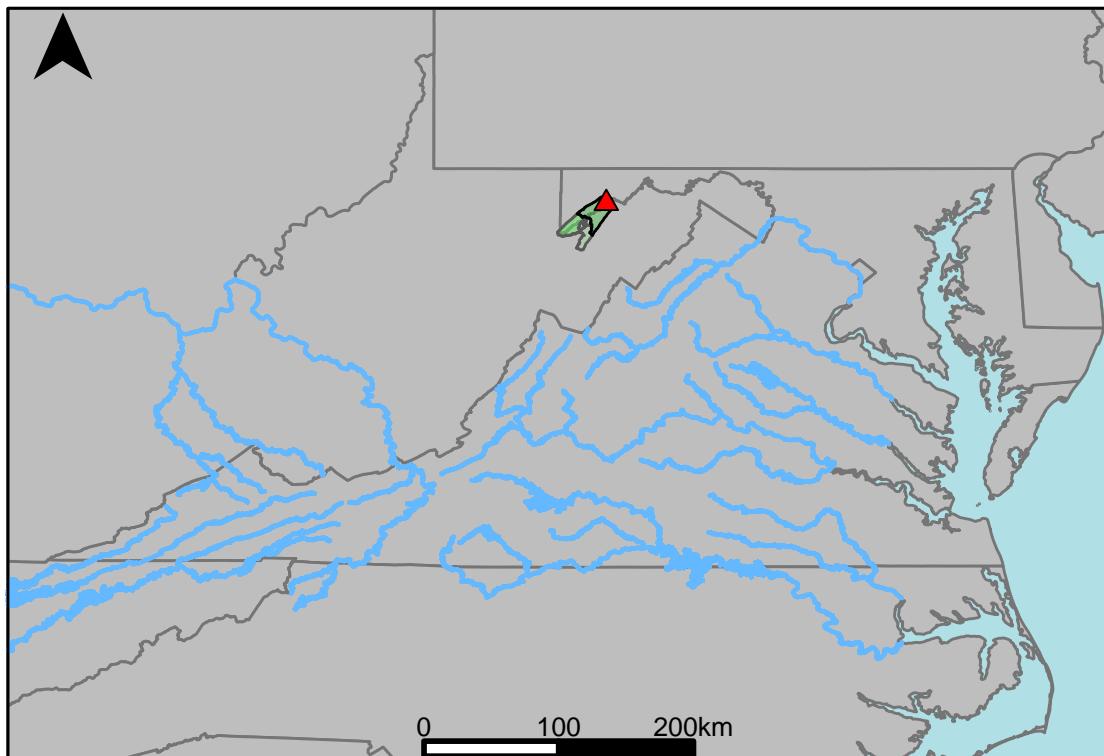


Appendix ##: River Segment: PU3\_4450\_4440 -  
Scenario 1: CFBASE30Y20180615 vs. Scenario 2:  
CBASE1808L55CY55R45P50R45P50Y



This river segment follows part of the flow of the Potomac River at Barnum, WV. Gage 01595800 is located in Mineral County, VA (Lat 39 26'42.4", Long 79 06'38.9") approximately 4.0 miles southwest of Piedmont W. VA. Drainage area is 266 sq. miles. This gage started taking data in 1966 and has been taking data periodically until now. Prior to July 1981, there has been regulation at low flow by Stony River Reservoir, 39 mi upstream from station (see station 01595200). Since July 1981, complete there has been regulation by Jennings Randolph Lake, 1.7 mi upstream from station, capacity 96,600 acre-ft. There is a U.S. Army Corps of Engineers satellite data-collection platform at station. The average daily discharge change between scenario 1 and scenario 2 for the 20 year timespan was 3.38078%, with 1.67% of its rolling three month time spans above 20% difference.

**Table 1: Monthly Low Flows**

	Base 2018	Climate Change	Pct. Difference
Jan. Low Flow	204	204	0
Feb. Low Flow	277	277	0
Mar. Low Flow	312	364	16.67
Apr. Low Flow	312	442	41.67
May Low Flow	412	429	4.13
Jun. Low Flow	522	532	1.92
Jul. Low Flow	284	292	2.82
Aug. Low Flow	216	216	0
Sep. Low Flow	202	202	0
Oct. Low Flow	210	210	0
Nov. Low Flow	266	264	-0.75
Dec. Low Flow	202	202	0

**Table 2: Monthly Average Flows**

	Base 2018	Climate Change	Pct. Difference
Overall Mean Flow	562	581	3.38
Jan. Mean Flow	598	643	7.53
Feb. Mean Flow	635	702	10.55
Mar. Mean Flow	790	806	2.03
Apr. Mean Flow	633	631	-0.32
May Mean Flow	639	661	3.44
Jun. Mean Flow	408	411	0.74
Jul. Mean Flow	640	642	0.31
Aug. Mean Flow	507	507	0
Sep. Mean Flow	365	367	0.55
Oct. Mean Flow	341	345	1.17
Nov. Mean Flow	584	605	3.6
Dec. Mean Flow	602	647	7.48

