

# Water in Wisconsin

Jodi Lepsch

Water Resource Management Specialist

WI Department of Natural Resources



# Run-off



# Algae blooms



# Invasive species



# Climate change



# Emerging contaminants

# PFAS

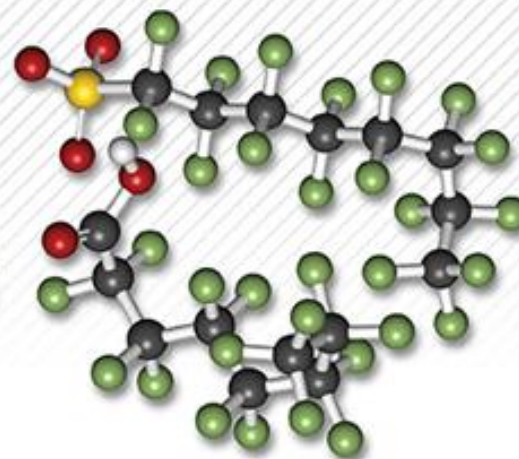
PERFLUOROALKYL AND  
POLYFLUOROALKYL  
SUBSTANCES



RAINCOATS



MICROWAVE  
POPCORN  
BAGS



FIRE  
RETARDANT  
FOAMS



ELECTRONICS



FAST FOOD  
CONTAINERS



NONSTICK  
COOKWARE



PERSONAL  
CARE  
PRODUCTS



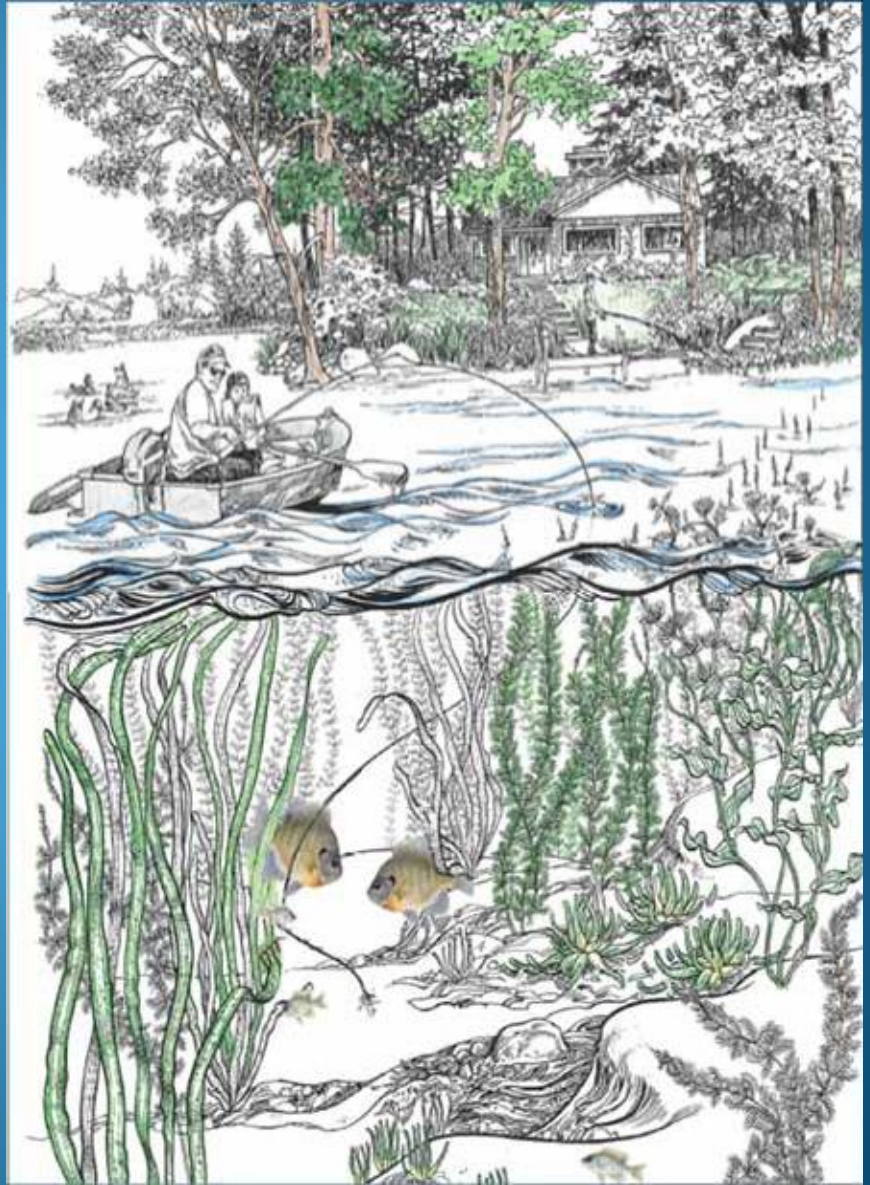
STAIN-  
RESISTANT  
CARPET


So many issues that it can be  
overwhelming as an  
individual looking to make  
change



# Shoreland Health

What are healthy shorelands and why do we need them?





