03209000 vs. BS4_8540_8441

Daniel Hildebrand, Hailey Alspaugh, and Kelsey Reitz

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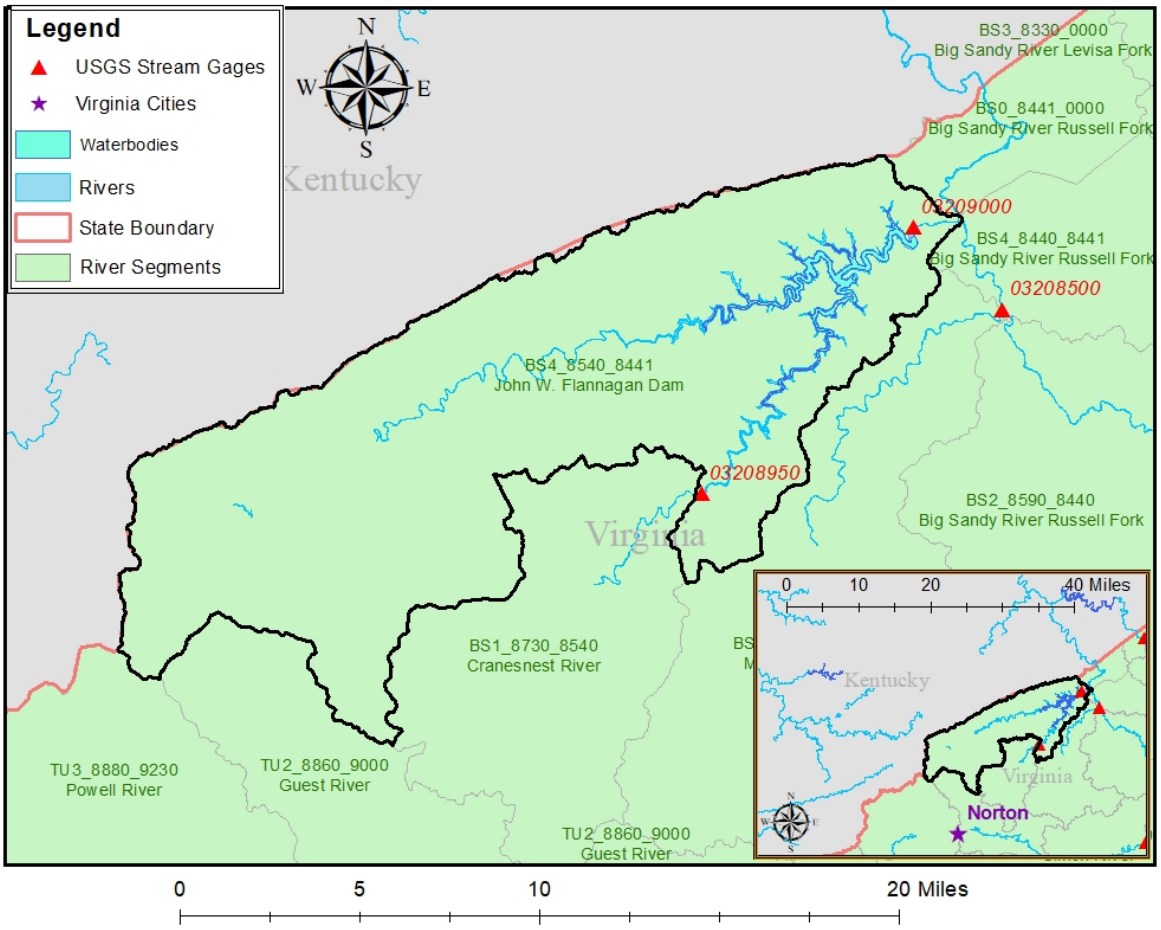

This river segment follows part of the flow of the Pound River, a tributary of the Big Sandy River. The gage is located in Dickenson County, VA (Lat 3714'13", Long 8220'36") approximately 26 miles northeast of Norton, VA. Drainage area is 221 sq. miles. This gage started taking data in 1926 and is still collecting data. Flow in this area is completely regulated by the Flannagan Dam, approximately 1,700 ft upstream. There is a possibility that some water will bypass the station if the reservoir fills completely and overflows across the spillway, this water will travel down the Cane Branch and return to the Pound River 4,600 ft below the gage. The average daily discharge error between the model and gage data for the 20 year timespan was -0.7%, with 50.4% of its rolling three month time spans above 20% error.

