03524000 vs. TU4_8680_8810

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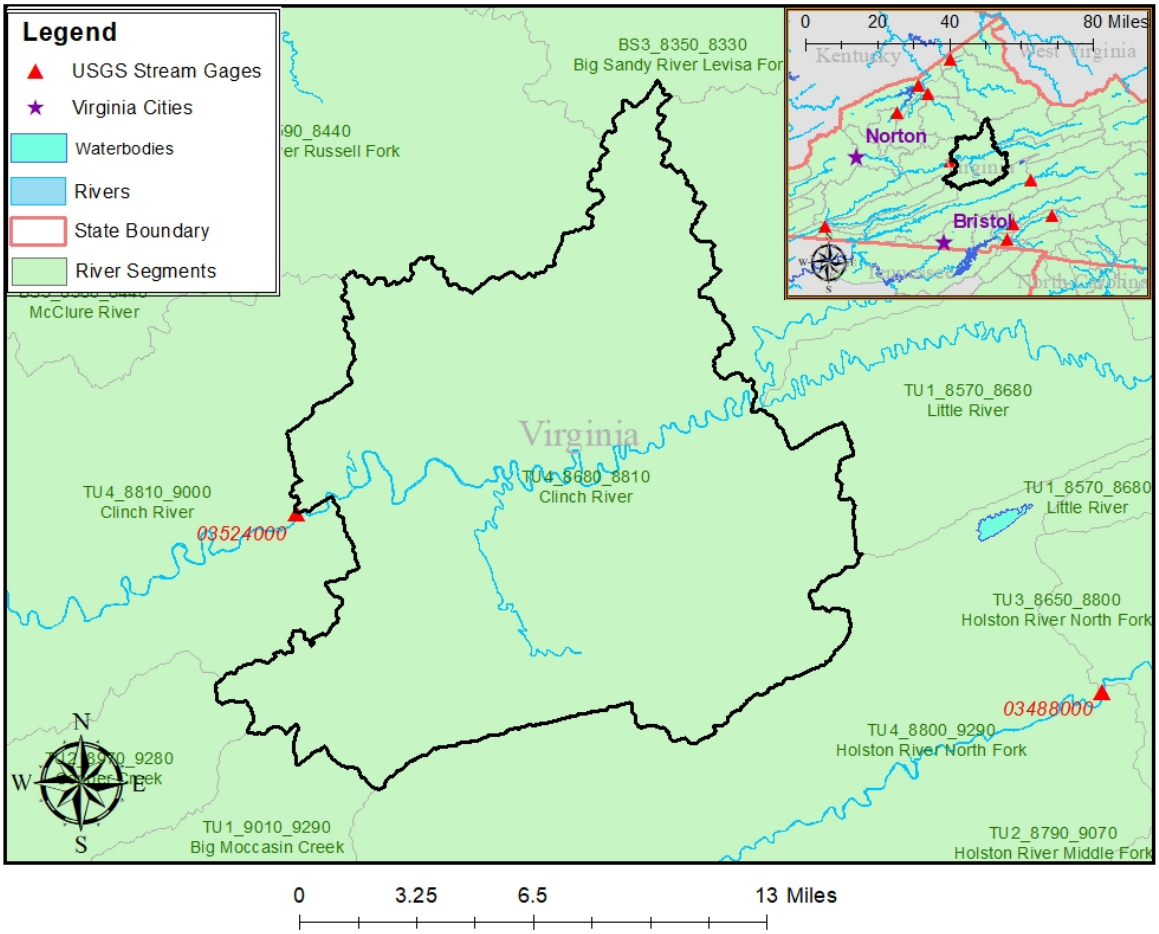

This river segment follows part of the flow of the Clinch River, a tributary of the Tennessee River. The gage is located in Russell County, VA (Lat 3656'41", Long 8209'18") approximately 24 miles north of Bristol, VA. Drainage area is 533 sq. miles. This gage started taking data in 1920 and is still taking data. There are no known anthropogenic alterations in this area that would affect the flow conditions. The average daily discharge error between the model and gage data for the 20 year timespan was -0.57%, with 39.2% of its rolling three month time spans above 20% error.

