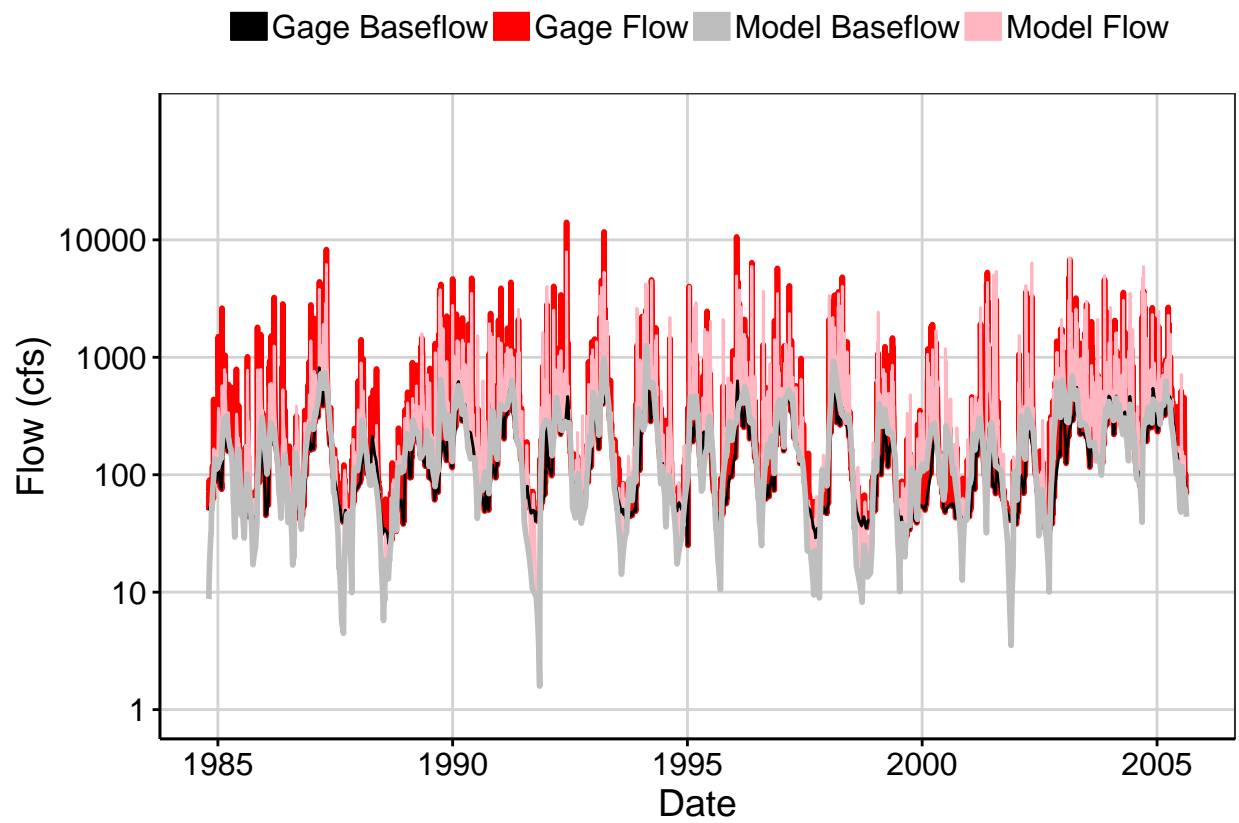


Fig. 6: Largest Error Segment

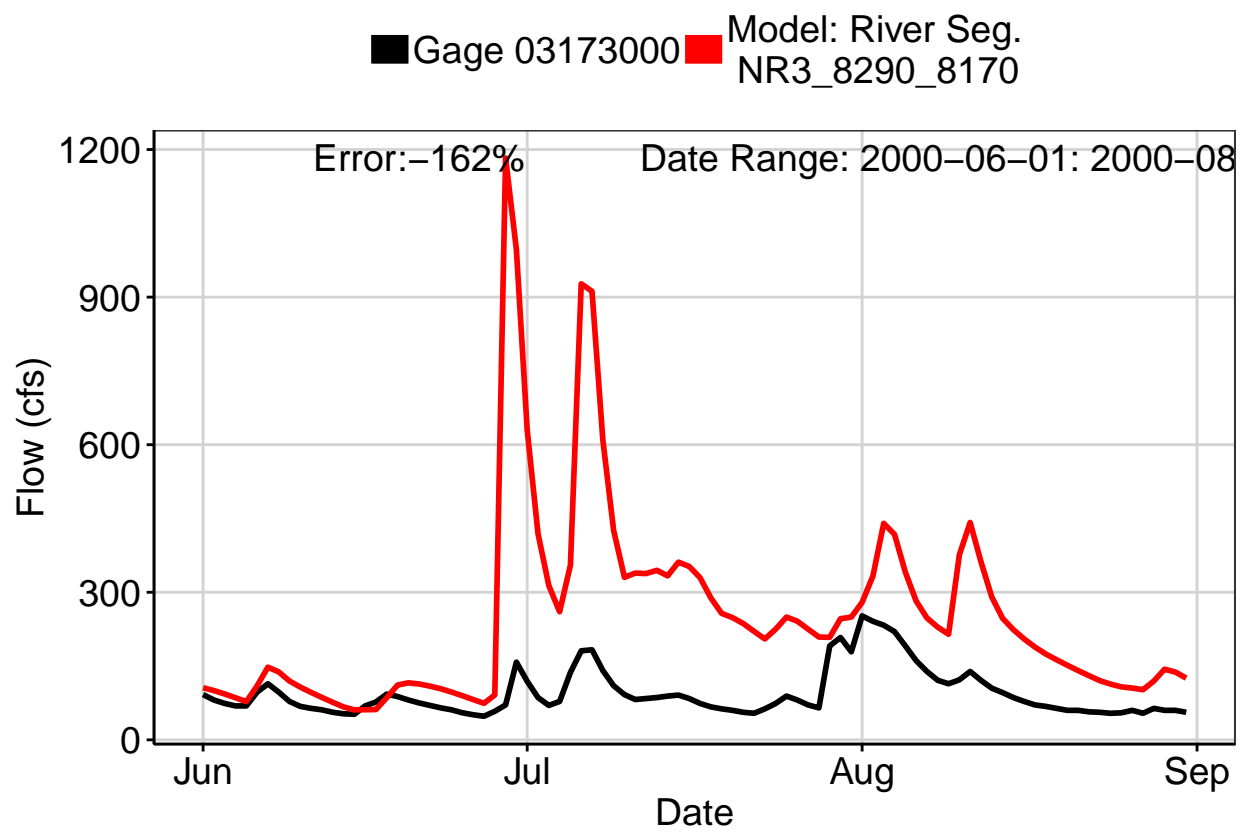


