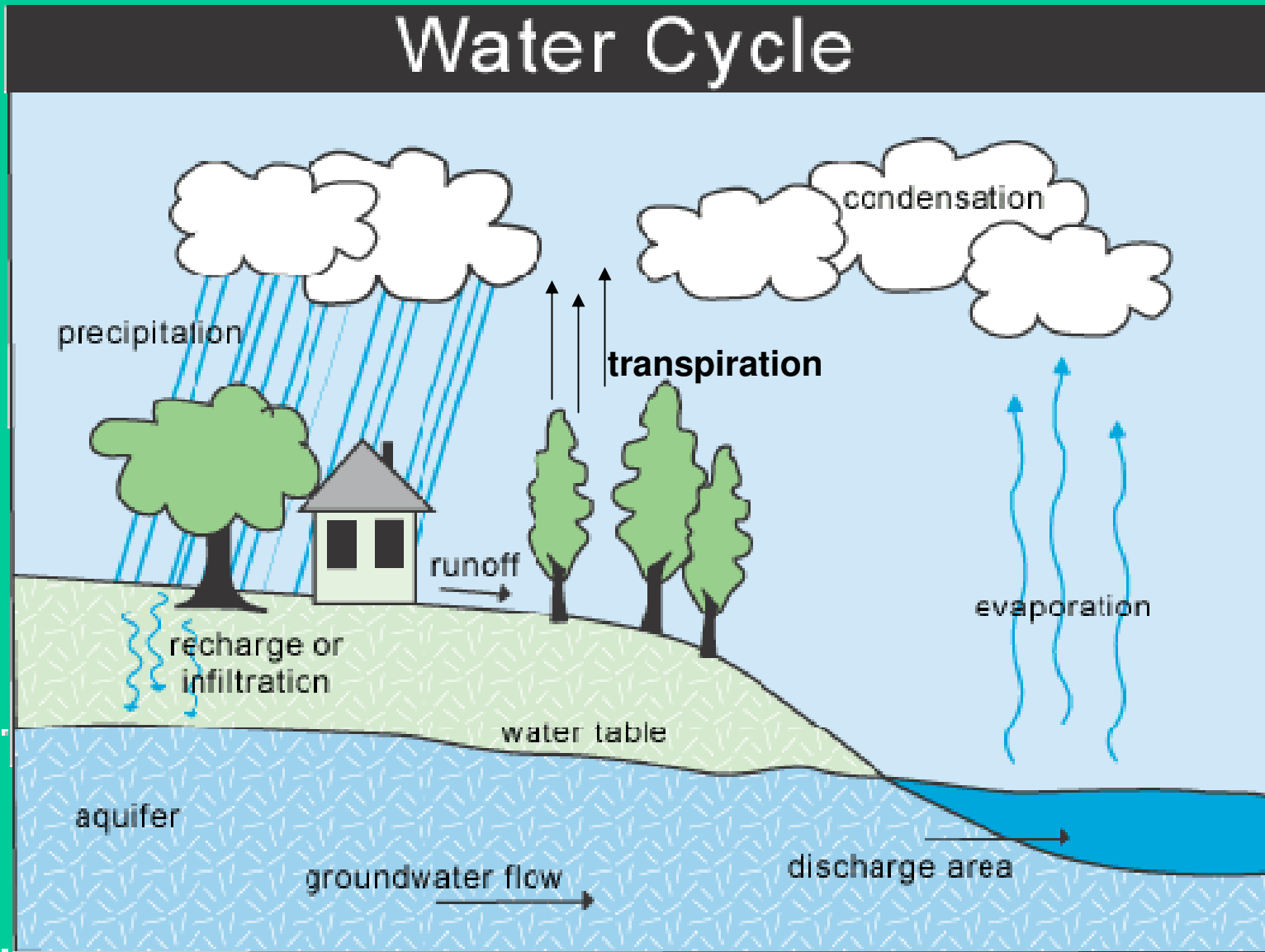


*Water*

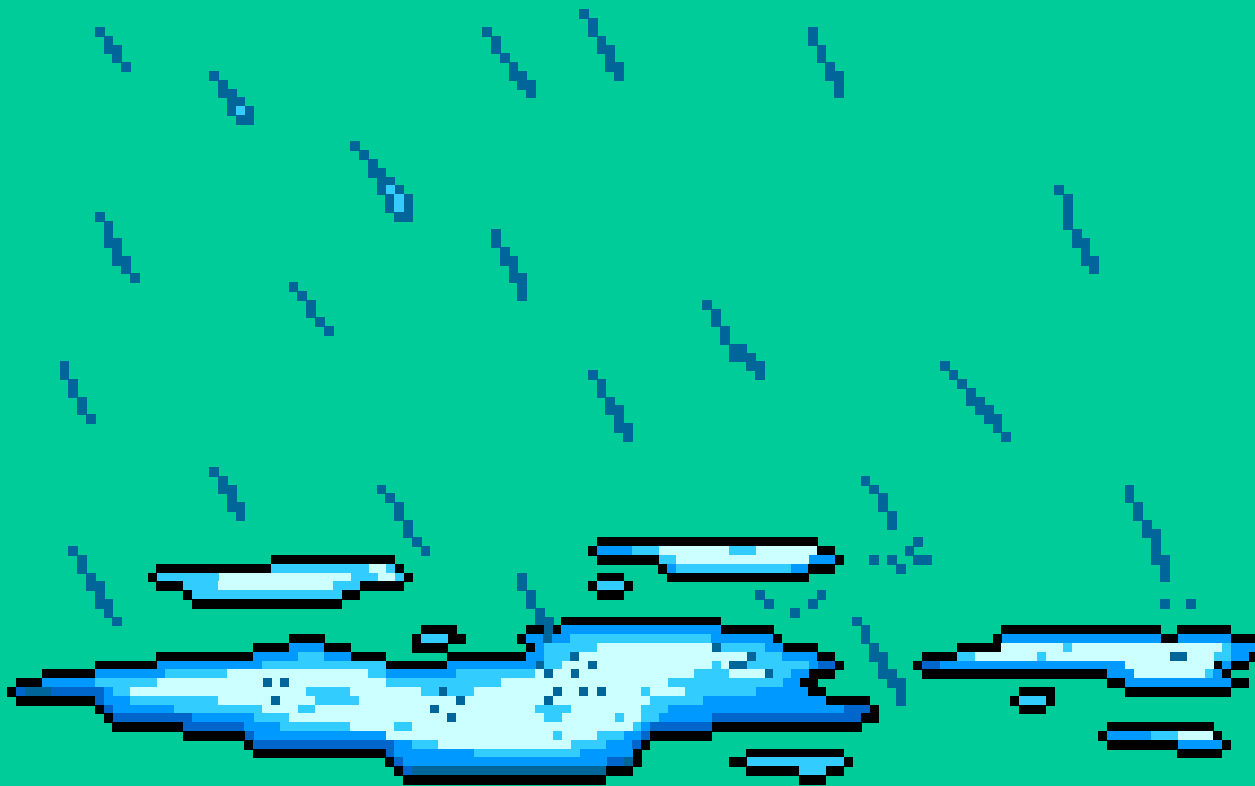
*&*

*Watersheds*

# The Water Cycle



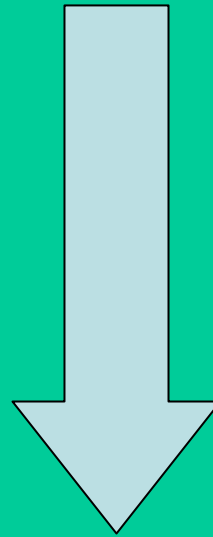
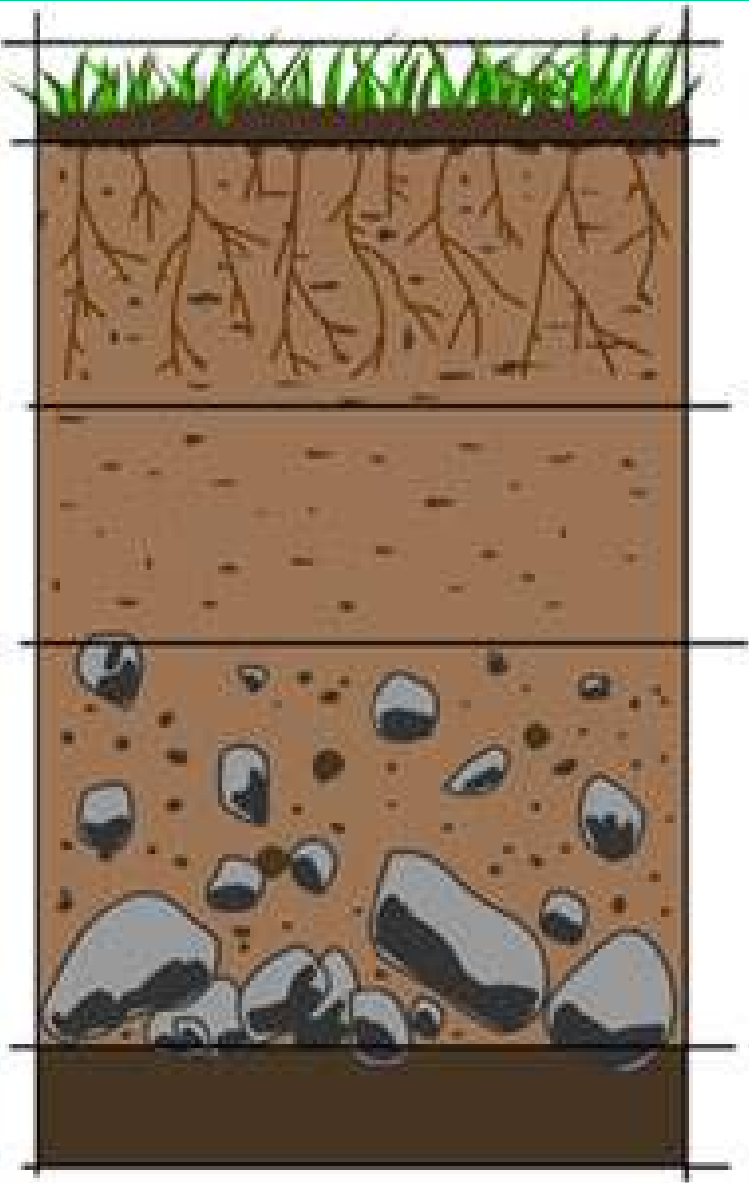
# Precipitation



