Maryland Department of Agriculture

Non-Cost Shared Best Management Practices Procedures Manual

AgWG July 11, 2013 Dana York

MDA Requires that for BMP's to be reported as "Implemented", they must be identified and verified on the farm by a trained employee or technical service provider.

This Functional Equivalent process was developed by MDA and reviewed by CBP staff.

Why does MDA think it is Important to Inventory Farms?

- There a several reasons MDA does BMP Inventories:
  - To give farmers credit for all the good conservation work they have completed on their land.
  - To update landowners/renters conservation plans and assist them with new conservation practices and funding to resolve resource issues.
  - To get an accurate accounting for WIP conservation practices on Maryland Farms including cost-shared and non-cost shared practices.
  - To help evaluate farmers for other programs- FSCAP, Maryland Nutrient Trading Program, Maryland Agricultural Certainty.
  - To determine Maryland Agriculture progress toward the Two Year Milestones.

Example of Draft WIP Best Management Practice Inventory Documentation Worksheets

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WIP Best Management Practice Inventory

Form Use: This form is to be used to completing WIP Best Man
goal of this inventory is to provide information about new BMP'
each farm. This information will be used to report progress for t
(WIP). Only ONE inventory will be filled out for each property (n
BMP that you identify on the Inventory on an aerial map and co
symbol is that you place on the map. For the date installed on n
practices were implement prior to 2006 or after 2006, which is v
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B. Practices and Programs

List which practices are found in each field and if th
farm map where practices are implemented; if you

Complete practice information below practices identified on farm. *A # sign denotes WIP Practice.* A * sign denotes a Functional Equivalent-FE. MACS in a state practice. A ^ is a future WIP practice.	Field No(s)/ Amount Installed- Meets Standard	Need	D th pr ne up to m					
*Alternative Crop-Switchgrass—(327FE)-Ac. **(Functional Equiv.) (See 512 Forag. And Biomass Pl)**	/	☐						
^Amendments for Treatment of Agricultural Waste-591-AU	/	☐						
#Animal Mortality Facility-316- No.	/	☐						
*Animal Mortality Facility-316FE-No. **(Functional Equiv.)**	/	☐						
#Conservation Cover-327-Ac.	/	☐						
#Cover Crop- 340-Ac.	/	☐						
#Critical Area Planting-342-Ac.	/	☐	☐	☐	☐	☐	☐	
Dairy Manure Incorporation- **MACS**(633) Ac.	/	☐	☐	☐	☐	☐	☐	
Dead Bird Composting Facility **MACS** -318-No. (Animal Mort. Facility-316)	/	☐	☐	☐	☐	☐	☐	
#Diversions-362-Ft.	/	☐	☐	☐	☐	☐	☐	
#Fence –382-Ft.	/	☐	☐	☐	☐	☐	☐	
*Fence–382FE-Ft. **(Functional Equiv.)**	/	☐	☐	☐	☐	☐	☐	
#Field Border-386-Ft	/	☐	☐	☐	☐	☐	☐	
#Filter Strip-393-Ac.	/	☐	☐	☐	☐	☐	☐	
*Filter Strip (or Grassed Buffer)-393FE-Ac. **(Functional Equiv.)**	/	☐	☐	☐	☐	☐	☐	

Name/Farm Name/Tract:
Data Collector Initials: Date: Verification Initials: Date:
Contrak Data Entry Initials: Date:

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Practice Inventory

ormally a FSA Tract).

ovided by: 1) Landowner 2) Operator (circle

Best time to call?

MDA WIP Version 2

2013, Version No. 2.0, describes the protocol
ent practices.

Only

CS standard and it is **farmer installed (no**
ent Practice Verification Report. (Page 7 of

a NRCS standard, but does meet the FE-
functional equivalent worksheets from MDA
n No. 2.0. **You will need to fill out one**
ractice is located on the worksheet.

