

The existence of man depends on six inches of topsoil & the water that falls on it.....Save them

Newsletter



2013 SPRING

State Cost Share – New Year – New Funding

Landowners may apply anytime throughout the year for cost share programs. Technical assistance is always available whether you participate in any cost share. To better evaluate the needs in the county and to direct allocation requests for funding in specific resource concerns, we ask that you talk with us about potential practices you need to implement on your farm. As the opportunity for additional funding presents itself, we know we have needs to which can utilize those funds.

Our fiscal year will be seeing a new year come July 1st. If you have a desire to implement or improve an existing managed grazing system, there is still time to enroll in a grazing school, which is required for state cost share financial assistance. Call our office for contact numbers and dates. For those who have been this spring, we look forward to continued planning with you on your system and our new fiscal year funding will be available for contracts soon into July.

If you were denied financial assistance through any other programs, such as through our partner, NRCS, you may apply for state cost share assistance. The two programs have many similarities. We can offer a plan layout which will help identify your goals for the system, give you some figures for cost estimates and the return to you financially. Any system implemented meeting standards, may also apply for a one-time lime on those acres and a one-time inter-seeding of legumes in those paddocks.

Other programs include funding for establishing and or improving vegetative cover on fields to reduce soil loss. Practices exist for excluding livestock from wooded areas and streams, gully erosion, stream bank stabilization through riparian buffers, decommissioning old abandoned wells, spring developments and nutrient and pest management. If you have a sinkhole that needs treatment please contact us. There may be needs come up that we need to address and ask for in future allocations for certain resource con-

cerns. Your input helps us to help you. See our website for current cost share practices or stop by or call.

Equipment Rental

The District just purchased a new Haybuster 10 ft. No-Till Drill to add to our inventory for five drills now, to help assist in meeting the needs of local landowners. If you have a need for any of our equipment, you may still contact our equipment manager, J.C. Bowling direct at 417-839-9965. You can call our office as well at 723-8389. Our drills rent for \$10 per acre, a minimum charge of \$50 on 10 ft. drills and a \$75 minimum on warm season 7 ft grass drill. No fee for delivery or pick up, we cover that expense for you. There is no mileage charge unless you are outside of Stone County in an adjoining county where a \$.50 per mile from county line each way applies.

We ask that the drills be used only on fields capable of being mowed for hay. Should you have any problem with a piece of equipment, please call J.C. first before proceeding. If necessary, call our office. We cover normal wear and tear expenses, but should any damage result not due to normal wear & tear, the landowner signs the agreement stating they will pay for such damage. One of the greatest risks for damage is TURNING WITH THE DRILL IN THE GROUND. We ask you raise the drill completely before turning. After use and or during use, lubricate drill each day in use and clean all seed from the hoppers after use. Except in cases of bad weather or exceptionally large acreages, we would ask that the drill be ready for pick up within 48 hours, especially during seasons of high demand.

We thank all of you who have continued to support the District by use of our equipment. In addition to the drills, we have a Work Saver Post Driver, a 300 gall. Sprayer, fencing equipment such as a ground rod driver, spinning jenny, and a cordless drill for soil sampling. Some deposits may be required.

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If you have received this publication in error or wish to be removed from the mailing list please call 417-723-8389.

Karst is about Groundwater, Sinkholes, Losing Streams, Springs & Caves

Groundwater Protection

Maintaining the quality of the groundwater is vital. Water captured by sinkholes and losing streams is not filtered when it flows downward through the cracks in soluble rock. Instead water is a very effective media in transporting surface materials underground, including sand, particles of soil, leaf litter, chemicals, garbage and trash deposited by people into sinkholes, hollows or anywhere else on the ground. Anything small or soluble on the surface of karst landforms can be transported into the groundwater systems. Therefore, land users must be careful how they use the land and how they dispose of waste. Unwise land use can cause excess silt, fertilizers, pesticides, herbicides, septic effluent or other harmful chemicals in groundwater. Urban groundwater problems are caused by petroleum leaks and spills from paved roads, sewage leaks, trash washing into sinkholes and changes in surface water drainage patterns due to construction of roads and buildings. Rural groundwater problems are caused by agricultural chemicals, sinkholes used as garbage dumps, improper land grading and leakage from failing septic systems. Land development and uses in both urban and rural areas can cause changes in surface and subsurface drainage patterns. These changes may increase flow in some drainages, reduce it in others. Sudden sinkhole collapses such as that which occurred in 2006 in the City of Nixa are often the result of changes in drainage patterns due to urbanization.

