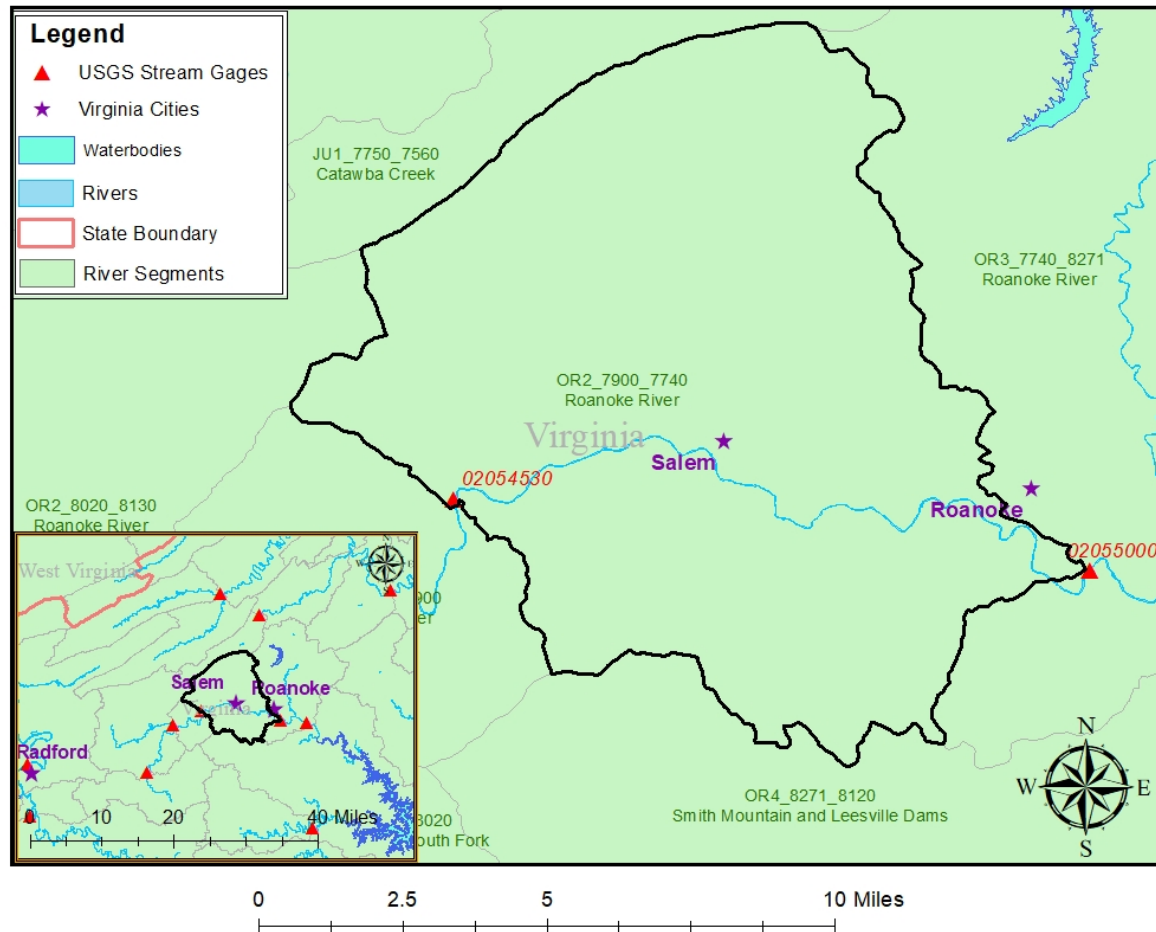


# 02055000 vs. OR2\_7900\_7740

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This river segment follows part of the flow of the Roanoke River. The gage is located in Roanoke County, VA (Lat 3715'30", Long 7956'20") approximately 1 mile southeast of Roanoke, VA. Drainage area is 384 sq. miles. This gage started taking data in 1899 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 -3.23%, with 35.4% of its rolling three month time spans above 20% error.

