# NAVIGATION NOTICE NO. 1-2018

## Mississippi Valley Division

## Great Lakes and Ohio River Division

January 2018

**INTRODUCTION:**

1. As a result of partnering efforts with navigation interests, a consolidated Notice to Navigation Interests has been prepared for the Mississippi and Ohio Rivers and their tributaries. The intent is to provide consistency by replacing current district and division regulations with a joint notice that will be updated annually. The notice is applicable to the St. Paul, Rock Island, Chicago, St. Louis, Louisville, Nashville, Huntington, Pittsburgh, Memphis, Vicksburg, and New Orleans districts.

2. The basic document includes policies of general application to the described areas within the Mississippi Valley and Great Lakes and Ohio River Divisions, while the appendices cite policies applicable to certain rivers or projects. Also included as appendices as an appendix is the Code of Federal Regulations containing the "Blue Book" of navigation regulations prescribed by the Secretary of the Army.

3. Comments on how we may improve this notice may be sent to the U.S. Army Corps of Engineers, Rock Island District, Clock Tower Building, P.O. Box 2004, Rock Island, IL 61204-2004, ATTN: CEMVR-OD-Q (Darla J. Schertz), telephone (309) 794-5366 or email darla.j.schertz@usace.army.mil.

**GENERAL:**

1. Reference revised Regulations, 33 C.F.R. 207.300, Ohio River, Mississippi River above Cairo, Illinois, and their tributaries; use, administration, and navigation, and 33 C.F.R. 207.800, Collection of navigation statistics. These regulations contain information essential to the navigation of those waters and may be found at Appendix E and Appendix F. Copies of the above regulations may be obtained from lock operators without charge.

2. The following information is furnished in addition to the above-referenced regulations to provide guidance about the procedures, control, and management of the locks on the Mississippi River, Illinois Waterway and Ohio River System. Suggested towboat operations are also included that will enhance safety and reduce damage to Government structures, commercial vessels, and recreational craft.

3. The 2018 Inland Waterways Conference is scheduled to be held at the Hyatt French Quarter, 800 Iberville St, New Orleans, LA 70112 on March 20-21, 2018. For further information see http://www.maritimemeetings.com/inland-waterways-conference.php

**SAFETY:**

1. Commercial and recreational craft shall use the locks at all times except for navigable pass dams, and authorized fixed weir passages.

2. Vessels shall not pass under gates in the dam when they are out of the water and the river is flowing freely through the gate openings.

3. Lockage of leaking or listing vessels may be refused. Leaking or listing vessels shall be moored in a location outside of the channel and outside of the Arrival Point so as not to interfere with passing navigation.

4. All craft and tows approaching a lock, within a distance of 200 feet of the upper or lower lock gates, shall proceed at a speed not greater than two miles per hour (rate of a slow walk) during normal flow conditions.

5. All tows entering the lock shall be properly aligned with the guide or lock wall. Tows may be required to stop prior to entering certain locks at which unusual conditions exist.

6. When an amber flashing light is displayed and approval is given by lock personnel, a descending or ascending vessel may approach and moor with a backing line to the guide wall; however, the head of the tow shall be no closer than 100 feet from the near end of the lock gate recess.

7. Burning fenders shall be dropped overboard immediately rather than being placed on the deck of a barge, towboat or vessel. Fenders shall not be secured to cleats or timberheads and left unattended.

8. With regard to the use of fenders, see the appropriate appendix for policies applicable to certain rivers and projects. Additionally, Appendix E provides pertinent navigation regulations and the authority of lockmasters.

9. It is the responsibility of the vessel operator to provide adequate mooring lines. The lock operator may require mooring lines to be replaced with satisfactory lines before lockage is made if the lines appear to be of such quality, size, or condition that would make safe lockage questionable.

10. Mates and deckhands, when preparing to moor within the lock chambers, shall not throw heavy mooring lines onto the walls, but shall wait for a heaving line from lockmen on the lock wall.

11. All towboat crews, while locking or moving a tow into or out of a lock chamber, must station themselves to preclude the possibility of being injured by the parting of a cable or line under strain. Single part lines only will be used to check a moving tow. During inclement weather conditions (snow and ice) the working area of the tow where lines are used shall be free of snow and ice to prevent injury to towing industry personnel. Working lines shall be kept dry and in good working condition (not frozen) to allow lines to be worked properly and to prevent injury to personnel.

12. Towboat crewmembers shall not jump between moving tows and lock or guide walls while preparing for lockage, locking, or departing lock. Use of lock wall ladder ways is permitted only after tows are securely moored and the chamber is at upper pool.

SAFETY (continued)

13. Tabulated below are the minimum numbers of vessel personnel required for handling lines during lockages. The captain/pilot cannot act as a deckhand.

| TYPE OF VESSEL OR TOW | MINIMUM NUMBER OF PERSONNEL | MINIMUM NUMBER OF LINES USED | MINIMUM NUMBER OF EMERGENCY USE LINES |
|---|---|---|---|
| Vessels less than 65 feet | 1 | 1 | 1 |
| Towboats (light boats) | 1 | 1 | 1 |
| All other vessels requiring single lockage | 2 | *2 (see Appendix B, paragraph C1) | 1 |
| Tows requiring double lockage (one deckhand to remain with first cut) | 3 | 2 | 1 |
| Set-over tows | 3 | 2 | 1 |
| Knock-out tows | 2 | 2 | 1 |

*Please reference the special requirements on page 3, #16

14. All vessels, when in the locks, shall be moored and/or moved as directed by the lock operator.

15. Commercial towing companies shall ensure that vessel operators and boat crew members have received orientation and training in all aspects of deck work and lockage procedures to ensure the safety of personnel, floating plant, and structures.

16. All cylinders or containers holding gases or liquids under pressure or any other chemical or substance shall be securely fastened to the hull of the vessel to prevent their rolling overboard into the lock chamber.

17. All containers holding paint, gasoline, or other volatile materials shall be securely fastened with tight fitting covers.

OPERATIONAL ASPECTS:

1. Commercial fishing craft are included in the classification "recreational craft" when considering the precedent at the locks.

2. Personal watercraft of the "sit-down" variety, (those you sit on and ride), will be accepted for lockage. The "stand-up" variety, (those that require the vessel to be moving for the operator to be out of the water), will not be accepted for lockage unless the craft is tied off to and locked through with an approved vessel, and the operator of the "stand-up" craft boards the approved vessel. Operators of personal watercraft and their passengers are required to wear Coast Guard approved PFDs during lockage. Paddleboards, sailboards and surfboards are not considered sit down variety water craft.

3. The sides of all vessels passing through the locks shall be free from projections that may damage lock structures. Suitable fenders shall be used with all commercial tows passing through the locks to prevent damage to the lock walls and structures. Fenders shall be cylindrical in shape and no less than 6 inches in diameter. The fenders shall be used on guide walls and lock chambers to protect the structures. The fenders shall be manufactured or fabricated for the purpose of fendering, using woven rope; laminated, molded reinforced, natural, or synthetic rubber; or other suitable material. Single, double, or triple strands of mooring line, with or without knots, and old tires will not be considered as suitable fenders. Lock operators may refuse lockage to all commercial and recreational vessels and/or tows not conforming to the above.

4. The Corps of Engineers endorses the towing industry initiative toward voluntary "self help," such as pulling unpowered cuts out of lock chambers where significant delays are being experienced because of high lockage demand, lock repairs, or some other reason.

5. During severe winter navigation conditions, the length and width of the tows may be restricted to facilitate passage of the tows into the lock chamber(s) and to minimize lock structural damage.

6. Rake to box ice couplings the entire width of the tow, at break points of the tow, will be required at all locks when ice is present at the lock. Double tripping and use of industry helper boats during ice conditions will be required if proper couplings are not accomplished prior to arrival at the locks. Failure to have the tow configured properly may result in loss of lock turn. Tow configuration to ice couplings shall not be accomplished at the lock or lock approach.

7. Tows using locks equipped with floating mooring bitts shall use at least one line on each of two floating bitts if the tow length permits. Floating mooring bitts shall not be used to check a tow.

8. In a knockout lockage, the towboat shall be placed in the hole alongside the rear barges and should be located sufficiently forward to allow for ample clearance between its stern and the mitering gates. While exiting from any lockage, the towboat shall proceed slowly to reduce backwash action and possible damage to lock gates.

9. Radio communications between a lock and an approaching tow are required at all times. All tows shall have a positive two-way voice communication between the pilot and the head of the tow to facilitate proper and safe approach to the lock guide wall and subsequent entrance into the lock chamber. All tows that decide to switch to another channel during the locking process for communication with their deckhands will be required to inform the lock personnel as to what channel they are changing to.

**OPERATIONAL ASPECTS (continued)**

10. Lock Personnel will monitor the frequencies below. However, the District Engineers are authorized to require that the initial contact to any lock be made on other frequencies where circumstances indicate necessity.

**Initial contact with locks is as follows:**

| | |
|---|---|
| UPPER MISSISSIPPI RIVER | |
| Lower St. Anthony Falls (LSAF) to Lock 24 and Melvin Price Lock | 156.7 MHz (Channel 14) |
| Locks 25 and 27 | 156.6 MHz (Channel 12) |
| ILLINOIS WATERWAY | |
| T.J. O'Brien L/D and Chicago Harbor Lock | 156.8 MHz (Channel 16) |
| All other Locks | 156.7 MHz (Channel 14) |
| OHIO RIVER | |
| Huntington, Louisville, Nashville and Pittsburgh District Locks | 156.65 MHz (Channel 13) |
| Louisville and Nashville District Locks also monitor | 156.8 MHz (Channel 16) |

All tows awaiting lockage shall monitor the appropriate lock channel at all times. This will allow the lock personnel the capability of calling tows in the case of needing pull boats, broadcasting general announcements, call for preparation for lockage, etc.

11. Under normal conditions, tows that can be arranged to avoid a double lockage shall be rearranged prior to approaching the lock. Non-compliance will result in not being assigned a lock turn, until tow has been rearranged to comply or until no other vessel awaits lockage.

12. . Where additional mooring facilities are provided, tows that must be rearranged in the approach area; e.g., set-overs, jackknives, etc., shall rearrange at these moorings prior to entering the lock, if they must wait for entry. Lock operators should be contacted prior to arrival and will render a decision whether the tow should be rearranged at the moorings or in the lock.

13. Towboats, when entering a lock, must remain fully attached to the barges until the tow has been stopped and properly moored. Barges within the tow configuration must be properly cabled. Lockage may be refused if lock operator considers barge couplings inadequate.

14. With regard to moving or making up tows prior to leaving the lock in an upbound movement, see the appropriate appendix for policies applicable to certain rivers and projects. Additionally, Appendix E provides pertinent navigation regulations and the authority of lockmasters.

15. When leaving the lock in down bound movement, rearrangement of tows in motion will be permitted while passing out of the lock at the discretion of the lockmaster. If there is a floating plant, bridges, or other structure located immediately downstream from the lock, these procedures shall not be used.

16. Lockage lengths in excess of 595 feet, but not more than 600 feet, will be permitted in a 600 foot chamber with the following conditions:

a. The vessel operator shall inform the lock operator by radio, prior to arrival, as to the precise overall length of an integrated tow (single lockage) or the cut lengths of a multiple lockage, the number of barges in the tow, cargo type, and tonnage. Failure to provide all information may result in refusal of lockage.

b. A tow may be required to have a total of four lines, two each leading fore and aft, at the discretion of the lock operator. The lines shall be in good condition.

c. The pilot shall be in the pilothouse and be in constant radio contact with lock personnel during the entire lockage procedure.

d. Experienced deck personnel shall be stationed at each end of the tow to monitor movement.

e. Refer to Appendix C., Pittsburgh District, item 3 for further guidance dealing with Montgomery Locks and Dam.

17. Lockage of tows wider than 108 feet for a 110-foot chamber, 82 feet for an 84-foot chamber, and 54 feet for a 56-foot chamber will be refused.

18. With regard to outdrafts, see the appropriate appendix for policies applicable to certain rivers and projects. Additionally, Appendix E provides pertinent navigation regulations and the authority of lockmasters.

19. When requested, the pilot of the towboat shall provide an accurate description of the contents of any covered or tank barge in their tow. Transiting of the locks with unknown cargos will not be permitted. All towboat pilots are required to provide accurate, detailed information concerning commodity classification and tonnage. Lockage turn may be forfeited if tow pilots do not provide this data.

20. All deck barges loaded with rock, scrap material, construction equipment and other material shall be loaded to allow for safe passage of crew members along the edge of the barges. A minimum of 2 feet of clear space shall be maintained along the edge of all of the barges. To protect the lock walls and equipment, nothing loaded on the barge shall extend beyond this 2-foot clear space from the edge of the barge. The barges shall be loaded such that the material does not move or fall into the 2-foot wide clear space while moving or transporting the barges. Additionally, material shall be loaded on barges such that it will not become dislodged or moved during the locking process, possibly falling off the barge into the lock chamber or coming to rest protruding off the edge of the barge. Lock operators may refuse lockage to all commercial tows not conforming to the above.

RICHARD G. KAISER
Major General, USA
Commanding
Mississippi Valley Division

POR

R. MARK TOY
Brigadier General, USA
Commanding
Great Lakes and Ohio River Division

APPENDIX A

## Mississippi River and Tributaries

### A. General.

1. When tows are underway in the lock approaches or lock chamber, a minimum of two deckhands with fenders shall be stationed at the head end of every tow 100 feet or greater in width. One deckhand with a fender shall be required at the head end of tows less than 100 feet in width. Additional personnel shall be required at the aft end if the lock operator determines that it is necessary to protect the lock and guide walls from damage.

2. When moving or making up tows prior to leaving the lock in an upbound movement, towboat operators are required to keep all barges secured to the lock or guide wall. At the locks where traveling mooring bitts are used, the line shall not be released until the regulator mooring line is secured at the bow. Generally, the deckhand will not release snubbing and holding lines from the lock or guide walls until the towboat is properly secured to the tow. For a single lockage, with a towboat only set over, deviating from this procedure will be allowed if the immediate situation will permit safe departure under power and a lock operator walks a line out with the tow until the towboat is again adequately secured to the tow. Lock operators will assist by moving barges with tow-haulage equipment. However, when moving barges from the lock chamber, it is the responsibility of the vessel master to assure that adequate lines and personnel are available for safe handling and mooring of the tow or sections to the lock or guide walls. Sufficient personnel shall remain with the other sections to assure its security.

3. During the high water season, strong outdrafts occur at the upstream approach to some navigation locks. On the Upper Mississippi River, the outdraft signals are displayed on the upper end of the land guide walls and may be orange or amber. At some locks, similar signs are also displayed on the downstream end of the lower guide wall for the information of upbound tows. Lock personnel on duty will be available to notify navigators of dam gate opening status and outdraft conditions upon request. All vessel operators are directed to exercise extreme caution when approaching locks for a downbound lockage or when leaving locks upbound, where outdraft conditions exist. Double trips may be required if doubt exists as to the ability of the tow to enter or leave the lock safely.

4. It is the responsibility of the Vessel Master to ensure that deckhands that are assisting with lockages are familiar with the location and proper use of life saving devices or rescue equipment such as safety blocks and ring buoys.

### B. St. Paul District.

1. The practice of heeling off the lockwall (using lockwall for leverage) will not be tolerated while departing the locks, unless the tow has significant forward movement and it is absolutely necessary. (The purpose for this restriction is to reduce costly damage to the scour protection along the guide walls and beneath the lower and upper sills).

2. The level of service for the 2017 navigation season at Lower St. Anthony Falls Lock and Dam and Lock and Dam 1 will be 10 hours a day, 7 days a week, 10:00 a.m. to 8:00 p.m.

3. Lower St. Anthony Falls Lock and Dam, and Lock and Dam 1, Minneapolis, Minnesota, use a 1-person locking operation.

4. Lower St. Anthony Falls Lock and Dam, and Lock and Dam 1, Minneapolis, Minnesota. Locking procedure for a single lockage, with a towboat only set over, knockout lockage deviating from this procedure will be allowed at the two Twin Cities Locks if the immediate situation will permit safe departure under power and a lock operator is available to assist the deck hands with the lock lines if required.

5. Locking procedures during high flow conditions:

a. The Corps has adopted a policy for pulling tows in the upbound direction when flows exceed the cubic feet / second (cfs) noted below. Lock personnel will use the tow haulage unit to pull any combination of empty or loaded barges to a point just clearing the miter gates, provided that the section pulled does not have a lead notch adjacent to the guidewall in addition to any loaded barge(s) abreast. A notch with empties abreast will be allowed. Two travelling kevels will be utilized (except LD 3), one travelling kevel will be used from the bow barge quarter kevel and the other travelling kevel will be used from the half kevel or three-quarter kevel on the bow barge. One additional deckhand will be required to handle lines on the section being pulled.

1) Lock and Dam 3, Welch, Minnesota: flows > 21,000 cfs, no port lead notch with loads abreast
2) Lock and Dam 4, Alma, Wisconsin: flows > 59,000 cfs, no starboard notch with loads abreast
3) Lock and Dam 5A, Fountain City, Wisconsin, flows > 59,000 cfs no port lead notch with loads abreast
4) Lock and Dam 6, Trempealeau, Wisconsin, flows > 59,000 CFS no starboard lead notch with loads abreast.
5) Lock and Dam 7, La Crescent, Minnesota, flows > 44,000 no port lead notch with loads abreast.

b. If at any time the lockmaster or his/her representative feels there is danger in using the tow haulage unit, he/she may require the towing owners and/or operators to double trip through the lock.

6. The St. Paul District Corps of Engineers is not planning a drawdown in 2018.

C. Rock Island District.

1. The practice of heeling off the lockwall (using lockwall for leverage) will not be tolerated while departing the locks, unless the tow has significant forward movement and it is absolutely necessary. (The purpose for this restriction is to reduce the very costly damage to the scour protection along the guide walls and beneath the lower and upper sills). Use of heeling line from barge to a pin on lockwall may be used in the Rock Island District to assist in swinging head of tow away from lockwall. A minimum 8 foot lead will be required and wheel wash will be directed out towards the river and not against the guide wall.

2. During double lockages, the stern of the first cut must be equipped with kevels or timberheads if used to stop the cut. Use of "buttons" in stopping a cut is prohibited. Cuts not properly equipped with timberheads or kevels at the break coupling will be required to use a helper boat to stop the cut. The practice of stopping the first cut with the quarter kevel is also prohibited.

3. At Lock 19, Keokuk, Iowa, no downbound commercial vessels shall enter the forebay until the upper gates are submerged and the lockmaster has given the vessel permission to proceed.

4. At Lock 19, Keokuk, Iowa, no personal watercraft, e.g. wet bikes, jet bikes, jet skis, wave runners, wave jumpers, etc. will be locked through under their own power. Personal watercraft will be locked through while being towed into and out of the lock by a conventional pleasure craft, e.g. bass boat, ski boat, runabout, day cruiser, houseboat, etc. While the personal watercraft is being towed into, locked through and towed out of the lock approach, they shall not be ridden or operated. The operator of the personal watercraft will be required to board the vessel performing the towing of the personal watercraft. Boarding and disembarking will not delay traffic in any way. An exception to the not locking through under its own power policy may be made for those personal watercraft that are wide enough for the operator (and passengers) to sit down on the seat with feet located on designated foot rest areas within the craft and out of the water. Operators of personal watercraft and their passengers are required to wear Coast Guard approved PFDs during lockage.

D. St. Louis District.

1. At Lock 24, Clarksville, Missouri, it is now mandatory for all northbound tows to land on the protection cell at the end of the lower guide wall. Due to the critical condition of the aging guide wall, all tows are required to land on the cell and then pivot on the cell with the lead barge in the port string. Tows may proceed forward after they are correctly aligned for straight entry into the lock to minimize impacts to the guide wall.

2. At Lock 25, Winfield, Missouri, it is recommended that prior to arrival at Lock 25, all northbound tows insure that they have the correct break coupling rigging to expedite the locking process. Many tows are arriving without the proper break coupling rigging. Delays are increasing during the remaking of the coupling due to complete relaying of wires and rigging.

3. At Lock 25, Winfield, Missouri, all northbound tows must avoid landing on the lower guide wall downstream of the 400 foot marker. All south bound tows must avoid heeling off the lower guide wall.

4. At Locks 27, Granite City, Illinois, the downstream long guide wall mooring hooks/pins, located at (from the DS miter gates) 125', 300', 450', and 550' are not adequate for checking or driving against while flattening a tow; they are designed to moor a waiting tow already against the wall. Some of the pins have already failed. For certain conditions (wind, ice, drift...,etc.) the District may issue additional guidance. Following are critical Northbound approach dimensions:

a. From the main lock downstream miter gates to the end of the long (east) guidewall is 690 ft. (measured from miter gate pintle to DS face of guidewall).
b. From the main lock downstream miter gates to the end of the I-wall (shortwall) bullnose is 83 ft. (measured from miter gate pintle to DS face of I-wall bullnose).
c. From the main lock downstream miter gates to the downstream bulkhead slots is 62 ft. (measured from miter gate pintle to DS face of the slot). The curvature of the bullnose starts at the UPSTREAM face of the bulkhead slots.

E. Vicksburg District

J. Bennett Johnston Waterway
Lindy C. Boggs L&D – River Mile 44, Vick, Louisiana
John H. Overton L&D – River Mile 74.5, Pineville, Louisiana
Lock and Dam No. 3 – River Mile 117, Colfax, Louisiana
Russell B. Long L&D – River Mile 169, Coushatta, Louisiana
Joe D. Waggonner, Jr. L&D – River Mile 200, Shreveport, Louisiana

Ouachita/Black
Jonesville L&D – River Mile 25, Jonesville, Louisiana
Columbia L&D – River Mile 117, Riverton, Louisiana
Felsenthal L&D – River Mile 227, Felsenthal, Arkansas
H. K. Thatcher L&D – River Mile 281.9, Calion, Arkansas

F. New Orleans District.

1. Port Allen Lock – vessels entering the Lock from the Mississippi River have at times experienced a hazardous eddy current when making the approach into the Lock Forebay. Navigation interests should take notice that this eddy current is still present at times and may have changed significantly so that it affects vessels further out into the river. Vessel operators should therefore be on alert, and ready to take action sooner and/or in a different manner to avoid collisions with the floating guidewall that is located in the Lock Forebay.

2. Inner Harbor Navigation Canal (IHNC) Lock – due to the limited mooring space between the Florida Avenue Bridge and the Lock, it is required that all tows contact the Lock on Channel 14 for locking information prior to navigating through the Florida Avenue Bridge. Towboat Captains are reminded that if a tow has to be broken for locking operations, this shall be done prior to coming through the Florida Avenue Bridge and the barges shall not be left unattended in the canal for any reason. Towboat Captains must use the mooring buoys and tend the wheelhouse at all times. To prevent bank erosion, Tow Captains are also reminded not to push the head of their tow into the banks on the river or canal end of the Lock for any reason while waiting for their locking.

New Orleans District (Continued)

3. Old River Lock – connecting the Lower Mississippi River to the Atchafalaya River via the Old River, just downriver from the Old River Control Complex.

4. Port Allen Lock – located on the west bank of the Lower Mississippi River just downstream from Interstate 10, connecting the Lower Mississippi River to the Gulf Intracoastal Waterway (GIWW) Morgan City to Port Allen Alternate Route.

5. Harvey Lock – located where the main stem of the GIWW meets the west bank of the Lower Mississippi River in Harvey, LA. Harvey Lock is the point from which mileage is measured to the east and west along the GIWW.

6. Inner Harbor Navigation Canal (IHNC) Lock – located where the GIWW meets the Lower Mississippi River from the east. With a sill depth of -33 feet, the IHNC Lock is the only Lock in the New Orleans District that's deep enough to pass ships.

7. Algiers Lock – located where the GIWW Algiers Canal Alternate Route meets the west bank of the Lower Mississippi River in Algiers, LA, a west bank community of the city of New Orleans. Algiers Lock supplements the capacity of Harvey Lock for GIWW traffic to the west of the Lower Mississippi River.

8. Bayou Boeuf Lock – located in Morgan City, LA where the GIWW crosses the east Atchafalaya Basin Levee.

9. Berwick Lock – located where Bayou Teche crosses the west Atchafalaya Basin Levee.

10. Bayou Sorrel Lock – located where the GIWW Morgan City to Port Allen Alternate Route crosses the east Atchafalaya Basin Levee.

11. Leland Bowman Lock – located south of Lafayette, LA, near Intracoastal City, LA where the GIWW crosses the eastern boundary of the Mermentau Basin.

12. Schooner Bayou Control Structure – located south of Lafayette, LA and just south of the GIWW and Leland Bowman Lock, where Schooner Bayou (the old GIWW) crosses the eastern boundary of the Mermentau Basin.

13. Freshwater Bayou Lock – located near Pecan Island, LA where Freshwater Bayou meets the Gulf of Mexico.

14. Catfish Point Control Structure – located just south of Grand Lake in Cameron Parish, LA where the Lower Mermentau River crosses the western boundary of the Mermentau Basin.

15. Calcasieu Lock – located south of Lake Charles, LA at the western boundary of the Mermentau Basin, where the GIWW meets the Calcasieu River.

16. Calcasieu River Saltwater Barrier – located 9 miles north of Lake Charles in Westlake, LA, at approximate Mile 45 of the Calcasieu River.

| STRUCTURE | LEVEL OF SERVICE |
|---|---|
| **Mermentau River** | |
| Schooner Bayou Control Structure | Operating hours – 12 hrs. a day, 7 days a week, from 6:00 am to 6:00 pm (NOTE: Leland Bowman Lock may be used as an alternate route when Schooner Bayou Control Structure is closed). |
| **Calcasieu River and Pass** | |
| Calcasieu River Saltwater Barrier | Operating hours – Sunday thru Thursday 6:00 am to 10:00 pm, and Friday & Saturday 6:00 am to 12:00 pm. |
| Catfish Point Control Structure | Operating hours – 12 hrs. a day, 7 days a week, from 6:00 am to 6:00 pm. |
| **Atchafalaya Basin** | |
| Berwick Lock | Operating hours – 16 hrs. a day, 7 days a week, from 6:00 am to 10:00 pm. |
| West Calumet Floodgate | Operating hours – 8 hrs. a day, 7 days a week, 7:00 am to 3:00 pm (NOTE: Lockings will be made during hours stated above during high water season when flood side stages are between 2.5 ft. and up to 4.5 ft., NGVD). This structure is located at the intersection of Bayou Teche & Wax Lake Outlet). |

APPENDIX B

Illinois Waterway

A. General.

1. When tows are underway in the lock approaches or lock chamber and there is a potential for damage to the structure a minimum of two deckhands with fenders shall be stationed at the head end of every tow 100 feet or greater in width. One deckhand with a fender shall be required at the head end of tows less than 100 feet in width. Additional personnel shall be required at the aft end if the lock operator determines that it is necessary to protect the lock and guide walls from damage.

2. When moving or making up tows prior to leaving the lock in an upbound movement, towboat operators are required to keep all barges secured to the lock or guide wall. At the locks where traveling mooring bitts are used, the line shall not be released until the regulator mooring line is secured at the bow. Generally, the deckhand will not release snubbing and holding lines from the lock or guide walls until the towboat is properly secured to the tow. For a single lockage, with a towboat only set over, deviating from this procedure will be allowed if the immediate situation will permit safe departure under power and a lock operator walks a line out with the tow until the towboat is again adequately secured to the tow. Lock operators will assist by moving barges with tow-haulage equipment. However, when moving barges from the lock chamber, it is the responsibility of the vessel master to assure that adequate lines and personnel are available for safe handling and mooring of the tow or sections to the lock or guide walls. Sufficient personnel shall remain with the other sections to assure its security.

3. During the high water season, strong outdrafts occur at the upstream approach to some navigation locks. On the Illinois Waterway, the outdraft signals are displayed on the upper end of the land guide walls, (river wall bullnose at Lockport Lock), and may be orange or amber. At some locks, similar signs are also displayed on the downstream end of the lower guide wall for the information of upbound tows. Lock personnel on duty will be available to notify navigators of dam gate opening status and outdraft conditions upon request. All vessel operators are directed to exercise extreme caution when approaching locks for a downbound lockage or when leaving locks upbound, where outdraft conditions exist. Double trips may be required if doubt exists as to the ability of the tow to enter or leave the lock safely.

B. Chicago District.

1. The Chicago Harbor Lock is at the upper end of the Illinois Waterway, which is a tributary of the Mississippi River. All rules and regulations defined in 33 CFR 207.300, Ohio River, Mississippi River above Cairo, Illinois, and their tributaries; use, administration and navigation, and 33 CFR 207.800, Collection of navigation statistics, shall apply, except where they conflict with 33 CFR 207.420, Chicago River, Ill.; Sanitary District controlling works, and the use, administration, and navigation of the lock at the mouth of the river, Chicago Harbor. In case of a conflict between 33 CFR 207.300 or 33 CFR 207.800 with 33 CFR 207.420, 33 CFR 270.420 controls.

