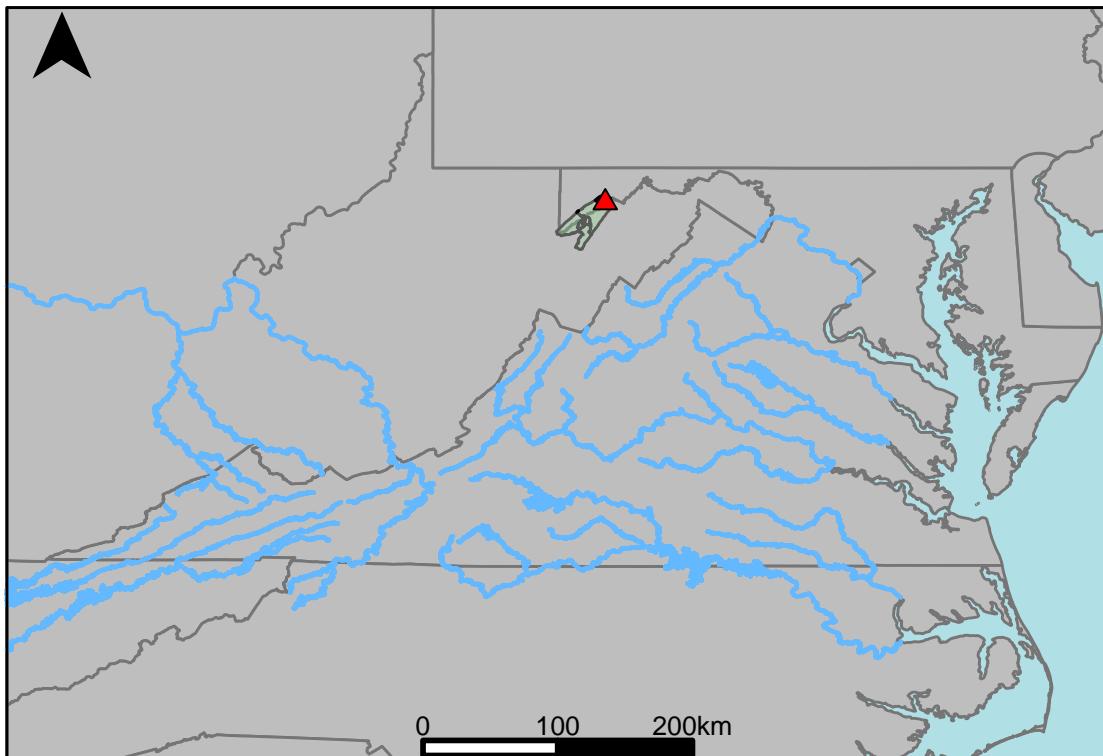


River Segment: PU3_4450_4440 - Scenario : CFBASE30Y20180615 : Gage 01595800 vs. VAHydro



This river segment follows part of the flow of the Potomac River at Barnum, WV. Gage 01595800 is located in Mineral County, VA (Lat 39 26'42.4", Long 79 06'38.9") approximately 4.0 miles southwest of Piedmont W. VA. Drainage area is 266 sq. miles. This gage started taking data in 1966 and has been taking data periodically until now. Prior to July 1981, there has been regulation at low flow by Stony River Reservoir, 39 mi upstream from station (see station 01595200). Since July 1981, complete there has been regulation by Jennings Randolph Lake, 1.7 mi upstream from station, capacity 96,600 acre-ft. There is a U.S. Army Corps of Engineers satellite data-collection platform at station. The average daily discharge change between scenario 1 and scenario 2 for the 20 year timespan was 4.6371%, with 42.5% of its rolling three month time spans above 20% difference.

Table 1: Monthly Low Flows

	USGS Gage	VAHydro	Pct. Difference
Jan. Low Flow	174	105	-39.66
Feb. Low Flow	174	300	72.41
Mar. Low Flow	244	312	27.87
Apr. Low Flow	302	318	5.3
May Low Flow	316	319	0.95
Jun. Low Flow	291	367	26.12
Jul. Low Flow	270	297	10
Aug. Low Flow	290	236	-18.62
Sep. Low Flow	245	168	-31.43
Oct. Low Flow	210	151	-28.1
Nov. Low Flow	184	150	-18.48
Dec. Low Flow	168	75.8	-54.88

Table 2: Monthly Average Flows

	USGS Gage	VAHydro	Pct. Difference
Overall Mean Flow	496	519	4.64
Jan. Mean Flow	698	641	-8.17
Feb. Mean Flow	600	614	2.33
Mar. Mean Flow	841	846	0.59
Apr. Mean Flow	696	707	1.58
May Mean Flow	707	666	-5.8
Jun. Mean Flow	402	453	12.69
Jul. Mean Flow	243	313	28.81
Aug. Mean Flow	231	277	19.91
Sep. Mean Flow	278	363	30.58
Oct. Mean Flow	266	305	14.66
Nov. Mean Flow	384	458	19.27
Dec. Mean Flow	608	596	-1.97

