SALMON RIVER BASIN

13317000 SALMON RIVER AT WHITE BIRD, ID--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959, 1966 to 1994, April to September 2000 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1977 to September 1980 (discontinued).
WATER TEMPERATURE: October 1966 to September 1980, April to September 2000 (discontinued).

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 241 microsiemens/cm Dec. 27, 1978; minimum daily mean, 51 microsiemens/cm May 25, 1979.
WATER TEMPERATURE: Maximum, 28.0 °C July 31, Aug. 2, 1977; minimum, 0.0 °C on many days during winter months.

EXTREMES FOR CURRENT PERIOD.--
WATER TEMPERATURE: Maximum, 26.0 °C Aug. 3.

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... | 0930 | 13000 | 95 | 8.1 | 23.5 | 9.8 | 2.9 | 11.6 | 108 | 59 | 28 |
| MAY | | | | | | | | | | | |
| 02... | 0940 | 23600 | 62 | 7.4 | 15.5 | 10.2 | .4 | 11.0 | 102 | K13 | K18 |
| JUN | | | | | | | | | | | |
| 13... | 1015 | 26500 | 57 | 7.2 | 22.0 | 11.6 | .7 | 8.5 | 81 | 35 | 38 |
| JUL | | | | | | | | | | | |
| 25... | 0840 | 4990 | 127 | 7.8 | 26.0 | 20.9 | 1.0 | -- | -- | K7 | K2 |
| AUG | | | | | | | | | | | |
| 22... | 1115 | 3340 | 152 | 8.2 | 27.5 | 17.5 | .3 | 7.2 | 79 | K6 | K8 |
| SEP | | | | | | | | | | | |
| 12... | 0745 | 4110 | 154 | 7.7 | 13.0 | 15.0 | .4 | 6.9 | 71 | 23 | K10 |

| 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... | 62 | 18.5 | 3.78 | 7.6 | 21 | 1.4 | 79 | 0 |

| 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... | 64 | 7.8 | 1.9 | .4 | 13.4 | 94 | .13 | 1040 |

| 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... | .015 | <.002 | .24 | .037 | .004 | 25 | 878 |
| MAY | | | | | | | |
| 02... | .019 | .004 | .16 | .021 | .003 | 50 | 3190 |
| JUN | | | | | | | |
| 13... | .012 | .012 | .12 | .025 | .002 | 37 | 2650 |
| JUL | | | | | | | |
| 25... | .005 | .004 | .19 | .010 | .003 | 2 | 27 |
| AUG | | | | | | | |
| 22... | <.005 | .002 | .12 | E.007 | .001 | 1 | 9.0 |
| SEP | | | | | | | |
| 12... | <.005 | .003 | .16 | .012 | .004 | 2 | 22 |

