



TNC's Freshwater Initiatives





Presented by:

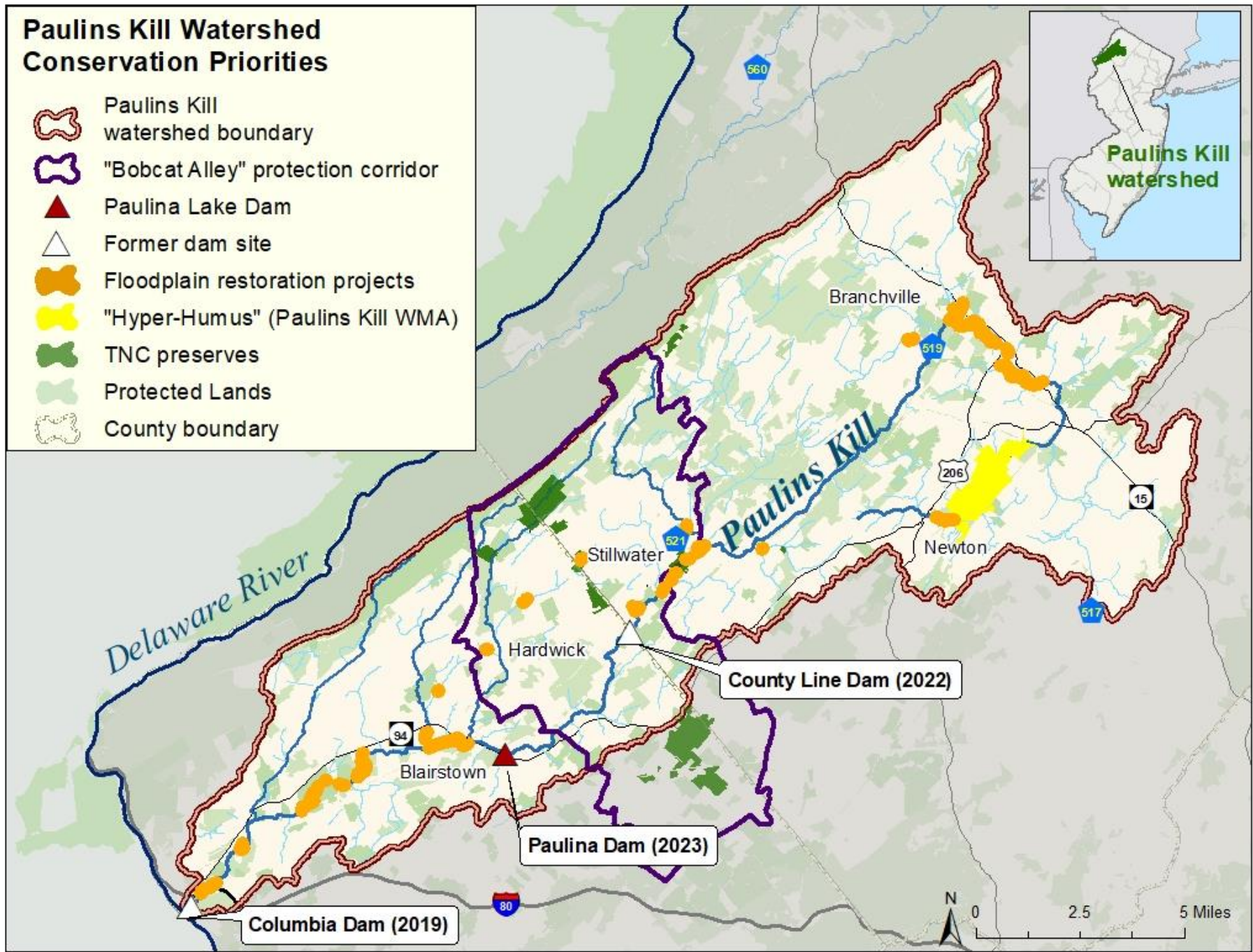
Michelle DiBlasio, Watershed Restoration Coordinator & Beth Styler-Barry, Director of River Restoration

- Restore the Paulins Kill Watershed
- Advance Aquatic Connectivity Projects in the Pequest Watershed
- Build Statewide Capacity for Dam removals



Paulins Kill Watershed Conservation Priorities

-  Paulins Kill watershed boundary
-  "Bobcat Alley" protection corridor
-  Paulina Lake Dam
-  Former dam site
-  Floodplain restoration projects
-  "Hyper-Humus" (Paulins Kill WMA)
-  TNC preserves
-  Protected Lands
-  County boundary





