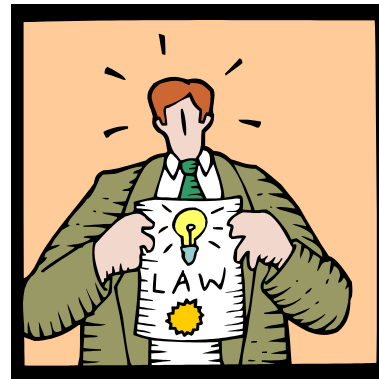


# Why Protect Wetlands?

Presented by  
Jennifer Boyer  
DuPage County DEC

# Wetland regulations abound

- Lake County
- DuPage County
- McHenry County
- Cook County
- Will County
- Kane County
- Illinois EPA
- Illinois IDNR
- US Fish and Wildlife
- US Army Corps of Engineers
- Municipal Ordinances



# Where's the love?



Gitar Beyer

# Why are wetlands important?

- Stormwater
  - Raindrop interception
  - Volume control
  - Infiltration
  - Flood control
  - Water quality
  - Erosion control
- Habitat
- Air Quality
- Recreation
- Economics

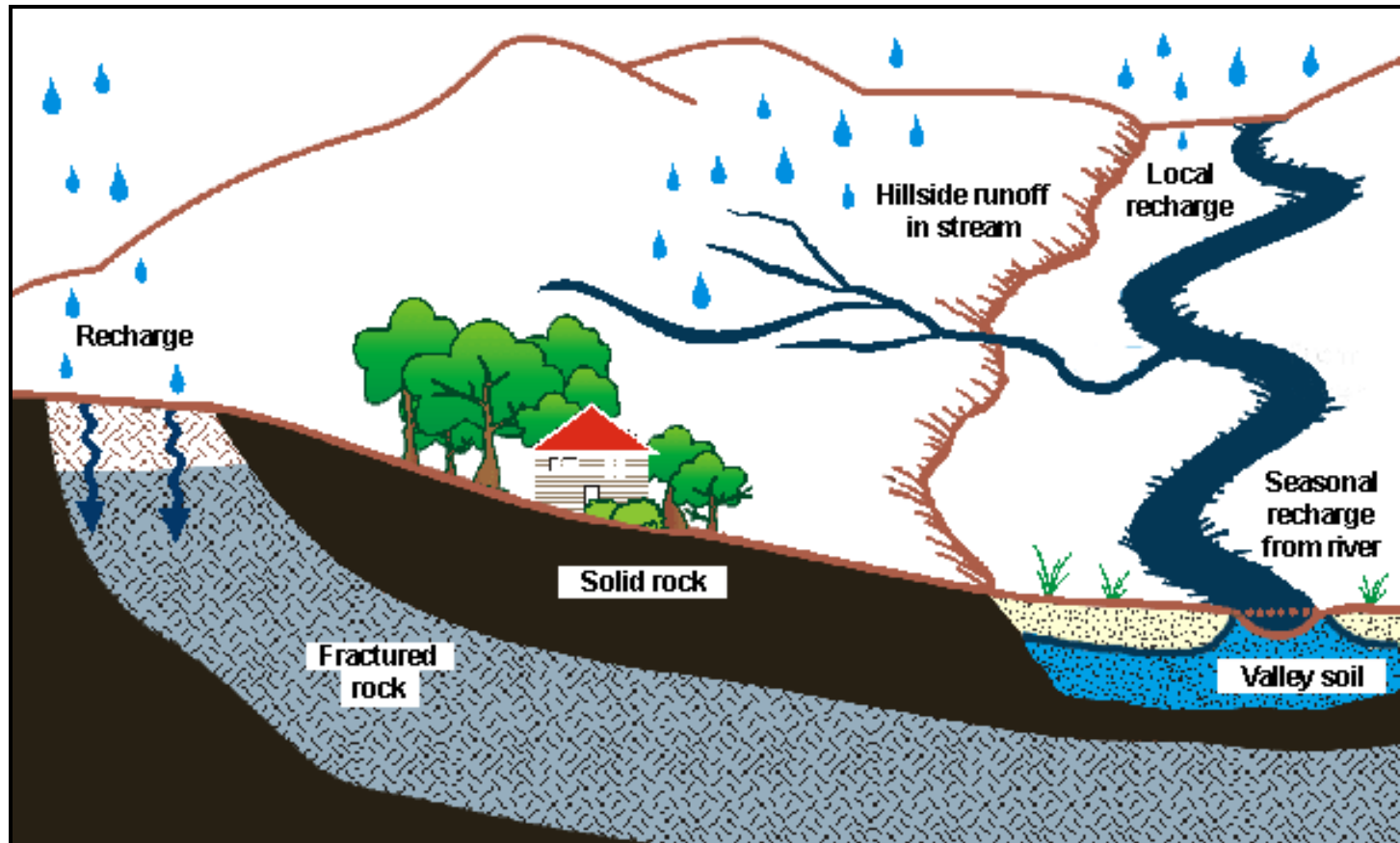
# Stormwater and Flood Control

A one-acre wetland can typically store 3 acre feet of water or 1 million gallons.

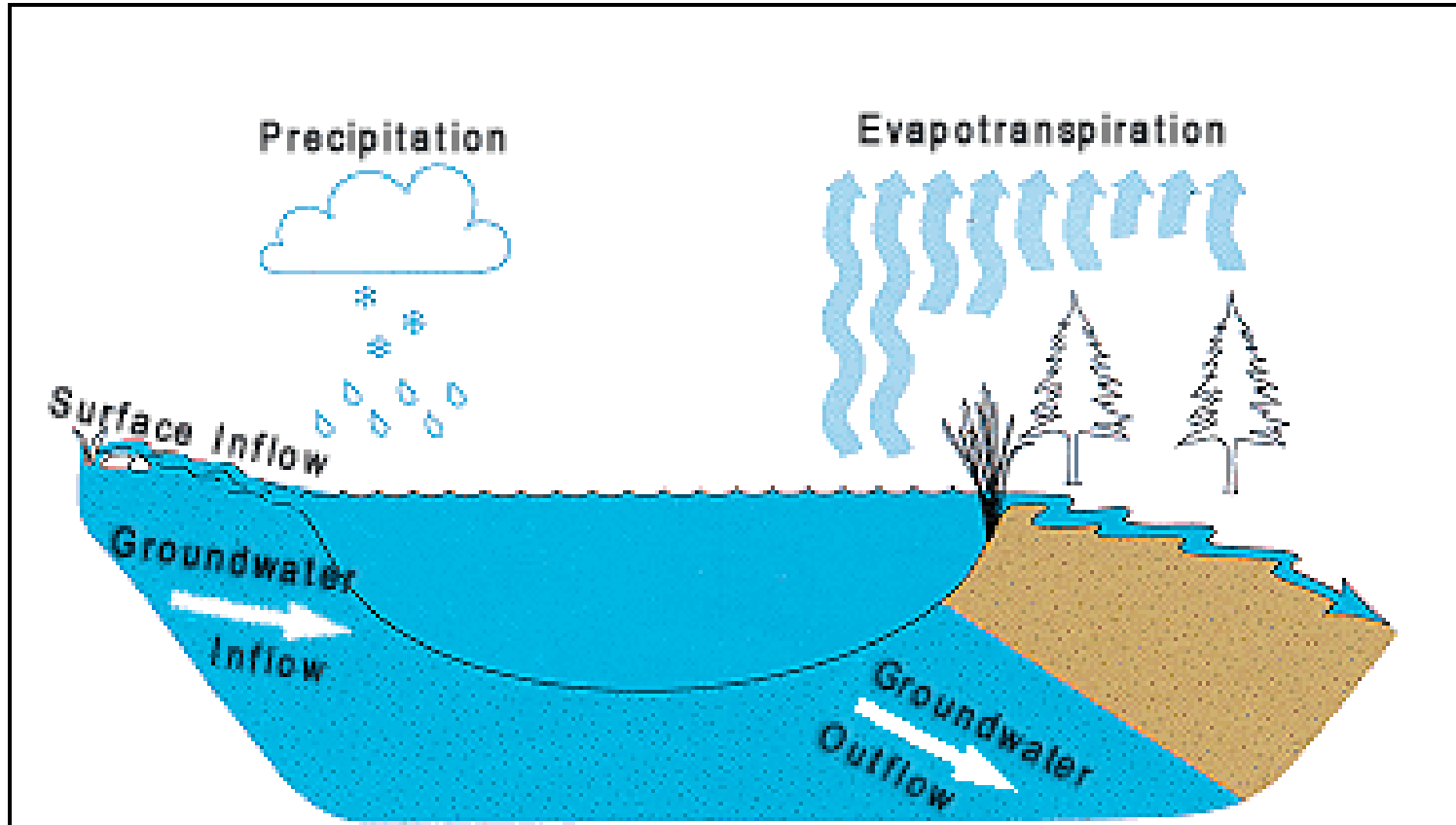
How?