/ N

WQP

if Y)

(See Filter Strip 393)
Heavy Use Protection Area (561FE) ☐
Livestock Fencing (382FE) ☐
(See Fence 382)
Pasture and Hayland Planting (512FE) ☐
(See Forage and Biomass Planting 512)
Prescribed Grazing (528FE) ☐
Riparian Forest Buffer (391FE) ☐
Structures for Water Control (587FE) ☐
(See Water Control Structures 587)
Vegetative Environmental Buffer (380FE) ☐
(See Windbreak and Shelterbelt Establishment 380)
Waste Storage Facility (313FE) ☐
Watering Facility (614FE) ☐
Wetland Restoration (657FE) ☐

NOTE: PICTURES should be taken of all practices you are reporting as non cost-shared practices.

The *Best Management Practice Verification Report* and the functional equivalent worksheets are to be filed in the conservation plan folder. Refer to the Manual for complete instructions for non cost-shared practices.

Name/Farm Name/Tract:
Data Collector Initials: Date: Verification Initials: Date:
Contrak Data Entry Initials: Date:

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MDA Non-Cost Shared Practice Documentation

- The key to identifying Non-Cost Shared Practices is that they: 1)meet a standard (NRCS or FE), and; 2) were installed by the farmer with no cost sharing.
- The Non-Cost shared BMP Verification Procedures Manual- MDA- Version 2.0 March 12, 2013 is to be used for guidance on identification and documentation.
- If a Practices meets a NRCS Standard---fill out a ***Best Management Practice Verification Report***.
- If a practice does not meet a NRCS Standard but meets the FE definition---fill out a ***FE worksheet***.
- A photo will be taken of these practices as part of the documentation.
- All forms are by signed and dated and filed in the SCWQP file folder.
- The practice information is entered into MDA Contrack.

Maryland Functional Equivalent Manual

NON COST-SHARED BEST MANAGEMENT PRACTICE

VERIFICATION PROCEDURES MANUAL

Maryland Department of Agriculture

Office of Resource Conservation

Quality Assurance and Accountability

Maryland Functional Equivalent Practices

391FE – Riparian Forest Buffer

393FE – Grassed Buffer

561FE – Heavy Use Area Protection

313FE – Waste Storage Facility

382FE – Livestock Fencing

614FE – Watering Facility

558FE – Barnyard Runoff Control

316FE – Animal Mortality Facility

512FE – Pasture and Hayland Planting

528FE – Prescribed Grazing

657FE – Wetland Restoration

587FE – Structure for Water Control

380FE – Vegetative Environmental Buffer

327FE – Alternative Crop – Switchgrass

Introduction in Verification Manual

As Chesapeake Bay states begin to implement local Watershed Implementation Plans to meet the new Total Maximum Daily Load requirements for the Chesapeake Bay Watershed, a more accurate accounting of all conservation measures on Maryland's agricultural land is critical to ensure that appropriate nutrient load reductions are being credited in the Bay Watershed Model. Traditionally, the Maryland Department of Agriculture (MDA) has relied upon both State and Federal Cost-share Programs as the source of conservation implementation data. This data is currently reported through MDA's Conservation Tracker System.

Recognizing that many conservation measures have been implemented without Federal or State financial assistance, the Chesapeake Bay Program has agreed to credit certain Best Management Practices that have been implemented without public cost-share provided they are functionally equivalent to the USDA-NRCS standard.

Objective Of Verification Manual

The objective is to develop a sustainable protocol for the collection of non cost-shared agricultural best management practices. The goal is to credit the agricultural sector for all verified conservation practice implementation that results in nutrient and sediment reductions. In order for practices to be counted in the Bay Model, data will have to be tracked, verified and reported using Maryland's Conservation Tracker Program and then transmitted to the Chesapeake Bay Program via the National Environmental Information Exchange Network.

