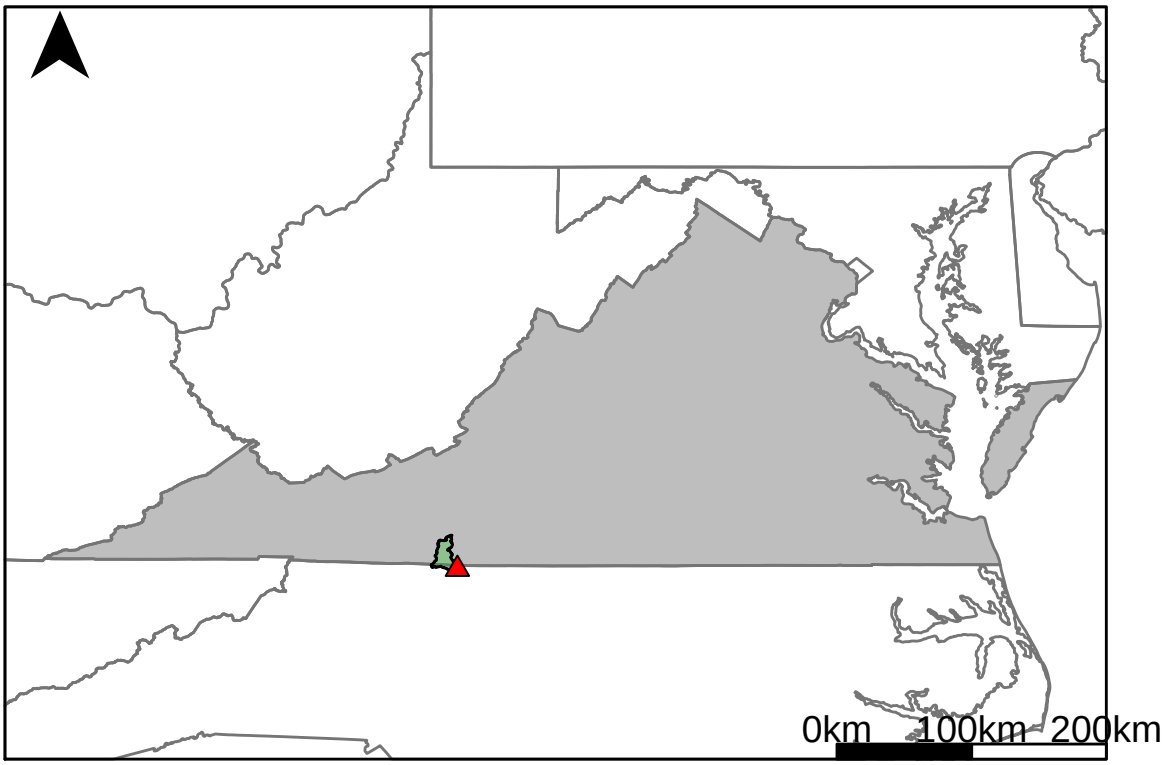
02068500 vs. OD2_8840_9020



This river segment follows part of the flow of the Dan River. The gage is located in Stokes County, NC (Lat 3630'54", Long 8018'11") approximately 26 miles southwest of Martinsville, VA. Drainage area is 129 sq. miles. This gage started taking data in 1924 and is still taking data but there is a gap from 1987-10-13 to 1991-11-30. The Talbot and Townes reservoirs are located above the Pinnacles Hydroelectric Plant in Virginia 28 miles above the station. There are also several gristmills but they are not expected to affect the flow. The average daily discharge error between the model and gage data for the 20 year timespan was 2.59%, with 54.6% of its rolling three month time spans above 20% error.

Table 1: Monthly Low Flows

	USGS Gage	Model	Pct. Error
Jan. Low Flow	75	55.4	26.1
Feb. Low Flow	88.1	64.8	26.4
Mar. Low Flow	90.9	98.7	-8.58
Apr. Low Flow	106	108	-1.89
May Low Flow	133	148	-11.3
Jun. Low Flow	131	155	-18.3
Jul. Low Flow	134	117	12.7
Aug. Low Flow	120	90.7	24.4
Sep. Low Flow	108	72	33.3
Oct. Low Flow	97.1	59.9	38.3
Nov. Low Flow	84	58.2	30.7
Dec. Low Flow	76	57.5	24.3

