

Water-Data Report 2007

**06313500 POWDER RIVER AT SUSSEX, WY**

Powder Basin  
Upper Powder Subbasin

LOCATION.--Lat 43°41'44", long 106°18'24" referenced to North American Datum of 1927, in SW ¼ SW ¼ NW ¼ sec.13, T.43 N., R.79 W., Johnson County, WY, Hydrologic Unit 10090202, on left bank 0.5 mi upstream from bridge on State Highway 192, 0.6 mi west of Sussex, and 2.7 mi downstream from Salt Creek.

DRAINAGE AREA.--3,090 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--April 1938 to June 1940, February 1950 to September 1957, October 1977 to September 1984, October 1985 to September 1998, November 2002 to current year.

REVISED RECORDS.--WDR WY-80-1: 1979(M), 1979.

GAGE.--Water-stage recorder. Elevation of gage is 4,362.16 ft above NGVD of 1929. Prior to June 30, 1940, nonrecording gage about 500 ft downstream from State Highway 192 at datum 4,363.23 ft. February 8, 1950 to September 30, 1957, water-stage recorder about 600 ft downstream from State Highway 192 at datum 4,362.16 ft. October 1977 to April 8, 1983, water-stage recorder 10 ft downstream from State Highway 192 at datum 4,362.95 ft. April 9, 1983 to October 21, 1987, at site 300 ft upstream from station at same datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Numerous small reservoirs and diversions for irrigation of about 17,000 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 30, 1923, reached an elevation of 4,375.75 ft at site about 600 ft downstream from State Highway 192, from information by local resident.

## 06313500 POWDER RIVER AT SUSSEX, WY—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**  
**DAILY MEAN VALUES**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	42	e98	e110	e86	e78	e135	e360	497	160	37	68	22
2	38	e105	e120	e90	e74	e150	e560	522	258	31	76	20
3	39	e110	e130	e96	e80	e175	e700	545	208	26	223	17
4	39	113	e135	e100	e90	e190	637	516	177	24	97	18
5	42	122	e140	e92	e100	e230	510	602	175	23	77	17
6	41	123	e140	e88	e96	e250	393	2,690	161	21	50	18
7	40	125	e135	e86	e100	e280	289	2,320	769	19	37	20
8	39	127	e130	e86	e94	259	247	756	967	22	45	22
9	46	131	e130	e94	e92	232	255	536	421	22	44	30
10	60	139	e130	e100	e90	211	455	454	324	50	29	28
11	63	142	e125	e105	e94	212	445	473	289	32	24	44
12	62	135	e115	e90	e100	195	258	531	268	23	21	40
13	61	134	e120	e80	e96	177	209	604	257	19	20	26
14	57	129	e115	e74	e90	177	216	515	234	18	18	22
15	54	120	e120	e78	e80	223	220	453	209	18	18	25
16	52	122	e100	e86	e86	214	226	405	238	17	18	26
17	59	121	e86	e84	e90	185	228	369	258	17	17	24
18	63	126	e76	e76	e100	182	215	312	184	16	17	38
19	65	125	e70	e76	e110	204	218	276	166	16	16	44
20	68	121	e77	e80	e100	223	239	265	145	873	15	42
21	72	122	e88	e80	e110	235	196	247	118	235	15	38
22	75	123	e93	e82	e115	295	184	254	107	79	15	33
23	73	121	e98	e84	e125	241	199	279	93	46	50	29
24	70	119	e94	e86	e120	214	221	217	87	27	86	33
25	71	117	e100	e91	e110	207	231	203	79	24	56	33
26	77	119	e110	e96	e110	199	226	188	72	691	41	36
27	83	115	e112	e92	e115	219	244	169	68	291	30	39
28	81	e110	e105	e90	e120	276	221	144	67	3,190	24	38
29	77	e105	e100	e96	---	e430	264	160	53	472	24	37
30	80	e100	e90	e92	---	e320	377	185	45	144	28	40
31	e87	---	e80	e84	---	e250	---	153	---	94	25	---
<b>Total</b>	1,876	3,619	3,374	2,720	2,765	6,990	9,243	15,840	6,657	6,617	1,324	899
<b>Mean</b>	60.5	121	109	87.7	98.8	225	308	511	222	213	42.7	30.0
<b>Max</b>	87	142	140	105	125	430	700	2,690	967	3,190	223	44
<b>Min</b>	38	98	70	74	74	135	184	144	45	16	15	17
<b>Ac-ft</b>	3,720	7,180	6,690	5,400	5,480	13,860	18,330	31,420	13,200	13,120	2,630	1,780