Table 1: Monthly Low Flows

	USGS Gage	Model	Pct. Error
Jan. Low Flow	51	54	-5.88
Feb. Low Flow	70	65.7	6.14
Mar. Low Flow	57	90.8	-59.3
Apr. Low Flow	46	147	-220
May Low Flow	92	183	-98.9
Jun. Low Flow	70	174	-149
Jul. Low Flow	51	54	-5.88
Aug. Low Flow	58	54	6.9
Sep. Low Flow	53	54	-1.89
Oct. Low Flow	46	54	-17.4
Nov. Low Flow	46	54	-17.4
Dec. Low Flow	46	54	-17.4

Table 2: Monthly Average Flows

	USGS Gage	Model	Pct. Error
Overall Mean Flow	287	289	-0.7
Jan. Mean Flow	368	414	-12.5
Feb. Mean Flow	534	612	-14.6
Mar. Mean Flow	505	536	-6.14
Apr. Mean Flow	308	310	-0.65
May Mean Flow	325	162	50.2
Jun. Mean Flow	228	184	19.3
Jul. Mean Flow	138	112	18.8
Aug. Mean Flow	120	115	4.17
Sep. Mean Flow	94.5	118	-24.9
Oct. Mean Flow	226	365	-61.5
Nov. Mean Flow	292	216	26
Dec. Mean Flow	319	336	-5.33

Table 3: Monthly High Flows

	USGS Gage	Model	Pct. Error
Jan. High Flow	383	738	-92.7
Feb. High Flow	669	709	-5.98
Mar. High Flow	949	774	18.4
Apr. High Flow	1160	1090	6.03
May High Flow	1740	1990	-14.4
Jun. High Flow	1360	1390	-2.21
Jul. High Flow	673	795	-18.1
Aug. High Flow	1260	394	68.7
Sep. High Flow	399	243	39.1
Oct. High Flow	365	199	45.5
Nov. High Flow	286	226	21
Dec. High Flow	119	150	-26.1

Table 4: Period Low Flows

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	8.5	54	-535
Med. 1 Day Min	23	54	-135
Min. 3 Day Min	8.63	54	-526
Med. 3 Day Min	39	54	-38.5
Min. 7 Day Min	10.9	54	-395
Med. 7 Day Min	41	54	-31.7
Min. 30 Day Min	38.4	54	-40.6
Med. 30 Day Min	56	54	3.57
Min. 90 Day Min	48.1	54	-12.3
Med. 90 Day Min	78.9	69.1	12.4
7Q10	16.3	54.6	-235
Year of 90-Day Min. Flow	1995	1988	100
Drought Year Mean	239	280	-17.2
Mean Baseflow	101	133	-31.7

Table 5: Period High Flows

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	4010	3690	7.98
Med. 1 Day Max	2920	2540	13
Max. 3 Day Max	3700	3620	2.16
Med. 3 Day Max	2350	2310	1.7
Max. 7 Day Max	2650	3340	-26
Med. 7 Day Max	1760	1500	14.8
Max. 30 Day Max	1630	1770	-8.59
Med. 30 Day Max	845	823	2.6
Max. 90 Day Max	1080	1300	-20.4
Med. 90 Day Max	562	558	0.71

Table 6: Non-Exceedance Flows

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	16.7	54	-223
5% Non-Exceedance	44	54	-22.7
50% Non-Exceedance	145	156	-7.59
95% Non-Exceedance	1060	896	15.5
99% Non-Exceedance	2260	2380	-5.31
Sept. 10% Non-Exceedance	54	45	16.7

