USDA

United States Department of Agriculture

Natural Resources Conservation Service

NRCS Practice Implementation Data

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Natural Resources Conservation Service

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CBP Agriculture Workgroup – June 2018 Priorities

Priority: Practice Implementation Data

- Full accounting of implementation: cost-shared and non-cost shared agricultural practices.
- Crosswalk of NRCS, state, and CBP practices: which practices fully match, which are supporting practices.
- Understand how much implementation we might be missing out on, or not.
- Implementation activities that may be missing from CBP reporting/tracking of practices, but provide WQ benefits.

Chesapeake Bay Executive Order Strategy : Accelerate Conservation Adoption

Develop a system of accountability for tracking and reporting conservation practices. Full accounting of conservation practices applied to the land is a necessary data input for improving the quality of information and ensuring that the practices are properly credited in the Bay model. In development of this system, USDA will uphold all privacy requirements as called for in Section 1619 of the 2008 Farm Bill.

2008 Farm Bill: Section 1619 Information Gathering

(2) PROHIBITION.—Except as provided in paragraphs (3) and (4), the Secretary, any officer or employee of the Department of Agriculture, or any contractor or cooperator of the Department, shall not disclose—

(A) information provided by an agricultural producer or owner of agricultural land concerning the agricultural operation, farming or conservation practices, or the land itself, in order to participate in programs of the Department; or

(B) geospatial information otherwise maintained by the Secretary about agricultural land or operations for which information described in subparagraph (A) is provided.

(3) AUTHORIZED DISCLOSURES.—

(A) LIMITED RELEASE OF INFORMATION.—If the Secretary determines that the information described in paragraph (2) will not be subsequently disclosed except in accordance with paragraph (4), the Secretary may release or disclose the information to a person or Federal, State, local, or tribal agency working in cooperation with the Secretary in any Department program—

(i) when providing technical or financial assistance with respect to the agricultural operation, agricultural land, or farming or conservation practices; or

(ii) when responding to a disease or pest threat

MEMORANDUM OF UNDERSTANDING

Between
U.S. Geological Survey
AND
United States Department of Agriculture
Natural Resources Conservation Service

I. PARTIES

This Memorandum of Understanding (MOU) is entered into by the United States Department of Agriculture Natural Resources Conservation Service (NRCS) and the U.S. Geological Survey (USGS).

II. PURPOSE

The purpose of this MOU is to continue the existing cooperation between USGS and NRCS for the evaluation of conservation practices and systems for improving water quality throughout the Chesapeake Bay watershed. The USGS and NRCS will work collaboratively to develop geospatial conservation data sets that preserve the value of the conservation actions, but do not reveal privacy information about individual farms or ranches.

III. BACKGROUND AND MUTUAL BENEFITS

USGS and NRCS have a mutual interest in meeting responsibilities identified in the Presidential Executive Order (13508) on the Chesapeake Bay, and in determining the benefits and impacts of agricultural conservation systems on water quality. Understanding the sources of nutrients and sediment and how these nutrients move into streams and groundwater is critical to design effective nutrient management and erosion control strategies.

