



**US Army Corps of Engineers**  
 Engineer Research and Development Center

# Real Time Current Velocity System

## Description

A joint proof of concept technology demonstration between the Corps of Engineers and towing industry began in 2006. The viability and utility of real time measurement and transmission of lock current data directly to approaching tows was demonstrated. The technology being demonstrated is Acoustic Doppler Current Profiler (ADCP) technology for measuring currents. This is combined with a United States Coast Guard approved Automatic Information System(AIS) transmission of the information to tows during lock approach via a Electronic Navigation Chart(ENC) display. The system has been named the Real Time Current Velocity (RTCV) System.



## Issue

Discussions between Corps of Engineers (USACE) and towing industry indicated the desire for real time lock approach current information at selected Corps projects. This effort would improve safety for approaching tows at the lock structure and also reduce the potential for impacts between tows and navigation structures.

## Users

U.S Army Corps of Engineers' lock operators and the towing industry.

## RTCV Locations as of November 2009

RTCV systems are currently located at the following locations: Tom Beville L/D, McAlpine L/D, L/D 3 MS River, Montgomery L/D, Emsworth L/D and Racine L/D. The following sites should be operational before September 2010: Smithland L/D, Dresden L/D, L/D 22, and L/D 25.



## Corps Program

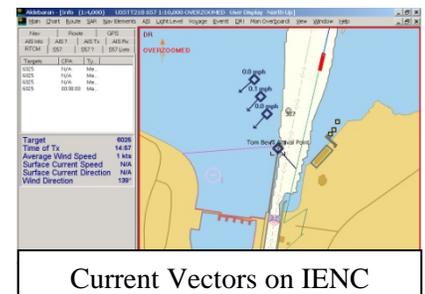
Navigation Systems Research Program, Mr. Charles E. (Eddie) Wiggins, Program Manager

## Point of Contact

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## Partners

ERDC; Corps; Industry, USCG, USGS, NOAA, and State DOT agencies



## View of IENC with RTCV

The figure to the right is a screen capture from an ENC software program, showing three RTCV vectors and a wind vector just upstream of the guard wall. If this information is not viewable from your ENC, please contact your software vender to update your system.