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Wet season bed-material
particle size distribution
and statistics for Swift
Creek (Ngarradj)
catchment between 1998
and 2002

MJ Saynor, BL Smith
& WD Erskine

September 2005

(Release status – unrestricted)

Wet season bed-material particle size distribution and statistics for Swift Creek (Ngarradj) catchment between 1998 and 2002

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Wet season bed-material particle size distribution and statistics for Swift Creek (Ngarradj) catchment between 1998 and 2002

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1 Introduction

Erskine et al (2001) proposed that a sediment budget framework should be adopted by the Environmental Research Institute of the Supervising Scientist (*eriss*) to assess the physical impacts, if any, of the Jabiluka project on the Ngarradj catchment (fig 1). Thirteen projects were outlined by Erskine et al (2001) to form the basis of this assessment including, among other things, the systematic sampling of bed-material load on the project catchment channels and Swift Creek (fig 1). Bed-material load is the coarser part of the total sediment load that is composed of particles found in the bed material in appreciable quantities and that is transported at a rate dependent on stream discharge (Einstein et al 1940).

During each wet season, the various grain size fractions of the bed material of Ngarradj and its tributaries are reworked and transported downstream at various rates to a number of sediment storages. Detailed bed-material load measurements at each *eriss* river gauging station were made during wet season flows, to determine sediment flux and particle size using the methods described by Saynor et al (2001).

This Internal Report presents the bed-material load particle size data collected at each of the three *eriss* gauging stations during the wet seasons, 1998/1999 to 2001/2002, inclusive.

Analysis of the bed-material load transport rates will be presented in a subsequent Supervising Scientist Report. The data contained in this internal report compliments that obtained from the bulk bed-material samples collected during each dry season between 1998 and 2003 (Saynor et al 2004, 2005) and the bed-material at the scour chain sites in Ngarradj (Erskine et al 2003).

2 Methods

The three *eriss* gauging stations in the Ngarradj catchment were visited weekly during periods of streamflow for the wet seasons of 1998/1999 to 2001/2002 inclusive. During each visit the gauging station data were downloaded and a number of other parameters collected. One of these parameters included the collection of bed-material load samples using a Helley-Smith bedload sampler (Helley & Smith 1971).

2.1 Field Methods

The Helley-Smith pressure difference bedload sampler used for this work (Helley & Smith 1971) was designed to be compatible with depth integrated suspended sediment samplers and is one of the most accurate bedload samplers yet designed (Emmett 1979). The orifice diameter of the Helley-Smith sampler closely approximates the unsampled zone between the intake nozzle and the bed of a depth integrated suspended sediment sampler (Helley & Smith

1971). The Helley-Smith sampler has been used within the Alligator Rivers Region in Magela Creek to collect bed-material samples (Roberts 1991, Jansen & Nanson 2004). Figure 2 shows bedload samples being collected at the Swift Creek gauge site.

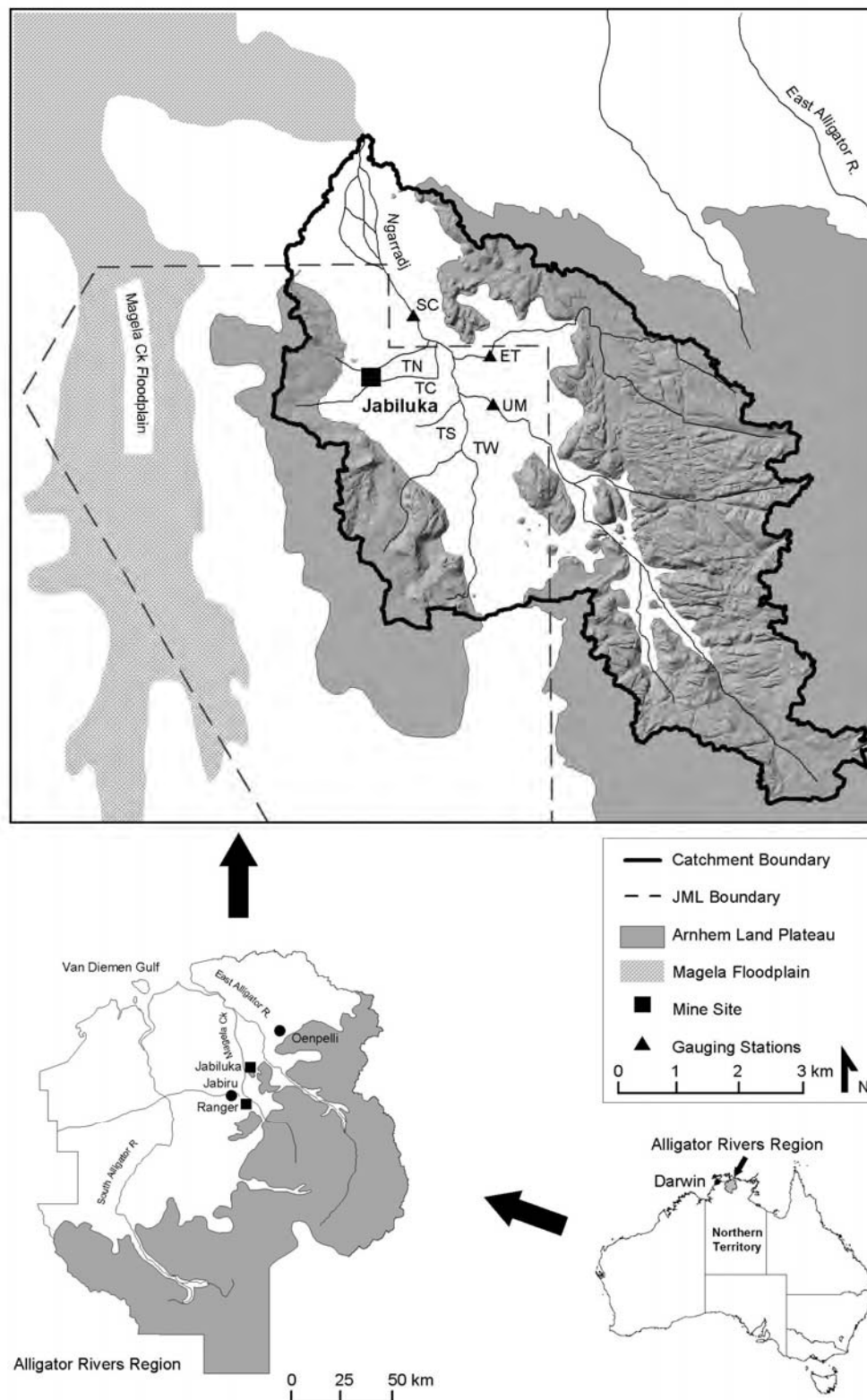


Figure 1 The Ngarradj catchment showing the location of the Jabiluka Mineral Lease (JML), *eriss*'s gauging stations and local creek names. SC refers to Swift Creek gauging station, TN Tributary North, ET East Tributary gauging station, TC Tributary Central, TS Tributary South, TW Tributary West and UM upper Swift Creek gauging station

Field methods followed those used by the Water Resources Division of the United States Geological Survey and have been outlined by Carey (1984, 1985), among others. At least 4 but usually 6 point measurements of bedload transport were taken at each gauging station cross section. Measurement times were determined on a trial and error basis and were generally 3–5 minutes for high streamflows and 10 minutes for lower flows. Each bed-material load gauging consisted of a double pass across each cross section (ie 8, 10 or 12 point measurements). Although instantaneous bed-material load fluxes are highly variable, it is usually possible to define a mean flux for a given discharge, provided sufficient thorough field measurements are made (Carey 1985).

In the field, each bed-material load sample was carefully washed (using a squeeze bottle filled with creek water) into a labelled plastic bag and then sealed and placed in a box for the trip back to the laboratory.

2.2 Laboratory methods

Each individual bed-material load sample was oven dried at 105°C for 24 hours before being weighed and then subjected to particle size analysis (PSA) For the 1998-1999 wet season each individual sample was subjected to particle size analysis. In subsequent years after the individual weights had been recorded the samples belonging to each transect were combined into transects, so that for each date at each site there were 2 samples only subjected to PSA, (transect 1 comprised the samples collected on the first pass across the cross section and transect 2 comprised the samples collected on the same cross section on the return pass).

As the sieve size of the mesh on the bag of the Helley-Smith sampler was 0.063 mm, there was very little clay present in samples and hence the samples did not need to be chemically or physically dispersed. Saynor et al (2005) also found that there was a very small percentage of sediment finer than 0.063 mm in the bed-material samples collected at the permanently monumented cross sections at each *eriss* gauging station. When a gravel fraction was present the sample was manually sieved in its entirety at $\phi/2$ intervals. If the sand fraction was greater than 150 g it was passed through a riffle box to obtain a sub-sample of approximately 100 g to ensure that the stainless steel sieves were not damaged by excessive loading. The split sand sample was then poured into a nest of sieve meshes separated by $\phi/2$ intervals to bracket the particle size range and the assembly placed on an automatic shaker for 15 minutes. The samples retained on each sieve were weighed on a two decimal place balance with the weights recorded as cumulative mass. This enabled cumulative frequency percentages to be calculated. The sediment masses were then entered into a spreadsheet and grain size statistics calculated, as outlined below.

The phi (ϕ) notation system is often used to describe the grain size of clastic sediment by sedimentologists. It is a logarithmic scale in which each grade limit is twice as large as the next smaller grade limit (Folk 1974, 1980) and is denoted by:

$$\phi = -\log_2 d \quad (1)$$

where d is the grain diameter in mm.



Figure 2 Bedload samples being collected at the Swift Creek site. Where possible two samplers were used to collect samples on each transect, thus reducing collection time.

2.3 Grain size statistics

Graphic grain size statistics (ie graphic mean size, inclusive graphic standard deviation, inclusive graphic skewness, graphic kurtosis and transformed kurtosis) were calculated in Excel spreadsheets using the equations of Folk and Ward (1957) and Folk (1974, 1980). These equations are outlined below and only use, at most, 90 % of the grain size distribution between the 5th and 95th percentiles (Folk 1974, 1980). Nevertheless, such graphic measures are preferred to the method of moments, which weights equally all grain size fractions. This assumption (i.e. equal weighting) is unjustified because there are major problems in accurately determining both the coarsest and finest fractions of the grain size distribution. Very large sample masses are required to reliably estimate the coarsest percentiles. Furthermore, there are methodological problems in accurately measuring the clay fraction, especially when present in relatively small amounts, such as for the present samples (Gee & Bauder 1986).

The equations used to calculate the graphic grain size statistics (Folk & Ward 1957, Folk 1974, 1980) are:

$$M_z = (\phi_{16} + \phi_{50} + \phi_{84})/3 \quad (2)$$

where M_z is graphic mean size in ϕ units and ϕ_n is the phi (ϕ) value corresponding to the n^{th} percentile, (eg ϕ_{16} is the ϕ value corresponding to the 16th percentile)

$$\sigma_I = (\phi_{84} - \phi_{16}) / 4 + (\phi_{95} - \phi_5) / 6.6 \quad (3)$$

where σ_I is inclusive graphic standard deviation and ϕ_{84} is as defined above.

$$Sk_I = ((\phi_{16} + \phi_{84}) - 2 \times \phi_{50}) / 2 \times (\phi_{84} - \phi_{16}) + ((\phi_5 + \phi_{95}) - 2 \times \phi_{50}) / 2 \times (\phi_{95} - \phi_5) \quad (4)$$

where Sk_I is inclusive graphic skewness and ϕ_{16} is as defined above.

$$K_G = (\phi_{95} - \phi_5) / (2.44 \times (\phi_{75} - \phi_{25})) \quad (5)$$

where K_G is graphic kurtosis and ϕ_{95} is as defined above.

$$K'_G = K_G / (1 + K_G) \quad (6)$$

where K'_G is transformed kurtosis.

The meanings of the graphic grain size statistics and the verbal scales of Folk (1974, 1980) to describe these statistics are briefly outlined below. The Wentworth grain size scale for sediments is used throughout this report and is given in Table 1. **Graphic mean size** is a reliable estimate of the mean and is expressed in terms of the Wentworth scale. **Inclusive graphic standard deviation** is a measure of sorting and is classified by the following qualitative scale:

- < 0.35 ϕ very well sorted;
- 0.35 – 0.50 ϕ well sorted;
- 0.50 – 0.71 ϕ moderately well sorted;
- 0.71 – 1.0 ϕ moderately sorted;
- 1.0 – 2.0 ϕ poorly sorted;
- 2.0 – 4.0 ϕ very poorly sorted;
- > 4.0 ϕ extremely poorly sorted.

Skewness is the degree of asymmetry of a grain size distribution. Positive skewness means an excess of fine sediment and vice versa. The more the inclusive graphic skewness value departs from 0 the greater the degree of asymmetry. The following qualitative scale is used:

- 0.30 – 1.0 strongly fine skewed;
- 0.10 – 0.30 fine skewed;
- 0.10 - -0.10 near symmetrical;
- 0.10 - -0.30 coarse skewed;
- 0.30 - -1.0 strongly coarse skewed.

Graphic kurtosis is the ratio between the sorting in the tails of the grain size distribution and the sorting in the central portion. If the central portion is better sorted than the tails, the curve is leptokurtic; if the tails are better sorted than the central portion, the curve is platykurtic. The following qualitative scale is used:

- < 0.67 very platykurtic;

- 0.67 – 0.90 platykurtic;
- 0.90 – 1.11 mesokurtic;
- 1.50 leptokurtic;
- 1.50 – 3.00 very leptokurtic;
- 3.00 extremely leptokurtic.

Transformed kurtosis is used to normalise the kurtosis distribution. Using transformed kurtosis a normal curve has a value of 0.50 and most sediments range between 0.40 and 0.65.

2.4 Sediment texture

The sediment textural classification used for bed-material load samples is that of Folk (1954, 1974, 1980) for unconsolidated materials and is based on a ternary diagram showing the proportions of gravel, sand and mud on separate axes (Figure 3). This texture triangle is split into 15 groups and the median diameter is determined, where possible, for each component fraction. Each sediment fraction can be expressed in terms of one of the Wentworth size classes (Table 1). To place a sample into one of the 15 major groups, only two properties need to be determined, namely the gravel percentage (boundaries at 80, 30, 5 and a trace or 0.01 %) and the ratio of sand to mud with boundaries at 9:1, 1:1 and 1:9 (Folk 1954, 1974, 1980). The gravel content is partly a function of the highest current velocity and the maximum grain size of the supplied sediment. The sand: mud ratio reflects the amount of winnowing (washing away of fine sediment) that has occurred. For samples lacking gravel, a further ternary diagram (Figure 4) is used which expands the bottom tier of Figure 3. It is based on the proportions of sand, silt and clay (see Folk 1954, 1974, 1980).

Table 1 The Wentworth grain size scale for sediments (after Folk 1974, 1980)

Finest Grain Size (mm)	Finest Grain Size (ϕ)	Wentworth Size Class
256	-8	Boulder
64	-6	Cobble
4	-2	Pebble
2	-1	Granule
1.00	0	Very coarse sand
0.50	1	Coarse sand
0.25	2	Medium sand
0.125	3	Fine sand
0.0625	4	Very fine sand
0.031	5	Coarse silt
0.0156	6	Medium silt
0.0078	7	Fine silt
0.0039	8	Very fine silt
0.00006	14	Clay

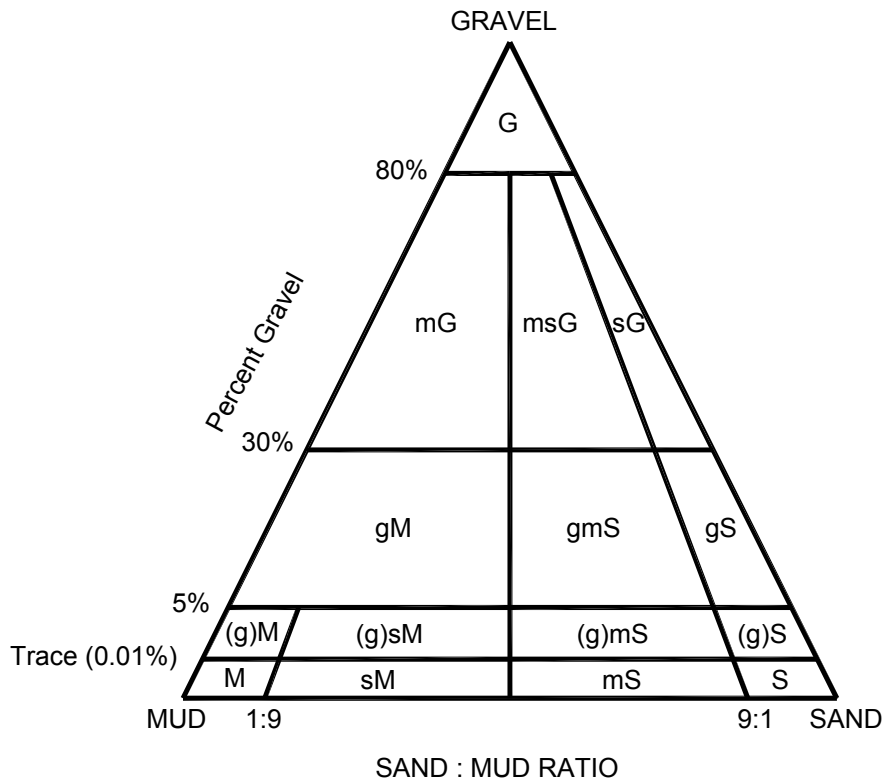


Figure 3 Folk's (1974, 1980) textural groups. G is gravel; sG sandy gravel; msG muddy sandy gravel; mG muddy gravel; gS gravelly sand; gmS gravelly muddy sand; gM gravelly mud; (g)S slightly gravelly sand; (g)mS slightly gravelly muddy sand; (g)sM slightly gravelly sandy mud; (g)M slightly gravelly mud; S sand; mS muddy sand; sM sandy mud; M mud.

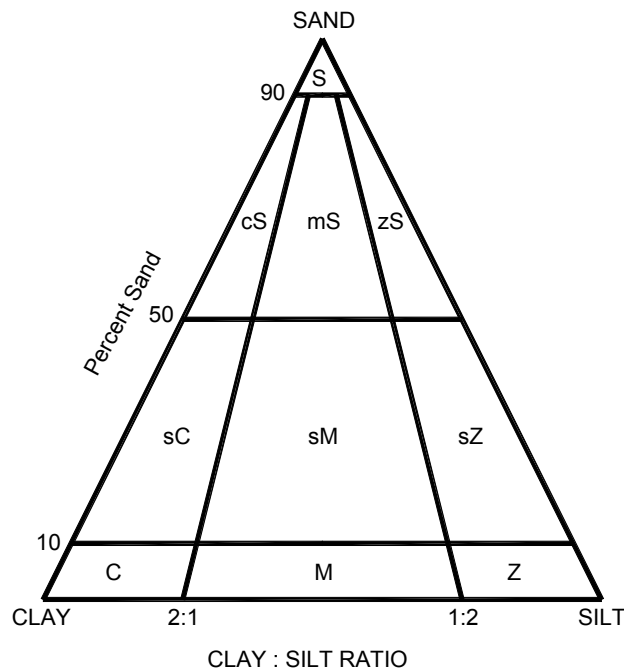


Figure 4 Folk's (1974, 1980) expansion of the bottom tier of Figure 3 to show textural classes for sediments lacking gravel. S is sand; zS silty sand; mS muddy sand; cS clayey sand; sZ sandy silt; sM sandy mud; sC sandy clay; Z silt; M mud; and C clay.

3 Results

The graphic grain size statistics for each bed-material load sample are listed in Appendix A. Table 2 shows the numbers of samples subjected to particle size analysis for the 1998/1999 to 2001/2002 wet seasons inclusive.

Table 2 Total number of bed-material load samples subjected to particle size analysis for the wet seasons 1998/1999 to 2001/2002 inclusive

Wet Season	East Tributary	Upper Swift Creek	Swift Creek	Total samples analysed each year
1998-1999	102	175	196	473
1999-2000	31	37	40	108
2000-2001	26	28	40	94
2001-2002	10	14	14	30
Total samples analysed				713

3.1 1998/1999 wet season

A total of 473 samples were subjected to particle size analysis for the 1998/1999 wet season. For each sample, the grain size statistics were calculated, with the average value for each of the transects shown in Tables 3 to 5. The individual grain size statistics for each sample are shown in Appendix A. Cumulative percentage distributions are shown in Appendix B.

3.1.1 East Tributary 1998/1999 wet season samples

The grain size statistics for each bed-material load measurement transect are shown in Table 3.

Table 3 1998/1999 wet season grain size statistics at the East Tributary gauge

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
05-Jan-99	Transect 1	0.79	0.69	-0.11	1.10	0.52
	Transect 2	0.69	0.74	-0.11	1.12	0.53
12-Jan-99	Transect 1	1.23	0.90	-0.23	1.16	0.53
	Transect 2	1.21	0.78	-0.16	1.12	0.53
19-Jan-99	Transect 1	1.15	0.53	-0.02	1.03	0.51
	Transect 2	1.07	0.59	-0.08	1.11	0.52
02-Feb-99	Transect 1	0.86	0.62	-0.14	1.16	0.54
	Transect 2	0.98	0.58	-0.06	1.10	0.52
09-Feb-99	Transect 1	0.55	0.75	-0.09	1.15	0.53
	Transect 2	0.20	0.83	-0.09	1.45	0.57
16-Feb-99	Transect 1	0.64	0.66	-0.10	1.15	0.53
	Transect 2	0.55	0.80	-0.10	1.11	0.52
23-Feb-99	Transect 1	0.33	0.93	-0.03	0.93	0.47
	Transect 2	0.46	0.83	-0.08	1.17	0.54

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
02-Mar-99	Transect 1	0.88	0.76	0.05	1.06	0.51
	Transect 2	0.92	0.72	-0.07	1.22	0.55
09-Mar-99	Transect 1	0.58	0.99	-0.14	1.12	0.53
	Transect 2	0.81	0.85	-0.14	1.10	0.52
17-Mar-99	Transect 1	0.53	0.81	-0.15	1.18	0.54
	Transect 2	0.40	0.84	-0.10	1.16	0.53
23-Mar-99	Transect 1	0.80	1.04	-0.18	1.14	0.53
	Transect 2	1.02	0.85	-0.20	1.19	0.54
30-Mar-99	Transect 1	0.81	0.95	-0.14	0.95	0.49
	Transect 2	0.97	0.83	-0.11	0.96	0.49
06-Apr-99	Transect 1	0.97	0.62	0.03	0.89	0.47
	Transect 2	0.86	0.65	0.03	1.13	0.53
13-Apr-99	Transect 1	0.96	0.66	-0.08	1.06	0.51
	Transect 2	0.69	0.83	-0.12	1.08	0.52
Mean		0.78	0.77	-0.10	1.11	0.52
Median		0.81	0.79	-0.10	1.12	0.53
Max		1.23	1.04	0.05	1.45	0.57
Min		0.20	0.53	-0.23	0.89	0.47

3.1.2 Upper Swift Creek 1998/1999 wet season samples

The transects for the bed-material load samples at Upper Swift Creek generally consisted of 5 samples on each transect. The graphic grain size statistics for each transect are shown in Table 4.

Table 4 1998/1999 wet season grain size statistics at the Upper Swift Creek gauge

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
23-Dec-98	Transect 1	0.89	0.78	-0.10	1.18	0.54
	Transect 2	0.99	0.66	-0.06	1.08	0.52
05-Jan-99	Transect 1	1.18	0.77	-0.07	1.07	0.51
	Transect 2	1.19	0.67	-0.05	0.98	0.50
12-Jan-99	Transect 1	1.13	0.81	-0.15	1.07	0.52
	Transect 2	1.19	0.77	-0.14	1.00	0.50
20-Jan-99	Transect 1	1.58	0.66	-0.24	1.22	0.54
	Transect 2	1.58	0.61	-0.22	1.04	0.51
02-Feb-99	Transect 1	1.63	0.93	-0.52	1.60	0.61
	Transect 2	1.73	0.86	-0.50	1.72	0.61
09-Feb-99	Transect 1	1.17	0.60	-0.04	1.07	0.52

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
	Transect 2	1.10	0.63	-0.07	1.01	0.50
16-Feb-99	Transect 1	1.65	0.49	-0.07	1.03	0.51
	Transect 2	1.67	0.50	-0.24	1.10	0.52
23-Feb-99	Transect 1	1.06	0.62	0.00	0.99	0.49
	Transect 2	0.92	0.69	0.00	0.96	0.49
3-Mar-99	Transect 1	1.13	0.57	-0.02	0.96	0.49
	Transect 2	1.10	0.58	-0.01	0.99	0.50
9-Mar-99	Transect 1	1.08	0.73	-0.07	0.93	0.48
	Transect 2	1.17	0.64	0.00	1.01	0.50
17-Mar-99	Transect 1	1.16	0.61	-0.08	1.09	0.52
	Transect 2	1.29	0.55	-0.07	1.12	0.53
23-Mar-99	Transect 1	1.03	0.62	-0.01	1.04	0.51
	Transect 2	0.93	0.68	0.04	1.05	0.51
30-Mar-99	Transect 1	1.16	0.60	-0.06	1.07	0.51
	Transect 2	0.95	0.63	-0.08	1.08	0.52
31-Mar-99	Transect 1	1.02	0.66	-0.06	1.05	0.51
	Transect 2	0.96	0.66	-0.10	1.04	0.51
6-Apr-99	Transect 1	0.96	0.65	-0.02	1.06	0.51
	Transect 2	1.01	0.63	-0.01	1.01	0.50
13-Apr-99	Transect 1	0.88	0.71	0.00	0.99	0.50
	Transect 2	0.83	0.76	0.00	0.96	0.49
20-Apr-99	Transect 1	1.03	0.65	-0.02	1.00	0.50
	Transect 2	1.05	0.62	-0.04	1.00	0.50
4-May-99	Transect 1	1.03	0.72	-0.04	0.99	0.50
	Transect 2	1.10	0.58	-0.04	0.98	0.49
	Mean	1.15	0.66	-0.09	1.07	0.51
	Median	1.10	0.65	-0.06	1.04	0.51
	Max	1.73	0.93	0.04	1.72	0.61
	Min	0.83	0.49	-0.52	0.93	0.48

3.1.3 Swift Creek 1998/1999 wet season samples

The transects for the bed-material load samples at Swift Creek consisted of between 4 and 7 samples on each transect depending on the width of the sand boundary (the same number of samples were collected on transects for each date). The grain size statistics for each transect are shown in Table 5.

Table 5 1998/1999 wet season grain size statistics at the Swift Creek gauge

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
15-Dec-98	Transect 1	0.98	0.85	-0.12	1.01	0.50
	Transect 2	1.07	0.71	-0.08	1.06	0.51
06-Jan-99	Transect 1	1.39	0.69	-0.14	1.02	0.50
	Transect 2	1.21	0.70	-0.05	1.00	0.50
20-Jan-99	Transect 1	1.16	0.68	-0.09	0.99	0.50
	Transect 2	1.22	0.60	-0.09	0.99	0.50
03-Feb-99	Transect 1	0.70	0.65	-0.05	1.09	0.52
	Transect 2	0.78	0.67	-0.13	1.20	0.54
10-Feb-99	Transect 1	1.02	0.63	-0.11	1.10	0.52
	Transect 2	0.96	0.56	-0.10	1.12	0.53
17-Feb-99	Transect 1	0.72	0.70	-0.03	1.07	0.52
	Transect 2	0.70	0.69	-0.06	1.01	0.50
23-Feb-99	Transect 1	0.92	0.70	-0.08	1.09	0.52
	Transect 2	0.90	0.72	-0.07	1.09	0.52
2-Mar-99	Transect 1	0.87	0.66	-0.03	1.05	0.51
	Transect 2	0.87	0.66	0.01	1.14	0.53
9-Mar-99	Transect 1	0.74	0.79	-0.09	1.19	0.54
	Transect 2	0.91	0.76	-0.05	1.13	0.53
18-Mar-99	Transect 1	0.57	0.74	-0.07	1.14	0.53
	Transect 2	0.91	0.76	-0.05	1.13	0.53
23-Mar-99	Transect 1	0.61	0.75	-0.10	1.11	0.53
	Transect 2	0.63	0.78	-0.11	1.18	0.54
30-Mar-99	Transect 1	1.16	0.82	-0.19	1.13	0.53
	Transect 2	1.26	0.74	-0.27	1.05	0.51
6-Apr-99	Transect 1	0.87	0.68	-0.09	1.13	0.53
	Transect 2	1.02	0.63	-0.07	1.12	0.53
12-Apr-99	Transect 1	0.96	0.71	-0.09	1.07	0.52
	Transect 2	0.86	0.71	-0.06	1.02	0.51
20-Apr-99	Transect 1	0.80	0.72	-0.05	1.05	0.51
	Transect 2	0.85	0.70	-0.04	1.06	0.52
27-Apr-99	Transect 1	0.91	0.73	-0.08	1.06	0.51
	Transect 2	0.91	0.73	-0.08	1.11	0.52
4-May-99	Transect 1	0.92	0.67	-0.01	1.08	0.52
	Transect 2	0.87	0.81	-0.03	1.08	0.52
	Mean	0.92	0.71	-0.08	1.08	0.52
	Median	0.91	0.70	-0.08	1.09	0.52
	Max	1.39	0.85	0.01	1.20	0.54
	Min	0.57	0.56	-0.27	0.99	0.50

3.2 1999/2000 wet season

A total of 108 samples were subjected to particle size analysis for the 1999/2000 wet season. For each transect, the grain size statistics are shown in Tables 6, 7 and 8. Cumulative masses and percentage distributions are shown in Appendix B.

3.2.1 East Tributary 1999/2000 wet season samples

The grain size statistics for the transects collected at East Tributary during the 1999/2000 wet season are shown in Table 6.

Table 6 1999/2000 wet season grain size statistics at the East Tributary gauge

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
3-Dec-99	Transect 1	1.03	0.81	-0.17	1.18	0.54
	Transect 2	0.94	0.83	-0.18	1.11	0.53
4-Jan-00	Transect 1	1.01	0.62	-0.07	1.10	0.52
	Transect 2	1.18	0.61	-0.03	1.01	0.50
11-Jan-00	Transect 1	0.57	0.88	-0.15	2.05	0.67
	Transect 2	0.53	0.85	-0.14	1.07	0.52
18-Jan-00	Transect 1	0.75	0.76	-0.14	2.44	0.71
	Transect 2	0.74	0.84	-0.24	1.13	0.53
25-Jan-00	Transect 1	0.35	1.03	-0.26	1.03	0.51
	Transect 2	0.19	1.09	-0.18	0.92	0.48
1-Feb-00	Transect 1	1.05	0.61	-0.04	3.00	0.75
	Transect 2	1.02	0.78	-0.27	1.45	0.59
8-Feb-00	Transect 1	0.66	0.73	-0.07	1.07	0.52
	Transect 2	0.52	0.78	-0.13	1.20	0.55
15-Feb-00	Transect 1	0.92	0.65	-0.07	1.18	0.54
	Transect 2	1.08	0.62	-0.05	1.07	0.52
22-Feb-00	Transect 1	1.33	0.66	-0.13	1.09	0.52
	Transect 2	1.24	0.61	-0.02	1.05	0.51
29-Feb-00	Transect 1	0.74	0.70	-0.02	1.02	0.51
	Transect 2	0.89	0.69	-0.04	1.10	0.52
7-Mar-00	Transect 1	1.12	0.67	-0.16	1.14	0.53
	Transect 2	1.01	0.67	-0.09	1.07	0.52
14-Mar-00	Transect 1	0.68	0.87	-0.19	1.02	0.50
	Transect 2	1.11	0.66	-0.14	1.30	0.57
21-Mar-00	Transect 1	1.04	0.72	-0.14	1.21	0.55
	Transect 2	0.99	0.76	-0.16	1.27	0.56
28-Mar-00	Transect 1	1.44	0.59	-0.18	1.05	0.51
11-Apr-00	Transect 1	1.27	0.58	-0.08	1.00	0.50
	Transect 2	1.35	0.59	-0.07	1.04	0.51
20-Apr-00	Transect 1	1.09	0.57	0.02	0.99	0.50

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
	Transect 2	1.07	0.61	0.00	0.95	0.49
	Mean	0.93	0.72	-0.12	1.23	0.54
	Median	1.01	0.69	-0.13	1.09	0.52
	Max	1.44	1.09	0.02	3.00	0.75
	Min	0.19	0.57	-0.27	0.92	0.48

3.2.2 Upper Swift Creek 1999/2000 wet season samples

The grain size statistics for the transects collected at Upper Swift Creek during the 1999/2000 wet season are shown in Table 7.

Table 7 1999/2000 wet season grain size statistics at the Upper Swift Creek gauge

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
3-Dec-99	Transect 1	0.96	0.81	-0.05	1.12	0.53
	Transect 2	0.78	0.82	-0.07	1.03	0.51
4-Jan-00	Transects	1.25	0.75	-0.12	1.04	0.51
11-Jan-00	Transect 1	1.13	0.72	-0.10	0.97	0.49
	Transect 2	0.95	0.76	-0.03	0.99	0.50
18-Jan-00	Transect 1	1.08	0.75	-0.10	1.13	0.53
	Transect 2	0.96	0.82	-0.07	1.02	0.51
25-Jan-00	Transect 1	0.96	0.82	-0.10	0.93	0.48
	Transect 2	1.11	0.70	-0.10	0.97	0.49
1-Feb-00	Transect 1	1.07	0.70	-0.15	0.97	0.49
	Transect 2	1.21	0.60	-0.13	0.93	0.48
8-Feb-00	Transect 1	0.97	0.76	-0.16	1.00	0.50
	Transect 2	1.07	0.70	-0.14	1.06	0.52
15-Feb-00	Transect 1	0.83	0.83	-0.11	1.01	0.50
	Transect 2	0.97	0.79	-0.15	1.05	0.51
22-Feb-00	Transect 1	1.38	0.74	-0.25	0.99	0.50
	Transect 2	1.32	0.70	-0.20	0.88	0.47
29-Feb-00	Transect 1	0.94	0.84	-0.17	1.11	0.53
	Transect 2	0.85	0.87	-0.13	1.03	0.51
7-Mar-00	Transect 1	1.73	0.83	-0.40	2.19	0.69
	Transect 2	1.73	0.81	-0.38	2.46	0.71
14-Mar-00	Transect 1	1.13	0.66	-0.12	1.01	0.50
	Transect 2	1.42	0.44	0.26	0.75	0.43
21-Mar-00	Transect 1	1.00	0.74	-0.16	1.03	0.51
	Transect 2	0.91	0.79	-0.19	1.08	0.52

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
28-Mar-00	Transect 1	1.26	0.63	-0.13	0.96	0.49
	Transect 2	1.38	0.68	-0.72	0.97	0.49
6-Apr-00	Transect 1	0.99	0.70	-0.08	1.00	0.50
	Transect 2	1.04	0.79	-0.17	0.95	0.49
11-Apr-00	Transect 1	1.10	0.87	-0.24	1.12	0.53
	Transect 2	1.00	0.92	-0.20	1.03	0.51
20-Apr-00	Transect 1	1.25	0.63	-0.15	1.00	0.50
	Transect 2	1.27	0.61	-0.16	0.97	0.49
2-May-00	Transect 1	1.05	0.66	-0.09	1.03	0.51
	Transect 2	1.12	0.65	-0.13	1.01	0.50
16-May-00	Transect 1	1.04	0.71	-0.11	1.00	0.50
	Transect 2	1.10	0.71	-0.14	0.97	0.49
	Mean	1.12	0.74	-0.15	1.07	0.51
	Median	1.07	0.74	-0.13	1.01	0.50
	Max	1.73	0.92	0.26	2.46	0.71
	Min	0.78	0.44	-0.72	0.75	0.43

3.2.3 Swift Creek 1999/2000 wet season samples

The grain size statistics for the transects collected at Swift Creek during the 1999/2000 wet season are shown in Table 8.

Table 8 1999/2000 wet season grain size statistics at the Swift Creek gauge

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
3-Dec-99	Transect 1	0.85	0.73	-0.11	1.09	0.52
	Transect 2	0.65	0.96	-0.26	1.22	0.55
21-Dec-99	Transect 1	1.10	1.24	-0.36	2.23	0.69
	Transect 2	0.91	0.92	-0.11	1.06	0.51
4-Jan-00	Transect 1	0.78	0.87	-0.27	1.24	0.55
	Transect 2	0.80	0.87	-0.26	1.37	0.58
11-Jan-00	Transect 1	1.08	0.73	-0.14	1.14	0.53
	Transect 2	0.91	1.10	-0.33	1.75	0.64
18-Jan-00	Transect 1	0.93	0.82	-0.23	1.35	0.57
	Transect 2	0.98	1.25	-0.39	2.21	0.69
25-Jan-00	Transect 1	0.90	0.85	-0.14	1.15	0.53
	Transect 2	0.91	0.78	-0.09	1.12	0.53
1-Feb-00	Transect 1	0.94	0.75	-0.10	1.04	0.51
	Transect 2	0.94	0.75	-0.08	1.05	0.51

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
8-Feb-00	Transect 1	0.99	0.89	-0.11	1.03	0.51
	Transect 2	1.22	0.74	-0.16	1.06	0.51
15-Feb-00	Transect 1	1.03	0.99	-0.27	1.30	0.56
	Transect 2	1.25	0.80	-0.23	1.21	0.55
22-Feb-00	Transect 1	0.70	0.79	-0.17	1.12	0.53
	Transect 2	0.76	0.74	-0.12	1.11	0.53
29-Feb-00	Transect 1	0.93	0.84	-0.21	1.23	0.55
	Transect 2	1.03	0.73	-0.13	1.09	0.52
7-Mar-00	Transect 1	0.68	0.72	-0.14	1.09	0.52
	Transect 2	0.60	0.76	-0.16	1.09	0.52
14-Mar-00	Transect 1	0.81	0.79	-0.12	1.16	0.54
	Transect 2	0.79	0.85	-0.17	1.13	0.53
21-Mar-00	Transect 1	0.98	0.92	-0.14	1.04	0.51
	Transect 2	0.87	0.90	-0.08	1.03	0.51
28-Mar-00	Transect 1	0.78	0.77	-0.14	1.10	0.52
	Transect 2	0.78	0.73	-0.10	1.11	0.53
6-Apr-00	Transect 1	0.80	0.76	-0.04	0.99	0.50
	Transect 2	0.95	0.69	-0.07	1.07	0.52
11-Apr-00	Transect 1	1.11	0.67	-0.16	1.11	0.53
	Transect 2	1.18	0.59	-0.12	0.98	0.50
20-Apr-00	Transect 1	0.87	0.80	-0.16	1.14	0.53
	Transect 2	0.76	0.71	-0.05	1.11	0.53
2-May-00	Transect 1	0.88	0.81	-0.07	1.00	0.50
	Transect 2	0.89	0.76	-0.08	1.04	0.51
16-May-00	Transect 1	1.19	0.62	-0.09	0.93	0.48
	Transect 2	1.06	0.70	-0.14	1.01	0.50
Mean		0.91	0.82	-0.16	1.18	0.54
Median		0.91	0.79	-0.14	1.11	0.53
Max		1.25	1.25	-0.04	2.23	0.69
Min		0.60	0.59	-0.39	0.93	0.48

3.3 2000/2001 wet season

For each transect the grain size statistics are shown in Tables 9, 10 and 11. Cumulative percentage distributions are shown in Appendix B.

3.3.1 East Tributary 2000/2001 wet season samples

The grain size statistics for the transects collected at East Tributary during the 2000/2001 wet season are shown in Table 9.

Table 9 2000/2001 wet season grain size statistics at the East Tributary gauge

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
4-Dec-00	Transect 1	0.87	0.96	-0.23	1.10	0.52
	Transect 2	0.93	0.91	-0.21	1.29	0.56
9-Jan-01	Transect 1	0.87	0.86	-0.34	1.18	0.54
	Transect 2	1.24	0.73	-0.15	1.11	0.53
23-Jan-01	Transect 1	0.93	0.66	-0.05	1.13	0.53
	Transect 2	0.79	0.72	-0.08	1.11	0.53
30-Jan-01	Transect 1	0.93	0.85	-0.05	1.05	0.51
	Transect 2	0.97	0.71	-0.13	1.19	0.54
6-Feb-01	Transect 1	0.96	0.67	-0.07	1.15	0.53
	Transect 2	0.83	0.68	-0.07	1.21	0.55
13-Feb-01	Transect 1	1.06	0.65	-0.06	1.05	0.51
	Transect 2	0.73	0.82	-0.10	0.96	0.49
27-Feb-01	Transect 1	1.08	0.65	-0.04	1.06	0.51
	Transect 2	1.19	0.60	-0.04	0.93	0.48
6-Mar-01	Transect 1	0.94	0.68	-0.09	1.19	0.54
	Transect 2	0.94	0.69	-0.08	1.12	0.53
13-Mar-01	Transect 1	1.06	0.67	-0.10	1.10	0.52
	Transect 2	0.99	0.79	-0.20	1.10	0.52
20-Mar-01	Transect 1	1.06	0.69	-0.11	1.08	0.52
	Transect 2	1.17	0.65	-0.08	1.06	0.51
27-Mar-01	Transect 1	1.04	0.66	-0.08	1.14	0.53
	Transect 2	1.01	0.70	-0.12	1.09	0.52
3-Apr-01	Transect 1	0.83	0.71	-0.09	1.12	0.53
	Transect 2	0.90	0.65	-0.16	1.28	0.56
10-Apr-01	Transect 1	1.12	0.61	-0.05	1.03	0.51
	Transect 2	0.93	0.69	-0.06	1.04	0.51
Mean		0.98	0.72	-0.11	1.11	0.53
Median		0.95	0.69	-0.08	1.11	0.53
Max		1.24	0.96	-0.04	1.29	0.56
Min		0.73	0.60	-0.34	0.93	0.48

3.3.2 Upper Swift Creek 2000/2001 wet season samples

The grain size statistics for the transects collected at Upper Swift Creek during the 2000/2001 wet season are shown in Table 10.

Table 10 2000/2001 wet season grain size statistics at the Upper Swift Creek gauge

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
4-Dec-00	Transect 1	0.79	0.94	-0.22	1.18	0.54
	Transect 2	0.80	0.95	-0.22	1.10	0.52
9-Jan-01	Transect 1	1.08	0.94	-0.20	1.04	0.51
	Transect 2	1.14	0.88	-0.20	1.00	0.50
23-Jan-01	Transect 1	1.12	0.76	-0.12	1.03	0.51
	Transect 2	1.06	0.78	-0.15	1.01	0.50
30-Jan-01	Transect 1	1.11	0.89	-0.18	1.16	0.54
	Transect 2	0.84	0.85	-0.20	1.37	0.58
6-Feb-01	Transect 1	0.96	0.72	-0.01	1.08	0.52
	Transect 2	0.93	0.66	0.00	1.08	0.52
13-Feb-01	Transect 1	1.01	0.70	-0.10	0.99	0.50
	Transect 2	1.20	0.65	-0.15	0.93	0.48
27-Feb-01	Transect 1	0.94	0.85	-0.12	1.02	0.50
	Transect 2	1.55	0.64	-0.26	1.09	0.52
6-Mar-01	Transect 1	1.08	0.66	-0.08	1.08	0.52
	Transect 2	0.69	0.89	-0.14	1.03	0.51
13-Mar-01	Transect 1	1.12	0.75	-0.19	1.06	0.51
	Transect 2	0.94	0.78	-0.13	1.16	0.54
20-Mar-01	Transect 1	0.84	0.77	-0.10	1.07	0.52
	Transect 2	0.90	0.76	-0.14	1.21	0.55
27-Mar-01	Transect 1	1.11	0.64	-0.08	1.10	0.52
	Transect 2	1.10	0.63	-0.06	1.03	0.51
3-Apr-01	Transect 1	0.84	0.79	-0.10	1.10	0.52
	Transect 2	0.79	0.87	-0.20	1.16	0.54
10-Apr-01	Transect 1	1.08	0.64	-0.06	1.10	0.52
	Transect 2	0.85	0.70	-0.08	1.27	0.56
17-Apr-01	Transect 1	0.99	0.75	-0.17	1.31	0.57
	Transect 2	0.80	0.90	-0.19	1.03	0.51
	Mean	0.99	0.78	-0.14	1.10	0.52
	Median	0.98	0.77	-0.14	1.08	0.52
	Max	1.55	0.95	0.00	1.37	0.58
	Min	0.69	0.63	-0.26	0.93	0.48

3.3.3 Swift Creek 2000/2001 wet season samples

The grain size statistics for the transects collected at Swift Creek during the 2000/2001 wet season are shown in Table 11.

Table 11 2000/2001 wet season grain size statistics at the Swift Creek gauge

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
9-Jan-01	Transect 1	0.64	1.27	-0.47	0.80	0.45
	Transect 2	0.56	1.26	-0.39	1.01	0.50
17-Jan-01	Transect 1	0.88	0.86	-0.20	1.24	0.55
	Transect 2	0.87	0.78	-0.16	1.25	0.56
23-Jan-01	Transect 1	0.62	0.78	-0.13	1.11	0.53
	Transect 2	0.71	0.80	-0.14	1.15	0.53
30-Jan-01	Transect 1	1.26	0.77	-0.50	1.22	0.55
	Transect 2	1.11	0.82	-0.24	1.18	0.54
6-Feb-01	Transect 1	0.84	0.72	-0.10	1.17	0.54
	Transect 2	0.79	0.79	-0.12	1.06	0.52
13-Feb-01	Transect 1	0.85	0.82	-0.13	1.09	0.52
	Transect 2	0.90	0.85	-0.16	1.09	0.52
20-Feb-01	Transect 1	0.98	0.69	-0.03	1.08	0.52
	Transect 2	0.91	0.68	-0.01	1.11	0.53
27-Feb-01	Transect 1	1.13	0.64	-0.10	1.01	0.50
	Transect 2	1.32	0.61	-0.19	1.05	0.51
6-Mar-01	Transect 1	1.15	0.70	0.04	1.05	0.51
	Transect 2	0.95	0.83	0.00	1.10	0.52
13-Mar-01	Transect 1	1.26	0.63	-0.09	0.97	0.49
	Transect 2	1.14	0.68	-0.09	0.94	0.49
20-Mar-01	Transect 1	0.97	0.73	-0.14	1.20	0.55
	Transect 2	1.08	0.70	-0.17	1.11	0.53
27-Mar-01	Transect 1	0.63	0.85	-0.15	1.04	0.51
	Transect 2	0.59	0.84	-0.16	1.08	0.52
3-Apr-00	Transect 1	0.87	0.75	-0.12	1.30	0.57
	Transect 2	0.92	0.72	-0.10	1.14	0.53
10-Apr-01	Transect 1	0.80	0.74	-0.11	1.16	0.54
	Transect 2	1.07	0.59	-0.04	1.11	0.53
17-Apr-01	Transect 1	0.63	0.84	-0.14	1.05	0.51
	Transect 2	0.72	0.84	-0.18	1.11	0.53
6-Apr-00	Transect 1	0.80	0.76	-0.04	0.99	0.50
	Transect 2	0.95	0.69	-0.07	1.07	0.52
16-May-00	Transect 1	1.19	0.62	-0.09	0.93	0.48
	Transect 2	1.06	0.70	-0.14	1.01	0.50

Date Sample Collected	Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
Mean	0.92	0.77	-0.14	1.08	0.52
Median	0.90	0.75	-0.13	1.09	0.52
Max	1.32	1.27	0.04	1.30	0.57
Min	0.56	0.59	-0.50	0.80	0.45

3.4 2001/2002 wet season

For each transect, the grain size statistics are shown in Tables 12, 13 and 14. Cumulative percentage distributions are shown in Appendix B.

3.4.1 East Tributary 2001/2002 wet season samples

The grain size statistics for the transects collected at East Tributary during the 2001/2002 wet season are shown in Table 12.

Table 12 2001/2002 wet season grain size statistics at the East Tributary gauge

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
12-Feb-02	Transect 1	0.72	0.72	-0.11	1.09	0.52
	Transect 2	0.96	0.52	0.04	1.15	0.54
19-Feb-02	Transect 1	0.75	0.79	-0.12	1.19	0.54
	Transect 2	0.81	0.81	-0.15	1.31	0.57
26-Feb-02	Transect 1	1.00	0.77	-0.12	1.21	0.55
	Transect 2	0.92	0.72	-0.07	1.17	0.54
4-Mar-02	Transect 1	1.05	0.66	-0.05	1.17	0.54
	Transect 2	1.08	0.70	-0.11	1.19	0.54
12-Mar-02	Transect 1	1.26	0.58	-0.05	0.94	0.48
	Transect 2	1.16	0.58	-0.04	0.99	0.50
	Mean	0.97	0.68	-0.08	1.14	0.53
	Median	0.98	0.71	-0.09	1.17	0.54
	Max	1.26	0.81	0.04	1.31	0.57
	Min	0.72	0.52	-0.15	0.94	0.48

3.4.2 Upper Swift Creek 2001/2002 wet season samples

The grain size statistics for the transects collected at Upper Swift Creek during the 2001/2002 wet season are shown in Table 13.

Table 13 2001/2002 wet season grain size statistics at the Upper Swift Creek gauge

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
23-Jan-02	Transect 1	0.81	0.86	-0.16	1.07	0.52
	Transect 2	1.08	0.73	-0.11	1.10	0.52
12-Feb-02	Transect 1	0.76	0.78	-0.15	1.28	0.56
	Transect 2	0.76	0.76	-0.09	1.26	0.56
19-Feb-02	Transect 1	1.60	0.72	-0.41	2.01	0.67
	Transect 2	1.54	0.75	-0.44	1.03	0.51
26-Feb-02	Transect 1	0.88	0.68	-0.06	1.16	0.54
	Transect 2	0.76	0.75	-0.12	1.17	0.54
4-Mar-02	Transect 1	0.93	0.81	-0.17	1.40	0.58
	Transect 2	0.95	0.70	-0.11	1.19	0.54
12-Mar-02	Transect 1	1.06	0.58	-0.02	1.05	0.51
	Transect 2	1.12	0.56	-0.03	1.02	0.51
19-Mar-02	Transect 1	0.83	0.70	-0.06	1.10	0.52
	Transect 2	0.84	0.66	-0.03	1.15	0.53
mean		0.99	0.72	-0.14	1.21	0.54
median		0.90	0.72	-0.11	1.15	0.54
max		1.60	0.86	-0.02	2.01	0.67
min		0.76	0.56	-0.44	1.02	0.51

3.4.3 Swift Creek 2001/2002 wet season samples

The grain size statistics for the transects collected at Swift Creek during the 2001/2002 wet season are shown in Table 14.

Table 14 2001/2002 wet season grain size statistics at the Swift Creek gauge

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
23-Jan-02	Transect 1	0.73	0.77	-0.10	1.14	0.53
	Transect 2	0.85	0.68	-0.09	1.20	0.55
12-Feb-02	Transect 1	0.82	0.68	-0.07	1.24	0.55
	Transect 2	0.86	0.71	-0.11	1.29	0.56
19-Feb-02	Transect 1	0.77	0.66	-0.12	1.41	0.58
	Transect 2	0.62	0.75	-0.17	1.19	0.54
26-Feb-02	Transect 1	0.43	0.97	-0.27	1.09	0.52
	Transect 2	0.84	0.72	-0.15	1.35	0.57
4-Mar-02	Transect 1	0.81	0.70	-0.28	1.11	0.53
	Transect 2	0.62	0.83	-0.16	1.14	0.53

Date Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
12-Mar-02	Transect 1	1.10	0.72	-0.13	1.01	0.50
	Transect 2	1.16	0.63	-0.09	0.97	0.49
19-Mar-02	Transect 1	0.86	0.92	-0.14	1.06	0.52
	Transect 2	0.96	0.83	-0.17	1.13	0.53
	mean	0.82	0.76	-0.15	1.17	0.54
	median	0.83	0.72	-0.14	1.14	0.53
	max	1.16	0.97	-0.07	1.41	0.58
	min	0.43	0.63	-0.28	0.97	0.49

3.5 Summary

Tables 15, 16 and 17 present summary values for each grain size statistic for each wet season at the three *eriss* gauging stations. At the East Tributary gauge, the bed-material load was coarsest during the 1998/1999 wet season. The other grain size statistics did not change during the measurement period. At the Upper Swift Creek gauge, there was a slight coarsening of the bed-material load after the 1999/2000 wet season but the other grain size statistics did not change during the measurement period. At the Swift Creek gauge, there was a slight coarsening of the bed-material load after the 2000/2001 wet season but the other grain size statistics did not change during the measurement period.

Table 15 Summary of annual bed-material load particle size statistics at the East Tributary gauge

Wet Season Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
1998/1999	Mean	0.78	0.77	-0.10	1.11	0.52
	Median	0.81	0.79	-0.10	1.12	0.53
	Max	1.23	1.04	0.05	1.45	0.57
	Min	0.20	0.53	-0.23	0.89	0.47
1999/2000	Mean	0.93	0.72	-0.12	1.23	0.54
	Median	1.01	0.69	-0.13	1.09	0.52
	Max	1.44	1.09	0.02	3.00	0.75
	Min	0.19	0.57	-0.27	0.92	0.48
2000/2001	Mean	0.98	0.72	-0.11	1.11	0.53
	Median	0.95	0.69	-0.08	1.11	0.53
	Max	1.24	0.96	-0.04	1.29	0.56
	Min	0.73	0.60	-0.34	0.93	0.48
2001/2002	Mean	0.97	0.68	-0.08	1.14	0.53
	median	0.98	0.71	-0.09	1.17	0.54
	Max	1.26	0.81	0.04	1.31	0.57
	Min	0.72	0.52	-0.15	0.94	0.48

Table 16 Summary of annual bed-material load particle size statistics at the Upper Swift Creek gauge

Wet Season Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
1998/1999	Mean	1.15	0.66	-0.09	1.07	0.51
	Median	1.10	0.65	-0.06	1.04	0.51
	Max	1.73	0.93	0.04	1.72	0.61
	Min	0.83	0.49	-0.52	0.93	0.48
1999/2000	Mean	1.12	0.74	-0.15	1.07	0.51
	median	1.07	0.74	-0.13	1.01	0.50
	Max	1.73	0.92	0.26	2.46	0.71
	Min	0.78	0.44	-0.72	0.75	0.43
2000/2001	Mean	0.99	0.78	-0.14	1.10	0.52
	Median	0.98	0.77	-0.14	1.08	0.52
	Max	1.55	0.95	0.00	1.37	0.58
	Min	0.69	0.63	-0.26	0.93	0.48
2001/2002	Mean	0.99	0.72	-0.14	1.21	0.54
	median	0.90	0.72	-0.11	1.15	0.54
	Max	1.60	0.86	-0.02	2.01	0.67
	Min	0.76	0.56	-0.44	1.02	0.51

Table 17 Summary of annual bed-material particle size statistics at the Swift Creek gauge

Wet Season Sample Collected		Graphic Mean (Φ)	Graphic Standard Deviation (Φ)	Skewness	Graphic Kurtosis	Normal Kurtosis
1998/1999	Mean	0.92	0.71	-0.08	1.08	0.52
	Median	0.91	0.70	-0.08	1.09	0.52
	Max	1.39	0.85	0.01	1.20	0.54
	Min	0.57	0.56	-0.27	0.99	0.50
1999/2000	mean	0.91	0.82	-0.16	1.18	0.54
	median	0.91	0.79	-0.14	1.11	0.53
	max	1.25	1.25	-0.04	2.23	0.69
	min	0.60	0.59	-0.39	0.93	0.48
2000/2001	Mean	0.92	0.77	-0.14	1.08	0.52
	Median	0.90	0.75	-0.13	1.09	0.52
	Max	1.32	1.27	0.04	1.30	0.57
	Min	0.56	0.59	-0.50	0.80	0.45
2001/2002	mean	0.82	0.76	-0.15	1.17	0.54
	median	0.83	0.72	-0.14	1.14	0.53
	max	1.16	0.97	-0.07	1.41	0.58
	min	0.43	0.63	-0.28	0.97	0.49

4 Further work

This report contains the cumulative frequency grain size distribution data and grain size statistics for the bed-material load samples collected by the Helley-Smith pressure difference sampler at each of the *eriss* gauging stations during the 1998/1999 to 2001/2002 wet seasons inclusive. This report is a data repository and the results will be used to produce a Supervising Scientist report on bed-material load fluxes.

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Appendix A Particle size statistics for the individual bed-material load samples collected during the 1998/1999 wet season

This appendix contains the particle size statistics for the individual bed-material load samples collected during the 1998/1999 wet season. The particle size statistics for the 1999/2000, 2000/2001 and 2001/2002 wet seasons are contained in the text. The cumulative particle size distributions are shown in Appendix B.

Table A1 Particle size statistics for bed-material samples collected at East Tributary during January 1999

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
5-Jan-99	Sample 1	Sample too small to sieve				
	Sample 2	0.38	0.78	-0.09	0.99	0.50
	Sample 3	0.96	0.71	-0.14	1.17	0.54
	Sample 4	1.03	0.57	-0.10	1.14	0.53
	Sample 5	0.86	0.66	-0.11	1.19	0.54
	Sample 6	1.01	0.61	-0.06	1.10	0.52
	Sample 7	0.51	0.76	-0.14	1.13	0.53
	Sample 8	0.37	0.92	-0.14	1.06	0.51
	Min	0.37	0.57	-0.14	0.99	0.50
	Max	1.03	0.92	-0.06	1.19	0.54
	Average	0.73	0.72	-0.11	1.11	0.53
	SEE	0.11	0.04	0.01	0.03	0.01
12-Jan-99	Sample 1	2.04	0.65	-0.21	1.62	0.62
	Sample 2	1.29	0.72	-0.10	1.02	0.51
	Sample 3	1.53	0.73	-0.27	1.24	0.55
	Sample 4	0.63	1.37	-0.36	0.84	0.46
	Sample 5	0.64	1.05	-0.18	1.08	0.52
	Sample 6	0.65	1.22	-0.17	0.94	0.49
	Sample 7	1.16	0.72	-0.12	1.22	0.55
	Sample 8	1.18	0.73	-0.16	1.11	0.53
	Sample 9	1.31	0.60	-0.08	1.02	0.51
	Sample 10	1.74	0.61	-0.24	1.32	0.57
	Min	0.63	0.60	-0.36	0.84	0.46
	Max	2.04	1.37	-0.08	1.62	0.62
	Average	1.22	0.84	-0.19	1.14	0.53
	SEE	0.15	0.09	0.03	0.07	0.01
19-Jan-99	Sample 1	1.06	0.57	-0.04	1.07	0.52
	Sample 2	1.11	0.54	-0.03	1.06	0.51
	Sample 3	1.28	0.49	0.01	0.98	0.49
	Sample 4	Sample too small to sieve				
	Sample 5	Sample too small to sieve				
	Sample 6	1.19	0.52	-0.04	0.99	0.50
	Sample 7	1.09	0.58	-0.02	1.10	0.52
	Sample 8	0.95	0.68	-0.17	1.23	0.55
	Min	0.95	0.49	-0.17	0.98	0.49
	Max	1.28	0.68	0.01	1.23	0.55
	Average	1.11	0.56	-0.05	1.07	0.52
	SEE	0.05	0.03	0.03	0.04	0.01

Table A2 Particle size statistics for bed-material samples collected at East Tributary during February 1999

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
2-Feb-99	Sample 1	0.70	0.81	-0.64	1.29	0.56
	Sample 2	0.74	0.69	-0.12	1.13	0.53
	Sample 3	0.73	0.50	0.12	1.25	0.56
	Sample 4	1.27	0.49	0.06	0.99	0.50
	Sample 5	1.29	0.52	0.05	0.96	0.49
	Sample 6	1.00	0.51	0.02	1.06	0.52
	Sample 7	0.95	0.60	-0.13	1.21	0.55
	Sample 8	0.68	0.69	-0.17	1.18	0.54
	Min	0.46	0.49	-0.23	0.96	0.49
	Max	1.29	0.74	0.12	1.25	0.56
	Average	0.89	0.59	-0.05	1.11	0.52
	SEE	0.10	0.04	0.05	0.04	0.01
9-Feb-99	Sample 1	0.48	0.87	-0.22	1.12	0.53
	Sample 2	0.68	0.83	-0.14	1.04	0.51
	Sample 3	0.48	0.56	0.09	1.29	0.56
	Sample 4	sample lost but was < 10g				
	Sample 5	Sample too small to sieve				
	Sample 6	0.37	0.78	-0.09	1.32	0.57
	Sample 7	0.23	0.56	-0.08	2.15	0.68
	Sample 8	0.00	1.15	-0.09	0.88	0.47
	Min	0.00	0.56	-0.22	0.88	0.47
	Max	0.68	1.15	0.09	2.15	0.68
	Average	0.37	0.79	-0.09	1.30	0.55
	SEE	0.10	0.09	0.04	0.18	0.03
16-Feb-99	Sample 1	Sample too small to sieve				
	Sample 2	0.39	0.82	-0.17	1.17	0.54
	Sample 3	0.84	0.65	-0.07	1.33	0.57
	Sample 4	0.69	0.52	-0.06	0.94	0.48
	Sample 5	1.17	0.57	-0.10	1.05	0.51
	Sample 6	0.86	0.66	-0.12	1.25	0.56
	Sample 7	0.44	0.85	-0.22	1.15	0.54
	Sample 8	-0.30	1.09	0.06	0.98	0.49
	Min	-0.30	0.52	-0.22	0.94	0.48
	Max	1.17	1.09	0.06	1.33	0.57
	Average	0.59	0.74	-0.10	1.12	0.53
	SEE	0.18	0.07	0.03	0.05	0.01

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
23-Feb-99	Sample 1	1.08	0.56	-0.09	1.15	0.54
	Sample 2	0.78	0.78	-0.06	1.11	0.53
	Sample 3	0.11	1.22	-0.09	0.90	0.47
	Sample 4	-0.63	1.16	0.12	0.57	0.36
	Sample 5	Sample too small to sieve				
	Sample 6	0.23	1.15	-0.17	0.99	0.50
	Sample 7	0.13	0.80	-0.01	1.37	0.58
	Sample 8	1.02	0.54	-0.06	1.14	0.53
	Min	-0.63	0.54	-0.17	0.57	0.36
	Max	1.08	1.22	0.12	1.37	0.58
	Average	0.39	0.89	-0.05	1.03	0.50
	SEE	0.23	0.11	0.03	0.10	0.03

Table A3 Particle size statistics for bed-material samples collected at East Tributary during March 1999

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
2-Mar-99	Sample 1	0.65	0.80	-0.19	1.21	0.55
	Sample 2	1.08	0.71	0.38	0.96	0.49
	Sample 3	1.02	0.48	0.30	0.81	0.45
	Sample 4	0.75	1.06	-0.28	1.27	0.56
	Sample 5	0.83	0.78	-0.17	1.47	0.60
	Sample 6	1.08	0.60	0.04	1.00	0.50
	Sample 7	0.96	0.77	-0.04	1.14	0.53
	Sample 8	0.80	0.74	-0.13	1.27	0.56
	Min	0.65	0.48	-0.28	0.81	0.45
	Max	1.08	1.06	0.38	1.47	0.60
	Average	0.90	0.74	-0.01	1.14	0.53
	SEE	0.06	0.06	0.08	0.07	0.02
9-Mar-99	Sample 1	Sample too small to sieve				
	Sample 2	0.29	1.12	-0.16	1.08	0.52
	Sample 3	0.65	1.17	-0.25	1.04	0.51
	Sample 4	0.79	0.68	-0.03	1.24	0.55
	Sample 5	1.08	0.73	-0.18	1.08	0.52
	Sample 6	1.03	0.80	-0.12	1.10	0.52
	Sample 7	0.32	1.03	-0.13	1.12	0.53
	Sample 8	Sample too small to sieve				
	Min	0.29	0.68	-0.25	1.04	0.51
	Max	1.08	1.17	-0.03	1.24	0.55
	Average	0.69	0.92	-0.14	1.11	0.52
	SEE	0.14	0.09	0.03	0.03	0.01

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis	
17-Mar-99	Sample 1	-0.04	0.93	-0.22	1.01	0.50	
	Sample 2	0.77	0.77	-0.14	1.18	0.54	
	Sample 3	0.44	0.88	-0.22	1.29	0.56	
	Sample 4	0.95	0.65	-0.03	1.24	0.55	
	Sample 5	0.85	0.65	0.00	1.30	0.56	
	Sample 6	0.44	0.97	-0.24	1.23	0.55	
	Sample 7	0.28	0.76	0.03	1.17	0.54	
	Sample 8	0.01	1.00	-0.20	0.94	0.48	
	Min	-0.04	0.65	-0.24	0.94	0.48	
	Max	0.95	1.00	0.03	1.30	0.56	
	Average	0.46	0.83	-0.13	1.17	0.54	
	SEE	0.13	0.05	0.04	0.05	0.01	
23-Mar-99	Sample 1	1.03	0.67	0.10	1.12	0.53	
	Sample 2	0.24	1.49	-0.29	0.76	0.43	
	Sample 3	0.93	1.23	-0.41	1.30	0.57	
	Sample 4	0.98	0.78	-0.11	1.36	0.58	
	Sample 5	0.91	0.83	-0.14	1.45	0.59	
	Sample 6	1.28	0.65	-0.19	1.11	0.53	
	Sample 7	0.40	1.20	-0.30	1.31	0.57	
	Sample 8	1.48	0.74	-0.17	0.90	0.47	
	Min	0.24	0.65	-0.41	0.76	0.43	
	Max	1.48	1.49	0.10	1.45	0.59	
	Average	0.91	0.95	-0.19	1.16	0.53	
	SEE	0.15	0.11	0.05	0.08	0.02	
30-Mar-99	Sample 1	0.35	1.23	-0.24	1.08	0.52	
	Sample 2	0.18	1.47	-0.14	0.73	0.42	
	Sample 3	1.39	0.60	-0.13	1.08	0.52	
	Sample 4	1.34	0.52	-0.06	0.92	0.48	
	Sample 5	1.36 0.51		0.00	0.98	0.49	
	Sample 6	1.33	0.68	-0.26	1.07	0.52	
	Sample 7	0.21	1.30	-0.08	0.83	0.45	
	Sample 8	Sample too small to sieve					
	Min	0.18	0.51	-0.26	0.73	0.42	
	Max	1.39	1.47	0.00	1.08	0.52	
	Average	0.88	0.90	-0.13	0.96	0.49	
	SEE	0.23	0.16	0.04	0.05	0.01	

Table A4 Particle size statistics for bed-material samples collected at East Tributary during April 1999

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
6-Apr-99	Sample 1	0.70	0.84	-0.17	1.09	0.52
	Sample 2	1.02	0.51	0.13	0.68	0.40
	Sample 3	1.09	0.48	0.20	0.73	0.42
	Sample 4	1.08	0.66	-0.06	1.05	0.51
	Sample 5	0.66 0.69		0.26	1.25	0.56
	Sample 6	0.91	0.60	-0.01	1.11	0.53
	Sample 7	1.07	0.55	-0.01	1.06	0.51
	Sample 8	0.77	0.77	-0.12	1.11	0.53
	Min	0.66 0.48		-0.17	0.68	0.40
	Max	1.09 0.84		0.26	1.25	0.56
	Average	0.91 0.64		0.03	1.01	0.50
SEE	0.06 0.04		0.05	0.07	0.02	
13-Apr-99	Sample 1	Sample too small to sieve				
	Sample 2	0.68	0.79	-0.11	1.05	0.51
	Sample 3	1.08	0.60	-0.08	1.12	0.53
	Sample 4	1.10	0.59	-0.06	1.02	0.51
	Sample 5	Sample too small to sieve				
	Sample 6	0.40	1.06	-0.20	0.97	0.49
	Sample 7	0.75	0.76	-0.11	1.06	0.51
	Sample 8	0.92	0.66	-0.04	1.23	0.55
	Min	0.40 0.59		-0.20	0.97	0.49
	Max	1.10 1.06		-0.04	1.23	0.55
	Average	0.82 0.74		-0.10	1.07	0.52
SEE	0.11 0.07		0.02	0.04	0.01	

Table A5 Particle size statistics for bed-material samples collected at Upper Swift Creek January 1999

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
23-Dec-98	Sample 1	Sample too small to sieve				
	Sample 2	1.19	0.75	-0.05	1.10	0.52
	Sample 3	1.03	0.90	-0.14	1.28	0.56
	Sample 4	0.85	0.67	-0.09	1.22	0.55
	Sample 5	0.49	0.79	-0.13	1.14	0.53
	Sample 6	0.59	0.66	-0.18	1.11	0.53
	Sample 7	0.90	0.62	-0.01	1.18	0.54
	Sample 8	1.18	0.71	0.00	1.06	0.52
	Sample 9	1.30	0.63	-0.04	0.98	0.49
	Sample 10	Sample too small to sieve				

