

# Dam Removal: The Evolution of an American Movement to Restore Rivers

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DAM REMOVAL EUROPE  
SEPTEMBER 25, 2017

 @SingerMcCombs



# Rivers connect us and *we connect rivers*

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James River, VA | VA Dept. of Conservation and Recreation



**American Rivers**  
*Rivers Connect Us®*

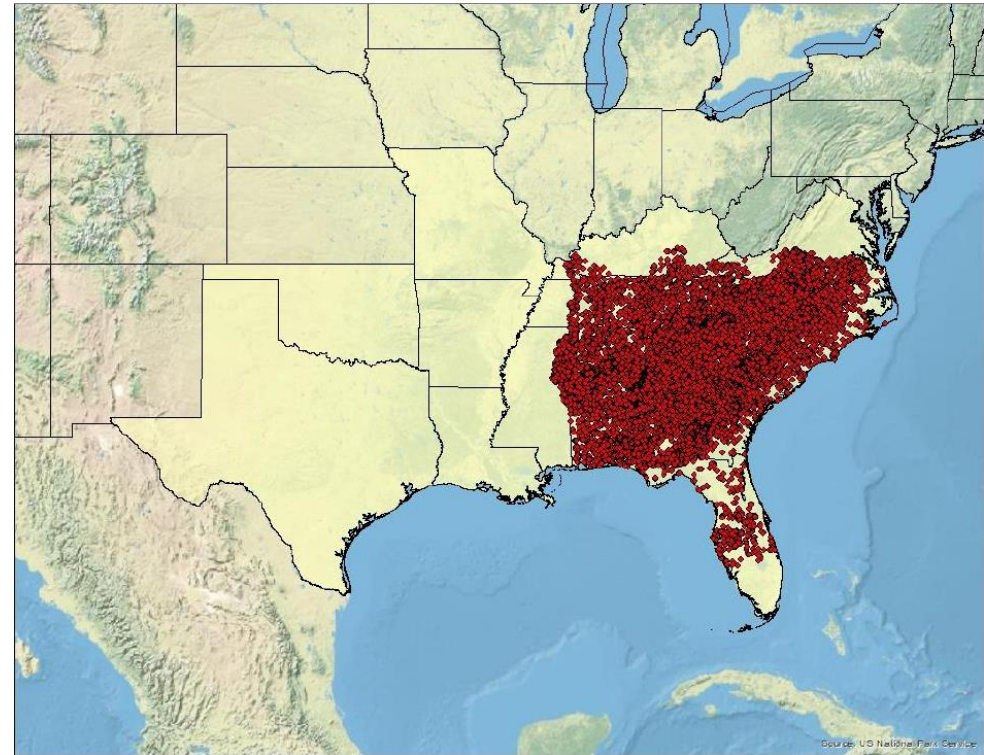
American Rivers protects  
wild rivers, restores damaged  
rivers, and conserves clean  
water for people and nature.

[www.AmericanRivers.org](http://www.AmericanRivers.org)



# A bit about me...

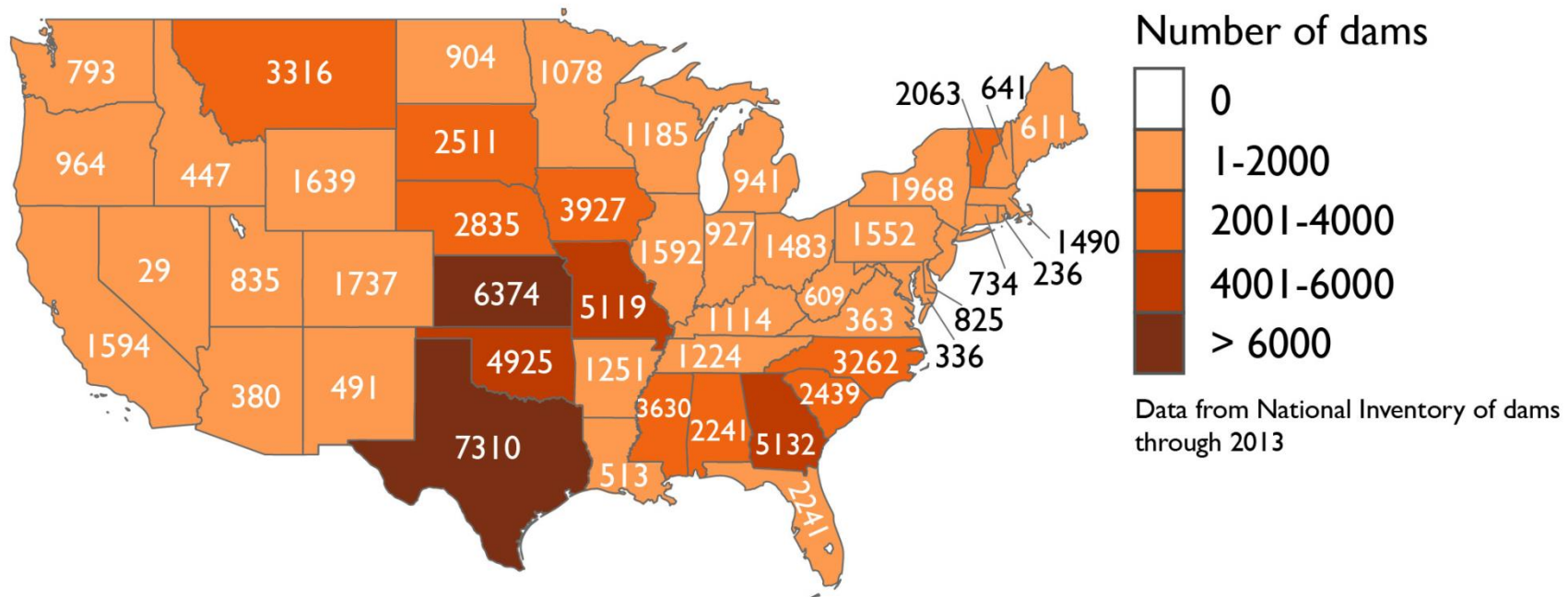
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# How many dams are there?

