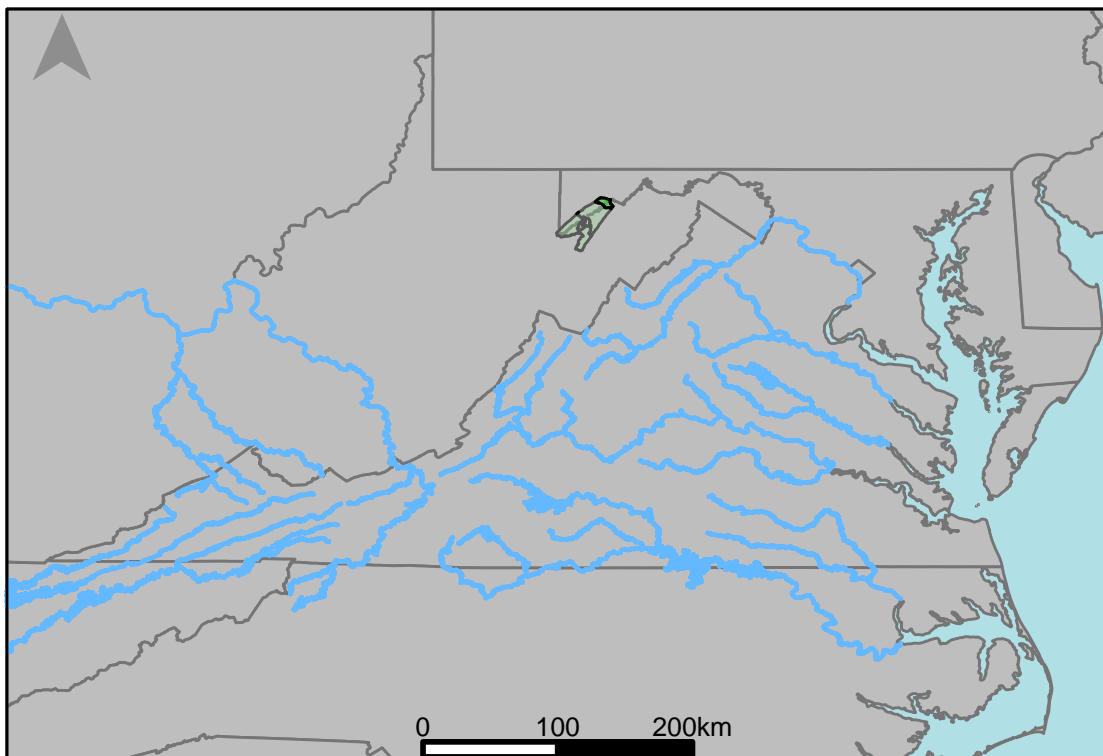


River Segment: PU3_4450_4440 - Scenario :
CFBASE30Y20180615 : VaHydro Run 120 (Base)
vs. VAHydro Run 121 (Climate Change)



The average daily discharge change between scenario 1 and scenario 2 for the 20 year timespan was 2.64798%, with 1.11% 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	120	120	0
Feb. Low Flow	284	284	0
Mar. Low Flow	394	434	10.15
Apr. Low Flow	364	444	21.98
May Low Flow	458	458	0
Jun. Low Flow	607	653	7.58
Jul. Low Flow	465	462	-0.65
Aug. Low Flow	355	356	0.28
Sep. Low Flow	193	190	-1.55
Oct. Low Flow	143	141	-1.4
Nov. Low Flow	77.8	77.6	-0.26
Dec. Low Flow	83.8	84	0.24

Table 2: Monthly Average Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Overall Mean Flow	642	659	2.65
Jan. Mean Flow	807	850	5.33
Feb. Mean Flow	888	956	7.66
Mar. Mean Flow	1160	1180	1.72
Apr. Mean Flow	948	931	-1.79
May Mean Flow	703	719	2.28
Jun. Mean Flow	491	497	1.22
Jul. Mean Flow	384	383	-0.26
Aug. Mean Flow	346	348	0.58
Sep. Mean Flow	323	324	0.31
Oct. Mean Flow	351	353	0.57
Nov. Mean Flow	589	608	3.23
Dec. Mean Flow	731	774	5.88

Table 3: Monthly High Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Jan. High Flow	611	613	0.33
Feb. High Flow	756	819	8.33
Mar. High Flow	1050	1120	6.67
Apr. High Flow	1450	1590	9.66
May High Flow	1420	1470	3.52
Jun. High Flow	2050	2080	1.46
Jul. High Flow	1390	1500	7.91
Aug. High Flow	1130	1130	0
Sep. High Flow	931	975	4.73
Oct. High Flow	605	600	-0.83
Nov. High Flow	563	559	-0.71
Dec. High Flow	426	421	-1.17