The Wise Use of Water

Due to increased demand, groundwater is being used faster than it is being replaced. This causes the lowering of groundwater levels, which can cause the sudden formation of subsidence sinkholes. Lowering groundwater levels can also cause changes in subterranean drainage patterns, sometimes causing flow of springs to diminish or “dry up”.

Karst is about Sinkholes

Sinkholes are also called sinks, depressions, recessions, basins, pits and natural wells. Sinkholes are naturally occurring enclosed drainages where water entering them descends into the ground and contributes to the groundwater. Sizes of depressions in the Ozarks can range from literally inches in diameter and a few feet deep to the giant sinks over 1,000 feet wide and over 100 feet deep. Sinkholes can be created either by a slow migration downward of soil materials through a small crack as water widens the crack (known as a solutional sink), or by a sudden collapse or subsidence of a subterranean cavity (known as a collapse sink) or a combination of the two. One study in the Ozarks found that about 95% of all the mapped sinkholes were solutional and less than 5% were collapse sinks (Porter and Thomson, 1975). Sinkholes represent direct, unfiltered paths from the surface to the groundwater systems below. These direct routes are called discrete recharges (the opposite—the slow percolation through soil and solid rock is known as diffuse recharge). Material and water that enters sinks is transported through the groundwater and on to caves, wells and springs.

Therefore, it is very important that sinks are not used as places to dispose of garbage. In many parts of Missouri, it is illegal to use sinkholes for dumping trash, garbage or any castoff equipment. Sinkholes, simply, should be left in their natural state as much as possible. Altering a sinkhole can alter the groundwater drainage patterns to springs and caves. It is a good idea to consult with a professional geologist before considering any changes to any sink. Sinkholes occur in hilltops, hillsides and valley bottoms. Many of the sinks in valley bottoms are filled with alluvial material (gravel, boulders, organic material and soil) and may not be apparent except that surface water flows along a creek bed and “disappears” into the gravel. These are known as losing streams. Many surface ravines, creeks and rivers flowing in the Ozarks have losing sections where the stream is “pirated” in whole or in part by a gravel-filled sink or vertical crack.

