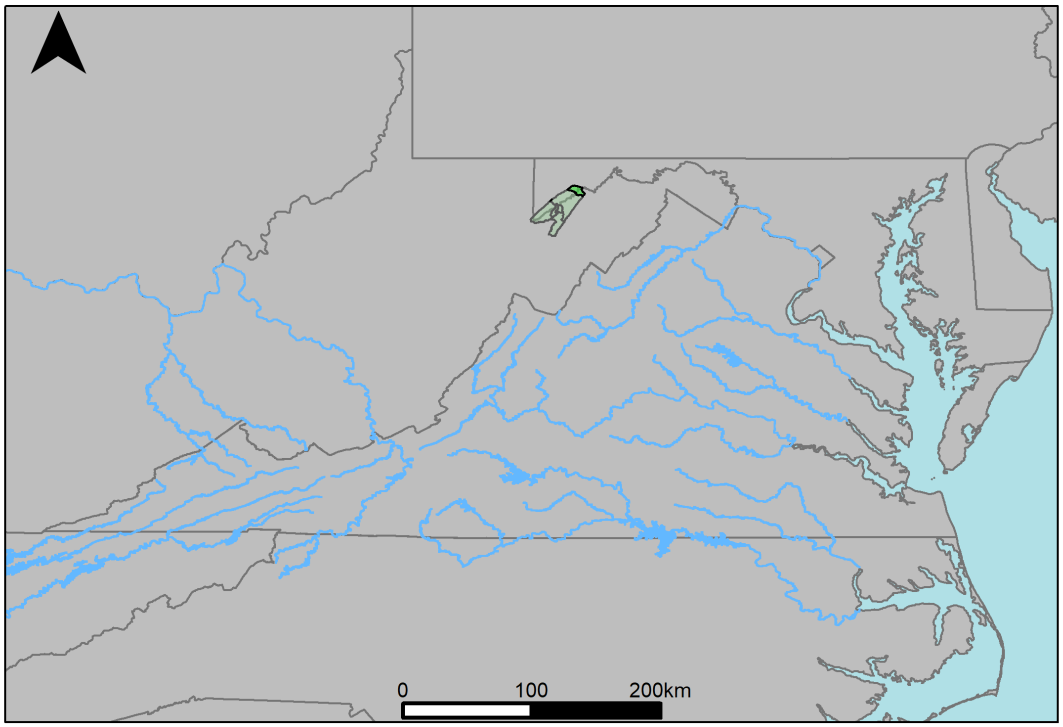
River Segment JU3_7400_7510: VA Hydro Run 120 vs. VA Hydro Run 121



The average daily discharge change between scenario 1 and scenario 2 for the 20 year timespan was 4.26442%, with 0.556% 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	84.5	85.8	1.62
Feb. Low Flow	132	133	0.73
Mar. Low Flow	247	251	1.38
Apr. Low Flow	291	347	19.2
May Low Flow	428	433	1.23
Jun. Low Flow	419	415	-1.03
Jul. Low Flow	304	311	2.47
Aug. Low Flow	232	234	1.01
Sep. Low Flow	97.4	99.3	1.93
Oct. Low Flow	35.1	34.8	-0.7
Nov. Low Flow	34.4	34.6	0.61
Dec. Low Flow	50.8	51.7	1.77

Table 2: Monthly Average Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Overall Mean Flow	450	469	4.26
Jan. Mean Flow	662	707	6.93
Feb. Mean Flow	695	739	6.27
Mar. Mean Flow	845	833	-1.43
Apr. Mean Flow	697	735	5.52
May Mean Flow	464	480	3.56
Jun. Mean Flow	361	375	4
Jul. Mean Flow	169	172	1.85
Aug. Mean Flow	178	188	5.41
Sep. Mean Flow	273	295	8.14
Oct. Mean Flow	254	260	2.29
Nov. Mean Flow	346	359	3.8
Dec. Mean Flow	471	503	6.76

Table 3: Monthly High Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Jan. High Flow	202	212	4.95
Feb. High Flow	471	485	2.9
Mar. High Flow	643	822	27.9
Apr. High Flow	1500	1580	5.51
May High Flow	1120	1240	11.2
Jun. High Flow	1500	1590	5.67
Jul. High Flow	1150	1170	2.04
Aug. High Flow	776	844	8.78
Sep. High Flow	380	386	1.67
Oct. High Flow	236	248	4.89
Nov. High Flow	221	224	1.29
Dec. High Flow	268	277	3.56

Table 4: Period Low Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Min. 1 Day Min	3.19	3.18	-0.41
Med. 1 Day Min	20.4	20.8	1.59
Min. 3 Day Min	3.29	3.28	-0.31
Med. 3 Day Min	21.7	22	1.61
Min. 7 Day Min	3.51	3.5	-0.1
Med. 7 Day Min	24.3	24.3	0.03
Min. 30 Day Min	5.33	5.45	2.16
Med. 30 Day Min	38	39.1	2.88
Min. 90 Day Min	44.9	46.8	4.21
Med. 90 Day Min	104	106	1.36
7Q10	7.85	8	1.81
Year of 90-Day Min. Flow	2000	2000	0
Drought Year Mean	243	260	7.07
Mean Baseflow	267	273	2.2

Table 5: Period High Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
Max. 1 Day Max	8500	8520	0.25
Med. 1 Day Max	3600	4090	13.5
Max. 3 Day Max	6690	6710	0.23
Med. 3 Day Max	3030	3470	14.3
Max. 7 Day Max	3910	3910	0.1
Med. 7 Day Max	2200	2410	9.55
Max. 30 Day Max	2350	2360	0.18
Med. 30 Day Max	1190	1240	3.62
Max. 90 Day Max	1580	1700	7.73
Med. 90 Day Max	820	849	3.53