**Table 1: Monthly Low Flows**

	USGS Gage	Model	Pct. Error
Jan. Low Flow	69	63.3	8.26
Feb. Low Flow	84	72.9	13.2
Mar. Low Flow	120	153	-27.5
Apr. Low Flow	125	181	-44.8
May Low Flow	214	316	-47.7
Jun. Low Flow	249	285	-14.5
Jul. Low Flow	212	241	-13.7
Aug. Low Flow	163	201	-23.3
Sep. Low Flow	126	157	-24.6
Oct. Low Flow	83	90.8	-9.4
Nov. Low Flow	67	72	-7.46
Dec. Low Flow	59	56.8	3.73

**Table 2: Monthly Average Flows**

	USGS Gage	Model	Pct. Error
Overall Mean Flow	372	384	-3.23
Jan. Mean Flow	460	486	-5.65
Feb. Mean Flow	580	591	-1.9
Mar. Mean Flow	650	669	-2.92
Apr. Mean Flow	604	581	3.81
May Mean Flow	434	447	-3
Jun. Mean Flow	337	366	-8.61
Jul. Mean Flow	204	237	-16.2
Aug. Mean Flow	173	184	-6.36
Sep. Mean Flow	263	271	-3.04
Oct. Mean Flow	170	190	-11.8
Nov. Mean Flow	291	301	-3.44
Dec. Mean Flow	313	309	1.28

**Table 3: Monthly High Flows**

	USGS Gage	Model	Pct. Error
Jan. High Flow	213	355	-66.7
Feb. High Flow	455	760	-67
Mar. High Flow	829	578	30.3
Apr. High Flow	1400	1510	-7.86
May High Flow	1290	1090	15.5
Jun. High Flow	2180	2030	6.88
Jul. High Flow	1390	1150	17.3
Aug. High Flow	1020	1190	-16.7
Sep. High Flow	498	721	-44.8
Oct. High Flow	413	451	-9.2
Nov. High Flow	262	390	-48.9
Dec. High Flow	208	340	-63.5

**Table 4: Period Low Flows**

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	16.3	0	100
Med. 1 Day Min	50	38.8	22.4
Min. 3 Day Min	16.8	0.87	94.8
Med. 3 Day Min	51.7	41.3	20.1
Min. 7 Day Min	18.5	4.65	74.9
Med. 7 Day Min	55.6	43.3	22.1
Min. 30 Day Min	33.8	13.5	60.1
Med. 30 Day Min	66.8	63.6	4.79
Min. 90 Day Min	50.2	25.1	50
Med. 90 Day Min	111	115	-3.6
7Q10	33.9	11	67.6
Year of 90-Day Min. Flow	2002	2002	0
Drought Year Mean	110	67.8	38.4
Mean Baseflow	184	211	-14.7

**Table 5: Period High Flows**

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	15000	17600	-17.3
Med. 1 Day Max	5700	5820	-2.11
Max. 3 Day Max	9480	7930	16.4
Med. 3 Day Max	3680	3410	7.34
Max. 7 Day Max	5250	3960	24.6
Med. 7 Day Max	2310	2120	8.23
Max. 30 Day Max	2590	2150	17
Med. 30 Day Max	992	1090	-9.88
Max. 90 Day Max	1500	1340	10.7
Med. 90 Day Max	655	679	-3.66

**Table 6: Non-Exceedance Flows**

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	42.8	12.1	71.7
5% Non-Exceedance	59.5	36.9	38
50% Non-Exceedance	191	225	-17.8
95% Non-Exceedance	1120	1120	0
99% Non-Exceedance	2900	3080	-6.21
Sept. 10% Non-Exceedance	30.9	56	-81.2

