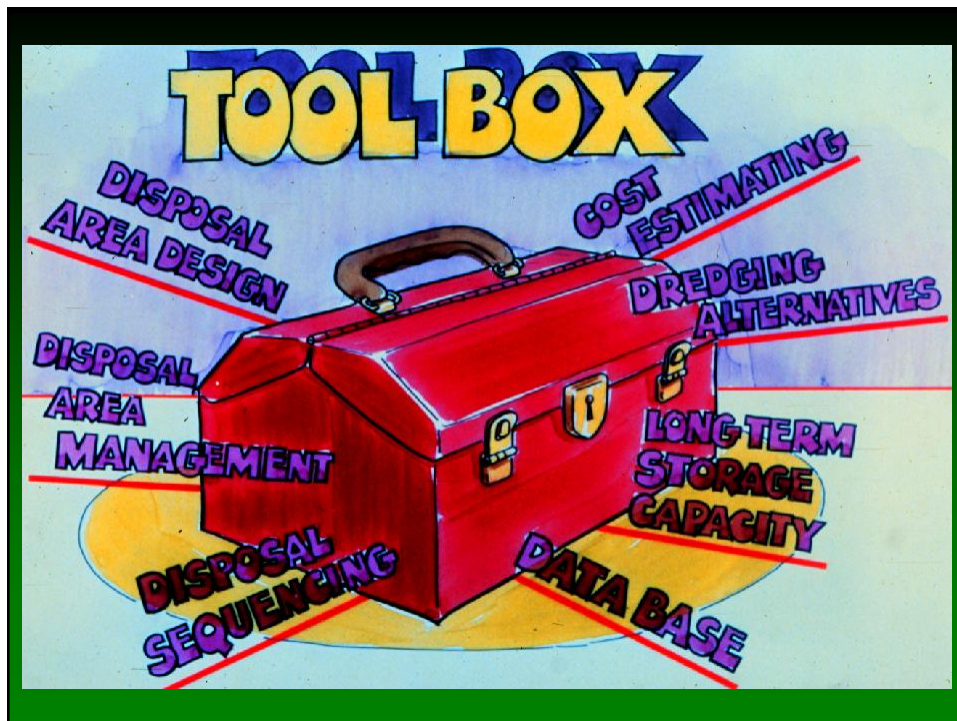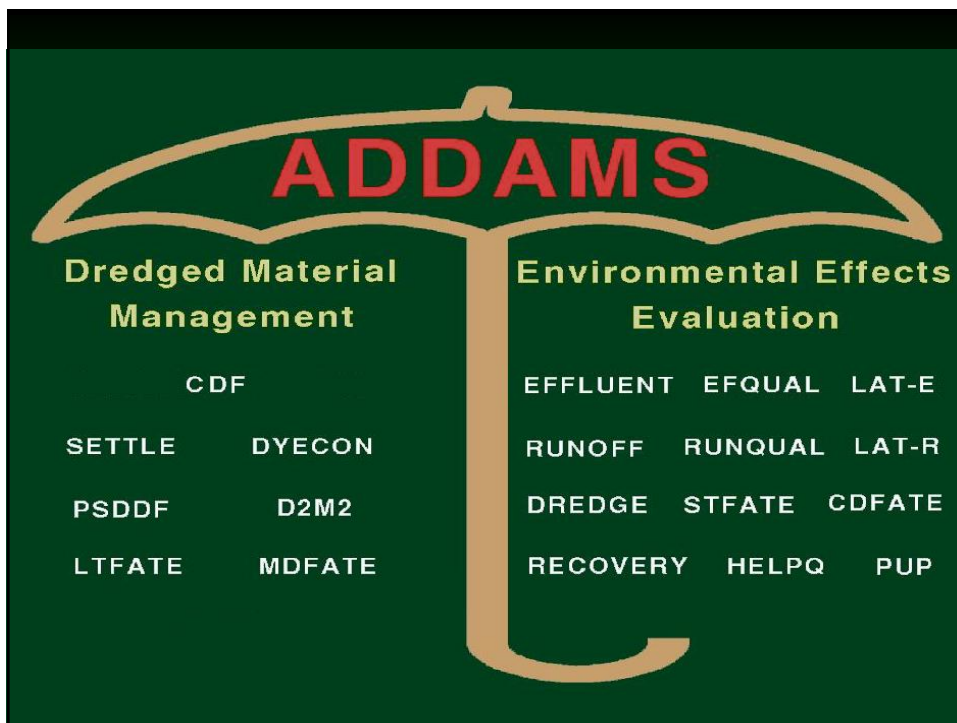# ADDAMS Overview

