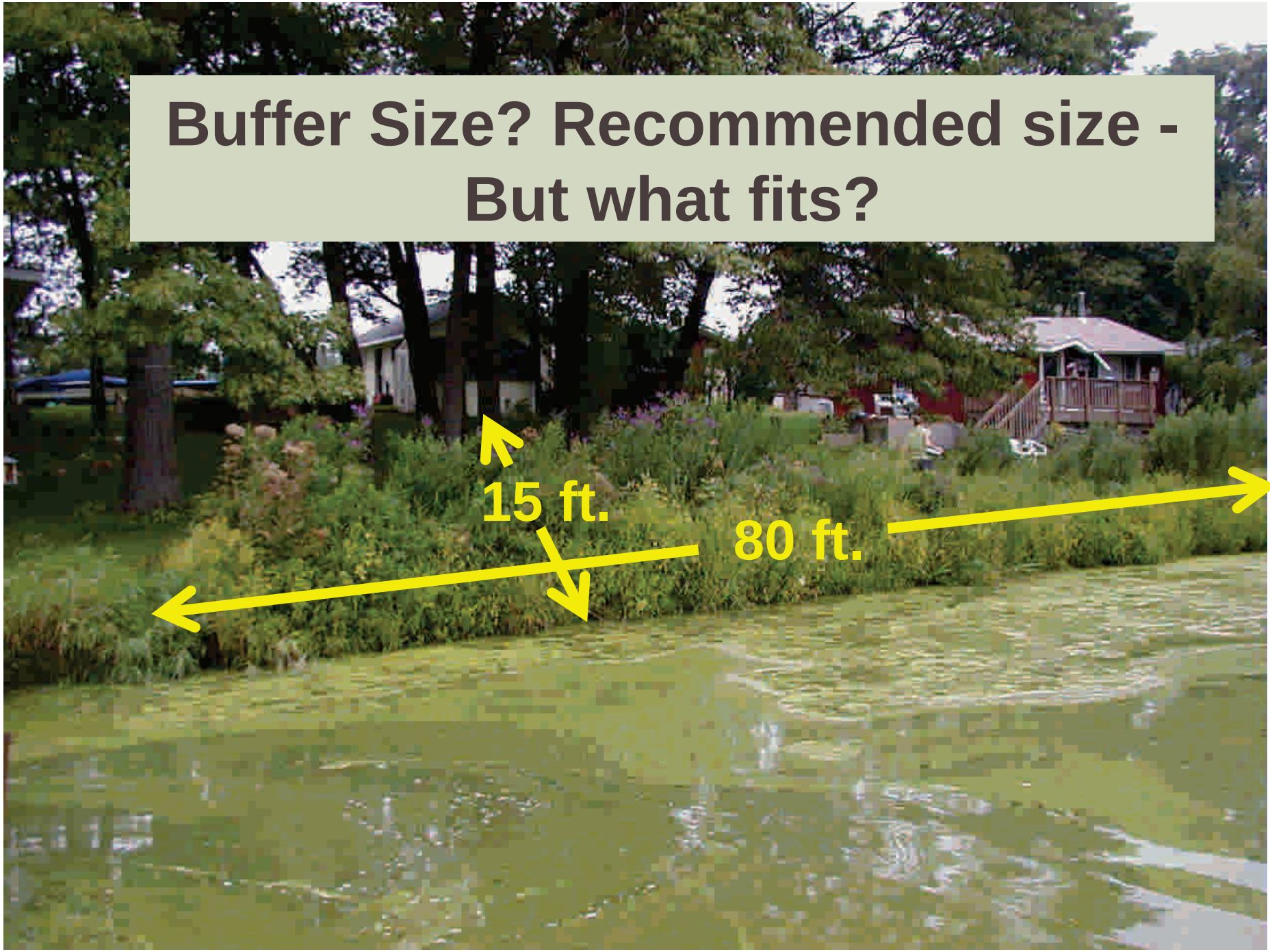
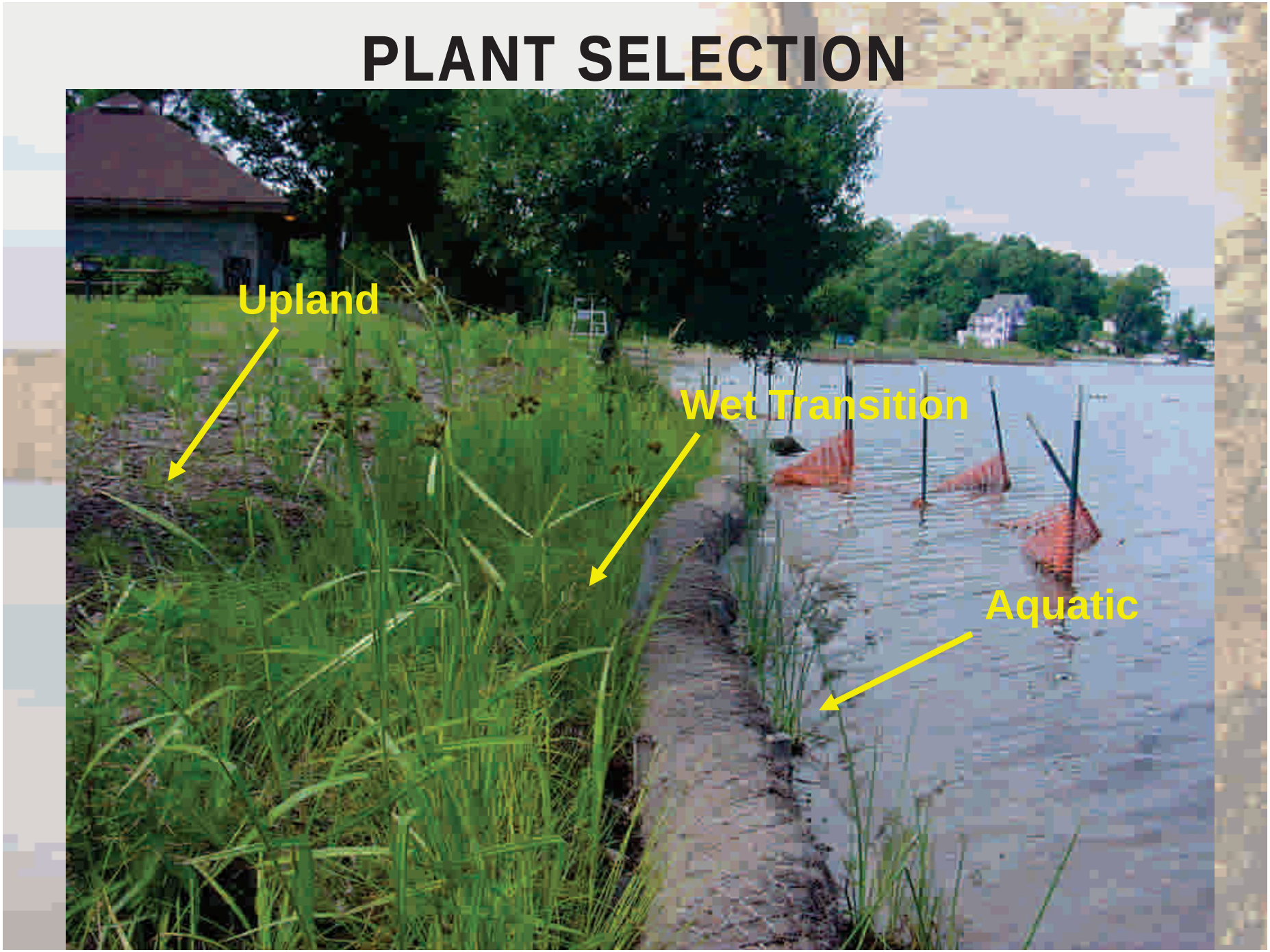

Buffer Size? Recommended size -
But what fits?
15 ft.
80 ft.

