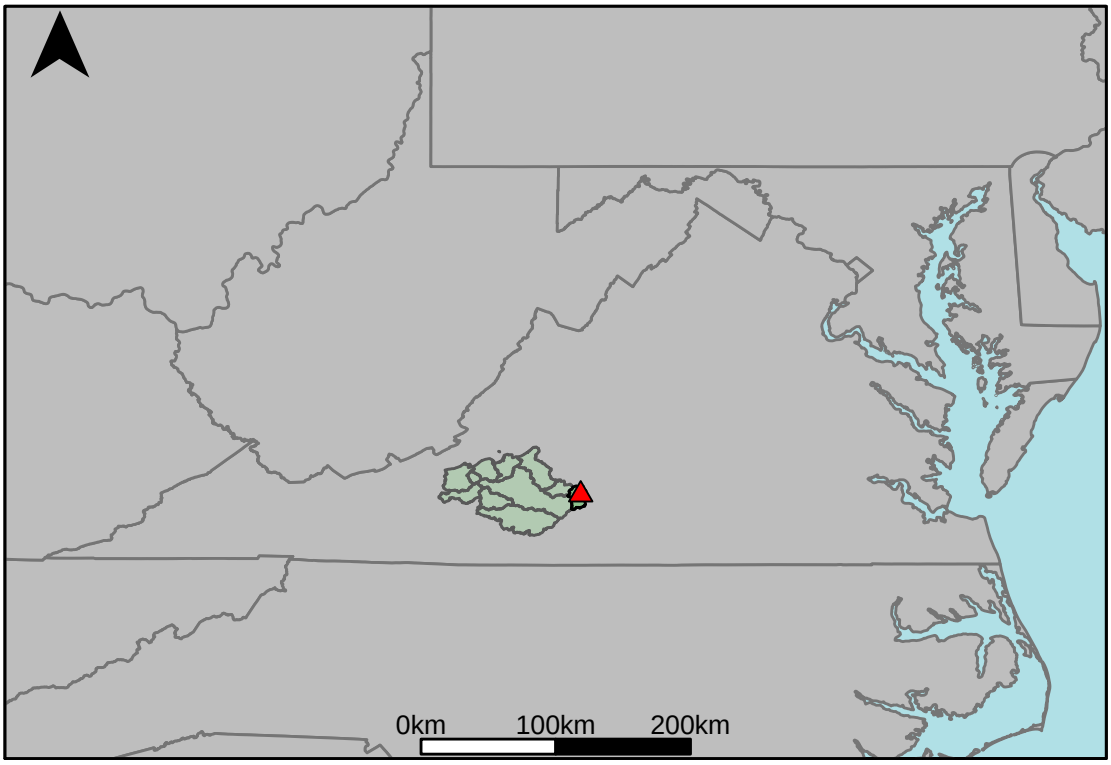
Appendix H.9: USGS Gage 02060500 vs. OR4_8120_7890



This river segment follows part of the flow of the Roanoke River. The gage is located in Pittsylvania County, VA (Lat 3706'16", Long 7917'44") approximately 23 miles south of Lynchburg, VA. Drainage area is 1782 sq. miles. This gage started taking data in 1930 and is still taking data. This area is regulated by the Smith Mount and Leesville power plants. The average daily discharge error between the model and gage data for the 20 year timespan was -5.59%, with 46.7% of its rolling three month time spans above 20% error.

Table 1: Monthly Low Flows

	USGS Gage	Model	Pct. Error
Jan. Low Flow	719	449	-37.6
Feb. Low Flow	796	503	-36.8
Mar. Low Flow	786	898	14.2
Apr. Low Flow	826	1090	32
May Low Flow	921	1580	71.6
Jun. Low Flow	852	1500	76.1
Jul. Low Flow	889	958	7.76
Aug. Low Flow	1020	774	-24.1
Sep. Low Flow	820	734	-10.5
Oct. Low Flow	746	520	-30.3
Nov. Low Flow	782	488	-37.6
Dec. Low Flow	759	466	-38.6

