SNAKE RIVER MAIN STEM

13213100 SNAKE RIVER AT NYSSA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1989 to September 1990, October 1992 to September 1993, April to September 1996.

PERIOD OF DAILY RECORD.--April 1989 to September 1990 (discontinued).

INSTRUMENTATION.--Water-quality monitor April 1989 to September 1990.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum 544 microsiemens/cm Sep. 3; minimum 507 microsiemens/cm Sep. 19, 1989.
pH: Maximum 9.82 units May 29; minimum 8.00 units Aug. 26, 1989.
WATER TEMPERATURE: Maximum 25.0 °C Jun. 12, Aug. 12-13; minimum 11.0 °C Apr. 23, 25-28, 1989.
DISSOLVED OXYGEN: Maximum 13.8 mg/L Aug. 11; minimum 6.7 mg/L Sep. 3, 1989.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
APR											
12...	1230	35400	385	8.6	9.0	12.0	5.2	10.8	108	73	230
MAY											
22...	1400	25400	359	9.2	16.5	15.0	8.5	12.2	132	110	180
JUN											
14...	1225	19400	305	8.8	28.0	19.0	4.5	12.1	142	210	200
JUL											
22...	1305	9220	441	8.6	35.0	22.0	20	10.2	125	300	400
AUG											
19...	1345	11300	482	8.6	27.0	20.0	5.1	10.8	129	240	240
SEP											
27...	1145	10100	527	8.6	14.0	14.0	4.0	10.9	114	K51	470

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR-BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
SEP									
27...	190	47	18	36	28	5.1	200	11	178

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
SEP								
27...	57	22	0.6	26	320	324	0.44	8730

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
APR								
12...	<0.01	0.47	<0.015	0.4	0.08	0.01	48	4590
MAY								
22...	0.01	0.35	0.020	0.7	0.09	<0.01	74	5070
JUN								
14...	0.02	0.23	0.030	0.8	0.11	<0.01	65	3400
JUL								
22...	0.03	0.81	0.060	0.7	0.12	0.01	59	1470
AUG								
19...	0.02	0.93	0.030	0.7	0.07	0.03	32	976
SEP								
27...	0.02	1.3	<0.015	0.5	0.08	0.04	22	600

K Results based on counts outside ideal colony range.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1989 to September 1990, October 1992 to September 1993, April 1996 to September 1997 (discontinued).

PERIOD OF DAILY RECORD.--April 1989 to September 1990, August to September 1997 (discontinued).

INSTRUMENTATION.--Water-quality monitor April 1989 to September 1990, temperature recording data logger August to September 1997.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE:Maximum, 544 microsiemens/cm Sep. 3; minimum, 507 microsiemens/cm Sep. 19, 1989.
pH:Maximum, 9.82 units May 29; minimum, 8.00 units Aug. 26, 1989.
WATER TEMPERATURE:Maximum 25.5 °C Aug. 7, 1997; minimum 11.0 °C Apr. 23, 25-28, 1989.
DISSOLVED OXYGEN:Maximum 13.8 mg/L Aug. 11; minimum 6.7 mg/L Sep. 3, 1989.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 25.5 °C Aug. 7.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
APR											
29...	1155	31600	325	8.3	15.0	11.5	19	10.4	104	74	100
MAY											
22...	1415	25400	348	8.7	27.0	18.5	--	11.6	135	K130	190
JUN											
13...	1350	36500	349	8.4	25.0	18.0	26	9.4	109	380	670
JUL											
22...	1145	9910	429	8.6	28.5	23.0	12	10.0	127	270	910
AUG											
13...	1252	11600	464	8.6	25.0	22.0	14	9.8	123	K100	110
SEP											
17...	0915	18600	460	8.5	15.0	18.5	11	8.5	99	K94	K4200

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER WH FET FIELD MG/L AS HCO3 (00440)	CAR-BONATE WATER WH FET FIELD MG/L AS CO3 (00445)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)
SEP									
17...	170	43	14	25	24	4.0	190	4	162

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
SEP								
17...	43	18	0.57	23	286	273	0.39	14400

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
APR								
29...	<0.010	0.608	0.021	0.45	0.084	0.044	45	3840
MAY								
22...	<0.010	0.403	<0.015	0.56	0.089	<0.010	47	3220
JUN								
13...	<0.010	0.399	<0.015	0.49	0.106	0.023	90	8870
JUL								
22...	0.017	0.903	<0.015	0.84	0.166	0.015	52	1390
AUG								
13...	0.022	0.940	<0.015	0.58	0.062	<0.010	57	1790
SEP								
17...	0.010	1.04	<0.015	0.44	0.098	0.029	41	2060

K Results based on counts outside ideal colony range.

