Last edited April 14, 2020

Non-Urban Stream Restoration (SR):

Summary of Concerns for Tracking, Reporting, & Crediting

In late 2018, the Urban Stormwater Workgroup (USWG) began re-evaluating the best management practice (BMP) recommendations of the 2013 Stream Restoration Expert Panel report sponsored by the USWG. In December 2019, the Water Quality Goal Implementation Team (WQGIT) approved one of a series of USWG reports, Recommendations for Improving the Application of the Stream Restoration Prevented Sediment Protocol, that provides further guidance on utilizing *Protocol 1- Prevented Sediment* for individual SR projects. At the same time, the WQGIT requested that the Agriculture Workgroup (AgWG) convene an expert panel (EP) to evaluate USDA-NRCS stream restoration practices that do not adhere to the SR protocols developed by the USWG. Concern has also been voiced regarding the USWG's recommendation to discontinue use of overall default removal rates for SR projects that are unable to provide site-specific data on TN, TP, and/or TSS for crediting toward nutrient and sediment load reduction goals. Per AgWG request in January 2020, an ad hoc group of interested parties convened a phone conference to discuss and clarify concerns regarding the new USWG recommendations. Below is a summary of the fundamental issues that the AgWG should consider addressing *before* the partnership-approved recommendations of the USWG are integrated into the Chesapeake Bay Watershed Model (CBWM) in July 2021.

APPLICABILITY OF SR RECOMMENDATIONS TO NON-URBAN PROJECTS:
This summary comes amid concerns raised in reaction to the Prevented Sediment (*Protocol 1*) report approved in December 2019, however non-urban SR restoration projects may include additional restoration techniques, beyond stabilization, that can be quantified using the relevant pollutant load reduction protocols (Figure 2, Lane 2 or 4) first defined in the 2013 report (p. 5; i.e., Protocol 2- Instream Denitrification and Protocol 3- Floodplain Reconnection). Non-urban SR projects that do not qualify for load reduction credit per the EP's qualifying conditions are also indicated in the report (p. 31). Figure 2 provides guidance on determining further action, in light of the USWG's recent re-evaluation of the 2013 EP report.

IMPORTANT NOTE FOR SUMITTING TO NEIEN:
**Any urban OR non-urban stream restoration project meeting the qualifying conditions defined by the USWG and able to produce site-level data on TN, TP, and/or TSS reduced (lbs/yr) should be reported as "Stream Restoration …[Urban or Ag]" (SB_BMP = [Urb or NonUrb] …StrmRestPro). If site-level data for TN, TP, and/or TSS reduced (lbs/yr) reduction cannot be collected, tracked, and submitted to NEIEN appropriately, jurisdictions should choose an alternative BMP name to report length (ft) or risk receiving no load reduction credit for the project.* Contact the Chesapeake Bay Program(CBP) office for further clarification.*

> **Any projects already in the ground or under contract as of January 1, 2021 should not be subject to the new USWG recommendations, but should adhere to the definitions, qualifying conditions and Protocol 1 (Prevented Sediment) calculations laid out in the 2013 Expert Panel (EP) report.**
>
> **All *new* definitions, qualifying conditions and Protocol 1 (Prevented Sediment) methods take effect on July 21, 2021.**

ISSUE #1: Default Removal Rate
The 2013 EP report provided an overall default removal rate (lb/ft/yr) for TN, TP and TSS that can be used by SR project managers in those situations where the load reductions cannot be estimated with the defined protocols, although the EP also concluded, "there was no scientific support to justify the use of a single rate for all stream restoration projects," (p.14). As of 2019, no jurisdiction has submitted site-specific TN, TP, and/or TSS reduced (lbs/year) in conjunction with length (ft) restored for a non-urban SR project. The USWG 2019 Prevented Sediment report aimed to clear up any confusion specifically related to the use of *Protocol 1-*

Prevented Sediment and to better equip jurisdictions to report site-specific load reduction data to NEIEN. The report additionally recommends discontinuing use of the 2013 EP report's overall default removal rates for TN, TP and TSS, thus requiring submission of site-specific pollutant load calculations for each SR project. There is concern among CBP partners that many non-urban SR projects meet the USWG SR qualifying conditions, but cannot estimate site-specific TN, TP and/or TSS reductions. For these projects, an overall default removal rate (lb/ft/yr) is needed in order to obtain even a minimal load reduction credit. In order to maintain the default option, the AgWG is tasked with providing scientific justification to:

1. continue the use of default removal rates for TN, TP, and TSS.
2. determine a default removal rate appropriate for non-urban SR projects when TN, TP, and TSS reductions cannot be estimated (See Figure 2, Lane 3).

ISSUE #2: NRCS Conservation Practice Standards (CPS)

When preparing BMP data for submission to NEIEN, jurisdictions must decide if an USDA-NRCS funded project meets the qualifying conditions defined by the USWG (see Figure 1). Complicating this decision is a lack of detailed NRCS project information available to the jurisdictions. Within the NRCS framework, projects aligned with NRCS CPS 580 (Streambank and Shoreline Protection) and 584 (Channel Bed Stabilization) have the highest potential to meet the USWG's qualifying conditions, although not all such projects will (see Figure 2, Lane 4 or 5). Projects that do not conform to these conditions will need to be defined, assessed for water quality benefits and affirmed with an acceptable method of tracking, reporting, and verification should a jurisdiction want to seek load reduction credit towards their TMDL goal. Such an endeavor must occur within the current partnership-approved framework for establishment of loading and effectiveness estimates for nutrient and sediment control in the CBWM, i.e. the CBP "BMP Expert Panel Protocol." A significant amount of agricultural BMP implementation occurs with the support of NRCS, therefore accurate accounting of water quality benefits from these stream restorative practices is imperative.

