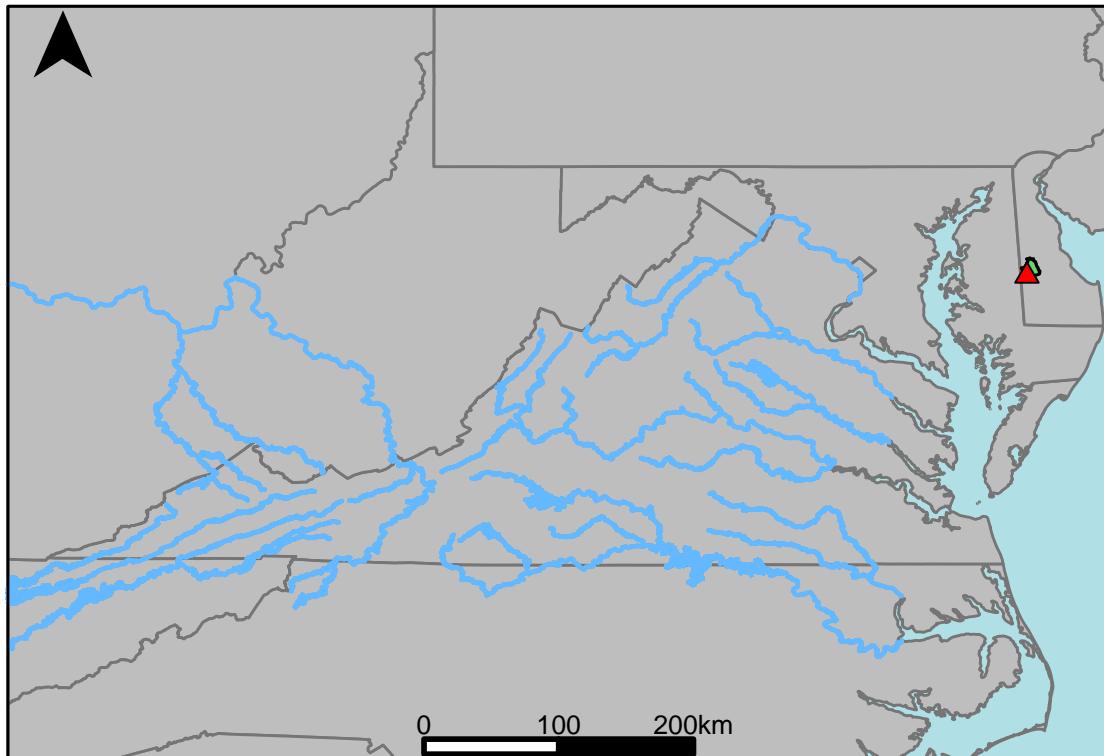


Appendix ##: River Segment: EL2\_4400\_4590 -  
Scenario 1: CFBASE30Y20180615 vs. Scenario 2:  
CBASE1808L55CY55R45P50R45P50Y



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 7.21649%, with 2.22% of its rolling three month time spans above 20% difference.

**Table 1: Monthly Low Flows**

	Base 2018	Climate Change	Pct. Difference
Jan. Low Flow	7.06	7.57	7.22
Feb. Low Flow	8.44	8.92	5.69
Mar. Low Flow	16.5	17.8	7.88
Apr. Low Flow	27.4	29	5.84
May Low Flow	38.2	39.2	2.62
Jun. Low Flow	31.6	30.8	-2.53
Jul. Low Flow	27.1	28.3	4.43
Aug. Low Flow	22.8	23.8	4.39
Sep. Low Flow	9.28	9.56	3.02
Oct. Low Flow	6.16	6.49	5.36
Nov. Low Flow	9.62	10.2	6.03
Dec. Low Flow	6.67	7.23	8.4

**Table 2: Monthly Average Flows**

	Base 2018	Climate Change	Pct. Difference
Overall Mean Flow	48.5	52	7.22
Jan. Mean Flow	72	79	9.72
Feb. Mean Flow	75.5	80.5	6.62
Mar. Mean Flow	99.3	101	1.71
Apr. Mean Flow	66.3	68.5	3.32
May Mean Flow	53.9	57.8	7.24
Jun. Mean Flow	30	31	3.33
Jul. Mean Flow	23.3	24.9	6.87
Aug. Mean Flow	24.6	27.6	12.2
Sep. Mean Flow	27.1	30	10.7
Oct. Mean Flow	27.5	30.2	9.82
Nov. Mean Flow	30.1	34.1	13.29
Dec. Mean Flow	53.1	60.5	13.94