Table 4: Period Low Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Min. 1 Day Min	1.15	1.15	0
Med. 1 Day Min	20.1	20.1	0
Min. 3 Day Min	1.3	1.3	0
Med. 3 Day Min	23	23	0
Min. 7 Day Min	1.76	1.76	0
Med. 7 Day Min	30.9	30.9	0
Min. 30 Day Min	17	16.4	-3.53
Med. 30 Day Min	90.9	89.5	-1.54
Min. 90 Day Min	52.9	52.9	0
Med. 90 Day Min	281	291	3.56
7Q10	5.02	4.88	-2.79
Year of 90-Day Min. Flow	1999	1999	0
Drought Year Mean	357	373	4.48
Mean Baseflow	407	426	4.67

Table 5: Period High Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Max. 1 Day Max	9530	9550	0.21
Med. 1 Day Max	2610	2790	6.9
Max. 3 Day Max	9110	9130	0.22
Med. 3 Day Max	2330	2610	12.02
Max. 7 Day Max	6590	6600	0.15
Med. 7 Day Max	1930	2150	11.4
Max. 30 Day Max	2780	2790	0.36
Med. 30 Day Max	1330	1370	3.01
Max. 90 Day Max	1820	1820	0
Med. 90 Day Max	1020	1060	3.92

Table 6: Non-Exceedance Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
1% Non-Exceedance	17.8	17	-4.49
5% Non-Exceedance	58.4	56.9	-2.57
50% Non-Exceedance	502	518	3.19
95% Non-Exceedance	1720	1780	3.49
99% Non-Exceedance	2640	2660	0.76
Sept. 10% Non-Exceedance	26.2	26	-0.76