Figure 1.

ISSUE #3: Credit Duration

Non-urban SR BMPs are currently assigned a 10-year credit duration in the CBWM, in contrast to a 5-year credit duration assigned to urban SR BMPs (the clock on those 5 years begins after the typical 3- to 5-year post-construction monitoring required in permitting of urban SR projects). Because urban and non-urban SR projects are defined by the same qualifying conditions in the 2013 EP report and are treated equivalent regarding the default removal rate (lb/ft/yr), the 10-year credit duration for non-urban projects has come into question. It is likely that the 10-year lifespan for non-urban SR projects is influenced by practice lifespans associated with NRCS CPS 580 and 584, as well as a series of 2015 decisions that resulted in 10-year credit durations for the majority of CBP BMPs associated with agriculture. If this is the case, rationale for this decision should be cited appropriately in future documentation.

USDA-NRCS = United States Department of Agriculture-Natural Resources Conservation Service; NEIEN = National Environmental Information Exchange Network; TN = total nitrogen; TP = total phosphorus; TSS = total suspended solids; lbs =pounds; yr = year; TMDL = Total Maximum Daily Load

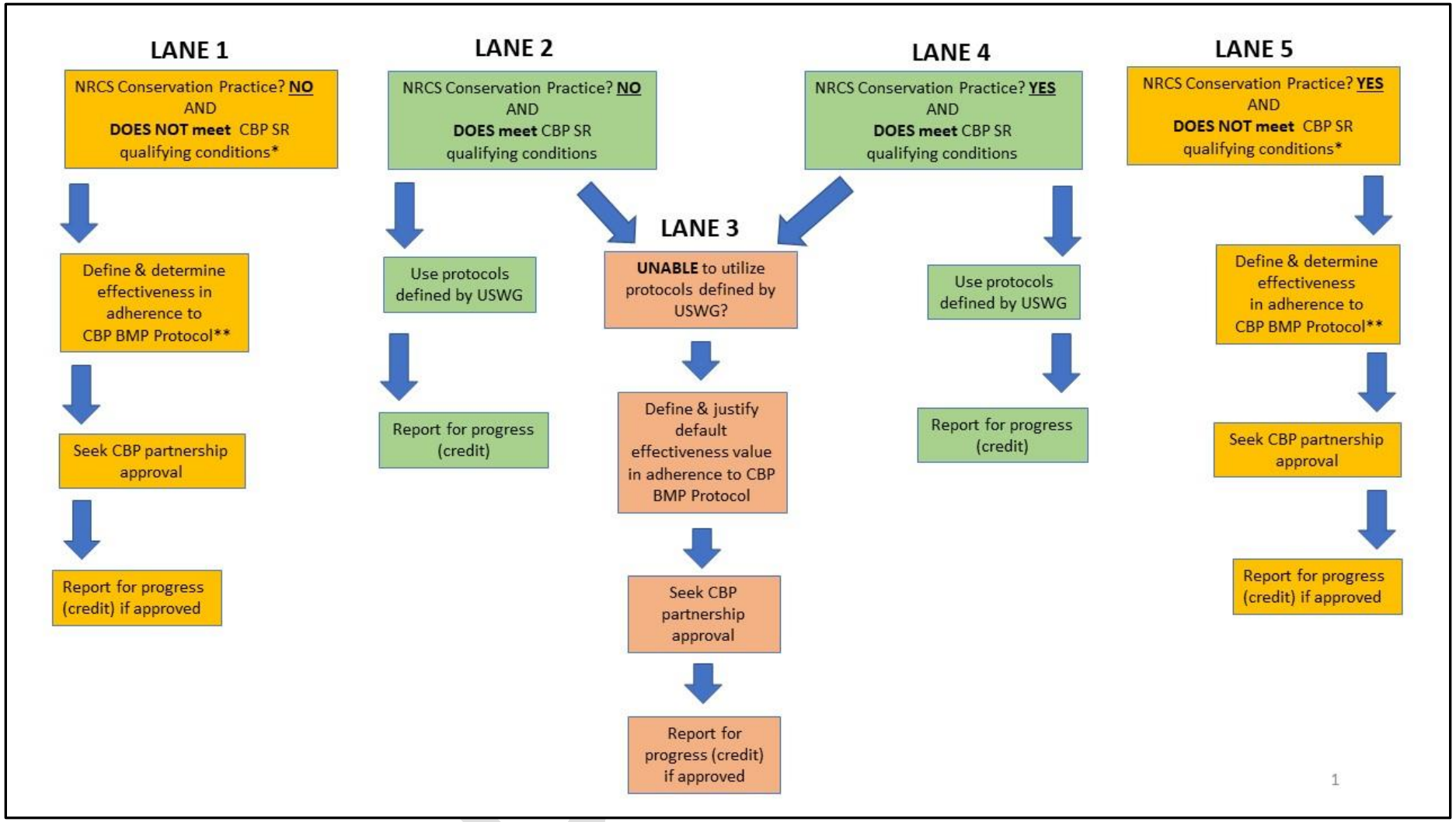

*Figure 2. *If the project/practice is not currently partnership-approved in terms of definition, specifications, or effectiveness, this must be addressed before it can be submitted for credit towards nutrient and sediment load reduction goals. The 2013 Expert Panel report (p. 31) lists classes of non-urban stream restoration practices that DO NOT quality for removal credit. **Protocol for the Development, Review, and Approval of Loading and Effectiveness Estimates for Nutrient and Sediment Controls in the Chesapeake Bay Watershed Model approved July, 13th 2015.*