

Lake Redstone

**Shoreline/Runoff
Assessment
Workshop**

May 29, 2026



Outline of Workshop (Total time 1.5 hours)

- **Welcome** *Brad Horner – LRPD 5 min*
 - Introductions of presenters and others
 - Purposes of this workshop
- **Basic information about the 2025 assessment and Overview of Reimbursements Available** *Brad Horner- LRPD Board 10 min.*
- **Review of the various shoreline improvement methods per Sauk Co. Lake Cost Share Funding Program and DNR Healthy Lakes Program** *Mitch McCarthy- Watershed Coordinator Sauk County 45 min.*
- **Landscaper Perspective and Q&A** Realities and economics of landscaping to reduce runoff *Nathan Ihde-Gonzo Valley Landscaping 30 min.*

Q&A at any time

This presentation, and the "Storyboard" posters, can be found on the LRPD website.

Purpose of the Workshop

- To help parcel owners understand their assessment, the reimbursements available for projects, the methods to address runoff, and to get insights into landscaping for improvements

The assessment, and follow-up, are important steps to greatly reduce the amount of sediment and phosphorus coming into the lake. Numerous methods are now in place to address the other sources of sediment and phosphorus, including farmer field runoff.

Attend the LRPD Annual Meeting on the morning of August 1st if you want to hear more about methods in place and planned!

Basic Information About The Assessment

- Performed in June and July 2025 on all 795 lakeshore properties. The first assessment was performed in 2019.
- Per studies, approximately 40% of the sediment (with phosphorus) coming into the lake is from residential properties
- Led by Sauk County in partnership with the LRPD
- Criteria are based on DNR Healthy Lakes methods
- About half of the parcels were red (high priority) or orange (moderate priority)
- The overall assessment results, and availability of individual assessments, were communicated in many ways: the LRPD Facebook page, the LRPD Mailchimp email list, the LRPD website, and articles in the Lake Redstone Property Owners' Association *Redstone Ripples*.
- Excellent response! Many people want to do right by the lake while potentially increasing the aesthetic appeal of their property.



Overview of Project Reimbursement Information

- DNR and Sauk County Reimbursements go thru Mitch McCarthy mitch.mcarthy@saukcountywi.gov
 - Mitch will guide you through the project design (**on-site, free help**), contracting, and project management processes. He will also help you with applications.
 - DNR reimbursement is \$1000 per improvement method used
 - Sauk County reimbursement is up to \$3000
 - Applications due for 2026 projects by November 2026
- LRPD reimbursement is up to 50% of total cost, up to \$2000. The focus of the LRPD program is on runoff prevention. <https://www.lakeredstonepd.org/shorelineimprovement>

Reimbursement Programs Comparison

Best Management Practice	Funding Source		
	Sauk County	DNR Healthy Lakes	LRPD
Wave Reducing Timbers- Fish Stick		X	
Wave Reducing Timbers- Log Revetment	X		*
Native Plantings (usually <35 ft from shore)		X	X
Diversions (often >35 ft from shore)		X	X
Rock Infiltrations (often >35 ft from shore)		X	X
Rain Gardens (often >35 ft from shore_		X	X
Bioengineered Shorelines- Natural Fiber Rolls, Blocks, and Mats	X		*
Bioengineered Shorelines- Riprap with Native Plantings	X		*
Bioengineered Shorelines- Geotextile Bags	X		*

* Case by case basis for LRPD. Culvert repair can also be eligible for reimbursement by the LRPD.

Lake Redstone Shoreline Assessment Workshop



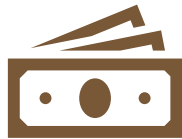
Mitch McCarthy
Sauk County LRE- Watershed Coordinator
May 29, 2026



