

Clark Lake Advancement Association

July 20th, 2024



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Conservationist Door County Soil & Water Conservation
Department

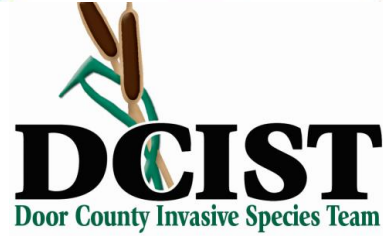
Coordinator for the Door County Invasive Species Team (DCIST)

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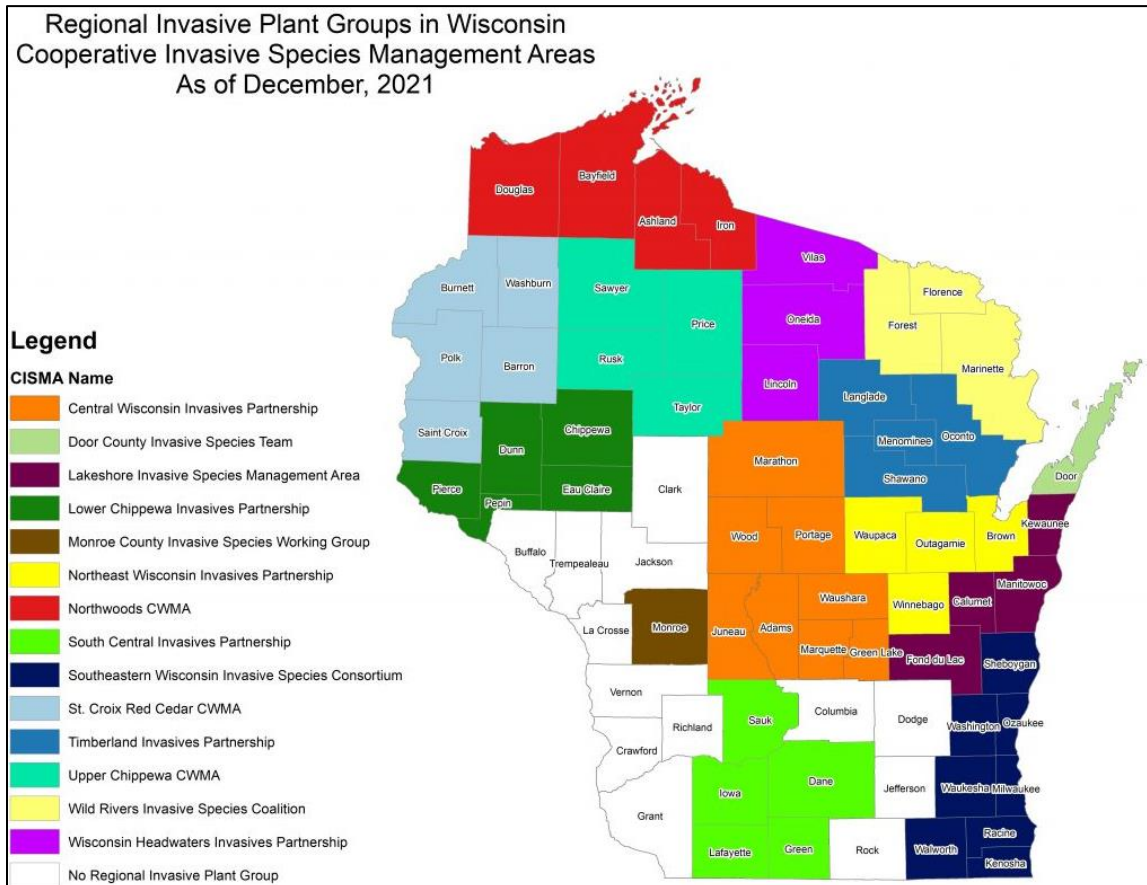
DCIST Website: www.doorinvasives.org



- ▶ The Door County Invasive Species Team (DCIST) Goal is to halt the spread of invasive species through providing the public with the education, tools and skills necessary to control invasive species. DCIST is a federally and state recognized Cooperative Weed Management Area (CWMA/CISMA).



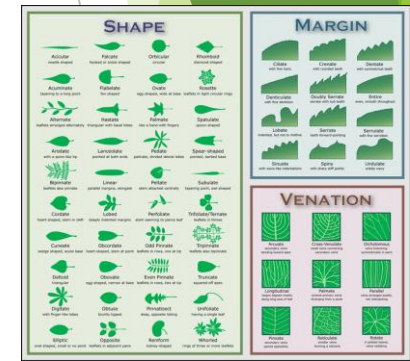
Cooperative Invasive Species Management Areas (CISMA)



- ▶ A partnership of federal, state, and local government agencies, tribes, individuals, and various interested groups that manage invasive species (or weeds) in a defined area. (Invasives.org)
- ▶ CISMAs often function under the authority of a mutually developed Memorandum of Understanding or Cooperative Agreement and are governed by a steering committee. Together, CISMA partners develop a comprehensive invasive species management plan for their area. (Invasive Plant Association of Wisconsin)
- ▶ Recognized federally and on the state level as a bargaining unit

What does DCIST do?

- ▶ Fosters partnerships between conservation groups, natural resource professionals, and concerned members of the public
- ▶ Presents on topics related to invasive species and their impacts
- ▶ Organizes invasive species identification, prevention, monitoring, and control workshops
- ▶ Provides private landowners with invasive species technical assistance and educational resources



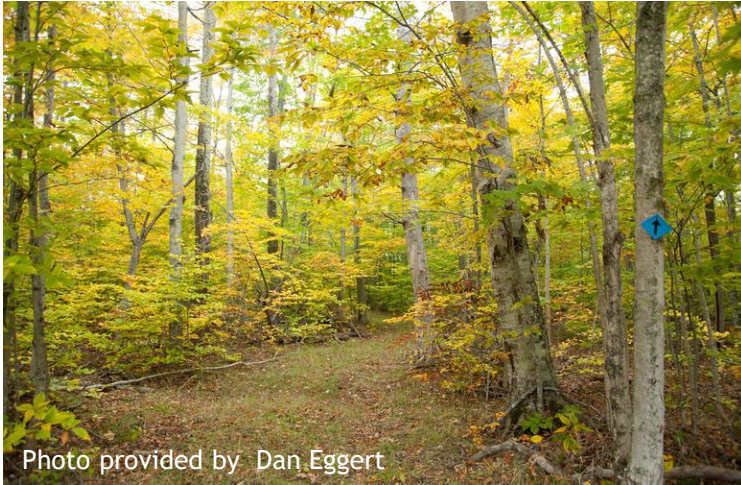
Topics

- ▶ Intro to Ecology
- ▶ Intro to Invasives
- ▶ NR40
- ▶ Invasive Species prevention
- ▶ Purple loosestrife
- ▶ What can you do?