Aggregated NRCS Practice Data

	A	B	C	D	E	F	G	H	I
1	ProgressYear	StateAbbreviatio	practice_fips	practice_code	practice_name	practice_measurement_unit	contract_livestock_name	practice_certified_quantity	RecordCount
2	2017	PA	42055	561	Heavy Use Area Protection	ac	Beef	1.3	7
3	2017	PA	42057	561	Heavy Use Area Protection	sq ft	Beef	4650	11
4	2017	PA	42063	561	Heavy Use Area Protection	ac	Beef	0.6	6
5	2017	PA	42011	561	Heavy Use Area Protection	sq ft	Beef	4872	5
6	2017	PA	42071	634	Waste Transfer	no	Dairy	59	15
7	2017	PA	42087	634	Waste Transfer	no	Dairy	9	9
8	2017	PA	42133	561	Heavy Use Area Protection	ac	Beef	0.7	5
9	2017	PA	42013	561	Heavy Use Area Protection	sq ft	Beef	2850	12
10	2017	PA	42071	561	Heavy Use Area Protection	sq ft	Dairy	12792	5
11	2017	PA	42057	561	Heavy Use Area Protection	ac	Beef	0.6	6
12	2017	PA	42071	313	Waste Storage Facility	no	Dairy	18	17
13	2017	PA	42011	634	Waste Transfer	no	Dairy	8	8
14	2017	PA	42029	561	Heavy Use Area Protection	sq ft	Dairy	19207	6
15	2017	PA	42055	313	Waste Storage Facility	no	Dairy	5	5
16	2017	PA	42011	533	Pumping Plant	no	Dairy	7	7
17	2017	PA	42029	634	Waste Transfer	no	No Livestock	9	9
18	2017	PA	42055	634	Waste Transfer	no	Dairy	16	16
19	2017	PA	42009	561	Heavy Use Area Protection	sq ft	Beef	1350	6
20	2017	PA	42011	313	Waste Storage Facility	no	Dairy	6	6
21	2017	PA	42029	634	Waste Transfer	no	Dairy	7	7
22	2017	PA	42087	533	Pumping Plant	no	Dairy	5	5
23									
24	2016	PA	42055	561	Heavy Use Area Protection	ac	Dairy	0.9	7
25	2016	PA	42117	634	Waste Transfer	no	Dairy	5	5
26	2016	PA	42011	561	Heavy Use Area Protection	ac	Beef	1.5	7
27	2016	PA	42033	561	Heavy Use Area Protection	ac	Beef	0.9	9
28	2016	PA	42055	561	Heavy Use Area Protection	ac	Beef	1	5
29	2016	PA	42063	561	Heavy Use Area Protection	ac	Beef	1.1	10
30	2016	PA	42027	561	Heavy Use Area Protection	ac	Beef	0.6	5
31	2016	PA	42071	634	Waste Transfer	no	Dairy	8	7
32	2016	PA	42109	634	Waste Transfer	no	Dairy	7	7
33	2016	PA	42133	561	Heavy Use Area Protection	ac	Beef	1	6

NRCS Conservation Practice Standards

code	practice	units	effective	lifespan
472	Access Control	ac	1/1/2004 0:00	10
560	Access Road	ft	1/1/2004 0:00	10
E612133X1	Adding food-producing trees and shrubs to existing plantings	ac	1/1/2016 0:00	15
E449114Z8	Advanced Automated IWM - Year 1 - Equipment and soil mo	ac	10/1/2017 0:00	1
E449114Z7	Advanced Automated IWM - Year 2-5, Soil moisture is moni	ac	10/1/2017 0:00	1
E449144Z4	Advanced Automated IWM-Year 1, Equipment and soil mois	ac	8/26/2017 0:00	1
E449144Z3	Advanced Automated IWM-Year 2-5, Soil moisture is monit	ac	8/26/2017 0:00	1
E449114Z1	Advanced IWM--Soil moisture is monitored, recorded, and u	ac	1/1/2016 0:00	5
E449114Z2	Advanced IWM--Weather is monitored, recorded and used i	ac	1/1/2016 0:00	5
129	Ag Energy Management Plan - Applied	no	10/1/2014 0:00	1
309	Agrichemical Handling Facility	no	5/23/2008 0:00	15
124	Agricultural Energy Management Plan, Landscape - Written	no	10/13/2010 0:00	1
128	Agricultural Energy Management Plan - Written	no	10/1/2014 0:00	1
123	Agricultural Energy Management Plan, Headquarters - Applie	no	3/5/2009 0:00	1
122	Agricultural Energy Management Plan, Headquarters - Writt	no	3/5/2009 0:00	1
125	Agricultural Energy Management Plan, Landscape - Applied	no	10/13/2010 0:00	1
371	Air Filtration and Scrubbing	no	5/27/2010 0:00	10
311	Alley Cropping	ac	1/1/2004 0:00	15
PLT14	Alley cropping establishment for wildlife and beneficial inse	ac	12/29/2010 0:00	1
801	AMENDING SOIL PROPERTIES WITH GYPSIFEROUS PRODUC	ac	10/15/2014 0:00	2
333	Amending Soil Properties with Gypsum Products	ac	5/7/2015 0:00	1
591	Amendments for the Treatment of Agricultural Waste	AU	5/12/2005 0:00	1
366	Anaerobic Digester	no	2/24/2004 0:00	25
316	Animal Mortality Facility	no	1/1/2004 0:00	15

