Water-Data Report 2012

12413000 NORTH FORK COEUR D'ALENE RIVER AT ENAVILLE, ID

Spokane Basin
Upper Coeur D'Alene Subbasin

LOCATION.--Lat 47°34′08″, long 116°15′12″ referenced to North American Datum of 1983, in NW ¼ SW ¼ NE ¼ sec.30, T.49 N., R.2 E., Shoshone County, ID, Hydrologic Unit 17010301, Cataldo quad., on left bank 200 ft downstream from county road bridge, 0.9 mi upstream from South Fork, 3.7 mi downstream from Little North Fork, and 168.7 mi upstream from mouth of Spokane River.

DRAINAGE AREA.--895 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1911 to April 1913 (fragmentary), October 1939 to September 1991 (published as Coeur d'Alene River at Enaville), October 1991 to current year.

REVISED RECORDS.--WSP 1396: 1945.

GAGE.--Water-stage recorder. Gage readings have been reduced to datum of gage at 2,100.00 ft above NGVD of 1929. National Geodetic Survey adjustment in 1991 found datum to be 3.71 ft higher. Mar. 3, 1911 to Apr. 12, 1913, nonrecording gage at approximately same location at different datum. Oct. 18 to Dec. 22, 1939, nonrecording gage 0.2 mi upstream at datum 2.60 ft higher. Dec. 23, 1939 to Sept. 30, 1990, 0.2 mi upstream at datum 2.60 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Station equipment includes satellite telemetry and crest-stage gage (CSG).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,000 ft^3/s Jan. 16, 1974, gage height, 81.32 ft, site and datum then in use; minimum, 95 ft^3/s Nov. 30, 1979, gage height, 60.95 ft, site and datum then in use; minimum gage height, 60.10 ft, Dec. 26, 1952, site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1933 reached a stage of 79.47 ft, datum then in use, and a flood in April 1938 reached a stage of 78.16 ft, datum then in use, from local information concerning high-water marks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 16	2215	10,800	66.18
Mar 31	0600	*22,600	*70.63
Apr 13	0600	10,000	65.76
Apr 25	0615	20,800	70.11
May 1	2130	10,400	65.98
Jun 7	1015	8,720	65.09

Minimum daily discharge, 173 ft^3/s, Dec. 24.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	284	343	493	1,430	1,450	1,000	14,900	9,670	2,760	1,820	567	331
2	280	317	457	1,110	1,240	874	10,800	9,570	2,950	1,700	553	327
3	275	292	410	923	1,080	802	7,670	7,830	3,340	1,720	542	321
4	275	277	344	804	960	789	6,110	6,690	3,080	1,670	529	317
5	288	276	314	721	869	873	5,100	5,910	3,720	1,520	518	313
6	334	267	332	681	804	1,210	4,300	5,380	5,880	1,420	505	311
7	355	258	316	650	756	1,290	3,700	4,900	8,430	1,330	500	308
8	348	253	268	626	708	1,230	3,280	4,780	7,560	1,260	489	304
9	323	249	267	598	717	1,190	3,080	5,450	6,940	1,190	479	300
10	309	245	227	595	722	1,240	3,300	6,170	7,640	1,130	469	298
11	322	244	207	540	702	1,430	4,810	5,570	7,700	1,070	459	296
12	396	293	269	379	731	1,760	8,280	4,730	6,450	1,010	448	294
13	397	346	285	340	760	2,200	9,640	4,330	6,090	971	439	293
14	345	340	278	423	780	2,710	8,230	4,590	6,800	956	432	289
15	327	324	287	493	753	2,870	6,900	5,540	6,550	1,100	422	287
16	305	281	278	453	717	7,880	6,130	6,600	5,480	1,220	415	281
17	287	288	269	412	692	9,310	6,770	6,560	4,780	986	407	276
18	276	343	267	369	707	6,110	7,610	5,540	4,210	905	401	272
19	268	326	260	380	720	4,310	7,380	4,590	3,700	851	395	268
20	264	291	253	382	678	3,380	7,890	3,910	3,180	828	389	263
21	262	284	247	442	718	3,050	13,200	3,750	2,830	846	385	258
22	286	330	236	517	1,610	2,720	13,600	4,710	2,630	784	398	256
23	375	670	195	517	2,560	2,480	14,600	5,080	2,510	744	396	255
24	384	922	173	469	2,120	2,280	18,800	4,640	2,340	715	380	254
25	334	922	215	490	1,880	2,230	20,100	4,140	2,150	693	372	253
26	298	755	254	612	1,580	3,260	17,400	3,700	2,240	675	364	252
27	278	613	260	666	1,330	5,250	16,900	3,360	2,420	655	362	250
28	267	583	424	626	1,150	5,010	13,000	3,060	2,110	636	353	248
29	295	566	e1,380	640	1,060	5,190	9,030	3,020	1,950	614	345	245
30	320	528	e1,820	1,210	---	10,500	7,810	3,000	1,830	598	341	241
31	342	---	e1,910	1,620	---	20,900	---	2,860	---	583	336	---
Total	9,699	12,026	13,195	20,118	30,554	115,328	280,320	159,630	130,250	32,200	13,390	8,461
Mean	313	401	426	649	1,054	3,720	9,344	5,149	4,342	1,039	432	282
Max	397	922	1,910	1,620	2,560	20,900	20,100	9,670	8,430	1,820	567	331
Min	262	244	173	340	678	789	3,080	2,860	1,830	583	336	241
Ac-ft	19,240	23,850	26,170	39,900	60,600	228,800	556,000	316,600	258,400	63,870	26,560	16,780
Cfsm	0.35	0.45	0.48	0.73	1.18	4.16	10.4	5.75	4.85	1.16	0.48	0.32
In.	0.40	0.50	0.55	0.84	1.27	4.79	11.65	6.63	5.41	1.34	0.56	0.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	377	947	1,474	1,520	1,981	2,655	5,323	5,116	2,044	668	350	291
Max	1,210	3,974	5,121	6,929	7,760	8,025	9,884	12,210	5,369	1,258	608	526
(WY)	(1952)	(1996)	(1965)	(1974)	(1996)	(1972)	(1943)	(2008)	(1974)	(2011)	(1948)	(1968)
Min	188	197	210	209	216	573	1,924	1,248	551	295	183	167
(WY)	(1945)	(1953)	(2001)	(1979)	(2001)	(1955)	(1941)	(1992)	(1992)	(1940)	(1994)	(2001)

