02077000 vs. OD3_8340_8520

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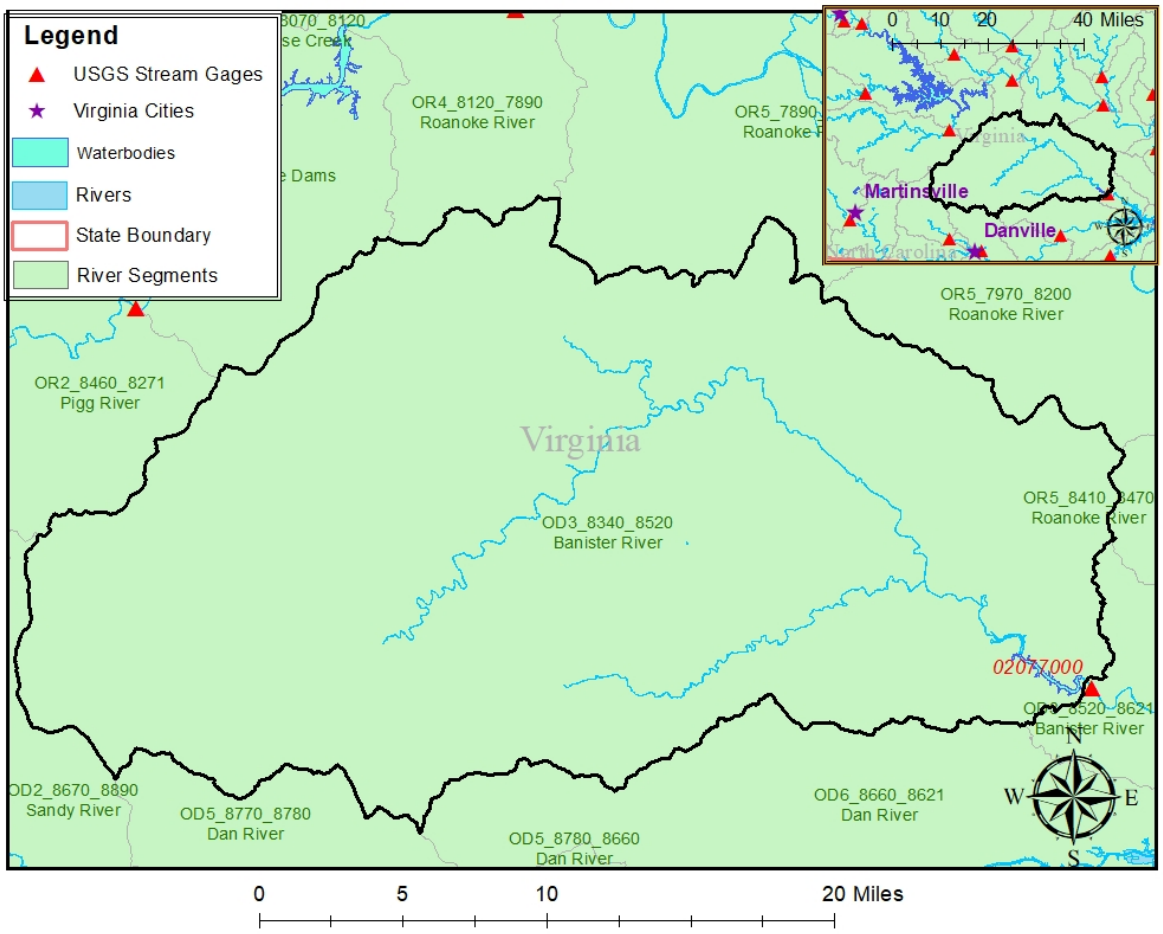

This river segment follows part of the flow of the Banister River, a tributary of the Dan River. The gage is located in Halifax County, VA (Lat 3646'35", Long 7854'58") approximately 30 miles northeast of Danville, VA. Drainage area is 547 sq. miles. This gage started taking data in 1904 and is still taking data. Flow in this area is regulated by a reservoir and hydroelectric generating facility about a half mile upstream. The average daily discharge error between the model and gage data for the 20 year timespan was -3.41%, 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	91	66.8	26.6
Feb. Low Flow	174	83.8	51.8
Mar. Low Flow	215	167	22.3
Apr. Low Flow	213	253	-18.8
May Low Flow	323	453	-40.2
Jun. Low Flow	365	444	-21.6
Jul. Low Flow	308	324	-5.19
Aug. Low Flow	215	203	5.58
Sep. Low Flow	159	136	14.5
Oct. Low Flow	107	83.2	22.2
Nov. Low Flow	107	63.3	40.8
Dec. Low Flow	93	49.1	47.2