Table 1: Monthly Low Flows

	USGS Gage	Model	Pct. Error
Jan. Low Flow	91	87	4.4
Feb. Low Flow	94.1	179	-90.2
Mar. Low Flow	201	250	-24.4
Apr. Low Flow	270	397	-47
May Low Flow	481	492	-2.29
Jun. Low Flow	488	588	-20.5
Jul. Low Flow	441	399	9.52
Aug. Low Flow	307	246	19.9
Sep. Low Flow	189	193	-2.12
Oct. Low Flow	153	117	23.5
Nov. Low Flow	114	123	-7.89
Dec. Low Flow	93	83.7	10

Table 2: Monthly Average Flows

	USGS Gage	Model	Pct. Error
Overall Mean Flow	701	705	-0.57
Jan. Mean Flow	1010	1010	0
Feb. Mean Flow	1360	1430	-5.15
Mar. Mean Flow	1340	1310	2.24
Apr. Mean Flow	1110	968	12.8
May Mean Flow	826	717	13.2
Jun. Mean Flow	567	513	9.52
Jul. Mean Flow	352	355	-0.85
Aug. Mean Flow	294	327	-11.2
Sep. Mean Flow	215	301	-40
Oct. Mean Flow	222	335	-50.9
Nov. Mean Flow	435	480	-10.3
Dec. Mean Flow	738	756	-2.44

Table 3: Monthly High Flows

	USGS Gage	Model	Pct. Error
Jan. High Flow	215	355	-65.1
Feb. High Flow	1260	925	26.6
Mar. High Flow	2500	1310	47.6
Apr. High Flow	3210	3530	-9.97
May High Flow	5120	3260	36.3
Jun. High Flow	3530	4000	-13.3
Jul. High Flow	1940	1800	7.22
Aug. High Flow	2750	1670	39.3
Sep. High Flow	1050	941	10.4
Oct. High Flow	787	494	37.2
Nov. High Flow	533	480	9.94
Dec. High Flow	346	355	-2.6

Table 4: Period Low Flows

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	39	8.23	78.9
Med. 1 Day Min	70	35.8	48.9
Min. 3 Day Min	44	8.67	80.3
Med. 3 Day Min	70.3	38.7	45
Min. 7 Day Min	49	10.1	79.4
Med. 7 Day Min	72.9	45.7	37.3
Min. 30 Day Min	62.7	27.7	55.8
Med. 30 Day Min	90.8	74.5	18
Min. 90 Day Min	83.4	69.8	16.3
Med. 90 Day Min	172	191	-11
7Q10	55.4	18.4	66.8
Year of 90-Day Min. Flow	1988	1988	0
Drought Year Mean	287	292	-1.74
Mean Baseflow	333	376	-12.9

Table 5: Period High Flows

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	20100	19200	4.48
Med. 1 Day Max	8530	8200	3.87
Max. 3 Day Max	11400	13300	-16.7
Med. 3 Day Max	6190	5150	16.8
Max. 7 Day Max	6930	7230	-4.33
Med. 7 Day Max	4030	3400	15.6
Max. 30 Day Max	3410	4060	-19.1
Med. 30 Day Max	2050	1930	5.85
Max. 90 Day Max	2210	2730	-23.5
Med. 90 Day Max	1430	1410	1.4

Table 6: Non-Exceedance Flows

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	60.7	34.1	43.8
5% Non-Exceedance	83	74.2	10.6
50% Non-Exceedance	371	424	-14.3
95% Non-Exceedance	2270	2080	8.37
99% Non-Exceedance	5020	5000	0.4
Sept. 10% Non-Exceedance	56.1	69	-23