2. The Chicago Harbor Lock is extending the successful implementation of new signal lights rules for all lockages, at Chicago River mile 0, Illinois Waterway chart mile 327.2, NOAA chart #14928. SIGNAL LIGHTS FOR LOCKAGE: Due to density of traffic and congestion in Chicago Harbor, Chicago Harbor Lock will use the red-amber-green lockage signal lights, in lieu of red-green signal lights. User comments and results have been positive, and await final implementation into the CFR.

a. The meaning of the lock signal lights located near the east end of the northeast guide wall and at the west end of the northwest lock wall are as follows:

(1) Red light: Lock is not ready for entrance. All vessels shall stand clear and shall allow unobstructed departure for the vessels leaving the lock chamber.

(2) Amber light: Lock is ready for entrance of all government vessels and certified passenger vessels waiting in the queuing area are given permission to enter the lock chamber. All other vessels shall only enter the lock chamber when specifically directed by the lock operator via radio, telephone or voice.

(3) Green light: Lock is ready for entrance by all other small passenger vessels, fishing vessels and recreational vessels. During the green light, certified passenger vessels, such as late arrivals to the queuing area, shall not enter the lock chamber unless specifically directed by the lock operator via radio, telephone or voice.

b. Definitions:

(1) Certified passenger vessel: A commercial passenger vessel which was issued a current Certificate of Inspection by the U.S. Coast Guard to carry more than 6 passengers.

(2) Queuing area: The designated lock waiting area for vessels less than 100 gross tons. The queuing area for east transits to the lake begins at Ogden Slip and the queuing area for west transits to the river begins at Municipal Pier No. 1 Light.

3. There are no changes to lock operating hours based on Inland Marine Transportation System (IMTS) Standard Levels of Service.

C. Rock Island District.

1. At Lockport, Brandon Road, Dresden Island, Marseilles and Starved Rock Locks, upbound tows with 1 barge length and up to 2 barges wide will require 2 deckhands and 2 lines. Under normal conditions, downbound tows with 1 barge length and up to 2 barges wide transiting the locks identified above will only require 1 deckhand and 1 line on the floating mooring bit and engines running at idle. At T.J. O'Brien, Peoria and LaGrange locks, 1 deckhand and 1 line are acceptable for lockage in both directions for tow configurations described above. At all locks, the navigator will provide an additional line or lines at the lock operator's discretion; conditions will indicate whether such added precautions are necessary for safe lockage. All vessels will have one additional line, at least equal in length to the lock lines, on the head (working side) of the tow for emergency use.

2. Only vessels waiting lockage turn at Marseilles Lock will be allowed to moor in Marseilles Canal. Mooring of tows or barges for other reasons is prohibited.

Rock Island District (continued)

3. Due to strong currents near intakes and extreme turbulence within the lock chamber, all personal watercraft, e.g. wet bikes, jet bikes, jet skis, wave runners, wave jumpers, etc., will not be locked while under their own power at Lockport Lock, Brandon Road Lock, Dresden Island Lock, Marseilles Lock, Starved Rock Lock, Peoria Lock, or LaGrange Lock. Personal watercraft will be locked through while being towed into and out of the lock by a conventional pleasure craft, e.g. bass boat, ski boat, runabout, day cruiser, houseboat, etc. While the personal watercraft are being towed into, locked through, and towed out of the lock approach, they shall not be ridden or operated. The operator of the personal watercraft will be required to board the vessel performing the towing of the personal watercraft. Boarding and deboarding is not to delay traffic in any way.

D. St. Louis District. No special instructions for this reach.

APPENDIX C

## Ohio River and Tributaries

### A. General.

1. Outdraft warning signs are not used on the Ohio River or its tributaries. All tow boat operators upon request when calling a lock on this system will be provided with the Dam Gate opening, if applicable and available, the upper and lower river gages and the current river predictions, as provided by the National Weather Service. All decisions as to the existence of an outdraft and the effect of that said outdraft will have upon their tows will be made by each tow boat operator.

2. Waterways Action Plans provides the marine industry, U.S. Coast Guard (USCG), U.S. Army Corps of Engineers (USACE), States and local governments with a plan for facilitating the safe and orderly movement of traffic during extreme conditions on the inland rivers.

### B. Pittsburgh District.

1. At Emsworth Dashields, Montgomery, and Lock 2, Monongahela River, set over lockages will be done at the discretion of the Lockmaster. The request for this procedure should be made as early as possible prior to arriving at the lock.

2. At Emsworth a third line (breast line) is required for upbound lockages due to the heavy turbulence created during the lock chambers filling. If the floating mooring bit is being used to moor the tow, the third line (breast line) will not be required.

3. The large land lock chamber at Montgomery Lock and Dam is only 597 feet long It will not be possible to lock the first cut of a double lockage, knockouts or set overs, which have three lengths of 200' barges end on end in the port or starboard string. Tows should be configured to include at least one (1) 195' or less barge in the port and starboard strings.

4. Pilots of commercial vessels should note when locking through Lock 4, Allegheny River, the depth of water over the upper sill is 0.6 feet less than the upper gage reading. An upper gage reading of 9.0 correlates to 8.4 feet of water over the upper sill.

5. Rubbing fenders will be required to be available on the head of each tow containing red flag barges that could come into contact with the lock wall. These fenders should be used as required to prevent sparking.

6. Barges will be moored to the lock wall at all times during the lockage cycle. On all lockages, deckhands will not remove mooring lines until signaled to do so by the lock operator. This will be done by use of a whistle or by verbal command. On knockout single cut lockages, once the deckhand has been signaled to remove the mooring lines, the tow boat may proceed out of the chamber and the tow boat may face back up to the tow as the tow moves forward. If requested by the deckhand, the lock operator will assist to moor the tow to the lock wall once the tow has moved a sufficient distance along the wall so that the tow boat can face up to the tow. This will be required at the Emsworth Locks and at the Dashields Locks when the total opening on the main channel and back channel dams at Emsworth reaches 65 feet. This will also be required at the Montgomery Locks when the total dam opening there reaches 40 feet. This is in accordance with a waterways action plan between the Coast Guard, the Army Corps of Engineers and the Waterways Association. On all set-over lockages, the tow will move far enough along the wall to provide room to set the barges back over and face up to the rest of the tow. The tow will then be moored to the wall until the face up process is completed. The lock operator will then remove the mooring lines at the request of the deckhand. On all multiple cut lockages, the cut will be pulled from the chamber using tow haulage equipment or assistance from a helper boat. The deckhand will be required to use the traveling regulator bit if directed by the lock operator. The tow will then be moored to the wall outside of the chamber until the remaining cuts of the tow have been faced up to the first cut. Once the tow is faced up and ready to depart, the mooring lines will be removed by the lock operator at the request of the deckhand.

7. The Pittsburgh District has awarded a Construction Contract for stabilization of the upper and lower guide wall at Dashields Lock and Dam, Ohio River mile 13.3. During this work the District will permit closures of the primary lock chamber for up to ten (10) hours per day Monday through Friday, except Federal holidays. The work is expected to start in early spring with a Contract completion date of October 4, 2018.

8. There are no changes to lock operating hours based on Inland Marine Transportation System (IMTS) Standard Levels of Service

1. KANAWHA RIVER DRAFT OF VESSELS AND OPERATING DURING HIGH WATER

For commercial vessels transiting the Kanawha River, the following project sill information is provided:

| | Kanawha River Mile | Sill Elevation | |
|---|---|---|---|
| London Locks | 82.8 | Upper 596.0 | Lower 578.0 |
| Marmet Locks | 67.7 | Main Upper 572.0<br>Auxiliary Upper 572.0 | Main Lower 548.0<br>Auxiliary Lower 554.0 |
| Winfield Locks | 31.1 | Main Upper 548.0<br>Auxiliary Upper 548.0 | Main Lower 520.0<br>Auxiliary Lower 526.0 |

The U.S. Army Corps of Engineers maintains a nine foot channel depth. Acceptable drafts for tows transiting these projects are specified below:

| Lower Gauge Reading: | Maximum Barge Draft: |
|---|---|
| 9'-3" and above | No restriction |
| 9'-0" to 9'-3" | 10'-6" |
| 8'-9" to 9'-0" | 10'-3" |
| 8'-9" and below | Gauge Reading Plus 1'-3" |

Draft of vessels: No vessel shall attempt to enter a lock unless its draft is at least three (3) inches less than the least depth of water over the gate sills. Information concerning control depth over sills can be obtained from the District Navigation Charts.

Operations during high water and floods in designated vulnerable areas: Vessels operating on these waters during periods when river stages exceed the level of "ordinary high water," as designated on Corps of Engineers' navigation charts, shall exercise reasonable care to minimize the effects of their bow waves and propeller washes on river banks; submerged or partially submerged structures or habitations; terrestrial growth such as trees and bushes; and man-made amenities that may be present. Vessels shall operate carefully when passing close to levees and other flood protection works, and shall observe minimum distances from banks which may be prescribed from time to time in Notices to Navigation Interests. Pilots should exercise particular care not to direct propeller wash at river banks, levees, revetments, structures or other appurtenances subject to damage from wave action.

2. Outdraft conditions for a downbound approach when the total dam opening is five feet or more at London requires lock personnel to meet all downbound tows at the end of the wall when requested by vessel operators.

3. Deckhands must stand clear of haul-out cables during all pull-out operations.

4. Vessels with flammable or hazardous cargo barges, loaded or empty, are required to use sparkproof protective rubbing fenders ("possums"). All vessels should utilize "possums" to help alleviate damages that are occurring to lock structures.

5. There are no changes to lock operating hours based on Inland Marine Transportation System (IMTS) Standard Levels of Service.

D. Louisville District.

1. The U.S. Coast Guard, Marine Safety Office, Louisville will place its Vessel Traffic Service (VTS) into operation when the upper gage at McAlpine Locks and Dam reaches 13.0 and the dam is all out. All upbound vessels should contact "Louisville Traffic" on Channel 13 upon arrival at McAlpine Locks and Dam. All downbound vessels should contact "Louisville Traffic" on Channel 13 upon arrival at Twelve Mile Island.

2. It is occasionally necessary to flush drift or ice from the upper lock approaches at Markland and Cannelton Locks and Dams. During these periods, flow is passed over a partially submerged emergency gate and through the auxiliary (600-foot) lock chamber. The auxiliary chamber will be closed during these flushing procedures and all traffic will be passed through the main (1200-foot) lock. Navigators should observe extreme caution and carefully follow the instructions of lock operators regarding the flushing operations.

3. McAlpine Locks and Dam Radio Contact Location: Due to traffic in the Louisville and Portland Canal, downbound vessels are permitted to announce their presence for lockage when they reach Six Mile Island (Mile 597.1).

4. Markland Locks and Dam: During periods of high drift, lock operators may instruct tows to stop closer than 100 feet from the upper miter gates of the main chamber to prevent excessive buildup of drift between the head of the tow and the miter gates.

5. Locks and Dam No. 52: Draft restrictions are in effect for the lock chambers at Locks and Dam No. 52 in accordance with the table below. Vessels meeting the chart restrictions will be allowed to lock through the 1200-foot chamber. Extreme caution must be exercised in the vicinity of the lower sill. "Slow Speed" and "No Driving over the lower sill" will be mandatory.

Please take note of the list below. It contains the water levels that are currently approved through the Corps and the Marine Industry Ice Committee.

| L&D 52's Lower Gage | Maximum Draft Permitted to Lock |
|---|---|
| 8.5' | 9.0' = 9' – 0.0" |
| 8.6' | 9.1' = 9' – 1.2" |
| 8.7' | 9.2' = 9' – 2.4" |
| 8.8' | 9.3' = 9' – 3.6" |
| 8.9' | 9.4' = 9' – 4.8" |
| 9.0' | 9.5' = 9' – 6.0" |
| 9.1' | 9.6' = 9' – 7.2" |
| 9.2' | 9.7' = 9' – 8.4" |
| 9.3' | 9.8' = 9' – 9.6" |
| 9.4' | 9.9' = 9' – 10.8" |
| 9.5' | 10.0' = 10' – 0.0" |
| 9.6' | 10.1' = 10' – 1.2" |
| 9.7' | 10.2' = 10' – 2.4" |
| 9.8' | 10.3' = 10' – 3.6" |
| 9.9' | 10.4' = 10' – 4.8" |
| 10.0' | 10.5' = 10' – 6.0" |
| 10.1' | 10.6' = 10' – 7.2" |
| 10.2' | 10.7' = 10' – 8.4" |
| 10.3' | 10.8' = 10' – 9.6" |
| 10.4' | 10.9' = 10' – 10.8" |
| 10.5' | 11.0' = 11' – 0.0" |
| 10.6' | 11.1' = 11' - 1.2" |
| 10.7' | 11.2' = 11' - 2.4" |
| 10.8' | 11.3' = 11' – 3.6" |
| 10.9' | 11.4' = 11' – 4.8" |
| 11.0' | 11.5' = 11' – 6.0" |
| 11.1' | 11.6' = 11' – 7.2" |
| 11.2' | 11.7' = 11' – 8.4" |
| 11.3' | 11.8' = 11' – 9.6" |
| 11.4' | 11.9' = 11' – 10.8" |
| 11.5' | 12.0' = 12' – 0.0" |
| 11.6' | 12.1' = 12' – 1.2" |
| 11.7' | 12.2' = 12' – 2.4" |
| 11.8' | 12.3' = 12' – 3.6" |
| 11.9' | 12.4' = 12' – 4.8" |
| 12.0' | 12.5' = 12' – 6.0" |
| 12.1' | 12.6' = 12' – 7.2" |
| 12.2' | 12.7' = 12' – 8.4" |
| 12.3' | 12.8' = 12' – 9.6" |
| 12.4' | 12.9' = 12' – 10.8" |
| 12.5' | 13.0' = 13' – 0.0" |
| 12.6' | 13.1' = 13' – 1.2" |

AUXILIARY 600-FOOT CHAMBER

| L&D 52's Lower Gage | Maximum Draft Permitted to Lock |
|---|---|
| 8.0' | 9.1' = 9' - 1.2" |
| 8.1' | 9.2' = 9' - 2.4" |
| 8.2' | 9.3' = 9' - 3.6" |
| 8.3' | 9.4' = 9' - 4.8" |
| 8.4' | 9.5' = 9' - 6.0" |
| 8.5' | 9.6' = 9' - 7.2" |
| 8.6' | 9.7' = 9' - 8.4" |
| 8.7' | 9.8' = 9' - 9.6" |
| 8.8' | 9.9' = 9' - 10.8" |
| 8.9' | 10.0' = 10' - 0.0" |
| 9.0' | 10.1' = 10' - 1.2" |
| 9.1' | 10.2' = 10' - 2.4" |
| 9.2' | 10.3' = 10' - 3.6" |
| 9.3' | 10.4' = 10' - 4.8" |
| 9.4' | 10.5' = 10' - 6.0" |
| 9.5' | 10.6' = 10' - 7.2" |
| 9.6' | 10.7' = 10' - 8.4" |
| 9.7' | 10.8' = 10' - 9.6" |
| 9.8' | 10.9' = 10' - 10.8" |
| 9.9' | 11.0' = 11' - 0.0" |
| 10.0' | 11.1' = 11' -1.2" |
| 10.1' | 11.2' = 11' -2.4" |
| 10.2' | 11.3' = 11'-3.6" |
| 10.3' | 11.4' = 11' -4.8" |
| 10.4' | 11.5' = 11' -6.0" |
| 10.5' | 11.6' = 11' -7.2" |
| 10.6' | 11.7' = 11' -8.4" |
| 10.7' | 11.8' = 11' -9.6" |
| 10.8' | 11.9' = 11' -10.8" |
| 10.9' | 12.0' = 12' -0.0" |
| 11.0' | 12.1' = 12' -1.2" |
| 11.1' | 12.2' = 12' -2.4" |
| 11.2' | 12.3' = 12' -3.6" |
| 11.3' | 12.4' = 12' -4.8" |
| 11.4' | 12.5' = 12' -6.0" |
| 11.5' | 12.6' = 12' -7.2" |
| 11.6' | 12.7' = 12' -8.4" |
| 11.7' | 12.8' = 12' -9.6" |
| 11.8' | 12.9' = 12' -10.8" |
| 11.9' | 13.0' = 13' -0.0" |
| 12.0' | 13.1' = 13' -1.2" |

Tows with drafts exceeding the chart guidelines will be locked through the auxiliary (600-foot) lock chamber. Draft determination will be made by the U.S. Coast Guard and/or Corps of Engineers personnel.

All users are urged to exercise extreme caution and comply fully with the Lockmaster's instructions. Cooperation of all concerned is solicited in the interest of uninterrupted service at this facility. When the dam is raised, call 618-309-2487 for lockage information. When the dam is down or for non-lockage information during normal business hours, call 618-564-2842.

6. Locks and Dams No. 53 and Olmsted Locks

Locks and Dam No. 53 and Olmsted Locks are being operated as a single system, in that they are considered one lockage from above 53 to below Olmsted. The lock operators from 53 are in the tower at Olmsted and will control the passage of all industry traffic through the system.

Olmsted Contact Information
Marine Channel 13
Telephone 618-748-6403

Olmsted Marine Fleet
Telephone 270-748-2596 M/V Gordon Stevens
270-823-3156 M/V Lipscomb

Louisville District (Continued)

Olmsted Locks general information

| Mile Marker | Arrival Point | Sill Elevation | Gage |
|---|---|---|---|
| 964.6 | Upper: 53's upper | Upper: 262.5 | Upper: 279.0 |
| | Lower: Olmsted boat ramp | Lower: 262.5 | Lower: 270.9 |
| | | Nav Pass wicket eye: 279.8 | |
| | | Concrete shell: 278.0 | |
| | | Left boat abutment: 303.5 | |
| | | Right boat abutment: 303.5 | |
| | | Top of lock: 310.0 | |

Draft of vessels and operating during high water: normal draft restrictions apply.

Draft of vessels and operating during low water:

Be advised that dam tail water scour protection rock has been placed. The top of rock elevation varies but is approximately 272. However, a 400' wide channel has been constructed to allow traffic to pass during low water events (buoy locations on charts). This channel is marked by navigation markers and has a bottom elevation of 269+/-. Industry is advised to make contact with the marine fleet or lock operations at Lock 53 to verify water elevation and draft available during low water events.

Vessels are directed to exercise reasonable care to minimize the effects of their box waves and propeller washes when passing the ongoing construction site. Vessels shall operate carefully when passing close to construction fleet. Pilots should exercise particular care when passing close to active work crews, crane operations, and workers in elevated platforms.

Navigation Charts showing different conditions scenarios are available on the Louisville District's web site listed below. The pages will be included in the next paper chart book. http://www.lrl.usace.army.mil/Missions/CivilWorks/Navigation/Charts.aspx

8. There are no changes to lock operating hours based on Inland Marine Transportation System (IMTS) Standard Levels of Service.

E. Nashville District.

1. No vessel shall attempt to enter Kentucky Lock with less than 12 inches clearance over the miter sill.

2. Procedures for Locking Fast Doubles at Pickwick Locks, Tennessee River Mile 206.7. The following guidelines will be used for the fast double lockages at Pickwick locks.

a. Downbound fast double lockages will not be conducted when the total discharge exceeds 100,000 cfs unless specifically requested by the operator of the vessel to be locked. When discharge exceeds 100,000 cfs a request to be locked as a fast double will be honored if, in the lock operator's opinion, it is safe to do so, based on such factors as water levels, actual amount of discharge, wind, etc.

b. A downbound fast double lockage will be accomplished by locking the fifteen barges in the 1,000-foot main lock and the towboat in the 600-foot auxiliary lock. Once locked down, the towboat will move to the main lock and prepare to receive the barges as they are pulled from the chamber with the lock's haulage unit equipment. Upon request by the towboat operator, the towboat may face up to the tow and pull the barge from the chamber in lieu of using the lock's haulage unit. In either event a crew member should be stationed on the upstream end of the tow and inform the towboat operator when the stern of the tow sufficiently clears the short wall to provide clearance for the boat to move in and make up to the stern of the tow. Proper protective devices must be used to protect concrete and wall armor during the pull out operation.

c. Upbound fast double lockages will not be conducted when there is discharge through the spillways, regardless of the amount, or when total discharge exceeds 100,000 cfs. When either of the above conditions exists fifteen barge upbound tows will be locked as straight doubles.

d. During an upbound fast double lockage the towboat should pull the tow out of the lock chamber a distance that will permit the towboat to safely remake to its tow. The lock's haulage unit equipment will not normally be used to pull an upbound fast double out from the chamber because it would still be necessary for the towboat to continue the pull out until a sufficient clearance is achieved.

e. With the exception of paragraphs c and d above all other aspects of locking and upbound fast double are the same as stated in a and b for downbound lockages.

. If for any reason a vessel operator desires to lock a fifteen barge tow as a straight double and conditions are such to allow for a fast double lockage, he will be locked as a straight double if determined by the lock operator that it will not create any additional delay to any other vessel(s). If the lock operator determines additional delay would be created, but the vessel operator still desires a straight double lockage, his position in queue will be reestablished until such time additional delay to other traffic does not result. Tows considered in making such determination do not necessarily have to be at the arrival point.

g. The lock operator may require that a fifteen barge tow be locked as a straight double through either lock, rather than as a fast double, due to various factors such as flow, wind, mechanical problems, approach obstruction, or any time when it will result in the most efficient utilization of the lock.

h. Prior to beginning each lockage, procedural aspects of the lockage will be coordinated between the lock and vessel operators in an effort to ensure a mutual and thorough understanding of the locking procedure

3. Due to the draw in the upstream lock approach when filling the chamber on Pickwick main lock all cuts of tows must be at the 600-foot marker or greater on the upper approach wall and have a minimum of 2 lines, four to six part each under normal conditions. During abnormal conditions/adverse weather conditions, tows may tie above the upper gates with additional lines provided the lock operator approves.

4. Locks with a width of less than 110' will require two deckhands with fenders when any vessel with a barge in tow is entering or exiting the lock.

5. Lock operators will not be available to handle lines on the Tennessee, Cumberland or Clinch Rivers.

6. Operating Procedures for upbound tows Wilson Main Lock, Tennessee River Mile 259.4

- Tows with barges over 290-foot in length will be locked as a set-over with the bow of the tow tied on the floating mooring bit at the 125-foot Marker-board.
- If the tow has more than two barges preventing a set-over lockage, they will be tied at the 300-foot Marker-board in addition to the bow and stern lines.

Questions regarding these procedures should be addressed to the Lock Operator on duty via Marine Radio or to the Lockmaster at Wilson Lock by telephone at 256-764-5223.

7. Lockage Procedures at Chickamauga Lock, Tennessee River Mile 471.0

With the completion of the lower cofferdam for the new lock, navigation conditions in the lower approach of Chickamauga Lock have changed considerably and warrant modifications to the existing lockage procedures. The top of the cofferdam extends to approximately Elevation 662 which is 28-foot above the normal tailwater level of Elevation 634.0. The massive size and height of the structure has created severe visibility issues for both upbound and downbound traffic.

To address this issue, the following guidance is being added to the standard lockage procedures for vessels wishing to transit Chickamauga Lock.

Upbound Traffic: All upbound vessels (commercial and recreational) must wait downstream of the Southern Railway Bridge until given approval to enter the lock by the lock operator. Approval will either be given by radio or the green light signal and horn blast. After receiving approval from the lock operator, vessels will advance upbound at minimum steerage headway. Tows and other vessels with restricted visibility must have a proper look-out on the head of their vessel. Look-out must have means of communicating with the pilothouse.

Downbound Traffic: All vessels (commercial and recreational) departing the lock downbound are requested to proceed at minimum steerage headway until they are downstream of the Southern Railway Bridge. Tows and other vessels with restricted visibility must have a proper look-out on the head of their vessel. Look-out must have means of communicating with the pilothouse.

All vessels (commercial and recreational) not directly engaged in locking through the lock should consider the area between the Southern Railway Bridge and the lock as a hazardous area. Vessels should not loiter in or around this area. Likewise, vessels should not transit this area without approval from the lock operator on duty.

This guidance shall remain in effect until further notice. Questions regarding this guidance may be addressed to the Lockmaster at Chickamauga Lock by telephone at (423) 875-6230.

8. There are no changes to lock operating hours based on Inland Marine Transportation System (IMTS) Standard Levels of Service.

APPENDIX D

BLUE BOOK

THE LAW

Section 7 of the River and Harbor Act of August 8, 1917, provides as follows:

"That it shall be the duty of the Secretary of War to prescribe such regulations for the use, administration, and navigation of the navigable waters of the United States as in his judgment the public necessity may require for the protection of life and property, or of operations of the United States in channel improvement, covering all matters not specifically delegated by law to some other executive department. Such regulations shall be posted, in conspicuous and appropriate places, for the information of the public; and every person and every corporation which shall violate such regulations shall be deemed guilty of a misdemeanor and, on conviction thereof in any district court of the United States within whose territorial jurisdiction such offense may have been committed, shall be punished by a fine not exceeding $500, or by imprisonment (in the case of a natural person) not exceeding six months, in the discretion of the court."

In pursuance of the law above quoted, the following regulations were prescribed to govern the use, administration, and navigation of the Ohio River, the Mississippi River above Cairo, Ill., and their tributaries.

**33 CFR 207.300**
**[Code of Federal Regulations]**
**[Title 33, Volume 3, Parts 200 to End]**
**[Revised as of July 1, 2004]**
**From the U.S. Government Printing Office via GPO Access**
**[CITE: 33CFR207.300]**

TITLE 33--NAVIGATION AND NAVIGABLE WATERS

PART 207--NAVIGATION REGULATIONS

**Sec. 207.300 Ohio River, Mississippi River above Cairo, Ill., and their tributaries; use, administration, and navigation.**

(a) *Authority of lockmasters.*

(1) Locks staffed with Government personnel. The provisions of this paragraph apply to all waterways in this section except for Cordell Hull Lock located at Mile 313.5 on the Cumberland River in Tennessee. The lockmaster shall be charged with the immediate control and management of the lock, and of the area set aside as the lock area, including the lock approach channels. He/she shall see that all laws, rules, and regulations for the use of the lock and lock area are duly complied with, to which end he/she is authorized to give all necessary orders and directions in accordance therewith, both to employees of the government and to any and every person within the limits of the lock and lock area, whether navigating the lock or not. No one shall cause any movement of any vessel, boat, or other floating thing in the lock or approaches except by or under the direction of the lockmaster or his/her assistants. In the event of an emergency, the lockmaster may depart from these regulations as he deems necessary. The lockmasters shall also be charged with the control and management of federally constructed mooring facilities.

(2) Locks *staffed with contract personnel.* The provisions of this paragraph apply to Cordell Hull Lock located at Mile 313.5 on the Cumberland River in Tennessee. Contract personnel shall give all necessary orders and directions for operation of the lock. No one shall cause any movement of any vessel, boat or other floating thing in the locks or approaches except by or under the direction of the contract lock operator. All duties and responsibilities of the lockmaster set forth in this section shall be performed by the contract lock operator except that responsibility for enforcing all laws, rules, and regulations shall be vested in a government employee designated by the Nashville District Engineer. The district engineer will notify waterway users and the general public through appropriate notices and media concerning the location and identity of the designated government employee.

(b) *Safety rules for vessels using navigation locks.* The following safety rules are hereby prescribed for vessels in the locking process, including the act of approaching or departing a lock:

(1) *Tows with flammable or hazardous cargo barges, loaded or empty.*

(I) Stripping barges or transferring cargo is prohibited.

(ii) All hatches on barges used to transport flammable or hazardous materials shall be closed and latched, except those barges carrying a gas-free certificate.

(iii) Spark-proof protective rubbing fenders ("possums") shall be used.

(2) *All vessels.*

(I) Leaking vessels may be excluded from locks until they have been repaired to the satisfaction of the lockmaster.

(ii) Smoking, open flames, and chipping or other spark-producing activities are prohibited on deck during the locking cycle.

(iii) Painting will not be permitted in the lock chamber during the locking cycle.

(iv) Tow speeds shall be reduced to a rate of travel such that the tow can be stopped by checking should mechanical difficulties develop. Pilots should check with the individual lockmasters concerning prevailing conditions. It is also recommended that pilots check their ability to reverse their engines prior to beginning an approach. Engines shall not be turned off in the lock until the tow has stopped and been made fast.

(v) U.S. Coast Guard regulations require all vessels to have on board life saving devices for prevention of drowning. All crew members of vessels required to carry work vests (life jackets) shall wear them during a lockage, except those persons in an area enclosed with a handrail or other device which would reasonably preclude the possibility of falling overboard. All deckhands handling lines during locking procedure shall wear a life jacket. Vessels not required by Coast Guard regulations to have work vests aboard shall have at least the prescribed life saving devices, located for ready access and use if needed. The lockmaster may refuse lockage to any vessel which fails to conform to the above.

(c) *Reporting of navigation incidents.* In furtherance of increased safety on waterways the following safety rules are hereby prescribed for all navigation interests:

(1) Any incident resulting in uncontrolled barges shall immediately be reported to the nearest lock. The report shall include information as to the number of loose barges, their cargo, and the time and location where they broke loose. The lockmaster or locks shall be kept informed of the progress being made in bringing the barges under control so that he can initiate whatever actions may be warranted.

