

SEDIMENT RESOURCES HANDOUT
12/7/99 TWG MEETING — DAVE RUBIN

The GCMRC physical sciences program has been monitoring sediment input (Paria and Little Colorado) and export (mainstem); grain size of sediment in flood deposits, on the bed, and in suspension; volume of sediment in storage at selected sites; and surface area of sand deposits (geomorphic mapping and side-scan sonar mapping).

High mainstem flows have the potential of accomplishing two sediment-related goals: transferring sediment from low areas (under water) to high areas (on bars); this transfer of sediment may offer the additional benefit of reducing the loss of sediment downstream.

Monitoring data suggest that little—if any—of the sediment that is supplied by tributaries remains upstream of the Grand Canyon gage for more than a few months. High mainstem flows that are not timed to follow shortly after tributary floods may accomplish the first goal listed above (transferring sand to high areas on bars), but will not effectively accomplish the important goal of retaining tributary sediment.

To retain tributary sediment, artificial mainstem floods should be scheduled as soon as possible after tributary-input floods. This will provide more sediment than waiting many years for tributary sediment to accumulate.