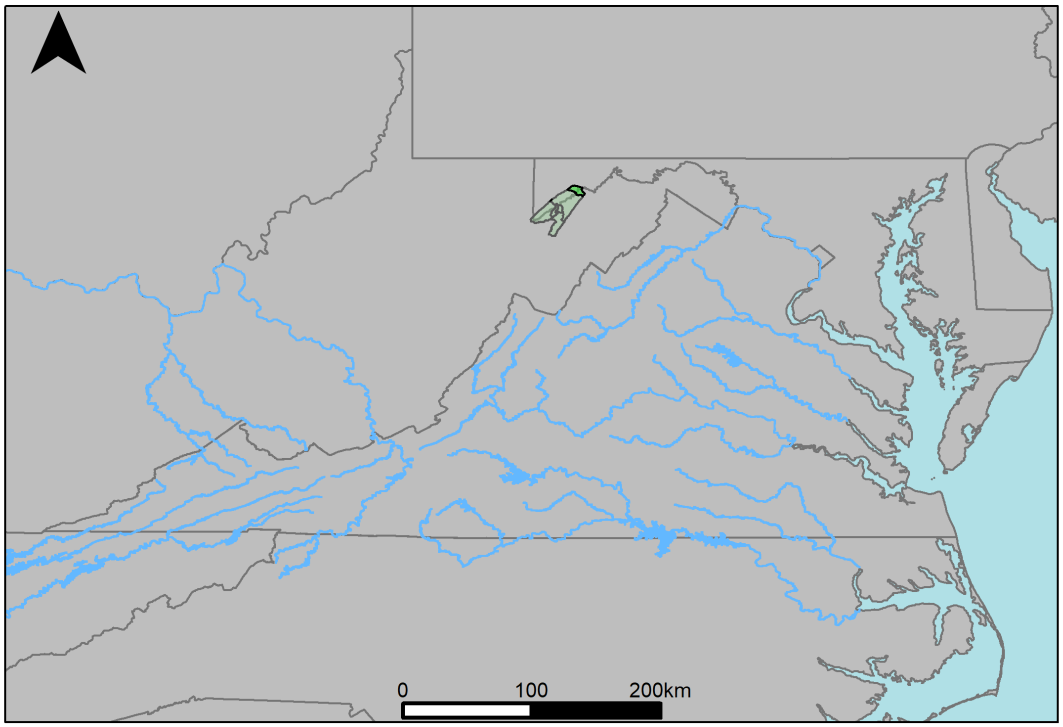
River Segment JU3_7400_7510: USGS Gage 02018000 vs. VA Hydro Run 120



This river segment follows part of the flow of Craig Creek at Parr, VA. Gage 02018000 is located in Botetourt County, VA (Lat 37 39'57", long 79 54'42") approximately 0.2 miles northeast of Horton. Drainage area is 329 sq. miles. This gage started taking data in 1925 and is still taking data currently. There are no known anthropogenic alterations in this area that would affect the flow conditions. The average daily discharge change between scenario 1 and scenario 2 for the 20 year timespan was 12.9046%, with 50.3% of its rolling three month time spans above 20% difference. The Nash-Sutcliffe Efficiency of the model, calculated between the gage and scenario data, was found to be 0.503.

Table 1: Monthly Low Flows

	Scen. 1	Scen. 2	Pct. Difference
Jan. Low Flow	49.4	71.2	44
Feb. Low Flow	65.6	129	96.5
Mar. Low Flow	127	242	90.5
Apr. Low Flow	148	291	97.6
May Low Flow	188	304	62
Jun. Low Flow	294	385	31
Jul. Low Flow	228	304	33.2
Aug. Low Flow	154	227	48
Sep. Low Flow	73	96.1	31.7
Oct. Low Flow	51.6	37.5	-27.4
Nov. Low Flow	45.5	33.8	-25.7
Dec. Low Flow	43.4	30.3	-30.1

Table 2: Monthly Average Flows

	Scen. 1	Scen. 2	Pct. Difference
Overall Mean Flow	385	435	12.9
Jan. Mean Flow	545	596	9.33
Feb. Mean Flow	567	614	8.25
Mar. Mean Flow	729	745	2.18
Apr. Mean Flow	648	653	0.76
May Mean Flow	517	488	-5.65
Jun. Mean Flow	338	384	13.8
Jul. Mean Flow	156	207	32.4
Aug. Mean Flow	109	156	43.4
Sep. Mean Flow	171	271	58.8
Oct. Mean Flow	141	254	80.5
Nov. Mean Flow	316	374	18.3
Dec. Mean Flow	402	493	22.8

Table 3: Monthly High Flows

	Scen. 1	Scen. 2	Pct. Difference
Jan. High Flow	184	231	25.2
Feb. High Flow	831	499	-40
Mar. High Flow	1380	894	-35.2
Apr. High Flow	1680	1290	-22.8
May High Flow	1480	927	-37.6
Jun. High Flow	2540	1500	-40.9
Jul. High Flow	1500	1370	-8.38
Aug. High Flow	1200	836	-30.6
Sep. High Flow	376	392	4.46
Oct. High Flow	188	238	27
Nov. High Flow	154	199	28.7
Dec. High Flow	158	268	68.8

Table 4: Period Low Flows

	Scen. 1	Scen. 2	Pct. Difference
Min. 1 Day Min	22.7	3.19	-85.9
Med. 1 Day Min	39.5	18.8	-52.5
Min. 3 Day Min	22.8	3.29	-85.6
Med. 3 Day Min	39.8	19.5	-51
Min. 7 Day Min	23.5	3.51	-85.1
Med. 7 Day Min	40.7	23.3	-42.7
Min. 30 Day Min	27.9	5.33	-80.9
Med. 30 Day Min	50	42.8	-14.5
Min. 90 Day Min	44.2	44.7	1.11
Med. 90 Day Min	73.3	87.4	19.2
7Q10	30.1	8.56	-71.5
Year of 90-Day Min. Flow	2000	2000	0
Drought Year Mean	140	165	17.7
Mean Baseflow	171	253	48

Table 5: Period High Flows

	Scen. 1	Scen. 2	Pct. Difference
Max. 1 Day Max	21000	11800	-43.9
Med. 1 Day Max	5200	3390	-34.8
Max. 3 Day Max	15200	8300	-45.4
Med. 3 Day Max	3440	2850	-17.3
Max. 7 Day Max	7300	3980	-45.4
Med. 7 Day Max	2400	2080	-13.5
Max. 30 Day Max	2480	2350	-5.34
Med. 30 Day Max	1140	1020	-10.2
Max. 90 Day Max	1520	1580	4.05
Med. 90 Day Max	731	759	3.81

Table 6: Non-Exceedance Flows

	Scen. 1	Scen. 2	Pct. Difference
1% Non-Exceedance	32	12.7	-60.4
5% Non-Exceedance	42	29.8	-28.9
50% Non-Exceedance	181	294	62.3
95% Non-Exceedance	1320	1320	0.01
99% Non-Exceedance	3190	2810	-12.1
Sept. 10% Non-Exceedance	37.1	22	-40.6

Additional Tables: Land-River Segment Flow Metrics

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	Mean Unit Flow (cfs/sq. mi)
SURface Outflow	0.00148
InterFloW Outflow	0.000371
Active GroundWater Outflow	0.00047

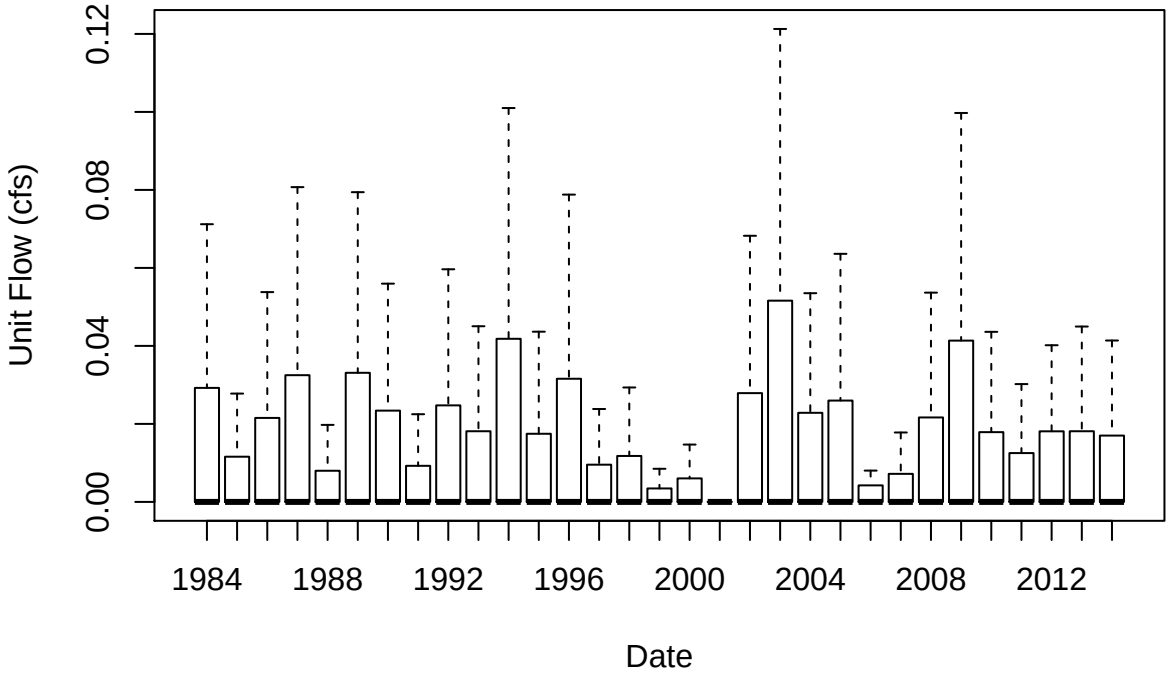
tab.cbp6_N51005_JU3_7400_7510.zero.day.ratios.by.flow

	Ratio of Days with Zero Flow to Total Days
SURface Outflow	0.647
InterFloW Outflow	0.483
Active GroundWater Outflow	0.365

tab.SURO.cbp6_N51005_JU3_7400_7510.iqr.by.lrseg.flow.annual

	IQR of Unit Flows (cfs/sq. mi) [25th, 75th]
1984	1.29e-05 [0, 1.29e-05]
1985	5.32e-06 [0, 5.32e-06]
1986	7.75e-06 [0, 7.75e-06]
1987	2.87e-05 [0, 2.87e-05]
1988	2.24e-06 [0, 2.24e-06]
1989	5.78e-05 [0, 5.78e-05]
1990	9.62e-06 [0, 9.62e-06]
1991	4.65e-06 [0, 4.65e-06]
1992	1.69e-05 [0, 1.69e-05]
1993	5.4e-06 [0, 5.4e-06]
1994	1.91e-05 [0, 1.91e-05]
1995	1.51e-05 [0, 1.51e-05]
1996	4.59e-05 [0, 4.59e-05]
1997	5.72e-06 [0, 5.72e-06]
1998	5.29e-06 [0, 5.29e-06]
1999	1.83e-06 [0, 1.83e-06]
2000	3.19e-06 [0, 3.19e-06]
2001	7.43e-09 [0, 7.43e-09]
2002	1.14e-05 [0, 1.14e-05]
2003	0.000467 [0, 0.000467]
2004	2.1e-05 [0, 2.1e-05]
2005	2.09e-05 [0, 2.09e-05]
2006	2.01e-06 [0, 2.01e-06]
2007	3.72e-06 [0, 3.72e-06]
2008	6.6e-06 [0, 6.6e-06]
2009	5.34e-05 [0, 5.34e-05]
2010	1.36e-05 [0, 1.36e-05]
2011	4.72e-06 [0, 4.72e-06]
2012	6.98e-06 [0, 6.98e-06]
2013	9.83e-06 [0, 9.83e-06]
2014	8.59e-06 [0, 8.59e-06]

