



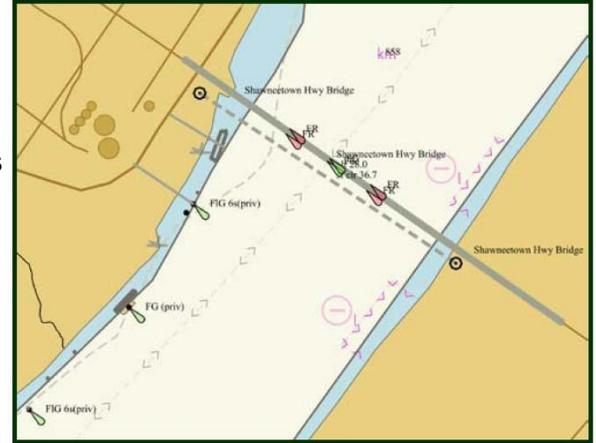
ELECTRONIC CHARTING FOR INLAND WATERWAY NAVIGATION

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Background and Description

The U.S. inland navigation system consists of 8,200 miles of rivers maintained by the Corps of Engineers in 22 states, and includes 276 lock chambers with a total lift of 6,100 feet. The highly adaptable and effective system of barge navigation moves over 625 million tons of commodities annually, which includes coal, petroleum products, various other raw materials, food and farm products, chemicals, and manufactured goods. Following recommendations by the National Transportation Safety Board, the National Academy of Science and the American Waterways Operators, Congress directed the Corps of Engineers to develop and publish electronic charts for the inland waterways. Thus development of *Inland Electronic Navigational Charts* (IENCs) to cover the Mississippi River and tributaries began in 2001 with pilot projects on the Atchafalaya River in Louisiana and Lower Mississippi River near Vicksburg, Mississippi. These projects were the first USACE efforts to collect and convert inland waterway data, commonly used for river and channel maintenance, into the international S-57 Hydrographic Data Exchange format. This highly structured data format is commonly used for electronic chart applications and it is used for all Corps IENCs.



Key Capabilities

Large-scale, accurate, and up-to-date IENCs, as now developed, enable electronic charting systems to provide accurate and real-time display of vessel positions relative to waterway features, improved voyage planning and monitoring, new personnel training tools and an integrated display of river charts, radar and Automatic Identification Systems (AIS) overlays.

Success Stories

IENC S-57 data are public data and have a variety of users from hydrographic agencies, government entities, private industry to the individual mariner. IENC promotes international harmonization with members of the European Union and members in South America for commonality of S-57 data standards. This effort promotes common data structures for inland ENC, and accommodates unique local requirements where needed. The IENC program promotes forum participation of chart vendors, consultants, and industry governance by waterway authorities.

Current Status

Today, over 7000 miles of navigable rivers have been electronically charted. IENCs for the following rivers are available for free download and unlimited use from the Corps E-Charting web site at www.agc.army.mil/echarts: Allegheny, Arkansas, Atchafalaya, Clinch, Black Warrior-Tombigbee, Cumberland, Green, Illinois, Kanawha, Lower Mississippi, Missouri, Monongahela, Ouachita, Ohio, Red, Tennessee, Tennessee-Tombigbee and Upper Mississippi.

U.S. ARMY CORPS OF ENGINEERS – ARMY GEOSPATIAL CENTER
7701 TELEGRAPH RD.
ALEXANDRIA, VA 22315

www.agc.army.mil • www.agc.army.smil.mil • www.agc.ic.gov

Updated Jan 12

The Alabama River and White River are currently under development with completion scheduled for FY12. Further IENC developments include monthly NTM updates, new geographic features, international harmonization features, more accurate hydrographic surveys, and supplemental chart data layers depicting specialized river information (MIOs).

Point of Contact

Dr. Robert G. Mann, IENC Program Lead, Robert.G.Mann@usace.army.mil (703) 428-6735,