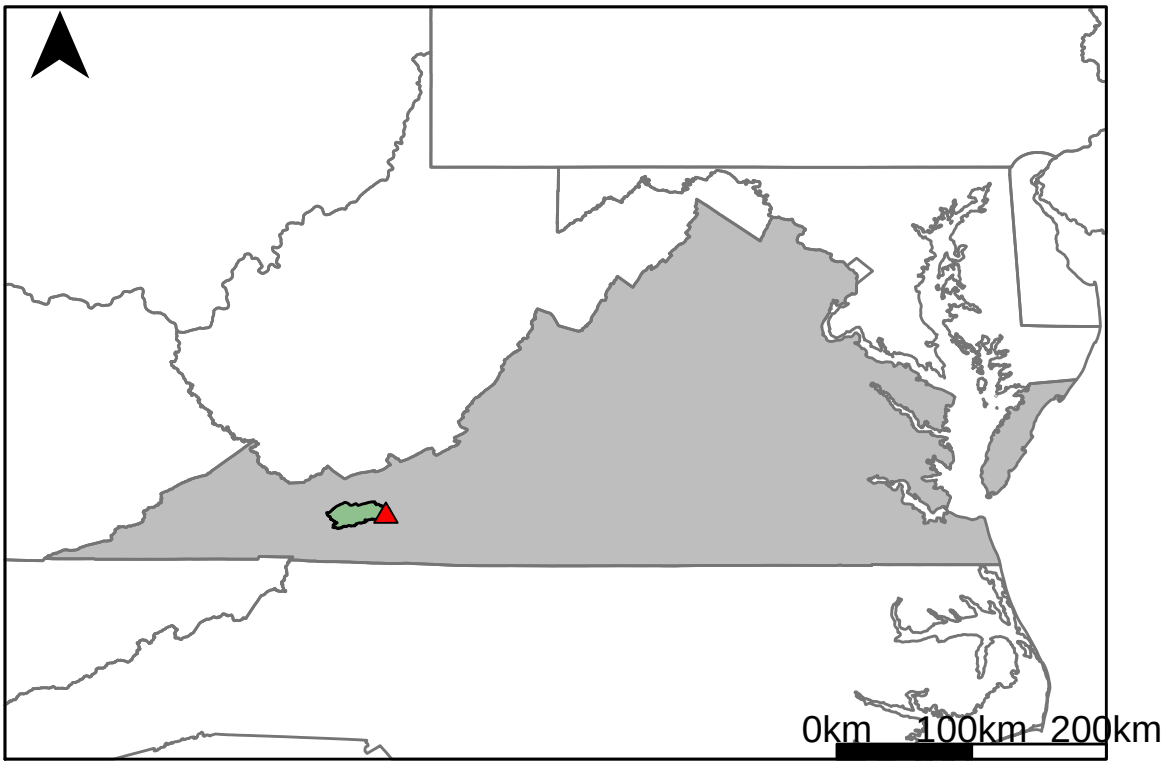
03167000 vs. NR2_8600_8700



This river segment follows part of the flow of the Reed Creek, a tributary of the New River. The gage is located in Wythe County, VA (Lat 3656'20", Long 8053'15") approximately 19 miles north of Galax, VA. Drainage area is 258 sq. miles. This gage started taking data in 1908 and is still taking data, but there is a gap from 1916-09-30 to 1991-09-29. For this reason, analysis was carried out from 1991-10-01 to 2005-09-30. There are no known anthropogenic alterations to the area that would affect flow. The average daily discharge error between the model and gage data for the 20 year timespan was 3.68%, with 34% of its rolling three month time spans above 20% error.

Table 1: Monthly Low Flows

	USGS Gage	Model	Pct. Error
Jan. Low Flow	72.6	42.7	41.2
Feb. Low Flow	81.5	43	47.2
Mar. Low Flow	89.5	65	27.4
Apr. Low Flow	102	133	-30.4
May Low Flow	190	235	-23.7
Jun. Low Flow	234	270	-15.4
Jul. Low Flow	226	201	11.1
Aug. Low Flow	152	185	-21.7
Sep. Low Flow	128	147	-14.8
Oct. Low Flow	99.8	97.6	2.2
Nov. Low Flow	85.1	64.3	24.4
Dec. Low Flow	76	40	47.4

