Report Non Cost-Shared and Resource Improvement Practice
Definitions and Verification Visual Indicators Guidance Document

This report should be reviewed in conjunction with the Chesapeake Bay Program Resource Improvement Practice Definitions and Verification Visual Indicators Guidance Document (Version 3.0, June 2014). The Guidance Document details: the procedures required for non cost-shared and Resource Improvement (RI) practice reporting; definitions for 19 RI practices; Visual Indicators (VI) for verification of each practice; reduced lifespans for RIs; and suggested methods for verification and documentation for reporting RIs. The guidance document provides example RI verification worksheets for each practice that may used to determine if the practice reviewed in the field meets the VIs for 19 RI practices.

Table 1 list the names and practice codes of the non cost-shared Resource Improvement practices in the Guidance Document that are discussed in this Report.

Table 1: Proposed Resource Improvement Practices:

	Resource Improvement Practice Name	Additional Practice Information
RI-1	Waste Storage Structure	
RI-2	Animal Compost Structure	
RI-3	Alternative Crop/Switchgrass	
RI-4a	Watercourse Access Control-Narrow- Grass	10'-34' Width Exclusion Area, Natural Grass or planted
RI-4b	Watercourse Access Control-Narrow- Trees	10'-34' Width Exclusion Area, Native Trees or planted
RI-5	Watercourse Access Control-Grass	35'+ Width Exclusion Area, Natural or planted Grass
RI-6	Watercourse Access Control-Trees	35'+ Width Exclusion Area, Native or planted Trees
RI-7	Grass Nutrient Exclusion Area on Watercourse	10'-34' Width Nutrient Exclusion Area
RI-8	Grass Buffer on Watercourse	35'+ Width Buffer
RI-9	Forest Nutrient Exclusion Area on Watercourse	10'-34' Width Nutrient Exclusion Area
RI-10	Forest Buffer on Watercourse	35'+ Width Buffer
RI-11	Vegetative Environmental Buffer for Poultry-Grass	Warm Season Grass
RI-12	Vegetative Environmental Buffer for Poultry-Trees	Trees
RI-13	Conversion to Pasture	
RI-14	Conversion to Hayland	
RI-15	Rotational Grazing	
RI-16	Barnyard Clean Water Diversion	
RI-17	Water Control Structure	
RI-18	Watering Trough	

Resource Improvement Practices

Recommendations for Approval by the Water Quality Goal Implementation Team, and it's associated Watershed Technical and Agriculture Workgroups.

This document summarizes the recommendations by the Resource Improvement (RI) practice Technical Review Panel for the acceptance of 19 non-cost shared RI practices and their associated Visual Indicators (VI). The Watershed Technical Workgroup (WTWG) recommended these practices for inclusion in the NEIEN Appendix at their meeting on November 7, 2013. On (XXXX) the Agriculture Workgroup (AgWG) recommended the use of these practices for reporting in Phase 5.3.2 of the Chesapeake Bay Program Watershed Model. The Technical Review Panel Membership was as follows:

Technical Review Panel Members	Affiliation
Robert Ensor – Panel Chair	District Manager, Howard SCD-MD
Debbie Absher	Director of Ag Programs, SCD-DE
Gary Moore	Ag Incentives Program Manager, DCR-VA
Lamonte Garber	Watershed Restoration Coordinator Stroud Water Research Center, PA
Beth McGee	Sr. WQ Scientist Chesapeake Bay Foundation,MD
Greg Albrecht	NYS Department of Agriculture and Markets-NY
Elmer Weibley	District Manager, Washington County SCD- MD
Charlie Wootton	TMDL Conservation Specialist, Piedmont SWCD-VA
Jeff Hill	Agriculture Program Manager, Lancaster County SCD-PA
NRCS Members In an Advisory Role	
Hosea Latshaw	State Conservation Engineer NRCS-PA
Larry Tennity	State Conservation Engineer NRCS-DE
Ann Baldwin	Environmental Engineer NRCS-MD
Sally Kepfer	State Resource Conservationist, NRCS-DE
Dale Gates	Resource Conservationist NRCS-NY
Other Advisors	
Mark Dubin	University of Maryland
Emma Giese	Chesapeake Research Consortium
Dana York	Green Earth Connection

Introduction

As Chesapeake Bay states 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 agricultural lands is critical to ensure that appropriate nutrient load reductions are being credited in the Bay Watershed Model. Traditionally, states have relied upon both State and Federal Cost-Share Programs as the source of conservation implementation data for progress to report in their Watershed Implementation Plans.

Recognizing that many conservation measures have been, and are being, implemented without Federal or State financial assistance, the Chesapeake Bay Program has agreed to credit Best Management Practices that meet CBP or NRCS definitions and standards and Resource

Improvement Practices that have been implemented without public cost-share funds provided they are providing a reduction of sediment and nutrients to the Chesapeake Bay. This document will provide the process for identification and verification of these two types of practices.

Background on Non Cost-Shared BMP Data Collection: Chesapeake Bay EO 12508
In January of 2009, President Obama issued Executive Order (EO) 12508 on the Chesapeake Bay. May 12, 2010, the Federal Leadership Committee for the Chesapeake Bay Program released the EO Strategy. 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." States actions for the NACD effort included:

- 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 first state to move forward in establishing a process to verify non-cost shared practices meeting NRCS standards and functional equivalents (FE) data (renamed Resource Improvements).

Objective
The objective of this guidance document is to provide what is required for the collection and verification of non-cost-shared agricultural best management practices that meet CBP definitions and establish definitions and verifications methods for Resource Improvement Practices**.** The goal is to account for all verified farmer implemented conservation practices that result 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 and then transmitted to the Chesapeake Bay Program via the National Environmental Information Exchange Network (NEIEN).

The process of identifying Non-cost shared practices will normally happen when local Conservation District or other trained technical staffs are on farms working with cooperators and landowners assisting them with the planning process to correct any potential environmental concerns that the landowner may have. It is extremely important for technical staff to establish a dialogue with landowners to encourage the proper use and maintenance of all BMPs. It is the intent of this document is to provide guidance for jurisdictions to develop verification protocols for the reporting all non cost-shared conservation practices for crediting toward progress in their state Watershed Implementation Plans.