Tab K

Dr. Paul R. Schroeder

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

Goals

- Development of technology transfer vehicle for tools relating to the evaluation and management of dredging and disposal

- Integration of additional existing computerized tools into the existing draft Decision-Making Framework Program as an ADDAMS Module for evaluating environmental effects of dredged material disposal

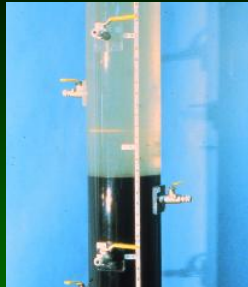- Computer tools for development of long-term management plans

ADDAMS

Dredged Material Management	Environmental Effects Evaluation
CDF	EFFLUENT EFQUAL LAT-E
SETTLE DYECON	RUNOFF RUNQUAL LAT-R
PSDDF D2M2	DREDGE STFATE CDFATE
LTFATE MDFATE	RECOVERY HELPQ PUP

CDF

Windows
Version of
SETTLE
and
DYECON

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

PSDDF

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

EFFLUENT

Windows Version of EFQUAL and LAT-E

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

RUNOFF

Windows Version of RUNQUAL and LAT-R

RUNQUAL

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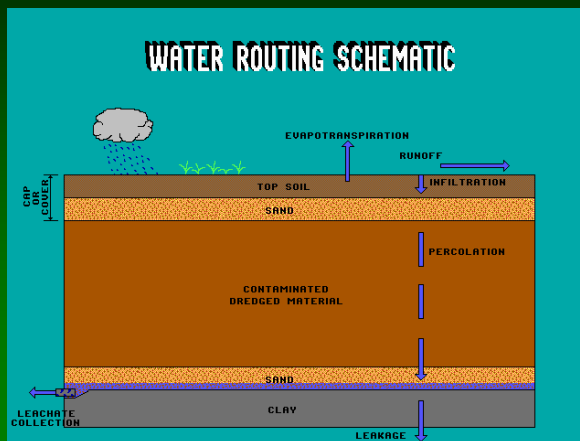
LAT-R

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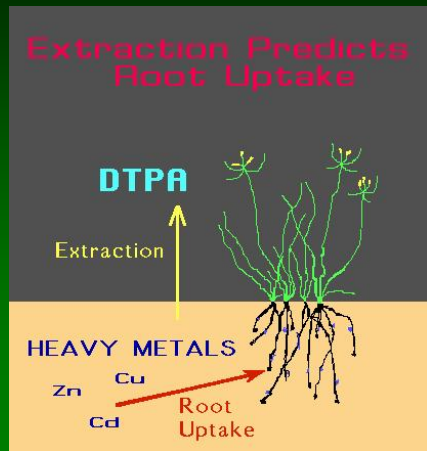
CDFATE

Computation of Mixing Zone Size or Dilution for Continuous Discharges

HELPQ

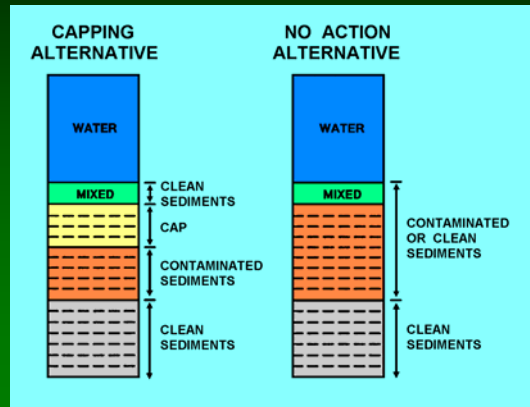Evaluation of Runoff and Leachate Production and Leachate Quality

