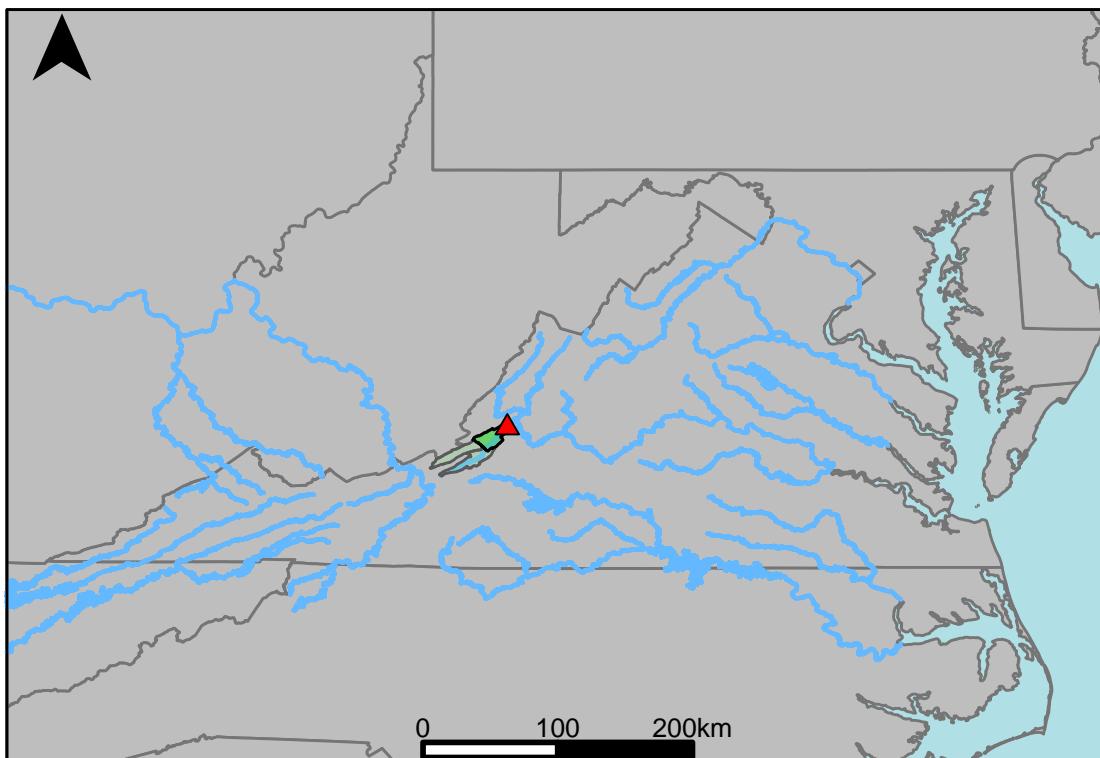


River Segment: JU3_7490_7400 - Scenario :
CFBASE30Y20180615 : Gage 02018000 vs. VAHydro



This river segment follows part of the flow of Craig Creek at Parr, VA. Gage 02018000 is located in Botetourt County, VA (Lat 37°39'57", long 79°54'42") approximately 0.2 miles northeast of Horton. Drainage area is 329 sq. miles. This gage started taking data in 1925 and is still taking data currently. There are no known anthropogenic alterations in this area that would affect the flow conditions. The average daily discharge change between scenario 1 and scenario 2 for the 20 year timespan was 0.779221%, with 39.1% of its rolling three month time spans above 20% difference.

Table 1: Monthly Low Flows

	USGS Gage	VAHydro	Pct. Difference
Jan. Low Flow	49.4	62.6	26.72
Feb. Low Flow	65.6	110	67.68
Mar. Low Flow	127	215	69.29
Apr. Low Flow	148	262	77.03
May Low Flow	188	271	44.15
Jun. Low Flow	294	338	14.97
Jul. Low Flow	228	270	18.42
Aug. Low Flow	154	196	27.27
Sep. Low Flow	73	71.3	-2.33
Oct. Low Flow	51.6	23.2	-55.04
Nov. Low Flow	45.5	21.7	-52.31
Dec. Low Flow	43.4	19.6	-54.84

Table 2: Monthly Average Flows

	USGS Gage	VAHydro	Pct. Difference
Overall Mean Flow	385	388	0.78
Jan. Mean Flow	545	535	-1.83
Feb. Mean Flow	567	551	-2.82
Mar. Mean Flow	729	669	-8.23
Apr. Mean Flow	648	579	-10.65
May Mean Flow	517	436	-15.67
Jun. Mean Flow	338	338	0
Jul. Mean Flow	156	178	14.1
Aug. Mean Flow	109	136	24.77
Sep. Mean Flow	171	242	41.52
Oct. Mean Flow	141	223	58.16
Nov. Mean Flow	316	335	6.01
Dec. Mean Flow	402	442	9.95