Why Is It Important To Report Non Cost shared BMP's?
- **Farmers and Agricultural Landowners** install many BMP's outside of state or federal cost share programs or cannot accept a government subsidy:
    - ✓ Plain Sect Farmers (Amish, Mennonite Farmers as examples)
    - ✓ Farms owned by corporations that cannot accept federal funding due to the payment limitations.
- **Some state nutrient regulations** require farmers to install practices that provide water quality protection and need to be verified for compliance with state laws. These state requirements may result in practices that are not required to meet NRCS Standards and Specifications:
    - ✓ Stream Exclusion (fencing type or distance from stream)

- ✓ 10’ and 35’ buffers for fertilizer and manure application setbacks
- **Watershed Organizations, Environmental Organizations, Conservation Organizations, and NGOs** are all helping Farmers and Agricultural Landowners to meet WIP goals to protect water quality by installing BMPs:
  - ✓ Shenandoah RC&D Council - Stream exclusion fencing with narrow width tree plantings
  - ✓ Nanticoke Watershed Alliance – 10’ Buffers on Drainage Ditches
  - ✓ Chester River Association - Switch grass plantings for field buffers
  - ✓ Mid-Shore Riverkeeper Conservancy - Water Control Structures on Field Ditches

Non Cost-Shared Practices that Provide Resource Improvement

Resource Improvement Best Management Practices (RI) are non-cost shared BMPs that are typically financed by the operator or other non-public entity or source and may or may not meet the practice standards associated with federal and state cost-share programs. RI practices may lack the contractual provisions of cost-shared BMPs as well as the corresponding implementation and maintenance oversight. **“*Resource Improvement BMP’s are practices which provide similar annual environmental benefits for water quality but may not fully meet all the design criteria of existing governmental design standards. RI BMP’s are usually identified during a visit with the farmer. RI BMP’s are implemented by a farmer and are not cost shared through a federal or state program. RI BMP’s can be the result of a farmer choosing not to completely follow all the details of the design standard from the District or NRCS, but will contain all the critical elements for water quality resource improvement. Accepted CBP RI BMP’s definitions contain descriptions of the practice with Visual Indicators. A Visual Indicator is a means of assessing the presence of key elements that must be present to achieve the water quality benefits of the RI practice and to be reported in Jurisdictional WIPs. The inspection interval of an agricultural Resource Improvement BMP shall be reduced from those practices meeting state or federal contractual guidelines resulting in more frequent inspections to insure proper function.”***

Resource Improvement Practices are Multi-Year Visual Assessment Practices

The Resource Improvement Practices (RI) discussed in this guidance documents fall under Visual Assessment BMPs - Multi-Year Practices in the Chesapeake Bay Program Partnership Agricultural Workgroup’s Agricultural BMP Verification Guidance (May 9, 2014). These are practices can be visually assessed and have a protracted physical presence on the landscape, i.e., of more than one year when properly maintained and operated.

Verification and Quality Assurance of Non Cost-Shared Practices

Currently the Chesapeake Bay Program accepts non-cost shared practices that meet NRCS standards for credit. This guidance document further develops definitions and suggested methods to verify and document the existence of Resource Improvement Practices. Each state will develop a method to verify and document these two types of non-cost shared practices and include it in their State Jurisdictional Protocols. The Chesapeake Bay Program Partnership Agricultural Workgroup’s Agricultural BMP Verification Guidance (May 9, 2014) recommends the following for verification of non-cost shared BMP’s:

“The minimum expectation of verification for non-cost-shared BMPs is recommended to be 100 percent of the initial identification of annual or multi-year structural BMPs and plan implementation by trained and certified technical field staff or engineers with supporting documentation that it meets the governmental and/or CBP practice standards. Visual assessment for single year BMPs, such as

tillage practices, can be statistically sub-sampled utilizing scientifically accepted procedures. During the course of the identified physical lifespan period of multi-year BMPs, a reoccurring annual verification that the BMPs are being maintained and operated as per the appropriate practice standards at a minimum expectation for follow-up sub-sampling of 10% for BMPs achieving greater than 5% of the jurisdiction's WIP agricultural sector goals.

It is important to note that BMPs which were initially implemented and/or operated under a cost-share, regulatory, or permit program but are transitioned out of these programs and no longer are under the oversight of a cost-share agreement, regulation, or permit, will be verified by the same level of verification described for non-cost shared BMPs if they are continued to be considered for ongoing pollution reduction crediting."

How Were Resource Improvement Practices and Visual Indicators Developed?
The development of Resource Improvement Practices started in July of 2013 with the Maryland Department of Agriculture requesting that their "Non Cost-Shared Management Practice Verification Procedures Manual" be approved by the AgWG. The November 2013 version of their verification document was the original document the Technical Panel reviewed and used for the development of this Guidance Document. The process for the development of this Guidance Document included the following actions by MDA and the Technical Panel:

1) Starting in 2011, through the review of practices that farmers have installed without cost sharing, the Maryland Department of Agriculture determined there were fourteen practices that they considered to be what was first called Functional Equivalent Practices (FE). MDA's first verification procedures manual Version 1 created documentation worksheet that consisted of open ended and fill-in the blank questions. Upon review by MDA, it was determined at this method of documentation resulted in wide variations in interpretation and what was reported as a FE Practice. Note: Virginia also conducted a trial of collecting Non-Cost shared practices in 6 Districts, but did not provide any information to the panel for this process.
2) MDA worked with representative Conservation Districts to develop Versions 2 and 3 of the MDA Non-Cost Shared Verification Manual. It included a new FE worksheet that contained NRCS practice design criteria and FE design criteria. It was tested and updated from input by the representative Conservation Districts in Maryland.
3) MDA presented this document to the AgWG in July 2013 and the Partnership endorsed the concept and requested approval from Water Quality Goal Implementation Team (WQGIT). The WQGIT requested that the AgWG work through a technical review process for final approval. The AgWG then requested a Partnership Review Panel be created to review the MDA document and provide recommendations back to the AgWG for final approval.
4) AgWG sent out a notice to the jurisdictions for Technical Review Panel member nominations. In this notice, the AgWG requested technically qualified members from State Agencies, Conservation Districts, NRCS technical personal and the NGO Community. States submitted nominees and NRCS agreed to participate as technical members in an advisory role (See letter from Rich Sims in Appendix A). December 12, 2013, the AgWG selected Technical Review Panel members.
5) The Technical Review Panel held a teleconference January 29, 2014 to receive an introduction to the issue and their panel charge.
6) The Technical Review Panel met in person on March 2, May 8, 2014 and a May 29, 2014 teleconference for working sessions to develop the definitions and documentation checklists for the practices. During these sessions, the following overall document changes were made:

a) Change in name from Functional Equivalents (FE) to Resource Improvement Practices (RI)
b) Change FE Criteria test to Visual Indicators (VI), following the WQGIT approved process developed by the Storm Water Sector for verification of homeowner BMPs.
c) The NRCS design criteria were removed from the documentation checklists. The NRCS Practice standards will only be used as a comparison practices for assistance in identifying if a

practice should be reported and a Non-Cost Shared Practice that meets a NRCS standard or a RI.

