DEPARTMENT OF THE ARMY
NORFOLK DISTRICT, CORPS OF ENGINEERS
FORT NORFOLK, 803 FRONT STREET
NORFOLK, VIRGINIA 23510-1096

REPLY TO
ATTENTION OF:

May 5, 2009

Eastern Virginia Regulatory Section

Virginia Department of Transportation
ATTN: Mr. Richard T. Woody, II
Environmental Division
1401 East Broad Street
Richmond, VA 23219

Dear Mr. Woody:

This letter concerns requirements for calculating stream impacts when applying for authorization from the Norfolk District Corps of Engineers to perform work in waters of the United States. It has recently come to our attention that the Virginia Department of Transportation may in some cases be estimating impacts to streams using a methodology different from that which the Corps uses. Please adhere to the following guidance in reporting stream impacts in all future applications for Department of the Army permits, and when using non-reporting Department of the Army permits.

When calculating stream impacts, an applicant should include the length of any box culvert, pipe, or bridge that is being removed and replaced, even if the new culvert/pipe/bridge is going back in the same location (bridges are a special case in determining impacts; see example 2 below). If a pipe is being extended, and the existing pipe is being left in place and not moved, then only the length and area of the new work is included in stream impact numbers. Similarly, if riprap is being added at the inlet and/or outlet of an existing pipe, and the pipe is being left in place, only the length of stream under the riprap is included in the length of impacts.

Typically, when stream impacts exceed 300 linear feet, stream compensation is required. Stream compensation requirements are determined by the Corps project manager. However, if stream mitigation is required for a project, compensation will typically not be required for the length of stream impacted by the original pipe, even though the length of the original pipe is included in the stream length impact total.

This guidance is consistent with the Unified Stream Methodology (USM), prepared jointly by the Corps and the Virginia Department of Environmental Quality, which states in part "Jurisdictional streams that are entirely contained within concrete, gabion-lined, or riprap channels and do not have normal stream features (sedimentation, vegetation) will be reviewed on a case-by-case basis. Compensation for impacts to these stream channels will generally not be required.

However, impacts to these streams will still need to be included in the impact area for permitting purposes."

The following examples should be helpful in understanding how this guidance should be applied:

Example 1:

A road is being widened. There is an existing 100'-long pipe with no riprap at the outlets. The pipe is being replaced with a 230' pipe, with 15' of riprap at each outlet. The total length of stream being impacted is 260'. Since under 300' length, stream mitigation not anticipated.

Example 2:

A bridge is being replaced. The existing bridge abutments and piers are 150' wide with 20' of riprap at either end. The old abutments and piers will be pulled out in their entirety. The new bridge abutments are 275' wide, and there will be 25' of riprap at either end of the abutments. Neither the base of the abutments nor the bottom of the stream under the bridge is being riprapped, just the banks at the wingwalls. Total length of stream impacts is 325'. Since the project is a bridge, and the stream bottom is being left intact under the bridge, stream mitigation is not typically required, even though over 300' of stream is being impacted. However, in some circumstances, depending on the width of the stream and other factors, stream mitigation may be required for bridge projects. [The USM contains the option of requiring mitigation in such cases, at the project manager's discretion, but at a lesser ratio than for a full impact. For example, the USM "Impact Factor" is 1.0 for pipes, fills, impoundments, etc., but it is 0.75 for hardening of stream banks (i.e., concrete, gabions, concrete blocks, riprap, bottomless culverts and other similar structures), and it is 0.50 for bridges with piers in the stream channel.]

Example 3:

A road is being widened, and the 250'-long box culvert is being extended 50', with 25' of riprap placed at the new outlet. The existing culvert will be left in place, with the extension on one end. The total length of stream impacts is 75'. No stream mitigation is required.

Example 4:

A road is being widened. The existing 150' pipe will be removed, and a new 275' box culvert with 25' of riprap at each outlet will be constructed just east of the existing pipe, resulting in a minor realignment of the stream. The total length of stream impacts will be the distance from the edge of riprap upstream to the edge of riprap downstream, measured along the length of the stream *at its preconstruction location* (rather than along the location of the new

culvert, which is actually being placed in upland, and into which the stream will be diverted). The total length when measured is 330' (somewhat longer than the new box plus riprap, because of the meanders of the preconstruction stream). Mitigation is required, because total impacts exceed 300'. However, the Corps will typically not require mitigation for the length of the existing pipe. Therefore, mitigation would be required for 330 - 150 = 180', and credits required will be determined using the USM. See the attached illustration.

