

# Reconnecting VT Rivers through Dam Removal



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# The Vermont Dam Removal Initiative

- Raise awareness
- Identify dams
- Prioritize dams
- Collaborate

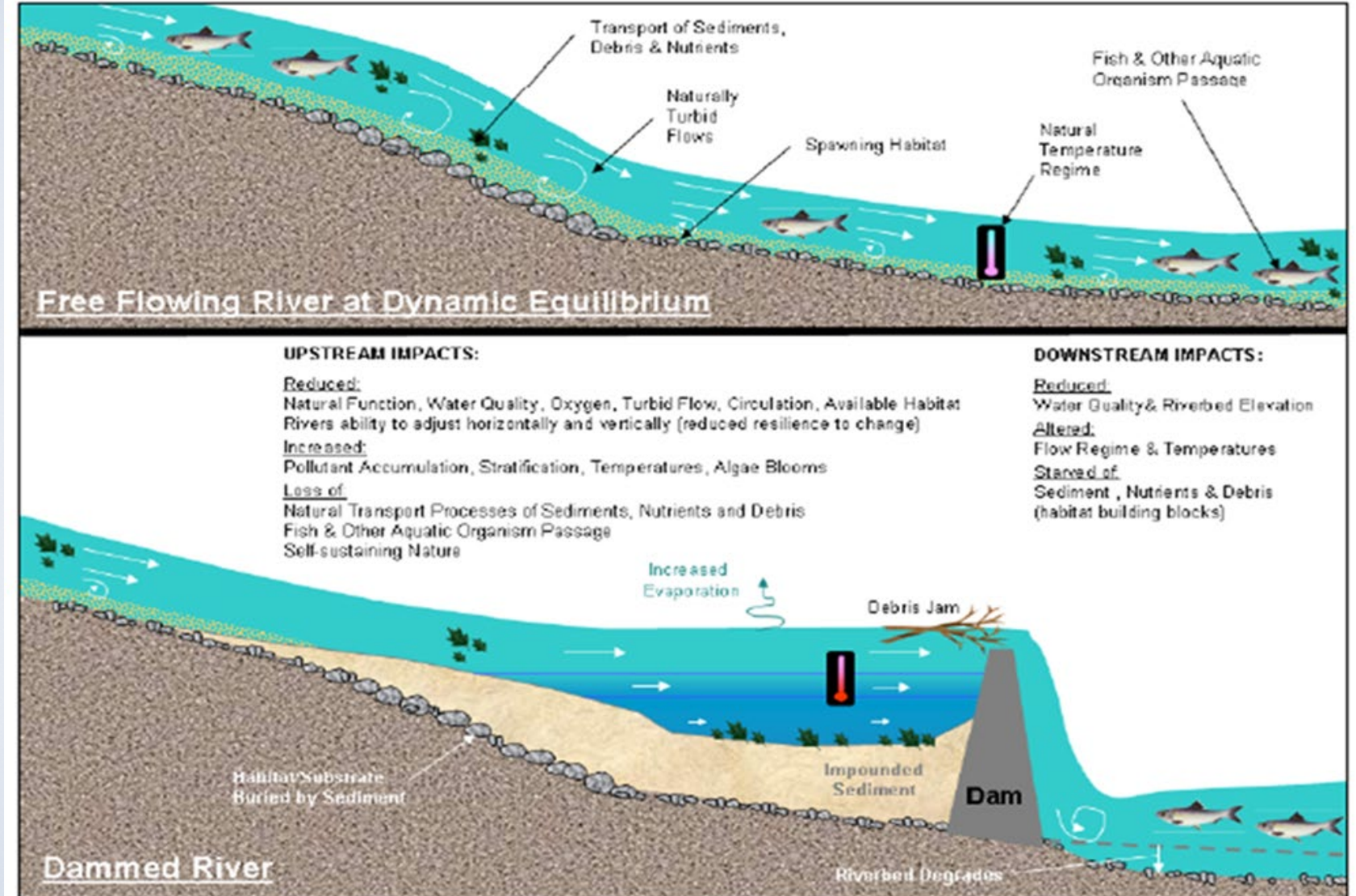




# Reconnecting River Systems

## Dams:

- Disrupt the river continuum - Biota - flow-habitat
- Degrade water quality and aquatic habitat.
- Restrict the movement of AOP including fish and other wildlife.
- Dams cost \$ to maintain.
- They are a liability to landowners and neighbors.
- They are a public safety risk.