**Fig. 1: Hydrograph**

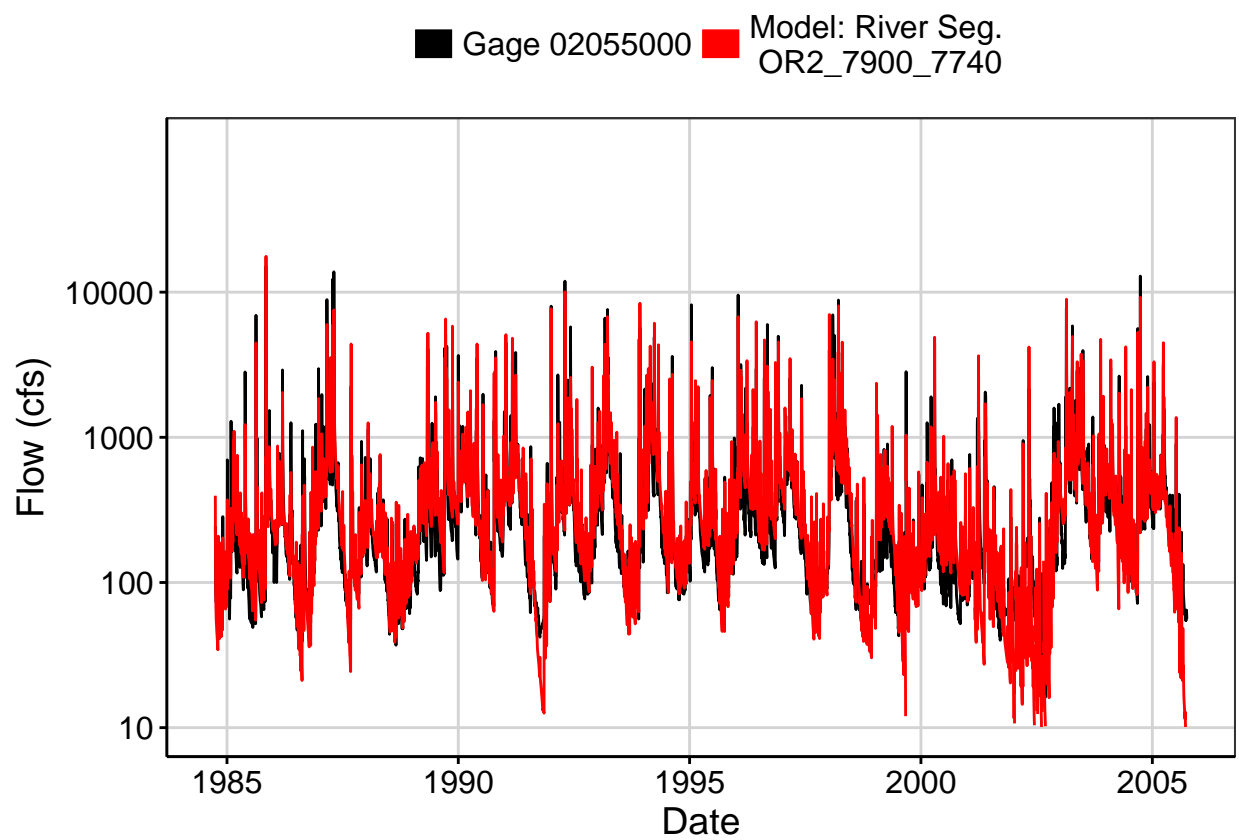


Fig. 2: Zoomed Hydrograph