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 | --- | --- | --- | 11.1 | 9.5 | 10.2 |
| 2 | --- | --- | --- | 11.1 | 10.1 | 10.7 |
| 3 | --- | --- | --- | 10.9 | 10.1 | 10.6 |
| 4 | --- | --- | --- | 10.6 | 9.8 | 10.1 |
| 5 | 10.1 | 9.4 | 9.6 | 10.1 | 9.4 | 9.8 |
| 6 | 9.4 | 8.6 | 8.9 | 10.3 | 9.2 | 9.7 |
| 7 | 9.5 | 8.1 | 8.8 | 10.1 | 9.1 | 9.6 |
| 8 | 9.7 | 8.3 | 9.0 | 10.0 | 9.1 | 9.6 |
| 9 | 10.1 | 9.1 | 9.5 | 10.1 | 9.4 | 9.7 |
| 10 | 10.6 | 9.2 | 9.9 | 10.0 | 8.7 | 9.3 |
| 11 | 10.6 | 9.5 | 10.1 | 8.7 | 8.1 | 8.3 |
| 12 | 10.9 | 9.8 | 10.4 | 8.7 | 7.7 | 8.2 |
| 13 | 10.8 | 10.1 | 10.3 | 9.4 | 7.7 | 8.5 |
| 14 | 10.1 | 9.2 | 9.6 | 10.1 | 8.6 | 9.3 |
| 15 | 9.7 | 9.1 | 9.4 | 11.5 | 9.7 | 10.5 |
| 16 | 9.4 | 8.4 | 8.9 | 12.2 | 10.8 | 11.4 |
| 17 | 9.5 | 8.4 | 9.1 | 12.0 | 10.8 | 11.3 |
| 18 | 10.0 | 8.6 | 9.3 | 11.7 | 10.6 | 11.2 |
| 19 | 10.3 | 9.1 | 9.7 | 12.0 | 10.9 | 11.4 |
| 20 | 10.6 | 9.5 | 10.1 | 12.0 | 10.9 | 11.5 |
| 21 | 10.8 | 9.4 | 10.1 | 12.3 | 11.2 | 11.7 |
| 22 | 10.5 | 9.8 | 10.1 | 12.8 | 11.5 | 12.1 |
| 23 | 9.8 | 9.1 | 9.5 | 12.5 | 11.4 | 11.9 |
| 24 | 9.7 | 8.7 | 9.1 | 11.5 | 11.1 | 11.4 |
| 25 | 9.1 | 8.4 | 8.8 | 11.5 | 10.8 | 11.2 |
| 26 | 9.2 | 8.1 | 8.7 | 11.8 | 11.2 | 11.5 |
| 27 | 10.1 | 8.4 | 9.2 | 11.7 | 11.1 | 11.4 |
| 28 | 10.5 | 9.7 | 10.0 | 11.5 | 10.8 | 11.1 |
| 29 | 10.6 | 9.5 | 10.1 | 11.5 | 10.9 | 11.2 |
| 30 | 10.8 | 9.4 | 10.1 | 11.4 | 10.6 | 11.0 |
| 31 | --- | --- | --- | 10.6 | 10.0 | 10.4 |
| MONTH | --- | --- | --- | 12.8 | 7.7 | 10.5 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | |
| 1 | 10.9 | 9.7 | 10.2 | 19.4 | 18.8 | 19.2 | 24.8 | 22.0 | 23.3 | 18.4 | 17.3 | 17.8 |
| 2 | 11.7 | 10.1 | 10.9 | 19.7 | 18.6 | 19.2 | 25.5 | 22.0 | 23.6 | 17.3 | 16.1 | 16.5 |
| 3 | 13.4 | 11.4 | 12.3 | 19.3 | 18.1 | 18.6 | 26.0 | 22.0 | 23.7 | 16.1 | 15.1 | 15.5 |
| 4 | 14.3 | 12.6 | 13.4 | 18.8 | 17.6 | 18.2 | 25.6 | 22.2 | 23.6 | 15.4 | 14.3 | 14.8 |
| 5 | 14.6 | 13.2 | 13.9 | 18.1 | 17.0 | 17.5 | 25.5 | 21.4 | 23.3 | 15.3 | 14.6 | 14.9 |
| 6 | 14.8 | 13.5 | 14.1 | 17.2 | 16.7 | 16.9 | 25.5 | 21.2 | 23.3 | 16.1 | 14.3 | 15.0 |
| 7 | 14.9 | 13.5 | 14.3 | 17.5 | 16.1 | 16.7 | 25.1 | 21.0 | 23.1 | 16.5 | 14.2 | 15.2 |