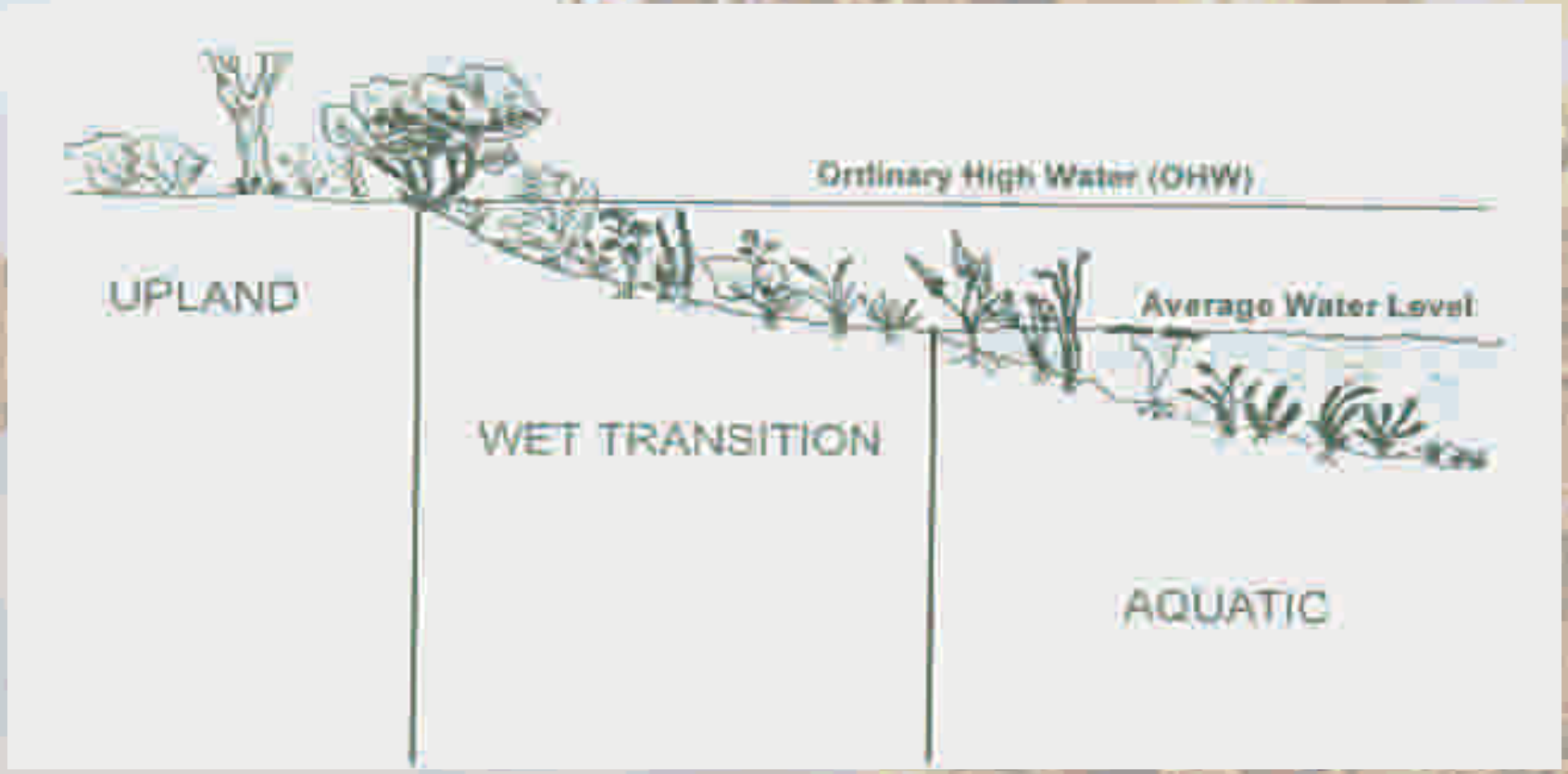
# PLANT SELECTION



# PLANT SELECTION

- A 50/50 mix of grasses/sedges and wildflowers
- Inventory the Lakeshore Ð what native plants are there?
- Woody plants should be considered


