Recommendation for Partial Credit based on Conversations within the BMP Verification Ad-Hoc Action Team

February 2022

The Recommendation

*Apply partial credit to the federally funded multi-year agriculture practices listed in **Table 1**. Partial credit will only be applied during the development of Phase 7 of the watershed model to allow time for the Partnership to address the issues outlined below. When Phase 7 is officially implemented, partial credit will sunset (terminate).*

Where will this recommendation go if approved?

At the request of WQGIT Leadership, if approved by the BMPVAHAT, this recommendation will proceed to the Watershed Technical Workgroup for discussion and subsequent approval by consensus prior to the WQGIT.

Why sunset the approach when Phase 7 is implemented?

Originally, the group discussed sunsetting the approach in 2025. This means that partial credit may only be applied for 2024 Progress, as a function of CAST-23. For example, CAST-21 is still in the process of being approved. If approved, CAST-21 will be used to finalize 2022 Progress. If we follow the same schedule for CAST-23, then partial credit will start being a function of NEIEN for 2024 Progress. The amount of resources and effort to implement partial credit for only one year (2024) was not championed by the agencies responsible for funding the development of partial credit.

NEIEN may change between Phase 6 and Phase 7, meaning the same functionality may not carry over from Phase 6 to Phase 7.

In addition, allowing for a longer sunset period (past 2025) provides the partnership with more time to find a long-term solution to the problems outlined in the following section, as partial credit is not meant to be a long-term solution.

What does the partial credit recommendation seek to address?

1. The BMP Verification Framework identifies "Ensuring Full Access to Federal Conservation Practice Data" as a key component of the program. However, this component of the verification framework has not been fully realized.
2. Jurisdictions, specifically Pennsylvania, Delaware, West Virginia, and Virginia, do not have access to location data for the majority of NRCS practices within their jurisdiction. Without point location data, jurisdictions are unable to locate agriculture practices that are fully funded by NRCS. Data privacy protections stipulated in section 1619 of the US Farm Bill, prohibit NRCS from sharing such data. Jurisdictions receive aggregated (i.e., privacy protected) data from USGS, but this aggregated data does not ensure "full access" to federal data as no point location data is provided to the jurisdictions.
3. Moreover, landowners can deny access to their land for verification and inspection of practices outside of the original contract duration.
4. In addition, loss of model credit for aged-yet-functioning practices could result in underestimation of conservation practices throughout the watershed. Though we do not have access to sufficient data to quantify this error (e.g., inspection and verification data for every single practice across all jurisdictions), results from verification efforts in Maryland and New York suggest some correctly functioning, multi-year agricultural BMPs remain on the landscape after credit duration expiration.

Is this proposal meant to serve as an all-encompassing solution for the lack of access to point location data for federally funded agriculture practices? No.

Is partial credit a replacement for data collection and verification on the ground? No. This recommendation is meant to supplement the on-going work of the states' verification program, not as a replacement to verification. Partial credit is not meant to influence the Bay Program's established credit durations and lifespans.

What does this proposal provide to the Bay Partnership?

Partial credit attempts to mitigate the issues resulting from an unfulfilled component of the Verification Framework: "Ensuring Full Access to Federal Conservation Practice Data", or more specifically, "Ensuring Full Access to Federal Cost-Shared Agricultural Conservation Practice Data".

Per page 14 of the Basinwide Verification Framework, this component has the following goals across the Bay states:

- *To establish a greater capacity for analysis and understanding of agricultural conservation practice implementation across the landscape;*
- *To support the adaptive management and targeting of conservation programs;*
- *To fully credit producers for their implemented conservation practices;*
- *To eliminate any double counting;*
- *And to promote success in attaining water-quality goals.*

To meet these goals, the "Ensuring Full Access to Federal Conservation Practice Data" section of the framework document provides the following guidance:

