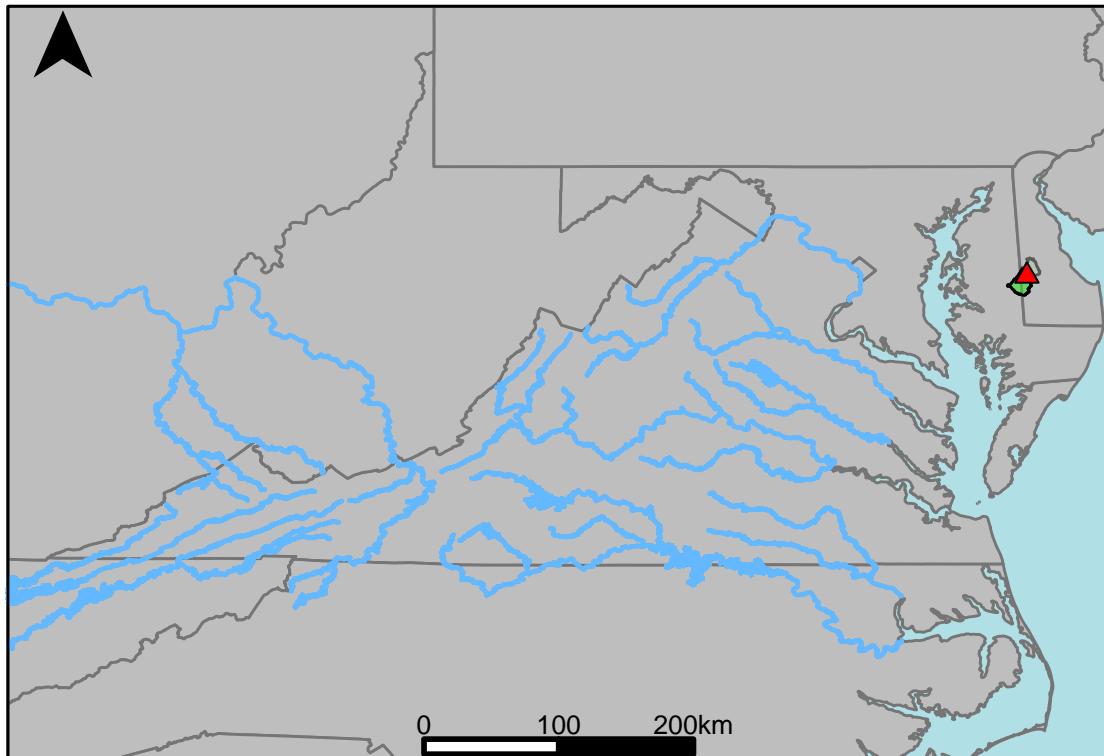


River Segment: EL2\_4590\_0001 - Scenario 1:  
CFBASE30Y20180615 vs. Scenario 2:  
CBAE1808L55CY55R45P50R45P50Y



This river segment follows part of the flow of Marshyhope Creek near Adamsville, DE. Gage 01488500 is located in Kent County, DE (Lat 38° 50' 58.9", Long 75° 40' 23.2") approximately 5.5 miles northwest of Snow Hill. Drainage area is 46.8 sq. miles. This gage started taking data in 1943 and has been taking data periodically until now. There is occasional regulation at low and medium flows for irrigation upstream from station and a U.S. Geological Survey satellite data-collection platform at station. The average daily discharge change between scenario 1 and scenario 2 for the 20 year timespan was 5.95238%, with 0% of its rolling three month time spans above 20% difference.

**Table 1: Monthly Low Flows**

	Base 2018	Climate Change	Pct. Difference
Jan. Low Flow	38.8	39.2	1.03
Feb. Low Flow	50.6	52.6	3.95
Mar. Low Flow	80	81.6	2
Apr. Low Flow	102	106	3.92
May Low Flow	130	140	7.69
Jun. Low Flow	112	112	0
Jul. Low Flow	110	112	1.82
Aug. Low Flow	87.2	88.8	1.83
Sep. Low Flow	48.8	49.2	0.82
Oct. Low Flow	26	26.4	1.54
Nov. Low Flow	41	42	2.44
Dec. Low Flow	31.7	33.8	6.62

**Table 2: Monthly Average Flows**

	Base 2018	Climate Change	Pct. Difference
Overall Mean Flow	168	178	5.95
Jan. Mean Flow	244	263	7.79
Feb. Mean Flow	250	265	6
Mar. Mean Flow	310	316	1.94
Apr. Mean Flow	219	226	3.2
May Mean Flow	183	195	6.56
Jun. Mean Flow	106	109	2.83
Jul. Mean Flow	83.2	87.2	4.81
Aug. Mean Flow	96.3	106	10.07
Sep. Mean Flow	113	118	4.42
Oct. Mean Flow	108	115	6.48
Nov. Mean Flow	125	135	8
Dec. Mean Flow	185	205	10.81