Rain  
Snow  
Sleet  
Hail



# Recharge or Infiltration



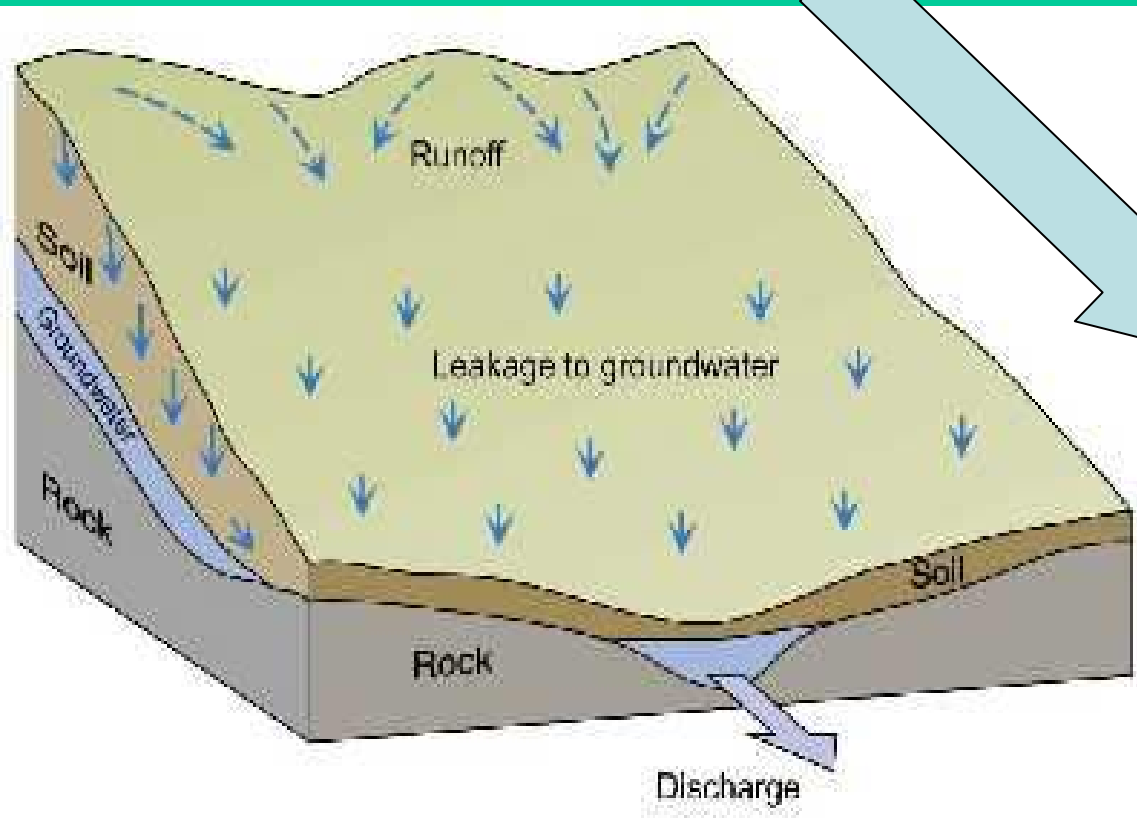
Precipitation can soak into the soil where it may be absorbed by plants or becomes

**GROUNDWATER!**

# Recharge Areas



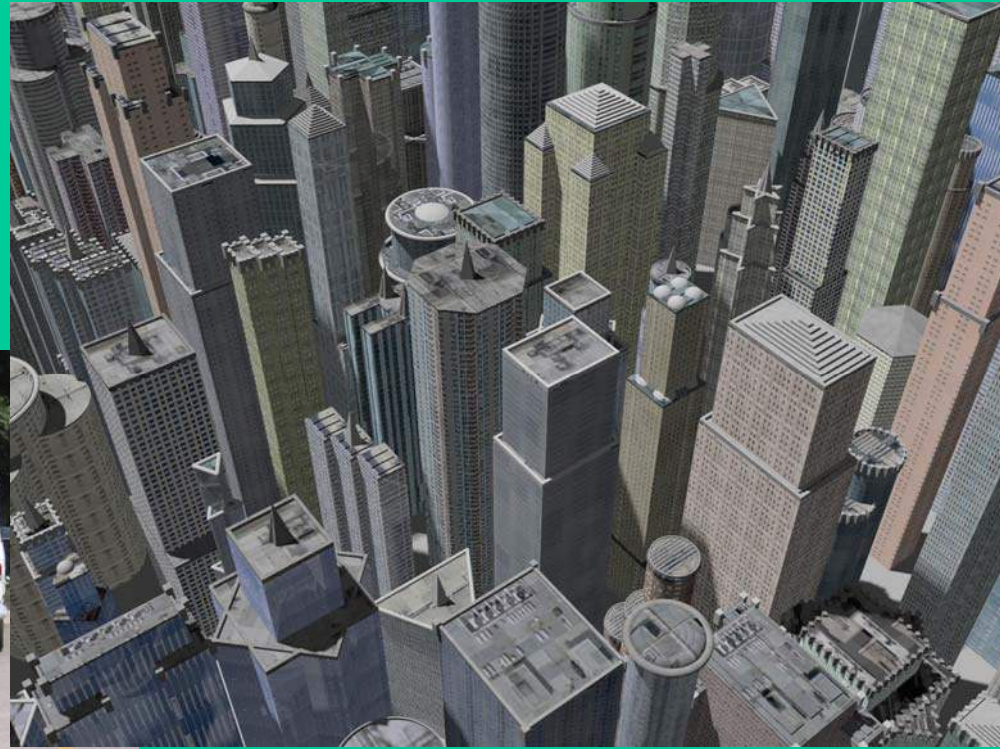
# Runoff



When precipitation cannot infiltrate it runs off the land and becomes

**SURFACE**  
**WATER!**

# Poor Recharge Areas



# Surface Water

Lakes

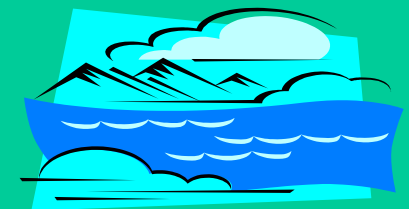
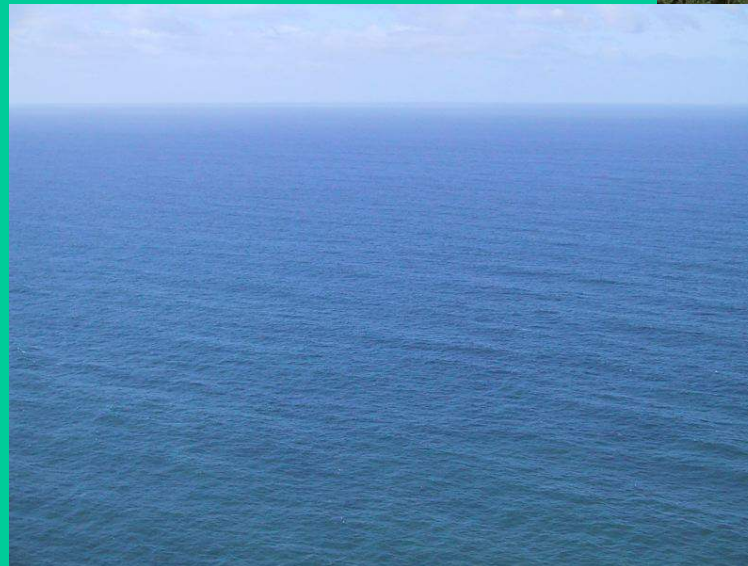
Rivers

