MDA BMP Functional Equivalents

Update

AgWG 11/7/13

Executive Order 12508

- In January of 2009, President Obama issued Executive Order (EO) 12508 on the Chesapeake Bay.
- May 12, 2010, the EO Strategy was released by the Federal Leadership Committee for the Chesapeake Bay.
- One of the issues in the Strategy was for USDA to assist states to get a full accounting of conservation practices both cost and non-cost shared practices (sometimes called voluntary practices) that have been implemented in the Bay Region.
- USDA was to take the lead and in December 2010 a contract was awarded to the National Association of Conservation Districts (NACD) to: “Establish a reliable system to collect, verify and report data on the implementation of non-cost shared agricultural conservation practices in the Chesapeake Bay area to the Bay Program Model.”

State Action from NACD Effort

- Bay states reviewed options AND decided to each develop their own system for verification.
- To date some states collect and report Non-cost shared BMPs meeting NRCS standards.
- MD is the only state to move forward establishing a process to verify non-cost shared practices meeting NRCS standards and functional equivalent's (FE) data.
- In 2010, MDA developed a verification manual for 14 FE BMP's based on work in the USDA Upper Chester River Showcase Watershed.
- The MDA verification manual was tested in Howard County and then released to all Districts in September 2011. It was updated in March of 2013.
- To date, about 100 FE practices have been reported using this manual in CONTRACK.

Why is it important to document Functional Equivalents?

- Watershed organizations, Environmental organizations, Conservation Organizations and NGOs are all helping Farmers and Agricultural Landowners to meet WIP goal and protect water quality by installing BMPs:

  - ✓ Chesapeake Bay Foundation - Stream exclusion fencing with narrow width tree plantings
  - ✓ Nanticoke Watershed Association- 10' Buffers on Drainage Ditches
  - ✓ Chester River Association- Switch grass plantings for field buffers
  - ✓ Middle Choptank River Association- Water Control Structures on Field Ditches

- Framers and Agricultural landowners install lots of BMP's outside of state cost share programs or cannot accept a government subsidy:

  - ✓ Plain Sect Farmers, Mennonite Farmers
  - ✓ Chesapeake Farms-Queen Anne's County
  - ✓ Tudor Farms-Dorchester County

- Maryland Regulations require farmers to install practices that provide water quality protection objectives and need to be verified for compliance but are not required to meet NRCS spec:

  - ✓ Stream Exclusion (fencing)
  - ✓ 10' and 35' buffers for fertilizer and manure application

- MDA needs a mechanism to document and verify that they meet a performance standard and the intended purpose (water quality protection).

Recommendations from July 2013 AgWG Meeting:

- In July, MDA requested that the AgWG start the process to approve a methodology to accept Non-Cost shared FE practices in NEIEN.
- The AWG told MDA to move forward with two assumptions:
  - All approved FE practices will receive the same effectiveness ratings as the federal or state cost shared practices. Buffers would be reported by width.
  - Depending on FE Criteria, FE's may need to have shorter lifespans for certification and re-certification.

MDA FE Definition

<u>Agricultural Functional Equivalent (FE) Best Management Practice (BMP)</u>

- **“A non-cost shared agricultural conservation practice that provides an environmental benefit on an annual basis that is equivalent to an existing approved Chesapeake Bay Program (CBP) BMP of similar function that is defined to meet an NRCS Standard and Specification. The recognized physical life-span of an agricultural functional equivalent BMP shall in nearly all cases represent a significantly reduced timeframe compared to an existing approved CBP BMP of similar function. It is assumed that the design criteria and/or construction materials may not be as comprehensive as currently defined by an NRCS Standard and Specification".**

What do Non-Cost Shared and FE Practices Look Like?

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Other Benefits of reporting MD Functional Equivalents:

- **Land Coverage:** By reporting Non-cost shared BMP's and FE's, MDA is more accurately defining land covered with BMP's for the Chesapeake Bay Model, therefore helping to better explain monitoring calibration data.
- **Future WIP Practice Implementation:** By reporting FE's MDA will be able to more accurately determine where new practices may or may not be established to meet WIP goals.
- **Future Funding for WIP Practice Implementation:** By reporting FE's MDA will be able to use this information to more accurately estimate the total cost-sharing data that is needed to meet WIP goals.
- **Societal Benefits:** By reporting non-cost shared and FE's MDA will provide "credit" for all the conservation actions Maryland farmers are doing to protect the environment and the Chesapeake.

Actions To Date

MDA has strengthen the MDA FE verification manual definitions and worksheets, the following actions have been taken to date:

- **August 2013**-
  - ✓Review of Verification Worksheets by a District Professional Engineer and Certified Professional Agronomist/Crop Advisor. Created a new format for worksheets showing NRCS practice specifications and FE specifications.
  - ✓Met with MDA staff on proposed structure of worksheets and manual. Received approval to move forward.
  - ✓Update to AgWG

Actions To Date

- **September 2013-**
  - ✓Reviewed Final Worksheets and Manual with MDA staff.
  - ✓Reviewed all practice worksheets and made changes; finalized FE practice names; and FE lifespans for recertification.
  - ✓Proposed Worksheets were reviewed by District personnel in Caroline, Howard, and Washington Soil Conservation Districts. Clarifying changes were made and approved by MDA.
  - ✓Update to AgWG
  - ✓MDA received guidance from WQGIT to complete the process for AWG approval.