Fig. 1: Hydrograph

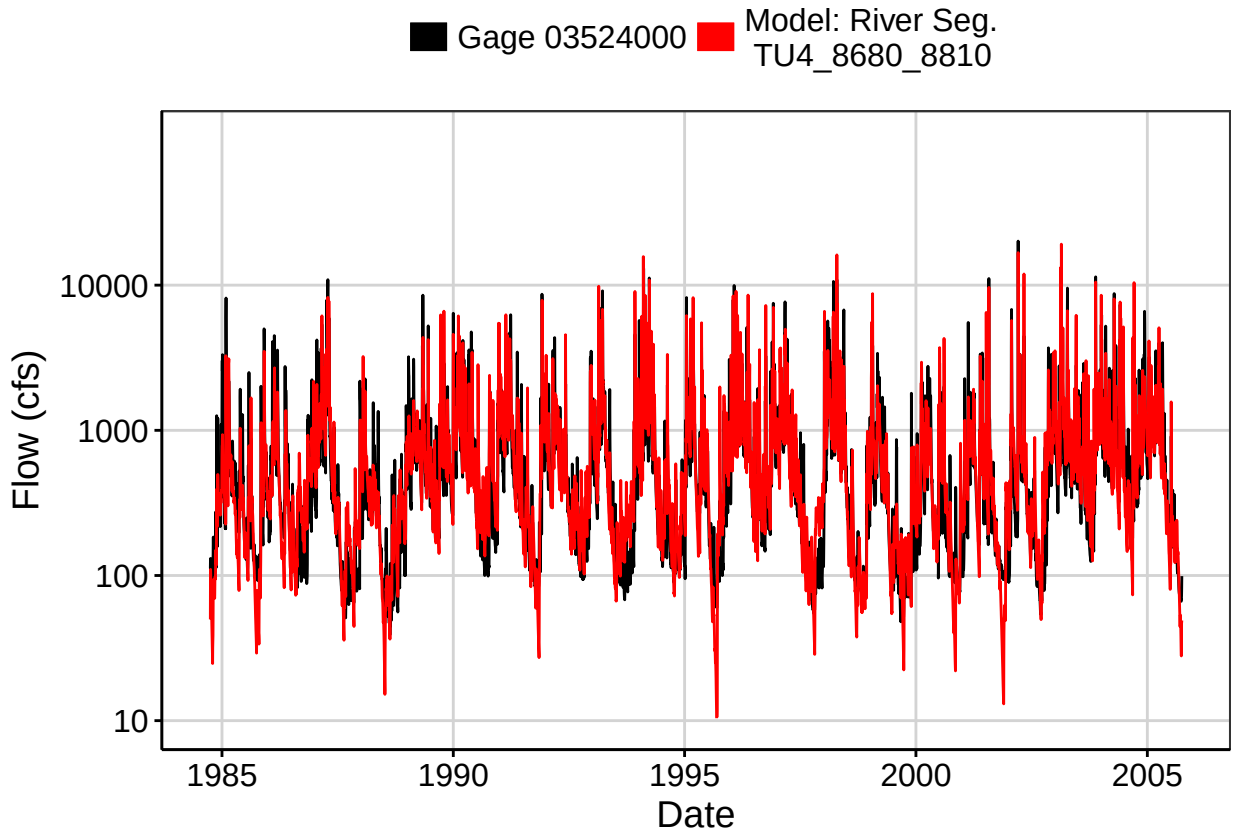

Fig. 2: Zoomed Hydrograph

