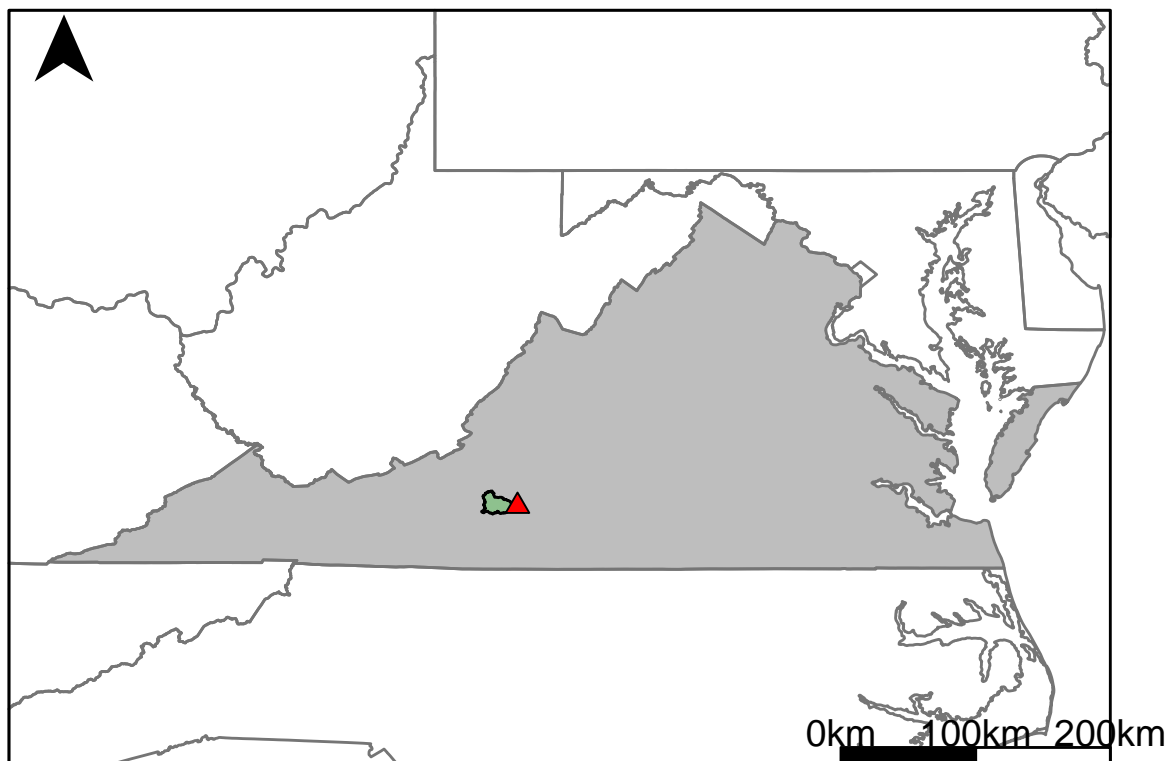


Appendix H.6: USGS Gage 02056900 vs. OR1_8320_8271



This river segment follows part of the flow of the Blackwater River, a tributary of the Roanoke River. The gage is located in Franklin County, VA (Lat 37°02'42", Long 79°50'40") approximately 20 miles southeast of Salem, VA. Drainage area is 115 sq. miles. This gage started taking data in 1976 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%, with 42.1% of its rolling three month time spans above 20% error.

Table 1: Monthly Low Flows

	USGS Gage	Model	Pct. Error
Jan. Low Flow	36	21.7	39.7
Feb. Low Flow	50	35.8	28.4
Mar. Low Flow	59	67.6	-14.6
Apr. Low Flow	58	81.3	-40.2
May Low Flow	89	104	-16.9
Jun. Low Flow	104	105	-0.96
Jul. Low Flow	95	64.3	32.3
Aug. Low Flow	81	52.1	35.7
Sep. Low Flow	59	48.8	17.3
Oct. Low Flow	40	32.7	18.2
Nov. Low Flow	32	30.7	4.06
Dec. Low Flow	34	25.8	24.1

