



What are the benefits of conservation buffers?

There are lots of benefits to establishing conservation buffers. Here are just a few of the reasons to consider putting buffers along streams, rivers and lakes. Of course, every buffer needs to be designed to meet the particular objectives of the property owner and the unique qualities of the associated site.

- Slow runoff from fields.
- Reduce downstream flooding.
- Increase profitability by taking marginal land out of production.
- Reduce the risk of tractor rollover by stabilizing the streambank and providing a turnaround area.
- Reduce soil erosion.

- Take advantage of financial incentives provided to establish buffers through local, state and federal programs.
- Remove up to 50% or more of nutrients and pesticides in runoff.
- Remove up to 60% or more of pathogens in runoff.
- Remove up to 75% or more of sediment in runoff.
- Reduce noise and odor.
- Provide food, nesting cover and shelter for wildlife.
- Stabilize streambanks.
- Reduce water temperature.
- Provide setback distance for agricultural chemical use from watercourses, wells, sinkholes, etc.
- Establishment of natural vegetation.

Conservation planning with the Core 4 approach.

As each year passes, we improve our understanding of how to manage for better soil, cleaner water, greater profits and a brighter future. We call this management approach the Core 4. The four fundamental components integrated into this approach are: Conservation Tillage; Crop Nutrient Management; Weed and Pest Management (IPM); and Conservation Buffers. If you'd like to learn more about the Core 4 approach, call your local agronomic and/or natural resources professional:

- Agricultural Retailer
- Certified Crop Advisor
- Conservation District
- Extension Agent
- Independent Crop Consultant
- Natural Resources Conservation Service

Credits: Photos provided by Capital Agricultural Property Services, Dupont, Denny Eilers, USDA Natural Resources Conservation Service-Iowa Office



Conservation Technology Information Center
1220 Potter Dr Rm 170, W Lafayette IN 47906
Phone: 765 494-9555 Fax: 765 494-5969
Email: ctic@ctic.purdue.edu
Web: www.ctic.purdue.edu

The Conservation Technology Information Center is a non-profit public-private partnership dedicated to advancing economic and environmentally beneficial agricultural management systems.



1099/100M

A Conservation Buffer is a small area of riparian vegetation designed to slow water runoff and filter sediment, nutrients and pesticides from farm fields.

What's a Conservation Buffer?



Conservation Buffers



What's a conservation buffer?

In short, buffers are a common-sense way to protect the environment and demonstrate a commitment to conservation. They're best described as a small area or strip of land in permanent vegetation that's designed to slow water runoff, improve water and air quality, provide shelter and stabilize riparian areas.

Why establish a buffer?

Environment.

Strategically placed and managed conservation buffers can effectively mitigate the movement of sediment, nutrients, pesticides and pathogens within and from farm fields to protect water quality. When properly planned, they can also improve air quality, reduce noise and disperse odors. Buffers can also play an important role in enhancing wildlife habitat and diversity.

Economic.

Buffers can turn a small parcel of marginally profitable land into a low-risk investment for the future. In fact, when landowners put a pencil to determining profit per acre over a period of years, the option of establishing buffers looks even better. Of course, by putting small areas of land into buffers, growers' and landowners' demonstrate their commitment to conservation and show their willingness to protect the environment.

Types of buffers.

Contour Grass Strips/Cross-Wind Trap Strips.

These rows of perennial vegetation strips can reduce wind. Generally, grass strips are planted with native, tall grasses while crosswind traps include shrubs and trees. The establishment of these buffers can protect young plants from wind damage, conserve moisture on the downwind side of the rows and reduce blowing soil.

Field Borders.

Vegetation planted in strips at the edge of fields. This area can be used for turn areas or travel lanes for machinery.

Filter Strips.

Strips of grass or other vegetation are used to slow water runoff from a field. These strips trap sediment, nutrients, pesticides, pathogens and other pollutants before they reach a river, lake or stream.

Grass Waterways.

These strips of grass are planted on areas of fields where water is concentrated as it runs through or off the fields. Used primarily to prevent and control gully erosion, waterways also act as a filter, trapping sediment and other pollutants.

Living Snow Fence.

Trees and/or shrubs planted in a way that's designed to control drifting snow. This protects buildings, roads and other property from drifts. Living snow fences can also be used to help protect nearby areas for livestock, provide cover for wildlife and enhance soil moisture.

Riparian Buffers.

Streamside plantings of trees, shrubs and grasses that can intercept pollutants from both surface and shallow groundwater before they reach a river or stream. Riparian buffers provide habitat for wildlife and enhance fish habitat by, among other things, reducing water temperature.

Shelterbelts/Windbreaks.

This row or rows of trees and/or shrubs are used to reduce wind erosion, protect field crops and shelter livestock, wildlife and buildings from harsh weather.

Salt-Tolerant Vegetation.

In areas where salinity is a water issue, growers can plant vegetation capable of growing in high saline environments. If the correct vegetation is selected, it can, ultimately, help reduce saline seepage problems.

Wellhead Protection Areas.

By planting vegetation around public and private wells, landowners and managers can protect the well from contamination.

Wetlands.

These areas of shallow water are generally near or between cropland and lakes or streams. They have water loving grasses, shrubs, and/or trees growing in and around the area. In addition to acting as a filter and providing wildlife habitat, they can also reduce downstream flooding and replenish groundwater reserves.