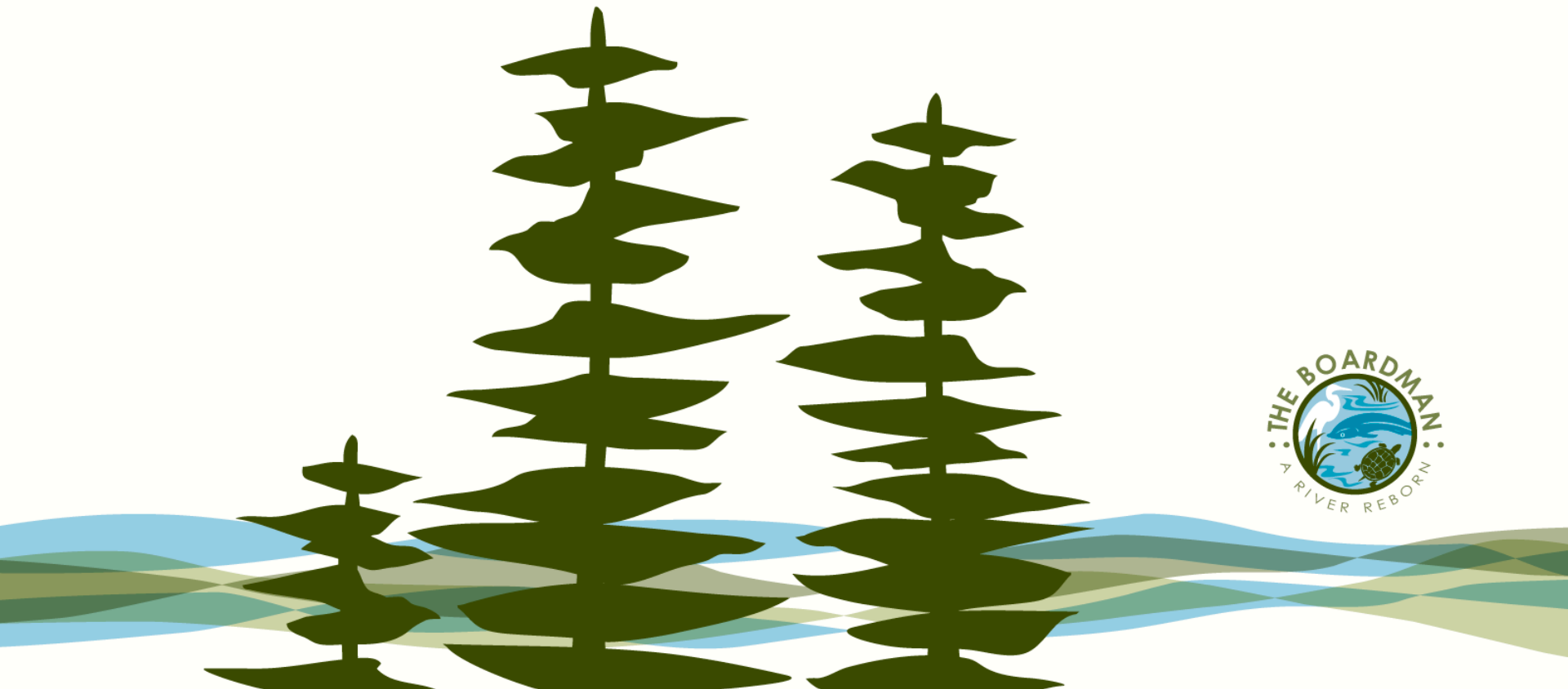


The Boardman: A River Reborn

Removing Dams for a Free Flowing River



Boardman River Dams

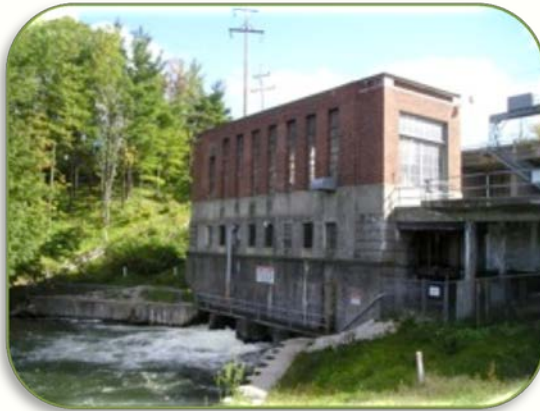
Brown
Bridge



Sabin



Boardman



Union