Table 2: Monthly Average Flows

	USGS Gage	Model	Pct. Error
Overall Mean Flow	131	131	0
Jan. Mean Flow	155	164	-5.81
Feb. Mean Flow	165	193	-17
Mar. Mean Flow	207	242	-16.9
Apr. Mean Flow	201	192	4.48
May Mean Flow	128	125	2.34
Jun. Mean Flow	129	108	16.3
Jul. Mean Flow	88.5	75.1	15.1
Aug. Mean Flow	77.6	67.7	12.8
Sep. Mean Flow	110	109	0.91
Oct. Mean Flow	79.8	79.7	0.12
Nov. Mean Flow	120	105	12.5
Dec. Mean Flow	115	119	-3.48

Table 3: Monthly High Flows

	USGS Gage	Model	Pct. Error
Jan. High Flow	131	73.5	43.9
Feb. High Flow	289	290	-0.35
Mar. High Flow	250	236	5.6
Apr. High Flow	388	365	5.93
May High Flow	393	330	16
Jun. High Flow	714	769	-7.7
Jul. High Flow	323	423	-31
Aug. High Flow	240	232	3.33
Sep. High Flow	156	113	27.6
Oct. High Flow	168	89.9	46.5
Nov. High Flow	130	73.8	43.2
Dec. High Flow	209	81.9	60.8

Table 4: Period Low Flows

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	3.83	2.51	34.5
Med. 1 Day Min	24	13.8	42.5
Min. 3 Day Min	4.2	2.61	37.9
Med. 3 Day Min	26	14.1	45.8
Min. 7 Day Min	4.61	2.88	37.5
Med. 7 Day Min	28.6	15	47.6
Min. 30 Day Min	12.7	5.29	58.3
Med. 30 Day Min	39.6	21.8	44.9
Min. 90 Day Min	17.9	14.8	17.3
Med. 90 Day Min	52.3	38.5	26.4
7Q10	12	6.21	48.2
Year of 90-Day Min. Flow	2002	2002	0
Drought Year Mean	37.1	131	-253
Mean Baseflow	76.8	77	-0.26

Table 5: Period High Flows

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	5410	6430	-18.9
Med. 1 Day Max	2270	1950	14.1
Max. 3 Day Max	3370	3030	10.1
Med. 3 Day Max	1190	1310	-10.1
Max. 7 Day Max	1860	1530	17.7
Med. 7 Day Max	632	778	-23.1
Max. 30 Day Max	842	795	5.58
Med. 30 Day Max	319	326	-2.19
Max. 90 Day Max	505	487	3.56
Med. 90 Day Max	220	239	-8.64

Table 6: Non-Exceedance Flows

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	13	8.68	33.2
5% Non-Exceedance	25	15.1	39.6
50% Non-Exceedance	85	77.7	8.59
95% Non-Exceedance	330	349	-5.76
99% Non-Exceedance	915	1060	-15.8
Sept. 10% Non-Exceedance	14.2	14.2	0

