

Managing Our Shorelands to Protect Our Lakes



Quita Sheehan
Conservation Specialist
Vilas County Land and Water Conservation Dept.

Program Overview

Shoreland Management

- ❖ The Ecology of Shorelands

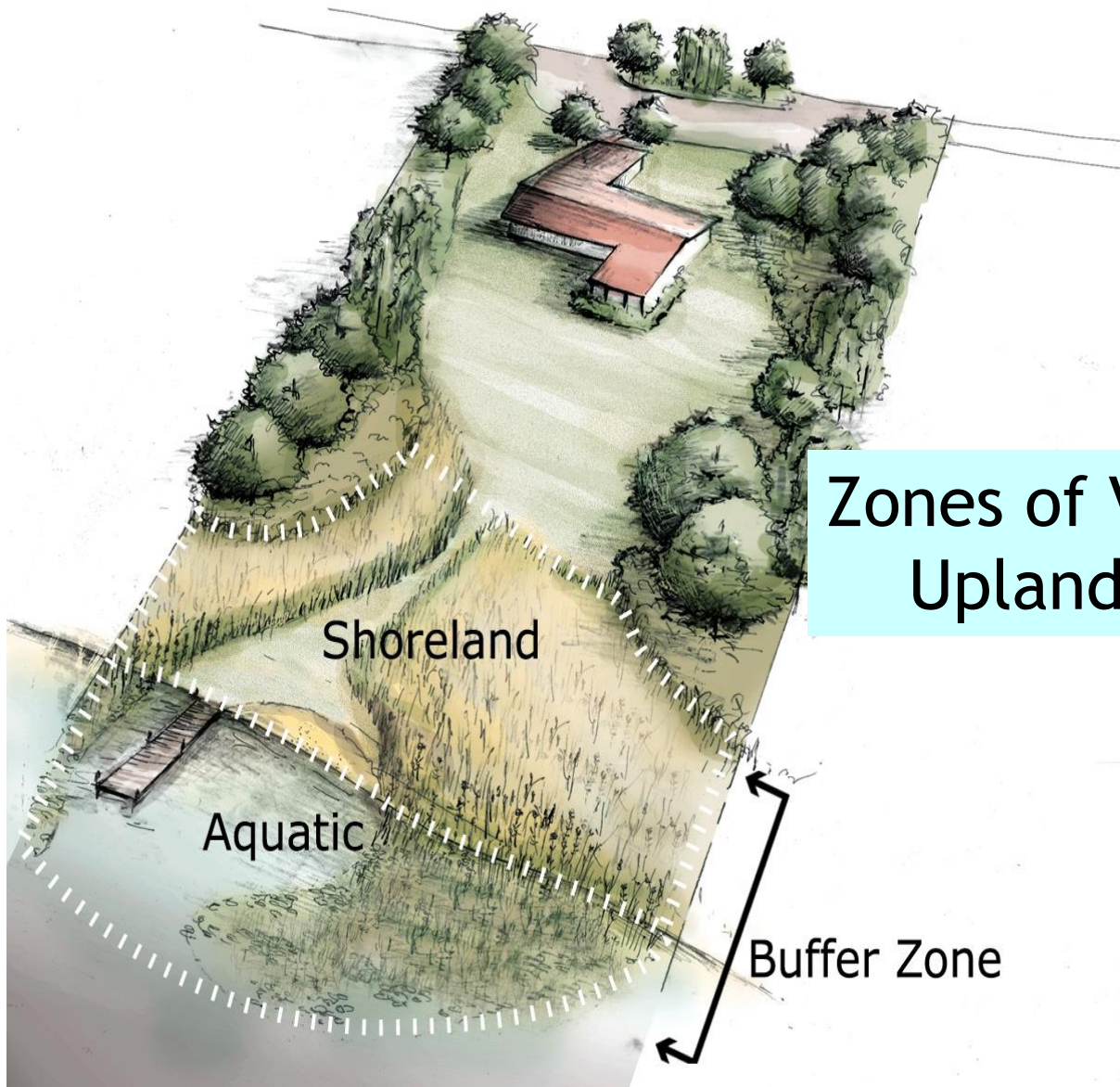
How to manage Shorelands?

- ❖ Surveying
- ❖ Restoring

Shoreland Programs



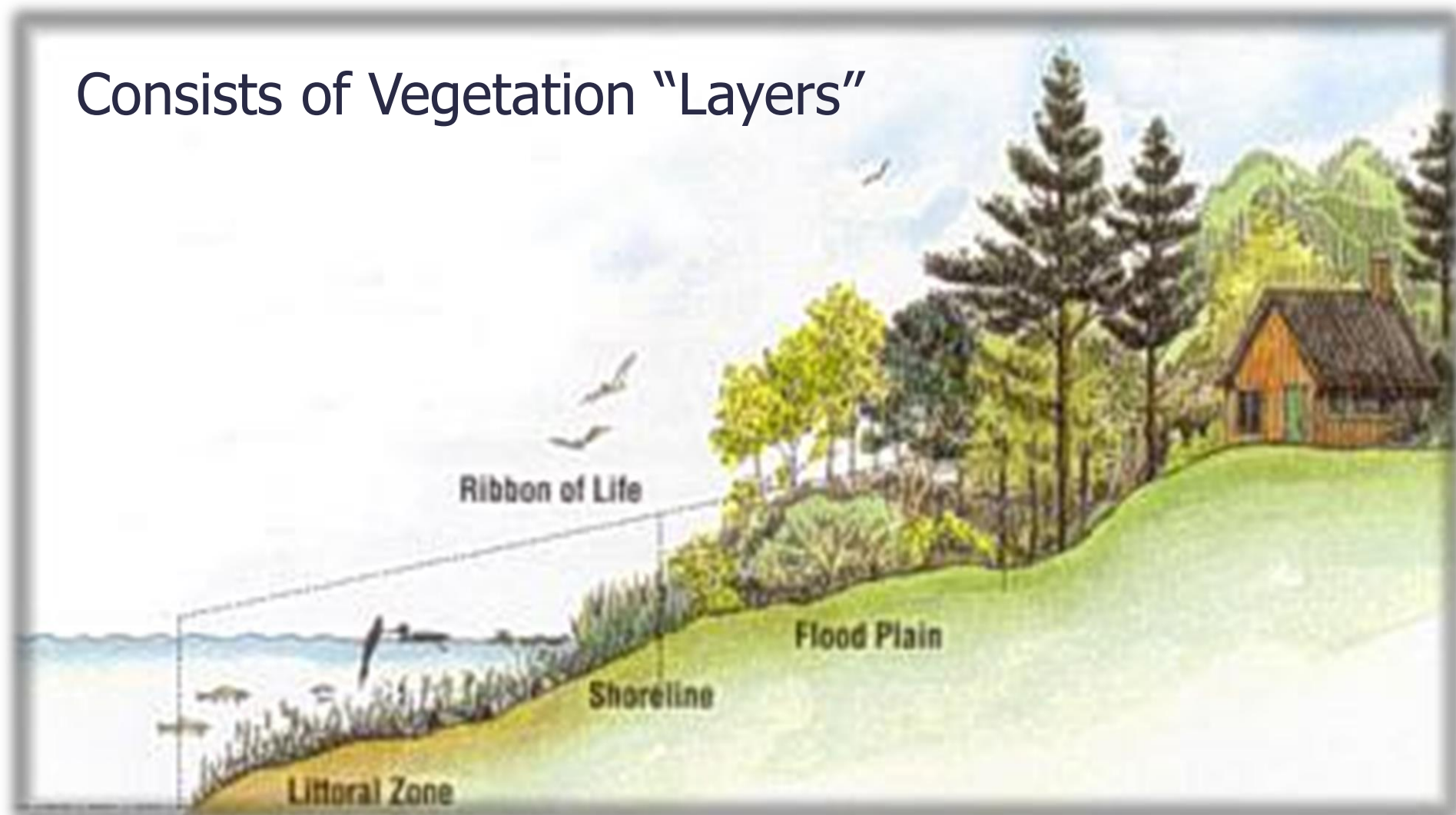
What is the “Shoreland Buffer Zone”?



Zones of Vegetation:
Upland & in Lake

What is the Shoreland Buffer Zone?

Consists of Vegetation “Layers”



Why are Shoreland Buffers Important?

