



# The Boardman River Reborn

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



## 2019-2021 River Care™ Projects

### Carp Lake River Watershed

1. Carp Lake River/Gill Rd road/stream crossing improvement
2. Carp Lake River/Munger Rd road/stream crossing improvement
3. Carp Lake River/Reed Rd road/stream crossing improvement

### Maple River Watershed

4. Van Creek /Bike Trails road/stream crossing improvement
5. Cold Creek/Ely Rd road/stream crossing improvement
6. E. Branch Maple River/Douglas Lake Rd road/stream crossing improvement
7. E. Branch Maple River/Robinson Rd road/stream crossing improvement
8. Lake Kathleen/Woodland Rd/Two-Track post dam restoration & monitoring

### Jordan River Watershed

9. Chestonia Bridge post-restoration streambank stabilization and instream habitat improvements
- \*Prioritize next improvement sites

### Boyne River Watershed

\*Prioritize next improvement sites

### Boardman River Watershed

10. Sabin Pond post dam restoration & monitoring
  11. Boardman Pond post dam restoration & monitoring
  12. Streambank stabilization and instream habitat improvement
- \*Boardman River streambank erosion and road/stream crossing inventory
- \*Boardman River Redd Survey

### Platte River Watershed

13. Tributary to the North Branch of the Platte River/Skinner Rd road/stream crossing improvement
14. North Branch of the Platte River/Dymond Rd road/stream crossing improvement
15. Little Platte Lake Creek/Saffron Rd road/stream crossing improvement
16. Upper Platte River streambank erosion and instream habitat improvements
17. Kinney Creek/N. Carmean Rd road/stream crossing improvement

### Bestie River Watershed

18. Mason Creek/E. Duck Lake Rd road/stream crossing improvement
19. Betsie River floodplain improvements

### Manistee River Watershed

20. Soper Creek Trout Farm post-restoration & monitoring
  21. Hinton Creek/5 1/2 road/stream crossing improvement
- \*Manistee River Tributary streambank erosion and road/stream crossing inventory

### Bear Creek Watershed

22. Bear Creek streambank stabilization and instream habitat improvements

### Pine River Watershed

23. Silver Creek/Pine River streambank stabilization and instream habitat improvements

### Little Manistee Watershed

24. Little Manistee River streambank stabilization and instream habitat improvements
  25. Syers Lake dam removal
- \*Little Manistee River streambank erosion inventory

### Big Sable Watershed

26. Phase III Big Sable River streambank stabilization and instream habitat improvements

### Pere Marquette Watershed

27. PM railroad streambank stabilization
28. Streambank stabilization and instream habitat improvements
29. Blood Creek/72nd road/stream crossing improvement
30. Blood Creek/Broadway St road/stream crossing improvement
31. Pere Marquette River unnamed tributary/Mac Rd road/stream crossing improvement
32. Scottville Riverside Park streambank stabilization
33. Nichols Lake fish habitat project

### Lincoln River Watershed

\*Lincoln River Watershed road/stream crossing inventory





# Boardman Dam & Pond

Photo by Jim Anderson  
October 2012



Core wall

Future bridge

Powerhouse



# Boardman Dam Removal

July 2017

Relic  
river  
location





# Boardman River Returned



October 2018



# Post-restoration needs





# Wood work





# Streambank protection & habitat



Root wads

Floodplain



# Stabilizing creeks & seeps





# Slope stabilization





# Invasive species control





# NER Streambank Stabilization





After





# Sabin Dam & Pond

An aerial photograph of Sabin Dam and Pond. The pond is a large, irregularly shaped body of water, surrounded by dense forests with vibrant autumn foliage in shades of orange, red, and yellow. A small dam structure is visible at the bottom center of the pond, with a small waterfall cascading over it. To the right of the pond, there is a large industrial or commercial facility with several large yellow buildings and numerous yellow trailers parked in a lot. The surrounding landscape is a mix of forested areas and open fields, with a road visible in the upper right corner.

