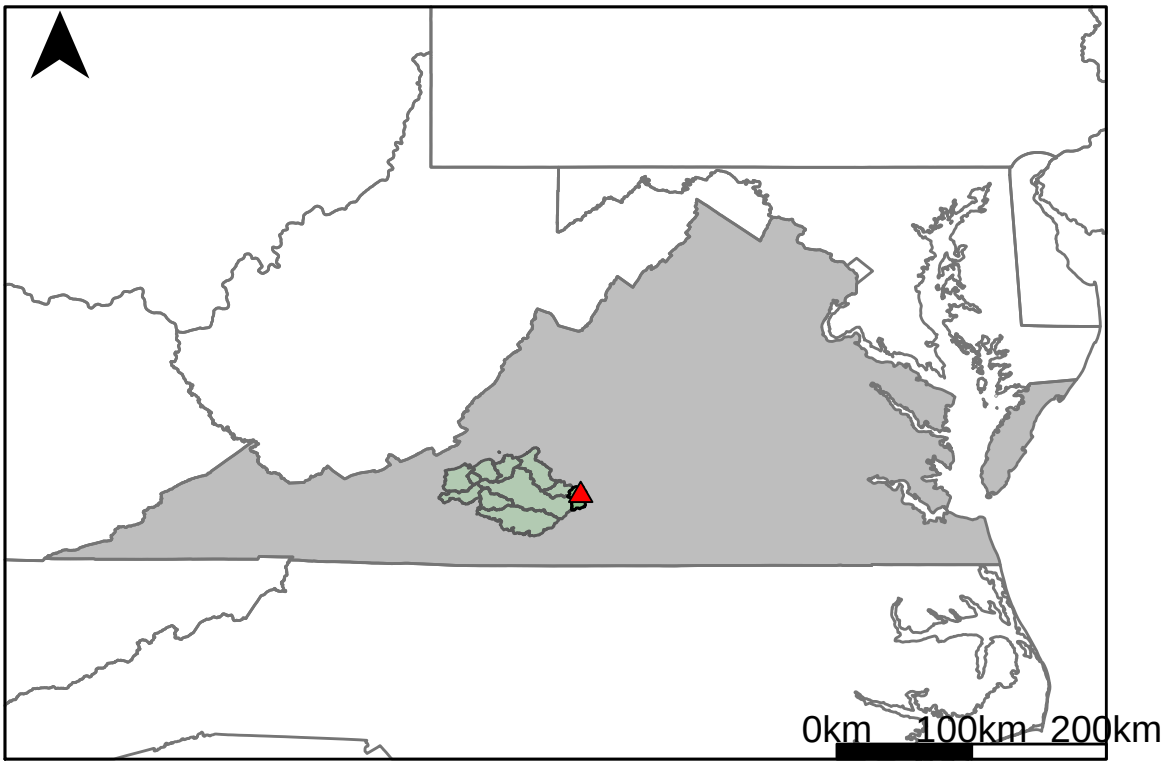
02060500 vs. OR4_8120_7890



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 -7.26%, 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	456	36.6
Feb. Low Flow	796	511	35.8
Mar. Low Flow	786	912	-16
Apr. Low Flow	826	1100	-33.2
May Low Flow	921	1610	-74.8
Jun. Low Flow	852	1520	-78.4
Jul. Low Flow	889	973	-9.45
Aug. Low Flow	1020	786	22.9
Sep. Low Flow	820	746	9.02
Oct. Low Flow	746	528	29.2
Nov. Low Flow	782	496	36.6
Dec. Low Flow	759	473	37.7

Table 2: Monthly Average Flows

	USGS Gage	Model	Pct. Error
Overall Mean Flow	1790	1920	-7.26
Jan. Mean Flow	2010	2410	-19.9
Feb. Mean Flow	2350	2880	-22.6
Mar. Mean Flow	2730	3470	-27.1
Apr. Mean Flow	2670	2900	-8.61
May Mean Flow	2000	1990	0.5
Jun. Mean Flow	1670	1690	-1.2
Jul. Mean Flow	1260	1060	15.9
Aug. Mean Flow	1190	921	22.6
Sep. Mean Flow	1560	1520	2.56
Oct. Mean Flow	1210	1170	3.31
Nov. Mean Flow	1400	1470	-5
Dec. Mean Flow	1490	1680	-12.8