Table 2: Monthly Average Flows

	USGS Gage	Model	Pct. Error
Overall Mean Flow	498	515	-3.41
Jan. Mean Flow	660	654	0.91
Feb. Mean Flow	711	832	-17
Mar. Mean Flow	863	1100	-27.5
Apr. Mean Flow	696	792	-13.8
May Mean Flow	505	505	0
Jun. Mean Flow	398	406	-2.01
Jul. Mean Flow	263	201	23.6
Aug. Mean Flow	269	204	24.2
Sep. Mean Flow	416	413	0.72
Oct. Mean Flow	317	313	1.26
Nov. Mean Flow	408	351	14
Dec. Mean Flow	493	438	11.2

Table 3: Monthly High Flows

	USGS Gage	Model	Pct. Error
Jan. High Flow	427	238	44.3
Feb. High Flow	1260	874	30.6
Mar. High Flow	1290	1450	-12.4
Apr. High Flow	1960	1890	3.57
May High Flow	2170	1660	23.5
Jun. High Flow	2420	3330	-37.6
Jul. High Flow	1460	2130	-45.9
Aug. High Flow	894	746	16.6
Sep. High Flow	791	377	52.3
Oct. High Flow	495	279	43.6
Nov. High Flow	456	209	54.2
Dec. High Flow	376	195	48.1

Table 4: Period Low Flows

	USGS Gage	Model	Pct. Error
Min. 1 Day Min	18	0.25	98.6
Med. 1 Day Min	70	31	55.7
Min. 3 Day Min	18	0.58	96.8
Med. 3 Day Min	90.3	32.7	63.8
Min. 7 Day Min	18.3	1.35	92.6
Med. 7 Day Min	93.8	36.7	60.9
Min. 30 Day Min	22.2	4.51	79.7
Med. 30 Day Min	123	55.6	54.8
Min. 90 Day Min	39.6	22.5	43.2
Med. 90 Day Min	184	100	45.7
7Q10	33.7	7.06	79.1
Year of 90-Day Min. Flow	2002	2002	0
Drought Year Mean	136	97.7	28.2
Mean Baseflow	239	268	-12.1

Table 5: Period High Flows

	USGS Gage	Model	Pct. Error
Max. 1 Day Max	22300	36600	-64.1
Med. 1 Day Max	5910	7830	-32.5
Max. 3 Day Max	18300	21000	-14.8
Med. 3 Day Max	4450	5080	-14.2
Max. 7 Day Max	10900	12500	-14.7
Med. 7 Day Max	2970	2890	2.69
Max. 30 Day Max	3080	3660	-18.8
Med. 30 Day Max	1180	1450	-22.9
Max. 90 Day Max	1640	2160	-31.7
Med. 90 Day Max	865	1030	-19.1

Table 6: Non-Exceedance Flows

	USGS Gage	Model	Pct. Error
1% Non-Exceedance	29	8.6	70.3
5% Non-Exceedance	80	32.6	59.2
50% Non-Exceedance	292	269	7.88
95% Non-Exceedance	1460	1590	-8.9
99% Non-Exceedance	4400	4620	-5
Sept. 10% Non-Exceedance	32.7	76	-132

