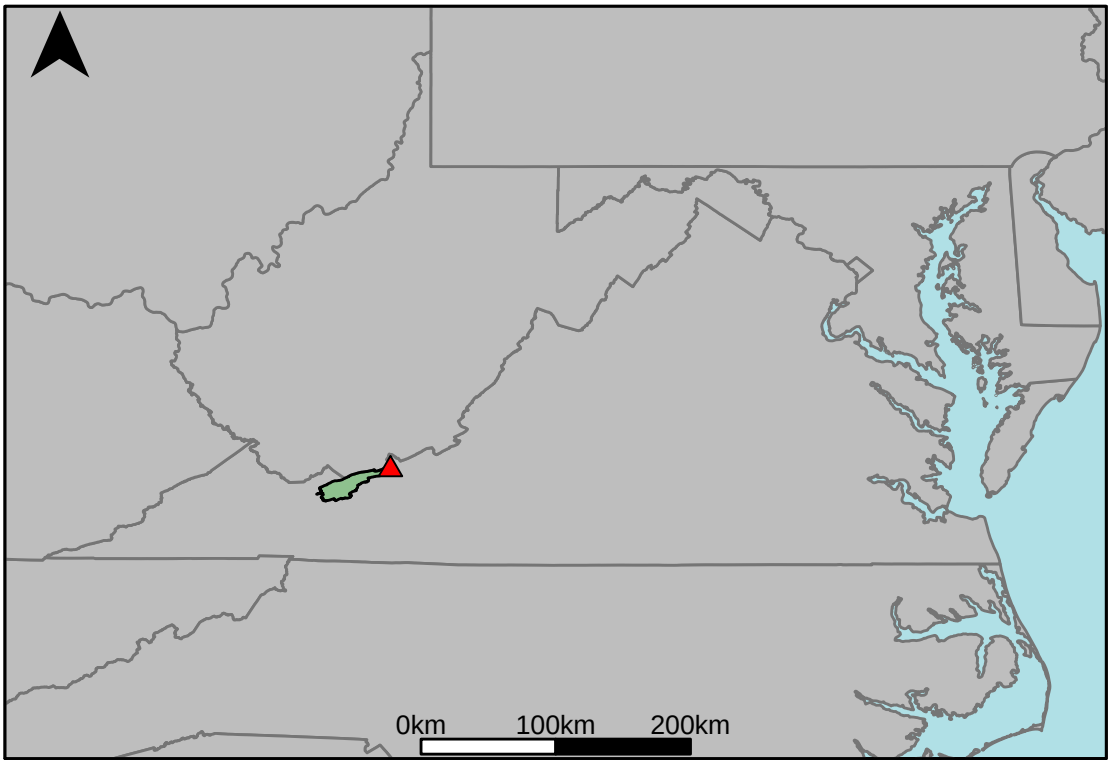
Appendix F.8: USGS Gage 03175500 vs. NR2_8210_8180



This river segment follows part of the flow of the Wolf Creek, a tributary of the New River. The gage is located in Giles County, VA (Lat 3718'20", Long 8051'00") approximately 20 miles northwest of Radford, VA. Drainage area is 223 sq. miles. This gage started taking data in 1908 and is still taking data but there is a gap from 1995-10-01 to 1996-09-30. 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 5.63%, with 46.2% of its rolling three month time spans above 20% error.

Table 1: Monthly Low Flows

	USGS Gage	Model	Pct. Error
Jan. Low Flow	32	27	-15.6
Feb. Low Flow	45	71.1	58
Mar. Low Flow	88	96.6	9.77
Apr. Low Flow	118	147	24.6
May Low Flow	176	193	9.66
Jun. Low Flow	244	245	0.41
Jul. Low Flow	192	165	-14.1
Aug. Low Flow	116	87.1	-24.9
Sep. Low Flow	76.4	45.5	-40.4
Oct. Low Flow	52.7	19.6	-62.8
Nov. Low Flow	38	20.6	-45.8
Dec. Low Flow	33.5	18.8	-43.9

