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HYDRAULIC AND SEDIMENT-TRANSPORT DATA, EAST FORK RIVER, WYOMING, 1978

By William W. Emmett, Robert M. Myrick, and Holly A. Martinson

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HYDRAULIC AND SEDIMENT TRANSPORT DATA, EAST FORK RIVER, WYOMING, 1978

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ABSTRACT

A bedload trap was operated on the East Fork River in western Wyoming from 1973 to 1979. The following data for 1978 are presented: gage height, discharge, bedload, and suspended load. The data presented herein completes publication of measurements made at the bedload trap. References cited include all other published data compilations and interpretive reports that are relevant to the data.

INTRODUCTION

Since 1967, the East Fork River in western Wyoming has been a field laboratory for the study of fluvial processes. Studies on the East Fork River and its principal tributary, Muddy Creek, have been reported by Andrews (1977, 1979a, 1979b, 1981, 1982a, 1982b), Bagnold (1977, 1980), Bennett and Nordin (1977), Dietrich (1982a, 1982b), Dietrich, Smith, and Dunne (1979), Dunne and Leopold (1978), Emmett (1980a, 1980b, 1981, 1982a, 1982b), Emmett and Leopold (1977), Emmett, Leopold, and Myrick (1983), Emmett and Myrick (1985), Emmett, Myrick, and Meade (1980, 1982), Klingeman and Emmett (1982), Leopold (1982a, 1982b), Leopold and Emmett (1976, 1977, 1982), Lisle (1976, 1979, 1982), Mahoney and others (1976), Meade, Emmett, and Myrick (1981a, 1981b), Meade, Myrick, and Emmett (1980, 1982), and Prestegaard (1982a, 1982b).

In particular, a bedload trap was operated from 1973 to 1979. All data collected at the bedload trap, with exception of data collected in 1978, have been published previously in the cited references. The purpose of this report is to present data collected in 1978. The data are tabulated in format similar to that used previously. Data are introduced in the text, but no discussion is provided. Readers are referred to the cited literature for complementary information.

PRESENTATION OF DATA

Each type of collected data is presented in a table or series of tables; all tables are included at the end of this report. In most instances, footnotes make the tables self-explanatory. Each table is introduced below.

Gage Height

Hourly gage heights, or water-level stage, as taken from a graphic water-level recorder located at the bedload trap, are listed in table 1. The period of record extends from May 24 to July 18, encompassing the duration of sediment sampling. All elevations reported herein are referenced to the National Geodetic Vertical Datum (NGVD) of 1929.

Discharge Measurements

Discharge was measured periodically at the bedload-trap section. A summary of the measured and computed data is presented in table 2; results are expressed for both the total flow of the river and that part of the flow over the bedload trap.

Discharge

Hourly values of discharge at the bedload trap are listed in table 3. Values of discharge were computed using a stage-discharge relation developed from hourly gage heights (table 1) in combination with discharge measurements (table 2).

Bedload Transport

The bedload trap has eight gates spanning the width of the trap; bedload could be collected separately at each individual gate or simultaneously at a combination of gates. Cross-channel distributions of bedload can be determined from data collected at individual gates. Streamwide values of bedload can be determined from data collected with all gates open or by summation of values at individual gates.

Data sets for individual gates are presented in tables 4 through 22, summarizing the 19 days of operation. Data include the appropriate river-hydraulics data, bedload-transport rates, and bedload-size distributions. Several footnotes help explain the tabulations.

A summation of river-hydraulics and bedload data for the full width of the bedload trap is presented in table 23. A total of 25 sets of data, covering 21 different days of operation, are included. The sets of data from tables 4 through 22 are among those summarized in table 23.

River Hydraulics

River-hydraulic data included in tables 4 through 23 are for individual bedload-trap gates (tables 4-22), or are the summation or effective values for the full width of the trap (table 23). Streamwide values of river hydraulics are presented in table 24. The 25 sets of data presented in table 24 correspond to the sets of data in table 23.

Suspended Load

Suspended-sediment data are listed in table 25. A total of 67 sets of data, collected for a wide range of river stages during 26 different days of measurements, comprise the compilation.

ACKNOWLEDGMENTS

Most data were collected by the junior author, assisted in the field by Steve Parsons, who also dried, weighed, and sieved the bedload samples. Suspended-sediment samples were analyzed for concentration and the silt/sand size break by the Worland, Wyoming, office of the Geological Survey. Luna Leopold, with the senior author, provided overall project direction.

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TABLES

TABLE 1.- HOURLY GAGE HEIGHT, IN METERS(1), AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, 1978

DATE	TIME IN HOURS											
	1 13	2 14	3 15	4 16	5 17	6 18	7 19	8 20	9 21	10 22	11 23	12 24
5-24	5.805 5.910	5.835 5.905	5.860 5.900	5.885 5.895	5.915 5.895	5.925 5.895	5.930 5.900	5.935 5.895	5.940 5.890	5.935 5.890	5.930 5.890	5.920 5.900
5-25	5.910 5.865	5.920 5.855	5.935 5.845	5.945 5.845	5.945 5.850	5.945 5.855	5.945 5.855	5.935 5.845	5.915 5.835	5.905 5.830	5.895 5.835	5.880 5.845
5-26	5.860 5.805	5.870 5.800	5.885 5.795	5.895 5.795	5.905 5.800	5.910 5.805	5.910 5.815	5.905 5.805	5.875 5.800	5.865 5.795	5.845 5.800	5.825 5.810
5-27	5.820 5.815	5.835 5.805	5.850 5.795	5.855 5.780	5.860 5.775	5.860 5.765	5.855 5.765	5.850 5.760	5.845 5.765	5.835 5.780	5.830 5.800	5.825 5.820
5-28	5.845 5.910	5.875 5.895	5.900 5.875	5.920 5.870	5.940 5.870	5.945 5.875	5.950 5.880	5.945 5.880	5.945 5.885	5.940 5.885	5.935 5.900	5.920 5.910
5-29	5.930 6.050	5.950 6.040	5.975 6.035	5.995 6.025	6.010 6.020	6.025 6.010	6.035 6.005	6.045 6.000	6.055 6.000	6.065 6.010	6.060 6.015	6.055 6.025
5-30	6.035 6.000	6.045 5.980	6.055 5.975	6.060 5.985	6.065 5.990	6.065 5.995	6.065 6.000	6.065 6.000	6.055 5.995	6.045 5.995	6.030 5.990	6.015 5.985
5-31	5.980 5.830	5.975 5.815	5.965 5.805	5.960 5.800	5.950 5.810	5.940 5.830	5.920 5.845	5.905 5.840	5.890 5.830	5.880 5.830	5.865 5.830	5.850 5.830
6- 1	5.830 5.735	5.830 5.725	5.830 5.715	5.830 5.705	5.825 5.705	5.820 5.725	5.815 5.725	5.805 5.720	5.795 5.720	5.785 5.720	5.770 5.725	5.750 5.735
6- 2	5.750 5.795	5.765 5.790	5.780 5.785	5.795 5.775	5.810 5.770	5.815 5.765	5.815 5.760	5.820 5.755	5.815 5.750	5.815 5.755	5.810 5.755	5.805 5.755
6- 3	5.760 5.785	5.765 5.785	5.770 5.785	5.780 5.780	5.785 5.770	5.795 5.765	5.800 5.760	5.800 5.755	5.795 5.755	5.795 5.755	5.795 5.755	5.790 5.755
6- 4	5.755 5.725	5.760 5.720	5.755 5.720	5.755 5.715	5.755 5.710	5.750 5.700	5.750 5.695	5.745 5.690	5.735 5.690	5.735 5.690	5.730 5.700	5.725 5.715
6- 5	5.735 5.850	5.760 5.845	5.780 5.835	5.805 5.830	5.820 5.830	5.830 5.825	5.845 5.825	5.850 5.825	5.855 5.835	5.855 5.845	5.850 5.865	5.850 5.890
6- 6	5.920 6.130	5.955 6.120	6.000 6.115	6.035 6.105	6.060 6.100	6.080 6.090	6.090 6.085	6.105 6.085	6.115 6.090	6.120 6.095	6.125 6.105	6.125 6.120
6- 7	6.140 6.400	6.160 6.400	6.185 6.400	6.215 6.395	6.240 6.390	6.265 6.385	6.290 6.375	6.320 6.365	6.345 6.355	6.370 6.345	6.380 6.340	6.390 6.340
6- 8	6.355 6.560	6.365 6.555	6.385 6.550	6.400 6.540	6.415 6.530	6.450 6.520	6.485 6.505	6.515 6.495	6.535 6.480	6.545 6.470	6.555 6.460	6.560 6.455
6- 9	6.455 6.600	6.460 6.595	6.470 6.590	6.480 6.585	6.500 6.575	6.520 6.565	6.540 6.555	6.555 6.545	6.570 6.535	6.580 6.525	6.590 6.515	6.595 6.510
6-10	6.505 6.650	6.505 6.645	6.510 6.640	6.515 6.635	6.535 6.625	6.560 6.615	6.580 6.610	6.600 6.595	6.615 6.585	6.635 6.580	6.640 6.565	6.650 6.550
6-11	6.540 6.355	6.525 6.335	6.510 6.320	6.495 6.295	6.480 6.265	6.465 6.250	6.450 6.230	6.435 6.215	6.415 6.195	6.400 6.185	6.385 6.170	6.370 6.155
6-12	6.155 6.125	6.150 6.110	6.155 6.100	6.155 6.090	6.155 6.085	6.160 6.080	6.160 6.080	6.160 6.080	6.160 6.080	6.155 6.070	6.150 6.065	6.140 6.065
6-13	6.070 6.245	6.080 6.250	6.095 6.255	6.110 6.255	6.125 6.255	6.140 6.250	6.160 6.240	6.180 6.235	6.195 6.225	6.210 6.225	6.225 6.220	6.235 6.220
6-14	6.235 6.570	6.245 6.580	6.265 6.575	6.290 6.575	6.320 6.570	6.355 6.560	6.390 6.550	6.420 6.540	6.455 6.530	6.485 6.515	6.520 6.500	6.550 6.485
6-15	6.470 6.560	6.460 6.565	6.460 6.555	6.460 6.545	6.465 6.540	6.475 6.530	6.490 6.520	6.510 6.510	6.525 6.490	6.540 6.475	6.555 6.460	6.560 6.445
6-16	6.435 6.540	6.430 6.545	6.425 6.545	6.425 6.540	6.430 6.535	6.440 6.520	6.455 6.510	6.475 6.495	6.495 6.475	6.515 6.450	6.525 6.435	6.535 6.415
6-17	6.400 6.440	6.395 6.440	6.390 6.430	6.390 6.420	6.395 6.410	6.400 6.395	6.410 6.385	6.415 6.360	6.420 6.345	6.430 6.325	6.435 6.310	6.440 6.290
6-18	6.275 6.275	6.270 6.265	6.260 6.250	6.260 6.235	6.260 6.220	6.265 6.205	6.265 6.195	6.270 6.185	6.275 6.175	6.280 6.165	6.280 6.155	6.280 6.150
6-19	6.150 6.270	6.155 6.275	6.160 6.275	6.175 6.265	6.195 6.260	6.210 6.250	6.220 6.235	6.230 6.220	6.240 6.210	6.255 6.195	6.260 6.170	6.265 6.160
6-20	6.155 6.170	6.150 6.160	6.150 6.150	6.150 6.140	6.155 6.125	6.160 6.110	6.165 6.095	6.170 6.080	6.175 6.070	6.175 6.060	6.175 6.050	6.170 6.050

TABLE 1.- HOURLY GAGE HEIGHT, IN METERS(1), AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, 1978--CONTINUED

DATE	TIME IN HOURS											
	1 13	2 14	3 15	4 16	5 17	6 18	7 19	8 20	9 21	10 22	11 23	12 24
6-21	6.050 6.220	6.055 6.220	6.070 6.220	6.085 6.215	6.100 6.205	6.120 6.195	6.140 6.185	6.155 6.170	6.170 6.155	6.185 6.135	6.195 6.125	6.210 6.115
6-22	6.115 6.365	6.125 6.385	6.140 6.400	6.155 6.405	6.180 6.405	6.200 6.400	6.225 6.385	6.250 6.370	6.275 6.350	6.295 6.330	6.325 6.305	6.350 6.280
6-23	6.260 6.390	6.245 6.405	6.235 6.405	6.235 6.405	6.240 6.400	6.250 6.385	6.270 6.365	6.290 6.345	6.315 6.315	6.335 6.290	6.360 6.260	6.375 6.235
6-24	6.220 6.365	6.210 6.375	6.210 6.370	6.215 6.370	6.230 6.360	6.245 6.350	6.260 6.345	6.280 6.330	6.300 6.305	6.320 6.280	6.335 6.260	6.350 6.235
6-25	6.215 6.290	6.200 6.305	6.195 6.310	6.190 6.315	6.195 6.315	6.200 6.305	6.210 6.295	6.225 6.280	6.240 6.270	6.255 6.245	6.265 6.220	6.280 6.195
6-26	6.175 6.140	6.155 6.125	6.150 6.115	6.145 6.095	6.140 6.080	6.145 6.060	6.150 6.045	6.155 6.030	6.155 6.015	6.155 6.000	6.155 5.985	6.150 5.975
6-27	5.965 6.015	5.960 6.010	5.960 6.000	5.960 5.990	5.970 5.980	5.975 5.970	5.985 5.955	5.995 5.940	6.005 5.930	6.010 5.915	6.015 5.910	6.015 5.905
6-28	5.910 6.140	5.915 6.150	5.930 6.150	5.955 6.140	5.975 6.130	6.000 6.115	6.025 6.095	6.050 6.070	6.075 6.045	6.100 6.025	6.115 6.005	6.135 5.995
6-29	5.990 6.160	5.995 6.165	6.005 6.160	6.020 6.150	6.040 6.140	6.060 6.130	6.080 6.115	6.100 6.095	6.120 6.075	6.135 6.055	6.150 6.035	6.155 6.020
6-30	6.010 6.155	6.005 6.165	6.010 6.170	6.020 6.175	6.035 6.165	6.050 6.135	6.070 6.105	6.090 6.075	6.110 6.045	6.125 6.020	6.135 6.000	6.145 5.985
7- 1	5.975 6.155	5.970 6.155	5.975 6.155	5.985 6.145	6.005 6.135	6.030 6.110	6.055 6.085	6.080 6.065	6.100 6.035	6.115 6.010	6.135 5.985	6.145 5.970
7- 2	5.955 6.015	5.945 6.010	5.945 6.000	5.955 5.985	5.960 5.970	5.975 5.955	5.995 5.935	6.005 5.915	6.015 5.900	6.025 5.885	6.025 5.870	6.025 5.860
7- 3	5.850 6.015	5.850 6.015	5.860 6.010	5.875 5.995	5.890 5.975	5.915 5.960	5.945 5.940	5.965 5.920	5.985 5.900	6.000 5.885	6.010 5.870	6.015 5.860
7- 4	5.850 5.975	5.845 5.970	5.845 5.955	5.855 5.940	5.875 5.920	5.890 5.900	5.915 5.875	5.940 5.855	5.955 5.835	5.970 5.820	5.975 5.805	5.980 5.795
7- 5	5.780 5.805	5.770 5.800	5.765 5.790	5.765 5.780	5.770 5.765	5.780 5.755	5.790 5.745	5.795 5.735	5.805 5.725	5.810 5.715	5.815 5.705	5.810 5.695
7- 6	5.685 5.745	5.680 5.745	5.680 5.770	5.680 5.775	5.690 5.775	5.700 5.765	5.710 5.755	5.725 5.735	5.735 5.720	5.745 5.710	5.745 5.705	5.750 5.695
7- 7	5.690 5.690	5.685 5.685	5.680 5.680	5.680 5.675	5.680 5.670	5.680 5.665	5.685 5.655	5.690 5.650	5.690 5.635	5.690 5.615	5.690 5.600	5.690 5.595
7- 8	5.590 5.735	5.585 5.735	5.585 5.735	5.595 5.725	5.610 5.720	5.635 5.710	5.655 5.700	5.680 5.690	5.705 5.675	5.710 5.665	5.720 5.655	5.730 5.650
7- 9	5.640 5.765	5.640 5.765	5.640 5.760	5.650 5.745	5.660 5.735	5.680 5.725	5.705 5.710	5.725 5.695	5.740 5.680	5.755 5.670	5.765 5.660	5.765 5.650
7-10	5.640 5.760	5.635 5.750	5.635 5.745	5.645 5.735	5.660 5.725	5.680 5.715	5.705 5.700	5.730 5.685	5.745 5.670	5.755 5.665	5.760 5.650	5.760 5.640
7-11	5.630 5.695	5.620 5.690	5.620 5.685	5.615 5.680	5.620 5.670	5.630 5.665	5.645 5.650	5.655 5.640	5.670 5.630	5.685 5.620	5.690 5.610	5.695 5.600
7-12	5.595 5.745	5.590 5.745	5.595 5.740	5.600 5.725	5.615 5.715	5.635 5.705	5.660 5.690	5.685 5.680	5.710 5.665	5.730 5.650	5.740 5.640	5.745 5.625
7-13	5.620 5.640	5.610 5.635	5.600 5.630	5.595 5.620	5.600 5.610	5.600 5.600	5.605 5.595	5.620 5.585	5.630 5.580	5.640 5.570	5.640 5.565	5.640 5.555
7-14	5.545 5.620	5.535 5.620	5.530 5.620	5.525 5.610	5.530 5.605	5.530 5.595	5.540 5.585	5.555 5.580	5.580 5.570	5.595 5.560	5.605 5.550	5.615 5.540
7-15	5.530 5.615	5.525 5.620	5.520 5.630	5.515 5.630	5.515 5.625	5.525 5.620	5.530 5.610	5.550 5.600	5.570 5.595	5.590 5.585	5.600 5.580	5.610 5.570
7-16	5.560 5.575	5.555 5.575	5.550 5.575	5.540 5.570	5.540 5.565	5.540 5.560	5.540 5.550	5.545 5.545	5.555 5.535	5.565 5.530	5.570 5.520	5.570 5.515
7-17	5.515 5.590	5.510 5.595	5.510 5.600	5.510 5.595	5.515 5.595	5.525 5.585	5.540 5.580	5.550 5.575	5.565 5.570	5.575 5.560	5.580 5.555	5.585 5.550
7-18	5.540 5.620	5.540 5.625	5.560 5.630	5.560 5.635	5.560 5.635	5.560 5.635	5.565 5.630	5.580 5.625	5.585 5.620	5.595 5.615	5.600 5.610	5.610 5.605