Conservation Practice Physical Effects (CPPE, FOTG Section V)

PracticeName	PracticeCode	Water Quality Degradation -Excess Nutrients in Surface and Groundwater - - Nutrients in Surface water	Water Quality Degradation -Excess Nutrients in Surface and Groundwater - - Nutrients in Groundwater	Water Quality Degradation -Excessive Sediment in Surface Water - - Excessive Sediment in Surface Water	W
Agrichemical Handling Facility	309	5	5	0	
Bedding	310	-2	1	-1	
Alley Cropping	311	3	1	3	
Waste Storage Facility	313	4	2	0	
Brush Management	314	0	0	2	
Herbaceous Weed Treatment	315	0	0	0	
Animal Mortality Facility	316	2	2	0	
Composting Facility	317	2	2	0	
Short Term Storage of Animal Waste and Byproducts	318	4	2	0	
On-Farm Secondary Containment Facility	319	0	0	0	
Irrigation Canal or Lateral	320	-2	0	0	
Deep Tillage	324	1	-2	0	
High Tunnel System	325	0	0	-1	
Clearing and Snagging	326	0	0	-2	
Conservation Cover	327	4	4	4	
Conservation Crop Rotation	328	2	2	2	

CONSERVATION PRACTICE STANDARD

RIPARIAN FOREST BUFFER

(Ac.)

CODE 391

DEFINITION

An area predominantly trees and/or shrubs located adjacent to and up-gradient from watercourses or water bodies.

PURPOSE

- Create shade to lower or maintain water temperatures to improve habitat for aquatic organisms.
- Create or improve riparian habitat and provide a source of detritus and large woody debris.
- Reduce excess amounts of sediment, organic material, nutrients and pesticides in surface runoff and reduce excess nutrients and other chemicals in shallow ground water flow.
- Reduce pesticide drift entering the water body.
- Restore riparian plant communities.
- Increase carbon storage in plant biomass and soils.

CONDITIONS WHERE PRACTICE APPLIES

Riparian forest buffers are applied on areas adjacent to permanent or intermittent streams, lakes, ponds, and wetlands. They are not applied to stabilize stream banks or shorelines.

CRITERIA

General Criteria Applicable to All Purposes

The riparian forest buffer shall be positioned appropriately and designed to achieve structure/density and connectivity to accomplish the intended purpose(s).

Dominant vegetation will consist of existing, naturally regenerated, or seeded/planted trees and shrubs suited to the soil and hydrology of the site and the intended purpose(s).

The vegetation will extend a minimum width to achieve the purpose(s). Measurement shall begin at and perpendicular to the normal water line, bank-full elevation, or the top of the bank as determined locally.

Overland flow through the riparian area will be maintained as sheet flow.

For sites to be regenerated or planted, excessive sheet-rill and concentrated-flow erosion will be controlled.

Excessive sheet-rill and concentrated-flow erosion will be controlled in the areas immediately adjacent and up-gradient of the buffer site.

Use tree and shrub species that are native and non-invasive. Substitution with improved and locally accepted cultivars or purpose-specific species is allowed. For plantings and seeding, only viable, high-quality and adapted plant materials will be used.

Favor tree and shrub species that have multiple values such as those suited for timber, nuts, fruit, florals, browse, nesting, and aesthetics.

Periodic removal of some forest products such as high value trees, medicinal herbs, nuts, and fruits is permitted provided the intended purpose is not compromised by the loss of vegetation or harvesting disturbance.

