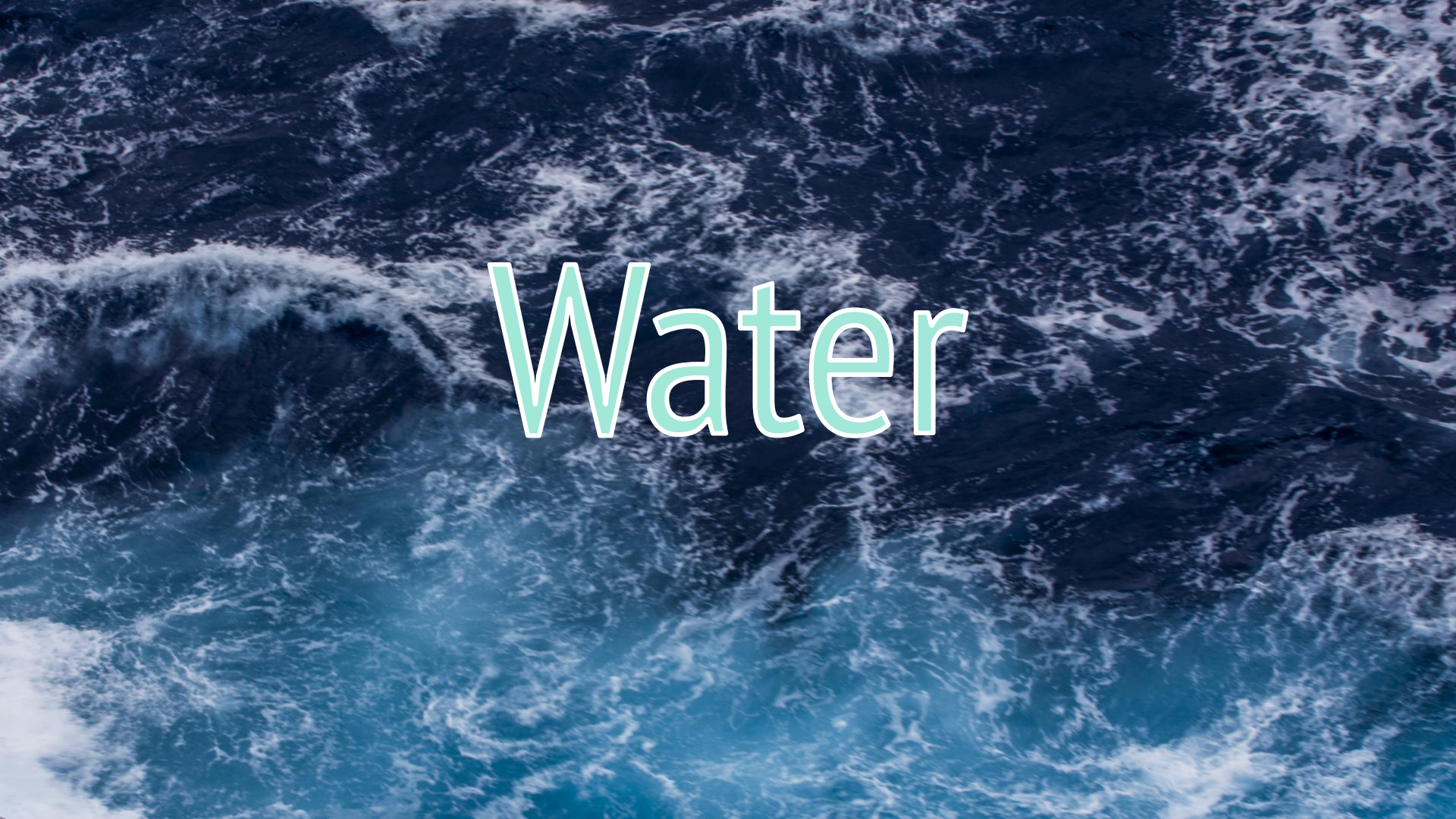

Water

Why Does Soil Need Water?

Healthy soils need water for many reasons!