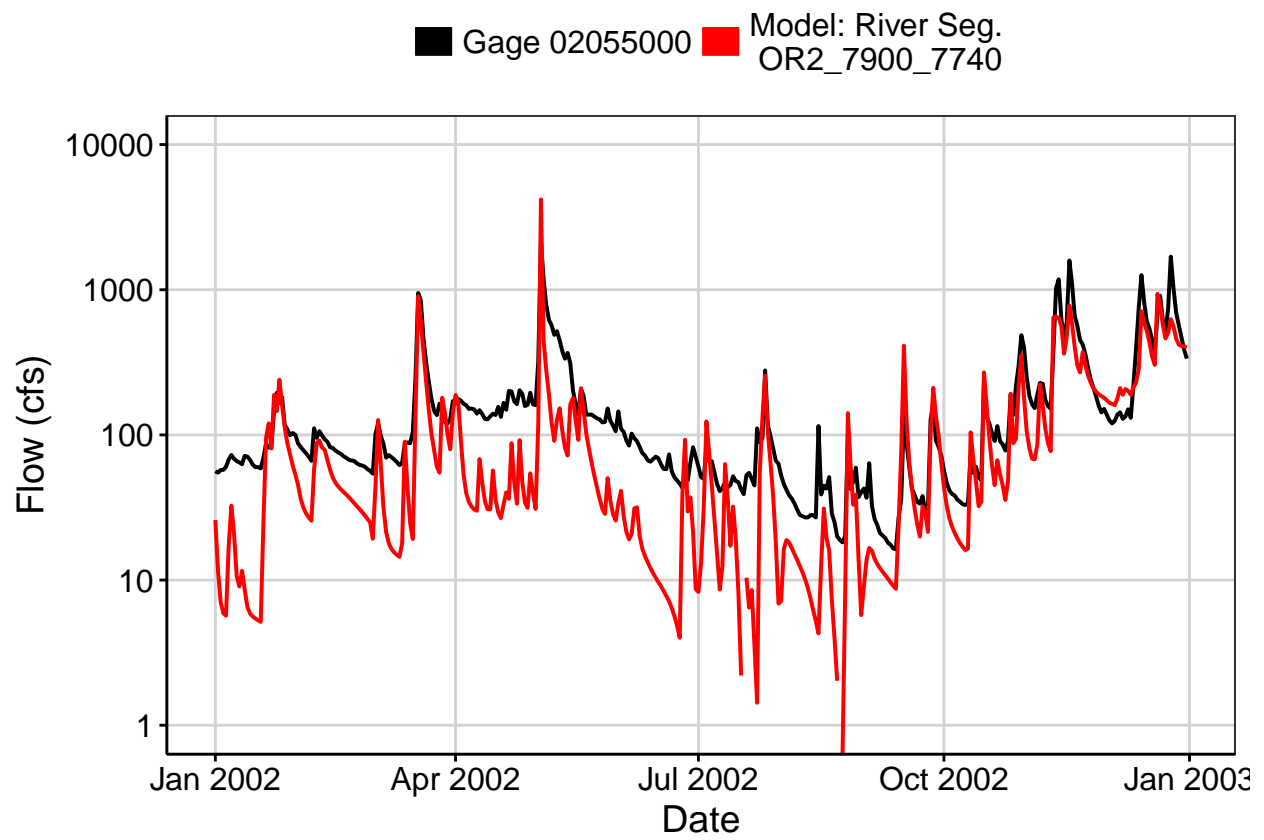


Fig. 3: Flow Exceedance

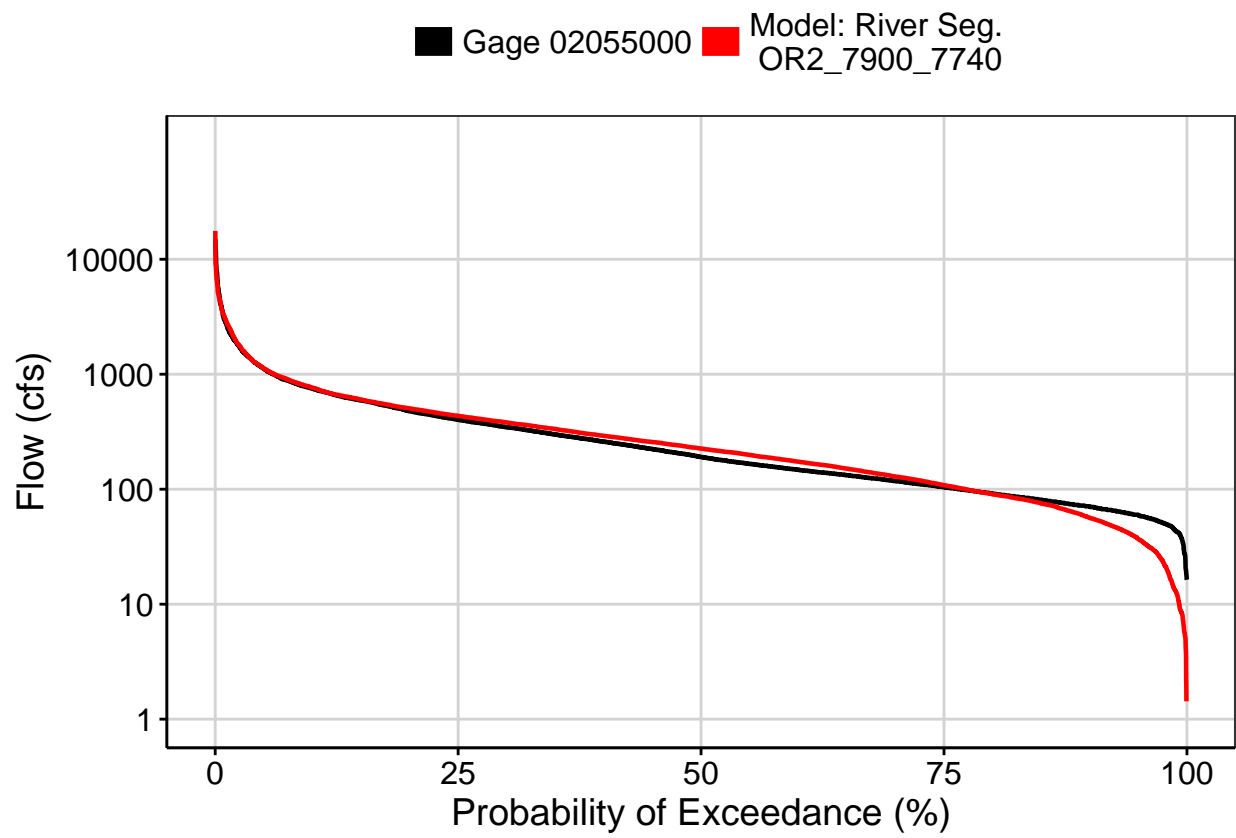


