

Table 4. Agricultural Verification Protocol Concept (Final, AgWG Approved Version 3.5.5)

Chesapeake Bay Program Agriculture Workgroup (AgWG)

For all agricultural BMP protocol activities, verification procedures must: 1) be established that demonstrate an 80% or greater confidence level that the subject BMP has been implemented, is currently operational, and is being maintained to meet the BMP definition for standards and requirements; and 2) be in compliance with the Chesapeake Bay Program Partnership BMP Verification Principles, including any supporting addendums.

Annual BMPs: Cover Crops; Commodity Cover Crops; Dairy precision feeding; Swine Phytase; Poultry litter transport; Poultry Litter Injection; Poultry litter treatment; Poultry Phytase; Conservation Tillage / **Interim BMPs:** Dairy manure injection; Annual No-till

Structural BMPs: Animal waste management system; Barnyard runoff control; Decision agriculture; Biofilters; Lagoon covers; Loafing lot management; Mortality composters; Non-urban stream restoration; shoreline erosion control; Off-stream watering w/o fencing; Stream access control with fencing; Pasture alternate watering systems; Soil conservation & water quality plan elements; Water control structures; Wetland restoration / **Interim BMPs:** Dirt & gravel road erosion & sediment control; Non-urban stream restoration; P sorbing materials in Ag ditches;

Management BMPs- Plans: Enhanced nutrient management; Horse pasture management; Nutrient management; Precision Intensive rotational grazing; Prescribed grazing; Soil conservation & water quality plans / **Interim BMPs:** Nutrient management as BMP only

Management BMPs- Practices: Alternate crops; Continuous no-till; Forest buffers; Grass buffers; Land retirement; Stream-side forest buffers; Stream-side grass buffers; Stream-side forest buffers; Stream-side wetland restoration; Tree planting / **Interim BMPs:** Cropland irrigation management; Irrigation water capture reuse; Tree planting; vegetative environmental buffers- poultry;

Agricultural BMP Verification Protocol Category	Assessment Method	Conservation Practice Category				Cost-Sharing Information					BMP Performance							Verification Methodology	Verification Issues
		Annual BMPs	Structural BMPs	Management BMPs: Plans	Management BMPs: Practices	Federal C/S	State C/S	NGO C/S	Private Funded	Previously C/S BMPs (Expired Contract)	BMP Detection	Meets USDA/State Design Specs	Meets O&M Specs	Functionally Equivalent (Non-spec)	Non-functional Equivalent (Non-spec)	Installation Date (M/Y)	Expiration Date (M/Y)		
1.) Permit Issuing Programs	Verified compliance with federal NPDES (CAFO) or state agricultural operational permit program requirements.	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	?	✓	✓	Through on-site permit compliance inspections by trained agency personnel.	Frequency of compliance inspections during permit life span.
2.) Regulatory Programs	Verified compliance with federal or state agricultural regulatory requirements (non-operational permit).	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	?	✓	✓	Through on-site regulatory compliance inspections by trained agency personnel.	Frequency and percent coverage of regulatory compliance inspections.
3.) Financial Incentive Programs	Verified compliance with federal or state program contractual requirements.	✓	✓		✓	✓	✓	?	✗	✗	✓	✓	✓	✗	✗	✓	✓	Through on-site contractual compliance inspections by trained agency personnel.	Frequency of compliance inspections during contractual life span.
4.) Farm Inventory	Farm inventory by trained and certified federal, state, and/or county agency personnel.	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Through on-site visit by trained personnel while collecting data, check databases.	Accredited data source through training/certification.
5.) Farm Inventory	Farm inventory by trained and certified independent third-party personnel.	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Through on-site visit by trained personnel while collecting data, check databases.	Accredited data source through training/certification.
6.) Farm Inventory	Farm inventory by trained and certified agricultural consultant personnel.	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Through on-site visit by trained personnel while collecting data, check databases.	Accredited data source through training/certification.
7.) Farm Inventory	Farmer completes self-certified inventory survey and trained and certified federal, state and/or county personnel visit site to confirm.	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Through on-site visit by trained personnel.	% of checks determines acceptance of some practices.
8.) Farm Inventory	Farmer completes in-office self-certified inventory with trained and certified federal, state and/or county agency personnel.	✓	✗		✓	?	?	?	?	?	✓	✗	✗	✗	✗	?	?	Farmer certified during the visit at USDA or governmental office.	Farmer Self certification with Professional Assistance

9.) Farm Inventory	Farmer with training and certification completes self-certified inventory survey.	✓	✗		✓	?	?	?	?	?	✓	✗	✗	✗	✗	?	?	Farmer trained and certified by governmental agency.	Farmer self-certification with training and certification.
10.) Farm Inventory	Farmer completes self-certified inventory survey.	?	✗		✓	?	?	?	?	?	?	?	?	?	?	?	?	By Farmer self-certification when submitted.	Wide variance in knowledge of farmers.
11.) Office Records	Review of existing office records by trained and certified federal, state and/or county agency personnel.	?	✓		?	✓	✓	?	?	✓	✗	✗	✗	✗	✗	?	?	Trained personnel verify through knowledge of the farm or through calls made to the farmer.	Identifies formerly contractual BMPs and may miss many non C/S practices.
12.) Farm Records	Review of existing on-farm records by trained and certified federal, state and/or county agency personnel.	✓	✓		✓	✓	✓	✓	✓	✓	✓	?	?	?	?	✓	✓	Trained personnel verify through knowledge of the farm or through calls made to the farmer.	Misses many non-C/S practices
13.) Farm Records	Review of existing on-farm records by trained and certified independent third-party personnel.	✓	✓		✓	✓	✓	✓	✓	✓	✓	?	?	?	?	✓	✓	Trained personnel verify through knowledge of the farm or through calls made to the farmer.	Misses many non C/S practices
14.) Farm Records	Review of existing on-farm records by trained and certified agricultural consultant personnel.	✓	✓		✓	✓	✓	✓	✓	✓	✓	?	?	?	?	✓	✓	Trained personnel verify through knowledge of the farm or through calls made to the farmer.	Misses many non C/S practices.
15.) Transect Survey	Transect completed by trained and certified personnel on a County or Watershed scale.	✓	✗		✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓	?	?	Verified by the trained personnel completing the transect on the ground.	Can only determine existence and quality of practices not source of funding.
16.) CEAP Survey	CEAP survey conducted in-person at field-level with NASS trained and certified personnel.	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	?	?	✓	?	NASS certification procedures.	Availability of data at required scale.
17.) NASS Survey	NASS survey conducted via survey with trained and certified personnel.	✓	✓		✓	?	?	?	?	?	✓	?	?	?	?	✓	?	NASS certification procedures.	Availability of data at required scale.
18.) Aerial Photography and Remote Sensing	Remote Sensing with Field Level Visits to Ground Truth Data.	✓	✓		✓	✗	✗	✗	✗	✗	?	✗	✗	✗	✗	?	✗	Verification can be same as Aerial Remote Sensing method or by visit to each site to collect and certify data.	Availability of data at required scale, resolution, and timing.
19.) NRI Point (NRCS) or some other statistically selected sites	Statistical survey conducted in-person at field-level with NASS trained and certified personnel.	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	?	✓	✓	NASS certification procedures.	Availability of data at required scale.