**Table 3: Monthly High Flows**

	Base 2018	Climate Change	Pct. Difference
Jan. High Flow	542	548	1.11
Feb. High Flow	769	776	0.91
Mar. High Flow	877	922	5.13
Apr. High Flow	882	922	4.54
May High Flow	802	816	1.75
Jun. High Flow	904	1040	15.04
Jul. High Flow	1080	1140	5.56
Aug. High Flow	1780	1840	3.37
Sep. High Flow	870	888	2.07
Oct. High Flow	945	950	0.53
Nov. High Flow	718	717	-0.14
Dec. High Flow	553	556	0.54

**Table 4: Period Low Flows**

	Base 2018	Climate Change	Pct. Difference
Min. 1 Day Min	198	198	0
Med. 1 Day Min	199	199	0
Min. 3 Day Min	198	198	0
Med. 3 Day Min	199	199	0
Min. 7 Day Min	199	199	0
Med. 7 Day Min	199	199	0
Min. 30 Day Min	200	200	0
Med. 30 Day Min	210	209	-0.48
Min. 90 Day Min	204	204	0
Med. 90 Day Min	332	348	4.82
7Q10	199	199	0
Year of 90-Day Min. Flow	1999	1999	0
Drought Year Mean	322	338	4.97
Mean Baseflow	398	414	4.02

**Table 5: Period High Flows**

	Base 2018	Climate Change	Pct. Difference
Max. 1 Day Max	15400	15500	0.65
Med. 1 Day Max	2660	2780	4.51
Max. 3 Day Max	9520	9590	0.74
Med. 3 Day Max	2120	2310	8.96
Max. 7 Day Max	6270	6290	0.32
Med. 7 Day Max	1650	1810	9.7
Max. 30 Day Max	2650	2650	0
Med. 30 Day Max	1050	1090	3.81
Max. 90 Day Max	1500	1470	-2
Med. 90 Day Max	805	825	2.48

**Table 6: Non-Exceedance Flows**

	Base 2018	Climate Change	Pct. Difference
1% Non-Exceedance	199	199	0
5% Non-Exceedance	201	201	0
50% Non-Exceedance	461	478	3.69
95% Non-Exceedance	1230	1320	7.32
99% Non-Exceedance	2400	2250	-6.25
Sept. 10% Non-Exceedance	200	200	0

