03207800 vs. BS3_8350_8330

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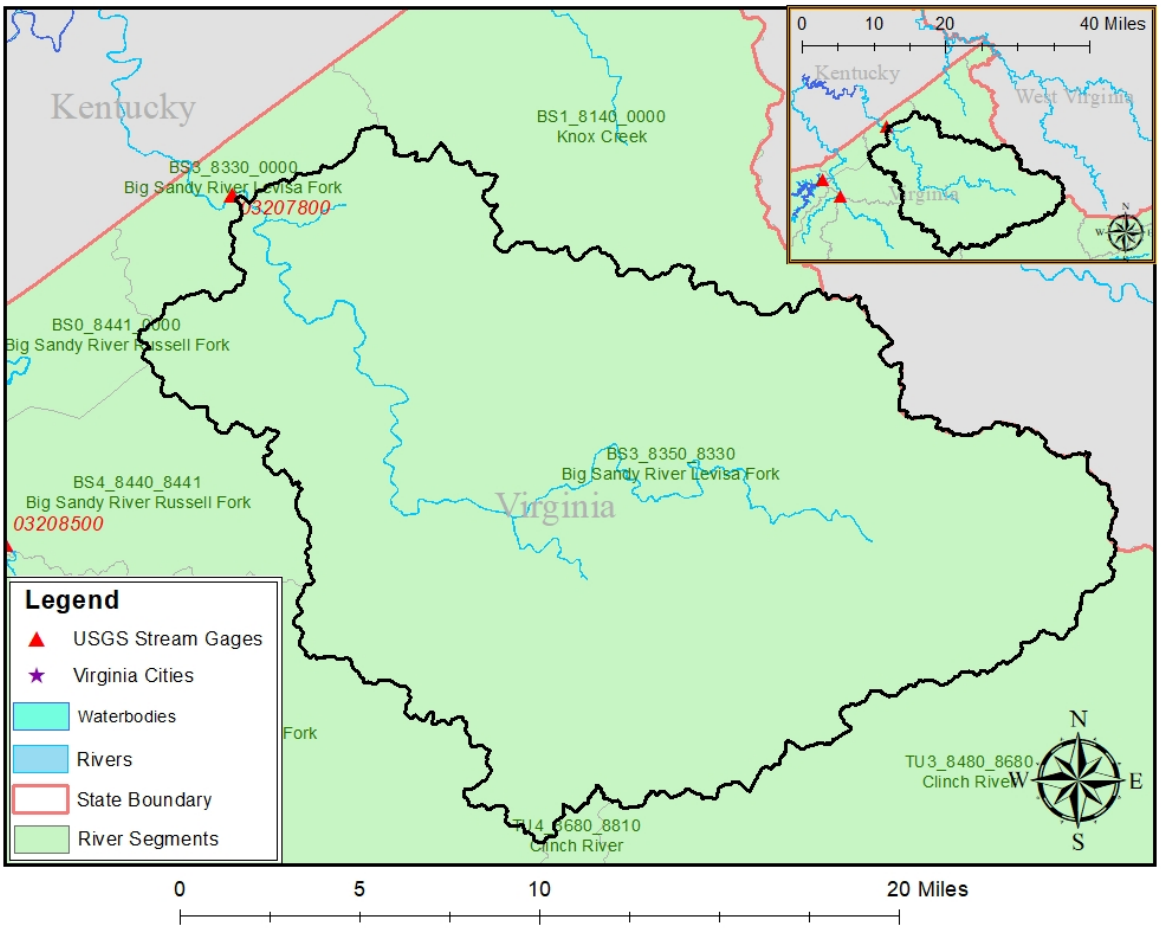

This river segment follows part of the flow of the Levisa Fork of the Big Sandy River. The gage is located in Buchanan County, VA (Lat 3721'13", Long 8211'45") approximately 40 miles northeast of Norton, VA. Drainage area is 297 sq. miles. This gage started taking data in 1967 and is still taking data. This area is not regulated and should not have any anthropogenic alterations to the flow. The average daily discharge error between the model and gage data for the 20 year timespan was -3.71%, with 56.2% of its rolling three month time spans above 20% error.