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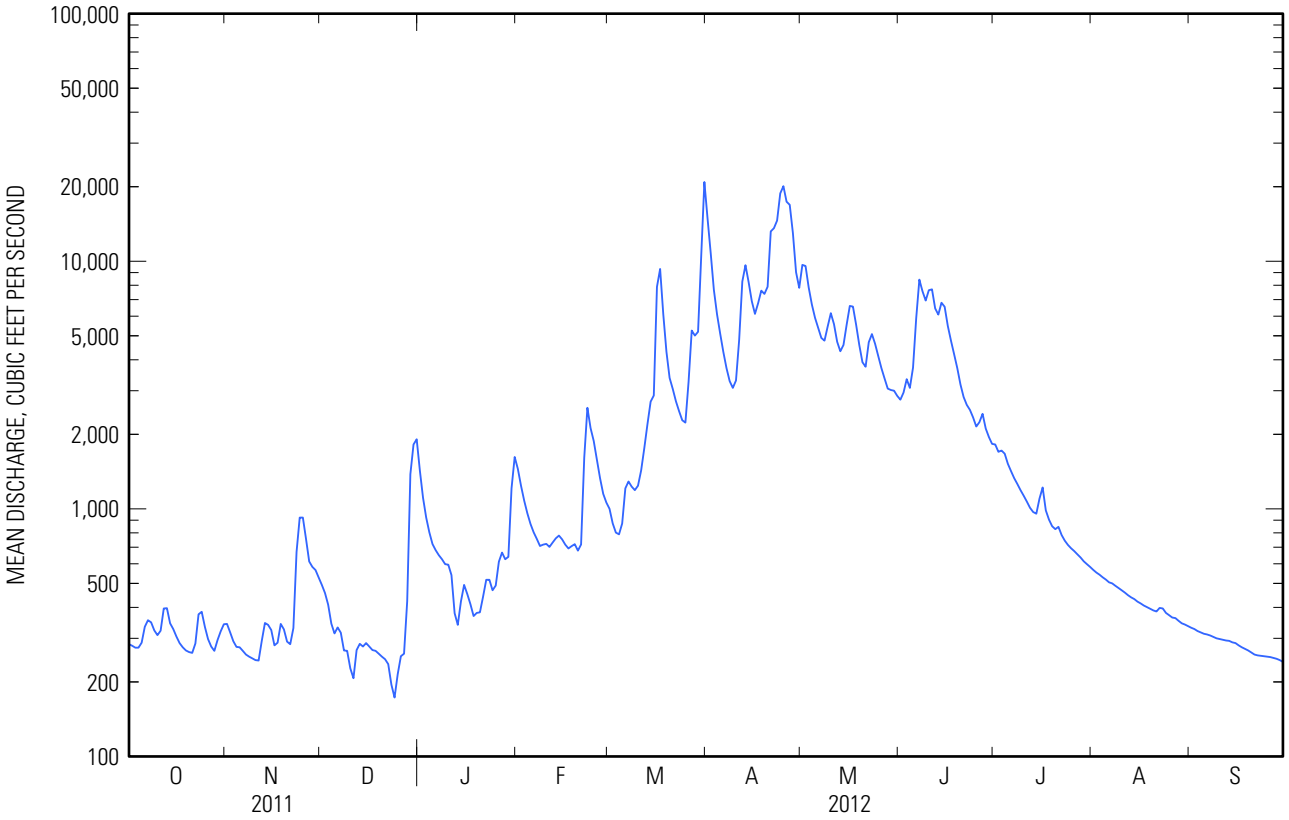
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1911 - 2012	
Annual total	961,080		825,171			
Annual mean	2,633		2,255		1,893	
Highest annual mean					3,281	1974
Lowest annual mean					599	1977
Highest daily mean	23,300	Jan 17	20,900	Mar 31	50,000	Jan 16, 1974
Lowest daily mean	173	Dec 24	173	Dec 24	108	Nov 30, 1979
Annual seven-day minimum	225	Dec 20	225	Dec 20	114	Jan 2, 1977
Annual runoff (ac-ft)	1,906,000		1,637,000		1,372,000	
Annual runoff (cfsm)	2.94		2.52		2.12	
Annual runoff (inches)	39.95		34.30		28.74	
10 percent exceeds	6,970		6,570		5,020	
50 percent exceeds	1,100		712		843	
90 percent exceeds	280		269		250	