Table 3: Monthly High Flows

	USGS Gage	VAHydro	Pct. Difference
Jan. High Flow	673	316	-53.05
Feb. High Flow	288	928	222.22
Mar. High Flow	1210	1100	-9.09
Apr. High Flow	1500	1180	-21.33
May High Flow	1050	1090	3.81
Jun. High Flow	2060	1800	-12.62
Jul. High Flow	1530	1380	-9.8
Aug. High Flow	2140	1260	-41.12
Sep. High Flow	1400	853	-39.07
Oct. High Flow	289	468	61.94
Nov. High Flow	349	549	57.31
Dec. High Flow	739	311	-57.92

Table 4: Period Low Flows

	USGS Gage	VAHydro	Pct. Difference
Min. 1 Day Min	88.9	4.18	-95.3
Med. 1 Day Min	141	17.5	-87.59
Min. 3 Day Min	95.3	5.21	-94.53
Med. 3 Day Min	145	25.5	-82.41
Min. 7 Day Min	98	8.16	-91.67
Med. 7 Day Min	148	63.3	-57.23
Min. 30 Day Min	103	73.1	-29.03
Med. 30 Day Min	174	130	-25.29
Min. 90 Day Min	132	120	-9.09
Med. 90 Day Min	219	252	15.07
7Q10	105	11.9	-88.67
Year of 90-Day Min. Flow	2011	2010	-0.05
Drought Year Mean	560	487	-13.04
Mean Baseflow	307	325	5.86

Table 5: Period High Flows

	USGS Gage	VAHydro	Pct. Difference
Max. 1 Day Max	4940	3580	-27.53
Med. 1 Day Max	3600	2190	-39.17
Max. 3 Day Max	4490	3440	-23.39
Med. 3 Day Max	3090	2120	-31.39
Max. 7 Day Max	3430	2890	-15.74
Med. 7 Day Max	2390	1890	-20.92
Max. 30 Day Max	1700	1530	-10
Med. 30 Day Max	1190	1080	-9.24
Max. 90 Day Max	1460	1220	-16.44
Med. 90 Day Max	858	818	-4.66

Table 6: Non-Exceedance Flows

	USGS Gage	VAHydro	Pct. Difference
1% Non-Exceedance	110	24.7	-77.55
5% Non-Exceedance	142	122	-14.08
50% Non-Exceedance	301	365	21.26
95% Non-Exceedance	1510	1380	-8.61
99% Non-Exceedance	2440	2060	-15.57
Sept. 10% Non-Exceedance	143	38.5	-73.08

