



# Portable Bridges

Temporary Access Provides Permanent Solutions

*Photo Courtesy of The Nature Conservancy/Emily Clegg*

*Luce County - Michigan* One of the biggest challenges landowners have with harvesting timber on their property is dealing with stream crossings. Often timber is “trapped” on the wrong side of a crossing. Michigan has a set of Best Management Practices (BMP’s) for riparian and stream area management around timber cutting. Usually the BMP’s recommend avoiding wetlands, streams, and riparian areas. However, in the past landowners “made due” with logs, old ill-fitting culverts, and many less than desirable “fills” that would dam a stream to allow a logging truck to cross.

Studies conducted by the US forest Service and the university of Auburn on the Talladega National Forest showed that installing a portable bridge resulted in 98% less sediment entering the stream compared to installing a culvert.

Currently, portable bridges are made out of either timber or steel and are becoming the standard for environmentally sound ways to cross rivers and streams. Portable skidder bridges are temporary wooden or steel (often old rails) structures used by operators for crossing streams with a skidder, forwarders, and in some cases mechanized timber harvesters and other logging equipment. They need to be able to hold up to a lot of weight – including a fully loaded logging truck. The use of a skidder bridge during timber harvest helps provide both a safe and

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stable stream crossing. By removing direct access through a waterway, the bridge minimizes streambank and streambed disturbances and the soil erosion and sedimentation which can accompany them. Also, since these bridges are above the stream they don't impede passage of aquatic organisms. The key advantages over culverts include:

- Minimize stream siltation
- Meet or exceed most BMP standards
- Keep wood and other debris out of waterways
- Reusable



Workers place a portable bridge over a stream at a former ford crossing. Photo Courtesy of The Nature Conservancy/ Amber Datta

More and more states and Conservation Extension services are developing loan and rental programs that allow temporary use of the bridges during active logging. The Michigan Department of Natural Resources has 27 portable bridges for use on state forest land, and is interested in buying more to loan out on private forest land. While the state is not ready for loans yet, they hope that a grant funded program could kick start a bridge rental program. The state hopes that other groups such as non-profit watershed groups, Tree Farm, Michigan Forestry owner's association and others could also build a stockpile of bridges to loan out on private forest land.

In Vermont, many of the state's conservation districts have portable skidder bridge rental or loan programs. The fee is reasonable around \$100 per month. The materials required to build a bridge based on Vermont's BMP was estimated at over \$2000.

#### **More Information**

Good USDA Guild on Portable Bridges: [https://www.na.fs.fed.us/pubs/misc/bmp/timber\\_bridges\\_bmp.pdf](https://www.na.fs.fed.us/pubs/misc/bmp/timber_bridges_bmp.pdf)

The Nature Conservancy created an introductory video on portable bridges—found at:

[www.nature.org/photos-and-video/video/safe-crossings](http://www.nature.org/photos-and-video/video/safe-crossings)

and <https://vimeo.com/204251766/fc2c1a4d58>