Table 3: Monthly High Flows

	USGS Gage	Model	Pct. Error
Jan. High Flow	1060	708	33.2
Feb. High Flow	1550	2930	-89
Mar. High Flow	2480	3090	-24.6
Apr. High Flow	5660	5610	0.88
May High Flow	5590	4610	17.5
Jun. High Flow	8290	9680	-16.8
Jul. High Flow	5700	7210	-26.5
Aug. High Flow	3580	3980	-11.2
Sep. High Flow	2470	2130	13.8
Oct. High Flow	2570	1480	42.4
Nov. High Flow	2210	925	58.1
Dec. High Flow	1230	769	37.5

Table 4: Period Low Flows

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	142	84.5	40.5
Med. 1 Day Min	513	277	46
Min. 3 Day Min	186	85.1	54.2
Med. 3 Day Min	570	287	49.6
Min. 7 Day Min	411	86.3	79
Med. 7 Day Min	693	312	55
Min. 30 Day Min	420	99	76.4
Med. 30 Day Min	751	364	51.5
Min. 90 Day Min	449	144	67.9
Med. 90 Day Min	863	567	34.3
7Q10	482	107	77.8
Year of 90-Day Min. Flow	2002	2002	0
Drought Year Mean	583	1920	-229
Mean Baseflow	930	1110	-19.4

Table 5: Period High Flows

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	46700	82600	-76.9
Med. 1 Day Max	16800	26000	-54.8
Max. 3 Day Max	32300	40800	-26.3
Med. 3 Day Max	15300	19500	-27.5
Max. 7 Day Max	21400	22200	-3.74
Med. 7 Day Max	9860	11200	-13.6
Max. 30 Day Max	11100	11400	-2.7
Med. 30 Day Max	4180	4840	-15.8
Max. 90 Day Max	6320	7140	-13
Med. 90 Day Max	3020	3480	-15.2

Table 6: Non-Exceedance Flows

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	246	115	53.3
5% Non-Exceedance	464	284	38.8
50% Non-Exceedance	1030	1070	-3.88
95% Non-Exceedance	5260	5590	-6.27
99% Non-Exceedance	13000	14300	-10
Sept. 10% Non-Exceedance	302	306	-1.32

