

Description/Challenges

- San Francisco Bay and Delta System
- Large estuary system with significant tidal prism and significant fluvial sediment input
- Difficulty understanding sediment transport, particularly through the Golden Gate

Objectives

- Develop preliminary sediment budget for SF Bay
- Develop understanding of implications of sediment budget for placement of dredged material
- Develop understanding of sediment transport to optimize dredging operations and beneficial reuse



BLUF: SPN reviewed the latest scientific literature and developed a preliminary sediment budget for the San Francisco Bay .

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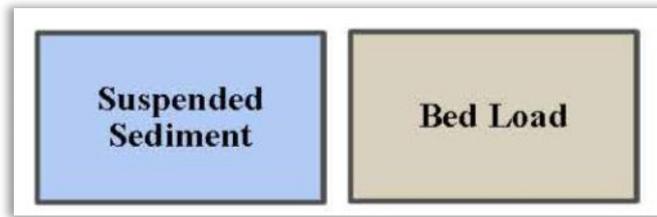
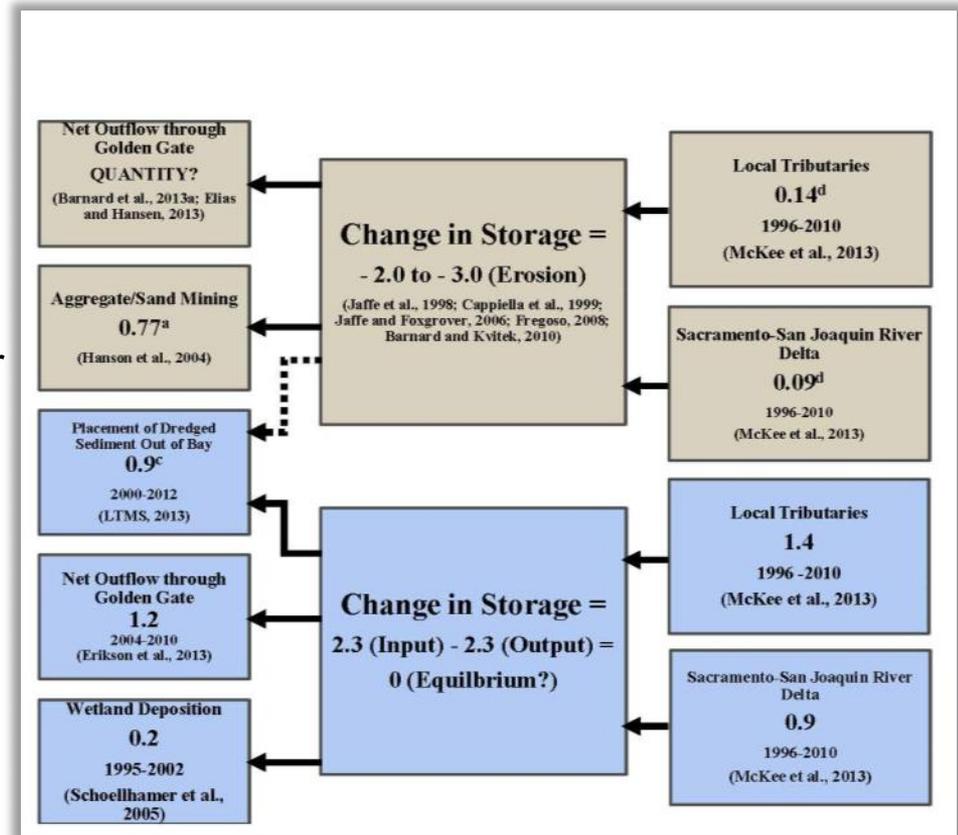
Approach

(including Tools/Models/Data Used)

- Review of latest scientific literature (late 20th century - 2013)
- Implementation and update of a box model depicting major sediment sources and sinks
- Review of existing sediment budgets for major sub-embayments

Deliverables

- Sediment budget (box model) - August 2013
- Summary document describing sediment budget – Sep 2013
- Presentation at RSM IPR – Aug 2013
- Additional presentations of findings - TBD



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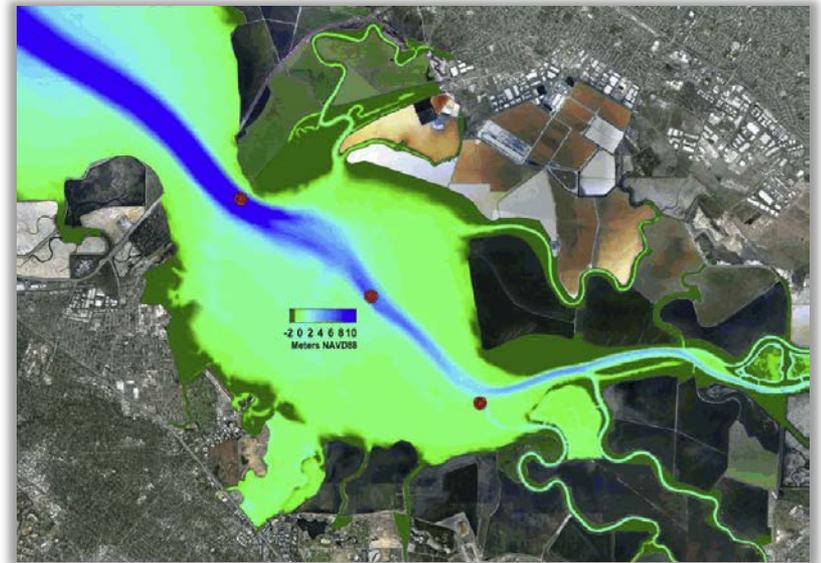
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Accomplishments/Benefits/Lessons Learned

- Better understanding of SF Bay sediment budget
- Identification of data and research needs
- Understanding of implications of sediment transport for beneficial reuse in restoration projects
- Understanding sediment transport in a highly energetic inlet is difficult and may require significant resources

Opportunities to take action

- Coordinate sediment needs at restoration projects with proposed deepening project in the South Bay
- Utilize numerical modeling to better understand sediment transport in sub-embayments (North Bay and South Bay)
- Provide support to initiate a pilot study of beneficial reuse of dredged material in and adjacent to restoration sites



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District PDT Members

- James Zoulas
- Frank Wu
- Craig Conner
- John Dingler
- Dave Doak
- Al Paniccia
- Jessica Burton-Evans
- Tom Kendall
- Peter Mull
- Mike Dillabough

Stakeholders and Partners

- San Francisco Bay Conservation and Development Commission (BCDC)
- California State Coastal Conservancy (SCC)
- US Environmental Protection Agency (EPA)
- US Fish and Wildlife Service
- US Geological Survey (USGS)

Leveraging/Collaborative Opportunities

- Research opportunities with USGS and ERDC
- Planning and resource management opportunities with BCDC
- Restoration opportunities with SCC and USFWS