We hope that this guidance clarifies the methodology the Corps uses to calculate stream impacts for all types of permits. If you have any questions, you may contact Alice Allen-Grimes at (757) 201-7219 or alice.w.allen-grimes@usace.army.mil.

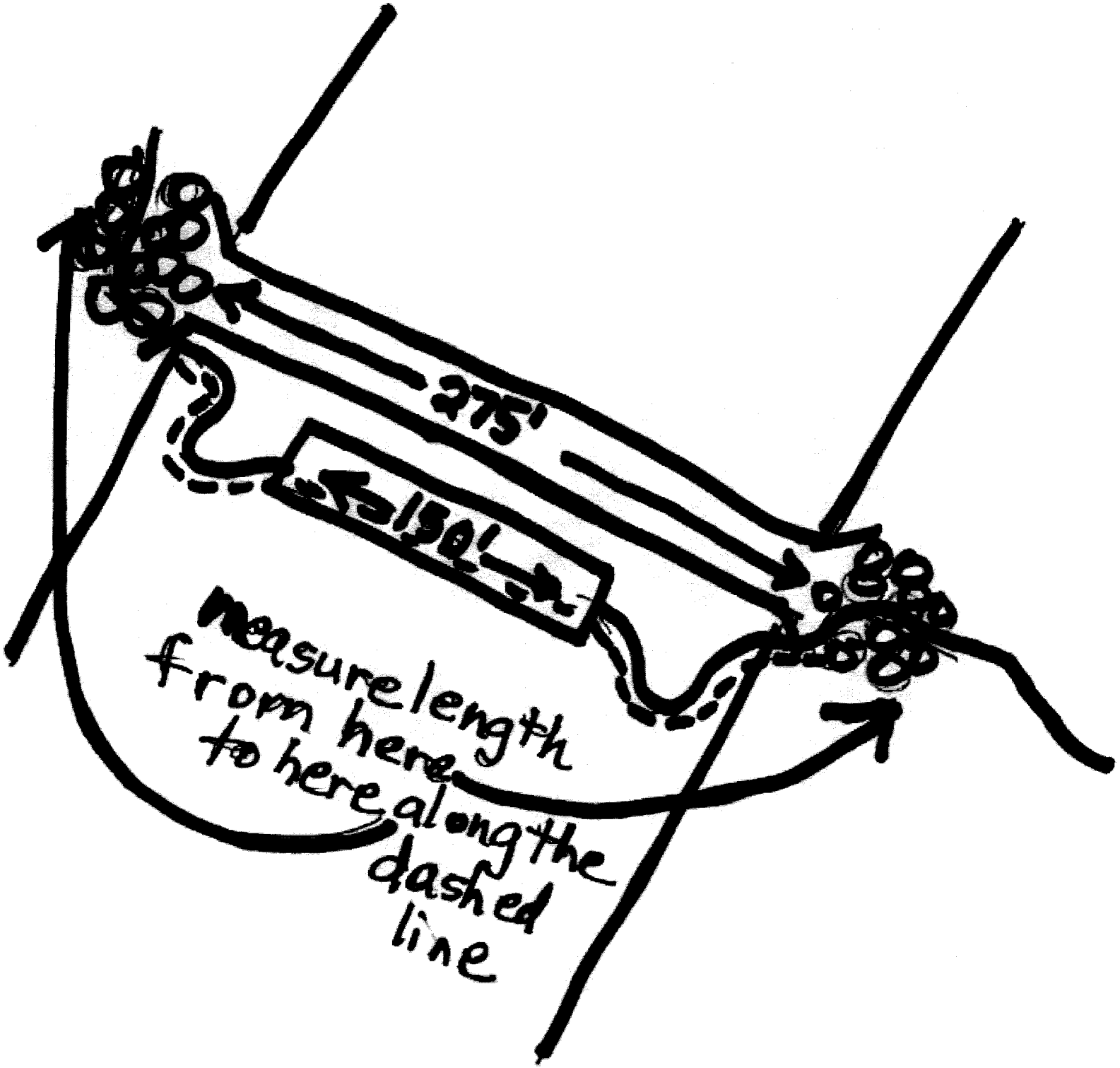
Sincerely,

J. Robert Hume, III
Chief, Regulatory Office

Enclosure

Copies Furnished (w/encl.):

Virginia Department of Environmental Quality, Richmond
Virginia Marine Resources Commission, Newport News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150'
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