Legacy Fund 2019 Restoration Evaluation Update

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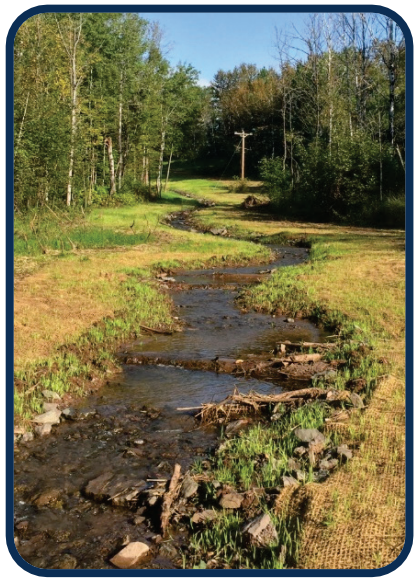
Minnesota Board of Water and Soil Resources

Little Stewart River - OHF

Current Legacy Fund Project Pool

- 5,916 completed restorations or enhancements
- Fractions of an acre to 30,000+
- <$100 to multi-million $ budgets
- Public and private land
- Variety of project managers



Statute Mandate

- Projects stated goals
- Utilization of current science
- Identify problems with implementation
- Improve future restorations

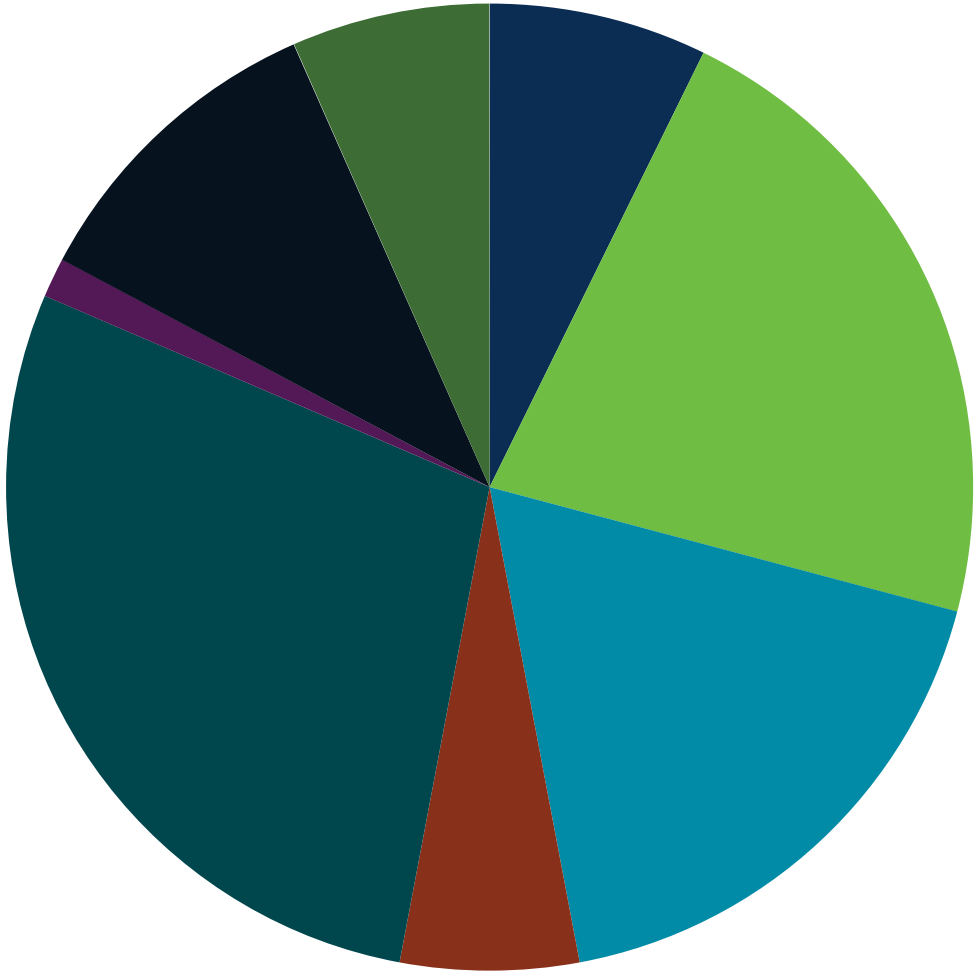
Evaluating Projects

- Contact project partners
- Collect project information
- Establish project goals
- Visit the project
- Review all projects with the Restoration Evaluation Panel

