

AGRICULTURAL BMP TECHNICAL ADVISORY COMMITTEE

Department of Forestry

900 Resource Drive, Charlottesville, VA 22903

October 18, 2022

9:30 AM

TIME AND PLACE

The Technical Advisory Committee met on Tuesday October 18, 2022 at 9:30am at the Department of Forestry in Charlottesville, VA.

ATTENDANCE

Voting Members Present:

Sara Bottenfield, DCR

Aaron Lucas, Headwaters SWCD

Adrienne Kotula, Chesapeake Bay Commission

Anne Marie Roberts, James River Association

Brad Copenhaver, Virginia Agribusiness Council

Brandon Dillistin, Northern Neck SWCD

Bryan Hofmann, Friends of the Rappahannock

Carrie Swanson, Virginia Cooperative Extension

Conner Miller, Virginia Grain Producers Association

Colton Sullivan, Monacan SWCD (proxy for Keith Burgess)

Dana Gochenour, Lord Fairfax SWCD

Darrell Marshall, VDACS

Dean Cumbia, DOF (proxy for Todd Groh)

Deanna Fehrer, Piedmont SWCD (proxy for Ricky Rash)

Eric Paulson, Virginia State Dairymen's Association

Gary Boring, New River SWCD

Kevin Dunn, Peter Francisco SWCD

Kelly Snoddy, Virginia Association of Conservation District Employees (proxy for Luke Longanecker)

Martha Moore, Virginia Farm Bureau

Matt Kowalski, Chesapeake Bay Foundation

Megen Dalton, Shenandoah Valley SWCD

Melissa Allen, John Marshall SWCD

Michael Tabor, Blue Ridge SWCD

Philip Davis, DEQ

Sharon Conner, Hanover-Caroline SWCD

Spencer Yager, Culpeper SWCD (proxy for Robert Bradford)

Steve Escobar, Virginia Horse Council

Steven Meeks, Virginia Association of SWCDs

Tricia Mays, Southside SWCD

Voting Members Not Present:

Jim Riddell, Virginia Cattlemen's Association

Non-Voting Members Present:

Amanda Pennington, DCR
Amy Walker, DCR
Ben Chester, DCR
Blair Gordon, DCR
Bob Waring, DCR
Christine Watlington Jones, DCR
Debbie Cross, DCR
Denney Collins, DCR
James Martin, DCR
Jason Wilfong, DCR
Marie Schirmacher, DCR
Marissa Roland, DCR
Olivia Leatherwood, DCR
Raleigh Coleman, DCR
Stu Blankenship, DCR

Other Attendees Present:

Hunter Landis, DCR
Kelsey Williams, Hanover-Caroline SWCD
Kemper Marable, Hanover-Caroline SWCD

WELCOME

Meeting Opens (9:30 AM)

A quorum was established with 26 voting members present (after a few late arrivals, a total of 29 voting members were present). Sara Bottenfield welcomed everyone, briefly reviewed the agenda and had everyone introduce themselves.

Each subcommittee chair presented the items that their subcommittees advanced to the full Technical Advisory Committee.

COVER CROP AND NUTRIENT MANAGEMENT SUBCOMMITTEE – BOB WARING

• **CC/NM Matrix Item 24C**

Suggestion to the TAC: “Address required lbs per N application to be considered a split application for nutrient management.”

- **Discussion:** NM CC Subcommittee adjusted the language for clarification that a minimum of 20 lbs of inorganic nitrogen per acre must be applied to be considered an application for the management of nitrogen:
 - NM-3C. Section B. Policies and Specifications
6. A minimum of 20 lbs of inorganic nitrogen per acre must be applied to be considered a sidedress application for the management of nitrogen
 - NM-4. Section B. Policies and Specifications, 2. Practice Development:
2.ii. A minimum of 20 lbs of inorganic nitrogen per acre must be applied to be considered a split application for the management of nitrogen
 - NM-5N. Section B. Policies and Specifications
8. A minimum of 20 lbs of inorganic nitrogen per acre must be applied to be considered a split or sidedress application for the management of nitrogen

- **Vote to Advance:** Unanimous with amendment of “inorganic nitrogen” for clarification
- **CC/NM Matrix Item 3C**

Suggestion to the TAC: “The Board directs the Cover Crop and Nutrient Management Subcommittee of the AgBMP Technical Advisory Committee to examine the viability of developing a specification that provides cost-share payment for producers that only harvest the grain off the field, leaving all of the remaining residue.

 - **Discussion:** The subcommittee adjusted the payment rates for the SL-8H to reflect an incentive for only harvesting the grain and leaving all remaining residue in the field
 - Section B. Policies and Specifications
 - 15. For cover crop that is harvested for seed or grain ONLY, leaving all remaining straw and residue on the field, a higher incentive rate is available. The seed or grain may be harvested after March 14, all remaining cover crop residue (INCLUDING STRAW) must be left on the field for conservation purposes. (Straw cannot be cut and baled).
 - Section C. Rates
 - 1. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost-share payment rate of **\$20 per acre is available for cover crop that is harvested for seed/grain and straw, remaining residue may be tilled under.** Districts should not issue cost-share funds if a good stand and good growth of winter cover is not obtained before December 15 and maintained through March 14, with the exception of the cities of Chesapeake and Virginia Beach that have late November planting dates.
 - 2. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost-share payment rate of **\$30 per acre is available for cover crop that is harvested for seed/grain ONLY,** all remaining residue must remain on the field (straw cannot be baled). Districts should not issue cost-share funds if a good stand and good growth of winter cover is not obtained before December 15 and maintained through March 14, with the exception of the cities of Chesapeake and Virginia Beach that have late November planting dates.
 - **Vote to Advance:** Unanimous with a note that the reference in C.1 to areas with late November planting dates should be updated to include the Coastal Plan in all applicable specifications.
- **CC/NM Matrix Item 5C**

Suggestion to the TAC: “Consider increasing the payment rate for the NM-7 practice. Currently there is only a \$5/acre difference in the payment rate for this practice and the SL-8H practice. This practice has the potential to provide valuable nutrient reductions by utilizing the fall soil nitrate test to determine the need for manure application.”