Fig. 1: Hydrograph

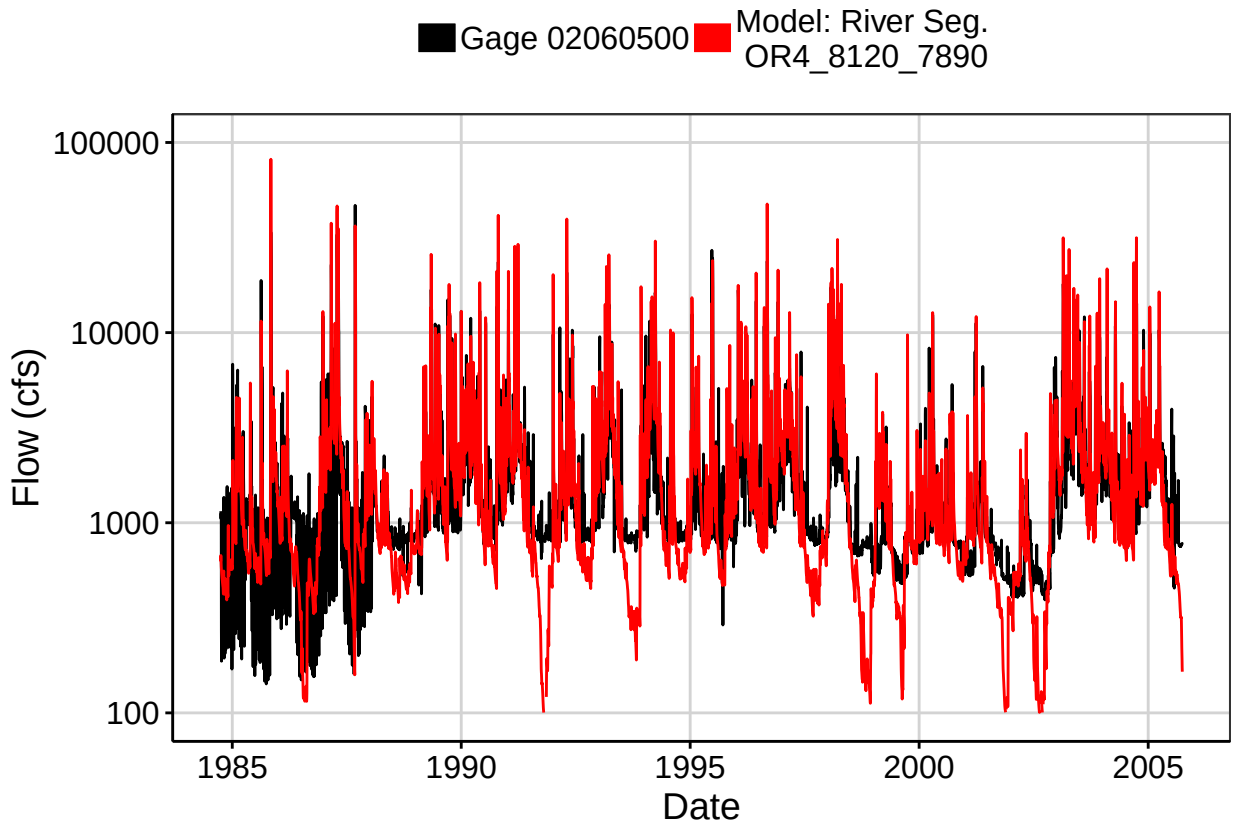


Fig. 2: Zoomed Hydrograph