Table 3: Monthly High Flows

	USGS Gage	VAHydro	Pct. Difference
Jan. High Flow	184	213	15.76
Feb. High Flow	831	472	-43.2
Mar. High Flow	1380	866	-37.25
Apr. High Flow	1680	1120	-33.33
May High Flow	1480	883	-40.34
Jun. High Flow	2540	1360	-46.46
Jul. High Flow	1500	1170	-22
Aug. High Flow	1200	763	-36.42
Sep. High Flow	376	356	-5.32
Oct. High Flow	188	223	18.62
Nov. High Flow	154	180	16.88
Dec. High Flow	158	240	51.9

Table 4: Period Low Flows

	USGS Gage	VAHydro	Pct. Difference
Min. 1 Day Min	22.7	1.66	-92.69
Med. 1 Day Min	39.5	11.6	-70.63
Min. 3 Day Min	22.8	1.71	-92.5
Med. 3 Day Min	39.8	12.4	-68.84
Min. 7 Day Min	23.5	1.82	-92.26
Med. 7 Day Min	40.7	14.3	-64.86
Min. 30 Day Min	27.9	2.84	-89.82
Med. 30 Day Min	50	31.6	-36.8
Min. 90 Day Min	44.2	30.9	-30.09
Med. 90 Day Min	73.3	74.6	1.77
7Q10	30.1	4.6	-84.72
Year of 90-Day Min. Flow	2002	2014	0.6
Drought Year Mean	140	141	0.71
Mean Baseflow	171	221	29.24

Table 5: Period High Flows

	USGS Gage	VAHydro	Pct. Difference
Max. 1 Day Max	21000	11500	-45.24
Med. 1 Day Max	5200	3090	-40.58
Max. 3 Day Max	15200	7770	-48.88
Med. 3 Day Max	3440	2660	-22.67
Max. 7 Day Max	7300	3560	-51.23
Med. 7 Day Max	2400	1870	-22.08
Max. 30 Day Max	2480	2080	-16.13
Med. 30 Day Max	1140	914	-19.82
Max. 90 Day Max	1520	1410	-7.24
Med. 90 Day Max	731	670	-8.34

Table 6: Non-Exceedance Flows

	USGS Gage	VAHydro	Pct. Difference
1% Non-Exceedance	32	7.23	-77.41
5% Non-Exceedance	42	20	-52.38
50% Non-Exceedance	181	261	44.2
95% Non-Exceedance	1320	1170	-11.36
99% Non-Exceedance	3190	2560	-19.75
Sept. 10% Non-Exceedance	37.1	13.7	-63.07

