





Chesapeake Bay WTWG Meeting

Buffer Upland Crediting a Proposal for Phase 7

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Topics VA Requested WTWG/CBP Consider for P7

- Cover Crop Excess – Possible Redistribution of Excess
- **Review How Buffer Upland Benefit is Calculated - Proposed Change to Assignment of Load Sources for Upland Benefit Exclusion versus Non-Exclusion Buffers**
- Animal BMP Excess Particularly Animal Waste Management Systems – Request a Review of Current Process in Model versus BMP Reporting
- Backout of Herbaceous Land Use Change BMPs – Proposed a Change to the Backout Process Used for Herbaceous Land Use Change BMPs

BMP Refresher

- Efficiency BMPs (Cover Crops, Nutrient Mgt) - An Efficiency reduction applied per acre of BMP Credited.
- Land Use Change BMPs (Tree Planting, Land Retirement to Ag Open) – Load Reduction for each Acre Converted from a Higher Loading Load Source to forest or Ag Open i.e. 1 Acre of Cropland Now Simulated as 1 Acre of Ag Open
- Land Use Change Plus **Upland Efficiency** (Buffers All Types) – Buffer Area is a Land Use Change from Higher Loading Source to a Lower One, Plus Upland Acres Treated as an Efficiency BMP by the Buffer (TN = 4 upland acres, TP and TSS = 2 upland acres)

The Problem

For 2024 Progress Year in VA

- Pasture Getting Non-exclusion Buffer Acres Applied = 0.00
- Pasture Providing an Upland Efficiency Benefit for Non-exclusion Buffers = 24,404
- Pasture Deemed Excess for Upland Credit for Forest Buffer with Streamside Fencing (Exclusion Buffer) = 14,027
- Seems Illogical to Provide Upland Benefit from a Load Source the BMP is Not Applied – Zero Acres of Non-Exclusion Buffers Applied to Pasture yet Pasture Provides Upland Benefit for Non-Exclusion Buffers?

Current Process Used for Buffer Upland Credit

- Exclusion Buffers (grass, narrow grass, forest, narrow forest with streamside fencing) Applied Exclusively to Pasture - Buffer Upland Credit Applied Exclusively to Pasture
- Non-Exclusion Buffers (grass, narrow grass, forest, narrow forest no streamside fencing) Applied to All* Ag Load Sources Except Pasture – Buffer Upland Credit Applied to All Ag Load Sources Including Ag Open and Pasture

* Forest Buffer can be applied to Ag Open, but Grass Buffers are not

The Proposals

- Distribute the Upland Benefit from Non-Exclusion Buffers Proportionally to the Load Sources it is Applied – Stop Providing Upland Credit to Non-Exclusion Buffers from Pasture
- Examine the BMP Batting Order so that Exclusion Buffers and Upland Credit are Applied to Pasture First Any Unused Acres Could Be Utilized by Non-Exclusion Buffers

Scenarios Run

- 2023 Corrected – Progress Year 2023 Run with Transposed Measurements Removed – Current Process to Distribute Buffer Upland Credit
- 2023 Corrected No Pasture – The Above Scenario but with Proportional Distribution of Buffer Upland Credit and Zero Acres of Pasture for Non-Exclusion Buffers

Current Process Used for Buffer Upland Credit

Current Method (Scenario 2023 Corrected)								
BMP	Load Source	% Applied All	DE %	MD %	NY %	PA %	VA %	WV %
Non-Exclusion Buffer	Ag Open Space	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Non-Exclusion Buffer	Total Hay	26.07%	3.96%	9.44%	65.54%	28.98%	54.58%	62.24%
Non-Exclusion Buffer	Pasture	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Non-Exclusion Buffer	Cropland	73.93%	96.04%	90.56%	34.46%	71.02%	45.42%	37.76%
Non-Exclusion Buffer	All	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Non-Exclusion Buffer Nitrogen Upland Acres	Ag Open Space	29.36%	0.38%	2.03%	9.32%	50.22%	4.99%	1.64%
Non-Exclusion Buffer Nitrogen Upland Acres	Total Hay	11.96%	3.75%	7.61%	49.37%	12.17%	26.28%	28.83%
Non-Exclusion Buffer Nitrogen Upland Acres	Pasture	13.53%	4.13%	6.79%	15.43%	13.30%	42.60%	38.98%
Non-Exclusion Buffer Nitrogen Upland Acres	Cropland	45.14%	91.74%	83.57%	25.88%	24.31%	26.13%	30.55%
Non-Exclusion Buffer Nitrogen Upland Acres	All	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Exclusion Buffer	Pasture	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Exclusion Buffer Nitrogen Upland Acres	Pasture	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Proposed Process for Buffer Upland Credit

Proportional Distribution (Scenario 2023 Corrected no pasture)								
BMP	Load Source	% Applied All	DE %	MD %	NY %	PA %	VA %	WV %
Non-Exclusion Buffer	Ag Open Space	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Non-Exclusion Buffer	Total Hay	26.07%	3.96%	9.44%	65.54%	28.98%	54.58%	62.24%
Non-Exclusion Buffer	Pasture	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Non-Exclusion Buffer	Cropland	73.93%	96.04%	90.56%	34.46%	71.02%	45.42%	37.76%
Non-Exclusion Buffer	All	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Non-Exclusion Buffer Nitrogen Upland Acres	Ag Open Space	2.36%	0.02%	1.19%	8.63%	2.23%	8.27%	0.33%
Non-Exclusion Buffer Nitrogen Upland Acres	Total Hay	21.27%	3.96%	9.23%	60.09%	23.71%	51.80%	54.89%
Non-Exclusion Buffer Nitrogen Upland Acres	Pasture	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Non-Exclusion Buffer Nitrogen Upland Acres	Cropland	76.37%	96.02%	89.58%	31.28%	74.06%	39.93%	44.78%
Non-Exclusion Buffer Nitrogen Upland Acres	All	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Exclusion Buffer	Pasture	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Exclusion Buffer Nitrogen Upland Acres	Pasture	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Proportional vs Current Distribution of Upland Credit Loadings Impacts

	Delta TN Proportional Dist - Current	Delta TP Proportional Dist - Current	Delta TSS Proportional Dist - Current
Delaware (CBWS Only)	-1,980	96	-39,434
District of Columbia (CBWS Only)	0	0	0
Maryland (CBWS Only)	-66,876	1,298	-2,049,398
New York (CBWS Only)	-1,366	4	-48,249
Pennsylvania (CBWS Only)	-16,309	9,995	-1,897,400
Virginia (CBWS Only)	-21,765	1,815	-1,658,175
West Virginia (CBWS Only)	-2,169	41	-122,478
All	-110,464	13,250	-5,815,134

Discussion