Fig. 1: Hydrograph

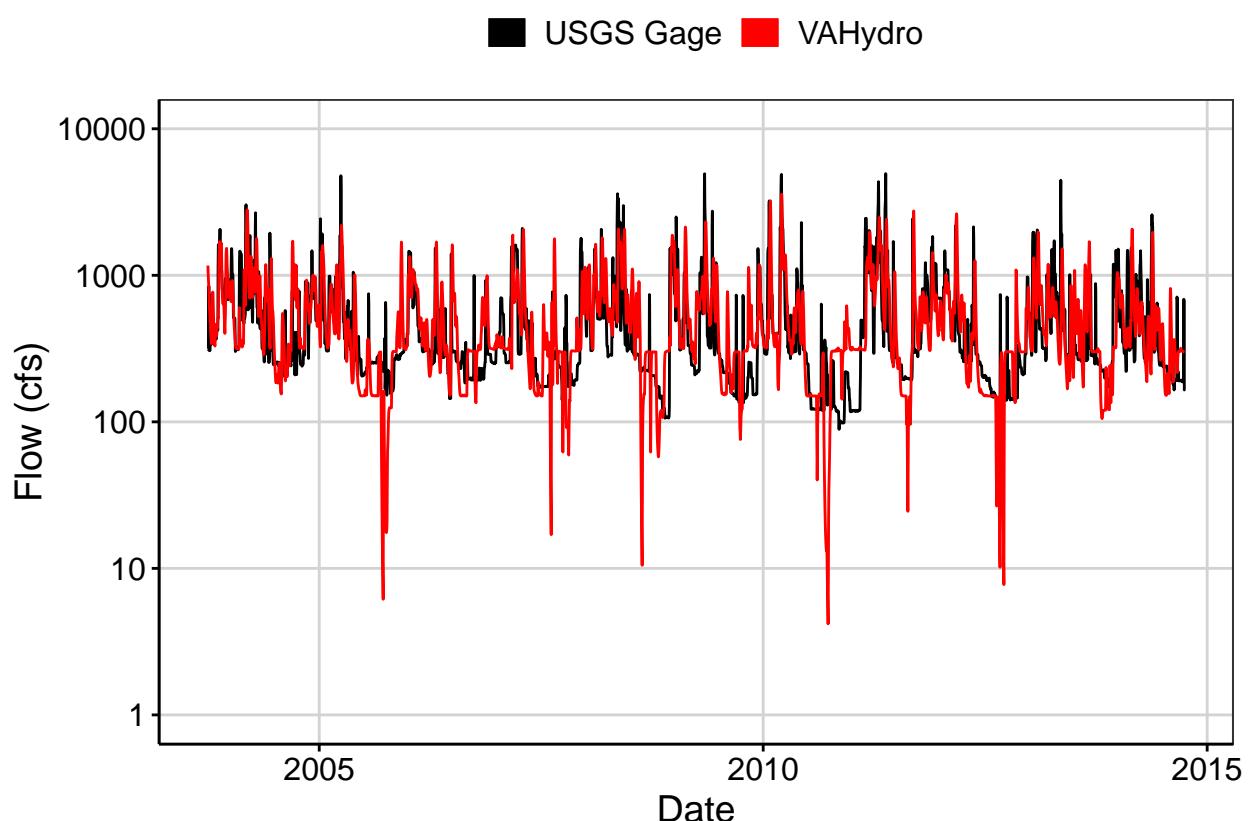


Fig. 2: Zoomed Hydrograph

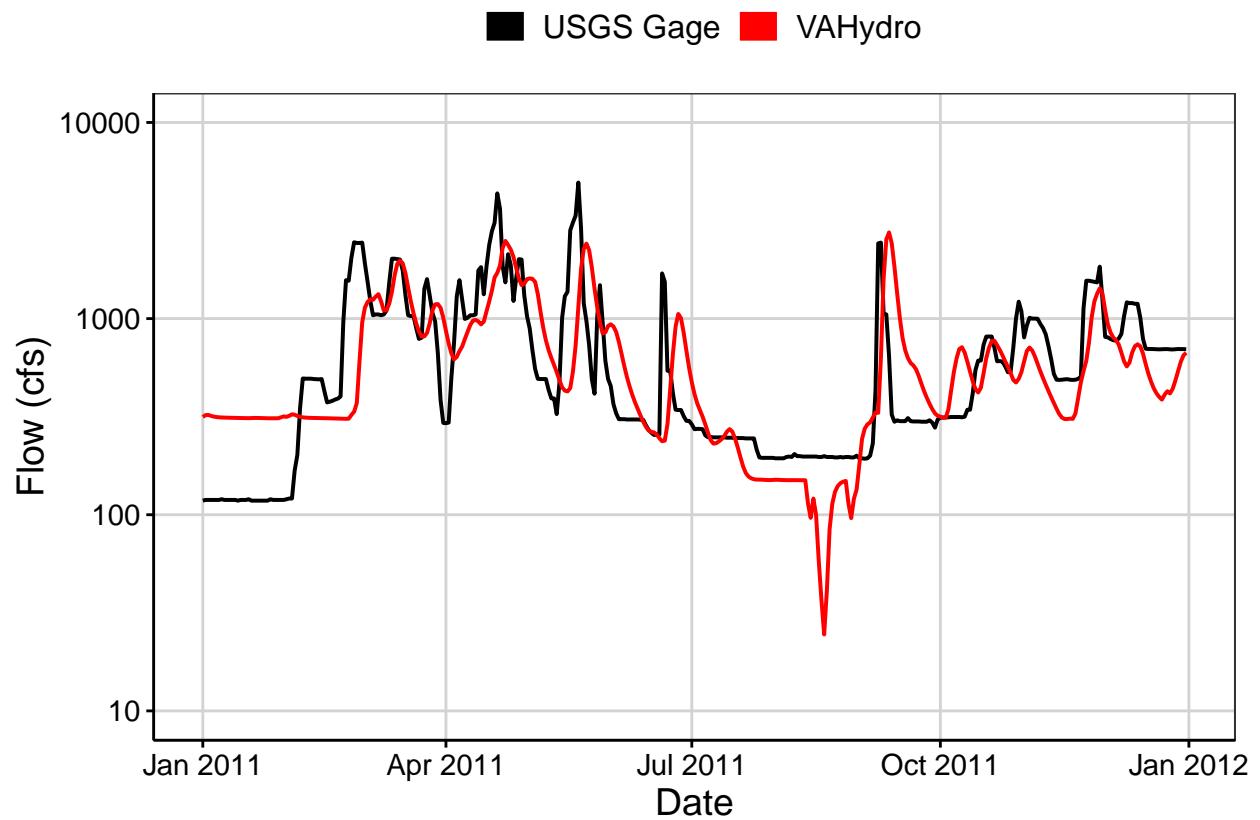