Fig. 1: Hydrograph

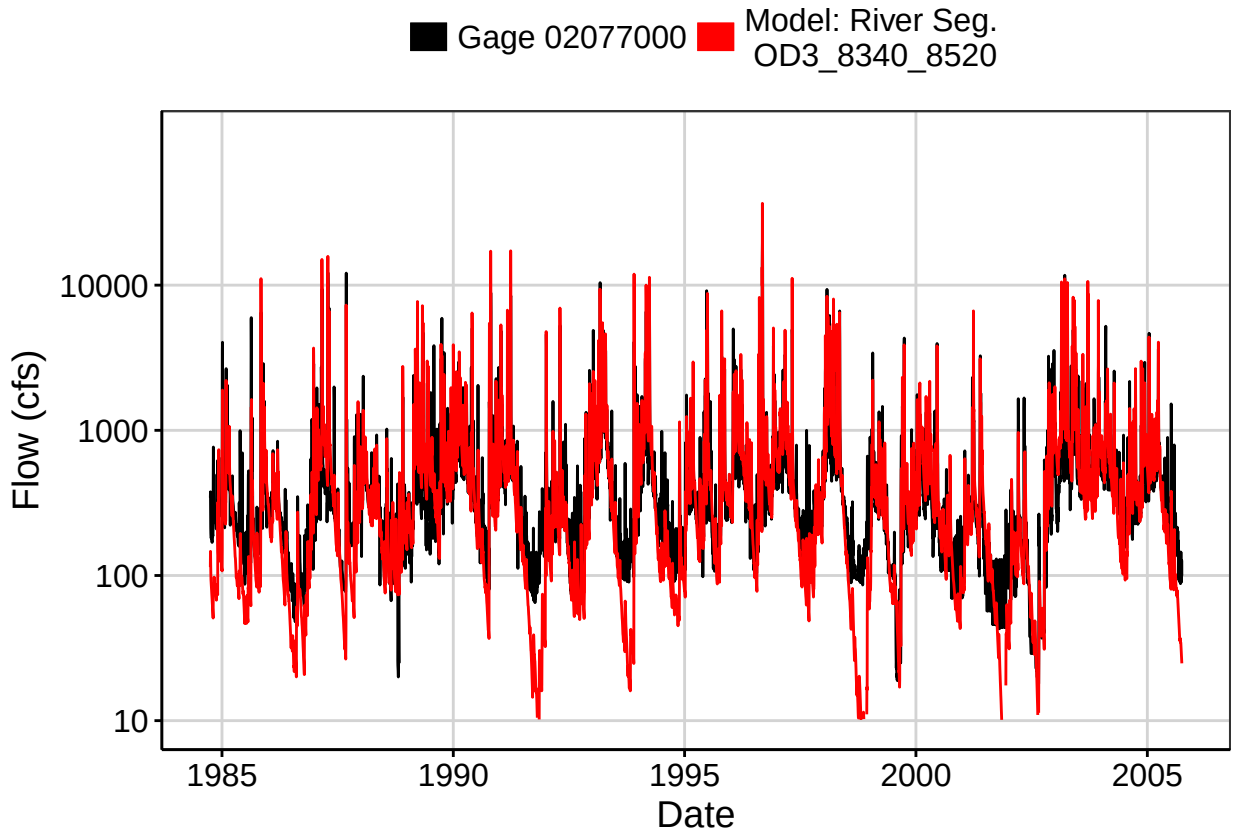

Fig. 2: Zoomed Hydrograph

