Tom Schueler and David Wood

Chesapeake Stormwater Network

June 18
USWG Meeting

Approval: Recommendations for Verifying Individual Stream Restoration Projects
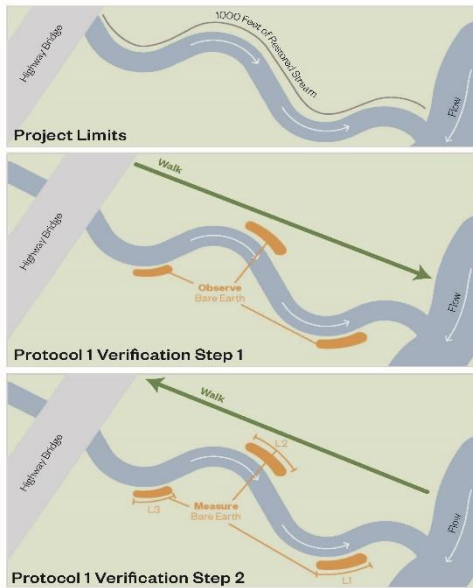
Thanks to the Experts on Group 1

Name	Affiliation
Rich Starr	Ecosystem Planning and Restoration
Kathy Hoverman	KCI
Tim Schueler	Hazen and Sawyer
Kip Mumaw	Ecosystem Services
Neely Law	Center for Watershed Protection
Meghan Fellows	Fairfax County, DPWES
Sandra Davis	US Fish and Wildlife Service
Jennifer Rauhofer	Stormwater Management Consulting
Josh Burch	DOEE
Scott Cox	PADEP

Memo Contents

Project Limits

Protocol 1 Verification Step 1

Protocol 1 Verification Step 2

Defining Loss of Pollutant Reduction Function for Protocol 1
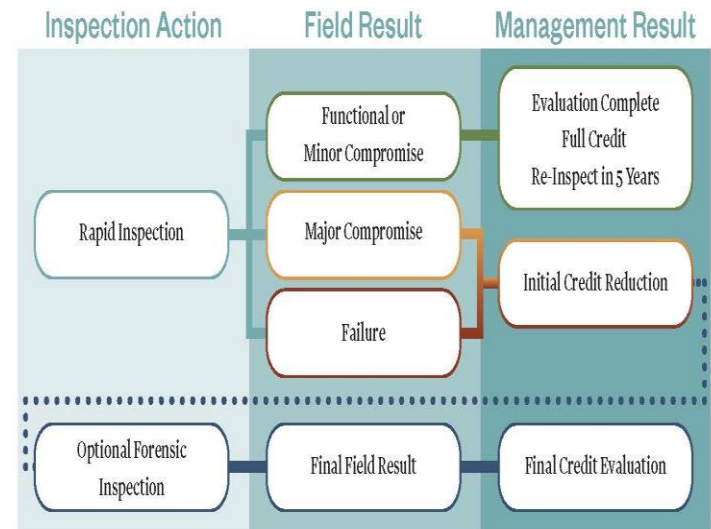
Criteria for Loss	Key Visual Indicators
Evidence of bank or bed instability such that the project delivers more sediment downstream than designed,	• Bank undercutting (bare earth exposed) • Incising bed (bed erosion evident) • Flanking or downstream scour of channel structures • Failure or collapse of bank armoring practices

Status	% Failing *
Functioning	**0 to 10% of reach**
Showing Major Compromise	**20 to 40% of reach**
Project Failure	**50% or more of reach**

Visual Indicators to Inspect for Stream Projects

Background on USWG Actions

- Recommended Findings Presented in April
- Shared with USWG/SHWG and the other 3 stream groups
- Comment period expired on June 1
- Minor comments received
- Final memo revised 6/4/19
- Seeking USWG Approval today
- Outreach in the early Fall

Comments:

Q: How do you verify older stream restoration projects that were designed w/o the protocols and just used the default rate?   (Alana – WVDEP):

A: Rely on the stability/erosion visual indicators for Protocol 1, since most historic projects were designed based on Rosgen natural channel design methods. May require some additional field work if post-construction documents are not available
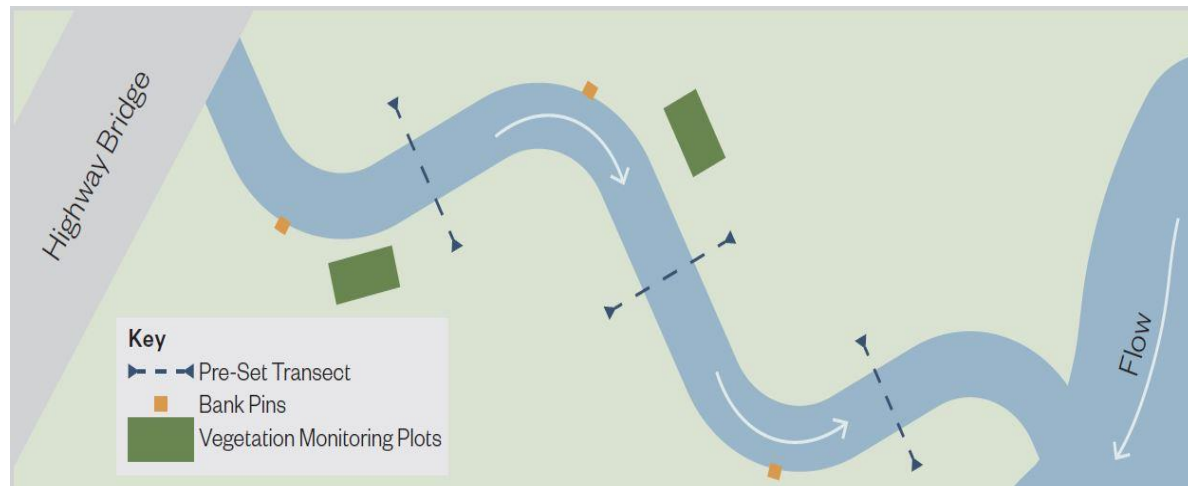
Other Comments:

- Concern about aggradation as a visual indicator

- Use of terms such as severe or major for bank erosion

- Revised Note 7 on Table 8 (scott Cox, PADEP)
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- How to verification of the actual boundaries of the hyporheic box (punted to Group 4)

Additional Feedback on Group 1 Memo

Courtesy of Greg Noe, USGS

Revisiting Stream Restoration: 2019

The USWG formed three other groups to revisit the EPR

- Group 2: Crediting Outfall Restoration Practices

- Group 3: Better Standards for Applying Protocol 1 (Prevented Sediment)

- Group 4: Adjusting Protocol 2/3 to Capture Floodplain and Stream Reconnection

Recommendations of the Expert Panel to Define
Removal Rates for
Individual Stream Restoration Projects

Joe Berg, Josh Burch, Deb Cappuccitti, Solange Filoso, Lisa Fraley-McNeal,
Dave Goerman, Natalie Hardman, Sujay Kaushal, Dan Medina, Matt Meyers, Bob Kerr,
Steve Stewart, Bettina Sullivan, Robert Walter and Julie Winters

Accepted by Urban Stormwater Work Group (USWG): **February 19, 2013**
Approved by Watershed Technical Work Group (WTWG): **April 5, 2013**
Final Approval by Water Quality Goal Implementation Team (WQGIT): **May 13, 2013**
Test-Drive Revisions Approved by the USWG : **January 17, 2014**
Test-Drive Revisions Approved by the WTWG: August 28, 2014
Test-Drive Revisions Approved by the WQGIT: September 8, 2014

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and
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