Fig. 3: Flow Exceedance

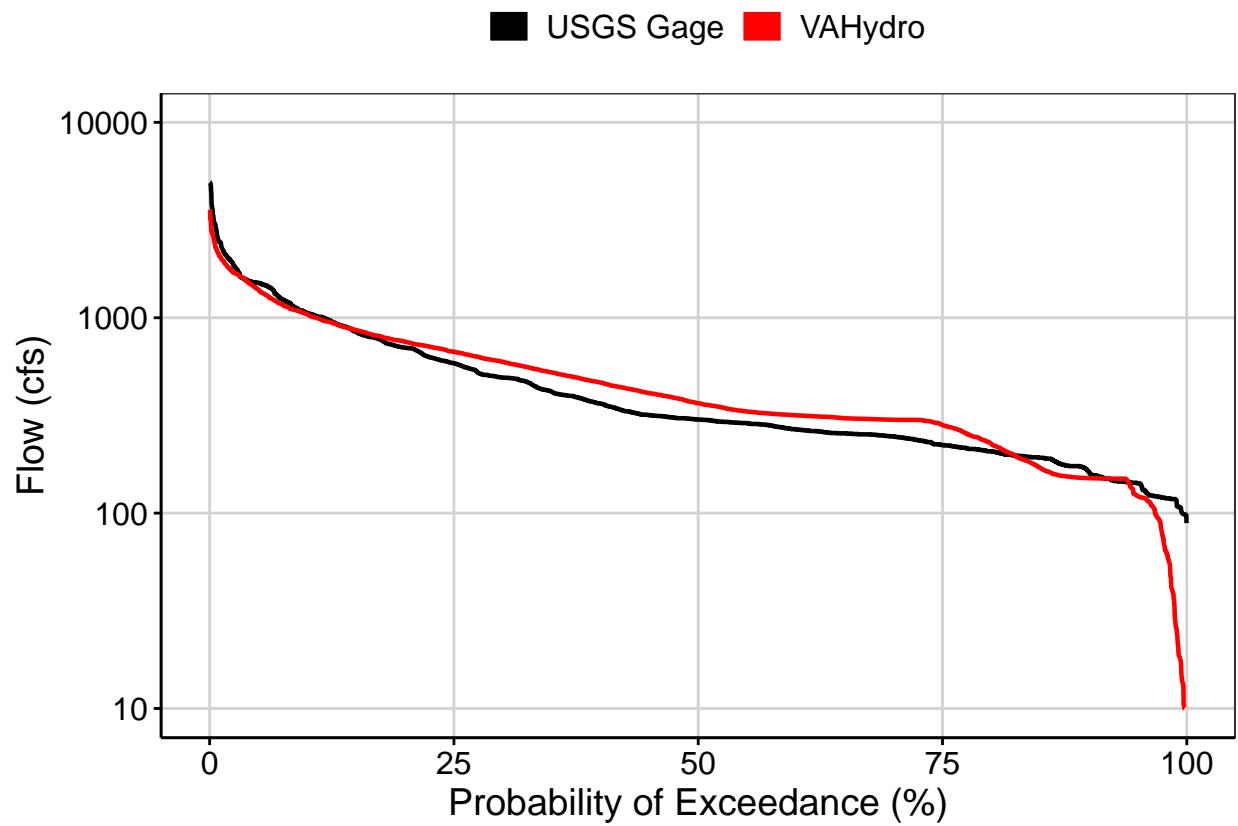


Fig. 4: Baseflow