 - **Discussion:** NM CC Subcommittee adjusted the payment rates for the NM-7 to reflect the increased time required for the intensive management and to offset time and costs associated with the additional required testing:
 - Rates Adjusted:
 - Section C. Rate(s)
 - 1. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost share payment rate of **\$35 \$25** per acre; is available. Participants may receive either a cost-share payment or a tax credit for implementation of this practice but not both on the same acre.
 - **Vote to Advance:** Unanimous
- **CC/NM Matrix Item 6C**

Suggestion to the TAC: “In the SL-8 Specification Policies and Specifications B-5 it makes reference to “seeding certification”. What does this mean? Is it referring to certification of the 60% cover or certification of the seed being planted? Why do other cover crop specifications not include this same language? If “seeding certification” is referring to certifying cover, then we suggest making all the specifications match.”

- **Discussion:** NM CC Subcommittee adjusted the language for clarification:

Section B. Policies and Specifications

5. The ~~seed must be planted and~~ **planting must be** certified no later than November 30.

- **Vote to Advance:** Unanimous with a note to also update this language in any other specs where it appears.

- **CC/NM Matrix Item 10C**

Suggestion to the TAC: “VNM5-N: Review B.3. Multiple aspects of this section should be evaluated. – N testing may be soil samples, tissue samples, using photo sensing equipment (Green Seeker) to develop and implement N applications.

- **Discussion:** The subcommittee voted to have the language for the VNM-5N be reviewed and made more consistent with the language in the NM-5N as appropriate. Cost share and tax credit references would not be included for the voluntary practice.

B. Policies and Specifications

3. i. Soil pre-sidedress nitrate test (PSNT): **Plant tissue samples or petiole samples must be submitted at the correct growth stage and handled in accordance with laboratory guidelines to ensure sample viability and usability. The results of these samples may be used by the participant to support this practice.**

8. **A minimum of 20 lbs of inorganic nitrogen per acre must be applied to be considered a split or sidedress application for the management of nitrogen.**

- **Vote to Advance:** Unanimous

- **CC/NM Matrix Item 11C**

Suggestion to the TAC: “Include STBA (Soil Test Biological Activity) testing costs in a nutrient management spec (probably NM-5N). Can the rates be broken into a rate per test? This would enable the rates to be folded directly into a practice.”

- **Discussion:** Subcommittee will create a small sub group to discuss a potential pilot project. The group will include key partners Virginia Tech, NRCS, DCR, and SWCD staff to look into STBA to see if it is a viable path forward. The subcommittee will report to Christine Watlington Jones to present to Virginia Soil and Water Board in December or March.

- **Vote to Advance:** no vote, discussion only to make TAC aware of subcommittee action

- **CC/NM Matrix Item 12C**

Suggestion to the TAC: “Update the SL-8M section B.5 to remove the March 1 date for manure application.”

- **Discussion:** NN CC Subcommittee voted to remove the “March 1” date and insert the language, “prior to planting”:

B. Policies and Specifications

5. No nutrients from any source are allowed between the harvesting of the previous crop and **prior to planting** ~~March 1 of the next calendar year~~, except that use of manure (with less than 40 lbs. N per acre tested) is permitted if all of the following conditions are met:

- **Vote to Advance:** Unanimous with a note for the subcommittee to further review the B.2 and B.5 language and edit for clarity.
- **CC/NM Matrix Item 17C – Attachment 1 (NM-3C)**
Suggestion to the TAC: “Consider if there is a need for a sorghum version of NM-3C and, if so, develop a new specification. Suggested for CY21, not taken up by Subcommittee.”
 - **Discussion:** NM CC Subcommittee voted to incorporate Grain Sorghum into the NM-3C due to similar management of the two crops. See Attachment 1.
 - **Vote to Advance:** Unanimous
- **CC/NM Matrix Item 19C**
Suggestion to the TAC: “Add a practice to re-enroll or capture existing grassland that was converted from row crop (may help with WIP). Suggested for CY21, not taken up by Subcommittee”
 - **Discussion:** NM CC Subcommittee voted to create a CCI practice for the existing SL-1; CCI-SL-1. Several questions were posed by the TAC on specific details on the Bay Model, lifespans and payment rate
 - **Motion** by Melissa Allen, seconded by Tricia Mays to send back to the committee for further review and discussion.
 - **Vote:** Unanimous

