



MEMORANDUM

From: Mike Rolband

Date: April 23, 2007

RE: USM Conversion for the Northern Virginia Stream Restoration Bank
WSSI #20000

The Mitigation Banking Review Team (MBRT) for the Northern Virginia Stream Restoration Bank (NVS RB) has approved an MBI Modification that provides a procedure for converting a USM score to a compensation requirement expressed in terms of SCUs (the currency used in the NVSRB). What does this mean? From this point forward, a person conducting stream assessments only needs to complete the Unified Stream Methodology (USM).

To determine the amount of credits that need to be purchased from the NVSRB to compensate for a stream impact, please follow the procedure outlined below:

1. *Assess the proposed impact stream per Section 1 of the USM;*
2. *Convert USM RCI to a SIAM Equivalency Factor utilizing the following formula:*

$$EF = 2.398 * (RCI_{USM})^{1.2619}$$

Where,

EF = SIAM Equivalency Factor

RCI_{USM} = USM Reach Condition Index;

3. *Assess the proposed impact stream per Section 2 of the USM; and*
4. *Determine stream compensation required (in SCUs) utilizing the following formula:*

$$CR_{SCU} = RCI_{USM} * EF * CF * LI * IF_{USM}$$

Where,

CR_{SCU} = Compensation Required (in terms of SCUs at NVSRB)

RCI_{USM} = USM Reach Condition Index

EF = SIAM Equivalency Factor (from Step 2)

CF = Drainage Area Correlation Factor¹

¹ Per Section 3.3.1 of the SIAM (pp. 104-106), if (DW_I/DW_C) is less than 0.2 then the Correlation Factor equals 0.53. If (DW_I/DW_C) is greater than 3.0 then the Correlation Factor equals 1.53. If (DW_I/DW_C) is between 0.2 and 3.0 then the Correlation Factor equals (DW_I/DW_C)^{0.39}.

LI = Length of Impact (in linear feet)
IF_{USM} = USM Impact Factor.

To aide you in these calculations, please find attached an electronic version of the NVSRB Credit Estimation Form in Excel format. To determine the Compensation Amount (in SCUs) and the Compensation Cost, a user needs to input the Stream Type, RCI_{USM}, Impact Length, Impact Factor (per Section 2 of the USM), and Impact Drainage Area. Our current pre-sale cost is \$135/SCU, which may be adjusted based upon payment timing, credit worthiness, and size of purchase.

If you have any questions, please contact Scott Petrey (E-mail: spetrey@wetlandstudies.com; telephone: 703.679.5653) or Kelly Stanforth (E-mail: kstanforth@wetlandstudies.com; telephone: 703.679.5658).

Enclosure