Streams

Ocean

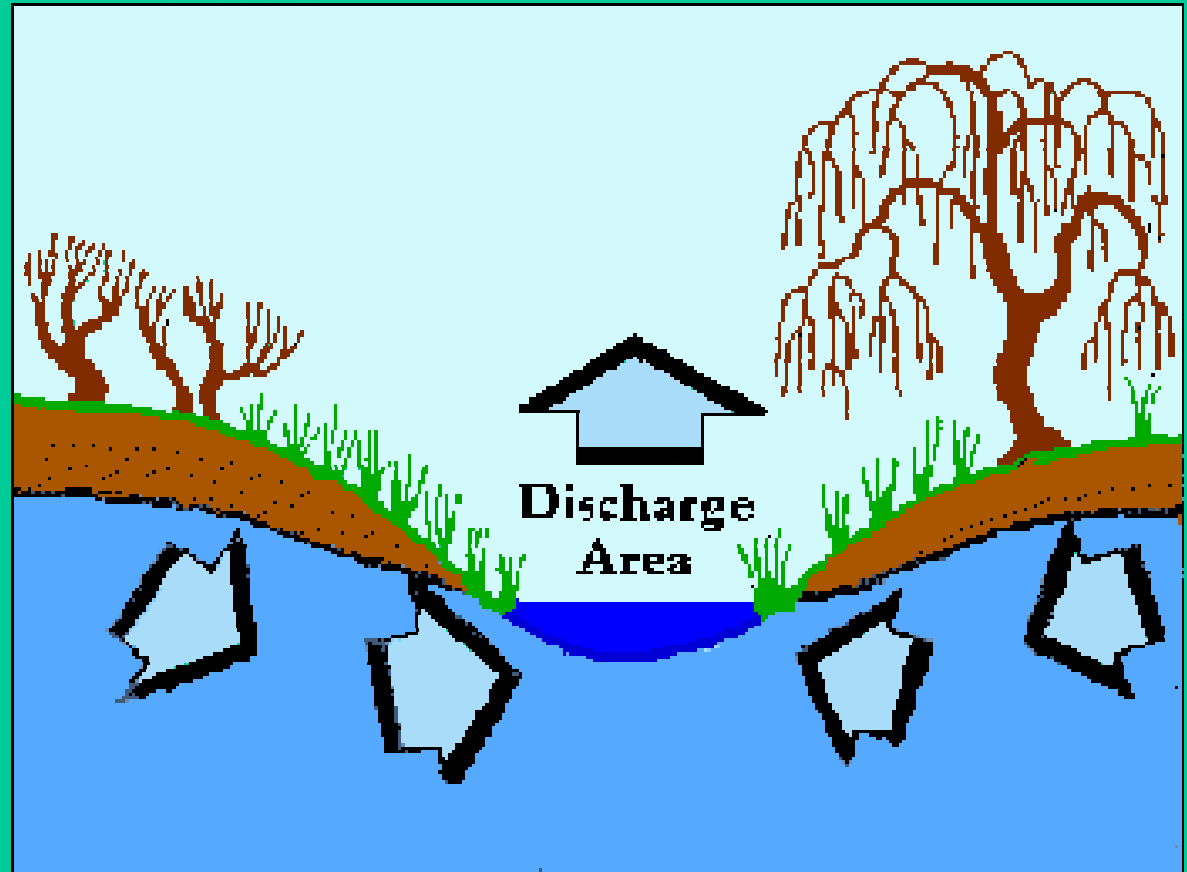
Reservoirs

Puddles

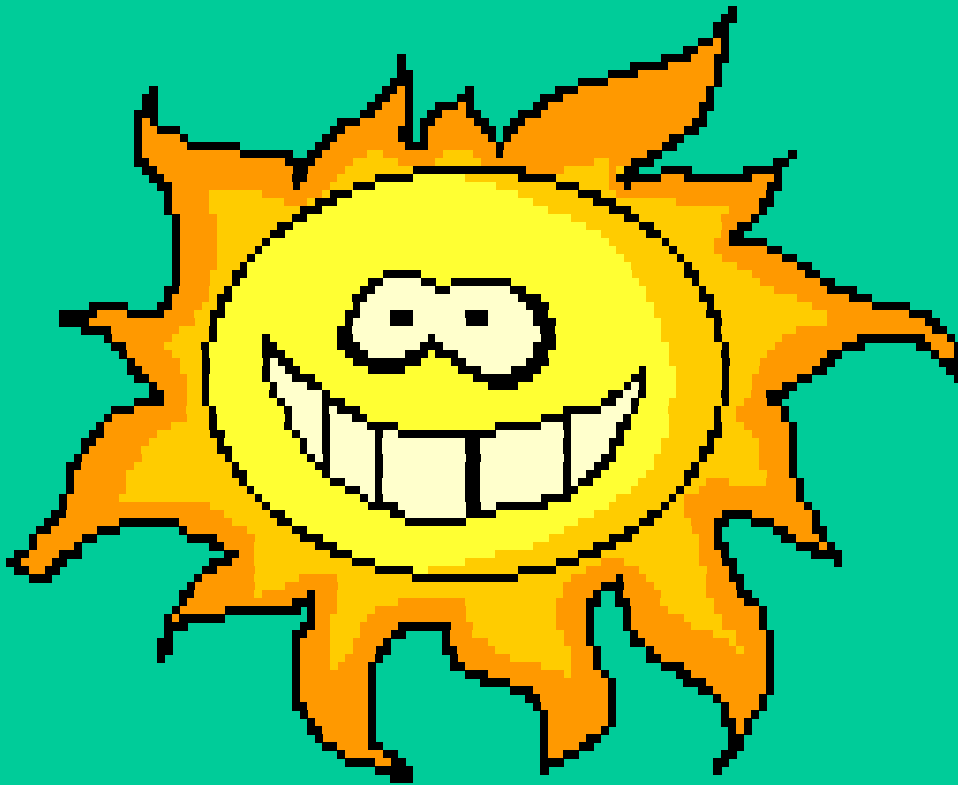


# Discharge Areas

Where  
groundwater  
becomes  
surface  
water



# Evaporation



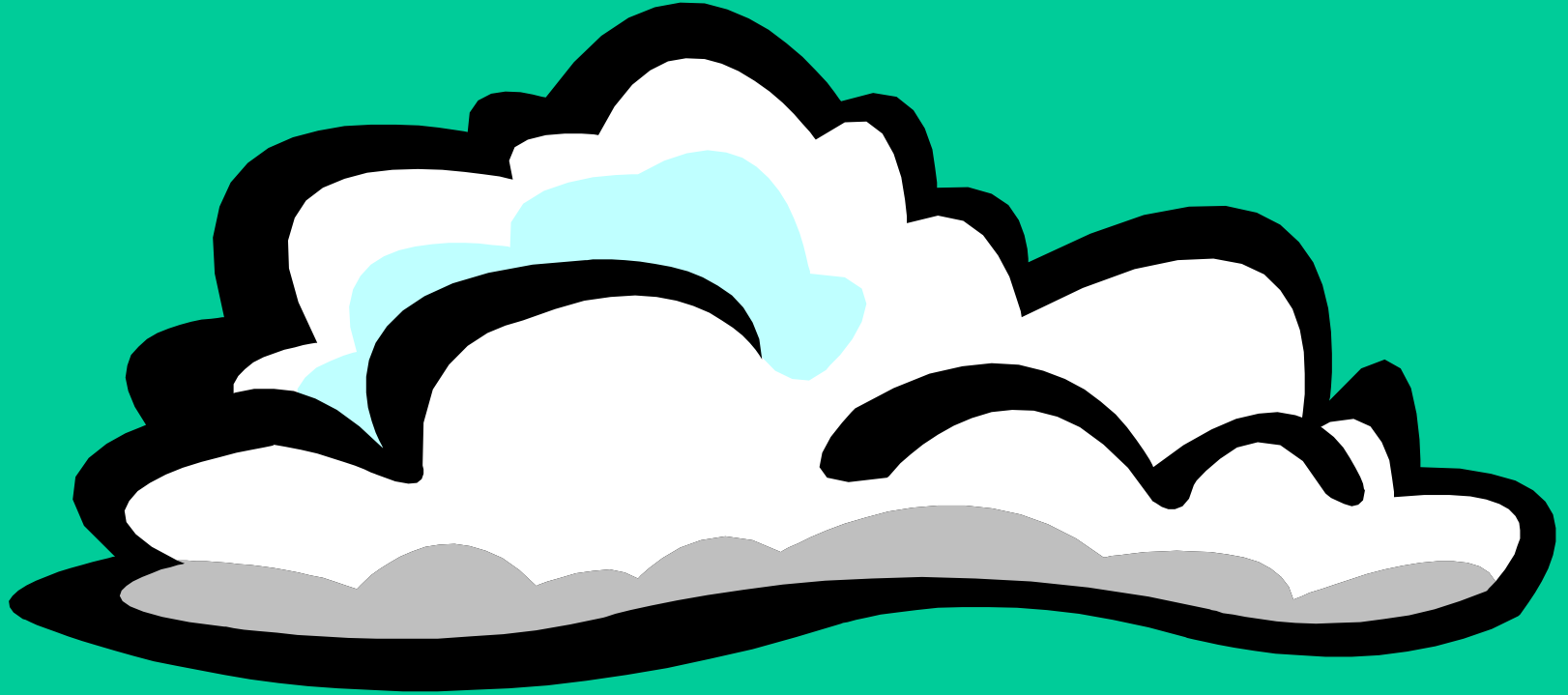
A process where the water is heated and turned into a water vapor. The sun is the main heat source.