d) Final definitions and VI's for each practice were developed.

e) Two practices were deleted: Concentrated Area Protection and Wetland Development. It is recommended by the Technical Review Panel that these two be provided back to the appropriate CBP program Expert Panel or Sector for assistance on the development of an appropriate RI practice.

f) It was decided to make a jurisdictional neutral document and recommendations were made on the appropriate Agricultural Verification BMP Methods, documentation requirements and lifespan for RI practices using the Agricultural Workgroup's Agricultural BMP Verification Guidance (May 9, 2014).

g) The document was presented by the Technical Panel to the AgWG for review on June 19, 2014.

h) The document was approved by the AgWG on XXXXXXX

i) The document was approved the WSTWG and the WQGIT on XXXX.

f) The final approved document provided for jurisdictions on XXXXX.

g) Jurisdictions that choose to report RI's will develop the specified guidance and will get approval the appropriate CBP approval process. If states propose additional RIs they will need the appropriate AgWG and CBP approval.

h) CBP approved RI practices will be collected by approved jurisdictional verification processes and reported through NEIEN for credit in the Jurisdictional TMDL Watershed Improvement Plan progress runs.

Resource Improvement Practices and Visual Indicator Requirements

RI Practices and Visual Indicators (VI) meet the follow requirements:

a) RI and their associated VI's are usually found as part of a state or NGO entity working with farmers. They typically would not be designed by Agencies or NGOs, but by the farmer who has an interest in resolving a conservation water quality problem on their farm and they implemented a RI to meet that need. To receive credit for the practice, the VI's for each RI are required to be present and are verified by an approved CBP Verification Method with the appropriate documentation provided to the certifying agency for approval before credit is provided in Jurisdictional WIPs (see Matrix in Appendix B of Guidance Document)

b) VI's will meet the appropriate federal, state and local regulations.

c) VI's provide for the safe functioning of the practice for humans or animals.

d) VI's will provide water quality or resource improvement as implemented.

e) Some RI standards will have more than one reportable code to record the appropriate buffer widths, vegetation or type of animal, or animal units, etc.. (See Appendix C- Animal Units)

f) Nutrient Exclusion Areas that are less than CBP Buffer widths (i.e. <35') are will receive "land use change" credit only as previously approved by the AgWG.

g) RI practice names, units and CBP credit will be finalized through the appropriate NEIEN Appendix process and timelines to be credited to the Jurisdiction WIP.

h) All RI practices have distinct lifespans and will be recertified at the end of RI lifespan to ensure they are being properly maintained and functioning.

How are Visual Indicators Evaluated and Recorded?

In the process of working with a farmer, RI practices may be mentioned by the farmer or discovered by the technical specialist during a farm visit. Jurisdictions may use any approved AgWG verification method (See Appendix B) to determine if the practice will meet the RI definitions and VI's. A Jurisdictional RI checklist will be used to document the appropriate information derived from these methods. Jurisdictions may use any format or design (i.e. paper, electronic, etc.) for their state

checklist to document if all elements of a RI and if the practice meets a RI definition and VIs. The Checklists that are included in this Guidance Document are one example of recording all the elements required for RI verification documentation.

Jurisdictional RI checklist will contain the following information for each RI:

1) Date of verification and name of certifying official;
2) Landowner information: such as address, county, etc.;
3) Location of RI on the landscape such as: marking on an aerial map or conservation plan map, GPS location or Latitude/Longitude coordinates, etc.;
4) Presence of the required VIs (as appropriate);
5) Date the practice was installed by the farmer;
6) Appropriate reported units for state database and NEIEN;
7) Visual documentation such as a photo of the practice, drawing or other description;
8) Other notes as needed for additional documentation or re-verification.

The RI checklist and associated information will be placed the farmer's conservation plan or other jurisdictional approved location.

Who can report RI practices?

RI BMPs may be reported by using any approved AgWG Verification method (See Appendix B). Any trained and/or certified technical field staff person that has the required knowledge and skills to determine if the practice meets the applicable RI definition and VIs may conduct the RI practice review. Jurisdictions will have final oversight and will be the certifying entity of all information that is provided and approved for entry into the CBP NEIEN reporting system. The appropriate spot-checking will be completed during annual Quality Assurance Reviews and the appropriate actions will be taken if information submitted is incorrect such as: removal of RI practice from reporting system; potential re-training of technical staff; removal of certification of the individual, NGO or other entities that may report RI's, etc.

Lifespan of RIs and Re-verification

Lifespans of RI practices have been reduced from similar NRCS Practice lifespans. It is assumed that since the RI design may not be as extensive as similar NRCS practices, that a technical person must visit the RI BMP on a more frequent basis to review the efficacy of the RI BMP and the farmer's operation and maintenance of the BMP. RI lifespans are found in the below table. When a jurisdiction re-verifies the practice it must determine if required VIs are still present and functioning for the appropriate water quality credit or it will be removed from the jurisdictional and NEIEN database.

Table 2: NRCS BMP Standard Design Lifespan and the RI lifespan:

RI BMP Name	NRCS Lifespans Years	RI Lifespans Years
Waste Storage Structure	15	5
Animal Compost Structure	15	5
Alternative Crop/Switchgrass	15	5
Watercourse Access Control (Narrow, Grass, Trees)	20	5
Grass Nutrient Exclusion Area on Watercourse and Grass Buffer on Watercourse	10	5
Forest Nutrient Exclusion Area on Watercourse and Forest Buffer on Watercourse	15	10
Vegetative Environmental Buffer for Poultry, Grass	10	3
Vegetative Environmental Buffer for Poultry, Trees	15	5
Conversion to Pasture or Hayland	5	3
Rotational Grazing	1*	3
Barnyard Clean Water Diversion	10	5
Water Control Structure	20	5
Watering Trough	20	5

*Primarily for the structural components of the NRCS practices-i.e. Fencing etc.

