

Virginia Agricultural BMP Technical Advisory Committee

Goochland Central High Cultural and Education Complex

2748 Dogtown Road, Goochland, VA 23063

December 18, 2019

9:30 AM – 3:30 PM

Draft Minutes

Attendance

David Bryan, DCR	Amy Walker, DCR
Blair Gordon, DCR	Carl Thiel-Goin DCR
Christine Watlington, DCR	Mark Hollberg, DCR
Jim Echols, DCR	Aaron Lucas, Headwaters SWCD
Rachel McCuller, Headwaters SWCD	Ashley Wendt, DEQ
Todd Groh, DOF	Charlie Wootton, VACDE
Brandon Dillistin, Northern Neck SWCD	Luke Longanecker, Thomas Jefferson SWCD
Charles Newton, Shenandoah Valley SWCD	Matt Kowalski, Chesapeake Bay Foundation
Dana Gochenour, Lord Fairfax WCD	Nick Livesay, Lord Fairfax SWCD
Kendall Dellinger, Culpeper SWCD (proxy)	Robert Bradford, Area II Representative
Andrew Smith, Virginia Farm Bureau	Anna Killius, James River Association
Ricky Rash, Piedmont SWCD	Tom Turner, John Marshall SWCD
Sharon Conner, Hanover-Caroline SWCD	Raleigh Coleman, DCR
Steven Meeks, VASWCD	Amanda Pennington, DCR
Willie Woode, Northern Virginia SWCD	Darrell Marshall, DCR
Debbie Cross, DCR	Josh Walker, Headwaters SWCD
Bob Waring, DCR	Kevin Dunn, Piedmont SWCD
Steph Drzal, DCR	Megen Dalton, Shenandoah Valley SWCD
Allyson Ponn, Lord Fairfax SWCD	Sam Truban, Lord Fairfax SWCD
Alston Horn, Chesapeake Bay Foundation	Steve Escobar, Virginia Horse Council
Amanda McCullen, Culpeper SWCD	Ben Chester, DCR
Beck Stanley, Virginia Agribusiness Council	Jaclyn Friedman, DCR
Conner Miller, Virginia Grain Producers Association	Buck Tharpe, Southside SWCD
Jim Tate, Hanover-Caroline SWCD	Tricia Mays, Southside SWCD
Keith Burgess, Monacan SWCD	Jason Wilfong, DCR
Spencer Yager, VACDE	Bill Fleming, VA Dare SWCD

Meeting Opened – 9:36 AM

Welcome and Review of Agenda (David Bryan)

Mr. Bryan welcomed the members of the TAC and reminded the group that this is the last TAC meeting of the year and the last meeting for providing edits to the FY2021 Ag BMP Manual.

Subcommittee Reports

Animal Waste Committee (Amanda Pennington)

- WP-4LL Loafing Lot – Ms. Pennington presented the draft language on the screen. No discussion was had.
 - Called for a vote: None opposed. Passes unanimously.

- WP-4SF – Ms. Pennington presented the draft language. The existing WP-4 will be dry stacking only as this new practice will become the producer’s option for a seasonal feeding lot. The committee simply removed the existing seasonal feeding facility language from the WP-4 and made it into its own specification.
 - Called for a vote: None opposed. Passes unanimously
- WP-4FP – The language for the new specification was presented. Ms. Pennington clarified that this new specification is intended to be a standalone feeding pad. In conjunction with the approval of this specification, the TAC will be removing the feeding pad option from the SL-6N/W and WP-4 specifications. This is not a covered facility nor does it have any storage associated with it. As with other animal waste specifications, WP-4FP will be offered at a 75% cost share rate. Stream exclusion is required for all associated livestock but not all stream exclusion requires a feeding pad. Some concern was voiced about the language “exclusion required” and whether the language was consistent with other specifications included in the manual. A brief discussion was had on what was meant by “exclusion required” and the TAC revised that language to specify that “livestock associated with this practice must be excluded from all live streams or live water.”
 - Called for a vote on the spec with the revised language: No opposed, passes unanimously.
- Updated SL-6N/W – The specification was presented; the only amendment was the removal of the feeding pad language.
 - Called for a vote: No opposed, passes unanimously.
- WP-4 Specification – This specification was updated because of the new WP-4FP specification. The WP-4 now becomes just a dry stack, liquid pit, and/or manure storage. Language allowing the installation of solid/liquid separator equipment was added as providing this option to an existing pit and building a dry stack to store the dry material may be cheaper than building a new pit. If it is not being added to an existing pit but is being included with the construction of a new pit, the separator can be used if it is the least-cost technically feasible option. The planner must be able to prove that it meets this criteria.
 - Called for a vote: No opposed, passes unanimously
- Variance Eligibility of Animal Waste Specification Combinations – The subcommittee recommends adding the following new specifications and specification combinations to the list of eligible practices for the variance process: WP-4LL, WP-4LC, WP-4SF, and SL-6N/W combined with a WP-4FP. A brief discussion was had by the TAC and the TAC agreed that the SL-6N/W combined with the WP-SF could also qualify for a variance.
 - Called for a vote: No opposed, passes unanimously.
- WP-4C – The specification was presented and the only amendment was to remove the fence language.
 - Called for a vote: No opposed, passes unanimously.

Ms. Pennington ended her presentation by thanking the committee for all their hard work.

Cover Crop/Nutrient Management Committee (Bob Waring)

Mr. Waring began by noting that the TAC only has four items to vote on from this committee. The CCNM Subcommittee did try to address the comments from the last TAC meeting.

- SL-8A – There are no changes to the language from the last TAC meeting. Mr. Waring did clarify that this specification does not replace the SL-8; it is just another option for producers.
 - Called for a vote: No opposed, passes unanimously.
- NM-5N/5P – The subcommittee made some edits to the plant tissue text. Language from the NM-5P specification was moved and added to the NM-5N specification where it is more appropriate. This was an issue that was discussed at the last TAC meeting.
 - Called for a vote: No opposed, passes unanimously.
- NM-7 – Mr. Waring noted that most of the comments from the last TAC meeting were just clean up comments that the committee worked to address. There are no substantial changes to this specification from the last TAC meeting. This practice is meant to help fill some gaps in the specifications in the current VACS program. A concern was voiced that the two week timeframe is too limiting and it was suggested 30 days be taken into

consideration. Mr. Burgess clarified that if the producer waits longer than two weeks it is not a nutrient management practice. In this practice, the goal is to achieve good growth. Another comment from the floor was to clarify that a fall nitrate test is a soil test and that a PSNT is not required. It was agreed by the TAC that the specification is referring to a soil test, and it does not have to be a PSNT. The word “soil” was added to the fall nitrate test language so it reads “fall soil nitrate test.”