Stabilize Soil

Provide Food &
Nesting Habitat

Take Up Nutrients

Shelter for Wildlife

Protection for Fish



90% of all lake life is born, raised,
sheltered, and fed or grows in the
area where land and water meet:

The Shoreland Buffer Zone



Natural Lake Shorelands



Rich Mosaic of
Vegetation

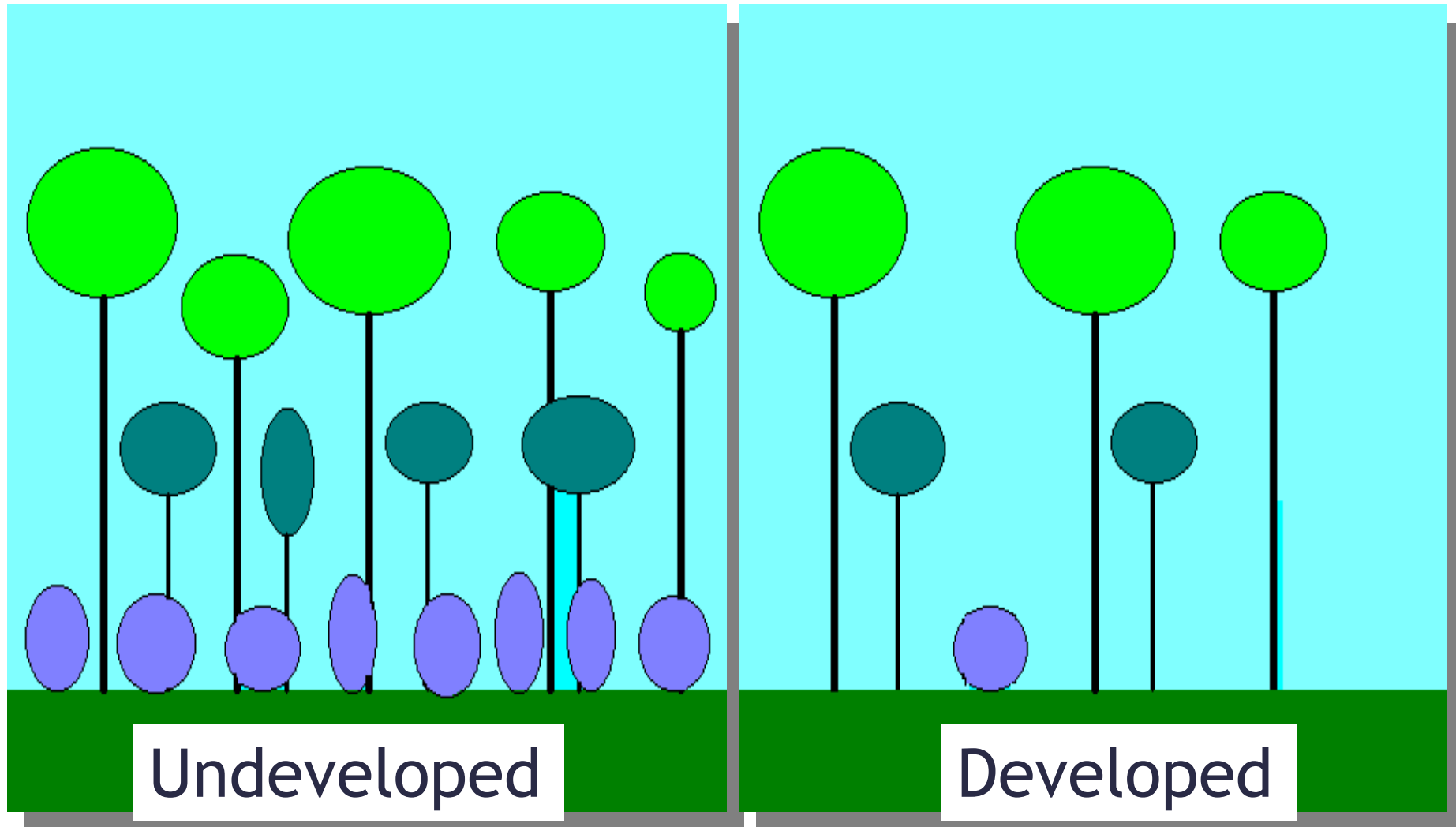
Habitat

Natural
Scenic Beauty

Lake Protection

The Very Essence of Being “Up North”

What's Happening to our Shoreland Buffers?



Losing the vegetation layers



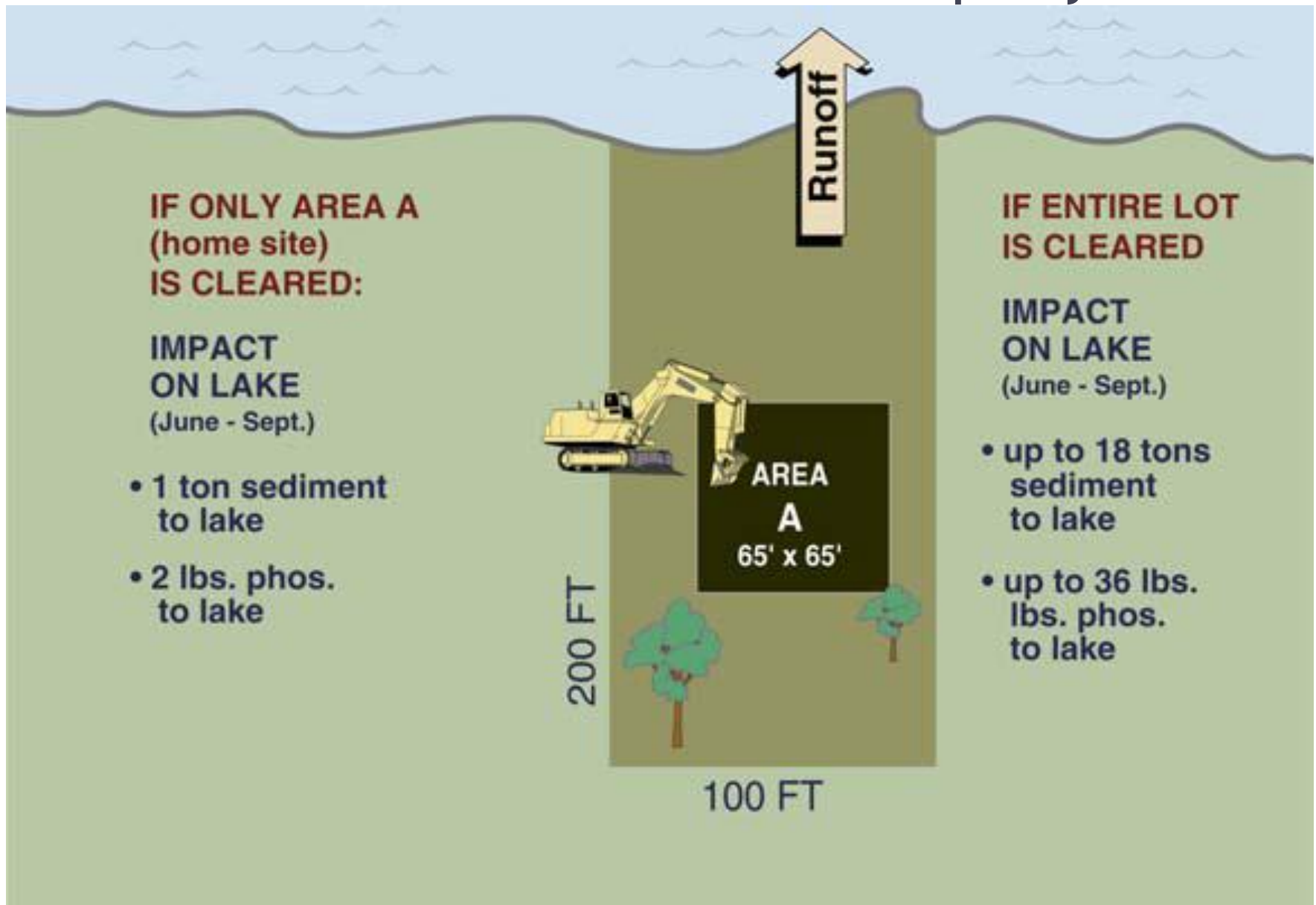
Everyone takes loving care of their own property....



