

Wetland Water Needs

Wetlands are known as Nature's sponges. This is certainly true as a cubic meter of organic peat which can dominate some wetlands, can hold as many as ??? gallons of water. This allows wetlands to soak up summer monsoon rains and winter snow melt, preventing flooding, only to slowly release the water during drier periods of the year.

Wetlands are usually composed of many living plants and animals. Every organism in a wetland requires water to metabolize the food they eat and excrete waste products. This water requirement is often the limiting factor in wetland development.

To gain a better understanding of how much water the plants in a wetland require for survival, growth and reproduction, we can measure how much water is needed in the wetland to maintain a steady pond level. This is an indirect measurement of plant water use, as other factors are involved in water loss. However, these other factors will be considered to be insignificant.

Objectives:

1. Understand how water is used in a wetland.
2. Collect data to calculate water use over the course of a day.
3. Compare the water needs of a wetland to a typical household.
4. Discuss other sources of possible water loss in wetlands.

Procedures:

1. Record the reading on the water meter in the wetland at the specified time.
2. Enter the value on the form on the laptop along with the time.
3. Calculate the area of the wetland in square meters given its dimensions.
4. Estimate the volume of water use per square meter for each period of the day.
5. Compare the current use of water to earlier in the spring with less vegetation and to a typical U.S. household.