Fig. 1: Hydrograph

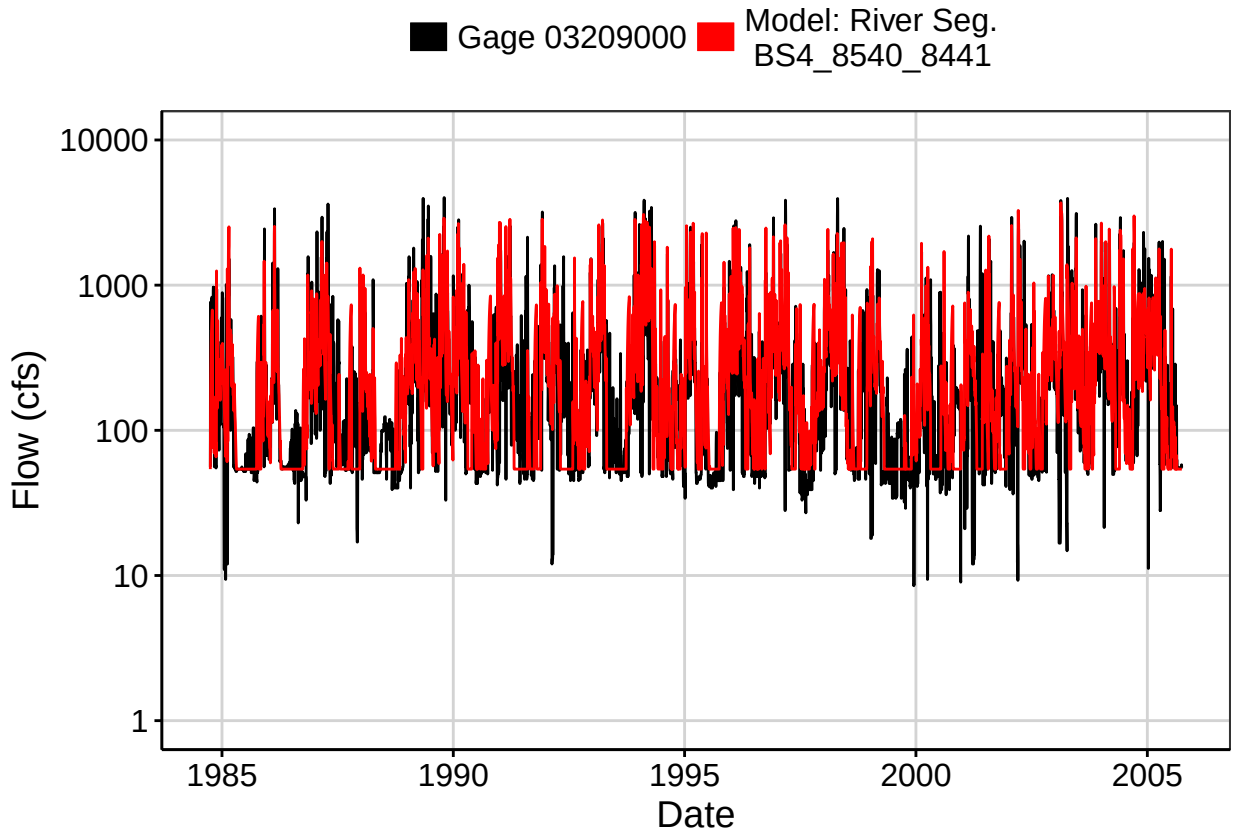

Fig. 2: Zoomed Hydrograph