**Table 3: Monthly High Flows**

	Base 2018	Climate Change	Pct. Difference
Jan. High Flow	184	216	17.39
Feb. High Flow	245	290	18.37
Mar. High Flow	316	365	15.51
Apr. High Flow	706	749	6.09
May High Flow	456	484	6.14
Jun. High Flow	696	731	5.03
Jul. High Flow	459	508	10.68
Aug. High Flow	376	459	22.07
Sep. High Flow	144	149	3.47
Oct. High Flow	91.2	104	14.04
Nov. High Flow	201	247	22.89
Dec. High Flow	218	246	12.84

**Table 4: Period Low Flows**

	Base 2018	Climate Change	Pct. Difference
Min. 1 Day Min	6.73	6.97	3.57
Med. 1 Day Min	21.8	22.3	2.29
Min. 3 Day Min	7.24	7.5	3.59
Med. 3 Day Min	23.2	23.8	2.59
Min. 7 Day Min	8.09	8.5	5.07
Med. 7 Day Min	26.1	26.8	2.68
Min. 30 Day Min	11.7	12	2.56
Med. 30 Day Min	37.6	40	6.38
Min. 90 Day Min	26.9	28.2	4.83
Med. 90 Day Min	62.8	66.6	6.05
7Q10	9.87	10.3	4.36
Year of 90-Day Min. Flow	1987	1987	0
Drought Year Mean	151	154	1.99
Mean Baseflow	98.7	100	1.32

**Table 5: Period High Flows**

	Base 2018	Climate Change	Pct. Difference
Max. 1 Day Max	3150	3330	5.71
Med. 1 Day Max	1560	1820	16.67
Max. 3 Day Max	2340	2510	7.26
Med. 3 Day Max	1110	1180	6.31
Max. 7 Day Max	1230	1350	9.76
Med. 7 Day Max	719	763	6.12
Max. 30 Day Max	742	799	7.68
Med. 30 Day Max	436	452	3.67
Max. 90 Day Max	545	576	5.69
Med. 90 Day Max	303	318	4.95

**Table 6: Non-Exceedance Flows**

	Base 2018	Climate Change	Pct. Difference
1% Non-Exceedance	12.8	13.6	6.25
5% Non-Exceedance	26.4	27.2	3.03
50% Non-Exceedance	120	124	3.33
95% Non-Exceedance	462	488	5.63
99% Non-Exceedance	973	1050	7.91
Sept. 10% Non-Exceedance	22.7	24.2	6.61