**Table 3: Monthly High Flows**

	Base 2018	Climate Change	Pct. Difference
Jan. High Flow	40.2	56.4	40.3
Feb. High Flow	63	82.1	30.32
Mar. High Flow	89.4	114	27.52
Apr. High Flow	240	272	13.33
May High Flow	151	164	8.61
Jun. High Flow	233	254	9.01
Jul. High Flow	128	146	14.06
Aug. High Flow	110	140	27.27
Sep. High Flow	49.6	56.8	14.52
Oct. High Flow	35.6	44.6	25.28
Nov. High Flow	58.4	76.8	31.51
Dec. High Flow	62.3	78.3	25.68

**Table 4: Period Low Flows**

	Base 2018	Climate Change	Pct. Difference
Min. 1 Day Min	0.93	1.05	13.15
Med. 1 Day Min	3.64	3.67	0.82
Min. 3 Day Min	1.02	1.16	13.73
Med. 3 Day Min	3.89	3.99	2.57
Min. 7 Day Min	1.33	1.52	14.29
Med. 7 Day Min	4.57	4.73	3.5
Min. 30 Day Min	3.45	3.82	10.72
Med. 30 Day Min	9.23	10.1	9.43
Min. 90 Day Min	7.28	8.19	12.5
Med. 90 Day Min	15.5	17.6	13.55
7Q10	1.95	2.18	11.79
Year of 90-Day Min. Flow	1986	1986	0
Drought Year Mean	29.3	30.5	4.1
Mean Baseflow	27	27.4	1.48

**Table 5: Period High Flows**

	Base 2018	Climate Change	Pct. Difference
Max. 1 Day Max	1130	1560	38.05
Med. 1 Day Max	570	642	12.63
Max. 3 Day Max	716	856	19.55
Med. 3 Day Max	352	361	2.56
Max. 7 Day Max	429	489	13.99
Med. 7 Day Max	225	241	7.11
Max. 30 Day Max	257	254	-1.17
Med. 30 Day Max	134	139	3.73
Max. 90 Day Max	181	190	4.97
Med. 90 Day Max	97.5	100	2.56

**Table 6: Non-Exceedance Flows**

	Base 2018	Climate Change	Pct. Difference
1% Non-Exceedance	2.82	3.05	8.16
5% Non-Exceedance	6.14	6.6	7.49
50% Non-Exceedance	32.6	34.5	5.83
95% Non-Exceedance	137	145	5.84
99% Non-Exceedance	297	333	12.12
Sept. 10% Non-Exceedance	4.92	5.35	8.74