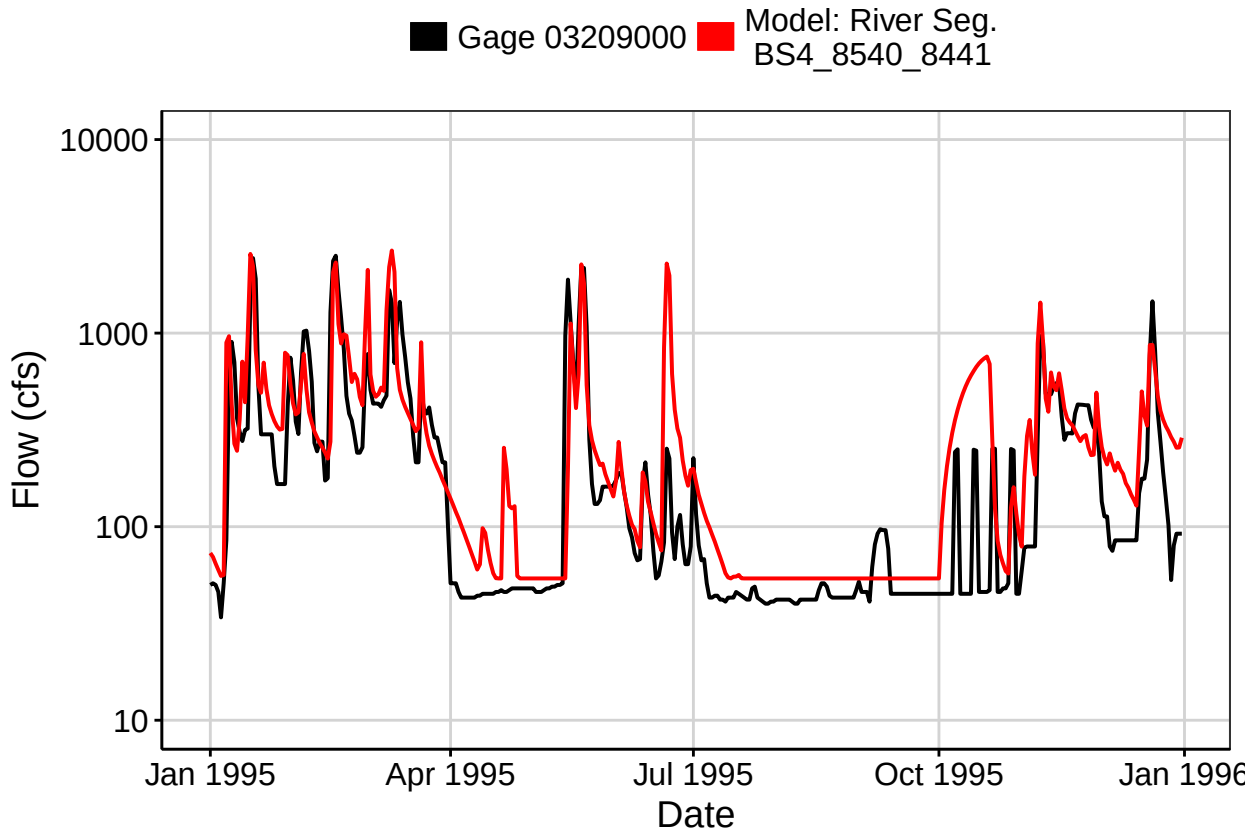

Fig. 3: Flow Exceedance

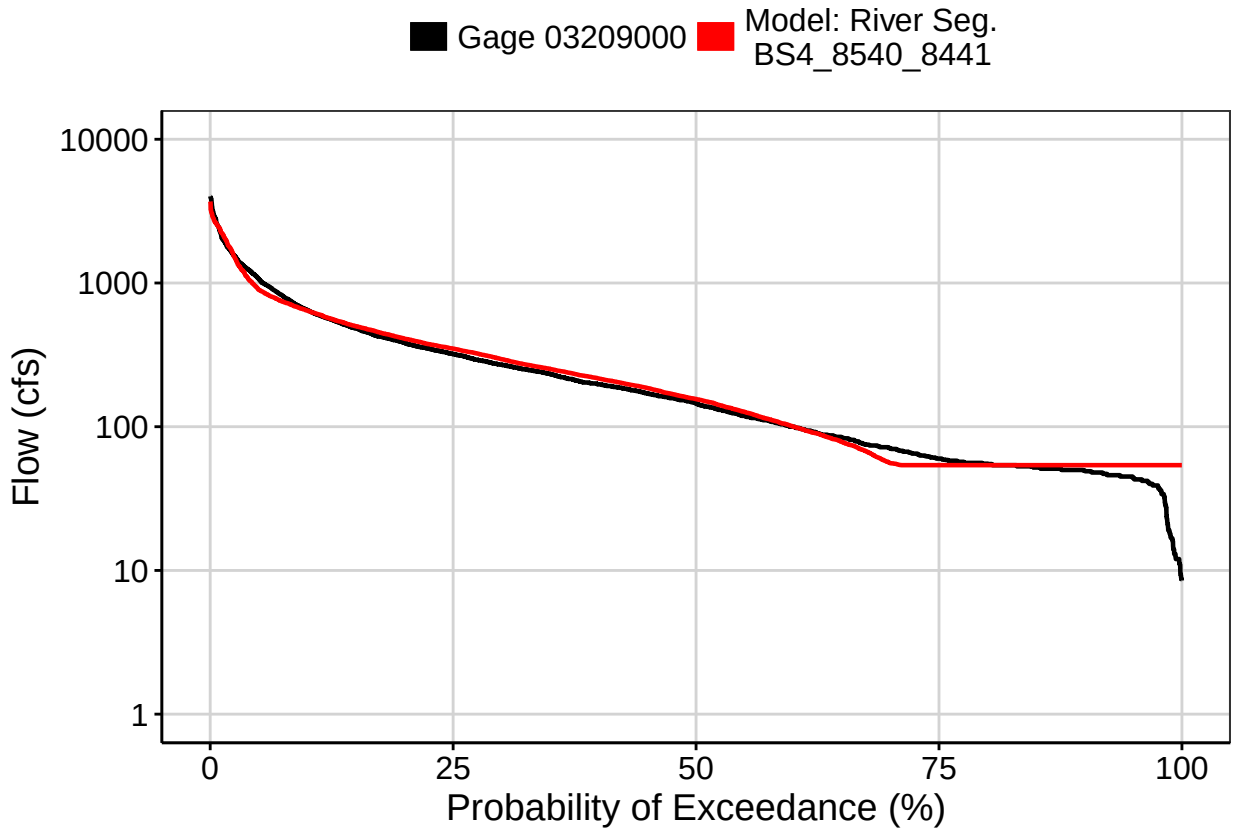

