Navigating the Complex Landscape of Project Funding

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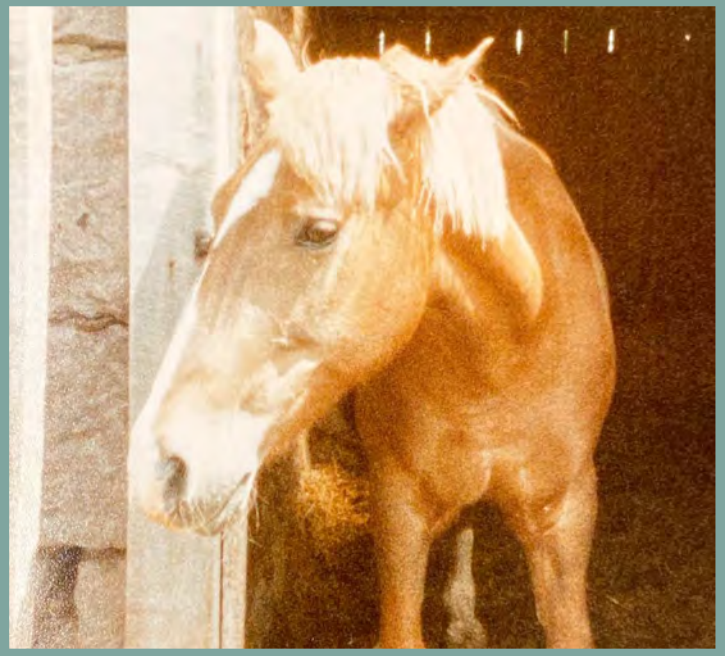
FRIENDS OF THE Nipmuc

Clean Water. Healthy Habitats. Resilient Communities.
Connecticut River Conservancy

How it Started



How it Went

7 Years + 24 grants = 2 barriers removed

1	Year	Funder/Program	Purpose	Project	Amount
2	2020	USFWS	AOP & Planting	multiple	$180,000
3	2020	EBTJV	Dam Removal Implementation	Camp Wihakowi	$50,000
4	2020	LCBP via VNRC	Dam Removal Implementation	Camp Wihakowi	$50,050
5	2021	USFWS via WNRCD	AOP Scoping	multiple	$2,500
6	2021	LCBP	Education & Outreach	Signs, access monitoring program	$9,976
7	2023	LCBP	Culvert Replacement Implementation	Lockwood Brook	$150,000
8	2023	LCBP via VNRC	Dam Removal Final Design	Stevens Branch	$30,000
9	2023	USFS via FMR	Culvert Replacement Implementation	Lockwood Brook	$113,321.24
10	2023	USFWS via WNRCD	Culvert Replacement Implementation	Lockwood Brook	$143,065.73
11	2023	USFWS via FMR	Culvert Replacement Implementation	Lockwood Brook	$105,456.03
12	2024	LCBP	AOP	Dam and culvert design	$223,000
13	2024	LCBP	Culvert Replacement Implementation	Baptist St	$300,000
14	2018	VFWD State Wildlife Grant	Dam Removal Preliminary Design	Camp Wihakowi	$38,462
15	2018	DEC ERP	Dam Removal Final Design	Camp Wihakowi	$24,042
16	2019	VFWD State Wildlife Grant	Dam Removal Preliminary Design	Brooklyn Street	$30,769
17	2021	VFWD Habitat Stamp	Dam Removal Preliminary Design	Brooklyn Street	$12,275
18	2020	DEC ERP	Dam Removal Implementation	Camp Wihakowi	$315,304
19	2021	DEC ERP	Dam Removal Preliminary Design	Jockey Hollow & Habbep	$69,300
20	2022	WUV Dam Removal	Dam Removal Final Design	Three dams on Stevens Branch	$75,295
21	2023	Vermont Fish & Wildlife	AOP	multiple	$30,000
22	2023	WUV Dam Removal	Dam Removal Implementation	Jockey Hollow	$150,000
23	2020	TNC VT	Dam Removal Implementation	Camp Wihakowi	$30,000
24	2024	VCF	Dam Removal Feasibility	Old Batchelder	$9,180
25	2023	Town of Fayston	Culvert Implementation	Lockwood Brook	$7,500.00

Why?