Table 2: Monthly Average Flows

	USGS Gage	Model	Pct. Error
Overall Mean Flow	193	188	2.59
Jan. Mean Flow	208	227	-9.13
Feb. Mean Flow	212	243	-14.6
Mar. Mean Flow	268	303	-13.1
Apr. Mean Flow	267	248	7.12
May Mean Flow	197	182	7.61
Jun. Mean Flow	197	172	12.7
Jul. Mean Flow	161	119	26.1
Aug. Mean Flow	181	143	21
Sep. Mean Flow	160	160	0
Oct. Mean Flow	123	131	-6.5
Nov. Mean Flow	158	157	0.63
Dec. Mean Flow	185	175	5.41

Table 3: Monthly High Flows

	USGS Gage	Model	Pct. Error
Jan. High Flow	174	148	14.9
Feb. High Flow	286	390	-36.4
Mar. High Flow	441	304	31.1
Apr. High Flow	420	707	-68.3
May High Flow	413	385	6.78
Jun. High Flow	497	1010	-103
Jul. High Flow	465	501	-7.74
Aug. High Flow	371	436	-17.5
Sep. High Flow	311	221	28.9
Oct. High Flow	233	188	19.3
Nov. High Flow	261	199	23.8
Dec. High Flow	274	212	22.6

Table 4: Period Low Flows

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	21	15.3	27.1
Med. 1 Day Min	60.5	35.3	41.7
Min. 3 Day Min	25.7	15.7	38.9
Med. 3 Day Min	63.7	36	43.5
Min. 7 Day Min	41	16.6	59.5
Med. 7 Day Min	71.1	37.4	47.4
Min. 30 Day Min	52.7	22.4	57.5
Med. 30 Day Min	87.2	49	43.8
Min. 90 Day Min	66.3	40.6	38.8
Med. 90 Day Min	117	69	41
7Q10	46.4	21.7	53.2
Year of 90-Day Min. Flow	2002	1986	100
Drought Year Mean	93.6	188	-101
Mean Baseflow	130	117	10

Table 5: Period High Flows

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	6430	5300	17.6
Med. 1 Day Max	1820	2350	-29.1
Max. 3 Day Max	3010	2900	3.65
Med. 3 Day Max	1000	1480	-48
Max. 7 Day Max	1540	1500	2.6
Med. 7 Day Max	675	923	-36.7
Max. 30 Day Max	768	718	6.51
Med. 30 Day Max	403	475	-17.9
Max. 90 Day Max	551	544	1.27
Med. 90 Day Max	276	303	-9.78

Table 6: Non-Exceedance Flows

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	51	26.7	47.6
5% Non-Exceedance	65	41.4	36.3
50% Non-Exceedance	143	131	8.39
95% Non-Exceedance	446	497	-11.4
99% Non-Exceedance	929	1040	-11.9
Sept. 10% Non-Exceedance	45.8	44	3.93