Table 2: Monthly Average Flows

	USGS Gage	Model	Pct. Error
Overall Mean Flow	272	262	3.68
Jan. Mean Flow	324	296	8.64
Feb. Mean Flow	463	439	5.18
Mar. Mean Flow	509	483	5.11
Apr. Mean Flow	405	423	-4.44
May Mean Flow	334	319	4.49
Jun. Mean Flow	268	252	5.97
Jul. Mean Flow	192	176	8.33
Aug. Mean Flow	152	140	7.89
Sep. Mean Flow	124	150	-21
Oct. Mean Flow	104	134	-28.8
Nov. Mean Flow	171	150	12.3
Dec. Mean Flow	236	193	18.2

Table 3: Monthly High Flows

	USGS Gage	Model	Pct. Error
Jan. High Flow	134	109	18.7
Feb. High Flow	235	145	38.3
Mar. High Flow	730	301	58.8
Apr. High Flow	1140	962	15.6
May High Flow	1600	801	49.9
Jun. High Flow	1560	1010	35.3
Jul. High Flow	980	910	7.14
Aug. High Flow	795	616	22.5
Sep. High Flow	469	429	8.53
Oct. High Flow	222	228	-2.7
Nov. High Flow	160	166	-3.75
Dec. High Flow	166	136	18.1

Table 4: Period Low Flows

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	40.8	15.1	63
Med. 1 Day Min	68	30.2	55.6
Min. 3 Day Min	44.1	15.3	65.3
Med. 3 Day Min	69	31	55.1
Min. 7 Day Min	46.8	16	65.8
Med. 7 Day Min	69.4	32.5	53.2
Min. 30 Day Min	56.9	18.6	67.3
Med. 30 Day Min	76.2	42.6	44.1
Min. 90 Day Min	66.5	28.5	57.1
Med. 90 Day Min	100	73	27
7Q10	51.6	18.5	64.1
Year of 90-Day Min. Flow	1999	1999	0
Drought Year Mean	143	262	-83.2
Mean Baseflow	160	171	-6.88

Table 5: Period High Flows

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	7620	8310	-9.06
Med. 1 Day Max	2850	3550	-24.6
Max. 3 Day Max	3880	4690	-20.9
Med. 3 Day Max	2130	2240	-5.16
Max. 7 Day Max	2190	2670	-21.9
Med. 7 Day Max	1420	1340	5.63
Max. 30 Day Max	1120	1420	-26.8
Med. 30 Day Max	706	623	11.8
Max. 90 Day Max	767	940	-22.6
Med. 90 Day Max	513	494	3.7

Table 6: Non-Exceedance Flows

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	54	21.5	60.2
5% Non-Exceedance	66.9	31.1	53.5
50% Non-Exceedance	165	161	2.42
95% Non-Exceedance	797	724	9.16
99% Non-Exceedance	1680	1840	-9.52
Sept. 10% Non-Exceedance	36.6	35	4.37

