03167000 vs. NR2_8600_8700

Daniel Hildebrand, Hailey Alspaugh, and Kelsey Reitz

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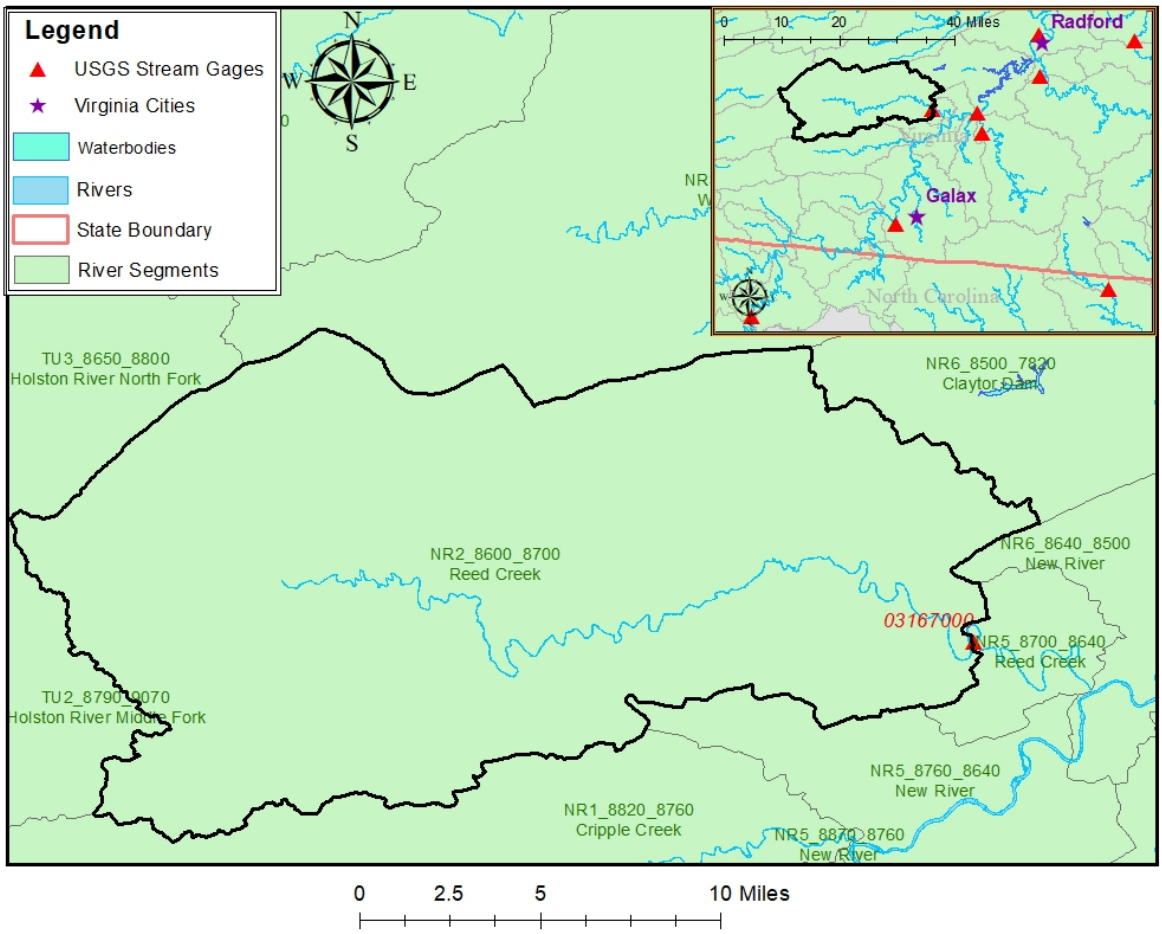

This river segment follows part of the flow of the Reed Creek, a tributary of the New River. The gage is located in Wythe County, VA (Lat 3656'20", Long 8053'15") approximately 19 miles north of Galax, VA. Drainage area is 258 sq. miles. This gage started taking data in 1908 and is still taking data, 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 -6.25%, 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	48.3	33.5
Feb. Low Flow	81.5	55.7	31.7
Mar. Low Flow	89.5	77.1	13.9
Apr. Low Flow	102	139	-36.3
May Low Flow	190	243	-27.9
Jun. Low Flow	234	314	-34.2
Jul. Low Flow	226	238	-5.31
Aug. Low Flow	152	191	-25.7
Sep. Low Flow	128	153	-19.5
Oct. Low Flow	99.8	105	-5.21
Nov. Low Flow	85.1	80.5	5.41
Dec. Low Flow	76	53.8	29.2