Table 1: Monthly Low Flows

	USGS Gage	Model	Pct. Error
Jan. Low Flow	32	56.3	-75.9
Feb. Low Flow	38	65.6	-72.6
Mar. Low Flow	88	174	-97.7
Apr. Low Flow	140	273	-95
May Low Flow	250	337	-34.8
Jun. Low Flow	264	330	-25
Jul. Low Flow	272	260	4.41
Aug. Low Flow	154	172	-11.7
Sep. Low Flow	90	121	-34.4
Oct. Low Flow	62.8	6.39	89.8
Nov. Low Flow	53	19.1	64
Dec. Low Flow	33	12.3	62.7

Table 2: Monthly Average Flows

	USGS Gage	Model	Pct. Error
Overall Mean Flow	377	391	-3.71
Jan. Mean Flow	495	538	-8.69
Feb. Mean Flow	728	735	-0.96
Mar. Mean Flow	742	683	7.95
Apr. Mean Flow	691	571	17.4
May Mean Flow	505	479	5.15
Jun. Mean Flow	295	291	1.36
Jul. Mean Flow	193	197	-2.07
Aug. Mean Flow	138	177	-28.3
Sep. Mean Flow	88	140	-59.1
Oct. Mean Flow	110	191	-73.6
Nov. Mean Flow	199	279	-40.2
Dec. Mean Flow	362	435	-20.2

Table 3: Monthly High Flows

	USGS Gage	Model	Pct. Error
Jan. High Flow	186	232	-24.7
Feb. High Flow	696	834	-19.8
Mar. High Flow	1160	987	14.9
Apr. High Flow	1650	1400	15.2
May High Flow	2960	1640	44.6
Jun. High Flow	2010	1760	12.4
Jul. High Flow	1270	1160	8.66
Aug. High Flow	1700	1300	23.5
Sep. High Flow	507	600	-18.3
Oct. High Flow	588	434	26.2
Nov. High Flow	385	228	40.8
Dec. High Flow	207	236	-14

Table 4: Period Low Flows

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	14	0	100
Med. 1 Day Min	25.2	1.67	93.4
Min. 3 Day Min	14.3	0	100
Med. 3 Day Min	26.7	1.97	92.6
Min. 7 Day Min	15.6	0	100
Med. 7 Day Min	28.3	3.32	88.3
Min. 30 Day Min	22.1	2.22	90
Med. 30 Day Min	39.3	28.6	27.2
Min. 90 Day Min	36.1	8.5	76.5
Med. 90 Day Min	99.6	92.6	7.03
7Q10	20.2	0	100
Year of 90-Day Min. Flow	1988	1988	0
Drought Year Mean	121	149	-23.1
Mean Baseflow	175	207	-18.3

Table 5: Period High Flows

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	11200	12200	-8.93
Med. 1 Day Max	4510	5500	-22
Max. 3 Day Max	5880	7180	-22.1
Med. 3 Day Max	3110	3440	-10.6
Max. 7 Day Max	3520	5030	-42.9
Med. 7 Day Max	2040	2220	-8.82
Max. 30 Day Max	2370	2400	-1.27
Med. 30 Day Max	1120	1010	9.82
Max. 90 Day Max	1360	1530	-12.5
Med. 90 Day Max	778	737	5.27

Table 6: Non-Exceedance Flows

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	23	0.72	96.9
5% Non-Exceedance	32	7.94	75.2
50% Non-Exceedance	188	252	-34
95% Non-Exceedance	1250	1160	7.2
99% Non-Exceedance	2820	2940	-4.26
Sept. 10% Non-Exceedance	2.43	27	-1010

