03208950 vs. BS1_8730_8540

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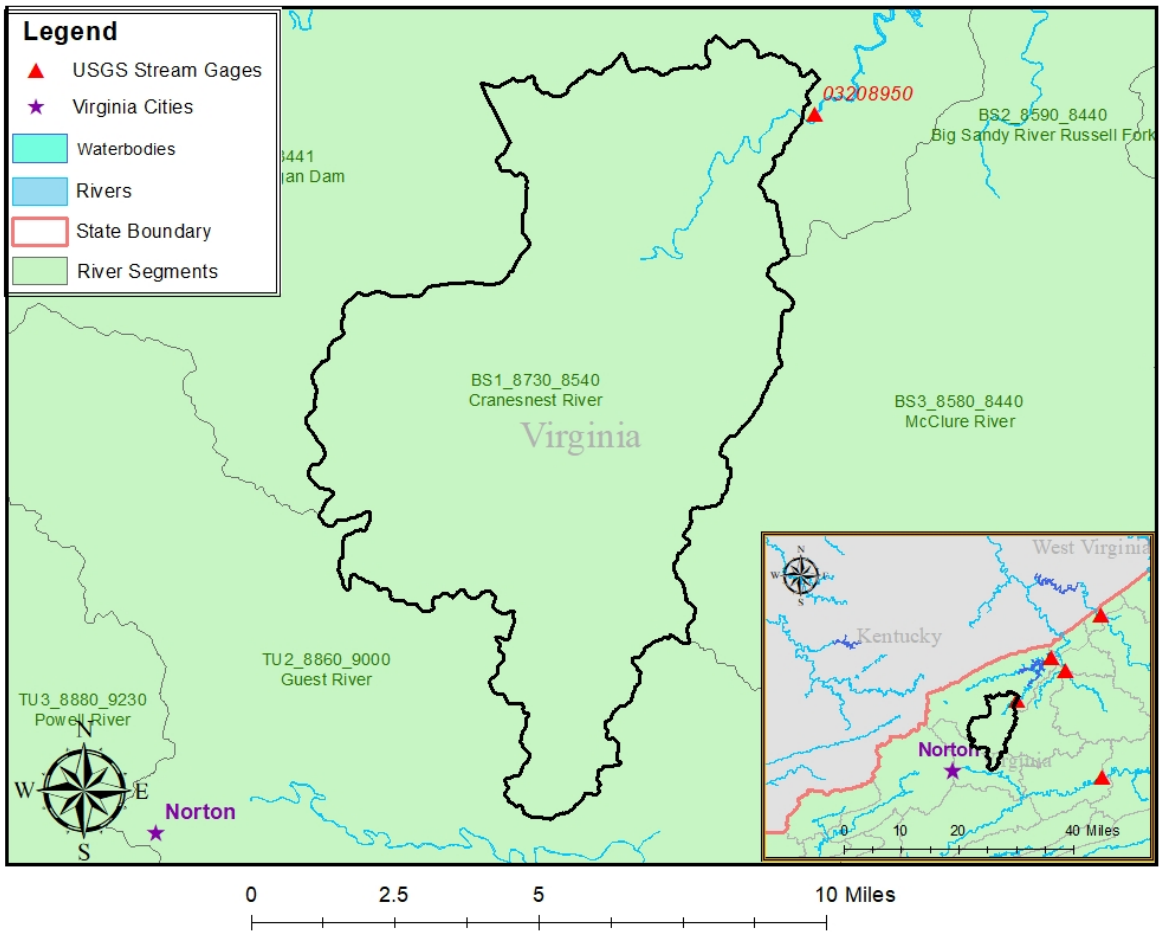

This river segment follows part of the flow of the Cranes Nest River, a tributary of the Big Sandy River. The gage is located in Dickenson County, VA (Lat 3707'26", Long 8226'20") approximately 17 miles northeast of Norton, VA. Drainage area is 66.5 sq. miles. This gage started taking data in 1963 and is still taking data. This area is not regulated and should not have any man-made alterations that could affect flow conditions. The average daily discharge error between the model and gage data for the 20 year timespan was -13.1%, with 55.8% of its rolling three month time spans above 20% error.