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
	Min	0.49	0.62	-0.18	0.98	0.49
	Max	1.30	0.90	0.00	1.28	0.56
	Average	0.94	0.72	-0.08	1.13	0.53
	SEE	0.10	0.03	0.02	0.03	0.01
5-Jan-99	Sample 1	1.45	0.53	0.03	1.44	0.59
	Sample 2	1.51	0.69	-0.24	1.12	0.53
	Sample 3	0.84	1.12	-0.13	0.93	0.48
	Sample 4	1.09	0.99	-0.04	0.83	0.45
	Sample 5	1.01	0.51	0.03	1.04	0.51
	Sample 6	0.99	0.51	0.06	1.04	0.51
	Sample 7	1.10	0.60	-0.05	1.00	0.50
	Sample 8	0.96	0.90	0.03	1.03	0.51
	Sample 9	1.53	0.74	-0.26	0.92	0.48
	Sample 10	1.36	0.62	-0.03	0.93	0.48
	Min	0.84	0.51	-0.26	0.83	0.45
	Max	1.53	1.12	0.06	1.44	0.59
	Average	1.18	0.72	-0.06	1.03	0.50
	SEE	0.08	0.07	0.04	0.05	0.01
12-Jan-99	Sample 1	Sample too small to sieve				
	Sample 2	1.34	0.68	-0.13	1.04	0.51
	Sample 3	1.18	0.91	-0.24	1.05	0.51
	Sample 4	1.07	0.89	-0.19	1.03	0.51
	Sample 5	0.91	0.76	-0.03	1.15	0.54
	Sample 6	0.76	0.82	-0.07	1.03	0.51
	Sample 7	1.18	0.83	-0.16	1.02	0.50
	Sample 8	1.36	0.75	-0.25	1.08	0.52
	Sample 9	1.28	0.71	-0.15	0.99	0.50
	Sample 10	1.39	0.73	-0.06	0.86	0.46
	Min	0.76	0.68	-0.25	0.86	0.46
	Max	1.39	0.91	-0.03	1.15	0.54
	Average	1.16	0.79	-0.14	1.03	0.51
	SEE	0.07	0.03	0.03	0.03	0.01
20-Jan-99	Sample 1	Sample too small to sieve				
	Sample 2	1.43	0.65	-0.23	1.15	0.53
	Sample 3	1.51	0.98	-0.41	1.83	0.65
	Sample 4	1.66	0.58	-0.21	1.04	0.51
	Sample 5	1.64	0.56	-0.21	1.17	0.54
	Sample 6	1.66	0.54	-0.14	1.00	0.50
	Sample 7	1.60	0.63	-0.23	1.10	0.52
	Sample 8	Sample too small to sieve				
	Sample 9	1.71	0.52	-0.15	1.14	0.53

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
	Sample 10	Sample too small to sieve				
	Sample 11	1.61	0.57	-0.16	1.01	0.50
	Sample 12	1.65	0.59	-0.21	1.01	0.50
	Sample 13	1.58	0.67	-0.26	1.04	0.51
	Sample 14	1.47	0.69	-0.29	1.04	0.51
	Sample 15	1.46	0.62	-0.24	1.03	0.51
	Sample 16	Sample too small to sieve				
	Min	1.71	0.98	-0.14	1.83	0.65
	Max	1.43	0.52	-0.41	1.00	0.50
	Average	1.58	0.63	-0.23	1.13	0.53
	SEE	0.03	0.03	0.02	0.07	0.01

Table A6 Particle size statistics for bed-material samples collected at Upper Swift Creek February 1999

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
2-Feb-99	Sample 1	Sample too small to sieve				
	Sample 2	1.28	1.24	-0.58	1.40	0.58
	Sample 3	1.98	0.63	-0.47	1.80	0.64
	Sample 4	Sample too small to sieve				
	Sample 5	1.97	0.50	-0.34	1.26	0.56
	Sample 6	1.97	0.84	-0.63	2.62	0.72
	Sample 7	1.27	1.24	-0.54	1.29	0.56
	Sample 8	Sample too small to sieve				
	Min	1.27	0.50	-0.63	1.26	0.56
Max	1.98	1.24	-0.34	2.62	0.72	
Average	1.69	0.89	-0.51	1.67	0.61	
SEE	0.17	0.15	0.05	0.26	0.03	
9-Feb-99	Sample 1	1.13	0.57	-0.14	1.17	0.54
	Sample 2	0.98	0.69	-0.08	1.11	0.53
	Sample 3	1.15	0.59	0.01	1.10	0.52
	Sample 4	1.33	0.53	-0.02	1.01	0.50
	Sample 5	1.27	0.59	0.06	0.99	0.50
	Sample 6	Sample too small to sieve				
	Sample 7	1.32	0.53	0.01	0.95	0.49
	Sample 8	1.08	0.58	-0.04	1.03	0.51
	Sample 9	0.88	0.81	-0.19	1.08	0.52
	Sample 10	1.13	0.59	-0.06	0.98	0.49
	Min	0.88	0.53	-0.19	0.95	0.49
	Max	1.33	0.81	0.06	1.17	0.54
	Average	1.14	0.61	-0.05	1.04	0.51
	SEE	0.05	0.03	0.03	0.02	0.01

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis	
16-Feb-99	Sample 1	1.92	0.41	-0.08	1.01	0.50	
	Sample 2	1.29 0.55		0.00	0.88	0.47	
	Sample 3	1.74	0.51	-0.14	1.21	0.55	
	Sample 4	Sample too small to sieve					
	Sample 5	Sample too small to sieve					
	Sample 6	2.03	0.40	-0.38	1.05	0.51	
	Sample 7	1.32	0.57	-0.30	1.13	0.53	
	Sample 8	1.63	0.50	-0.21	1.23	0.55	
	Sample 9	1.56	0.55	-0.14	1.02	0.51	
	Sample 10	1.83	0.49	-0.19	1.07	0.52	
		Min	1.29	0.40	-0.38	0.88	0.47
		Max	2.03	0.57	0.00	1.23	0.55
		Average	1.66	0.50	-0.18	1.07	0.52
		SEE	0.09	0.02	0.04	0.04	0.01
23-Feb-99	Sample 1	1.07	0.53	-0.01	1.03	0.51	
	Sample 2	1.21	0.61	-0.14	0.84	0.46	
	Sample 3	0.84	0.74	-0.02	1.14	0.53	
	Sample 4	0.77	0.81	-0.03	1.07	0.52	
	Sample 5	1.34	0.56	-0.05	0.99	0.50	
	Sample 6	1.10 0.47		0.24	0.85	0.46	
	Sample 7	Sample too small to sieve					
	Sample 8	1.40	0.50	-0.19	0.91	0.48	
	Sample 9	0.47	0.79	-0.04	1.03	0.51	
	Sample 10	0.83	0.80	0.01	1.02	0.51	
	Sample 11	0.85 0.81		0.17	0.82	0.45	
	Sample 12	1.03 0.54		0.05	1.03	0.51	
		Min	0.47	0.47	-0.19	0.82	0.45
		Max	1.40	0.81	0.24	1.14	0.53
	Average	0.99	0.65	0.00	0.97	0.49	
	SEE	0.08	0.04	0.04	0.03	0.01	

Table A7 Particle size statistics for bed-material samples collected at Upper Swift Creek March 1999

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
3-Mar-99	Sample 1	1.30	0.49	-0.02	0.92	0.48
	Sample 2	1.07	0.56	0.01	0.99	0.50
	Sample 3	1.23	0.59	-0.09	0.92	0.48
	Sample 4	1.06	0.64	0.01	0.94	0.48
	Sample 5	1.12	0.58	-0.03	1.01	0.50
	Sample 6	1.00	0.57	0.02	0.97	0.49

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
	Sample 7	1.00	0.53	0.05	1.02	0.51
	Sample 8	1.20	0.58	-0.02	0.96	0.49
	Sample 9	1.17	0.63	0.00	0.98	0.50
	Sample 10	1.22	0.59	-0.08	0.91	0.48
	Sample 11	0.76	0.66	-0.03	1.20	0.55
	Sample 12	1.25	0.48	0.01	0.88	0.47
	Min	0.76	0.48	-0.09	0.88	0.47
	Max	1.30	0.66	0.05	1.20	0.55
	Average	1.11	0.58	-0.01	0.97	0.49
	SEE	0.04	0.02	0.01	0.02	0.01
9-Mar-99	Sample 1	1.33	0.71	-0.15	0.85	0.46
	Sample 2	0.72	0.84	-0.03	1.10	0.52
	Sample 3	1.03	0.77	0.02	1.01	0.50
	Sample 4	1.16	0.77	-0.10	0.75	0.43
	Sample 5	1.15	0.56	-0.11	0.92	0.48
	Sample 6	Sample too small to sieve				
	Sample 7	Sample too small to sieve				
	Sample 8	1.55	0.60	-0.12	0.92	0.48
	Sample 9	1.35	0.60	-0.01	1.03	0.51
	Sample 10	1.10	0.73	0.02	1.02	0.51
	Sample 11	0.84	0.78	0.03	1.04	0.51
	Sample 12	1.01	0.49	0.08	1.04	0.51
	Min	0.72	0.49	-0.15	0.75	0.43
	Max	1.55	0.84	0.08	1.10	0.52
	Average	1.12	0.68	-0.04	0.97	0.49
	SEE	0.08	0.04	0.02	0.03	0.01
17-Mar-99	Sample 1	1.12	0.77	-0.11	1.34	0.57
	Sample 2	1.13	0.46	-0.01	1.05	0.51
	Sample 3	1.16	0.72	-0.17	1.13	0.53
	Sample 4	1.23	0.53	-0.08	0.99	0.50
	Sample 5	1.16	0.56	-0.04	0.96	0.49
	Sample 6	1.08	0.51	0.03	1.09	0.52
	Sample 7	1.24	0.59	-0.15	1.01	0.50
	Sample 8	1.57	0.52	-0.24	1.20	0.55
	Sample 9	1.29	0.45	0.06	1.22	0.55
	Sample 10	1.24	0.69	-0.08	1.07	0.52
	Min	1.08	0.45	-0.24	0.96	0.49
	Max	1.57	0.77	0.06	1.34	0.57
	Average	1.22	0.58	-0.08	1.11	0.52
	SEE	0.04	0.03	0.03	0.04	0.01

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis	
23-Mar-99	Sample 1	1.10	0.53	0.02	1.04	0.51	
	Sample 2	1.20	0.53	0.01	0.89	0.47	
	Sample 3	1.02	0.72	-0.02	1.11	0.53	
	Sample 4	1.17	0.60	-0.05	0.97	0.49	
	Sample 5	0.81	0.75	-0.05	1.07	0.52	
	Sample 6	0.87	0.58	0.00	1.16	0.54	
	Sample 7	0.85	0.69	0.01	1.08	0.52	
	Sample 8	0.74	0.73	-0.06	1.26	0.56	
	Sample 9	1.02	0.69	0.01	0.98	0.50	
	Sample 10	1.02	0.79	-0.04	1.00	0.50	
	Sample 11	1.04	0.50	0.28	0.95	0.49	
	Sample 12	Sample too small to sieve					
	Min	0.74	0.50	-0.06	0.89	0.47	
	Max	1.20	0.79	0.28	1.26	0.56	
	Average	0.98	0.65	0.01	1.05	0.51	
	SEE	0.04	0.03	0.03	0.03	0.01	
30-Mar-99	Sample 1	Sample too small to sieve					
	Sample 2	1.83	0.45	-0.09	0.93	0.48	
	Sample 3	1.34	0.53	0.06	1.06	0.51	
	Sample 4	1.15	0.70	-0.11	1.00	0.50	
	Sample 5	0.68	0.74	-0.11	1.13	0.53	
	Sample 6	0.81	0.58	-0.06	1.20	0.55	
	Sample 7	0.84	0.62	-0.07	1.20	0.54	
	Sample 8	0.60	0.86	-0.11	1.10	0.52	
	Sample 9	0.70	0.52	-0.07	1.20	0.54	
	Sample 10	1.28	0.64	-0.14	1.00	0.50	
	Sample 11	1.31	0.51	-0.02	0.89	0.47	
	Sample 12	Sample too small to sieve					
	Min	0.60	0.45	-0.14	0.89	0.47	
	Max	1.83	0.86	0.06	1.20	0.55	
	Average	1.05	0.62	-0.07	1.07	0.52	
	SEE	0.12	0.04	0.02	0.04	0.01	
31-Mar-99	Sample 1	Sample too small to sieve					
	Sample 2	1.21	0.65	-0.05	0.99	0.50	
	Sample 3	1.11	0.68	-0.05	0.95	0.49	
	Sample 4	0.95	0.68	-0.03	1.06	0.52	
	Sample 5	0.87	0.72	-0.14	1.17	0.54	
	Sample 6	0.95	0.55	-0.03	1.08	0.52	
	Sample 7	0.87	0.67	-0.09	1.20	0.55	
	Sample 8	0.82	0.75	-0.11	1.06	0.51	
	Sample 9	0.79	0.66	-0.08	0.76	0.43	

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
	Sample 10	0.98	0.64	-0.10	1.16	0.54
	Sample 11	1.34	0.59	-0.14	1.03	0.51
	Sample 12	Sample too small to sieve				
	Min	1.34	0.75	-0.03	1.20	0.55
	Max	0.79	0.55	-0.14	0.76	0.43
	Average	0.99	0.66	-0.08	1.05	0.51
	SEE	0.06	0.02	0.01	0.04	0.01

Table A8 Particle size statistics for bed-material samples collected at Upper Swift Creek April 1999

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
6-Apr-99	Sample 1	Sample too small to sieve				
	Sample 2	1.03 0.63		0.01	0.99	0.50
	Sample 3	1.28	0.59	-0.13	0.98	0.50
	Sample 4	0.94	0.74	-0.04	0.98	0.50
	Sample 5	0.75	0.76	-0.04	1.23	0.55
	Sample 6	0.82 0.53		0.07	1.10	0.52
	Sample 7	0.87 0.54		0.11	1.09	0.52
	Sample 8	0.74 0.67		0.03	1.15	0.54
	Sample 9	1.05	0.75	-0.02	0.99	0.50
	Sample 10	1.21	0.60	-0.08	0.91	0.48
	Sample 11	1.18	0.59	-0.06	0.91	0.48
	Sample 12	Sample too small to sieve				
		Min	0.74	0.53	-0.13	0.91
	Max	1.28	0.76	0.11	1.23	0.55
	Average	0.99	0.64	-0.02	1.03	0.51
	SEE	0.06	0.03	0.02	0.03	0.01
13-Apr-99	Sample 1	1.05	0.52	0.08	1.00	0.50
	Sample 2	0.89	0.60	0.05	1.07	0.52
	Sample 3	1.19	0.65	-0.05	0.93	0.48
	Sample 4	0.83	0.93	-0.07	0.99	0.50
	Sample 5	0.59	0.95	-0.01	0.89	0.47
	Sample 6	0.75	0.61	-0.02	1.08	0.52
	Sample 7	0.73	0.64	-0.02	1.04	0.51
	Sample 8	0.73	0.86	-0.02	0.93	0.48
	Sample 9	0.24	1.32	-0.01	0.80	0.45
	Sample 10	1.16	0.64	0.02	0.98	0.49
	Sample 11	1.18	0.56	0.00	0.99	0.50
	Sample 12	0.93	0.53	0.05	1.04	0.51
		Min	0.24	0.52	-0.07	0.80
	Max	1.19	1.32	0.08	1.08	0.52

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis	
	Average	0.86	0.73	0.00	0.98	0.49	
	SEE	0.09	0.08	0.01	0.03	0.01	
20-Apr-99	Sample 1	0.96	0.59	0.03	0.96	0.49	
	Sample 2	1.42	0.55	-0.06	0.97	0.49	
	Sample 3	1.17	0.62	-0.04	0.90	0.47	
	Sample 4	0.81	0.59	0.01	1.13	0.53	
	Sample 5	0.79	0.88	-0.06	1.06	0.51	
	Sample 6	Sample too small to sieve					
	Sample 7	1.18	0.51	-0.04	0.98	0.50	
	Sample 8	0.76	0.79	-0.08	1.08	0.52	
	Sample 9	0.88	0.63	-0.06	1.07	0.52	
	Sample 10	1.07 0.61		0.03	0.94	0.48	
	Sample 11	1.33	0.55	-0.03	1.00	0.50	
	Sample 12	1.08	0.62	-0.03	0.92	0.48	
		Min	0.76	0.51	-0.08	0.90	0.47
		Max	1.42	0.88	0.03	1.13	0.53
	Average	1.04	0.63	-0.03	1.00	0.50	
	SEE	0.07	0.03	0.01	0.02	0.01	
4-May-99	Sample 1	Sample too small to sieve					
	Sample 2	1.49	0.58	-0.19	1.03	0.51	
	Sample 3	0.78 0.83		0.01	1.00	0.50	
	Sample 4	1.04	0.68	-0.01	0.94	0.48	
	Sample 5	0.83	0.81	0.02	0.99	0.50	
	Sample 6	1.16 0.54		0.00	0.93	0.48	
	Sample 7	0.49	0.67	0.00	1.01	0.50	
	Sample 8	Sample too small to sieve					
	Sample 9	1.64	0.54	-0.13	1.00	0.50	
	Sample 10	Sample too small to sieve					
		Min	1.64	0.83	0.02	1.03	0.51
	Max	0.49	0.54	-0.19	0.93	0.48	
	Average	1.06	0.66	-0.04	0.98	0.50	
	SEE	0.15	0.05	0.03	0.01	0.00	

Table A9 Particle size statistics for bed-material samples collected at Swift Creek January 1999

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis	
15-Dec-98	Sample 1	Sample too small to sieve					
	Sample 2	1.18	0.64	-0.05	1.00	0.50	
	Sample 3	0.66	0.93	-0.12	0.96	0.49	
	Sample 4	0.60	1.01	-0.21	1.06	0.51	
	Sample 5	1.49	0.80	-0.11	1.03	0.51	
	Sample 6	Sample too small to sieve					
	Sample 7	Sample too small to sieve					
	Sample 8	Sample too small to sieve					
	Sample 9	1.02	0.78	-0.10	1.08	0.52	
	Sample 10	1.11	0.57	-0.01	1.01	0.50	
	Sample 11	1.08	0.77	-0.13	1.08	0.52	
	Sample 12	Sample too small to sieve					
		Min	0.60	0.57	-0.21	0.96	0.49
		Max	1.49	1.01	-0.01	1.08	0.52
	Average	1.02	0.79	-0.10	1.03	0.51	
	SEE	0.12	0.06	0.02	0.02	0.00	
6-Jan-99	Sample 1	1.27	0.54	-0.01	0.88	0.47	
	Sample 2	1.49	1.11	-0.58	1.41	0.58	
	Sample 3	1.24	0.72	-0.05	0.99	0.50	
	Sample 4	1.39	0.71	-0.10	0.90	0.47	
	Sample 5	1.41	0.60	-0.02	0.92	0.48	
	Sample 6	1.52	0.45	-0.07	1.02	0.51	
	Sample 7	1.50	0.49	-0.05	1.02	0.50	
	Sample 8	1.35	0.63	-0.05	0.94	0.48	
	Sample 9	1.15	0.76	-0.01	1.01	0.50	
	Sample 10	1.05	0.81	-0.03	1.06	0.51	
	Sample 11	0.92	0.92	-0.10	0.97	0.49	
	Sample 12	1.28	0.60	-0.07	0.98	0.49	
		Min	0.92	0.45	-0.58	0.88	0.47
		Max	1.52	1.11	-0.01	1.41	0.58
	Average	1.30	0.70	-0.09	1.01	0.50	
	SEE	0.05	0.05	0.04	0.04	0.01	
20-Jan-99	Sample 1	Sample too small to sieve					
	Sample 2	1.67	0.54	-0.18	1.15	0.54	
	Sample 3	0.74	0.90	-0.04	0.95	0.49	
	Sample 4	0.99	0.80	-0.07	0.97	0.49	
	Sample 5	1.22	0.60	-0.06	0.95	0.49	
	Sample 6	1.21	0.56	-0.09	0.92	0.48	
	Sample 7	1.18	0.54	-0.07	1.01	0.50	
	Sample 8	1.38	0.54	-0.09	0.95	0.49	

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
	Sample 9	1.19 0.60		-0.06	1.00	0.50
	Sample 10	1.19	0.67	-0.16	1.01	0.50
	Sample 11	1.15 0.62		-0.07	1.00	0.50
	Sample 12	Sample too small to sieve				
	Min	0.74	0.54	-0.18	0.92	0.48
	Max	1.67	0.90	-0.04	1.15	0.54
	Average	1.19	0.64	-0.09	0.99	0.50
	SEE	0.08	0.04	0.01	0.02	0.00

Table A10 Particle size statistics for bed-material samples collected at Swift Creek February 1999

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
3-Feb-99	Sample 1	Sample too small to sieve				
	Sample 2	0.09	0.89	-0.15	1.00	0.50
	Sample 3	0.58	0.71	-0.13	1.03	0.51
	Sample 4	0.75	0.66	-0.12	1.14	0.53
	Sample 5	0.71	0.79	-0.21	1.31	0.57
	Sample 6	1.16	0.50	-0.01	1.00	0.50
	Sample 7	0.93	0.38	0.35	1.04	0.51
	Sample 8	1.15	0.51	0.03	0.98	0.49
	Sample 9	0.59	0.56	-0.17	1.23	0.55
	Sample 10	0.70	0.66	-0.16	1.53	0.60
	Sample 11	1.03	0.78	-0.08	1.20	0.55
	Sample 12	0.58	0.82	-0.20	1.11	0.53
	Sample 13	0.64	0.71	-0.20	1.13	0.53
	Sample 14	Sample too small to sieve				
	Min	0.09	0.38	-0.21	0.98	0.49
	Max	1.16	0.89	0.35	1.53	0.60
	Average	0.74	0.66	-0.09	1.14	0.53
	SEE	0.09	0.04	0.05	0.05	0.01
10-Feb-99	Sample 1	1.21	0.95	-0.30	0.87	0.47
	Sample 2	0.83	0.59	-0.08	1.27	0.56
	Sample 3	1.01	0.60	-0.05	1.17	0.54
	Sample 4	1.08	0.50	-0.09	1.07	0.52
	Sample 5	0.99	0.52	-0.04	1.12	0.53
	Sample 6	1.01	0.42	-0.33	1.00	0.50
	Sample 7	1.00	0.57	-0.06	1.05	0.51
	Sample 8	0.87	0.61	-0.11	1.23	0.55
	Sample 9	0.45	0.47	0.21	1.19	0.54
	Sample 10	1.46	0.75	-0.22	1.10	0.52

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
	Min	0.45	0.42	-0.33	0.87	0.47
	Max	1.46	0.95	0.21	1.27	0.56
	Average	0.99	0.60	-0.11	1.11	0.52
	SEE	0.08	0.05	0.05	0.04	0.01
17-Feb-99	Sample 1	0.69	0.66	0.27	0.92	0.48
	Sample 2	0.22	0.96	-0.22	1.02	0.51
	Sample 3	0.18	0.89	-0.17	1.02	0.51
	Sample 4	0.84	0.61	-0.11	1.25	0.56
	Sample 5	1.04	0.68	-0.01	1.04	0.51
	Sample 6	0.71	0.61	-0.01	1.24	0.55
	Sample 7	1.36	0.49	0.03	1.00	0.50
	Sample 8	1.34	0.47	-0.02	0.92	0.48
	Sample 9	0.91	0.64	-0.02	1.10	0.52
	Sample 10	1.13	0.61	-0.02	1.05	0.51
	Sample 11	0.13	0.75	0.03	1.12	0.53
	Sample 12	0.09	1.04	-0.17	0.94	0.49
	Sample 13	0.21	0.91	-0.27	1.04	0.51
	Sample 14	1.12	0.45	0.09	0.88	0.47
	Min	0.09	0.45	-0.27	0.88	0.47
	Max	1.36	1.04	0.27	1.25	0.56
	Average	0.71	0.70	-0.04	1.04	0.51
	SEE	0.13	0.05	0.04	0.03	0.01
23-Feb-99	Sample 1	1.00	0.70	-0.15	1.21	0.55
	Sample 2	0.90	0.75	-0.11	1.14	0.53
	Sample 3	0.61	0.82	-0.13	1.07	0.52
	Sample 4	1.03	0.66	-0.03	1.03	0.51
	Sample 5	1.07	0.58	0.01	1.01	0.50
	Sample 6	1.09	0.55	0.00	1.03	0.51
	Sample 7	0.99	0.67	-0.02	1.06	0.51
	Sample 8	0.67	0.84	-0.08	1.05	0.51
	Sample 9	0.87	0.80	-0.11	1.07	0.52
	Sample 10	0.90	0.76	-0.13	1.26	0.56
	Min	0.61	0.55	-0.15	1.01	0.50
	Max	1.09	0.84	0.01	1.26	0.56
	Average	0.91	0.71	-0.07	1.09	0.52
	SEE	0.05	0.03	0.02	0.03	0.01

Table A11 Particle size statistics for bed-material samples collected at Swift Creek March 1999

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis	
2-Mar-99	Sample 1	1.15	0.44	-0.08	1.03	0.51	
	Sample 2	0.97	0.50	0.12	1.07	0.52	
	Sample 3	0.65	0.79	-0.12	1.21	0.55	
	Sample 4	0.48	0.92	-0.11	1.18	0.54	
	Sample 5	0.83 0.73		-0.01	0.98	0.49	
	Sample 6	1.16 0.60		0.04	0.86	0.46	
	Sample 7	Sample too small to sieve					
	Sample 8	0.76	0.46	-0.01	1.16	0.54	
	Sample 9	0.97	0.57	0.04	1.07	0.52	
	Sample 10	0.89	0.69	0.03	1.09	0.52	
	Sample 11	0.39	0.91	-0.16	1.19	0.54	
	Sample 12	0.62	0.77	-0.10	1.19	0.54	
	Sample 13	1.10	0.52	0.02	0.97	0.49	
	Sample 14	1.36	0.68	0.23	1.34	0.57	
	Min	0.39	0.44	-0.16	0.86	0.46	
	Max	1.36	0.92	0.23	1.34	0.57	
	Average	0.87	0.66	-0.01	1.10	0.52	
	SEE	0.08	0.04	0.03	0.04	0.01	
9-Mar-99	Sample 1	0.43	0.84	-0.24	1.54	0.61	
	Sample 2	1.07	0.67	-0.04	1.17	0.54	
	Sample 3	0.32	1.06	-0.16	1.11	0.53	
	Sample 4	0.46	0.90	-0.18	1.25	0.56	
	Sample 5	1.01	0.62	0.02	1.01	0.50	
	Sample 6	1.17	0.63	0.08	1.04	0.51	
	Sample 7	1.18	0.65	0.07	1.05	0.51	
	Sample 8	1.00	0.64	0.02	1.05	0.51	
	Sample 9	0.87	0.75	-0.10	1.19	0.54	
	Sample 10	0.58	0.97	-0.18	1.18	0.54	
	Sample 11	0.97	0.78	-0.11	1.26	0.56	
	Sample 12	0.84	0.79	-0.01	1.06	0.51	
		Min	0.32	0.62	-0.24	1.01	0.50
		Max	1.18	1.06	0.08	1.54	0.61
	Average	0.82	0.78	-0.07	1.16	0.54	
	SEE	0.09	0.04	0.03	0.04	0.01	
18-Mar-99	Sample 1	0.19	0.98	-0.24	1.04	0.51	
	Sample 2	0.84	0.54	-0.03	1.16	0.54	
	Sample 3	0.65	0.73	-0.13	1.19	0.54	
	Sample 4	0.51	0.77	0.10	1.12	0.53	
	Sample 5	0.57	0.83	-0.07	1.18	0.54	
	Sample 6	0.65	0.61	-0.02	1.16	0.54	
	Sample 7	0.78	0.58	0.01	1.38	0.58	
	Sample 8	0.71	0.73	-0.07	1.21	0.55	

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
	Sample 9	0.73	0.73	-0.06	1.20	0.54
	Sample 10	0.43	0.91	-0.27	1.36	0.58
	Sample 11	0.70	0.66	-0.13	1.30	0.57
	Sample 12	0.56	0.89	-0.23	1.26	0.56
	Min	0.19	0.54	-0.27	1.04	0.51
	Max	0.84	0.98	0.10	1.38	0.58
	Average	0.61	0.75	-0.10	1.21	0.55
	SEE	0.05	0.04	0.03	0.03	0.01
23-Mar-99	Sample 1	1.12	0.47	0.07	0.92	0.48
	Sample 2	0.14	0.96	-0.20	1.11	0.52
	Sample 3	0.23	0.99	-0.24	1.02	0.51
	Sample 4	0.54	0.77	-0.19	1.23	0.55
	Sample 5	0.80	0.72	-0.03	1.13	0.53
	Sample 6	0.87	0.58	0.00	1.26	0.56
	Sample 7	0.78	0.67	-0.12	1.58	0.61
	Sample 8	0.74	0.77	0.00	1.22	0.55
	Sample 9	0.42	0.84	-0.12	1.15	0.53
	Sample 10	0.19	1.01	-0.20	1.01	0.50
	Sample 11	0.37	0.92	-0.22	1.18	0.54
	Sample 12	1.24	0.48	-0.01	0.92	0.48
	Min	0.14	0.47	-0.24	0.92	0.48
	Max	1.24	1.01	0.07	1.58	0.61
	Average	0.62	0.76	-0.10	1.14	0.53
	SEE	0.10	0.05	0.03	0.05	0.01
30-Mar-99	Sample 1	0.73	0.90	-0.18	1.16	0.54
	Sample 2	1.38	0.74	-0.32	1.18	0.54
	Sample 3	1.18	0.97	-0.31	1.18	0.54
	Sample 4	1.32	0.90	-0.29	1.19	0.54
	Sample 5	1.12	0.76	-0.07	1.07	0.52
	Sample 6	1.22	0.64	0.02	0.98	0.50
	Sample 7	1.16	0.64	0.02	0.96	0.49
	Sample 8	1.43	0.71	-0.89	1.04	0.51
	Sample 9	1.45	0.75	-0.20	1.01	0.50
	Sample 10	1.16	0.95	-0.32	1.14	0.53
	Sample 11	1.57	0.50	-0.13	1.06	0.51
	Sample 12	0.80	0.92	-0.10	1.07	0.52
	Min	0.73	0.50	-0.89	0.96	0.49
	Max	1.57	0.97	0.02	1.19	0.54
	Average	1.21	0.78	-0.23	1.09	0.52
	SEE	0.07	0.04	0.07	0.02	0.01

Table A12 Particle size statistics for bed-material samples collected at Swift Creek April 1999

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
6-Apr-99	Sample 1	0.74	0.70	-0.13	1.23	0.55
	Sample 2	0.74	0.92	-0.14	0.98	0.50
	Sample 3	Sample too small to sieve				
	Sample 4	0.90	0.69	-0.15	1.19	0.54
	Sample 5	1.01	0.66	-0.09	1.09	0.52
	Sample 6	0.79	0.66	-0.09	1.33	0.57
	Sample 7	1.04	0.46	0.07	0.98	0.50
	Sample 8	1.00	0.45	0.12	1.00	0.50
	Sample 9	1.30	0.86	-0.28	1.38	0.58
	Sample 10	0.89	0.61	-0.01	1.23	0.55
	Sample 11	0.93	0.67	-0.06	1.07	0.52
	Sample 12	1.01	0.68	-0.13	1.12	0.53
	Sample 13	1.22	0.51	-0.05	1.00	0.50
	Sample 14	0.76	0.66	-0.06	1.03	0.51
		Min	0.74	0.45	-0.28	0.98
	Max	1.30	0.92	0.12	1.38	0.58
	Average	0.95	0.66	-0.08	1.13	0.53
	SEE	0.05	0.04	0.03	0.04	0.01
12-Apr-99	Sample 1	1.12	0.49	-0.06	1.04	0.51
	Sample 2	0.44	1.03	-0.15	1.04	0.51
	Sample 3	1.06	0.71	-0.11	1.15	0.54
	Sample 4	1.06	0.68	-0.15	1.13	0.53
	Sample 5	0.97	0.79	-0.10	1.09	0.52
	Sample 6	1.10	0.59	0.03	0.96	0.49
	Sample 7	Sample too small to sieve				
	Sample 8	1.28 0.52		0.09	0.97	0.49
	Sample 9	0.88 0.75		-0.09	1.13	0.53
	Sample 10	1.17	0.67	-0.05	1.09	0.52
	Sample 11	0.81	0.77	-0.08	1.08	0.52
	Sample 12	0.03	0.91	-0.12	0.95	0.49
	Sample 13	0.47	0.91	-0.08	1.04	0.51
	Sample 14	1.39	0.43	-0.05	0.91	0.48
		Min	0.03	0.43	-0.15	0.91
	Max	1.39	1.03	0.09	1.15	0.54
	Average	0.91	0.71	-0.07	1.04	0.51
	SEE	0.11	0.05	0.02	0.02	0.01
20-Apr-99	Sample 1	1.17	0.57	-0.09	0.96	0.49
	Sample 2	0.81	0.78	-0.08	1.04	0.51
	Sample 3	0.94	0.68	-0.03	1.11	0.53
	Sample 4	0.25	0.91	0.00	1.00	0.50
	Sample 5	0.55	0.72	-0.05	1.25	0.56
	Sample 6	1.08	0.64	-0.06	0.94	0.48

Date Collected	Sample Name	Graphic Mean (ϕ)	Inclusive Graphic S.D. (ϕ)	Inclusive Skewness	Kurtosis	Transformed Kurtosis
	Sample 7	0.91	0.72	0.02	1.08	0.52
	Sample 8	0.71	0.76	-0.07	1.14	0.53
	Sample 9	0.37	0.82	0.03	1.03	0.51
	Sample 10	0.77	0.77	-0.11	1.11	0.53
	Sample 11	1.11	0.58	-0.04	1.00	0.50
	Sample 12	1.21	0.52	-0.08	1.02	0.51
	Min	0.25	0.52	-0.11	0.94	0.48
	Max	1.21	0.91	0.03	1.25	0.56
	Average	0.82	0.71	-0.05	1.06	0.51
	SEE	0.09	0.03	0.01	0.02	0.01
27-Apr-99	Sample 1	1.51	0.43	-0.06	0.99	0.50
	Sample 2	1.10	0.64	-0.14	1.10	0.52
	Sample 3	0.22	1.02	-0.01	1.07	0.52
	Sample 4	0.57	0.88	-0.12	1.02	0.50
	Sample 5	1.11	0.75	-0.09	1.06	0.51
	Sample 6	0.98	0.65	-0.06	1.14	0.53
	Sample 7	0.80	0.76	-0.13	1.24	0.55
	Sample 8	1.03	0.76	-0.14	1.14	0.53
	Sample 9	0.88	0.70	-0.01	1.11	0.52
	Sample 10	0.66	0.86	-0.10	1.06	0.51
	Sample 11	1.15	0.58	-0.03	1.00	0.50
	Sample 12	Sample too small to sieve				
	Min	0.22	0.43	-0.14	0.99	0.50
	Max	1.51	1.02	-0.01	1.24	0.55
	Average	0.91	0.73	-0.08	1.08	0.52
	SEE	0.10	0.05	0.01	0.02	0.00
4-May-99	Sample 1	Sample too small to sieve				
	Sample 2	0.86	0.70	-0.05	1.28	0.56
	Sample 3	0.90	0.68	0.00	1.11	0.53
	Sample 4	0.80	0.85	-0.10	1.00	0.50
	Sample 5	0.97	0.61	0.03	1.03	0.51
	Sample 6	1.06	0.53	0.10	0.98	0.50
	Sample 7	1.06	0.57	0.11	0.97	0.49
	Sample 8	1.10	0.64	0.02	1.07	0.52
	Sample 9	0.77	0.91	-0.11	1.04	0.51
	Sample 10	0.91	0.69	-0.05	1.13	0.53
	Sample 11	1.04	1.03	-0.19	1.24	0.55
	Sample 12	0.33	1.06	0.03	1.01	0.50
	Min	0.33	0.53	-0.19	0.97	0.49
	Max	1.10	1.06	0.11	1.28	0.56
	Average	0.91	0.72	-0.01	1.08	0.52
	SEE	0.06	0.05	0.03	0.03	0.01

Appendix B East Tributary cumulative frequency data for bed-material load samples for the 1998/1999 wet season

This appendix contains the cumulative percentage values for the bed-material load samples collected at East Tributary for the 1998/1999 Wet season. All samples were dry sieved through a nest of sieves to a value of 4 phi (63 μm).

Table B1 Cumulative frequency data for bed material flux samples in East Tributary for 5 January 1999

Date	5-Jan-99	No. of Samples = 8		1st Transect = 4	2nd Transect = 4		
Sample 1	Sample too small to sieve (1.21g)						
Sample 2							
	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
	-2.0	4.0 mm	0.21	0.09	-2.0	4.0 mm	
	-1.5	2.4 mm	4.84	2.04	-1.5	2.4 mm	0.06
	-1.0	2.0 mm	9.08	3.82	-1.0	2.0 mm	0.24
	-0.5	1.4 mm	32.17	13.54	-0.5	1.4 mm	0.66
	0.0	1.0 mm	72.12	30.35	0.0	1.0 mm	1.51
	0.5	710 µm	125.50	52.81	0.5	710 µm	3.85
	1.0	500 µm	190.81	80.29	1.0	500 µm	11.58
	1.5	355 µm	223.03	93.84	1.5	355 µm	20.29
	2.0	250 µm	234.72	98.76	2.0	250 µm	23.77
	2.5	180 µm	237.47	99.92	2.5	180 µm	24.45
	3.0	125 µm	237.59	99.97	3.0	125 µm	24.47
	3.5	90 µm	237.63	99.99	3.5	90 µm	
	4.0	63 µm	237.64	99.99	4.0	63 µm	
		<63 µm	237.66	100.00		<63 µm	
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 3							
	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
	-2.0	4.0 mm			-2.0	4.0 mm	
	-1.5	2.4 mm	0.63	0.98	-1.5	2.4 mm	0.02
	-1.0	2.0 mm	1.15	1.79	-1.0	2.0 mm	0.23
	-0.5	1.4 mm	3.11	4.84	-0.5	1.4 mm	1.02
	0.0	1.0 mm	6.54	10.18	0.0	1.0 mm	2.65
	0.5	710 µm	13.93	21.69	0.5	710 µm	6.03
	1.0	500 µm	32.32	50.33	1.0	500 µm	14.57
	1.5	355 µm	51.32	79.91	1.5	355 µm	21.95
	2.0	250 µm	61.79	96.22	2.0	250 µm	25.02
	2.5	180 µm	64.17	99.92	2.5	180 µm	25.60
	3.0	125 µm	64.21	99.98	3.0	125 µm	25.61
	3.5	90 µm	64.22	100.00	3.5	90 µm	25.62
	4.0	63 µm			4.0	63 µm	
		<63 µm				<63 µm	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table B1 Cumulative frequency data for bed material flux samples in East Tributary for 5 January 1999 (Continued).

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.34	0.24
-1.0	2.0 mm	0.83	0.59
-0.5	1.4 mm	3.23	2.31
0.0	1.0 mm	8.84	6.31
0.5	710 μ m	24.56	17.54
1.0	500 μ m	68.68	49.05
1.5	355 μ m	113.86	81.31
2.0	250 μ m	135.60	96.84
2.5	180 μ m	139.86	99.88
3.0	125 μ m	139.98	99.96
3.5	90 μ m	139.99	99.97
4.0	63 μ m	140.00	99.98
	<63 μ m	140.03	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.67	0.17
-1.5	2.4 mm	5.97	1.54
-1.0	2.0 mm	11.95	3.08
-0.5	1.4 mm	38.10	9.81
0.0	1.0 mm	90.41	23.29
0.5	710 μ m	173.07	44.58
1.0	500 μ m	299.66	77.18
1.5	355 μ m	359.63	92.63
2.0	250 μ m	383.85	98.87
2.5	180 μ m	387.81	99.89
3.0	125 μ m	388.07	99.95
3.5	90 μ m	388.14	99.97
4.0	63 μ m	388.20	99.99
	<63 μ m	388.25	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.14	0.17
-1.5	2.4 mm	3.26	4.05
-1.0	2.0 mm	5.47	6.80
-0.5	1.4 mm	14.01	17.42
0.0	1.0 mm	26.04	32.38
0.5	710 μ m	42.12	52.38
1.0	500 μ m	62.48	77.69
1.5	355 μ m	73.59	91.51
2.0	250 μ m	79.13	98.40
2.5	180 μ m	80.30	99.85
3.0	125 μ m	80.36	99.93
3.5	90 μ m	80.40	99.98
4.0	63 μ m	80.42	100.00
	<63 μ m		

Folk (1974) Texture Group: Granular coarse sand

Table B2 Cumulative frequency data for bed material flux samples in East Tributary for 12 January 1999

Date	12-Jan-99	No. of Samples = 10		1st Transect = 5	2nd Transect = 5		
Sample 1				Sample 3			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm	0.03	0.64	-2.0	4.0 mm	2.31	1.05
-1.5	2.4 mm	0.05	1.07	-1.5	2.4 mm	4.64	2.10
-1.0	2.0 mm	0.07	1.49	-1.0	2.0 mm	5.65	2.56
-0.5	1.4 mm	0.10	2.13	-0.5	1.4 mm	8.13	3.69
0.0	1.0 mm	0.14	2.99	0.0	1.0 mm	12.44	5.64
0.5	710 µm	0.26	5.54	0.5	710 µm	20.95	9.50
1.0	500 µm	0.41	8.74	1.0	500 µm	43.85	19.89
1.5	355 µm	0.67	14.29	1.5	355 µm	94.34	42.79
2.0	250 µm	1.97	42.00	2.0	250 µm	170.38	77.28
2.5	180 µm	4.00	85.29	2.5	180 µm	216.84	98.35
3.0	125 µm	4.43	94.46	3.0	125 µm	219.64	99.62
3.5	90 µm	4.55	97.01	3.5	90 µm	220.20	99.88
4.0	63 µm	4.62	98.51	4.0	63 µm	220.35	99.95
	<63 µm	4.69	100.00		<63 µm	220.47	100.00
Folk (1974) Texture Group: Slightly granular fine sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 2				Sample 4			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm	0.96	0.48	-2.0	4.0 mm	9.56	3.56
-1.5	2.4 mm	1.53	0.77	-1.5	2.4 mm	33.09	12.33
-1.0	2.0 mm	2.06	1.04	-1.0	2.0 mm	42.68	15.91
-0.5	1.4 mm	4.47	2.26	-0.5	1.4 mm	62.78	23.40
0.0	1.0 mm	10.82	5.46	0.0	1.0 mm	80.47	29.99
0.5	710 µm	25.22	12.73	0.5	710 µm	101.37	37.78
1.0	500 µm	65.62	33.13	1.0	500 µm	135.39	50.46
1.5	355 µm	117.83	59.49	1.5	355 µm	178.10	66.38
2.0	250 µm	171.02	86.34	2.0	250 µm	235.07	87.61
2.5	180 µm	192.74	97.31	2.5	180 µm	265.37	98.91
3.0	125 µm	196.75	99.33	3.0	125 µm	267.24	99.60
3.5	90 µm	197.60	99.76	3.5	90 µm	267.86	99.84
4.0	63 µm	197.95	99.94	4.0	63 µm	268.09	99.92
	<63 µm	198.07	100.00		<63 µm	268.30	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Granular medium sand			

Table B2 Cumulative frequency data for bed material flux samples in East Tributary for 12 January 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	5.35	0.91
-1.5	2.4 mm	27.54	4.67
-1.0	2.0 mm	44.40	7.53
-0.5	1.4 mm	86.29	14.64
0.0	1.0 mm	146.18	24.79
0.5	710 µm	228.53	38.76
1.0	500 µm	371.78	63.06
1.5	355 µm	473.04	80.23
2.0	250 µm	555.22	94.17
2.5	180 µm	585.43	99.30
3.0	125 µm	588.80	99.87
3.5	90 µm	589.25	99.95
4.0	63 µm	589.47	99.98
	<63 µm	589.57	100.00

Folk (1974) Texture Group: Granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	4.01	2.19
-1.5	2.4 mm	11.83	6.46
-1.0	2.0 mm	17.69	9.66
-0.5	1.4 mm	33.97	18.54
0.0	1.0 mm	52.58	28.70
0.5	710 µm	75.84	41.40
1.0	500 µm	107.31	58.58
1.5	355 µm	134.99	73.68
2.0	250 µm	163.31	89.14
2.5	180 µm	181.40	99.02
3.0	125 µm	182.55	99.65
3.5	90 µm	182.93	99.85
4.0	63 µm	183.07	99.93
	<63 µm	183.20	100.00

Folk (1974) Texture Group: Granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	2.17	1.46
-1.5	2.4 mm	4.03	2.70
-1.0	2.0 mm	4.75	3.19
-0.5	1.4 mm	7.13	4.79
0.0	1.0 mm	11.35	7.62
0.5	710 µm	22.73	15.26
1.0	500 µm	58.94	39.56
1.5	355 µm	105.89	71.07
2.0	250 µm	137.63	92.38
2.5	180 µm	148.23	99.49
3.0	125 µm	148.83	99.89
3.5	90 µm	148.93	99.96
4.0	63 µm	148.96	99.98
	<63 µm	148.99	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.52	0.88
-1.5	2.4 mm	3.60	2.09
-1.0	2.0 mm	4.58	2.66
-0.5	1.4 mm	7.64	4.44
0.0	1.0 mm	14.11	8.19
0.5	710 µm	27.67	16.07
1.0	500 µm	65.85	38.24
1.5	355 µm	114.94	66.76
2.0	250 µm	159.88	92.86
2.5	180 µm	170.96	99.29
3.0	125 µm	172.01	99.90
3.5	90 µm	172.12	99.97
4.0	63 µm	172.15	99.98
	<63 µm	172.18	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table B2 Cumulative frequency data for bed material flux samples in East Tributary for 12 January 1999 (Continued)

Sample 9				Sample 10			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.27	0.16	-2.0	4.0 mm	0.09	0.51
-1.5	2.4 mm	0.69	0.40	-1.5	2.4 mm	0.16	0.90
-1.0	2.0 mm	0.93	0.54	-1.0	2.0 mm	0.19	1.07
-0.5	1.4 mm	2.09	1.21	-0.5	1.4 mm	0.40	2.26
0.0	1.0 mm	4.88	2.82	0.0	1.0 mm	0.65	3.67
0.5	710 µm	13.24	7.65	0.5	710 µm	1.09	6.15
1.0	500 µm	48.36	27.94	1.0	500 µm	1.88	10.62
1.5	355 µm	104.85	60.58	1.5	355 µm	4.81	27.16
2.0	250 µm	157.33	90.90	2.0	250 µm	12.12	68.44
2.5	180 µm	171.44	99.05	2.5	180 µm	17.18	97.01
3.0	125 µm	172.93	99.91	3.0	125 µm	17.56	99.15
3.5	90 µm	173.04	99.98	3.5	90 µm	17.63	99.55
4.0	63 µm	173.07	99.99	4.0	63 µm	17.67	99.77
	<63 µm	173.08	100.00		<63 µm	17.71	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table B3 Cumulative frequency data for bed material flux samples in East Tributary for 19 January 1999

Date	19-Jan-99	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Sample 1			Sample 3				
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.27	0.67	-1.5	2.4 mm	0.05	0.05
-1.0	2.0 mm	0.40	0.99	-1.0	2.0 mm	0.08	0.08
-0.5	1.4 mm	0.92	2.28	-0.5	1.4 mm	0.20	0.21
0.0	1.0 mm	2.09	5.17	0.0	1.0 mm	0.76	0.81
0.5	710 µm	5.77	14.28	0.5	710 µm	3.71	3.94
1.0	500 µm	18.61	46.05	1.0	500 µm	24.61	26.10
1.5	355 µm	32.51	80.45	1.5	355 µm	65.20	69.16
2.0	250 µm	39.26	97.15	2.0	250 µm	89.06	94.46
2.5	180 µm	40.36	99.88	2.5	180 µm	94.20	99.92
3.0	125 µm	40.40	99.98	3.0	125 µm	94.26	99.98
3.5	90 µm	40.41	100.00	3.5	90 µm	94.27	99.99
4.0	63 µm			4.0	63 µm	94.28	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table B3 Cumulative frequency data for bed material flux samples in East Tributary for 19 January 1999 (Continued)

Sample 2

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.06	0.04
-1.5	2.4 mm	0.13	0.09
-1.0	2.0 mm	0.34	0.24
-0.5	1.4 mm	1.08	0.77
0.0	1.0 mm	4.02	2.88
0.5	710 µm	14.63	10.49
1.0	500 µm	58.09	41.66
1.5	355 µm	111.02	79.62
2.0	250 µm	134.45	96.42
2.5	180 µm	139.22	99.84
3.0	125 µm	139.37	99.95
3.5	90 µm	139.42	99.99
4.0	63 µm	139.43	99.99
	<63 µm	139.44	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.03	0.03
-1.0	2.0 mm	0.09	0.08
-0.5	1.4 mm	0.61	0.53
0.0	1.0 mm	2.23	1.95
0.5	710 µm	8.53	7.44
1.0	500 µm	40.29	35.15
1.5	355 µm	85.05	74.21
2.0	250 µm	110.78	96.66
2.5	180 µm	114.42	99.83
3.0	125 µm	114.59	99.98
3.5	90 µm	114.60	99.99
4.0	63 µm	114.60	99.99
	<63 µm	114.61	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 4 Sample too small to sieve (0.33g)

Sample 5 Sample too small to sieve (0.19g)

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.19	1.49
-1.5	2.4 mm	0.23	1.80
-1.0	2.0 mm	0.32	2.50
-0.5	1.4 mm	0.64	5.01
0.0	1.0 mm	1.25	9.78
0.5	710 µm	2.55	19.95
1.0	500 µm	6.46	50.55
1.5	355 µm	10.53	82.39
2.0	250 µm	12.50	97.81
2.5	180 µm	12.76	99.84
3.0	125 µm	12.77	99.92
3.5	90 µm	12.78	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Table B3 Cumulative frequency data for bed material flux samples in East Tributary for 19 January 1999 (Continued)

Sample 7			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.09	0.14
-1.5	2.4 mm	0.25	0.39
-1.0	2.0 mm	0.42	0.65
-0.5	1.4 mm	1.06	1.64
0.0	1.0 mm	3.04	4.69
0.5	710 µm	8.68	13.40
1.0	500 µm	28.94	44.66
1.5	355 µm	51.73	79.83
2.0	250 µm	61.46	94.85
2.5	180 µm	64.68	99.81
3.0	125 µm	64.74	99.91
3.5	90 µm	64.78	99.97
4.0	63 µm	64.79	99.98
	<63 µm	64.80	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table B4 Cumulative frequency data for bed material flux samples in East Tributary for 2 February 1999

Date	2-Feb-99	No. of Samples = 8		1st Transect = 4	2nd Transect = 4		
Sample 1				Sample 3			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm	0.23	0.08	-2.0	4.0 mm	0.16	0.03
-1.5	2.4 mm	7.35	2.69	-1.5	2.4 mm	0.55	0.10
-1.0	2.0 mm	13.39	4.89	-1.0	2.0 mm	1.09	0.19
-0.5	1.4 mm	33.84	12.37	-0.5	1.4 mm	4.00	0.70
0.0	1.0 mm	67.15	24.55	0.0	1.0 mm	17.20	2.99
0.5	710 µm	67.17	24.55	0.5	710 µm	168.73	29.37
1.0	500 µm	120.22	43.94	1.0	500 µm	445.78	77.58
1.5	355 µm	262.45	95.94	1.5	355 µm	528.40	91.96
2.0	250 µm	271.3	99.17	2.0	250 µm	566.08	98.52
2.5	180 µm	273.45	99.96	2.5	180 µm	573.71	99.85
3.0	125 µm	273.54	99.99	3.0	125 µm	574.36	99.96
3.5	90 µm	273.55	99.99	3.5	90 µm	574.51	99.99
4.0	63 µm	273.56	100.00	4.0	63 µm	574.55	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Folk (1974) Texture Group: Slightly granular coarse sand

Table B4 Cumulative frequency data for bed material flux samples in East Tributary for 2 February 1999 (Continued)

Sample 2				Sample 4			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.11	0.08	-2.0	4.0 mm		
-1.5	2.4 mm	1.43	1.06	-1.5	2.4 mm		
-1.0	2.0 mm	2.46	1.82	-1.0	2.0 mm		
-0.5	1.4 mm	7.76	5.73	-0.5	1.4 mm	0.03	0.06
0.0	1.0 mm	18.73	13.82	0.0	1.0 mm	0.17	0.33
0.5	710 µm	41.81	30.85	0.5	710 µm	1.60	3.09
1.0	500 µm	88.61	65.39	1.0	500 µm	14.53	28.02
1.5	355 µm	122.74	90.57	1.5	355 µm	37.12	71.59
2.0	250 µm	133.64	98.61	2.0	250 µm	48.12	92.81
2.5	180 µm	135.43	99.93	2.5	180 µm	51.73	99.77
3.0	125 µm	135.49	99.98	3.0	125 µm	51.83	99.96
3.5	90 µm	135.50	99.99	3.5	90 µm	51.84	99.98
4.0	63 µm	135.51	99.99	4.0	63 µm	51.85	100.00
	<63 µm	135.52	100.00		<63 µm		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Medium sand			
Sample 5				Sample 7			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.10	0.08
-1.5	2.4 mm			-1.5	2.4 mm	0.95	0.73
-1.0	2.0 mm			-1.0	2.0 mm	1.66	1.27
-0.5	1.4 mm	0.04	0.13	-0.5	1.4 mm	4.49	3.43
0.0	1.0 mm	0.20	0.63	0.0	1.0 mm	9.90	7.56
0.5	710 µm	1.19	3.77	0.5	710 µm	23.52	17.97
1.0	500 µm	8.64	27.34	1.0	500 µm	67.21	51.35
1.5	355 µm	21.29	67.37	1.5	355 µm	112.43	85.90
2.0	250 µm	29.23	92.50	2.0	250 µm	128.38	98.09
2.5	180 µm	31.48	99.62	2.5	180 µm	130.75	99.90
3.0	125 µm	31.58	99.94	3.0	125 µm	130.84	99.97
3.5	90 µm	31.58	99.94	3.5	90 µm	130.87	99.99
4.0	63 µm	31.59	99.97	4.0	63 µm	130.87	99.99
	<63 µm	31.60	100.00		<63 µm	130.88	100.00
Folk (1974) Texture Group: Medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table B4 Cumulative frequency data for bed material flux samples in East Tributary for 2 February 1999 (Continued)

Sample 6				Sample 8			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.13	0.02	-2.0	4.0 mm		
-1.5	2.4 mm	0.78	0.11	-1.5	2.4 mm	4.58	0.94
-1.0	2.0 mm	1.65	0.24	-1.0	2.0 mm	10.97	2.24
-0.5	1.4 mm	5.72	0.83	-0.5	1.4 mm	34.81	7.12
0.0	1.0 mm	23.85	3.47	0.0	1.0 mm	76.40	15.63
0.5	710 µm	93.17	13.55	0.5	710 µm	158.80	32.48
1.0	500 µm	350.48	50.96	1.0	500 µm	341.75	69.90
1.5	355 µm	586.39	85.25	1.5	355 µm	455.06	93.08
2.0	250 µm	672.97	97.84	2.0	250 µm	482.62	98.72
2.5	180 µm	686.65	99.83	2.5	180 µm	488.41	99.90
3.0	125 µm	687.63	99.97	3.0	125 µm	488.79	99.98
3.5	90 µm	687.74	99.99	3.5	90 µm	488.84	99.99
4.0	63 µm	687.78	100.00	4.0	63 µm	488.84	99.99
	<63 µm				<63 µm	488.88	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table B5 Cumulative frequency data for bed material flux samples in East Tributary for 9 February 1999

Date	9-Feb-99	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Sample 1				Sample 3			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm	3.94	0.59	-2.0	4.0 mm	3.83	0.28
-1.5	2.4 mm	23.76	3.55	-1.5	2.4 mm	25.27	1.84
-1.0	2.0 mm	38.9	5.82	-1.0	2.0 mm	41.56	3.03
-0.5	1.4 mm	94.9	14.20	-0.5	1.4 mm	88.77	6.47
0.0	1.0 mm	175.99	26.33	0.0	1.0 mm	175.97	12.82
0.5	710 µm	291.24	43.58	0.5	710 µm	800.22	58.31
1.0	500 µm	498.55	74.59	1.0	500 µm	1160.97	84.59
1.5	355 µm	615.16	92.04	1.5	355 µm	1326.29	96.64
2.0	250 µm	656.16	98.17	2.0	250 µm	1367.09	99.61
2.5	180 µm	667.6	99.89	2.5	180 µm	1371.65	99.94
3.0	125 µm	668.19	99.97	3.0	125 µm	1372.09	99.97
3.5	90 µm	668.28	99.99	3.5	90 µm	1372.26	99.98
4.0	63 µm	668.32	99.99	4.0	63 µm	1372.28	99.99
	<63 µm	668.36	100.00		<63 µm	1372.47	100.00
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table B5 Cumulative frequency data for bed material flux samples in East Tributary for 9 February 1999 (Continued)

Sample 2		
Phi		Mass (g) Cumulative %
-2.0	4.0 mm	1.99 0.79
-1.5	2.4 mm	5.95 2.35
-1.0	2.0 mm	9.13 3.61
-0.5	1.4 mm	22.75 8.98
0.0	1.0 mm	49.96 19.73
0.5	710 µm	94.12 37.16
1.0	500 µm	161.85 63.91
1.5	355 µm	216.93 85.66
2.0	250 µm	245.12 96.79
2.5	180 µm	252.83 99.83
3.0	125 µm	253.12 99.95
3.5	90 µm	253.2 99.98
4.0	63 µm	253.23 99.99
	<63 µm	253.25 100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 5		
Sample too small to sieve	(8.4g)	

Sample 4		
sample lost but was < 10g		

Sample 7		
Phi		Mass (g) Cumulative %
-2.0	4.0 mm	1.87 0.42
-1.5	2.4 mm	12.09 2.70
-1.0	2.0 mm	19.86 4.43
-0.5	1.4 mm	46.87 10.46
0.0	1.0 mm	92.8 20.71
0.5	710 µm	358.97 80.10
1.0	500 µm	413.49 92.26
1.5	355 µm	437.92 97.71
2.0	250 µm	447.38 99.82
2.5	180 µm	447.91 99.94
3.0	125 µm	448.08 99.98
3.5	90 µm	448.12 99.99
4.0	63 µm	448.12 99.99
	<63 µm	448.17 100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Table B5 Cumulative frequency data for bed material flux samples in East Tributary for 9 February 1999 (Continued)

Sample 6				Sample 8			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	2.08	0.39	-2.0	4.0 mm	3.81	1.58
-1.5	2.4 mm	17.37	3.30	-1.5	2.4 mm	30.74	12.73
-1.0	2.0 mm	28.33	5.38	-1.0	2.0 mm	46.79	19.38
-0.5	1.4 mm	63.33	12.02	-0.5	1.4 mm	81.42	33.72
0.0	1.0 mm	133.5	25.33	0.0	1.0 mm	114.87	47.57
0.5	710 µm	288.45	54.73	0.5	710 µm	147.56	61.10
1.0	500 µm	437.19	82.95	1.0	500 µm	192.7	79.80
1.5	355 µm	488.08	92.60	1.5	355 µm	222.59	92.17
2.0	250 µm	517.67	98.22	2.0	250 µm	236.65	98.00
2.5	180 µm	526.25	99.85	2.5	180 µm	241.05	99.82
3.0	125 µm	526.95	99.98	3.0	125 µm	241.4	99.96
3.5	90 µm	527.03	99.99	3.5	90 µm	241.46	99.99
4.0	63 µm	527.04	100.00	4.0	63 µm	241.46	99.99
	<63 µm				<63 µm	241.49	100.00
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Granular coarse sand			

Table B6 Cumulative frequency data for bed material flux samples in East Tributary for 16 February 1999

Date	16-Feb-99	No. of Samples = 8	1st Transect = 4	2nd Transect = 4
Sample 1	Sample too small to sieve	(5.31g)	Sample 3	
			Phi	Mass (g) Cumulative %
			-2.0	4.0 mm
			-1.5	2.4 mm 3.50 0.49
			-1.0	2.0 mm 6.87 0.97
			-0.5	1.4 mm 33.68 4.75
			0.0	1.0 mm 68.96 9.73
			0.5	710 µm 160.10 22.58
			1.0	500 µm 442.62 62.43
			1.5	355 µm 621.56 87.66
			2.0	250 µm 694.74 97.98
			2.5	180 µm 707.96 99.85
			3.0	125 µm 708.86 99.98
			3.5	90 µm 708.93 99.99
			4.0	63 µm 708.98 99.99
				<63 µm 709.03 100.00
			Folk (1974) Texture Group: Slightly granular coarse sand	

Table B6 Cumulative frequency data for bed material flux samples in East Tributary for 16 February 1999 (Continued)

Sample 2

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.14	0.33
-1.5	2.4 mm	12.32	3.60
-1.0	2.0 mm	20.58	6.01
-0.5	1.4 mm	46.76	13.66
0.0	1.0 mm	95.16	27.80
0.5	710 µm	175.48	51.27
1.0	500 µm	277.22	80.99
1.5	355 µm	319.43	93.32
2.0	250 µm	340.28	99.41
2.5	180 µm	341.64	99.81
3.0	125 µm	342.18	99.97
3.5	90 µm	342.22	99.98
4.0	63 µm	342.26	99.99
	<63 µm	342.29	100.00

Folk (1974) Texture Group: Granular coarse sand

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.03	0.15
-1.0	2.0 mm	0.05	0.26
-0.5	1.4 mm	0.23	1.18
0.0	1.0 mm	0.75	3.84
0.5	710 µm	2.23	11.43
1.0	500 µm	6.96	35.67
1.5	355 µm	14.44	74.01
2.0	250 µm	18.67	95.69
2.5	180 µm	19.49	99.90
3.0	125 µm	19.51	100.00
3.5	90 µm		
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 4

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.03	0.08
-1.0	2.0 mm	0.06	0.16
-0.5	1.4 mm	0.20	0.54
0.0	1.0 mm	3.15	8.51
0.5	710 µm	12.94	34.97
1.0	500 µm	27.02	73.03
1.5	355 µm	36.09	97.54
2.0	250 µm	36.96	99.89
2.5	180 µm	36.98	99.95
3.0	125 µm	36.98	99.95
3.5	90 µm	36.99	99.97
4.0	63 µm	36.99	99.97
	<63 µm	37	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.05	0.03
-1.5	2.4 mm	6.37	3.44
-1.0	2.0 mm	11.57	6.24
-0.5	1.4 mm	27.25	14.70
0.0	1.0 mm	48.94	26.40
0.5	710 µm	85.58	46.17
1.0	500 µm	142.68	76.97
1.5	355 µm	172.78	93.21
2.0	250 µm	182.55	98.48
2.5	180 µm	185.17	99.89
3.0	125 µm	185.29	99.96
3.5	90 µm	185.34	99.98
4.0	63 µm	185.37	100.00
	<63 µm		

Folk (1974) Texture Group: Granular coarse sand

Table B6 Cumulative frequency data for bed material flux samples in East Tributary for 16 February 1999 (Continued)

Sample 6				Sample 8			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.11	0.62
-1.5	2.4 mm	1.07	0.48	-1.5	2.4 mm	2.67	15.02
-1.0	2.0 mm	2.04	0.91	-1.0	2.0 mm	4.22	23.73
-0.5	1.4 mm	6.402	2.85	-0.5	1.4 mm	7.58	42.63
0.0	1.0 mm	28.12	12.51	0.0	1.0 mm	11.00	61.87
0.5	710 µm	46.14	20.53	0.5	710 µm	13.46	75.70
1.0	500 µm	127.33	56.66	1.0	500 µm	15.53	87.35
1.5	355 µm	192.87	85.82	1.5	355 µm	16.77	94.32
2.0	250 µm	218.04	97.02	2.0	250 µm	17.50	98.43
2.5	180 µm	224.40	99.85	2.5	180 µm	17.76	99.89
3.0	125 µm	224.68	99.98	3.0	125 µm	17.78	100.00
3.5	90 µm	224.70	99.99	3.5	90 µm		
4.0	63 µm	224.72	100.00	4.0	63 µm		
	<63 µm				<63 µm		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Granular very coarse sand			

Table B7 Cumulative frequency data for bed material flux samples in East Tributary for 23 February 1999

Date	23-Feb-99	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Sample 1			Sample 3				
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.09	0.05	-2.0	4.0 mm	1.40	2.23
-1.5	2.4 mm	2.05	1.03	-1.5	2.4 mm	8.21	13.11
-1.0	2.0 mm	3.04	1.53	-1.0	2.0 mm	11.48	18.33
-0.5	1.4 mm	5.74	2.89	-0.5	1.4 mm	19.79	31.59
0.0	1.0 mm	10.73	5.40	0.0	1.0 mm	28.12	44.89
0.5	710 µm	24.70	12.43	0.5	710 µm	36.33	58.00
1.0	500 µm	86.67	43.63	1.0	500 µm	47.22	75.38
1.5	355 µm	161.47	81.29	1.5	355 µm	54.89	87.63
2.0	250 µm	192.83	97.08	2.0	250 µm	59.99	95.77
2.5	180 µm	198.48	99.92	2.5	180 µm	62.52	99.81
3.0	125 µm	198.60	99.98	3.0	125 µm	62.62	99.97
3.5	90 µm	198.63	99.99	3.5	90 µm	62.63	99.98
4.0	63 µm	198.64	100.00	4.0	63 µm	62.64	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Granular coarse sand			

Table B7 Cumulative frequency data for bed material flux samples in East Tributary for 23 February 1999 (Continued)

Sample 2

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.28	0.31
-1.5	2.4 mm	1.31	1.46
-1.0	2.0 mm	2.25	2.51
-0.5	1.4 mm	5.70	6.35
0.0	1.0 mm	13.42	14.94
0.5	710 µm	28.73	31.99
1.0	500 µm	56.74	63.18
1.5	355 µm	75.10	83.62
2.0	250 µm	85.25	94.92
2.5	180 µm	89.41	99.55
3.0	125 µm	89.77	99.96
3.5	90 µm	89.79	99.98
4.0	63 µm	89.80	99.99
	<63 µm	89.81	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 5 Sample too small to sieve (7.78g)

Sample 4

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.59	2.40
-1.5	2.4 mm	7.39	30.10
-1.0	2.0 mm	10.27	41.83
-0.5	1.4 mm	13.21	53.81
0.0	1.0 mm	16.28	66.31
0.5	710 µm	19.05	77.60
1.0	500 µm	22.51	91.69
1.5	355 µm	24.01	97.80
2.0	250 µm	24.37	99.27
2.5	180 µm	24.55	100.00
3.0	125 µm		
3.5	90 µm		
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Coarse sandy granular gravel

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.90	1.11
-1.5	2.4 mm	10.18	5.96
-1.0	2.0 mm	14.85	8.69
-0.5	1.4 mm	28.18	16.50
0.0	1.0 mm	76.55	44.82
0.5	710 µm	125.24	73.32
1.0	500 µm	152.48	89.27
1.5	355 µm	163.99	96.01
2.0	250 µm	170.40	99.76
2.5	180 µm	170.76	99.97
3.0	125 µm	170.79	99.99
3.5	90 µm	170.81	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Granular coarse sand

Table B7 Cumulative frequency data for bed material flux samples in East Tributary for 23 February 1999 (Continued)

Sample 6				Sample 8			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	2.50	2.62	-2.0	4.0 mm	0.04	0.03
-1.5	2.4 mm	10.64	11.16	-1.5	2.4 mm	0.79	0.58
-1.0	2.0 mm	15.14	15.89	-1.0	2.0 mm	1.42	1.05
-0.5	1.4 mm	25.21	26.45	-0.5	1.4 mm	3.36	2.48
0.0	1.0 mm	37.70	39.56	0.0	1.0 mm	7.23	5.35
0.5	710 µm	51.81	54.37	0.5	710 µm	18.55	13.71
1.0	500 µm	71.85	75.39	1.0	500 µm	65.67	48.55
1.5	355 µm	84.41	88.57	1.5	355 µm	114.27	84.48
2.0	250 µm	91.78	96.31	2.0	250 µm	131.88	97.50
2.5	180 µm	95.07	99.76	2.5	180 µm	135.20	99.96
3.0	125 µm	95.30	100.00	3.0	125 µm	135.24	99.99
3.5	90 µm			3.5	90 µm	135.26	100.00
4.0	63 µm			4.0	63 µm		
	<63 µm				<63 µm		
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table B8 Cumulative frequency data for bed material flux samples in East Tributary for 2 March 1999

Date	2-Mar-99	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Sample 1				Sample 3			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm	0.36	0.47	-2.0	4.0 mm	0.04	0.03
-1.5	2.4 mm	2.32	3.05	-1.5	2.4 mm	0.06	0.05
-1.0	2.0 mm	3.52	4.62	-1.0	2.0 mm	0.25	0.21
-0.5	1.4 mm	7.88	10.35	-0.5	1.4 mm	1.27	1.05
0.0	1.0 mm	13.86	18.20	0.0	1.0 mm	4.59	3.78
0.5	710 µm	26.05	34.20	0.5	710 µm	16.63	13.70
1.0	500 µm	51.73	67.91	1.0	500 µm	64.00	52.71
1.5	355 µm	68.55	90.00	1.5	355 µm	100.24	82.55
2.0	250 µm	74.38	97.65	2.0	250 µm	115.29	94.94
2.5	180 µm	76.14	99.96	2.5	180 µm	121.27	99.87
3.0	125 µm	76.16	99.99	3.0	125 µm	121.39	99.97
3.5	90 µm	76.16	99.99	3.5	90 µm	121.41	99.98
4.0	63 µm	76.16	99.99	4.0	63 µm	121.42	99.99
	<63 µm	76.17	100.00		<63 µm	121.43	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table B8 Cumulative frequency data for bed material flux samples in East Tributary for 2 March 1999
(Continued)