Outline of Session



Assessing your
Shoreline



Financial and
Technical options



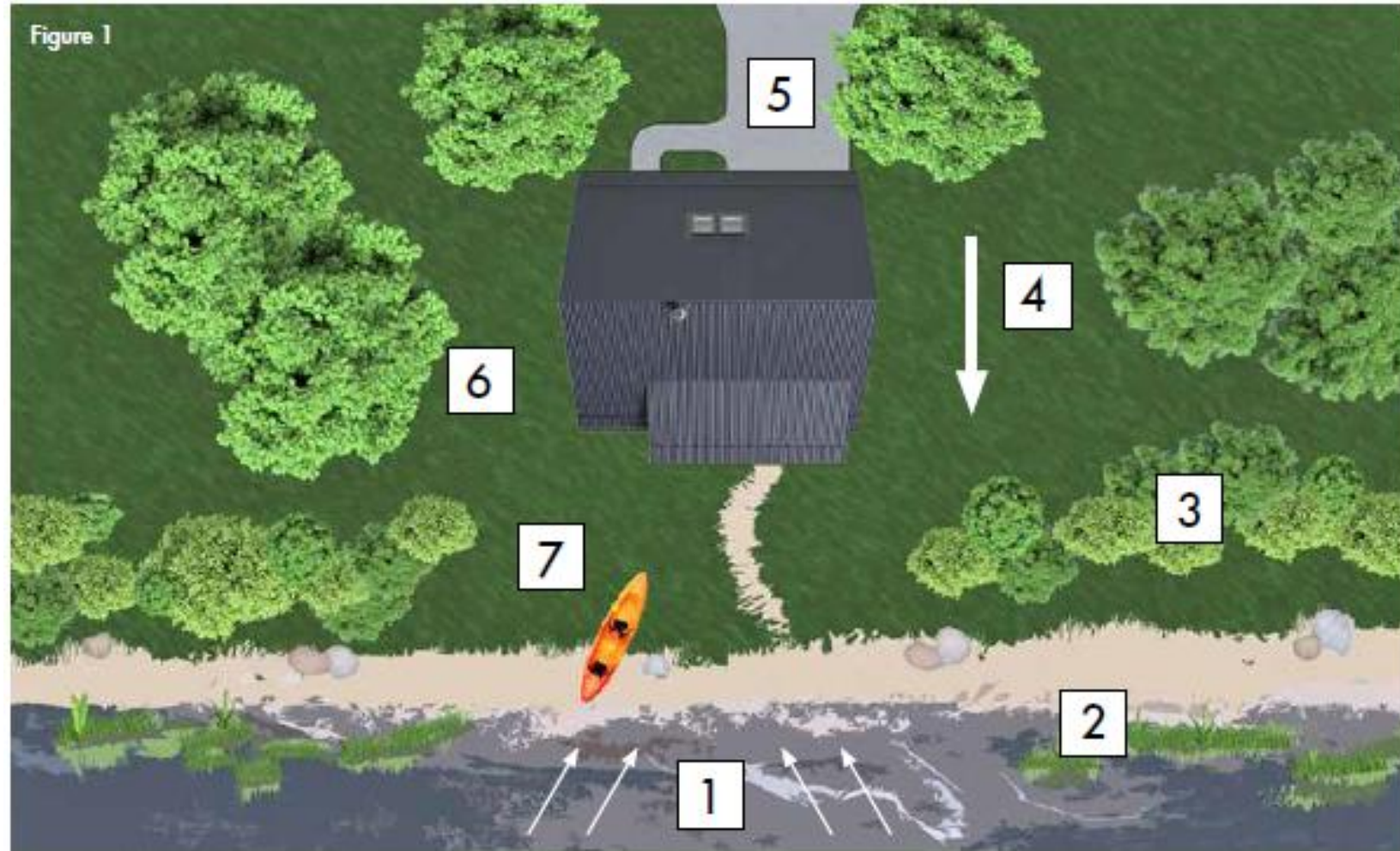
BMP
Recommendations



Q&A

Assessing Your Shoreline

1. Wave Energy
2. Aquatic Vegetation
3. Shoreline Vegetation
4. Slope
5. Impervious Surfaces
6. Soil Type
7. Recreational Use



Financial and Technical options- Sauk County

1. Be within 1,000 feet of lake
2. Set up appointment to assess your **entire** property (BEFORE SNOW COVER)
 - mitchell.mccarthy@saukcountywi.gov or 608-355-4836
 - Sauk County will guide you through the best management practices, project design (on-site, free help), contracting, and project management processes
3. Apply for funding, get bids, and permits
 - Complete participation pledge* or cost share application
 - *Once enough landowners complete participation pledge, Sauk Co applies for DNR grant
 - Based on designs provided or approved, get bids if not doing the work yourself
 - Awarded projects will sign cost share contract
 - Obtain permits and approvals- Sauk County can assist
4. Construction
 - Awarded projects will receive project management necessary for documentation and practice certification
5. Reimbursement upon completion
 - DNR reimbursement is \$1000 per Healthy Lakes Practice (through Sauk Co Grant)
 - Sauk County reimbursement is up to \$3000
 - LRPD reimbursement is up to 50% of total cost, up to \$2000

Best Management Practices

There are a variety of practices that homeowners can implement to improve their shoreline for habitat, runoff control, stabilization, and natural beauty. It is important to take into consideration the needs of the property as well as the landowner's goals.

Practices:

1. Wave Reducing Timbers
2. Native Plantings
3. Tree Cover
4. Diversions
5. Rock Infiltrations
6. Rain Gardens
7. Bioengineered Shorelines



Financial and Technical options

BMP	Funding Source		
	Sauk County	DNR Healthy Lakes	LRPD
Wave Reducing Timbers- Fish Stick		X	
Wave Reducing Timbers- Log Revetment	X		*
Native Plantings		X	X
Diversions		X	X
Rock Infiltrations		X	X
Rain Gardens		X	X
Bioengineered Shorelines- Natural Fiber Rolls, Blocks, and Mats	X		*
Bioengineered Shorelines- Riprap with Native Plantings	X		*
Bioengineered Shorelines- Geotextile Bags	X		*

* Case by case basis

Sauk County Regulations for Shoreline Work

Before starting any alteration of your shoreline, make sure you have any required permits from the appropriate local municipalities, county government, tribal government, Wisconsin Department of Natural Resources (DNR), and the U.S. Army Corps of Engineers, as needed.

Sauk County Zoning	608-355-3245
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WDNR	608-267-3125
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U.S. Army Corps of Engineers	715-345-7911
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Wave Reducing Timbers- Fish Sticks

This practice protects the shoreline from low energy wave energy, provides habitat to wildlife up and down the food chain, and improves water quality.



