12415140 ST JOE RIVER NEAR CHATCOLET, ID

Spokane Basin
St. Joe Subbasin

LOCATION.--Lat 47°21′37″, long 116°41′26″ referenced to North American Datum of 1983, in NW ¼ NW ¼ SW ¼ sec.2, T.46 N., R.3 W., Benewah County, ID, Hydrologic Unit 17010304, Benewah Lake quad., on left bank 0.4 mile upstream from Silvertip Landing in Heyburn State Park, and at mile 5.4.

DRAINAGE AREA.--1,720 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--January 1991 to December 1992 (mean daily gage-heights only), November 2002 to December 2003 (discharge measurements only), March 2004 to September 2009 (discontinued).

GAGE.--Water-stage recorder and acoustic velocity meter. Datum of gage is 2,100.00 ft above NGVD of 1929. January 1991 to December 1992, recording gage located 0.3 mi downstream at datum 6.64 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Station equipment includes satellite telemetry. Elevation affected by backwater from Coeur d'Alene Lake. During periods of high stage, flows passing the gage may not represent the total discharge of the St. Joe River as some of the water may bypass the gage about 1.1 mile upstream and enter directly into Round Lake and then into Coeur d' Alene Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 22,400 ft^3/s May 19, 2008; maximum gage height, 32.14 ft, May 23, 2008; minimum daily, 320 ft^3/s Dec. 18, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,300 ft^3/s Jan. 9; maximum gage height, 26.87 ft, Apr. 25; minimum daily, 374 ft^3/s Oct. 31.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e410	e451	1,540	e1,040	1,630	3,210	3,620	5,150	10,200	2,010	e845	e579
2	e395	e469	1,940	e1,100	1,600	3,320	3,390	5,090	9,630	1,880	e828	e556
3	e390	e597	2,430	e1,040	1,550	5,150	3,770	5,630	8,680	1,960	e801	e542
4	e390	e524	1,890	e966	1,460	5,510	3,450	6,310	8,020	1,950	e779	e530
5	e464	e546	1,630	e999	1,420	5,200	3,900	7,120	7,460	1,950	e756	e522
6	e452	e510	1,670	e1,020	1,540	4,690	4,170	9,480	7,320	1,950	e736	e529
7	e431	1,220	1,620	1,980	1,830	3,940	4,990	9,790	6,610	1,810	e989	e568
8	e452	1,630	1,760	14,300	1,770	3,680	6,100	9,440	5,800	1,610	e1,110	e584
9	e425	1,350	1,740	20,000	1,750	3,220	7,070	8,480	5,330	1,660	e1,090	e563
10	e405	1,220	1,640	12,900	1,640	3,070	7,270	7,800	4,770	1,460	e937	e528
11	e392	1,200	1,510	6,460	1,580	2,380	7,560	8,000	4,460	1,680	e792	e510
12	e382	1,650	1,490	5,000	1,530	2,380	7,290	9,000	4,250	1,650	e751	e500
13	e382	5,220	1,490	4,340	1,430	2,340	8,880	8,850	3,990	1,780	e769	e487
14	e380	3,190	1,090	4,010	1,380	2,470	10,400	8,340	4,360	1,770	e810	e476
15	e392	2,180	749	3,780	1,410	2,620	8,820	10,100	4,680	1,400	862	e467
16	e389	2,040	810	3,670	1,410	4,000	7,350	9,570	4,470	e1,310	e860	e464
17	e388	1,850	863	3,350	1,350	3,340	7,050	9,310	4,150	e1,240	e834	e456
18	e388	1,640	988	2,930	1,410	2,950	6,830	10,000	4,160	e1,160	e805	e453
19	e407	1,450	1,170	2,720	1,440	3,040	7,440	11,900	3,940	e1,110	e772	e453
20	e405	1,400	1,080	2,580	1,310	3,210	8,000	13,200	3,780	e1,080	e736	e449
21	e420	1,680	979	2,570	1,320	3,930	9,880	11,700	3,690	e1,050	e707	e444
22	e424	1,530	991	2,480	1,340	6,050	11,800	10,000	3,660	e1,020	e685	e442
23	e403	1,350	966	2,590	1,470	6,920	12,900	9,380	3,330	e997	e666	e444
24	e400	1,230	984	2,480	2,390	5,890	12,500	9,680	3,030	e979	e641	e441
25	e396	1,230	927	2,150	3,730	5,740	10,000	10,500	2,940	e962	e628	e437
26	e393	1,240	898	1,680	5,560	5,260	8,160	10,800	2,850	e937	e615	e430
27	e389	1,270	811	1,480	4,510	4,560	7,150	10,500	2,670	e977	e599	e418
28	e382	1,200	811	1,820	3,480	4,150	6,600	10,200	2,460	e977	e583	e412
29	e378	1,300	854	1,930	---	4,250	6,130	10,100	2,480	e949	e574	e409
30	e377	1,460	e990	1,860	---	3,920	5,590	10,200	2,260	e907	e574	e412
31	e374	---	e1,080	1,700	---	3,640	---	10,500	---	e868	e587	---
Total	12,455	43,827	39,391	116,925	54,240	124,030	218,060	286,120	145,430	43,043	23,721	14,505
Mean	402	1,461	1,271	3,772	1,937	4,001	7,269	9,230	4,848	1,388	765	484
Max	464	5,220	2,430	20,000	5,560	6,920	12,900	13,200	10,200	2,010	1,110	584
Min	374	451	749	966	1,310	2,340	3,390	5,090	2,260	868	574	409
Ac-ft	24,700	86,930	78,130	231,900	107,600	246,000	432,500	567,500	288,500	85,380	47,050	28,770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	594	1,679	1,902	2,772	2,075	4,114	5,943	8,022	4,895	1,398	700	519
Max	951	3,011	3,227	4,411	2,854	7,816	7,637	12,680	11,070	2,798	945	814
(WY)	(2005)	(2007)	(2005)	(2006)	(2007)	(2007)	(2006)	(2008)	(2008)	(2008)	(2008)	(2004)
Min	402	766	1,201	697	1,005	2,521	3,985	5,183	2,286	869	498	405
(WY)	(2009)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2005)	(2005)	(2007)	(2007)	(2007)

