



# Small Scale Solutions for your Farm

## Runoff Management



### Do You Have Problems with:

- Mud messes in your barn yards, livestock loafing areas, and other places you work, whenever it rains
- Dirty water running into streams, lakes, or roadside ditches
- Clean water from roof, mixing with dirty water from feedlots
- Livestock standing in mud puddles, which is unhealthy for their feet

### What is Runoff Management?

Runoff management refers to controlling water running off roofs, driveways, feedlots, and other places around the buildings on a livestock farm.

### Purposes and Benefits of Runoff Management

- Helps reduce water running off land around a livestock farm that can be polluted with manure and mud impacting streams and lakes
- Clean water running off roofs and other hard surfaces can be kept clean, instead of mixing with dirty water
- The farm will look better
- It's easier to drive and work around the area when it's dry, rather than when it's muddy and wet
- Livestock are healthier and cleaner when they are not stuck in the mud
- An inch of rain on a typical barn roof produces 620 gallons of water, enough to make a big mess!

Correcting water problems around your livestock buildings will benefit both you and your animals. You may find that after these problems are fixed, you spend less on building and equipment maintenance. Keeping livestock dry and healthy may also increase your profits.



Poor runoff control can be detrimental to livestock health.



Ensuring that runoff is filtered before getting into streams is the focus of runoff management.





## How to Install the Practice:

### Diversions and Waterways:

Water may be running across your barn yard or into buildings from land uphill of the farm. By installing diversion channels, grassed waterways and water catchments, this runoff can be steered away from the farmyard before it starts a problem.

### Roof runoff control:

The purpose of a roof is to keep rain out of a building, but the rain has to go somewhere. If there are no gutters or channels to carry the water to a safe place, the water will land right around the building and cause problems.

Installing gutters, rain barrels, gravel drains or other devices can keep livestock dry and prevent mud.

### Heavy Use Area Protection:

Some areas get too much vehicle and animal traffic for grass to grow. These paths, roads, and animal loafing areas need additional protection, like gravel or paving, to withstand heavy use.

### Vegetated filter strips and buffer areas:

When possible, the best place for water to run is into grass. Water and pollutants can soak into the ground, and the grass will trap mud from the water. Grass filter strips or buffers need to be designed at the right width and slope so an erosion problem doesn't start and cause gullies.



Runoff Management incorporate agronomical and engineering measures that function as a system.



With proper management, rainwater can become an alternative source of irrigation.



A combination of practices like grasses waterway and grade stabilization is a tool that can be incorporated into your conservation plan.





## How to Maintain the Practice:

Just like cars and houses, conservation practices need some maintenance. Depending on what was installed to solve water runoff problems, you will need to take a little time each season to check some things:

- Pipes are running freely
- No erosion has started anywhere around the barn yard
- Gutters and downspouts are securely fastened
- Gravel may need to be added periodically to certain areas
- Grass on buffers and filters and in grassed waterways benefits from periodic mowing, although it should never be cut as short as a lawn—4 to 6 inches is good
- If mud builds up on the grass, it will need to be cleaned out
- Bare spots should be seeded and mulched to keep them from washing out

NRCS staff for your county can help you design the practices you need to solve water runoff problems. They have cost figures to help you weigh alternatives and will come to your farm and discuss your specific concerns.

## Associated Costs

Costs will depend on the practices your farm needs. Everything does not need to be done at once—NRCS conservation planners can help you decide which practices are the most important. Here are a few of the things that might be needed to control runoff:

- Gutters or other ways to catch roof runoff from buildings
- Tanks or rain barrels and flexible piping to remove water
- Gravel or paving to protect areas that are heavily used
- Earth-moving equipment to build waterways or diversions
- Grass seed and mulch



Cattle feeding on a hay ring in a muddy unprotected lot.



A well protected heavy use area will assist you managing your runoff.





## Technical and Financial Help Is Available

Whether you measure your farm in terms of feet or acres, your local Natural Resources Conservation Service (NRCS) office has experienced conservationists that can help you develop a Conservation Plan to conserve, maintain, and restore the natural resources on your land and improve the long-term health of your operation.

There is no charge for our assistance. Simply contact your local office to set up an appointment. You may also be eligible to receive financial assistance. Your NRCS office will explain any programs that are available so you can make the best decision for your operation. All NRCS programs and services are voluntary.

## For More Information

Visit the [Natural Resources Conservation Service](#) or visit [farmers.gov/service-locator](https://farmers.gov/service-locator) to find your local NRCS office. You can also check with your local USDA Service Center, then make an appointment to determine next steps for your conservation goals.

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NRCS conservationist assisting small scale farmer with developing a customized conservation plan.