Fig. 1: Hydrograph

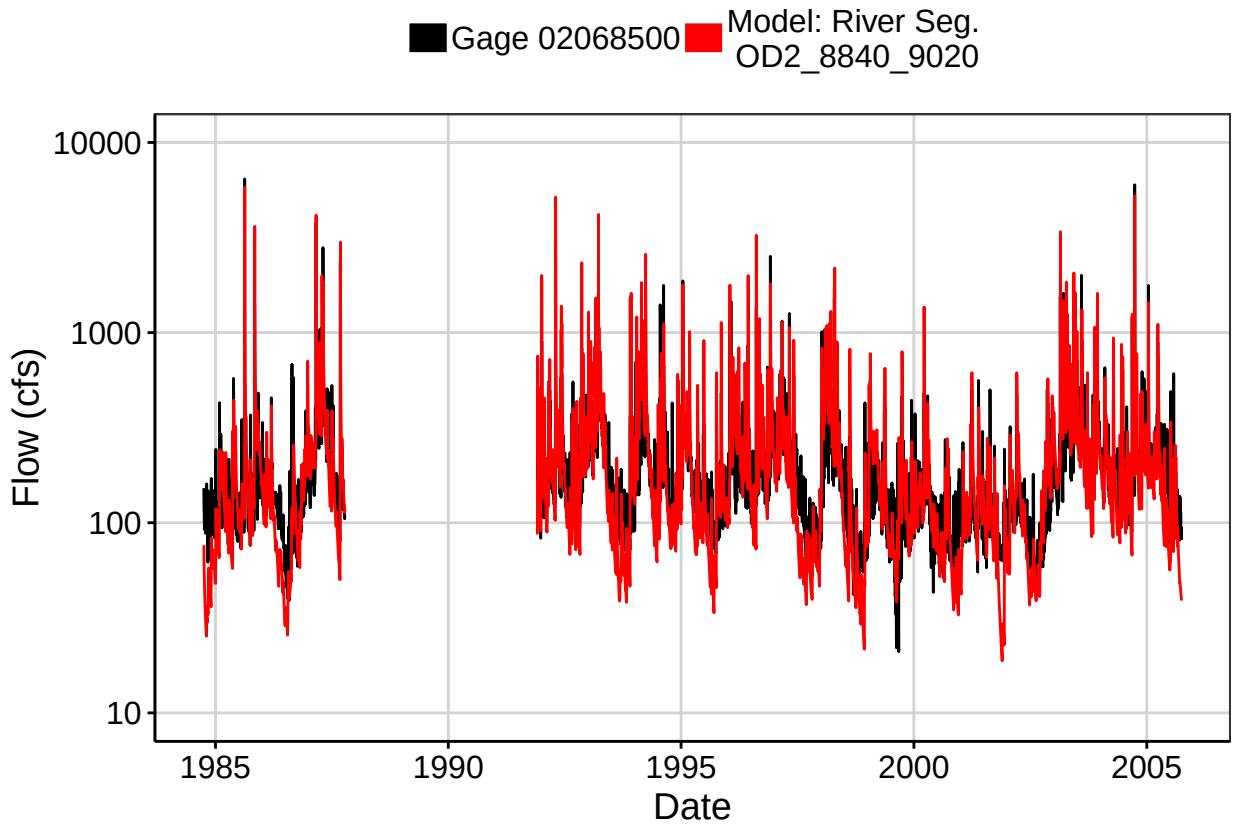


Fig. 2: Zoomed Hydrograph