Columbia Dam Removal





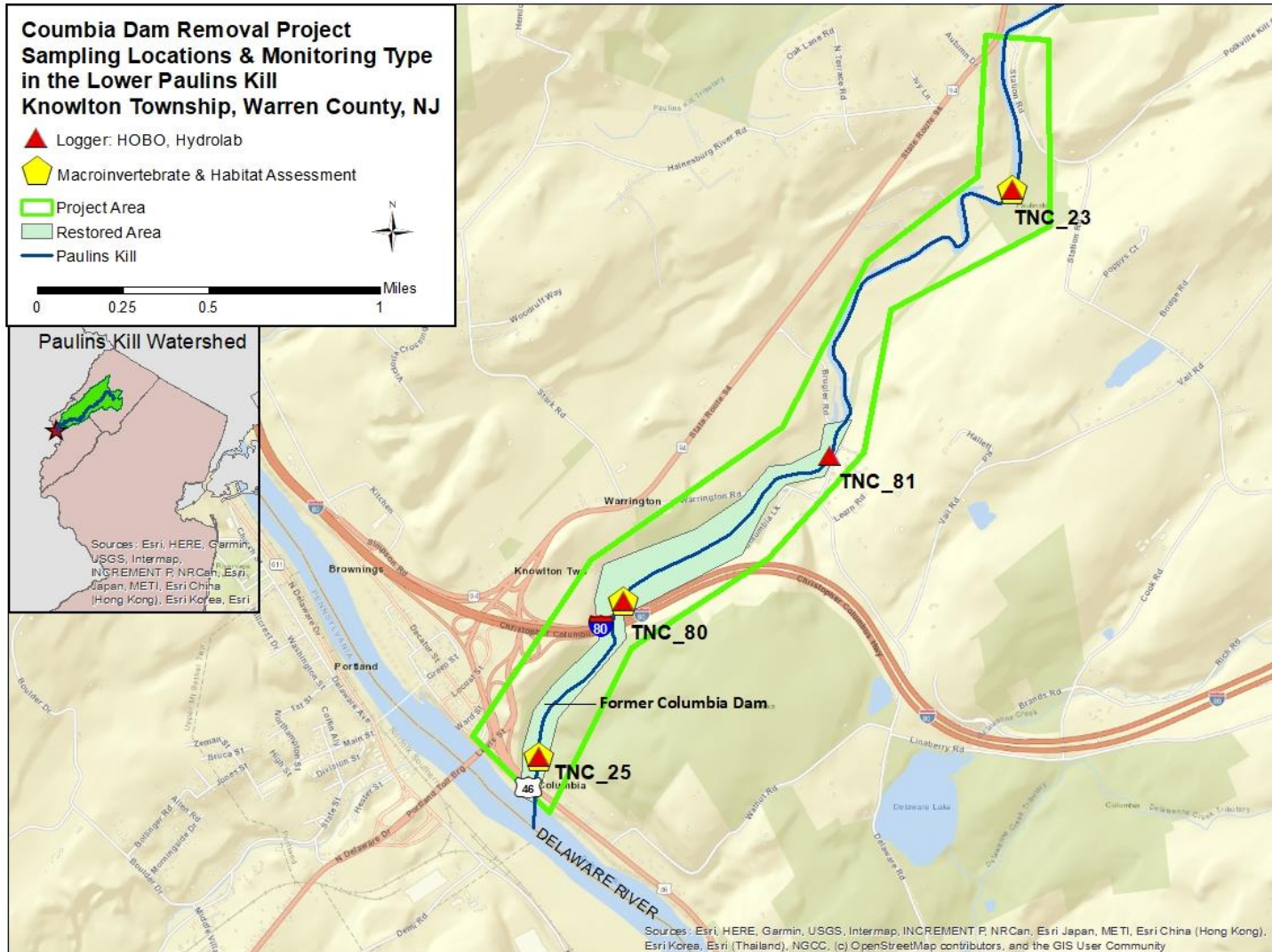
Photo Credit: Jim Wright/TNC/Light Hawk





Dam removals restore damaged and overdeveloped floodplains so they can better store floodwaters, provide high-quality wildlife habitat and reduce the flood risk to nearby communities.

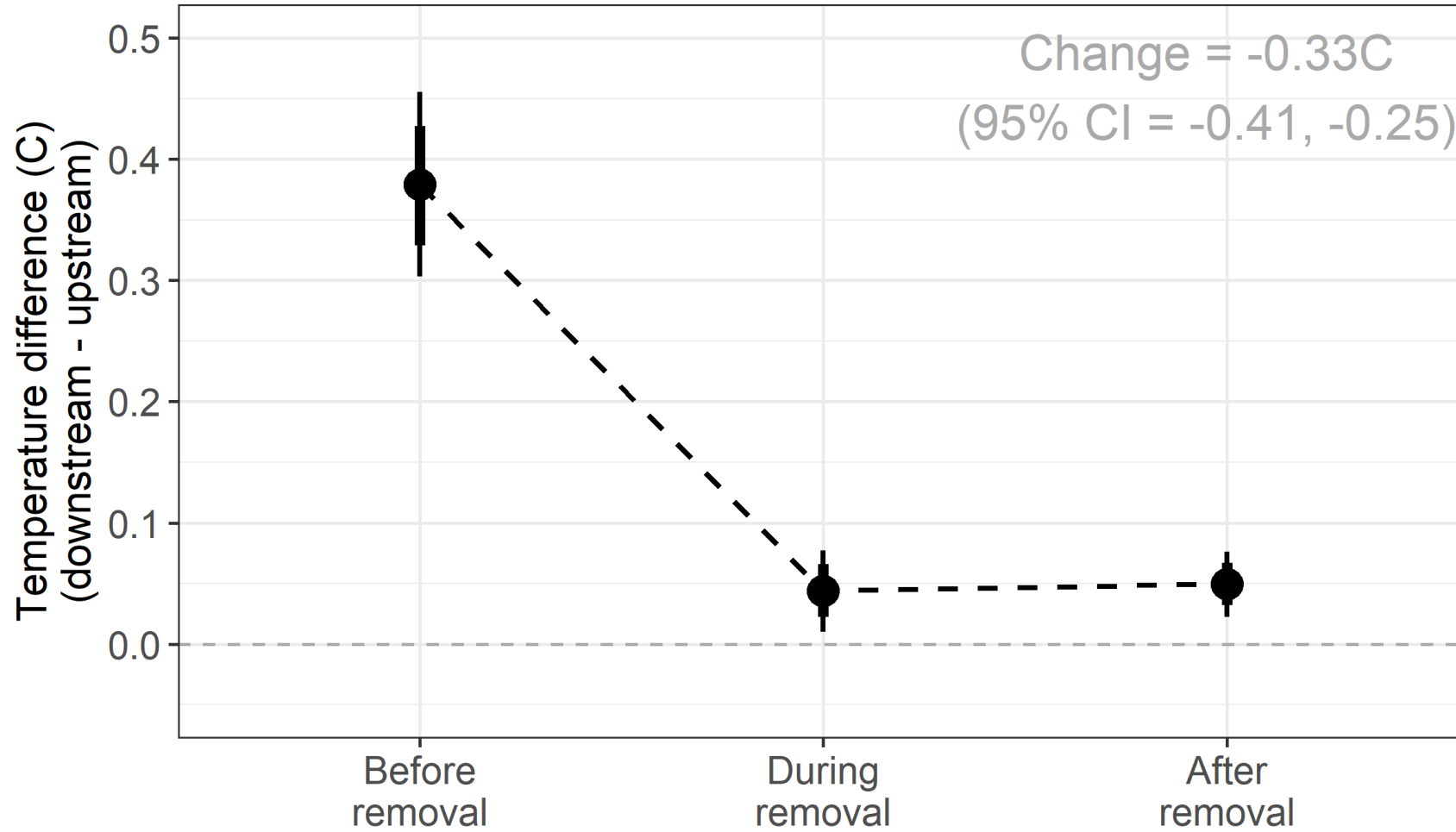




Indicators of Water Quality:

- Biological
 - Fish
 - Macroinvertebrates
 - Mussels
- Water temperature
- Dissolved oxygen
- Sediment/turbidity

Columbia Dam



County Line Dam Removal



Photo Credit: Jim Wright/TNC/Light Hawk

Photo Credit: Jim Wright/TNC/Light Hawk





County Line Dam Removal

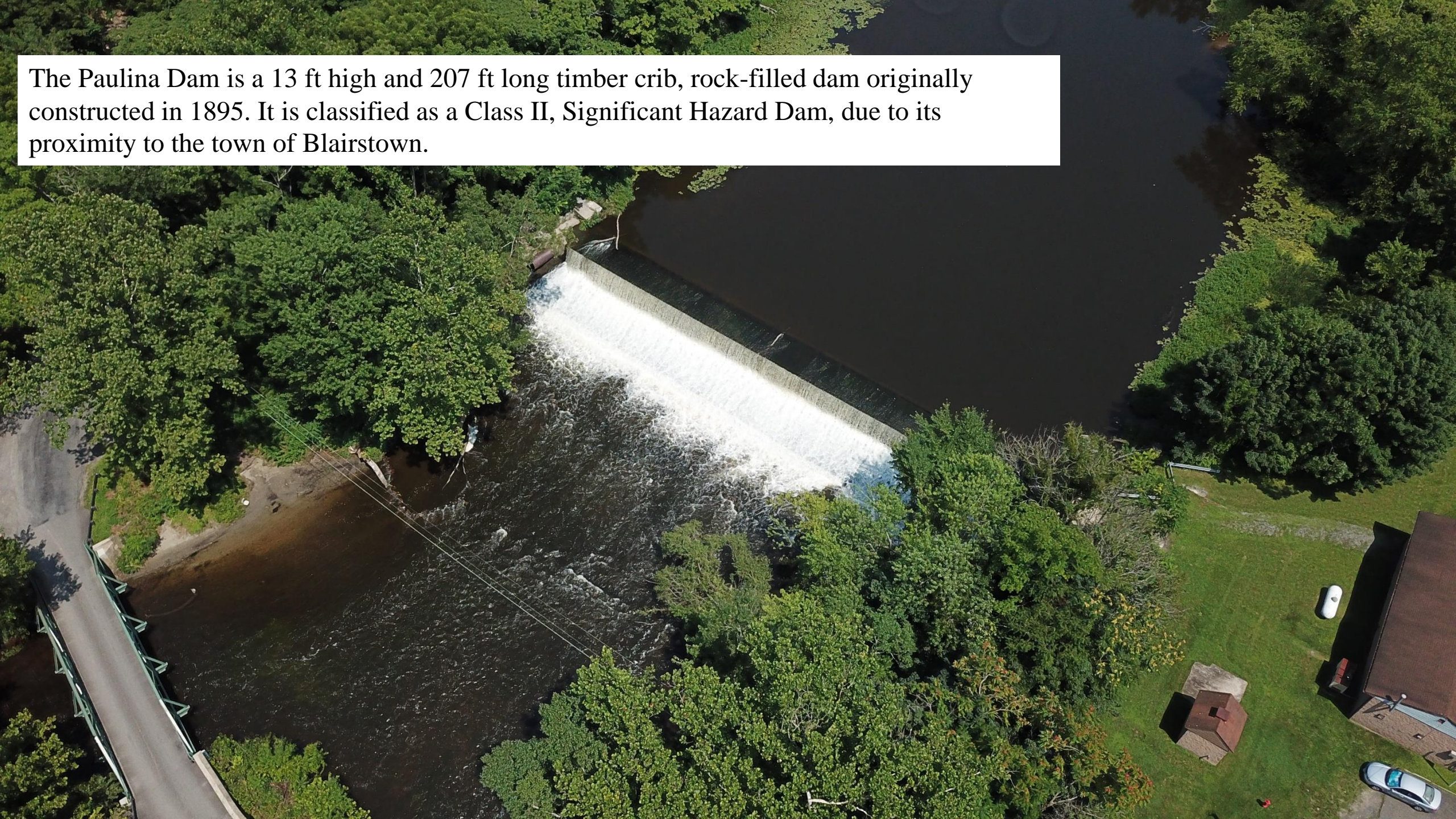