ANIMAL WASTE SUBCOMMITTEE – AMANDA PENNINGTON

- CCI's are priorities for next year
- The subcommittee did not consider the suggestion to bring back the WP-6 because the SWCB took action on it last year.
- **AW Matrix Item 1A – Attachment 2 and Attachment 3 (WP-4 and WP-4 Risk Assessment)**
Suggestion to the TAC: “The Virginia Soil and Water Conservation Board directs the Animal Waste Subcommittee (Subcommittee) of the AgBMP Technical Advisory Committee (TAC) to review and examine the water quality impacts of livestock manure, specifically the differences between the impact of poultry litter and livestock manures. The Subcommittee shall review the existing WP-4 standards and specifications, in addition to the Animal Waste Control Facility Needs Determination Worksheet for Livestock Waste Storage Facilities (Worksheet) provided by the Shenandoah Valley Soil and Water Conservation District, to determine the most appropriate method to evaluate the impacts of the manure. The Subcommittee shall provide their recommendation, including the standard and specification and the method used to evaluate the impacts, to the full AgBMP TAC for review and approval; the Subcommittee shall also make a recommendation on whether the revised specification and standard should be implemented during FY2023. The action and recommendation taken by the AgBMP TAC shall be presented to the Board at their December meeting.”
 - **Discussion:** The subcommittee made changes to the WP-4 specification and revised the WP-4 Risk Assessment effective next program year. See Attachment 1 and Attachment 2. The subcommittee also created two instruction documents to help with the technical in-field evaluation. The feeding facility document has been added in the Tracking Program, the WP-4 instruction document will be added at the start of the next program year. The Needs Determination Worksheet for Poultry was kept but revised as a Data Collection Worksheet.
 - **Vote to Advance:** Unanimous
- **AW Matrix Item 4A**
Suggestion to the TAC: “Include the following NRCS Practice Standards into one or more of VACS specifications: 360 Waste Storage Facility Closure, 521 Pond Sealing or Lining -

Geomembrane or Geosynthetic Clay Liner, 520 Pond Sealing or Lining, Compacted Soil Treatment, and 522 Pond Sealing or Lining, Concrete. The 360 Practice is used to properly demolish an existing waste storage facility, typically liquid manure pits or lagoons. The three others are options to line an existing leaking manure pit/lagoon based on the best way to line or seal them depending on environmental and soil conditions.” This item was deferred in the CY21.

- **Discussion:** The subcommittee discussed that further research is needed related to closing of manure pits. The subcommittee voted to add the NRCS 360 standard as an eligible component to the WP-8 specification.
- **Vote to Advance:** Unanimous

STREAM PROTECTION AND FORESTRY SUBCOMMITTEE – RALEIGH COLEMAN

- **SP/F Matrix Item 1S**

Suggestion to the TAC: “Consider modifying the language in the CCI-FRB-1 and CCI-HRB-1 specifications to be consistent with the current SL-6W specification with regards to the buffers and the floodplain. Remove the statement about not exceeding 100 feet from the CCI specifications to be consistent with the SL-6W.”

- **Discussion:** The subcommittee recommended amending this suggestion by deleting “up to one third of the floodplain” from the CCI-FRB-1 and CCI-HRB-1 specifications to be more consistent with language in the FR-3 specification (since CCI-FRB-1 would theoretically be a continuation of FR-3).
- **Vote to Advance:** Unanimous

- **SP/F Matrix Item 3S**

Suggestion to the TAC:” The name of the SL-7 practice is “Extension of Watering System” which implies that at least one trough is a required component of the practice. There are many cases where the least cost, technically feasible way to address grazing management issues would be to make better use of the existing watering system, rather than installing additional troughs. It is also LCTF with a concurrently planned CREP and SL-7 to strategically locate the trough in a cross fence in order to serve two paddocks. Recommend changing the name of the practice to Expansion of Grazing System to clarify that fence-only practices are eligible if that is the LCTF method of addressing the resource concern.”

- **Discussion:** The SL-7 specification is not just about watering systems, cross fence is allowed as a stand-alone component. The subcommittee recommended changing the title of this practice to “Extension of Watering and Grazing Management Systems.”
- **Vote to Advance:** Unanimous

- **SP/F Matrix Item 7S**

Suggestion to the TAC: “Consider moving SL-6A Small Acreage Grazing System from Tax Credit Only BMP to VACS BMP. The practice requires full implementation of a Nutrient Management Plan and development of a grazing plan. Nutrient Management Plans receive credit in the Bay Model.”

- **Discussion:** The subcommittee tabled with a recommendation to remove the SL-6A practice from the manual because other existing VACS Program practices can be used to accomplish its intent. The SL-6A is more stringent than the WP-4LL, but the WP-4LL can generally cost-share on the same infrastructure as an SL-6A at 75% cost-share.
- **Motion** made by Michael Tabor to remove the SL-6A from the VACS program. The motion was seconded by Brian Hofmann.
- **Vote to Advance:** Unanimous with a note to make DEQ aware of the change.

- **SP/F Matrix Item 9S**

Suggestion to the TAC: “The “Description and Purpose” of the SL-5 Diversions practice does not match the typical application of a diversion. As written, the purpose is to treat nutrient- and sediment-laden water, but there are other more appropriate and less costly VACS practices that can be used for that purpose. When necessary, diversions are able to be cost-shared on using other practices. To avoid confusion and inappropriate usage of this practice, it should be removed from the VACS program.”

- **Discussion:** The subcommittee voted to advance this suggestion to remove this specification from the VACS manual. This will help avoid confusion and inappropriate usage, and if a diversion is needed it can often be cost-shared under another practice.
- **Vote to Advance:** Unanimous

PROGRAMMATIC SUBCOMMITTEE – SARA BOTTENFIELD

- **Programmatic Matrix Item 1P**

Suggestion to the TAC: The Board directs the AgBMP Technical Advisory Committee to review the methodology associated with the participant cap to determine if there should be additional considerations taken into account such as a sliding scale for acreage under production, the number of counties or Districts a producer is operating in, and any other considerations that the TAC may determine are worthwhile to examine. The increase in the participant cap to \$300,000 shall be reduced to \$200,000 for FY2024 if the AgBMP TAC does not provide a new recommendation and the Board takes no further action extending the increase in the participant cap through FY2024.

- **Discussion:** The subcommittee voted to recommend maintaining the participant cap at \$300,000 for PY24 to allow time for it to be evaluated fully. Revisit cap methodology for PY25. Use of a sliding scale method was not supported.
- **Vote to Advance:** Unanimous

- **Programmatic Matrix Item 3P**

Suggestion to the TAC: “Request the addition of karst in the Glossary. Consider using the “What is Karst” Section of the Living on Karst publication located on the DCR Natural Heritage website.”