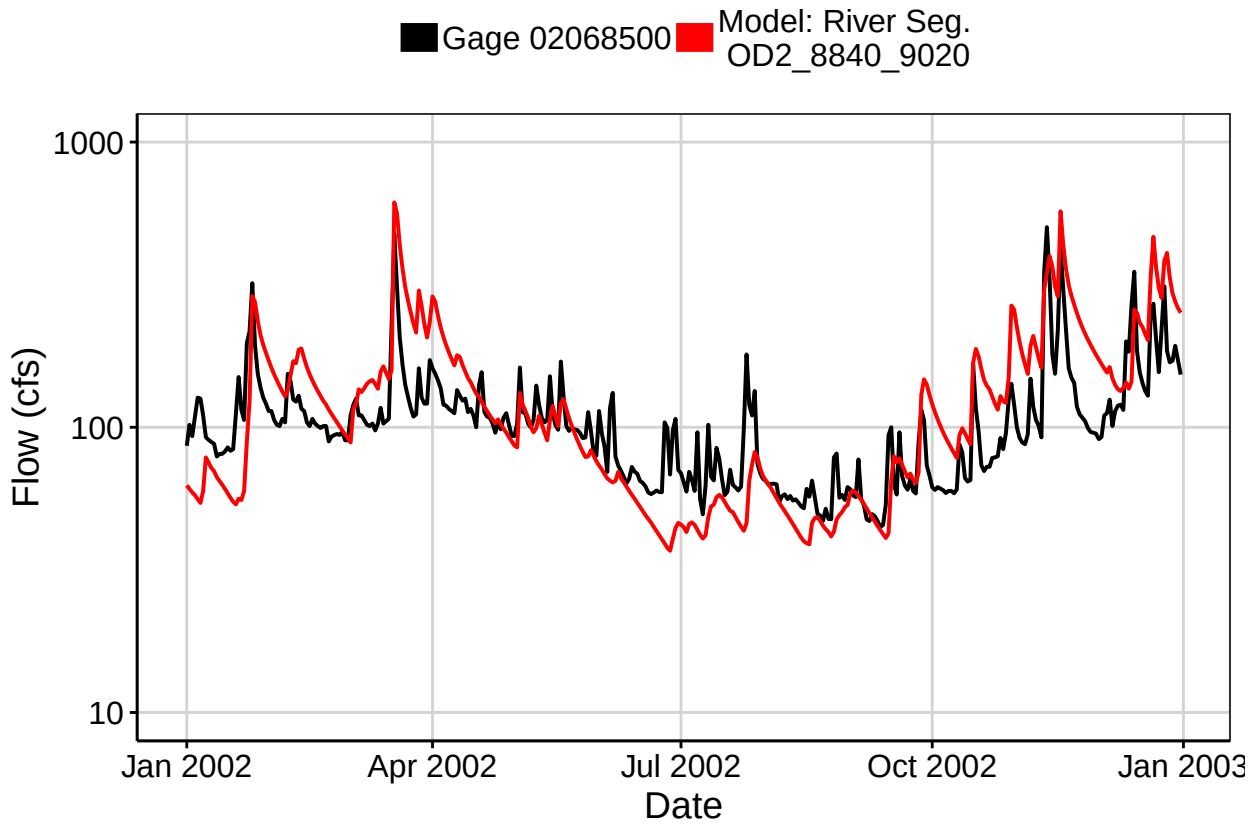


Fig. 3: Flow Exceedance

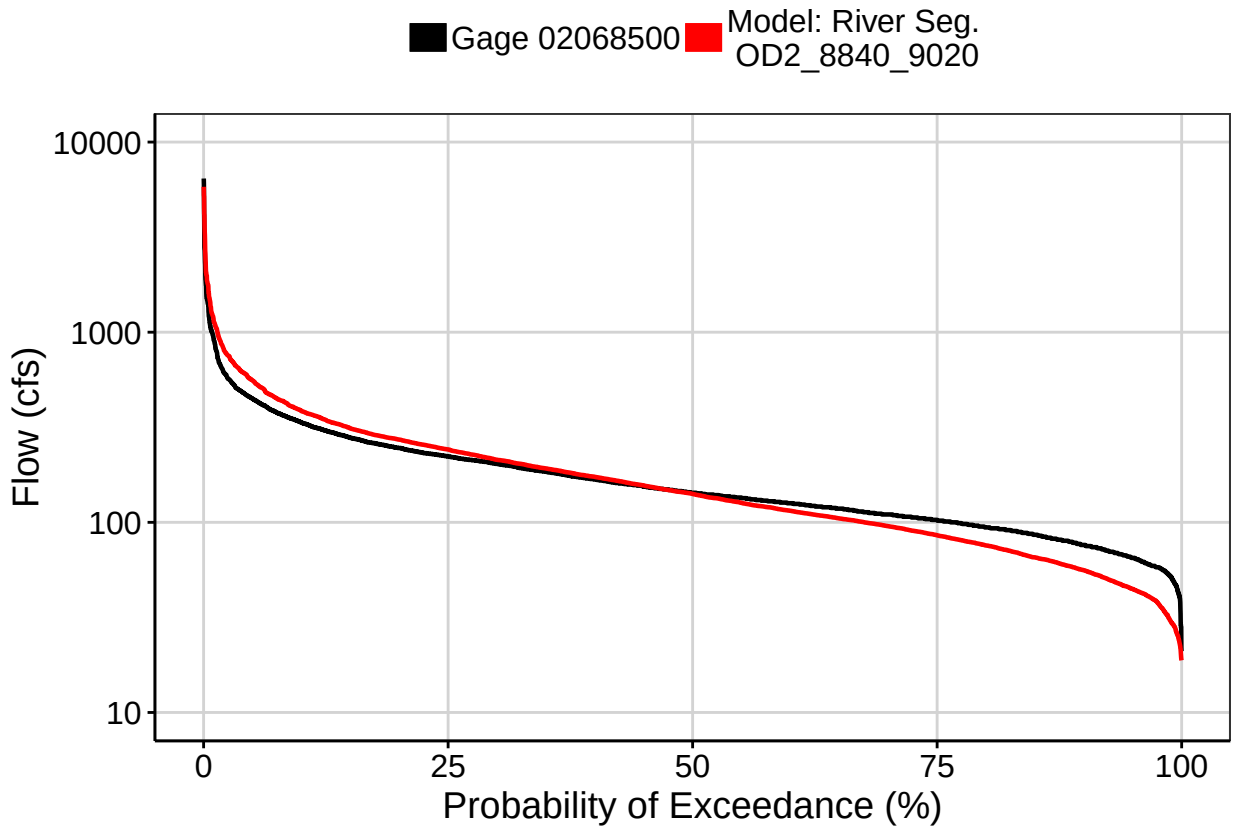