(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.

TABLE 2.- SUMMARY OF DISCHARGE MEASUREMENTS, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, 1978(1)

A. TOTAL DISCHARGE - NO OVERBANK FLOW

DATE	TIME	WATER LEVEL(2) (M)	SURFACE WIDTH(3) (M)	MEAN DEPTH(4) (M)	MEAN VELOCITY(5) (M/S)	FLOW AREA(6) (M^2)	TOTAL DISCHARGE(7) (M^3/S)
5-26	1315	5.800	16.5	0.63	0.78	10.45	8.16
5-27	1335	5.805	16.5	.65	.73	10.41	7.64
5-28	1610	5.875	16.6	.68	.79	11.31	8.88
5-29	1310	6.050	16.9	.85	.81	14.32	11.64
5-30	1445	5.975	16.9	.72	.90	12.24	11.02
5-31	1430	5.815	16.5	.60	.76	9.91	7.56
6- 4	1145	5.725	16.2	.55	.73	8.96	6.50
6- 6	1105	6.125	18.4	.89	.93	16.30	15.23
6- 6	1130	6.125	18.2	.90	.91	16.31	14.92
6- 7	0810	6.320	18.6	1.04	1.03	19.33	19.83
6- 7	1630	6.390	18.6	1.13	1.05	20.99	22.05
6- 8	1700	6.525	18.9	1.30	1.15	24.53	28.25
6- 9	1345	6.600	19.2	1.32	1.24	25.39	31.59
6-10	1440	6.640	19.5	1.29	1.33	25.25	33.62
6-12	1205	6.140	17.4	.94	.88	16.28	14.37
6-21	1335	6.225	17.4	1.00	1.00	17.34	17.37

(1) DISCHARGE MEASUREMENTS WERE MADE FROM SUSPENSION BRIDGE AT BEDLOAD TRAP.
(2) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(3) TOTAL SURFACE WIDTH OF CHANNEL.
(4) MEAN DEPTH OF WATER OVER TOTAL WIDTH.
(5) MEAN VELOCITY OF TOTAL DISCHARGE.
(6) FLOW AREA OF TOTAL WIDTH.
(7) TOTAL DISCHARGE OVER TOTAL WIDTH OF CHANNEL.

B. EFFECTIVE DISCHARGE - FLOW OVER 14.6-METER WIDTH OF CONVEYOR BELT

DATE	TIME	WATER LEVEL(2) (M)	EFFECTIVE WIDTH(3) (M)	MEAN DEPTH(4) (M)	MEAN VELOCITY(5) (M/S)	FLOW AREA(6) (M^2)	EFFECTIVE DISCHARGE(7) (M^3/S)
5-26	1315	5.800	14.6	0.67	0.81	9.75	7.87
5-27	1335	5.805	14.6	.66	.76	9.66	7.36
5-28	1610	5.875	14.6	.72	.81	10.46	8.51
5-29	1310	6.050	14.6	.89	.84	13.04	10.97
5-30	1445	5.975	14.6	.75	.94	11.02	10.32
5-31	1430	5.815	14.6	.63	.79	9.21	7.29
6- 4	1145	5.725	14.6	.58	.75	8.48	6.33
6- 6	1105	6.125	14.6	1.00	.96	14.63	14.01
6- 6	1130	6.125	14.6	1.00	.94	14.63	13.71
6- 7	0810	6.320	14.6	1.16	1.06	16.97	18.04
6- 7	1630	6.390	14.6	1.27	1.10	18.57	20.39
6- 8	1700	6.525	14.6	1.44	1.21	21.03	25.52
6- 9	1345	6.600	14.6	1.45	1.34	21.24	28.46
6-10	1440	6.640	14.6	1.47	1.41	21.44	30.24
6-12	1205	6.140	14.6	1.02	.90	14.91	13.46
6-21	1335	6.225	14.6	1.07	1.04	15.64	16.28

(1) DISCHARGE MEASUREMENTS WERE MADE FROM SUSPENSION BRIDGE AT BEDLOAD TRAP.
(2) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(3) EFFECTIVE WIDTH OF STREAM CHANNEL IS THE 14.6-METER WIDTH OF THE BEDLOAD TRAP.
(4) MEAN DEPTH OF WATER OVER EFFECTIVE WIDTH.
(5) MEAN VELOCITY OF EFFECTIVE DISCHARGE.
(6) FLOW AREA OF EFFECTIVE WIDTH.
(7) EFFECTIVE DISCHARGE, INCLUDES ALL FLOW OVER THE EFFECTIVE WIDTH OF THE STREAMBED.

TABLE 3.- HOURLY DISCHARGE, IN CUBIC METERS PER SECOND, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, 1978

DATE	TIME IN HOURS											
	1 13	2 14	3 15	4 16	5 17	6 18	7 19	8 20	9 21	10 22	11 23	12 24
5-24	7.80 9.71	8.32 9.62	8.78 9.52	9.24 9.43	9.80 9.43	10.0 9.43	10.1 9.52	10.2 9.43	10.3 9.34	10.2 9.34	10.1 9.34	9.90 9.52
5-25	9.71 8.87	9.90 8.69	10.2 8.50	10.4 8.50	10.4 8.59	10.4 8.69	10.4 8.69	10.2 8.50	9.80 8.32	9.62 8.22	9.43 8.32	9.15 8.50
5-26	8.78 7.80	8.97 7.72	9.24 7.63	9.43 7.63	9.62 7.72	9.71 7.80	9.71 7.97	9.62 7.80	9.06 7.72	8.87 7.63	8.50 7.72	8.13 7.88
5-27	8.05 7.97	8.32 7.80	8.59 7.63	8.69 7.35	8.78 7.27	8.78 7.10	8.69 7.10	8.59 7.02	8.50 7.10	8.32 7.35	8.22 7.72	8.13 8.05
5-28	8.50 9.71	9.06 9.43	9.52 9.06	9.90 8.97	10.3 8.97	10.4 9.06	10.5 9.15	10.4 9.15	10.4 9.24	10.3 9.24	10.2 9.52	9.90 9.71
5-29	10.1 12.5	10.5 12.3	10.9 12.2	11.3 12.0	11.7 11.9	12.0 11.7	12.2 11.6	12.4 11.5	12.7 11.5	12.9 11.7	12.8 11.8	12.7 12.0
5-30	12.2 11.5	12.4 11.0	12.7 10.9	12.8 11.1	12.9 11.2	12.9 11.3	12.9 11.5	12.9 11.5	12.7 11.3	12.4 11.3	12.1 11.2	11.8 11.1
5-31	11.0 8.22	10.9 7.97	10.8 7.80	10.7 7.72	10.5 7.88	10.3 8.22	9.90 8.50	9.62 8.41	9.34 8.22	9.15 8.22	8.87 8.22	8.59 8.22
6- 1	8.22 6.60	8.22 6.46	8.22 6.31	8.22 6.17	8.13 6.17	8.05 6.46	7.97 6.46	7.80 6.38	7.63 6.38	7.44 6.38	7.19 6.46	6.85 6.60
6- 2	6.85 7.63	7.10 7.54	7.35 7.44	7.63 7.27	7.88 7.19	7.97 7.10	7.97 7.02	8.05 6.94	7.97 6.85	7.97 6.94	7.88 6.94	7.80 6.94
6- 3	7.02 7.44	7.10 7.44	7.19 7.44	7.35 7.35	7.44 7.19	7.63 7.10	7.72 7.02	7.72 6.94	7.63 6.94	7.63 6.94	7.63 6.94	7.54 6.94
6- 4	6.94 6.46	7.02 6.38	6.94 6.38	6.94 6.31	6.94 6.24	6.85 6.10	6.85 6.03	6.77 5.96	6.60 5.96	6.60 5.96	6.53 6.10	6.46 6.31
6- 5	6.60 8.59	7.02 8.50	7.35 8.32	7.80 8.22	8.05 8.22	8.22 8.13	8.50 8.13	8.59 8.13	8.69 8.32	8.69 8.50	8.59 8.87	8.59 9.34
6- 6	9.90 14.4	10.6 14.1	11.5 14.0	12.2 13.8	12.8 13.7	13.2 13.4	13.4 13.3	13.8 13.3	14.0 13.4	14.1 13.5	14.2 13.8	14.2 14.1
6- 7	14.6 22.6	15.1 22.6	15.8 22.6	16.6 22.4	17.3 22.2	18.0 22.0	18.8 21.6	19.8 21.2	20.6 20.9	21.4 20.6	21.8 20.4	22.2 20.4
6- 8	20.9 29.8	21.2 29.5	22.0 29.3	22.6 28.8	23.2 28.3	24.6 27.8	26.1 27.1	27.5 26.6	28.6 25.9	29.1 25.5	29.5 25.0	29.8 24.8
6- 9	24.8 32.2	25.0 31.9	25.5 31.5	25.9 31.2	26.8 30.5	27.8 30.0	28.8 29.5	29.5 29.1	30.2 28.6	30.8 28.0	31.5 27.5	31.9 27.3
6-10	27.1 36.0	27.1 35.5	27.3 35.1	27.5 34.6	28.6 33.9	29.8 33.2	30.8 32.9	32.2 31.9	33.2 31.2	34.6 30.8	35.1 30.0	36.0 29.3
6-11	28.8 20.9	28.0 20.2	27.3 19.8	26.6 18.9	25.9 18.0	25.3 17.6	24.6 17.0	24.0 16.6	23.2 16.0	22.6 15.8	22.0 15.4	21.4 15.0
6-12	15.0 14.2	14.9 13.9	15.0 13.7	15.0 13.4	15.0 13.3	15.1 13.2	15.1 13.2	15.1 13.2	15.1 13.2	15.0 13.0	14.9 12.9	14.6 12.9
6-13	13.0 17.4	13.2 17.6	13.5 17.7	13.9 17.7	14.2 17.7	14.6 17.6	15.1 17.3	15.6 17.2	16.0 16.9	16.5 16.9	16.9 16.7	17.2 16.7
6-14	17.2 30.2	17.4 30.8	18.0 30.5	18.8 30.5	19.8 30.2	20.9 29.8	22.2 29.3	23.4 28.8	24.8 28.3	26.1 27.5	27.8 26.8	29.3 26.1
6-15	25.5 29.8	25.0 30.0	25.0 29.5	25.0 29.1	25.3 28.8	25.7 28.3	26.4 27.8	27.3 27.3	28.0 26.4	28.8 25.7	29.5 25.0	29.8 24.4
6-16	24.0 28.8	23.8 29.1	23.6 29.1	23.6 28.8	23.8 28.6	24.2 27.8	24.8 27.3	25.7 26.6	26.6 25.7	27.5 24.6	28.0 24.0	28.6 23.2
6-17	22.6 24.2	22.4 24.2	22.2 23.8	22.2 23.4	22.4 23.0	22.6 22.4	23.0 22.0	23.2 21.1	23.4 20.6	23.8 19.9	24.0 19.4	24.2 18.8
6-18	18.3 18.3	18.1 18.0	17.8 17.6	17.8 17.2	17.8 16.7	18.0 16.3	18.0 16.0	18.1 15.8	18.3 15.5	18.5 15.2	18.5 15.0	18.5 14.9
6-19	14.9 18.1	15.0 18.3	15.1 18.3	15.5 18.0	16.0 17.8	16.5 17.6	16.7 17.2	17.0 16.7	17.3 16.5	17.7 16.0	17.8 15.4	18.0 15.1
6-20	15.0 15.4	14.9 15.1	14.9 14.9	14.9 14.6	15.0 14.2	15.1 13.9	15.2 13.5	15.4 13.2	15.5 13.0	15.5 12.8	15.5 12.5	15.4 12.5

TABLE 3.- HOURLY DISCHARGE, IN CUBIC METERS PER SECOND, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, 1978--CONTINUED

