Various publications describe the Wolman Pebble Count procedure. This technique requires the observer to measure sizes of random particles using a gravelometer. Particles smaller than 2 mm are placed in a category of <2mm. A step-toe procedure is frequently used to randomly select particles for quantification.

**Wolman Pebble Count Procedure**

1. Select a reach for sediment particle size distribution quantification. For stream characterization, sample pools and riffles at the same proportion the occur in the stream reach.

2. Start transect at a randomly selected point (throw a pebble) along the edge of stream. Take one step into the water perpendicular to flow and, while averting your eyes, pick up the first pebble touching your index finger next to your big toe.

3. Measure the b-axis by determining which hole the pebble fits through in the gravelometer and record in data book. For embedded pebbles or those that are too large to move, measure the shortest axis visible.

4. Take another step across the stream and repeat the previous steps until you reach the opposite side. Establish a new transect and begin the process over again. If your stream reach is relatively narrow (<2 m), you can modify the method by walking upstream in a zig-zag pattern instead of perpendicular to flow. In general, you will need to collect 100 measurements in order to accurately quantify pebble distributions.

5. After data is collected, plot data by size class (log₂ scale) and frequency to determine distributions. For example the D₅₀ is the particle size that 50% of the samples are equal to or smaller than.