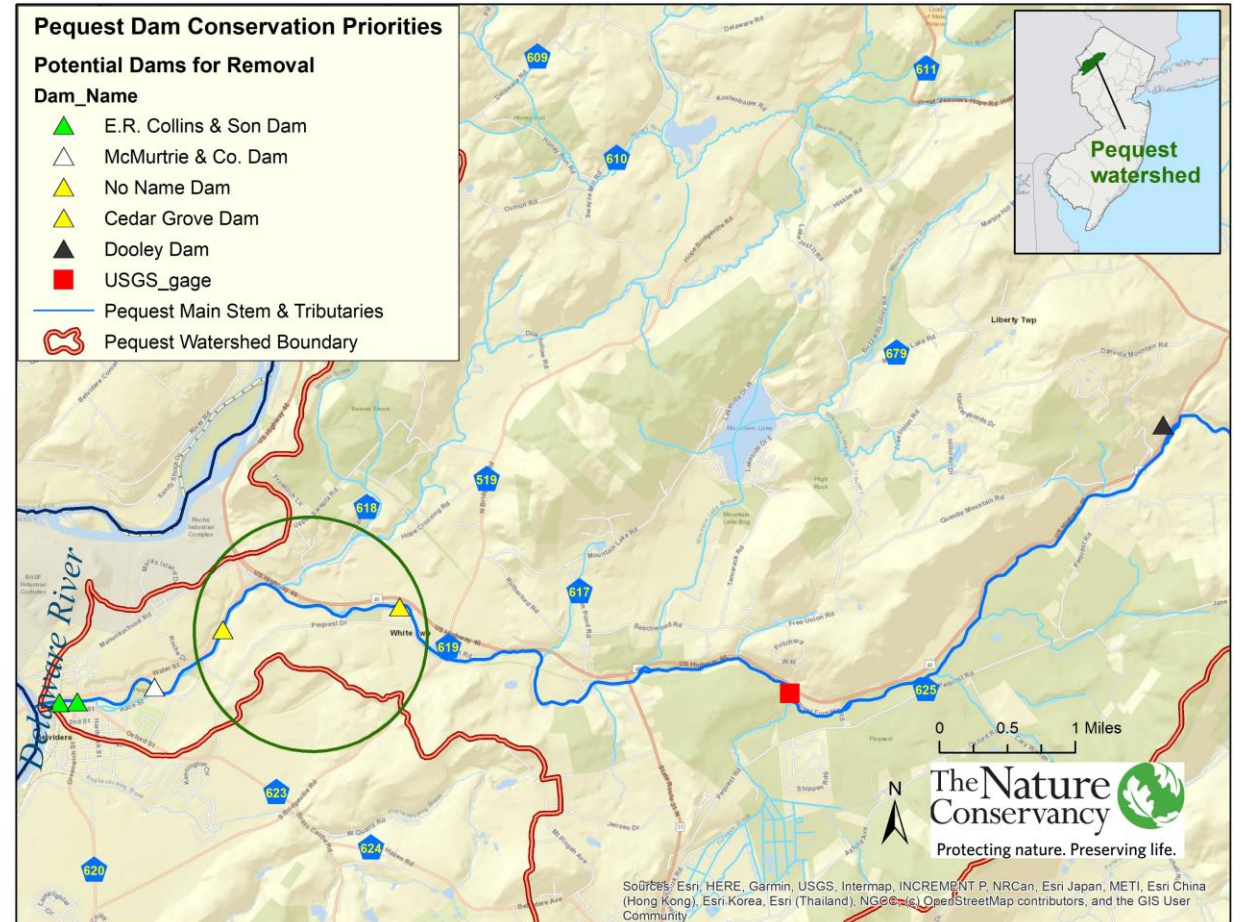
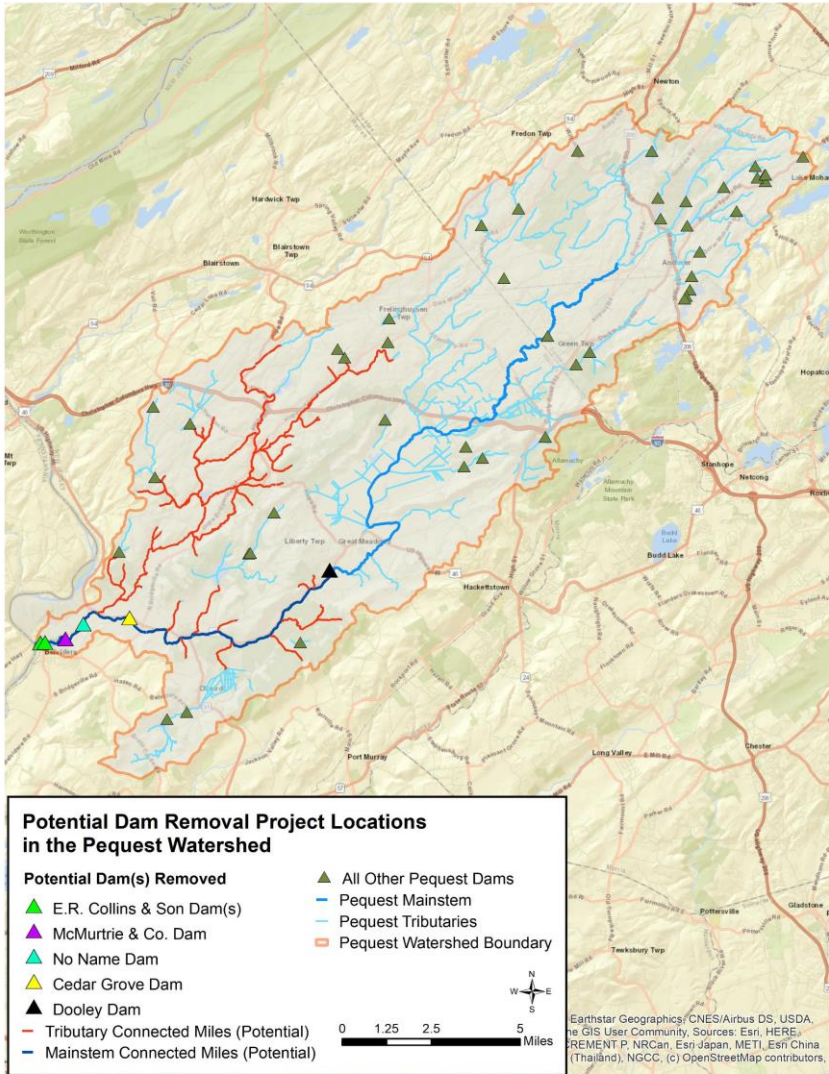
Paulina Dam Removal



The Paulina Dam is a 13 ft high and 207 ft long timber crib, rock-filled dam originally constructed in 1895. It is classified as a Class II, Significant Hazard Dam, due to its proximity to the town of Blairstown.

