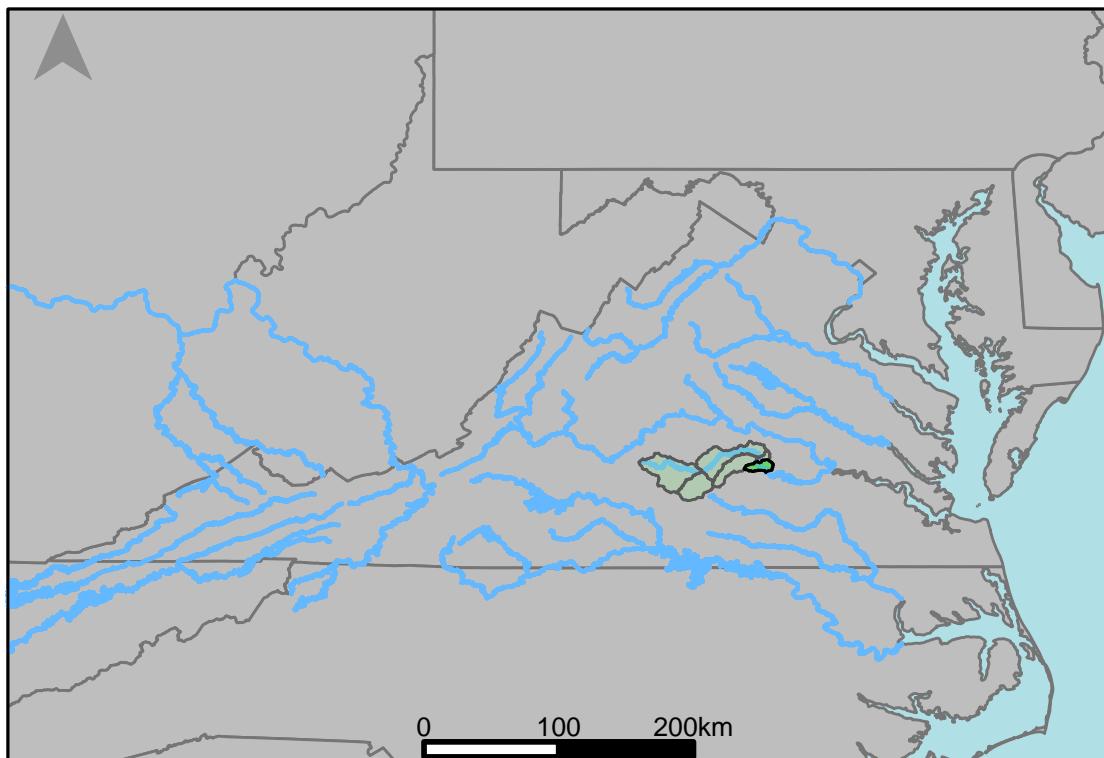


River Segment: JA4_7470_7480 - Scenario :
CFBASE30Y20180615 : VaHydro Run 120 (Base)
vs. VAHydro Run 121 (Climate Change)



The average daily discharge change between scenario 1 and scenario 2 for the 20 year timespan was 6.69145%, with 3.89% of its rolling three month time spans above 20% difference.

Table 1: Monthly Low Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Jan. Low Flow	131	140	6.87
Feb. Low Flow	194	201	3.61
Mar. Low Flow	325	351	8
Apr. Low Flow	547	561	2.56
May Low Flow	683	727	6.44
Jun. Low Flow	697	713	2.3
Jul. Low Flow	501	514	2.59
Aug. Low Flow	346	358	3.47
Sep. Low Flow	225	227	0.89
Oct. Low Flow	149	154	3.36
Nov. Low Flow	124	128	3.23
Dec. Low Flow	103	107	3.88

Table 2: Monthly Average Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Overall Mean Flow	807	861	6.69
Jan. Mean Flow	1200	1300	8.33
Feb. Mean Flow	1450	1540	6.21
Mar. Mean Flow	1700	1760	3.53
Apr. Mean Flow	1220	1280	4.92
May Mean Flow	806	844	4.71
Jun. Mean Flow	469	484	3.2
Jul. Mean Flow	298	316	6.04
Aug. Mean Flow	279	301	7.89
Sep. Mean Flow	392	448	14.29
Oct. Mean Flow	441	487	10.43
Nov. Mean Flow	620	675	8.87
Dec. Mean Flow	838	926	10.5

