Silver Creek Droplets

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The Ancient Art of Soil Erosion

Why revisit a subject as ancient as soil erosion? After all, so much has been said and done for several decades to confront this environmental enemy. While substantial progress has been made in redirecting man's land management activities to reduce the environmental impacts of erosion and off-site sediment delivery, sediment remains the number one water quality pollutant nation-wide.

And, what is sediment anyway? Erosion and sedimentation involve the detachment of soil particles by water, the transport of the detached soil particles (sediment) via runoff (rain or snow melt moving over the land), and the settling out (sedimentation) of soil particles in our streams, lakes, and other water bodies. In addition to soil particles, sediment often carries with it organic matter, animal or industrial wastes, nutrients, and chemicals.

Sediment occurs naturally and can be greater in some areas than others depending on the climate, soil type, native vegetation, and slope of the land. Changes in water quality and habitat begin to occur when human activities that contribute to sedimentation are thrown into the mix. These changes include murky water, reduced oxygen levels for aquatic life, loss of aquatic habitat, and loss of land value either esthetically or productively.

Human activities shown to alter a stream's natural sediment regime are not limited to those associated with urban sprawl and industrialization, such as construction. They include agricultural activities as well, such as overgrazing, row cropping, and allowing livestock access to streams.

What can be done to reduce or eliminate the effects of sedimentation? Well, control of erosion and sedimentation "begins at home", as they say. The challenge for every homeowner, landowner, and practicing conservationist, is to plan and apply the combination of practices appropriate for their particular soil, site, and land use. Here are a few suggestions:

Less Is More: Minimize disturbance to ground cover when doing any type of land clearing work. Avoid mass-grading large areas which will allow more disturbed soil to be exposed and vulnerable to erosion from runoff after it rains or when snow melts. Along waterfronts, leave as many aquatic plants in place as possible—they will hold bottom sediments in place and protect the shoreline from the erosive forces of wind and ice action.
Keep it Legal: Obtain required permits and install necessary soil erosion controls. Any earth-changing activity that will impact more than one acre of land requires a soil erosion control permit.
Cover Your Bald Spots: Vegetate bare soil as quickly as possible with an appropriate vegetative cover, such as sod or seed. Be sure to mulch the area with straw or other appropriate cover to prevent erosion until the seeds germinate.
Don't Be Stumped: Incorporate large woody debris, such as stumps, logs and tree trunks, as a management option for streambanks and shorelines. Woody debris provides essential aquatic habitat and stabilizes shorelines and streambanks from erosion.
Go Natural! Utilize natural materials, such as wildflowers, grasses and shrubs, to stabilize shorelines and streambanks.

Sedimentation is classified as non-point source pollution, meaning that it does not have a specific source, such as a drain pipe, that it emanates from. It also most often travels to the nearest waterway without treatment.

We all live in a watershed—an area of land that drains to a common body of water, such as a lake, river or stream – and, we can all be part of the solution to the water pollution that occurs in it by practicing healthy habits for clean water at home.

Inside this issue:

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Landscape With Nature

Nonpoint source (NPS) pollution is widespread because it can occur any time activities disturb the land or water. Agriculture, forestry, grazing, septic systems, recreational boating, urban runoff, construction, physical changes to stream channels, and habitat degradation are potential sources of NPS pollution.

Careless or uninformed household management also contributes to NPS pollution problems. Altering the natural contours of yards during landscaping and planting with non-native plants that need fertilizer and extra water can increase the potential for higher runoff volumes, increase erosion, and introduce chemicals into the path of runoff.

In contrast, **xeriscape** landscaping provides households with a framework that can dramatically reduce the potential for NPS pollution.

Xeriscape incorporates many environmental factors into landscape design--soil type, use of native plants, practical turf areas, proper irrigation, mulches, and appropriate maintenance schedules. By using native plants that are well-suited to a regions climate and pests, xeriscape drastically reduces the need for irrigation and chemical applications. Less irrigation results in less runoff, while less chemical application keeps runoff clean.

Originally developed for drought-afflicted areas, the principles of xeriscape today have an ever broadening appeal. With water now considered an expensive and limited resource, all landscaping projects, residential or commercial, can benefit from this alternative.

Xeriscapes do not have a single look - almost any landscaping style can be achieved. The principles can be applied to all or part of a yard, in any geographic region of North America.