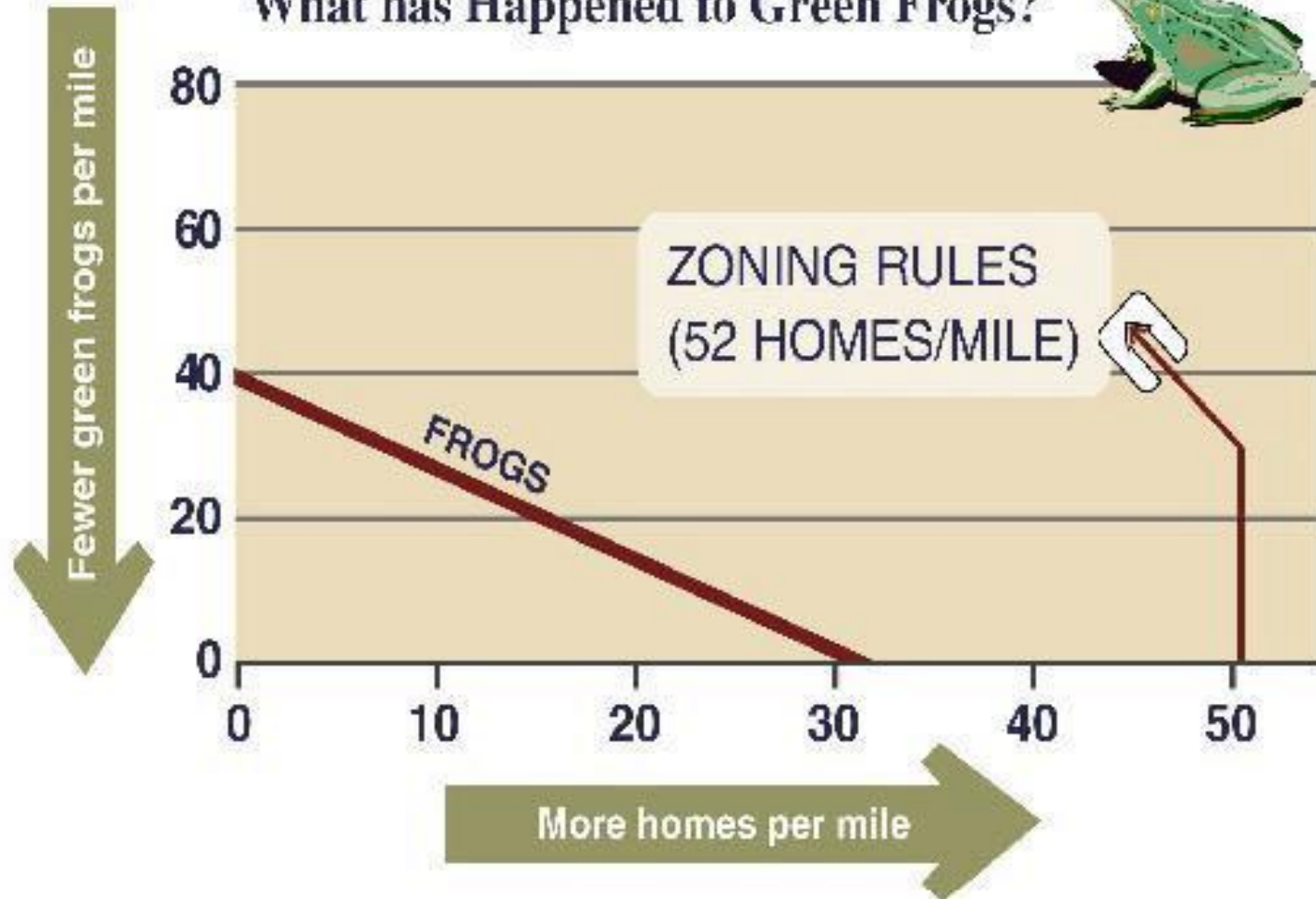
But when everyone does it, the effects add up!



The effect of land disturbance on water quality



What has Happened to Green Frogs?