# Transpiration



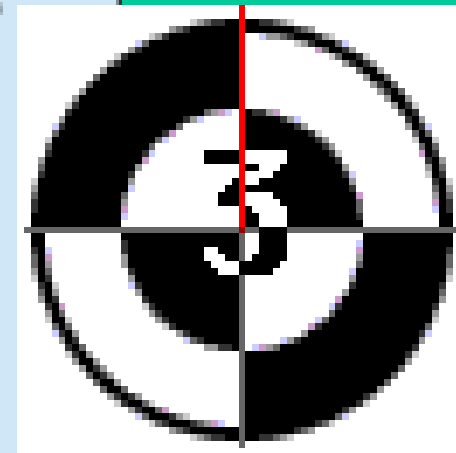
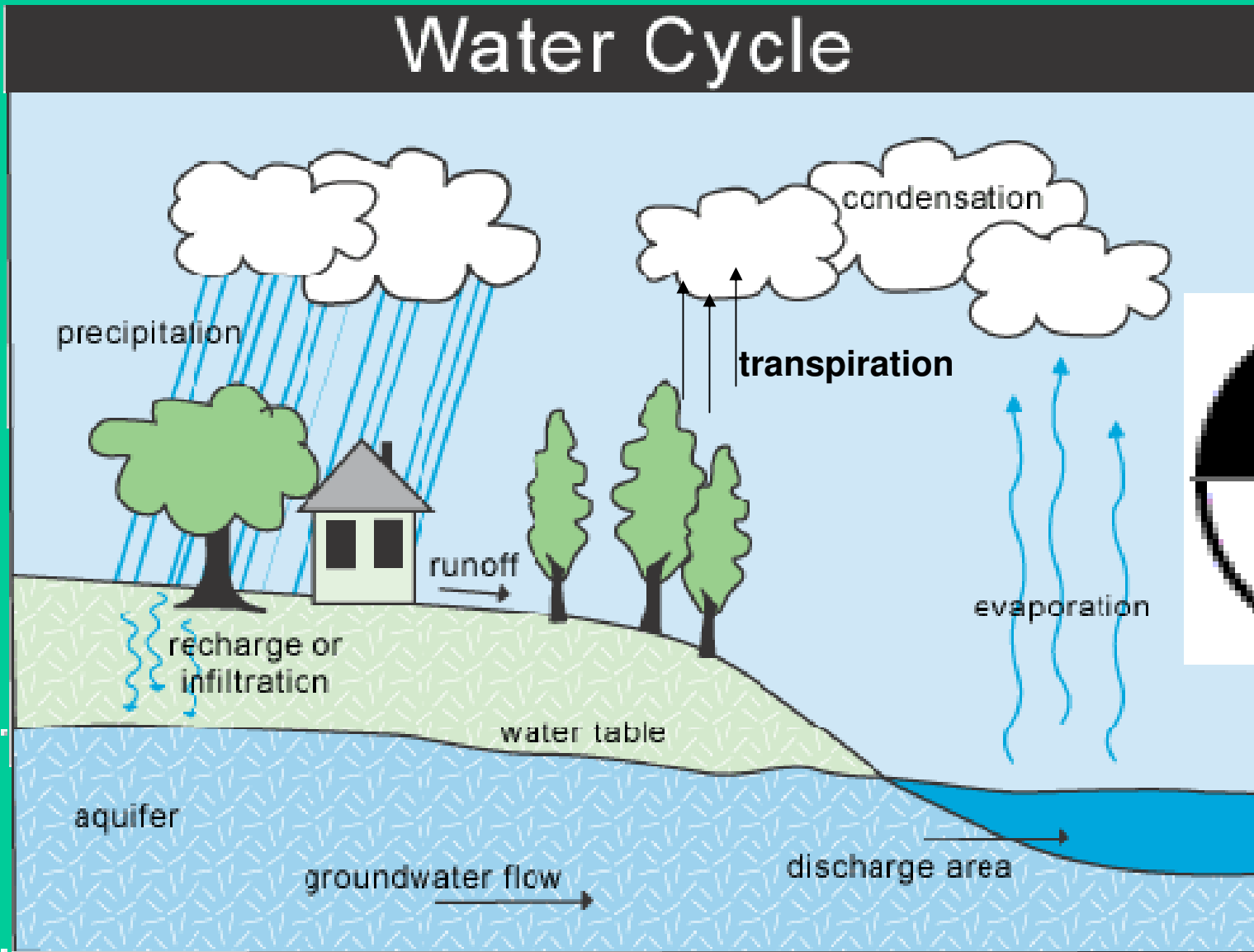
Process in  
which the water  
in plants  
become vapor

# Condensation



Where warm and cold air collide and form ice crystals that condense and form droplets of water, which eventually fall as precipitation.

# Water Cycle Begins All Over Again!



# Groundwater

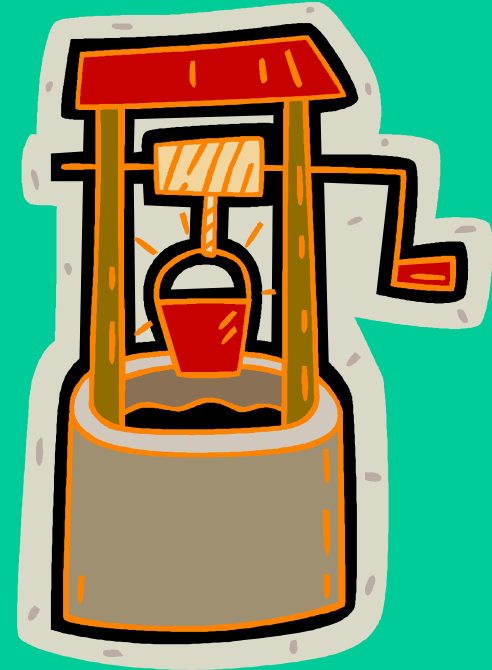
Why is  
groundwater  
so important?



# Groundwater

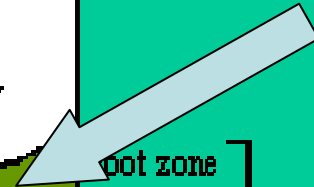
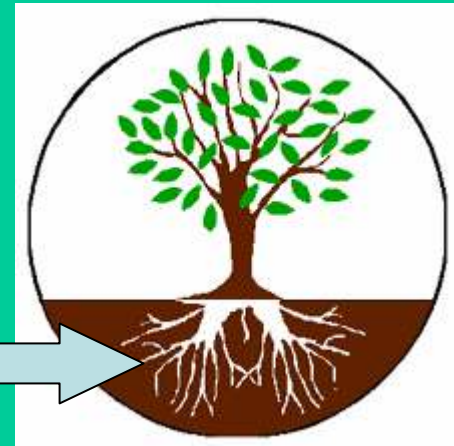
# A.