It was also mentioned from the floor that the NM-7 should be allowed to “carry over” into the next program year. The intent of NM-7 is to help improve manure management; if a producer has a manure pit that cannot accommodate the volume, this carryover option provides the opportunity to apply manure to fields in the fall. A producer could apply for this practice in the spring and complete it later in the year as the practice encourages year round nutrient management. NM-7 gives the producer the ability to plan their harvest appropriately with the manure applications.

- Called for a vote on the spec with the minor “soil” edit and clarifying this practice is eligible for a carry-over: No opposed, passes unanimously.
- NM-3C – Most of the edits presented were to clean up the language and make it consistent with other specifications in the manual. The subcommittee decided to review the inclusion of sorghum during the next TAC cycle. Sorghum may need its own practice to meet producer’s needs. Mr. Waring also clarified that this specification will also provide a payment rate for not applying nutrients if the PSNT demonstrates no application is needed.
 - Called for a vote: No opposed, passes unanimously.

DCR update on Internal Items

David Bryan presented updates on internal items that DCR has been working on for the FY2021 Ag BMP Manual, focusing on the practice failures section of the manual. DCR will clarify that if a project has been approved and is under construction when an extreme act of nature occurs, the District Board may approve additional cost-share to address the unforeseen costs. However, the producer may not be paid until the project is complete and certified.

Mr. Bryan also presented on changes to the TAC format for the future. He clarified that moving forward there will be one voting member allowed per partner entity (e.g. District, state or federal agency, non-profit organization, industry group) on the full TAC. The partner TAC member must also participate on a subcommittee of their choice; there will be four subcommittees: Animal Waste, Cover Crop/Nutrient Management, Programmatic, and Stream Protection/Forestry. A partner entity may also choose to send up to one member for each of the three remaining Subcommittees. Finally, a partner entity may choose to decline a seat on the full TAC but still participate on a subcommittee of their choice.

Due to quorum troubles this year at the full TAC and subcommittee meetings, the 2020 TAC will have attendance requirements for its members; members should plan to either attend meetings or send a designated proxy. Members that miss two consecutive full TAC meetings or two consecutive subcommittee meetings will lose their voting privileges at all TAC functions.

Mr. Bryan stated that DCR will once again begin soliciting suggestions in February. There will be a firm deadline for those suggestions in March. The full TAC’s 2020 scope of work will be announced in April and partner entities will be able to decide at that time whether they desire to participate. Subcommittees will begin their work in June or July and the first full TAC meeting will be in late July.

Mr. Bryan thanked everyone for their commitment to the TAC this year.

Meeting adjourned 12:30 pm.

Name of Practice: ~~SPLIT SIDEDRESS APPLICATION OF~~
NITROGEN ON CORN ~~USING PRE SIDEDRESS NITRATE TEST~~
DCR Specification for No. NM-3C

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's ~~Split Sidedress~~ Application of Nitrogen on Corn ~~Using Pre-sidedress Nitrate Test (PSNT)~~ practice that are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

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

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 ~~splitsidedress~~ 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. ~~Farmer~~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 acres specified by the nutrient management plan to be side-dressed will determine the maximum acres to qualify, ~~with payment being made only to those acres which actually received a secondary application of nitrogen.~~
- 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 that this practice will be implemented on. 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. ~~Farmer~~The producer must sign-up prior to April 1 and provide a written verification of contracted ~~sph~~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 is at the 6-leaf stage or at least 15" in height.
- ~~6.~~ Total nitrogen to be applied to the cornfield must be consistent with the nutrient management plan or determined by using a PSNT consistent with procedures contained in the Nutrient Management Training and Certification Regulations, 4VAC50-85 et. seq.
- ~~6-7.~~ 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.
- ~~7-8.~~ This is an annual practice.

C. Rate(s)

1. As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.
2. For participants who certify in writing (*see language on last page of this specification*) that they will not utilize the tax credit set forth above with regard to the implementation of this practice and who are not receiving payment for a ~~sph~~sidedress application of nutrients to corn 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, based on the contracted ~~sph~~sidedress application acreage. Producers applying their own ~~sph~~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

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of \$8.00 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 ~~March, 2018~~ April 2020

~~Certification from an Agricultural Best Management Practice Participant that
a Tax Credit will not be Utilized~~

~~I, _____, hereby certify that I
will not claim the tax credit which is available for participation in the Split Application of
Nitrogen to Corn Using Pre-Sidedress Nitrate Test, NM-3C practice, and therefore I am
eligible for cost share funding available under that practice for participants who do not
wish to utilize the tax credit. I understand that any cost share funds received must be
returned should I claim the tax credit.~~

~~Signed: _____~~

~~Date: _____~~

Name of Practice: PRECISION NUTRIENT MANAGEMENT ON CROPLAND –
NITROGEN APPLICATION
DCR Specification for No. NM-5N

A. Description and Purpose

This practice will encourage the use of precision nutrient management practice components that support a higher intensity of nitrogen management in the field than existing standard nutrient management practices. This practice is limited to row crops, small grains and highly managed hayland (see glossary for definition) production systems.

This practice supports multiple enhanced nutrient management components such as soil (pre-sidedress) nitrate tests (PSNT), and all variable rate nitrogen application technologies. This practice may only be used on fields that apply nitrogen based upon test results identified in section B, whether they have organic nutrient applications or not, with the exception of Biosolids applications.

Multiple split applications (~~more than two~~) of nitrogen applies to corn, cotton, small grains crops, grain sorghum/milo, canola, specialty crops, produce, turf/sod farms and highly managed hayland. This practice does apply to the late winter split application of nitrogen on small grains. The variable rates of nitrogen listed below (~~in B.-2.~~) apply to all row and highly managed hay crops (other than alfalfa, which is not eligible). Other macro--micro nutrients or soil amendments may be applied concurrently.