Fig. 1: Hydrograph

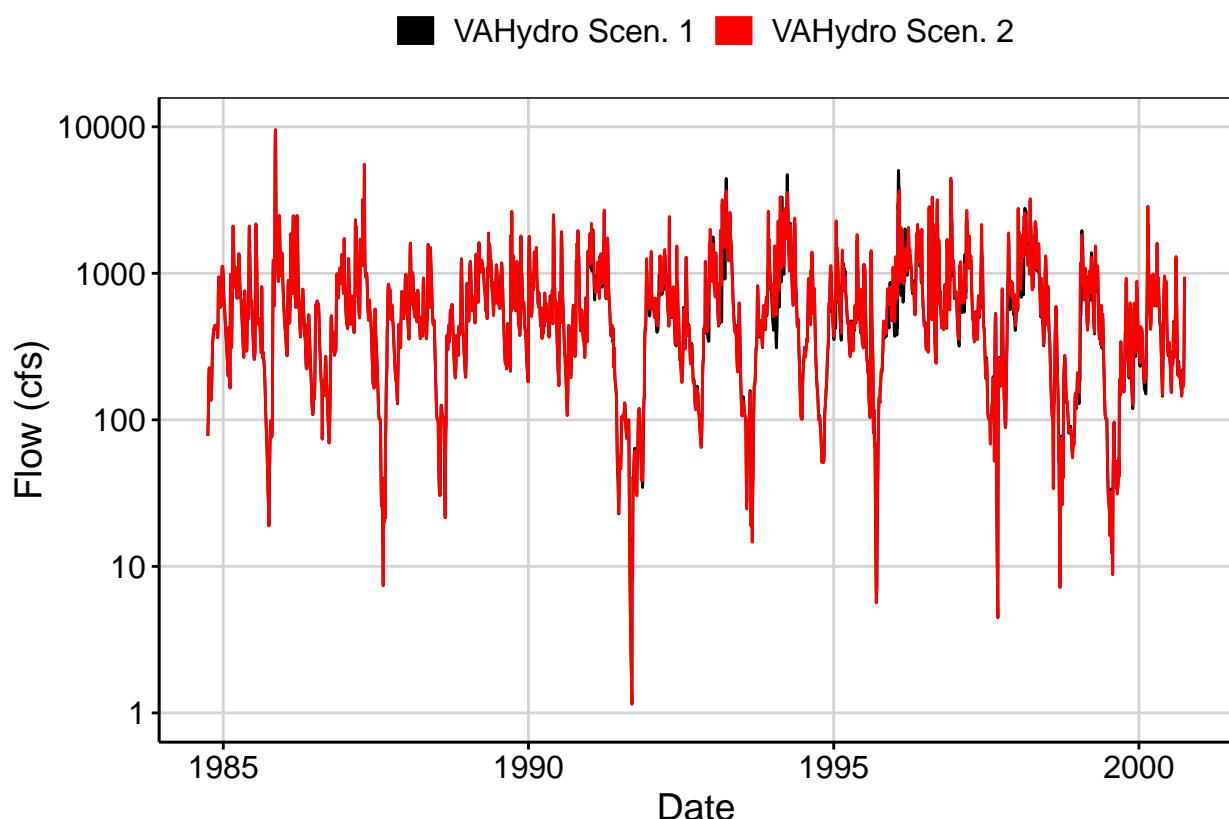


Fig. 2: Zoomed Hydrograph

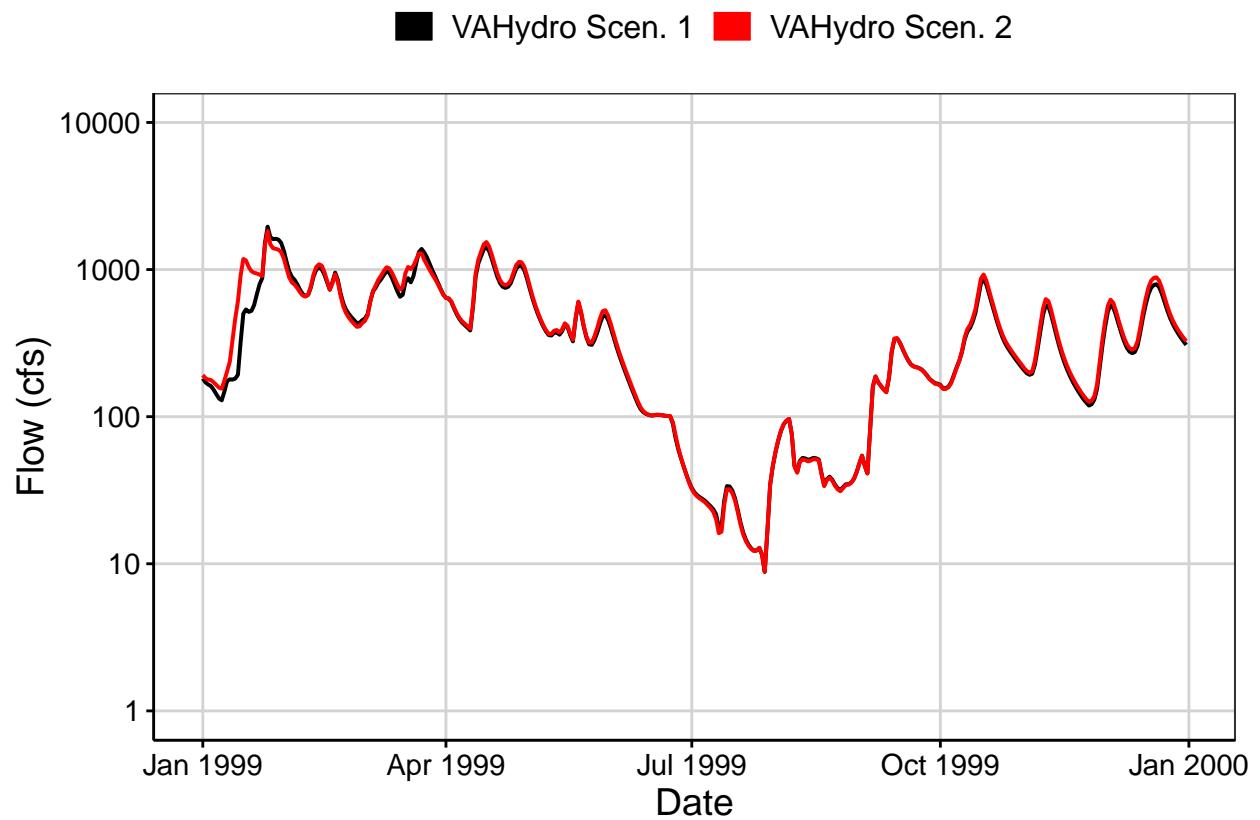