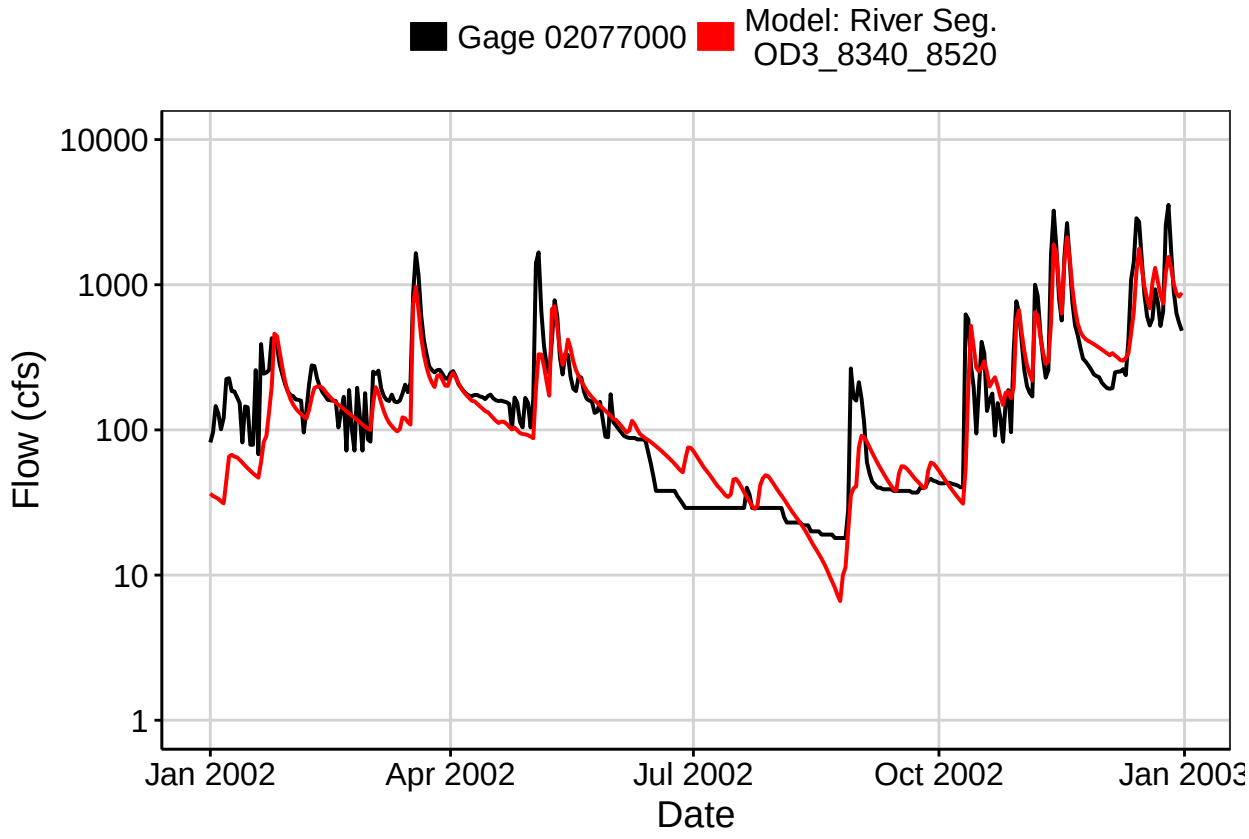

Fig. 3: Flow Exceedance

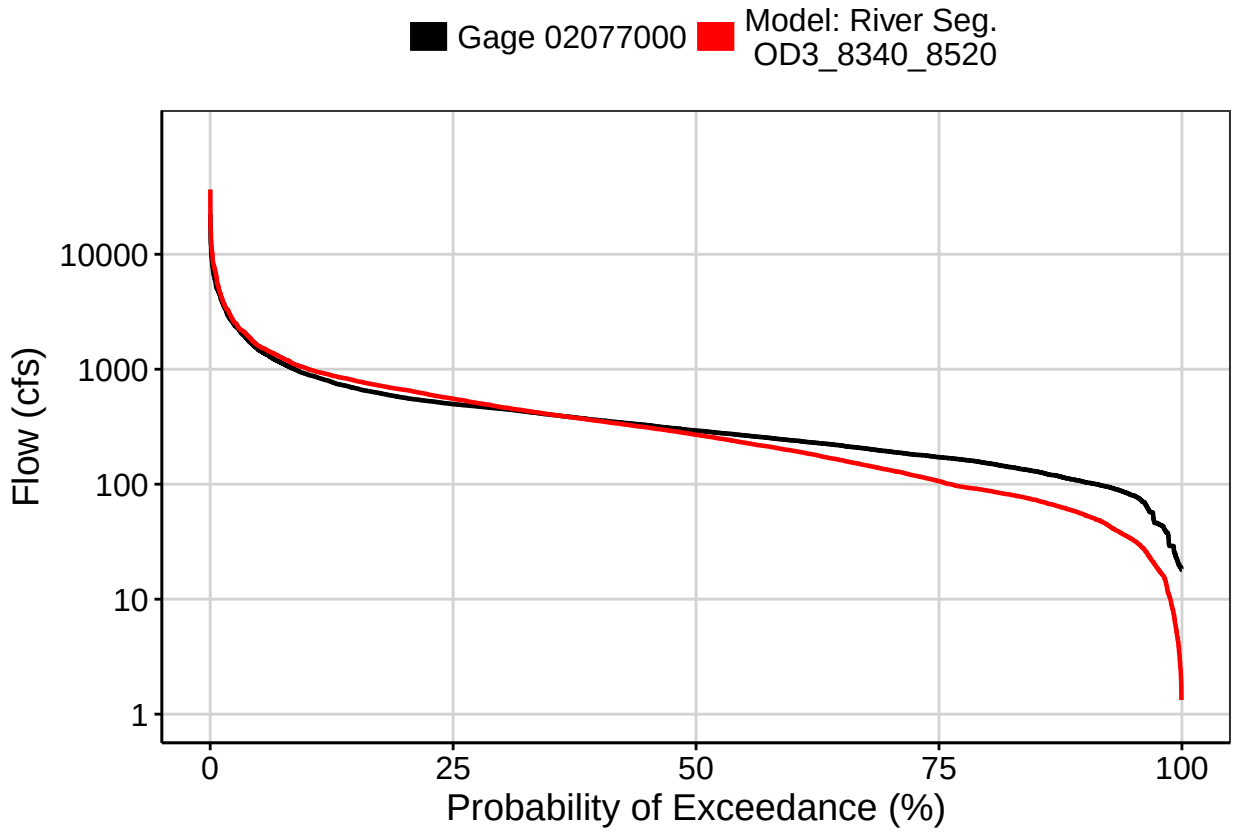