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2007, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	135	126	113	113	162	263	268	544	331	123	54.1	67.2
<b>Max</b>	838	202	176	177	335	701	553	2,553	1,477	374	125	448
<b>(WY)</b>	(1995)	(1987)	(1995)	(1983)	(1980)	(1987)	(1987)	(1978)	(1995)	(1978)	(1983)	(1982)
<b>Min</b>	24.2	77.7	77.9	58.6	69.4	110	136	72.0	22.2	13.6	3.54	4.90
<b>(WY)</b>	(1957)	(1953)	(2006)	(1940)	(1939)	(1940)	(1953)	(1992)	(1954)	(2006)	(1939)	(1939)

06313500 POWDER RIVER AT SUSSEX, WY—Continued

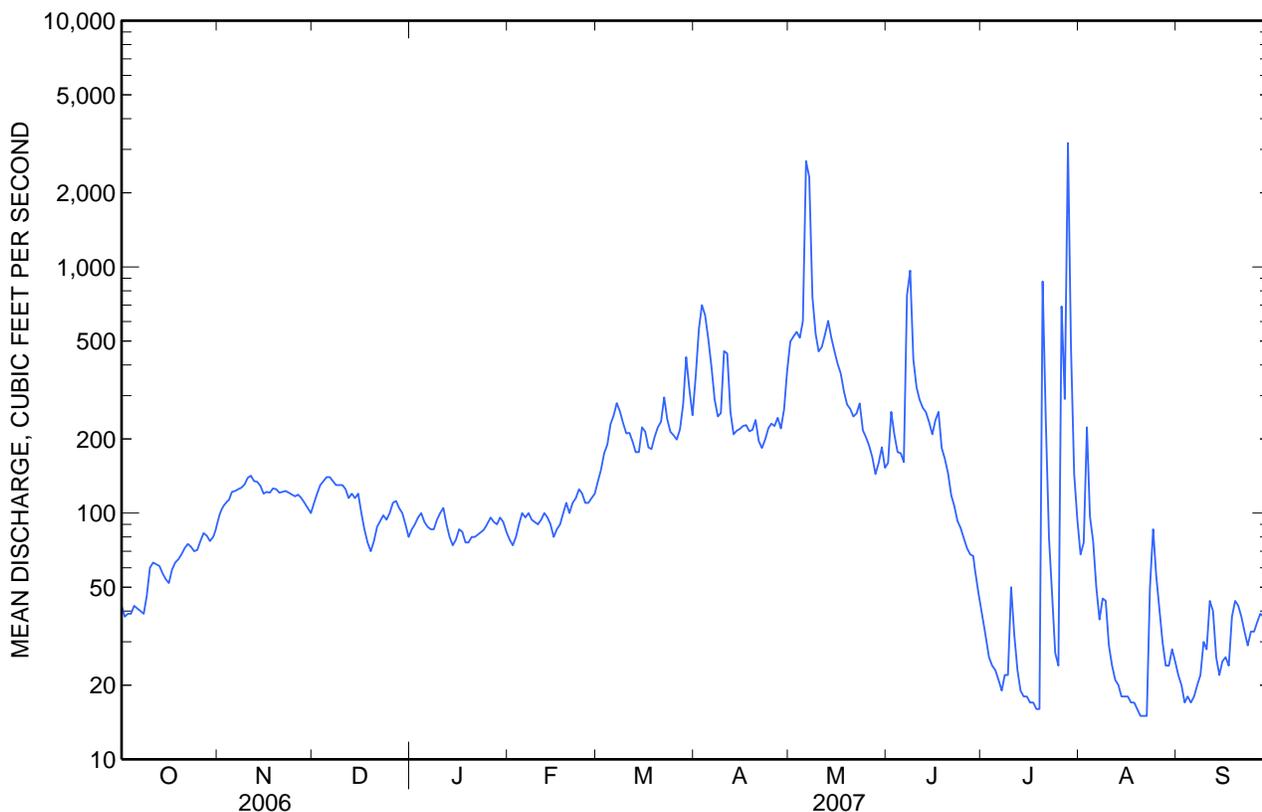
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1938 - 2007	
<b>Annual total</b>	38,379.7		61,924			
<b>Annual mean</b>	105		170		194	
<b>Highest annual mean</b>					486	1978
<b>Lowest annual mean</b>					86.0	2004
<b>Highest daily mean</b>	736	Aug 27	3,190	Jul 28	14,100	May 23, 1952
<b>Lowest daily mean</b>	2.0	Aug 25	15	Aug 20 <sup>a</sup>	1.5	Aug 25, 1939
<b>Annual seven-day minimum</b>	3.5	Aug 20	16	Aug 16	2.6	Aug 23, 1939
<b>Maximum peak flow</b>			5,130	Jul 28	<sup>b</sup> 32,500	May 23, 1952
<b>Maximum peak stage</b>			7.80	Jul 28	<sup>c</sup> 4,374.76	May 23, 1952
<b>Annual runoff (ac-ft)</b>	76,130		122,800		140,700	
<b>10 percent exceeds</b>	216		315		385	
<b>50 percent exceeds</b>	96		100		123	
<b>90 percent exceeds</b>	6.0		24		22	