(2) Whenever barges are temporarily moored at other than commercial terminals or established fleeting areas, and their breaking away could endanger a lock, the nearest lock shall be so notified, preferably the downstream lock.

(3) Sunken or sinking barges shall be reported to the nearest lock both downstream and upstream of the location in order that other traffic passing those points may be advised of the hazards.

(4) In the event of an oil spill, notify the nearest lock downstream, specifying the time and location of the incident, type of oil, amount of spill, and what recovery or controlling measures are being employed.

(5) Any other activity on the waterways that could conceivably endanger navigation or a navigation structure shall be reported to the nearest lock.

(6) Whenever it is necessary to report an incident involving uncontrolled, sunken or sinking barges, the cargo in the barges shall be accurately identified.

(d) *Precedence at locks.*

(1) The vessel arriving first at a lock shall normally be first to lock through, but precedence shall be given to vessels belonging to the United States. Licensed commercial passenger vessels operating on a published schedule or regularly operating in the "for hire" trade shall have precedence over cargo tows and like craft. Commercial cargo tows shall have precedence over recreational craft, except as described in paragraph (f) of this section.

(2) Arrival posts or markers may be established ashore above and/or below the locks. Vessels arriving at or opposite such posts or markers will be considered as having arrived at the locks within the meaning of this paragraph. Precedence may be established visually or by radio communication. The lockmaster may prescribe such departure from the normal order of precedence as in his judgment is warranted to achieve best lock utilization.

(e) *Unnecessary delay at locks.* Masters and pilots must use every precaution to prevent unnecessary delay in entering or leaving locks. Vessels failing to enter locks with reasonable promptness when signaled to do so shall lose their turn. Rearranging or switching of barges in the locks or in approaches is prohibited unless approved or directed by the lockmaster. This is not meant to curtail "jackknifing" or set-over where normally practiced.

(f) *Lockage of recreational craft.* In order to fully utilize the capacity of the lock, the lockage of recreational craft shall be expedited by locking them through with commercial craft: *Provided,* that both parties agree to joint use of the chamber. When recreational craft are locked simultaneously with commercial tows, the lockmaster will direct, whenever practicable, that the recreational craft enter the lock and depart while the tow is secured in the lock. Recreational craft will not be locked through with vessels carrying volatile cargoes or other substances likely to emit toxic or explosive vapors. If the lockage of recreational craft cannot be accomplished within the time required for three other lockages, a separate lockage of recreational craft shall be made. Recreational craft operators are advised that many locks have a pull chain located at each end of the lock which signals the lockmaster that lockage is desired. Furthermore, many Mississippi River locks utilize a strobe light at the lock to signal recreational type vessels that the lock is ready for entry. Such lights are used exclusively to signal recreational craft.

(g) *Simultaneous lockage of tows with dangerous cargoes.* Simultaneous lockage of other tows with tows carrying dangerous cargoes or containing flammable vapors normally will only be permitted when there is agreement between the lockmaster and both vessel masters that the simultaneous lockage can be executed safely. He shall make a separate decision each time such action seems safe and appropriate, provided:

(1) The first vessel or tow in and the last vessel or tow out are secured before the other enters or leaves.

(2) Any vessel or tow carrying dangerous cargoes is not leaking.

(3) All masters involved have agreed to the joint use of the lock chamber.

(h) *Stations while awaiting a lockage.* Vessels awaiting their turn to lock shall remain sufficiently clear of the structure to allow unobstructed departure for the vessel leaving the lock. However, to the extent practicable under the prevailing conditions, vessels and tows shall position themselves so as to minimize approach time when signaled to do so.

(i) *Stations while awaiting access through navigable pass.* When navigable dams are up or are in the process of being raised or lowered, vessels desiring to use the pass shall wait outside the limits of the approach points unless authorized otherwise by the lockmaster.

(j) *Signals.* Signals from vessels shall ordinarily be by whistle; signals from locks to vessels shall be by whistle, another sound device, or visual means. when a whistle is used, long blasts of the whistle shall not exceed 10 seconds and short blasts of the whistle shall not exceed 3 seconds. Where a lock is not provided with a sound or visual signal installation, the lockmaster will indicate by voice or by the wave of a hand when the vessel may enter or leave the lock. Vessels must approach the locks with caution and shall not enter nor leave the lock until signaled to do so by the lockmaster. The following lockage signals are prescribed:

(1) *Sound signals by means of a whistle.* These signals apply at either a single lock or twin locks.

(i) Vessels desiring lockage shall on approaching a lock give the following signals at a distance of not more than one mile from the lock;

(*a*) If a single lockage only is required: One long blast of the whistle followed by one short blast.

(*b*) If a double lockage is required: One long blast of the whistle followed by two short blasts.

(ii) When the lock is ready for entrance, the lock will give the following signals:

(*a*) One long blast of the whistle indicates permission to enter the lock chamber in the case of a single lock or to enter the landward chamber in the case of twin locks.

(*b*) Two long blasts of the whistle indicates permission to enter the riverward chamber in the case of twin locks.

(iii) Permission to leave the locks will be indicated by the following signals given by the lock:

(*a*) One short blast of the whistle indicates permission to leave the lock chamber in the case of a single lock or to leave the landward chamber in the case of twin locks.

(*b*) Two short blasts of the whistle indicates permission to leave the riverward chamber in the case of twin locks.

(iv) Four or more short blasts of the lock whistle delivered in rapid succession will be used as a means of attracting attention, to indicate caution, and to signal danger. This signal will be used to attract the attention of the captain and crews of vessels using or approaching the lock or navigating in its vicinity and to indicate that something unusual involving danger or requiring special caution is happening or is about to take place. When this signal is given by the lock, the captains and crews of vessels in the vicinity shall immediately become on the alert to determine the reason for the signal and shall take the necessary steps to cope with the situation.

(2) *Lock signal lights.* At locks where density of traffic or other local conditions make it advisable, the sound signals from the lock will be supplemented by signal lights. Flashing lights (showing a one-second flash followed by a two-second eclipse) will be located on or near each end of the land wall to control use of a single lock or of the landward lock of double locks. In addition, at double locks, interrupted flashing lights (showing a one-second flash, a one-second eclipse and a one-second flash, followed by a three-second eclipse) will be located on or near each end of the intermediate wall to control use of the riverward lock. Navigation will be governed as follows:

(i) *Red light.* Lock cannot be made ready immediately. Vessel shall stand clear.

(ii) *Amber light.* Lock is being made ready. Vessel may approach but under full control.

(iii) *Green light.* Lock is ready for entrance.

(iv) *Green and amber.* Lock is ready for entrance but gates cannot be recessed completely. Vessel may enter under full control and with extreme caution.

(3) *Radio communications.* VHF-FM radios, operating in the FCC authorized Maritime Band, have been installed at all operational locks (except those on the Kentucky River and Lock 3, Green River). Radio contact may be made by any vessel desiring passage. Commercial tows are especially requested to make contact at least one half hour before arrival in order that the pilot may be informed of current river and traffic conditions that may affect the safe passage of his tow.

(4) All locks monitor 156.8 MHz (Ch. 16) and 156.65 MHz (Ch. 13) and can work 156.65 MHz (Ch. 13) and 156.7 MHz (Ch. 14) Ch. 16 is the authorized call, reply and distress frequency, and locks are not permitted to work on this frequency except in an emergency involving the risk of immediate loss of life or property. Vessels may call and work Ch. 13, without switching, but are cautioned that vessel to lock traffic must not interrupt or delay Bridge to Bridge traffic which has priority at all times.

(k) *Rafts.* Rafts to be locked through shall be moored in such manner as not to obstruct the entrance of the lock, and if to be locked in sections, shall be brought to the lock as directed by the lockmaster. After passing the lock the sections shall be reassembled at such distance beyond the lock as not to interfere with other vessels.

(l) *Entrance to and exit from locks.* In case two or more boats or tows are to enter for the same lockage, their order of entry shall be determined by the lockmaster. Except as directed by the lockmaster, no boat shall pass another in the lock. In no case will boats be permitted to enter or leave the locks until directed to do so by the lockmaster. The sides of all craft passing through any lock shall be free from projections of any kind which might injure the lock walls. All vessels shall be provided with suitable fenders, and shall be used to protect the lock and guide walls until it has cleared the lock and guide walls.

(m) *Mooring*

(1) *At locks.*

(i) All vessels when in the locks shall be moored as directed by the lockmaster. Vessels shall be moored with bow and stern lines leading in opposite directions to prevent the vessel from "running" in the lock. All vessels will have one additional line available on the head of the tow for emergency use. The pilothouse shall be attended by qualified personnel during the entire locking procedure. When the vessel is securely moored, the pilot shall not cause movement of the propellers except in emergency or unless directed by the lockmaster. Tying to lock ladders is strictly prohibited.

(ii) Mooring of unattended or no propelled vessels or small craft at the upper or lower channel approaches will not be permitted within 1200 feet of the lock.

(2) *Outside of locks.*

(i) No vessel or other craft shall regularly or permanently moor in any reach of a navigation channel. The approximate centerline of such channels are marked as the sailing line on Corps of Engineers' navigation charts. Nor shall any floating craft, except in an emergency, moor in any narrow or hazardous section of the waterway. Furthermore, all vessels or other craft are prohibited from regularly or permanently mooring in any section of navigable waterways which are congested with commercial facilities or traffic unless it is moored at facilities approved by the Secretary of the Army or his authorized representative. The limits of the congested areas shall be marked on Corps of Engineers' navigation charts. However, the District Engineer may authorize in writing exceptions to any of the above if, in his judgment, such mooring would not adversely affect navigation and anchorage.

(ii) No vessel or other craft shall be moored to railroad tracks, to riverbanks in the vicinity of railroad tracks when such mooring threatens the safety of equipment using such tracks, to telephone poles or power poles, or to bridges or similar structures used by the public.

(iii) Except in case of great emergency, no vessel or craft shall anchor over revetted banks of the river, and no floating plant other than launches and similar small craft shall land against banks protected by revetment except at regular commercial landings. In all cases, every precaution to avoid damage to the revetment works shall be exercised. The construction of log rafts along mattressed or paved banks or the tying up and landing of log rafts against such banks shall be performed in such a manner as to cause no damage to the mattress work or bank paving. Generally, mattress work extends out into the river 600 feet from the low water line.

(iv) Any vessel utilizing a federally constructed mooring facility (e.g., cells, buoys, anchor rings) at the points designated on the current issue of the Corps' navigation charts shall advise the lockmaster at the nearest lock from that point by the most expeditious means.

(n) *Draft of vessels.* No vessel shall attempt to enter a lock unless its draft is at least three inches less than the least depth of water over the guard sills, or over the gate sills if there be no guard sills. Information concerning controlling depth over sills can be obtained from the lockmaster at each lock or by inquiry at the office of the district engineer of the district in which the lock is located.

(o) *Handling machinery.* No one but employees of the United States shall move any lock machinery except as directed by the lockmaster. Tampering or meddling with the machinery or other parts of the lock is strictly forbidden.

(p) *Refuse in locks.* Placing or discharging refuse of any description into the lock, on lock walls or esplanade, canal or canal bank is prohibited.

(q) *Damage to locks or other work.* To avoid damage to plant and structures connected with the construction or repair of locks and dams, vessels passing structures in the process of construction or repair shall reduce their speed and navigate with special caution while in the vicinity of such work. The restrictions and admonitions contained in these regulations shall not affect the liability of the owners and operators of floating craft for any damage to locks or other structures caused by the operation of such craft.

(r) *Trespass of lock property.* Trespass on locks or dams or other U.S. property pertaining to the locks or dams is strictly prohibited except in those areas specifically permitted. Parties committing any injury to the locks or dams or to any part thereof will be responsible therefore. Any person committing a willful injury to any U.S. property will be prosecuted. No fishing will be permitted from lock walls, guide walls, or guard walls of any lock or from any dam, except in areas designated and posted by the responsible District Engineer as fishing areas. Personnel from commercial and recreational craft will be allowed on the lock structure for legitimate business reasons; e.g., crew changes, emergency phone calls, etc.

(s) *Restricted areas at locks and dams.* All waters immediately above and below each dam, as posted by the respective District Engineers, are hereby designated as restricted areas. No vessel or other floating craft shall enter any such restricted area at any time. The limits of the restricted areas at each dam will be determined by the responsible District Engineer and marked by signs and/or flashing red lights installed in conspicuous and appropriate places.

(t) [Reserved]

(u) *Operations during high water and floods in designated vulnerable areas.* Vessels operating on these waters during periods when river stages exceed the level of "ordinary high water," as designated on Corps of Engineers' navigation charts, shall exercise reasonable care to minimize the effects of their bow waves and propeller washes on river banks; submerged or partially submerged structures or habitations; terrestrial growth such as trees and bushes; and man-made amenities that may be present. Vessels shall operate carefully when passing close to levees and other flood protection works, and shall observe minimum distances from banks which may be prescribed from time to time in Notices to Navigation Interests. Pilots should exercise particular care not to direct propeller wash at river banks, levees, revetments, structures or other appurtenances subject to damage from wave action.

(v) *Navigation lights for use at all locks and dams except on the Kentucky River and Lock 3, Green River.*

(1) At locks at all fixed dams and at locks at all movable dams when the dams are up so that there is no navigable pass through the dam, the following navigation lights will be displayed during hours of darkness:

(i) Three green lights visible through an arc of 360° arranged in a vertical line on the upstream end of the river (guard) wall unless the intermediate wall extends farther upstream. In the latter case, the lights will be placed on the upstream end of the intermediate wall.

(ii) Two green lights visible through an arc of 360° arranged in a vertical line on the downstream end of the river (guard) wall unless the intermediate wall extends farther downstream. In the latter case, the lights will be placed on the downstream end of the intermediate wall.

(iii) A single red light, visible through an arc of 360° on each end (upstream and downstream) of the land (guide) wall.

(2) At movable dams when the dam has been lowered or partly lowered so that there is an unobstructed navigable pass through the dam, the navigation lights indicated in the following paragraphs will be displayed during hours of darkness until lock walls and weir piers are awash.

(i) Three red lights visible through an arc of 360° arranged in a vertical line on the upstream end of the river (guard) wall.

(ii) Two red lights visible through an arc of 360° arranged in a vertical line on the downstream end of the river (guard) wall.

(iii) A single red light visible through an arc of 360° on each end (upstream and downstream) of the land (guide) wall.

(3) After lock walls and weir piers are awash they will be marked as prescribed in paragraph (x) of this section.

(4) If one or more bear traps or weirs are open or partially open, and may cause a set in current conditions at the upper approach to the locks, this fact will be indicated by displaying a white circular disk 5 feet in diameter, on or near the light support on the upstream end of the land (guide) wall during the hours of daylight, and will be indicated during hours of darkness by displaying a white (amber) light vertically under and 5 feet below the red light on the upstream end of the land (guide) wall.

(5) At Locks No. 1 and 2, Green River, when the locks are not in operation because of high river stages, a single red light visible through an arc of 360° will be displayed on each end (upstream and downstream) of the lock river (guard) will at which time the lights referred to above will not be visible.

(w) *Navigation lights for use at locks and dams on the Kentucky River and Lock 3, Green River.* A single red light visible through an arc of 360° shall be displayed during hours of darkness at each end of the river wall or extending guard structures until these structures are awash.

(x) *Buoys at movable dams.*

(1) Whenever the river (guard) wall of the lock and any portion of the dam are awash, and until covered by a depth of water equal to the project depth, the limits of the navigable pass through the dam will be marked by buoys located at the upstream and downstream ends of the river (guard) wall, and by a single buoy over the end or ends of the portion or portions of the dam adjacent to the navigable pass over which project depth is not available. A red nun-type buoy will be used for such structures located on the left-hand side (facing downstream) of the river and a black can-type buoy for such structures located on the right-hand side. Buoys will be lighted, if practicable.

(2) Where powerhouses or other substantial structures projecting considerably above the level of the lock wall are located on the river (guard) wall, a single red light located on top of one of these structures may be used instead of river wall buoys prescribed above until these structures are awash, after which they will be marked by a buoy of appropriate type and color (red nun or black can buoy) until covered by a depth of water equal to the project depth. Buoys will be lighted, if practicable.

(y) *Vessels to carry regulations.* A copy of these regulations shall be kept at all times on board each vessel regularly engaged in navigating the rivers to which these regulations apply. Copies may be obtained from any lock office or District Engineer's office on request. Masters of such vessels are encouraged to have on board copies of the current edition of appropriate navigation charts.

NOTES

1. Muskingum River Lock & Dam 1 has been removed. Ohio River slackwater provides navigable channel for recreational craft to Lock 2 near Devola, Ohio. Muskingum River Locks 2 thru 11 inclusive have been transferred to the State of Ohio and are operated during the recreational boating season by the Ohio Department of Natural Resources. Inquiries regarding Muskingum River channel conditions and lock availability should be directed to the aforementioned Department.

2. Little Kanawha River Lock and Dam 1 has been removed, thus permitting recreational craft to navigate up to Lock 2 near Slate, W.Va. Operation of Locks 2 thru 5 on the Little Kanawha River has been discontinued.

3. Big Sandy River: Lock 1 has been removed, thus permitting recreational craft to navigate to Lock 2, near Buchanan, Ky. Operation of Lock 2 and Lock 3 near Fort Gay, W.Va. has been discontinued. Operation of Lock and Dam 1 on Levisa Fork near Gallup, Ky., and Lock and Dam 1 on Tug Fork near Chapman, Ky. has been discontinued.

4. Operation of the following Green River Locks has been discontinued: Lock 4 near Woodbury, Ky., Lock 5 near Glenmore, Ky., and Lock 6 near Brownsville, Ky.

5. Operation of Barren River Lock and Dam No. 1 near Richardsville, Ky. has been discontinued.

6. Operation of Rough River Lock and Dam No. 1 near Hartford, Ky. has been discontinued.

7. Operation of Osage River Lock and Dam 1 near Osage City, Mo., has been discontinued.

8. Operation of the 34 locks in the Illinois and Mississippi (Hennepin) Canal, including the feeder section, has been discontinued.

9. Operation of the Illinois and Michigan Canal has been discontinued.

[40 FR 32121, July 31, 1975, as amended at 50 FR 37580, Sept. 18, 1985; 56 FR 13765, Apr. 4, 1991]

**Sec. 207.200 Mississippi River below mouth of Ohio River, including South and Southwest Passes; use, administration, and navigation.**

(a) *Mississippi River bank protection works provided by United States.* Except in case of great emergency, no vessel or craft shall anchor over revetted banks of the river, and no floating plant other than launches and similar small craft shall land against banks protected by revetment except at regular commercial landings. In all cases, every precaution to avoid damage to the revetment works shall be exercised. The construction of log rafts along mattressed or paved banks or the tying up and landing of log rafts against such banks shall be performed in such a manner as to cause no damage to the mattress work or bank paving. Generally, mattress work extends out into the river 600 feet from the low water line. Information as to the location of revetted areas may be obtained from, and will be published from time to time by, the District Engineers, Corps of Engineers, New Orleans, Louisiana, Vicksburg, Mississippi, and Memphis, Tennessee, and the President, Mississippi River Commission, Vicksburg, Mississippi.

(b) *Mississippi River below Baton Rouge, La., including South and Southwest Passes*--(1) *Supervision.* The use, administration, and navigation of the waterways to which this paragraph applies shall be under the supervision of the District Engineer, Corps of Engineers, New Orleans, Louisiana.

(2)-(3) [Reserved]

(4) *Cable and pipeline crossings.* Any cable or pipeline crossing or extending into the waterways shall be marked by large signs with 12-inch black letters on a white background readable from the waterway side, placed on each side of the river near the point where the cable or pipeline enters the water, and at a sufficient height to be readable above any obstructions normally to be expected at the locality such as weeds or moored vessels.

(5) *Marine accidents.* Masters, mates, pilots, owners, or other persons using the waterway to which this paragraph applies shall notify the District Engineer by the most expeditious means available of all marine accidents, such as fire, collision, sinking, or stranding, where there is possible obstruction of the channel or interference with navigation or where damage to Government property is involved, furnishing a clear statement as to the name, address, and ownership of the vessel or vessels involved, the time and place, and the action taken. In all cases, the owner of the sunken vessel shall take immediate steps properly to mark the wreck.

[15 FR 3325, May 30, 1950, as amended at 17 FR 6594, July 18, 1952; 27 FR 3166, Apr. 3, 1962; 33 FR 10456, July 23, 1968; 42 FR 51773, Sept. 29, 1977; 42 FR 57961, 57962, Nov. 7, 1977]

APPENDIX E

BLUE BOOK

33 CFR 207.800

[Code of Federal Regulations]
[Title 33, Volume 3, Parts 200 to End]
[Revised as of July 1, 2004]
From the U.S. Government Printing Office via GPO Access
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TITLE 33--NAVIGATION AND NAVIGABLE WATERS

PART 207--NAVIGATION REGULATIONS--Table of Contents

Sec. 207.800 Collection of navigation statistics.

(a) *Definitions.* For the purpose of this regulation the following terms are defined:

(1) *Navigable waters of the United States* means those waters of the United States that are subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce. (See 33 CFR part 329 for a more complete definition of this term.)

(2) *Offenses and Violations* mean:

(i) Failure to submit a required report.

(ii) Failure to provide a timely, accurate, and complete report.

(iii) Failure to submit monthly listings of idle vessels or vessels in transit.

(iv) Failure to submit a report required by the lockmaster or canal operator.

(3) *Leased or chartered vessel* means a vessel that is leased or chartered when the owner relinquishes control of the vessel through a contractual agreement with a second party for a specified period of time and/or for a specified remuneration from the lessee. Commercial movements on an affreightment basis are not considered a lease or charter of a particular vessel.

(4) *Person or entity* means an individual, corporation, partnership, or company.

(5) *Timely* means vessel and commodity movement data must be received by the Waterborne Commerce Statistics Center within 30 days after the close of the month in which the vessel movement or nonmovement takes place.

(6) *Commercial vessel* means a vessel used in transporting by water, either merchandise or passengers for compensation or hire, or in the course of business of the owner, lessee, or operator of the vessel.

(7) *Reporting situation* means a vessel movement by an operator that is required to be reported. Typical examples are listed in the instructions on the various ENG Forms. Five typical movements that are required to be reported by vessel operating companies include the following examples: Company A is the barge owner and the barge transports corn from Minneapolis, MN to New Orleans, LA, with fleeting at Cairo, IL.

(i) *Lease/Charter:* If Company A leases or charters the barge to Company B, then Company B is responsible for reporting the movements of the barge until the lease/charter expires.

(ii) *Interline Movement:* A barge is towed from Minneapolis to Cairo by Company A and from Cairo to New Orleans by Company B. Since Company A is the barge owner, and the barge is not leased. Company A reports the entire movement of the barge with an origin of Minneapolis and a destination of New Orleans.

(iii) *Vessel Swap/Trade:* Company A swaps barge with Company B to allow Company B to meet a delivery commitment to New Orleans. Since Company A has not leased/chartered the barge, Company A is responsible for filing the report. Company B is responsible for filing the report on the barge which is traded to Company A. The swap or trade will not affect the primary responsibility for reporting the individual vessel movements.

(iv) *Re-Consignment:* Barge is reconsigned to Mobile, AL. Company A reports the movements as originating in Minneapolis and terminating in Mobile. The point from which barge is reconsigned is not reported, only points of loading and unloading.

(v) *Fleeting:* Barge is deposited at a New Orleans fleeting area by Company A and towed by Company B from fleeting area to New Orleans area dock for unloading. Company A, as barge owner, reports entire movements from Minneapolis to the unloading dock in New Orleans. Company B does not report any barge movement.

(b) Implementation of the waterborne commerce statistics provisions of the River and Harbor Act of 1922, as amended by the Water Resources Development Act of 1986 (Pub. L. 99-662), mandates the following.

(1) Filing Requirements. Except as provided in paragraph (b)(2) of this section, the person or entity receiving remuneration for the movement of vessels or for the transportation of goods or passengers on the navigable waters is responsible for assuring that the activity report of commercial vessels is timely filed.

(i) For vessels under lease/charter agreements, the lessee or charterer of any commercial vessel engaged in commercial transportation will be responsible for the filing of said reports until the lease/charter expires.

(ii) The vessel owner, or his designated agent, is always the responsible party for ensuring that all commercial activity of the vessel is timely reported.

(2) The following Vessel Information Reports are to be filed with the Army Corps of Engineers, at the address specified on the ENG Form, and are to include:

(i) Monthly Reports. These reports shall be made on ENG Forms furnished upon written request of the vessel operating companies to the Army Corps of Engineers. The forms are available at the following address: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, Post Office Box 61280, New Orleans, Louisiana 70161-1280.

(A) All movements of domestic waterborne commercial vessels shall be reported, including but not limited to: Dry cargo ship and tanker moves, loaded and empty barge moves, towboat moves, with or without barges in tow, fishing vessels, movements of crew boats and supply boats to offshore locations, tugboat moves and movements of newly constructed vessels from the shipyard to the point of delivery.

(B) Vessels idle during the month must also be reported.

(C) Notwithstanding the above requirements, the following waterborne vessel movements need not be reported:

(*1*) Movements of recreational vessels.

(2) Movements of fire, police, and patrol vessels.

(3) Movements of vessels exclusively engaged in construction (e.g., piledrivers and crane barges). NOTE: however, those movements of supplies, materials, and crews to or from the construction site must be timely reported.

(*4*) Movements of dredges to or from the dredging site. However, vessel movements of dredged material from the dredging site to the disposal site must be reported.

(*5*) Specific movements granted exemption in writing by the Waterborne Commerce Statistics Center.

(D) ENG Forms 3925 and 3925b shall be completed and filed by vessel operating companies each month for all voyages or vessel movements completed during the month. Vessels that did not complete a move during the month shall be reported as idle or in transit.

(E) The vessel operating company may request a waiver from the Army Corps of Engineers, and upon written approval by the Waterborne Commerce Center, the company may be allowed to provide the requisite information of the above paragraph (D), on computer printouts, magnetic tape, diskettes, or alternate medium approved by the Center.

(F) Harbor Maintenance Tax information is required on ENG Form 3925 for cargo movements into or out of ports that are subject to the provisions of section 1402 of the Water Resources Development Act of 1986 (Pub. L. 99-662).

(*1*) The name of the shipper of the commodity, and the shipper's Internal Revenue Service number or Social Security number, must be reported on the form.

(*2*) If a specific exemption applies to the shipper, the shipper should list the appropriate exemption code. The specific exemption codes are listed in the directions for ENG Form 3925.

(3) Refer to 19 CFR part 24 for detailed information on exemptions and ports subject to the Harbor Maintenance Tax.

(ii) Annual Reports. Annually an inventory of vessels available for commercial carriage of domestic commerce and vessel characteristics must be filed on ENG Forms 3931 and 3932.

(iii) Transaction Reports. The sale, charter, or lease of vessels to other companies must also be reported to assure that proper decisions are made regarding each company's duty for reporting vessel movements during the year. In the absence of notification of the transaction, the former company of record remains responsible until proper notice is received by the Corps.

(iv) Reports to Lockmasters and Canal Operators. Masters of self-propelled non-recreational vessels which pass through locks and canals operated by the Army Corps of Engineers will provide the data specified on ENG Forms 3102b, 3102c, and/or 3102d to the lockmaster, canal operator, or his designated representative in the manner and detail dictated.

(c) *Penalties for Noncompliance*. The following penalties for noncompliance can be assessed for offenses and violations.

(1) Criminal Penalties. Every person or persons violating the provisions of this regulation shall, for each and every offense, be liable to a fine of not more than $5,000, or imprisonment not exceeding two months, to be enforced in any district court in the United States within whose territorial jurisdiction such offense may have been committed.

(2) Civil Penalties. In addition, any person or entity that fails to provide timely, accurate, and complete statements or reports required to be submitted by this regulation may also be assessed a civil penalty of up to $2,500 per violation under 33 U.S.C. 555, as amended.

(3) Denial of Passage. In addition to these fines, penalties, and imprisonments, the lockmaster or canal operator can refuse to allow vessel passage.

(d) *Enforcement Policy*. Every means at the disposal of the Army Corps of Engineers will be utilized to monitor and enforce these regulations.

(1) To identify vessel operating companies that should be reporting waterborne commerce data, The Corps will make use of, but is not limited to, the following sources.

(i) Data on purchase and sale of vessels.

(ii) U.S. Coast Guard vessel documentation and reports.

(iii) Data collected at Locks, Canals, and other facilities operated by the Corps.

(iv) Data provided by terminals on ENG Form 3926.

(v) Data provided by the other Federal agencies including the Internal Revenue Service, Customs Service, Maritime Administration, Department of Transportation, and Department of Commerce.

(vi) Data provided by ports, local facilities, and State or local governments.

(vii) Data from trade journals and publications.

(viii) Site visits and inspections.