Necessary site preparation and planting shall

Additional Criteria

necessary to achieve and maintain the intended purpose. If pesticides are used, refer to the standard Pest Management, 595.

Additional Criteria to Reduce Excess Amounts of Sediment, Organic Material, Nutrients and Pesticides in Surface Runoff and Reduce Excess Nutrients and Other Chemicals in Shallow Ground Water Flow

The minimum width shall be at least 35 feet measured horizontally on a line perpendicular to the water body beginning at the normal water line, bank-full elevation, or the top of the bank as determined locally.

The width will be extended in high nutrient, sediment, and animal waste application areas, where the contributing area is not adequately treated or where an additional level of protection is needed.

Existing, functional underground drains through the riparian area will pass pollutants directly to the outlet. To filter such pollutants, drains can be plugged, removed or replaced with perforated pipe/end plugs or water control structures (see Structure for Water Control - 587) to allow passage and filtration of drain

for the site.

CONSIDERATIONS

Tree and shrub species, which may be alternate hosts to undesirable pests, sh avoided. Species diversity should be considered to avoid loss of function du species-specific pests.

Using seed and/or seedlings collected propagated from multiple sources can genetic diversity.

Consider selecting species with toleran herbicide leakage from adjoining fields

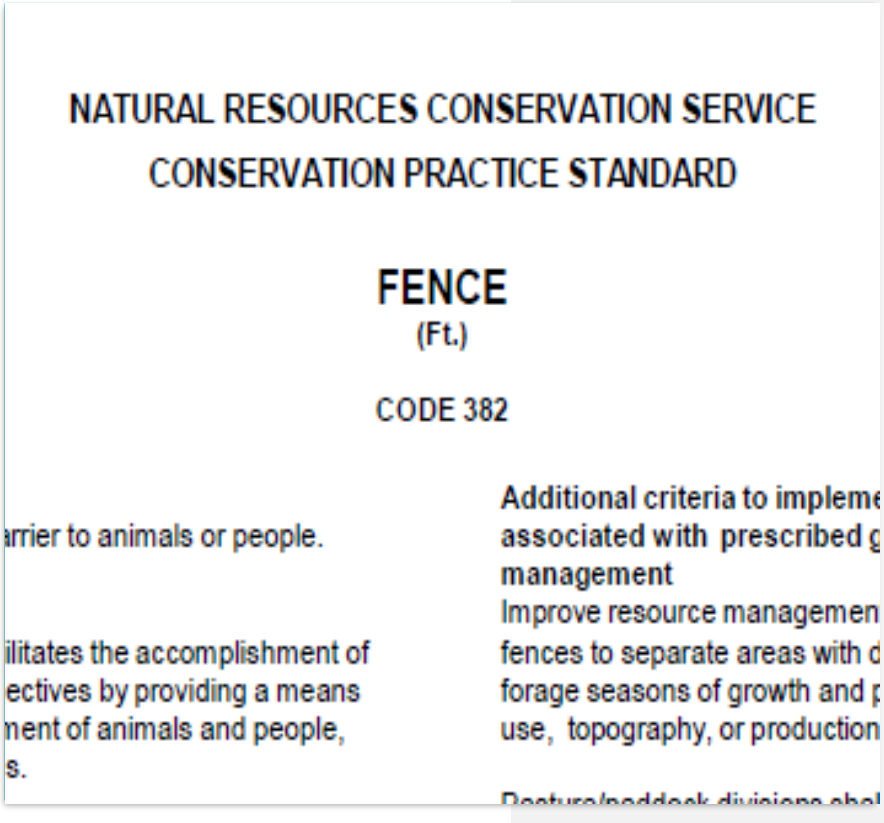
Allelopathic impacts of plants should b considered.

The location, layout and density of the should complement natural features, a mimic natural riparian forests.