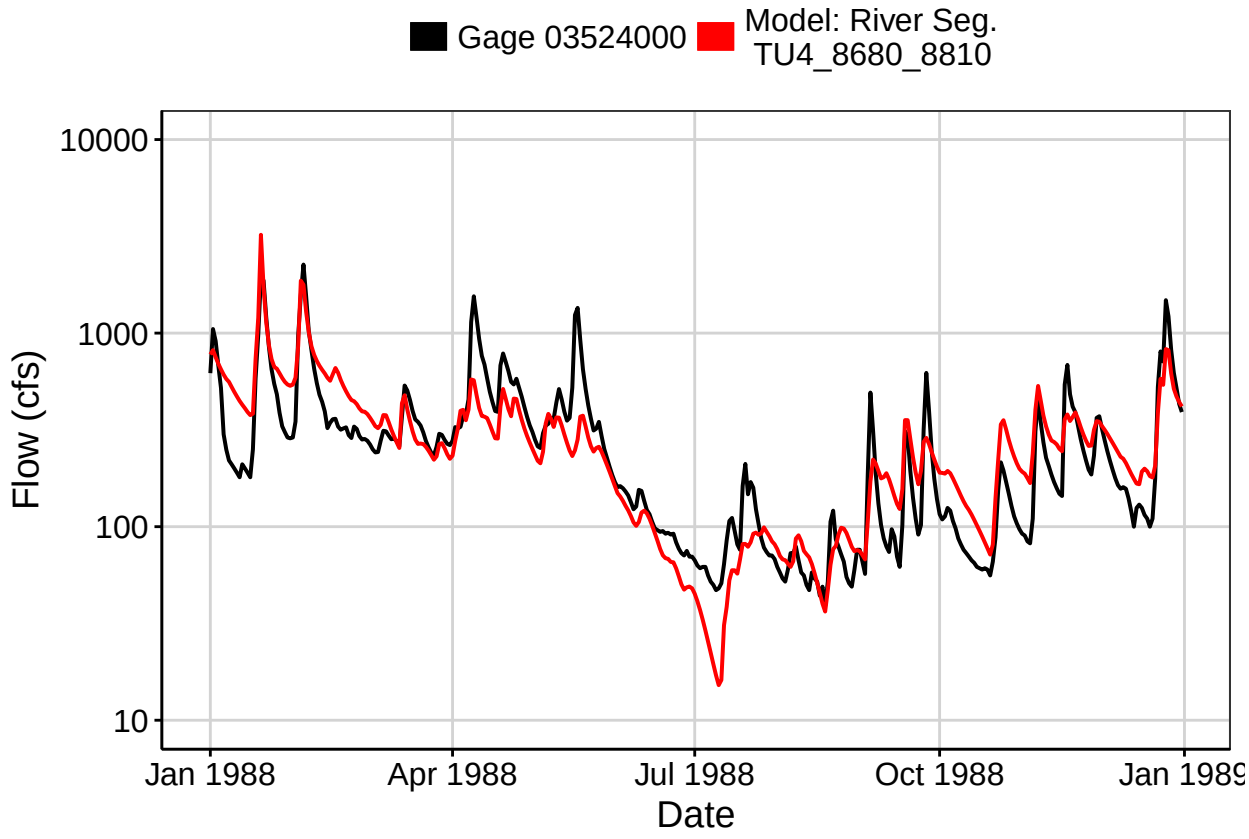

Fig. 3: Flow Exceedance

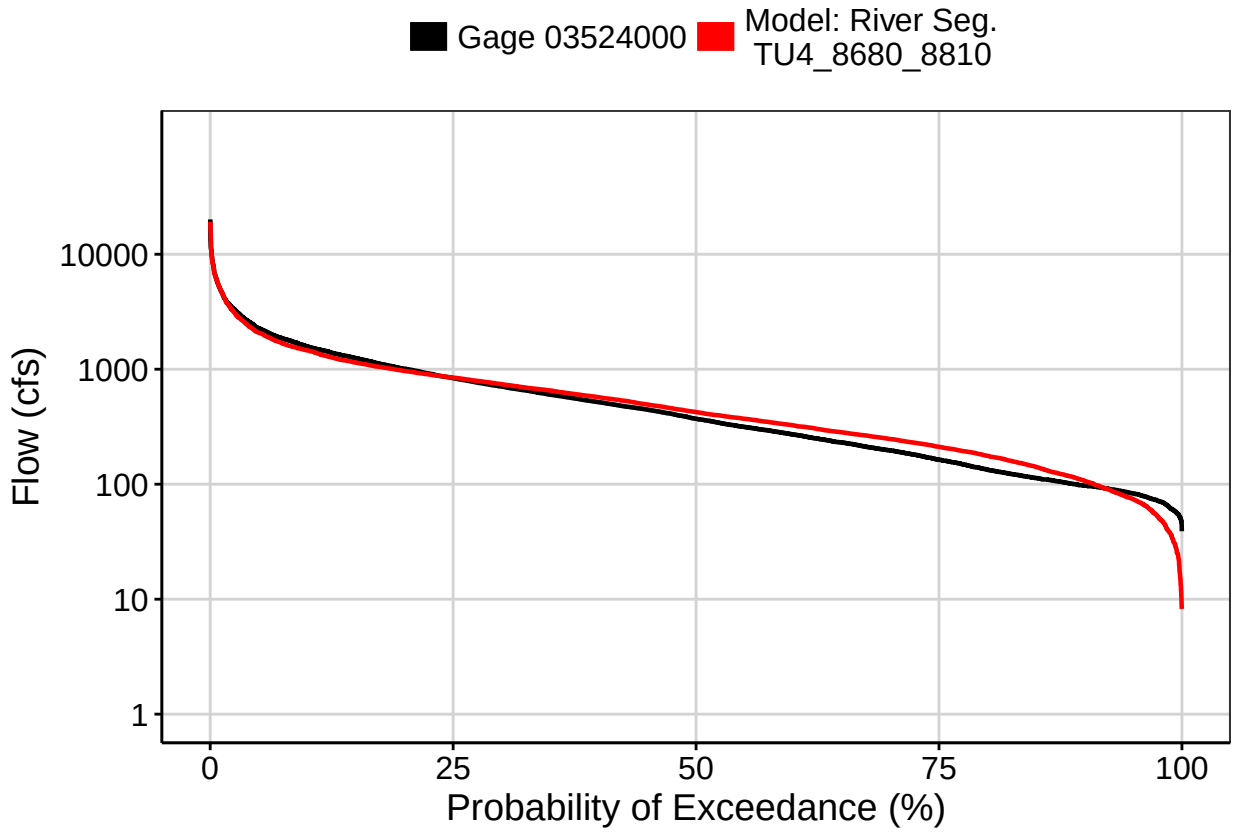