DATE	TIME IN HOURS											
	1 13	2 14	3 15	4 16	5 17	6 18	7 19	8 20	9 21	10 22	11 23	12 24
6-21	12.5 16.7	12.7 16.7	13.0 16.7	13.3 16.6	13.7 16.3	14.1 16.0	14.6 15.8	15.0 15.4	15.4 15.0	15.8 14.5	16.0 14.2	16.5 14.0
6-22	14.0 21.2	14.2 22.0	14.6 22.6	15.0 22.8	15.6 22.8	16.2 22.6	16.9 22.0	17.6 21.4	18.3 20.7	18.9 20.1	19.9 19.3	20.7 18.5
6-23	17.8 22.2	17.4 22.8	17.2 22.8	17.2 22.8	17.3 22.6	17.6 22.0	18.1 21.2	18.8 20.6	19.6 19.6	20.2 18.8	21.1 17.8	21.6 17.2
6-24	16.7 21.2	16.5 21.6	16.5 21.4	16.6 21.4	17.0 21.1	17.4 20.7	17.8 20.6	18.5 20.1	19.1 19.3	19.8 18.5	20.2 17.8	20.7 17.2
6-25	16.6 18.8	16.2 19.3	16.0 19.4	15.9 19.6	16.0 19.6	16.2 19.3	16.5 18.9	16.9 18.5	17.3 18.1	17.7 17.4	18.0 16.7	18.5 16.0
6-26	15.5 14.6	15.0 14.2	14.9 14.0	14.7 13.5	14.6 13.2	14.7 12.8	14.9 12.4	15.0 12.1	15.0 11.8	15.0 11.5	15.0 11.1	14.9 10.9
6-27	10.8 11.8	10.7 11.7	10.7 11.5	10.7 11.2	10.9 11.0	10.9 10.9	11.1 10.6	11.3 10.3	11.6 10.1	11.7 9.80	11.8 9.71	11.8 9.62
6-28	9.71 14.6	9.80 14.9	10.1 14.9	10.6 14.6	10.9 14.4	11.5 14.0	12.0 13.5	12.5 13.0	13.1 12.4	13.7 12.0	14.0 11.6	14.5 11.3
6-29	11.2 15.1	11.3 15.2	11.6 15.1	11.9 14.9	12.3 14.6	12.8 14.4	13.2 14.0	13.7 13.5	14.1 13.1	14.5 12.7	14.9 12.2	15.0 11.9
6-30	11.7 15.0	11.6 15.2	11.7 15.4	11.9 15.5	12.2 15.2	12.5 14.5	13.0 13.8	13.4 13.1	13.9 12.4	14.2 11.9	14.5 11.5	14.7 11.1
7- 1	10.9 15.0	10.9 15.0	10.9 15.0	11.1 14.7	11.6 14.5	12.1 13.9	12.7 13.3	13.2 12.9	13.7 12.2	14.0 11.7	14.5 11.1	14.7 10.9
7- 2	10.6 11.8	10.4 11.7	10.4 11.5	10.6 11.1	10.7 10.9	10.9 10.6	11.3 10.2	11.6 9.80	11.8 9.52	12.0 9.24	12.0 8.97	12.0 8.78
7- 3	8.59 11.8	8.59 11.8	8.78 11.7	9.06 11.3	9.34 10.9	9.80 10.7	10.4 10.3	10.8 9.90	11.1 9.52	11.5 9.24	11.7 8.97	11.8 8.78
7- 4	8.59 10.9	8.50 10.9	8.50 10.6	8.69 10.3	9.06 9.90	9.34 9.52	9.80 9.06	10.3 8.69	10.6 8.32	10.9 8.05	10.9 7.80	11.0 7.63
7- 5	7.35 7.80	7.19 7.72	7.10 7.54	7.10 7.35	7.19 7.10	7.35 6.94	7.54 6.77	7.63 6.60	7.80 6.46	7.88 6.31	7.97 6.17	7.88 6.03
7- 6	5.89 6.77	5.82 6.77	5.82 7.19	5.82 7.27	5.96 7.27	6.10 7.10	6.24 6.94	6.46 6.60	6.60 6.38	6.77 6.24	6.77 6.17	6.85 6.03
7- 7	5.96 5.96	5.89 5.89	5.82 5.82	5.82 5.76	5.82 5.69	5.82 5.62	5.89 5.48	5.96 5.42	5.96 5.22	5.96 4.96	5.96 4.77	5.96 4.71
7- 8	4.64 6.60	4.58 6.60	4.58 6.60	4.71 6.46	4.90 6.38	5.22 6.24	5.48 6.10	5.82 5.96	6.17 5.76	6.24 5.62	6.38 5.48	6.53 5.42
7- 9	5.29 7.10	5.29 7.10	5.29 7.02	5.42 6.77	5.55 6.60	5.82 6.46	6.17 6.24	6.46 6.03	6.69 5.82	6.94 5.69	7.10 5.55	7.10 5.42
7-10	5.29 7.02	5.22 6.85	5.22 6.77	5.35 6.60	5.55 6.46	5.82 6.31	6.17 6.10	6.53 5.89	6.77 5.69	6.94 5.62	7.02 5.42	7.02 5.29
7-11	5.16 6.03	5.03 5.96	5.03 5.89	4.96 5.82	5.03 5.69	5.16 5.62	5.35 5.42	5.48 5.29	5.69 5.16	5.89 5.03	5.96 4.90	6.03 4.77
7-12	4.71 6.77	4.64 6.77	4.71 6.69	4.77 6.46	4.96 6.31	5.22 6.17	5.55 5.96	5.89 5.82	6.24 5.62	6.53 5.42	6.69 5.29	6.77 5.09
7-13	5.03 5.29	4.90 5.22	4.77 5.16	4.71 5.03	4.77 4.90	4.77 4.77	4.83 4.71	5.03 4.58	5.16 4.52	5.29 4.40	5.29 4.35	5.29 4.23
7-14	4.12 5.03	4.01 5.03	3.96 5.03	3.91 4.90	3.96 4.83	3.96 4.71	4.07 4.58	4.23 4.52	4.52 4.40	4.71 4.29	4.83 4.18	4.96 4.07
7-15	3.96 4.96	3.91 5.03	3.86 5.16	3.81 5.16	3.81 5.09	3.91 5.03	3.96 4.90	4.18 4.77	4.40 4.71	4.64 4.58	4.77 4.52	4.90 4.40
7-16	4.29 4.46	4.23 4.46	4.18 4.46	4.07 4.40	4.07 4.35	4.07 4.29	4.07 4.18	4.12 4.12	4.23 4.01	4.35 3.96	4.40 3.86	4.40 3.81
7-17	3.81 4.64	3.76 4.71	3.76 4.77	3.76 4.71	3.81 4.71	3.91 4.58	4.07 4.52	4.18 4.46	4.35 4.40	4.46 4.29	4.52 4.23	4.58 4.18
7-18	4.07 5.03	4.07 5.09	4.29 5.16	4.29 5.22	4.29 5.22	4.29 5.22	4.35 5.16	4.52 5.09	4.58 5.03	4.71 4.96	4.77 4.90	4.90 4.83

TABLE 4.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, MAY 24, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1042	1118	1204	1243	1335	1414	1453	1525
WATER LEVEL(1)	(M)	5.930	5.930	5.920	5.915	5.905	5.905	5.900	5.900
DISCHARGE(2)	(M^3/S)	1.03	1.18	.99	.82	1.04	1.31	1.58	1.26
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	.67	.70	.65	.64	.68	.84	.99	.85
AREA(5)	(M^2)	1.22	1.27	1.20	1.18	1.24	1.54	1.81	1.56
VELOCITY(6)	(M/S)	.84	.93	.83	.69	.84	.85	.87	.81
TEMPERATURE	(°C)	5.5	5.5	6.0	6.0	6.5	7.0	7.5	7.5
STREAM POWER(7)	(W/M)	7.04	8.09	6.80	5.60	7.17	8.96	10.85	8.63
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	30	30	30	30	30
RATE(9)	(KG/S)	.0452	.1161	.1022	.1073	.2114	.3348	.1348	.0133
STANDARD DEVIATION(10)	(KG/S)	.0734	.0815	.0537	.0367	.0763	.0621	.0818	.0056

(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	---
22.6	---	---	---	---	---	---	---	---
16.0	100	---	---	---	---	---	---	100
11.3	99.7	---	---	---	---	100	---	99.5
8.00	99.0	100	100	---	100	98.8	100	99.5
5.66	96.7	99.4	99.7	100	99.2	98.0	98.7	98.7
4.00	91.7	98.1	98.8	99.9	98.0	96.3	96.0	97.6
2.83	83.5	95.0	95.7	99.5	96.4	92.2	90.3	95.8
2.00	72.0	90.0	90.0	98.6	92.2	84.7	81.0	92.7
1.41	57.4	83.1	80.9	95.3	83.5	70.8	63.2	86.8
1.00	44.5	74.9	67.8	87.6	68.5	52.3	44.3	78.1
.707	32.9	62.4	51.7	71.3	46.5	32.9	27.0	65.5
.500	19.5	40.4	28.7	39.1	18.7	12.5	11.0	39.2
.354	8.8	14.2	9.1	12.8	4.4	2.9	2.5	12.4
.250	2.8	2.9	1.6	3.2	1.2	.8	.7	2.5
.177	1.4	1.2	.7	1.3	.6	.5	.4	.9
.125	.9	.9	.4	.6	.4	.3	.3	.4
.088	.7	.6	.3	.4	.3	.2	.3	.2
.062	.5	.4	.2	.3	.2	.1	.2	.2
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.29	0.28	0.31	0.28	0.36	0.40	0.41	0.29
16	.45	.36	.41	.37	.48	.54	.57	.38
25	.58	.42	.48	.43	.55	.63	.68	.43
35	.75	.47	.55	.48	.62	.74	.84	.48
50	1.16	.58	.69	.56	.75	.96	1.11	.58
65	1.68	.76	.94	.66	.94	1.26	1.46	.70
75	2.17	1.00	1.20	.76	1.15	1.55	1.76	.91
84	2.89	1.48	1.57	.91	1.44	1.97	2.21	1.26
90	3.67	2.00	2.00	1.09	1.80	2.51	2.79	1.68
95	4.88	2.83	2.67	1.39	2.46	3.50	3.69	2.55

TABLE 5.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, MAY 25, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1105	1152	1237	1340	1448	1615	1830	1909
WATER LEVEL(1)	(M)	5.895	5.880	5.870	5.860	5.845	5.845	5.855	5.855
DISCHARGE(2)	(M^3/S)	.94	1.08	.87	.70	.94	1.19	1.50	1.16
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	.63	.65	.60	.59	.63	.81	.96	.81
AREA(5)	(M^2)	1.15	1.20	1.11	1.08	1.16	1.49	1.76	1.49
VELOCITY(6)	(M/S)	.82	.90	.79	.65	.81	.80	.85	.78
TEMPERATURE	(^0C)	5.0	5.5	6.5	7.5	7.5	8.5	8.5	8.5
STREAM POWER(7)	(W/M)	6.47	7.41	5.99	4.80	6.45	8.18	10.26	7.93
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	30	30	30	30	30
RATE(9)	(KG/S)	.0788	.1945	.2018	.2022	.2146	.2951	.0934	.0720
STANDARD DEVIATION(10)	(KG/S)	.0489	.0998	.0778	.0398	.0497	.0733	.0813	.0454

(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	---
22.6	---	---	---	---	---	---	---	---
16.0	---	---	---	---	---	---	---	---
11.3	100	100	100	---	---	100	---	100
8.00	99.1	99.7	99.5	100	100	99.4	100	99.6
5.66	97.7	98.5	97.1	99.2	98.8	97.8	99.8	98.4
4.00	95.3	92.4	94.5	96.8	97.0	93.2	98.2	96.4
2.83	92.1	84.6	88.9	90.8	93.0	86.4	95.8	93.6
2.00	87.2	75.0	81.4	82.5	84.9	75.7	89.0	86.8
1.41	79.3	63.4	68.9	69.1	72.0	59.0	75.3	74.7
1.00	68.0	49.8	54.8	54.0	54.1	39.9	57.6	60.1
.707	51.7	34.3	39.3	37.4	33.6	22.6	37.6	44.1
.500	24.4	15.3	19.5	17.4	11.6	7.3	15.0	21.8
.354	6.0	3.8	5.7	4.8	2.4	1.4	3.3	6.0
.250	1.4	1.0	1.7	1.4	.8	.5	.9	1.2
.177	.8	.7	.9	.9	.5	.3	.5	.5
.125	.4	.5	.6	.6	.3	.2	.2	.3
.088	.2	.3	.4	.4	.2	.2	.2	.1
.062	.2	.2	.3	.3	.1	.1	.1	.1
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.34	0.38	0.34	0.36	0.41	0.46	0.38	0.34
16	.44	.51	.47	.49	.55	.63	.51	.45
25	.50	.61	.56	.58	.63	.75	.60	.53
35	.58	.72	.66	.68	.72	.91	.68	.62
50	.69	1.01	.90	.92	.93	1.20	.88	.80
65	.93	1.48	1.28	1.28	1.23	1.59	1.15	1.12
75	1.23	2.00	1.66	1.63	1.52	1.97	1.40	1.42
84	1.73	2.77	2.24	2.12	1.95	2.60	1.73	1.83
90	2.40	3.53	2.99	2.72	2.43	3.33	2.08	2.30
95	3.84	4.42	4.22	3.49	3.27	4.43	2.67	3.30

TABLE 6.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, MAY 26, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1204	1257	1349	1445	1536	1625	1715	1759
WATER LEVEL(1)	(M)	5.825	5.805	5.800	5.795	5.795	5.795	5.800	5.805
DISCHARGE(2)	(M^3/S)	.81	.94	.72	.58	.87	1.11	1.40	1.04
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	.57	.59	.54	.53	.60	.79	.93	.77
AREA(5)	(M^2)	1.04	1.09	.98	.97	1.10	1.45	1.70	1.40
VELOCITY(6)	(M/S)	.78	.87	.73	.60	.79	.77	.82	.74
TEMPERATURE	(°C)	5.5	7.0	7.5	8.5	9.0	9.0	9.0	9.0
STREAM POWER(7)	(W/M)	5.54	6.47	4.96	3.97	5.95	7.62	9.60	7.17
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	29	30	30	30	30	30	30
RATE(9)	(KG/S)	.0233	.0983	.0818	.0645	.1709	.1647	.0431	.0047
STANDARD DEVIATION(10)	(KG/S)	.0119	.0374	.0247	.0202	.0449	.0680	.0322	.0037

(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	---
22.6	---	---	---	---	---	---	---	---
16.0	---	---	---	---	---	---	---	---
11.3	---	---	100	---	100	100	---	100
8.00	100	100	99.8	---	98.3	99.4	100	99.2
5.66	99.2	99.5	98.9	100	93.4	97.3	99.9	98.3
4.00	97.0	97.7	96.7	99.2	87.9	92.1	98.6	97.2
2.83	94.1	94.6	92.1	96.6	78.2	80.5	94.3	95.2
2.00	89.8	90.1	84.7	91.2	66.3	62.5	85.0	91.3
1.41	82.3	82.0	73.3	81.0	50.4	41.7	65.6	84.2
1.00	71.5	69.4	59.3	65.4	34.7	25.5	44.4	74.2
.707	56.1	53.6	42.8	46.4	21.4	14.3	26.4	60.6
.500	32.2	29.3	21.4	22.7	8.5	5.4	12.5	39.1
.354	14.5	9.8	8.4	7.2	2.2	1.5	5.4	20.1
.250	4.9	2.4	2.6	2.1	.8	.8	1.9	7.3
.177	2.3	1.3	1.3	1.1	.5	.5	.9	3.1
.125	1.1	.8	.8	.6	.3	.4	.4	1.3
.088	.6	.6	.5	.4	.2	.3	.2	.6
.062	.4	.4	.4	.3	.2	.2	.2	.4
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.25	0.30	0.30	0.32	0.43	0.49	0.34	0.21
16	.37	.40	.44	.44	.62	.75	.55	.32
25	.44	.47	.53	.52	.78	.99	.69	.39
35	.52	.55	.63	.61	1.01	1.23	.84	.47
50	.65	.67	.82	.75	1.40	1.62	1.09	.60
65	.86	.90	1.14	.99	1.94	2.09	1.40	.79
75	1.11	1.15	1.48	1.22	2.56	2.51	1.64	1.02
84	1.52	1.53	1.96	1.55	3.44	3.09	1.96	1.41
90	2.03	1.99	2.52	1.90	4.49	3.69	2.34	1.86
95	3.09	2.93	3.42	2.48	6.12	4.68	2.93	2.77