“In order to restore the functional values of a shoreland habitat, vegetation shall be vigorous, diverse and structurally complex and shall include **herbaceous cover**, a **shrub** layer and a **tree canopy**” NRCS Code 634  
Shoreland Habitat

# Canopy



- Softens rainfall reducing erosion
- Provides perching, foraging and nesting sites for birds
- Provides shade
- Fallen trees provide fish habitat, wildlife perching sites and food for aquatic invertebrates

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# Understory



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- Provides cover, foraging and travel corridors for mammals
- Prevents nuisance wildlife
- Softens wave action and stabilizes shoreline



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# Ground cover

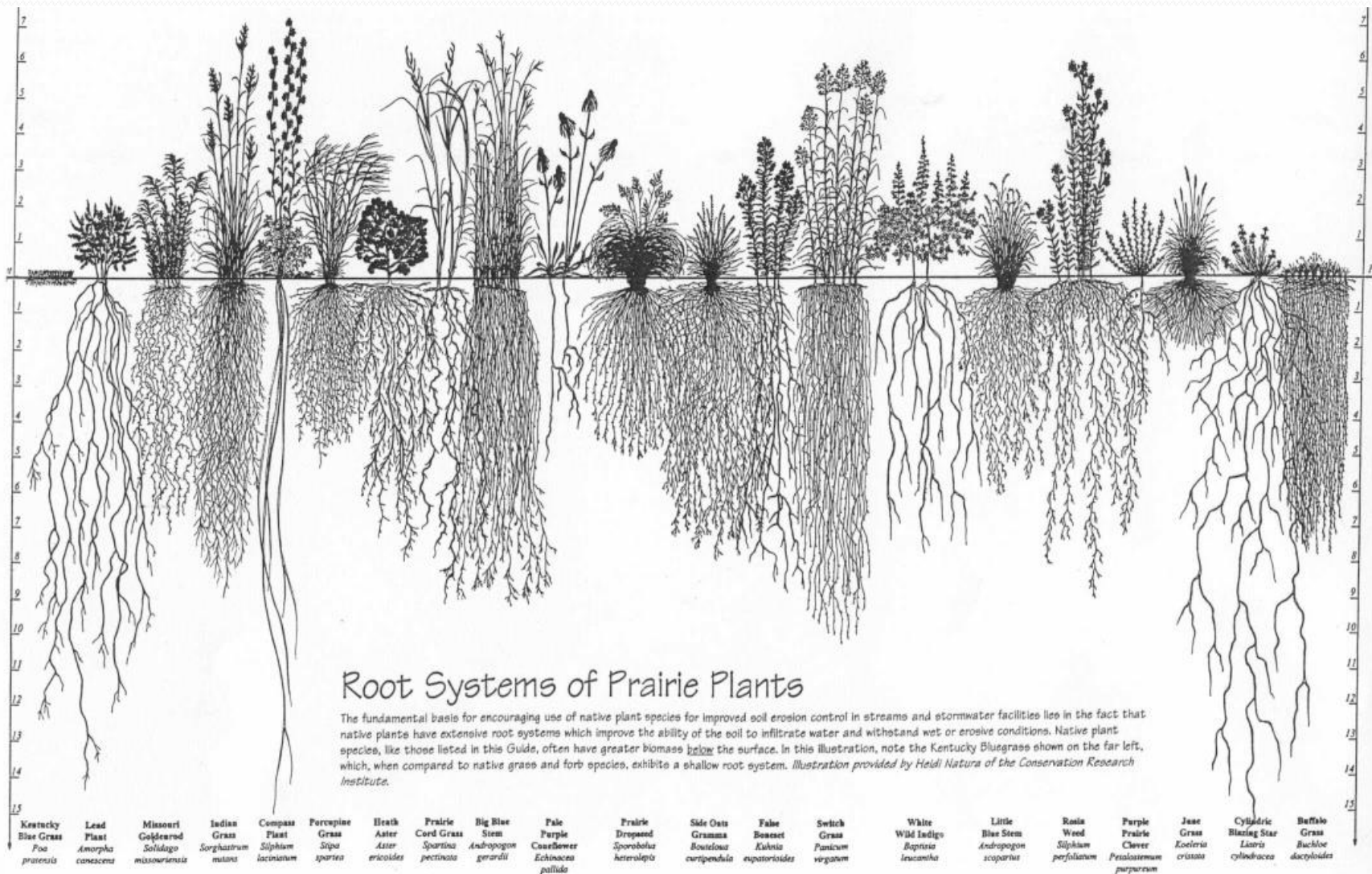


- Removes phosphorus from runoff
- Slows the water flow off the land which allows heavy particulates to settle out and reduces erosion
- Acts as a flood control

# Root system

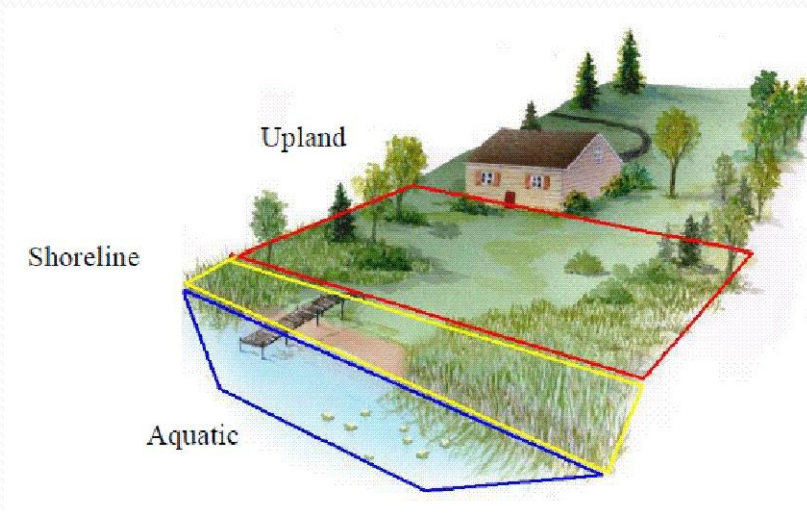


- Filters runoff and associated pollutants before they reach the lake and ground water supply
- Prevents scouring of shallow waters
- Stabilizes shoreline