Fig. 4: Baseflow

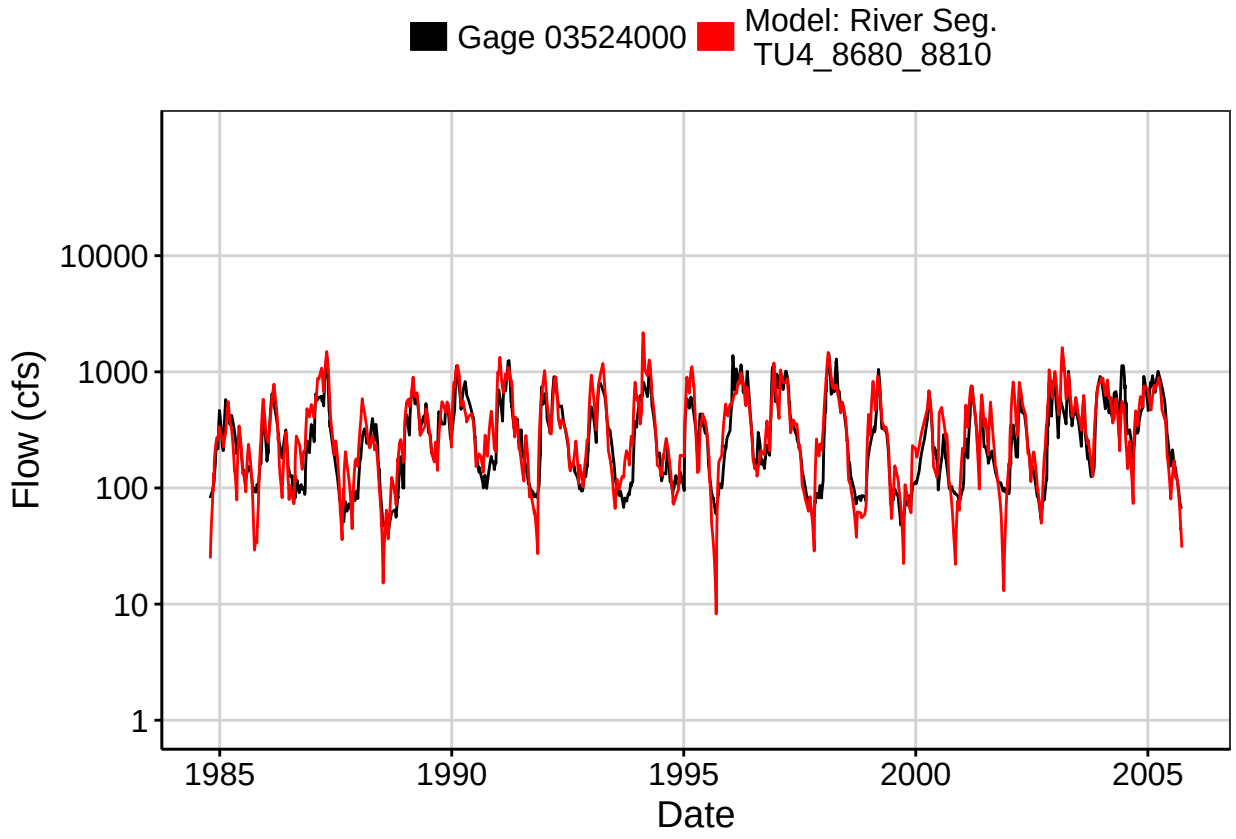

Fig. 5: Combined Baseflow