- **Discussion:** The subcommittee voted to update existing VACS Manual references to “karst areas” to consistent use of “karst features”. The subcommittee also voted to add a karst definition to the Glossary of the VACS Manual: ‘Karst: A landscape occurring in areas with limestone or other soluble bedrock, characterized by features such as sinkholes, springs, sinking streams, and caves.’
- **Vote to Advance:** 24Y, 2N (Martha Moore and Brad Copenhaver), motion passes

- **Programmatic Matrix Item 5P**

Suggestion to the TAC: “The guidelines section of the BMP manual says that payment is based on the estimated or actual cost, whichever is less. The SL-6 suite of practices say approved or actual and the WP-4 practices say eligible or actual. This can lead to misunderstandings. Too lenient of a payment procedure can cause abuse of the program. Unnecessarily strict, complex procedures can create a deterrent to participation, especially when combined with a low cost list. The wording should be clarified to better reflect the intention of the program. Alternatively, DCR could issue a guidance document prior to the start of PY23 clarifying how payments should be calculated and how much flexibility SWCDs have.”

- **Discussion:** The subcommittee voted to update the VACS Manual with consistent language, “payment is based on estimated or eligible actual cost, whichever is less”. TAC added “approved” to the language from the subcommittee.
“payment is based on **approved** estimated or eligible actual cost, whichever is less”
- **Vote to Advance:** Unanimous
- **Programmatic Matrix Item 4C**
Suggestion to the TAC: “A new practice for split application of nitrogen on grasses (hay and forages). Currently allowed under NM-5N; discussion by Cover Crop/Nutrient Management Subcommittee found the underlying issue is that only “highly managed hayland” is eligible, which requires 3 cuttings unless under drought conditions. The CC/NM SC requests Programmatic SC review the Glossary definition of “highly managed hayland” and further explain “designated drought condition”.
 - **Discussion:** The subcommittee voted to revise the definition of “highly managed hayland” in the VACS Manual: ‘Highly Managed Hayland: A production system in which cropland dedicated to hay production is not grazed **and is managed in accordance with a Nutrient Management Plan**. If grass-based, the participants **must** produce at least ~~three~~ **two** cuttings a year of hay and may have a nitrogen application for each cutting. ~~However, in a designated drought condition, the third cutting and nitrogen application would not be required.~~ If legume based (e.g. alfalfa), the participants **are is** exempt from the nitrogen application and **are-is** eligible for phosphorus management under NM-5P. ~~Land (pasture) that is primarily grazed is not to be considered highly managed hayland.’~~
 - **Vote to Advance:** 25Y, 1N (Tricia Mays), motion passes
- **Programmatic Matrix Item 4C**
Suggestion to the TAC: “Recommend allowing all DCR practices to be variance eligible based on the support of the local SWCD board and proper justification.”
 - **Discussion:** The subcommittee voted to recommend that DCR create a process to request a “bundle variance” in situations where a participant qualifies for a variance under the existing policy and wishes to install additional practices, to allow the additional practices to be included in the variance request as well. DCR will determine what is needed for submittal packet.
 - **Vote to Advance:** 25Y, 1A (Phil Davis), motion passes
- **Programmatic Discussion:**
 - Question if the Whole Farm Approach is to go statewide in PY24. Districts should let DCR know if they are interested in being involved, there is potential for it to expand but likely not statewide. The training needs to be further streamlined.
 - Question if anyone of expertise was brought in for discussion for Programmatic Matrix Item 7P. Discussions identified other concerns including whether participants for oyster aquaculture BMPs could meet VACS eligibility requirements. Discussion can continue and recommendation of experts are welcome.

PUBLIC COMMENT

Megen Dalton requested that subcommittee chairs also report on tabled and deferred items. Sara Bottenfield noted that tabled and deferred items are not discussed in full TAC with consideration of time and for it not to be spent on items that have already been decided. It was suggested instead that subcommittees include more details in their final matrices for future TAC cycles.

FUTURE MEETING DATES, TIMES AND LOCATIONS

All items up for discussion by subcommittees were discussed by the full Technical Advisory Committee. The TAC meeting scheduled for November 1, 2022 is cancelled.

ADJOURN 11:34 AM

Name of Practice: ANIMAL WASTE CONTROL FACILITIES
DCR Specifications for No. WP-4

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's animal waste control facilities best management practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice creates a planned system designed to manage liquid and/or solid waste from existing feeding facilities, hardened pads or other areas where livestock and poultry are concentrated and from which manure can be collected. This practice is designed to provide facilities for the storage and handling of livestock and poultry waste and the control of surface runoff to permit the recycling of animal waste onto the land in a way that will abate pollution that would otherwise result from existing livestock or poultry operations.

Its purpose is to improve water quality by storing and spreading waste at the proper time, rate, and location, and/or to control erosion and nutrient input caused by feeding operations located adjacent to riparian areas or other environmentally sensitive features.

B. Policies and Specifications

1. Eligibility: Cost-share and tax credit are limited to solving the pollution problems where the livestock or poultry operation can show they have either:
 - i. Access to land for application, and where a full farm plan approach to solving the water quality problem is being carried out.
 - ii. A current Nutrient Management Plan that has been certified by a Virginia certified Nutrient Management Planner and, if needed, a transfer plan prepared by a certified Nutrient Management Planner for any livestock or poultry waste.

