



Safe Navigation on the Mississippi River

Reading the Water

River Phobia

- An irrational fear of the Mississippi River based on the rumors and misconceptions
- Virtually all of the incident I observe are clearly people who are unprepared
- I'm here to help you understand the hazards and how to avoid them

Navigation Hazards

- Wing Dams
- Sandbars
- Wood
- Bank Protection
- Up-Current Wind Blown Waves
- Cruiser/Barge Wakes
- Inattentive Boaters

Channel Markers (ATONS)

- Red... Nun
- Green...Can
- Mile Markers...Distance to Confluence of Ohio River
- Red Right Return...return = heading in (upstream) from the ocean
- Any on Lake Pepin equals hazard

Wakes and Waves

- Heavy cruiser wakes
- Wakes may be from a craft that is out of sight
- Wind blowing upstream against the current produces huge, irregular waves
- Watch out in wide open areas and high current areas

Definitions

- Wing Dam...Man-made rock structure designed to divert flow into the main channel
- Usually in Groups of Four or five
- Closing Dam...Man-made rock structure built all the way across a side channels to reduce flow
- Bank Protection...Man-made rock structure to reduce erosion. Some were built prior to lock-and-dams, some have been washed away and out of sight.
- Breach...opening in wing or closing dam

Wing Dam Appearance



Wing Dam Appearance



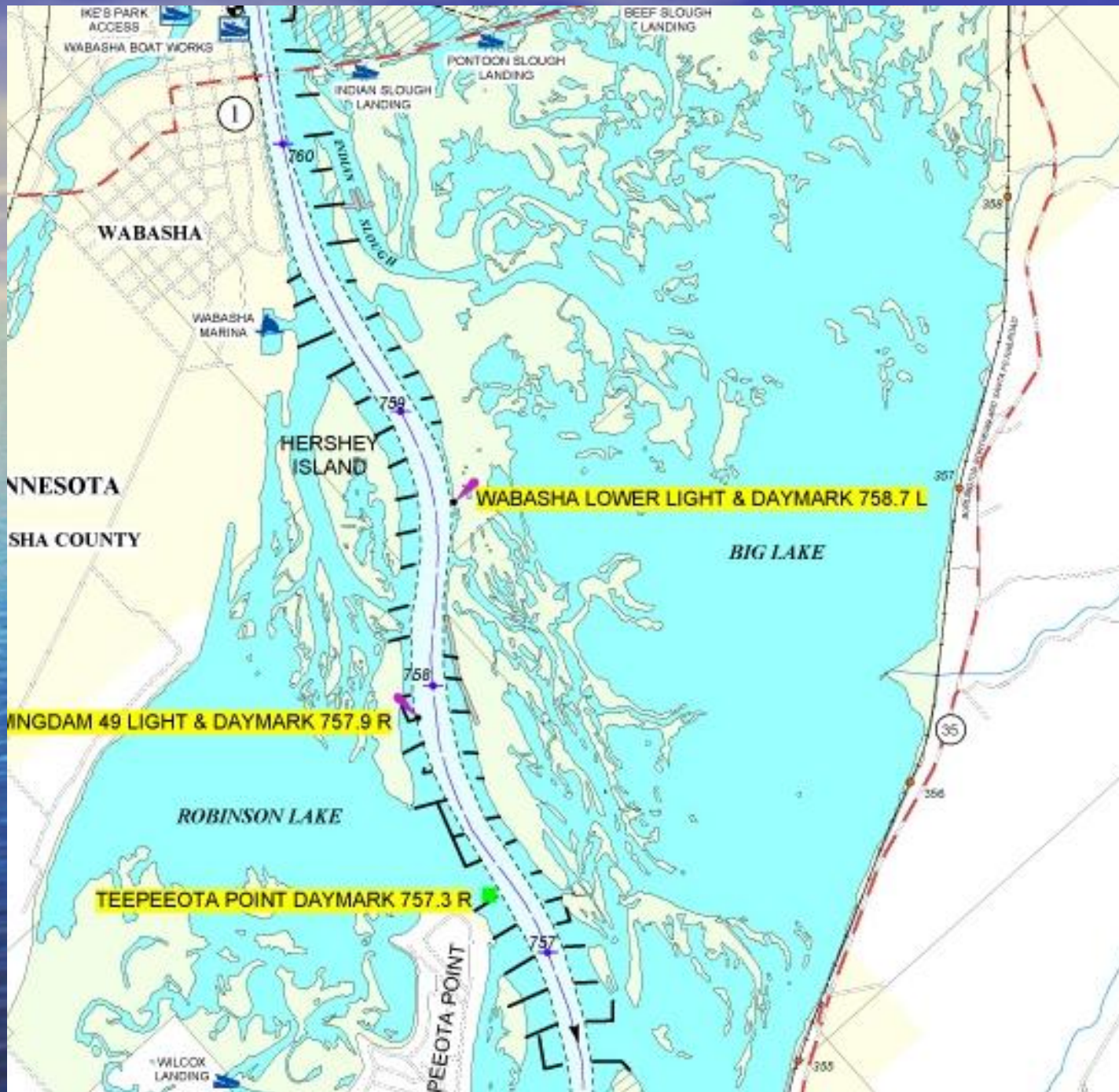
Wing Dam Appearance



Wing Dams

- Miss-information...Wing Dams are marked by channel markers....WRONG
- Not all dams are simple, straight structures
- The depth over the dam is not consistent
- Many older dams extend into backwaters...islands and sandbars formed on them over time





Sandbars

- Anywhere the current slows
- Up and Downstream Points
- Irregular Flow Junctions
- Widening Channels
- Deltas
- Sandbars shift from year-to-year
- Track the water level
- The route you took this spring might not be safe today.