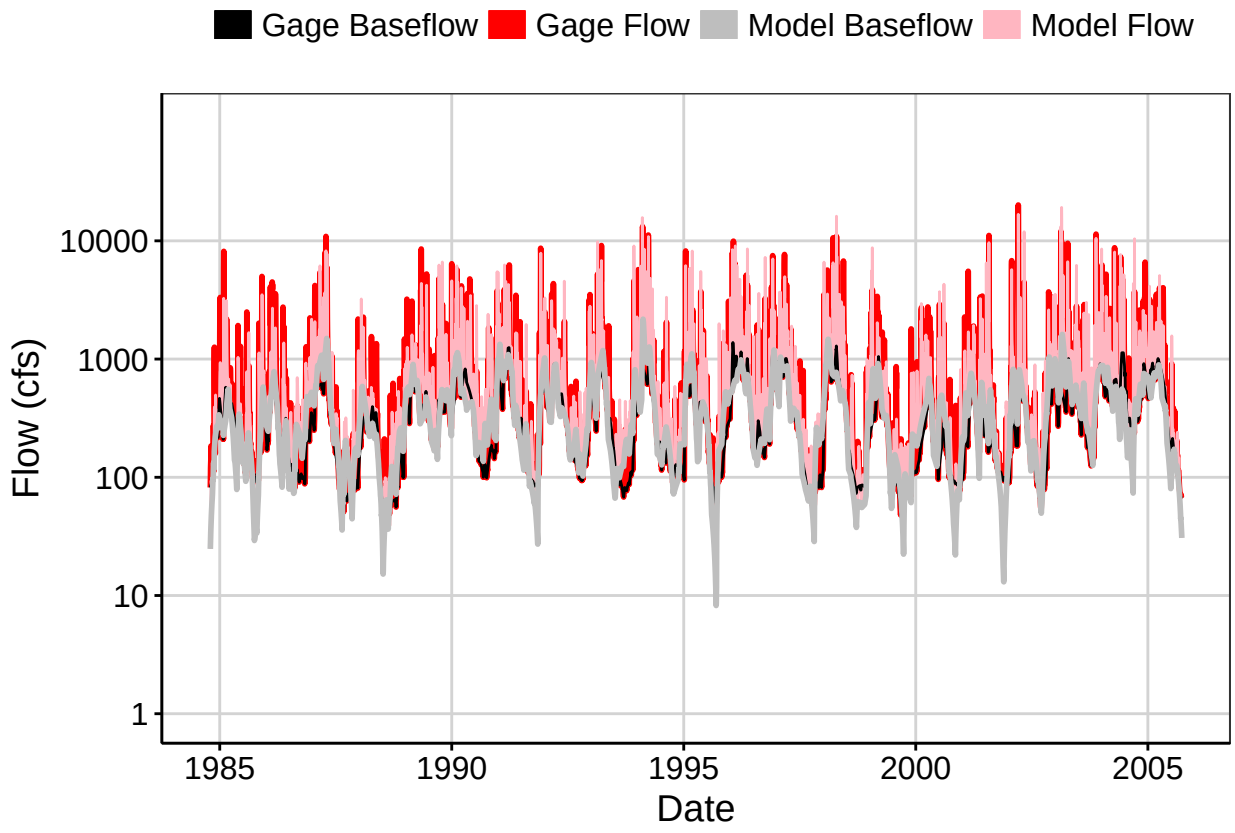

Fig. 6: Largest Error Segment

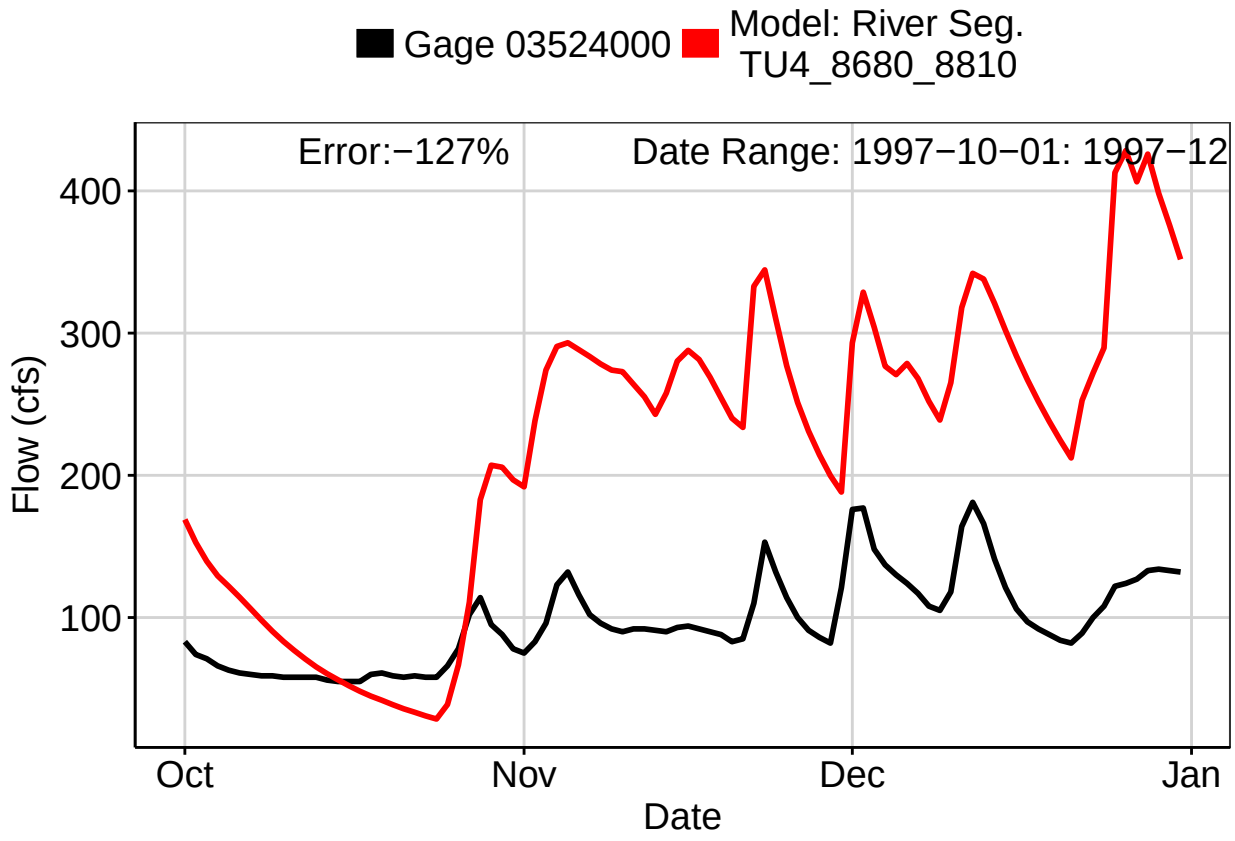