Table 2: Monthly Average Flows

	USGS Gage	Model	Pct. Error
Overall Mean Flow	1790	1890	5.59
Jan. Mean Flow	2010	2370	17.9
Feb. Mean Flow	2350	2840	20.9
Mar. Mean Flow	2730	3420	25.3
Apr. Mean Flow	2670	2850	6.74
May Mean Flow	2000	1960	-2
Jun. Mean Flow	1670	1670	0
Jul. Mean Flow	1260	1040	-17.5
Aug. Mean Flow	1190	907	-23.8
Sep. Mean Flow	1560	1500	-3.85
Oct. Mean Flow	1210	1160	-4.13
Nov. Mean Flow	1400	1450	3.57
Dec. Mean Flow	1490	1650	10.7

Table 3: Monthly High Flows

	USGS Gage	Model	Pct. Error
Jan. High Flow	1060	697	-34.2
Feb. High Flow	1550	2880	85.8
Mar. High Flow	2480	3050	23
Apr. High Flow	5660	5520	-2.47
May High Flow	5590	4540	-18.8
Jun. High Flow	8290	9530	15
Jul. High Flow	5700	7100	24.6
Aug. High Flow	3580	3920	9.5
Sep. High Flow	2470	2100	-15
Oct. High Flow	2570	1450	-43.6
Nov. High Flow	2210	911	-58.8
Dec. High Flow	1230	757	-38.5

Table 4: Period Low Flows

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	142	83.2	-41.4
Med. 1 Day Min	513	272	-47
Min. 3 Day Min	186	83.7	-55
Med. 3 Day Min	570	283	-50.4
Min. 7 Day Min	411	85	-79.3
Med. 7 Day Min	693	307	-55.7
Min. 30 Day Min	420	97.5	-76.8
Med. 30 Day Min	751	359	-52.2
Min. 90 Day Min	449	142	-68.4
Med. 90 Day Min	863	558	-35.3
7Q10	482	109	-77.4
Year of 90-Day Min. Flow	2002	2002	0
Drought Year Mean	583	428	-26.6
Mean Baseflow	930	1090	17.2

Table 5: Period High Flows

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	46700	81300	74.1
Med. 1 Day Max	16800	25600	52.4
Max. 3 Day Max	32300	40200	24.5
Med. 3 Day Max	15300	19200	25.5
Max. 7 Day Max	21400	21900	2.34
Med. 7 Day Max	9860	11000	11.6
Max. 30 Day Max	11100	11200	0.9
Med. 30 Day Max	4180	4760	13.9
Max. 90 Day Max	6320	7030	11.2
Med. 90 Day Max	3020	3420	13.2

Table 6: Non-Exceedance Flows

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	246	114	-53.7
5% Non-Exceedance	464	279	-39.9
50% Non-Exceedance	1030	1060	2.91
95% Non-Exceedance	5260	5500	4.56
99% Non-Exceedance	13000	14100	8.46
Sept. 10% Non-Exceedance	301	518	72.1