Table 3 contains the RI Definition and CBP BMP Definitions.

Table 3: The following are the RI BMP Definitions and the associated CBP BMP Definitions:

RI BMP Name	RI Definition	CBP BMP Name	Interim	CBP Definition
RI-1 Waste Storage Structure	A waste storage structure for dry stackable manure constructed by fabricating a structure, or by fabricating a field-stacking pad. This does not include the temporary stacking of poultry manure in a field that would be moved to different locations each year.	Animal Waste Management Systems (AWMS)	N	Practices designed for proper handling, storage, and utilization of wastes generated from confined animal operations. Reduced storage and handling loss is conserved in the manure and available for land application
RI-2 Animal Compost Structure	An on-farm facility for the treatment or disposal of livestock and poultry carcasses for a small numbers of animals. (Typically less than 80 Animal Units total on the farm) .	Mortality Composters (MortalityComp)	N	A physical structure and process for disposing of any type of dead animals. Composted material land applied using nutrient management plan recommendations.
RI-3 Alternative Crop/Switchgrass	Conversion of cropland to a herbaceous alternative crop of switchgrass.	AlternativeCrop (CarSeqAltCrops)	N	Alternative crops is a BMP that accounts for those crops that are planted and managed as permanent, such as warm season grasses, to sequester carbon in the soil. Carbon sequestration refers to the conversion of the Watershed Model land uses that are cropland to the hay land use.
RI-4a Watercourse Access Control, Narrow- Grass	A constructed barrier to livestock. A field border will be present of herbaceous materials between the watercourse and the barrier or fence. **(Narrow-10'-34')**	Stream Access Control with Fencing (PastFence)	N	Stream access control with fencing involves excluding a strip of land with fencing along the stream corridor to provide protection from livestock. The fenced areas may be planted with trees or grass, or left to natural plant succession, and can be of various widths. To provide the modeled benefits of a functional riparian buffer, the width must be a minimum of 35 feet from top-of-bank to fence line. The implementation of stream fencing provides stream access control for livestock but does not necessarily exclude animals from entering the stream by incorporating limited and stabilized in-stream crossing or watering facilities. The modeled benefits of stream access control can be applied to degraded stream corridors in association with or without alternative watering facilities. They can also be applied in conjunction with or without pasture management systems such as prescribed grazing or PIRG. Alternative

				watering facilities typically involves the use of permanent or portable livestock water troughs placed away from the stream corridor. The source of water supplied to the facilities can be from any source including pipelines, spring developments, water wells, and ponds. In-stream watering facilities such as stream crossings or access points are not considered in this definition.
RI-4b Watercourse Access Control, Narrow- Trees	A constructed barrier to livestock. A field border will be present of trees between the watercourse and the barrier or fence. **(Narrow-10'-34')**	Stream Access Control with Fencing (PastFence) AND Tree Planting (TreePlant)	N	Stream access control with fencing involves excluding a strip of land with fencing along the stream corridor to provide protection from livestock. The fenced areas may be planted with trees or grass, or left to natural plant succession, and can be of various widths. To provide the modeled benefits of a functional riparian buffer, the width must be a minimum of 35 feet from top-of-bank to fence line. The implementation of stream fencing provides stream access control for livestock but does not necessarily exclude animals from entering the stream by incorporating limited and stabilized in-stream crossing or watering facilities. The modeled benefits of stream access control can be applied to degraded stream corridors in association with or without alternative watering facilities. They can also be applied in conjunction with or without pasture management systems such as prescribed grazing or PIRG. Alternative watering facilities typically involves the use of permanent or portable livestock water troughs placed away from the stream corridor. The source of water supplied to the facilities can be from any source including pipelines, spring developments, water wells, and ponds. In-stream watering facilities such as stream crossings or access points are not considered in this definition. Tree Planting includes any tree planting.
RI-5 Watercourse Access Control, Grass	A constructed barrier to livestock. A field border will be present of grass herbaceous materials between the watercourse and the barrier or fence. **(Grass Buffer-35'+)**	Streamside Grass Buffers (GrassBuffersTrp)	N	This represents the 35-foot or greater fenced, managed grass buffer area behind stream access control with fencing. See definition for Stream Access Control with Fencing for additional details. There is no need to submit

				PastFence for this practice.
RI-6 Watercourse Access Control, Trees	A constructed barrier to livestock. A field border will be present of trees between the watercourse and the barrier or fence. **(Tree Buffer-35'+)**	Streamside Forest Buffers (ForestBuffersTrp) AND Stream Access Control with Fencing (PastFence)	N	This represents the 35 foot or greater fenced, managed riparian forest buffer are behind stream access control with fencing. Jurisdictions need to submit PastFence in conjunction with this BMP. See definition for Stream Access Control with Fencing for additional details.
RI-7 Grass Nutrient Exclusion Area on Watercourse	Grasses, grass-like plants, and forbs that are established on converted cropland that receive no nutrients and are managed to provide a herbaceous buffer located adjacent to and up-gradient from water bodies or a strip or area of herbaceous vegetation that inhibits nutrients and sediment from overland flow located adjacent to cropland. This includes areas that function as nutrient exclusion areas or riparian herbaceous buffers.**(Narrow-10'-34')**	Land Retirement to Hay Without Nutrients (LandRetireHYO)	N	Converts land area to hay without nutrients. Agricultural land retirement takes marginal and highly erosive cropland out of production by planting permanent vegetative cover such as shrubs, grasses, and/or trees. Agricultural agencies have a program to assist farmers in land retirement procedures.
RI-8 Grass Buffer on Watercourse	Grasses, grass-like plants, and forbs that are established on converted cropland that receive no nutrients and are managed to provide a herbaceous buffer located adjacent to and up-gradient from water bodies or a strip or area of herbaceous vegetation that inhibits nutrients and sediment from overland flow located adjacent to cropland. This includes areas that function as nutrient exclusion area or riparian herbaceous buffers. **(Wide 35'+)**	Grass Buffers; Vegetated Open Channels for Agriculture (GrassBuffers)	N	Agricultural riparian grass buffers are linear strips of grass or other non-woody vegetation maintained between the edge of fields and streams, rivers or tidal waters that help filter nutrients, sediment and other pollutants from runoff. The recommended buffer width for riparian forests buffers (agriculture) is 100 feet, with a 35 feet minimum width required. Vegetated open channels are modeled identically to grass buffers.
RI-9 Forest Nutrient Exclusion Area on Watercourse	An area predominately trees and/or shrubs established on converted cropland located adjacent to and up-gradient steams, ditches or tidal waters.**(Narrow 10'-34')**	Tree Planting (TreePlant)	N	Tree planting includes any tree planting, except those used to establish riparian forest buffers, targeting lands that are highly erodible or identified as critical resource areas.
RI-10 Forest Buffer on Watercourse	An area predominately trees and/or shrubs established on converted cropland located adjacent to and up-gradient from streams ditches or tidal waters. **(Wide 35'+)**	Forest Buffers (ForestBuffers)	N	Agricultural riparian forest buffers are linear wooded areas along rivers, stream and shorelines. Forest buffers help filter nutrients, sediments and other pollutants from runoff as well as remove nutrients from groundwater. The recommended buffer width for riparian forest buffers (agriculture) is 100 feet, with a 35 feet minimum width required.