Fig. 4: Baseflow

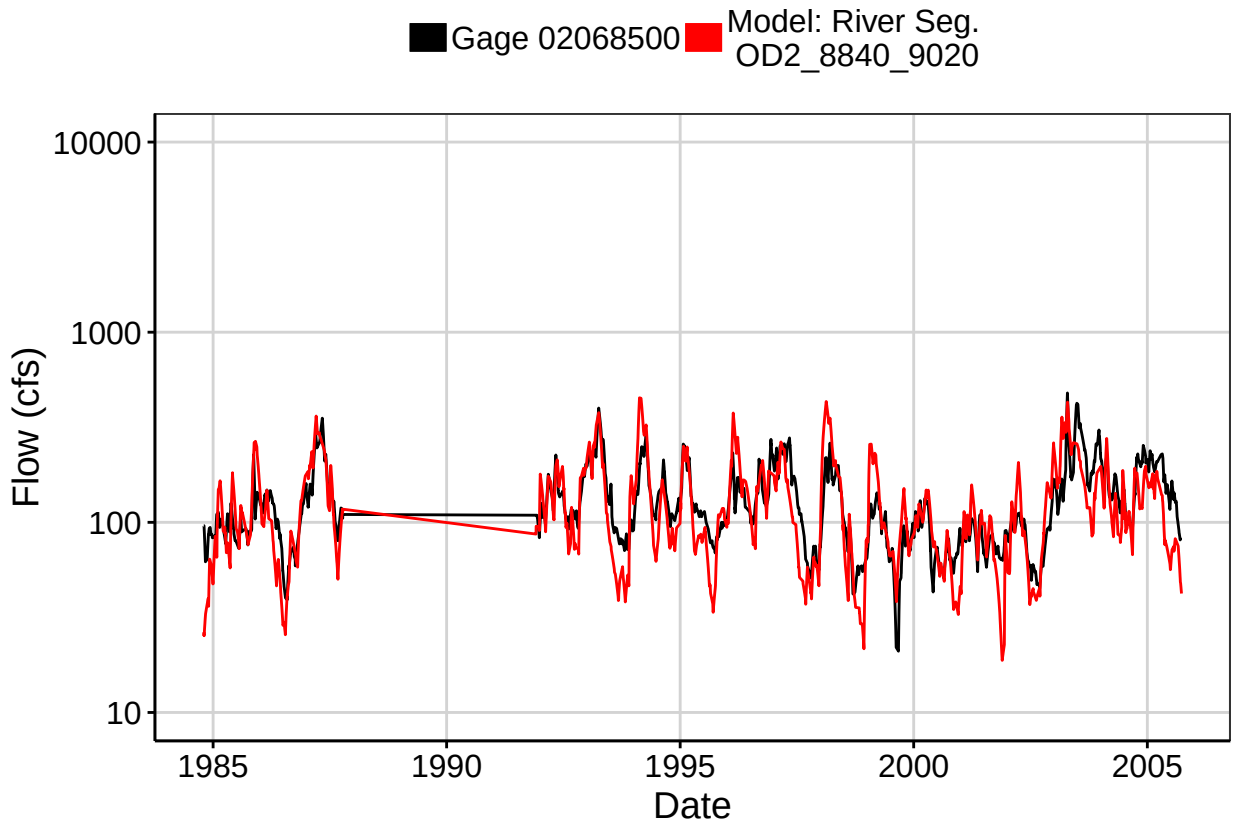


Fig. 5: Combined Baseflow