**Fig. 1: Hydrograph**

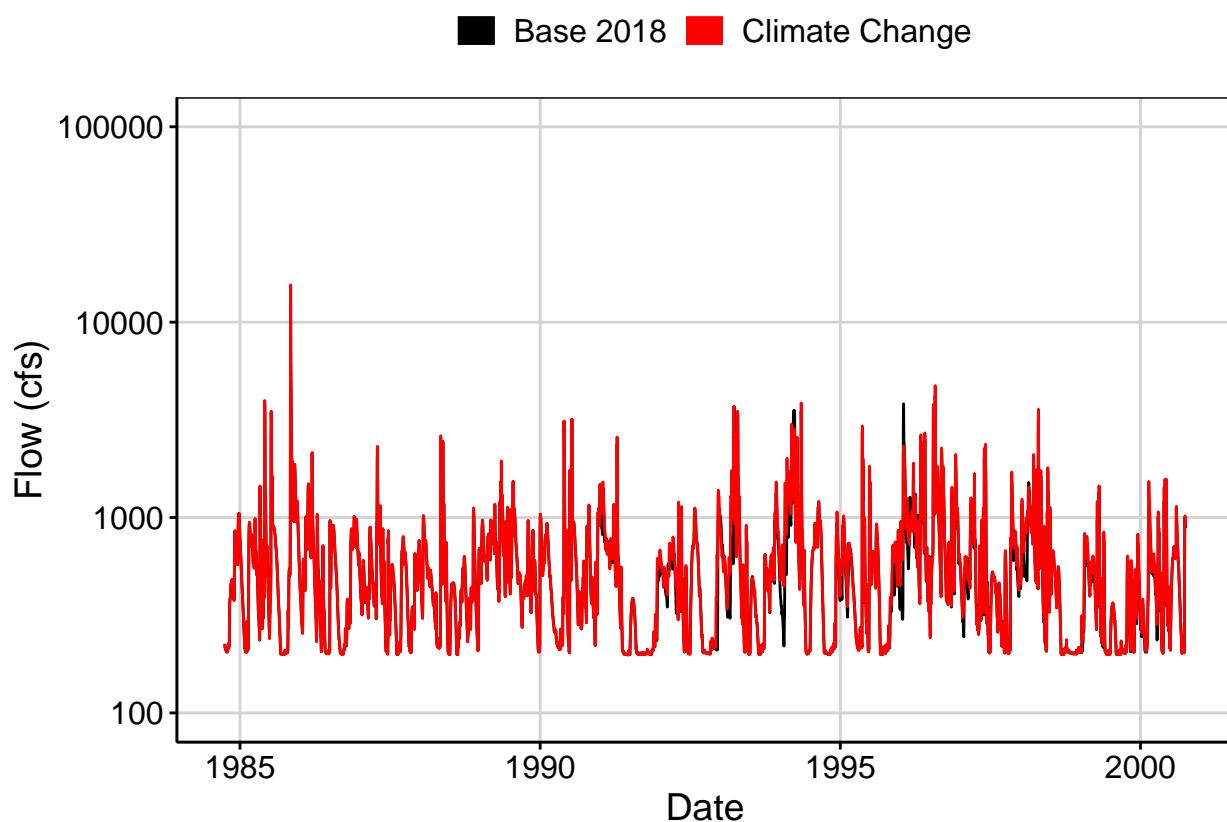


Fig. 2: Zoomed Hydrograph