Table 1: Monthly Low Flows

	USGS Gage	Model	Pct. Error
Jan. Low Flow	8.3	7.89	4.94
Feb. Low Flow	12	21.3	-77.5
Mar. Low Flow	16	26.1	-63.1
Apr. Low Flow	30	44.8	-49.3
May Low Flow	48	58.2	-21.3
Jun. Low Flow	54	53.3	1.3
Jul. Low Flow	54	38.7	28.3
Aug. Low Flow	32.6	24.5	24.8
Sep. Low Flow	19	14.5	23.7
Oct. Low Flow	14	12	14.3
Nov. Low Flow	11	14.6	-32.7
Dec. Low Flow	9.4	8.44	10.2

Table 2: Monthly Average Flows

	USGS Gage	Model	Pct. Error
Overall Mean Flow	77.6	87.8	-13.1
Jan. Mean Flow	102	125	-22.5
Feb. Mean Flow	156	187	-19.9
Mar. Mean Flow	156	164	-5.13
Apr. Mean Flow	134	118	11.9
May Mean Flow	90.1	85.5	5.11
Jun. Mean Flow	61.1	57.4	6.06
Jul. Mean Flow	39.5	38.6	2.28
Aug. Mean Flow	33.8	37.9	-12.1
Sep. Mean Flow	25.3	36.2	-43.1
Oct. Mean Flow	25	42.4	-69.6
Nov. Mean Flow	39.2	64.3	-64
Dec. Mean Flow	75	104	-38.7

Table 3: Monthly High Flows

	USGS Gage	Model	Pct. Error
Jan. High Flow	36	74	-106
Feb. High Flow	163	211	-29.4
Mar. High Flow	231	251	-8.66
Apr. High Flow	380	325	14.5
May High Flow	596	591	0.84
Jun. High Flow	411	422	-2.68
Jul. High Flow	255	280	-9.8
Aug. High Flow	243	349	-43.6
Sep. High Flow	97	81.4	16.1
Oct. High Flow	118	78.7	33.3
Nov. High Flow	79	76.3	3.42
Dec. High Flow	55	56	-1.82

Table 4: Period Low Flows

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	3	0	100
Med. 1 Day Min	7.4	5	32.4
Min. 3 Day Min	3.33	0.01	99.6
Med. 3 Day Min	7.53	5.5	27
Min. 7 Day Min	4.41	0.35	92.1
Med. 7 Day Min	7.84	6.58	16.1
Min. 30 Day Min	5.1	4.37	14.3
Med. 30 Day Min	11.2	13	-16.1
Min. 90 Day Min	8.91	9.15	-2.69
Med. 90 Day Min	18.7	25.2	-34.8
7Q10	5.15	1.43	72.2
Year of 90-Day Min. Flow	1999	1988	100
Drought Year Mean	46.3	56.8	-22.7
Mean Baseflow	35.5	41.3	-16.3

Table 5: Period High Flows

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	3750	3250	13.3
Med. 1 Day Max	1020	1360	-33.3
Max. 3 Day Max	1710	1890	-10.5
Med. 3 Day Max	755	717	5.03
Max. 7 Day Max	873	1190	-36.3
Med. 7 Day Max	477	488	-2.31
Max. 30 Day Max	451	556	-23.3
Med. 30 Day Max	247	268	-8.5
Max. 90 Day Max	320	412	-28.7
Med. 90 Day Max	162	180	-11.1

Table 6: Non-Exceedance Flows

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	5.7	3.5	38.6
5% Non-Exceedance	8.3	8.3	0
50% Non-Exceedance	39.9	49.6	-24.3
95% Non-Exceedance	247	267	-8.1
99% Non-Exceedance	607	703	-15.8
Sept. 10% Non-Exceedance	5.95	7.6	-27.7

