power. In addition, consolidation and imbrication of bed material is used in conjunction with bar data to evaluate sediment transport competency.

Bar

The bar theme is used primarily for developing an understanding of sediment transport, an often overlooked but critically important stream process.

The bar theme includes 16 parameters. These include extent and type of bed sorting (generally coarse to fine proceeding downstream), pattern of bar placement, bar width relative to stream width, consolidation, vegetative condition, and other indicators of potential bar advance. Assessment of bar condition is particularly useful in distinguishing between widening and meander adjustment, two stream processes associated with systemic bank failures. Bar evaluation is also helpful in temporal analysis of stream process and helps distinguish between ongoing and completed channel adjustments.

Profile Features (non-surveyed)

This theme included the location of knick points and the tops of pool-riffle sequences. The height of the knick point, bed material type, presence or absence of debris jams, and erosion patterns are all used to distinguish between active and completed channel incision. Evaluation of pool-riffle sequence, particularly relative to location in plan form, is useful in assessing potential plan form migration.

Channel Dimensions

The channel dimensions theme is essentially channel cross section information. In this theme there are 27 parameters, including bed width, bank height, bank angle, top of bank width, scour line elevation, and lower limit of woody vegetation. The combined bank height and angle data are useful in distinguishing between fluvial and geotechnical causes of bank failure and therefore the appropriate approach to management.

Erosion and Mass Wasting

The erosion and mass wasting theme includes both quantitative and qualitative data used to identify lengths of channel experiencing active erosion or mass wasting, as well as the dominant mode of failure, such as scour, toppling, flow, wedge, or circular failure. Identifying the type of mass wasting is essential to understanding the failure mode and to distinguish between systemic, local, and geotechnical failures. Scour patterns are also helpful in determining the systemic process driving the erosion.

Vegetation

The vegetation theme contains 16 elements. Vegetative data include the quality, size, and structure of the riparian forest, percent of canopy cover, and presence or absence of invasive species. Native vegetation plays a role in stabilizing stream systems through mechanical reinforcement of streambanks by plant roots, soil moisture management through evapotranspiration, and hydraulic roughness at the bank toes.