

Making a difference in Boone County...

Flooding: Some Positive Effects

Flooding is part of the natural water cycle and has both positive and negative impacts on the environment. Negative impacts of flooding are understandable to most but positive impacts are still relatively unfamiliar. Let's look on the bright side and see what good comes from flooding.

Although flooding can be devastating to people and personal property, it is an essential part of nature's renewal process, providing many long-term positive effects such as the following:

Revives ground water: Floodwaters absorb into the ground and infiltrate down through the rock to recharge underground aquifers that supply natural springs, wells, rivers and lakes with fresh water.

Renews wetlands: Flooding balances the health of ecology of wetlands. Healthy wetlands promote healthy water supplies and improve the surrounding air quality. Flooding contributes fresh water and waste to the wetlands that carry and deposit nutrient-rich sediments that support both plant and animal life of the wetlands.

Returns nutrients to soil: Flooding distributes and deposits river sediments over large areas of land. These river sediments replenish nutrients in topsoil and make agricultural lands more fertile. The populations of many ancient civilizations concentrated along the floodplains of rivers such as the Nile, the Tigris and the Yellow because periodic flooding resulted in fertile, productive farmlands.

Recovers natural fish stock: Flooding can provide fresh water, waste, nutrients and larva to the wetlands. As a result the wetlands get chance to renew its environment. It helps to recover the natural fish stock and increase the population of fishes. Flooding also adds nutrients to lakes and streams that help support healthy fisheries.

Prevents erosion and maintains land mass elevation: Soil deposited by floodwaters prevents erosion and helps maintain the elevation of landmasses above sea level. The rapidly receding land of the Mississippi River delta is a direct result of man-made flood controls and levees that prevent topsoil-replenishing sediments from being deposited in the delta.

Works on anoxia and hypoxia of wetlands: A variety of physical, chemical and biological changes occur in floodwater. Because of high currents, waste accumulation minimized by hydrodynamic spreading and water movement also helps to replenish anoxia (absence of oxygen) or hypoxia (low level of oxygen) water with oxygen-rich water from enormous flooding and upgrade the environment.



Other effects: Flooding brings fresh water for irrigation and domestic use, increases fishery resources, improves navigation of transport, kills insects, washes out acid water, pushes salt water toward the sea, etc.

Flooding is certainly a natural calamity but is the only disaster that brings some positive effects to the environment. Flooding can revive and refresh nature by its own law.



Making a difference in Boone Communities...

Ahhhh. The sounds of summer: the crash of ocean waves, the crackle and bang of Fourth of July fireworks, the sizzle of burgers on the grill.

Unfortunately, the sounds of summer also include the whine of pesky mosquitoes. But there is plenty you can do to turn down the volume so that you can enjoy the lazy, hazy days of summer.

Learning how to kill mosquitoes naturally is important beyond ensuring a comfortable backyard cookout. Mosquitoes present a health risk to everyone in the family – even Fido. Mosquito-borne diseases – which kill one million people worldwide every year – include malaria, yellow fever, encephalitis and, more commonly in the United States, West Nile Virus. Mosquitoes also carry heartworm, a life-threatening disease for dogs.

So, it's worth the effort to control and kill mosquitoes around your house and to reduce your risk of getting bit. Here are some tips for mosquito control:

Don't give mosquitoes a nearby place to breed

- *Most mosquitoes can fly no more than one to three miles, and some mosquitoes such as Asian tiger mosquito have a flight range of just 100 yards or so.
- *Eliminate standing water where mosquitoes breed by emptying in the saucers of flower pots, hauling off old tires, cleaning rain gutters and frequently changing the water in birdbaths. Walk your property with an eye for puddles. Fix the problem.
- *Stock ornamental ponds with mosquito fish that eat the larva or treat them with larvicide mosquito rings sold at home and garden stores.

Don't give mosquitoes a nearby place to hang out during the day

- *Like their fellow bloodsuckers, vampires, adult mosquitoes rest during daylight. Mosquitoes spend daylight hours hiding among vegetation. Reduce mosquito shelter in your yard by trimming weeds and keeping the grass short.
- *Spraying the lower limbs of shade trees, shrubs and other plants with home-use products containing deltamethrin and lambda-cyhalothrin can reduce the adult mosquito population, according to the American Mosquito Control Association.



Properly apply insect repellent

There are a number of proven-effective insect repellents that provide hours of protection available. There are four repellents that have been approved by the U.S. Environmental Protection Agency: DEET, Picaridin, Oil of Lemon Eucalyptus and IR3535. The EPA considers DEET and Picaridin “conventional repellents” and Oil of Lemon Eucalyptus and IR3535 as “biopesticide repellents,” which are made from natural materials.

The EPA offers these guidelines for the safe use of insect repellents:

- *Repellents should be applied only to exposed skin and/or clothing. Do not use under clothing.
- *Do not apply near eyes and mouth, and apply sparingly around ears.
- *When using sprays, do not spray directly into face; spray on hands first and then apply to face.
- *Never use repellents over cuts, wounds, or irritated skin.
- *After returning indoors, wash treated skin and clothes with soap and water.
- *DEET is considered the most effective insect repellent. The American Academy of Pediatrics recommends DEET not be used on infants less than 2 months old. The label on products containing oil of lemon eucalyptus warns against use on children younger than age 3.
- *Don't waste money on bug zappers. Mosquito traps that attract mosquitoes using carbon dioxide kill bugs, but they may not be trapping the mosquitoes that are biting you.