B. Policies and Specifications

1. This is an annual practice. Results from the test conducted to develop a nitrogen application prescription must be used to determine the nutrient application rates for the current or following crop as appropriate; that prescription must be followed during the rate of application of nitrogen.
2. At least one of the following identified components must be implemented to receive any cost-share payment for this practice.
 - 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 tests may be used by the participant to support this practice.
 - ii. Variable rate nitrogen applications based upon the soil test results of (subfield) sampling; other macro-micro nutrients may be applied concurrently
 - iii. Variable rate or zone application of nitrogen on row crops, specialty crops or small grains
 - iv. Multiple (more than two) Three or more split applications of nitrogen on corn, cotton and small grains-
 - ~~iv.v.~~ Two or more split sidedress applications of nitrogen on corn or cotton
 - ~~v.vi.~~ More than two Two or more applications of nitrogen on highly

managed hayland production systems (other than alfalfa, which is not eligible).

vi.vii. Injection at sidedress.

3. On fields that have organic sources of nitrogen applied during the crop year or in previous years, or if high residual nitrogen levels are suspected from a previous crop, fall nitrogen rates shall be determined by a soil nitrate test.

4. All split applications will be applied at a growth stage when the plant is entering the highest demand for nitrogen. Application of any sidedress nitrogen, including the first split, must be applied after the corn is at the 5-leaf stage or at least 12" in height.

3.5. Subsequent sidedress applications must be applied at least 14 days after the most recent application.

4.6. Total nitrogen application rates (including pre-plant and sidedress) on corn shall not exceed 1 lb./bu. expected crop yield.

Where this practice is applied, there must be a note to that effect in the narrative or elsewhere in the nutrient management plan indicating that the soils were sampled in an appropriate manner.

5.7. 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 that this practice will be implemented on. 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).

6.8. Acres receiving a zero application rate based on a PSNT result also qualify for a payment rate of \$8 per acre.

7.9. The total number of acres that qualify for this practice will be based upon the total acres that were sampled in zones, had mid-season testing such as soil (Pre-sidedress) Nitrate Testing (PSNT), or received Variable Rate or Zone applications of nitrogen, based upon the zone or grid soil nitrate sampling.

8.10. Participants **shall** provide written verification of the recommendation and the resulting application(s) (examples include but are not limited to: results of laboratory test, a work order or bill; and as-applied application map of field) to the District within forty-five days of the final nitrogen application to verify that the recommendations were followed.

9.11. The participant **must** sign up for this practice before April 1st of each year that the practice will be utilized.

~~10.12.~~ Fields that have received applications of biosolids within the previous 24 months are not eligible.

12. Participants may **not** receive cost-share payments for NM-3C or NM-4 and NM-5N simultaneously on the same crop and field.

C. Rates

1. As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.

For participants who certify in writing (*see language on last page of this specification*) that they will not utilize the tax credit available for the implementation of this practice and who are not receiving payment for precision application of ~~nutrients~~nitrogen from any other funding source on the same acreage, a state cost share payment rate of 75% of the application charge, up to a maximum amount of \$8.00 per acre per year, is available for the acres receiving the variable rate or zone application of nitrogen or multiple split applications of nitrogen on corn, cotton and small grain; or more than two applications on highly managed hayland.

2. Costs for a pre-side dress nitrate test (PSNT) or fall 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 \$8.00 per sample, up to one PSNT per field. No per-sample cost-share is available for zone soil fertility testing. ~~Many commercial applicators include zone pre-sidedress soil fertility sampling in their variable rate application charge~~

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 202019

~~Certification from an Agricultural Best Management Practice Participant that
a Tax Credit will not be Utilized~~

~~I, _____, hereby certify that I
will not claim the tax credit which is available for participation in the Precision Nutrient
Management on Cropland—Nitrogen Application, NM-5N practice, and therefore I am
eligible for cost share funding. I understand that any cost share funds received must be
returned should I claim the tax credit.~~

~~Signed: _____~~

~~Date: _____~~

Name of Practice: PRECISION NUTRIENT MANAGEMENT ON CROPLAND –
PHOSPHORUS APPLICATION
DCR Specification for No. NM-5P

A. Description and Purpose

This practice will encourage the use of precision nutrient management practice components that support a higher intensity of phosphorous management in the field than existing standard nutrient management practices.

This practice is ~~limited to~~ intended for row crops, small grains, grain sorghum/milo, canola, specialty crops, produce, turf/sod farms and highly managed hayland including alfalfa hay production systems.

This practice supports multiple enhanced nutrient management components such as zone or grid soil fertility samples, and all variable rate phosphorous application technologies based upon the soil test results of zone or grid (subfield) sampling. This practice may only be used on fields that apply phosphorous based upon test results identified in section B.2, whether they have organic nutrient applications or not, with the exception of biosolids applications.

~~This practice supports multiple enhanced nutrient management components such as zone or grid soil fertility samples, and all variable rate phosphorous application technologies based upon the soil test results of zone or grid (subfield) sampling. This practice may only be used on fields that apply phosphorous based upon test results identified in section B.A. 2, whether they have organic nutrient applications or not, with the exception of biosolids applications.~~

The variable rates of phosphorus listed below (in B.1.) apply to all row crops, small grains and highly managed hay crops. Other macro-micro nutrients or soil amendments may be applied concurrently.

B. Policies and Specifications

1. This is an annual practice. Results from any test conducted to develop a phosphorous application prescription must be used to determine the phosphorous application rates for the current or following crop as appropriate, and that prescription must be followed during the application of phosphorous.
2. Phosphorous applications must be based upon the soil test results of zone or grid (subfield) sampling recommendations; other macro-micro nutrients may be applied concurrently.

~~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 tests may be used by the participant to support this~~

~~practice.~~

3. Total phosphorus application rates shall not exceed ~~the recommendations of~~ the zone or grid sampling recommendations.
4. 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 that this practice will be implemented on. 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).

5. The total number of acres that qualify for this practice will be based upon the total acres that were sampled in zones (zone shall be no larger than 20 acres and based upon soil type) grids (grid size shall be of 1 to 4 acres in size), or had mid-season testing such as variable rate or zone/grid (subfield) applications of phosphorus, based upon the zone or grid soil sampling recommendations.
6. The participant **must** provide written verification of the recommendation(s) and the resulting application(s) (examples include but are not limited to: results of laboratory test(s), a work order or detailed bill/invoice showing application rates, and an as-applied application map of field(s) to the District within forty-five days of the phosphorous application to verify that the recommendations were followed
7. The participant **must** sign up for this practice before April 1st of each year that the practice will be utilized.
8. Fields that have received applications of biosolids within the previous 24 months are not eligible.