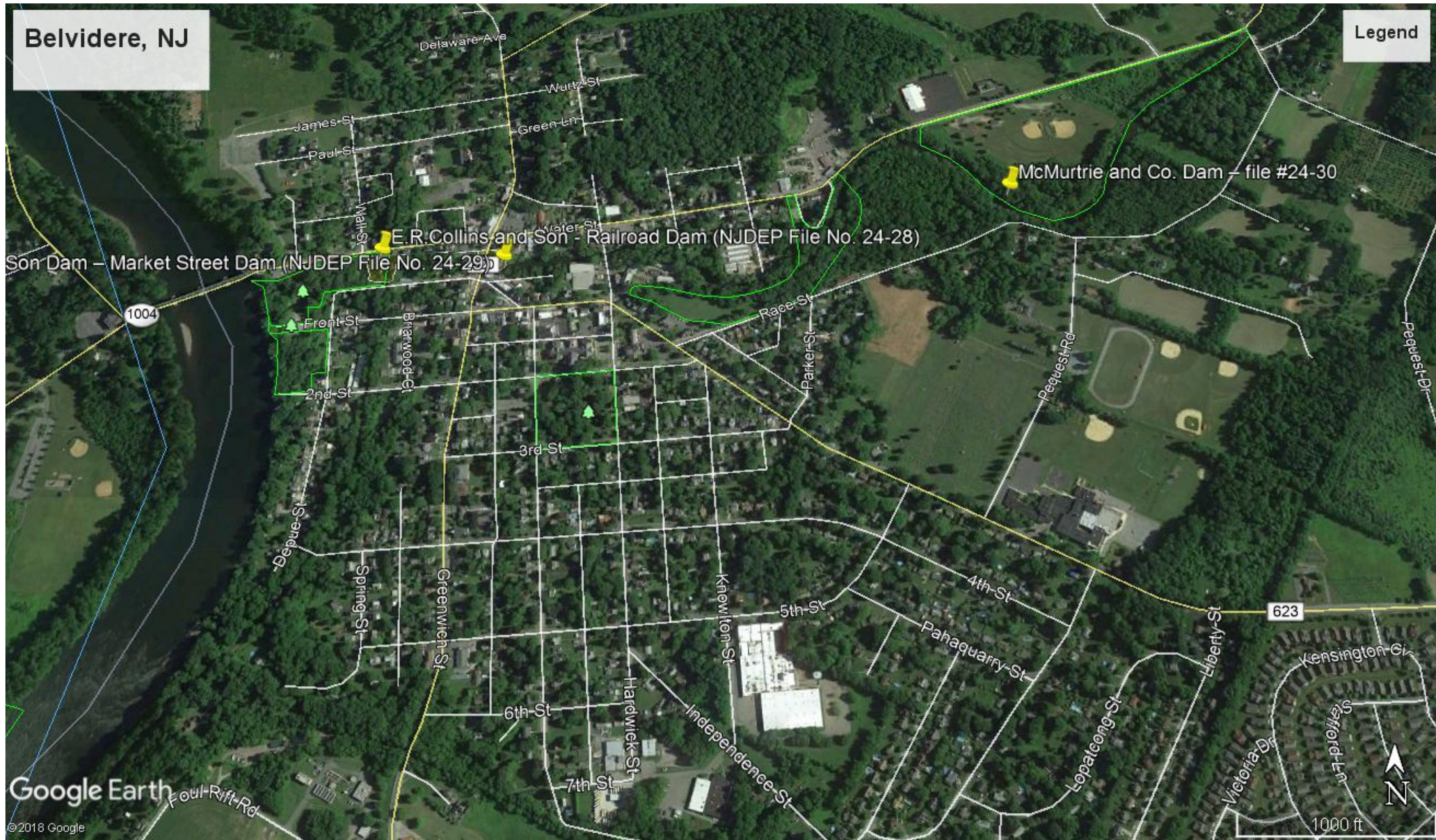


Pequest River Restoration



Belvidere, NJ

Legend





Lower E.R. Collins