Fig. 4: Baseflow

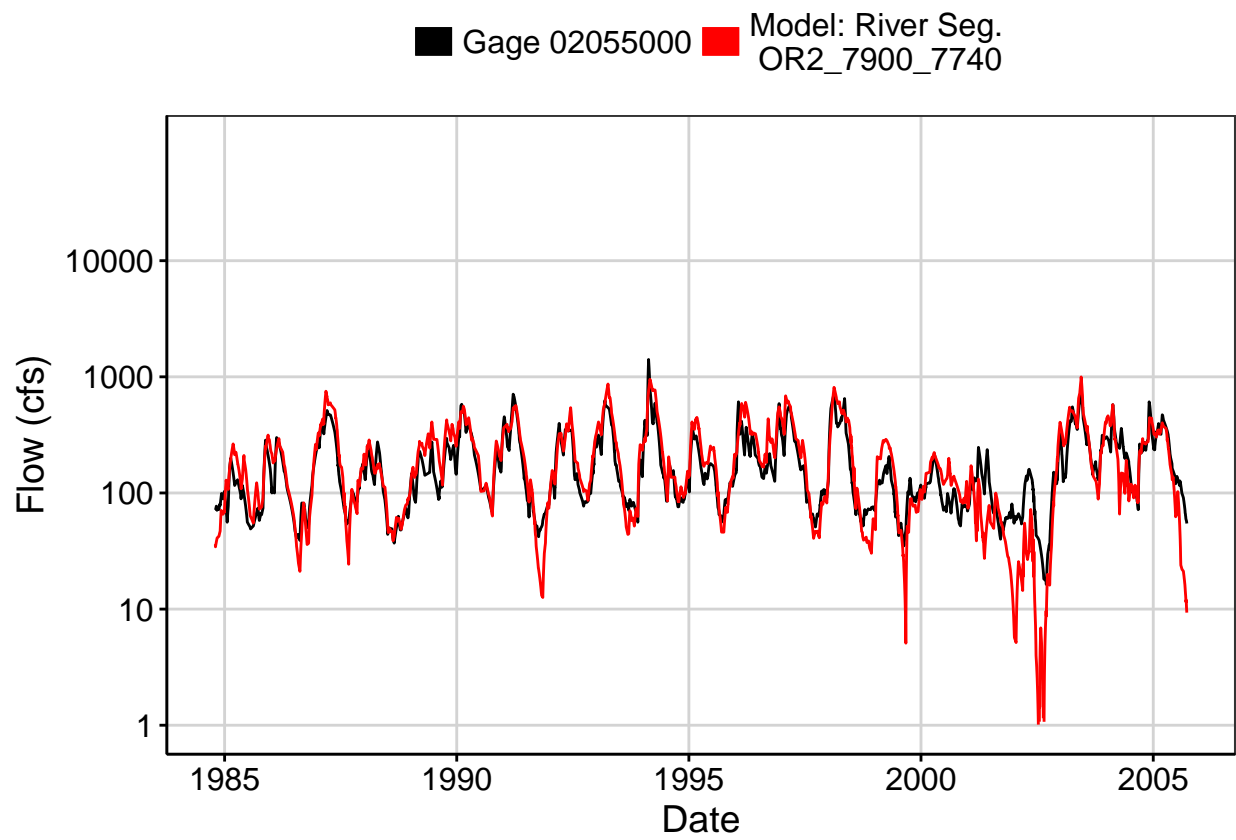


Fig. 5: Combined Baseflow