1. **The fundamental element of Xeriscape design is water conservation.** Landscape designers constantly look for ways to reduce the amount of applied water and to maximize the use of natural precipitation.
2. **Soil Improvement**
   The ideal soil in a water-conserving landscape does two things simultaneously: it drains quickly and stores water at the same time. This is achieved by increasing the amount of organic material in your soil and keeping it well aerated.
3. **Create Limited Turf Areas**
   Reduce the size of turf areas as much as possible**,** while retaining some turf for open space, functionality and visual appeal.
4. **Use Appropriate Plants**
   For best results, select drought-resistant plants that are native to your region.
5. **Mulch**
   Cover the soil's surface around plants with a mulch, such as leaves, coarse compost, pine needles, wood chips, bark or gravel. Mulch helps retain soil moisture and temperature, prevent erosion and block out competing weeds.
6. **Irrigate**
   Water conservation is the goal, so avoid overwatering. Soaker hoses and drip-irrigation systems offer the easiest and most efficient watering for xeriscapes because they deliver water directly to the base of the plant. This reduces moisture loss from evaporation.
7. **Maintain your landscape**
   Low-maintenance is one of the benefits of xeriscape. Keeping the weeds from growing up through the mulch may require some attention. Thickening the layer of mulch will help.

SWCD Tree Sale Underway

The Clark County Soil and Water Conservation District's (SWCD) annual Spring Tree Sale is now in progress.

Once again the SWCD will be offering quality stock from Forrest Keeling Nursery, Missouri. These trees are 3-gallon, Grade 1 (nursery stock) container trees grown using Forrest Keeling's RPM® (Root Production Method). This method produces fast-growing, uniform trees, which can be easily removed from their containers and directly planted. Species available are: River Birch, American Beech, American Hornbeam, Brandywine Red Maple, Tulip Poplar, Swamp Chestnut Oak, Flowering Dogwood, Eastern Redbud, Norway Spruce, Elderberry, Quaking Aspen, Sugarberry, Deciduous Holly, Winterberry, Yellowwood, and White Pine. These trees are $25.00 each plus tax.

One-gallon, potted, perennial plants are also being offered. Species include: Fox Sedge, Columbine, Cardinal Flower, Obedient Plant, Little Joe Pye Weed, Sweet Coneflower, Wild Bergamot, plus many others. These sell for $8.50 per plant.

Other items included in the sale are: Tree-Mate-O "Tree Success Kits" (tree support, guard, and stake), and wildlife nest boxes.

Deadline for orders is April 3, 2012. Trees will be available for pick-up between the hours of 8 a.m.-4 p.m., April 16-20, 2012, at the SWCD office. For tree order forms or more information, visit www.clarkswcd.org or contact the Clark County SWCD office at 256-2330, ext. 3.

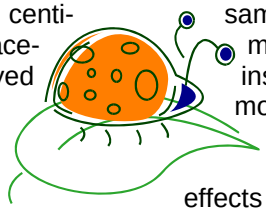
***Get involved** in the planning and zoning process in your community. That's where the decisions are made that shape the course of development and the future quality of our **environment**.*

You've Got Pests!

...and you want to control them with a dependable pest control method that does not contain chemical pesticides. Non-chemical pest control methods really work, and they have many advantages. Compared to chemical treatments, non-chemical methods are generally effective for longer periods of time. They are less likely to create hardy pest populations that develop the ability to resist pesticides. And many non-chemical pest controls can be used with fewer safeguards, because they are generally thought to pose virtually no hazards to human health or the environment. Two examples of non-chemical pest control methods are ***biological*** and ***manual*** treatments.

Biological Controls

Did you know that pests themselves may be eaten or otherwise controlled by birds, insects, or other living organisms? You can use a pest's natural enemies (predators) to your advantage. These "biological controls," as they are called, take many forms: ***Beneficial predators*** such as purple martins and other birds eat insects; bats can eat thousands of insects in one night; lady beetles (ladybugs) and their larvae eat aphids, mealybugs, whiteflies, and mites. Other beneficial bugs include spiders, centipedes, ground beetles, lacewings, dragonflies, big-eyed bugs, and ants. You can install a purple martin house in your yard. You can also buy and release predatory insects. They are available from sources such as gardening catalogs and magazines.



Parasitoids such as miniature wasps lay their eggs inside the eggs or bodies of insect pests such as tomato hornworms. Once the eggs hatch, the offspring kill their insect hosts, making parasitoids highly effective pest controllers.

Microscopic pathogens such as fungi, bacteria, and viruses control pests. An example is milky spore disease, which attacks Japanese beetles. A number of these biological pesticides are available commercially at hardware and garden stores

Biochemical pesticides include pheromones and juvenile insect hormones. Pheromones are chemical substances released by various organisms (including insects) as means of communicating with others of the same species, usually as an aid to mating. Pheromones lure pests inside a trap. Juvenile insect hormones interfere with an insect's normal growth and reproductive functions by mimicking the effects of compounds that occur naturally in the pest.