Fig. 1: Hydrograph

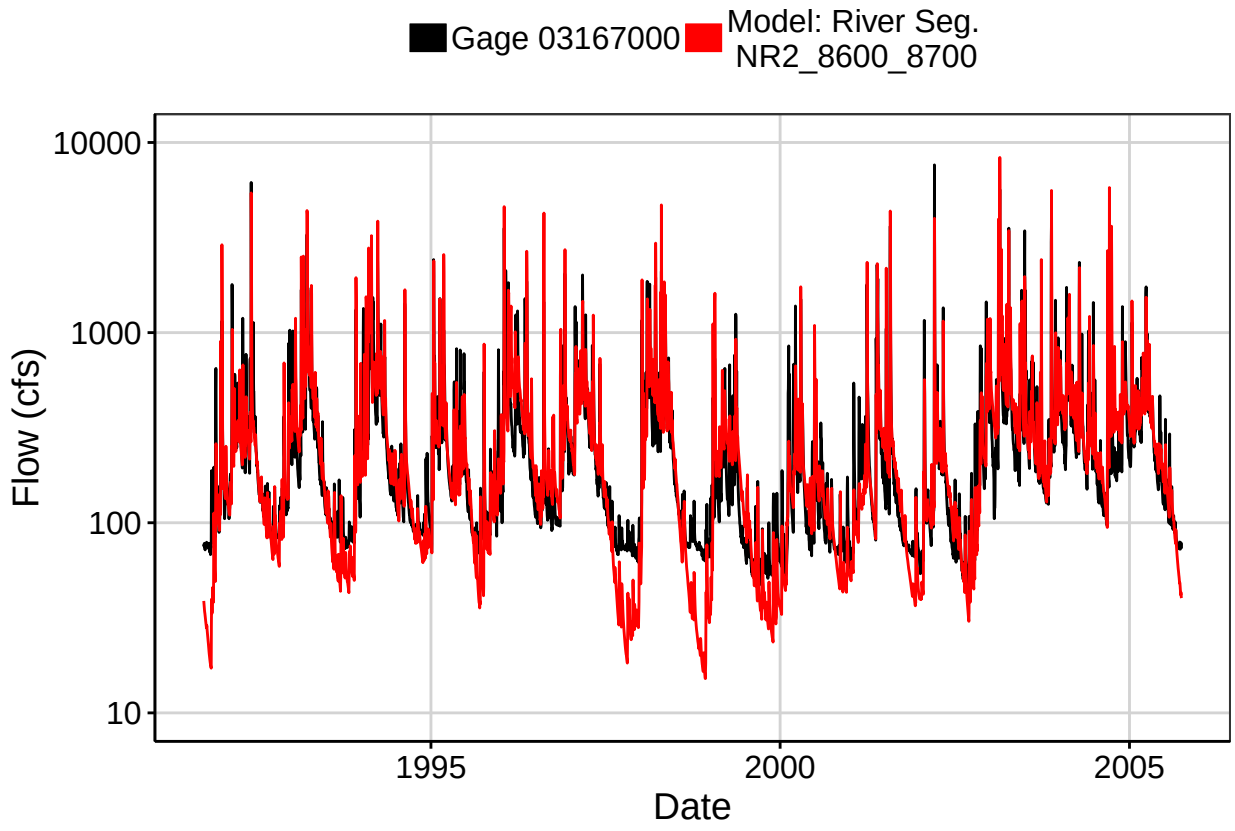


Fig. 2: Zoomed Hydrograph

