Restoring Habitat by Removing Dams

Dams pose threats to the ecosystems and communities of Long Island Sound. There are over 5,000 of them in Connecticut alone and nearly 200 in New York's portion of the Sound's watershed. Past dam removals led by Save the Sound and partner organizations in the Long Island Sound River Restoration Network show how restored, free-flowing rivers decrease flooding, provide fish passage, and improve water quality. Here, we explore what happens when a dam is removed and how those changes are inspiring future removals in our region.

Why Do We Need Free-Flowing Rivers?

Rivers are dynamic waterways that connect the land to the oceans.

Nutrients, sediments, freshwater, and food for both people and wildlife, travel these blue highways. Rivers sustain life from our back yards to Long Island Sound and beyond.

Healthy and free-flowing rivers support migratory fish and wildlife.

Diadromous fish, migratory fish that move between freshwater and salt water to complete their life cycle, depend on the ability to travel up and down a river. Many migratory fish provide food for other species, from striped bass to seals and eagles.

Dams are manmade barriers built on rivers to control water.

Dams divert or hold water. Dams are installed to serve a wide range of purposes including hydroelectricity, recreation, navigation, local water supply, flood control, irrigation, mechanical power, and more. But many no longer serve any purpose at all.

Dams present barriers to fish passage.

Impediments to annual fish migrations significantly diminish populations of diadromous fish nationwide. The less fish in our rivers, the weaker the food chain of our riverine, estuarine, and ocean ecosystems.

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Dams can present safety risks.

Poorly maintained dams or those that have outlived their useful life are at risk of failing. Dam failure can cause flooding and damage to upstream and downstream infrastructure, homes, businesses, and ecosystems. Any polluted sediment trapped behind a dam is also released. With severe storms becoming more common, dam failure is a growing threat to communities.

Removing dams to restore connectivity is key for habitat resiliency.

Free-flowing rivers are cleaner and, combined with their floodplains, more resilient to the impacts of climate change. They allow aquatic wildlife to move as temperatures change or in response to hazards such as contaminant spills. They also transport sediment to marshes and wetlands which provide their own unique benefits.

What Happens When a Dam is Removed?

Pond Lily Dam presented risks to people and wildlife.

The dam was located on a highly developed stretch of the West River in Connecticut. It increased flood risk to nearby homes and businesses and, along with its non-functioning fishway, blocked fish passage.

Removing the dam reduced flood risk and restored habitat.

The dam and fishway were removed in February 2016, supported by the Hurricane Sandy Recovery Fund to reduce flooding in this urban watershed. In addition to decreasing localized flooding, the removal has since supported sixty times more alewife, a diadromous river herring, in annual fish runs. As a key food source, their comeback benefits the entire Long Island Sound ecosystem.



March 2016



Acres of habitat restored

/6





Native wetland plants rebounded.

Their revival where the pond or impoundment once was contributes to habitat, biodiversity, and resiliency.

June 2018

0

June 2023

Why We Need to Remove Dams in Long Island Sound

For generations, the rivers and streams of the Long Island Sound watershed have been impeded and fragmented.

There is approximately 1 dam every square mile in Connecticut, and the density of barriers in New York's portion of the watershed are similarly high. Each represents a barrier to the natural function and flow of a river.

Removing outdated dams has myriad ecological benefits.

Dam removals restore habitat for migratory fish such as river herring and resident fish such as brook trout. River connectivity allows sediment to move downstream, nourishing marshes and creating healthier riverine, estuarine, and open ocean habitats. Freeing impounded, stagnant water decreases water temperatures in the summer and increases oxygen for aquatic life. Removing a dam eliminates the risk of dam failure, as well as associated downstream ecological and economic impacts.

Storms are increasing in severity and frequency.

We urgently need to remove vulnerable structures to restore natural river and floodplain functions. Those functions make our communities and ecosystems more resilient to climate change.



How the Long Island Sound River Restoration Network Can Help

Working collaboratively can increase the pace and impact of barrier removal in Long Island Sound.

Save the Sound, Housatonic Valley Association, Farmington River Watershed Association, Trout Unlimited, Connecticut River Conservancy, American Rivers, Seatuck Environmental Association, and The Nature Conservancy in Connecticut are working together to free our region's rivers as members of the Long Island Sound River Restoration Network.

The Network focuses on three main goals:

sharing resources and working collaboratively, coordinating with regulators and funders, and communicating the benefits of dam removal and restored river systems. Knowledge sharing now builds a transparent and community-centered action plan for future dam removals.

>5,000

Dams hinder river connecticity to Long Island Sound

You Can Help Undam and Restore Your Rivers

Do you know of a dam that is no longer serving a useful purpose?

Without regular inspection and proactive upkeep, dams are a liability. If you own a dam, please contact Save the Sound or any member of the River Restoration Network below to discuss your best options for removal and habitat restoration.



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LONG SLAND SOUND





Scan to learn more or visit our website at www.SaveTheSound.org