Fig. 3: Flow Exceedance

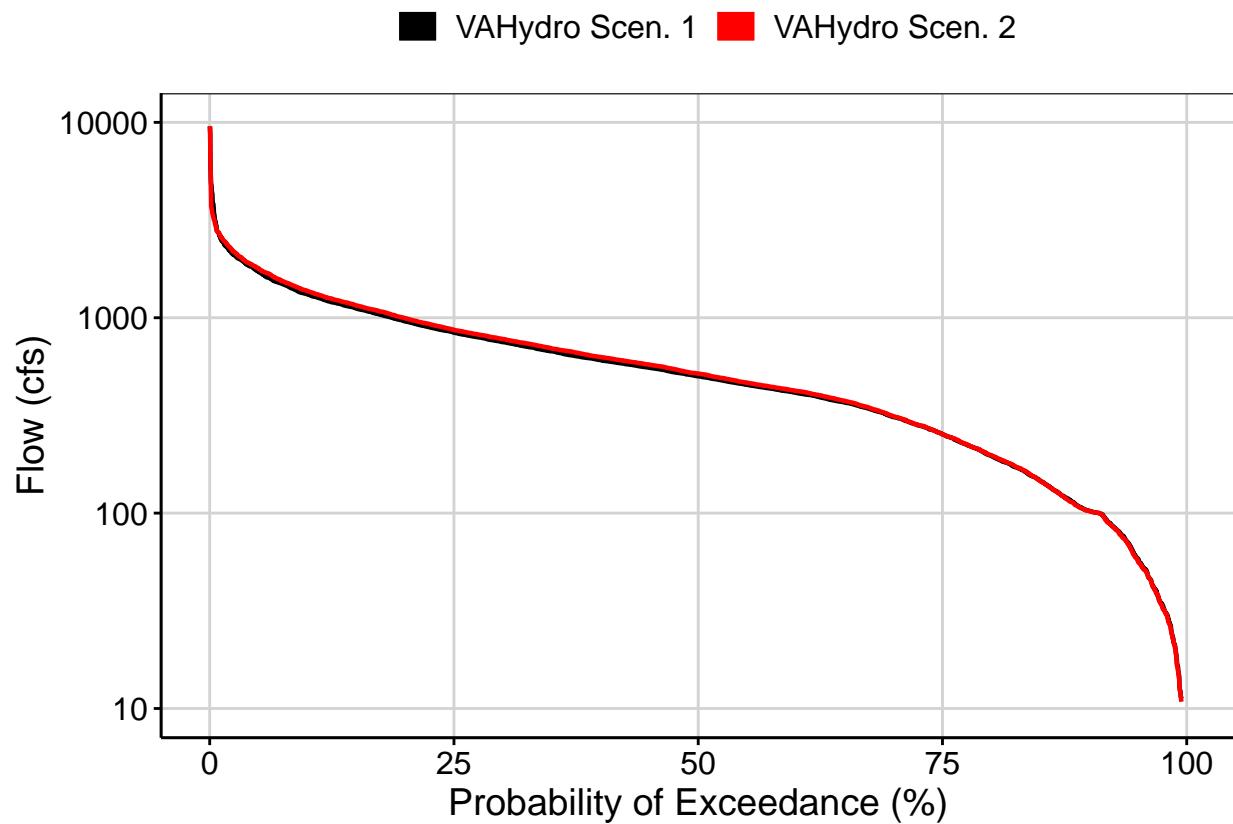


Fig. 4: Baseflow

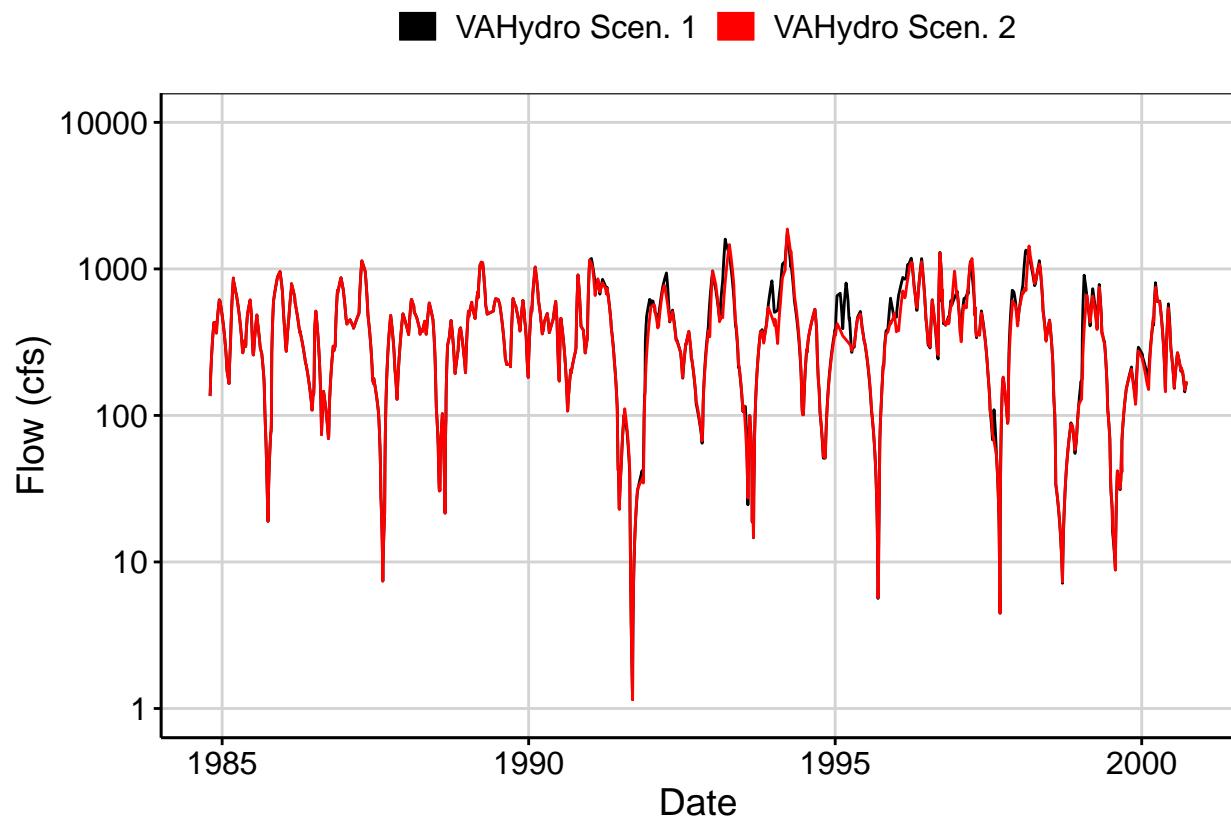