Fig. 1: Hydrograph

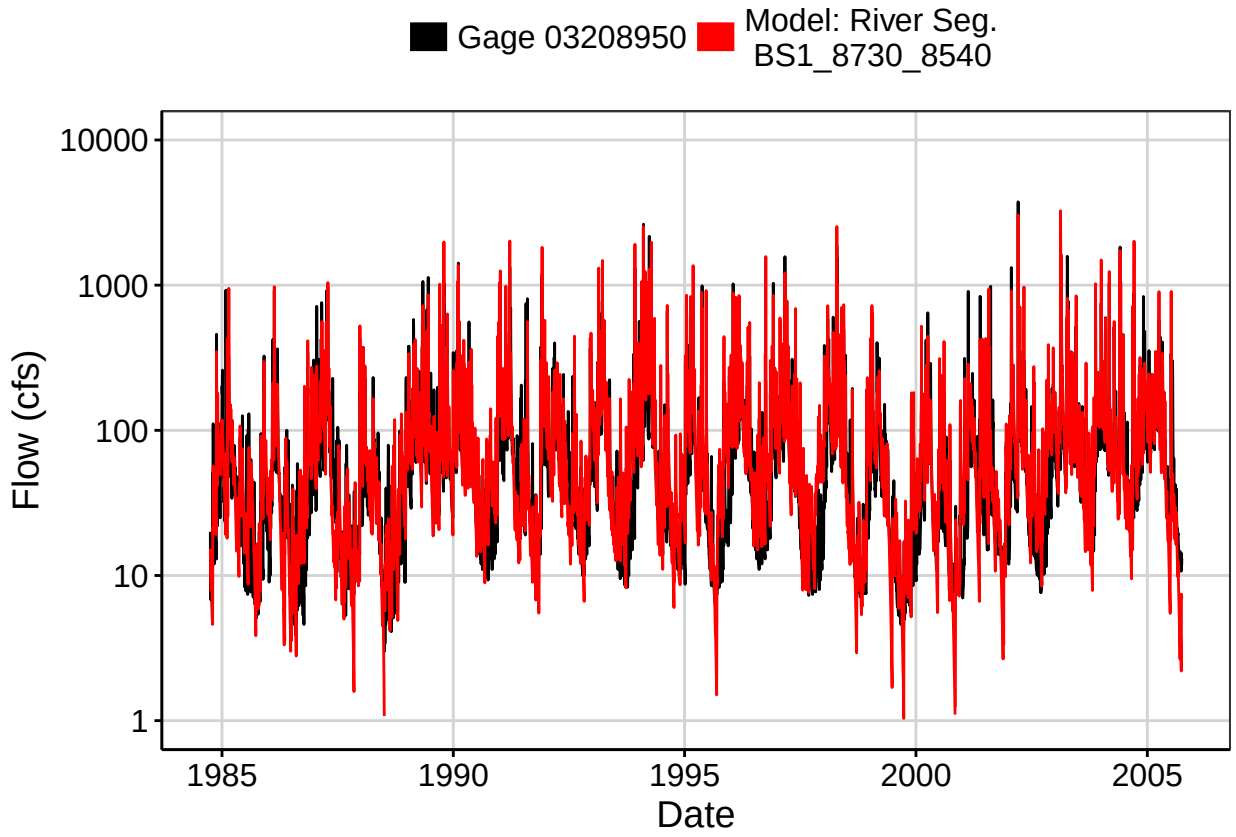

Fig. 2: Zoomed Hydrograph