**Fig. 1: Hydrograph**

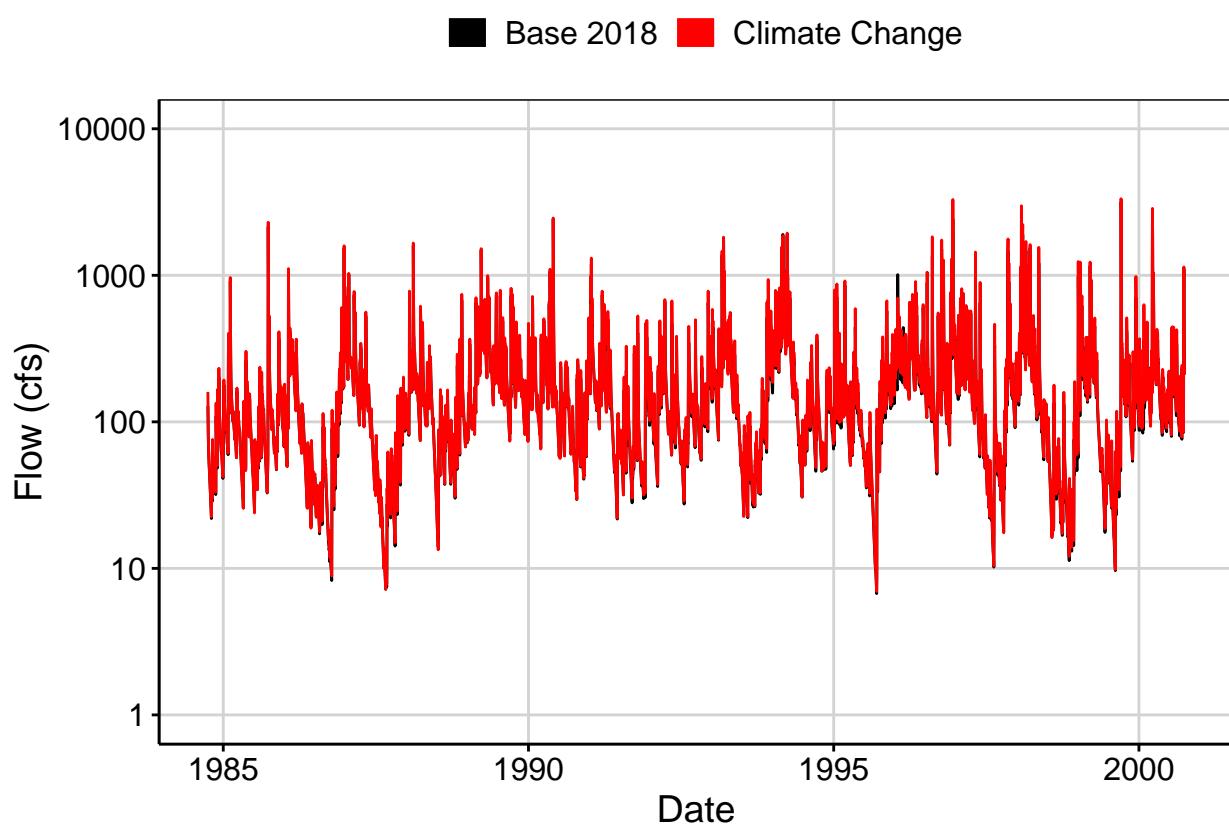


Fig. 2: Zoomed Hydrograph