Table 2: Monthly Average Flows

	USGS Gage	Model	Pct. Error
Overall Mean Flow	302	285	-5.63
Jan. Mean Flow	409	402	-1.71
Feb. Mean Flow	545	527	-3.3
Mar. Mean Flow	594	540	-9.09
Apr. Mean Flow	501	393	-21.6
May Mean Flow	383	305	-20.4
Jun. Mean Flow	237	235	-0.84
Jul. Mean Flow	132	137	3.79
Aug. Mean Flow	102	112	9.8
Sep. Mean Flow	121	145	19.8
Oct. Mean Flow	113	147	30.1
Nov. Mean Flow	199	199	0
Dec. Mean Flow	300	299	-0.33

Table 3: Monthly High Flows

	USGS Gage	Model	Pct. Error
Jan. High Flow	106	131	23.6
Feb. High Flow	296	344	16.2
Mar. High Flow	1200	622	-48.2
Apr. High Flow	1530	1430	-6.54
May High Flow	1380	1220	-11.6
Jun. High Flow	1650	1500	-9.09
Jul. High Flow	871	939	7.81
Aug. High Flow	958	759	-20.8
Sep. High Flow	438	518	18.3
Oct. High Flow	312	181	-42
Nov. High Flow	154	177	14.9
Dec. High Flow	155	141	-9.03

Table 4: Period Low Flows

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	10	0	-100
Med. 1 Day Min	28	2.59	-90.8
Min. 3 Day Min	11.3	0.01	-99.9
Med. 3 Day Min	29	3.71	-87.2
Min. 7 Day Min	16	0.44	-97.2
Med. 7 Day Min	31.5	4.85	-84.6
Min. 30 Day Min	23.1	3.52	-84.8
Med. 30 Day Min	38.2	18.1	-52.6
Min. 90 Day Min	33.2	13.9	-58.1
Med. 90 Day Min	64	60.1	-6.09
7Q10	20.5	0.91	-95.5
Year of 90-Day Min. Flow	1988	1988	0
Drought Year Mean	126	105	-16.7
Mean Baseflow	146	145	-0.68

Table 5: Period High Flows

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	7910	6570	-16.9
Med. 1 Day Max	3810	3580	-6.04
Max. 3 Day Max	5630	4120	-26.8
Med. 3 Day Max	2590	2230	-13.9
Max. 7 Day Max	3080	2360	-23.4
Med. 7 Day Max	1630	1580	-3.07
Max. 30 Day Max	1770	1470	-16.9
Med. 30 Day Max	850	713	-16.1
Max. 90 Day Max	1110	982	-11.5
Med. 90 Day Max	632	555	-12.2

Table 6: Non-Exceedance Flows

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	24	2.73	-88.6
5% Non-Exceedance	33	11.1	-66.4
50% Non-Exceedance	159	167	5.03
95% Non-Exceedance	969	908	-6.3
99% Non-Exceedance	1930	2030	5.18
Sept. 10% Non-Exceedance	5.9	27.5	366