Fig. 1: Hydrograph

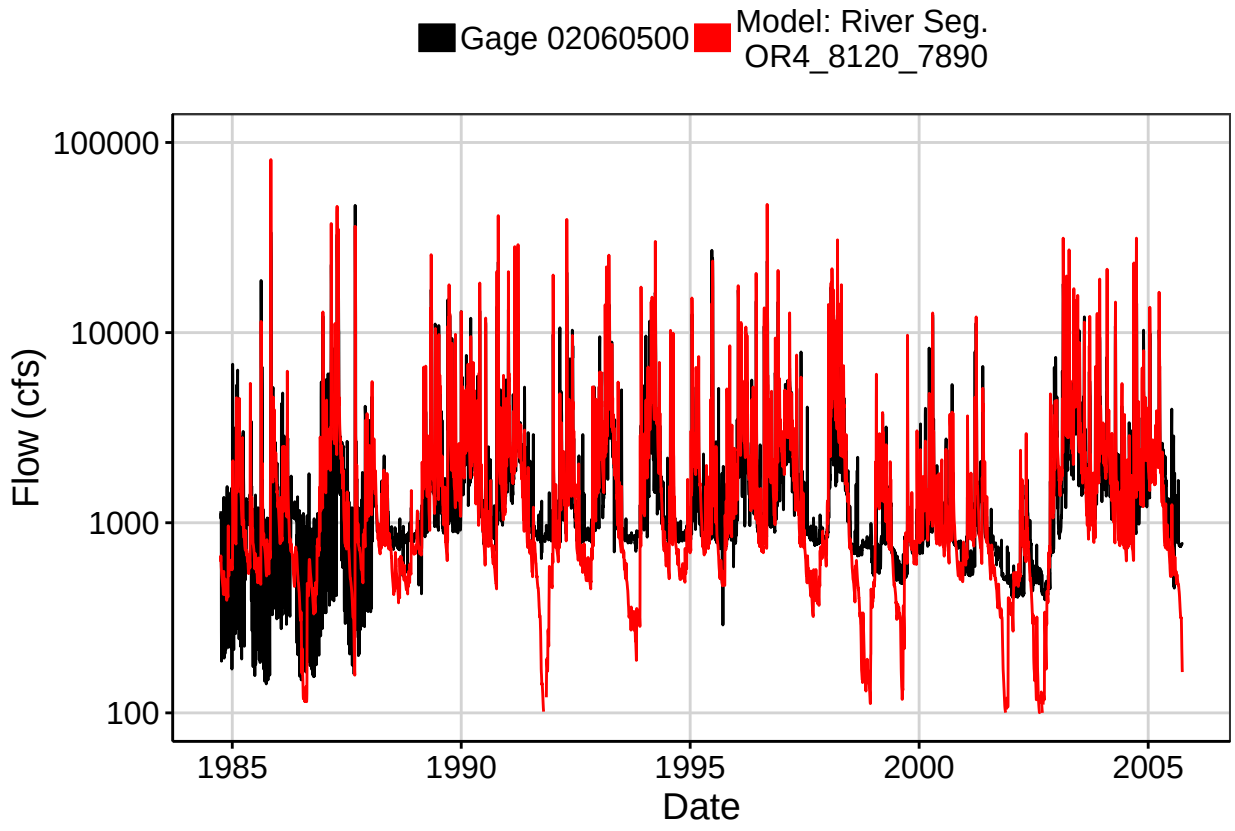


Fig. 2: Zoomed Hydrograph