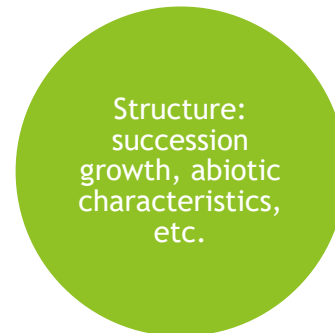
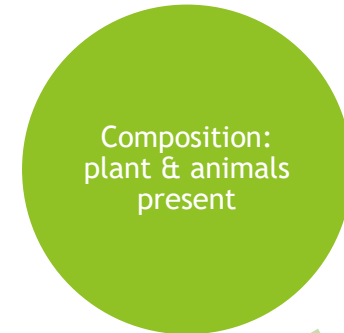


Ecology 101

Ecology is about relationships—relationships among living things (composition), processes that sustain systems (Function) and the components that make up the system (Structure).



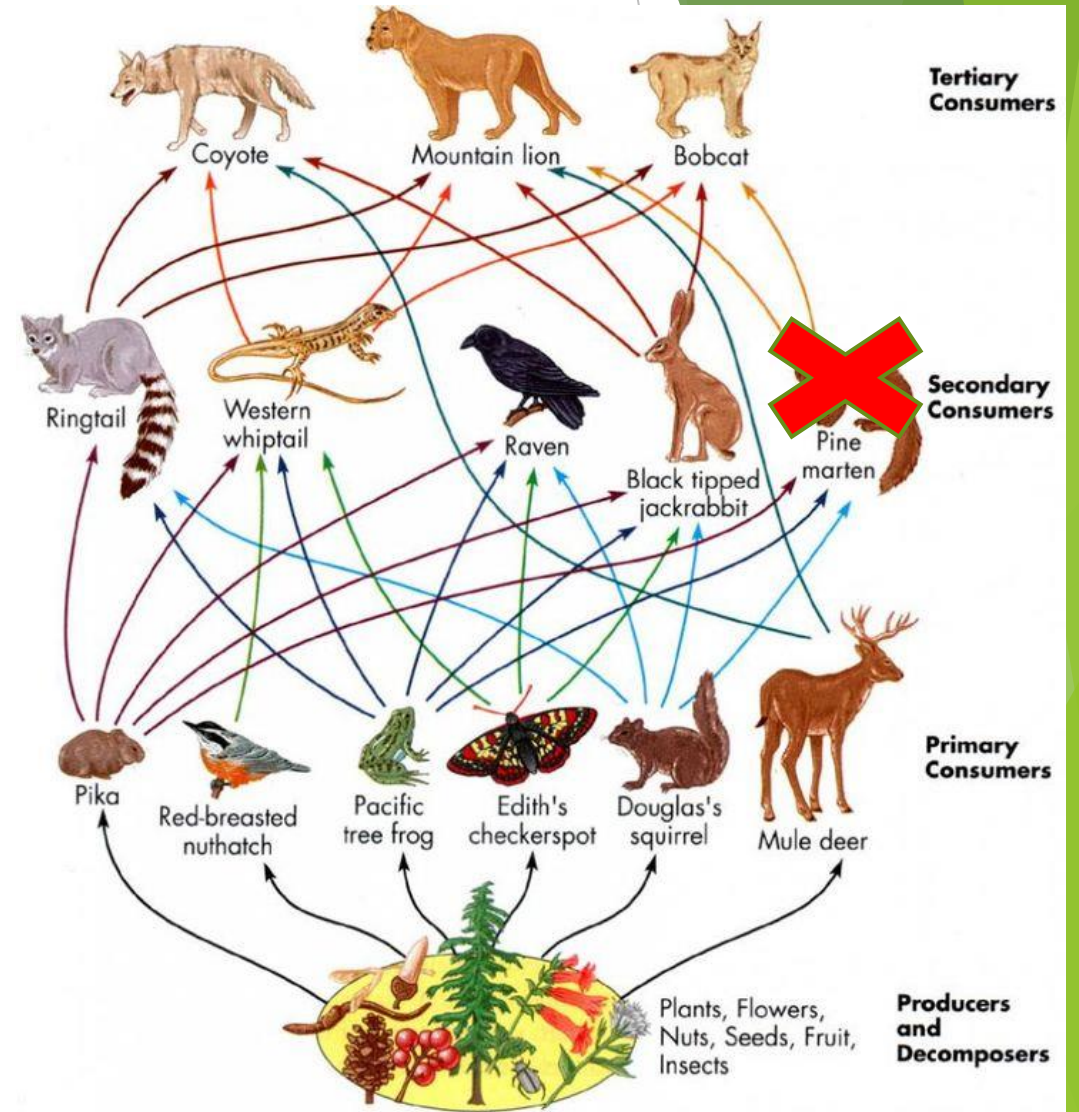
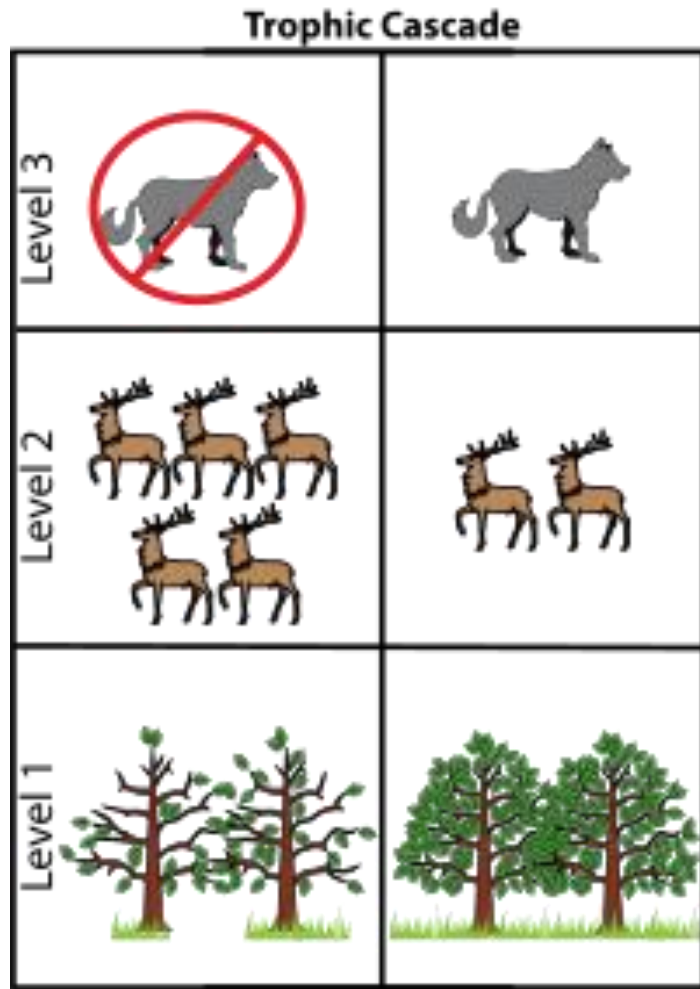
Process and relationships that sustain the system



