
ADDAMS Overview

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KEY WORDS: Model, Verification, Evaluation,
Framework, Analysis, Demonstration



TOOL BOX

DISPOSAL
AREA DESIGN

COST
ESTIMATING

DREDGING
ALTERNATIVES

DISPOSAL
AREA
MANAGEMENT

LONG-TERM
STORAGE
CAPACITY

DISPOSAL
SEQUENCING

DATA BASE



Goals

- Development of technology transfer vehicle for tools relating to the evaluation and management of dredging and disposal
- Support Decision-Making Framework, Ocean Testing Manual, Inland Testing Manual and Upland testing Manual for evaluating environmental effects of dredging and dredged material disposal
- Computer tools for development of long-term management plans



ADDAMS

Dredged Material Management

CDF

SETTLE

DYECON

PSDDF

D2M2

LTFATE

MDFATE

Environmental Effects Evaluation

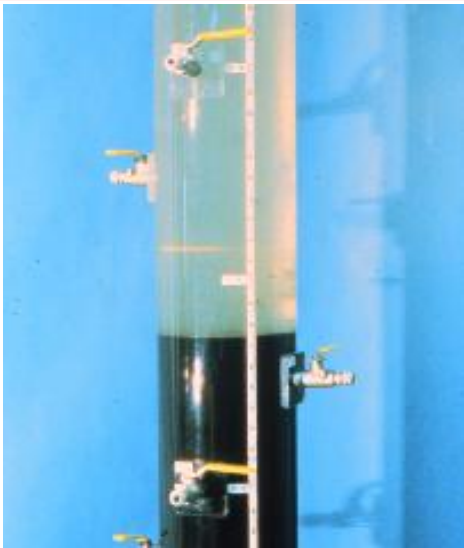
EFFLUENT EFQUAL LAT-E

RUNOFF RUNQUAL LAT-R

DREDGE STFATE CDFATE

RECOVERY HELPQ PUP

SETTLE



Design of Confined Disposal Facilities (CDFs) for Solids Retention and Initial Storage Requirements Using Settling Test Data



DYECON



Determination of CDF
Hydraulic Efficiency for
Retention Time



CDF



Windows
Version of
SETTLE
and
DYECON



PSDDF



Evaluation of Consolidation, Compression, and Desiccation of Dredged Fill for Determining Long-Term Storage Requirements



EFQUAL



Analysis of Modified
Elutriate Test Results
for Prediction of
Effluent Water Quality
and Dilution
Requirements for
Confined Disposal



LAT-E



Analysis of Water Column Bioassay Test to Compute Toxicity (LC50) of CDF Effluents



EFFLUENT



Windows
Version of
EFQUAL
and LAT-E



RUNQUAL



Comparison of
Predicted Runoff
Water Quality with
Standards and
Prediction of Dilution
Requirements