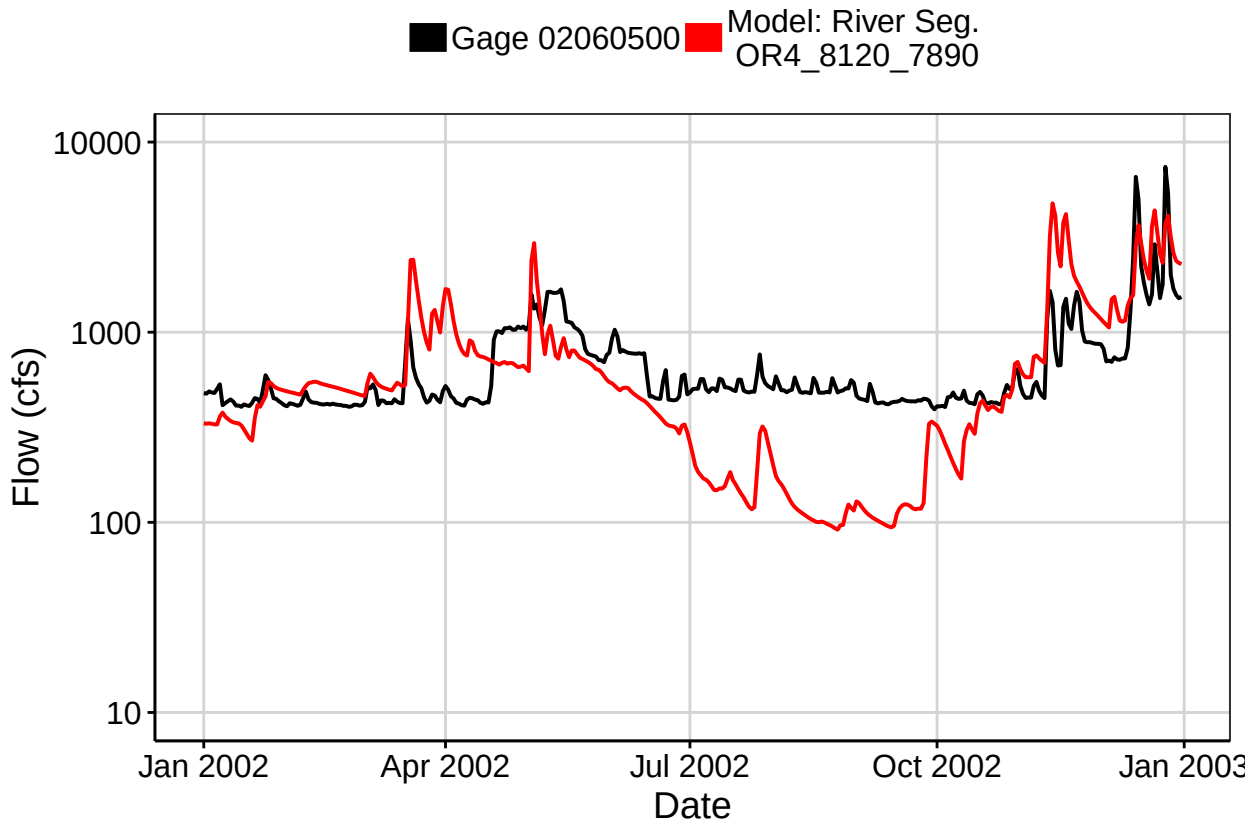


Fig. 3: Flow Exceedance

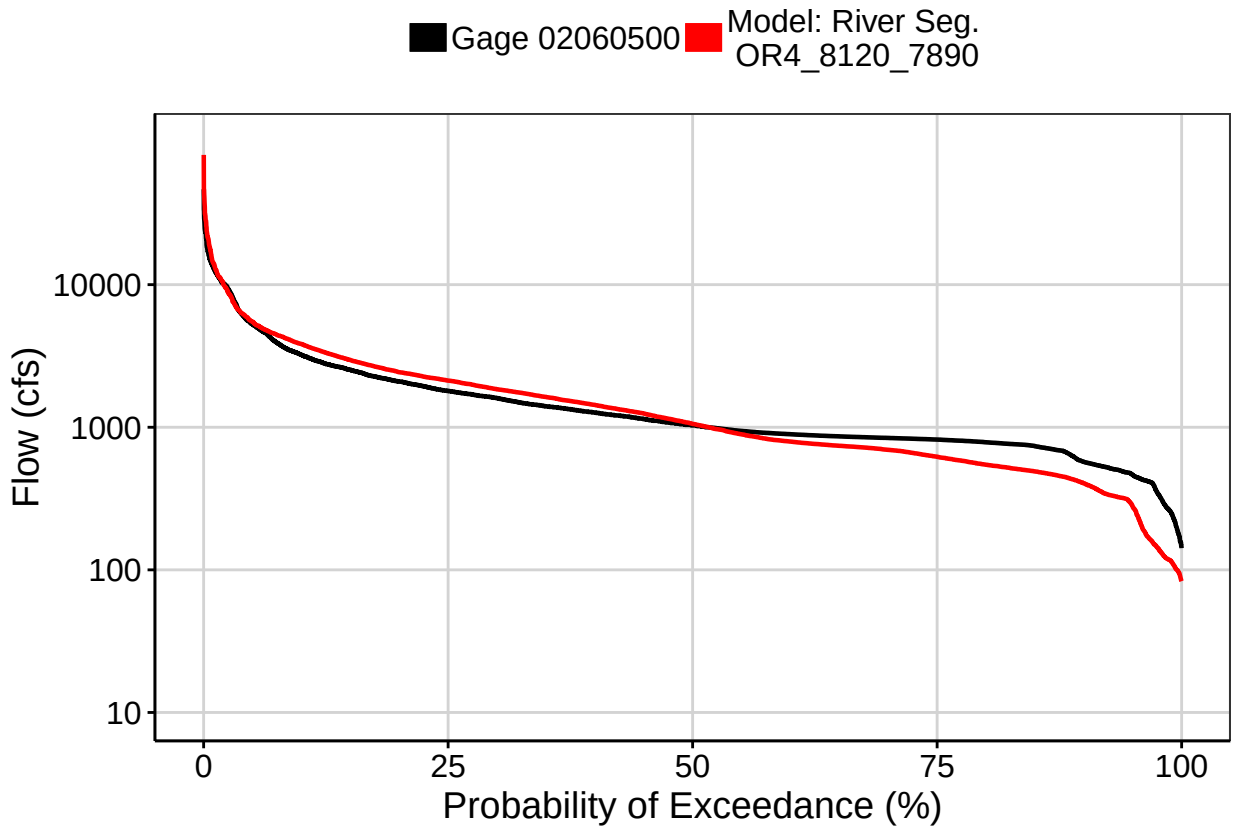