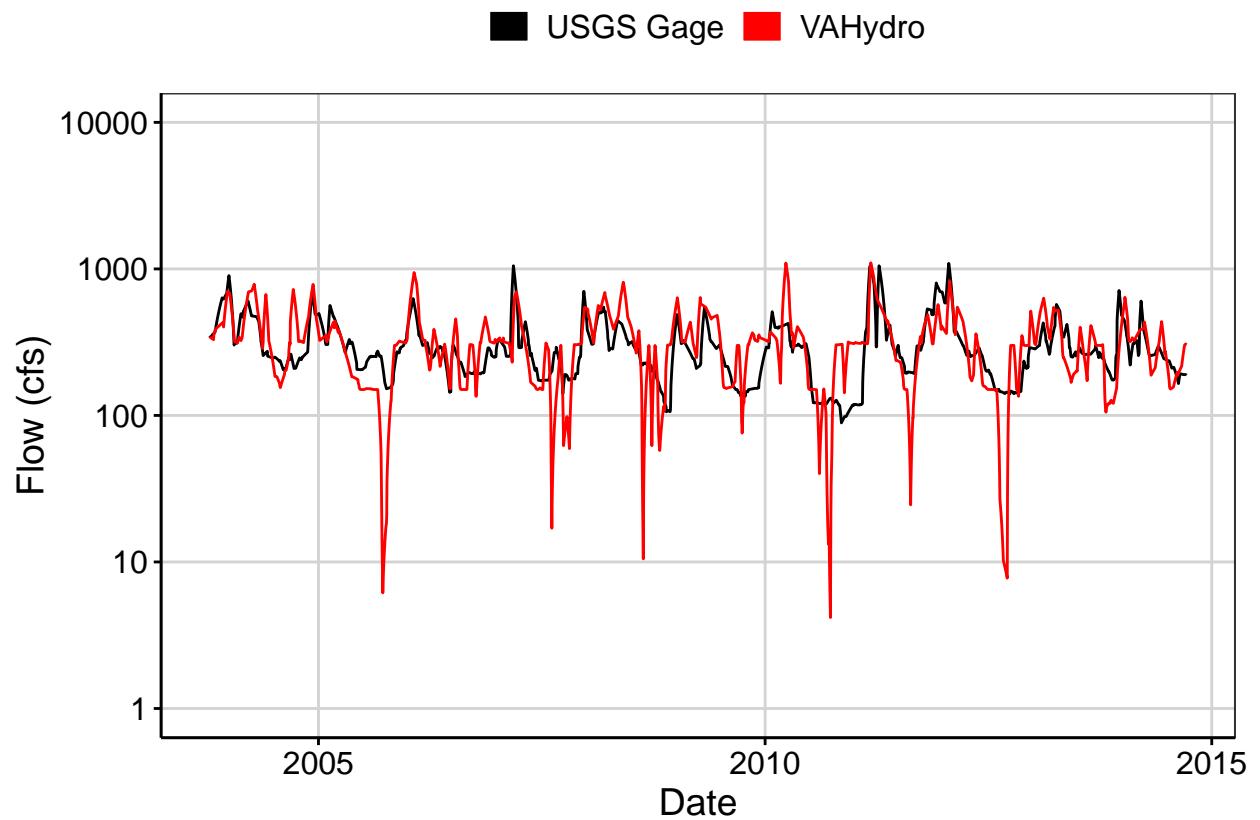


Fig. 5: Combined Baseflow

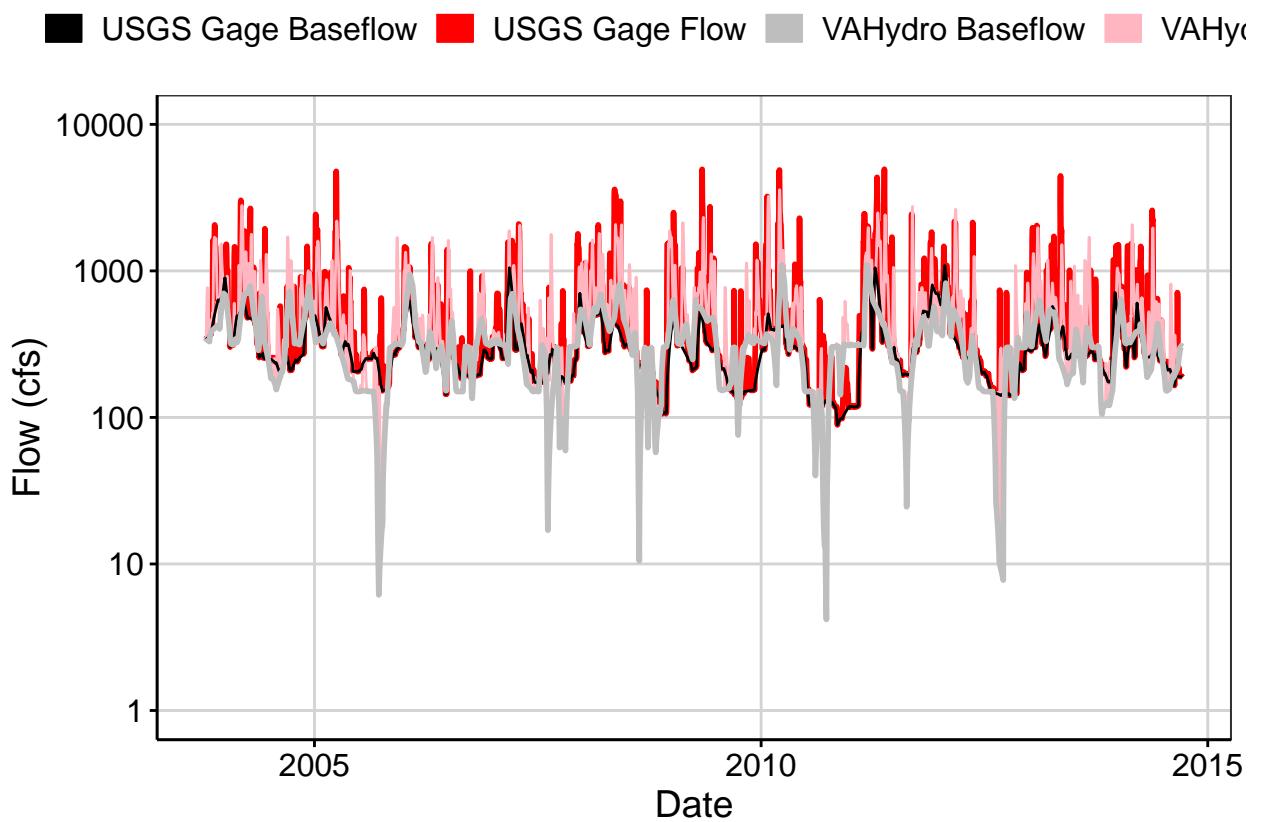