<sup>a</sup> Also, August 21, 22.

<sup>b</sup> From rating curve extended above 1,500 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

<sup>c</sup> From floodmarks, site and datum then in use.



**06313500 POWDER RIVER AT SUSSEX, WY—Continued**

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1949-53, 1967-68, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1983 to September 1984, April 2003 to current year (seasonal).

WATER TEMPERATURE: October 1982 to September 1984, April 2003 to current year (seasonal).

SUSPENDED-SEDIMENT DISCHARGE: May 1983 to September 1984.

INSTRUMENTATION.--Water-quality monitor for specific conductance and water temperature.

REMARKS.--

Specific conductance records excellent October 1-11, March 21-29, April 13, May 12, 24, 25, June 8, 20, 21, July 9-26, August 2, 10, 22, 23, and September 8-12, 19-28; good April 14, May 26-29, June 9, 22-25, August 3, 11-15, and September 13-18, 29, 30; fair May 30 to June 1, June 10, 26-28, August 4, 16-18, and August 24 to September 7; and poor June 2-7, 11-19, June 29 to July 4, and August 5-9, 19-21.

Water temperature records excellent March 20, April 13-15, May 12 to July 24, August 2-4, August 14 to September 7, and September 10-30; good October 1-11, March 21-29, July 25, 26, August 5-7, 10-13, and September 8, 9; fair August 8, 9; and poor April 25. Water-temperature records represent water temperature at sensor within 0.2°C.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 7,980 microsiemens per centimeter at 25°C ( $\mu\text{S}/\text{cm}$ ), August 17, 2003; minimum recorded, 756  $\mu\text{S}/\text{cm}$ , May 21, 22, 2005.

WATER TEMPERATURE: Maximum recorded, 34.7°C, July 24, 2005; minimum recorded, -0.1°C, March 29, 2007.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 6,370  $\mu\text{S}/\text{cm}$ , August 23; minimum recorded, 968  $\mu\text{S}/\text{cm}$ , May 12.

WATER TEMPERATURE: Maximum recorded, 33.4°C, July 2; minimum recorded, -0.1°C, March 29.

## 06313500 POWDER RIVER AT SUSSEX, WY—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 1 of 3

[Remark codes: &lt;, less than; E, estimated.]