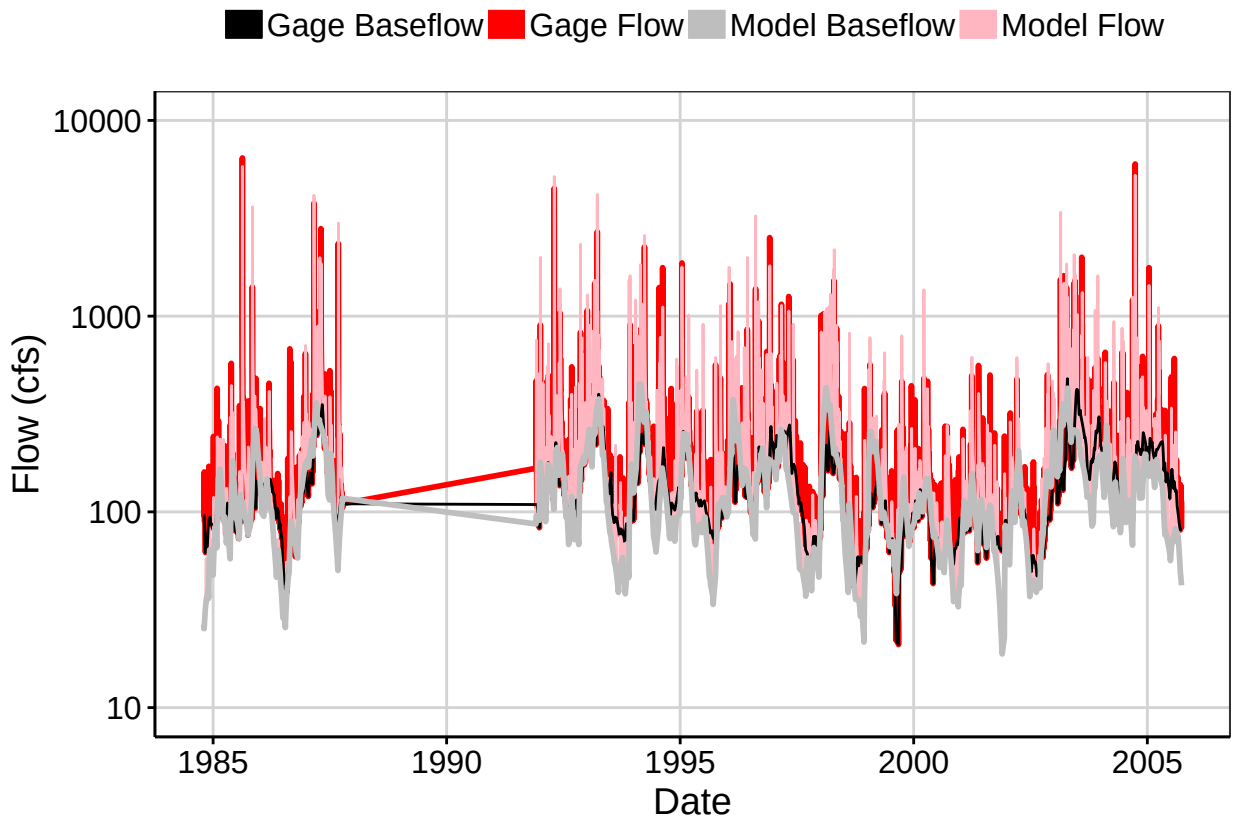


Fig. 6: Largest Error Segment

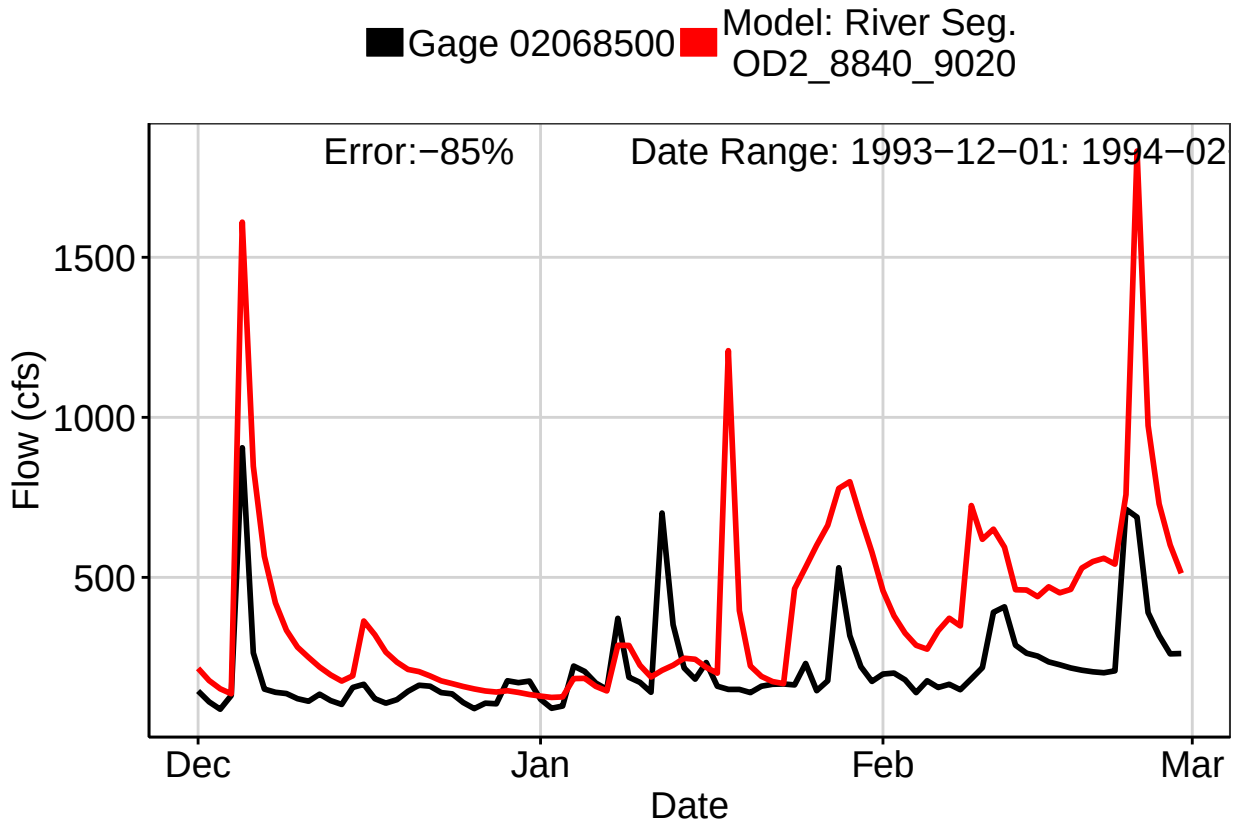