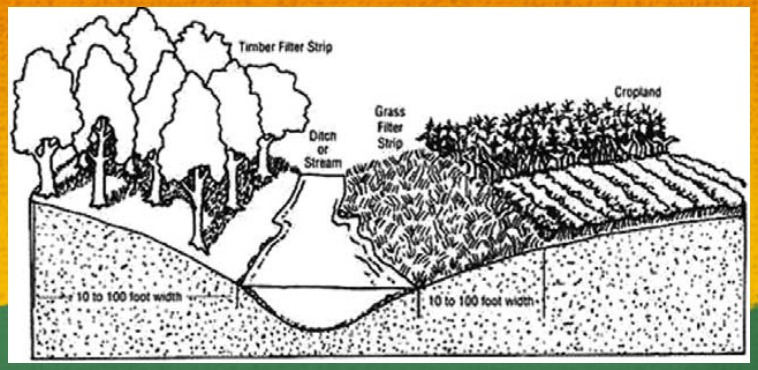
District staff are encouraged to contact cooperators and landowners to fully document all conservation practices and to try to assist in correcting any potential environmental concerns that may arise during site visits. It is extremely important for the District to establish a dialogue with cooperators to encourage the proper use and maintenance of all BMPs. It is the intent of the program to ensure that all conservation practices are documented. The program relies heavily on the Districts to ensure that the intent of the program is carried out.

Non- Cost share Practice Verification Procedures

1) An on-farm evaluation of **all** non cost-shared Best Management Practices should be performed under the following situations:
    a. Developing or updating a Conservation Plan
    b. MACS Spot Check / Quality Assurance Review
    c. Nutrient Trading Evaluation
    d. At the request of owner/operator
    e. FSCAP Evaluation
    f. Agricultural Certainty Evaluation
2) The Soil Conservation District will assign a technically proficient person(s) from their staff to perform the verification.

3) Do an on-site evaluation of the BMP.
4) If the BMP meets NRCS standard,
    a. Complete the *Best Management Practice Verification Report* form
    b. Document BMP in Conservation Plan, if owner agrees to complete and sign an NRCS Operation and Maintenance Plan
    c. Keep report form in Conservation Plan folder
    d. Report BMP in Conservation Tracker
5) If the BMP does not meet NRCS standard, review Functional Equivalent Practice Standards for BMP.
    a. Complete associated BMP worksheet for each practice identified
    b. Document necessary actions to bring BMP to NRCS standard
    c. Review recommendations with owner/operator, and if they agree, develop a schedule to implement improvements to bring practices up to NRCS standard
    d. Keep Worksheet in Conservation Plan folder (Including photos and other documentation)
    e. Report BMP in Conservation Tracker
6) All verified practices must be reported in Conservation Tracker.
    a. Those that meet NRCS standard should be reported with appropriate NRCS BMP code (i.e. 391 – Riparian Forest Buffer)
    b. Those that do not meet NRCS standard but meet the functional equivalent standard should be reported under the functional equivalent code (i.e. 391FE – Riparian Forest Buffer (MDA))
    c. Report date implemented or installed by owner/operator, not date verified
    d. Indicate "Farmer Installed" as technician
    e. Federal and State cost-share programs should remain unchecked
7) At any point at which the BMP is brought up to NRCS standard, the change should be documented by completing a *Best Management Practice Verification Report* and appropriate change reported in Conservation Tracker.
8) BMPs identified and reported may be subject to review during MACS Spot Checks or Quality Assurance Reviews.

Standards and Specifications



First-- determine if the practice meets MD NRCS standards, regardless of funding. There are 160+ National NRCS practices. Maryland as 100+ practices. This Inventory focuses on 47 practices and 14 Functional Equivalents

To look at National NRCS standards go to:

http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/references/?&cid=nrcs143_026849

To look at MD NRCS Standards go to:

http://efotg.sc.egov.usda.gov/efotg_locator.aspx?map=US and pick Maryland and your county. Then pick Section IV for Maryland practice standards.