Table 3: Monthly High Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Jan. High Flow	568	661	16.37
Feb. High Flow	931	988	6.12
Mar. High Flow	1110	1290	16.22
Apr. High Flow	2500	2600	4
May High Flow	2190	2480	13.24
Jun. High Flow	2990	3080	3.01
Jul. High Flow	2680	2760	2.99
Aug. High Flow	1360	1550	13.97
Sep. High Flow	584	598	2.4
Oct. High Flow	403	416	3.23
Nov. High Flow	395	421	6.58
Dec. High Flow	429	495	15.38

Table 4: Period Low Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Min. 1 Day Min	21.3	22.9	7.51
Med. 1 Day Min	82.3	84.2	2.31
Min. 3 Day Min	22.1	23.8	7.69
Med. 3 Day Min	85.3	87.3	2.34
Min. 7 Day Min	23.7	25.5	7.59
Med. 7 Day Min	92.1	94.3	2.39
Min. 30 Day Min	33.6	36.3	8.04
Med. 30 Day Min	121	129	6.61
Min. 90 Day Min	86.4	103	19.21
Med. 90 Day Min	208	220	5.77
7Q10	40.4	42.1	4.21
Year of 90-Day Min. Flow	1999	1998	-0.05
Drought Year Mean	433	1510	248.73
Mean Baseflow	464	475	2.37

Table 5: Period High Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Max. 1 Day Max	14400	14500	0.69
Med. 1 Day Max	6220	6800	9.32
Max. 3 Day Max	13000	13100	0.77
Med. 3 Day Max	5820	6210	6.7
Max. 7 Day Max	9150	9600	4.92
Med. 7 Day Max	4650	4760	2.37
Max. 30 Day Max	5380	5890	9.48
Med. 30 Day Max	2120	2190	3.3
Max. 90 Day Max	4000	4320	8
Med. 90 Day Max	1450	1470	1.38

Table 6: Non-Exceedance Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
1% Non-Exceedance	44.4	47.3	6.53
5% Non-Exceedance	88.9	94.6	6.41
50% Non-Exceedance	491	527	7.33
95% Non-Exceedance	2540	2710	6.69
99% Non-Exceedance	5480	5930	8.21
Sept. 10% Non-Exceedance	81.5	85	4.29

