

14240525 NORTH FORK TOUTLE RIVER BELOW SRS NEAR KID VALLEY, WA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1990-91, February 2001 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May to September 1990, May to September 1991.

WATER TEMPERATURE: May to September 1990, May to September 1991, May 2001 to September 2002 (discontinued).

SUSPENDED SEDIMENT: February 2001 to September 2002 (discontinued).

INSTRUMENTATION.--Temperature sensor and electronic data logger, with 15-minute logging interval. Automatic pumping sediment sampler.

REMARKS.--Water temperature records good, except Oct. 13-14, Dec. 6-14, Feb. 12-19, 21-27, May 7, 15-17, May 23-June 7, July 2-12, Sept. 7-15, which are fair; and Oct. 15-22, 24-27, Mar. 11-14, 19, 20, Apr. 9-May 5, May 8-12, 14, July 13-15, July 17-Aug. 13, Sept. 16-17, 19-30, which are poor.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 999 microsiemens Sept. 26, 1991; minimum recorded, 322 microsiemens May 26, 1991.

WATER TEMPERATURE: Maximum recorded (more than 20 percent missing record), 29.7°C, July 22, 2002; minimum recorded, 1.0°C Jan. 29, 2002.

SEDIMENT CONCENTRATION: Maximum daily, 18,100 mg/L Jan. 8, 2002; minimum daily, 82 mg/L Feb. 12, 2001.

SEDIMENT DISCHARGE: Maximum daily, 200,000 tons Jan. 8, 2002; minimum daily, 45 tons Sept. 22, 2001.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded (more than 20 percent missing record), 29.7°C, July 22; minimum recorded 1.0°C, Jan. 29.

SEDIMENT CONCENTRATION: Maximum daily, 18,100 mg/L Jan. 8; minimum daily, 119 mg/L Oct. 5.

SEDIMENT DISCHARGE: Maximum daily, 200,000 tons Jan. 8, minimum daily, 59 tons Oct. 5.

DAY	TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002											
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	6.8	5.8	6.3	6.7	3.9	5.6
2	---	---	---	---	---	---	6.4	5.6	6.0	8.1	5.4	6.8
3	---	---	---	---	---	---	7.2	4.8	5.8	7.8	5.0	6.1
4	---	---	---	---	---	---	5.3	4.4	4.8	7.7	4.6	5.9
5	---	---	---	---	---	---	6.7	3.7	5.0	7.5	5.2	6.4
6	---	---	---	---	---	---	6.7	5.5	6.0	9.4	5.8	7.6
7	---	---	---	---	---	---	7.4	4.2	5.6	9.3	8.0	8.8
8	---	---	---	---	---	---	7.1	5.7	6.2	8.0	6.7	7.4
9	15.7	---	---	---	---	---	7.1	4.8	5.8	7.2	5.2	6.2
10	11.9	7.8	9.6	---	---	---	5.7	4.7	5.2	7.0	5.0	5.9
11	13.5	9.5	11.1	---	---	---	6.3	4.6	5.4	8.0	6.2	6.9
12	11.4	9.1	10.0	---	---	---	6.4	4.3	5.2	6.7	4.9	6.2
13	15.6	9.8	12.2	---	---	---	8.0	6.4	7.2	6.6	4.2	5.1
14	16.4	12.0	13.4	11.7	---	---	6.4	4.2	5.0	5.9	3.5	4.8
15	17.1	9.1	12.4	10.8	9.4	10.3	5.9	4.7	5.1	5.3	1.9	3.4
16	13.0	10.1	11.6	9.7	8.6	9.2	7.5	5.9	7.0	4.5	2.8	3.5
17	15.9	9.4	11.9	10.5	6.1	8.5	6.7	4.4	5.3	4.4	2.7	3.6
18	14.5	9.1	11.5	9.5	4.9	6.9	5.6	4.4	4.9	5.5	3.8	4.4
19	14.2	11.8	12.7	10.6	7.2	9.1	5.9	4.5	5.2	---	---	---
20	15.8	10.3	12.5	9.5	8.1	8.9	---	---	---	---	---	---
21	13.4	10.8	11.9	9.0	7.6	8.2	7.3	4.8	5.7	4.4	3.0	3.6
22	12.4	11.1	11.7	8.9	7.5	8.3	6.3	3.2	4.4	4.4	2.6	3.3
23	---	---	---	---	---	---	6.3	2.9	4.1	5.2	2.9	4.0
24	10.2	9.4	9.8	7.9	6.6	7.1	6.0	2.6	3.7	5.5	4.6	5.0
25	12.2	10.2	10.9	7.3	5.6	6.5	4.8	2.0	3.1	5.5	3.9	5.1
26	13.0	11.0	11.8	7.8	5.3	6.2	4.5	1.8	3.1	4.3	1.7	3.4
27	13.0	11.6	12.2	7.1	4.7	5.7	5.2	3.8	4.5	4.2	1.8	2.9
28	11.6	10.4	11.0	6.5	4.7	5.6	7.5	4.0	5.6	5.7	1.9	3.3
29	---	---	---	6.9	5.3	6.2	6.5	3.0	4.3	4.0	1.0	2.3
30	---	---	---	6.1	5.2	5.6	6.6	2.8	4.5	5.3	2.6	3.6
31	---	---	---	---	---	---	7.4	4.1	5.9	5.1	3.6	4.2
MONTH	17.1	7.8	11.6	11.7	4.7	7.5	8.0	1.8	5.2	9.4	1.0	5.0