# PERMITS

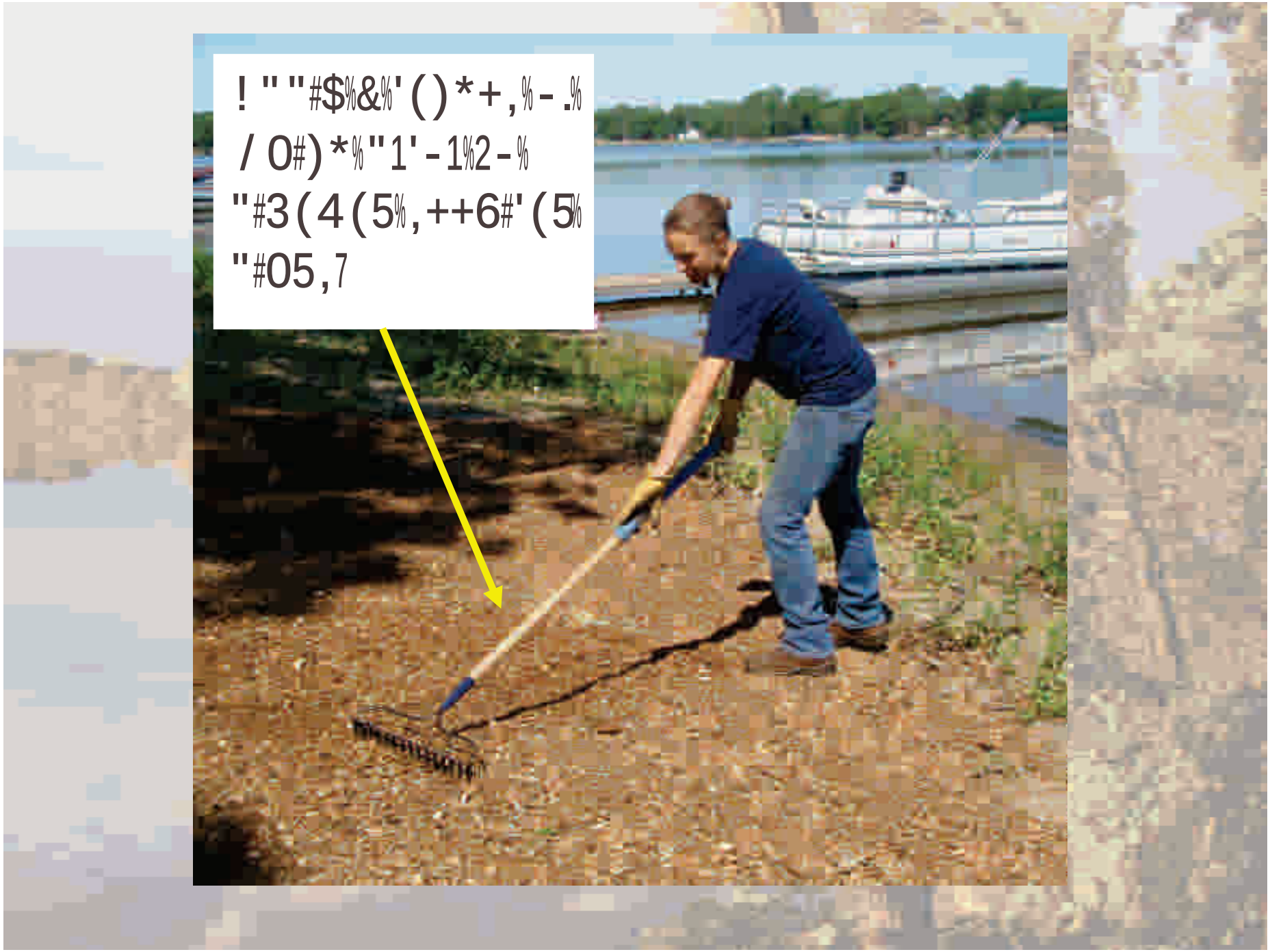



**OHW Đ The point where vegetation changes from predominantly aquatic to predominantly terrestrial**

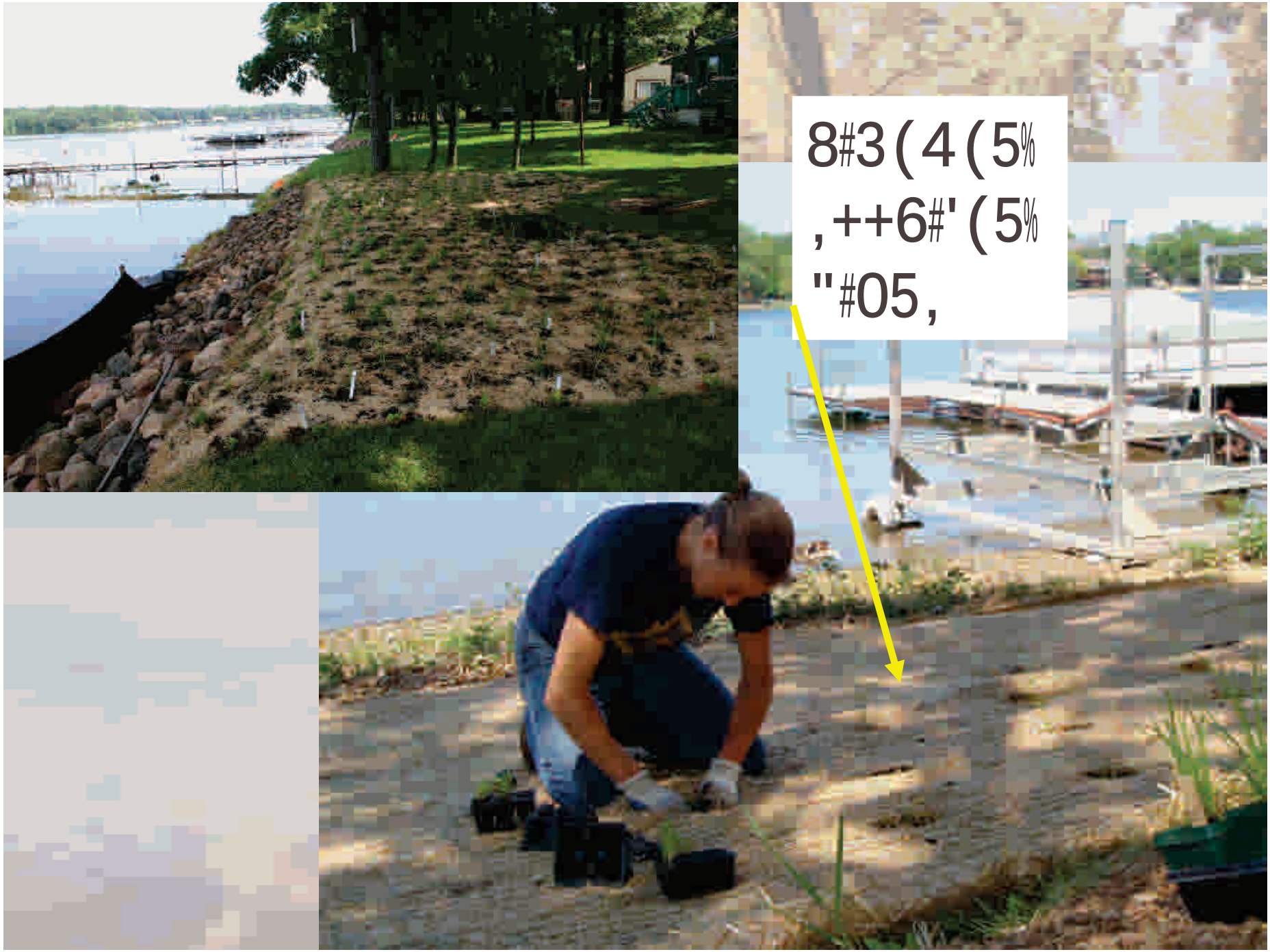
# Site Preparation

## Eliminate turf grass and non-native vegetation

## Glyphosate herbicide Ð Rodeo required close to water


! " "#$%&%'()*+,%-.%
/ 0#)*%"1'-1%2-%
"#3(4(5%,++6#'(5%
"#05,7

# STAKE EROSION BLANKET OVER MULCH IN FLOOD PRONE SHORELAND


8#3(4(5%
,++6#'(5%
"#05,

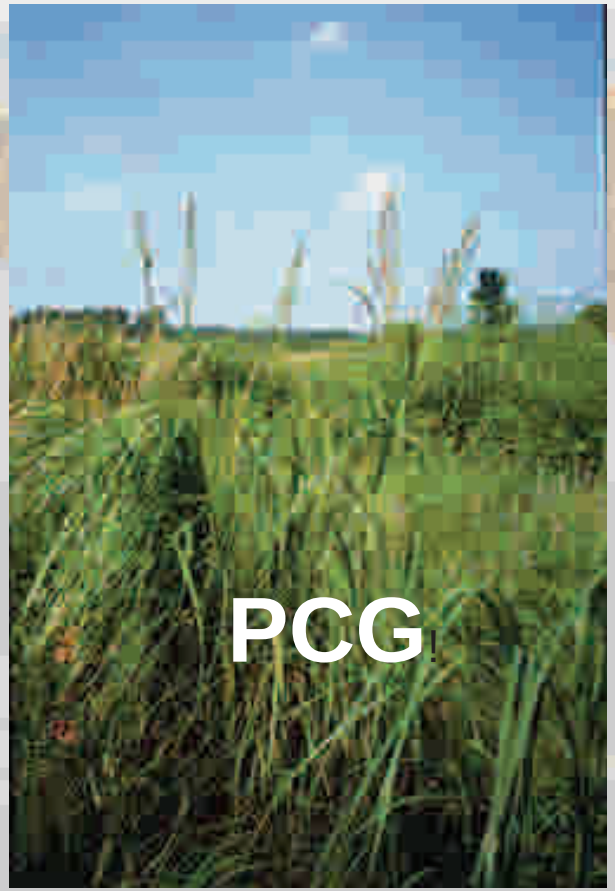
# OR STOP MOWING AND SEE WHAT COMES IN


A FEW THINGS I KNOW

# GEESE WILL EAT YOUNG PLANTS

# SO WILL MUSKRATS

# Prairie Cord Grass vs. Reed Canary Grass

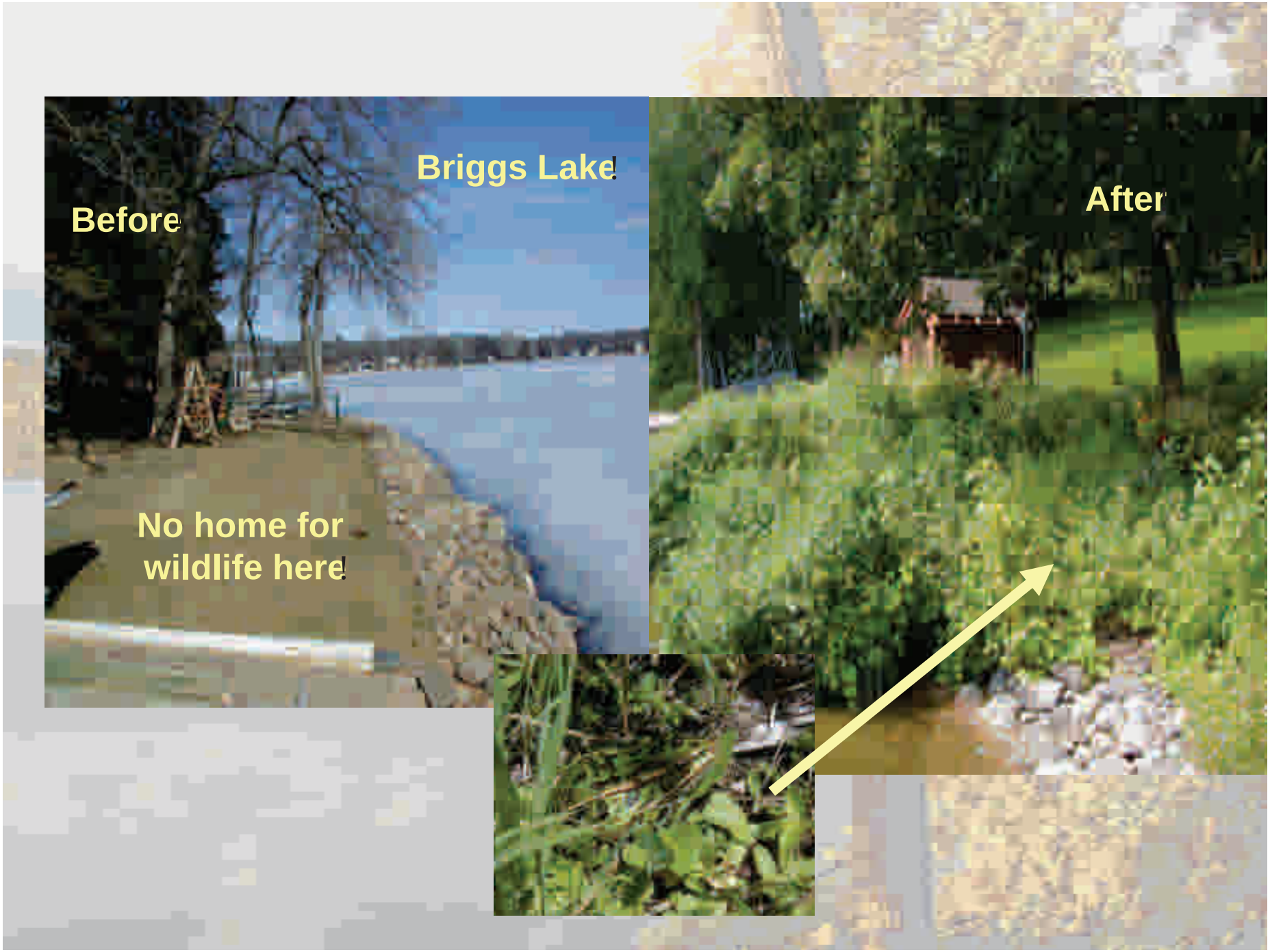



