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Field Guide to Best Management Practices for Timber Harvesting in Kentucky

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What Is in This Guide

This guide was designed as a field reference for timber harvesting operations. It contains minimum requirements and specifications of Best Management Practices (BMPs) appropriate for timber harvesting operations in Kentucky. Use of these BMPs will help reduce or eliminate sources of water pollution from:

- movement of sediments to streams and other waters;
- changes in stream temperatures;
- alteration of stream flow due to sediment deposits, tree tops, and other debris;
- movement of substances harmful to waters, such as vehicle fluids and fertilizers.

This guide includes the minimum requirements mandated by the Agriculture Water Quality State Plan. These minimum requirements are found in the highlighted boxes in each BMP. This guide also includes recommendations for meeting these minimum requirements as found in BMPs 1, 2, 3, 4, 5, 7, and 10 of the 1997 edition of the *Kentucky Forest Practice Guidelines for Water Quality Management (1997).* BMPs 6, 8, 9, 11, 12, and 13 are not included in this guide as they involve reforestation and fire control issues.

Quick Reference for Determining Timber Harvesting BMPs

The following reference can be used to determine the appropriate BMPs for protecting water quality. The BMPs determined using this reference satisfy the Silviculture (including timber harvesting) and the Streams and Other Waters sections of the Kentucky Agriculture State Water Quality Plan. Use one or more of the following BMPs if your answer is "yes":

Questions 1 through 6 are for Silvicultural BMPs for Timber Harvesting.

1. As part of any timber harvesting operation, will roads, skid trails, and/or log landings be constructed, used, and/or maintained?

☐ Yes ☐ No

If yes, use Silvicultural BMP No. 1 (pg. 10) and BMP No. 5 (pg. 50).

2. Does the area where the timber harvesting operation is to occur contain—or is it directly adjacent to—perennial or intermittent streams or other bodies of water?

☐ Yes ☐ No

If yes, use Silvicultural BMP No. 3 (pg. 39) and BMP No. 5 (pg. 50), also see questions 7-10.

3. Does the boundary or tract where the timber harvesting operation is to occur contain sinkholes?

☐ Yes ☐ No

If yes, use Silvicultural BMP No. 4 (pg. 47) and BMP No. 5 (pg. 50).

4. In conjunction with the timber harvesting operation, are there disturbed or otherwise bare areas (such as roads, skid trails, or landings)

that need to be revegetated to prevent and/or control soil erosion?

☐ Yes ☐ No

If yes, use Silvicultural BMP No. 2 (pg. 32).

5. Will timber harvesting activities occur in areas classified as wetlands by the Natural Resources Conservation Service (NRCS) or the U.S. Army Corps of Engineers?

☐ Yes ☐ No

If yes, use Silvicultural BMP No. 10 (pg. 53).

6. Will fertilizers be used in connection with your timber harvesting activities?

☐ Yes ☐ No

If yes, use Silvicultural BMP No. 7 (pg. 52).

Questions 7 through 10 are for Streams and Other Waters BMPs (as found in the Kentucky Agriculture Water Quality Authority Producer Workbook.

7. Do you have to cross a stream with vehicles as part of your operation?

☐ Yes ☐ No

If yes, use Streams and Other Waters BMP No. 1.

8. Are there sand or gravel deposits in any stream that you will remove?

☐ Yes ☐ No

If yes, use Streams and Other Waters BMP No. 2.

9. Are any stream banks scouring, caving in, or sloughing off?

☐ Yes ☐ No

If yes, use Streams and Other Waters BMP No. 3.

10. Do any streams have logjams or sediment blockages that need removing?

☐ Yes ☐ No

If yes, use Streams and Other Waters BMP No. 4.

Planning for Proper BMP Effectiveness

The following provides a guide for planning road, trail, and landing placement which is critical to effective BMP use and water quality protection.

Determining Control Points

Control points affect the placement of the roads, trails, and landings. Control points are features of the landscape such as:

- highway access points,
- wood roads,
- water courses (streams, sloughs, springs, and ponds),
- seeps,
- rock outcrops,
- thin soils, and
- sinkholes.

Using Maps and a Walk-Through

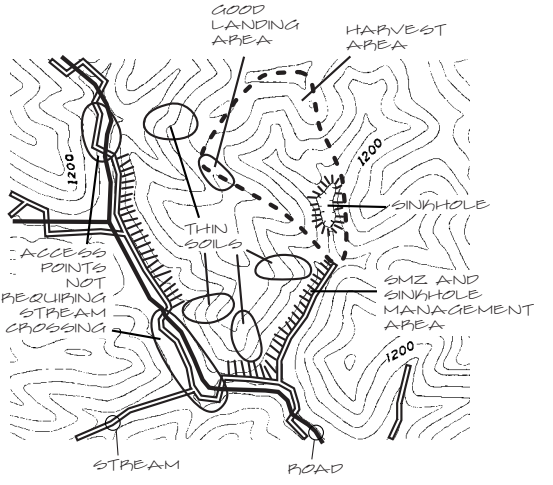
Use topographic maps and a thorough walk-through to determine the location of **control points**. Figure 1 shows a timber harvest boundary sketched on a topographic map. Topographic maps contains curved lines, called contour lines, which represent a particular elevation. Several of the control points, such as streams, sinkholes, ephemeral channels, and the location of roads, were identified from the topographic map prior to the walk-through. During the walk-through, several other control points were also identified, including areas with thin soils and rock outcrops and a potential site for the landing.

Planning the Location of the Roads and Landings

Use the established control points and road standards to establish the preliminary access road location following these general recommendations:

- Minimize the number of stream crossings.
- Maintain minimum SMZ distances to streams (see BMP No. 3).
- Avoid sinkholes, if possible (see BMP No. 4).
- Avoid drainages such as ephemeral channels, if possible.
- Maintain appropriate road grade (see BMP No. 1).

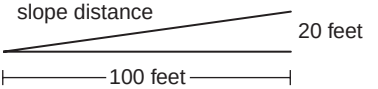
Figure 1–Topographic Map with Control Points



Common Measurements Needed for BMP Implementation

Slope Measurement

Slope is measured as the rise or fall over a 100-foot horizontal distance. Slope percent describes the steepness of a hill or road and is used for implementing BMPs like water bars or Streamside Management Zones.



In this example 20 feet ÷ 100 feet = 0.20

or a 20 percent slope.

A scale for estimating slope percent is provided on the back of this *Guide*.

Slope Distance

Distances used in this *Guide* refer to slope distances or the linear distance along the ground, not the horizontal distance.