# Groundwater Recharge



# Gravity? No problem.



- Modified from [http://www.na.fs.fed.us/spfo/pubs/n\\_resource/wetlands/wetlands4\\_hydrology.htm](http://www.na.fs.fed.us/spfo/pubs/n_resource/wetlands/wetlands4_hydrology.htm)



# Erosion Control

- Rain interception
- Flat grades and vegetation in the way slows water flows and prevents or reduces erosion from wave action.
- Infiltration
- Evapo-transpiration





# Water Temperature



# Climate Control

- Moderates air temperatures
- Filters air pollutants
- Carbon sink







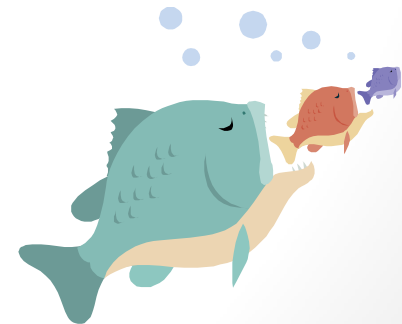
# Habitat

- Although wetlands cover only about 5% of the land surface in the lower 48 states, they are home to 31% of plant species and habitat for at least 50% of the country's threatened and endangered species.
- As many as 50% of all north American bird species nest or feed in wetlands



# Food Web

- Vertebrates (amphibians, birds, mammals, fish...)
- Invertebrates (worms, mussels, insects and insect larvae...)
- Plants (Algae, trees, grasses and forbs...)
- Fungi and molds
- Bacteria
- Minerals
- Detritus (dead bits of vegetation or other organic material)



# Need another reason why wetlands are important to rivers?

- Detritus
  - Wetland creatures release nutrients, minerals, and ground up organic material called detritus.
  - Diverse wetland bugs = Diverse detritus.
  - Diverse detritus = diverse stream bugs
  - Diverse stream bugs=diverse stream food web
  - Detritus has to flow continuously so that it can be plucked from the water.