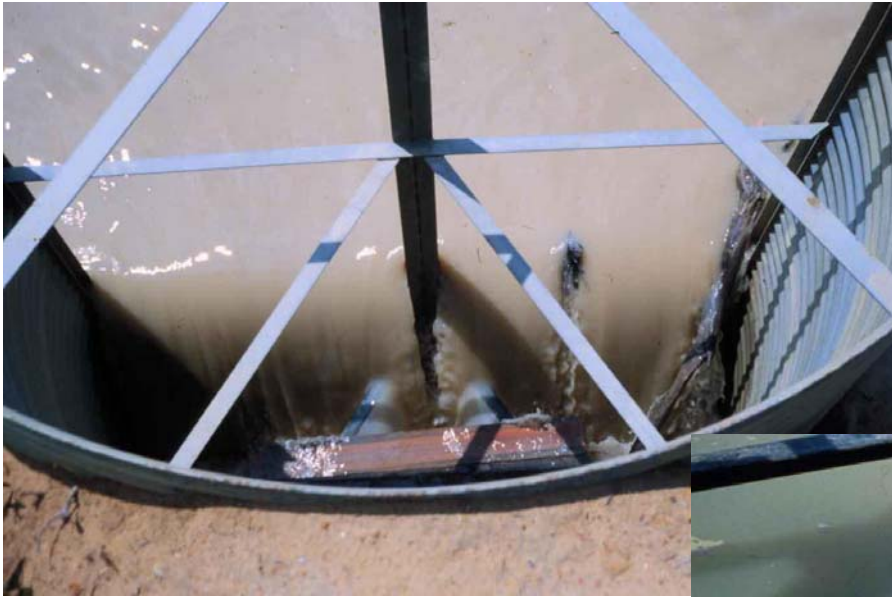
LAT-R



Analysis of Water Column Bioassay Test to Compute Toxicity (LC50) of CDF Runoff



RUNOFF



Windows
Version of
RUNQUAL
and LAT-R



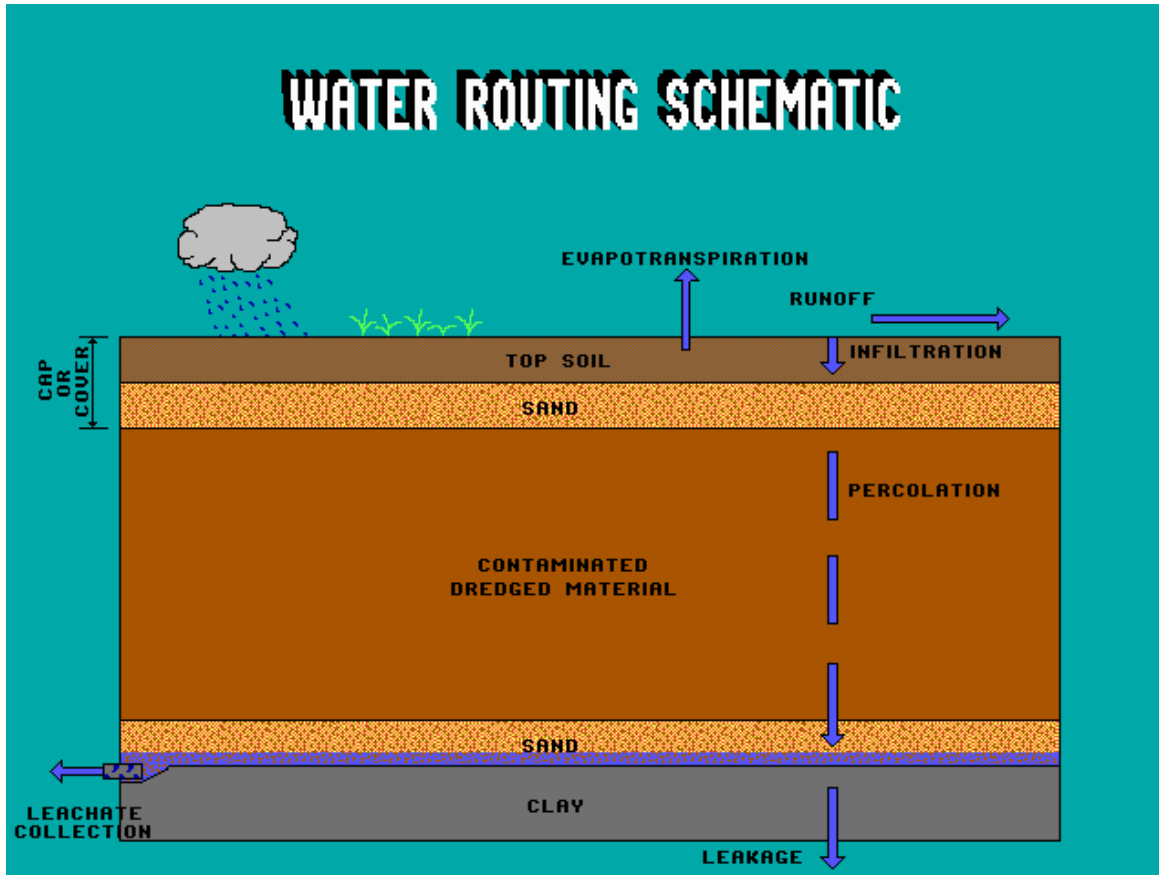