RI-11 Vegetative Environmental Buffer for Poultry, Grass	Vegetative Environmental Buffers are a minimum of two staggered rows of warm season grasses in linear configurations adjacent to poultry house fans. (**Warm Season Grass)**	None	NO BMP	None (not approved at this time)
RI-12 Vegetative Environmental Buffer for Poultry, Trees	Vegetative Environmental Buffers are a minimum of two staggered rows of trees/ shrubs in linear configurations adjacent to poultry house fans.**(Trees)**	Tree Planting: Vegetative Environmental Buffers Poultry (TreePlant)	Y	No CBP definition exists for Vegetated Environmental Buffers for Poultry, however the interim practice is credited as "Tree Planting." (not approved at this time)
RI-13 Conversion to Pasture	Conversion of cropland to pasture for the purpose of forage production through the establishment of native or introduced forage species.	Land Retirement to Pasture (LandRetirePast)	N	Converts land area to pasture. Agricultural land retirement takes marginal and highly erosive cropland out of production by planting permanent vegetative cover such as shrubs, grasses, and/or trees. Agricultural agencies have a program to assist farmers in land retirement procedures.
RI-14 Conversion to Hayland	Conversion of cropland to hayland for the purpose of forage production through the establishment of native or introduced forage species.	Land Retirement to Hay Without Nutrients (LandRetireHYO)	N	Converts land area to hay without nutrients. Agricultural land retirement takes marginal and highly erosive cropland out of production by planting permanent vegetative cover such as shrubs, grasses, and/or trees. Agricultural agencies have a program to assist farmers in land retirement procedures.
RI-15 Rotational Grazing	This practice utilizes a range of pasture management and grazing techniques to improve the quality and quantity of the forages grown on pastures and reduces the impact of animal travel lanes, animal concentration areas or other degraded areas.	Prescribed Grazing (PrecRotGrazing)	N	This practice utilizes a range of pasture management and grazing techniques to improve the quality and quantity of the forages grown on pastures and reduce the impact of animal travel lanes, animal concentration areas or other degraded areas. Prescribed Grazing can be applied to pastures intersected by streams or upland pastures outside of the degraded stream corridor (35 feet width from top of bank). The modeled benefits of prescribed grazing practices can be applied to pasture acres in association with or without alternative watering facilities. They can also be applied in conjunction with or without stream access control. Pastures under the prescribed grazing systems are defined as having a vegetative cover of 60% or greater.

RI-16 Barnyard Clean Water Diversion	This practice includes the installation of practices to control clean water runoff from barnyard areas, such as roof runoff control, diversion of clean water from entering the barnyard and control of runoff from barnyard or poultry barn areas. This is not associated with dirty water that requires treatment before release.	Barnyard Runoff Control (BarnRunoffCont)	N	Includes the installation of practices to control runoff from barnyard areas. This includes practices such as roof runoff control, diversion of clean water from entering the barnyard and control of runoff from barnyard areas.
RI-17 Water Control Structure	A structure in a water management system that conveys water, controls the direction or rate of flow, maintains a desired water surface elevation in drainage ditches for water de-nitrification purposes.	Water Control Structures (WaterContStruc)	N	Installing and managing boarded gate systems in agricultural land that contains surface drainage ditches.
RI- Watering Trough	A permanent or portable device to provide an adequate amount and quality of drinking water for livestock.	Off Stream Watering Without Fencing (OSWnoFence)	N	This BMP requires the use of alternative drinking water sources away from streams. The BMP may also include options to provide off-stream shade for livestock, and implementing a shade component is encouraged where applicable. The hypothesis on which this practice is based is that, given a choice between a clean and convenient off-stream water source and a stream, cattle will preferentially drink from off-stream water source and reduce the time they spend near and in streams and stream banks. Alternative watering facilities typically involves the use of permanent or portable livestock water troughs placed away from the stream corridor. The source of water supplied to the facilities can be from any source including pipelines, spring developments, water wells, and ponds. In-stream watering facilities such as stream crossings or access points are not considered in this definition. The modeled benefits of alternative watering facilities can be applied to pasture acres in association with or without improved pasture management systems such as prescribed grazing or PIRG.

Effectiveness Estimates:
The effectiveness estimates for Non-Cost Shared practices and Resource Improvement Practices will be the same as CBP BMP's per guidance received from AgWG July 2013.

