<h1 style="text-align:center">Recommendations to Establish an Agroforestry BMP Expert Panel Establishment Group (EPEG)</h1>

Prepared for the Chesapeake Bay Program Partnership's Water Quality Goal Implementation Team's Agriculture and Forestry Workgroups.

Background:

Agroforestry is defined as the intentional integration of trees and shrubs into agricultural crop and animal production systems. Agroforestry practices are receiving increased attention and funding for research and implementation by USDA, conservation districts, academic institutions, and nonprofits due to the multiple conservation and agronomic benefits they provide. Agroforestry practices can also help improve the diversity and resiliency of agricultural production systems to climate change while providing additional carbon sequestration and storage benefits.

There are multiple established Agroforestry practices defined by NRCS:
- Riparian Forest Buffers (391): An area predominantly covered by trees and/or shrubs located adjacent to and up-gradient from a watercourse or water body.
- Windbreaks (380): Establishing, enhancing, or renovating windbreaks, also known as shelterbelts, which are single or multiple rows of trees and/or shrubs in linear or curvilinear configurations.
- Forest Farming (379): Managing or establishing stands of trees or shrubs in coordination with the management and/or cultivation of understory plants or nontimber forest products.
- Alley Cropping (311): Trees or shrubs are planted in sets of single or multiple rows with agronomic, horticultural crops or forages produced in the alleys between the sets of woody plants that produce additional products.
- Silvopasture (381): Establishment and/or management of desired trees and forages on the same land unit).

Currently, only two of these Agroforestry practices, Riparian Forest Buffers and Windbreaks, crosswalk to Bay Program BMPs for nutrient and sediment reduction credits. Riparian Forest Buffers are credited under Forest Buffer BMPs and Windbreaks are credited as Agricultural Tree Planting. The remaining Agroforestry practices do not currently crosswalk to a corresponding Bay Program BMP, and so cannot be reported for annual progress nutrient and sediment reduction credits. Of the remaining three Agroforestry practices, there is particular interest in evaluating the potential to credit Alley Cropping and Silvopasture practices. Forest Farming is less likely to have significant effects on water quality that would merit practice tracking, verification, and crediting by the Bay Program partnership.

For Alley Cropping, the NRCS Conservation Practice documentation indicates that implementation can reduce surface water runoff and erosion and decrease offsite movement of nutrients or chemicals. For Silvopasture, according to NRCS's Conservation Practice documentation, implementation can improve water quality and reduce erosion, while providing multiple other on and off-farm benefits. More specifically, the permanent enhanced vegetation resulting from silvopasture implementation is estimated to result in substantial improvements in

the uptake of excess nutrients from surface water, and moderate reductions in both sediment runoff and groundwater nutrient excess (Silvopasture 381 CCPE).

Given the potential for Alley Cropping and Silvopasture conservation practices to improve water quality, and the substantial investments being made in Agroforestry practices, the time is ripe to consider pathways for crediting these practices. Crediting these practices could help incentivize additional implementation, which would benefit the Chesapeake Bay restoration effort while generating multiple other on- and off-farm benefits, including improving climate adaptation and mitigation.

This proposal for establishing an Agroforestry Expert Panel Establishment Group (EPEG) is being put forward jointly to obtain support from the members of the Agriculture and Forestry Workgroups. The Chesapeake Bay Agroforestry Network, which was formed to help implement some of the priority actions for Agroforestry identified in the 2020 Chesapeake Forest Restoration Strategy, is also supporting this proposal. Establishing an Agroforestry EPEG would enable an initial evaluation of the scale of practice implementation in the watershed, and the availability of scientific research data as evidence for the water quality benefits of Alley Cropping and Silvopasture practices. Based on this evidence, the EPEG would evaluate whether Alley Cropping and/or Silvopasture are functionally similar enough to any existing Bay Program BMPs to merit crediting under an existing BMP.

Ultimately, the Agroforestry Expert Panel Establishment Group (EPEG) is proposed to:

- Determine if there is a need for a BMP Expert Panel (EP) for Alley Cropping and/or Silvopasture.
  - If an EP is recommended, then:
    - Identify priority tasks for the EP(s),
    - Recommend areas of expertise that should be included on the EP(s), and recommend members for consideration,
    - Draft the EP(s)'scope of work and charge for the review process.
  - If an EP is not recommended, then:
    - Provide justification for not convening an EP,
    - Provide an alternative recommendation to address the crediting of Alley Cropping and/or Silvopasture practices in lieu of an EP (i.e. crediting these practices under an existing established Bay Program BMP).

Table 1. Proposed Expert Panel Establishment Group membership and affiliations.

Member	Affiliation
EPEG Support Staff	
Ruth Cassilly	University of Maryland
Katie Brownson	USFS
Eric Hughes	EPA
Mark Dubin	University of Maryland