Fig. 1: Hydrograph

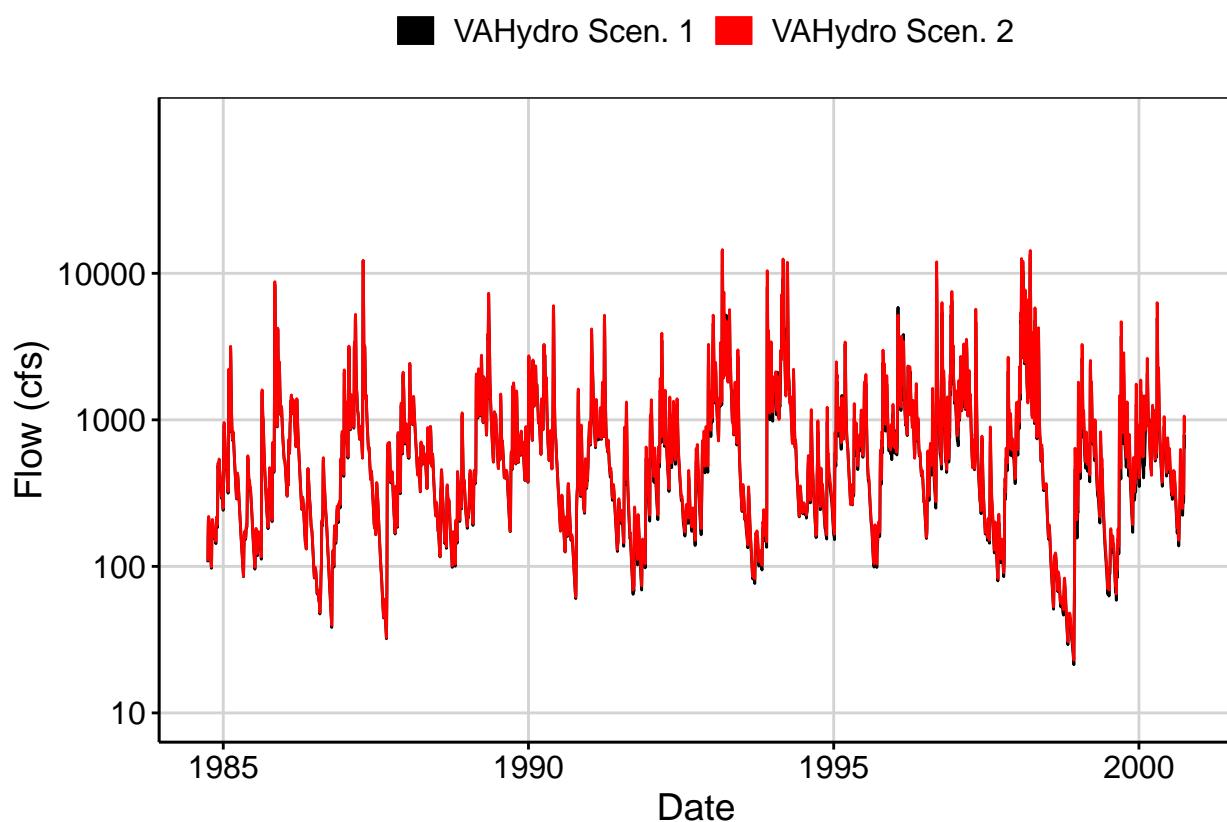


Fig. 2: Zoomed Hydrograph

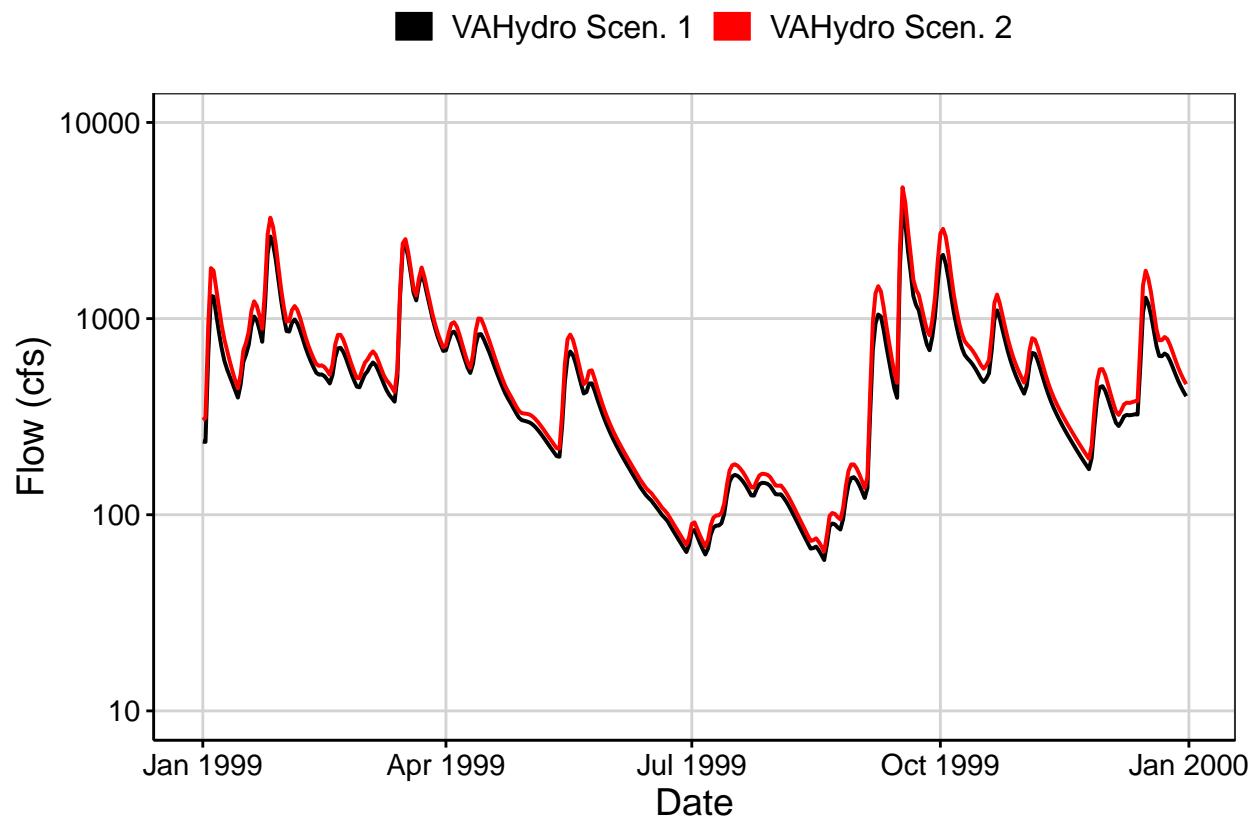