**Fig. 1: Hydrograph**

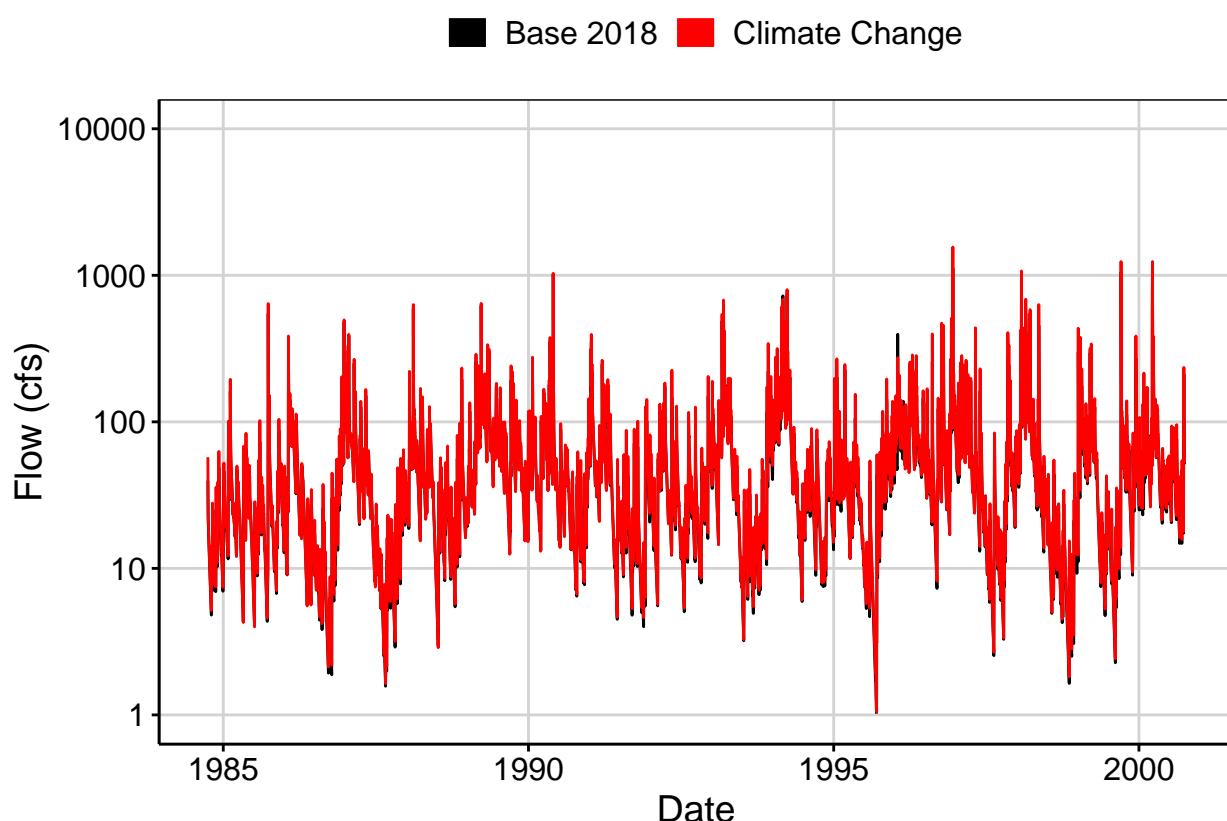


Fig. 2: Zoomed Hydrograph