Fig. 1: Hydrograph

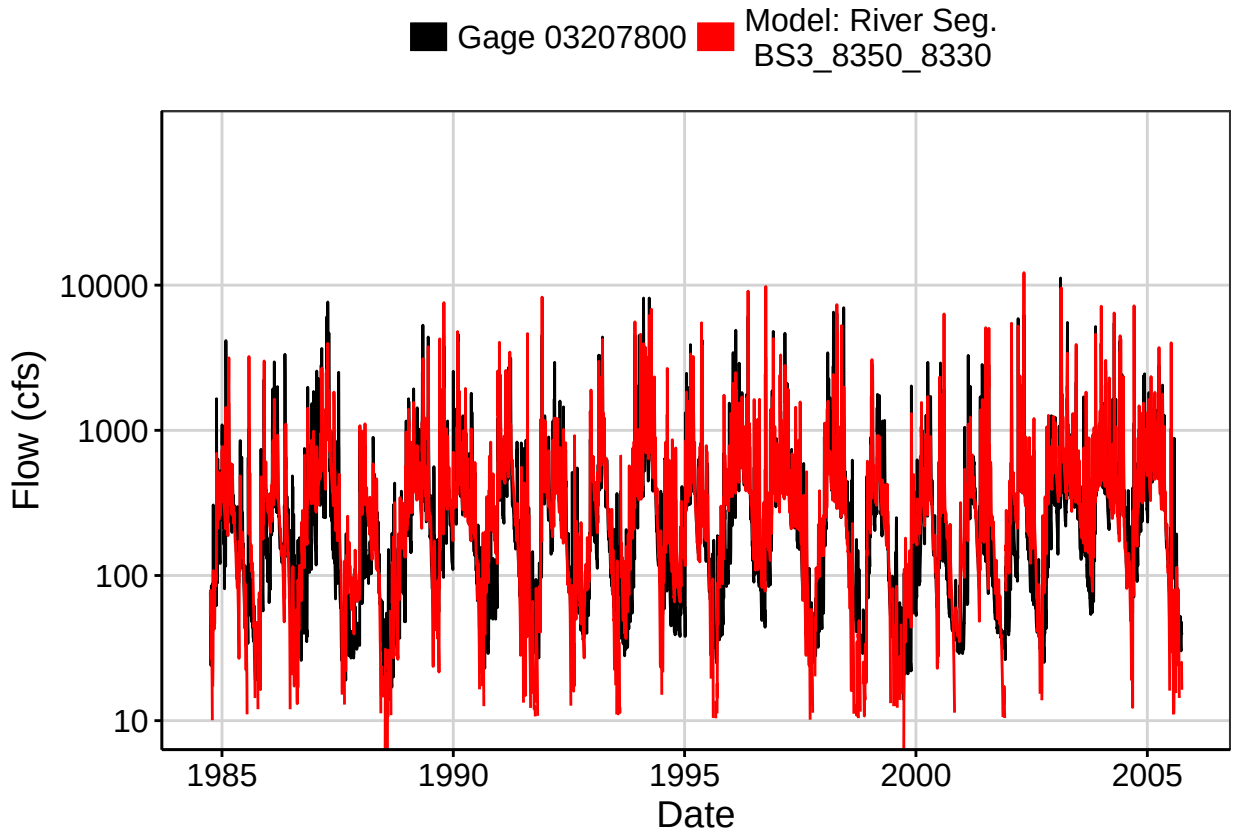

Fig. 2: Zoomed Hydrograph