SNAKE RIVER MAIN STEM

13213100 SNAKE RIVER AT NYSSA, OR--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN
		AUGUST			SEPTEMBER	
1	---	---	---	22.0	19.6	20.8
2	23.9	20.9	22.3	21.9	20.6	21.0
3	24.6	21.7	23.1	22.4	20.2	21.1
4	23.9	22.0	22.6	22.2	19.9	21.1
5	23.6	20.7	22.0	22.5	20.4	21.5
6	24.8	22.2	23.4	22.5	20.2	21.3
7	25.5	22.5	23.9	22.2	20.1	21.2
8	24.4	22.4	23.4	21.7	20.1	21.0
9	23.4	20.9	22.2	21.7	19.4	20.6
10	22.9	20.9	21.9	22.0	20.1	21.0
11	22.7	20.9	21.7	21.4	20.4	20.8
12	23.4	20.4	21.8	20.4	19.3	19.8
13	23.4	21.2	22.3	20.9	18.8	19.8
14	24.2	21.5	22.9	21.5	19.7	20.5
15	24.1	21.9	23.0	20.7	18.9	19.6
16	22.7	20.6	21.8	19.3	17.5	18.4
17	22.9	20.6	21.7	18.4	16.7	17.7
18	23.2	20.4	21.8	18.0	15.9	16.8
19	23.6	20.7	22.1	18.1	16.4	17.2
20	23.4	21.0	22.3	18.4	16.5	17.5
21	23.4	20.6	21.9	18.8	16.7	17.6
22	23.6	21.0	22.4	18.9	16.8	17.8
23	23.6	20.9	22.3	19.3	17.2	18.2
24	23.0	21.2	22.2	19.3	17.5	18.3
25	22.7	20.2	21.6	18.6	17.2	18.0
26	22.5	20.1	21.4	19.3	17.5	18.2
27	22.5	20.1	21.3	18.3	16.5	17.3
28	22.2	19.9	21.1	17.5	15.7	16.7
29	22.0	19.3	20.6	17.5	15.6	16.5
30	22.2	19.6	20.9	17.5	15.9	16.7
31	21.7	20.1	20.9	---	---	---
MONTH	---	---	---	22.5	15.6	19.1

BIOLOGICAL DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	ORGANISM	INDI-VIDUALS IN SAMPLE (NO.) (81614)	WEIGHT SAMPLE BIOTA TISSUE COMP. AVERAGE (GRAMS) (01373)	LENGTH SAMPLE BIOTA TISSUE COMP. AVERAGE (CM) (01371)	ALUMI-NUM, BIOTA, TISSUE, DRY WGT REC (UG/G) (49237)	ANTI-MONY, BIOTA, TISSUE, DRY WGT REC (UG/G) (49246)	ARSENIC BIOTA, TISSUE, DRY WGT REC (UG/G) (49247)	BARIUM, BIOTA, TISSUE, DRY WGT REC (UG/G) (49238)
AUG 06...	1305	largescale sucker liver	7	1270	51	4.2	<0.2	0.6	0.2

DATE	BERYL-LIUM-, BIOTA, TISSUE, DRY WGT REC (UG/G) (49248)	BORON, BIOTA, TISSUE, DRY WGT REC (UG/G) (49239)	CADMIUM BIOTA, TISSUE, DRY WGT REC (UG/G) (49249)	CHROM-IUM-, BIOTA, TISSUE, DRY WGT REC (UG/G) (49240)	COBALT, BIOTA TISSUE, DRY WGT REC (UG/G) (49250)	COPPER, BIOTA, TISSUE, DRY WGT REC (UG/G) (49241)	IRON, BIOTA, TISSUE, DRY WGT REC (UG/G) (49242)	LEAD, BIOTA, TISSUE, DRY WGT REC (UG/G) (49251)	MANGAN-ESE, BIOTA, TISSUE, DRY WGT REC (UG/G) (49243)	MERCURY BIOTA, TISSUE, DRY WGT REC (UG/G) (49258)
AUG 06...	<0.2	0.3	0.6	0.6	<0.2	38	810	<0.2	6.0	0.3

DATE	MOLYB-DENUM, BIOTA, TISSUE, DRY WGT REC (UG/G) (49252)	NICKEL, BIOTA, TISSUE, DRY WGT REC (UG/G) (49253)	SELEN-IUM, BIOTA, TISSUE, DRY WGT REC (UG/G) (49254)	SILVER, BIOTA, TISSUE, DRY WGT REC (UG/G) (49255)	STRON-TIUM, BIOTA, TISSUE, DRY WGT REC (UG/G) (49244)	VANA-DIUM BIO TIS LIVER DRY WGT REC (UG/G) (49465)	ZINC, BIOTA, TISSUE, DRY WGT REC (UG/G) (49245)	URANIUM BIOTA, TISSUE, DRY WGT REC (UG/G) (49257)	WATER, PRESENT BIO TIS DRY WGT REC PERCENT (49273)
AUG 06...	0.9	<0.2	4.4	<0.2	0.4	1.2	96	<0.2	77

DATE	TIME	ORGANISM	INDI-VIDUALS IN SAMPLE (NO.) (81614)	WEIGHT SAMPLE BIOTA TISSUE COMP. AVERAGE (GRAMS) (01373)	LENGTH SAMPLE BIOTA TISSUE COMP. AVERAGE (CM) (01371)	ALDRIN, BIOTA, WH ORG WW, REC (UG/KG) (49353)	CIS-CHLOR-DANE, BIOTA, WH ORG WW, REC (UG/KG) (49380)	TRANS-CHLOR-DANE, BIOTA, WH ORG WW, REC (UG/KG) (49379)	DCPA, BIOTA, WH ORG WW, REC (UG/KG) (49378)	O,P'-DDT, BIOTA, WH ORG WW, REC (UG/KG) (49377)	P,P'-DDT, BIOTA, WH ORG WW, REC (UG/KG) (49376)
AUG 06...	1300	largescale suckers	7	1300	51	<5.0	<5.0	<5.0	<5.0	<12	50