(2) Notice of Violation. Once a reporting violation is determined to have occurred, the Chief of the Waterborne Commerce Statistics Center will notify the responsible party and allow 30 days for the reports to be filed after the fact. If the reports are not filed within this 30-day notice period, then appropriate civil or criminal actions will be undertaken by the Army Corps of Engineers, including the proposal of civil or criminal penalties for noncompliance. Typical cases for criminal or civil action include, but are not limited to, those violations which are willful, repeated, or have a substantial impact in the opinion of the Chief of the Waterborne Commerce Statistics Center.

(3) Administrative Assessment of Civil Penalties. Civil penalties may be assessed in the following manner.

(i) Authorization. If the Chief of the Waterborne Commerce Statistics Center finds that a person or entity has failed to comply with any of the provisions specified herein, he is authorized to assess a civil penalty in accordance with the Class I penalty provisions of 33 CFR part 326. Provided, however, that the procedures in 33 CFR part 326 specifically implementing the Clean Water Act (33 U.S.C. 1319(g)(4)), public notice, comment period, and state coordination, shall not apply.

(ii) Initiation. The Chief of the Waterborne Commerce Statistics Center will prepare and process a proposed civil penalty order which shall state the amount of the penalty to be assessed, describe by reasonable specificity the nature of the violation, and indicate the applicable provisions of 33 CFR part 326.

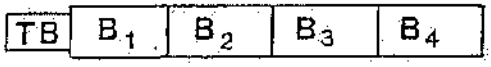
(iii) Hearing Requests. Recipients of a proposed civil penalty order may file a written request for a hearing or other proceeding. This request shall be as specified in 33 CFR part 326 and shall be addressed to the Director of the Water Resources Support Center, Casey Building, Fort Belvoir, Virginia 22060-5586, who will provide the requesting person or entity with a reasonable opportunity to present evidence regarding the issuance, modification, or revocation of the proposed order. Thereafter, the Director of the Water Resources Center shall issue a final order.

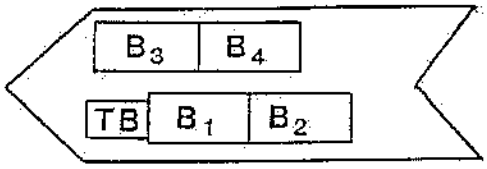
(4) Additional Remedies. Appropriate cases may also be referred to the local U.S. Attorney for prosecution, penalty collection, injunctive, and other relief by the Chief of the Waterborne Commerce Statistics Center.

[56 FR 13765, Apr. 4, 1991]

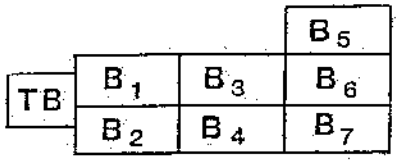
# RECOMMENDED LOCKING CONFIGURATIONS

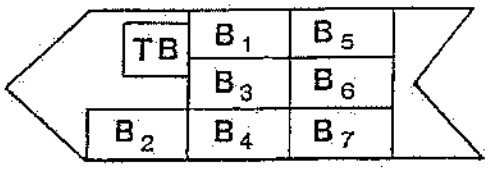
SETOVER (UNIT TOW)



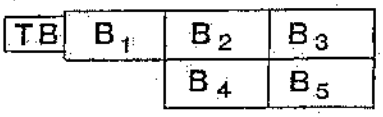



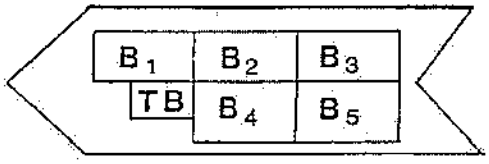

SETOVER (7 BARGE TOW & WIDE BOAT)



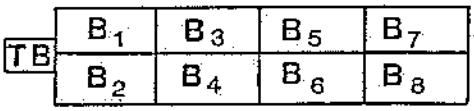



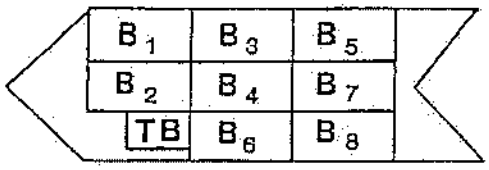

KNOCKOUT



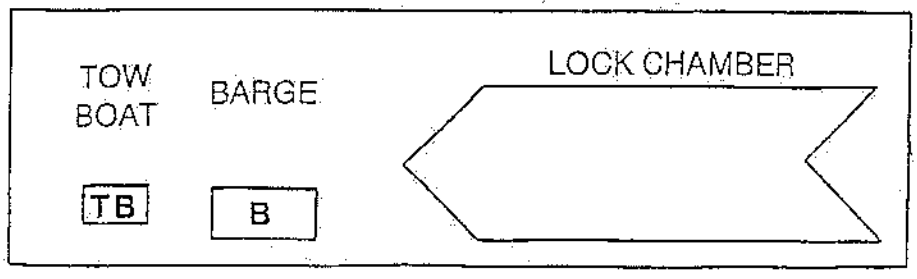




JACKKNIFE




KEY



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OFFICE OF THE DIVISION ENGINEER
CORPS OF ENGINEERS, MISSISSIPPI VALLEY DIVISION
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VICKSBURG, MISSISSIPPI 39180

CEMVD-ET-CO

January 2018

# DIVISION BULLETIN NO.1

## MAPS AND CHARTS, MISSISSIPPI RIVER SYSTEM

## LIST OF MAPS AND CHARTS SUITED FOR NAVIGATION OF THE MISSISSIPPI RIVER AND THE PRINCIPAL CONNECTING WATERWAYS

## FOREWORD

The maps and charts described below, of the Mississippi River and certain connecting waterways, have been selected as those best suited for the general needs of the navigator and the inland-waterway tourist. Orders should include reference to the title of the maps or charts. To ensure that orders may receive prompt attention, they should be addressed to the pertinent offices as directed in the descriptions and should be accompanied by the proper remittance. Remittance may be made by Postal or Express Money Order or check, payable to "FAO Treasurer of the United States".

The proper authorities with whom to communicate concerning the availability of maps and charts on tributaries of the Mississippi River and maps other than those described are listed in the latter part of this bulletin.

## INLAND ELECTRONIC NAVIGATIONAL CHARTS

In addition to paper navigation chart books detailed below, the US Army Corps of Engineers (USACE) has produced Inland Electronic Navigational Charts (IENCs) which are updated and maintained on a monthly basis. These large-scale, accurate, and up-to-date IENCs enable electronic charting systems to provide accurate and real-time display of vessel positions relative to waterway features, improve voyage planning and monitoring, aid in new personnel training tools and integrated displays of river charts, radar and Automatic Identification Systems (AIS) overlays. USACE IENCs are updated on a monthly cycle to stay current with changes in the waterway system. To date, over 7000 miles of navigable rivers have been electronically charted. IENCs for the following rivers are available for free download and use from the USACE Electronic Charting website at http://www.agc.army.mil/Missions/Echarts.aspx: Allegheny, Arkansas, Atchafalaya, Black Warrior-Tombigbee, Clinch, Cumberland, Green, Illinois, Kanawha, Kaskaskia, Lower Mississippi, Missouri, Monongahela, Ohio, Ouachita, Red, Tennessee, Tennessee-Tombigbee, Upper Mississippi and White Rivers. Additionally, USACE produces a weekly IENC Chart Overlay (3UASW000) for the Mississippi River, Southwest Pass to represent the most current channel conditions. This IENC is intended to be used in conjunction with the NOAA Electronic Navigational Chart US4LA30M.

## MISSISSIPPI RIVER

## MISSISSIPPI RIVER, (CAIRO, ILLINOIS) TO GULF OF MEXICO

(Vicksburg District-MVK, Memphis District-MVM & New Orleans District-MVN)

1. Title, "2015 Flood Control and Navigation Maps of the Mississippi River, (Cairo, Illinois) to the Gulf of Mexico" published under the direction of the President, Mississippi River Commission. This bound set of charts is 11" X 17", with scale 1:40,000, showing the Mississippi River with navigation sailing line, navigation lights, bridges, aerial and submarine crossings, ferries, roads, levees, topography, etc.

   This folio charts the Mississippi River from the Ohio River mouth at approximately Mississippi River Mile 950 AHP to the Gulf of Mexico. There are 24 sheets pertaining to the Mississippi River below Cairo, Illinois, containing the following river data: bridges with limiting horizontal and vertical clearances; lock dimensions connecting the Mississippi River with the Gulf Intracoastal Waterway; Mississippi River cutoffs constructed since 1929; list of operative revetments and utility crossings; distance chart showing river distances; a table showing project channel dimensions of navigable streams in the Mississippi Valley Division. The Navigation Charts folio can be downloaded in PDF format at: http://www.mvn.usace.army.mil/Missions/Engineering/Geospatial-Section/MRNB_2015/ Cost: $83.00, The chart folio may be ordered from the Government Publishing Office (GPO) at link https://bookstore.gpo.gov/catalog/transportation-navigation/almanacs-navigation-guides/usace-navigational-charts
   GPO Stock Number: 008-022-00369-0

   Additionally, the U.S. Army Corps of Engineers' New Orleans District has a webpage for its Local Navigation Bulletins. See: http://www.mvn.usace.army.mil/Missions/Navigation.aspx Furthermore, the link http://www.mvn.usace.army.mil/Missions/Navigation/ChannelSurveys.aspx will take mariners to the General Navigation site where they can select Navigation Notices, Hydrographic Surveys, and other various navigation information. For current Notices for MVN and other districts can also be found at Notices to Navigation Interests (NTNI) website: http://ntninotices.usace.army.mil/lpwb/f?p=150:1

## MISSISSIPPI RIVER, FROM OHIO RIVER (CAIRO, IL) TO MINNEAPOLIS, MINNESOTA

(Rock Island District-MVR & St. Paul District-MVP)

2. Title, "Upper Mississippi River Navigation Charts", consisting of 2 sheets of navigation rules and regulations; 2 page of navigation information; 2 pages of Legend; 1 page of navigational aids; 5 index sheets; 147 Mississippi River navigation charts extending from the mouth of the Ohio River to Mile 866.0, 10 miles above Minneapolis, Minnesota, and locating navigation aids and hazards, docks, recreation areas, historic sites, wildlife sanctuaries, etc.; 5 charts of the St. Croix River from the mouth to Mile 26.0 above Stillwater, Minnesota; and 4 charts of the Minnesota River from the mouth to Mile 27.0, Shakopee, Minnesota. Supplemental pages provide detailed profiles of highway and railroad bridges. Bound sets of the charts described in this paragraph are printed in full color on 11" X 17" paper at a scale of 1:24,000, 1" = 2,000'. For purchase cost and shipping call the Mississippi River Visitor Center, Rock Island, (309) 794-5338, website: www.missriver.org. Charts are also available from one of the following: 1) National Great River Museum, #2 Locks and Dam Way, East Alton, Illinois 62024, telephone (877) 462-6979 Call for purchase and shipping costs. 2) Or they can be downloaded free from: http://www.mvr.usace.army.mil/Missions/Navigation/NavigationCharts.aspx . 3) Illinois Waterway Visitor Center, 950 N 27th Road, Ottawa, Illinois 61350. 815-667-4054. Checks payable to "Eastern National" All credit cards accepted. Call for pricing and shipping costs.

## ILLINOIS WATERWAY

## ILLINOIS WATERWAY, FROM MISSISSIPPI RIVER (GRAFTON, IL) TO LAKE MICHIGAN (CHICAGO HARBOR AND CALUMET HARBOR)

(Rock Island District-MVR)

3. Title, "Charts of Illinois Waterway, from Mississippi River at Grafton, Illinois to Lake Michigan at Chicago and Calumet Harbors". Bound sets of planographed navigation charts, size 11" x 17", scale 1" = 1,000'. The set consists of 1 waterway profile and map, 2 pages of navigation information, 6 pages of navigation regulations, 1 page of index maps, 122 navigation charts, and 18 pages of reference tables, covering both the Chicago Harbor route to Lake Michigan via the Chicago Sanitary and Ship Canal and the Chicago River, and Sag route to Lake Michigan at Calumet Harbor via the Calumet-Sag Channel, Little Calumet and Calumet Rivers. Charts show channel location, navigation aids, mileage, bridges, bridge clearances, normal sailing lines, and the 9-foot contour within riverbanks. Supplemental pages provide detailed profiles of highway and railroad bridges. Available from Illinois Waterway Visitor Center, 950 North 27th Road Ottawa, Illinois 61350, telephone (815) 667-4054. Checks payable to "Eastern National." All credit cards accepted. Call for current pricing information. Charts can also be purchased from one of the following: 1) Mississippi River Visitor Center, Post Office Box 2004, Rock Island, Illinois 61204-2004, telephone (309) 794-5338. Checks payable to "Mississippi Valley Welcome Center." Visa, Master Card, and American Express are accepted. Call for current pricing information. 2) National Great River Museum, #2 Locks and Dam Way, East Alton, Illinois 62024, telephone (877) 462-6979.

## OHIO RIVER, FROM PITTSBURGH, PA (MILE 0) TO NEW MARTINSVILLE, WV (MILE 127.2)

(Pittsburgh District-LRP)

4. Title, "Ohio River Navigation Charts, New Martinsville, West Virginia to Pittsburgh, Pennsylvania". A bound set of continuous multilith charts in color, size 8½" x 14", scale 1" = 1500', showing channel sailing line, U.S. navigation lights, daymarks, arrival point marks for locks, normal pool elevations, mouth of tributary streams, location of bars, channel buoys, bridges, aerial and submarine crossings, docks, terminals, landings and navigation structures. No soundings are shown. A listing of small boat harbors, ramps, landings and commercial river terminals are included at the back of each navigation chart book. Cost: $29.50 per set includes shipping. Available from the U.S. Government Publishing Office on the internet at http://bookstore.gpo.gov/, by calling (866) 512-1800 (toll-free) or by mail order with a Government Publishing Office order form. Payment can be made by check or money order (payable to the Superintendent of Documents), major credit card or Superintendent of Documents Deposit Account. When ordering Navigation Charts from the Internet U.S. Government Bookstore, enter "navigation charts" in the Simple Search field and click on the Search button. Click on the Add to Cart button below the publication title of your choice and follow the instructions provided to order your navigation charts. Also available from the U.S. Government Publishing Office are similar bound chart books for the Allegheny River from Pittsburgh upriver to the head of commercial navigation at East Brady, mile 69.6, at a cost of $24.00 including shipping; and for the Monongahela River from Pittsburgh upriver to the head of commercial navigation above Fairmont, West Virginia, mile 128.7, at a cost of $30.50 including shipping.

## OHIO RIVER, FROM NEW MARTINSVILLE, WV (MILE 127.2) TO FOSTER, KY (MILE 438)

(Huntington District-LRH)

5. Title, "Ohio River Navigation Charts, Foster, Kentucky to New Martinsville, West Virginia". A bound set of continuous multilith charts in color, size 8½" X 14", scale 1" = 2,000 feet, showing sailing line, U.S. lights, daymarks, arrival point markers for locks, normal pool elevation, tributaries, location of bars, channel buoys, bridges, aerial crossings, seaplane bases, docks, terminals, landings, and navigation structures. Slack water pools adjacent to the Ohio River on the Big Sandy, Little Kanawha, and Muskingum Rivers are also shown. No soundings are shown, Order by going to U.S. Government Online Bookstore, http://bookstore.gpo.gov/ or calling the Government Publishing Office toll-free at (866) 512-1800 or by mail order with the Government Publishing Office order form. Payment can be made by check, money order, or major credit card. Cost: $86.00 per set. More information, including downloadable PDF versions, can be obtained at http://www.lrh.usace.army.mil/Missions/Civil-Works/Navigation.

## KANAWHA RIVER, MOUTH TO HEAD OF NAVIGATION

(Huntington District-LRH)

6. Title "Kanawha River Navigation Charts, Huntington District, Mouth to Head of Navigation." A bound set of continuous multilith charts, in color, size 8½" x 14", scale 1 inch = 1,500 feet, showing sailing line, U.S. Lights, daymarks, normal pool elevation, mouths of tributary streams, location of bars, channel buoys, bridges, aerial crossings, seaplane bases, terminals and navigation structures. Slack water pool adjacent to Kanawha River on Elk River is also shown. Order by going to U.S. Government Online Bookstore, http://bookstore.gpo.gov/ or calling the Government Publishing Office toll-free at (866) 512-1800 or by mail order with the Government Publishing Office order form. Payment can be made by check, money order, or major credit card. Cost: $37.00 per set. More information, including downloadable PDF versions, can be obtained at http://www.lrh.usace.army.mil/Missions/Civil-Works/Navigation.

## OHIO RIVER, FROM FOSTER, KY (MILE 438) TO CAIRO, IL (MILE 981)

(Louisville District-LRL)

7. Title, "Ohio River Navigation Charts, Cairo, Illinois to Foster, Kentucky". A bound set of continuous multilith charts in color, size 8½" X 14", scale 1" = 2,000 feet, showing sailing line, U.S. lights, daymarks, day beacons, arrival point markers for locks, normal pool elevation, major tributaries, location of bars, channel buoys, bridges, aerial crossings, submarine crossings, docks, terminals, landings and navigation structures. No soundings are shown. Paper charts are only available from the central printing location by going online at http://bookstore.gpo.gov/. Cost: $64.00 per set. Electronic copies are available from the Louisville District web site at http://www.lrl.usace.army.mil/Missions/Civil-Works/Navigation/Charts

## GREEN RIVER, MOUTH (MILE 0) TO ROCHESTER, KY (MILE 108.5)

(Louisville District-LRL)

8. Title, "Green River Navigation Charts". Green River Navigation Charts are no longer available in printed form. Electronic copies are available from the Louisville District web site at. http://www.lrl.usace.army.mil/Missions/Civil-Works/Navigation/Charts

## CUMBERLAND RIVER

(Nashville District-LRN)

9. Title, "Cumberland River Navigation Charts, Nashville District, Smithland, Kentucky to Celina, Tennessee". A bound set of continuous multilith charts in color, size 8" X 14", scale 1" = ½ mile, showing sailing line, location of navigation aids, normal pool elevation, mouths of tributaries, location of bars, bridges, aerial crossings, docks, terminals, landings, navigation structures, and safety harbors. No soundings are shown. Cost: $15.00 per set plus shipping and handling. Address: District Engineer, U.S. Army Corps of Engineer, Nashville District, Post Office Box 1070, Nashville, Tennessee 37202-1070, telephone (615) 736-5607. Shipping and handling cost are based on total cost; see order form on website: http://www.lrn.usace.army.mil/Library/MapsandCharts.aspx. Order forms also available on line PDF file formsroom@lrn02.usace.army.mil Call or write to confirm exact shipping cost. Make checks payable to "FAO, USACE.LRD."

## TENNESSEE RIVER

(Nashville District-LRN)

TENNESSEE RIVER, FROM MOUTH AT PADUCAH, KY TO HEAD OF RIVER (MILE 652.2) NEAR KNOXVILLE, TN, INCLUDING TENNESSEE TOMBIGEE WATERWAY, 7.0 MILES; HIWASSEE RIVER, MOUTH TO CHARLESTON, TN 20.4 MILES; CLINCH RIVER, MOUTH TO CLINTON, TN, 61.5 MILES; EMORY RIVER, MOUTH TO HARRIMAN, TN 12.0 MILES; LITTLE TENNESSEE RIVER, MOUTH TO OLD FORT LOUDOUN AT VONROE, TN 19.3 MILES.

10. Title, "Tennessee River Navigation Charts, Nashville District, Paducah, Kentucky to Knoxville, Tennessee". A bound set of continuous multilith charts in color, size 8" X 14", scale 1" = ½ mile, showing sailing line, U.S. lights, safety harbors, daymarks, normal pool elevation, mouths of tributaries, location of bars, channel buoys, bridges, aerial crossings, docks, terminals, landings, and navigation structures. No soundings are shown. Cost: $20.00 per set plus shipping and handling. Address: Map and Chart Sales, U.S. Army Corps of Engineer, Nashville District, Post Office Box 1070, Nashville, Tennessee 37202-1070, telephone (615) 736-5607. Shipping and handling cost are based on total cost; see order form on website: http://www.lrn.usace.army.mil/Library/MapsandCharts.aspx. Order forms also available on line PDF file formsroom@lrn02.usace.army.mil Call or write to confirm exact shipping cost. Make checks payable to "FAO, USACE.LRD."

## MISSOURI RIVER

(Omaha District-NWO)

11. Title, "Aerial Photography and Maps of the Missouri River, Ponca State Park, Nebraska to St. Louis Missouri". Bound glossy book, 277 pages, aerial photos of the Missouri River from Ponca State Park, Nebraska to the mouth of the Missouri River near St. Louis, Missouri. Color photos, size 8 1/2" X 11", scale 1" = 2,000 feet and indicates river miles, Federal, Tribal and State property management, and boat ramps. No channel depths or buoys are shown. The book is available free of charge by contacting the Missouri River Project Office at 402-996-3761 or by e-mail ruth.e.bentinger@usace.army.mil.

In addition to the Missouri River Map "Boating and Recreational Maps" for each of the six main stem lakes in the upper Missouri River can be purchased on-line from Jefferson National Parks Association on their web site www.shop.jnpa.com .The average size of these books is 30 plates. Each plate notes the shoreline location of boat ramps, marinas, major recreational areas and main access roads. Buoys and some navigational aids are also noted.

## ARKANSAS-VERDIGRIS RIVERS

(Little Rock District-CESWL & Tulsa District-CESWT)

12 Title, "McClellan-Kerr Arkansas River Navigation System, 2016 Navigation Charts, Catoosa, Oklahoma to mouth of White River". A bound set of continuous color charts, size 8-1/2" X 14", (scale 1"=2,000 feet), shows sailing line, location of navigation aids, bridges, navigation structures, pipeline and aerial crossings, docks, and safety harbors. The set also includes navigation regulations, a mileage chart, and lists of terminals, marinas, and public use areas. Copies can be ordered from the Government Publishing Office at https://bookstore.gpo.gov, ISBN 9780160936227, GPO Stock Number 008-022-00379-7.

## OUACHITA AND BLACK RIVERS

(Vicksburg District-MVK)

13. Title, "2006 Navigation Charts, Ouachita and Black Rivers, Camden, Arkansas to Red River, Louisiana, Mile 332 to Mile 0 P.P.R.M.". A bound set of charts in color, size 11" X 17", (scale 1"=15,000 feet), current issue 2006. Shows sailing line, locations of navigation aids, bridges, navigation structures, commercial facilities, pipeline and aerial crossings, public access areas and facilities, river miles, and river gages. The set also includes waterway facts, gage information, navigation regulations, locking regulations, recreation area regulations, aids to navigation information, aerial photos, and a mileage chart. Address: USACE, VICKSBURG, 4155 Clay St., Vicksburg, Mississippi 39183-3435, ATTN: MAP SALES. Telephone (601) 631-5042. Cost: $22.00, plus shipping. May be purchased using check or money order payable to the "F & A OFFICER, VICKSBURG DISTRICT".

## RED RIVER

(Vicksburg District-MVK)

14. Title, "2006 Navigation Charts, J. Bennett Johnston Waterway, Red River, Shreveport, Louisiana to, Mouth of Red River, Mile 235 to Mile 0 P.P.R.M.". A bound set of charts in color, size 11" X 17", (scale 1"=15,000 feet), current issue 2006. Shows sailing line, location of navigation aids, bridges, revetment locations, navigation structures, commercial facilities, pipeline and aerial crossings, public access areas and facilities, river miles, and river gages. The set also includes waterway facts, gage information, navigation regulations, revetment notice, aids to navigation information, lock and dam information, aerial photos, and a mileage chart. Address: USACE. Vicksburg, 4155 Clay St., Vicksburg, Mississippi 39183-3435, ATTN: Map Sales. Telephone (601) 631-5042. Cost: $22.00, plus shipping. May be purchased using check or money order payable to the "F & A OFFICER, VICKSBURG DISTRICT.

## ALABAMA RIVER (Aerial Photo)

(Mobile District-SAM)

15. "Alabama River, Alabama" covers from Mobile to Montgomery, Alabama including Clairborne Lake, William (Bill) Dannelly Lake (Millers Ferry), and R.E. "Bob" Woodruff Lake (Jones Bluff Lake). Cost: $17.50, plus shipping. U.S. Army Corps of Engineer District, Mobile District, Post Office Box 2288, ATTN: Map Sales, CESAM-LM-SR, Mobile, Alabama 36628-0001, telephone (251) 441-5631.

## APALACHICOLA, CHATTAHOOCHEE AND FLINTRIVER

(Mobile District-SAM)

16. "Apalachicola, Chattahoochee and Flint Rivers, Florida, Georgia and Alabama" covers from the Gulf of Mexico to Brainbridge, Georgia, on the Chattahoochee River. This booklet covers Lake Seminole (Jim Woodruff), Georgia W. Andrews Lake (Columbia) and Walter F. George Lake (Lake Eufaula). Cost: $29.50, plus shipping. For shipping charges please telephone Leslie Moore or Marvin Mackabee at (251) 441-5631. Address: U.S. Army Corps of Engineer District, Mobile District, Post Office Box 2288, ATTN: Map Sales, CESAM-LM-SR, Mobile, Alabama 36628-0001.

## BLACK WARRIOR AND TOMBIGBEE RIVERS/UPPER AND LOWER

(Mobile District-SAM)

17. "Black Warrior-Tombigbee Rivers, Alabama" covers from Mobile to Port Birmingham, Alabama, including Coffeeville Lake, the Warrior River portion of Dempolis Lake, Warrior Lake, William Bacon Oliver Lake (Tuscaloosa), Holt Lake and Lake Bankhead (Lock 17). The chart is in aerial mosaic form. Cost: $28.50 plus shipping. For shipping charges please telephone Leslie Moore or Marvin Mackabee at (251) 441-5631. Address: U.S. Army Corps of Engineer District, Mobile District, Post Office Box 2288, ATTN: Map Sales, CESAM-LM-SR, Mobile, Alabama 36628-0001.

## LOWER BLACK WARRIOR-TOMBIGBEE WATERWAY

(Mobile District-SAM)

18. "Lower Black Warrior-Tombigbee Waterway - Waterway Charts" covers the Mobile and Tombigbee Rivers from Mobile, Alabama to the junction of Black Warrior and Rivers at Demopolis, Alabama. Mile 1 to mile 217 on the BWT Waterway The chart is in graphical form. Cost: $21.50 plus shipping. For shipping charges please telephone Leslie Moore or Marvin Mackabee at (251) 441-5631. Address: U.S. Army Corps of Engineer District, Mobile District, Post Office Box 2288, ATTN: Map Sales, CESAM-LM-SR, Mobile, Alabama 36628-0001.

## UPPER BLACK WARRIOR-TOMBIGBEE WATERWAY
(Mobile District-SAM)

19. Junction of Black Warrior and Tombigbee Rivers at Demopolis, AL Mile 217.0 on BWT Waterway to the head of Navigation on Mulberry, Locust and Sipsey Frorks. Cost $21.50 plus shipping for shipping charges please telephone Leslie Moore or Marvin Mackabee at (251) 441-5631. Address: U.S. Army Corps of Engineer District, Mobile District, Post Office Box 2288, ATTN: Map Sales, CESAM-LM-SR, Mobile, Alabama 36628-0001.

## TENNESSEE-TOMBIGBEE WATERWAY, AL AND MS
(Mobile District-SAM)

20. "Tennessee-Tombigbee Waterway Charts" covers Pickwick Lake on Tennessee River to junction of Black Warrior and Tombigbee Rivers at Demopolis, AL. Cost: $23.50 plus shipping. For shipping charges please telephone Leslie Moore or Marvin Mackabee at (251) 441-5631. Address: U.S. Army Corps of Engineer District, Mobile District, Post Office Box 2288, ATTN: Map Sales, CESAM-LM-SR, Mobile, Alabama 36628-0001.

## ATCHAFALAYA RIVER
(New Orleans District-MVN)

"2012 Atchafalaya River System Navigation Book" consists of 102 map sheets developed from the 1:24,000 publication scale. This book charts the Atchafalaya River System from Old River to the Atchafalaya Bay, including its distributaries. The folio is available for download in PDF format at: http://www.mvn.usace.army.mil/Missions/Engineering/GeospatialSection Printed versions may be purchased from GPO at: https://bookstore.gpo.gov/catalog/transportation-navigation/almanacs-navigation-guides/usace-navigational-charts at a cost of $71.00 per folio plus shipping. Additionally, the U.S. Army Corps of Engineers' New Orleans District Local Navigation Bulletins are available at: http://www.mvn.usace.army.mil/Missions/Navigation/Navigation-Bulletins/

## GENERAL INFORMATION

Data on tributaries of the Mississippi River system and maps and charts on the Mississippi River and Illinois Waterway in addition to those listed herein may be procured from the U.S. Army Engineer Offices listed below. If maps, charts, or information for specific purposes are desired, request for such should be made to the proper office and should state the purpose for which the data are to be used, the area to be covered and any other pertinent data which will be of service in the selection of maps, charts, etc., to meet the desired requirement.