Date	Time	Instan- taneous dis- charge, cfs (00061)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif- ic conduc- tance, wat unf µS/cm 25 degC (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)
<b>Oct</b>													
12...	0825	62	650	11.0	101	8.3	2,500	2.0	4.5	640	169	54.2	12.3
24...	1320	73	647	10.8	106	8.4	2,420	12.0	7.0	630	166	53.0	11.2
<b>Nov</b>													
08...	1300	128	641	10.3	109	8.6	1,870	6.0	10.0	540	141	44.6	8.00
29...	0955	E105	656	12.9	103	8.4	1,900	-14.0	.0	620	155	55.4	7.10
<b>Dec</b>													
13...	1405	119	644	12.6	103	8.2	1,850	2.0	.0	500	130	42.5	8.22
27...	1045	112	640	12.5	103	7.9	1,700	5.0	.0	500	130	43.3	7.55
<b>Jan</b>													
10...	1600	96	639	11.8	97	8.1	2,000	4.0	.0	560	146	47.4	9.07
25...	1030	91	653	11.1	89	8.0	1,770	2.0	.0	500	133	41.8	8.27
<b>Feb</b>													
08...	1540	95	649	11.8	96	8.4	2,030	-2.0	.0	520	136	43.5	9.79
23...	1020	E128	636	12.0	99	8.4	2,020	8.0	.0	550	142	46.7	8.05
<b>Mar</b>													
08...	1430	280	645	11.4	99	7.9	1,820	13.0	2.5	460	119	39.3	7.67
20...	1010	239	645	9.8	97	8.2	1,440	15.0	7.5	370	95.1	32.9	5.70
<b>Apr</b>													
12...	1435	245	644	9.9	102	8.3	2,020	10.0	9.0	550	134	52.0	6.53
25...	1020	250	650	9.6	99	8.4	1,650	12.0	9.5	390	95.2	37.6	6.59
<b>May</b>													
11...	1620	452	651	7.9	102	8.2	1,280	23.0	19.5	330	82.8	29.6	5.09
23...	1000	300	648	8.6	96	8.3	2,690	13.0	12.5	460	109	46.8	10.8
<b>Jun</b>													
07...	1550	853	646	8.5	96	8.2	1,480	14.0	13.0	310	74.7	29.7	6.21
19...	1020	171	652	8.5	105	8.3	1,590	20.5	17.5	390	97.4	35.7	5.96
<b>Jul</b>													
12...	1100	24	653	7.6	105	8.2	4,360	27.0	23.0	780	192	73.0	19.5
24...	1020	24	649	8.0	110	8.2	3,380	28.0	22.5	600	147	57.4	17.1
<b>Aug</b>													
09...	1215	44	650	6.1	83	7.8	4,260	34.5	22.0	1,100	288	82.5	20.2
21...	1020	17	648	7.8	100	8.2	5,730	22.0	18.5	730	165	78.5	26.1
<b>Sep</b>													
07...	1415	20	649	9.4	130	8.3	5,150	23.0	22.5	630	141	67.5	23.3
18...	1120	34	653	11.2	128	8.3	4,240	16.0	13.5	570	132	59.7	19.0

## 06313500 POWDER RIVER AT SUSSEX, WY—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 2 of 3

[Remark codes: &lt;, less than; E, estimated.]

Date	Sodium adsorp- tion ratio (00931)	Sodium frac- tion of cations percent (00932)	Sodium water, flt'd, mg/L (00930)	Alka- linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor- ide, water, flt'd, mg/L (00940)	Fluor- ide, water, flt'd, mg/L (00950)	Silica, water, flt'd, mg/L (00955)	Sulfate water, flt'd, mg/L (00945)	Residue water, flt'd, sum of consti- tuents mg/L (70301)	Residue water, flt'd, tons/ acre-ft (70303)	Residue water, dis- solved, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Alum- inum, water, unflt'd recover- able, µg/L (01105)
<b>Oct</b>													
12...	5.3	50	307	201	257	1.06	9.59	764	1,690	2.45	302	1,800	5,870
24...	4.9	49	282	198	254	1.01	9.69	706	1,600	2.34	339	1,720	1,100
<b>Nov</b>													
08...	3.6	44	193	207	166	.77	7.51	558	1,240	1.82	461	1,340	2,730
29...	3.5	41	197	246	165	.69	9.79	556	1,290	1.84	--	1,350	645
<b>Dec</b>													
13...	3.7	45	192	225	181	.77	11.2	479	1,180	1.75	413	1,290	1,420
27...	3.5	44	181	238	165	.77	12.0	455	1,140	1.64	364	1,200	1,490
<b>Jan</b>													
10...	4.1	46	225	241	207	.86	12.4	540	1,330	1.92	366	1,410	1,080
25...	3.6	44	184	237	173	.77	13.2	428	1,120	1.61	291	1,190	773
<b>Feb</b>													
08...	4.6	50	243	238	225	.93	13.7	506	1,320	1.91	360	1,400	1,380
23...	4.1	46	219	181	145	.81	10.1	660	1,340	1.93	--	1,420	4,710
<b>Mar</b>													
08...	4.4	50	214	169	128	.76	8.52	623	1,240	1.83	1,020	1,350	26,400
20...	3.4	46	150	178	128	.55	9.66	383	912	1.34	634	983	7,440
<b>Apr</b>													
12...	4.7	50	254	171	94.3	.58	7.71	782	1,430	2.10	1,020	1,540	19,000
25...	4.7	54	212	174	153	.59	8.73	492	1,110	1.59	788	1,170	5,840
<b>May</b>													
11...	3.6	50	152	130	68.3	.44	8.48	413	838	1.20	1,080	885	11,300
23...	8.0	64	394	205	322	.86	10.3	702	1,720	2.48	1,480	1,830	11,100
<b>Jun</b>													
07...	4.8	57	192	115	83.4	.42	5.73	515	977	1.39	2,350	1,020	313
19...	4.4	52	200	182	144	.53	9.53	432	1,040	1.47	499	1,080	2,490
<b>Jul</b>													
12...	10	64	646	243	568	1.52	13.9	1,230	2,890	4.32	206	3,180	3,820
24...	8.7	63	492	214	436	1.24	11.9	907	2,200	3.11	148	2,280	736
<b>Aug</b>													
09...	8.5	56	637	187	409	1.40	10.5	1,630	3,190	4.53	396	3,330	214,000
21...	16	73	968	256	953	1.68	17.8	1,290	3,650	5.18	175	3,810	2,380
<b>Sep</b>													
07...	16	75	901	240	888	1.50	15.4	1,100	3,280	4.50	179	3,310	880
18...	12	71	661	250	696	1.29	13.0	911	2,640	3.76	254	2,760	245

