

Supporting Beavers to Achieve Restoration Goals



Ben Goldfarb
2025













A few ecological services:



Drought mitigation



Firebreaks & refugia



Photo: Joe Wheaton,
Utah State

Pollution filtration/ Carbon sequestration



Flood attenuation



A keystone species













Annual economic value
in one Utah watershed:
\$175-470 million per year
(ECONorthwest, 2011)





Historic beaver capacity

Pre-European population:
60–400(!) million

150–250 million ponds
(Butler & Malanson, 2005)

~235,000 square
miles impounded

“Native American tribes on the Great Plains... learned through observation that beavers helped create an ecological oasis within a dry and arid landscape.”
— Rosalyn LaPier







A live beaver is more valuable to
mankind than a dead one.

—Enos Mills, 1913

...so how do we bring them back?



The Beaver Spectrum

COEXISTENCE

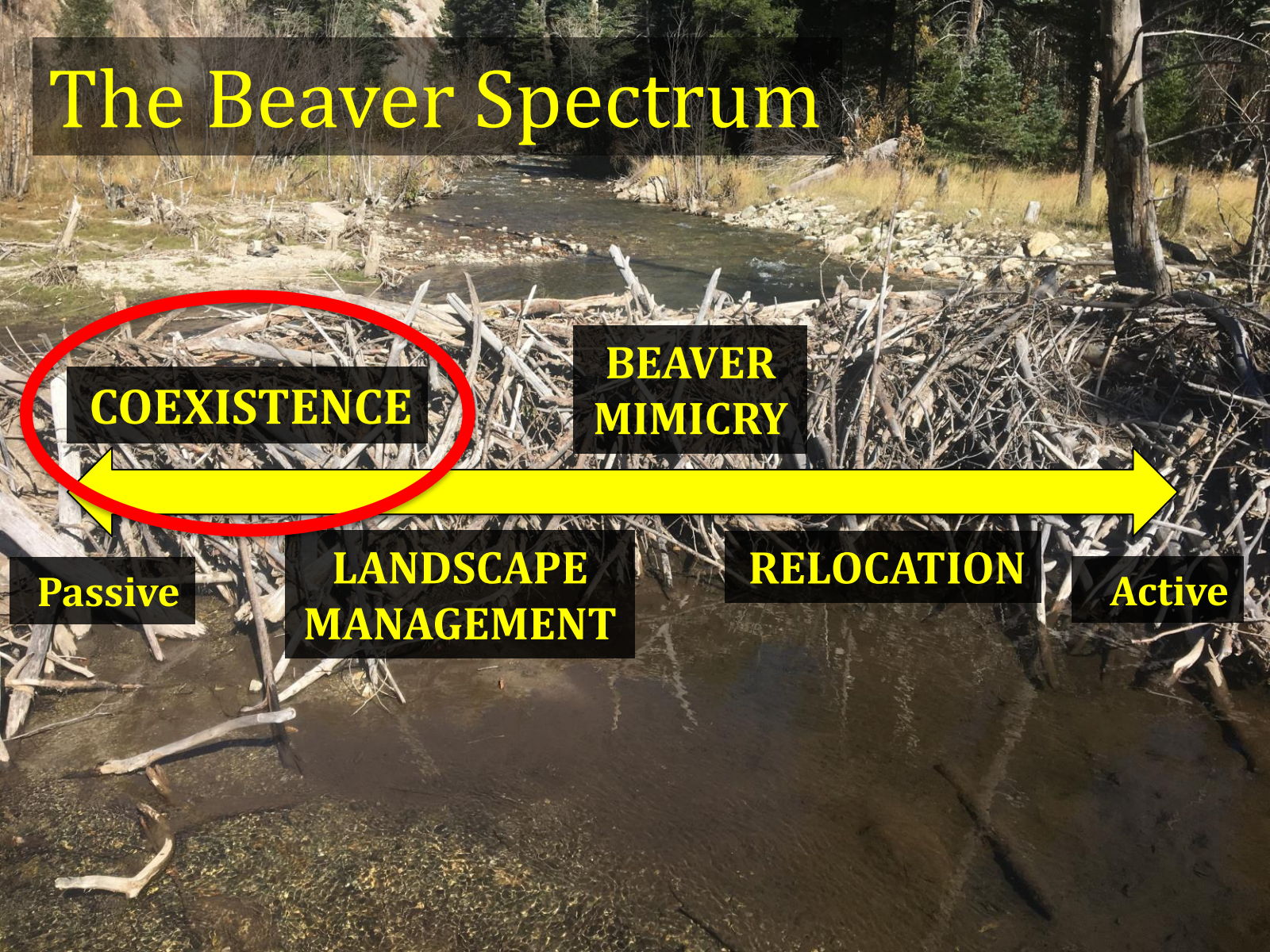
**BEAVER
MIMICRY**

Passive

**LANDSCAPE
MANAGEMENT**

RELOCATION

Active



COEXISTENCE







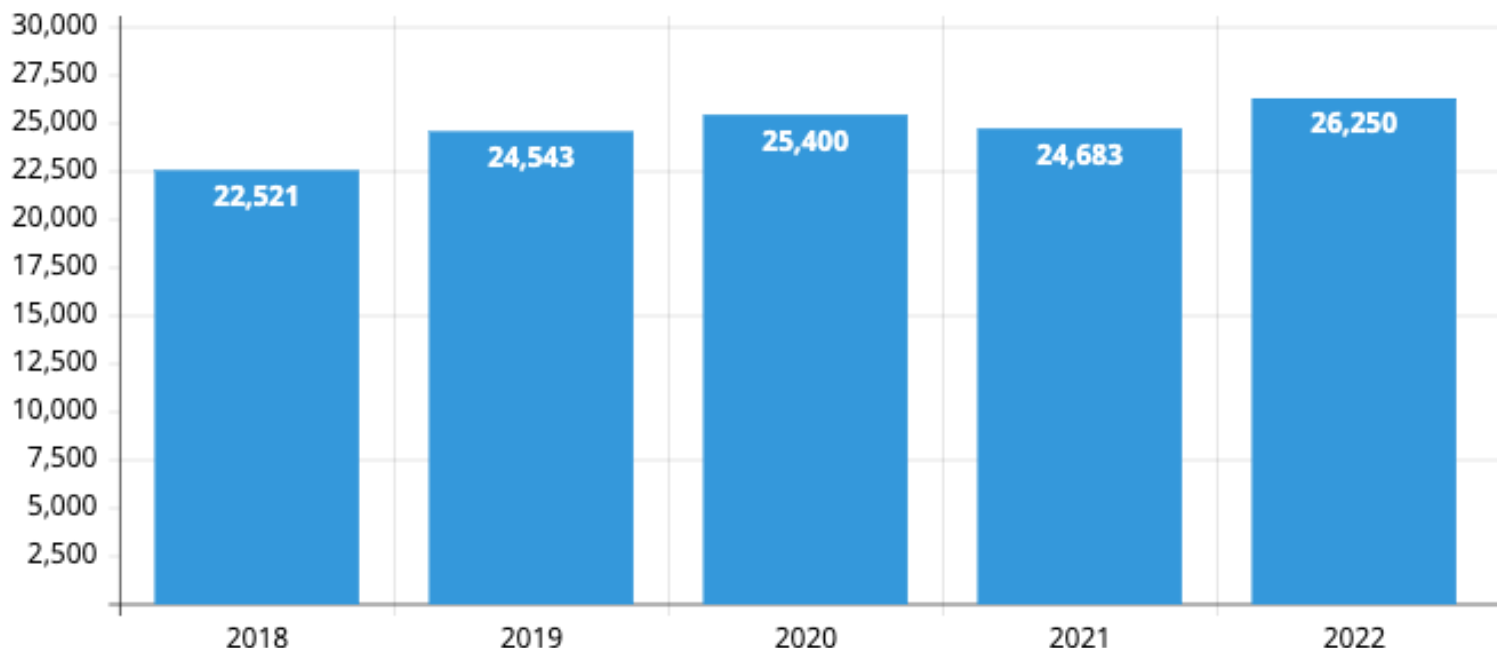
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Martinezbeavers.org



Wildlife Services Lethal Beaver Removal

We're not making progress!