Photo provided by John Russel  
October 2012



# Sabin Dam Removal

An aerial photograph showing the Sabin Dam removal project. The image captures a winding river with a large, exposed sediment area in the center, where the dam has been removed. The surrounding landscape is a mix of dense green forest and trees with vibrant autumn foliage in shades of yellow, orange, and red. To the right, there is a large parking lot with several vehicles and some industrial or commercial buildings. In the bottom left corner, a small residential area with a few houses is visible. The overall scene depicts a significant environmental and engineering project in progress.

October 2018



Historically, river bottom was  
dredged down 8' in this section





# Channel construction and bank stabilization measures





River returned...





# Wrap up in 2019





# Project Overview

January 2019

Feasibility Study/Planning	\$3,000,000
Brown Bridge Dam Removal	\$4,400,000
Boardman Dam Removal	\$10,500,000 (est.)
Robbins Bridge (Cass Road)	\$3,310,000
<u>Sabin Dam Removal</u>	<u>\$5,700,000 (est.)</u>
Total Construction/Engineering	\$26,910,000
Non-Construction Tasks*	\$300-350K per year

\*Project management, grant and contract administration, monitoring, communications and outreach





# Project Team

## IT

- Grand Traverse Band
- City of Traverse City
- Grand Traverse County
- Michigan DEQ
- Michigan DNR
- Michigan Hydro Relicensing Coalition
- Traverse City Light & Power
- U.S. Fish & Wildlife Service

## Ex-Officio IT & Partners

- Conservation Resource Alliance
- Grand Traverse Conservation District
- Grand Traverse County Road Commission
- US Army Corps of Engineers
- Natural Resources Conservation Service
- Watershed Center, Grand Traverse Bay
- Garfield Township





# CRA Roles & Responsibilities

- Fund development & coordination
- Facilitation of IT & partners
- Serve as GT County's point of contact for engineer and USACE
- Project documentation & dissemination
- Post-restoration, monitoring & invasive species work outside USACE scope





# Fund Development

- Total ~ \$27 million
- Army Corps \$11 million
- GTB grants \$3 million
- CRA grants \$8 million





# Thank you to the Funders!

- Bureau of Indian Affairs
- Great Lakes Fishery Trust
- National Fish & Wildlife Foundation
- U.S. Fish & Wildlife Service
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers
- MDEQ, MDNR & MDOT
- Grand Traverse Band
- NRCS
- Frey Foundation
- Brook by Foundation
- Oleson Foundation
- Traverse City Rotary
- City of Traverse City
- Grand Traverse County
- GT Road Commission
- Conservation Alliance
- DTE Energy Foundation
- Trout Unlimited
- Patagonia
- And more.....





# City/County Contributions

~\$1.1 million

\$185,000 each consultant costs  
(\$20K per year; \$25K in 2009)

\$121,896 each additional funds for Sabin  
Project Partnership Agreement, Grand  
Traverse Band

