



Restricted Areas

The U.S. Army Corps of Engineers has restricted areas to protect boaters in the vicinity of locks and dams (see illustration above). These areas are:

 A large area immediately upstream of the dam, usually 600 feet. Strong, unseen currents can pull boats into the dam.

 A smaller area immediately downstream of the dam, usually 150 feet. Undercurrents and turbulence make the downstream restricted area extremely dangerous.

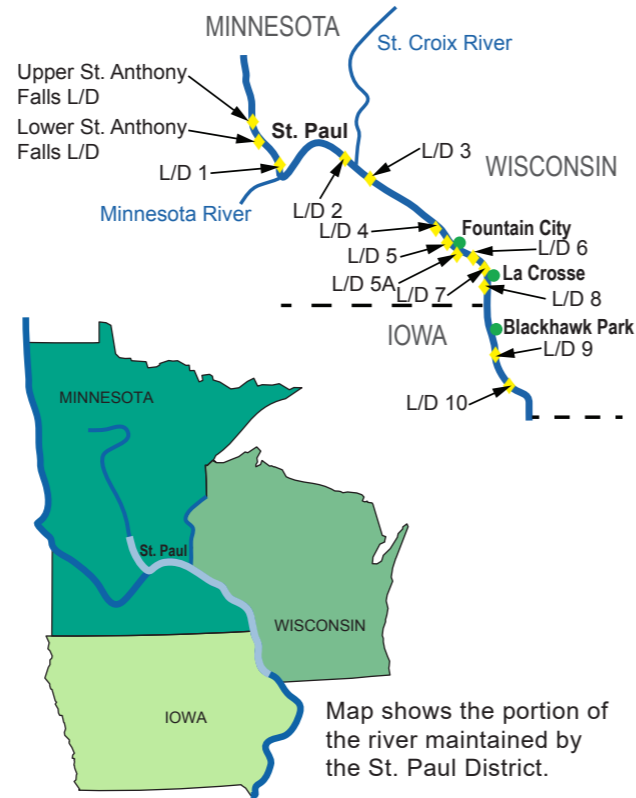
Restricted areas are marked by danger signs and are strictly off-limits to all boaters. Violators are subject to a citation and a fine.



Wear your
PERSONAL FLOTATION DEVICE

It floats; you don't.

Upper Mississippi River



Lock and Dam No. 4, located at river mile 752.8 in Alma, Wis., is an important link in the “step” system of the Upper Mississippi 9-foot navigational channel. The Corps of Engineers originally placed the facility in operation in May 1935. The lock and dam locks thousands of vessels every year, ranging from commodity-laden tows to small pleasure craft and canoes. Commodities carried by barges include grain, coal, fertilizer and petroleum products. The lock is 600 feet long by 110 feet wide. It raises and lowers traffic seven feet. The dam is 6,876 feet long, including 1,367 feet of movable gate sections and 5,500 feet of earth fill dike. The movable gate section consists of six roller gates and 22 Tainter gates.



The St. Paul District’s navigation program provides a safe, reliable, cost-effective and environmentally sustainable waterborne transportation system on the Upper Mississippi River for the movement of commercial goods and national security needs. To do this, the district maintains a 9-foot navigation channel and 13 locks and dams from Minneapolis to Guttenberg, Iowa.



Lock & Dam No. 4

P.O. Box 325
Alma, WI 54610-0325
651-290-5951

U.S. Army Corps of Engineers
332 Minnesota St Ste E1500
St Paul, MN 55101-1323
www.mvp.usace.army.mil
www.corpslocks.usace.army.mil
www.marinetraffic.com