For sites where continued function of d desired, woody root penetration may ev plug the underground structure. In thes cases, a setback of woody vegetation p over the drain maintained in herbaceou or using rigid, non-perforated pipe will r

Practices do not always align

BMPFullName
Forest Buffer-Narrow with Exclusion Fencing
Forest Buffer-Streamside with Exclusion Fencing
Grass Buffer
Grass Buffer - Narrow
Grass Buffer-Narrow with Exclusion Fencing
Grass Buffer-Streamside with Exclusion Fencing
Horse Pasture Management
Irrigation Water Capture Reuse
Lagoon Covers



NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

FENCE

(Ft.)

CODE 382

rrier to animals or people.

ilitates the accomplishment of
ectives by providing a means
ment of animals and people,
s.

Additional criteria to impleme
associated with prescribed g
management
Improve resource managemen
fences to separate areas with d
forage seasons of growth and p
use, topography, or production

Natural Resources Conservation Service

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CSP Enhancements are now directly associated with a Conservation Practice

NRCS Practice Code	NRCS Practice Name	Enhancement Code	Resource Concern	Enhancement Description
590	Nutrient Management	E590118X	WATER QUALITY DEGRADATION	Utilize precision application technology and techniques to reduce risk of nutrients in surface wa applied and reducing the potential for delivery of nutrients into water bodies. Precision agricultu and apply nutrients to improve nutrient use efficiency and reduce risk of nutrient losses.
590	Nutrient Management	E590118Z	WATER QUALITY DEGRADATION	Nutrient management encompasses managing the amount, source, placement, and timing of the and soil amendments. Nutrients are currently being applied on the farm based on the 4R nutrien Enhanced nutrient use efficiency strategies or technologies are utilized to improve nutrient use e nutrient losses.
590	Nutrient Management	E590119X	WATER QUALITY DEGRADATION	Utilize precision application technology and techniques to reduce risk of nutrients in ground wat applied and reducing the potential for delivery of nutrients into ground water. Precision agricultu and apply nutrients to improve nutrient use efficiency and reduce risk of nutrient losses.
590	Nutrient Management	E590119Z	WATER QUALITY DEGRADATION	Nutrient management encompasses managing the amount, source, placement, and timing of the and soil amendments. Nutrients are currently being applied on the farm based on the 4R nutrien Enhanced nutrient use efficiency strategies or technologies are utilized to improve nutrient use e nutrient losses.

Reviewing current CP-BMP Crosswalk

NRCS Practice Code	NRCS Practice Name	CAST BMP Name	Comments
568	Trails and Walkways		
570	Stormwater Runoff Control		
574	Spring Development	Off Stream Watering Without Fencing	
575	Trails and Walkways		
578	Stream Crossing		
580	Streambank and Shoreline Protection	Non Urban Stream Restoration	
585	Stripcropping	Soil Conservation and Water Quality Plans	
587	Structure for Water Control	Water Control Structures	
590	Nutrient Management		
591	Amendments for the Treatment of Agricultural Waste	Poultry Litter Amendments (alum, for example)	
592	Feed Management	Dairy Precision Feeding and/or Forage Management	
600	Terrace	Soil Conservation and Water Quality Plans	may give more benefit than reflected in SWQP
604	Saturated Buffer		Suggest "Saturated Buffer"
605	Denitrifing Bioreactor		Suggest "Denitrifying Ditch Bioreactor"

CP - BMP Crosswalk Review Process

Crosswalk review will identify and provide recommendations for:

- **What CPs are correctly attributed to the right BMP and the correct BMP definition.**
- **What CPs are not correctly attributed to the right BMP or the correct BMP definition.**
- **What CPs are not currently attributed to a BMP but should be.**
- **What CPs are currently attributed to a BMP but should not be.**

CP - BMP Crosswalk Review Process

Step 1: Internal technical review (initiated)
USDA-NRCS and CBPO

Step 2: Develop draft recommendation report.
USDA-NRCS and CBPO

Step 3: Jurisdictional report review.
AgWG and WTWG

Step 4: Finalize recommendation report.
USDA-NRCS and CBPO

Step 5: Implement recommendations in NEIEN
WTWG and CBPO

Completion and Implementation: 2019 Model Updates

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