



Developing Guidance Documents for Utilizing Low-Cost Imagery for Monitoring Dredged Material

Dredging Operations Environmental Research (DOER) Program

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Focus Area

Dredged Material Management.

Problem

In 2023, LTG. Spellmon issued his “Beneficial Use of Dredged Material Command Philosophy Notice” which detailed USACE’s goal to beneficially use 70% of dredged material by the year 2023. In the two years since the release of LTG> Spellmon’s memo, USACE Districts have begun tracking current BUDM usage and identifying new projects that can help reach the 70% usage, however there is some uncertainty on how to successfully accomplish this due to limited recent research or published documents. Recent guidance documents have been published detailing how to identify nourishment sites and placing thin-layer material, but none have been written on the crucial, but not required, monitoring portion of placements.

Study Description

This effort will utilize CorpsCam imagery to write technical documents detailing the various monitoring methods and their applications to BUDM projects. While some of the datasets were analyzed for previous and ongoing DOER, EWN, and RSM efforts, there is no single document detailing the camera deployment, data dissemination, and image analyses from a monitoring and performance assessment perspective. These documents will allow District partners to have a reference for future monitoring efforts within their jurisdiction.



Products

Two technical documents will be produced as part of this effort, the first will be a journal article on the CorpsCam initiative. While this has been ongoing for 8 years and referenced in the media and publications, there has not been a document detailing all of the hardware and data infrastructure currently offered. The second document will be a technical report describing previous CorpsCam efforts to monitor BUDM placements across the Nation, allowing District partners to see possible monitoring solutions for their ongoing projects.

Summary

This research will develop two new technical guidance documents for District partners to reference. The results will allow for cheaper and more efficient monitoring of ongoing BUDM projects.



Balancing operational and environmental initiatives and meeting complex challenges of dredging and dredged material placement in support of the navigation mission.