Source: Wisconsin Dept. of Natural Resources

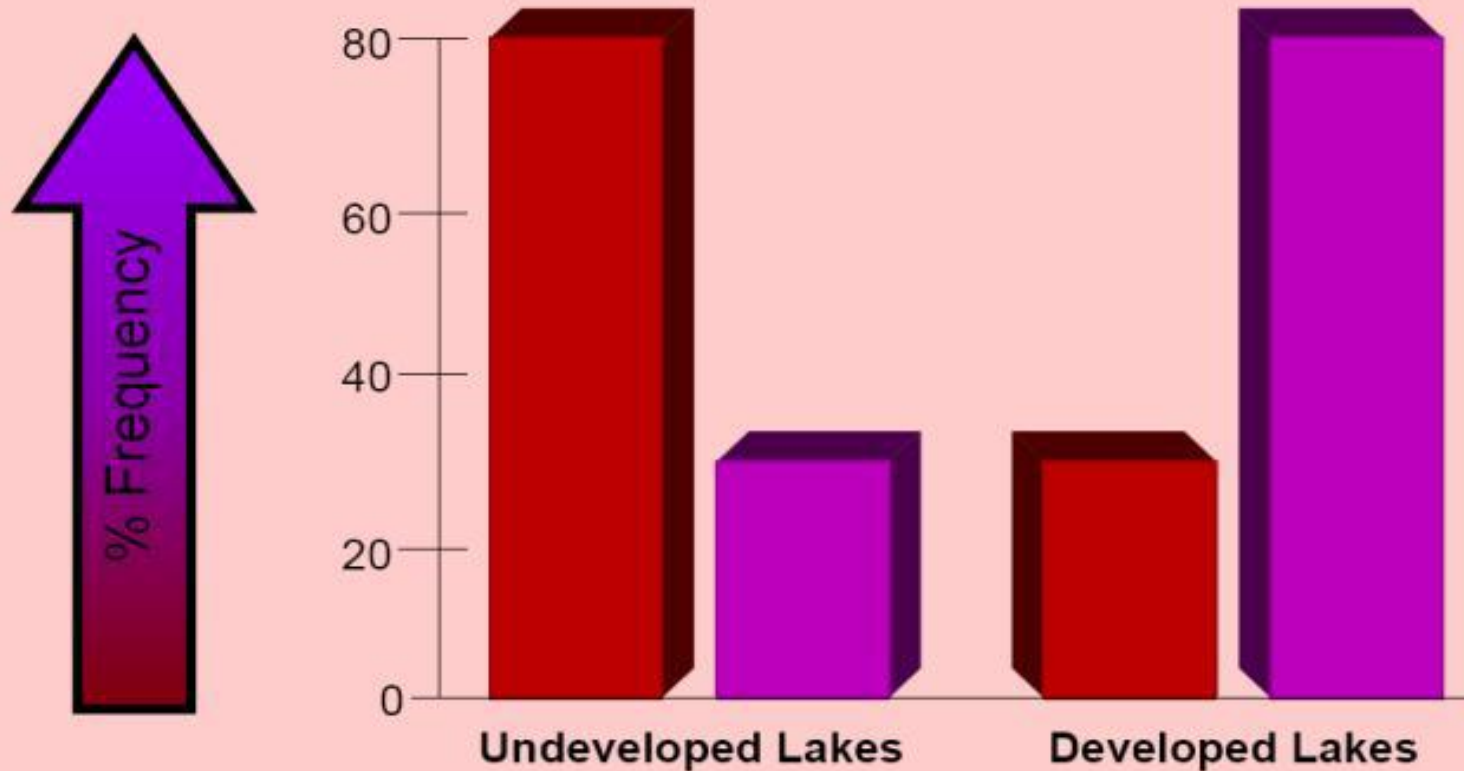
The Wisconsin Lakes Partnership



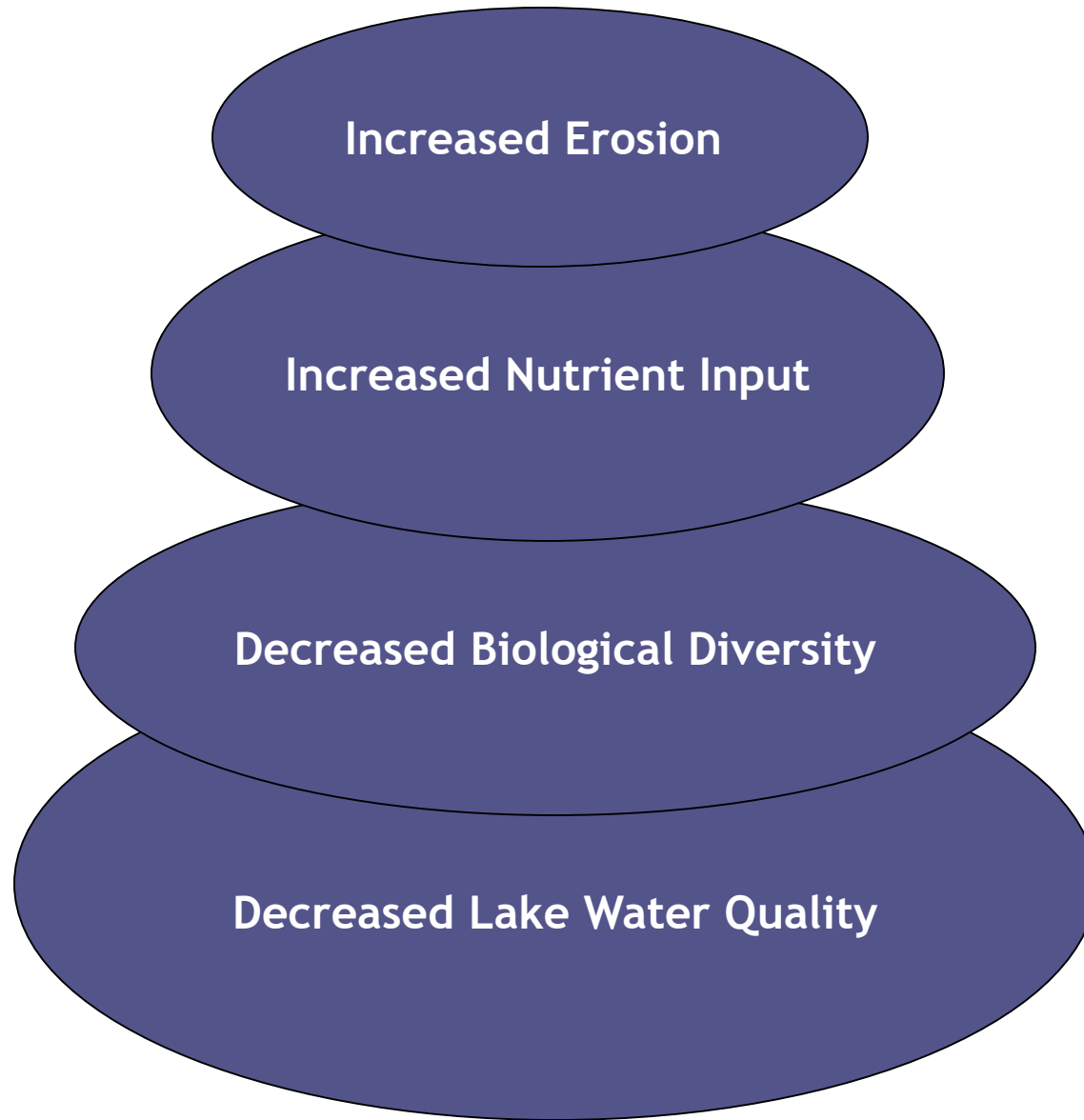
What's Happened to Songbirds?



- Uncommon birds (*Warblers, Thrushes, Vireos, Oven Bird*)
- Common birds (*Grackle, Catbird, Chickadee, Bluejay, Goldfinch*)



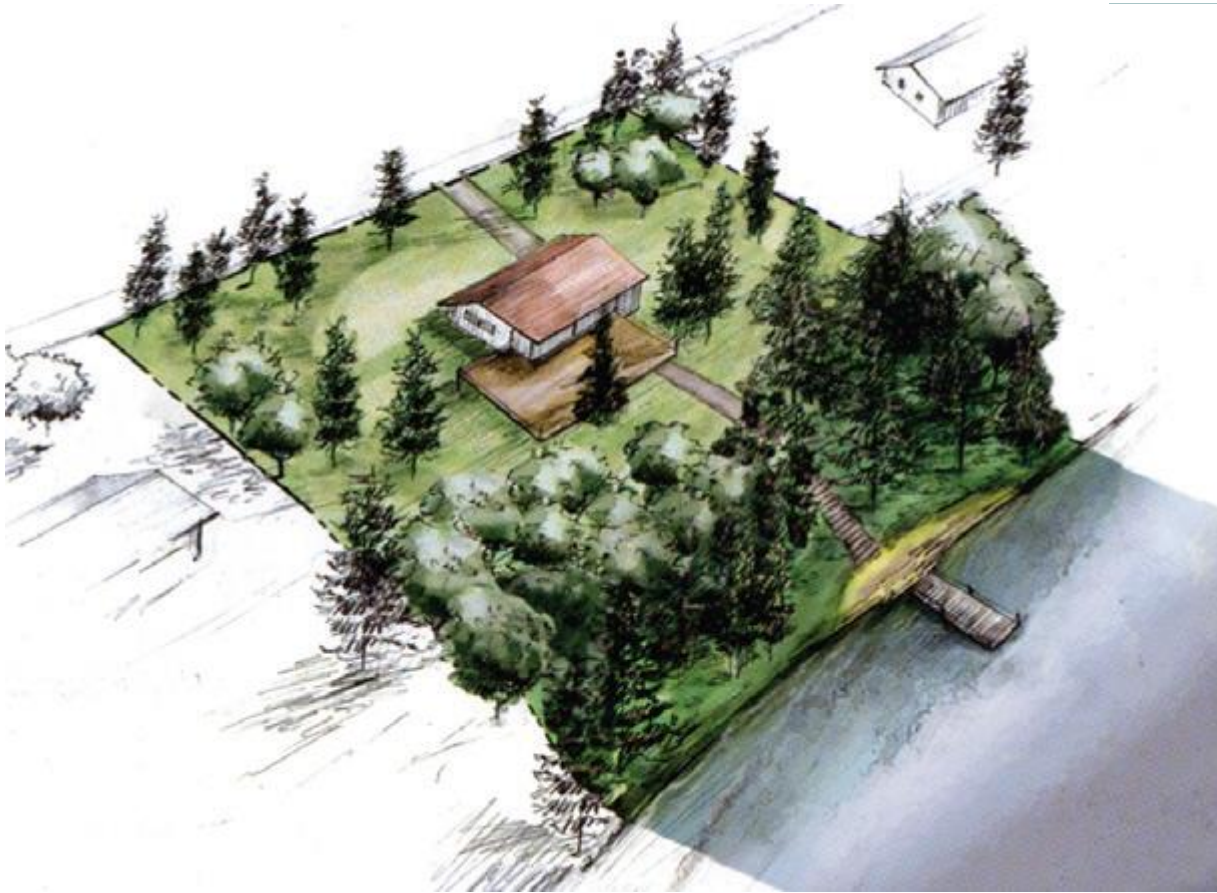
Cumulative Impacts:



How do we know what condition
our shoreland is in?