| 8 | 14.6 | 14.0 | 14.3 | 18.0 | 16.8 | 17.3 | 24.9 | 20.9 | 22.9 | 15.7 | 14.5 | 15.0 |
| 9 | 14.2 | 13.4 | 13.8 | 19.3 | 17.5 | 18.4 | 24.2 | 20.9 | 22.6 | 16.7 | 14.3 | 15.3 |
| 10 | 13.7 | 12.6 | 13.1 | 19.6 | 18.1 | 18.8 | 23.7 | 20.9 | 22.2 | 15.1 | 14.6 | 14.9 |
| 11 | 12.6 | 11.8 | 12.2 | 20.6 | 18.4 | 19.5 | 23.2 | 20.9 | 21.9 | 16.4 | 14.5 | 15.2 |
| 12 | 11.8 | 11.2 | 11.6 | 21.2 | 19.4 | 20.2 | 22.0 | 20.2 | 21.1 | 17.5 | 15.1 | 16.1 |
| 13 | 12.8 | 11.2 | 11.9 | 21.9 | 19.9 | 20.9 | 22.0 | 19.6 | 20.7 | 18.1 | 15.7 | 16.8 |
| 14 | 13.7 | 12.0 | 12.8 | 21.9 | 20.2 | 21.0 | 21.5 | 19.4 | 20.4 | 18.8 | 16.2 | 17.3 |
| 15 | 14.8 | 13.4 | 14.0 | 21.2 | 20.2 | 20.7 | 21.2 | 19.1 | 20.1 | 18.8 | 16.4 | 17.5 |
| 16 | 15.3 | 14.0 | 14.7 | 21.4 | 19.3 | 20.3 | 20.9 | 18.6 | 19.7 | 19.3 | 17.0 | 18.0 |
| 17 | 15.1 | 13.9 | 14.5 | 21.4 | 19.6 | 20.5 | 20.4 | 18.6 | 19.5 | 19.9 | 17.5 | 18.6 |
| 18 | 15.1 | 14.0 | 14.5 | 21.0 | 19.7 | 20.4 | 20.2 | 18.1 | 19.1 | 19.9 | 18.0 | 18.9 |
| 19 | 15.1 | 14.2 | 14.6 | 21.4 | 19.9 | 20.6 | 20.1 | 18.1 | 18.9 | 20.2 | 18.8 | 19.4 |
| 20 | 15.7 | 14.2 | 14.9 | 21.4 | 20.1 | 20.7 | 19.7 | 17.8 | 18.7 | 18.9 | 17.6 | 18.3 |
| 21 | 16.2 | 14.6 | 15.4 | 21.7 | 20.1 | 20.9 | 19.6 | 17.2 | 18.3 | 18.3 | 17.0 | 17.6 |
| 22 | 17.0 | 15.3 | 16.1 | 22.0 | 20.4 | 21.1 | 19.1 | 17.0 | 18.1 | 17.0 | 14.8 | 15.9 |
| 23 | 17.6 | 16.1 | 16.8 | 22.0 | 20.2 | 21.1 | 18.6 | 17.0 | 17.8 | 15.7 | 13.7 | 14.6 |
| 24 | 18.0 | 16.4 | 17.1 | 22.5 | 20.2 | 21.4 | 18.9 | 17.3 | 18.1 | 15.1 | 12.9 | 14.0 |
| 25 | 18.1 | 16.7 | 17.4 | 22.7 | 20.6 | 21.6 | 19.9 | 17.6 | 18.6 | 14.3 | 12.6 | 13.5 |
| 26 | 18.6 | 16.8 | 17.8 | 22.7 | 20.7 | 21.6 | 19.6 | 17.8 | 18.8 | 14.0 | 12.0 | 13.0 |
| 27 | 18.9 | 17.5 | 18.2 | 22.9 | 20.7 | 21.7 | 19.4 | 17.5 | 18.5 | 13.5 | 11.5 | 12.5 |
| 28 | 19.3 | 17.8 | 18.6 | 23.6 | 20.7 | 22.1 | 19.6 | 17.2 | 18.4 | 12.9 | 11.1 | 12.0 |
| 29 | 19.4 | 18.3 | 18.9 | 23.9 | 21.2 | 22.5 | 19.1 | 17.5 | 18.4 | 12.2 | 11.2 | 11.7 |
| 30 | 19.7 | 18.6 | 19.2 | 23.9 | 21.5 | 22.8 | 19.6 | 17.6 | 18.6 | 12.0 | 11.5 | 11.7 |
| 31 | --- | --- | --- | 24.6 | 21.9 | 23.0 | 19.4 | 17.6 | 18.5 | --- | --- | --- |
| MONTH | 19.7 | 9.7 | 14.7 | 24.6 | 16.1 | 20.2 | 26.0 | 17.0 | 20.4 | 20.2 | 11.1 | 15.6 |

