



# Confined Disposal Facility (CDF) Plant Uptake of Contaminates Literature Review

## ERDC Dredging Operations Technical Support Program (DOTS)

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

### Response Summary:

USACE Chicago district was interested in compiling existing information on plant uptake of contaminants in dredged sediments. There was particular interest in past research on bio-uptake of Indiana Harbor sediments by Dr. Richard Price and other phytoremediation or plant interactions (e.g., uptake, hydrosol stabilization, biogeochemical cycling, etc.) with dredge material related research of marginally contaminated materials.

In response to this effort ERDC conducted a literature review focused on technical notes, reports, and peer-reviewed literature.

### Period of Performance:

December 2019 – January 2020

### Benefits of the Response to the USACE Dredging/Navigation Program:

This technical response provided information to understand or plant interactions (e.g., uptake, hydrosol stabilization, biogeochemical cycling, etc.) of contaminants in CDFs.

### Deliverable:

Products generated with this DOTs response included a literature review of relevant research related to plant uptake of contaminants in dredged sediments. Results of this study were summarized in a memo to the USACE Chicago district containing a bibliography of the findings and provided a repository of the relevant publications.

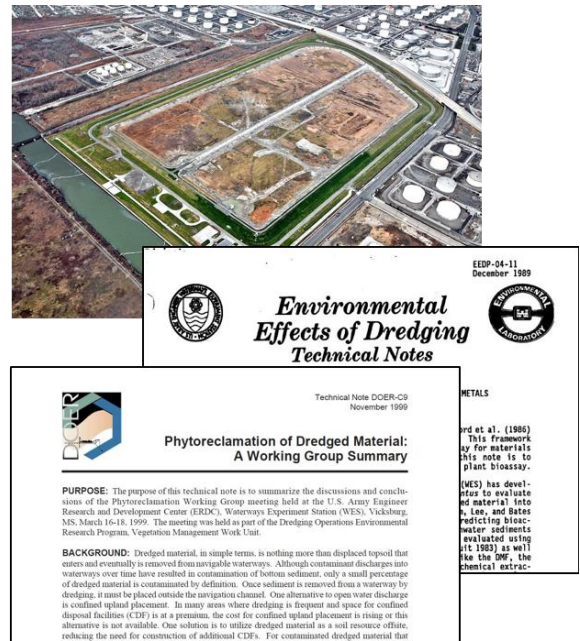


Figure 1: Literature review of plant uptake of contaminants in CDFs



Providing environmental and engineering technical support to the U.S. Army Corps of Engineers Operations and Maintenance navigation and dredging missions

Andrew McQueen, Ph.D.  
ERDC Environmental Laboratory • andrew.d.mcqueen@usace.army.mil

DOTS ID: DOTS-20-R05