Table 2: Monthly Average Flows

	USGS Gage	Model	Pct. Error
Overall Mean Flow	272	289	-6.25
Jan. Mean Flow	324	336	-3.7
Feb. Mean Flow	463	516	-11.4
Mar. Mean Flow	509	543	-6.68
Apr. Mean Flow	405	446	-10.1
May Mean Flow	334	334	0
Jun. Mean Flow	268	293	-9.33
Jul. Mean Flow	192	199	-3.65
Aug. Mean Flow	152	166	-9.21
Sep. Mean Flow	124	164	-32.3
Oct. Mean Flow	104	107	-2.88
Nov. Mean Flow	171	159	7.02
Dec. Mean Flow	236	217	8.05

Table 3: Monthly High Flows

	USGS Gage	Model	Pct. Error
Jan. High Flow	134	114	14.9
Feb. High Flow	235	186	20.9
Mar. High Flow	730	323	55.8
Apr. High Flow	1140	1330	-16.7
May High Flow	1600	1270	20.6
Jun. High Flow	1560	1940	-24.4
Jul. High Flow	980	1100	-12.2
Aug. High Flow	795	583	26.7
Sep. High Flow	469	492	-4.9
Oct. High Flow	222	231	-4.05
Nov. High Flow	160	163	-1.88
Dec. High Flow	166	145	12.7

Table 4: Period Low Flows

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	40.8	15.1	63
Med. 1 Day Min	68	37.9	44.3
Min. 3 Day Min	44.1	15.3	65.3
Med. 3 Day Min	69	38.8	43.8
Min. 7 Day Min	46.8	16	65.8
Med. 7 Day Min	69.4	39.8	42.7
Min. 30 Day Min	56.9	18.7	67.1
Med. 30 Day Min	76.2	50.7	33.5
Min. 90 Day Min	66.5	28.6	57
Med. 90 Day Min	100	76.9	23.1
7Q10	51.6	19.4	62.4
Year of 90-Day Min. Flow	1999	1999	0
Drought Year Mean	143	158	-10.5
Mean Baseflow	160	182	-13.8

Table 5: Period High Flows

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	7620	8340	-9.45
Med. 1 Day Max	2850	4170	-46.3
Max. 3 Day Max	3880	4710	-21.4
Med. 3 Day Max	2130	2740	-28.6
Max. 7 Day Max	2190	2680	-22.4
Med. 7 Day Max	1420	1600	-12.7
Max. 30 Day Max	1120	1420	-26.8
Med. 30 Day Max	706	695	1.56
Max. 90 Day Max	767	944	-23.1
Med. 90 Day Max	513	505	1.56

Table 6: Non-Exceedance Flows

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	54	21.7	59.8
5% Non-Exceedance	66.9	34.8	48
50% Non-Exceedance	165	183	-10.9
95% Non-Exceedance	797	791	0.75
99% Non-Exceedance	1680	2050	-22
Sept. 10% Non-Exceedance	36.6	61.1	-66.9