MISSISSIPPI RIVER ABOVE OHIO RIVER TO MILE 300.0 AND TRIBUTARIES (EXCEPT MISSOURI RIVER) AND INCLUDING ILLINOIS WATERWAY AND TRIBUTARIES BELOW THE LAGRANGE LOCK AND DAM, MILE 80.2 Address: U.S. Army Corps of Engineer, St. Louis District, 1222 Spruce Street, St. Louis, Missouri 63103-2833. (NOTE: Only general information concerning these waterways is provided.)

## MISSISSIPPI RIVER BELOW OHIO RIVER AND TRIBUTARIES
(Memphis District-MVM & Vicksburg District-MVK)

Address: President, Mississippi River Commission, Post Office Box 80, Vicksburg, Mississippi 39181-0080. Folios of maps of the following rivers and waterways are available at prices stated from the U.S. Army Corps of Engineer, Vicksburg District, 4155 Clay St., Vicksburg, Mississippi 39183-3435, telephone (601) 631-5042. The maps are scale 1:31680 (1" = 1/2 mile). Mississippi River, Hannibal, Missouri to Gulf, Cost: $22.00 plus shipping.

## MISSOURI RIVER AND TRIBUTARIES
(NOW)

Address: U.S. Army Corps of Engineer Division, Northwestern Division, 12565 West Center Road, Omaha, Nebraska 68144-3869.

## OHIO RIVER AND TRIBUTARIES

Address: U.S. Army Corps of Engineer, Great Lakes and Ohio River Division, Room 1032 Cincinnati, Ohio 45202-3222.

## LIGHT LIST - MISSISSIPPI RIVER SYSTEM
(United States Coast Guard-USCG)

The 2018 Light List is now available. Coast Guard Light Lists are a means for communicating aids to navigation information to the maritime public. The last government printed Light Lists were the 2014 editions. While the Light Lists will no longer be available in government printed form, commercial reproductions may be available for purchase from maritime service providers. Local Notices to Mariners will continue to advertise Light List corrections and NAVCEN will continue to publish a compilation of corrections. 2018 Light Lists are available on the USCG Navigation Center's website at: http://www.navcen.uscg.gov/?pageName=lightLists. Complete versions of the 2018 Light Lists are updated weekly on the NAVCEN website and mariners should download applicable copies and updates as needed at: http://www.navcen.uscg.gov/?pageName=lightListWeeklyUpdates. A summary of 2016 Light List corrections are available at: http://www.navcen.uscg.gov/?pageName=lightListCorrections Guidance for use of electronic navigation publications onboard U.S. vessels can be found at: http://www.uscg.mil/hq/cgcvc/cvc/policy/policy_letters/543/CG-543_pol 10-05.pdf.

## LOCAL NOTICE TO MARINERS

(United States Coast Guard-USCG)

Published weekly by the U.S. Coast Guard summarizing information considered essential to the safe passage of navigation. Available at no charge through the Navigation Center Website www.navcen.uscg.gov.

## RULES AND REGULATIONS

(Rock Island District-MVR)

For the publication "Regulations to Govern the Use, Administration and Navigation of the Ohio River, Mississippi River above Cairo, Illinois and Their Tributaries". Address: U.S. Army Corps of Engineer District, Rock Island District, Attn: OD-Q, Clock Tower Building, Post Office Box 2004, Rock Island, Illinois 61204-2004, telephone (309) 794-5366.

Navigational Rules, International - Inland" contains the Inland Navigation Rules Act of 1980. The public can obtain copies from the Government Publishing Office by calling (202) 512-1800 or is available for purchase on the Internet at: http://bookstore.gpo.gov/ Stock Number 050-012-00407-2.

## GREAT LAKES

(United States Coast Guard-USCG)

Navigation Charts, and the Great Lakes Coast Pilot (Coast Pilot 6). (Distributed by the Federal Aviation Administration). Address: FAA, Distribution Division (AJW-3550), 10201 Good Luck Road, Glenn Dale, Maryland 20769-9700, telephone (800) 638-8972. A free catalog (specify the Great Lakes) of the NOAA charts of the Great Lakes will be furnished upon request.

The U.S. Coast Guard Ninth District publishes the Ninth District Local Notice to Mariners weekly from January to December every year. It summarizes information considered essential to the safe passage of navigation. This publication covers the St. Lawrence Seaway, Great lakes, and the Illinois Waterway from mile marker 291 northward to Lake Michigan. Please address questions to Commander (dpw), Ninth Coast Guard District, 1240 East Ninth Street, Cleveland and Ohio 44199-2060, or call (216) 902-6073.

The LIGHT LIST Volume VII, Great lakes (COMDTPUB P16502.7), lists lights, fog signals, buoys, day beacons and racons on the Great Lakes. Illustrations of the U.S. Aids to Navigation System, Geographic Range tables, a Luminous Range diagram, and glossary of side to navigation terms are included. Address: Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Information pertaining to this publication may be obtained from: Commandant (G-MOV-3). U.S. Coast Guard, 2100 Second Street, S.W., Washington, DC 20593-0001.Changes made in aids to navigation are addressed in Broadcast and the Local Notices to Mariners. These should be used to correct the current Light List. The Light List, Vol. V, is available for purchase by mail from the Government Publishing Office by calling (202) 512-1800, or is available for purchase on the Internet at: http://bookstore.gpo.gov/.

NAVIGATION RULES, INTERNATIONAL-INLAND (COMDTINST MI6672. 2d) "Rules of the Road". This publication contains (Inland Navigation Rules Act of 1980) regulations applying to navigation of the Western Rivers, Inland Waters (Great Lakes), and International Waters. A free online version of the Rules of the Road is available via the U.S. Coast Guard Navigation Center Website at: http://www.navcen.uscg.gov/, under Navigation Rules along the top header. The public can obtain copies from the Government Publishing Office by calling (202) 512-1800 or is available for purchase on the Internet at: http://bookstore.gpo.gov/ Stock Number 050-012-00407-2. Address: Superintendent of Documents, U.S. Government Publishing Office, Washington, DC 20402. Inquiries regarding specific rules should be addressed to Commandant (G-MOV-3), U.S. Coast Guard, 2100 Second Street, S.W., Washington DC 20593-0001.

A monthly Bulletin of Lake Levels which show current levels of the prior 12 months, a six month forecast and record highs and lows is available from: U.S. Army Corps of Engineer, Detroit District, Post Office Box 1027, Detroit, Michigan 48231-1027. Recorded data (1918-PRESENT) provided by NOAA. Great Lakes Online (301) 713-9596.

NOAA Raster Navigational Charts NOAA RNCs™) and Electronic Navigational Charts (NOAA ENC®s) are now available free to the public from the Internet at http://nauticalcharts.noaa.gov/.

Improved On-Line Chart Catalogs are now available free to the public to download via the Internet at http://nauticalcharts.noaa.gov/. In addition, Coast Survey has created page-sized state catalogs of its chart suite, in Adobe .pdf format, that anyone can examine on-line or print for free. The catalogs include locations where charts can be purchased.

The National Ocean Service, NOAA, network of Authorized Nautical Chart Sales Agents sell NOAA nautical charts for the U. S. and its territories. Some Nautical Agents also sell NGA public sale nautical charts covering the entire world.

You may also order NOS, FAA and NGA aeronautical and nautical products and catalogs directly from the FAA Distribution Division by mail, telephone, FAX, and e-mail:

Mail: FAA Distribution Division
National Aeronautical Charting Office
10201 Good Luck Road
Glenn Dale, Maryland 20769

Telephone: (301) 436-8301
(800) 638-8972 toll free, U.S. only
FAX: (301)436-6829
E-mail: 9-AMC-chartsales@faa.gov

OFFICE OF THE DIVISION ENGINEER
CORPS OF ENGINEERS, MISSISSIPPI VALLEY DIVISION
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CEMVD-ET-CO

January 2018

# DIVISION BULLETIN NO. 2

## NAVIGATION CONDITIONS FOR 2018



### FOREWORD

This description of navigation conditions to be expected during the current season is intended only as a general guide for the navigator. Detailed information regarding river and construction conditions and available maps may be obtained upon request to the proper authorities, as listed in the latter part of this bulletin and may be found at the Division's navigation mission page at: http://www.mvd.usace.army.mil/Missions/Navigation.aspx. Individual channel surveys, however, may be found in the Navigation Mission page of the District where the channel is located, which page may be reached by clicking on the District's link found on the Division's navigation page or by clicking on the following direct links:

St. Paul District: http://www.mvp.usace.army.mil/Missions/Navigation.aspx
Rock Island District: http://www.mvr.usace.army.mil/Missions/Navigation.aspx
St. Louis District: http://www.mvs.usace.army.mil/Missions/Navigation.aspx
Memphis District: http://www.mvm.usace.army.mil/Missions/Navigation.aspx
Vicksburg District: http://www.mvk.usace.army.mil/Missions/Operations-Division/River-Operations/
New Orleans District: http://www.mvn.usace.army.mil/Missions/Navigation.aspx

For canalized portions of streams, data is presented by pools and for the portions not canalized, by reaches selected to include similar river conditions. The controlling depths given are applicable to low water conditions; ordinarily greater depths are available.

Mileage is measured upstream on the upper Mississippi River from the intersection of the Mississippi and Ohio Rivers and on other streams above their respective mouths.

## MISSISSIPPI RIVER, OHIO RIVER TO GULF OF MEXICO

This lower section of the Mississippi River is a part of the Lakes-to-Gulf Waterway and is under the jurisdiction of the President of the Mississippi River Commission, Post Office Box 80, Vicksburg, Mississippi 39181-0080, who is also the Division Engineer, Department of the Army, Mississippi Valley Division. Parties desiring more detailed information should communicate with the Vicksburg Office.

The President of the Mississippi River Commission prepares biennially a folio of navigation maps covering the Mississippi River from Cairo, Illinois to the Gulf of Mexico, showing the general outline of navigation channel, navigation lights, bridges, aerial and submarine crossings, ferries, roads, levees, and general topography. This folio may be purchased from Address: Address: U.S. Army Corps of Engineer District, Vicksburg District, 4155 Clay St., Vicksburg, Mississippi 39183-3435, or call (601) 631-5042 or U.S. Army Corps of Engineer District, Memphis District, Clifford Davis Federal Building, Room B-202, Memphis, Tennessee 38103-1894, telephone (901) 544-3351 or U.S. Army Corps of Engineer District, New Orleans District, 7400 Leake Avenue, New Orleans, Louisiana 70118.

**Cairo, Illinois to Baton Rouge, Louisiana.** The navigation channel of the Mississippi River between the mouth of the Ohio River at Cairo, Illinois and Baton Rouge, Louisiana, is approximately 726 miles long. Navigation in this section of the river is safe and easy throughout the year except for short periods in extremely cold winters, when the upper portions of this reach may contain floating ice for a few days. Between Cairo and Baton Rouge, a channel 9 feet deep and 300 feet wide is maintained. The range between high and low water is about 50 feet at Cairo, 50 feet at Memphis, 60 feet at Vicksburg, 55 feet at Natchez, and 45 feet at Baton Rouge. Detailed data on additional depths normally available to navigation during the high-water seasons can be obtained from the President, Mississippi River Commission, Post Office Box 80, Vicksburg, Mississippi 39180-0080.

Maximum current velocities, which occur during the period of rising high stages, may be as great as 6 miles per hour. Velocities up to 9 1/2 miles per hour in short stretches of constricted reaches and at bridges have been observed during extreme high-water periods. At low-water stages, current velocities range from 2 to 4 miles per hour.

The navigation channel is maintained by dredging through the shoal reaches (crossing bars) as required during low water and by snagging operations to remove snags from the channel. Maintenance of the navigation channel is also aided by the stabilization of caving banks usually with articulated concrete revetment, construction of pile and stone dikes to constrict the channel, and improvement dredging to correct channel alignment.

Twelve fixed bridges cross the Mississippi River between its confluence with the Ohio River just below Cairo and Baton Rouge; four at Memphis, two at Vicksburg, two at Natchez, two at Greenville, and one at Caruthersville, Helena and just above Baton Rouge.

**Baton Rouge, Louisiana, to Gulf of Mexico.** The U.S. Army Corps of Engineers is authorized to dredge the channel depth to 55 feet; however, construction of the channel is limited to 45 feet, at the present time. The current dimensions are:

From Baton Rouge, Mile 232.4, Above Head of Passes (AHP) to New Orleans, a navigable channel of 45 feet deep and 500 feet wide is constructed. From New Orleans to the Head of Passes, a distance of approximately 104.5 miles, a navigable channel of 45 feet deep and 750 feet wide is constructed. Between the Head of Passes and 17.5 miles Below Head of Passes (BHP) along Southwest Pass, a navigable channel of 45 feet in depth and 750 feet wide is constructed before entering the jetty and bar channel, where constructed dimensions are 45 feet deep and 600 feet wide.

Please refer to the New Orleans District website for channel conditions at: http://www.mvn.usace.army.mil/Missions/Navigation/ChannelSurveys.aspx Channel dimensions and hydrographic survey data are subject to change rapidly due to several factors including, but not limited to, dredging activity and the natural shoaling and scouring processes. The U.S. Army Corps of Engineers accepts no responsibility for changes in the hydrographical conditions.

Mileages on the Lower Mississippi River (Gulf of Mexico to the Ohio River) are measured upstream from the Head of Passes.

**Port Allen - Morgan City Route.** This is an alternate route of the Gulf Intracoastal Waterway between the Mississippi River (mile 228.3) at Baton Rouge, and Morgan City, Louisiana (mile 95.5 west of Harvey Lock at New Orleans). This route provides a channel 12 feet deep and 125 feet wide and is 64.1 miles long. It is about 161 miles shorter than the route via Harvey Lock at New Orleans.

**Old River and Atchafalaya River.** This route is the connecting waterway between the Mississippi River (mile 304 AHP) and the Gulf Intracoastal Waterway at Morgan City (mile 95.5 west of Harvey Lock, New Orleans, Louisiana). It provides channel dimensions of 12 feet by 125 feet. The length of the waterway via Old River and the Atchafalaya River is 123 miles and is approximately 177 miles shorter to Morgan City than via Harvey Lock at New Orleans.

"There are ELEVEN bridges crossing the Atchafalaya River: two at Simmesport, one at Melville, three at Krotz Springs, two at Whiskey Bay Pilot Channel, and three at Morgan City."

Higher current velocities may be expected at high water stages and particularly at the upper bridges. Downbound vessels should use extreme caution in navigating the bridges. At low stages, moderate velocities allow easier navigation. Also, there are several overhead pipeline crossings.

The controlling navigation depth of this channel is usually at Three Rivers. Here, the navigation channel is maintained by dredging and depths from 9 to 12 feet are available, dependent upon river stages. The Grand and Six-mile Lake section is marked by unlighted reflector type buoys and several shorelights. The channel above Grand Lake is marked by mile posts and direction signs.

**Mississippi River - Gulf Outlet (MRGO).** This project was de-authorized in WRDA 2007 from channel Mile 60 to the Gulf of Mexico. As part of the Inner Harbor Navigation Canal (IHNC) Hurricane Risk Reduction Project, a floodwall barrier has been constructed across the MRGO Waterway at Mile 59 and a rock closure was constructed across the former channel at approximately Mile 36. Below Mile 60, the MRGO is permanently closed to navigation. The project channel reach above Mile 60 will be maintained to the 36 ft. deep by 500 ft. wide authorization.

**Mississippi River – Outlets at Venice (MROV).** This project consists of the Grand and Tiger Pass channel reaches and the Baptiste Collette Bayou channel. Grand and Tiger Pass comprise a 14 ft. deep by 150 ft. wide channel that expands to 16 ft. deep by 250 ft. wide at approximately the mile 11.5 Tiger Pass channel marker. This navigation channel allows direct access to the western Louisiana coastal regions for the local Mississippi River based petrochemical and fishing industries. The Baptiste Collette Bayou channel is a 14 ft. deep by 150 ft. wide channel that expands to 16 ft. deep by 250 ft. wide at approximately the mile 6.1 channel marker. The Baptiste Collette Bayou channel allows direct access to the eastern Louisiana coastal regions for the local Mississippi River based petrochemical and fishing industries.

**Waterway from Empire, LA to the Gulf of Mexico.** The project consists of a 9 ft. deep by 80 ft. wide channel that extends approximately 10 miles from the right descending bank of the Mississippi River at mile 29.5 to the Gulf of Mexico. The channel is used by large fishing and mineral resource production companies to access the western Louisiana coastal regions.

**Gulf Intracoastal Waterway (GIWW) –** This project extends from Brownsville, Texas to St. Marks, Florida, passing through all 5 Gulf Coast States. The New Orleans District's portion of this project is located entirely within southern Louisiana. Included in the project is the "main stem" running from the Pearl River in the east to the Sabine River in the west, a distance of 302 miles. The GIWW is a man-made inland and coastal barge channel which is authorized to dimensions of -16 ft. deep (M.L.G.) by 200 ft. wide west of the Atchafalaya River and -16 ft. deep (M.L.G.) by 150 ft. wide from the Atchafalaya River to the Mississippi River. East of the Mississippi River the authorization is -12 ft. deep (M.L.G.) by 150 ft. wide. The Harvey Canal and Port Allen to Morgan City alternate route are authorized to -12 ft. deep (M.L.G.) by 125 ft. wide.

**Gulf Intracoastal Waterway**: As part of the Inner Harbor Navigation Canal (IHNC) Hurricane Risk Reduction Project, a floodgate structure has been constructed in the vicinity of Mile 15.5, East of the Harvey Lock (EHL).

**Gulf Intracoastal Waterway (Harvey Canal)**: A floodgate structure has been constructed, just south of the Lapalco Bridge at Mile 2.8, West of the Harvey Lock (WHL).

**Gulf Intracoastal Waterway:** As part of the GIWW West Closure Complex (WCC), a floodgate structure has been constructed in the vicinity of Mile 6.9, West of the Harvey Lock (WHL). Note: in the event of a closure to navigation at Harvey Lock, the Algiers Canal, which intersects at Mile 6.5 of the Harvey Canal, can be used as an alternate route.

## MISSISSIPPI RIVER, OHIO RIVER TO MINNEAPOLIS, MINNESOTA

The Mississippi River between the Ohio River and the Lower St. Anthony Falls Lock and Dam at Minneapolis, Minnesota, 853.4 miles has been improved to provide a waterway with least depth of 9 feet and with widths suitable for long-haul common-carrier service. Between the Ohio River, mile 0, and Locks No. 27 at Granite City, Illinois, mile 185.1 (a short distance below the Missouri River), improvement is being accomplished by bank protection and dikes to constrict and regulate the channel, supplemented by dredging as necessary. At present, a controlling depth of 9 feet between the Ohio River and Locks No. 27 is normally available year round. Controlling depths may temporarily become less than 9 feet at certain localities. Controlling bars are removed by dredging as promptly as practical, until ice formation prevents dredging.

Lock No. 27 at the lower end of the Chain of Rocks Canal (located on the left bank between miles 184.0 and 194.0) provides a 110-foot by 1200-foot main lock on the left bank of the canal and 110-foot by 600-foot auxiliary lock on the right bank of the canal.

Improvement between Alton and Minneapolis has been accomplished by a canalization plan which includes 28 locks and dams, (including Lock No. 27 there are 29 Locks and Dams) and now affords a 9-foot channel throughout. (For locations of structures refer to tables on the last pages of this bulletin.) Locks have widths of 110 feet, except at Lower St. Anthony Lock and the twin locks at Site No. 1, Minneapolis, which have widths of 56 feet. Controlling lock lengths are 400 feet at these two lock sites. Lock No. 19, Keokuk, Iowa, and Melvin Price Lock, Alton, Illinois, are 110 feet by 1200 feet long. All other locks provide a usable length of 600 feet. A twin lock at Lock 15, is 360 feet by 110 feet at mile 482.9.

At controlled pool elevations, depths of 10 feet or more are available over miter-gate sills, as a result of the construction of Dam No. 27 (a low water dam in old river at mile 190.3), the lower sill at the Melvin Price Lock provides a minimum of 18 feet at low water. Lock No. 19, Keokuk, Iowa, affords 13.0 feet over its lower miter gate sill.

At Locks, St. Anthony Falls through 10, buoys and US Coast Guard restricted area signs mark the upstream and downstream restricted areas.

At Locks and Dams No. 11 through 22, flashing red lights have been installed to mark the 150-foot restricted lines below the gate sections of the dams and the 600-foot lines above the dams. At Locks and Dams 24 through 26, the lights are 600 feet above and 300 feet below the dams.

Channel widths generally 200-feet to 300-feet are available throughout the Upper Mississippi River. The United States Coast Guard marks the channel with aids to navigation lights, daymarks, and lighted and unlighted buoys. During the winter months, unlighted buoys replace the lighted buoys.

Average navigation seasons for various reaches of the Mississippi River within this Division are:

Ohio River to Keokuk, IA*. . . . . All Year
Keokuk, IA, to Rock Island, IL. . . . . 01 March-31 Dec.
Rock Island, IL, to Minneapolis, MN. . . . . .20 March-05 Dec.

*This section has usually been open to navigation throughout the winter months. During periods of extremely cold weather ice may be encountered in December, January, and February, but complete stoppage seldom occurs except in the pool above Melvin Price Lock, mile 200.8, where severe weather may stop traffic for duration of the cold wave.

Controlling vertical clearances stated in the following Mississippi River pool descriptions are obtained at center of the channel span, unless otherwise noted. The names and location of the structures involving these clearances are shown in tabular form on the last pages of this bulletin.

Flashing light traffic signal systems are installed and in operation at all sites in the Mississippi Valley Divisions. These signals will be operated in accordance with paragraph (e) of the publication entitled "Regulations to Govern the Use, Administration and Navigation of the Ohio River, Mississippi River above Cairo, Illinois and Their Tributaries."

**"FEDERAL REGULATIONS"**

Pursuant to the provisions of Section 5 of the River and Harbor Act of 1 August 1894 (2 Stat. 362; 33 U.S.C. 499), Section 117.33 of the Code of Federal Regulations, Title 33, Chapter I, the operation of drawbridges during a major disaster of civil defense emergency is regulated as follows:

* * * * * * * * * * * * * * * * * * * * *

**Section 117.33 Closure of Draw for Natural Disasters or Civil Disorders**

Drawbridges need not open for the passage of vessels during periods of natural disasters or civil disorders declared by the appropriate authorities unless otherwise provided for in Subpart B or directed to do so by the District Commander.

**Section 117.35 Operation During Repair or Maintenance**

(a) When operation of the draw must deviate from the regulations in this part for scheduled repair or maintenance work, the drawbridge owner shall request approval from the District Commander at least 30 days before the date of the intended change. The request shall include a brief description of the nature of the work to be performed and the times and dates or requested changes. The District Commander's decision is forwarded to the applicant within five working days of the receipt of the request. If the request is denied, the reasons for the denial are forwarded with the decision.

(b) When the draw is rendered inoperative because of damage to the structure or when vital, unscheduled repair or maintenance work shall be performed without delay, the drawbridge owner shall immediately notify the District Commander and give the reasons why the draw is or should be rendered inoperative and the expected date of completion of the repair or maintenance work.

(c) All repair or maintenance work under this section shall be performed with all due speed in order to return the draw to operation as soon as possible.

(d) If the operation of the draw will be affected for periods of less than 60 days, the regulations in this part will not be amended. Where practicable, the District Commander publishes notice of the temporary deviations from the regulations in this part in the Federal Register and Local Notices to Mariners. If operation of the draw is expected to be affected for more than 60 days, the District Commander publishes temporary regulations covering the repair period.

**Section 117.37 Opening or Closure of Draw for Public Interest Concerns.**

(a) For reasons of public health or safety or for public functions, such as street parades and marine regattas, the District Commander may authorize the opening or closure of a drawbridge for a specified period of time.

(b) Requests for opening or closure of a draw shall be submitted to the District Commander at least 30 days before the proposed opening or closure and include a brief description of the proposed event or other reason for the request; the reason why the opening is required, and the times and dates of the period the draw is to remain open or closed.

(c) Approval by the District Commander depends on the necessity for the opening or closure, the reasonableness of the times and dates, and the overall effect on navigation and users of the bridge.

**Section 117.31 Closure of Draw for Emergency Vehicles.**

When a drawtender is informed by a reliable source that an emergency vehicle is due to cross the draw, the drawtender shall take all reasonable measures to have the draw closed at the time the emergency vehicle arrives at the bridge.

Pursuant to the provisions of Section 5 of the River and Harbor Act of 1 August 1894, (28 Stat. 352, 33 U.S.C. 499), Sections 117.667, 117.671, 117.1099, and 117.1103, Chapter I, Title 33, Code of Federal Regulation governing the operations of bridges across the Upper Mississippi River and its tributaries, the operations of bridges across the Upper Mississippi River between Lock and Dam No. 10 and Lock and Dams No. 1, and the St. Croix River, Wisconsin and Minnesota, between the mouth and Bayport, Minnesota, are regulated as follows:

* * * * * * * * * * * * * * * * * * * * *

**Section 117.667 (117.1099) St. Croix River.**

(a) The draws of the BNSF Bridge, mile 0.2, and the US 16-61Bridges, mile 0.3, all at Prescott, and the Chicago and Northwestern Railroad Bridge, mile 17.3 at Hudson, shall open on signal; except that, from December 15 through March 31, the draws shall open on signal if at least 24 hours notice is given.

(b) The draw of the S36 Bridge, mile 23.4 at Stillwater, shall open on signal as follows: from October 16 through May 14, if at least 24 hours notice is given.

**Section 117.671 (117.1103) Upper Mississippi River.**

(a) The draws of all bridges between Lock and Dam No. 10, mile 615.1, and Lock and Dam No. 2, mile 815.2, shall open on signal; except that, from December 15 through the last day of February, the draws shall open on signal if at least 24 hours notice is given.

(b) The draws of all bridges between Lock and Dam No. 2, mile 815.2, and Lock and Dam No. 1, mile 847.6, shall open on signal; except that, from December 15 through the last day of February, the draws shall open on signal if at least 12 hours notice is given.

General Information: River conditions and controlling bridge clearance on the Mississippi River, Ohio River to Minneapolis, Minnesota, are as follows:

**Upper St. Anthony Pool (mi. 857.6 to 853.7)**

River conditions: Controlling channel depths: about 9 feet.
Current velocities: 1/2 to 2 miles per hour.

Controlling clearances: 1. Horizontal - 121 feet (Upper Great Northern Railroad Bridge, mile 854.4).
2. Vertical - 23.3 (above normal pool) at 3rd Avenue Bridge, mile 854.1, Minneapolis, Minnesota.

General: Upper St. Anthony Falls Lock is closed to navigation. Mooring cells are located just upstream from the lock on the right descending side of the channel at mile 854.6.

**Lower St. Anthony Pool (mi. 853.7 to 853.4)**

River conditions: Controlling channel depths: about 9 feet.
Current velocities: 1/2 to 2 miles per hour in navigable channel. Greater velocities may be encountered outside the navigation channel during high flows.

Controlling clearances: 1. Horizontal - 56 feet.
2. Vertical - 24.4 feet (above 40,000 cfs).

Both clearances at the Hennepin County Stone Arch, mile 853.7, Minneapolis, Minnesota.

General: Mooring cells are located just upstream on the right descending side of the channel at mile 853.5.

**Pool No. 1 (mi. 853.4 to 847.6)**

River conditions: Controlling channel depths: about 9 feet.
Current velocities: 1/2 mile per hour at ordinary stages; about 5 miles per hour at extreme high stages.

Controlling clearances: 1. Horizontal - 160 feet
2. Vertical - 39.4 feet above normal pool

Both clearances at the BNSF Bridge, mile 853.0, Minneapolis, Minnesota.

**Pool No. 2 (mi. 847.6 to 815.2)**

River conditions: Controlling channel depths: about 9 feet
Current velocities: 1 mile per hour at ordinary stages; 3 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 158 feet.
2. Vertical - 59.6 feet above normal pool.

Both clearances are at the Robert Street Highway Bridge, mile 839.2, St. Paul Minnesota.

General: Openings to permit passage of small boats have been made at the head and foot of Newport Island Slough, mile 831. Commercial barge cleaning services are available on the right bank, miles 838.0 and 840.5. Potable water is available at St. Paul Lambert Landing mile 839.0.

**Pool No. 3 (mi. 815.2 to 796.9)**

River conditions: Controlling channel depths: about 9 feet.
Current velocities: 1 mile per hour at ordinary stages; 3 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 307.0 feet (Chicago, Milwaukee, St. Paul, and Pacific Railroad Bridge, mile 813.7, Hastings, Minnesota).
2. Vertical - 60 feet above normal pool (Chicago, Milwaukee, St. Paul and Pacific Railroad Bridge, Mile 813.7).

General: Potable water is available within 200 feet of docking facilities at Hastings and Prescott. (See page 25, Appendix A, for information concerning St. Croix River, mouth at mile 811.3).

**Pool No. 4 (mi. 796.9 to 752.8)**

River conditions: Controlling channel depths: about 9 feet.
Current velocities: 1 mile per hour at ordinary stages; 4 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 402.5 feet (Wabasha, Minnesota) Highway Bridge, mile 760.2.
2. Vertical - 62.49 feet above normal pool (Wabasha Highway Bridge, mile 760.2)

General: Pool includes Lake Pepin. Levees exist at Red Wing, Minnesota (mile 790.7), and Wabasha, Minnesota (mile 760.0).