Fig. 7: Second Largest Error Segment

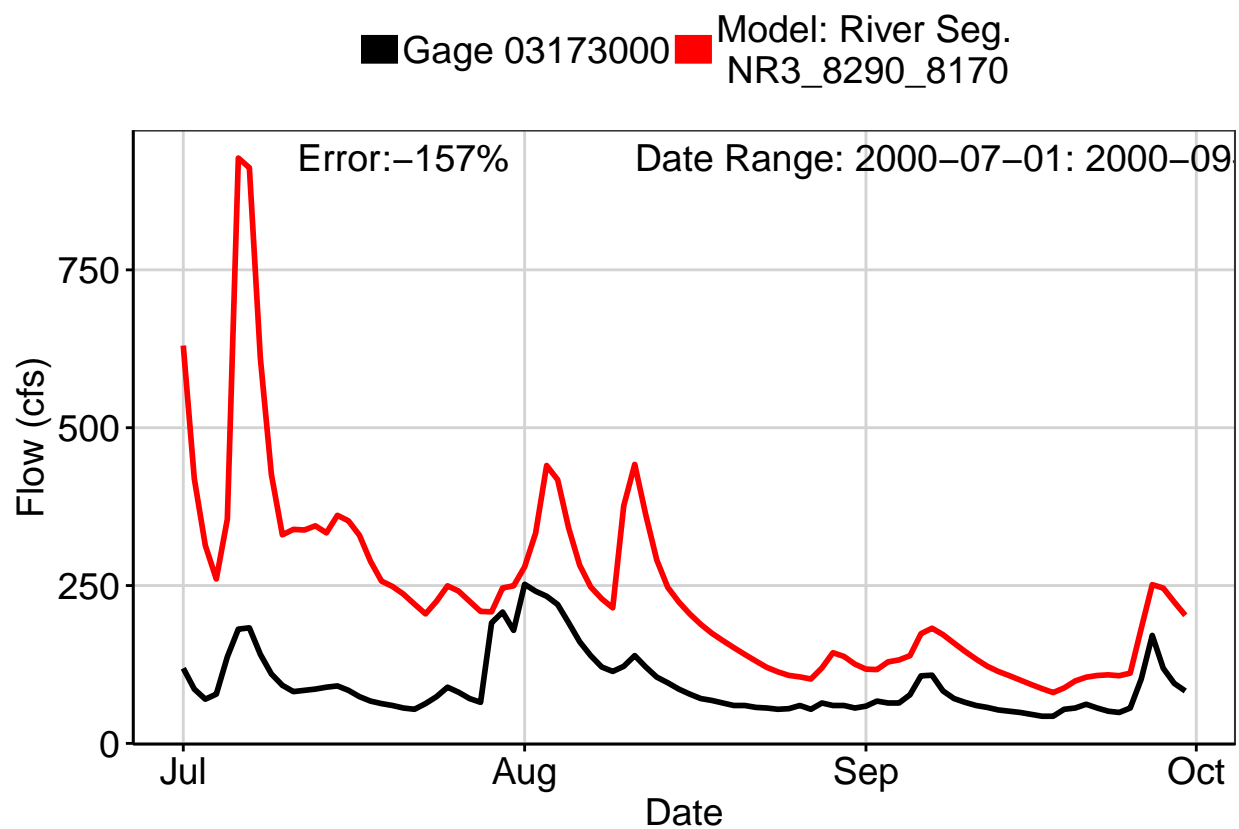