Sample 2

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.13	0.15
-1.5	2.4 mm	0.57	0.65
-1.0	2.0 mm	0.86	0.98
-0.5	1.4 mm	2.32	2.65
0.0	1.0 mm	5.35	6.10
0.5	710 µm	12.64	14.41
1.0	500 µm	35.25	40.19
1.5	355 µm	60.41	68.88
2.0	250 µm	77.52	88.39
2.5	180 µm	87.32	99.57
3.0	125 µm	87.67	99.97
3.5	90 µm	87.69	99.99
4.0	63 µm	87.69	99.99
	<63 µm	87.70	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.53	0.74
-1.5	2.4 mm	2.36	3.31
-1.0	2.0 mm	3.22	4.52
-0.5	1.4 mm	5.49	7.70
0.0	1.0 mm	9.07	12.72
0.5	710 µm	17.64	24.74
1.0	500 µm	41.46	58.16
1.5	355 µm	60.50	84.86
2.0	250 µm	67.80	95.10
2.5	180 µm	71.02	99.62
3.0	125 µm	71.26	99.96
3.5	90 µm	71.27	99.97
4.0	63 µm	71.29	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 4

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.52	1.26
-1.5	2.4 mm	7.63	6.35
-1.0	2.0 mm	10.50	8.73
-0.5	1.4 mm	16.21	13.48
0.0	1.0 mm	24.10	20.04
0.5	710 µm	37.09	30.84
1.0	500 µm	66.90	55.63
1.5	355 µm	94.41	78.51
2.0	250 µm	112.22	93.32
2.5	180 µm	119.34	99.24
3.0	125 µm	120.24	99.99
3.5	90 µm	120.24	99.99
4.0	63 µm	120.24	99.99
	<63 µm	120.25	100.00

Folk (1974) Texture Group: Granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.01	0.01
-1.5	2.4 mm	0.68	0.87
-1.0	2.0 mm	1.31	1.68
-0.5	1.4 mm	3.37	4.33
0.0	1.0 mm	8.23	10.57
0.5	710 µm	18.17	23.33
1.0	500 µm	40.85	52.45
1.5	355 µm	60.17	77.26
2.0	250 µm	72.64	93.27
2.5	180 µm	77.61	99.65
3.0	125 µm	77.88	100.00
3.5	90 µm		
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Table B8 Cumulative frequency data for bed material flux samples in East Tributary for 2 March 1999
(Continued)

Sample 6				Sample 8			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.31	0.14
-1.5	2.4 mm	0.26	0.10	-1.5	2.4 mm	4.97	2.20
-1.0	2.0 mm	0.86	0.32	-1.0	2.0 mm	7.46	3.30
-0.5	1.4 mm	3.49	1.30	-0.5	1.4 mm	14.93	6.59
0.0	1.0 mm	13.41	4.99	0.0	1.0 mm	29.6	13.07
0.5	710 µm	40.68	15.12	0.5	710 µm	61.64	27.23
1.0	500 µm	129.32	48.07	1.0	500 µm	140.88	62.23
1.5	355 µm	207.16	77.01	1.5	355 µm	194.42	85.87
2.0	250 µm	256.05	95.19	2.0	250 µm	220.46	97.38
2.5	180 µm	268.25	99.72	2.5	180 µm	225.98	99.81
3.0	125 µm	268.89	99.96	3.0	125 µm	226.37	99.99
3.5	90 µm	268.94	99.98	3.5	90 µm	226.40	100.00
4.0	63 µm	268.96	99.99	4.0	63 µm		
	<63 µm	269.00	100.00		<63 µm		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table B9 Cumulative frequency data for bed material flux samples in East Tributary for 9 March 1999

Date	9-Mar-99	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Sample 1				Sample 3			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm	1.32	11.34	-2.0	4.0 mm	1.95	0.77
-1.5	2.4 mm	3.61	31.01	-1.5	2.4 mm	15.91	6.29
-1.0	2.0 mm	4.42	37.97	-1.0	2.0 mm	23.94	9.46
-0.5	1.4 mm	5.56	47.77	-0.5	1.4 mm	44.76	17.69
0.0	1.0 mm	6.59	56.62	0.0	1.0 mm	65.91	26.04
0.5	710 µm	7.78	66.84	0.5	710 µm	94.06	37.17
1.0	500 µm	9.33	80.15	1.0	500 µm	143.93	56.87
1.5	355 µm	10.41	89.43	1.5	355 µm	194.76	76.96
2.0	250 µm	11.08	95.19	2.0	250 µm	232.06	91.69
2.5	180 µm	11.62	99.83	2.5	180 µm	252.07	99.60
3.0	125 µm	11.64	100.00	3.0	125 µm	252.85	99.91
3.5	90 µm			3.5	90 µm	252.98	99.96
4.0	63 µm			4.0	63 µm	253.01	99.97
	<63 µm				<63 µm	253.08	100.00
Folk (1974) Texture Group: Not classified				Folk (1974) Texture Group: Granular coarse sand			

Table B9 Cumulative frequency data for bed material flux samples in East Tributary for 9 March 1999
(Continued)

Sample 2

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	8.53	1.98
-1.5	2.4 mm	40.21	9.33
-1.0	2.0 mm	57.1	13.24
-0.5	1.4 mm	100.8	23.38
0.0	1.0 mm	157.59	36.55
0.5	710 µm	231.2	53.62
1.0	500 µm	327.17	75.87
1.5	355 µm	377.06	87.44
2.0	250 µm	414.79	96.19
2.5	180 µm	429.73	99.66
3.0	125 µm	431.04	99.96
3.5	90 µm	431.09	99.97
4.0	63 µm	431.14	99.99
	<63 µm	431.2	100.00

Folk (1974) Texture Group: Granular coarse sand

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	4.36	0.58
-1.0	2.0 mm	10.95	1.46
-0.5	1.4 mm	33.5	4.47
0.0	1.0 mm	73.03	9.75
0.5	710 µm	138.74	18.52
1.0	500 µm	321.57	42.92
1.5	355 µm	534.78	71.37
2.0	250 µm	709.42	94.68
2.5	180 µm	746.59	99.64
3.0	125 µm	749.06	99.97
3.5	90 µm	749.16	99.98
4.0	63 µm	749.2	99.99
	<63 µm	749.3	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 4

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0	0.00
-1.5	2.4 mm	3.06	0.63
-1.0	2.0 mm	7.03	1.46
-0.5	1.4 mm	23.68	4.91
0.0	1.0 mm	53.74	11.15
0.5	710 µm	133.99	27.80
1.0	500 µm	328.12	68.09
1.5	355 µm	414.44	86.00
2.0	250 µm	469.19	97.36
2.5	180 µm	481	99.81
3.0	125 µm	481.81	99.98
3.5	90 µm	481.85	99.99
4.0	63 µm	481.9	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	3.33	1.47
-1.5	2.4 mm	14.28	6.32
-1.0	2.0 mm	22.35	9.89
-0.5	1.4 mm	46.19	20.44
0.0	1.0 mm	77.68	34.38
0.5	710 µm	122.33	54.14
1.0	500 µm	174.09	77.04
1.5	355 µm	202.6	89.66
2.0	250 µm	218.22	96.57
2.5	180 µm	225.42	99.76
3.0	125 µm	225.84	99.94
3.5	90 µm	225.91	99.97
4.0	63 µm	225.94	99.99
	<63 µm	225.97	100.00

Folk (1974) Texture Group: Granular coarse sand

Table B9 Cumulative frequency data for bed material flux samples in East Tributary for 9 March 1999
(Continued)

Sample 6			Sample 8 Sample too small to sieve (9.49g)		
Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm	1.53	0.59		
-1.5	2.4 mm	4.15	1.60		
-1.0	2.0 mm	6.26	2.41		
-0.5	1.4 mm	13.6	5.24		
0.0	1.0 mm	27.14	10.45		
0.5	710 µm	58.73	22.62		
1.0	500 µm	122.35	47.13		
1.5	355 µm	187.65	72.29		
2.0	250 µm	239.81	92.38		
2.5	180 µm	258.37	99.53		
3.0	125 µm	259.27	99.88		
3.5	90 µm	259.45	99.95		
4.0	63 µm	259.46	99.95		
	<63 µm	259.59	100.00		

Folk (1974) Texture Group: Slightly granular medium sand

Table B10 Cumulative frequency data for bed material flux samples in East Tributary for 17 March 1999

Date	17-Mar-99	No. of Samples = 8		1st Transect = 4	2nd Transect = 4	
Sample 1				Sample 3		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	27.67	1.95	-2.0	4.0 mm	11.75 1.03
-1.5	2.4 mm	146.38	10.32	-1.5	2.4 mm	51.81 4.56
-1.0	2.0 mm	219.62	15.48	-1.0	2.0 mm	79.21 6.97
-0.5	1.4 mm	399.43	28.15	-0.5	1.4 mm	159.45 14.03
0.0	1.0 mm	640.71	45.16	0.0	1.0 mm	302.05 26.58
0.5	710 µm	922.31	65.01	0.5	710 µm	536.14 47.18
1.0	500 µm	1244.89	87.74	1.0	500 µm	897.30 78.96
1.5	355 µm	1349.39	95.11	1.5	355 µm	1045.89 92.04
2.0	250 µm	1396.74	98.45	2.0	250 µm	1115.29 98.14
2.5	180 µm	1416.08	99.81	2.5	180 µm	1134.02 99.79
3.0	125 µm	1418.14	99.95	3.0	125 µm	1136.07 99.97
3.5	90 µm	1418.45	99.98	3.5	90 µm	1136.21 99.99
4.0	63 µm	1418.62	99.99	4.0	63 µm	1136.28 99.99
	<63 µm	1418.80	100.00		<63 µm	1136.37 100.00

Folk (1974) Texture Group: Granular coarse sand

Table B10 Cumulative frequency data for bed material flux samples in East Tributary for 17 March 1999 (Continued)

Sample 2			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.60	0.41
-1.5	2.4 mm	9.30	2.41
-1.0	2.0 mm	13.63	3.53
-0.5	1.4 mm	28.10	7.27
0.0	1.0 mm	57.99	15.01
0.5	710 µm	115.44	29.89
1.0	500 µm	241.54	62.53
1.5	355 µm	331.16	85.73
2.0	250 µm	376.61	97.50
2.5	180 µm	385.27	99.74
3.0	125 µm	386.14	99.96
3.5	90 µm	386.21	99.98
4.0	63 µm	386.25	99.99
	<63 µm	386.28	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 5			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.69	0.17
-1.5	2.4 mm	3.49	0.84
-1.0	2.0 mm	5.98	1.43
-0.5	1.4 mm	14.77	3.54
0.0	1.0 mm	37.33	8.94
0.5	710 µm	96.58	23.13
1.0	500 µm	267.46	64.05
1.5	355 µm	358.20	85.78
2.0	250 µm	401.83	96.23
2.5	180 µm	416.10	99.65
3.0	125 µm	417.39	99.96
3.5	90 µm	417.48	99.98
4.0	63 µm	417.52	99.99
	<63 µm	417.56	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 4			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.84	0.39
-1.5	2.4 mm	5.23	1.12
-1.0	2.0 mm	8.10	1.74
-0.5	1.4 mm	17.53	3.76
0.0	1.0 mm	36.55	7.84
0.5	710 µm	88.48	18.98
1.0	500 µm	252.40	54.13
1.5	355 µm	385.87	82.75
2.0	250 µm	442.79	94.96
2.5	180 µm	464.72	99.67
3.0	125 µm	466.09	99.96
3.5	90 µm	466.25	99.99
4.0	63 µm	466.25	99.99
	<63 µm	466.28	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	3.61	0.76
-1.5	2.4 mm	9.38	1.97
-1.0	2.0 mm	14.00	2.93
-0.5	1.4 mm	68.19	14.29
0.0	1.0 mm	142.51	29.86
0.5	710 µm	301.48	63.16
1.0	500 µm	402.05	84.23
1.5	355 µm	443.81	92.98
2.0	250 µm	462.61	96.92
2.5	180 µm	176.11	36.90
3.0	125 µm	477.15	99.97
3.5	90 µm	477.24	99.99
4.0	63 µm	477.30	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Table B10 Cumulative frequency data for bed material flux samples in East Tributary for 17 March 1999 (Continued)

Sample 6				Sample 8			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	11.62	1.52	-2.0	4.0 mm	8.94	2.31
-1.5	2.4 mm	41.35	5.42	-1.5	2.4 mm	43.63	11.30
-1.0	2.0 mm	62.26	8.15	-1.0	2.0 mm	63.92	16.55
-0.5	1.4 mm	126.50	16.57	-0.5	1.4 mm	115.69	29.95
0.0	1.0 mm	211.77	27.73	0.0	1.0 mm	173.21	44.85
0.5	710 µm	347.99	45.58	0.5	710 µm	245.36	63.53
1.0	500 µm	572.10	74.93	1.0	500 µm	333.69	86.40
1.5	355 µm	694.88	91.01	1.5	355 µm	371.53	96.20
2.0	250 µm	742.47	97.24	2.0	250 µm	381.68	98.82
2.5	180 µm	762.27	99.83	2.5	180 µm	385.93	99.92
3.0	125 µm	763.28	99.96	3.0	125 µm	386.15	99.98
3.5	90 µm	763.43	99.98	3.5	90 µm	386.19	99.99
4.0	63 µm	763.47	99.99	4.0	63 µm	386.22	100.00
	<63 µm	763.55	100.00		<63 µm		
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Granular coarse sand			

Table B11 Cumulative frequency data for bed material flux samples in East Tributary for 23 March 1999

Date	23-Mar-99	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Sample 1			Sample 3				
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.46	1.34
-1.5	2.4 mm	0.12	0.04	-1.5	2.4 mm	2.66	7.74
-1.0	2.0 mm	0.18	0.06	-1.0	2.0 mm	4.95	14.40
-0.5	1.4 mm	7.80	2.45	-0.5	1.4 mm	5.41	15.74
0.0	1.0 mm	21.45	6.73	0.0	1.0 mm	6.24	18.16
0.5	710 µm	54.82	17.20	0.5	710 µm	8.33	24.24
1.0	500 µm	170.19	53.40	1.0	500 µm	14.10	41.02
1.5	355 µm	245.98	77.18	1.5	355 µm	20.58	59.88
2.0	250 µm	298.77	93.74	2.0	250 µm	28.91	84.11
2.5	180 µm	317.70	99.68	2.5	180 µm	33.73	98.14
3.0	125 µm	318.50	99.93	3.0	125 µm	34.33	99.88
3.5	90 µm	318.62	99.97	3.5	90 µm	34.35	99.94
4.0	63 µm	318.68	99.99	4.0	63 µm	34.36	99.97
	<63 µm	318.71	100.00		<63 µm	34.37	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Granular medium sand			

Table B11 Cumulative frequency data for bed material flux samples in East Tributary for 23 March 1999 (Continued)

Sample 2

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	4.32	6.68
-1.5	2.4 mm	12.1	18.72
-1.0	2.0 mm	14.79	22.88
-0.5	1.4 mm	19.69	30.47
0.0	1.0 mm	24.72	38.25
0.5	710 µm	30.65	47.42
1.0	500 µm	39.8	61.58
1.5	355 µm	49.05	75.89
2.0	250 µm	59.58	92.19
2.5	180 µm	64.39	99.63
3.0	125 µm	64.56	99.89
3.5	90 µm	64.59	99.94
4.0	63 µm	64.62	99.98
	<63 µm	64.63	100.00

Folk (1974) Texture Group: Granular coarse sand

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.63	0.80
-1.5	2.4 mm	2.83	3.57
-1.0	2.0 mm	3.88	4.90
-0.5	1.4 mm	6.19	7.81
0.0	1.0 mm	9.90	12.50
0.5	710 µm	18.69	23.59
1.0	500 µm	43.10	54.41
1.5	355 µm	63.79	80.52
2.0	250 µm	74.32	93.81
2.5	180 µm	79.15	99.91
3.0	125 µm	79.20	99.97
3.5	90 µm	79.21	99.99
4.0	63 µm	79.22	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 4

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.4	0.33
-1.5	2.4 mm	2.83	2.34
-1.0	2.0 mm	4.22	3.49
-0.5	1.4 mm	7.42	6.14
0.0	1.0 mm	12.71	10.51
0.5	710 µm	24.75	20.47
1.0	500 µm	61.28	50.67
1.5	355 µm	95.75	79.18
2.0	250 µm	113.15	93.57
2.5	180 µm	120.66	99.78
3.0	125 µm	120.9	99.98
3.5	90 µm	120.93	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.16	2.78
-1.5	2.4 mm	4.74	11.37
-1.0	2.0 mm	6.00	14.40
-0.5	1.4 mm	8.33	19.99
0.0	1.0 mm	11.42	27.40
0.5	710 µm	16.24	38.96
1.0	500 µm	28.37	68.07
1.5	355 µm	37.51	90.00
2.0	250 µm	40.42	96.98
2.5	180 µm	41.60	99.81
3.0	125 µm	41.65	99.93
3.5	90 µm	41.67	99.98
4.0	63 µm	41.68	100.00
	<63 µm		

Folk (1974) Texture Group: Granular coarse sand

Table B11 Cumulative frequency data for bed material flux samples in East Tributary for 23 March 1999 (Continued)

Sample 6			Sample 8		
Phi		Mass (g) Cumulative %	Phi		Mass (g) Cumulative %
-2.0	4.0 mm	0.10 0.02	-2.0	4.0 mm	
-1.5	2.4 mm	2.05 0.51	-1.5	2.4 mm	0.03 0.08
-1.0	2.0 mm	3.91 0.97	-1.0	2.0 mm	0.11 0.28
-0.5	1.4 mm	10.21 2.53	-0.5	1.4 mm	0.45 1.15
0.0	1.0 mm	22.57 5.59	0.0	1.0 mm	1.34 3.44
0.5	710 µm	43.99 10.90	0.5	710 µm	3.65 9.36
1.0	500 µm	117.35 29.07	1.0	500 µm	10.57 27.10
1.5	355 µm	245.69 60.86	1.5	355 µm	18.57 47.62
2.0	250 µm	374.66 92.80	2.0	250 µm	29.10 74.62
2.5	180 µm	401.60 99.48	2.5	180 µm	37.59 96.38
3.0	125 µm	403.44 99.93	3.0	125 µm	38.96 99.90
3.5	90 µm	403.56 99.96	3.5	90 µm	39.00 100.00
4.0	63 µm	403.63 99.98	4.0	63 µm	
	<63 µm	403.71 100.00		<63 µm	
Folk (1974) Texture Group: Slightly granular medium sand			Folk (1974) Texture Group: Slightly granular medium sand		

Table B12 Cumulative frequency data for bed material flux samples in East Tributary for 30 March 1999

Date	30-Mar-99	No. of Samples = 8	Ist Transect = 4	2nd Transect = 4	
Sample 1			Sample 3		
Phi		Mass (g) Cumulative %	Phi	Mass (g) Cumulative %	
-2.0	4.0 mm	1.31 3.83	-2.0	4.0 mm	
-1.5	2.4 mm	4.00 11.68	-1.5	2.4 mm	0.15 0.05
-1.0	2.0 mm	5.41 15.80	-1.0	2.0 mm	0.38 0.13
-0.5	1.4 mm	7.96 23.25	-0.5	1.4 mm	1.75 0.60
0.0	1.0 mm	11.11 32.45	0.0	1.0 mm	6.69 2.31
0.5	710 µm	16.09 46.99	0.5	710 µm	20.79 7.18
1.0	500 µm	24.32 71.03	1.0	500 µm	65.76 22.72
1.5	355 µm	29.12 85.05	1.5	355 µm	156.38 54.02
2.0	250 µm	31.90 93.17	2.0	250 µm	253.57 87.59
2.5	180 µm	34.12 99.65	2.5	180 µm	287.79 99.42
3.0	125 µm	34.23 99.97	3.0	125 µm	289.28 99.93
3.5	90 µm	34.23 99.97	3.5	90 µm	289.38 99.97
4.0	63 µm	34.23 99.97	4.0	63 µm	289.44 99.99
	<63 µm	34.24 100.00		<63 µm	289.48 100.00
Folk (1974) Texture Group: Granular coarse sand			Folk (1974) Texture Group: Slightly granular medium sand		

Table B12 Cumulative frequency data for bed material flux samples in East Tributary for 30 March 1999 (Continued)

Sample 2

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	4.22	4.26
-1.5	2.4 mm	17.95	18.12
-1.0	2.0 mm	22.83	23.05
-0.5	1.4 mm	32.55	32.87
0.0	1.0 mm	42.26	42.67
0.5	710 µm	52.56	53.07
1.0	500 µm	64.97	65.60
1.5	355 µm	75.56	76.29
2.0	250 µm	90.86	91.74
2.5	180 µm	98.41	99.36
3.0	125 µm	98.91	99.87
3.5	90 µm	98.98	99.94
4.0	63 µm	99.00	99.96
	<63 µm	99.04	100.00

Folk (1974) Texture Group: Granular coarse sand

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm	0.03	0.01
-0.5	1.4 mm	0.16	0.07
0.0	1.0 mm	1.22	0.55
0.5	710 µm	7.16	3.22
1.0	500 µm	48.84	22.00
1.5	355 µm	134.17	60.43
2.0	250 µm	203.56	91.69
2.5	180 µm	221.44	99.74
3.0	125 µm	221.95	99.97
3.5	90 µm	222.00	99.99
4.0	63 µm	222.02	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 4

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm		
-0.5	1.4 mm	0.25	0.14
0.0	1.0 mm	1.58	0.91
0.5	710 µm	8.31	4.77
1.0	500 µm	43.33	24.86
1.5	355 µm	102.46	58.79
2.0	250 µm	161.53	92.68
2.5	180 µm	173.71	99.67
3.0	125 µm	174.26	99.98
3.5	90 µm	174.28	99.99
4.0	63 µm	174.28	99.99
	<63 µm	174.29	100.00

Folk (1974) Texture Group: Medium sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	6.50	3.26
-1.5	2.4 mm	26.35	13.21
-1.0	2.0 mm	36.52	18.31
-0.5	1.4 mm	60.47	30.32
0.0	1.0 mm	86.48	43.37
0.5	710 µm	111.71	56.02
1.0	500 µm	139.79	70.10
1.5	355 µm	162.60	81.54
2.0	250 µm	188.99	94.77
2.5	180 µm	198.60	99.59
3.0	125 µm	199.29	99.93
3.5	90 µm	199.36	99.97
4.0	63 µm	199.39	99.98
	<63 µm	199.42	100.00

Folk (1974) Texture Group: Granular coarse sand

Table B12 Cumulative frequency data for bed material flux samples in East Tributary for 30 March 1999 (Continued)

Sample 6		
Phi		Mass (g) Cumulative %
-2.0	4.0 mm	
-1.5	2.4 mm	0.45 0.16
-1.0	2.0 mm	1.18 0.42
-0.5	1.4 mm	5.10 1.79
0.0	1.0 mm	14.66 5.16
0.5	710 µm	33.84 11.91
1.0	500 µm	78.51 27.63
1.5	355 µm	150.57 52.98
2.0	250 µm	253.31 89.13
2.5	180 µm	281.99 99.23
3.0	125 µm	283.85 99.88
3.5	90 µm	283.99 99.93
4.0	63 µm	284.10 99.97
	<63 µm	284.19 100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 8 Sample too small to sieve (5.72g)

Table B13 Cumulative frequency data for bed material flux samples in East Tributary for 6 April 1999

Date	6-Apr-99	No. of Samples = 8
Sample 1		
Phi		Mass (g) Cumulative %
-2.0	4.0 mm	0.67 0.38
-1.5	2.4 mm	3.89 2.19
-1.0	2.0 mm	7.53 4.24
-0.5	1.4 mm	17.53 9.88
0.0	1.0 mm	33.21 18.72
0.5	710 µm	61.19 34.49
1.0	500 µm	111.05 62.60
1.5	355 µm	151.18 85.22
2.0	250 µm	171.63 96.74
2.5	180 µm	177.18 99.87
3.0	125 µm	177.32 99.95
3.5	90 µm	177.36 99.97
4.0	63 µm	177.37 99.98
	<63 µm	177.41 100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Ist Transect = 4	2nd Transect = 4	
Sample 3		
Phi		Mass (g) Cumulative %
-2.0	4.0 mm	0.20 0.08
-1.5	2.4 mm	0.46 0.18
-1.0	2.0 mm	0.77 0.31
-0.5	1.4 mm	2.21 0.88
0.0	1.0 mm	7.75 3.08
0.5	710 µm	31.31 12.45
1.0	500 µm	115.40 45.89
1.5	355 µm	196.00 77.94
2.0	250 µm	242.42 96.39
2.5	180 µm	250.99 99.80
3.0	125 µm	251.45 99.98
3.5	90 µm	251.47 99.99
4.0	63 µm	251.49 100.00
	<63 µm	

Folk (1974) Texture Group: Slightly granular medium sand

Table B13 Cumulative frequency data for bed material flux samples in East Tributary for 6 April 1999
(Continued)

Sample 2

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.06	0.02
-1.5	2.4 mm	0.45	0.11
-1.0	2.0 mm	0.90	0.23
-0.5	1.4 mm	3.09	0.78
0.0	1.0 mm	11.27	2.84
0.5	710 µm	43.41	10.93
1.0	500 µm	186.55	46.98
1.5	355 µm	330.65	83.27
2.0	250 µm	385.19	97.01
2.5	180 µm	396.73	99.91
3.0	125 µm	396.98	99.98
3.5	90 µm	397.02	99.99
4.0	63 µm	397.03	99.99
	<63 µm	397.07	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.32	0.09
-1.5	2.4 mm	0.74	0.22
-1.0	2.0 mm	3.47	1.02
-0.5	1.4 mm	11.57	3.41
0.0	1.0 mm	39.87	11.75
0.5	710 µm	165.86	48.87
1.0	500 µm	266.89	78.63
1.5	355 µm	288.83	85.10
2.0	250 µm	328.93	96.91
2.5	180 µm	338.95	99.86
3.0	125 µm	339.35	99.98
3.5	90 µm	339.38	99.99
4.0	63 µm	339.41	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 4

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.01	0.04
-1.0	2.0 mm	0.12	0.46
-0.5	1.4 mm	0.56	2.15
0.0	1.0 mm	1.74	6.68
0.5	710 µm	4.48	17.21
1.0	500 µm	11.88	45.64
1.5	355 µm	19.61	75.34
2.0	250 µm	24.41	93.78
2.5	180 µm	26.01	99.92
3.0	125 µm	26.03	100.00
3.5	90 µm		
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.13	0.03
-1.5	2.4 mm	0.61	0.16
-1.0	2.0 mm	1.49	0.40
-0.5	1.4 mm	4.65	1.25
0.0	1.0 mm	14.23	3.82
0.5	710 µm	46.87	12.59
1.0	500 µm	171.30	46.01
1.5	355 µm	301.59	81.00
2.0	250 µm	360.00	96.69
2.5	180 µm	372.07	99.93
3.0	125 µm	372.30	99.99
3.5	90 µm	372.32	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Table B13 Cumulative frequency data for bed material flux samples in East Tributary for 6 April 1999
(Continued)

Sample 6				Sample 8			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.20	0.12
-1.5	2.4 mm	0.32	0.15	-1.5	2.4 mm	3.18	1.91
-1.0	2.0 mm	0.85	0.40	-1.0	2.0 mm	5.27	3.17
-0.5	1.4 mm	4.12	1.92	-0.5	1.4 mm	11.64	6.99
0.0	1.0 mm	13.85	6.45	0.0	1.0 mm	25.44	15.29
0.5	710 µm	43.93	20.46	0.5	710 µm	51.60	31.00
1.0	500 µm	121.00	56.34	1.0	500 µm	102.96	61.86
1.5	355 µm	181.34	84.44	1.5	355 µm	140.32	84.31
2.0	250 µm	208.72	97.19	2.0	250 µm	161.81	97.22
2.5	180 µm	214.64	99.95	2.5	180 µm	166.15	99.83
3.0	125 µm	214.71	99.98	3.0	125 µm	166.40	99.98
3.5	90 µm	214.72	99.99	3.5	90 µm	166.40	99.98
4.0	63 µm	214.74	100.00	4.0	63 µm	166.42	99.99
	<63 µm				<63 µm	166.43	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table B14 Cumulative frequency data for bed material flux samples in East Tributary for 13 April 1999

Date	13-Apr-99	No. of Samples = 8	1st Transect = 4	2nd Transect = 4
Sample 1	Sample too small to sieve	(7.51g)	Sample 3	
Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm	0.06	0.04	
-1.5	2.4 mm	0.44	0.28	
-1.0	2.0 mm	1.06	0.69	
-0.5	1.4 mm	3.56	2.30	
0.0	1.0 mm	9.16	5.93	
0.5	710 µm	22.58	14.61	
1.0	500 µm	68.19	44.11	
1.5	355 µm	122.11	78.99	
2.0	250 µm	148.85	96.29	
2.5	180 µm	154.38	99.87	
3.0	125 µm	154.53	99.97	
3.5	90 µm	154.55	99.98	
4.0	63 µm	154.57	99.99	
	<63 µm	154.58	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				

Table B14 Cumulative frequency data for bed material flux samples in East Tributary for 13 April 1999
(Continued)

Sample 2				Sample 4			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.09	0.11	-2.0	4.0 mm		
-1.5	2.4 mm	1.02	1.23	-1.5	2.4 mm		
-1.0	2.0 mm	2.22	2.67	-1.0	2.0 mm	0.04	0.13
-0.5	1.4 mm	6.34	7.61	-0.5	1.4 mm	0.32	1.04
0.0	1.0 mm	15.34	18.42	0.0	1.0 mm	1.64	5.33
0.5	710 µm	30.27	36.36	0.5	710 µm	4.63	15.05
1.0	500 µm	54.67	65.66	1.0	500 µm	13.48	43.82
1.5	355 µm	72.28	86.81	1.5	355 µm	23.62	76.79
2.0	250 µm	81.06	97.36	2.0	250 µm	29.76	96.75
2.5	180 µm	83.02	99.71	2.5	180 µm	30.71	99.84
3.0	125 µm	83.23	99.96	3.0	125 µm	30.75	99.97
3.5	90 µm	83.25	99.99	3.5	90 µm	30.75	99.97
4.0	63 µm	83.26	100.00	4.0	63 µm	30.76	100.00
	<63 µm				<63 µm		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 5 Sample too small to sieve (9.93g)				Sample 7			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.42	0.26	-2.0	4.0 mm	0.42	0.26
-1.5	2.4 mm	2.21	1.36	-1.5	2.4 mm	2.21	1.36
-1.0	2.0 mm	3.97	2.45	-1.0	2.0 mm	3.97	2.45
-0.5	1.4 mm	10.64	6.57	-0.5	1.4 mm	10.64	6.57
0.0	1.0 mm	26.18	16.16	0.0	1.0 mm	26.18	16.16
0.5	710 µm	52.59	32.45	0.5	710 µm	52.59	32.45
1.0	500 µm	101.24	62.47	1.0	500 µm	101.24	62.47
1.5	355 µm	138.36	85.38	1.5	355 µm	138.36	85.38
2.0	250 µm	157.83	97.40	2.0	250 µm	157.83	97.40
2.5	180 µm	161.72	99.80	2.5	180 µm	161.72	99.80
3.0	125 µm	162.02	99.98	3.0	125 µm	162.02	99.98
3.5	90 µm	162.04	99.99	3.5	90 µm	162.04	99.99
4.0	63 µm	162.04	99.99	4.0	63 µm	162.04	99.99
	<63 µm	162.05	100.00		<63 µm	162.05	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table B14 Cumulative frequency data for bed material flux samples in East Tributary for 13 April 1999
(Continued)

Sample 6				Sample 8			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.35	1.74	-2.0	4.0 mm	0.45	0.25
-1.5	2.4 mm	1.07	5.31	-1.5	2.4 mm	2.87	1.57
-1.0	2.0 mm	1.98	9.83	-1.0	2.0 mm	3.89	2.12
-0.5	1.4 mm	4.24	21.05	-0.5	1.4 mm	7.60	4.15
0.0	1.0 mm	6.71	33.32	0.0	1.0 mm	16.34	8.91
0.5	710 µm	9.63	47.82	0.5	710 µm	37.12	20.25
1.0	500 µm	14.15	70.26	1.0	500 µm	105.28	57.44
1.5	355 µm	17.69	87.84	1.5	355 µm	152.08	82.97
2.0	250 µm	19.36	96.13	2.0	250 µm	178.04	97.14
2.5	180 µm	20.09	99.75	2.5	180 µm	183.03	99.86
3.0	125 µm	20.13	99.95	3.0	125 µm	183.24	99.97
3.5	90 µm	20.13	99.95	3.5	90 µm	183.26	99.98
4.0	63 µm	20.13	99.95	4.0	63 µm	183.29	100.00
	<63 µm	20.14	100.00		<63 µm		
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table B15 Cumulative frequency data for bed material flux samples in East Tributary for 27 April 1999

Date	27-Apr-99	No. of Samples = 8		1st Transect = 4		2nd Transect = 4		Combined to make one sample
Combined Sample								
Phi		Mass (g)	Cumulative %					
-2.0	4.0 mm	0.67	0.38					
-1.5	2.4 mm	3.89	2.19					
-1.0	2.0 mm	0.00	2.1					
-0.5	1.4 mm	1.38	2.98					
0.0	1.0 mm	5.11	5.42					
0.5	710 µm	15.80	12.41					
1.0	500 µm	42.53	29.88					
1.5	355 µm	73.95	50.42					
2.0	250 µm	122.57	82.21					
2.5	180 µm	147.67	98.61					
3.0	125 µm	149.66	99.92					
3.5	90 µm	149.74	99.97					
4.0	63 µm	149.77	99.99					
	<63 µm	149.79	100.00					
Folk (1974) Texture Group: Slightly granular medium sand								

Appendix C Upper Swift Creek cumulative frequency data for bed-material load samples for the 1998/1999 wet season

This appendix contains the cumulative percentage values for the bed-material load samples collected at Upper Swift Creek for the 1998/1999 Wet season. All samples were dry sieved through a nest of sieves to a value of 4 phi (63 μm).

Table C1 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 23 December 1998

Date	23-Dec-98	No. of Samples = 10		Ist Transect = 5	2nd Transect = 5	
Sample 1	Sample too small to sieve	(4.30g)				
Sample 2				Sample 4		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	1.16	0.51	-2.0	4.0 mm	1.05 0.57
-1.5	2.4 mm	2.86	1.25	-1.5	2.4 mm	2.77 1.51
-1.0	2.0 mm	4.39	1.92	-1.0	2.0 mm	3.89 2.13
-0.5	1.4 mm	8.59	3.75	-0.5	1.4 mm	8.20 4.48
0.0	1.0 mm	16.38	7.16	0.0	1.0 mm	18.58 10.16
0.5	710 µm	35.85	15.67	0.5	710 µm	44.11 24.11
1.0	500 µm	91.62	40.04	1.0	500 µm	107.31 58.65
1.5	355 µm	155.43	67.93	1.5	355 µm	156.55 85.57
2.0	250 µm	202.45	88.48	2.0	250 µm	175.69 96.03
2.5	180 µm	225.28	98.46	2.5	180 µm	182.11 99.54
3.0	125 µm	228.53	99.88	3.0	125 µm	182.78 99.90
3.5	90 µm	228.73	99.97	3.5	90 µm	182.88 99.96
4.0	63 µm	228.79	100.00	4.0	63 µm	182.92 99.98
	<63 µm				<63 µm	182.96 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand		
Sample 3				Sample 5		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	0.48	0.35	-2.0	4.0 mm	0.34 1.20
-1.5	2.4 mm	3.89	2.84	-1.5	2.4 mm	0.61 2.16
-1.0	2.0 mm	6.06	4.42	-1.0	2.0 mm	1.17 4.14
-0.5	1.4 mm	10.01	7.30	-0.5	1.4 mm	3.19 11.28
0.0	1.0 mm	16.70	12.19	0.0	1.0 mm	6.83 24.15
0.5	710 µm	31.11	22.70	0.5	710 µm	13.21 46.71
1.0	500 µm	64.60	47.14	1.0	500 µm	21.58 76.31
1.5	355 µm	99.33	72.48	1.5	355 µm	26.26 92.86
2.0	250 µm	122.01	89.03	2.0	250 µm	27.65 97.77
2.5	180 µm	135.37	98.78	2.5	180 µm	28.19 99.68
3.0	125 µm	136.74	99.78	3.0	125 µm	28.24 99.86
3.5	90 µm	136.89	99.89	3.5	90 µm	28.27 99.96
4.0	63 µm	136.99	99.96	4.0	63 µm	28.28 100.00
	<63 µm	137.04	100.00		<63 µm	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand		

Table C1 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 23 December 1998 (Continued)

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	2.26	1.26
-1.0	2.0 mm	4.62	2.58
-0.5	1.4 mm	12.62	7.05
0.0	1.0 mm	32.07	17.92
0.5	710 µm	70.51	39.40
1.0	500 µm	135.71	75.84
1.5	355 µm	170.32	95.18
2.0	250 µm	177.49	99.18
2.5	180 µm	178.72	99.87
3.0	125 µm	178.91	99.98
3.5	90 µm	178.94	99.99
4.0	63 µm	178.95	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.65	0.51
-1.0	2.0 mm	1.22	0.96
-0.5	1.4 mm	3.36	2.65
0.0	1.0 mm	8.98	7.08
0.5	710 µm	26.52	20.92
1.0	500 µm	73.02	57.60
1.5	355 µm	108.25	85.40
2.0	250 µm	121.65	95.97
2.5	180 µm	126.39	99.71
3.0	125 µm	126.67	99.93
3.5	90 µm	126.71	99.96
4.0	63 µm	126.75	99.99
	<63 µm	126.76	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	1.26	1.11
-1.0	2.0 mm	1.78	1.57
-0.5	1.4 mm	3.37	2.97
0.0	1.0 mm	6.75	5.94
0.5	710 µm	17.13	15.08
1.0	500 µm	47.06	41.43
1.5	355 µm	79.35	69.86
2.0	250 µm	100.58	88.55
2.5	180 µm	112.60	99.13
3.0	125 µm	113.42	99.85
3.5	90 µm	113.52	99.94
4.0	63 µm	113.59	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.22	0.12
-1.0	2.0 mm	0.47	0.25
-0.5	1.4 mm	1.83	0.99
0.0	1.0 mm	4.97	2.69
0.5	710 µm	15.24	8.24
1.0	500 µm	56.80	30.72
1.5	355 µm	114.06	61.70
2.0	250 µm	162.95	88.14
2.5	180 µm	183.67	99.35
3.0	125 µm	184.65	99.88
3.5	90 µm	184.81	99.97
4.0	63 µm	184.87	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 10 Sample too small to sieve (6.81g)

Table C2 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 5 January 1999

Date	5-Jan-99	No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Sample 1				Sample 3			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.62	0.72
-1.5	2.4 mm	0.07	0.05	-1.5	2.4 mm	3.46	4.04
-1.0	2.0 mm	0.13	0.09	-1.0	2.0 mm	5.13	6.00
-0.5	1.4 mm	0.79	0.54	-0.5	1.4 mm	10.97	12.82
0.0	1.0 mm	3.55	2.42	0.0	1.0 mm	19.02	22.24
0.5	710 µm	14.04	9.58	0.5	710 µm	30.99	36.23
1.0	500 µm	14.70	10.03	1.0	500 µm	46.25	54.07
1.5	355 µm	89.90	61.32	1.5	355 µm	59.18	69.18
2.0	250 µm	130.85	89.25	2.0	250 µm	72.91	85.23
2.5	180 µm	145.96	99.56	2.5	180 µm	85.19	99.59
3.0	125 µm	146.58	99.98	3.0	125 µm	85.42	99.86
3.5	90 µm	146.61	100.00	3.5	90 µm	85.48	99.93
4.0	63 µm			4.0	63 µm	85.51	99.96
	<63 µm				<63 µm	85.54	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Granular coarse sand			
Sample 2				Sample 4			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.43	0.84	-2.0	4.0 mm	0.04	0.10
-1.5	2.4 mm	0.83	1.63	-1.5	2.4 mm	0.56	1.44
-1.0	2.0 mm	0.95	1.86	-1.0	2.0 mm	1.15	2.95
-0.5	1.4 mm	1.35	2.65	-0.5	1.4 mm	2.55	6.54
0.0	1.0 mm	2.27	4.45	0.0	1.0 mm	5.61	14.39
0.5	710 µm	4.43	8.68	0.5	710 µm	10.89	27.94
1.0	500 µm	10.60	20.78	1.0	500 µm	18.93	48.56
1.5	355 µm	22.40	43.90	1.5	355 µm	25.55	65.55
2.0	250 µm	40.16	78.71	2.0	250 µm	30.01	76.99
2.5	180 µm	50.50	98.98	2.5	180 µm	38.80	99.54
3.0	125 µm	50.96	99.88	3.0	125 µm	38.93	99.87
3.5	90 µm	50.99	99.94	3.5	90 µm	38.94	99.90
4.0	63 µm	51.00	99.96	4.0	63 µm	38.96	99.95
	<63 µm	51.02	100.00		<63 µm	38.98	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table C2 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 5 January 1999 (Continued)

Sample 5				Sample 7			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.03	0.02	-1.5	2.4 mm	0.67	0.35
-1.0	2.0 mm	0.07	0.04	-1.0	2.0 mm	1.11	0.57
-0.5	1.4 mm	0.51	0.33	-0.5	1.4 mm	3.38	1.75
0.0	1.0 mm	3.38	2.16	0.0	1.0 mm	9.73	5.03
0.5	710 µm	20.01	12.77	0.5	710 µm	29.00	14.99
1.0	500 µm	78.12	49.84	1.0	500 µm	84.61	43.73
1.5	355 µm	132.56	84.57	1.5	355 µm	147.15	76.05
2.0	250 µm	152.70	97.42	2.0	250 µm	185.81	96.03
2.5	180 µm	156.68	99.96	2.5	180 µm	193.13	99.81
3.0	125 µm	156.71	99.97	3.0	125 µm	193.46	99.98
3.5	90 µm	156.73	99.99	3.5	90 µm	193.48	99.99
4.0	63 µm	156.74	99.99	4.0	63 µm	193.49	99.99
	<63 µm	156.75	100.00		<63 µm	193.50	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 6				Sample 8			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.28	0.33
-1.5	2.4 mm	0.06	0.04	-1.5	2.4 mm	1.99	2.36
-1.0	2.0 mm	0.11	0.07	-1.0	2.0 mm	2.79	3.31
-0.5	1.4 mm	0.62	0.41	-0.5	1.4 mm	5.08	6.03
0.0	1.0 mm	3.79	2.50	0.0	1.0 mm	10.54	12.50
0.5	710 µm	22.42	14.79	0.5	710 µm	24.40	28.95
1.0	500 µm	80.24	52.92	1.0	500 µm	47.43	56.27
1.5	355 µm	129.40	85.34	1.5	355 µm	61.52	72.99
2.0	250 µm	148.11	97.69	2.0	250 µm	73.89	87.66
2.5	180 µm	151.54	99.95	2.5	180 µm	83.84	99.47
3.0	125 µm	151.60	99.99	3.0	125 µm	84.22	99.92
3.5	90 µm	151.61	99.99	3.5	90 µm	84.27	99.98
4.0	63 µm	151.62	100.00	4.0	63 µm	84.28	99.99
	<63 µm				<63 µm	84.29	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table C2 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 5 January 1999 (Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.17	0.90
-1.5	2.4 mm	0.19	1.00
-1.0	2.0 mm	0.22	1.16
-0.5	1.4 mm	0.42	2.22
0.0	1.0 mm	0.80	4.23
0.5	710 µm	1.86	9.84
1.0	500 µm	4.51	23.85
1.5	355 µm	8.19	43.31
2.0	250 µm	13.30	70.33
2.5	180 µm	18.78	99.31
3.0	125 µm	18.86	99.74
3.5	90 µm	18.89	99.89
4.0	63 µm	18.90	99.95
	<63 µm	18.91	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm		
-0.5	1.4 mm	0.06	0.52
0.0	1.0 mm	0.19	1.63
0.5	710 µm	0.79	6.79
1.0	500 µm	3.26	28.03
1.5	355 µm	6.73	57.87
2.0	250 µm	9.88	84.95
2.5	180 µm	11.60	99.74
3.0	125 µm	11.63	100.00
3.5	90 µm		
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Medium sand

Table C3 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 12 January 1999

Date	12-Jan-99	No. of Samples = 10		1st Transect = 5	2nd Transect = 5	
Sample 1	Sample too small to sieve	(5.92g)				
Sample 2				Sample 4		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	0.39	0.72	-2.0	4.0 mm	0.98 0.49
-1.5	2.4 mm	0.83	1.54	-1.5	2.4 mm	3.36 1.69
-1.0	2.0 mm	1.02	1.89	-1.0	2.0 mm	5.67 2.85
-0.5	1.4 mm	1.56	2.90	-0.5	1.4 mm	12.86 6.47
0.0	1.0 mm	2.51	4.66	0.0	1.0 mm	24.68 12.42
0.5	710 µm	5.39	10.01	0.5	710 µm	46.47 23.39
1.0	500 µm	15.29	28.40	1.0	500 µm	87.37 43.97
1.5	355 µm	30.81	57.23	1.5	355 µm	128.83 64.84
2.0	250 µm	46.02	85.48	2.0	250 µm	174.99 88.07
2.5	180 µm	53.69	99.72	2.5	180 µm	197.97 99.63
3.0	125 µm	53.81	99.94	3.0	125 µm	198.50 99.90
3.5	90 µm	53.83	99.98	3.5	90 µm	198.61 99.95
4.0	63 µm	53.84	100.00	4.0	63 µm	198.65 99.97
	<63 µm				<63 µm	198.70 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand		
Sample 3				Sample 5		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	0.71	0.46	-2.0	4.0 mm	0.03 0.08
-1.5	2.4 mm	3.21	2.07	-1.5	2.4 mm	0.26 0.65
-1.0	2.0 mm	5.08	3.28	-1.0	2.0 mm	0.60 1.51
-0.5	1.4 mm	10.19	6.57	-0.5	1.4 mm	1.76 4.43
0.0	1.0 mm	17.83	11.50	0.0	1.0 mm	4.30 10.83
0.5	710 µm	31.98	20.63	0.5	710 µm	10.06 25.33
1.0	500 µm	59.79	38.57	1.0	500 µm	21.97 55.31
1.5	355 µm	90.83	58.60	1.5	355 µm	31.72 79.86
2.0	250 µm	129.73	83.69	2.0	250 µm	37.20 93.66
2.5	180 µm	154.23	99.50	2.5	180 µm	39.67 99.87
3.0	125 µm	154.87	99.91	3.0	125 µm	39.70 99.95
3.5	90 µm	154.94	99.95	3.5	90 µm	39.71 99.97
4.0	63 µm	154.97	99.97	4.0	63 µm	39.72 100.00
	<63 µm	155.01	100.00		<63 µm	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand		

Table C3 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 12 January 1999 (Continued)

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.10	0.20
-1.5	2.4 mm	0.88	1.80
-1.0	2.0 mm	1.37	2.80
-0.5	1.4 mm	3.73	7.62
0.0	1.0 mm	8.35	17.07
0.5	710 µm	17.15	35.06
1.0	500 µm	30.79	62.94
1.5	355 µm	40.25	82.28
2.0	250 µm	46.77	95.61
2.5	180 µm	48.87	99.90
3.0	125 µm	48.90	99.96
3.5	90 µm	48.91	99.98
4.0	63 µm	48.92	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.18	0.13
-1.5	2.4 mm	1.80	1.25
-1.0	2.0 mm	2.97	2.07
-0.5	1.4 mm	6.72	4.68
0.0	1.0 mm	13.28	9.24
0.5	710 µm	27.33	19.02
1.0	500 µm	56.43	39.27
1.5	355 µm	88.99	61.93
2.0	250 µm	123.27	85.79
2.5	180 µm	143.25	99.69
3.0	125 µm	143.60	99.94
3.5	90 µm	143.65	99.97
4.0	63 µm	143.69	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.76	0.42
-1.5	2.4 mm	1.88	1.05
-1.0	2.0 mm	2.75	1.54
-0.5	1.4 mm	6.10	3.41
0.0	1.0 mm	11.67	6.52
0.5	710 µm	23.19	12.96
1.0	500 µm	51.65	28.87
1.5	355 µm	93.33	52.17
2.0	250 µm	148.74	83.15
2.5	180 µm	177.75	99.37
3.0	125 µm	178.73	99.92
3.5	90 µm	178.81	99.96
4.0	63 µm	178.84	99.98
	<63 µm	178.88	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.25	0.12
-1.5	2.4 mm	0.97	0.46
-1.0	2.0 mm	1.70	0.81
-0.5	1.4 mm	4.71	2.26
0.0	1.0 mm	11.79	5.64
0.5	710 µm	28.29	13.54
1.0	500 µm	69.93	33.48
1.5	355 µm	120.70	57.79
2.0	250 µm	181.66	86.98
2.5	180 µm	206.84	99.03
3.0	125 µm	208.73	99.94
3.5	90 µm	208.81	99.98
4.0	63 µm	208.84	99.99
	<63 µm	208.86	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table C3 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 12 January 1999 (Continued)

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.06	0.36
-1.5	2.4 mm	0.07	0.42
-1.0	2.0 mm	0.08	0.48
-0.5	1.4 mm	0.19	1.14
0.0	1.0 mm	0.59	3.55
0.5	710 μm	1.84	11.06
1.0	500 μm	5.20	31.25
1.5	355 μm	9.20	55.29
2.0	250 μm	12.87	77.34
2.5	180 μm	16.47	98.98
3.0	125 μm	16.61	99.82
3.5	90 μm	16.63	99.94
4.0	63 μm	16.64	100.00
	<63 μm		

Folk (1974) Texture Group: Slightly granular medium sand

Table C4 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 20 January 1999

Date	20-Jan-99	No. of Samples = 16		Ist Transect = 8	2nd Transect = 8	
Sample 1	Sample too small to sieve	(1.53g)				
Sample 2				Sample 4		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	1.50	2.01	-2.0	4.0 mm	0.31 0.35
-1.5	2.4 mm	1.97	2.64	-1.5	2.4 mm	0.72 0.82
-1.0	2.0 mm	2.22	2.97	-1.0	2.0 mm	0.86 0.98
-0.5	1.4 mm	2.76	3.69	-0.5	1.4 mm	1.17 1.34
0.0	1.0 mm	3.47	4.65	0.0	1.0 mm	1.93 2.21
0.5	710 µm	6.10	8.17	0.5	710 µm	4.33 4.95
1.0	500 µm	16.72	22.38	1.0	500 µm	12.34 14.10
1.5	355 µm	37.02	49.56	1.5	355 µm	28.89 33.02
2.0	250 µm	62.72	83.96	2.0	250 µm	64.04 73.20
2.5	180 µm	74.51	99.75	2.5	180 µm	86.90 99.33
3.0	125 µm	74.66	99.95	3.0	125 µm	87.33 99.82
3.5	90 µm	74.68	99.97	3.5	90 µm	87.40 99.90
4.0	63 µm	74.69	99.99	4.0	63 µm	87.44 99.94
	<63 µm	74.70	100.00		<63 µm	87.49 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand		
Sample 3				Sample 5		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	1.40	4.05	-2.0	4.0 mm	0.51 0.53
-1.5	2.4 mm	1.90	5.49	-1.5	2.4 mm	0.69 0.72
-1.0	2.0 mm	2.04	5.89	-1.0	2.0 mm	0.83 0.86
-0.5	1.4 mm	2.21	6.39	-0.5	1.4 mm	1.09 1.13
0.0	1.0 mm	2.61	7.54	0.0	1.0 mm	1.89 1.96
0.5	710 µm	3.68	10.63	0.5	710 µm	4.56 4.73
1.0	500 µm	7.54	21.79	1.0	500 µm	13.20 13.69
1.5	355 µm	14.93	43.14	1.5	355 µm	30.58 31.73
2.0	250 µm	26.27	75.90	2.0	250 µm	74.76 77.56
2.5	180 µm	34.41	99.42	2.5	180 µm	95.69 99.27
3.0	125 µm	34.51	99.71	3.0	125 µm	96.29 99.90
3.5	90 µm	34.56	99.86	3.5	90 µm	96.35 99.96
4.0	63 µm	34.58	99.91	4.0	63 µm	96.37 99.98
	<63 µm	34.61	100.00		<63 µm	96.39 100.00
Folk (1974) Texture Group: Granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand		

Table C4 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 20 January 1999 (Continued)

Sample 6				Sample 8 Sample too small to sieve (6.55g)			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.35	0.52	-2.0	4.0 mm	0.09	0.88
-1.5	2.4 mm	0.43	0.64	-1.5	2.4 mm	0.11	1.08
-1.0	2.0 mm	0.45	0.67	-1.0	2.0 mm	0.12	1.18
-0.5	1.4 mm	0.48	0.72	-0.5	1.4 mm	0.13	1.28
0.0	1.0 mm	0.68	1.01	0.0	1.0 mm	0.18	1.77
0.5	710 µm	1.72	2.57	0.5	710 µm	0.29	2.85
1.0	500 µm	7.87	11.74	1.0	500 µm	0.89	8.75
1.5	355 µm	23.49	35.05	1.5	355 µm	2.91	28.61
2.0	250 µm	49.75	74.24	2.0	250 µm	7.46	73.35
2.5	180 µm	66.75	99.61	2.5	180 µm	10.07	99.02
3.0	125 µm	66.95	99.91	3.0	125 µm	10.16	99.90
3.5	90 µm	66.99	99.97	3.5	90 µm	10.17	100.00
4.0	63 µm	67.00	99.99	4.0	63 µm		
	<63 µm	67.01	100.00		<63 µm		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 7				Sample 10 Sample too small to sieve (3.24g)			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.40	0.82				
-1.5	2.4 mm	0.49	1.00				
-1.0	2.0 mm	0.58	1.18				
-0.5	1.4 mm	0.85	1.73				
0.0	1.0 mm	1.65	3.37				
0.5	710 µm	3.28	6.69				
1.0	500 µm	8.24	16.81				
1.5	355 µm	18.72	38.19				
2.0	250 µm	36.87	75.21				
2.5	180 µm	48.70	99.35				
3.0	125 µm	48.96	99.88				
3.5	90 µm	49.00	99.96				
4.0	63 µm	49.01	99.98				
	<63 µm	49.02	100.00				
Folk (1974) Texture Group: Slightly granular medium sand							

Table C4 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 20 January 1999 (Continued)

Sample 11				Sample 13			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.23	0.26	-2.0	4.0 mm	0.16	0.30
-1.5	2.4 mm	0.40	0.45	-1.5	2.4 mm	0.28	0.53
-1.0	2.0 mm	0.46	0.52	-1.0	2.0 mm	0.47	0.89
-0.5	1.4 mm	0.72	0.82	-0.5	1.4 mm	0.80	1.52
0.0	1.0 mm	1.50	1.71	0.0	1.0 mm	1.71	3.25
0.5	710 µm	3.91	4.45	0.5	710 µm	4.02	7.65
1.0	500 µm	13.30	15.12	1.0	500 µm	9.80	18.64
1.5	355 µm	33.68	38.30	1.5	355 µm	20.17	38.36
2.0	250 µm	67.59	76.86	2.0	250 µm	38.45	73.13
2.5	180 µm	87.44	99.43	2.5	180 µm	52.27	99.41
3.0	125 µm	87.85	99.90	3.0	125 µm	52.51	99.87
3.5	90 µm	87.90	99.95	3.5	90 µm	52.54	99.92
4.0	63 µm	87.92	99.98	4.0	63 µm	52.56	99.96
	<63 µm	87.94	100.00		<63 µm	52.58	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 12				Sample 14			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.09	0.48	-2.0	4.0 mm	0.13	0.22
-1.5	2.4 mm	0.09	0.48	-1.5	2.4 mm	0.36	0.62
-1.0	2.0 mm	0.11	0.58	-1.0	2.0 mm	0.43	0.74
-0.5	1.4 mm	0.14	0.74	-0.5	1.4 mm	0.79	1.37
0.0	1.0 mm	0.32	1.70	0.0	1.0 mm	2.21	3.82
0.5	710 µm	0.90	4.78	0.5	710 µm	5.79	10.01
1.0	500 µm	2.87	15.26	1.0	500 µm	13.85	23.94
1.5	355 µm	6.30	33.49	1.5	355 µm	24.73	42.75
2.0	250 µm	13.67	72.67	2.0	250 µm	46.33	80.09
2.5	180 µm	18.67	99.26	2.5	180 µm	57.53	99.45
3.0	125 µm	18.79	99.89	3.0	125 µm	57.79	99.90
3.5	90 µm	18.79	99.89	3.5	90 µm	57.82	99.95
4.0	63 µm	18.80	99.95	4.0	63 µm	57.84	99.98
	<63 µm	18.81	100.00		<63 µm	57.85	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table C4 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 20 January 1999 (Continued)

Sample 15

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.08	0.16
-1.5	2.4 mm	0.35	0.69
-1.0	2.0 mm	0.42	0.83
-0.5	1.4 mm	0.61	1.20
0.0	1.0 mm	1.22	2.40
0.5	710 μm	3.54	6.97
1.0	500 μm	11.27	22.18
1.5	355 μm	23.21	45.67
2.0	250 μm	42.48	83.59
2.5	180 μm	50.53	99.43
3.0	125 μm	50.77	99.90
3.5	90 μm	50.79	99.94
4.0	63 μm	50.81	99.98
	<63 μm	50.82	100.00

Sample 16 Sample too small to sieve

Folk (1974) Texture Group: Slightly granular medium sand

Table C5 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 2 February 1999

Date	2-Feb-99	No. of Samples = 8	1st Transect = 4	2nd Transect = 4
Sample 1	Sample too small to sieve (2.63g)		Sample 3	
			Phi	Mass (g) Cumulative %
			-2.0 4.0 mm	0.67 2.99
			-1.5 2.4 mm	0.85 3.79
			-1.0 2.0 mm	0.94 4.19
			-0.5 1.4 mm	1.04 4.64
			0.0 1.0 mm	1.20 5.35
			0.5 710 µm	1.49 6.65
			1.0 500 µm	2.16 9.64
			1.5 355 µm	3.36 14.99
			2.0 250 µm	9.89 44.13
			2.5 180 µm	21.71 96.88
			3.0 125 µm	22.30 99.51
			3.5 90 µm	22.36 99.78
			4.0 63 µm	22.39 99.91
			<63 µm	22.41 100.00
			Folk (1974) Texture Group: Slightly pebbly fine sand	
Sample 2			Sample 4 Sample too small to sieve (3.83g)	
	Phi	Mass (g)	Cumulative %	
	-2.0 4.0 mm	8.70	4.98	
	-1.5 2.4 mm	15.69	8.99	
	-1.0 2.0 mm	18.33	10.50	
	-0.5 1.4 mm	23.02	13.19	
	0.0 1.0 mm	28.44	16.29	
	0.5 710 µm	36.36	20.83	
	1.0 500 µm	50.82	29.11	
	1.5 355 µm	68.37	39.17	
	2.0 250 µm	126.50	72.47	
	2.5 180 µm	171.40	98.20	
	3.0 125 µm	173.96	99.66	
	3.5 90 µm	174.24	99.82	
	4.0 63 µm	174.39	99.91	
	<63 µm	174.55	100.00	
	Folk (1974) Texture Group: Granular medium sand			

Table C5 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 2 February 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.14	1.11
-1.5	2.4 mm	0.19	1.51
-1.0	2.0 mm	0.23	1.83
-0.5	1.4 mm	0.27	2.15
0.0	1.0 mm	0.38	3.02
0.5	710 μ m	0.57	4.53
1.0	500 μ m	0.99	7.87
1.5	355 μ m	1.86	14.79
2.0	250 μ m	6.13	48.73
2.5	180 μ m	12.17	96.74
3.0	125 μ m	12.55	99.76
3.5	90 μ m	12.56	99.84
4.0	63 μ m	12.57	99.92
	<63 μ m	12.58	100.00

Folk (1974) Texture Group: Slightly pebbly fine sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.45	3.80
-1.5	2.4 mm	0.58	4.90
-1.0	2.0 mm	0.66	5.58
-0.5	1.4 mm	0.74	6.26
0.0	1.0 mm	0.81	6.85
0.5	710 μ m	0.96	8.11
1.0	500 μ m	1.37	11.58
1.5	355 μ m	2.03	17.16
2.0	250 μ m	4.29	36.26
2.5	180 μ m	11.54	97.55
3.0	125 μ m	11.74	99.24
3.5	90 μ m	11.78	99.58
4.0	63 μ m	11.80	99.75
	<63 μ m	11.83	100.00

Folk (1974) Texture Group: Pebbly fine sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	5.29	4.82
-1.5	2.4 mm	9.53	8.68
-1.0	2.0 mm	10.99	10.01
-0.5	1.4 mm	14.29	13.01
0.0	1.0 mm	18.01	16.40
0.5	710 μ m	23.51	21.41
1.0	500 μ m	34.68	31.58
1.5	355 μ m	48.23	43.92
2.0	250 μ m	77.54	70.61
2.5	180 μ m	108.11	98.44
3.0	125 μ m	109.22	99.45
3.5	90 μ m	109.53	99.74
4.0	63 μ m	109.66	99.85
	<63 μ m	109.82	100.00

Folk (1974) Texture Group: Granular medium sand

Sample 8 Sample too small to sieve (0.8g)

Table C5 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 9 February 1999

Date	9-Feb-99	No. of Samples = 10		1st Transect = 5	2nd Transect = 5		
Sample 1				Sample 3			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm	1.82	0.26	-2.0	4.0 mm	0.84	0.08
-1.5	2.4 mm	4.69	0.67	-1.5	2.4 mm	3.82	0.37
-1.0	2.0 mm	7.01	1.01	-1.0	2.0 mm	5.70	0.55
-0.5	1.4 mm	15.95	2.29	-0.5	1.4 mm	13.60	1.32
0.0	1.0 mm	35.11	5.04	0.0	1.0 mm	36.16	3.52
0.5	710 µm	87.56	12.57	0.5	710 µm	115.09	11.19
1.0	500 µm	250.52	35.96	1.0	500 µm	420.63	40.91
1.5	355 µm	544.90	78.21	1.5	355 µm	781.66	76.03
2.0	250 µm	668.04	95.88	2.0	250 µm	962.85	93.66
2.5	180 µm	695.38	99.81	2.5	180 µm	1025.23	99.72
3.0	125 µm	696.45	99.96	3.0	125 µm	1027.53	99.95
3.5	90 µm	696.62	99.99	3.5	90 µm	1027.87	99.98
4.0	63 µm	696.67	99.99	4.0	63 µm	1027.96	99.99
	<63 µm	696.72	100.00		<63 µm	1028.07	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 2				Sample 4			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm	1.61	0.29	-2.0	4.0 mm	0.26	0.07
-1.5	2.4 mm	5.97	1.08	-1.5	2.4 mm	0.75	0.20
-1.0	2.0 mm	9.01	1.63	-1.0	2.0 mm	0.95	0.25
-0.5	1.4 mm	19.81	3.59	-0.5	1.4 mm	1.82	0.48
0.0	1.0 mm	49.58	8.99	0.0	1.0 mm	5.01	1.31
0.5	710 µm	113.90	20.64	0.5	710 µm	20.93	5.49
1.0	500 µm	280.84	50.90	1.0	500 µm	92.02	24.14
1.5	355 µm	433.40	78.55	1.5	355 µm	239.51	62.84
2.0	250 µm	530.00	96.06	2.0	250 µm	347.37	91.14
2.5	180 µm	530.39	96.13	2.5	180 µm	379.43	99.55
3.0	125 µm	551.51	99.96	3.0	125 µm	380.85	99.92
3.5	90 µm	551.61	99.98	3.5	90 µm	381.03	99.97
4.0	63 µm	551.67	99.99	4.0	63 µm	381.07	99.98
	<63 µm	551.72	100.00		<63 µm	381.14	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table C5 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 9 February 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.03	0.12
-1.0	2.0 mm	0.03	0.12
-0.5	1.4 mm	0.07	0.27
0.0	1.0 mm	0.35	1.35
0.5	710 µm	1.74	6.71
1.0	500 µm	8.35	32.20
1.5	355 µm	17.71	68.30
2.0	250 µm	23.20	89.47
2.5	180 µm	25.80	99.50
3.0	125 µm	25.89	99.85
3.5	90 µm	25.91	99.92
4.0	63 µm	25.92	99.96
	<63 µm	25.93	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 6 Sample too small to sieve (5.76g)

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.22	0.05
-1.5	2.4 mm	0.55	0.12
-1.0	2.0 mm	0.70	0.16
-0.5	1.4 mm	1.24	0.28
0.0	1.0 mm	3.99	0.89
0.5	710 µm	19.72	4.42
1.0	500 µm	116.12	26.03
1.5	355 µm	279.77	62.71
2.0	250 µm	410.32	91.97
2.5	180 µm	443.08	99.31
3.0	125 µm	445.87	99.94
3.5	90 µm	446.06	99.98
4.0	63 µm	446.08	99.99
	<63 µm	446.14	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.04	0.03
-1.5	2.4 mm	0.68	0.51
-1.0	2.0 mm	1.24	0.94
-0.5	1.4 mm	2.84	2.15
0.0	1.0 mm	6.59	4.98
0.5	710 µm	19.14	14.47
1.0	500 µm	59.46	44.94
1.5	355 µm	103.66	78.35
2.0	250 µm	128.11	96.83
2.5	180 µm	131.79	99.61
3.0	125 µm	132.26	99.96
3.5	90 µm	132.29	99.98
4.0	63 µm	132.30	99.99
	<63 µm	132.31	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table C5 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 9 February 1999 (Continued)

Sample 9			Sample 10				
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	7.43	0.58	-2.0	4.0 mm	2.22	0.69
-1.5	2.4 mm	29.78	2.34	-1.5	2.4 mm	3.16	0.98
-1.0	2.0 mm	44.64	3.50	-1.0	2.0 mm	3.90	1.21
-0.5	1.4 mm	93.02	7.30	-0.5	1.4 mm	6.39	1.98
0.0	1.0 mm	186.54	14.65	0.0	1.0 mm	14.84	4.59
0.5	710 μ m	361.25	28.36	0.5	710 μ m	42.36	13.11
1.0	500 μ m	674.52	52.96	1.0	500 μ m	135.17	41.83
1.5	355 μ m	1007.63	79.11	1.5	355 μ m	238.84	73.92
2.0	250 μ m	1232.27	96.74	2.0	250 μ m	311.20	96.31
2.5	180 μ m	1270.07	99.71	2.5	180 μ m	322.39	99.78
3.0	125 μ m	1273.23	99.96	3.0	125 μ m	322.93	99.94
3.5	90 μ m	1273.49	99.98	3.5	90 μ m	323.02	99.97
4.0	63 μ m	1273.61	99.99	4.0	63 μ m	323.06	99.98
	<63 μ m	1273.73	100.00		<63 μ m	323.11	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table C6 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 16 February 1999

Date	16-Feb-99	No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Sample 1				Sample 3			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.02	0.01
-1.5	2.4 mm			-1.5	2.4 mm	0.24	0.12
-1.0	2.0 mm			-1.0	2.0 mm	0.42	0.20
-0.5	1.4 mm			-0.5	1.4 mm	0.77	0.37
0.0	1.0 mm	0.04	0.32	0.0	1.0 mm	1.45	0.70
0.5	710 µm	0.19	1.53	0.5	710 µm	3.77	1.82
1.0	500 µm	0.54	4.36	1.0	500 µm	17.10	8.27
1.5	355 µm	1.69	13.64	1.5	355 µm	53.08	25.68
2.0	250 µm	7.30	58.92	2.0	250 µm	149.44	72.31
2.5	180 µm	12.14	97.98	2.5	180 µm	203.69	98.56
3.0	125 µm	12.37	99.84	3.0	125 µm	206.42	99.88
3.5	90 µm	12.37	99.84	3.5	90 µm	206.59	99.96
4.0	63 µm	12.38	99.92	4.0	63 µm	206.62	99.98
	<63 µm	12.39	100.00		<63 µm	206.67	100.00
Folk (1974) Texture Group: Medium sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 2				Sample 4	Sample too small to sieve		(13.06g)
Phi		Mass (g)	Cumulative %				
-2.0	4.0 mm	1.08	0.69				
-1.5	2.4 mm	1.54	0.99				
-1.0	2.0 mm	1.81	1.16				
-0.5	1.4 mm	2.26	1.45				
0.0	1.0 mm	3.41	2.18				
0.5	710 µm	8.27	5.30				
1.0	500 µm	47.26	30.28				
1.5	355 µm	99.17	63.53				
2.0	250 µm	144.48	92.56				
2.5	180 µm	155.07	99.35				
3.0	125 µm	155.97	99.92				
3.5	90 µm	156.05	99.97				
4.0	63 µm	156.08	99.99				
	<63 µm	156.09	100.00				
Folk (1974) Texture Group: Slightly granular medium sand							