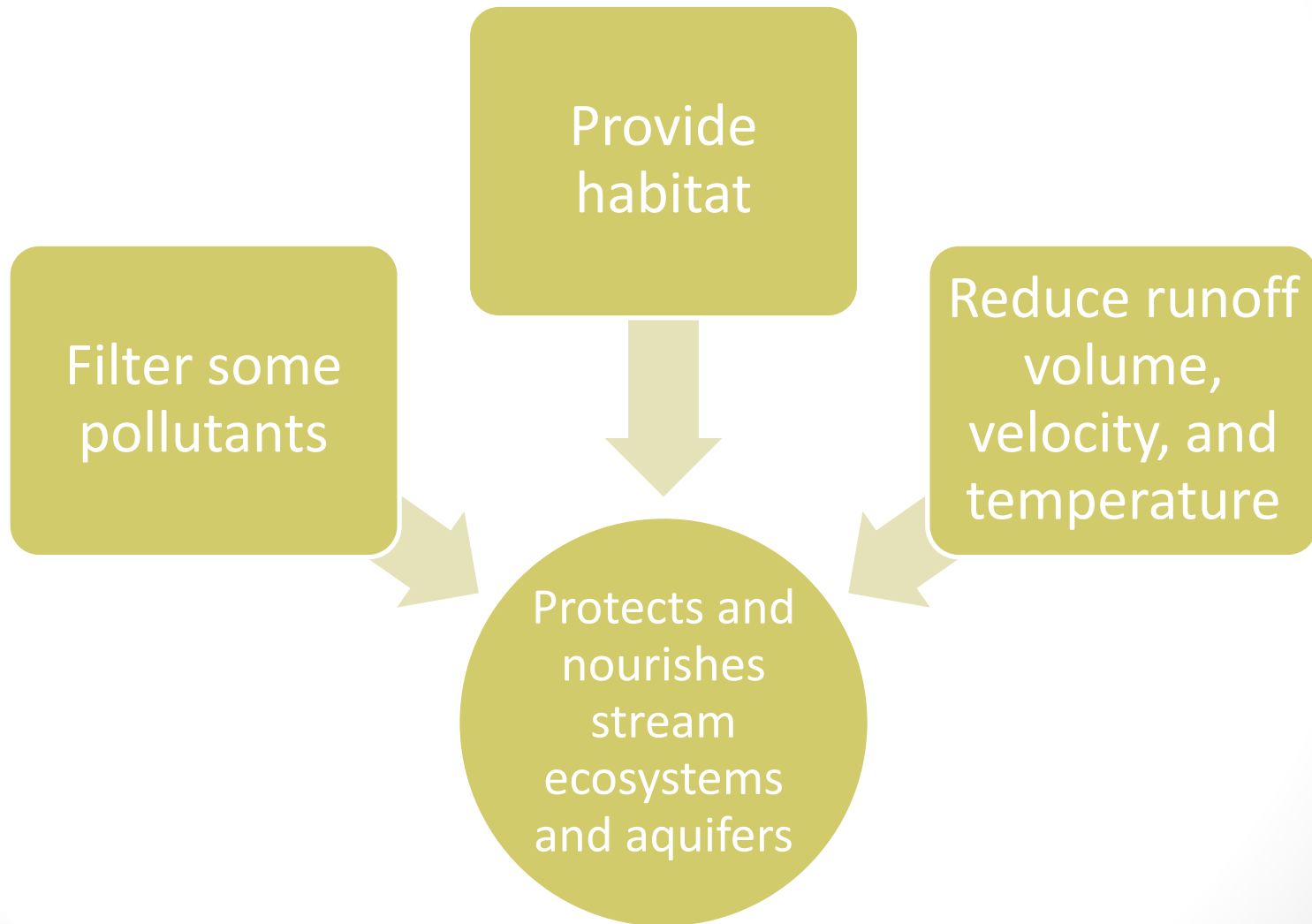


# Why is this important?

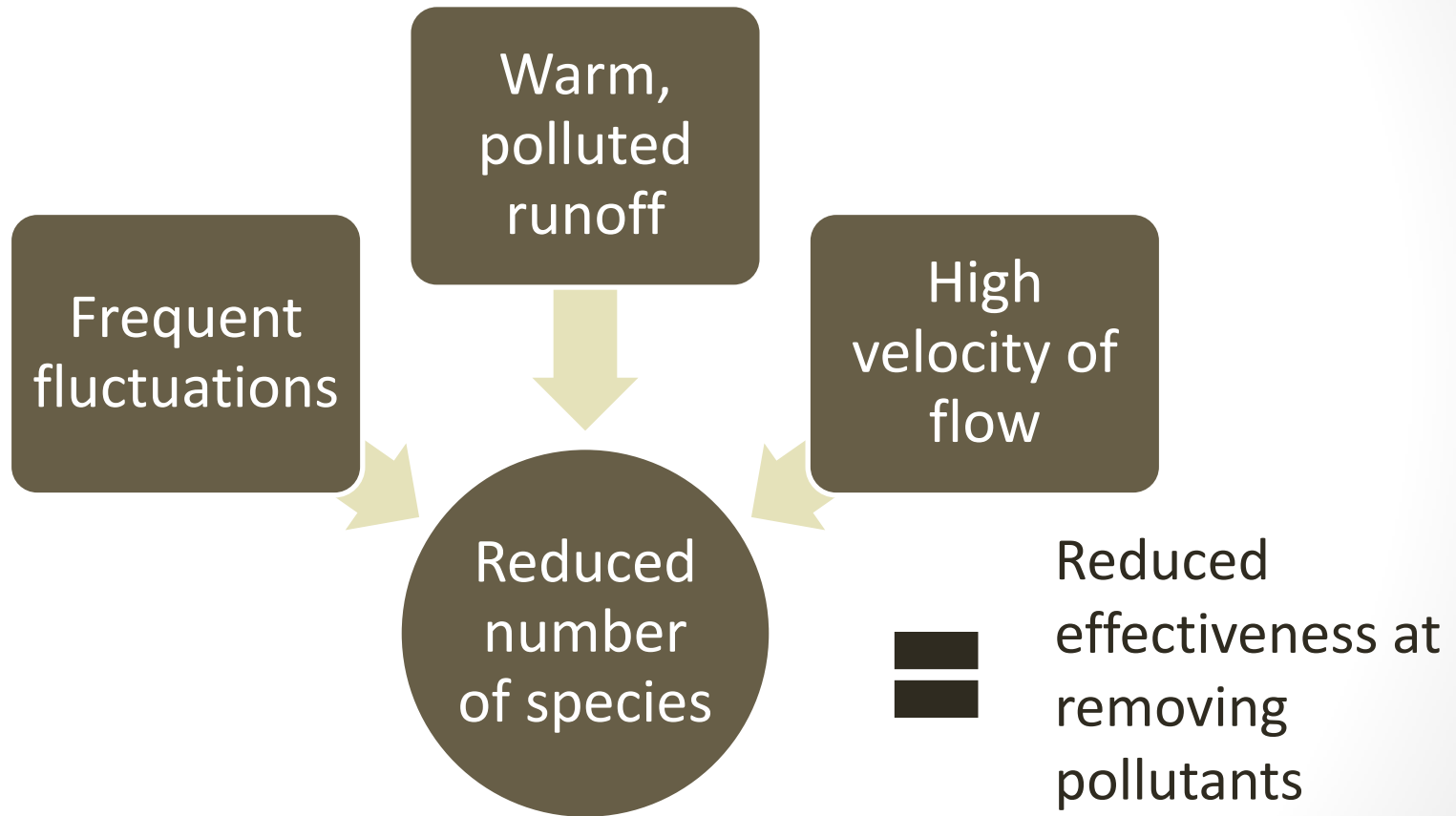
Diverse ecosystems are better at everything

- Greater plant diversity supports diverse soil fauna
- Different kinds of plants and organisms assimilate different kinds of pollutants
- Tend to reduce runoff volume more efficiently through evapotranspiration and infiltration