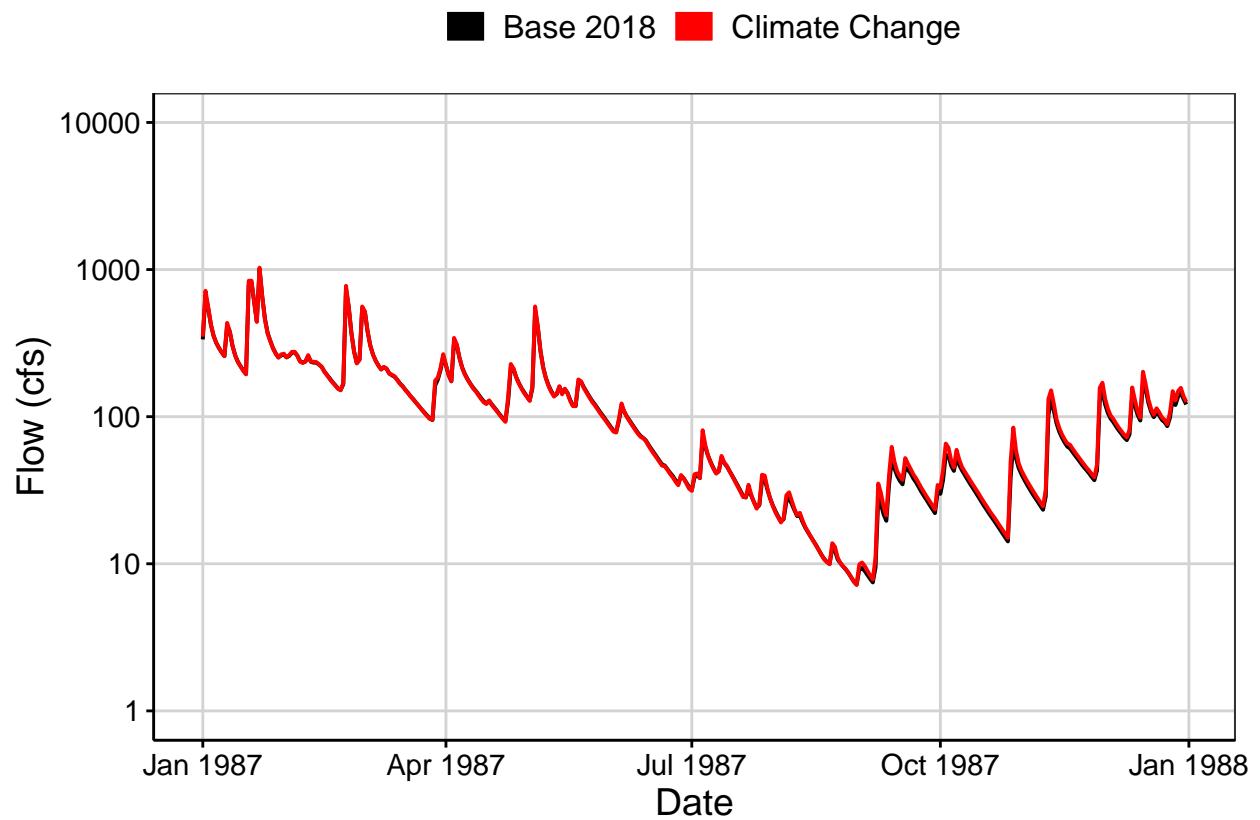


Fig. 3: Flow Exceedance