1) *Adopt the broadest, most consistent language in the existing Maryland, New York, Virginia, West Virginia, and USGS 1619 conservation cooperator agreements as described in Appendix F.*
2) *Institute 1619 conservation cooperator agreements in Delaware and Pennsylvania and for all the jurisdictional agencies in Maryland, New York, Virginia, West Virginia listed in Table 3 which have direct responsibilities for planning, funding, delivery, reporting, and/or submission of agricultural conservation practice data.*
3) *Establish an annual data handling protocol that will ensure routine, thorough, and consistent data access for all USDA Farm Bill agricultural conservation programs. This uniform data access can be tailored to formats that integrate effectively within each state's respective conservation practice tracking and reporting system.*

Despite the guidance above, states were unable to establish 1619 agreements with NRCS due to USDA's policies and stance on enforcement. To work around this issue, the Bay Program supported the USGS 1619 conservation cooperator agreement which provides data to states in an aggregate form. While this enables states to report NRCS practices, it does not enable states to verify NRCS practices. Due to this inability to verify practices, this key component of the verification framework has not been

realized, as "**full** access" has not been achieved.

What supporting data is available to us?

Examples of Structural Practices – Barnyard Runoff Control

1) Information from Maryland on Roof Runoff Structures:

From MD's inspection data, MD has recorded that 380 (out of 481) verified roof runoff structures (systems) met standards and were in compliance at the time of inspection. 101 structures did not pass inspection.

- **79% of Roof Runoff Structures** inspected met standards at the time of inspection. **21%** did not meet standards, were no longer in operation/retired, or no longer present.

2) Information from New York on Roof Runoff Control Practices, including Diversions, Stormwater Runoff Control Practices, and Animal Trails and Walkways:

From NY's inspection data, NY has recorded that 83 (out of 85) verified roof runoff controls (practices) met standards and were in compliance at the time of inspection. 2 instances of roof runoff controls did not pass inspection.

- **97.6% of Roof Runoff Controls** inspected met standards at the time of inspection. **2.4% did not.** *NY has stated that the average age of the practices in this dataset was 13 years old.*

From NY's inspection data, NY has recorded that 27 (out of 27) verified diversions (practices) met standards and were in compliance at the time of inspection.

- **100% of Diversions** inspected met standards at the time of inspection. *NY has stated that the average age of the practices in this dataset was 13 years old.*

From NY's inspection data, NY has recorded that 47 (out of 47) verified animal trails and walkways and access roads (practices) met standards and were in compliance at the time of inspection.

- **100% of Animal Trails & Walkways/Access Roads** inspected met standards at the time of inspection. *NY has stated that the average age of the practices in this dataset was 13 years old.*

From NY's inspection data, NY has recorded that 18 (out of 18) verified

stormwater runoff control (practices) met standards and were in compliance at the time of inspection.

- **100% of Stormwater Runoff Control** inspected met standards at the time of inspection. *NY has stated that the average age of the practices in this dataset was 9 years old.*

3) Information from Pennsylvania on Roof Runoff Structures, Animal Trails and Walkways, and Barnyard Runoff Control Practices:

BRC, AT&W and RRS Past 10 Year Credit Duration		
Practice	**Average Age of Inspected Practice (Years)**	**Percent of Total Practices Functioning Beyond 10 Years**
BRC	19	43%
Animal Trails and Walkways	16	25%
Roof Runoff Structure	17.8	49%

Source: April 2021 Pennsylvania's Barnyard Runoff Control and Loafing Lot Management Verification and Credit Duration Presentation

Examples of Structural Practices – Loafing Lot Management

1) Information from Maryland on Heavy Use Area Protection Practices:

From MD's inspection data, MD has recorded that 441 (out of 490) verified Heavy Use Area Protection (systems, excluding those with poultry pads) met standards and were in compliance at the time of inspection. 101 structures did not pass inspection.

- **90% of Heavy Use Area Protection Structures** inspected met standards at the time of inspection. **10%** did not meet standards, were no longer in operation/retired, or no longer present.

2) Information from NY on Heavy Use Area Protection Practices:

From NY's inspection data, NY has recorded that 128 (out of 131) verified heavy use area protection (practices) met standards and were in compliance at the time of inspection. Two instances of roof runoff controls did not pass inspection.