CDFATE



Computation of
Mixing Zone Size
or Dilution for
Continuous
Discharges



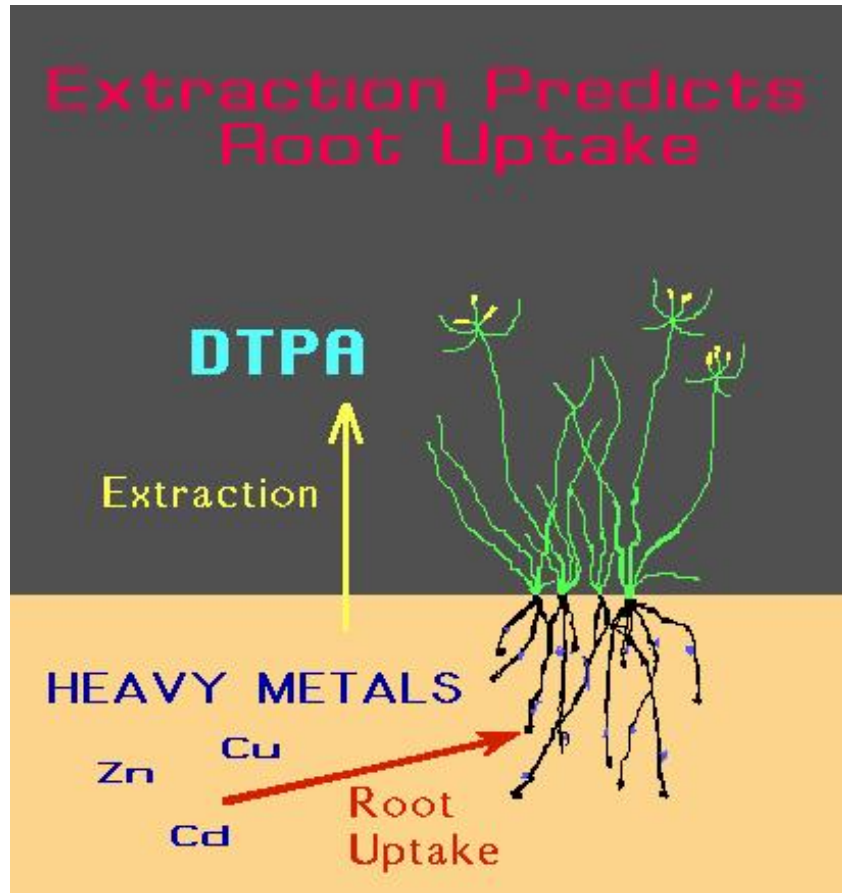
HELPQ



Evaluation of
Runoff and
Leachate
Production and
Leachate
Quality



PUP



