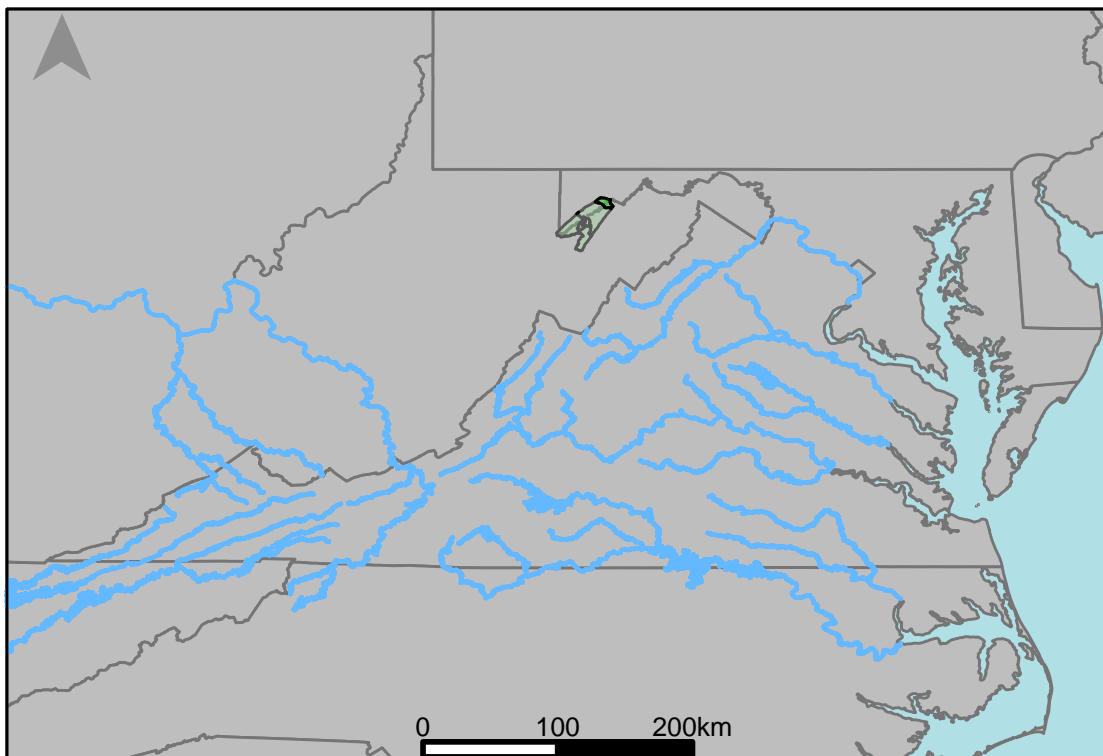


River Segment: PU3_4450_4440 - Scenario :
CFBASE30Y20180615 : VaHydro Run 120 (Original
Base) vs. VAHydro Run 122 (Fixed Base)



The average daily discharge change between scenario 1 and scenario 2 for the 20 year timespan was -21.8321%, with 45.1% 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	125	103	-17.6
Feb. Low Flow	294	241	-18.03
Mar. Low Flow	362	285	-21.27
Apr. Low Flow	361	255	-29.36
May Low Flow	423	310	-26.71
Jun. Low Flow	534	433	-18.91
Jul. Low Flow	458	352	-23.14
Aug. Low Flow	347	273	-21.33
Sep. Low Flow	210	163	-22.38
Oct. Low Flow	147	133	-9.52
Nov. Low Flow	77.8	75	-3.6
Dec. Low Flow	50.8	45.8	-9.84

Table 2: Monthly Average Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Overall Mean Flow	655	512	-21.8
Jan. Mean Flow	795	586	-26.3
Feb. Mean Flow	851	622	-26.9
Mar. Mean Flow	1130	855	-24.3
Apr. Mean Flow	946	719	-24
May Mean Flow	786	625	-20.5
Jun. Mean Flow	563	448	-20.4
Jul. Mean Flow	397	342	-13.8
Aug. Mean Flow	344	302	-12.2
Sep. Mean Flow	366	294	-19.7
Oct. Mean Flow	364	304	-16.5
Nov. Mean Flow	589	472	-19.9
Dec. Mean Flow	745	583	-21.7

Table 3: Monthly High Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Jan. High Flow	818	721	-11.86
Feb. High Flow	1010	766	-24.16
Mar. High Flow	1340	1010	-24.63
Apr. High Flow	1320	1050	-20.45
May High Flow	1440	1060	-26.39
Jun. High Flow	2080	1600	-23.08
Jul. High Flow	1410	1170	-17.02
Aug. High Flow	1460	1120	-23.29
Sep. High Flow	1000	790	-21
Oct. High Flow	642	597	-7.01
Nov. High Flow	639	545	-14.71
Dec. High Flow	378	340	-10.05