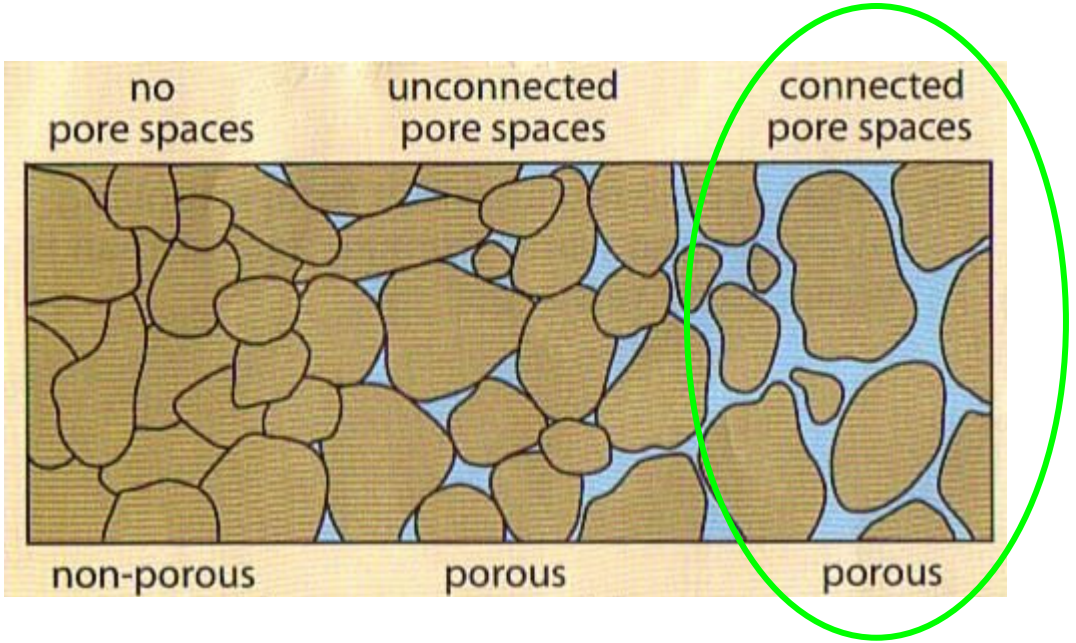
- Water soaks up nutrients in the soil.
- When plants “drink” the water in the soil with their roots, they get a bunch of needed nutrients!
- Water keep the soil moist, which keeps organisms (like worms) in the soil happy and healthy!
- Water is also clingy. When your clothes get wet, they cling to your skin. Water does the same thing with soil & roots, which helps with transferring plants from pots to the ground!
- Water also helps speed up decomposition, meaning more nutrients for plants! Yum!

Peña, Helena Frías. (March 2016). [Happy Plants in Rain] [Illustration]. Domestika.org. Retrieved from https://tinyurl.com/yy5oa5oj

Does Soil Type Affect How Much Water it Can Hold?

Sand soil is very porous. This means there's lots of space for water to fill up.

- By itself, sand soil can't hold water well and dries up quickly.
- If there's no water, there are no nutrients in the soil.
- This means that sand soil isn't a nice home for many plants and organisms (but some love it)!
- However, when mixed in with less porous soils, sand soil improves water drainage!