TABLE 7.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, MAY 27, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1045	1120	1205	1250	1346	1458	1540	1637
WATER LEVEL(1)	(M)	5.830	5.830	5.825	5.815	5.805	5.795	5.785	5.775
DISCHARGE(2)	(M^3/S)	.82	.99	.78	.61	.87	1.10	1.37	.98
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	.58	.61	.56	.54	.60	.79	.92	.74
AREA(5)	(M^2)	1.06	1.12	1.03	.99	1.11	1.44	1.68	1.35
VELOCITY(6)	(M/S)	.78	.88	.75	.61	.79	.77	.82	.73
TEMPERATURE	(°C)	6.0	6.5	7.0	7.5	8.5	9.0	10.0	10.5
STREAM POWER(7)	(W/M)	5.66	6.78	5.33	4.18	6.01	7.58	9.43	6.73
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	30	30	30	30	30
RATE(9)	(KG/S)	.0062	.0386	.0501	.0463	.1390	.1518	.0225	.0084
STANDARD DEVIATION(10)	(KG/S)	.0046	.0112	.0229	.0103	.0482	.0689	.0175	.0068

(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	---
22.6	---	---	---	---	---	---	---	---
16.0	---	---	---	---	---	---	---	100
11.3	---	100	100	100	100	100	---	94.9
8.00	100	99.5	99.9	99.8	99.9	99.7	100	94.5
5.66	99.3	98.7	99.5	98.7	97.9	96.6	99.2	94.4
4.00	97.9	96.5	97.1	95.8	93.2	90.0	94.8	92.8
2.83	95.2	93.2	93.1	92.0	85.4	78.6	88.6	90.0
2.00	89.6	88.1	86.3	85.7	74.3	64.2	79.4	84.5
1.41	80.8	79.7	74.9	75.5	59.5	47.2	66.6	76.7
1.00	69.8	67.8	61.7	64.0	43.7	32.5	52.8	67.2
.707	53.2	51.1	46.9	50.6	27.3	19.7	37.1	54.3
.500	29.3	27.2	27.2	30.7	11.7	8.7	18.3	32.5
.354	11.1	10.7	11.3	14.0	4.0	3.3	7.1	13.0
.250	3.0	2.8	2.6	4.0	1.2	1.3	2.8	4.2
.177	1.2	1.2	.9	1.4	.5	.6	1.4	1.8
.125	.6	.6	.5	.7	.3	.4	.7	.8
.088	.3	.4	.3	.4	.2	.2	.5	.3
.062	.2	.3	.2	.3	.1	.2	.3	.1
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.28	0.29	0.29	0.26	0.38	0.41	0.31	0.26
16	.40	.40	.40	.37	.56	.64	.47	.38
25	.47	.48	.48	.45	.68	.83	.57	.45
35	.55	.56	.58	.54	.84	1.06	.68	.52
50	.68	.70	.76	.70	1.15	1.50	.94	.66
65	.90	.94	1.08	1.03	1.60	2.03	1.35	.94
75	1.17	1.22	1.42	1.39	2.04	2.57	1.76	1.32
84	1.59	1.67	1.85	1.88	2.70	3.28	2.35	1.96
90	2.04	2.24	2.36	2.49	3.39	4.00	3.01	2.83
95	2.78	3.34	3.24	3.66	4.41	5.04	4.03	11.34

TABLE 8.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, MAY 28, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1017	1100	1148	1235	1335	1417	1520	1604
WATER LEVEL(1)	(M)	5.940	5.935	5.925	5.915	5.900	5.890	5.875	5.870
DISCHARGE(2)	(M^3/S)	1.04	1.19	1.00	.82	1.03	1.27	1.53	1.19
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	.67	.70	.66	.63	.68	.84	.97	.82
AREA(5)	(M^2)	1.23	1.28	1.21	1.16	1.24	1.53	1.78	1.51
VELOCITY(6)	(M/S)	.85	.93	.83	.71	.84	.83	.86	.79
TEMPERATURE	(^oC)	6.0	6.5	6.5	7.0	8.0	9.0	10.0	10.5
STREAM POWER(7)	(W/M)	7.11	8.16	6.86	5.64	7.10	8.75	10.54	8.16
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	30	30	30	30	30
RATE(9)	(KG/S)	.0030	.0564	.0731	.0477	.0990	.1465	.0129	.0060
STANDARD DEVIATION(10)	(KG/S)	.0040	.0111	.0216	.0213	.0286	.0799	.0120	.0135

(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	---
22.6	---	---	---	---	---	---	---	---
16.0	---	---	---	---	---	---	---	---
11.3	100	---	---	100	100	100	100	100
8.00	99.9	---	100	99.8	97.9	99.8	99.6	99.8
5.66	99.2	100	98.8	99.3	95.0	97.4	98.5	99.4
4.00	98.0	99.3	96.0	98.0	88.9	91.7	96.0	98.0
2.83	95.6	97.4	92.7	95.5	79.6	81.2	89.7	94.7
2.00	91.0	94.7	87.7	90.8	66.6	65.1	78.1	87.5
1.41	83.1	89.1	79.0	82.4	49.9	45.4	59.2	74.9
1.00	72.7	82.2	68.1	72.1	34.8	29.1	41.2	60.8
.707	59.6	71.4	54.9	59.3	22.6	17.2	26.7	46.8
.500	38.3	51.3	34.3	39.2	11.6	7.4	14.1	30.4
.354	17.2	23.2	13.8	17.6	4.6	2.4	5.8	15.8
.250	6.1	5.4	3.9	5.7	1.6	.9	2.0	7.0
.177	2.8	1.8	1.4	2.0	.7	.5	.9	3.4
.125	1.3	.9	.8	.9	.4	.3	.4	1.6
.088	.7	.6	.5	.6	.3	.2	.2	.9
.062	.5	.3	.4	.5	.2	.1	.1	.6
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.23	0.24	0.27	0.24	0.36	0.44	0.34	0.21
16	.34	.32	.37	.34	.58	.68	.53	.35
25	.41	.36	.44	.40	.76	.90	.68	.45
35	.48	.41	.51	.47	1.00	1.14	.87	.55
50	.61	.49	.65	.60	1.42	1.53	1.18	.76
65	.81	.63	.92	.82	1.93	2.00	1.56	1.10
75	1.07	.79	1.23	1.09	2.48	2.44	1.87	1.42
84	1.47	1.09	1.71	1.50	3.29	3.06	2.34	1.79
90	1.90	1.48	2.31	1.92	4.20	3.72	2.86	2.21
95	2.67	2.06	3.54	2.70	5.66	4.70	3.71	2.89

TABLE 9.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, MAY 29, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1109	1201	1300	1347	*	*	*	*
WATER LEVEL(1)	(M)	6.060	6.055	6.050	6.040	---	---	---	---
DISCHARGE(2)	(M^3/S)	1.30	1.45	1.30	1.10	---	---	---	---
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	---	---	---	---
DEPTH(4)	(M)	.78	.81	.78	.76	---	---	---	---
AREA(5)	(M^2)	1.42	1.48	1.42	1.39	---	---	---	---
VELOCITY(6)	(M/S)	.91	.98	.91	.79	---	---	---	---
TEMPERATURE	(°C)	6.0	6.5	7.5	8.0	---	---	---	---
STREAM POWER(7)	(W/M)	8.92	9.95	8.92	7.52	---	---	---	---
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	30	---	---	---	---
RATE(9)	(KG/S)	.0609	.1412	.1259	.1052	---	---	---	---
STANDARD DEVIATION(10)	(KG/S)	.0489	.0772	.0815	.0587	---	---	---	---

* NO DATA COLLECTED AT GIVEN GATE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	---
22.6	---	---	---	---	---	---	---	---
16.0	---	---	---	---	---	---	---	---
11.3	100	100	---	---	---	---	---	---
8.00	99.7	96.5	100	100	---	---	---	---
5.66	98.8	95.8	98.2	99.2	---	---	---	---
4.00	98.3	94.2	96.2	96.5	---	---	---	---
2.83	96.2	91.1	92.1	90.8	---	---	---	---
2.00	93.4	86.7	85.3	84.0	---	---	---	---
1.41	88.0	80.5	73.7	72.6	---	---	---	---
1.00	80.3	71.7	59.7	59.2	---	---	---	---
.707	67.3	59.2	43.9	44.9	---	---	---	---
.500	41.6	36.8	23.7	26.9	---	---	---	---
.354	14.2	13.3	7.7	9.2	---	---	---	---
.250	2.9	3.0	1.9	2.3	---	---	---	---
.177	1.1	1.2	.8	1.0	---	---	---	---
.125	.6	.7	.4	.7	---	---	---	---
.088	.4	.3	.2	.5	---	---	---	---
.062	.3	.2	.1	.2	---	---	---	---
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.28	0.28	0.31	0.30	---	---	---	---
16	.36	.37	.44	.41	---	---	---	---
25	.41	.43	.51	.49	---	---	---	---
35	.47	.49	.61	.59	---	---	---	---
50	.56	.61	.81	.80	---	---	---	---
65	.68	.82	1.13	1.15	---	---	---	---
75	.86	1.13	1.46	1.51	---	---	---	---
84	1.17	1.71	1.92	2.01	---	---	---	---
90	1.58	2.57	2.50	2.70	---	---	---	---
95	2.39	4.70	3.54	3.55	---	---	---	---

TABLE 10.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, JUNE 5, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1114	1146	1228	1321	1425	*	*	*
WATER LEVEL(1)	(M)	5.850	5.850	5.850	5.845	5.840	---	---	---
DISCHARGE(2)	(M^3/S)	.85	1.02	.83	.67	.93	---	---	---
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	---	---	---
DEPTH(4)	(M)	.59	.63	.58	.58	.63	---	---	---
AREA(5)	(M^2)	1.08	1.15	1.07	1.06	1.15	---	---	---
VELOCITY(6)	(M/S)	.79	.89	.77	.64	.81	---	---	---
TEMPERATURE	(°C)	5.5	6.0	6.5	7.5	8.5	---	---	---
STREAM POWER(7)	(W/M)	5.85	7.02	5.68	4.63	6.38	---	---	---
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		15	30	30	30	30	---	---	---
RATE(9)	(KG/S)	.0017	.0452	.0233	.0197	.0458	---	---	---
STANDARD DEVIATION(10)	(KG/S)	.0029	.0185	.0085	.0100	.0258	---	---	---

* NO DATA COLLECTED AT GIVEN GATE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^2/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	100	---	---	---	---	---	---	---
22.6	74.6	---	---	---	---	---	---	---
16.0	67.7	---	---	---	---	---	---	---
11.3	65.7	---	100	---	100	---	---	---
8.00	65.5	100	98.5	100	99.2	---	---	---
5.66	64.8	98.1	90.6	99.5	96.7	---	---	---
4.00	63.5	93.6	84.2	98.7	92.5	---	---	---
2.83	62.3	85.3	75.7	94.4	84.9	---	---	---
2.00	60.5	75.2	66.2	87.6	76.7	---	---	---
1.41	57.6	62.3	55.2	76.7	65.1	---	---	---
1.00	54.0	49.4	45.4	64.0	51.1	---	---	---
.707	49.0	36.7	35.1	49.5	38.5	---	---	---
.500	38.5	20.7	21.3	31.0	23.9	---	---	---
.354	22.1	6.8	7.3	13.8	10.3	---	---	---
.250	8.8	1.5	1.5	3.8	2.6	---	---	---
.177	3.9	.7	.8	1.2	.9	---	---	---
.125	1.8	.4	.5	.7	.5	---	---	---
.088	.9	.3	.3	.4	.3	---	---	---
.062	.5	.2	.2	.3	.2	---	---	---
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.20	0.33	0.32	0.27	0.29	---	---	---
16	.31	.46	.45	.37	.42	---	---	---
25	.38	.55	.55	.45	.51	---	---	---
35	.47	.68	.71	.54	.65	---	---	---
50	.76	1.02	1.18	.72	.97	---	---	---
65	6.14	1.51	1.92	1.02	1.41	---	---	---
75	22.67	1.99	2.75	1.34	1.89	---	---	---
84	23.76	2.70	3.99	1.76	2.73	---	---	---
90	24.75	3.35	5.45	2.21	3.50	---	---	---
95	26.08	4.32	6.46	2.92	4.78	---	---	---

TABLE 11.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, JUNE 7, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1005	1054	1226	1337	1510	1405	1616	1705
WATER LEVEL(1)	(M)	6.370	6.380	6.395	6.400	6.400	6.400	6.395	6.390
DISCHARGE(2)	(M^3/S)	2.13	2.31	2.39	2.30	2.65	2.97	3.10	2.69
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	1.07	1.13	1.15	1.16	1.24	1.36	1.43	1.31
AREA(5)	(M^2)	1.96	2.06	2.10	2.12	2.28	2.48	2.61	2.41
VELOCITY(6)	(M/S)	1.09	1.12	1.14	1.08	1.17	1.20	1.19	1.12
TEMPERATURE	(°C)	5.0	5.5	7.0	8.5	9.0	9.0	9.5	9.5
STREAM POWER(7)	(W/M)	14.64	15.86	16.41	15.77	18.21	20.41	21.29	18.47
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	32	30	31	**	30	30
RATE(9)	(KG/S)	.0298	.1433	.1755	.2187	.4090	.3535	.0767	.0092
STANDARD DEVIATION(10)	(KG/S)	.0233	.0918	.1210	.1147	.1843	---	.0360	.0067

** BEDLOAD-TRANSPORT RATE DETERMINED BY USING HELLEY-SMITH BEDLOAD SAMPLER; NO VALUE OF STANDARD DEVIATION AVAILABLE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	---
22.6	100	---	100	---	100	---	100	100
16.0	98.0	---	96.1	100	97.7	100	97.2	97.7
11.3	96.6	100	95.7	98.6	92.5	98.8	94.6	95.4
8.00	96.6	99.0	94.0	95.6	88.4	95.1	85.3	91.8
5.66	96.2	98.0	91.1	92.2	82.4	88.1	70.8	87.0
4.00	95.3	95.4	87.7	86.0	74.2	80.1	57.6	83.6
2.83	93.8	92.8	82.7	78.1	62.4	68.8	45.8	78.7
2.00	91.5	89.4	76.5	68.9	47.8	55.3	36.0	72.9
1.41	88.0	84.5	68.6	58.0	33.5	39.1	26.9	65.6
1.00	82.7	77.9	59.6	48.1	21.9	25.6	19.4	57.4
.707	73.0	67.1	47.8	38.1	13.2	15.3	12.8	46.5
.500	49.4	44.3	28.0	24.5	5.8	6.9	5.8	28.3
.354	24.3	20.7	11.6	12.1	2.2	3.0	1.9	12.7
.250	7.4	4.7	2.7	3.6	.7	1.1	.5	3.2
.177	2.7	1.4	.9	1.3	.4	.4	.2	.8
.125	1.3	.6	.5	.7	.2	.3	.1	.4
.088	.8	.5	.3	.5	.2	.2	.1	.3
.062	.6	.4	.2	.4	.1	.1	.1	.2
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.22	0.25	0.29	0.27	0.47	0.43	0.48	0.28
16	.31	.33	.39	.40	.80	.72	.84	.39
25	.36	.38	.47	.51	1.11	.98	1.30	.47
35	.41	.44	.57	.66	1.47	1.28	1.93	.57
50	.50	.54	.75	1.07	2.11	1.79	3.20	.79
65	.62	.68	1.23	1.76	3.04	2.55	4.83	1.38
75	.75	.90	1.86	2.50	4.12	3.39	6.18	2.26
84	1.09	1.38	3.10	3.65	6.19	4.69	7.73	4.21
90	1.71	2.11	5.02	4.92	9.05	6.09	9.24	6.93
95	3.71	3.76	9.70	7.43	12.86	7.94	11.81	10.79