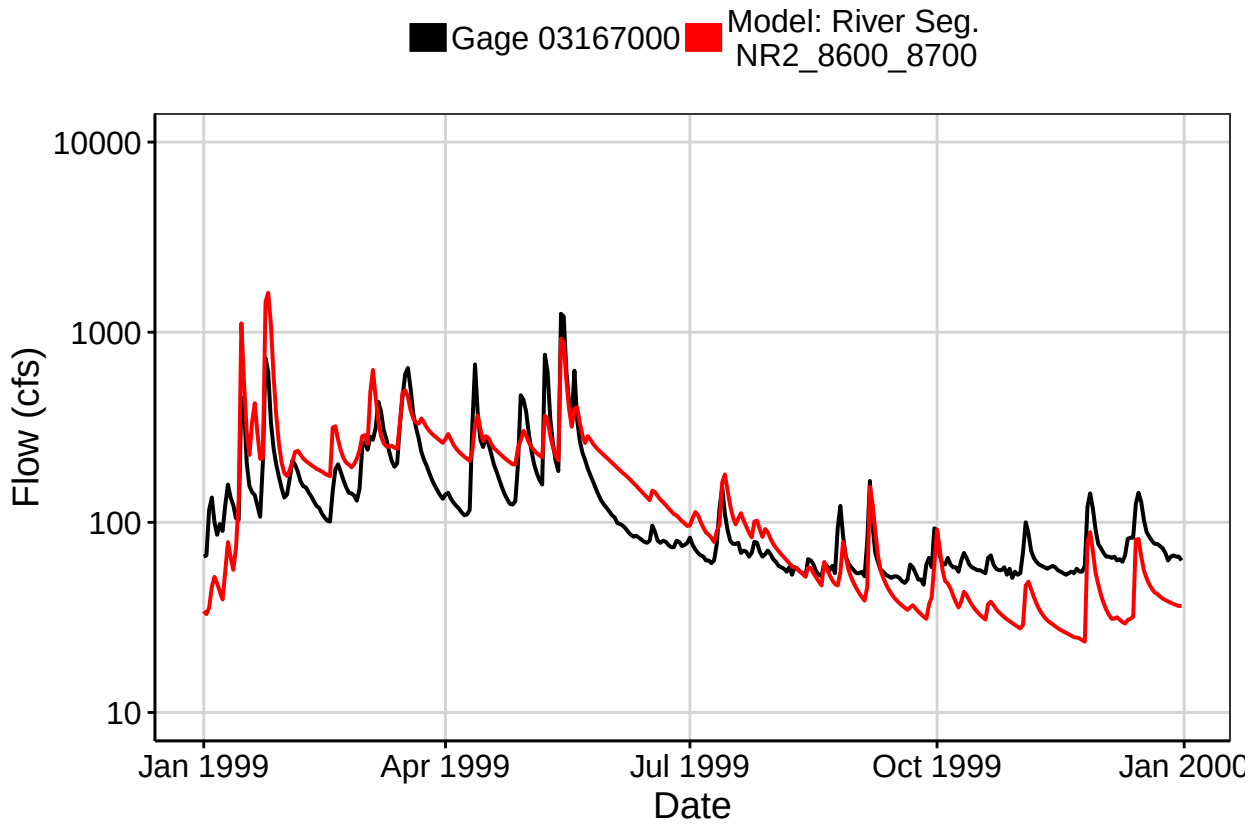


Fig. 3: Flow Exceedance

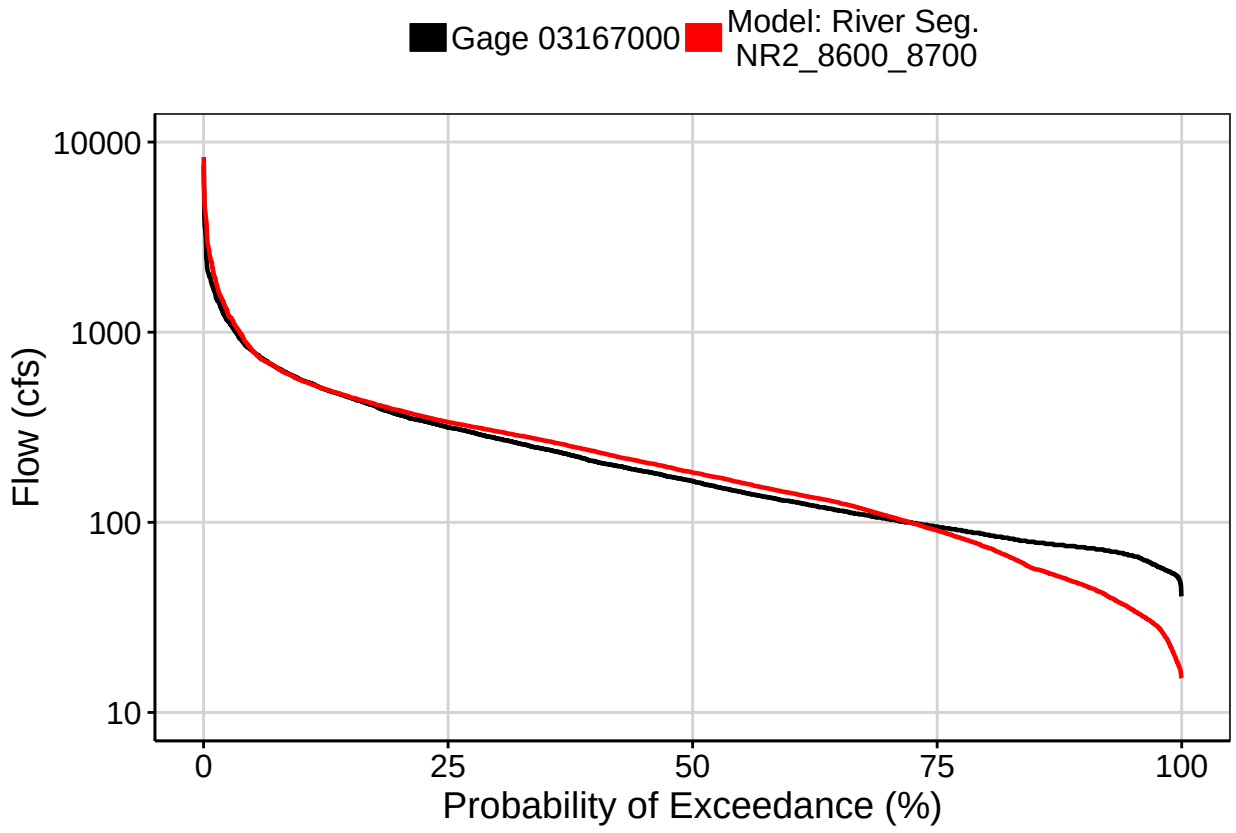