Fig. 5: Combined Baseflow

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

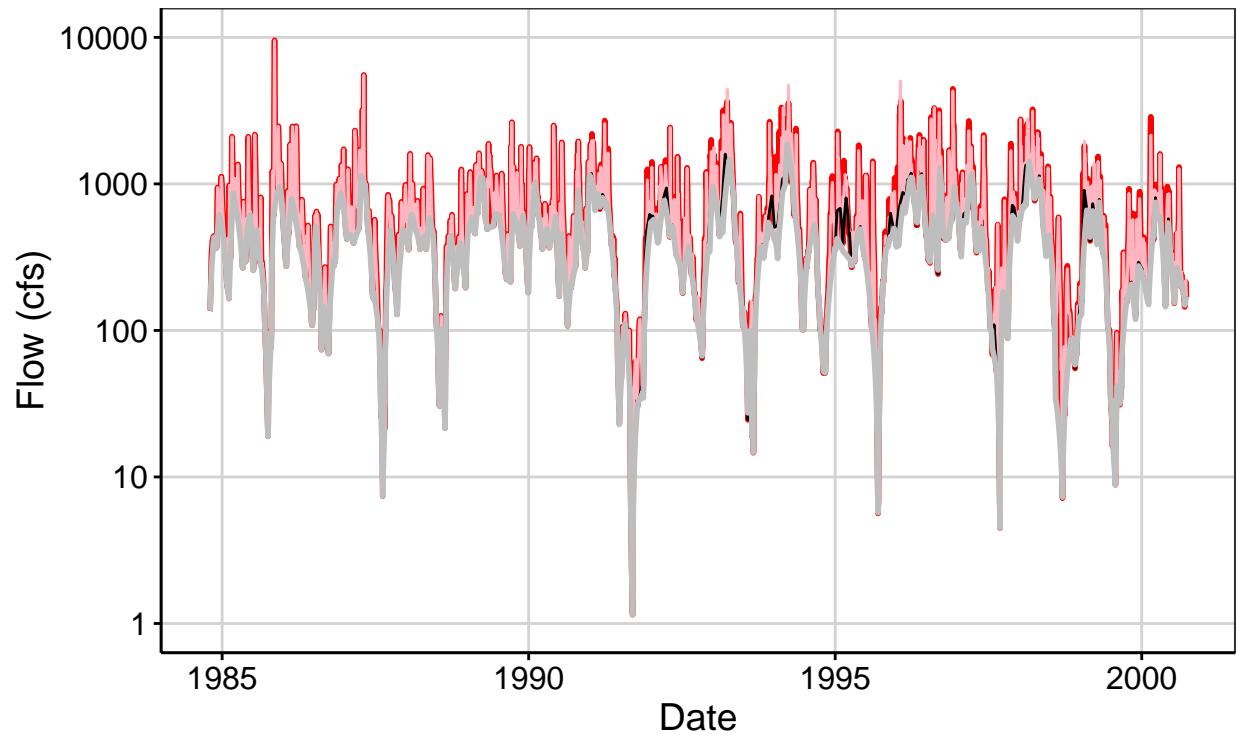