- Drinking Water Supply

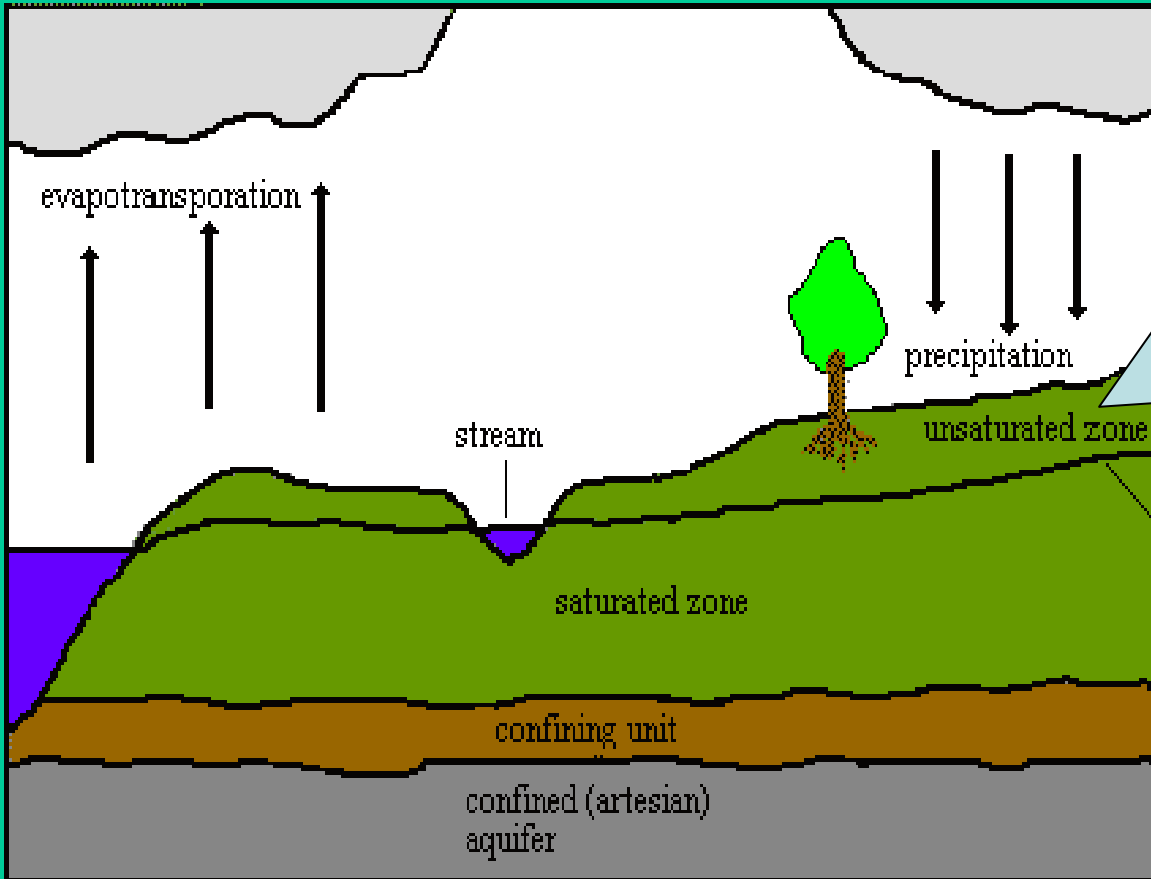


- \* Provides the Base Flow for our Surface Waters

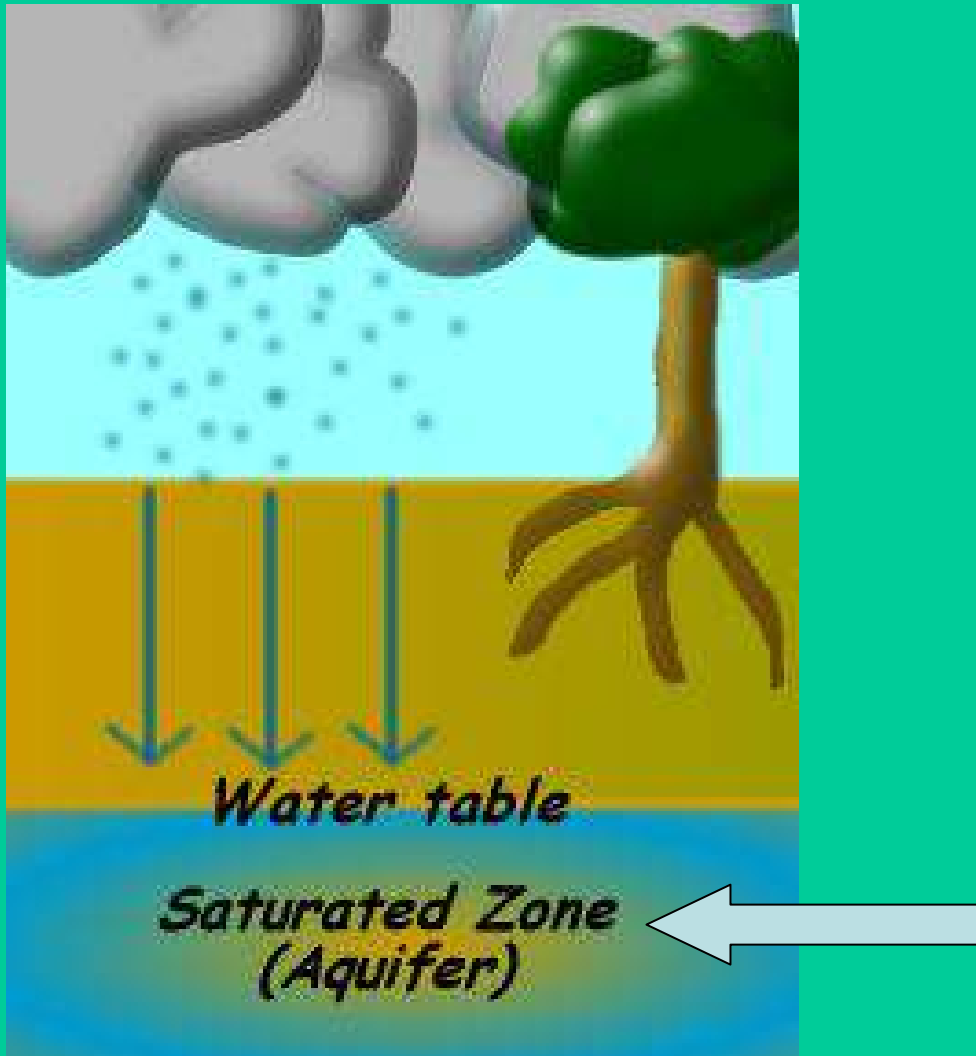
# Unsaturated Zone



Area between land and water table that contains both air and water in pore spaces



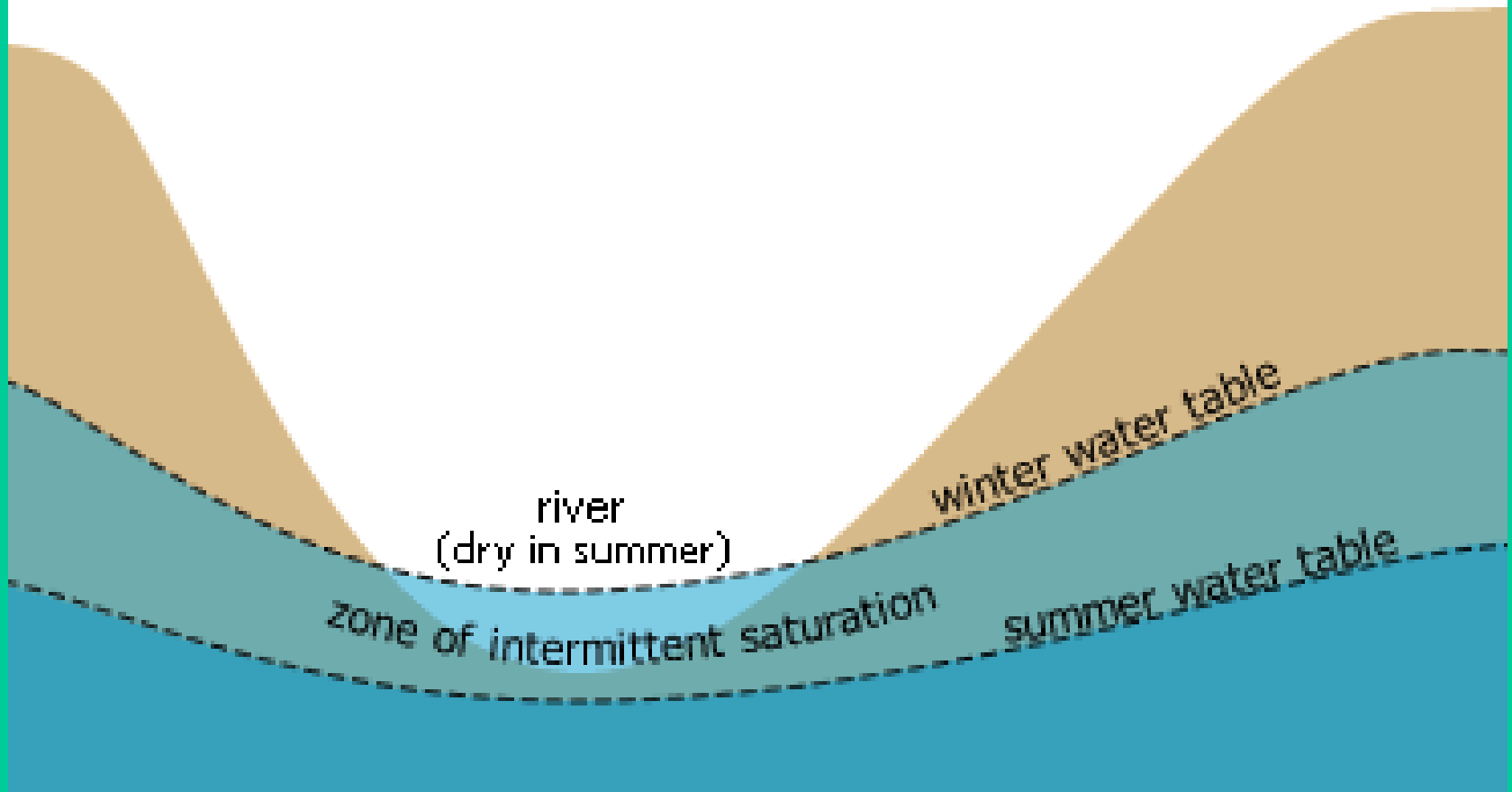
# Saturated Zone



Area below the  
water table  
where all  
available pore  
space is filled  
with water