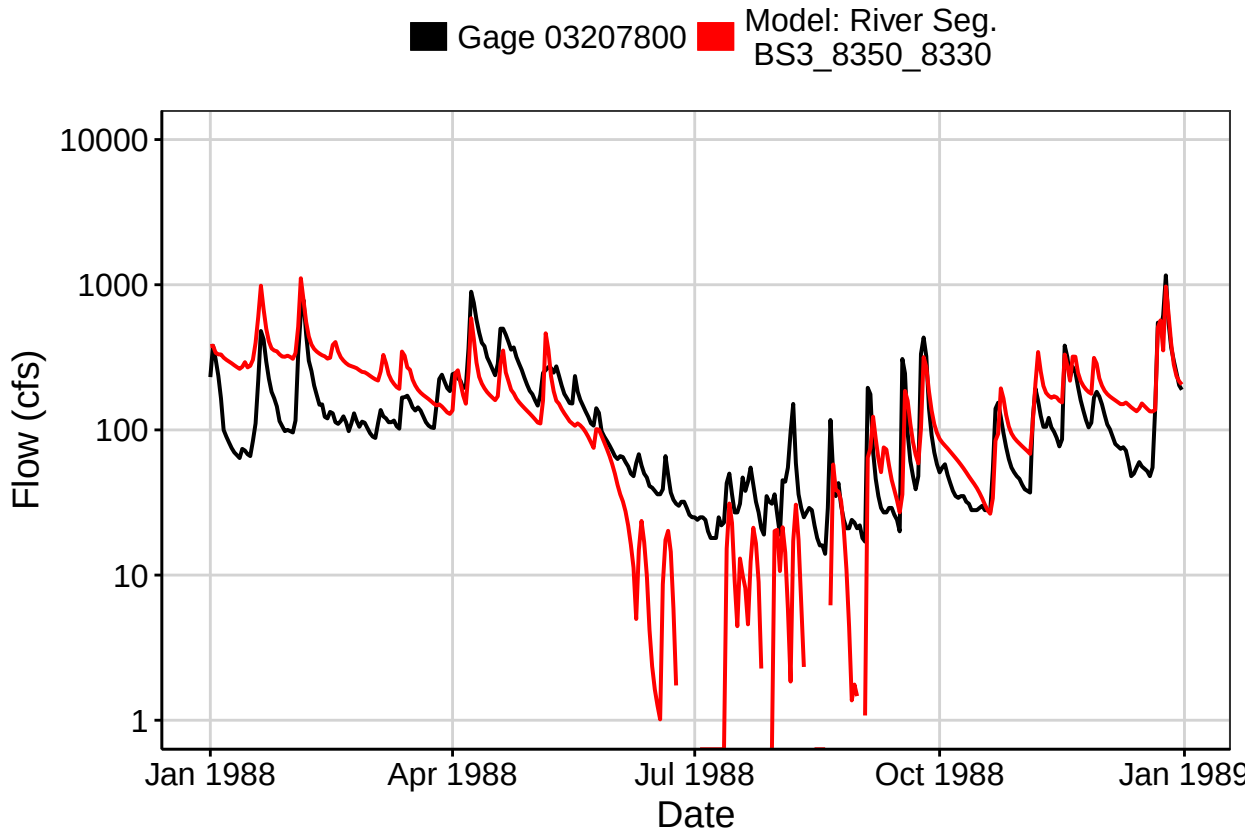

Fig. 3: Flow Exceedance

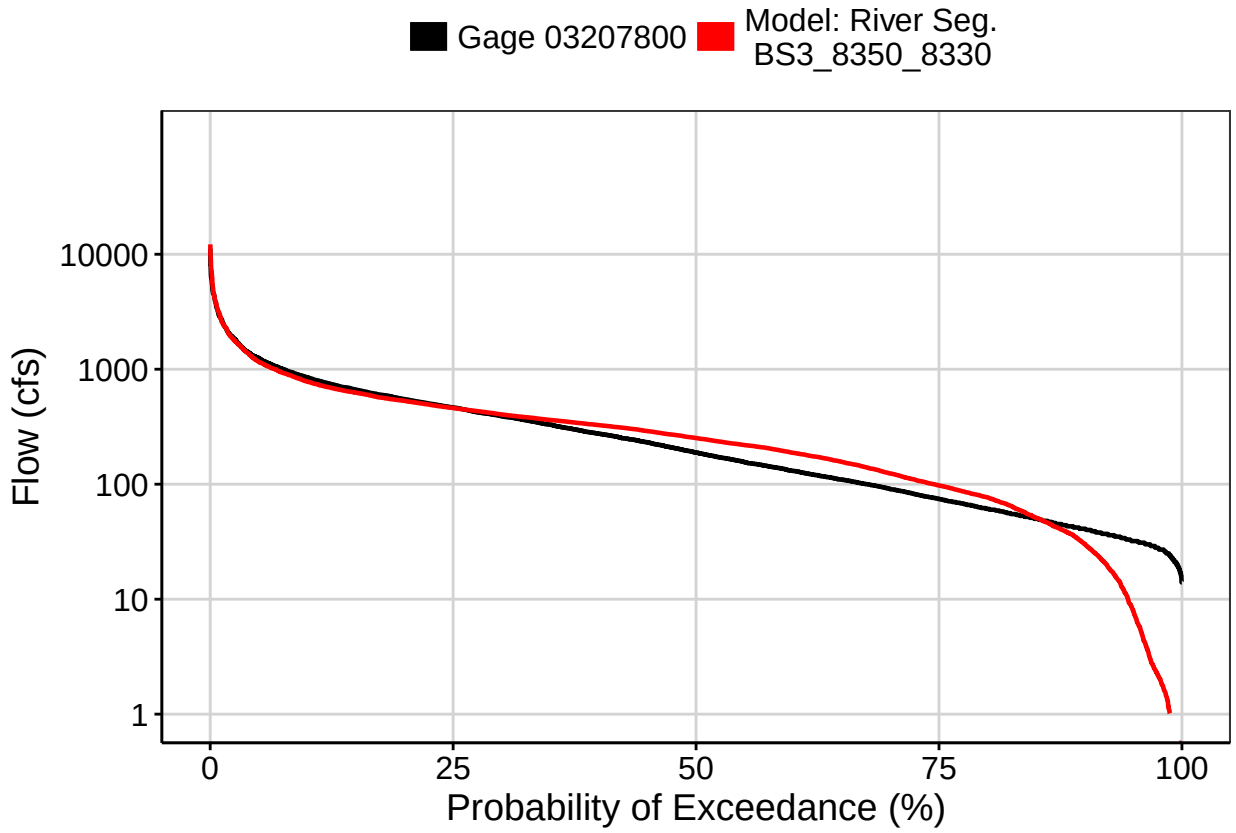