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SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	188	167	86.0	808	653	1430	2210	2610	15800
2	187	161	82.0	720	630	1220	1970	1780	9550
3	186	121	60.0	563	559	855	1650	1900	8420
4	186	121	61.0	489	461	609	1510	1760	7250
5	184	119	59.0	500	444	601	1370	1180	4380
6	184	133	66.0	427	372	429	1390	1230	4630
7	189	139	71.0	383	389	401	1270	1260	4300
8	202	127	69.0	353	311	297	1190	1070	3460
9	197	132	70.0	333	304	273	1180	1160	3720
10	265	452	363	312	296	250	1120	1090	3300
11	298	358	296	297	299	240	1130	976	2960
12	264	219	159	314	325	277	1050	845	2390
13	338	508	491	406	532	650	1730	3120	18300
14	318	493	440	1810	6360	33400	2510	3000	21600
15	284	286	219	1410	1880	7180	1790	1500	7270
16	282	243	185	1200	1360	4410	2820	5630	52300
17	275	235	174	1000	1220	3310	3600	12900	137000
18	251	214	145	820	1430	3140	2250	6420	39100
19	248	201	135	831	1560	3580	1790	5210	25200
20	240	198	128	1030	2010	5580	1540	4440	18400
21	253	235	161	1150	1660	5200	1350	2910	10600
22	322	368	346	1960	3750	23500	1210	2050	6700
23	584	990	1550	2130	4120	25700	1100	1800	5360
24	477	508	657	1610	1550	6700	1030	1670	4650
25	455	444	546	1310	1550	5510	973	1570	4140
26	507	e517	e709	1090	1000	2960	935	1530	3860
27	567	e727	e1130	965	1190	3110	910	1560	3830
28	513	e650	e907	1380	1730	6700	922	1330	3310
29	452	511	624	1750	2040	9840	874	1140	2700
30	580	858	1430	1620	1500	6580	854	955	2200
31	875	1260	3030	---	---	---	880	1030	2450
TOTAL	10351	---	14449.0	28971	---	163932	46108	---	439130
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	889	1050	2520	973	1830	4820	1010	2040	5550
2	997	1110	2980	926	1730	4330	947	447	1150
3	984	1060	2820	970	1610	4230	910	345	849
4	929	1020	2550	892	1480	3570	870	347	814
5	914	942	2320	899	1370	3340	877	348	823
6	1080	2560	8460	980	1610	4460	903	349	850
7	3180	13400	125000	1260	2880	9780	847	350	800
8	3970	18100	200000	1310	3050	10700	813	351	770
9	2460	11200	74800	1150	2950	9180	822	352	781
10	1840	9270	46300	1090	3050	9000	913	e1940	e4810
11	1550	6230	26100	1010	3160	8630	1790	e7560	e42300
12	e1500	5420	e22000	958	2820	7300	1880	e8350	e43000
13	e1400	5090	e19000	906	2410	5910	1620	e5450	e23900
14	e1300	4280	e15000	862	2250	5230	1420	357	1360
15	e1200	3930	e13000	836	2060	4660	1280	358	1240
16	e1100	4000	e12000	844	1810	4120	1160	359	1130
17	e1050	3840	e11000	823	1400	3120	1040	361	1010
18	e980	3540	e9400	844	1510	3440	952	362	930
19	e1150	3350	e10000	1040	2310	6570	1180	e3100	e10300
20	e1250	3160	e11000	1020	2270	6280	1240	e3830	e12900
21	e1400	2940	e11000	1470	4470	18500	1110	365	1090
22	e1250	2710	e9100	1790	6200	29900	1040	366	1030
23	e1100	2570	e7600	2150	6960	40600	1020	367	1020
24	e1300	e4860	e17000	1870	4960	25200	1040	368	1030
25	2120	e8050	e46500	1560	3970	16700	1000	369	997
26	1590	e4970	e21600	1370	3610	13300	974	370	973
27	1350	e3450	e12600	1220	3210	10600	942	371	944
28	1160	2760	8700	1100	2600	7740	957	372	962
29	1050	2330	6590	---	---	---	922	373	930
30	994	2100	5630	---	---	---	913	375	923
31	1030	1940	5390	---	---	---	865	376	877
TOTAL	44067	---	767960	32123	---	281210	33257	---	166043