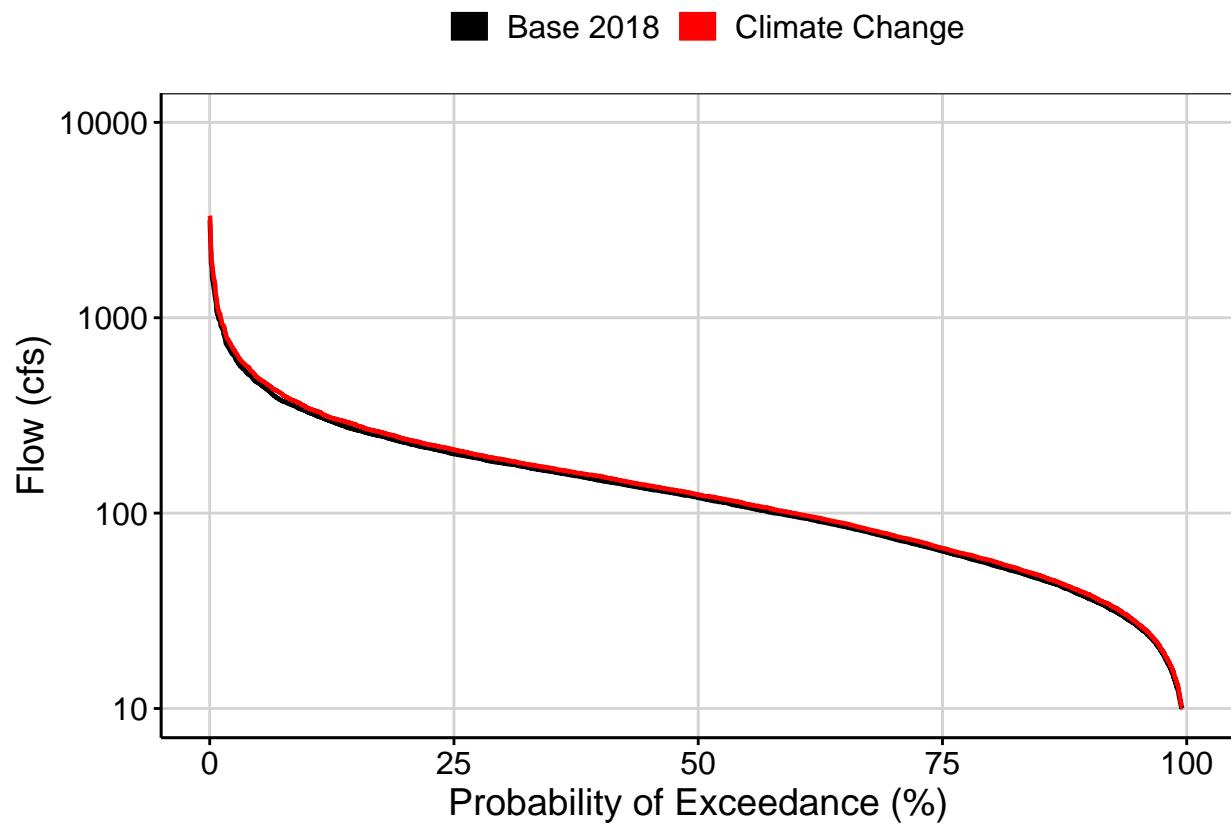
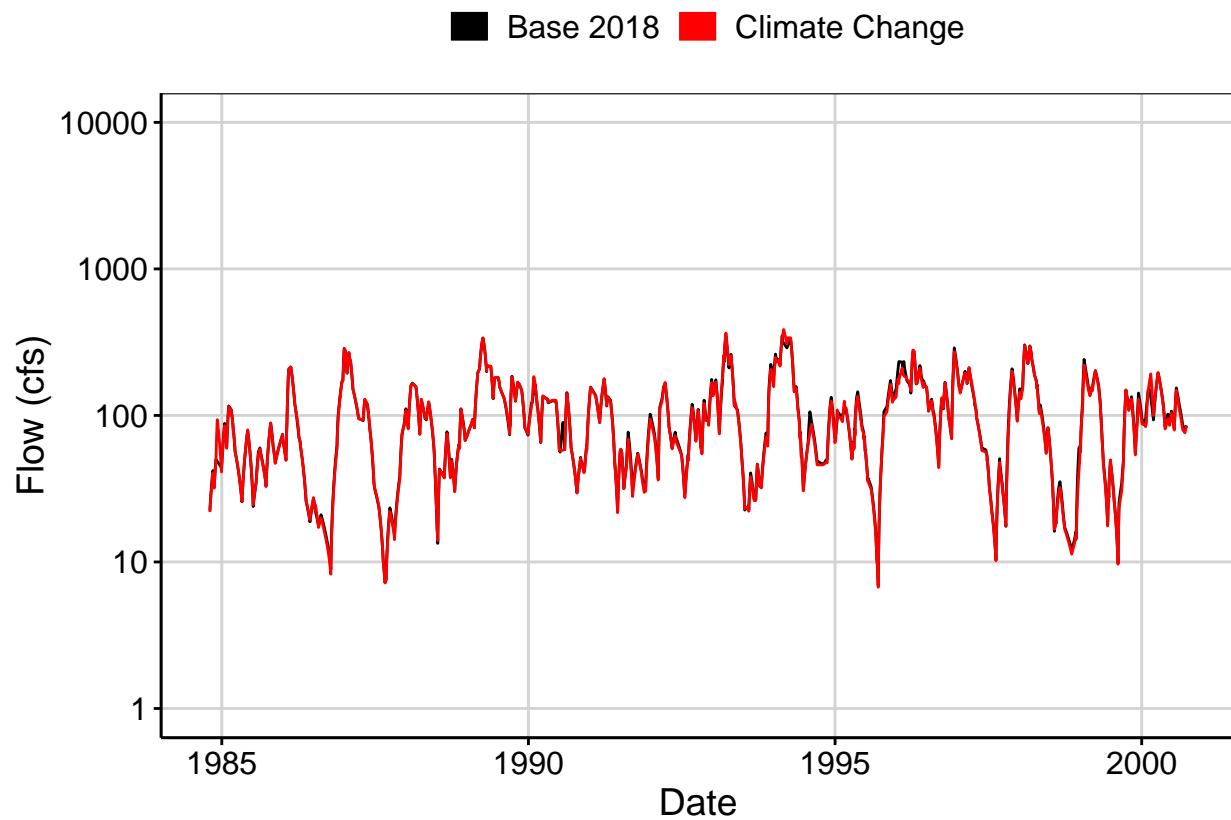