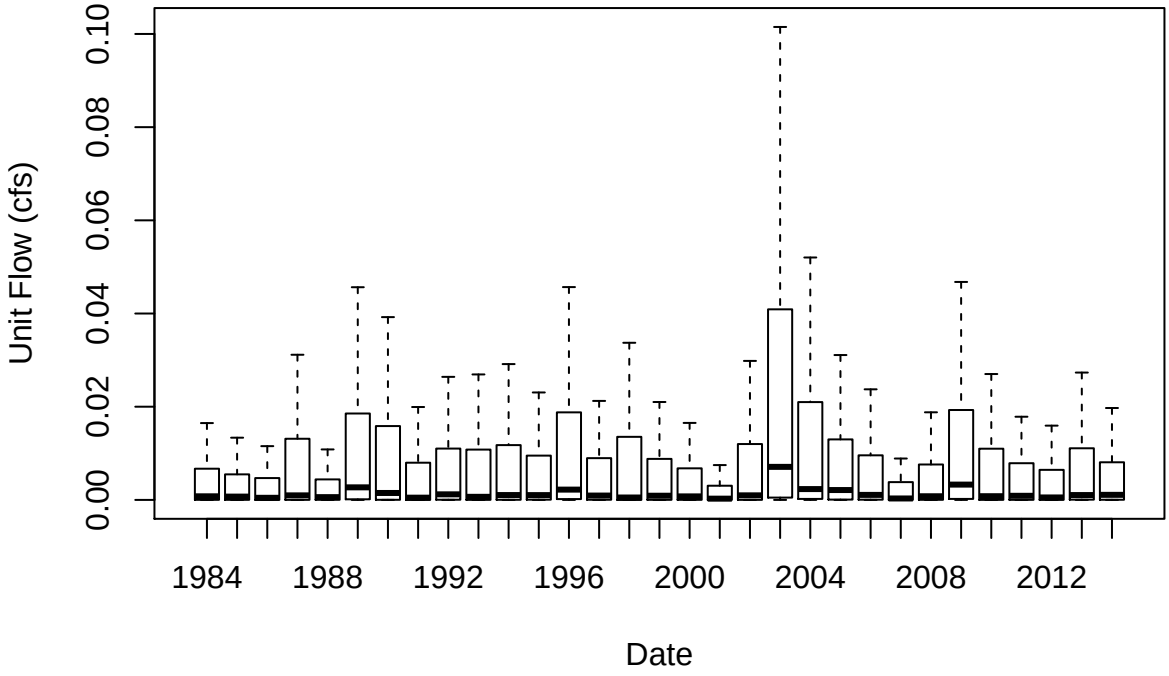
Fig: Boxplot of Annual SURO Flows for LR-seg cbp6_N51005_JU3_7400_7510



tab.IFWO.cbp6_N51005_JU3_7400_7510.iqr.by.lrseg.flow.annual

	IQR of Unit Flows (cfs/sq. mi) [25th, 75th]
1984	7.86e-05 [0, 7.86e-05]
1985	5.52e-05 [0, 5.52e-05]
1986	3.99e-05 [0, 3.99e-05]
1987	9.5e-05 [0, 9.5e-05]
1988	4.88e-05 [0, 4.88e-05]
1989	0.00024 [0, 0.00024]
1990	0.000178 [0, 0.000178]
1991	5.81e-05 [0, 5.81e-05]
1992	0.000104 [0, 0.000104]
1993	8.29e-05 [0, 8.29e-05]
1994	0.000103 [0, 0.000103]
1995	0.000102 [0, 0.000102]
1996	0.000216 [0, 0.000216]
1997	9.51e-05 [0, 9.51e-05]
1998	7.8e-05 [0, 7.8e-05]
1999	8.93e-05 [0, 8.93e-05]
2000	7.5e-05 [0, 7.5e-05]
2001	2.9e-05 [0, 2.9e-05]
2002	0.000111 [0, 0.000111]
2003	0.000552 [0, 0.000552]
2004	0.000222 [0, 0.000222]
2005	0.000183 [0, 0.000183]
2006	0.000107 [0, 0.000107]
2007	3.87e-05 [0, 3.87e-05]
2008	7.43e-05 [0, 7.43e-05]
2009	0.000265 [0, 0.000265]
2010	8.12e-05 [0, 8.12e-05]
2011	7.86e-05 [0, 7.86e-05]
2012	5.13e-05 [0, 5.13e-05]
2013	0.000109 [0, 0.000109]
2014	9e-05 [0, 9e-05]

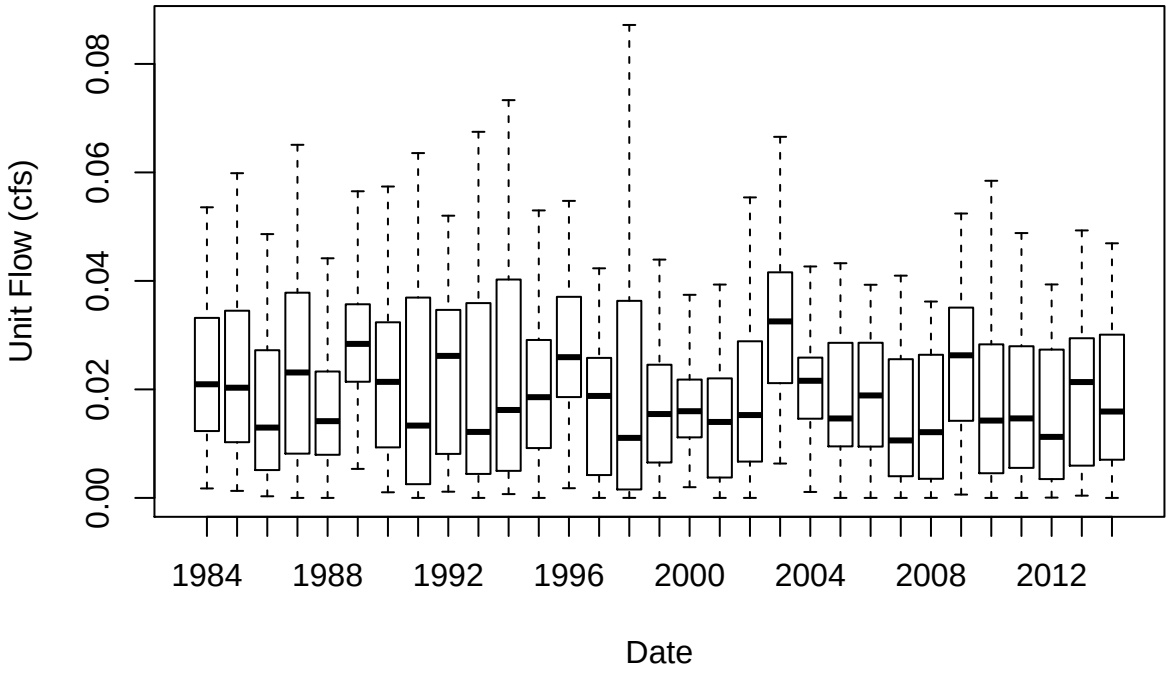
Fig: Boxplot of Annual IFWO Flows for LR-seg cbp6_N51005_JU3_7400_7510



tab.AGWO.cbp6_N51005_JU3_7400_7510.iqr.by.lrseg.flow.annual

	IQR of Unit Flows (cfs/sq. mi) [25th, 75th]
1984	0.000901 [0, 0.000901]
1985	0.000916 [0, 0.000916]
1986	0.000685 [0, 0.000685]
1987	0.000972 [0, 0.000972]
1988	0.00061 [0, 0.00061]
1989	0.0011 [0, 0.0011]
1990	0.000917 [0, 0.000917]
1991	0.000868 [0, 0.000868]
1992	0.00101 [0, 0.00101]
1993	0.000896 [0, 0.000896]
1994	0.000838 [0, 0.000838]
1995	0.000801 [0, 0.000801]
1996	0.00107 [0, 0.00107]
1997	0.000741 [0, 0.000741]
1998	0.000804 [0, 0.000804]
1999	0.00066 [0, 0.00066]
2000	0.000644 [0, 0.000644]
2001	0.00061 [0, 0.00061]
2002	0.000681 [0, 0.000681]
2003	0.00126 [0, 0.00126]
2004	0.000832 [0, 0.000832]
2005	0.000754 [0, 0.000754]
2006	0.000755 [0, 0.000755]
2007	0.000596 [0, 0.000596]
2008	0.000677 [0, 0.000677]
2009	0.00101 [0, 0.00101]
2010	0.000664 [0, 0.000664]
2011	0.000662 [0, 0.000662]
2012	0.000633 [0, 0.000633]
2013	0.000869 [0, 0.000869]
2014	0.000768 [0, 0.000768]

Fig: Boxplot of Annual AGWO Flows for LR-seg cbp6_N51005_JU3_7400_7510



tab.cbp6__N51005__JU3__7400__7510.means.by.land.use

	Mean Unit Flow (cfs/sq. mi)
aop	0.000565
cch	0.000709
cci	0.00111
ccn	0.000743
cfr	0.000537
cir	0.00111
cmo	0.000547
cnr	0.00111
ctg	0.000709
dbl	0.00059
fnp	0.00111
for	0.000537
fsp	0.00111
gom	0.00059
gwm	0.00059
hfr	0.000599
lhy	0.000565
mch	0.000709
mci	0.00111
mcn	0.000743
mir	0.00111
mnr	0.00111
mtg	0.000709
nch	0.000709
nci	0.00111
nir	0.00111
nnr	0.00111
ntg	0.000709
oac	0.00059
ohy	0.000565
osp	0.000547
pas	0.000565
sch	0.00059
scl	0.00059
sgg	0.00059
sho	0.00111
som	0.00059
soy	0.00059
stb	0.00111
stf	0.00111
swm	0.00059
wfp	0.000537
wto	0.000537

tab.cbp6_N51005_JU3_7400_7510.zero.day.ratios.by.land.use

	Ratio of Days with Zero Flow to Total Days
aop	0.302
cch	0.315
cci	0.89
ccn	0.284
cfr	0.36
cir	0.89
cmo	0.317
cnr	0.89
ctg	0.315
dbl	0.291
fnp	0.889
for	0.369
fsp	0.889
gom	0.291
gwm	0.291
hfr	0.301
lhy	0.303
mch	0.315
mci	0.89
mcn	0.284
mir	0.89
mnr	0.89
mtg	0.315
nch	0.315
nci	0.89
nir	0.89
nnr	0.89
ntg	0.315
oac	0.291
ohy	0.303
osp	0.318
pas	0.303
sch	0.291
scl	0.291
sgg	0.291
sho	0.89
som	0.291
soy	0.291
stb	0.89
stf	0.89
swm	0.291
wfp	0.369
wto	0.369

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	Mean Unit Flow (cfs/sq. mi)
SURface Outflow	0.00154
InterFloW Outflow	0.000334
Active GroundWater Outflow	0.000595