Fig. 4: Baseflow

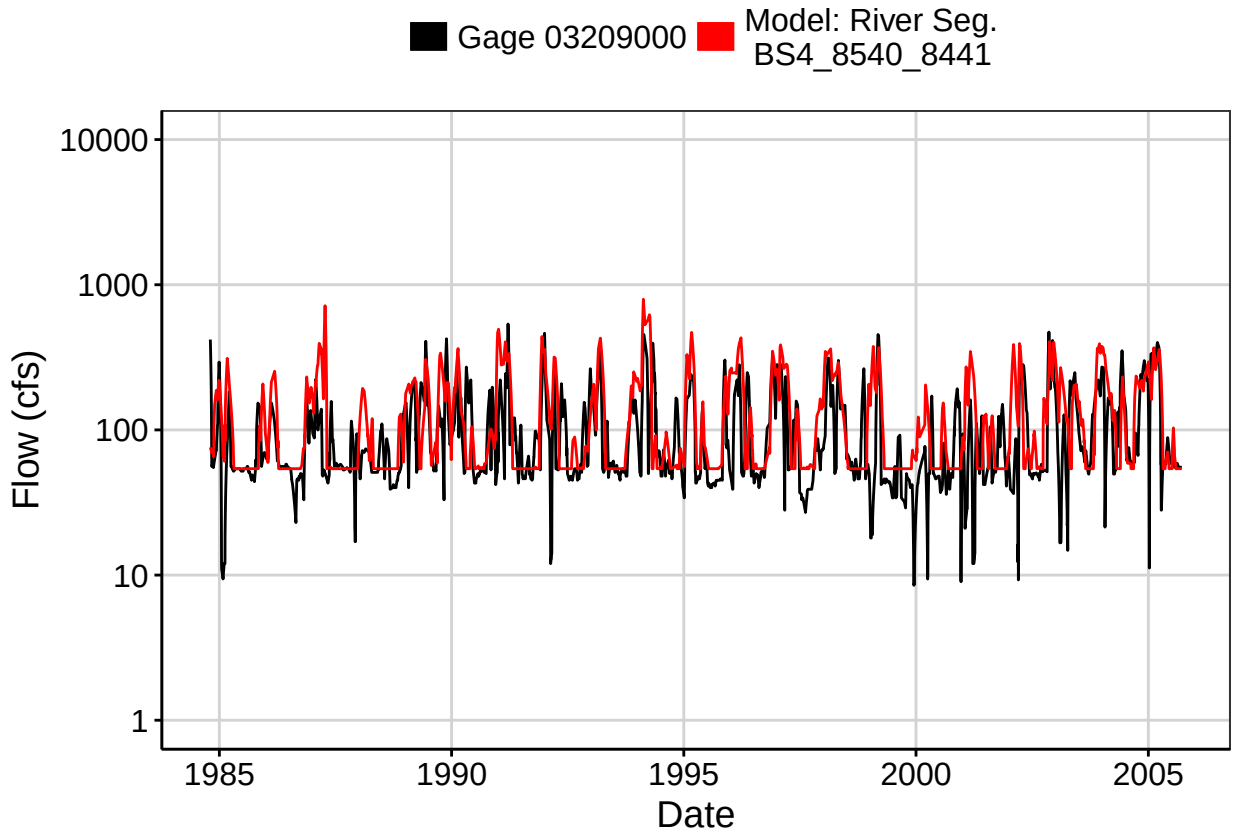

Fig. 5: Combined Baseflow