# Shoreland Zoning

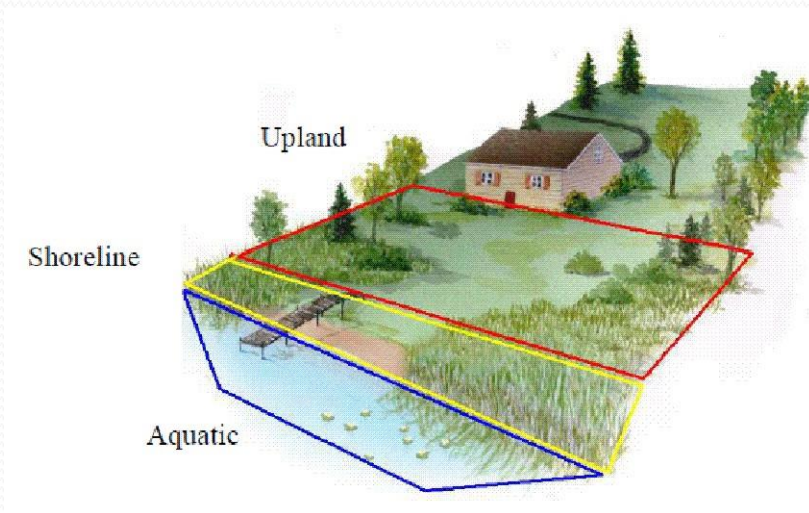
- NRCS Code 634
  - Buffer depth
    - 35 feet minimum
  - View and access
    - 30 feet maximum



Wisconsin's Biology Tech Note 1: Provides guidance on best management practices for shoreland preservation and restoration.



# Shoreland Zoning



- WDNR NR 115
  - Buffer depth
    - 35 feet minimum
  - View and access
    - Lesser of 30% of frontage or 200 feet maximum

# Buffer in Compliance



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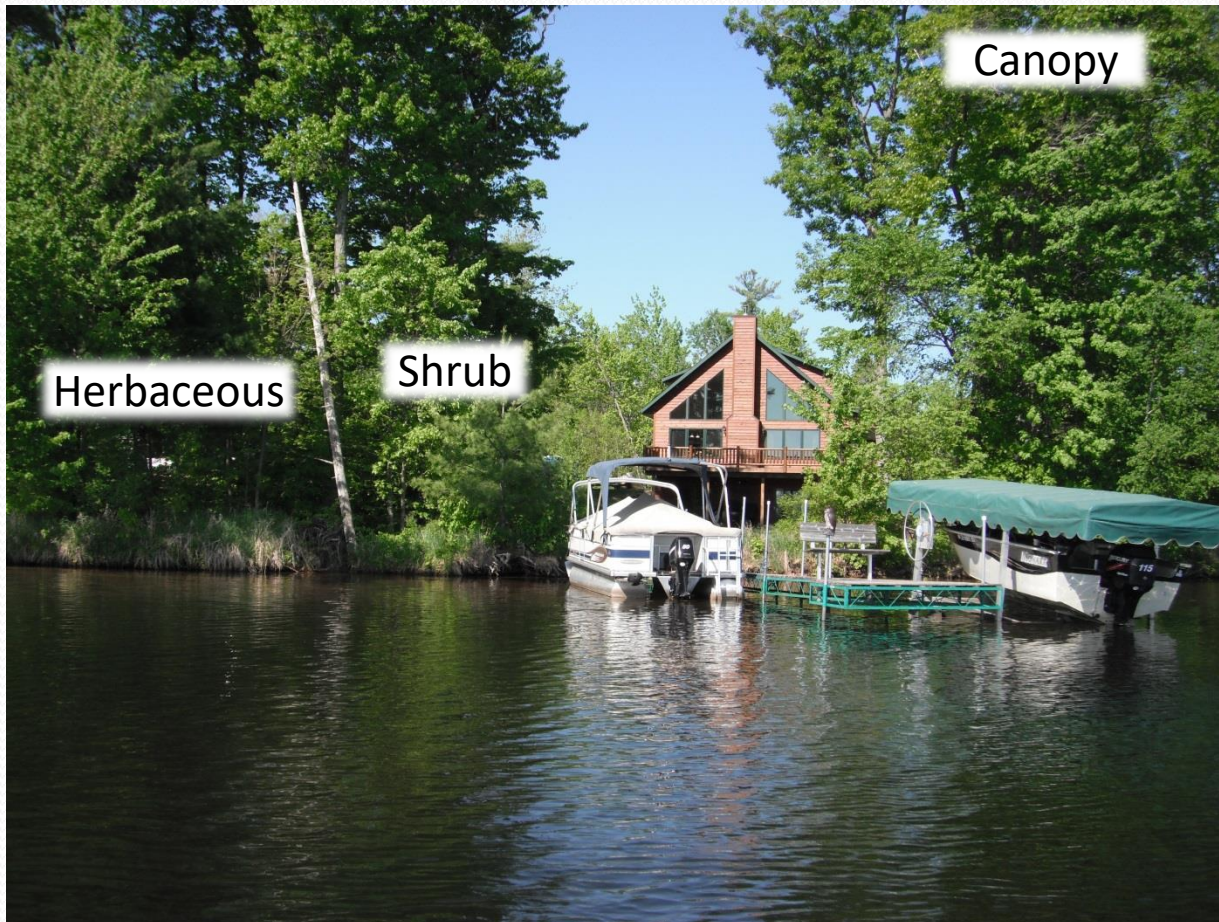