Fig. 3: Flow Exceedance

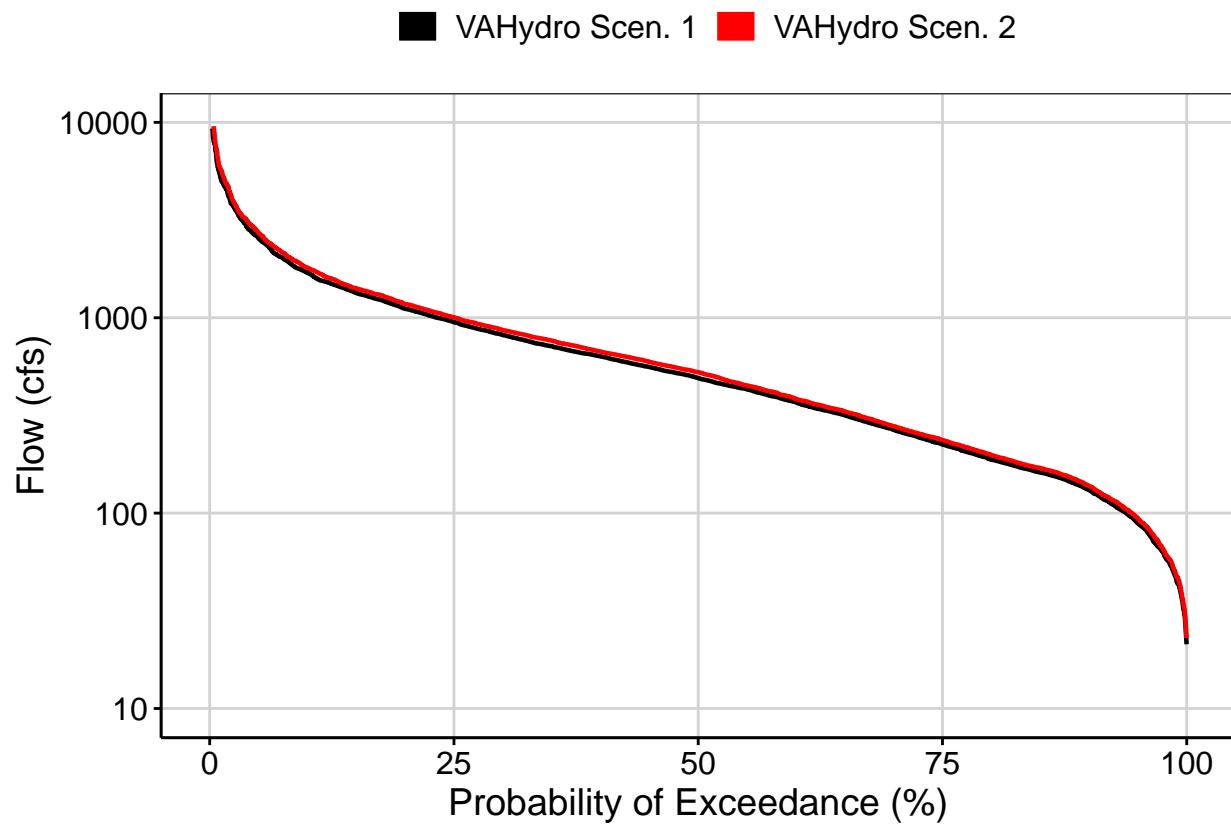


Fig. 4: Baseflow

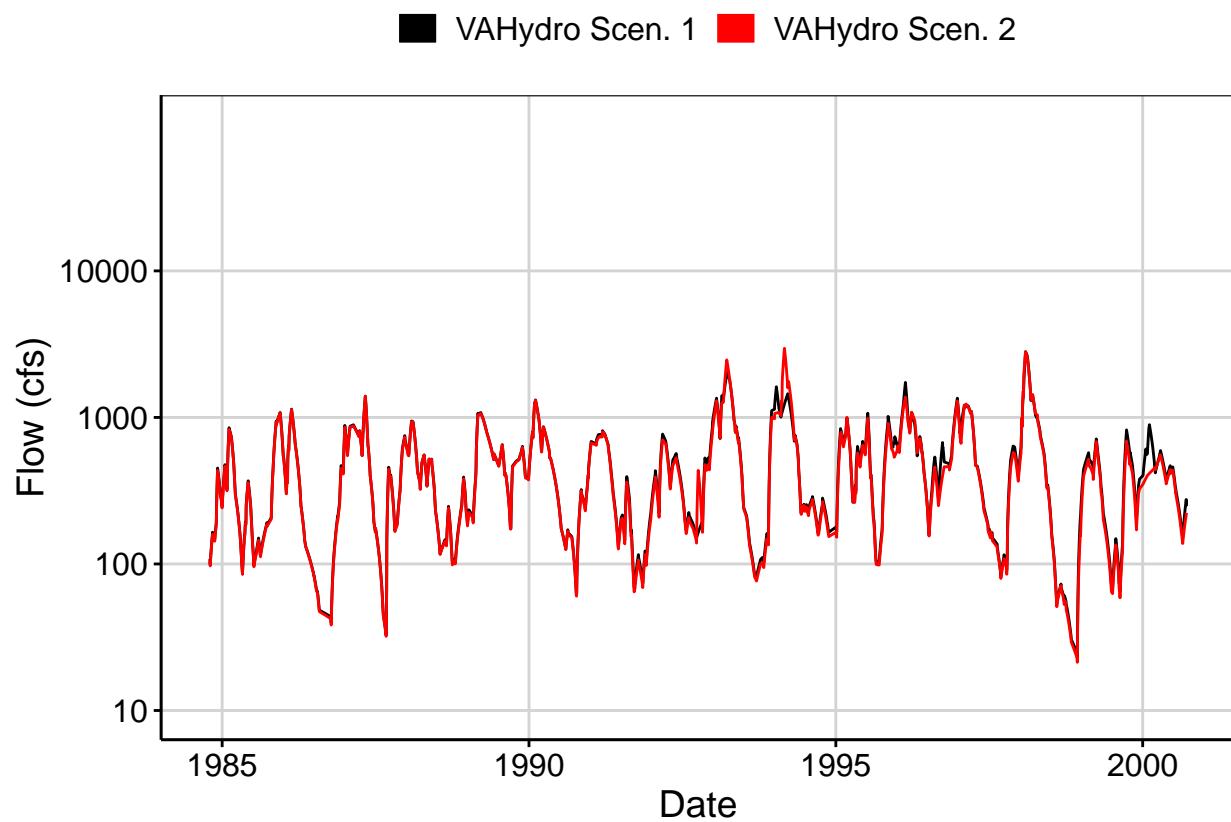