Fig. 6: Largest Difference Segment

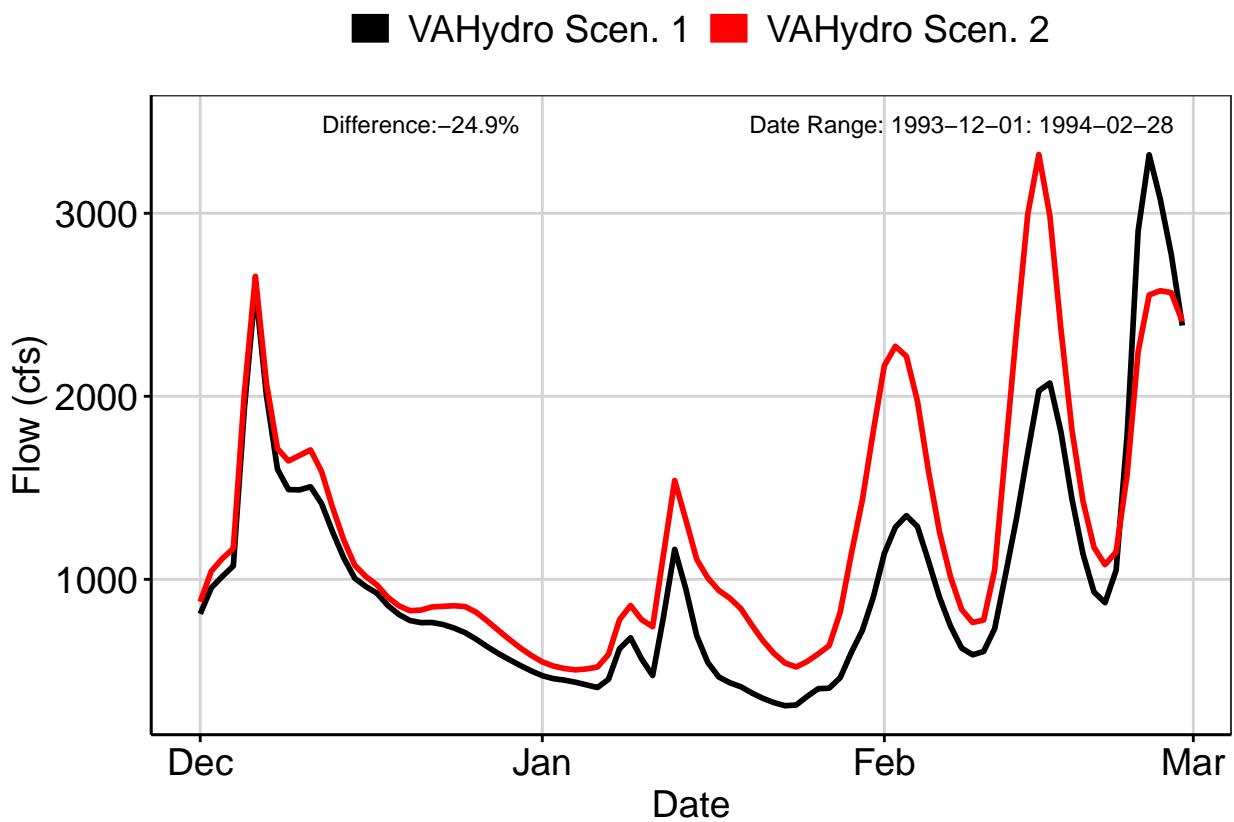


Fig. 7: Second Largest Difference Segment

