Erosion Ratings Criteria – San Joaquin River System:

The Flood Project Integrity and Inspection Branch (FPIIB) has developed the following criteria to rate erosion sites in the San Joaquin River system. Portions of this criteria have been based upon the Ayres Associates 'Priority Site Ranking for Critical Erosion Sites on the Sacramento River Flood Control Levees Using Multiple Ranking Methodologies" dated January 16, 2006. Some of the definitions and scores appear below exactly as stated in the Ayres report. The criteria have been partially modified to suit the type of data collected from the San Joaquin River System erosion surveys. Also, new criteria have been added as necessary to account for site conditions and personal judgment of the criteria team. If more time were available to visit erosion sites again, additional data would be collected and the criteria would be expanded.

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

Berm width: The berm width is the horizontal segment of the bank that extends from the levee toe to the top of the riverbank.

Length of Erosion: The length of erosion is the full length along the river over which the erosion occurs.

Location of Erosion: The location of the erosion is the position in the vertical direction where the erosion occurs, the lower on the slope, the greater the potential for failure.

Severity of Erosion: The severity of erosion refers to the vertical scarp height of the eroded face.

Burrow Holes: Burrow holes refers to the location of animals holes in the vertical direction of the levee slope. This criteria would be expanded upon if more information were available regarding size and frequency of holes.

Radius of Curvature (Rc/W): This factor is the radius of the meander bend divided by the top width of the channel flowing full.

Site Relative to Bend: This factor relates to where within a meander bend an erosion site is located.

Vegetation Cover: This criterion refers to how much vegetation exists on the site and its role in providing erosion protection.

Seepage Potential: The seepage potential takes into account any documented history of seepage or sinkholes as contained in the FPIIB's database.

Each factor is given a point rating as defined in the following table. The severity of erosion criteria is multiplied by a factor of two to account for its importance. If more time were available to visit sites again, the FPIIB would add in criteria for levee slope

and soil type. Also, a factor for velocity would be included as available from hydraulic models.