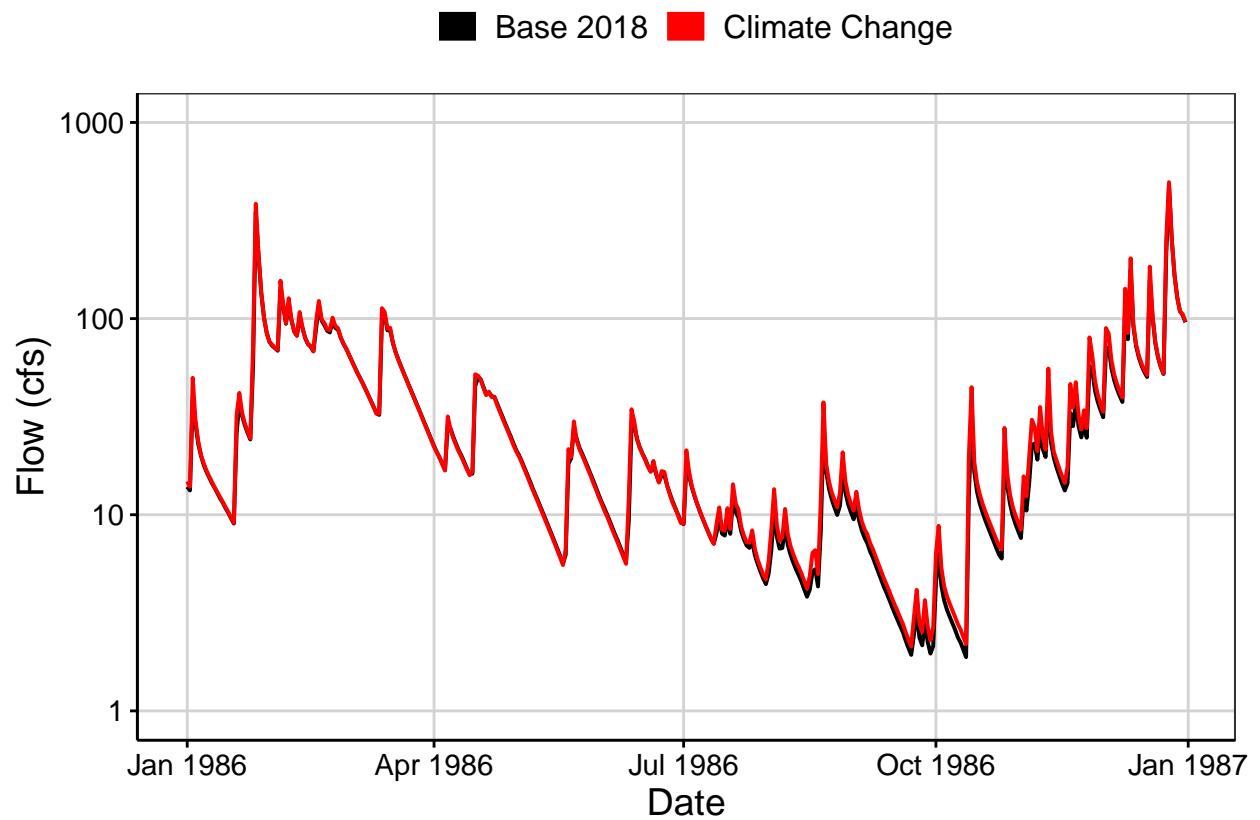


Fig. 3: Flow Exceedance