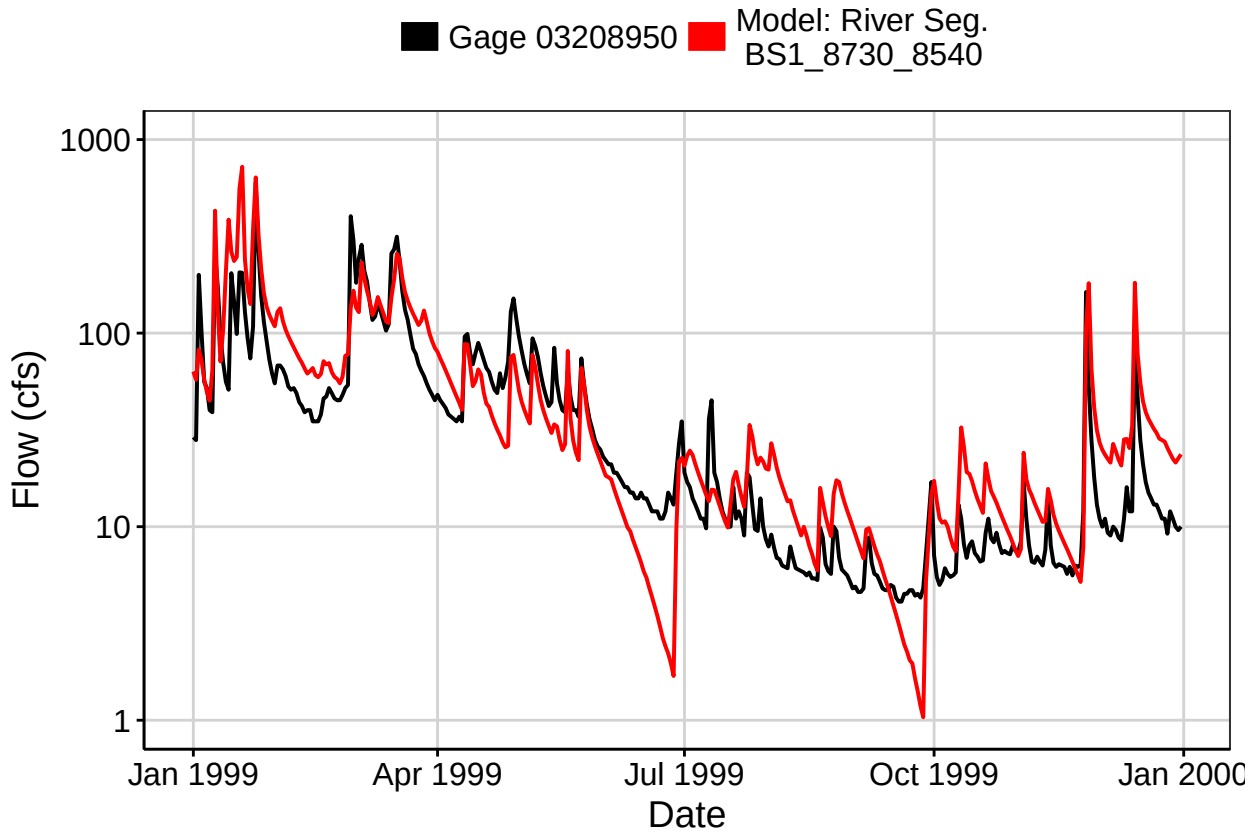

Fig. 3: Flow Exceedance

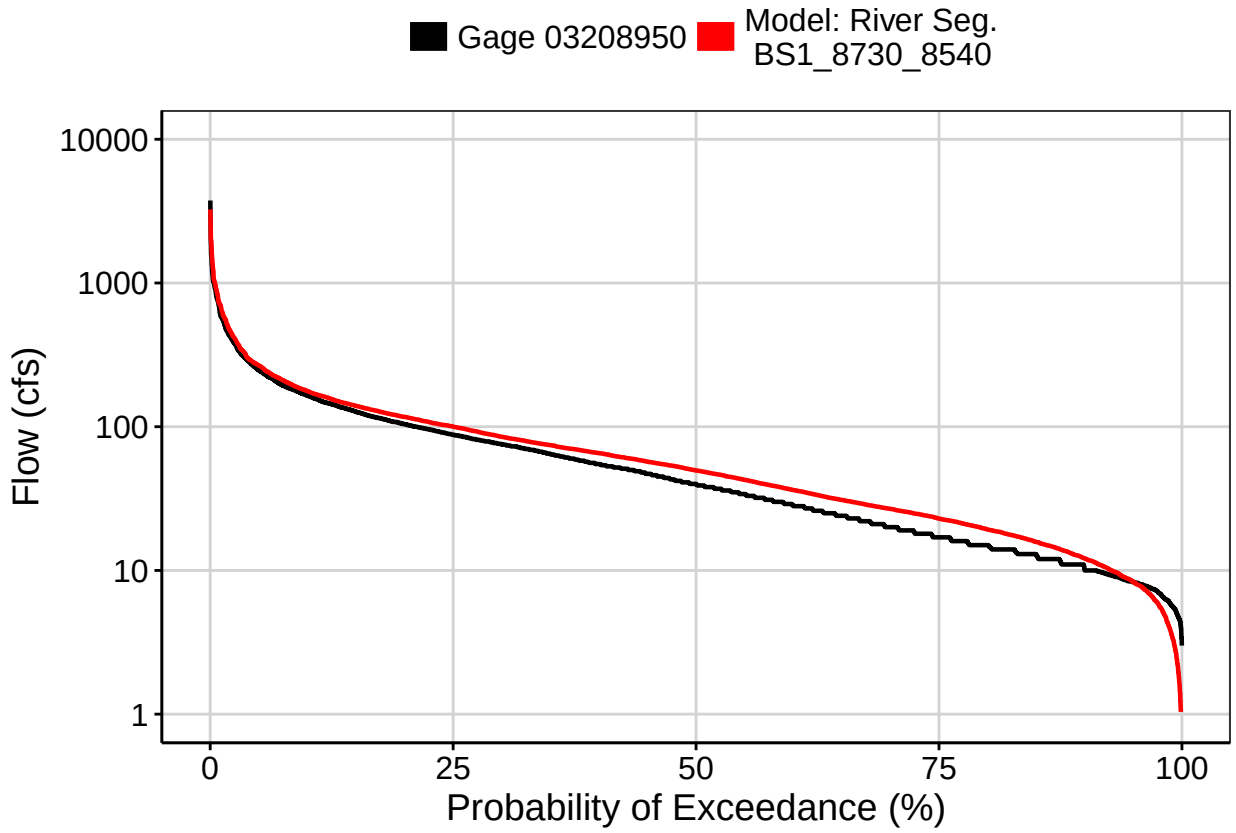