Wave Reducing Timbers- Fish Sticks-Example

FISH STICKS AND TREE DROPS

Appropriate Uses & Benefits

- Reduces wave energy and limits bank erosion
- Provides habitat for a variety of species
- Provides an environment for establishing aquatic plants
- Restores natural structure to lakes

Limitations

- Accessing and transporting trees
- Not suitable for high energy sites
- Not suitable near heavy boat traffic
- Avoid walleye spawning areas
- Icy conditions can delay installation

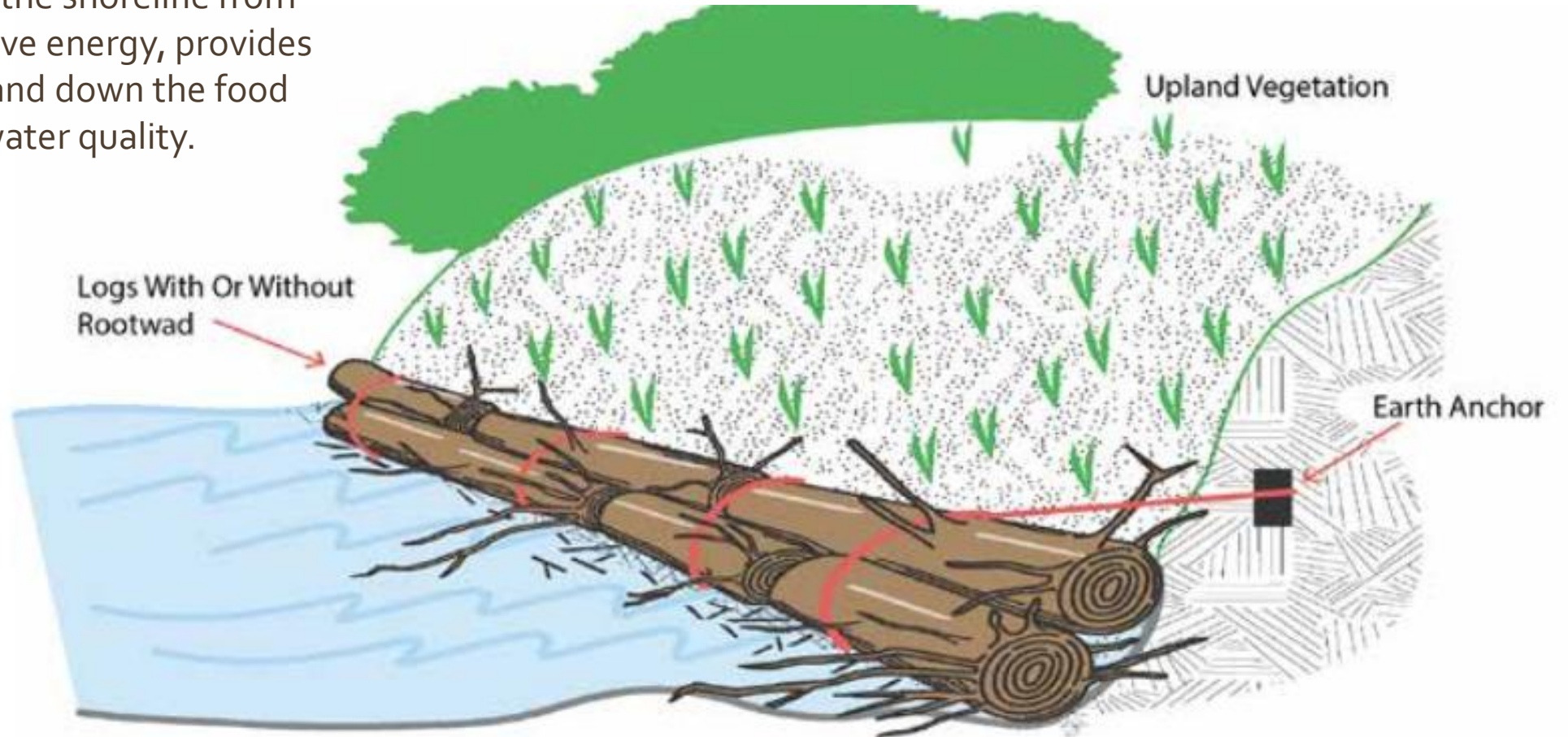


Funding Source

Sauk County	N
Healthy Lakes	Y
LRPD	N

Wave Reducing Timbers- Log Revetments

This practice protects the shoreline from high to low energy wave energy, provides habitat to wildlife up and down the food chain, and improves water quality.



Wave Reducing Timbers Log Revetments- Example

LOG AND ROOT WAD REVETMENT

Appropriate Uses & Benefits

- Both high and low energy sites
- Improves spawning habitat
- Economical

Limitations

- Limits shoreline access
- Creates shoreline disturbance
- May need to be replaced eventually
- Transporting and access to trees

Funding Source

Sauk County Y

Healthy Lakes N

LRPD Case by case basis



Native Plantings- aka 350 ft² Native Buffer

Native buffers help to filter and slow runoff before reaching the lake and protects shorelines with their dense and deep root structures. Additionally, buffers provide fantastic habitat to beneficial birds, insects, and provide shade and food to fish.



Native Plantings- aka 350 ft² Native Buffer

NATIVE PLANTINGS

Appropriate Uses & Benefits

- Most sites are appropriate
- Areas with little or no traffic are best
- Areas with little or no wave action

Limitations

- Cost
- Maintenance is required (e.g. fencing, watering, and weeding)
- Deer browse may be an issue
- Not for use on sites with active erosion issues
- May need additional practices to address erosion



Funding Source

Sauk County	Native Plant Sale
Healthy Lakes	Y
LRPD	Y

Tree cover

Tree cover benefits Wisconsin's lakes by dissipating rain fall energy, acting as a natural filter that improves water quality, preventing shoreline erosion, and providing essential habitat for fish and wildlife.