Best Management Practice Verification Report

(Meets NRCS Standard)

Cooperator Name, Address and Phone #	FSA Farm / Tract	District	Inspection Type
			☐ Initial Inspection ☐ Q.A.R ☐ Nutrient Trading ☐ Recheck ☐ Other _____
	Parcel ID#	MDA Plan ID #	

Best Management Practice	Date Installed	Extent Implemented	Unit	Comment
	__/__/____			
	__/__/____			
	__/__/____			
	__/__/____			
	__/__/____			
	__/__/____			
	__/__/____			
	__/__/____			
	__/__/____			
	__/__/____			
	__/__/____			

1. Does/do the BMP(s) meet the current NRCS standard as defined in the NRCS-FOTG? ☐ Yes ☐ No

2. Is the BMP being utilized to achieve an environmental benefit? ☐ Yes ☐ No

3. Is there any maintenance work needed to bring the project up to the standard? ☐ Yes ☐ No

4. Has the SCD discussed any improvements or corrective actions with the cooperator? ☐ Yes ☐ No

5. Will the owner agree to complete and sign an NRCS Operation and Maintenance Plan to allow the practice to be documented in the Conservation Plan? ☐ Yes ☐ No

Expected Completion Date: ___/___/___

SCD Description/Remarks:

_____ _____

SCD Reviewer: Name, Position, and Signature Date of Review

393FE – GRASSED BUFFER (MDA)

(Reported by Acres)

DEFINITION

Grasses, grass-like plants and forbs that are established or managed to provide a herbaceous buffer located adjacent to and up-gradient from water bodies or a strip or area of herbaceous vegetation that removes contaminants from overland flow located adjacent to cropland. This includes areas that function as riparian herbaceous buffers, filter strips and/or grassed waterways.

PURPOSES

This practice is to reduce excess amounts of sediment, organic material, nutrients, pesticides and other pollutants in surface runoff and reduce excess nutrients and other chemicals in shallow ground water flow and to increase carbon storage in plant biomass and soils.

CONDITIONS WHERE PRACTICE APPLIES

This practice qualify if applied on stable areas adjacent to permanent or intermittent streams, lakes, ponds, wetlands and areas with ground water recharge.

CRITERIA

To reduce excess amounts of sediment, organic material, nutrients, pesticides and other pollutants in surface runoff and reduce excess nutrients and other chemicals in shallow ground water flow.

For areas adjacent to surface water, the minimum width shall be at least 10 feet measured horizontally on a line perpendicular to the water body, beginning at the top of bank or wetland edge. In order to adequately address water quality, the buffer width may need to be expanded to include important resource features such as wetlands, steep slopes, areas that are occasionally or seasonally flooded, or critical habitats.

Livestock shall be controlled or excluded as necessary to achieve and maintain the intended purpose.

Plant and animal pest species shall be controlled to the extent feasible to achieve and maintain the intended purpose of the vegetative cover. Noxious weeds shall be controlled as required by state law.

OPERATION AND MAINTENANCE

Inspections of the natural grassed buffer are required at least every 3 years.

Control concentrated flow or mass soil movement up-gradient of the buffer to maintain buffer function.

Species shall have stiff stems and high stem density near the ground surface.

SUPPORTING DATA AND DOCUMENTATION

Complete accompanying worksheet and document on conservation plan map.