## 87,359 NID



+ 2.5 million NRCS + other non-regulated dams

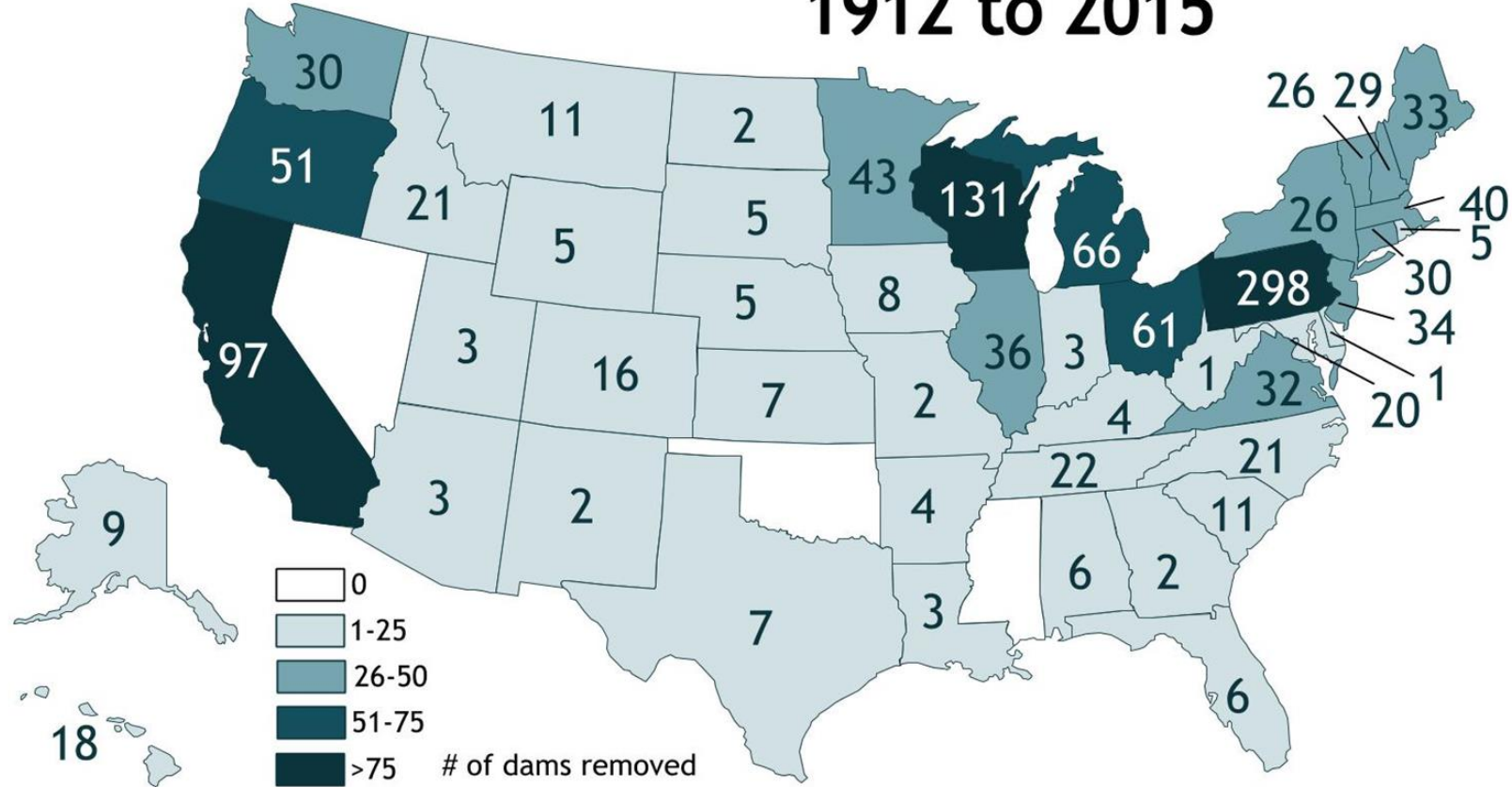
= MILLIONS OF DAMS





American Rivers  
Rivers Connect Us®

## Dam Removals by State 1912 to 2015



# On the agenda...

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- The beginning: history of the US dam removal movement
- Social marketing: making dam removal normal
- The Six Factors: building a programmatic dam removal movement





# A battle over dams begins almost as soon as they began to be built

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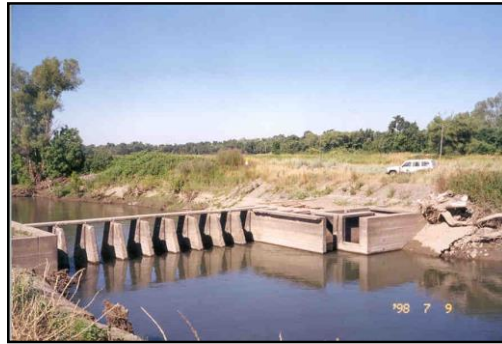
Lawsuits regarding the Billerica dam on the Concord River filed soon after built in 1710 and earliest fish passage laws were established



# Early dam removals in California

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California removes 47 dams between 1922-1998



