



Update on 2010 sediment inputs

GCDAMP AMWG Meeting, Phoenix

August 24-25, 2010

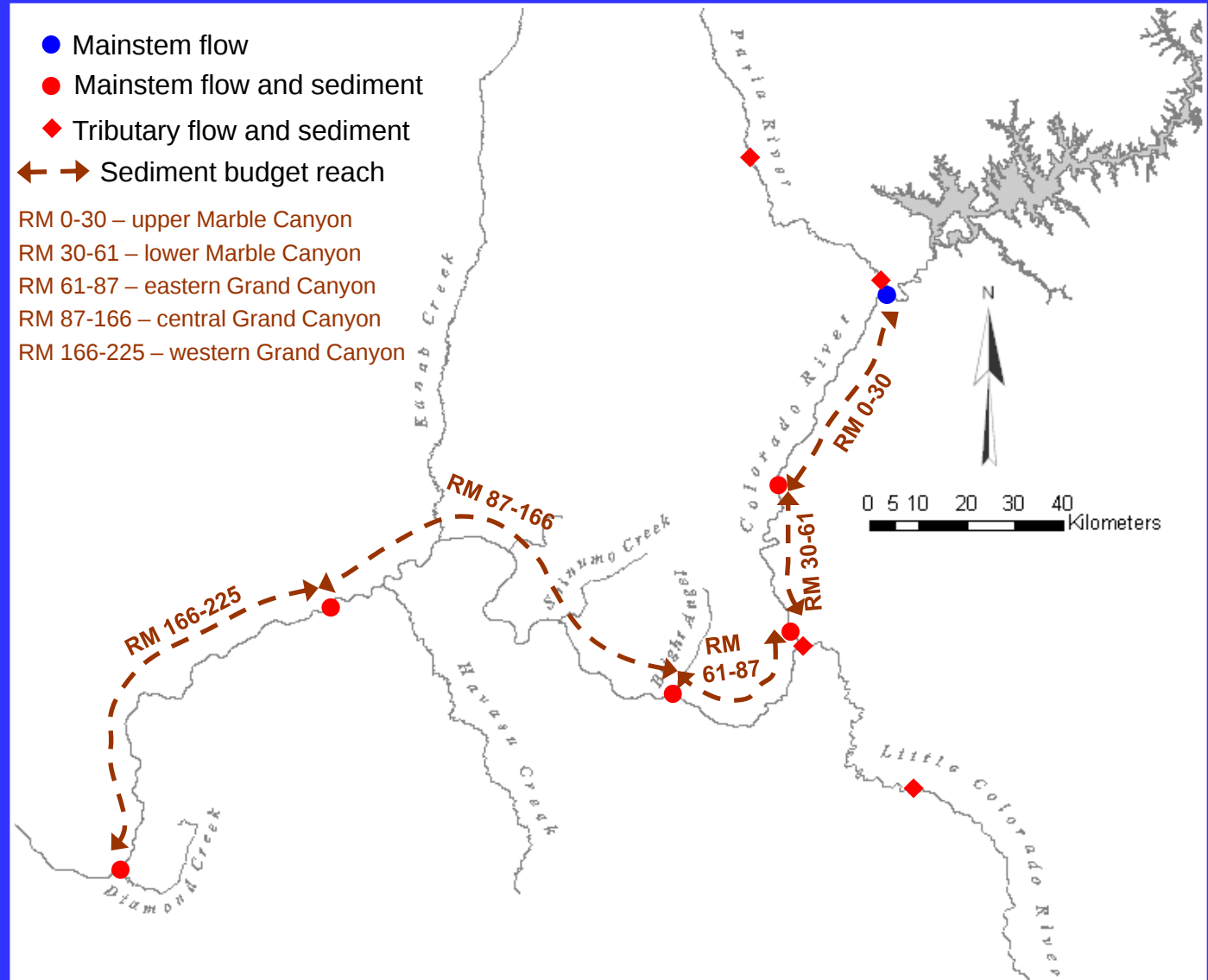
Paul Grams, USGS, Grand Canyon Monitoring and Research Center

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.