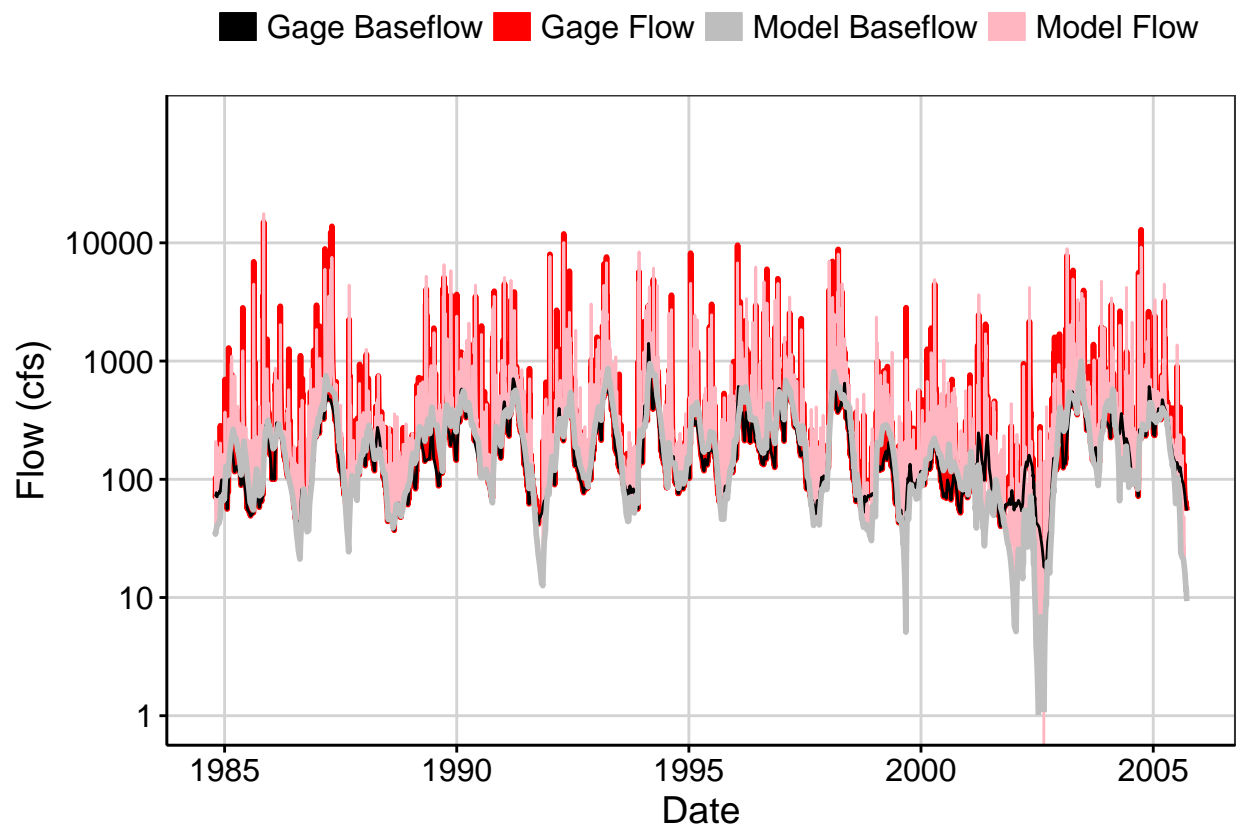




Fig. 6: Largest Error Segment

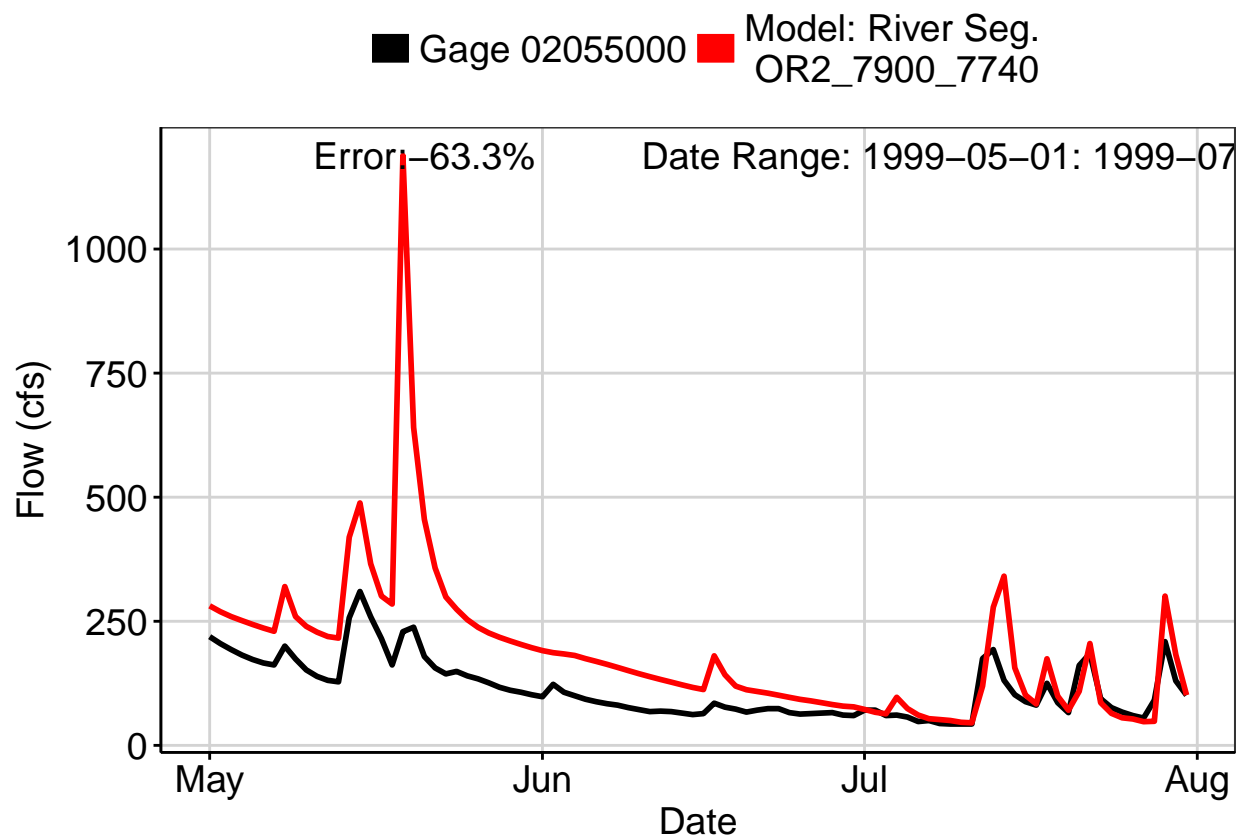