SUREVYS



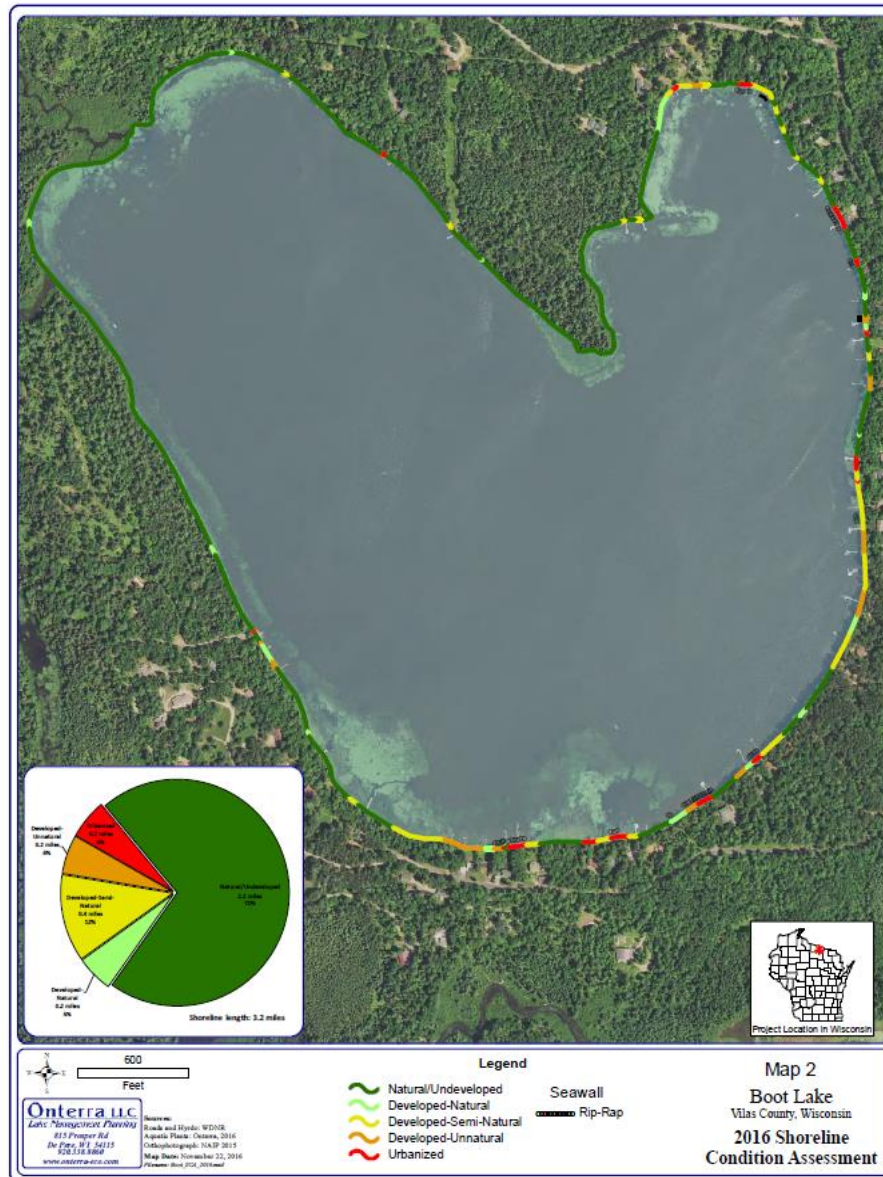
Score your Shoreland

- 1) Is there natural ground cover? How much?
- 2) Is there a shrub layer? How much?
- 3) Is there a tree layer? How much?
- 4) Is there any soil erosion? How much?

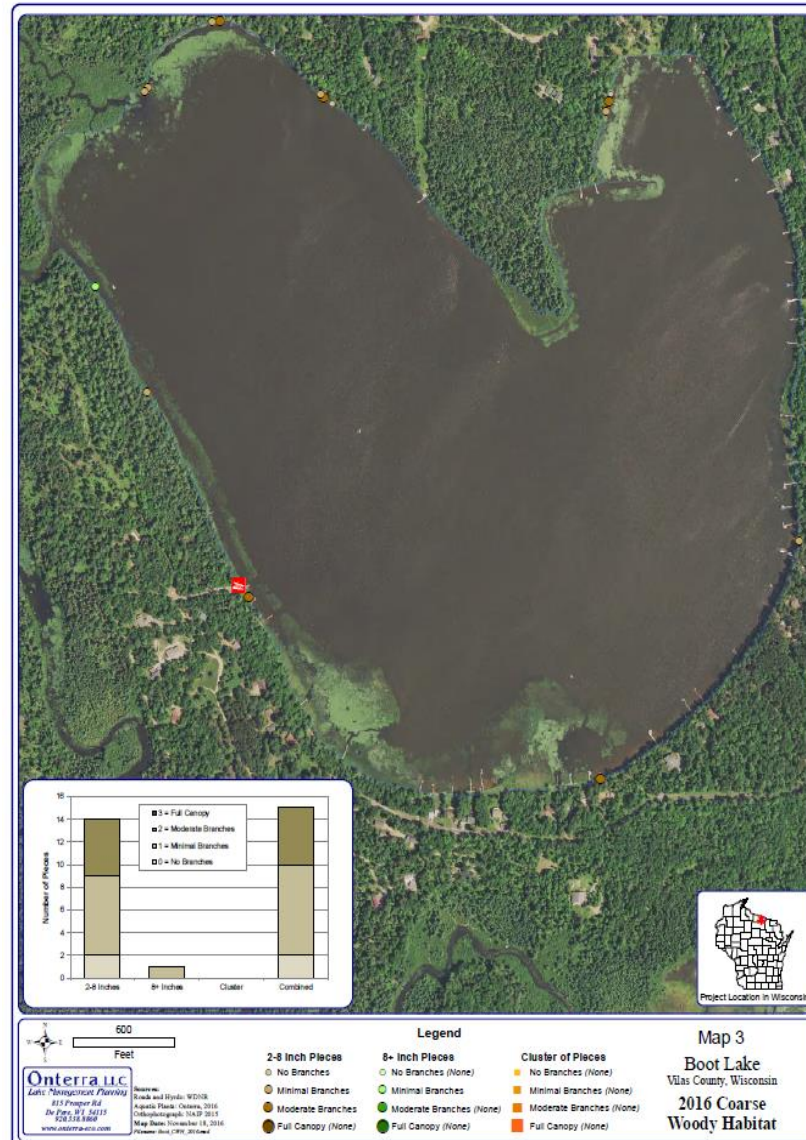
GIS Lake Shoreland Inventory

- Identify areas of shoreland that may need protection or restoration
- Provide a different perspective
- Develop a baseline for future comparison
- Provide specific information to property owners
- Inventory of potential workload for municipal/agency professionals

Shoreland Condition Assessment



Coarse Woody Habitat





Now we know what the
condition of our shoreland is -
What can we do?

Restoration Options:

Protection

I

Natural Recovery

Accelerated Recovery

Protection

- No serious erosion problem
- Native vegetation present
- Diversity of structure
- Shoreland buffer requirement met



Natural Recovery

- Elements of 3 layers present
- Turf grasses not well established
- Leave it be - no mowing or weed whacking
- Discourage disturbance (people and critters)



Accelerated Recovery

- Turf grass well established
- No natives present
- Exposed soil
- Lots of traffic
- Sand beach maintained
- Quick results wanted



Accelerated Recovery Steps

- Site Plan Design
- Find a reference site
- Bioengineering required?
- Permits needed?
- Plant native plant species



“What about the toe erosion of my shoreland?”



Restoration Assistance

- Vilas County Land & Water Conservation Department
 - Technical Assistance
 - Cost Share Program
- WI DNR's Healthy Lakes Implementation Grant
 - Through Lake Association
 - Shovel Ready Projects

2003



Construction



2005



2011



Funding the Projects

Cost Share Funding

- DATCP funding managed by Land & Water Conservation Depts.
 - Can provide engineering design
 - Requires match - % varies depending on project
 - Dept. work directly with the land owners
 - Typically for moderate erosion problems
 - Funds more expensive projects (\$7500 cap)

BACKGROUND

Lean Government Charter



Goal: protect and improve the health of Wisconsin lakes by increasing lakeshore property owner participation in habitat restoration and runoff and erosion control projects.