Fig. 1: Hydrograph

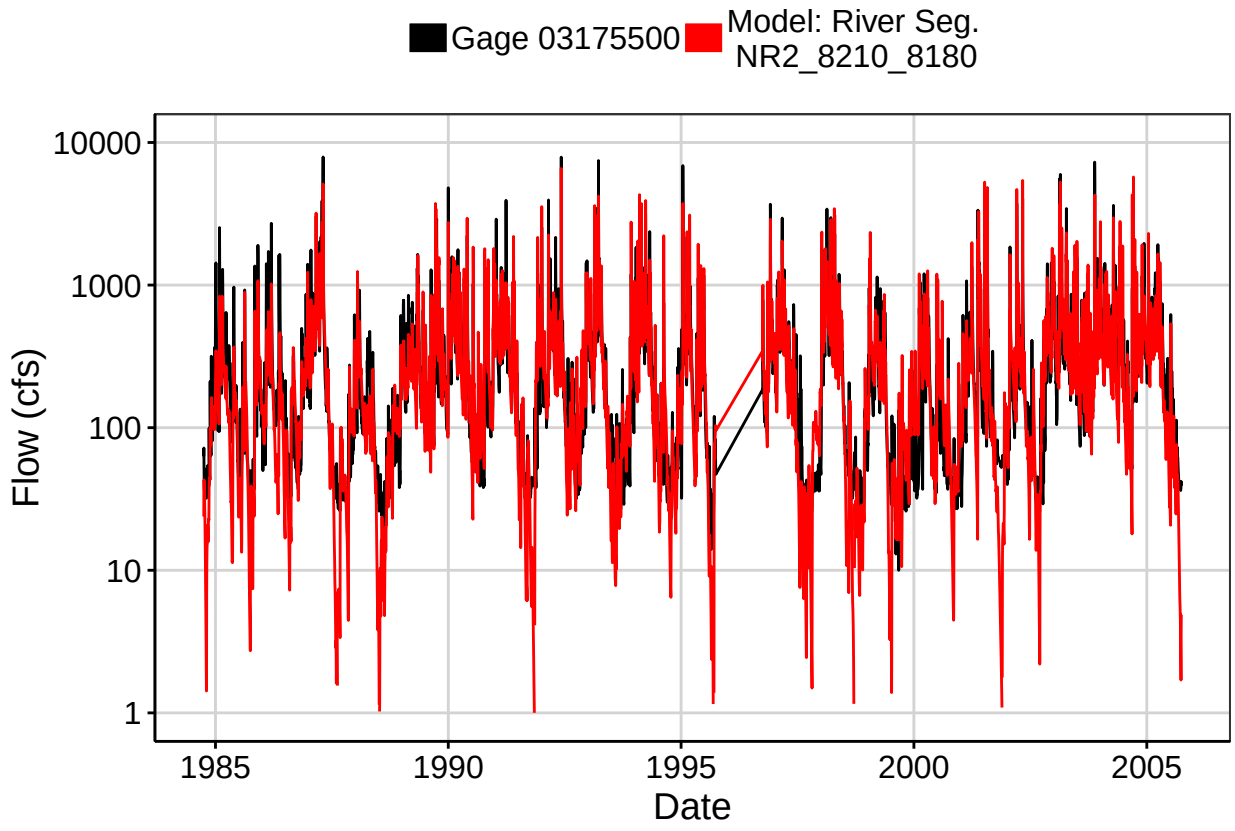


Fig. 2: Zoomed Hydrograph