Fig. 4: Baseflow

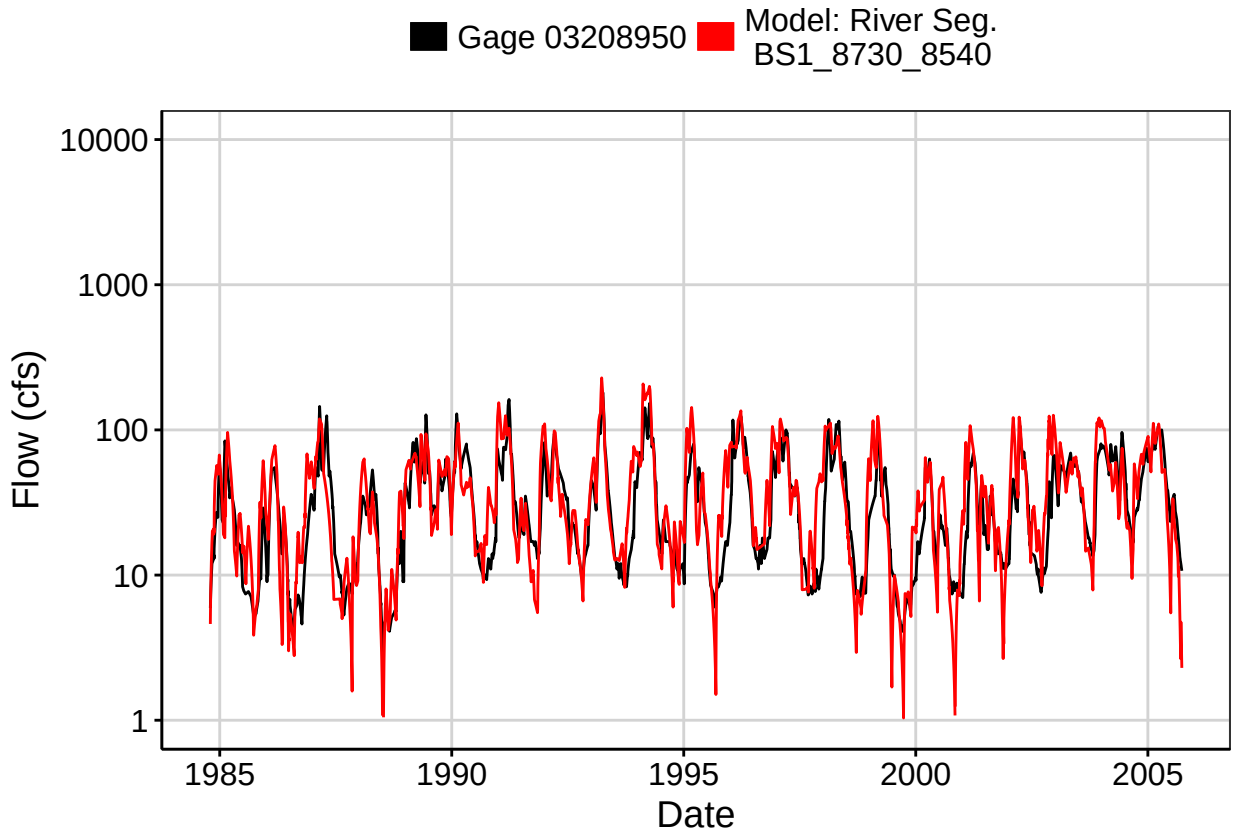

Fig. 5: Combined Baseflow

