Dam Removal

NEW YORK STATE | Department of Environmental Conservation | Hudson River Estuary Program

A River Restoration and Flood Risk Mitigation Opportunity

Removing dams is an opportunity to improve river and stream ecosystems, reduce community risks of flooding, and eliminate dam owner maintenance and liabilities.

The Hudson River estuary watershed has more than 1,500 known dams, and many more that are unmapped. A recent study suggests that up to four times as many unidentified dams may exist on streams and rivers in the estuary watershed.

Dams are artificial structures in our waterways that disrupt the flow of water and have numerous negative impacts to river systems. Dams fundamentally change the free-flowing condition of the stream and often create artificial, unnatural impoundments upstream. They are barriers to fish and other aquatic organisms that restrict movement and access to habitat.

Historically, many dams were originally built to harness the energy of water to support an economic use, such as a saw or gristmill. Many dams are no longer serving their original purpose, have exceeded their useful life, and are financial liabilities to owners. Additionally, their removal is an opportunity to restore rivers.

Removing a dam can have many positive benefits to ecosystems, communities, and owners:

- Restoring free-flowing riverine conditions,
- Improving water quality,
- Restoring aquatic habitat connectivity,
- Eliminating flood risk from dam failure,
- Reducing public nuisance and safety liabilities, and
- Eliminating operation, maintenance, and repair costs to the dam owner.

Dams can pose risks to recreational river users.

Removing dams can eliminate costs and liabilities associated with dam ownership.

Owning a dam requires maintenance costs for the owner, and many dam owners must comply with dam safety regulatory compliance. Not only is dam removal a good stream restoration opportunity, but removal can also alleviate dam owner costs associated with maintenance and management. Removing a dam also eliminates potential public safety hazards to recreational users around the dam and people boating down the waterway. Dams can create dangerous hydraulic hazards just below the structure. Flooding risks from possible dam failure is also alleviated if the dam is removed.

Removal of Strooks Felt Dam in Newburgh, NY, was funded by the DEC Hudson River Estuary Program.

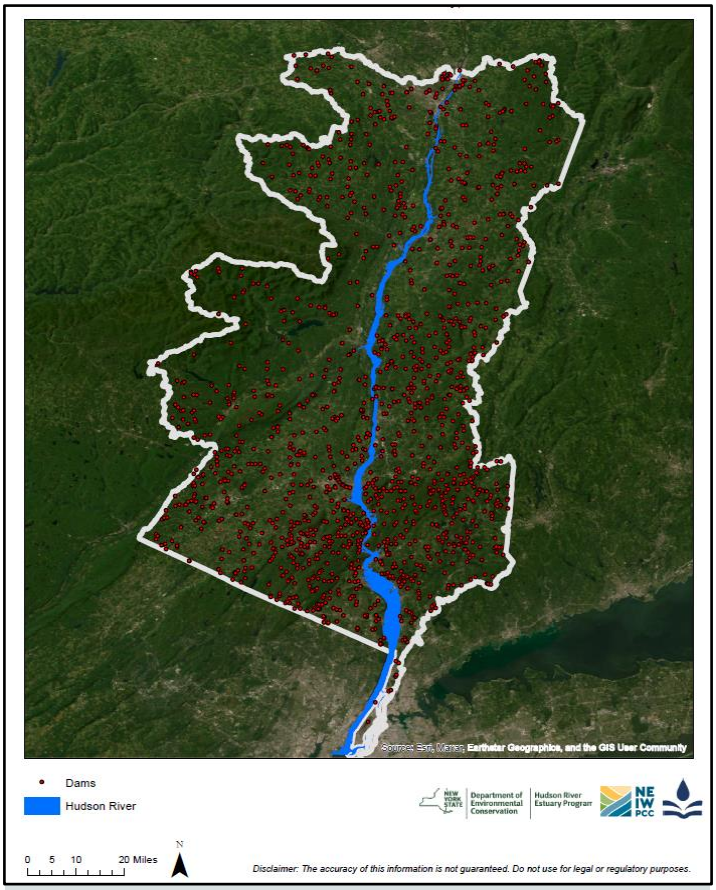
Empowering Communities and Partners

Dam owners, municipalities, and watershed partners can receive help with planning, designing, and removing dams.

The DEC Hudson River Estuary Program, along with local and county governments (e.g., soil and water conservation districts) and local and regional watershed partners, are working with willing dam owners to reconnect tributaries in the Hudson River estuary watershed. Program staff help connect interested communities and dam owners with technical assistance and funding opportunities to advance dam removal from concept to construction.

Removal Success

In the City of Troy on the Wynants Kill, the first barrier to fish passage upstream of the Hudson River was removed in May 2016. Within days, alewives were spotted in spawning habitat upstream of the former barrier for the first time in 85 years. A partnership between the DEC Hudson River Estuary Program, New York State Water Resource Institute, City of Troy, and Riverkeeper led to the removal of this critical barrier and was an immediate success.



Mapped dams in the Hudson River estuary watershed (2024)

Funding Assistance

Hudson River Estuary Program grants for Tributary Restoration and Resiliency provide funding for dam removal reconnaissance, feasibility studies, public engagement, planning, permitting, and construction with funding from the New York State Environmental Protection Fund. These grants have funded removals such as the Strooks Felt Dam on Quassaick Creek in Newburgh in 2020 and the Shapp Pond Dam on the East Branch of Wappinger Creek in the Town of Clinton in 2016.

CONTACT INFORMATION

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