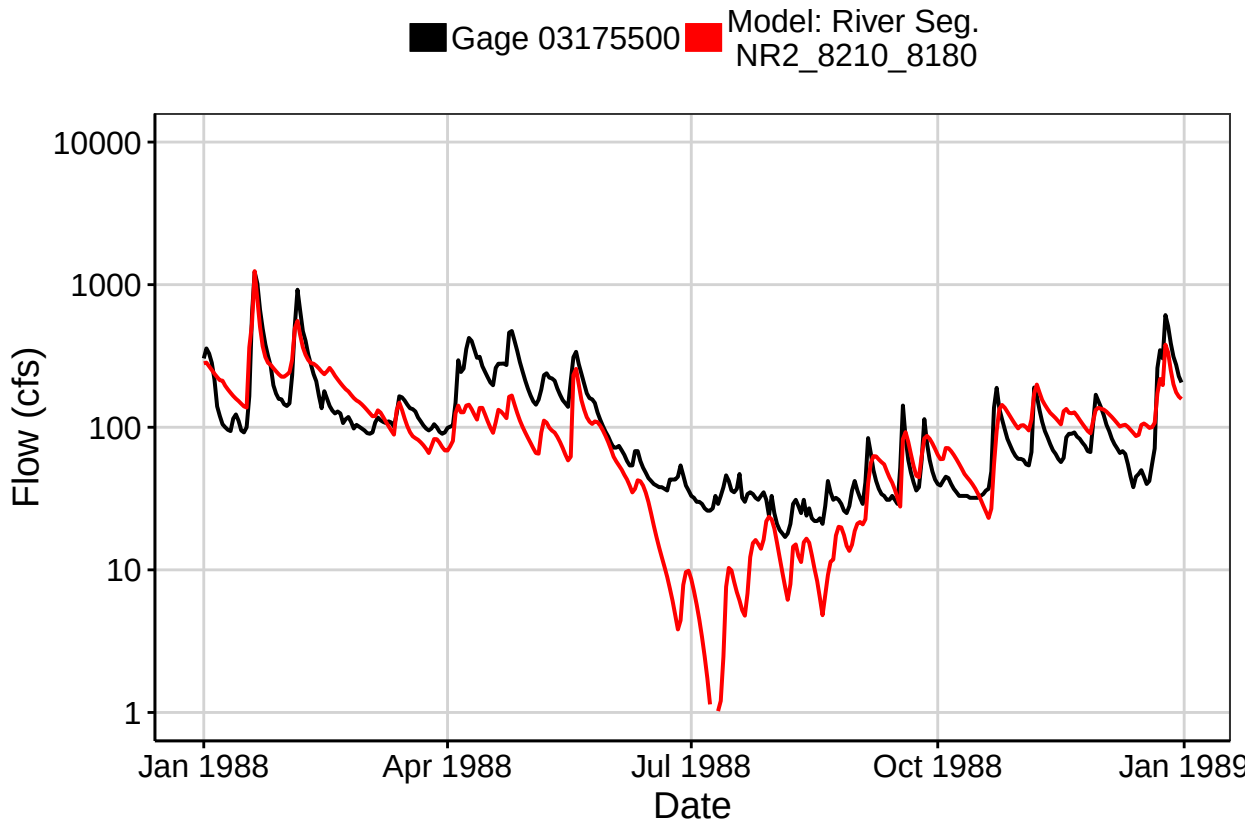


Fig. 3: Flow Exceedance

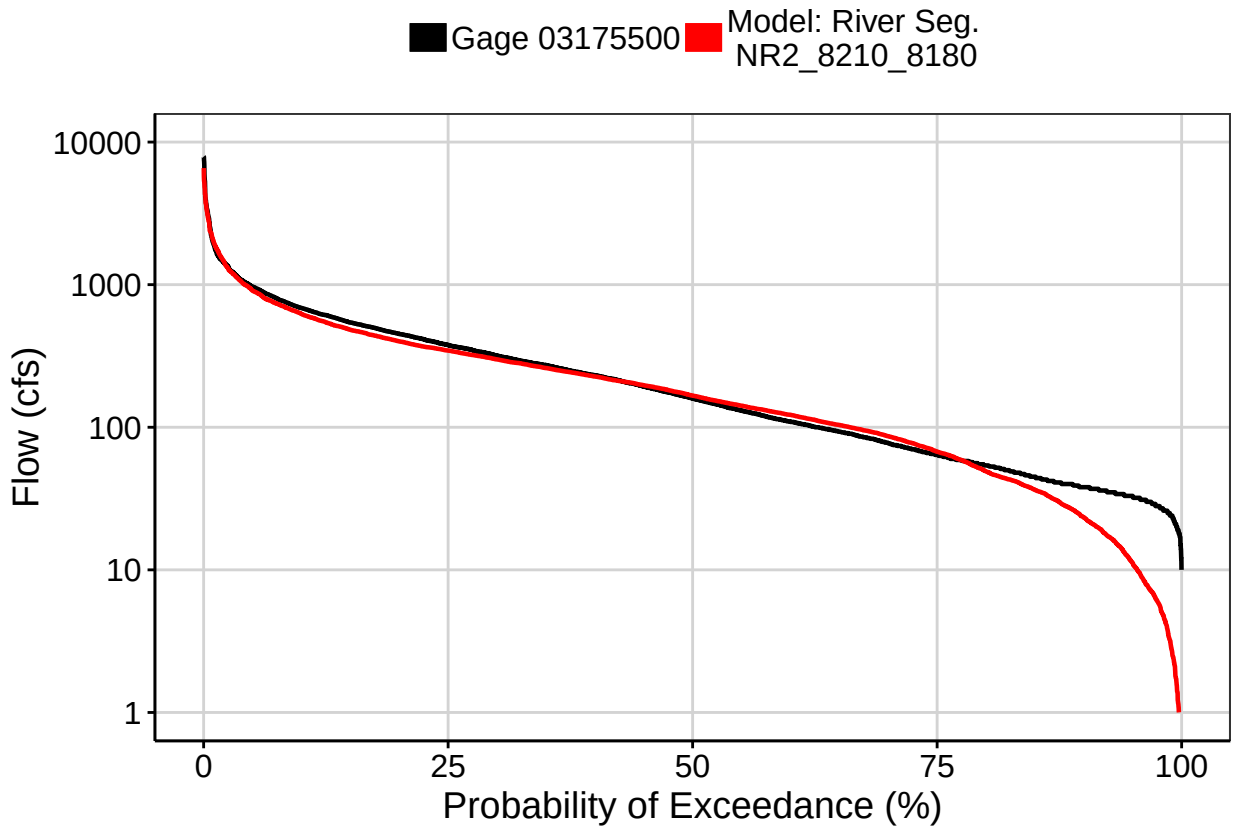


