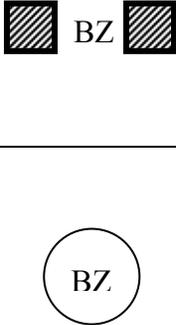


	Bowling Green, Kentucky Stormwater Best Management Practices (BMPs) Erosion Prevention Practices (EPPs)	EPP-04										
	Activity: Buffer Zones (BZ)											
PLANNING CONSIDERATIONS: Design Life: Permanent Acreage Needed: Minimal Estimated Unit Cost: Low Monthly Maintenance: 60% of Installation												
Target Pollutants												
<table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 33%;">Significant ♦</td> <td style="text-align: center; width: 33%;">Partial ♦</td> <td style="text-align: center; width: 33%;">Low or Unknown ◇</td> </tr> </table>			Significant ♦	Partial ♦	Low or Unknown ◇							
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Description	Buffer zones allow the utilization of vegetation to protect soils from erosion as well as reduce the velocity of runoff. This BMP allows the removal of sediment through filtering and settling. This management practice is likely to create a significant reduction in sediment by reducing erosion and retaining plant vegetation along waterways.											
Suitable Applications	<ul style="list-style-type: none"> ➤ There are two types of buffer strips: General Buffers and Vegetated Riparian Buffers. <ul style="list-style-type: none"> • <i>General Buffers:</i> A strip of original, undisturbed land adjacent to the disturbed site provides a general buffer. • <i>Vegetated Riparian Buffers:</i> Buffers that provide protection to adjacent streams by filtering overland flow of sediments and strengthening bank stabilization. These buffers are also useful by cooling streams to promote plant and fish habitation and providing food for the surrounding wildlife. ➤ Utilization or reinforcement of existing vegetation is preferred. However, where improvements are required; sodding, plugging, use of stockpiled vegetation or seeding is acceptable. ➤ Sodding is appropriate if it is part of the no construction activity area that contained turf prior to construction, or for any graded or cleared areas that might erode and where a robust plant cover is needed immediately. ➤ Plantings for buffer reestablishment and enhancement can consist of bare root seedlings, container grown seedlings, container grown plants and balled and burlapped plants. Standard permanent erosion control grasses and legumes may be used in denuded areas for quick stabilization. ➤ Soil preparation and maintenance are essential for the establishment of planted vegetation. 											

Approach**General Buffers**

- A sufficient width should be selected to promote plantings' growth and to serve as a filter of overland flow entering the zone.

Vegetated Riparian Buffers

- Prior to structuring the zone, careful consideration should be given to its intent and purpose and how it should be enhanced to meet the requirements of the buffer zone. Stream characteristics such as width, slope, depth and the topography of the surrounding vicinity should be considered.
- Stream buffers must at least include the floodway plus 50 feet perpendicular to the floodway. If a floodway has not been determined, the buffer must be at least 25 feet perpendicular from each side of the stream bank, creek, or unnamed waterway, under "bank-full" conditions.
- Stream buffers are typically 50 feet wide for flat lying areas.
- A buffer should be increased 2 feet in width for every 1% of slope perpendicular to the centerline of the stream.
- If existing vegetation is disturbed or removed, a new multipurpose buffer should be created using the three following zones:
 - Zone 1 – the first 20-feet adjacent to the stream should include trees and shrubs spaced 6-10 feet apart to provide stabilization of the bank deep into the soil.
 - Zone 2 – The next 10-feet should consist of managed forest for chemical absorption and wildlife habitat.
 - Zone 3 – the upper 20-feet should be comprised of grasses for sediment and chemical capture as well as noise reduction.

Maintenance

- Inspect sod installations weekly and after significant storm events, until the turf is established, and routinely thereafter.
- Maintenance shall consist of mowing, weeding, and ensuring that the irrigation system is operating properly and as designed to sustain growth.
- Inspect buffer strips weekly and after significant storm events until vegetation is established, and routinely thereafter. Repair eroded or damaged areas as needed to maintain original purpose and effectiveness of the buffer strip.
- Provisions to maintain and protect new plantings from native wildlife should be incorporated with the design documents and drawings.

Inspection Checklist

- Sod is properly maintained and watered.
- Buffer strips are properly maintained.
- Plantings are sufficiently protecting from wildlife.
- Significant rainstorm events have not deteriorated buffer zone.