# Water Table

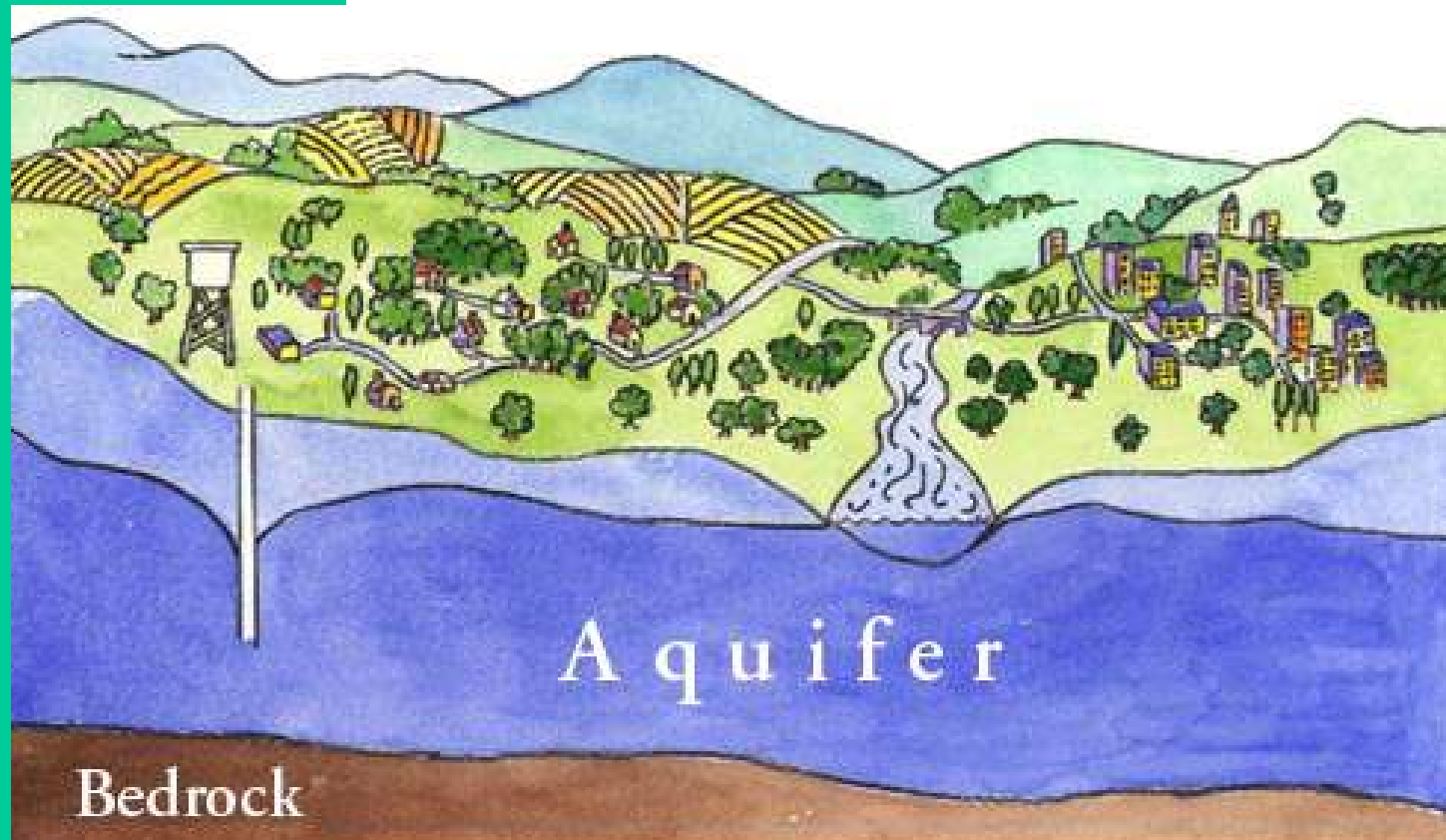
Top of the  
Saturated  
Zone



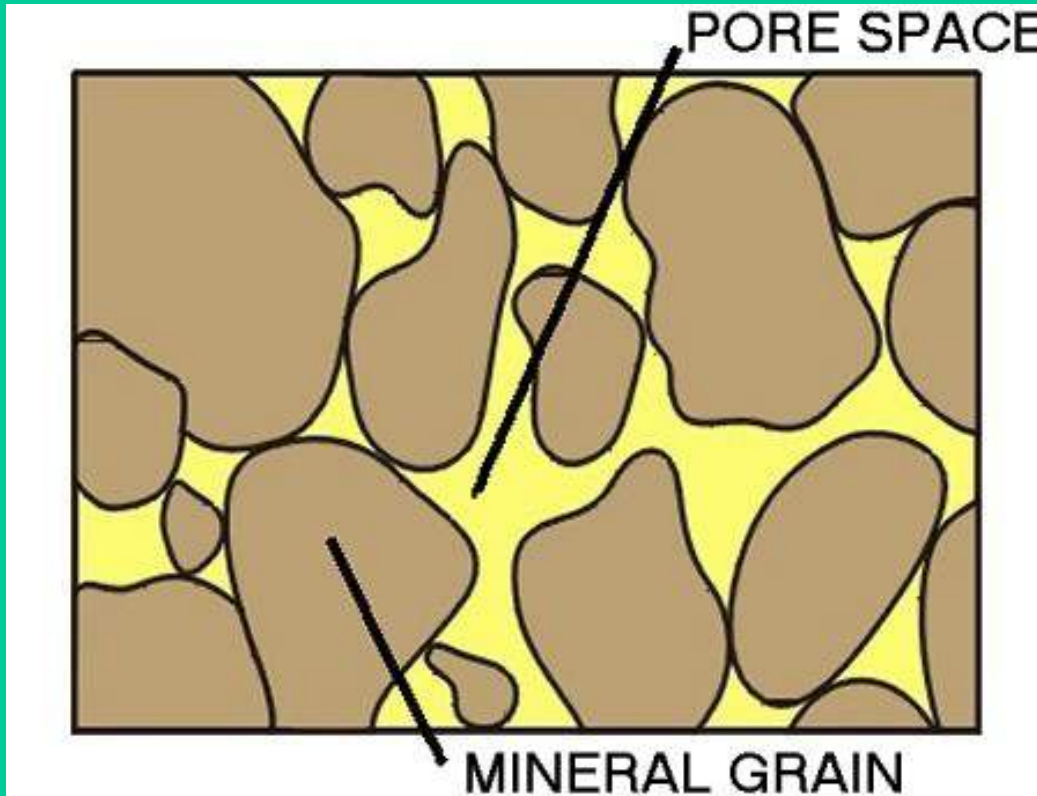
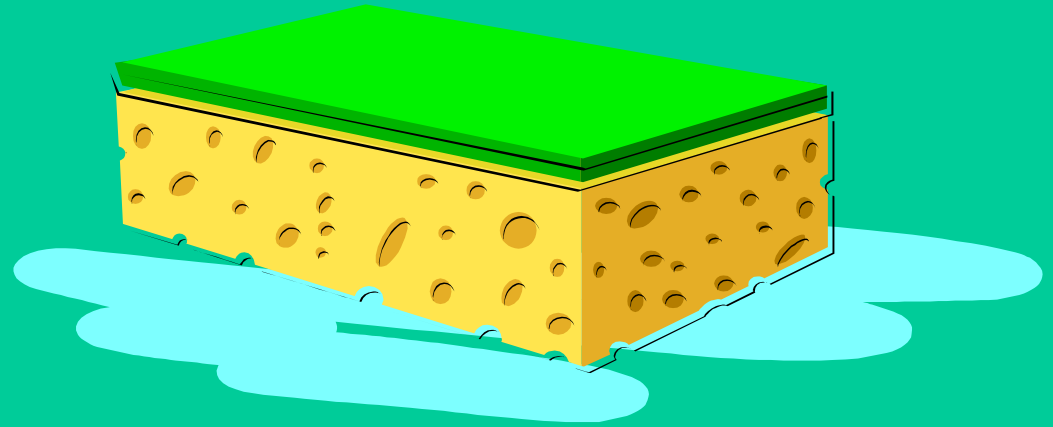
# Aquifer