DATE	P,P'-DDD, BIOTA, WH ORG WW, REC (UG/KG) (49375)	O,P'-DDD, BIOTA, WH ORG WW, REC (UG/KG) (49374)	O,P'-DDE, BIOTA, WH ORG WW, REC (UG/KG) (49373)	P,P'-DDE, BIOTA, WH ORG WW, REC (UG/KG) (49372)	DIEL-DRIN, BIOTA, WH ORG WW, REC (UG/KG) (49371)	ENDRIN, BIOTA, WH ORG WW, REC (UG/KG) (49370)	HEPTA-CHLOR, BIOTA, WH ORG WW, REC (UG/KG) (49369)	HEPTA-CHLOR EPOXIDE BIOTA, WH ORG WW, REC (UG/KG) (49368)	BENZENE HEXA-CHLORO-BIOTA, WH ORG WW, REC (UG/KG) (49367)	ALPHA-BHC, BIOTA, WH ORG WW, REC (UG/KG) (49366)	BETA-BHC, BIOTA, WH ORG WW, REC (UG/KG) (49365)	DELTA-BHC, BIOTA, WH ORG WW, REC (UG/KG) (49364)
AUG 06...	24	<5.0	E9.3	510	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

DATE	LINDANE BIOTA, WH ORG WW, REC (UG/KG) (49363)	METHOXY CHLOR, O,P'-, BIOTA, WH ORG WW, REC (UG/KG) (49362)	METHOXY CHLOR, P,P'-, BIOTA, WH ORG WW, REC (UG/KG) (49361)	MIREX, BIOTA, WH ORG WW, REC (UG/KG) (49360)	CIS-NONA-CHLOR, BIOTA, WH ORG WW, REC (UG/KG) (49359)	TRANS-NONA-CHLOR, BIOTA, WH ORG WW, REC (UG/KG) (49358)	OXY-CHLOR DANE, BIOTA, WH ORG WW, REC (UG/KG) (49357)	PENTA CHLORO ANISOLE BIOTA, WH ORG WW, REC (UG/KG) (49356)	PCB, BIOTA, WH ORG WW, REC (UG/KG) (49354)	TOXA-PHENE, BIOTA, WH ORG WW, REC (UG/KG) (49355)	LIPIDS, BIOTA, WH ORG WW, REC PERCENT (49289)
AUG 06...	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<50	<200	10.0

COLLECTION METHODS.--Electrofishing; boat (13A).

LENGTH OF REACH.--1120 m.

TIME ELAPSED FOR EACH METHOD.--Boat (13A)-0.41 hours.

ANOMALY CODES.--AA-none; DE-deformities; ER-eroded fins; LE-lesions; TU-tumors; AL-anchor worms; BL-black spot; CL-leeches; IC-ich; NE-blind; PA-other parasites; PE-popeye.

HABITAT QUALITY INDEX.--NA.

REMARKS.--Large river. Sample collection upstream of gage near raliroad bridge, lat. 43°51’50”,long. 116°59’51”, at river mile 391.3. Samples collected along right bank of entire reach and select riffles around islands.

BIOLOGICAL DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

FISH COLLECTION DATA

ORGANISM **FAMILY** *GENUS SPECIES* (COMMON)	DATE	NUMBER OF INDIV-IDUALS	PERCENT COMPO-SITION	LENGTH RANGE TOTAL MM	WEIGHT RANGE IN GM	ORIGIN	TROPHIC GROUP OF ADULTS	TEMPER-ATURE PREFER-ENCE	NUMBER AND TYPE OF ANOMALY
	Aug. 6								
Catostomidae (Suckers)									
Catostomus columbianus (Bridgelip sucker)		1	0.92	130	24	Native	Herbivore	Cold	1-AA,
Catostomus macrocheilus (Largescale sucker)		19	17.43	761-565	3-1657	Native	Omnivore	Warm	14-AA, 1-ER/LE, 4-LE,1-LE/TU
Catastomus platyrhynchus (Mountain sucker)		2	1.83	115-135	15-24	Native	Herbivore	Cold	2-AA
Centrarchidae (Sunfishes)									
Lepomis gibbosus (Pumpkinseed)		3	2.75	77-92	4-8	Introduced	Invertivore	Warm	3-AA
Lepomis macrochirus (Bluegill)		1	0.92	120	31	Introduced	Insectivore	Warm	1-AA
Micropterus dolomieui (Smallmouth bass)		40	36.70	40-370	1-755	Introduced	Piscivore	Cool	40-AA
Cyprinidae (Carps and minnows)									
Cyprinus carpio (Common Carp)		12	11.01	359-628	680-3500	Introduced	Omnivore	Warm	10-AA, 1-AL 1-BL,
Acrocheilus alutaceus (Chiselmouth)		4	3.67	96-130	8-19	Native	Herbivore	Cold	4-AA
Gila bicolor (Tui Chub)		8	7.34	50-60	1-2	Introduced	Omnivore	Warm	8-AA
Richardsonius balteatus (Redside shiner)		2	1.83	90-100	7-8	Native	Invertivore	Cold	2-AA
Ictaluridae (Bullhead catfishes)									
Ictalurus punctatus (Channel catfish)		9	8.26	410-525	378-1478	Introduced	Omnivore	Warm	5-AA, 4-CL
Pylodictus olivaris (Flathead catfish)		1	0.92	850	8450	Introduced	Poscivore	Warm	1-LE
Salmonidae (Trouts)									
Prosopium williamsoni (Mountain whitefish)		7	6.42	106-134	7-18	Native	Insectivore	Cold	7-AA

SUMMARY STATISTICS
TOTAL NUMBER OF TAXA 13
TOTAL INDIVIDUALS 109

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1989 to September 1990, October 1992 to September 1993, April 1996 to September 1997, June to September 1998 (discontinued).