Fig. 1: Hydrograph

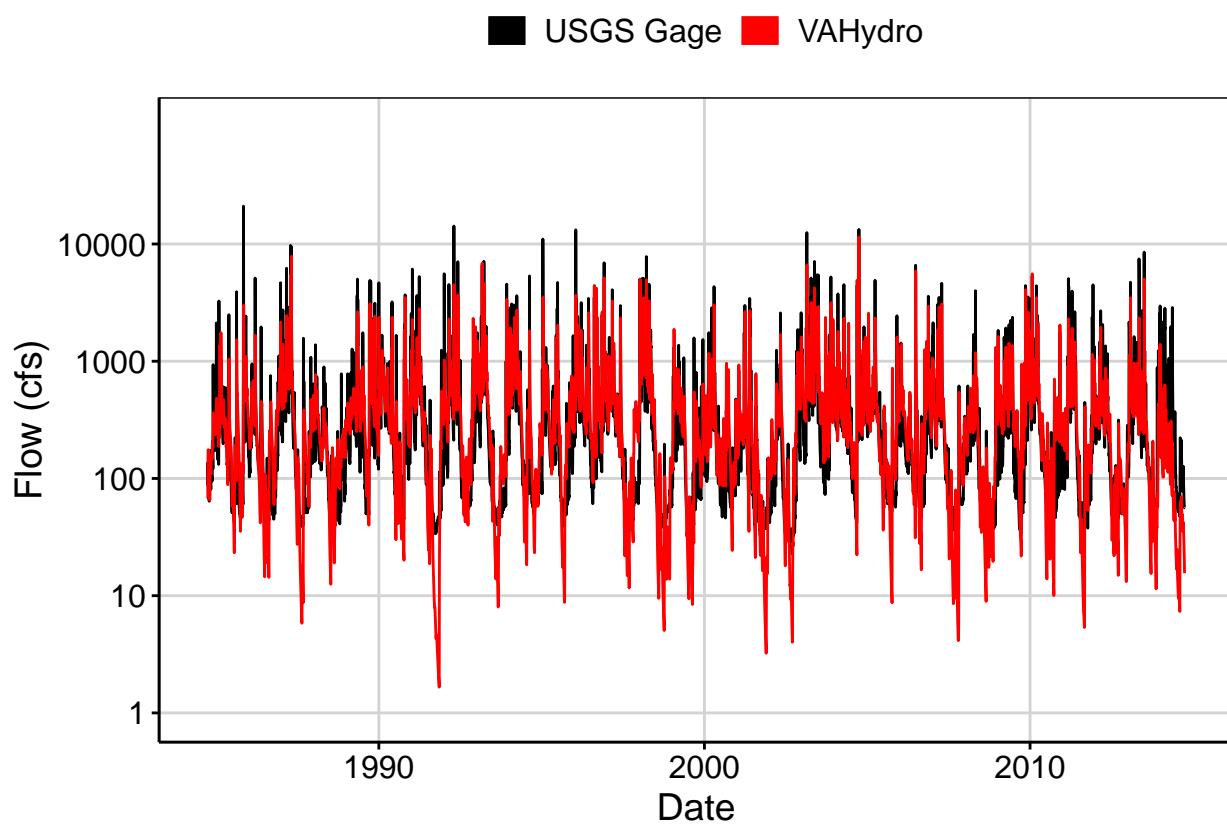


Fig. 2: Zoomed Hydrograph

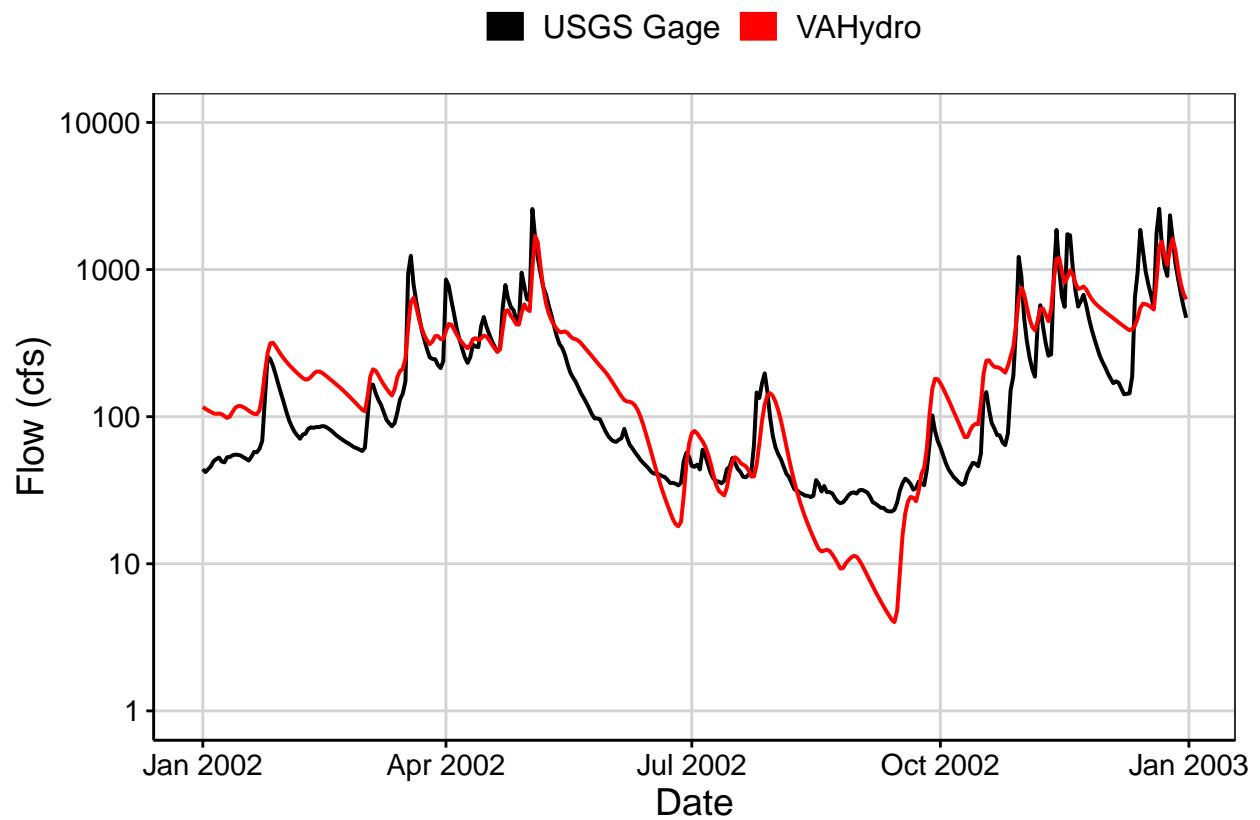