Table 6: Non-Exceedance Flows

	VAHydro Scen. 1	VAHydro Scen. 2	Pct. Difference
1% Non-Exceedance	12.9	13.1	2.16
5% Non-Exceedance	31.5	32.3	2.34
50% Non-Exceedance	304	312	2.66
95% Non-Exceedance	1380	1440	5.01
99% Non-Exceedance	2820	3060	8.43
Sept. 10% Non-Exceedance	21.8	22	0.99

Fig. 1: Hydrograph

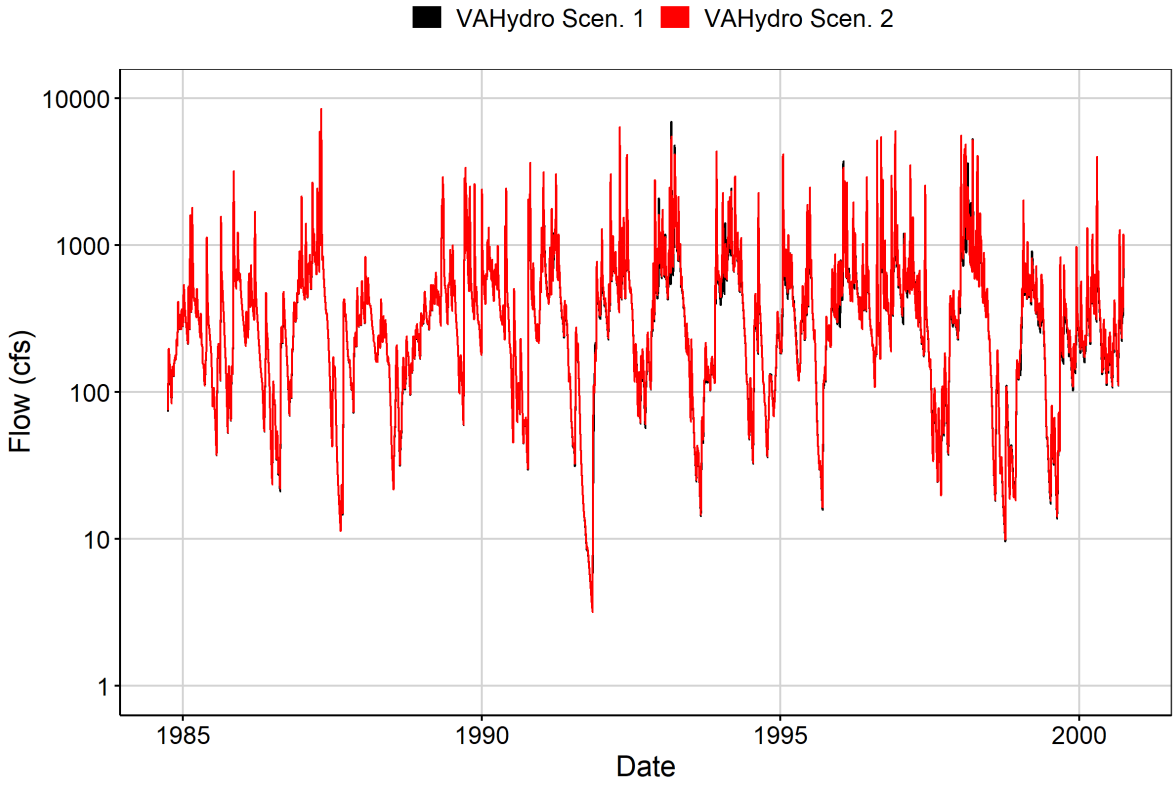


Fig. 2: Zoomed Hydrograph

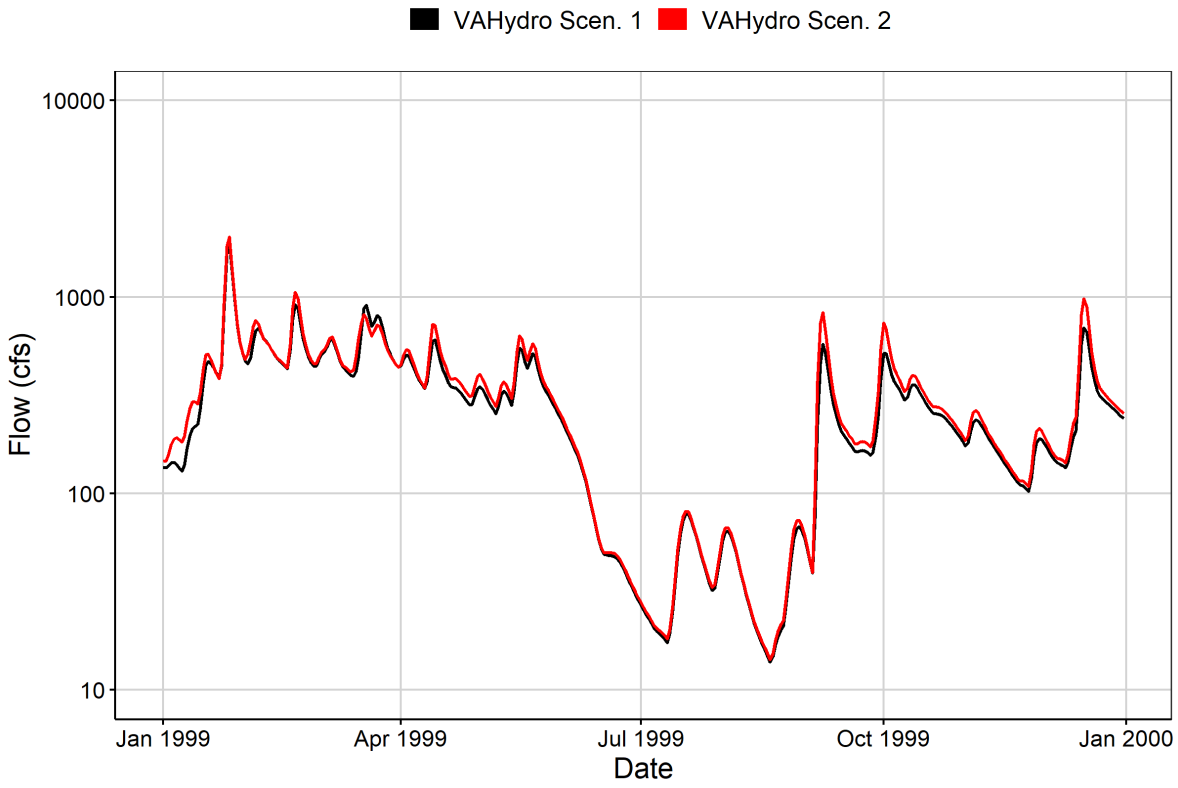