Actions To Date

- **October 2013-**
  - ✓Presentation to the WTWG meeting on MDA FE BMP process and design criteria.
  - ✓Prepare NEIEN Appendix with CBP; Reviewed by CBP Staff
  - ✓Prepare AgWG Submission Document; Reviewed by CBP Staff
- **November 2013-**
  - ✓Presentation to AgWG 11/7/13
  - ✓Presentation to WQGIT 11/12/13

How Were Critical Design Components for FE Standards Determined?

- **All critical NRCS Standard design components for 15 BMP's were listed and considered for a FE.**
- **Critical Design Components of FE were determined by:**
  1. Is it required by Federal or State Law? (State Law criteria is in addition to the NRCS criteria).
  2. Is it required for safe functioning of the practice?
  3. Is it required for the practice to provide resource protection?
  4. Owner Certification will be required for satisfaction of design criteria of components that are not obvious and for operations and maintenance.
- **The process for District reporting includes:**
  1. Trained District personnel will report all Non-Cost shared practices after a field visit by documenting a verification worksheet and taking a picture. The worksheet and picture will be stored the the District Conservation Plan and reported in CONTRACK.
  2. Some FE standards have more than one reportable code to record the appropriate buffer width or type of animal. The FE practices have a different (but similar) names to distinguish them from Non-cost shared practices that meet a NRCS standard.
  3. FE Standards have a reduced lifespan and will be recertified at the end of FE lifespan.
  4. Districts will be provided a list of practices whose lifespan is expiring to recertify in July in the preceding year and will be re-checked during the next calendar year for recertification.

14 Non-Cost Shared Practices are Reportable (NRCS Names and MDA FE Names and Additional Reporting Options

NRCS Code	MDNRCS Non-Cost Shared BMP Name	MDA FE Code	MDA Non-Cost Shared FE BMP Name	Additional Reporting Options
313	Waste Storage Facility	313FE	Waste Storage Structure	
316	Animal Mortality Facility	316FE	Animal Compost Structure	
327	Conservation Cover	327FE	Alternative Crop/Switchgrass	
382A	Fence	382FE1	Watercourse Exclusion	10'-34' Width Buffer, Planted to Grass or Trees
382B	Fence	382FE2	Watercourse Exclusion	35'+ Width Buffer, Planted to Grass
382C	Fence	382FE3	Watercourse Exclusion	35'+ Width Buffer, Planted to Trees
None	None*	390FE1	Grass Buffer for Stream	10'-34' Width Buffer
390	Riparian Herbaceous Cover	390FE2	Grass Buffer for Stream	35'+ Width Buffer
None	None*	391FE1	Forest Buffer for Stream	10'-34' Width Buffer
391	Riparian Forest Buffer	391FE2	Forest Buffer for Stream	35'+ Width Buffer
422A	Hedgerow Planting	422FE1	Vegetative Environmental Buffer for Poultry	Warm Season Grass
422B	Hedgerow Planting	422FE2	Vegetative Environmental Buffer for Poultry	Trees
512	Forage and Biomass Planting	512FE	Pasture and Hayland Planting	
528	Prescribed Grazing	528FE	Rotational Grazing	
558	Roof Runoff Structure	558FE	Barnyard Runoff Control	
561	Heavy Use Area Protection	561FE	Concentrated Area Protection	
587	Structure for Water Control	587FE	Water Control Structure	
614	Watering Facility	614FE	Watering Trough	
657	Wetland Restoration	657FE	Wetland Development	

512 Forage and Biomass Planting / 512FE Pasture and Hayland Planting Worksheet

	NRCS Specification: 512 Forage & Biomass Planting MDNRCS Spec date: 5/13		MDA Specification: 512FE Pasture & Hayland Planting MDAFE Spec date: 11/13				FE Supporting Data & Documentation
	Life span: 5 years		**FE Life span: 3 years**				
	Criteria Test:		**Criteria Test:**				
	NRCS		**FE**	**Y**	**N**	**N/A**	
1	Plants are non-invasive	**1**	Plants are non-invasive	X			Visual inspection
2	Lime & fertilizer rates are based on soil tests	**2**	Lime & fertilizer rates are based on soil tests*	X			Owner interview
3	Area complies with state nutrient management regulations	**3**	Area complies with state nutrient management regulations*	X			Owner interview
4	All areas utilize certified seed						
		4	75% cover is established and maintained as "pasture in good	X			Visual inspection
5	Nox						
	Maintenance Test:						
8	Owner has and follows a maintenance plan		*-per owner's certification	X			
9	Maintenance plan includes means of management including mowing, prescribed burning, mechanical harvesting, prescribed grazing, over seeding, nutrient management, pest management, and other approp. actions						
	MEETS NRCS SPEC		**MEETS FE SPEC**				Circle Appropriate Finding
	Installation Date:		3/15/12				
	NRCS Reportable Units: Acres:		**FE Reportable Units:** Acres: 50				

Employee records installation date, checks appropriate boxes , circles decision, documents and dates

9 STEPS TOTAL

ADDITIONAL INFORMATION: per owner's certification-corn field est. in fescue/clover pasture, 90% cover, photo attached

Next Steps

- Present FE Verification Manual and AgWG Submittal document for AgWG/WTWG/WQGIT review
- Submit FE BMP's for addition to NEIEN Appendix (turned off until approved) for 5.3.2 CBP Model
- When approve, add FE's to all data collection sheets used in Maryland- WIP, FSCAP, MDNTT, Certainty
- In-Service Training for all District Employees

Questions?