Fig. 1: Hydrograph

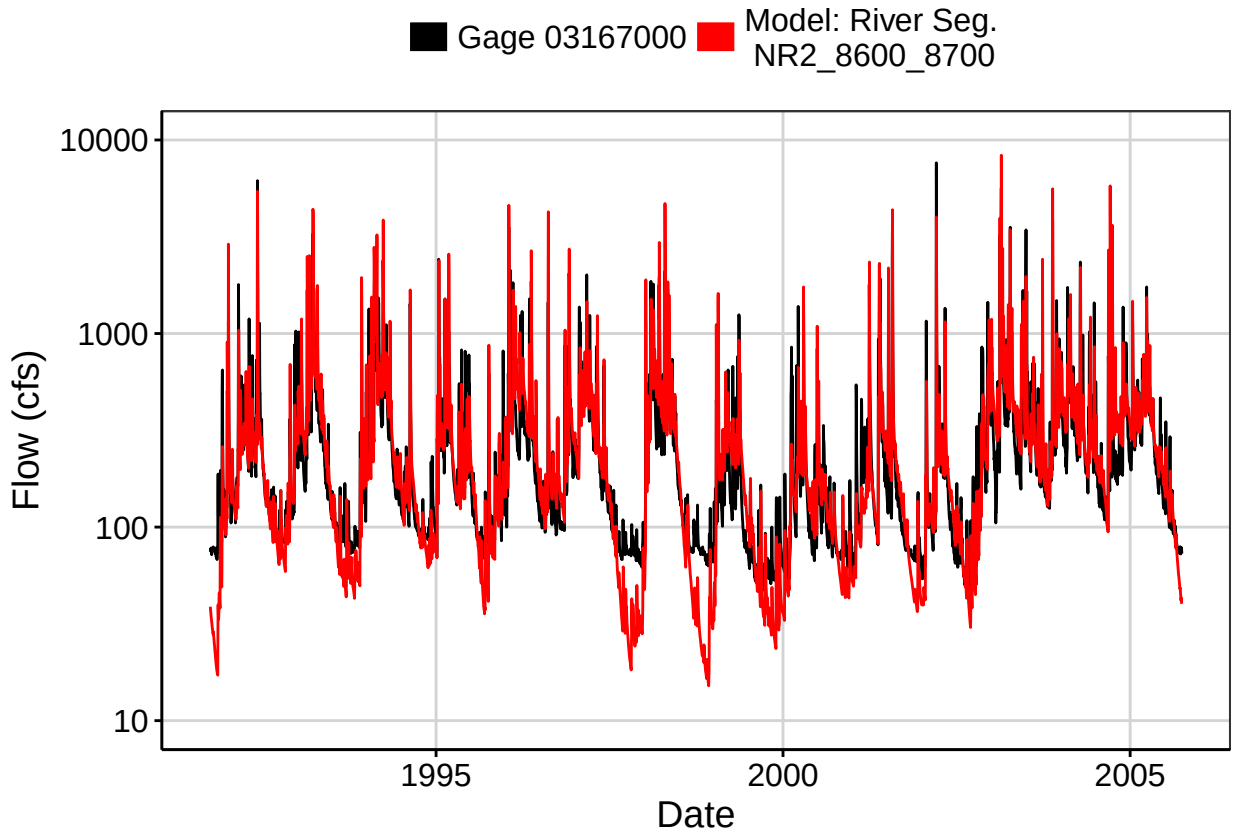

Fig. 2: Zoomed Hydrograph