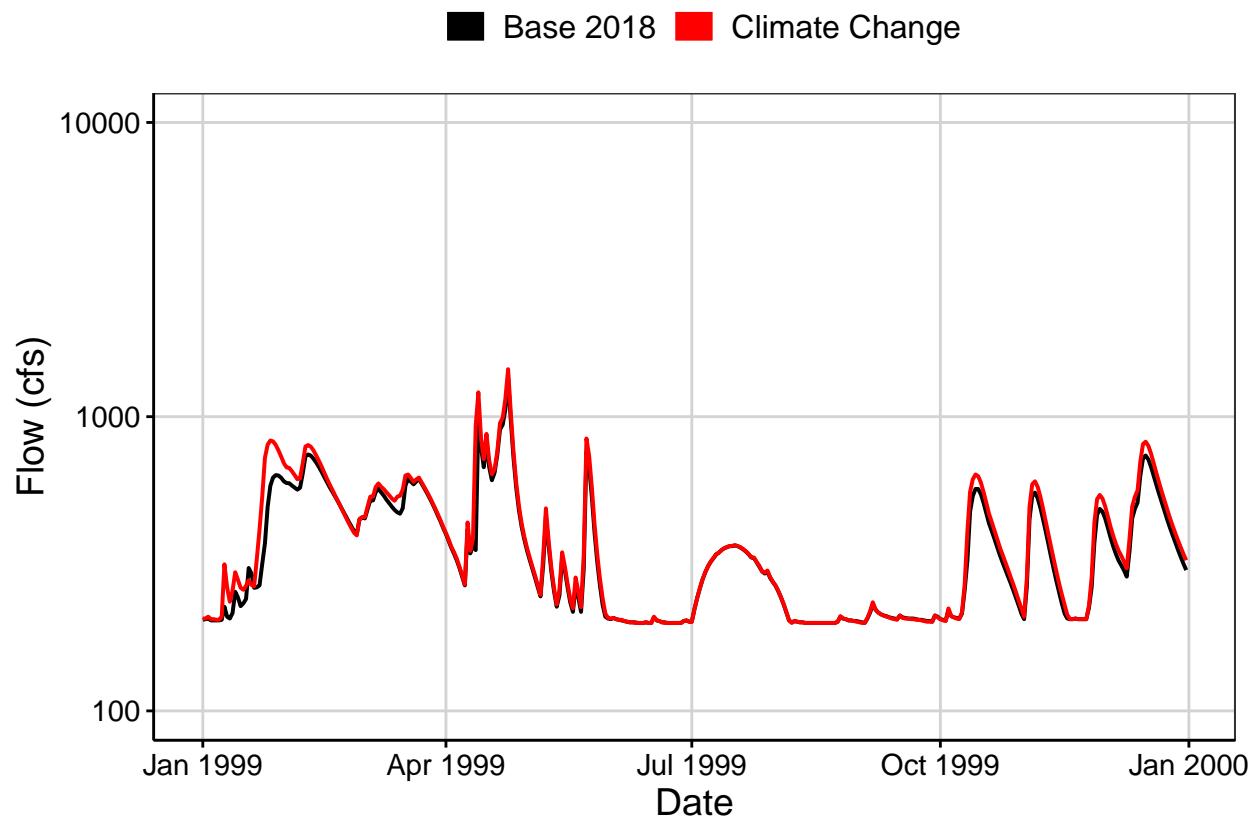


Fig. 3: Flow Exceedance