Formation capable of supplying useable amounts of water

Depends on 2 properties



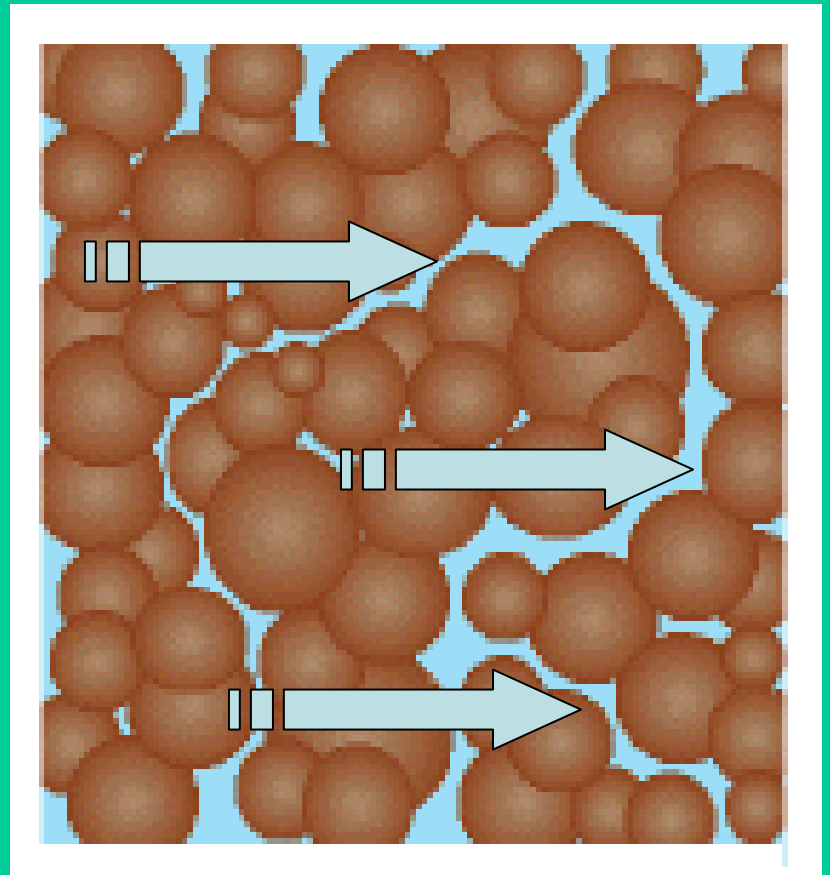
# Porosity



Amount of open spaces with rock or soil

# Permeability

Relative ease with which water can flow through rock and soil





# Wetlands



# Wetland Benefits

Helps Reduce Flooding

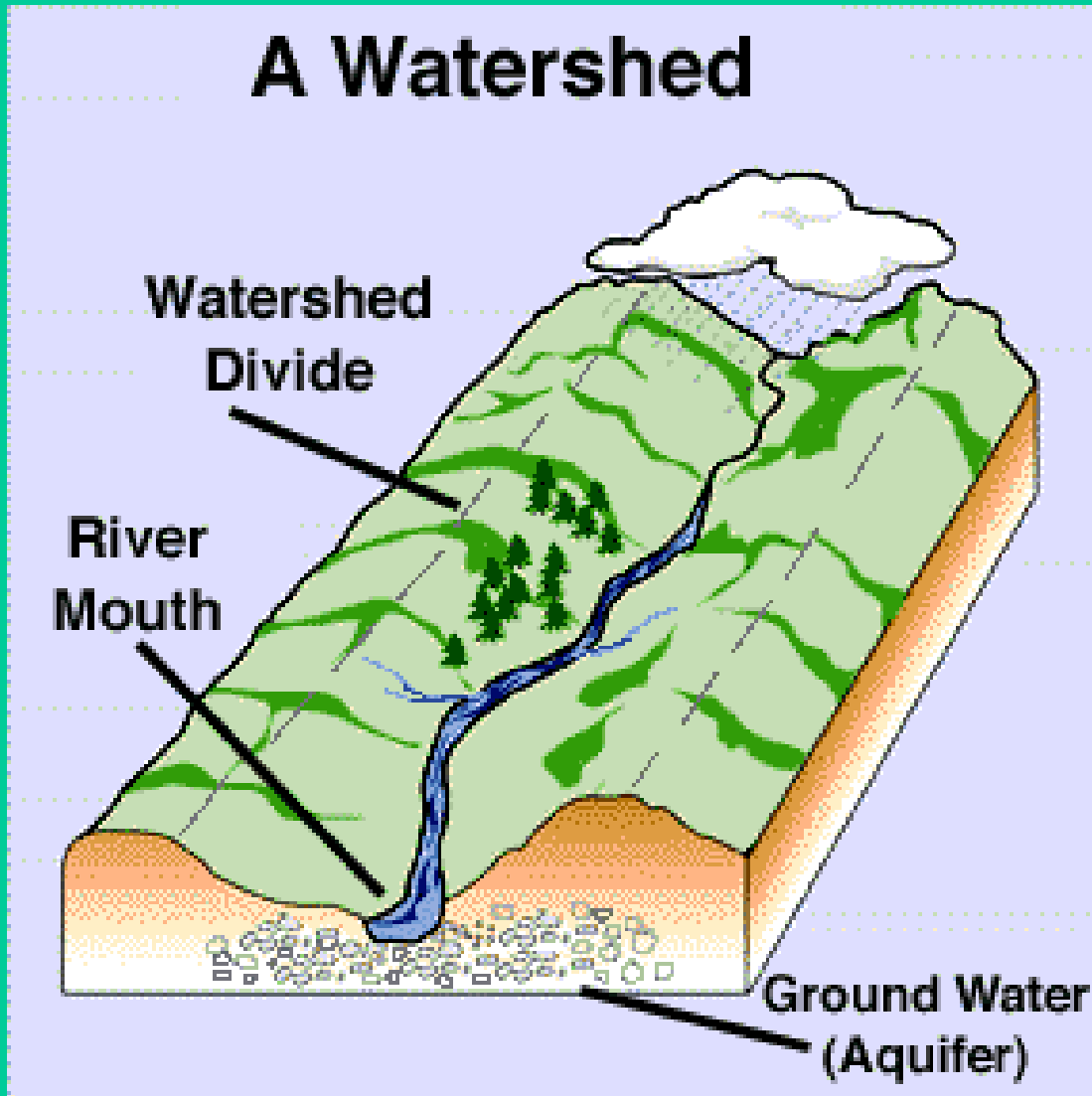


Acts as a Filter



Provides Habitat

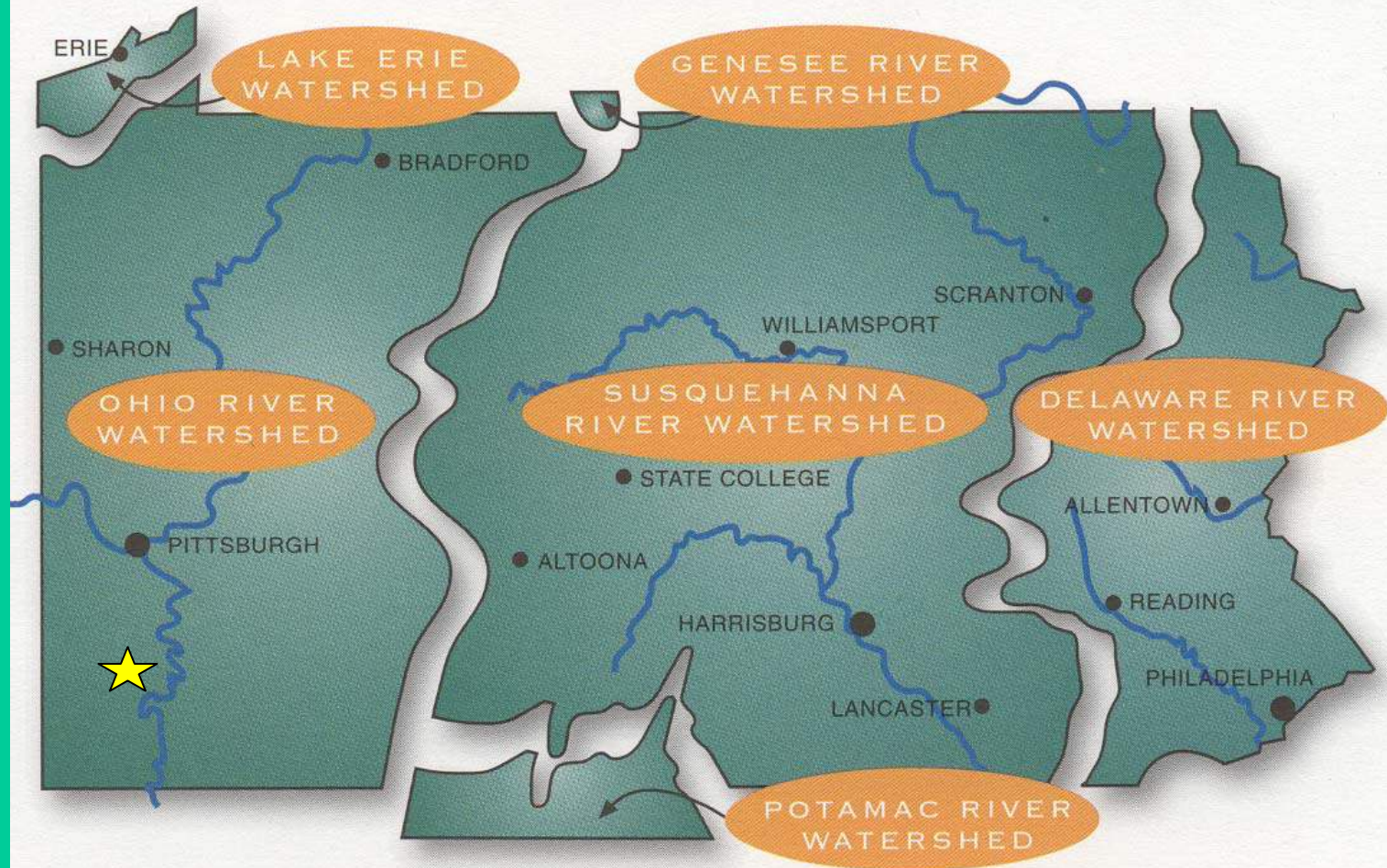
# Watershed



An area of land in which all water drains to one common point

# Watersheds

- PA has 6 major watersheds & every watershed is unique.