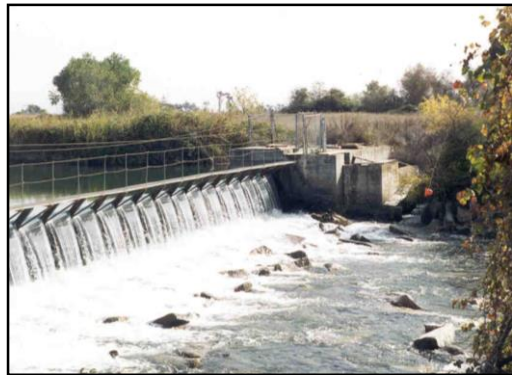
**McPherrin Dam**



**1998 - immediately following removal**



**2008 - 10yrs post removal**



**McGowan Dam**



**1998 - immediately following removal**



**2008 - 10yrs post removal**





# Dam removal began to slowly spread in 1980s and 90s

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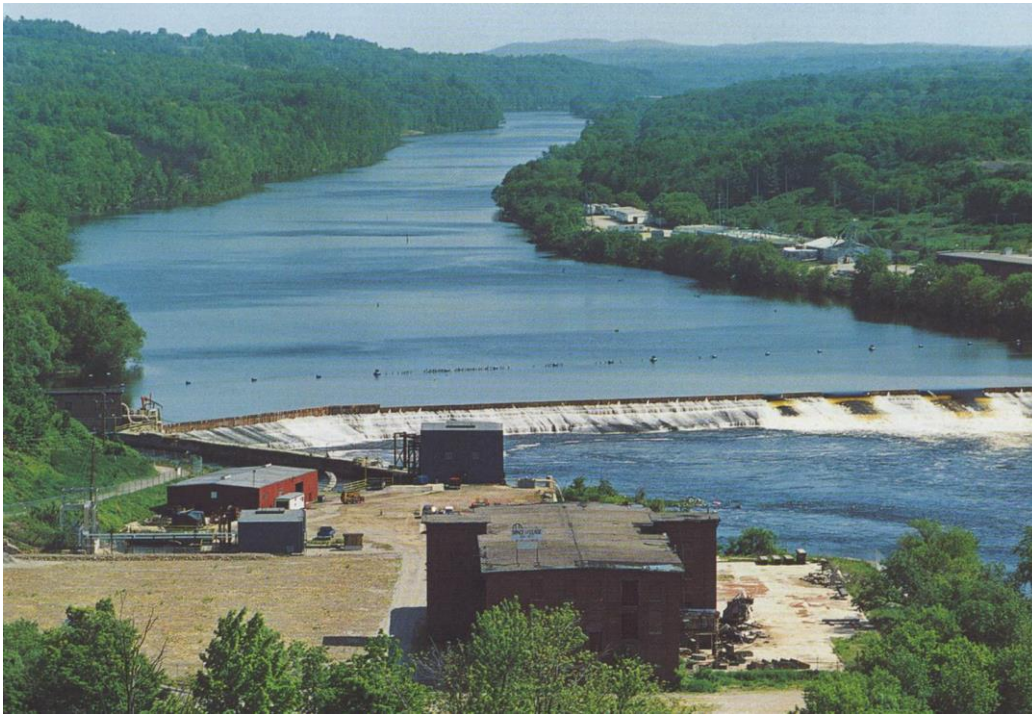
Wisconsin ramps up dam removal efforts for dam safety between 1982-1990s

Sec. of Interior Bruce Babbitt begins “sledgehammer” tour of dams across US. (1998)



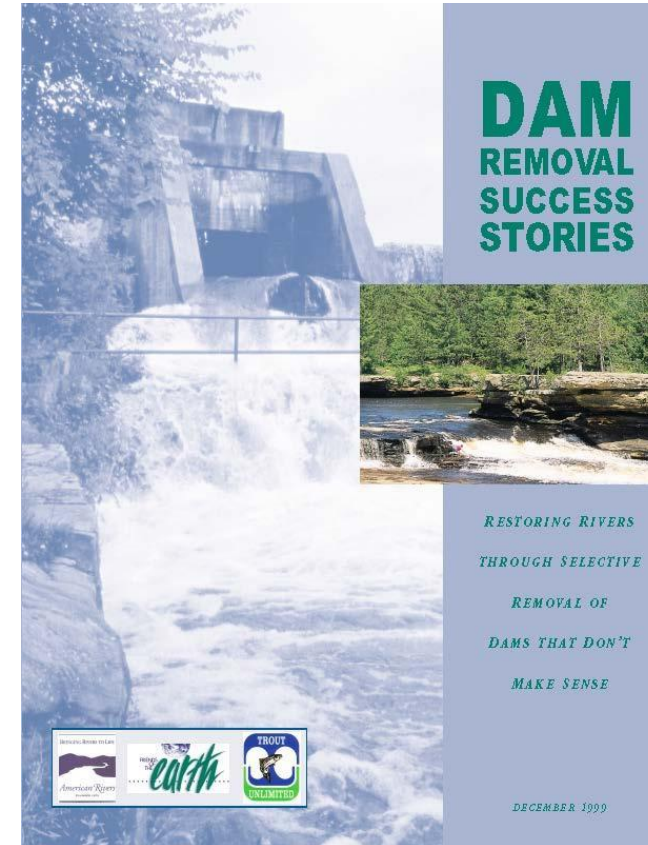
# Edwards Dam removal in Maine was the spark that ignited a movement

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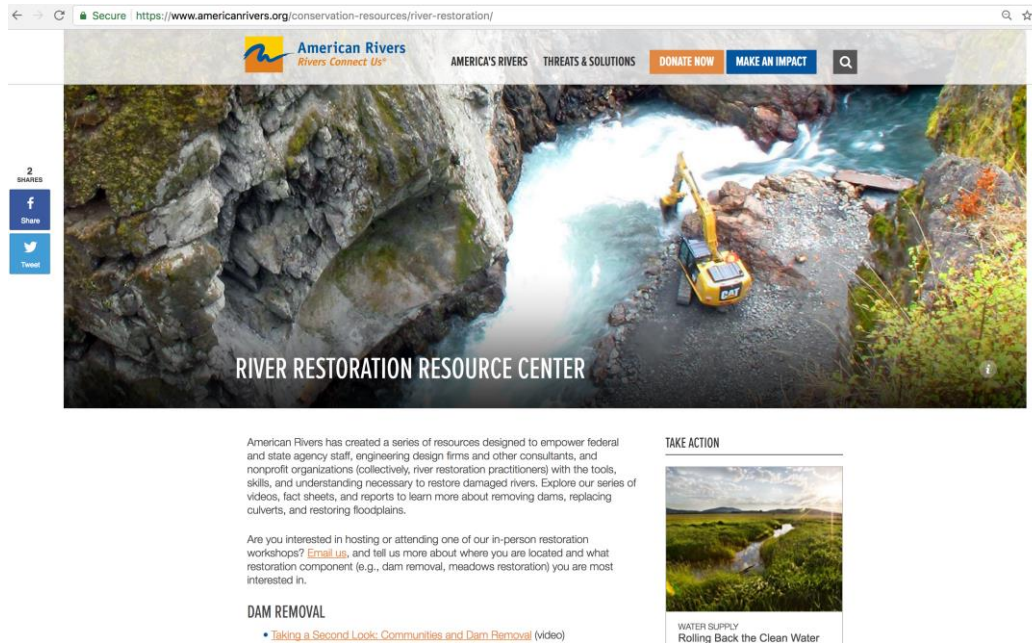


# American Rivers launched our dam removal program around the Edwards Dam removal





# We work to make dam removal “normal” throughout the country



The screenshot shows the American Rivers website's "River Restoration Resource Center" page. The header includes the American Rivers logo and navigation links: "AMERICA'S RIVERS", "THREATS & SOLUTIONS", "DONATE NOW", and "MAKE AN IMPACT". A large image of a yellow excavator working on a riverbank is featured. Below the image, the text "RIVER RESTORATION RESOURCE CENTER" is displayed. To the left of the main content, there are social media share buttons for Facebook and Twitter, and a "2 SHARES" indicator. The main content area contains text about the resources available and a "TAKE ACTION" section with a video thumbnail titled "Taking a Second Look: Communities and Dam Removal".

2 SHARES

[Share](#)

[Tweet](#)

**RIVER RESTORATION RESOURCE CENTER**


American Rivers has created a series of resources designed to empower federal and state agency staff, engineering design firms and other consultants, and nonprofit organizations (collectively, river restoration practitioners) with the tools, skills, and understanding necessary to restore damaged rivers. Explore our series of videos, fact sheets, and reports to learn more about removing dams, replacing culverts, and restoring floodplains.