Portage Creek - OHF

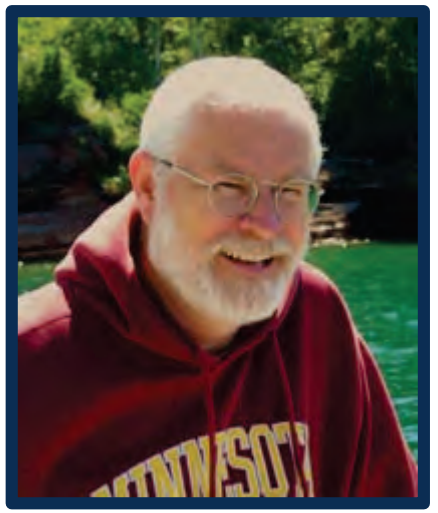
Who are our assessors?

- BWSR
- DNR
- EOR
- HDR
- Stantec
- Great River Greening
- Cardno
- Wenck



Afton State Park - PTF

Restoration Evaluation Panel



Communicate Results

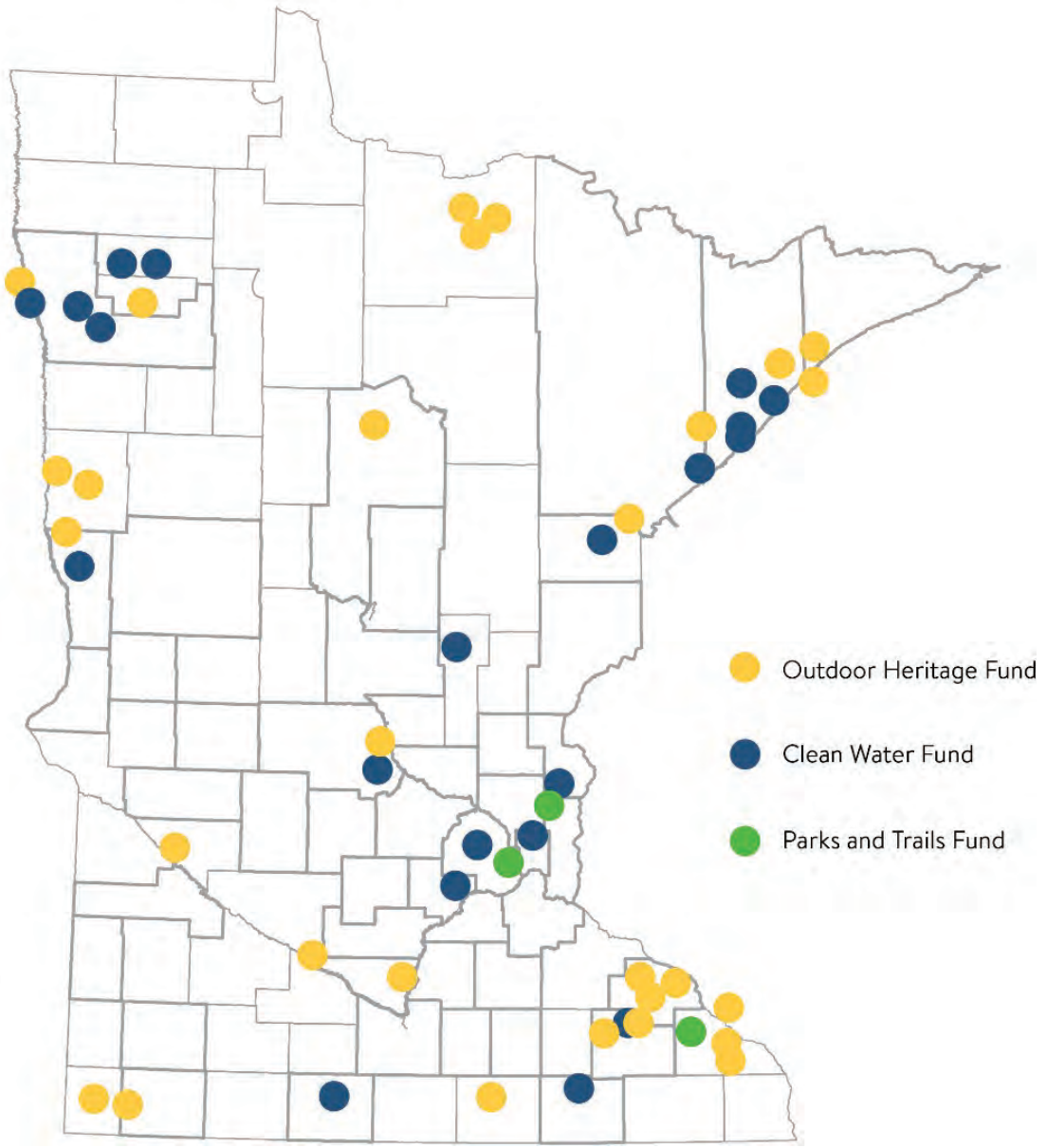
- Share successes, challenges, and lessons learned to improve restorations.