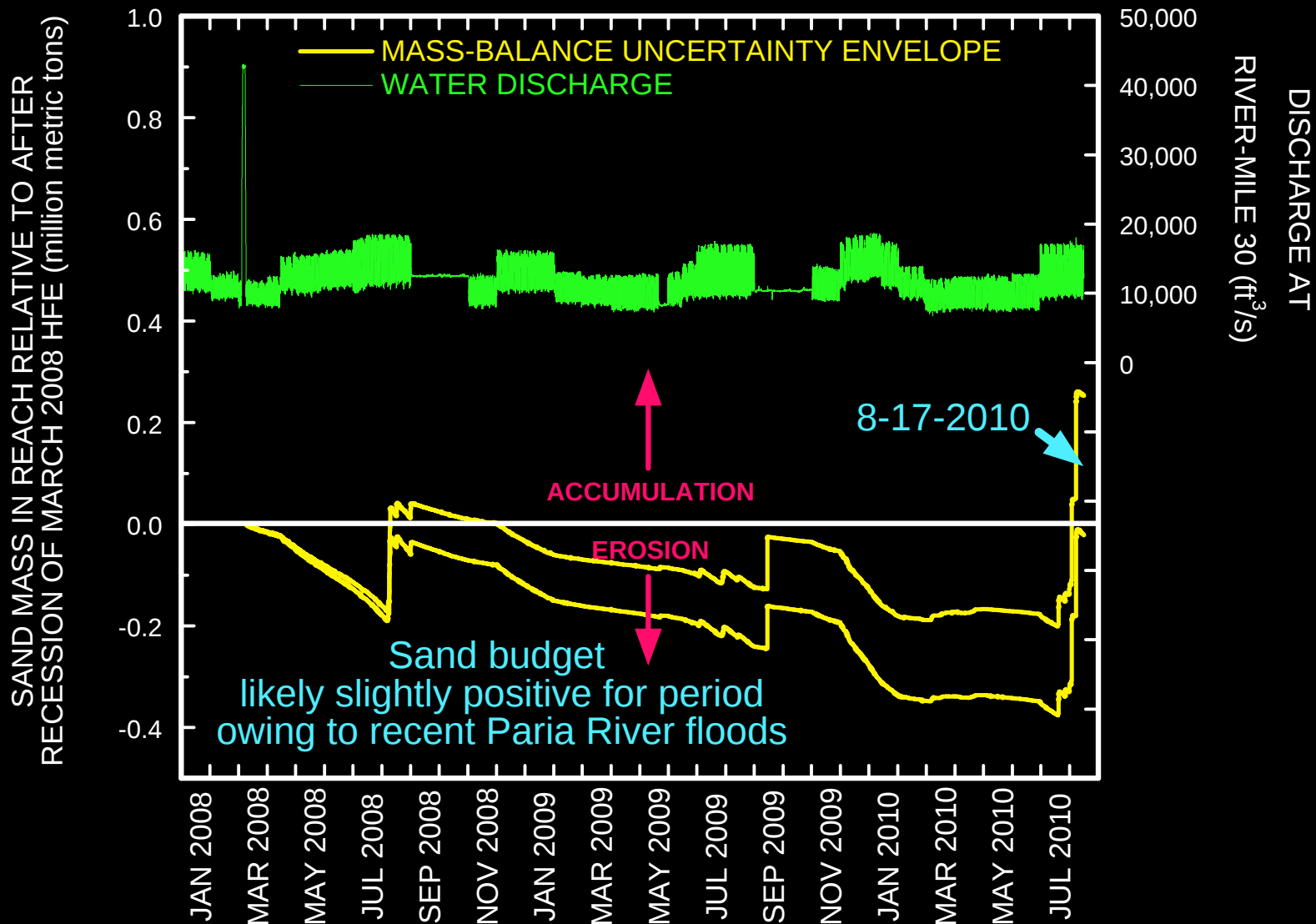


USGS Sediment Flux Monitoring Program in Grand Canyon



David J. Topping
Ronald E. Griffiths
Thomas A. Sabol
Nicholas Voichick

POST-2008 HFE MASS-BALANCE SAND BUDGET BETWEEN RIVER-MILES 0 AND 30



Summary

- The tributaries have been fairly active this summer. Since July 1, 2010, the Paria River has supplied $440,000 \pm 90,000$ metric tons of sand and the Little Colorado River has supplied $420,000 \pm 80,000$ 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 $+120,000 \pm 140,000$ metric tons during this period.
- In comparison, we had accumulated $1.2 \text{ million} \pm 600,000$ metric tons leading up to the March 2008 HFE.