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# Highland Pond Dam Removal

Middletown, Connecticut



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*A dam removal project becomes an opportunity to improve the aquatic passage along Sawmill Brook and its tributaries and promote ecological uplift within a degraded stream corridor.*

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## **SERVICES**

Climate Adaptation  
Ecological Restoration

**F**rom its origin Connecticut's Higby Mountain, Sawmill Brook flows through Middletown to its confluence with the Mattabesset River. On its way, it is dammed by the 12-foot-high Highland Pond Dam. Constructed in 1875 for irrigation, the dam created an 11-acre impoundment known as Highland Pond. Although the pond is a prominent feature in what is now a 30-acre nature preserve, the dam is a barrier for migrating fish, such as alewife, blueback herring, American eel, and sea lamprey.

Biohabitats worked with the Middlesex Land Trust, owners of the dam and property, and RiverWork to develop a design to remove the dam, restore fish passage, and enhance ecological function along the Sawmill Brook corridor. Biohabitats began by conducting a field assessment, which included wetland delineation and soil probing. Biohabitats performed hydrologic and hydraulic modeling to characterize the stream and floodplain and quantify the impacts of dam removal during the migratory period.

Biohabitats then crafted a design and assisted with permitting to restore the system's functional attributes while maintaining as much wetland value and complexity as possible. The design, which integrates theories of Stage 0 restoration, incorporated a beaver dam analog structure to help sustain some wetland function, add habitat complexity, and stabilize a portion of the impounded sediment on site. The approach also takes advantage of an active beaver population present on site, allowing the beaver to actively restore the site and build ecological complexity through their activities. Biohabitats created photographic renderings to show what the restoration would look like and participated in a public meeting to help the community better understand the project and the benefits of dam removal.