Table 4: Period Low Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Min. 1 Day Min	0.97	0.96	-0.72
Med. 1 Day Min	19.1	17.2	-9.95
Min. 3 Day Min	1.09	1.08	-0.92
Med. 3 Day Min	23	19.6	-14.78
Min. 7 Day Min	1.44	1.43	-0.69
Med. 7 Day Min	30.9	27.2	-11.97
Min. 30 Day Min	12.6	11.4	-9.52
Med. 30 Day Min	96.1	86.8	-9.68
Min. 90 Day Min	52.9	45.4	-14.18
Med. 90 Day Min	274	247	-9.85
7Q10	5.32	4.81	-9.59
Year of 90-Day Min. Flow	1999	1999	0
Drought Year Mean	357	282	-21.01
Mean Baseflow	400	317	-20.75

Table 5: Period High Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Max. 1 Day Max	9530	8830	-7.35
Med. 1 Day Max	2960	2000	-32.43
Max. 3 Day Max	9110	8240	-9.55
Med. 3 Day Max	2680	1910	-28.73
Max. 7 Day Max	6590	5860	-11.08
Med. 7 Day Max	2300	1690	-26.52
Max. 30 Day Max	2780	2390	-14.03
Med. 30 Day Max	1460	1070	-26.71
Max. 90 Day Max	1820	1440	-20.88
Med. 90 Day Max	1040	792	-23.85

Table 6: Non-Exceedance Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
1% Non-Exceedance	16.3	15.1	-7.36
5% Non-Exceedance	67.1	57.4	-14.46
50% Non-Exceedance	511	403	-21.14
95% Non-Exceedance	1790	1350	-24.58
99% Non-Exceedance	2620	2010	-23.28
Sept. 10% Non-Exceedance	23.4	21	-10.26