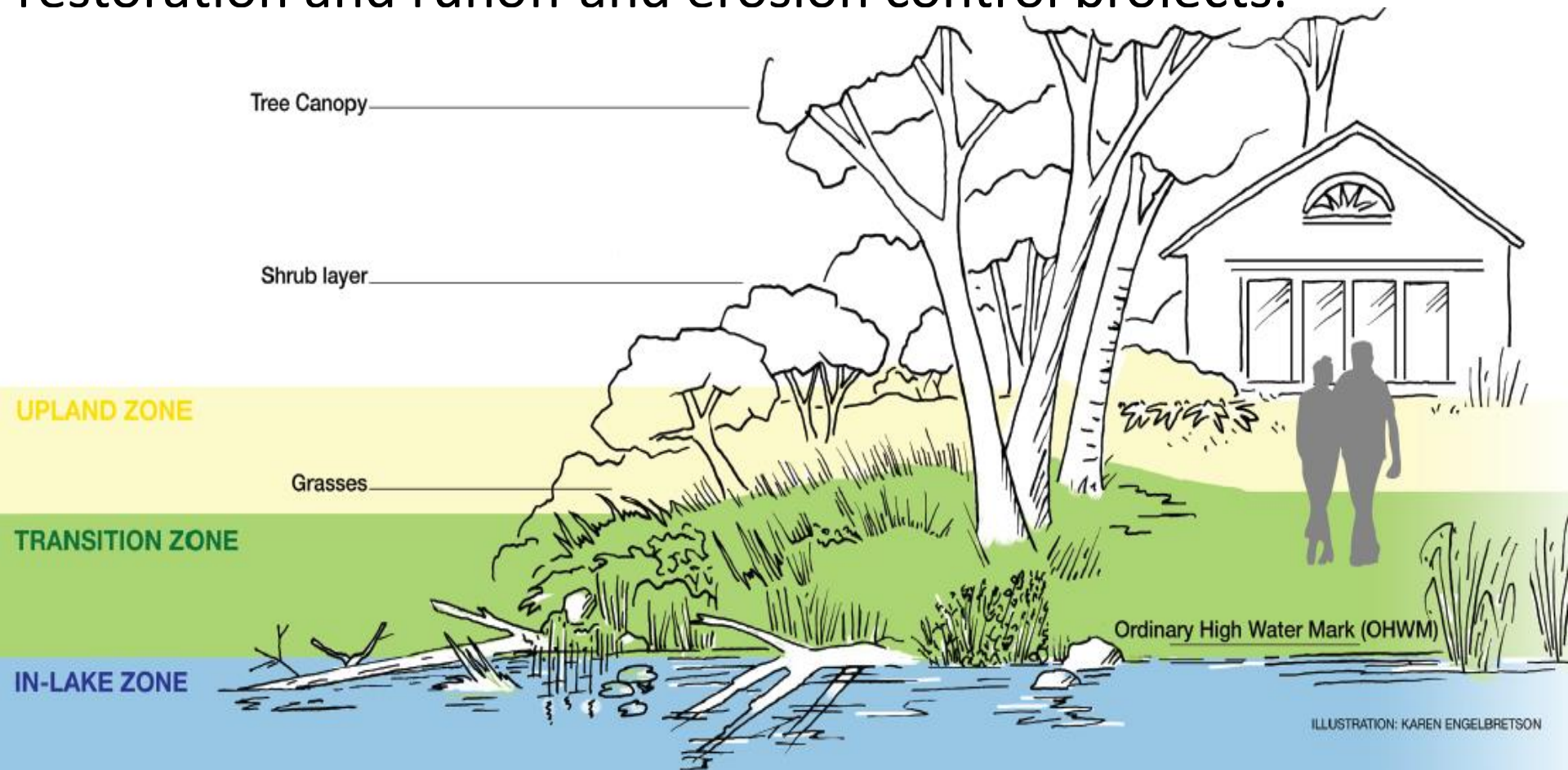
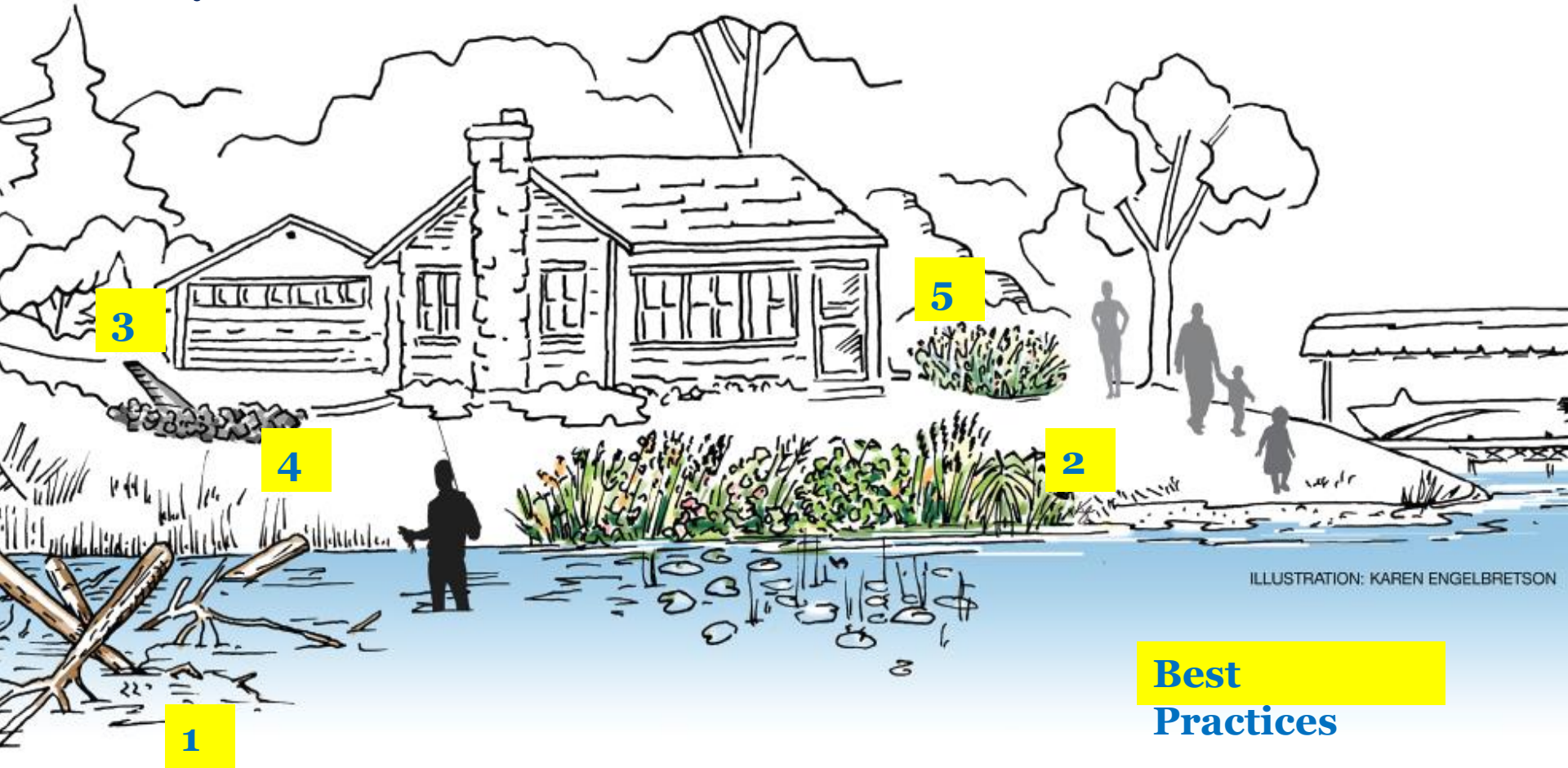


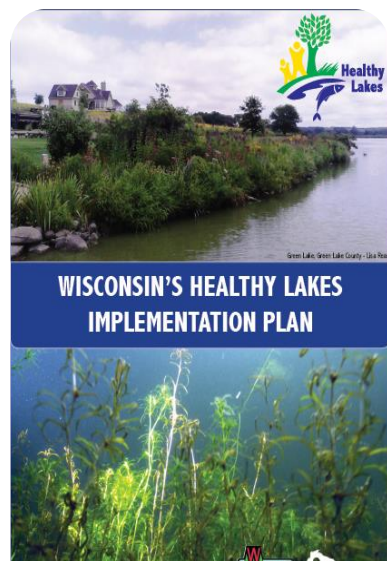
ILLUSTRATION: KAREN ENGELBRETSON

Wisconsin's 2014-2017 Healthy Lakes Implementation Plan

- Apply for Healthy Lakes grant funding, or
- Integrate into local planning efforts, or
- Do it yourself.



