HYDROGRAPHIC FEATURES

Sailing Line - The Sailing Line shown is an approximate representation of the track a down bound vessel would follow during a low river stage equal to the Low Water Reference Plane water level.

Low Water Reference Plane - The Low Water Reference Plane (LWRP) from Mile 313.7 to 242.0 is based on 97% discharge duration at Tarbert Landing (1974-1993) and corresponding to stages from 1974 – 1993.

LWRP from Mile 242.0 to Head of Passes is based on the Mean of 40 years (1891-1930) low water at Regular (M.R.C.) gauges and adjusted. from low water information obtained Sept 1931 and Nov. 1933. (Include graph of LWRP).

LWRP from Mile 320 to Mile 610 is the 1993 LWRP computer from 1982 to 1991 average low water stage at discharge equaled or exceeded 97% of the time.

Water Edge equals Low Water Reference Plane +5 feet above Mile 320 AHP. Water Edge equals Low Water Reference Plane zero below 320 AHP.

Drying Height Area is defined as an area denoting the range between water edge and high water conditions. Drying height is denoted as dark brown in this publication. The feature applies only to that section of the river that is not controlled by a lock and dam, also know as open river.

Color for Water Areas
A dark blue tint is shown on pages in this Navigation Book to represent areas of less than Project Depth. The light blue areas represents depths of project depth or greater.

The navigation channel will be marked with buoys as per U.S. Coast Guard.

Channel data a depicted is as of date of survey.

Mean Lower Low Water – (MLLW) The tidal datum that is the average of the lowest low water height of each tidal day observed over the National Tidal datum Epoch, 19-years metonic cycle.

Channel Condition Reports and Surveys
In general, this Navigation Book gives project depths for deep-draft ships, 45', up to Baton Rouge LA (Mile 232.2) and project depth for shallow draft, 9', tows above Baton Rouge, LA. In all cases mariners are advised to consult with pilots, local, State or Federal authorities for the latest channel controlling depths. The controlling depths are shown on these charts and published in the appropriate Local Notice to Mariner. Current channel conditions for high shoal areas at passes and at Mississippi River Crossings are obtained from hydrographic surveys and posted to: http://www.mvn.usace.army.mil/ChannelSurveys.

Submarine Cables and Submerged Pipelines
Submarine Cables and Submerged Pipelines cross many of the navigable waterways used by both large and small vessels. Normally warning signs are posted on the banks where submerged cables or a pipeline exists to warn mariners of their existence; in some areas warning signs are not always present.

CHART PAGE DESCRIPTIONS
Courses – These are true and given in degrees clockwise from 000° (north) to 359°. Courses given are courses to be made good.

Bridges and Cables
Vertical Clearances for Bridges are in feet above the appropriate reference gage zero reading. To obtain actual bridge clearance the mariner must subtract the appropriate gage river stage reading from the bridge clearance given.

Vertical Clearances for Overhead cables are in feet above the appropriate river gage mean high water readings; they may be as-built (verified by actual inspection after completion of structure), laser-range surveyed or authorized (design values specified in permit issued prior to construction. No differentiation is made in this Navigation Book between as-built, re-surveyed or authorized clearances.

Vertical Clearance for drawbridges and lift bridges are for the closed position and the open position as referenced to the appropriate river or tide gage as listed.

Vessels with masts, stacks, booms or antennas should allow sufficient clearance under power cables to avoid arcing.

Horizontal clearances for all bridges are in feet, as measured from the narrowest features. Mariners should use caution when navigating within these restricted areas.

Obstructions
Wrecks and other obstructions are mentioned only if of a relatively permanent nature and in or near normal traffic routes.

Depth is the vertical distance from the chart datum to the bottom and is expressed in feet. Depth contours are lines connecting points of equal depth.

Controlling Depth of a channel or crossing is the least depth within the limits of the channel; it restricts safe use of the channel to drafts of less than that depth.

Federal Project Depth is the designed dredging depth of a channel constructed by the U. S. Army Corps of Engineers; the project depth may or may not be the goal of maintenance dredging after completion of the channel and for this reason project depth must not be confused with controlling depth.

Region Covered	Begin Mile	End Mile	Project Depth
Baton Rouge, LA to Cairo, IL	234	960	9' [1]
Philadelphia Point to Baton Rouge, LA	180	233	40'
Gulf of Mexico to Philadelphia Point	-22	180	45'

[1] Maintained depth is 9' Project Depth plus 3' advance maintenance dredging.

U. S. Buoyage Systems – Aids to Navigation
Aids to navigation depicted on charts comprise a system of fixed and floating aids with varying degrees of reliability. Therefore, prudent mariners will not rely solely on any single aid to navigation, particularly a floating aid. Consult the latest Light List or the Coast Guard Navigation Center website at: http://www.navcen.uscg.gov.

The mariner is also cautioned that buoys may be missing or off station as the result of ice, running ice or other natural causes (high water), collisions, or other accidents.

Therefore, a prudent mariner must not rely completely upon the position or operation of floating aids to navigation, but will also utilize bearings from fixed objects and aids to navigation on shore. Further, a vessel attempting to pass close aboard always risks collision with a yawing buoy or with the obstruction that the buoy marks.

The U. S. Coast Guard Light List Volume V, Mississippi River System and Light List Volume IV, Gulf of Mexico, should be consulted for determination between Federally Maintained Aids to Navigation and Private Aids to Navigation.

Western Rivers System of Buoyage
The Western Rivers System – a variation of the standard U.S. Aids to Navigation System is employed on the Mississippi River and its tributaries above Baton Rouge, LA and on certain rivers which flow toward the Gulf of Mexico. The Western Rivers System varies from standard U. S. system, as follows:

1. Aids to navigation are not numbered.
2. Numbers on aids to navigation do not have lateral significance, but rather indicate mileage from a fixed point (normally a river mouth or confluence).
3. Diamond shaped crossing dayboards, red and white or green and white as appropriate are used to indicate where the river channel crosses from one bank to another.
4. Lights on the green aids to navigation show a single-flash characteristic, which may be green or white.
5. Lights on the red aids to navigation show a group-flash characteristic, which may be red or white.
6. Isolated Danger marks are not used.

U. S. Standard Aids to Navigation System of Buoyage
The waters of the United States and its territories are marked to assist navigation by the U.S. Aids to Navigation System. This system encompasses buoys and beacons conforming to the International Association of Lighthouse Authorities (IALA) buoyage guidelines and other short range aids to navigation. All U. S. lateral marks are located in the IALA Region B (IALA B)and follow the traditional 3R rule; Red, Right Returning from sea. For more information on aids to navigation access the U.S. Coast Guard Navigation Center website at: http://www.navcen.uscg.gov

DISTRICT	HYDROGRAPHIC SURVEY DATES
MEMPHIS	JANUARY – APRIL 2004
VICKSBURG	MAY – JUNE 2005
NEW ORLEANS	AUGUST – DECEMBER 2003