## 06313500 POWDER RIVER AT SUSSEX, WY—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 3 of 3

[Remark codes: &lt;, less than; E, estimated.]

Date	Arsenic water, flt'd, µg/L (01000)	Arsenic water, unflt'd µg/L (01002)	Barium, water, unflt'd recover -able, µg/L (01007)	Beryll- ium, water, unflt'd recover -able, µg/L (01012)	Iron, water, flt'd, µg/L (01046)	Mangan- ese, water, flt'd, µg/L (01056)	Selen- ium, water, flt'd, µg/L (01145)	Selen- ium, water, unflt'd µg/L (01147)
<b>Oct</b>								
12...	.87	3.7	129	.65	<18	29.6	2.2	2.4
24...	.88	3.9	62.4	.10	<18	33.0	1.7	2.0
<b>Nov</b>								
08...	.80	2.9	84.8	.20	<6	10.7	1.9	1.9
29...	.85	1.7	57.6	<.06	E9	41.5	1.8	1.9
<b>Dec</b>								
13...	.89	2.2	65.4	.10	E5	20.5	1.8	1.6
27...	.74	2.1	63.7	.09	E4	18.2	1.6	1.7
<b>Jan</b>								
10...	.88	1.8	73.6	.11	7	25.8	2.1	1.8
25...	.83	2.0	90.8	E.05	14	23.6	1.7	1.5
<b>Feb</b>								
08...	1.2	2.2	93.1	.14	E4	28.0	1.9	1.7
23...	.80	3.5	248	.37	E4	27.8	4.1	3.8
<b>Mar</b>								
08...	.64	15.4	901	2.82	E3	39.3	2.3	3.2
20...	.99	7.3	191	.86	E6	7.7	1.6	1.9
<b>Apr</b>								
12...	.67	10.8	515	1.46	<18	12.6	9.1	9.4
25...	.88	4.9	147	.44	<6	4.5	2.3	2.5
<b>May</b>								
11...	.95	7.9	264	1.44	E3	5.9	2.3	2.5
23...	1.0	9.6	310	.96	<18	9.8	1.7	2.1
<b>Jun</b>								
07...	.65	9.1	12.1	.06	8	27.1	1.6	--
19...	1.1	3.0	97.8	.28	<6	6.8	1.3	1.2
<b>Jul</b>								
12...	1.4	3.3	115	.20	<18	58.0	3.1	3.0
24...	1.6	1.9	93.2	<.12	<18	41.0	2.4	2.3
<b>Aug</b>								
09...	.80	25.5	641	16.9	<18	.8	4.4	4.5
21...	1.8	2.1	99.0	<.18	<18	71.8	2.3	1.6
<b>Sep</b>								
07...	1.6	1.9	94.2	<.18	<30	49.4	2.5	1.7
18...	1.1	1.4	72.5	<.12	<18	48.5	1.7	1.5