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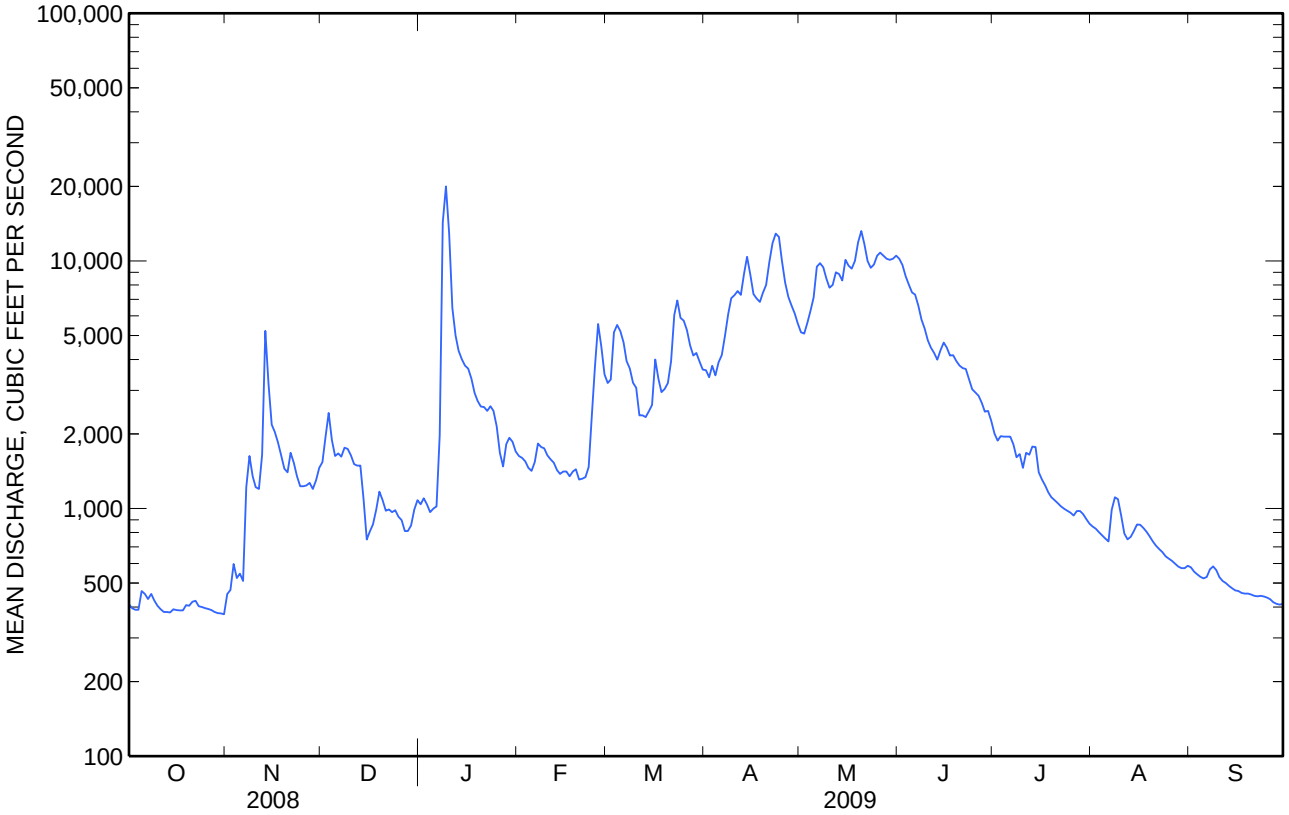
SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 2004 - 2009	
Annual total	1,200,484		1,121,747			
Annual mean	3,280		3,073		2,927	
Highest annual mean					3,226	2008
Lowest annual mean					2,392	2005
Highest daily mean	22,400	May 19	20,000	Jan 9	22,400	May 19, 2008
Lowest daily mean	374	Oct 31	374	Oct 31	320	Dec 18, 2005
Annual seven-day minimum	384	Oct 25	384	Oct 25	379	Dec 14, 2005
Annual runoff (ac-ft)	2,381,000		2,225,000		2,120,000	
10 percent exceeds	10,700		8,560		7,320	
50 percent exceeds	1,350		1,630		1,660	
90 percent exceeds	419		443		452	