Are you interested in hosting or attending one of our in-person restoration workshops? [Email Us](#), and tell us more about where you are located and what restoration component (e.g., dam removal, meadows restoration) you are most interested in.

**DAM REMOVAL**

- [Taking a Second Look: Communities and Dam Removal](#) (video)

**TAKE ACTION**

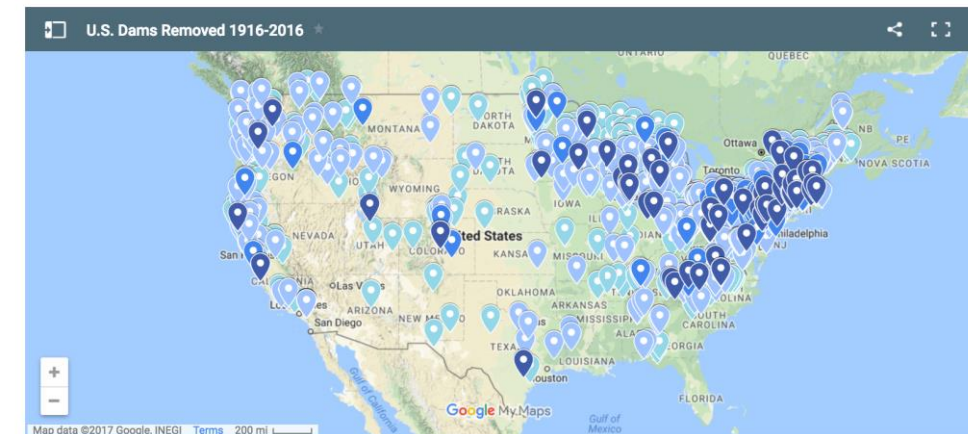


WATER SUPPLY  
Rolling Back the Clean Water

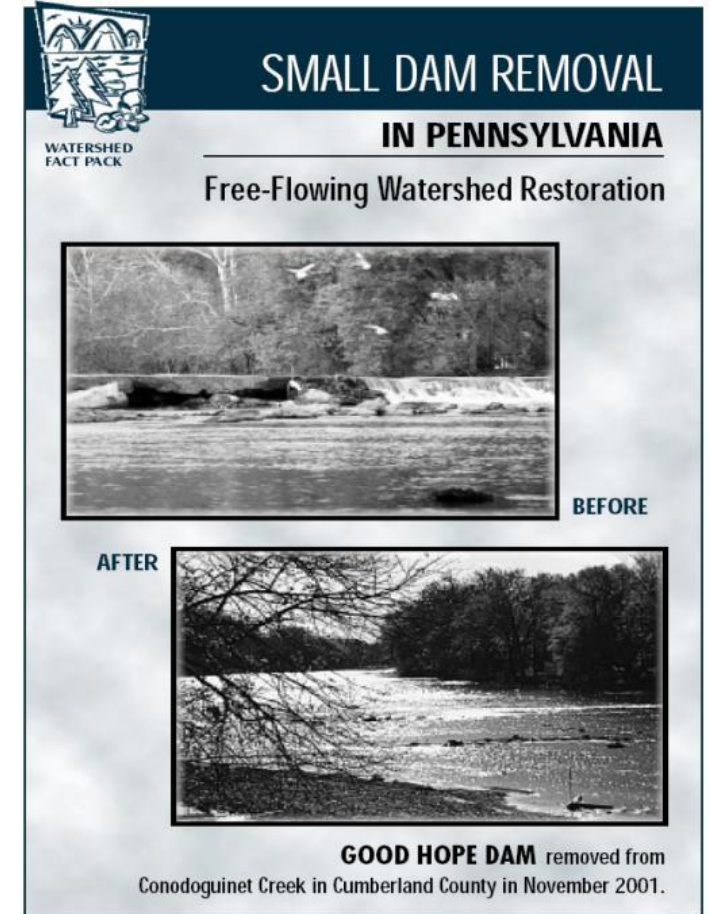
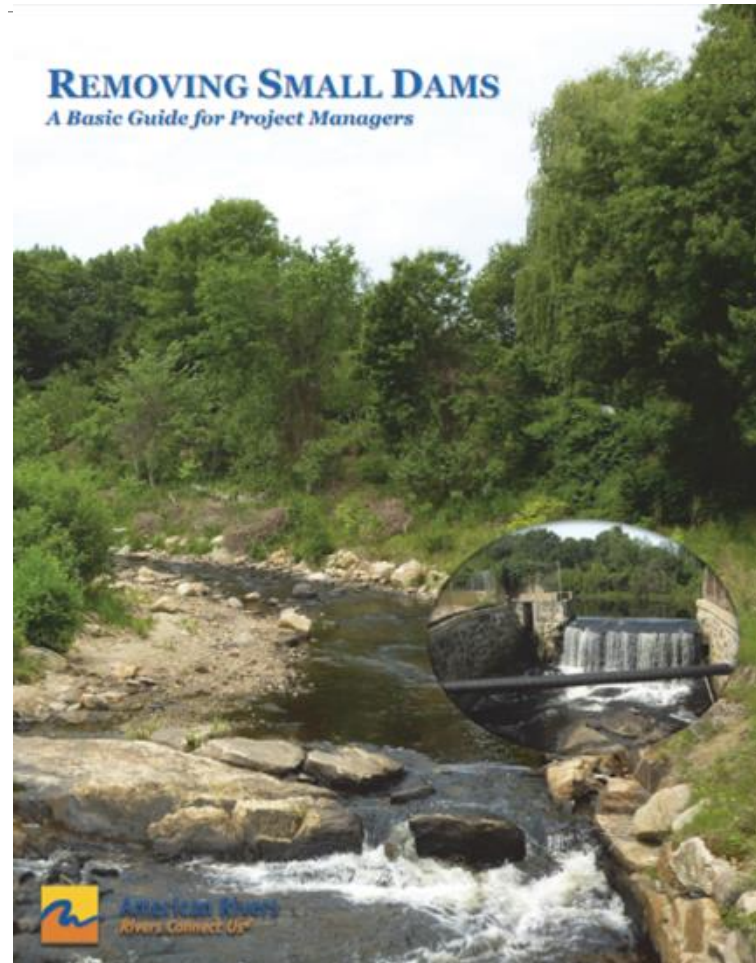
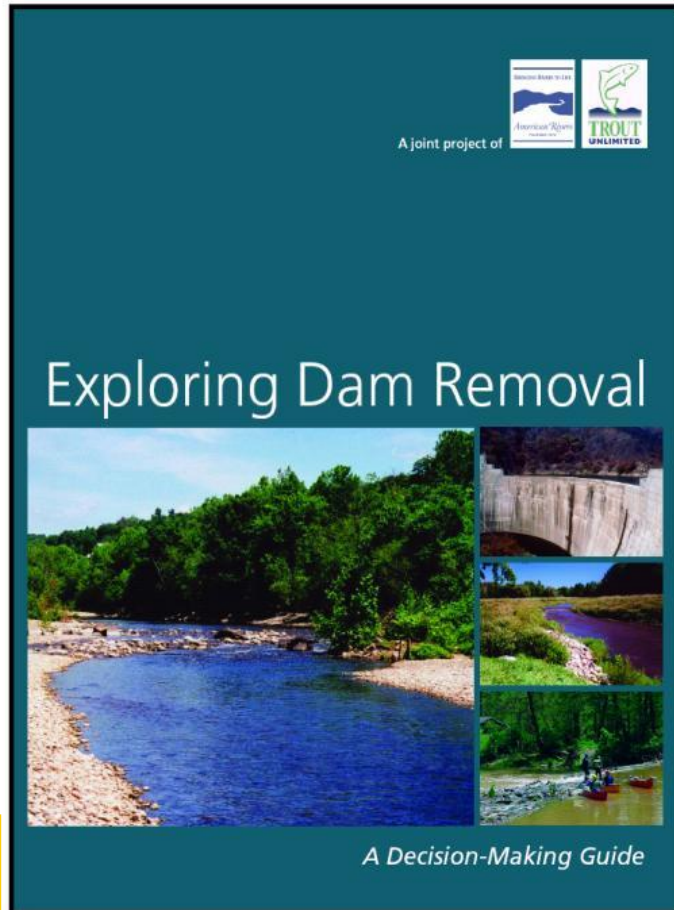
[AMERICA'S RIVERS](#)[THREATS & SOLUTIONS](#)[DONATE NOW](#)[MAKE AN IMPACT](#)