Tree Cover

Tree Cover

Appropriate Uses & Benefits

- Natural filter that improves water quality
- Preventing shoreline erosion
- Providing essential habitat for wildlife
- Most effective when the native shoreline buffer

Limitations

- Possible view obstruction
- Deer browse

Funding Source

Sauk County	Tree Sale
Healthy Lakes	Y- (part of buffer)
LRPD	N

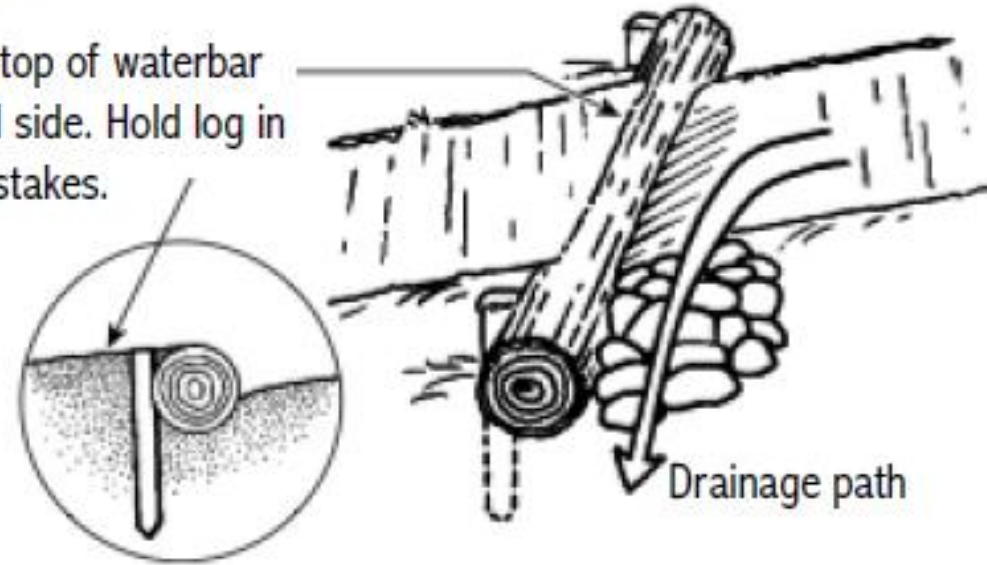


Diversion

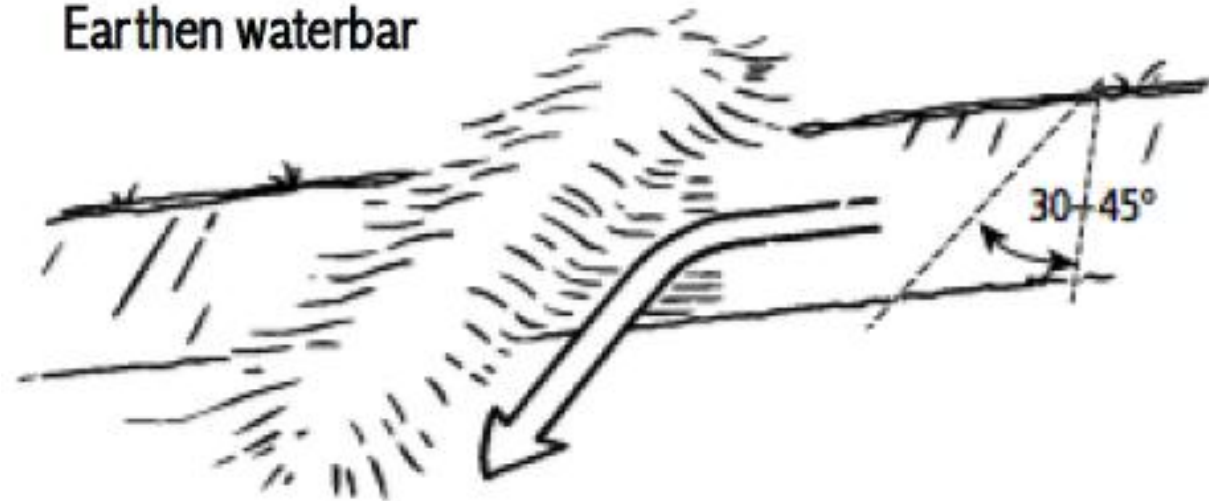
Diversions divert water into places better suited for water infiltration. In addition to helping improve lake health, these can also reduce the effects of erosion on the paths that the diversions are installed on.

Log waterbar

Pile soil to top of waterbar on downhill side. Hold log in place with stakes.



Earthen waterbar



Diversion

Diversion

Appropriate Uses & Benefits

- Transition zone and upland best practice
- Intercept runoff from a path or driveway
- Redirect it into a well-vegetated dispersion area or infiltration practice
- Multiple diversion practices may be necessary

Limitations

- Slopes not exceeding a 10% grade
- Must outlet to a stable, well-vegetated area
- Not intended for large volumes of runoff