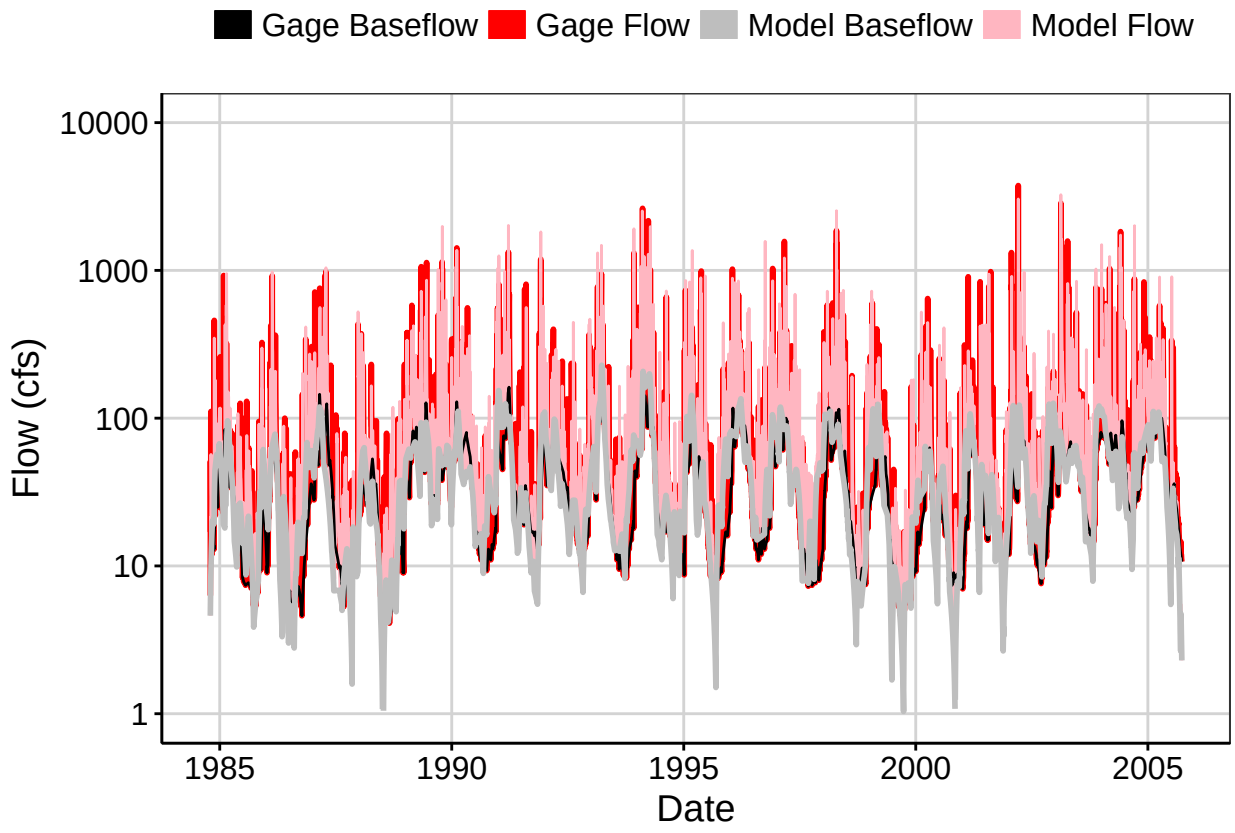

Fig. 6: Largest Error Segment

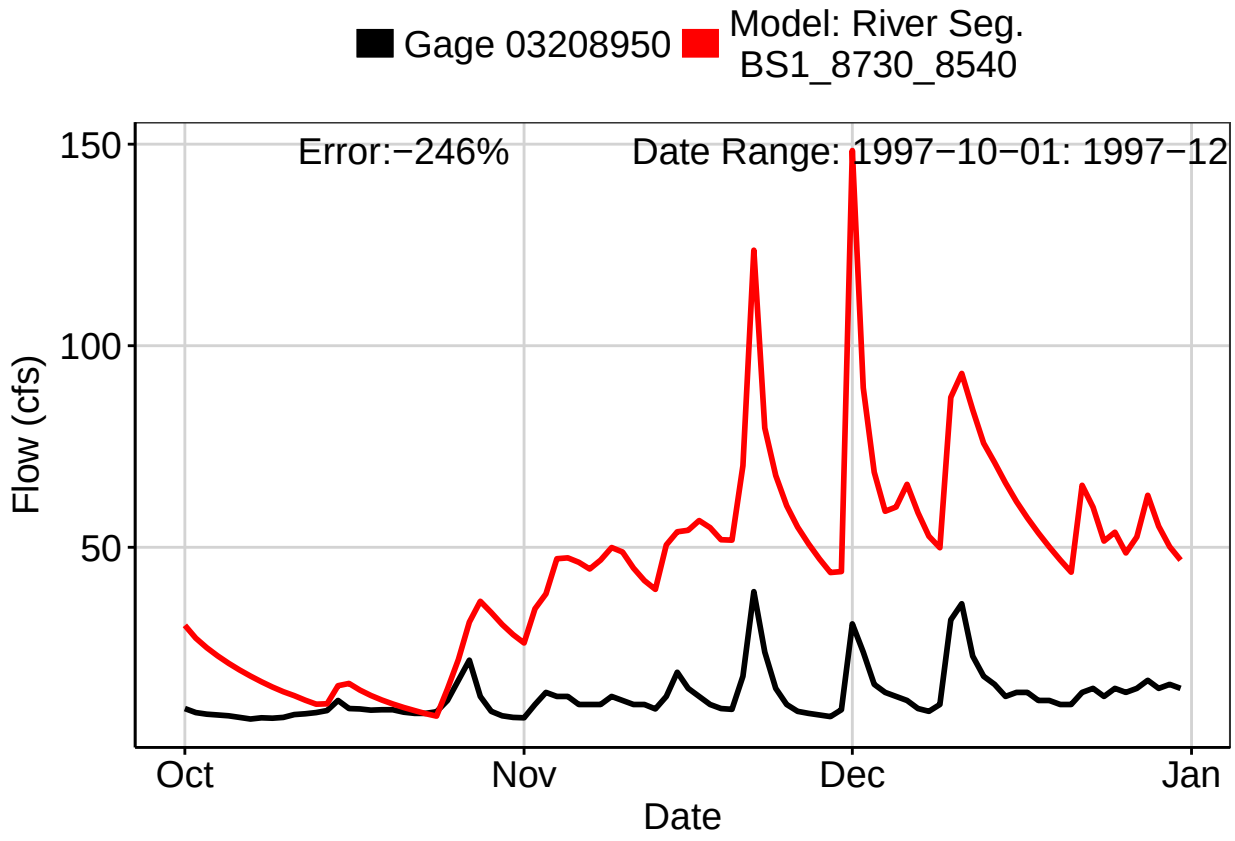

