

## **Researchers Install Instrumentation at Strategic Placement Locations to Measure Sediment Delivery to Tidal Creeks**

*Impact Statement: In-bay strategic placement to benefit wetlands is a promising, novel approach that if proven effective could become applied nationwide to increase beneficial use of fine-grained sediment in coastal and estuarine settings. The subject study supplements routine monitoring of the Eden Landing Strategic Placement (South San Francisco Bay) and provides key insight into the acting physical processes which allows expansion of the principles to other sites.*

In August 2023, Jarrell Smith, Michael Ramirez, Charles Ellis, and Josh Isenhoff (all of ERDC Coastal and Hydraulics Laboratory [CHL]) installed two instrument platforms in Mt. Eden Creek, California, in preparation for in-bay strategic placement by the USACE San Francisco District (SPN) (Figure 1). Instrumentation installed on these platforms will estimate tidal sediment flux and suspended sediment characteristics delivered to the creek. This USACE Dredging Operations and Environmental Research (DOER) Program sponsored research will be combined with data collected by the US Geological Survey (USGS) and SPN to evaluate the performance of this in-bay strategic placement action and to inform future efforts to supplement the delivery of dredged sediment to saltmarshes. The instrumented platforms will operate from August 2023 through January 2024.



Figure 1. Instrumented platform in Mt. Eden Creek at the state of California's Eden Landing Ecological Reserve. Instrumentation installed on the platforms are measuring key sediment transport metrics to evaluate the delivery of sediment in the channel to connected saltmarshes. Funding for this research is provided by the USACE Dredging Operations and Environmental Research (DOER) Program.

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