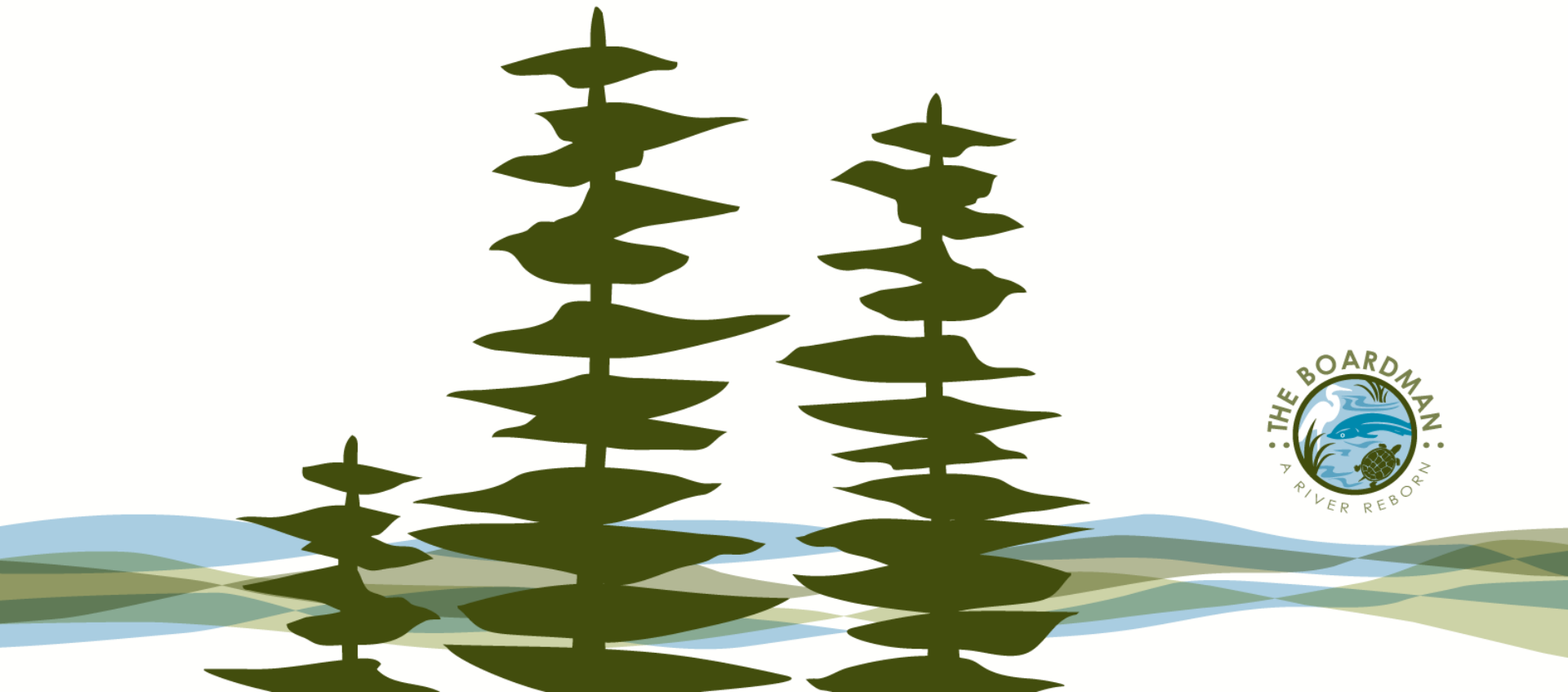
\$500,000 Brownfield Authority





Information & Updates

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