TABLE 12.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, JUNE 8, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1728	1003	1101	1201	1303	1537	1543	1636
WATER LEVEL(1)	(M)	6.525	6.545	6.555	6.560	6.560	6.545	6.545	6.535
DISCHARGE(2)	(M^3/S)	2.77	2.87	3.05	3.11	3.47	3.79	3.96	3.30
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	1.27	1.31	1.34	1.38	1.48	1.55	1.63	1.48
AREA(5)	(M^2)	2.33	2.41	2.44	2.52	2.70	2.83	2.99	2.71
VELOCITY(6)	(M/S)	1.19	1.19	1.25	1.23	1.28	1.34	1.33	1.22
TEMPERATURE	(°C)	10.5	5.0	5.5	6.5	7.5	9.0	10.0	10.5
STREAM POWER(7)	(W/M)	19.01	19.71	20.92	21.34	23.79	26.05	27.21	22.65
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	30	30	**	30	30
RATE(9)	(KG/S)	.1401	.3303	.3631	.2757	.3746	.2527	.1343	.0101
STANDARD DEVIATION(10)	(KG/S)	.1161	.2622	.2050	.1491	.1619	---	.1103	.0055

** BEDLOAD-TRANSPORT RATE DETERMINED BY USING HELLEY-SMITH BEDLOAD SAMPLER; NO VALUE OF STANDARD DEVIATION AVAILABLE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	100	---
32.0	---	---	---	---	100	---	85.0	---
22.6	---	100	---	100	94.0	---	80.5	---
16.0	---	95.6	100	97.8	94.0	100	80.5	100
11.3	100	92.0	99.2	97.4	90.8	98.1	76.2	98.4
8.00	99.7	91.0	97.6	96.7	89.3	96.6	71.3	97.1
5.66	99.4	89.8	96.5	95.4	84.4	91.0	63.5	95.1
4.00	98.5	88.2	94.4	92.5	74.2	80.0	55.8	92.5
2.83	97.5	85.1	90.5	85.1	57.2	58.9	46.3	87.9
2.00	94.8	80.2	82.8	72.5	38.5	35.3	37.5	82.4
1.41	88.2	71.5	68.6	54.4	21.7	16.0	29.6	74.1
1.00	75.7	58.4	51.5	38.5	11.7	7.5	23.6	63.7
.707	54.4	40.3	34.1	25.4	6.4	4.1	17.9	50.5
.500	23.5	18.7	16.3	13.6	3.2	2.3	10.6	28.7
.354	5.6	5.9	5.1	5.3	1.2	1.1	4.2	9.6
.250	.8	1.4	1.3	1.6	.4	.5	1.2	2.0
.177	.3	.7	.6	.8	.3	.2	.6	.7
.125	.2	.4	.4	.5	.2	.2	.4	.3
.088	.1	.3	.3	.4	.1	.2	.3	.2
.062	.1	.2	.2	.3	.1	.1	.2	.1
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.35	0.34	0.35	0.35	0.62	0.79	0.38	0.30
16	.45	.47	.50	.54	1.18	1.41	.65	.41
25	.51	.56	.60	.70	1.53	1.69	1.09	.47
35	.58	.66	.72	.92	1.87	1.99	1.80	.56
50	.68	.85	.97	1.29	2.48	2.49	3.24	.70
65	.83	1.18	1.31	1.72	3.29	3.09	6.02	1.04
75	.99	1.61	1.63	2.12	4.10	3.64	10.36	1.46
84	1.24	2.63	2.10	2.74	5.60	4.46	29.79	2.21
90	1.53	5.99	2.75	3.49	9.38	5.43	33.37	3.27
95	2.04	14.91	4.36	5.34	23.10	7.03	35.51	5.57

TABLE 13.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, JUNE 9, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1043	1148	1253	1428	1553	1700	1815	1900
WATER LEVEL(1)	(M)	6.585	6.595	6.600	6.595	6.585	6.575	6.565	6.555
DISCHARGE(2)	(M^3/S)	3.10	3.05	3.23	3.29	3.61	4.01	4.12	3.40
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	1.37	1.38	1.39	1.42	1.52	1.61	1.67	1.51
AREA(5)	(M^2)	2.51	2.52	2.54	2.60	2.78	2.95	3.06	2.76
VELOCITY(6)	(M/S)	1.24	1.21	1.27	1.26	1.30	1.36	1.35	1.23
TEMPERATURE	(°C)	6.0	6.5	7.5	8.5	9.5	9.5	10.0	10.0
STREAM POWER(7)	(W/M)	21.27	20.96	22.16	22.59	24.80	27.53	28.30	23.33
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	33	30	30	**	30	30
RATE(9)	(KG/S)	.1658	.4100	.4170	.3489	.3644	.2120	.0469	.0300
STANDARD DEVIATION(10)	(KG/S)	.1015	.2480	.2660	.1645	.2917	---	.0598	.0533

** BEDLOAD-TRANSPORT RATE DETERMINED BY USING HELLEY-SMITH BEDLOAD SAMPLER; NO VALUE OF STANDARD DEVIATION AVAILABLE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	100	---	---	100	---	---	---
22.6	---	95.3	---	---	95.6	---	---	100
16.0	---	95.3	100	100	92.7	100	100	95.6
11.3	100	94.5	99.3	99.3	90.4	96.2	97.5	89.0
8.00	99.7	94.2	98.4	98.5	88.1	88.9	92.2	82.2
5.66	99.1	92.2	96.0	95.9	84.0	76.7	87.9	77.4
4.00	97.8	89.3	91.8	90.6	75.2	60.9	83.4	73.2
2.83	95.4	84.1	84.0	82.0	59.4	43.2	78.4	69.1
2.00	90.9	75.5	72.6	67.8	40.1	26.9	72.0	64.2
1.41	83.3	63.1	56.2	48.1	21.9	13.6	64.1	57.5
1.00	70.6	48.1	38.9	31.4	11.0	6.8	54.9	49.2
.707	50.3	31.4	22.6	19.2	5.7	3.8	43.4	39.0
.500	22.0	13.7	8.9	9.3	2.8	2.1	26.2	23.8
.354	6.1	3.9	2.4	3.0	1.0	1.0	11.5	10.8
.250	1.4	1.0	.7	.9	.4	.4	3.7	3.6
.177	.6	.6	.4	.5	.2	.2	1.5	1.5
.125	.4	.4	.3	.3	.1	.1	.7	.8
.088	.2	.3	.2	.2	.1	.1	.4	.5
.062	.2	.2	.1	.2	.1	.1	.3	.3
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.34	0.38	0.42	0.41	0.66	0.83	0.27	0.27
16	.45	.53	.61	.64	1.19	1.52	.40	.41
25	.52	.63	.75	.84	1.51	1.92	.49	.52
35	.59	.76	.93	1.08	1.83	2.39	.60	.65
50	.70	1.04	1.25	1.46	2.39	3.23	.86	1.03
65	.90	1.48	1.69	1.90	3.17	4.34	1.47	2.11
75	1.11	1.97	2.13	2.35	3.98	5.42	2.34	4.62
84	1.46	2.83	2.84	3.04	5.71	6.85	4.21	8.73
90	1.90	4.32	3.63	3.88	10.62	8.31	6.61	11.78
95	2.72	13.97	5.11	5.24	20.80	10.43	9.25	15.31

TABLE 14.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, JUNE 10, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1015	1117	1216	1315	1452	1514	1550	1649
WATER LEVEL(1)	(M)	6.635	6.640	6.650	6.650	6.640	6.640	6.635	6.625
DISCHARGE(2)	(M^3/S)	3.40	3.24	3.44	3.58	3.93	4.64	4.71	3.77
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	1.46	1.44	1.44	1.49	1.60	1.79	1.80	1.60
AREA(5)	(M^2)	2.67	2.63	2.64	2.72	2.94	3.27	3.29	2.93
VELOCITY(6)	(M/S)	1.28	1.23	1.30	1.31	1.34	1.42	1.43	1.29
TEMPERATURE	(°C)	6.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0
STREAM POWER(7)	(W/M)	23.37	22.24	23.62	24.57	26.96	31.84	32.35	25.85
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(B)		30	30	30	30	30	**	30	30
RATE(9)	(KG/S)	.2911	.4472	.4132	.2628	.3239	.1360	.0167	.0240
STANDARD DEVIATION(10)	(KG/S)	.2108	.4074	.2384	.1292	.2133	---	.0131	.0339

** BEDLOAD-TRANSPORT RATE DETERMINED BY USING HELLEY-SMITH BEDLOAD SAMPLER; NO VALUE OF STANDARD DEVIATION AVAILABLE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(B) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	100	---	---	---	100	---	100	---
22.6	92.8	---	---	100	86.7	100	96.0	---
16.0	92.8	---	100	97.9	86.7	96.8	96.0	100
11.3	91.8	100	99.4	95.5	83.7	91.8	94.5	94.4
8.00	90.8	99.5	99.1	92.8	80.1	87.4	93.6	94.4
5.66	90.1	98.5	96.3	88.7	71.6	77.1	91.1	92.6
4.00	88.9	95.5	92.1	81.0	59.6	61.8	87.2	90.3
2.83	86.4	89.8	84.7	69.9	44.0	41.9	82.0	87.8
2.00	82.2	80.3	74.0	55.3	28.4	21.9	75.6	82.9
1.41	74.2	67.1	59.0	37.9	15.5	7.9	66.1	74.9
1.00	63.3	51.2	43.2	24.1	8.7	3.3	54.1	63.7
.707	47.2	33.5	27.9	14.4	5.0	2.0	38.4	46.6
.500	22.2	13.0	11.9	6.2	2.3	1.4	16.5	19.9
.354	5.5	3.2	4.0	2.0	.7	.8	4.3	4.4
.250	1.2	.9	1.5	.7	.3	.3	.9	.9
.177	.6	.6	.8	.4	.2	.1	.4	.4
.125	.4	.4	.5	.3	.2	.1	.3	.3
.088	.3	.3	.4	.2	.1	.0	.2	.2
.062	.2	.2	.2	.1	.1	.0	.1	.1
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.34	0.39	0.38	0.47	0.71	1.17	0.37	0.36
16	.45	.53	.56	.75	1.43	1.77	.49	.47
25	.52	.63	.67	1.03	1.84	2.13	.58	.54
35	.60	.73	.84	1.32	2.33	2.53	.68	.62
50	.75	.98	1.16	1.80	3.23	3.25	.91	.76
65	1.05	1.35	1.61	2.50	4.64	4.27	1.37	1.04
75	1.46	1.72	2.06	3.28	6.45	5.36	1.95	1.42
84	2.33	2.26	2.77	4.54	11.87	7.06	3.23	2.17
90	5.50	2.86	3.56	6.24	23.32	9.69	5.09	3.83
95	23.55	3.84	4.96	10.50	24.88	13.69	12.58	11.46

TABLE 15.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, JUNE 11, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1043	1145	1229	*	*	*	*	*
WATER LEVEL(1)	(M)	6.390	6.375	6.365	---	---	---	---	---
DISCHARGE(2)	(M^3/S)	2.22	2.30	2.28	---	---	---	---	---
WIDTH(3)	(M)	1.83	1.83	1.83	---	---	---	---	---
DEPTH(4)	(M)	1.10	1.12	1.11	---	---	---	---	---
AREA(5)	(M^2)	2.02	2.05	2.03	---	---	---	---	---
VELOCITY(6)	(M/S)	1.10	1.12	1.12	---	---	---	---	---
TEMPERATURE	(°C)	4.0	4.5	5.0	---	---	---	---	---
STREAM POWER(7)	(W/M)	15.24	15.80	15.63	---	---	---	---	---
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	---	---	---	---	---
RATE(9)	(KG/S)	.0341	.1420	.0983	---	---	---	---	---
STANDARD DEVIATION(10)	(KG/S)	.0229	.1022	.0432	---	---	---	---	---

* NO DATA COLLECTED AT GIVEN GATE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	---
22.6	---	---	---	---	---	---	---	---
16.0	---	---	---	---	---	---	---	---
11.3	---	100	---	---	---	---	---	---
8.00	---	98.8	100	---	---	---	---	---
5.66	100	97.1	95.9	---	---	---	---	---
4.00	99.6	93.2	87.4	---	---	---	---	---
2.83	98.4	87.4	76.5	---	---	---	---	---
2.00	95.1	78.3	64.9	---	---	---	---	---
1.41	88.4	64.3	49.9	---	---	---	---	---
1.00	78.3	49.0	37.7	---	---	---	---	---
.707	62.1	33.5	27.2	---	---	---	---	---
.500	32.5	15.3	13.9	---	---	---	---	---
.354	10.1	4.8	4.6	---	---	---	---	---
.250	2.4	1.2	1.0	---	---	---	---	---
.177	.9	.6	.4	---	---	---	---	---
.125	.4	.4	.3	---	---	---	---	---
.088	.2	.3	.2	---	---	---	---	---
.062	.1	.2	.1	---	---	---	---	---
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.29	0.36	0.36	---	---	---	---	---
16	.40	.51	.53	---	---	---	---	---
25	.46	.61	.67	---	---	---	---	---
35	.52	.73	.92	---	---	---	---	---
50	.61	1.02	1.42	---	---	---	---	---
65	.75	1.44	2.00	---	---	---	---	---
75	.92	1.83	2.69	---	---	---	---	---
84	1.20	2.46	3.55	---	---	---	---	---
90	1.51	3.24	4.33	---	---	---	---	---
95	1.98	4.56	5.36	---	---	---	---	---

TABLE 16.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, JUNE 14, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1020	1130	1240	1338	1545	1605	1640	1731
WATER LEVEL(1)	(M)	6.495	6.535	6.560	6.575	6.575	6.575	6.570	6.565
DISCHARGE(2)	(M^3/S)	2.62	2.82	3.07	3.17	3.54	4.01	4.15	3.44
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	1.23	1.30	1.34	1.39	1.50	1.62	1.68	1.52
AREA(5)	(M^2)	2.26	2.38	2.45	2.55	2.74	2.96	3.07	2.78
VELOCITY(6)	(M/S)	1.16	1.19	1.25	1.25	1.29	1.35	1.35	1.24
TEMPERATURE	(^oC)	8.0	9.0	10.0	10.5	12.0	12.0	11.5	12.5
STREAM POWER(7)	(W/M)	18.00	19.38	21.07	21.77	24.30	27.53	28.46	23.62
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	30	30	**	30	30
RATE(9)	(KG/S)	.0745	.1722	.3721	.3290	.4164	.1642	.0188	.0148
STANDARD DEVIATION(10)	(KG/S)	.0334	.1414	.1619	.1542	.2416	---	.0136	.0148