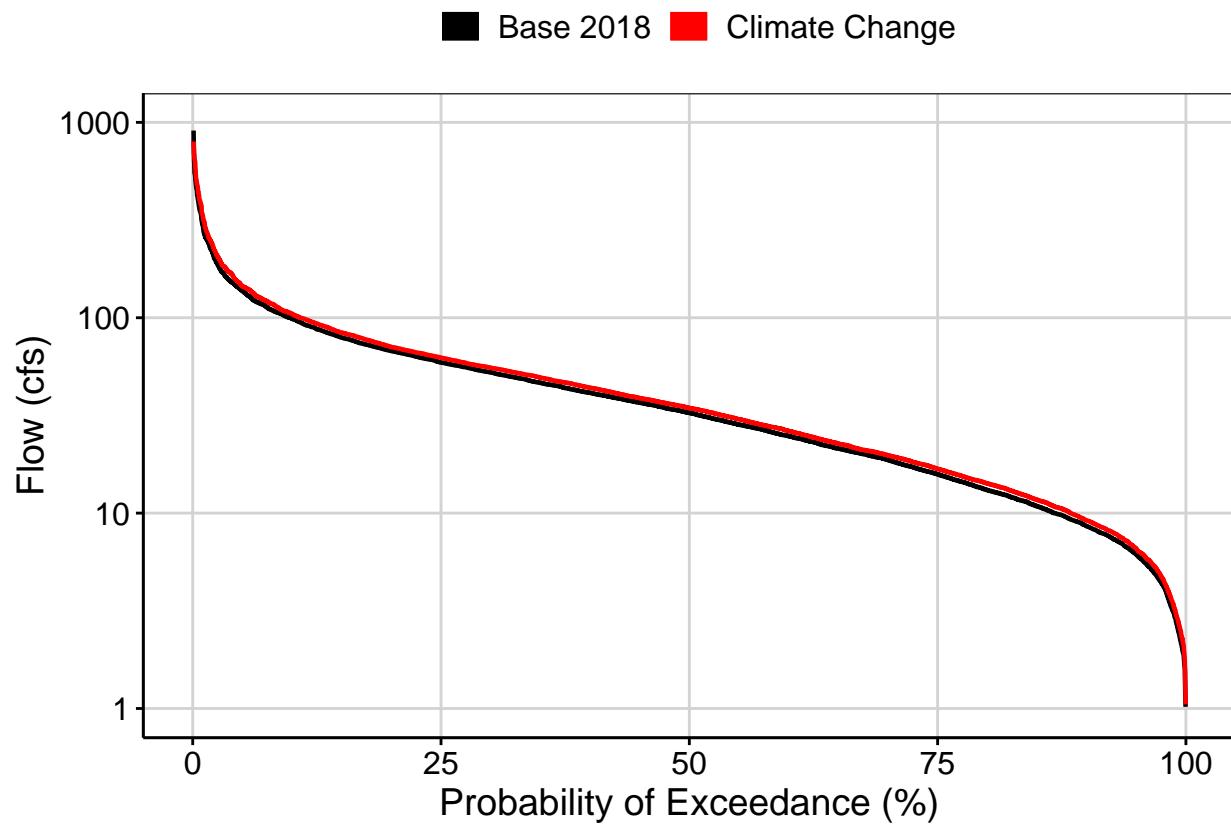
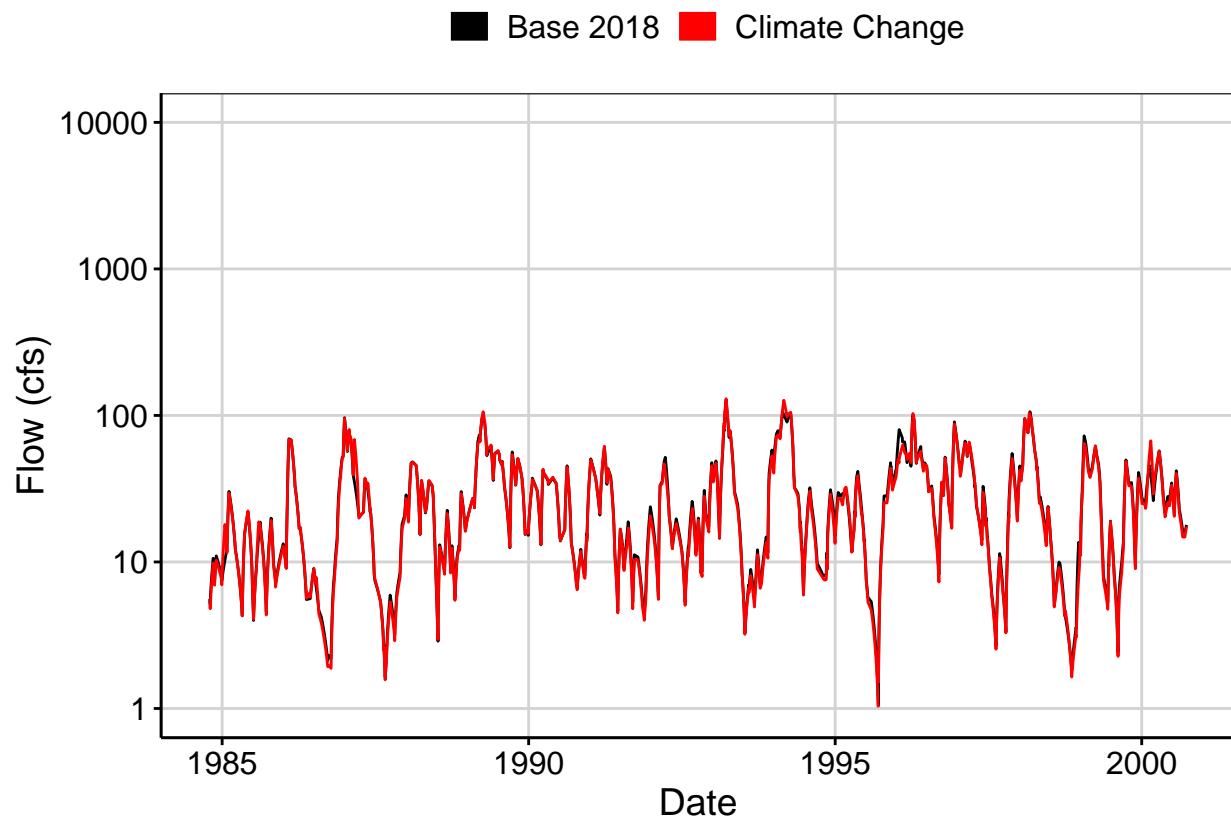