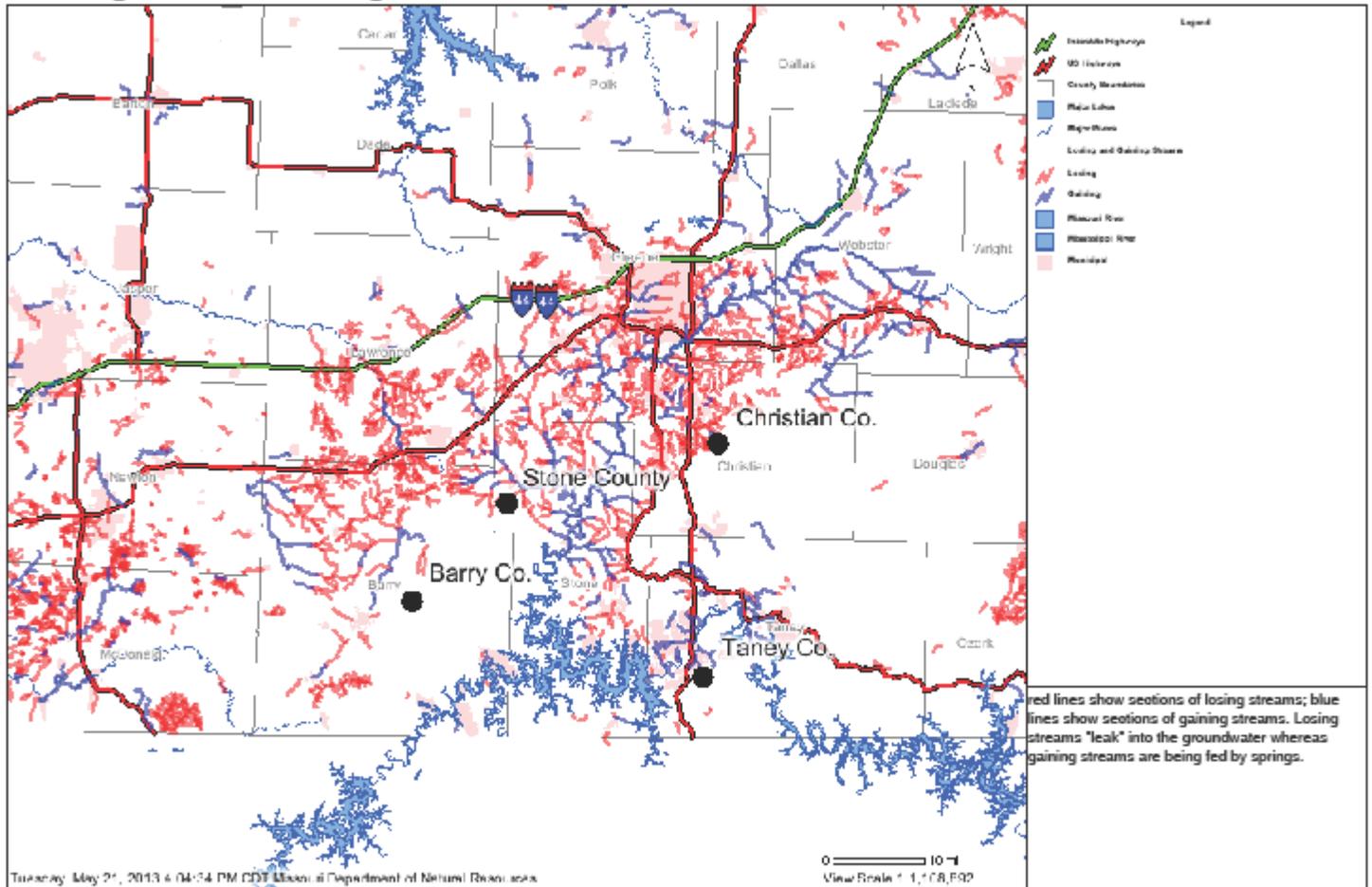
Good Sinkhole Management is good for you, your neighbors and cave and spring critters

Wise management of sinkhole areas will contribute to good quality well water for you and others, and it protects nearby spring and cave ecosystems. It can also contribute to property values for your land and lands nearby. No real estate buyer wants to pay for sinkholes filled with trash, nor does anyone wish to buy a home with polluted well water or erosion problems around sinks. Sinkholes containing trash should be cleaned. Trash is not only a visual eyesore, but it can contribute to groundwater pollution or plug natural drainage patterns. Surface erosion can be prevented or controlled by making sure trees, hedges and grasses are planted in and around sinks. Roots from vegetation will hold the soil in place and prevent the sides of sinkholes from expanding due to headward erosion of unprotected soils.

Caring for your Losing Stream

When you recognize you have a losing stream, you can help the groundwater ecosystems as well as your neighbors by managing developments to avoid negative impacts on the subsurface. Earth moving tasks should be controlled to prevent excess erosion or silt runoff into the losing stream. The boundaries of the losing stream should be vegetated with trees, shrubs and grasses to prevent erosion or siltation downstream. Cattle should be excluded from losing streams and adjacent areas. They can adversely impact protective vegetation and contribute large quantities of organic debris. The Ozarks containing so many losing streams makes it so important to prevent pollutants and excessive silt from entering surface streams that contribute to our groundwater.