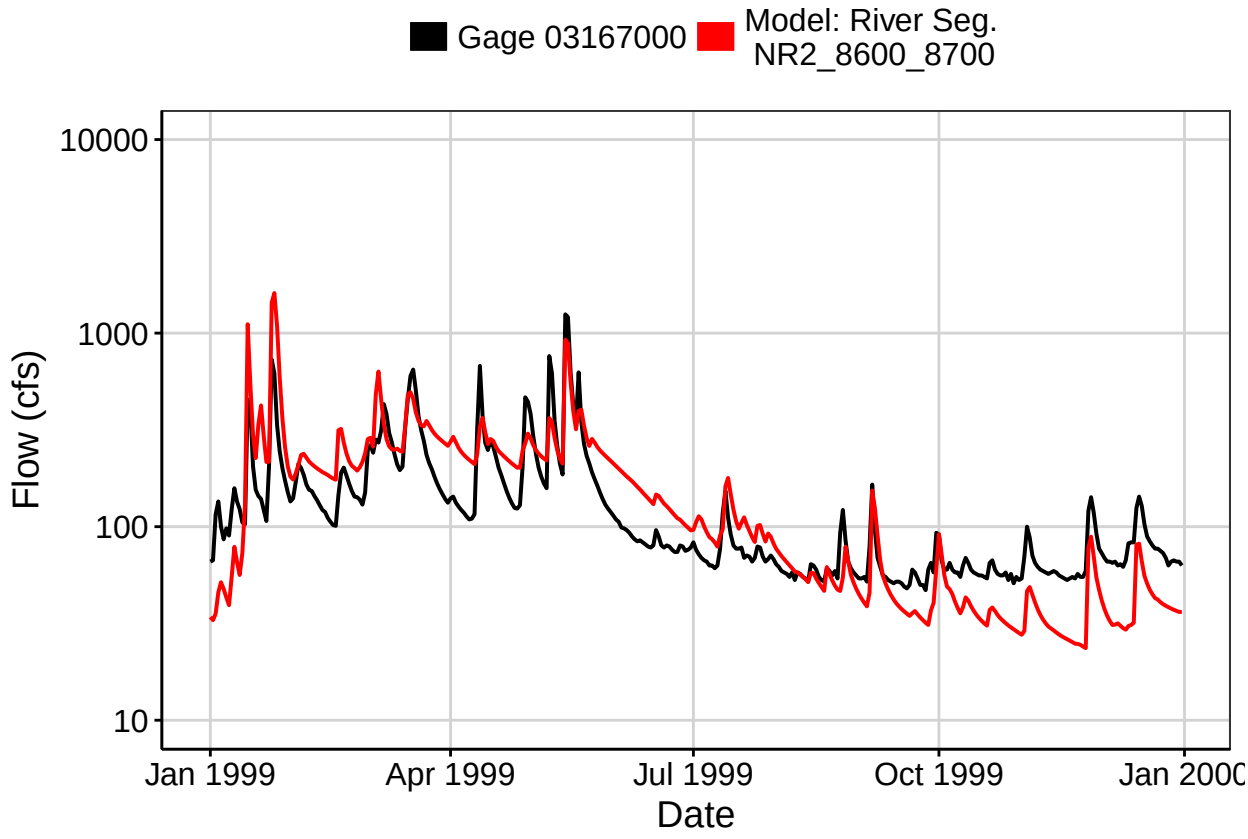

Fig. 3: Flow Exceedance

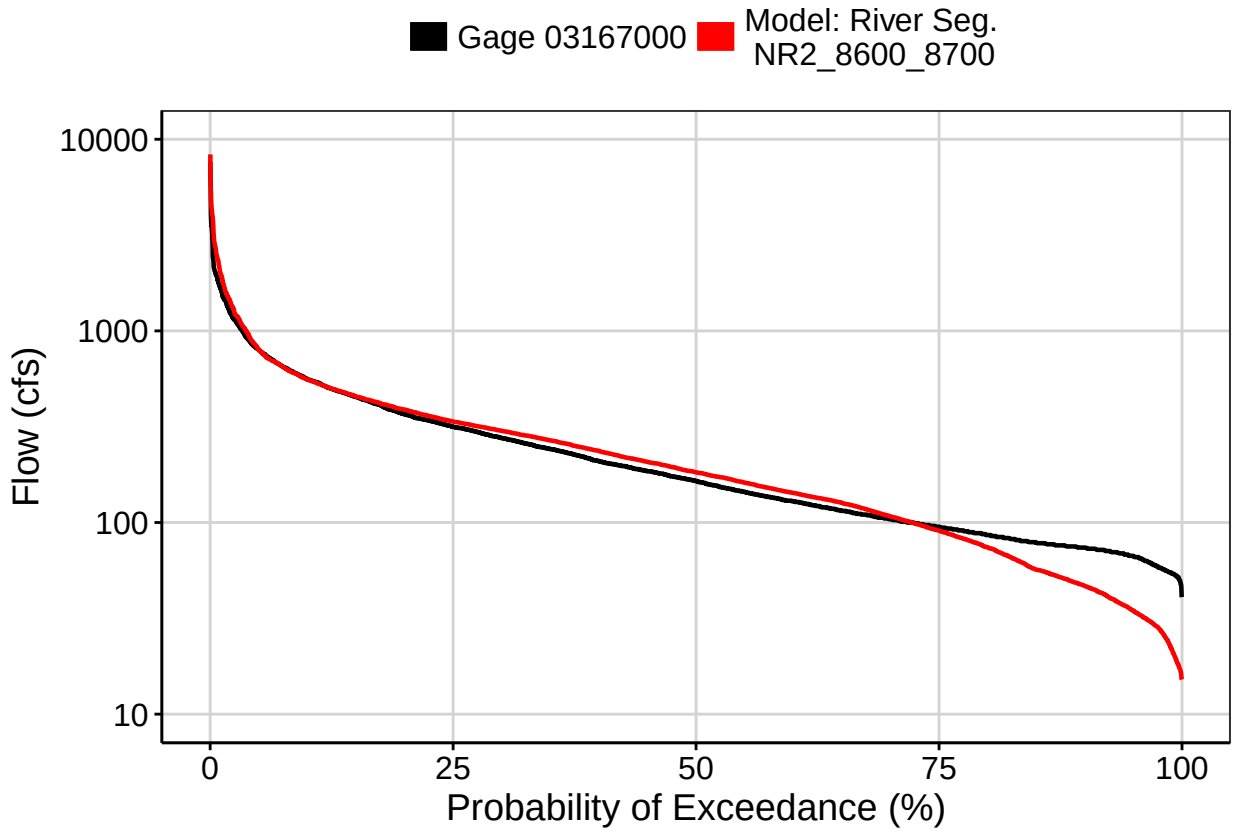