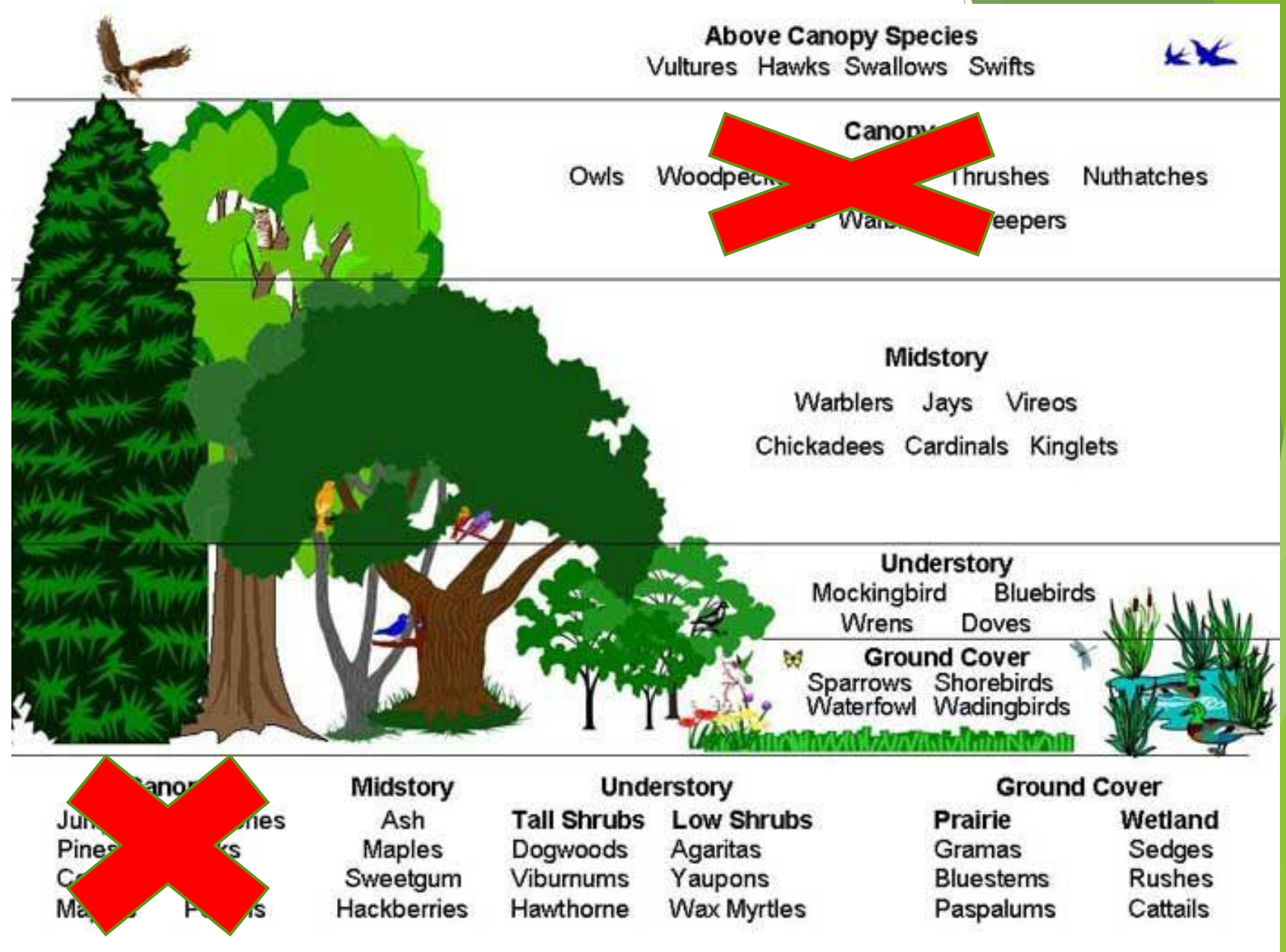
Who lives in the system

Physical organization of natural elements (canopy, community mosaics, abiotic factors)

Trophic Cascades



Structural Diversity



What is an Invasive Species

- ▶ Wisconsin Statute defines invasive species as “nonindigenous species whose introduction causes or is likely to cause economic or environmental harm or harm to human health.” These species can be aquatic or terrestrial weeds, insect pests, nuisance animals, or disease-causing organisms.
 - ▶ Non-native
 - ▶ Negatively impacts economy, environment, and/or human health



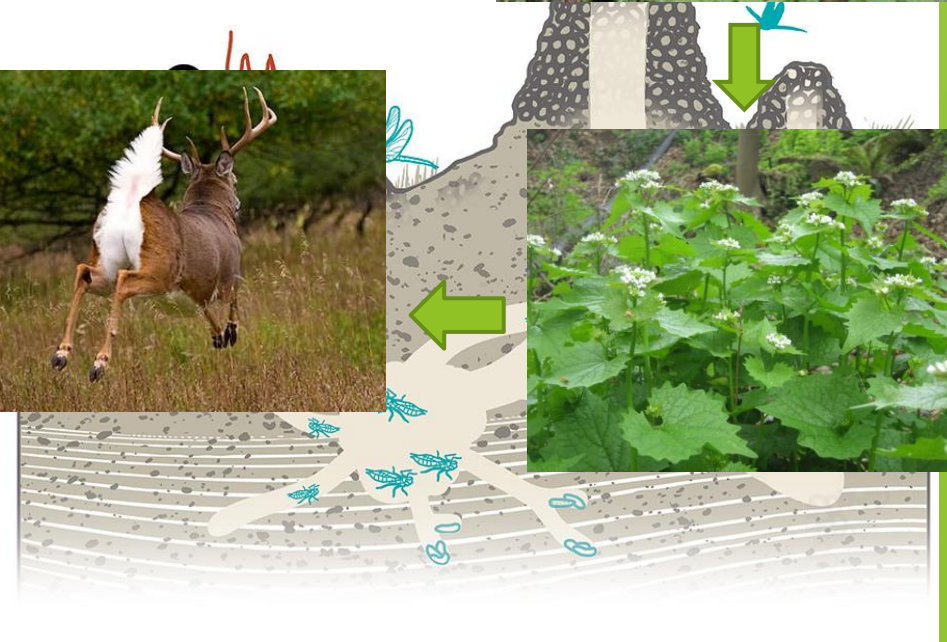
Invasive species vs. Nativar vs. Cultivar vs. Weed

- **Invasive species:** Non-native species that negatively impact economy and/or human health and/or the environment
- **Naturalized:** A non-native/non-invasive plant that is now found in natural areas
- **Weeds:** A native nuisance plant
- **Cultivar:** A non-native ornamental plant
- **Nativar:** A cultivated plant altered from native plants



