NCRWQCB FILE Madej Aggradation

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... upper ... the Bear River has been dramatically different than predicted by Gilbert's *symmetrical sediment wave model*. Lack of main channel storage in the South Yuba suggests a sediment wave more similar to Gilbert's concept, although sustained storage and mobility of sediment in some tributary channels suggest that a *skewed wave model* is also appropriate to that basin. Thus, even in the type locale of Gilbert's model, sediment deliveries are skewed in respect to time. This temporal relationship is more subtle in the steep gorges of the Yuba basin, but differences with the Bear River are in degree not kind.

H52A-2 1330H

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Aggradation and Degradation in Redwood Creek, Northwestern California, Over Three Time Scales.

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Aggradation and degradation spanning three time scales have been studied in the Redwood Creek basin. Floodplain sediments several thousand years old and up to 7.7 m deep were sampled by backhoe trenches and soil cores. Results from stratigraphic analyses and C14 dating suggest one floodplain rose about 1.3 m in 810 years (+/- 50y), through a minimum of 5 major episodes of flood deposition. Individual fining-upward flood deposits laid down between 3520 and 810 ybp range from 40 to 120 cm thick and have weak soil (A horizon) development. Deposits younger than 810 ybp are less than 40 cm thick and show little to no soil development, suggesting episodes of overbank flooding occur more frequently, but deposit less sediment than prior to 810 ybp. Modern (post-1950) flood deposits are limited spatially and average <10 cm/event. In contrast, over several decades, a similar amount of channel filling (1-2 m) occurred in steep tributaries in one flood event, but >70% was then removed in 5 to 10 years. Likewise, in the 1964 flood the main channel of Redwood Creek (area = 720 km^2, gradient = 1.4%) aggraded several meters in headwater areas. Channel cross section surveys show that subsequent erosion and transport of upstream flood deposits caused aggradation downstream during the last 14 years. The locus of aggradation shifted 6 km downstream in 9 years. Finally, on the scale of one high flow season, detailed topographic surveys show that fine-grained gravel 'sheets' 0.2 -1 m high were deposited on gravel bars, raising the mean channel bed elevation. These gravel 'sheets' are only found in reaches displaying recent aggradation. Although floodplain deposits provide a long-term record of sedimentation, they may not document significant short-term fluctuations in sediment storage and channel morphology due to landuse.

H52A-3 1345H

Hydrologic and Geomorphic Chan...

River. Radio... indicates uninte... the last 3,000 ... reach of the wa... and filling pr... fill which cons... strata of fine... been deposited b...

The lower wash ... historic evidenc... phytic vegetati... about 5,000 in ... water discharge ... parallel with po... in 1955, averag... more than 150 fe... supported dense ... and marshlands we...

Increasing stre... morphology, and ... Holocene deposi... flow approache... progressed becau... and superimposed ... during the flood-... removed about ... redeposited most ... equivalent to a le... and a depth of 17 ... lines and wetland ... dam presently be... south of the wash ... trends along a sev...

H52A-5 1415...

Timing and Possible Ca... Southwestern Colorad...

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Since about A.D. 120... Plateau have undergone tw... spatial and temporal scales... 1150-1250 and lasted until ... entrenchment of continuo... beginning about A.D. 140... deposition of a valley-axis ... record the filling and over... derived primarily from adjac... walls. Perennial surface wa... floods occurred in the peri... alluviation is probably rel... intensification of hillslope ... sediment to alluvial channe...

The recent erosional epi... among basins. The erosio...