PUP

Extraction Predicts Root Uptake

DTPA

Extraction

HEAVY METALS

Zn   Cu

Cd   Root Uptake

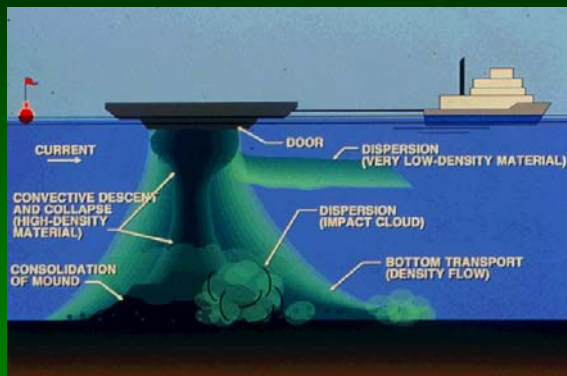Prediction of Heavy Metals Uptake by Freshwater Plants

DREDGE

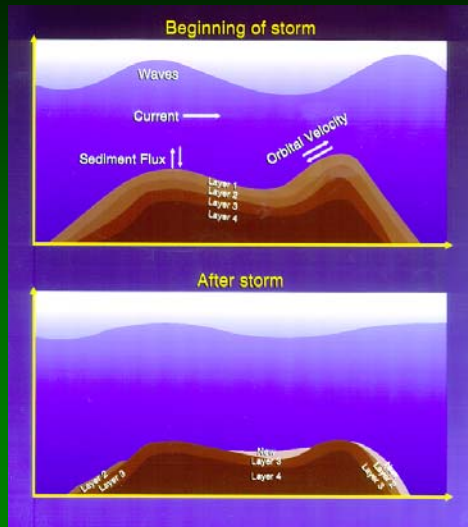Prediction of Sediment and Contaminant Resuspension by Dredging

RECOVERY

Prediction of Contaminant Release and Decay from Bottom Sediments
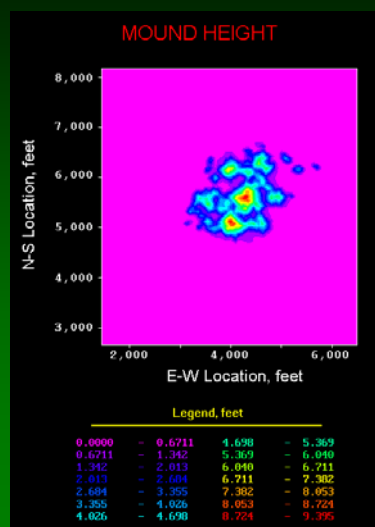
STFATE

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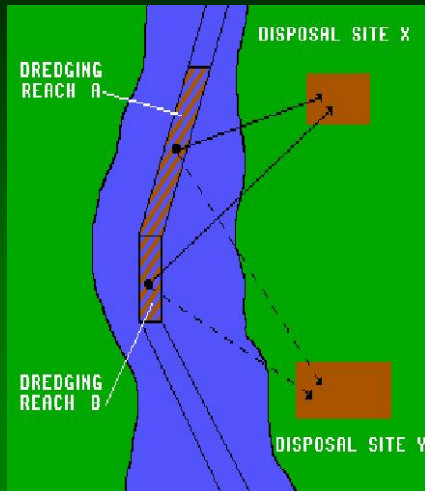
LTFATE

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

Availability

- http://el.erdc.usace.army.mil/products.cfm? Topic=model&Type=drgmat