Fig. 7: Second Largest Error Segment

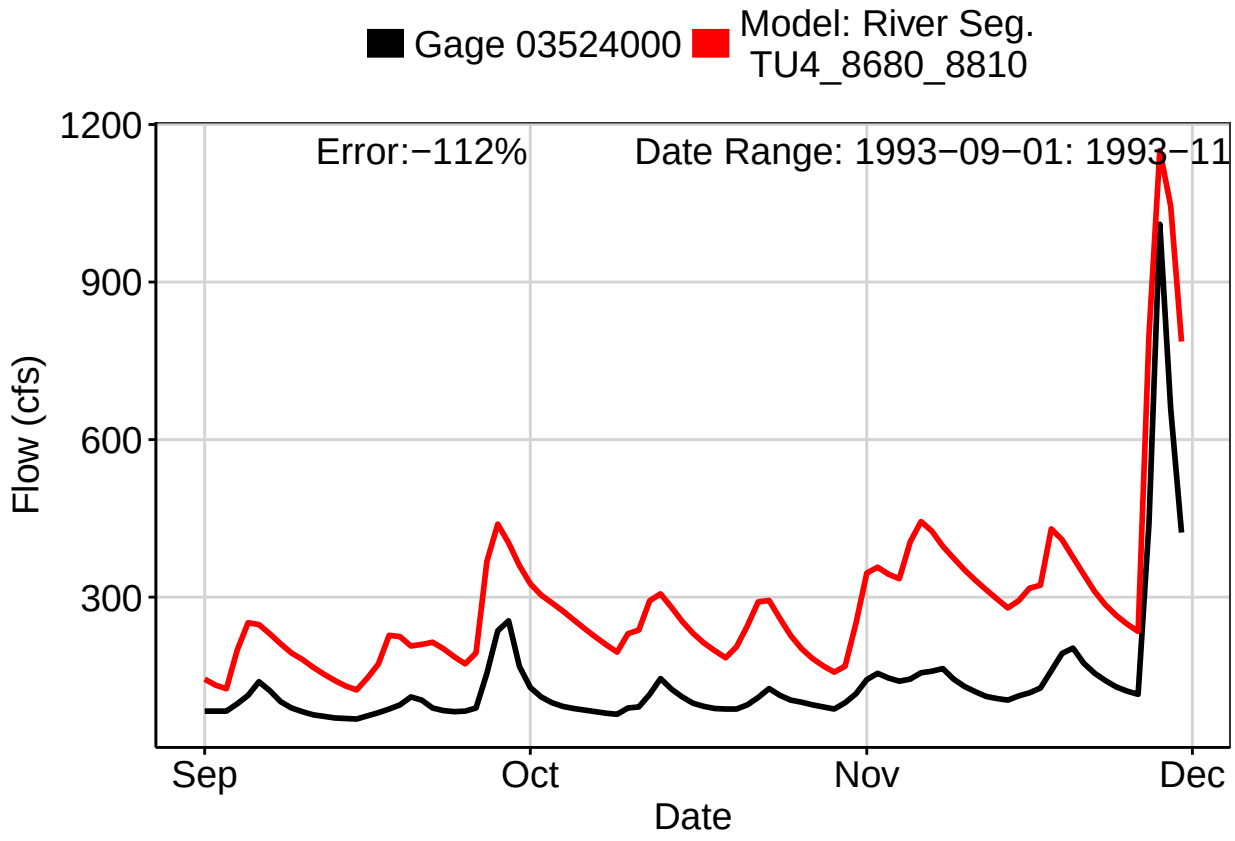