C. Rates

1. As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.
2. For participants who certify in writing (*see language on last page of this specification*) that they will not utilize the tax credit set forth above with regard to the implementation of this practice and who are not receiving payment for precision application of phosphorus from another funding source on the same acreage, a state cost share payment rate of 75% of the application charge, up to a maximum amount of \$8.00 per acre, for the acres receiving variable rate zone or grid (subfield) application of phosphorous on row crops, small grains or highly managed hayland production systems.
- ~~3. No per sample cost-share is available for zone/grid (subfield) soil fertility testing. Many commercial applicators include zone/grid (subfield) soil fertility sampling in their variable rate application charge.~~

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 ~~March, 2018~~ April, 2020

~~Certification from an Agricultural Best Management Practice Participant that
a Tax Credit will not be Utilized~~

I, _____, hereby certify that I
~~will not claim the tax credit which is available for participation in the Precision Nutrient
Management on Cropland—Phosphorus Application, NM-5P practice, and therefore I am
eligible for cost share funding available under that practice for participants who do not
wish to utilize the tax credit. I understand that any cost share funds received must be
returned should I claim the tax credit.~~

Signed: _____

Date: _____

Name of Practice: Cover Crop for Managing Liquid or Semi-Solid Manure
DCR Specifications for No. NM-7

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's nutrient management and protective cover best management practices that are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

Cost-share and tax credit are provided for the reduction of nutrient losses to groundwater and the establishment of vegetative cover on cropland for protection from erosion.

This practice will provide an incentive to keep cover on cropland receiving liquid or semi-solid manure, which will help prevent the loss of nutrients. The primary purposes are to reduce the leaching of nitrogen to groundwater and reduce runoff of nutrients into surface waters; a secondary purpose is to reduce winter rain and wind-generated erosion. This BMP is designed to help liquid/semi-solid manure generating operations improve nitrogen and phosphorus management through applications to actively growing crops. This BMP will utilize current nitrogen applications and residual nitrogen in the first three feet of the soil profile.

B. Policies and Specifications

1. Soil loss calculations using the presently approved NRCS calculation methodology shall be documented and included in the participant file for review during spot checks.
2. 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 that this practice will be implemented on. 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).
3. This practice applies only to operations generating liquid or semi-solid manure. Use of imported manure does not qualify.
4. This practice shall not be used for grain production.
5. The cover crop planted as part of this practice shall be harvested (for hay, haylage, silage, or straw) or killed (chemical or other non-tillage methods) prior

to viable seed development. All remaining cover crop residue shall be left on the surface and no tillage of the cover crop is allowed post-harvest/burndown. Pasturing consistent with sound agronomic management is permitted as long as a 60% cover is maintained through the life of the practice. The practice will be considered complete once the cover crop has served its purpose and been killed.

6. The practice is intended to provide an incentive to keep a vegetative cover on cropland receiving manure, which will help prevent the loss of nutrients, by absorbing any excess nutrients from the soil and reducing surface erosion.
7. This practice applies only to on-farm manure generating operations and to acres necessary for application as referenced in the nutrient management plan. A 3-year nutrient management plan is required for this practice. The 3-year plan is required to reflect active nutrient management planning and implementation. The NMP shall require cropping rotation practices that are consistent with sound agronomic crop production practices (i.e. if the producer knows he will not have sufficient other acreage to make fall manure applications, then the spring/summer crop shall be planned for a harvest date that will allow adequate fall growth to utilize the nutrients and reduce soil erosion.)
8. Planting shall occur within 2 weeks of summer/fall harvest, but no later than the planting dates listed. A variance may be granted under extreme weather conditions supported by local weather data.
9. Winter tissue testing is encouraged as part of the practice for crops that will be harvested.
10. A fall soil nitrate test is required annually. If the 6" fall soil nitrate test is less than 30 ppm, then a manure application at planting is allowed. If fall soil nitrate test is greater than 30 ppm at planting, then the crop must be well established (4-6" tall and 50% ground cover) and temperatures conducive to N uptake at time of manure application.
11. A manure sample shall be taken at time of application and is a required component of this practice. Application recommendations shall be consistent with the approved NMP and a recent manure test (i.e. within 1 year).
12. Total fall N application shall not exceed 30 lbs/acre. Commercial P may be applied on soils having less than a medium soil test level. Total P application (manure + commercial) shall not exceed recommendation for the crop rotation in the nutrient management plan. Commercial N (not to exceed 15 lbs/acre) as part of the P fertilizer is allowed.
13. Spring N applications (after March 1) shall be based on tissue tests.
14. Soil tests must be taken within 18 months of practice sign-up.
15. This practice has a one-program year completion date eligible for carryover (i.e.

Commented [VP1]: If this practice moves forward, this will have to be edited to be in line with the Guidelines section on Extreme Act of Nature cover crop extensions. Or simply deleted here and covered there.

participant can apply in early part of a calendar year for summer/fall implementation)

16. Select one of following species and/or mixtures of species to plant in all soils:

Species	bu./acre
Rye (Tetraploid)	2 bu./acre
Winter Rye (not tetraploid)	2 bu./acre
Winter Barley	2 bu./acre
Winter Hardy Oats	2 bu./acre
Winter Wheat or Triticale	2 bu./acre
Winter Annual ryegrass	20 lbs./acre
Small grain seed mixes shall contain 2 bu./acre small grain	
Ryegrass mixtures shall contain 20 lbs./acre ryegrass	

Higher seeding rates are recommended for aerial seeding and non-incorporation seeding methods.

17. Seeding of all seed types must be planted by the dates listed below:

Area	Planting Date
Cities of Chesapeake & VA Beach	November 10
Coastal Plain (including the Eastern Shore)	October 25
Piedmont	October 10
Mountain and Valley	October 5

18. In all cases, this practice is subject to NRCS standard 340.

C. Rate(s)

- For participants who certify in writing that they will not utilize the tax credit set forth below with regard to the implementation of this practice and who are not receiving payment for cover crops from another source on the same acreage, a state cost share payment rate of **\$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.
- As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.

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.

Created April 2020

DRAFT

Name of Practice: STREAM EXCLUSION WITH NARROW WIDTH BUFFER AND
GRAZING LAND MANAGEMENT
DCR Specifications for No. SL-6N

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's stream exclusion with grazing land management best management practice that are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

A structural and/or management practice that will enhance or protect vegetative cover to reduce runoff of sediment and nutrients from grazing livestock on existing pastureland through livestock exclusion.

