Table III-1-3
Qualitative Sediment Distribution Ranges for Standard Deviation, Skewness, and Kurtosis

Standard Deviation	
Phi Range	**Description**
<0.35	Very well sorted
0.35-0.50	Well sorted
0.50-0.71	Moderately well sorted
0.71-1.00	Moderately sorted
1.00-2.00	Poorly sorted
2.00-4.00	Very poorly sorted
>4.00	Extremely poorly sorted
Coefficient of Skewness	
<-0.3	Very coarse-skewed
- 0.3 to - 0.1	Coarse-skewed
- 0.1 to +0.1	Near-symmetrical
+0.1 to +0.3	Fine-skewed
>+0.3	Very fine-skewed
Coefficient of Kurtosis	
<0.65	Very platykurtic (flat)
0.65-0.90	Platykurtic
0.90-1.11	Mesokurtic (normal peakedness)
1.11-1.50	Leptokurtic (peaked)
1.50-3.00	Very leptokurtic
>3.00	Extremely leptokurtic

f. Uses of distributions. The median grain size is the most commonly used sediment size characteristic, and it has wide application in coastal engineering practice. The standard deviation of sediment samples has been used in several ways, including beach-fill design (see Hobson (1977), Ch. 5, Sec. III,3) and sediment permeability (Krumbein and Monk 1942). When a set of samples are taken from a single project site, they will frequently show little or no consistent variation in median diameter. In this case, various higher order moments are usually used to distinguish different depositional environments. There is an extensive literature on the potential application of the measures of size distribution; see, for example, Inman (1957), Folk and Ward (1957), McCammon (1962), Folk (1965, 1966), Griffiths (1967), and Stauble and Hoel (1986).

g. Sediment sampling procedures.

(1) Although a beach can only be composed of the available sediments, grain size distributions change in time and space. In winter, beach distributions are typically coarser and more poorly sorted than in summer. Also, typically, there is more variability in the foreshore and the bar/trough regions than in the dunes and the nearshore.

(2) While a single sample is occasionally sufficient to grossly characterize the sediments at a site, usually a set of samples is obtained. Combining samples from across the beach can reduce the high variability in spacial grain size distributions on beaches (Hobson 1977). Composite samples are created by either physically combining several samples before sieving or by mathematically combining the individual sample