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2002 to August 2009.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
Part 1 of 2
[Remark codes: <, less than; E, estimated.]

Date	Time	Temperature, air, deg C (00020)	Instantaneous discharge, ft^3/s (00061)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf µS/cm @ 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L as P (00666)
Oct													
14...	1215	15.0	379	7.3	68	10.9	27	7.93	1.78	<.020	<.016	E.005	E.005
Nov													
14...	0945	1.0	3,510	7.1	52	6.1	21	5.94	1.45	<.020	.071	.008	.012
Jan													
10...	1300	2.0	12,500	6.3	34	-.1	11	3.02	.814	E.019	.048	.012	.016
Feb													
25...	1150	3.0	3,920	6.9	60	1.4	21	5.89	1.47	.020	.033	.012	.011
May													
21...	1305	23.0	11,700	6.3	36	6.8	14	4.06	.959	<.020	.027	E.007	E.007
Jun													
23...	1405	25.0	3,070	6.7	40	12.4	18	5.24	1.17	<.020	<.016	E.008	E.008
Aug													
11...	1120	25.5	676	7.3	64	22.2	26	7.51	1.70	<.020	<.016	E.005	E.005

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
Part 2 of 2
[Remark codes: <, less than; E, estimated.]

Date	Phos-phorus, water, unfltrd mg/L as P (00665)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Cadmium water, fltrd, µg/L (01025)	Cadmium water, unfltrd µg/L (01027)	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan-ese, water, fltrd, µg/L (01056)	Mangan-ese, water, unfltrd recover -able, µg/L (01055)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)	Suspnd. sedimnt sieve diametr percent <0.0625 mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)
Oct														
14...	.018	.16	<.02	<.06	110	232	E.06	.13	1.0	11.7	4.7	<2.0	50	1
Nov														
14...	.039	.23	<.02	<.06	138	534	.09	.31	7.9	16.3	E1.7	<2.0	99	9
Jan														
10...	.089	.39	<.02	<.06	168	1,580	.10	1.70	12.1	44.9	E1.6	5.3	84	61
Feb														
25...	.027	.15	<.02	<.06	181	554	E.05	.22	16.6	21.5	E1.7	E1.6	88	6
May														
21...	.020	.10	<.02	<.06	40	367	.07	.38	4.1	12.2	<2.0	E1.8	82	16
Jun														
23...	.012	<.10	<.02	<.06	65	137	.07	.11	7.9	10.3	E1.0	E1.2	77	5
Aug														
11...	.011	E.09	<.02	<.06	48	127	<.06	.10	1.4	11.6	<2.0	E1.2	73	3