Losing and Gaining Streams



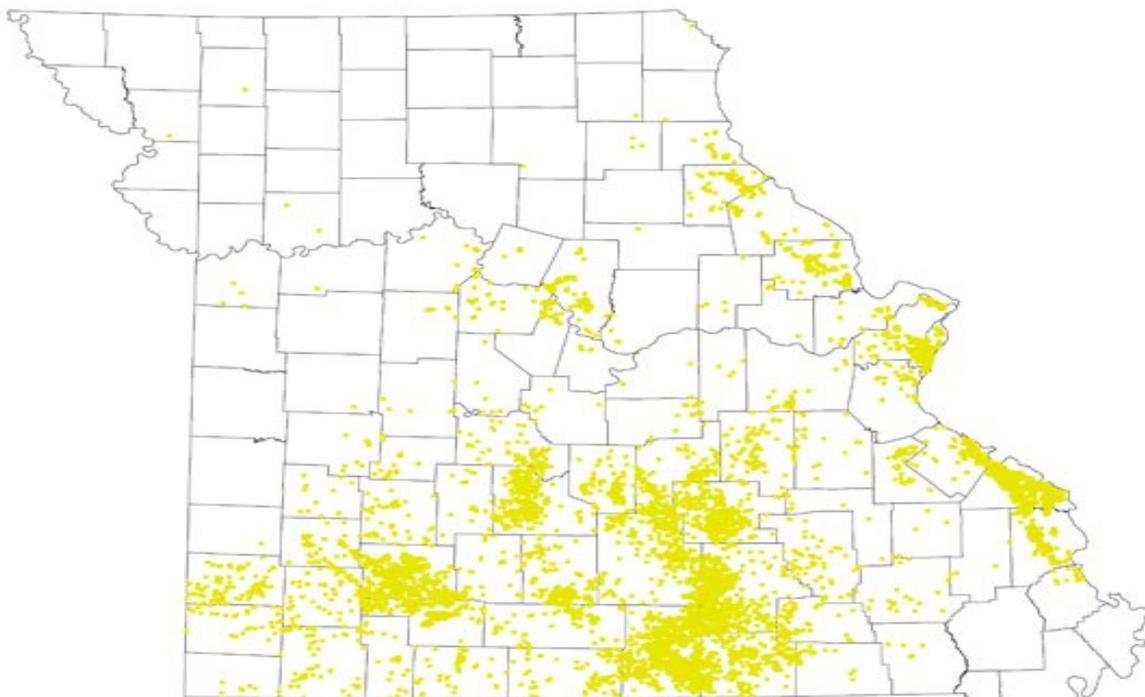
Missouri
Department of
Natural Resources

Disclaimer: Although this map has been compiled by the Missouri Department of Natural Resources, no warranty, expressed or implied, is made by the department as to the accuracy of the data and related materials. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the department in the use of these data or related materials.

[STREAM PROTECTION COST SHARE PRACTICE AVAILABLE](#)

The Soil and Water Conservation Program has a practice for stream protection (WQ10). This practice would apply to areas immediately adjacent to permanent, losing, or intermittent streams that have a defined stream bed where livestock have uncontrolled access for watering purposes.

The purpose of this practice is to reduce excess amounts of sediment, organic material, nutrients, and pesticides in surface runoff; and reduce excess nutrients and other chemicals in shallow groundwater flow, with a secondary benefit of stream bank stabilization. There must be evidence of livestock presence to qualify. A one time out of production incentive for livestock exclusion is available at \$500 per acre. The excluded area may be flash grazed beginning one year after contract payment during approved time periods in spring and fall. A maximum cost share amount is authorized for development of a watering source when the qualifying stream is excluded. Funding also available for water distribution and permanent electric fence with charger. Districts aid the landowner in planning, layout and design, to ensure practice meets standards and specifications. If you see a need to implement this practice for stream protection, please contact our office. We would be glad to come out and take a look. Call us at 723-8389. Together we can apply good conservation practices to the land; a win win for everyone and everything.



Sinkholes in Missouri



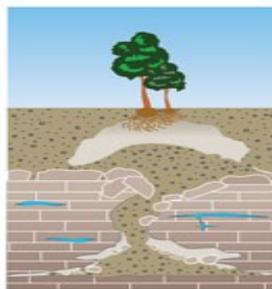
Sinkhole Development



As rain falls, it absorbs carbon dioxide, making percolating water slightly acidic. As this water migrates downward, the carbonate bedrock is slowly dissolved, creating bedrock voids.



Over time, the underground void becomes larger as soil and rock from above fall into the cavity and are washed away.



The void continues to grow and slope upward toward the surface.



Eventually, the structural integrity of the overlying material is breached and a sinkhole forms.