Create your own breeze

Strategically placed fans will keep a deck or porch free of mosquitoes, says Joseph Conlon of the American Mosquito Control Association. “Mosquitoes are weak flyers and will not be able to navigate properly against or within the air stream,” Conlon says. “There is no set formula for how large a fan or how many you'll need. It's simply a matter of experimenting until you obtain the desired effect.”

Making a difference in Boone Rural Areas...

Follow up:

The Spring 2015 newsletter contained an article on Harmful Algal Blooms (HAB's). I have since been approached with questions as to why there seems to be so much more algae this spring/summer and how to control it on private property ponds/lakes. The following are suggestions from the Missouri Department of Conservation (MDC). Contact your local agent with specific questions regarding proper application and quantities related to treatment methods.

-Theresa Thomas, Stormwater Educator-

Mechanical Control

Mechanical control means removing the vegetation by hand. Mats of filamentous algae may be removed with a rake, seine, wire screen or similar devices. However, this control method is very labor intensive and provides only temporary control. In some instances, the algae may seem to grow as fast as it is pulled out. Mechanical control is practical when used in conjunction with chemical control methods or as a maintenance treatment around swimming or fishing areas for an occasional special event. Algae removed from the pond should be deposited below the pond's dam to ensure that nutrients tied up in the vegetation do not re-enter the pond. Algal surface scums can sometimes be controlled with a water pump that circulates the top layer of water in the pond.

Biological Control

Biological control means using animals, insects or diseases to reduce the amount of nuisance plant coverage. Grass carp do not provide effective biological control of filamentous algae in fishing ponds. While very high densities of small grass carp have reduced filamentous algae in fish hatchery ponds that contain no rooted plants, these fish will switch to other plants (if available) once the fish grow larger than 5 inches. Large stockings of grass carp in fishing ponds could eventually eliminate all beneficial rooted plants and can actually encourage algae growth (filamentous and planktonic) by releasing nutrients from rooted plants after they are digested. Stocking 3-5 inch grass carp into ponds with established largemouth bass could result in the grass carp being eaten by the bass before they have the chance to grow.

Chemical Control

Directions, Restrictions and Warnings

ALWAYS READ THE PRODUCT LABEL FOR DIRECTIONS, CURRENT RESTRICTIONS AND WARNINGS. Before using chemicals, you should consider potential contamination of domestic water supplies and the waiting periods for watering livestock, eating fish, swimming and irrigation. Algae control with chemicals works best when the water temperature is above 60 degrees Fahrenheit and algae mats are broken up while the chemical is being applied.

To avoid oxygen depletion and a possible fish kill, avoid treating when the water temperature is above 80 degrees Fahrenheit and treat only 1/4 to 1/3 of the vegetation at a time. Allow 10 days to two weeks between consecutive treatments. Chemicals do not provide permanent control, so repeated treatments usually necessary to keep algae at desired levels.



For more information on pond or lake management, go to mdc.mo.gov/node/3117.

To contact your regional MDC fisheries personnel, go to mdc.mo.gov and select your county in the box titled "Who's My Local Contact."

Making a difference in Boone Homes...

What Not To Flush

There are several ways you can reduce the likelihood of stoppages in your private sewer lines and your neighborhood's main lines. Most sewer line obstructions are caused by grease, tree roots and debris. The simplest way to prevent these materials from blocking your lines is to keep them out of your lines.

Common Causes of Collection System Obstructions

Fats, Oil and Grease are some of the primary causes of blockages in sanitary sewer collection systems. Too often grease is washed into the plumbing system usually through the kitchen sink. When grease cools it lines the pipes and the opening in the pipes get smaller and smaller until finally there is a blockage and sewer backs up in people's homes or it comes out of a manhole or cleanout and pollutes the environment. Do not pour grease down the drain. Dispose of it in the trash.

Tree roots enter sewer pipes through cracks, breaks, and joints. Root masses inside collection system pipes can become matted with grease, toilet paper, and other debris. Uncontrolled tree root growth can eventually fracture sewer pipes and cause extensive damage. You can help decrease the infiltration of roots into your private and District public lines by being aware of where you plant trees and other vegetation in your yard. Avoid areas where sewer lines are buried.

Think before you flush. The amount of trash that makes its way to our wastewater treatment/reclamation facilities is growing along with the increasing popularity of disposable wipes, washcloths and rags. When you flush items such as baby wipes, hand wipes, floor wipes etc. down the toilet, one of our District crew members must retrieve it from the facility and throw it away. Save them from this nasty job by placing disposable wipes where they belong in the first place, in the trash.

Do not flush any non-biodegradable products down the toilet. Items such as:

- *Disposable wipes, washcloths and rags
- *Synthetic materials such as plastic do not decompose and dissolve
- *Feminine products
- *Condoms
- *Syringes
- *Diapers

Any inorganic matter flushed down the toilet must be collected and thrown away. Please help the operator in your neighborhood by choosing to throw these items in the trash yourself. Please do not flush them down the toilet.



How Did That Get in There?

Over the years the operators have found some pretty interesting stuff in the sewer pipes. A partial list includes: drug paraphernalia, a bicycle, Hot Wheel cars and other small toys, landscape lights, bed linens, Levis jeans, all types of underwear, jewelry, a tool box, folding lawn chairs, an attic fan and a couple of bowling balls. It makes you wonder, doesn't it?

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