

Dirt, Gravel, and Low Volume Road Maintenance Program Administrative Manual – November, 2014

7.1 Stream Crossing Structural Replacement Policy

This section applies to both **Low Volume funds and Dirt and Gravel funds.**

7.1.1 Background

The goal of this policy is to allow the replacement of stream crossing structures that were negatively impacting the stream, while at the same time preventing the Program from simply becoming a “bridge replacement program”. The best quantification of stream impact is the size of the existing structure related to the bankfull width of the channel. A channel’s “bankfull width” is the width of flow at a “dominate channel forming flow stage” where sediment and bed material is moved most effectively through the stream system. Although it varies, bankfull is typically associated with a flow level between 1 and 2 year recurrence. Stream crossing structures that are significantly less than the channel’s bankfull width are typically associated with many problems including gravel deposition above the road and excessive stream scour and erosion below the road. In order to focus Program funds on structures that are most likely to be causing stream instability, the policy drafted here limits paying for structural replacement to only those locations where the existing structure is less than half of the bankfull channel width. These structures are most likely to be causing negative stream impacts, and are most likely to be sources of perpetual maintenance and road impacts to local municipalities (gravel bar removal, erosion, etc.). In addition, any new structures must have a width at least equal to the channel’s bankfull width.

7.1.2 Replacement of Road/stream Crossing Structures

The purpose of this policy is to determine eligibility for stream crossing structural replacement with Program funds. Environmentally Sensitive Maintenance practices applied to the surrounding bridge area (road, stream banks, ditches, high water bypass etc.) are still eligible Program expenses around all stream crossings. Within the limits described below, the final decision on funding structure replacement, along with the type of structure used (pipe, box, etc.), is at the discretion of local Quality Assurance Boards. These qualifications do not exempt projects from any permitting or engineering requirements.

EXISTING stream crossing structures with an opening equal to or less than 7 square feet (equivalent to a 36” diameter round pipe):

- **Are eligible to be replaced with Program funds.**
- **The NEW REPLACEMENT structure must meet (all four):**

1. Have a structure width at least equal to bankfull width (100% ratio).
2. Be properly aligned with the channel.

3. Consider additional floodplain connectivity when possible.
4. Be designed and constructed to accommodate the passage of aquatic organisms through the structure.