06313500 POWDER RIVER AT SUSSEX, WY—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	2,220	2,160	2,190	---	---	---	---	---	---	---	---	---
2	2,290	2,220	2,240	---	---	---	---	---	---	---	---	---
3	2,340	2,290	2,320	---	---	---	---	---	---	---	---	---
4	2,410	2,340	2,370	---	---	---	---	---	---	---	---	---
5	2,460	2,410	2,430	---	---	---	---	---	---	---	---	---
6	2,490	2,440	2,470	---	---	---	---	---	---	---	---	---
7	2,550	2,480	2,510	---	---	---	---	---	---	---	---	---
8	2,580	2,550	2,560	---	---	---	---	---	---	---	---	---
9	2,590	2,580	2,590	---	---	---	---	---	---	---	---	---
10	2,590	2,530	2,560	---	---	---	---	---	---	---	---	---
11	2,540	2,500	2,520	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
Month	---	---	---	---	---	---	---	---	---	---	---	---

06313500 POWDER RIVER AT SUSSEX, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	1,110	968	1,030
13	---	---	---	---	---	---	1,980	1,880	1,910	---	---	---
14	---	---	---	---	---	---	2,000	1,930	1,960	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	1,390	1,250	1,310	---	---	---	---	---	---
22	---	---	---	1,460	1,230	1,350	---	---	---	---	---	---
23	---	---	---	1,550	1,460	1,500	---	---	---	---	---	---
24	---	---	---	1,580	1,550	1,560	---	---	---	2,010	1,590	1,740
25	---	---	---	1,580	1,550	1,560	---	---	---	1,640	1,610	1,620
26	---	---	---	1,550	1,500	1,520	---	---	---	1,640	1,570	1,630
27	---	---	---	1,510	1,480	1,490	---	---	---	1,570	1,510	1,530
28	---	---	---	1,500	1,480	1,490	---	---	---	1,570	1,520	1,540
29	---	---	---	1,490	---	1,390	---	---	---	1,990	1,570	1,820
30	---	---	---	---	---	---	---	---	---	1,760	1,710	1,750
31	---	---	---	---	---	---	---	---	---	1,710	1,550	1,670
Month	---	---	---	---	---	---	---	---	---	---	---	---

## 06313500 POWDER RIVER AT SUSSEX, WY—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	1,670	1,420	1,540	3,220	2,700	2,910	---	---	---	4,170	3,970	4,060
2	1,660	1,060	1,230	3,550	3,200	3,290	3,030	1,520	2,740	4,410	4,170	4,280
3	1,120	1,060	1,090	4,070	3,550	3,830	2,180	1,260	1,520	4,640	4,410	4,550
4	1,140	1,100	1,120	4,150	4,030	4,090	2,470	2,040	2,290	4,770	4,600	4,680
5	1,160	1,090	1,120	---	---	---	2,960	2,450	2,770	4,910	4,760	4,830
6	1,170	1,140	1,160	---	---	---	3,350	2,930	3,090	5,030	4,910	4,970
7	1,550	1,040	1,270	---	---	---	3,970	3,350	3,640	5,180	5,010	5,080
8	1,490	1,100	1,230	---	---	---	4,400	3,970	4,120	5,160	4,870	5,050
9	1,350	1,100	1,210	5,430	---	---	4,330	3,980	4,120	4,930	4,580	4,740
10	1,100	1,020	1,040	5,380	2,710	4,300	4,140	3,970	4,030	4,830	3,900	4,620
11	1,030	991	1,010	4,280	3,630	3,850	4,370	4,140	4,270	3,900	2,770	3,110
12	1,080	1,020	1,040	4,290	3,660	3,910	4,580	4,370	4,470	3,020	2,760	2,930
13	1,400	1,080	1,220	4,640	4,290	4,470	4,790	4,580	4,680	4,210	3,020	3,620
14	1,360	1,310	1,340	4,790	4,630	4,700	5,000	4,780	4,900	4,360	4,210	4,260
15	1,420	1,360	1,390	5,010	4,780	4,880	5,120	4,970	5,040	4,340	4,160	4,270
16	1,890	1,330	1,410	4,930	4,830	4,890	5,200	5,080	5,130	4,340	4,170	4,260
17	1,520	1,260	1,370	4,980	4,870	4,920	5,290	5,180	5,240	4,350	4,220	4,310
18	1,640	1,440	1,550	5,080	4,910	4,990	5,380	5,260	5,310	5,160	3,810	4,360
19	1,900	1,040	1,510	5,150	4,800	4,960	5,480	5,320	5,390	4,440	3,500	3,890
20	1,550	1,420	1,470	5,150	1,860	3,370	5,650	5,470	5,560	3,940	3,570	3,760
21	1,700	1,550	1,640	2,440	1,840	2,120	5,740	5,580	5,650	3,570	2,760	3,100
22	1,790	1,630	1,700	2,900	2,440	2,650	5,600	5,300	5,490	3,750	2,920	3,410
23	1,880	1,790	1,850	3,250	2,900	3,080	6,370	3,520	4,790	4,090	3,750	3,930
24	1,940	1,850	1,910	3,970	3,250	3,500	4,090	3,860	3,990	4,160	3,990	4,070
25	2,090	1,920	2,020	3,920	2,940	3,750	4,310	4,090	4,230	4,160	3,930	4,000
26	2,180	2,020	2,110	3,100	---	---	4,290	4,180	4,230	4,220	3,870	4,080
27	2,160	2,070	2,110	---	---	---	4,180	4,090	4,120	3,890	3,730	3,790
28	2,280	2,040	2,140	---	---	---	4,090	3,980	4,020	4,020	3,790	3,940
29	2,560	2,280	2,460	---	---	---	3,980	3,920	3,950	4,130	3,950	4,010
30	2,740	2,560	2,640	---	---	---	3,940	3,870	3,910	3,950	3,620	3,810
31	---	---	---	---	---	---	3,970	3,890	3,930	---	---	---
Month	2,740	991	1,530	---	---	---	---	---	---	5,180	2,760	4,130