13317000 SALMON RIVER AT WHITE BIRD, ID--Continued

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

LENGTH OF REACH.--1083 m.

TIME ELAPSED FOR EACH COLLECTION METHOD.--0.78 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.

BIOLOGICAL DATA, 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 |
|---|---|---|---|---|---|---|---|---|---|
| | Sep.21 | | | | | | | | |
| **Catostomidae** (Suckers) | | | | | | | | | |
| *Catostomus columbianus* (Bridgelip sucker) | | 8 | 4.0 | 95-435 | 8-874 | NATIVE | HERBIVORE | COLD | 1-LE,7-AA |
| *Catostomus macrocheilus* (Largescale sucker) | | 77 | 38.7 | 40-478 | 1-1124 | NATIVE | OMNIVORE | COLD | 77_AA |
| **Centrarchidae** (sunfishes) | | | | | | | | | |
| *Micropterus dolomieui* (Smallmouth bass) | | 10 | 5.0 | 58-215 | 4-139 | INTRODUCED | PISCIVORE | COOL | 10-AA |
| **Cottidae** (Sculpins) | | | | | | | | | |
| *Cottus rhotheus* (Torrent sculpin) | | 18 | 9.0 | 51-100 | 2-14 | NATIVE | INVERTIVORE | COLD | 10-BL,8-AA |
| **Cyprinidae** (Carps and minnows) | | | | | | | | | |
| *Acrocheilus alutaceus* (Chiselmouth) | | 1 | 0.5 | 126 | 20 | NATIVE | OMNIVORE | COLD | 1-AA |
| *Cyprinus carpio* (Common Carp) | | 1 | 0.5 | 678 | 4400 | NATIVE | INVERTIVORE | COLD | 1-AA |
| *Ptychocheilus oregonensis* (Northern pikeminnow) | | 17 | 8.5 | 32-452 | 1-1050 | NATIVE | INVERTIVORE | COOL | 17-AA |
| *Rhinichthys osculus* (Speckled dace) | | 3 | 1.5 | 31-46 | 1-2 | NATIVE | INVERTIVORE | COLD | 3-AA |
| *Richardsonius balteatus* (Redside shiner) | | 42 | 21.1 | 36-95 | 1-7 | NATIVE | INVERTIVORE | COLD | 42-AA |
| **Salmonidae** (Trouts) | | | | | | | | | |
| *Oncorhynchus mykiss* sp. (Rainbow trout) | | 2 | 1.0 | 90-188 | 11-64 | [a]INTRODUCED | INVERTIVORE | COLD | 2-AA |
| *Prosopium williamsoni* (Mountain whitefish) | | 20 | 10 | 123-410 | 13-734 | NATIVE | INVERTIVORE | COLD | 20-AA |

TOTAL NUMBER OF TAXA 11
TOTAL INDIVIDUALS 199

a-Rainbow trout are considered native in Idaho downstream of Shoshone Falls and introduced upstream of Shoshone Falls.

## WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959, 1966 to 1994, April to September 2000, April to September 2001 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1977 to September 1980 (discontinued).
WATER TEMPERATURE: October 1966 to September 1980, April to September 2000, April to September 2001 (discontinued).

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 241 microsiemens/cm Dec. 27, 1978; minimum daily mean, 51 microsiemens/cm May 25, 1979.
WATER TEMPERATURE: Maximum, 28.0 °C July 31, Aug. 2, 1977; minimum, 0.0 °C on many days during winter months.

EXTREMES FOR CURRENT PERIOD.--
WATER TEMPERATURE: Maximum, 24.8 °C Aug. 12.