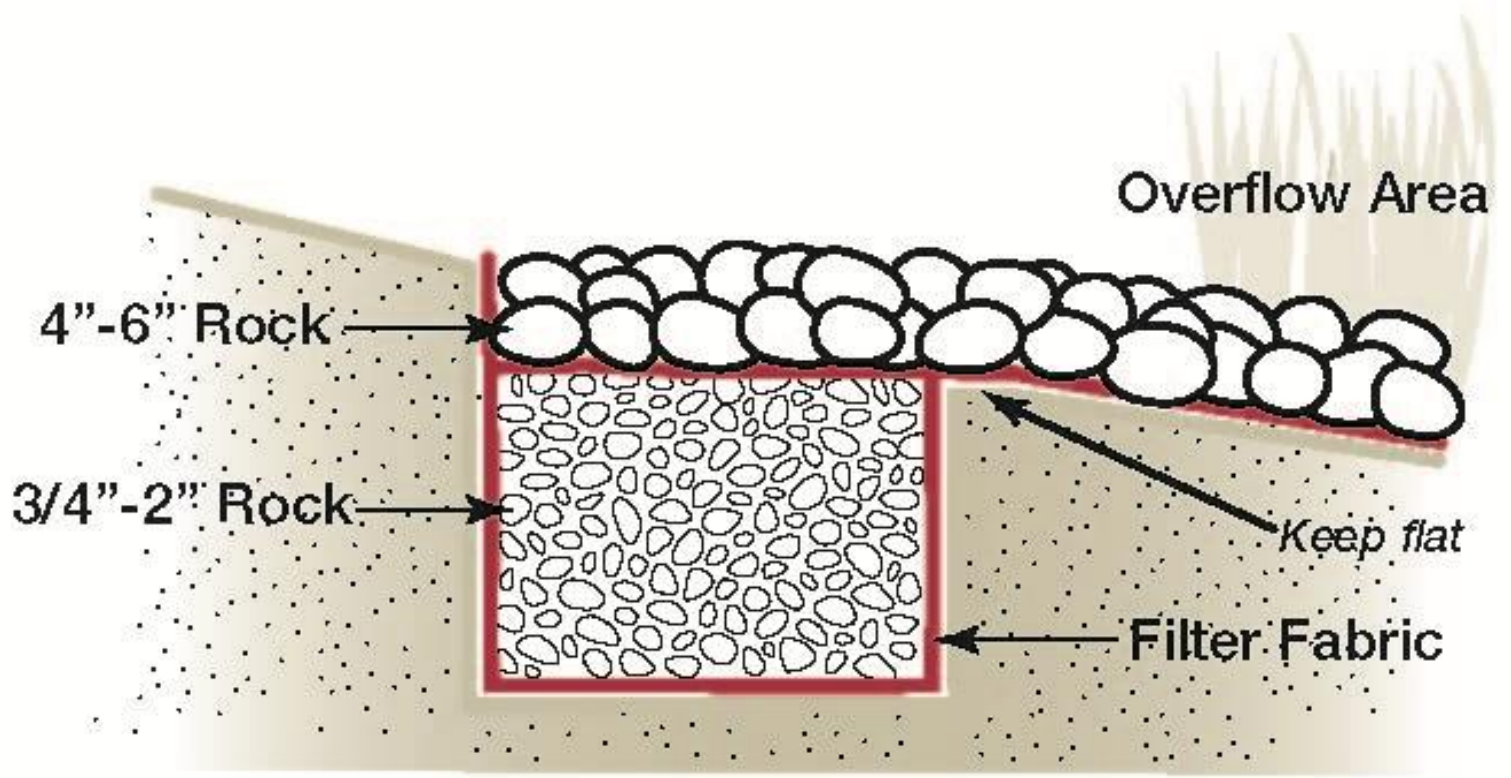
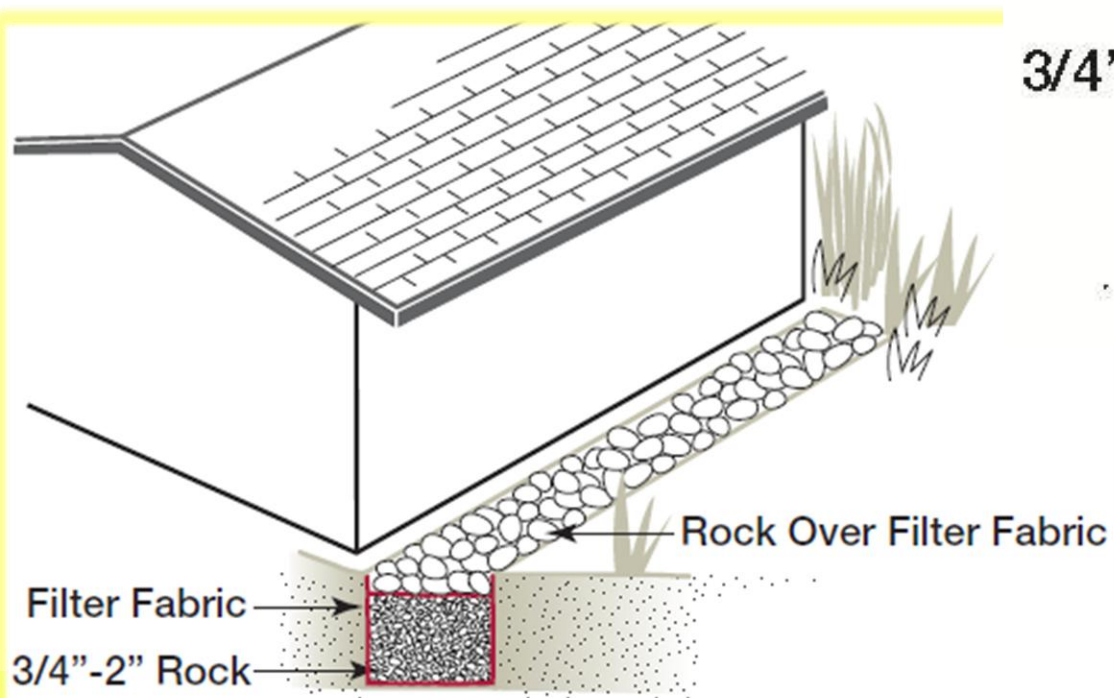
Funding Source

Sauk County	N
Healthy Lakes	Y
LRPD	Y



Rock Infiltration

Installed upland, where large quantities of water are expected to come from (think roofs, roads, and gutters). Infiltrations slow water down and allow it to absorb into the soil instead of going straight down to the lake.



