

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Haskell Agricultural Laboratory (Northeast
Research and Extension Center)

Agricultural Research Division of IANR

2009

Riparian Buffers For Cleaner Water

Follow this and additional works at: <http://digitalcommons.unl.edu/ardhaskell>



Part of the [Agriculture Commons](#)

"Riparian Buffers For Cleaner Water" (2009). *Haskell Agricultural Laboratory (Northeast Research and Extension Center)*. 5.
<http://digitalcommons.unl.edu/ardhaskell/5>

This Article is brought to you for free and open access by the Agricultural Research Division of IANR at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Haskell Agricultural Laboratory (Northeast Research and Extension Center) by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.



Riparian Buffers

For Cleaner Water



Before riparian buffer installation



After riparian buffer establishment


Earn

- Annual rental payments for up to 15 years
- Installation cost share and incentive payments
- Bonus signup incentive
- Annual maintenance payments



Riparian Buffers

Protecting Water Quality



Our conservation ethics determine the importance we place on water, one of our most precious natural resources. All life revolves around and depends on clean water. Quality of life now and for future generations is dependent upon our current treatment of water resources.

Nonpoint Source (NPS) pollution, a result of many land uses, is a leading cause of water quality problems. Eroding streambanks, silted-in lakes and reservoirs, algal blooms, poor fishing and high nitrates in groundwater are all too common. Like urban residents, rural landowners and farm operators are responsible for the quality of runoff water that leaves their property. We are all part of the problem and we can all join together to be part of the solution.

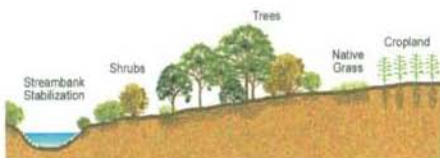
The most common NPS pollutants in rural areas are *sediment, nutrients, and pesticides* that move off of agricultural land and from livestock operations. Farmers and ranchers can manage land runoff in ways that improve water quality in streams, lakes and aquifers.

One landowner within a watershed cannot completely accomplish this task alone. Each landowner has a part in buffering the water system, whether or not an active stream or water body is present. Runoff from fields enters waterways, gullies, and ditches; eventually working its way downstream. Water quality protection is most successful when many landowners within a watershed use conservation practices that reduce soil erosion and slow water movement on their lands. Riparian buffers dramatically improve water quality.



What is a Riparian Buffer?

The word *riparian* means “relating to or located on the bank of a natural watercourse or lake”. A *riparian buffer* is a strip of permanent vegetation (native grass, shrubs and trees, either individually or in combination) located between crop areas and surface waters.



A riparian forest buffer

The term *filter strip* is used when only grass is planted next to the water. A *riparian forest buffer* includes shrubs and trees. Both types of buffers are very effective filter systems that can improve water quality by reducing these pollutants in runoff water:

- sediment
- nutrients
- pesticides
- organic matter
- other pollutants

In fact, studies have shown as high as 90% of nitrates and 70% of herbicides are removed from runoff water passing through a buffer system.





Benefits of Buffers

Everyone benefits from buffers. Producers enjoy increased income, greater wildlife, better hunting and cleaner water. And those downstream benefit from cleaner water for drinking and recreation. Some of the more recognized benefits are:

- Improved water quality
- Reduced soil loss
- Stabilized banks & stream channels
- Slower flow & force of water
- Reduced downstream flooding
- Moderated water temperature
- Wildlife & aquatic habitat
- Added income
 - Government payments
 - Fee-based hunting
 - Nuts, fruits, and specialty crops such as woody florals
- Beautified landscape

Riparian buffers work jointly with other conservation practices. For maximum effectiveness, riparian buffers should be used in combination with such practices as:

- Conservation land treatments (including conservation tillage)
- Comprehensive nutrient management (crop & livestock)
- Weed and pest management



Buffers Can Be Profitable!

Both State and Federal programs can provide landowners and producers with substantial annual payments for installing and retaining buffers. When you install riparian buffers on your farm, you can feel proud that you are providing everyone downstream with cleaner, healthier water—an environmental service the government is willing to pay for.

With sign-up for certain buffer practices (riparian buffers, filter strips, grassed waterways, farmed wetland & field windbreaks) under the continuous Conservation Reserve Program (CRP), the USDA pays the following:

- Sign-up incentive
- Annual rental payments
- A 20% rental rate bonus
- Cost-sharing and incentive payments for installation (up to 90%)
- Annual maintenance payments
- Livestock fencing and water for some practices

Other federal programs (EQIP, WHIP, WRP) are available to provide assistance for conservation buffer installation. Many local Natural Resource Districts (NRD), the Nebraska Department of Agriculture and wildlife organizations also may pay you to provide the public with cleaner water through the installation of riparian buffers.

These programs provide a guaranteed income for up to 15 years, potentially exceeding returns from crops in the buffer area.

Contact your local Natural Resources Conservation Service, Farm Service Agency or County Extension office for more details.



Continuous Conservation Reserve Program Payment Worksheet ***

First Year One-time Signup Incentive

\$10/Acre Bonus X No. Acres X No. Yrs.

\$10.00 X _____ X _____ = \$ _____

Plus cost-share and incentive payment of 90%
of eligible installation

CCRP Annual Payment Estimate

\$ _____ County Soil Rental Rate (SRR)
(Per Acre Basis) Range: \$ _____ to \$ _____

+ \$ _____ Bonus payment of 20% of SRR for
grassed waterways, riparian buffers,
filter strips, and field windbreaks

+ \$ _____ Maintenance Payment/Acre
(Range: \$ _____ to \$ _____)

= \$ _____ **Total Annual Payment**
(Per Contract Acre)

*** (Check with local FSA office for exact rates)



UNIVERSITY OF
Nebraska
Lincoln



Institute of Agriculture and Natural Resources

It is the policy of the University of Nebraska-Lincoln not to discriminate on the basis of gender, age, disability, race, color, religion, marital status, veteran's status, national or ethnic origin or sexual orientation.