Fig. 4: Baseflow

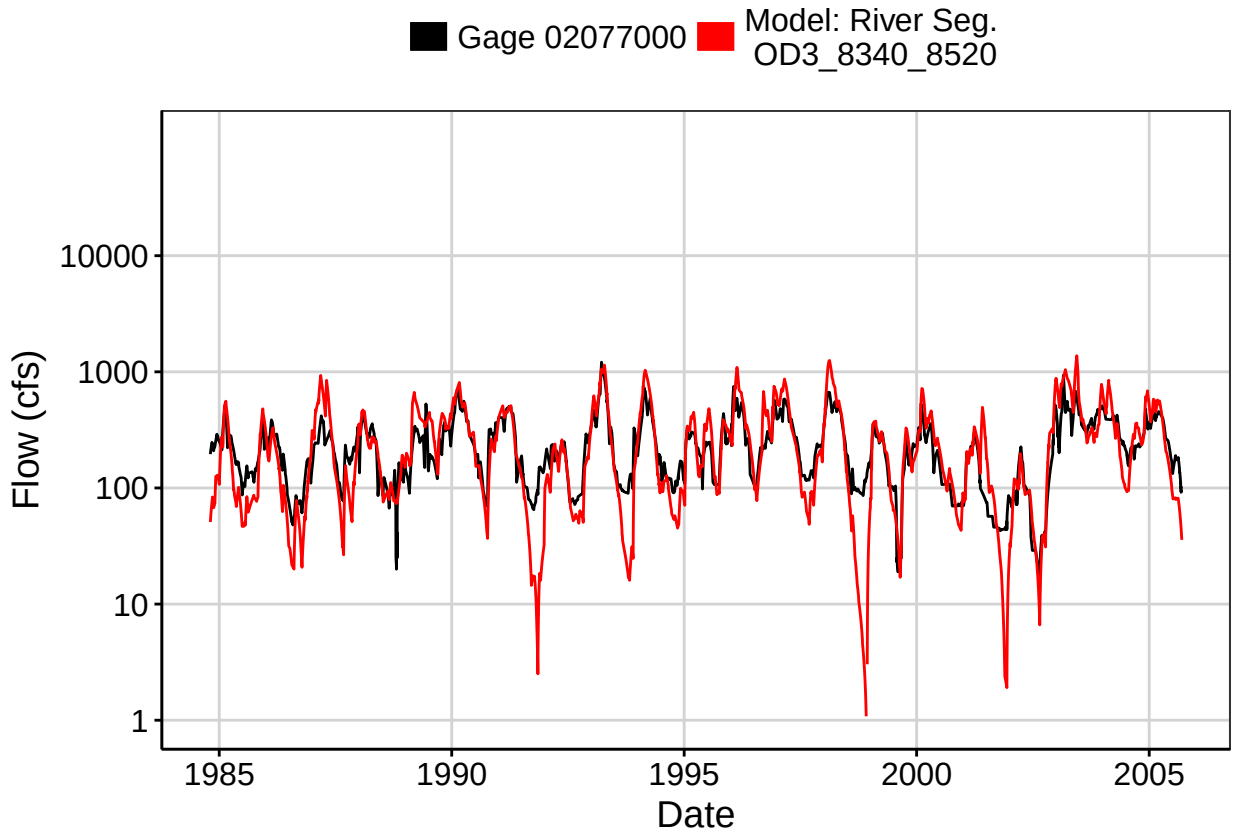

Fig. 5: Combined Baseflow