Table 4: Effective Estimates from RI BMPs/CBP BMPs

RI BMP Name	CBP BMP Name	Land Use Change	Nitrogen % Effectiveness Min/Max	Phosphorus % Effectiveness Min/Max	Sediment Effectiveness Min/Max
RI-1 Waste Storage Structure	AWMS	Nutrient Availability	N/A	N/A	N/A
Ri-2 Animal Compost Structure	MortalityComp	Nutrient Availability	N/A	N/A	N/A
RI-3 Alternative Crop/Switchgrass	CarSeqAltCrop	Landuse change	N/A	N/A	N/A
RI-4a Watercourse Access Control, Narrow-Grass 10'-34'	PastFence	Landuse change	N/A	N/A	N/A
RI-4b Watercourse Access Control, Narrow-Trees10'-34'	PastFence AND Tree Plant	Landuse change AND Landuse change	N/A	N/A	N/A
RI-5 Watercourse Access Control, Grass 35'+	GrassBuffersTrp	Landuse change Efficiency	13/46	30/45	40/60
RI-6 Watercourse Access Control, Trees 35'+	PastFence AND ForestBuffersTRP	Landuse change AND Landuse change Efficiency	19/65	30/45	40/60
RI-7 Grass Nutrient Exclusion Area on Watercourse, 10'-34'	LandRetireHYO	Landuse change	N/A	N/A	N/A
RI-8 Grass Buffer on Watercourse, 35'+	Grass Buffers	Landuse change Efficiency	13/46	30/45	40/60
RI-9 Forest Nutrient Exclusion Area on Watercourse, 10'-34'	TreePlant	Landuse Change	N/A	N/A	N/A
RI-10 Forest Buffer on Streams, 35'+	ForestBuffers	Landuse change Efficiency	19/65	30/45	40/60
RI-11 Vegetative Environmental Buffer for Poultry-Grass	None	Not Approved BMP	Not Approved BMP	Not Approved BMP	Not Approved BMP
RI-12 Vegetative Environmental Buffer for Poultry- Trees	TreePlant	Landuse change	N/A	N/A	N/A

RI-13 Conversion to Pasture	LandRetirePast	Landuse change	N/A	N/A	N/A
RI-14 Conversion to Hayland	LandRetireHYO	Landuse change	N/A	N/A	N/A
RI-15 Rotational Grazing	PrecRotGrazing	Efficiency	9/11	24/24	30/30
RI-16 Barnyard Clean Water Diversion	BarnRunoffCont	Efficiency	20/20	20/20	40/40
RI-17 Water Control Structure	WaterContStruc	Efficiency	33/33	0/0	0/0
RI-18 Watering Trough	OSWnoFence	Efficiency	5/5	8/8	10

- Estimates will vary based on hydro geomorphic regions of the Chesapeake Bay.

Other Benefits of reporting Resource Improvement Practices:

- **Land Coverage:** By reporting Non-cost shared BMP's and RIs, Jurisdictions are 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 RIs Jurisdictions 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 RIs Jurisdictions 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 RIs Jurisdictions will provide "credit" for all the conservation actions farmers are implementing to protect the environment and the Chesapeake.

Justification for Recommended Effectiveness Estimates:

At the recommendation of the AgWG (July 2013), the effectiveness estimates for Non-Cost Shared practices meeting NRCS standards and Specifications and Resource Improvement practices will be the same. However, the RI lifespans have been reduced from NRCS lifespans (with the exception of rotational grazing). It is assumed that since the design criteria for the RI are not as extensive as required by NRCS specifications, that a technical person must visit the BMP on a more frequent basis to review the efficacy and farmer's operations and maintenance of the RI.

References Utilized for Manual Development and this Report:

List of references:

- MDA Non Cost-Shared Verification Procedures Manual, November 2013, Versions 1,2 and 3
- Estimates of County-Level Nitrogen and Phosphorus Data for use in the Modeling Pollutant Reduction-Documentation for Scenario Builder Version 2.4.
- "Developing Best Management Practice Definitions and Effectiveness Estimates for Nitrogen, Phosphorus and Sediment in the Chesapeake Bay Watershed" Final Report December 2009, University of Maryland Mid-Atlantic Water Program
- USDA-NRCS National Conservation Practice Handbook

- Natural Resource Conservation Service Technical Guide, Section IV, Practice Standards
- NACD Protocol Project: The report can be found at www.howardscd.org

Appropriateness of Recommendations:

- Applicability: The RI definitions developed by Technical Review Panel would be applicable for other states in the Chesapeake Bay Watershed.
- Study location: This report is presented for the use in Chesapeake Bay states.
- Variability: If used in other states, there would be some variability depending on state definitions and state laws that may require additional specifications or design criteria. For example, there would be some variability between states on planting dates.
- Number of studies: The NRCS Technical Guide, Section IV Standards were used as references for the RI definitions and Visual Indicators. NRCS Standards and Specifications are based the USDA-NRCS National Practices Standards and Specifications and the research and practice standard development and approval processes that is used to develop them.
- Scientific support: The scientific support for USDA-NRCS National Standards and Specifications are based on federal and/or state scientific research.

Other considerations to include:

- BMP FE worksheets from MDA Non Cost Shared Verification Manual, Versions 1, 2 and 3 were reviewed for the development or RI worksheets. Technical Review Panel members who had used the previous worksheets were used to help further clarify what a RI practice should be.
- The RI BMP definitions were designed utilizing the NRCS design standards as references, which are implemented similarly throughout the Chesapeake Bay watershed.
- Lifespans for RI practices were reduced to assure the viability of the practice.
- The reduction values are applied annually

How much influence do the results have on the final estimate?

- Existing BMP's in Chesapeake Bay Partnership BMP Documentation were used for effectiveness estimates.

Application of Practice Effectiveness Estimates

Table 5: Reporting Units in Scenario Builder and NEIEN Appendix

BMP Name	Unit Name	Measurement Name
Waste Storage Structure RI	COUNT	BEEF_AU
Waste Storage Structure RI	COUNT	DAIRY_AU
Waste Storage Structure RI	COUNT	GOATS_AU
Waste Storage Structure RI	COUNT	HORSE_AU
Waste Storage Structure RI	COUNT	OTHER_AU