# BORDERS

**Brick Edging**

Designed & Installed by:

**Natural Shore Technologies**



Briggs Lake
Before
No home for
wildlife here
After


Phelps, Lake Julia

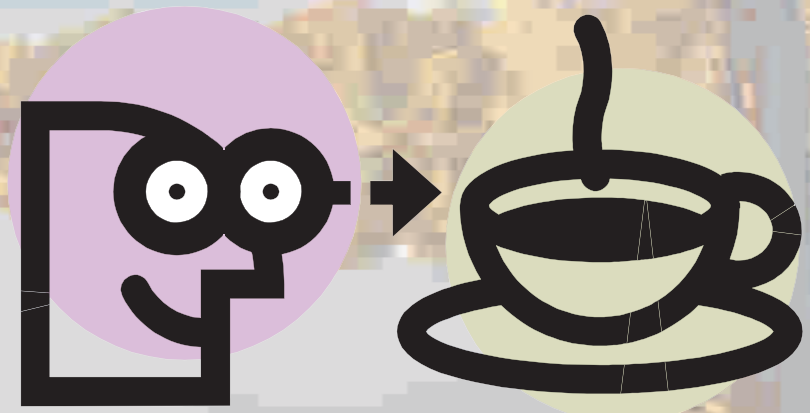

Schnell, Briggs


Tucker, Big Elk


Koontz, Briggs Lake


Golding

# MOVING ONÉ.

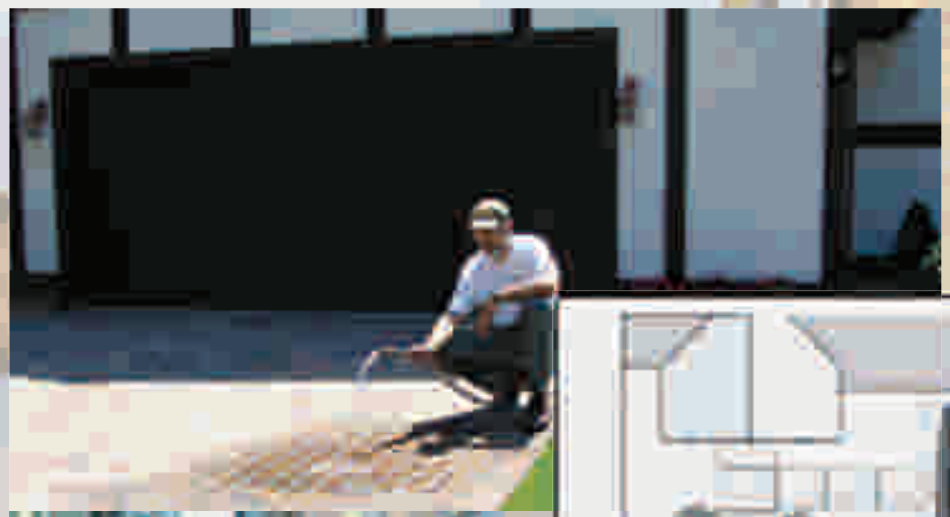


# MINIMIZE IMPERVIOUS SURFACE


**Parcel: 1.1 Acres**
**Impervious: .36 Acres**
**32% Impervious**

**Use Beacon Website**

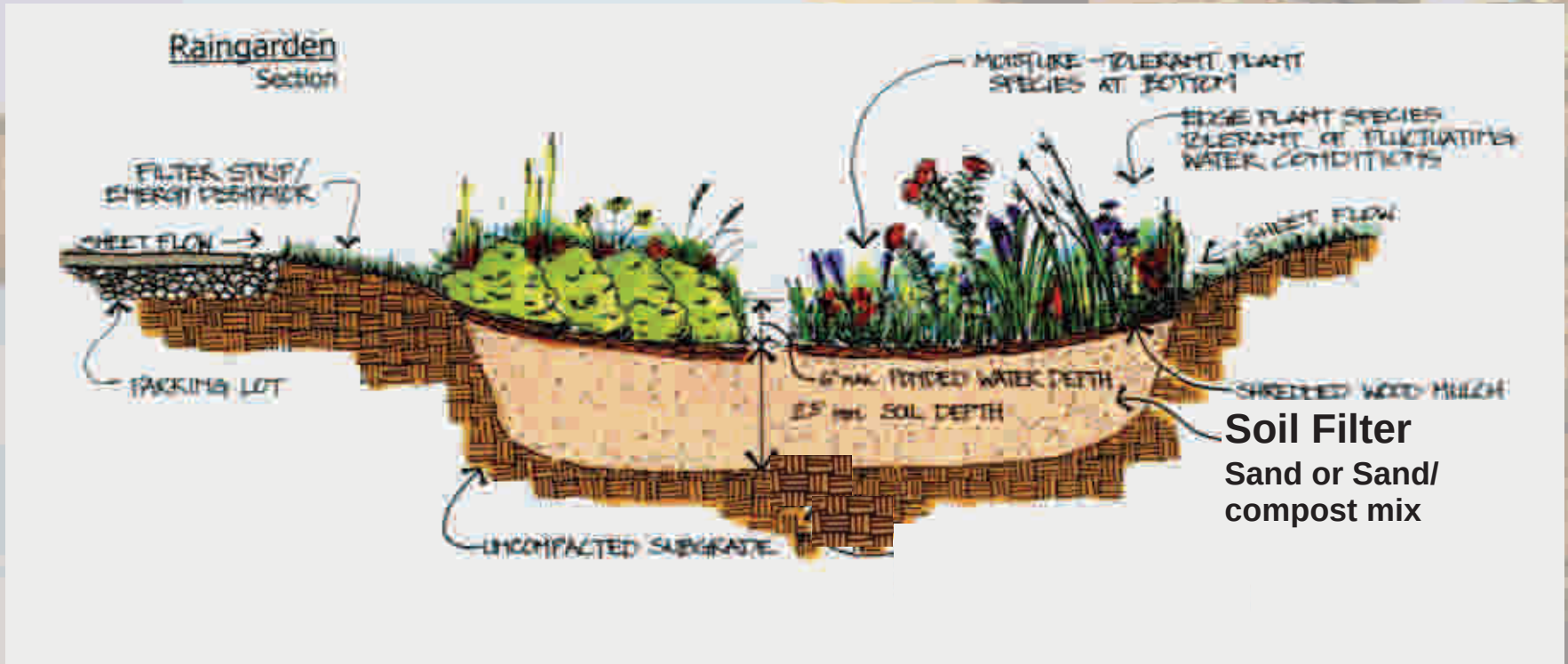
# PERVIOUS PAVERS/ASPHALT




RAIN GARDENS
! Natural Landscape Features
! Captures runoff from impervious surfaces
! Protects and preserves nearby lakes, streams and wetlands