Fig. 1: Hydrograph

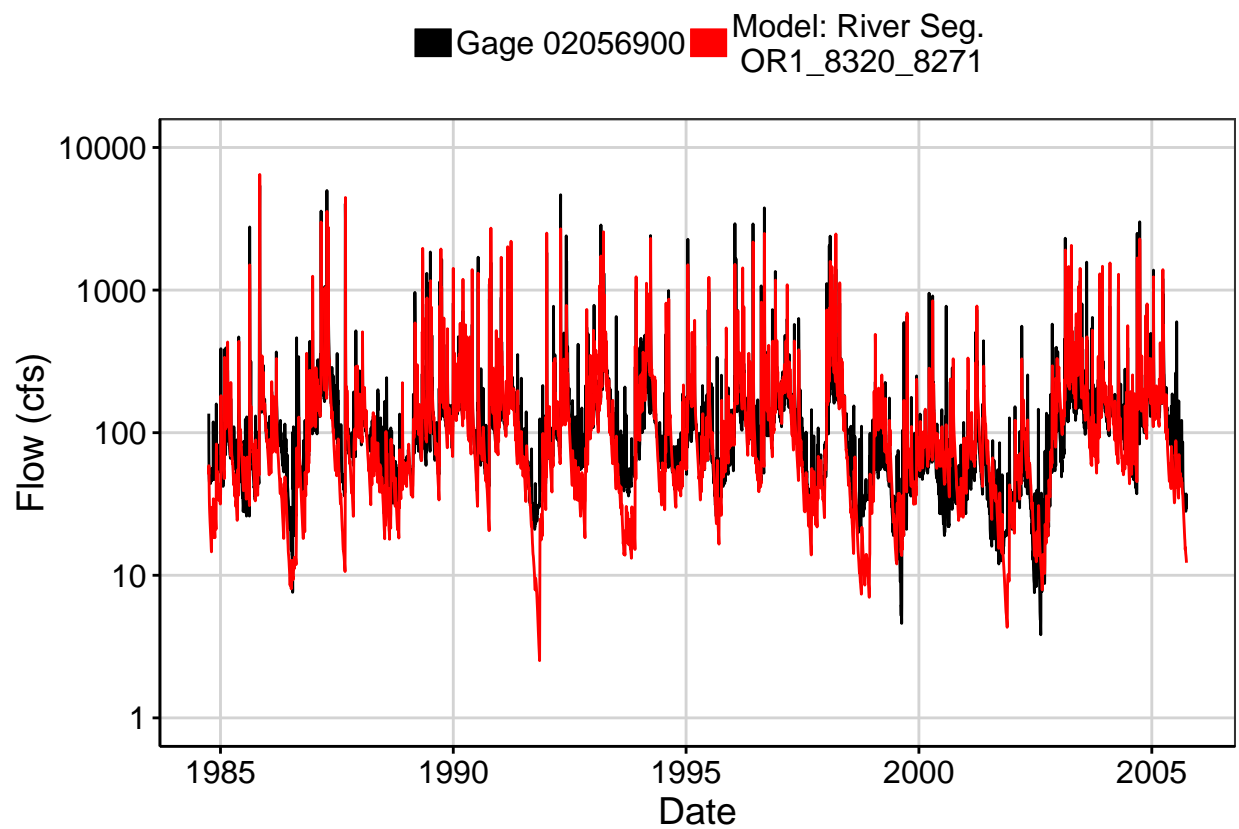


Fig. 2: Zoomed Hydrograph

