

Methods published for 3D printing dredge sediments to sequester contaminants

ERDC-EL researchers recently developed and published methods to increase beneficial use of contaminated dredge sediments by innovative 3D printing post processing. The effort is funded by the USACE Dredging Operations and Environmental Research program, project 24-07.

Researchers Mrs. Ashley Harmon, Dr. Mark Ballentine, and Mr. Michael Jung recently published a ERDC technical note on novel methods to 3D print dredge sediment titled, “Methods for 3D Printing Dredge Sediments to Sequester Contaminants.” The technical report focused on developing post processing of the dredge sediment to sequester and amend contaminated sediments. Confirmatory analytical analysis indicates post processing plays an important role in controlling the release and sequestration of contaminants. Post processing of contaminated dredge sediments that involve heat beyond 400 °C can potentially increase release into water than those that are less processed. This research could help to inform safer beneficial use of dredge sediments. The group have also previously detailed the importance and impact of 3D printing dredge sediment through creation of a video posted on the Dredging Operations and Environmental Research program website.

ERDC-EL is following this technical report with a journal article detailing the results from the effect of pre- and post-processing of dredge sediment on sequestering contaminants and contaminant toxicity.

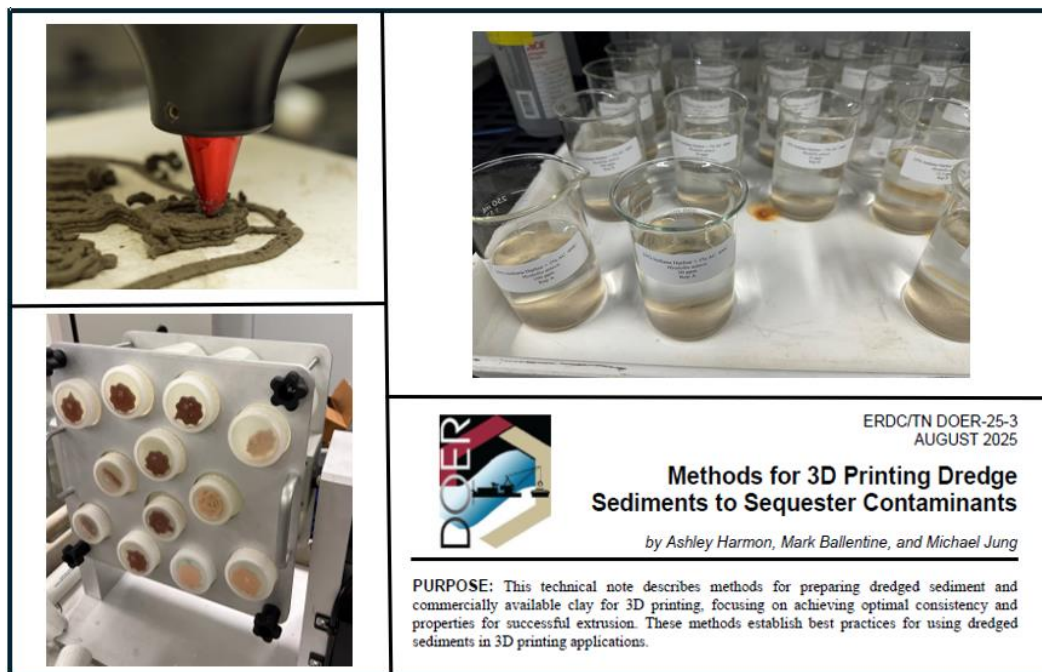


Figure 1. Methods for 3D Printing Dredge Sediments.

Link: ERDC technical note: <https://dx.doi.org/10.21079/11681/49892>

Video: https://doer.el.erdcdren.mil/media.html#bu-3d_1

Reference: Use Chicago Manual of Style reference formats as applicable ...

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