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The South River Current

Promoting interest and collaboration for watershed stewardship

Karst Landscape pictures from Virginia Department of Conservation and Recreation

River Restoration: Karst Plays Key Role in Keeping River Cold

KARST

No, it's not the new word of the day on Wordle. Karst is a landform that develops in areas where bedrock consists of carbonate-rich rock that is easily dissolved (think limestone). As a result, karst landscapes feature caves, underground streams, and sinkholes. It is through these natural hollows and underground fissures that cold water flows and sometimes bubbles up along the river. In fact, karst is one of the main sources of cold water in the South River, and many fish and other aquatic organisms need cold water to survive. What does all this have to do with river restoration? Keeping areas of the river cold is a key part of past, current, and future restoration efforts. After remediating and stabilizing riverbanks, trees were planted to shade the river. Planting shade trees is also an important part of most riparian buffer projects. (See May 2021 Issue.) The South River restoration has also included the removal of the Rife-Loth dam, the DuPont dam, among others. Cold water is now free-flowing and no longer warms up in ponds behind these dams. Keeping the river cold and preserving the health of the South River Watershed requires everyone's participation. Read "Connections" to see how you can make a difference in your own backyard.

Did You Know?

- About 20% of the United States is underlain by karst, and 40% of groundwater used for drinking comes from karst aquifers.
- That old harvest gold, avocado green, or pink toilet? Help conserve water by replacing it (and other toilets installed before 1992) with new low-flow models.
- Heavy rainfalls that occur in a short span of time in karst topography can cause a booming sound that can be

heard at the surface (Booming Sounds Attributed to Karst).

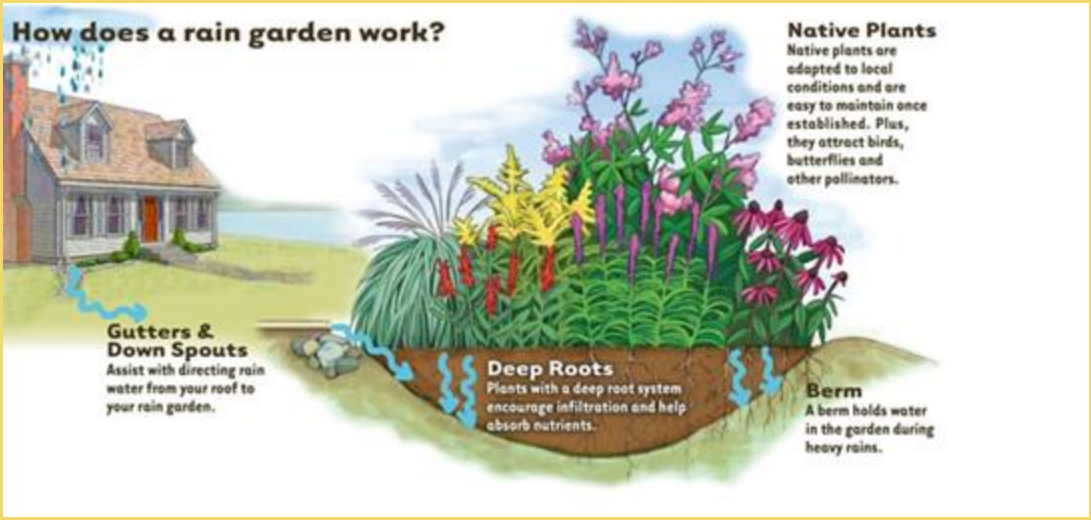

Image Credit: Tip of the Mitt Watershed Council

Connections: Considerations for Water Conservation

Conservation efforts can have a ripple effect in a community. One person learns something new that they find enlightening. They share the new insight with a few friends, and they share with their friends! In an effort to start a ripple, here are a few thoughts about everyday water conservation.

- Eco-friendly cleaning supplies are not just better for you, but better for your water too. Some soaps and shampoos aren't removed from water when treated, and they can end up disrupting the pH balance of the water and encouraging algae growth.
- A rain garden can reduce stormwater runoff pollution by 99%. Wow! Here is a six-minute video from This Old House to show you how to build one. You may even be able to get cost-share assistance from the Virginia Conservation Assistance Program (VCAP).
- Organic fertilizers stimulate beneficial soil micro-organisms, improve the structure of the soil, and provide a nontoxic alternative that doesn't harm groundwater.

- Car wash soap can contain toxins, so if you choose to wash your jalopy in your driveway, be sure to choose an eco-friendly soap.

Pictured: Ira Driver tending his lime kiln near Mount Sidney (Courtesy Augusta County Historical Society from David McCaskey)

Take a Walk Back: Limestone Burned for Centuries in Virginia

Do you know what "lime" (the fruit) and "lime" in limestone have in common? Not much! The only thing that connects them is the spelling of the word! The word for the fruit comes from "lima," the Spanish word for citrus. The word for the rock is derived from "lim" in Old English, "leimaz" Proto-Germanic, and Latin "limus" as a reference to its slimy, sticky, mortar-like texture. Lime is made by burning limestone—without melting it. Early 19th century farmers built lime kilns for their own or local use on a lot near a limestone quarry or on a woodlot, depending on whether they wanted to carry the stone or the fuel to the kiln. In addition to agricultural use, lime produced from limestone has been used in the manufacturing of paper, glass, and whitewash; in tanning leather and sugar refining; and as a water softener and bleach. It is also used to make mortar and cement. Today, only the remnants of early lime kilns remain in the Valley, but the area is still rich in limestone. You can see the wonders of limestone formations at Grand Caverns, Luray Caverns, and in others like them. Learn more about the limestone industry in Virginia here.

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