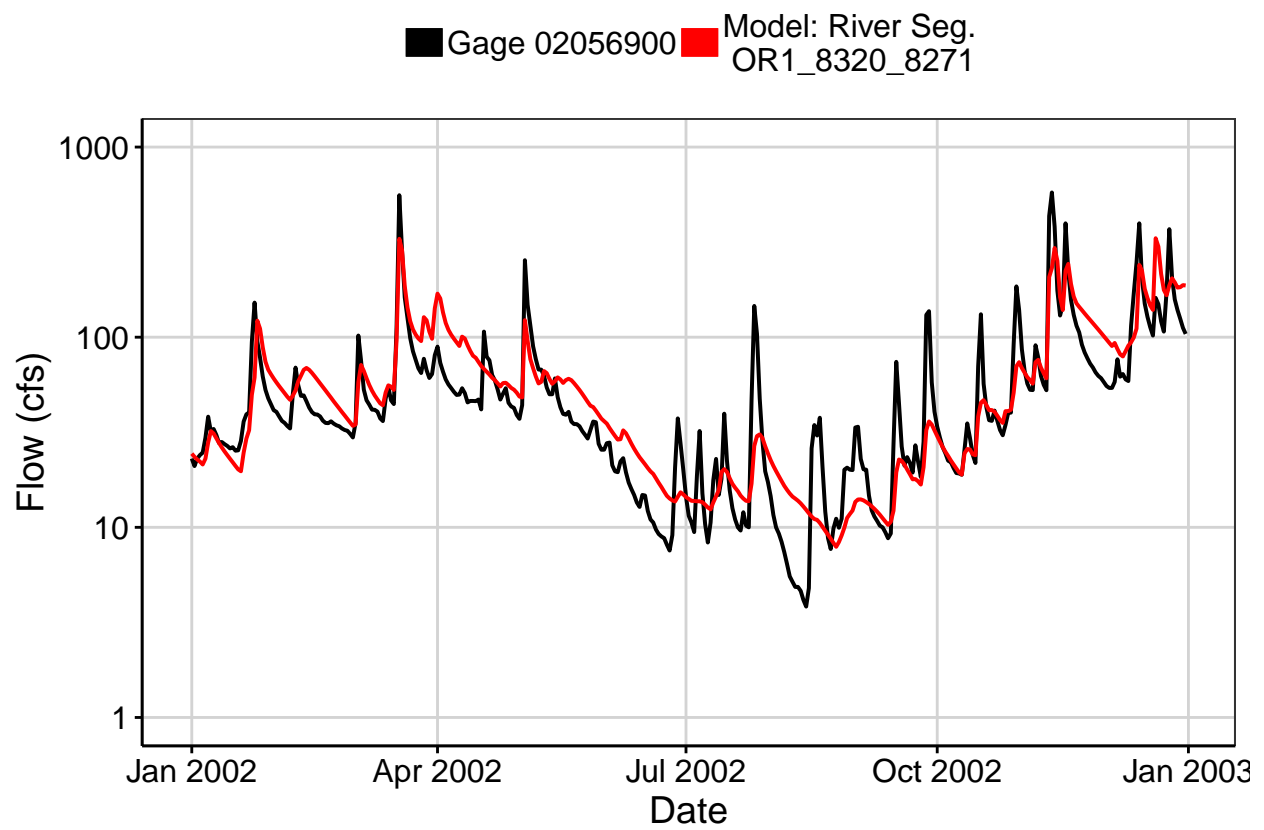


Fig. 3: Flow Exceedance

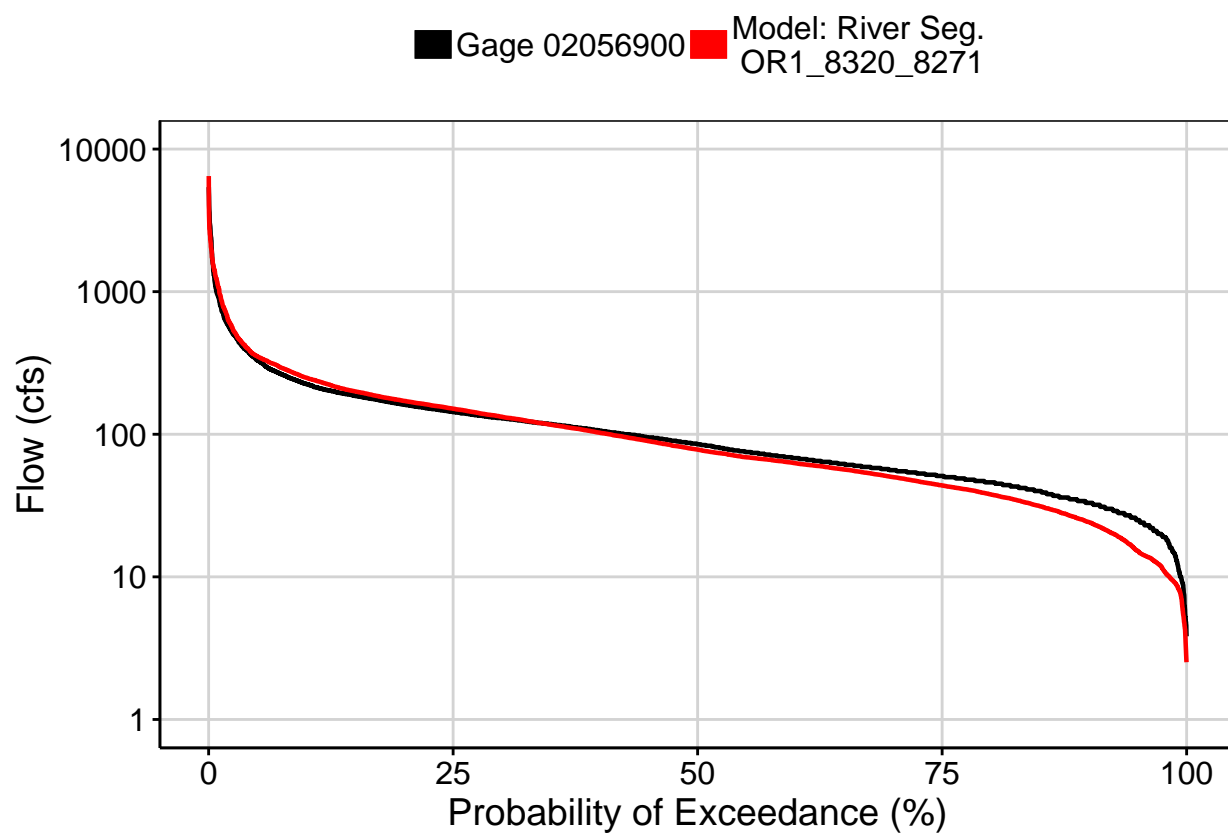