Street





Minnesota

Ontario

Quebec

Wisconsin

Traverse City

Boardman River Watershed

Michigan

New York

Detroit

Iowa

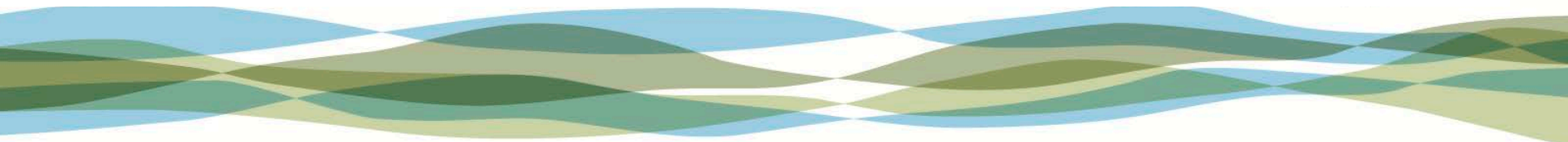
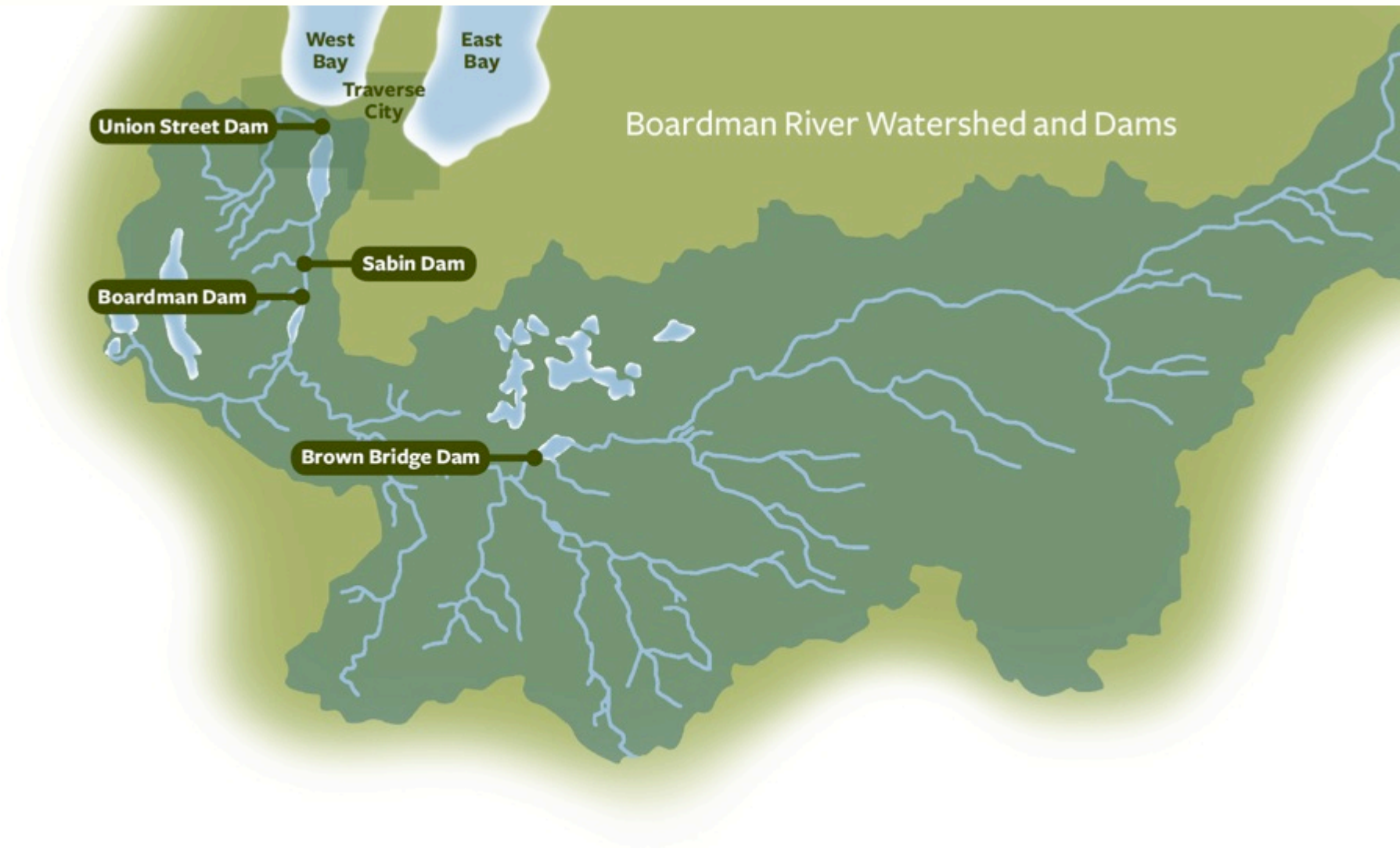
Chicago