## MAP OF U.S. DAMS REMOVED SINCE 1916

While dams can benefit society, they also cause considerable harm to rivers. Dams have depleted fisheries, degraded river ecosystems, and altered recreational opportunities on nearly all of our nation's rivers. Today, many dams that were once at the epicenter of a community's livelihood are now old, unsafe or no longer serving their intended purposes. Learn how we're working to remove these dams and [restore our rivers to their natural free-flowing state](#).



# We work to make dam removal “normal” throughout the country





# We work to make dam removal “normal” throughout the country

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# We work to make dam removal “normal” throughout the country

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“A few years ago, the notion of taking a dam out of a river seemed ridiculous. American Rivers...helped move the idea from the laughable to the visionary to the pragmatic.”

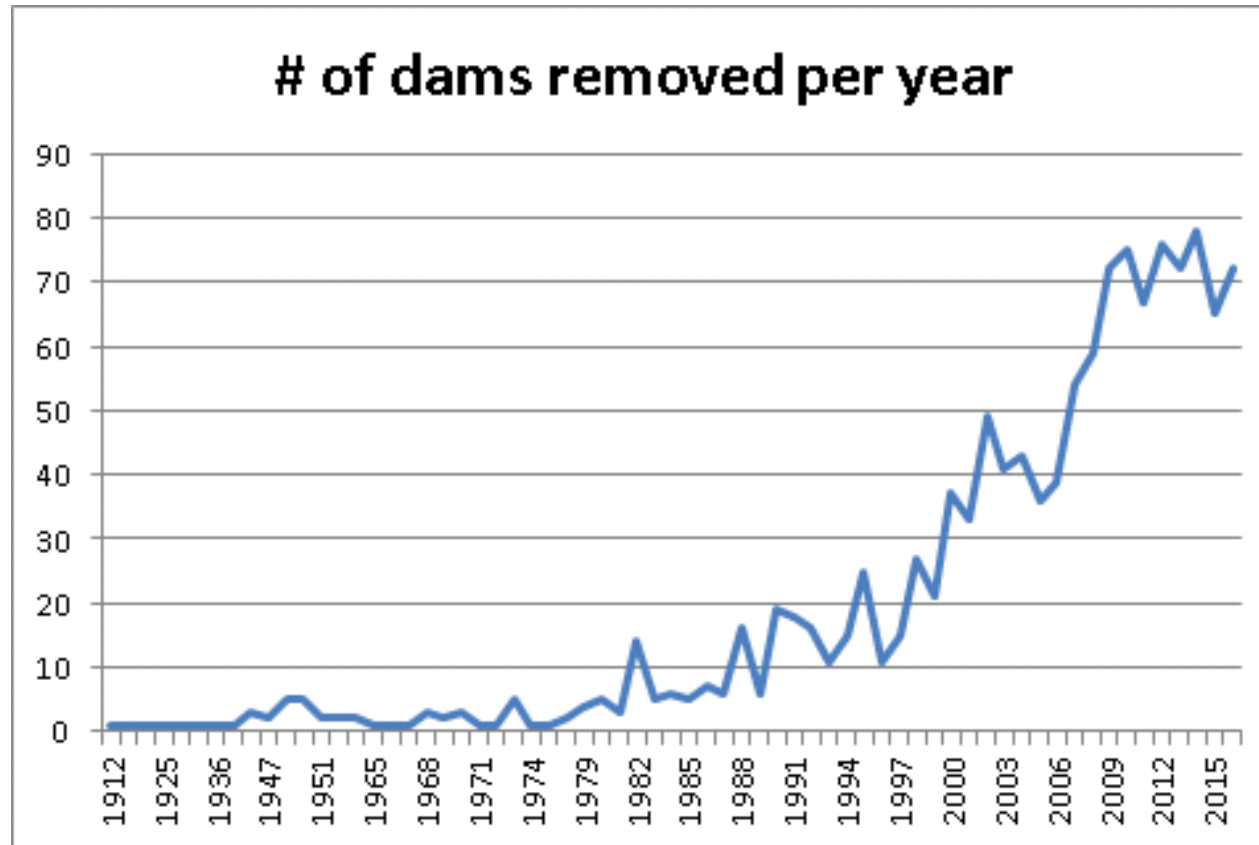
-The Turner Foundation

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# Removing barriers to removing dams



