13168500 BRUNEAU RIVER NEAR HOT SPRING, ID

Middle Snake-Boise Basin
Bruneau Subbasin

LOCATION.--Lat 42°46′16″, long 115°43′13″ referenced to North American Datum of 1983, in NE ¼ NE ¼ SE ¼ sec.34, T.7 S., R.6 E., Owyhee County, ID, Hydrologic Unit 17050102, Hot Springs quad., on right bank, 1 mi downstream from Hot Creek, 1.5 mi south of Hot Spring, 9 mi southeast of Bruneau, 16 mi downstream from East Fork, and at mile 22.0.

DRAINAGE AREA.--2,686 mi^2, mean elevation, 5,600 ft.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1909 to March 1915, October 1943 to current year.

REVISED RECORDS.--WSP 1063: 1913. WSP 1517: 1910(M). WSP 1567: Drainage area. WDR-US-2010: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,598.5 ft above NGVD of 1929. Prior to Mar. 12, 1910, nonrecording gage at site 0.2 mi upstream at different datum. Mar. 12, 1910 to Mar. 15, 1915, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Station equipment includes satellite telemetry and crest stage gage. Several small reservoirs on tributaries above station. Diversions above station for irrigation of about 12,900 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,860 ft^3/s May 15, 1984, gage height, 13.03 ft; minimum, 6.9 ft^3/s Oct. 31, Nov. 2, 2002, Nov. 1, 2003, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 920 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 13	0530	1,410	6.91
Jan 17	2315	2,320	8.06
Mar 17	0930	2,040	7.72
Apr 19	0200	*4,880	*10.86
May 15	1630	4,410	10.45

Minimum discharge, 33 ft^3/s, Jan. 1, gage height, 4.09 ft.

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 13168500, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/13168500.2011.pdf

13168500 BRUNEAU RIVER NEAR HOT SPRING, ID—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	57	121	128	46	236	183	850	1,200	1,940	1,620	269	91
2	57	120	165	71	176	179	1,290	1,180	1,880	1,490	264	90
3	57	116	158	99	124	192	1,510	1,160	1,970	1,430	262	91
4	58	113	177	110	170	197	1,340	1,170	1,920	1,440	259	92
5	64	113	187	88	277	186	1,080	1,210	1,860	1,390	240	93
6	66	115	202	137	250	183	998	1,320	2,050	1,320	227	91
7	69	117	209	163	223	205	968	1,650	2,340	1,250	214	91
8	70	124	218	154	207	240	926	2,250	2,510	1,200	203	92
9	69	131	212	157	197	220	875	3,110	2,520	1,120	193	90
10	71	133	207	131	173	226	822	2,990	2,460	1,030	180	88
11	72	133	251	93	153	420	796	2,590	2,450	934	173	87
12	71	133	301	119	176	680	904	2,380	2,410	868	166	86
13	72	127	342	313	205	570	958	2,370	2,510	812	161	87
14	72	125	439	198	187	465	979	2,880	2,700	759	154	94
15	71	123	370	184	182	579	894	3,820	2,800	729	145	91
16	70	135	314	187	183	742	845	4,110	2,860	675	138	89
17	69	147	176	902	186	1,650	1,060	3,600	2,690	628	136	88
18	68	149	185	1,820	176	1,080	2,450	3,020	2,310	582	133	94
19	68	144	307	1,030	178	879	4,420	2,580	2,280	538	128	93
20	69	141	316	668	189	736	3,270	2,450	2,370	507	125	91
21	70	142	341	487	185	611	2,470	2,250	2,140	480	121	87
22	70	134	325	486	174	574	2,120	2,220	2,100	450	118	86
23	71	132	268	450	158	516	1,780	2,350	2,260	428	113	85
24	73	116	229	364	165	490	1,560	2,530	2,430	404	111	85
25	82	60	205	341	177	496	1,480	2,560	2,350	374	109	84
26	248	50	200	319	162	489	1,470	2,470	2,120	350	106	83
27	171	69	200	297	144	454	1,400	2,690	1,920	334	104	82
28	140	161	189	263	135	448	1,280	2,520	1,810	313	100	83
29	129	121	188	256	---	468	1,250	2,330	1,820	292	99	83
30	124	88	195	262	---	462	1,240	2,130	1,760	274	97	83
31	119	---	118	254	---	486	---	2,010	---	262	94	---
Total	2,637	3,633	7,322	10,449	5,148	15,306	43,285	73,100	67,540	24,283	4,942	2,650
Mean	85.1	121	236	337	184	494	1,443	2,358	2,251	783	159	88.3
Max	248	161	439	1,820	277	1,650	4,420	4,110	2,860	1,620	269	94
Min	57	50	118	46	124	179	796	1,160	1,760	262	94	82
Ac-ft	5,230	7,210	14,520	20,730	10,210	30,360	85,860	145,000	134,000	48,170	9,800	5,260