Fig. 4: Baseflow

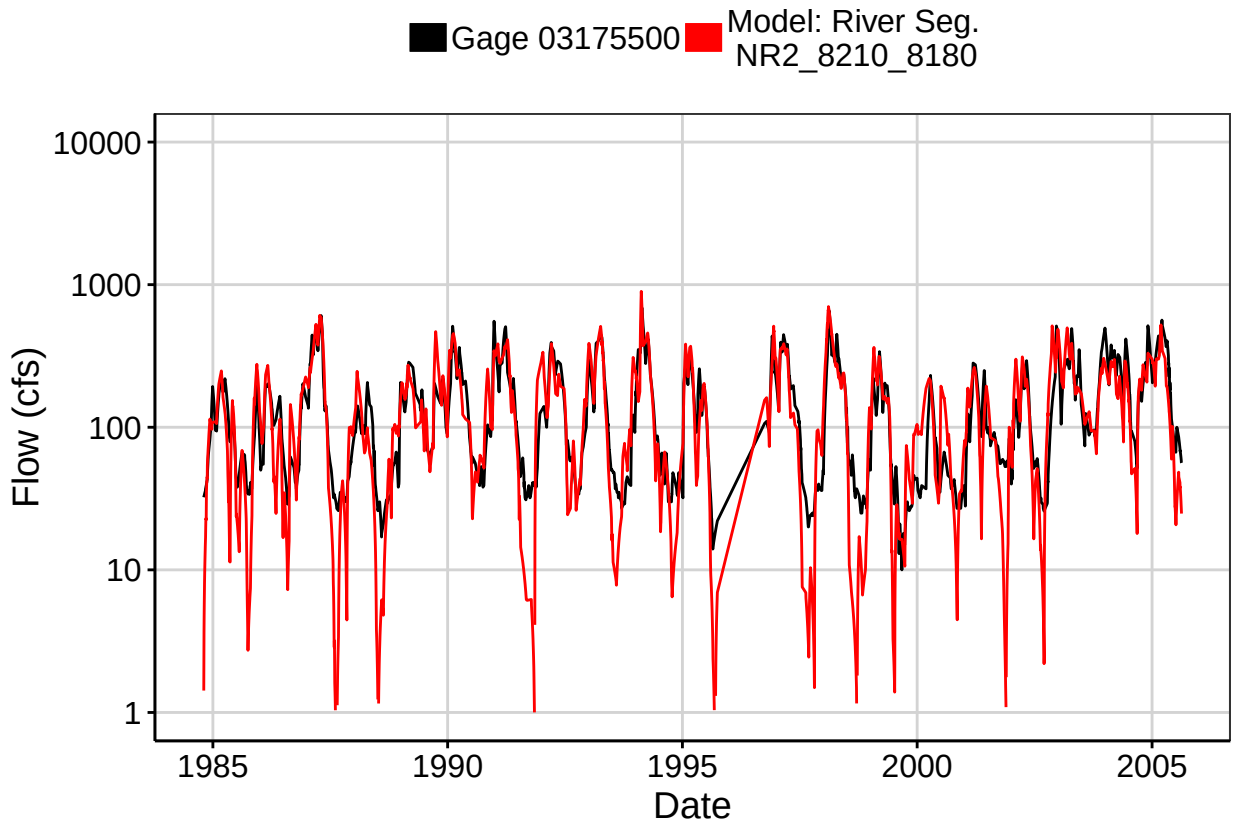


Fig. 5: Combined Baseflow