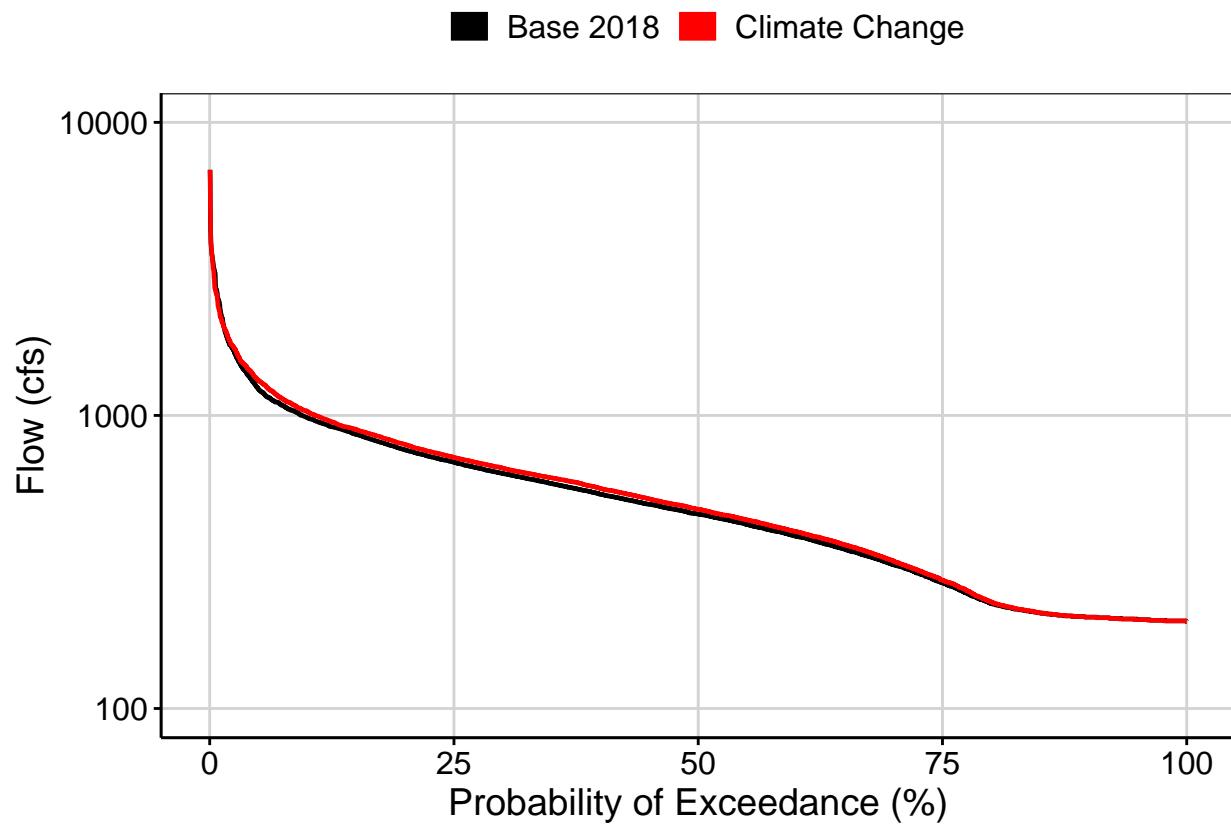
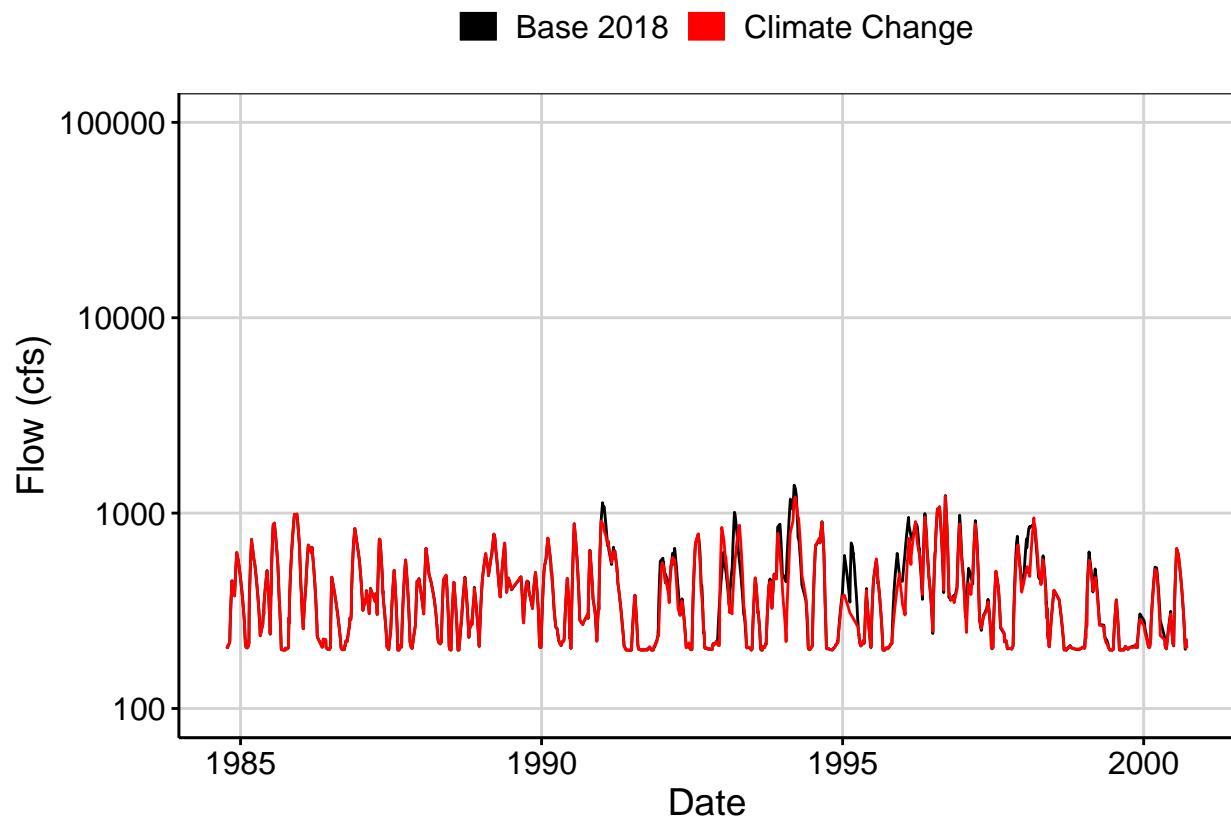