06313500 POWDER RIVER AT SUSSEX, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	18.6	10.4	14.4	---	---	---	---	---	---	---	---	---
2	15.4	10.8	13.4	---	---	---	---	---	---	---	---	---
3	13.5	10.6	11.9	---	---	---	---	---	---	---	---	---
4	15.8	9.5	11.9	---	---	---	---	---	---	---	---	---
5	16.3	9.9	13.1	---	---	---	---	---	---	---	---	---
6	17.2	11.9	14.2	---	---	---	---	---	---	---	---	---
7	16.9	11.6	14.0	---	---	---	---	---	---	---	---	---
8	12.9	9.9	11.1	---	---	---	---	---	---	---	---	---
9	10.3	6.0	7.8	---	---	---	---	---	---	---	---	---
10	12.3	5.0	8.0	---	---	---	---	---	---	---	---	---
11	9.8	5.9	7.7	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
Month	---	---	---	---	---	---	---	---	---	---	---	---

06313500 POWDER RIVER AT SUSSEX, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	20.3	---	---
12	---	---	---	---	---	---	---	---	---	20.0	15.5	17.7
13	---	---	---	---	---	---	13.1	5.4	9.0	17.6	14.5	16.0
14	---	---	---	---	---	---	15.0	6.6	10.7	15.9	11.8	13.2
15	---	---	---	---	---	---	---	9.0	---	16.9	10.8	13.4
16	---	---	---	---	---	---	---	---	---	18.5	11.4	14.9
17	---	---	---	---	---	---	---	---	---	20.4	13.7	16.9
18	---	---	---	---	---	---	---	---	---	20.4	14.8	17.9
19	---	---	---	---	---	---	---	---	---	21.2	15.0	18.2
20	---	---	---	12.9	---	---	---	---	---	22.5	15.5	18.9
21	---	---	---	10.8	7.1	9.2	---	---	---	20.2	15.9	17.4
22	---	---	---	11.6	6.4	8.9	---	---	---	17.0	14.4	15.6
23	---	---	---	12.2	6.4	9.4	---	---	---	15.9	12.1	14.2
24	---	---	---	11.8	6.8	9.2	---	---	---	17.6	11.2	14.4
25	---	---	---	13.7	6.5	10.0	15.7	---	---	16.4	12.3	14.4
26	---	---	---	13.9	9.1	11.4	---	---	---	19.5	11.1	15.0
27	---	---	---	14.4	9.6	11.9	---	---	---	22.8	13.5	18.0
28	---	---	---	12.5	3.6	7.6	---	---	---	22.5	16.4	19.2
29	---	---	---	3.6	---	---	---	---	---	18.0	13.8	16.0
30	---	---	---	---	---	---	---	---	---	18.3	13.1	15.6
31	---	---	---	---	---	---	---	---	---	14.0	12.0	12.7
Month	---	---	---	---	---	---	---	---	---	---	---	---