Fig. 5: Combined Baseflow

dro Scen. 1 Baseflow ■ VAHydro Scen. 1 Flow ■ VAHydro Scen. 2 Baseflow ■ V

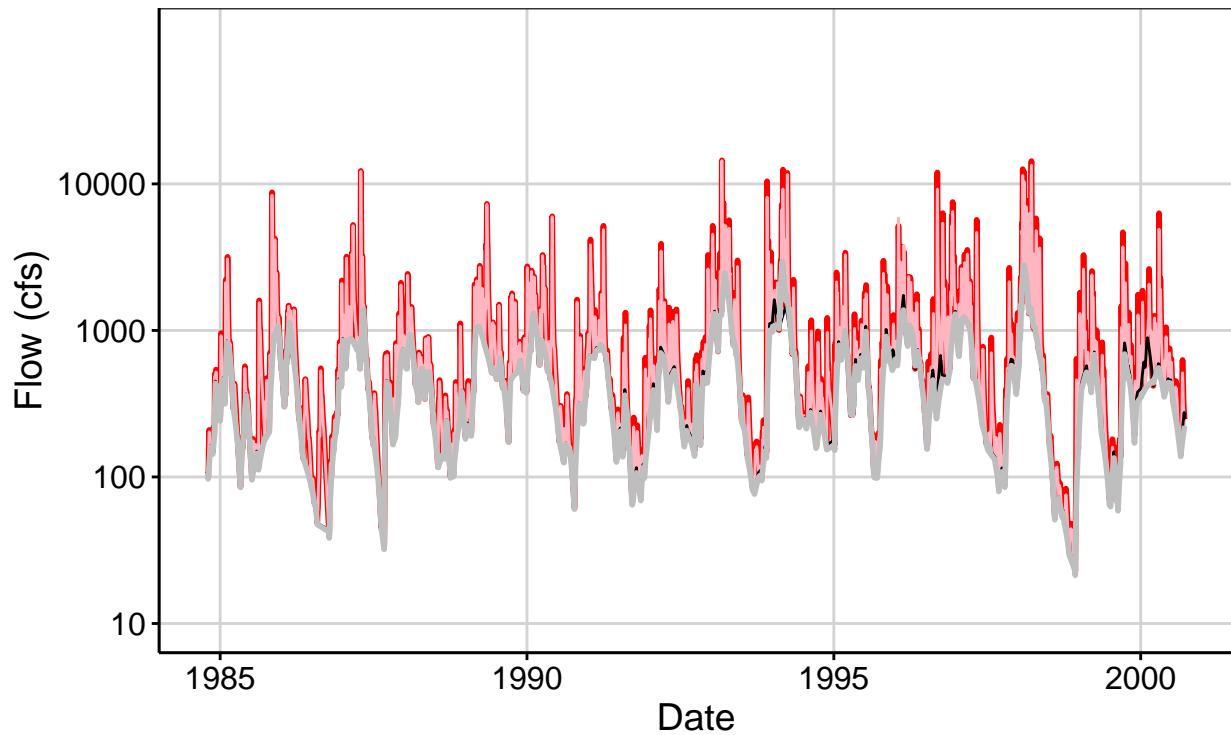


Fig. 6: Largest Difference Segment

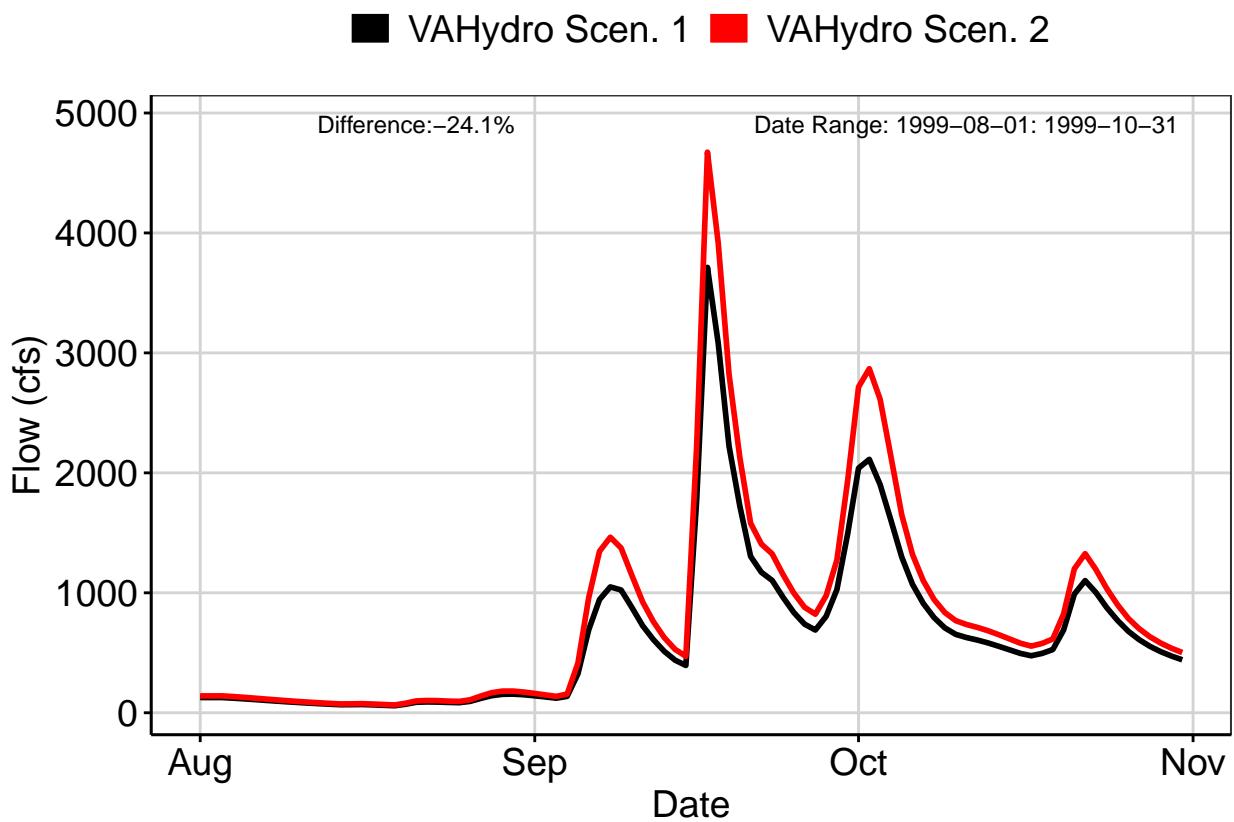


Fig. 7: Second Largest