Fig. 7: Second Largest Error Segment

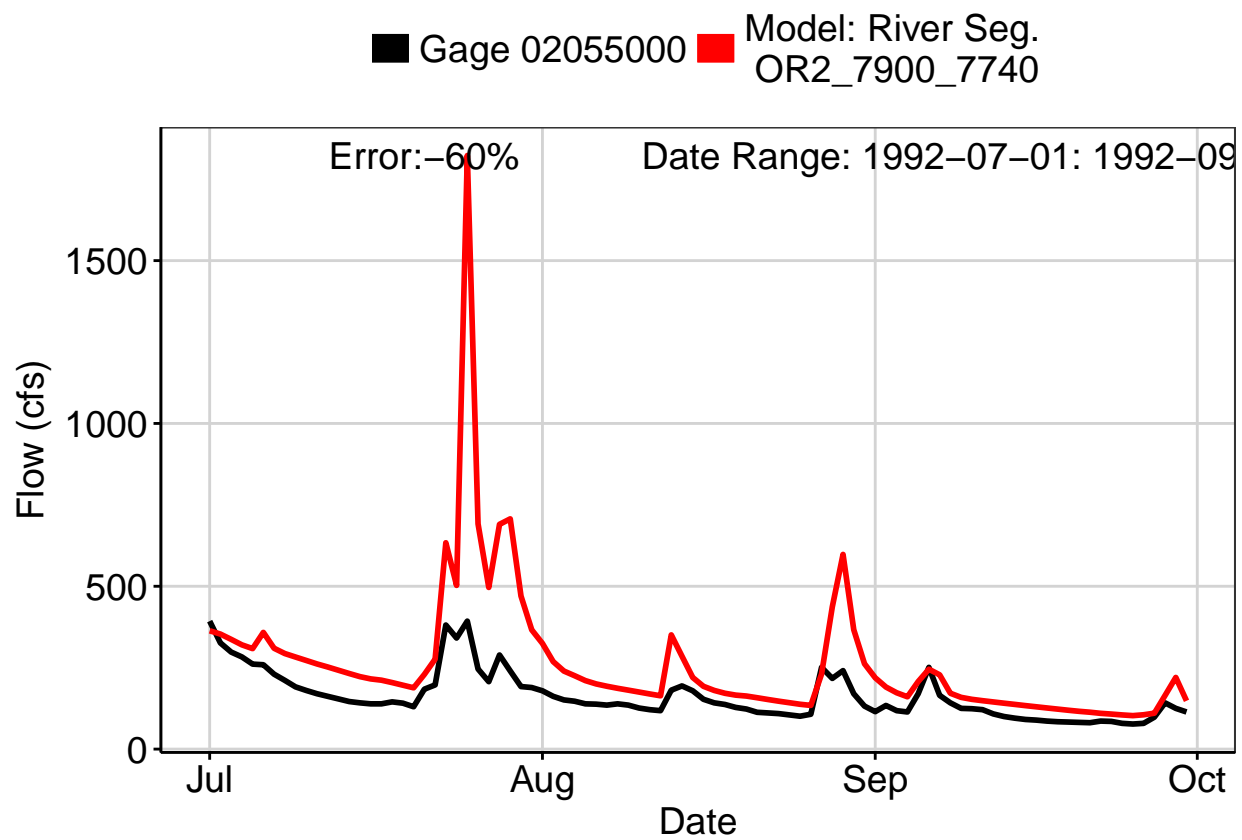


