

CHaMP Point Method Collection

Depending on the size and topography of a stream there are different methods the rodman needs to employ in order to represent the different streams correctly. The following describe the various methods used to represent different types of streams.

120 meter Streams

When surveying a 6 meter bankfull width category (120 meters) stream it is important to represent the thalweg as a line. Representing the thalweg as a line requires that the rodman take a sufficient amount of thalweg points to accurately represent the gradient breaks and thalweg direction changes within the stream.

Greater than 120 meter Streams

When surveying streams greater than 6 meters, it is not necessary to represent the thalweg as a line. In these larger streams the thalweg is best represented by points. The point density distributions are less than the smaller streams. The point intervals will depend on the actual length of the site and the complexity of topography within the site.

Constrained Reaches

In constrained streams the survey perimeter will often be represented by Survey Extent (sx). Survey Extent points are recorded as lines. These sx points should be taken at least a meter beyond bankfull.

Non-constrained Reaches

In non-constrained reaches, depending on the topography surrounding the reach, the perimeter of survey will be represented by top of bank (tb), survey extent (sx), or bankfull (bf). Top of bank will be used as the perimeter of survey if it is clearly definable and there is little or no possibility of erosion beyond the top of bank. If it appears that the stream bank may erode beyond the top of bank or there is no clearly defined top of bank it is necessary to use survey extent lines past the top of bank location.

Simple Channel Units

- If a section or unit of stream is plane bed or has uniform channel topography use larger spacing the points collect the topographic points systematically in a triangular fashion but with fewer points than a more complex section.

Complex Channel Units

- Sections of stream that have many gradient breaks and are very complex and will require a high density of points taken at smart locations.
- For gradient breaks points must be taken at the base of the break and at the top of break. This will ensure that the gradient change is clearly defined once represented in TIN format. See illustration
- To accurately represent a high feature within the stream or on the bank it is important to not just get point at highest part of feature but also take points around base of feature. This ensures that the highest point does not incorrectly interpolate to outlying points not associated with the feature.
- Similarly the above steps should be taken for very low or deep topographic features.
- If there are manmade structures in stream such as square cement bridge footings or other cement structures. It is important to represent them using breaklines (bl). To effectively represent such features the rodman must create breaklines around the top of feature and around the base of the feature.