## 06313500 POWDER RIVER AT SUSSEX, WY—Continued

**TEMPERATURE, WATER, DEGREES CELSIUS**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	<b>June</b>			<b>July</b>			<b>August</b>			<b>September</b>		
<b>1</b>	17.6	11.3	14.2	32.2	20.5	26.0	---	---	---	28.1	18.6	23.1
<b>2</b>	20.2	12.6	16.3	33.4	21.0	26.6	26.5	19.7	23.4	26.9	18.6	22.8
<b>3</b>	23.4	15.3	19.1	32.2	19.8	25.6	25.5	18.4	22.2	27.9	18.7	22.9
<b>4</b>	23.3	16.7	19.9	33.0	20.2	26.1	28.5	20.9	24.4	27.0	18.2	22.4
<b>5</b>	24.2	16.5	20.1	32.9	20.4	26.2	28.5	21.1	24.6	25.4	18.1	21.7
<b>6</b>	22.4	17.9	19.9	33.0	19.8	25.7	27.9	21.0	24.3	24.2	17.5	20.2
<b>7</b>	19.0	11.8	14.0	30.5	19.3	24.6	27.6	19.9	23.4	23.7	14.7	19.1
<b>8</b>	15.3	9.9	12.6	30.3	19.2	24.2	28.4	19.6	23.7	19.0	13.4	15.1
<b>9</b>	20.2	13.2	16.5	32.3	20.3	25.3	27.6	18.9	23.1	13.4	11.2	12.2
<b>10</b>	22.0	15.3	18.7	25.9	16.7	20.7	26.6	19.6	22.9	19.4	8.8	13.9
<b>11</b>	22.7	16.6	19.6	29.7	17.1	22.9	27.8	17.8	22.6	20.4	10.8	15.5
<b>12</b>	20.1	17.4	18.4	30.8	17.4	23.7	27.8	18.5	23.1	21.1	12.3	16.5
<b>13</b>	22.8	15.4	19.0	31.4	18.2	24.3	28.7	18.7	23.2	17.6	12.6	14.8
<b>14</b>	22.8	16.2	19.6	31.6	18.1	24.4	27.5	19.3	23.4	19.3	9.5	14.4
<b>15</b>	25.8	18.0	21.7	32.7	19.2	25.6	29.3	19.3	23.9	22.9	13.1	17.6
<b>16</b>	26.1	14.2	21.6	31.6	19.5	25.4	26.9	19.0	22.8	20.5	13.2	17.1
<b>17</b>	21.7	16.5	19.1	32.1	21.1	26.2	26.9	20.5	23.5	19.5	12.1	15.4
<b>18</b>	23.5	15.3	19.4	33.2	20.3	26.4	29.4	18.9	23.8	19.5	13.0	15.6
<b>19</b>	25.6	15.9	20.7	32.7	21.1	26.0	27.9	19.1	23.2	20.5	12.3	16.0
<b>20</b>	27.2	18.1	22.5	23.9	13.5	18.2	26.2	18.3	21.8	20.3	12.8	16.4
<b>21</b>	28.6	19.3	23.8	26.5	17.3	21.8	26.9	16.8	21.6	20.1	12.0	15.9
<b>22</b>	27.4	19.9	23.7	29.7	20.7	25.0	24.2	17.9	20.3	21.1	12.1	16.5
<b>23</b>	28.6	19.2	23.9	29.8	20.7	24.8	23.3	16.9	19.7	17.5	12.9	15.3
<b>24</b>	29.6	20.3	24.9	29.9	20.0	24.5	21.4	17.5	19.1	12.9	10.2	11.7
<b>25</b>	31.2	20.5	25.2	30.7	20.9	24.7	24.5	15.2	19.6	16.6	7.7	12.0
<b>26</b>	27.6	18.3	22.4	---	19.2	---	23.4	16.5	20.1	16.5	9.0	12.5
<b>27</b>	27.9	17.3	22.2	---	---	---	24.6	17.3	20.4	16.9	8.5	12.6
<b>28</b>	30.3	18.6	24.1	---	---	---	21.1	16.6	18.0	15.9	9.7	12.8
<b>29</b>	31.0	19.8	25.1	---	---	---	25.7	15.3	19.8	16.9	9.8	12.8
<b>30</b>	31.4	20.0	25.1	---	---	---	27.0	17.2	21.9	17.2	10.1	13.0
<b>31</b>	---	---	---	---	---	---	25.4	18.1	22.0	---	---	---
<b>Month</b>	31.4	9.9	20.4	---	---	---	---	---	---	28.1	7.7	16.3