Fig. 7: Second Largest Error Segment

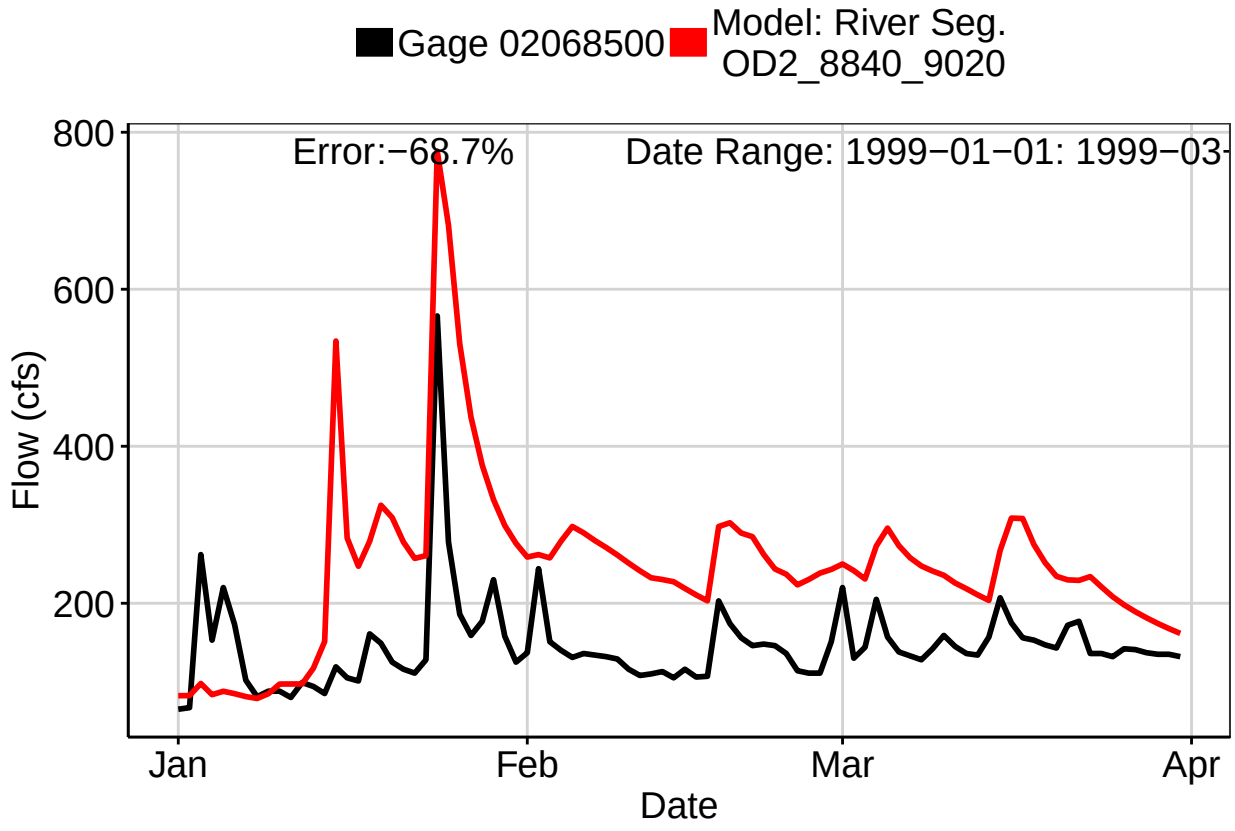


