Capwell Mill Pond Dam Removal

Restore America's Estuaries (RAE) selected the Rhode Island TU proposal to remove the Capwell Mill Pond Dam for full funding in August 2023. The SNEP (Southeast New England Program) Watershed Implementation Grant amount is $129,300.

Capwell Mill Pond Dam is located on the Carr River in the Town of West Greenwich, Rhode Island. The river rises from Carr Pond in West Greenwich, and flows roughly due west past Tarbox and Capwell Mill Ponds to its confluence with the Big River, which leads to the South Branch Pawtuxet River. The Carr River lies within the Big River Wildlife Management Area (WMA), which was surveyed in 2021 for fish populations and barriers to fish passage. Surveys found wild native Brook Trout (Salvelinus Fontenalis) throughout the area.

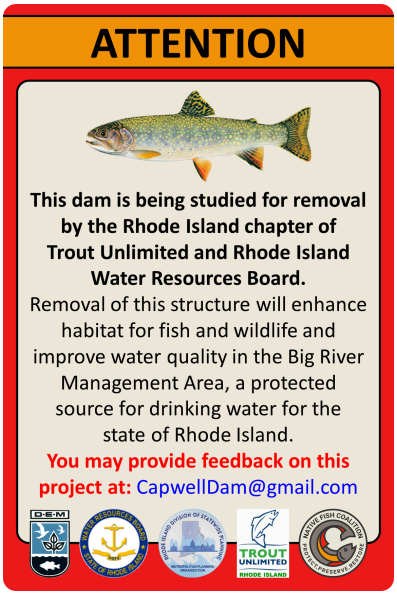
Capwell Mill Pond Dam is classified by Rhode Island Department of Environmental Management (RIDEM) as having a Significant Hazard potential. Failure of the dam would likely overtop and wash out Burnt Sawmill Road just downstream of the dam. Failure of the dam may also destroy the USGS gaging station downstream of the bridge. Removal would open 8 miles and 24 acres for wild native Brook Trout and other native species. This is the start of a larger restoration project within the Big River WMA.

Rhode Island TU has contracted EA Engineering, Science, and Technology, Inc., PBC (EA) to provide engineering and design services as part of TU's efforts to restore aquatic passage in the Big River WMA. EA will provide TU with an alternative analysis-based approach to the engineering design which will allow TU to determine a project scope that best meets the following project goals:

- Maximize restoration effectiveness and remove barriers to aquatic organisms.
- Eliminate stagnated water and subsequently elevated water temperatures in the impoundment that are currently isolating thermally dependent species, and genetically isolating populations of aquatic organisms.
- Open the now closed fluvial river system to thermally restricted species (i.e., Brook Trout) and assist them in their ability to seek, and successfully reach, thermal refugia. Thermal refugia are critical to species and population survival by increasing species fitness, genetic diversity, and population resiliency throughout the upper Pawtuxet River Watershed.
- Reduce liability to the dam owner by decreasing the hazard classification of the dam which is classified as a significant hazard.

Three alternatives for dam removal are evaluated in the Alternative Analysis:

1. No Action
2. Removal of Capwell Pond Dam only
3. Removal of both the Capwell Pond Dam and upstream Legacy Dam



Signage was placed at the site to ensure that interested people were aware of the intent to remove the dam and to afford them an opportunity to comment. A question was raised regarding the removal of the dam and its potential “Historical” significance. As part of the Grant process, a review must be conducted by a historical site professional to determine if the site includes anything of historical significance as defined in Sec. 106 of the Rhode Island Historical Commission guidelines.

The report presents the results of surveys and observations conducted at the site and summarizes EA’s assessment of the action alternatives. Based on the information reviewed and analyses conducted as part of the analysis, EA recommends the removal of the Capwell Dam and Legacy Dam be reviewed in the feasibility study.

These recommendations are pending approval by the Water Resources Board.