2. Practice Development
 - i. The District shall consider all existing animal waste storage facilities on the same property when sizing a new manure storage facility. The District should determine on a case-by-case basis whether any existing manure storage facilities (cost-shared or non-cost-shared) are adequate for continued manure storage. Existing storage deemed adequate shall be deducted from the total storage need calculation to determine the amount of additional storage eligible for cost-share.
 - ~~ii.~~ Before cost-share or tax credit can be approved, all applications for animal waste control facilities, ~~including~~ ~~except~~ poultry operations, must have a "WP-4 Risk Assessment for Water Quality Impairment from Heavy-Use Areas/Animal Concentrated Areas" completed and must receive a minimum score of 120 in order to be eligible. Furthermore, all associated livestock must be excluded from all streams in the tract before cost-share or tax credit is provided.

~~iii. Poultry Dry Stack facilities should only be built after the completion of the a Poultry Dry Stack Needs Determination Worksheet. An analysis of the Needs Determination Worksheet must determine that all other means of reducing the environmental impact of the existing poultry operation have been explored and rejected due to economic inefficiency or lack of space for relocation.~~

~~ii.~~

~~iv.iii.~~ The applicant is ~~also~~ required to sign a Dry Manure Storage Structure Agreement DCR199-86 (03/18) or similar District agreement which addresses the minimum criteria prior to receiving any funds.

~~v.iv.~~ Determination of the storage capacity of animal waste facilities shall be reviewed and approved by the DCR Agricultural BMP Engineer.

3. Cost-share and tax credit is authorized:

i. For animal waste storage facilities, such as dry stacking storage, aerobic or anaerobic lagoons, liquid manure tanks, solid/liquid separation, holding ponds, collection basins, settling basins, and similar facilities, as well as diversions, channels, waterways, designed filter strips, outlet structures piping, land shaping, and similar measures needed as part of a system on the farm to manage animal wastes as outlined below:

- a. Permanently installed equipment needed as an integral part of the system.
- b. Solid/liquid separation is eligible when the manure storage is not adequate and this is the least cost, technically feasible alternative to a new liquid pit.
- c. Vegetative cover (including mulching needed to protect the facility).
- d. Leveling and filling to permit the installation of an effective system.

ii. Only if the facilities will contribute significantly to improving the soil or water quality by providing protected storage for on-site generated waste.

iii. For the waste storage facility as a part of the relocated livestock or poultry operation, if the original facility is contributing significantly to a water quality problem.

iv. For individual components of animal waste systems, only if:

- a. A DCR Agricultural BMP Engineer determines that the component stands alone as a measure that will significantly improve water quality and
- b. Only where a no-discharge permit for a waste storage facility is not required.

v. For wastewater storage facilities as a stand-alone component with a minimum storage of 120 days.

vi. For a waste storage system to store manure produced for a consecutive period up to six months based on existing need. All components of a waste storage system (regardless of funding source) must be designed to match the amount of manure storage capacity required.

Exceptions to the six month storage criteria are:

- a. Liquid storage which may provide storage for manure produced during a consecutive seven month period based on existing need.
- b. Poultry layer/breeder operations may provide storage for manure

produced for a consecutive period up to 12 months based on existing need.

- vii. The construction of a fabricated liquid waste storage structure and associated components if it is the only acceptable alternative (based on site limitations [i.e., high water table, karst topography, etc.]) for liquid waste management.
4. Cost-share and tax credit are not authorized:
- i. Operations that do not currently have a way to collect manure (i.e. existing feeding facilities, hardened pads, etc).
 - ii. For measures primarily for the prevention or abatement of air pollution, unless the measures also have soil and water conserving benefits.
 - iii. For the following:
 - a. Portable pumps.
 - b. Pumping equipment for unloading facilities.
 - c. Buildings or modifications of buildings to house pumping equipment.
 - d. Spreading animal wastes on the land, including distribution system using irrigation pipelines.
 - iv. For animal waste facilities that do not meet local or state regulations.
 - v. For installation primarily for the operator's convenience.
 - vi. For dairy, beef, poultry and swine confined feeding operations that are planned or under construction. A water quality problem must already exist for cost-share to be approved for a BMP. The number of livestock that would be used to design the animal waste control facility must be present before consideration for cost-share can be given.
 - vii. For waste storage facilities that will not store manure produced on the operation where the facility is to be located. End user facilities are not authorized.
5. All applicants must have:
- i. The storage capacity calculations of animal waste facilities reviewed and approved by a DCR Agricultural BMP Engineer (except for practices previously sized and engineered by NRCS) and coordinated with the Nutrient Management Plan so that adequate storage capacity is installed.
6. All appropriate local and state permits must be obtained before cost-share and/or tax credits are authorized.
7. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria

designated in the BMP practice (4VACV50-85-130G).

8. This practice is subject to NRCS standards 313 Waste Storage Facility, 342 Critical Area Planting, 359 Waste Treatment Lagoon, 362 Diversion, 367 Roofs and Covers, 558 Roof Runoff Structure, 561 Heavy Use Protection, 620 Underground Outlet, 632 Solid/Liquid Waste Separation Facility, 633 Waste Recycling and 634 Waste Transfer.
9. All practice components implemented must be maintained for a minimum of 15 years following the calendar year of installation. The lifespan begins on Jan. 1 of the calendar year following the year of certification of completion. By accepting either a cost-share payment or a state tax credit for this practice, the participant agrees to maintain all practice components for the specified lifespan. This practice is subject to spot check by the District throughout the lifespan of the practice and failure to maintain the practice may result in reimbursement of cost-share and/or tax credits.