Made with Livegap Charts





The Beaver Deceiver



Beaver Management Costs/Yr.	Before Flow Devies	With Flow Devices
Beaver management	\$155,869.00	\$44,526.00
Beaver damage repair	\$145,000.00	\$0.00
Total costs	\$300,869.00	\$44,526.00
Potential resources saved*	\$71,639.00	\$71,639.00
Total resources saved	\$116,165.00	\$372,508.00
Total resources saved/ Total costs	\$0.39	\$8.37





TABLE 1 - BEAVER MANAGEMENT STUDY OVERVIEW

Management Method	Total Sites	Total Successful	Total Failed	Failed < 1 Yr	Failed 1-2 Yrs	Failed > 2 Yrs
Culvert Devices	227	220 (97%)	7 (3%)	5	2	0
Pond Levelers	156	135 (87%)	21 (13%)	21	0	0
Cylindrical Fences	30	18 (60%)	12 (40%)	9	0	3
Trapping Only*	69	8 (16%)	43 (84%)	3	34	6
Total	482					



Vermont's Beaver Baffle Program



—VFWD installs ~15 devices/year (>340 total)

—Landowners contribute ~50 percent of cost plus maintenance

—“(Beaver devices) can also be expensive, making them inaccessible to some landowners and towns.” —VDFW, 2022



...but lots of beavers still get trapped

—1000 recreationally + 500 “nuisance”
— John Aberth

—Stowe: ~5 beavers killed/year in perpetuity

“I don’t have a clear understanding of what the goal ultimately is... the beaver will repopulate the area.” — selectboard member

“They’ve been battling beavers here probably since they returned from the fur trade.”



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LANDSCAPE MANAGEMENT



Photo: BLM

Maggie Creek, 1980



3 more miles of wetted stream length

2 foot increase in water table!

100 more acres of riparian vegetation

“This floodplain is about 1000 pounds of grass production per acre...

From a rancher’s perspective, beavers increase production 10-fold.”