Fig. 4: Baseflow



**Fig. 5: Combined Baseflow**

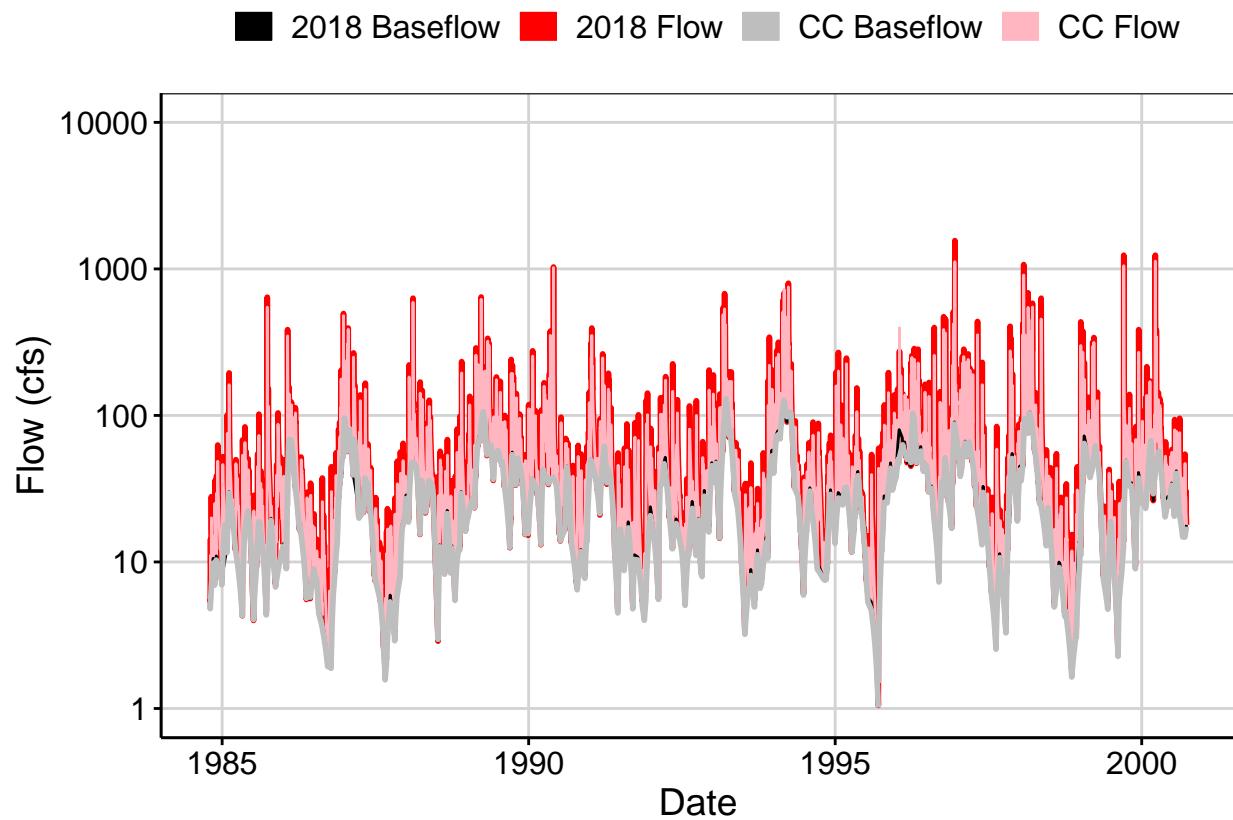


Fig. 6: Largest Difference Segment