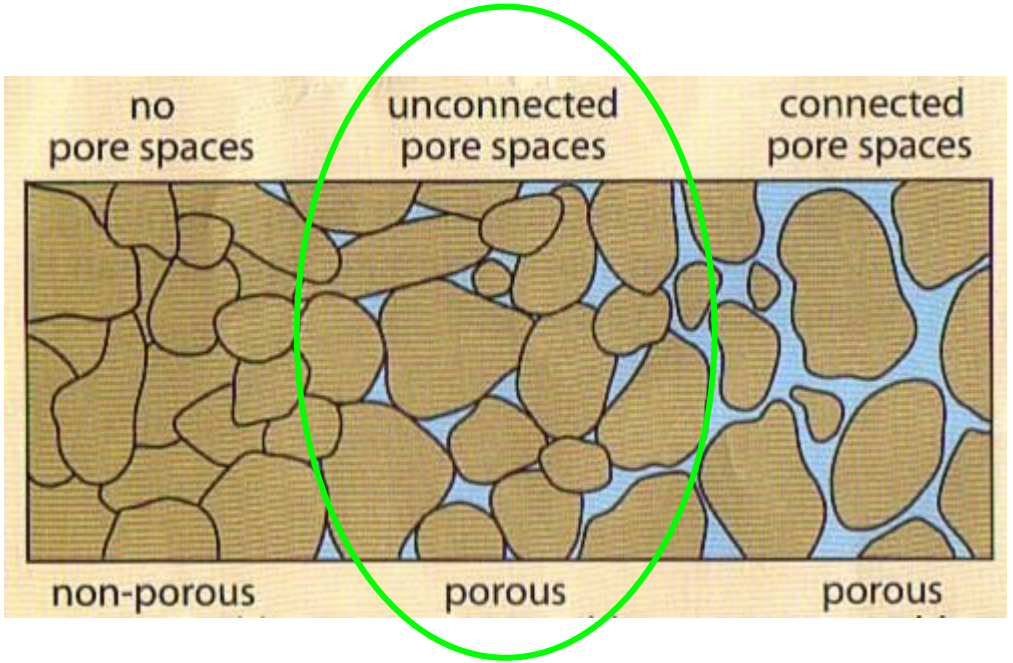


Adapted from UC Denver. (n.d.). Porosity and Permeability [Image]. DEQ Louisiana. https://tinyurl.com/y3hflws4

Does Soil Type Affect How Much Water it Can Hold?

Silt soil is porous. It can hold some water, but not a lot.

- Because silt soil can't hold a lot of water, it also can't hold a lot of nutrients.
- Since it can hold some water, it can have problems draining water.
- Silt soil is handy for mixing into soil that needs help draining or holding onto water & nutrients!

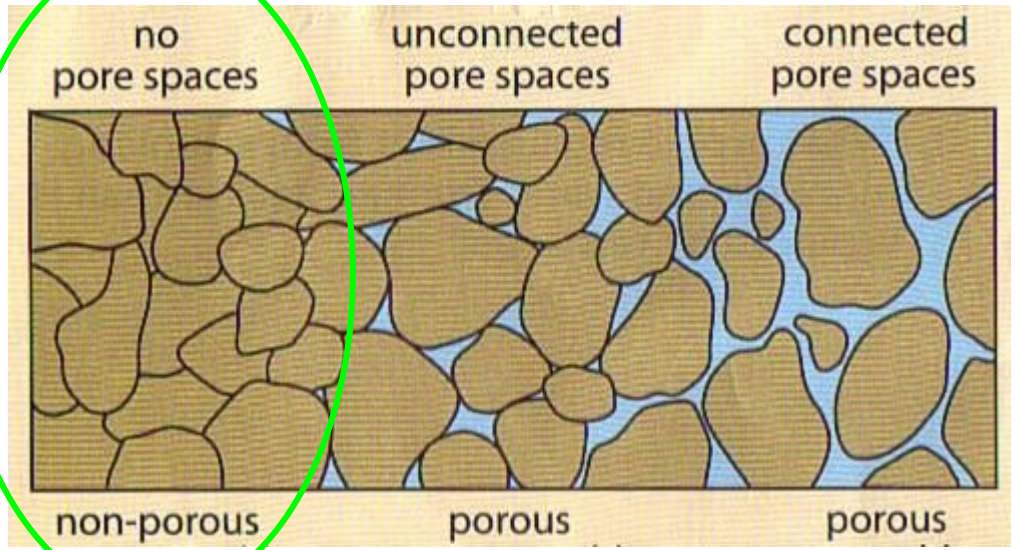


Adapted from UC Denver. (n.d.). Porosity and Permeability [Image]. DEQ Louisiana. https://tinyurl.com/y3hflws4

Does Soil Type Affect How Much Water it Can Hold?

Clay soil is not very porous. It can absorb and hold water, but it's not easy.

- Clay soil has fine particles that are close together, leaving little room for water.
    - This means water sometimes sits on top of the soil as it is slowly absorbed.
    - It also means water doesn't drain well, making the soil waterlogged.
- However, clay soil is packed with nutrients! Plants that drink water from clay soil get a nice, healthy burst of nutrients.



Adapted from UC Denver. (n.d.). Porosity and Permeability [Image]. DEQ Louisiana. https://tinyurl.com/y3hflws4

If We Have Too Little Water...

Every living thing needs water to live.

Without enough water, plants and organisms get too dry and start to die.

Decomposition will slow down without the help of decomposers.

Plants will start to dry up, especially in hot weather.

And without water or the help of decomposers, plants won't be able to get enough nutrients to grow!

Wakeshine. (2016). [Drying and dying plant] [Image]. Forum.gardenersworld.com. https://forum.gardenersworld.com/discussion/986579/hebe-margret-all-dried-up