WATER-QUALITY DATA, APRIL TO SEPTEMBER 2001

| 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) | TURBID-ITY LAB HACH 2100AN (NTU) (99872) | 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) |
|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | |
| 12... | 1000 | 4600 | 135 | 7.7 | 8.0 | 7.2 | 6.1 | 12.3 | 107 | S15 |
| MAY | | | | | | | | | | |
| 11... | 1000 | 17800 | 64 | 7.6 | 23.0 | 11.0 | 7.0 | 10.6 | 101 | S9 |
| JUN | | | | | | | | | | |
| 08... | 0815 | 14700 | 72 | 7.7 | 17.5 | 11.7 | 2.5 | 10.2 | 99.5 | S11 |
| JUL | | | | | | | | | | |
| 12... | 1445 | 4990 | 120 | 8.4 | 34.5 | 23.0 | 7.7 | 9.5 | 117 | S2 |
| AUG | | | | | | | | | | |
| 08... | 1530 | 3210 | 134 | 8.6 | 36.0 | 23.6 | 2.5 | 9.6 | 118 | S8 |
| SEP | | | | | | | | | | |
| 20... | 1200 | 3120 | 165 | 8.0 | 26.5 | 17.5 | 5.7 | 9.0 | 99.0 | S7 |

| 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) | 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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEP | | | | | | | | | | | | | |
| 20... | 66.6 | 19.8 | 4.17 | 8.5 | 21.3 | 1.58 | 87 | 0 | 71 | 9.9 | 2.1 | .5 | 12.1 |

| DATE | 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) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671) | PHOS-PHORUS TOTAL (MG/L AS P) (00665) | SEDI-MENT, SUS-PENDED (MG/L) (80154) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155) |
|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | |
| 12... | -- | -- | -- | <.002 | .18 | .008 | E.004 | .024 | 4 | 50 |
| MAY | | | | | | | | | | |
| 11... | -- | -- | -- | <.002 | .20 | .018 | E.006 | .045 | 34 | 1630 |
| JUN | | | | | | | | | | |
| 08... | -- | -- | -- | .004 | .10 | .009 | E.006 | .023 | 11 | 436 |
| JUL | | | | | | | | | | |
| 12... | -- | -- | -- | <.002 | .20 | .008 | E.004 | .016 | 3 | 40 |
| AUG | | | | | | | | | | |
| 08... | -- | -- | -- | <.002 | .19 | <.005 | E.005 | .017 | 3 | 26 |
| SEP | | | | | | | | | | |
| 20... | 102 | .138 | 856 | .003 | .23 | .008 | E.004 | .017 | 5 | 42 |

