# RECOMMENDATIONS FOR IMPROVING THE APPLICATION OF THE PREVENTED SEDIMENT PROTOCOL

WTWG – NOVEMBER 7, 2019

# REVISITING STREAM RESTORATION

The USWG formed 4 groups to revisit the stream restoration EPR:

- Group 1: Verifying Stream Restoration Practices
- Group 2: Outfall and Gully Stabilization Practices
- Group 3: Establishing Standards for Applying Protocol 1
- Group 4: Adjusting Protocol 2/3 to Capture Floodplain Restoration

# BACKGROUND – NEED FOR GROUP 3

- One of the fastest growing BMPs – hundreds of miles in the pipeline
- Several key concerns based on past 5 years of implementation experience:
  - Over-reliance on default rates
  - Need for a clear "bank armoring" definition
  - Need for guidance on monitoring and modeling methods to improve consistency across practitioner community

| Table 1. Membership for Group 3 | |
|---|---|
| **Name** | Affiliation |
| **Drew Altland** | RKK |
| **Lisa Fraley-McNeal** | Center for Watershed Protection |
| **Joe Berg** | Biohabitats |
| **Rich Starr** | Ecosystem Planning and Restoration |
| **Josh Running** | Stantec |
| **Matt Meyers** | Fairfax County, VA DPWES |
| **Bill Brown** | PADEP |
| **Jeff White** | MDE |
| **Josh Burch** | DOEE |
| **Reid Cook** | RES Consultants |
| **Aaron Blair** | EPA |
| **Tess Thompson** | Virginia Tech |
| **Joe Sweeney** | Water Science Institute |

# A FEW REMINDERS

- These are Bay guidelines… final authority on any and all regulatory/permitting issues remains with the appropriate local/state/federal agency
- Grandfathering Clause: Any new recommendations would not need to be in place until January 2021
  - This aligns with CBPO model "lock-down" period and prevents disruption of projects already under contract.

# BANK ARMORING

## Original EPR

- "Projects primarily designed to protect public infrastructure by bank armoring or rip rap do not qualify for a credit."

## Group 3 Memo

- Reinforces EP statement on armoring for the sole purpose of infrastructure protection
- Narrative Definition of Bank Armoring
- Armoring techniques categories as Non-Creditable, Creditable with Limits, and Creditable
- Specific guidance on pollutant load discounts and calculation examples for each category

# DEALING WITH THE DEFAULTS

## Original EPR

- Nutrient Concentration Default Rates
- Bulk Density Example Being Used as Default
- Over-Use of Default Nutrient and Sediment Reductions

## Group 3 Memo

- Site Specific Monitoring for Bulk-Density and Nutrient Concentration
- Recommended Field and Lab Methods
- Stronger language on need to use the Protocols
- Separate section on recommendations for planning level estimates

# MONITORING GUIDANCE

## Original EPR

- Allows for use of "alternative monitoring and modeling approaches" to estimate sediment loss along a proposed reach
- Allows monitoring to be used to demonstrate better pollutant removal than 50% efficiency

## Group 3 Memo

- Describes Bank Pin Monitoring, Permanent Cross Sections and Bank Profile Methods
- Describes DEM Differencing Methods
- Provides guidance on monitoring necessary to demonstrate efficiencies higher than 50%

# TRACKING/REPORTING/VERIFICATION

- No changes to initial reporting requirements to CBPO
- Follows key visual indicators for prevented sediment outlined by Group 1

| Criteria for Loss | Key Visual Indicators |
|---|---|
| Evidence of bank or bed instability such that the project delivers more sediment downstream than designed, as defined by exposed soils/fresh rootlets | • Bank erosion (e.g., exposed bare earth or undercutting bank)<br>• Departure of more than 20% from average post-construction design bank height[1]<br>• Incised channel, as indicated by loss of defined pools and riffles and/or presence of an active head cut<br>• Flanking or scour of in-channel structures<br>• Failure or collapse of allowable bank protection practices<br>• Less than 80% ground or canopy cover in the restoration zone[2] |
| [1] as measured at riffles from the project as-built drawing, preferably from pre-designated control sections established at its most vulnerable locations<br>[2] depending on the long-term vegetative community objectives established for the project, may be expressed as a measure of exposed surface soil (>20%) or canopy cover (<80%) | |

# MONITORING GUIDANCE

- Directly measured pre- and post restoration sediment loss from streambank erosion
- Need 3 years of post-restoration monitoring before re-calculating reduction efficiency
- Use same monitoring method for pre and post analysis
- Re-report the back-dated BMP and remove the original record

# ISSUES FOR WTWG REVIEW: #1

WV DEP Comment:

- Grandfathering, Executive Summary Page 1- Suggest the recommendation be simplified to make projects implemented in progress year 2022 and beyond subject to the new requirements

  - Response: Will shift start to July 1, 2021, pending WTWG approval

# ISSUE FOR WTWG REVIEW: #2

WV DEP Comment:

- Recommended deleting section on default rates as it is broader than the intended charge for Protocol 1. The availability of entire project default rates should be an independent matter taken up by the partnership.
  - The group stands by its recommendation that default rates should not be used for reporting, from a technical standpoint. It will defer to the WTWG on a final decision.

# QUESTIONS?

Alger Park Restoration
Courtesy: DOEE