Rock Infiltration

Rock Infiltration

Appropriate Uses & Benefits

- Transition zone and upland best practice
- Capture, redirect, and pre-treat water
- Alternative option to Rain Garden

Limitations

- Appropriate for sandy to loamy soils only (not clay!)
- May require a catch basin or diversion practice to redirect runoff water to it

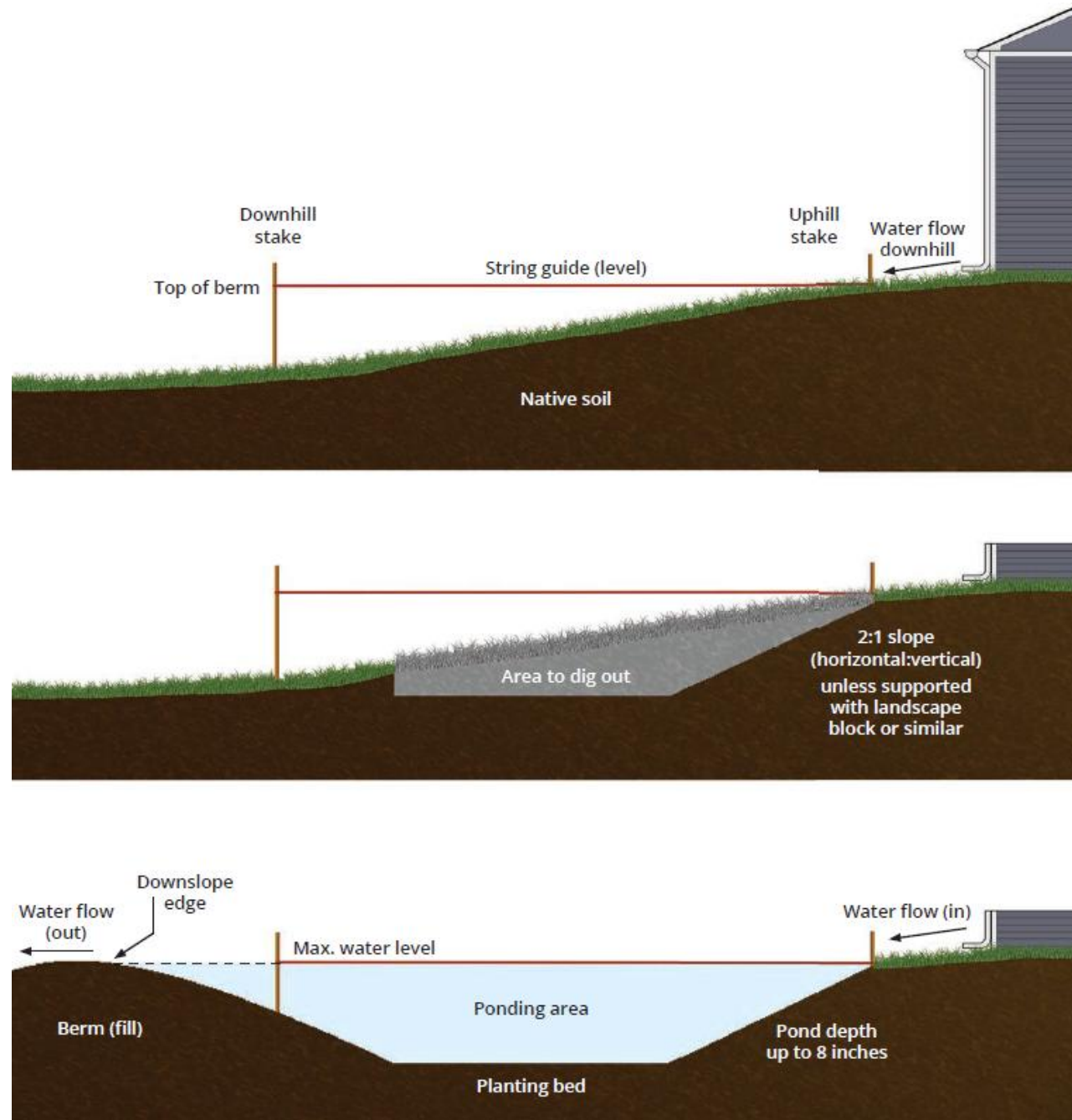
Funding Source

Sauk County	N
Healthy Lakes	Y
LRPD	Y



Rain Garden

Rain Gardens collect roof, path, and driveway runoff allowing it to soak into the ground. With larger rain events the garden will still support the lake by filtering out a majority of the polluted runoff. Rain Gardens also give homeowners an opportunity to create a beautiful native garden that will attract birds, butterflies, and beneficial insects.