393FE – GRASSED BUFFER (MDA) Worksheet

Cooperator Name, Address and Phone #	FSA Farm / Tract	District	Inspection Type
			☐ Initial Inspection ☐ Q.A.R ☐ Nutrient Trading ☐ Recheck ☐ Other _____
	Parcel ID#	**MDA Plan ID #**	

1. When was the practice installed? _____/_____
   Month Year

2. How is the buffer managed? Is it mowed? Is it ever burned down? Is it fertilized? How are weeds controlled? Describe:

3. Why no cost-share?
   - ☐ Not aware that cost-share was available
   - ☐ Practice doesn't fit standard
   - ☐ Programs take too long
   - ☐ Other:
   - ☐ Not eligible
   - ☐ Programs too complicated
   - ☐ Not selected for program

4. Does the buffer border a ☐ river, ☐ stream, ☐ forest or ☐ ditch?	Y / N
5. Are livestock excluded from the buffer?	Y / N / NA
6. How wide is the non-cost-shared buffer? If it buffers water, measure from the top of the bank. If buffer width varies significantly, record average width	
7. How long is the buffer?	
8. Is the buffer thick? Is there high stem density near the ground surface? Does the grass appear healthy? Are bare spots few or none? Describe:	Y / N

9. What is the land use upslope of the buffer? ☐ Cropland ☐ Pasture ☐ Hay ☐ Other

10. Is maintenance or other work needed that can make the buffer achieve the standard? Describe:	Y / N
11. Does the practice provide an environmental benefit?	Y / N

_____ _____

SCD Reviewer: Name, Position, and Signature Date of Review

Contrack Data Hierarchy

Contrack Report for Farmer Installed Practices

Plan ID	SCD Pla	Tract #	Cooperator	Watershed	Sub WS	Critic	Best Management Practice	Extent	Dor	Unit	Date Installe	Fe	M.	M	Technician
All	All	BMP Detail Report for Baltimore Co.	Farmer Installed	BMPs Installed Between 1/1/1980 and 6/18/2012	All	All									

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Sub WS	Critic	Best Management Practice	Extent	Unit	Date Installed	Fe	Technician
03-09	N	587 - Structure for Water Cont:	1	ST	1/1/2008	N	Farmer Installed
03-09	N	590 - Nutrient Management	58.9	AC	1/1/2008	N	Farmer Installed
03-09	N	390 - Riparian Herbaceous Cove:	1.2	AC	1/1/2008	N	Farmer Installed
03-09	N	586 - Strip-cropping, Field	11.5	AC	1/1/1999	N	Farmer Installed
03-09	N	386 - Field Border	600	FT	1/1/1999	N	Farmer Installed
03-09	N	393 - Filter Strip	3.3	AC	1/1/1999	N	Farmer Installed
03-09	N	328 - Conservation Crop Rotati	110.2	AC	1/1/2003	N	Farmer Installed
03-09	N	330 - Contour Farming	11.5	AC	1/1/2003	N	Farmer Installed
03-09	N	560 - Access Road	3200	FT	1/1/2003	N	Farmer Installed
03-09	N	329 - No Till	110.2	AC	1/1/2005	N	Farmer Installed
03-09	N	590 - Nutrient Management	110.2	AC	1/1/2005	N	Farmer Installed
03-09	N	595 - Pest Management	110.2	AC	1/1/2005	N	Farmer Installed

Example of Field Inventory and BMP's Identified for Reporting

Practice	Unit	Total Units Identified on Farm	Meeting NRCS Standard	Meets MDA FE Standard	Need work to meet NRCS or FE Standard
393 Grass Buffer	Ac	3,000	1,600 (35+')	400 (10')	0
382 Fencing	Ft	27,000	3,000 (Wooden Post-Barb and Woven Wire)	22,000 (2 Strand High Ten. Elect)	2,000 (Elect – needs repair)
614 Watering Facility	No	5	4 (Round-Concrete)	1 (Plastic Drum)	0

Purpose of Today's Presentation

1) Introduce the AgWG to MDA's procedures for Identifying, Verifying and Reporting Functional Equivalents.
2) Discuss how to go about providing a effectiveness ratings through the AgWG BMP Protocol Process (we do not believe FE's would go through the whole process but may be assigned a lesser effectiveness rating by some methodology(?))
3) Determine Next Steps to Move Forward.
4) Once approved-upload the FE practices to NEIEN

Next Steps ?