Fig. 3: Flow Exceedance

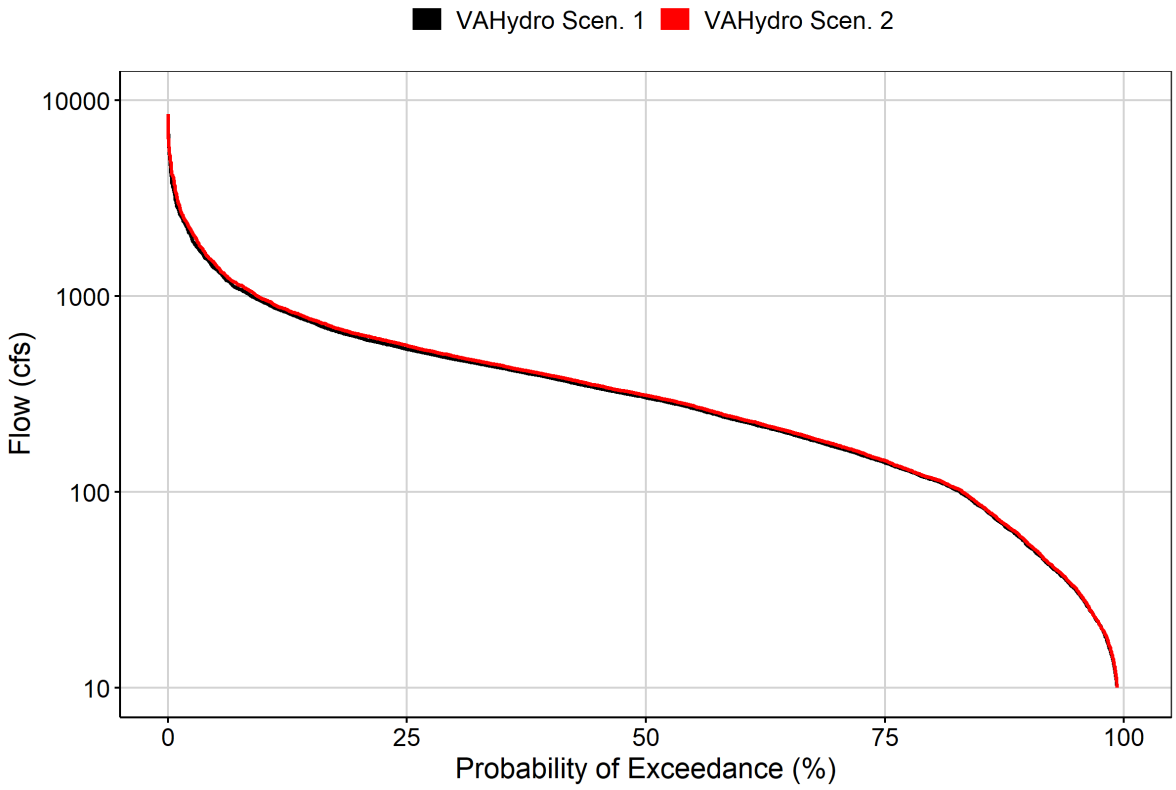


Fig. 4: Baseflow

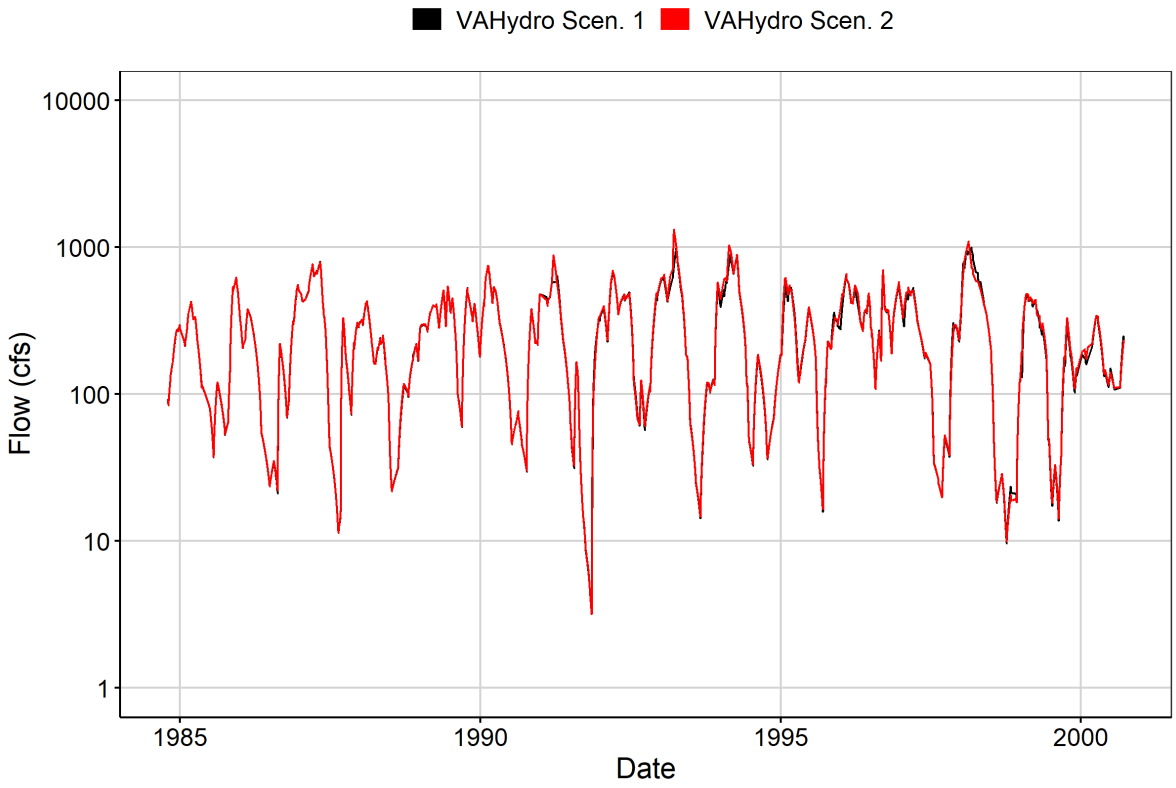


Fig. 5: Combined Baseflow

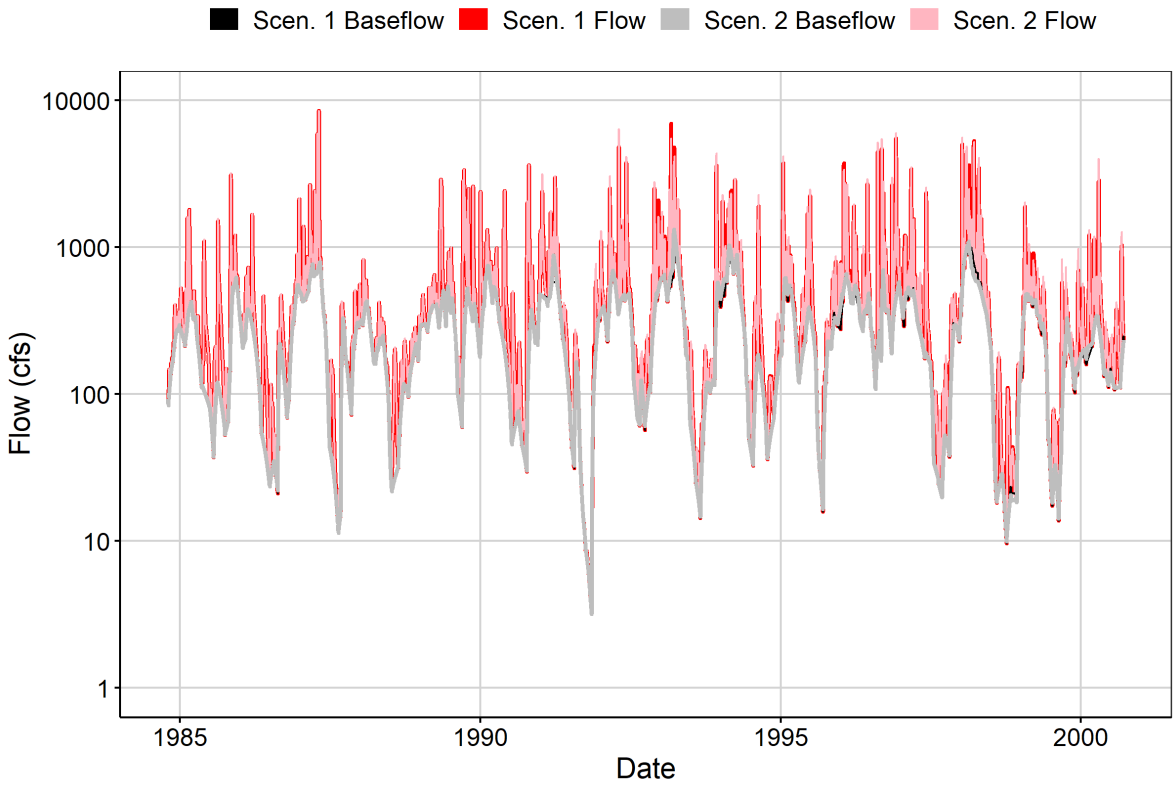


Fig. 6: Largest Difference Period