Provide livestock water systems, fencing and/or a hardened pad for winter-feeding that will improve water quality control erosion and eliminate direct access to or a direct runoff input to all live streams ~~or live water where there is a defined water quality problem.~~ **Stream exclusion fencing and an off-stream watering facility are required components of this practice.** Rotational grazing is an optional enhancement of this practice. The exclusion and/or rotational grazing system receiving cost share should reflect the least cost, technically feasible, environmentally effective approach to resolve the existing water quality problem.

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B. Policies and Specifications

1. State cost-share and tax credit on this practice are limited to pastureland that borders a live stream or Chesapeake Bay Preservation Act Resource Protection Area as defined by local ordinance. An exception to this may be granted in cases of severe environmental degradation occurring in and around features such as: springs, seeps, ponds, wetlands, or sinkholes, etc.
2. An applicant may not apply for or receive cost share funds for CRSL-6 and SL-6 practices funded by the Virginia Agricultural Best Management Practices Cost Share Program on the same fields.
3. A written management plan, to include a rotational grazing component if more than three new grazing units are created by the installation of interior fencing, and operation and maintenance plans must be prepared and followed in accordance with NRCS FOTG. Factors to be addressed in the management plan should include water sources, environmental impact of winter-feeding pad location, runoff from the feeding pad area, soil fertility maintenance, access lanes, fencing needs, wetlands, minimum cover or grazing heights, carrying capacity of the land and rotational schedules.

4. The buffer must be maintained as perennial species for the practice lifespan.
Grazing (including flash grazing) and haying are not allowed in the protected riparian area during the lifespan of this practice. When both sides of the stream are under the same ownership livestock must be excluded from both sides of the stream.
5. To protect stream banks, state cost-share and tax credit are authorized for:
 - i. Fencing to restrict stream access in connection with newly developed watering facilities. The stream exclusion fence must be placed a minimum of 10 feet ~~and up to 34.9 or 25~~ feet away from the stream, except as designed in areas immediately adjacent to livestock crossings and controlled hardened accesses.
 - a. Wetlands, intermittent springs, seeps, ponds connected to streams, sensitive karst features, and gullies adjacent to streams should be included in the buffer area.
 - b. Isolated seeps, springs, wetlands, and ponds without direct connection to a stream may be fenced as well, but shall not be used as the sole criteria for determining eligibility for the SL-6 practice.
 - ii. Stream crossings for grazing distribution or limited water access as long as the fencing adjacent to the crossing restricts access to the excluded area.
 - iii. Fence chargers used to electrify permanent or temporary fencing.
6. To supply an alternative watering system to grazing livestock, state cost-share and tax credit are authorized for:
 - i. Watering developments including:
 - a. Wells, including a permanently affixed pump and pumping accessories;
 - I) Districts may approve cost-share for dry wells and/or well location studies (geotechnical surveys) for the development of an alternative watering systems on a case by case basis and at the discretion of the District's Board.
 - II) Pumps and equipment associated with portable and permanent watering systems. ~~Pumps may operate on purchased electrical current or alternative energy sources such as solar, battery, mechanical or hydraulic energy.~~ The payment for the selected pump, provision of power, and associated equipment should be the most cost effective for the specific site and application. The replacement costs of pumps and pumping equipment components which fail to function properly during the lifespan of the practice are considered maintenance expenses and are the responsibility of the participant.
 - b. Connection to existing water supply
 - c. Development of springs, seeps, or stream pickups, including fencing of the area, where needed, to protect the development

from pollution by livestock;

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- d. Ponds (if the only cost effective and technically feasible alternative for water source) including fencing of the area, where needed, to protect the development from pollution by livestock
 - e. Pumps and equipment associated with permanent watering systems.
 - ii. Watering facilities including:
 - a. troughs,
 - b. tanks/storage facilities/cisterns,
 - c. hydrants
 - iii. Pipelines to convey water to watering facilities.
 - iv. Stream crossings for limited water access as long as the fencing adjacent to the crossing restricts access to the excluded area.
 - v. Portable water supply system components such as troughs, pipe, etc. that are:
 - a. Commercially available or farmer constructed,
 - b. Large enough to provide a timely and sufficient volume of water for the livestock to be contained in a specific area for which the system is designed,
 - c. Capable of being maintained in a stable position and protected from any damage while the system or component is in use, and
 - d. Capable of being moved in a timely manner from one location to another within the acreage for which the system is designed.
7. To establish pasture management through rotational grazing, state cost-share and tax credit are authorized for:
- i. Interior fencing and watering facilities that distribute grazing to improve water quality, when combined with the livestock exclusion component of this practice on an adjacent stream or sensitive feature. Consideration must be given, in such cases, to the additional management requirements of such systems.
 - ii. When more than three new grazing units are created by the installation of interior cross fencing, a written grazing management plan must be prepared and implemented. Input from the participant during the development of the plan is required.
8. To develop a hardened pad for winter-feeding of livestock state cost-share and tax credit are authorized for:
- i. Grading and shaping, geotextile fabric, gravel, concrete or bituminous concrete.
 - ii. The winter-feeding hardened pad will be cost shared based upon the existing herd size. Cost-share funds cannot be used to accommodate expansion of the herd size.
 - iii. All other means of reducing the environmental impact of the winterfeeding operation must be explored and rejected, due to economic

- inefficiency or lack of space for relocation, before cost-share or tax credit can be approved.
- iv. Cost-share funding for a hardened winter-feeding pad will only be authorized after the “Needs Determination Worksheet” has been completed, and all other methods of resolving the water quality degradation have been considered.
 - v. A nutrient management plan is required to properly manage the manure collected from around the feeding pad that addresses all enriched runoff and manure accumulations associated with the winter-feeding pad.
9. Portable or temporary system components (fencing, etc.) cannot be utilized in other areas or moved from fields utilized in the system plan. The replacement costs of portable components which fail to function properly during the lifespan of the practice are considered maintenance expenses and are the responsibility of the participant.
 10. The conservation planning process for developing an alternative watering system for livestock should include consideration of some means to provide water to the livestock during emergency conditions. Generators for emergency use may not receive cost-share.
 11. The primary water use of the components which were installed with state cost share and tax credit must be for the purpose of providing water for livestock; however, incidental use is not prohibited. State cost-share and tax credit is not permitted for any electrical, structural, or plumbing supplies, including pipe, or associated construction costs for developing any incidental use. When an incidental use is anticipated, the District Board should consider the applicant's intent before approving the request. Incidental use will be documented in the applicant's file
 12. No state cost-share and tax credit is authorized under the practice for any installation that is:
 - i. PRIMARILY for wildlife, dry lot feeding, barn lots, or barns.
 - ii. To make it possible to graze crop residues, field borders, or temporary or supplemental pasture crops.
 - iii. For boundary fencing or water supply systems used to establish new pastures not currently in use.
 - iv. For interior fencing and watering facilities to distribute grazing in fields not receiving exclusion fence. (Applicant may apply for SL-7).
 - v. For the purpose of providing water for the farm or ranch headquarters
 13. Soil loss rates must be computed for all applications for use in establishing priorities for receiving cost share funds.
 14. All permits or approvals necessary are the responsibility of the applicant.