Waste Storage Structure RI	COUNT	POULTRY_AU
Waste Storage Structure RI	COUNT	SHEEP_AU
Waste Storage Structure RI	COUNT	SWINE_AU
Animal Compost Structure RI	COUNT	Systems
Animal Compost Structure RI	COUNT	Systems
Alternative Crop/Switchgrass RI	ACRE	Acres
Watercourse Access Control Narrow Grass RI	FEET	Length
Watercourse Access Control Narrow Grass RI	FEET	Width
Watercourse Access Control Narrow Trees Fence RI*	FEET	Length
Watercourse Access Control Narrow Trees Fence RI*	FEET	Width
Watercourse Access Control Narrow Trees Planted RI*	FEET	Length
Watercourse Access Control Narrow Trees Planted RI*	FEET	Width
Watercourse Access Control-Grass RI	FEET	Length
Watercourse Access Control Grass RI	FEET	Width
Watercourse Access Control Trees Fence RI**	FEET	Length
Watercourse Access Control Trees Fence RI**	FEET	Width
Watercourse Access Control Trees Planted RI**	FEET	Length
Watercourse Access Control Trees Planted RI**	FEET	Width
Grass Nutrient Exclusion Area on Watercourse RI	FEET	Length
Grass Nutrient Exclusion Area on Watercourse RI	FEET	Width
Grass Buffer on Watercourse RI	FEET	Length
Grass Buffer on Watercourse RI	FEET	Width
Forest Nutrient Exclusion Area on Watercourse RI	FEET	Length
Forest Nutrient Exclusion Area on Watercourse RI	FEET	Width
Forest Buffer on Watercourse RI	FEET	Length
Forest Buffer on Watercourse RI	FEET	Width
Vegetative Environmental Buffer-Grass RI	FEET	Length
Vegetative Environmental Buffer-Grass RI	FEET	Width
Vegetative Environmental Buffer-Trees RI	FEET	Length
Vegetative Environmental Buffer-Trees RI	FEET	Width
Conversion to Pasture RI	ACRE	Acres
Conversion to Hayland RI	ACRE	Acres
Rotational Grazing RI	ACRE	Acres
Barnyard Clean Water Diversion RI	COUNT	Number
Water Control Structure RI	COUNT	Number
Watering Trough RI	COUNT	Number

*Jurisdictions should submit both Watercourse Access Control Narrow Trees Fence and Watercourse Access Control Narrow Trees Planted for each project with trees planted behind a pasture fence

** Jurisdictions should submit both Watercourse Access Control Trees Fence and Watercourse Access Control Trees Planted for each project with trees planted behind a pasture fence

All Existing CBP Partnership BMP Characteristics and Outcomes were used for Non-Cost Shared and RI BMPs

- Conditions under which the BMP works: BMP's will address the same load sources as the CBP BMP's.
- On-the-ground, operational, average conditions have been taken into account with the use existing CBP BMP effectiveness estimates.
- Considerations for benefits in load reductions among various hydrologic flow regimes have been taken into account with the use of existing CBP BMP effectiveness estimates.
- Benefits in load reductions among species of nitrogen and species of phosphorus and how these considerations yielded a total nitrogen and total phosphorus reduction benefit and sediment load reduction benefits have been taken into account with the use existing CBP BMP effectiveness estimates.

Geographic Considerations

- Location within the Chesapeake Bay watershed where these practices are applicable- Chesapeake Bay States

Land Types:

Table 6: Land Types to which RI BMPs are applied

BMP Name	Default Land Use	Default SBLandUse
Waste Storage Structure RI	Agricultural	Livestock
Animal Compost Structure RI	Agricultural	Livestock
Alternative Crop/Switchgrass RI	Agricultural	ROW
Watercourse Access Control-Narrow- Grass RI	Pasture/Hay	trp
Watercourse Access Control-Narrow- Trees Fence RI	Pasture/Hay	trp
Watercourse Access Control-Narrow- Trees Planted RI	Pasture/Hay	hyo
Watercourse Access Control Grass RI	Pasture/Hay	trp
Watercourse Access Control-Trees Fence RI	Pasture/Hay	trp
Watercourse Access Control-Trees Planted RI	Pasture/Hay	hyo
Grass Nutrient Exclusion Area on Watercourse-Narrow RI	Agricultural	ROW
Grass Buffer on Watercourse RI	Agricultural	ROW
Forest Nutrient Exclusion Area on Watercourse- Narrow RI	Agricultural	ROW

Forest Buffer on Watercourse RI	Agricultural	ROW
Vegetative Environmental Buffer-Grass RI	Agricultural	Afocafo
Vegetative Environmental Buffer-Trees RI	Agricultural	Afocafo
Conversion to Pasture RI	Agricultural	ROW
Conversion to Hayland RI	Agricultural	ROW
Rotational Grazing RI	Pasture/Hay	PASTURE
Barnyard Clean Water Diversion RI	Agricultural	Afocafo
Water Control Structure RI	Agricultural	AG
Watering Trough RI	Agricultural	PASTURE

- The Scale at which the BMP and BMP load reduction benefits are applied have been taken into account with the use of existing CBP BMP effectiveness estimates.
- The pre-BMP and post-BMP circumstances, including the baseline conditions for individual practices have been taken into account with the use of existing CBP BMP's.
- Variations in BMP effectiveness across the watershed due to climate, hydro geomorphic region, soil types and vegetation – or other measureable factors have been taken into account with the use of existing CBP BMP's.

Temporal Considerations:

- All these practices are considered cumulative.
- Temporal performance of the BMP including lag times between establishment and full functioning (if applicable) have been taken into account with the use of existing CBP BMP's.
- The need for annualized benefits was accounted for with practices that only perform during specific time periods within a year have been taken into account with the use of existing CBP BMP's.
- Useful life: Lifespans have been reduced from NRCS Standards. It is assumed that since the RI design criteria may not be as extensive as required by NRCS specifications, that a technical person must visit the RI BMP on a more frequent basis to review the efficacy of the RI BMP and the farmer's operation and maintenance of the BMP. (See above table)
- More frequent reviews of the RI BMPs will assist in accounting for imperfect operation and maintenance of the practice.

Practice Limitations

- Potential interactions with other practices-None
- Ancillary benefits beyond nitrogen, phosphorus and sediment loads for some practices could include but is not limited to reduced atmospheric N losses and air emissions.

Data Gaps and Research Needs

- The following BMP's will need to be completed through the Partnership Expert Panel Process with effectiveness rating for them to be final in the model:

    - Efficiencies for buffer widths for narrow Grass Buffers has not been considered by an Expert Panel
    - Vegetative Environmental Buffers on poultry houses have been recognized as providing air quality benefits and some nutrient processing. This is currently a Interim BMP. Collection of research to support efficiencies is needed for tree and warm season grass buffers.
- Potential Efficiencies for Switchgrass: Currently Ken Staver of Wye Research has been working on the nutrient uptake of Switchgrass on the Eastern Shore. Results of his work may help inform effectiveness rating for Alternative Crop/Switchgrass BMP in the future (currently a land use change BMP).