Fig. 4: Baseflow

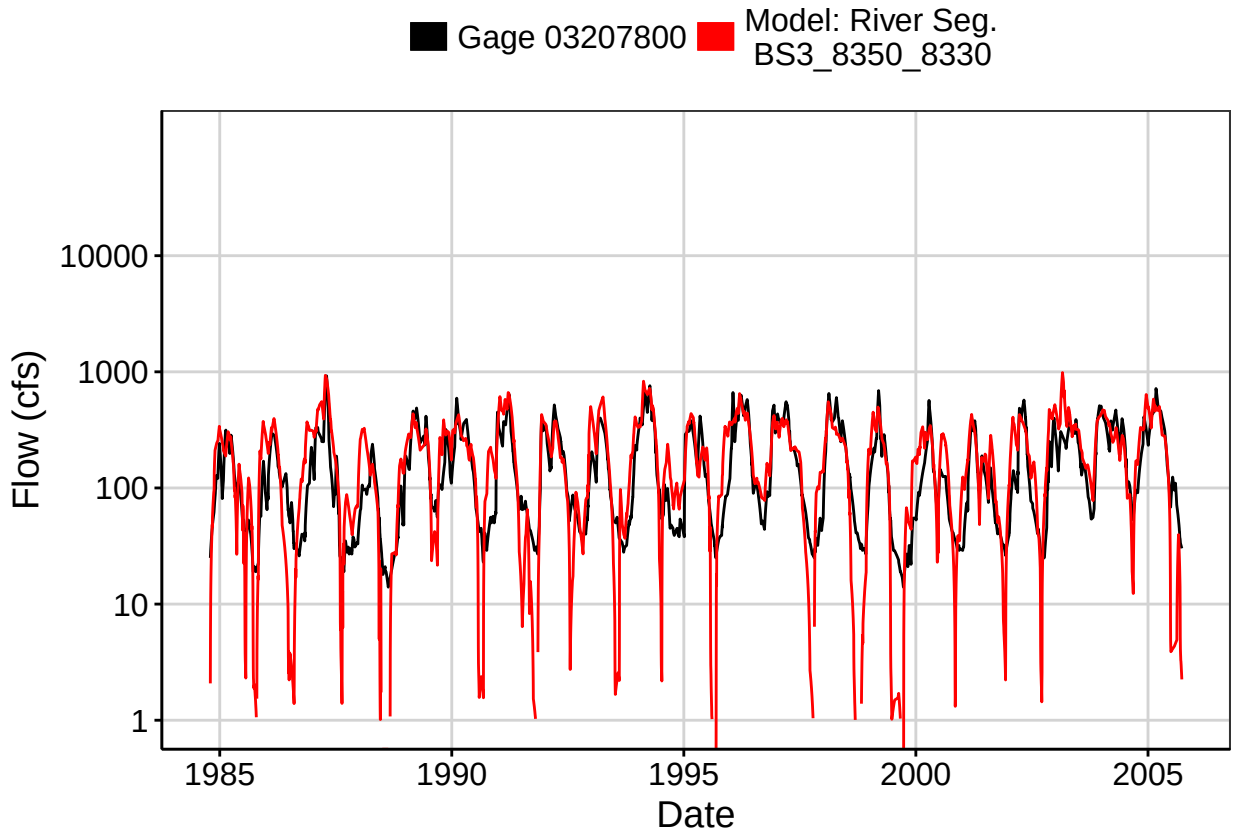

Fig. 5: Combined Baseflow