Illinois

Indiana

Ohio

Pennsylvania



The Project

- Remove Brown Bridge, Boardman and Sabin Dams, and modify Union Street Dam
- Return the Boardman to a more natural, cold water, free flowing river
- Largest dam removal project in Michigan's history
- Largest wetlands restoration in the Great Lakes Basin



Project Implementation 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

- Conservation Resource Alliance
- Grand Traverse Conservation District
- Grand Traverse County Road Commission
- Rotary Camps & Services
- Watershed Center, Grand Traverse Bay
- Garfield Twp.



Environmental Benefits

- Restore over 3.4 miles of coldwater stream
- Reconnect 160 miles of high quality river habitat to the Great Lakes
- Restore more than 250 acres of wetlands and 60 acres of upland habitat
- Enhanced recreational opportunities



Community Benefits



- Significant economic impact
- Promote tourism and business growth
- Support long-term goals of the Grand Vision



Educational Benefits



- Active laboratory for local schools
- Support a variety of scientific research initiatives



Community-Based Process

- Community-based dam disposition assessment (2005-2008);
- Boardman River Feasibility Study
 - Assess current conditions
 - Assess alternatives
 - Provide recommendation



BRDC Statement of purpose: “To engage all interests in Assessing and recommending the fate of the dams..upon a thorough analysis of options,”



Unprecedented Collaboration

- Over 1,000 participants
- Local, State, Tribal, private, non-profit, and Federal participation
- Global interest
- Over 150 public meetings (2,500 people)
- 2,000 questions answered
- Public survey (18,000 distributed)



Local Support

- Grand Traverse Band of Ottawa & Chippewa Indians
- Grand Traverse County
- City of Traverse City
- Rotary Charities
- Rotary Camps & Services
- Oleson Foundation
- Traverse City Light & Power



Major Funders

Frey Foundation

Great Lakes Fishery Trust

National Fish & Wildlife Foundation

U.S. Fish & Wildlife Service

U.S. EPA Great Lakes Restoration Initiative

U.S. Bureau of Indian Affairs



Project Timeline

- 2005-2009 Preliminary decisions
- 2009-2012 Fundraising, planning, design & engineering (BRDC)
- 2012-2013 Brown Bridge Dam removal & restoration
- 2012-2014 Continued fundraising, planning, design & engineering
- 2015-2016 Removal of Sabin & Boardman Dams and modification of Union Street Dam
- 2012-2018 Ongoing restoration



Cost/Funding

- Preliminary cost estimate \$13-\$15 million
 - Not including transportation system costs (road crossings, etc.)
- Approx. \$5.7 million in commitments to date for dam removal
- Funding pursued through federal, state, tribal, local government & private sources



Phase 1: Brown Bridge Dam Removal and Restoration



- First of three dams to be removed (August 2012 – January 2013)
- Restore 2.5 miles of cold water stream, 24 acres of wetlands and over 70 acres of adjacent riparian habitat.



