

Washington County Riparian Buffer Project

Sponsored by the Planning and Parks Department
Land and Water Conservation Division



Town of Polk, Washington County

Definition

Riparian buffers are vegetated areas next to surface water resources that protect the surface water from nonpoint source pollution and provide bank stabilization and aquatic and wildlife habitat. These vegetated areas have been proven to reduce many nonpoint source pollutant factors, most effectively are the removal rates of phosphorus and sediment. The Wisconsin Buffer Initiative researchers found that "...riparian buffers are capable of reducing large percentages of the phosphorus and sediment that are currently being carried by Wisconsin streams. Even in watersheds with extremely high loads (top 10% in the state), an average of about 70% of the sediment and phosphorus can be reduced through buffer implementation." (Diebel, M.J. and others, 2009, *Landscape planning for agricultural nonpoint source pollution reduction III: Assessing Phosphorus and sediment reduction potential, Environmental Management*, 43:69-83.).

Goal

The goal of the Washington County Buffer Project is to establish a 75 foot wide riparian buffer measured from the top of bank along the water's edge. The 75 foot goal was identified in the Southeastern Wisconsin Regional Planning Commission (SEWRPC) Regional Water Quality Management Plan Updated for the Greater Milwaukee Watershed, Planning Report No. 50, Appendix O; which states "...that based upon the literature review, for the purposes of contaminant management, a buffer width of 75 feet represents the most appropriate width for water quality protection." Further stated; "a 75-foot buffer width provides a high level of effectiveness in reducing Total Suspended Solids (TSS) loads delivered to the buffer by about 75 percent, delivered total nitrogen loads by about 65 percent, delivered nitrate loads by about 75 percent, and delivered total phosphorus loads by about 70 percent."

Additionally, it has to be understood that buffers alone will not address all of our water quality concerns. In fact, applying riparian buffers as a paint brush approach to the land will not achieve the 50 – 70% pollution reduction for all sites. Riparian buffers and its effectiveness is site dependant; buffers will only be recommended where effective and the need has been determined by an experienced conservationist.

Existing Riparian Buffer Programs

It is worth mentioning that there are several existing programs that promote and offer cost share assistance for riparian buffers such as the Conservation Reserve Program (CRP), Conservation Reserve Enhancement Program (CREP), and Wisconsin Administrative Code, ATCP 50.08(4) Riparian Land Taken out of Production. These programs have had limited success mainly due to three factors: 1) extensive and lengthy contracts, 2) restrictions on the use of land in contract and management options that only allowed limited spot mowing and/or spraying of weeds and brush, and 3) implications of idle open land relating to Use-Value Assessment. Existing programs will continue to be utilized as determined to be beneficial with a landowner's willingness to comply with the specific program requirements.

Project Highlights

Width of Buffer: Goal is 75 feet up hill from the top of bank. For requests less than 75 feet, width determinations shall be based on NRCS Conservation Practice Standard 393 – Filter Strip. A minimum width of 30 feet is required for participation through this project.

Vegetation Cover: A perennial vegetated cover, mainly grasses, shall be established or maintained. Specific seed and plant types shall be based upon landowners request and management plan, provided that the species selection offers adequate ground cover and pollutant removal.

Management: The landowner and land operator are free to utilize the buffer area as needed provided that the vegetation cover is maintained. This includes the use of the area for field

access, headland turning, mowing and harvesting. Mowing and harvesting are strongly encouraged and recommended for: 1) removal of nutrients that are taken up in the leafy portion of the plant, 2) reducing the competition of woody vegetation, and 3) allowing for the routine inspection of the riparian buffer ensuring proper filtering.

Maintenance: Gullies and/or uneven deposits of sediment may jeopardize the buffers functions. On occasion, the buffer area may need to be re-graded or tilled and vegetation reestablished. These activities are allowed provided it is under the direction of a County Conservationist or designee. Additionally, the landowner/operator may request to re-establish specific perennial grass species. In these cases it is recommended that a system of no-till planting be utilized to accomplish the request.

Financial Assistance: Funds are offered to offset the loss of income from the riparian buffer area. Since the goal of the project is to establish a 75 foot riparian buffer, funding rates are maximized at this width. The following are offered as payment rates for the various riparian buffer widths. A three year payment schedule has been selected to ensure: 1) installation and maintenance by the landowner/operator, 2) follow-up by the Land and Water Conservation Division personnel, 3) the riparian buffer is functioning as intended, and 4) that the buffer is satisfying the landowner’s expectations. Payment rates shall be based on the following table and disbursed: First year 52%, Second year 36%, and Third year 12%.

Table 1. Buffer widths and funding rates as specified are per each side of stream.

Riparian Buffer Width (feet)	Funding Rate per Lin. Ft. of Stream	Equivalent Rate per Acre
30 - 39	\$1.00	\$1,245.00
40 - 49	\$1.50	\$1,450.00
50 - 59	\$2.00	\$1,585.00
60 - 69	\$2.75	\$1,845.00
70 - 79	\$3.50	\$2,035.00

Contract: The contract must be completed and signed by both the landowner/cost share recipient and County prior to payment.

Terms and Conditions: It is the intent of this project that the riparian buffer be installed and maintained as long as the practice is needed or the landowner/operator has agreed to control the upland sediment loads and non-point pollution by other equally effective practices.

“Federal and state natural resource agencies have long recognized the need to apply a wide range of Best Management Practices on agricultural lands to improve stream water quality. Although there are many tools available in the toolbox to reduce pollutant runoff from agricultural lands, such as crop rotations, nutrient and manure management, conservation tillage, and contour plowing, riparian buffers are one of the most effective tools to accomplish this task.” *(SEWRPC, Managing the Waters Edge, April 2010)*