**Extra Slides Follow**

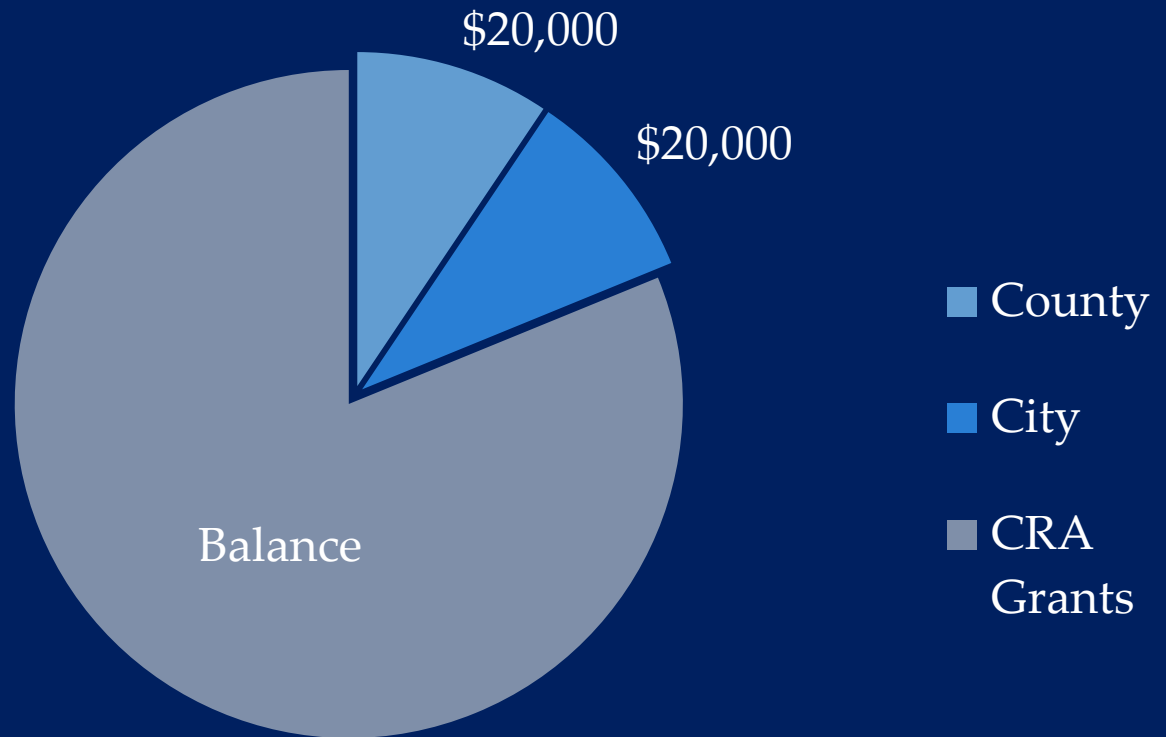


# Non-Construction Cost:\$300-350K/yr

CRA contributes additional “in-kind”