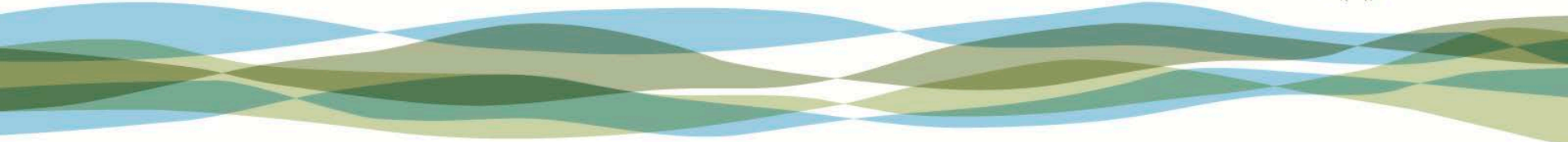
Project Team

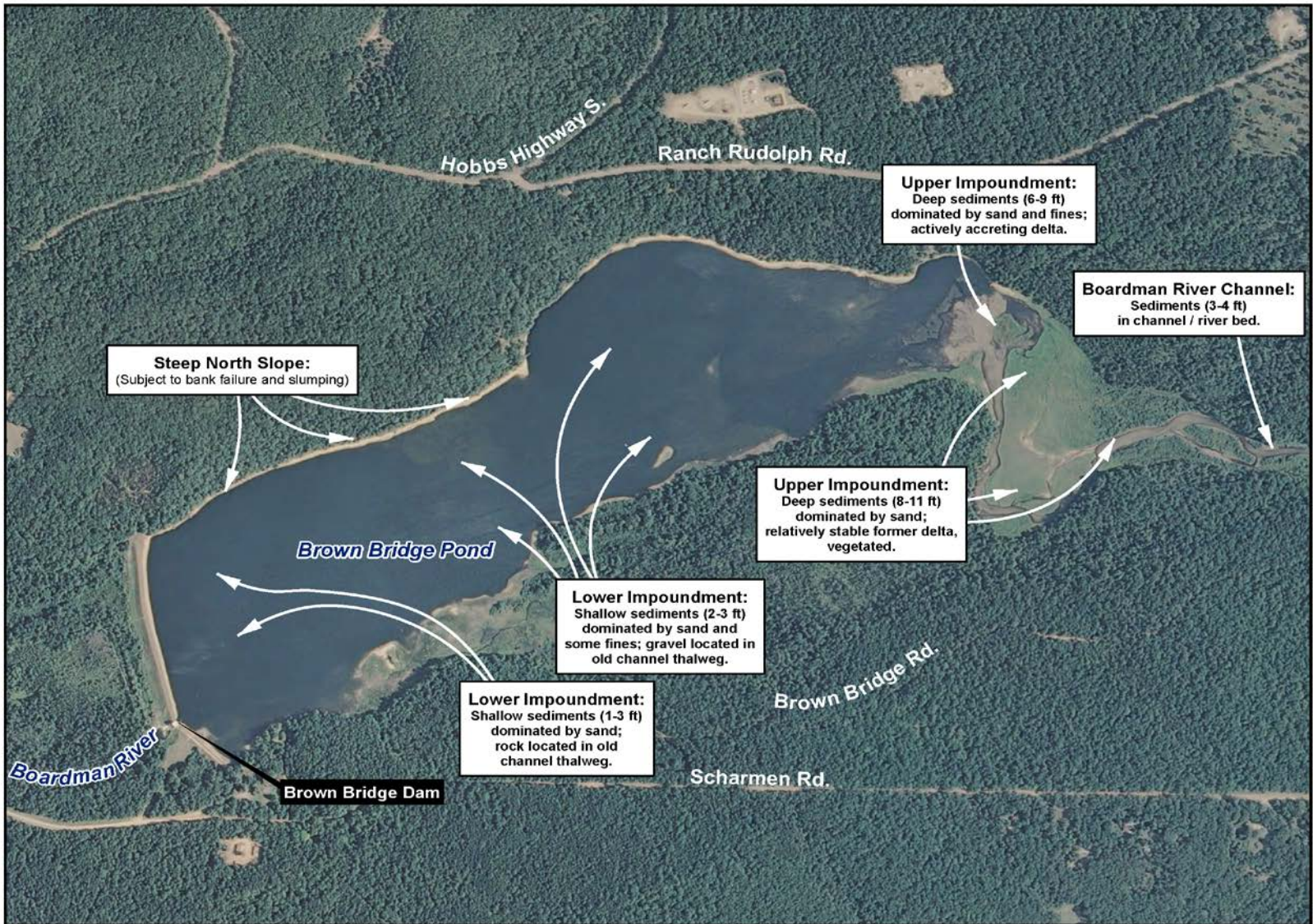


City of Traverse City



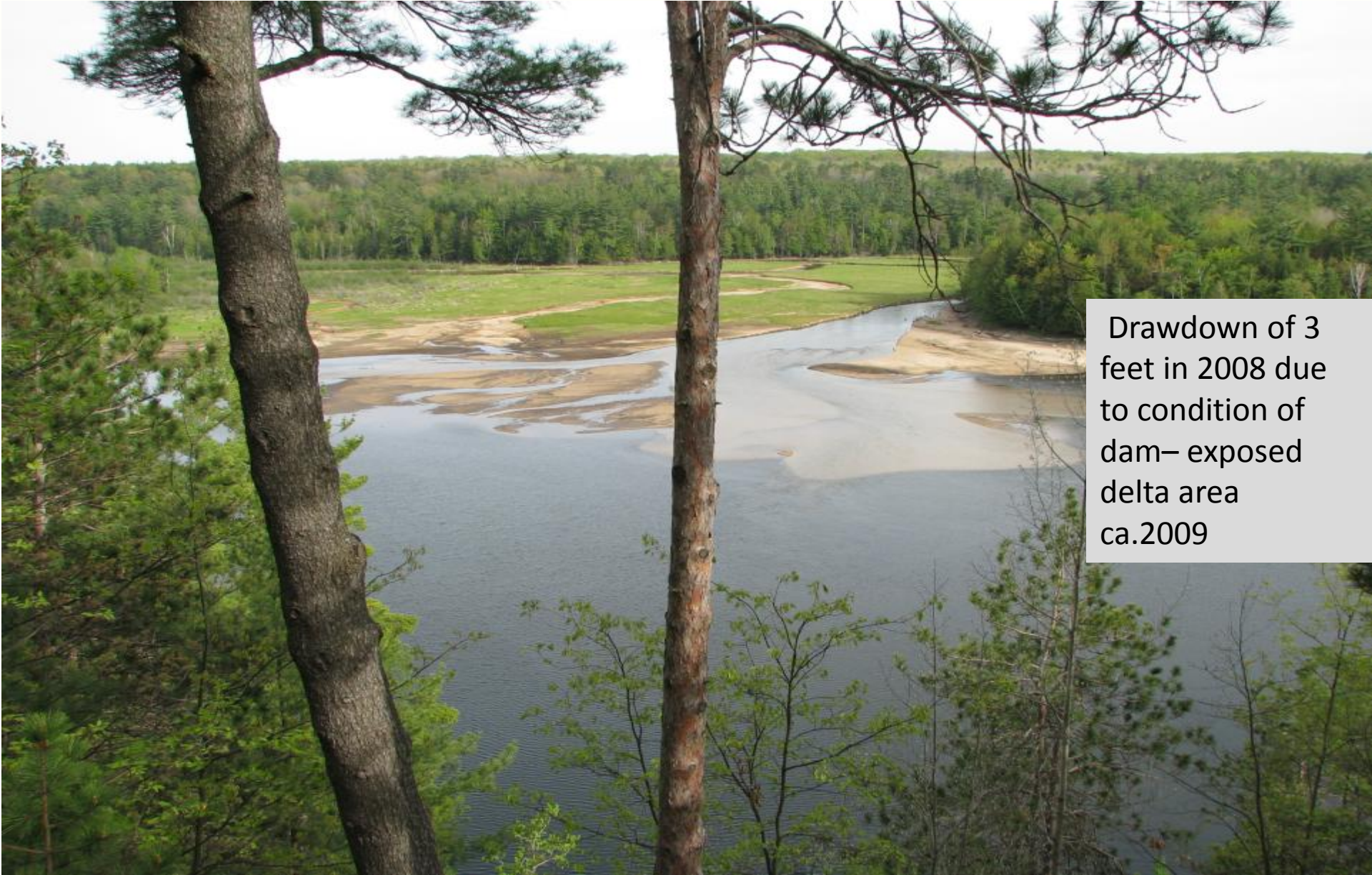
Conservation Resource Alliance





Brown Bridge
Impoundment
ca. 2003





Drawdown of 3 feet in 2008 due to condition of dam– exposed delta area ca.2009





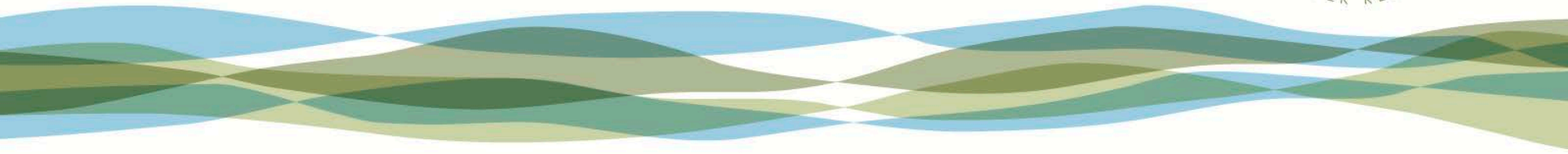
2011– Exposed delta area after drawdown in 2011 prior to dam removal, additional 1.5 feet, staged drawdown.





Construct river channel in its original location; construct floodplain along the restored channel (delta area)
October 2012