Fig. 8: Third Largest Error Segment

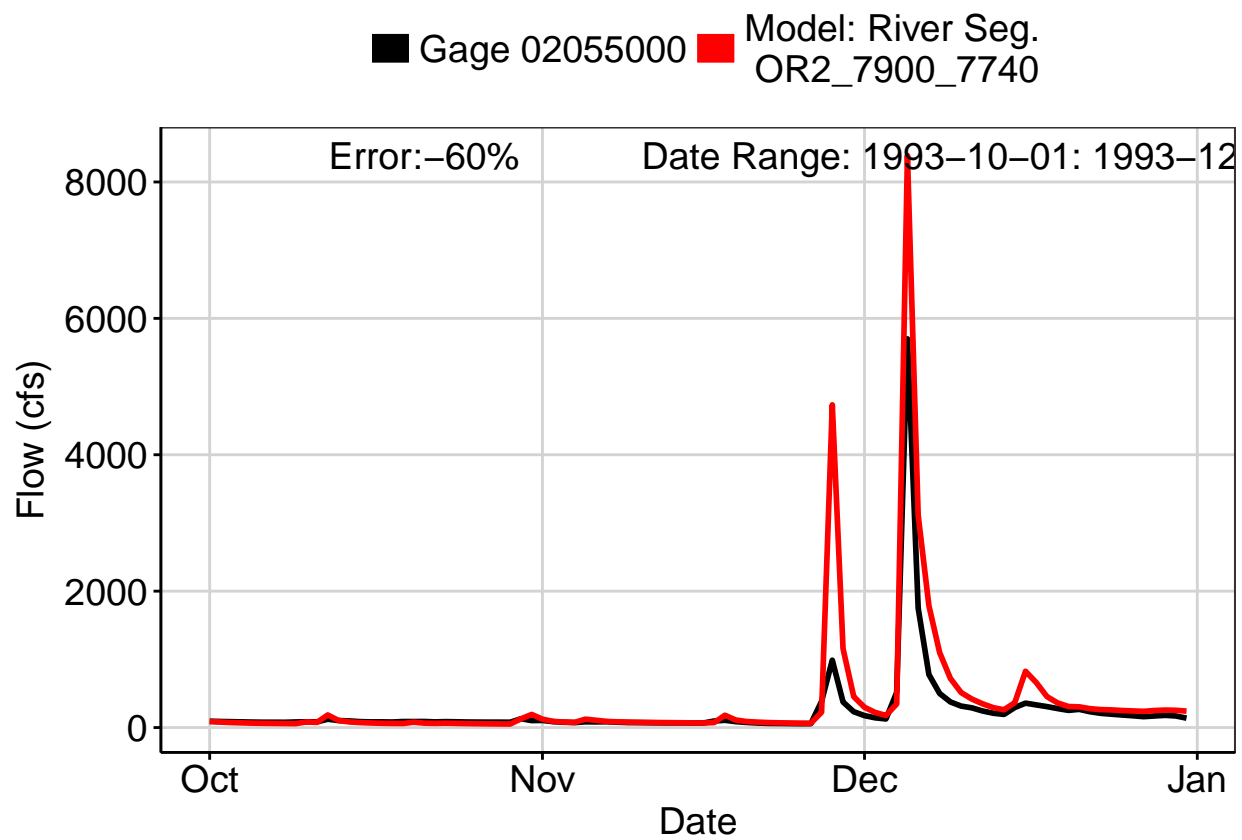


Fig. 9: Residuals Plot