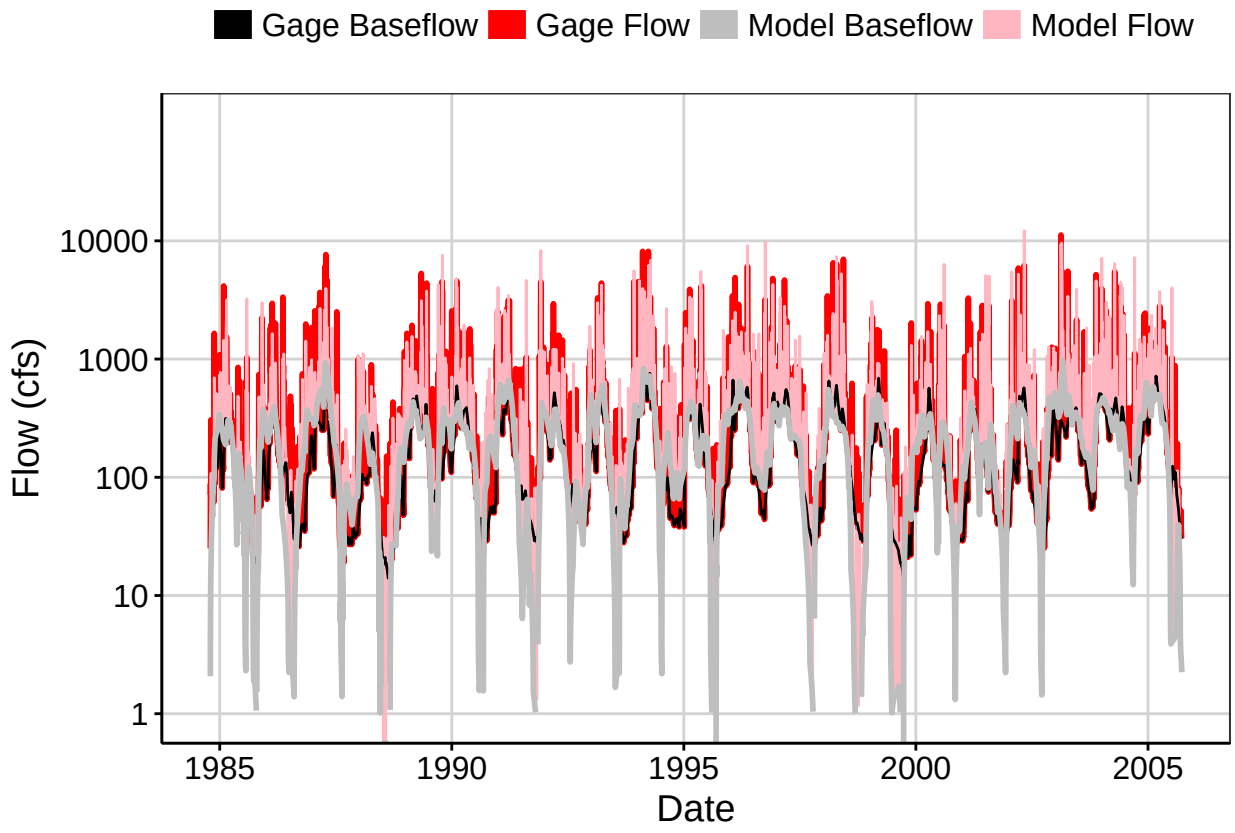

Fig. 6: Largest Error Segment

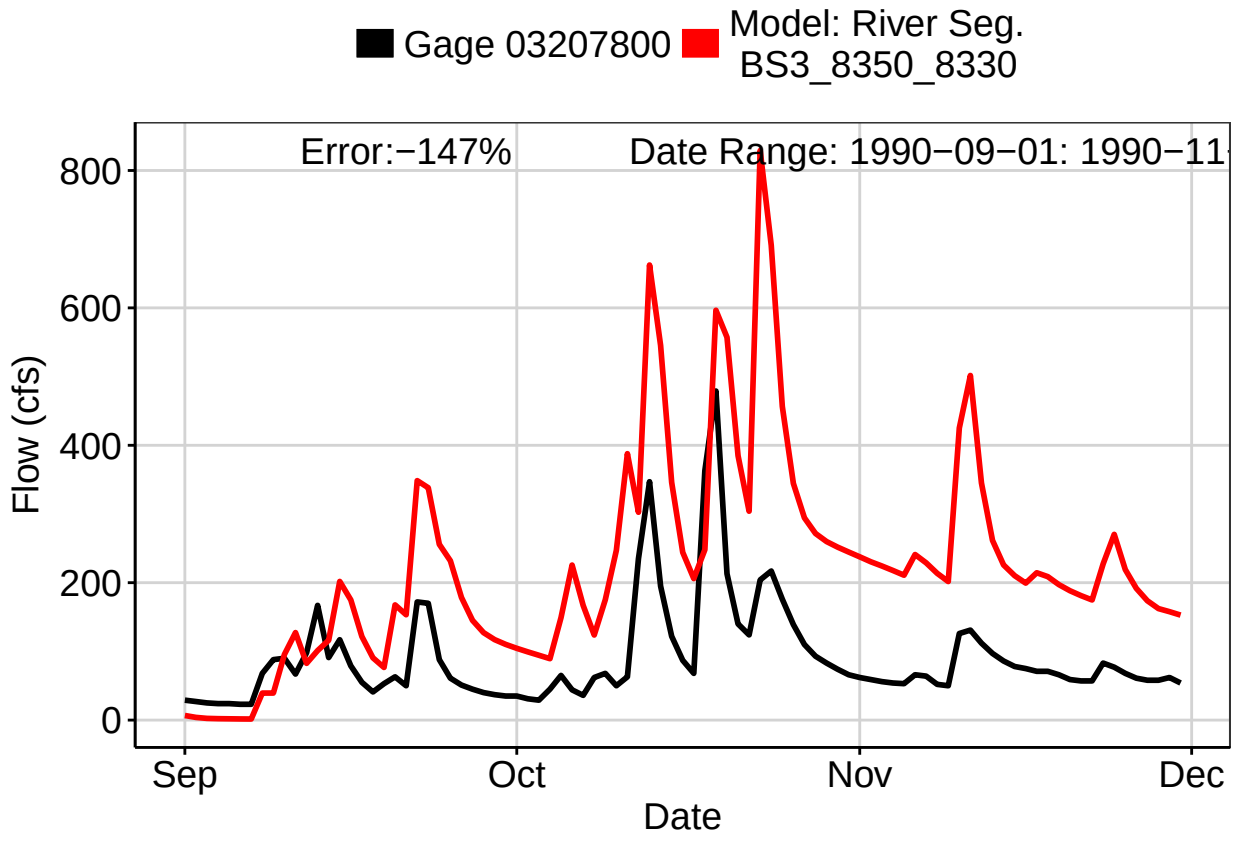

