

BEST MANAGEMENT PRACTICES FOR PROJECTS AFFECTING RIVERS, STREAMS AND TRIBUTARIES

The project crosses or potentially affects river, stream or tributary aquatic habitat. Therefore the Service recommends implementing the following applicable Best Management Practices:

1. Construct stream crossings during a period of low streamflow (e.g., July - September);
2. Cross streams, stream banks and riparian zones at right angles and at gentle slopes;
3. When feasible, directionally bore under stream channels;
4. Disturb riparian and floodplain vegetation only when necessary;
5. Construction equipment should cross the stream at one confined location over an existing bridge, equipment pads, clean temporary native rock fill, or over a temporary portable bridge;
6. Limit in-stream equipment use to that needed to construct crossings;
7. Place trench spoil at least 25 feet away landward from streambanks;
8. Use sediment filter devices to prevent movement of spoil off right-of-way when standing or flowing water is present;
9. Trench de-watering, as necessary, should be conducted to prevent discharge of silt laden water into the stream channel;
10. Maintain the current contours of the bank and channel bottom;
11. Do not store hazardous materials, chemicals, fuels, lubricating oils, and other such substances within 100 feet of streambanks;
12. Refuel construction equipment at least 100 feet from streambanks;
13. Revegetate all disturbed areas as soon as possible after construction to prevent unnecessary soil erosion. Use only native riparian plants to help prevent the spread of exotics;
14. Maintain sediment filters at the base of all slopes located adjacent to the streams until right-of-way vegetation becomes established;
15. Maintain a vegetative filtration strip adjacent to streams and wetlands. The width of a filter strip is based on the slope of the banks and the width of the stream. Guidance to determine the appropriate filter strip (stream management zone, SMZ) width is provided below; and
16. Direct water runoff into vegetated areas.

SMZ WIDTH

SMZ widths should consider watershed characteristics, risk of erosion, soil type, and stream width. SMZ widths are measured from the top of each bank and established on each side of the stream. Erosion risk is increased with sandy soil, steep slopes, large watersheds and increasing stream widths. Recommended primary (refers to ephemeral streams) and secondary SMZ (refers to intermittent, braided, and perennial streams, lakes, and ponds) widths are provided in the table below.

Stream Width (Feet)	Slope (Percent)	Primary SMZ (Feet)	Secondary SMZ (Feet)
< 20	< 7	35	0
< 20	7-20	35	50
< 20	> 20	Top of slope or 150	75
20-50	< 7	50	0
20-50	7-20	50	50
20-50	> 20	Top of slope or 150	75
> 50	< 7	Width of stream or 100 max.	0
> 50	7-20	Width of stream or 100 max.	50
> 50	> 20	Top of slope or 150	75

PERMIT REQUIREMENTS

A permit may be required from the U.S. Army Corps of Engineers should fill material be placed in wetlands or other waters of the United States. Should such a permit be required, the BMP's contained in this enclosure, as well as other conservation provisions, may become permit conditions. Additional permit requirements may apply, depending upon the nature of individual projects.

DEFINITIONS

Perennial streams have a well defined channel and flow year-round, except during periods of extreme drought.

Intermittent streams have a seasonal flow and a continuous well-defined channel.

Ephemeral streams flow during and for a few hours or days after periods of heavy rain and the stream channel is less recognizable than either perennial or intermittent streams.

Braided streams are stream systems with multiple and frequently interconnected channels.

Wetlands generally support hydrophytic vegetation, hydric soils and wetland hydrology.

Literature Cited

Arkansas Forestry Commission. 2001. Draft Arkansas Forestry Best Management Practices for Water Quality Protection.