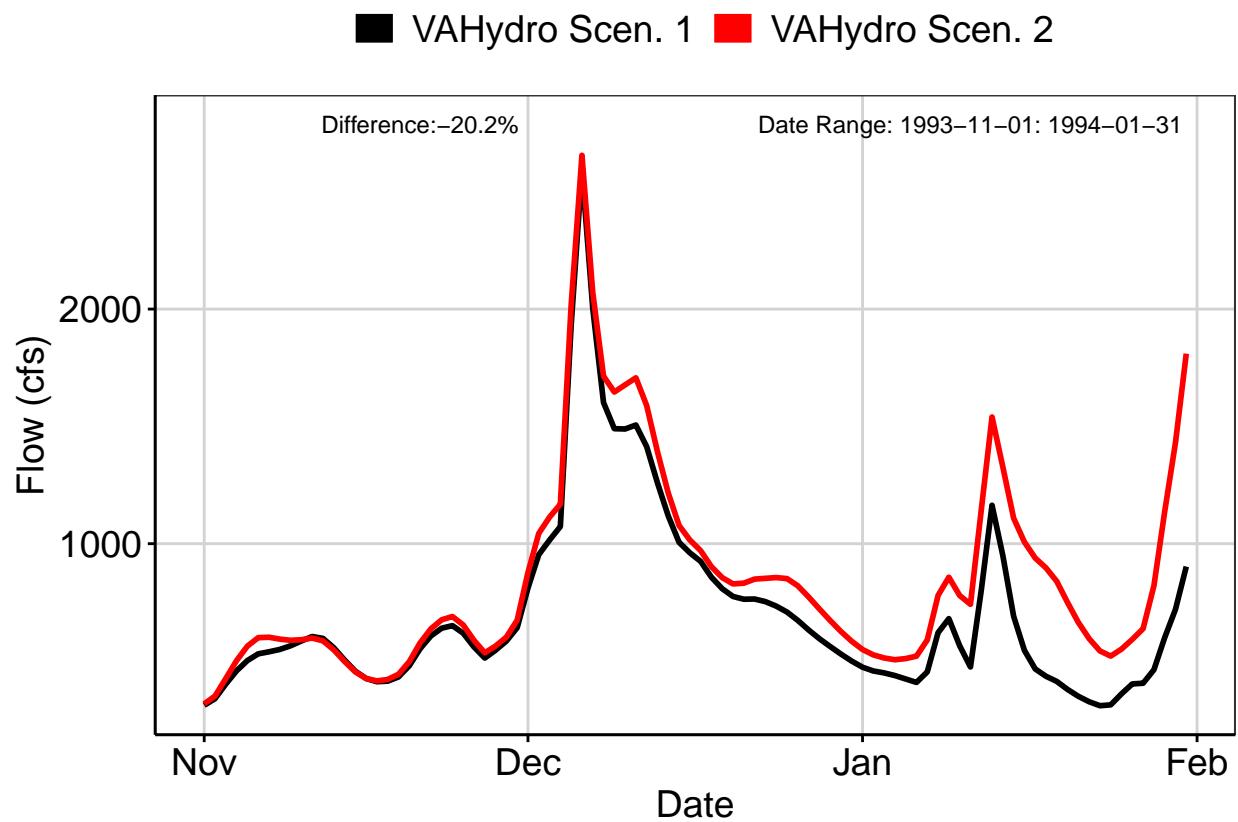


Fig. 8: Third Largest Difference Segment

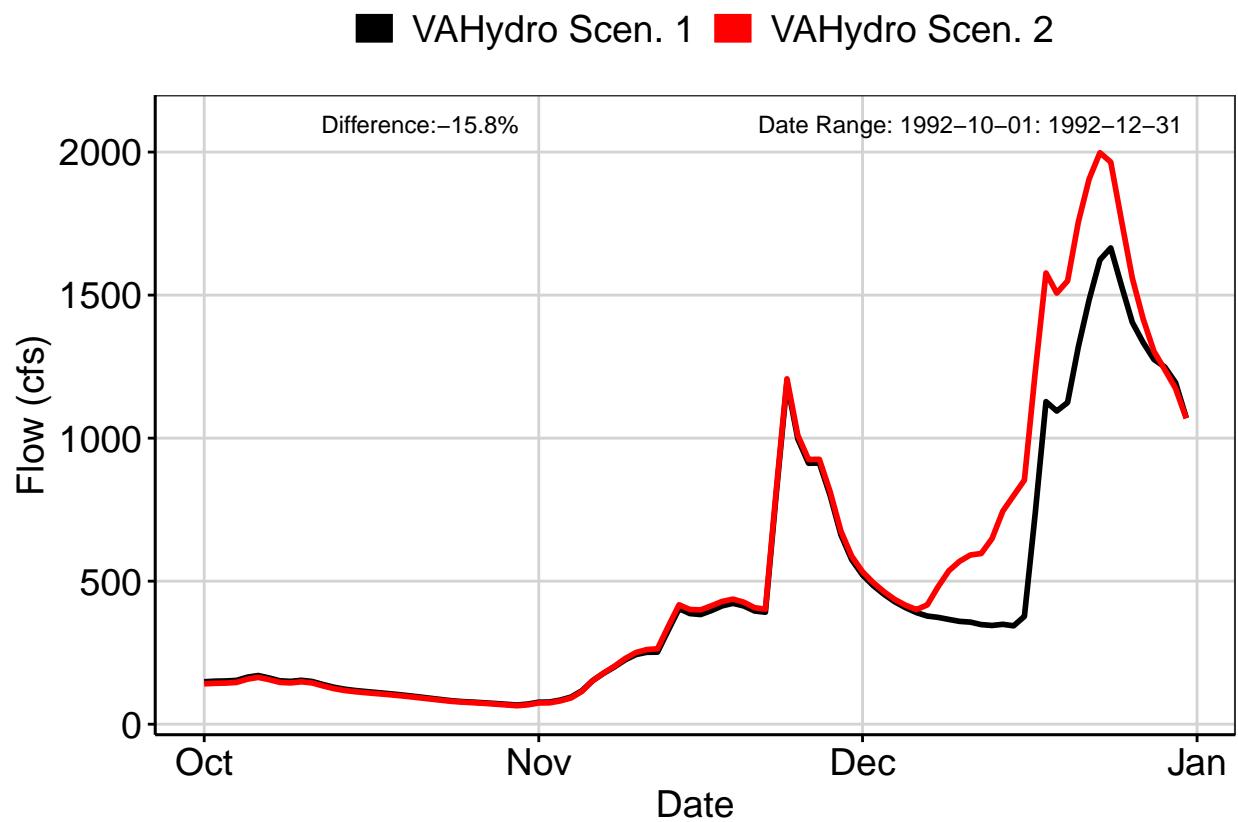