Fig. 4: Baseflow

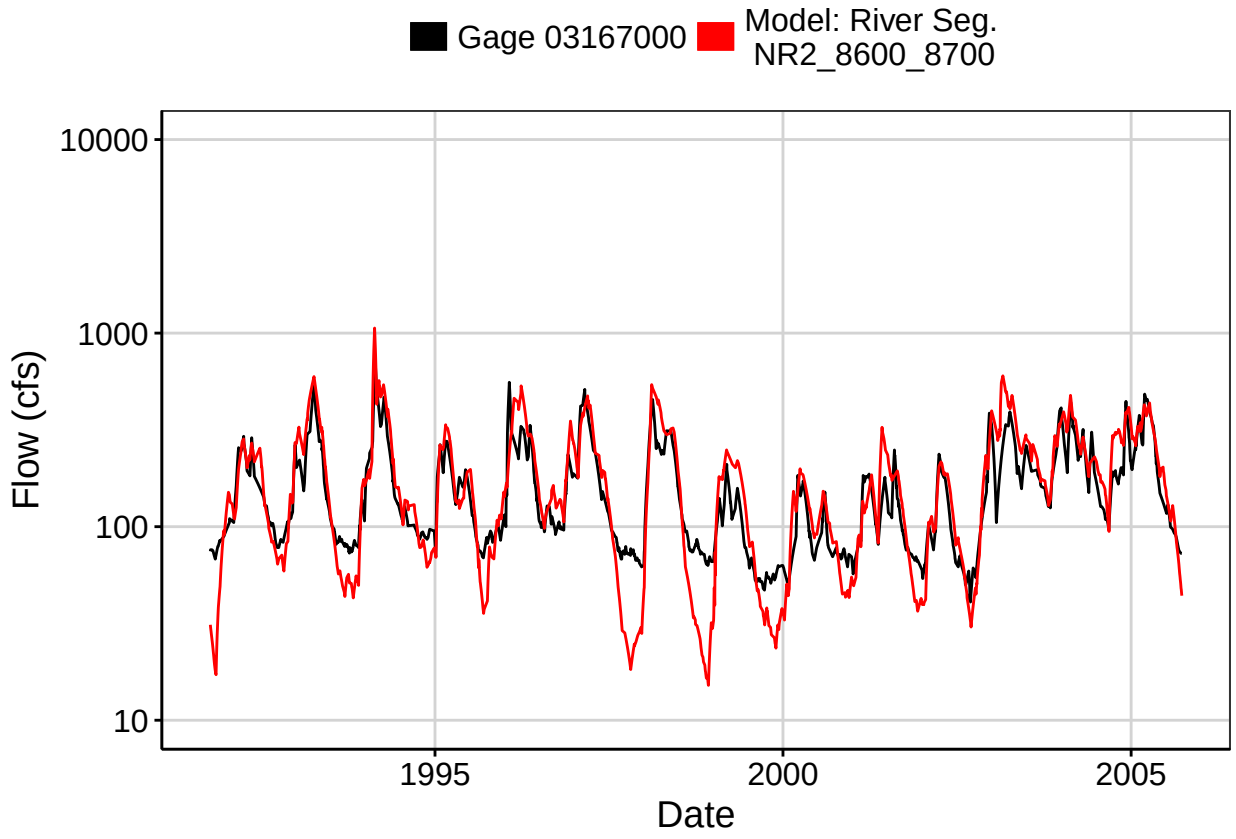

Fig. 5: Combined Baseflow