Attachments

- Chesapeake Bay Program Resource Improvement Practice Definition and Verification Visual Indicators, Version 3.0, June 2014
- NEIEN Appendix
- Interview Summary Report

Interview Summary Report:

Date	Attendees	Actions
7/15/13	Mark Dubin, CBP Dana York, GEC	Meeting to for Recommendation on Next Steps for Maryland to submit FE (now RI) BMP's
7/23/13	John Rhoderick, MDA	Meeting with John Rhoderick to develop next steps on FE (now RI) Submittal to CBP
8/7/13	Greg Sandi, MDA Michael Stanton, MDA Dana York, GEC	Meeting with MDE on NEIEN node and to update next steps MDA will take to submit FE's (now RI) to CBP program
8/9/13	AgWG Members	AgWG Meeting- MDA present next steps and ask for guidance on submitting FE's (now RI) to AgWG and CBP. AgWG tells MDA to use two assumptions: 1) The FE BMP's (now RI) will have the same efficiencies as the those meeting a NRCS standard, but they should have a shorter lifespan.
8/26/13	John Rhoderick, MDA Beth Horsey, MDA Michael Stanton, MDA Jason Keppler, MD Dana York, GEC Bob Ensor, HSCD	Meeting with MDA to present MDA worksheet concept. MDA approved concept and told to GEC complete and return with final worksheets and with suggested FE (now RI) Design Criteria.
9/17/13	John Rhoderick, MDA Beth Horsey, MDA Michael Stanton, MDA Dana York, GEC Bob Ensor, HSCD	Meeting with MDA to review and adjust FE (now RI) Design Criteria.
8/18/13	Bob Ensor, HSCD Geof Schoming, HSCD	Meeting with Howard County staff to review and finalize MDA FE (now RI) Design Criteria and to look at suggestions and guidance for middle Maryland counties.
9/24/13	John Shepard, CSCD Trista North, CSCD Stephanie Knutsen, CSCD Alison Taylor, CSCD Carol Middleton, CSCD Dana York, GEC Bob Ensor, HSCD	Meet with Caroline County Soil Conservation Staff on FE (now RI) design criteria for worksheets and collect suggestions and guidance for eastern shore counties.
9/25/13	Elmer Weibley, WCSCD Bob Ensor, HSCD	Meet with Washington County Soil Conservation staff on FE (now RI) design criteria for worksheets and to collect suggestions and guidance for western Maryland counties.

9/26/13	AgWG Members	Ag Work Group Meeting- WQGIT members were also present. Presented latest worksheet concepts as developed from field District Staff Review. AgWG approved technical concept. AgWG told MDA to request a review from WQGIT of FE design criteria and verification protocol for acceptance into the bay program. MDA told they may submit the BMP names for inclusion to the NEIEN Appendix with the names turned off until approved to meet the Appendix deadline.
9/30/13	MDA	MDA proposed a review from WQGIT of FE design criteria and verification protocol for acceptance into the bay program. WQGIT Acting Chair referred the recommendation back to the AgWG for action.
9/30/13	John Rhoderick, MDA Beth Horsey, MDA Michael Stanton, MDA	Reviewed and acted on District Staff FE Design Criteria recommendations.
10/7/13	WTWG Members	Presentation to the WTWG meeting on MDA FE BMP process and design criteria.
10/9/13	Mark Dubin, CBP Dana York, GEC	Teleconference on CBP BMP Efficiency Reporting.
10/10/13	Mark Dubin, CBP Dana York, CBP	NEIEN Appendix proposal.
10/15/13	John Rhoderick, MDA Beth Horsey, MDA Michael Stanton, MDA Dana York, GEC Mark Dubin, CBP Matt Johnston, CBP	Meeting with MDA on NEIEN Appendix, and selection of appropriate CBP BMPs for MDA FE's.
10/21/13	John Rhoderick, MDA Beth Horsey, MDA Michael Stanton, MDA Dana York, GEC Bob Ensor, HSCD	Meeting to determine FE (now RI) worksheet and Contrack Reporting Requirements.
11/5/13	John Rhoderick, MDA Beth Horsey, MDA Michael Stanton, MDA Dana York, GEC	Meeting to review CBP edits and CBP program document submission.
11/7/13	AgWG Members WTWG Members	AgWG Meeting; Manual referred to Technical Review Panel; NEIEN Appendix Approved with FE's DRAFT; Technical Review Panel Nomination Sent to States
11/12/13	WQGIT Members	MDA FE Update
12/12/13	AgWG Members	Technical Review Panel Selected
1/29/14	Sally Kepfer, Debbie Absher, Ann Baldwin, Robert Ensor, Gary Moore, Lamonte Garber, Beth McGee, Larry Tennity, Hosea Latshaw,	Technical Review Panel Conference Call for Introduction to Issue and Panel Charge

	Elmer Weibley, Charlie Wootton, Greg Albrecht, Jeff Hill, Mark Dubin, Dana York, Emma Giese	
3/21/14	Sally Kepfer, Ann Baldwin, Robert Ensor, Gary Moore, Lamonte Garber, Beth McGee, Dale Gates, Greg Albrecht, Larry Tennity, Hosea Latshaw, Elmer Weibley, Charlie Wootton, Jeff Hill, Dana York, Emma Giese, Mark Dubin, John Rhoderick	Technical Review Panel Meeting
5/8/14	John Rhoderick, Jason Keppler, Elmer Weibley, Debbie Absher, Sally Kepfer, Hosea Latshaw, Gary Moore, Charlie Wootton, Lamonte Garber, Jeff Hill, Mark Dubin, Beth McGee, Larry Tennity, Ann Baldwin, Greg Albrecht, Bob Ensor, Dana York, Emma Giese	Technical Review Panel Meeting
5/9/14	AgWG	CBP Partnership AgWG Agricultural BMP Verification Guidance Released
5/21/14	AgWG	Suggestion provided on RI's to Verification Guidance
5/29/14	MBRS	Technical Review Panel Teleconference to review Guidance Document and Submission Document
6/3/14	Matt Johnston, Mark Dubin, Emma Giese, Dana York, Bob Ensor, John Rhoderick, Jason Keppler, Rachel Melvin	Conference Call on CBP definitions, efficiencies for RI's Matt Johnston Provided corrected Table Entries
6/18/14	AgWG	Bob Ensor, Panel Chair, Technical Review Panel Presentation of Guidance Document and Submission Document
July	AgWG	Approval
August	WTWG/WQGIT	Approval