



FINDINGS OF CONCERN

Sector Upper Mississippi River

August 29, 2022
St. Louis, MO

Findings of Concern 014-22

COMMUNICATION OF OPEN RIVER CONDITIONS AND ASSOCIATED OUT-DRAFT HAZARDS AT LOCKS AND DAMS

Purpose. The U.S. Coast Guard issues findings of concern to disseminate information related to unsafe conditions that were identified as causal factors in a casualty and could contribute to future incidents. Findings of concern are intended to educate the public, state, or local agencies about the conditions discovered so they may address the findings with an appropriate voluntary action or highlight existing applicable company policies or state/local regulations.

The Incident. In March of 2021, a 167 foot, 5,600 horsepower Inspected Towing Vessel was pushing 15 (6 empty dry cargo and 9 loaded dry cargo) barges and making a downriver approach for lockage at the Melvin Price Locks and Dam at mile marker 200.8 on the Upper Mississippi River. At the time of the incident, Melvin Price Locks and Dam was operating in an “open river” condition with all nine dam gates open allowing the river to flow freely through the dam. During the approach, the Master was aware of the open river condition but failed to account for the degree to which the out-draft currents were pulling away from the main lock chamber. The failure of the Master to consider the significance of the out-drafts resulted in an uncorrectable approach causing the tow to allide with the bullnose of the long wall and breaking apart the tow which resulted in 8 barges resting near the main lock chamber and seven resting against the dam gates. After salvage and survey operations were conducted, over \$530,000 in vessel damage and \$635,000 in facility damage was sustained.

Contributing Factors and Analysis. The investigation showed that although the Master was aware of the open river condition, he was not aware of the significance of out-drafts this condition created.

Findings of Concern. Coast Guard investigators have identified the following voluntary actions for an owner / operator of similar vessels and operations to consider in order to reduce the likelihood of recurrence:

- Owners, operators, masters and pilots are encouraged to review U.S. Army Corps of Engineers, AIS Data Case Study: River Level and Vessel Approach Variation at Melvin Price Locks and Dam in St. Louis District (April, 2020) to better understand approach paths at varying river conditions and water levels.
- Owners, operators, masters and pilots should maintain an active awareness of open river conditions at locks and dams at all times. This includes understanding the cubic feet of



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water passing through the dam, out-drafts that may exist, the current river conditions, and how these conditions impact vessel navigation on approach and departure from locks and dams.

- Owners, operators, masters and pilots are encouraged question lock and dam operators while making lock arrangements to discuss river conditions and any existing out-draft conditions that exist in order to better prepare vessel approaches and departures.

Closing. These findings of concern are provided for informational purposes only and do not relieve any domestic or international safety, operational, or materiel requirements. For any questions or comments please contact Sector Upper Mississippi River, Investigations Division by phone at (314) 269-2500 or by email at STL-SMB-SECUMR-IO-Shop@uscg.mil