Fig. 6: Largest Difference Segment

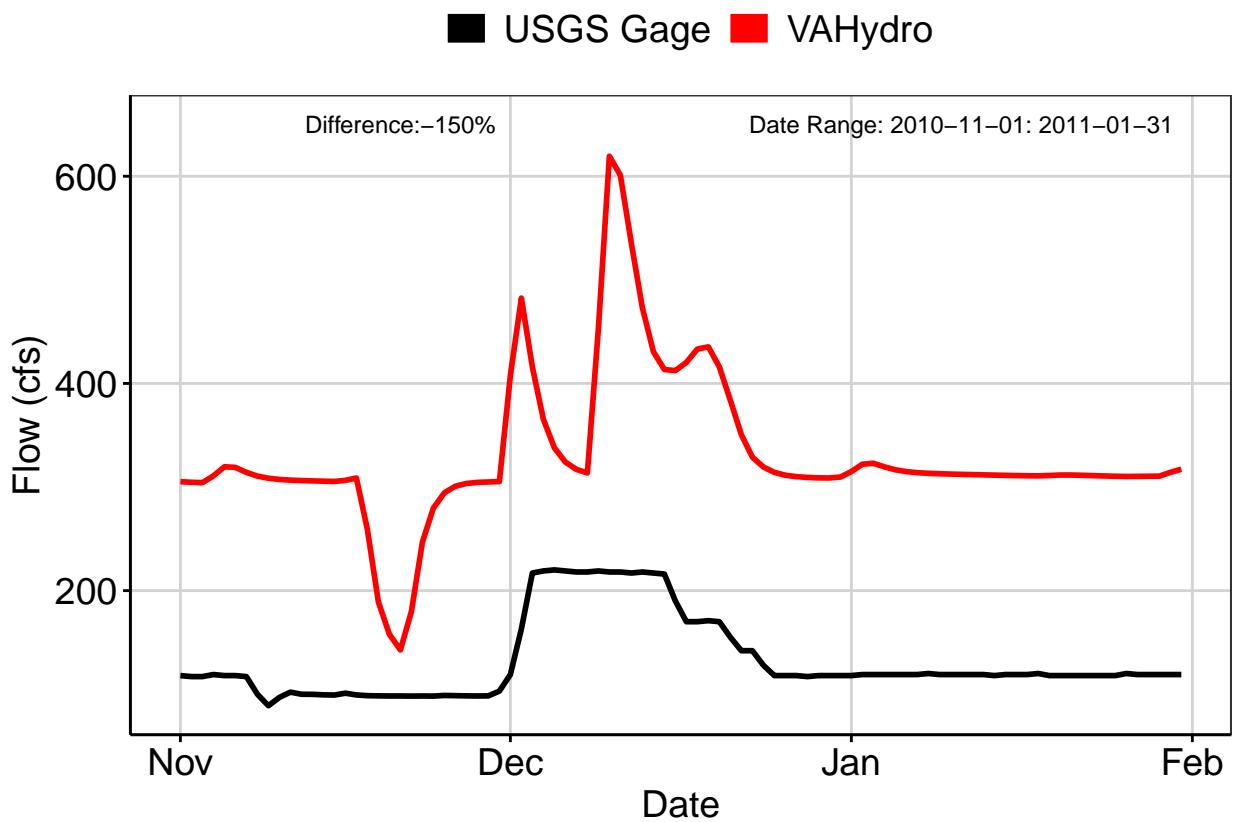


Fig. 7: Second Largest Difference Segment

