Boone County Resource Management Making a difference in Boone County...

Boone County Stormwater Education started 2015 off with multiple events to teach the effects of stormwater on our local watersheds and the impact of each individual upon our county neighbors.



Above: Brenda Barnes' 6th grade science students at Chester Boren Middle School in Centralia, Missouri study the effects of water flow utilizing the county stormwater table.



Above: Centralia students during a real estate planning activity. This activity worked on civic responsibility and how the actions on our personal property affect our neighbors including settling disputes.



Above: Earth Day 2015 on Eco-Avenue. Learning about the effects of erosion on our watersheds.

"YOU CANNOT GET THROUGH A SINGLE DAY WITHOUT HAVING AN IMPACT ON THE WORLD AROUND YOU. WHAT YOU DO MAKES A DIFFERENCE, AND YOU HAVE TO DECIDE WHAT KIND OF DIFFERENCE YOU WANT TO MAKE."

–JANE GOODALL



Above: Southern Boone 4th grade classes spent two weeks learning various aspects of water and its impact on our environment. Utilizing Project WET activities and the Boone County stream table.

Boone County Resource Management Making a difference in Boone Communities...

Roll out the Barrel.... Rain Barrel Sale!

Once again Boone County in cooperation with the city of Columbia are providing rain barrels at a deeply discounted price. This year we are offering two sizes and a diverter kit to meet your rainwater collection needs. For more information and to pre-purchase rain barrels and diverters go to:

RainBarrelProgram.org/como

Deadline to order is May 31st Pick up: Friday June 5, 2015 Between 12:00 p.m. - 5:30 p.m.

**Pick Up Location : Columbia/Boone County Department of Public Health and Human Services

1005 W Worley St. Columbia, Missouri

Rain Barrel Tips:

When rain barrels are full they are extremely heavy;
do not allow children to play on/around rain barrels.
IMPORTANT: Do not use rain barrels for drinking,
cooking or bathing.

 Elevating your rain barrel on a stand or blocks makes water retrieval easier and improves water flow. If you do elevate, make sure everything is level, stable, and secure.
 A full rain water barrel may weigh more than 300 lbs.

~ If you are not connecting multiple barrels together, attach a 6' flexible hose to the overflow valve and extend it away from your building to prevent water infiltration into your foundation.

~ If you have plastic barrels: a once a month application of ArmorAll will help protect against UV damage.

~ Often times, debris will clog the screen on the downspout adapter; clean out the screen to prevent water backup.

~Use the water in the rain barrel within 3 days if possible

~Check your gutters for debris.

~Make sure your overflow is directed away from your house (minimum of 5', preferred 10')

Beautification of the Rain Barrel

If you have a creative side, use your barrel as a creative outlet. Paint a scene of color to highlight your existing yard space. Have the kids or grandkids paint it with messages and handprints. Use the opportunity to teach them about water conservation and its importance.



PAINTING TIPS / HOW-TO

~Wipe down the barrel with a one-to-one mixture of vinegar and water.

- ~Rough the surface with a piece of fine grit sand paper.
- ~Apply a coat of latex bonding primer.
- ~Paint your design with "exterior latex paint."



Interesting Fact about Rain Barrels:

One inch of rain on a 1,000 square foot roof yields 623 gallons of water. Calculate the yield of your roof by multiplying the square footage of your roof by 623 and divide by 1,000. Depending on your roof area, a rain barrel can fill up when there has been as little as 1/10th-inch of rain.

Boone County Resource Management Making a difference in Boone Rural Areas...

When Blooms Go Bad ... Harmful Algal Blooms!

Algae are naturally occurring plants that grow in water. When algae grow extremely rapidly in a confined area it is referred to as an algal bloom. Blooms thrive in shallow, warm, non-moving bodies of water like ponds and smaller lakes. Most algal blooms are harmless, but certain types of algae are capable of producing toxins that pose a risk to humans, animals, and water quality.