Fig. 4: Baseflow



**Fig. 5: Combined Baseflow**

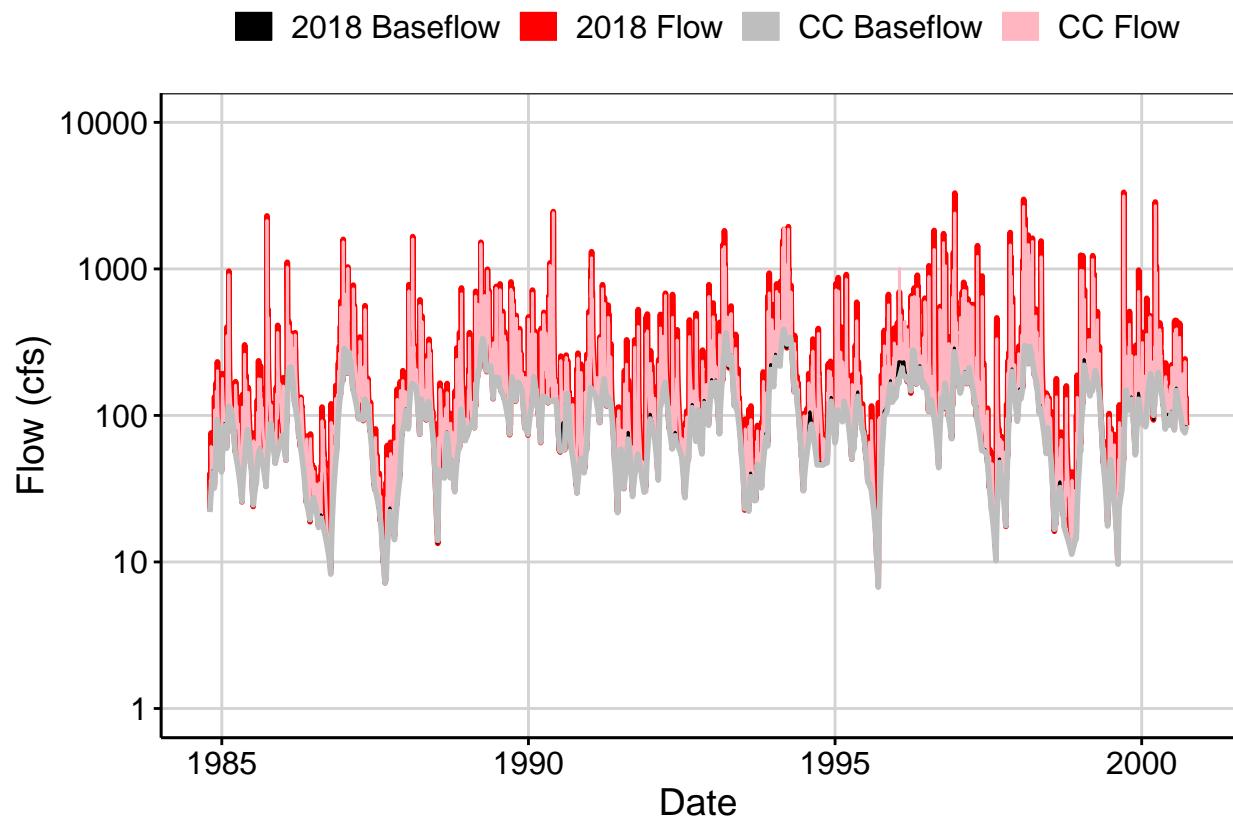


Fig. 6: Largest Difference Segment