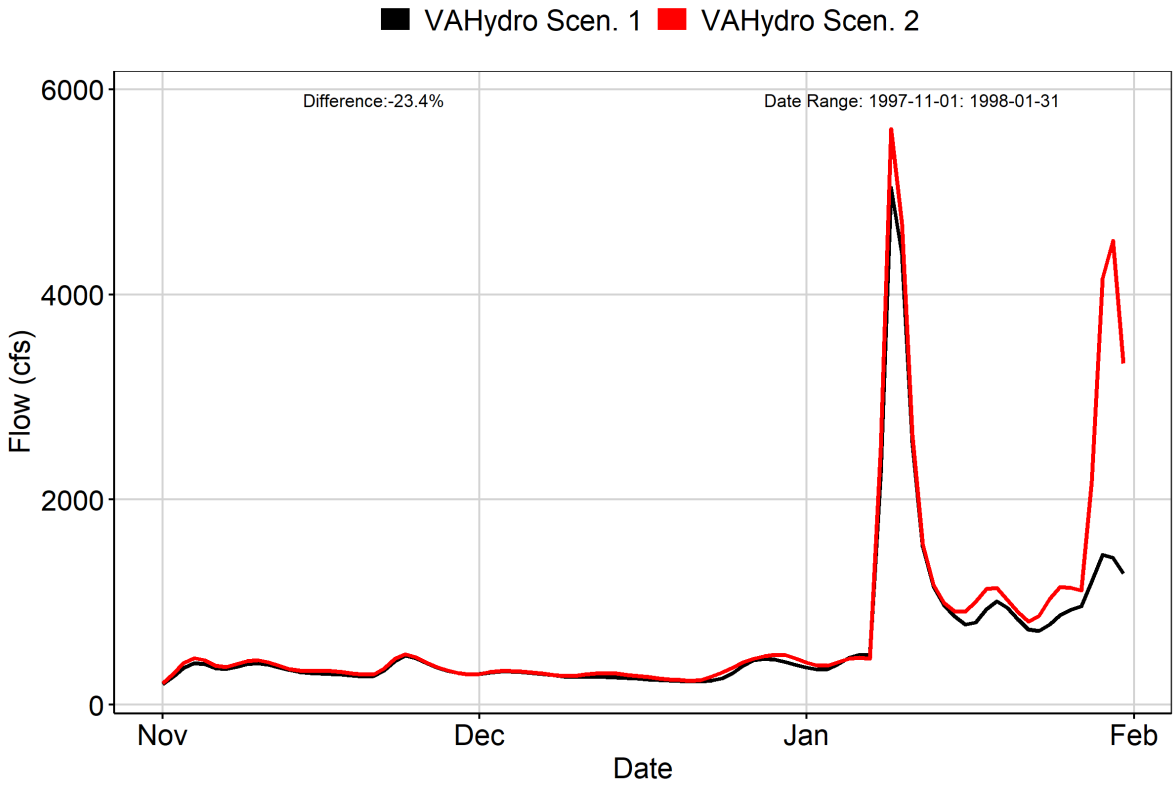


Fig. 7: Second Largest Difference Period

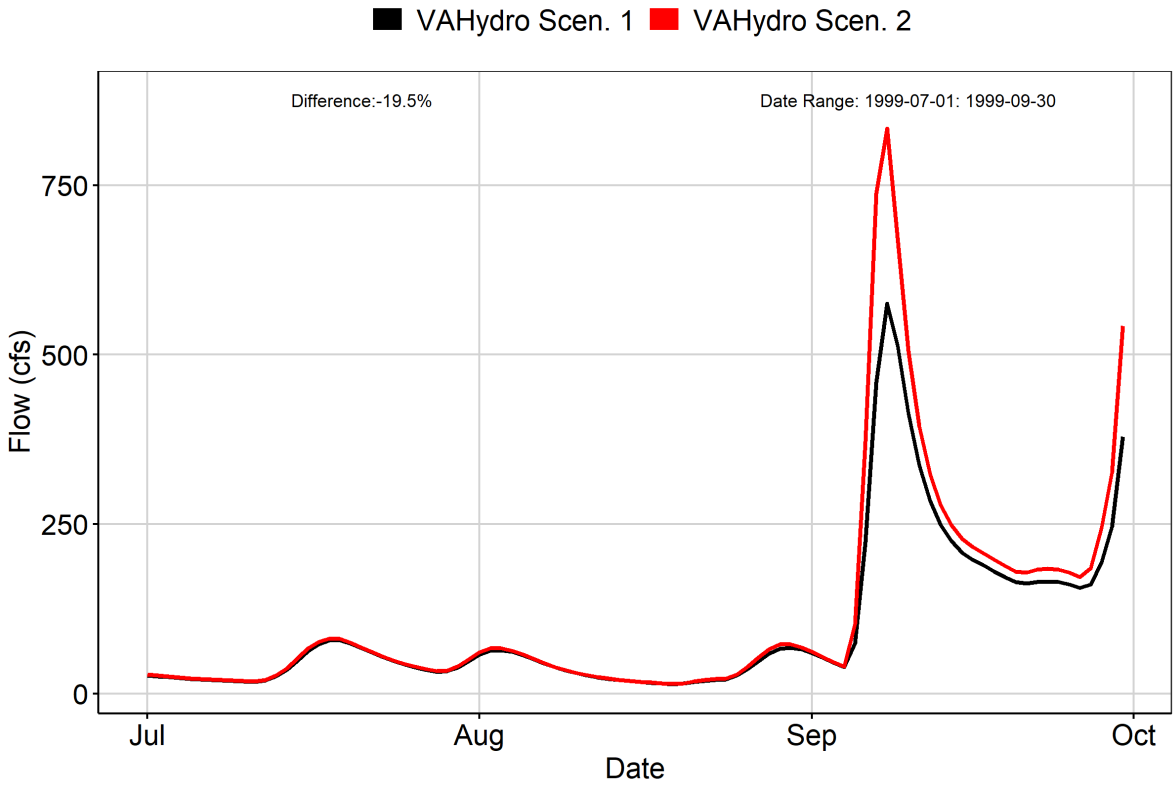


Fig. 8: Third Largest Difference Period

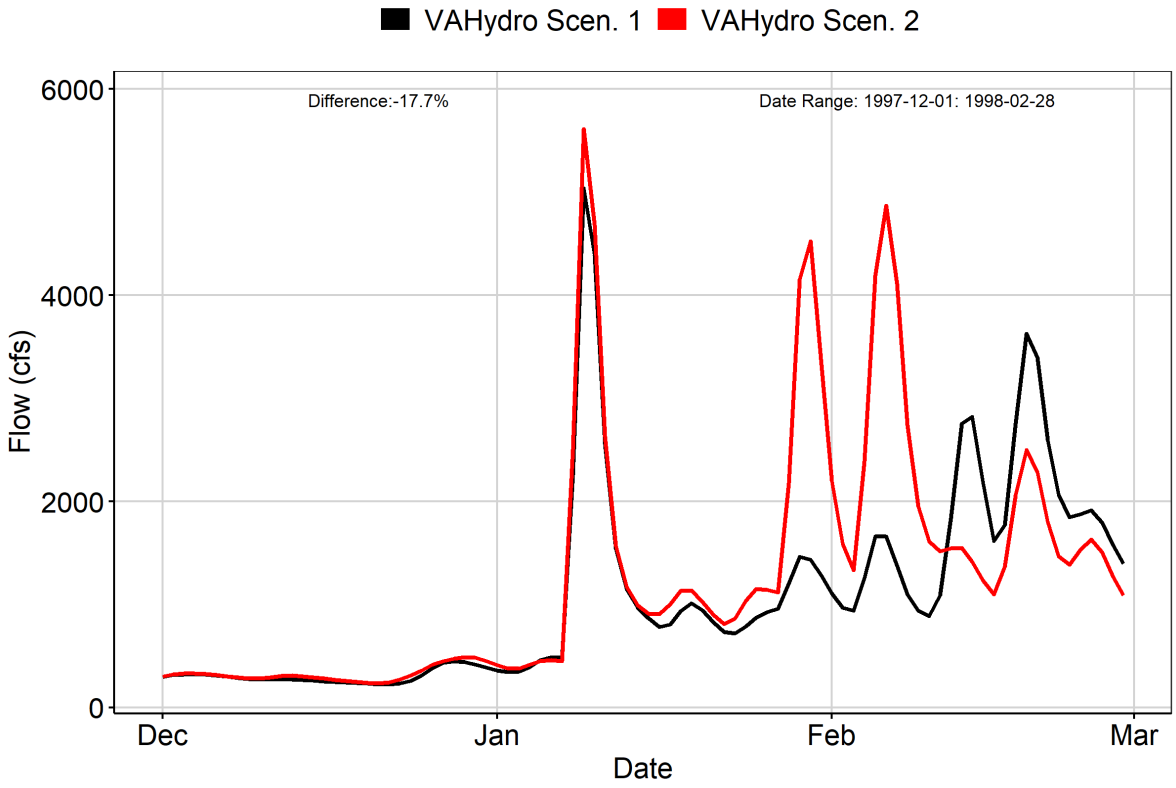