Fig. 3: Flow Exceedance

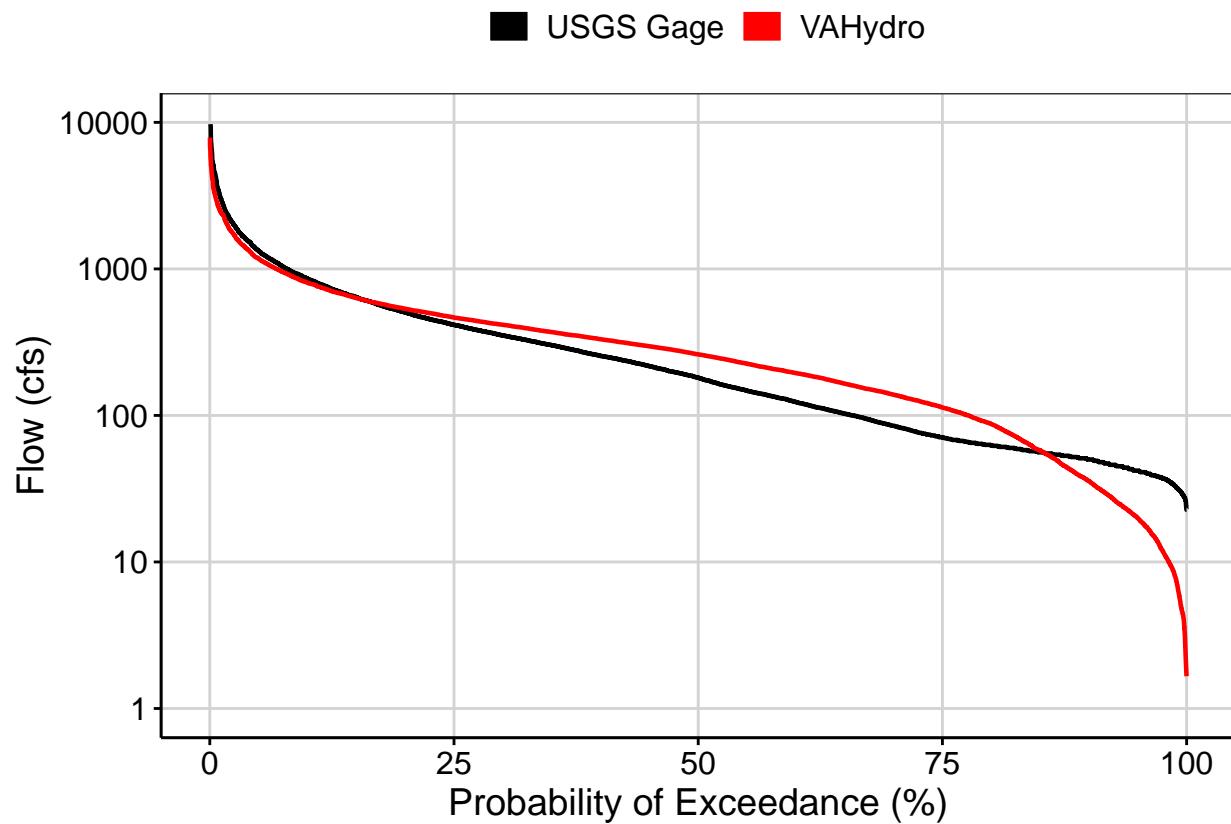


Fig. 4: Baseflow