# Rain garden - Runoff Treatment

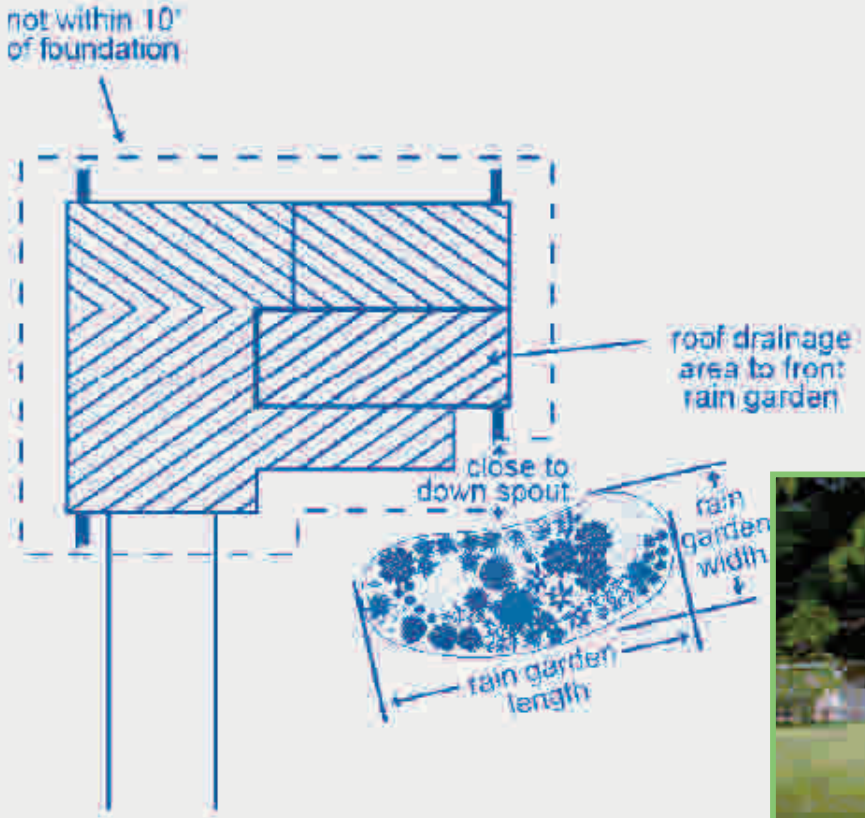
## Evapo-transpiration (Treatment by Plants)




## Infiltration

(Treatment by Plants & Soil Microbes)

# Rain Garden Guidelines

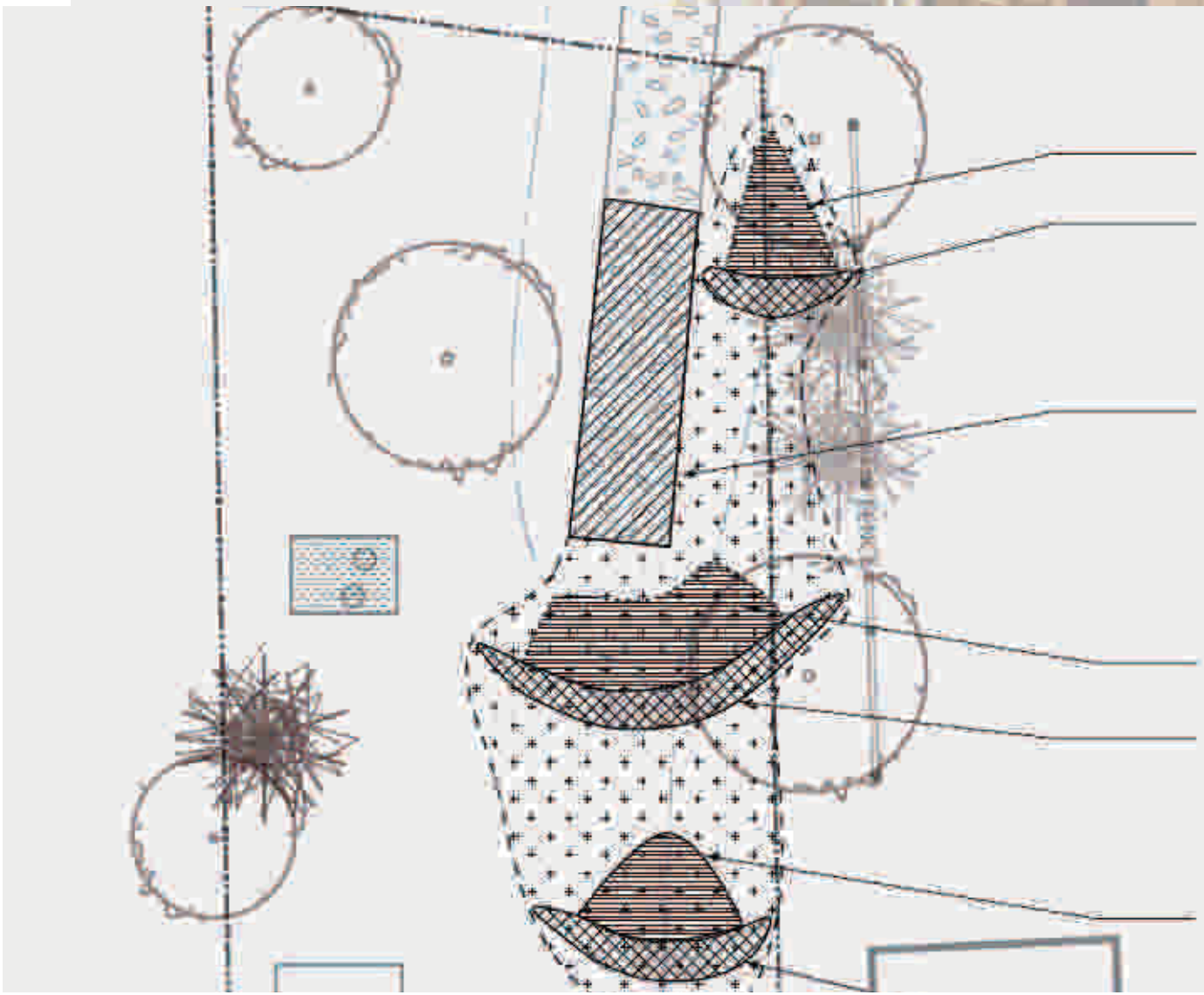



# Filtering sediment - flow over turf


Tucker Rain Garden – Big Elk Lake
natural depression – no digging due to trees

# BERMS

# BERMS



TEMPORARY PONDING AREA 1

GRASS BERM 1
LENGTH = 11'
MAX WIDTH = 3'
MAX HEIGHT = 8"
(BERM OVERFLOW LOCATION SHOWN IN GRAY)