Fig. 4: Baseflow

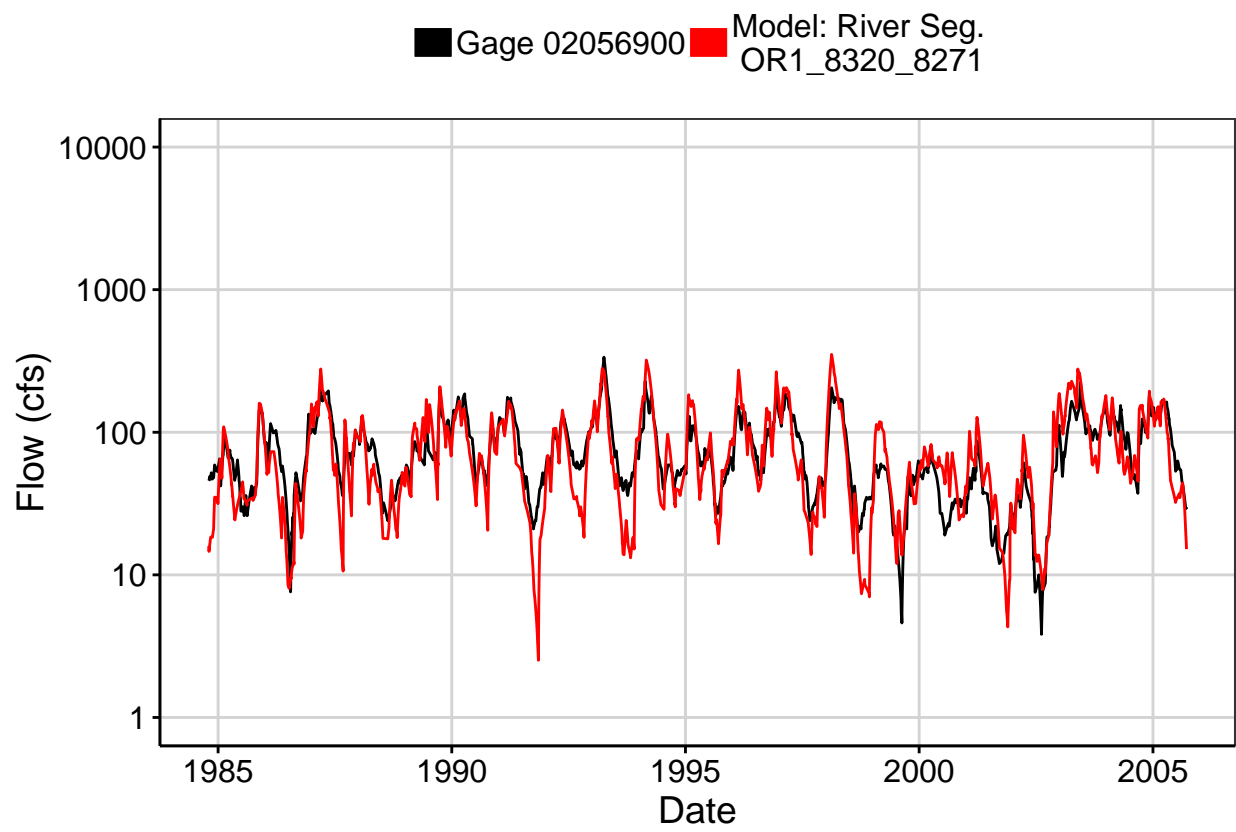


Fig. 5: Combined Baseflow