Manual Methods

- ~ *Spading and hoeing to cut up weeds.*
- ~ *Hand-picking weeds from your lawn and pests from your plants, indoors or out.*
- ~ *Using a flyswatter.*
- ~ *Setting traps to control rats, mice, and some insects.*
- ~ *Mulching to reduce weed growth.*

One or a combination of several non-chemical treatments may be just what you need for your pest problem. You must be patient because results may not be immediate. And you must work to prevent pests from entering your home or garden in the first place.

Here's a Drip Tip For You!

A family of four in the United States uses 400 gallons of water every day. That's a lot of water – enough to take 10 baths! By being smarter about our water use, not only can we save water, energy, and money, we can help our rivers, lakes, and streams too. When we use water more efficiently, we leave more water in rivers and streams to support fish and wildlife and recreation.

Here are 10 simple tips for saving water:

- ♦ *Turn the water off while you brush your teeth and save over two gallons a minute.*
- ♦ *Fix dripping faucets and running toilets. A leaky faucet that drips at a rate of one drop per second can waste up to 2,700 gallons a year.*
- ♦ *Save water and money by choosing efficient showerheads, dishwashers, and other appliances. .*
- ♦ *Only run your washing machine and dish washer when they are full.*
- ♦ *In the yard, use mulch to keep moisture from leaving the soil and minimize the need to water.*
- ♦ *If you must water the lawn, water in the early morning or evening, and try to avoid watering on windy days. This will limit the amount of water that is evaporated by the sun or blown onto sidewalks and driveways.*
- ♦ *Use a rain barrel to collect rain and help water your plants. Forty percent of the average homeowner's water use is outdoors. Rain barrels reduce the stress on municipal water systems during the dry, summer months.*

Check out our next newsletter for more ***Drip Tips*** that will help protect our **watershed** and your **wallet**!

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For additional information or details on the Silver Creek Watershed Improvement Project or this newsletter contact:
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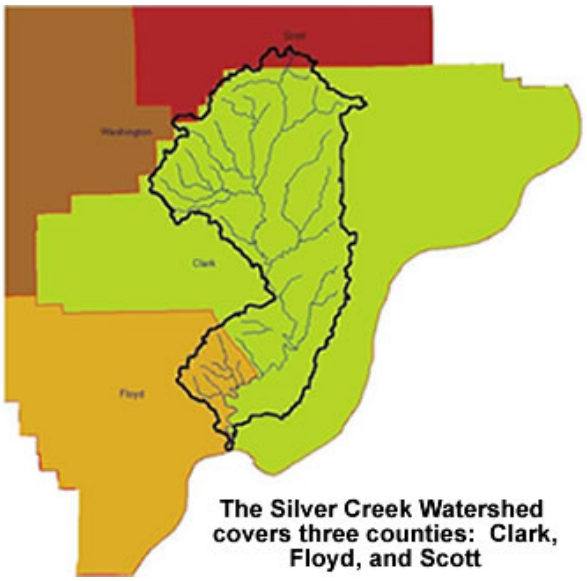
812-256-2330, ext. 3, or melanie.davis@in.nacdnet.net
To view this newsletter electronically, visit www.mysilvercreekwatershed.weebly.com

Cost Share Dollars Available

The Silver Creek Watershed Improvement Project currently has agricultural and urban cost-share dollars available to implement best management practices (BMPs) on land within the watershed in order to improve water quality. BMPs are effective and practical methods which prevent or reduce the movement of sediment, nutrients, pesticides and other pollutants from the land to surface or ground water.

The cost-share program provides 60% match of the allowed actual costs of implementing approved BMPs. Technical assistance is provided. Some of the practices that may be funded include: livestock exclusion from streams, cover crops, streambank stabilization, riparian buffers, critical area planting, water & sediment control basin, and alternative watering systems. More examples are available at *www.mysilvercreekwatershed.weebly.com.* If you are an agricultural producer, homeowner, organization, or entity and are located within the Silver Creek Watershed you may be eligible to apply.

For more information about the cost share program, contact Melanie Davis at 812-256-2330, ext. 3, or *melanie.davis@in.nacdnet.net*.



The Silver Creek Watershed covers three counties: Clark, Floyd, and Scott

Do You Have Ideas for Improving Water Quality?
The Silver Creek Steering Committee is a group of volunteers who work together to help improve the water quality of the Silver Creek Watershed. Committee members are vital to the improvement of the watershed. The group meets quarterly. Call 256-2330, ext. 3 for more details or if you would like to become an important part of the improvement project.