



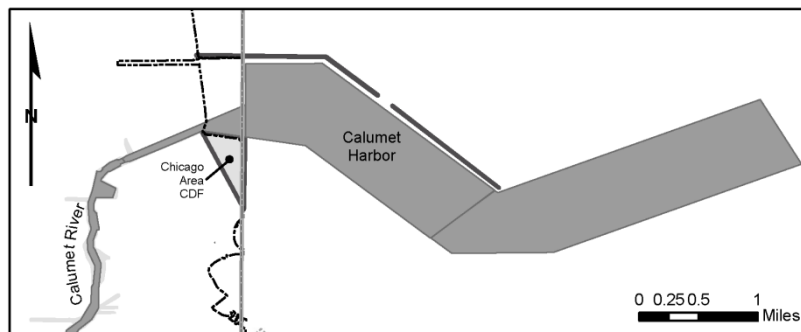
Regional Sediment Management Program

LRC Calumet Harbor Sediment Transport Analysis



Description

Calumet Harbor is located on Lake Michigan on the far south side of Chicago, at the Illinois-Indiana border, as shown in the project location map, below. The harbor channel is approximately 4.5 miles long and connects to Calumet River, also part of the Federal channel. Sediment accumulates in the Federal channel, requiring ongoing maintenance dredging and disposal. The Chicago District is developing a dredged material management plan (DMMP) to plan for the next 20 years of maintenance dredging. As part of this effort, the District will develop a sediment transport for the harbor channel.



Issue/Challenges

By developing a sediment transport model, the District hopes to improve predictions of shoaling patterns. The model will aid in the evaluation of measures to minimize accumulation of sediment in the channel. If harbor material is suitable for beneficial use, prediction of dredged quantities can also aid in planning for placement sites and uses.

Successes Lessons Learned

A major challenge in development of this model is the collection and refinement of spatially varied wind-field data. Identification of and collaboration with Corps personnel with expertise in this area has been a crucial step.

Expected Products

- Sediment transport model for Calumet Harbor
- Sediment budget for Calumet Harbor
- Quantitative analysis of measures to minimize sediment accumulation
- Recommendations for improved efficiency in maintenance dredging
- Documentation of study findings

Potential Users

USACE Chicago District

Projected Benefits

The District will be able to better plan for maintenance dredging and evaluate measures to reduce sedimentation in the channel and minimize future dredging needs.

Leveraging Opportunities

This model will leverage existing data (JALBTCX bathymetry) and analyses (Calumet River sediment transport model) as part of an overall DMMP effort to efficiently use Federal O&M funding to maintain navigation depths in the Federal channel.

Points of Contact

David F. Bucaro, P.E. david.f.bucaro@usace.army.mil 312-846-5583
Chief, Economic Formulation & Analysis Section, Chicago District

Participating Partners

The DMMP is being developed with the support and participation of the City of Chicago and the Illinois International Port District.