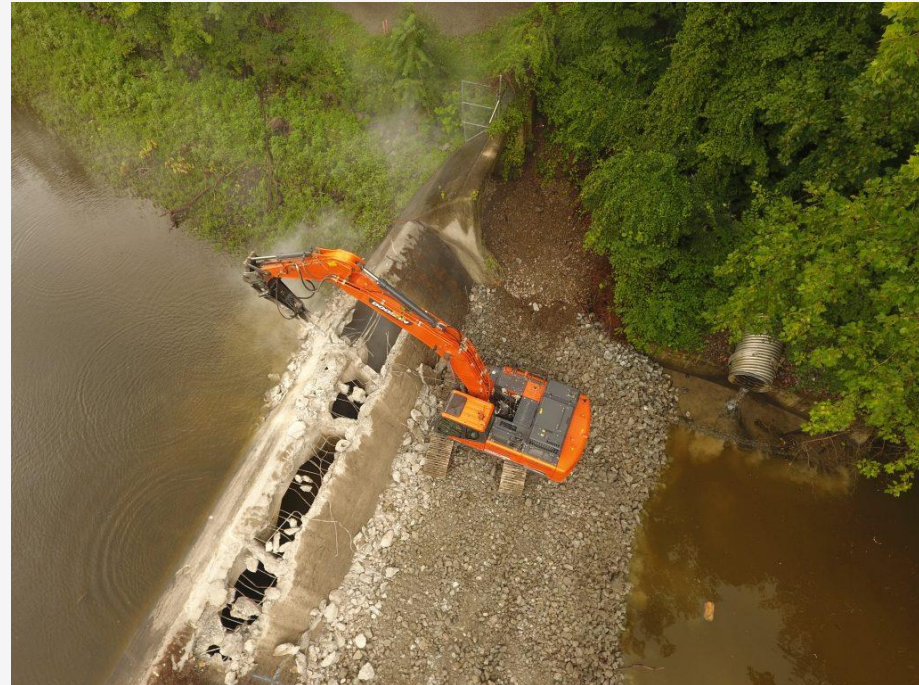
Upper E.R. Collins Dam

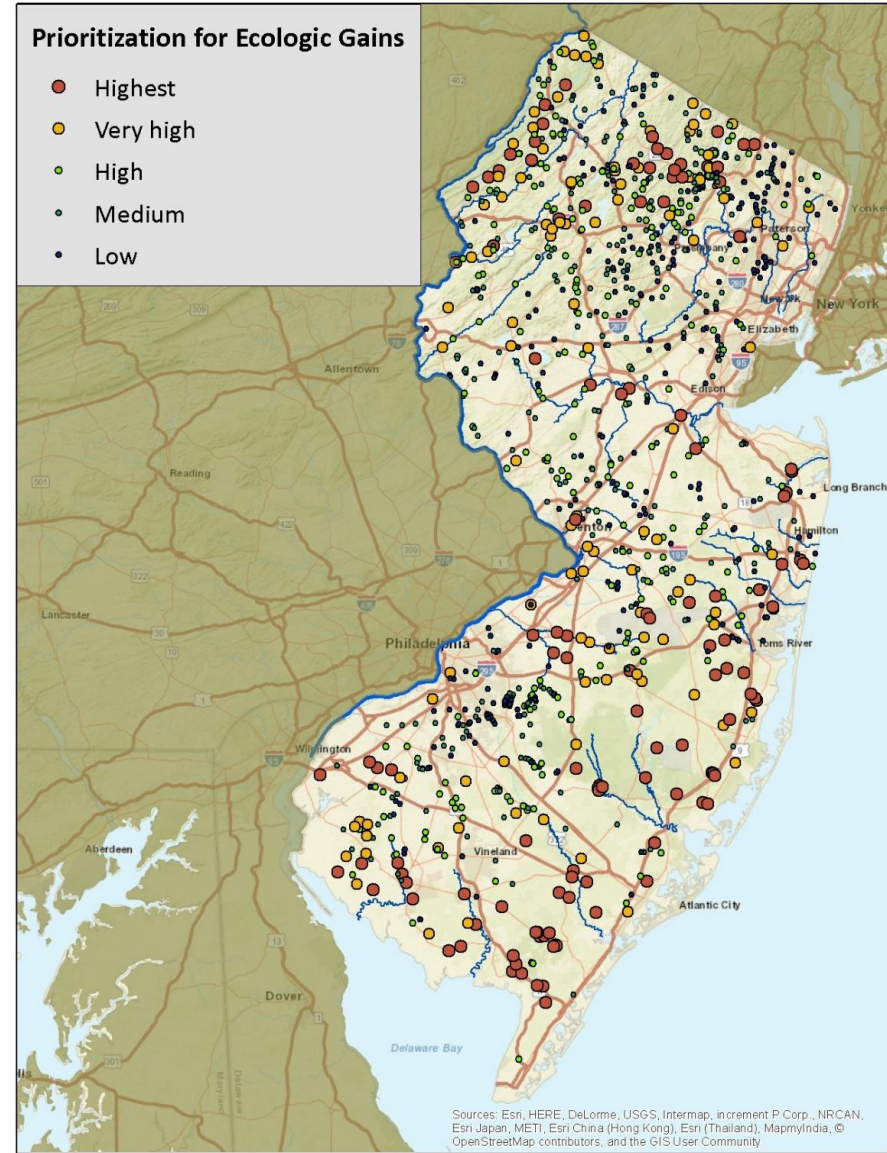
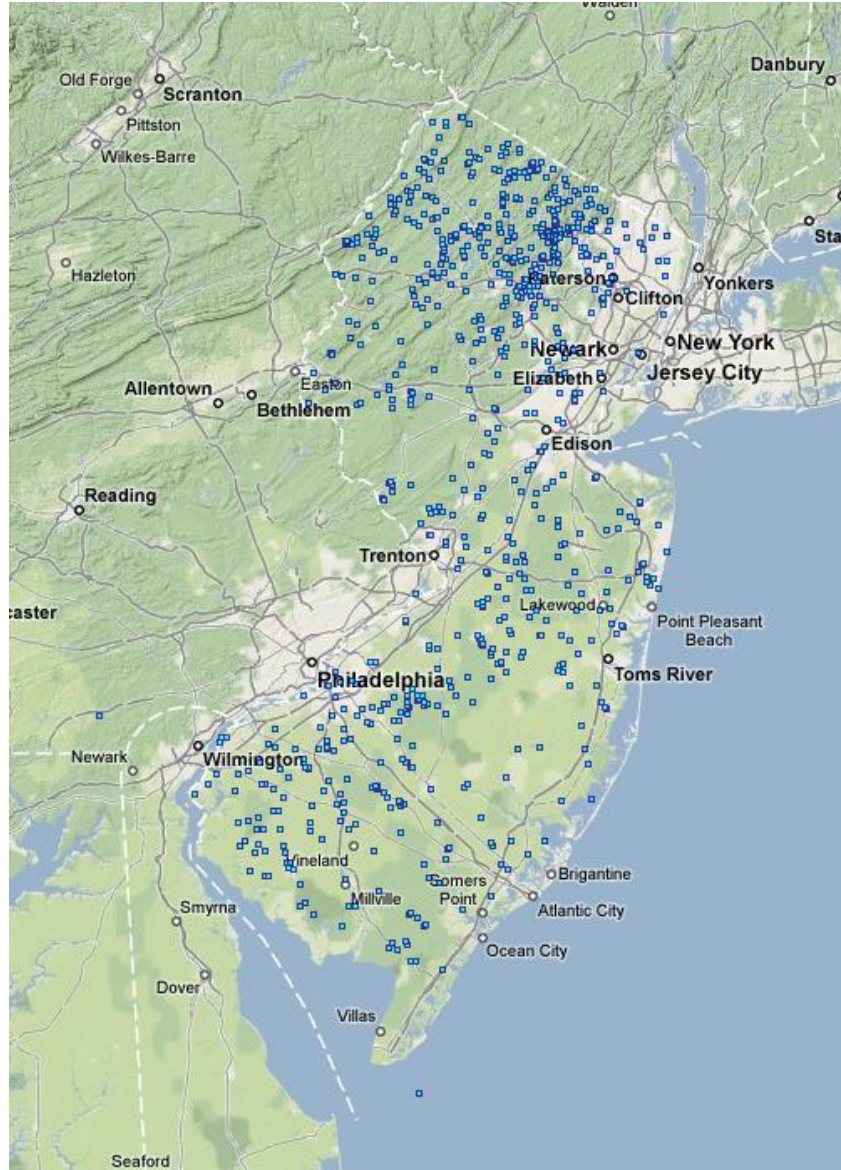