Fig. 7: Second Largest Error Segment

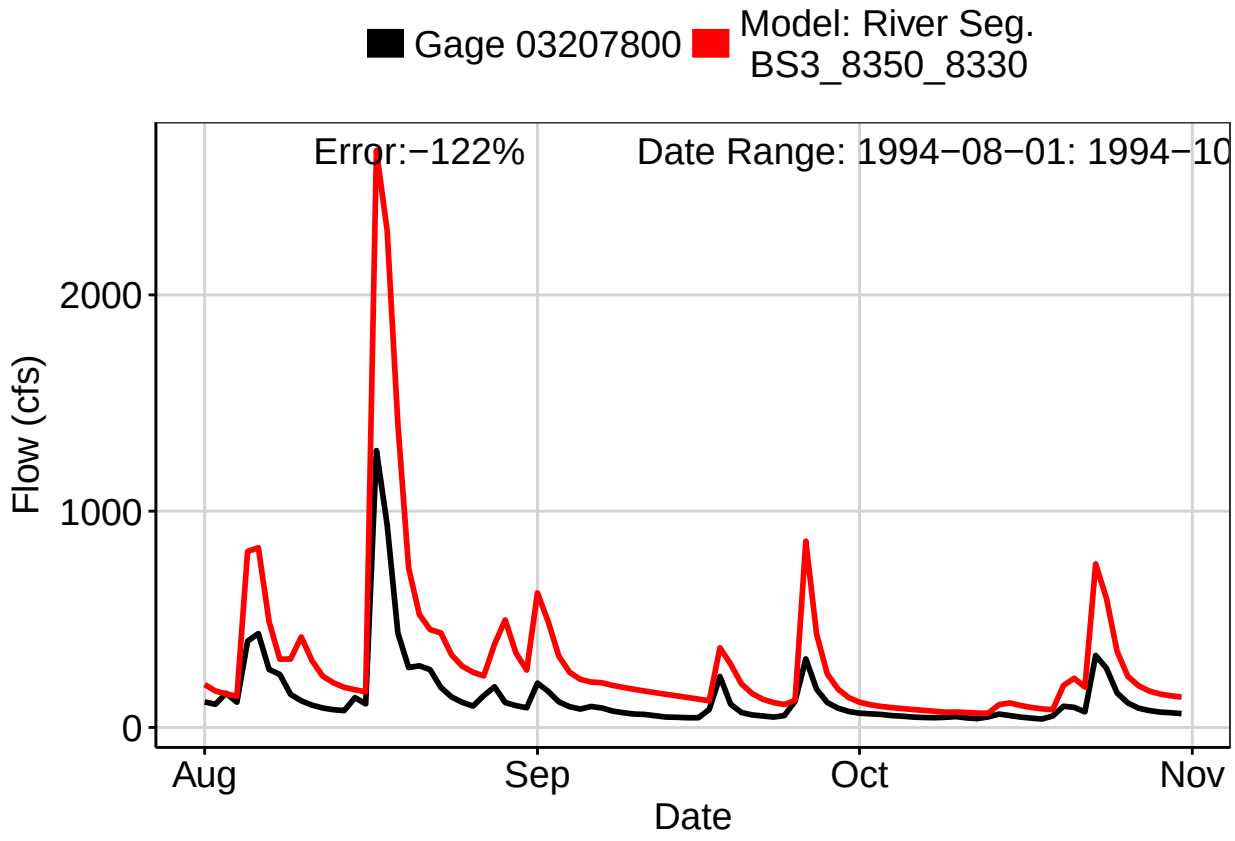

