



## Professional Issues Related to Bridge Design and Terrain Stability

**Date: December 2000**

Please file this notice in your Professional Manual under the tab *Ethics and Responsibilities*.

### **Background:**

The following notice is intended as a guide for professional foresters with respect to their responsibilities regarding forest roads, in particular bridge design and terrain stability.

The association has become aware of an apparent misinterpretation of the changes to the *Forest Road Regulation* and that some members currently working in the forest sector are not aware of these requirements.

### **Bridge design:**

The professional responsible for the design of a bridge must take full professional responsibility for the following at the design stage:

- If the registered member is intending to design the bridge, that RPF must assess the specific location where the structure will be placed to determine, on a case-by-case basis, whether the site and structure elements are sufficiently benign to permit non-professional engineer design. This is clearly spelled out in the *Forest Road Regulation* (part 2, section 10).
- The RPF must determine the exact site selection where the bridge will cross the stream.
- The RPF must determine the design discharge at high water.
- The RPF must ensure the position of the bridge on the stream and along the road, vertically and horizontally.
- The RPF must determine the final combinations of appropriate structural design elements for the specific crossing structure.

## **Terrain Stability:**

Professional foresters must be aware that full road design profiles are required in the following instance. If, prior to construction, the terrain stability field assessment (TSFA) indicates sidecasting of materials would create a moderate to high likelihood of landslides, then full road design profiles must be completed. The TSFA must not be based on the final road arrangement.

For example, if you prescribe a full bench cut with end hauling in an area that would be of moderate to high likelihood of landslide, you must still do a full road design profile even though the full bench cut reduces the likelihood below moderate.