# 6 factors that build program capacity to complete projects

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# Overall

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Workshops

Presentations

Project Managers

Aquatic Connectivity Teams



# Leadership

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# Leadership

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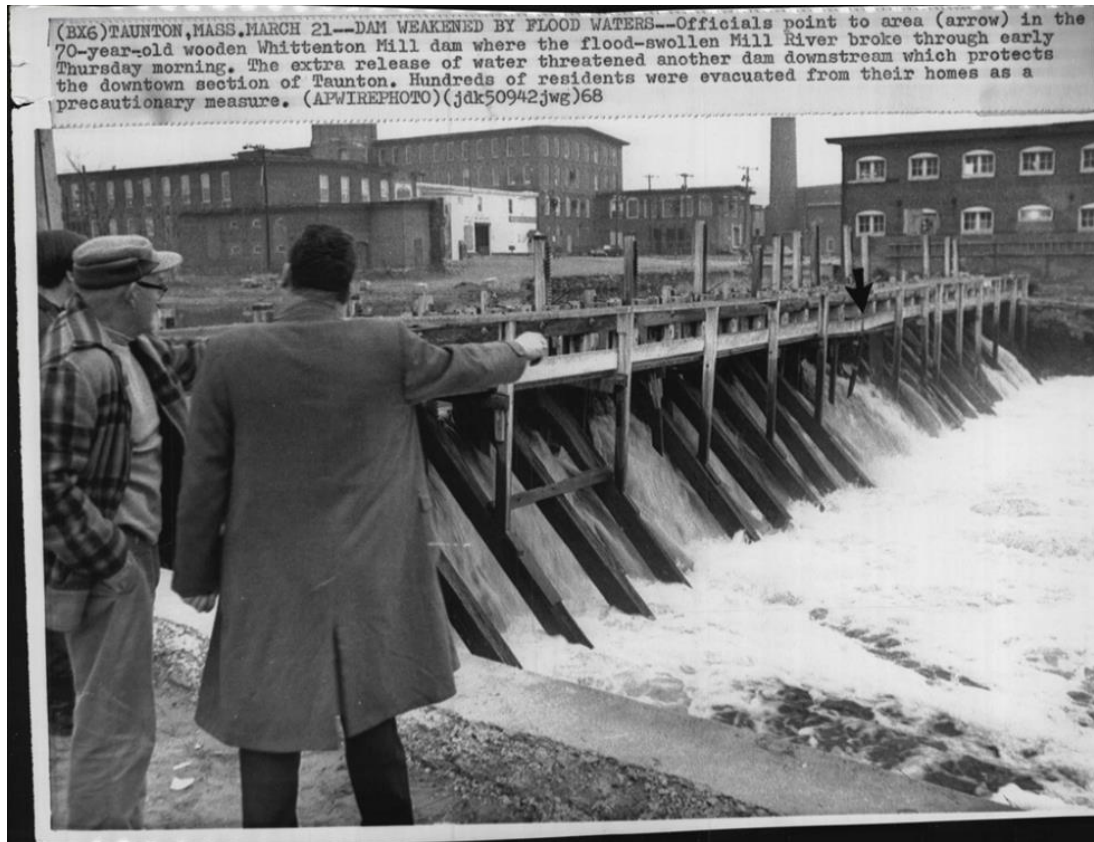
# Owner Incentives

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# Owner Incentives



# Funding

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# Funding

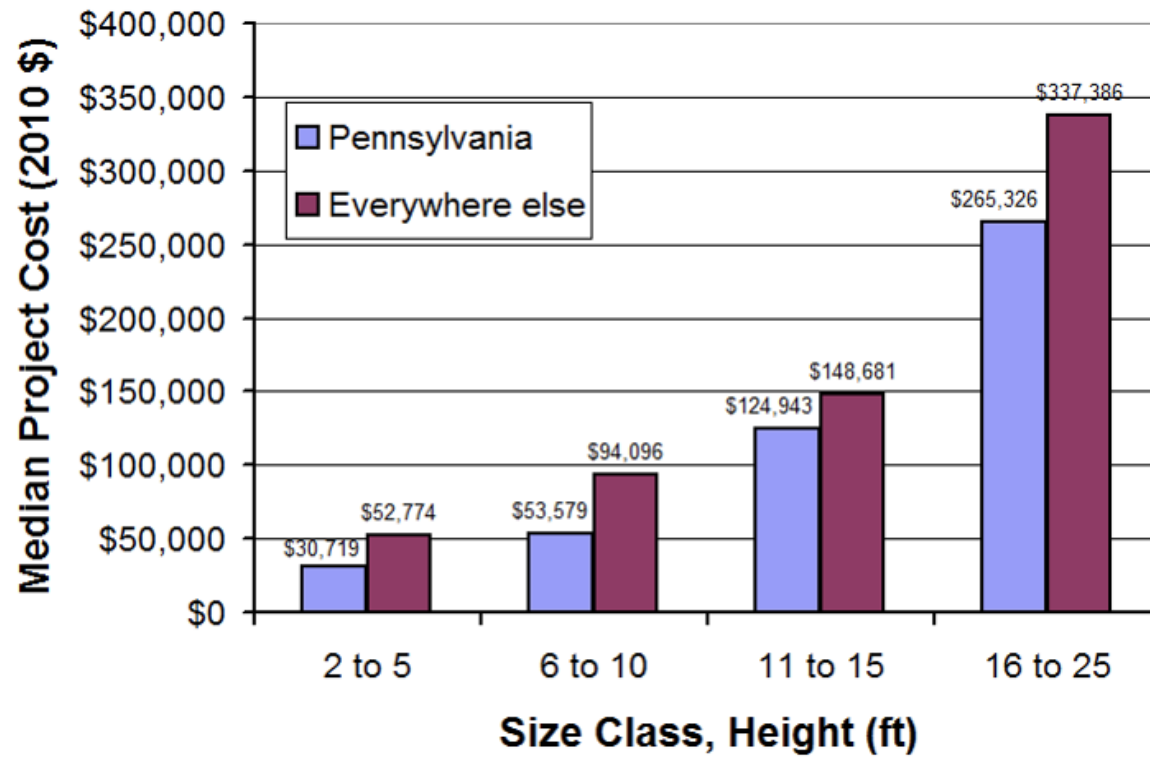
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- Federal and state government
- Foundations and nonprofits
- Stream Mitigation Program
- Environmental enforcement
- Private donors
- Dam owner