Sinkhole Mitigation

Topsoil or fill material

Landscaping fabric

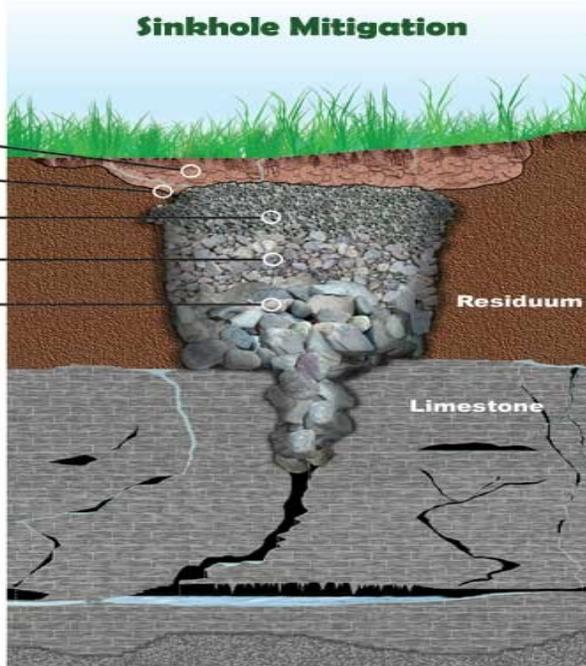
1-4" inch gravel stock

4-8" inch gravel stock

8-12" inch gravel stock

This graded filter system is constructed above the exposed fracture.

It will allow the vertical movement of water while retaining soil materials.



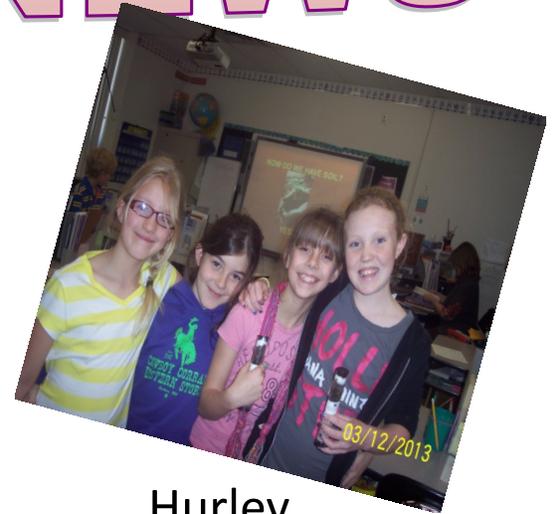
SCHOOL NEWS



Reeds Spring



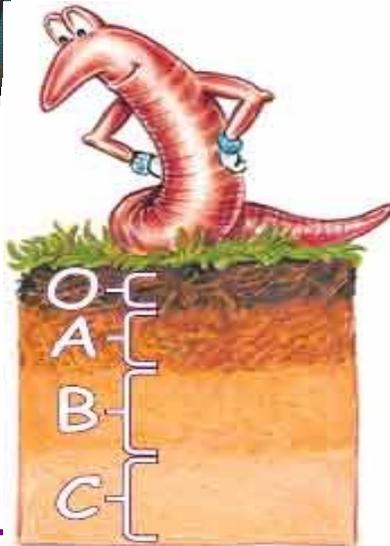
Galena



Hurley



BlueEye



Reeds Spring

Soil demonstrations completed in participating Stone Co. Schools. Students were educated on soil profiles, the purpose of soil, how it is made, where it comes from, erosion and pollution and the need to preserve our natural resources. They constructed their own soil profile to take home and enjoyed their own edible soil!! Thank you to all who participated.



STONE COUNTY SOIL & WATER CONSERVATION DISTRICT

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UPCOMING EVENTS

Regional Management Intensive Grazing Schools

June 11-13th (daytime) Location: Neosho, MO Contact: Nathan Witt 417-451-1007 ext. 3

Sept 12-14 (daytime) Location: Greenfield, MO Contact: Cedar Co SWCD 417-276-3388 ext. 3

Sept 24-26 (daytime) Location: Marshfield, MO Contact: Mark Emerson 417-468-4176 ext. 3

Oct 22-24 (daytime) Location: Bois D'Arc, MO Contact Greene Co SWCD 417-831-5246 ext. 3

Dairy Field Day

Southwest Research Center, June 20th 10:30am-2pm, located on H Hwy, Mt.Vernon, MO 65712. Event is Free and Open to public. Topics: Forage Quality for Dairies, Maximizing/Optimizing Dairy Rations, Dairy Profitability, Synchronization Protocols and Dairy Tour & Research Discussion. Lunch 12-1pm.