Fig. 1: Hydrograph

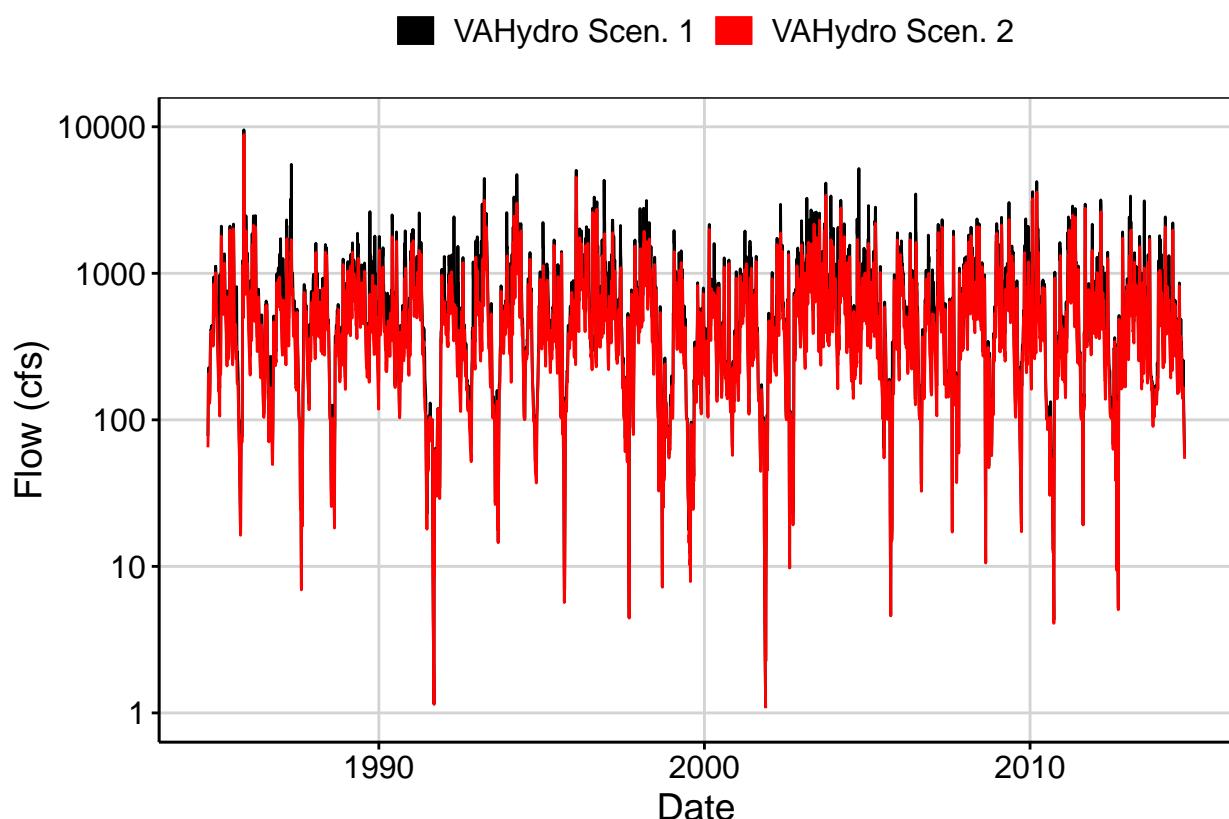


Fig. 2: Zoomed Hydrograph

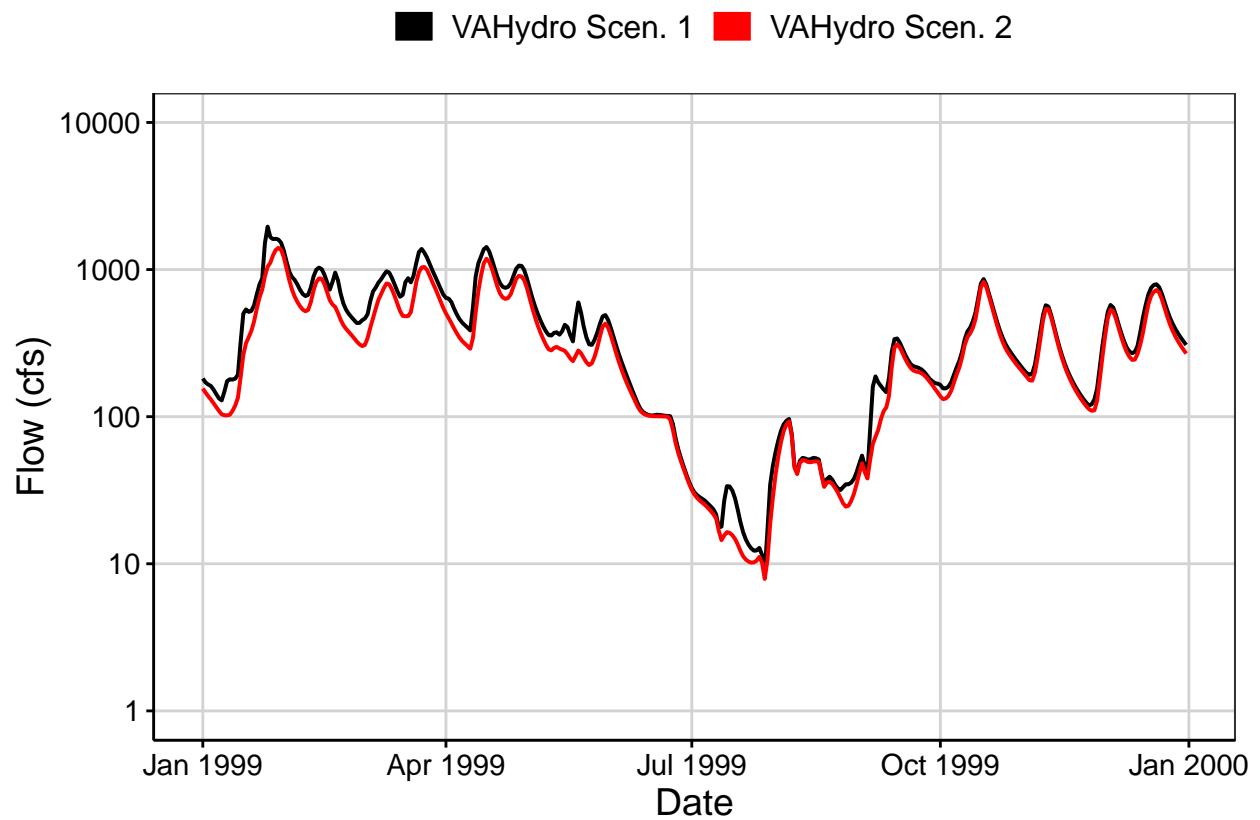


