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UNL MESOWHEELS Program:
What is a Wetland?[1]

BACKGROUND:

Nebraska is home to four diverse and important wetland systems: saline, riverine, playa, and sandhill. Wetlands provide several benefits to our environment including[2]: improving water quality, providing habitat for wildlife, reducing flooding and soil erosion, supplying water storage, and providing recreational and education opportunities. The state of Nebraska contained around 2,910,500 acres of wetlands in 1867, but now only has around 1,905,500 areas (35% loss)[2]. Therefore, efforts to preserve and restore this important ecosystem is critical for improving water quality and providing habitat for sensitive wildlife and plants.

OBJECTIVE:

The objective of this exercise is to
1. Understand how wetlands can reduce sediment and contaminants (i.e., pesticides and phosphorus) attached to sediment from entering rivers
2. Observe how water is slowed down and stored in wetlands

MATERIALS NEEDED PER GROUP   :

Material	Cost per Item	Total
6"x6" pan	$3	$3
Incline	$5	$5
Sponge	$1	$1
Mulch (one bag per class)	$5	$5
Fake grass (3"X6"square)	$1	$1
Pitcher of Water	$3	$3
Total		**$20**

PROCEDURE:

1. Pass out following materials: Pan, Incline, Sponge, Fake grass
2. Instruct students to construct a hill that will be moving towards a river using only the incline (See Figure 2)
3. Pour dirty water over hill (water should have mulch mixed into the pitcher). Observe water and empty water from the pan.

4. Place fake grass along the incline, which will represent a grass filter strip and pour water over the hill again.
5. Place sponges at the bottom of the hill, which will represent a wetland and pour water over the hill again.
6. Discuss differences in water after the grass filter strip and wetlands were installed. How, does the wetland help the water quality? (Slows down water, holds in contaminants)
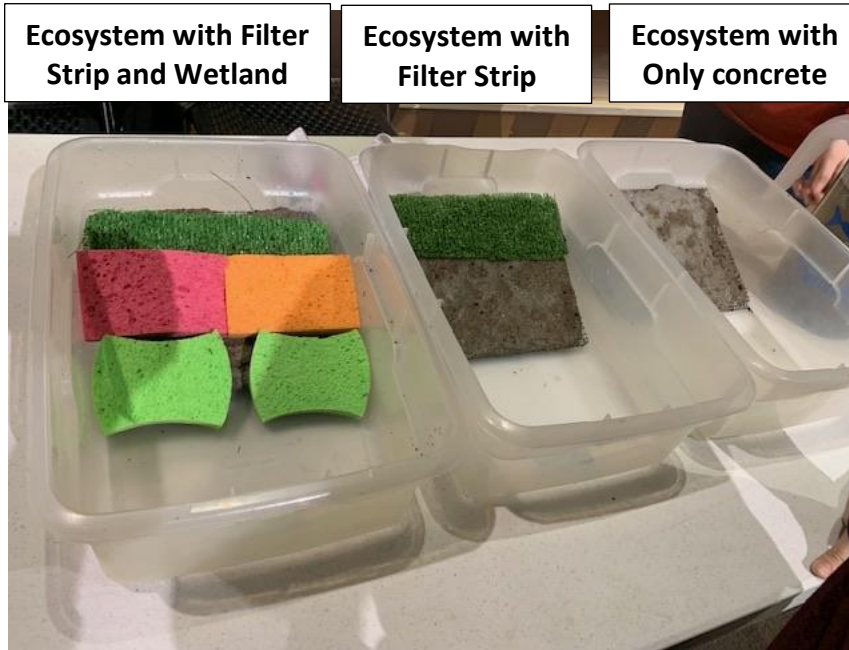
Ecosystem with Filter Strip and Wetland	Ecosystem with Filter Strip	Ecosystem with Only concrete

Figure 1: Demonstration schematics.