15. This practice is subject to NRCS Standards, 382 Fence, 390 Riparian Herbaceous Cover, 472 Access Control, 516 Livestock Pipeline, 533 Pumping Plant, 561 Heavy Use Area Protection, 574 Spring Development, 575 Trails and Walkways, 578 Stream Crossing, 614 Watering Facility and 642 Water Well.
16. All practice components implemented must be maintained for a minimum of either 10 years or 15 years, as indicated in the table below, 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 rates shall be based on the approved or actual cost, whichever is less, and shall vary by the minimum fence setback and lifespan of the practice. The rates are:

Minimum fence setback (from the top of streambank)	Lifespan	Cost-share rate
25'	15 years	75%
	10 years	70%
10'	15 years	65%
	10 years	60%

~~2. The maximum state cost share payment for this practice will be \$100,000. Multiple SL-6s may be approved for funding in the same program year up to the cap.~~

~~3.2~~ As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.

~~4.3~~ If a participant receives cost-share from any source (state, federal, or private), only the percent of the total cost of the project that the applicant contributed is used to determine the tax credit.

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 described 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, ~~2019~~ 2020

**Needs Determination Worksheet for Winter-Feeding Pad
for _____ project**

(To be completed by the conservationist; Use additional sheets as
necessary)

This practice is not designed to be cost-shared as a stand-alone practice, but rather as a component to address a limited site specific situation, where an existing concentrated feeding location, due to its proximity to surface water or karst formations, concentrates manure and generates contaminated runoff that cannot be treated in a more cost-effective manner (including relocation of existing feeding site and fencing of stream buffers). All other potential more cost-effective approaches to reducing the water quality impact from the existing feeding operation must be implemented prior to consideration of construction of a winter-feeding pad (see Policies and Specification section B 6-8.)

Describe the current water quality problem? Have all other more cost-effective BMP approaches been implemented? If not do not provide cost-share. List approaches that have been considered.

Is there another location (further from the stream) that this feeding operation might be relocated to? If there is, relocate there and do not provide cost-share or provide environmental reasons why it cannot be relocated.

How many and what types of livestock will be fed at the facility? This facility should not be approved for cost-share unless a significant nutrient or bacterial contamination issue can only be cost-effectively resolved through the construction of the feeding pad. Explain the source and document the bacterial contamination being treated.

Is there an existing vegetated buffer between current the winter-feeding location and the closest waterway, are livestock excluded from the buffer and water feature? If animals have not been excluded from all water features on this tract, do not provide cost-share.

Describe the condition of the riparian area (starting at the top of the bank and proceeding upland for a minimum of 200 feet). If there is sufficient buffer width (200') that adequately treats contaminated run-off before it reaches the stream, do not provide cost-share.

How much pasture, hay land and cropland is available in this operation where the stored manure may be spread? If the available land cannot handle the anticipated amount of manure generated a plan must be developed for disposing of the manure in a manner consistent with existing nutrient management techniques.

Pasture acres _____ Hay acres _____ Cropland _____

What level of conservation planning has been accomplished on your operation?

What level of Conservation Plan implementation is in place on this operation?

Will the establishment of a winter-feeding pad in conjunction with stream fencing resolve all erosion, and bacterial contamination issues associated with this grazing system and feeding operation (including potential contaminated runoff from the winter feeding facility)? **If not, do not provide cost –share funds.**

Completed by:

Signature

Date

Title

Name of Practice: STREAM EXCLUSION WITH WIDE WIDTH BUFFER AND GRAZING
LAND MANAGEMENT
DCR Specifications for No. SL-6W

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's stream exclusion with grazing land management best management practice that are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

A structural and/or management practice that will enhance or protect vegetative cover to reduce runoff of sediment and nutrients from grazing livestock on existing pastureland through livestock exclusion.

Provide livestock water systems, fencing and/or a hardened pad for winter-feeding that will improve water quality control erosion and eliminate direct access to or a direct runoff input to all live streams ~~or live water where there is a defined water quality problem.~~ **Stream exclusion fencing and an off-stream watering facility are required components of this practice.** Rotational grazing is an optional enhancement of this practice. The exclusion and/or rotational grazing system receiving cost share should reflect the least cost, technically feasible, environmentally effective approach to resolve the existing water quality problem.

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B. Policies and Specifications

1. State cost-share and tax credit on this practice are limited to pastureland that borders a live stream or Chesapeake Bay Preservation Act Resource Protection Area as defined by local ordinance. An exception to this may be granted in cases of severe environmental degradation occurring in and around features such as: springs, seeps, ponds, wetlands, or sinkholes, etc.
2. An applicant may not apply for or receive cost share funds for CRSL-6 and SL-6 practices funded by the Virginia Agricultural Best Management Practices Cost Share Program on the same fields.
3. A written management plan, to include a rotational grazing component if more than three new grazing units are created by the installation of interior fencing, and operation and maintenance plans must be prepared and followed in accordance with NRCS FOTG. Factors to be addressed in the management plan should include water sources, environmental impact of winter-feeding pad location, runoff from the feeding pad area, soil fertility maintenance, access lanes, fencing needs, wetlands, minimum cover or grazing heights, carrying capacity of the land and rotational schedules.

