

## **Erosion Ratings Criteria – Sacramento River System:**

The Flood Project Integrity and Inspection Branch (FPIIB) has developed the following criteria to rate erosion sites in the Sacramento River system. The Sacramento River criteria and ratings are based entirely on the Ayres Associates '2007 – Field Reconnaissance Report of Bank Erosion Sites and Site Priority Ranking' dated December 18, 2007. The definitions appear below exactly as stated in the Ayres report. While DWR staff may have been present on some of the reconnaissance surveys, the Ayres data collection and ranking system was relied upon to make ranking choices. Considering that DWR personally inspected only a small percentage of sites, the Ayres Associates data and ranking give a broad perspective and knowledge of the Sacramento system.

DWR staff decided to use Methodology 4 to rate the erosion sites. This methodology was chosen over Methodology 1, 2, and 3 because the factors of Economics and/or Human Usage were not included in Methodology 4. These factors are based on cost and recreation, which was not desirable for this integrity rating.

Following are the definitions of the criteria used to rate erosion sites:

Bank Slope: The bank slope is the horizontal to vertical ratio of the eroding slope. (Estimated since actual cross sections were not completed at the time of this report.)

Berm Width: The berm width is the horizontal segment of the bank that extends from the levee toe to the top of the riverbank. (Estimated since actual cross sections were not completed at the time of this report.)

Soil Type: Based on the Unified Soil Classification System.

Velocity: The velocity for the Sacramento River sites has been obtained from the existing UNET hydraulic model using the 100-yr discharge, where available.

Bank Stability: The bank stability criterion identifies any observed instabilities in the bank, such as near vertical slopes and animal caves.

Each factor is given a point rating as defined in the following table. This table is taken from page 21 of Ayres Associates '2007 – Field Reconnaissance Report of Bank Erosion Sites and Site Priority Ranking.'