## Leverage:

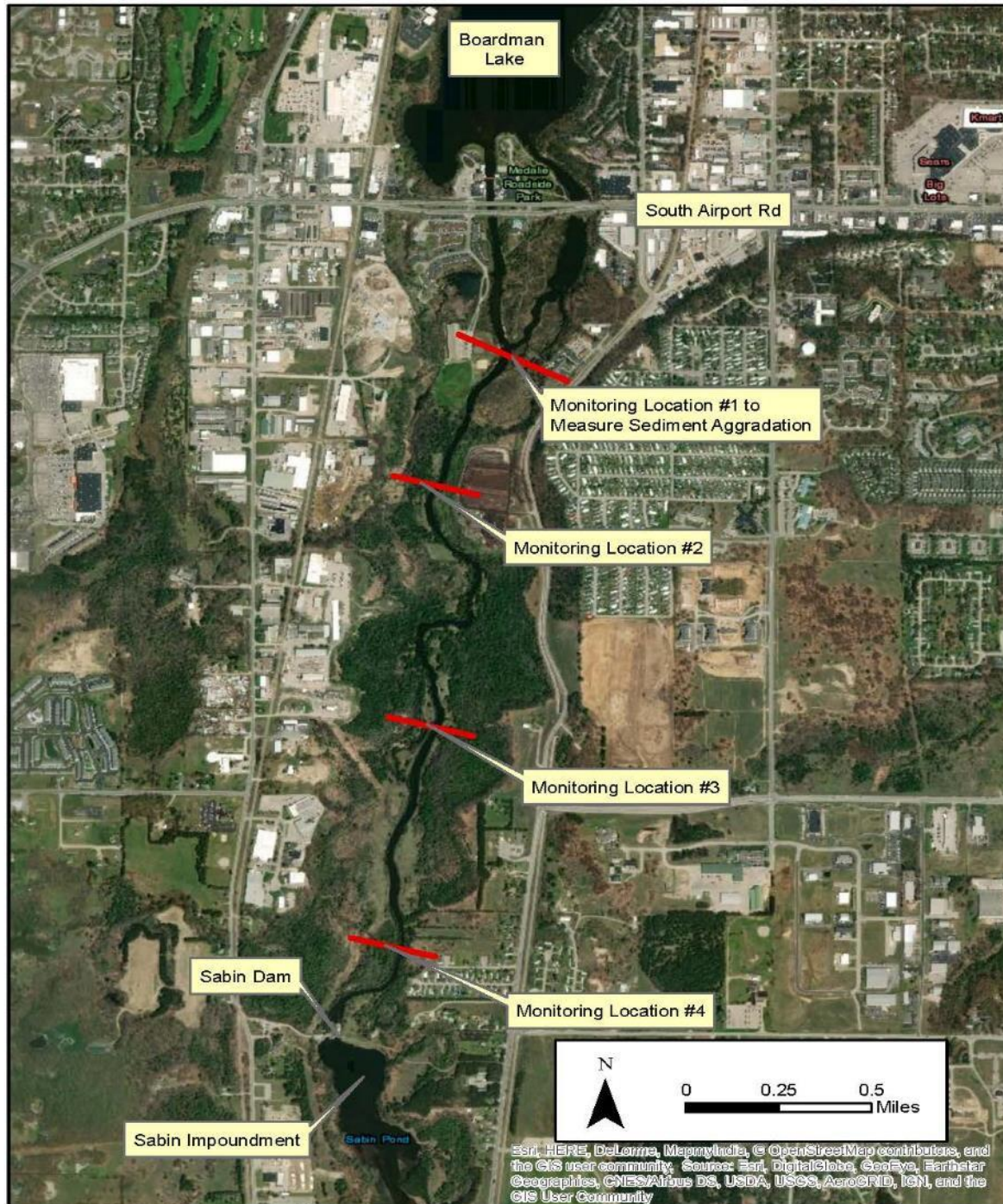
How effort is paid for



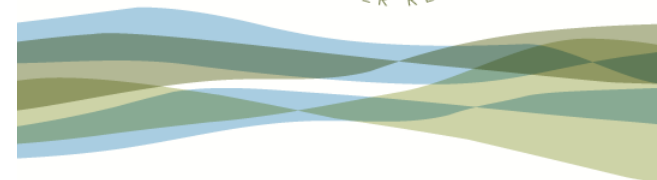
Total Funds Raised:

\$27 million





# Monitoring: Pre-, During, & Post- Construction





Boardman Dams Removal - Stream Morphology Monitoring Requirements			
Monitoring task	Description	Frequency	Conditions
Boardman River Assessment	Hydraulic & geomorphic assessments upstream & downstream of former pond including reference reach surveys.	Completed in March 2015	Required by MDEQ as part of permit violation in regards to Brown Bridge dewatering structure failure. Used to determine SOW for resulting restoration needs in "Impacted Reach."
Boardman Dam Removal - Monitoring and Evaluation Plan for the Boardman Dam Removal and River Restoration Project	Stream morphology, dissolved oxygen, stream temperature at 3 reaches within restored area.	Baseline/asbuilts collected 3 mos after project completion, then annually for minimum 3 years. Monitoring could continue outside of 3 years if adaptive management is needed due to channel instability.	Required by MDEQ permit
Sabin Dam Removal Construction - Monitoring Plan for Phase III Boardman River Restoration Project	Cross-sections, photographs, staff gage readings taken at 4 locations between Sabin Dam & at the S. Airport culverts.	Prior to construction & twice a month during construction.	USACE offered to monitor potential migration of sediment and/or instream wood during construction activities.
Sabin Dam Removal - Monitoring & Evaluation Plan for Phase III Boardman River Restoration Project	Stream morphology incl. longitudinal surveys, cross-sections, topography at 4 locations. Three reaches totaling 3,000' or 43% project area in daylighted river + site upstream of S. Airport culverts.	Starts with completion of as-builts, continues for minimum 3 years (bankfull event must happen), taking measurements annually the same month as as-builts.	Required by MDEQ permit





# MONITORING AND EVALUATION REPORT

## Phase II Boardman River Restoration Project

### *2018 Annual Report*

**Prepared by:** Will Harman, PG - Stream Mechanics, PLLC

**Prepared for:** Grand Traverse Band of Ottawa and Chippewa Indians and Michigan Department of Environmental Quality

**January 28, 2019**