Focus on Stream Projects

- 63 stream projects evaluated
- 7 stream projects revisited
- 31 project manager organizations

STREAM PROJECTS EVALUATED 2012-2019

Dots may represent more than one stream project site. A list of projects evaluated is available in Appendix B.



Rat Root River

Koochiching SWCD and Rainy Lake Sport Fishing Club:

Working to restore the walleye fishery

- Remove fish passage barriers
- Improve water quality
- Provide spawning beds

Monitoring to see if it is working and what to do next

Lawndale Creek

Trout Unlimited :

Restoring a spring-fed prairie stream

- Straight ditches through a WMA
- New meandering channel
- Improved habitat and hydrology

Monitoring shows substantial biological response

Knowlton Creek

Minnesota Land Trust and MN DNR:

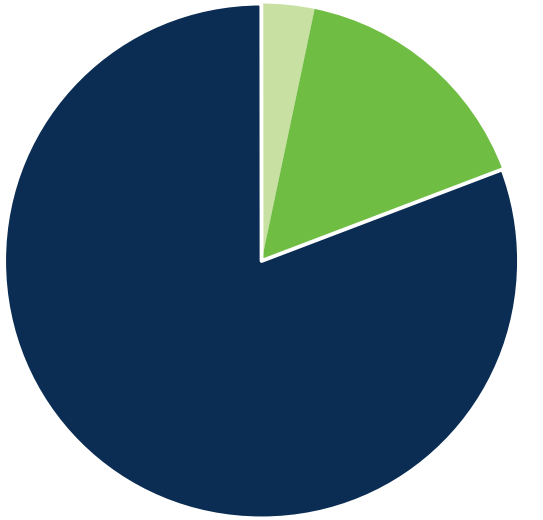
Responding to flood damage and changing climate

- Designed with extreme precipitation in mind
- Replaced culverts with bridges
- Stabilized natural stream and off-channel pools

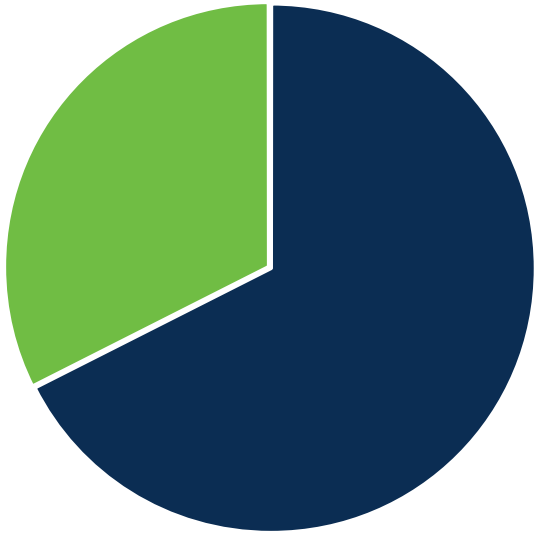
Partnership and working with neighbors in multifunctional landscape