Canopy

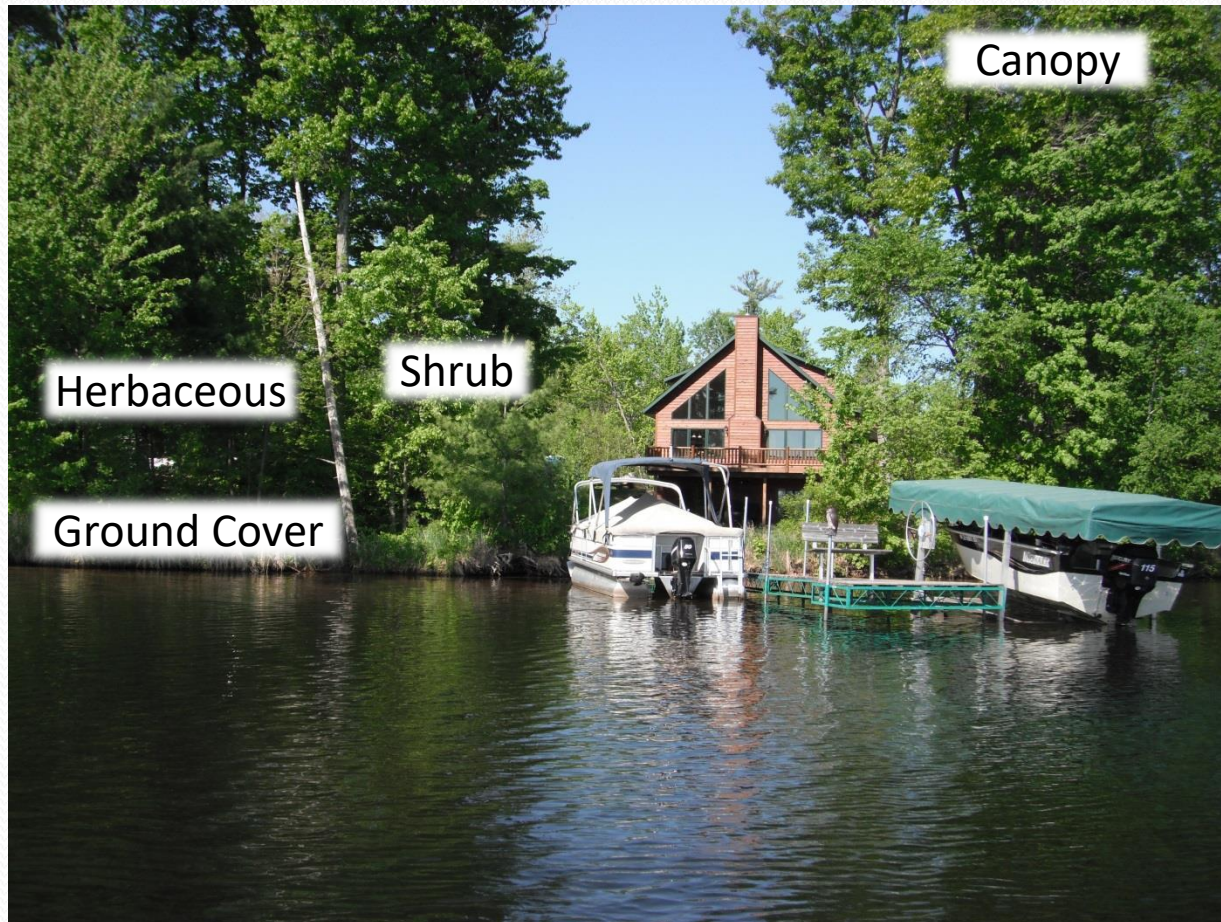
# Buffer in Compliance



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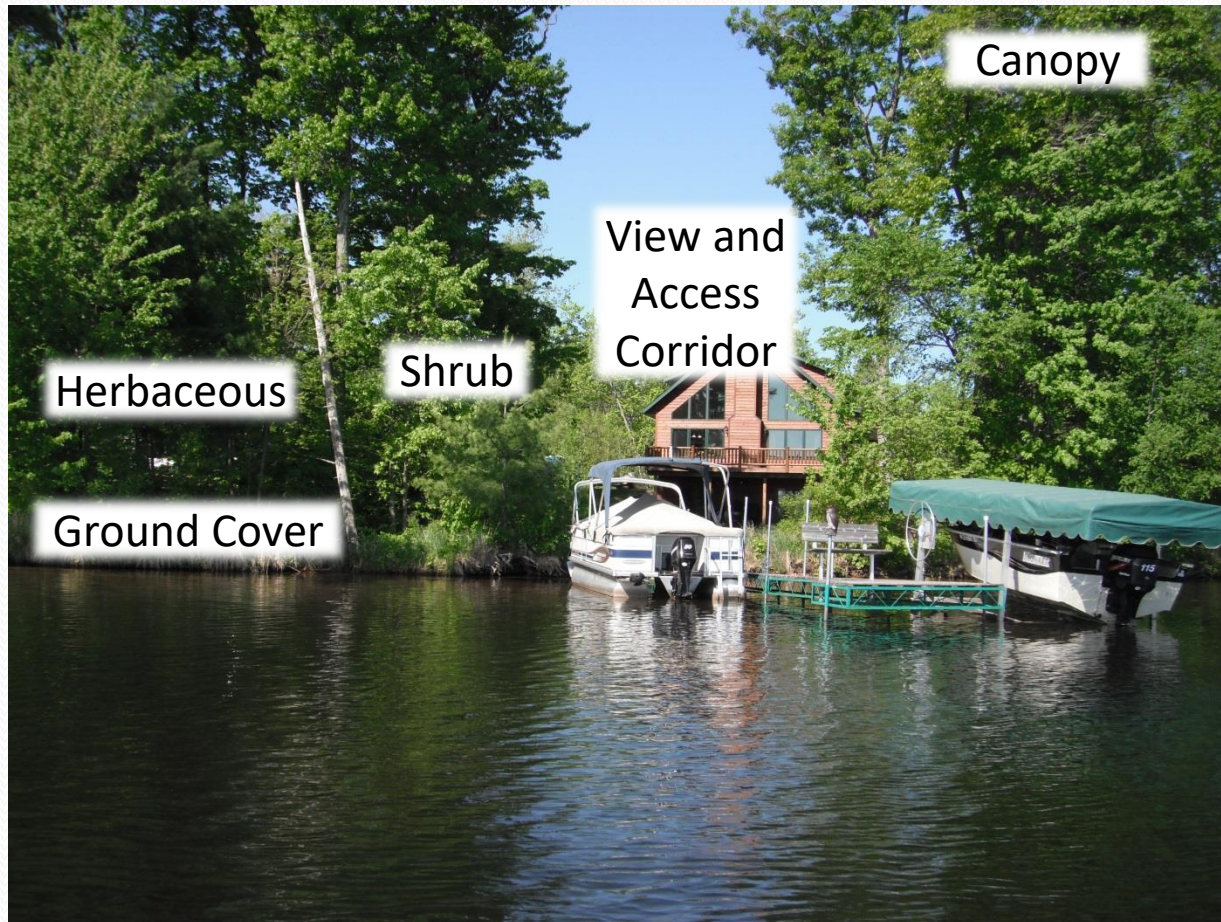
Canopy