Fig. 9A: Residuals Plot

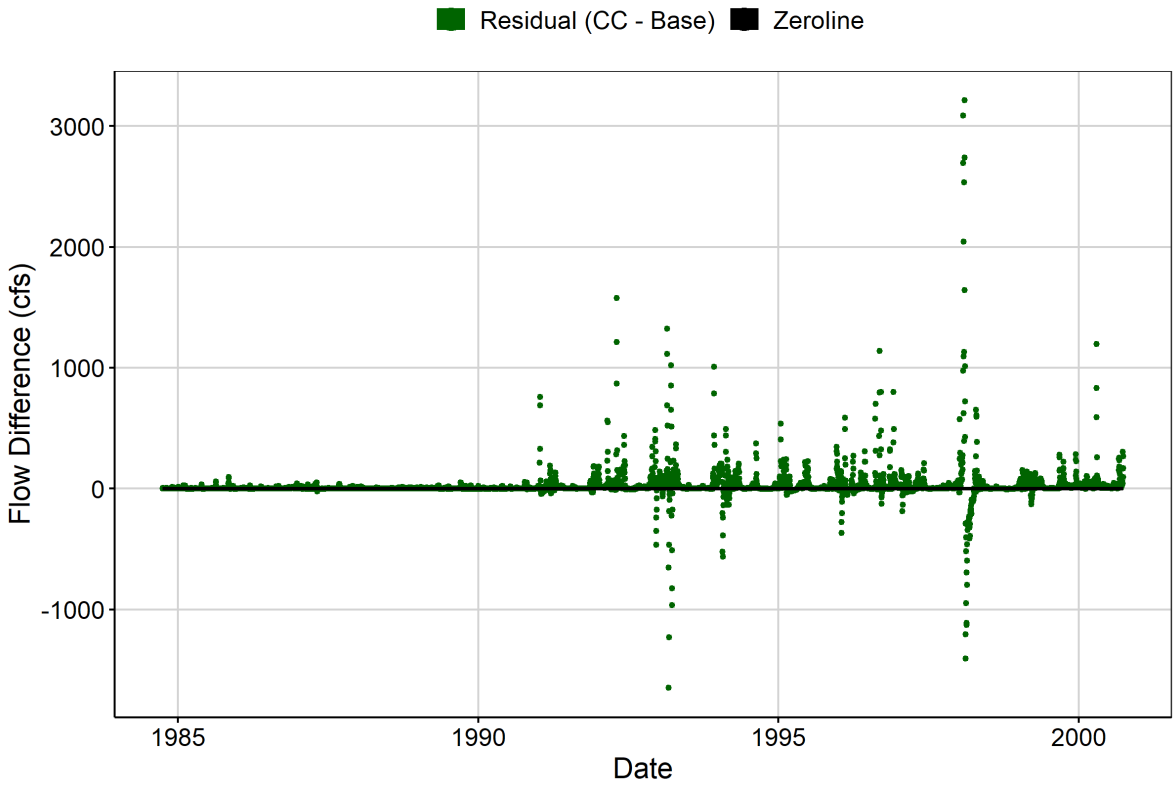


Fig. 9B: Area Weighted Residuals Plot

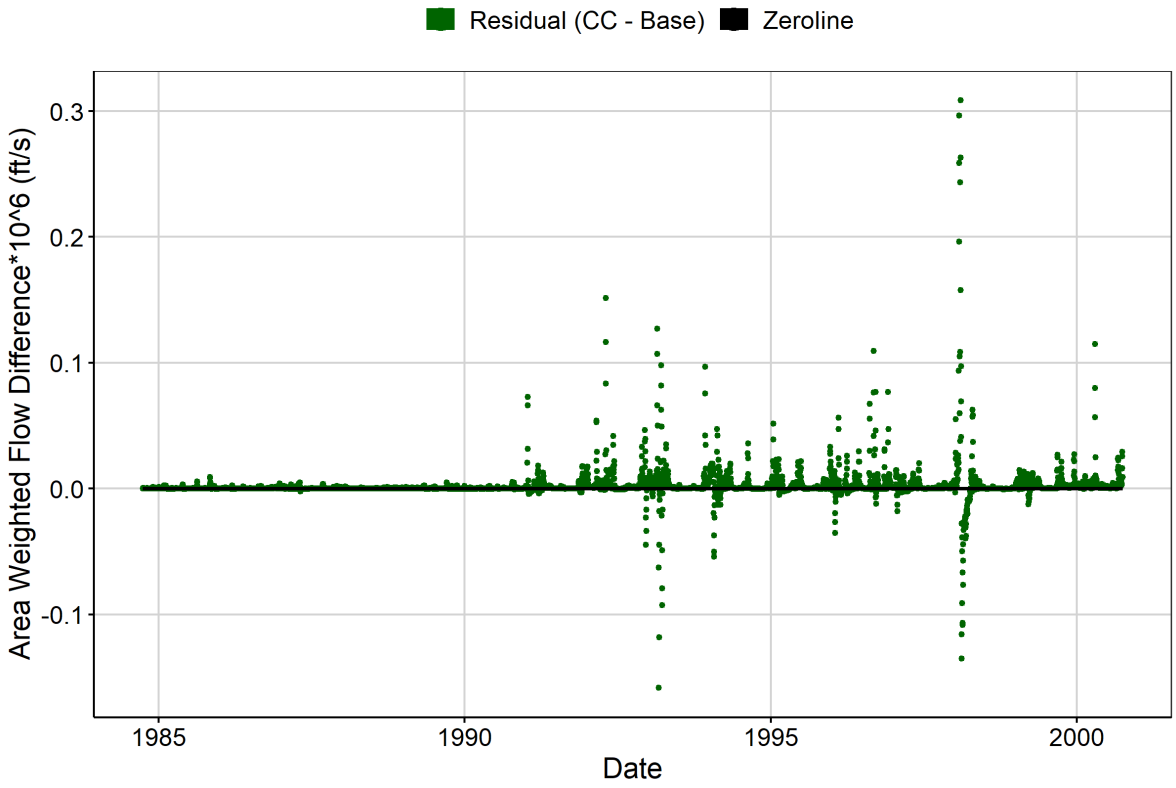


Fig. 10: VA Hydro Scen. 1 Runit Values (Outliers Excluded)