Invasive Species Impacts to Ecology

- ▶ 42% of species listed in the Endangered Species Act are threatened by invasive species
- ▶ Invasive species alter ecosystem structure & function
- ▶ Modify water and soil chemistry
- ▶ Decrease in diversity & ecological resilience



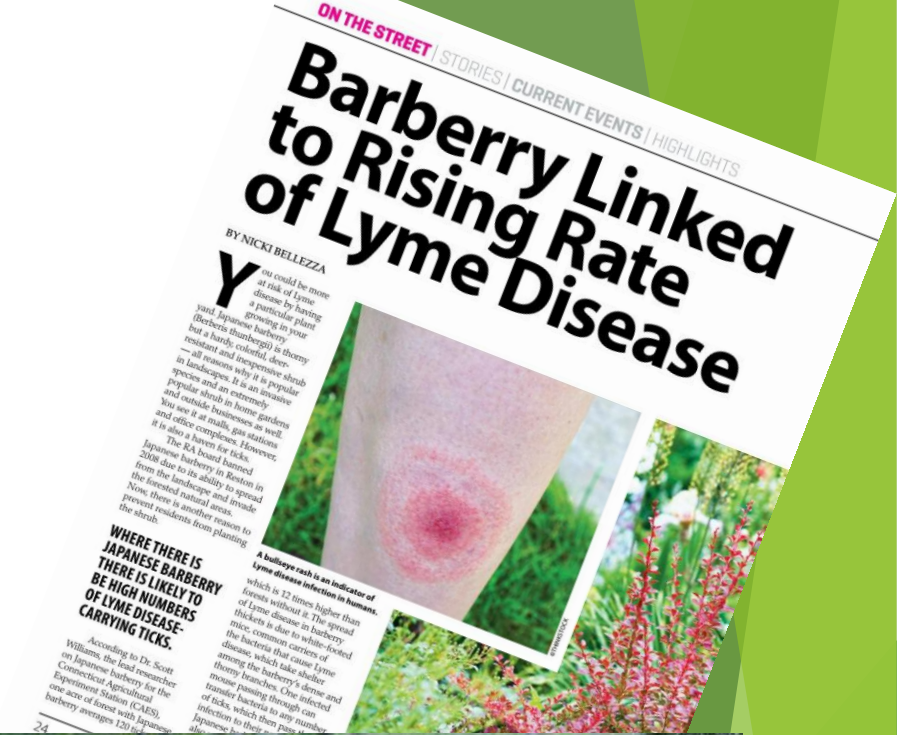
Invasive Species Impacts to Economy

- ▶ \$137 Billion Dollar annual impact
- ▶ Impacts to fishing, agriculture & forestry industry, and impacts to raw water users
- ▶ Infrastructure damage
- ▶ Negative impacts to recreation and access to natural resources
- ▶ Negatively impacting aesthetic values & tourism



Invasive Species Impacts to Health

- ▶ Association with disease/bacteria complexes
- ▶ Rashes, eye irritants, etc.
- ▶ Roadway hazards



NR40

The regulations are aimed at preventing new invasive species from getting to Wisconsin, and enabling quick action to control or eradicate those here but not yet established. The list does not include all invasives. Species lists are updated every 2-3 years, and sorts species into two categories Prohibited and Restricted.

Restricted:

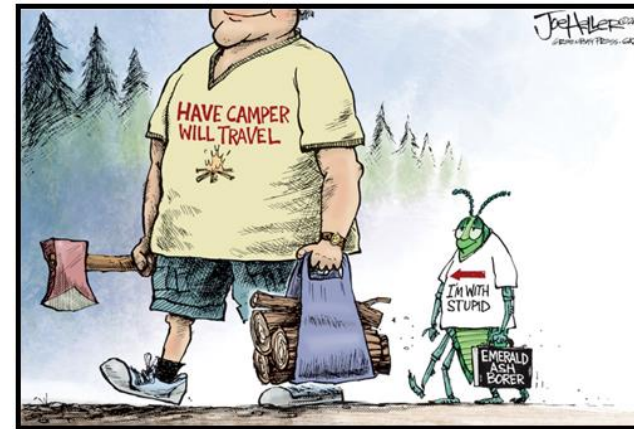
It is illegal to transport, transfer or introduce certain invasive species in Wisconsin without a permit.

Prohibited:

It is illegal to possess, transport, transfer or introduce certain invasive species in Wisconsin without a permit. AIS coordinators were issued permits in 2013.

How Do They Spread?

- ▶ Humans are the primary means of spread when it comes to invasive species.
- ▶ Intentional introduction
 - ▶ Food/agriculture
 - ▶ Ornamentals/landscaping
 - ▶ Fishing (earthworms) & aquaculture
 - ▶ Game animals
- ▶ Unintentional introduction
 - ▶ Ballast water
 - ▶ “Hitchhikers” on equipment
 - ▶ Improper disposal
 - ▶ Natural disasters
 - ▶ Wildlife





Prevention



PROTECT OUR FORESTS

Transported pests can kill trees

Non-native plants damage natural habitats & species

6 WAYS YOU CAN PREVENT INVASIVE SPECIES

1. **DON'T MOVE FIREWOOD** - Use it where you gather it
2. **DON'T CARRY "HITCHHIKERS"** - clean shoes, equipment & vehicles or **"PACK A PEST"** - plants, animals, insects, fruits & vegetables
3. **PLANT NATIVE PLANTS**
Replace non-native plants in your garden
4. **HELP REMOVE INVASIVE PLANTS** from your property
Volunteer or Plan a Community Service Project
5. **IDENTIFY & REPORT INVASIVE PESTS**
6. **EDUCATE OTHERS ABOUT INVASIVE SPECIES**