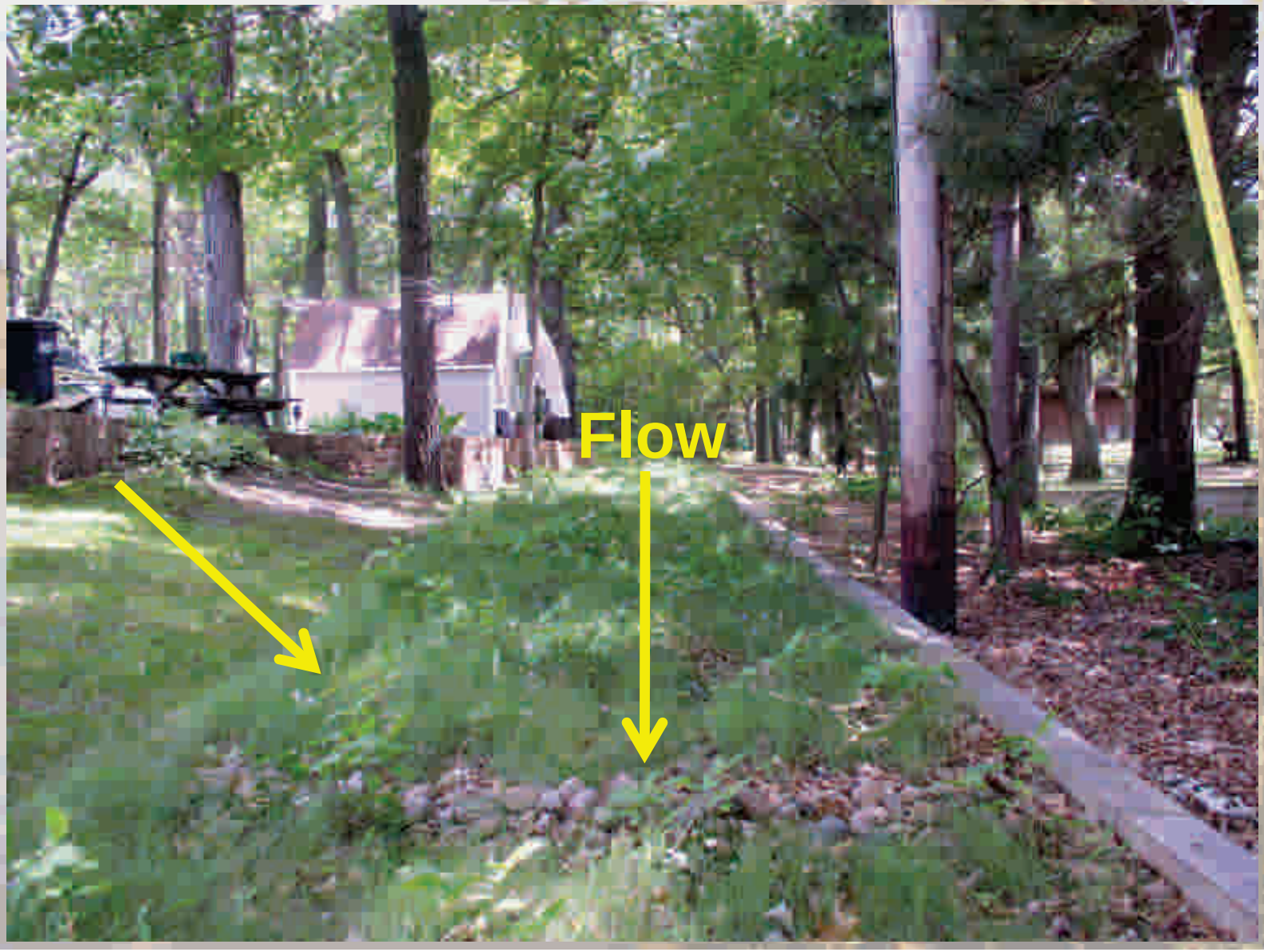
ADDITIONAL GRAVEL TO EXISTING ENTRANCE DRIVE
ADD APPROXIMATELY 4" OF GRAVEL (COMPACTED) TO PORTION OF DRIVEWAY (HATCHED AREA) SO RUNOFF WILL TRAVEL AROUND DRIVEWAY INSTEAD OF ERODING THE SOUTH EDGE OF THE DRIVE

TEMPORARY PONDING AREA 2

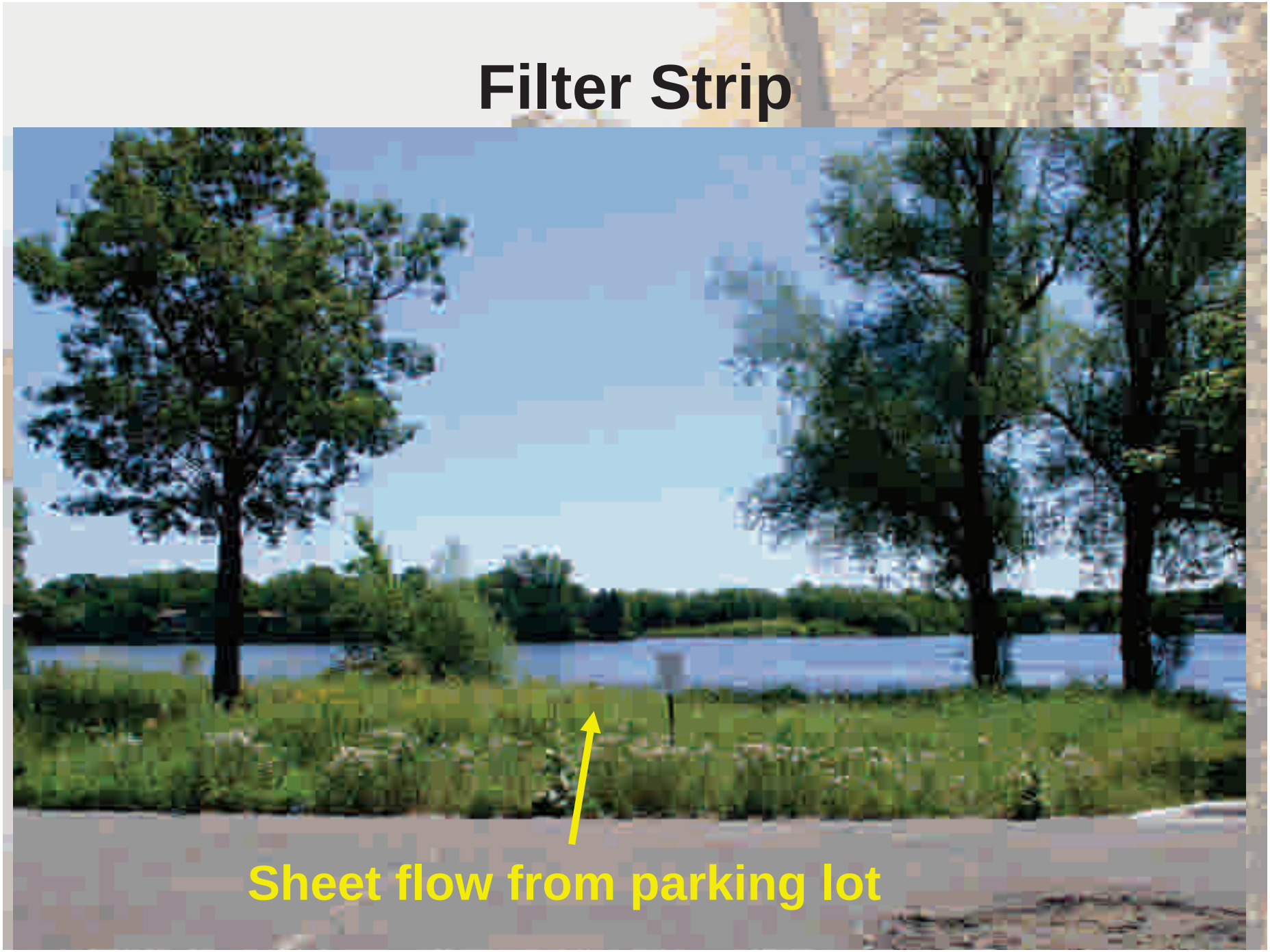
GRASS BERM 2
LENGTH = 10'
MAX WIDTH = 3'
MAX HEIGHT = 8"
(BERM OVERFLOW LOCATION SHOWN IN GRAY)