Prediction of Heavy Metals Uptake by Freshwater Plants



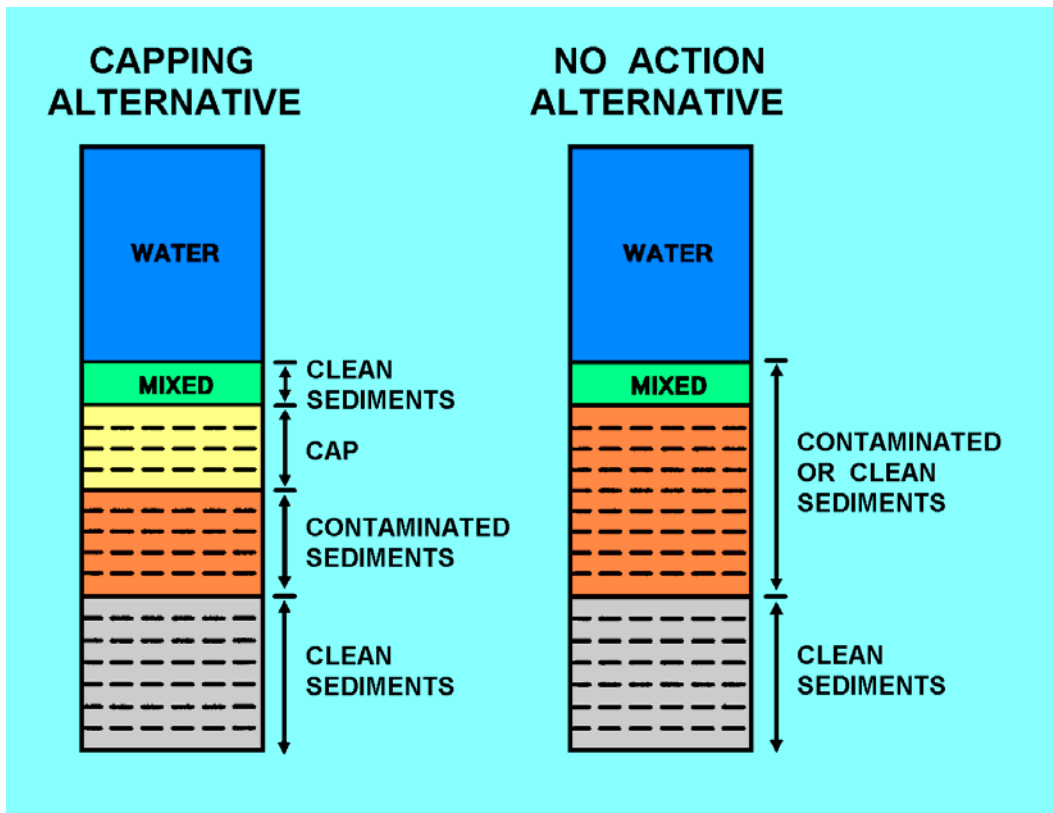
DREDGE



Prediction of
Sediment and
Contaminant
Resuspension by
Dredging



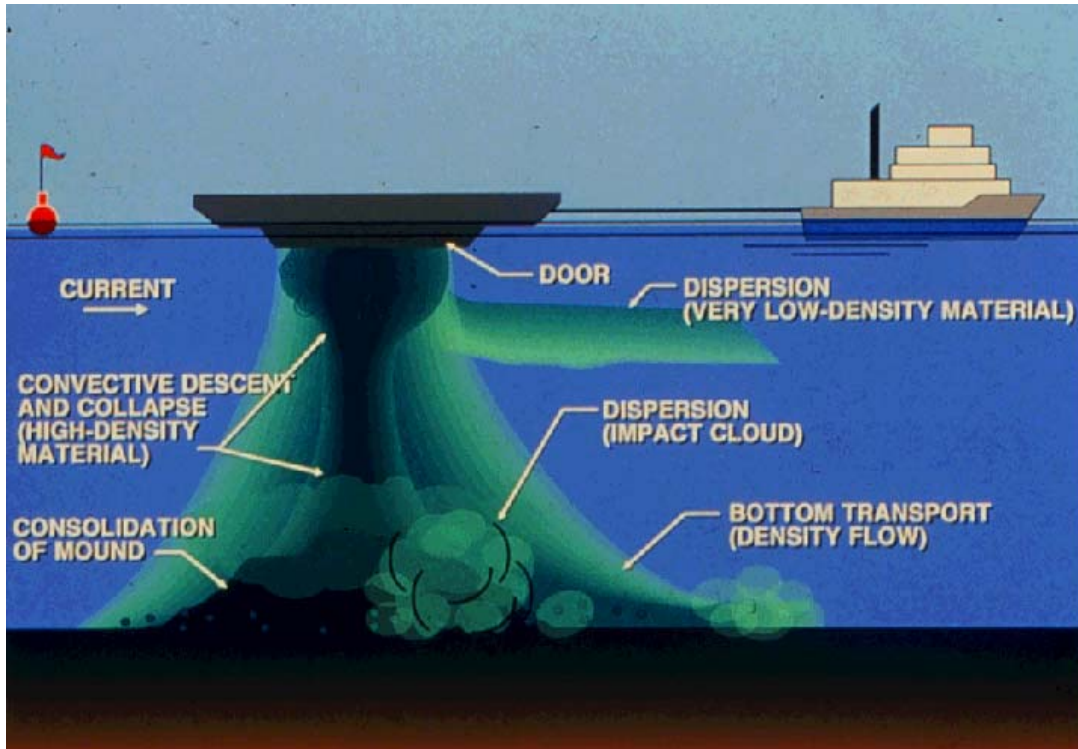
RECOVERY