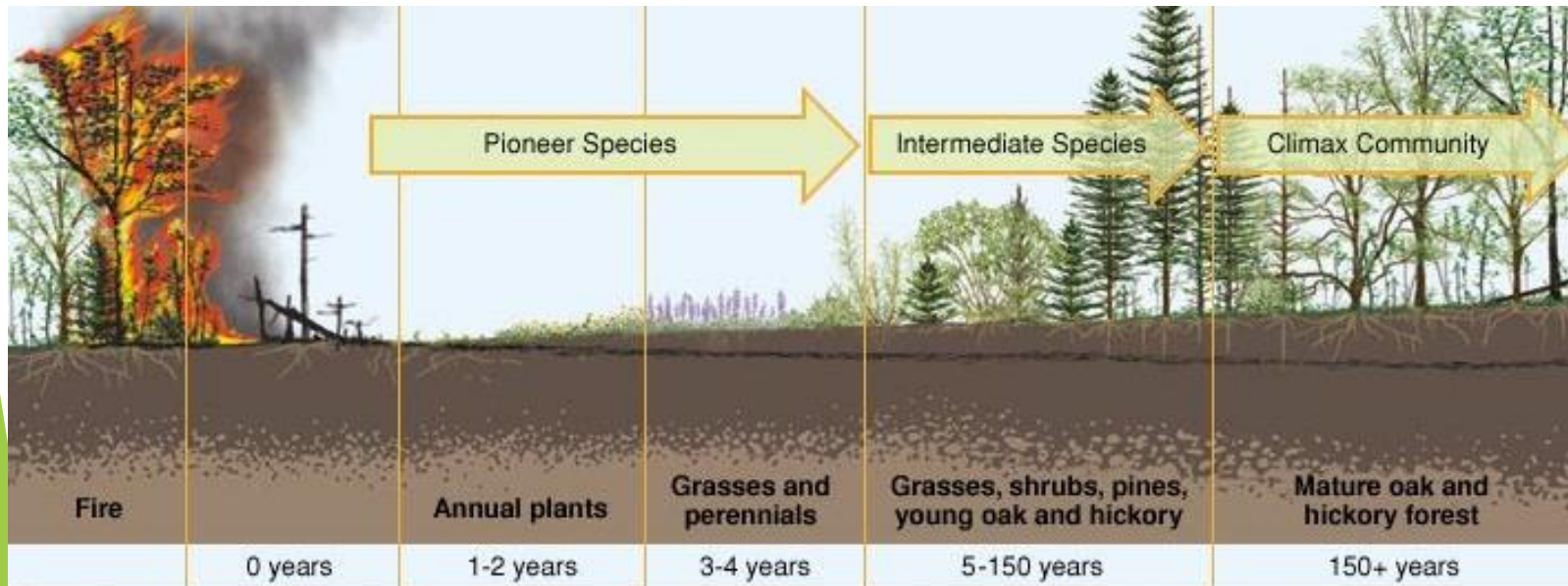


Scout Conservation Help Wanted
Find us on [f](#)

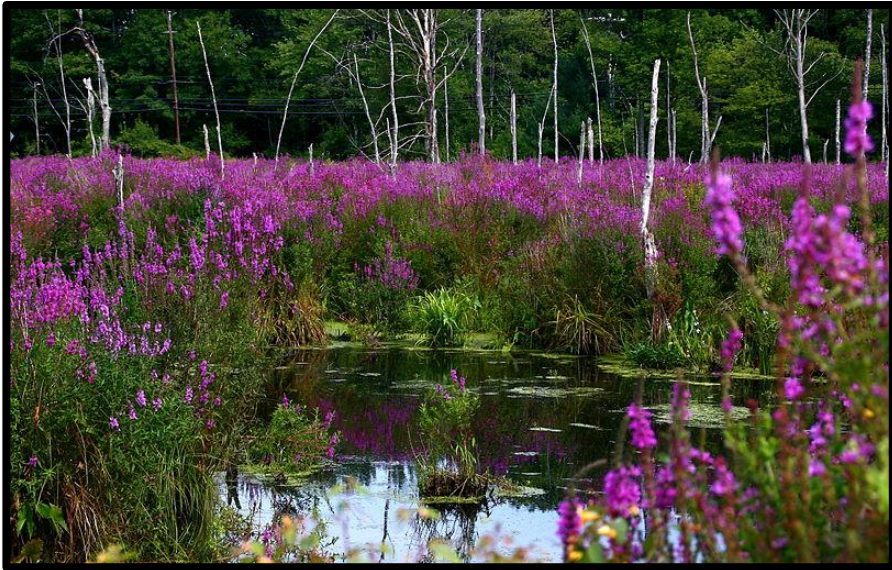


Now What?

- ▶ Embrace the monoculture and ecological collapse
- ▶ Restoration: Consider what is driving the problem
 - ▶ Pre-colonial?
 - ▶ Guided succession?
 - ▶ Stalled succession?