E Estimated value
S Most probable value

WATER TEMPERATURE, DEGREES CELSIUS, APRIL TO SEPTEMBER 2001

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FEBRUARY | | | MARCH | | | APRIL | | | MAY | |
| 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.9 | 8.8 | 9.2 |
| 2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.5 | 8.5 | 9.0 |
| 3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.4 | 7.8 | 8.7 |
| 4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.0 | 8.6 | 9.3 |
| 5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10.8 | 9.9 | 10.2 |
| 6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 11.2 | 9.7 | 10.5 |
| 7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 11.4 | 10.0 | 10.7 |
| 8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 11.6 | 10.8 | 11.3 |
| 9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 11.9 | 10.9 | 11.4 |
| 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 12.2 | 10.9 | 11.6 |
| 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 12.5 | 10.9 | 11.7 |
| 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 12.3 | 11.1 | 11.8 |
| 13 | --- | --- | --- | --- | --- | --- | 8.5 | 7.4 | 7.9 | 12.2 | 11.4 | 11.8 |
| 14 | --- | --- | --- | --- | --- | --- | 9.2 | 7.1 | 8.1 | 11.9 | 10.8 | 11.1 |
| 15 | --- | --- | --- | --- | --- | --- | 10.0 | 7.8 | 8.8 | 10.8 | 10.2 | 10.6 |
| 16 | --- | --- | --- | --- | --- | --- | 10.6 | 8.3 | 9.4 | 10.6 | 10.0 | 10.3 |
| 17 | --- | --- | --- | --- | --- | --- | 10.8 | 9.4 | 10.0 | 10.3 | 9.5 | 10.0 |
| 18 | --- | --- | --- | --- | --- | --- | 10.9 | 9.5 | 10.2 | 11.4 | 9.7 | 10.4 |
| 19 | --- | --- | --- | --- | --- | --- | 11.1 | 9.9 | 10.4 | 11.9 | 10.6 | 11.2 |
| 20 | --- | --- | --- | --- | --- | --- | 10.6 | 10.2 | 10.4 | 12.2 | 11.1 | 11.6 |
| 21 | --- | --- | --- | --- | --- | --- | 10.9 | 10.0 | 10.3 | 12.3 | 10.9 | 11.6 |
| 22 | --- | --- | --- | --- | --- | --- | 10.9 | 9.7 | 10.2 | 12.8 | 10.9 | 11.9 |
| 23 | --- | --- | --- | --- | --- | --- | 11.1 | 10.0 | 10.4 | 13.7 | 11.9 | 12.7 |
| 24 | --- | --- | --- | --- | --- | --- | 12.2 | 10.0 | 11.0 | 14.7 | 13.0 | 13.8 |
| 25 | --- | --- | --- | --- | --- | --- | 12.6 | 10.8 | 11.7 | 15.1 | 13.7 | 14.4 |
| 26 | --- | --- | --- | --- | --- | --- | 12.8 | 11.6 | 12.2 | 14.8 | 14.0 | 14.5 |
| 27 | --- | --- | --- | --- | --- | --- | 13.4 | 12.2 | 12.7 | 15.0 | 13.9 | 14.4 |
| 28 | --- | --- | --- | --- | --- | --- | 12.8 | 11.1 | 11.8 | 15.1 | 13.9 | 14.6 |
| 29 | --- | --- | --- | --- | --- | --- | 11.1 | 10.3 | 10.7 | 14.8 | 13.7 | 14.2 |
| 30 | --- | --- | --- | --- | --- | --- | 10.5 | 9.7 | 10.0 | 14.3 | 13.1 | 13.8 |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 15.0 | 13.1 | 14.0 |
| MONTH | --- | --- | --- | --- | --- | --- | --- | --- | --- | 15.1 | 7.8 | 11.7 |