PERIOD OF DAILY RECORD.--April 1989 to September 1990, August to Septmeber 1997, June to September 1998 (discontinued).

INSTRUMENTATION.--Water-quality monitor April 1989 to September 1990, temperature recording data logger August to September 1997, June to September 1998.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 544 microsiemens/cm Sep. 3; minimum, 507 microsiemens/cm Sep. 19, 1989.
pH: Maximum, 9.82 units May 29; minimum, 8.00 units Aug. 26, 1989.
WATER TEMPERATURE: Maximum, 26.9 ^{o}C July 27-28, 1998; minimum, 11.0 ^{o}C Apr. 23, 25-28, 1989.
DISSOLVED OXYGEN: Maximum, 13.8 mg/L Aug. 11; minimum, 6.7 mg/L Sep. 3, 1989.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 26.9 ^{o}C July 27-28.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	21.8	18.8	20.3	25.2	22.4	23.7	22.9	20.6	21.8
2	---	---	---	22.1	19.8	20.8	25.3	22.8	24.1	23.1	20.8	21.9
3	---	---	---	20.4	19.3	19.6	25.5	22.9	24.3	23.3	20.9	22.2
4	---	---	---	21.4	19.3	20.2	25.9	22.9	24.4	23.3	21.1	22.2
5	---	---	---	22.3	19.3	20.6	25.9	23.3	24.7	22.8	21.8	22.1
6	---	---	---	22.9	20.0	21.5	25.5	23.6	24.7	23.1	21.3	22.1
7	---	---	---	24.0	20.6	22.2	25.3	23.1	24.2	24.0	22.1	23.0
8	---	---	---	24.0	21.6	22.8	24.8	22.1	23.6	23.1	21.9	22.5
9	---	---	---	23.6	21.8	22.7	25.0	22.1	23.5	22.3	20.6	21.4
10	---	---	---	23.4	21.6	22.6	25.0	22.4	23.7	21.4	19.8	20.5
11	---	---	---	24.3	21.1	22.7	25.3	22.6	23.9	21.6	19.6	20.7
12	---	---	---	25.0	21.8	23.4	25.3	22.6	24.0	21.6	19.8	20.8
13	---	---	---	24.7	22.4	23.6	25.9	23.1	24.5	21.8	19.8	20.9
14	---	---	---	25.0	22.4	23.8	26.0	23.4	24.7	21.6	19.8	20.7
15	---	---	---	25.3	22.9	24.1	25.5	23.3	24.5	21.6	19.6	20.7
16	---	---	---	25.9	23.3	24.6	24.8	22.4	23.6	22.1	20.3	21.3
17	---	---	---	26.2	23.4	24.9	23.4	21.1	22.3	21.9	20.4	21.3
18	---	---	---	26.0	24.0	25.1	22.3	20.0	21.2	21.6	19.6	20.5
19	---	---	---	26.4	24.0	25.2	22.3	19.8	21.1	19.8	18.2	18.8
20	---	---	---	26.0	23.6	24.9	22.9	19.8	21.4	18.5	17.1	17.6
21	---	---	---	26.0	23.6	24.9	23.4	20.4	21.9	18.3	16.3	17.3
22	---	---	---	26.6	23.6	25.0	23.4	20.8	22.2	18.7	16.7	17.8
23	---	---	---	25.7	23.8	24.8	22.9	20.9	22.0	19.0	17.1	18.1
24	---	---	---	25.9	22.9	24.4	22.1	19.6	21.0	18.8	17.1	18.0
25	---	---	---	26.6	23.4	25.0	22.3	19.6	20.9	18.3	17.7	18.0
26	---	---	---	26.7	24.0	25.4	22.1	20.1	21.0	18.0	16.4	17.2
27	17.7	15.1	16.4	26.9	24.3	25.5	22.6	19.8	21.1	18.0	16.4	17.3
28	19.1	16.1	17.5	26.9	24.1	25.5	22.8	20.0	21.4	18.7	16.7	17.6
29	20.3	17.4	18.8	26.6	23.6	25.1	23.1	20.4	21.8	18.8	17.1	18.0
30	21.4	18.5	19.9	25.7	23.6	24.6	23.1	21.1	22.1	18.8	17.1	18.0
31	---	---	---	24.7	22.1	23.4	22.8	20.3	21.6	---	---	---
MONTH	---	---	---	26.9	18.8	23.5	26.0	19.6	22.9	24.0	16.3	20.0

COLLECTION METHODS.--Composite of 5, 0.25 m^2 samples. Richest targeted habitat--riffles, whole sample. MESH SIZE.--425 um.

AVERAGE DEPTH.--0.25 m.

AVERAGE PERCENT SHADING.--6.