** BEDLOAD-TRANSPORT RATE DETERMINED BY USING HELLEY-SMITH BEDLOAD SAMPLER; NO VALUE OF STANDARD DEVIATION AVAILABLE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	100
32.0	---	---	---	---	---	100	---	89.4
22.6	---	---	---	---	100	97.1	100	82.3
16.0	---	---	---	---	96.9	94.9	96.7	79.9
11.3	100	---	---	---	93.3	75.8	91.2	77.6
8.00	99.8	100	---	---	87.7	57.9	88.7	75.4
5.66	99.6	99.5	100	100	79.6	42.0	84.1	73.9
4.00	99.0	99.0	99.7	98.6	67.7	31.4	80.8	72.6
2.83	97.8	98.4	98.8	96.2	53.8	22.4	76.7	70.6
2.00	95.9	96.7	97.1	91.0	39.7	16.2	72.0	67.9
1.41	91.9	92.9	93.2	79.7	26.5	11.5	65.9	64.0
1.00	85.4	86.7	84.7	63.4	16.7	8.9	58.5	58.6
.707	75.0	74.4	66.2	43.4	10.0	7.0	45.9	48.6
.500	51.2	47.9	31.2	19.0	4.8	4.5	22.7	24.7
.354	22.7	18.6	7.8	5.1	1.9	2.3	6.5	6.7
.250	6.1	4.0	1.7	1.3	.8	.8	1.7	1.5
.177	2.0	1.7	.8	.6	.5	.2	.7	.6
.125	.8	.9	.6	.4	.4	.2	.3	.3
.088	.5	.5	.3	.2	.3	.1	.2	.2
.062	.3	.3	.2	.2	.2	.1	.1	.2
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.23	0.26	0.32	0.35	0.51	0.54	0.33	0.33
16	.32	.34	.41	.47	.96	1.96	.45	.44
25	.37	.39	.47	.55	1.35	3.15	.52	.50
35	.42	.44	.52	.64	1.78	4.52	.61	.59
50	.49	.51	.60	.79	2.58	6.73	.79	.74
65	.60	.62	.70	1.03	3.72	9.09	1.35	1.54
75	.71	.72	.82	1.27	4.90	11.12	2.48	7.28
84	.95	.92	.99	1.59	6.77	12.64	5.67	24.48
90	1.26	1.18	1.21	1.92	9.06	14.04	9.51	32.21
95	1.82	1.67	1.61	2.55	12.99	16.21	13.93	34.52

TABLE 17.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, JUNE 15, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1029	1129	1228	1340	1457	1500	1556	1725
WATER LEVEL(1)	(M)	6.545	6.555	6.560	6.565	6.555	6.555	6.545	6.535
DISCHARGE(2)	(M^3/S)	2.89	2.89	3.06	3.13	3.43	3.88	3.96	3.30
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	1.31	1.33	1.34	1.38	1.47	1.59	1.63	1.48
AREA(5)	(M^2)	2.40	2.42	2.44	2.53	2.68	2.91	2.99	2.71
VELOCITY(6)	(M/S)	1.21	1.19	1.25	1.24	1.28	1.33	1.33	1.22
TEMPERATURE	(°C)	8.0	9.0	9.5	10.5	11.5	11.5	12.0	12.5
STREAM POWER(7)	(W/M)	19.83	19.87	20.99	21.46	23.54	26.63	27.21	22.65
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	30	30	**	30	30
RATE(9)	(KG/S)	.0319	.1909	.2956	.2416	.2088	.0718	.0257	.0156
STANDARD DEVIATION(10)	(KG/S)	.0073	.1838	.1401	.0623	.0745	---	.0298	.0126

** BEDLOAD-TRANSPORT RATE DETERMINED BY USING HELLEY-SMITH BEDLOAD SAMPLER; NO VALUE OF STANDARD DEVIATION AVAILABLE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	100
22.6	---	---	---	100	---	100	100	84.4
16.0	---	---	---	98.3	100	96.8	96.6	84.4
11.3	---	100	---	97.5	96.9	91.4	92.0	84.4
8.00	100	99.4	100	97.0	92.6	83.5	90.9	80.6
5.66	99.8	98.5	99.4	95.2	83.2	71.0	90.1	79.1
4.00	99.3	98.1	97.8	91.7	70.9	56.5	88.4	78.3
2.83	99.0	96.7	94.1	83.7	53.9	43.2	86.3	77.2
2.00	98.4	93.6	86.3	70.5	37.6	31.0	83.9	75.4
1.41	97.2	86.5	70.1	51.4	23.7	21.7	80.1	72.6
1.00	94.0	73.1	48.9	33.5	15.7	16.8	75.2	66.7
.707	83.6	51.3	28.4	19.6	10.8	13.1	67.9	56.4
.500	53.8	23.7	11.3	9.0	6.3	8.7	48.6	37.6
.354	23.1	8.4	3.8	3.6	2.8	5.1	23.8	18.3
.250	7.5	2.3	1.1	1.1	.9	1.7	7.4	4.9
.177	2.9	1.1	.6	.6	.5	.4	3.0	1.7
.125	1.2	.7	.4	.4	.3	.3	1.5	.8
.088	.6	.4	.3	.3	.2	.2	.9	.4
.062	.4	.3	.2	.2	.2	.1	.5	.3
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.21	0.30	0.38	0.40	0.45	0.35	0.21	0.25
16	.31	.43	.56	.64	1.01	.92	.31	.34
25	.36	.51	.67	.82	1.47	1.61	.36	.40
35	.41	.58	.80	1.03	1.88	2.25	.42	.48
50	.48	.70	1.02	1.38	2.61	3.38	.51	.63
65	.56	.87	1.29	1.80	3.52	4.87	.67	.94
75	.63	1.04	1.55	2.22	4.44	6.25	.99	1.90
84	.72	1.31	1.89	2.87	5.81	8.19	2.07	11.02
90	.85	1.64	2.30	3.66	7.11	10.51	5.54	23.69
95	1.09	2.29	3.01	5.52	9.43	13.81	13.79	25.19

TABLE 18.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, JUNE 16, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1044	1141	1249	1342	1433	1525	1527	1620
WATER LEVEL(1)	(M)	6.520	6.530	6.540	6.545	6.545	6.545	6.545	6.540
DISCHARGE(2)	(M^3/S)	2.75	2.81	2.99	3.02	3.36	3.79	3.96	3.33
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	1.27	1.29	1.32	1.35	1.45	1.57	1.63	1.49
AREA(5)	(M^2)	2.32	2.37	2.42	2.47	2.65	2.87	2.99	2.72
VELOCITY(6)	(M/S)	1.19	1.19	1.24	1.22	1.27	1.32	1.33	1.22
TEMPERATURE	(°C)	7.5	8.5	9.5	10.5	11.0	11.5	11.5	11.5
STREAM POWER(7)	(W/M)	18.89	19.30	20.51	20.70	23.04	26.05	27.21	22.84
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	30	30	**	30	30
RATE(9)	(KG/S)	.0366	.0840	.2166	.1953	.2024	.1035	.0122	.0124
STANDARD DEVIATION(10)	(KG/S)	.0231	.0597	.1529	.0519	.1163	---	.0091	.0134

** BEDLOAD-TRANSPORT RATE DETERMINED BY USING HELLEY-SMITH BEDLOAD SAMPLER; NO VALUE OF STANDARD DEVIATION AVAILABLE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	---
22.6	---	---	---	---	100	100	---	---
16.0	---	---	---	---	98.5	91.2	100	100
11.3	---	---	100	100	96.9	83.7	98.1	99.5
8.00	---	---	99.7	99.6	93.6	72.0	96.0	99.5
5.66	100	100	99.4	98.7	83.3	52.7	92.6	98.9
4.00	99.0	99.6	98.6	96.0	68.4	33.6	89.7	97.8
2.83	98.8	99.2	96.0	88.2	50.2	16.9	86.4	96.0
2.00	97.9	97.0	90.1	74.6	32.5	7.0	80.7	92.2
1.41	94.8	91.7	75.2	55.1	19.3	3.3	71.4	85.2
1.00	87.2	82.6	54.5	37.8	12.9	2.4	60.0	76.0
.707	70.7	67.3	34.3	24.6	9.5	1.9	47.3	64.4
.500	38.8	42.6	18.1	13.7	6.5	1.4	31.4	46.5
.354	15.3	18.4	8.7	6.2	3.4	.9	16.5	27.4
.250	4.0	3.5	2.0	1.4	1.0	.4	3.8	8.2
.177	2.0	1.1	.8	.7	.5	.2	1.1	3.1
.125	1.2	.6	.5	.4	.4	.1	.6	1.6
.088	.7	.2	.3	.3	.2	.1	.3	.9
.062	.4	.2	.2	.2	.2	.1	.2	.6
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.26	0.27	0.31	0.33	0.43	1.70	0.26	0.21
16	.36	.34	.47	.54	1.19	2.75	.35	.30
25	.42	.39	.59	.72	1.66	3.40	.44	.34
35	.48	.45	.72	.93	2.11	4.11	.54	.41
50	.56	.55	.93	1.28	2.82	5.39	.76	.53
65	.66	.68	1.18	1.67	3.73	7.00	1.16	.72
75	.76	.83	1.41	2.02	4.60	8.66	1.60	.97
84	.92	1.05	1.70	2.50	5.78	11.50	2.44	1.35
90	1.11	1.31	1.99	3.00	6.89	14.97	4.14	1.76
95	1.44	1.70	2.61	3.75	9.05	16.98	7.09	2.53

TABLE 19.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, JUNE 21, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		0917	1014	1055	1427	1329	1500	1243	1153
WATER LEVEL(1)	(M)	6.175	6.190	6.200	6.220	6.220	6.220	6.215	6.210
DISCHARGE(2)	(M^3/S)	1.56	1.78	1.72	1.65	1.95	2.25	2.40	2.06
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	.88	.93	.93	.96	1.02	1.15	1.24	1.13
AREA(5)	(M^2)	1.61	1.71	1.70	1.76	1.86	2.10	2.28	2.07
VELOCITY(6)	(M/S)	.97	1.04	1.01	.94	1.05	1.07	1.05	1.00
TEMPERATURE	(°C)	9.0	9.0	9.5	11.5	11.0	12.0	10.5	10.0
STREAM POWER(7)	(W/M)	10.71	12.23	11.82	11.31	13.39	15.42	16.45	14.17
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	30	30	**	30	30
RATE(9)	(KG/S)	.0085	.0373	.0700	.0641	.1238	.0411	.0064	.0082
STANDARD DEVIATION(10)	(KG/S)	.0035	.0047	.0122	.0204	.0578	---	.0041	.0063

** BEDLOAD-TRANSPORT RATE DETERMINED BY USING HELLEY-SMITH BEDLOAD SAMPLER; NO VALUE OF STANDARD DEVIATION AVAILABLE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	---
22.6	---	---	---	---	---	---	---	---
16.0	---	---	---	---	100	100	---	---
11.3	---	---	---	---	99.4	98.6	100	---
8.00	100	---	100	100	96.8	96.6	99.0	100
5.66	99.9	100	99.8	99.9	91.9	91.5	97.9	99.7
4.00	99.8	99.9	99.2	99.5	85.4	81.7	97.3	99.4
2.83	98.8	98.7	97.6	98.4	77.0	67.9	95.7	98.7
2.00	96.5	96.3	93.7	95.0	64.4	48.1	93.0	97.1
1.41	91.3	89.6	85.2	85.7	46.8	29.0	88.2	92.8
1.00	82.7	79.8	71.6	68.7	31.6	20.0	81.3	85.6
.707	69.2	66.4	54.8	49.1	22.0	16.2	72.0	74.7
.500	44.6	45.8	33.3	30.0	14.5	12.7	54.5	52.4
.354	20.3	20.7	14.6	14.1	7.9	8.0	28.3	25.9
.250	5.0	5.3	4.0	3.9	3.3	3.0	8.4	6.8
.177	1.6	1.8	1.7	1.4	1.8	.6	2.9	2.4
.125	.7	.8	1.1	.7	1.1	.4	1.3	1.1
.088	.5	.5	.7	.5	.7	.3	.6	.7
.062	.3	.3	.5	.4	.5	.2	.4	.4
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.25	0.24	0.26	0.27	0.29	0.30	0.21	0.22
16	.33	.33	.36	.37	.54	.69	.29	.31
25	.38	.38	.44	.45	.79	1.22	.34	.35
35	.44	.44	.51	.55	1.08	1.59	.39	.40
50	.54	.54	.66	.72	1.50	2.07	.47	.49
65	.66	.69	.87	.93	2.03	2.68	.61	.60
75	.81	.87	1.08	1.12	2.66	3.34	.78	.71
84	1.05	1.14	1.37	1.36	3.77	4.29	1.14	.95
90	1.33	1.44	1.67	1.61	5.03	5.29	1.59	1.21
95	1.76	1.82	2.19	2.00	6.83	6.97	2.55	1.64

TABLE 20.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, JUNE 24, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1142	1236	1314	1426	1524	1646	1618	1704
WATER LEVEL(1)	(M)	6.345	6.360	6.365	6.375	6.370	6.360	6.365	6.360
DISCHARGE(2)	(M^3/S)	2.05	2.24	2.29	2.20	2.54	2.81	2.97	2.53
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	1.05	1.10	1.12	1.13	1.21	1.31	1.40	1.27
AREA(5)	(M^2)	1.91	2.02	2.04	2.07	2.21	2.40	2.55	2.32
VELOCITY(6)	(M/S)	1.07	1.11	1.12	1.06	1.15	1.17	1.16	1.09
TEMPERATURE	(°C)	10.0	10.5	11.0	11.5	11.5	12.5	12.0	12.5
STREAM POWER(7)	(W/M)	14.07	15.40	15.71	15.10	17.42	19.26	20.39	17.38
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	30	30	**	30	30
RATE(9)	(KG/S)	.0340	.1953	.2024	.1112	.2146	.1729	.0096	.0013
STANDARD DEVIATION(10)	(KG/S)	.0183	.1928	.1272	.0403	.1208	---	.0310	.0031

** BEDLOAD-TRANSPORT RATE DETERMINED BY USING HELLEY-SMITH BEDLOAD SAMPLER; NO VALUE OF STANDARD DEVIATION AVAILABLE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	---
22.6	---	---	---	---	---	100	---	---
16.0	---	---	---	---	100	98.9	---	100
11.3	---	100	100	---	99.4	96.9	100	99.6
8.00	100	99.7	99.4	100	98.6	92.2	99.8	98.2
5.66	99.3	99.2	98.8	99.6	94.5	80.4	98.7	96.4
4.00	98.8	98.1	97.6	97.8	85.8	67.4	96.1	94.6
2.83	98.0	96.0	94.1	93.2	70.8	53.7	90.9	91.7
2.00	95.7	91.4	87.5	83.6	52.3	39.1	83.7	85.5
1.41	89.7	83.2	74.6	64.9	31.8	24.6	74.5	73.5
1.00	78.4	71.1	57.9	43.2	16.9	15.2	64.9	58.8
.707	60.8	55.1	40.6	27.4	9.3	11.0	56.0	44.0
.500	33.1	30.2	21.2	16.2	5.5	8.3	44.5	26.2
.354	11.7	9.0	6.9	7.2	2.7	4.8	28.7	11.1
.250	3.5	2.2	1.9	2.1	1.1	1.6	14.3	3.6
.177	1.3	1.0	.9	.9	.6	.4	7.6	1.3
.125	.7	.6	.6	.5	.4	.3	4.7	.6
.088	.4	.5	.4	.3	.2	.2	2.9	.4
.062	.2	.3	.3	.3	.2	.1	1.8	.2
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.27	0.30	0.32	0.32	0.48	0.36	0.13	0.27
16	.39	.41	.45	.50	.96	1.03	.26	.40
25	.45	.47	.54	.66	1.22	1.43	.33	.49
35	.51	.54	.65	.84	1.50	1.82	.41	.60
50	.62	.66	.85	1.11	1.93	2.59	.59	.81
65	.76	.87	1.15	1.42	2.52	3.75	1.00	1.15
75	.93	1.11	1.43	1.68	3.08	4.84	1.44	1.47
84	1.17	1.46	1.80	2.03	3.82	6.18	2.04	1.91
90	1.43	1.86	2.23	2.46	4.59	7.35	2.69	2.54
95	1.89	2.57	3.03	3.13	5.81	9.53	3.64	4.28