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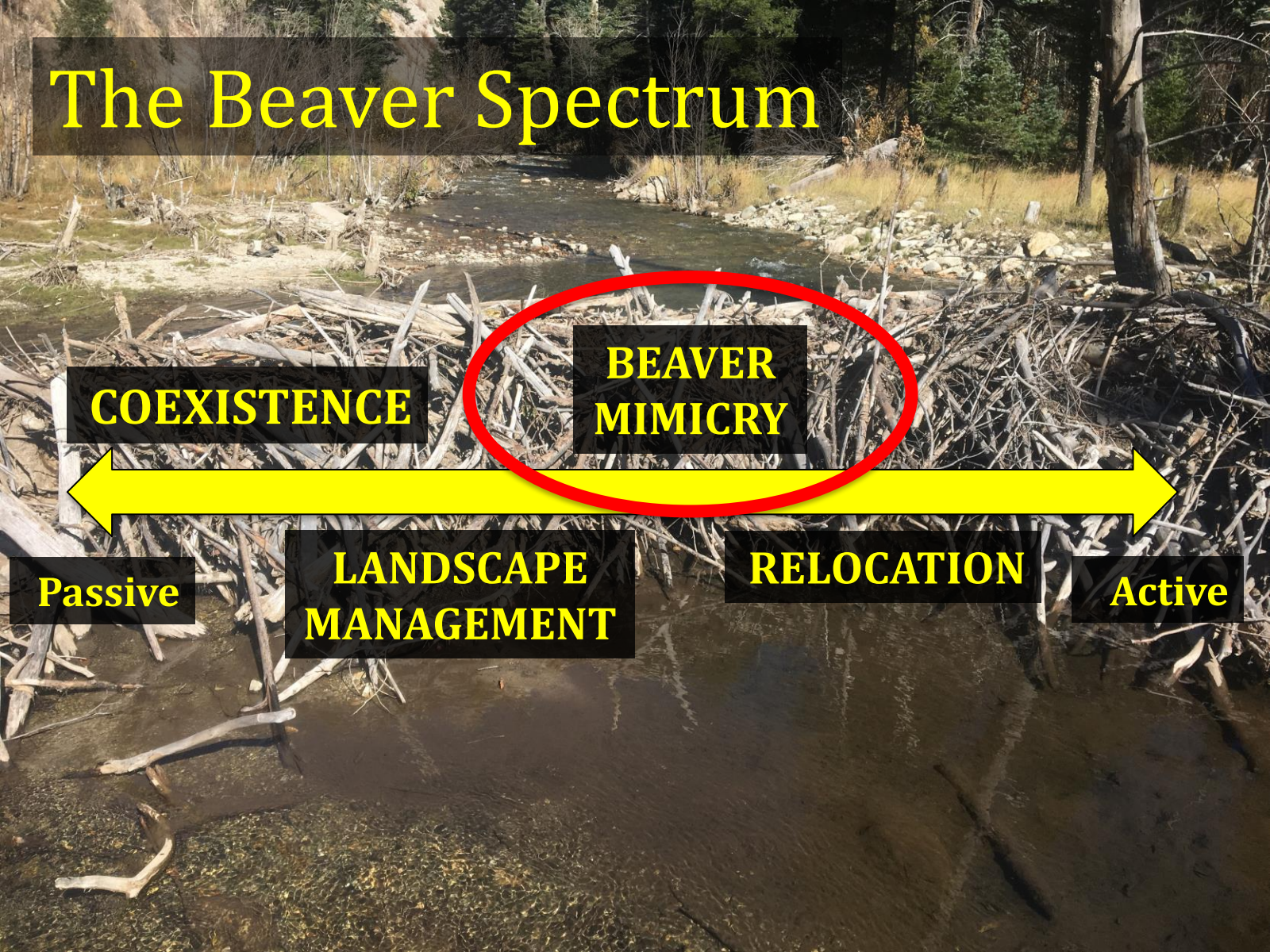
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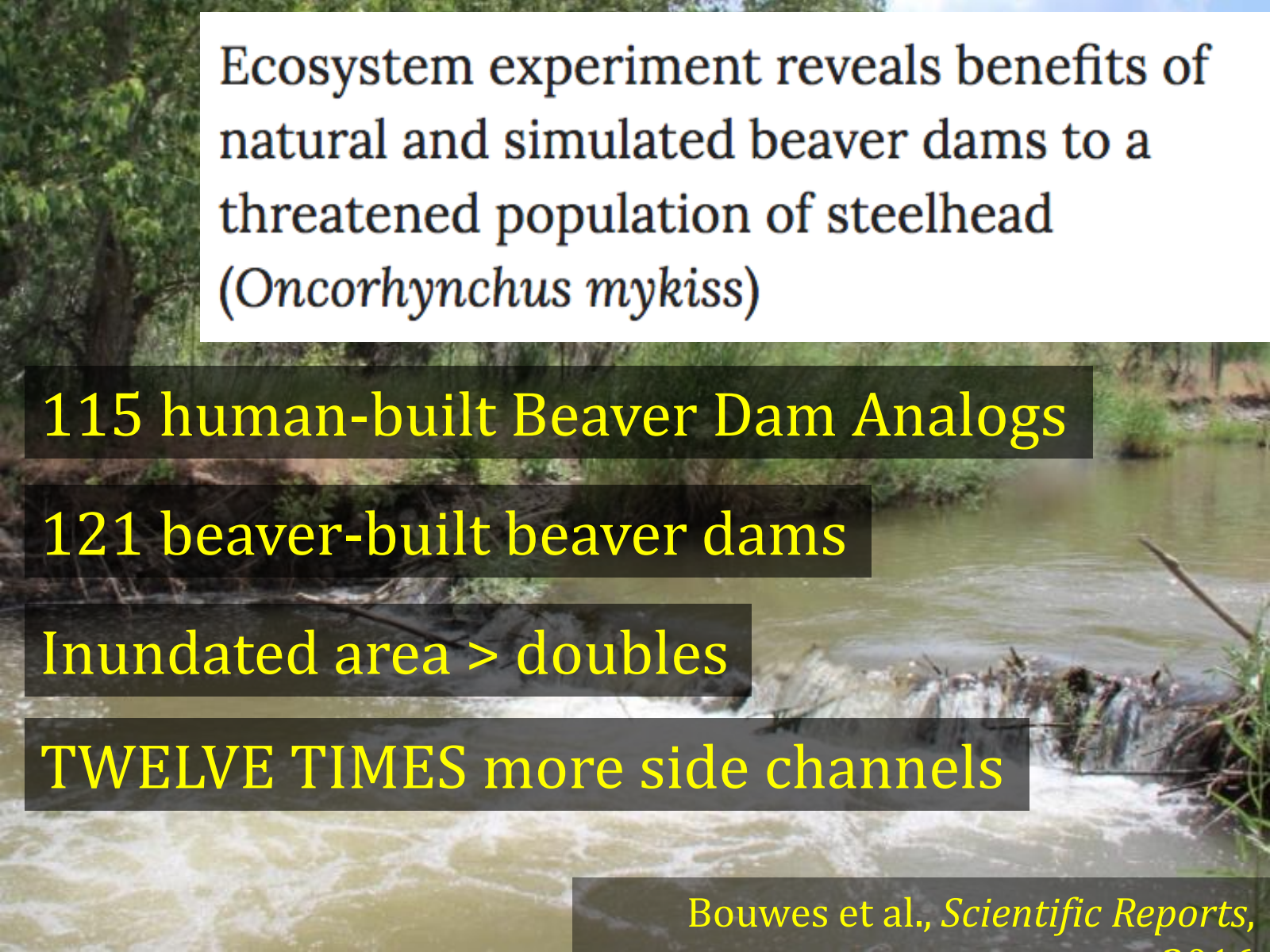
Active