**Pool No. 5 (mi. 752.8 to 738.1)**

River conditions: Controlling channel depths: about 9 feet.
Current velocities: 1 mile per hour at ordinary stages, 3 miles per hour at high stages.

Controlling clearances: 1. Horizontal - No bridges cross this pool.
2. Vertical - 72.3 feet above high water of 1965, which was 20.7 feet on the Winona gage.
(Aerial wire crossing, mile 750.5).

**Pool No. 5A (mi. 738.1 to 728.5)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: 1 mile per hour at ordinary stages; 3 miles per hour at high stages.

Controlling clearances: No bridges or aerial wires cross this pool.

General: The Corps of Engineers' Service Base is at Fountain City Bay (mile 733.3), a short distance above Fountain City, Wisconsin.

**Pool No. 6 (mi. 728.5 to 714.3)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: 1 mile per hour at ordinary stages; 3 miles per hour at high stages.

Controlling clearances: Aerial wires crossing at miles 728.2 and 725.1, elevation 727.5 M.S.L.

Controlling bridge clearances:
1. Horizontal – 434.1 feet (Winona, Minnesota Highway Bridge mile 725.9)
2. Vertical - 64.2 feet above normal pool. (Winona, Minnesota) Highway Bridge, (mile 725.9).

General: Levee exists at Winona, Minnesota, (mile 725.8)

**Pool No. 7 (mi. 714.3 to 702.5)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: 1 mile per hour at ordinary stages; 3 miles per hour at high stages.

Controlling clearances: No bridges or aerial wires cross this pool

**Pool No. 8 (mi. 702.5 to 679.2 including Black River mi. 0 to 1.4)**

River conditions: Controlling channel depths: about 9 feet
Controlling velocities: 1 mile per hour at ordinary stages, 3 miles per hour at high stages.

Controlling clearances excluding Black River, mile 0 to 1.4:

1. Horizontal - 150 feet (Chicago, Milwaukee, St. Paul & Pacific Railroad Bridge, mile 699.8, above LaCrosse, Wisconsin).
2. Vertical - Dresbach Highway Bridge, I-90, mile 701.7.

Clearances: Horizontal main channel span, 411.0 feet.
Vertical main channel span at center of span, 62.7 feet above normal pool.

Controlling clearances for the Black River (mile 0 to 1.4):

1. Horizontal - 127 feet (Chicago, Milwaukee, St. Paul, & Pacific Railroad Bridge, mile 1.0, LaCrosse, Wisconsin).
2. Vertical - No limit.

Note 1: Two hours advance notice is required to open the bridge.

Note 2: The Black River is navigable for small craft to Onalaska Dam, mile 5, with a minimum depth of 4 feet. The highway bridge at mile 1.9 provides vertical clearance of 12.9 feet above flat pool (elevation 631), and zero clearances above high water of 1965, which was 17.9 feet on the LaCrosse gage. Twenty-four hours notice is required to open this bridge. Bridge replaced with non-opening bridge at Clinton St. Also a non-opening bridge for I-90 at mile 3.5. The available elevation and clearance is on file at the Wisconsin Department of Transportation.

LaCrosse Highway Bridge Clearances: 1. Horizontal - main channel span, 462.0 feet.
2. Vertical - main channel span, 67.3 feet above normal pool, and 97.4 feet above zero of gage, Mile 696.8. Miles from Cairo: 697.6

General: Paved levee at LaCrosse, Wisconsin (mile 697.9), affords cargo transfer point. Potable water is available within 100 feet of docking facilities. Servicing facilities for small craft are available at North LaCrosse on the Black River, 1.7 miles above its mouth.

**Pool No. 9 (mi. 679.2 to 647.9)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: 2 miles per hour at ordinary stages; 3 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 640 feet.
2. Vertical - 67.5 feet above normal pool.

Both clearances are at the Lansing, Iowa, Highway Bridge, mile 663.4.

**Pool No. 10 (mi. 647.9 to 615.1)**

River conditions: Controlling channel depths: about 9 feet; however, east channel at Prairie du Chien is about 8 feet. Channel in lower section of pool is marked with permanent markers.

Controlling velocities: about 2 miles per hour at ordinary stages; 4 miles per hour at high stages.

Controlling clearances for main channel: 1. Horizontal - 451.5 feet, pier to pier.
2. Vertical - 60.0 feet above normal pool.

Both clearances are at Marquette-Prairie du Chien Main Channel Bridge, mile 634.9.

Controlling clearances for east channel: 1. Horizontal - 338.0 feet.
2. Vertical - 60 feet above normal pool.

Both clearances are at Marquette Highway Bridge at Prairie du Chien, Wisconsin, mile 634.8.

**Pool No. 11 (mi. 615.1 to 583.0)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: 2 miles per hour at ordinary stages; 4 miles per hour at high stages.

Controlling clearances: 1. Horizontal - No bridges cross this pool.
2. Vertical - No restrictions over this pool.

General: There is a guard wall extending upstream from the river wall and a guide wall extending upstream from the landwall of Lock 11. There is a deflection dike above this lock.

**Pool No. 12 (mi. 583.0 to 556.7)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: about 2 miles per hour at ordinary stages; 4 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 146.8 feet (Canadian National Illinois Central, mile 579.9, Dubuque, Iowa).
2. Vertical - 64 feet above flat pool (low water). (Mid 300 feet, Julien Dubuque Highway Bridge, mile 579.3).

Note: In closed position the channel span of the Chicago Central and Pacific Railroad Bridge provides a vertical clearance of 19.9 feet above flat pool (low water).

General: The Coast Guard Base and Docks are located in the harbor of refuge at Dubuque, Iowa (mile 579.5).

General: Mooring cell, mile 557.5, approximately, on right descending bank.

**Pool No. 13 (mi. 556.7 to 522.5)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: 2 miles per hour at ordinary stages; 4 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 154 feet (Iowa, Chicago & Eastern Company Railroad Bridge, mile 535.0, Sabula, Iowa.
2. Vertical - 63.5 feet above flat pool (low water). (Sabula Railroad Bridge, Iowa draw, Mile 535.0)

Note: In closed position, the channel span of the Iowa, Chicago & Eastern Bridge provides vertical clearance of 18.3 feet above flat pool (low water).

General: A mooring cell is on the left of the channel at mile 523.7, above Lock 13. Dike extension of upper guide wall of the lock is equipped with mooring posts at the upper end and mooring rings along the entire face. Navigators are cautioned not to land or trespass on U.S. Military Reservation which extends along the left bank between miles 545.2 and 558.5.

**Pool No. 14 (mi. 522.5 to 493.3)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: 2 miles per hour at ordinary stages; 5 miles per hour at high stages.
Controlling clearances: 1. Horizontal - 177.5 feet (Union Pacific Bridge, mile 518.0, Clinton, Iowa).
2. Vertical - 60 feet above flat pool (low water) (I-80 Bridge, mile 495.4)

Note 1: In closed position the channel span of the Union Pacific Bridge provides vertical clearance of 18.7 feet above flat pool (low water).

Note 2: The secondary channel in Beaver Slough at Clinton, Iowa, was last dredged in 1975 to project depth and 250 feet wide. Aerial wires cross Beaver Slough with a clearance of 42 feet above the high water of 1965.

Note 3: Old Lock 14 in LeClaire Canal is open to small boat traffic from Memorial Day through mid September. The canal was dredged to 5 feet at flat pool. In addition, a notch approximately 60 feet wide exists on the lateral dam at the head of Smith's Island, mile 494.4, allowing recreational craft to navigate in and out of the canal. The notch is marked with a rock pile on the upstream end and on the downstream end. At present, a small shoal exists in the canal from the marked entrance (notch) to approximately 200 feet downstream. Depths in this area are as shallow as 3.5 feet. Corps of Engineers special purpose buoys are located throughout the Canal. The Canal is a "NO WAKE" Zone.

General: There is a guard wall extending upstream from the river wall to Lock No. 14.

Andrews Anchorage (right bank, mile 519.0) has 2 tractors with lift booms of 4 and 5 ton capacity.

**Pool No. 15 (mi. 493.3 to 482.9)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: about 2 miles per hour at ordinary stages; 6 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 710 feet.
2. Vertical - 66.1 feet above flat pool (low water) (Iowa-Illinois Memorial Dual Bridges, mile 485.8).

General: A submerged rock and cement dike separate the main channel from the old Moline Lock, mile 485.1 to the junction buoy at mile 488.1.

**Pool No. 16 (mi. 482.9 to 457.2)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: about 2 miles per hour at ordinary stages; 4 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 197.9 feet (BNSF Bridge, mile 481.4, Rock Island, Illinois).
2. Vertical - 62.5 feet above flat pool (low water) (Interstate 280 Bridge mile 478.3)

Note 1: In closed position the channel span of the Government Bridge at Rock Island (mile 482.9) provides a vertical clearance of 23.8 feet above flat pool (low water), and the (BNSF Bridge, mile 481.4 provides vertical clearance of 25.7 feet above flat pool (low water).

Note 2: At the Rock Island Centennial Highway Bridge, mile 482.1, project depth exists under only the Illinois channel span.

Note 3: The U.S. Army Corps of Engineers, Rock Island District office is located at Lock 15, mile 482.9.

General: There is a guard wall extending upstream from the river wall of Lock No. 16. Illinois and Mississippi Canal enters at mouth of the Rock River (mile 479.1). Illinois and Mississippi Canal is not open to navigation.

Note 4: Special purpose buoys will be placed approximately 200' above the Ogee spillway on the right descending bank from 1 April through 30 November weather permitting.

General: There is a guard wall extending upstream from the river wall of Lock No. 16. Illinois and Mississippi Canal enters at mouth of the Rock River (mile 479.1). Illinois and Mississippi Canal is not open to navigation.

**Pool No. 17 (mi. 457.2 to 437.1)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: 2 miles per hour at ordinary stages; 4 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 500 feet.
2. Vertical - 65.0 feet above flat pool (low water) (Highway 92 Bridge, mile 455.9).

General: Dike extension of upper guide wall of lock is equipped with mooring rings.

**Pool No. 18 (mi. 437.1 to 410.5)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: 2 miles per hour at ordinary stages; 4 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 400 feet at Trans-Action & Associates Bridge remains, mile 428.0, Keithsburg, Illinois.
2. Vertical - No restriction on the pool.

General: A guard wall extends upstream from the river wall of the lock.

**Pool No. 19 (mi. 410.5 to 364.2)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: about 2 miles per hour at ordinary stages; 3 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 200 feet, (Ft Madison Highway Bridge, mile 383.9).
2. Vertical - 60.09 feet above flat pool (low water) (New Burlington Highway Bridge, mile 404.19).

Note: In a closed position, the channel span of the BNSF Bridge provides a vertical clearance of 21.5 feet above flat pool, and the Ft. Madison Railroad Bridge provides vertical clearance of 13.1 feet above flat pool (low water).

General: Mooring piers are located near the lower approach and above the upper approach to the forebay of Lock No. 19. Forebay is protected by concrete dike extending upstream from Union Electric Power plant.

**Pool No. 20 (mi. 364.2 to 343.2)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: 2 miles per hour at ordinary stages; 4 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 158 feet (Keokuk, Iowa, Municipal Railway and Highway Bridge, mile 364.0).
2. Vertical - 67.3 feet above flat pool (low water) (Keokuk Highway Bridge, mile 363.9).

Note: In a closed position, the channel span of the Keokuk Drawbridge provides 25.2 feet above flat pool (low water).

General: A guard wall extends upstream from the river wall of the lock. A Coast Guard base and dock is located at mile 363.6, Keokuk, Iowa. A deflection cell is now in place on the downstream side of Lock 20.

**Pool No. 21 (mi. 343.2 to 324.9)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: about 2 miles per hour at ordinary stages; 4 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 300 feet, BNSF, Mile 328.0).
2. Vertical - 61.38 feet above flat pool (low water) (New Quincy Highway Bridge, Mile 327.2).

General: A guard wall extends upstream from the river wall of Lock No. 21, and a levee with mooring facilities is located approximately 1/2 mile upstream from the lock. A flow deflection dike is located upstream of Lock No. 21, left descending bank, mile 325.5. A ferry operates between Canton, Missouri, and the Illinois shore (mile 342.6) for transportation of automobiles and light trucks.

**Pool No. 22 (mi. 324.9 to 301.2)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: about 2 miles per hour at ordinary stages; 4 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 348 feet (Norfolk Southern Bridge, mile 309.8, Hannibal, Missouri).
2. Vertical - 66.5 feet above flat pool (low water) (Hannibal Highway Bridge, mile 309.2).

Note: In closed position, the channel span of the Norfolk Southern Bridge provides vertical clearance of 20.7 feet above flat pool (low water). A mooring cell is located on the right bank, mile 301.8, above Lock 22.

General: A flow-deflection dike is located upstream from the lock.

**Pool No. 24 (mi. 301.2 to 273.4)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: about 1-1/2 miles per hour at ordinary stages; and about 4 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 195.0 feet (Illinois Central Gulf Railroad Bridge, mile 282.1, Louisiana, Missouri.)
2. Vertical - 65.9 feet above high pool stage, (Mid-300 feet, Louisiana Highway Bridge, mile 283.2.)

Note: In closed position, the main channel span of the Illinois Central Gulf Railroad Bridge provides a vertical clearance of 16.0 feet above normal pool.

**Pool No. 25 (mi. 273.4 to 241.4)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: 1-1/2 miles per hour at ordinary stages; 4 miles per hour at high stages.

Controlling bridge clearances: No bridges or aerial wires cross this pool.

**Melvin Price Pool (mi. 241.4 to 200.8)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: about 2 miles per hour at ordinary stages; 5 miles per hour at high stages.

Controlling clearances: 1. Horizontal - 690 feet (New Clark Highway Bridge, mile 202.4, Alton, Illinois).
2. Vertical – 485.4 feet minus Mel Price L&D Upper Gage elevation.
3. Secondary Vertical - 55.2 feet above high water of 1844, which was 32.1 feet on the Grafton gage. (Aerial wire crossing, mile 224.6).

General: In Melvin Price Pool, ferries operate between Illinois and Missouri for transportation of automobiles and light trucks. One at West Point Landing (mile 240.8), one at Fruitland Landing (mile 228.5), and one at Grafton just upriver of the Grafton Public Boat Launch (mile 218.4). These ferries operate until ice conditions cause operations to cease.

**Melvin Price Lock & Dam to Missouri River (mi. 200.8 to 195.0)**

River conditions: Open river conditions exist throughout. Controlling vertical clearance is 52.4 feet above high water of 1944, which was 36 feet on Alton gage. Horizontal clearance, 110 feet, is controlled by width of locks.

General: National Marine Service Dock (mile 196.6 left bank).

Missouri River to McKinley Bridge, St. Louis (miles 195.0 to 182.5)

River conditions: The Chain of Rocks reach, mile 184.0 to 194.0, has been bypassed by Lock No. 27 chain of Rocks Canal. All traffic is directed to use the Canal and Lock No. 27. Construction of a broad-crested rock-filled dam at mile 190.3 above mouth of Ohio River, forces all commercial traffic to use the canal. Controlling horizontal clearance 348 feet, controlling vertical clearance 480.2 minus the Lock 27 Upper gage (Chain of Rocks Canal Highway Bridge, mile 190.5). During severe winters, ice hampers or completely blocks traffic at the mouth of the Missouri River and in the Chain of Rocks Canal. Depths less than 9 feet may occur during extreme low water at Lower Access (mile 183.2 - 184.0) General: Humbolt Boat Service Dock (mile 185. right bank)

**Merchants Railroad Bridge to Ohio River (mi. 183.2 - 00.0)**

River Conditions: Open river conditions exist throughout. Depths less than 9 feet during extreme low water may occur at several localities, with the most serious shoals anticipated at Municipal Dock (mile 181.9 - 182.5), North Market (mile 180.6), Mouth of Meramec River (mile 161.0), Baumstarks (mile 122.5 - 123.5), Horse Island (mile 110.5), Liberty Bend (mile 95.5-96.5), Moccasin Springs (mile 66.0-67.5), Hamburg Island (mile 62.0-63.0), Devils Island (mile 57.0- 62.0), Cape Bend (mile 49.5 - 50.5), Cape LaCroix (mile 46.0 - 47.0), Burnham Island (mile 36.0 - 38.0), Buffalo Island (mile 26.0 -27.0), Scudders (mile 16.2 - 17.8), Grand Lake (mile 13.5 - 14.5), and Greenfield Bend (mile 2.8 - 4.4). Shoals are removed by dredging as they occur. The channel is well marked by lights and buoys. Current velocities vary from 2 to 7 1/2 miles per hour. Controlling bridge clearances are 500 feet horizontal at low water (channel span of McKinley Highway and Railroad Bridge at Venice, Illinois, mile 182.5) and 88.6 feet above zero of St. Louis gage, vertically, (at center of main arch) Eads Highway and Railroad Bridge, St. Louis, Missouri (mile 180.0).

General:, Material Sales Company, Inc (mile 179 right bank), Eagle Fabrication, LLC (mile 177 left bank), JB Marine Service, Inc (mile 168 right bank), and Missouri Dry Dock Repair Company (mile 51.3 right bank), maintain shipbuilding, barge repair, and marineway facilities. .

## ILLINOIS WATERWAY

The Illinois Waterway connects the Mississippi River at Grafton, Illinois (mouth of Illinois River, about 218 miles above the Ohio River) with two outlets to Lake Michigan at Chicago, Illinois, and consists of the following waters:

| To 130th Street (Chicago) (Mile 327.0) | |
|---|---|
| Illinois River | 272.9 miles |
| Des Plaines River | 7.1 miles |
| Chicago Sanitary and Ship Canal | 13.5 miles |
| Calumet-Sag Channel | 16.1 miles |
| Little Calumet River | 6.1 miles |
| Calumet River | 1.3 miles |
| Total* | 327.0 miles |

*Total distance from Grafton to Calumet Harbor is 333.4 miles.

| To Lake Street (Chicago) (Mile 325.6) | |
|---|---|
| Illinois River | 272.9 miles |
| Des Plaines River | 17.1 miles |
| Chicago Sanitary and Ship Canal | 31.1 miles |
| South Branch of Chicago River | 4.5 miles |
| Lake Street (Chicago) to Lake Michigan | 1.6 miles |
| Total** | 327.2 miles |

**Total distance from Grafton to Chicago Harbor is 327.2 miles.

The waterway is relatively narrow, but because of good alignment, stable banks, moderate currents and absence of rapid silting, it is well adapted to navigation. Low-water channel, Grafton to just below Lockport, is generally 300 feet wide and 9 feet deep, except between miles 244.6 and 247, where channel width is 200 feet. From Lockport to Chicago Harbor, about 36 miles, the channel is generally 160 feet wide in the rock section between miles 293.5 and 307.9, and has a bottom width of 202 feet in the earth section between miles 308.0 and 320.9. From the junction of the Chicago Sanitary and Ship Canal and the Calumet-Sag Channel to Calumet Harbor, about 30 miles, the width is generally 225 feet. The controlling bridge clearances are above Lockport. There are eight locks in operation on the Waterway; i.e., LaGrange, Peoria, Starved Rock, Marseilles, Dresden Island, Brandon Road, Lockport, and the Thomas J. O'Brien. The locks have widths of 110 feet and lengths of 600 feet, except the Thomas J. O'Brien Lock, which is 110 feet wide and 1000 feet long.

**Lake Street (Chicago) to Lake Michigan**

Chicago River Entrance and Main Branch of Chicago River.....1.6 miles

The channel in the Chicago River Entrance and the main branch of the Chicago River is approximately 250 feet wide, but 10 bascule bridges having horizontal clearances ranging from 176 to 219 feet reduce the usable width of the waterway. Both banks have been improved with revetments. There is one lock, the Chicago Lock, which has a width of 80 feet and a length of 600 feet.

Below Lockport, the channel is marked by the United States Coast Guard with lighted and unlighted shore aids and unlighted buoys. In general, the unlighted buoys between Grafton and Joliet are set near the nine-foot contour line as measured below normal pool stages and should be given a berth of not less than 50 feet. A considerable number of 5-pile timber structures and steel structures have been installed on the Illinois Waterway for the exhibition of navigation lights. These structures, which extend 20 to 25 feet above the water at normal stages, exhibit lights at elevation slightly above the extreme high-water level. Directional lights showing a narrow beam of high intensity upstream, downstream, or both, have been installed at certain locations. These lights are located in sections where they may be used as leading lights for an unusually long reach and are sometimes shown in conjunction with regular 360 degree passing lights, depending on their location. Above Lockport there are a few shore lights, and project depth of 9 feet is available for full width between retaining walls or riprapped slopes.

During December, January, and February, ice may be encountered in the Marseilles Canal and the lower river. The heaviest concentrations occur in the upper and lower Peoria Lakes, but seldom cause complete stoppage of navigation.

**Alton Pool (mi. 0 - 80.2)**

River conditions: Controlling channel depths: 9 feet is low water.
Controlling velocities: about 1 1/2 miles per hour; maximum, about 3 miles per hour.

Controlling bridge clearances:

1. Horizontal - 202.0 feet (Florence Highway Bridge, mile 56.0)
2. Vertical - 66.5 feet above normal pool (Hardin Drawbridge, Mile 21.6, low steel elevation is 484.7 in open position

Note: In the closed position the channel span of the Illinois Central Gulf Railroad Bridge, mile 43.2, provides a vertical clearance of 21.3 feet above normal pool. In a closed position, Hardin Drawbridge provides 27.4 feet clearance above normal pool stage. Florence Drawbridge provides 28.1 feet clearance above pool stage when closed. Norfolk and Western Railroad Bridge provides 33.2 feet above pool level when closed.

WARNING: Wing dams extend from banks between miles 35 and 65. Dams are flooded and marked on channel by buoys.

General: For transportation of cars and trucks, a ferry operates at Deer Plain subdivision (right bank) Illinois to east bank at Pere Marquette State Park mile 3.6 and a State of Illinois ferry operates at Kampsville (mile 32.0, right bank) to connect State Highways Nos. 108 (left bank) with 100 and 96 (right bank).

**LaGrange Pool (mi. 80.2 to 157.7)**

River conditions: Boats pass through the LaGrange Dam (mile 80.2) at high stages when a 9-foot depth can be maintained with wickets lowered.

Note: All navigators should familiarize themselves with paragraph (v) of the Regulations and not attempt to pass over the dam when the wickets are up.

Controlling channel depths: about 9 feet at low water.
Controlling velocities: 1.3 miles per hour; maximum, 3.4 miles per hour.

Controlling clearances: 1. Horizontal - 150 feet (Union Pacific Bridge, mile 151.2, Pekin, Illinois).
2. Vertical - 47.7 feet above record high water (Havana Highway Bridge, mile 119.6).

**Peoria Pool (mi. 157.7 to 231.0)**

River conditions: Boats pass through Peoria Dam (mile 157.7) at high stages when a 9-foot depth can be maintained with wickets lowered.

Note: All navigators should familiarize themselves with paragraph (v) of the Regulations and not attempt to pass over the dam when the wickets are up.

Controlling channel depths: about 9 feet.

Controlling clearances: 1. Horizontal - 260 feet (Illinois Central Railroad Bridge, mile225.5, LaSalle, Illinois).
2. Vertical - 58.8 feet above pool stage (A.T. and S.F. Railroad Bridge, mile 181.9).

General: Permanent navigation aids on concrete capped steel sheet piling cells are in place in the upper and lower Peoria Lakes. The Martin Oil Services, Inc., (mile 160.2) has facilities available for fueling towboats.

**Starved Rock Pool (mi. 231.0 to 244.6)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: about 0.8 miles per hour in lower 9 miles; about 1.7 miles per hour in upper 4.5 miles.

Controlling clearances: 1. Horizontal - 167 feet (Illinois Rail Net Bridge, mile 239.4).
2. Vertical - 47.6 feet above pool stage (Veterans Memorial Highway Bridge, mile 239.7).

**Marseilles Pool (mi. 244.6 to 271.5)**

River conditions: Lower 2-1/2 miles of pool consist of an artificial canal which provides a width of 200 feet and controlling depth of about 9 feet. Marseilles Dam is at upper end of canal (mile 247.0).

Controlling channel depth on pool: about 9 feet.
Controlling velocities: none in canal; above Marseilles Dam 1.6 miles per hour; maximum 2.13 miles per hour.

Controlling clearances: 1. Horizontal - 140 feet (Chessie Railroad Drawbridge, mile 254.1).
2. Vertical – 50.45 feet above normal pool (Marseilles Highway Bridge, mile 246.9).

General: The channel is well marked with buoys. The lights in general are so placed that they may be used as leading lights.

**Dresden Island Pool (mi. 271.5 to 286.0)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: below Treat's Island - 0.8 to 1.4 miles per hour; above Treat's Island - 0.8 to 1.7 miles per hour.

Controlling clearances: 1. Horizontal - 110 feet (Rockdale-Brandon Road Bridge, over lower approach to Brandon road Lock, mile 285.
2. Vertical - 47.7 feet above pool stage (I-55 Bridge, mile 277.9).

General: Channel well marked by buoys. Shore lights generally are so located that they may be used as leading lights. Upper 1.5 miles of channel are in rock cut.

**Brandon Road Pool (mi. 286.0 to 291.1)**

River conditions: Controlling channel depths: about 9 feet.
Controlling velocities: up to 2 miles per hour.

Controlling clearances: 1. Horizontal - 150 feet (5 bridges at Joliet, Illinois), mile 287.4-288.4).
2. Vertical - 47.4 feet above pool stage (I-80 Bridge, mile 286.9).

Note: The channel from Brandon Road Lock to upper section of Joliet, a distance of about 2.8 miles, is confined by concrete retaining walls.

General: On right bank about 1,400 feet above the dam are 10 mooring piers which may be used for interchange of tows.

Note: The 10 piers mentioned are normally occupied by a fleeting service, or for semi-permanent dockage. Additional mooring facilities are provided on the right bank, above CSXT Bridge (mile 287.6), for use when waiting for bridges to open.

**Lockport Lock to Chicago Harbor (mi. 291.1 - 327.2)**

This section consists of 31.1 miles of the Chicago Sanitary and Ship Canal between Lockport and South Damen Avenue, Chicago, and 6.1 miles of West Fork of South Branch, South Branch and Main Branch of the Chicago River between South Damen Avenue and Chicago Harbor.

**Lockport Lock (mi. 291.1)**: Depth over lower miter sill at low water is 15 feet. Depth over upper miter sill varies from 11 feet to 20 feet, depending on elevation of water surface in canal.

**Chicago Water Cannon (mi. 326.8):** Between Michigan Avenue and Lake Shore Drive, the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) operates a fountain which shoots a stream of water from the north shore south across the river. This fountain attraction operates for 10 minutes per hour on the hour from 10:00 a.m. to 3:00 p.m. and from 5:00 p.m. to 11:00 p.m. from Memorial Day to October 31. On calm days this stream reaches 60 feet in height and falls to within 10 feet of the south shore.

**Chicago Harbor Lock (mi. 327.2):** The controlling works and lock were constructed by the Sanitary District of Chicago to limit the amount of water taken from Lake Michigan. The river level at this point is normally maintained, by the Sanitary District, at about 0.6 feet below low water datum for Lake Michigan, pursuant to the provisions of 33 CFR 207.420.

The navigation lock is located about 40 feet south of the centerline of the river entrance channel and about 1,800 feet east of the Lake Shore Drive Bridge. The lock is 80 feet by 600 feet and has a depth of 23 feet below low water datum over the sills.

Channel conditions: Drawdown may occur when heavy rainfall is predicted. Drawdown will result in current velocities which are treacherous and at times cannot be navigated. In the Chicago River, current velocities average 0.2 to 0.4, with a maximum of 2.0 miles per hour. These velocities are increased at bridges which decrease channel cross-section.

Controlling horizontal and vertical clearances: 95 feet horizontally, BNSF Bridge, mile 318.9, and 17.0 feet vertically (8-track Railroad Bridge at Chicago, Illinois, mile 320.4) above water datum. There are movable bridges across the South Branch Chicago River and main branch from mile 321.1 to 326.9. The only exception is the Dan Ryan Expressway Bridge at mile 322.9 having a fixed controlling vertical clearance of 64.4 feet. Before storm run-off channel depths may temporarily be reduced several feet and bridge clearances increased several feet due to drawdown. During and after storm run-off channel depths may temporarily be increased several feet and bridge clearances decreased several feet.

General: Shoals exist along right bank between the 16th and 9th Street highway bridges (miles 292.1 and 292.8) at Lockport, Illinois.

Navigators are warned that before, during and after heavy rainfall and run-off in the Chicago area, sluice gates located on the right bank at mile 293.2, will be open, causing a strong set-over. Special warning signals have been installed on top of the superstructure (red flasher type) and can be seen in both directions.

Navigators are warned to use caution and nominal speed when passing the many craft, either moving or moored at terminals, which use this relatively narrow channel.