Fig. 3: Flow Exceedance

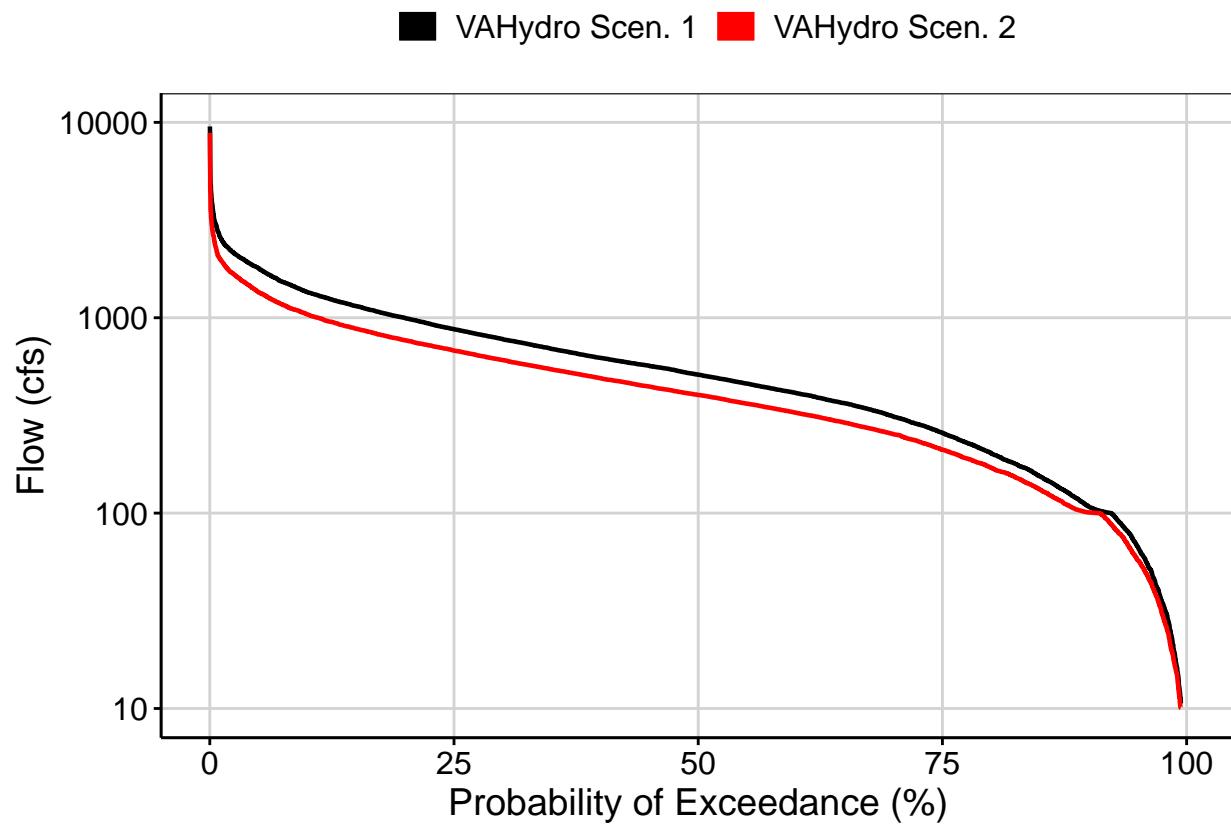


Fig. 4: Baseflow

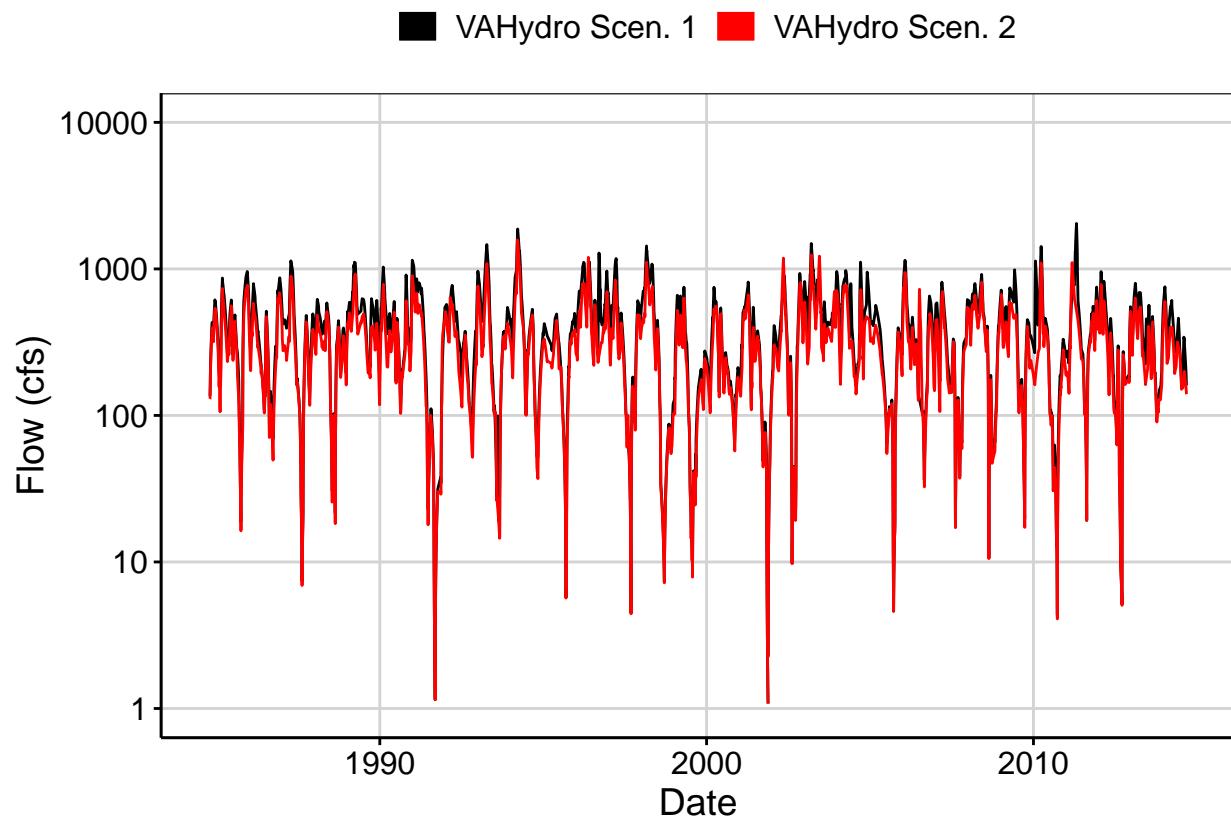