Graphic courtesy of American Rivers



# Project Selection

- Ecological impact
- Hazard Potential Classification
- Owner interest
- Partner support





# The Changing Flow of Rutland's Waterways ~ Evolution of the Tenney Brook Landscape

*Since time immemorial, Native people lived and traveled along Vermont's river corridors, lakes, and ponds, with connected waterways integral to sustaining life prior to industrialization. For Rutland's early Euro-American settlers, the rivers were also a critical source of power to support a new nation's industry and commerce. From the 1790s to the 1920s, this section of Tenney Brook was a locus for an evolving industrial landscape, with its water impounded by a dam that supplied power for a series of mills, a tannery, and a commercial ice harvesting business. Although largely gone today, hydro-powered industrial landscapes were integral components of Vermont's functional economic and physical development. Today, with the removal of obsolete dams from this industrial period, stream restoration like that of Tenney Brook is a vital part of restoring clean water and healthy natural habitat for Native people and all Vermonters, now and into the future.*

## 13,000 years ago to 1750s

River floodplains and terraces were major focal points for Mohican people who utilized the connected systems of the Otter Creek Watershed for travel, trade, and sustenance. From the mountainous headwaters that feed Tenney Brook, a tributary to East Creek, all the way to the main stem of Otter Creek, and into Lake Champlain—indigenous peoples utilized the entire arteries of a connected stream network.

### 1790s

The earliest recorded mill at this site was John Prentiss and Company's oil mill, which ground flaxseed to produce linseed oil, a mainstay in paints, printing inks, and industrial coatings. The mill was supplied by water from a dammed pond on Tenney Brook, with a stone dam straddling the brook directly upstream from this site. By 1795, the mill, pond, and dam had been purchased by farmer Asa Hale, who grew flax and other crops on lands surrounding Tenney Brook and processed his crops at the Tenney Brook oil mill.

### 1830s

In 1832, wood-worker Thaddeus Dunklee purchased lands surrounding Tenney Brook, including the pond and dam. During this time Dunklee operated a saw and wood planing mill at the site as well as a machinist mill for turning iron for screws and other metal work. By the 1850s, a pencil factory also stood at the site. Downstream of the dam, in present-day Rotary Park, George Graves operated a sprawling tannery, fed by a penstock carrying water from the dam. Tanning of hides was a water intensive process, with hides soaked in vats of Tenney Brook water, lime, and bark to produce supple leather. Graves Tannery remained at the site until 1875, when it was destroyed by fire.

## Notice to farmers.

The subscribers having erected & completed an OIL MILL at RUTLAND, At present are and shall continue to be the best of  
**FLAX SEED:**  
Which will at all times be ready received, in large or small quantities, and LINSEED OIL, or ENGLISH GOODS given in exchange, by JOHN PRENTISS & Co.  
Rutland, June 16, 1793

*From the Old Connecticut State Gazette*

## ICE! ICE! ICE!

TENNESSEE'S early Euro-American settlers, the rivers were also a critical source of power to support a new nation's industry and commerce. From the 1790s to the 1920s, this section of Tenney Brook was a locus for an evolving industrial landscape, with its water impounded by a dam that supplied power for a series of mills, a tannery, and a commercial ice harvesting business. Although largely gone today, hydro-powered industrial landscapes were integral components of Vermont's functional economic and physical development. Today, with the removal of obsolete dams from this industrial period, stream restoration like that of Tenney Brook is a vital part of restoring clean water and healthy natural habitat for Native people and all Vermonters, now and into the future.

## 1850s

By the mid-1850s, Thaddeus Dunklee's sons, George and Benjamin Dunklee, had constructed an ice house on the bank of Tenney Brook, harvesting ice from the dammed pond that by this era was locally known as Dunklee Pond. Prior to refrigeration, ice harvesting was a crucial industry in Vermont, with hand-sawn blocks of ice harvested from area ponds in the winter and stored for commercial sale. Ice was commonly shipped from Rutland via the burgeoning network of rail lines to urban areas along the Eastern Seaboard and to the Southern United States, with ice harvests also sent via ship to the West Indies, Havana, and other far-flung equatorial destinations.

## 1920s

With the advent of modern refrigeration, commercial ice harvesting waned. In 1925, Dunklee's Ice House was demolished, leaving Dunklee Pond and its stone dam as the last surviving remnant of the city's multifacted industrial era. By the 1930s, Dunklee Pond had evolved into an informal recreational site, with the industrial buildings and operations of the eighteenth and nineteenth centuries ceding to swimming, skating, and hockey on the pond. Dunklee Pond Dam remained in place through the twentieth century, impounding the waters of Tenney Brook and standing as the site's last linkage to an intensive industrial past.

### Dunklee Pond Swimming July, 1920

*Source: The Stockbridge-Munsee Mohican Nation*

### Stockbridge-Munsee Mohican Nation

(see www.mohican.com) was honored to consult on their ancestral lands and be part of restoration. Thank you to the landowners, community, and the City of Rutland for supporting this project and to the following funders who contributed to its success.