AVERAGE VELOCITY.--0.64 m/s.

SUBSTRATE EMBEDDEDNESS CLASS RANGE.--2-3.

PERCENT FINES RANGE.--0-10.

HABITAT QUALITY INDEX.--NA.

REMARKS.--Large river. Numerous islands and bars. Agriculture encroaching on banks.

BIOLOGICAL DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
BENTHIC INVERTEBRATE COLLECTION DATA

ORGANISM **TAXON** *GENUS SPECIES*	DATE AUG 6	NUMBER OF INDIV-IDUALS	PERCENT COMPO-SITION	FUNC-TIONAL FEEDING GROUP	POLLU-TION TOLER-ANCE VALUE
NON-INSECTS					
Turbellaria		8	0.32	CG	4
Oligochaeta		4	0.16	CG	8
Potamopyrgus antipodarum		4	0.16	SC	8
Fluminicola new species		36	1.45	SC	5
Acari		20	0.81	PA	5
EPHEMEROPTERA					
Acentrella turbida		136	5.48	CG	4
Baetis tricaudatus		88	3.55	CG	6
Rhithrogena		4	0.16	SC	0
Stenonema		80	3.23	SC	5
Tricorythodes		180	7.26	CG	4
Tricorythodes minutus		208	8.39	CG	4
TRICHOPTERA					
Cheumatopsyche		144	5.81	CF	8
Hydropsyche		1336	53.87	CF	4
Hydroptila		12	0.48	PH	6
LEPIDOPTERA					
Petrophila		4	0.16	SC	5
COLEOPTERA					
Microcylloepus		16	0.65	SC	7
DIPTERA					
Hemerodromia		4	0.16	PR	6
Simulium		52	2.1	CF	6
CHIRONOMIDAE					
Chironomidae-pupae		16	0.65	UN	6
Cricotopus		52	2.1	CG	7
Cricotopus Bicinctus Gr.		32	1.29	CG	7
Cricotopus Trifascia Gr.		16	0.65	CG	6
Polypedilum		24	0.97	OM	6
Rheotanytarsus		4	0.16	CF	6

TOTAL NUMBER OF TAXA 24
TOTAL NUMBER OF ORGANISMS 2480/m^2
HILSENHOFF BIOTIC INDEX 4.59

EPT ABUNDANCE 2188/m^2
NUMBER EPT TAXA 9
SHANNON DIVERSITY INDEX (H) 2.67

COLLECTION METHODS.--Qualitative multiple habitat, relative abundance, whole sample.
MESH SIZE.--210 um.
GEAR TYPE.--D-frame net and visual collections.

REACH LENGTH.--1120 m.

AVERAGE WIDTH.--NA.

HABITAT QUALITY INDEX.-NA.

REMARKS.--Large river. Numerous islands and bars. Agriculture encroaching on banks.

BIOLOGICAL DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
BENTHIC INVERTEBRATE COLLECTION DATA

ORGANISM **TAXON** *GENUS SPECIES*	DATE AUG 6	NUMBER OF INDIV-IDUALS	PERCENT COMPO-SITION	FUNC-TIONAL FEEDING GROUP	POLLU-TION TOLER-ANCE VALUE
NON-INSECTS					
Turbellaria		48	1.45	CG	4
Oligochaeta		6	0.18	CG	8
EPHEMEROPTERA					
Acentrella turbida		102	3.09	CG	4
Baetis tricaudatus		270	8.18	CG	6
Stenonema		60	1.82	SC	5
Tricorythodes		18	0.55	CG	4
Tricorythodes minutus		168	5.09	CG	4
HEMIPTERA					
Corixidae		12	0.36	UN	8
TRICHOPTERA					
Cheumatopsyche		48	1.45	CF	8
Hydropsyche		756	22.91	CF	4
DIPTERA					
Simulium		1446	43.82	CF	6
CHIRONOMIDAE					
Chironomidae-pupae		6	0.18	UN	6
Cardiocladius		12	0.36	PR	5
Chironomus		6	0.18	CG	10
Cricotopus		54	1.64	CG	7
Cricotopus Bicinctus Gr.		108	3.27	CG	7
Cricotopus Trifascia Gr.		18	0.55	CG	6
Cryptochironomus		6	0.18	PR	8
Eukiefferiella		6	0.18	OM	8
Glyptotendipes		12	0.36	CG	10
Orthocladius Complex		42	1.27	CG	6
Paracladopelma		12	0.36	UN	7
Parakiefferiella		6	0.18	CG	4
Polypedilum		54	1.64	OM	6
Rheotanytarsus		12	0.36	CF	6
Tanytarsus		6	0.18	CF	6
Thienemanniella		6	0.18	CG	6

TOTAL NUMBER OF TAXA 27
TOTAL NUMBER OF ORGANISMS 3300
HILSENHOFF BIOTIC INDEX 5.43

EPT ABUNDANCE 1422
NUMBER EPT TAXA 7
SHANNON DIVERSITY INDEX (H) 2.76

13213100 SNAKE RIVER AT NYSSA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1989 to September 1990, October 1992 to September 1993, April 1996 to September 1997, June to September 1998, April to September 2000 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August to September 1989.
pH: May to September 1989.
WATER TEMPERATURE: April to September 1989, August to September 1997, June to September 1998, April to September 2000 (discontinued).
DISSOLVED OXYGEN: August to September 1989.