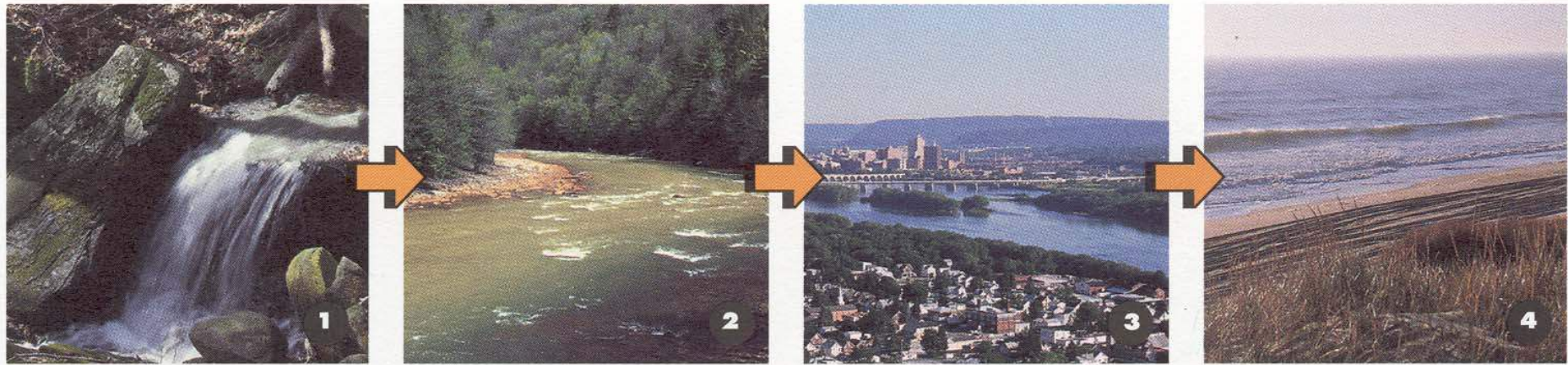


**Pennsylvania contains parts of six major watersheds, all of which eventually drain into the Atlantic Ocean. Locate the major watershed that you live in.**



# Water Movement

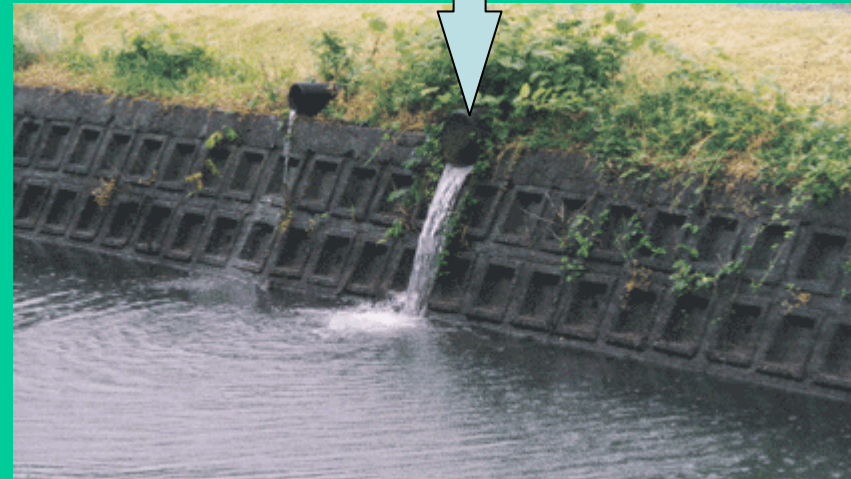
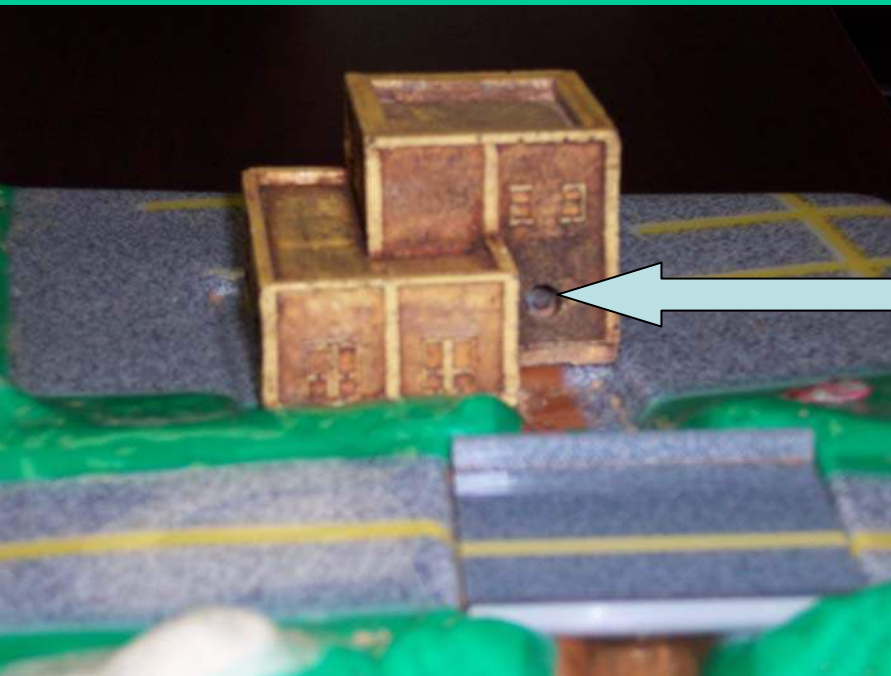
## Water movement through a watershed



**Within all watersheds, small streams (1) join together to form larger streams (2) and larger streams join together to form rivers (3). Rivers eventually empty into the ocean (4) where the water may stay for some time or evaporate and form precipitation. Some of this precipitation falls on the land and the process repeats itself endlessly.**

# Point Source Pollution

A single identifiable source



FACTORY

# Non-point Source Pollution

FARMLAND



CONSTRUCTION



# Non-point Source Pollution



FOREST  
DESTRUCTION



# Non-point Source Pollution

PESTICIDES



FERTILIZERS

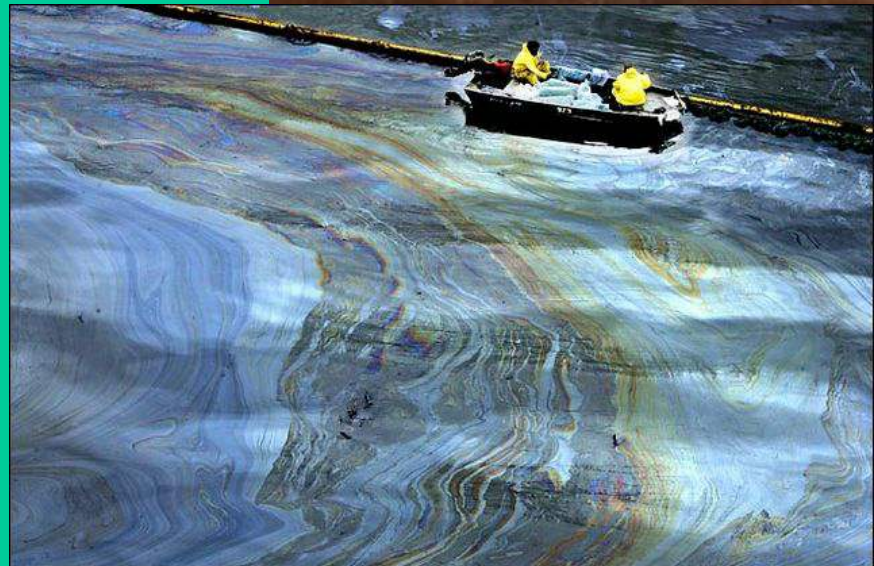
# Non-point Source Pollution



OIL



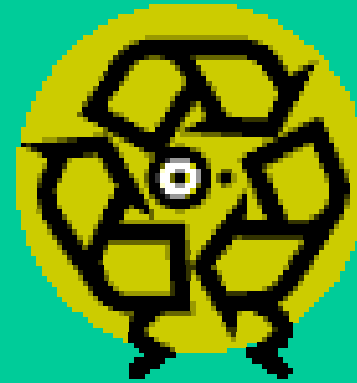
# We Don't Want This!



# What Can You Do?

Recycle

Reuse



Conserve Water  
and Energy

Replant

Protect

Get Involved!

# The End