What is a Harmful Algal Bloom?

Harmful Algal Blooms, or HABs, contain toxins and can cause fish kills, foul up shorelines and produce conditions dangerous to aquatic life, humans, and animals. A bloom can look like a scum, foam or mat on top of the water or like paint that has been spilled in the water. They are also sometimes accompanied by an earthy, pungent or musty smell. However, not all algal blooms give off an odor or affect the appearance of water. Toxins can remain present in the water even when a bloom has dissipated.

Missouri HABs are mainly made up of blue-green algae. While technically not an algae, blue-green algae are a cyanobacteria that contain chlorophyll similar to true algae. They produce rapidly and are typically found at or near the surface of the water.

How Harmful are HABs?

HABs have been known to produce a wide array of neurotoxins; liver toxins; cell toxins; skin irritants; and gastrointestingal distress if ingested. Consumption of large amounts of these toxins can result in muscle cramps, twitching, paralysis, cardiac or respiratory difficulty, nausea, vomiting and liver failure.

The most dominant blue-green algae in Missouri is Microcystis which can produce Microcystin, a liver toxin and skin irritant. Thorough washing is important for both humans and pets who come in contact with a bloom.



What Causes HABs?

Malfunctioning septic systems, products with phosphates like dishwasher detergent or phosphorus/nitrogen in lawn fertilizers, and urban and agricultural runoff are thought to contribute to more frequent HABs. Harmful algal blooms have also been linked to the invasion of zebra and quagga mussels in water bodies and the ability of the mussels to filter feed. Essentially, they eat the good algae and phytoplankton but release organisms like blue-green algae back into the water. The blooms can often persist for several weeks to a few months, depending on air and water temperature, sunlight, water flow and naturally occurring bacteria levels.

Boone County Resource Management

Making a difference in Boone Homes... Basement Water Problems

Each year the Missouri DNR Water Resources Center receives dozens of phone calls and emails from people experiencing problems with unwanted water. Many of the calls start with "I think my house is built on a spring." The complaints may include water leaking into the basement, the sump pump operating frequently or perpetually wet area in the yard. Some people live where springs are fairly common, but others are in parts of the state where springs are very rare. There is usually a much simpler explanation for wet basement problems than a spring or cavern beneath the house.



Few, if any, basements are truly waterproof. To remain dry, basements need a properly designed and constructed drainage system to intercept water moving through the soil and drain it away from the structure. This prevents water from ever reaching the basement walls or floor. During wet weather, the soil around a house can become saturated especially in places where the soil has been disturbed, such as in the excavation of a basement. Undisturbed soils are much less sponge-like than soils that have been excavated and replaced.



Basement water problems can occur in both rural and urban areas. Other types of excessive water problems are also found in developed areas where landscape modifications have been made that alter surface drainage patterns. Surface-water runoff is a natural result of rainfall, but surface-water runoff rates and amounts change when the landscape is modified. The addition of streets, driveways, buildings, patios, swimming pools, etc., creates inpenetrable areas where surface water can no longer soak into the soil. In carefully planned developments, these additions are mitigated by the addition of storm sewers, drainage ditches, stormwater detention basins, and other structures that carry excess runoff away from the development or store part of the runoff for later release. Drainage in many older developments receives less attention. The result is flooding and erosion.



So what can I do?

There are several things a homeowner can do to help decrease the potential for basement leakage. Rain gutters and downspouts do not need to be as complicated as the picture above shows in order to help prevent roof runoff from accumulating around the basement walls.

Two inches of rain falling on a 1,500 square foot roof will produce about 1,870 gallons of water. If that amount of water is allowed to drain off a roof and collect around a house, it can overwhelm a properly installed basement drainage system. Downspouts should empty beyond the backfill around the basement, usually 5' from the residence. The land should be sloped away from the house on all sides. A commonly recommended minimum slope is at least 1" of vertical drop for each foot of horizontal distance.