Fig. 4: Baseflow

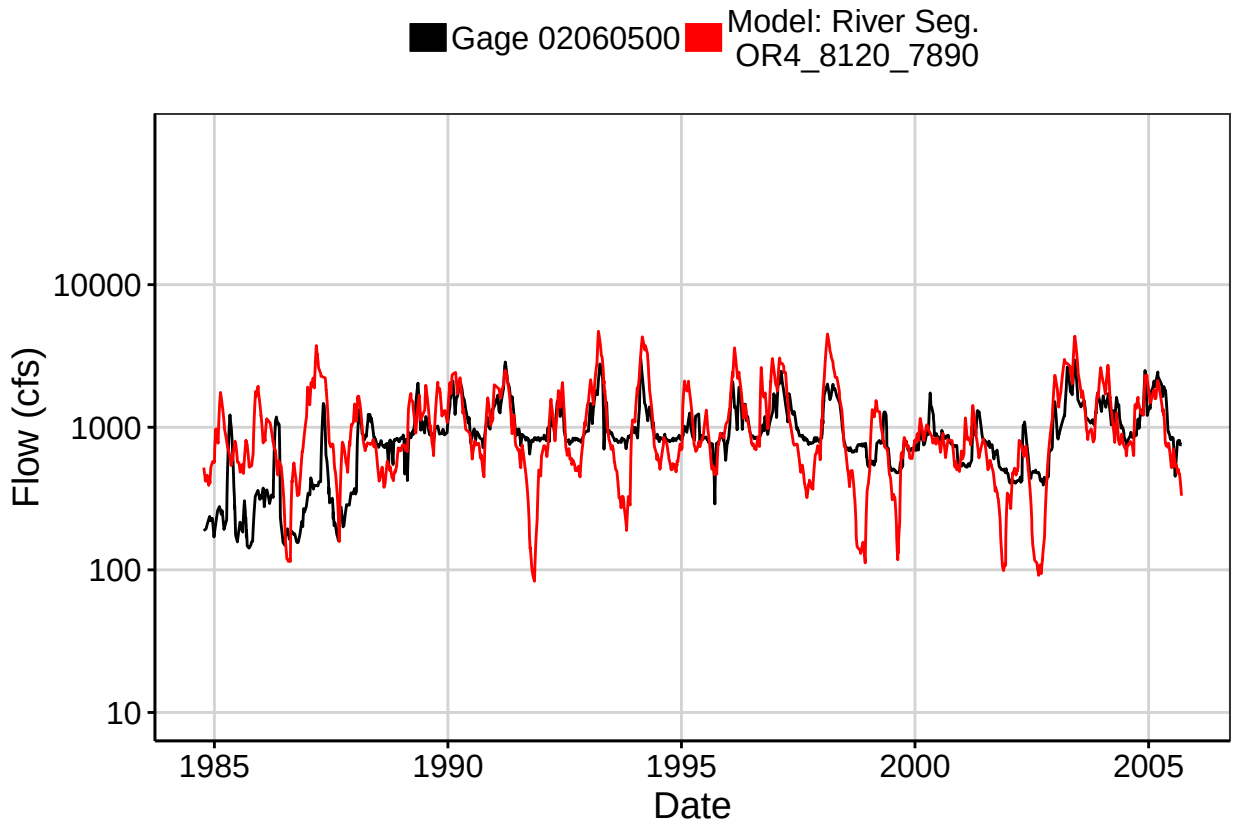


Fig. 5: Combined Baseflow

