



## ERDC Dredging Operations Technical Support Program (DOTS)

U.S. ARMY CORPS OF ENGINEERS

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### Response Summary:

MVS has a problem occurring in the St. Louis harbor that is causing undesired symptoms at inconsistent intervals. The symptoms of the problem include accretion of sediment, which requires dredging, but also a strong cross-current condition that occurs as tow boats are exiting Lock and Dam 26 to traverse the St. Louis harbor. So far, MVS has only been able to temporarily treat the symptom by dredging when the problem occurs. MVS is utilizing an AdH/SEDLIB model to determine the system-wide problem (river conditions, reach instabilities, events, etc.) leading to the undesired symptoms in the St. Louis Harbor. The DOTS services rendered including technical assistance from an ERDC researcher (Gary L Brown) to assist in the development of the numerical model.

### Period of Performance:

The DOTS related services were rendered in FY 2018 (October 1027 – September 2018)

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

The results of the ADH/SEDLIB modeling will lead to a greater understanding of the hydraulics and sediment storage and transport through the reaches. This information is necessary to formulate a solution for managing sediment in the St. Louis Harbor and reducing costly repetitive dredging. This, in turn, will lead to less channel closures and will provide a more safe and dependable navigation channel.

### Deliverable:

The products generated for this study will include a calibrated and validated AdH/SEDLIB Model of the St Louis Harbor Reach and a report and presentation detailing the model results concerning the hydraulics and sediment transport through the reach



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

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