**Sag Junction to Calumet Harbor - The "Sag Route" (mi. 303.5 - 333.4).** (Note: Inbound navigation should be warned that vertical clearance is 19.1 feet above water datum at BNSF Bridge, mile 300.6).

**Calumet Sag Channel (mi. 303.5 - 319.7)**

Channel conditions: About 10.2 miles of channel is of rock section between miles 303.5 and 313.7 and about 6 miles of channel is of earth and rock section, between miles 313.7 and 319.7. Both sections generally have a bottom width of 225 feet. Some areas are narrower due to deferred maintenance, consistent with traffic usage.

Current velocities average 0.2 to 0.4 miles per hour; maximum during heavy run-off 1.3 miles per hour. Controlling bridge clearance 188.5 feet horizontally at mile 310.7 Southwest Highway (State Highway 7) Bridge; vertically, 24.4 feet above water datum at 104th Street Bridge, (mile 307.4).

**Little Calumet River (mi. 319.7 - 325.7)**

River conditions: There is a sharp bend in this reach at mile 320.7 to 322.2. The water level is approximately 1.5 feet below the level of Lake Michigan.

**Calumet River to Calumet Harbor (mi. 325.7 - 333.4)**

River conditions: The portion of the Calumet River connecting the Little Calumet (mile 325.7) to Turning Basin No. 5 (mile 327.3) has a controlling horizontal clearance of 110 feet at the Thomas J. O'Brien Lock (mile 326.5). The controlling vertical clearance is 29.4 feet at the 130th Street Bridge (mile 327.0).

The portion of the Calumet River connecting Turning Basin No. 5 (mile 327.3) to Lake Michigan (mile 333.4) has a controlling horizontal clearance of 135.7 feet at the Baltimore and Ohio Railroad Bridge (mile 332.0). The controlling vertical clearance is 120.0 feet at the Conrail Central Vertical Lift Bridge (mile 332.0).

General: A temporary dike constructed across Lake Calumet from the north side of Slip No. 2 to the north side of Slip No. 3 to facilitate dredging and construction of new slips, now prevents passage of small boats into and out of the shallow areas of Lake Calumet north of the dike.

## ILLINOIS AND MISSISSIPPI CANAL

The Illinois and Mississippi Canal (Hennepin Canal), 75 miles long, once connected the Illinois River near Bureau, Illinois, with the Mississippi River just below Rock Island, Illinois. A feeder canal extends for 29 miles from Rock River at Rock Falls, Illinois, to summit level of the main canal about 28 miles from the Illinois River. The Illinois and Mississippi Canal (Hennepin Canal) was transferred by the Corps of Engineers to the State of Illinois on 1 August 1970. The canal is now operated and maintained as a park by the State of Illinois.

Operations of the Illinois and Mississippi Canal (Hennepin) were discontinued on 1 July 1951. This action resulted from a lack of use by commercial traffic for which it was originally constructed.

The use of the canal by pleasure craft is limited to those craft which may readily be portaged around locks or other obstructions. The locks will not be operated for craft of any type.

## BLACK RIVER, WISCONSIN, MOUTH TO 1.4 MILES ABOVE

See Pool No. 8, Mississippi River, page 6 of this bulletin.

## ST. CROIX RIVER, MOUTH TO TAYLORS FALLS, MINNESOTA

The St. Croix River enters the Mississippi River at Prescott, Wisconsin, 811.3 miles above the Ohio River. From its mouth to Stillwater, Minnesota, 24.5 miles, the Corps of Engineers maintains the channel to the level of use, which, in recent years, is only recreational and excursion boat traffic. Aids to navigation on the St. Croix River include 7 battery-operated shore lights, and unlighted buoys as required. From Stillwater to Taylors Falls, 27.3 miles, the river is marked with daymarks and unlighted buoys for the use of pleasure craft.

River conditions: Minimum channel width from the mouth to Stillwater, about 200 feet, with controlling depth about 9 feet. From Stillwater to Taylors Falls, minimum channel width about 50 feet, with controlling depth 1-foot at extreme low water. In low-flow periods a 5 foot and a 2-foot channel may be available to points about 5 miles and 15 miles above Stillwater, respectively. Maximum current velocity below Stillwater is about 2 miles per hour at highwater through Chicago, Milwaukee, St. Paul and Pacific Railway drawbridge near Hudson, Wisconsin (mile 17.3). Above Stillwater, velocities vary considerably as channel conditions change, at times reaching considerable intensities in limited reaches. Controlling clearances from the mouth to Stillwater (mile 24.5) are horizontally 132 feet (Hudson Railroad Bridge mile 17.5) and vertically 61.1 feet above 1965 normal pool (I-94 Dual Bridges, mile 16.1).

Pursuant to provisions of 33 CFR 667 and 117.1099, bridge openings are as follows:

## (16) ST. CROIX RIVER, WISCONSIN AND MINNESOTA

The draw of the Stillwater Bridge, mile 23.4 shall open on signal:

From May 15 through October 15 from Monday through Friday, except Federal holidays, as follows:

8:00 a.m. to 11:00 a.m. every hour on the hour
11:00 a.m. to 2:30 p.m. every hour and half hour
2:30 p.m. to 5:30 p.m. every hour and a half
5:30 p.m. to 6:30 p.m. every hour on the half
6:30 p.m. to 10:00 p.m. every hour and half hour
10:00 p.m. to 8:00 a.m. if at least two hours notice is given

On Saturdays, Sundays, and Federal holidays, as follows:

8:00 a.m. to 9:00 a.m. every hour and half hour
9:00 a.m. to 8:00 p.m. every hour on the hour
8:00 p.m. to midnight every hour and half hour
Midnight to 8:00 a.m. if at least two hours notice is given

From October 16 through May 14 if at least 24 hours notice is given.

Controlling clearances between Stillwater and Taylors Falls are 102 feet horizontally at the Soo Line Bridge (mile 40.7) and 9.9 feet vertically above 1950 high water (29.2 feet above low water) at fixed highway bridge at Osceola (mile 45.0). Drawbridge at mile 40.7 has a clearance above 1950 high water of 7.6 feet (26.9 feet above low water).

Pursuant to provision of 33 CFR Section 117.667(c) and 117.1099(c) draw need not be open for passage of vessels.

## MINNESOTA RIVER, MOUTH TO SHAKOPEE, MINNESOTA

The Minnesota River enters the Mississippi River at St. Paul, Minnesota, 844.0 miles above the Ohio River. From the mouth to the vicinity of Shakopee, Minnesota, a distance of 25 miles, aids to navigation include unlighted buoys and daymarks as required.

River conditions: Controlling channel depth about 9 feet, from mouth to Savage, Minnesota, mile 14.7.
. Controlling vertical clearance from mouth to Mile 14.7 is the Interstate Highway 35W bridge, Mile 10.9, 53.6 feet above flat pool. With spans closed, S00 Line Railroad bridge, mile 14.3, provides little or no clearance above high water. Drawspan is maintained in open to navigation position and only closes for trains.

General: Small craft mooring facilities are at Cedar Avenue, right bank, mile 7.3, and Shakopee, Minnesota, mile 25.0. Cargill, Inc., terminal facilities are located at Port Cargill on the right bank, mile 13.1. Industrial terminals for barge fleeting are located on the right bank, mile 7.4; right bank, mile 10.8; and right bank, between miles 14.4 and 14.7.

## MISSISSIPPI RIVER TO LAKE MICHIGAN VIA WISCONSIN & FOX RIVERS

A possible route for canoe trips between the Mississippi River and Lake Michigan at Green Bay, Wisconsin, exists via the Wisconsin River to Portage, Wisconsin (116 miles), canal to Portage connecting the Wisconsin and Fox Rivers, canalized Fox River to DePere (156 miles) and improved Fox River to Green Bay (7 miles). The unimproved Wisconsin River may be quite difficult and hazardous to navigate. Due to tortuous channel, shifting nature of the stream bed, and high current velocity, navigation would nearly be impossible even if sufficient depth of channel existed. Vessels may be taken down the Wisconsin River during very high water at the risk of the owner. Regulation navigation on this river, even for small craft, is practically out of the question.

A lock 35 feet wide and 139 feet long, with lift of about 30 feet, provides passage through the Prairie du Sac Dam, about 26 miles below Portage. However, due to the scouring of the river bed below the dam, the lower sill of the lock is above the tailwater during much of the summer season, and due to lack of need for this facility, no change in the structure has been ordered. It is understood that occasionally small boats are transported around the dam.

There are at least 15 bridges across the river between Portage and the Mississippi River. Controlling bridge clearances are 42 feet horizontally (Chicago, Milwaukee, St. Paul & Pacific Railroad at Lone Rock, Wisconsin, mile 55.0) and 1.1 feet vertically above high water of 20.8 feet above low water (BNSF at Prairie du Chien, Wisconsin, mile 1.4).

Regulations to Govern the Operation of Drawbridges Across the Wisconsin River, provide that whenever a vessel, unable to pass under closed bridge, desires to pass through the draw, advance notice of at least 48 hours of the time the opening is required shall be given to the authorized representative of the owner of, or agency controlling, the bridge.
The canal at Portage connecting the Wisconsin River and the Fox River is no longer navigable at the Ft. Winnebago (Fox River) end.

The Fox River from Portage, mile 163.0, to 9 miles above Lake Winnebago, near the Town of Butte Des Morts on Big Lake Butte Des Morts, mile 65.0, following the water route from Green Bay, is maintained by the State of Wisconsin. Operation of the Lock at Portage, at the upper end of the connecting canal, has been suspended. Water control structures have been erected on the Fox River, at Governor Bend, Montello, Grand River, Princeton, White River, and Berlin to maintain the pools above as the locks at these locations have been removed. (The lock at Eureka is no longer operated) and is under the control of the Wisconsin Department of Natural Resources. Continuous navigation on the Upper Fox River for powered pleasure craft extends only to the vicinity of Eureka.

Existing projects for the Fox River from Lake Butte Des Morts to DePere (65 miles) provide for depths of 6 feet and 18 to 24 feet from DePere to Green Bay. The latest known controlling depth from Green Bay to DePere is 8 to 20 feet and from DePere to the mouth of the Wolf River in Big Lake Butte Des Morts is 6 feet at standard low water. Locks on the canalized portion of the river vary in width from 33.6 feet to 36.6 feet and in length from 144.0 feet to 146.5 feet. Some shoaling has occurred.

The Wolf River, a tributary of the Fox River, is navigable by small craft for a distance of 47 miles from its mouth, 10 miles above Oshkosh, to the head of navigation at New London, Wisconsin.

Improvements have been made to obtain a channel of navigable width and 4 feet depth, by dredging across bars and removing snags) overhanging trees and other obstructions between the mouth of the river and New London. The channel will admit passage of boats drawing 4.0 feet to 1 mile below Partridge Crop Lake, thence 2 feet to New London. Small boats navigate the river as far as New London.

The Fox River navigation project between Menasha, Wisconsin and DePere, Wisconsin, was placed in caretaker status on October 15, 1983. The Corps of Engineers has not operated the locks since that time, and has transferred the navigation system to the State of Wisconsin, Fox River Navigational System Authority. Lock operation on the Lower Fox River has been curtailed to only three locks. Rapids Croche Lock has been closed and cofferdammed for prevention of sea lamprey migration to Lake Winnebago to preserve the sturgeon spawning habitat. As a consequence of the disruption of through navigation between Lake Winnebago and Green Bay, the Fox River Navigational System Authority operates only DePere, Little Kaukauna, and Menasha Locks. The Lower Fox River locks are being operated by the Fox River Navigational System Authority located at 1008 Augustine Street, Kaukauna, WI 54130, or telephone: 920/ 759-9833. Visit www.foxriverlocks.org for current schedule and fee information.

All bridges crossing the Fox River in the reaches above Big Lake Butte Des Morts open on demand or with proper advance notice.

Controlling bridge clearances of the Fox River in the reaches below Big Lake Butte Des Morts are 35.4 feet horizontally and 54.2 vertically above standard low water. Of the 30 bridges crossing the river and canals from Big Lake Butte Des Morts through Green Bay, 9 are swing, 14 bascule, 1 lift, and 5 fixed. The fixed bridges at Appleton have vertical clearances of 54.6 and 62.9 feet above standard low water and at Kimberly - Little Chute fixed bridge has a vertical clearance of 54 feet above standard low water. The lift bridge at Kaukauna has a vertical clearance, when raised, of 65 feet above standard low water.

Advance notice of two hours is required for all openings of the George Street drawbridge across the Fox River at DePere, Wisconsin, between 6:00 p.m. and 8:00 a.m., Central Standard Time, pursuant to the provisions of 33 CFR 117.1087(b).

Controlling bridge clearances on the Wolf River are 56.5 feet horizontally and 15.0 feet vertically above standard low water. Of the 6 bridges crossing the Wolf River from its mouth to New London, 2 are bascule, 1 swing, and 3 fixed. The fixed bridge at Northport has a vertical clearance of 15.9 feet above standard low water, and the fixed bridges at New London have vertical clearances of 15.0 and 15.5 feet above standard low water. The owner of the bridge at Gills Landing (Minneapolis, St. Paul and Sault Sainte Marie Railway) requires 24-hour notice to open the draw span for passage of vessels. Opening can be requested by calling (715) 344-1910.

**REQUESTS FOR ADDITIONAL INFORMATION**

If additional information is desired concerning any specific waterway or section of waterway lying wholly within the jurisdiction of a District Engineer, request for such should be made to the proper district office. If the waterway or section lies in two or more districts' jurisdiction, requests for information may be addressed to each District Engineer for data pertaining to waterways under his jurisdiction. Requests for information should be as specific as practicable and preferably should indicate the purpose for which data are desired.

**MISSISSIPPI RIVER, OHIO RIVER TO 1.2 MILES BELOW DAM NO. 22 (mi. 0-300)** including eastern tributaries to mile 261 (except Illinois River above LaGrange Lock and Dam, mile 80.2), and western tributaries to mile 300 (except Missouri River).

U.S. Army Corps of Engineers, St. Louis District, 1222 Spruce Street, St. Louis, Missouri 63103-2833.

**MISSISSIPPI RIVER, 1.2 MILES BELOW DAM 22 TO 1.1 MILES BELOW DAM NO. 10 (mi. 300-614)** Including tributaries from miles 261 to 614 on east and miles 300-614 on west.

U.S. Army Corps of Engineers, Rock Island District, Clock Tower Building, Post Office Box 2004, Rock Island, Illinois 61204-2004.

**MISSISSIPPI RIVER, 1.1 MILES BELOW DAM NO. 10 TO LAKE ITASCA (mi. 614-SOURCE)** including tributaries above mile 614.

U.S. Army Corps of Engineers, St. Paul District, 180 5th Street East, Suite 700, St. Paul, MN 55101-1678.

**ILLINOIS WATERWAY AND TRIBUTARY STREAMS**. From the mouth to LaGrange Lock and Dam, mile 80.2

U.S. Army Corps of Engineers, St. Louis District, 1222 Spruce Street, St. Louis, Missouri 63103-2833.

**ILLINOIS WATERWAY AND TRIBUTARY STREAMS above LaGrange Lock and Dam, mi. 80.2 -325.6** (Lake Street, Chicago) and mile 327.0 (130th Street, Chicago).

U.S. Army Corps of Engineers, Rock Island District, Clock Tower Building, Post Office Box 2004, Rock Island, Illinois 61204-2004.

## CHICAGO RIVER ENTRANCE AND MAIN BRANCH OF CHICAGO RIVER

U.S. Army Corps of Engineers, Chicago District, 231 South LaSalle Street, Suite 1500, Chicago, Illinois 60604

## TRIBUTARIES TO LAKE SUPERIOR ADJOINING MISSISSIPPI RIVER BASIN

U.S. Army Corps of Engineers, Detroit District, 477 Michigan Avenue, Detroit, Michigan 48226.

**MISSISSIPPI RIVER, OHIO RIVER TO MOUTH** Including all tributaries except the Arkansas River, the White River above Peach Orchard Bluff, Arkansas, and the Red River above Fulton, Arkansas.

Division Engineer, U.S. Army Engineers Division, Mississippi Valley, Post Office Box 80, Vicksburg, Mississippi 39181-0080, who is also President of the Mississippi River Commission.

**HEADWATER SECTIONS OF ARKANSAS, WHITE, AND RED RIVERS** Including Arkansas River and tributaries, the White River and tributaries above Peach Orchard Bluff, Arkansas, and the Red River and tributaries above Fulton, Arkansas.

Division Engineer, U.S. Army Engineer Division, Southwestern, 1114 Commerce Street, Dallas, Texas 75242-0216.

## MISSOURI RIVER AND TRIBUTARIES

U.S. Army Corps of Engineers, Omaha District, 1616 Capital Avenue, Omaha, Nebraska 68120

## OHIO RIVER AND TRIBUTARIES

U.S. Army Corps of Engineers, Great Lakes and Ohio River Division, Room 1032 Cincinnati, Ohio 45202-3222.

## GREAT LAKES

Navigation Charts, and the Great Lakes Coast Pilot (Coast Pilot 6). (Distributed by the Federal Aviation Administration). Address: FAA, Distribution Division (AJW-3550), 10201 Good Luck Road, Glenn Dale, Maryland 20769-9700, telephone (800) 638-8972. A free catalog (specify the Great Lakes) of the NOAA charts of the Great Lakes will be furnished upon request.

## NOTICE TO MARINERS

The U.S. Coast Guard Ninth District publishes the Ninth District Local Notice to Mariners weekly from January to December every year. It summarizes information considered essential to the safe passage of navigation. This publication covers the St. Lawrence Seaway, Great lakes, and the Illinois Waterway from mile marker 291 northward to Lake Michigan. . Available at no charge through the Navigation Center Website www.navcen.uscg.gov . Please address questions to Commander (dpw), Ninth Coast Guard District, 1240 East Ninth Street, Cleveland and Ohio 44199-2060, or call (216) 902-6073.

## LIGHT LIST

The LIGHT LIST Volume VII, Great lakes (COMDTPUB P16502.7), lists lights, fog signals, buoys, day beacons and racons on the Great Lakes. Illustrations of the U.S. Aids to Navigation System, Geographic Range tables, a Luminous Range diagram, and glossary of side to navigation terms are included. Address: Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Information pertaining to this publication may be obtained from: Commandant (G-MOV-3). U.S. Coast Guard, 2100 Second Street, S.W., Washington, DC 20593-0001.Changes made in aids to navigation are addressed in Broadcast and the Local Notices to Mariners. These should be used to correct the current Light List. The Light List, Vol. V, is available for purchase by mail from the Government Printing Office by calling (202) 512-1800, or is available for purchase on the Internet at: http://bookstore.gpo.gov Stock Number 050-012-00463-3. or a free online version of the Light List is available via the U.S. Coast Guard Navigation Center Website at: http://www.navcen.uscg.gov/.

## RULES OF THE ROAD

NAVIGATION RULES, INTERNATIONAL-INLAND (COMDTINST MI6672.2a) "Rules of the Road". This publication contains (Inland Navigation Rules Act of 1980) regulations applying to navigation of the Western Rivers, Inland Waters (Great Lakes), and International Waters. The public can obtain copies from the Government Printing Office by calling (202) 512-1800 or is available for purchase on the Internet at: http://bookstore.gpo.gov Stock Number 050-12-00407-2. Address: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Inquiries regarding specific rules should be addressed to Commandant (G-MOV-3), U.S. Coast Guard, 2100 Second Street, S.W., Washington DC 20593-0001.

## OTHER PUBLICATIONS

The following publications of interest to navigators are available in this and other Federal offices:

**MISSISSIPPI VALLEY DIVISION BULLETIN NO. 1** - Describes maps and charts of the Mississippi River System suitable for navigation.

**REGULATIONS TO GOVERN THE USE, ADMINISTRATION AND NAVIGATION OF THE OHIO RIVER, MISSISSIPPI RIVER ABOVE CAIRO, ILLINOIS WATERWAY AND THEIR TRIBUTARIES.**

**RULES AND REGULATIONS TO GOVERN THE OPERATIONS OF THE DRAWBRIDGES CROSSING THE MISSISSIPPI RIVER AND ALL ITS NAVIGABLE TRIBUTARIES AND OUTLETS.** Director, Western Rivers Operation, 1222 Spruce Street, St. Louis, Missouri 63103-2832.

**"Navigational Rules, International - Inland"** (COMDTINST M16672.2 (Series) contains the Inland Navigation Rules Act of 1980. The public can obtain copies from the Government Printing Office by calling (202) 512-1800 or E-Mail: http://bookstore.gpo.gov Stock Number 050-012-00407-2. A copy of the navigation rules is required to be in the pilothouse of all vessels. Copies of the rules may be available from various license training and upgrading schools.

## LIGHT LIST - MISSISSIPPI RIVER SYSTEM

(United States Coast Guard-USCG)

The U.S. Coast Guard annually publishes a list of aids to navigation on the river mentioned in this bulletin is available via the U.S. Coast Guard Navigation Center Website at: http://www.navcen.uscg.gov/. Information pertaining to this publication may be obtained from the Commander (dpw), Eighth Coast Guard District, 500 Poydras Street, New Orleans, Louisiana 70130, telephone (504) 671-2327.

## NOTICE TO NAVIGATION INTERESTS

The District Engineers issue "Notice to Navigation Interests and Navigation Bulletins containing data on available channel widths and depths, sailing directions, locations of shoals, snags, wrecks, and other obstructions to navigation as occasions require. Interested parties may have their name placed on the mailing list to receive such notices as issued, without charge, by making a request to the appropriate District Office listed below.

Memphis District: Donald V. Mayer, e-mail: Donald.V.Mayer@usace.army.mil, phone: 901-544-3764
New Orleans District: Wesley M. Sisung, e-mail: Wesley.M.Sisung@usace.army.mil, phone: 504-862-2335
Rock Island District: Darla J. Schertz, e-mail: Darla.J.Schertz@usace.army.mil, phone: 309-794-5366
St. Paul District: Kristin M. Moe, email: Kristin.M.Moe@usace.army.mil, phone: 651-290-5146
St. Louis District: Lance Engle, e-mail: Lance.Engle@usace.army.mil, phone: 314-865-6343
Vicksburg District: Joel Brown, e-mail: Joel.T.Brown@usace.army.mil, phone: 601-631-7549

Nation Wide Navigation Notices and Local Notices to Mariners can be found at: http://ntninotices.usace.army.mil/lpwb/f?p=150:1:0:::::

## NOTICE TO MARINERS - MISSISSIPPI RIVER AND TRIBUTARIES

The U.S. Coast Guard issues "Notices to Mariners" containing data on aids to navigation, channel conditions, menaces to navigation, drawbridge closures, marine dangers, etc. The Notice to Mariners is available electronically through the U.S. Coast Guard Navigation Website: www.navcen.uscg.gov

## STATUS OF LOCKS AND DAMS-CONTROLLING CLEARANCES IN MISSISSIPPI RIVER POOLS

| Lock Name or No. | Miles Above Ohio River | Nearest Town | Bank | Usable Lock Size in Feet | Lift in Feet *1(1) | Horizontal Name & Mile | Horizontal Clearance in Feet | Vertical Name & Mile | Vertical Clearance in Feet *2 |
|---|---|---|---|---|---|---|---|---|---|
| Lower St. Anthony | 853.4 | Minneapolis, MN | R | 56x400 | 24.9 | Henn Co. Stone Arch (853.7) | 56.0 | Henn Co. Stone Arch (853.7) | 24.4 |
| 1 | 847.6 | Minneapolis, MN | R | 56x400 | 37.9 | BNSF RR Bridge (853.0) | 160.0 | Cedar Avenue (853.1) *(6) | 28.6 |
| 2 | 815.2 *(6) | Hastings, MN | R | 110x600 | 12.2 | Robert St. Hwy (839.2) | 158.0 | Robert St. Hwy Bridge (839.2) *(6) | 59.6 |
| 3 | 796.9 | Red Wing, MN | R | 110x600 | 8.0 | CMSP&P RR (813.7) | 307.0 | Hastings RR Bridge (813.7) | 60 |
| 4 | 752.8 | Alma, WI | L | 110x600 | 7.0 | Wabasha Hwy (760.2) | 402.5 | New Wabasha Hwy (760.2) | 62.49 |
| 5 | 738.1 *(3) | Minnesota City, MN | R | 110x600 | 9.0 | No bridges cross this pool | | Aerial Wire Crossing (750.5) *(3) | 72.3 |
| 5A | 728.5 | Fountain City, WI | R | 110x600 | 5.5 | No bridges or aerial wires cross this pool | | | |
| 6 | 714.3 | Trempealeau, WI | L | 110x600 | 6.5 | Winona Hwy (725.9) | 420.0 | Winona Hwy Bridge (725.9) | 64.2 |
| 7 | 702.5 | LaCrescent, MN | R | 110x600 | 8.0 | No bridges or aerial wires cross this pool | | | |
| 8 | 679.2 | Genoa, WI | L | 110x600 | 11.0 | LaCrosse RR (699.8) | 150.0 | Dresbach Hwy Bridge (I-90) (701.7) At Center of Span | 62.7 |
| 9 | 647.9 | Lynxville, WI | L | 110x600 | 9.0 | Lansing Hwy (663.4) | 640.0 | Lansing Hwy Bridge (663.4) | 67.5 |
| 10 | 615.1 | Guttenberg, IA | R | 110x600 | 8.0 | Marquette-Prairie du Chien Main Channel Bridge (634.9) | 451.5 | Marquette-Prairie du Chien Main Channel Bridge (634.9) | 60.0 |

*NOTES:

(1) Lifts at flat pool stages.

(2) Vertical Clearance above flat pool (low water).

(3) Above recorded high water indicated on pages 8 and 15.

(4) Lock and Dam No. 23 not constructed.

(5) With depth of 18 feet on lower lock sill.

(6) At 40,000 cfs flow.

(7) Lift is based on St. Louis Gage 0.0 and upper pool reading of EL.395, Vertical clearance based on upper pool of EL.395

(8) Mile 0 of IWW is at mile 218.0 of Upper Mississippi River, mile 0 to 80.2 of IWW is part of Melvin Price L/D Pool.

## STATUS OF LOCKS AND DAMS-CONTROLLING CLEARANCES IN MISSISSIPPI RIVER POOLS (continued)

| Lock Name or No. | Miles Above Ohio River | Nearest Town | Bank | Usable Lock Size in Feet | Lift in Feet *1(1) | Horizontal Name & Mile | Horizontal Clearance in Feet | Vertical Name & Mile | Vertical Clearance in Feet *2 |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 583.0 | Dubuque, IA | R | 110x600 | 11.0 | No bridges cross this pool | N/A | No restrictions over this pool | N/A |
| 12 | 556.7 | Bellevue, IA | R | 110x600 | 9.0 | CNIC RR (579.9) | 146.8 | Julien Dubuque Hwy Br (579.3) | 64 |
| 13 | 522.5 | Fulton, IL | L | 110x600 | 11.0 | Sabula (535.0) | 154.0 | Sabula (535.0) | 64 |
| 14 | 493.3 | Pleasant Valley, IA | R | 110x600 | 11.0 | UP RR Bridge (518.0) | 177.5 | Interstate 80 Hwy (495.4) | 60 |
| | | | L | 80x320 | | | | | |
| 15 | 482.9 | Rock Island, IL | L | 110x600 | 16.0 | IA-IL Memorial (I-74)(485.8) | 710.0 | IA-IL Memorial (I-74)(485.8) | 66.1 |
| | | | L | 110x360 | 16.0 | | | | |
| 16 | 457.2 | Muscatine, IA | L | 110x600 | 9.0 | Crescent Bridge (BNSF) RR Lift Span (481.4) | 197.9 | I-280 (478.3) | 62.5 |
| 17 | 437.1 | New Boston, IL | L | 110x600 | 8.0 | Muscatine Hwy Bridge (455.9) | 500.0 | Muscatine Hwy Bridge (455.9) | 65 |
| 18 | 410.5 | Gladstone, IL | L | 110x600 | 9.8 | Keithsburg RR (428.0) No Bridge (Structure in River) | 400.0 | No restrictions over this pool | N/A |
| 19 | 364.2 | Keokuk, IA | R | 110x1200 | 38.0 | Ft Madison Hwy (383.9) | 200.0 | Gr River Hwy Bridge (404.2) | 60.1 |
| 20 | 343.2 | Canton, MO | R | 110x600 | 10.0 | Keokuk Junction RR (364.0) | 158.0 | Keokuk Hwy (US 136)(363.9) | 67.5 |
| 21 | 324.9 | Quincy, IL | L | 110x600 | 10.5 | BNSF RR (328.0) | 300.0 | Quincy Bayview Hwy (327.2) | 61.3 |
| 22 | 301.2 | New London, MO | R | 110x600 | 10.2 | Norfolk Southern (Hannibal ) R (309.9) | 348.8 | Norfolk Southern (Hannibal) RR (309.9) | 61.4 |

*NOTES:

(1) Lifts at flat pool stages.

(2) Vertical Clearance above flat pool (low water).

(3) Above recorded high water indicated on pages 8 and 15.