RIVER REBO



New Rapids Forming

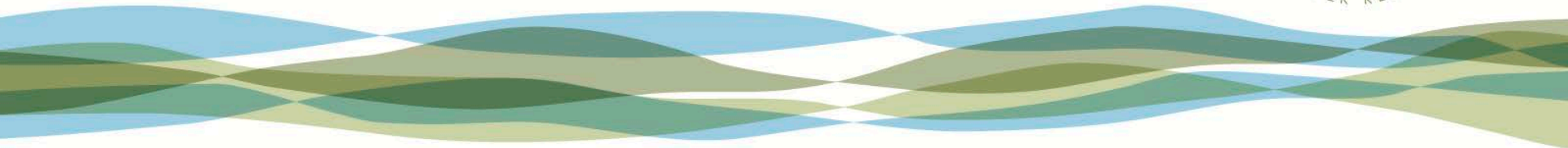


Powerhouse Demolition



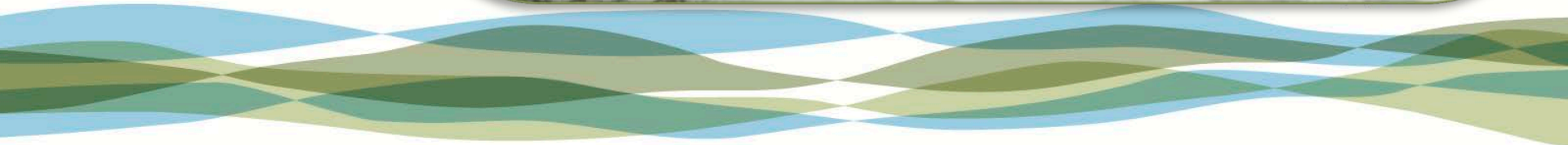


RIVER REBO



A River Reborn

December 2012



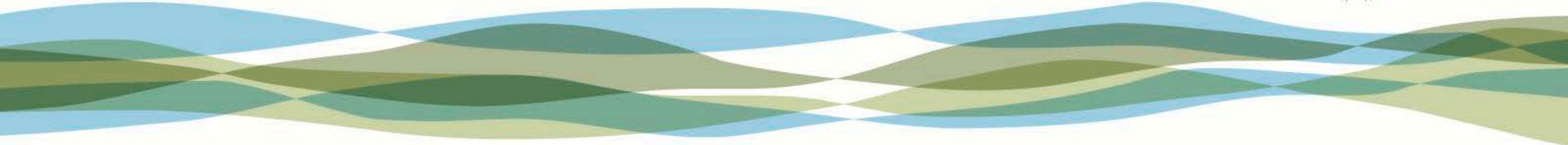


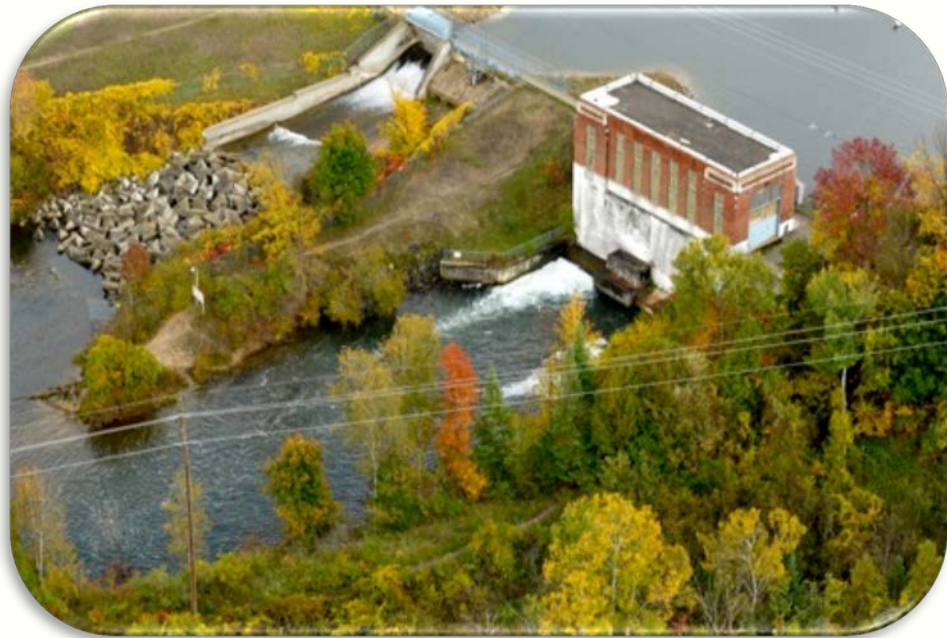
Brown Bridge Dam Removal

By the numbers

- Construction ~ 5 months
- Total hours ~ 21,300
- Partner hours ~ 2,500







Removal of Boardman Dam and Sabin Dam

PHASE 2



Timeline

2010-2014: Field studies, preliminary engineering and analysis

2014: Final design, bidding, permitting

2015-16: Construction

2010 – Ongoing: Monitoring



Going Forward

- Boardman Prosperity Plan

- Watershed plan
- Economic development