Phases funded separately

- Scoping/Identification
- Development
- Feasibility/Preliminary Design
- Final Design
- Implementation

Funders' goals

- Manage their risk
- Support many organizations
- Have impact across their territory

Barrier Removal is Costly

Dam Removal

- Feasibility/Preliminary Design: $10,000-$20,000
- Final Design: $70,000-$110,000
- Implementation: $50,000-$1,500,000

Culvert Replacement

- Final Design: $50,000 +
- Implementation: $100,000-$1,000,000

Lake Champlain Basin $ Sources

Federal

- US Fish & Wildlife Service
- US Forest Service
- Lake Champlain Basin Program

State

- Watersheds United Vermont
- Clean Water Service Providers
- Vermont Fish & Wildlife Dept.
- Vermont Emergency Management

Private

- The Nature Conservancy
- Vermont Community Foundation
- Donations

Barrier Removal Funding for VT's East Coast

Where's the money, Lebowski?

Connecticut River Watershed $ Sources

- US Fish & Wildlife: *National Fish Passage Program, EBTJV, Conte Refuge*
- Other Feds: USACE, *NOAA, FEMA, Forest Service, USDA/NRCS*
- State of VT / WUV Dam Removal Design & Implementation BG
- State of VT / WUV Design & Implementation BG (early stage only)
- VT Fish & Wildlife: *Habitat Stamp, State Wildlife & Watershed**
- Foundations: VT Community, NFWF (LISFF/NEFR), NHCF MEF, other
- Other: *Towns/ARPA, TU/EAS, 1% Planet/PAT/CA, Members/donors*

Why Remove Dams?

More than 90,000 inventoried dams block rivers and streams of the United States. While many still serve public or private needs for flood risk management, water supply, industry/agriculture, or hydropower, many others have become uneconomical or obsolete. With the average age of American dams at 60 years old, many dams, regardless of functionality, are in desperate need of attention for repairs or upgrades to meet safety standards. Selective removal of dams, particularly those that have become outdated or unsafe, can be an economical and effective solution for eliminating dam-owner liability, improving river health, enhancing public safety and quality of life, and boosting economic development and recreational opportunities.

What's Funded?

The Infrastructure Investment and Jobs Act (IIJA) is funding several federal programs to address our nation's dam infrastructure and remove obsolete dams to restore the health of our nation's rivers. This funding requires the consent of the dam owner to remove a dam and excludes federal hydropower dams. Of those dams that are eligible, prioritization is for projects that pose a significant public safety hazard and those whose removal will provide significant ecological value.

Dam Removal

NOAA - Community Based Restoration Grant Program — $400 million

The National Oceanic and Atmospheric Administration (NOAA) provides funding to restore fish passage through the removal of dams (in-stream barriers). NOAA distributes funds through competitive grant cycles. Eligibility: institution of higher education, non-profit, commercial (for-profit) organizations, US territories, state or local governments, and Indian Tribes. www.fisheries.noaa.gov/grant/restoring-fish-passage-through-barrier-removal-grants

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

The National Fish Passage Program of the U.S. Fish and Wildlife Services (USFWS) works with communities to restore rivers and conserve aquatic resources by removing dams and other in-stream barriers. USFWS accepts proposals year-round. Eligibility: institution of higher education, non-profit, commercial (for profit) organizations, U.S. territories, state or local governments, Indian Tribes, and individuals. www.fws.gov/program/national-fish-passage

FEMA - National Dam Safety Program - Dam Removal — $75 million

The Federal Emergency Management Agency's (FEMA) National Dam Safety Program provides grants to State Dam Safety Agencies to reduce the public safety risks associated with dams. FEMA funds the removal of eligible dams through the High Hazard Potential Dam Rehabilitation Grant Program. Proposals must be submitted through a State Administrative Agency. Eligibility: States or territories with a dam safety program. Non-profits and non-federal governments are eligible to be sub-recipients. FEMA received an additional $725 million through the IIJA for dam safety, which can also include dam removal. www.fema.gov/emergency-managers/risk-management/dam-safety/rehabilitation-high-hazard-potential-dams

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

The U.S. Army Corps of Engineers (USACE) provides funding for dam removal through the Aquatic Ecosystem Restoration Program. Proposals are accepted on a rolling basis by contacting your local USACE office. There is no cost share requirement for USACE's IIJA dam removal funds. Eligibility: Non-federal entities can request USACE assistance under the 206 program and enter into a cooperative agreement. www.usace.army.mil/Missions/Locations