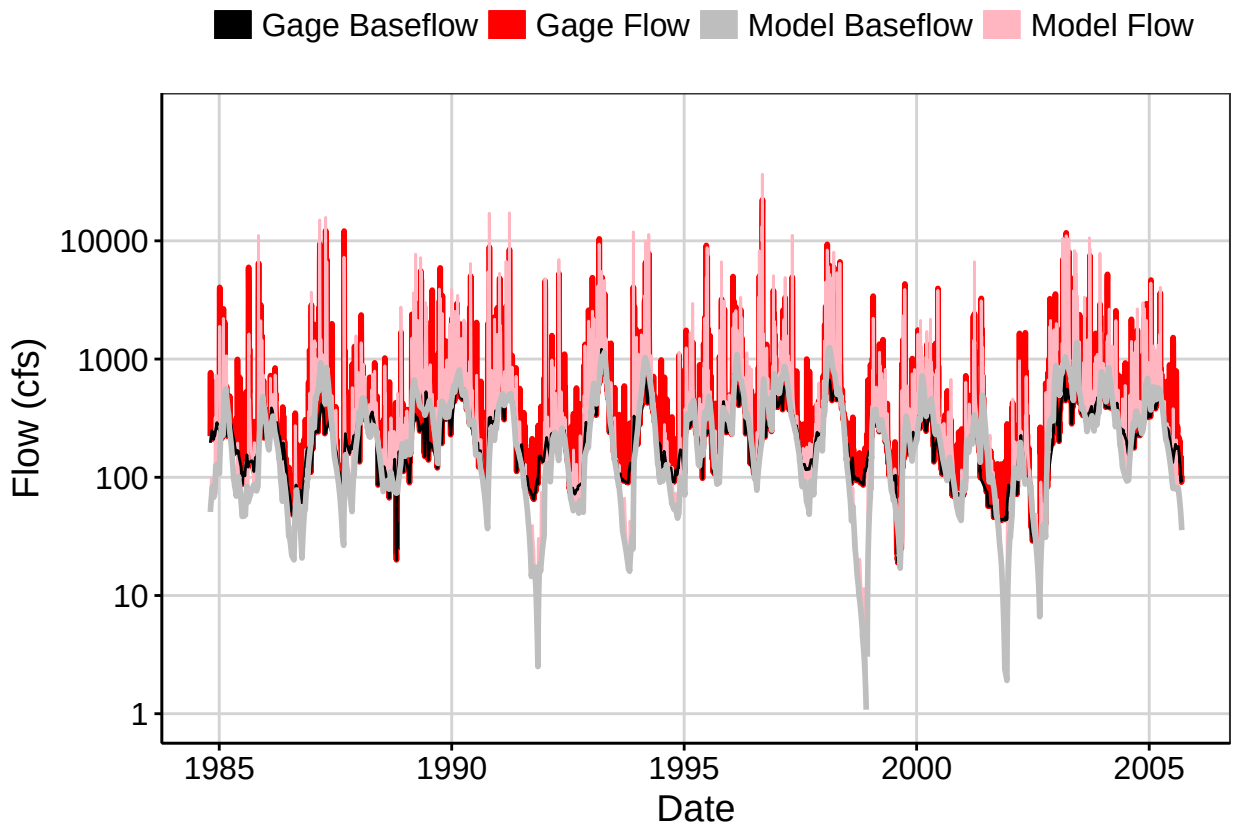

Fig. 6: Largest Error Segment

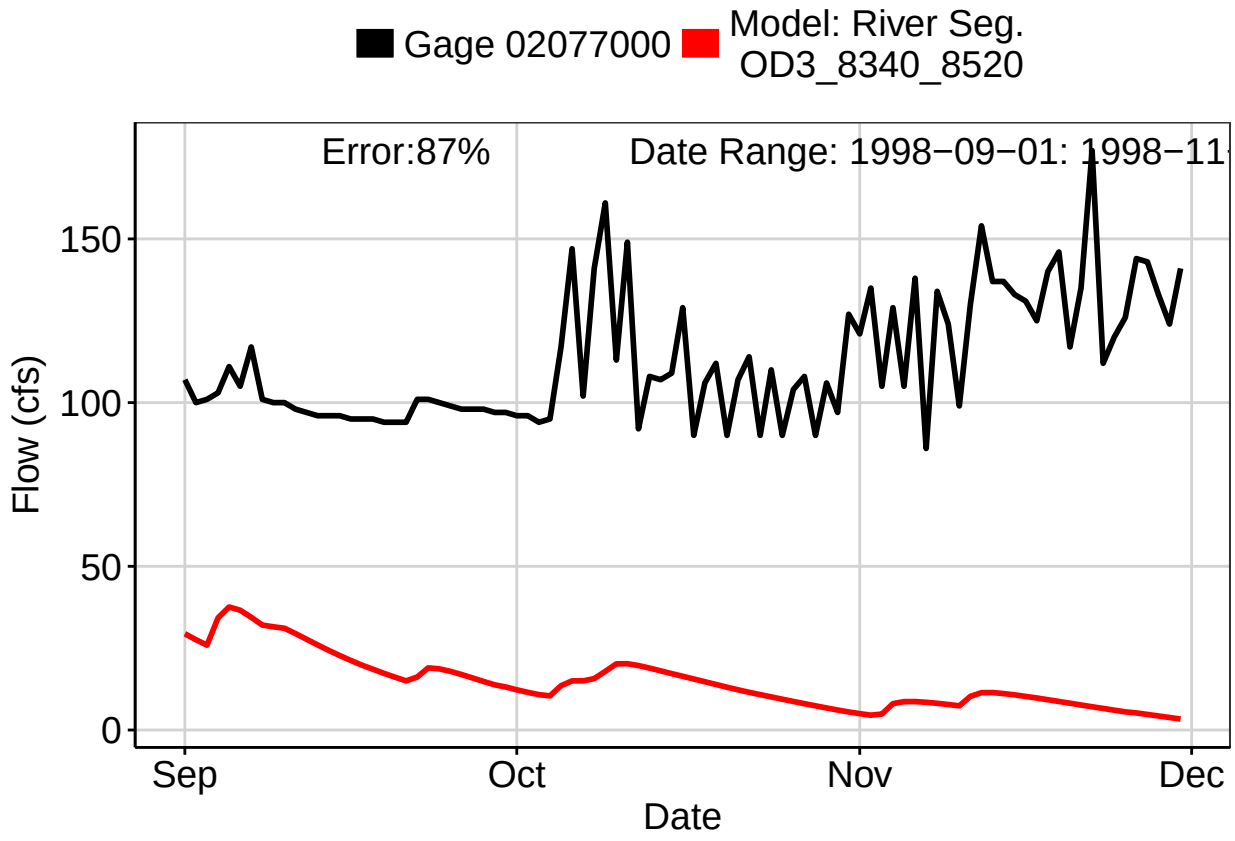