## VNRC

VERMONT NATURE RESOURCES COUNCIL

## VRC

VERMONT RECREATION COUNCIL

## STOCKBRIDGE-MUNSEE MOHICAN NATION

VERMONT





# Pelletier Dam, Castleton



North Breton Brook - Pelletier Dam, March 2022



Post Dam Removal - North Breton Brook, October 2022



# Connolly Pond Dam, Shrewsbury





# Cross Brothers Dam, Northfield





# Cross Brothers Dam, Northfield



Before



After



# Rouleau Pond Dam, Williamstown





# Rouleau Pond Dam, Williamstown

STATE OF VERMONT

AGENCY OF NATURAL RESOURCES

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## 10 V.S.A §1095 DAM ORDER

|                        |  |
|------------------------|--|
| Owner:                 | David Traczyk and Linda Archambault                            |
| Dam Name:              | Rouleau Dam  |
| Dam ID Number:         | 244.02   |
| Hazard Classification: | SIGNIFICANT Hazard Potential                                   |
| Waterbody:             | Rouleau Pond, Stevens Branch Tributary<br>Winooski River Basin |
| Town:                  | Williamstown   |



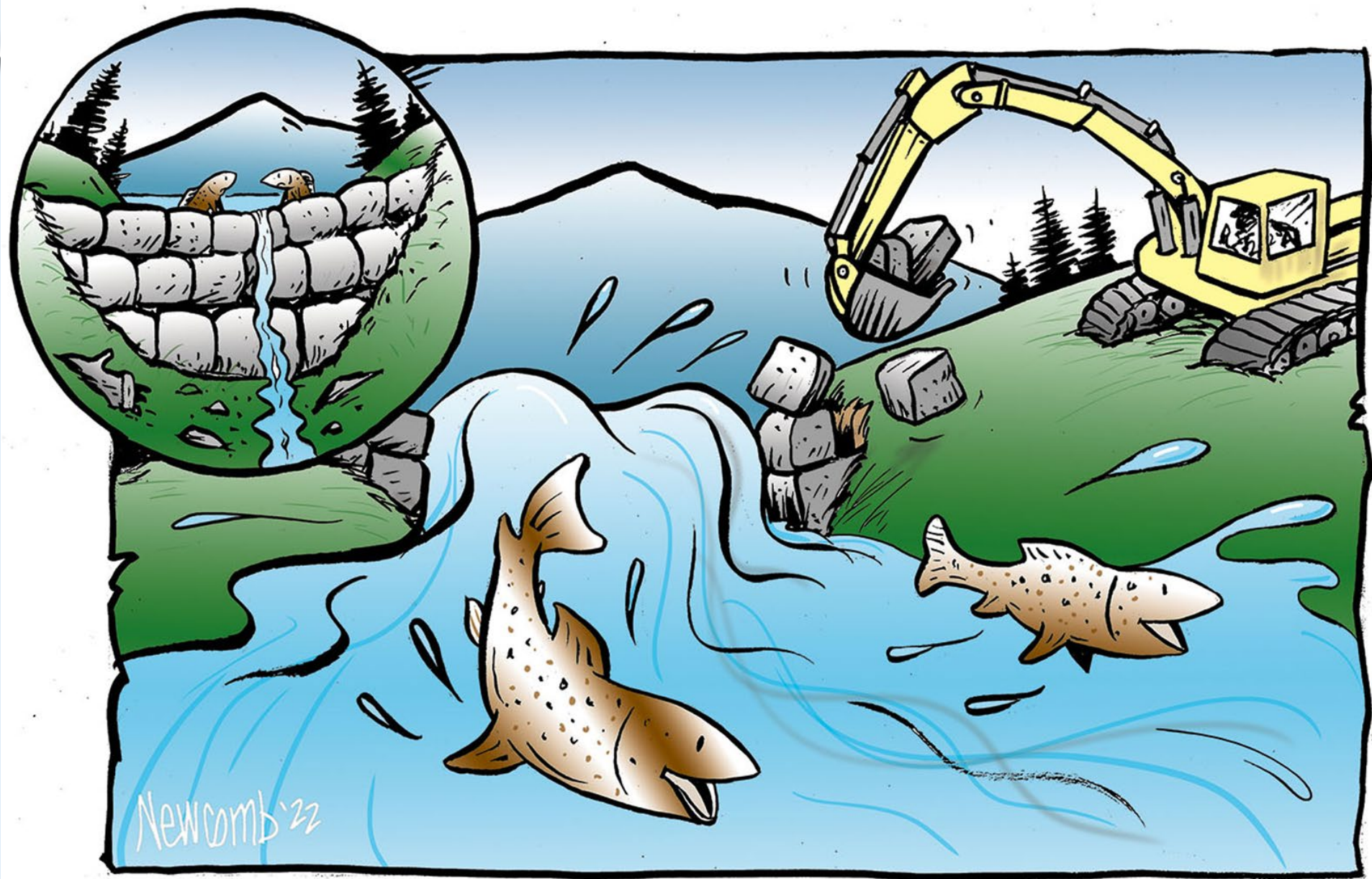


# Dam Removal Outcomes

- Reconnected rivers allows for increased species diversity and habitat
- Improves community and climate resilience
- Provides public safety and removes liability
- Improves water quality
- Improves recreational opportunities
- Provides community outreach and education
- Provide support for watershed organizations







**FREE VERMONT RIVERS!**