Table C6 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 16 February 1999 (Continued)

Sample 5 Sample too small to sieve (5.79g)

Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	
-1.5	2.4 mm	
-1.0	2.0 mm	
-0.5	1.4 mm	0.02 0.15
0.0	1.0 mm	0.05 0.38
0.5	710 µm	0.15 1.15
1.0	500 µm	0.47 3.59
1.5	355 µm	1.37 10.46
2.0	250 µm	4.81 36.72
2.5	180 µm	12.81 97.79
3.0	125 µm	13.07 99.77
3.5	90 µm	13.09 99.92
4.0	63 µm	13.09 99.92
	<63 µm	13.10 100.00

Folk (1974) Texture Group: Slightly granular fine sand

Sample 7

Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	
-1.5	2.4 mm	0.40 0.68
-1.0	2.0 mm	0.58 0.99
-0.5	1.4 mm	1.11 1.89
0.0	1.0 mm	2.36 4.01
0.5	710 µm	6.18 10.51
1.0	500 µm	13.19 22.44
1.5	355 µm	33.55 57.08
2.0	250 µm	56.84 96.70
2.5	180 µm	58.71 99.88
3.0	125 µm	58.77 99.98
3.5	90 µm	58.78 100.00
4.0	63 µm	
	<63 µm	

Folk (1974) Texture Group: Slightly granular medium sand

Sample 8

Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	0.59 0.17
-1.5	2.4 mm	1.43 0.40
-1.0	2.0 mm	1.71 0.48
-0.5	1.4 mm	2.32 0.65
0.0	1.0 mm	3.74 1.05
0.5	710 µm	9.48 2.67
1.0	500 µm	39.94 11.24
1.5	355 µm	108.29 30.48
2.0	250 µm	290.04 81.63
2.5	180 µm	354.43 99.75
3.0	125 µm	354.92 99.89
3.5	90 µm	355.14 99.95
4.0	63 µm	355.21 99.97
	<63 µm	355.31 100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table C6 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 16 February 1999 (Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.26	0.11
-1.5	2.4 mm	2.17	0.89
-1.0	2.0 mm	2.61	1.07
-0.5	1.4 mm	3.69	1.52
0.0	1.0 mm	5.35	2.20
0.5	710 μ m	11.00	4.53
1.0	500 μ m	39.13	16.10
1.5	355 μ m	102.07	41.99
2.0	250 μ m	197.75	81.35
2.5	180 μ m	241.00	99.14
3.0	125 μ m	242.86	99.91
3.5	90 μ m	243.02	99.97
4.0	63 μ m	243.06	99.99
	<63 μ m	243.09	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.21	0.88
-1.0	2.0 mm	0.20	0.84
-0.5	1.4 mm	0.29	1.22
0.0	1.0 mm	0.39	1.64
0.5	710 μ m	0.54	2.27
1.0	500 μ m	1.59	6.68
1.5	355 μ m	4.95	20.79
2.0	250 μ m	14.61	61.36
2.5	180 μ m	23.68	99.45
3.0	125 μ m	23.79	99.92
3.5	90 μ m	23.81	100.00
4.0	63 μ m		
	<63 μ m		

Folk (1974) Texture Group: Slightly granular medium sand

Table C7 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 23 February 1999

Date	23-Feb-99	No. of Samples = 12		1st Transect = 6	2nd Transect = 6	
Sample 1				Sample 3		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	0.02	0.01	-2.0	4.0 mm	0.19 0.08
-1.5	2.4 mm	0.14	0.06	-1.5	2.4 mm	1.64 0.71
-1.0	2.0 mm	0.22	0.10	-1.0	2.0 mm	2.78 1.20
-0.5	1.4 mm	1.23	0.57	-0.5	1.4 mm	12.84 5.55
0.0	1.0 mm	5.91	2.73	0.0	1.0 mm	24.45 10.56
0.5	710 µm	26.97	12.47	0.5	710 µm	66.66 28.79
1.0	500 µm	98.22	45.42	1.0	500 µm	144.26 62.31
1.5	355 µm	175.61	81.20	1.5	355 µm	191.30 82.63
2.0	250 µm	209.98	97.10	2.0	250 µm	221.11 95.50
2.5	180 µm	216.21	99.98	2.5	180 µm	230.75 99.67
3.0	125 µm	216.26	100.00	3.0	125 µm	231.49 99.99
3.5	90 µm			3.5	90 µm	231.52 100.00
4.0	63 µm			4.0	63 µm	
	<63 µm				<63 µm	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand		
Sample 2				Sample 4		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	0.38	0.06	-2.0	4.0 mm	0.71 0.14
-1.5	2.4 mm	2.35	0.40	-1.5	2.4 mm	6.45 1.28
-1.0	2.0 mm	4.24	0.73	-1.0	2.0 mm	12.11 2.41
-0.5	1.4 mm	10.41	1.78	-0.5	1.4 mm	34.97 6.95
0.0	1.0 mm	27.07	4.63	0.0	1.0 mm	81.06 16.12
0.5	710 µm	73.09	12.50	0.5	710 µm	174.56 34.71
1.0	500 µm	230.22	39.37	1.0	500 µm	318.79 63.40
1.5	355 µm	362.57	62.01	1.5	355 µm	414.76 82.48
2.0	250 µm	557.35	95.32	2.0	250 µm	474.17 94.30
2.5	180 µm	583.46	99.79	2.5	180 µm	501.40 99.71
3.0	125 µm	584.66	99.99	3.0	125 µm	502.66 99.96
3.5	90 µm	584.66	99.99	3.5	90 µm	502.78 99.99
4.0	63 µm	584.67	100.00	4.0	63 µm	502.81 99.99
	<63 µm				<63 µm	502.85 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand		

Table C7 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 23 February 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.11	0.04
-1.0	2.0 mm	0.25	0.08
-0.5	1.4 mm	0.98	0.32
0.0	1.0 mm	3.86	1.26
0.5	710 µm	17.13	5.59
1.0	500 µm	76.32	24.89
1.5	355 µm	181.04	59.04
2.0	250 µm	277.92	90.63
2.5	180 µm	305.62	99.67
3.0	125 µm	306.60	99.99
3.5	90 µm	306.63	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm		
-0.5	1.4 mm	0.03	0.13
0.0	1.0 mm	0.09	0.40
0.5	710 µm	0.91	4.05
1.0	500 µm	10.79	48.06
1.5	355 µm	17.77	79.15
2.0	250 µm	21.72	96.75
2.5	180 µm	22.42	99.87
3.0	125 µm	22.44	99.96
3.5	90 µm	22.45	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Medium sand

Sample 7 Sample too small to sieve (11.40g)

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.11	0.04
-1.0	2.0 mm	0.25	0.08
-0.5	1.4 mm	0.98	0.32
0.0	1.0 mm	3.86	1.26
0.5	710 µm	17.13	5.59
1.0	500 µm	76.32	24.89
1.5	355 µm	181.04	59.04
2.0	250 µm	277.92	90.63
2.5	180 µm	305.62	99.67
3.0	125 µm	306.60	99.99
3.5	90 µm	306.63	100.00
4.0	63 µm		
	<63 µm		

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.05	0.03
-1.0	2.0 mm	0.07	0.04
-0.5	1.4 mm	0.36	0.19
0.0	1.0 mm	1.60	0.85
0.5	710 µm	7.94	4.22
1.0	500 µm	40.82	21.67
1.5	355 µm	98.36	52.22
2.0	250 µm	176.20	93.55
2.5	180 µm	187.71	99.67
3.0	125 µm	188.33	99.99
3.5	90 µm	188.34	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Table C7 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 23 February 1999 (Continued)

Sample 9			Sample 11		
Phi		Mass (g) Cumulative %	Phi		Mass (g) Cumulative %
-2.0	4.0 mm	0.26 0.12	-2.0	4.0 mm	
-1.5	2.4 mm	2.50 1.17	-1.5	2.4 mm	2.05 0.50
-1.0	2.0 mm	4.62 2.15	-1.0	2.0 mm	3.65 0.89
-0.5	1.4 mm	25.20 11.75	-0.5	1.4 mm	9.33 2.27
0.0	1.0 mm	53.75 25.06	0.0	1.0 mm	54.25 13.17
0.5	710 µm	108.45 50.56	0.5	710 µm	150.42 36.52
1.0	500 µm	159.65 74.44	1.0	500 µm	270.11 65.58
1.5	355 µm	197.16 91.92	1.5	355 µm	305.14 74.08
2.0	250 µm	213.95 99.75	2.0	250 µm	381.03 92.51
2.5	180 µm	214.42 99.97	2.5	180 µm	410.53 99.67
3.0	125 µm	214.43 99.98	3.0	125 µm	411.85 99.98
3.5	90 µm	214.47 100.00	3.5	90 µm	411.87 99.99
4.0	63 µm		4.0	63 µm	411.89 100.00
	<63 µm			<63 µm	
Folk (1974) Texture Group: Slightly granular coarse sand			Folk (1974) Texture Group: Slightly granular coarse sand		
Sample 10			Sample 12		
Phi		Mass (g) Cumulative %	Phi		Mass (g) Cumulative %
-2.0	4.0 mm	0.72 0.19	-2.0	4.0 mm	0.04 0.01
-1.5	2.4 mm	4.15 1.10	-1.5	2.4 mm	0.55 0.14
-1.0	2.0 mm	6.60 1.76	-1.0	2.0 mm	0.95 0.24
-0.5	1.4 mm	16.47 4.38	-0.5	1.4 mm	3.37 0.85
0.0	1.0 mm	57.60 15.32	0.0	1.0 mm	13.38 3.36
0.5	710 µm	109.78 29.19	0.5	710 µm	57.78 14.51
1.0	500 µm	232.22 61.75	1.0	500 µm	200.51 50.34
1.5	355 µm	298.31 79.33	1.5	355 µm	327.41 82.20
2.0	250 µm	353.29 93.95	2.0	250 µm	385.52 96.79
2.5	180 µm	374.90 99.69	2.5	180 µm	398.02 99.93
3.0	125 µm	376.01 99.99	3.0	125 µm	398.29 99.99
3.5	90 µm	376.04 100.00	3.5	90 µm	398.31 100.00
4.0	63 µm		4.0	63 µm	
	<63 µm			<63 µm	
Folk (1974) Texture Group: Slightly granular coarse sand			Folk (1974) Texture Group: Slightly granular coarse sand		

Table C8 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 3 March 1999

Date	3-Mar-99		No. of Samples = 12	1st Transect = 6	2nd Transect = 6		
Sample 1	Phi	Mass (g)	Cumulative %	Sample 3	Phi	Mass (g)	Cumulative %
	-2.0	4.0 mm			-2.0	4.0 mm	0.03 0.01
	-1.5	2.4 mm	0.03 0.03		-1.5	2.4 mm	0.28 0.12
	-1.0	2.0 mm	0.04 0.04		-1.0	2.0 mm	0.94 0.41
	-0.5	1.4 mm	0.24 0.26		-0.5	1.4 mm	2.40 1.05
	0.0	1.0 mm	0.90 0.96		0.0	1.0 mm	7.07 3.08
	0.5	710 µm	3.82 4.07		0.5	710 µm	22.89 9.97
	1.0	500 µm	24.43 26.00		1.0	500 µm	80.60 35.11
	1.5	355 µm	62.12 66.11		1.5	355 µm	151.72 66.09
	2.0	250 µm	88.80 94.50		2.0	250 µm	216.41 94.27
	2.5	180 µm	93.92 99.95		2.5	180 µm	229.41 99.93
	3.0	125 µm	93.97 100.00		3.0	125 µm	229.55 99.99
	3.5	90 µm			3.5	90 µm	229.56 100.00
	4.0	63 µm			4.0	63 µm	
		<63 µm				<63 µm	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 2	Phi	Mass (g)	Cumulative %	Sample 4	Phi	Mass (g)	Cumulative %
	-2.0	4.0 mm			-2.0	4.0 mm	0.08 0.03
	-1.5	2.4 mm	0.01 0.01		-1.5	2.4 mm	0.89 0.29
	-1.0	2.0 mm	0.22 0.12		-1.0	2.0 mm	1.71 0.55
	-0.5	1.4 mm	1.32 0.70		-0.5	1.4 mm	5.28 1.71
	0.0	1.0 mm	6.09 3.23		0.0	1.0 mm	17.25 5.58
	0.5	710 µm	26.99 14.31		0.5	710 µm	55.35 17.90
	1.0	500 µm	88.04 46.68		1.0	500 µm	150.85 48.79
	1.5	355 µm	148.55 78.76		1.5	355 µm	229.25 74.15
	2.0	250 µm	182.56 96.79		2.0	250 µm	294.24 95.17
	2.5	180 µm	188.52 99.95		2.5	180 µm	308.45 99.77
	3.0	125 µm	188.58 99.98		3.0	125 µm	309.12 99.98
	3.5	90 µm	188.60 99.99		3.5	90 µm	309.14 99.99
	4.0	63 µm	188.60 99.99		4.0	63 µm	309.15 99.99
		<63 µm	188.62 100.00			<63 µm	309.17 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table C8 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 3 March 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.27	0.09
-1.5	2.4 mm	0.57	0.18
-1.0	2.0 mm	1.05	0.34
-0.5	1.4 mm	3.75	1.22
0.0	1.0 mm	11.82	3.83
0.5	710 µm	41.49	13.44
1.0	500 µm	131.43	42.58
1.5	355 µm	235.09	76.17
2.0	250 µm	294.58	95.44
2.5	180 µm	308.22	99.86
3.0	125 µm	308.57	99.98
3.5	90 µm	308.63	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm	0.07	0.12
-0.5	1.4 mm	0.39	0.67
0.0	1.0 mm	2.27	3.92
0.5	710 µm	10.37	17.92
1.0	500 µm	29.49	50.96
1.5	355 µm	46.91	81.06
2.0	250 µm	56.64	97.87
2.5	180 µm	57.78	99.84
3.0	125 µm	57.86	99.98
3.5	90 µm	57.87	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.06	0.05
-1.0	2.0 mm	0.11	0.09
-0.5	1.4 mm	0.85	0.73
0.0	1.0 mm	4.17	3.60
0.5	710 µm	18.46	15.94
1.0	500 µm	60.50	52.23
1.5	355 µm	96.66	83.45
2.0	250 µm	113.34	97.85
2.5	180 µm	115.79	99.97
3.0	125 µm	115.80	99.97
3.5	90 µm	115.83	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.03	0.01
-1.5	2.4 mm	0.07	0.03
-1.0	2.0 mm	0.11	0.05
-0.5	1.4 mm	1.12	0.54
0.0	1.0 mm	4.73	2.29
0.5	710 µm	20.13	9.75
1.0	500 µm	76.03	36.83
1.5	355 µm	145.38	70.43
2.0	250 µm	193.67	93.82
2.5	180 µm	206.04	99.82
3.0	125 µm	206.38	99.98
3.5	90 µm	206.40	99.99
4.0	63 µm	206.41	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Table C8 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 3 March 1999 (Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.28	0.08
-1.0	2.0 mm	0.76	0.22
-0.5	1.4 mm	3.04	0.87
0.0	1.0 mm	12.03	3.45
0.5	710 µm	45.31	13.00
1.0	500 µm	141.43	40.58
1.5	355 µm	248.04	71.18
2.0	250 µm	322.55	92.56
2.5	180 µm	347.81	99.81
3.0	125 µm	348.42	99.98
3.5	90 µm	348.46	99.99
4.0	63 µm	348.47	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.06	0.01
-1.5	2.4 mm	0.44	0.10
-1.0	2.0 mm	0.75	0.17
-0.5	1.4 mm	2.98	0.66
0.0	1.0 mm	11.8	2.61
0.5	710 µm	44.75	9.91
1.0	500 µm	160.97	35.65
1.5	355 µm	300.07	66.45
2.0	250 µm	425.82	94.30
2.5	180 µm	450.37	99.74
3.0	125 µm	451.43	99.98
3.5	90 µm	451.49	99.99
4.0	63 µm	451.51	99.99
	<63 µm	451.54	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 11

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.11	0.04
-1.5	2.4 mm	2.23	0.81
-1.0	2.0 mm	4.35	1.58
-0.5	1.4 mm	12.00	4.35
0.0	1.0 mm	30.91	11.20
0.5	710 µm	81.37	29.47
1.0	500 µm	190.07	68.85
1.5	355 µm	243.31	88.13
2.0	250 µm	271.54	98.36
2.5	180 µm	275.81	99.91
3.0	125 µm	276.01	99.98
3.5	90 µm	276.05	99.99
4.0	63 µm	276.06	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 12

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm	0.02	0.02
-0.5	1.4 mm	0.17	0.13
0.0	1.0 mm	0.66	0.50
0.5	710 µm	5.11	3.88
1.0	500 µm	39.34	29.89
1.5	355 µm	93.14	70.76
2.0	250 µm	126.04	95.75
2.5	180 µm	131.53	99.92
3.0	125 µm	131.61	99.98
3.5	90 µm	131.63	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Table C9 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 9 March 1999

Date	9-Mar-99	No. of Samples = 12		1st Transect = 6	2nd Transect = 6	
Sample 1				Sample 3		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	1.96	0.48	-2.0	4.0 mm	0.52 0.12
-1.5	2.4 mm	6.09	1.49	-1.5	2.4 mm	2.74 0.61
-1.0	2.0 mm	9.21	2.26	-1.0	2.0 mm	4.72 1.05
-0.5	1.4 mm	20.59	5.05	-0.5	1.4 mm	13.27 2.94
0.0	1.0 mm	52.66	12.92	0.0	1.0 mm	37.46 8.30
0.5	710 µm	125.07	30.69	0.5	710 µm	99.50 22.04
1.0	500 µm	255.99	62.81	1.0	500 µm	227.74 50.44
1.5	355 µm	326.73	80.16	1.5	355 µm	323.58 71.66
2.0	250 µm	384.54	94.34	2.0	250 µm	412.90 91.45
2.5	180 µm	405.56	99.50	2.5	180 µm	447.45 99.10
3.0	125 µm	407.24	99.91	3.0	125 µm	451.21 99.93
3.5	90 µm	407.43	99.96	3.5	90 µm	451.39 99.97
4.0	63 µm	407.52	99.98	4.0	63 µm	451.46 99.99
	<63 µm	407.59	100.00		<63 µm	451.52 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand		
Sample 2				Sample 4		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	2.00	0.70	-2.0	4.0 mm	0.36 0.10
-1.5	2.4 mm	6.81	2.40	-1.5	2.4 mm	0.60 0.16
-1.0	2.0 mm	10.05	3.54	-1.0	2.0 mm	0.80 0.21
-0.5	1.4 mm	21.44	7.54	-0.5	1.4 mm	4.63 1.23
0.0	1.0 mm	50.59	17.80	0.0	1.0 mm	19.19 5.09
0.5	710 µm	107.13	37.69	0.5	710 µm	92.06 24.42
1.0	500 µm	189.61	66.70	1.0	500 µm	153.72 40.77
1.5	355 µm	237.07	83.40	1.5	355 µm	229.12 60.77
2.0	250 µm	268.93	94.60	2.0	250 µm	325.21 86.26
2.5	180 µm	282.64	99.43	2.5	180 µm	373.10 98.97
3.0	125 µm	283.90	99.87	3.0	125 µm	376.52 99.87
3.5	90 µm	284.07	99.93	3.5	90 µm	376.62 99.90
4.0	63 µm	284.19	99.97	4.0	63 µm	376.94 99.98
	<63 µm	284.27	100.00		<63 µm	377.00 100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand		

Table C9 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 9 March 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.06	0.08
-1.0	2.0 mm	0.08	0.11
-0.5	1.4 mm	0.51	0.71
0.0	1.0 mm	1.83	2.53
0.5	710 µm	9.33	12.92
1.0	500 µm	27.73	38.40
1.5	355 µm	52.77	73.07
2.0	250 µm	71.51	99.02
2.5	180 µm	72.17	99.93
3.0	125 µm	72.22	100.00
3.5	90 µm		
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 6 Sample too small to sieve (0.46g)

Sample 7 Sample too small to sieve (2.98g)

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.02	0.04
-1.0	2.0 mm	0.03	0.06
-0.5	1.4 mm	0.16	0.34
0.0	1.0 mm	0.53	1.14
0.5	710 µm	2.11	4.53
1.0	500 µm	8.70	18.69
1.5	355 µm	20.18	43.34
2.0	250 µm	35.89	77.08
2.5	180 µm	46.00	98.80
3.0	125 µm	46.50	99.87
3.5	90 µm	46.53	99.94
4.0	63 µm	46.54	99.96
	<63 µm	46.56	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table C9 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 9 March 1999 (Continued)

Sample 9				Sample 11			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.10	0.02	-2.0	4.0 mm		
-1.5	2.4 mm	0.55	0.12	-1.5	2.4 mm		
-1.0	2.0 mm	0.87	0.19	-1.0	2.0 mm	0.05	0.12
-0.5	1.4 mm	2.54	0.54	-0.5	1.4 mm	0.15	0.36
0.0	1.0 mm	8.26	1.77	0.0	1.0 mm	0.86	2.04
0.5	710 µm	30.15	6.47	0.5	710 µm	4.87	11.53
1.0	500 µm	117.90	25.29	1.0	500 µm	16.84	39.86
1.5	355 µm	280.28	60.12	1.5	355 µm	21.86	51.74
2.0	250 µm	402.85	86.41	2.0	250 µm	35.70	84.50
2.5	180 µm	462.14	99.12	2.5	180 µm	40.35	95.50
3.0	125 µm	465.73	99.89	3.0	125 µm	42.15	99.76
3.5	90 µm	466.06	99.96	3.5	90 µm	42.21	99.91
4.0	63 µm	466.13	99.98	4.0	63 µm	42.23	99.95
	<63 µm	466.23	100.00		<63 µm	42.25	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			
Sample 10				Sample 12			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.08	0.02	-2.0	4.0 mm		
-1.5	2.4 mm	2.27	0.54	-1.5	2.4 mm		
-1.0	2.0 mm	4.14	0.99	-1.0	2.0 mm		
-0.5	1.4 mm	10.28	2.45	-0.5	1.4 mm	0.08	0.16
0.0	1.0 mm	26.68	6.35	0.0	1.0 mm	0.72	1.46
0.5	710 µm	77.51	18.45	0.5	710 µm	5.48	11.10
1.0	500 µm	194.80	46.37	1.0	500 µm	25.31	51.28
1.5	355 µm	300.21	71.46	1.5	355 µm	41.78	84.64
2.0	250 µm	378.79	90.16	2.0	250 µm	47.96	97.16
2.5	180 µm	417.35	99.34	2.5	180 µm	49.24	99.76
3.0	125 µm	419.68	99.90	3.0	125 µm	49.34	99.96
3.5	90 µm	419.96	99.96	3.5	90 µm	49.35	99.98
4.0	63 µm	420.04	99.98	4.0	63 µm	49.35	99.98
	<63 µm	420.11	100.00		<63 µm	49.36	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Coarse sand			

Table C10 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 17 March 1999

Date	17-Mar-99	No. of Samples = 10		1st Transect = 5	2nd Transect = 5	
Sample 1				Sample 3		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	0.03	0.08	-2.0	4.0 mm	0.74 0.30
-1.5	2.4 mm	0.42	1.09	-1.5	2.4 mm	3.12 1.25
-1.0	2.0 mm	0.90	2.33	-1.0	2.0 mm	4.75 1.91
-0.5	1.4 mm	1.85	4.80	-0.5	1.4 mm	9.82 3.94
0.0	1.0 mm	3.50	9.08	0.0	1.0 mm	19.61 7.87
0.5	710 µm	6.83	17.72	0.5	710 µm	41.34 16.60
1.0	500 µm	15.42	40.00	1.0	500 µm	92.57 37.16
1.5	355 µm	28.86	74.86	1.5	355 µm	173.37 69.60
2.0	250 µm	34.30	88.98	2.0	250 µm	231.89 93.09
2.5	180 µm	38.38	99.56	2.5	180 µm	248.45 99.74
3.0	125 µm	38.50	99.87	3.0	125 µm	248.95 99.94
3.5	90 µm	38.52	99.92	3.5	90 µm	249.06 99.98
4.0	63 µm	38.52	99.92	4.0	63 µm	249.08 99.99
	<63 µm	38.55	100.00		<63 µm	249.11 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand		
Sample 2				Sample 4		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	0.82	0.09	-2.0	4.0 mm	0.06 0.01
-1.5	2.4 mm	2.94	0.31	-1.5	2.4 mm	2.21 0.23
-1.0	2.0 mm	3.99	0.42	-1.0	2.0 mm	3.18 0.33
-0.5	1.4 mm	8.21	0.87	-0.5	1.4 mm	6.94 0.73
0.0	1.0 mm	18.90	2.01	0.0	1.0 mm	21.36 2.24
0.5	710 µm	54.47	5.79	0.5	710 µm	70.44 7.40
1.0	500 µm	343.10	36.45	1.0	500 µm	291.25 30.60
1.5	355 µm	770.31	81.83	1.5	355 µm	670.50 70.44
2.0	250 µm	904.16	96.05	2.0	250 µm	907.35 95.32
2.5	180 µm	938.52	99.70	2.5	180 µm	948.23 99.62
3.0	125 µm	940.98	99.96	3.0	125 µm	951.60 99.97
3.5	90 µm	941.22	99.99	3.5	90 µm	951.77 99.99
4.0	63 µm	941.26	99.99	4.0	63 µm	951.82 99.99
	<63 µm	941.32	100.00		<63 µm	951.88 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand		

Table C10 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 17 March 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.24	0.08
-1.5	2.4 mm	0.94	0.32
-1.0	2.0 mm	1.36	0.47
-0.5	1.4 mm	1.56	0.54
0.0	1.0 mm	7.54	2.60
0.5	710 µm	31.33	10.81
1.0	500 µm	115.67	39.93
1.5	355 µm	213.84	73.81
2.0	250 µm	278.59	96.16
2.5	180 µm	289.01	99.76
3.0	125 µm	289.65	99.98
3.5	90 µm	289.70	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.62	0.11
-1.5	2.4 mm	1.89	0.35
-1.0	2.0 mm	3.16	0.58
-0.5	1.4 mm	7.73	1.41
0.0	1.0 mm	21.35	3.91
0.5	710 µm	41.32	7.56
1.0	500 µm	250.50	45.85
1.5	355 µm	447.16	81.84
2.0	250 µm	526.58	96.37
2.5	180 µm	545.34	99.81
3.0	125 µm	546.22	99.97
3.5	90 µm	546.33	99.99
4.0	63 µm	546.36	99.99
	<63 µm	546.40	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.65	0.07
-1.5	2.4 mm	2.80	0.30
-1.0	2.0 mm	4.96	0.53
-0.5	1.4 mm	13.48	1.44
0.0	1.0 mm	36.99	3.96
0.5	710 µm	94.73	10.14
1.0	500 µm	287.24	30.73
1.5	355 µm	622.55	66.61
2.0	250 µm	885.32	94.72
2.5	180 µm	931.55	99.67
3.0	125 µm	934.26	99.96
3.5	90 µm	934.48	99.98
4.0	63 µm	934.57	99.99
	<63 µm	934.68	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.89	0.36
-1.5	2.4 mm	2.12	0.86
-1.0	2.0 mm	2.53	1.02
-0.5	1.4 mm	3.80	1.54
0.0	1.0 mm	6.39	2.58
0.5	710 µm	12.57	5.08
1.0	500 µm	31.78	12.84
1.5	355 µm	88.53	35.78
2.0	250 µm	207.28	83.77
2.5	180 µm	245.17	99.08
3.0	125 µm	247.17	99.89
3.5	90 µm	247.29	99.94
4.0	63 µm	247.39	99.98
	<63 µm	247.45	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table C10 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 17 March 1999 (Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.19	0.02
-1.5	2.4 mm	0.40	0.05
-1.0	2.0 mm	0.61	0.08
-0.5	1.4 mm	1.04	0.13
0.0	1.0 mm	3.39	0.43
0.5	710 µm	18.02	2.30
1.0	500 µm	168.43	21.46
1.5	355 µm	577.04	73.53
2.0	250 µm	740.02	94.29
2.5	180 µm	782.64	99.72
3.0	125 µm	784.52	99.96
3.5	90 µm	784.72	99.99
4.0	63 µm	784.76	99.99
	<63 µm	784.81	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.12	0.33
-1.5	2.4 mm	0.26	0.72
-1.0	2.0 mm	0.38	1.05
-0.5	1.4 mm	0.90	2.49
0.0	1.0 mm	2.04	5.65
0.5	710 µm	4.57	12.65
1.0	500 µm	12.38	34.27
1.5	355 µm	23.77	65.79
2.0	250 µm	32.31	89.43
2.5	180 µm	35.91	99.39
3.0	125 µm	36.11	99.94
3.5	90 µm	36.12	99.97
4.0	63 µm	36.13	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Table C11 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 23 March 1999

Date	23-Mar-99		No. of Samples = 12		1st Transect = 6		2nd Transect = 6	
Sample 1	Phi	Mass (g)	Cumulative %		Sample 3	Phi	Mass (g)	Cumulative %
	-2.0	4.0 mm				-2.0	4.0 mm	0.12 0.03
	-1.5	2.4 mm				-1.5	2.4 mm	2.23 0.53
	-1.0	2.0 mm	0.02	0.06		-1.0	2.0 mm	4.13 0.98
	-0.5	1.4 mm	0.21	0.64		-0.5	1.4 mm	12.47 2.95
	0.0	1.0 mm	0.73	2.23		0.0	1.0 mm	32.78 7.75
	0.5	710 µm	3.24	9.88		0.5	710 µm	87.88 20.77
	1.0	500 µm	14.47	44.14		1.0	500 µm	210.40 49.72
	1.5	355 µm	26.31	80.26		1.5	355 µm	323.91 76.55
	2.0	250 µm	31.32	95.55		2.0	250 µm	393.81 93.07
	2.5	180 µm	32.74	99.88		2.5	180 µm	421.36 99.58
	3.0	125 µm	32.78	100.00		3.0	125 µm	422.92 99.95
	3.5	90 µm				3.5	90 µm	423.05 99.98
	4.0	63 µm				4.0	63 µm	423.10 99.99
	<63 µm					<63 µm		423.13 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				
Sample 2	Phi	Mass (g)	Cumulative %		Sample 4	Phi	Mass (g)	Cumulative %
	-2.0	4.0 mm				-2.0	4.0 mm	0.26 0.04
	-1.5	2.4 mm	0.07	0.02		-1.5	2.4 mm	1.54 0.25
	-1.0	2.0 mm	0.21	0.06		-1.0	2.0 mm	2.98 0.49
	-0.5	1.4 mm	0.80	0.22		-0.5	1.4 mm	8.81 1.45
	0.0	1.0 mm	4.19	1.15		0.0	1.0 mm	24.18 3.98
	0.5	710 µm	24.99	6.86		0.5	710 µm	75.29 12.38
	1.0	500 µm	136.16	37.36		1.0	500 µm	239.22 39.34
	1.5	355 µm	263.31	72.24		1.5	355 µm	437.91 72.02
	2.0	250 µm	346.28	95.00		2.0	250 µm	567.93 93.41
	2.5	180 µm	363.35	99.68		2.5	180 µm	605.58 99.60
	3.0	125 µm	364.38	99.97		3.0	125 µm	607.73 99.95
	3.5	90 µm	364.43	99.98		3.5	90 µm	607.91 99.98
	4.0	63 µm	364.45	99.99		4.0	63 µm	607.96 99.99
	<63 µm		364.50	100.00		<63 µm		608.02 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table C11 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 23 March 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.66	0.11
-1.5	2.4 mm	6.43	1.09
-1.0	2.0 mm	12.04	2.04
-0.5	1.4 mm	32.15	5.45
0.0	1.0 mm	77.93	13.21
0.5	710 µm	177.18	30.04
1.0	500 µm	366.06	62.07
1.5	355 µm	487.92	82.73
2.0	250 µm	568.99	96.47
2.5	180 µm	588.28	99.74
3.0	125 µm	589.59	99.97
3.5	90 µm	589.68	99.98
4.0	63 µm	589.72	99.99
	<63 µm	589.79	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.16	0.03
-1.5	2.4 mm	2.32	0.49
-1.0	2.0 mm	4.20	0.88
-0.5	1.4 mm	10.84	2.27
0.0	1.0 mm	30.09	6.31
0.5	710 µm	100.93	21.18
1.0	500 µm	290.86	61.04
1.5	355 µm	421.02	88.35
2.0	250 µm	467.20	98.05
2.5	180 µm	476.19	99.93
3.0	125 µm	476.44	99.99
3.5	90 µm	476.49	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.79	0.19
-1.5	2.4 mm	3.09	0.73
-1.0	2.0 mm	5.80	1.38
-0.5	1.4 mm	14.79	3.51
0.0	1.0 mm	41.83	9.92
0.5	710 µm	113.88	27.01
1.0	500 µm	265.50	62.96
1.5	355 µm	346.58	82.19
2.0	250 µm	412.68	97.87
2.5	180 µm	421.12	99.87
3.0	125 µm	421.57	99.98
3.5	90 µm	421.63	99.99
4.0	63 µm	421.64	99.99
	<63 µm	421.67	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	8.23	1.34
-1.5	2.4 mm	16.39	2.68
-1.0	2.0 mm	21.37	3.49
-0.5	1.4 mm	38.77	6.33
0.0	1.0 mm	78.75	12.86
0.5	710 µm	200.68	32.76
1.0	500 µm	422.01	68.89
1.5	355 µm	540.76	88.27
2.0	250 µm	593.64	96.90
2.5	180 µm	611.04	99.75
3.0	125 µm	612.04	99.91
3.5	90 µm	612.35	99.96
4.0	63 µm	612.48	99.98
	<63 µm	612.60	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Table C11 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 23 March 1999 (Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.21	0.05
-1.5	2.4 mm	1.50	0.34
-1.0	2.0 mm	3.04	0.69
-0.5	1.4 mm	9.59	2.19
0.0	1.0 mm	31.15	7.12
0.5	710 µm	88.80	20.29
1.0	500 µm	224.30	51.25
1.5	355 µm	326.24	74.54
2.0	250 µm	414.67	94.74
2.5	180 µm	435.75	99.55
3.0	125 µm	437.57	99.97
3.5	90 µm	437.63	99.98
4.0	63 µm	437.65	99.99
	<63 µm	437.70	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.42	0.07
-1.5	2.4 mm	4.53	0.77
-1.0	2.0 mm	7.97	1.36
-0.5	1.4 mm	20.73	3.54
0.0	1.0 mm	55.91	9.56
0.5	710 µm	134.26	22.96
1.0	500 µm	287.33	49.13
1.5	355 µm	413.59	70.72
2.0	250 µm	538.13	92.01
2.5	180 µm	579.71	99.12
3.0	125 µm	584.42	99.92
3.5	90 µm	584.66	99.97
4.0	63 µm	584.75	99.98
	<63 µm	584.86	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 11

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.06	0.01
-1.0	2.0 mm	0.16	0.02
-0.5	1.4 mm	1.33	0.14
0.0	1.0 mm	9.41	0.98
0.5	710 µm	71.18	7.40
1.0	500 µm	543.21	56.47
1.5	355 µm	776.06	80.67
2.0	250 µm	930.56	96.73
2.5	180 µm	959.89	99.78
3.0	125 µm	961.84	99.99
3.5	90 µm	961.93	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 12 Sample too small to sieve (1.64g)

Table C12 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 30 March 1999

Date	30-Mar-99	No. of Samples = 12	1st Transect = 6	2nd Transect = 6
Sample 1	Sample too small to sieve (0.62g)			
			Sample 3	
			Phi	Mass (g) Cumulative %
			-2.0	4.0 mm 0.29 0.05
			-1.5	2.4 mm 0.82 0.14
			-1.0	2.0 mm 1.04 0.18
			-0.5	1.4 mm 2.27 0.39
			0.0	1.0 mm 6.96 1.20
			0.5	710 µm 26.83 4.64
			1.0	500 µm 133.80 23.15
			1.5	355 µm 375.79 65.03
			2.0	250 µm 520.91 90.14
			2.5	180 µm 575.29 99.55
			3.0	125 µm 577.62 99.95
			3.5	90 µm 577.81 99.98
			4.0	63 µm 577.83 99.99
				<63 µm 577.9 100.00
			Folk (1974) Texture Group: Slightly granular medium sand	
Sample 2			Sample 4	
Phi	Mass (g)	Cumulative %	Phi	Mass (g) Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm 0.55 0.19
-1.5	2.4 mm		-1.5	2.4 mm 3.76 1.28
-1.0	2.0 mm		-1.0	2.0 mm 5.40 1.83
-0.5	1.4 mm	0.03 0.15	-0.5	1.4 mm 10.07 3.42
0.0	1.0 mm	0.06 0.30	0.0	1.0 mm 21.09 7.16
0.5	710 µm	0.15 0.75	0.5	710 µm 48.85 16.58
1.0	500 µm	0.74 3.68	1.0	500 µm 122.84 41.69
1.5	355 µm	4.23 21.03	1.5	355 µm 200.64 68.09
2.0	250 µm	12.75 63.40	2.0	250 µm 273.23 92.72
2.5	180 µm	19.95 99.20	2.5	180 µm 292.74 99.35
3.0	125 µm	20.08 99.85	3.0	125 µm 294.51 99.95
3.5	90 µm	20.09 99.90	3.5	90 µm 294.60 99.98
4.0	63 µm	20.1 99.95	4.0	63 µm 294.64 99.99
	<63 µm	20.11 100.00		<63 µm 294.67 100.00
Folk (1974) Texture Group: Medium sand			Folk (1974) Texture Group: Slightly granular medium sand	

Table C12 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 30 March 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.36	0.22
-1.5	2.4 mm	2.96	1.79
-1.0	2.0 mm	5.05	3.05
-0.5	1.4 mm	12.56	7.59
0.0	1.0 mm	27.73	16.75
0.5	710 µm	60.69	36.67
1.0	500 µm	113.7	68.69
1.5	355 µm	148.49	89.71
2.0	250 µm	162.5	98.18
2.5	180 µm	165.31	99.87
3.0	125 µm	165.45	99.96
3.5	90 µm	165.49	99.98
4.0	63 µm	165.51	99.99
	<63 µm	165.52	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.85	0.43
-1.0	2.0 mm	1.6	0.82
-0.5	1.4 mm	5.4	2.76
0.0	1.0 mm	14.91	7.61
0.5	710 µm	47.25	24.12
1.0	500 µm	126.3	64.46
1.5	355 µm	180.28	92.01
2.0	250 µm	193.49	98.75
2.5	180 µm	195.82	99.94
3.0	125 µm	195.89	99.98
3.5	90 µm	195.91	99.99
4.0	63 µm	195.92	99.99
	<63 µm	195.93	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.06	0.03
-1.5	2.4 mm	1.15	0.67
-1.0	2.0 mm	1.94	1.12
-0.5	1.4 mm	5.70	3.30
0.0	1.0 mm	14.89	8.61
0.5	710 µm	41.19	23.82
1.0	500 µm	105.58	61.06
1.5	355 µm	153.44	88.74
2.0	250 µm	171.04	98.92
2.5	180 µm	172.76	99.91
3.0	125 µm	172.88	99.98
3.5	90 µm	172.90	99.99
4.0	63 µm	172.91	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.39	0.30
-1.5	2.4 mm	13.41	2.85
-1.0	2.0 mm	22.70	4.82
-0.5	1.4 mm	51.76	10.99
0.0	1.0 mm	102.52	21.76
0.5	710 µm	195.59	41.52
1.0	500 µm	325.66	69.13
1.5	355 µm	410.04	87.05
2.0	250 µm	454.67	96.52
2.5	180 µm	469.90	99.76
3.0	125 µm	470.61	99.91
3.5	90 µm	470.83	99.95
4.0	63 µm	470.92	99.97
	<63 µm	471.05	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Table C12 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 30 March 1999 (Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.06	0.02
-1.5	2.4 mm	0.96	0.33
-1.0	2.0 mm	1.82	0.63
-0.5	1.4 mm	6.26	2.16
0.0	1.0 mm	22.41	7.72
0.5	710 µm	86.5	29.78
1.0	500 µm	220.88	76.04
1.5	355 µm	276.31	95.13
2.0	250 µm	285.93	98.44
2.5	180 µm	290.12	99.88
3.0	125 µm	290.41	99.98
3.5	90 µm	290.45	99.99
4.0	63 µm	290.46	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.26	0.09
-1.5	2.4 mm	1.21	0.42
-1.0	2.0 mm	1.79	0.62
-0.5	1.4 mm	4.07	1.41
0.0	1.0 mm	11.25	3.89
0.5	710 µm	31.15	10.77
1.0	500 µm	88.58	30.61
1.5	355 µm	174.12	60.17
2.0	250 µm	264.38	91.37
2.5	180 µm	287.01	99.19
3.0	125 µm	289.23	99.96
3.5	90 µm	289.30	99.98
4.0	63 µm	289.33	99.99
	<63 µm	289.36	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 11

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.09	0.03
-1.0	2.0 mm	0.13	0.04
-0.5	1.4 mm	0.44	0.14
0.0	1.0 mm	2.01	0.62
0.5	710 µm	14.21	4.38
1.0	500 µm	87.80	27.08
1.5	355 µm	204.63	63.11
2.0	250 µm	303.65	93.65
2.5	180 µm	322.73	99.53
3.0	125 µm	324.16	99.98
3.5	90 µm	324.21	99.99
4.0	63 µm	324.23	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 12 Sample too small to sieve (0.62g)

Table C13 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 31 March 1999

Date	31-Mar-99	No. of Samples = 12	1st Transect = 6	2nd Transect = 6
Sample 1	Sample too small to sieve	(3.79g)	Sample 3	
			Phi	Mass (g) Cumulative %
			-2.0	4.0 mm 0.31 0.12
			-1.5	2.4 mm 1.78 0.71
			-1.0	2.0 mm 2.42 0.96
			-0.5	1.4 mm 5.03 1.99
			0.0	1.0 mm 14.87 5.89
			0.5	710 µm 44.85 17.76
			1.0	500 µm 112.22 44.45
			1.5	355 µm 178.51 70.71
			2.0	250 µm 236.46 93.66
			2.5	180 µm 251.24 99.51
			3.0	125 µm 252.35 99.95
			3.5	90 µm 252.41 99.98
			4.0	63 µm 252.43 99.98
			<63 µm	252.47 100.00
			Folk (1974) Texture Group: Slightly granular medium sand	
Sample 2			Sample 4	
			Phi	Mass (g) Cumulative %
			-2.0	4.0 mm 0.03 0.03
			-1.5	2.4 mm 0.18 0.20
			-1.0	2.0 mm 0.40 0.44
			-0.5	1.4 mm 1.42 1.56
			0.0	1.0 mm 4.32 4.73
			0.5	710 µm 11.93 13.07
			1.0	500 µm 33.82 37.06
			1.5	355 µm 61.25 67.12
			2.0	250 µm 83.37 91.36
			2.5	180 µm 91.12 99.86
			3.0	125 µm 91.21 99.96
			3.5	90 µm 91.24 99.99
			4.0	63 µm 91.25 100.00
			<63 µm	
			Folk (1974) Texture Group: Slightly granular medium sand	
			Phi	Mass (g) Cumulative %
			-2.0	4.0 mm 1.03 0.19
			-1.5	2.4 mm 4.04 0.73
			-1.0	2.0 mm 6.86 1.24
			-0.5	1.4 mm 17.28 3.14
			0.0	1.0 mm 45.84 8.32
			0.5	710 µm 120.60 21.89
			1.0	500 µm 302.59 54.91
			1.5	355 µm 437.18 79.34
			2.0	250 µm 533.30 96.78
			2.5	180 µm 549.71 99.76
			3.0	125 µm 550.94 99.98
			3.5	90 µm 550.99 99.99
			4.0	63 µm 551.03 100.00
			<63 µm	
			Folk (1974) Texture Group: Slightly granular coarse sand	

Table C13 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 31 March 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.79	0.29
-1.5	2.4 mm	3.67	1.36
-1.0	2.0 mm	6.10	2.26
-0.5	1.4 mm	14.78	5.48
0.0	1.0 mm	30.85	11.43
0.5	710 µm	69.23	25.66
1.0	500 µm	149.39	55.36
1.5	355 µm	224.38	83.15
2.0	250 µm	261.17	96.79
2.5	180 µm	269.40	99.84
3.0	125 µm	269.72	99.96
3.5	90 µm	269.79	99.98
4.0	63 µm	269.81	99.99
	<63 µm	269.84	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	1.05	0.31
-1.0	2.0 mm	1.96	0.58
-0.5	1.4 mm	5.82	1.72
0.0	1.0 mm	17.88	5.27
0.5	710 µm	60.38	17.81
1.0	500 µm	178.92	52.77
1.5	355 µm	291.58	86.00
2.0	250 µm	331.36	97.74
2.5	180 µm	338.71	99.91
3.0	125 µm	338.97	99.98
3.5	90 µm	339.00	99.99
4.0	63 µm	339.02	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.47	0.16
-1.5	2.4 mm	4.23	1.41
-1.0	2.0 mm	6.54	2.18
-0.5	1.4 mm	13.01	4.33
0.0	1.0 mm	28.78	9.58
0.5	710 µm	69.43	23.11
1.0	500 µm	173.39	57.71
1.5	355 µm	254.28	84.63
2.0	250 µm	294.17	97.91
2.5	180 µm	300.09	99.88
3.0	125 µm	300.41	99.99
3.5	90 µm	300.43	99.99
4.0	63 µm	300.45	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.27	0.10
-1.5	2.4 mm	3.62	1.28
-1.0	2.0 mm	6.74	2.39
-0.5	1.4 mm	16.45	5.83
0.0	1.0 mm	39.12	13.86
0.5	710 µm	84.10	29.79
1.0	500 µm	166.69	59.05
1.5	355 µm	234.09	82.93
2.0	250 µm	274.79	97.35
2.5	180 µm	281.76	99.82
3.0	125 µm	282.21	99.98
3.5	90 µm	282.24	99.99
4.0	63 µm	282.26	99.99
	<63 µm	282.28	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Table C13 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 31 March 1999 (Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.00	0.10
-1.5	2.4 mm	11.09	1.13
-1.0	2.0 mm	19.18	1.95
-0.5	1.4 mm	48.08	4.88
0.0	1.0 mm	108.61	11.03
0.5	710 µm	258.23	26.23
1.0	500 µm	636.06	64.62
1.5	355 µm	875.04	88.90
2.0	250 µm	961.18	97.65
2.5	180 µm	983.36	99.90
3.0	125 µm	984.23	99.99
3.5	90 µm	984.31	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.53	0.06
-1.5	2.4 mm	4.88	0.53
-1.0	2.0 mm	9.42	1.02
-0.5	1.4 mm	28.66	3.09
0.0	1.0 mm	70.25	7.59
0.5	710 µm	175.89	18.99
1.0	500 µm	462.85	49.98
1.5	355 µm	759.19	81.98
2.0	250 µm	887.70	95.86
2.5	180 µm	923.54	99.73
3.0	125 µm	925.80	99.97
3.5	90 µm	925.97	99.99
4.0	63 µm	926.01	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 11

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.36	0.15
-1.0	2.0 mm	0.53	0.21
-0.5	1.4 mm	1.48	0.60
0.0	1.0 mm	5.21	2.11
0.5	710 µm	18.38	7.45
1.0	500 µm	62.65	25.39
1.5	355 µm	140.02	56.74
2.0	250 µm	225.18	91.25
2.5	180 µm	245.63	99.54
3.0	125 µm	246.70	99.97
3.5	90 µm	246.73	99.98
4.0	63 µm	246.75	99.99
	<63 µm	246.77	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 12 Sample too small to sieve (4.46g)

Table C14 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 6 April 1999

Date	6-Apr-99	No. of Samples = 12	1st Transect = 6	2nd Transect = 6
Sample 1	Sample too small to sieve	(5.83g)	Sample 3	
			Phi	Mass (g) Cumulative %
			-2.0	4.0 mm
			-1.5	2.4 mm 1.16 0.17
			-1.0	2.0 mm 2.33 0.35
			-0.5	1.4 mm 6.36 0.95
			0.0	1.0 mm 19.48 2.90
			0.5	710 µm 61.20 9.11
			1.0	500 µm 198.24 29.50
			1.5	355 µm 417.61 62.14
			2.0	250 µm 629.01 93.59
			2.5	180 µm 668.58 99.48
			3.0	125 µm 671.94 99.98
			3.5	90 µm 672.02 99.99
			4.0	63 µm 672.07 100.00
				<63 µm
			Folk (1974) Texture Group: Slightly granular medium sand	
Sample 2			Sample 4	
			Phi	Mass (g) Cumulative %
			-2.0	4.0 mm 0.14 0.01
			-1.5	2.4 mm 3.00 0.26
			-1.0	2.0 mm 5.95 0.51
			-0.5	1.4 mm 19.86 1.70
			0.0	1.0 mm 68.18 5.84
			0.5	710 µm 212.72 18.22
			1.0	500 µm 589.65 50.51
			1.5	355 µm 900.87 77.17
			2.0	250 µm 1122.64 96.17
			2.5	180 µm 1163.76 99.69
			3.0	125 µm 1167.15 99.98
			3.5	90 µm 1167.27 99.99
			4.0	63 µm 1167.30 99.99
				<63 µm 1167.37 100.00
			Folk (1974) Texture Group: Slightly granular coarse sand	
			Folk (1974) Texture Group: Slightly granular coarse sand	

Table C14 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 6 April 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.85	0.08
-1.5	2.4 mm	7.70	0.76
-1.0	2.0 mm	39.83	3.93
-0.5	1.4 mm	78.41	7.73
0.0	1.0 mm	126.38	12.46
0.5	710 µm	366.57	36.14
1.0	500 µm	695.19	68.53
1.5	355 µm	870.95	85.86
2.0	250 µm	987.21	97.32
2.5	180 µm	1012.18	99.78
3.0	125 µm	1013.99	99.96
3.5	90 µm	1014.16	99.98
4.0	63 µm	1014.26	99.99
	<63 µm	1014.38	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.33	0.05
-1.0	2.0 mm	0.89	0.13
-0.5	1.4 mm	5.35	0.81
0.0	1.0 mm	30.06	4.55
0.5	710 µm	158.22	23.96
1.0	500 µm	444.32	67.28
1.5	355 µm	599.60	90.79
2.0	250 µm	651.31	98.62
2.5	180 µm	660.10	99.95
3.0	125 µm	660.37	99.99
3.5	90 µm	660.40	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.32	0.06
-1.0	2.0 mm	0.80	0.14
-0.5	1.4 mm	3.87	0.70
0.0	1.0 mm	23.45	4.23
0.5	710 µm	117.92	21.25
1.0	500 µm	360.11	64.89
1.5	355 µm	485.37	87.47
2.0	250 µm	546.79	98.53
2.5	180 µm	554.56	99.94
3.0	125 µm	554.91	100.00
3.5	90 µm		
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	3.57	0.40
-1.5	2.4 mm	8.21	0.93
-1.0	2.0 mm	12.94	1.47
-0.5	1.4 mm	33.64	3.82
0.0	1.0 mm	94.76	10.75
0.5	710 µm	294.50	33.40
1.0	500 µm	620.04	70.32
1.5	355 µm	774.30	87.82
2.0	250 µm	856.42	97.13
2.5	180 µm	880.27	99.84
3.0	125 µm	881.33	99.96
3.5	90 µm	881.55	99.98
4.0	63 µm	881.62	99.99
	<63 µm	881.72	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Table C14 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 6 April 1999 (Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.19	0.05
-1.5	2.4 mm	2.50	0.62
-1.0	2.0 mm	4.22	1.05
-0.5	1.4 mm	11.18	2.79
0.0	1.0 mm	31.88	7.95
0.5	710 µm	84.15	20.97
1.0	500 µm	193.39	48.20
1.5	355 µm	283.79	70.73
2.0	250 µm	370.51	92.35
2.5	180 µm	398.68	99.37
3.0	125 µm	400.97	99.94
3.5	90 µm	401.09	99.97
4.0	63 µm	401.17	99.99
	<63 µm	401.22	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.14	0.02
-1.5	2.4 mm	1.43	0.21
-1.0	2.0 mm	2.61	0.39
-0.5	1.4 mm	7.18	1.06
0.0	1.0 mm	22.55	3.33
0.5	710 µm	74.08	10.94
1.0	500 µm	248.77	36.75
1.5	355 µm	447.70	66.14
2.0	250 µm	638.17	94.28
2.5	180 µm	674.45	99.64
3.0	125 µm	676.78	99.98
3.5	90 µm	676.86	99.99
4.0	63 µm	676.88	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 11

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.13	0.02
-1.5	2.4 mm	0.77	0.12
-1.0	2.0 mm	1.62	0.25
-0.5	1.4 mm	5.62	0.85
0.0	1.0 mm	21.38	3.24
0.5	710 µm	76.71	11.63
1.0	500 µm	258.10	39.13
1.5	355 µm	461.18	69.92
2.0	250 µm	626.25	94.95
2.5	180 µm	656.69	99.56
3.0	125 µm	659.40	99.98
3.5	90 µm	659.52	99.99
4.0	63 µm	659.52	99.99
	<63 µm	659.56	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 12 Sample too small to sieve (10.02g)

Table C14 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 13 April 1999

Date	13-Apr-99	No. of Samples =12		1st Transect = 6	2nd Transect = 6	
Sample 1				Sample 3		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	
-1.5	2.4 mm			-1.5	2.4 mm	0.53 0.39
-1.0	2.0 mm			-1.0	2.0 mm	0.77 0.56
-0.5	1.4 mm	0.17	0.08	-0.5	1.4 mm	1.88 1.37
0.0	1.0 mm	2.81	1.37	0.0	1.0 mm	6.27 4.57
0.5	710 µm	24.16	11.79	0.5	710 µm	19.74 14.37
1.0	500 µm	101.42	49.49	1.0	500 µm	53.65 39.07
1.5	355 µm	167.37	81.67	1.5	355 µm	91.29 66.47
2.0	250 µm	198.86	97.03	2.0	250 µm	126.76 92.30
2.5	180 µm	204.61	99.84	2.5	180 µm	136.73 99.56
3.0	125 µm	204.89	99.98	3.0	125 µm	137.29 99.97
3.5	90 µm	204.93	100.00	3.5	90 µm	137.31 99.99
4.0	63 µm			4.0	63 µm	137.31 99.99
	<63 µm				<63 µm	137.33 100.00
Folk (1974) Texture Group: Medium sand				Folk (1974) Texture Group: Slightly granular medium sand		
Sample 2				Sample 4		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	0.04	0.01	-2.0	4.0 mm	0.03 0.03
-1.5	2.4 mm	1.33	0.18	-1.5	2.4 mm	2.09 2.05
-1.0	2.0 mm	2.82	0.38	-1.0	2.0 mm	3.88 3.81
-0.5	1.4 mm	10.53	1.40	-0.5	1.4 mm	9.01 8.85
0.0	1.0 mm	41.99	5.59	0.0	1.0 mm	18.24 17.92
0.5	710 µm	165.71	22.07	0.5	710 µm	34.88 34.26
1.0	500 µm	446.32	59.43	1.0	500 µm	58.50 57.46
1.5	355 µm	637.24	84.86	1.5	355 µm	77.21 75.84
2.0	250 µm	723.84	96.39	2.0	250 µm	93.11 91.45
2.5	180 µm	749.75	99.84	2.5	180 µm	101.42 99.62
3.0	125 µm	750.86	99.99	3.0	125 µm	101.78 99.97
3.5	90 µm	750.93	99.99	3.5	90 µm	101.79 99.98
4.0	63 µm	750.96	100.00	4.0	63 µm	101.81 100.00
	<63 µm				<63 µm	
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand		

Table C14 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 13 April 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	3.72	2.16
-1.0	2.0 mm	7.66	4.46
-0.5	1.4 mm	21.53	12.53
0.0	1.0 mm	49.07	28.55
0.5	710 µm	80.39	46.77
1.0	500 µm	114.64	66.70
1.5	355 µm	140.79	81.91
2.0	250 µm	162.66	94.64
2.5	180 µm	170.81	99.38
3.0	125 µm	171.74	99.92
3.5	90 µm	171.82	99.97
4.0	63 µm	171.85	99.98
	<63 µm	171.88	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.36	0.13
-1.0	2.0 mm	1.22	0.43
-0.5	1.4 mm	6.58	2.30
0.0	1.0 mm	26.54	9.29
0.5	710 µm	87.87	30.75
1.0	500 µm	195.01	68.24
1.5	355 µm	260.05	90.99
2.0	250 µm	282.00	98.67
2.5	180 µm	285.50	99.90
3.0	125 µm	285.74	99.98
3.5	90 µm	285.77	99.99
4.0	63 µm	285.78	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.10	0.08
-1.0	2.0 mm	0.59	0.45
-0.5	1.4 mm	3.62	2.78
0.0	1.0 mm	15.27	11.72
0.5	710 µm	44.24	33.95
1.0	500 µm	89.03	68.32
1.5	355 µm	117.22	89.95
2.0	250 µm	128.74	98.80
2.5	180 µm	130.13	99.86
3.0	125 µm	130.29	99.98
3.5	90 µm	130.30	99.99
4.0	63 µm	130.30	99.99
	<63 µm	130.31	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.17	0.11
-1.5	2.4 mm	1.79	1.20
-1.0	2.0 mm	3.35	2.24
-0.5	1.4 mm	10.91	7.30
0.0	1.0 mm	29.14	19.49
0.5	710 µm	58.64	39.21
1.0	500 µm	94.45	63.16
1.5	355 µm	120.34	80.47
2.0	250 µm	141.87	94.87
2.5	180 µm	148.87	99.55
3.0	125 µm	149.48	99.96
3.5	90 µm	149.52	99.99
4.0	63 µm	149.53	99.99
	<63 µm	149.54	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Table C14 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 13 April 1999 (Continued)

Sample 9				Sample 11			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.30	0.48	-2.0	4.0 mm		
-1.5	2.4 mm	7.28	11.70	-1.5	2.4 mm	0.04	0.02
-1.0	2.0 mm	11.56	18.58	-1.0	2.0 mm	0.12	0.06
-0.5	1.4 mm	19.96	32.08	-0.5	1.4 mm	0.73	0.36
0.0	1.0 mm	27.65	44.45	0.0	1.0 mm	3.46	1.69
0.5	710 µm	34.82	55.97	0.5	710 µm	18.53	9.04
1.0	500 µm	42.92	68.99	1.0	500 µm	77.90	37.99
1.5	355 µm	49.52	79.60	1.5	355 µm	150.59	73.44
2.0	250 µm	57.17	91.90	2.0	250 µm	193.34	94.29
2.5	180 µm	61.79	99.32	2.5	180 µm	204.70	99.83
3.0	125 µm	62.17	99.94	3.0	125 µm	205.01	99.98
3.5	90 µm	62.19	99.97	3.5	90 µm	205.03	99.99
4.0	63 µm	62.20	99.98	4.0	63 µm	205.05	100.00
	<63 µm	62.21	100.00		<63 µm		
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 10				Sample 12			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.24	0.12	-1.5	2.4 mm	0.12	0.08
-1.0	2.0 mm	0.46	0.23	-1.0	2.0 mm	0.13	0.09
-0.5	1.4 mm	2.03	0.99	-0.5	1.4 mm	0.70	0.46
0.0	1.0 mm	7.46	3.66	0.0	1.0 mm	5.58	3.68
0.5	710 µm	27.79	13.62	0.5	710 µm	27.16	17.91
1.0	500 µm	84.60	41.46	1.0	500 µm	86.33	56.93
1.5	355 µm	145.07	71.10	1.5	355 µm	131.73	86.87
2.0	250 µm	188.21	92.24	2.0	250 µm	149.13	98.34
2.5	180 µm	203.53	99.75	2.5	180 µm	151.24	99.74
3.0	125 µm	204.00	99.98	3.0	125 µm	151.60	99.97
3.5	90 µm	204.03	99.99	3.5	90 µm	151.62	99.99
4.0	63 µm	204.04	100.00	4.0	63 µm	151.62	99.99
	<63 µm				<63 µm	151.64	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table C15 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 20 April 1999

Date	20-Apr-99	No. of Samples =12		1st Transect = 6		2nd Transect = 6	
Sample 1				Sample 3			
	Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
	-2.0	4.0 mm			-2.0	4.0 mm	
	-1.5	2.4 mm			-1.5	2.4 mm	0.07 0.05
	-1.0	2.0 mm			-1.0	2.0 mm	0.20 0.14
	-0.5	1.4 mm	0.11 0.38		-0.5	1.4 mm	1.16 0.82
	0.0	1.0 mm	1.29 4.49		0.0	1.0 mm	4.95 3.48
	0.5	710 µm	5.84 20.33		0.5	710 µm	19.30 13.57
	1.0	500 µm	15.36 53.48		1.0	500 µm	57.84 40.66
	1.5	355 µm	23.36 81.34		1.5	355 µm	98.46 69.21
	2.0	250 µm	28.01 97.53		2.0	250 µm	134.01 94.20
	2.5	180 µm	28.69 99.90		2.5	180 µm	142.05 99.85
	3.0	125 µm	28.71 99.97		3.0	125 µm	142.25 99.99
	3.5	90 µm	28.71 99.97		3.5	90 µm	142.26 100.00
	4.0	63 µm	28.71 99.97		4.0	63 µm	
		<63 µm	28.72 100.00			<63 µm	
Folk (1974) Texture Group: Coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 2				Sample 4			
	Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
	-2.0	4.0 mm			-2.0	4.0 mm	0.14 0.07
	-1.5	2.4 mm			-1.5	2.4 mm	0.41 0.22
	-1.0	2.0 mm	0.04 0.08		-1.0	2.0 mm	0.69 0.37
	-0.5	1.4 mm	0.17 0.32		-0.5	1.4 mm	3.27 1.75
	0.0	1.0 mm	0.59 1.12		0.0	1.0 mm	12.93 6.91
	0.5	710 µm	2.47 4.67		0.5	710 µm	48.26 25.80
	1.0	500 µm	11.21 21.20		1.0	500 µm	121.53 64.98
	1.5	355 µm	28.03 53.01		1.5	355 µm	167.14 89.36
	2.0	250 µm	45.71 86.44		2.0	250 µm	183.75 98.24
	2.5	180 µm	52.74 99.74		2.5	180 µm	186.94 99.95
	3.0	125 µm	52.88 100.00		3.0	125 µm	187.00 99.98
	3.5	90 µm			3.5	90 µm	187.01 99.98
	4.0	63 µm			4.0	63 µm	187.03 99.99
		<63 µm				<63 µm	187.04 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table C15 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 20 April 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.03	0.04
-1.5	2.4 mm	1.04	1.40
-1.0	2.0 mm	2.13	2.87
-0.5	1.4 mm	6.15	8.28
0.0	1.0 mm	13.01	17.51
0.5	710 µm	25.31	34.06
1.0	500 µm	44.96	60.50
1.5	355 µm	59.62	80.23
2.0	250 µm	69.16	93.07
2.5	180 µm	74.12	99.74
3.0	125 µm	74.28	99.96
3.5	90 µm	74.29	99.97
4.0	63 µm	74.29	99.97
	<63 µm	74.31	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6 Sample too small to sieve (5.61g)

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm	0.01	0.08
-0.5	1.4 mm	0.04	0.31
0.0	1.0 mm	0.14	1.08
0.5	710 µm	0.98	7.53
1.0	500 µm	4.62	35.51
1.5	355 µm	9.79	75.25
2.0	250 µm	12.66	97.31
2.5	180 µm	12.99	99.85
3.0	125 µm	12.99	99.85
3.5	90 µm	13.00	99.92
4.0	63 µm	13.01	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.77	1.93
-1.0	2.0 mm	1.38	3.46
-0.5	1.4 mm	2.77	6.94
0.0	1.0 mm	6.36	15.94
0.5	710 µm	13.74	34.43
1.0	500 µm	25.42	63.69
1.5	355 µm	33.55	84.06
2.0	250 µm	38.48	96.42
2.5	180 µm	39.84	99.82
3.0	125 µm	39.89	99.95
3.5	90 µm	39.91	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Table C15 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 20 April 1999 (Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.33	0.10
-1.5	2.4 mm	1.62	0.51
-1.0	2.0 mm	2.79	0.87
-0.5	1.4 mm	8.10	2.53
0.0	1.0 mm	26.05	8.13
0.5	710 µm	76.94	24.00
1.0	500 µm	185.66	57.91
1.5	355 µm	270.08	84.24
2.0	250 µm	320.39	99.93
2.5	180 µm	320.50	99.97
3.0	125 µm	320.55	99.98
3.5	90 µm	320.57	99.99
4.0	63 µm	320.58	99.99
	<63 µm	320.60	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.16	0.06
-1.0	2.0 mm	0.49	0.20
-0.5	1.4 mm	2.80	1.13
0.0	1.0 mm	11.38	4.59
0.5	710 µm	41.27	16.64
1.0	500 µm	119.59	48.23
1.5	355 µm	186.97	75.40
2.0	250 µm	237.56	95.81
2.5	180 µm	247.61	99.86
3.0	125 µm	247.93	99.99
3.5	90 µm	247.94	99.99
4.0	63 µm	247.94	99.99
	<63 µm	247.96	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 11

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.03	0.02
-1.0	2.0 mm	0.05	0.03
-0.5	1.4 mm	0.50	0.31
0.0	1.0 mm	2.31	1.45
0.5	710 µm	9.04	5.66
1.0	500 µm	40.39	25.28
1.5	355 µm	97.29	60.88
2.0	250 µm	145.50	91.05
2.5	180 µm	159.41	99.76
3.0	125 µm	159.76	99.97
3.5	90 µm	159.77	99.98
4.0	63 µm	159.80	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 12

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.06	0.27
-1.0	2.0 mm	0.06	0.27
-0.5	1.4 mm	0.23	1.05
0.0	1.0 mm	1.10	5.01
0.5	710 µm	3.82	17.39
1.0	500 µm	10.12	46.06
1.5	355 µm	16.39	74.60
2.0	250 µm	21.09	95.99
2.5	180 µm	21.93	99.82
3.0	125 µm	21.96	99.95
3.5	90 µm	21.96	99.95
4.0	63 µm	21.96	99.95
	<63 µm	21.97	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table C16 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 4 May 1999

Date	4-May-99	No. of Samples =10	1st Transect = 5	2nd Transect = 5
Sample 1	Sample too small to sieve	(3.48g)	Sample 3	
			Phi	Mass (g) Cumulative %
			-2.0 4.0 mm	
			-1.5 2.4 mm	0.23 0.96
			-1.0 2.0 mm	0.51 2.12
			-0.5 1.4 mm	1.53 6.36
			0.0 1.0 mm	4.04 16.80
			0.5 710 µm	8.76 36.42
			1.0 500 µm	15.29 63.58
			1.5 355 µm	19.41 80.71
			2.0 250 µm	22.64 94.14
			2.5 180 µm	23.90 99.38
			3.0 125 µm	24.04 99.96
			3.5 90 µm	24.05 100.00
			4.0 63 µm	
			<63 µm	
			Folk (1974) Texture Group: Slightly granular coarse sand	
Sample 2			Sample 4	
			Phi	Mass (g) Cumulative %
			-2.0 4.0 mm	
			-1.5 2.4 mm	
			-1.0 2.0 mm	0.02 0.06
			-0.5 1.4 mm	0.36 1.05
			0.0 1.0 mm	2.12 6.16
			0.5 710 µm	7.12 20.69
			1.0 500 µm	16.80 48.81
			1.5 355 µm	25.43 73.88
			2.0 250 µm	32.48 94.36
			2.5 180 µm	34.32 99.71
			3.0 125 µm	34.42 100.00
			3.5 90 µm	
			4.0 63 µm	
			<63 µm	
			Folk (1974) Texture Group: Slightly granular medium sand	
			Folk (1974) Texture Group: Slightly granular medium sand	

Table C16 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 4 May 1999 (Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.25	0.74
-1.0	2.0 mm	0.52	1.54
-0.5	1.4 mm	1.80	5.33
0.0	1.0 mm	5.03	14.89
0.5	710 µm	11.42	33.81
1.0	500 µm	20.59	60.95
1.5	355 µm	26.97	79.84
2.0	250 µm	31.65	93.69
2.5	180 µm	33.62	99.53
3.0	125 µm	33.77	99.97
3.5	90 µm	33.78	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.05	0.16
-1.5	2.4 mm	0.07	0.23
-1.0	2.0 mm	0.07	0.23
-0.5	1.4 mm	0.14	0.46
0.0	1.0 mm	0.35	1.15
0.5	710 µm	2.68	8.82
1.0	500 µm	12.09	39.81
1.5	355 µm	22.49	74.05
2.0	250 µm	29.08	95.75
2.5	180 µm	30.33	99.87
3.0	125 µm	30.36	99.97
3.5	90 µm	30.36	99.97
4.0	63 µm	30.37	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.03	0.06
-1.5	2.4 mm	0.06	0.12
-1.0	2.0 mm	0.68	1.35
-0.5	1.4 mm	3.30	6.53
0.0	1.0 mm	10.87	21.52
0.5	710 µm	25.90	51.27
1.0	500 µm	39.31	77.81
1.5	355 µm	47.80	94.62
2.0	250 µm	50.48	99.92
2.5	180 µm	50.51	99.98
3.0	125 µm	50.51	99.98
3.5	90 µm	50.52	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8 Sample too small to sieve (6.48g)

Table C16 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 4 May 1999 (Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm		
-0.5	1.4 mm		
0.0	1.0 mm	0.03	0.24
0.5	710 μm	0.30	2.35
1.0	500 μm	1.56	12.24
1.5	355 μm	4.69	36.78
2.0	250 μm	9.69	76.00
2.5	180 μm	12.70	99.61
3.0	125 μm	12.75	100.00
3.5	90 μm		
4.0	63 μm		
	<63 μm		

Sample 10 Sample too small to sieve (1.86g)

Folk (1974) Texture Group: Medium sand

Appendix D Swift Creek cumulative frequency data for bed-material load samples for the 1998/1999 wet season

This appendix contains the cumulative percentage values for the bed-material load samples collected at Swift Creek for the 1998/1999 Wet season. All samples were dry sieved through a nest of sieves to a value of 4 phi (63 μm).