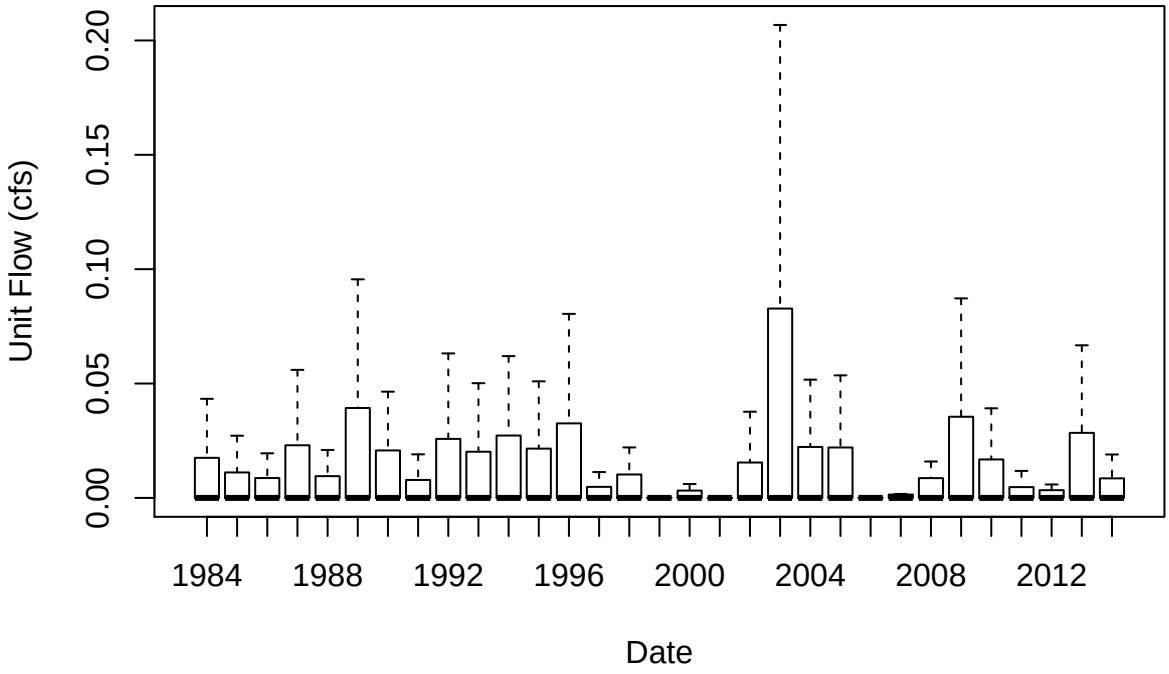
tab.cbp6_N51023_JU3_7400_7510.zero.day.ratios.by.flow

	Ratio of Days with Zero Flow to Total Days
SURface Outflow	0.676
InterFloW Outflow	0.435
Active GroundWater Outflow	0.326

tab.SURO.cbp6_N51023_JU3_7400_7510.iqr.by.lrseg.flow.annual

	IQR of Unit Flows (cfs/sq. mi) [25th, 75th]
1984	2.32e-06 [0, 2.32e-06]
1985	2.04e-06 [0, 2.04e-06]
1986	2.27e-06 [0, 2.27e-06]
1987	1.12e-05 [0, 1.12e-05]
1988	1.3e-06 [0, 1.3e-06]
1989	3.36e-05 [0, 3.36e-05]
1990	7.54e-06 [0, 7.54e-06]
1991	8.43e-07 [0, 8.43e-07]
1992	1.01e-05 [0, 1.01e-05]
1993	7.86e-06 [0, 7.86e-06]
1994	1.68e-05 [0, 1.68e-05]
1995	9.08e-06 [0, 9.08e-06]
1996	2.49e-05 [0, 2.49e-05]
1997	1.63e-06 [0, 1.63e-06]
1998	2.88e-06 [0, 2.88e-06]
1999	9.29e-09 [0, 9.29e-09]
2000	1.02e-06 [0, 1.02e-06]
2001	0 [0, 0]
2002	4.4e-06 [0, 4.4e-06]
2003	0.000387 [0, 0.000387]
2004	7.72e-06 [0, 7.72e-06]
2005	1.15e-05 [0, 1.15e-05]
2006	5.32e-09 [0, 5.32e-09]
2007	3.64e-09 [0, 3.64e-09]
2008	2.05e-06 [0, 2.05e-06]
2009	2.71e-05 [0, 2.71e-05]
2010	1.01e-05 [0, 1.01e-05]
2011	1.12e-06 [0, 1.12e-06]
2012	1.19e-06 [0, 1.19e-06]
2013	8.55e-06 [0, 8.55e-06]
2014	2.78e-06 [0, 2.78e-06]

Fig: Boxplot of Annual SURO Flows for LR-seg cbp6_N51023_JU3_7400_7510



tab.IFWO.cbp6_N51023_JU3_7400_7510.iqr.by.lrseg.flow.annual

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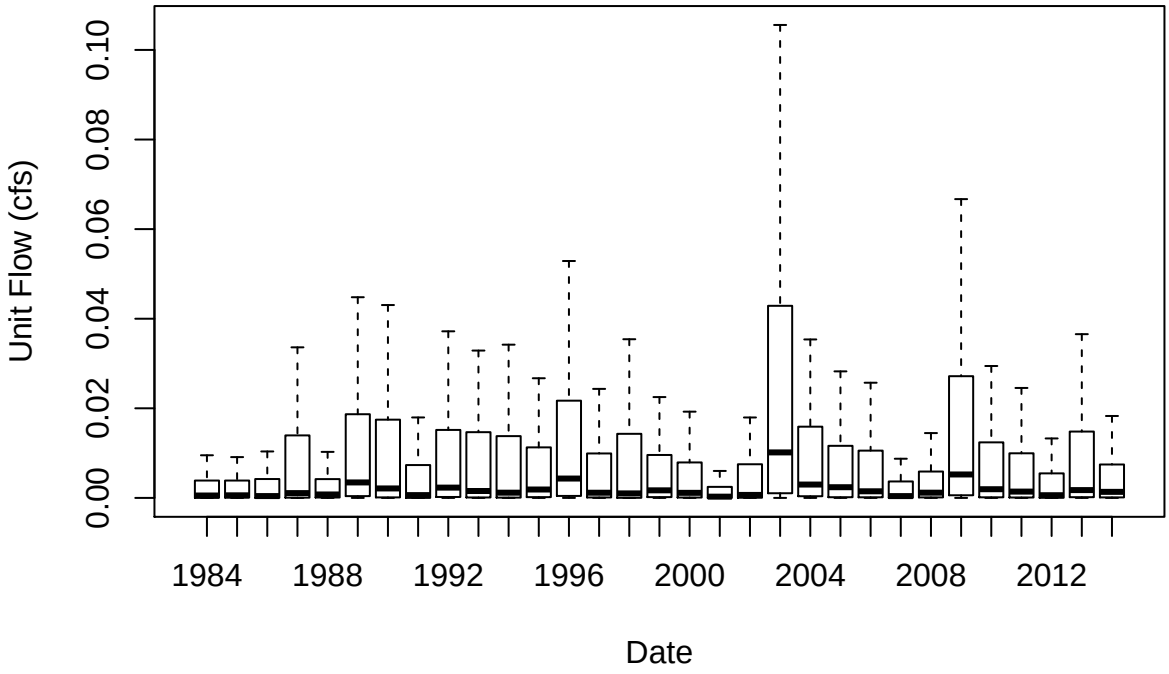
1984	4.1e-05 [0, 4.1e-05]
1985	4.94e-05 [0, 4.94e-05]
1986	3.48e-05 [0, 3.48e-05]
1987	0.000119 [0, 0.000119]
1988	4.81e-05 [0, 4.81e-05]
1989	0.000262 [0, 0.000262]
1990	0.000234 [0, 0.000234]
1991	6.3e-05 [0, 6.3e-05]
1992	0.000179 [0, 0.000179]
1993	0.000159 [0, 0.000159]
1994	0.000135 [0, 0.000135]
1995	0.000143 [0, 0.000143]
1996	0.000326 [0, 0.000326]
1997	9.84e-05 [0, 9.84e-05]
1998	9.49e-05 [0, 9.49e-05]
1999	0.000121 [0, 0.000121]
2000	0.000105 [0, 0.000105]
2001	2.52e-05 [0, 2.52e-05]
2002	5.89e-05 [0, 5.89e-05]
2003	0.000736 [0, 0.000736]
2004	0.000233 [0, 0.000233]
2005	0.000175 [0, 0.000175]
2006	0.000138 [0, 0.000138]
2007	3.5e-05 [0, 3.5e-05]
2008	7.14e-05 [0, 7.14e-05]
2009	0.000393 [0, 0.000393]
2010	0.00015 [0, 0.00015]
2011	0.000119 [0, 0.000119]
2012	5.77e-05 [0, 5.77e-05]
2013	0.000178 [0, 0.000178]
2014	9.86e-05 [0, 9.86e-05]

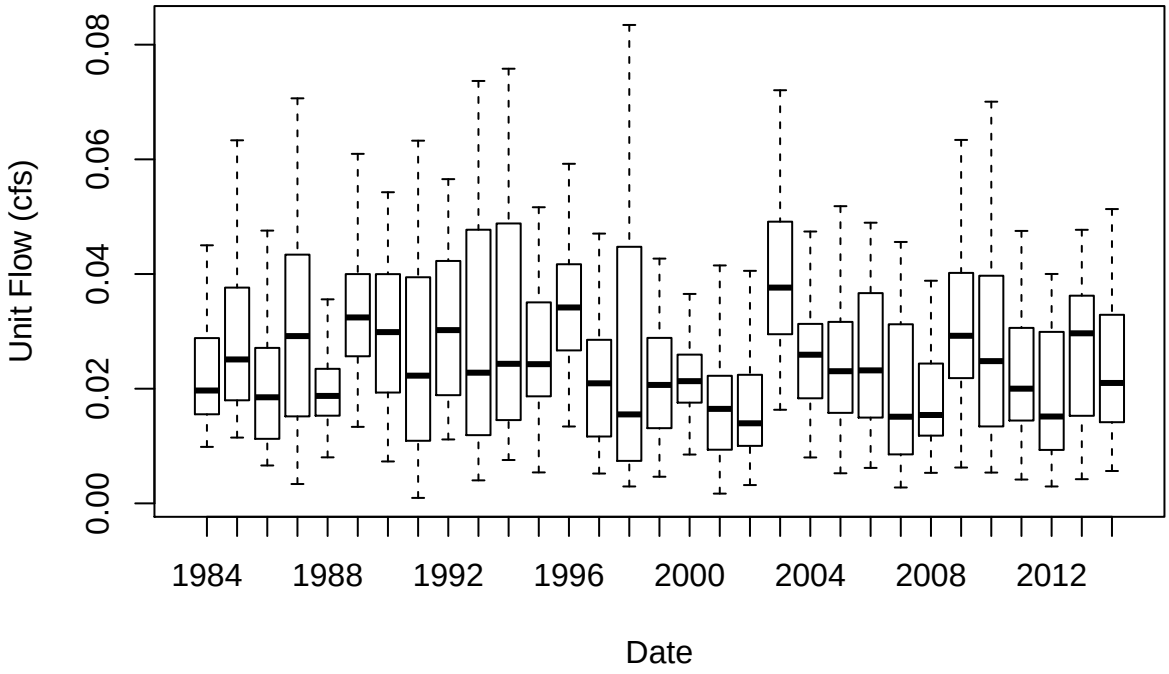
Fig: Boxplot of Annual IFWO Flows for LR-seg cbp6_N51023_JU3_7400_7510



tab.AGWO.cbp6_N51023_JU3_7400_7510.iqr.by.lrseg.flow.annual

	IQR of Unit Flows (cfs/sq. mi) [25th, 75th]
1984	0.000817 [0, 0.000817]
1985	0.00105 [0, 0.00105]
1986	0.000764 [0, 0.000764]
1987	0.00119 [0, 0.00119]
1988	0.000738 [0, 0.000738]
1989	0.00124 [0, 0.00124]
1990	0.00117 [0, 0.00117]
1991	0.00097 [0, 0.00097]
1992	0.00118 [0, 0.00118]
1993	0.00123 [0, 0.00123]
1994	0.00118 [0, 0.00118]
1995	0.00102 [0, 0.00102]
1996	0.00134 [0, 0.00134]
1997	0.000815 [0, 0.000815]
1998	0.000974 [0, 0.000974]
1999	0.000844 [0, 0.000844]
2000	0.000817 [0, 0.000817]
2001	0.000665 [0, 0.000665]
2002	0.000615 [0, 0.000615]
2003	0.00148 [0, 0.00148]
2004	0.001 [0, 0.001]
2005	0.000962 [0, 0.000962]
2006	0.000948 [0, 0.000948]
2007	0.000705 [0, 0.000705]
2008	0.000673 [0, 0.000673]
2009	0.00115 [0, 0.00115]
2010	0.00101 [0, 0.00101]
2011	0.000782 [0, 0.000782]
2012	0.000759 [0, 0.000759]
2013	0.00112 [0, 0.00112]
2014	0.00089 [0, 0.00089]