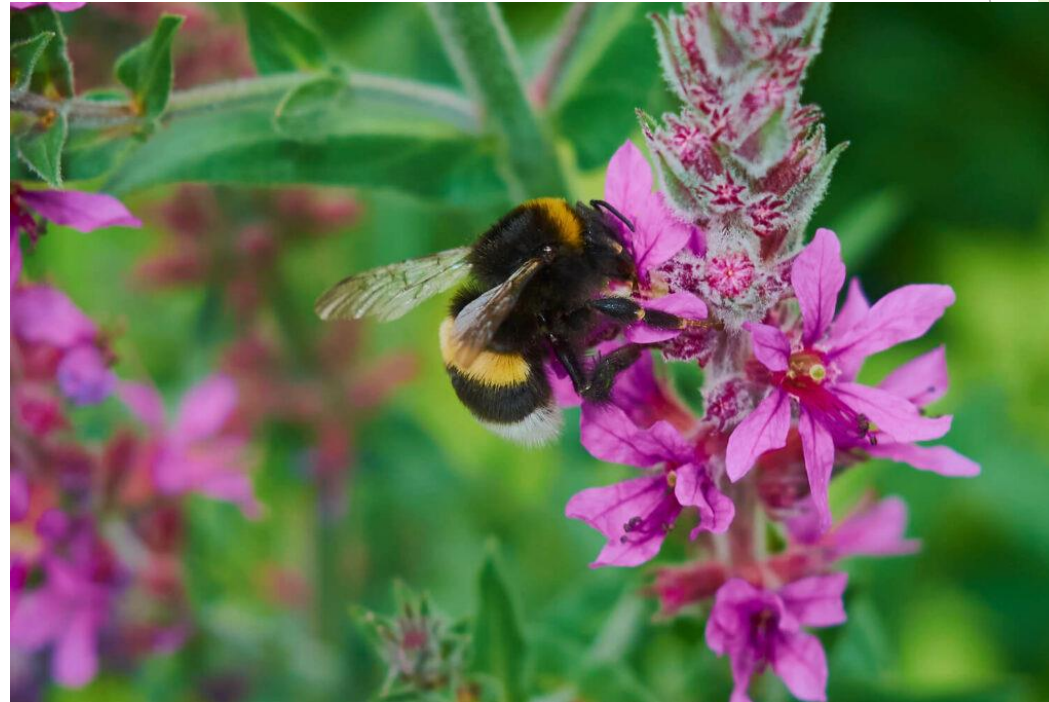
Purple loosestrife



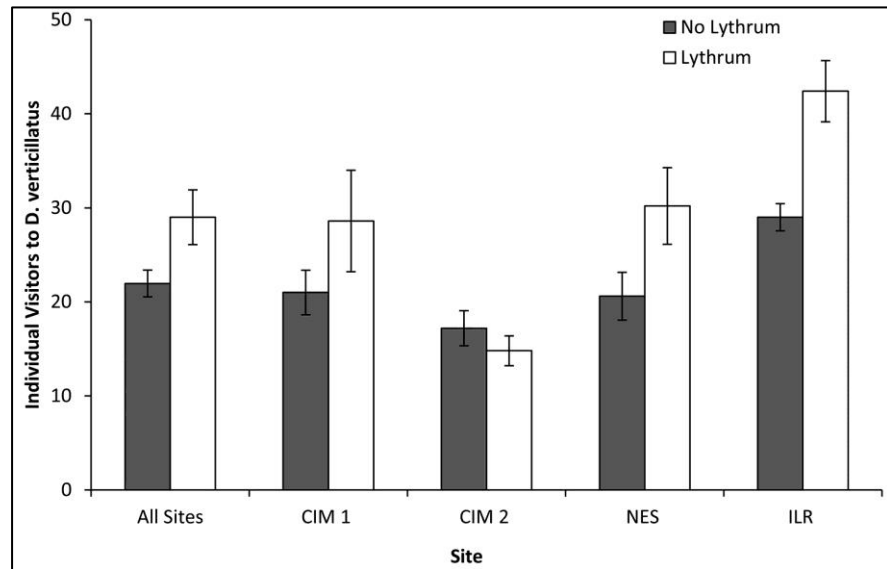
- ▶ Invades moist habitat including lake shores, river banks, and roadways
- ▶ Can quickly establish in new places
- ▶ Seeds are viable for many years
- ▶ Also capable of asexual reproduction

Purple loosestrife

- ▶ Forms monocultures
- ▶ Displaces native flora and fauna
- ▶ Acts as a pollinator magnet



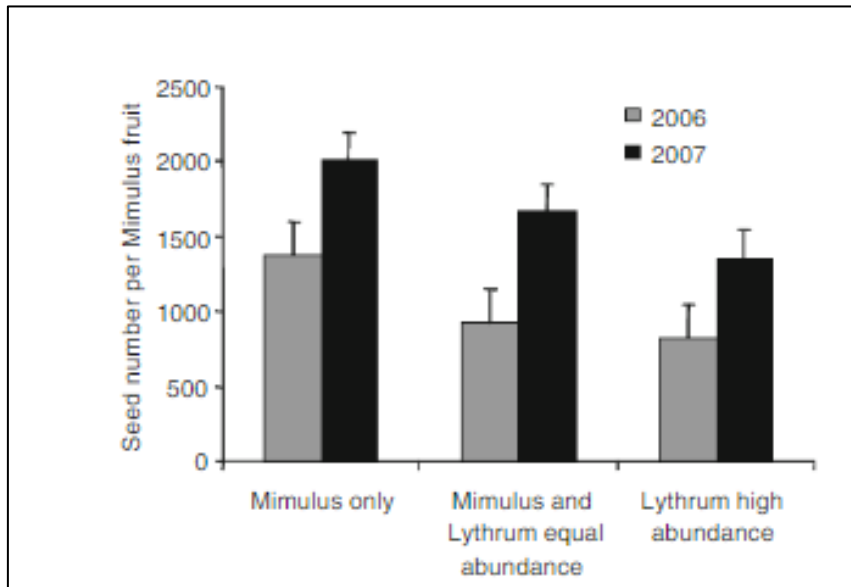
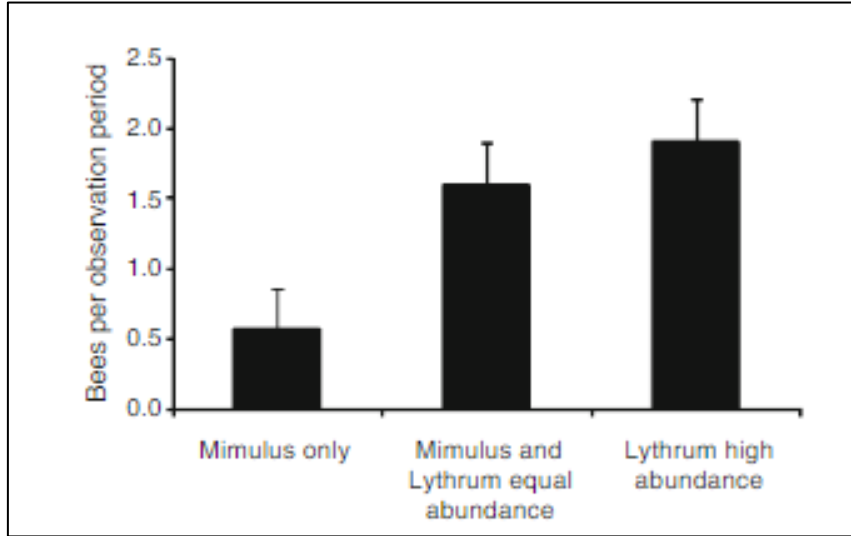
Purple loosestrife



Decodon verticillatus



Purple loosestrife



Problems

- ▶ Extreme weather events
- ▶ Nutrients and pollutants
- ▶ Erosion
- ▶ Geese



What are your goals?

What goals do you have for your property?

Create fish and wildlife habitat.

➤ **CHOOSE FISH STICKS**
(lakes only)

Improve wildlife habitat, natural beauty and privacy, and decrease runoff.

➤ **CHOOSE NATIVE SHORELINE PLANTING**

Prevent runoff from getting into your lake or river or direct water to an infiltration practice,

➤ **CHOOSE DIVERSION PRACTICE***

Capture and clean runoff.

➤ **CHOOSE ROCK INFILTRATION***

Create wildlife habitat and natural beauty while capturing and cleaning runoff.