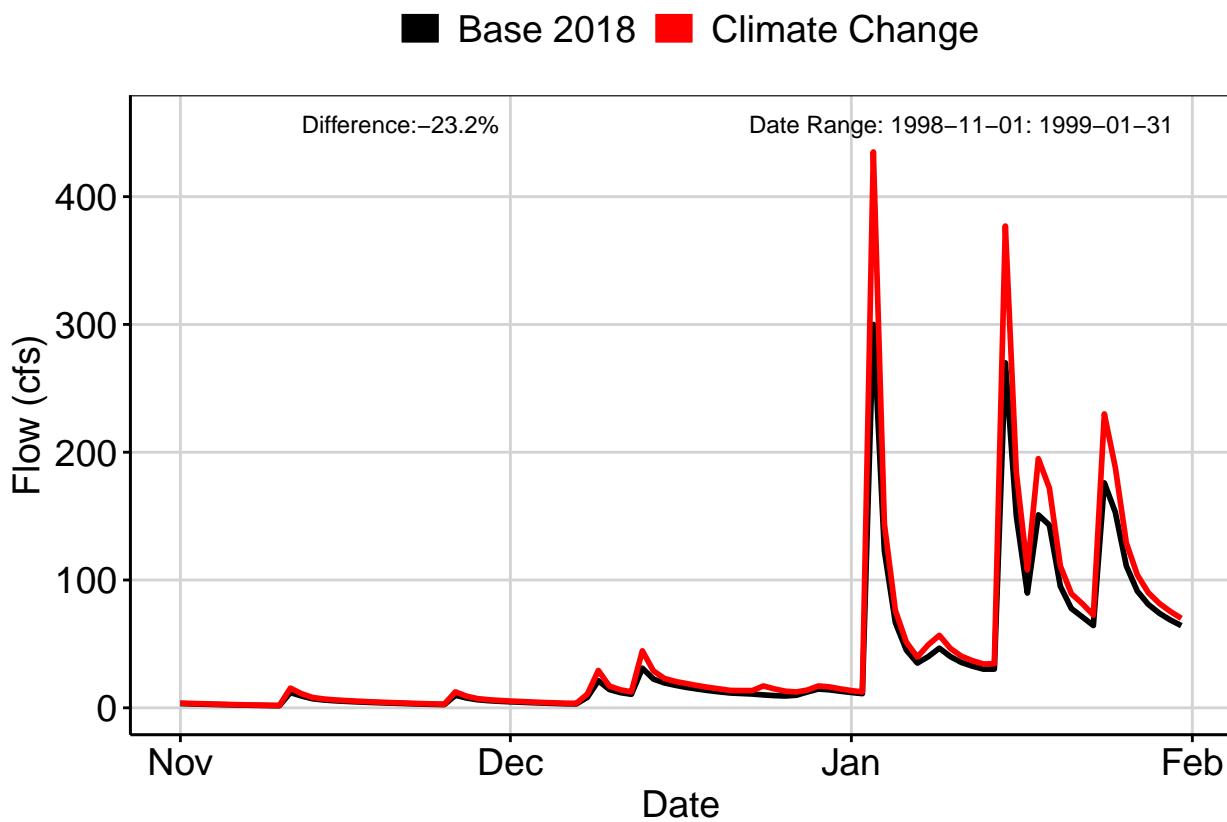


Fig. 7: Second Largest Difference Segment

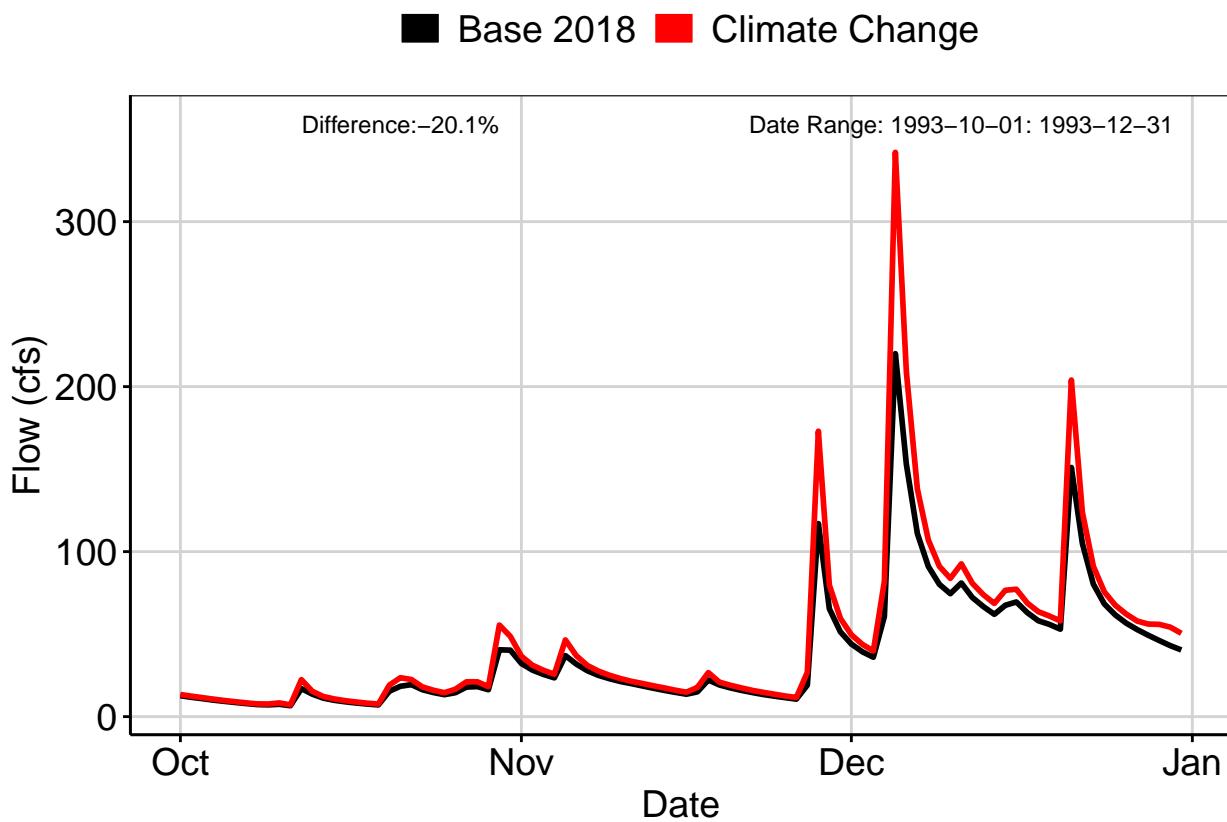


Fig. 8: Third Largest Difference Segment