Fig. 5: Combined Baseflow

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

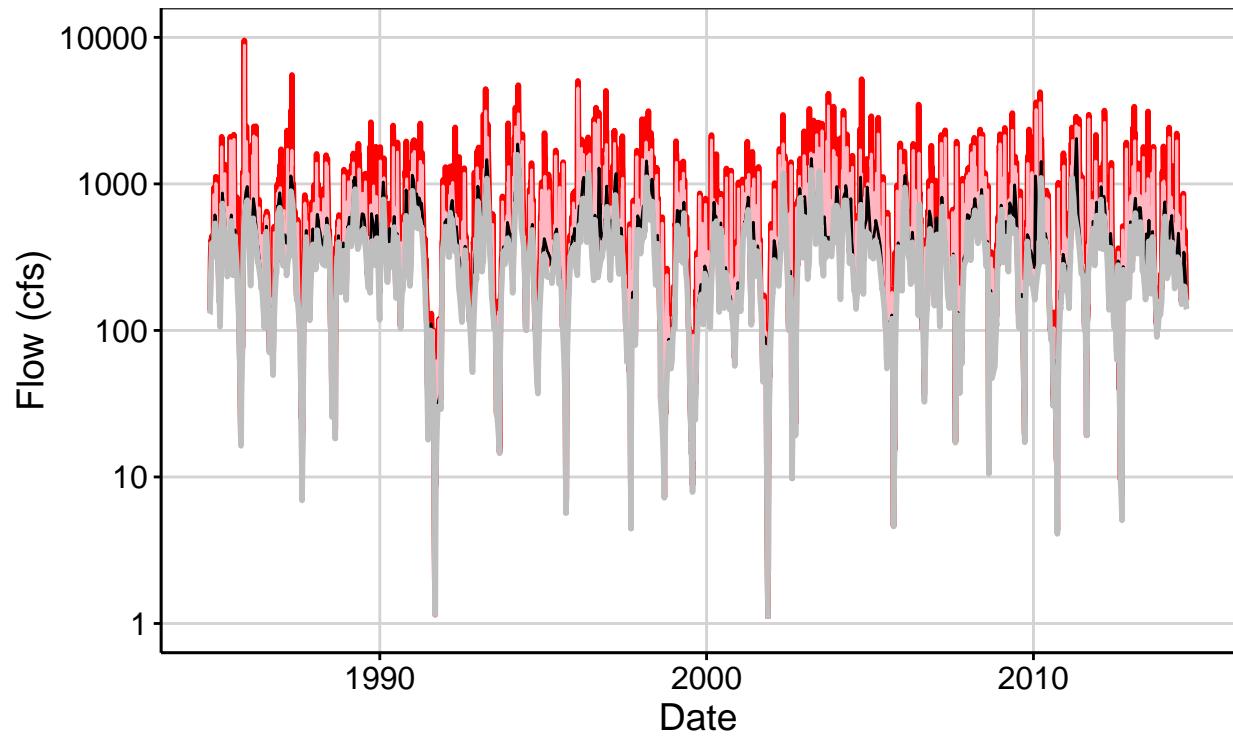