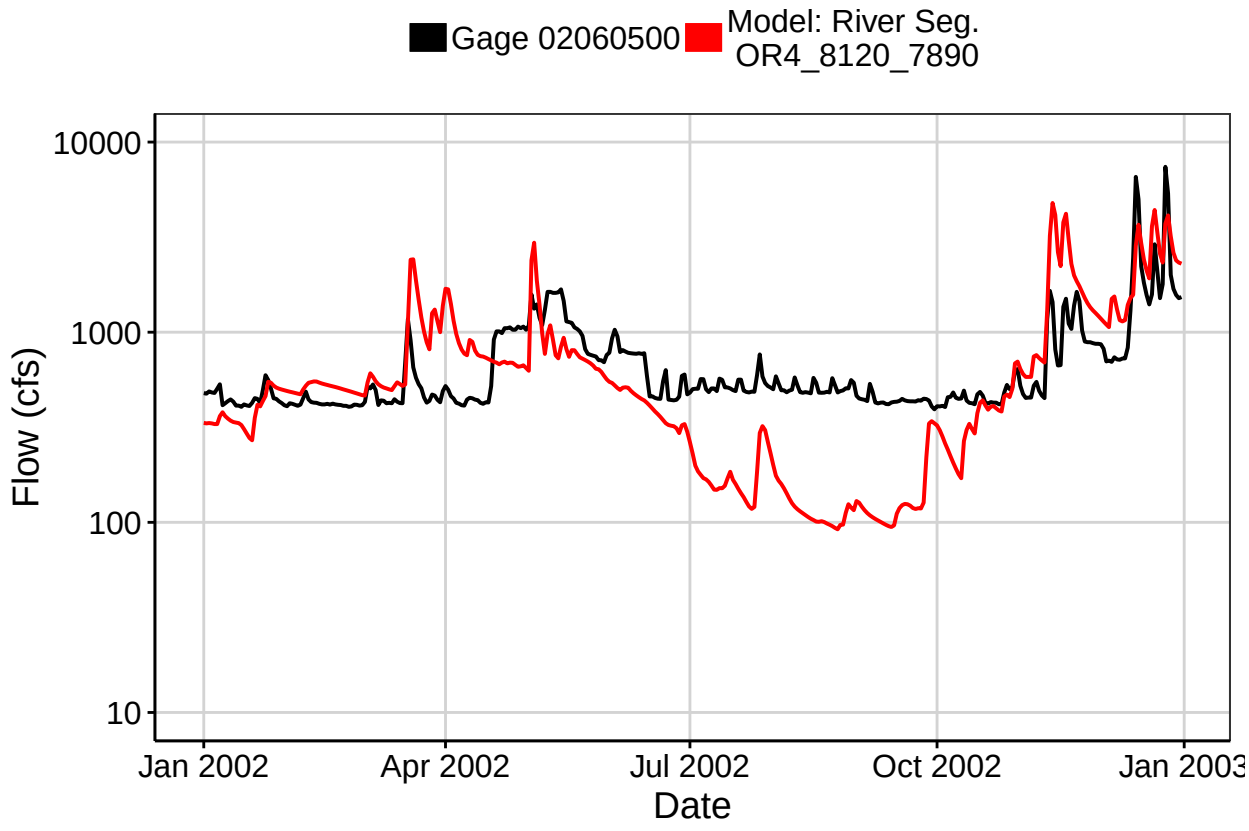


Fig. 3: Flow Exceedance

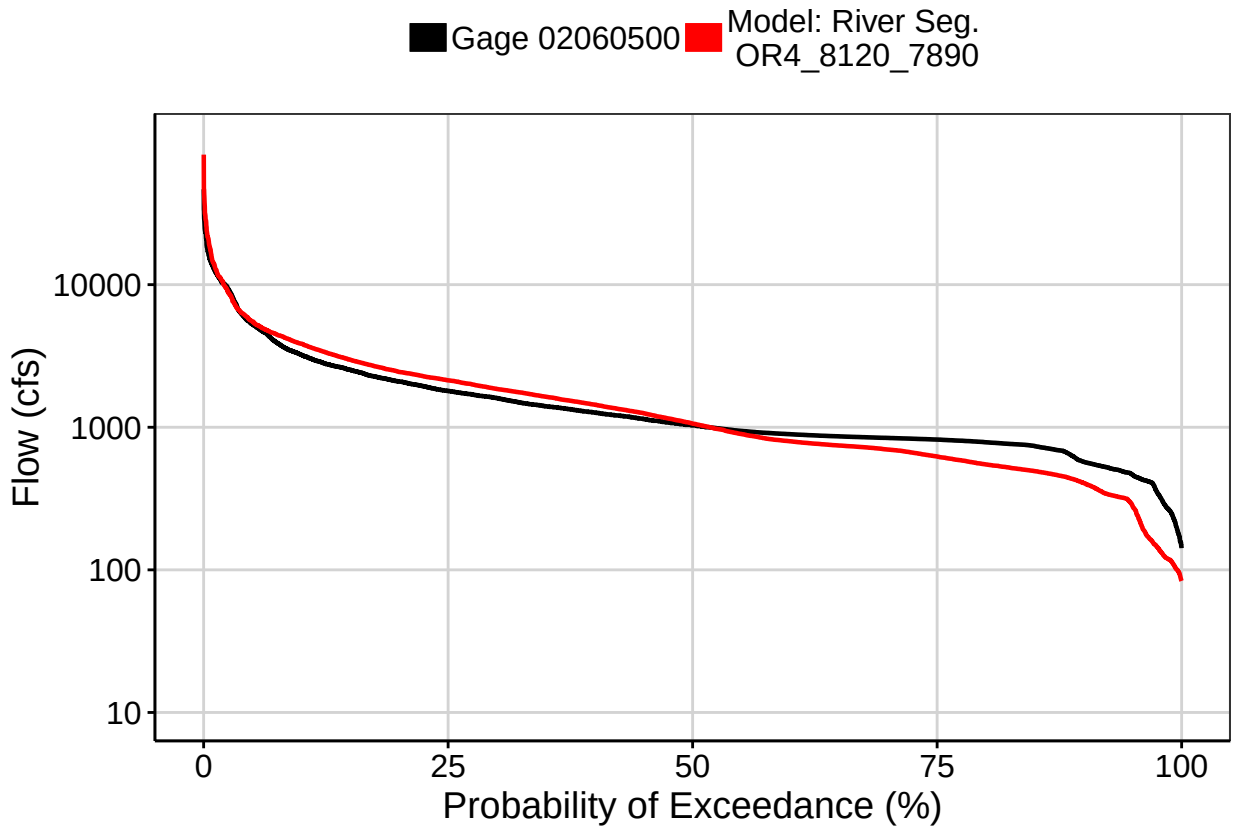