COWLITZ RIVER BASIN

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SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	871	377	886	876	409	967	e840	1750	e4000
2	861	378	878	892	410	988	e800	1820	e3900
3	842	379	862	894	411	993	e780	1850	e3900
4	820	380	841	838	412	933	e750	1850	e3700
5	870	381	895	863	413	963	e740	1830	e3700
6	909	382	937	827	414	925	e740	1800	e3600
7	973	383	1010	776	415	870	e680	1780	e3300
8	934	384	969	734	417	826	e660	1780	e3200
9	1020	385	1060	702	418	792	e580	1830	e2900
10	1440	386	1500	665	419	752	e560	2070	e3100
11	1530	387	1600	645	420	731	574	453	703
12	1570	389	1650	640	421	727	562	454	689
13	1710	390	1800	677	422	772	592	455	728
14	2840	391	2990	682	423	779	626	456	771
15	2330	392	2460	649	424	743	637	458	787
16	1990	393	2100	643	425	739	626	459	775
17	1720	394	1830	685	426	789	623	460	773
18	1490	395	1580	716	427	827	678	461	843
19	1320	396	1400	733	428	848	616	462	768
20	1200	397	1280	794	430	921	586	463	733
21	1140	398	1220	799	431	928	587	464	736
22	1080	399	1160	797	432	929	575	465	722
23	1050	400	1130	750	433	876	563	466	708
24	958	401	1040	722	434	846	552	467	697
25	906	403	984	733	435	861	548	468	693
26	908	404	989	731	436	861	541	469	686
27	918	405	1000	747	437	881	540	470	686
28	882	406	966	818	438	968	582	e1290	e2050
29	872	407	958	e1300	2320	e8100	710	e1840	e3590
30	847	408	933	e1100	2250	e6700	592	e1180	e1900
31	---	---	---	e950	1990	e5100	---	---	---
TOTAL	36801	---	38908	24378	---	43935	19040	---	55338
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	558	475	715	344	508	472	230	542	336
2	541	476	695	339	509	466	232	543	339
3	530	477	683	343	510	472	233	544	342
4	523	478	675	339	511	468	227	545	334
5	524	479	678	338	512	467	221	546	325
6	523	480	678	332	514	460	224	547	330
7	528	481	686	328	515	455	227	548	336
8	507	482	660	311	516	433	222	549	328
9	486	483	635	299	517	417	219	550	325
10	474	484	620	291	518	407	217	551	323
11	468	486	613	286	519	400	220	552	328
12	468	487	615	279	520	392	215	553	321
13	472	488	622	273	521	384	214	555	320
14	466	489	615	279	522	393	214	556	321
15	464	490	614	276	523	389	215	557	322
16	455	491	603	272	524	385	224	558	337
17	451	492	600	266	525	378	219	559	330
18	443	493	590	263	527	374	212	560	321
19	417	494	557	262	528	374	210	561	318
20	403	495	540	265	529	378	212	562	321
21	395	496	530	269	530	385	211	563	320
22	392	497	527	256	531	366	204	564	310
23	387	498	521	247	532	354	201	565	307
24	379	500	512	246	533	353	201	566	307
25	391	501	529	243	534	350	203	567	311
26	379	502	514	248	535	359	202	569	311
27	378	503	513	243	536	352	201	570	309
28	379	504	516	236	537	342	201	571	310
29	378	505	515	232	538	337	228	572	351
30	367	506	501	235	539	342	225	567	344
31	350	507	480	232	541	339	---	---	---
TOTAL	13876	---	18352	8672	---	12243	6484	---	9737
YEAR	304128		2011237.0						

e Estimated