Fig: Boxplot of Annual AGWO Flows for LR-seg cbp6_N51023_JU3_7400_7510



tab.cbp6__N51023__JU3__7400__7510.means.by.land.use

	Mean Unit Flow (cfs/sq. mi)
aop	0.000592
cch	0.000755
cci	0.00119
ccn	0.000771
cfr	0.000561
cir	0.00119
cmo	0.000569
cnr	0.00119
ctg	0.000755
dbl	0.000617
fnp	0.00119
for	0.000561
fsp	0.00119
gom	0.000617
gwm	0.000617
hfr	0.000646
lhy	0.000592
mch	0.000755
mci	0.00119
mcn	0.000771
mir	0.00119
mnr	0.00119
mtg	0.000755
nch	0.000755
nci	0.00119
nir	0.00119
nnr	0.00119
ntg	0.000755
oac	0.000617
ohy	0.000592
osp	0.000569
pas	0.000592
sch	0.000617
scl	0.000617
sgg	0.000617
sho	0.00119
som	0.000617
soy	0.000617
stb	0.00119
stf	0.00119
swm	0.000617
wfp	0.000561
wto	0.000561

tab.cbp6_N51023_JU3_7400_7510.zero.day.ratios.by.land.use

	Ratio of Days with Zero Flow to Total Days
aop	0.276
cch	0.275
cci	0.897
ccn	0.266
cfr	0.298
cir	0.897
cmo	0.288
cnr	0.897
ctg	0.275
dbl	0.27
fnp	0.896
for	0.302
fsp	0.896
gom	0.27
gwm	0.27
hfr	0.265
lhy	0.277
mch	0.275
mci	0.897
mcn	0.266
mir	0.897
mnr	0.897
mtg	0.275
nch	0.275
nci	0.897
nir	0.897
nnr	0.897
ntg	0.275
oac	0.27
ohy	0.277
osp	0.288
pas	0.277
sch	0.27
scl	0.27
sgg	0.27
sho	0.897
som	0.27
soy	0.27
stb	0.897
stf	0.897
swm	0.27
wfp	0.302
wto	0.302

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	Mean Unit Flow (cfs/sq. mi)
SURface Outflow	0.0015
InterFloW Outflow	0.000341
Active GroundWater Outflow	0.000572

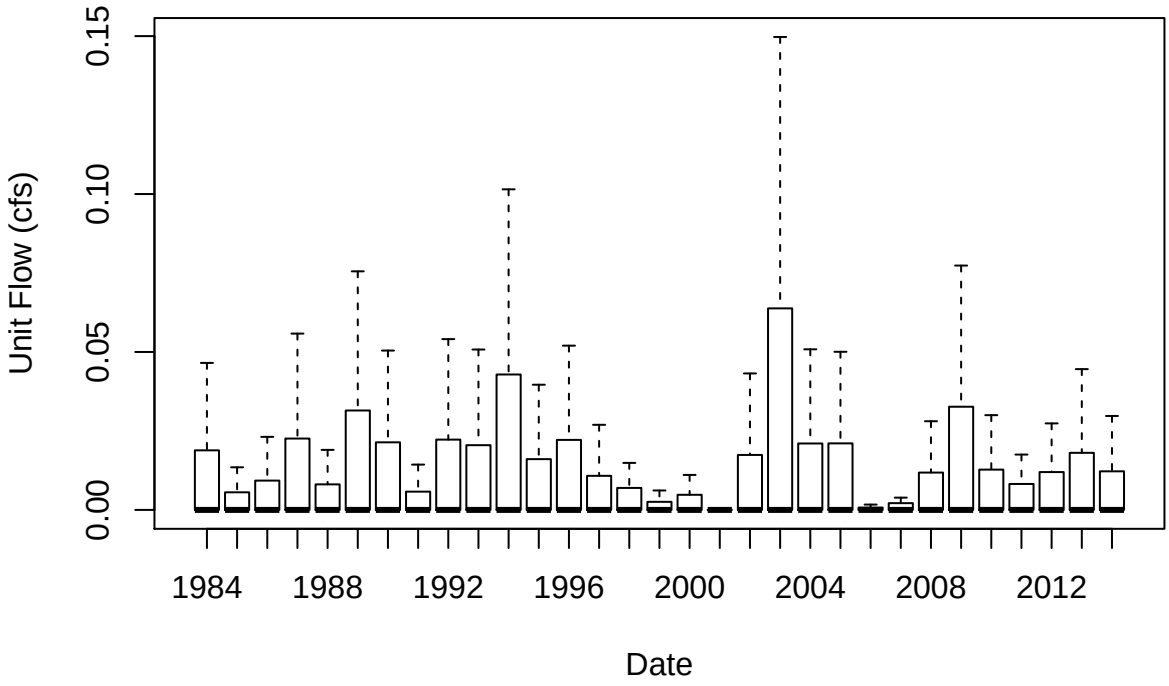
tab.cbp6_L51023_JU3_7400_7510.zero.day.ratios.by.flow

	Ratio of Days with Zero Flow to Total Days
SURface Outflow	0.677
InterFloW Outflow	0.466
Active GroundWater Outflow	0.326

tab.SURO.cbp6_L51023_JU3_7400_7510.iqr.by.lrseg.flow.annual

	IQR of Unit Flows (cfs/sq. mi) [25th, 75th]
1984	3.02e-06 [0, 3.02e-06]
1985	1.9e-06 [0, 1.9e-06]
1986	1.85e-06 [0, 1.85e-06]
1987	1.03e-05 [0, 1.03e-05]
1988	7.92e-07 [0, 7.92e-07]
1989	2.72e-05 [0, 2.72e-05]
1990	4.92e-06 [0, 4.92e-06]
1991	8.4e-07 [0, 8.4e-07]
1992	1.05e-05 [0, 1.05e-05]
1993	6.86e-06 [0, 6.86e-06]
1994	2.48e-05 [0, 2.48e-05]
1995	6.67e-06 [0, 6.67e-06]
1996	1.14e-05 [0, 1.14e-05]
1997	1.44e-06 [0, 1.44e-06]
1998	2.92e-06 [0, 2.92e-06]
1999	2.16e-07 [0, 2.16e-07]
2000	5.74e-07 [0, 5.74e-07]
2001	0 [0, 0]
2002	4.39e-06 [0, 4.39e-06]
2003	0.000335 [0, 0.000335]
2004	9.96e-06 [0, 9.96e-06]
2005	1.16e-05 [0, 1.16e-05]
2006	3.98e-09 [0, 3.98e-09]
2007	3.14e-08 [0, 3.14e-08]
2008	3.22e-06 [0, 3.22e-06]
2009	2e-05 [0, 2e-05]
2010	9.09e-06 [0, 9.09e-06]
2011	1.17e-06 [0, 1.17e-06]
2012	3.64e-06 [0, 3.64e-06]
2013	5.88e-06 [0, 5.88e-06]
2014	3.1e-06 [0, 3.1e-06]

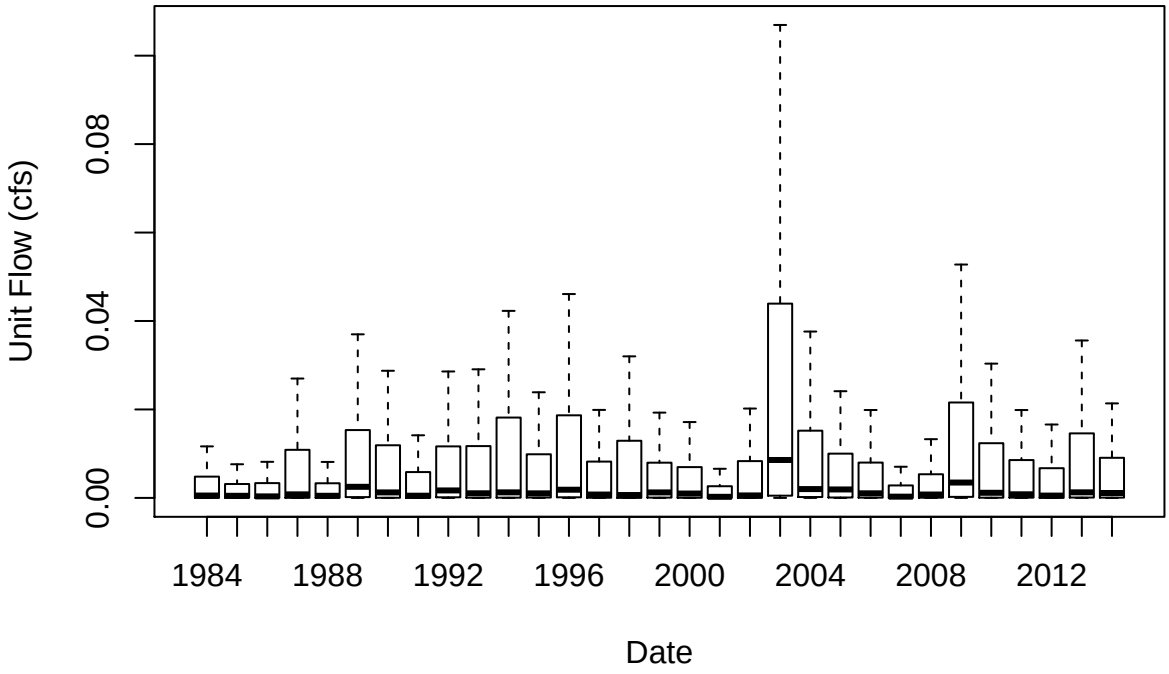
Fig: Boxplot of Annual SURO Flows for LR-seg cbp6_L51023_JU3_7400_7510



tab.IFWO.cbp6_L51023_JU3_7400_7510.iqr.by.lrseg.flow.annual

	IQR of Unit Flows (cfs/sq. mi) [25th, 75th]
1984	4.87e-05 [0, 4.87e-05]
1985	3.7e-05 [0, 3.7e-05]
1986	2.35e-05 [0, 2.35e-05]
1987	7.88e-05 [0, 7.88e-05]
1988	3.18e-05 [0, 3.18e-05]
1989	0.000213 [0, 0.000213]
1990	0.000142 [0, 0.000142]
1991	5.28e-05 [0, 5.28e-05]
1992	0.000136 [0, 0.000136]
1993	0.000112 [0, 0.000112]
1994	0.00014 [0, 0.00014]
1995	9.13e-05 [0, 9.13e-05]
1996	0.000229 [0, 0.000229]
1997	7.14e-05 [0, 7.14e-05]
1998	8.3e-05 [0, 8.3e-05]
1999	9.39e-05 [0, 9.39e-05]
2000	9.11e-05 [0, 9.11e-05]
2001	2.45e-05 [0, 2.45e-05]
2002	5.98e-05 [0, 5.98e-05]
2003	0.000641 [0, 0.000641]
2004	0.000184 [0, 0.000184]
2005	0.000145 [0, 0.000145]
2006	9.87e-05 [0, 9.87e-05]
2007	2.71e-05 [0, 2.71e-05]
2008	5.5e-05 [0, 5.5e-05]
2009	0.000294 [0, 0.000294]
2010	0.000116 [0, 0.000116]
2011	7.41e-05 [0, 7.41e-05]
2012	5.82e-05 [0, 5.82e-05]
2013	0.000144 [0, 0.000144]
2014	9.19e-05 [0, 9.19e-05]