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	94.8	117	125	160	204	384	786	1,264	977	280	95.5	76.6
Max	185	248	425	724	905	1,901	1,882	4,102	3,122	1,044	334	170
(WY)	(1985)	(1910)	(1965)	(1971)	(1986)	(1910)	(1952)	(1984)	(1984)	(1984)	(1984)	(1984)
Min	42.8	62.0	58.7	73.5	98.2	119	196	277	97.8	55.3	31.5	34.8
(WY)	(2002)	(2004)	(1991)	(2008)	(1994)	(1955)	(1968)	(1992)	(1992)	(1992)	(2001)	(1981)

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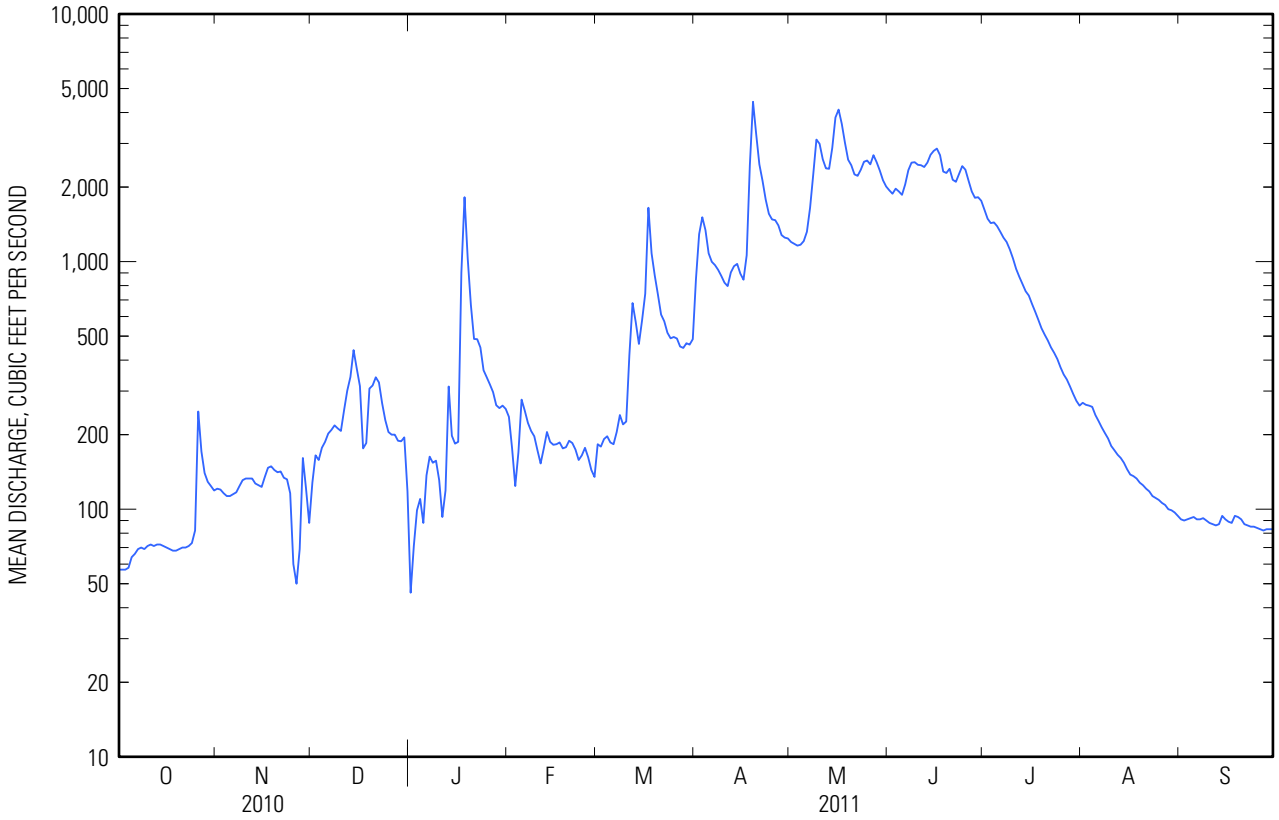
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1909 - 2011	
Annual total	122,566		260,295			
Annual mean	336		713		380	
Highest annual mean					1,012	1984
Lowest annual mean					113	1992
Highest daily mean	2,370	Jun 7	4,420	Apr 19	6,470	May 15, 1984
Lowest daily mean	50	Nov 26	46	Jan 1	21	Dec 21, 1998
Annual seven-day minimum	55	Aug 24	61	Oct 1	28	Aug 26, 2001
Annual runoff (ac-ft)	243,100		516,300		275,400	
10 percent exceeds	1,030		2,330		1,110	
50 percent exceeds	124		226		143	
90 percent exceeds	61		85		65	



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1958 to October 1959, October 1965, December 1969 to June 1982, November 1990 to September 1991, November 1993 to September 1994, April to September 1997, April to September 2000, April 2004 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: August to September 1997, July to September 2000, April 2004 to current year.