Fig. 7: Second Largest Error Segment

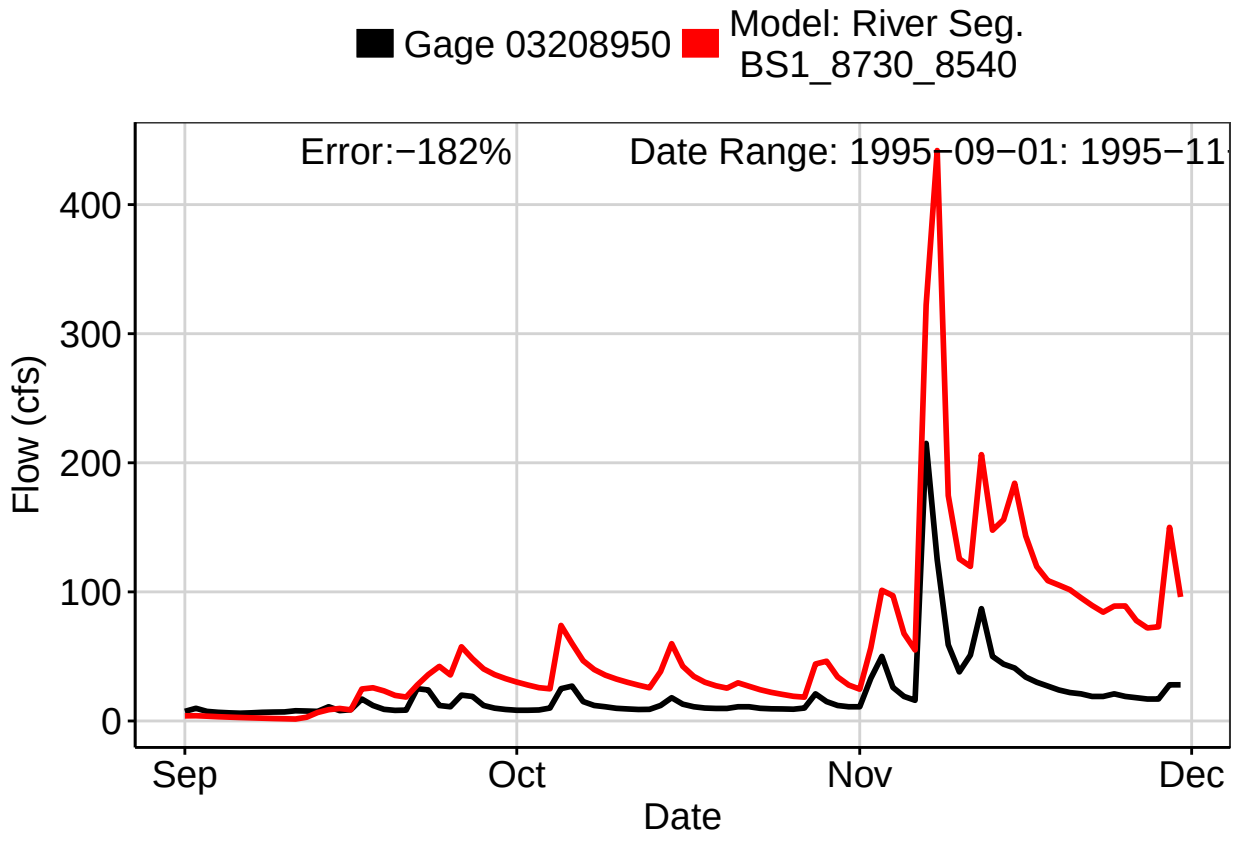