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-73, 1975-1980, 1990, October 1992 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: May to September 1998, May to September 1999, May to September 2000, May to September 2001. (discontinued)

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 21.9 °C July 27, 1998.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 1 of 3

[$CaCO_3$, calcium carbonate; N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than]

Date	Sample start time	Temperature, air, °C (00020)	Discharge, instantaneous, ft³/s (00061)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, water, °C (00010)	Hardness, water, mg/L as $CaCO_3$ (00900)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Ammonia, water, filtered, mg/L as N (00608)
10-11-2011	**0845**	9.0	310	6.9	51	10.9	21.5	5.20	2.08	< .010
02-24-2012	**1130**	5.0	--	7.2	42	2.5	18.0	4.40	1.71	.010
04-27-2012	**0930**	7.0	--	6.9	28	5.1	11.3	2.76	1.06	< .010
06-27-2012	**0915**	16.0	--	6.9	41	9.6	17.8	4.35	1.69	< .010

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 2 of 3

[$CaCO_3$, calcium carbonate; N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than]

Date	Sample start time	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, filtered, mg/L as P (00666)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, unfiltered, analytically determined, mg/L (62855)	Cadmium, water, filtered, µg/L (01025)	Cadmium, water, unfiltered, µg/L (01027)	Iron, water, filtered, µg/L (01046)
10-11-2011	**0845**	< .008	< .004	< .004	< .004	< .05	< .016	< .016	4.8
02-24-2012	**1130**	.015	< .004	< .004	.005	.05	.017	.025	18.0
04-27-2012	**0930**	.025	.006	.009	.046	.10	.020	.049	48.3
06-27-2012	**0915**	.008	< .004	.004	.005	< .05	.022	.032	17.3

12413000 NORTH FORK COEUR D'ALENE RIVER AT ENAVILLE, ID—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 3 of 3

[$CaCO_3$, calcium carbonate; N, nitrogen; P, phosphorus; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than]

Date	Sample start time	Iron, water, unfiltered, recoverable, µg/L (01045)	Lead, water, filtered, µg/L (01049)	Lead, water, unfiltered, recoverable, µg/L (01051)	Manganese, water, filtered, µg/L (01056)	Manganese, water, unfiltered, recoverable, µg/L (01055)	Zinc, water, filtered, µg/L (01090)	Zinc, water, unfiltered, recoverable, µg/L (01092)	Suspended sediment, sieve diameter, percent smaller than 0.0625 mm (70331)	Suspended sediment concentration, mg/L (80154)
10-11-2011	**0845**	13.6	0.026	0.09	0.80	1.2	2.7	< 3.0	40	1
02-24-2012	**1130**	63.1	.080	.36	1.27	2.1	5.3	5.3	67	2
04-27-2012	**0930**	860	.257	4.84	5.21	29.6	4.2	10.2	91	53
06-27-2012	**0915**	48.3	.091	.27	2.92	3.0	4.9	5.0	57	7