4. The buffer must be maintained as perennial species for the practice lifespan. Grazing (including flash grazing) and haying are not allowed in the protected riparian area during the lifespan of this practice. When both sides of the stream are under the same ownership livestock must be excluded from both sides of the stream.
5. To protect stream banks, state cost-share and tax credit are authorized for:
 - i. Fencing to restrict stream access in connection with newly developed watering facilities. The stream exclusion fence must be placed a minimum of 35 or 50 feet away from the stream, except as designed in areas immediately adjacent to livestock crossings and controlled hardened accesses.
 - a. Wetlands, intermittent springs, seeps, ponds connected to streams, sensitive karst features, and gullies adjacent to streams should be included in the buffer area.
 - b. Isolated seeps, springs, wetlands, and ponds without direct connection to a stream may be fenced as well, but shall not be used as the sole criteria for determining eligibility for the SL-6 practice.
 - ii. Stream crossings for grazing distribution or limited water access as long as the fencing adjacent to the crossing restricts access to the excluded area.
 - iii. Fence chargers used to electrify permanent or temporary fencing.
6. To supply an alternative watering system to grazing livestock, state cost-share and tax credit are authorized for:
 - i. Watering developments including:
 - a. Wells, including a permanently affixed pump and pumping accessories;
 - I) Districts may approve cost-share for dry wells and/or well location studies (geotechnical surveys) for the development of an alternative watering systems on a case by case basis and at the discretion of the District's Board.
 - II) Pumps and equipment associated with portable and permanent watering systems. ~~Pumps may operate on-purchased electrical current or alternative energy sources such as solar, battery, mechanical or hydraulic energy.~~ The payment for the selected pump, provision of power, and associated equipment should be the most cost effective for the specific site and application. The replacement costs of pumps and pumping equipment components which fail to function properly during the lifespan of the practice are considered maintenance expenses and are the responsibility of the participant.
 - b. Connection to existing water supply
 - c. Development of springs, seeps, or stream pickups, including fencing of the area, where needed, to protect the development

from pollution by livestock;

SL-6W- 3

- d. Ponds (if the only cost effective and technically feasible alternative for water source) including fencing of the area, where needed, to protect the development from pollution by livestock
 - e. Pumps and equipment associated with permanent watering systems.
 - ii. Watering facilities including:
 - a. troughs,
 - b. tanks/storage facilities/cisterns,
 - c. hydrants
 - iii. Pipelines to convey water to watering facilities.
 - iv. Stream crossings for limited water access as long as the fencing adjacent to the crossing restricts access to the excluded area.
 - v. Portable water supply system components such as troughs, pipe, etc. that are:
 - a. Commercially available or farmer constructed,
 - b. Large enough to provide a timely and sufficient volume of water for the livestock to be contained in a specific area for which the system is designed,
 - c. Capable of being maintained in a stable position and protected from any damage while the system or component is in use, and
 - d. Capable of being moved in a timely manner from one location to another within the acreage for which the system is designed.
7. To establish pasture management through rotational grazing, state cost-share and tax credit are authorized for:
- i. Interior fencing and watering facilities that distribute grazing to improve water quality, when combined with the livestock exclusion component of this practice on an adjacent stream or sensitive feature. Consideration must be given, in such cases, to the additional management requirements of such systems.
 - ii. When more than three new grazing units are created by the installation of interior cross fencing, a written grazing management plan must be prepared and implemented. Input from the participant during the development of the plan is required.
8. To develop a hardened pad for winter-feeding of livestock state cost-share and tax credit are authorized for:
- i. Grading and shaping, geotextile fabric, gravel, concrete or bituminous concrete.
 - ii. The winter-feeding hardened pad will be cost shared based upon the existing herd size. Cost-share funds cannot be used to accommodate expansion of the herd size.

- iii. All other means of reducing the environmental impact of the winterfeeding operation must be explored and rejected, due to economic inefficiency or lack of space for relocation, before cost-share or tax credit can be approved.
 - iv. Cost-share funding for a hardened winter-feeding pad will only be authorized after the “Needs Determination Worksheet” has been completed, and all other methods of resolving the water quality degradation have been considered.
 - v. A nutrient management plan is required to properly manage the manure collected from around the feeding pad that addresses all enriched runoff and manure accumulations associated with the winter-feeding pad.
9. Portable or temporary system components (fencing, etc.) cannot be utilized in other areas or moved from fields utilized in the system plan. The replacement costs of portable components which fail to function properly during the lifespan of the practice are considered maintenance expenses and are the responsibility of the participant.
10. The conservation planning process for developing an alternative watering system for livestock should include consideration of some means to provide water to the livestock during emergency conditions. Generators [for emergency use](#) may not receive cost-share.
11. The primary water use of the components which were installed with state cost share and tax credit must be for the purpose of providing water for livestock; however, incidental use is not prohibited. State cost-share and tax credit is not permitted for any electrical, structural, or plumbing supplies, including pipe, or associated construction costs for developing any incidental use. When an incidental use is anticipated, the District Board should consider the applicant's intent before approving the request. Incidental use will be documented in the applicant's file
12. No state cost-share and tax credit is authorized under the practice for any installation that is:
 - i. PRIMARILY for wildlife, dry lot feeding, barn lots, or barns.
 - ii. To make it possible to graze crop residues, field borders, or temporary or supplemental pasture crops.
 - iii. For boundary fencing or water supply systems used to establish new pastures not currently in use.
 - iv. For interior fencing and watering facilities to distribute grazing in fields not receiving exclusion fence. (Applicant may apply for SL-7).
 - v. For the purpose of providing water for the farm or ranch headquarters.

13. Soil loss rates must be computed for all applications for use in establishing priorities for receiving cost share funds.
14. All permits or approvals necessary are the responsibility of the applicant.
15. This practice is subject to NRCS Standards, 382 Fence, 390 Riparian Herbaceous Cover, 472 Access Control, 516 Livestock Pipeline, 533 Pumping Plant, 561 Heavy Use Area Protection, 574 Spring Development, 575 Trails and Walkways, 578 Stream Crossing, 614 Watering Facility and 642 Water Well.
16. All practice components implemented must be maintained for a minimum of either 10 years or 15 years, as indicated in the table below, 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 rates shall be based on the approved or actual cost, whichever is less, and shall vary by the minimum fence setback and lifespan of the practice. The buffer payment rates shall be provided for a maximum of 10 acres. The rates including the buffer payment rates are:

Minimum fence setback (from the top of streambank)	Lifespan	Cost-share rate	Buffer payment rate	Buffer payment cap
50'	15 years	100%	\$80 per acre per year	\$12,000 per contract
	10 years	95%	\$80 per acre per year	\$8,000 per contract
35'	15 years	90%	\$80 per acre per year	\$12,000 per contract
	10 years	85%	\$80 per acre per year	\$8,000 per contract

~~NOTE: For the purposes of calculating buffer acres, measurements are capped at 100 feet from the top of streambank or 1/3 of the floodplain up to 300 feet.~~

~~NOTE: The Buffer payment cap is the maximum a participant can be paid per tract even when multiple SL-6W and/or WP-2W practices are approved in a given program year.~~

- ~~2. The maximum state cost share payment for this practice will be \$100,000. Multiple SL-6s may be approved for funding in the same program year up to the cap.~~

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~~3.2.~~As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.

