

Farms and Streams

Good Farm Stewardship Protects Streams and Watersheds



Watershed
Committee
of the Ozarks

USDA
NRCS

NATURAL RESOURCES
CONSERVATION SERVICE

Farmers and Ranchers have incentives to be good land stewards. Their livelihood depends on keeping the land productive. They must keep soils in place and in good condition. They need clean water for their households, as well as for livestock. Many times, farms are handed down in the family. These future farmers will need healthy and productive soil and water resources as well.

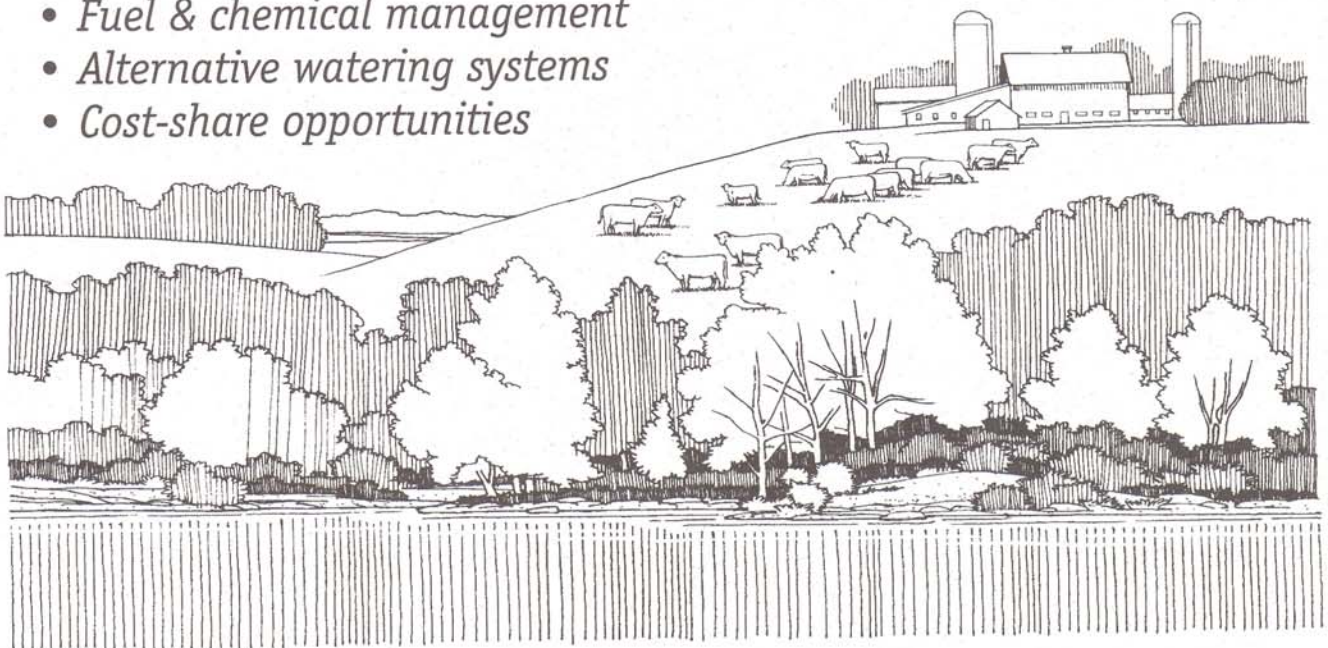
The Watershed Committee and NRCS recognize that well managed and maintained farm lands contribute positively to a healthy watershed. We also

know that yours is a difficult business; farming is hard work and it is often difficult to make ends meet. But these factors only make it more important to be efficient; to maintain long-term productivity; and to protect precious soil and water resources.

This fact sheet is intended to suggest ways that you might maintain, or even increase productivity while saving resources for the future. We certainly don't have all the answers – but we do want to see you succeed – it is in the best interests of our watersheds that you do.

In this fact sheet you will find suggestions for:

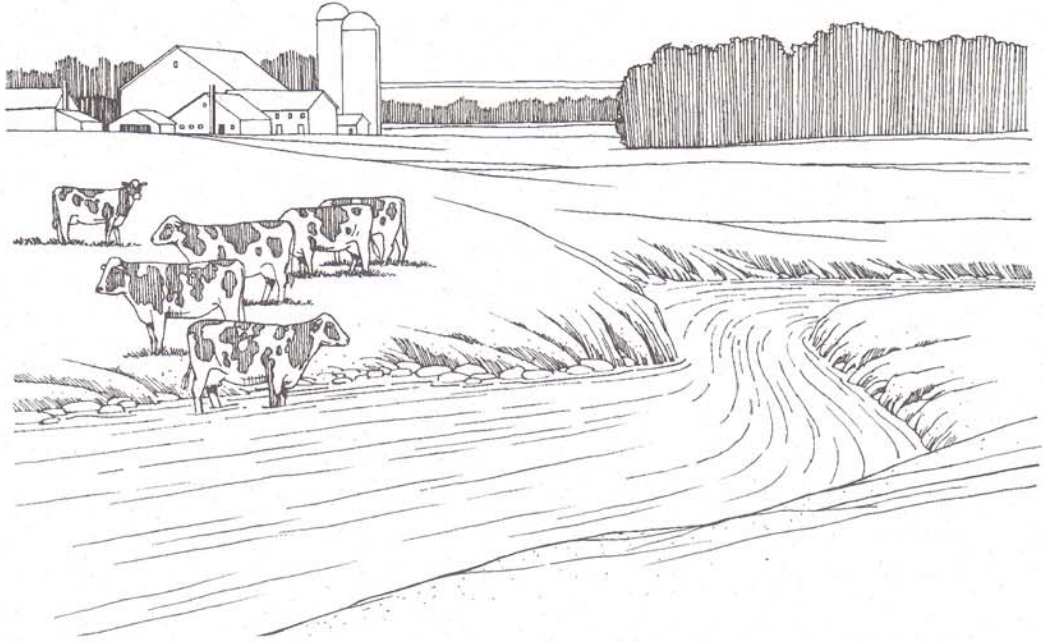
- *Grazing management*
- *Controlling erosion, especially along streambanks*
- *Septic tanks and wells*
- *Fuel & chemical management*
- *Alternative watering systems*
- *Cost-share opportunities*



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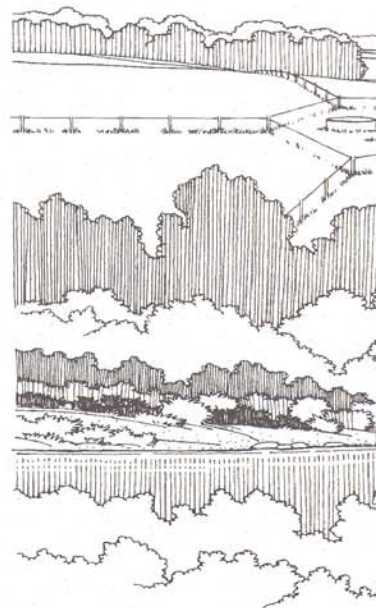
Traditional Grazing

Livestock eat the plants they like best, causing them to be replaced with less desirable and less nutritious plant species. Livestock spend most of their time in or near the stream during warmer weather, overgrazing pasture near the stream, under-utilizing forage further away. Streambank vegetation is trampled, denuding banks and leading to more erosion. Animal waste is concentrated in stream zones where it may pollute water.



Streambank Stabilization

Erosion in stream zones leads to a loss of productive farmland and an increase in downstream siltation, which is harmful to wildlife. Riverside lands often contain the richest soils in the Ozarks, which have taken thousands of years to form. The best way to preserve these soils is to leave a healthy, vegetated buffer along streams. Trees tend to be the best at holding soil, so should not be removed for at least 50 to 100 feet back from the streambank. Where active bank-cutting is occurring, methods such as willow staking or revetments can often be used to check erosion. Technical advice for these methods can be provided through the Missouri Department of Conservation.



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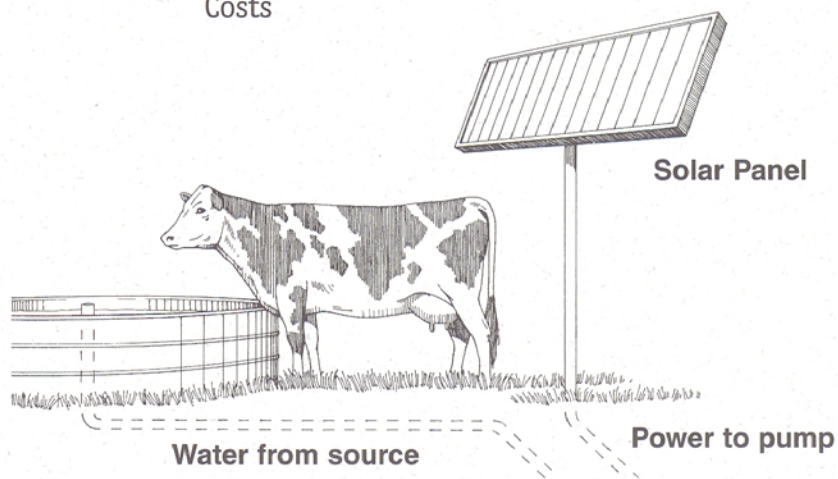
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Alternative Watering Systems

Providing clean water to livestock increases productivity and improves animal health. Where electricity is not readily available, water can be pumped using solar power from the stream or from a shallow well or spring into stock tanks at a planned location away from the stream. Wells, pipelines, spring developments and ponds are alternatives to consider.