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | |
| 1 | 15.6 | 13.9 | 14.7 | 21.9 | 19.9 | 20.9 | 21.2 | 18.8 | 20.0 | 22.6 | 20.7 | 21.7 |
| 2 | 15.4 | 14.7 | 15.0 | 22.6 | 20.4 | 21.5 | 21.6 | 19.1 | 20.1 | 22.2 | 20.7 | 21.6 |
| 3 | 15.1 | 14.5 | 14.8 | 23.2 | 21.1 | 22.1 | 21.7 | 19.3 | 20.4 | 22.2 | 20.6 | 21.5 |
| 4 | 14.5 | 12.8 | 13.5 | 23.9 | 22.1 | 22.8 | --- | --- | --- | 21.7 | 20.4 | 21.3 |
| 5 | 12.8 | 10.9 | 11.6 | 23.2 | 22.2 | 22.6 | --- | --- | --- | 21.4 | 19.3 | 20.3 |
| 6 | 11.4 | 10.3 | 10.9 | 22.9 | 21.7 | 22.3 | --- | --- | --- | 20.1 | 18.6 | 19.4 |
| 7 | 12.3 | 10.9 | 11.4 | 22.9 | 21.1 | 22.1 | --- | --- | --- | 19.6 | 18.3 | 18.9 |
| 8 | 13.7 | 11.9 | 12.7 | 23.2 | 21.4 | 22.2 | --- | --- | --- | 19.3 | 17.3 | 18.3 |
| 9 | 15.0 | 13.4 | 14.2 | 23.6 | 21.9 | 22.7 | 23.9 | 21.9 | 22.9 | 18.6 | 16.9 | 17.8 |
| 10 | 15.0 | 14.3 | 14.6 | 23.6 | 21.7 | 22.5 | 24.1 | 22.1 | 23.1 | 18.6 | 16.7 | 17.7 |
| 11 | 15.4 | 14.5 | 15.1 | 23.2 | 21.6 | 22.4 | 24.4 | 22.4 | 23.4 | 18.3 | 16.6 | 17.6 |
| 12 | 15.3 | 14.3 | 14.7 | 23.4 | 21.7 | 22.6 | 24.8 | 22.7 | 23.5 | 18.6 | 16.9 | 17.7 |
| 13 | 14.5 | 13.0 | 13.5 | 23.1 | 21.9 | 22.5 | 24.1 | 22.9 | 23.4 | 18.3 | 17.7 | 18.0 |
| 14 | 13.3 | 12.2 | 12.7 | 22.9 | 21.2 | 22.1 | 23.9 | 22.6 | 23.2 | 19.1 | 17.5 | 18.2 |
| 15 | 13.3 | 11.7 | 12.5 | 22.6 | 21.6 | 22.0 | 24.1 | 22.1 | 23.0 | 19.6 | 17.8 | 18.6 |
| 16 | 14.5 | 12.3 | 13.3 | 21.6 | 20.6 | 21.1 | 24.1 | 22.2 | 23.1 | 19.9 | 18.5 | 19.1 |
| 17 | 15.1 | 13.9 | 14.5 | 20.9 | 19.9 | 20.4 | 23.8 | 22.1 | 22.9 | 20.3 | 18.5 | 19.2 |
| 18 | 16.4 | 14.5 | 15.4 | 20.1 | 19.0 | 19.5 | 23.1 | 21.9 | 22.5 | 20.4 | 18.6 | 19.5 |
| 19 | 16.9 | 15.3 | 16.1 | 20.7 | 18.6 | 19.5 | 22.7 | 21.2 | 22.0 | 19.6 | 18.2 | 19.0 |
| 20 | 17.5 | 15.9 | 16.7 | 21.1 | 19.3 | 20.0 | 22.4 | 20.6 | 21.6 | 19.1 | 17.3 | 18.3 |
| 21 | 18.5 | 16.7 | 17.5 | 20.9 | 19.3 | 20.1 | 22.2 | 20.6 | 21.4 | 18.6 | 17.0 | 17.9 |
| 22 | 19.6 | 17.8 | 18.6 | 21.9 | 19.4 | 20.5 | 21.6 | 20.6 | 21.0 | 18.3 | 16.6 | 17.4 |
| 23 | 19.9 | 18.8 | 19.4 | 22.7 | 20.3 | 21.3 | 21.1 | 20.1 | 20.5 | 18.0 | 16.6 | 17.3 |
| 24 | 19.4 | 18.3 | 19.0 | 23.4 | 20.6 | 21.8 | 21.2 | 19.8 | 20.5 | 18.0 | 16.6 | 17.2 |
| 25 | 19.4 | 18.0 | 18.7 | 23.6 | 21.1 | 22.2 | 21.2 | 19.3 | 20.3 | 17.5 | 16.4 | 16.9 |
| 26 | 19.3 | 18.2 | 18.7 | 23.9 | 20.9 | 22.4 | 21.7 | 19.4 | 20.6 | 17.2 | 15.6 | 16.4 |
| 27 | 19.4 | 18.6 | 18.9 | 24.1 | 20.9 | 22.5 | 22.1 | 20.3 | 21.2 | 17.5 | 15.9 | 16.6 |
| 28 | 19.6 | 18.5 | 19.0 | 23.4 | 21.1 | 22.1 | 21.9 | 20.6 | 21.3 | 16.9 | 15.8 | 16.2 |
| 29 | 20.6 | 18.6 | 19.5 | 21.1 | 17.7 | 19.6 | 22.1 | 20.3 | 21.2 | 16.6 | 14.8 | 15.6 |
| 30 | 21.1 | 19.4 | 20.2 | 19.4 | 16.2 | 18.1 | 22.4 | 20.6 | 21.6 | 16.9 | 15.0 | 15.9 |
| 31 | --- | --- | --- | 21.2 | 18.3 | 19.9 | 22.2 | 21.1 | 21.7 | --- | --- | --- |
| MONTH | 21.1 | 10.3 | 15.6 | 24.1 | 16.2 | 21.4 | --- | --- | --- | 22.6 | 14.8 | 18.4 |

COLLECTION METHODS.--Composite of 5, 0.25 $m^2$ samples. Richest targeted habitat--riffles.
MESH SIZE.--425 um.
AVERAGE DEPTH.-- 0.80 m.
AVERAGE PERCENT SHADING.--15.
AVERAGE VELOCITY.-- 0.64.
SUBSTRATE EMBEDDEDNESS CLASS RANGE.--4-5.
PERCENT FINES RANGE.--2.