Fig. 8: Third Largest Error Segment

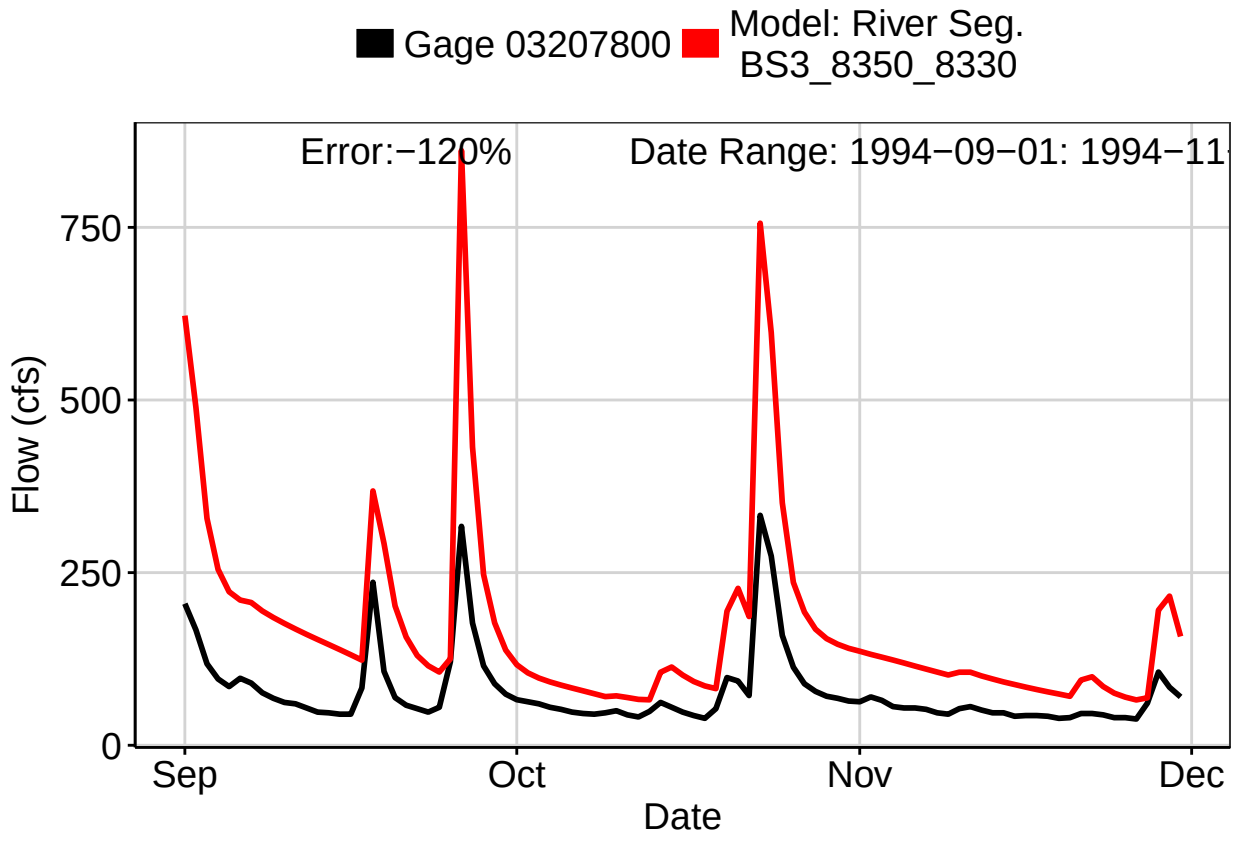

Fig. 9: Residuals Plot