(4) Lock and Dam No. 23 not constructed.

(5) With depth of 18 feet on lower lock sill.

(6) At 40,000 cfs flow.

(7) Lift is based on St. Louis Gage 0.0 and upper pool reading of EL.395, Vertical clearance based on upper pool of EL.395

(8) Mile 0 of IWW is at mile 218.0 of Upper Mississippi River, mile 0 to 80.2 of IWW is part of Melvin Price L/D Pool.

## STATUS OF LOCKS AND DAMS-CONTROLLING CLEARANCES IN MISSISSIPPI RIVER POOLS (continued)

| Lock Name or No. | Miles Above Ohio River | Nearest Town | Bank | Usable Lock Size in Feet | Lift in Feet *1(1) | Horizontal Name & Mile | Horizontal Clearance in Feet | Vertical Name & Mile | Vertical Clearance in Feet *2 |
|---|---|---|---|---|---|---|---|---|---|
| 23 *(4) | | | | | | | | | *(2) |
| 24 | 273.4 | Clarksville, MO | R | 110x600 | 15.0 | Louisiana Rr (282.1) | 195.0 | Louisiana Hwy Bridge (Mid 300')(283.2) | 65.9 |
| 25 | 241.4 | Winfield, MO | R | 110x600 | 15.0 | No bridges or aerial wires cross this pool. | | | |
| Melvin Price Pool *(8) | 200.8 | Alton, IL | L | 110x1200 | 23.0 | Clark Hwy (202.4) | 670.0 | Clark Hwy (202.4) | 66.4 |
| | | | | 110x600 | *(5) | | | | |
| 27 | 185.0 | Granite City, IL | L | 110x1200 | 15.0 | In Chain of rocks Canal (190.5) | 348.0 | I-270 Canal Bridges (190.8) | 66.1 |
| | | | | 110x600 | *(7) | | | | *(7) |
| Dam No. 27 | 190.3 | St. Louis, MO | R | (no lock) | | | | | |
| Melvin Price Lock & Dam (Pool on Illinois River) | *(8) | Alton, IL | L | 110x1200 | 23.0 | Florence Hwy Bridge (56.0) | 203.2 | Aerial wire crossing (61.6) Pearl RR Br (43.2)(open) | 41.2 |
| | | | | | | | | | 69 |

*NOTES:

(1) Lifts at flat pool stages.

(2) Vertical Clearance above flat pool (low water).

(3) Above recorded high water indicated on pages 8 and 15.

(4) Lock and Dam No. 23 not constructed.

(5) With depth of 18 feet on lower lock sill.

(6) At 40,000 cfs flow.

(7) Lift is based on St. Louis Gage 0.0 and upper pool reading of EL.395, Vertical clearance based on upper pool of EL.395

(8) Mile 0 of IWW is at mile 218.0 of Upper Mississippi River, mile 0 to 80.2 of IWW is part of Melvin Price L/D Pool.

## STATUS OF LOCKS AND DAMS-CONTROLLING CLEARANCES IN ILLINOIS WATERWAY

| Lock Name or No. | Miles Above Mississippi River | Nearest Town | Bank | Usable Lock Size in Feet | Lift in Feet *1(1) | Horizontal Name & Mile | Horizontal Clearance in Feet | Vertical Name & Mile | Vertical Clearance in Feet *2 |
|---|---|---|---|---|---|---|---|---|---|
| LaGrange | 80.2 | Versailles, IL | R | 110x600 | 10.0 | UP RR Bridge (151.2) | 150.0 | Havana Hwy Bridge (119.6) | 68.4 |
| Peoria | 157.7 | Creve Coeur, IL | L | 110x600 *(3) | 11.0 | Private RR (225.5) | 260.0 | BNSF RR Bridge (181.9) | 58.8 |
| Starved Rock | 231.0 | Utica, IL | R | 110x600 | 18.2 | Illinois RR Bridge (239.4) | 167.0 | Illinois RR Bridge (239.4) | 47 |
| Marseilles | 244.6 | Marseilles, IL | L | 110x600 | 24.3 | Chessie System RR Bridge (254.1) | 140.0 | Seneca RR (254.1) | 48 |
| Dresden Island | 271.5 | Morris, IL | L | 110x600 | 21.7 | Brandon Road Drawbridge (285.8) | 110.0 | I-55 Bridge (277.9) | 47.2 |
| Brandon Island | 286.0 | Rockdale, IL | R | 110x600 | 34.0 | 5 Bridges @ Joliet (287.4-288.4) | 150.0 | I-80 Bridge (286.9) | 46.9 |
| Lockport Lock (Sanitary & Ship Canal | 291.1 | Lockport, IL | L | 110x600 | 38.9 | Canal dimensions | 160.0 | BNSF RR Bridge (300.7) | 19.7 |
| Chicago Lock | 327.2 | Chicago, IL | R | 80x600 | | BNSF RR Bridge (318.9) | 95.0 | CSX Chessie Conrail RR Bridge (320.4) | 17.6 |
| Calumet-Sag Channel | 303.5 | Lemont, IL | L | | | Southwest Highway Bridge (310.7) | 188.5 | Overhead Pipeline (316.6) | 24.4 |
| Thomas J. O'Brien | 326.5 | Chicago, IL | R | 110x1000 | 2.0 | CSXT RR (332.0) | 135.7 | CSXT RR (332.0) | 120 |

*NOTES:

(1) Lifts at flat pool stages.

(2) Vertical Clearance above flat pool (low water). Clearances upstream from T.J. O'Brien L&D are above Low Water Datum - Lake Michigan (IGLD '85)

(3) Above recorded high water indicated on pages 8 and 15.

(4) Lock and Dam No. 23 not constructed.

(5) With depth of 18 feet on lower lock sill.

(6) At 40,000 cfs flow.

(7) Lift is based on St. Louis Gage 0.0 and upper pool reading of EL.395, Vertical clearance based on upper pool of EL.395

(8) Mile 0 of IWW is at mile 218.0 of Upper Mississippi River, mile 0 to 80.2 of IWW is part of Melvin Price L/D Pool.

APPENDIX A - DIVISION BULLETIN NO. 2

PRINCIPAL CITIES AND TRIBUTARY CONFLUENCES ON THE MISSISSIPPI RIVER
FROM ST. PAUL, MINNESOTA
TO HEAD OF THE PASSES BELOW NEW ORLEANS, LOUISIANA

| | MILE | |
|---|---|---|
| Minneapolis, Minnesota | 853.0 | U.S. Army Engineer District, St. Paul |
| Mouth of Minnesota River | 844.0 | 180 5th Street East, Suite 700 |
| Hastings, Minnesota | 813.8 | St. Paul, MN 55101-1678 |
| Mouth of St. Croix River | 811.3 | |
| Red Wing, Minnesota | 790.9 | (mile 614.0 to Head of Navigation) |
| Stockholm, Wisconsin | 774.4 | |
| Lake City, Minnesota | 772.6 | |
| Pepin, Wisconsin | 767.1 | |
| Mouth of Chippewa River | 763.5 | |
| Wabasha, Minnesota | 760.3 | |
| Alma, Wisconsin | 752.7 | |
| Minneiska, Minnesota | 742.4 | |
| Fountain City, Wisconsin | 732.9 | |
| Winona, Minnesota | 725.6 | |
| Trempealeau, Wisconsin | 714.7 | |
| Dakota, Minnesota | 706.9 | |
| Dresbach, Minnesota | 705.5 | |
| Mouth of Black River | 698.2 | |
| LaCrosse, Wisconsin | 697.9 | |
| Genoa, Wisconsin | 679.5 | |
| DeSoto, Wisconsin | 667.6 | |
| Lansing, Iowa | 663.2 | |
| Lynxville, Wisconsin | 651.1 | |
| Prairie du Chien, Wisconsin | 635.1 | |
| McGregor, Iowa | 633.5 | |
| Mouth of Wisconsin River | 631.0 | |
| Clayton, Iowa | 624.7 | |
| Guttenberg, Iowa | 614.8 | |
| Cassville, Wisconsin | 606.6 | U.S. Army Engineer District, Rock Island |
| Dubuque, Iowa | 579.4 | Clock Tower Building-P.O. Box 2004 |
| Bellevue, Iowa | 556.7 | Rock Island, IL 61204-2004 |
| Mouth of Maquoketa River | 548.6 | |
| Savanna, Illinois | 537.4 | (mile 300.0 to 614.0) |
| Sabula, Iowa | 535.4 | |
| Lyons, Iowa | 520.9 | |
| Clinton, Iowa | 518.2 | |
| Albany, Illinois | 513.5 | |
| Camanche, Iowa | 511.7 | |
| Cordova, Illinois | 503.1 | |
| Princeton, Iowa | 502.4 | |
| LeClaire, Iowa | 497.1 | |
| Moline, Illinois | 486.0 | |
| Bettendorf, Iowa | 485.7 | |
| Davenport, Iowa | 482.4 | |
| Rock Island, Illinois | 482.3 | |
| Mouth of Rock River | 479.1 | |
| Buffalo, Iowa | 473.0 | |
| Andalusia, Illinois | 473.0 | |
| Fairport, Iowa | 463.1 | |
| Muscatine, Iowa | 455.2 | |
| Mouth of Iowa River | 434.3 | |
| New Boston, Illinois | 433.0 | |
| Keithsburg, Illinois | 427.5 | |
| Oquawka, Illinois | 415.8 | |

PRINCIPAL CITIES AND TRIBUTARY CONFLUENCES ON THE MISSISSIPPI RIVER
FROM ST. PAUL, MINNESOTA
TO HEAD OF THE PASSES BELOW NEW ORLEANS, LOUISIANA
(CONTINUED)

| | MILE | |
|---|---|---|
| Burlington, Iowa | 403.9 | US Army Engineer District, Rock Island |
| Mouth of Skunk River | 395.9 | Clock Tower Building-P.O. Box 2004 |
| Dallas City, Illinois | 390.7 | Rock Island, IL 61204-2004 |
| Pontoosac, Illinois | 388.6 | |
| Fort Madison, Iowa | 383.4 | (mile 300.0 to 614.0) |
| Nauvoo, Illinois | 374.8 | |
| Montrose, Iowa | 374.8 | |
| Keokuk, Iowa | 364.0 | |
| Mouth of Des Moines River | 361.4 | |
| Warsaw, Illinois | 359.7 | |
| Alexandria, Missouri | 359.1 | |
| Canton, Missouri | 342.3 | |
| LaGrange, Missouri | 336.0 | |
| Quincy, Illinois | 327.1 | |
| Hannibal, Missouri | 308.8 | |
| Saverton, Missouri | 302.4 | |
| Mouth of Salt River | 284.2 | U.S. Army Engineer District, St. Louis |
| Louisiana, Missouri | 282.8 | 1222 Spruce Street |
| Clarksville, Missouri | 273.1 | St. Louis, MO 63101-2833 |
| Hamburg, Illinois | 258.6 | |
| Winfield, Missouri | 242.0 | (mile 0 (Mouth of Ohio River) to 300.0) |
| Grafton, Illinois | 218.2 | |
| Mouth of Illinois River | 218.1 | |
| Portage Des Sioux, Missouri | 212.4 | |
| Alton, Illinois | 203.1 | |
| Mouth of Missouri River | 195.0 | |
| East St. Louis, Illinois | 180.0 | |
| St. Louis, Missouri | 180.0 | |
| Mouth of Meramec River | 160.7 | |
| Ste. Genevieve, Missouri | 123.0 | |
| Kaskaskia River Navigation Proj. | 117.3 | |
| Fort Gage, Illinois | 115.6 | |
| Chester, Illinois | 109.5 | |
| Wittenburg, Missouri | 81.4 | |
| Grand Tower, Illinois | 79.5 | |
| Moccasin Springs, Missouri | 66.3 | |
| Cape Girardeau, Missouri | 52.0 | |
| Thebes, Illinois | 44.0 | |
| Commerce, Missouri | 39.5 | |
| Cairo, Illinois (mouth of Ohio River) | 0.0 | |
| Hickman, Kentucky | 922.0 | U.S. Army Engineer District, Memphis |
| New Madrid, Missouri | 889.0 | 167 North Main Street, B-202 |
| Caruthersville, Missouri | 845.0 | Memphis, TN 38103-1894 |
| Mouth of the Obion River | 819.2 | |
| Mouth of the Forked Deer River | 803.6 | |
| Osceola, Arkansas | 786.0 | |
| Mouth of the Hatchie River | 773.2 | |
| Mouth of the Loosahatchie River | 740.8 | |
| New Mouth of the Wolf River | 738.5 | |
| Memphis, Tennessee | 736.0 | (mile 599.0 to 954.0) |
| Old Mouth of the Wolf River (Downtown Harbor) | 736.8 | |
| Mouth of McKellar Lake Harbor | 725.6 | |
| Mouth of Pidgen Harbor | 724.1 | |
| St. Francis River | 672.3 | |
| Helena, Arkansas | 663.4 | |

PRINCIPAL CITIES AND TRIBUTARY CONFLUENCES ON THE MISSISSIPPI RIVER
FROM ST. PAUL, MINNESOTA
TO HEAD OF THE PASSES BELOW NEW ORLEANS, LOUISIANA
(CONTINUED)

| | MILE | |
|---|---|---|
| Mouth of the White River | 599.0 | |
| Arkansas City, Arkansas | 549.5 | U.S. Army Engineer District, Vicksburg |
| Greenville, Mississippi | 537.2 | 4155 Clay Street |
| Grand Lake, Arkansas | 513.0 | Vicksburg, MS 39183-3435 |
| Lake Providence, Louisiana | 487.5 | |
| Vicksburg, Mississippi | 437.2 | (mile 322.5 to 599.0) |
| | | |
| Mouth of Yazoo River | 437.2 | |
| Natchez, Mississippi | 364.2 | |
| Baton Rouge, Louisiana | 229.0 | U.S. Army Engineer District, New Orleans |
| Donaldsonville, Louisiana | 175.3 | 7400 Leake Avenue |
| New Orleans, Louisiana | 95.0 | New Orleans, LA 70118 |
| Head of Passes, Pilot Town, Louisiana | 0.0 | (mile 0 (Head of Passes) to mile 322.5) |

NOTE: Below Baton Rouge, La., is highly industrialized, which is not necessarily suitable for recreational activities. Please refer to the latest Mississippi River Flood Control and Navigation Maps for additional information. Additionally, mariners can refer to the Marine Yellow Pages at 'www.marineyellowpages.com', and the Southern Waterway Guide at 'www.waterwayguide.com' for marine information and services below Baton Rouge, La.

CITIES, TOWNS, AND TRIBUTARY CONFLUENCES ON THE RED RIVER WATERWAY
FROM SHREVEPORT, LOUISIANA TO THE MOUTH OF THE RED RIVER

| | MILE | |
|---|---|---|
| Brownlee, Louisiana | 235.7 | U.S. Army Engineer District, Vicksburg |
| Shreveport, Louisiana (Bridge Crossings) | 234.5-225.1 | 4155 E. Clay Street |
| Bossier City, Louisiana (Bridge Crossings) | 228.5-222.5 | Vicksburg, Mississippi 39183 |
| Hinkle, Louisiana | 230.0 | |
| Dixie Gardens, Louisiana | 221.6 | (Head of Navigation to Mouth of Red River) |
| Lucas, Louisiana | 217.1 | |
| Caddo-Bossier Port | 211.8-210.9 | |
| Gayles, Louisiana | 211.3 | |
| Moss, Louisiana | 206.0 | |
| Atkins, Louisiana | 204.0 | |
| Caspiana, Louisiana | 204.0 | |
| Cooterville, Louisiana | 201.9 | |
| Joe D. Waggonner Jr. Lock and Dam No. 5 | 200.0 | |
| Crosskeys, Louisiana | 199.3 | |
| Williams, Louisiana (Overhead Pipeline) | 195.1-195.2 | |
| East Point, Louisiana | 192.6 | |
| New Hope, Louisiana | 191.3 | |
| Abington, Louisiana | 189.0 | |
| Linsberry, Louisiana | 188.6 | |
| Harmon, Louisiana | 184.6 | |
| Gahagan, Louisiana | 181.1 | |
| Coushatta, Louisiana (Bridge Crossing) | 177.8 | |
| Armistead, Louisiana | 177.4 | |
| Hollingsworth, Louisiana | 175.0 | |
| Red River Parish Port (Proposed) | 173.3 | |
| Redoak, Louisiana | 169.4 | |
| Lake End, Louisiana | 169.3 | |
| Russell B. Long Lock and Dam No. 4 | 168.5 | |
| Timon, Louisiana | 165.1 | |
| Powhatan, Louisiana | 162.8 | |
| Campti, Louisiana | 158.6 | |
| Hyams, Louisiana | 154.7 | |
| Natchitoches Parish Port | 152.3 | |
| Grand Ecore, Louisiana (Bridge Crossing, Overhead Pipeline) | 151.6-152.1 | |
| Clarence, Louisiana | 150.2 | |
| Natchitoches, Louisiana | 150.0 | |
| Bethal, Louisiana | 148.6 | |
| Irma, Louisiana | 147.9 | |
| Luella, Louisiana | 146.3 | |
| St. Maurice, Louisiana | 142.0 | |
| Montgomery, Louisiana | 132.4 | |
| Odra, Louisiana | 125.2 | |
| Aloha, Louisiana | 121.4 | |
| Lock and Dam No. 3 | 116.5 | |
| Colfax, Louisiana | 116.0 | |
| McNeely, Louisiana | 114.1 | |
| Raven Camp, Louisiana | 112.5 | |
| Kateland, Louisiana | 110.4 | |
| Zimmerman, Louisiana | 108.7 | |
| Boyce, Louisiana (Bridge Crossing) | 105.8 | |
| Alfalfa, Louisiana | 102.2 | |
| Rapides, Louisiana | 101.0 | |
| Barrett, Louisiana | 95.0 | |
| Alexandria Regional Port | 91.0-92.5 | |
| Alexandria, Louisiana (Bridge Crossings) | 84.0-90.1 | |

CITIES, TOWNS, AND TRIBUTARY CONFLUENCES ON THE RED RIVER WATERWAY
FROM SHREVEPORT, LOUISIANA TO THE MOUTH OF THE RED RIVER
(CONTINUED)

| | MILE |
|---|---|
| Mallin, Louisiana | 90.5 |
| Pineville, Louisiana | 87.8 |
| Wardville, Louisiana | 86.5 |
| Latanier, Louisiana | 78.1 |
| John H. Overton Lock and Dam No. 2 | 74.5 |
| Poland, Louisiana | 72.0 |
| Magda, Louisiana | 70.9 |
| Roxana, Louisiana | 68.7 |
| Echo, Louisiana | 67.9 |
| Egg Bend, Louisiana | 66.0 |
| Cassandria, Louisiana | 61.5 |
| Effie, Louisiana | 60.0 |
| Moncla, Louisiana (Bridge Crossing) | 59.7 |
| Vick, Louisiana | 56.6 |
| Brouillette, Louisiana | 50.0 |
| Lindy C. Boggs Lock and Dam No. 1 | 44.0 |
| Mouth of the Ouachita/Black River Waterway | 34.2 |
| Delhoste, Louisiana | 34.1 |
| Old River Control Structure Outflow Channel | 10.6 |
| Lower Old River | 6.9 |
| Old River Lock (Bridge Crossing) | 0.0 |

CITIES, TOWNS, AND TRIBUTARY CONFLUENCES ON THE OUACHITA/BLACK RIVER WATERWAY
FROM CAMDEN, LOUISIANA TO THE MOUTH OF THE BLACK RIVER

| | MILE | |
|---|---|---|
| Camden, Arkansas | 332.0 | U.S. Army Engineer District, Vicksburg |
| U.S. Highway 79 Bridge Crossing | 329.5 | 4155 E. Clay Street |
| Camden Port Authority | 327.5 | Vicksburg, Mississippi 39183 |
| Millers Bluff, Arkansas | 299.2 | |
| Mouth of Champagnolle Creek | 289.2 | (Camden, AR to Mouth of Black River) |
| U.S. Highway 167 Bridge Crossing | 288.2 | |
| Calion, Arkansas | 288.0 | |
| H.K Thatcher Lock and Dam | 281.9 | |
| Moro Bay, Arkansas | 270.7 | |
| U.S. Highway 63 Bridge Crossing | 268.6 | |
| Mouth of Saline River | 238.2 | |
| U.S. Highway 82 Bridge Crossing | 235.8 | |
| Felsenthal, Arkansas | 227.5 | |
| Felsenthal Lock and Dam | 226.9 | |
| Arkansas/Louisiana State Line | 221.1 | |
| Mouth of Cook Creek | 199.0 | |
| Ouachita City, Louisiana | 194.4 | |
| Mouth of Bayou Bartholomew | 194.1 | |
| Louisiana Highway 2 Bridge Crossing | 191.8 | |
| Sterlington, Louisiana | 191.8 | |
| Union Pacific Railroad Bridge Crossing | 191.5 | |
| Mouth of Bayou De L'Outre | 188.1 | |
| Loch Lomond, Louisiana | 187.9 | |
| Mouth of Bayou D'Arbonne | 173.0 | |
| Mouth of Bayou DeSiard | 171.4 | |
| Monroe, Louisiana (Bridge Crossings) | 160.4-171.4 | |
| West Monroe, Louisiana | 165.8-170.3 | |
| Brownsville, Louisiana | 163.8 | |
| De Loach, Louisiana | 159.8 | |
| Mouth of Cheniere Creek | 153.6 | |
| Rilla, Louisiana | 150.7 | |
| McLain, Louisiana | 146.1 | |
| Logtown, Louisiana | 142.4 | |
| Corey, Louisiana | 122.7 | |
| Columbia Lock and Dam | 117.0 | |
| Riverton, Louisiana | 116.7 | |
| Union Pacific Railroad Bridge Crossing | 114.4 | |
| Columbia, Louisiana (Bridge Crossing) | 110.3 | |
| Bellevue, Louisiana | 108.4 | |
| Duty, Louisiana (Ferry Crossing) | 81.0 | |
| Enterprise, Louisiana | 78.3 | |
| Mouth of Boeuf River | 66.0 | |
| Harrisonburg, Louisiana (Bridge Crossing) | 57.5 | |
| Wallace Ridge, Louisiana | 49.9 | |
| Mouth of Haha Bayou | 43.8 | |
| Mouth of Tensas River | 41.5 | |
| Mouth of Little River | 41.2 | |
| Ouachita River becomes Black River | 41.3 | |
| Wildsville, Louisiana | 40.9 | |
| Jonesville, Louisiana (Bridge Crossing) | 40.8 | |
| Security, Louisiana | 35.0 | |
| Lismore, Louisiana | 31.9 | |
| Glade, Louisiana | 25.8 | |
| Jonesville Lock and Dam | 25.0 | |
| Serena, Louisiana | 21.9 | |
| New Era, Louisiana | 11.0 | |
| Mouth of Catahoula Lake Diversion Canal | 8.9 | |

CITIES, TOWNS, AND TRIBUTARY CONFLUENCES ON THE OUACHITA/BLACK RIVER WATERWAY
FROM CAMDEN, LOUISIANA TO THE MOUTH OF THE BLACK RIVER
(CONTINUED)

| | MILE |
|---|---|
| Book, Louisiana | 7.0 |
| Acme, Louisiana | 1.6 |
| Delhoste, Louisiana | 0.0 |
| Mouth of Ouachita/Black Waterway | 0.0 |
| Confluence with Red River Waterway | 0.0 |

CITIES, TOWNS, AND TRIBUTARY CONFLUENCES ON THE ILLINOIS WATERWAY
FROM LAKE MICHIGAN AT CHICAGO AND CALUMET HARBORS
TO MISSISSIPPI RIVER AT GRAFTON, ILLINOIS

| | MILE | |
|---|---|---|
| Chicago Harbor (Lake Michigan) | 327.2 | U.S. Army Engineer District, Chicago |
| Chicago, Illinois | 327.0 | |
| Junction Chicago River with N&S Branches | | |
| Chicago River (Wolf Point) Lake Street | 325.6 | 231 South LaSalle Street, Suite 1500, Chicago, Illinois 60604 |
| Junction S. Fork S. Branch & W. Fork S. Branch Chicago R. | 321.7 | (Chicago Harbor & River to mile 325.6) |
| Junction S. Branch Chicago River with Chicago Sanitary & Ship Canal | 321.1 | |
| Stickney, Illinois | 315.8 | |
| Forest View, Illinois | 314.8 | |
| Summit, Illinois | 312.8 | |
| Argo, Illinois | 311.7 | |
| Willow Springs, Illinois | 307.9 | |
| Junction Chg. Sanitary & Ship Canal with Calumet-Sag Channel (Sag Junction) | 303.5 | |
| Lemont, Illinois | 300.5 | |
| Romeoville, Illinois | 296.2 | |
| Lockport, Illinois | 292.8 | U.S. Army Engineer District, Rock Island |
| Junction Chg. Sanitary & Ship Canal with Des Plaines River | 290.0 | Illinois Waterway Project Office<br>257 Grant Street |
| Joliet, Illinois | 287.9 | Peoria, Illinois 61603-3585 |
| Channahon, Illinois | 276.8 | |
| Confluence of Kankakee and Des Plaines Rivers forming the Illinois River | 272.9 | (mile 325.6 to 80.0) |
| Mouth of the DuPage River | 266.8 | |
| Mouth of Mazon River | 263.5 | |
| Morris, Illinois | 263.4 | |
| Seneca, Illinois | 252.7 | |
| Marseilles, Illinois | 246.9 | |
| Mouth of Fox River | 239.7 | |
| Ottawa, Illinois | 239.7 | |
| Mouth of Vermilion River | 226.4 | |
| Peru, Illinois | 222.5 | |
| Hennepin, Illinois | 207.4 | |
| Henry, Illinois | 196.0 | |
| Lacon, Illinois | 189.2 | |
| Chillicothe, Illinois | 180.4 | |
| Rome, Illinois | 178.0 | |
| Spring Bay, Illinois | 173.8 | |
| Mossville, Illinois | 171.8 | |
| Long Shore, Illinois | 168.2 | |
| Peoria Heights, Illinois | 167.6 | |
| Peoria, Illinois | 162.6 | |
| Pekin, Illinois | 152.8 | |
| Mouth of Mackinaw River | 147.7 | |
| Kingston Mines, Illinois | 145.5 | |
| Liverpool, Illinois | 128.0 | |
| Mouth of Spoon River | 120.5 | |
| Havana, Illinois | 120.2 | |
| Mouth of the Sangamon River (Natural) | 98.0 | |
| Browning, Illinois | 97.2 | U.S. Army Engineer District, Rock Island |
| Frederick, Illinois | 91.6 | Illinois Waterway Project Office |
| Mouth of Sangamon River (Canal) | 88.9 | 257 Grant Street |
| Beardstown, Illinois | 88.2 | Peoria, Illinois 61603-3585 |
| Mouth of LaMoine River | 83.7 | |

CITIES, TOWNS, AND TRIBUTARY CONFLUENCES ON THE ILLINOIS WATERWAY
FROM LAKE MICHIGAN AT CHICAGO AND CALUMET HARBORS
TO MISSISSIPPI RIVER AT GRAFTON, ILLINOIS
(CONTINUED)

| | MILE | |
|---|---|---|
| Meredosia, Illinois | 71.3 | (mile 325.6 to 80.0) (Continued) |
| Naples, Illinois | 65.6 | |
| Florence, Illinois | 55.6 | U.S. Army Engineer District, St. Louis |
| Montezuma, Illinois | 50.3 | 1222 Spruce Street |
| Bedford, Illinois | 48.6 | St. Louis, Missouri 63101-2833 |
| Kampsville, Illinois | 32.0 | |
| Hardin, Illinois | 21.4 | (mile 80.0 to 0.0) |
| Grafton, Illinois | 0.4 | |
| Mouth of the Illinois River (Junction Illinois and Mississippi Rivers) | 0.0 | |
| Calumet Harbor (Lake Michigan) | 333.4 | U.S. Army Engineer District, Chicago |
| Junction Calumet Harbor with Calumet River | 332.8 | |
| 130th Street Bridge | 327.0 | |
| Junction Calumet River with Little Calumet River | 325.7 | 231 South LaSalle Street, Suite 1500, Chicago, Illinois 60604 |
| Burnham, Illinois | 325.3 | (Calumet Harbor & River to mile 327.0) |
| Dolton, Illinois | 324.2 | |
| Riverdale, Illinois | 322.4 | |
| Junction Little Calumet with Calumet Sag Channel | 319.6 | |
| Calumet Park, Illinois | 319.5 | |
| Blue Island, Illinois | 318.0 | |
| Alsip, Illinois | 314.9 | |
| Crestwood, Illinois | 314.9 | U.S. Army Engineer District, Rock Island |
| Worth, Illinois | 311.5 | Illinois Waterway Project Office |
| Palos Heights, Illinois | 311.5 | 257 Grant Street |
| Palos Hills, Illinois | 309.7 | Peoria, Illinois 61603 |
| Junction Calumet-Sag Channel with Chicago Sanitary & Ship Canal | 303.5 | (mile 327.0 to 303.5) |