Table D1 Cumulative frequency data for bed material flux samples in Swift Creek for 15 December 1998

Date	15-Dec-98	No. of Samples = 12		1st Transect = 6	2nd Transect = 6	
Sample 1	Sample too small to sieve	(2.29g)				
Sample 2				Sample 4		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	0.13	0.05	-2.0	4.0 mm	0.48 0.22
-1.5	2.4 mm	1.26	0.45	-1.5	2.4 mm	9.86 4.48
-1.0	2.0 mm	2.31	0.82	-1.0	2.0 mm	16.07 7.29
-0.5	1.4 mm	5.86	2.09	-0.5	1.4 mm	33.07 15.01
0.0	1.0 mm	15.12	5.40	0.0	1.0 mm	55.42 25.15
0.5	710 µm	36.54	13.04	0.5	710 µm	88.30 40.08
1.0	500 µm	112.67	40.21	1.0	500 µm	140.36 63.71
1.5	355 µm	194.12	69.28	1.5	355 µm	182.78 82.96
2.0	250 µm	261.48	93.33	2.0	250 µm	210.21 95.41
2.5	180 µm	279.51	99.76	2.5	180 µm	219.64 99.69
3.0	125 µm	280.05	99.95	3.0	125 µm	220.16 99.93
3.5	90 µm	280.14	99.99	3.5	90 µm	220.25 99.97
4.0	63 µm	280.17	100.00	4.0	63 µm	220.29 99.99
	<63 µm				<63 µm	220.32 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Granular coarse sand		
Sample 3				Sample 5		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	
-1.5	2.4 mm	4.15	2.53	-1.5	2.4 mm	
-1.0	2.0 mm	7.55	4.60	-1.0	2.0 mm	0.18 0.80
-0.5	1.4 mm	20.37	12.41	-0.5	1.4 mm	0.26 1.15
0.0	1.0 mm	38.45	23.43	0.0	1.0 mm	0.94 4.17
0.5	710 µm	64.48	39.30	0.5	710 µm	2.69 11.94
1.0	500 µm	104.89	63.92	1.0	500 µm	5.62 24.94
1.5	355 µm	133.76	81.52	1.5	355 µm	10.83 48.07
2.0	250 µm	156.13	95.15	2.0	250 µm	16.53 73.37
2.5	180 µm	163.69	99.76	2.5	180 µm	20.93 92.90
3.0	125 µm	163.99	99.94	3.0	125 µm	22.30 98.98
3.5	90 µm	164.06	99.98	3.5	90 µm	22.48 99.78
4.0	63 µm	164.08	99.99	4.0	63 µm	22.52 99.96
	<63 µm	164.09	100.00		<63 µm	22.53 100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand		

Table D1 Cumulative frequency data for bed material flux samples in Swift Creek for 15 December 1998 (Continued)

Sample 6	Sample too small to sieve	(3.01g)
Sample 7	Sample too small to sieve	(3.45g)
Sample 8	Sample too small to sieve	(6.12g)

Sample 10			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.07	0.03
-1.5	2.4 mm	0.52	0.24
-1.0	2.0 mm	0.80	0.37
-0.5	1.4 mm	2.20	1.02
0.0	1.0 mm	7.43	3.45
0.5	710 µm	27.54	12.79
1.0	500 µm	95.27	44.24
1.5	355 µm	166.58	77.35
2.0	250 µm	206.48	95.88
2.5	180 µm	214.94	99.80
3.0	125 µm	215.27	99.96
3.5	90 µm	215.32	99.98
4.0	63 µm	215.35	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 9			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.32	0.16
-1.5	2.4 mm	2.29	1.11
-1.0	2.0 mm	3.91	1.90
-0.5	1.4 mm	10.45	5.08
0.0	1.0 mm	21.42	10.42
0.5	710 µm	44.34	21.57
1.0	500 µm	99.21	48.25
1.5	355 µm	148.77	72.36
2.0	250 µm	191.87	93.32
2.5	180 µm	205.13	99.77
3.0	125 µm	205.50	99.95
3.5	90 µm	205.57	99.99
4.0	63 µm	205.60	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 11			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.40	0.52
-1.0	2.0 mm	0.70	0.91
-0.5	1.4 mm	3.39	4.41
0.0	1.0 mm	7.17	9.32
0.5	710 µm	15.26	19.83
1.0	500 µm	33.75	43.87
1.5	355 µm	54.20	70.44
2.0	250 µm	71.18	92.51
2.5	180 µm	76.38	99.27
3.0	125 µm	76.61	99.57
3.5	90 µm	76.78	99.79
4.0	63 µm	76.94	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 12	Sample too small to sieve	(8.21g)
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Table D2 Cumulative frequency data for bed material flux samples in Swift Creek for 6 January 1999

Date	6-Jan-99	No. of Samples = 12		1st Transect = 6		2nd Transect = 6	
Sample 1				Sample 3			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.03	0.02
-1.5	2.4 mm			-1.5	2.4 mm	0.58	0.46
-1.0	2.0 mm			-1.0	2.0 mm	1.03	0.82
-0.5	1.4 mm	0.01	0.01	-0.5	1.4 mm	2.81	2.24
0.0	1.0 mm	0.56	0.61	0.0	1.0 mm	7.02	5.60
0.5	710 µm	5.36	5.86	0.5	710 µm	18.00	14.37
1.0	500 µm	28.25	30.87	1.0	500 µm	46.41	37.04
1.5	355 µm	59.45	64.97	1.5	355 µm	80.50	64.25
2.0	250 µm	85.39	93.32	2.0	250 µm	108.35	86.48
2.5	180 µm	91.35	99.84	2.5	180 µm	124.16	99.10
3.0	125 µm	91.47	99.97	3.0	125 µm	125.22	99.94
3.5	90 µm	91.49	99.99	3.5	90 µm	125.28	99.99
4.0	63 µm	91.50	100.00	4.0	63 µm	125.28	99.99
	<63 µm				<63 µm	125.29	100.00
Folk (1974) Texture Group: Medium sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 2				Sample 4			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.34	7.37	-2.0	4.0 mm	0.51	1.00
-1.5	2.4 mm	1.81	9.96	-1.5	2.4 mm	0.57	1.12
-1.0	2.0 mm	1.98	10.89	-1.0	2.0 mm	0.63	1.24
-0.5	1.4 mm	2.27	12.49	-0.5	1.4 mm	0.80	1.57
0.0	1.0 mm	2.65	14.58	0.0	1.0 mm	1.75	3.43
0.5	710 µm	3.11	17.11	0.5	710 µm	5.19	10.18
1.0	500 µm	4.18	22.99	1.0	500 µm	15.38	30.16
1.5	355 µm	5.99	32.95	1.5	355 µm	27.51	53.94
2.0	250 µm	10.46	57.54	2.0	250 µm	40.78	79.96
2.5	180 µm	17.22	94.72	2.5	180 µm	50.29	98.61
3.0	125 µm	17.99	98.95	3.0	125 µm	50.92	99.84
3.5	90 µm	18.08	99.45	3.5	90 µm	50.96	99.92
4.0	63 µm	18.14	99.78	4.0	63 µm	50.98	99.96
	<63 µm	18.18	100.00		<63 µm	51.00	100.00
Folk (1974) Texture Group: Granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table D2 Cumulative frequency data for bed material flux samples in Swift Creek for 6 January 1999
(Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.05	0.03
-1.5	2.4 mm	0.19	0.12
-1.0	2.0 mm	0.24	0.15
-0.5	1.4 mm	0.57	0.35
0.0	1.0 mm	2.00	1.23
0.5	710 µm	8.61	5.31
1.0	500 µm	39.30	24.23
1.5	355 µm	88.63	54.64
2.0	250 µm	134.68	83.03
2.5	180 µm	160.95	99.23
3.0	125 µm	162.06	99.91
3.5	90 µm	162.15	99.97
4.0	63 µm	162.17	99.98
	<63 µm	162.20	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.03	0.06
-1.5	2.4 mm	0.06	0.11
-1.0	2.0 mm	0.07	0.13
-0.5	1.4 mm	0.08	0.15
0.0	1.0 mm	0.14	0.26
0.5	710 µm	0.55	1.03
1.0	500 µm	5.71	10.72
1.5	355 µm	24.89	46.72
2.0	250 µm	47.69	89.51
2.5	180 µm	52.86	99.21
3.0	125 µm	53.25	99.94
3.5	90 µm	53.27	99.98
4.0	63 µm	53.28	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm		
-0.5	1.4 mm		
0.0	1.0 mm	0.02	0.11
0.5	710 µm	0.31	1.74
1.0	500 µm	2.47	13.89
1.5	355 µm	8.68	48.82
2.0	250 µm	15.53	87.35
2.5	180 µm	17.64	99.21
3.0	125 µm	17.75	99.83
3.5	90 µm	17.77	99.94
4.0	63 µm	17.78	100.00
	<63 µm		

Folk (1974) Texture Group: Medium sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.04	0.02
-1.5	2.4 mm	0.18	0.09
-1.0	2.0 mm	0.30	0.15
-0.5	1.4 mm	0.83	0.42
0.0	1.0 mm	3.31	1.67
0.5	710 µm	14.39	7.24
1.0	500 µm	56.86	28.62
1.5	355 µm	113.12	56.94
2.0	250 µm	169.58	85.36
2.5	180 µm	195.99	98.66
3.0	125 µm	198.53	99.93
3.5	90 µm	198.60	99.97
4.0	63 µm	198.63	99.98
	<63 µm	198.66	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table D2 Cumulative frequency data for bed material flux samples in Swift Creek for 6 January 1999
(Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.12	0.07
-1.5	2.4 mm	0.62	0.37
-1.0	2.0 mm	1.25	0.75
-0.5	1.4 mm	4.23	2.55
0.0	1.0 mm	11.26	6.80
0.5	710 µm	29.61	17.87
1.0	500 µm	72.07	43.50
1.5	355 µm	113.93	68.77
2.0	250 µm	144.87	87.44
2.5	180 µm	164.40	99.23
3.0	125 µm	165.55	99.92
3.5	90 µm	165.64	99.98
4.0	63 µm	165.66	99.99
	<63 µm	165.68	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.15	0.10
-1.5	2.4 mm	1.21	0.79
-1.0	2.0 mm	2.08	1.36
-0.5	1.4 mm	5.95	3.90
0.0	1.0 mm	14.64	9.61
0.5	710 µm	34.05	22.34
1.0	500 µm	72.59	47.63
1.5	355 µm	109.07	71.57
2.0	250 µm	135.42	88.86
2.5	180 µm	151.22	99.23
3.0	125 µm	152.24	99.90
3.5	90 µm	152.32	99.95
4.0	63 µm	152.36	99.98
	<63 µm	152.39	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 11

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.01	0.57
-1.5	2.4 mm	3.03	1.72
-1.0	2.0 mm	5.24	2.97
-0.5	1.4 mm	13.18	7.48
0.0	1.0 mm	28.74	16.31
0.5	710 µm	52.83	29.98
1.0	500 µm	91.78	52.09
1.5	355 µm	126.01	71.51
2.0	250 µm	159.71	90.64
2.5	180 µm	174.85	99.23
3.0	125 µm	176.04	99.90
3.5	90 µm	176.13	99.95
4.0	63 µm	176.17	99.98
	<63 µm	176.21	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 12

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.01	0.04
-1.0	2.0 mm	0.04	0.16
-0.5	1.4 mm	0.14	0.55
0.0	1.0 mm	0.62	2.43
0.5	710 µm	2.14	8.38
1.0	500 µm	7.81	30.57
1.5	355 µm	16.03	62.74
2.0	250 µm	23.44	91.74
2.5	180 µm	25.41	99.45
3.0	125 µm	25.51	99.84
3.5	90 µm	25.53	99.92
4.0	63 µm	25.54	99.96
	<63 µm	25.55	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table D3 Cumulative frequency data for bed material flux samples in Swift Creek for 20 January 1999

Date	20-Jan-99	No. of Samples = 12	1st Transect = 6	2nd Transect = 6
Sample 1	Sample too small to sieve (0.24g)			
Sample 2				Sample 4
Phi	Mass (g)	Cumulative %	Phi	Mass (g) Cumulative %
-2.0	4.0 mm	0.19 1.27	-2.0	4.0 mm 0.10 0.06
-1.5	2.4 mm	0.22 1.47	-1.5	2.4 mm 1.23 0.71
-1.0	2.0 mm	0.22 1.47	-1.0	2.0 mm 2.43 1.40
-0.5	1.4 mm	0.25 1.67	-0.5	1.4 mm 7.70 4.44
0.0	1.0 mm	0.32 2.13	0.0	1.0 mm 20.11 11.60
0.5	710 µm	0.58 3.86	0.5	710 µm 43.92 25.34
1.0	500 µm	1.73 11.53	1.0	500 µm 87.36 50.41
1.5	355 µm	4.70 31.31	1.5	355 µm 124.19 71.66
2.0	250 µm	11.36 75.68	2.0	250 µm 159.23 91.88
2.5	180 µm	14.94 99.53	2.5	180 µm 172.82 99.72
3.0	125 µm	14.99 99.87	3.0	125 µm 173.23 99.96
3.5	90 µm	15.00 99.93	3.5	90 µm 173.26 99.98
4.0	63 µm	15.01 100.00	4.0	63 µm 173.29 99.99
	<63 µm			<63 µm 173.30 100.00
Folk (1974) Texture Group: Slightly granular medium sand			Folk (1974) Texture Group: Slightly granular medium sand	
Sample 3				Sample 5
Phi	Mass (g)	Cumulative %	Phi	Mass (g) Cumulative %
-2.0	4.0 mm	0.08 0.05	-2.0	4.0 mm 0.26 0.15
-1.5	2.4 mm	2.04 1.35	-1.5	2.4 mm 0.54 0.31
-1.0	2.0 mm	4.40 2.92	-1.0	2.0 mm 0.69 0.40
-0.5	1.4 mm	12.56 8.34	-0.5	1.4 mm 1.69 0.97
0.0	1.0 mm	30.45 20.22	0.0	1.0 mm 5.12 2.95
0.5	710 µm	57.72 38.33	0.5	710 µm 17.82 10.28
1.0	500 µm	93.69 62.22	1.0	500 µm 61.73 35.59
1.5	355 µm	119.59 79.42	1.5	355 µm 116.78 67.34
2.0	250 µm	141.78 94.16	2.0	250 µm 161.98 93.40
2.5	180 µm	150.09 99.68	2.5	180 µm 172.97 99.73
3.0	125 µm	150.52 99.97	3.0	125 µm 173.38 99.97
3.5	90 µm	150.53 99.97	3.5	90 µm 173.41 99.99
4.0	63 µm	150.55 99.99	4.0	63 µm 173.42 99.99
	<63 µm	150.57 100.00		<63 µm 173.43 100.00
Folk (1974) Texture Group: Slightly granular coarse sand			Folk (1974) Texture Group: Slightly granular medium sand	

Table D3 Cumulative frequency data for bed material flux samples in Swift Creek for 20 January 1999
(Continued)

Sample 6			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm	0.12	0.08
-0.5	1.4 mm	0.79	0.54
0.0	1.0 mm	3.46	2.38
0.5	710 µm	13.59	9.34
1.0	500 µm	50.32	34.60
1.5	355 µm	101.12	69.52
2.0	250 µm	140.06	96.29
2.5	180 µm	145.16	99.80
3.0	125 µm	145.41	99.97
3.5	90 µm	145.44	99.99
4.0	63 µm	145.45	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.25	0.21
-1.0	2.0 mm	0.41	0.34
-0.5	1.4 mm	0.97	0.81
0.0	1.0 mm	2.96	2.47
0.5	710 µm	10.78	8.98
1.0	500 µm	42.70	35.57
1.5	355 µm	88.59	73.79
2.0	250 µm	115.42	96.14
2.5	180 µm	119.94	99.91
3.0	125 µm	120.03	99.98
3.5	90 µm	120.04	99.99
4.0	63 µm	120.04	99.99
	<63 µm	120.05	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 8			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.04	0.04
-1.0	2.0 mm	0.11	0.10
-0.5	1.4 mm	0.33	0.31
0.0	1.0 mm	1.20	1.12
0.5	710 µm	5.18	4.82
1.0	500 µm	24.98	23.27
1.5	355 µm	58.92	54.88
2.0	250 µm	97.20	90.53
2.5	180 µm	106.88	99.54
3.0	125 µm	107.34	99.97
3.5	90 µm	107.36	99.99
4.0	63 µm	107.37	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 9			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.04	0.03
-1.5	2.4 mm	0.28	0.20
-1.0	2.0 mm	0.56	0.39
-0.5	1.4 mm	1.74	1.22
0.0	1.0 mm	5.12	3.60
0.5	710 µm	15.96	11.22
1.0	500 µm	51.86	36.46
1.5	355 µm	100.31	70.52
2.0	250 µm	133.35	93.74
2.5	180 µm	142.00	99.82
3.0	125 µm	142.21	99.97
3.5	90 µm	142.25	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Table D3 Cumulative frequency data for bed material flux samples in Swift Creek for 20 January 1999
(Continued)

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.46	0.37
-1.0	2.0 mm	0.90	0.72
-0.5	1.4 mm	3.25	2.61
0.0	1.0 mm	8.19	6.58
0.5	710 μm	18.94	15.21
1.0	500 μm	46.19	37.09
1.5	355 μm	82.64	66.35
2.0	250 μm	117.03	93.96
2.5	180 μm	124.14	99.67
3.0	125 μm	124.50	99.96
3.5	90 μm	124.52	99.98
4.0	63 μm	124.53	99.98
	<63 μm	124.55	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 12 Sample too small to sieve (0.13g)

Sample 11

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.24	0.13
-1.5	2.4 mm	0.73	0.39
-1.0	2.0 mm	1.17	0.62
-0.5	1.4 mm	3.45	1.82
0.0	1.0 mm	9.59	5.06
0.5	710 μm	27.33	14.42
1.0	500 μm	76.32	40.27
1.5	355 μm	137.64	72.63
2.0	250 μm	178.89	94.40
2.5	180 μm	189.21	99.84
3.0	125 μm	189.43	99.96
3.5	90 μm	189.47	99.98
4.0	63 μm	189.49	99.99
	<63 μm	189.51	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table D4 Cumulative frequency data for bed material flux samples in Swift Creek for 3 February 1999

Date	3-Feb-99	No. of Samples = 14	1st Transect = 7	2nd Transect = 7
Sample 1	Sample too small to sieve (0.76g)			
Sample 2				Sample 4
Phi	Mass (g)	Cumulative %	Phi	Mass (g) Cumulative %
-2.0	4.0 mm	2.41 0.39	-2.0	4.0 mm 0.99 0.26
-1.5	2.4 mm	40.20 6.49	-1.5	2.4 mm 5.21 1.35
-1.0	2.0 mm	66.80 10.78	-1.0	2.0 mm 8.45 2.19
-0.5	1.4 mm	155.77 25.13	-0.5	1.4 mm 20.41 5.28
0.0	1.0 mm	268.07 43.25	0.0	1.0 mm 48.52 12.56
0.5	710 µm	401.95 64.85	0.5	710 µm 114.53 29.65
1.0	500 µm	544.11 87.79	1.0	500 µm 257.61 66.69
1.5	355 µm	602.30 97.17	1.5	355 µm 349.99 90.61
2.0	250 µm	615.91 99.37	2.0	250 µm 380.38 98.48
2.5	180 µm	619.53 99.95	2.5	180 µm 385.74 99.86
3.0	125 µm	619.69 99.98	3.0	125 µm 386.23 99.99
3.5	90 µm	619.73 99.99	3.5	90 µm 386.24 99.99
4.0	63 µm	619.78 100.00	4.0	63 µm 386.26 100.00
	<63 µm			<63 µm
Folk (1974) Texture Group: Granular coarse sand			Folk (1974) Texture Group: Slightly granular coarse sand	
Sample 3				Sample 5
Phi	Mass (g)	Cumulative %	Phi	Mass (g) Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm 0.8 0.18
-1.5	2.4 mm		-1.5	2.4 mm 13.6 3.03
-1.0	2.0 mm	0.00 0.00	-1.0	2.0 mm 24.89 5.55
-0.5	1.4 mm	24.14 7.72	-0.5	1.4 mm 41.02 9.14
0.0	1.0 mm	62.32 19.94	0.0	1.0 mm 73.73 16.43
0.5	710 µm	127.46 40.78	0.5	710 µm 142.85 31.84
1.0	500 µm	229.85 73.54	1.0	500 µm 294.82 65.71
1.5	355 µm	292.60 93.62	1.5	355 µm 403.05 89.83
2.0	250 µm	308.77 98.79	2.0	250 µm 441.23 98.34
2.5	180 µm	312.15 99.88	2.5	180 µm 448.3 99.92
3.0	125 µm	312.46 99.97	3.0	125 µm 448.57 99.98
3.5	90 µm	312.52 99.99	3.5	90 µm 448.62 99.99
4.0	63 µm	312.53 100.00	4.0	63 µm 448.65 99.99
	<63 µm			<63 µm 448.68 100.00
Folk (1974) Texture Group: Coarse sand			Folk (1974) Texture Group: Granular coarse sand	

Table D4 Cumulative frequency data for bed material flux samples in Swift Creek for 3 February 1999
(Continued)

Sample 6				Sample 8			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.07	0.05	-2.0	4.0 mm	0.1	0.05
-1.5	2.4 mm	0.16	0.11	-1.5	2.4 mm	0.22	0.10
-1.0	2.0 mm	0.22	0.15	-1.0	2.0 mm	0.28	0.13
-0.5	1.4 mm	0.52	0.36	-0.5	1.4 mm	0.52	0.24
0.0	1.0 mm	2.08	1.46	0.0	1.0 mm	2.39	1.10
0.5	710 µm	9.55	6.70	0.5	710 µm	15.1	6.95
1.0	500 µm	52.87	37.11	1.0	500 µm	85.11	39.20
1.5	355 µm	110.94	77.87	1.5	355 µm	168.21	77.48
2.0	250 µm	138.04	96.89	2.0	250 µm	208.09	95.85
2.5	180 µm	142.20	99.81	2.5	180 µm	216.71	99.82
3.0	125 µm	142.44	99.98	3.0	125 µm	217.05	99.97
3.5	90 µm	142.45	99.99	3.5	90 µm	217.08	99.99
4.0	63 µm	142.46	99.99	4.0	63 µm	217.1	100.00
	<63 µm	142.47	100.00		<63 µm		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 7				Sample 9			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.53	0.18
-1.5	2.4 mm			-1.5	2.4 mm	3.29	1.11
-1.0	2.0 mm	0.03	0.01	-1.0	2.0 mm	5.88	1.98
-0.5	1.4 mm	2.40	0.60	-0.5	1.4 mm	16.37	5.50
0.0	1.0 mm	2.91	0.73	0.0	1.0 mm	39.06	13.13
0.5	710 µm	19.94	5.00	0.5	710 µm	110.37	37.09
1.0	500 µm	269.33	67.56	1.0	500 µm	243.23	81.74
1.5	355 µm	366.11	91.84	1.5	355 µm	285.50	95.94
2.0	250 µm	391.70	98.25	2.0	250 µm	294.91	99.10
2.5	180 µm	398.37	99.93	2.5	180 µm	297.33	99.92
3.0	125 µm	398.62	99.99	3.0	125 µm	297.52	99.98
3.5	90 µm	398.64	99.99	3.5	90 µm	297.55	99.99
4.0	63 µm	398.66	100.00	4.0	63 µm	297.57	100.00
	<63 µm				<63 µm		
Folk (1974) Texture Group: Coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table D4 Cumulative frequency data for bed material flux samples in Swift Creek for 3 February 1999
(Continued)

Sample 10				Sample 12			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	2.45	0.21	-2.0	4.0 mm	3.40	0.58
-1.5	2.4 mm	18.80	1.64	-1.5	2.4 mm	17.79	3.04
-1.0	2.0 mm	32.37	2.83	-1.0	2.0 mm	29.74	5.09
-0.5	1.4 mm	75.33	6.58	-0.5	1.4 mm	65.78	11.26
0.0	1.0 mm	153.33	13.39	0.0	1.0 mm	124.87	21.37
0.5	710 µm	322.70	28.18	0.5	710 µm	230.38	39.42
1.0	500 µm	844.41	73.73	1.0	500 µm	405.08	69.31
1.5	355 µm	1066.99	93.17	1.5	355 µm	533.18	91.23
2.0	250 µm	1125.82	98.30	2.0	250 µm	574.39	98.28
2.5	180 µm	1143.79	99.87	2.5	180 µm	583.91	99.91
3.0	125 µm	1145.02	99.98	3.0	125 µm	584.27	99.97
3.5	90 µm	1145.16	99.99	3.5	90 µm	584.38	99.99
4.0	63 µm	1145.23	100.00	4.0	63 µm	584.41	99.99
	<63 µm				<63 µm	584.44	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Granular coarse sand			
Sample 11				Sample 13			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	2.38	2.05	-2.0	4.0 mm	0.44	0.23
-1.5	2.4 mm	3.24	2.80	-1.5	2.4 mm	3.05	1.56
-1.0	2.0 mm	3.88	3.35	-1.0	2.0 mm	5.93	3.04
-0.5	1.4 mm	5.95	5.14	-0.5	1.4 mm	16.17	8.29
0.0	1.0 mm	10.83	9.35	0.0	1.0 mm	34.12	17.49
0.5	710 µm	24.03	20.74	0.5	710 µm	69.21	35.48
1.0	500 µm	55.38	47.80	1.0	500 µm	138.45	70.97
1.5	355 µm	86.42	74.59	1.5	355 µm	182.72	93.67
2.0	250 µm	106.69	92.09	2.0	250 µm	193.33	99.11
2.5	180 µm	115.29	99.51	2.5	180 µm	194.99	99.96
3.0	125 µm	115.74	99.90	3.0	125 µm	195.02	99.97
3.5	90 µm	115.8	99.95	3.5	90 µm	195.06	99.99
4.0	63 µm	115.83	99.97	4.0	63 µm	195.07	100.00
	<63 µm	115.86	100.00		<63 µm		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			
Sample 14 Sample too small to sieve (0.10g)							

Table D5 Cumulative frequency data for bed material flux samples in Swift Creek for 10 February 1999

Date	10-Feb-99	No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Sample 1				Sample 3			
	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
	-2.0	4.0 mm		-2.0	4.0 mm	0.38	0.10
	-1.5	2.4 mm	0.07	-1.5	2.4 mm	3.69	0.95
	-1.0	2.0 mm	0.26	-1.0	2.0 mm	5.44	1.40
	-0.5	1.4 mm	1.29	-0.5	1.4 mm	11.83	3.04
	0.0	1.0 mm	3.00	0.0	1.0 mm	26.76	6.88
	0.5	710 µm	5.49	0.5	710 µm	64.26	16.53
	1.0	500 µm	8.42	1.0	500 µm	195.54	50.29
	1.5	355 µm	11.96	1.5	355 µm	319.80	82.26
	2.0	250 µm	17.77	2.0	250 µm	378.28	97.30
	2.5	180 µm	22.20	2.5	180 µm	388.13	99.83
	3.0	125 µm	22.37	3.0	125 µm	388.65	99.96
	3.5	90 µm	22.39	3.5	90 µm	388.71	99.98
	4.0	63 µm	22.43	4.0	63 µm	388.76	99.99
		<63 µm	22.44		<63 µm	388.79	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 2				Sample 4			
	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
	-2.0	4.0 mm	2.81	-2.0	4.0 mm	0.13	0.05
	-1.5	2.4 mm	11.45	-1.5	2.4 mm	1.42	0.49
	-1.0	2.0 mm	18.69	-1.0	2.0 mm	2.11	0.73
	-0.5	1.4 mm	42.89	-0.5	1.4 mm	4.35	1.51
	0.0	1.0 mm	100.99	0.0	1.0 mm	9.28	3.22
	0.5	710 µm	270.31	0.5	710 µm	27.61	9.59
	1.0	500 µm	778.18	1.0	500 µm	121.32	42.13
	1.5	355 µm	1130.22	1.5	355 µm	239.22	83.07
	2.0	250 µm	1223.94	2.0	250 µm	281.54	97.76
	2.5	180 µm	1238.11	2.5	180 µm	287.73	99.91
	3.0	125 µm	1238.98	3.0	125 µm	287.93	99.98
	3.5	90 µm	1239.13	3.5	90 µm	287.95	99.99
	4.0	63 µm		4.0	63 µm	287.97	100.00
		<63 µm			<63 µm		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table D5 Cumulative frequency data for bed material flux samples in Swift Creek for 10 February 1999
(Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.26	0.10
-1.5	2.4 mm	1.48	0.58
-1.0	2.0 mm	2.44	0.95
-0.5	1.4 mm	5.50	2.14
0.0	1.0 mm	13.30	5.17
0.5	710 µm	38.10	14.82
1.0	500 µm	130.44	50.73
1.5	355 µm	223.73	87.01
2.0	250 µm	251.91	97.97
2.5	180 µm	256.94	99.92
3.0	125 µm	257.09	99.98
3.5	90 µm	257.13	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.46	0.14
-1.5	2.4 mm	1.75	0.52
-1.0	2.0 mm	2.39	0.70
-0.5	1.4 mm	5.60	1.65
0.0	1.0 mm	13.38	3.94
0.5	710 µm	38.87	11.44
1.0	500 µm	142.37	41.90
1.5	355 µm	329.19	96.88
2.0	250 µm	339.40	99.88
2.5	180 µm	339.69	99.97
3.0	125 µm	339.72	99.98
3.5	90 µm	339.76	99.99
4.0	63 µm	339.79	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.13	0.17
-1.5	2.4 mm	5.14	0.76
-1.0	2.0 mm	7.88	1.17
-0.5	1.4 mm	18.47	2.74
0.0	1.0 mm	34.93	5.18
0.5	710 µm	115.37	17.10
1.0	500 µm	330.85	49.03
1.5	355 µm	558.64	82.78
2.0	250 µm	659.28	97.69
2.5	180 µm	673.95	99.87
3.0	125 µm	674.71	99.98
3.5	90 µm	674.77	99.99
4.0	63 µm	674.80	99.99
	<63 µm	674.84	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.51	0.13
-1.5	2.4 mm	3.26	0.86
-1.0	2.0 mm	5.45	1.44
-0.5	1.4 mm	13.84	3.65
0.0	1.0 mm	32.61	8.61
0.5	710 µm	80.79	21.33
1.0	500 µm	217.15	57.33
1.5	355 µm	336.69	88.88
2.0	250 µm	372.24	98.27
2.5	180 µm	378.53	99.93
3.0	125 µm	378.71	99.98
3.5	90 µm	378.75	99.99
4.0	63 µm	378.76	99.99
	<63 µm	378.80	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Table D5 Cumulative frequency data for bed material flux samples in Swift Creek for 10 February 1999
(Continued)

Sample 9				Sample 10			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.69	0.14	-2.0	4.0 mm		
-1.5	2.4 mm	6.14	0.52	-1.5	2.4 mm	0.17	0.41
-1.0	2.0 mm	10.19	0.87	-1.0	2.0 mm	0.50	1.20
-0.5	1.4 mm	25.07	2.14	-0.5	1.4 mm	1.13	2.72
0.0	1.0 mm	114.44	9.77	0.0	1.0 mm	2.32	5.59
0.5	710 μ m	725.70	61.96	0.5	710 μ m	4.44	10.69
1.0	500 μ m	1041.74	88.94	1.0	500 μ m	9.99	24.06
1.5	355 μ m	1126.14	96.15	1.5	355 μ m	19.96	48.07
2.0	250 μ m	1163.34	99.32	2.0	250 μ m	32.23	77.63
2.5	180 μ m	1170.67	99.95	2.5	180 μ m	40.82	98.31
3.0	125 μ m	1171.12	99.99	3.0	125 μ m	41.32	99.52
3.5	90 μ m	1171.20	99.99	3.5	90 μ m	41.39	99.69
4.0	63 μ m	1171.25	100.00	4.0	63 μ m	41.40	99.71
	<63 μ m				<63 μ m	41.52	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table D6 Cumulative frequency data for bed material flux samples in Swift Creek for 17 February 1999

Date	17-Feb-99	No. of Samples = 14		1st Transect = 7	2nd Transect = 7	
Sample 1				Sample 3		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	1.34 0.30
-1.5	2.4 mm	0.01	0.01	-1.5	2.4 mm	23.85 5.38
-1.0	2.0 mm	0.18	0.23	-1.0	2.0 mm	41.01 9.25
-0.5	1.4 mm	1.20	1.56	-0.5	1.4 mm	95.47 21.53
0.0	1.0 mm	7.34	9.53	0.0	1.0 mm	169.17 38.15
0.5	710 µm	36.77	47.75	0.5	710 µm	268.20 60.48
1.0	500 µm	54.20	70.38	1.0	500 µm	371.95 83.88
1.5	355 µm	65.94	85.63	1.5	355 µm	424.39 95.70
2.0	250 µm	76.24	99.00	2.0	250 µm	440.61 99.36
2.5	180 µm	76.98	99.96	2.5	180 µm	442.1 99.70
3.0	125 µm	77.01	100.00	3.0	125 µm	443.37 99.98
3.5	90 µm			3.5	90 µm	443.41 99.99
4.0	63 µm			4.0	63 µm	443.42 99.99
	<63 µm				<63 µm	443.45 100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Granular coarse sand		
Sample 2				Sample 4		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	2.60	0.59	-2.0	4.0 mm	0.34 0.11
-1.5	2.4 mm	31.22	7.14	-1.5	2.4 mm	3.52 1.18
-1.0	2.0 mm	49.68	11.37	-1.0	2.0 mm	5.52 1.84
-0.5	1.4 mm	98.06	22.44	-0.5	1.4 mm	12.63 4.22
0.0	1.0 mm	161.52	36.96	0.0	1.0 mm	26.55 8.87
0.5	710 µm	244.54	55.95	0.5	710 µm	68.07 22.75
1.0	500 µm	354.74	81.17	1.0	500 µm	184.31 61.59
1.5	355 µm	413.03	94.51	1.5	355 µm	268.66 89.77
2.0	250 µm	434.89	99.51	2.0	250 µm	294.75 98.49
2.5	180 µm	436.88	99.96	2.5	180 µm	299.09 99.94
3.0	125 µm	436.97	99.98	3.0	125 µm	299.20 99.98
3.5	90 µm	437.00	99.99	3.5	90 µm	299.25 99.99
4.0	63 µm	437.03	100.00	4.0	63 µm	299.25 99.99
	<63 µm				<63 µm	299.27 100.00
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand		

Table D6 Cumulative frequency data for bed material flux samples in Swift Creek for 17 February 1999
(Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.15	0.67
-1.0	2.0 mm	0.23	1.03
-0.5	1.4 mm	0.56	2.50
0.0	1.0 mm	1.57	7.02
0.5	710 µm	4.28	19.12
1.0	500 µm	11.06	49.42
1.5	355 µm	16.86	75.34
2.0	250 µm	21.12	94.37
2.5	180 µm	22.36	99.91
3.0	125 µm	22.38	100.00
3.5	90 µm		
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	1.62	0.26
-1.0	2.0 mm	4.00	0.64
-0.5	1.4 mm	17.17	2.74
0.0	1.0 mm	65.90	10.50
0.5	710 µm	199.36	31.77
1.0	500 µm	462.62	73.73
1.5	355 µm	572.36	91.22
2.0	250 µm	619.66	98.76
2.5	180 µm	627.01	99.93
3.0	125 µm	627.31	99.98
3.5	90 µm	627.38	99.99
4.0	63 µm	627.40	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.02	0.02
-1.5	2.4 mm	0.13	0.13
-1.0	2.0 mm	0.16	0.16
-0.5	1.4 mm	0.27	0.27
0.0	1.0 mm	0.54	0.55
0.5	710 µm	2.39	2.43
1.0	500 µm	20.56	20.90
1.5	355 µm	61.88	62.91
2.0	250 µm	90.94	92.45
2.5	180 µm	98.14	99.77
3.0	125 µm	98.32	99.95
3.5	90 µm	98.36	99.99
4.0	63 µm	98.36	99.99
	<63 µm	98.37	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.11	0.10
-1.0	2.0 mm	0.18	0.16
-0.5	1.4 mm	0.25	0.22
0.0	1.0 mm	0.44	0.39
0.5	710 µm	2.15	1.93
1.0	500 µm	24.76	22.20
1.5	355 µm	69.87	62.64
2.0	250 µm	105.37	94.47
2.5	180 µm	111.32	99.80
3.0	125 µm	111.50	99.96
3.5	90 µm	111.53	99.99
4.0	63 µm	111.53	99.99
	<63 µm	111.54	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table D6 Cumulative frequency data for bed material flux samples in Swift Creek for 17 February 1999
(Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.04	0.03
-1.5	2.4 mm	0.50	0.44
-1.0	2.0 mm	0.86	0.75
-0.5	1.4 mm	2.74	2.39
0.0	1.0 mm	8.47	7.38
0.5	710 µm	25.12	21.90
1.0	500 µm	65.18	56.82
1.5	355 µm	95.36	83.13
2.0	250 µm	111.66	97.34
2.5	180 µm	114.62	99.92
3.0	125 µm	114.68	99.97
3.5	90 µm	114.69	99.98
4.0	63 µm	114.70	99.99
	<63 µm	114.71	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.01	0.03
-1.5	2.4 mm	0.17	0.58
-1.0	2.0 mm	0.26	0.88
-0.5	1.4 mm	0.62	2.11
0.0	1.0 mm	1.44	4.90
0.5	710 µm	3.95	13.44
1.0	500 µm	12.50	42.55
1.5	355 µm	21.97	74.78
2.0	250 µm	27.69	94.25
2.5	180 µm	29.36	99.93
3.0	125 µm	29.37	99.97
3.5	90 µm	29.38	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 11

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.49	0.14
-1.5	2.4 mm	7.16	2.04
-1.0	2.0 mm	12.67	3.60
-0.5	1.4 mm	67.01	19.07
0.0	1.0 mm	136.93	38.96
0.5	710 µm	250.70	71.33
1.0	500 µm	318.27	90.55
1.5	355 µm	330.10	93.92
2.0	250 µm	343.85	97.83
2.5	180 µm	351.17	99.91
3.0	125 µm	351.36	99.97
3.5	90 µm	351.42	99.98
4.0	63 µm	351.46	99.99
	<63 µm	351.48	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 12

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	10.60	1.50
-1.5	2.4 mm	75.83	10.70
-1.0	2.0 mm	114.67	16.18
-0.5	1.4 mm	204.37	28.83
0.0	1.0 mm	305.08	43.03
0.5	710 µm	423.84	59.79
1.0	500 µm	583.19	82.26
1.5	355 µm	663.80	93.64
2.0	250 µm	703.17	99.19
2.5	180 µm	708.52	99.94
3.0	125 µm	708.76	99.98
3.5	90 µm	708.83	99.99
4.0	63 µm	708.87	99.99
	<63 µm	708.92	100.00

Folk (1974) Texture Group: Granular coarse sand

Table D6 Cumulative frequency data for bed material flux samples in Swift Creek for 17 February 1999
(Continued)

Sample 13				Sample 14			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	5.82	0.76	-2.0	4.0 mm		
-1.5	2.4 mm	50.76	6.64	-1.5	2.4 mm		
-1.0	2.0 mm	80.82	10.58	-1.0	2.0 mm		
-0.5	1.4 mm	163.68	21.42	-0.5	1.4 mm	0.17	0.07
0.0	1.0 mm	270.65	35.42	0.0	1.0 mm	1.09	0.42
0.5	710 µm	427.56	55.96	0.5	710 µm	11.10	4.29
1.0	500 µm	638.89	83.61	1.0	500 µm	107.24	41.47
1.5	355 µm	738.91	96.70	1.5	355 µm	208.32	80.55
2.0	250 µm	761.84	99.70	2.0	250 µm	254.76	98.51
2.5	180 µm	763.99	99.99	2.5	180 µm	258.61	100.00
3.0	125 µm	764.04	99.99	3.0	125 µm		
3.5	90 µm	764.08	100.00	3.5	90 µm		
4.0	63 µm			4.0	63 µm		
	<63 µm				<63 µm		
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Medium sand			

Table D7 Cumulative frequency data for bed material flux samples in Swift Creek for 23 February 1999

Date	23-Feb-99		No. of Samples = 10	1st Transect = 5	2nd Transect = 5		
Sample 1	Phi	Mass (g)	Cumulative %	Sample 3	Phi	Mass (g)	Cumulative %
	-2.0	4.0 mm	0.18 0.05		-2.0	4.0 mm	0.31 0.15
	-1.5	2.4 mm	4.17 1.19		-1.5	2.4 mm	4.53 2.22
	-1.0	2.0 mm	7.19 2.06		-1.0	2.0 mm	7.62 3.74
	-0.5	1.4 mm	16.24 4.65		-0.5	1.4 mm	19.68 9.66
	0.0	1.0 mm	32.32 9.25		0.0	1.0 mm	43.33 21.28
	0.5	710 µm	68.88 19.70		0.5	710 µm	81.47 40.00
	1.0	500 µm	167.52 47.92		1.0	500 µm	141.60 69.53
	1.5	355 µm	279.32 79.90		1.5	355 µm	180.02 88.39
	2.0	250 µm	334.16 95.59		2.0	250 µm	199.90 98.15
	2.5	180 µm	349.05 99.85		2.5	180 µm	203.50 99.92
	3.0	125 µm	349.54 99.99		3.0	125 µm	203.65 100.00
	3.5	90 µm	349.56 100.00		3.5	90 µm	
	4.0	63 µm			4.0	63 µm	
		<63 µm				<63 µm	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			
Sample 2	Phi	Mass (g)	Cumulative %	Sample 4	Phi	Mass (g)	Cumulative %
	-2.0	4.0 mm	0.64 0.18		-2.0	4.0 mm	0.19 0.05
	-1.5	2.4 mm	3.90 1.12		-1.5	2.4 mm	2.37 0.59
	-1.0	2.0 mm	7.77 2.23		-1.0	2.0 mm	4.30 1.07
	-0.5	1.4 mm	18.72 5.38		-0.5	1.4 mm	10.45 2.60
	0.0	1.0 mm	40.68 11.68		0.0	1.0 mm	27.54 6.85
	0.5	710 µm	88.63 25.45		0.5	710 µm	74.44 18.51
	1.0	500 µm	188.46 54.12		1.0	500 µm	199.20 49.53
	1.5	355 µm	278.69 80.03		1.5	355 µm	307.55 76.47
	2.0	250 µm	332.26 95.41		2.0	250 µm	382.38 95.07
	2.5	180 µm	347.83 99.89		2.5	180 µm	400.78 99.65
	3.0	125 µm	348.14 99.97		3.0	125 µm	402.12 99.98
	3.5	90 µm	348.19 99.99		3.5	90 µm	402.16 99.99
	4.0	63 µm	348.23 100.00		4.0	63 µm	402.17 100.00
		<63 µm				<63 µm	
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table D7 Cumulative frequency data for bed material flux samples in Swift Creek for 23 February 1999
(Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.06	0.02
-1.5	2.4 mm	0.50	0.19
-1.0	2.0 mm	0.99	0.38
-0.5	1.4 mm	3.44	1.33
0.0	1.0 mm	11.98	4.65
0.5	710 µm	38.56	14.96
1.0	500 µm	122.31	47.45
1.5	355 µm	202.87	78.71
2.0	250 µm	249.19	96.68
2.5	180 µm	257.19	99.78
3.0	125 µm	257.71	99.98
3.5	90 µm	257.73	99.99
4.0	63 µm	257.75	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.36	0.12
-1.5	2.4 mm	0.82	0.27
-1.0	2.0 mm	1.19	0.39
-0.5	1.4 mm	2.86	0.93
0.0	1.0 mm	9.09	2.96
0.5	710 µm	36.40	11.85
1.0	500 µm	137.08	44.61
1.5	355 µm	243.78	79.33
2.0	250 µm	294.99	95.99
2.5	180 µm	307.00	99.90
3.0	125 µm	307.26	99.99
3.5	90 µm	307.27	99.99
4.0	63 µm	307.29	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.51	0.24
-1.5	2.4 mm	4.10	0.66
-1.0	2.0 mm	6.50	1.04
-0.5	1.4 mm	15.93	2.56
0.0	1.0 mm	45.44	7.30
0.5	710 µm	127.83	20.54
1.0	500 µm	325.27	52.27
1.5	355 µm	487.36	78.32
2.0	250 µm	594.01	95.46
2.5	180 µm	620.59	99.73
3.0	125 µm	622.13	99.98
3.5	90 µm	622.23	99.99
4.0	63 µm	622.25	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.31	0.08
-1.5	2.4 mm	7.32	1.78
-1.0	2.0 mm	13.84	3.36
-0.5	1.4 mm	36.95	8.98
0.0	1.0 mm	82.89	20.14
0.5	710 µm	158.80	38.58
1.0	500 µm	277.59	67.43
1.5	355 µm	346.94	84.28
2.0	250 µm	397.78	96.63
2.5	180 µm	410.76	99.78
3.0	125 µm	411.58	99.98
3.5	90 µm	411.62	99.99
4.0	63 µm	411.65	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Table D7 Cumulative frequency data for bed material flux samples in Swift Creek for 23 February 1999
(Continued)

Sample 9			Sample 10				
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm	0.65	0.19	-2.0	4.0 mm	0.65	0.22
-1.5	2.4 mm	4.83	1.42	-1.5	2.4 mm	5.55	1.86
-1.0	2.0 mm	8.48	2.49	-1.0	2.0 mm	8.14	2.73
-0.5	1.4 mm	21.67	6.36	-0.5	1.4 mm	18.00	6.03
0.0	1.0 mm	47.20	13.86	0.0	1.0 mm	35.01	11.73
0.5	710 µm	96.93	28.46	0.5	710 µm	72.33	24.23
1.0	500 µm	189.92	55.77	1.0	500 µm	162.10	54.30
1.5	355 µm	271.13	79.62	1.5	355 µm	243.39	81.52
2.0	250 µm	324.03	95.15	2.0	250 µm	283.10	94.82
2.5	180 µm	340.07	99.86	2.5	180 µm	298.28	99.91
3.0	125 µm	340.48	99.98	3.0	125 µm	298.53	99.99
3.5	90 µm	340.52	99.99	3.5	90 µm	298.54	100.00
4.0	63 µm	340.54	100.00	4.0	63 µm		
	<63 µm				<63 µm		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table D8 Cumulative frequency data for bed material flux samples in Swift Creek for 2 March 1999

Date	2-Mar-99		No. of Samples = 14		1st Transect = 7		2nd Transect = 7	
Sample 1	Phi	Mass (g)	Cumulative %		Sample 3	Phi	Mass (g)	Cumulative %
	-2.0	4.0 mm				-2.0	4.0 mm	1.45 0.38
	-1.5	2.4 mm	0.01	0.02		-1.5	2.4 mm	9.33 2.43
	-1.0	2.0 mm	0.05	0.12		-1.0	2.0 mm	15.09 3.93
	-0.5	1.4 mm	0.13	0.32		-0.5	1.4 mm	34.08 8.88
	0.0	1.0 mm	0.58	1.44		0.0	1.0 mm	69.76 18.18
	0.5	710 µm	2.36	5.86		0.5	710 µm	143.39 37.38
	1.0	500 µm	13.24	32.88		1.0	500 µm	270.40 70.48
	1.5	355 µm	32.63	81.03		1.5	355 µm	341.99 89.15
	2.0	250 µm	40.25	99.95		2.0	250 µm	371.24 96.77
	2.5	180 µm	40.27	100.00		2.5	180 µm	383.09 99.86
	3.0	125 µm				3.0	125 µm	383.54 99.98
	3.5	90 µm				3.5	90 µm	383.59 99.99
	4.0	63 µm				4.0	63 µm	383.61 99.99
		<63 µm					<63 µm	383.63 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand				
Sample 2	Phi	Mass (g)	Cumulative %		Sample 4	Phi	Mass (g)	Cumulative %
	-2.0	4.0 mm	0.09	0.01		-2.0	4.0 mm	2.09 0.39
	-1.5	2.4 mm	1.01	0.15		-1.5	2.4 mm	19.67 3.68
	-1.0	2.0 mm	1.84	0.28		-1.0	2.0 mm	33.37 6.25
	-0.5	1.4 mm	5.26	0.79		-0.5	1.4 mm	75.36 14.12
	0.0	1.0 mm	20.68	3.10		0.0	1.0 mm	147.48 27.63
	0.5	710 µm	88.10	13.22		0.5	710 µm	256.82 48.11
	1.0	500 µm	382.02	57.35		1.0	500 µm	403.11 75.51
	1.5	355 µm	573.85	86.14		1.5	355 µm	468.22 87.71
	2.0	250 µm	658.25	98.81		2.0	250 µm	512.82 96.06
	2.5	180 µm	665.80	99.94		2.5	180 µm	531.87 99.63
	3.0	125 µm	666.11	99.99		3.0	125 µm	533.64 99.96
	3.5	90 µm	666.13	99.99		3.5	90 µm	533.73 99.98
	4.0	63 µm	666.16	100.00		4.0	63 µm	533.78 99.99
		<63 µm					<63 µm	533.84 100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Granular coarse sand				

Table D8 Cumulative frequency data for bed material flux samples in Swift Creek for 2 March 1999
(Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.32	0.11
-1.5	2.4 mm	2.70	0.93
-1.0	2.0 mm	4.83	1.67
-0.5	1.4 mm	12.78	4.41
0.0	1.0 mm	32.17	11.11
0.5	710 µm	94.20	32.53
1.0	500 µm	173.69	59.99
1.5	355 µm	238.15	82.25
2.0	250 µm	277.89	95.97
2.5	180 µm	282.65	97.62
3.0	125 µm	289.46	99.97
3.5	90 µm	289.50	99.98
4.0	63 µm	289.52	99.99
	<63 µm	289.55	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.11	0.03
-1.5	2.4 mm	0.34	0.10
-1.0	2.0 mm	0.63	0.18
-0.5	1.4 mm	2.62	0.75
0.0	1.0 mm	10.10	2.91
0.5	710 µm	40.07	11.55
1.0	500 µm	154.89	44.63
1.5	355 µm	238.02	68.59
2.0	250 µm	327.81	94.46
2.5	180 µm	345.79	99.64
3.0	125 µm	346.97	99.98
3.5	90 µm	346.99	99.99
4.0	63 µm	347.02	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7 Sample too small to sieve (7.68g)

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm	0.00	0.00
-0.5	1.4 mm	0.14	1.02
0.0	1.0 mm	0.64	4.67
0.5	710 µm	3.35	24.43
1.0	500 µm	10.12	73.81
1.5	355 µm	13.15	95.92
2.0	250 µm	13.62	99.34
2.5	180 µm	13.71	100.00
3.0	125 µm		
3.5	90 µm		
4.0	63 µm		
	<63 µm		

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm	0.00	0.00
-0.5	1.4 mm	0.14	1.02
0.0	1.0 mm	0.64	4.67
0.5	710 µm	3.35	24.43
1.0	500 µm	10.12	73.81
1.5	355 µm	13.15	95.92
2.0	250 µm	13.62	99.34
2.5	180 µm	13.71	100.00
3.0	125 µm		
3.5	90 µm		
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Coarse sand

Table D8 Cumulative frequency data for bed material flux samples in Swift Creek for 2 March 1999
(Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.73	0.32
-1.0	2.0 mm	1.26	0.55
-0.5	1.4 mm	3.72	1.61
0.0	1.0 mm	11.82	5.13
0.5	710 µm	40.88	17.75
1.0	500 µm	124.51	54.05
1.5	355 µm	192.34	83.50
2.0	250 µm	221.23	96.04
2.5	180 µm	230.06	99.87
3.0	125 µm	230.27	99.96
3.5	90 µm	230.32	99.98
4.0	63 µm	230.34	99.99
	<63 µm	230.36	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.01	0.00
-1.5	2.4 mm	0.51	0.23
-1.0	2.0 mm	1.61	0.72
-0.5	1.4 mm	5.52	2.46
0.0	1.0 mm	19.76	8.80
0.5	710 µm	56.92	25.34
1.0	500 µm	133.42	59.40
1.5	355 µm	182.80	81.39
2.0	250 µm	213.91	95.24
2.5	180 µm	224.01	99.73
3.0	125 µm	224.56	99.98
3.5	90 µm	224.59	99.99
4.0	63 µm	224.59	99.99
	<63 µm	224.61	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 11

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	3.79	0.73
-1.5	2.4 mm	23.76	4.58
-1.0	2.0 mm	37.93	7.32
-0.5	1.4 mm	83.62	16.13
0.0	1.0 mm	151.27	29.19
0.5	710 µm	265.43	51.22
1.0	500 µm	406.36	78.41
1.5	355 µm	476.05	91.86
2.0	250 µm	505.58	97.55
2.5	180 µm	517.68	99.89
3.0	125 µm	518.18	99.98
3.5	90 µm	518.23	99.99
4.0	63 µm	518.26	100.00
	<63 µm		

Folk (1974) Texture Group: Granular coarse sand

Sample 12

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.91	0.21
-1.5	2.4 mm	9.11	2.11
-1.0	2.0 mm	14.89	3.44
-0.5	1.4 mm	37.29	8.62
0.0	1.0 mm	80.25	18.55
0.5	710 µm	173.76	40.16
1.0	500 µm	313.40	72.44
1.5	355 µm	390.78	90.33
2.0	250 µm	421.13	97.34
2.5	180 µm	432.12	99.88
3.0	125 µm	432.53	99.98
3.5	90 µm	432.59	99.99
4.0	63 µm	432.59	99.99
	<63 µm	432.63	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Table D8 Cumulative frequency data for bed material flux samples in Swift Creek for 2 March 1999
(Continued)

Sample 13			Sample 14			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	
-1.5	2.4 mm			-1.5	2.4 mm	
-1.0	2.0 mm	0.08	0.03	-1.0	2.0 mm	0.00 0.00
-0.5	1.4 mm	0.67	0.24	-0.5	1.4 mm	0.13 0.27
0.0	1.0 mm	4.57	1.66	0.0	1.0 mm	0.73 1.50
0.5	710 μm	26.56	9.65	0.5	710 μm	3.16 6.51
1.0	500 μm	122.46	44.51	1.0	500 μm	15.40 31.71
1.5	355 μm	216.55	78.71	1.5	355 μm	36.70 75.56
2.0	250 μm	269.46	97.94	2.0	250 μm	36.81 75.79
2.5	180 μm	274.95	99.94	2.5	180 μm	48.51 99.88
3.0	125 μm	275.10	99.99	3.0	125 μm	48.57 100.00
3.5	90 μm	275.10	99.99	3.5	90 μm	
4.0	63 μm	275.11	100.00	4.0	63 μm	
	<63 μm				<63 μm	
Folk (1974) Texture Group: Slightly granular medium sand			Folk (1974) Texture Group: Medium sand			

Table D9 Cumulative frequency data for bed material flux samples in Swift Creek for 9 March 1999

Date	9-Mar-99	No. of Samples = 12		1st Transect = 6		2nd Transect = 6	
Sample 1				Sample 3			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.91	3.02	-2.0	4.0 mm	4.01	1.44
-1.5	2.4 mm	1.59	5.27	-1.5	2.4 mm	21.46	7.73
-1.0	2.0 mm	1.94	6.43	-1.0	2.0 mm	31.48	11.34
-0.5	1.4 mm	3.54	11.74	-0.5	1.4 mm	58.37	21.03
0.0	1.0 mm	7.08	23.47	0.0	1.0 mm	96.82	34.89
0.5	710 µm	14.73	48.84	0.5	710 µm	147.68	53.21
1.0	500 µm	24.79	82.19	1.0	500 µm	211.46	76.19
1.5	355 µm	28.29	93.80	1.5	355 µm	246.92	88.97
2.0	250 µm	29.35	97.31	2.0	250 µm	269.21	97.00
2.5	180 µm	30.12	99.87	2.5	180 µm	276.85	99.75
3.0	125 µm	30.14	99.93	3.0	125 µm	277.31	99.92
3.5	90 µm	30.16	100.00	3.5	90 µm	277.40	99.95
4.0	63 µm			4.0	63 µm	277.47	99.98
	<63 µm				<63 µm	277.53	100.00
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Granular coarse sand			
Sample 2				Sample 4			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.73	0.60	-2.0	4.0 mm	1.02	0.41
-1.5	2.4 mm	4.24	1.48	-1.5	2.4 mm	10.94	4.44
-1.0	2.0 mm	5.50	1.92	-1.0	2.0 mm	17.34	7.04
-0.5	1.4 mm	10.78	3.75	-0.5	1.4 mm	34.80	14.13
0.0	1.0 mm	20.37	7.09	0.0	1.0 mm	65.33	26.53
0.5	710 µm	47.93	16.69	0.5	710 µm	116.74	47.41
1.0	500 µm	136.11	47.40	1.0	500 µm	188.74	76.65
1.5	355 µm	222.16	77.37	1.5	355 µm	221.96	90.14
2.0	250 µm	271.22	94.45	2.0	250 µm	239.61	97.31
2.5	180 µm	286.40	99.74	2.5	180 µm	246.06	99.93
3.0	125 µm	287.04	99.96	3.0	125 µm	246.15	99.97
3.5	90 µm	287.12	99.99	3.5	90 µm	246.18	99.98
4.0	63 µm	287.15	100.00	4.0	63 µm	246.20	99.99
	<63 µm				<63 µm	246.23	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Granular coarse sand			

Table D9 Cumulative frequency data for bed material flux samples in Swift Creek for 9 March 1999
(Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.16	0.07
-1.5	2.4 mm	0.68	0.31
-1.0	2.0 mm	1.08	0.49
-0.5	1.4 mm	3.45	1.58
0.0	1.0 mm	12.61	5.76
0.5	710 µm	40.65	18.56
1.0	500 µm	113.19	51.68
1.5	355 µm	172.30	78.67
2.0	250 µm	211.32	96.49
2.5	180 µm	218.66	99.84
3.0	125 µm	218.92	99.96
3.5	90 µm	218.96	99.98
4.0	63 µm	218.97	99.98
	<63 µm	219.01	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm	0.06	0.18
-0.5	1.4 mm	0.32	0.95
0.0	1.0 mm	1.08	3.20
0.5	710 µm	3.81	11.27
1.0	500 µm	14.29	42.28
1.5	355 µm	24.70	73.08
2.0	250 µm	30.70	90.83
2.5	180 µm	33.70	99.70
3.0	125 µm	33.79	99.97
3.5	90 µm	33.80	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.02	0.02
-1.5	2.4 mm	0.08	0.10
-1.0	2.0 mm	0.27	0.33
-0.5	1.4 mm	0.98	1.19
0.0	1.0 mm	3.03	3.67
0.5	710 µm	9.80	11.87
1.0	500 µm	34.42	41.69
1.5	355 µm	59.90	72.54
2.0	250 µm	74.01	89.63
2.5	180 µm	82.29	99.66
3.0	125 µm	82.50	99.92
3.5	90 µm	82.56	99.99
4.0	63 µm	82.56	99.99
	<63 µm	82.57	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.47	0.25
-1.5	2.4 mm	1.56	0.84
-1.0	2.0 mm	2.23	1.20
-0.5	1.4 mm	4.45	2.39
0.0	1.0 mm	11.91	6.40
0.5	710 µm	35.32	18.97
1.0	500 µm	98.39	52.85
1.5	355 µm	146.38	78.63
2.0	250 µm	178.86	96.08
2.5	180 µm	185.73	99.77
3.0	125 µm	186.05	99.94
3.5	90 µm	186.10	99.97
4.0	63 µm	186.14	99.99
	<63 µm	186.16	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Table D9 Cumulative frequency data for bed material flux samples in Swift Creek for 9 March 1999
(Continued)

Sample 9			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.58	0.49
-1.5	2.4 mm	5.78	1.79
-1.0	2.0 mm	9.26	2.86
-0.5	1.4 mm	18.88	5.84
0.0	1.0 mm	39.19	12.12
0.5	710 µm	82.54	25.53
1.0	500 µm	186.04	57.55
1.5	355 µm	262.345	81.16
2.0	250 µm	312.16	96.57
2.5	180 µm	322.30	99.70
3.0	125 µm	323.05	99.94
3.5	90 µm	323.18	99.98
4.0	63 µm	323.21	99.98
	<63 µm	323.26	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 10			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.66	1.01
-1.5	2.4 mm	7.50	4.54
-1.0	2.0 mm	11.88	7.19
-0.5	1.4 mm	22.21	13.45
0.0	1.0 mm	39.94	24.19
0.5	710 µm	68.49	41.48
1.0	500 µm	113.00	68.43
1.5	355 µm	140.80	85.27
2.0	250 µm	158.14	95.77
2.5	180 µm	164.73	99.76
3.0	125 µm	165.03	99.94
3.5	90 µm	165.05	99.95
4.0	63 µm	165.10	99.98
	<63 µm	165.13	100.00

Folk (1974) Texture Group: Granular coarse sand

Sample 11			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.75	0.29
-1.5	2.4 mm	4.56	1.74
-1.0	2.0 mm	7.36	2.82
-0.5	1.4 mm	14.87	5.69
0.0	1.0 mm	27.82	10.65
0.5	710 µm	57.14	21.86
1.0	500 µm	131.95	50.49
1.5	355 µm	204.31	78.18
2.0	250 µm	244.68	93.63
2.5	180 µm	260.56	99.70
3.0	125 µm	261.11	99.91
3.5	90 µm	261.24	99.96
4.0	63 µm	261.29	99.98
	<63 µm	261.34	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 12			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.08	0.44
-1.5	2.4 mm	0.24	1.33
-1.0	2.0 mm	0.38	2.11
-0.5	1.4 mm	0.97	5.39
0.0	1.0 mm	2.41	13.40
0.5	710 µm	5.61	31.18
1.0	500 µm	10.88	60.48
1.5	355 µm	14.57	80.99
2.0	250 µm	16.91	94.00
2.5	180 µm	17.94	99.72
3.0	125 µm	17.96	99.83
3.5	90 µm	17.96	99.83
4.0	63 µm	17.98	99.94
	<63 µm	17.99	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Table D10 Cumulative frequency data for bed material flux samples in Swift Creek for 18 March 1999

Date	18-Mar-99	No. of Samples = 12		1st Transect = 6		2nd Transect = 6	
Sample 1				Sample 3			
	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
	-2.0	4.0 mm	1.24 1.15	-2.0	4.0 mm	0.50 0.23	
	-1.5	2.4 mm	9.41 8.69	-1.5	2.4 mm	3.99 1.86	
	-1.0	2.0 mm	13.79 12.74	-1.0	2.0 mm	7.15 3.33	
	-0.5	1.4 mm	24.69 22.81	-0.5	1.4 mm	16.17 7.53	
	0.0	1.0 mm	40.20 37.13	0.0	1.0 mm	36.62 17.05	
	0.5	710 µm	61.13 56.47	0.5	710 µm	79.19 36.88	
	1.0	500 µm	88.44 81.69	1.0	500 µm	154.43 71.92	
	1.5	355 µm	102.55 94.73	1.5	355 µm	196.66 91.58	
	2.0	250 µm	107.12 98.95	2.0	250 µm	211.23 98.37	
	2.5	180 µm	108.19 99.94	2.5	180 µm	214.36 99.83	
	3.0	125 µm	108.24 99.98	3.0	125 µm	214.67 99.97	
	3.5	90 µm	108.24 99.98	3.5	90 µm	214.70 99.99	
	4.0	63 µm	108.25 99.99	4.0	63 µm	214.72 100.00	
		<63 µm	108.26 100.00		<63 µm		
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			
Sample 2				Sample 4			
	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
	-2.0	4.0 mm		-2.0	4.0 mm	2.19 0.42	
	-1.5	2.4 mm	0.29 0.20	-1.5	2.4 mm	11.80 2.27	
	-1.0	2.0 mm	0.84 0.57	-1.0	2.0 mm	19.48 3.75	
	-0.5	1.4 mm	2.80 1.90	-0.5	1.4 mm	45.34 8.74	
	0.0	1.0 mm	9.14 6.20	0.0	1.0 mm	106.37 20.49	
	0.5	710 µm	31.18 21.15	0.5	710 µm	289.77 55.83	
	1.0	500 µm	93.62 63.51	1.0	500 µm	386.22 74.41	
	1.5	355 µm	135.88 92.17	1.5	355 µm	468.80 90.33	
	2.0	250 µm	145.77 98.88	2.0	250 µm	511.22 98.50	
	2.5	180 µm	147.33 99.94	2.5	180 µm	517.68 99.74	
	3.0	125 µm	147.39 99.98	3.0	125 µm	518.67 99.93	
	3.5	90 µm	147.41 99.99	3.5	90 µm	518.85 99.97	
	4.0	63 µm	147.41 99.99	4.0	63 µm	518.92 99.98	
		<63 µm	147.42 100.00		<63 µm	519.01 100.00	
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table D10 Cumulative frequency data for bed material flux samples in Swift Creek for 18 March 1999
(Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.79	0.35
-1.5	2.4 mm	13.40	2.62
-1.0	2.0 mm	21.76	4.25
-0.5	1.4 mm	50.42	9.84
0.0	1.0 mm	113.11	22.08
0.5	710 µm	224.64	43.86
1.0	500 µm	375.20	73.25
1.5	355 µm	453.67	88.57
2.0	250 µm	494.20	96.48
2.5	180 µm	510.81	99.72
3.0	125 µm	512.02	99.96
3.5	90 µm	512.11	99.98
4.0	63 µm	512.17	99.99
	<63 µm	512.22	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.18	0.10
-1.5	2.4 mm	0.89	0.50
-1.0	2.0 mm	1.68	0.94
-0.5	1.4 mm	6.27	3.51
0.0	1.0 mm	23.18	12.96
0.5	710 µm	67.75	37.88
1.0	500 µm	136.49	76.31
1.5	355 µm	166.14	92.89
2.0	250 µm	176.46	98.66
2.5	180 µm	178.71	99.92
3.0	125 µm	178.83	99.98
3.5	90 µm	178.84	99.99
4.0	63 µm	178.86	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.57	0.05
-1.5	2.4 mm	4.02	0.36
-1.0	2.0 mm	7.35	0.66
-0.5	1.4 mm	26.85	2.41
0.0	1.0 mm	86.10	7.73
0.5	710 µm	275.97	24.78
1.0	500 µm	783.26	70.34
1.5	355 µm	1010.89	90.78
2.0	250 µm	1090.19	97.90
2.5	180 µm	1112.29	99.88
3.0	125 µm	1113.45	99.99
3.5	90 µm	1113.56	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.41	0.14
-1.5	2.4 mm	15.06	1.47
-1.0	2.0 mm	26.58	2.59
-0.5	1.4 mm	67.64	6.58
0.0	1.0 mm	157.97	15.37
0.5	710 µm	349.45	34.01
1.0	500 µm	724.33	70.50
1.5	355 µm	904.30	88.01
2.0	250 µm	1001.35	97.46
2.5	180 µm	1025.38	99.80
3.0	125 µm	1027.26	99.98
3.5	90 µm	1027.41	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Table D10 Cumulative frequency data for bed material flux samples in Swift Creek for 18 March 1999
(Continued)

Sample 9			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	3.78	0.61
-1.5	2.4 mm	11.20	1.80
-1.0	2.0 mm	17.70	2.85
-0.5	1.4 mm	39.67	6.38
0.0	1.0 mm	88.61	14.25
0.5	710 µm	206.05	33.14
1.0	500 µm	424.97	68.36
1.5	355 µm	544.13	87.52
2.0	250 µm	602.48	96.91
2.5	180 µm	620.31	99.78
3.0	125 µm	621.56	99.98
3.5	90 µm	621.65	99.99
4.0	63 µm	621.69	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 10			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	9.10	0.98
-1.5	2.4 mm	48.37	5.21
-1.0	2.0 mm	73.51	7.92
-0.5	1.4 mm	141.97	15.30
0.0	1.0 mm	237.73	25.61
0.5	710 µm	418.85	45.13
1.0	500 µm	728.03	78.44
1.5	355 µm	860.50	92.72
2.0	250 µm	907.39	97.77
2.5	180 µm	926.96	99.88
3.0	125 µm	927.94	99.98
3.5	90 µm	928.08	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Granular coarse sand