Fig. 4: Baseflow

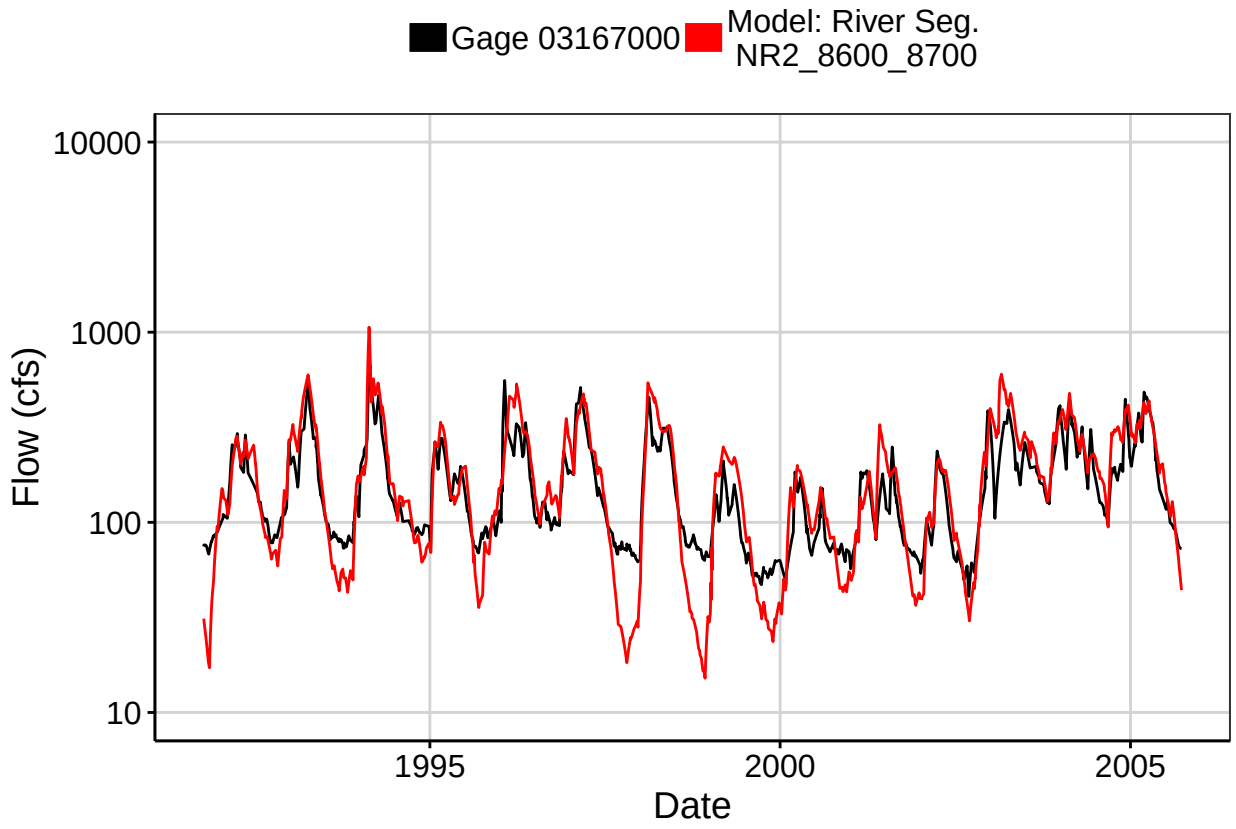


Fig. 5: Combined Baseflow