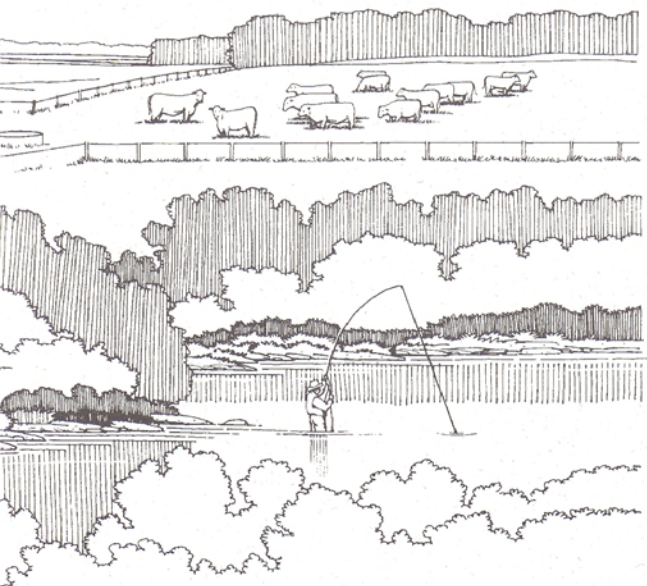
Advantages

- Cleaner, Disease-free Water; reduced parasite load
- Tanks Can Be Placed Where Needed
- Adequate quantity of water
- Improved livestock production
- Solar Power Eliminates Long-term Electricity Costs

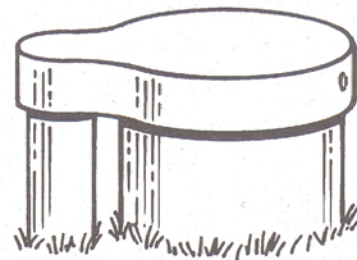


Managed Grazing

In managed grazing, pastures are divided into sections, or paddocks, which are grazed one at a time in a planned sequence. Livestock are grazed only long enough to eat the desired amount of the most nutritious forage. Animal weight gains are usually increased, and herd health can be improved because cattle spend less time in wet areas and are drinking water less susceptible to contamination. Streamside vegetation stays healthier, reducing erosion and improving water quality. Animal waste becomes a fertilizer, distributed more evenly over the grazing area, rather than a water pollutant.



Wells and Septic Tanks

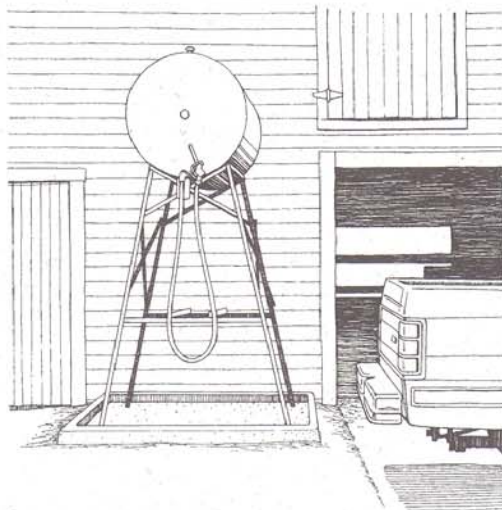


Wells - The well casing should extend above ground level, especially in areas that may flood. Water should be tested annually for bacteria, a service provided by local Health Departments. Never store chemicals like pesticides in a well house or mix chemicals near the well-head. Abandoned wells need to be properly sealed because they can transport pollutants down into drinking water aquifers.

Septic Systems - Septic systems should be located away from streams, sinkholes and flood plains, whenever possible. Tanks should be inspected at least every 3 years and pumped if solids have reached 40% of the liquid depth of the tank. Toxic chemicals like degreasers and photographic chemicals should never be allowed to go into a septic tank. Local Health Departments can offer advice on problems.

Fuel & Chemical Management

Gasoline and other fuels are some of the most common chemical pollutants in groundwater. Storage tanks should be on concrete with curbing so that spills can be contained. Pesticide and other chemical containers should be rinsed according to label directions and properly disposed. Water hoses should not be left submerged in mixing tanks while filling because back-siphoning could cause chemicals to be sucked into the water supply.



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Cost-Share Opportunities

- *Managed Grazing*
- *Plugging Abandoned Wells*
- *Streamside Buffers*
- *Alternative Watering Systems*
- *Fencing*
- *Wells*
- *For more information on cost-share, please contact your local Soil and Water Conservation District*

Streamside Buffers

Leaving vegetation along stream zones or creating new buffers can benefit landowners. Soil erosion is minimal in well-vegetated areas. Buffers filter runoff from farm fields or pastures, improving stream water

quality. Forested buffers also provide benefits such as firewood, saw timber, nuts and berries, wildlife habitat, improved fishing, clean swimming holes and reduced flood damage.



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**Watershed
Committee
of the Ozarks**

The Watershed Committee of the Ozarks is a not-for-profit citizens advisory group dedicated to the protection of drinking water sources in the Springfield area.

Other free publications available from the Watershed Committee:

- Watershed News** – Quarterly newsletter
- Maintaining Your Septic System** – Proper maintenance protects your family's health, saves you money, and guards area water quality
- Sinkholes-Inlets to the Groundwater System** – How to recognize sinkholes, how they function, and how they affect groundwater
- Quality Development and Stormwater Runoff** – What you can do to reduce flooding, erosion and pollution
- How To Protect Your Well** – Your family's health depends on a safe, reliable source of drinking water