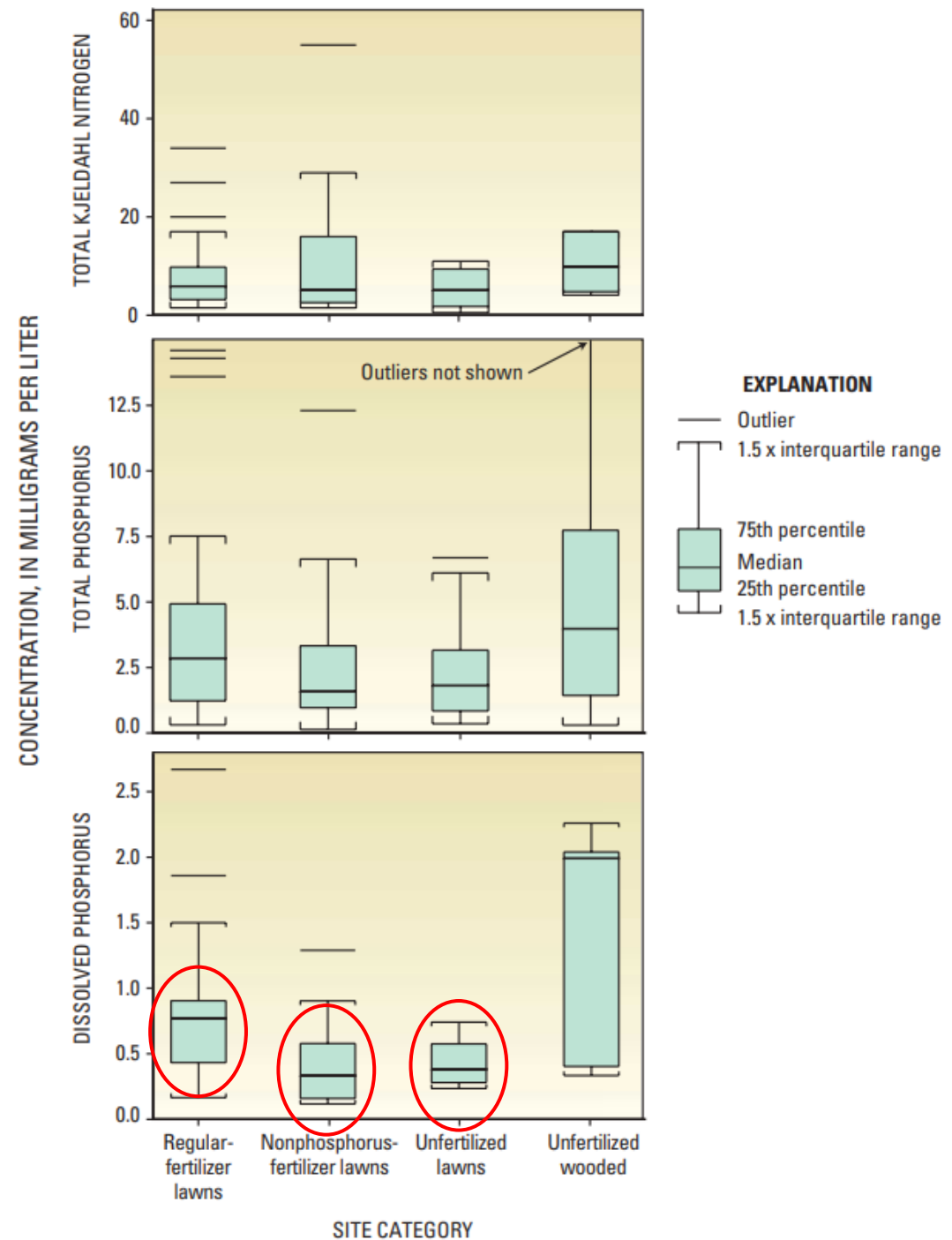
➤ **CHOOSE A RAIN GARDEN***

**Eligible for shoreland properties within 1000 feet of a lake or 300 feet of a river.*

What can be done?

-Nutrients and pollution

- ▶ Changes in lawn fertilization
 - ▶ Soil testing
 - ▶ Reduce frequency
 - ▶ Change fertilizer type
 - ▶ Stop fertilizing



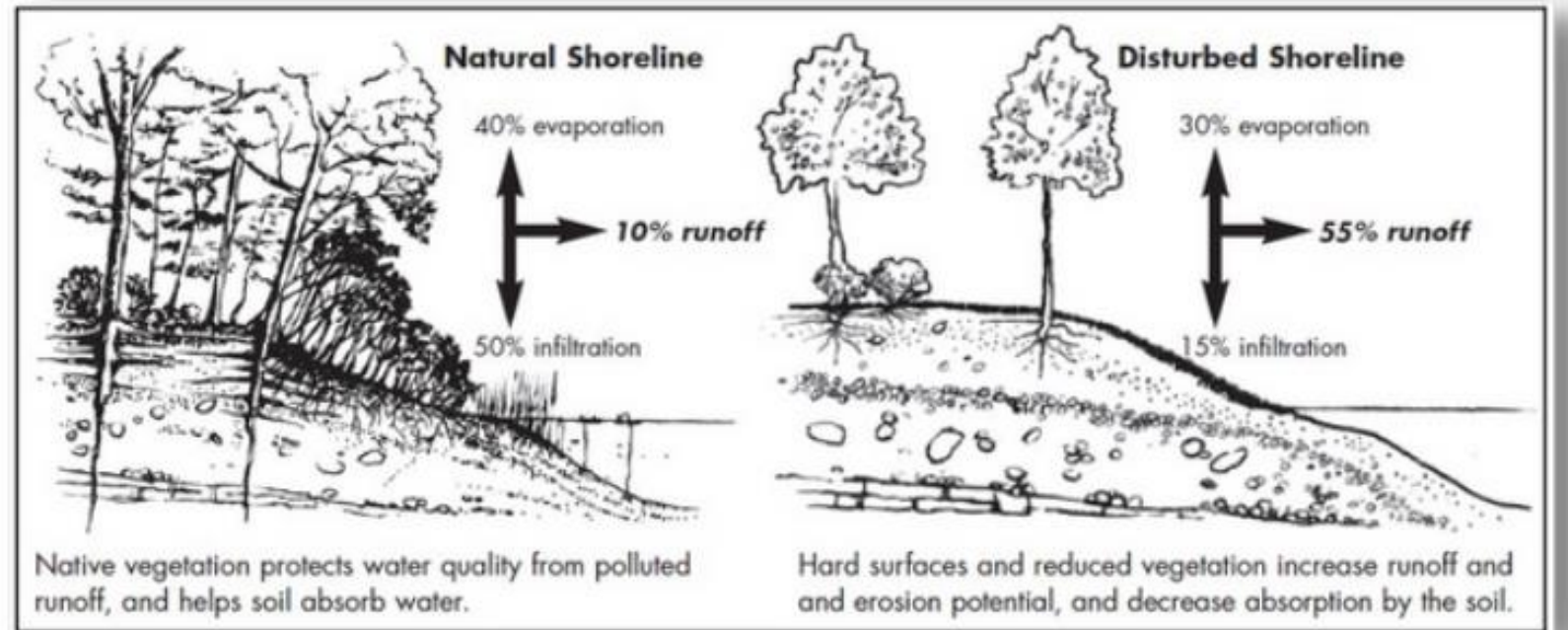
What can be done?