Wisconsin's 2014-2017 Healthy Lakes Implementation Plan



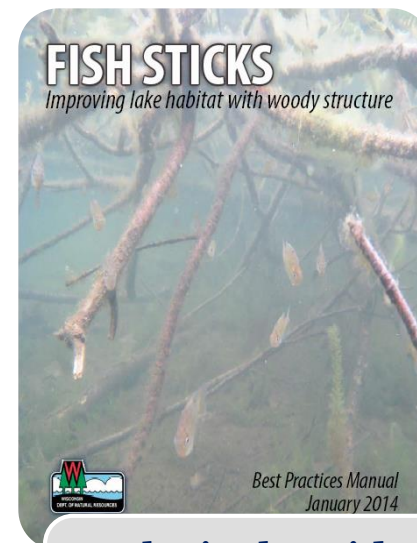
Statewide Plan

- Implementation focus



Fact Sheets

- 5 Best Practices
- Funding & Admin
- FAQs



Technical Guidance

- More project installation detail

Healthy Lakes Grants

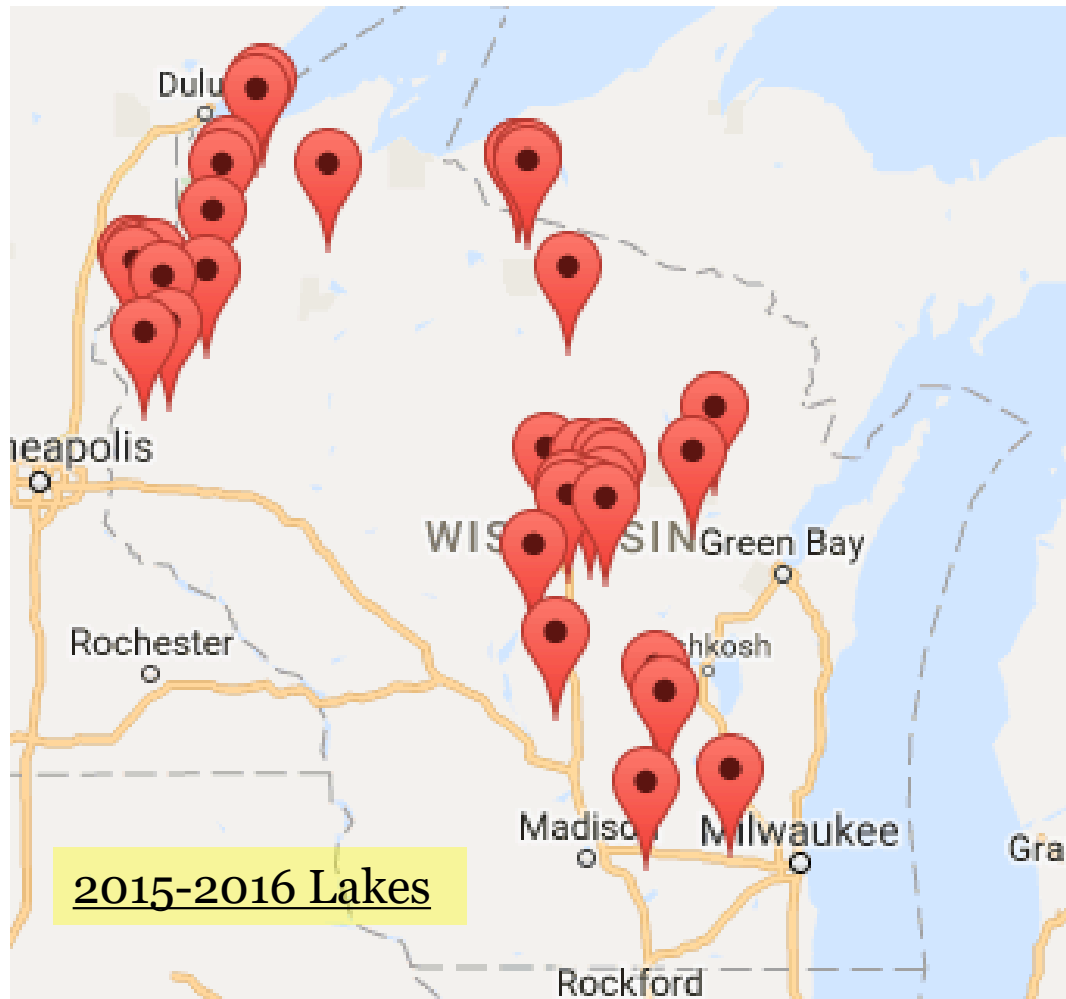
- \$1000/best practice funding cap
- Eligible sponsor applies on behalf of landowners with \$25,000 grant award cap (multiple best practices)
- 2-year grant agreement and 10-year individual landowner contract with maintenance requirements



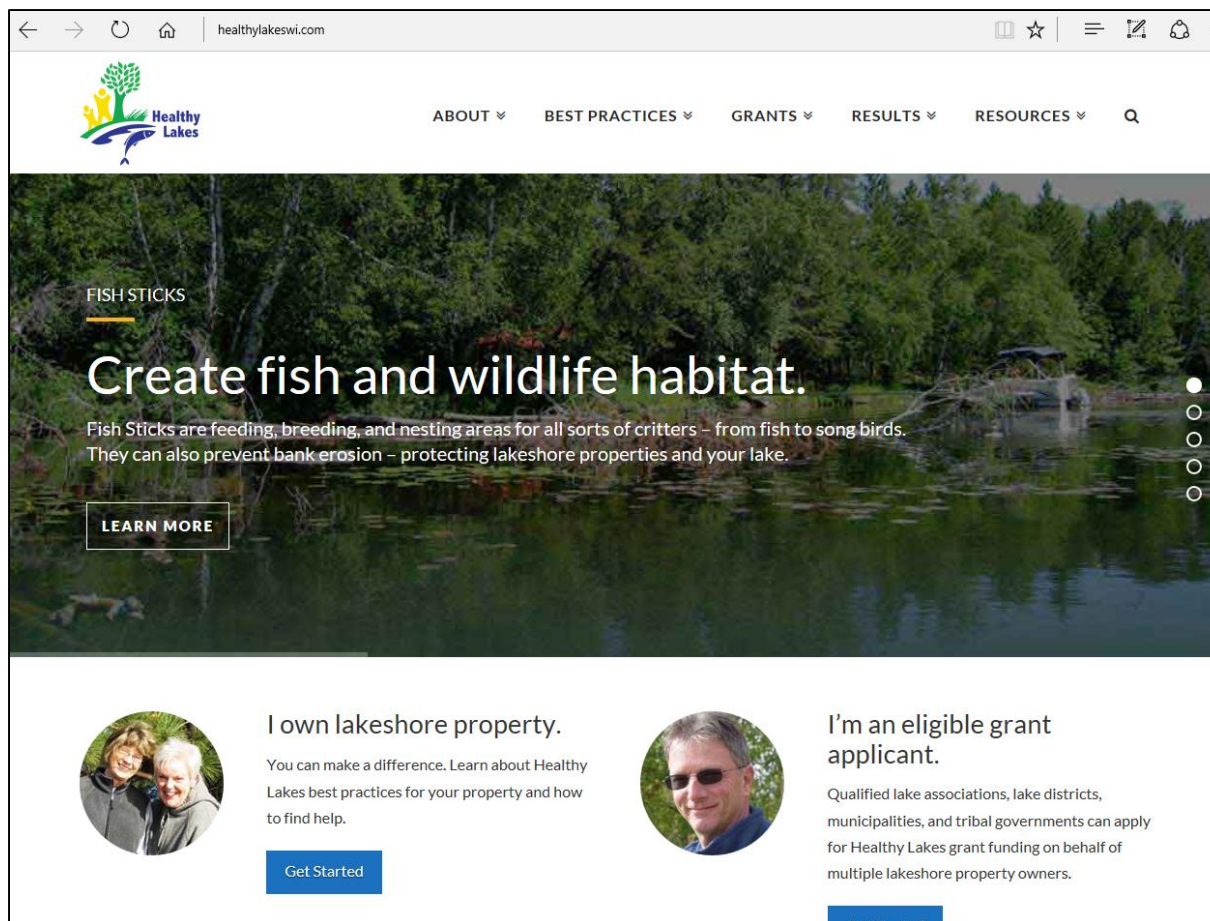
Stan, 2016 Governor's Fishing Opener on Minong Flowage

RESULTS

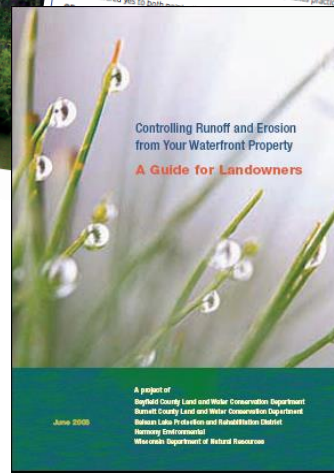
2015-2017: 407 Best Practices, 267 Properties, 56
Lakes, 21 Counties
\$377K state investment



www.healthylakeswi.com



- www.healthylakeswi.com
- Professional Shoreland Habitat Training (UW-Extension)
- Future workshops – **Wisconsin Lake Partnership Convention April 5 -7**



DNR's Healthy Lakes Implementation Plan

- Grants available to Lake Associations or other entities
- 5 Best Practices (pick 1 or more)
 - Fish Sticks
 - 10 x 30 ft area of Native Plantings
 - Diversion
 - Infiltrations Pit
 - Rain Garden







Restoration in progress

Rain Gardens

- Increase the amount of water filtering into ground rather than running across the ground and causing soil erosion
- Recharge groundwater
- Provide wildlife habitat
- Enhance beauty of yard and neighborhood
- Protect against flooding and drainage problems
- Protect lakes from damaging flows and reduces erosion
- Reduce the need for costly municipal storm water treatment structures

