## Hudson Valley Stream Conservancy

## Reservoir No. 2 Dam Feasibility Study

New Rochelle, New York



A careful approach to removing a dam from an urban river clears the way for local fish species while maintaining flood control.

SERVICES Ecological Restoration Reservoir No. 2 Dam on the Hutchinson River is mere feet away from the Hutchinson River Parkway and provides flood control for the city of New Rochelle. An effort by Westchester County DPW to rehabilitate the dam was altered after ecological monitoring of the site revealed an active alewife run. Encouraged by the first alewife sighting in the river since the 19th century, project partners decided to decommission the dam and restore that area to allow fish passage.

Due to the dam's proximity to a densely populated area and the critical need to maintain flood attenuation, a carefully managed approach to dam removal was necessary. With funding through Westchester County Public Works, the Hudson Valley Stream Conservancy turned to Biohabitats to design such an approach. After investigating the feasibility of removing or lowering the dam, Biohabitats presented two options for restoring fish passage to the river: spillway removal, or a bypass stream. Biohabitats also conducted a hydrological and hydraulic assessment and sediment probes to estimate the quantity and quality of sediment impounded behind the dam.

The team then assessed four primary alternative approaches: complete dam removal; lowering the spillway and incorporating a rockramp fishway; installing a culvert through the dam and including a steeppass fishway; and rerouting of the outlet stream. Biohabitats identified the installation of a Denil steeppass fishway as the preferred alternative. With four viable options assessed, the Hudson Valley Stream Conservancy moved forward with their efforts to restore the area.