

NOVA SCOTIA WATERCOURSE ALTERATION SPECIFICATIONS (2010)

Erosion Protection:

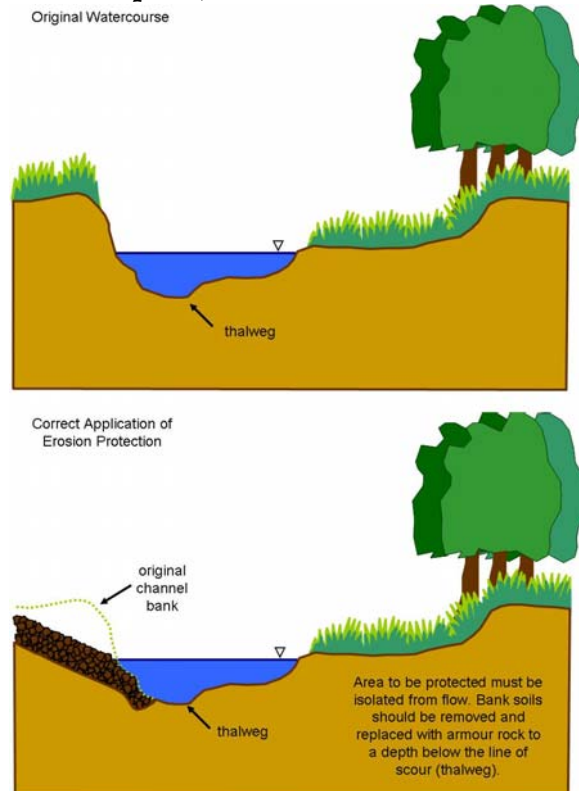
- EP1. All work operations shall be conducted in a manner to protect the watercourse from the release of silt and sediment.
- EP2. All erosion protection works must be carried out in isolation of the streamflow (in the dry).
- EP3. Prior to the placement of erosion protection material, banks are to be graded to a uniform slope not to exceed a 2:1 horizontal to vertical slope. Erosion protection materials must be installed, after preparation of the bank, below the line of scour (deepest channel of flow within the watercourse), sized based on the calculated velocity of the stream (see table 1) and installed to minimum thickness of 1.5 times the maximum stone size. (See Diagram 1)
- EP4. Erosion Protection material shall be placed such that it must not encroach upon the channel beyond the thickness of the largest material required, based on velocity of the watercourse.
- EP5. The placement of the erosion protection material shall be carried out starting at the upstream end.
- EP6. Following installation the erosion protection material shall be checked to ensure that any movement of the material does not result in exposing the slope, increasing the risk of failure.
- EP7. The material used for erosion protection works must be clean, durable, non-ore bearing, non-toxic and obtained from a non-watercourse source.
- EP8. The following uniformly-graded, stone rip rap material shall be used as armour for erosion protection unless alternate materials have been authorized by the Department.

Table 1: Rip Rap Sizing

<i>Velocity</i>	<i>A minimum of 70% of Rip rap size (millimetres)</i>
Up to 3 meters per second	200 to 450
3 meters per second to 4 meters per second	300 to 760
4 meters per second to 4.5 meters per second	500 to 1200

- EP9. Erosion Protection Material must be placed by an excavator, backhoe, or by hand and carefully fitted along the watercourse to prevent scouring and bank failure. No equipment shall be permitted in the watercourse unless otherwise authorized in writing by the Minister or Administrator.
- EP10. Erosion Protection material is to be installed to minimum thickness of 1.5 times the maximum stone size.
- EP11. All areas of soil exposed as a result of construction must be immediately stabilized to protect the watercourse from the release of silt or sediment.
- EP12. All excavated material shall be placed in a location where it will not enter the watercourse. All debris resulting from construction activities shall be disposed of at a facility which is Approved to accept the specific material. Any material not regulated by the Department shall be removed to an area where flood water will not come in contact with the debris and excavated material must be removed from the areas adjacent to the watercourse and be disposed of in a manner acceptable to the Department.

Diagram 1: Example of Correct Erosion Protection Installation



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