Prediction of Contaminant Release and Decay from Bottom Sediments



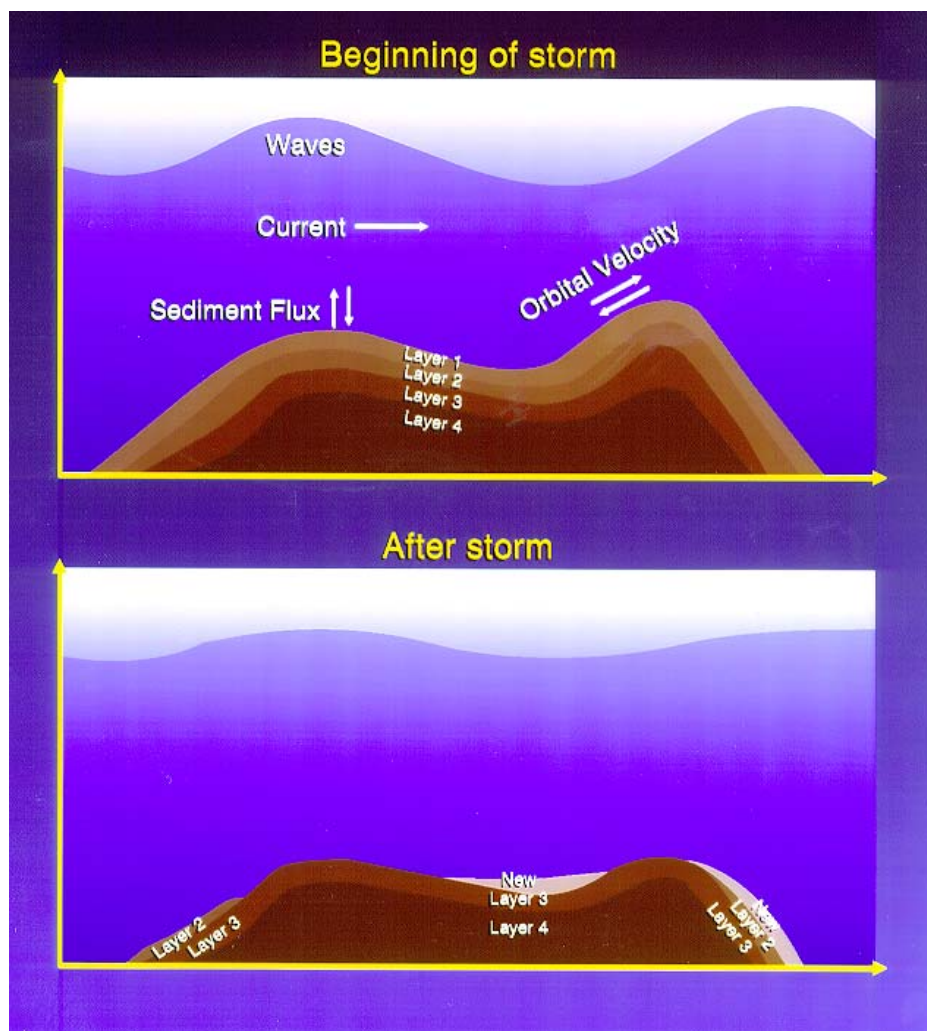
STFATE



Short-Term Fate of Dredged Material Disposed in Open Water for Predicting Deposition and Water Quality Effects