INSTRUMENTATION.--Temperature recording datalogger from December 1958 to October 1959, October 1965, December 1969 to June 1982, November 1990 to September 1991, November 1993 to September 1994, April to September 1997, April to September 2000, April 2004 to October 2004. Electronic thermistor connected to datalogger located in orifice pipe on right bank at gage from October 2004 to current year.

REMARKS.--Records good. Records represent water temperature at thermistor within 0.2°C. Water temperature data is representational of a point in the river and not necessarily representational of mean temperature of the river cross section at that point. Water temperatures during periods of extreme low air temperatures may rise as a result of river flow going into storage (ice formation) as numerous hot springs upstream of the gage contribute a higher portion of the total streamflow.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 31.6 °C July 28, 2000; minimum, 0.0 °C Dec. 24, 2005.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 28.2 °C Aug. 26; minimum, 0.2 °C Jan. 13.

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		October			November			December			January	
1	24.2	17.8	20.7	13.6	10.6	11.8	6.7	3.3	4.7	8.9	4.7	6.8
2	24.1	18.1	20.7	13.9	10.5	11.9	4.4	3.5	4.0	7.4	4.4	5.8
3	22.7	18.6	20.6	14.1	10.8	12.2	4.8	3.5	4.0	8.3	2.7	4.6
4	22.6	20.1	21.0	14.3	11.3	12.5	4.0	3.3	3.6	5.6	2.8	3.9
5	20.7	18.5	19.5	14.3	11.3	12.6	6.7	3.5	5.4	6.6	3.9	5.0
6	21.5	17.3	19.0	14.2	11.7	12.8	6.9	5.4	6.1	5.3	1.7	3.7
7	19.8	17.3	18.4	13.1	12.2	12.7	6.3	5.1	5.8	4.1	1.8	3.0
8	18.7	16.1	17.3	12.5	9.7	11.5	6.1	4.9	5.5	3.9	2.6	3.3
9	19.5	15.7	17.4	11.2	8.7	9.7	6.9	5.8	6.3	4.1	2.6	3.1
10	21.5	16.5	18.5	9.9	8.9	9.3	8.0	6.5	7.3	4.8	2.6	3.5
11	19.7	16.3	18.0	10.2	8.1	8.9	7.3	6.5	6.8	6.0	3.1	4.5
12	18.7	14.4	16.1	9.4	8.0	8.5	7.7	6.5	7.0	5.1	3.4	4.2
13	18.0	13.1	15.2	9.2	7.6	8.4	7.8	6.7	7.2	3.6	0.2	1.9
14	18.2	13.2	15.3	9.7	8.7	9.2	7.5	7.1	7.3	3.8	2.2	2.8
15	17.4	14.2	15.6	10.9	8.8	9.8	7.1	5.4	6.4	3.9	2.9	3.2
16	18.0	14.8	16.1	11.4	9.2	10.2	5.4	3.5	4.3	6.4	3.1	4.3
17	18.5	15.2	16.6	9.8	8.5	9.2	4.4	3.0	3.6	7.2	1.4	4.5
18	18.4	14.3	15.8	10.2	9.2	9.6	4.2	3.0	3.6	3.2	2.6	2.9
19	17.1	13.0	14.6	9.3	8.5	8.8	4.5	3.1	4.0	3.4	2.6	3.1
20	16.8	12.0	14.0	9.1	7.7	8.5	4.6	3.9	4.1	2.9	2.1	2.5
21	16.5	12.0	13.9	7.8	6.4	6.9	3.9	3.1	3.4	3.5	2.4	2.9
22	16.9	13.2	14.6	7.4	6.2	6.7	3.9	3.0	3.5	4.4	3.1	3.6
23	15.9	13.5	14.6	7.2	4.0	5.8	4.9	3.9	4.3	4.3	3.3	3.7
24	15.9	14.4	15.0	5.5	3.6	4.3	5.2	4.0	4.4	4.6	3.4	4.0
25	14.7	12.6	13.7	8.5	4.0	6.4	5.0	3.9	4.3	5.1	4.1	4.5
26	12.6	10.0	10.6	9.1	6.4	7.4	6.2	4.4	5.2	5.3	4.1	4.7
27	11.3	8.9	9.8	8.6	5.4	7.3	5.8	4.8	5.2	5.6	4.8	5.1
28	10.7	8.4	9.5	5.4	2.9	3.7	6.1	4.8	5.4	6.1	4.6	5.1
29	11.8	9.0	10.2	5.5	3.3	4.2	6.2	4.6	5.8	5.4	4.3	4.7
30	11.2	9.4	10.2	7.0	4.2	5.5	4.8	2.2	3.5	5.2	4.5	4.8
31	13.2	10.5	11.6	---	---	---	4.7	2.1	3.2	5.9	4.3	5.0
Month	24.2	8.4	15.6	14.3	2.9	8.9	8.0	2.1	5.0	8.9	0.2	4.0