Rain Garden

Rain Garden

Appropriate Uses & Benefits

- Capture and infiltrate runoff
- Designed to drain within 1-2 days,
- Provide habitat for birds, butterflies, and beneficial insects and promote natural beauty

Limitations

- At least 10 feet away from your home
- Do not locate the garden over a septic field or where water already ponds
- Choose a location in full or partial sun

Funding Source

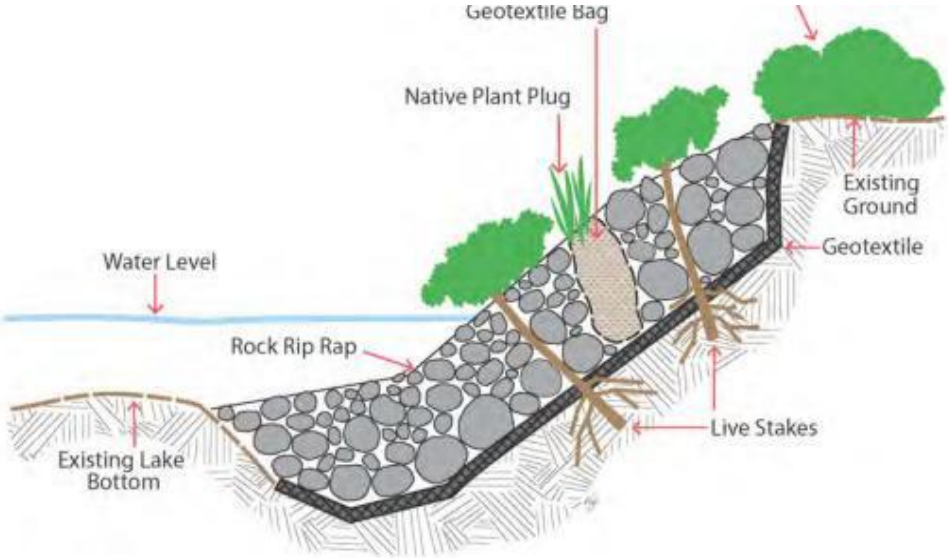
Sauk County	N
Healthy Lakes	Y
LRPD	Y



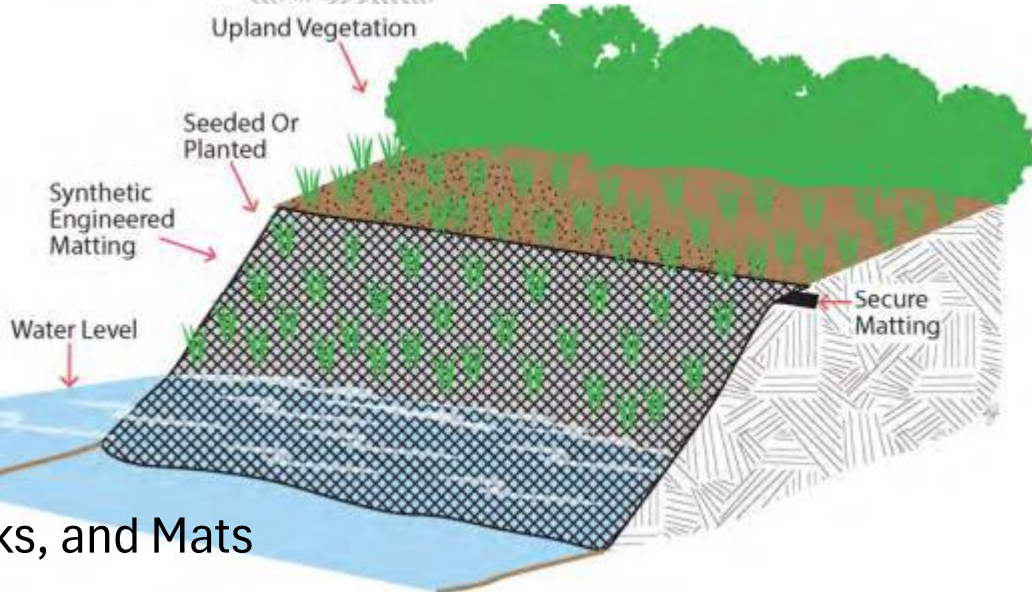
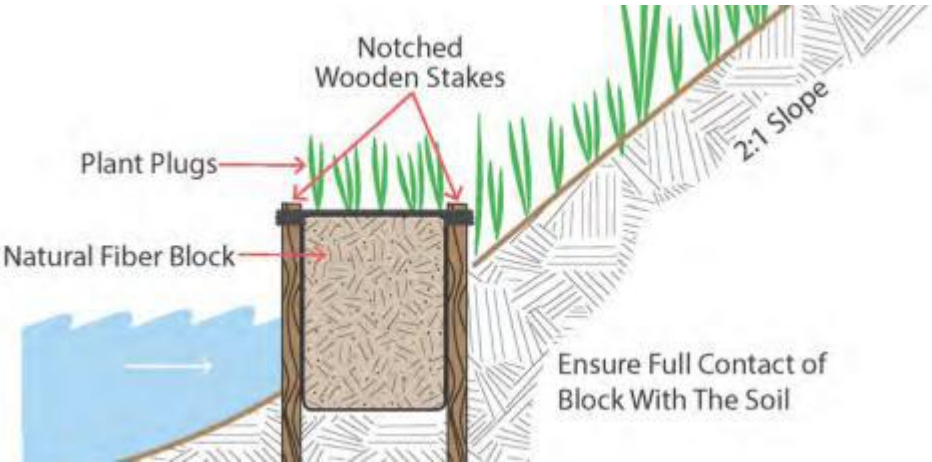
Bioengineered Shorelines

Bioengineered shoreline option that can be suited to any property. Natural fibers, plantings, and geotextiles reinforces riprap with root structures to enhance its longevity, runoff absorption qualities, and ability to provide habitat. If landowners want to replace or install riprap it is highly recommended to consider a bioengineered option that includes some plant integration.