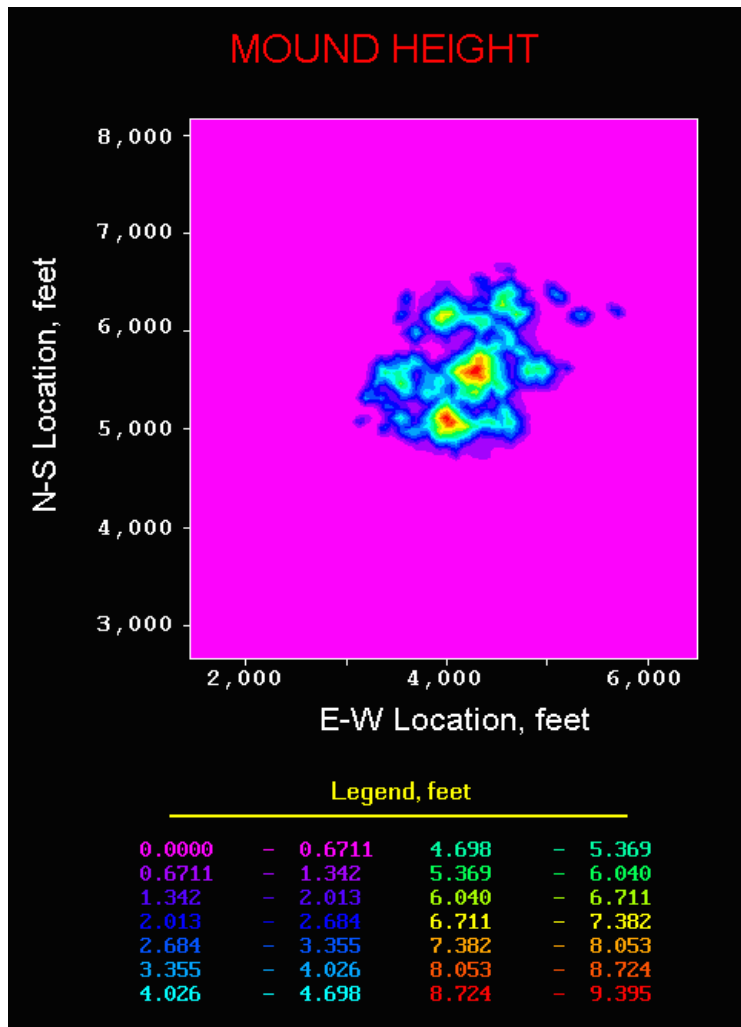
LTFATE



Long-Term Fate of Dredged Material Disposed in Open Water for Prediction of Mound Erosion



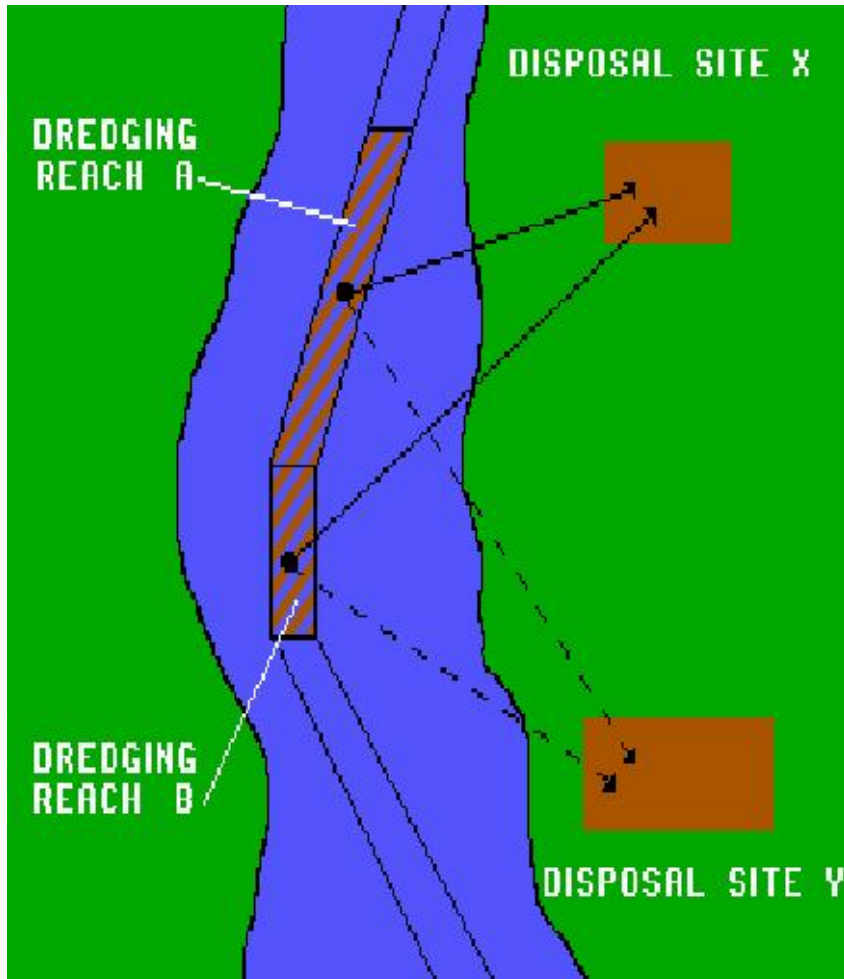
MDFATE



Fate of Dredged Material from Multiple Disposals in Open Water for Prediction of Mound Formation



D2M2



Optimization of Long-Term Operation, Expansion, and Acquisition of Multiple Disposal Sites for Multiple Dredging Reaches