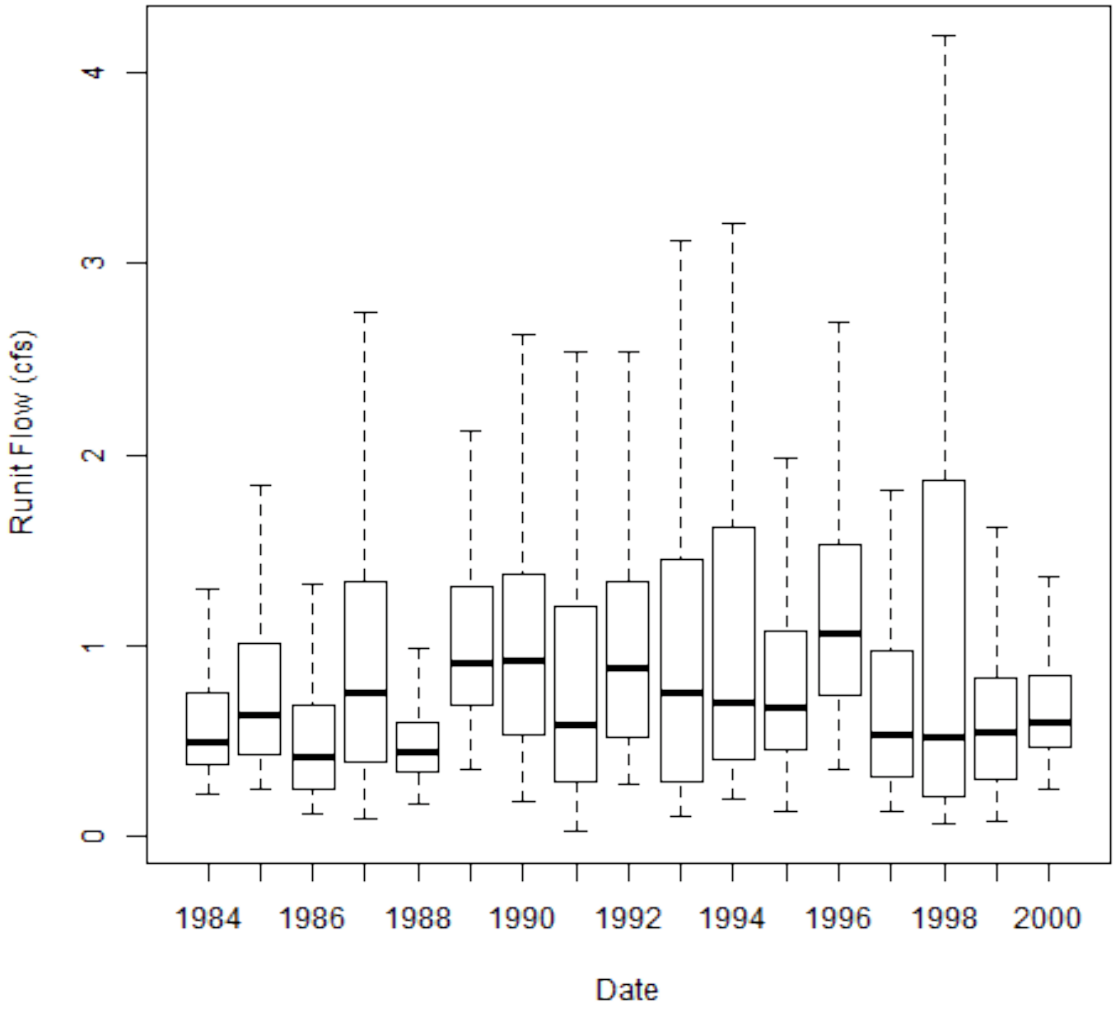


Fig. 11: Smallest Difference Period

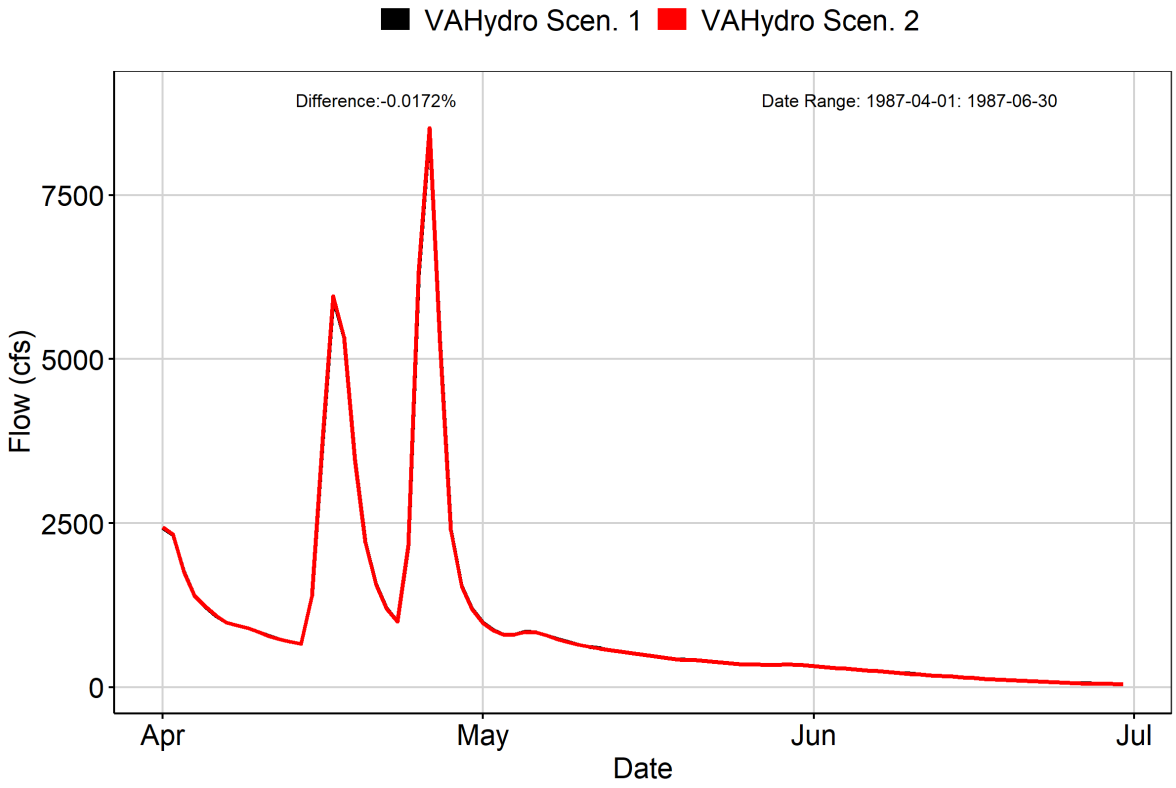


