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Update on 2010 sediment inputs

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Paul Grams, USGS, Grand Canyon Monitoring and Research Center

U.S. Department of the Interior
U.S. Geological Survey

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.

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USGS Sediment Flux Monitoring Program in Grand Canyon

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

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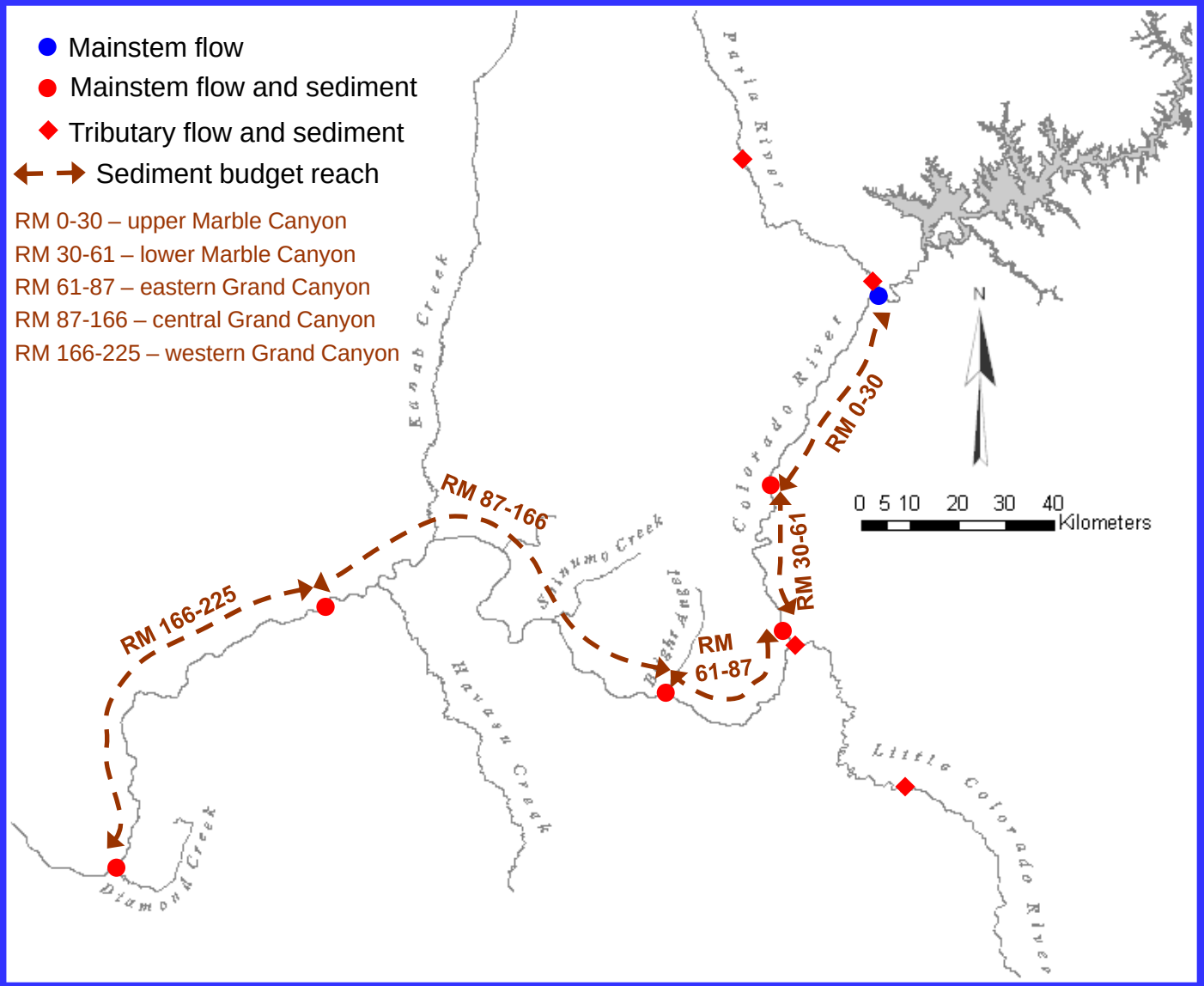
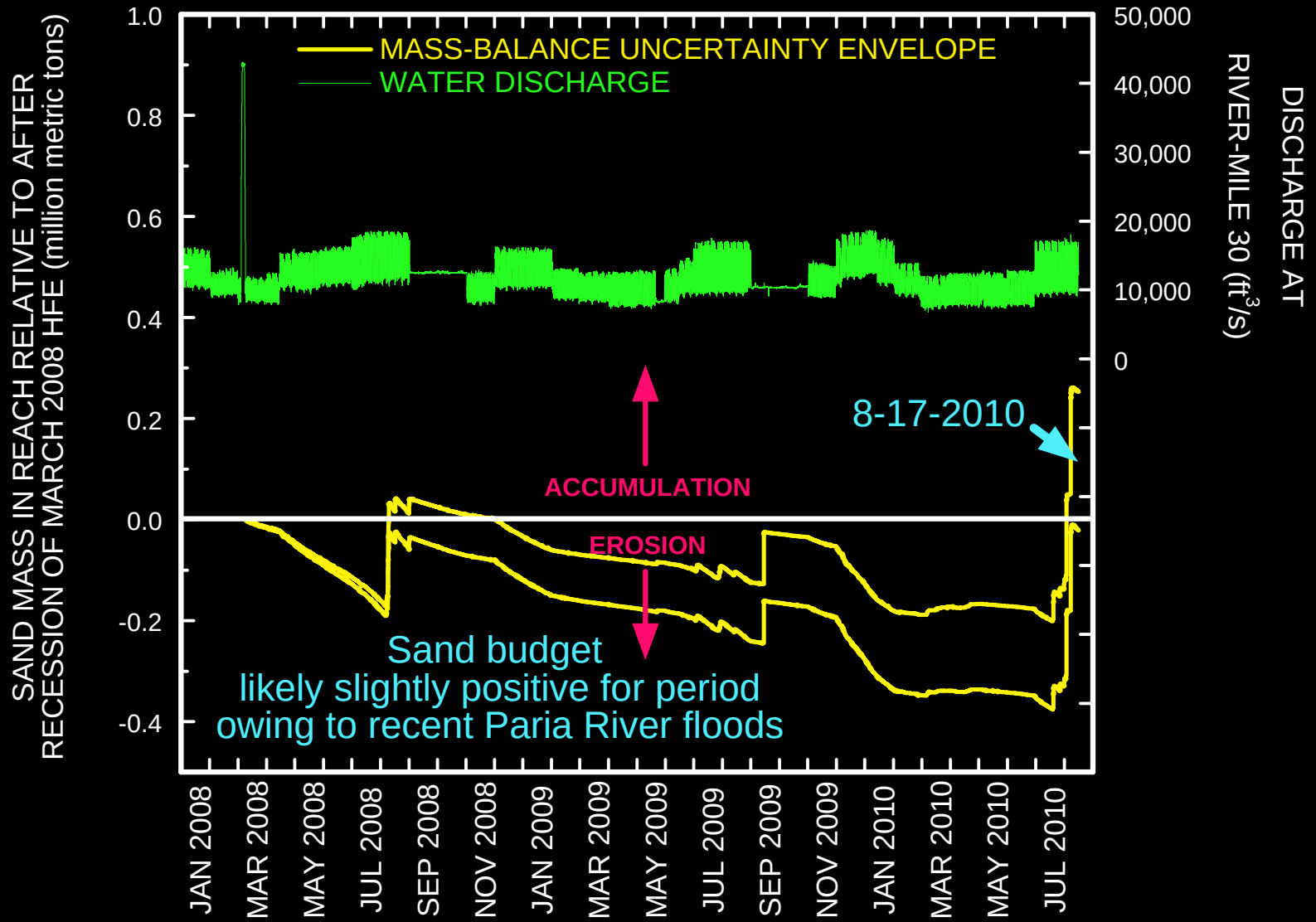


POST-2008 HFE MASS-BALANCE SAND BUDGET BETWEEN RIVER-MILES 0 AND 30



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Preliminary results – subject to review and revision

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.**

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Preliminary results – subject to review and revision