INSTRUMENTATION.--Water-quality monitor, temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 544 microsiemens/cm Sep. 3; minimum, 507 microsiemens/cm Sep. 19, 1989.
pH: Maximum, 9.82 units May 29; minimum, 8.00 units Aug. 26, 1989.
WATER TEMPERATURE: Maximum, 26.9 °C July 27-28, 1998.
DISSOLVED OXYGEN: Maximum, 13.8 mg/L Aug. 11; minimum, 6.7 mg/L Sep. 3, 1989.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 26.2 °C July 13, 21, 22, 29.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
APR											
12...	1000	17000	387	8.5	20.0	13.0	7.5	--	--	100	200
MAY											
09...	1800	6100	403	8.8	22.0	16.6	16	13.7	154	100	120
JUN											
08...	1100	7370	416	8.4	20.0	20.0	10	8.2	99	250	810
JUL											
12...	0620	7680	597	8.4	19.0	23.4	32	--	--	K200	500
AUG											
23...	1000	9580	477	8.4	25.0	20.2	.5	9.4	113	K63	1900
SEP											
12...	1045	10300	503	8.6	21.0	17.8	1.2	9.4	107	66	490

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ANC WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	ANC UNFLTRD CARB FET FIELD MG/L AS CO3 (00445)
SEP								
12...	180	42.9	17.3	34.6	29	4.3	200	5

DATE	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
SEP								
12...	171	52.7	21.0	.6	27.9	310	.42	8610

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
APR							
12...	.663	.016	.62	.084	.013	42	1930
MAY							
09...	.455	.099	.99	.106	.003	34	560
JUN							
08...	.714	.002	.65	.143	.016	49	975
JUL							
12...	.633	.050	.92	.162	.018	51	1060
AUG							
23...	.789	.002	.60	.111	.017	39	1010
SEP							
12...	1.24	.006	.57	.109	.044	24	667

K Results based on counts outside ideal colony range.

WATER TEMPERATURE, DEGREES CELSIUS, APRIL TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN
		APRIL			MAY	
1	---	---	---	15.9	13.1	14.5
2	---	---	---	17.5	14.6	15.9
3	---	---	---	17.7	15.3	16.5
4	---	---	---	17.2	15.3	16.2
5	---	---	---	17.5	15.3	16.3
6	---	---	---	16.2	14.5	15.3
7	---	---	---	16.9	14.3	15.4
8	---	---	---	17.5	14.8	16.1
9	---	---	---	16.5	15.1	15.8
10	---	---	---	15.8	14.2	14.9
11	---	---	---	14.5	13.1	13.8
12	---	---	---	15.1	11.8	13.5
13	---	---	---	15.8	13.7	14.8
14	---	---	---	17.5	14.6	16.0
15	---	---	---	18.3	15.1	16.6
16	---	---	---	17.8	16.2	16.7
17	---	---	---	17.3	14.6	16.0
18	---	---	---	18.5	15.1	16.6
19	14.3	12.2	13.2	19.1	16.5	17.7
20	14.6	13.1	13.8	20.4	17.3	18.7
21	15.3	12.6	13.8	21.6	18.3	19.8
22	15.0	13.9	14.5	22.1	19.3	20.6
23	13.9	11.7	12.8	21.4	19.3	20.4
24	13.7	11.2	12.5	22.1	18.8	20.3
25	13.2	12.3	12.8	21.1	18.8	19.8
26	14.0	11.5	12.7	20.7	17.8	19.2
27	15.9	12.9	14.2	19.6	18.5	19.0
28	15.6	13.9	14.8	20.6	18.0	19.1
29	14.6	11.8	13.3	20.1	17.5	18.9
30	15.1	12.0	13.5	18.9	17.0	17.9
31	---	---	---	17.7	15.6	16.6
MONTH	---	---	---	22.1	11.8	17.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.3	15.1	17.1	24.4	21.9	23.3	25.5	22.7	24.3	19.9	18.1	18.9
2	21.1	17.2	18.9	23.9	20.7	22.4	25.8	23.2	24.5	18.5	17.2	17.8
3	22.1	18.8	20.3	23.1	20.4	21.6	25.3	23.1	24.3	17.5	16.1	16.7
4	23.4	19.6	21.4	21.2	18.8	20.1	25.8	23.2	24.4	18.3	16.2	17.1
5	23.6	20.7	22.1	20.4	19.3	19.7	25.3	22.6	23.9	18.0	16.9	17.4
6	23.2	19.9	21.7	20.9	17.7	19.2	25.1	22.6	23.9	18.5	16.2	17.3
7	23.6	20.6	22.1	22.7	19.3	20.7	25.3	22.7	24.1	18.8	16.5	17.7
8	22.7	19.3	20.6	23.1	20.4	21.7	25.5	22.9	24.2	18.5	17.0	17.9
9	19.4	17.3	18.5	23.7	20.4	22.0	25.5	22.9	24.3	18.0	16.1	17.1
10	18.6	17.0	17.9	24.1	20.9	22.5	25.6	23.2	24.5	17.5	16.1	16.6
11	17.8	16.4	17.3	24.8	21.6	23.1	25.0	22.6	23.8	18.3	15.6	16.8
12	18.1	16.7	17.2	25.6	22.4	24.0	24.6	22.1	23.4	19.6	17.0	18.2
13	20.1	16.2	17.9	26.2	22.9	24.5	24.6	22.1	23.4	20.6	18.5	19.5
14	22.7	18.5	20.3	25.6	22.9	24.4	23.9	21.4	22.8	21.2	19.1	20.2
15	22.4	20.1	21.3	25.1	22.2	23.2	23.7	21.4	22.7	21.4	19.3	20.3
16	21.6	18.6	20.1	23.9	21.2	22.5	23.4	20.9	22.2	21.1	19.3	20.2
17	22.4	19.1	20.7	23.2	21.6	22.3	23.4	20.9	22.2	21.1	19.1	20.1
18	22.4	19.4	20.9	23.4	21.2	22.2	23.4	20.9	22.2	20.9	19.1	20.1
19	21.2	18.6	20.1	24.8	21.1	22.8	23.1	20.4	21.8	20.4	19.1	19.8
20	21.9	18.1	19.9	25.5	22.1	23.7	21.9	19.4	20.8	19.4	17.5	18.5
21	23.2	19.6	21.3	26.2	23.1	24.6	21.4	19.1	20.3	18.5	16.7	17.7
22	23.1	21.1	22.2	26.2	23.1	24.6	21.9	19.3	20.5	17.2	15.1	15.9
23	22.6	20.4	21.6	25.1	22.2	23.9	22.2	19.6	21.0	15.3	12.9	14.2
24	23.4	20.1	21.7	25.0	22.1	23.6	23.1	20.9	21.9	15.0	12.8	14.0
25	23.4	20.4	21.9	25.5	22.6	24.0	23.2	20.9	22.1	15.4	13.2	14.3
26	23.9	20.6	22.2	25.3	22.7	24.0	23.2	20.7	22.1	15.9	13.9	14.9
27	24.1	20.7	22.5	25.5	22.7	24.2	23.1	20.6	21.9	16.4	14.3	15.4
28	24.6	21.4	23.0	25.8	22.7	24.2	22.1	19.8	20.9	16.9	15.1	15.9
29	25.1	21.7	23.4	26.2	23.1	24.6	21.2	19.1	20.4	17.0	15.4	16.3
30	25.5	22.2	23.8	26.0	23.6	24.9	21.7	19.4	20.5	17.3	15.8	16.5
31	---	---	---	25.8	23.4	24.7	21.1	19.4	20.2	---	---	---
MONTH	25.5	15.1	20.7	26.2	17.7	23.0	25.8	19.1	22.6	21.4	12.8	17.4