US Forest Service — $10 million

The IIJA provided funding for the Forest Service to remove non-hydropower federal dams and for providing technical assistance. Funds may be transferred to USFWS and National Marine Fisheries Service (NMFS) for the costs of carrying out their responsibilities under the Endangered Species Act. Eligibility: The U.S. Forest Service and non-profits assisting the Forest Service with executing this work. No cost-share required. fs.usda.gov/science-technology/fish-wildlife-plants/fisheries-program

Number of Grants
1 to 8

On average 4

Dam Removal Projects
2014-2024

Connecticut River Conservancy

Total Impact:

24 Dams Removed | **6** Culvert Upgrades | **437** Miles of Habitat Restored

2024

Dams: 3
Culverts: 1
Miles: 13

Blake Higgins Dam

The remnant 90-foot-long and 7-foot-high concrete Blake Higgins dam on the Saxtons River in Bellows Falls/Westminster Vermont was removed to increase sea lamprey spawning habitat, improve water quality and flood resiliency. The project also includes a new river access for recreational use. Our project partners/funders included the dam owner and neighbors, State of Vermont Agency of Natural Resources, US Fish & Wildlife Service, Vermont River Conservancy, The Conservation Alliance, Fidelity, American Rivers, and Bingham Trust.

Before removal

After removal

Kimball Brook

This long-abandoned dam in North Statford, NH was on a direct tributary to the mainstem Connecticut River which supports native, wild brook trout and other cold water species. Removal of the old concrete dam and trapped sediment has had immediate positive impacts for the fish and other aquatic organisms in Kimball Brook.

CRC's project partners include the private dam owner, US Fish and Wildlife Service, NH Charitable Foundation, Fidelity, American Rivers, and Bingham Trust as well as a local engineering firm, construction company, and trucking contractors.

Dudleyville Pond Dam

Dudleyville Pond Dam, dating back to the 1800s, was removed. Known locally in Shutesbury MA as Brown's Dam, it had been a family fixture since 1951. Despite decades of care by the Brown family, it was deemed a safety hazard due to modern standards and environmental changes. The dam's removal, expedited by an emergency order, will transform the pond into a stream, benefiting local wildlife and improving safety. Partners who were involved with this project were MA Division of Ecological Restoration, SumCo Eco-Contracting, Stantec Engineering Shutesbury Conservation Commission, USFWS, Trout Unlimited, and Connecticut River Atlantic Salmon Association.

Nulhegan River Culvert

CRC and the U.S. Fish & Wildlife Services collaborated to complete the Yellow Branch culvert replacement and bridge installation project on the Nulhegan River in Brunswick, VT. The objective was to remove the undersized old culvert which had been blocking aquatic organism passage and natural stream function within the Conte Refuge's native brook trout habitat. The new bridge connects road access while restoring the natural stream and fish habitat, and improving flood resiliency.

2023

Dams: 1
Culverts: 1
Miles: 2

Beaver Brook Dam

Connecticut River Conservancy (CRC) worked with a private dam owner, the Town of Wilmington, the State of Vermont, and the U.S. Fish & Wildlife Service to remove an old mill dam and upgrade a town owned culvert to a new bridge. This project will restore water quality, reconnect native Brook trout habitat, and improve flood resiliency in Beaver Brook (a tributary to the Deerfield River in the town of Wilmington).

So many sources…

How to choose?

Primary Benefit of Project

- Aquatic Organism Passage
  - Species
  - Miles
  - USGS Persistence Rating
- Flood Resilience
- Clean Water
  - $/kg P
  - Enhancement
- Habitat

Location

- National Forest
- Trout Patch
- VFWD Priority Subwatershed
- Disadvantaged Community

Other Factors

- Dam's Hazard Condition
- Ownership: State, Town, Private
- Historic Structure

Questions?