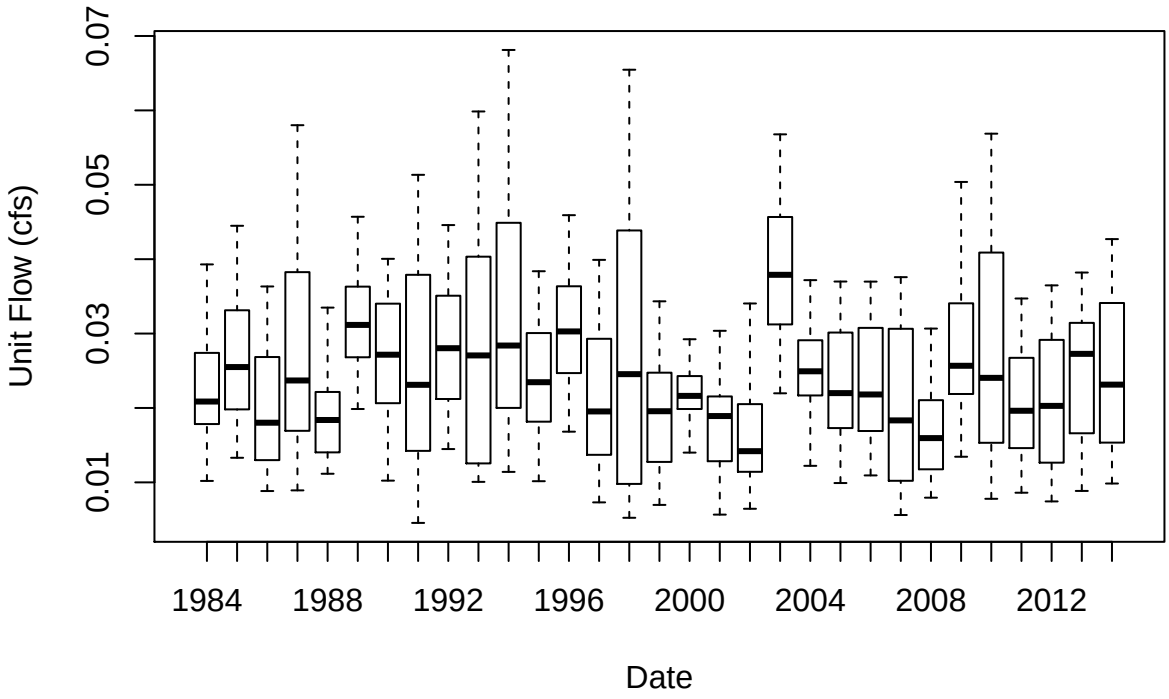
Fig: Boxplot of Annual IFWO Flows for LR-seg cbp6_L51023_JU3_7400_7510



tab.AGWO.cbp6_L51023_JU3_7400_7510.iqr.by.lrseg.flow.annual

	IQR of Unit Flows (cfs/sq. mi) [25th, 75th]
1984	0.00081 [0, 0.00081]
1985	0.000999 [0, 0.000999]
1986	0.00076 [0, 0.00076]
1987	0.00106 [0, 0.00106]
1988	0.000693 [0, 0.000693]
1989	0.00118 [0, 0.00118]
1990	0.00105 [0, 0.00105]
1991	0.000995 [0, 0.000995]
1992	0.00106 [0, 0.00106]
1993	0.0011 [0, 0.0011]
1994	0.0012 [0, 0.0012]
1995	0.000908 [0, 0.000908]
1996	0.00117 [0, 0.00117]
1997	0.000803 [0, 0.000803]
1998	0.00109 [0, 0.00109]
1999	0.000754 [0, 0.000754]
2000	0.00083 [0, 0.00083]
2001	0.000715 [0, 0.000715]
2002	0.000595 [0, 0.000595]
2003	0.00143 [0, 0.00143]
2004	0.000976 [0, 0.000976]
2005	0.000867 [0, 0.000867]
2006	0.000863 [0, 0.000863]
2007	0.000767 [0, 0.000767]
2008	0.000631 [0, 0.000631]
2009	0.00102 [0, 0.00102]
2010	0.000952 [0, 0.000952]
2011	0.000746 [0, 0.000746]
2012	0.000818 [0, 0.000818]
2013	0.00102 [0, 0.00102]
2014	0.000907 [0, 0.000907]

Fig: Boxplot of Annual AGWO Flows for LR-seg cbp6_L51023_JU3_7400_7510



tab.cbp6_L51023_JU3_7400_7510.means.by.land.use

	Mean Unit Flow (cfs/sq. mi)
aop	0.00058
cch	0.000746
cci	0.00116
ccn	0.000767
cfr	0.00054
cir	0.00116
cmo	0.000554
cnr	0.00116
ctg	0.000746
dbl	0.000604
fnp	0.00116
for	0.00054
fsp	0.00116
gom	0.000604
gwm	0.000604
hfr	0.000632
lhy	0.000579
mch	0.000746
mci	0.00116
mcn	0.000767
mir	0.00116
mnr	0.00116
mtg	0.000746
nch	0.000746
nci	0.00116
nir	0.00116
nnr	0.00116
ntg	0.000746
oac	0.000604
ohy	0.000579
osp	0.000554
pas	0.000579
sch	0.000604
scl	0.000604
sgg	0.000604
sho	0.00116
som	0.000604
soy	0.000604
stb	0.00116
stf	0.00116
swm	0.000604
wfp	0.00054
wto	0.00054

tab.cbp6_L51023_JU3_7400_7510.zero.day.ratios.by.land.use

	Ratio of Days with Zero Flow to Total Days
aop	0.291
cch	0.292
cci	0.898
ccn	0.277
cfr	0.316
cir	0.898
cmo	0.306
cnr	0.898
ctg	0.292
dbl	0.285
fnp	0.898
for	0.321
fsp	0.898
gom	0.285
gwm	0.285
hfr	0.28
lhy	0.289
mch	0.292
mci	0.898
mcn	0.277
mir	0.898
mnr	0.898
mtg	0.292
nch	0.292
nci	0.898
nir	0.898
nnr	0.898
ntg	0.292
oac	0.285
ohy	0.289
osp	0.306
pas	0.289
sch	0.285
scl	0.285
sgg	0.285
sho	0.898
som	0.285
soy	0.285
stb	0.898
stf	0.898
swm	0.285
wfp	0.321
wto	0.321