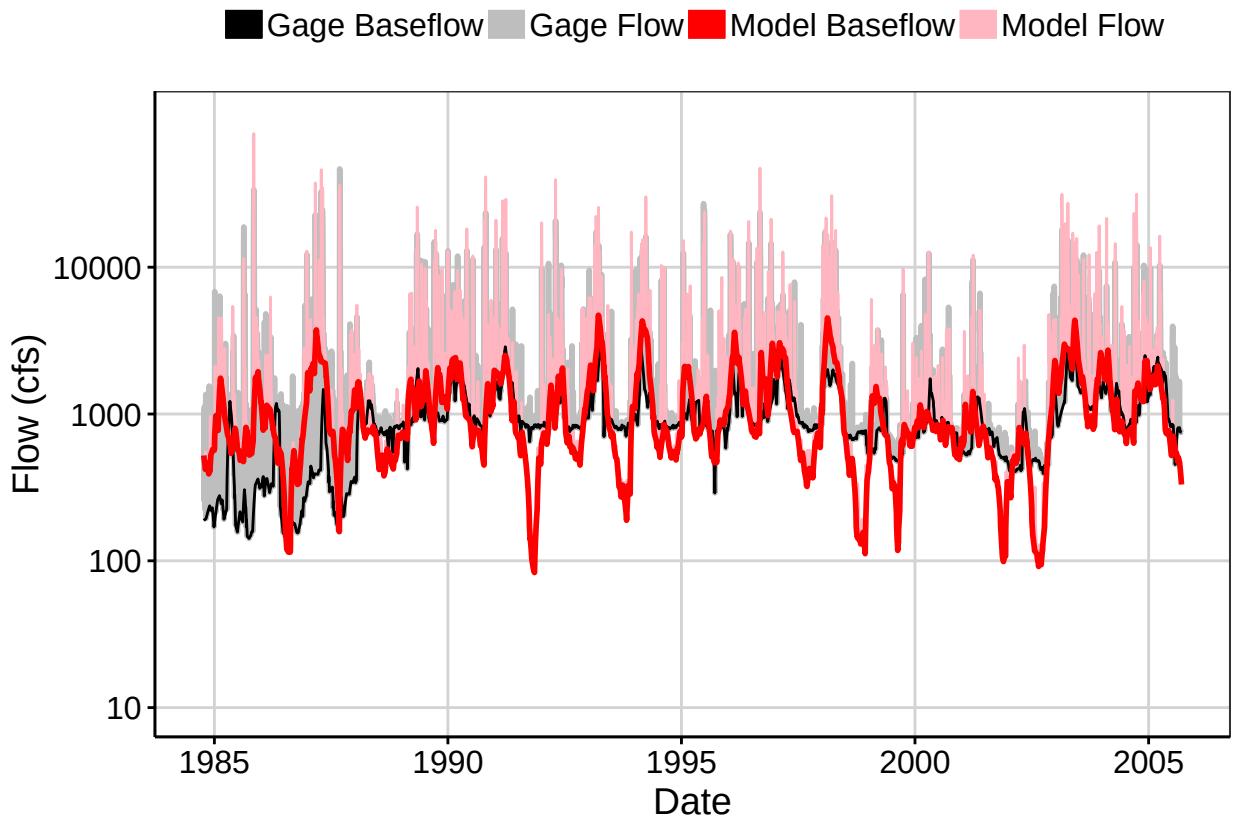


Fig. 6: Largest Error Segment

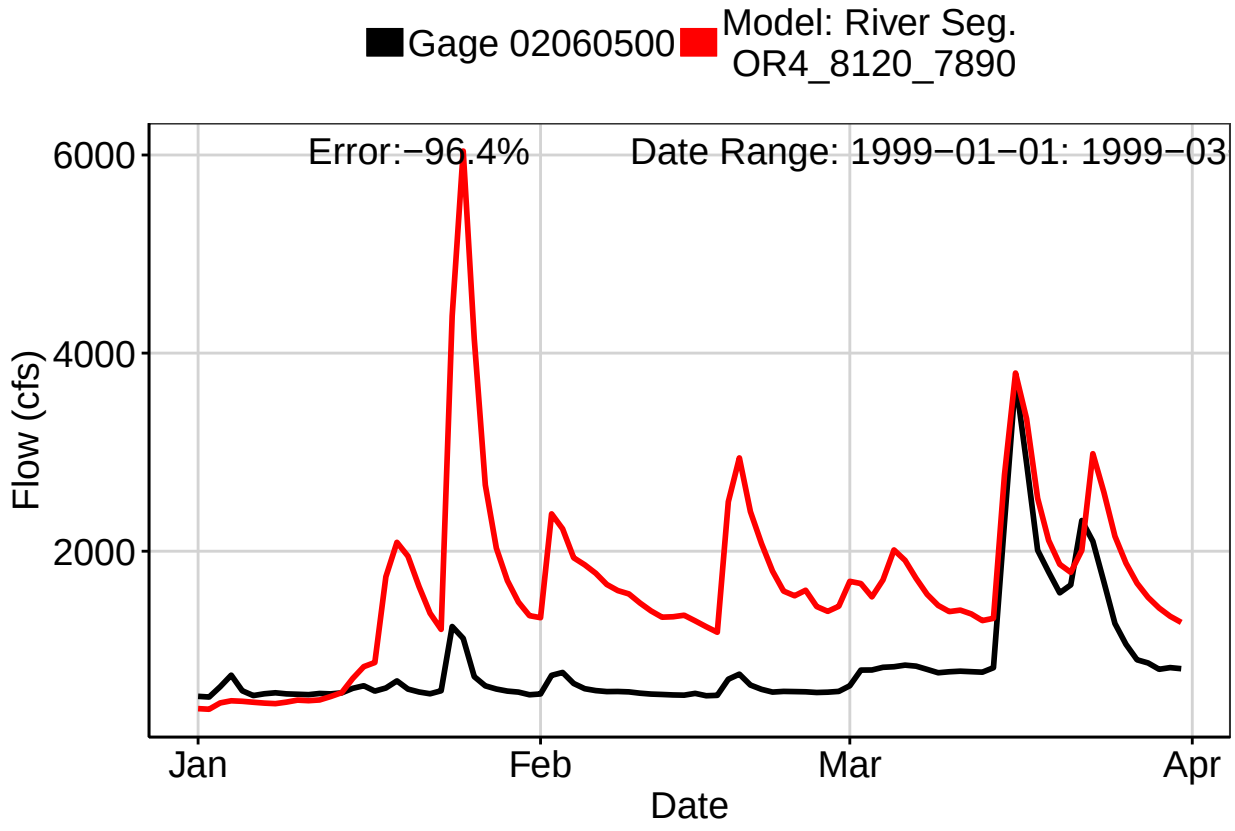