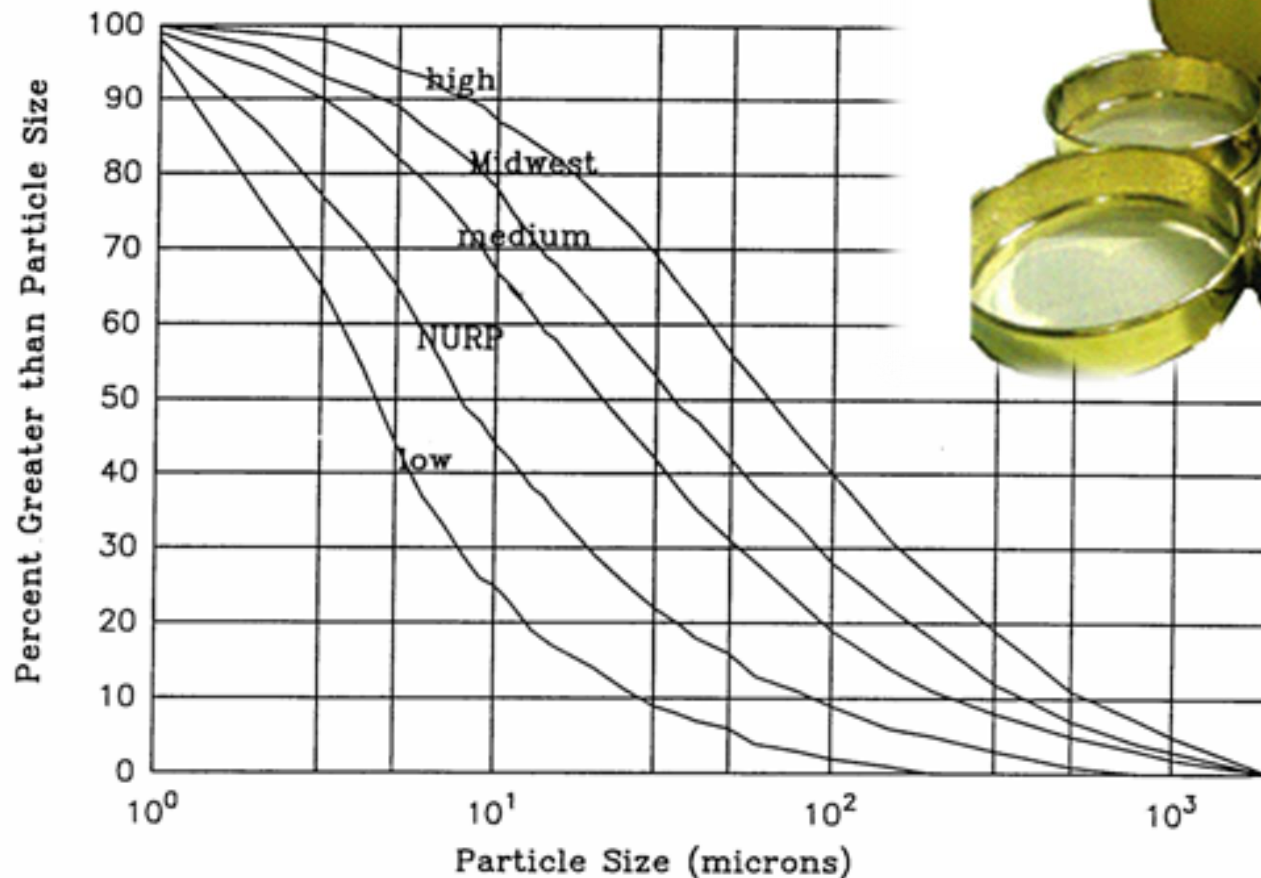
# Diversity Is Super



# If wetlands are so super, why should we do all of the work?

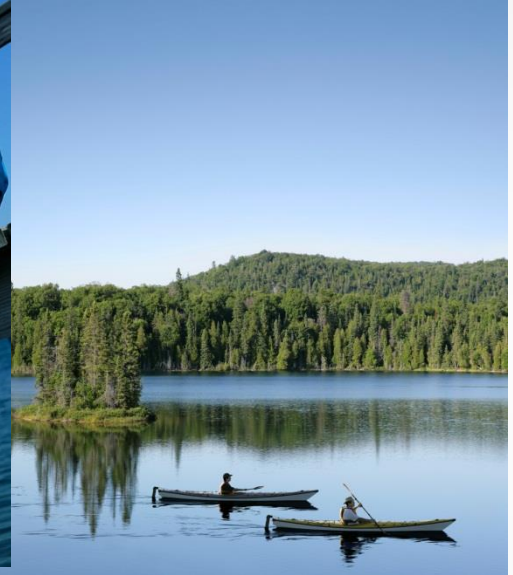


# Why can't BMPs replace wetlands?



# Wetlands are Fun!

In 2001, 82 million Americans spent \$108 billion in wetlands. What were they doing?



Source: EPA





# Mitigation replaces wetlands, right?



# Why protect wetlands?

- Stormwater
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- Habitat
- Air Quality
- Recreation
- Economics





**Questions?**

[www.dupageco.org/stormwater](http://www.dupageco.org/stormwater)