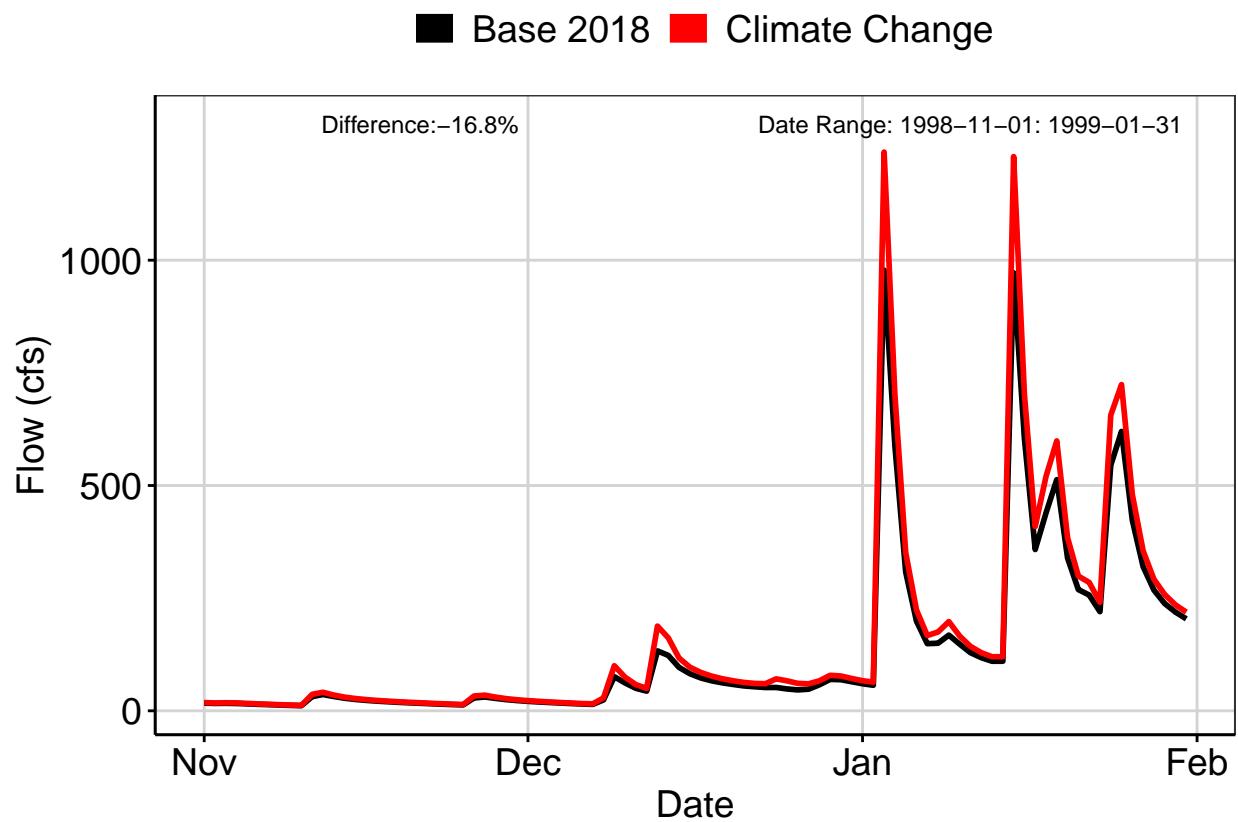


Fig. 7: Second Largest Difference Segment

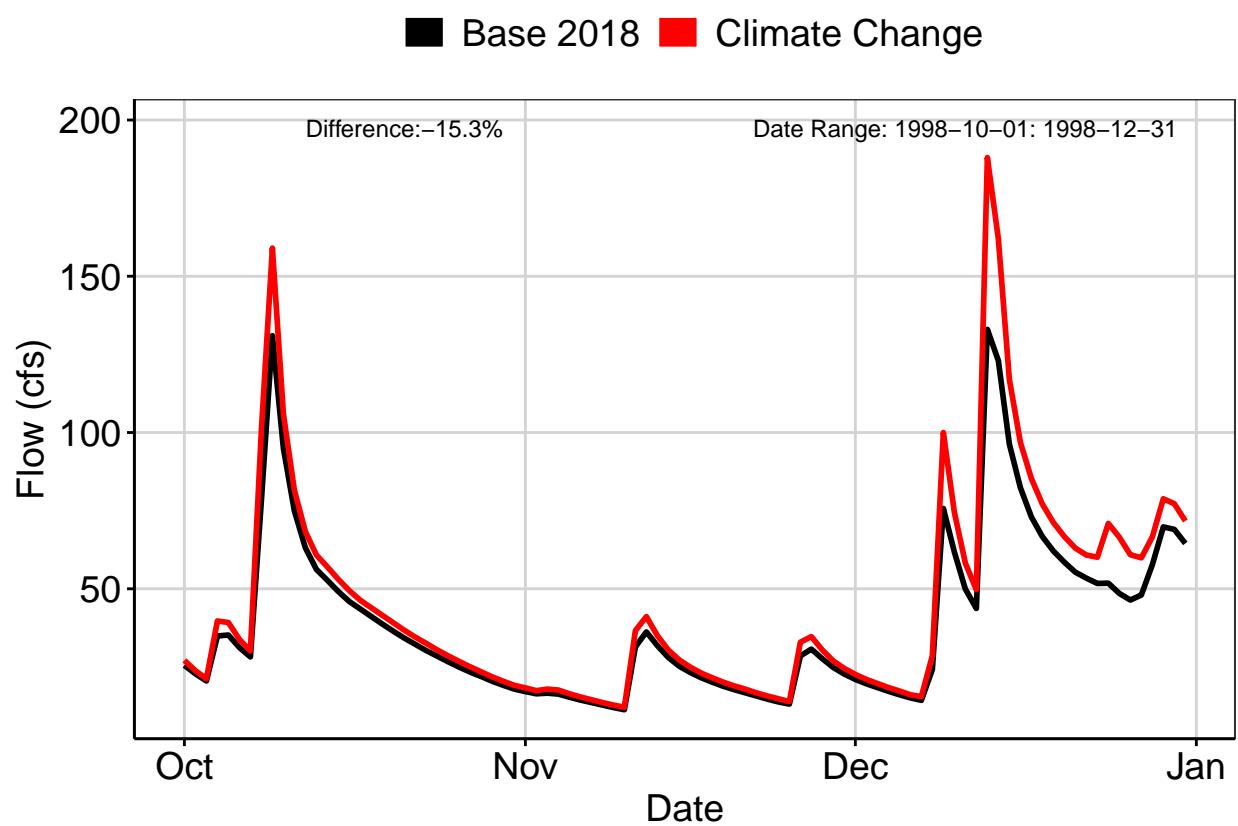


Fig. 8: Third Largest Difference Segment