Restoration Evaluations to Date

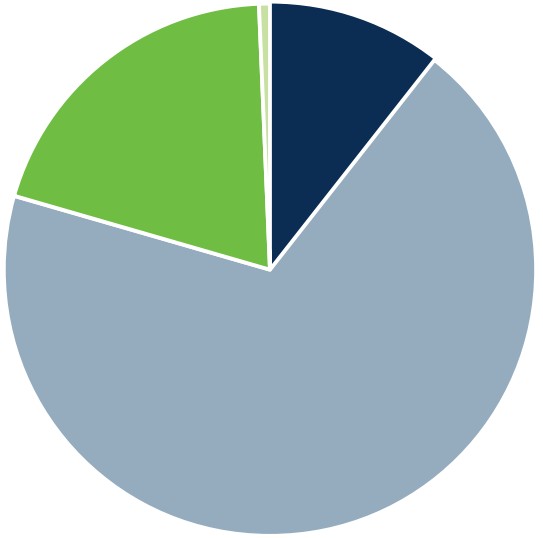
Utilized Current Science



Problems with Implementation



Meet Stated Goals



Improving Application of Current Science

- Ensuring project goals align with design to maximize habitat & clean water benefits
- Planting diverse native vegetation targeted to site conditions
- Ensuring restoration techniques are executed using best practices

Avoiding Problems with Implementation

- Providing detailed information in restoration plans
- Having experienced experts provide construction oversight
- Sufficient treatment of invasive species during site preparation

Making a Plan

Designing the Project

Doing the Work

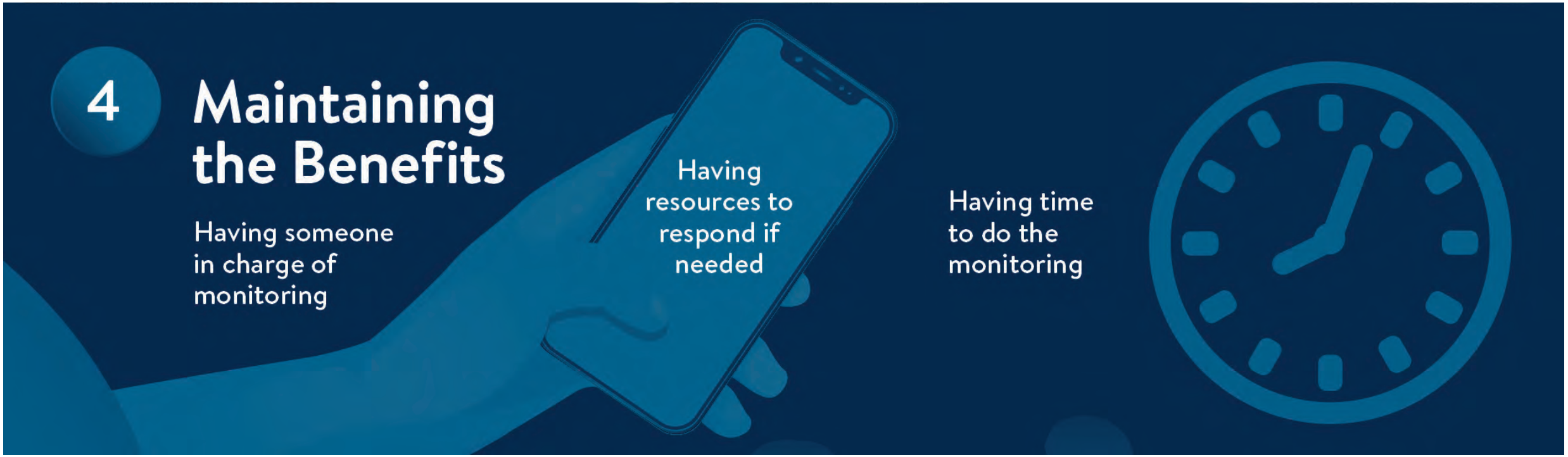
3 Doing the Work

Hiring trained, experienced professionals

Having construction oversight guiding installation

Collaborating with a team if the plan changes

Maintaining the Benefits



Moving Forward

Factors of Success

Four Stream Evaluation Take-home Messages

- Stream projects are just as successful other projects
- Consequences of failure can be more significant
- Maintenance and repair is less certain for stream projects
- Stream findings continue to underscore the value of standing Panel recommendations

DEPARTMENT OF NATURAL RESOURCES

Thank You!

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https://www.dnr.state.mn.us/legacy/restoration-evaluation.html