13213100 SNAKE RIVER AT NYSSA, OR--Continued

COLLECTION METHODS.--Electrofishing; boat (13A), backpack (11A).

LENGTH OF REACH.--1120 m.

TIME ELAPSED FOR EACH COLLECTION METHOD.--13A 0.8 hours; 11A 0.38 hours.

ANOMALY CODES.--AA-none; DE-deformities; ER-eroded fins; LE-lesions; TU-tumors; AL-anchor worms; BL-black spot; CL-leeches; IC-ich; NE-blind; PA-other parasites; PE-popeye.

HABITAT QUALITY INDEX.--NA.

COMMENTS.--Large river.

BIOLOGICAL DATA, JULY TO SEPTEMBER 2000
FISH COLLECTION DATA

ORGANISM **FAMILY** *GENUS SPECIES* (COMMON)	DATE	NUMBER OF INDIV-IDUALS	PERCENT COMPO-SITION	LENGTH RANGE TOTAL MM	WEIGHT RANGE IN GM	ORIGIN	TROPHIC GROUP OF ADULTS	TEMPER-ATURE PREFER-ENCE	NUMBER AND TYPE OF ANOMALY
	July 6								
Catostomidae (Suckers)									
Catostomus columbianus (Bridgelip sucker)		6	4.5	112-520	17-1529	NATIVE	HERBIVORE	COLD	6-AA
Catostomus macrocheilus (Largescale sucker)		55	41.7	33-590	1-2189	NATIVE	OMNIVORE	COLD	1-LE,1-ER, 53-AA
Catostomus platyrhychus (Mountain sucker)		3	2.3	105-170	13-55	NATIVE	HERBIVORE	COLD	3-AA
Centrarchdae (sunfishes)									
Lepomis gibbosus (Pumpkinseed)		1	0.8	80	15	INTRODUCED	PISCIVORE	WARM	1-AA
Micropterus dolomieui (Smallmouth bass)		14	10.6	45-162	2-63	INTRODUCED	PISCIVORE	COOL	14-AA
Cottidae (Sculpins)									
Cottus bairdi (Mottled sculpin)		1	0.8	40	1	NATIVE	INVERTIVORE	COLD	1-AA
Cyprinidae (Carps and minnows)									
Acrocheilus alutaceus (Chislemouth)		7	5.3	130-260	26-158	NATIVE	HERBIVORE	COLD	1-LE,6-AA
Cyprinus carpio (Common Carp)		6	4.5	477-592	14330-3200	INTRODUCED	OMNIVORE	WARM	6-AA
Pimephales promelas (Fathead minnow)		4	3.0	44-57	1-3	INTRODUCED	OMNIVORE	WARM	4-AA
Ptychocheilus oregonensis (Northern pikeminnow)		3	2.3	168-286	50-178	NATIVE	INVERTIVORE	COOL	3-AA
Ictaluridae (Bullhead catfishes)									
Ictalurus punctatus (Channel catfish)		23	17.4	375-532	468-1430	INTRODUCED	OMNIVORE	WARM	2-LE,9-AA 12-AA
Salmonidae (Trouts)									
Prosopium williamsoni (Mountain whitefish)		9	6.8	100-142	9-26	NATIVE	INVERTIVORE	COLD	9-AA
TOTAL NUMBER OF TAXA 12									
TOTAL INDIVIDUALS 132									
	Sep. 19								
Catostomidae (Suckers)									
Catostomus columbianus (Bridgelip sucker)		2	1.4	150-152	46-49	NATIVE	HERBIVORE	COLD	1-ER,1-AA
Catostomus macrocheilus (Largescale sucker)		45	30.6	110-565	12-2263	NATIVE	OMNIVORE	COLD	1-LE44-AA
Catostomus platyrhychus (Mountain sucker)		1	0.7	187	62	NATIVE	HERBIVORE	COLD	1-AA
Centrarchdae (sunfishes)									
Micropterus dolomieui (Smallmouth bass)		77	52.4	70-338	3-619	INTRODUCED	PISCIVORE	COOL	77-AA
Pomoxis annularis (White crappie)		1	0.7	198	110	INTRODUCED	INVERTIVORE	WARM	1-AA
Cyprinidae (Carps and minnows)									