Fig. 4: Baseflow



**Fig. 5: Combined Baseflow**

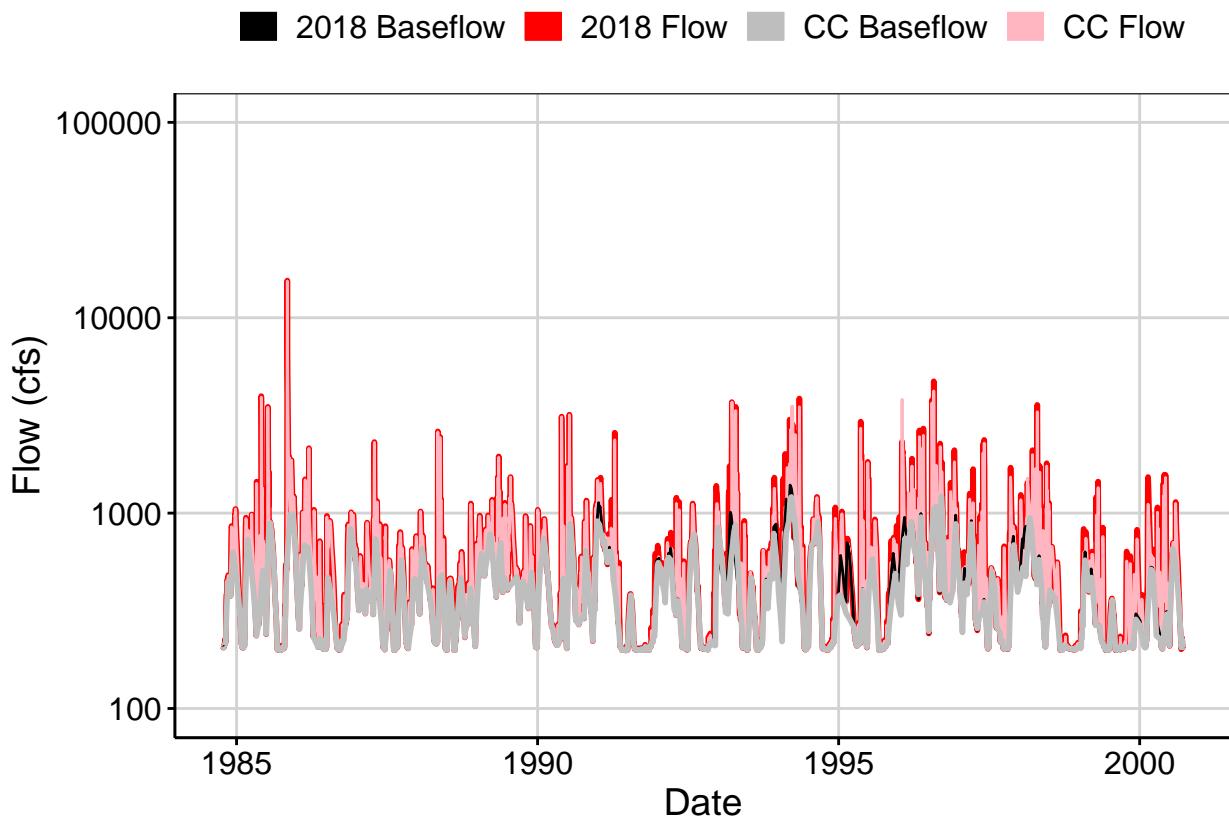


Fig. 6: Largest Difference Segment