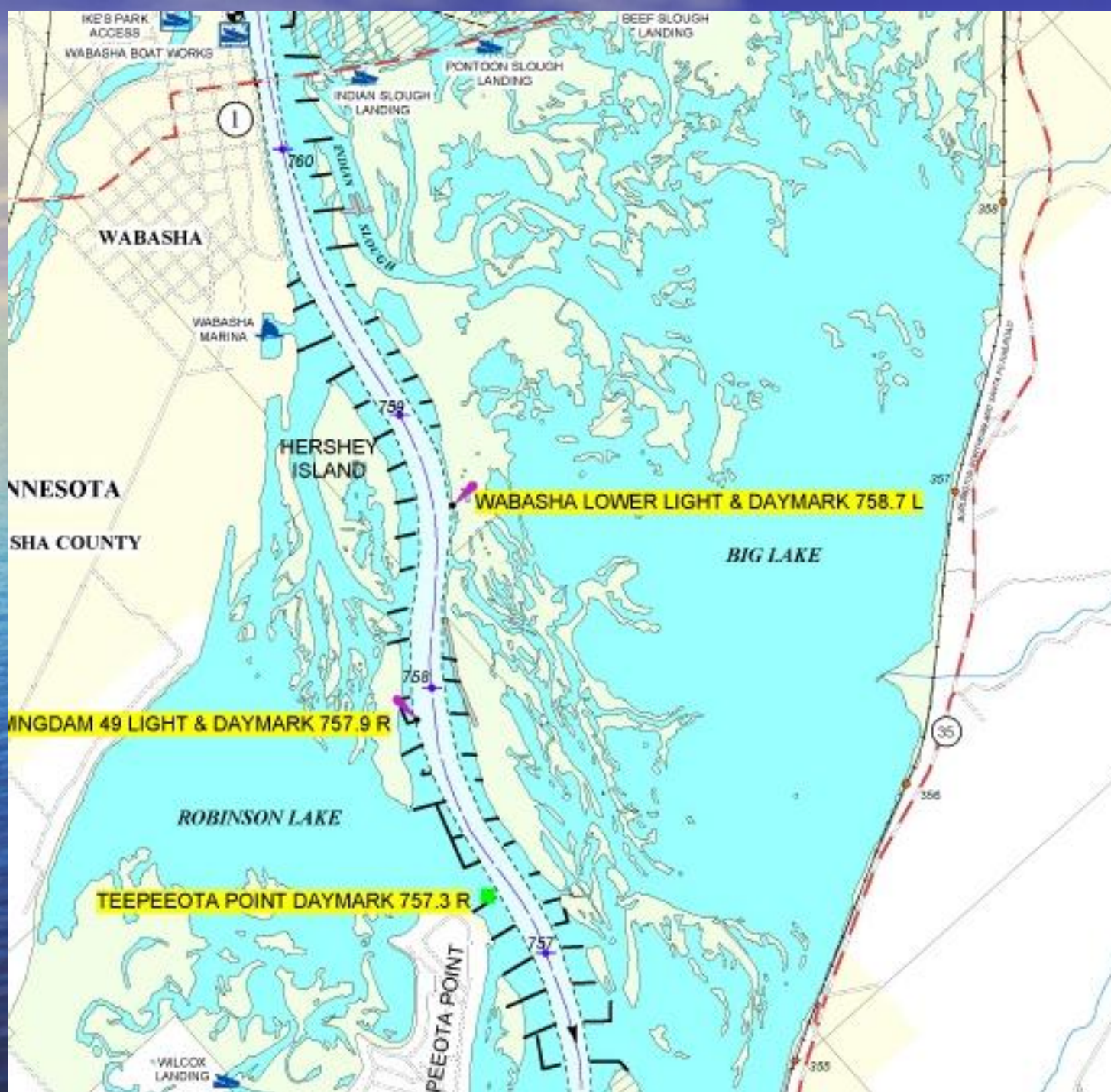
Keller Island

44°12'50.42"N 91°51'47.76"W



Wood

- Stumps in lakes
- Eroded banks
- Floating and hung on shallow structure
- Submerged wood in current will make a change in the surface pattern



Reading the Water

- A learned skill...most trout fisherman recognize the signs
- Scan the water surface far enough ahead to make corrections...several hundred yards
- Defocus
- Look for changes in surface patterns
- Any change surface patterns needs to be interpreted
- Learn the patterns

Recommendations

- Do your home work...read maps
- Buy GPS map chip with wing dams
- Everyone needs to be observant
- Explore upstream when possible
- Exit the Channel at 90 degree angle
- Slow Down
- Any change in surface pattern need to be interpreted
- Run onto a sandbar...trim up and keep running

Clues (Red Flags)

- Small sand islands
- Wood in channels
- Birds standing in water
- Emergent or submergent vegetation

Recommended Safety Equipment

- Push Pole
- Marine Band Radio...channel 16
hailing...channel 14 commercial including
lock and dams
- Visual signal

Websites

- Water Level

<http://www.crh.noaa.gov/ahps2/index.php?wfo=arx>

<http://www2.mvr.usace.army.mil/WaterControl/new/layout.cfm>

- Army Corps of Engineers

– www.mvp.usace.army.mil