LOCK AND DAM

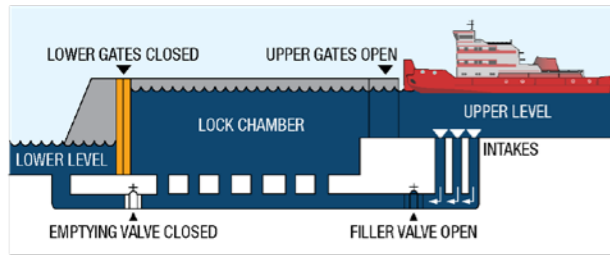
NO. 4

US Army Corps of Engineers®
St. Paul District

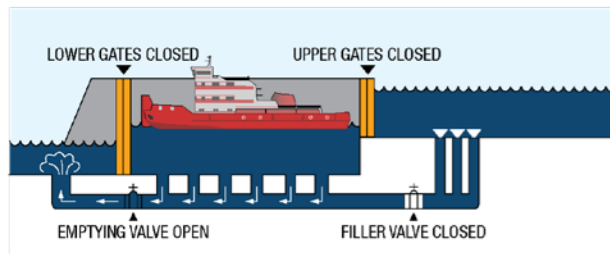
Alma, Wisconsin



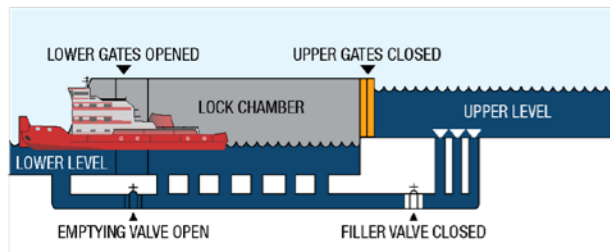
LOCKING THROUGH



For a boat going downstream, the lock is first filled by opening the filling valve. The upper and lower gates are closed, so the level of the chamber rises to the upstream level. The upper gate then opens and the boat moves into the lock.

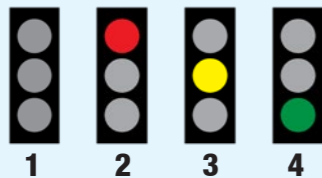


To lower the boat, the gates are closed behind it, the filling valve is closed and the emptying valve is opened. The pressure of the higher water in the lock drains to the downstream level in minutes.



The lower gates are then opened and the boat moves out on the lower water level. For a boat going upstream the process is reversed.

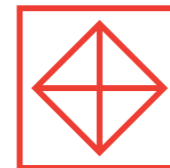
Lock Signals



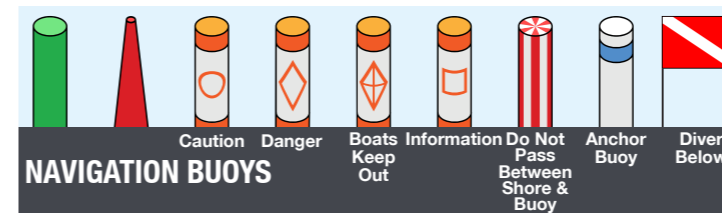
1. Contact lock and dam for lockage by pulling signal cord or by calling on marine channel 14. For emergencies, use marine channel 16
2. Stand clear, do not approach, lock is in use
3. Lock is being made ready, vessel may approach but under full control
4. Lock is ready, enter lock slowly and follow lock operators direction

Special Considerations When Locking Through

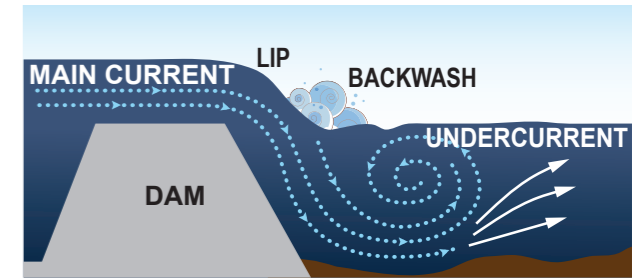
- Engines should be shut down during the lockage
- Wear your life jacket at all times and stay in your boat
- If the lock is in use, find a safe place to wait that is well out of the path of exiting boats.
- Do not anchor in the channel or tie off to a navigation buoy
- Never allow your boat to drift into the restricted area.
- In a crowded lock, you may have to tie up to another boat
- Under certain conditions and under the direction of the lock operator, you may occupy the lock with a towboat
- Do not cut in front of towboats to be first to the lock; even though you may appear to have arrived first, a tow has the right-of-way and the lock operator will decide who has priority
- If you get in trouble and your boat is drawn into the dam, grab the line attached to the safety blocks (if equipped) on the upstream side



BOATS KEEP OUT
U.S. Coast Guard Daymark



NAVIGATION BUOYS



Deceptive Currents

The water surface near a lock and dam facility may appear calm; however beneath the surface lie strong and deceptive currents, powerful undertows, violent churnings and eddies. These currents are powerful enough to drag a boat and its occupants to the bottom of the river.

Downstream currents are particularly deceptive. These currents actually reverse direction and flow back toward the dam. Boats can be pulled into the dam gates by the back currents and capsize. A number of drownings have occurred over the years that could have been avoided.

WHAT YOU NEED TO KNOW ABOUT BARGES AND TOW