What is a Dam?

In NJ, a "dam" means any artificial dike, levee or other barrier, together with appurtenant works, which is constructed for the purpose of impounding water...that raises the water level five feet or more above the usual, mean, low water height.





DAM REMOVAL – TOTAL \$800 MILLION

NOAA - Community Based Restoration Grant Program - \$400 million

US Fish & Wildlife Service - National Fish Passage Program - \$200 million

FEMA – High Hazard Dams Program - \$75 million

US Army Corps of Engineers - Section 206 Aquatic Ecosystem Restoration Program - \$115 million

US Forest Service - Legacy Roads & Trails - for removal of non-hydropower federal dams- \$10 million

The SDRP is a collaboration of nonprofits and government agencies that seeks to advance the removal of antiquated, dangerous or ecologically detrimental dams.

- We meet quarterly to discuss beneficial dam removal projects and to exchange information regarding policy, regulatory issues, funding and the practical considerations of dam removal.
- The SDRP also provides information to the public about how dams and dam removal may affect their communities and their lives.

NEW JERSEY DAMS

HOME

FAQ

DAMS 101 ▾

WHY REMOVE DAMS?

HOW TO REMOVE A DAM

CASE STUDIES

RES

MONITORING

Monitoring should be a key component of the dam removal process, both to ensure that project goals and the practice of dam removal. The project team should develop a monitoring plan that covers pre-project monitoring and post project monitoring. A project might be monitored for changes in fish population, temperature, dissolved oxygen, and water quality.

What is a Dam?

Anatomy of a Dam

Purpose of Dams

Vocabulary

Videos

FAQ

General Questions

Dam Removal

Public Safety

Dam Ownership

Regulation

Restoration

Cost

Hydropower

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Lowhead Dam Removal FACT SHEET

Calco Dam

Raritan River, New Jersey

Location

Raritan River Mile 20.9
Bridgewater & Franklin Townships
Somerset County, NJ
Latitude: 40.55075; Longitude: -74.5519

Date of Construction

1938

Date of Removal

July-August 2011

Dam Structure

- Concrete Gravity Dam Encapsulating a 3-foot Diameter Tile Pipe Composing a Center Weir with 41 8-inch Diameter Discharge Outlets
- Structural Height: 7.0 feet
- Width Across River: 201 feet (Total: 245 feet)

Dam Purpose/Public Impact

Chemical Dispersion (1938)/ POTW Treated Effluent (post-1980)
No Known Fatalities/Multiple Incidents

Dam Removal Objectives

- Provide Migratory Fish Passage
- Eliminate Public Safety Hazard
- Restore Wading Bird Habitat



Synopsis: Calco Dam was constructed in 1938 by the Calco Chemical Company division of American Cyanamid, who conducted significant synthetic dyestuff manufacturing operations in Bound Brook, New Jersey between 1915-1980, for the purposes of dispersing manufacturing-related effluent into the Raritan River. Although the 123-foot long center weir was subsequently used as a treated effluent discharge point for the Somerset Raritan Valley Sewerage Authority POTW, the Calco Dam removal became a major watershed restoration priority because it was the lowermost fish passage obstruction on the Raritan blocking fish passage to both the Raritan River and its largest tributary, the Millstone River.