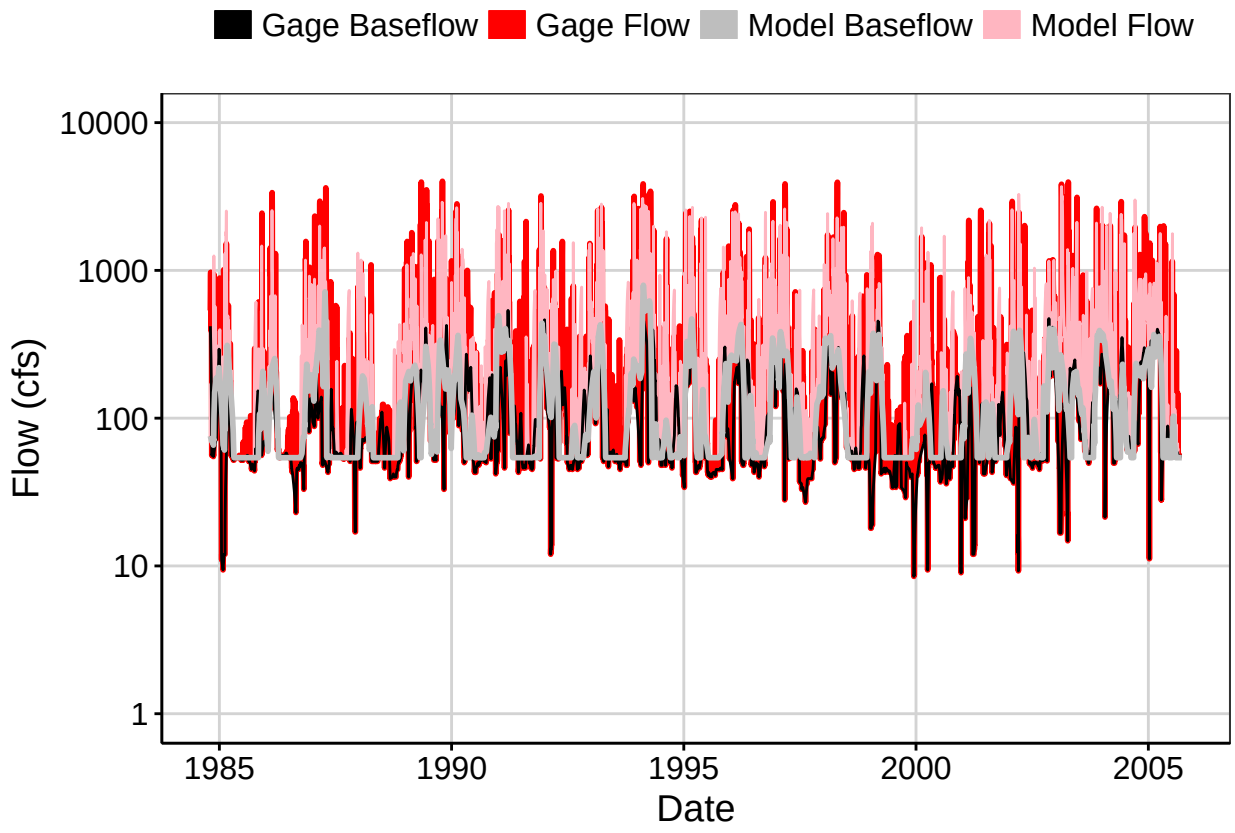

Fig. 6: Largest Error Segment

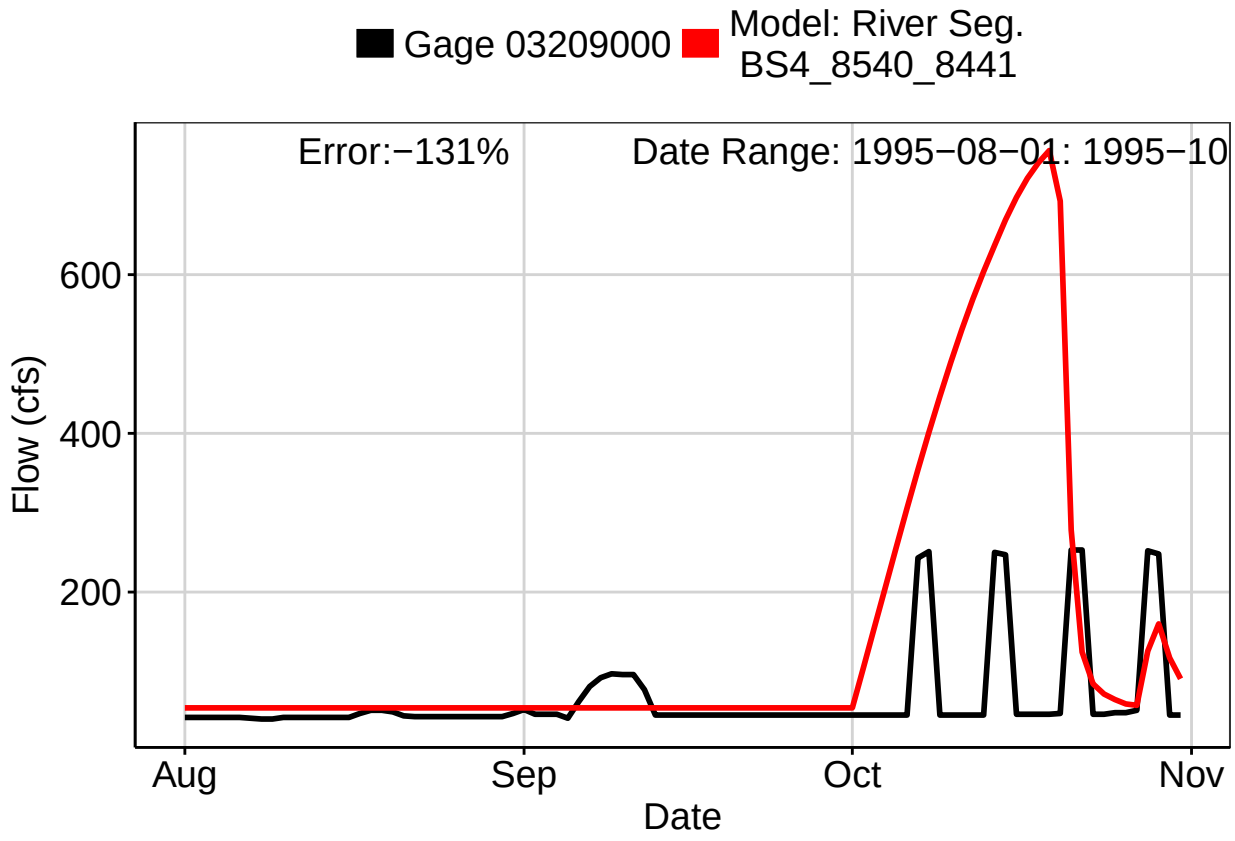