- **97.8% of Heavy Use Area Protection structures** inspected met standards at the time of inspection. **2.2% did not.** *NY has stated that the average age of the practices in this dataset was 13 years old*.

3) Information from Pennsylvania on Loafing Lot Management, Heavy Use Area Protection, and Access Roads:

LLM, HUAP and Access Roads Past 10 Year Credit Duration		
Practice	**Average Age of Inspected Practice (Years)**	**Percent of Total Practices Functioning Beyond 10 Years**
LLM	18	39%
HUAP	18.4	42%
Access Road	15.8	29%

Source: April 2021 Pennsylvania's Barnyard Runoff Control and Loafing Lot Management Verification and Credit Duration Presentation

Examples of Vegetative Practices – Grass Buffers

1) Information from Maryland on Grass Buffers:

- MD has inspected **2,575 grass buffer related practices** that have expired (are older than 10 years).
- MD has information on the following practices:
  - NRCS 386 – Field Border – 68% Met Standards, 32% Did not Exist or Did not Meet Standards
  - NRCS 390 – Riparian Herbaceous Cover - 36% Met Standards, 64% Did not Exist or Did not Meet Standards
  - NRCS 393 – Filter Strip - 51% Met Standards, 49% Did not Exist or Did not Meet Standards
  - NRCS 412 – Grassed Waterway - 67% Met Standards, 33% Did not Exist or Did not Meet Standards

How would partial credit be applied?

A jurisdiction must report the funding code for partial credit to be applied to the expired federally funded practices. The funding code will allow NEIEN to separate the federally funded practices from the state cost-shared, nonprofit organization, and independently funded practices.

For practices that have reached the end of their credit duration:

- The acreage of reported practices that fall within their credit duration are processed in NEIEN without an error related to an expired credit duration.
- The acreage or amount of reported expired practices, or practices past their credit duration for which an inspection data has not been reported, would be sorted into practices that are 1 to 5 years past their credit duration.
- Since one state's data may not accurately reflect another state's data, a standard reduction of 25%, 50%, 75%, and 100% will be applied over 4 years to define how many acres are credited post-credit-duration, following the logic in the graph below:

- These standard reductions are applied to the acreage of expired practices that fall within 1 to 4 years post credit duration, and thus nutrient and load reduction efficiencies remain unchanged.

Example of Methodology:

For Barnyard Runoff Control practices that have been federally funded, a state reports a total of 1,000 acres to NEIEN. 100 of those acres are for expired practices (i.e., older than their credit durations). 900 acres are processed normally, without an error for an expired credit duration.

Of the 100 expired acres, 10 acres are 1 year post credit duration, 10 acres are 2 years post credit duration, 10 acres at 3 years, 10 acres at 4 years, 10 acres at 5 years and 50 acres are more than 5 years past their credit life.

- If we use a 25% reduction over 4 years (from the previous slide), of the 10 acres 1 year post credit duration, 7.5 acres are processed without error.
- Of the 10 acres 2 years post credit duration, 5 acres are processed without error.
- Of the 10 acres 3 years post credit duration, 2.5 acres are processed without error.
- Of the 10 acres 4 years post credit duration, 0 acres are processed without error. (No partial credit received.)
- Of the 60 acres 5 years or more post credit duration, 0 acres are processed without error. (No partial credit received.)

Importantly, acreage will be processed with full efficiency.

Will partial credit be applied retroactively? Yes.