TEMPORARY PONDING AREA 3

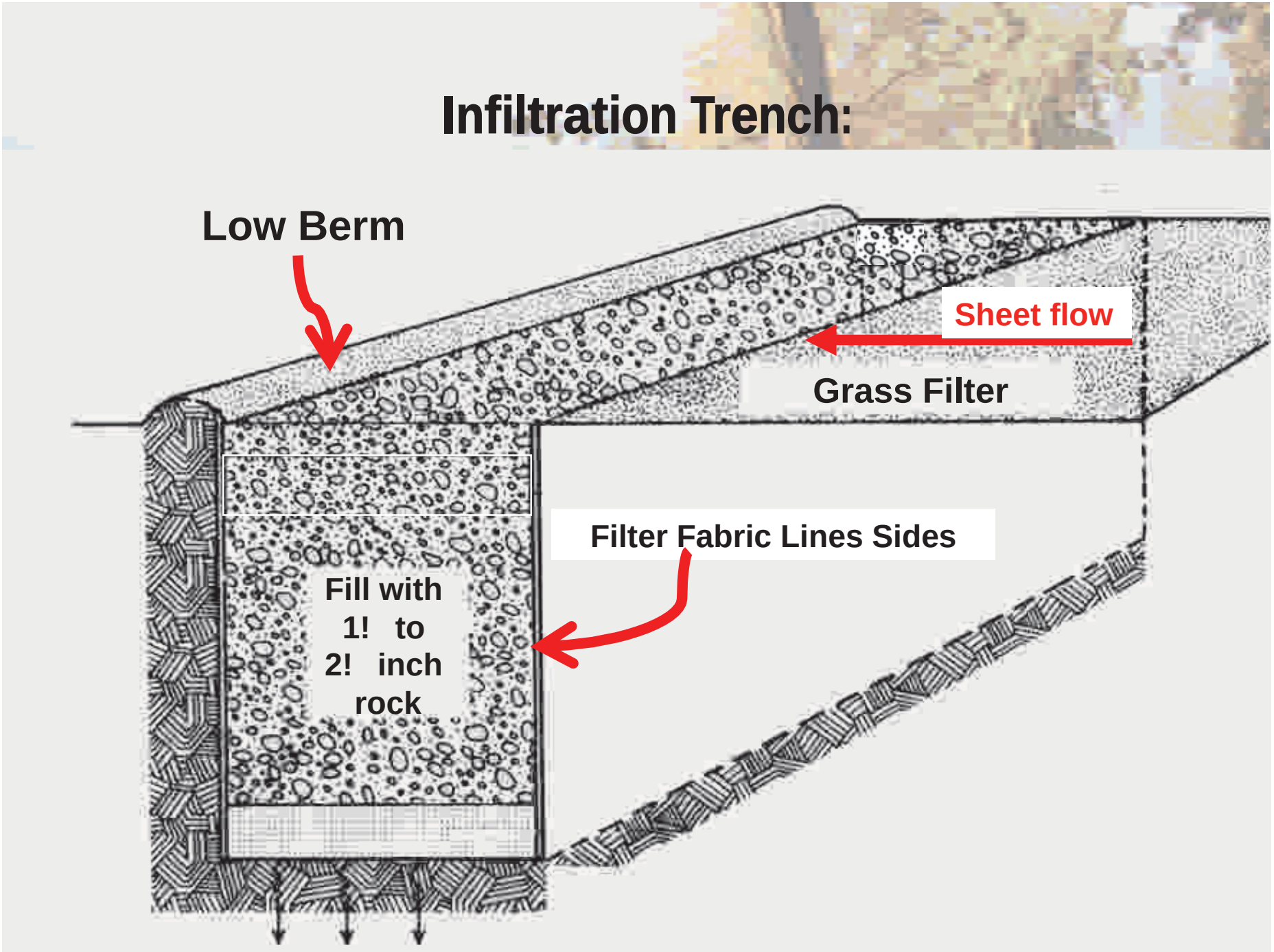
# VEGETATED WATERWAY



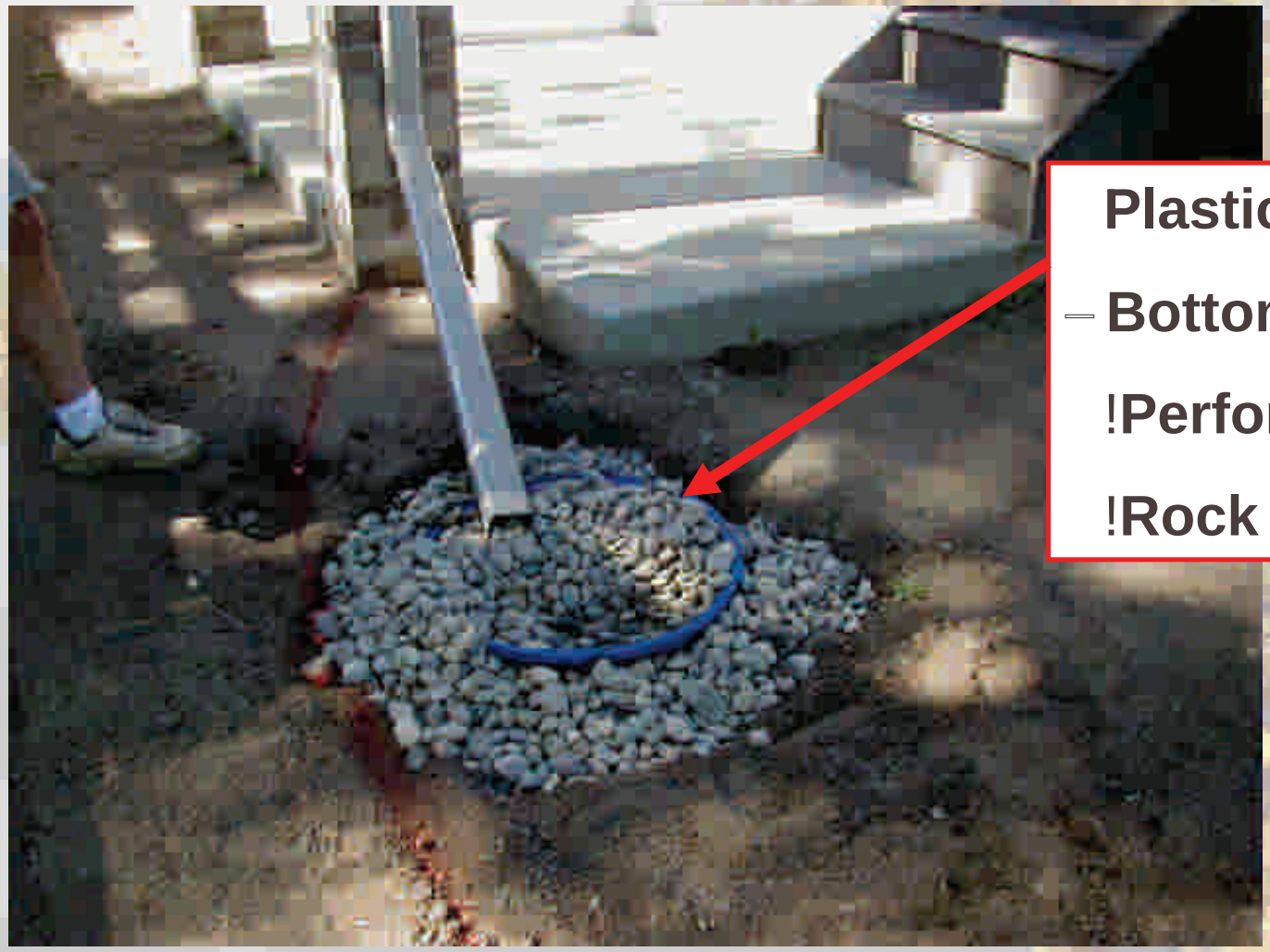
# Filter Strip



# Infiltration Trench:



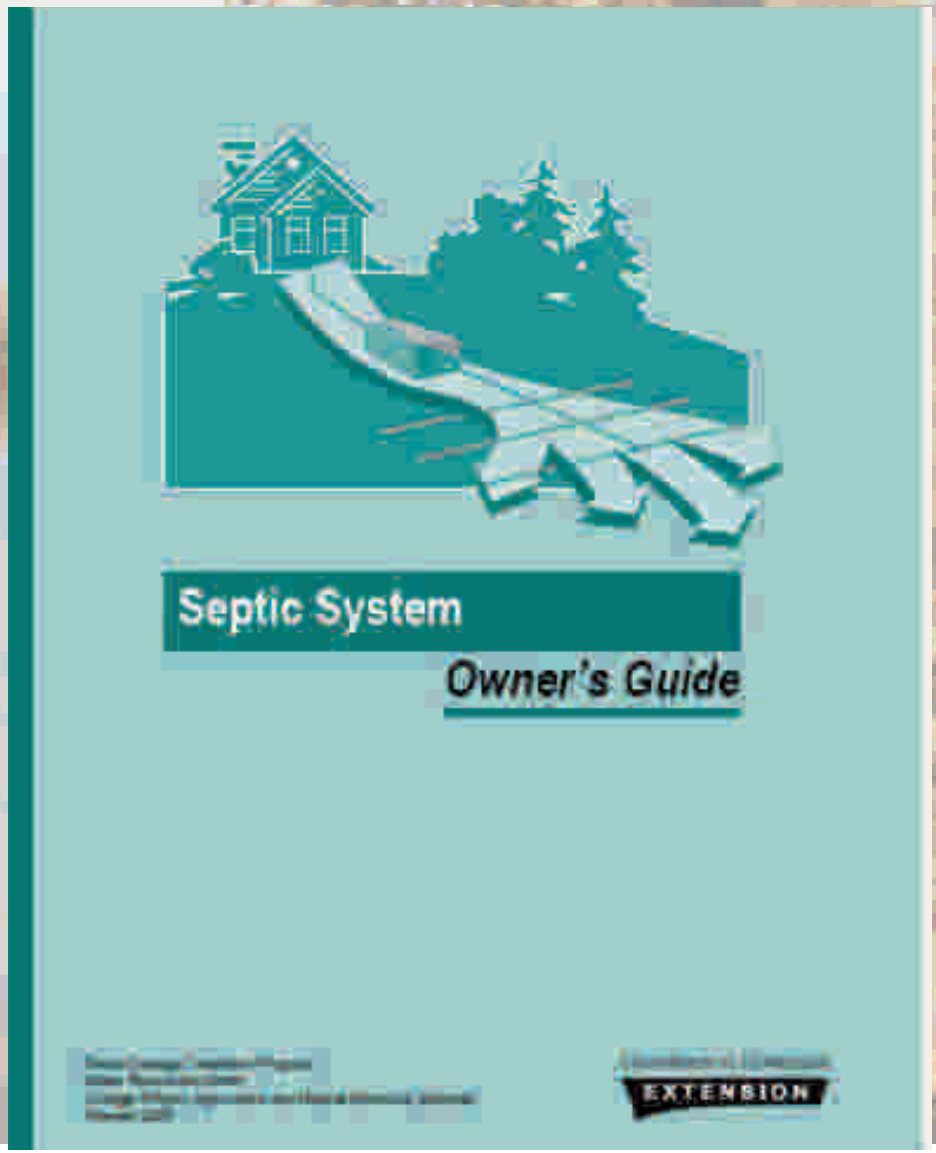
# Cistern Example



- Plastic Drum
- Bottom removed
- Perforated sides
- Rock filled

# RAIN BARRELS

# SEPTIC SYSTEM MAINTENANCE/UPGRADE



# LOW IMPACT BOATING

- Keep your boat properly trimmed- an engine in the water makes much less noise and creates less wake.
- Keep your engine well-tuned, it will run more efficiently, pollute less and be quieter.
- Try an electric motor- itõs almost silent and virtually pollution-free.
- Observe state regulations and be aware of individual, lake specific restrictions
- Whatõs the hurry? Boating slowly makes less wake, less noise, reduces pollution and is less disruptive to wildlife and other people-plus youõll see more and enjoy the lake longer.
- When using a motor, stay out of shallow areas where a churned bottom can adversely affect water quality and disrupt vegetation and fish spawning groundsÉ..

U of M Extension: Shoreland Education

http://www.extension.umn.edu/Shoreland/factsheets.html (Lake Home and Cabin Kit)

Tips & Ideas on developing your property

www.lakesuperiorstreams.org