Fig. 9A: Residuals Plot

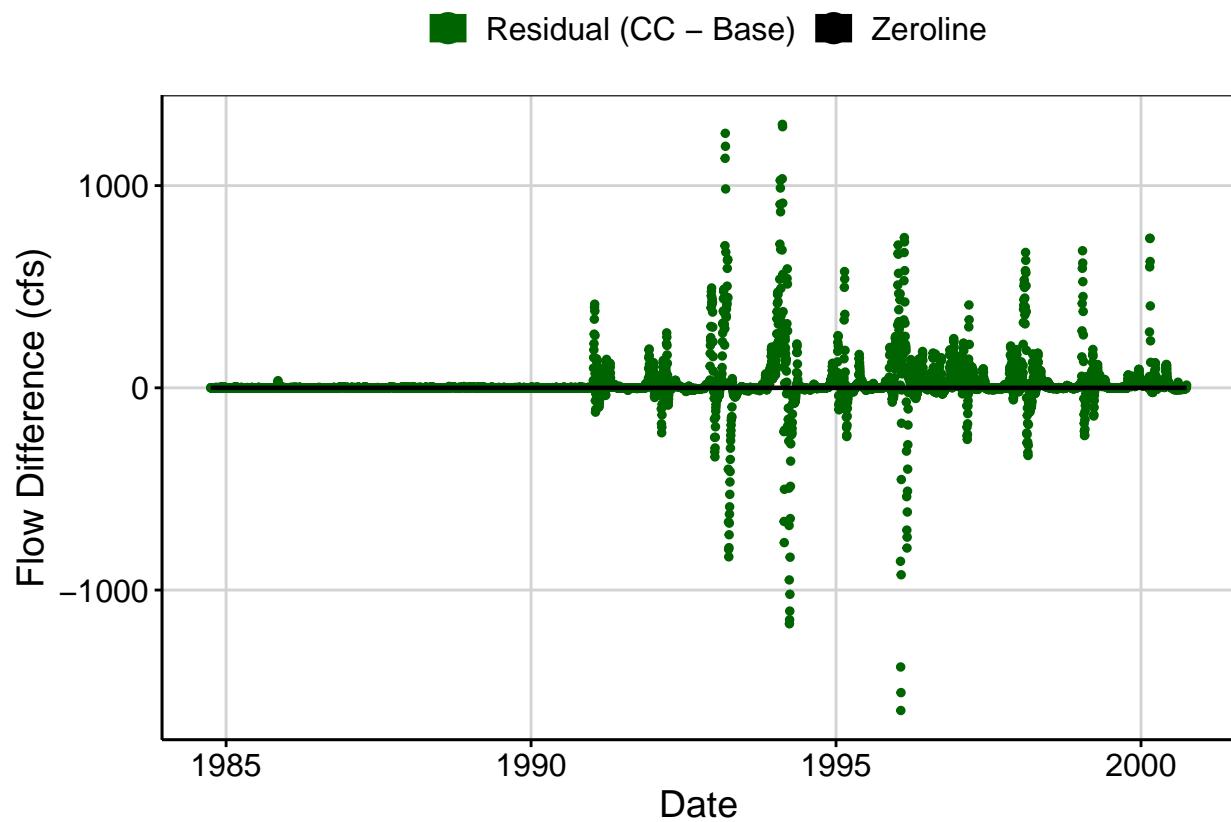


Fig. 9B: Area Weighted Residuals Plot