Fig. 4: Baseflow

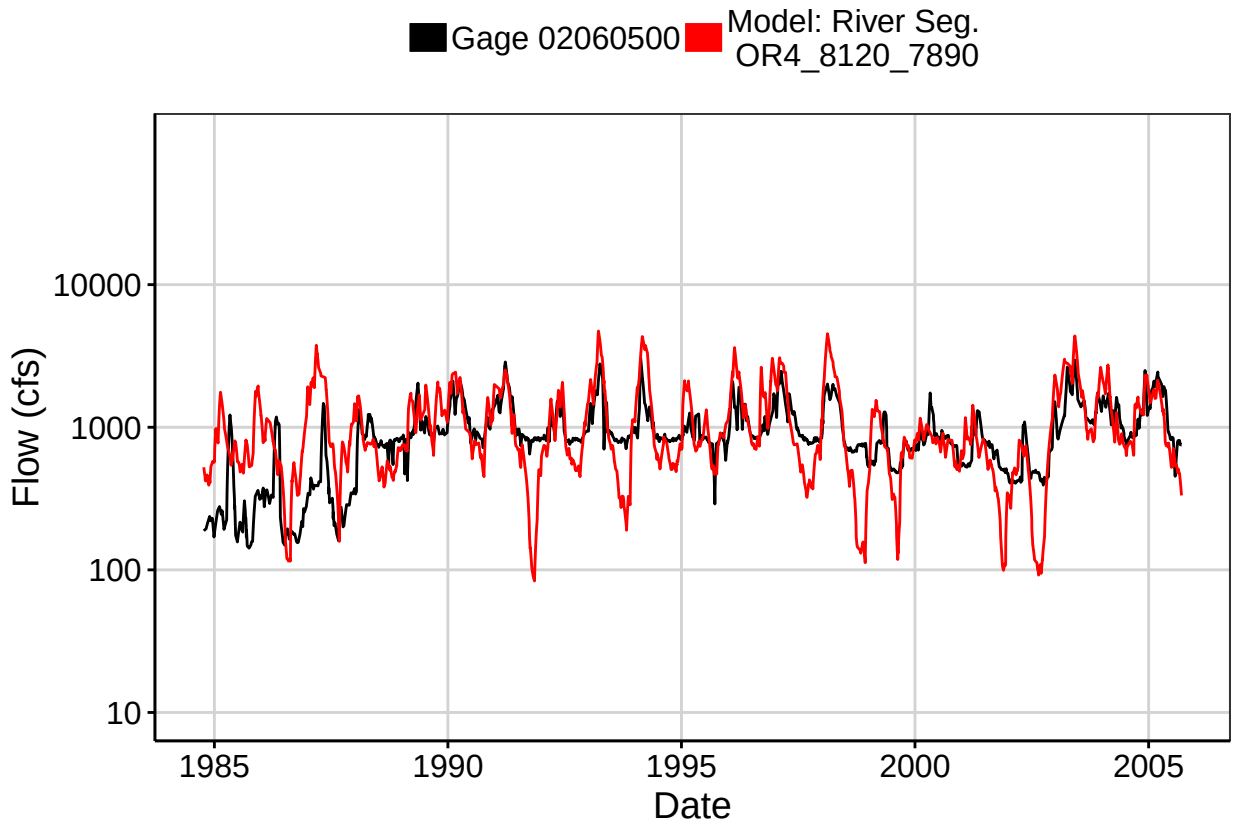


Fig. 5: Combined Baseflow