Fig. 8: Third Largest Error Segment

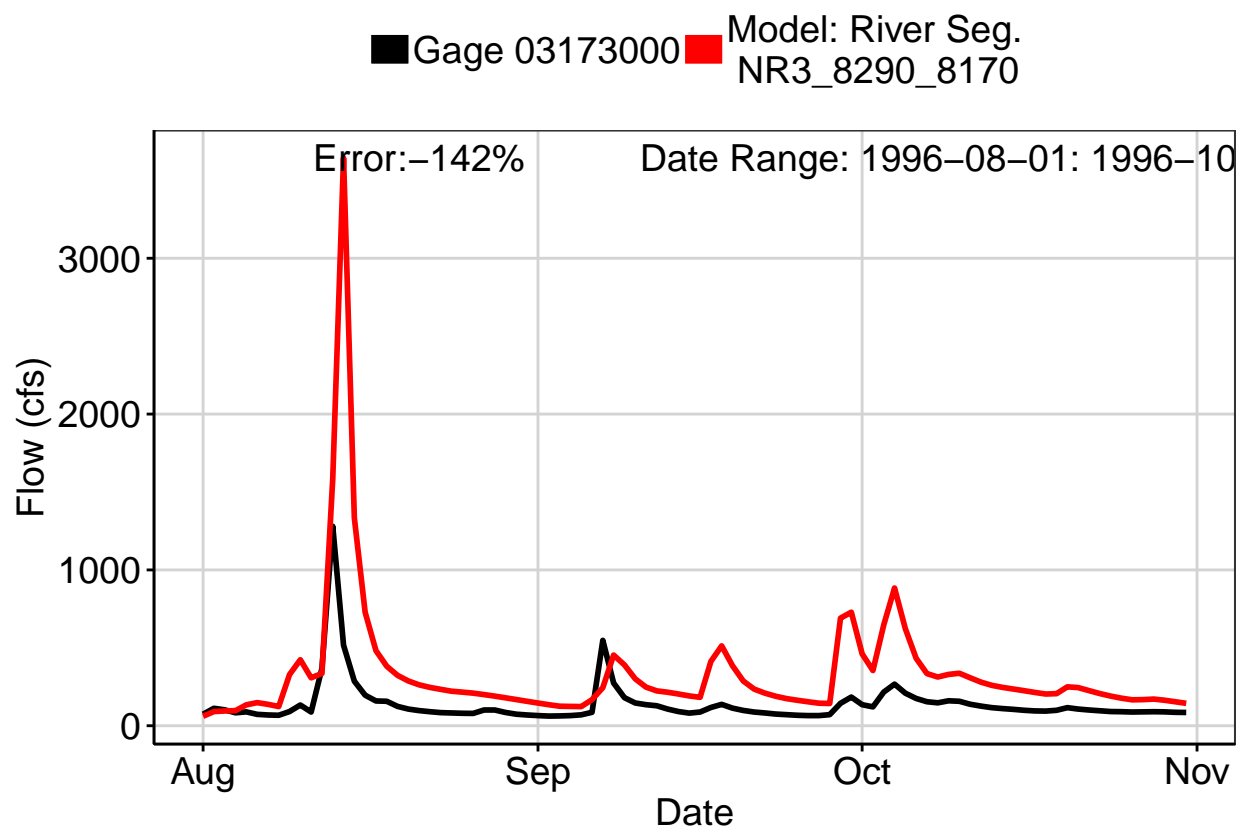


Fig. 9: Residuals Plot