C. Rate(s)

1. The state cost-share payment, alone or if combined with any other cost-share payment, will not exceed 75% of the total eligible cost.
2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.
3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

1. Technical and administrative responsibility is assigned to qualified technical DCR and District staff in consultation, where appropriate and based on the controlling standard, with DCR, Virginia Certified Nutrient Management Planner(s), NRCS, DOF, and VCE. Individuals certifying technical need and technical practice installation shall have appropriate certifications as identified above and/or Engineering Job Approval Authority (EJAA) for the designed and installed component(s). All practices are subject to spot check procedures and any other quality control measures.

Revised April 2021

Optional Animal Waste Control Facility Needs Determination
Worksheet for Poultry Data Collection Worksheet
Dry-Stack Facilities

1. What type of ~~poultry~~ operation do you have?
2. How long have you been in operation?
3. Have you expanded or enlarged your ~~poultry~~ operation? If so, when?
4. How often in the past 5 years have you been forced to store waste out-of-doors? How long was the ~~waste/litter~~ stored outside? Was this due to unfavorable conditions beyond your control? Explain. Also locate the storage sites utilized.
 - a.
 - b.
 - c.

Explanation:

5. How many ~~livestock/cattle per year or~~ birds per flock do you normally ~~produce/raise~~? Their size, type, etc.
6. How many flocks/~~herds~~ per year do you normally ~~produce/raise~~?
7. How often do you clean out ~~or scrape~~ in a year's period? When and how is the ~~waste/litter~~ used and/or stored? Also give the number of partial and total clean outs ~~for poultry~~.
8. What use do you make of the ~~waste/litter~~ produced?
9. Is any waste disposed of off your farm? ~~If so, is it sold or bartered for commercial gain?~~
Explain.
10. How much pasture, hayland and cropland are available to spread litter on in your operation?

Pasture acres _

Hay acres _

Cropland _

Completed by: _

Signature Date _____
Title

Dry Manure Storage Structure Agreement

1. The Waste Storage Structure or winter-feeding facility must be utilized in accordance with a Nutrient Management Plan prepared and certified by a Virginia certified Nutrient Management Planner and, if needed, a transfer plan prepared by a Virginia certified Nutrient Management Planner for any livestock or poultry waste. The Plan identifies specific requirements related to waste storage, utilization and disposal. These requirements must be met in order to remain in program compliance.
2. Any changes in the farming operation that affect the ability to comply with the Nutrient Management or transfer plan will be reported to the District.
3. No alterations to the structure are allowed without prior approval by the District. The structure must be built according to the approved final design and no change may be made to it.
4. The structure must be maintained in strict accordance with the NRCS maintenance guidelines.
5. The District imposes that (District check one of the following):
 - i. The structure is to be used for storage of manure only.
 - ii. The applicant must request prior district approval for storage of non-manure items. .
 - iii. During times when the structure is not filled with manure, shavings or temporary housing of mobile farm equipment or composted poultry carcasses resulting from normal mortality is permitted. This is only if it does not affect compliance with the Nutrient Management Plan or transfer plan.

At NO TIME will manure be stored outside the facility when storage space is available in the structure. Waste stored out-of-doors will be grounds for the refund of all cost-share funds.

6. Employees or agents of the Department or the Soil and Water Conservation District will be allowed to spot-check the facility at any time during the minimum 15-year lifespan of the practice.

I _____ certify that I have read and understand the guidelines contained herein. I further understand that if I fail to comply with these guidelines, I will pay back all cost-share funds received by me for the waste storage structure.

Producer Signature

Date

District Director

Date

WP-4 Risk Assessment for Water Quality Impairment from Animal Concentrated Areas

Client's Name: _____ Farm #: _____ Tract #: _____

Livestock Type: _____ No: _____ Avg. Wt.: _____

Is the cooperator currently feeding hay or other feedstuffs from a fixed hardened location that allows for manure collection? Yes No

If yes, then describe where and how they are feeding:

If the cooperator is not feeding hay or other supplements, on a hardened location that allows for manure collection, then do not complete this form.

For those who are feeding, are alternative manure storage locations available? Yes No

Could relocation of the manure storage area reduce the risk to the water resources? Yes No

Describe the alternatives discussed with the landowner:

Describe the selected alternative:

Note: The Landowner should be informed that if the selected alternative includes manure or wastewater handling, storage, or treatment practices, a Comprehensive Nutrient Management Plan (CNMP) must be developed and implemented for the farm prior to construction of the storage facility.

Livestock Manure and Nutrient Loading Estimator

1. **Manure Estimator** - Input site specific data into the table below:

Select Livestock Type from the list below in Table 1:	INPUTS								OUTPUT - Waste deposited annually in concentrated area		
	A	B	C	D	E	F	G	H	Manure (tons/ac/yr)	Total N (lbs/ac/yr)	Total P ₂ O ₅ (lbs/ac/yr)
	Number of animals fed	Average animal weight (lbs)	Days in concentrated area (per year)	Portion of manure dropped in concentrated area (%)	Size of current manure storage area (ac)	Manure production rate (lbs/day per 1,000 lbs of live weight)	Total N per ton of manure	Total P ₂ O ₅ per ton of manure			
7	100	5	365	100%	0.5	16	65	52	3	192	155

2. Guidance on inputs:

Column A, B, C, D, E, are site specific and may be adjusted according to site conditions and professional judgement.

Column A: Use the number of animals on site within the Column C Days in concentrated area. For poultry production round flocks up to whole numbers.

Column D: If water is available in concentrated/feeding area, assume 60-70% drops in the area (adjust to site conditions). If water is only available in pasture outside concentrated/feeding area, assume 40-50% drops in the area (adjust to site conditions). For confined feeding use 100% confinement.

Columns F through H (see Table 1 below) are auto-filled with appropriate values when livestock type is selected.

