Update on 2010 sediment inputs

GCDAMP AMWG Meeting, Phoenix
August 24-25, 2010

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Flux monitoring for managing sediment and sandbars

- Flux monitoring:
  - Tracks tributary sediment inputs and mainstem transport at five locations to track status of the sediment “bank account.”
  - Provides the information needed to time high flows for building sandbars to follow periods of sand accumulation.
Mainstem flow
Mainstem flow and sediment
Tributary flow and sediment
Sediment budget reach
RM 0-30 – upper Marble Canyon
RM 30-61 – lower Marble Canyon
RM 61-87 – eastern Grand Canyon
RM 87-166 – central Grand Canyon
RM 166-225 – western Grand Canyon

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Sand budget likely slightly positive for period owing to recent Paria River floods.
Summary

- The tributaries have been fairly active this summer. Since July 1, 2010, the Paria River has supplied 440,000 ± 90,000 metric tons of sand and the Little Colorado River has supplied 420,000 ± 80,000 metric tons of sand to the Colorado River.

- However, owing to (1) relatively low sand inputs and (2) relatively high powerplant fluctuations during winter and summer months, the sand mass balance in upper Marble Canyon (RM 0 to 30) is only likely slightly positive between recession of the 2008 HFE and today. The change in the sand mass balance in upper Marble Canyon is +120,000 ± 140,000 metric tons during this period.

- In comparison, we had accumulated 1.2 million ± 600,000 metric tons leading up to the March 2008 HFE.