Fig. 7: Second Largest Error Segment

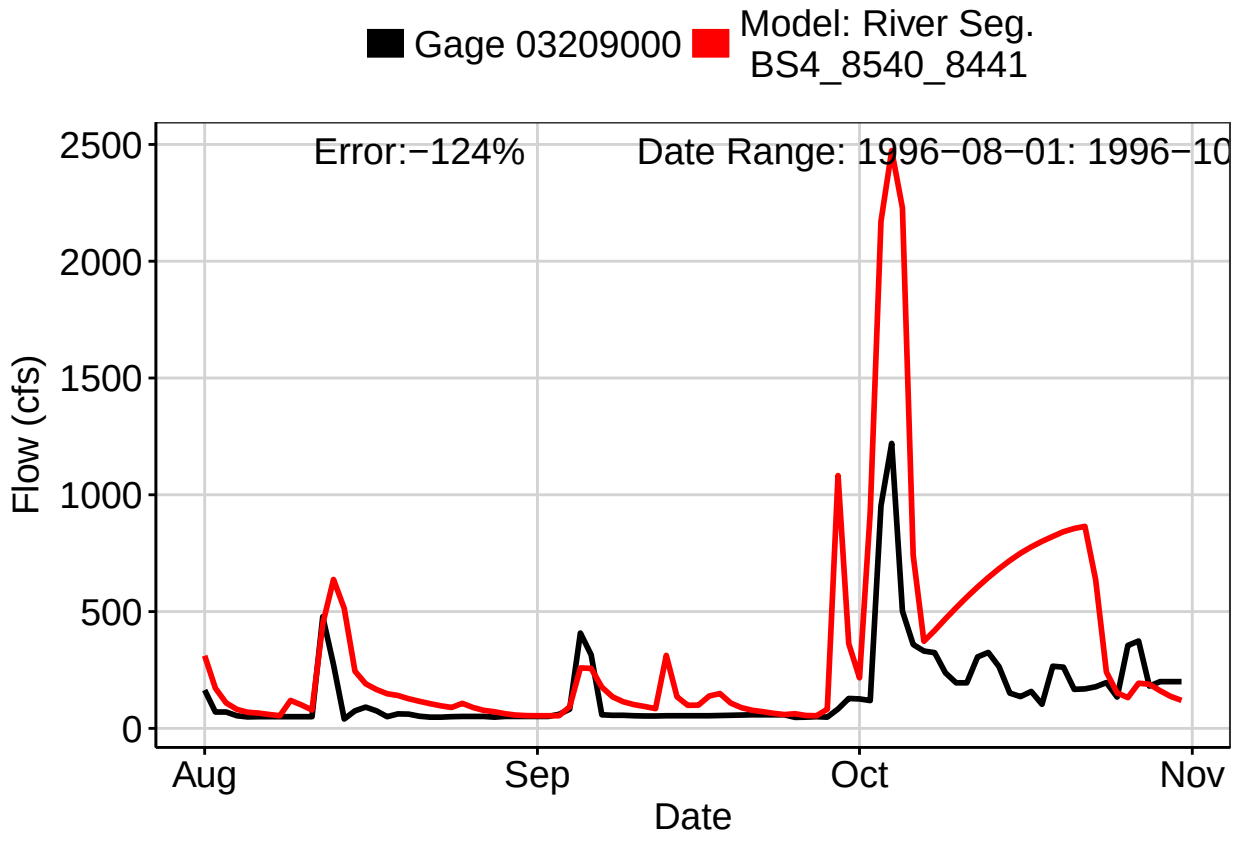