Shrub

Herbaceous

Ground Cover

# Buffer in Compliance



# Buffer NOT in Compliance





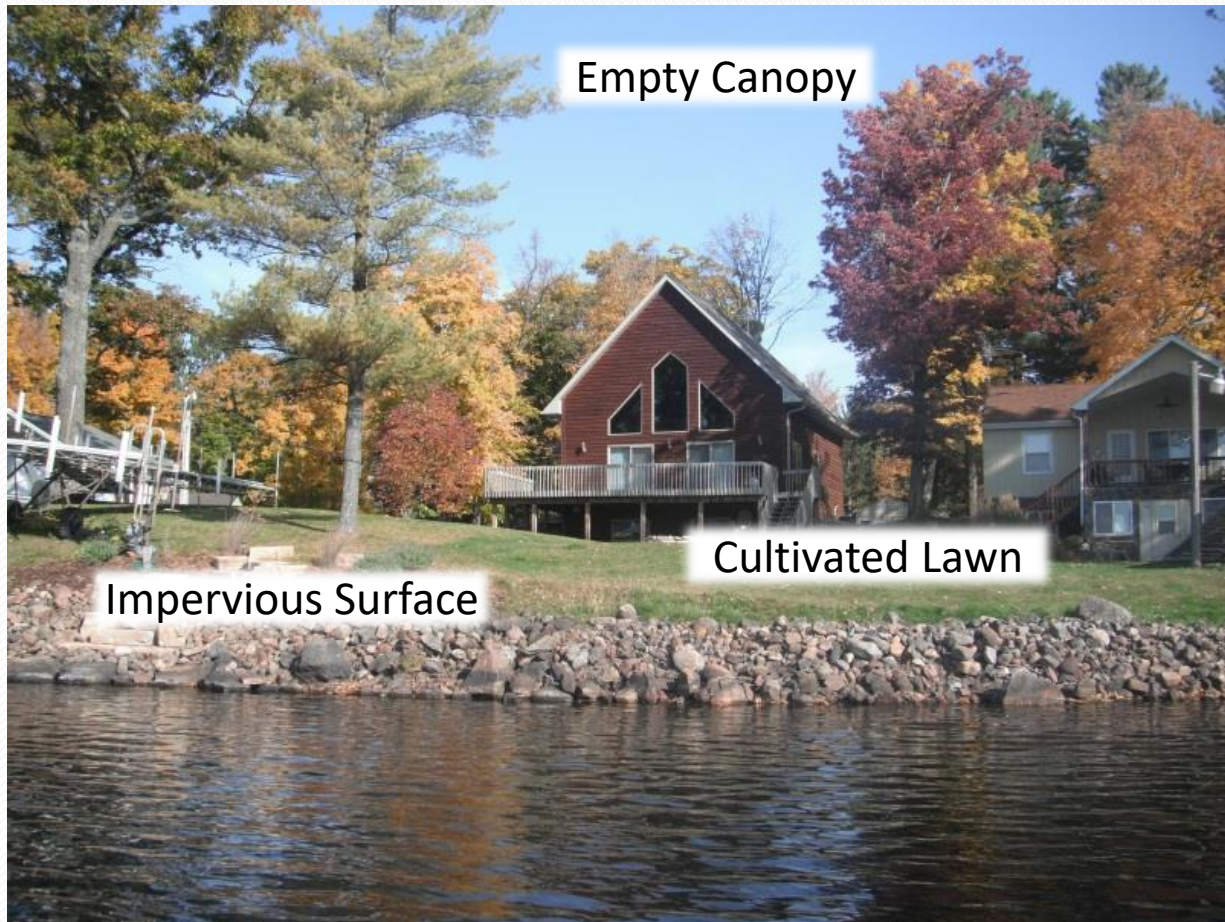
# Buffer NOT in Compliance



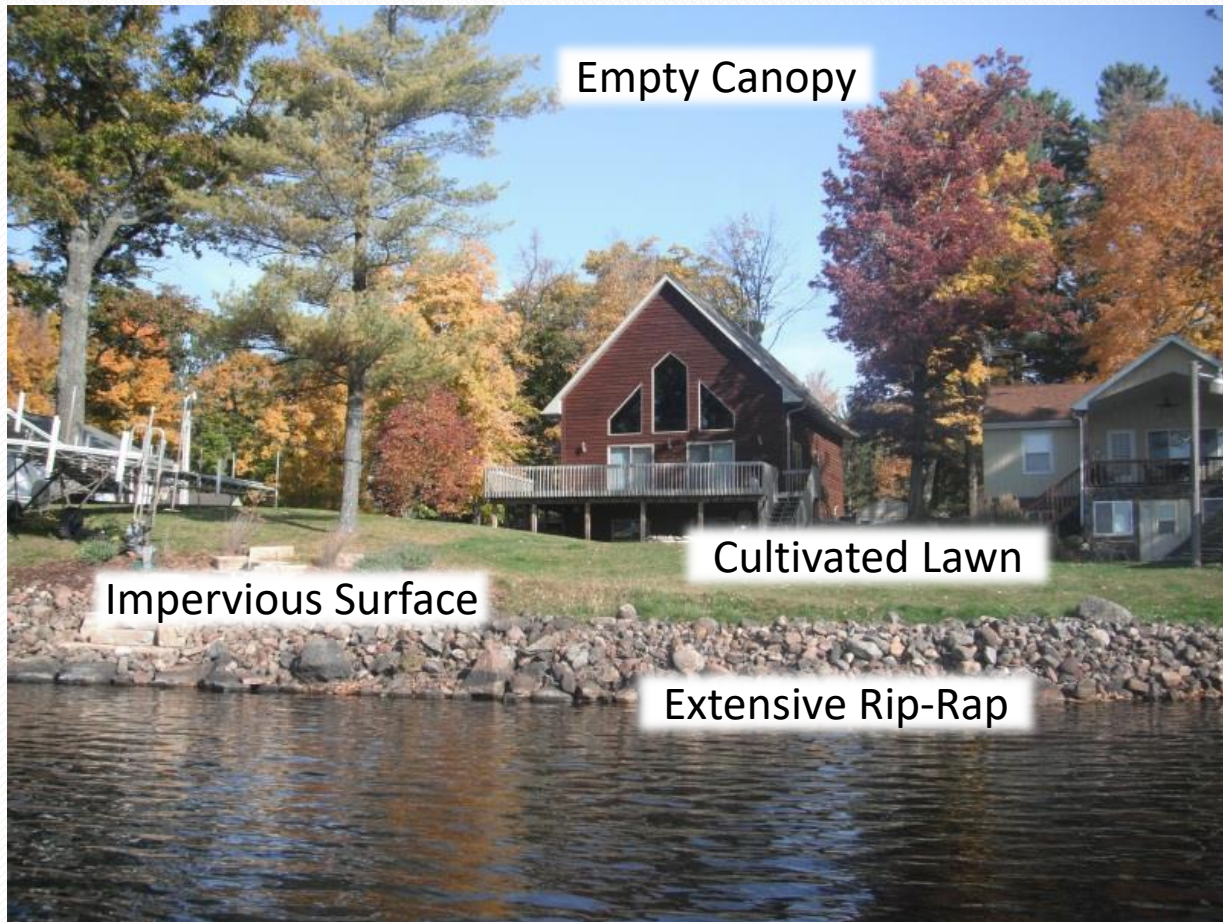
# Buffer NOT in Compliance



# Buffer NOT in Compliance



# Buffer NOT in Compliance



# How can you help?



<https://healthylakeswi.com>

# How can you help?

## HOW WILL YOU IMPROVE YOUR LAKE?

ILLUSTRATION: KAREN ENGBLRETSON

### 1 FISH STICKS

Fish sticks are large woody habitat structures that utilize whole trees grouped together. Fish sticks are anchored to the shore and are partially or fully submerged.

### 2 NATIVE PLANTINGS

Native flowers, shrubs and trees are planted adjacent to the lake in a 350 ft<sup>2</sup> contiguous area. You can design your planting to thrive the lakeshore or in the woodland, to be low-growing or deer resistant, or to promote bird/butterfly habitat.

### 3 DIVERSION

Diversion practices use a berm or shallow trench to intercept runoff from a path or road and divert it into an area where water can filter into the ground. Depending on the site, multiple diversion practices may be necessary.

### 4 ROCK INFILTRATION

This excavated pit or trench filled with rock reduces runoff by storing it underground to soak in slowly. A catch basin and/or perforated pipe surrounded by gravel and lined with sturdy landscape fabric may be integrated into the design to capture, pre-treat, and redirect water to the pit or trench. Pit and trench size depend on the area draining to it and how much the underlying soil can absorb.

### 5 RAIN GARDEN

A rain garden is a landscaped, shallow depression with loose soil designed to collect roof and driveway runoff.

