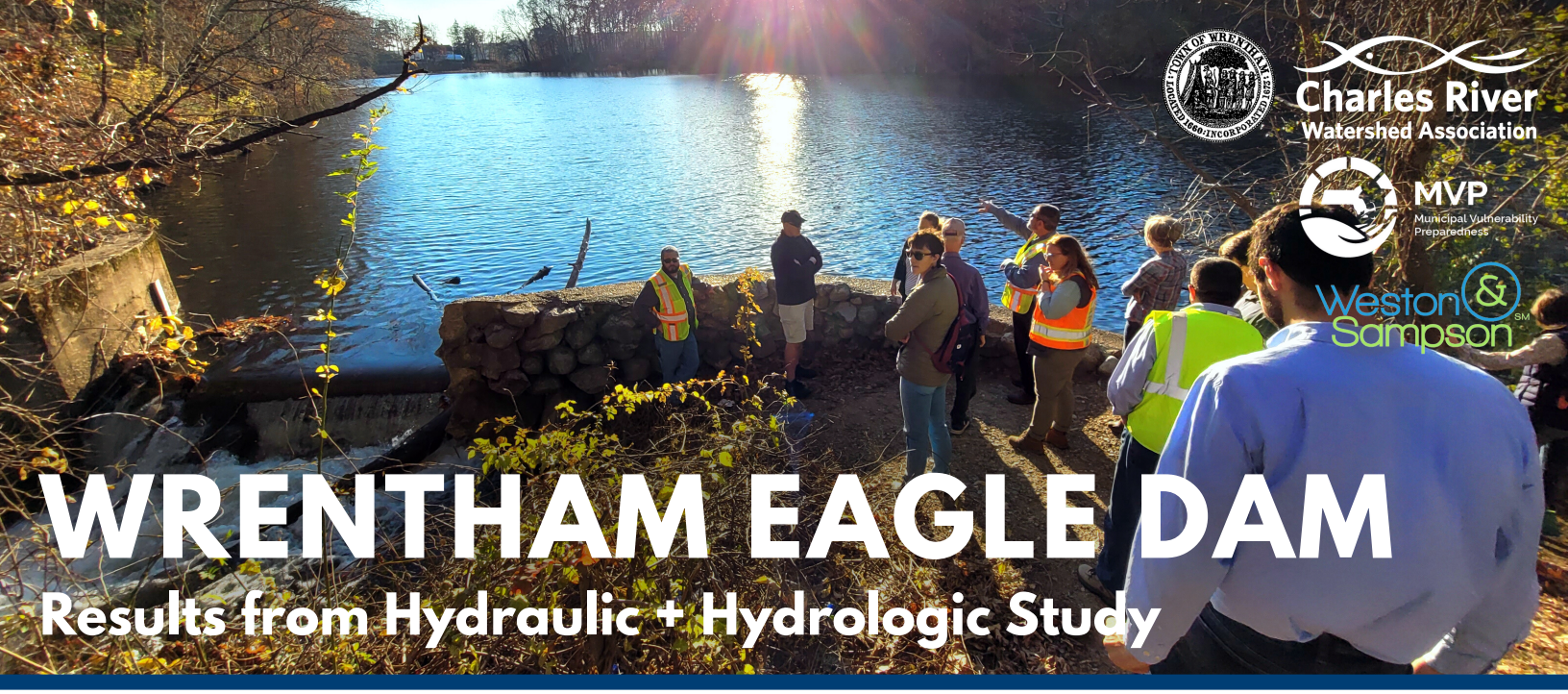


WRENTHAM EAGLE DAM

Results from Hydraulic + Hydrologic Study

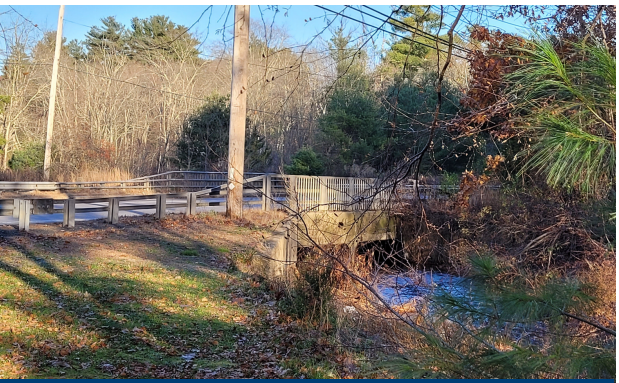
Eagle Dam is a crumbling, functionless dam on Eagle Brook in Wrentham, MA. According to 2012 and 2022 inspection reports, the dam is in unsafe condition and poses significant flood hazards to homes, businesses, and critical infrastructure.

UNDERSTANDING DAM REMOVAL:

In 2019, a study by the Town of Wrentham **determined dam removal is feasible.** Now, technical experts have completed a hydraulic and hydrologic study of downstream flooding impacts. Using the Charles River Flood Model, the study **shows the impact of dam removal** on downstream flooding in present-day and future-strength storms.

- Ten storm scenarios modeled: 2-, 10-, 50-, 100-, and 500-year, 24-hour design storms under both present-day + 2070 climate
- Water levels for existing + dam removal compared at five locations: Lake Pearl, Eagle Dam, upstream RT. 140, downstream RT. 140 bridge, + dam behind 160 Mill Street

EAGLE DAM HAS FAILED BEFORE In 1875, severe storms washed out Eagle Dam, releasing flood waters from Lake Pearl down Eagle Brook and Mill River, washing out railroad tracks, another dam, and large parts of the mill on Main Street. Dam removal could avoid catastrophic failure and downstream damage.



RT. 140 BRIDGE Dam removal will have little impact on water levels + flows at the bridge.

MAIN TAKEAWAYS FROM THE STUDY:

- **Floodwater levels in Lake Pearl will not be impacted by dam removal**
- Little change in floodwater levels at Eagle Dam Impoundment–less than 1 ft
- Floodwater levels upstream of RT. 140 will not change, with the exception of a 2070 500-yr flood, which will increase levels by 0.01-0.02 ft
- Floodwater levels downstream of RT. 140 will not be impacted
- Floodwater levels will not change at 160 Mill Street (Wrentham Angler Club)
- **No increases in flooding for any residences near the Eagle Brook**
- No significant impact on flood levels at RT. 140 bridge. However, MassDOT consultation is underway to review the RT. 140 bridge.

CONCLUSION: Dam removal is feasible from both hydrologic and hydraulic perspectives to protect Wrentham from flooding in extreme weather.

QUESTIONS? Contact us at charles@crwa.org.