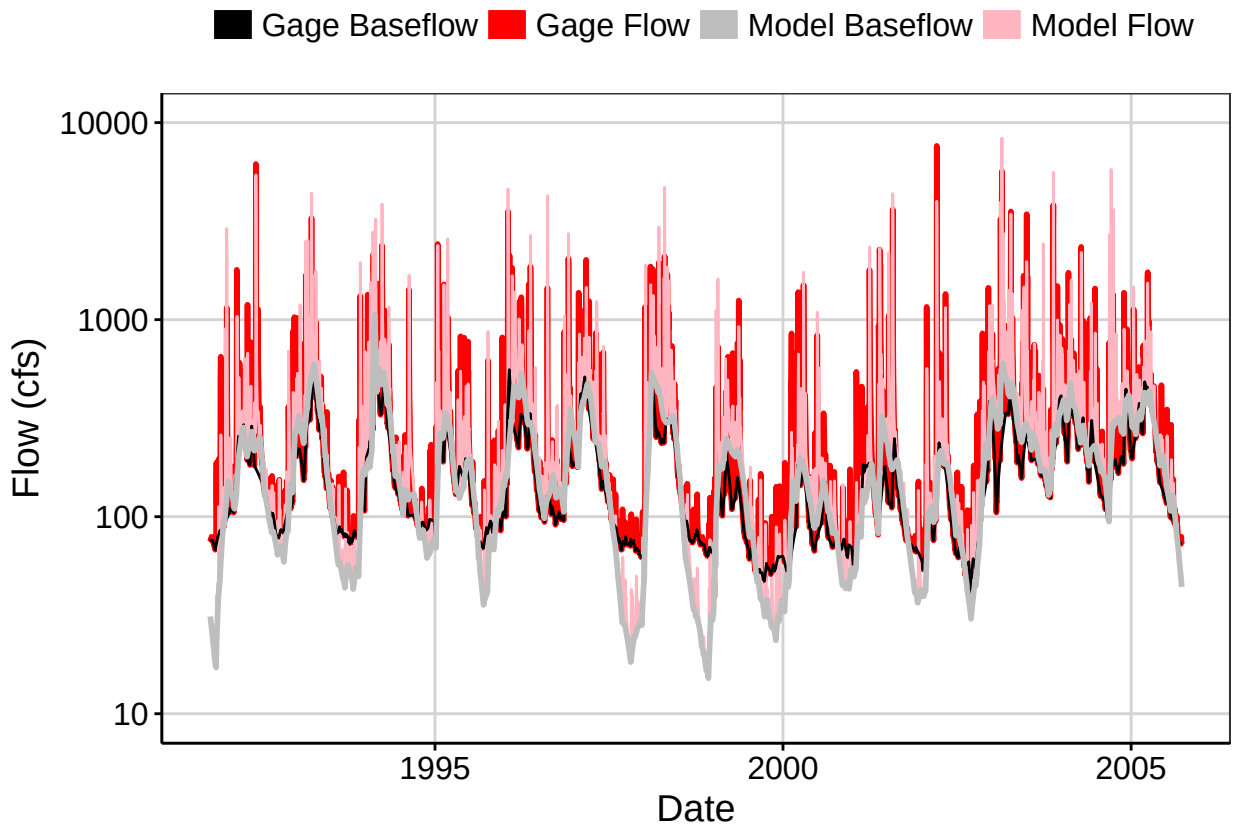

Fig. 6: Largest Error Segment

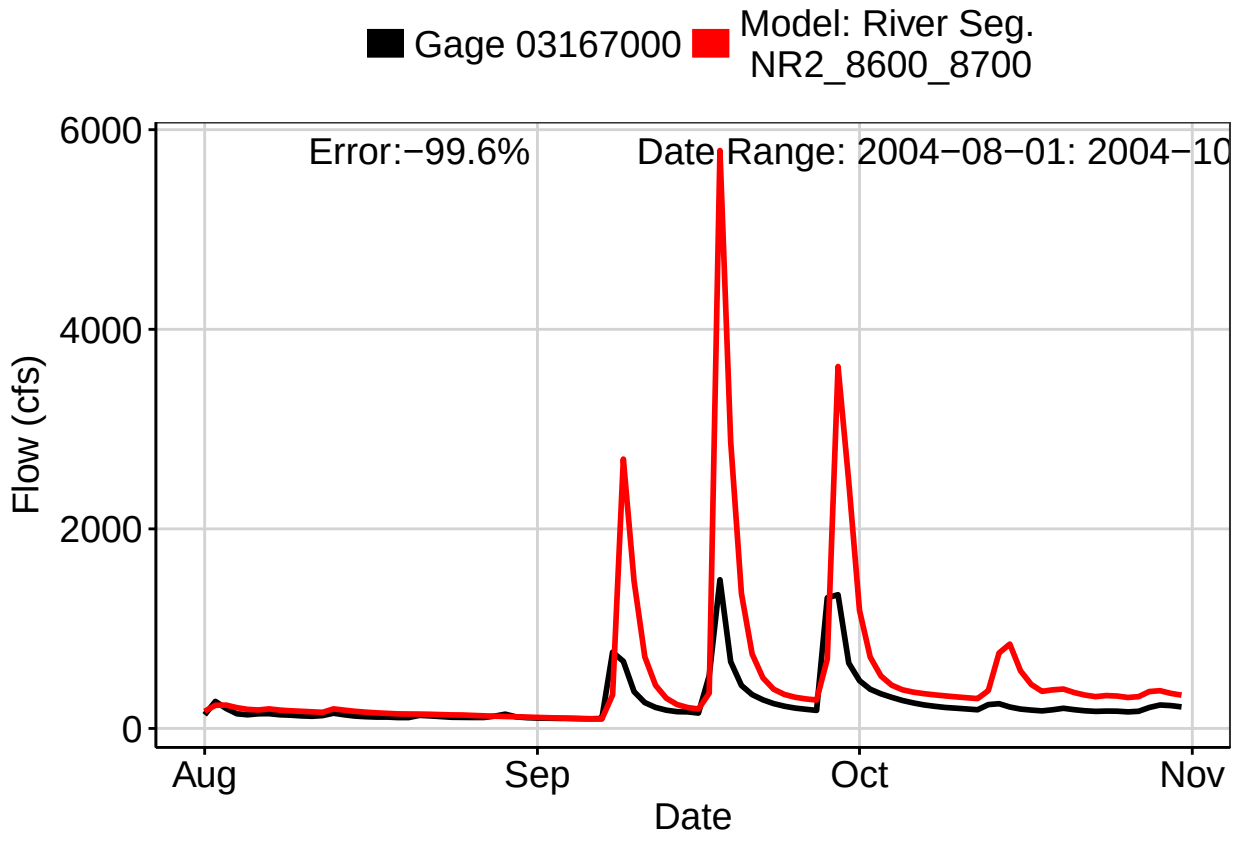