Fig. 6: Largest Difference Segment

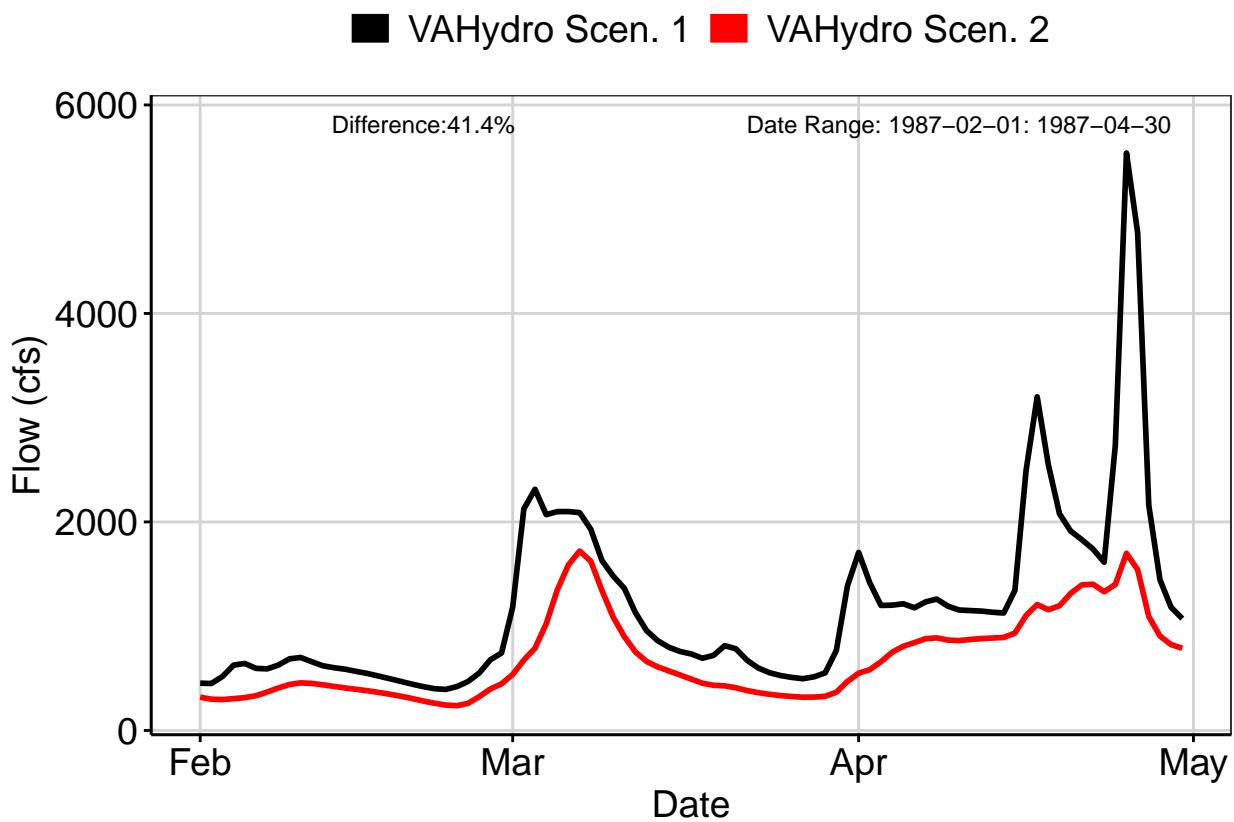


Fig. 7: Second Largest Difference Segment