Fig. 8: Third Largest Error Segment

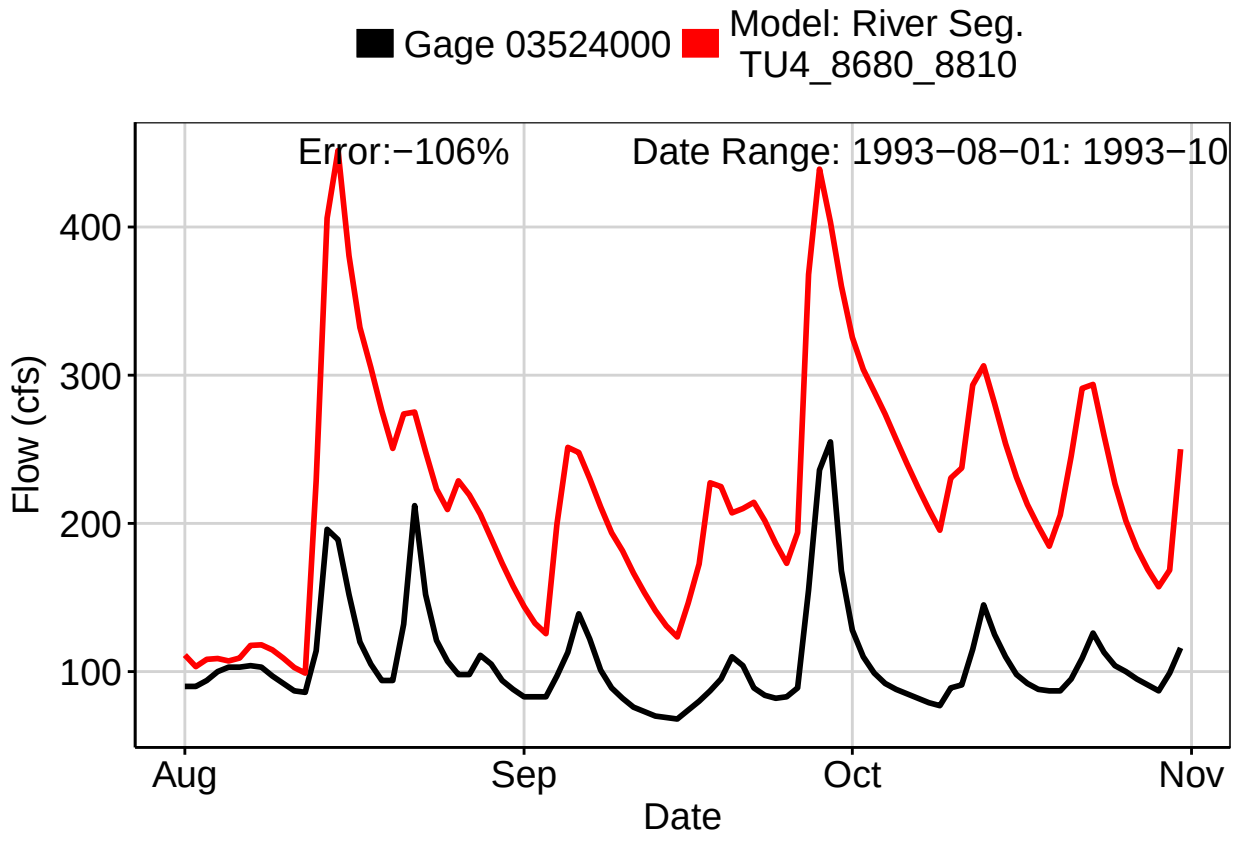

Fig. 9: Residuals Plot