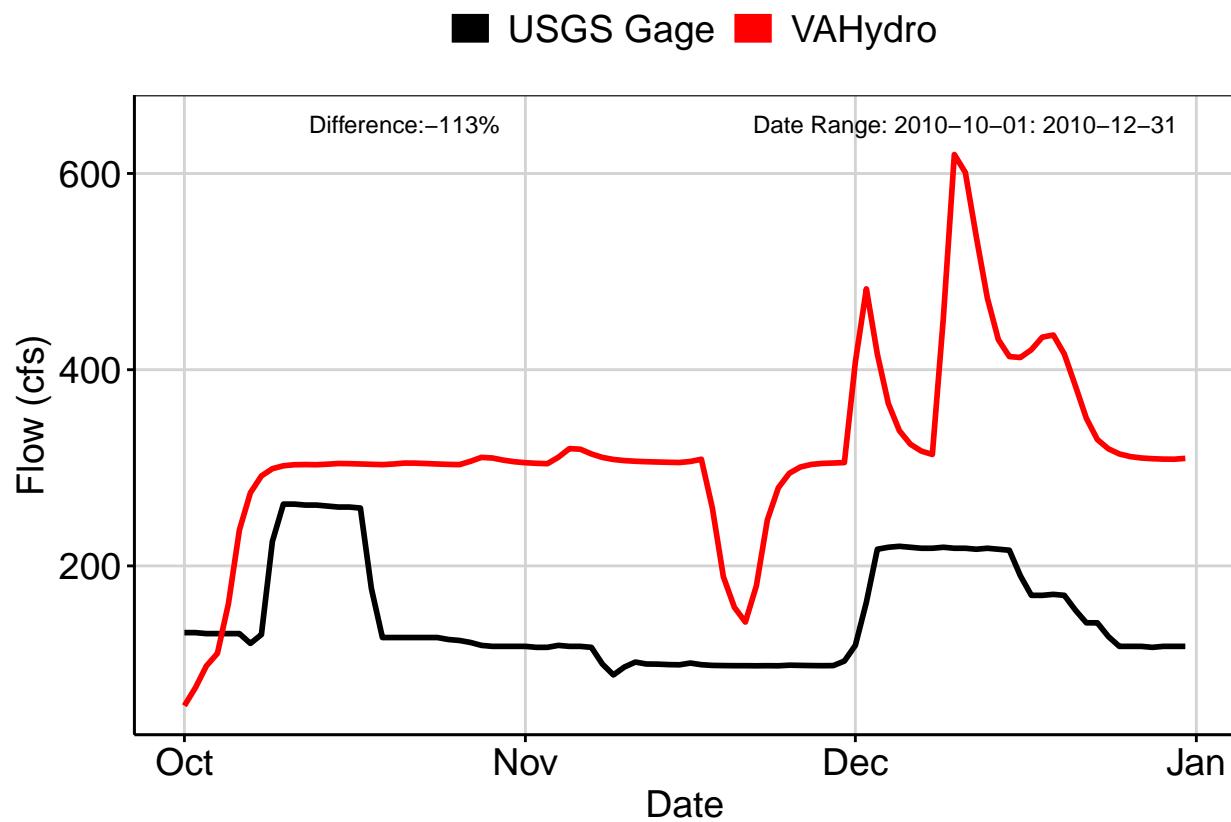


Fig. 8: Third Largest Difference Segment

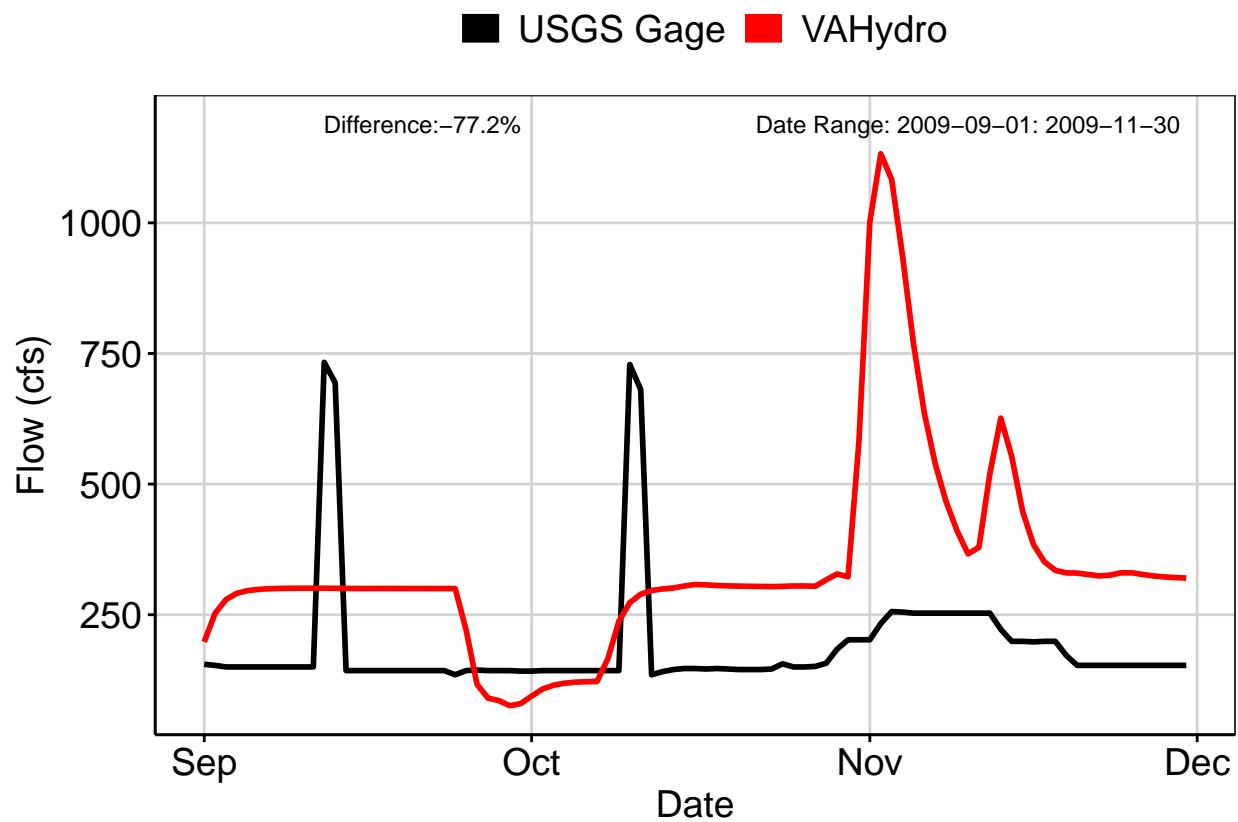