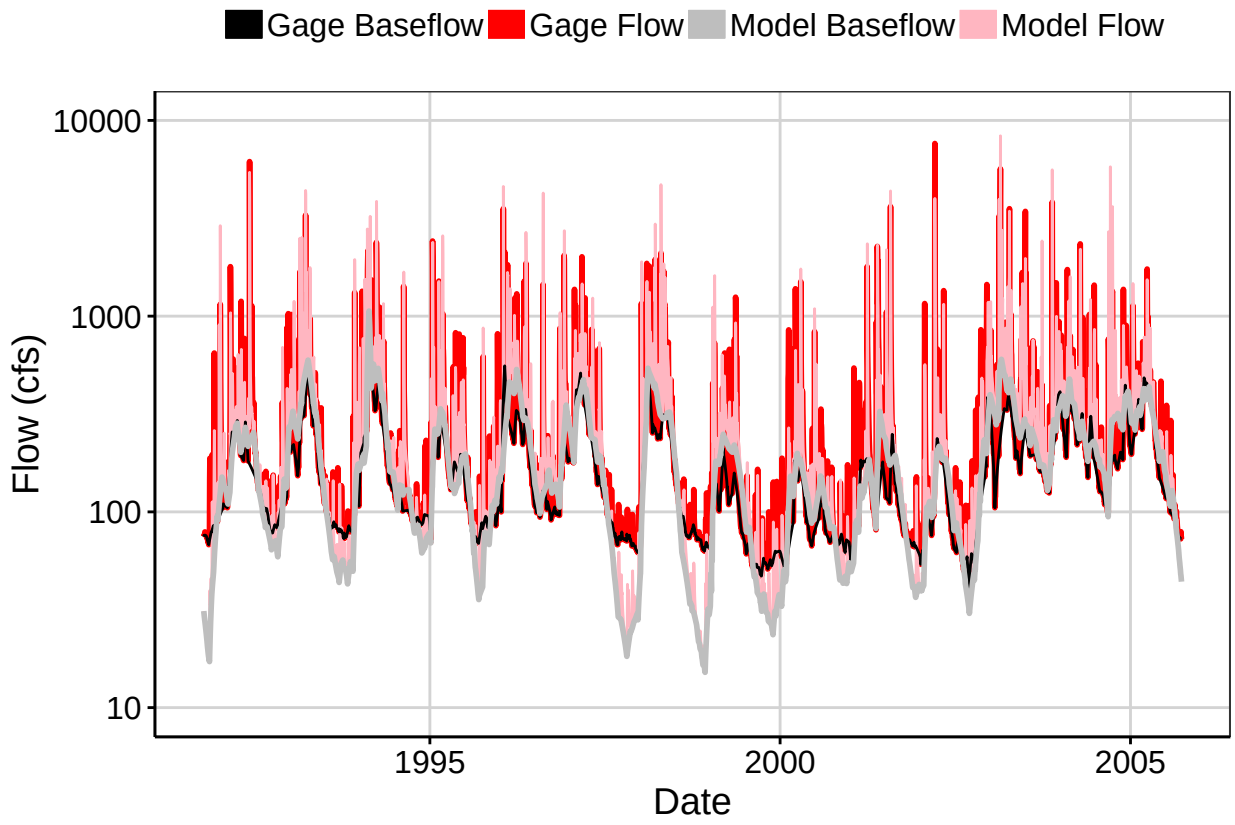


Fig. 6: Largest Error Segment

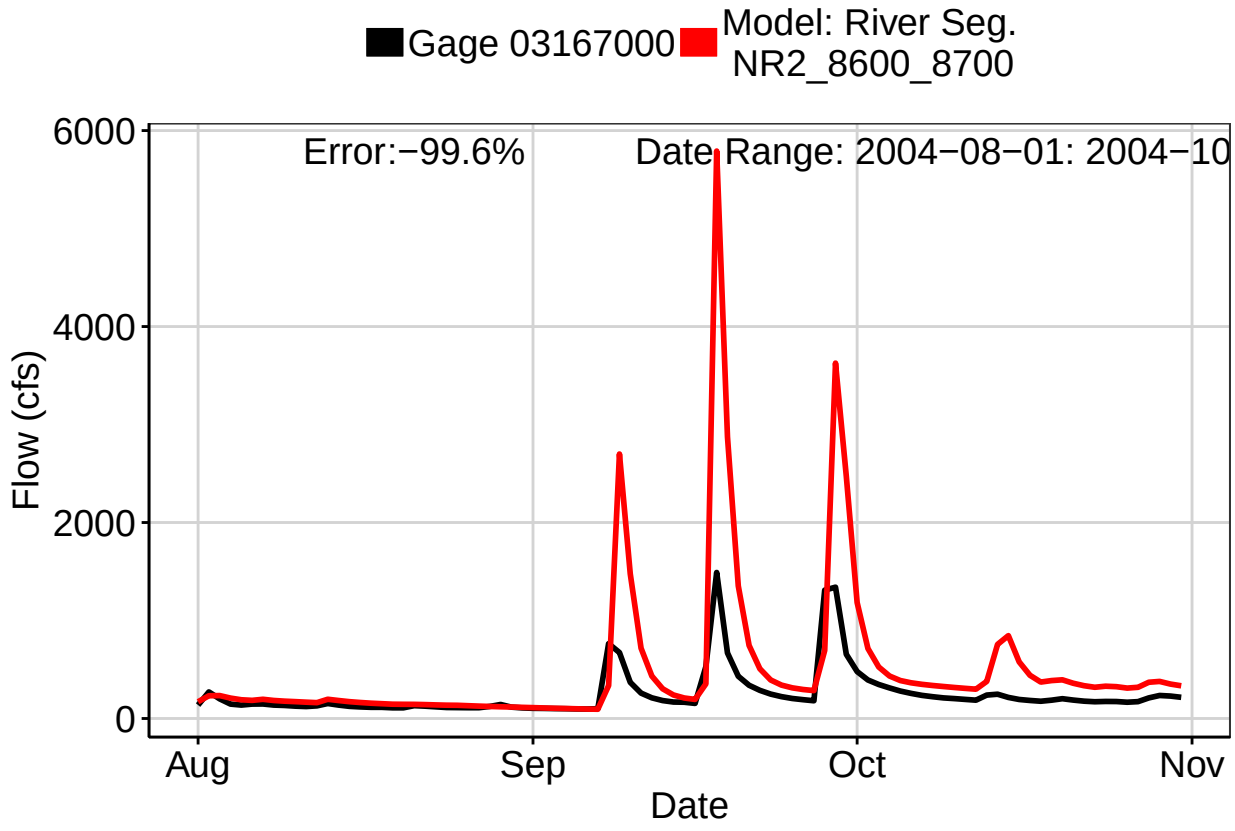