Fig. 8: Third Largest Error Segment

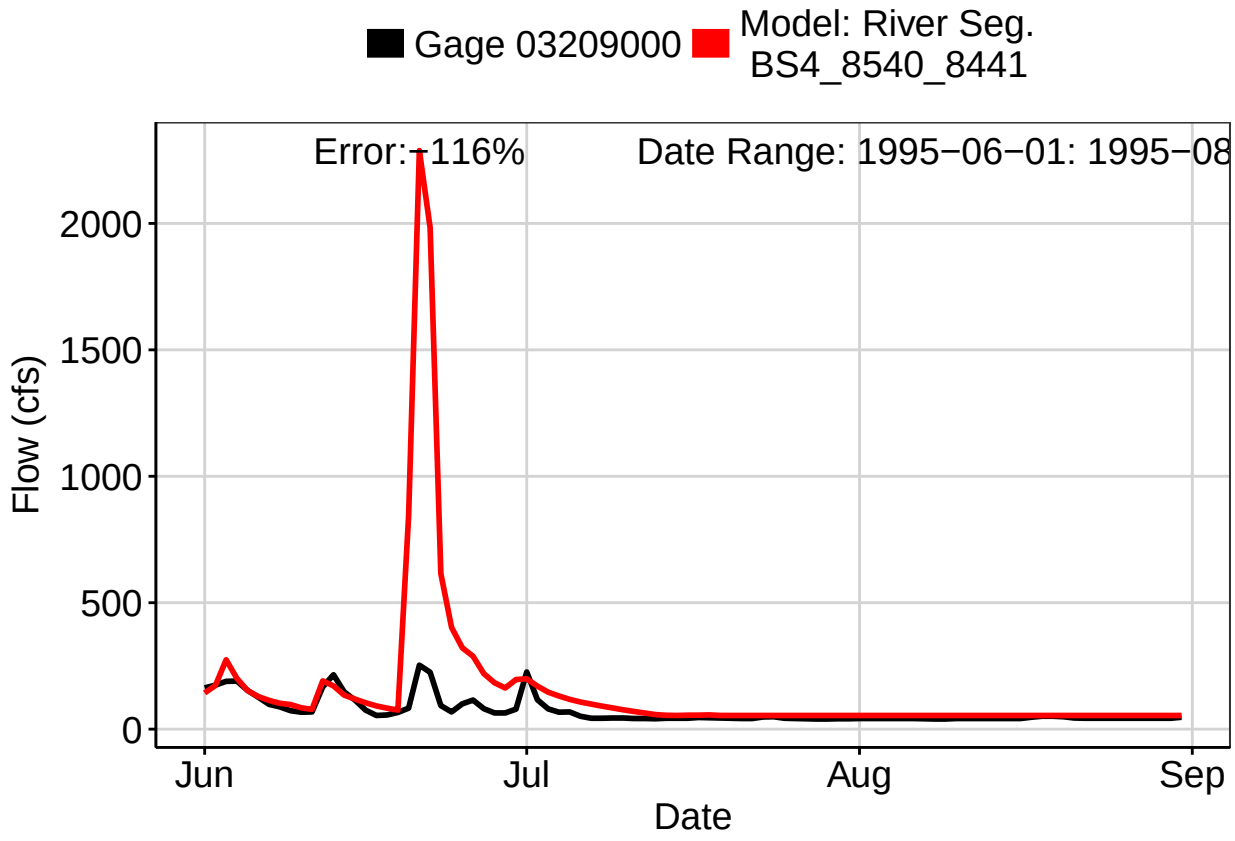

Fig. 9: Residuals Plot