Sample 11			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.47	0.26
-1.5	2.4 mm	3.57	1.95
-1.0	2.0 mm	5.70	3.11
-0.5	1.4 mm	11.20	6.12
0.0	1.0 mm	22.96	12.54
0.5	710 µm	58.35	31.87
1.0	500 µm	132.15	72.18
1.5	355 µm	170.40	93.07
2.0	250 µm	179.90	98.26
2.5	180 µm	182.82	99.86
3.0	125 µm	182.97	99.94
3.5	90 µm	183.02	99.97
4.0	63 µm	183.06	99.99
	<63 µm	183.08	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 12			
Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.38	0.38
-1.5	2.4 mm	4.22	4.24
-1.0	2.0 mm	6.59	6.63
-0.5	1.4 mm	12.49	12.56
0.0	1.0 mm	22.27	22.39
0.5	710 µm	39.25	39.47
1.0	500 µm	70.72	71.11
1.5	355 µm	89.78	90.28
2.0	250 µm	97.44	97.98
2.5	180 µm	99.37	99.92
3.0	125 µm	99.43	99.98
3.5	90 µm	99.44	99.99
4.0	63 µm	99.44	99.99
	<63 µm	99.45	100.00

Folk (1974) Texture Group: Granular coarse sand

Table D11 Cumulative frequency data for bed material flux samples in Swift Creek for 23 March 1999

Date	23-Mar-99	No. of Samples = 12		1st Transect = 6	2nd Transect = 6	
Sample 1				Sample 3		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	5.91 1.00
-1.5	2.4 mm	0.13	0.04	-1.5	2.4 mm	47.10 8.00
-1.0	2.0 mm	0.24	0.07	-1.0	2.0 mm	71.31 12.11
-0.5	1.4 mm	0.97	0.28	-0.5	1.4 mm	135.78 23.05
0.0	1.0 mm	3.12	0.90	0.0	1.0 mm	213.66 36.27
0.5	710 µm	20.35	5.85	0.5	710 µm	322.98 54.83
1.0	500 µm	146.47	42.12	1.0	500 µm	472.79 80.26
1.5	355 µm	277.18	79.70	1.5	355 µm	554.68 94.16
2.0	250 µm	339.69	97.68	2.0	250 µm	582.22 98.84
2.5	180 µm	347.24	99.85	2.5	180 µm	588.55 99.91
3.0	125 µm	347.72	99.99	3.0	125 µm	588.90 99.97
3.5	90 µm	347.76	100.00	3.5	90 µm	588.98 99.99
4.0	63 µm			4.0	63 µm	589.04 100.00
	<63 µm				<63 µm	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand		
Sample 2				Sample 4		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	12.60	1.07	-2.0	4.0 mm	3.00 0.31
-1.5	2.4 mm	97.52	8.26	-1.5	2.4 mm	28.87 2.95
-1.0	2.0 mm	146.78	12.43	-1.0	2.0 mm	47.42 4.84
-0.5	1.4 mm	271.55	22.99	-0.5	1.4 mm	106.76 10.90
0.0	1.0 mm	456.89	38.68	0.0	1.0 mm	205.83 21.01
0.5	710 µm	712.92	60.36	0.5	710 µm	407.61 41.60
1.0	500 µm	999.39	84.61	1.0	500 µm	752.48 76.80
1.5	355 µm	1109.64	93.95	1.5	355 µm	902.01 92.06
2.0	250 µm	1165.60	98.69	2.0	250 µm	962.68 98.26
2.5	180 µm	1179.23	99.84	2.5	180 µm	978.57 99.88
3.0	125 µm	1180.67	99.96	3.0	125 µm	979.44 99.97
3.5	90 µm	1180.90	99.98	3.5	90 µm	979.64 99.99
4.0	63 µm	1181.02	99.99	4.0	63 µm	979.70 99.99
	<63 µm	1181.13	100.00		<63 µm	979.77 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand		

Table D11 Cumulative frequency data for bed material flux samples in Swift Creek for 23 March 1999
(Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.52	0.12
-1.5	2.4 mm	5.17	1.16
-1.0	2.0 mm	8.87	1.99
-0.5	1.4 mm	22.11	4.95
0.0	1.0 mm	55.65	12.46
0.5	710 µm	130.92	29.31
1.0	500 µm	281.30	62.99
1.5	355 µm	379.71	85.02
2.0	250 µm	424.63	95.08
2.5	180 µm	445.15	99.68
3.0	125 µm	446.38	99.95
3.5	90 µm	446.52	99.98
4.0	63 µm	446.57	99.99
	<63 µm	446.60	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.45	0.04
-1.5	2.4 mm	6.33	0.55
-1.0	2.0 mm	11.24	0.97
-0.5	1.4 mm	30.20	2.60
0.0	1.0 mm	80.68	6.96
0.5	710 µm	230.48	19.88
1.0	500 µm	729.55	62.92
1.5	355 µm	1032.94	89.09
2.0	250 µm	1135.73	97.95
2.5	180 µm	1157.99	99.87
3.0	125 µm	1159.30	99.98
3.5	90 µm	1159.44	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.62	0.11
-1.5	2.4 mm	6.47	1.17
-1.0	2.0 mm	11.99	2.16
-0.5	1.4 mm	32.11	5.79
0.0	1.0 mm	72.04	12.98
0.5	710 µm	121.92	21.97
1.0	500 µm	376.14	67.77
1.5	355 µm	499.00	89.90
2.0	250 µm	543.82	97.98
2.5	180 µm	554.34	99.87
3.0	125 µm	552.82	99.60
3.5	90 µm	554.95	99.98
4.0	63 µm	555.00	99.99
	<63 µm	555.05	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.39	0.08
-1.5	2.4 mm	6.35	1.29
-1.0	2.0 mm	11.26	2.29
-0.5	1.4 mm	29.12	5.91
0.0	1.0 mm	71.81	14.57
0.5	710 µm	164.14	33.31
1.0	500 µm	330.49	67.07
1.5	355 µm	424.99	86.25
2.0	250 µm	460.98	93.55
2.5	180 µm	488.10	99.05
3.0	125 µm	492.60	99.97
3.5	90 µm	492.70	99.99
4.0	63 µm	492.73	99.99
	<63 µm	492.77	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Table D11 Cumulative frequency data for bed material flux samples in Swift Creek for 23 March 1999
(Continued)

Sample 9				Sample 11			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.98	0.20	-2.0	4.0 mm	3.70	0.48
-1.5	2.4 mm	16.72	3.39	-1.5	2.4 mm	38.04	4.94
-1.0	2.0 mm	27.99	5.67	-1.0	2.0 mm	60.55	7.87
-0.5	1.4 mm	65.55	13.28	-0.5	1.4 mm	129.93	16.88
0.0	1.0 mm	137.54	27.87	0.0	1.0 mm	230.50	29.95
0.5	710 µm	250.58	50.78	0.5	710 µm	389.97	50.67
1.0	500 µm	389.26	78.88	1.0	500 µm	611.52	79.45
1.5	355 µm	453.42	91.88	1.5	355 µm	712.03	92.51
2.0	250 µm	486.02	98.49	2.0	250 µm	756.53	98.29
2.5	180 µm	492.51	99.81	2.5	180 µm	768.26	99.82
3.0	125 µm	493.30	99.97	3.0	125 µm	769.26	99.95
3.5	90 µm	493.38	99.98	3.5	90 µm	769.49	99.98
4.0	63 µm	493.42	99.99	4.0	63 µm	769.57	99.99
	<63 µm	493.47	100.00		<63 µm	769.66	100.00
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Granular coarse sand			
Sample 10				Sample 12			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	8.33	0.89	-2.0	4.0 mm		
-1.5	2.4 mm	76.86	8.19	-1.5	2.4 mm	0.05	0.09
-1.0	2.0 mm	120.52	12.84	-1.0	2.0 mm	0.08	0.14
-0.5	1.4 mm	231.26	24.63	-0.5	1.4 mm	0.18	0.32
0.0	1.0 mm	355.34	37.85	0.0	1.0 mm	0.65	1.14
0.5	710 µm	532.59	56.73	0.5	710 µm	2.54	4.45
1.0	500 µm	758.28	80.76	1.0	500 µm	16.54	28.96
1.5	355 µm	878.36	93.55	1.5	355 µm	40.92	71.65
2.0	250 µm	925.63	98.59	2.0	250 µm	54.99	96.29
2.5	180 µm	938.26	99.93	2.5	180 µm	56.99	99.79
3.0	125 µm	938.64	99.97	3.0	125 µm	57.09	99.96
3.5	90 µm	938.78	99.99	3.5	90 µm	57.09	99.96
4.0	63 µm	938.83	99.99	4.0	63 µm	57.09	99.96
	<63 µm	938.89	100.00		<63 µm	57.11	100.00
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table D12 Cumulative frequency data for bed material flux samples in Swift Creek for 30 March 1999

Date	30-Mar-99	No. of Samples = 12		1st Transect = 6	2nd Transect = 6	
Sample 1				Sample 3		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	3.54	1.25	-2.0	4.0 mm	2.54 1.33
-1.5	2.4 mm	10.76	3.79	-1.5	2.4 mm	7.29 3.83
-1.0	2.0 mm	16.25	5.72	-1.0	2.0 mm	9.82 5.16
-0.5	1.4 mm	31.95	11.25	-0.5	1.4 mm	16.27 8.54
0.0	1.0 mm	55.37	19.50	0.0	1.0 mm	24.56 12.90
0.5	710 µm	97.39	34.30	0.5	710 µm	39.22 20.60
1.0	500 µm	173.50	61.11	1.0	500 µm	69.27 36.38
1.5	355 µm	237.22	83.56	1.5	355 µm	109.67 57.60
2.0	250 µm	269.72	95.01	2.0	250 µm	159.45 83.74
2.5	180 µm	283.30	99.79	2.5	180 µm	187.99 98.73
3.0	125 µm	283.83	99.98	3.0	125 µm	190.05 99.81
3.5	90 µm	283.88	99.99	3.5	90 µm	190.26 99.92
4.0	63 µm	283.90	100.00	4.0	63 µm	190.32 99.95
	<63 µm				<63 µm	190.41 100.00
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Granular medium sand		
Sample 2				Sample 4		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	0.40	0.25	-2.0	4.0 mm	3.28 1.40
-1.5	2.4 mm	2.29	1.46	-1.5	2.4 mm	7.90 3.38
-1.0	2.0 mm	3.06	1.95	-1.0	2.0 mm	10.28 4.39
-0.5	1.4 mm	5.68	3.61	-0.5	1.4 mm	15.64 6.68
0.0	1.0 mm	10.17	6.47	0.0	1.0 mm	23.46 10.02
0.5	710 µm	18.95	12.05	0.5	710 µm	38.40 16.41
1.0	500 µm	41.32	26.27	1.0	500 µm	75.27 32.16
1.5	355 µm	76.71	48.77	1.5	355 µm	125.15 53.47
2.0	250 µm	132.51	84.25	2.0	250 µm	189.75 81.07
2.5	180 µm	154.71	98.36	2.5	180 µm	229.51 98.06
3.0	125 µm	157.14	99.90	3.0	125 µm	233.31 99.68
3.5	90 µm	157.24	99.97	3.5	90 µm	233.75 99.87
4.0	63 µm	157.26	99.98	4.0	63 µm	233.90 99.94
	<63 µm	157.29	100.00		<63 µm	234.05 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand		

Table D12 Cumulative frequency data for bed material flux samples in Swift Creek for 30 March 1999
(Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.35	0.10
-1.5	2.4 mm	3.72	1.07
-1.0	2.0 mm	6.17	1.77
-0.5	1.4 mm	13.79	3.95
0.0	1.0 mm	28.19	8.07
0.5	710 µm	62.65	17.94
1.0	500 µm	153.52	43.96
1.5	355 µm	240.66	68.91
2.0	250 µm	317.29	90.85
2.5	180 µm	345.77	99.01
3.0	125 µm	348.86	99.89
3.5	90 µm	349.05	99.95
4.0	63 µm	349.15	99.97
	<63 µm	349.24	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.11	0.05
-1.0	2.0 mm	0.48	0.22
-0.5	1.4 mm	1.91	0.86
0.0	1.0 mm	6.67	3.01
0.5	710 µm	24.77	11.17
1.0	500 µm	83.74	37.76
1.5	355 µm	151.67	68.39
2.0	250 µm	199.83	90.11
2.5	180 µm	220.37	99.37
3.0	125 µm	221.62	99.94
3.5	90 µm	221.71	99.98
4.0	63 µm	221.72	99.98
	<63 µm	221.76	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.08	0.07
-1.0	2.0 mm	0.22	0.19
-0.5	1.4 mm	0.94	0.82
0.0	1.0 mm	4.00	3.50
0.5	710 µm	15.51	13.56
1.0	500 µm	48.16	42.12
1.5	355 µm	80.59	70.48
2.0	250 µm	105.67	92.41
2.5	180 µm	113.96	99.66
3.0	125 µm	114.30	99.96
3.5	90 µm	114.31	99.97
4.0	63 µm	114.34	99.99
	<63 µm	114.35	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.27	0.20
-1.5	2.4 mm	1.10	0.80
-1.0	2.0 mm	1.85	1.34
-0.5	1.4 mm	3.99	2.90
0.0	1.0 mm	9.24	6.72
0.5	710 µm	20.94	15.22
1.0	500 µm	51.37	37.33
1.5	355 µm	88.99	64.67
2.0	250 µm	124.81	90.70
2.5	180 µm	136.42	99.14
3.0	125 µm	137.44	99.88
3.5	90 µm	137.52	99.94
4.0	63 µm	137.55	99.96
	<63 µm	137.60	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table D12 Cumulative frequency data for bed material flux samples in Swift Creek for 30 March 1999
(Continued)

Sample 9				Sample 11			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.49	0.22	-2.0	4.0 mm		
-1.5	2.4 mm	2.12	0.97	-1.5	2.4 mm	0.16	0.07
-1.0	2.0 mm	3.10	1.41	-1.0	2.0 mm	0.24	0.10
-0.5	1.4 mm	6.22	2.83	-0.5	1.4 mm	0.69	0.29
0.0	1.0 mm	11.56	5.27	0.0	1.0 mm	1.90	0.80
0.5	710 µm	24.13	10.99	0.5	710 µm	5.83	2.46
1.0	500 µm	57.92	26.38	1.0	500 µm	27.35	11.55
1.5	355 µm	107.85	49.13	1.5	355 µm	96.27	40.67
2.0	250 µm	169.53	77.22	2.0	250 µm	197.71	83.52
2.5	180 µm	215.84	98.31	2.5	180 µm	234.69	99.14
3.0	125 µm	219.28	99.88	3.0	125 µm	236.51	99.91
3.5	90 µm	219.48	99.97	3.5	90 µm	236.65	99.97
4.0	63 µm	219.51	99.99	4.0	63 µm	236.69	99.98
	<63 µm	219.54	100.00		<63 µm	236.73	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 10				Sample 12			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.84	0.68	-2.0	4.0 mm	0.73	0.71
-1.5	2.4 mm	8.93	3.31	-1.5	2.4 mm	3.13	3.03
-1.0	2.0 mm	12.52	4.64	-1.0	2.0 mm	4.64	4.49
-0.5	1.4 mm	23.07	8.56	-0.5	1.4 mm	9.60	9.30
0.0	1.0 mm	35.81	13.28	0.0	1.0 mm	18.81	18.22
0.5	710 µm	56.69	21.02	0.5	710 µm	34.00	32.93
1.0	500 µm	98.79	36.64	1.0	500 µm	60.19	58.30
1.5	355 µm	155.31	57.60	1.5	355 µm	80.77	78.24
2.0	250 µm	230.29	85.41	2.0	250 µm	96.04	93.03
2.5	180 µm	267.86	99.34	2.5	180 µm	102.70	99.48
3.0	125 µm	269.31	99.88	3.0	125 µm	103.15	99.91
3.5	90 µm	269.50	99.95	3.5	90 µm	103.19	99.95
4.0	63 µm	269.57	99.97	4.0	63 µm	103.21	99.97
	<63 µm	269.64	100.00		<63 µm	103.24	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table D13 Cumulative frequency data for bed material flux samples in Swift Creek for 6 April 1999

Date	6-Apr-99	No. of Samples = 14		1st Transect = 7	2nd Transect = 7
Sample 1				Sample 3	Sample dropped or misplaced
Phi		Mass (g)	Cumulative %	Phi	
-2.0	4.0 mm	5.60	0.45	-2.0	4.0 mm
-1.5	2.4 mm	18.69	1.50	-1.5	2.4 mm
-1.0	2.0 mm	33.22	2.67	-1.0	2.0 mm
-0.5	1.4 mm	78.64	6.31	-0.5	1.4 mm
0.0	1.0 mm	172.76	13.86	0.0	1.0 mm
0.5	710 µm	363.96	29.20	0.5	710 µm
1.0	500 µm	829.65	66.57	1.0	500 µm
1.5	355 µm	1113.33	89.33	1.5	355 µm
2.0	250 µm	1233.59	98.98	2.0	250 µm
2.5	180 µm	1245.44	99.93	2.5	180 µm
3.0	125 µm	1246.01	99.98	3.0	125 µm
3.5	90 µm	1246.11	99.99	3.5	90 µm
4.0	63 µm	1246.19	99.99	4.0	63 µm
	<63 µm	1246.27	100.00		<63 µm
Folk (1974) Texture Group: Slightly granular coarse sand					
Sample 2				Sample 4	
Phi		Mass (g)	Cumulative %	Phi	
-2.0	4.0 mm	2.30	0.70	-2.0	4.0 mm
-1.5	2.4 mm	9.35	2.83	-1.5	2.4 mm
-1.0	2.0 mm	15.35	4.64	-1.0	2.0 mm
-0.5	1.4 mm	35.37	10.69	-0.5	1.4 mm
0.0	1.0 mm	67.11	20.29	0.0	1.0 mm
0.5	710 µm	118.69	35.88	0.5	710 µm
1.0	500 µm	195.85	59.21	1.0	500 µm
1.5	355 µm	262.92	79.48	1.5	355 µm
2.0	250 µm	314.12	94.96	2.0	250 µm
2.5	180 µm	330.15	99.81	2.5	180 µm
3.0	125 µm	330.56	99.93	3.0	125 µm
3.5	90 µm	330.71	99.98	3.5	90 µm
4.0	63 µm	330.77	99.99	4.0	63 µm
	<63 µm	330.79	100.00		<63 µm
Folk (1974) Texture Group: Slightly granular coarse sand					
Folk (1974) Texture Group: Slightly granular coarse sand					

Table D13 Cumulative frequency data for bed material flux samples in Swift Creek for 6 April 1999
(Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	1.20	0.67
-1.0	2.0 mm	1.98	1.10
-0.5	1.4 mm	5.21	2.90
0.0	1.0 mm	13.43	7.48
0.5	710 µm	34.56	19.25
1.0	500 µm	88.17	49.11
1.5	355 µm	141.59	78.87
2.0	250 µm	173.79	96.81
2.5	180 µm	179.21	99.83
3.0	125 µm	179.50	99.99
3.5	90 µm	179.51	99.99
4.0	63 µm	179.52	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.11	0.12
-1.5	2.4 mm	10.26	1.14
-1.0	2.0 mm	18.29	2.02
-0.5	1.4 mm	46.13	5.10
0.0	1.0 mm	100.30	11.10
0.5	710 µm	230.62	25.52
1.0	500 µm	587.51	65.01
1.5	355 µm	807.71	89.38
2.0	250 µm	884.23	97.85
2.5	180 µm	903.07	99.93
3.0	125 µm	903.56	99.99
3.5	90 µm	903.59	99.99
4.0	63 µm	903.61	99.99
	<63 µm	903.66	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.12	0.03
-1.5	2.4 mm	0.15	0.04
-1.0	2.0 mm	0.15	0.04
-0.5	1.4 mm	0.55	0.14
0.0	1.0 mm	3.90	1.00
0.5	710 µm	30.16	7.74
1.0	500 µm	188.44	48.36
1.5	355 µm	327.23	83.97
2.0	250 µm	383.56	98.42
2.5	180 µm	389.40	99.92
3.0	125 µm	389.69	100.00
3.5	90 µm		
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.08	0.01
-1.0	2.0 mm	0.21	0.02
-0.5	1.4 mm	1.49	0.16
0.0	1.0 mm	7.10	0.76
0.5	710 µm	75.10	8.06
1.0	500 µm	493.54	52.99
1.5	355 µm	818.72	87.90
2.0	250 µm	919.95	98.77
2.5	180 µm	930.75	99.93
3.0	125 µm	931.35	99.99
3.5	90 µm	931.37	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Table D13 Cumulative frequency data for bed material flux samples in Swift Creek for 6 April 1999
(Continued)

Sample 9				Sample 11			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.31	0.13	-2.0	4.0 mm		
-1.5	2.4 mm	1.41	0.57	-1.5	2.4 mm	1.15	0.40
-1.0	2.0 mm	2.46	1.00	-1.0	2.0 mm	2.48	0.85
-0.5	1.4 mm	7.52	3.04	-0.5	1.4 mm	8.35	2.87
0.0	1.0 mm	19.36	7.83	0.0	1.0 mm	25.15	8.66
0.5	710 µm	49.98	20.22	0.5	710 µm	66.90	23.03
1.0	500 µm	50.21	20.32	1.0	500 µm	157.78	54.32
1.5	355 µm	127.50	51.59	1.5	355 µm	235.03	80.91
2.0	250 µm	199.65	80.79	2.0	250 µm	283.20	97.49
2.5	180 µm	236.49	95.69	2.5	180 µm	290.00	99.83
3.0	125 µm	246.89	99.90	3.0	125 µm	290.43	99.98
3.5	90 µm	247.08	99.98	3.5	90 µm	290.46	99.99
4.0	63 µm	247.12	100.00	4.0	63 µm	290.47	99.99
	<63 µm				<63 µm	290.49	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			
Sample 10				Sample 12			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.69	0.07	-2.0	4.0 mm		
-1.5	2.4 mm	5.80	0.60	-1.5	2.4 mm	1.27	0.55
-1.0	2.0 mm	11.13	1.16	-1.0	2.0 mm	2.83	1.22
-0.5	1.4 mm	29.24	3.04	-0.5	1.4 mm	8.38	3.61
0.0	1.0 mm	71.18	7.40	0.0	1.0 mm	19.16	8.25
0.5	710 µm	194.22	20.20	0.5	710 µm	45.78	19.72
1.0	500 µm	572.27	59.52	1.0	500 µm	110.28	47.50
1.5	355 µm	831.13	86.44	1.5	355 µm	182.15	78.46
2.0	250 µm	932.02	96.93	2.0	250 µm	223.54	96.28
2.5	180 µm	960.23	99.86	2.5	180 µm	231.88	99.88
3.0	125 µm	961.36	99.98	3.0	125 µm	232.11	99.97
3.5	90 µm	961.46	99.99	3.5	90 µm	232.14	99.99
4.0	63 µm	961.50	100.00	4.0	63 µm	232.15	99.99
	<63 µm				<63 µm	232.17	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table D13 Cumulative frequency data for bed material flux samples in Swift Creek for 6 April 1999
(Continued)

Sample 13				Sample 14			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.01	0.01	-2.0	4.0 mm		
-1.5	2.4 mm	0.26	0.17	-1.5	2.4 mm	0.55	0.31
-1.0	2.0 mm	0.33	0.21	-1.0	2.0 mm	1.37	0.77
-0.5	1.4 mm	0.86	0.55	-0.5	1.4 mm	5.93	3.35
0.0	1.0 mm	2.56	1.65	0.0	1.0 mm	20.99	11.85
0.5	710 µm	10.10	6.49	0.5	710 µm	55.29	31.21
1.0	500 µm	47.87	30.76	1.0	500 µm	114.48	64.63
1.5	355 µm	113.00	72.62	1.5	355 µm	157.57	88.96
2.0	250 µm	149.77	96.25	2.0	250 µm	175.86	99.28
2.5	180 µm	155.46	99.91	2.5	180 µm	177.04	99.95
3.0	125 µm	155.59	99.99	3.0	125 µm	177.09	99.98
3.5	90 µm	155.60	100.00	3.5	90 µm	177.13	100.00
4.0	63 µm			4.0	63 µm		
	<63 µm				<63 µm		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table D14 Cumulative frequency data for bed material flux samples in Upper Swift Creek for 12 April 1999

Date	12-Apr-99	No. of Samples = 14		1st Transect = 7		2nd Transect = 7	
Sample 1				Sample 3			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.25	0.16
-1.5	2.4 mm	0.03	0.01	-1.5	2.4 mm	1.25	0.80
-1.0	2.0 mm	0.09	0.03	-1.0	2.0 mm	2.27	1.46
-0.5	1.4 mm	0.65	0.24	-0.5	1.4 mm	5.77	3.71
0.0	1.0 mm	4.17	1.54	0.0	1.0 mm	12.73	8.18
0.5	710 µm	22.27	8.21	0.5	710 µm	28.76	18.47
1.0	500 µm	103.64	38.23	1.0	500 µm	70.27	45.14
1.5	355 µm	218.54	80.61	1.5	355 µm	117.81	75.67
2.0	250 µm	265.79	98.03	2.0	250 µm	146.44	94.06
2.5	180 µm	270.97	99.94	2.5	180 µm	155.27	99.74
3.0	125 µm	271.07	99.98	3.0	125 µm	155.64	99.97
3.5	90 µm	271.10	99.99	3.5	90 µm	155.67	99.99
4.0	63 µm	271.11	100.00	4.0	63 µm	155.67	99.99
	<63 µm				<63 µm	155.68	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			
Sample 2				Sample 4			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.07	0.43	-2.0	4.0 mm	0.13	0.08
-1.5	2.4 mm	13.38	5.38	-1.5	2.4 mm	1.34	0.83
-1.0	2.0 mm	21.74	8.75	-1.0	2.0 mm	2.44	1.51
-0.5	1.4 mm	45.19	18.19	-0.5	1.4 mm	6.58	4.08
0.0	1.0 mm	78.58	31.62	0.0	1.0 mm	13.64	8.45
0.5	710 µm	122.24	49.19	0.5	710 µm	28.97	17.94
1.0	500 µm	177.96	71.62	1.0	500 µm	73.13	45.29
1.5	355 µm	214.91	86.49	1.5	355 µm	123.99	76.79
2.0	250 µm	240.82	96.91	2.0	250 µm	152.89	94.69
2.5	180 µm	248.06	99.83	2.5	180 µm	160.95	99.68
3.0	125 µm	248.44	99.98	3.0	125 µm	161.41	99.97
3.5	90 µm	248.46	99.99	3.5	90 µm	161.44	99.99
4.0	63 µm	248.47	99.99	4.0	63 µm	161.45	99.99
	<63 µm	248.49	100.00		<63 µm	161.46	100.00
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table D14 Cumulative frequency data for bed material flux samples in Swift Creek for 12 April 1999
(Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.31	0.18
-1.5	2.4 mm	2.16	1.29
-1.0	2.0 mm	3.63	2.16
-0.5	1.4 mm	8.80	5.24
0.0	1.0 mm	19.13	11.38
0.5	710 µm	40.73	24.23
1.0	500 µm	85.43	50.82
1.5	355 µm	126.24	75.10
2.0	250 µm	158.14	94.08
2.5	180 µm	167.03	99.37
3.0	125 µm	168.04	99.97
3.5	90 µm	168.07	99.99
4.0	63 µm	168.08	99.99
	<63 µm	168.09	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.14	0.07
-1.0	2.0 mm	0.37	0.18
-0.5	1.4 mm	1.80	0.89
0.0	1.0 mm	7.59	3.74
0.5	710 µm	28.61	14.10
1.0	500 µm	94.09	46.36
1.5	355 µm	153.51	75.63
2.0	250 µm	194.36	95.76
2.5	180 µm	202.11	99.58
3.0	125 µm	202.92	99.98
3.5	90 µm	202.96	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7 Sample too small to sieve (13.40g)

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm		
-0.5	1.4 mm	0.00	0.00
0.0	1.0 mm	0.09	0.16
0.5	710 µm	1.41	2.57
1.0	500 µm	15.48	28.26
1.5	355 µm	37.75	68.91
2.0	250 µm	50.44	92.08
2.5	180 µm	54.62	99.71
3.0	125 µm	54.76	99.96
3.5	90 µm	54.78	100.00
4.0	63 µm		
	<63 µm		

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm		
-1.0	2.0 mm		
-0.5	1.4 mm	0.00	0.00
0.0	1.0 mm	0.09	0.16
0.5	710 µm	1.41	2.57
1.0	500 µm	15.48	28.26
1.5	355 µm	37.75	68.91
2.0	250 µm	50.44	92.08
2.5	180 µm	54.62	99.71
3.0	125 µm	54.76	99.96
3.5	90 µm	54.78	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Medium sand

Table D14 Cumulative frequency data for bed material flux samples in Swift Creek for 12 April 1999
(Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	2.97	1.10
-1.0	2.0 mm	5.56	2.06
-0.5	1.4 mm	14.86	5.49
0.0	1.0 mm	32.38	11.97
0.5	710 µm	71.32	26.36
1.0	500 µm	151.43	55.98
1.5	355 µm	220.54	81.52
2.0	250 µm	257.85	95.32
2.5	180 µm	270.10	99.84
3.0	125 µm	270.44	99.97
3.5	90 µm	270.49	99.99
4.0	63 µm	270.49	99.99
	<63 µm	270.52	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.12	0.05
-1.5	2.4 mm	1.14	0.51
-1.0	2.0 mm	2.30	1.03
-0.5	1.4 mm	5.84	2.62
0.0	1.0 mm	13.00	5.82
0.5	710 µm	31.73	14.21
1.0	500 µm	89.05	39.88
1.5	355 µm	159.07	71.24
2.0	250 µm	205.45	92.01
2.5	180 µm	221.92	99.39
3.0	125 µm	223.17	99.95
3.5	90 µm	223.24	99.98
4.0	63 µm	223.26	99.99
	<63 µm	223.29	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 11

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	2.45	1.15
-1.0	2.0 mm	4.36	2.05
-0.5	1.4 mm	13.00	6.12
0.0	1.0 mm	30.00	14.12
0.5	710 µm	63.55	29.90
1.0	500 µm	128.14	60.29
1.5	355 µm	175.67	82.66
2.0	250 µm	204.21	96.09
2.5	180 µm	211.66	99.59
3.0	125 µm	212.48	99.98
3.5	90 µm	212.51	99.99
4.0	63 µm	212.52	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 12

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	1.24	0.47
-1.5	2.4 mm	18.54	7.03
-1.0	2.0 mm	34.08	12.92
-0.5	1.4 mm	77.59	29.42
0.0	1.0 mm	122.72	46.53
0.5	710 µm	176.98	67.10
1.0	500 µm	232.60	88.19
1.5	355 µm	255.47	96.86
2.0	250 µm	261.74	99.24
2.5	180 µm	263.61	99.95
3.0	125 µm	263.71	99.98
3.5	90 µm	263.73	99.99
4.0	63 µm	263.74	100.00
	<63 µm		

Folk (1974) Texture Group: Granular coarse sand

Table D14 Cumulative frequency data for bed material flux samples in Swift Creek for 12 April 1999
(Continued)

Sample 13

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.96	0.32
-1.5	2.4 mm	10.28	3.47
-1.0	2.0 mm	17.55	5.92
-0.5	1.4 mm	42.46	14.33
0.0	1.0 mm	87.03	29.37
0.5	710 μ m	148.52	50.13
1.0	500 μ m	217.76	73.50
1.5	355 μ m	262.31	88.53
2.0	250 μ m	290.03	97.89
2.5	180 μ m	295.90	99.87
3.0	125 μ m	296.20	99.97
3.5	90 μ m	296.23	99.98
4.0	63 μ m	296.25	99.99
	<63 μ m	296.28	100.00

Folk (1974) Texture Group: Granular coarse sand

Sample 14

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.01	0.01
-1.5	2.4 mm	0.03	0.03
-1.0	2.0 mm	0.05	0.04
-0.5	1.4 mm	0.09	0.08
0.0	1.0 mm	0.28	0.24
0.5	710 μ m	1.91	1.61
1.0	500 μ m	20.87	17.57
1.5	355 μ m	71.61	60.30
2.0	250 μ m	114.59	96.49
2.5	180 μ m	118.63	99.89
3.0	125 μ m	118.74	99.98
3.5	90 μ m	118.75	99.99
4.0	63 μ m	118.76	100.00
	<63 μ m		

Folk (1974) Texture Group: Slightly granular medium sand

Table D15 Cumulative frequency data for bed material flux samples in Swift Creek for 20 April 1999

Date	20-Apr-99	No. of Samples = 12		1st Transect = 6	2nd Transect = 6	
Sample 1				Sample 3		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.32 0.04
-1.5	2.4 mm	0.48	0.21	-1.5	2.4 mm	3.32 0.43
-1.0	2.0 mm	0.97	0.43	-1.0	2.0 mm	7.25 0.95
-0.5	1.4 mm	2.74	1.23	-0.5	1.4 mm	24.32 3.18
0.0	1.0 mm	7.84	3.51	0.0	1.0 mm	62.34 8.15
0.5	710 µm	24.91	11.15	0.5	710 µm	168.46 22.04
1.0	500 µm	84.68	37.89	1.0	500 µm	420.58 55.02
1.5	355 µm	161.54	72.29	1.5	355 µm	616.78 80.68
2.0	250 µm	215.95	96.64	2.0	250 µm	732.37 95.80
2.5	180 µm	223.16	99.87	2.5	180 µm	763.35 99.85
3.0	125 µm	223.43	99.99	3.0	125 µm	764.35 99.98
3.5	90 µm	223.44	99.99	3.5	90 µm	764.40 99.99
4.0	63 µm	223.45	100.00	4.0	63 µm	764.43 99.99
	<63 µm				<63 µm	764.47 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand		
Sample 2				Sample 4		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.42 0.12
-1.5	2.4 mm	0.79	0.54	-1.5	2.4 mm	12.21 3.40
-1.0	2.0 mm	2.22	1.52	-1.0	2.0 mm	25.62 7.14
-0.5	1.4 mm	9.07	6.22	-0.5	1.4 mm	70.94 19.76
0.0	1.0 mm	21.79	14.94	0.0	1.0 mm	144.48 40.24
0.5	710 µm	45.15	30.96	0.5	710 µm	218.51 60.85
1.0	500 µm	86.41	59.26	1.0	500 µm	288.70 80.40
1.5	355 µm	119.96	82.27	1.5	355 µm	327.27 91.14
2.0	250 µm	138.87	95.23	2.0	250 µm	351.62 97.93
2.5	180 µm	145.42	99.73	2.5	180 µm	358.46 99.83
3.0	125 µm	145.79	99.98	3.0	125 µm	359.00 99.98
3.5	90 µm	145.81	99.99	3.5	90 µm	359.02 99.99
4.0	63 µm	145.82	100.00	4.0	63 µm	359.04 99.99
	<63 µm				<63 µm	359.07 100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Granular coarse sand		

Table D15 Cumulative frequency data for bed material flux samples in Swift Creek for 20 April 1999
(Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.45	0.04
-1.5	2.4 mm	13.77	1.11
-1.0	2.0 mm	28.90	2.33
-0.5	1.4 mm	89.94	7.26
0.0	1.0 mm	236.05	19.05
0.5	710 µm	546.77	44.13
1.0	500 µm	974.72	78.68
1.5	355 µm	1132.10	91.38
2.0	250 µm	1207.77	97.49
2.5	180 µm	1236.71	99.82
3.0	125 µm	1238.71	99.99
3.5	90 µm	1238.80	99.99
4.0	63 µm	1238.85	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.20	0.14
-1.0	2.0 mm	0.46	0.33
-0.5	1.4 mm	2.11	1.49
0.0	1.0 mm	8.01	5.67
0.5	710 µm	25.31	17.92
1.0	500 µm	64.41	45.61
1.5	355 µm	104.00	73.65
2.0	250 µm	134.65	95.35
2.5	180 µm	140.88	99.77
3.0	125 µm	141.17	99.97
3.5	90 µm	141.20	99.99
4.0	63 µm	141.20	99.99
	<63 µm	141.21	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.04	0.01
-1.5	2.4 mm	2.96	0.49
-1.0	2.0 mm	6.34	1.05
-0.5	1.4 mm	21.13	3.51
0.0	1.0 mm	59.07	9.81
0.5	710 µm	144.73	24.04
1.0	500 µm	338.10	56.16
1.5	355 µm	475.59	79.00
2.0	250 µm	575.86	95.66
2.5	180 µm	600.21	99.70
3.0	125 µm	601.86	99.98
3.5	90 µm	601.92	99.99
4.0	63 µm	601.95	99.99
	<63 µm	602.00	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	2.74	1.13
-1.0	2.0 mm	5.98	2.47
-0.5	1.4 mm	17.86	7.36
0.0	1.0 mm	39.25	16.18
0.5	710 µm	85.25	35.14
1.0	500 µm	163.91	67.57
1.5	355 µm	211.39	87.14
2.0	250 µm	234.04	96.48
2.5	180 µm	242.15	99.82
3.0	125 µm	242.53	99.98
3.5	90 µm	242.56	99.99
4.0	63 µm	242.57	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Table D15 Cumulative frequency data for bed material flux samples in Swift Creek for 20 April 1999
(Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.18	0.09
-1.5	2.4 mm	3.66	1.88
-1.0	2.0 mm	8.19	4.21
-0.5	1.4 mm	25.94	13.35
0.0	1.0 mm	63.51	32.68
0.5	710 µm	109.79	56.50
1.0	500 µm	155.34	79.94
1.5	355 µm	176.58	90.87
2.0	250 µm	189.97	97.76
2.5	180 µm	193.96	99.81
3.0	125 µm	194.27	99.97
3.5	90 µm	194.32	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.43	0.06
-1.5	2.4 mm	10.06	1.50
-1.0	2.0 mm	19.54	2.92
-0.5	1.4 mm	47.89	7.15
0.0	1.0 mm	99.27	14.83
0.5	710 µm	216.26	32.30
1.0	500 µm	409.83	61.22
1.5	355 µm	568.22	84.88
2.0	250 µm	643.94	96.19
2.5	180 µm	668.42	99.85
3.0	125 µm	669.34	99.98
3.5	90 µm	669.41	99.99
4.0	63 µm	669.44	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 11

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.13	0.08
-1.5	2.4 mm	0.22	0.14
-1.0	2.0 mm	0.45	0.28
-0.5	1.4 mm	1.74	1.09
0.0	1.0 mm	6.36	4.00
0.5	710 µm	22.14	13.93
1.0	500 µm	68.44	43.05
1.5	355 µm	121.39	76.36
2.0	250 µm	152.22	95.75
2.5	180 µm	158.86	99.92
3.0	125 µm	158.95	99.98
3.5	90 µm	158.98	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 12

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.12	0.12
-1.0	2.0 mm	0.21	0.22
-0.5	1.4 mm	0.58	0.60
0.0	1.0 mm	1.98	2.05
0.5	710 µm	7.24	7.50
1.0	500 µm	30.80	31.91
1.5	355 µm	70.70	73.25
2.0	250 µm	93.24	96.60
2.5	180 µm	96.47	99.95
3.0	125 µm	96.51	99.99
3.5	90 µm	96.51	99.99
4.0	63 µm	96.51	99.99
	<63 µm	96.52	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Table D16 Cumulative frequency data for bed material flux samples in Swift Creek for 27 April 1999

Date	27-Apr-99	No. of Samples =12		1st Transect = 6		2nd Transect = 6	
Sample 1				Sample 3			
	Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
	-2.0	4.0 mm			-2.0	4.0 mm	1.84 0.49
	-1.5	2.4 mm			-1.5	2.4 mm	21.74 5.76
	-1.0	2.0 mm	0.00 0.00		-1.0	2.0 mm	37.76 10.01
	-0.5	1.4 mm	0.08 0.11		-0.5	1.4 mm	87.60 23.21
	0.0	1.0 mm	0.20 0.28		0.0	1.0 mm	156.33 41.43
	0.5	710 µm	0.81 1.12		0.5	710 µm	231.29 61.29
	1.0	500 µm	6.55 9.06		1.0	500 µm	300.30 79.58
	1.5	355 µm	34.58 47.85		1.5	355 µm	337.29 89.38
	2.0	250 µm	66.18 91.59		2.0	250 µm	365.61 96.89
	2.5	180 µm	72.15 99.85		2.5	180 µm	376.33 99.73
	3.0	125 µm	72.24 99.97		3.0	125 µm	377.19 99.96
	3.5	90 µm	72.25 99.99		3.5	90 µm	377.26 99.98
	4.0	63 µm	72.26 100.00		4.0	63 µm	377.30 99.99
		<63 µm				<63 µm	377.35 100.00
Folk (1974) Texture Group: Medium sand				Folk (1974) Texture Group: Granular coarse sand			
Sample 2				Sample 4			
	Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
	-2.0	4.0 mm			-2.0	4.0 mm	0.52 0.24
	-1.5	2.4 mm	0.99 0.45		-1.5	2.4 mm	5.46 2.53
	-1.0	2.0 mm	2.09 0.95		-1.0	2.0 mm	10.34 4.80
	-0.5	1.4 mm	6.36 2.90		-0.5	1.4 mm	26.65 12.37
	0.0	1.0 mm	15.07 6.87		0.0	1.0 mm	53.31 24.74
	0.5	710 µm	36.05 16.44		0.5	710 µm	93.35 43.32
	1.0	500 µm	92.25 42.07		1.0	500 µm	150.72 69.94
	1.5	355 µm	166.64 76.00		1.5	355 µm	186.46 86.52
	2.0	250 µm	211.04 96.25		2.0	250 µm	208.67 96.83
	2.5	180 µm	219.12 99.93		2.5	180 µm	214.94 99.74
	3.0	125 µm	219.21 99.97		3.0	125 µm	215.46 99.98
	3.5	90 µm	219.24 99.99		3.5	90 µm	215.48 99.99
	4.0	63 µm	219.26 100.00		4.0	63 µm	215.48 99.99
		<63 µm				<63 µm	215.50 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table D16 Cumulative frequency data for bed material flux samples in Swift Creek for 27 April 1999
(Continued)

Sample 5			Sample 7				
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm	0.10	0.05	-2.0	4.0 mm	0.28	0.11
-1.5	2.4 mm	0.71	0.37	-1.5	2.4 mm	5.97	2.41
-1.0	2.0 mm	1.68	0.87	-1.0	2.0 mm	9.10	3.67
-0.5	1.4 mm	6.61	3.44	-0.5	1.4 mm	18.02	7.28
0.0	1.0 mm	16.06	8.36	0.0	1.0 mm	32.77	13.23
0.5	710 µm	35.83	18.65	0.5	710 µm	71.19	28.75
1.0	500 µm	83.17	43.29	1.0	500 µm	151.44	61.16
1.5	355 µm	134.07	69.78	1.5	355 µm	210.45	84.99
2.0	250 µm	175.24	91.21	2.0	250 µm	238.77	96.43
2.5	180 µm	191.39	99.61	2.5	180 µm	247.24	99.85
3.0	125 µm	192.07	99.97	3.0	125 µm	247.58	99.98
3.5	90 µm	192.10	99.98	3.5	90 µm	247.60	99.99
4.0	63 µm	192.11	99.99	4.0	63 µm	247.61	100.00
	<63 µm	192.13	100.00		<63 µm		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			
Sample 6			Sample 8				
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm	0.47	0.23	-2.0	4.0 mm	0.02	0.01
-1.5	2.4 mm	2.05	1.00	-1.5	2.4 mm	2.01	1.11
-1.0	2.0 mm	2.99	1.46	-1.0	2.0 mm	3.74	2.06
-0.5	1.4 mm	6.76	3.29	-0.5	1.4 mm	8.83	4.87
0.0	1.0 mm	15.01	7.32	0.0	1.0 mm	17.96	9.90
0.5	710 µm	39.82	19.41	0.5	710 µm	37.75	20.81
1.0	500 µm	105.86	51.60	1.0	500 µm	83.44	45.99
1.5	355 µm	166.24	81.03	1.5	355 µm	134.77	74.29
2.0	250 µm	197.48	96.26	2.0	250 µm	169.82	93.61
2.5	180 µm	204.92	99.88	2.5	180 µm	180.99	99.76
3.0	125 µm	205.13	99.99	3.0	125 µm	181.40	99.99
3.5	90 µm	205.15	100.00	3.5	90 µm	181.42	100.00
4.0	63 µm			4.0	63 µm		
	<63 µm				<63 µm		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table D16 Cumulative frequency data for bed material flux samples in Swift Creek for 27 April 1999
(Continued)

Sample 9

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.11	0.06
-1.5	2.4 mm	0.96	0.49
-1.0	2.0 mm	1.93	0.99
-0.5	1.4 mm	6.51	3.35
0.0	1.0 mm	18.78	9.68
0.5	710 µm	50.00	25.77
1.0	500 µm	113.87	58.68
1.5	355 µm	158.38	81.62
2.0	250 µm	186.05	95.88
2.5	180 µm	193.41	99.68
3.0	125 µm	194.00	99.98
3.5	90 µm	194.01	99.98
4.0	63 µm	194.03	99.99
	<63 µm	194.04	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 10

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.10	0.04
-1.5	2.4 mm	4.15	1.83
-1.0	2.0 mm	7.74	3.41
-0.5	1.4 mm	22.54	9.93
0.0	1.0 mm	45.88	20.21
0.5	710 µm	86.79	38.22
1.0	500 µm	149.90	66.01
1.5	355 µm	191.89	84.51
2.0	250 µm	215.99	95.12
2.5	180 µm	226.48	99.74
3.0	125 µm	226.99	99.96
3.5	90 µm	227.04	99.99
4.0	63 µm	227.05	99.99
	<63 µm	227.07	100.00

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 11

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.14	0.08
-1.0	2.0 mm	0.32	0.18
-0.5	1.4 mm	1.41	0.79
0.0	1.0 mm	5.36	3.02
0.5	710 µm	21.14	11.90
1.0	500 µm	72.62	40.86
1.5	355 µm	132.70	74.67
2.0	250 µm	168.61	94.88
2.5	180 µm	177.54	99.90
3.0	125 µm	177.69	99.99
3.5	90 µm	177.70	99.99
4.0	63 µm	177.71	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Sample 12 Sample too small to sieve (9.54g)

Table D17 Cumulative frequency data for bed material flux samples in Swift Creek for 4 May 1999

Date	4-May-99	No. of Samples =12	1st Transect = 6	2nd Transect = 6
Sample 1	Sample too small to sieve	(0.93g)	Sample 3	
			Phi	Mass (g) Cumulative %
			-2.0	4.0 mm 0.15 0.06
			-1.5	2.4 mm 1.33 0.49
			-1.0	2.0 mm 2.41 0.89
			-0.5	1.4 mm 7.62 2.81
			0.0	1.0 mm 23.15 8.52
			0.5	710 µm 66.40 24.44
			1.0	500 µm 157.56 58.00
			1.5	355 µm 222.84 82.03
			2.0	250 µm 259.74 95.62
			2.5	180 µm 271.19 99.83
			3.0	125 µm 271.60 99.98
			3.5	90 µm 271.64 100.00
			4.0	63 µm
				<63 µm
			Folk (1974) Texture Group: Slightly granular coarse sand	
Sample 2			Sample 4	
			Phi	Mass (g) Cumulative %
			-2.0	4.0 mm 0.31 0.16
			-1.5	2.4 mm 3.86 1.95
			-1.0	2.0 mm 5.89 2.97
			-0.5	1.4 mm 10.16 5.12
			0.0	1.0 mm 18.81 9.49
			0.5	710 µm 48.35 24.38
			1.0	500 µm 119.49 60.26
			1.5	355 µm 166.33 83.89
			2.0	250 µm 189.02 95.33
			2.5	180 µm 197.96 99.84
			3.0	125 µm 198.26 99.99
			3.5	90 µm 198.28 100.00
			4.0	63 µm
				<63 µm
			Folk (1974) Texture Group: Slightly granular coarse sand	
			Folk (1974) Texture Group: Slightly granular coarse sand	

Table D17 Cumulative frequency data for bed material flux samples in Swift Creek for 4 May 1999
(Continued)

Sample 5

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.01	0.02
-1.0	2.0 mm	0.05	0.09
-0.5	1.4 mm	0.58	1.10
0.0	1.0 mm	2.94	5.57
0.5	710 µm	10.17	19.28
1.0	500 µm	28.28	53.61
1.5	355 µm	42.90	81.33
2.0	250 µm	51.03	96.74
2.5	180 µm	52.67	99.85
3.0	125 µm	52.73	99.96
3.5	90 µm	52.75	100.00
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 6

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.02	0.01
-1.0	2.0 mm	0.05	0.03
-0.5	1.4 mm	0.23	0.16
0.0	1.0 mm	2.19	1.50
0.5	710 µm	16.05	10.99
1.0	500 µm	71.72	49.11
1.5	355 µm	117.21	80.25
2.0	250 µm	141.59	96.95
2.5	180 µm	145.90	99.90
3.0	125 µm	146.04	99.99
3.5	90 µm	146.04	99.99
4.0	63 µm	146.04	99.99
	<63 µm	146.05	100.00

Folk (1974) Texture Group: Slightly granular medium sand

Sample 7

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.19	0.05
-1.0	2.0 mm	0.73	0.21
-0.5	1.4 mm	3.33	0.94
0.0	1.0 mm	12.18	3.43
0.5	710 µm	48.79	13.75
1.0	500 µm	181.20	51.05
1.5	355 µm	277.86	78.29
2.0	250 µm	343.41	96.75
2.5	180 µm	354.33	99.83
3.0	125 µm	354.89	99.99
3.5	90 µm	354.90	99.99
4.0	63 µm	354.93	100.00
	<63 µm		

Folk (1974) Texture Group: Slightly granular coarse sand

Sample 8

Phi		Mass (g)	Cumulative %
-2.0	4.0 mm		
-1.5	2.4 mm	0.06	0.09
-1.0	2.0 mm	0.21	0.33
-0.5	1.4 mm	1.07	1.67
0.0	1.0 mm	3.60	5.63
0.5	710 µm	10.04	15.69
1.0	500 µm	29.41	45.97
1.5	355 µm	48.40	75.65
2.0	250 µm	59.91	93.64
2.5	180 µm	63.87	99.83
3.0	125 µm	63.98	100.00
3.5	90 µm		
4.0	63 µm		
	<63 µm		

Folk (1974) Texture Group: Slightly granular medium sand

Table D17 Cumulative frequency data for bed material flux samples in Swift Creek for 4 May 1999
(Continued)

Sample 9				Sample 11			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	0.27	0.09
-1.5	2.4 mm	1.89	1.81	-1.5	2.4 mm	11.54	3.92
-1.0	2.0 mm	4.20	4.02	-1.0	2.0 mm	19.39	6.58
-0.5	1.4 mm	10.36	9.92	-0.5	1.4 mm	41.70	14.15
0.0	1.0 mm	19.90	19.05	0.0	1.0 mm	41.71	14.15
0.5	710 µm	35.98	34.44	0.5	710 µm	78.71	26.71
1.0	500 µm	62.43	59.76	1.0	500 µm	133.00	45.13
1.5	355 µm	83.08	79.53	1.5	355 µm	206.30	70.00
2.0	250 µm	98.03	93.84	2.0	250 µm	252.28	85.60
2.5	180 µm	104.32	99.87	2.5	180 µm	284.62	96.57
3.0	125 µm	104.46	100.00	3.0	125 µm	294.07	99.78
3.5	90 µm			3.5	90 µm	294.72	100.00
4.0	63 µm			4.0	63 µm		
	<63 µm				<63 µm		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Granular medium sand			
Sample 10				Sample 12			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %
-2.0	4.0 mm	0.07	0.05	-2.0	4.0 mm		
-1.5	2.4 mm	0.77	0.53	-1.5	2.4 mm	0.61	4.37
-1.0	2.0 mm	1.83	1.26	-1.0	2.0 mm	1.19	8.52
-0.5	1.4 mm	5.41	3.71	-0.5	1.4 mm	3.05	21.83
0.0	1.0 mm	13.21	9.07	0.0	1.0 mm	5.44	38.94
0.5	710 µm	34.24	23.50	0.5	710 µm	8.05	57.62
1.0	500 µm	81.09	55.65	1.0	500 µm	10.48	75.02
1.5	355 µm	118.65	81.43	1.5	355 µm	11.96	85.61
2.0	250 µm	139.50	95.74	2.0	250 µm	13.22	94.63
2.5	180 µm	145.52	99.87	2.5	180 µm	13.92	99.64
3.0	125 µm	145.68	99.98	3.0	125 µm	13.95	99.86
3.5	90 µm	145.69	99.99	3.5	90 µm	13.96	99.93
4.0	63 µm	145.70	99.99	4.0	63 µm	13.96	99.93
	<63 µm	145.71	100.00		<63 µm	13.97	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Granular coarse sand			

Appendix E East Tributary cumulative frequency data bed-material load samples for the 1999-2000 wet season

This appendix contains the cumulative percentage values for the bed-material load samples collected at East Tributary for the 1999/2000 Wet season. All samples were dry sieved through a nest of sieves to a value of 4 phi (63 μm).

Table E1 Cumulative frequency data for bed material flux samples in East Tributary 3 December 1999

Date	3-Dec-99		No. of Samples = 8		1st Transect = 4		2nd Transect = 4		
Transect 1	Samples 1,2 3, & 4			Transect 2		Samples 5, 6, 7 & 8			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %			
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm			-1.5	2.4 mm				
-1.0	2.0 mm	24.88	2.52	-1.0	2.0 mm	25.42	3.04		
-0.5	1.4 mm	4.18	5.84	-0.5	1.4 mm	3.93	6.83		
0.0	1.0 mm	11.12	11.35	0.0	1.0 mm	11.07	13.73		
0.5	710 µm	23.84	21.44	0.5	710 µm	23.67	25.90		
1.0	500 µm	54.15	45.51	1.0	500 µm	48.93	50.30		
1.5	355 µm	89.33	73.44	1.5	355 µm	75.09	75.57		
2.0	250 µm	113.87	92.92	2.0	250 µm	94.90	94.71		
2.5	180 µm	122.43	99.71	2.5	180 µm	100.02	99.65		
3.0	125 µm	122.73	99.95	3.0	125 µm	100.36	99.98		
3.5	90 µm	122.76	99.98	3.5	90 µm	100.37	99.99		
4.0	63 µm	122.79	100.00	4.0	63 µm	100.38	100.00		
	<63 µm				<63 µm				
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand					

Table E2 Cumulative frequency data for bed material flux samples in East Tributary 4 January 2000

Date	4-Jan-00		No. of Samples = 8		1st Transect = 4		2nd Transect = 4		
Transect 1	Samples 1,2 3, & 4			Transect 2		Samples 5, 6, 7 & 8			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %			
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm			-1.5	2.4 mm				
-1.0	2.0 mm	4.28	0.79	-1.0	2.0 mm	0.53	0.86		
-0.5	1.4 mm	2.40	2.54	-0.5	1.4 mm	0.55	1.74		
0.0	1.0 mm	8.30	6.86	0.0	1.0 mm	1.87	3.85		
0.5	710 µm	23.13	17.72	0.5	710 µm	6.38	11.04		
1.0	500 µm	66.19	49.25	1.0	500 µm	23.56	38.45		
1.5	355 µm	108.40	80.16	1.5	355 µm	44.24	71.44		
2.0	250 µm	131.91	97.37	2.0	250 µm	58.14	93.62		
2.5	180 µm	135.28	99.84	2.5	180 µm	61.96	99.71		
3.0	125 µm	135.43	99.95	3.0	125 µm	62.12	99.97		
3.5	90 µm	135.45	99.96	3.5	90 µm	62.13	99.98		
4.0	63 µm	135.49	99.99	4.0	63 µm	62.14	100.00		
	<63 µm	135.50	100.00		<63 µm				
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand					

Table E3 Cumulative frequency data for bed material flux samples in East Tributary 11 January 2000

Date	11-Jan-00	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4	
Transect 1	Samples 1,2 3, & 4			Transect 2	Samples 5, 6, 7 & 8	
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
-2.0	4.0 mm	7.14	0.90	-2.0	4.0 mm	
-1.5	2.4 mm	29.07	3.66	-1.5	2.4 mm	
-1.0	2.0 mm	43.28	5.45	-1.0	2.0 mm	35.94 4.87
-0.5	1.4 mm	12.38	11.50	-0.5	1.4 mm	14.43 12.38
0.0	1.0 mm	36.61	23.35	0.0	1.0 mm	38.79 25.06
0.5	710 µm	74.78	42.01	0.5	710 µm	75.57 44.21
1.0	500 µm	131.53	69.75	1.0	500 µm	129.85 72.47
1.5	355 µm	169.36	88.24	1.5	355 µm	163.24 89.85
2.0	250 µm	188.21	97.46	2.0	250 µm	178.68 97.89
2.5	180 µm	192.99	99.79	2.5	180 µm	182.41 99.83
3.0	125 µm	193.34	99.97	3.0	125 µm	182.67 99.96
3.5	90 µm	193.37	99.98	3.5	90 µm	182.69 99.97
4.0	63 µm	193.39	99.99	4.0	63 µm	182.72 99.99
	<63 µm	193.41	100.00		<63 µm	182.74 100.00
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand		

Table E4 Cumulative frequency data for bed material flux samples in East Tributary 18 January 2000

Date	18-Jan-00	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4	
Transect 1	Samples 1,2 3, & 4			Transect 2	Samples 5, 6, 7 & 8	
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %
-2.0	4.0 mm			-2.0	4.0 mm	
-1.5	2.4 mm			-1.5	2.4 mm	
-1.0	2.0 mm	65.74	3.24	-1.0	2.0 mm	59.10 4.73
-0.5	1.4 mm	11.36	7.56	-0.5	1.4 mm	9.02 10.30
0.0	1.0 mm	32.06	15.44	0.0	1.0 mm	21.39 17.93
0.5	710 µm	74.30	31.52	0.5	710 µm	41.65 30.42
1.0	500 µm	157.16	63.05	1.0	500 µm	85.92 57.73
1.5	355 µm	221.12	87.39	1.5	355 µm	128.42 83.94
2.0	250 µm	247.88	97.58	2.0	250 µm	150.56 97.60
2.5	180 µm	254.02	99.91	2.5	180 µm	154.21 99.85
3.0	125 µm	254.18	99.97	3.0	125 µm	154.40 99.97
3.5	90 µm	254.22	99.99	3.5	90 µm	154.42 99.98
4.0	63 µm	254.23	99.99	4.0	63 µm	154.44 99.99
	<63 µm	254.25	100.00		<63 µm	154.45 100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand		

Table E5 Cumulative frequency data for bed material flux samples in East Tributary 25 January 2000

Date	25-Jan-00	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Transect 1	Samples 1,2 3, & 4			Transect 2	Samples 5, 6, 7 & 8		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm	2.40	0.57	-2.0	4.0 mm	10.04	1.49
-1.5	2.4 mm	28.86	6.87	-1.5	2.4 mm	74.49	11.05
-1.0	2.0 mm	46.04	10.96	-1.0	2.0 mm	104.07	15.44
-0.5	1.4 mm	21.89	21.23	-0.5	1.4 mm	21.29	27.77
0.0	1.0 mm	45.91	32.49	0.0	1.0 mm	44.19	41.03
0.5	710 µm	80.55	48.74	0.5	710 µm	69.21	55.52
1.0	500 µm	134.68	74.13	1.0	500 µm	105.93	76.78
1.5	355 µm	171.92	91.60	1.5	355 µm	132.47	92.15
2.0	250 µm	185.36	97.91	2.0	250 µm	143.46	98.51
2.5	180 µm	189.65	99.92	2.5	180 µm	145.81	99.87
3.0	125 µm	189.75	99.97	3.0	125 µm	145.97	99.97
3.5	90 µm	189.78	99.98	3.5	90 µm	146.00	99.98
4.0	63 µm	189.80	99.99	4.0	63 µm	146.02	99.99
	<63 µm	189.82	100.00		<63 µm	146.03	100.00
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Granular coarse sand			

Table E6 Cumulative frequency data for bed material flux samples in East Tributary 1 February 2000

Date	1-Feb-00	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Transect 1	Samples 1,2 3, & 4			Transect 2	Samples 5, 6, 7 & 8		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm			-1.5	2.4 mm		
-1.0	2.0 mm	1.51	1.33	-1.0	2.0 mm	2.68	4.44
-0.5	1.4 mm	1.27	2.44	-0.5	1.4 mm	2.15	8.00
0.0	1.0 mm	5.37	6.05	0.0	1.0 mm	4.68	12.19
0.5	710 µm	17.24	16.48	0.5	710 µm	8.53	18.57
1.0	500 µm	52.64	47.59	1.0	500 µm	23.73	43.74
1.5	355 µm	89.11	79.64	1.5	355 µm	44.69	78.45
2.0	250 µm	107.28	95.61	2.0	250 µm	55.11	95.71
2.5	180 µm	111.84	99.62	2.5	180 µm	57.52	99.70
3.0	125 µm	112.22	99.96	3.0	125 µm	57.68	99.97
3.5	90 µm	112.25	99.98	3.5	90 µm	57.69	99.98
4.0	63 µm	112.26	99.99	4.0	63 µm	57.70	100.00
	<63 µm	112.27	100.00		<63 µm		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table E7 Cumulative frequency data for bed material flux samples in East Tributary 8 February 2000

Date	8-Feb-00		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1,2 3, & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm			-1.5	2.4 mm			
-1.0	2.0 mm	11.77	2.49	-1.0	2.0 mm	32.74	4.66	
-0.5	1.4 mm	4.33	6.21	-0.5	1.4 mm	9.35	10.25	
0.0	1.0 mm	17.33	17.38	0.0	1.0 mm	29.28	22.18	
0.5	710 µm	42.22	38.76	0.5	710 µm	68.38	45.59	
1.0	500 µm	78.77	70.17	1.0	500 µm	119.95	76.45	
1.5	355 µm	101.81	89.96	1.5	355 µm	146.92	92.60	
2.0	250 µm	111.31	98.13	2.0	250 µm	156.30	98.21	
2.5	180 µm	113.30	99.84	2.5	180 µm	159.13	99.90	
3.0	125 µm	113.46	99.97	3.0	125 µm	159.24	99.97	
3.5	90 µm	113.48	99.99	3.5	90 µm	159.28	99.99	
4.0	63 µm	113.49	100.00	4.0	63 µm	159.29	100.00	
	<63 µm				<63 µm			
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table E8 Cumulative frequency data for bed material flux samples in East Tributary 15 February 2000

Date	15-Feb-00		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1,2 3, & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm			-1.5	2.4 mm			
-1.0	2.0 mm	21.64	1.20	-1.0	2.0 mm	11.87	1.25	
-0.5	1.4 mm	2.19	3.18	-0.5	1.4 mm	1.47	2.51	
0.0	1.0 mm	7.68	8.13	0.0	1.0 mm	5.50	5.98	
0.5	710 µm	21.93	20.98	0.5	710 µm	17.34	16.17	
1.0	500 µm	59.33	54.72	1.0	500 µm	52.08	46.06	
1.5	355 µm	91.45	83.69	1.5	355 µm	88.81	77.67	
2.0	250 µm	105.28	96.17	2.0	250 µm	109.81	95.74	
2.5	180 µm	109.36	99.85	2.5	180 µm	114.40	99.69	
3.0	125 µm	109.50	99.97	3.0	125 µm	114.70	99.95	
3.5	90 µm	109.52	99.99	3.5	90 µm	114.73	99.97	
4.0	63 µm	109.53	100.00	4.0	63 µm	114.75	99.99	
	<63 µm				<63 µm	114.76	100.00	
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table E9 Cumulative frequency data for bed material flux samples in East Tributary 22 February 2000

Date	22-Feb-00		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1,2 3, & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm			-1.5	2.4 mm			
-1.0	2.0 mm	2.96	2.96	-1.0	2.0 mm	2.09	0.94	
-0.5	1.4 mm	0.51	3.47	-0.5	1.4 mm	0.68	1.56	
0.0	1.0 mm	1.78	4.75	0.0	1.0 mm	2.51	3.23	
0.5	710 µm	6.17	9.15	0.5	710 µm	8.99	9.15	
1.0	500 µm	24.99	28.01	1.0	500 µm	35.63	33.45	
1.5	355 µm	55.10	58.19	1.5	355 µm	74.33	68.76	
2.0	250 µm	84.68	87.84	2.0	250 µm	98.99	91.26	
2.5	180 µm	96.03	99.22	2.5	180 µm	108.16	99.63	
3.0	125 µm	96.78	99.97	3.0	125 µm	108.50	99.94	
3.5	90 µm	96.79	99.98	3.5	90 µm	108.54	99.97	
4.0	63 µm	96.81	100.00	4.0	63 µm	108.56	99.99	
	<63 µm				<63 µm	108.57	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table E10 Cumulative frequency data for bed material flux samples in a depositional sample East Tributary 22 February

Date	22-Feb-00		Depositional Sample	
Depositional Sample	Phi	Mass (g)	Cumulative %	
	-2.0	4.0 mm		
	-1.5	2.4 mm		
	-1.0	2.0 mm	1.50 0.14	
	-0.5	1.4 mm	0.06 0.19	
	0.0	1.0 mm	0.64 0.63	
	0.5	710 µm	5.43 4.27	
	1.0	500 µm	37.92 28.98	
	1.5	355 µm	83.27 63.47	
	2.0	250 µm	117.00 89.12	
	2.5	180 µm	128.03 97.51	
	3.0	125 µm	130.93 99.72	
	3.5	90 µm	131.19 99.92	
	4.0	63 µm	131.27 99.98	
	<63 µm		131.30 100.00	
Folk (1974) Texture Group: Slightly granular medium sand				

Table E11 Cumulative frequency data for bed material flux samples in East Tributary 29 February 2000

Date	29-Feb-00		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1,2 3, & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm	
-1.5	2.4 mm		-1.5	2.4 mm		-1.5	2.4 mm	
-1.0	2.0 mm	20.13	1.32	-1.0	2.0 mm	15.64	1.01	
-0.5	1.4 mm	5.77	4.28	-0.5	1.4 mm	4.58	3.29	
0.0	1.0 mm	25.48	14.40	0.0	1.0 mm	17.57	9.76	
0.5	710 µm	63.16	33.76	0.5	710 µm	48.09	24.95	
1.0	500 µm	126.56	66.32	1.0	500 µm	112.46	57.00	
1.5	355 µm	166.08	86.62	1.5	355 µm	161.99	81.67	
2.0	250 µm	187.34	97.54	2.0	250 µm	192.28	96.75	
2.5	180 µm	191.82	99.84	2.5	180 µm	198.43	99.81	
3.0	125 µm	192.06	99.96	3.0	125 µm	198.73	99.96	
3.5	90 µm	192.09	99.98	3.5	90 µm	198.78	99.99	
4.0	63 µm	192.11	99.99	4.0	63 µm	198.80	100.00	
	<63 µm	192.13	100.00		<63 µm			

Folk (1974) Texture Group: Slightly granular coarse sand

Table E12 Cumulative frequency data for bed material flux samples in East Tributary 7 March 2000

Date	7-Mar-00		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1,2 3, & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm	
-1.5	2.4 mm		-1.5	2.4 mm		-1.5	2.4 mm	
-1.0	2.0 mm	18.99	2.53	-1.0	2.0 mm	6.31	0.73	
-0.5	1.4 mm	3.34	4.15	-0.5	1.4 mm	2.24	2.62	
0.0	1.0 mm	10.68	7.71	0.0	1.0 mm	8.57	7.98	
0.5	710 µm	27.66	15.95	0.5	710 µm	22.59	19.86	
1.0	500 µm	79.45	41.07	1.0	500 µm	56.77	48.80	
1.5	355 µm	146.66	73.68	1.5	355 µm	91.01	77.80	
2.0	250 µm	192.08	95.72	2.0	250 µm	112.51	96.00	
2.5	180 µm	200.47	99.79	2.5	180 µm	116.98	99.79	
3.0	125 µm	200.87	99.99	3.0	125 µm	117.21	99.98	
3.5	90 µm	200.88	99.99	3.5	90 µm	117.22	99.99	
4.0	63 µm	200.89	100.00	4.0	63 µm	117.23	100.00	
	<63 µm				<63 µm			

Folk (1974) Texture Group: Slightly granular medium sand

Table E13 Cumulative frequency data for bed material flux samples in East Tributary 14 March 2000

Date	14-Mar-00	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Transect 1	Samples 1,2 3, & 4			Transect 2	Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm			-1.5	2.4 mm		
-1.0	2.0 mm	111.09	4.32	-1.0	2.0 mm	67.29	3.19
-0.5	1.4 mm	11.17	10.89	-0.5	1.4 mm	2.46	4.92
0.0	1.0 mm	28.44	21.05	0.0	1.0 mm	5.81	7.28
0.5	710 µm	52.14	35.00	0.5	710 µm	14.74	13.56
1.0	500 µm	97.62	61.76	1.0	500 µm	56.68	43.06
1.5	355 µm	135.49	84.04	1.5	355 µm	105.32	77.27
2.0	250 µm	157.84	97.19	2.0	250 µm	132.12	96.12
2.5	180 µm	162.30	99.81	2.5	180 µm	137.28	99.75
3.0	125 µm	162.57	99.97	3.0	125 µm	137.61	99.99
3.5	90 µm	162.58	99.98	3.5	90 µm	137.62	99.99
4.0	63 µm	162.61	99.99	4.0	63 µm	137.63	100.00
	<63 µm	162.62	100.00		<63 µm		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table E14 Cumulative frequency data for bed material flux samples in East Tributary 21 March 2000

Date	21-Mar-00	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Transect 1	Samples 1,2 3, & 4			Transect 2	Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm			-1.5	2.4 mm		
-1.0	2.0 mm	15.36	3.19	-1.0	2.0 mm	18.53	3.50
-0.5	1.4 mm	2.31	5.16	-0.5	1.4 mm	3.26	6.03
0.0	1.0 mm	6.77	8.96	0.0	1.0 mm	9.00	10.48
0.5	710 µm	17.85	18.40	0.5	710 µm	22.29	20.78
1.0	500 µm	50.93	46.58	1.0	500 µm	58.92	49.19
1.5	355 µm	86.13	76.57	1.5	355 µm	95.89	77.86
2.0	250 µm	107.67	94.92	2.0	250 µm	117.98	94.99
2.5	180 µm	113.24	99.67	2.5	180 µm	123.97	99.64
3.0	125 µm	113.60	99.97	3.0	125 µm	124.38	99.95
3.5	90 µm	113.62	99.99	3.5	90 µm	124.40	99.97
4.0	63 µm	113.63	100.00	4.0	63 µm	124.42	99.98
	<63 µm				<63 µm	124.44	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table E15 Cumulative frequency data for bed material flux samples in East Tributary 28 March 2000

Date	28-Mar-00	No. of Samples = 4		Ist Transect = 4	One Transect Only
Transect 1	Samples 1,2 3, & 4				
Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm				
-1.5	2.4 mm				
-1.0	2.0 mm	0.67	0.37		
-0.5	1.4 mm	1.01	0.92		
0.0	1.0 mm	3.43	2.25		
0.5	710 µm	10.51	6.12		
1.0	500 µm	37.45	20.88		
1.5	355 µm	88.04	48.60		
2.0	250 µm	156.06	85.86		
2.5	180 µm	180.06	99.01		
3.0	125 µm	181.78	99.95		
3.5	90 µm	181.82	99.97		
4.0	63 µm	181.84	99.98		
	<63 µm	181.87	100.00		
Folk (1974) Texture Group: Slightly granular medium sand					

Table E16 Cumulative frequency data for bed material flux samples in East Tributary 11 April 2000

Date	11-Apr-00	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4	
Transect 1	Samples 1,2 3, & 4			Transect 2	Samples 5, 6, 7 & 8	
Phi		Mass (g)	Cumulative %	Phi	Mass (g) Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm	
-1.5	2.4 mm			-1.5	2.4 mm	
-1.0	2.0 mm	4.24	0.58	-1.0	2.0 mm	1.75 0.37
-0.5	1.4 mm	1.25	1.24	-0.5	1.4 mm	0.44 0.70
0.0	1.0 mm	4.38	2.92	0.0	1.0 mm	2.30 2.10
0.5	710 µm	12.96	7.50	0.5	710 µm	8.08 6.43
1.0	500 µm	54.16	29.52	1.0	500 µm	32.74 24.91
1.5	355 µm	119.69	64.54	1.5	355 µm	76.45 57.67
2.0	250 µm	173.51	93.31	2.0	250 µm	118.23 88.98
2.5	180 µm	185.16	99.54	2.5	180 µm	131.51 98.94
3.0	125 µm	185.94	99.95	3.0	125 µm	132.76 99.87
3.5	90 µm	185.99	99.98	3.5	90 µm	132.85 99.94
4.0	63 µm	186.02	99.99	4.0	63 µm	132.90 99.98
	<63 µm	186.03	100.00		<63 µm	132.93 100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand		

Table E17 Cumulative frequency data for bed material flux samples in East Tributary 20 April 2000

Date	20-Apr-00		No. of Samples = 4		1st Transect = 2		2nd Transect = 2	
Transect 1	Samples 1 & 2			Transect 2			Samples 3 & 4	
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm			-1.5	2.4 mm			
-1.0	2.0 mm	0.39	0.29	-1.0	2.0 mm	0.13	0.14	
-0.5	1.4 mm	0.80	0.87	-0.5	1.4 mm	0.65	0.85	
0.0	1.0 mm	4.34	3.47	0.0	1.0 mm	4.10	4.59	
0.5	710 µm	18.34	13.75	0.5	710 µm	15.67	17.14	
1.0	500 µm	62.59	46.23	1.0	500 µm	43.05	46.83	
1.5	355 µm	104.93	77.30	1.5	355 µm	69.79	75.84	
2.0	250 µm	130.25	95.89	2.0	250 µm	87.58	95.13	
2.5	180 µm	135.39	99.66	2.5	180 µm	91.76	99.66	
3.0	125 µm	135.78	99.95	3.0	125 µm	92.02	99.95	
3.5	90 µm	135.82	99.98	3.5	90 µm	92.04	99.97	
4.0	63 µm	135.84	99.99	4.0	63 µm	92.07	100.00	
	<63 µm	135.85	100.00		<63 µm			
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Appendix F Upper Swift Creek cumulative frequency data bed-material load samples for the 1999-2000 wet season

This appendix contains the cumulative percentage values for the bed-material load samples collected at Upper Swift Creek for the 1999/2000 Wet season. All samples were dry sieved through a nest of sieves to a value of 4 phi (63 μm).