Fig. 7: Second Largest Error Segment

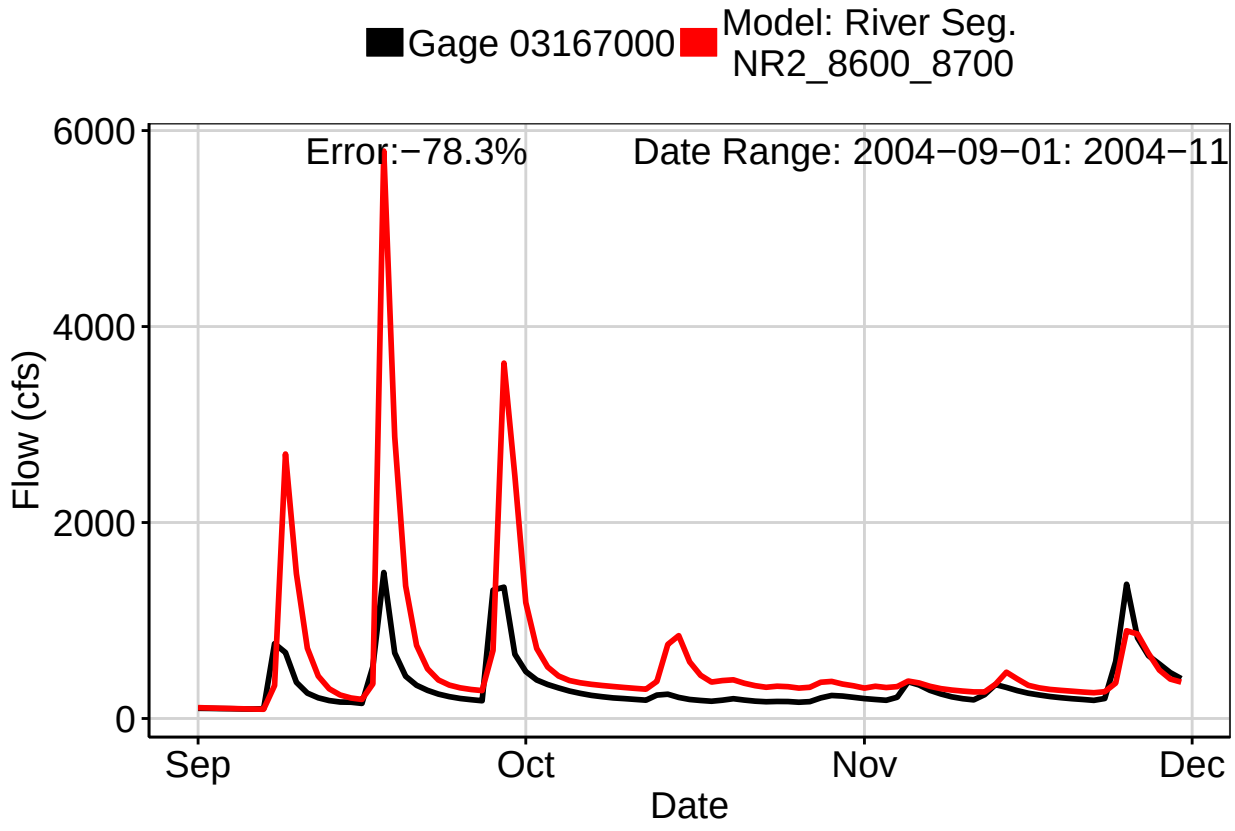