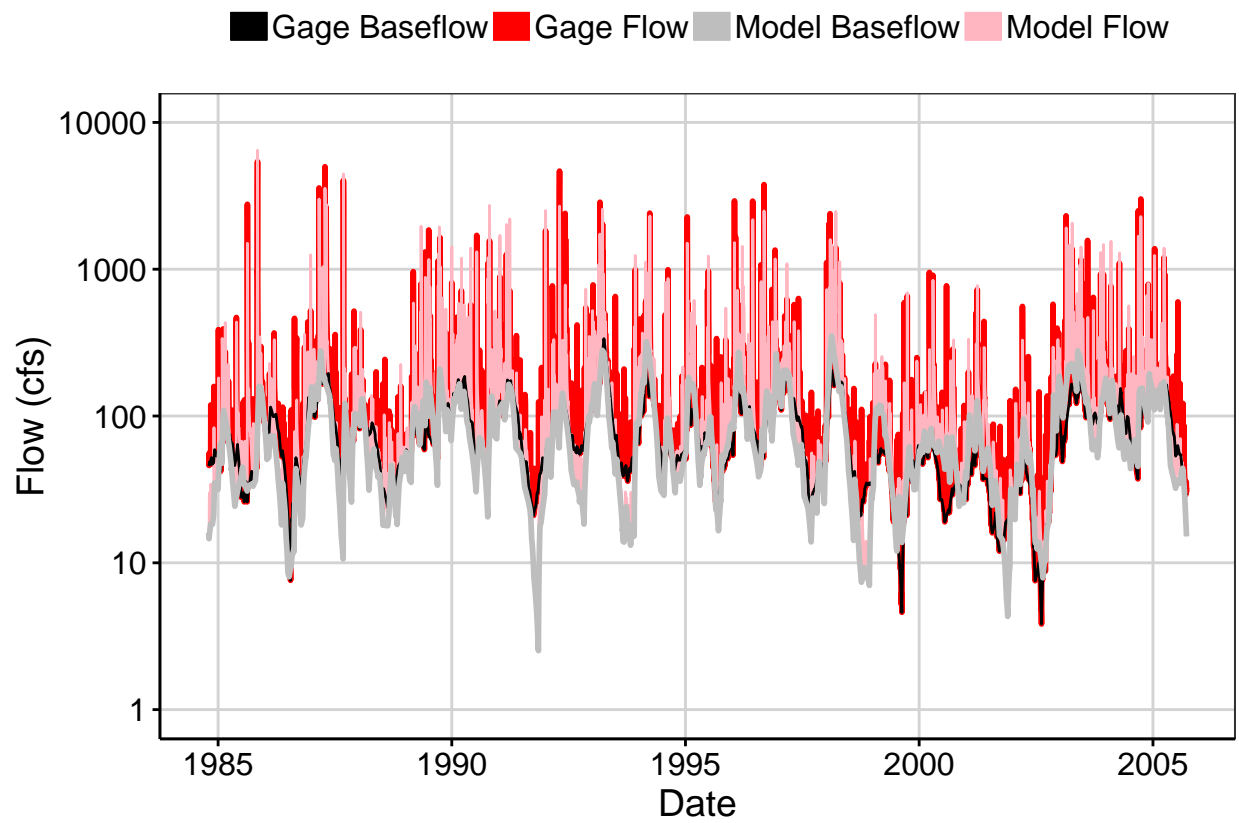


Fig. 6: Largest Error Segment

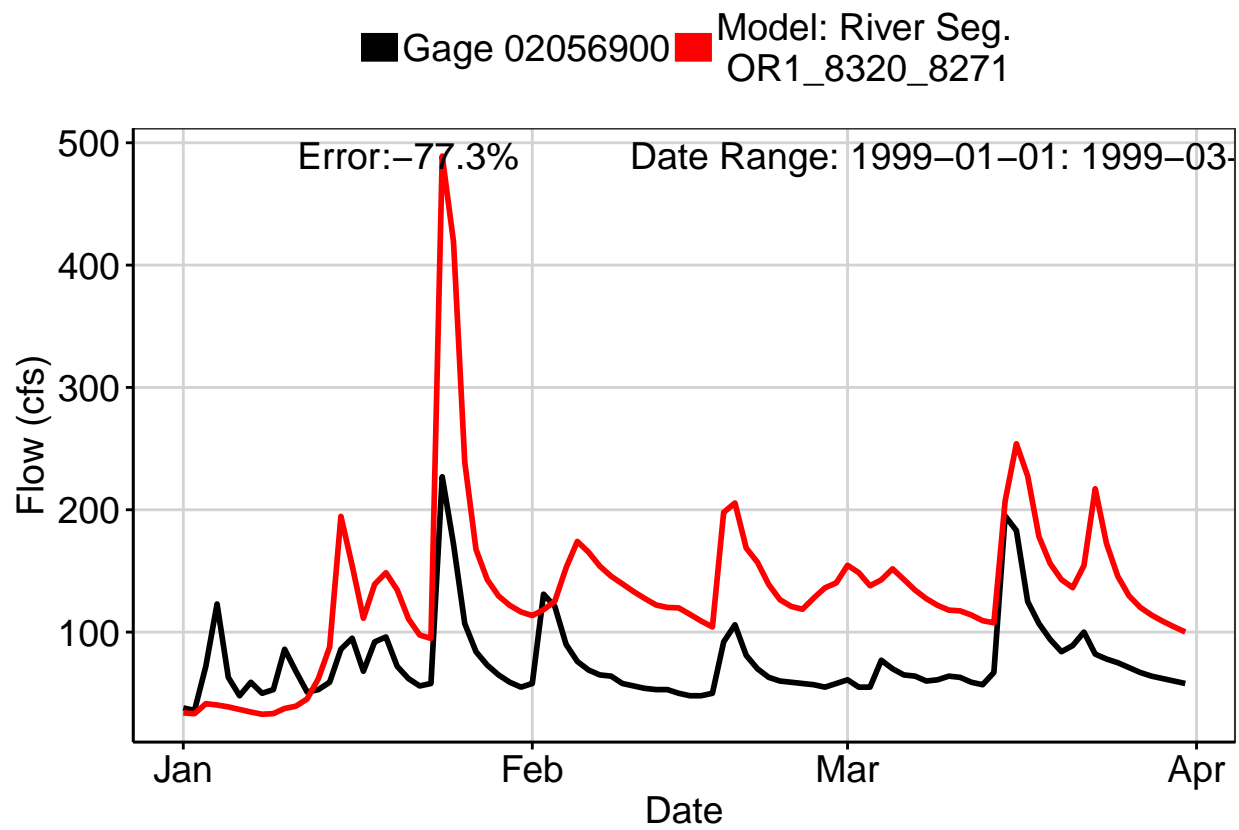