TABLE 21.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, JUNE 25, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1020	1106	1202	1258	1404	1420	1456	1546
WATER LEVEL(1)	(M)	6.260	6.265	6.280	6.290	6.305	6.305	6.310	6.315
DISCHARGE(2)	(M^3/S)	1.78	1.99	1.99	1.89	2.26	2.58	2.75	2.41
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	.95	1.01	1.02	1.04	1.12	1.24	1.34	1.24
AREA(5)	(M^2)	1.75	1.85	1.87	1.90	2.05	2.28	2.45	2.27
VELOCITY(6)	(M/S)	1.02	1.07	1.07	.99	1.10	1.13	1.12	1.06
TEMPERATURE	(^oC)	8.5	8.5	9.0	9.5	10.0	10.5	11.0	11.5
STREAM POWER(7)	(W/M)	12.25	13.63	13.69	13.00	15.53	17.69	18.86	16.52
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	30	30	**	30	30
RATE(9)	(KG/S)	.0386	.2069	.1896	.1028	.2313	.2275	.0116	.0101
STANDARD DEVIATION(10)	(KG/S)	.0180	.1285	.1131	.0329	.1555	---	.0078	.0202

** BEDLOAD-TRANSPORT RATE DETERMINED BY USING HELLEY-SMITH BEDLOAD SAMPLER; NO VALUE OF STANDARD DEVIATION AVAILABLE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	100	---	---	---
22.6	---	---	---	---	98.3	---	---	---
16.0	---	---	---	---	98.3	---	100	---
11.3	---	---	---	100	97.6	100	99.7	100
8.00	---	100	100	99.8	96.0	96.0	96.6	99.3
5.66	100	99.6	98.9	98.0	91.6	91.3	94.3	98.8
4.00	99.9	98.4	96.2	94.7	84.9	82.9	91.2	96.6
2.83	98.9	96.2	91.5	89.0	75.4	68.9	87.9	93.3
2.00	96.8	91.7	82.1	79.6	62.4	48.4	83.4	87.3
1.41	90.3	83.2	67.4	65.6	42.5	25.1	76.7	79.0
1.00	77.2	70.4	50.7	49.7	23.6	10.5	68.6	69.7
.707	55.1	51.8	34.2	34.6	11.7	4.8	58.7	59.4
.500	23.0	23.8	17.4	19.8	5.7	2.9	43.7	44.5
.354	5.8	6.1	6.6	8.6	2.6	1.6	25.9	27.0
.250	1.8	1.4	2.1	2.2	1.0	.6	11.4	12.3
.177	.9	.7	1.0	.8	.5	.2	5.8	5.9
.125	.5	.4	.7	.5	.3	.2	3.7	3.3
.088	.3	.3	.5	.3	.2	.1	2.2	1.9
.062	.1	.2	.4	.2	.2	.1	1.4	1.1
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.34	0.34	0.32	0.30	0.47	0.72	0.16	0.16
16	.45	.44	.48	.45	.81	1.16	.28	.28
25	.51	.51	.59	.57	1.03	1.41	.35	.34
35	.58	.58	.72	.71	1.24	1.65	.43	.42
50	.67	.69	.99	1.01	1.61	2.05	.58	.57
65	.82	.90	1.34	1.39	2.13	2.64	.88	.85
75	.96	1.12	1.67	1.77	2.79	3.25	1.31	1.21
84	1.17	1.46	2.13	2.32	3.87	4.17	2.11	1.73
90	1.40	1.84	2.64	2.97	5.14	5.30	3.50	2.29
95	1.76	2.52	3.58	4.09	7.25	7.29	6.20	3.30

TABLE 22.- SUMMARY OF DATA, INDIVIDUAL GATES, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, JUNE 29, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

GATE		-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
TIME		1100	1157	1250	1344	1446	1450	1528	1614
WATER LEVEL(1)	(M)	6.150	6.155	6.160	6.165	6.160	6.160	6.155	6.150
DISCHARGE(2)	(M^3/S)	1.50	1.69	1.61	1.46	1.75	2.06	2.19	1.88
WIDTH(3)	(M)	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
DEPTH(4)	(M)	.86	.90	.89	.89	.95	1.09	1.18	1.07
AREA(5)	(M^2)	1.57	1.65	1.63	1.64	1.74	2.00	2.16	1.96
VELOCITY(6)	(M/S)	.96	1.02	.99	.89	1.01	1.03	1.01	.96
TEMPERATURE	(°C)	11.0	11.0	11.5	11.5	11.5	11.5	12.0	12.0
STREAM POWER(7)	(W/M)	10.32	11.59	11.02	10.03	11.99	14.15	15.07	12.91
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		30	30	30	30	30	**	30	30
RATE(9)	(KG/S)	.0197	.1033	.0943	.0636	.0835	.0664	.0015	.0013
STANDARD DEVIATION(10)	(KG/S)	.0082	.0569	.0254	.0143	.1009	---	.0028	.0026

** BEDLOAD-TRANSPORT RATE DETERMINED BY USING HELLEY-SMITH BEDLOAD SAMPLER; NO VALUE OF STANDARD DEVIATION AVAILABLE.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) DISCHARGE OVER WIDTH OF INDIVIDUAL GATE.
(3) INDIVIDUAL GATES ARE 1.83 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF INDIVIDUAL GATE.
(5) FLOW AREA OVER INDIVIDUAL GATE, EQUALS PRODUCT OF GATE WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER INDIVIDUAL GATE, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER INDIVIDUAL GATE, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER INDIVIDUAL GATE (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

GATE	-8-	-7-	-6-	-5-	-4-	-3-	-2-	-1-
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	---
22.6	---	---	---	---	---	100	---	---
16.0	---	---	---	100	---	99.0	100	100
11.3	---	---	---	99.5	---	96.0	99.4	99.3
8.00	---	---	100	98.7	100	90.7	99.2	99.2
5.66	100	100	99.2	97.7	98.5	80.8	97.9	98.2
4.00	99.4	99.3	97.6	94.7	95.3	70.5	95.4	95.9
2.83	99.1	97.4	93.0	89.7	89.4	56.1	90.6	89.4
2.00	97.6	94.0	84.9	81.7	79.8	39.9	81.1	77.2
1.41	94.3	89.0	72.3	68.0	64.3	25.3	66.2	58.5
1.00	88.9	82.7	58.3	51.8	41.3	18.0	51.2	40.3
.707	78.1	72.4	43.2	37.1	24.6	14.4	37.8	24.7
.500	54.6	49.7	24.8	24.2	15.8	11.5	24.3	12.1
.354	24.1	22.6	10.2	12.7	10.5	7.8	13.0	4.8
.250	5.6	6.1	2.7	3.8	5.9	2.9	4.4	1.2
.177	1.5	2.2	1.0	1.4	1.8	.6	1.3	.4
.125	.6	1.1	.6	.7	.3	.4	.5	.2
.088	.3	.7	.4	.4	.2	.3	.3	.2
.062	.2	.6	.3	.3	.2	.2	.2	.1
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.24	0.23	0.29	0.27	0.24	0.30	0.26	0.36
16	.31	.32	.41	.39	.50	.82	.39	.56
25	.36	.37	.50	.51	.71	1.40	.51	.71
35	.40	.42	.61	.67	.88	1.79	.66	.90
50	.48	.50	.83	.96	1.14	2.48	.97	1.20
65	.58	.63	1.17	1.32	1.43	3.48	1.37	1.58
75	.67	.77	1.51	1.67	1.78	4.61	1.71	1.91
84	.84	1.07	1.95	2.19	2.30	6.25	2.20	2.38
90	1.06	1.50	2.43	2.88	2.91	7.76	2.75	2.90
95	1.50	2.17	3.18	4.11	3.90	10.39	3.85	3.74

TABLE 23.- SUMMARY OF DATA, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, 1978

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

DATE		5-24	5-25	5-26	5-27	5-28	5-28	5-29	6-05
TIME		---	---	---	---	---	1752	1231	1247
WATER LEVEL(1)	(M)	---	---	---	---	---	5.875	6.050	5.850
DISCHARGE(2)	(M^3/S)	9.21	8.38	7.47	7.52	9.07	8.65	11.80	8.20
WIDTH(3)	(M)	14.63	14.63	14.63	14.63	14.63	14.63	14.63	14.63
DEPTH(4)	(M)	.75	.71	.67	.67	.75	.72	.87	.70
AREA(5)	(M^2)	11.02	10.44	9.73	9.78	10.94	10.57	12.80	10.23
VELOCITY(6)	(M/S)	.84	.80	.77	.77	.83	.82	.92	.80
TEMPERATURE	(°C)	6.5	7.5	8.5	8.0	8.0	11.0	7.0	7.0
STREAM POWER(7)	(W/M)	63.23	57.53	51.28	51.62	62.26	59.38	81.01	56.29
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		**	**	**	**	**	60*	***	***
RATE(9)	(KG/S)	1.0650	1.3525	.6513	.4629	.4445	.3229	---	---
STANDARD DEVIATION(10)	(KG/S)	---	---	---	---	---	.0769	---	---

B. BEDLOAD-SIZE DISTRIBUTION

DATE	5-24	5-25	5-26	5-27	5-28	5-28	5-29	6-05
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	---	---	---	---
22.6	---	---	---	---	---	---	---	---
16.0	---	---	---	100	---	---	---	---
11.3	100	100	100	99.9	100	100	---	---
8.00	99.6	99.7	99.4	99.7	99.4	99.4	---	---
5.66	98.8	98.3	97.3	97.8	97.7	98.3	---	---
4.00	97.2	95.1	93.7	93.2	93.7	96.0	---	---
2.83	93.8	89.6	86.6	85.7	86.8	91.5	---	---
2.00	87.8	81.1	76.0	75.2	76.5	83.1	---	---
1.41	76.8	67.8	61.2	61.4	62.5	69.8	---	---
1.00	62.0	51.9	46.0	47.2	49.2	55.5	---	---
.707	44.1	34.6	31.5	32.5	37.0	41.1	---	---
.500	21.5	14.7	15.2	16.5	22.5	24.2	---	---
.354	6.3	3.7	5.2	6.5	9.4	9.6	---	---
.250	1.5	1.0	1.7	1.9	2.8	2.5	---	---
.177	.7	.6	.9	.8	1.1	.9	---	---
.125	.5	.4	.5	.4	.6	.5	---	---
.088	.3	.3	.4	.3	.4	.4	---	---
.062	.2	.2	.2	.2	.3	.3	---	---
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.33	0.38	0.35	0.33	0.29	0.30	---	---
16	.45	.51	.51	.49	.43	.42	---	---
25	.53	.61	.63	.61	.53	.51	---	---
35	.62	.71	.77	.75	.68	.63	---	---
50	.79	.96	1.09	1.07	1.02	.88	---	---
65	1.07	1.33	1.54	1.54	1.50	1.25	---	---
75	1.35	1.69	1.95	1.99	1.92	1.60	---	---
84	1.75	2.23	2.58	2.66	2.55	2.07	---	---
90	2.23	2.89	3.26	3.37	3.25	2.62	---	---
95	3.12	3.97	4.42	4.43	4.36	3.63	---	---

TABLE 23.- SUMMARY OF DATA, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, 1978--CONTINUED

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

DATE		6-07	6-08	6-09	6-10	6-11	6-14	6-15	6-16
TIME		---	---	---	---	1136	---	---	---
WATER LEVEL(1)	(M)	---	---	---	---	6.375	---	---	---
DISCHARGE(2)	(M^3/S)	20.54	26.32	27.81	30.71	19.88	26.82	26.54	26.01
WIDTH(3)	(M)	14.63	14.63	14.63	14.63	14.63	14.63	14.63	14.63
DEPTH(4)	(M)	1.23	1.43	1.48	1.58	1.21	1.45	1.44	1.42
AREA(5)	(M^2)	18.02	20.93	21.72	23.09	17.69	21.19	21.08	20.81
VELOCITY(6)	(M/S)	1.14	1.26	1.28	1.33	1.12	1.27	1.26	1.25
TEMPERATURE	(°C)	8.0	8.0	8.5	7.0	4.5	10.5	10.5	10.0
STREAM POWER(7)	(W/M)	141.00	180.68	190.91	210.82	136.47	184.12	182.19	178.56
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		**	**	**	**	***	**	**	**
RATE(9)	(KG/S)	1.4156	1.8808	1.9950	1.9149	---	1.5620	1.0820	.8630
STANDARD DEVIATION(10)	(KG/S)	---	---	---	---	---	---	---	---

B. BEDLOAD-SIZE DISTRIBUTION

DATE	6-07	6-08	6-09	6-10	6-11	6-14	6-15	6-16
SIEVE SIZE, IN MILLIMETERS			PERCENTAGE FINER THAN GIVEN SIZE					
45.3	---	100	---	---	---	100	---	---
32.0	---	98.9	100	100	---	99.9	100	---
22.6	100	97.4	98.2	96.6	---	99.5	99.8	100
16.0	98.6	96.3	97.6	96.1	---	98.4	99.1	98.6
11.3	96.4	94.3	96.2	94.5	---	95.3	97.8	97.3
8.00	93.0	92.8	94.4	92.9	---	91.9	96.2	94.9
5.66	87.7	89.9	90.8	89.2	---	88.0	92.8	89.9
4.00	80.9	84.6	84.8	83.2	---	83.2	88.1	83.1
2.83	71.9	75.2	75.4	74.2	---	77.6	80.8	74.3
2.00	61.2	63.3	63.0	62.9	---	71.3	71.1	64.0
1.41	49.2	49.3	47.9	49.6	---	63.3	57.7	51.4
1.00	38.6	36.8	34.1	37.2	---	53.8	43.4	39.2
.707	28.8	24.8	21.8	24.9	---	41.1	29.0	27.8
.500	16.7	12.0	9.8	10.7	---	21.4	14.4	16.2
.354	7.5	4.0	3.1	3.0	---	7.0	5.7	7.6
.250	2.1	1.0	.9	.9	---	1.7	1.7	1.8
.177	.7	.5	.5	.5	---	.8	.8	.8
.125	.4	.3	.3	.3	---	.5	.5	.4
.088	.3	.3	.2	.2	---	.3	.3	.3
.062	.2	.2	.1	.2	---	.2	.2	.2
PERCENTILE			PARTICLE DIAMETER, IN MILLIMETERS					
5	0.31	0.38	0.40	0.40	---	0.32	0.34	0.32
16	.49	.57	.61	.58	---	.45	.52	.49
25	.64	.71	.78	.71	---	.54	.65	.66
35	.88	.95	1.02	.94	---	.64	.82	.88
50	1.45	1.44	1.48	1.43	---	.90	1.17	1.36
65	2.25	2.09	2.11	2.12	---	1.52	1.70	2.06
75	3.16	2.81	2.79	2.91	---	2.44	2.28	2.90
84	4.66	3.92	3.89	4.20	---	4.26	3.27	4.19
90	6.47	5.72	5.36	6.05	---	6.68	4.54	5.69
95	9.59	12.61	8.88	12.49	---	10.90	6.94	8.09