- Citizen engagement
- Local units of government participation
- Leadership development
- Placemaking
- Statewide policy development



Natural Resources as an Economic Driver

- 15 governmental units:
 - Identify local priorities
 - Create evaluation plan
 - Find the funding to support projects
 - Build capacity

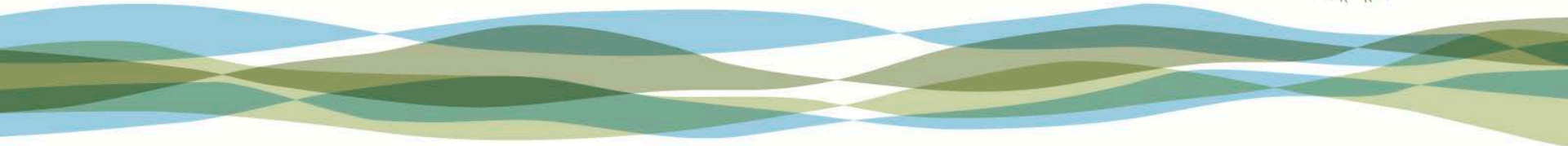


Making a Model

- Create an advisory team of funders and state leaders:
 - Help find funding that aligns with local priorities
 - Implement policy change at the state level that will allow watershed-based economic development
 - Create regional strategies for prosperity



A River Reborn



Information & Updates

www.theboardman.org