Fig. 7: Second Largest Error Segment

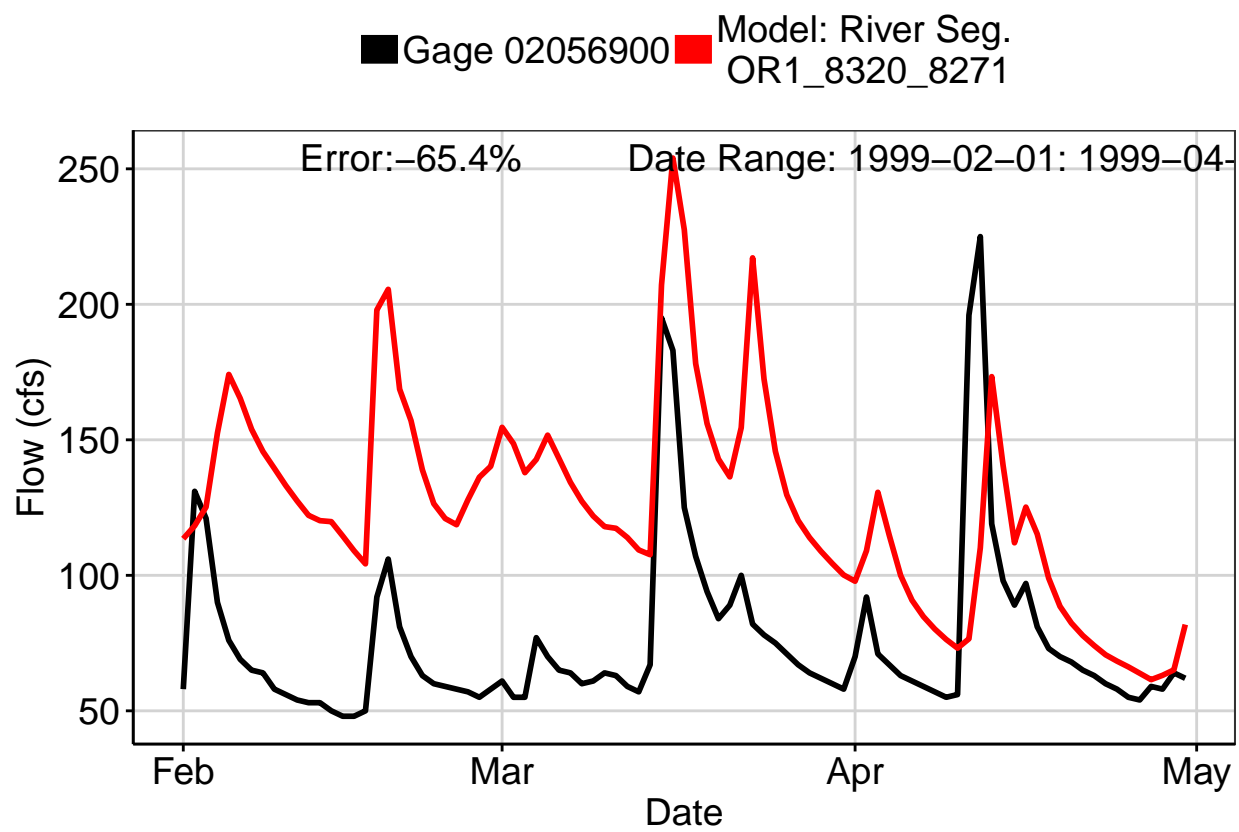