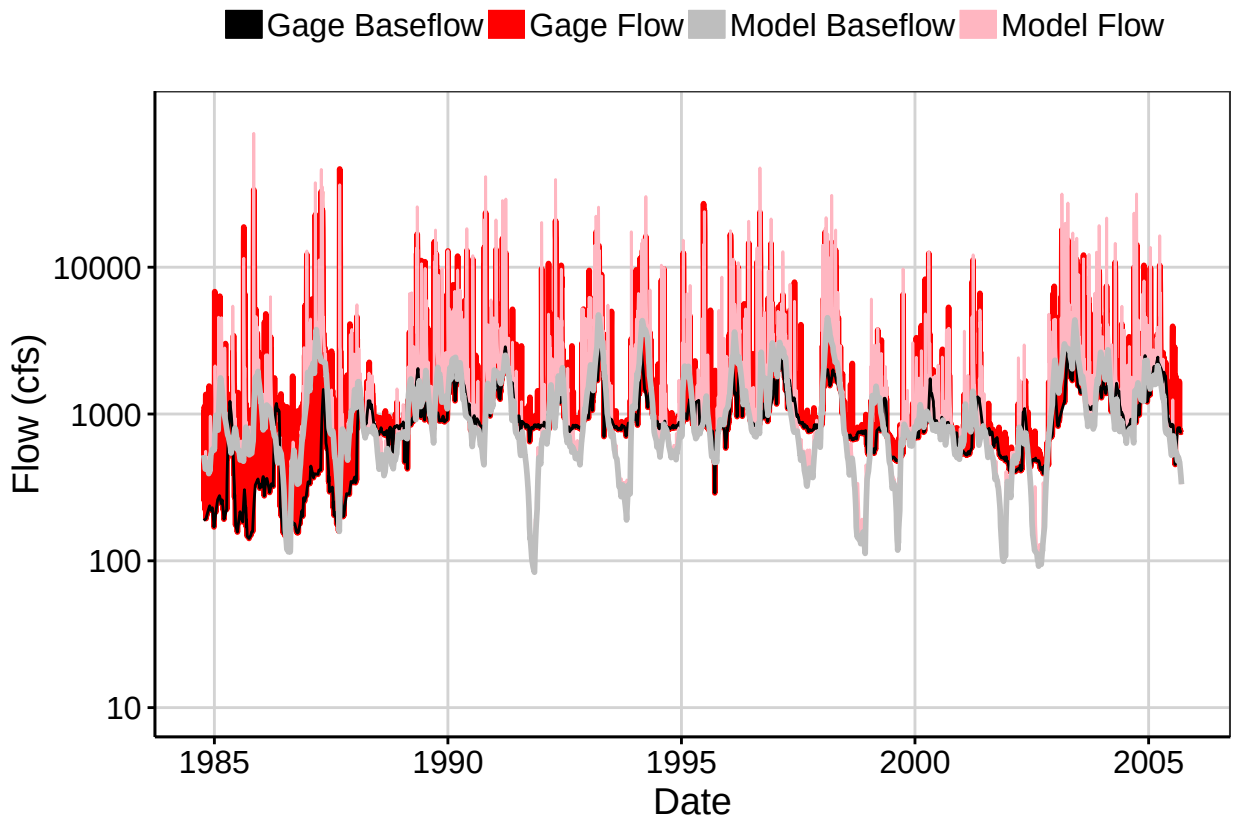


Fig. 6: Largest Error Segment

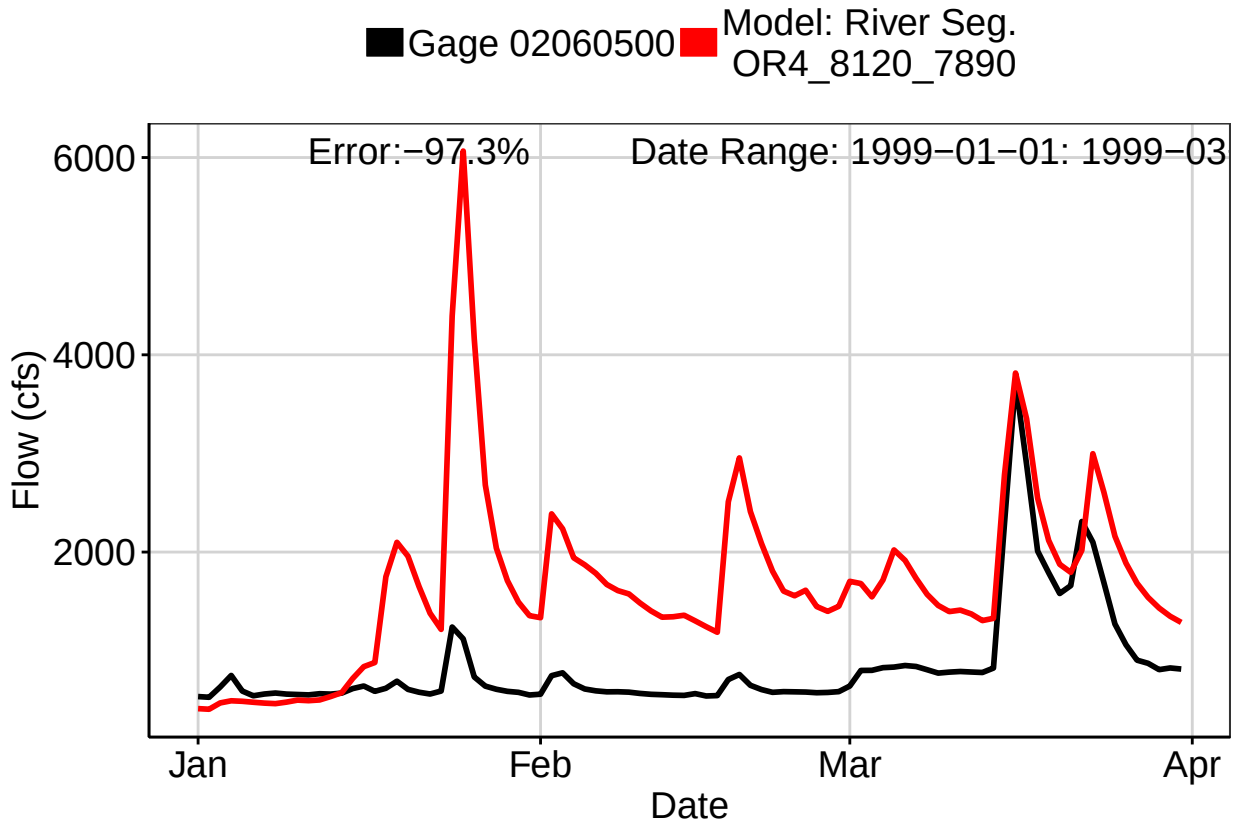