Fig. 7: Second Largest Error Segment

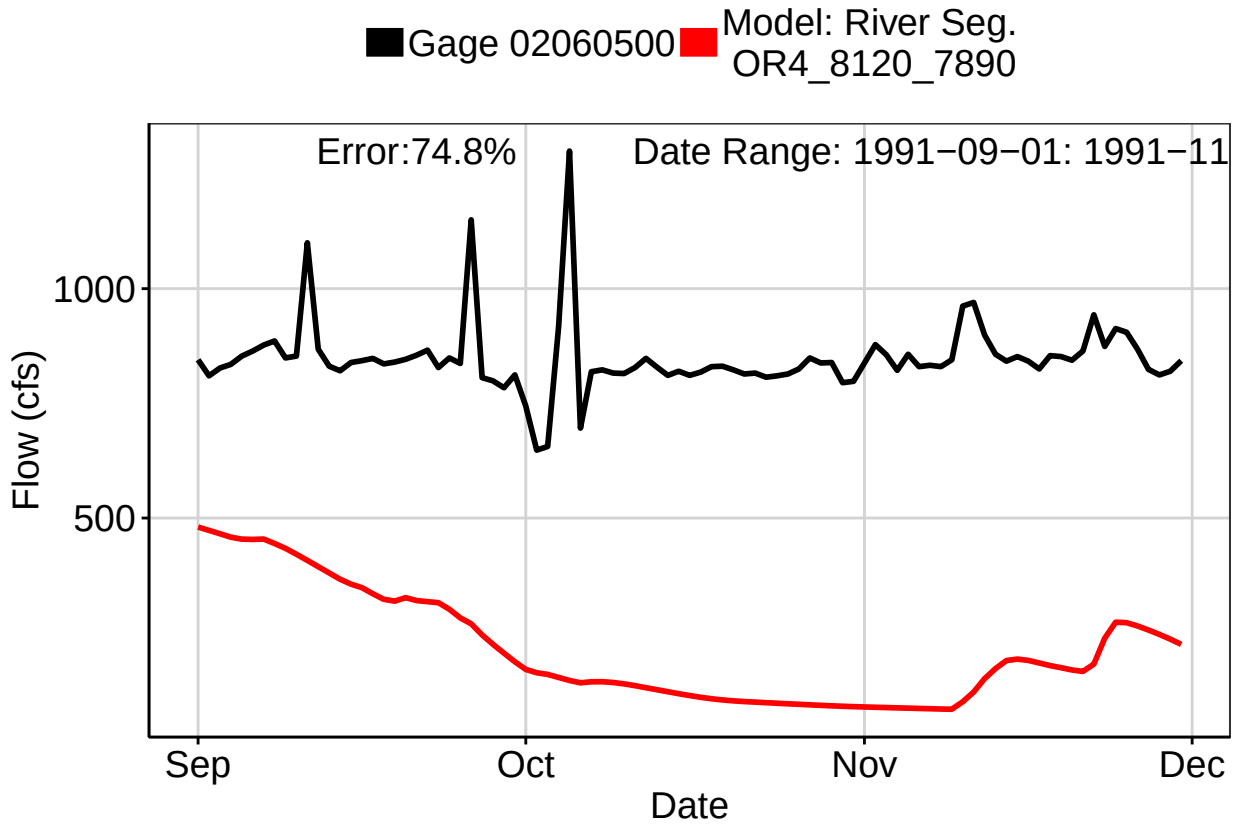