# Funding





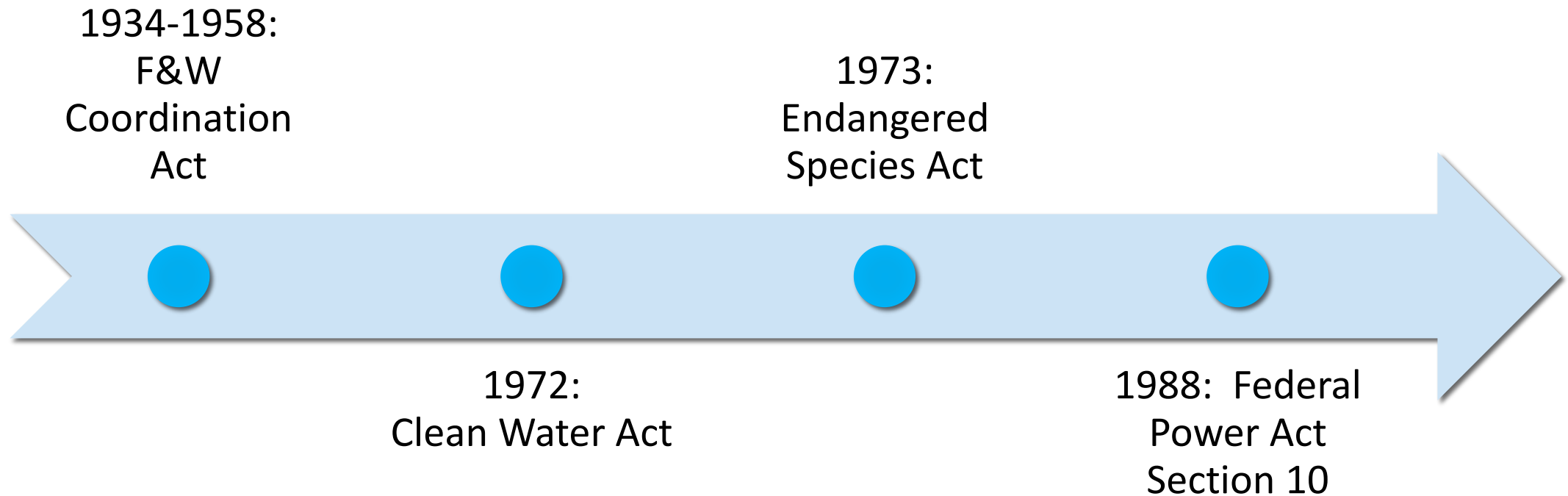
# Regulations

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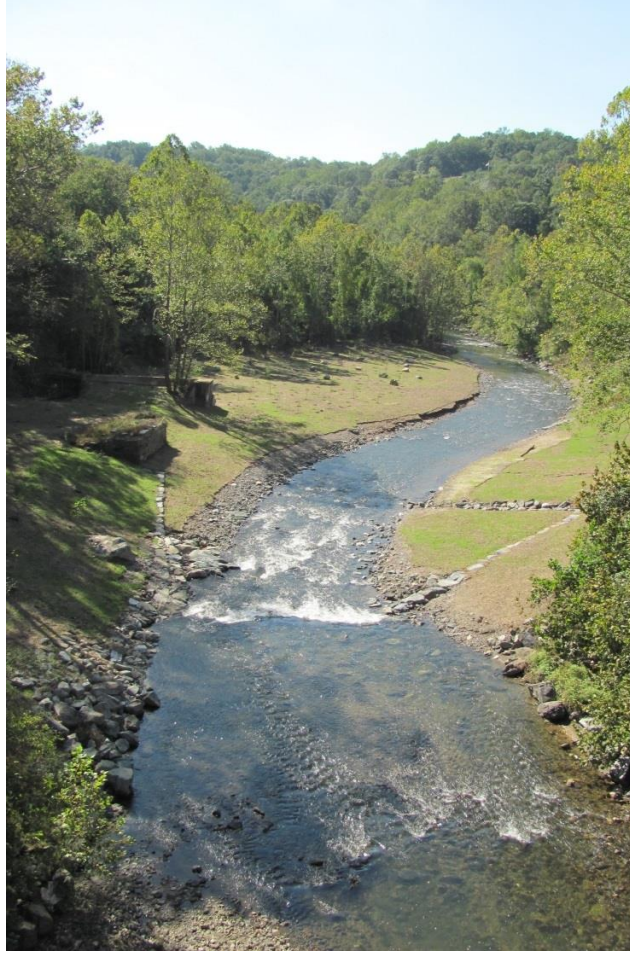
# Regulations: US historical context

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# Today regulators have leeway to permit short-term impacts for long-term benefits