Fig. 12: Second Smallest Difference Period

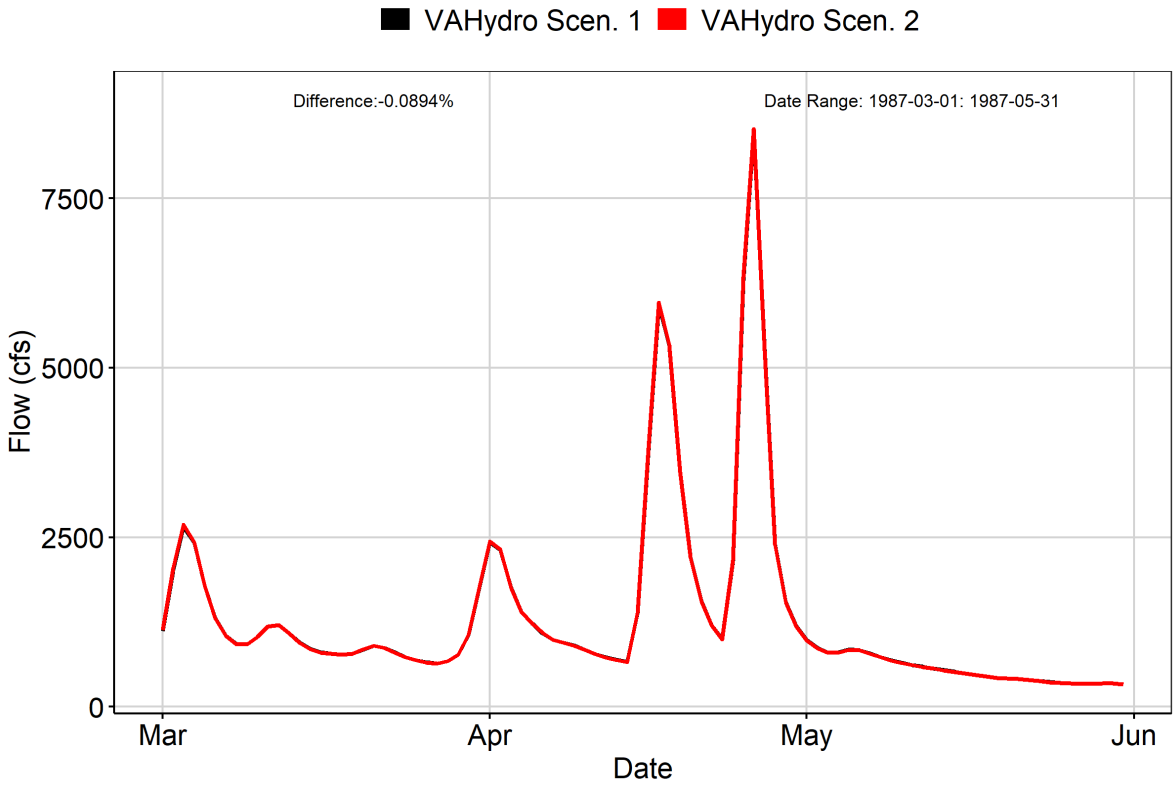


Fig. 13: Third Smallest Difference Period