Fig. 8: Third Largest Error Segment

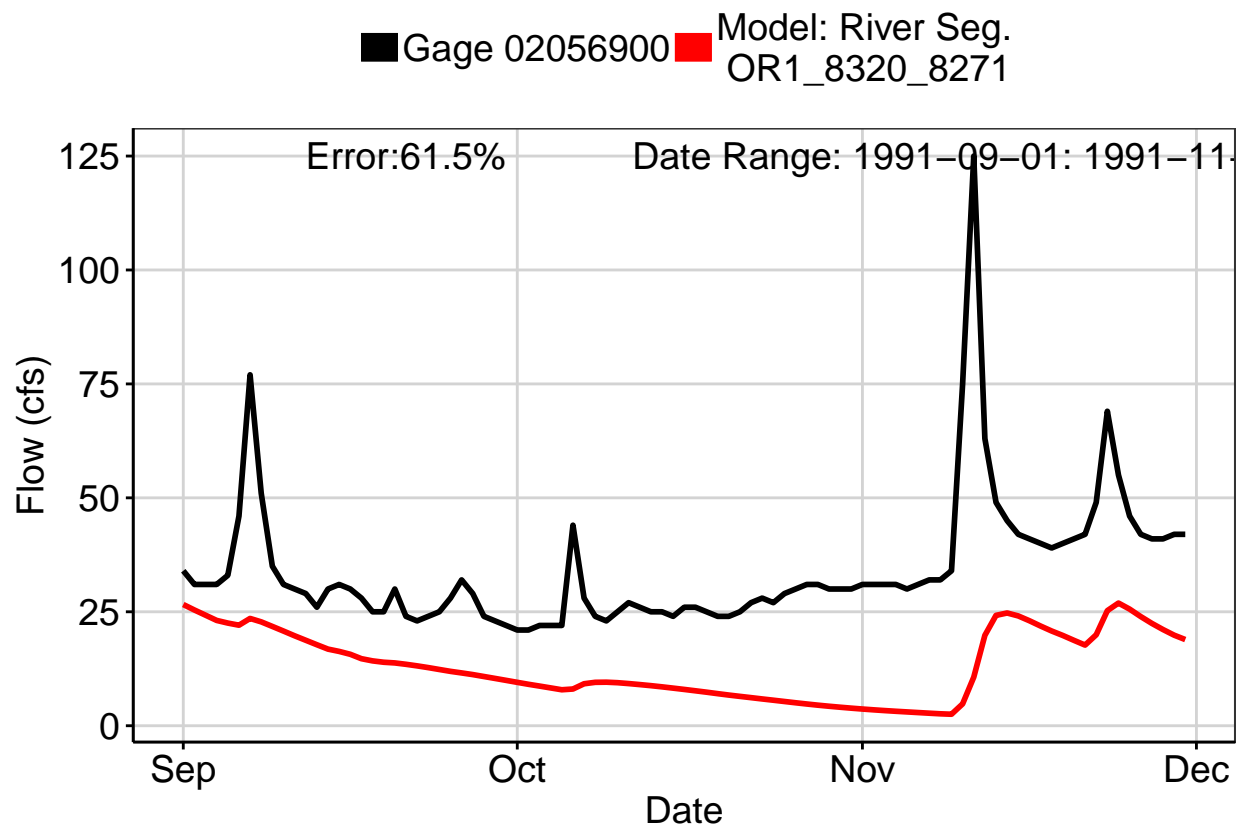


Fig. 9: Residuals Plot