Fig. 1: Hydrograph

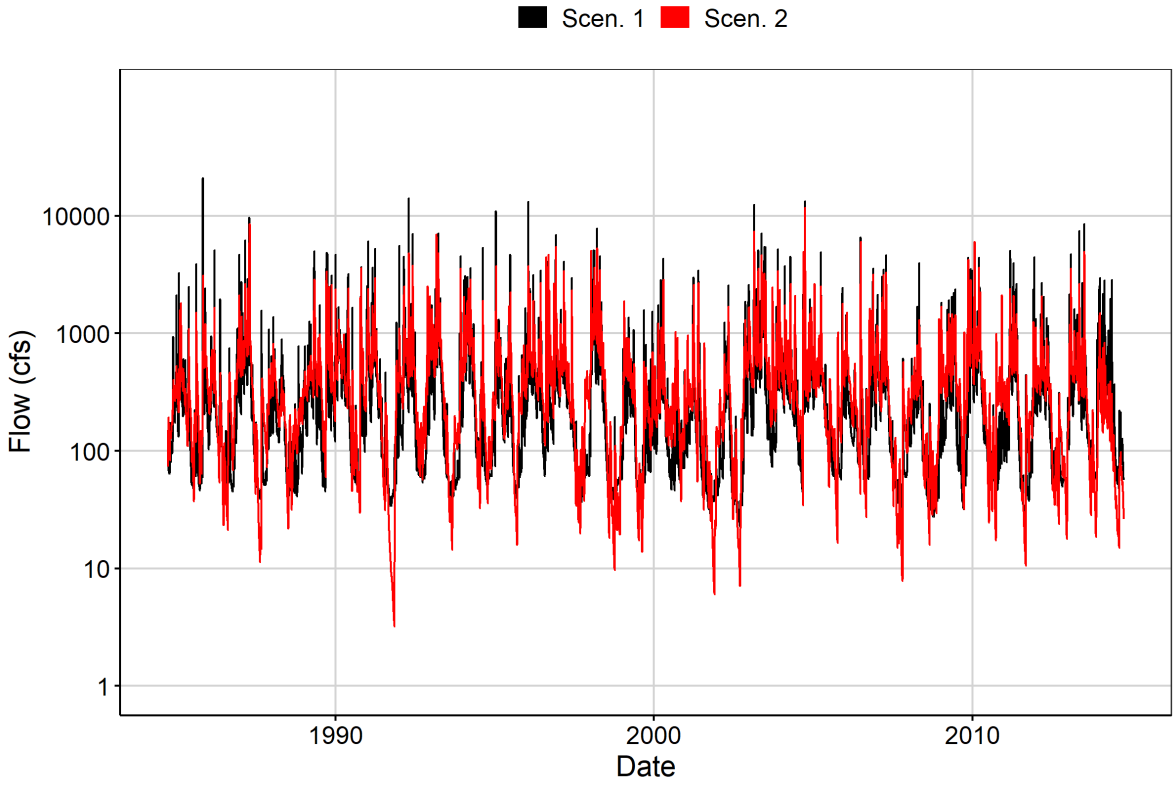


Fig. 2: Zoomed Hydrograph

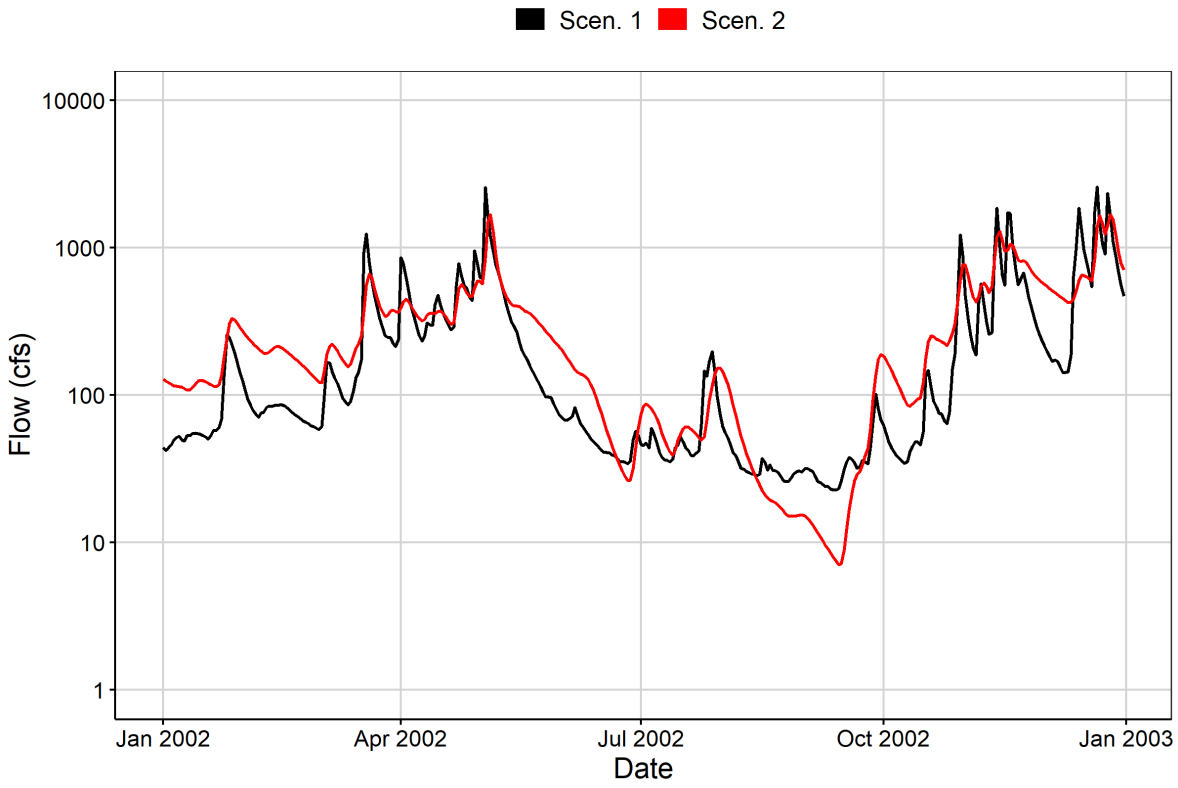


Fig. 3: Flow Exceedance

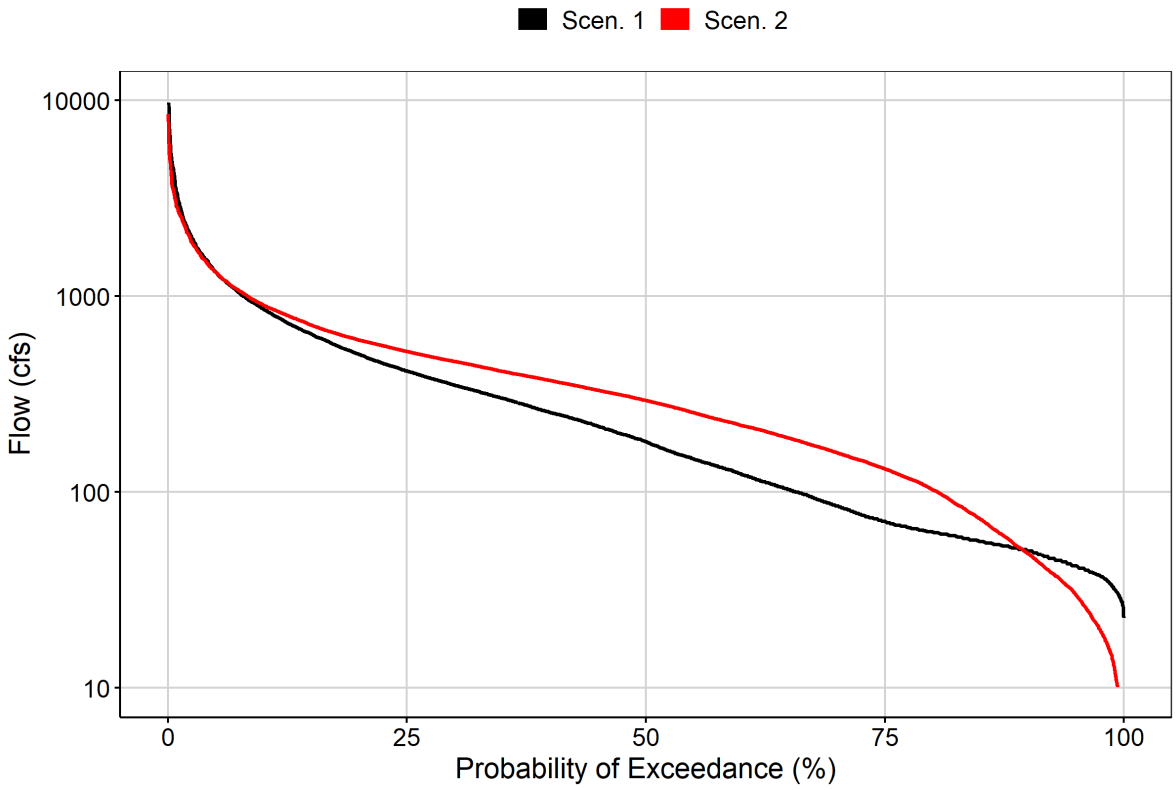


Fig. 4: Baseflow

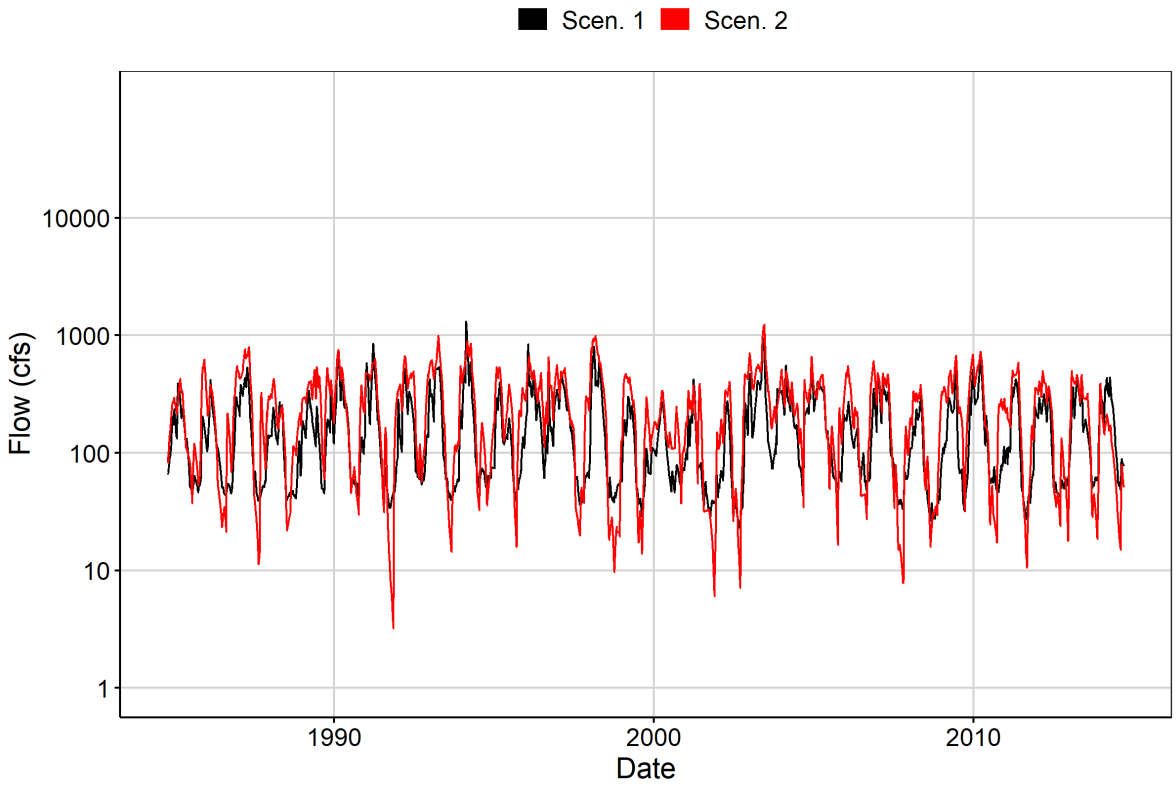


Fig. 5: Combined Baseflow

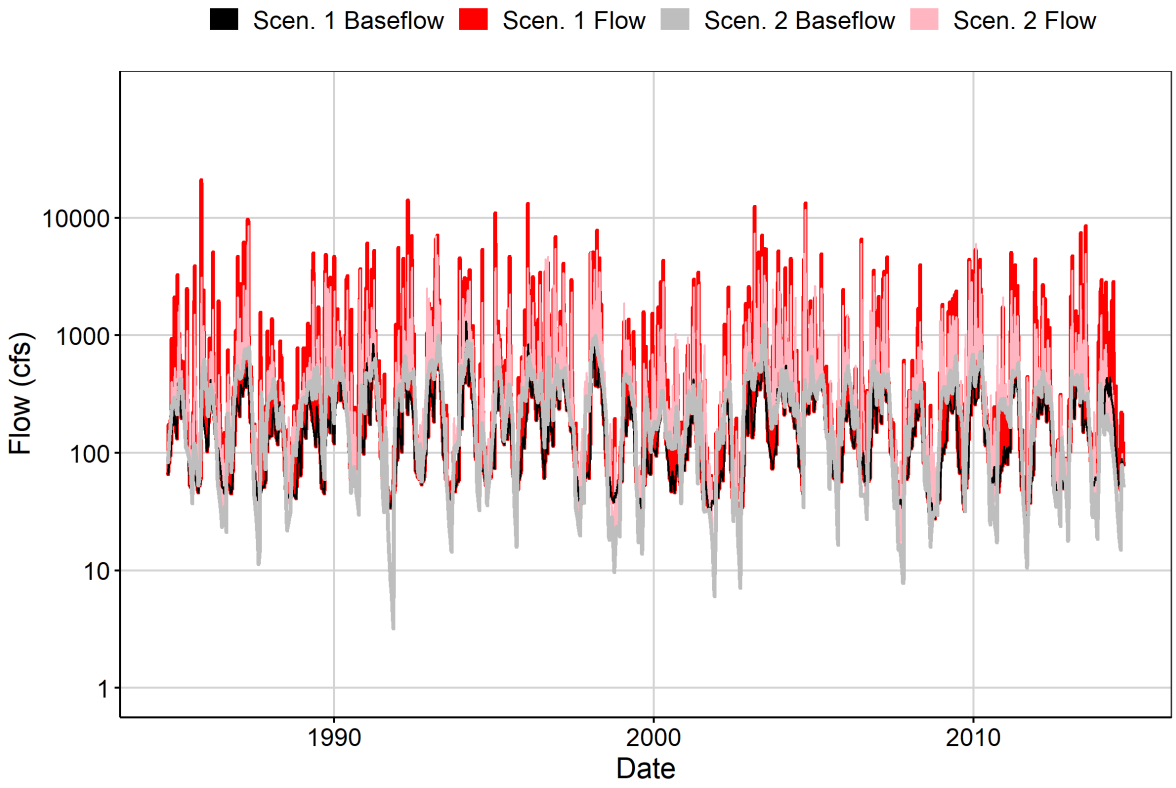


Fig. 6: Largest Difference Period

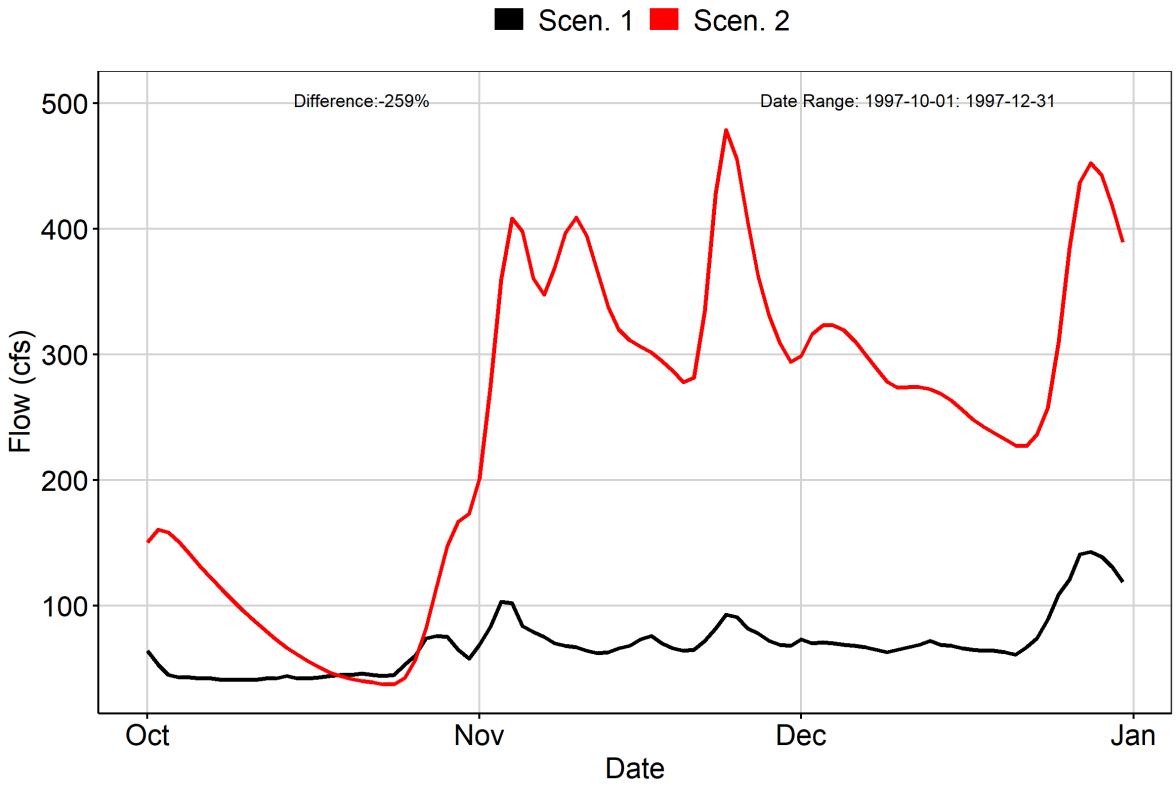


Fig. 7: Second Largest Difference Period

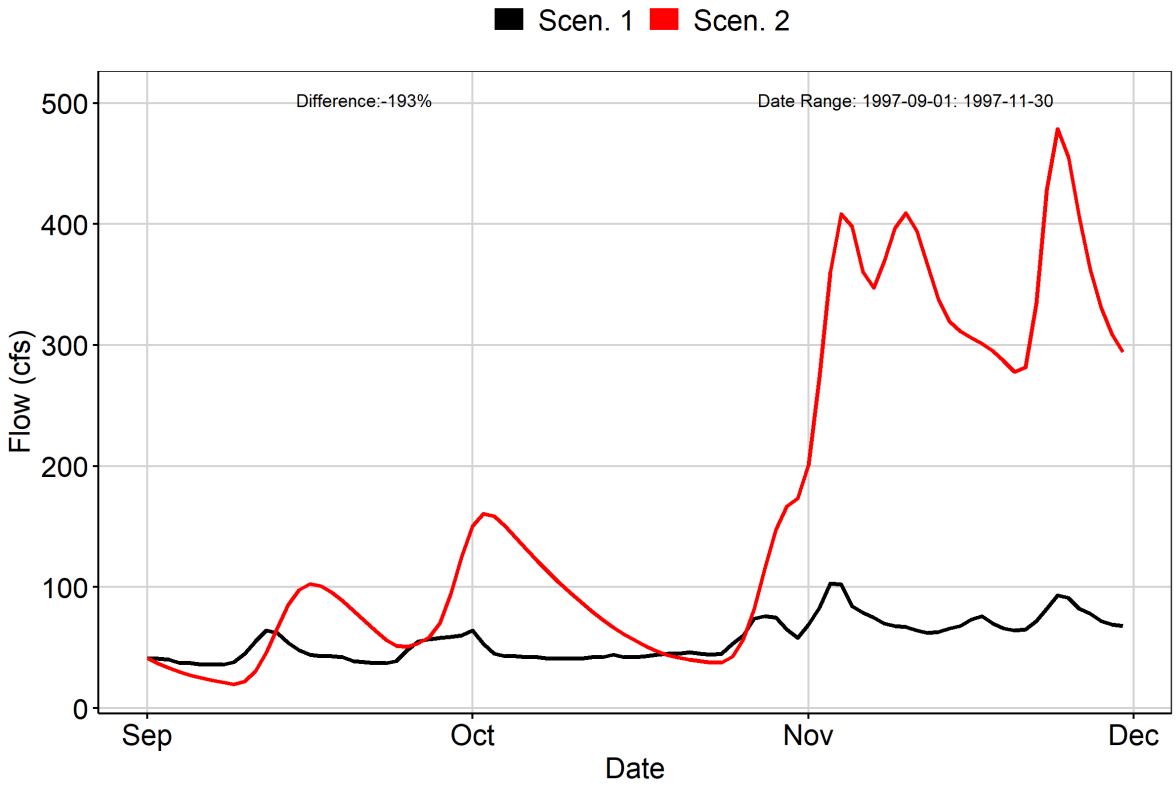


Fig. 8: Third Largest Difference Period

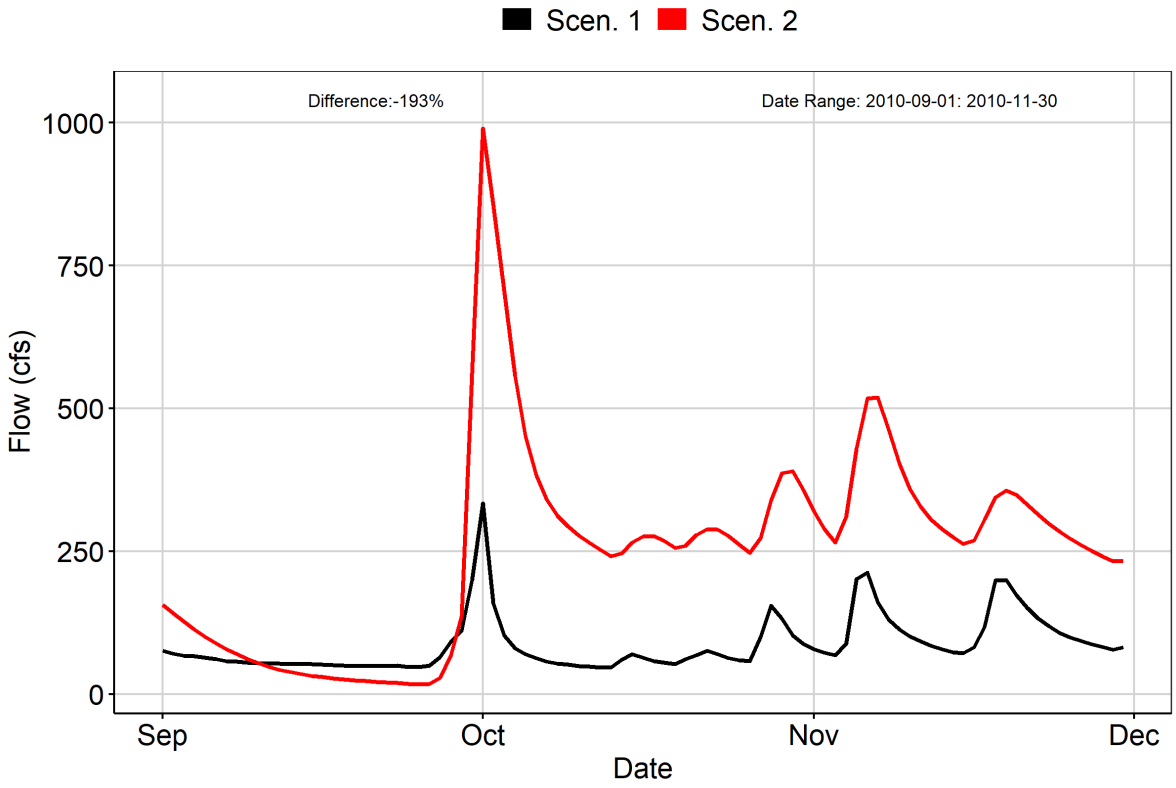


Fig. 9A: Residuals Plot

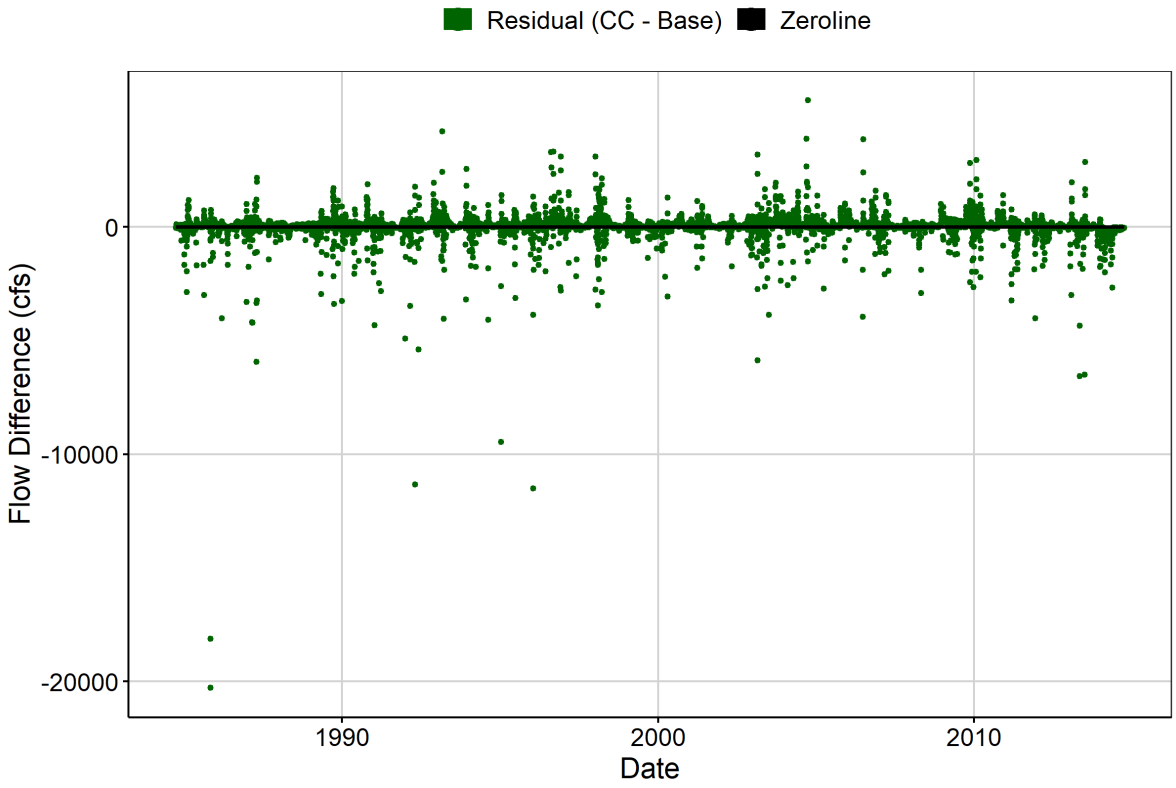