Fig. 7: Second Largest Error Segment

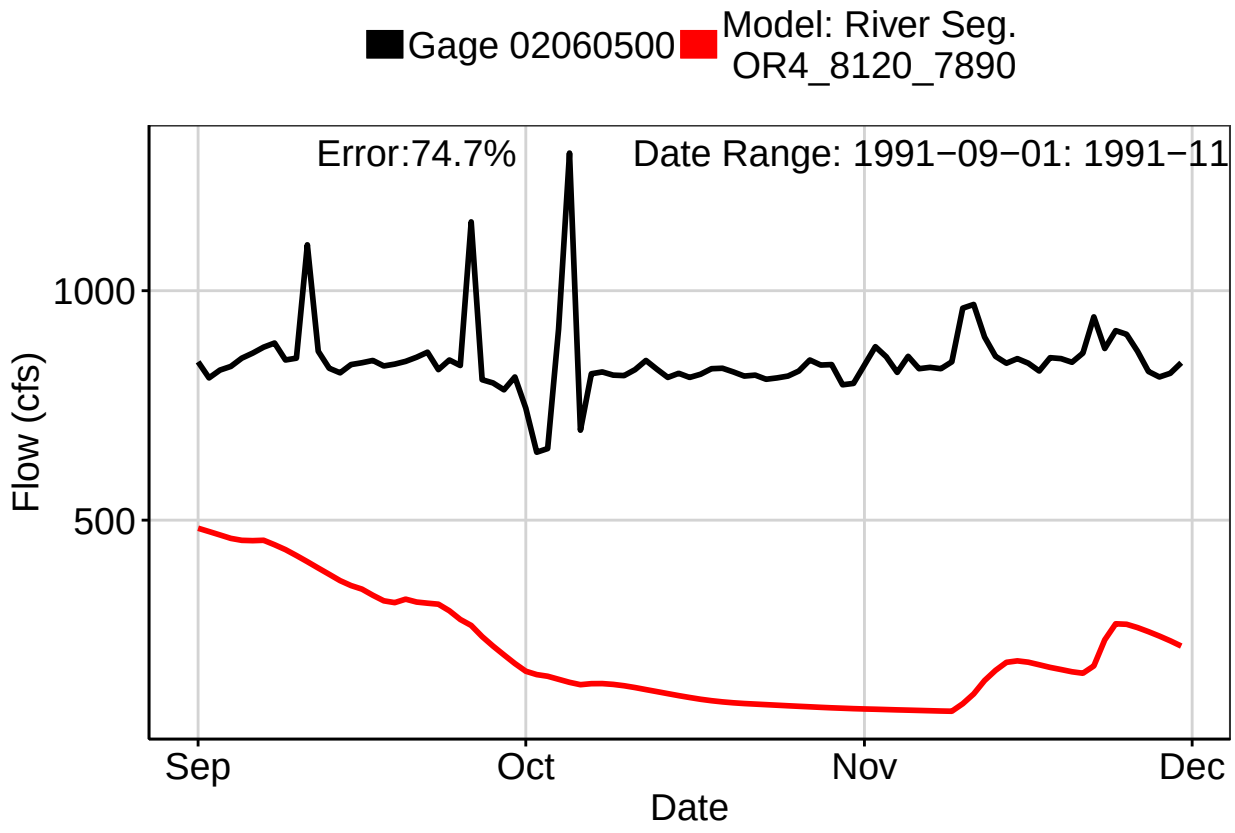


