

ZONING

27 Attachment 18

Township of Ferguson

Appendix C – Riparian Buffer Management Plan

Riparian Buffer Management Plan

The preparation of a riparian buffer management plan is essential for ensuring a healthy and successful riparian corridor environment. While wooded riparian corridors provide the greatest water quality benefits, there are other management alternatives that contribute to water quality. Therefore, the management plan should balance the intent of the riparian buffer with a site's existing conditions and the landowner's desires for the property. When completed, the management plan should clearly define the landowner's goals for the riparian buffer and what specific actions will be taken to achieve those goals. For example, the landowner may intend to allow an existing meadow to revert to a woodland over 20 years. To ensure this happens, the plan will identify what specific management techniques will be implemented. Similarly, if the effectiveness of a portion of the riparian buffer is reduced, mitigation measures will need to be identified that will offset the disturbance. The management plan should clearly define what actions will be taken to fulfill the goals of the plan and who is responsible for implementing them.



A portion of this meadow has been managed to allow for natural succession

Anyone proposing subdivision, land development, redevelopment or any other property improvements that require any plan submission or need for permit within the riparian buffer must submit a Riparian Buffer Management Plan. Certain requirements of the plan may overlap with other municipal subdivision and land development requirements, such as the existing conditions plan. Landowners with no plans for subdivision or land development are encouraged to submit Riparian Buffer Management Plans on a voluntary basis.

The Riparian Buffer Management Plan shall include scale drawings and explanatory text and shall be prepared by a Pennsylvania licensed landscape architect, engineer, or other qualified professional. This plan shall be submitted and approved as part of any normal municipal subdivision and/or land development review process or as required in accordance with Section 8 – Inspection of the Riparian Buffer Overlay Zoning District. The Riparian Buffer Management Plan should include the following four elements:

Section I: Existing Conditions

This section shall include a sketch plan showing the boundaries of Zone 1 and Zone 2 at a minimum, and existing environmental conditions (such as five foot contours, steep slopes and swales and other drainage features highlighted, wetlands, floodplains, woodlands and

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other vegetation, and any existing structures). A written description of unusual or other “site specific” significant conditions also shall also be included.

Section II: Goals

An analysis shall be done that identifies the landowner goals for the entire property, considering the intent of the Riparian Buffer Overlay Zoning District. For example, the goal for land in Zone 1 may be to preserve existing woodland. The goal for Zone 2 may be to convert an existing pasture into a wildflower meadow. The goal outside the riparian buffer zones may be to construct a house and barn. For those riparian areas that include improvements, there should be a discussion of how disturbance to the riparian buffer(s) will be mitigated and offset with the applicant’s proposed riparian buffer improvements and restoration. A schematic plan illustrating the landowner’s goals shall also be included.

Section III: Proposed Activities

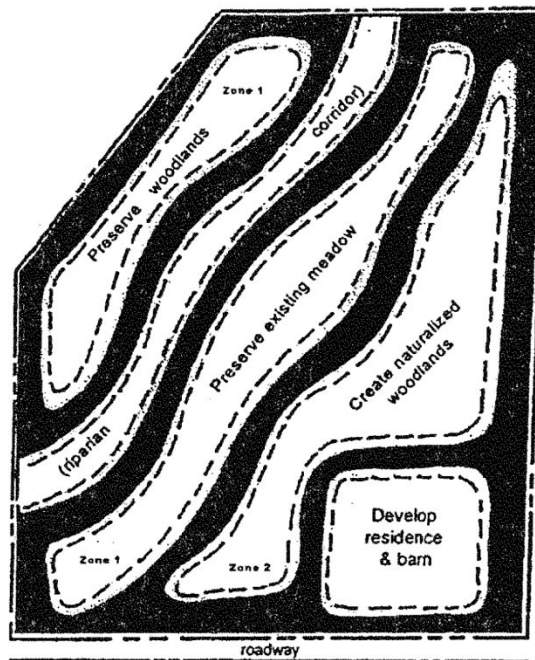
This section shall include a scaled drawing and a discussion of activities proposed for land in Zone 1, Zone 2 and land directly adjacent to the riparian buffer(s). The plan shall clearly show the areas that will be disturbed and those which will be protected and preserved. The plan shall identify which proposed activities are permitted by right, which will require any conditional use approval, and which will require mitigation and restoration measures as a result of the actions proposed and /or activities planned in the Riparian Buffer Overlay Zoning District.

Section IV: Management

The final section of the riparian buffer management plan shall include a discussion of how the *goals* identified in Section II will be met, given the *proposed activities* from Section III. The plan shall be very specific in terms of when the construction, planting, or other activities are to begin and end and shall address long- and short-term maintenance and improvement activities necessary for preservation of the riparian buffer.

Details for management measures for existing vegetation could include application of herbicides, identification of invasive plants to be removed, number/species of native stock to be planted, and spacing required for newly planted trees. All other activities necessary to reach the goals stated in the schematic plan shall be referenced. These may include mowing schedules, farming practices, other plantings, renovations to structures, and all other related functions.

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The Riparian Buffer Management Plan shall include a schematic plan that illustrates the landowners' goals for the riparian buffer.

There are some basic guidelines landowners shall consider prior to deciding how to manage their riparian buffer areas. They are as follows:

- Three distinct layers of native vegetation are recommended to protect stream resources. The three “layers” include trees that form an overhead canopy, shrubs that provide an understory and herbaceous plants that serve as groundcover. The three layers provide specific water quality benefits and a diversity of animal habitat.
- Maintaining land is one of the most expensive methods for managing land on a suburban property.
- Native Pennsylvania species are *recommended* to be used, since they will adapt the best to existing site conditions.
- The creation of additional edges (berms, banks, walls, curbs) shall be minimized, and a reduction in existing edges should be sought.
- The importance of continued maintenance of the riparian buffer shall always be balanced with a landowner’s financial resources.
- No concentrated storm water flow shall be introduced into the Riparian Buffer Overlay Zoning District unless that flow is minimized to the extent possible with a level spreader or similar structure and or improvement.