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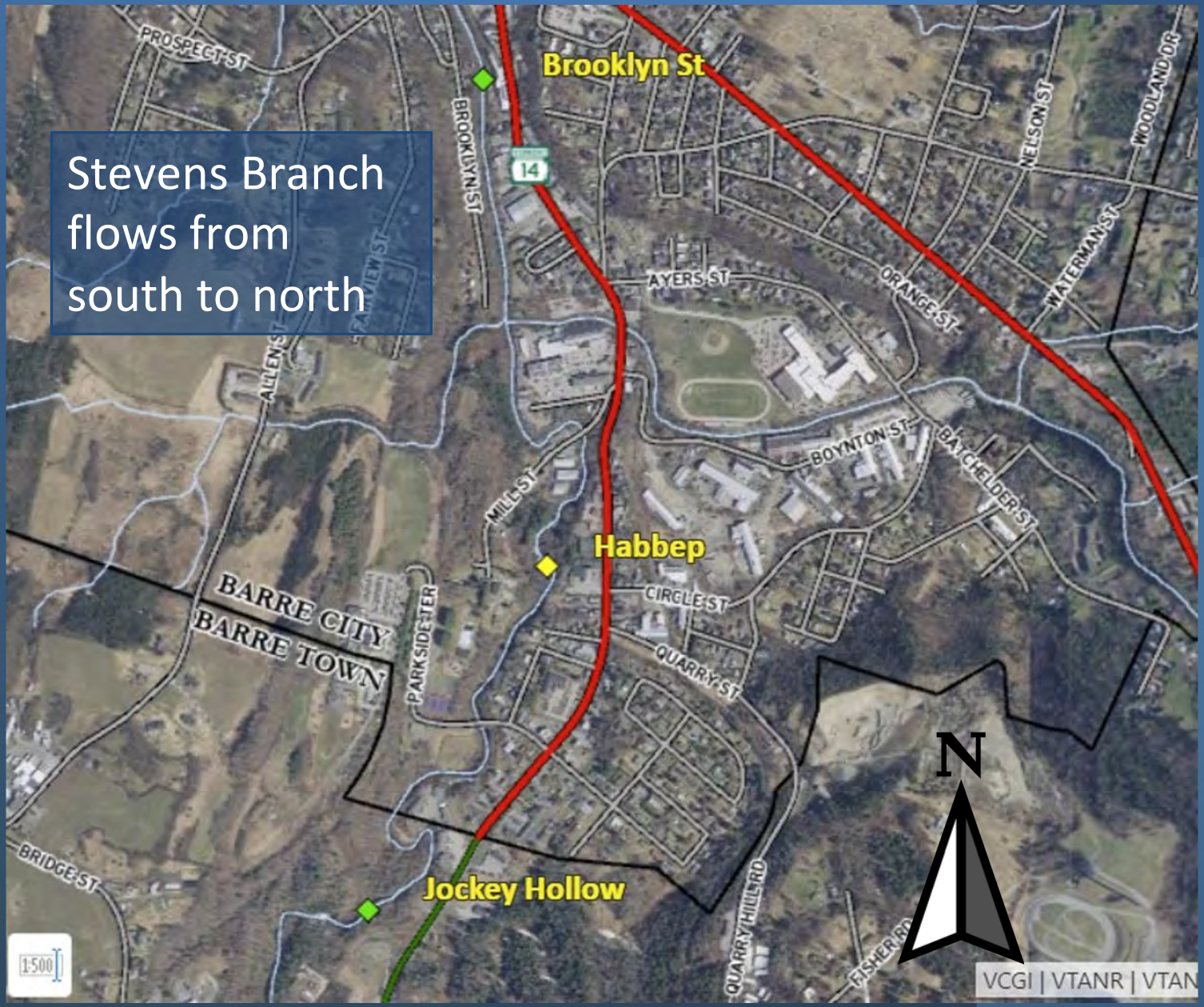
Camp Wihakowi Dam
Before Removal


Stevens Branch flows from south to north
Brooklyn St
Habbep
Jockey Hollow
BARRE CITY
BARRE TOWN
PROSPECT ST
BROOKLYN ST
AYERS ST
ORANGE ST
NELSON ST
WOODLAND DR
WATERMAN ST
ALLEN ST
MILL ST
BOYNTON ST
BATCHELDER ST
CIRCLE ST
QUARRY ST
PARKSIDE TER
BRIDGE ST
QUARRY HILL RD
FISHER RD
14
N
1:500
VCGI | VTANR | VTAN

Jockey Hollow Dam

Habbep Dam

Brooklyn Street Dam

East Calais Mill Dam

Clarks Sawmill Dam, Cabot

Clarks Sawmill Dam, Cabot

Old Batchelder Dam, Plainfield

Camp Wihakowi Dam After Removal