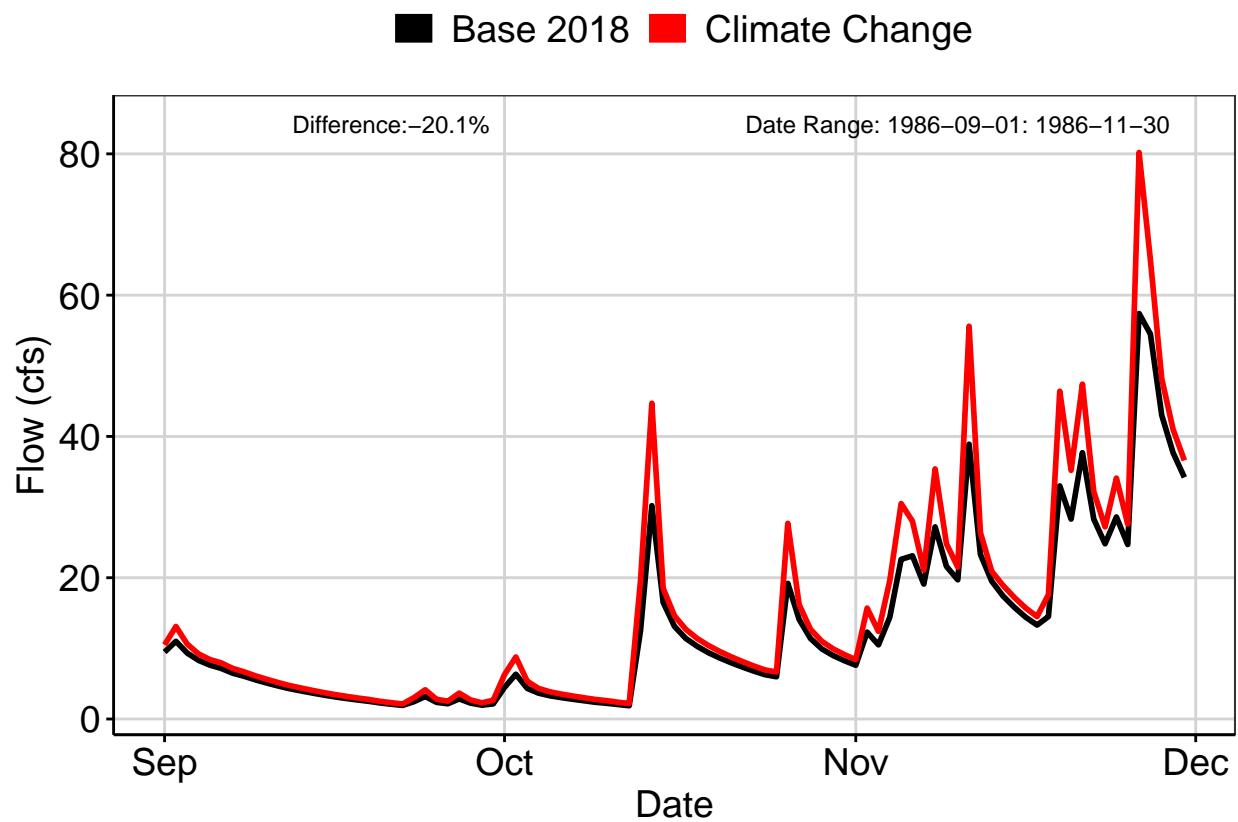


Fig. 9A: Residuals Plot

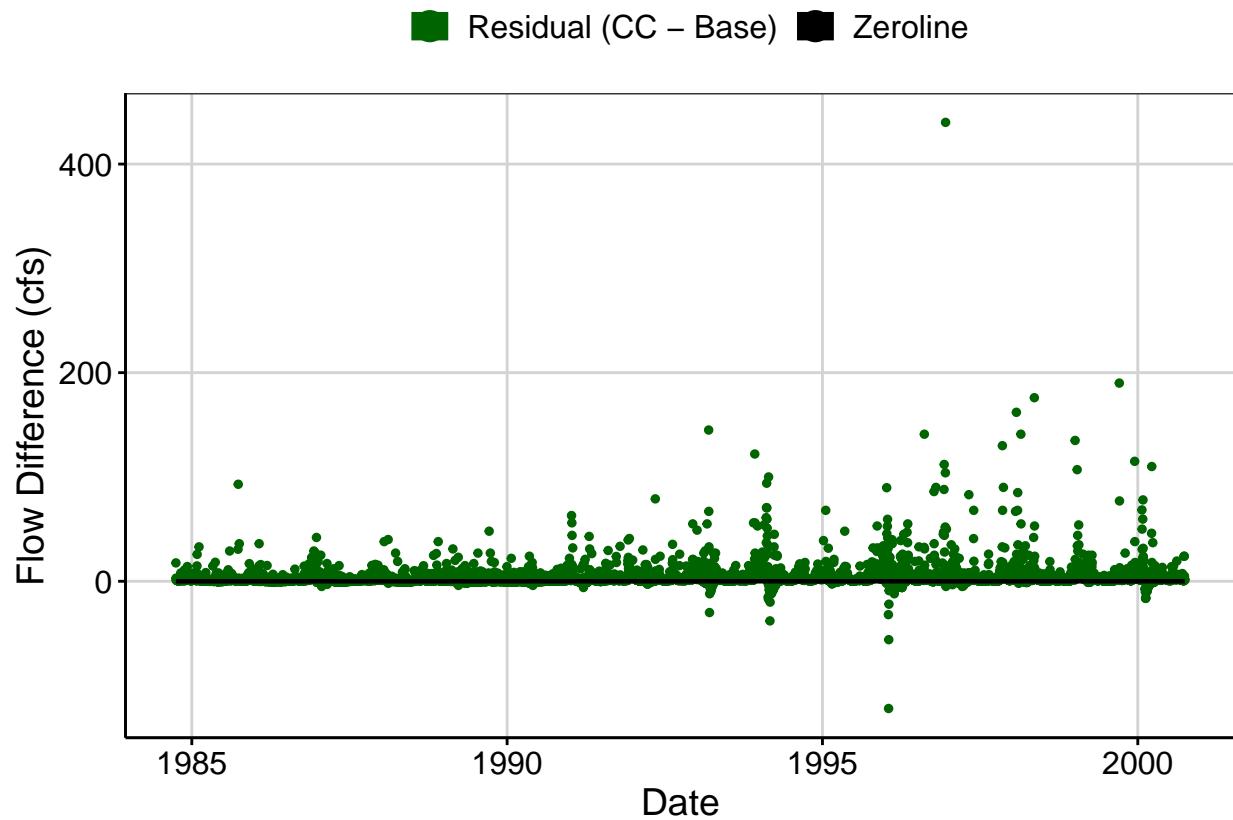


Fig. 9B: Area Weighted Residuals Plot