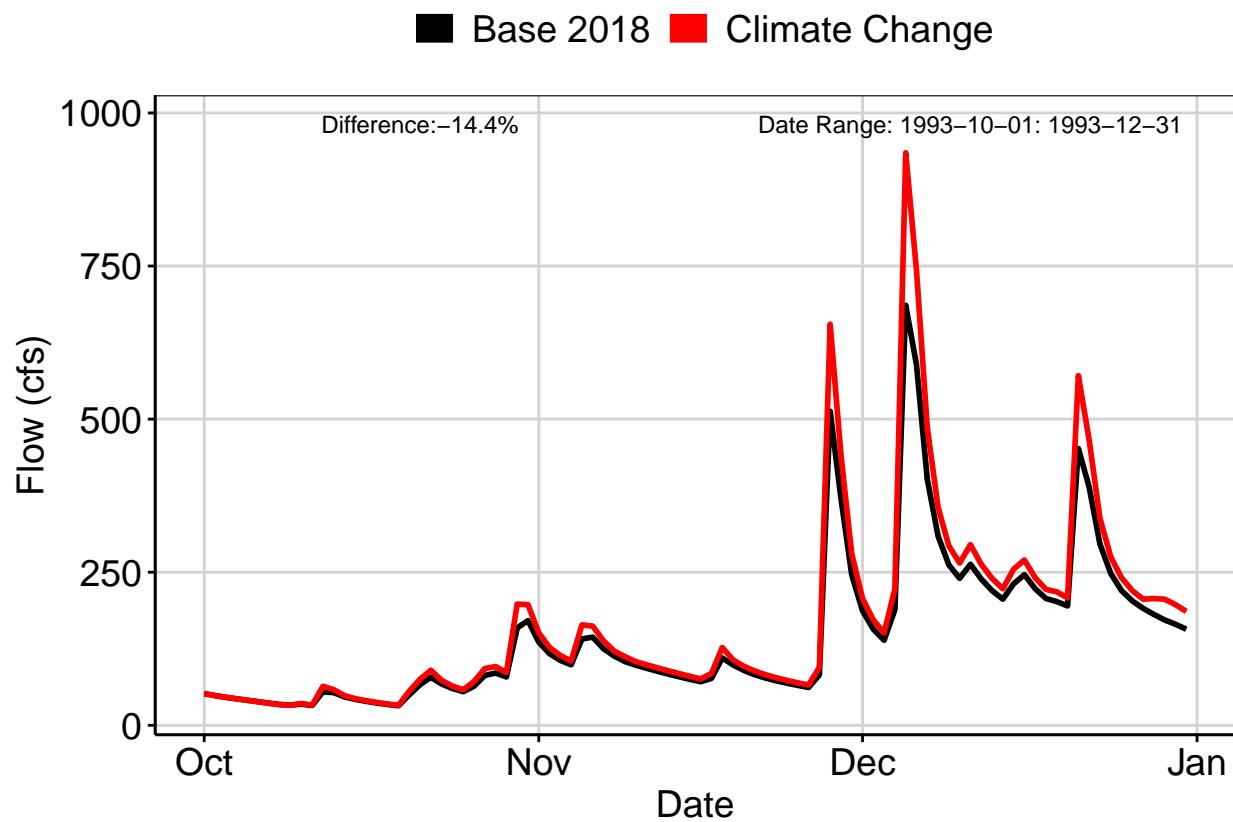


Fig. 9A: Residuals Plot

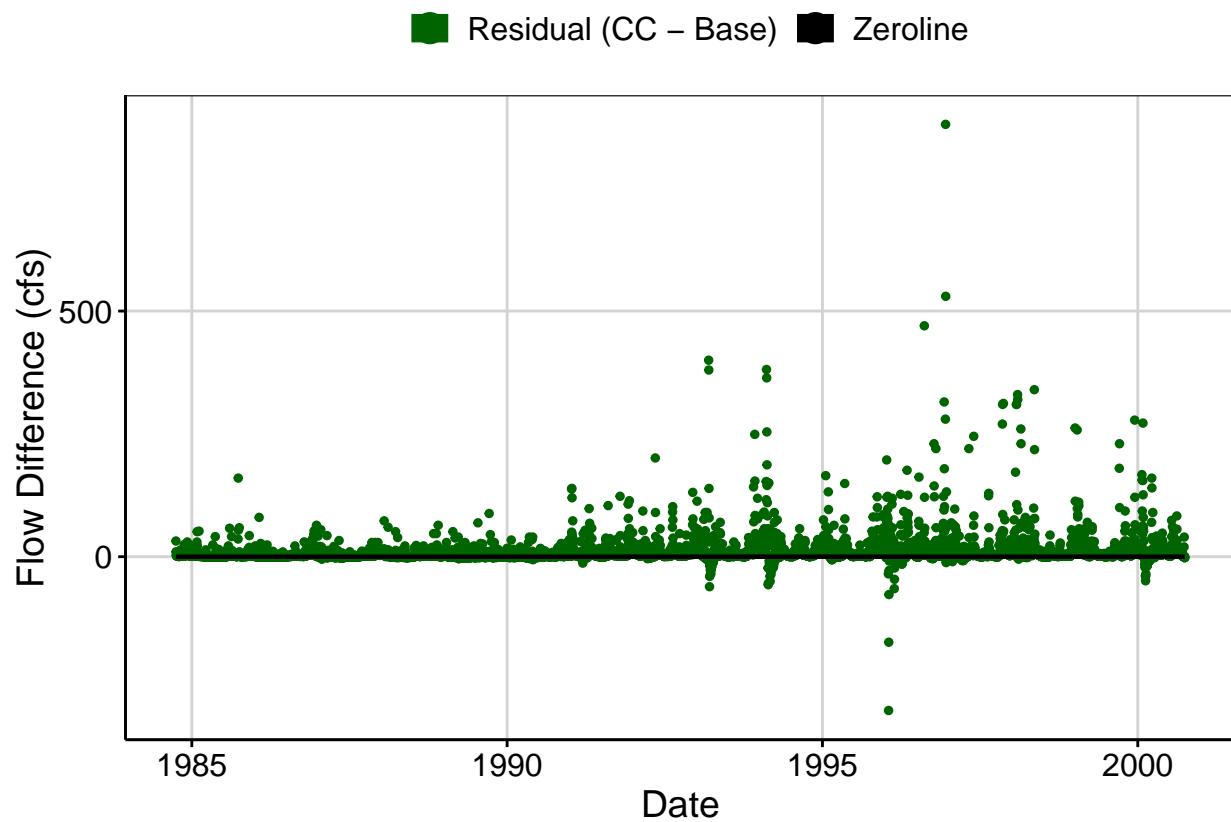


Fig. 9B: Area Weighted Residuals Plot