Table 1. List of Federally Funded Multi-Year Agriculture Practices

BMPName	CAST BMP Name	CASTBmpShortName	CreditDuration
Animal Mortality Facility	Mortality Composting	mortalitycomp	15
CREP Forest Buffers			15
Animal Waste Management Systems (All Types)	AWMS	awms	15
Animal Trails and Walkways	Barnyard Runoff Control	barnrunoffcont	10
Brush Management	Soil Conservation and Water Quality Plans	conplan	10
Composting Facility	Mortality Composting	mortalitycomp	15
Conservation Cover	Land Retirement	landretireopen	10
Contour Buffer Strips	Soil Conservation and Water Quality Plans	conplan	10
Contour Farming	Soil Conservation and Water Quality Plans	conplan	10
CREP Wetland Restoration	Wetland Restoration	wetlandrestorefloodplain	15
CREP Wildlife Habitat	Land Retirement	landretireopen	10
Critical Area Planting	Land Retirement	landretireopen	10
Wetland Rehabilitation	Wetland Rehabilitation	wetlandrehabilitate	15
Headwater Wetland Creation	Wetland Creation	wetlandcreateheadwater	15
Wetland Creation	Wetland Creation	wetlandcreatefloodplain	15
Wetland Buffer		na	15
Barnyard Runoff Controls	Barnyard Runoff Control	barnrunoffcont	10
Diversion	Soil Conservation and Water Quality	conplan	10

	Plans		
Exclusion Fence with Grass Buffer	Grass Buffers with Exclusion Fencing	grassbuffexcl	10
Exclusion Fence with Narrow Forest Buffer	Narrow Forest Buffer with Exclusion Fencing	forestbuffexclnar	10
Exclusion Fence with Narrow Grass Buffer	Narrow Grass Buffers with Exclusion Fencing	grassbuffexclnar	10
Field Border	Grass Buffers	grassbuffers	10
Filter Strip	Grass Buffers	grassbuffers	10
Grass Buffers	Grass Buffers	grassbuffers	10
Grazing Land Protection	Precision Intensive Rotational/Prescribed Grazing	precrotgrazing	10
Grassed Waterway	Grass Buffers	grassbuffers	10
Hedgerow Planting	Soil Conservation and Water Quality Plans	conplan	10
Irrigation System, Microirrigation	Cropland Irrigation Management	cropirrmgmt	10
Irrigation Water Conveyance, Pipeline, High-Pressure, Underground, Plastic	Cropland Irrigation Management	cropirrmgmt	10
Irrigation System, Sprinkler	Cropland Irrigation Management	cropirrmgmt	10
Irrigation Water Management	Cropland Irrigation Management	cropirrmgmt	10
Land Retirement	Land Retirement	landretireopen	10
Lined Waterway or Outlet	Soil Conservation and Water Quality	conplan	10

	Plans		
Loafing Lot Management System	Loafing Lot Management	loaflot	10
Pasture & Hay Planting	Land Retirement	landretirepas	10

Pipeline	Soil Conservation and Water Quality Plans	conplan	10
Prescribed Grazing	Precision Intensive Rotational/Prescribed Grazing	precrotgrazing	10
Roof runoff management	Barnyard Runoff Control	barnrunoffcont	10
Roof Runoff Structure	Barnyard Runoff Control	barnrunoffcont	10
Spring Development	Off Stream Watering No Fence	oswnofence	10
Stream Habitat Improvement and Management	Soil Conservation and Water Quality Plans	conplan	10
Streambank and Shoreline Protection	NonUrban Stream Restoration	nonurbstrmrest	10
Structure for Water Control	Water Control Structures	watercontstruc	10
Subsurface Drain	Soil Conservation and Water Quality Plans	conplan	10
Terrace	Soil Conservation and Water Quality Plans	conplan	10
Tree Planting	Tree Planting	treeplant	10
Tree/Shrub Establishment	Tree Planting	treeplant	10
Underground Outlet	Soil Conservation and Water Quality Plans	conplan	10

Upland Wildlife Habitat Management	Soil Conservation and Water Quality Plans	conplan	10
Vegetated Treatment Area	Agriculture Stormwater Management	agstormeff	10
Waste Storage Facility	AWMS	AWMS	15
Wastewater Treatment Strip	Barnyard Runoff Control	barnrunoffcont	10
Water and Sediment Control Basin	Soil Conservation and Water Quality Plans	conplan	10
Water Well	Off Stream Watering No Fence	oswnofence	10
Watering Facility	Off Stream Watering No Fence	oswnofence	10
Windbreak/Shelterbelt Establishment	Tree Planting	treeplant	10