Fig. 8: Third Largest Error Segment

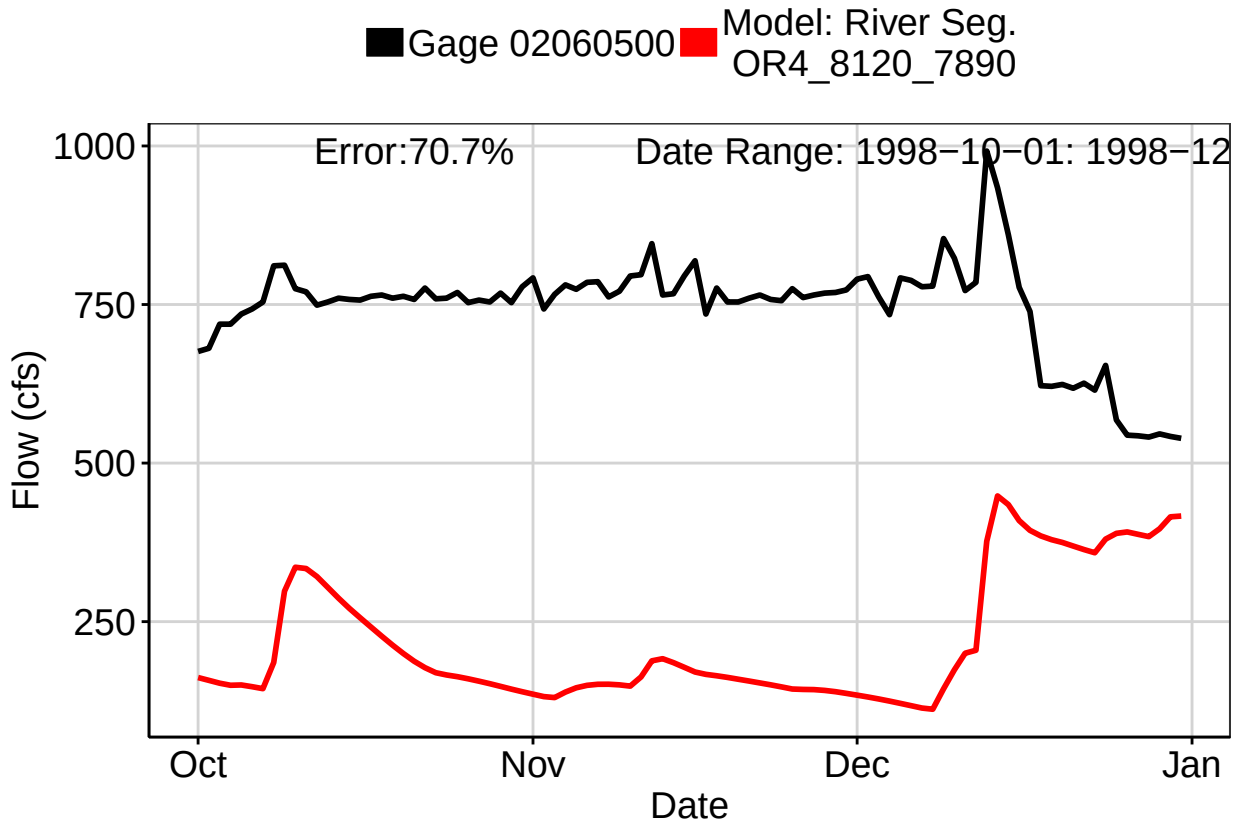


Fig. 9: Residuals Plot