IMPROVE HABITAT AND NATURAL BEAUTY ~ SLOW, DIVERT, CLEAN AND FILTER RUNOFF

# Healthy Lakes & Rivers Grants

- \$1000/best practice funding cap
- Eligible sponsor applies on behalf of landowners with \$25,000 grant award cap (multiple best practices) and 75 state/25 sponsor cost share
- 2-year grant agreement and 10-year individual landowner contract with maintenance requirements
- September 15 pre-application deadline
- November 15 final deadline

# 5 Best Practices

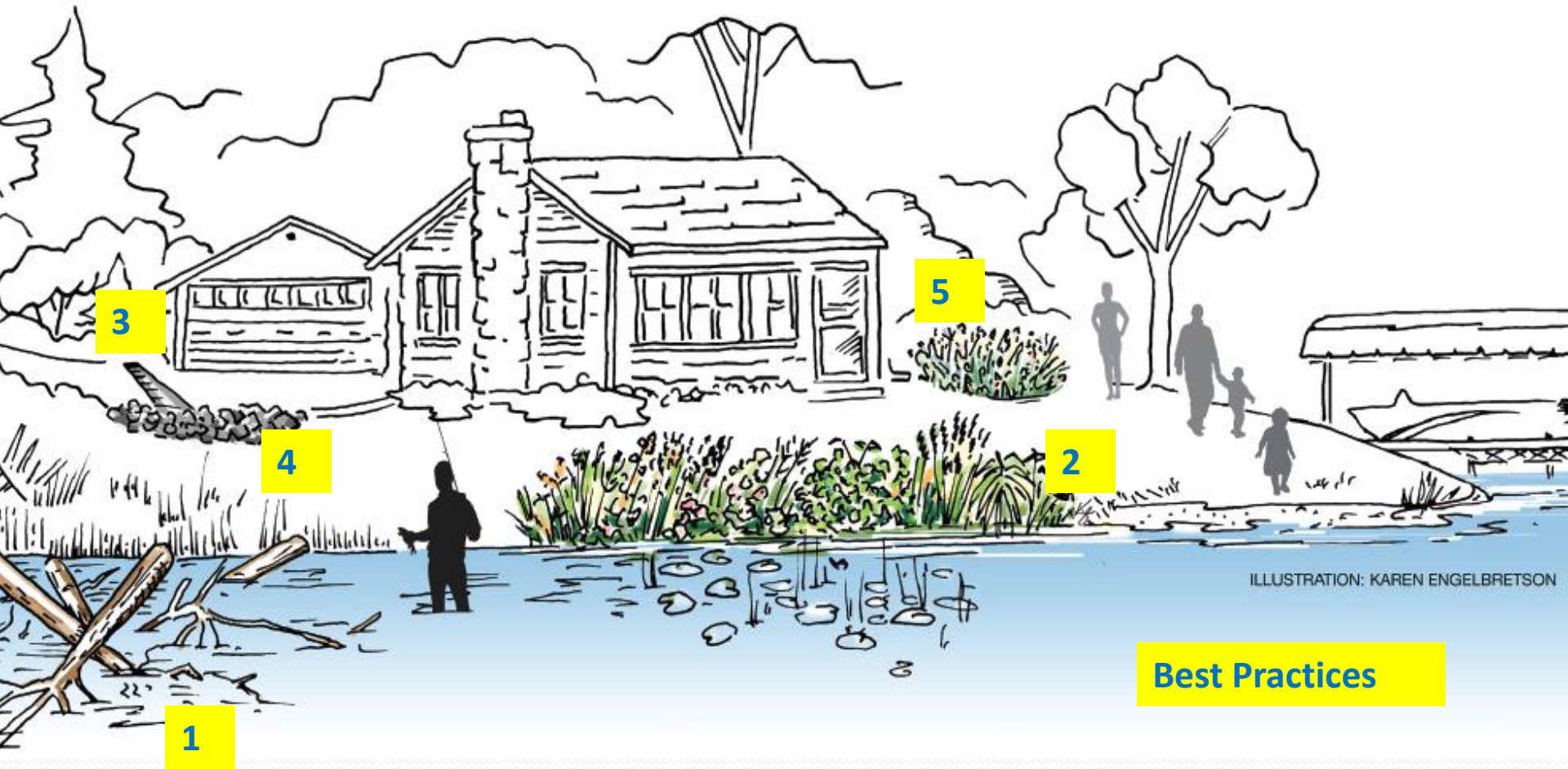


ILLUSTRATION: KAREN ENGELBRETSON

**Best Practices**

**1**

**3**

**4**

**5**

**2**



# Practice #1: Fish Sticks



Pewaukee Lake, Waukesha County (Tom Koepp)

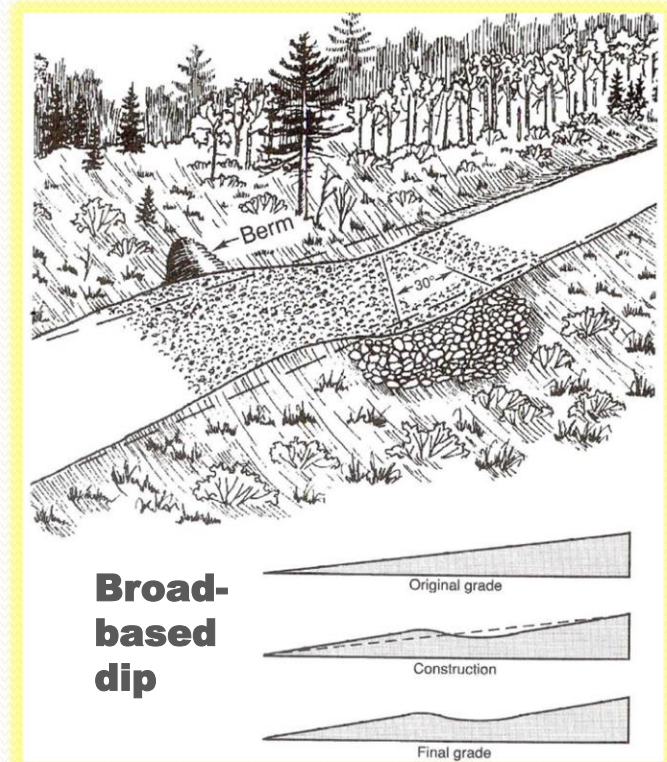
- Commit to no-mow or 350 ft<sup>2</sup> native planting at the base