BEAVER MIMICRY







Ecosystem experiment reveals benefits of natural and simulated beaver dams to a threatened population of steelhead (*Oncorhynchus mykiss*)

115 human-built Beaver Dam Analogs

121 beaver-built beaver dams

Inundated area > doubles

TWELVE TIMES more side channels

Bouwes et al., *Scientific Reports*,

2016



52 percent survival increase





2021

No beavers

Image: EcoMetrics



Image: EcoMetrics

2022

People playing beaver



Image: EcoMetrics

2023

Real beavers

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RELOCATION





Should relocation be an option in Vermont?

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A few examples of beaver legislation



—Washington's Beaver Bill
(liberalized relocation)

—California's Beaver Restoration
Program (\$2 million for coexistence +
dedicated staff)

—DAMS for Beavers Act (federal
legislation that would provide \$1 million
for coexistence/year nationally)

A man wearing a blue and white plaid shirt, a white baseball cap, and khaki shorts is kneeling on a wooden boardwalk next to a shallow stream. He is holding a small, dark-furred beaver in his hands. The stream is filled with smooth, rounded stones and has a gentle flow. In the background, there are green plants and a large, weathered log.

What should you do?

—Does VT need a better understanding of how beavers could address flood mitigation?

—Should trapping policies (both nuisance and recreational) be revisited?

—Should Vermont provide more support to coexistence programs in acknowledgment of beavers' benefits to public?

A close-up photograph of a brown beaver sitting in a nest made of straw and wood shavings. The beaver is facing left, and its dark brown fur is the central focus. The background is a dense layer of light-colored straw.

Any dam
questions?

ben.a.goldfarb@gmail.com