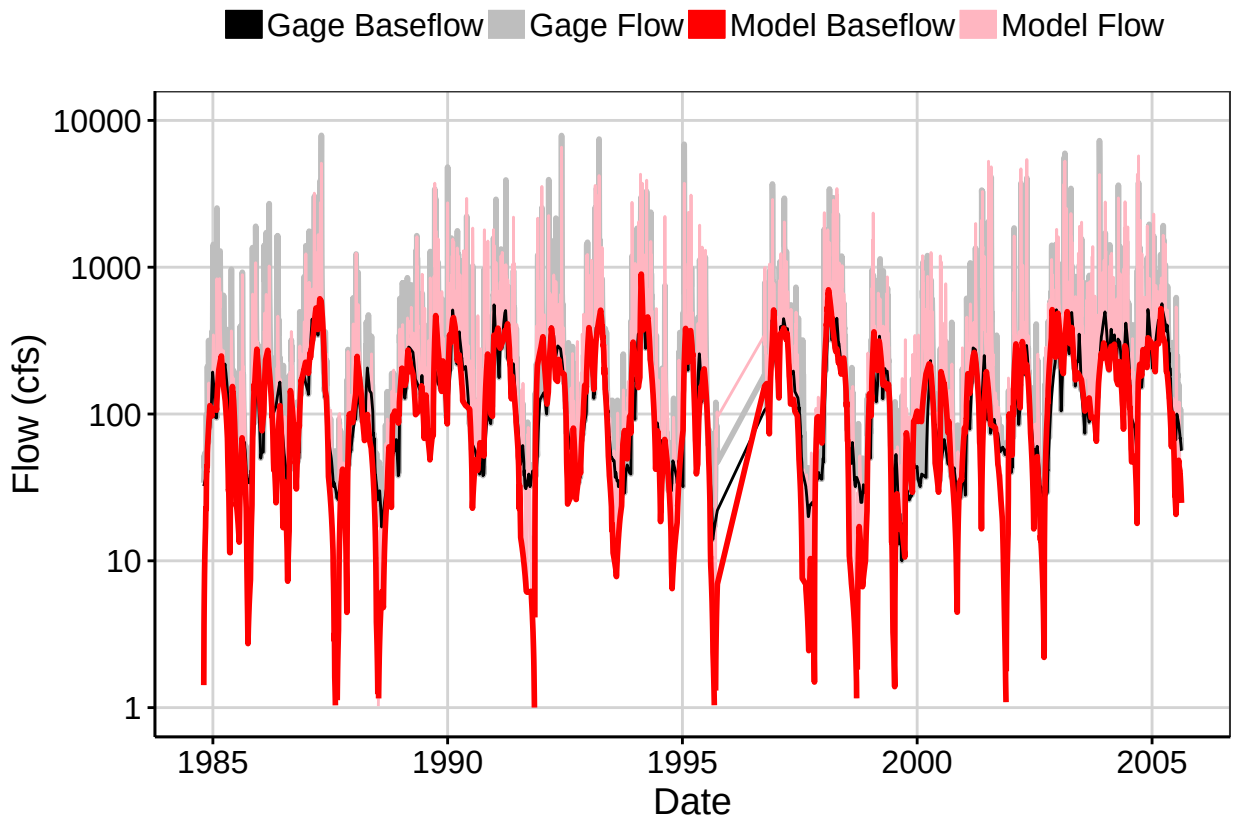


Fig. 6: Largest Error Segment

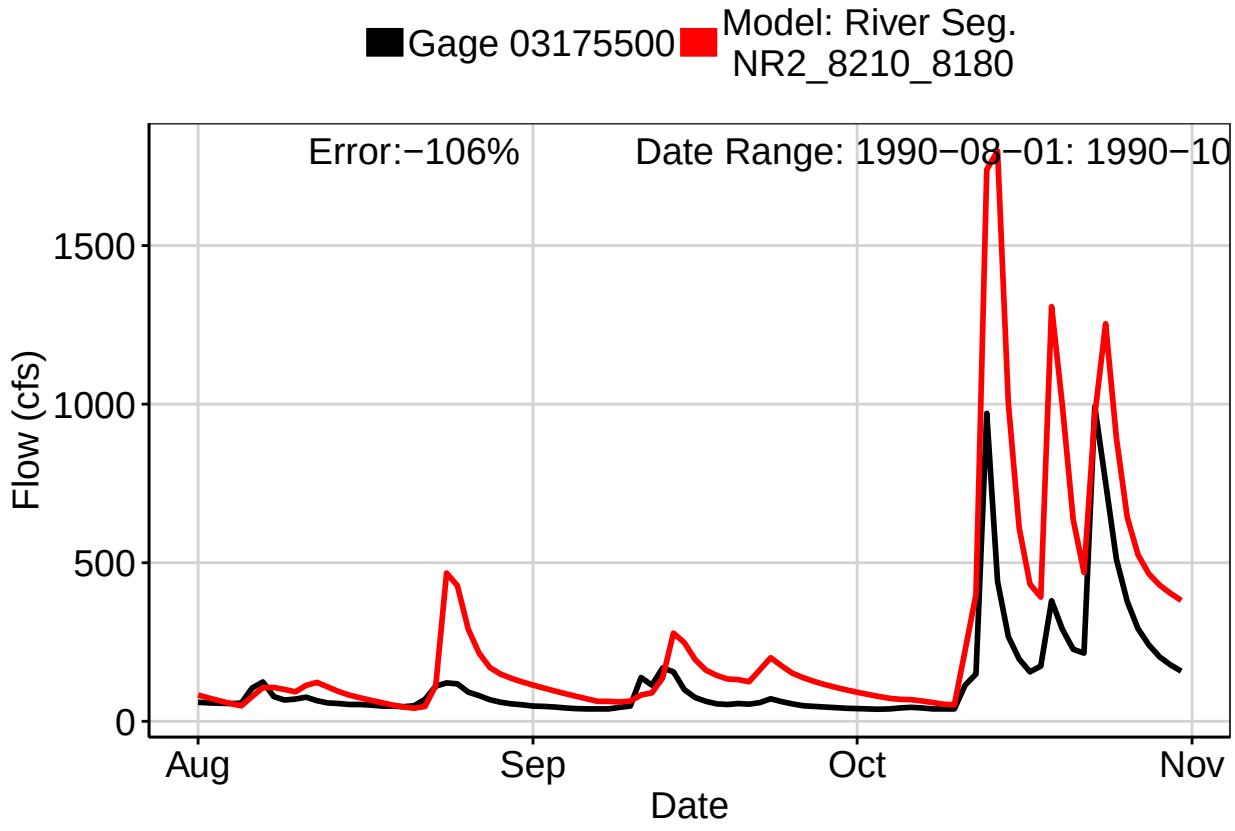


