

Central Valley Flood Protection Board Meeting

INFORMATIONAL BRIEFING

Understanding the Sacramento River Valley before Levees and Dams

BRIEFING SUMMARY

Abstract

This presentation discusses three topics: 1) the geomorphic function of the Sacramento River system in the early 1800s, 2) the historical and geomorphic context of the 1862 flood, and 3) how the Sacramento River Flood Control Project mimics the natural geomorphic function of the river system during floods. Historically, the lower Sacramento River lacked the capacity to convey seasonal floods and regularly overtopped its banks, sending water and sediment via a network of sloughs and crevasses into expansive flood basins on either side of the river. Prior to levees and dams, seasonal floods on the Sacramento River would regularly inundate the lowest parts of these flood basins, moderate floods would cause extensive flooding, and very large floods would create an 'inland sea', affecting over 2,000 square miles of the valley floor. The 1862 flood was a very large flood that filled the Sacramento Valley flood basins. Although it was described as unprecedented by early settlers, most had lived in California for less than 15 years. Historical accounts from Spanish missions and Native Americans describe an earlier valley-filling flood in 1805. Subsequent valley-wide flooding in 1878 and again in 1907 suggests the 1862 flood was not an anomaly but rather representative of very large magnitude floods that infrequently occur in the Sacramento Valley. The modern flood control system mimics the natural geomorphic function of the Sacramento River system by routing flood flows from the Sacramento and Feather Rivers through a network of flood basin bypasses.