



Bowling Green, Kentucky
Stormwater Best Management Practices (BMPs)
Site Planning and Design Practices (SPDs)

SPD-04.2

Activity: Setbacks and Buffers

PLANNING CONSIDERATIONS:

Design Life:
Permanent

Acreege Needed:
Varies

Estimated Unit Cost:
High

Monthly Maintenance:
N/A



Target Pollutants

Significant ♦	Partial ♦	Low or Unknown ♦
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Sediment ♦	Heavy Metals ♦	Nutrients ♦	Oxygen Demanding Substances ♦	Toxic Materials ♦
Oil & Grease ♦	Bacteria & Viruses ♦	Floatable Materials ♦	Construction Waste ♦	

Description

A *setback* is the area between intensive development (i.e., buildings, parking lots, roads) and a protected area, such as a wetland. Setbacks are necessary for:

- Controlling the peripheral effects of development
- Protecting developments
- Providing access for maintenance

For example, a highway or parking lot built directly on the edge of a high-quality wetland may adversely affect water quality and wildlife habitat from pollutant runoff or spray and traffic noise. Setback requirements for structures, particularly adjacent to streams, reflect the fact that streams naturally meander or expand over time. Placing structures in the natural path of a meandering stream virtually guarantees that expensive stabilization measures will be needed in the future as the stream approaches building foundations, threatening their collapse.

Only limited activities are recommended for approval in a setback. The types of activities include minor improvements, such as walkways, foot bridges, and observation decks; roadways necessary for crossing a water body; maintenance and repair of existing roads and utilities; and the establishment of landscaped lawns or parks. In general, major modifications to the land surface should be avoided in setbacks.

**Description
(cont'd)**

Limiting activities in a *floodway* to appropriate uses is similar to a setback requirement. A floodway is the part of the floodplain, centered on the stream, which will convey most of the flow during a high water event. Appropriate uses exclude most buildings and structures. However, other uses that are allowed may adversely affect water quality and habitat. These include:

- Parking lots
- Roadways parallel to the waterbody
- Garages and storage sheds
- Treatment plants and pumping facilities

Within a setback, a *buffer strip* is the transitional vegetated area closest to the waterbody or wetland. The purposes of a buffer are to:

- Minimize erosion
- Stabilize the stream bank or lakeshore
- Filter runoff pollutants from adjacent developments
- Preserve fish and wildlife habitat
- Screen manmade structures and preserve aesthetic values
- Provide access for maintenance or trails

Buffers reflect that natural aquatic systems may not function well in isolation and that a gradual continuum exists from natural riparian or wetland systems to upland. Ideally, a buffer should be maintained or planted in native riparian vegetation to maximize pollutant filtering, soil stabilization, and habitat functions.