13168500 BRUNEAU RIVER NEAR HOT SPRING, ID—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1	4.5	2.7	3.6	8.3	3.7	5.6	13.2	10.6	11.8	9.8	7.4	8.4
2	4.2	2.1	3.0	7.3	5.1	6.2	11.9	9.0	10.7	10.8	8.6	9.7
3	5.1	3.2	4.1	9.1	6.4	7.4	9.0	6.7	7.8	12.6	10.3	11.2
4	4.8	2.4	3.8	9.2	6.7	7.9	7.2	6.1	6.7	12.3	10.3	11.2
5	4.6	2.2	3.3	9.3	7.6	8.4	8.4	7.0	7.7	13.2	10.7	11.9
6	5.7	4.3	5.0	10.3	8.2	9.0	8.1	6.9	7.5	14.7	12.5	13.5
7	6.5	5.2	5.6	9.2	6.7	7.9	7.5	6.6	7.0	14.2	13.2	13.6
8	6.3	4.8	5.4	7.6	5.9	6.8	7.1	6.0	6.6	13.2	11.1	12.4
9	6.6	4.5	5.2	9.5	6.5	7.7	7.4	6.3	6.7	11.1	9.1	9.9
10	6.7	3.9	4.9	9.5	8.0	8.7	8.3	5.8	7.1	10.1	8.6	9.3
11	6.9	3.7	5.1	9.4	7.8	8.7	9.0	7.6	8.2	11.9	9.5	10.5
12	7.3	4.2	5.6	7.9	6.5	7.3	10.8	8.1	9.2	14.3	11.8	12.9
13	7.6	5.2	6.3	8.9	6.7	7.7	10.2	9.0	9.6	15.8	13.8	14.6
14	8.0	5.7	6.7	9.7	8.1	8.6	9.0	7.9	8.4	15.1	13.9	14.6
15	10.0	6.8	8.0	8.8	8.5	8.6	8.7	7.3	8.1	14.0	11.3	13.3
16	8.1	6.8	7.5	9.6	8.2	8.9	11.3	8.7	9.9	11.3	9.3	10.1
17	7.6	6.0	6.6	8.2	5.1	6.2	13.0	10.9	12.0	9.9	8.8	9.3
18	7.6	6.3	6.7	6.9	5.0	5.9	12.4	9.0	10.9	9.6	9.3	9.4
19	8.3	6.0	6.9	7.7	6.1	6.7	9.0	8.0	8.4	11.5	9.1	10.2
20	7.6	6.3	6.9	7.3	5.7	6.6	8.6	8.3	8.5	13.7	11.4	12.4
21	7.7	5.4	6.2	8.6	7.2	7.8	9.1	8.5	8.8	13.6	12.2	13.0
22	6.9	5.1	5.7	8.1	7.0	7.6	8.9	7.6	8.1	14.3	12.6	13.4
23	7.0	5.2	6.0	8.0	6.0	7.0	9.6	7.7	8.4	13.9	12.4	12.9
24	6.5	4.8	5.8	9.6	7.2	8.1	10.1	8.8	9.5	12.5	10.9	11.7
25	5.6	3.9	4.6	8.9	7.5	8.1	10.3	9.4	9.8	12.5	11.3	11.9
26	6.6	3.1	4.3	8.5	7.4	8.0	9.9	8.7	9.3	12.2	11.2	11.6
27	6.9	3.0	4.6	8.4	7.2	7.9	9.6	7.7	8.6	11.4	10.5	10.9
28	5.6	4.0	4.7	8.9	6.8	7.7	10.3	9.1	9.6	11.0	10.2	10.5
29	---	---	---	9.0	6.7	7.7	9.4	8.1	8.7	10.9	9.8	10.2
30	---	---	---	10.2	7.8	8.8	9.0	7.2	8.0	11.8	10.4	10.9
31	---	---	---	12.6	9.4	10.8	---	---	---	12.6	11.3	12.0
Month	10.0	2.1	5.4	12.6	3.7	7.8	13.2	5.8	8.7	15.8	7.4	11.5

