

___10 RIPARIAN BUFFER ZONE (RBZ) MANAGEMENT

(Note to ___ Township: we are including 6 special resource area sections here, 414.10 through 414.15, which deal with management of stormwater-related features in indirect, though important ways. Although it is appropriate to include these provisions in subdivision/land development regulations, virtually all of these provisions should also be included in the zoning ordinance, in most cases as regulatory “overlays,” in order to reinforce their effectiveness. In some cases, such as floodplain protection and steep slopes, ___ Township already has some degree of regulation provided; however, these proposed regulations provide substantially more comprehensive management of the resource. In other cases, such as the Riparian Buffer Zone below, no regulation and overall management is currently provided and needs to be included if the Township is to have a comprehensive stormwater management program.)

The purpose of this section of the Ordinance is to:

- Regulate the land use, siting, and engineering of all development to be consistent with the intent and objectives of this ordinance, accepted conservation practices, so as to respect the carrying capacity of existing natural resources as further development occurs.
- Reduce the amount of nutrients, sediment, organic matter pesticides, and other harmful substances that reach watercourses, wetlands, and other surface water bodies as well as subsurface waters by optimizing scientifically-proven processes including filtration, deposition, absorption, adsorption, plant uptake, biodegradation, denitrification through stabilizing concentrated flows and encouraging distributed sheet flow, and by improving infiltration in all watersheds and especially in watersheds designated as Special Protection Waters by the Commonwealth of Pennsylvania.
- Provide for shading (i.e., cooling) of the aquatic environment so as to moderate temperatures, protect fish habitat, retain more dissolved oxygen, and encourage the growth of diatoms, beneficial algae, and aquatic insects in all watersheds and especially in watersheds designated as Special Protection Waters by the Commonwealth of Pennsylvania.
- Provide organic matter through leaf debris which falls into the stream and becomes trapped by woody debris (fallen trees and limbs) and rocks where such provides food and habitat for small bottom dwelling organisms (insects, amphibians, crustaceans, and small fish), essential to maintain the food chain in all watersheds and especially in watersheds designated as Special Protection Waters by the Commonwealth of Pennsylvania.
- Increase stream bank stability and maintain natural fluvial geomorphology of the stream system, reducing streambank erosion and sediment production and protecting fish habitat in all watersheds and especially in watersheds designated as Special Protection Waters by the Commonwealth of Pennsylvania.
- Conserve the natural features important to land and water resources (e.g., headwater areas, groundwater recharge zones, floodway, floodplain, springs, streams, wetlands, woodlands, prime wildlife habitats) and other features constituting high recreational value or containing amenities that exist on developed and undeveloped land.
- Conserve natural, scenic, and recreation areas within and adjacent to stream

areas for the community's benefit, promoting the positive functions of greenways.

- Improve and maintain the safety, reliability and adequacy of the water supply for domestic, agricultural, commercial, industrial and recreational uses along with sustaining diverse populations of aquatic flora and fauna.
- Work with floodplain and other ordinances that regulate environmentally sensitive areas to minimize hazards to life, property, and stream features.
- Assist in the implementation of pertinent state laws concerning erosion and sediment control practices.

A. Riparian Buffer Zone (RBZ) Definition

Areas immediately adjacent to the Township's perennial streams and waterways as mapped on US Geological Survey 1:24,000-scale quadrangle maps shall be defined as the Riparian Buffer Zone (RBZ). In the RBZ, special requirements as set forth in this section shall apply in order to maintain important natural functions. These RBZ requirements are based on both the heightened sensitivity of the RBZ zone in terms of stormwater-related impacts and the potential to negatively impact the stream system when the vegetation and soil of this RBZ zone is disturbed. Additionally, the RBZ has the potential to mitigate to the maximum extent the negative effects of development in areas adjacent to the stream system. The RBZ shall include three sub-zones, Zones 1 through 3, extending landward from the top of the streambank where different requirements are imposed:

1. Zone 1, a 25-foot setback zone/increased to a 50-foot setback zone in Special Protection Waters, measured from the top of the bank of the waterbody, where no disturbance of vegetation and soil except for restoration shall occur, in order to shade the stream with natural vegetation, to provide a source of numerous other organic inputs to the aquatic system, to anchor the streambank and floodplain areas, and to consume and otherwise remove nitrogen, sediment, and other substances which can adversely affect stream systems.
2. Zone 2, a 75-foot managed buffer zone/increased to a 150-foot managed buffer zone in Special Protection Waters, extending outward from Zone 1, where disturbance of natural vegetative cover shall be limited to selective logging and other activities which minimally disrupt existing tree cover and soil mantle, in order to maximize filtering and overall physical removal of particulate-form pollutants from runoff generated upgradient and to promote subsurface vegetative uptake of nitrogen and other non-particulate elements from stormwater generated upgradient.
3. Zone 3, a zone of varying width extending outward from Zone 2; Zone 3 is defined in those cases where upslope areas adjacent to the RBZ are being disturbed during the land development process and where direct discharge of stormwater would otherwise occur; Zone 3 must include level spreading devices as necessary to ensure that any directly discharged stormwater flows are properly distributed as sheet flow and channelization and point source discharges are avoided; if the conditions triggering Zone 3 are not present, Zone 3 does not exist, but where Zone 3 conditions are triggered, a minimum Zone 3 width is likely to be 50 feet beyond Zone 2.