TABLE 23.- SUMMARY OF DATA, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, 1978--CONTINUED

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

DATE		6-21	6-24	6-25	6-25	6-29	6-29	6-29	6-30
TIME		---	---	---	1710	1000	---	1725	1130
WATER LEVEL(1)	(M)	---	---	---	6.315	6.135	---	6.140	6.140
DISCHARGE(2)	(M^3/S)	15.37	19.63	17.65	17.93	13.54	14.14	13.74	13.67
WIDTH(3)	(M)	14.63	14.63	14.63	14.63	14.63	14.63	14.63	14.63
DEPTH(4)	(M)	1.03	1.20	1.12	1.13	.95	.98	.96	.96
AREA(5)	(M^2)	15.09	17.52	16.42	16.59	13.94	14.35	14.07	14.03
VELOCITY(6)	(M/S)	1.02	1.12	1.07	1.08	.97	.99	.98	.97
TEMPERATURE	(^oC)	10.0	11.5	10.0	11.5	11.0	11.5	12.0	11.0
STREAM POWER(7)	(W/M)	105.51	134.76	121.17	123.09	92.95	97.07	94.32	93.84
BEDLOAD-TRANSPORT									
NUMBER OF OBSERVATIONS(8)		**	**	**	60*	60*	**	60*	60*
RATE(9)	(KG/S)	.3595	.9413	1.0183	.8324	.2890	.4336	.4935	.5481
STANDARD DEVIATION(10)	(KG/S)	---	---	---	.2127	.0369	---	.1015	.0964

B. BEDLOAD-SIZE DISTRIBUTION

DATE	6-21	6-24	6-25	6-25	6-29	6-29	6-29	6-30
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE							
45.3	---	---	---	---	---	---	---	---
32.0	---	---	---	---	100	---	---	---
22.6	---	100	100	---	99.4	100	---	---
16.0	100	99.8	99.6	100	97.9	99.8	100	100
11.3	99.6	99.3	99.5	99.5	96.9	99.3	99.1	99.5
8.00	98.5	98.0	98.1	98.5	95.2	98.4	98.3	98.3
5.66	96.2	94.6	95.6	95.5	91.3	96.3	95.5	96.1
4.00	92.5	89.5	91.1	90.0	86.1	93.1	91.1	92.6
2.83	87.4	81.8	83.8	80.8	78.2	87.5	83.6	85.9
2.00	79.0	71.2	72.4	68.4	68.0	79.3	72.4	74.4
1.41	66.5	56.8	56.4	51.1	55.1	67.8	55.9	55.7
1.00	53.0	42.5	40.8	35.2	42.9	55.0	39.6	38.6
.707	40.4	30.4	27.4	22.6	31.3	42.8	26.0	25.5
.500	26.2	17.2	13.8	11.0	18.9	28.2	13.2	13.8
.354	12.7	6.4	5.1	3.8	9.2	13.8	5.4	6.0
.250	3.9	1.9	1.6	1.2	2.8	4.4	1.7	1.8
.177	1.6	.8	.7	.5	1.0	1.5	.7	.7
.125	.9	.5	.5	.4	.6	.6	.4	.4
.088	.6	.4	.3	.2	.4	.4	.3	.3
.062	.4	.3	.2	.2	.3	.3	.2	.2
PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS							
5	0.27	0.33	0.35	0.38	0.29	0.26	0.34	0.33
16	.39	.48	.53	.59	.46	.38	.54	.54
25	.49	.62	.67	.76	.60	.47	.69	.70
35	.62	.81	.87	.99	.79	.59	.89	.91
50	.92	1.20	1.23	1.38	1.22	.87	1.25	1.26
65	1.36	1.71	1.69	1.86	1.84	1.31	1.70	1.66
75	1.77	2.24	2.15	2.38	2.52	1.74	2.15	2.03
84	2.44	3.10	2.87	3.15	3.63	2.42	2.89	2.66
90	3.32	4.11	3.76	4.00	5.13	3.24	3.76	3.43
95	4.95	5.82	5.33	5.42	7.82	4.81	5.38	4.97

TABLE 23.- SUMMARY OF DATA, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, 1978--CONTINUED

A. RIVER HYDRAULICS AND BEDLOAD-TRANSPORT RATE

DATE		6-30
TIME		1230
WATER LEVEL(1)	(M)	6.150
DISCHARGE(2)	(M^3/S)	13.94
WIDTH(3)	(M)	14.63
DEPTH(4)	(M)	.97
AREA(5)	(M^2)	14.20
VELOCITY(6)	(M/S)	.98
TEMPERATURE	(°C)	11.5
STREAM POWER(7)	(W/M)	95.70
BEDLOAD-TRANSPORT		
NUMBER OF OBSERVATIONS(8)		60*
RATE(9)	(KG/S)	.4942
STANDARD DEVIATION(10)	(KG/S)	.1160

* TRANSPORT RATE DETERMINED BY OPERATING BEDLOAD TRAP WITH ALL GATES OPEN SIMULTANEOUSLY.
** TRANSPORT RATE DETERMINED BY SUMMING RATES FOR INDIVIDUAL GATES; SEE TABLES 4 TO 22 FOR TIME AND WATER-LEVEL OBSERVATION AT EACH GATE. NO VALUE OF STANDARD DEVIATION FOR TRANSPORT RATE IS AVAILABLE.
*** DATA NOT COLLECTED AT ALL GATES; TRANSPORT RATE WAS NOT COMPUTED. TIME, WATER-LEVEL OBSERVATIONS, AND EFFECTIVE DISCHARGE VALUES ARE APPROXIMATE MEAN VALUES DURING THE PERIODS OF MEASURMENT; SEE TABLES 4 TO 22.
(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(2) EFFECTIVE DISCHARGE OVER WIDTH OF BEDLOAD TRAP. WHEN ALL GATES WERE OPERATED INDIVIDUALLY, EFFECTIVE DISCHARGE WAS DETERMINED BY SUMMING THE DISCHARGE OVER EACH GATE.
(3) BEDLOAD TRAP IS 14.6 METERS WIDE.
(4) MEAN DEPTH OVER WIDTH OF BEDLOAD TRAP.
(5) EFFECTIVE FLOW AREA OVER BEDLOAD TRAP, EQUALS PRODUCT OF BEDLOAD TRAP WIDTH TIMES MEAN DEPTH.
(6) MEAN VELOCITY OVER BEDLOAD TRAP, EQUALS EFFECTIVE DISCHARGE DIVIDED BY FLOW AREA.
(7) STREAM POWER OVER BEDLOAD TRAP, EQUALS PRODUCT OF ACCELERATION OF GRAVITY (9.807 M/S^2), UNIT MASS OF WATER (1000 KG/M^3), DISCHARGE OVER BEDLOAD TRAP (M^3/S), AND WATER-SURFACE SLOPE (0.0007 M/M); STREAM POWER IS EXPRESSED IN WATTS PER METER.
(8) NUMBER OF INDIVIDUAL 60-SECOND DETERMINATIONS OF TRANSPORT RATE.
(9) MEAN VALUE OF INDIVIDUALLY-DETERMINED TRANSPORT RATES IN DRY MASS PER UNIT TIME.
(10) STANDARD DEVIATION OF INDIVIDUALLY-DETERMINED TRANSPORT RATES.

B. BEDLOAD-SIZE DISTRIBUTION

DATE	6-30
SIEVE SIZE, IN MILLIMETERS	PERCENTAGE FINER THAN GIVEN SIZE
45.3	---
32.0	---
22.6	---
16.0	100
11.3	98.8
8.00	98.2
5.66	95.7
4.00	91.6
2.83	85.7
2.00	75.8
1.41	59.4
1.00	42.5
.707	28.2
.500	14.7
.354	5.8
.250	1.6
.177	.5
.125	.3
.088	.2
.062	.1

PERCENTILE	PARTICLE DIAMETER, IN MILLIMETERS
5	0.34
16	.52
25	.66
35	.84
50	1.17
65	1.58
75	1.96
84	2.65
90	3.59
95	5.26

TABLE 24.- SUMMARY OF STREAMWIDE RIVER-HYDRAULIC DATA, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, 1978

DATE	TIME	EFFECTIVE DISCHARGE(1) (M^3/S)	STREAM DISCHARGE(2) (M^3/S)	WATER LEVEL(3) (M)	FLOW AREA(4) (M^2)	SURFACE WIDTH(5) (M)	MEAN DEPTH(6) (M)	MEAN VELOCITY(7) (M/S)
5-24	--	9.21	9.71	5.910	11.9	16.8	0.71	0.81
5-25	--	8.38	8.78	5.860	11.2	16.6	.67	.78
5-26	--	7.47	7.80	5.805	10.4	16.4	.63	.75
5-27	--	7.52	7.88	5.810	10.4	16.4	.63	.76
5-28	--	9.07	9.52	5.900	11.8	16.8	.70	.81
5-28	1752	8.65	9.06	5.875	11.4	16.7	.68	.79
5-29	1231	11.8	12.5	6.050	14.1	17.3	.81	.89
6- 5	1247	8.20	8.59	5.850	11.0	16.6	.66	.78
6- 7	--	20.5	22.4	6.395	20.6	18.5	1.11	1.09
6- 8	--	26.3	29.1	6.545	24.5	19.1	1.28	1.19
6- 9	--	27.8	30.8	6.580	25.4	19.2	1.32	1.21
6-10	--	30.7	34.6	6.635	27.4	19.5	1.41	1.26
6-11	1136	19.9	21.6	6.375	20.1	18.4	1.09	1.07
6-14	--	26.8	29.8	6.560	24.8	19.1	1.30	1.20
6-15	--	26.5	29.3	6.550	24.6	19.1	1.29	1.19
6-16	--	26.0	28.8	6.540	24.3	19.1	1.28	1.19
6-21	--	15.4	16.6	6.215	17.0	17.9	.95	.98
6-24	--	19.6	21.4	6.370	20.0	18.4	1.09	1.07
6-25	--	17.6	19.1	6.300	18.6	18.2	1.02	1.03
6-25	1710	17.9	19.6	6.315	18.9	18.2	1.04	1.04
6-29	1000	13.5	14.5	6.135	15.5	17.6	.88	.93
6-29	--	14.1	15.1	6.160	15.9	17.7	.90	.95
6-29	1725	13.7	14.6	6.140	15.6	17.6	.88	.94
6-30	1130	13.7	14.6	6.140	15.6	17.6	.88	.94
6-30	1230	13.9	14.9	6.150	15.8	17.7	.89	.94

(1) EFFECTIVE DISCHARGE OVER WIDTH OF BEDLOAD TRAP. WHEN ALL GATES WERE OPERATED INDIVIDUALLY, EFFECTIVE DISCHARGE WAS DETERMINED BY SUMMING THE DISCHARGE OVER EACH GATE (TABLE 23).
(2) TOTAL DISCHARGE OVER TOTAL WIDTH OF CHANNEL.
(3) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.
(4) FLOW AREA OF STREAM CHANNEL.
(5) TOTAL SURFACE WIDTH OF STREAM CHANNEL.
(6) MEAN DEPTH OF WATER OVER TOTAL WIDTH.
(7) MEAN VELOCITY OF TOTAL STREAM DISCHARGE.

TABLE 25.- SUMMARY OF SUSPENDED-SEDIMENT DATA, AT CONVEYOR-BELT BEDLOAD TRAP (SECTION 0000), EAST FORK RIVER, WYOMING, 1978

DATE	TIME	WATER LEVEL(1) (M)	TOTAL DISCHARGE (M^3/S)	WATER TEMPERATURE (°C)	CONCENTRATION (MG/L)	PERCENT FINER THAN 0.062MM
5-26	1515	5.795	7.63	9.0	29	60
5-27	1045	5.830	8.22	5.5	29	46
5-28	1120	5.930	10.1	6.5	49	52
5-28	1735	5.875	9.06	11.0	44	43
5-29	0945	6.065	12.9	5.5	113	44
5-29	1330	6.045	12.4	8.5	175	44
5-30	1020	6.040	12.3	3.0	64	39
5-30	1130	6.020	11.9	3.5	54	41
5-31	1215	5.845	8.50	2.5	24	50
5-31	1330	5.820	8.05	3.0	23	60
5-31	1600	5.800	7.72	5.5	21	61
6- 1	0900	5.795	7.63	1.5	22	50
6- 1	1100	5.770	7.19	2.5	18	58
6- 2	0955	5.815	7.97	4.0	24	55
6- 3	1210	5.790	7.54	4.5	21	49
6- 4	1020	5.735	6.60	4.0	13	58
6- 4	1315	5.725	6.46	6.0	15	55
6- 5	1015	5.855	8.69	4.5	29	51
6- 6	1250	6.130	14.4	7.0	78	50
6- 6	1315	6.130	14.4	8.5	70	51
6- 6	1625	6.105	13.8	9.0	65	48
6- 7	0715	6.295	18.9	4.5	134	59
6- 7	0825	6.340	20.4	4.5	135	53
6- 7	0955	6.370	21.4	5.5	151	42
6- 7	1125	6.385	22.0	6.0	113	48
6- 7	1455	6.400	22.6	9.0	83	53
6- 8	0705	6.485	26.1	4.0	97	39
6- 8	0735	6.500	26.8	4.0	83	48
6- 8	0825	6.525	28.0	4.0	98	42
6- 8	0910	6.535	28.6	4.5	91	42
6- 8	1105	6.555	29.5	5.5	80	38
6- 8	1255	6.560	29.8	7.0	83	34
6- 8	1625	6.535	28.6	10.5	53	42
6- 8	1810	6.520	27.8	11.0	43	51
6- 9	0720	6.545	29.1	5.0	45	42
6- 9	0810	6.555	29.5	5.0	48	38
6- 9	0900	6.570	30.2	5.5	47	39
6- 9	1210	6.595	31.9	7.0	62	30
6- 9	1540	6.585	31.2	9.0	33	32
6- 9	1815	6.565	30.0	10.0	44	32
6-12	1250	6.125	14.2	6.5	25	57
6-13	1000	6.210	16.5	7.5	39	53
6-13	1430	6.250	17.6	11.0	36	56
6-14	0930	6.470	25.5	7.5	60	30
6-14	1100	6.520	27.8	9.0	63	34
6-14	1235	6.560	29.8	9.5	63	22
6-14	1430	6.580	30.8	11.5	52	26
6-14	1845	6.550	29.3	12.0	31	37
6-15	1015	6.545	29.1	7.5	36	32
6-15	1220	6.560	29.8	9.5	27	42
6-16	0915	6.500	26.8	7.0	43	48
6-16	1630	6.540	28.8	11.5	29	50
6-17	0945	6.425	23.6	6.5	37	38
6-17	1245	6.440	24.2	9.0	29	41
6-19	1125	6.260	17.8	8.0	30	57
6-20	1325	6.165	15.2	9.5	23	55
6-21	1230	6.215	16.6	10.5	30	56

(1) ADD 2150 METERS TO OBTAIN WATER-SURFACE ELEVATION ABOVE NGVD.

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