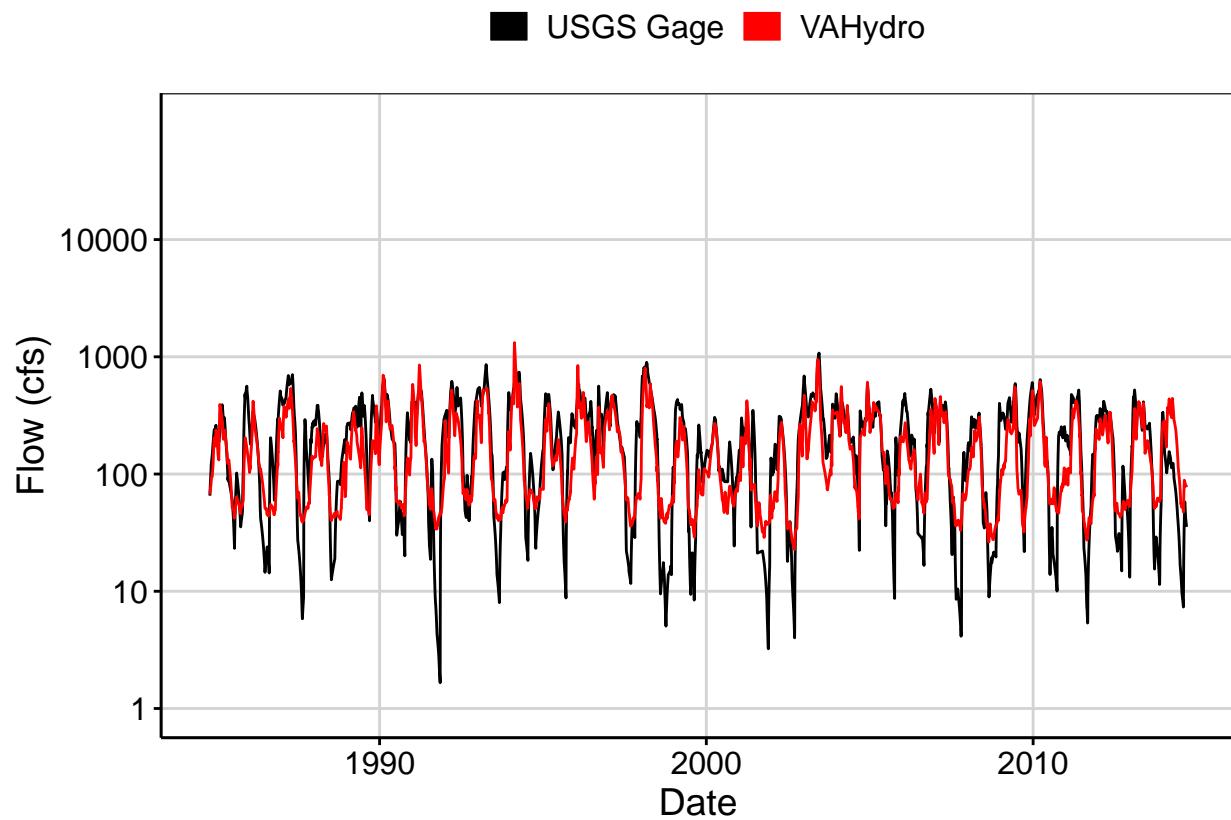


Fig. 5: Combined Baseflow

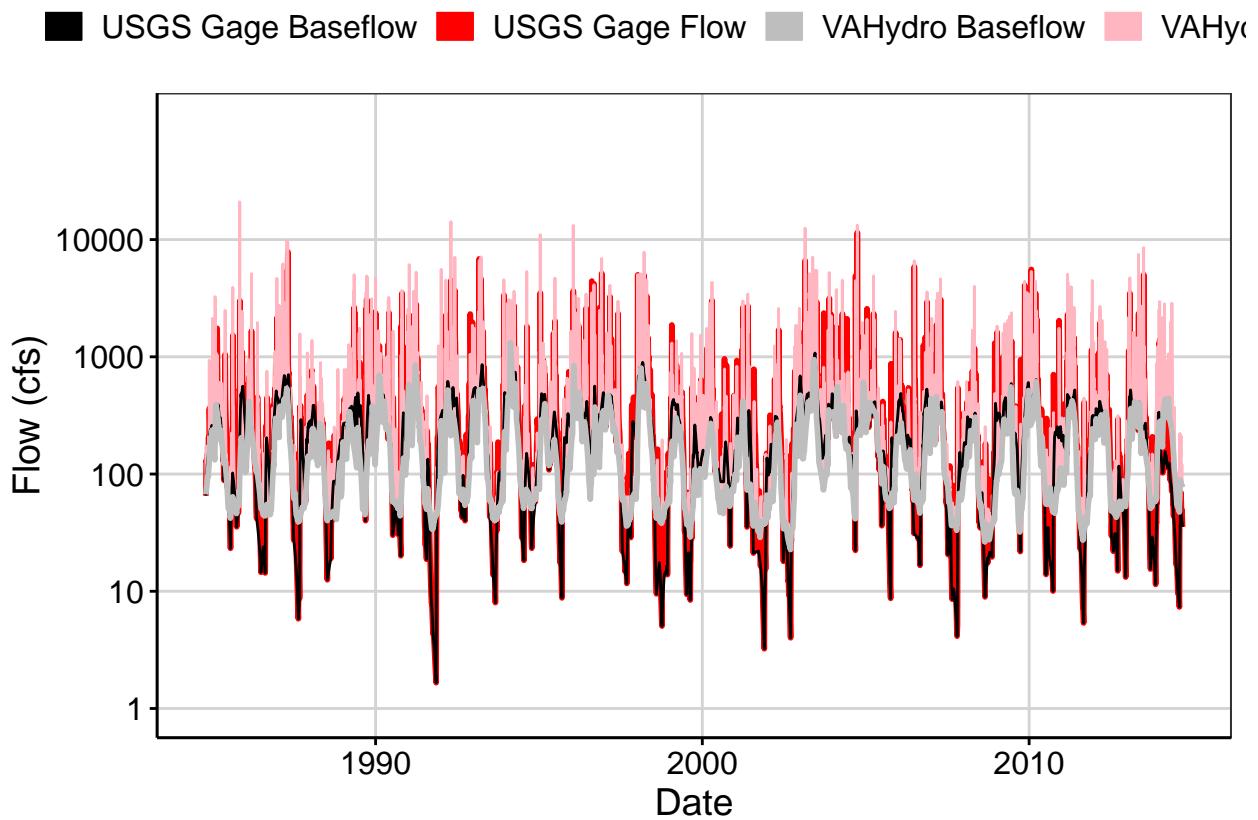