Fig. 7: Second Largest Error Segment

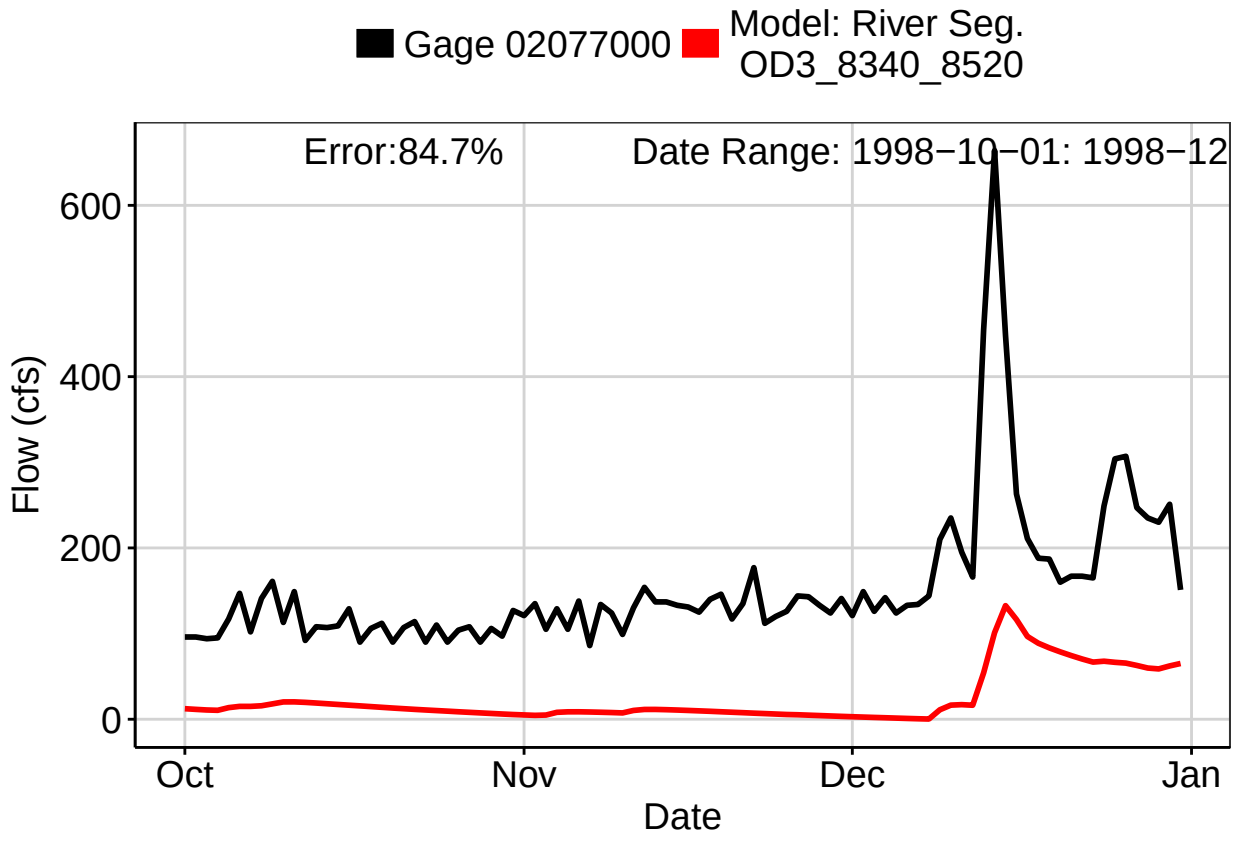