TABLE 1

Livestock Type	Weight	Manure lbs./day/1,000lbs.	N/ton of manure	P ₂ O ₅ /ton of manure
1: Beef Finishing	400 - 1,000	65	11	3.1
2: Beef Cow/calf	900 - 1,400	104	7	3.5
3: Non Lact. Dairy	150 - 1,500	56	10	4
4: Lactating Dairy	1100 -1,500	119	13	5.4
5: Horse	1000-1,500	52	9.6	4.2
6: Goats/Sheep	30-200	40	22.5	8
7: Chicken Broiler	3-8	16	65	52
8: Chicken Layer	7	13	48	61
9: Turkey	30	41	62	50
10:Turkey Breeder	20	6	59	61

Note: Calculation of manure weight, N, and P are associated with livestock concentrated/feeding locations. Dairy, beef, horse and sheep values are based on NRCS Agricultural Waste Management Field Handbook (AWMFH). Poultry values are based on the DCRs Virginia Nutrient Management Standards and Criteria, Revised 2014.

3. Guidance on interpreting output:

TABLE 2

Loading Rate (lbs/ac/yr) from Estimator above		Level of Concern	Water resources at risk	Loading Points
N	P2O5			
Less than 200	Less than 80	Minor	No	0
201 to 300	81-120	Moderate	Possibly	15
301 to 800	121-310	Major	Possibly	40
801 to 1000	311-390	Excessive	Possibly	80
1,001 +	390 +	Extreme	Possibly	100

	<u>Comments</u>	<u>Loading Points</u>
Loading Points:	From Table 2	100

Site Information - Receiving water feature and buffer considerations: (see exhibit 1 to determine if points are to be given in Section A below for overland flow to a vulnerable water feature or Section B below for a concentrated flow to a vulnerable water feature)

(A1) Overland Flow - Proximity to Vulnerable Water Feature:		<u>Comments</u>	
< 100 Feet:	40 points	<i>Distance from edge of concentrated/feeding area to edge of a water feature which includes open sinkholes, springs, streams (perennial or intermittent), wetlands and ponds.</i>	<div style="border: 1px solid black; width: 50px; height: 50px; background-color: yellow;"></div>
100- 199 Feet:	25 points		
200-300 Feet:	15 points		
>300 Feet:	0 points		
(A2) Buffer width adjacent to the selected water feature:			
< 35 Feet:	20 points	<i>A buffer is a vegetative area which effectively filters overland flow to the adjoining water feature (0-34' is not an effective buffer). Source: P Index and FOTG.</i>	<div style="border: 1px solid black; width: 50px; height: 50px; background-color: yellow;"></div>
35 -100 Feet:	10 points		
>100 Feet:	0 points		
Sum of A1 and A2:			0

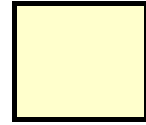
or

(B) Concentrated Flow - Does the runoff from the ACA enter a transport feature within 300 feet of the edge of the ACA?			
Yes	60 points	<i>Transport Feature - A swale, grassed waterway, gully, or similar feature where concentrated water flow occurs. (This transport feature must flow into the vulnerable water feature in the above question)</i>	<div style="border: 1px solid black; width: 50px; height: 50px; background-color: yellow;"></div>
No	0 points		
The greater of A or B (maximum 60 points can be earned here):			0

Is the Vulnerable Water feature or Receiving Water Feature above classified as high value water?

High Value Water - A stream, lake, or estuary designated within a TMDL watershed based on the 303d Impaired Waters List, endangered species, and/or designated trout waters.

Yes = 20 points
 No = 0 points



Site Information:

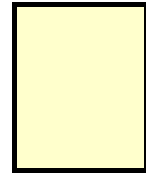
Scoring Boxes

Comments

Environmental Sensitivity Index:

High 15 points
 Medium 10 points
 Low 0 points

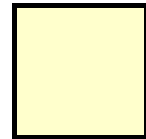
From DCRs *Virginia Nutrient Management Standards and Criteria, Revised 7/2014*, Table 1-4. Includes soils with leaching potential, shallow soils and poor drainage. (Use soil series at the existing HUA/ACA.)



Slope:

0-2 % 0 points
 2-6% 5 points
 6-15% 15 points
 15-25% 25 points

General slope of the HUA/ACA from the edge of feeding area to the vulnerable water feature.



Total Score:

100

Note: If total is 120 or greater, there is a significant risk of water resource impairment. Follow the planning process to address this concern. Consider both structural and non-structural alternatives.

Definitions:

Buffer - A permanently vegetated area with a minimum width of 35 feet.

High Value Water - A stream, lake, or estuary designated within a TMDL watershed based on the 303d Impaired Waters List, endangered species, and/or designated trout waters.

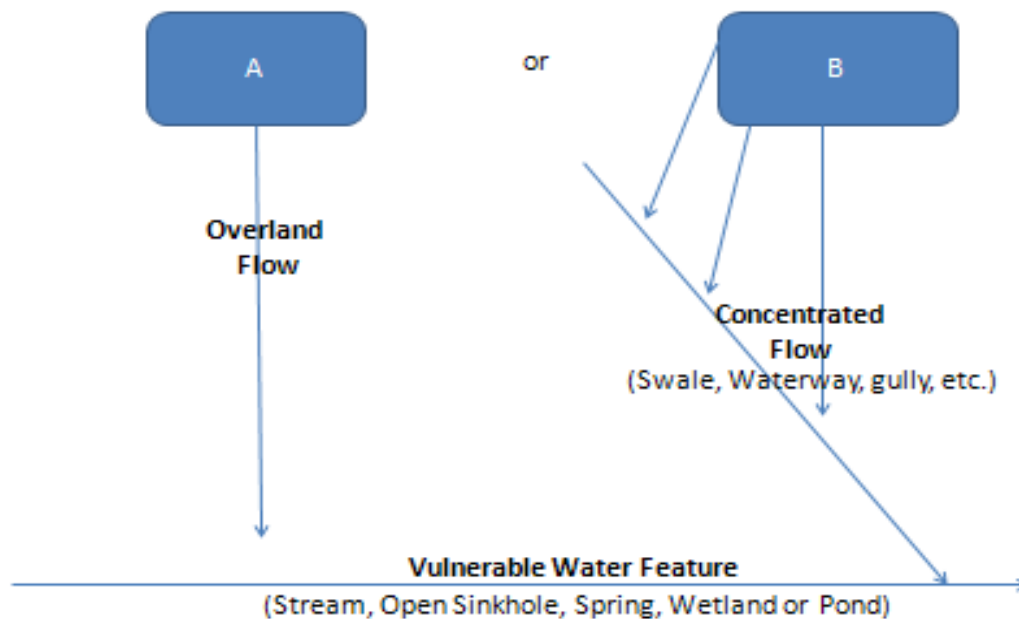
Karst features - Includes sinkholes, limestone rock outcrops, and fractured limestone that are direct conduits to ground water.