Riprap with Native Plantings



Geotextile Bags



Natural Fiber Rolls, Blocks, and Mats

Bioengineered Shorelines

ROCK RIPRAP TOE WITH UPLAND GEOTEXTILE BAGS

Appropriate Uses & Benefits

- Steeper slopes
- Quickly establish riparian vegetation
- Effectiveness increases with time
- Smaller areas of unvegetated banks between trees and shrubs
- Best for areas of limited access with existing vegetation
- Environmentally friendly alternative to hardscape retaining walls

Limitations

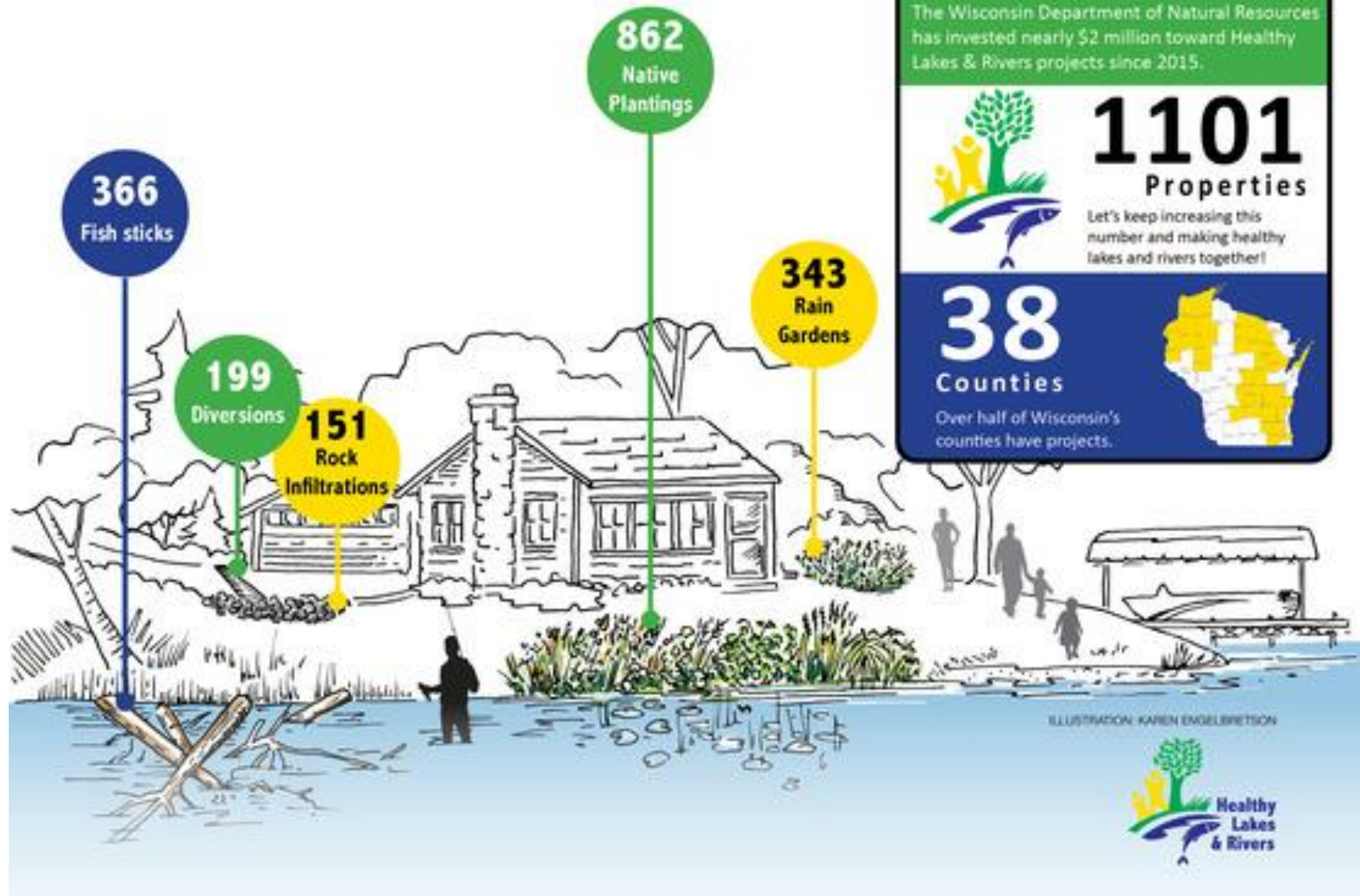
- Expensive
- Labor intensive
- Requires engineering
- Soil-filled bags require site to be accessible

Funding Source

Sauk County	Y
Healthy Lakes	N
LRPD	Y



We are proud to share our success!



Resources

- [Healthy Lakes & Rivers](#)
- [Shoreline Stabilization Guide for Homeowners](#)
- [Impervious Surfaces](#)
- [Sauk County LRE](#)
- [LRPD](#)

QUESTIONS?

Mitch McCarthy

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Sauk County Land Resources & Environment

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608-355-4836



Landscaping Insights

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