Fig. 8: Third Largest Error Segment

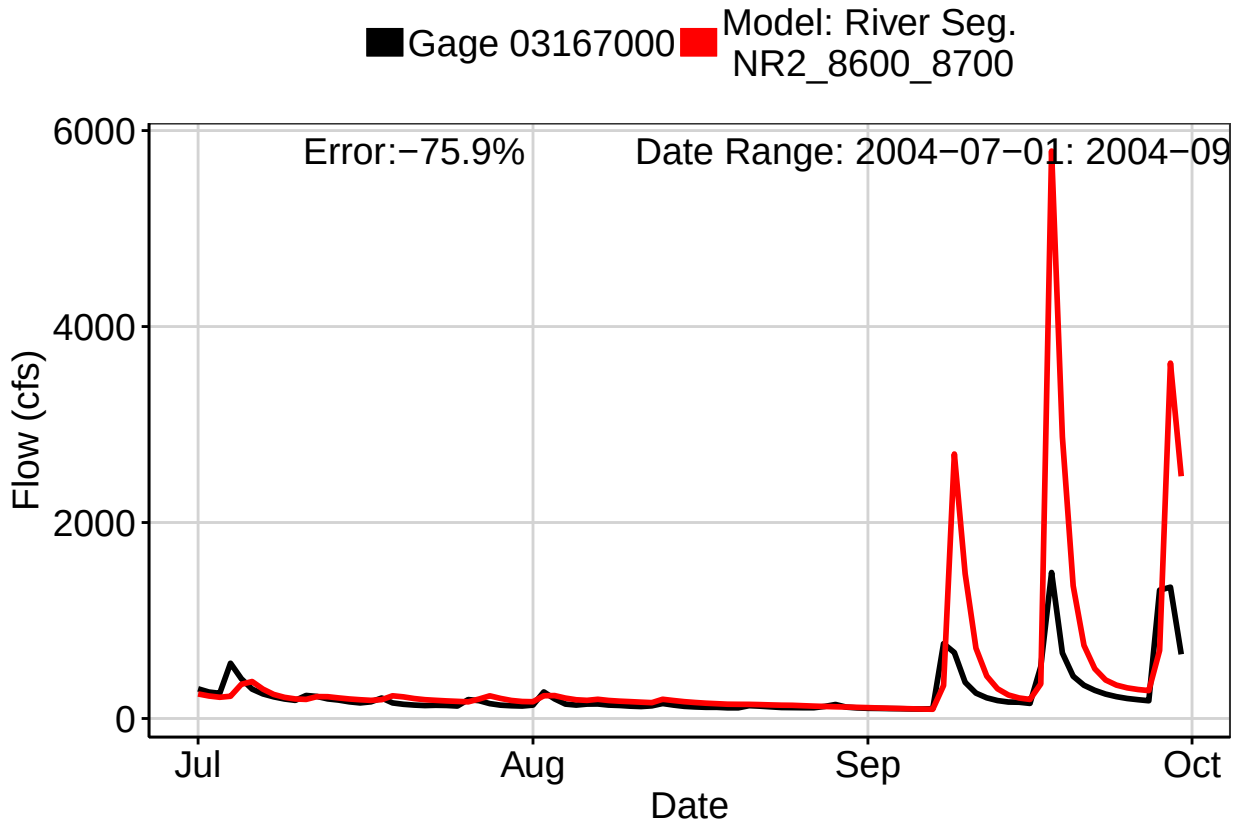


Fig. 9: Residuals Plot