Fig. 7: Second Largest Error Segment

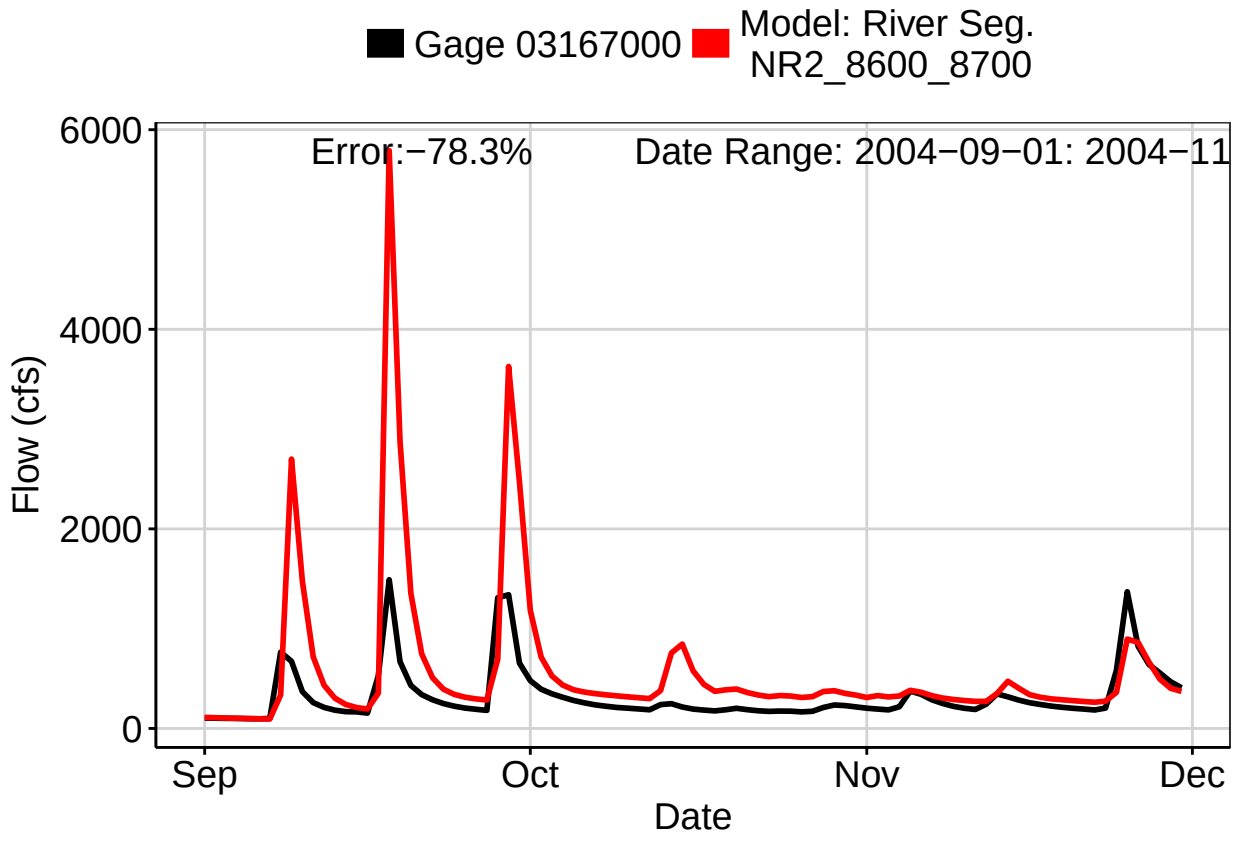