# Practice #2: 350 ft<sup>2</sup> Native Plantings



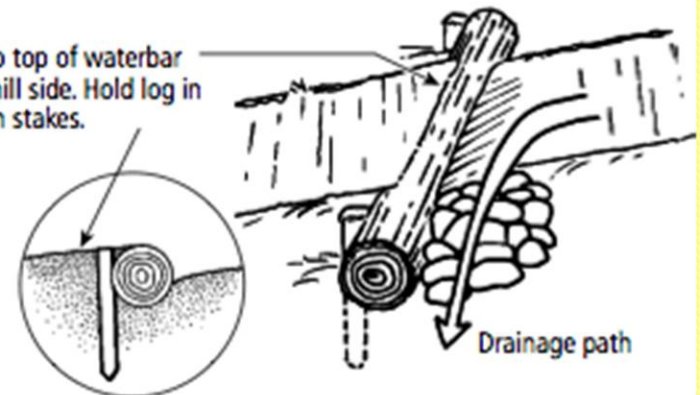
- 350 contiguous ft<sup>2</sup> at least 10 feet wide
- Must follow technical guidance

# Practice #3: Diversion

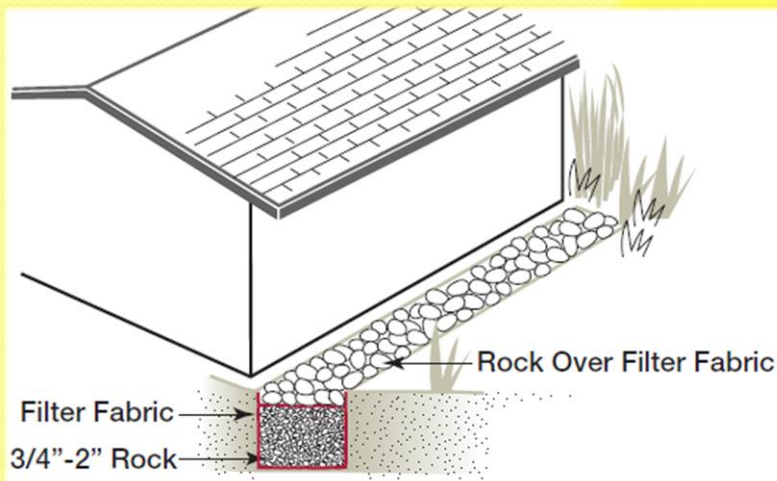


## Log waterbar

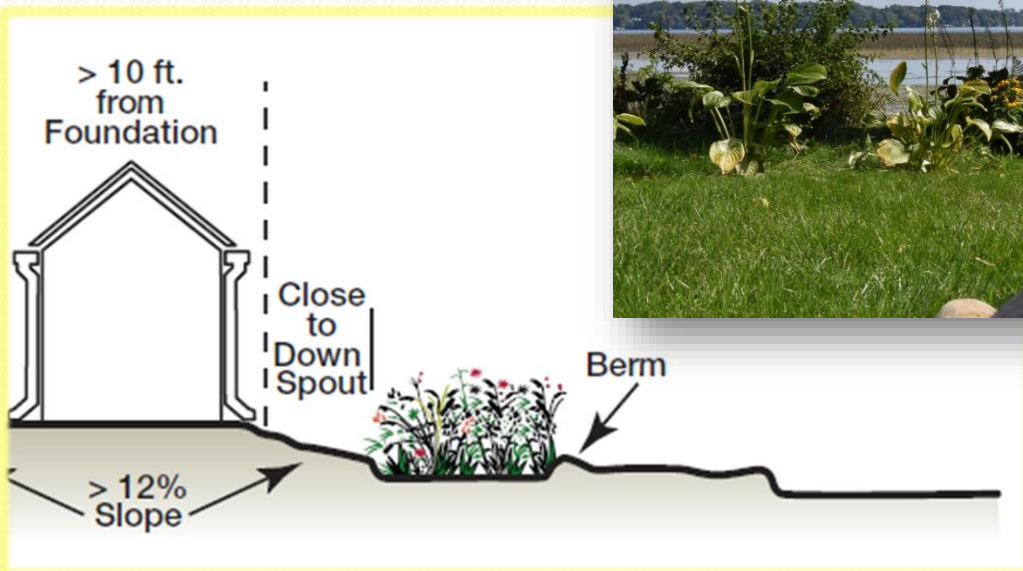
Pile soil to top of waterbar on downhill side. Hold log in place with stakes.



# Practice #4: Rock Infiltration



# Practice #5: Rain Garden



BEFORE



AFTER



# Change the culture

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lake home



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Summertime at the Lake - Mountain Living  
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Modern Lake House Complete With ...  
hgtv.com



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quickenloans.com



Buying Lake Property  
realtysuccess.com



Lake Houses for Sale in Texas ...  
knoxre.com



Tour a Rustic Lake House in Tiger, Ga ...  
hgtv.com

Instead of this





# Normalize this



# Normalize this





Thank you

Comments?

Questions?