Fig. 9B: Area Weighted Residuals Plot

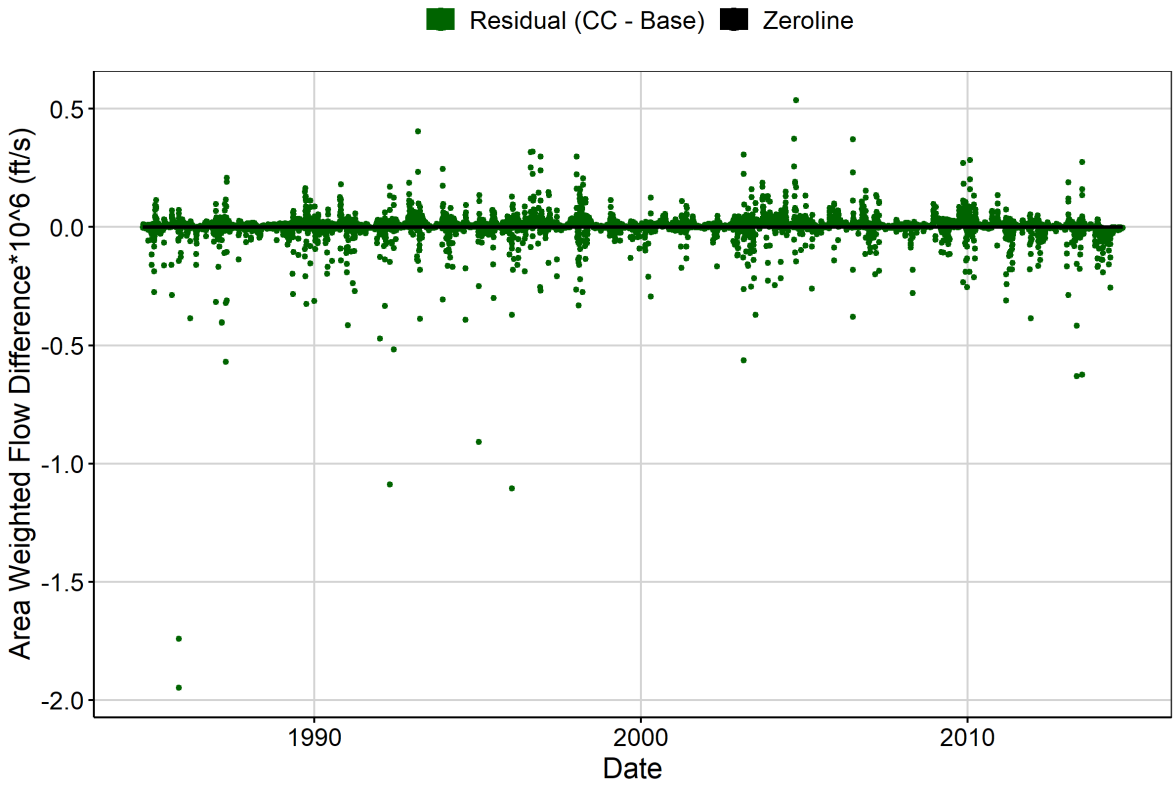
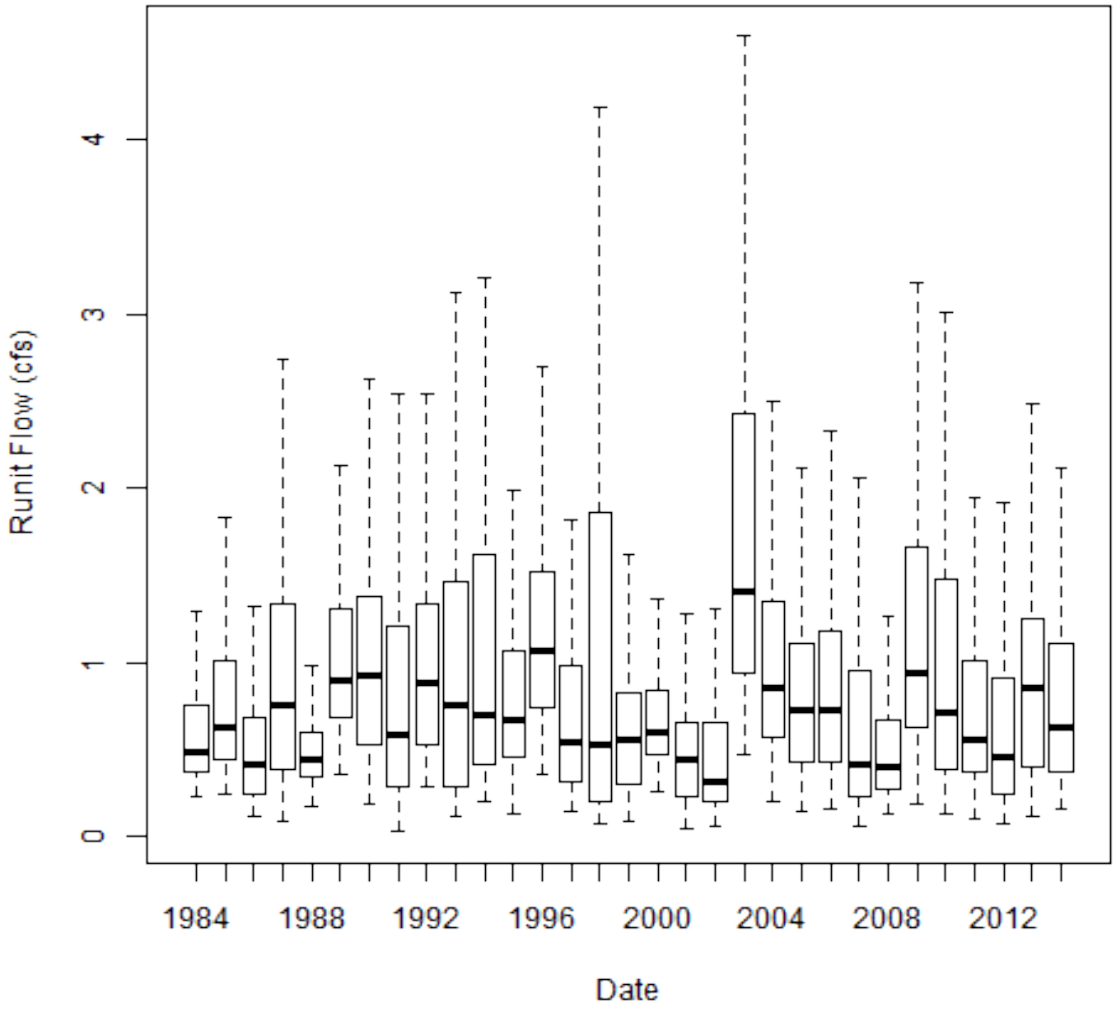


Fig. 10: VA Hydro Scen. 1 Runit Values (Outliers Excluded)



	IQR of Runit Flows (cfs/sq. mi) [25th, 75th]
1984	0.753 [0.377, 1.13]
1985	0.753 [0.377, 1.13]
1986	0.753 [0.377, 1.13]
1987	0.753 [0.377, 1.13]
1988	0.753 [0.377, 1.13]
1989	0.753 [0.377, 1.13]
1990	0.753 [0.377, 1.13]
1991	0.753 [0.377, 1.13]
1992	0.753 [0.377, 1.13]
1993	0.753 [0.377, 1.13]
1994	0.753 [0.377, 1.13]
1995	0.753 [0.377, 1.13]

	IQR of Runit Flows (cfs/sq. mi) [25th, 75th]
1996	0.753 [0.377, 1.13]
1997	0.753 [0.377, 1.13]