Table F1 Cumulative frequency data for bed material flux samples in Upper Swift Creek 3 December 1999

Date	3-Dec-99			No. of Samples = 10	Ist Transect = 5	2nd Transect = 5		
Transect 1	Samples 1,2 3, 4 & 5				Transect 2	Samples 6, 7, 8, 9 & 10		
Phi		Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm				-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00		-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	19.09	1.90		-1.0	2.0 mm	54.21	3.20
-0.5	1.4 mm	4.19	5.18		-0.5	1.4 mm	8.62	7.48
0.0	1.0 mm	12.16	11.51		0.0	1.0 mm	27.07	16.63
0.5	710 µm	29.55	25.33		0.5	710 µm	63.71	34.79
1.0	500 µm	62.95	51.86		1.0	500 µm	118.79	62.08
1.5	355 µm	93.20	75.88		1.5	355 µm	158.17	81.60
2.0	250 µm	113.50	92.01		2.0	250 µm	186.36	95.57
2.5	180 µm	123.01	99.56		2.5	180 µm	194.44	99.57
3.0	125 µm	123.51	99.96		3.0	125 µm	195.22	99.96
3.5	90 µm	123.56	100.00		3.5	90 µm	195.28	99.99
4.0	63 µm				4.0	63 µm	195.30	100.00
Folk (1974) Texture Group: Slightly granular coarse sand					Folk (1974) Texture Group: Slightly granular coarse sand			

Table F2 Cumulative frequency data for bed material flux samples in Upper Swift Creek 4 January 2000

Date	4-Jan-00			No. of Samples = 10	Ist Transect = 5	2nd Transect = 5		
Transect 1	Both transects were accidentally combined and split. Data shown is all 10 samples							
Phi		Mass (g)	Cumulative %					
-2.0	4.0 mm				No sieved data for transect 2 due to accidental mixing of sample			
-1.5	2.4 mm	0.00	0.00					
-1.0	2.0 mm	13.52	3.40					
-0.5	1.4 mm	1.40	4.10					
0.0	1.0 mm	6.03	6.44					
0.5	710 µm	22.46	14.78					
1.0	500 µm	66.62	37.17					
1.5	355 µm	113.39	60.89					
2.0	250 µm	164.71	86.92					
2.5	180 µm	189.12	99.30					
3.0	125 µm	190.36	99.93					
3.5	90 µm	190.42	99.96					
4.0	63 µm	190.46	99.98					
	<63 µm	190.50	100.00					
Folk (1974) Texture Group: Slightly granular medium sand								

Table F3 Cumulative frequency data for bed material flux samples Upper Swift Creek 11 January 2000

Date	11-Jan-00		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1,2 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm	
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	0.00
-1.0	2.0 mm	12.83	0.80	-1.0	2.0 mm	12.99	1.20	
-0.5	1.4 mm	3.39	2.53	-0.5	1.4 mm	3.28	3.75	
0.0	1.0 mm	12.32	6.98	0.0	1.0 mm	11.82	10.27	
0.5	710 µm	34.98	18.28	0.5	710 µm	32.75	26.26	
1.0	500 µm	83.08	42.27	1.0	500 µm	68.52	53.58	
1.5	355 µm	133.20	67.27	1.5	355 µm	96.91	75.27	
2.0	250 µm	183.92	92.56	2.0	250 µm	121.57	94.10	
2.5	180 µm	198.30	99.74	2.5	180 µm	128.92	99.72	
3.0	125 µm	198.78	99.98	3.0	125 µm	129.25	99.97	
3.5	90 µm	198.80	99.99	3.5	90 µm	129.27	99.98	
4.0	63 µm	198.81	99.99	4.0	63 µm	129.28	99.99	
	<63 µm	198.83	100.00		<63 µm	129.29	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table F4 Cumulative frequency data for bed material flux samples in Upper Swift Creek 18 January 2000

Date	18-Jan-00		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1,2 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm	
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	0.00
-1.0	2.0 mm	37.72	2.60	-1.0	2.0 mm	39.15	3.10	
-0.5	1.4 mm	3.02	4.22	-0.5	1.4 mm	3.68	5.29	
0.0	1.0 mm	10.55	8.31	0.0	1.0 mm	14.36	11.73	
0.5	710 µm	30.04	18.89	0.5	710 µm	39.23	26.73	
1.0	500 µm	77.14	44.47	1.0	500 µm	80.83	51.83	
1.5	355 µm	129.13	72.70	1.5	355 µm	117.09	73.71	
2.0	250 µm	165.14	92.26	2.0	250 µm	148.89	92.89	
2.5	180 µm	178.89	99.73	2.5	180 µm	160.12	99.67	
3.0	125 µm	179.30	99.95	3.0	125 µm	160.58	99.95	
3.5	90 µm	179.37	99.99	3.5	90 µm	160.62	99.97	
4.0	63 µm	179.38	99.99	4.0	63 µm	160.65	99.99	
	<63 µm	179.39	100.00		<63 µm	160.67	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table F5 Cumulative frequency data for bed material flux samples in Upper Swift Creek 25 January 2000

Date	25-Jan-00			No. of Samples = 10			1st Transect = 5			2nd Transect = 5		
Transect 1	Samples 1,2 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10					
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %				
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm					
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	0.00				
-1.0	2.0 mm	76.21	2.00	-1.0	2.0 mm	16.86	0.90					
-0.5	1.4 mm	8.54	5.29	-0.5	1.4 mm	3.70	2.50					
0.0	1.0 mm	28.29	13.00	0.0	1.0 mm	13.94	6.87					
0.5	710 µm	66.23	27.80	0.5	710 µm	40.41	18.19					
1.0	500 µm	124.70	50.61	1.0	500 µm	99.14	43.29					
1.5	355 µm	177.77	71.31	1.5	355 µm	160.22	69.39					
2.0	250 µm	234.82	93.57	2.0	250 µm	217.00	93.66					
2.5	180 µm	250.35	99.63	2.5	180 µm	231.23	99.74					
3.0	125 µm	251.25	99.98	3.0	125 µm	231.80	99.98					
3.5	90 µm	251.28	99.99	3.5	90 µm	231.82	99.99					
4.0	63 µm	251.29	100.00	4.0	63 µm	231.83	100.00					
	<63 µm				<63 µm							
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand								

Table F6 Cumulative frequency data for bed material flux samples in Upper Swift Creek 1 February 2000

Date	1-Feb-00			No. of Samples = 10			1st Transect = 5			2nd Transect = 5		
Transect 1	Samples 1,2 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10					
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %				
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm					
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	0.00				
-1.0	2.0 mm	15.05	0.80	-1.0	2.0 mm	5.07	0.70					
-0.5	1.4 mm	2.31	2.64	-0.5	1.4 mm	1.65	1.52					
0.0	1.0 mm	8.97	7.92	0.0	1.0 mm	6.77	4.15					
0.5	710 µm	23.96	19.80	0.5	710 µm	22.53	12.27					
1.0	500 µm	53.92	43.54	1.0	500 µm	66.98	35.16					
1.5	355 µm	89.03	71.37	1.5	355 µm	128.97	67.08					
2.0	250 µm	118.82	94.98	2.0	250 µm	182.81	94.80					
2.5	180 µm	124.92	99.82	2.5	180 µm	192.62	99.86					
3.0	125 µm	125.12	99.98	3.0	125 µm	192.87	99.98					
3.5	90 µm	125.14	99.99	3.5	90 µm	192.89	99.99					
4.0	63 µm	125.15	100.00	4.0	63 µm	192.89	99.99					
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand								

Table F7 Cumulative frequency data for bed material flux samples in Upper Swift Creek 8 February 2000

Date	8-Feb-00		No. of Samples = 10		1st Transect = 5		2nd Transect = 5		
Transect 1	Samples 1,2 3, 4 & 5			Transect 2		Samples 6, 7, 8, 9 & 10			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %			
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	38.56	1.90	-1.0	2.0 mm	22.41	1.30		
-0.5	1.4 mm	3.18	4.66	-0.5	1.4 mm	2.42	3.27		
0.0	1.0 mm	11.13	11.49	0.0	1.0 mm	8.18	8.03		
0.5	710 µm	26.77	24.93	0.5	710 µm	21.64	19.16		
1.0	500 µm	54.84	49.04	1.0	500 µm	51.64	43.96		
1.5	355 µm	84.75	74.74	1.5	355 µm	87.92	73.95		
2.0	250 µm	109.18	95.73	2.0	250 µm	112.90	94.59		
2.5	180 µm	113.88	99.77	2.5	180 µm	119.31	99.89		
3.0	125 µm	114.13	99.98	3.0	125 µm	119.43	99.99		
3.5	90 µm	114.14	99.99	3.5	90 µm	119.44	100.00		
4.0	63 µm	114.15	100.00	4.0	63 µm				
	<63 µm				<63 µm				
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand					

Table F8 Cumulative frequency data for bed material flux samples in Upper Swift Creek 15 February 2000

Date	15-Feb-00		No. of Samples = 10		1st Transect = 5		2nd Transect = 5		
Transect 1	Samples 1,2 3, 4 & 5			Transect 2		Samples 6, 7, 8, 9 & 10			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %			
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	46.77	3.30	-1.0	2.0 mm	51.88	2.60		
-0.5	1.4 mm	7.80	7.41	-0.5	1.4 mm	3.45	5.44		
0.0	1.0 mm	23.71	15.82	0.0	1.0 mm	11.15	11.70		
0.5	710 µm	54.16	31.90	0.5	710 µm	27.31	24.82		
1.0	500 µm	102.66	57.51	1.0	500 µm	57.75	49.55		
1.5	355 µm	143.60	79.13	1.5	355 µm	87.93	74.06		
2.0	250 µm	175.27	95.86	2.0	250 µm	113.37	94.73		
2.5	180 µm	182.75	99.81	2.5	180 µm	119.57	99.76		
3.0	125 µm	183.08	99.98	3.0	125 µm	119.86	99.98		
3.5	90 µm	183.10	99.99	3.5	90 µm	119.88	100.00		
4.0	63 µm	183.11	100.00	4.0	63 µm				
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand					

Table F9 Cumulative frequency data for bed material flux samples Upper Swift Creek 22 February 2000

Date	22-Feb-00		No. of Samples = 10		1st Transect = 5		2nd Transect = 5		
Transect 1	Samples 1,2 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10		
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	0.00	
-1.0	2.0 mm	3.18	2.10	-1.0	2.0 mm	15.13	7.60		
-0.5	1.4 mm	1.38	2.98	-0.5	1.4 mm	4.22	9.76		
0.0	1.0 mm	5.11	5.42	0.0	1.0 mm	11.78	13.58		
0.5	710 µm	15.80	12.41	0.5	710 µm	27.41	21.48		
1.0	500 µm	42.53	29.88	1.0	500 µm	59.82	37.86		
1.5	355 µm	73.95	50.42	1.5	355 µm	96.67	56.49		
2.0	250 µm	122.57	82.21	2.0	250 µm	155.22	86.08		
2.5	180 µm	147.67	98.61	2.5	180 µm	180.76	98.99		
3.0	125 µm	149.66	99.92	3.0	125 µm	182.56	99.90		
3.5	90 µm	149.74	99.97	3.5	90 µm	182.68	99.96		
4.0	63 µm	149.77	99.99	4.0	63 µm	182.72	99.98		
	<63 µm	149.79	100.00		<63 µm	182.76	100.00		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Granular medium sand					

Table F10 Cumulative frequency data for bed material flux samples in a depositional sample Upper Swift Creek 22 February 2000

Date	22-Feb-00		Depositional Samples		Depositional Sample Right Bank		Depositional Sample Left Bank		
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm		
-1.5	2.4 mm		-1.5	2.4 mm		-1.5	2.4 mm		
-1.0	2.0 mm		-1.0	2.0 mm	0.00	0.10	-1.0	2.0 mm	
-0.5	1.4 mm	0.00	0.00	-0.5	1.4 mm	0.01	0.06	-0.5	1.4 mm
0.0	1.0 mm	0.03	0.03	0.0	1.0 mm	0.29	0.32	0.0	1.0 mm
0.5	710 µm	0.07	0.06	0.5	710 µm	2.68	2.49	0.5	710 µm
1.0	500 µm	0.73	0.68	1.0	500 µm	17.13	15.60	1.0	500 µm
1.5	355 µm	10.85	10.06	1.5	355 µm	40.94	37.20	1.5	355 µm
2.0	250 µm	56.21	52.10	2.0	250 µm	72.24	65.60	2.0	250 µm
2.5	180 µm	97.94	90.78	2.5	180 µm	100.70	91.42	2.5	180 µm
3.0	125 µm	105.74	98.01	3.0	125 µm	107.99	98.03	3.0	125 µm
3.5	90 µm	107.58	99.71	3.5	90 µm	109.85	99.72	3.5	90 µm
4.0	63 µm	107.83	99.94	4.0	63 µm	110.10	99.95	4.0	63 µm
	<63 µm	107.89	100.00		<63 µm	110.16	100.00		<63 µm
Folk (1974) Texture Group: Medium sand				Folk (1974) Texture Group: Slightly granular medium sand					

Table F11 Cumulative frequency data for bed material flux samples in Upper Swift Creek 29 February 2000

Date	29-Feb-00		No. of Samples = 12		1st Transect = 6		2nd Transect = 6	
Transect 1	Samples 1,2 3, 4, 5 & 6			Transect 2		Samples 7, 8, 9, 10, 11 & 12		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	78.41	3.90	-1.0	2.0 mm	34.88	4.10	
-0.5	1.4 mm	5.22	6.81	-0.5	1.4 mm	8.40	8.00	
0.0	1.0 mm	16.42	13.10	0.0	1.0 mm	26.61	16.41	
0.5	710 µm	39.78	26.21	0.5	710 µm	58.88	31.32	
1.0	500 µm	83.50	50.74	1.0	500 µm	111.95	55.84	
1.5	355 µm	126.29	74.75	1.5	355 µm	157.61	76.93	
2.0	250 µm	161.55	94.54	2.0	250 µm	195.80	94.58	
2.5	180 µm	170.80	99.73	2.5	180 µm	207.04	99.77	
3.0	125 µm	171.22	99.97	3.0	125 µm	207.48	99.97	
3.5	90 µm	171.25	99.98	3.5	90 µm	207.52	99.99	
4.0	63 µm	171.27	99.99	4.0	63 µm	207.53	100.00	
	<63 µm	171.28	100.00		<63 µm			
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table F12 Cumulative frequency data for bed material flux samples in Upper Swift Creek 7 March 2000

Date	7-Mar-00		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1,2 3, 4 & 5			Transect 2		Samples 6, 7, 8, 9 & 10		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	31.77	5.70	-1.0	2.0 mm	21.15	5.50	
-0.5	1.4 mm	0.64	6.18	-0.5	1.4 mm	0.98	5.97	
0.0	1.0 mm	1.73	6.95	0.0	1.0 mm	2.34	6.64	
0.5	710 µm	3.80	8.40	0.5	710 µm	5.01	7.97	
1.0	500 µm	11.04	13.48	1.0	500 µm	14.62	12.76	
1.5	355 µm	28.38	25.64	1.5	355 µm	37.23	24.02	
2.0	250 µm	87.13	66.84	2.0	250 µm	129.13	69.79	
2.5	180 µm	130.16	97.01	2.5	180 µm	184.26	97.24	
3.0	125 µm	134.21	99.85	3.0	125 µm	189.54	99.87	
3.5	90 µm	134.34	99.94	3.5	90 µm	189.69	99.95	
4.0	63 µm	134.38	99.97	4.0	63 µm	189.75	99.98	
	<63 µm	134.42	100.00		<63 µm	189.80	100.00	
Folk (1974) Texture Group: Granular medium sand				Folk (1974) Texture Group: Granular medium sand				

Table F13 Cumulative frequency data for bed material flux samples in Upper Swift Creek 14 March 2000

Date	14-Mar-00		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1,2 3, 4 & 5			Transect 2		Samples 6, 7, 8, 9 & 10		
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm	
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	0.00
-1.0	2.0 mm	21.74	1.60	-1.0	2.0 mm	35.03	1.10	
-0.5	1.4 mm	2.70	3.14	-0.5	1.4 mm	2.16	2.18	
0.0	1.0 mm	8.87	6.66	0.0	1.0 mm	7.42	4.77	
0.5	710 µm	25.55	16.16	0.5	710 µm	22.66	12.27	
1.0	500 µm	70.98	42.04	1.0	500 µm	64.32	32.76	
1.5	355 µm	122.40	71.33	1.5	355 µm	122.80	61.53	
2.0	250 µm	164.17	95.13	2.0	250 µm	185.82	92.53	
2.5	180 µm	172.25	99.73	2.5	180 µm	200.05	99.53	
3.0	125 µm	172.68	99.98	3.0	125 µm	200.95	99.98	
3.5	90 µm	172.71	99.99	3.5	90 µm	200.98	99.99	
4.0	63 µm	172.72	100.00	4.0	63 µm	200.99	100.00	
	<63 µm				<63 µm			
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table F14 Cumulative frequency data for bed material flux samples Upper Swift Creek 21 March 2000

Date	21-Mar-00		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1,2 3, 4 & 5			Transect 2		Samples 6, 7, 8, 9 & 10		
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm	
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	34.40	1.70	-1.0	2.0 mm	56.13	2.50	
-0.5	1.4 mm	3.83	4.56	-0.5	1.4 mm	6.00	6.40	
0.0	1.0 mm	11.55	10.30	0.0	1.0 mm	16.91	13.49	
0.5	710 µm	27.85	22.43	0.5	710 µm	36.82	26.44	
1.0	500 µm	61.53	47.50	1.0	500 µm	75.26	51.44	
1.5	355 µm	97.21	74.05	1.5	355 µm	116.67	78.38	
2.0	250 µm	126.52	95.86	2.0	250 µm	145.46	97.10	
2.5	180 µm	131.89	99.85	2.5	180 µm	149.77	99.90	
3.0	125 µm	132.07	99.99	3.0	125 µm	149.90	99.99	
3.5	90 µm	132.08	99.99	3.5	90 µm	149.91	99.99	
4.0	63 µm	132.08	99.99	4.0	63 µm	149.92	100.00	
	<63 µm	132.09	100.00		<63 µm			
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table F15 Cumulative frequency data for bed material flux samples in Upper Swift Creek 28 March 2000

Date	28-Mar-00			No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1,2 3 & 4			Transect 2		Samples 5, 6, 7 & 8			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	5.68	0.30	-1.0	2.0 mm	4.78	0.70		
-0.5	1.4 mm	1.57	1.22	-0.5	1.4 mm	2.75	2.21		
0.0	1.0 mm	5.99	3.69	0.0	1.0 mm	9.05	5.72		
0.5	710 µm	19.08	10.98	0.5	710 µm	25.61	14.94		
1.0	500 µm	57.19	32.20	1.0	500 µm	64.71	36.71		
1.5	355 µm	109.13	61.13	1.5	355 µm	113.49	63.87		
2.0	250 µm	164.98	92.24	2.0	250 µm	164.00	91.99		
2.5	180 µm	178.28	99.65	2.5	180 µm	177.91	99.73		
3.0	125 µm	178.88	99.98	3.0	125 µm	178.36	99.98		
3.5	90 µm	178.90	99.99	3.5	90 µm	178.38	99.99		
4.0	63 µm	178.91	100.00	4.0	63 µm	178.39	100.00		
	<63 µm				<63 µm				
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand					

Table F16 Cumulative frequency data for bed material flux samples in Upper Swift Creek 6 April 2000

Date	6-Apr-00			No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1,2 3, 4 & 5			Transect 2		Samples 6, 7, 8, 9 & 10			
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	7.71	0.60	-1.0	2.0 mm	9.71	0.90		
-0.5	1.4 mm	2.85	2.41	-0.5	1.4 mm	4.30	3.98		
0.0	1.0 mm	12.35	8.37	0.0	1.0 mm	14.32	11.13		
0.5	710 µm	34.70	22.39	0.5	710 µm	31.75	23.55		
1.0	500 µm	78.64	49.95	1.0	500 µm	61.03	44.43		
1.5	355 µm	120.17	76.00	1.5	355 µm	94.43	68.23		
2.0	250 µm	151.69	95.77	2.0	250 µm	129.75	93.41		
2.5	180 µm	158.16	99.82	2.5	180 µm	138.50	99.65		
3.0	125 µm	158.42	99.99	3.0	125 µm	138.96	99.98		
3.5	90 µm	158.43	99.99	3.5	90 µm	138.97	99.99		
4.0	63 µm	158.43	99.99	4.0	63 µm	138.98	99.99		
	<63 µm	158.44	100.00		<63 µm	138.99	100.00		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand					

Table F17 Cumulative frequency data for bed material flux samples in Upper Swift Creek 11 April 2000

Date	11-Apr-00		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1,2 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	38.40	3.80	-1.0	2.0 mm	78.66	3.70	
-0.5	1.4 mm	3.78	6.63	-0.5	1.4 mm	5.79	7.69	
0.0	1.0 mm	10.54	11.66	0.0	1.0 mm	15.87	14.72	
0.5	710 µm	23.69	21.45	0.5	710 µm	32.76	26.50	
1.0	500 µm	49.82	40.91	1.0	500 µm	60.67	45.95	
1.5	355 µm	81.49	64.49	1.5	355 µm	91.27	67.29	
2.0	250 µm	116.60	90.63	2.0	250 µm	125.01	90.81	
2.5	180 µm	128.33	99.36	2.5	180 µm	137.05	99.21	
3.0	125 µm	129.16	99.98	3.0	125 µm	138.12	99.95	
3.5	90 µm	129.17	99.99	3.5	90 µm	138.16	99.98	
4.0	63 µm	129.18	99.99	4.0	63 µm	138.18	99.99	
	<63 µm	129.19	100.00		<63 µm	138.19	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table F18 Cumulative frequency data for bed material flux samples in Upper Swift Creek 20 April 2000

Date	20-Apr-00		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1,2 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	10.92	0.80	-1.0	2.0 mm	8.46	0.60	
-0.5	1.4 mm	1.83	1.81	-0.5	1.4 mm	1.37	1.39	
0.0	1.0 mm	6.42	4.37	0.0	1.0 mm	5.63	3.75	
0.5	710 µm	19.27	11.54	0.5	710 µm	18.07	10.66	
1.0	500 µm	54.93	31.43	1.0	500 µm	54.29	30.76	
1.5	355 µm	111.36	62.92	1.5	355 µm	109.91	61.63	
2.0	250 µm	165.58	93.17	2.0	250 µm	167.34	93.50	
2.5	180 µm	177.36	99.74	2.5	180 µm	178.68	99.79	
3.0	125 µm	177.81	99.99	3.0	125 µm	179.02	99.98	
3.5	90 µm	177.82	99.99	3.5	90 µm	179.03	99.99	
4.0	63 µm	177.83	100.00	4.0	63 µm	179.04	99.99	
	<63 µm				<63 µm	179.05	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table F19 Cumulative frequency data for bed material flux samples in Upper Swift Creek 2 May 2000

Date	2-May-00		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1,2 3 & 4			Transect 2			Samples 5, 6, 7 & 8	
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	2.57	0.60	-1.0	2.0 mm	3.09	0.60	
-0.5	1.4 mm	1.86	2.19	-0.5	1.4 mm	2.45	2.50	
0.0	1.0 mm	7.29	6.96	0.0	1.0 mm	8.06	6.74	
0.5	710 µm	20.76	18.80	0.5	710 µm	21.10	16.61	
1.0	500 µm	52.27	46.48	1.0	500 µm	54.51	41.89	
1.5	355 µm	85.90	76.03	1.5	355 µm	95.13	72.62	
2.0	250 µm	108.68	96.05	2.0	250 µm	125.39	95.52	
2.5	180 µm	112.95	99.80	2.5	180 µm	131.03	99.79	
3.0	125 µm	113.16	99.98	3.0	125 µm	131.28	99.98	
3.5	90 µm	113.17	99.99	3.5	90 µm	131.29	99.98	
4.0	63 µm	113.17	99.99	4.0	63 µm	131.30	99.99	
	<63 µm	113.18	100.00		<63 µm	131.31	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table F20 Cumulative frequency data for bed material flux samples in Upper Swift Creek 16 May 2000

Date	16-May-00		No. of Samples = 4		1st Transect = 2		2nd Transect = 2	
Transect 1	Samples 1 & 2			Transect 2			Samples 3 & 4	
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	0.84	0.50	-1.0	2.0 mm	0.13	0.30	
-0.5	1.4 mm	3.56	2.74	-0.5	1.4 mm	0.81	2.04	
0.0	1.0 mm	12.10	8.06	0.0	1.0 mm	3.36	7.59	
0.5	710 µm	32.74	20.92	0.5	710 µm	8.68	19.15	
1.0	500 µm	74.31	46.83	1.0	500 µm	19.06	41.72	
1.5	355 µm	117.78	73.92	1.5	355 µm	31.95	69.74	
2.0	250 µm	151.21	94.75	2.0	250 µm	43.13	94.04	
2.5	180 µm	159.25	99.76	2.5	180 µm	45.75	99.74	
3.0	125 µm	159.62	99.99	3.0	125 µm	45.84	99.93	
3.5	90 µm	159.63	99.99	3.5	90 µm	45.85	99.96	
4.0	63 µm	159.64	100.00	4.0	63 µm	45.87	100.00	
	<63 µm				<63 µm			
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Appendix G Swift Creek cumulative frequency data bed-material load samples for the 1999–2000 wet season

This appendix contains the cumulative percentage values for the bed-material load samples collected at Swift Creek for the 1999/2000 Wet season. All samples were dry sieved through a nest of sieves to a value of 4 phi (63 μm).

Table G1 Cumulative frequency data for bed material flux samples in Swift Creek 3 December 1999

Date	3-Dec-99		No. of Samples = 12		1st Transect = 6		2nd Transect = 6	
Transect 1	Samples 1,2 3, 4, 5 & 6			Transect 2		Samples 7, 8, 9, 10, 11 & 12		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm	22.63	1.80	
-1.5	2.4 mm			-1.5	2.4 mm	68.93	5.49	
-1.0	2.0 mm	0.00	0.00	-1.0	2.0 mm	96.22	7.66	
-0.5	1.4 mm	9.62	5.15	-0.5	1.4 mm	8.00	12.98	
0.0	1.0 mm	23.69	12.67	0.0	1.0 mm	19.88	20.89	
0.5	710 µm	49.91	26.70	0.5	710 µm	41.88	35.52	
1.0	500 µm	106.21	56.82	1.0	500 µm	82.36	62.46	
1.5	355 µm	153.76	82.26	1.5	355 µm	115.77	84.68	
2.0	250 µm	181.60	97.15	2.0	250 µm	133.3	96.35	
2.5	180 µm	186.68	99.87	2.5	180 µm	138.64	99.90	
3.0	125 µm	186.87	99.97	3.0	125 µm	138.75	99.97	
3.5	90 µm	186.90	99.99	3.5	90 µm	138.77	99.99	
4.0	63 µm	186.92	100.00	4.0	63 µm	138.78	99.99	
	<63 µm				<63 µm	138.79	100.00	
Folk (1974) Texture Group: Coarse sand				Folk (1974) Texture Group: Granular coarse sand				

Table G2 Cumulative frequency data for bed material flux samples in Swift Creek 23 December 1999

Date	21-Dec-99		No. of Samples = 12		1st Transect = 6		2nd Transect = 6	
Transect 1	Samples 1,2 3, 4, 5 & 6			Transect 2		Samples 7, 8, 9, 10, 11 & 12		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %		
-4.0	16.0 mm	0.00	0.00	-2.0	4.0 mm			
-3.25	9.5 mm	38.70	5.77	-1.5	2.4 mm	0.00	0.00	
-2.0	4.0 mm	39.14	5.83	-1.0	2.0 mm	66.96	4.46	
-1.5	2.4 mm	43.00	6.41	-0.5	1.4 mm	6.83	8.23	
-1.0	2.0 mm	45.60	6.80	0.0	1.0 mm	20.41	15.73	
-0.5	1.4 mm	2.06	8.18	0.5	710 µm	46.09	29.91	
0.0	1.0 mm	6.58	11.22	1.0	500 µm	88.60	53.39	
0.5	710 µm	19.08	19.63	1.5	355 µm	125.40	73.71	
1.0	500 µm	52.37	42.02	2.0	250 µm	158.66	92.08	
1.5	355 µm	91.68	68.45	2.5	180 µm	171.91	99.39	
2.0	250 µm	124.55	90.56	3.0	125 µm	172.86	99.92	
2.5	180 µm	137.53	99.29	3.5	90 µm	172.97	99.98	
3.0	125 µm	138.43	99.89	4.0	63 µm	172.99	99.99	
3.5	90 µm	138.51	99.95		<63 µm	173.01	100.00	
4.0	63 µm	138.55	99.97	Folk (1974) Texture Group: Slightly granular coarse sand				
	<63 µm	138.59	100.00					
Folk (1974) Texture Group: Granular medium sand								

Table G3 Cumulative frequency data for bed material flux samples in Swift Creek 4 January 2000

Date	4-Jan-00	No. of Samples = 12		Ist Transect = 6	2nd Transect = 6		
Transect 1	Samples 1,2 3, 4, 5 & 6			Transect 2	Samples 7, 8, 9, 10, 11 & 12		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %	
	4.0 mm	23.67	1.07	-2.0	4.0 mm	17.31	1.08
-1.5	2.4 mm	76.85	3.47	-1.5	2.4 mm	72.05	4.49
-1.0	2.0 mm	135.58	6.13	-1.0	2.0 mm	102.85	6.41
-0.5	1.4 mm	9.51	9.73	-0.5	1.4 mm	5.30	9.39
0.0	1.0 mm	28.09	16.78	0.0	1.0 mm	16.45	15.66
0.5	710 µm	61.57	29.48	0.5	710 µm	39.48	28.61
1.0	500 µm	131.60	56.04	1.0	500 µm	90.21	57.15
1.5	355 µm	203.55	83.33	1.5	355 µm	137.09	83.51
2.0	250 µm	242.48	98.09	2.0	250 µm	162.10	97.58
2.5	180 µm	247.07	99.83	2.5	180 µm	165.99	99.77
3.0	125 µm	247.34	99.94	3.0	125 µm	166.26	99.92
3.5	90 µm	247.41	99.96	3.5	90 µm	166.29	99.94
4.0	63 µm	247.48	99.99	4.0	63 µm	166.32	99.96
	<63 µm	247.51	100.00		<63 µm	166.40	100.00
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Granular coarse sand			

Table G4 Cumulative frequency data for bed material flux samples in Swift Creek 11 January 2000

Date	11-Jan-00	No. of Samples = 12		Ist Transect = 6	2nd Transect =6		
Transect 1	Samples 1, 2, 3, 4, 5 & 6			Transect 2	Samples 7, 8, 9, 10, 11, & 12		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-3.25	9.5 mm	29.89	3.22
-1.5	2.4 mm	0.00	0.00	-2.0	4.0 mm	53.39	5.74
-1.0	2.0 mm	31.08	2.12	-1.5	2.4 mm	62.12	6.68
-0.5	1.4 mm	4.17	4.32	-1.0	2.0 mm	71.80	7.72
0.0	1.0 mm	12.84	8.89	-0.5	1.4 mm	6.20	10.51
0.5	710 µm	31.48	18.72	0.0	1.0 mm	17.90	15.76
1.0	500 µm	78.53	43.54	0.5	710 µm	41.34	26.28
1.5	355 µm	135.03	73.34	1.0	500 µm	95.17	50.45
2.0	250 µm	173.85	93.81	1.5	355 µm	152.41	76.15
2.5	180 µm	184.19	99.26	2.0	250 µm	192.74	94.26
3.0	125 µm	185.46	99.93	2.5	180 µm	204.29	99.44
3.5	90 µm	185.53	99.97	3.0	125 µm	205.36	99.92
4.0	63 µm	185.56	99.98	3.5	90 µm	205.46	99.97
	<63 µm	185.59	100.00	4.0	63 µm	205.50	99.99
					<63 µm	205.53	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Granular medium sand			

Table G5 Cumulative frequency data for bed material flux samples in Swift Creek 18 January 2000

Date	18-Jan-00		No. of Samples = 12		1st Transect = 6		2nd Transect = 6		
Transect 1	Samples 1,2, 3, 4, 5 & 6			Transect 2			Samples 7, 8, 9, 10, 11 & 12		
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm		-4.0	16.0 mm	0.00 0.00				
-1.5	2.4 mm	0.00 0.00	-3.25	9.5 mm	45.79 6.39				
-1.0	2.0 mm	109.74 4.89	-2.0	4.0 mm	46.80 6.53				
-0.5	1.4 mm	4.51 7.67	-1.5	2.4 mm	51.75 7.22				
0.0	1.0 mm	12.46 12.56	-1.0	2.0 mm	58.54 8.16				
0.5	710 µm	30.99 23.96	-0.5	1.4 mm	3.26 9.99				
1.0	500 µm	74.18 50.53	0.0	1.0 mm	10.63 14.11				
1.5	355 µm	121.39 79.57	0.5	710 µm	27.30 23.43				
2.0	250 µm	147.40 95.57	1.0	500 µm	68.45 46.44				
2.5	180 µm	154.38 99.86	1.5	355 µm	115.27 72.61				
3.0	125 µm	154.53 99.96	2.0	250 µm	153.33 93.89				
3.5	90 µm	154.57 99.98	2.5	180 µm	163.77 99.73				
4.0	63 µm	154.58 99.99	3.0	125 µm	164.15 99.94				
	<63 µm	154.60 100.00	3.5	90 µm	164.20 99.97				
Folk (1974) Texture Group: Slightly granular medium sand			4.0	63 µm	164.23 99.99				
				<63 µm	164.25 100.00				
			Folk (1974) Texture Group: Granular medium sand						

Table G6 Cumulative frequency data for bed material flux samples in Swift Creek 25 January 2000

Date	25-Jan-00		No. of Samples = 12		1st Transect = 6		2nd Transect = 6		
Transect 1	Samples 1,2, 3, 4, 5 & 6			Transect 2			Samples 7, 8, 9, 10, 11 & 12		
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm		-2.0	4.0 mm					
-1.5	2.4 mm	0.00 0.00	-1.5	2.4 mm	0.00 0.00				
-1.0	2.0 mm	162.38 3.62	-1.0	2.0 mm	136.58 2.62				
-0.5	1.4 mm	11.41 7.47	-0.5	1.4 mm	11.24 5.88				
0.0	1.0 mm	31.47 14.23	0.0	1.0 mm	33.52 12.34				
0.5	710 µm	69.66 27.10	0.5	710 µm	79.83 25.77				
1.0	500 µm	146.52 53.00	1.0	500 µm	181.56 55.26				
1.5	355 µm	217.93 77.07	1.5	355 µm	260.52 78.15				
2.0	250 µm	268.51 94.11	2.0	250 µm	318.87 95.07				
2.5	180 µm	283.90 99.30	2.5	180 µm	334.05 99.47				
3.0	125 µm	285.83 99.95	3.0	125 µm	335.74 99.96				
3.5	90 µm	285.93 99.98	3.5	90 µm	335.83 99.99				
4.0	63 µm	285.96 99.99	4.0	63 µm	335.87 100.00				
	<63 µm	285.98 100.00		<63 µm					
Folk (1974) Texture Group: Slightly granular coarse sand			Folk (1974) Texture Group: Slightly granular coarse sand						

Table G7 Cumulative frequency data for bed material flux samples in Swift Creek 1 February 2000

Date	1-Feb-00		No. of Samples = 12		1st Transect = 6		2nd Transect = 6		
Transect 1	Samples 1,2, 3, 4, 5 & 6			Transect 2			Samples 7, 8, 9, 10, 11 & 12		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	61.02	1.40	-1.0	2.0 mm	61.00	1.44		
-0.5	1.4 mm	9.17	4.75	-0.5	1.4 mm	8.60	4.44		
0.0	1.0 mm	27.92	11.58	0.0	1.0 mm	27.68	11.10		
0.5	710 µm	64.98	25.09	0.5	710 µm	66.55	24.65		
1.0	500 µm	140.66	52.67	1.0	500 µm	148.27	53.14		
1.5	355 µm	206.50	76.67	1.5	355 µm	216.60	76.97		
2.0	250 µm	259.11	95.84	2.0	250 µm	269.53	95.43		
2.5	180 µm	270.00	99.81	2.5	180 µm	282.02	99.78		
3.0	125 µm	270.48	99.99	3.0	125 µm	282.60	99.98		
3.5	90 µm	270.49	99.99	3.5	90 µm	282.63	99.99		
4.0	63 µm	270.50	100.00	4.0	63 µm	282.64	100.00		
	<63 µm				<63 µm				
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand					

Table G8 Cumulative frequency data for bed material flux samples in Swift Creek 8 February 2000

Date	8-Feb-00		No. of Samples = 12		1st Transect = 6		2nd Transect = 6		
Transect 1	Samples 1,2, 3, 4, 5, & 6			Transect 2			Samples 7, 8, 9, 10, 11, & 12		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	29.59	2.87	-1.0	2.0 mm	35.12	1.97		
-0.5	1.4 mm	4.62	6.57	-0.5	1.4 mm	3.66	3.69		
0.0	1.0 mm	13.30	13.53	0.0	1.0 mm	11.33	7.30		
0.5	710 µm	29.44	26.46	0.5	710 µm	28.8	15.52		
1.0	500 µm	57.74	49.15	1.0	500 µm	72.67	36.14		
1.5	355 µm	83.59	69.86	1.5	355 µm	128.39	62.34		
2.0	250 µm	108.65	89.95	2.0	250 µm	187.54	90.15		
2.5	180 µm	120.43	99.39	2.5	180 µm	207.21	99.40		
3.0	125 µm	121.15	99.97	3.0	125 µm	208.44	99.98		
3.5	90 µm	121.18	99.99	3.5	90 µm	208.47	99.99		
4.0	63 µm	121.19	100.00	4.0	63 µm	208.48	100.00		
	<63 µm				<63 µm				
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand					

Table G9 Cumulative frequency data for bed material flux samples in Swift Creek 15 February 2000

Date	15-Feb-00	No. of Samples = 10		Ist Transect = 5	2nd Transect = 5		
Transect 1	Samples 1,2, 3, 4 & 5			Transect 2	Samples 6, 7, 8, 9 & 10		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm	40.08	3.69	-2.0	4.0 mm		
-1.5	2.4 mm	50.92	4.68	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	62.71	5.77	-1.0	2.0 mm	72.31	3.62
-0.5	1.4 mm	3.79	8.71	-0.5	1.4 mm	2.59	5.58
0.0	1.0 mm	10.55	13.96	0.0	1.0 mm	6.77	8.74
0.5	710 µm	23.39	23.93	0.5	710 µm	15.85	15.60
1.0	500 µm	49.38	44.11	1.0	500 µm	39.55	33.52
1.5	355 µm	79.03	67.13	1.5	355 µm	74.20	59.71
2.0	250 µm	108.78	90.23	2.0	250 µm	112.44	88.61
2.5	180 µm	120.49	99.32	2.5	180 µm	126.14	98.96
3.0	125 µm	121.28	99.94	3.0	125 µm	127.44	99.95
3.5	90 µm	121.34	99.98	3.5	90 µm	127.5	99.99
4.0	63 µm	121.36	100.00	4.0	63 µm	127.51	100.00
	<63 µm				<63 µm		
Folk (1974) Texture Group: Granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table G10 Cumulative frequency data for bed material flux samples in Swift Creek 22 February 2000

Date	22-Feb-00	No. of Samples = 12		Ist Transect = 6	2nd Transect = 6		
Transect 1	Samples 1,2 3, 4, 5 & 6			Transect 2	Samples 7, 8, 9, 10, 11 & 12		
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	199.04	4.07	-1.0	2.0 mm	148.75	2.48
-0.5	1.4 mm	8.43	8.43	-0.5	1.4 mm	8.53	6.61
0.0	1.0 mm	26.09	17.57	0.0	1.0 mm	25.09	14.62
0.5	710 µm	58.26	34.22	0.5	710 µm	59.23	31.14
1.0	500 µm	117.05	64.64	1.0	500 µm	124.89	62.90
1.5	355 µm	161.92	87.86	1.5	355 µm	173.75	86.54
2.0	250 µm	182.28	98.40	2.0	250 µm	197.76	98.16
2.5	180 µm	185.14	99.88	2.5	180 µm	201.28	99.86
3.0	125 µm	185.34	99.98	3.0	125 µm	201.53	99.98
3.5	90 µm	185.37	99.99	3.5	90 µm	201.55	99.99
4.0	63 µm	185.38	100.00	4.0	63 µm	201.57	100.00
	<63 µm				<63 µm		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table G11 Cumulative frequency data for depositional sample in Left Bank Swift Creek 22 February 2000

Date	22-Feb-00		Deposition	
Deposition Sample LB				
Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	1.68	0.28	
-0.5	1.4 mm	0.09	0.34	
0.0	1.0 mm	0.22	0.43	
0.5	710 µm	0.40	0.56	
1.0	500 µm	0.84	0.86	
1.5	355 µm	3.57	2.75	
2.0	250 µm	53.78	37.55	
2.5	180 µm	113.67	79.06	
3.0	125 µm	139.22	96.76	
3.5	90 µm	143.02	99.40	
4.0	63 µm	143.77	99.92	
	<63 µm	143.89	100.00	

Folk (1974) Texture Group: Slightly granular fine sand

Table G12 Cumulative frequency data for bed material flux samples in Swift Creek 29 February 2000

Date	29-Feb-00		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2	Samples 6, 7, 8, 9 & 10			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	74.66	4.36	-1.0	2.0 mm	60.95	2.30	
-0.5	1.4 mm	8.10	7.97	-0.5	1.4 mm	3.56	4.33	
0.0	1.0 mm	21.32	13.86	0.0	1.0 mm	12.08	9.17	
0.5	710 µm	46.24	24.97	0.5	710 µm	31.69	20.32	
1.0	500 µm	103.92	50.67	1.0	500 µm	78.47	46.93	
1.5	355 µm	161.68	76.41	1.5	355 µm	127.25	74.67	
2.0	250 µm	203.83	95.19	2.0	250 µm	162.77	94.86	
2.5	180 µm	214.03	99.73	2.5	180 µm	171.23	99.68	
3.0	125 µm	214.55	99.96	3.0	125 µm	171.75	99.97	
3.5	90 µm	214.60	99.99	3.5	90 µm	171.78	99.99	
4.0	63 µm	214.61	99.99	4.0	63 µm	171.79	99.99	
	<63 µm	214.63	100.00		<63 µm	171.80	100.00	

Folk (1974) Texture Group: Slightly granular medium sand

Folk (1974) Texture Group: Slightly granular medium sand

Table G13 Cumulative frequency data for bed material flux samples in Swift Creek 7 March 2000

Date	7-Mar-00		No. of Samples = 12		1st Transect = 6		2nd Transect = 6		
Transect 1	Samples 1,2 3, 4, 5 & 6			Transect 2			Samples 7, 8, 9, 10, 11 & 12		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	204.56	2.23	-1.0	2.0 mm	200.52	3.16		
-0.5	1.4 mm	8.81	7.10	-0.5	1.4 mm	11.84	8.82		
0.0	1.0 mm	26.36	16.79	0.0	1.0 mm	35.61	20.17		
0.5	710 µm	58.45	34.50	0.5	710 µm	75.77	39.36		
1.0	500 µm	118.87	67.86	1.0	500 µm	143.31	71.63		
1.5	355 µm	160.23	90.70	1.5	355 µm	185.19	91.64		
2.0	250 µm	175.61	99.19	2.0	250 µm	201.12	99.25		
2.5	180 µm	176.98	99.95	2.5	180 µm	202.61	99.97		
3.0	125 µm	177.04	99.98	3.0	125 µm	202.66	99.99		
3.5	90 µm	177.06	99.99	3.5	90 µm	202.67	100.00		
4.0	63 µm	177.06	99.99	4.0	63 µm				
	<63 µm	177.07	100.00		<63 µm				
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand					

Table G14 Cumulative frequency data for bed material flux samples in Swift Creek 14 March 2000

Date	14-Mar-00		No. of Samples = 10		1st Transect = 5		2nd Transect = 5		
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	122.08	3.48	-1.0	2.0 mm	77.81	4.64		
-0.5	1.4 mm	8.31	7.34	-0.5	1.4 mm	10.05	9.34		
0.0	1.0 mm	23.52	14.42	0.0	1.0 mm	26.07	16.84		
0.5	710 µm	55.85	29.46	0.5	710 µm	55.20	30.46		
1.0	500 µm	121.73	60.11	1.0	500 µm	115.18	58.52		
1.5	355 µm	170.57	82.83	1.5	355 µm	164.12	81.41		
2.0	250 µm	199.54	96.31	2.0	250 µm	195.36	96.02		
2.5	180 µm	206.96	99.76	2.5	180 µm	203.5	99.83		
3.0	125 µm	207.43	99.98	3.0	125 µm	203.84	99.99		
3.5	90 µm	207.46	100.00	3.5	90 µm	203.86	100.00		
4.0	63 µm			4.0	63 µm				
	<63 µm				<63 µm				
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand					

Table G15 Cumulative frequency data for bed material flux samples in Swift Creek 21 March 2000

Date	21-Mar-00			No. of Samples = 10			1st Transect = 5			2nd Transect = 5		
Transect 1	Samples 1,2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10					
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %				
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm					
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00					
-1.0	2.0 mm	17.29	3.57	-1.0	2.0 mm	45.53	3.38					
-0.5	1.4 mm	5.25	7.62	-0.5	1.4 mm	8.42	8.15					
0.0	1.0 mm	14.44	14.71	0.0	1.0 mm	23.22	16.53					
0.5	710 µm	30.21	26.87	0.5	710 µm	48.42	30.79					
1.0	500 µm	58.86	48.96	1.0	500 µm	92.08	55.52					
1.5	355 µm	85.02	69.13	1.5	355 µm	126.55	75.03					
2.0	250 µm	112.51	90.33	2.0	250 µm	157.09	92.33					
2.5	180 µm	124.48	99.56	2.5	180 µm	169.79	99.52					
3.0	125 µm	125.00	99.96	3.0	125 µm	170.59	99.97					
3.5	90 µm	125.03	99.98	3.5	90 µm	170.61	99.98					
4.0	63 µm	125.04	99.99	4.0	63 µm	170.63	99.99					
	<63 µm	125.05	100.00		<63 µm	170.64	100.00					
Folk (1974) Texture Group: Slightly granular medium sand						Folk (1974) Texture Group: Slightly granular coarse sand						

Table G16 Cumulative frequency data for bed material flux samples in Swift Creek 28 March 2000

Date	28-Mar-00			No. of Samples = 8			1st Transect = 4			2nd Transect = 4		
Transect 1	Samples 1, 2, 3 & 4			Transect 2			Samples 5, 6, 7 & 8					
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %				
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm					
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00					
-1.0	2.0 mm	49.40	2.89	-1.0	2.0 mm	63.85	2.49					
-0.5	1.4 mm	9.73	7.19	-0.5	1.4 mm	5.90	5.93					
0.0	1.0 mm	28.50	15.49	0.0	1.0 mm	19.41	13.80					
0.5	710 µm	62.79	30.65	0.5	710 µm	47.81	30.37					
1.0	500 µm	129.65	60.22	1.0	500 µm	102.39	62.20					
1.5	355 µm	184.31	84.38	1.5	355 µm	143.08	85.93					
2.0	250 µm	213.25	97.18	2.0	250 µm	163.01	97.55					
2.5	180 µm	219.11	99.77	2.5	180 µm	166.86	99.80					
3.0	125 µm	219.59	99.98	3.0	125 µm	167.19	99.99					
3.5	90 µm	219.61	99.99	3.5	90 µm	167.20	99.99					
4.0	63 µm	219.62	100.00	4.0	63 µm	167.21	100.00					
	<63 µm				<63 µm							
Folk (1974) Texture Group: Slightly granular coarse sand						Folk (1974) Texture Group: Slightly granular coarse sand						

Table G17 Cumulative frequency data for bed material flux samples in Swift Creek 6 April 2000

Date	6-Apr-00		No. of Samples = 12		1st Transect = 6		2nd Transect = 6		
Transect 1	Samples 1, 2, 3, 4, 5 & 6			Transect 2			Samples 7, 8, 9, 10, 11 & 12		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	50.36	1.62	-1.0	2.0 mm	19.81	1.00		
-0.5	1.4 mm	7.54	5.32	-0.5	1.4 mm	3.03	3.20		
0.0	1.0 mm	26.47	14.63	0.0	1.0 mm	10.64	8.73		
0.5	710 µm	62.29	32.24	0.5	710 µm	29.69	22.57		
1.0	500 µm	121.86	61.53	1.0	500 µm	70.81	52.45		
1.5	355 µm	164.09	82.29	1.5	355 µm	107.73	79.28		
2.0	250 µm	192.72	96.36	2.0	250 µm	131.19	96.32		
2.5	180 µm	199.78	99.83	2.5	180 µm	136.06	99.86		
3.0	125 µm	200.10	99.99	3.0	125 µm	136.23	99.99		
3.5	90 µm	200.11	100.00	3.5	90 µm	136.24	99.99		
4.0	63 µm			4.0	63 µm	136.25	100.00		
	<63 µm				<63 µm				
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand					

Table G18 Cumulative frequency data for bed material flux samples in Swift Creek 11 April 2000

Date	11-Apr-00		No. of Samples = 8		1st Transect = 4		2nd Transect = 4		
Transect 1	Samples 1, 2, 3 & 4			Transect 2			Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	16.62	2.17	-1.0	2.0 mm	26.58	1.49		
-0.5	1.4 mm	3.66	4.03	-0.5	1.4 mm	1.64	2.37		
0.0	1.0 mm	10.90	7.71	0.0	1.0 mm	5.96	4.68		
0.5	710 µm	28.57	16.69	0.5	710 µm	20.19	12.30		
1.0	500 µm	78.14	41.90	1.0	500 µm	66.11	36.87		
1.5	355 µm	140.84	73.78	1.5	355 µm	130.2	71.17		
2.0	250 µm	185.07	96.27	2.0	250 µm	176.59	95.99		
2.5	180 µm	192.15	99.87	2.5	180 µm	183.78	99.84		
3.0	125 µm	192.36	99.97	3.0	125 µm	184.03	99.97		
3.5	90 µm	192.38	99.98	3.5	90 µm	184.07	99.99		
4.0	63 µm	192.40	99.99	4.0	63 µm	184.07	99.99		
	<63 µm	192.41	100.00		<63 µm	184.08	100.00		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand					

Table G19 Cumulative frequency data for bed material flux samples in Swift Creek 20 April 2000

Date	20-Apr-00		No. of Samples = 12		1st Transect = 6		2nd Transect = 6		
Transect 1	Samples 1, 2, 3, 4, 5 & 6			Transect 2			Samples 7, 8, 9, 10, 11 & 12		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	116.99	3.13	-1.0	2.0 mm	22.65	1.50		
-0.5	1.4 mm	7.95	7.05	-0.5	1.4 mm	7.03	5.25		
0.0	1.0 mm	22.24	14.09	0.0	1.0 mm	22.28	13.40		
0.5	710 µm	48.52	27.05	0.5	710 µm	55.33	31.06		
1.0	500 µm	105.23	55.02	1.0	500 µm	120.68	65.97		
1.5	355 µm	155.99	80.05	1.5	355 µm	159.49	86.70		
2.0	250 µm	189.17	96.41	2.0	250 µm	180.04	97.68		
2.5	180 µm	196.16	99.86	2.5	180 µm	184.23	99.92		
3.0	125 µm	196.41	99.98	3.0	125 µm	184.36	99.99		
3.5	90 µm	196.42	99.99	3.5	90 µm	184.37	99.99		
4.0	63 µm	196.44	100.00	4.0	63 µm	184.38	100.00		
	<63 µm				<63 µm				
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand					

Table G20 Cumulative frequency data for bed material flux samples in Swift Creek 2 May 2000

Date	2-May-00		No. of Samples = 10		1st Transect = 5		2nd Transect = 5		
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	33.52	1.87	-1.0	2.0 mm	15.22	1.37		
-0.5	1.4 mm	7.48	5.83	-0.5	1.4 mm	5.17	4.90		
0.0	1.0 mm	23.18	14.14	0.0	1.0 mm	15.95	12.24		
0.5	710 µm	52.04	29.42	0.5	710 µm	37.55	26.97		
1.0	500 µm	101.63	55.66	1.0	500 µm	79.11	55.30		
1.5	355 µm	142.67	77.38	1.5	355 µm	114.14	79.18		
2.0	250 µm	174.68	94.33	2.0	250 µm	138.05	95.47		
2.5	180 µm	184.71	99.63	2.5	180 µm	144.32	99.75		
3.0	125 µm	185.37	99.98	3.0	125 µm	144.67	99.99		
3.5	90 µm	185.38	99.99	3.5	90 µm	144.68	99.99		
4.0	63 µm	185.39	99.99	4.0	63 µm	144.69	100.00		
	<63 µm	185.40	100.00		<63 µm				
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand					

Table G21 Cumulative frequency data for bed material flux samples in Swift Creek 16 May 2000

Date	16-May-00		No. of Samples = 8		1st Transect = 4		2nd Transect = 4		
Transect 1	Samples 1,2 ,3 & 4			Transect 2			Samples 5, 6, 7 & 8		
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	0.00	
-1.0	2.0 mm	0.57	0.46	-1.0	2.0 mm	4.57	0.92		
-0.5	1.4 mm	1.18	1.42	-0.5	1.4 mm	3.32	3.36		
0.0	1.0 mm	4.74	4.32	0.0	1.0 mm	10.05	8.31		
0.5	710 µm	15.57	13.13	0.5	710 µm	25	19.31		
1.0	500 µm	45.46	37.45	1.0	500 µm	59.82	44.92		
1.5	355 µm	82.83	67.85	1.5	355 µm	97.32	72.50		
2.0	250 µm	115.25	94.23	2.0	250 µm	128.29	95.28		
2.5	180 µm	122.04	99.76	2.5	180 µm	134.41	99.79		
3.0	125 µm	122.32	99.98	3.0	125 µm	134.68	99.99		
3.5	90 µm	122.33	99.99	3.5	90 µm	134.69	99.99		
4.0	63 µm	122.34	100.00	4.0	63 µm	134.69	99.99		
	<63 µm				<63 µm	134.7	100.00		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand					

Appendix H East Tributary cumulative frequency data bed-material load samples for the 2000–2001 wet season

This appendix contains the cumulative percentage values for the bed-material load samples collected at East Tributary for the 2000/2001 Wet season. All samples were dry sieved through a nest of sieves to a value of 4 phi (63 μm).

Table H1 Cumulative frequency data for bed material flux samples in East Tributary 4 December 2000

Date	4-Dec-00		No. of Samples = 8		1st Transect = 4		2nd Transect = 4		
Transect 1	Samples 1, 2, 3, & 4			Transect 2		Samples 5, 6, 7 & 8			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %			
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	24.06	5.90	-1.0	2.0 mm	11.21	5.14		
-0.5	1.4 mm	10.11	10.85	-0.5	1.4 mm	4.75	9.54		
0.0	1.0 mm	24.30	17.79	0.0	1.0 mm	10.75	15.11		
0.5	710 µm	45.91	28.36	0.5	710 µm	21.8	25.36		
1.0	500 µm	92.15	50.98	1.0	500 µm	47.62	49.31		
1.5	355 µm	138.25	73.54	1.5	355 µm	75.80	75.45		
2.0	250 µm	178.92	93.43	2.0	250 µm	94.59	92.88		
2.5	180 µm	191.56	99.62	2.5	180 µm	102.03	99.78		
3.0	125 µm	192.22	99.94	3.0	125 µm	102.2	99.94		
3.5	90 µm	192.27	99.97	3.5	90 µm	102.24	99.97		
4.0	63 µm	192.30	99.98	4.0	63 µm	102.25	99.98		
	<63 µm	192.34	100.00		<63 µm	102.27	100.00		
Folk (1974) Texture Group: Granular medium sand				Folk (1974) Texture Group: Granular medium sand					

Table H2 Cumulative frequency data for bed material flux samples in East Tributary 9 January 2001

Date	9-Jan-01		No. of Samples = 8		1st Transect = 4		2nd Transect = 4		
Transect 1	Samples 1, 2, 3, & 4			Transect 2		Samples 5, 6, 7 & 8			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %			
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	113.68	5.08	-1.0	2.0 mm	59.06	2.31		
-0.5	1.4 mm	5.45	8.91	-0.5	1.4 mm	1.52	3.94		
0.0	1.0 mm	14.41	15.19	0.0	1.0 mm	4.37	6.99		
0.5	710 µm	28.25	24.90	0.5	710 µm	10.30	13.34		
1.0	500 µm	59.66	46.94	1.0	500 µm	30.48	34.96		
1.5	355 µm	91.83	69.51	1.5	355 µm	56.26	62.59		
2.0	250 µm	123.17	91.50	2.0	250 µm	81.91	90.07		
2.5	180 µm	133.95	99.06	2.5	180 µm	90.29	99.05		
3.0	125 µm	135.08	99.85	3.0	125 µm	91.10	99.91		
3.5	90 µm	135.19	99.93	3.5	90 µm	91.14	99.96		
4.0	63 µm	135.25	99.97	4.0	63 µm	91.17	99.99		
	<63 µm	135.29	100.00		<63 µm	91.18	100.00		
Folk (1974) Texture Group: Granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand					

Table H3 Cumulative frequency data for bed material flux samples in East Tributary 23 January 2001

Date	23-Jan-01	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Transect 1	Samples 1, 2, 3, & 4			Transect 2	Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	1.49	0.88	-1.0	2.0 mm	5.70	1.47
-0.5	1.4 mm	3.29	2.82	-0.5	1.4 mm	7.52	5.37
0.0	1.0 mm	13.19	8.66	0.0	1.0 mm	23.71	13.76
0.5	710 µm	33.88	20.87	0.5	710 µm	53.11	28.99
1.0	500 µm	90.98	54.58	1.0	500 µm	118.33	62.77
1.5	355 µm	137.14	81.83	1.5	355 µm	161.36	85.06
2.0	250 µm	162.69	96.91	2.0	250 µm	184.7	97.15
2.5	180 µm	167.60	99.81	2.5	180 µm	189.71	99.75
3.0	125 µm	167.87	99.96	3.0	125 µm	190.11	99.95
3.5	90 µm	167.90	99.98	3.5	90 µm	190.14	99.97
4.0	63 µm	167.92	99.99	4.0	63 µm	190.18	99.99
	<63 µm	167.93	100.00		<63 µm	190.20	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table H4 Cumulative frequency data for bed material flux samples in East Tributary 30 January 2001

Date	30-Jan-01	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Transect 1	Samples 1, 2, 3, & 4			Transect 2	Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	30.47	2.12	-1.0	2.0 mm	24.07	2.41
-0.5	1.4 mm	5.74	6.00	-0.5	1.4 mm	3.73	5.11
0.0	1.0 mm	17.09	13.67	0.0	1.0 mm	10.47	9.98
0.5	710 µm	37.37	27.39	0.5	710 µm	25.41	20.78
1.0	500 µm	76.36	53.75	1.0	500 µm	67.34	51.08
1.5	355 µm	107.11	74.54	1.5	355 µm	106.36	79.28
2.0	250 µm	133.36	92.29	2.0	250 µm	130.38	96.65
2.5	180 µm	143.80	99.34	2.5	180 µm	134.70	99.77
3.0	125 µm	144.55	99.85	3.0	125 µm	134.93	99.93
3.5	90 µm	144.68	99.94	3.5	90 µm	134.96	99.96
4.0	63 µm	144.75	99.99	4.0	63 µm	135.00	99.99
	<63 µm	144.77	100.00		<63 µm	135.02	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table H5 Cumulative frequency data for bed material flux samples in East Tributary 6 February 2000

Date	6-Feb-01	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Transect 1	Samples 1, 2, 3, & 4			Transect 2	Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	5.34	1.35	-1.0	2.0 mm	6.50	1.60
-0.5	1.4 mm	4.54	3.65	-0.5	1.4 mm	5.80	4.42
0.0	1.0 mm	14.75	8.82	0.0	1.0 mm	19.69	11.16
0.5	710 µm	37.54	20.36	0.5	710 µm	48.64	25.23
1.0	500 µm	102.28	53.14	1.0	500 µm	122.47	61.10
1.5	355 µm	156.53	80.60	1.5	355 µm	171.57	84.95
2.0	250 µm	188.55	96.82	2.0	250 µm	197.81	97.70
2.5	180 µm	194.49	99.82	2.5	180 µm	202.23	99.84
3.0	125 µm	194.80	99.98	3.0	125 µm	202.51	99.98
3.5	90 µm	194.82	99.99	3.5	90 µm	202.53	99.99
4.0	63 µm	194.84	100.00	4.0	63 µm	202.55	100.00
	<63 µm				<63 µm		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table H6 Cumulative frequency data for bed material flux samples in East Tributary 13 February 2001

Date	13-Feb-01	No. of Samples = 8		Ist Transect = 4	2nd Transect = 4		
Transect 1	Samples 1, 2, 3 & 4			Transect 2	Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	29.03	0.83	-1.0	2.0 mm	204.63	3.67
-0.5	1.4 mm	1.85	2.46	-0.5	1.4 mm	9.50	9.72
0.0	1.0 mm	6.78	6.82	0.0	1.0 mm	25.15	19.69
0.5	710 µm	19.19	17.78	0.5	710 µm	49.25	35.04
1.0	500 µm	52.47	47.19	1.0	500 µm	91.42	61.90
1.5	355 µm	85.34	76.24	1.5	355 µm	123.77	82.51
2.0	250 µm	106.96	95.34	2.0	250 µm	145.14	96.12
2.5	180 µm	111.68	99.51	2.5	180 µm	150.51	99.54
3.0	125 µm	112.18	99.96	3.0	125 µm	151.09	99.91
3.5	90 µm	112.22	99.99	3.5	90 µm	151.17	99.96
4.0	63 µm	112.23	100.00	4.0	63 µm	151.21	99.99
	<63 µm				<63 µm	151.23	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table H7 Cumulative frequency data for bed material flux samples in East Tributary 27 February 2001

Date	27-Feb-01		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1,2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	3.83	1.02	-1.0	2.0 mm	0.73	0.47	
-0.5	1.4 mm	3.14	2.69	-0.5	1.4 mm	0.84	1.02	
0.0	1.0 mm	11.09	6.90	0.0	1.0 mm	4.25	3.22	
0.5	710 µm	29.54	16.67	0.5	710 µm	16.20	10.96	
1.0	500 µm	87.53	47.38	1.0	500 µm	59.16	38.77	
1.5	355 µm	140.40	75.38	1.5	355 µm	105.98	69.08	
2.0	250 µm	178.69	95.66	2.0	250 µm	144.51	94.02	
2.5	180 µm	186.40	99.74	2.5	180 µm	153.33	99.73	
3.0	125 µm	186.85	99.98	3.0	125 µm	153.71	99.98	
3.5	90 µm	186.86	99.98	3.5	90 µm	153.72	99.99	
4.0	63 µm	186.88	99.99	4.0	63 µm	153.73	99.99	
	<63 µm	186.89	100.00		<63 µm	153.74	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table H8 Cumulative frequency data for bed material flux samples in East Tributary 6 March 2001

Date	6-Mar-01		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1,2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	5.71	1.76	-1.0	2.0 mm	2.73	0.74	
-0.5	1.4 mm	4.12	4.28	-0.5	1.4 mm	4.97	3.38	
0.0	1.0 mm	12.66	9.50	0.0	1.0 mm	16.76	9.66	
0.5	710 µm	31.52	21.02	0.5	710 µm	39.18	21.59	
1.0	500 µm	84.59	53.46	1.0	500 µm	99.06	53.46	
1.5	355 µm	130.82	81.71	1.5	355 µm	149.71	80.42	
2.0	250 µm	155.02	96.50	2.0	250 µm	180.93	97.04	
2.5	180 µm	160.12	99.62	2.5	180 µm	186.05	99.77	
3.0	125 µm	160.67	99.96	3.0	125 µm	186.45	99.98	
3.5	90 µm	160.70	99.98	3.5	90 µm	186.48	99.99	
4.0	63 µm	160.72	99.99	4.0	63 µm	186.48	99.99	
	<63 µm	160.74	100.00		<63 µm	186.49	100.00	
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table H9 Cumulative frequency data for bed material flux samples in East Tributary 13 March 2001

Date	13-Mar-01		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3 & 4			Transect 2			Samples 5, 6, 7 & 8	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	2.36	0.82	-1.0	2.0 mm	5.99	2.42	
-0.5	1.4 mm	3.24	3.04	-0.5	1.4 mm	4.33	5.88	
0.0	1.0 mm	10.33	7.91	0.0	1.0 mm	12.35	12.29	
0.5	710 µm	24.80	17.85	0.5	710 µm	25.63	22.89	
1.0	500 µm	66.30	46.34	1.0	500 µm	56.15	47.27	
1.5	355 µm	110.03	76.37	1.5	355 µm	89.76	74.11	
2.0	250 µm	137.86	95.48	2.0	250 µm	116.22	95.25	
2.5	180 µm	144.18	99.82	2.5	180 µm	121.80	99.70	
3.0	125 µm	144.38	99.96	3.0	125 µm	122.17	100.00	
3.5	90 µm	144.39	99.97	3.5	90 µm			
4.0	63 µm	144.44	100.00	4.0	63 µm			
	<63 µm				<63 µm			
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table H10 Cumulative frequency data for bed material flux samples in East Tributary 20 March 2001

Date	20-Mar-01		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3 & 4			Transect 2			Samples 5, 6, 7 & 8	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	3.20	1.32	-1.0	2.0 mm	9.92	0.90	
-0.5	1.4 mm	2.26	3.16	-0.5	1.4 mm	2.20	2.47	
0.0	1.0 mm	8.13	7.94	0.0	1.0 mm	6.81	5.77	
0.5	710 µm	20.95	18.36	0.5	710 µm	17.24	13.25	
1.0	500 µm	54.75	45.86	1.0	500 µm	53.41	39.16	
1.5	355 µm	90.54	74.97	1.5	355 µm	97.77	70.94	
2.0	250 µm	115.04	94.89	2.0	250 µm	129.49	93.66	
2.5	180 µm	120.80	99.58	2.5	180 µm	137.88	99.67	
3.0	125 µm	121.26	99.95	3.0	125 µm	138.25	99.94	
3.5	90 µm	121.28	99.97	3.5	90 µm	138.31	99.98	
4.0	63 µm	121.31	99.99	4.0	63 µm	138.32	99.99	
	<63 µm	121.32	100.00		<63 µm	138.34	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table H11 Cumulative frequency data for bed material flux samples in East Tributary 27 March 2001

Date	27-Mar-01		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1,2, 3 & 4			Transect 2			Samples 5, 6, 7 & 8	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	3.39	1.17	-1.0	2.0 mm	4.38	1.31	
-0.5	1.4 mm	2.96	3.16	-0.5	1.4 mm	4.04	3.73	
0.0	1.0 mm	9.74	7.72	0.0	1.0 mm	13.08	9.14	
0.5	710 µm	24.34	17.55	0.5	710 µm	31.13	19.94	
1.0	500 µm	69.00	47.59	1.0	500 µm	78.51	48.29	
1.5	355 µm	114.27	78.04	1.5	355 µm	125.58	76.46	
2.0	250 µm	139.92	95.30	2.0	250 µm	157.90	95.80	
2.5	180 µm	146.61	99.80	2.5	180 µm	164.52	99.76	
3.0	125 µm	146.86	99.97	3.0	125 µm	164.9	99.99	
3.5	90 µm	146.88	99.98	3.5	90 µm	164.91	99.99	
4.0	63 µm	146.90	99.99	4.0	63 µm	164.91	99.99	
	<63 µm	146.91	100.00		<63 µm	164.92	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table H12 Cumulative frequency data for bed material flux samples in East Tributary 3 April 2001

Date	3-Apr-01		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3 & 4			Transect 2			Samples 5, 6, 7 & 8	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	5.86	1.76	-1.0	2.0 mm	4.33	1.73	
-0.5	1.4 mm	3.18	4.79	-0.5	1.4 mm	4.03	4.90	
0.0	1.0 mm	11.22	12.45	0.0	1.0 mm	10.69	10.14	
0.5	710 µm	26.42	26.94	0.5	710 µm	23.42	20.16	
1.0	500 µm	60.47	59.40	1.0	500 µm	66.56	54.10	
1.5	355 µm	86.36	84.08	1.5	355 µm	107.26	86.11	
2.0	250 µm	99.57	96.67	2.0	250 µm	122.27	97.92	
2.5	180 µm	102.81	99.76	2.5	180 µm	124.8	99.91	
3.0	125 µm	103.02	99.96	3.0	125 µm	124.90	99.99	
3.5	90 µm	103.05	99.99	3.5	90 µm	124.91	100.00	
4.0	63 µm	103.06	100.00	4.0	63 µm			
	<63 µm				<63 µm			
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table H13 Cumulative frequency data for bed material flux samples in East Tributary 10 April 2001

Date	10-Apr-01	No. of Samples = 4		1st Transect = 2		2nd Transect = 2	
Transect 1	Samples 1 & 2			Transect 2		Samples 3 & 4	
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	0.17	0.35	-1.0	2.0 mm	0.27	0.36
-0.5	1.4 mm	0.69	1.77	-0.5	1.4 mm	1.55	2.45
0.0	1.0 mm	2.52	5.54	0.0	1.0 mm	6.58	9.21
0.5	710 µm	6.61	13.96	0.5	710 µm	17.52	23.92
1.0	500 µm	20.79	43.15	1.0	500 µm	39.43	53.38
1.5	355 µm	36.08	74.63	1.5	355 µm	59.10	79.83
2.0	250 µm	46.13	95.33	2.0	250 µm	71.40	96.37
2.5	180 µm	48.33	99.86	2.5	180 µm	73.90	99.73
3.0	125 µm	48.38	99.96	3.0	125 µm	74.05	99.93
3.5	90 µm	48.40	100.00	3.5	90 µm	74.06	99.95
4.0	63 µm			4.0	63 µm	74.10	100.00
	<63 µm				<63 µm		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Appendix I Upper Swift Creek cumulative frequency data bed-material load samples for the 2000–2001 wet season

This appendix contains the cumulative percentage values for the bed-material load samples collected at Upper Swift Creek for the 2000/2001 Wet season. All samples were dry sieved through a nest of sieves to a value of 4 phi (63 μm).