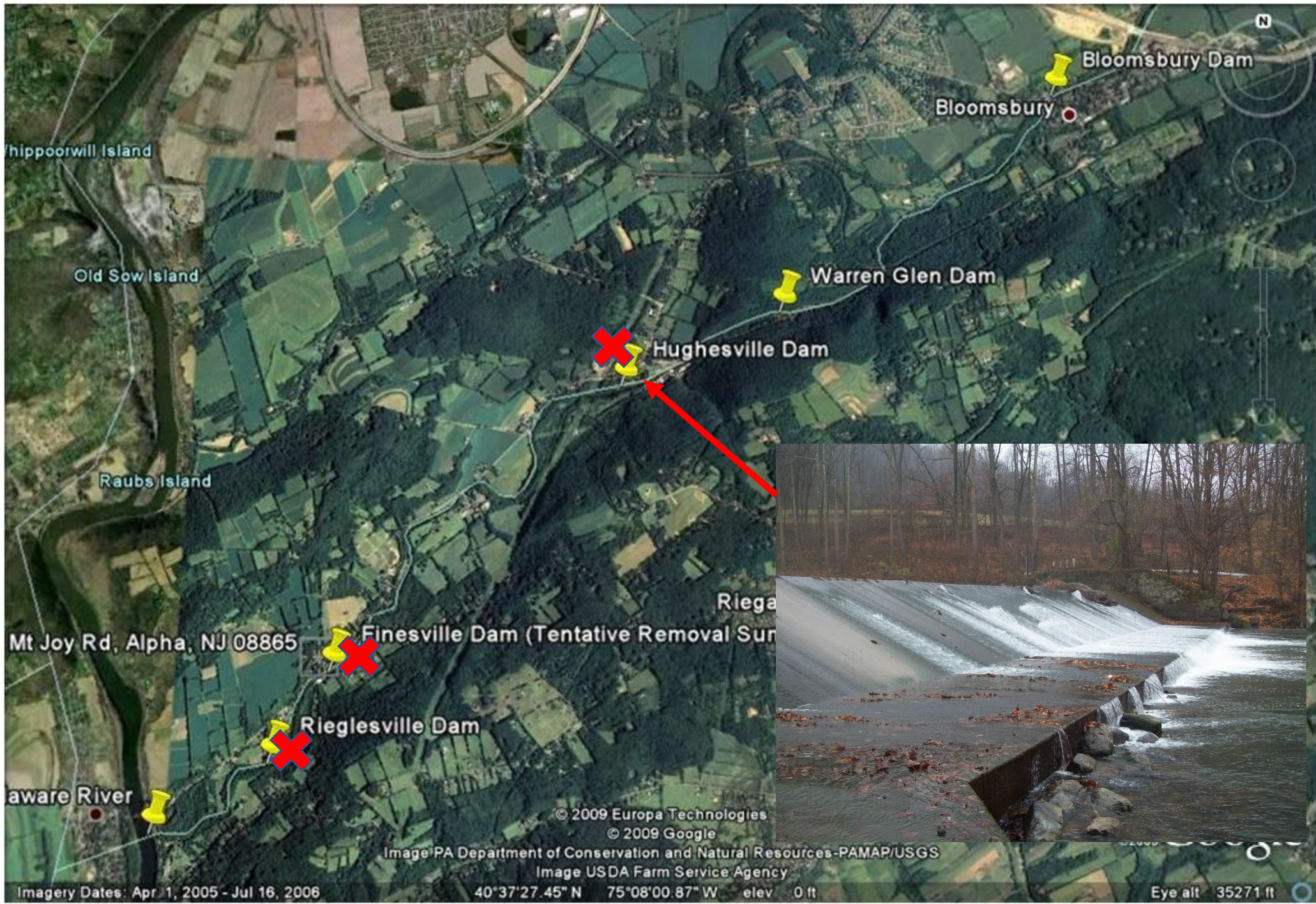


Before



After

Photographs and Dam Summary by John W. Jengo, PG, LSRP





Warren Mill Dam

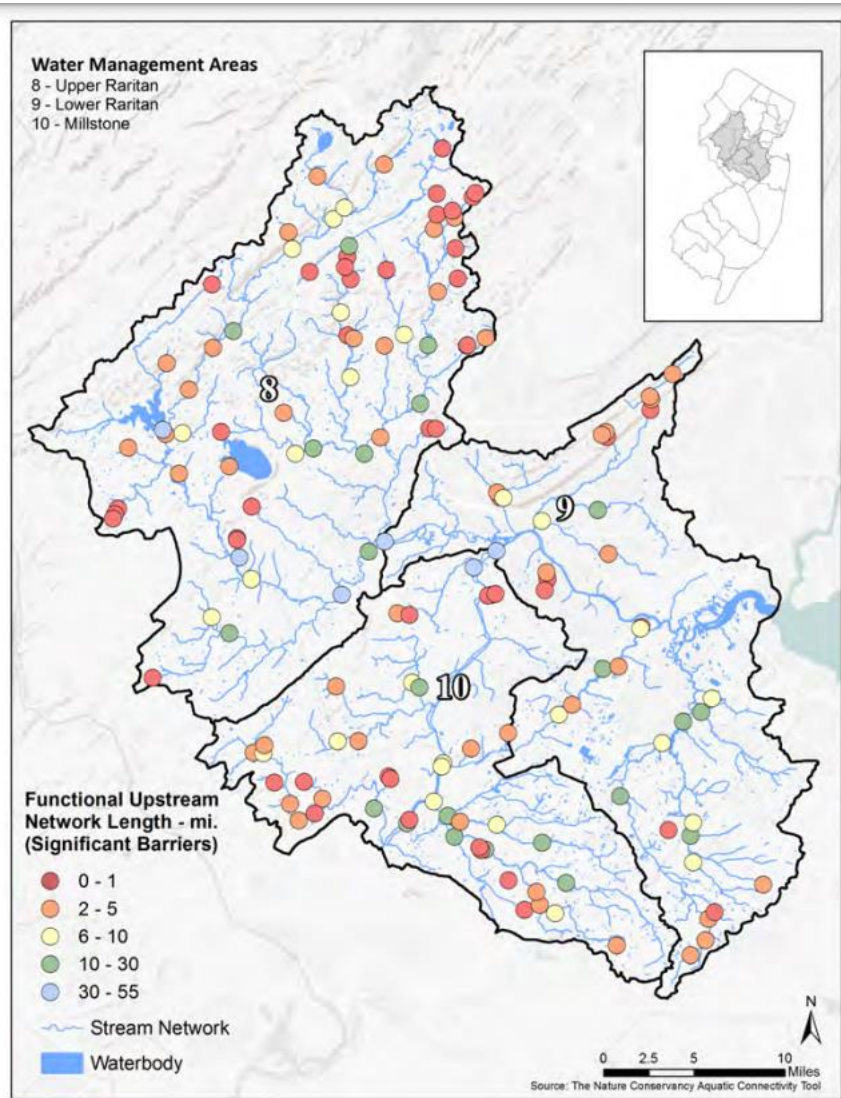


Figure 51. Map of functional upstream network length (for tier 1 to 20 dams) in the Raritan

Cole's Mill	Yes	South Branch
Rockafellows	?	South Branch
Nunn's Mill	Yes	South Branch
Califon Dam	X	South Branch
Island Weir	X	Raritan
Headgates	X	Raritan
Mill Street Dam	?	North Branch
Kline's Mill Dam	?	North Branch

Questions?

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