Fig. 7: Second Largest Error Segment

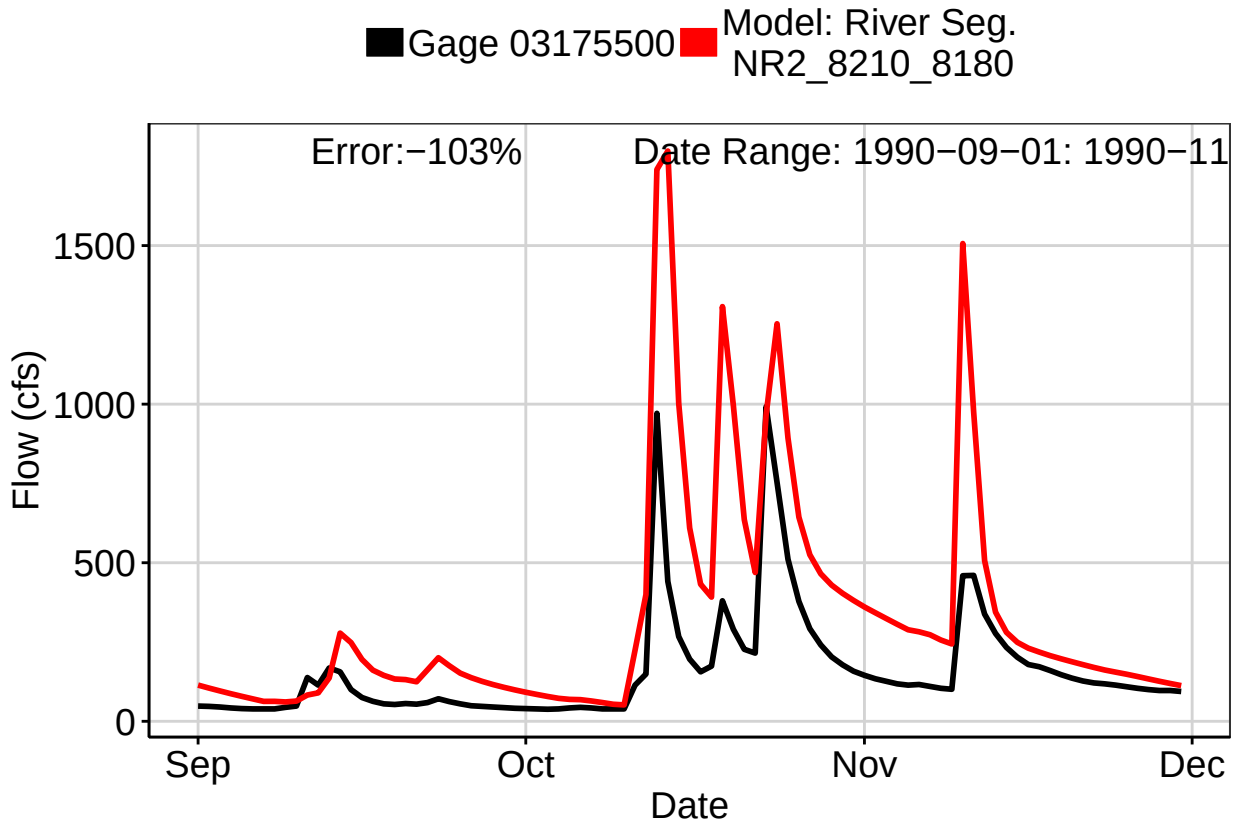