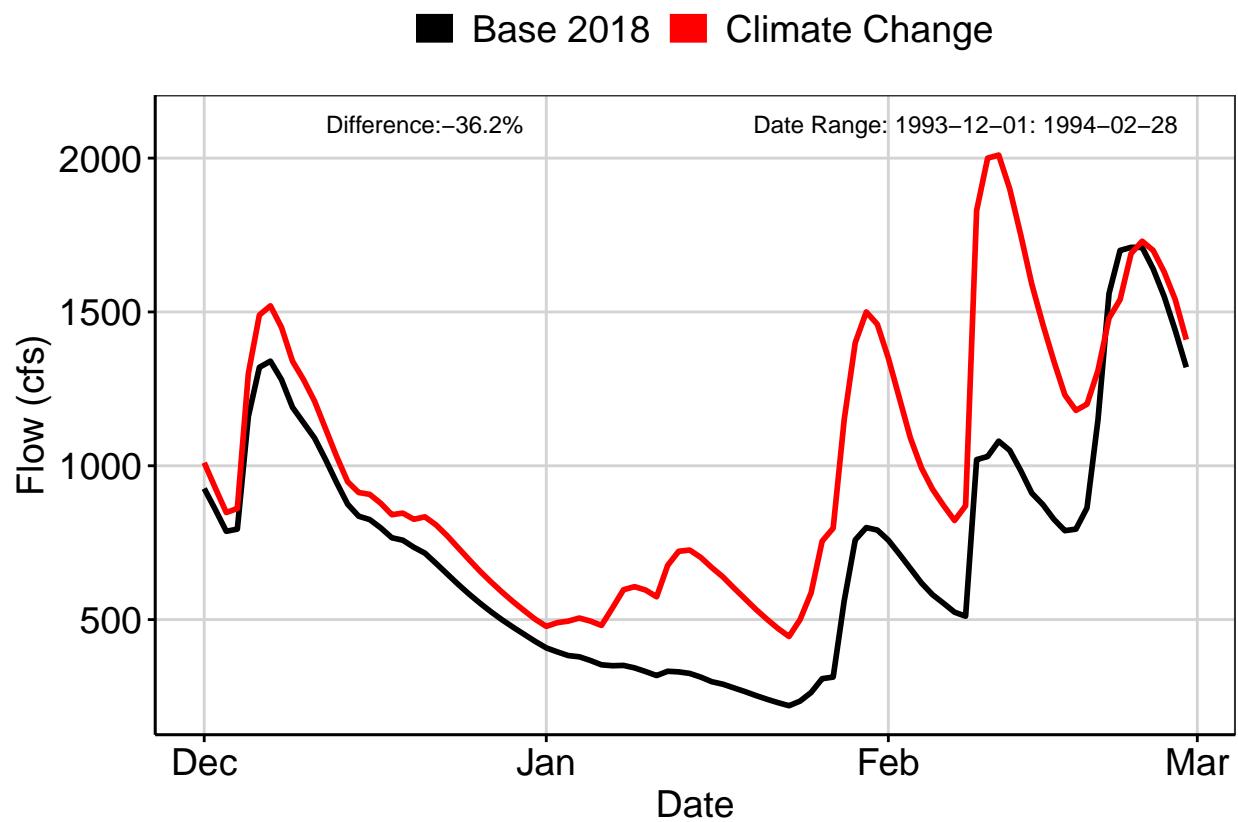


Fig. 7: Second Largest Difference Segment

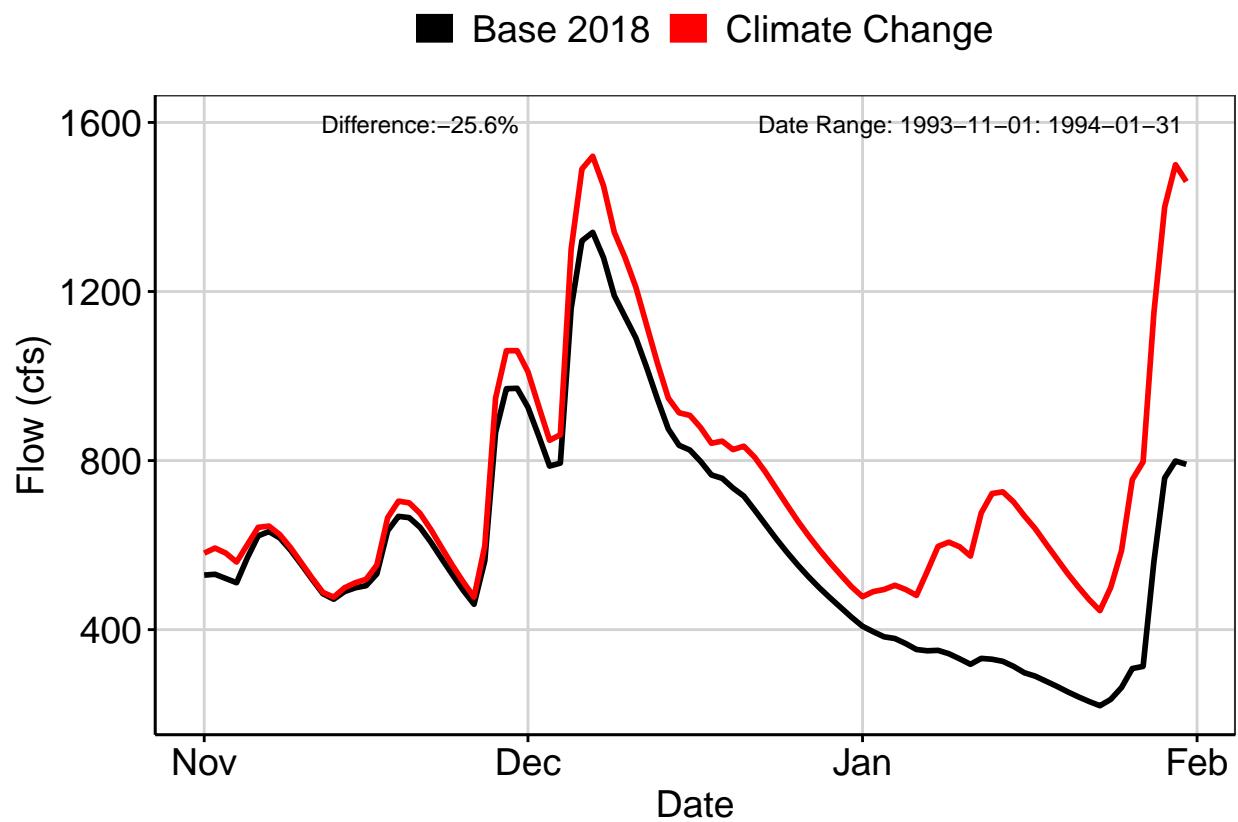


Fig. 8: Third Largest Difference Segment