Difference Segment

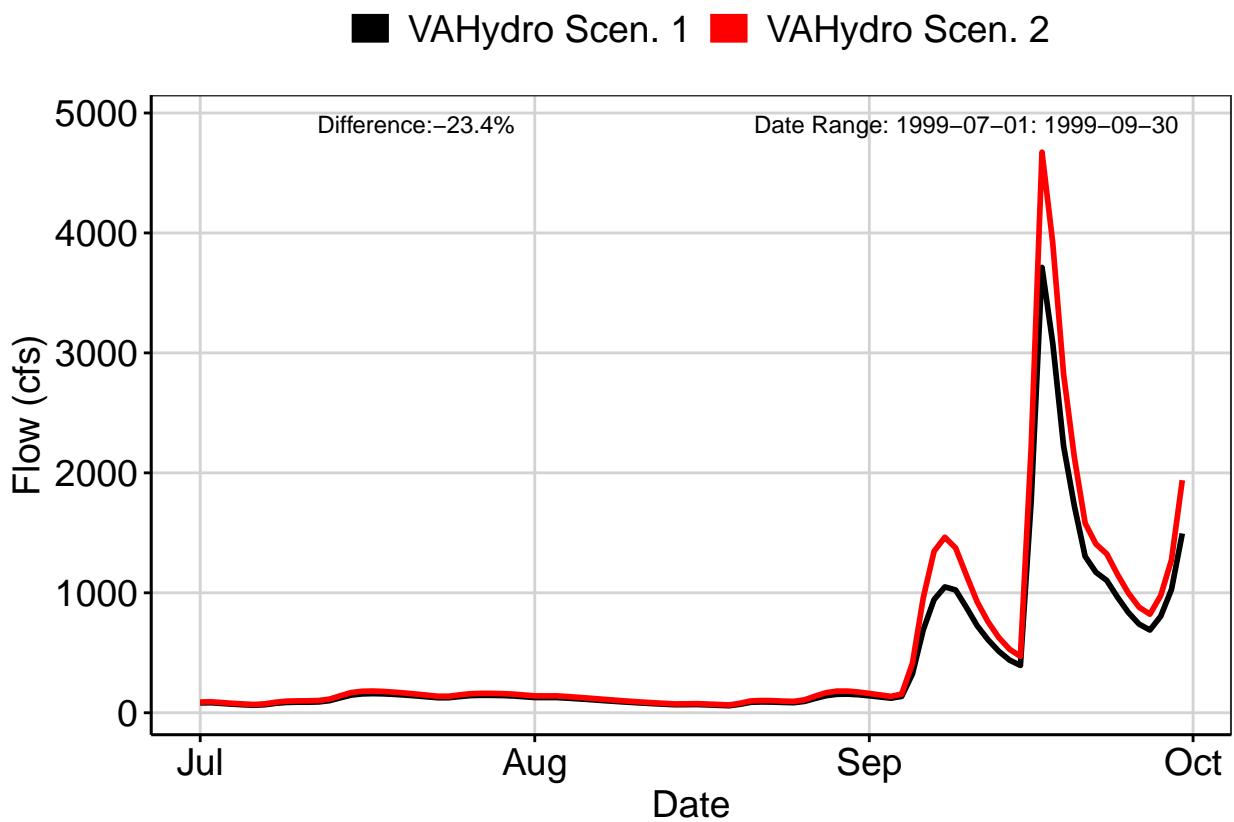


Fig. 8: Third Largest Difference Segment

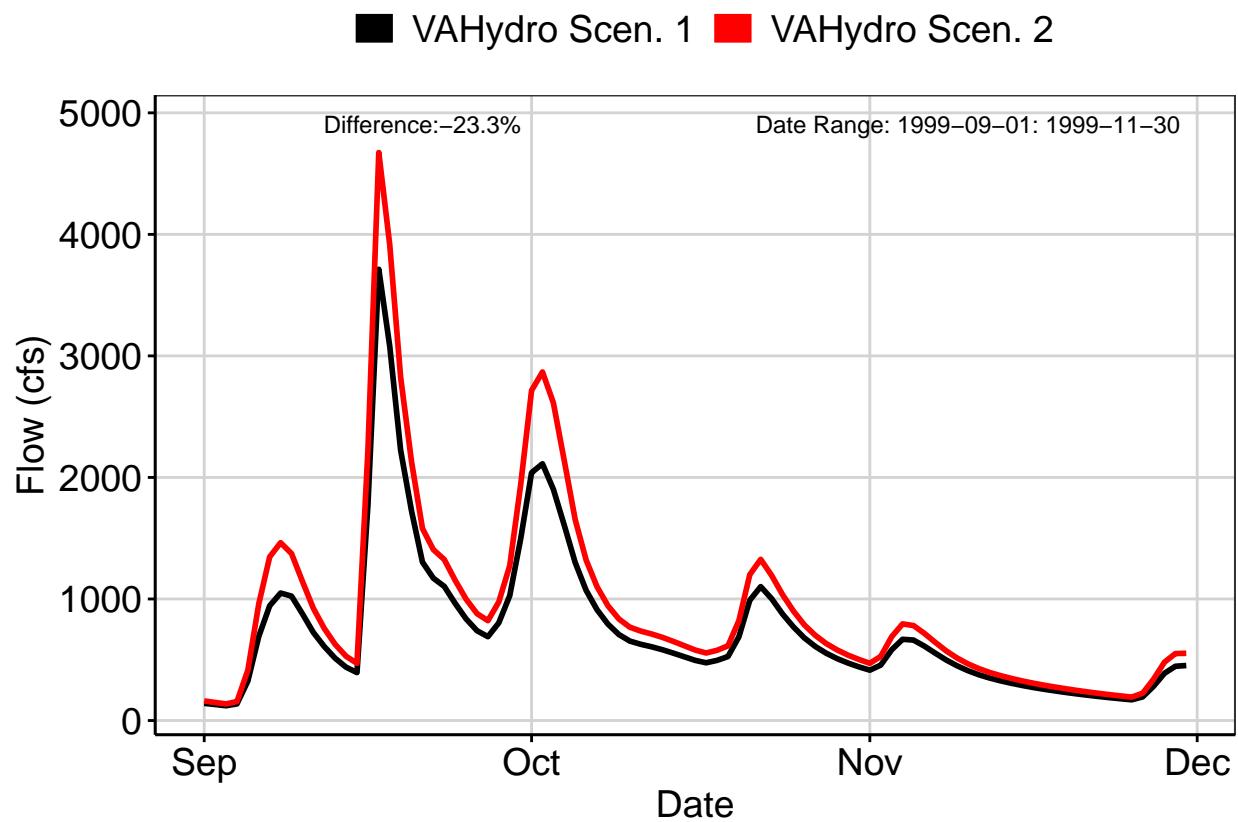