Fig. 8: Third Largest Error Segment

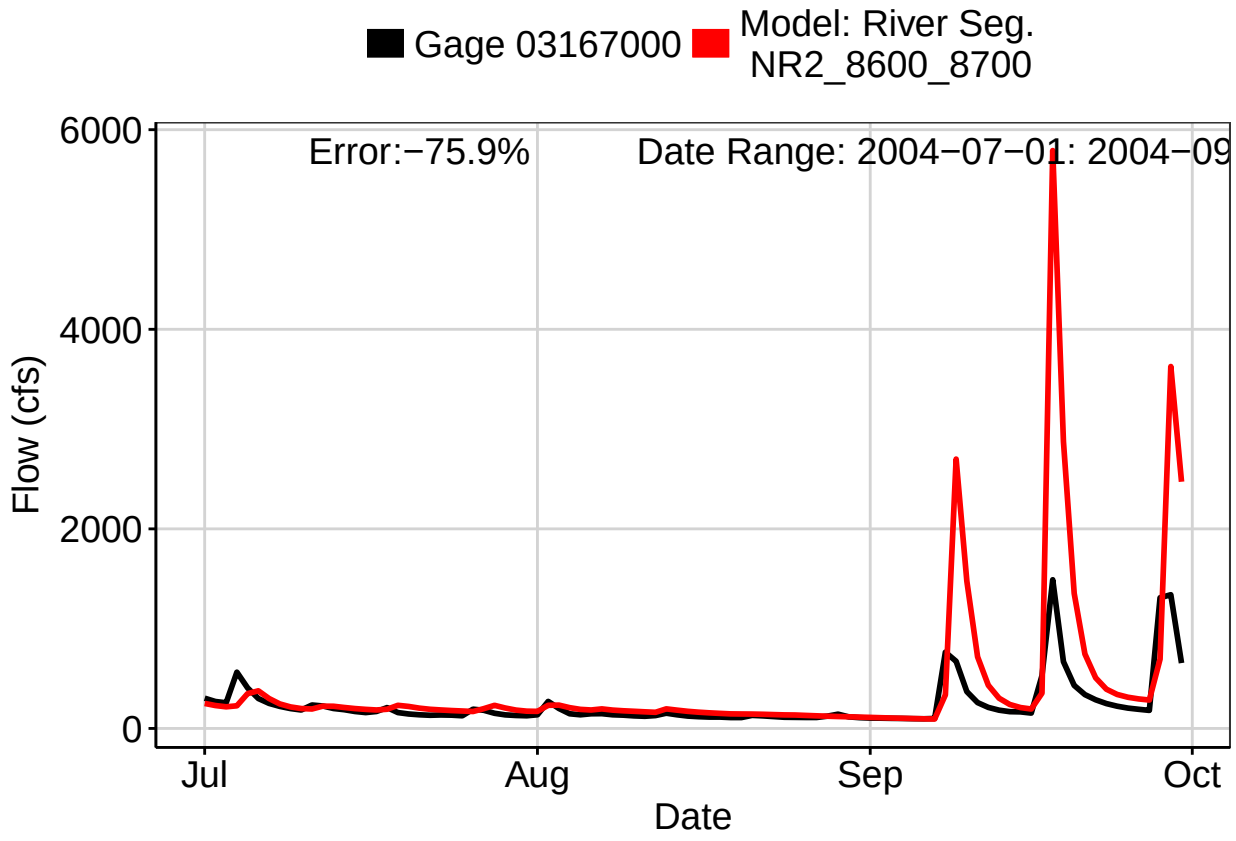

Fig. 9: Residuals Plot