1998	0.753 [0.377, 1.13]
1999	0.753 [0.377, 1.13]
2000	0.753 [0.377, 1.13]
2001	0.753 [0.377, 1.13]
2002	0.753 [0.377, 1.13]
2003	0.753 [0.377, 1.13]
2004	0.753 [0.377, 1.13]
2005	0.753 [0.377, 1.13]
2006	0.753 [0.377, 1.13]
2007	0.753 [0.377, 1.13]
2008	0.753 [0.377, 1.13]
2009	0.753 [0.377, 1.13]
2010	0.753 [0.377, 1.13]
2011	0.753 [0.377, 1.13]
2012	0.753 [0.377, 1.13]
2013	0.753 [0.377, 1.13]
2014	0.753 [0.377, 1.13]

Fig. 11: Smallest Difference Period

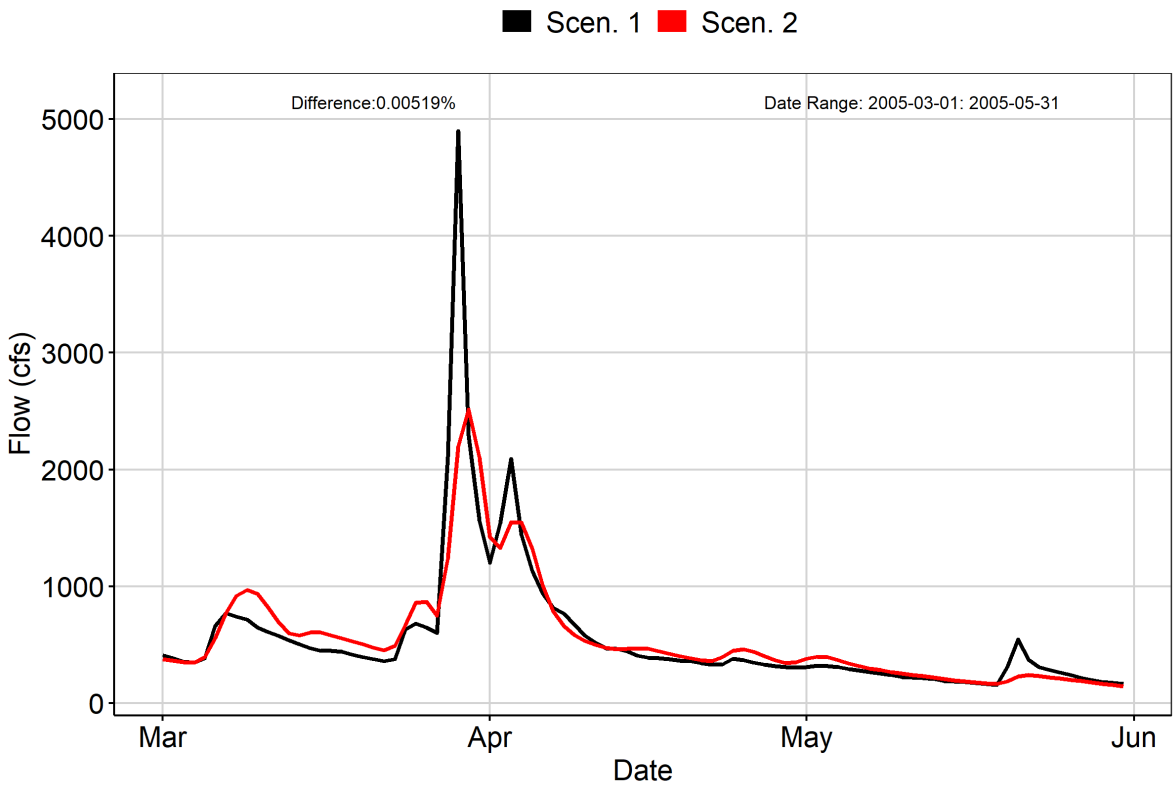


Fig. 12: Second Smallest Difference Period

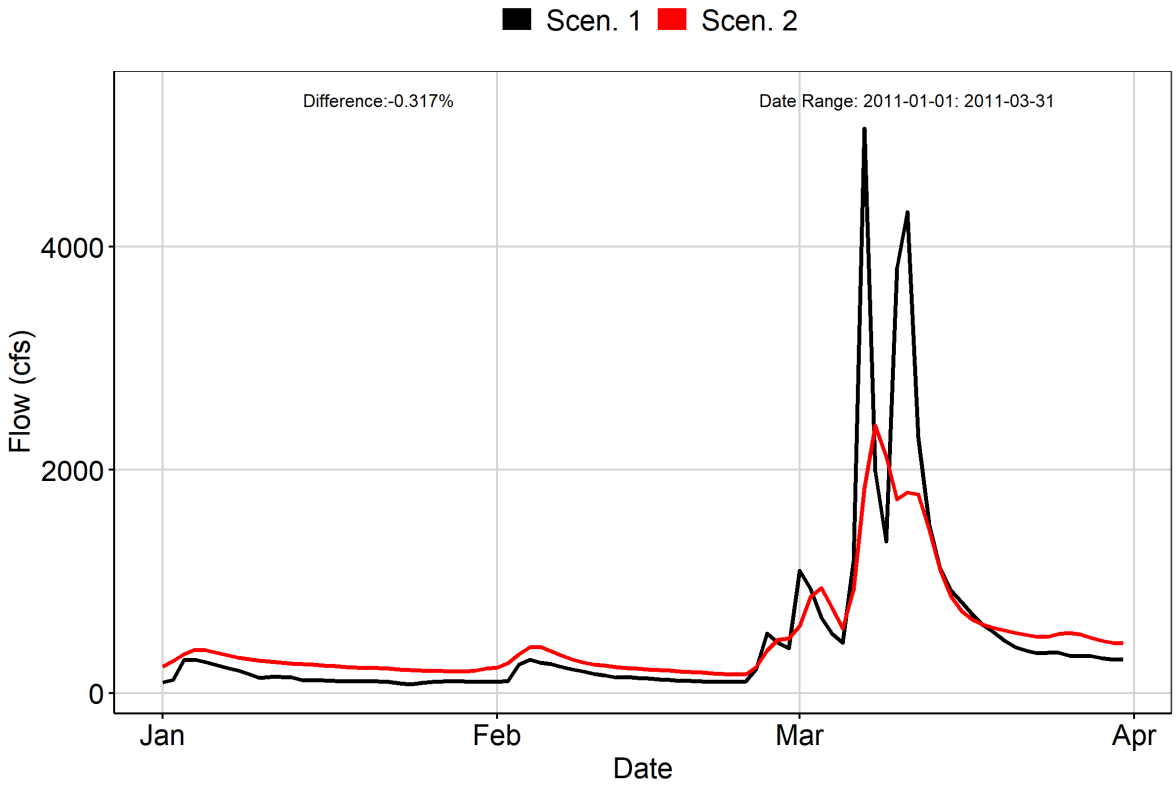


Fig. 13: Third Smallest Difference Period