# Project Managers

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# Project Managers



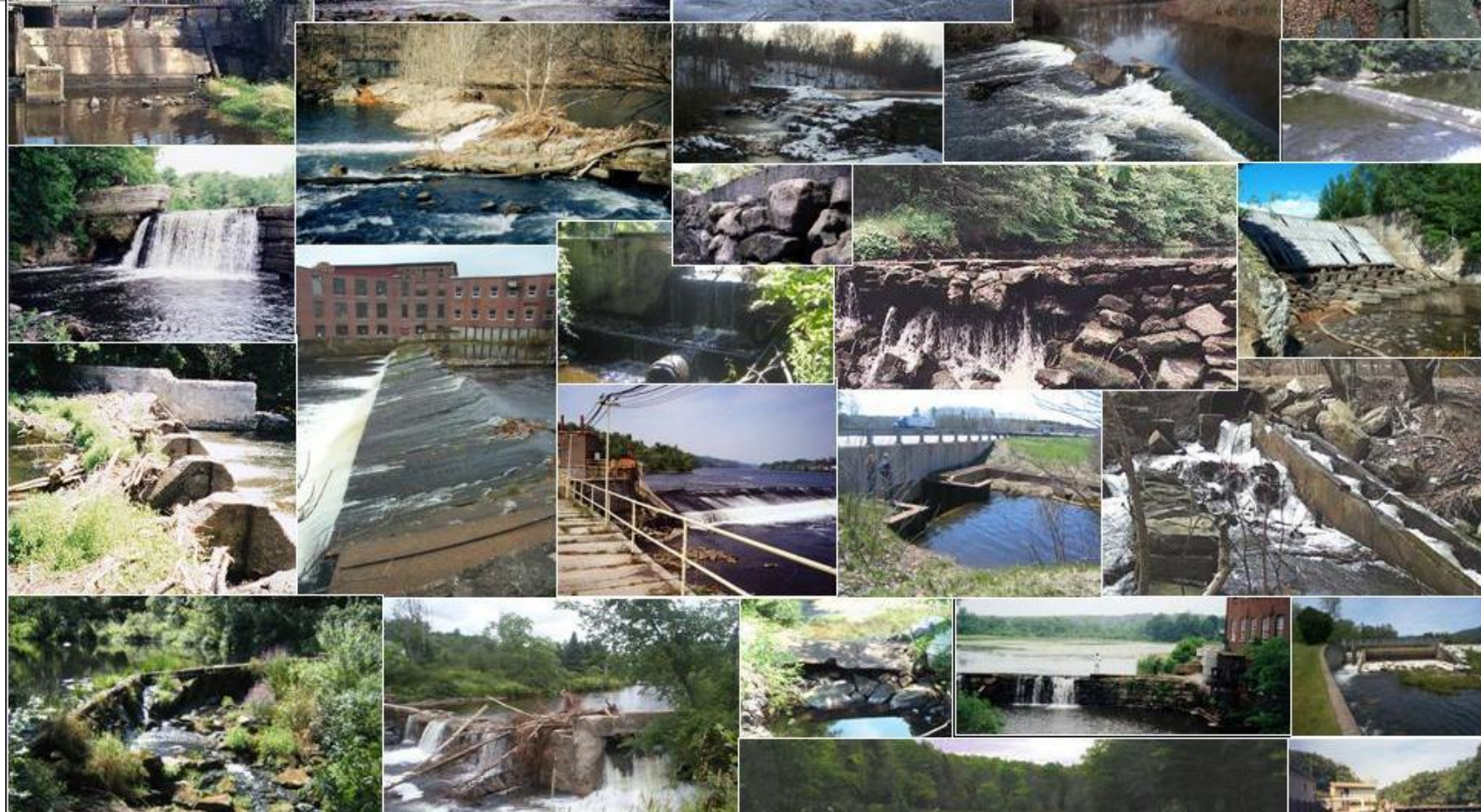


# Momentum





# Completed projects lead to more projects





# Shuford Dam Removal

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# Troy, NC dam removals

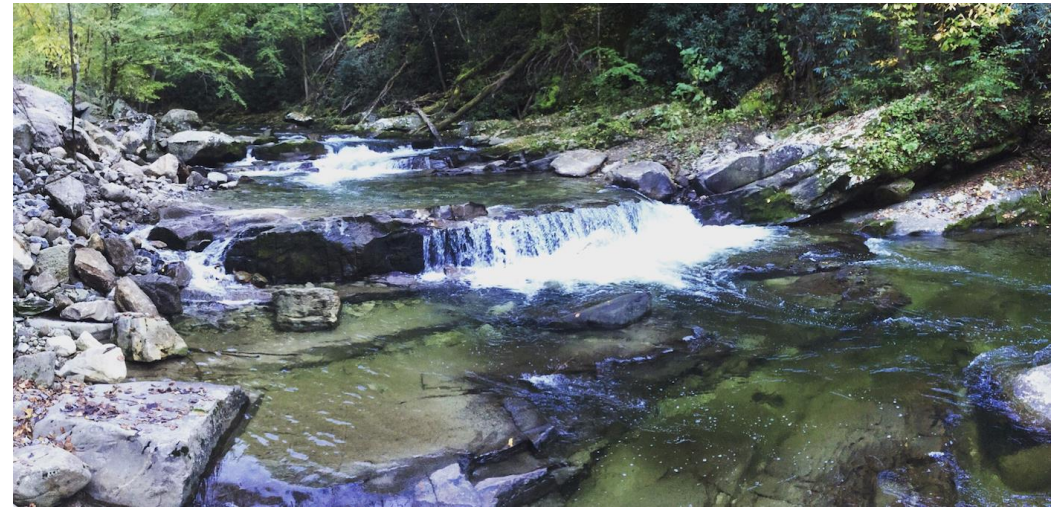
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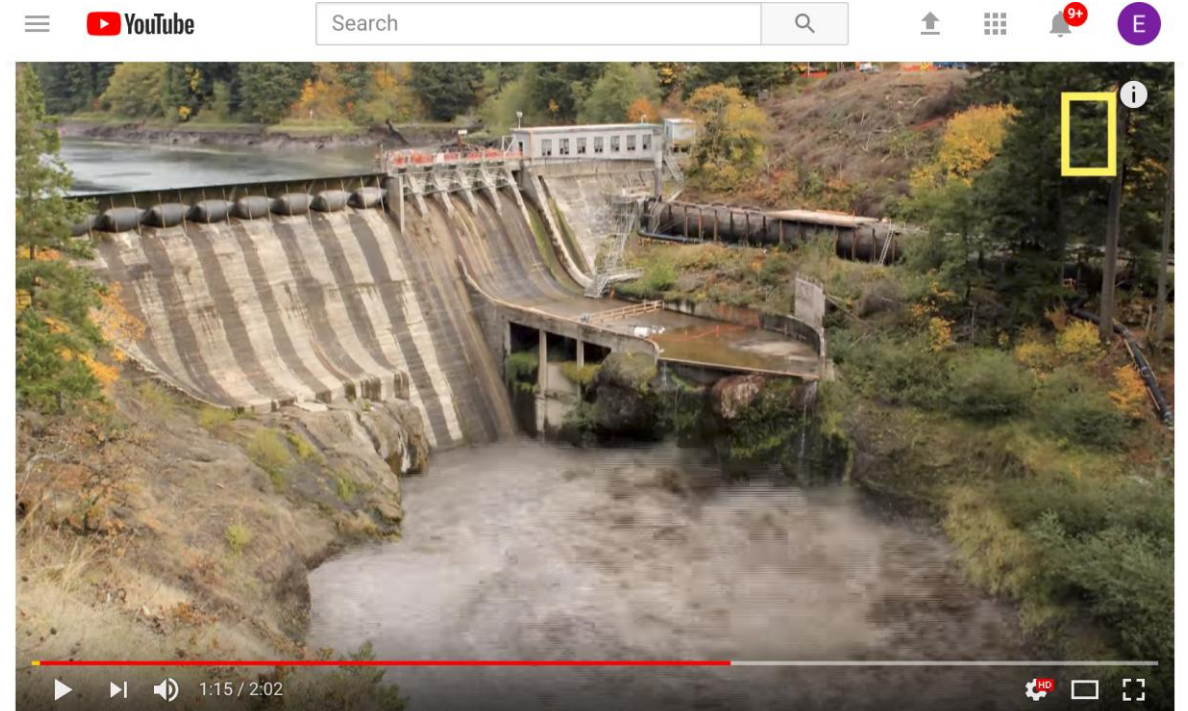
# Citico Creek dam removal

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# Condit Dam removal



# Elwha Dam removals

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Steve Ringman/AP/Press Association Images





# In summary...

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Thank you! Questions?  
Contact me at [emccombs@americanrivers.org](mailto:emccombs@americanrivers.org) or  
on Twitter @SingerMcCombs