Fig. 8: Third Largest Error Segment

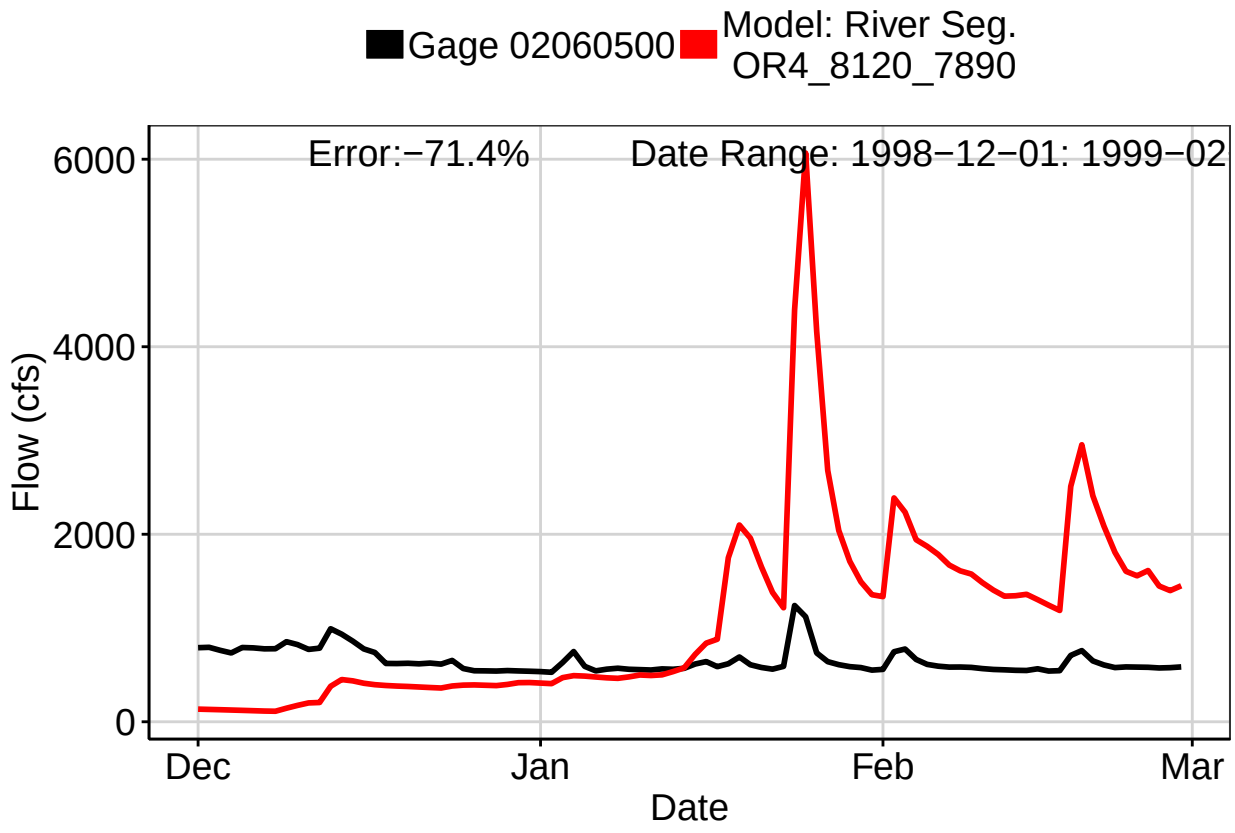


Fig. 9: Residuals Plot