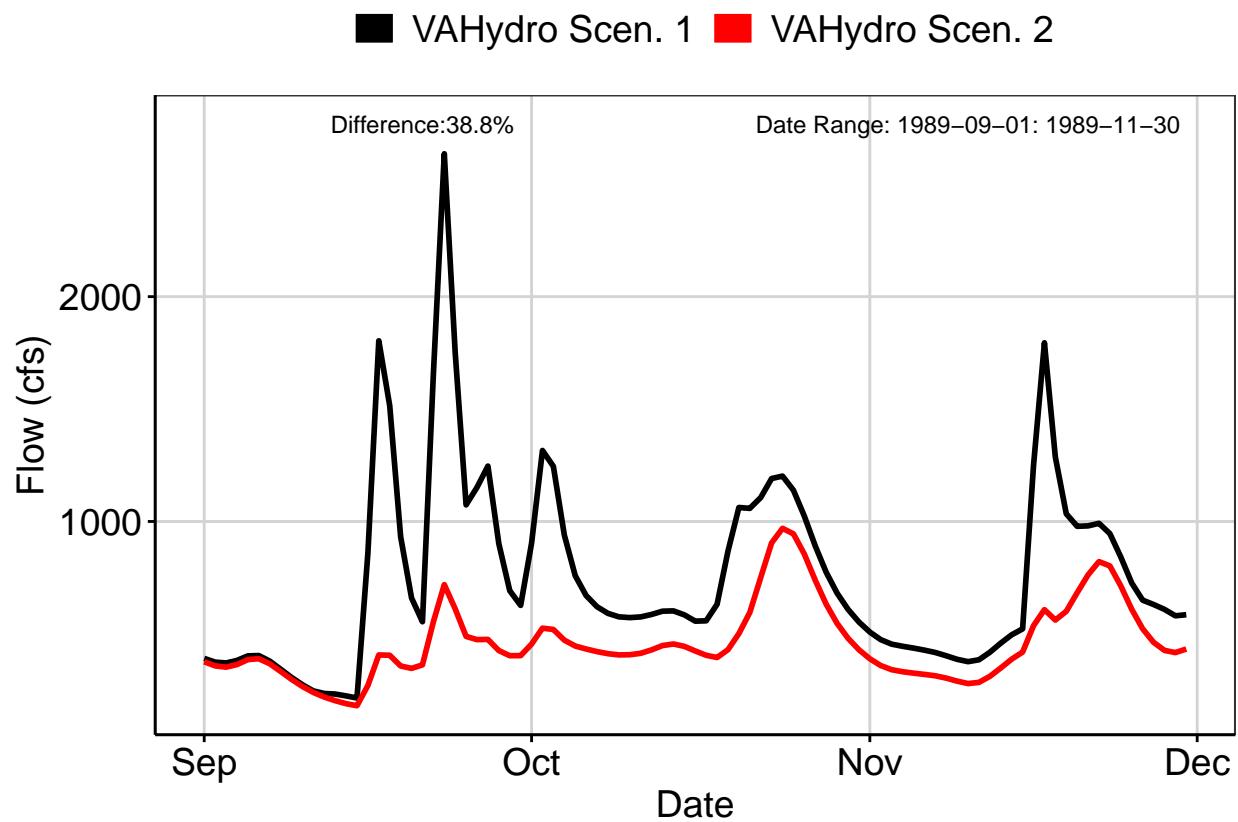


Fig. 8: Third Largest Difference Segment

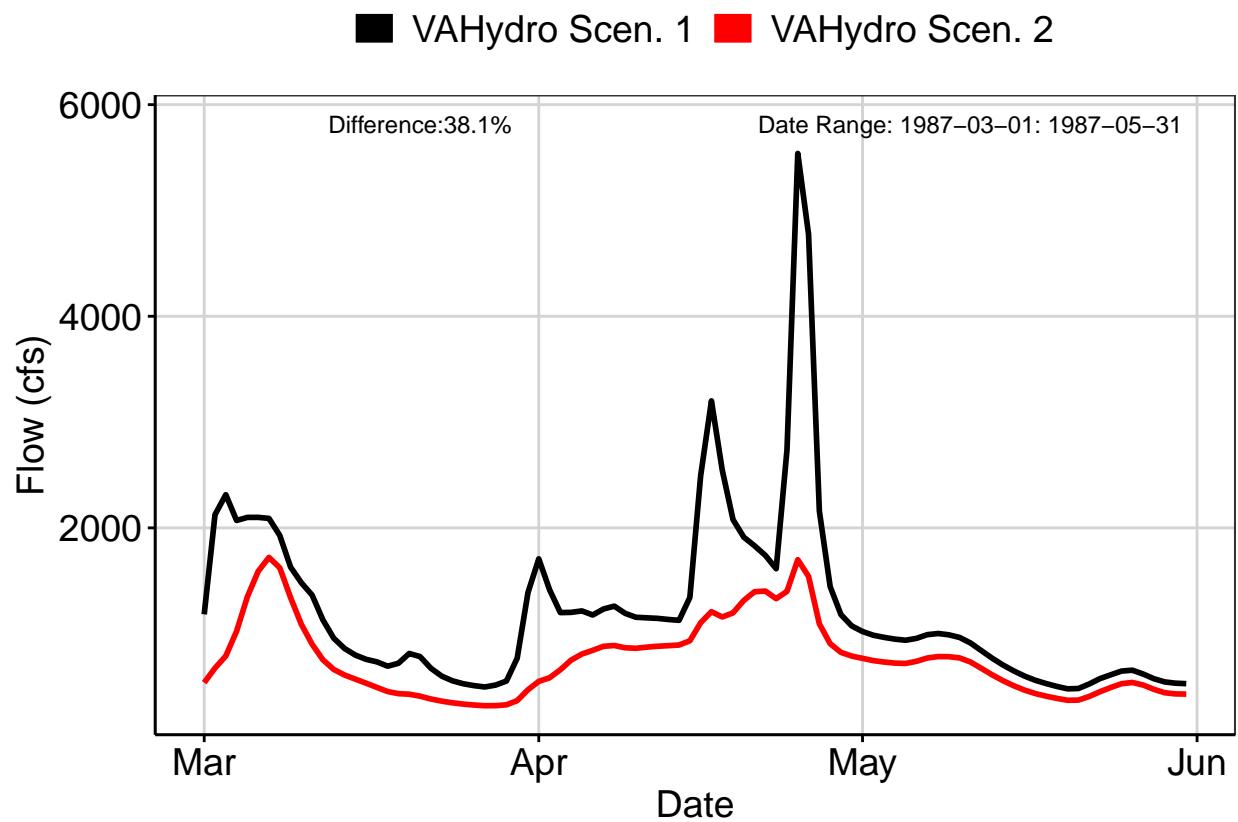