B. Uses Permitted in the Riparian Buffer Zone RBZ

In addition to regulated activities permitted by the State, if any, provision for unpaved trail access, and selective removal of hazardous or invasive vegetative species, the following uses are permitted in the Riparian Buffer Conservation Zone, either by right or after review and approval by ___ Township.

1. Zone 1: Uses Permitted by Right

Open space uses that are primarily passive in character shall be permitted to extend into the area defined as Zone 1, including:

- a. Wildlife sanctuaries, nature preserves, forest preserves, fishing areas, passive areas of public and private parklands, and reforestation.
- b. Streambank stabilization.

2. Zone 1: Uses Requiring Municipal Review and Approval

Crossings by farm vehicles and livestock, recreational trails, roads, railroads, centralized sewer and/ or water lines, and public utility transmission lines, and public utility transmission lines provided that any disturbance is offset by buffer improvements.

3. Zone 2: Uses Permitted By Right

The following uses, which are primarily passive, shall be permitted by right to extend into the area defined as Zone 2:

- a. Open space uses including wildlife sanctuaries, nature preserves, forest preserves, passive areas of public and private parklands, and recreational trails.
- b. Reforestation.
- c. Minimum required front, side, and rear yards on private lots, provided that no yard may extend into Zone 2 more than half the distance between the outer boundaries of Zone 1 and Zone 2.
- d. Agricultural uses existing at the time of adoption of this Ordinance, provided that appropriate conservation techniques are being applied.

4. Zone 2: Uses Requiring Municipal Review and Approval

- a. New agricultural uses.
- b. Buffer crossings by farm vehicles and livestock, roads, railroads, centralized sewer and/or water lines, and public utility transmission lines provided that any disturbance is at a minimum, offset by buffer improvements.
- c. Centralized sewer and/or water lines and public utility transmission lines running along the buffer, provided that any disturbance is, at a minimum, offset by buffer improvements. These lines shall be located as far from Zone 1 as practical.

5. Zone 3: Uses Permitted By Right

Zone 3 must include level spreading devices as necessary to ensure that any directly discharged stormwater flows are properly distributed as sheet flow and channelization and point source discharges are avoided. All uses

which allow for this level spreading and sheet flow to occur are acceptable. Acceptable uses include:

- a. Selective cutting of trees when removal is consistent with approved standards.
 - b. Areas such as camps, campgrounds, picnic areas and golf courses. Active recreation areas such as ballfields, playgrounds, and courts provided these uses are designed in a manner that will not permit concentrated flow.
 - c. Naturalized stormwater basins in compliance with acceptable comprehensive stormwater management guidelines appearing elsewhere in this Ordinance. The entire basin shall be located a minimum of 100 feet from the defined edge of an identified watercourses.
6. The RBZ may be included in net density calculations with uses permitted in the Township Zoning Ordinance, unless this RBZ is required to be subtracted out as the result of other applicable Zoning Ordinance regulations, such as regulation of the floodplain.
 7. An RBZ adjacent to “High Quality Waters” and “Exceptional Value Waters” designated under the PADEP Chapter 93 Rules and Regulations shall be subject to the provisions of the PADEP “Special Protection Waters Implementation Handbook” and its amendments. To the extent that ___ Township and PADEP requirements are not consistent, the more restrictive requirements shall apply.

C. Uses Prohibited in the Riparian Buffer Zone (RBZ)

Any use or activity not authorized HEREIN shall be prohibited within the Riparian Buffer Zone. No woodland disturbance or other land disturbance shall be permitted within 25 feet of the outermost limit of any wetland or streambank, measured horizontally, except as noted in this Ordinance. The following activities and facilities are specifically prohibited:

- Clear-cutting of trees and other vegetation, Zones 1 and 2.
- Selective cutting of trees and/or the clearing of other vegetation within Zone 1, except where such clearing is necessary to prepare land for a use permitted herein and where the effects of these actions are mitigated by revegetation.
- Selective cutting of trees and/or the clearing of other vegetation within Zone 2, except where such clearing is necessary to prepare land for a use permitted herein and where the effects of these actions are mitigated by revegetation.
- Removal of trees in excess of selective cutting, except where such removal is necessary as a means to eliminate dead, diseased, or hazardous tree stands that jeopardize public safety or as part of a reforestation project, provided that the removal is approved by the Township Engineer and/or directly by the Township.
- Removal or disturbance of vegetation in a manner that is inconsistent with erosion control and buffer protection.

- Storage of any hazardous or noxious materials.
- Use of fertilizers, pesticides, herbicides, and/or other chemicals in Zones 1 and 2; in Zone 3, such chemicals may be applied but only consistent with prescribed industry standards or the recommendations of the ____ County Conservation District.
- Roads or driveways, except where permitted as buffer crossings.
- Motor or wheeled vehicle traffic in any area not designed to accommodate adequately traffic type and volume.
- Parking lots.
- Any type of permanent structure, including fences, except structures needed for a use permitted herein.
- Subsurface sewage disposal areas.
- Sod farming.

D. Existing Uses

Existing uses within the RBZ, unless otherwise addressed by the above provisions, are not subject to the requirements of this Ordinance.