Vulnerable Water Feature - An open sinkhole, stream (perennial or intermittent), spring, wetland, or pond that is receiving overland flow.

Transport Feature - A swale, grassed waterway, gully, or similar feature where concentrated water flow occurs.

HUA/ACA - Areas which have a high concentration of livestock, large amounts of waste and the inability to sustain vegetation.

Exhibit 1



Name of Practice: SIDEDRESS APPLICATION OF NITROGEN ON
CORN AT THE 6-LEAF STAGE OR AT LEAST 15" IN HEIGHT
AND/OR GRAIN SORGHUM AT THE 5-LEAF STAGE OR AT
LEAST 12" IN HEIGHT

DCR Specification for No. NM-3C

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Sidedress Application of Nitrogen on Corn and/or Grain Sorghum practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice will encourage the sidedress application of nitrogen (organic OR inorganic) on ~~corn~~ corn and/or grain sorghum. For fields receiving only nitrogen fertilizer, sidedress applications will be based upon soil sample results and the Nutrient Management Plan (NMP). All secondary or sidedress applications will be applied at a growth stage when the plant is entering the highest demand for nitrogen (corn 15" to 24" tall; grain sorghum 12-18" tall).

For fields that have previously received manure or biosolids applications according to the current NMP, a pre-sidedress nitrate test (PSNT) will be used to determine the amount of nitrogen necessary in the sidedress application.

B. Policies and Specifications

1. Eligibility:

- i. Eligibility for this practice is limited to the length of the plan recommending the sidedress practice.
- ii. The producer must provide a written verification (such as a work order or bill) to the district within two weeks of the sidedress application when the application has been contracted out.
- iii. The total number of ~~corn~~ corn and/or grain sorghum acres specified by the nutrient management plan to be sidedressed will determine the maximum acres to qualify.
- iv. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations, (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).
- v. District staff should utilize the NMP maps, nutrient balance sheets, and summary sheets to confirm practice implementation. A comparison between crop recommendations and in field conditions shall be used when certifying conservation practice compliance.

2. The total number of corn acres specified by the nutrient management plan to receive manure will determine the maximum acres to qualify for cost-share payment for the PSNT. Cost-share payment for PSNT laboratory analysis will be made only for those PSNT tests that are submitted for laboratory analysis.
 - i. The PSNT must be done when corn is approximately 12 inches in height.
 - ii. PSNT samples should represent a minimum of 7 acres on average and a maximum of 20 acres on average.
3. Checks to ensure compliance with this practice may be conducted by the District or appropriate agency personnel and failure to comply may result in forfeiture of cost-share funds.
4. The producer must sign up prior to April 1 and provide a written verification of contracted sidedress application cost (including the PSNT results) to the District within two weeks of the sample analysis.
5. Application of any sidedress nitrogen must be made after the ~~corn~~ corn is at the 6-leaf stage or at least 15 inches in height and/or grain sorghum is at the 5-leaf stage or at least 12 inches in height.
- 5-6. A minimum of 20 lbs per acre must be applied to be considered a sidedress application for the management of nitrogen
- 6-7. Total nitrogen to be applied to the ~~corn~~ corn and/or grain sorghum field must be consistent with the nutrient management plan or determined by using a PSNT (as applicable for corn) consistent with procedures contained in the Nutrient Management Training and Certification Regulations (4VAC50-85 et. Seq).
- 7-8. Acres receiving a zero application rate based on a PSNT result also qualify for a payment rate of \$6 per acre. This is for manure only; biosolids are not eligible for payment.
- 8-9. This is an annual practice.

C. Rate(s)

1. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.
2. For participants who are not receiving payment for a sidedress application of nutrients to ~~corn~~ corn and/or grain sorghum from any other source on the same acreage, a state cost share payment rate of 75% of the application charge, up to a maximum amount of \$6.00 per acre for the sidedress application, shall be paid based upon the contracted sidedress application acreage. Producers applying their own sidedress applications will receive \$6.00 per acre applied.

3. Costs for soil nitrate test sample collection and analysis by a commercial laboratory that are used to implement this practice will be reimbursed at a flat rate of \$12.00 per sample.

D. Technical Responsibility

Technical and administrative responsibility is assigned to qualified technical DCR and District staff in consultation, where appropriate and based on the controlling standard, with DCR, Virginia Certified Nutrient Management Planner(s), NRCS, DOF, and VCE. Individuals certifying technical need and technical practice installation shall have appropriate certifications as identified above and/or Engineering Job Approval Authority (EJAA) for the designed and installed component(s). All practices are subject to spot check procedures and any other quality control measures.

Revised April 2022