13168500 BRUNEAU RIVER NEAR HOT SPRING, ID—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			September	
1	13.5	12.2	12.8	16.8	14.3	15.4	26.2	22.5	24.0	23.2	18.7	20.5
2	13.2	11.6	12.2	17.8	14.8	16.1	25.1	22.6	23.6	22.8	17.2	19.5
3	12.8	10.4	11.5	19.0	15.9	17.2	26.1	21.8	23.6	23.6	17.7	20.1
4	14.1	11.7	12.8	19.3	16.7	17.8	24.9	21.6	22.8	23.7	17.4	20.1
5	16.0	13.5	14.6	19.6	16.8	18.0	25.2	21.0	22.9	21.9	18.5	19.8
6	15.1	13.6	14.3	19.6	16.8	18.1	25.8	21.1	23.3	23.8	17.8	20.5
7	13.9	12.8	13.2	18.8	17.1	18.0	26.4	22.1	23.8	24.7	19.1	21.4
8	14.0	11.9	12.8	18.8	17.1	17.8	26.4	21.4	23.6	24.7	19.3	21.7
9	13.9	12.1	13.0	18.6	15.9	17.2	26.1	21.6	23.6	24.5	19.6	21.7
10	13.9	12.4	13.2	18.9	16.1	17.4	26.0	20.7	23.1	24.7	19.5	21.7
11	14.1	12.4	13.2	20.2	17.0	18.4	25.3	21.1	22.9	24.9	19.6	21.9
12	15.4	12.9	13.9	21.2	18.2	19.5	25.6	19.9	22.5	25.5	20.0	22.4
13	15.1	13.8	14.4	20.9	18.6	19.5	24.0	20.5	22.3	23.6	19.9	21.6
14	15.3	13.3	14.2	20.4	18.2	19.0	24.5	19.7	22.2	25.0	19.8	21.9
15	15.6	13.8	14.5	20.3	17.6	18.7	25.0	20.4	22.4	22.9	19.1	20.9
16	14.3	13.0	13.6	21.5	17.9	19.3	25.0	19.1	21.8	24.1	19.8	21.4
17	14.0	11.7	12.8	22.2	18.5	20.0	25.4	19.4	22.2	22.4	18.5	20.1
18	14.0	12.6	13.2	22.6	18.5	20.3	25.7	20.2	22.5	22.2	17.0	19.3
19	14.5	12.2	13.2	21.9	19.2	20.5	25.4	19.9	22.2	22.4	17.0	19.3
20	14.8	12.6	13.6	22.1	18.4	20.0	26.1	20.2	22.6	22.7	17.6	19.7
21	16.6	13.7	14.8	22.4	18.6	20.3	26.9	20.9	23.5	22.4	17.2	19.4
22	17.5	15.1	16.1	22.2	19.1	20.5	26.9	20.7	23.5	22.6	16.7	19.3
23	17.3	15.4	16.1	22.5	18.5	20.4	26.9	21.5	23.8	23.0	17.0	19.6
24	16.4	14.5	15.4	23.3	19.1	21.2	27.1	21.2	23.8	22.6	17.2	19.6
25	15.8	13.8	14.6	24.2	20.9	22.5	27.7	22.3	24.5	23.4	18.2	20.1
26	16.6	13.8	14.9	23.2	20.5	21.9	28.2	22.5	24.8	22.8	17.7	19.8
27	16.5	14.1	15.1	23.3	20.0	21.5	25.4	23.0	24.1	22.6	17.0	19.4
28	18.2	15.1	16.4	23.5	20.1	21.6	27.2	21.8	24.1	22.3	17.8	19.5
29	17.2	15.6	16.4	24.2	20.1	22.1	27.2	21.6	24.1	22.1	16.8	19.0
30	17.0	15.1	15.8	25.6	21.5	23.1	26.4	20.8	23.3	22.6	17.3	19.5
31	---	---	---	24.9	22.5	23.4	24.6	20.9	22.3	---	---	---
Month	18.2	10.4	14.1	25.6	14.3	19.6	28.2	19.1	23.2	25.5	16.7	20.4

	Max	Min	Mean
Year	28.2	0.2	12.1