Fig. 8: Third Largest Error Segment

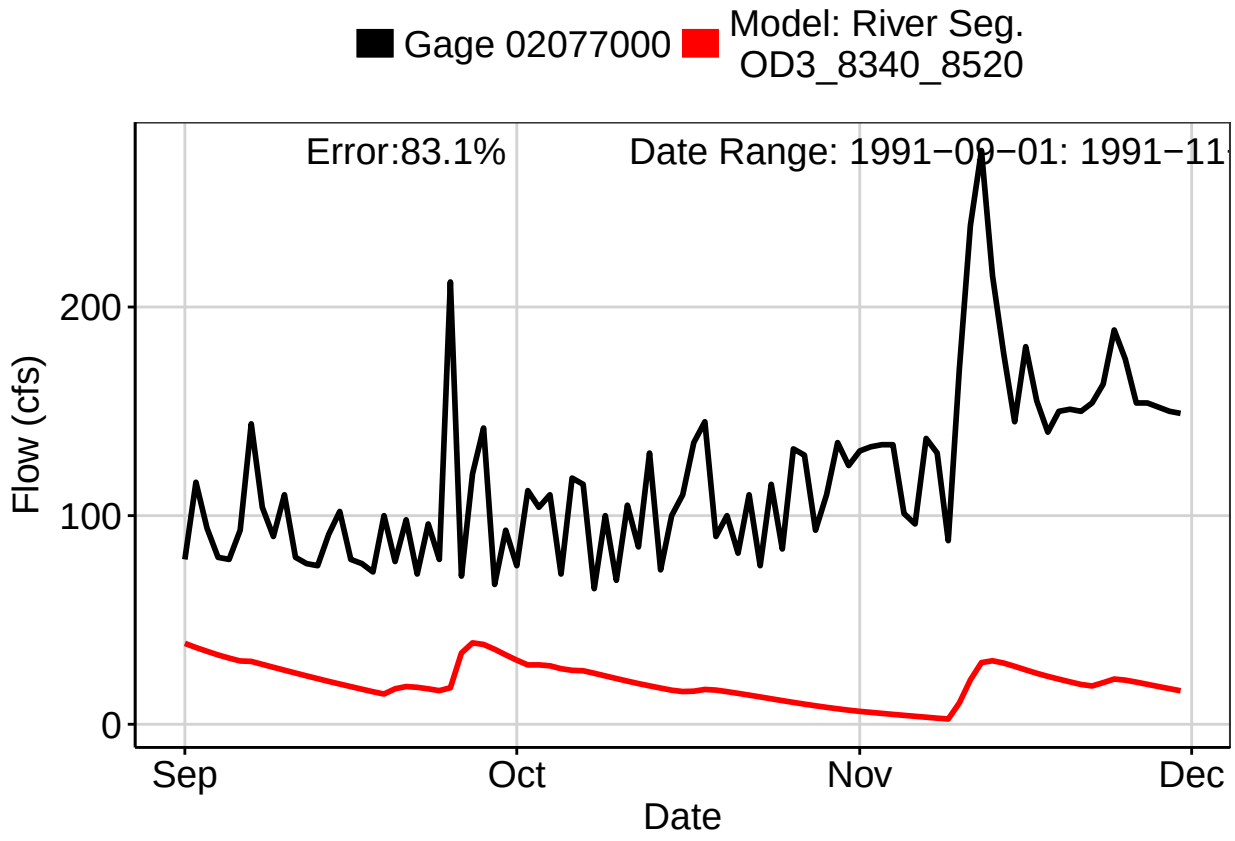

Fig. 9: Residuals Plot