Fig. 6: Largest Difference Segment

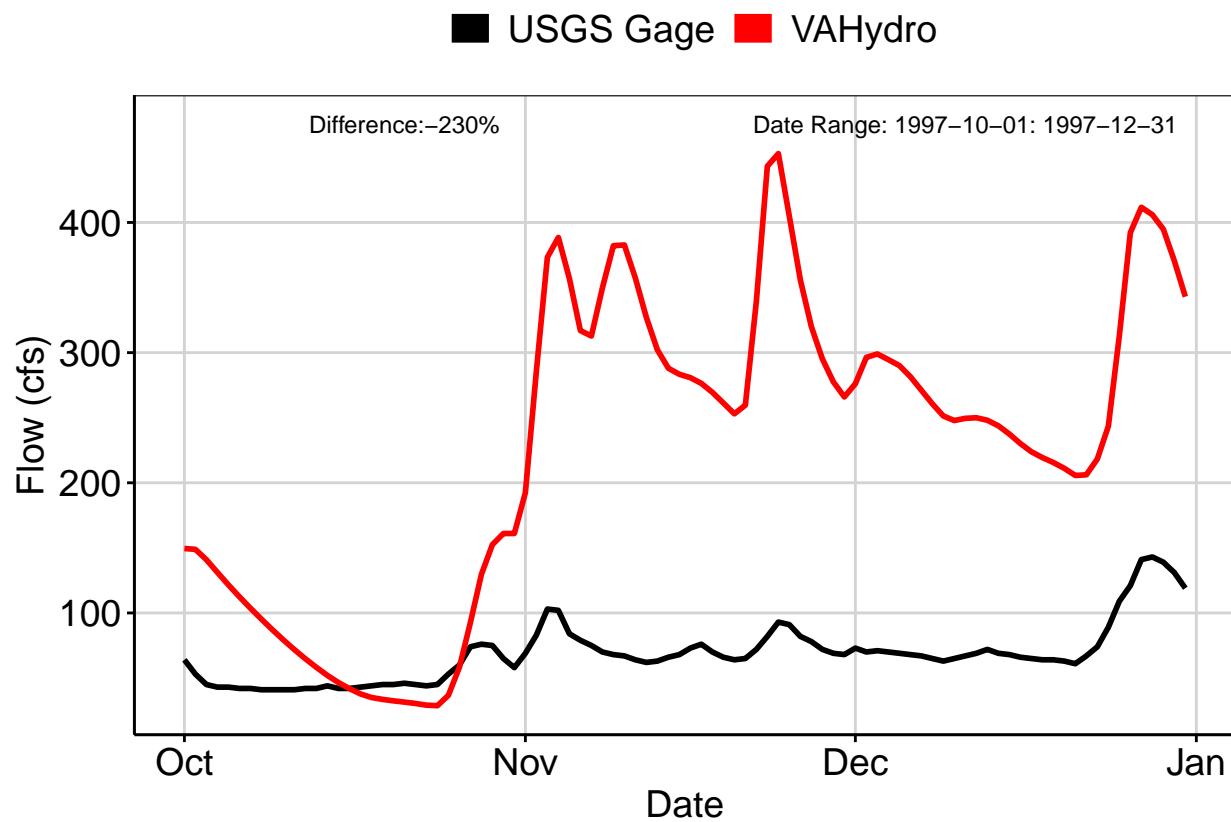


Fig. 7: Second Largest Difference Segment