Rain Gardens - Defined

- Shallow depressions planted with native plants usually located near drain spouts of a building or adjacent to pavement areas
- Allows water to infiltrate into the soil
- Reduces soil erosion caused by runoff, to protect the quality of lake water or storm water drainage
- Functional garden

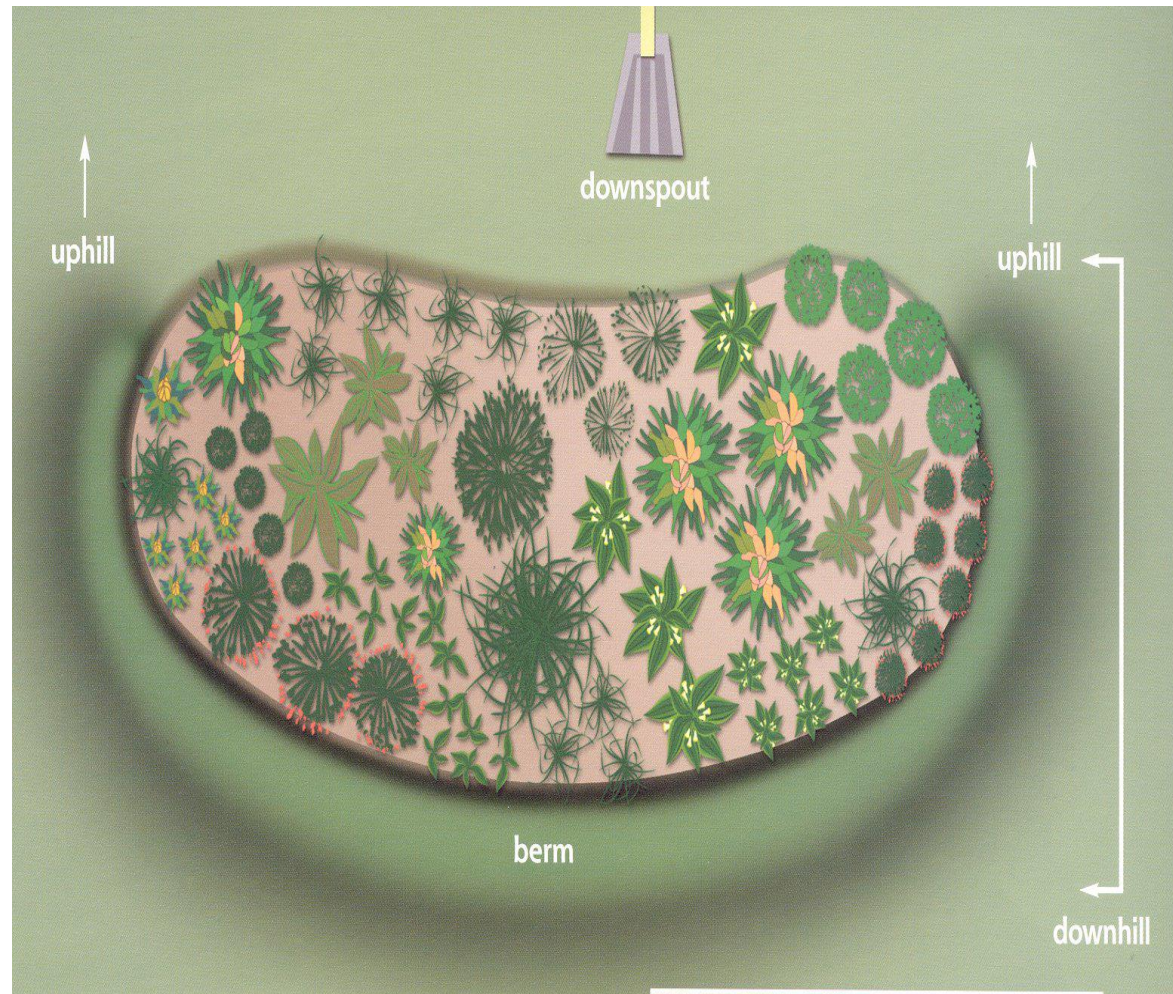


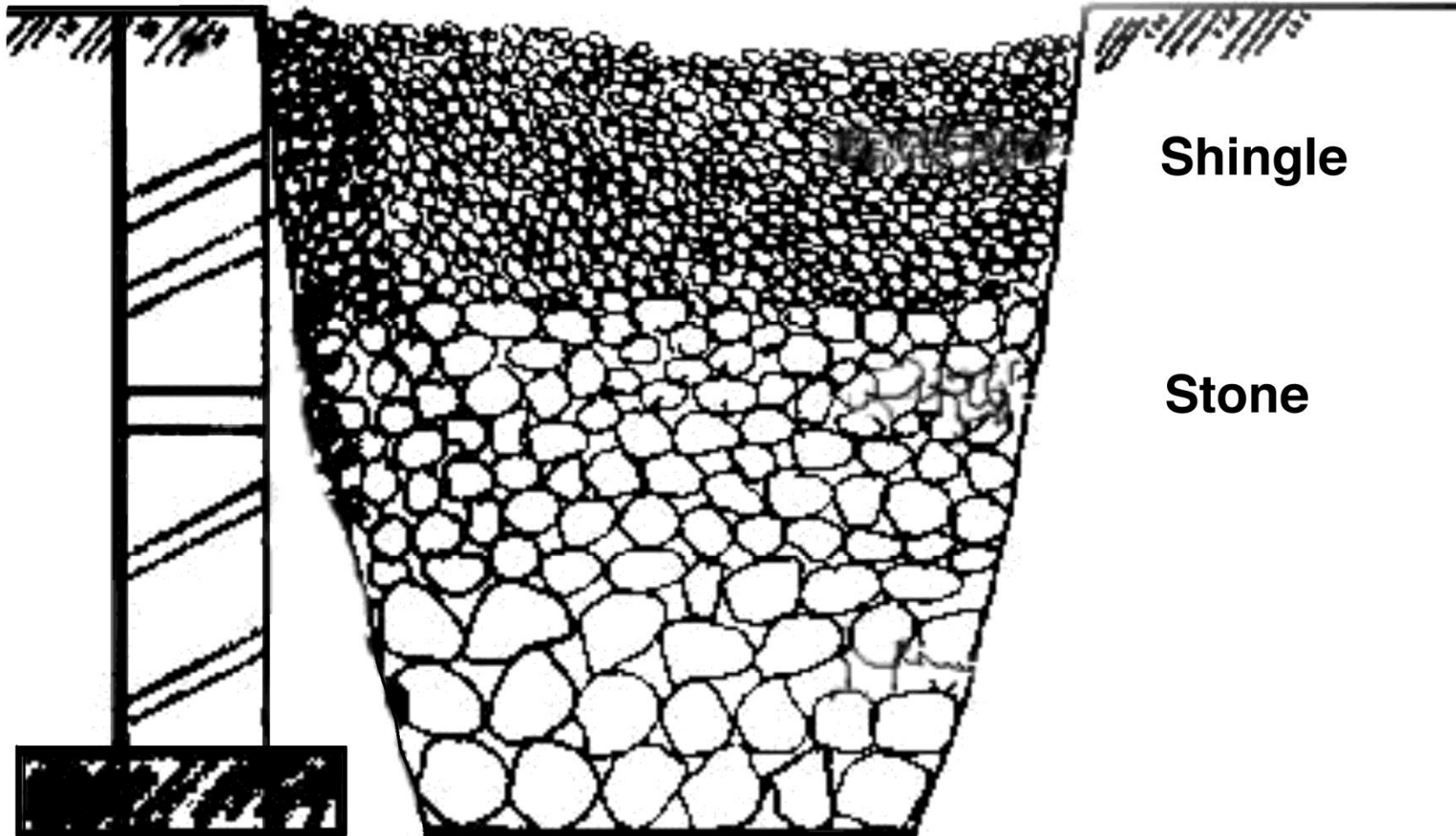






Illustration 1: French Drain

Foundation



Not to scale







Funding the Projects

Healthy Lakes

- DNR Grant Funded
 - Lake Organizations typically hold grant
 - \$1,000 max per practice awards
 - Requires 25% match (cash and/or labor)
 - Lake Organizations often have property owners cover the 25% match on practices implemented
 - Works well for minor erosion problems



Questions?