Fig. 9A: Residuals Plot

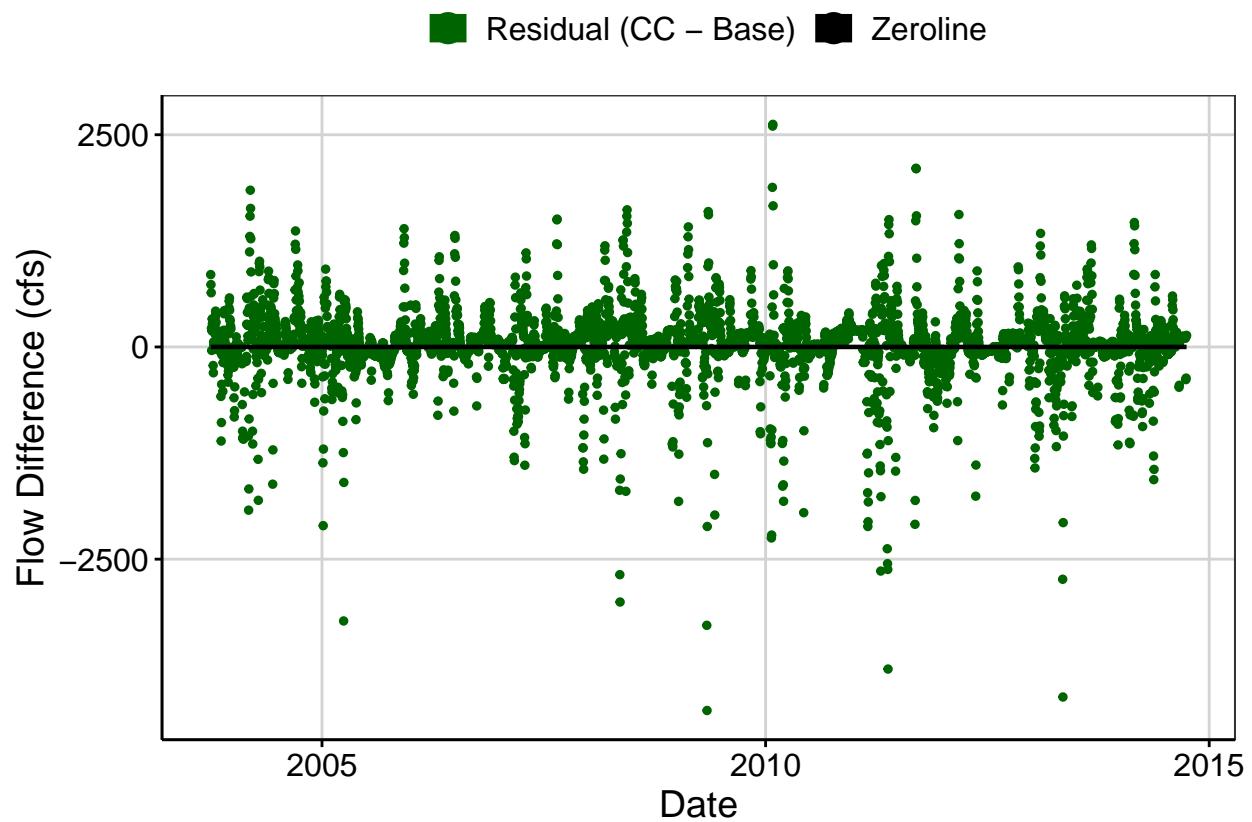


Fig. 9B: Area Weighted Residuals Plot