Fig. 9A: Residuals Plot

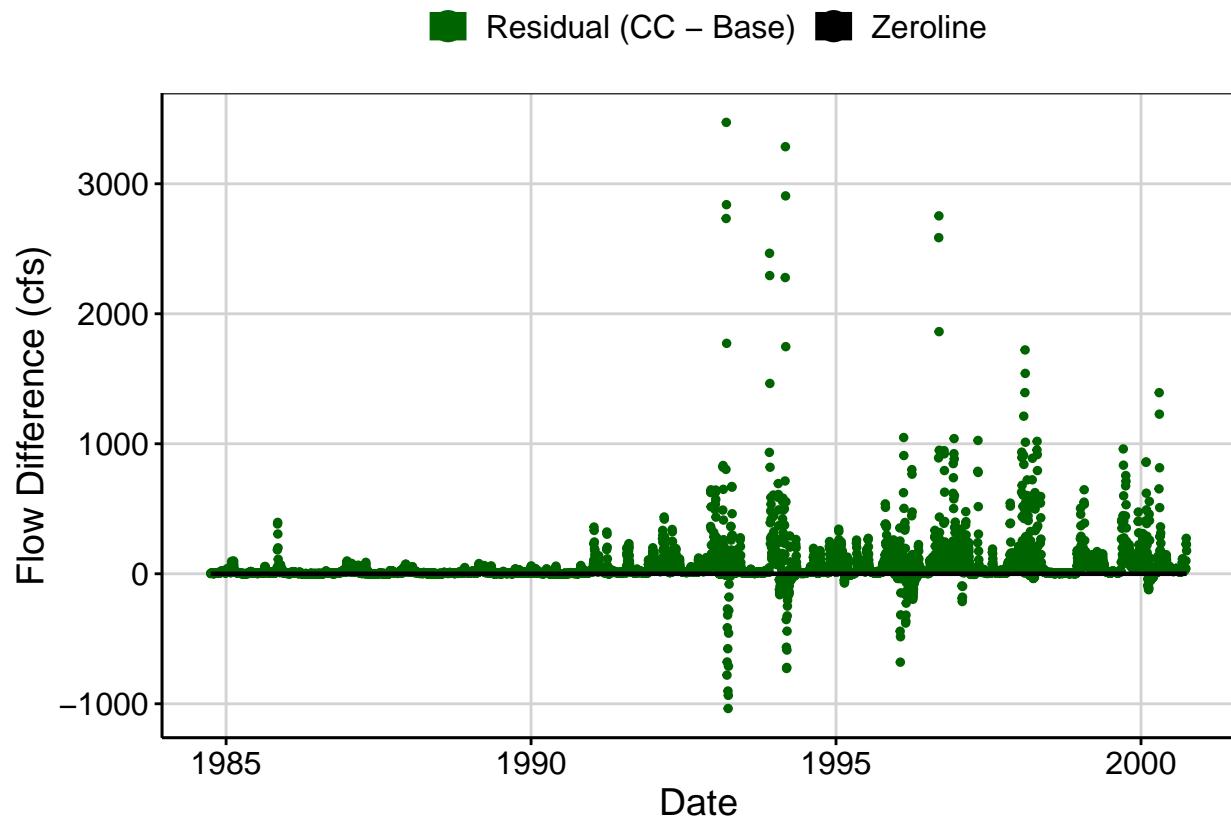


Fig. 9B: Area Weighted Residuals Plot