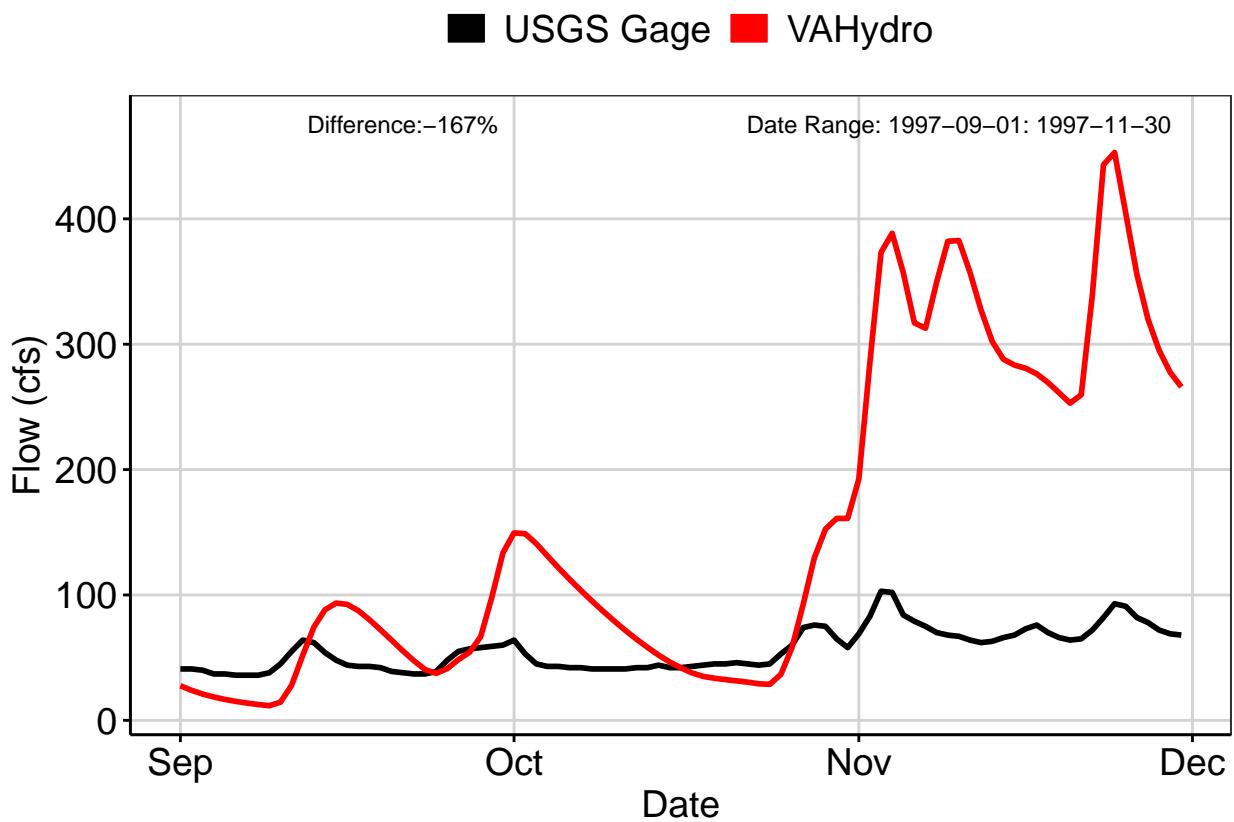


Fig. 8: Third Largest Difference Segment

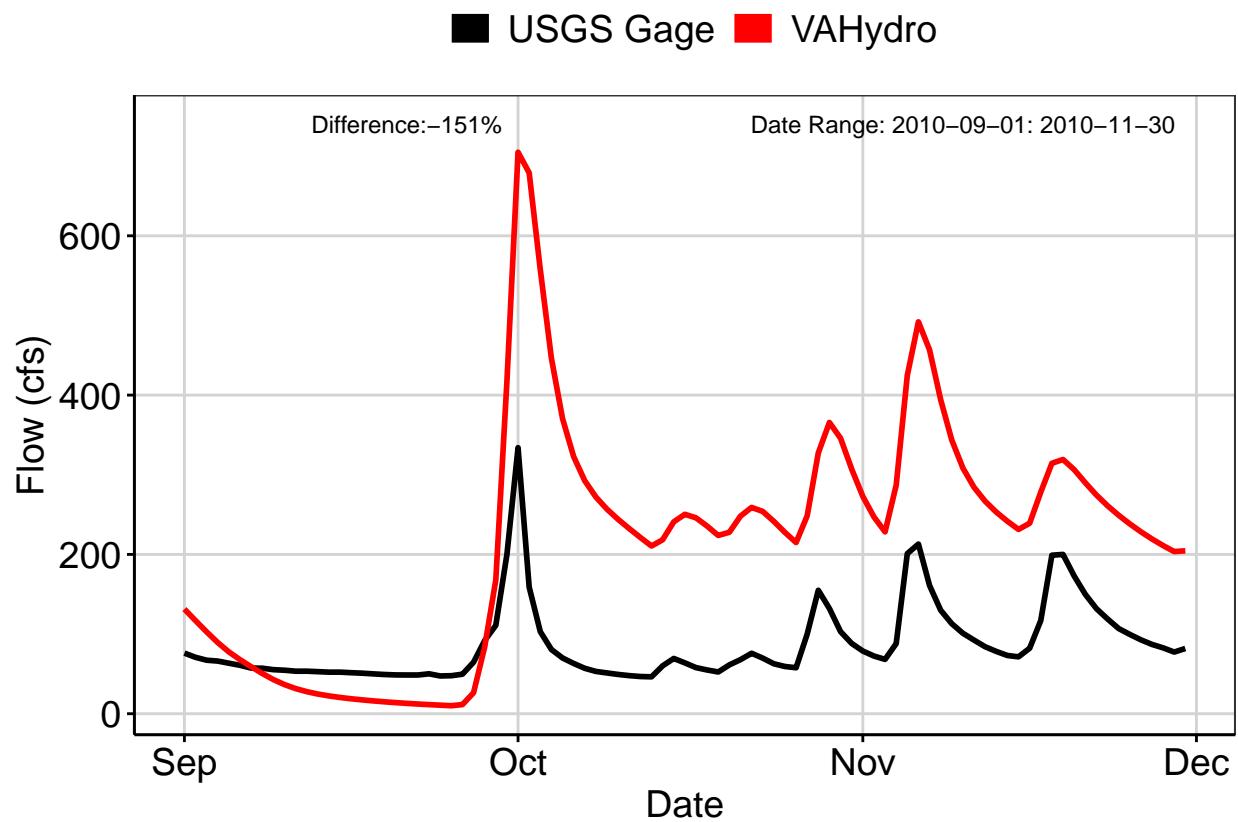