Acrocheilus alutaceus (Chislemouth)		3	2.0	176-262	57-181	NATIVE	OMNIVORE	COLD	3-AA
Cyprinus carpio (Common Carp)		5	3.4	520-735	1500-5700	INTRODUCED	OMNIVORE	WARM	5-AA
Ptychocheilus oregonensis (Northern pikeminnow)		1	0.7	168	34	NATIVE	INVERTIVORE	COOL	1-AA
Ictaluridae (Bullhead catfishes)									
Ictalurus punctatus (Channel catfish)		11	7.5	425-575	714-2380	INTRODUCED	OMNIVORE	WARM	2-PA,9-AA
Salmonidae (Trouts)									
Prosopium williamsoni (Mountain whitefish)		1	0.7	171	50	NATIVE	INVERTIVORE	COLD	1-AA
TOTAL NUMBER OF TAXA 10									
TOTAL INDIVIDUALS 147									

13213100 SNAKE RIVER AT NYSSA, OR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1989 to September 1990, October 1992 to September 1993, April 1996 to September 1997, June to September 1998, April to September 2000 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August to September 1989.
pH: May to September 1989.
WATER TEMPERATURE: April to September 1989, August to September 1997, June to September 1998, April to September 2000 (discontinued).
DISSOLVED OXYGEN: August to September 1989.

INSTRUMENTATION.--Water-quality monitor, temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 544 microsiemens/cm Sept. 3; minimum, 507 microsiemens/cm Sept. 19, 1989.
pH: Maximum, 9.82 units May 29; minimum, 8.00 units Aug. 26, 1989.
WATER TEMPERATURE: Maximum, 26.9 ^{o}C July 27-28, 1998.
DISSOLVED OXYGEN: Maximum, 13.8 mg/L Aug. 11; minimum, 6.7 mg/L Sept. 3, 1989.

COLLECTION METHODS.--Composite of 5, 0.25 m^2 samples. Richest targeted habitat--riffles.
MESH SIZE.--425 um.

AVERAGE DEPTH.--0.30 m.

AVERAGE PERCENT SHADING.--22.

AVERAGE VELOCITY.-- 0.81 m/s.

SUBSTRATE EMBEDDEDNESS CLASS RANGE.--4-5.

PERCENT FINES AVERAGE.--16.

BIOLOGICAL DATA, JULY 2000
BENTHIC INVERTEBRATE COLLECTION DATA

ORGANISM **TAXON** *GENUS SPECIES*	DATE July 6	NUMBER OF INDIV-IDUALS	PERCENT COMPO-SITION
NON-INSECTS			
Turbellaria		240	4.48
Lumbriculidae		32	0.60
Corbicula fluminea		16	0.30
Potamopyrgus antipodarum		24	0.45
Fluminicola n.sp. near fuscus		152	2.84
Acari		16	0.30
ODONATA			
Ophiogomphus		8	0.15
EPHEMEROPTERA			
Acentrella insignificans		336	6.27
Baetis tricaudatus		344	6.42
Camelobaetidius		8	0.15
Stenonema		56	1.04
Ephoron		32	0.60
Tricorythodes		728	13.58
TRICHOPTERA			
Culoptila		16	0.30
Protoptila		56	1.04
Cheumatopsyche		528	9.85
Hydropsyche		2328	43.43
Nectopsyche		16	0.30
LEPIDOPTERA			
Petrophila		56	1.04
COLEOPTERA			
Microcylloepus		96	1.79
DIPTERA			
Hemerodromia		8	0.15
Simulium		128	2.39
CHIRONOMIDAE			
Cricotopus		40	0.75
Cricotopus Trifascia group		24	0.45
Phaenopsectra		16	0.30
Polypedilum		56	1.04

SUMMARY STATISTICS
TOTAL NUMBER OF TAXA 26
TOTAL INDIVIDUALS 5,360