Fig. 9A: Residuals Plot

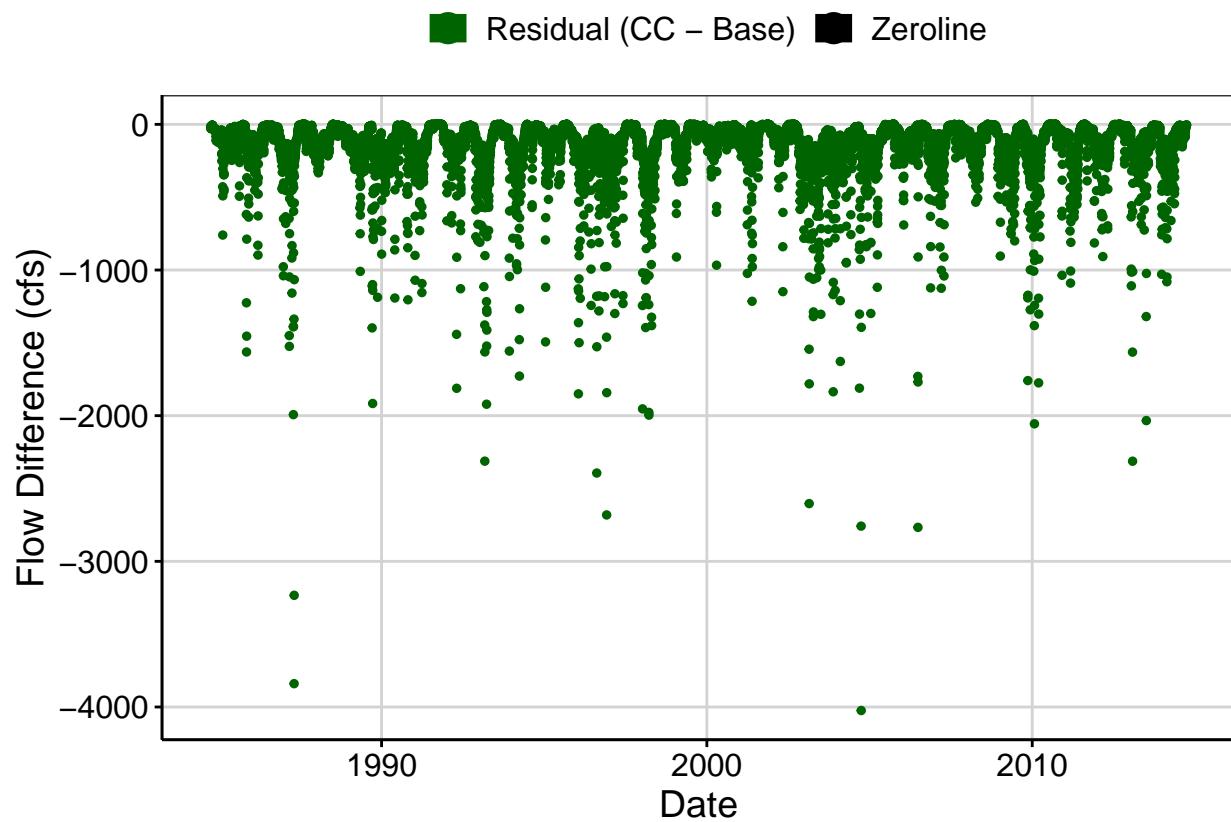


Fig. 9B: Area Weighted Residuals Plot