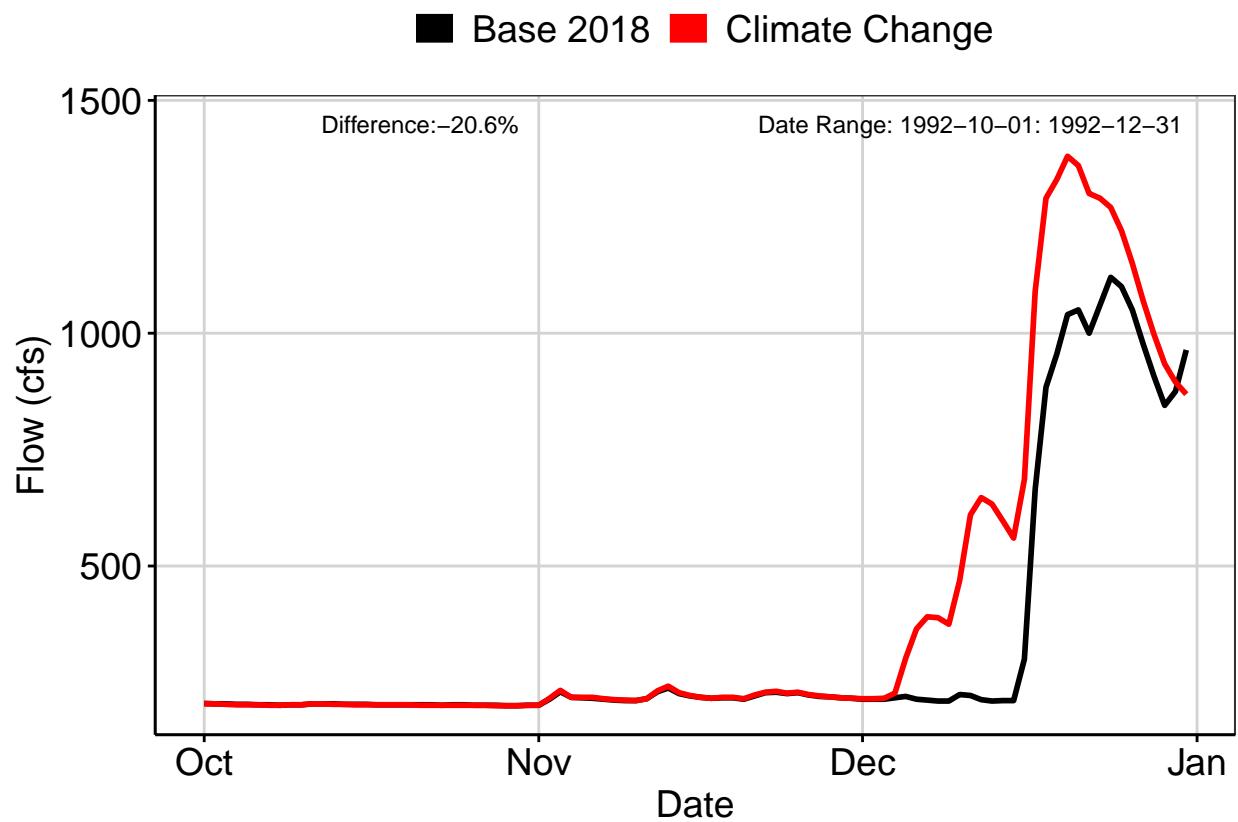


Fig. 9A: Residuals Plot

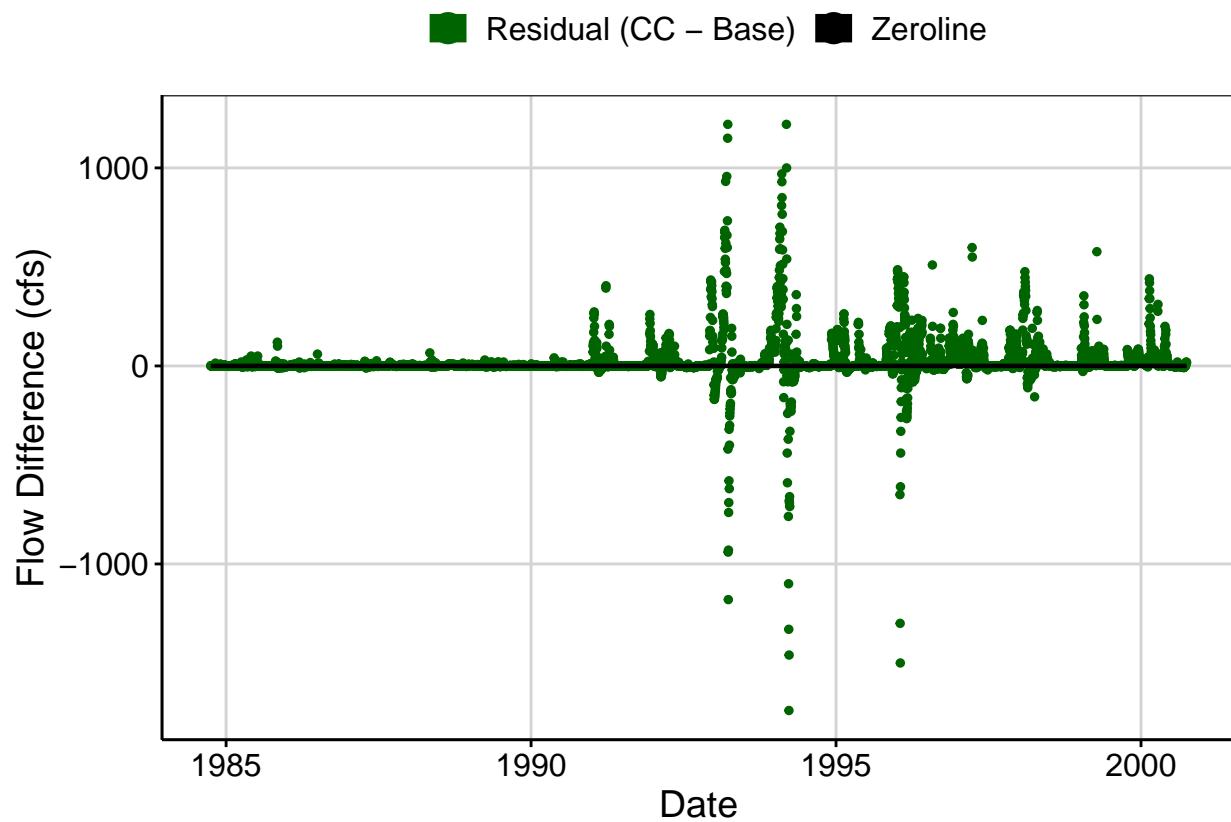


Fig. 9B: Area Weighted Residuals Plot