Fig. 8: Third Largest Error Segment

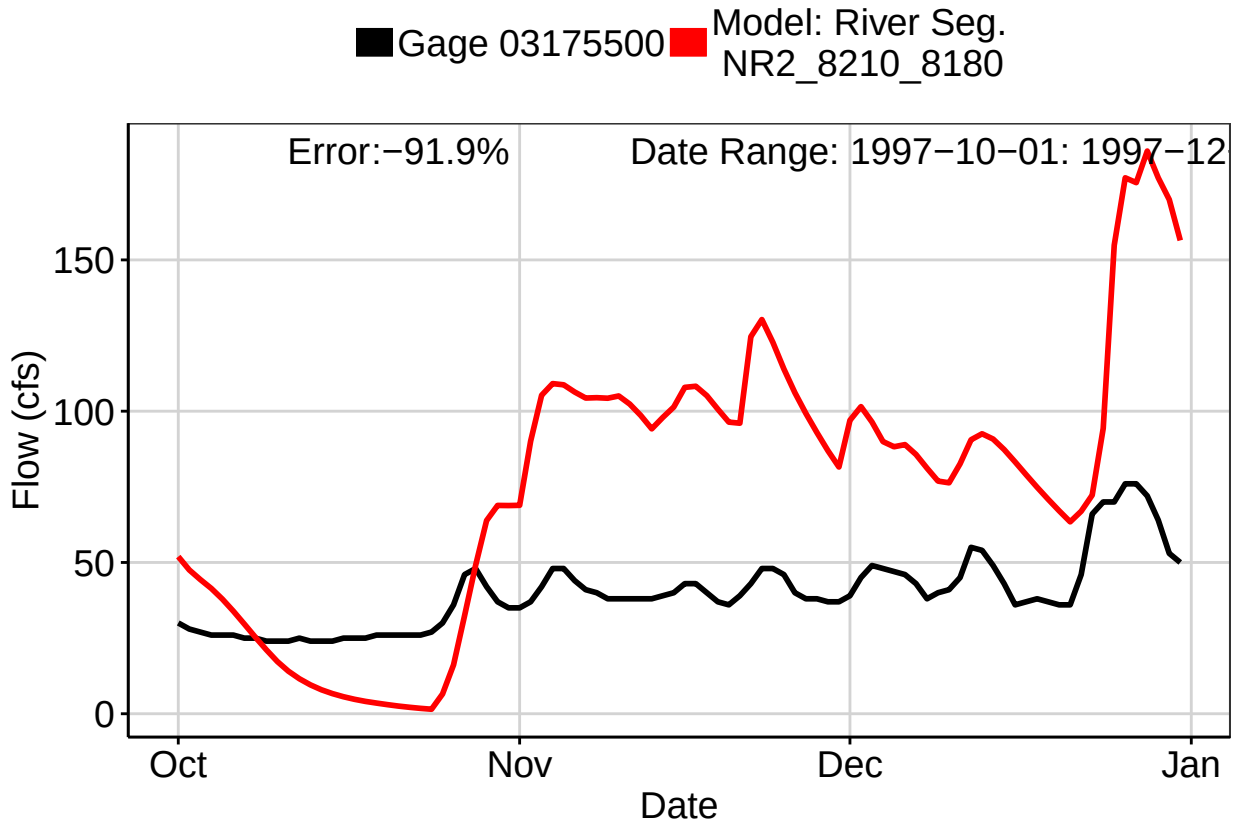


Fig. 9: Residuals Plot