Fig. 9A: Residuals Plot

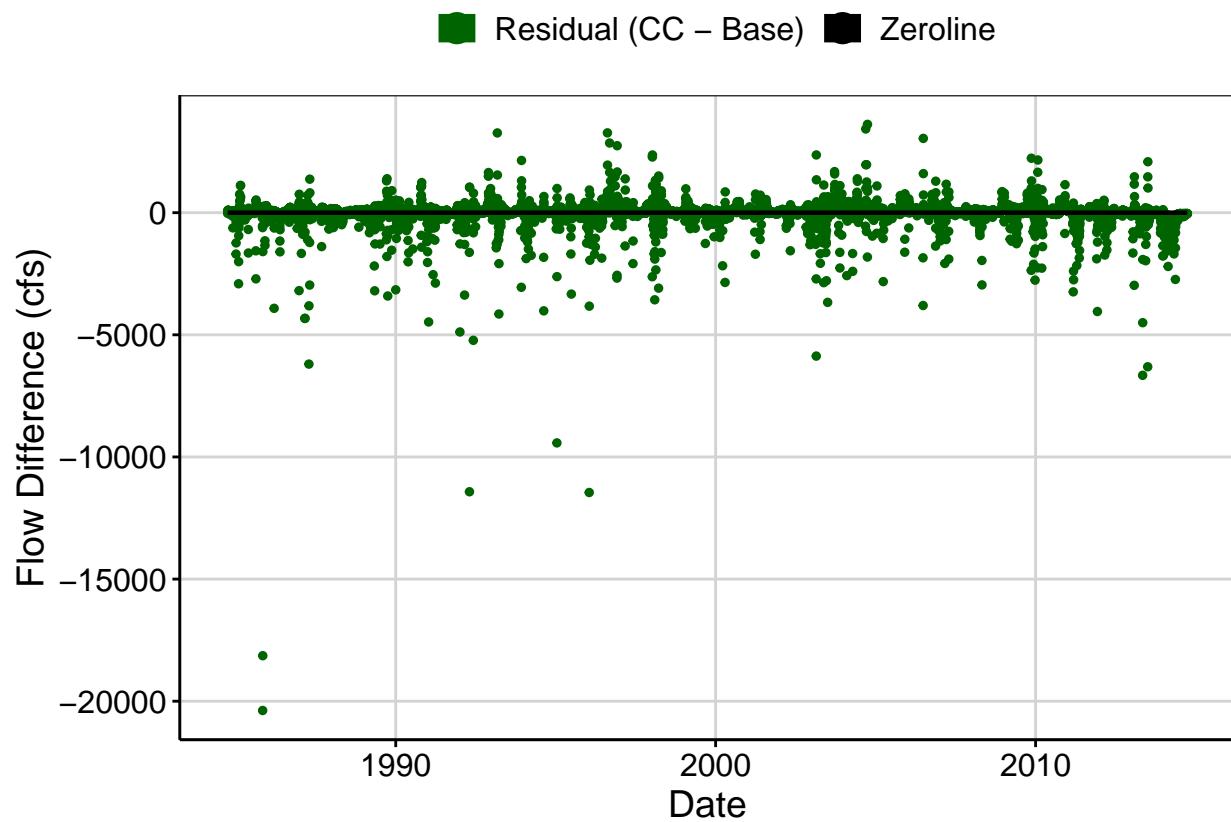


Fig. 9B: Area Weighted Residuals Plot