- ▶ Create buffers



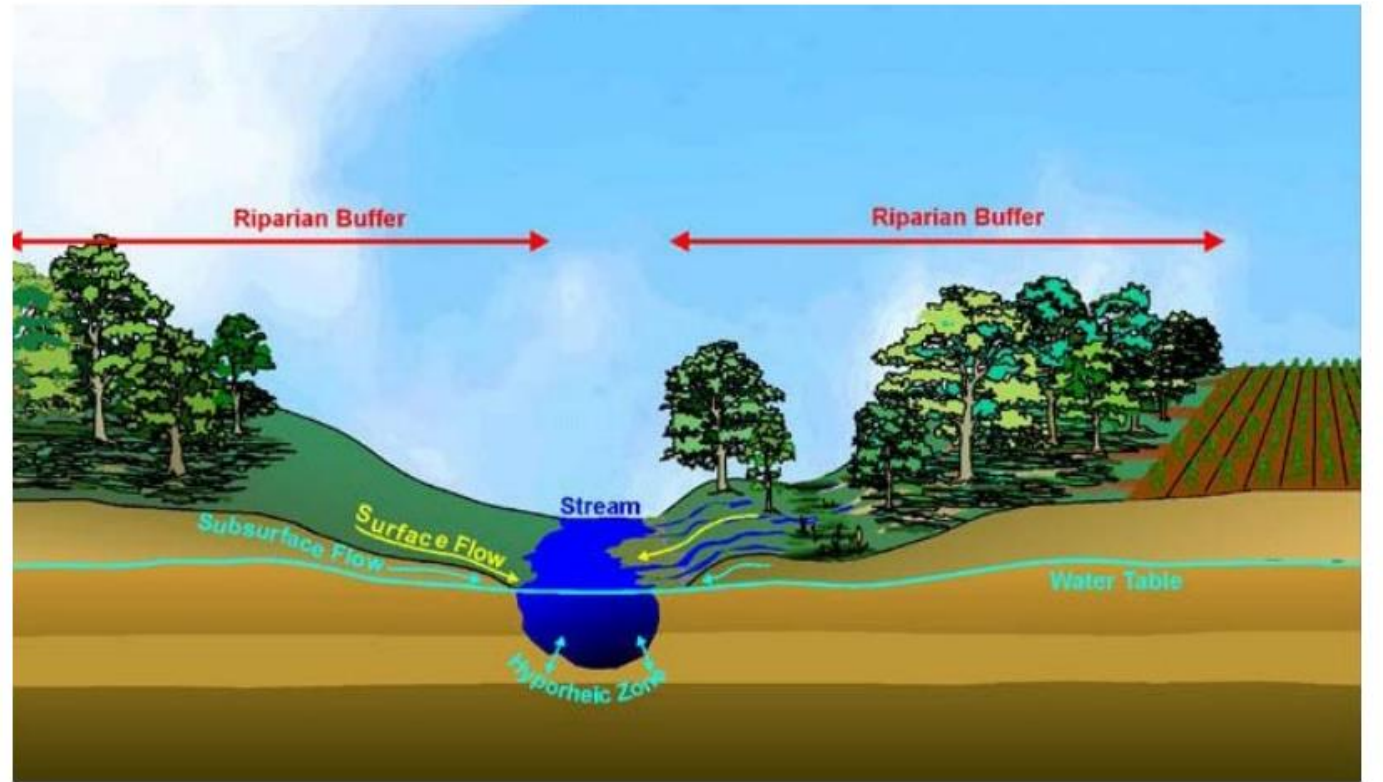
Shoreline buffers

- ▶ Protects banks from erosion
- ▶ Filters runoff
- ▶ Absorbs nutrients
- ▶ Protects property values
- ▶ Provides aesthetic value



Shoreline buffers

- ▶ Bigger is better in this case
- ▶ Many factors come into play when deciding width
 - ▶ Space
 - ▶ Shoreline quality
 - ▶ Property location



Reduce runoff

- ▶ Replace impervious surfaces



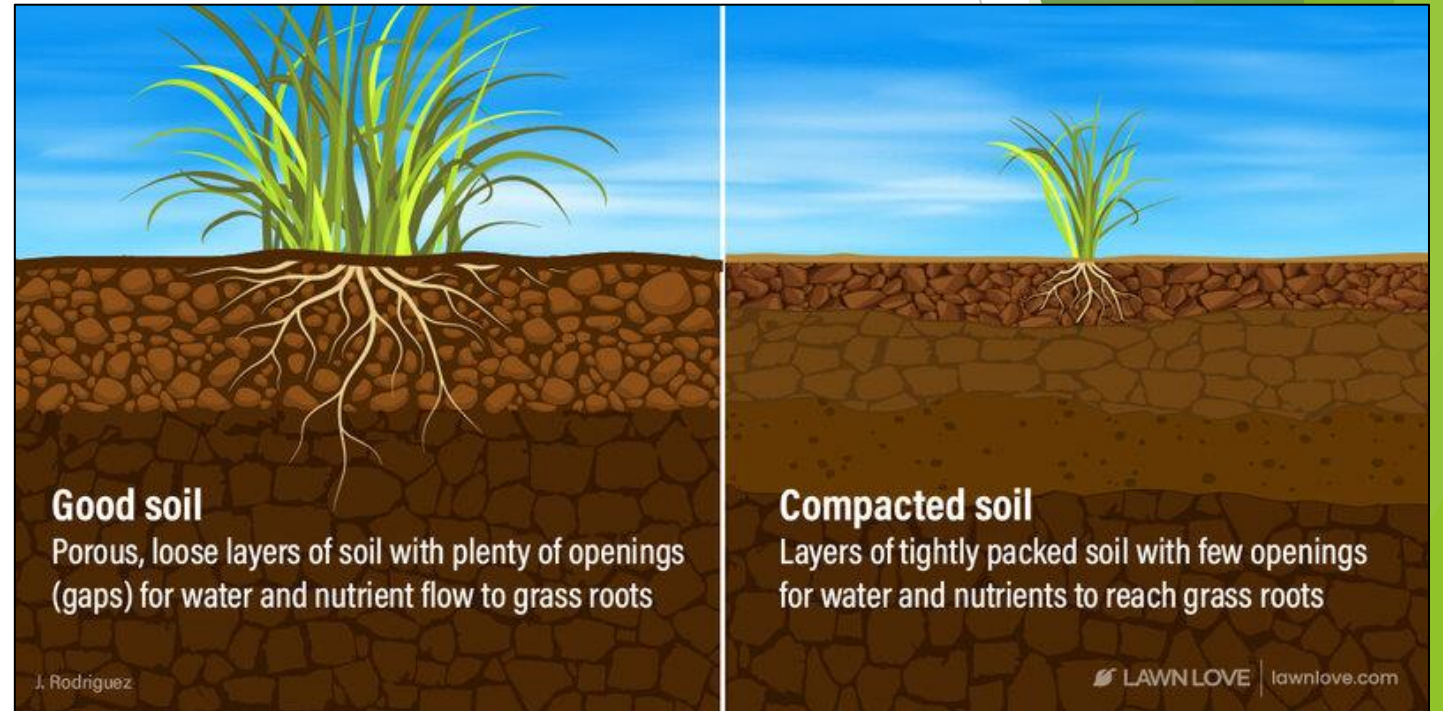
Reduce runoff

- Replace impervious surfaces



Improve soils

- ▶ Improved soils increase infiltration



Manage roof runoff

- ▶ Roofs can direct a lot of water
- ▶ A 1000 square foot roof yields 623 gallons with just one inch of rain



Create a rain-friendly yard

- ▶ Rain gardens



During the storm



24 hours later