BIOLOGICAL DATA, AUGUST 2000
BENTHIC INVERTEBRATE COLLECTION DATA

| ORGANISM **TAXON** *GENUS SPECIES* | DATE Aug. 29 | NUMBER OF INDIV-IDUALS | PERCENT COMPO-SITION |
|---|---|---|---|
| **NON-INSECTS** | | | |
| Porifera | | 4 | 0.13 |
| Turbellaria | | 26 | 0.92 |
| *Potamopyrgus antipodarum* | | 4 | 0.13 |
| *Fluminicola n.sp. near fuscus* | | 218 | 7.72 |
| *Fisherola nuttalli* | | 4 | 0.13 |
| *Stagnicola idahoensis* | | 11 | 0.39 |
| *Physella* | | 30 | 1.05 |
| Acari | | 63 | 2.23 |
| **EPHEMEROPTERA** | | | |
| *Acentrella insignificans* | | 81 | 2.88 |
| *Baetis tricaudatus* | | 11 | 0.39 |
| *Fallceon quilleri* | | 4 | 0.13 |
| *Drunella doddsi* | | 133 | 4.71 |
| *Drunella grandis* | | 41 | 1.44 |
| *Ephemerella inermis/infrequens* | | 7 | 0.26 |
| *Epeorus albertae* | | 48 | 1.70 |
| *Heptagenia* | | 30 | 1.05 |
| *Rhithrogena* | | 41 | 1.44 |
| **PLECOPTERA** | | | |
| *Hesperoperla pacifica* | | 11 | 0.39 |
| **TRICHOPTERA** | | | |
| *Brachycentrus occidentalis* | | 22 | 0.79 |
| *Glossosoma* | | 11 | 0.39 |
| *Helicopsyche borealis* | | 41 | 1.44 |
| *Cheumatopsyche* | | 74 | 2.62 |
| *Hydropsyche* | | 151 | 5.37 |
| *Hydroptila* | | 4 | 0.13 |
| *Leucotrichia* | | 7 | 0.26 |
| *Ochrotrichia* | | 55 | 1.96 |
| *Lepidostoma-sand case larvae* | | 4 | 0.13 |
| *Ceraclea* | | 4 | 0.13 |
| *Psychomyia* | | 7 | 0.26 |
| **LEPIDOPTERA** | | | |
| *Petrophila* | | 26 | 0.92 |
| **COLEOPTERA** | | | |
| *Zaitzevia* | | 133 | 4.71 |
| **DIPTERA** | | | |
| *Atherix* | | 4 | 0.13 |
| Empididae-pupae | | 4 | 0.13 |
| *Hemerodromia* | | 7 | 0.26 |
| *Simulium* | | 414 | 14.66 |
| *Antocha* | | 4 | 0.13 |
| **CHIRONOMIDAE** | | | |
| Chironomidae-pupae | | 26 | 0.92 |
| *Cardiocladius* | | 351 | 12.43 |
| *Cricotopus* | | 96 | 3.40 |
| *Cricotopus Trifascia group* | | 255 | 9.03 |
| *Eukiefferiella* | | 188 | 6.68 |
| *Orthocladius Complex* | | 103 | 3.66 |
| *Potthastia Gaedii group* | | 15 | 0.52 |
| *Thienemanniella* | | 7 | 0.26 |
| *Thienemannimyia group* | | 7 | 0.26 |
| *Tvetenia Discoloripes group* | | 37 | 1.31 |

SUMMARY STATISTICS
TOTAL NUMBER OF TAXA 8
TOTAL INDIVIDUALS 2,821