Minnesota Shoreland Management Resource Guide

www.shorelandmanagement.org

Restore Your Shore http://www.dnr.state.mn.us/restoreyourshore/index.html

www.bluethumb.org


Questions???

# Cost Share Available!!!!

**Cost share funds can be used by public or private landowners within Sherburne County to implement projects that assist in one or all of the following:**

1)Protect or restore quality of lakes and rivers

2)Innovative approaches to treat stormwater at the source

**Funding:**

75% match of eligible expenses with a maximum level of $1,000 per project. In-kind labor done by the home owner can be sued for 25% match at a rate of $15.00 per hour.

**+ AgBMP Low Interest Loans for SSTS**

**Eligible Expenses:**

Raingardens

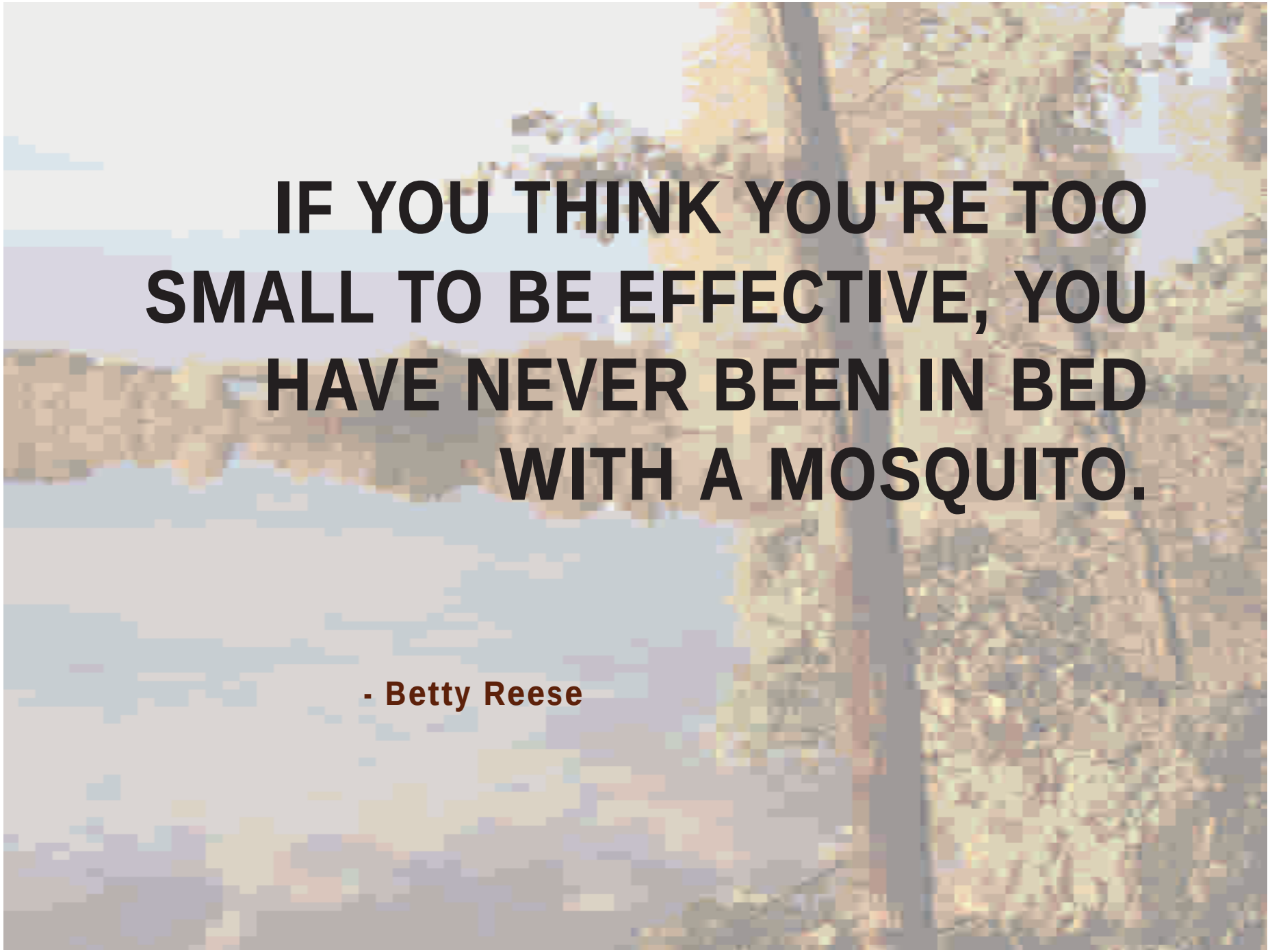
Shoreline restoration

Native buffers

Innovative Stormwater BMPs

# Contact Information

- Sherburne Soil and Water Conservation District
- 14855 Hwy 10
- Elk River, MN 55330
- 763-241-1170 ext. 3
- tdeterman@sherburneswcd.org
- www.sherburneswcd.org


IF YOU THINK YOU'RE TOO SMALL TO BE EFFECTIVE, YOU HAVE NEVER BEEN IN BED WITH A MOSQUITO.
- Betty Reese

Keeping Our Shores: Shoreland Best Management Practices

http://www.extension.umn.edu/distribution/naturalresources/components/08307a.html#1