Fig. 8: Third Largest Error Segment

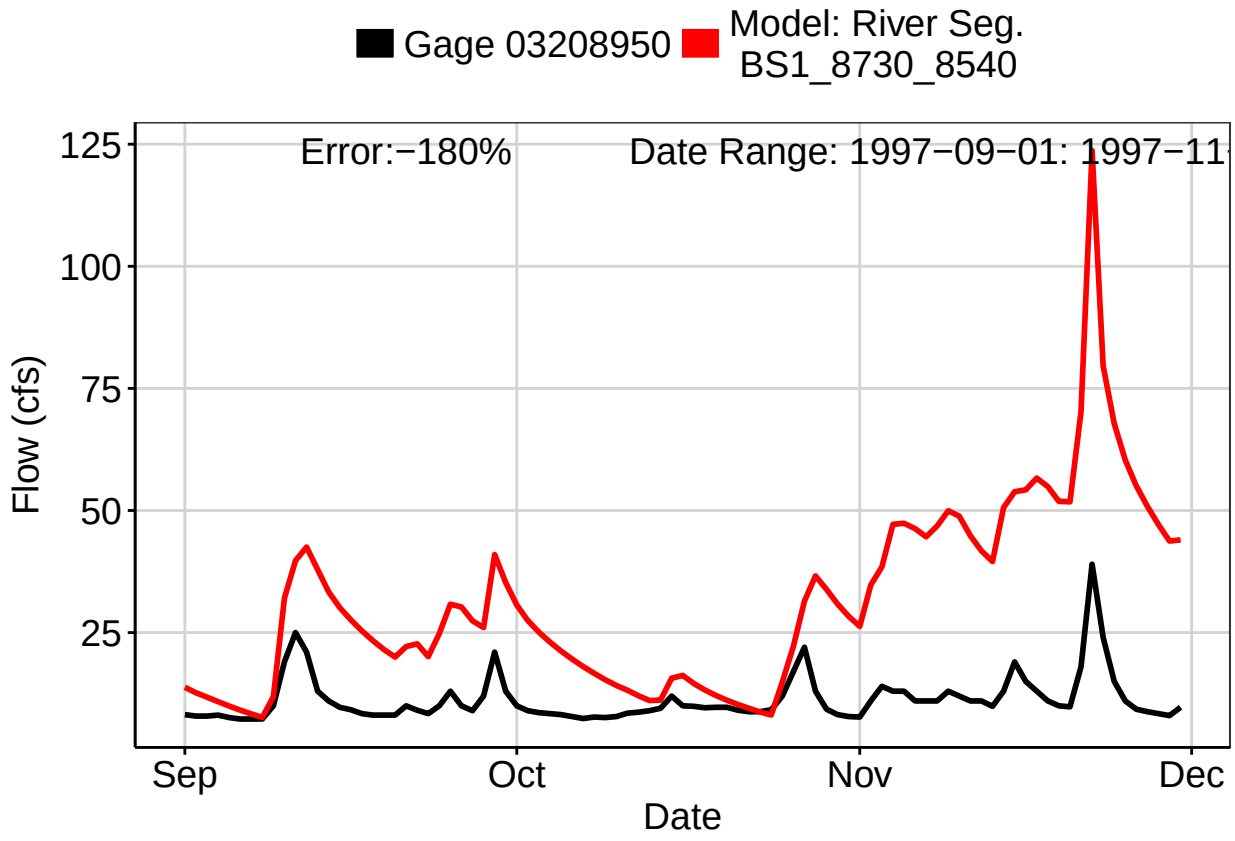

Fig. 9: Residuals Plot