

STATION 11 WHAT CAN YOU DO!

In the effort to preserve our parks and prevent the destruction of the aquatic habitat we are asking for your help!

1. Please walk around the mulch netting located along the banks to avoid destruction to the erosion prevention system
2. Please avoid making new paths through pre existing vegetation to help the root mat of the banks grow strong
3. Please pick up, throw out or recycle all trash and pet waste to avoid contamination of the creek water to protect the health of the thriving ecosystem



Spring Lake Park Walking Tour



For Questions and Comments Contact

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STATION 1 ~ The Bright Yellow Sun - Are you ready to take a walk along the creek side? The sun is where our tour begins. The sun is the ultimate source of energy to all living things on earth. Its rays provide energy to producers (plants), which are eaten by consumers (you and other animals). The energy you will use during this walk originally came from the sun. I hope you're SUN-ER-GIZED because you are about to walk and learn about the geology and ecology of Spring Lake Park!

STATION 2 ~ Shrubs, Bushes, and Trees - Look all along the bank. Many places are covered in healthy green vegetation. Producers are a key part of the ecology of Spring Lake Park and any other ecosystem. Healthy vegetation is important because it supplies matter and energy to other trophic levels of the food pyramid, prevents soil from washing away, and shades living things from the hot sun on long summer days. Do you ever cool off under a big tree after running around the playground or playing a game?

STATION 3 ~ Meandering Creek - Creeks, streams, and rivers do not flow in a straight line. There are bends and curves along the way. Right here the creek curves causing a variation in water flow velocity at the cross-section. Water on the outside of the meander is moving much faster than the water on the inside on the meander. Think about riding a roller coaster around a tight turn. Does your body shift to the outside of the curve or the inside of the curve? Water acts in the same way. Where do you think there is more creek bank erosion occurring along this cross-section? **Answer** - outside of curve

STATION 4 ~ Muddy Water - During the spring and after heavy rainfalls the creek water looks very brown. Is the water clear or brown today? When the creek is moving faster than normal there is high turbidity, which is a measure of the degree to which the water loses its transparency (clearness) due to the presence of suspended particles. The murky water occurs when sediments from the bottom are stirred up into the water column and when sediments are added from the bank side during runoff.

STATION 5 ~ Rapids - Creeks end up with eroded banks in three different ways. The first way is hydraulic action of water moves the sediments from the mouth of the creek to the outlet. In addition, water acts to corrode sediments by removing and dissolving ions in the same way rust forms on iron. Lastly, particles in the water strike bedrock acting like sand paper loosening the sediment. The faster the water is moving the more erosion of the surface is occurring. Do you think there is more erosion before, after, or during the rapid section of the creek? **Answer** - During

STATION 6 ~ Large Fallen Tree - Take a look at the fallen tree to your right. The end closest to the water has been attacked by various decomposers, including termites, grubs, ants, earthworms, fungus and many more. Decomposers recycle nutrients like nitrogen and matter (carbon) from dead plants and animals into the ground to keep the circle of life continuous. Look closely! Do you see any decomposers hard at work?

STATION 7 ~ Human Activity - Human activity can help and hurt an ecosystem. Constant trampling of the land by humans and animals has worn away the stream bank causing high levels of erosion. The grass starts at the road and continues to the slope of the bank. Then bare loose sand is present. When you walk across it can you see the sediment moving down the slope? This is erosion by humans. Dogs and other animals do the same thing. When dogs enter the creek to play loose sediment is moved. When they claw to get out more sediment is added to the ecosystem. Too much sediment will disrupt the ecosystem in a negative manner.

STATION 8 ~ Blue Heron (Picture on back) - Along the creek a blue heron is often spotted. This is a large wading bird with tinted blue feathers. The diet of a blue heron is primarily small fish from the creek. Where there are small fish there are bigger fish too. A blue heron is an example of a primary consumer. Do you see any blue herons? Do you see anyone fishing for dinner?

STATION 9 ~ Visible Roots - WOW! Look at that root system! It is right on the surface! When this root system was created it was underground, but after intense weathering and erosion the root mat appeared on the surface. Water running over a barren surface will pull sediments loose and wash them down the slope into the creek. Too much erosion causes unstable bank sides for walkers and unhealthy water for fish.

STATION 10 ~ Prevention - Two large areas along the creek bank are mulch netted and willow staked to begin stabilization of wash out and trapped area (Spring 2010). The mulch netting is brown colored with stick like features sticking out from it. Do you see any? This process will keep the loose sediment in place while vegetation from the willow stakes produces a strong root mat below the surface. A root mat is a complex system of roots which keeps sediment from shifting during runoff events.