Table I1 Cumulative frequency data for bed material flux samples in Upper Swift Creek 4 December 2000

Date	4-Dec-00		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	38.21	9.20	-1.0	2.0 mm	44.93	8.16	
-0.5	1.4 mm	5.81	12.06	-0.5	1.4 mm	4.02	11.17	
0.0	1.0 mm	17.24	17.68	0.0	1.0 mm	13.84	18.50	
0.5	710 µm	44.03	30.87	0.5	710 µm	31.23	31.49	
1.0	500 µm	96.17	56.53	1.0	500 µm	63.99	55.96	
1.5	355 µm	143.16	79.65	1.5	355 µm	93.00	77.63	
2.0	250 µm	174.05	94.86	2.0	250 µm	116.63	95.28	
2.5	180 µm	184.02	99.76	2.5	180 µm	122.49	99.66	
3.0	125 µm	184.31	99.91	3.0	125 µm	122.83	99.91	
3.5	90 µm	184.41	99.96	3.5	90 µm	122.88	99.95	
4.0	63 µm	184.46	99.98	4.0	63 µm	122.92	99.98	
	<63 µm	184.50	100.00		<63 µm	122.95	100.00	
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Granular coarse sand				

Table I2 Cumulative frequency data for bed material flux samples in Upper Swift Creek 9 January 2001

Date	9-Jan-01		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1,2 3, 4 & 5			Transect 2		Samples 6, 7, 8, 9 & 10		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	70.62	4.10	-1.0	2.0 mm	28.30	3.42	
-0.5	1.4 mm	3.31	6.97	-0.5	1.4 mm	4.32	5.54	
0.0	1.0 mm	10.30	13.01	0.0	1.0 mm	14.86	10.70	
0.5	710 µm	23.82	24.70	0.5	710 µm	37.37	21.74	
1.0	500 µm	46.77	44.55	1.0	500 µm	79.00	42.15	
1.5	355 µm	66.24	61.38	1.5	355 µm	114.56	59.58	
2.0	250 µm	95.56	86.74	2.0	250 µm	168.82	86.18	
2.5	180 µm	109.42	98.72	2.5	180 µm	195.66	99.34	
3.0	125 µm	110.37	99.54	3.0	125 µm	196.92	99.96	
3.5	90 µm	110.87	99.97	3.5	90 µm	196.96	99.98	
4.0	63 µm	110.89	99.99	4.0	63 µm	197.00	100.00	
	<63 µm	110.90	100.00		<63 µm			
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table I3 Cumulative frequency data for bed material flux samples in Upper Swift Creek 23 January 2001

Date	23-Jan-01		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm	
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	0.00
-1.0	2.0 mm	31.47	2.23	-1.0	2.0 mm	49.52	1.81	
-0.5	1.4 mm	1.60	4.04	-0.5	1.4 mm	2.31	4.32	
0.0	1.0 mm	5.46	8.39	0.0	1.0 mm	7.40	9.87	
0.5	710 µm	14.50	18.59	0.5	710 µm	17.79	21.18	
1.0	500 µm	35.99	42.83	1.0	500 µm	39.36	44.68	
1.5	355 µm	56.86	66.37	1.5	355 µm	61.36	68.64	
2.0	250 µm	79.42	91.82	2.0	250 µm	83.97	93.27	
2.5	180 µm	86.23	99.50	2.5	180 µm	89.80	99.62	
3.0	125 µm	86.62	99.94	3.0	125 µm	90.10	99.95	
3.5	90 µm	86.65	99.98	3.5	90 µm	90.12	99.97	
4.0	63 µm	86.66	99.99	4.0	63 µm	90.13	99.98	
	<63 µm	86.67	100.00		<63 µm	90.15	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table I4 Cumulative frequency data for bed material flux samples Upper Swift Creek 30 January 2001

Date	30-Jan-01		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm	
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	18.07	4.51	-1.0	2.0 mm	38.22	6.56	
-0.5	1.4 mm	3.60	6.31	-0.5	1.4 mm	5.61	9.23	
0.0	1.0 mm	12.20	10.59	0.0	1.0 mm	17.54	14.89	
0.5	710 µm	32.42	20.66	0.5	710 µm	41.16	26.10	
1.0	500 µm	77.67	43.20	1.0	500 µm	106.93	57.33	
1.5	355 µm	121.73	65.15	1.5	355 µm	157.43	81.30	
2.0	250 µm	168.70	88.54	2.0	250 µm	189.93	96.73	
2.5	180 µm	190.31	99.31	2.5	180 µm	196.41	99.81	
3.0	125 µm	191.56	99.93	3.0	125 µm	196.74	99.96	
3.5	90 µm	191.63	99.97	3.5	90 µm	196.79	99.99	
4.0	63 µm	191.68	99.99	4.0	63 µm	196.81	100.00	
	<63 µm	191.70	100.00		<63 µm			
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Granular coarse sand				

Table I5 Cumulative frequency data for bed material flux samples Upper Swift Creek 6 February 2001

Date	6-Feb-01		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	10.20	1.32	-1.0	2.0 mm	16.18	0.77	
-0.5	1.4 mm	2.02	3.24	-0.5	1.4 mm	2.41	2.52	
0.0	1.0 mm	7.86	8.79	0.0	1.0 mm	9.68	7.79	
0.5	710 µm	22.76	22.93	0.5	710 µm	29.53	22.17	
1.0	500 µm	55.34	53.86	1.0	500 µm	76.69	56.35	
1.5	355 µm	80.15	77.41	1.5	355 µm	110.57	80.90	
2.0	250 µm	97.98	94.34	2.0	250 µm	132.54	96.83	
2.5	180 µm	103.66	99.73	2.5	180 µm	136.66	99.81	
3.0	125 µm	103.93	99.99	3.0	125 µm	136.89	99.98	
3.5	90 µm	103.93	99.99	3.5	90 µm	136.92	100.00	
4.0	63 µm	103.93	99.99	4.0	63 µm			
	<63 µm	103.94	100.00		<63 µm			
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table I6 Cumulative frequency data for bed material flux samples in Upper Swift Creek 13 February 2001

Date	13 Feb-01		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm			-1.5	2.4 mm			
-1.0	2.0 mm	0.00	0.00	-1.0	2.0 mm	0.00	0.00	
-0.5	1.4 mm	2.91	2.55	-0.5	1.4 mm	2.34	1.73	
0.0	1.0 mm	9.51	8.34	0.0	1.0 mm	7.56	5.58	
0.5	710 µm	24.11	21.15	0.5	710 µm	19.74	14.57	
1.0	500 µm	55.32	48.52	1.0	500 µm	50.40	37.20	
1.5	355 µm	85.32	74.83	1.5	355 µm	87.73	64.76	
2.0	250 µm	109.57	96.10	2.0	250 µm	127.78	94.32	
2.5	180 µm	113.77	99.78	2.5	180 µm	135.13	99.75	
3.0	125 µm	113.99	99.97	3.0	125 µm	135.44	99.98	
3.5	90 µm	114.01	99.99	3.5	90 µm	135.46	99.99	
4.0	63 µm	114.02	100.00	4.0	63 µm	135.47	100.00	
	<63 µm				<63 µm			
Folk (1974) Texture Group: Medium sand				Folk (1974) Texture Group: Medium sand				

Table I7 Cumulative frequency data for bed material flux samples Upper Swift Creek 27 February 2001

Date	27-Feb-01		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm	
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	0.00
-1.0	2.0 mm	31.61	2.62	-1.0	2.0 mm	1.09	0.73	
-0.5	1.4 mm	6.10	6.49	-0.5	1.4 mm	0.77	1.24	
0.0	1.0 mm	18.16	14.15	0.0	1.0 mm	3.30	2.93	
0.5	710 µm	39.20	27.50	0.5	710 µm	9.50	7.07	
1.0	500 µm	76.76	51.33	1.0	500 µm	27.56	19.13	
1.5	355 µm	111.08	73.11	1.5	355 µm	56.87	38.71	
2.0	250 µm	142.78	93.22	2.0	250 µm	116.20	78.33	
2.5	180 µm	152.89	99.64	2.5	180 µm	147.26	99.07	
3.0	125 µm	153.37	99.94	3.0	125 µm	148.54	99.93	
3.5	90 µm	153.42	99.97	3.5	90 µm	148.60	99.97	
4.0	63 µm	153.45	99.99	4.0	63 µm	148.62	99.98	
	<63 µm	153.46	100.00		<63 µm	148.65	100.00	
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table I8 Cumulative frequency data for bed material flux samples in Upper Swift Creek 6 March 2001

Date	6-Mar-01		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm	
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	21.09	1.82	-1.0	2.0 mm	79.54	4.91	
-0.5	1.4 mm	2.31	3.46	-0.5	1.4 mm	11.42	10.86	
0.0	1.0 mm	7.49	7.14	0.0	1.0 mm	30.28	20.67	
0.5	710 µm	21.21	16.87	0.5	710 µm	61.16	36.74	
1.0	500 µm	62.36	46.06	1.0	500 µm	113.06	63.75	
1.5	355 µm	102.93	74.84	1.5	355 µm	149.13	82.52	
2.0	250 µm	132.62	95.90	2.0	250 µm	176.39	96.71	
2.5	180 µm	138.17	99.84	2.5	180 µm	182.41	99.84	
3.0	125 µm	138.38	99.99	3.0	125 µm	182.66	99.97	
3.5	90 µm	138.38	99.99	3.5	90 µm	182.70	99.99	
4.0	63 µm	138.40	100.00	4.0	63 µm	182.70	99.99	
	<63 µm				<63 µm	182.71	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table I9 Cumulative frequency data for bed material flux samples in Upper Swift Creek 13 March 2001

Date	13-Mar-01	No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2		Samples 6, 7, 8, 9 & 10	
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	22.08	1.88	-1.0	2.0 mm	27.01	2.24
-0.5	1.4 mm	3.95	4.40	-0.5	1.4 mm	5.95	5.79
0.0	1.0 mm	11.32	9.10	0.0	1.0 mm	16.43	12.05
0.5	710 µm	25.97	18.45	0.5	710 µm	36.31	23.90
1.0	500 µm	60.06	40.21	1.0	500 µm	82.41	51.41
1.5	355 µm	102.96	67.59	1.5	355 µm	125.94	77.37
2.0	250 µm	143.16	93.24	2.0	250 µm	155.05	94.74
2.5	180 µm	153.21	99.66	2.5	180 µm	163.50	99.78
3.0	125 µm	153.74	99.99	3.0	125 µm	163.84	99.98
3.5	90 µm	153.74	99.99	3.5	90 µm	163.85	99.99
4.0	63 µm	153.75	100.00	4.0	63 µm	163.87	100.00
	<63 µm				<63 µm		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table I10 Cumulative frequency data for bed material flux samples in Upper Swift Creek 20 March 2001

Date	20-Mar-01	No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2		Samples 6, 7, 8, 9 & 10	
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	51.84	2.51	-1.0	2.0 mm	45.68	2.50
-0.5	1.4 mm	3.26	5.94	-0.5	1.4 mm	3.84	6.08
0.0	1.0 mm	10.47	13.52	0.0	1.0 mm	10.40	12.18
0.5	710 µm	25.15	28.95	0.5	710 µm	23.46	24.33
1.0	500 µm	52.59	57.80	1.0	500 µm	55.15	53.81
1.5	355 µm	75.02	81.37	1.5	355 µm	83.61	80.28
2.0	250 µm	89.17	96.25	2.0	250 µm	100.34	95.84
2.5	180 µm	92.48	99.73	2.5	180 µm	104.64	99.84
3.0	125 µm	92.71	99.97	3.0	125 µm	104.8	99.99
3.5	90 µm	92.72	99.98	3.5	90 µm	104.8	99.99
4.0	63 µm	92.73	99.99	4.0	63 µm	104.8	99.99
	<63 µm	92.74	100.00		<63 µm	104.81	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table I11 Cumulative frequency data for bed material flux samples in Upper Swift Creek 27 March 2001

Date	27-Mar-01		No. of Samples = 8		1st Transect = 4		2nd Transect = 4		
Transect 1	Samples 1, 2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %			
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	10.02	1.17	-1.0	2.0 mm	9.58	0.95		
-0.5	1.4 mm	1.89	3.00	-0.5	1.4 mm	1.86	2.42		
0.0	1.0 mm	5.61	6.60	0.0	1.0 mm	6.44	6.03		
0.5	710 µm	14.38	15.08	0.5	710 µm	18.87	15.82		
1.0	500 µm	44.41	44.15	1.0	500 µm	55.78	44.89		
1.5	355 µm	76.79	75.49	1.5	355 µm	93.70	74.76		
2.0	250 µm	97.27	95.31	2.0	250 µm	120.55	95.90		
2.5	180 µm	101.96	99.85	2.5	180 µm	125.51	99.81		
3.0	125 µm	102.11	99.99	3.0	125 µm	125.73	99.98		
3.5	90 µm	102.11	99.99	3.5	90 µm	125.75	100.00		
4.0	63 µm	102.12	100.00	4.0	63 µm				
	<63 µm				<63 µm				
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand					

Table I12 Cumulative frequency data for bed material flux samples in Upper Swift Creek 3 April 2001

Date	3-Apr-01		No. of Samples = 10		1st Transect = 5		2nd Transect = 5		
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2		Samples 6, 7, 8, 9 & 10			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %			
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	71.83	3.08	-1.0	2.0 mm	79.41	5.06		
-0.5	1.4 mm	5.33	6.75	-0.5	1.4 mm	10.16	10.06		
0.0	1.0 mm	16.26	14.28	0.0	1.0 mm	24.77	17.26		
0.5	710 µm	37.97	29.23	0.5	710 µm	49.50	29.43		
1.0	500 µm	80.92	58.82	1.0	500 µm	105.95	57.23		
1.5	355 µm	113.10	80.98	1.5	355 µm	155.21	81.48		
2.0	250 µm	135.33	96.29	2.0	250 µm	184.86	96.08		
2.5	180 µm	140.42	99.80	2.5	180 µm	192.53	99.86		
3.0	125 µm	140.67	99.97	3.0	125 µm	192.75	99.97		
3.5	90 µm	140.69	99.99	3.5	90 µm	192.79	99.99		
4.0	63 µm	140.71	100.00	4.0	63 µm	192.80	99.99		
	<63 µm				<63 µm	192.82	100.00		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Granular coarse sand					

Table I13 Cumulative frequency data for bed material flux samples in Upper Swift Creek 10 April 2001

Date	10-Apr-01		No. of Samples = 8		1st Transect = 4		2nd Transect = 4		
Transect 1	Samples 1, 2, 3 & 4			Transect 2			Samples 5, 6, 7 & 8		
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm		
-1.5	2.4 mm	0.00 0.00	-1.5	2.4 mm	0.00 0.00	-1.5	2.4 mm	0.00 0.00	
-1.0	2.0 mm	8.49 1.21	-1.0	2.0 mm	8.95 1.55	-1.0	2.0 mm	8.95 1.55	
-0.5	1.4 mm	3.21 3.09	-0.5	1.4 mm	4.56 4.72	-0.5	1.4 mm	4.56 4.72	
0.0	1.0 mm	9.60 6.84	0.0	1.0 mm	16.01 12.68	0.0	1.0 mm	16.01 12.68	
0.5	710 µm	25.50 16.17	0.5	710 µm	29.47 22.03	0.5	710 µm	29.47 22.03	
1.0	500 µm	76.89 46.31	1.0	500 µm	84.74 60.44	1.0	500 µm	84.74 60.44	
1.5	355 µm	127.98 76.27	1.5	355 µm	118.42 83.84	1.5	355 µm	118.42 83.84	
2.0	250 µm	160.76 95.50	2.0	250 µm	137.74 97.26	2.0	250 µm	137.74 97.26	
2.5	180 µm	168.25 99.89	2.5	180 µm	141.45 99.84	2.5	180 µm	141.45 99.84	
3.0	125 µm	168.40 99.98	3.0	125 µm	141.60 99.94	3.0	125 µm	141.60 99.94	
3.5	90 µm	168.42 99.99	3.5	90 µm	141.64 99.97	3.5	90 µm	141.64 99.97	
4.0	63 µm	168.43 100.00	4.0	63 µm	141.65 99.98	4.0	63 µm	141.65 99.98	
	<63 µm			<63 µm	141.68 100.00		<63 µm	141.68 100.00	
Folk (1974) Texture Group: Slightly granular medium sand					Folk (1974) Texture Group: Slightly granular coarse sand				

Table I14 Cumulative frequency data for bed material flux samples in Upper Swift Creek 17 April 2001

Date	17-Apr-01		No. of Samples = 8		1st Transect = 4		2nd Transect = 4		
Transect 1	Samples 1, 2, 3 & 4			Transect 2			Samples 5, 6, 7 & 8		
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm		
-1.5	2.4 mm	0.00 0.00	-1.5	2.4 mm	0.00 0.00	-1.5	2.4 mm	0.00 0.00	
-1.0	2.0 mm	18.02 3.70	-1.0	2.0 mm	24.08 4.61	-1.0	2.0 mm	24.08 4.61	
-0.5	1.4 mm	3.09 6.26	-0.5	1.4 mm	7.42 10.14	-0.5	1.4 mm	7.42 10.14	
0.0	1.0 mm	8.35 10.63	0.0	1.0 mm	18.42 18.34	0.0	1.0 mm	18.42 18.34	
0.5	710 µm	19.07 19.51	0.5	710 µm	35.97 31.42	0.5	710 µm	35.97 31.42	
1.0	500 µm	54.82 49.15	1.0	500 µm	68.65 55.79	1.0	500 µm	68.65 55.79	
1.5	355 µm	89.80 78.15	1.5	355 µm	98.57 78.09	1.5	355 µm	98.57 78.09	
2.0	250 µm	111.18 95.88	2.0	250 µm	121.76 95.38	2.0	250 µm	121.76 95.38	
2.5	180 µm	115.98 99.86	2.5	180 µm	127.53 99.68	2.5	180 µm	127.53 99.68	
3.0	125 µm	116.14 99.99	3.0	125 µm	127.91 99.96	3.0	125 µm	127.91 99.96	
3.5	90 µm	116.15 100.00	3.5	90 µm	127.93 99.98	3.5	90 µm	127.93 99.98	
4.0	63 µm		4.0	63 µm	127.96 100.00	4.0	63 µm	127.96 100.00	
	<63 µm			<63 µm			<63 µm		
Folk (1974) Texture Group: Slightly granular medium sand					Folk (1974) Texture Group: Slightly granular coarse sand				

Appendix J Swift Creek cumulative frequency data bed-material load samples for the 2000–2001 wet season

This appendix contains the cumulative percentage values for the bed-material load samples collected at Swift Creek for the 2000/2001 Wet season. All samples were dry sieved through a nest of sieves to a value of 4 phi (63 μm).

Table J1 Cumulative frequency data for bed material flux samples in Swift Creek 4 December 2000

Date	4-Dec-00		No. of Samples = 8		1st Transect = 4		2nd Transect = 4		
Transect 1	Samples 1, 2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %			
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	17.56	6.72	-1.0	2.0 mm	13.10	5.98		
-0.5	1.4 mm	5.65	11.16	-0.5	1.4 mm	3.56	9.24		
0.0	1.0 mm	14.20	17.89	0.0	1.0 mm	10.11	15.25		
0.5	710 µm	30.23	30.51	0.5	710 µm	22.78	26.86		
1.0	500 µm	64.40	57.42	1.0	500 µm	49.86	51.69		
1.5	355 µm	95.01	81.51	1.5	355 µm	75.59	75.28		
2.0	250 µm	113.40	95.99	2.0	250 µm	96.74	94.67		
2.5	180 µm	118.31	99.86	2.5	180 µm	102.16	99.64		
3.0	125 µm	118.41	99.94	3.0	125 µm	102.47	99.93		
3.5	90 µm	118.44	99.96	3.5	90 µm	102.51	99.96		
4.0	63 µm	118.47	99.98	4.0	63 µm	102.54	99.99		
	<63 µm	118.49	100.00		<63 µm	102.55	100.00		
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Granular medium sand					

Table J2 Cumulative frequency data for bed material flux samples in Swift Creek 9 January 2001

Date	9-Jan-01		No. of Samples = 12		1st Transect = 6		2nd Transect = 6		
Transect 1	Samples 1, 2, 3, 4, 5 & 6			Transect 2		Samples 7, 8, 9, 10, 11 & 12			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %			
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	28.04	22.55	-1.0	2.0 mm	69.84	19.80		
-0.5	1.4 mm	1.65	23.88	-0.5	1.4 mm	6.38	21.61		
0.0	1.0 mm	4.34	26.05	0.0	1.0 mm	15.65	24.24		
0.5	710 µm	10.12	30.69	0.5	710 µm	37.47	30.43		
1.0	500 µm	29.13	45.99	1.0	500 µm	105.80	49.80		
1.5	355 µm	55.75	67.40	1.5	355 µm	191.74	74.17		
2.0	250 µm	83.28	89.54	2.0	250 µm	253.58	91.71		
2.5	180 µm	94.97	98.95	2.5	180 µm	280.86	99.44		
3.0	125 µm	95.94	99.73	3.0	125 µm	282.22	99.83		
3.5	90 µm	96.15	99.90	3.5	90 µm	282.62	99.94		
4.0	63 µm	96.23	99.96	4.0	63 µm	282.77	99.99		
	<63 µm	96.28	100.00		<63 µm	282.82	100.00		
Folk (1974) Texture Group: Granular medium sand				Folk (1974) Texture Group: Granular medium sand					

Table J3 Cumulative frequency data for bed material flux samples in Swift Creek 17 January 2001

Date	17-Jan-01		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	54.94	5.67	-1.0	2.0 mm	38.99	3.94	
-0.5	1.4 mm	3.59	8.59	-0.5	1.4 mm	3.59	6.72	
0.0	1.0 mm	10.84	14.49	0.0	1.0 mm	11.54	12.87	
0.5	710 µm	25.68	26.56	0.5	710 µm	27.99	25.61	
1.0	500 µm	59.55	54.12	1.0	500 µm	67.21	55.99	
1.5	355 µm	89.19	78.23	1.5	355 µm	100.31	81.62	
2.0	250 µm	111.43	96.32	2.0	250 µm	120.75	97.45	
2.5	180 µm	115.68	99.78	2.5	180 µm	123.86	99.86	
3.0	125 µm	115.89	99.95	3.0	125 µm	123.98	99.95	
3.5	90 µm	115.91	99.97	3.5	90 µm	124.00	99.97	
4.0	63 µm	115.94	99.99	4.0	63 µm	124.02	99.98	
	<63 µm	115.95	100.00		<63 µm	124.04	100.00	
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table J4 Cumulative frequency data for bed material flux samples in Swift Creek 23 January 2001

Date	23-Jan-01		No. of Samples = 12		1st Transect = 6		2nd Transect = 6	
Transect 1	Samples 1, 2, 3, 4, 5 & 6			Transect 2		Samples 7, 8, 9, 10, 11, & 12		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	282.82	3.27	-1.0	2.0 mm	213.86	4.91	
-0.5	1.4 mm	7.72	8.88	-0.5	1.4 mm	1.63	6.07	
0.0	1.0 mm	22.72	19.79	0.0	1.0 mm	17.37	17.31	
0.5	710 µm	48.87	38.80	0.5	710 µm	41.91	34.84	
1.0	500 µm	92.92	70.83	1.0	500 µm	84.71	65.41	
1.5	355 µm	118.54	89.46	1.5	355 µm	114.24	86.50	
2.0	250 µm	131.26	98.71	2.0	250 µm	130.96	98.44	
2.5	180 µm	132.86	99.87	2.5	180 µm	133.01	99.91	
3.0	125 µm	132.97	99.95	3.0	125 µm	133.09	99.96	
3.5	90 µm	132.99	99.96	3.5	90 µm	133.11	99.98	
4.0	63 µm	133.03	99.99	4.0	63 µm	133.13	99.99	
	<63 µm	133.04	100.00		<63 µm	133.14	100.00	
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table J5 Cumulative frequency data for bed material flux samples in Swift Creek 30 January 2001

Date	30-Jan-01		No. of Samples = 8		1st Transect = 4		2nd Transect = 4		
Transect 1	Samples 1, 2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %			
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	17.12	8.37	-1.0	2.0 mm	29.18	4.43		
-0.5	1.4 mm	0.75	9.11	-0.5	1.4 mm	3.03	6.24		
0.0	1.0 mm	2.44	10.78	0.0	1.0 mm	8.57	9.54		
0.5	710 µm	6.76	15.03	0.5	710 µm	24.08	18.77		
1.0	500 µm	22.93	30.95	1.0	500 µm	62.50	41.66		
1.5	355 µm	50.31	57.91	1.5	355 µm	103.99	66.37		
2.0	250 µm	83.45	90.55	2.0	250 µm	149.93	93.73		
2.5	180 µm	92.44	99.40	2.5	180 µm	159.73	99.57		
3.0	125 µm	92.95	99.90	3.0	125 µm	160.38	99.96		
3.5	90 µm	93.00	99.95	3.5	90 µm	160.43	99.99		
4.0	63 µm	93.03	99.98	4.0	63 µm	160.44	99.99		
	<63 µm	93.05	100.00		<63 µm	160.45	100.00		
Folk (1974) Texture Group: Granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand					

Table J6 Cumulative frequency data for bed material flux samples in Swift Creek 6 February 2001

Date	6-Feb-01		No. of Samples = 8		1st Transect = 4		2nd Transect = 4		
Transect 1	Samples 1, 2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8			
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %			
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	132.18	2.16	-1.0	2.0 mm	91.35	2.47		
-0.5	1.4 mm	6.27	5.39	-0.5	1.4 mm	5.68	7.33		
0.0	1.0 mm	19.14	12.02	0.0	1.0 mm	15.72	15.93		
0.5	710 µm	46.52	26.13	0.5	710 µm	33.75	31.37		
1.0	500 µm	110.36	59.03	1.0	500 µm	67.48	60.26		
1.5	355 µm	157.74	83.44	1.5	355 µm	93.99	82.97		
2.0	250 µm	185.04	97.51	2.0	250 µm	110.17	96.82		
2.5	180 µm	189.51	99.81	2.5	180 µm	113.53	99.70		
3.0	125 µm	189.84	99.98	3.0	125 µm	113.84	99.97		
3.5	90 µm	189.85	99.99	3.5	90 µm	113.86	99.98		
4.0	63 µm	189.86	99.99	4.0	63 µm	113.87	99.99		
	<63 µm	189.87	100.00		<63 µm	113.88	100.00		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand					

Table J7 Cumulative frequency data for bed material flux samples in Swift Creek 13 February 2001

Date	13-Feb-01	No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8	
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	172.98	2.92	-1.0	2.0 mm	147.72	3.41
-0.5	1.4 mm	8.20	7.48	-0.5	1.4 mm	6.24	7.72
0.0	1.0 mm	21.85	15.06	0.0	1.0 mm	16.58	14.86
0.5	710 µm	46.24	28.62	0.5	710 µm	34.70	27.36
1.0	500 µm	96.60	56.61	1.0	500 µm	71.33	52.65
1.5	355 µm	138.08	79.66	1.5	355 µm	105.64	76.33
2.0	250 µm	166.60	95.51	2.0	250 µm	131.90	94.45
2.5	180 µm	173.90	99.57	2.5	180 µm	139.20	99.49
3.0	125 µm	174.60	99.96	3.0	125 µm	139.86	99.94
3.5	90 µm	174.64	99.98	3.5	90 µm	139.91	99.98
4.0	63 µm	174.66	99.99	4.0	63 µm	139.93	99.99
	<63 µm	174.68	100.00		<63 µm	139.94	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table J8 Cumulative frequency data for bed material flux samples in Swift Creek 20 February 2001

Date	20-Feb-01	No. of Samples = 12		1st Transect = 6		2nd Transect = 6	
Transect 1	Samples 1, 2, 3, 4, 5 & 6			Transect 2		Samples 7, 8, 9, 10, 11 & 12	
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	34.03	0.99	-1.0	2.0 mm	38.38	1.28
-0.5	1.4 mm	2.43	3.18	-0.5	1.4 mm	2.99	2.87
0.0	1.0 mm	7.87	8.08	0.0	1.0 mm	14.16	8.78
0.5	710 µm	22.39	21.17	0.5	710 µm	41.98	23.51
1.0	500 µm	57.35	52.68	1.0	500 µm	106.01	57.42
1.5	355 µm	85.75	78.28	1.5	355 µm	151.05	81.27
2.0	250 µm	104.50	95.18	2.0	250 µm	178.82	95.97
2.5	180 µm	109.57	99.75	2.5	180 µm	186.01	99.78
3.0	125 µm	109.82	99.97	3.0	125 µm	186.41	99.99
3.5	90 µm	109.83	99.98	3.5	90 µm	186.41	99.99
4.0	63 µm	109.84	99.99	4.0	63 µm	186.42	99.99
	<63 µm	109.85	100.00		<63 µm	186.43	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Table J9 Cumulative frequency data for bed material flux samples in Swift Creek 27 February 2001

Date	27-Feb-01		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	25.38	1.65	-1.0	2.0 mm	15.29	1.29	
-0.5	1.4 mm	1.16	2.76	-0.5	1.4 mm	1.28	2.15	
0.0	1.0 mm	4.76	6.21	0.0	1.0 mm	4.01	4.01	
0.5	710 µm	14.32	15.36	0.5	710 µm	10.94	8.71	
1.0	500 µm	42.68	42.49	1.0	500 µm	37.93	27.01	
1.5	355 µm	73.90	72.36	1.5	355 µm	82.99	57.57	
2.0	250 µm	98.18	95.59	2.0	250 µm	134.77	92.70	
2.5	180 µm	102.58	99.80	2.5	180 µm	145.02	99.65	
3.0	125 µm	102.76	99.97	3.0	125 µm	145.44	99.93	
3.5	90 µm	102.78	99.99	3.5	90 µm	145.52	99.99	
4.0	63 µm	102.79	100.00	4.0	63 µm	145.53	99.99	
	<63 µm				<63 µm	145.54	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table J10 Cumulative frequency data for bed material flux samples in Swift Creek 6 March 2001

Date	6-Mar-01		No. of Samples = 12		1st Transect = 6		2nd Transect = 6	
Transect 1	Samples 1, 2, 3, 4, 5 & 6			Transect 2			Samples 7, 8, 9, 10, 11 & 12	
Phi	Mass (g)	Cumulative %		Phi	Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	15.47	1.00	-1.0	2.0 mm	49.00	2.68	
-0.5	1.4 mm	1.27	2.27	-0.5	1.4 mm	2.93	5.32	
0.0	1.0 mm	4.80	5.80	0.0	1.0 mm	10.16	11.84	
0.5	710 µm	14.58	15.57	0.5	710 µm	25.12	25.33	
1.0	500 µm	43.31	44.29	1.0	500 µm	57.91	54.89	
1.5	355 µm	70.05	71.01	1.5	355 µm	79.24	74.12	
2.0	250 µm	89.54	90.49	2.0	250 µm	98.39	91.39	
2.5	180 µm	97.38	98.33	2.5	180 µm	106.98	99.13	
3.0	125 µm	98.93	99.88	3.0	125 µm	107.89	99.95	
3.5	90 µm	98.98	99.93	3.5	90 µm	107.93	99.99	
4.0	63 µm	99.04	99.99	4.0	63 µm	107.94	100.00	
	<63 µm	99.05	100.00		<63 µm			
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table J11 Cumulative frequency data for bed material flux samples in Swift Creek 13 March 2001

Date	13-Mar-01	No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8	
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	10.16	0.56	-1.0	2.0 mm	10.92	0.66
-0.5	1.4 mm	0.76	1.19	-0.5	1.4 mm	1.36	1.89
0.0	1.0 mm	3.58	3.56	0.0	1.0 mm	6.10	6.21
0.5	710 µm	11.19	9.94	0.5	710 µm	17.80	16.88
1.0	500 µm	38.49	32.84	1.0	500 µm	45.40	42.03
1.5	355 µm	73.83	62.48	1.5	355 µm	74.03	68.13
2.0	250 µm	108.42	91.49	2.0	250 µm	102.31	93.90
2.5	180 µm	118.26	99.75	2.5	180 µm	108.71	99.74
3.0	125 µm	118.53	99.97	3.0	125 µm	108.99	99.99
3.5	90 µm	118.54	99.98	3.5	90 µm	108.99	99.99
4.0	63 µm	118.55	99.99	4.0	63 µm	109.00	100.00
	<63 µm	118.56	100.00		<63 µm		
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table J12 Cumulative frequency data for bed material flux samples in Swift Creek 20 March 2001

Date	20-Mar-01	No. of Samples = 12		1st Transect = 6		2nd Transect = 6	
Transect 1	Samples 1, 2, 3, 4, 5 & 6			Transect 2		Samples 7, 8, 9, 10, 11 & 12	
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	80.77	2.25	-1.0	2.0 mm	71.37	2.19
-0.5	1.4 mm	3.65	5.33	-0.5	1.4 mm	2.75	4.46
0.0	1.0 mm	9.76	10.49	0.0	1.0 mm	7.67	8.51
0.5	710 µm	21.94	20.77	0.5	710 µm	18.75	17.64
1.0	500 µm	56.85	50.23	1.0	500 µm	50.24	43.59
1.5	355 µm	90.91	78.98	1.5	355 µm	86.63	73.57
2.0	250 µm	111.44	96.30	2.0	250 µm	113.91	96.05
2.5	180 µm	115.69	99.89	2.5	180 µm	118.41	99.76
3.0	125 µm	115.81	99.99	3.0	125 µm	118.66	99.97
3.5	90 µm	115.82	100.00	3.5	90 µm	118.66	99.97
4.0	63 µm			4.0	63 µm	118.69	99.99
	<63 µm				<63 µm	118.70	100.00
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand			

Table J13 Cumulative frequency data for bed material flux samples in Swift Creek 27 March 2001

Date	27-Mar-01		No. of Samples = 12		1st Transect = 6		2nd Transect = 6		
Transect 1	Samples 1, 2, 3, 4, 5 & 6			Transect 2			Samples 7, 8, 9, 10, 11 & 12		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	148.99	4.13	-1.0	2.0 mm	192.43	4.08		
-0.5	1.4 mm	7.18	10.78	-0.5	1.4 mm	10.55	11.30		
0.0	1.0 mm	18.88	21.63	0.0	1.0 mm	26.56	22.25		
0.5	710 µm	36.92	38.35	0.5	710 µm	51.07	39.02		
1.0	500 µm	67.45	66.65	1.0	500 µm	95.56	69.46		
1.5	355 µm	88.98	86.61	1.5	355 µm	123.42	88.52		
2.0	250 µm	100.68	97.45	2.0	250 µm	136.74	97.63		
2.5	180 µm	103.23	99.81	2.5	180 µm	140.07	99.91		
3.0	125 µm	103.40	99.97	3.0	125 µm	140.16	99.97		
3.5	90 µm	103.41	99.98	3.5	90 µm	140.18	99.99		
4.0	63 µm	103.43	100.00	4.0	63 µm	140.18	99.99		
	<63 µm				<63 µm	140.2	100.00		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand					

Table J14 Cumulative frequency data for bed material flux samples in Swift Creek 3 April 2001

Date	3-Apr-01		No. of Samples = 10		1st Transect = 5		2nd Transect = 5		
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00		
-1.0	2.0 mm	67.93	3.28	-1.0	2.0 mm	27.12	2.54		
-0.5	1.4 mm	3.73	6.09	-0.5	1.4 mm	3.13	4.81		
0.0	1.0 mm	11.38	11.87	0.0	1.0 mm	11.07	10.58		
0.5	710 µm	27.43	23.98	0.5	710 µm	28.78	23.46		
1.0	500 µm	71.43	57.18	1.0	500 µm	70.39	53.70		
1.5	355 µm	105.22	82.67	1.5	355 µm	106.63	80.04		
2.0	250 µm	123.10	96.17	2.0	250 µm	129.11	96.37		
2.5	180 µm	128.02	99.88	2.5	180 µm	133.84	99.81		
3.0	125 µm	128.12	99.95	3.0	125 µm	134.07	99.98		
3.5	90 µm	128.15	99.98	3.5	90 µm	134.08	99.99		
4.0	63 µm	128.18	100.00	4.0	63 µm	134.10	100.00		
	<63 µm				<63 µm				
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand					

Table J15 Cumulative frequency data for bed material flux samples in Swift Creek 10 Apr 2001

Date	10-Apr-01		No. of Samples = 10		1st Transect = 5		2nd Transect = 5		
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10		
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	0.00	
-1.0	2.0 mm	63.37	2.17	-1.0	2.0 mm	21.03	0.80		
-0.5	1.4 mm	4.18	6.20	-0.5	1.4 mm	2.82	2.56		
0.0	1.0 mm	11.62	13.38	0.0	1.0 mm	8.04	5.82		
0.5	710 µm	27.28	28.48	0.5	710 µm	21.42	14.19		
1.0	500 µm	61.58	61.55	1.0	500 µm	73.38	46.66		
1.5	355 µm	85.66	84.77	1.5	355 µm	125.89	79.48		
2.0	250 µm	98.71	97.36	2.0	250 µm	153.82	96.93		
2.5	180 µm	101.30	99.86	2.5	180 µm	158.6	99.92		
3.0	125 µm	101.40	99.95	3.0	125 µm	158.71	99.99		
3.5	90 µm	101.44	99.99	3.5	90 µm	158.73	100.00		
4.0	63 µm	101.45	100.00	4.0	63 µm				
	<63 µm				<63 µm				
Folk (1974) Texture Group: Slightly granular coarse sand					Folk (1974) Texture Group: Slightly granular medium sand				

Table J16 Cumulative frequency data for bed material flux samples in Swift Creek 17 April 2001

Date	17-Apr-01		No. of Samples = 12		1st Transect = 6		2nd Transect = 6		
Transect 1	Samples 1, 2, 3, 4, 5 & 6			Transect 2			Samples 7, 8, 9, 10, 11 & 12		
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	0.00	
-1.0	2.0 mm	54.96	3.69	-1.0	2.0 mm	59.31	4.03		
-0.5	1.4 mm	7.00	10.35	-0.5	1.4 mm	11.94	9.96		
0.0	1.0 mm	18.37	21.17	0.0	1.0 mm	28.81	18.34		
0.5	710 µm	36.67	38.59	0.5	710 µm	55.85	31.77		
1.0	500 µm	67.00	67.46	1.0	500 µm	115.58	61.43		
1.5	355 µm	87.43	86.91	1.5	355 µm	161.25	84.11		
2.0	250 µm	98.65	97.59	2.0	250 µm	186.21	96.51		
2.5	180 µm	100.96	99.79	2.5	180 µm	192.87	99.82		
3.0	125 µm	101.16	99.98	3.0	125 µm	193.23	100.00		
3.5	90 µm	101.18	100.00	3.5	90 µm				
4.0	63 µm			4.0	63 µm				
	<63 µm				<63 µm				
Folk (1974) Texture Group: Slightly granular coarse sand					Folk (1974) Texture Group: Slightly granular coarse sand				

Appendix K East Tributary cumulative frequency data bed-material load samples for the 2001–2002 wet season

This appendix contains the cumulative percentage values for the bed-material load samples collected at East Tributary for the 2001/2002 Wet season. All samples were dry sieved through a nest of sieves to a value of 4 phi (63 μm).

Table K1 Cumulative frequency data for bed material flux samples in East Tributary 12 February 2002

Date	12-Feb-02		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	56.24	1.57	-1.0	2.0 mm	16.74	0.57	
-0.5	1.4 mm	5.65	6.09	-0.5	1.4 mm	1.66	2.17	
0.0	1.0 mm	17.96	15.94	0.0	1.0 mm	5.20	5.56	
0.5	710 µm	38.09	32.05	0.5	710 µm	15.46	15.40	
1.0	500 µm	80.43	65.94	1.0	500 µm	58.43	56.61	
1.5	355 µm	108.66	88.53	1.5	355 µm	90.67	87.53	
2.0	250 µm	121.06	98.46	2.0	250 µm	102.30	98.69	
2.5	180 µm	122.87	99.90	2.5	180 µm	103.59	99.92	
3.0	125 µm	122.95	99.97	3.0	125 µm	103.64	99.97	
3.5	90 µm	122.97	99.98	3.5	90 µm	103.65	99.98	
4.0	63 µm	122.98	99.99	4.0	63 µm	103.66	99.99	
	<63 µm	122.99	100.00		<63 µm	103.67	100.00	
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table K2 Cumulative frequency data for bed material flux samples in East Tributary 19 February 2002

Date	19-Feb-02		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3, & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %		
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	18.93	3.14	-1.0	2.0 mm	51.40	4.33	
-0.5	1.4 mm	5.73	7.82	-0.5	1.4 mm	4.85	8.28	
0.0	1.0 mm	15.98	16.18	0.0	1.0 mm	12.93	14.88	
0.5	710 µm	33.56	30.52	0.5	710 µm	27.91	27.10	
1.0	500 µm	75.08	64.40	1.0	500 µm	68.97	60.61	
1.5	355 µm	100.66	85.27	1.5	355 µm	96.72	83.26	
2.0	250 µm	114.10	96.24	2.0	250 µm	112.18	95.88	
2.5	180 µm	118.52	99.84	2.5	180 µm	116.93	99.76	
3.0	125 µm	118.69	99.98	3.0	125 µm	117.21	99.98	
3.5	90 µm	118.69	99.98	3.5	90 µm	117.21	99.98	
4.0	63 µm	118.70	99.99	4.0	63 µm	117.22	99.99	
	<63 µm	118.71	100.00		<63 µm	117.23	100.00	
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table K3 Cumulative frequency data for bed material flux samples in East Tributary 26 February 2002

Date	26-Feb-02		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3, & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	8.76	2.06	-1.0	2.0 mm	8.72	1.86	
-0.5	1.4 mm	3.87	5.50	-0.5	1.4 mm	3.54	4.72	
0.0	1.0 mm	10.22	11.14	0.0	1.0 mm	10.94	10.68	
0.5	710 µm	20.69	20.44	0.5	710 µm	25.81	22.68	
1.0	500 µm	52.85	49.02	1.0	500 µm	65.94	55.04	
1.5	355 µm	83.21	75.99	1.5	355 µm	97.21	80.26	
2.0	250 µm	103.61	94.12	2.0	250 µm	116.1	95.49	
2.5	180 µm	109.82	99.64	2.5	180 µm	121.36	99.73	
3.0	125 µm	110.15	99.93	3.0	125 µm	121.63	99.95	
3.5	90 µm	110.19	99.96	3.5	90 µm	121.66	99.98	
4.0	63 µm	110.22	99.99	4.0	63 µm	121.67	99.98	
	<63 µm	110.23	100.00		<63 µm	121.69	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table K4 Cumulative frequency data for bed material flux samples in East Tributary 4 March 2002

Date	4-Mar-02		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	13.37	1.34	-1.0	2.0 mm	13.46	2.05	
-0.5	1.4 mm	2.66	3.65	-0.5	1.4 mm	2.52	4.40	
0.0	1.0 mm	7.77	8.07	0.0	1.0 mm	7.25	8.79	
0.5	710 µm	17.75	16.72	0.5	710 µm	16.22	17.13	
1.0	500 µm	54.61	48.66	1.0	500 µm	46.47	45.25	
1.5	355 µm	88.65	78.15	1.5	355 µm	79.02	75.51	
2.0	250 µm	108.45	95.30	2.0	250 µm	99.53	94.57	
2.5	180 µm	113.62	99.78	2.5	180 µm	105.10	99.75	
3.0	125 µm	113.84	99.97	3.0	125 µm	105.31	99.94	
3.5	90 µm	113.85	99.98	3.5	90 µm	105.34	99.97	
4.0	63 µm	113.86	99.99	4.0	63 µm	105.35	99.98	
	<63 µm	113.87	100.00		<63 µm	105.37	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table K5 Cumulative frequency data for bed material flux samples in East Tributary 12 March 2002

Date	12-Mar-02		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3, & 4			Transect 2			Samples 5, 6, 7 & 8	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	0.25	0.16	-1.0	2.0 mm	0.82	1.13	
-0.5	1.4 mm	0.53	0.82	-0.5	1.4 mm	0.48	1.79	
0.0	1.0 mm	1.84	2.47	0.0	1.0 mm	2.04	3.94	
0.5	710 µm	5.87	7.52	0.5	710 µm	6.72	10.40	
1.0	500 µm	25.82	32.53	1.0	500 µm	28.54	40.49	
1.5	355 µm	51.61	64.86	1.5	355 µm	52.58	73.64	
2.0	250 µm	73.94	92.85	2.0	250 µm	68.37	95.42	
2.5	180 µm	79.50	99.82	2.5	180 µm	71.61	99.89	
3.0	125 µm	79.61	99.96	3.0	125 µm	71.65	99.94	
3.5	90 µm	79.63	99.99	3.5	90 µm	71.68	99.99	
4.0	63 µm	79.63	99.99	4.0	63 µm	71.68	99.99	
	<63 µm	79.64	100.00		<63 µm	71.69	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Appendix L Upper Swift Creek cumulative frequency data bed-material load samples for the 2001–2002 wet season

This appendix contains the cumulative percentage values for the bed-material load samples collected at Upper Swift Creek for the 2001/2002 Wet season. All samples were dry sieved through a nest of sieves to a value of 4 phi (63 μm).

Table L1 Cumulative frequency data for bed material flux samples in Upper Swift Creek 23 January 2002

Date	23-Jan-02		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	42.15	3.99	-1.0	2.0 mm	12.46	1.48	
-0.5	1.4 mm	5.89	9.04	-0.5	1.4 mm	2.77	4.00	
0.0	1.0 mm	15.28	17.09	0.0	1.0 mm	8.12	8.86	
0.5	710 µm	31.01	30.57	0.5	710 µm	18.53	18.32	
1.0	500 µm	61.69	56.87	1.0	500 µm	47.60	44.75	
1.5	355 µm	88.50	79.85	1.5	355 µm	78.39	72.74	
2.0	250 µm	106.62	95.38	2.0	250 µm	101.56	93.80	
2.5	180 µm	111.80	99.82	2.5	180 µm	108.12	99.76	
3.0	125 µm	111.99	99.98	3.0	125 µm	108.36	99.98	
3.5	90 µm	111.99	99.98	3.5	90 µm	108.36	99.98	
4.0	63 µm	112.00	99.99	4.0	63 µm	108.38	100.00	
	<63 µm	112.01	100.00		<63 µm			
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table L2 Cumulative frequency data for bed material flux samples Upper Swift Creek 12 February 2002

Date	12-Feb-02		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	269.97	4.23	-1.0	2.0 mm	79.83	3.56	
-0.5	1.4 mm	4.85	8.35	-0.5	1.4 mm	4.38	7.01	
0.0	1.0 mm	13.07	15.34	0.0	1.0 mm	13.62	14.30	
0.5	710 µm	29.42	29.23	0.5	710 µm	33.91	30.31	
1.0	500 µm	70.44	64.09	1.0	500 µm	79.67	66.41	
1.5	355 µm	96.72	86.42	1.5	355 µm	104.77	86.22	
2.0	250 µm	109.29	97.10	2.0	250 µm	117.88	96.56	
2.5	180 µm	112.48	99.81	2.5	180 µm	122.01	99.82	
3.0	125 µm	112.67	99.97	3.0	125 µm	122.20	99.97	
3.5	90 µm	112.69	99.99	3.5	90 µm	122.22	99.98	
4.0	63 µm	112.69	99.99	4.0	63 µm	122.24	100.00	
	<63 µm	112.70	100.00		<63 µm			
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table L3 Cumulative frequency data for bed material flux samples Upper Swift Creek 19 February 2002

Date	19-Feb-02		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm	
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	36.75	3.78	-1.0	2.0 mm	30.62	4.00	
-0.5	1.4 mm	1.77	5.22	-0.5	1.4 mm	1.52	5.30	
0.0	1.0 mm	3.97	7.02	0.0	1.0 mm	3.88	7.32	
0.5	710 µm	6.89	9.41	0.5	710 µm	7.32	10.26	
1.0	500 µm	14.60	15.71	1.0	500 µm	15.91	17.62	
1.5	355 µm	31.33	29.38	1.5	355 µm	32.52	31.83	
2.0	250 µm	94.33	80.87	2.0	250 µm	91.12	81.98	
2.5	180 µm	116.69	99.15	2.5	180 µm	111.21	99.17	
3.0	125 µm	117.65	99.93	3.0	125 µm	112.11	99.94	
3.5	90 µm	117.69	99.97	3.5	90 µm	112.14	99.97	
4.0	63 µm	117.72	99.99	4.0	63 µm	112.16	99.98	
	<63 µm	117.73	100.00		<63 µm	112.18	100.00	
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table L4 Cumulative frequency data for bed material flux samples in Upper Swift Creek 26 February 2002

Date	26-Feb-02		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
-2.0	4.0 mm		-2.0	4.0 mm		-2.0	4.0 mm	
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	55.92	1.14	-1.0	2.0 mm	67.78	2.42	
-0.5	1.4 mm	3.10	3.77	-0.5	1.4 mm	5.06	7.02	
0.0	1.0 mm	10.72	10.23	0.0	1.0 mm	13.94	15.11	
0.5	710 µm	26.57	23.67	0.5	710 µm	30.15	29.88	
1.0	500 µm	66.94	57.91	1.0	500 µm	67.61	64.00	
1.5	355 µm	96.38	82.87	1.5	355 µm	92.23	86.43	
2.0	250 µm	113.10	97.05	2.0	250 µm	104.63	97.72	
2.5	180 µm	116.46	99.90	2.5	180 µm	107.00	99.88	
3.0	125 µm	116.56	99.98	3.0	125 µm	107.09	99.96	
3.5	90 µm	116.57	99.99	3.5	90 µm	107.11	99.98	
4.0	63 µm	116.58	100.00	4.0	63 µm	107.11	99.98	
	<63 µm				<63 µm	107.13	100.00	
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table L5 Cumulative frequency data for bed material flux samples in Upper Swift Creek 4 March 2002

Date	4-Mar-02		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	108.73	1.85	-1.0	2.0 mm	98.27	1.81	
-0.5	1.4 mm	3.37	5.10	-0.5	1.4 mm	3.61	4.86	
0.0	1.0 mm	9.55	11.08	0.0	1.0 mm	9.78	10.09	
0.5	710 µm	21.57	22.70	0.5	710 µm	22.64	20.99	
1.0	500 µm	53.44	53.51	1.0	500 µm	59.74	52.44	
1.5	355 µm	80.50	79.67	1.5	355 µm	92.88	80.52	
2.0	250 µm	97.57	96.17	2.0	250 µm	112.16	96.86	
2.5	180 µm	101.40	99.87	2.5	180 µm	115.75	99.91	
3.0	125 µm	101.51	99.98	3.0	125 µm	115.83	99.97	
3.5	90 µm	101.52	99.99	3.5	90 µm	115.86	100.00	
4.0	63 µm	101.52	99.99	4.0	63 µm			
	<63 µm	101.53	100.00		<63 µm			
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table L6 Cumulative frequency data for bed material flux samples in Upper Swift Creek 12 March 2002

Date	12- Mar-02		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	9.05	0.64	-1.0	2.0 mm	3.94	0.36	
-0.5	1.4 mm	1.48	1.97	-0.5	1.4 mm	1.27	1.45	
0.0	1.0 mm	5.23	5.33	0.0	1.0 mm	4.12	3.89	
0.5	710 µm	15.68	14.71	0.5	710 µm	12.9	11.42	
1.0	500 µm	52.26	47.53	1.0	500 µm	49.73	43.00	
1.5	355 µm	87.93	79.54	1.5	355 µm	89.53	77.13	
2.0	250 µm	107.91	97.47	2.0	250 µm	112.68	96.98	
2.5	180 µm	110.66	99.94	2.5	180 µm	116.14	99.95	
3.0	125 µm	110.70	99.97	3.0	125 µm	116.18	99.98	
3.5	90 µm	110.71	99.98	3.5	90 µm	116.19	99.99	
4.0	63 µm	110.72	99.99	4.0	63 µm	116.20	100.00	
	<63 µm	110.73	100.00		<63 µm			
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table L7 Cumulative frequency data for bed material flux samples in Upper Swift Creek 19 March 2002

Date	19- Mar-02	No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3 & 4			Transect 2	Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	9.83	1.02	-1.0	2.0 mm	3.95	0.49
-0.5	1.4 mm	3.56	4.10	-0.5	1.4 mm	2.47	2.94
0.0	1.0 mm	12.60	11.92	0.0	1.0 mm	9.20	9.62
0.5	710 µm	30.15	27.10	0.5	710 µm	25.05	25.34
1.0	500 µm	68.94	60.65	1.0	500 µm	61.44	61.45
1.5	355 µm	95.71	83.81	1.5	355 µm	85.20	85.02
2.0	250 µm	111.52	97.48	2.0	250 µm	98.19	97.91
2.5	180 µm	114.33	99.91	2.5	180 µm	100.26	99.96
3.0	125 µm	114.41	99.98	3.0	125 µm	100.28	99.98
3.5	90 µm	114.42	99.99	3.5	90 µm	100.29	99.99
4.0	63 µm	114.42	99.99	4.0	63 µm	100.30	100.00
	<63 µm	114.43	100.00		<63 µm		
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand			

Appendix M Swift Creek cumulative frequency data bed-material load samples for the 2001–2002 wet season

This appendix contains the cumulative percentage values for the bed-material load samples collected at Swift Creek for the 2001/2002 Wet season. All samples were dry sieved through a nest of sieves to a value of 4 phi (63 μm).

Table M1 Cumulative frequency data for bed material flux samples in Swift Creek 23 January 2002

Date	23-Jan-02		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
	4.0 mm		-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	6.55	2.49	-1.0	2.0 mm	3.99	1.12	
-0.5	1.4 mm	6.45	7.37	-0.5	1.4 mm	3.12	4.39	
0.0	1.0 mm	18.19	16.26	0.0	1.0 mm	9.51	11.08	
0.5	710 µm	39.29	32.23	0.5	710 µm	22.34	24.52	
1.0	500 µm	82.89	65.24	1.0	500 µm	55.14	58.86	
1.5	355 µm	110.55	86.18	1.5	355 µm	79.91	84.80	
2.0	250 µm	124.34	96.62	2.0	250 µm	91.84	97.29	
2.5	180 µm	128.61	99.85	2.5	180 µm	94.34	99.91	
3.0	125 µm	128.78	99.98	3.0	125 µm	94.41	99.98	
3.5	90 µm	128.79	99.98	3.5	90 µm	94.42	99.99	
4.0	63 µm	128.80	99.99	4.0	63 µm	94.43	100.00	
	<63 µm	128.81	100.00		<63 µm			

Folk (1974) Texture Group: Slightly granular coarse sand

Table M2 Cumulative frequency data for bed material flux samples in Swift Creek 12 February 2002

Date	12-Feb-02		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %
	4.0 mm		-2.0	4.0 mm				
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	41.14	1.59	-1.0	2.0 mm	53.91	2.64	
-0.5	1.4 mm	3.37	4.46	-0.5	1.4 mm	3.68	5.70	
0.0	1.0 mm	11.21	11.12	0.0	1.0 mm	10.44	11.32	
0.5	710 µm	27.92	25.31	0.5	710 µm	24.99	23.42	
1.0	500 µm	71.44	62.29	1.0	500 µm	67.37	58.65	
1.5	355 µm	99.81	86.39	1.5	355 µm	97.98	84.09	
2.0	250 µm	112.78	97.41	2.0	250 µm	113.33	96.85	
2.5	180 µm	115.68	99.87	2.5	180 µm	116.91	99.83	
3.0	125 µm	115.81	99.98	3.0	125 µm	117.07	99.96	
3.5	90 µm	115.81	99.98	3.5	90 µm	117.09	99.98	
4.0	63 µm	115.83	100.00	4.0	63 µm	117.10	99.98	
	<63 µm				<63 µm	117.12	100.00	

Folk (1974) Texture Group: Slightly granular coarse sand

Table M3 Cumulative frequency data for bed material flux samples in Swift Creek 19 February 2002

Date	19-Feb-02		No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	52.54	2.49	-1.0	2.0 mm	79.01	3.15	
-0.5	1.4 mm	3.81	5.72	-0.5	1.4 mm	6.48	8.61	
0.0	1.0 mm	11.14	11.94	0.0	1.0 mm	18.62	18.83	
0.5	710 µm	27.44	25.77	0.5	710 µm	39.26	36.20	
1.0	500 µm	76.22	67.16	1.0	500 µm	82.34	72.47	
1.5	355 µm	104.14	90.85	1.5	355 µm	105.06	91.60	
2.0	250 µm	113.21	98.54	2.0	250 µm	113.38	98.60	
2.5	180 µm	114.86	99.94	2.5	180 µm	114.95	99.92	
3.0	125 µm	114.91	99.98	3.0	125 µm	115.03	99.99	
3.5	90 µm	114.92	99.99	3.5	90 µm	115.04	100.00	
4.0	63 µm	114.93	100.00	4.0	63 µm			
	<63 µm				<63 µm			
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table M4 Cumulative frequency data for bed material flux samples in Swift Creek 26 February 2002

Date	26 - Feb-02		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2		Samples 6, 7, 8, 9 & 10		
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-3.25	9.5 mm	1.33	0.02					
-2.0	4.0 mm	23.29	0.40	-2.0	4.0 mm			
-1.5	2.4 mm	299.30	5.17	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	415.50	7.18	-1.0	2.0 mm	88.25	3.09	
-0.5	1.4 mm	14.62	17.92	-0.5	1.4 mm	3.37	6.31	
0.0	1.0 mm	30.75	29.76	0.0	1.0 mm	9.19	11.88	
0.5	710 µm	51.35	44.89	0.5	710 µm	21.77	23.90	
1.0	500 µm	90.59	73.71	1.0	500 µm	58.39	58.90	
1.5	355 µm	114.55	91.30	1.5	355 µm	86.27	85.54	
2.0	250 µm	124.75	98.80	2.0	250 µm	99.28	97.97	
2.5	180 µm	126.32	99.95	2.5	180 µm	101.29	99.89	
3.0	125 µm	126.36	99.98	3.0	125 µm	101.37	99.97	
3.5	90 µm	126.38	99.99	3.5	90 µm	101.37	99.97	
4.0	63 µm	126.38	99.99	4.0	63 µm	101.38	99.98	
	<63 µm	126.39	100.00		<63 µm	101.40	100.00	
Folk (1974) Texture Group: Granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table M5 Cumulative frequency data for bed material flux samples in Swift Creek 4 March 2002

Date	4-Mar-02		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	45.48	3.94	-1.0	2.0 mm	88.72	4.14	
-0.5	1.4 mm	4.01	7.21	-0.5	1.4 mm	7.89	10.61	
0.0	1.0 mm	11.95	13.69	0.0	1.0 mm	20.12	20.63	
0.5	710 µm	27.34	26.24	0.5	710 µm	39.89	36.84	
1.0	500 µm	69.14	60.34	1.0	500 µm	79.65	69.44	
1.5	355 µm	99.29	84.93	1.5	355 µm	102.82	88.44	
2.0	250 µm	113.81	96.78	2.0	250 µm	113.21	96.96	
2.5	180 µm	117.64	99.90	2.5	180 µm	116.70	99.82	
3.0	125 µm	117.74	99.98	3.0	125 µm	116.89	99.98	
3.5	90 µm	117.74	99.98	3.5	90 µm	116.89	99.98	
4.0	63 µm	117.75	99.99	4.0	63 µm	116.91	99.99	
	<63 µm	117.76	100.00		<63 µm	116.92	100.00	
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular coarse sand				

Table M6 Cumulative frequency data for bed material flux samples in Swift Creek 12 March 2002

Date	12-Mar-02		No. of Samples = 10		1st Transect = 5		2nd Transect = 5	
Transect 1	Samples 1, 2, 3, 4 & 5			Transect 2			Samples 6, 7, 8, 9 & 10	
Phi		Mass (g)	Cumulative %	Phi		Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm			
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00	
-1.0	2.0 mm	7.85	0.51	-1.0	2.0 mm	6.32	0.41	
-0.5	1.4 mm	2.61	3.10	-0.5	1.4 mm	1.52	1.92	
0.0	1.0 mm	8.09	8.54	0.0	1.0 mm	5.25	5.64	
0.5	710 µm	18.06	18.44	0.5	710 µm	13.56	13.91	
1.0	500 µm	43.53	43.72	1.0	500 µm	39.99	40.23	
1.5	355 µm	69.92	69.91	1.5	355 µm	69.64	69.76	
2.0	250 µm	94.40	94.20	2.0	250 µm	94.64	94.65	
2.5	180 µm	100.10	99.86	2.5	180 µm	99.88	99.87	
3.0	125 µm	100.22	99.98	3.0	125 µm	100.00	99.99	
3.5	90 µm	100.23	99.99	3.5	90 µm	100.00	99.99	
4.0	63 µm	100.24	100.00	4.0	63 µm	100.01	100.00	
	<63 µm				<63 µm			
Folk (1974) Texture Group: Slightly granular medium sand				Folk (1974) Texture Group: Slightly granular medium sand				

Table M7 Cumulative frequency data for bed material flux samples in Swift Creek 19 March 2002

Date	19-Mar-02	No. of Samples = 8		1st Transect = 4		2nd Transect = 4	
Transect 1	Samples 1, 2, 3 & 4			Transect 2		Samples 5, 6, 7 & 8	
Phi		Mass (g)	Cumulative %	Phi	Mass (g)	Cumulative %	
-2.0	4.0 mm			-2.0	4.0 mm		
-1.5	2.4 mm	0.00	0.00	-1.5	2.4 mm	0.00	0.00
-1.0	2.0 mm	19.02	3.80	-1.0	2.0 mm	7.82	1.96
-0.5	1.4 mm	6.81	9.83	-0.5	1.4 mm	4.83	6.95
0.0	1.0 mm	15.28	17.33	0.0	1.0 mm	11.58	13.92
0.5	710 µm	28.11	28.69	0.5	710 µm	21.15	23.81
1.0	500 µm	56.59	53.91	1.0	500 µm	45.75	49.24
1.5	355 µm	79.85	74.51	1.5	355 µm	69.54	73.82
2.0	250 µm	100.66	92.94	2.0	250 µm	89.02	93.95
2.5	180 µm	108.20	99.62	2.5	180 µm	94.65	99.77
3.0	125 µm	108.60	99.97	3.0	125 µm	94.85	99.98
3.5	90 µm	108.62	99.99	3.5	90 µm	94.86	99.99
4.0	63 µm	108.62	99.99	4.0	63 µm	94.86	99.99
	<63 µm	108.63	100.00		<63 µm	94.87	100.00
Folk (1974) Texture Group: Slightly granular coarse sand				Folk (1974) Texture Group: Slightly granular medium sand			