Fig. 8: Third Largest Error Segment

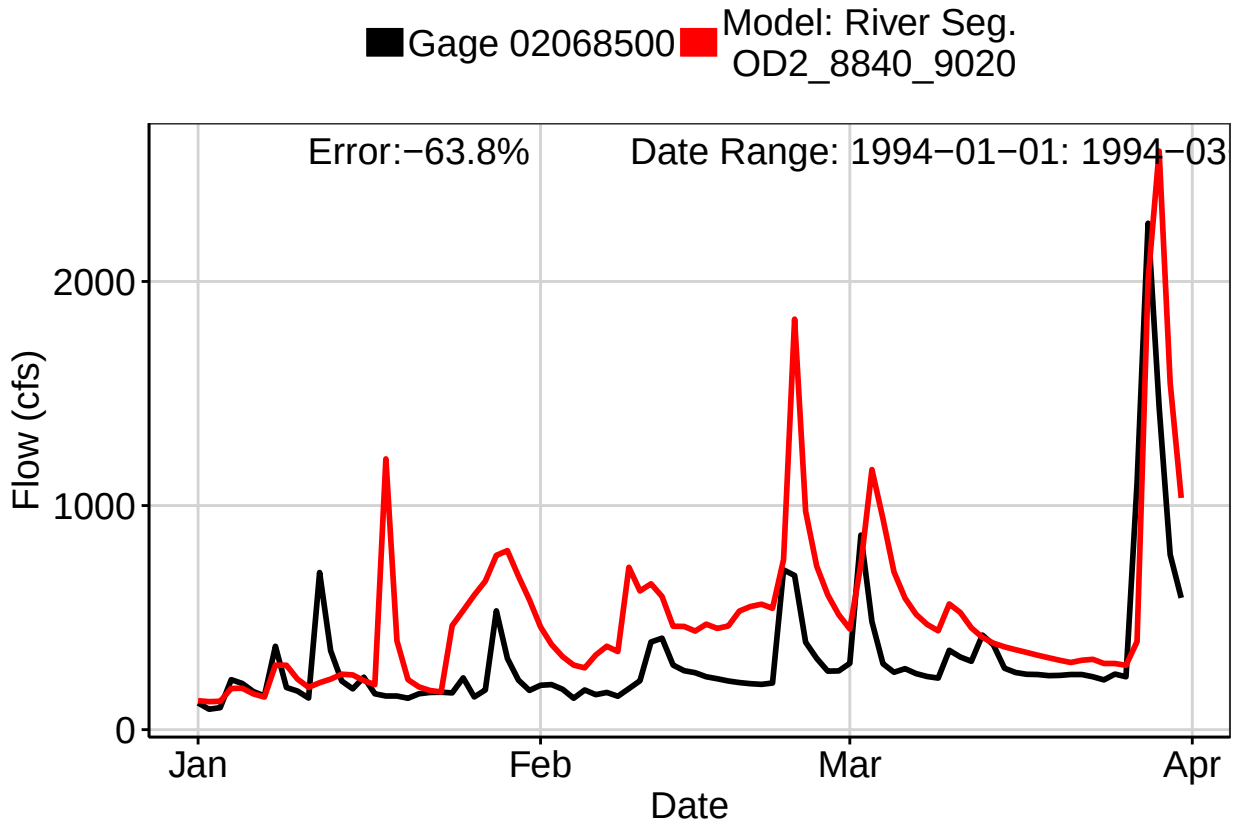


Fig. 9: Residuals Plot