~~4.3.~~If a participant receives cost-share from any source (state, federal, or private), only the percent of the total cost of the project that the applicant contributed is used to determine the tax credit.

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 described 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 ~~2020-~~2019

**Needs Determination Worksheet for Winter-Feeding Pad
for _____ project**

(To be completed by the conservationist; Use additional sheets as
necessary)

This practice is not designed to be cost-shared as a stand-alone practice, but rather as a component to address a limited site specific situation, where an existing concentrated feeding location, due to its proximity to surface water or karst formations, concentrates manure and generates contaminated runoff that cannot be treated in a more cost-effective manner (including relocation of existing feeding site and fencing of stream buffers). All other potential more cost-effective approaches to reducing the water quality impact from the existing feeding operation must be implemented prior to consideration of construction of a winter-feeding pad (see Policies and Specification section B 6-8.)

Describe the current water quality problem? Have all other more cost-effective BMP approaches been implemented? If not do not provide cost-share. List approaches that have been considered.

Is there another location (further from the stream) that this feeding operation might be relocated to? If there is, relocate there and do not provide cost-share or provide environmental reasons why it cannot be relocated.

How many and what types of livestock will be fed at the facility? This facility should not be approved for cost-share unless a significant nutrient or bacterial contamination issue can only be cost-effectively resolved through the construction of the feeding pad. Explain the source and document the bacterial contamination being treated.

Is there an existing vegetated buffer between current the winter-feeding location and the closest waterway, are livestock excluded from the buffer and water feature? If animals have not been excluded from all water features on this tract, do not provide cost-share.

Describe the condition of the riparian area (starting at the top of the bank and proceeding upland for a minimum of 200 feet). If there is sufficient buffer width (200') that adequately treats contaminated run-off before it reaches the stream, do not provide cost-share.

How much pasture, hay land and cropland is available in this operation where the stored manure may be spread? If the available land cannot handle the anticipated amount of manure generated a plan must be developed for disposing of the manure in a manner consistent with existing nutrient management techniques.

Pasture acres _____ Hay acres _____ Cropland _____

What level of conservation planning has been accomplished on your operation?

What level of Conservation Plan implementation is in place on this operation?

Will the establishment of a winter-feeding pad in conjunction with stream fencing resolve all erosion, and bacterial contamination issues associated with this grazing system and feeding operation (including potential contaminated runoff from the winter feeding facility)? **If not, do not provide cost –share funds.**

Completed by:

Signature

Date

Title

Name of Practice: PROTECTIVE COVER FOR
AGRICULTURAL CROPLAND
DCR Specification for No. SL-8A

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's protective cover for agricultural cropland best management practice that are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice will provide an incentive to keep a cover on agricultural cropland when it is not being used after harvest of a crop, after harvest of a specialty crop, or in situations due to an unforeseen circumstance or natural disaster. Unforeseen circumstances or natural disasters could include flooded fields, fire, failed crops, or damage by hail, tornadoes, hurricanes, etc. Cost-share or tax credit are provided to establish vegetative cover on agricultural cropland.

The purpose is to reduce wind and water erosion, thus improving water quality.

B. Policies and Specifications

1. Eligibility:
Agricultural croplands after harvest of a crop, failed crop, unforeseen circumstances, or natural disaster are given consideration due to bare sites and highly erodible soil conditions. Examples for this practice could include, but are not limited to, the following:
 - i) Vegetables
 - ii) Tobacco
 - iii) Turf
 - iv) Hemp
 - v) Preventative Planting
 - vi) Other
2. Soil loss rates must be computed for all applications for use in establishing priority considerations.
3. A conservation plan containing crop rotations is required to calculate soil loss reductions and nutrient management planning. The conservation plan and NMP shall include crop rotations for at least 1 year post completion of this practice.
4. Payment is provided as a variable rate per acre incentive payment to encourage proper establishment and to offset a portion of the cost of seed and the seeding operation.

5. The seeding must be planted and certified within 45 days after crop harvest or destruction of the crop due to natural disaster or unforeseen circumstances. All seeding must be planted and certified no later than November 15 and no earlier than March 1. A good stand and good growth of cover, achieving 60% or greater cover, must be obtained in sufficient time to protect the area. The stand/vegetative cover, 60% or greater, must be maintained for at least 60 days after seeding certification or until the conservation purpose has been served in accordance with NRCS 340, whichever is greater. The vegetative cover shall be left on the land or incorporated.
6. In order to be eligible for cost-share producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field that this practice will be implemented on. 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).
7. Manure application may be made in accordance with the nutrient management plan prepared by a Virginia certified nutrient management planner.
8. Pasturing consistent with sound agronomic management is permitted as long as a 60% cover is maintained. In years of drought if producers anticipates a need for additional feed harvest, they should apply for the SL-8H practice as harvest is not allowed under this practice.
9. This practice is applicable for Preventative Planting to prevent erosion after crop failures, flood, hail, tornado, and/or hurricane damage, or any other unforeseen circumstance or natural disaster.
10. The cover crop shall not be harvested for seed/grain.
11. Seed type and rates shall be those listed:

Spring Seed Type	Rate
Tetraploid Rye (pure strain only)	2.0 bu./acre
Winter Rye	1.5 bu./acre
Winter Barley	2.5 bu. /acre
Winter Annual Ryegrass	20 lbs./acre
Winter Wheat	1.5 bu./acre
Spring Oats	2.0 bu./acre

Small Grain Mixtures	1 bu./ac.with
a) legume†	10 lbs./acre or,
b) forage radish	6 lb./ acre or,
c) canola or rape	4 lbs./acre
Triticale	1.5 bu. /acre
Forage Radish	6-8 lbs. /acre
1) mixture with grass or legume†	4 lbs./acre
Winter-hardy <i>Brassica</i> (canola/rape)	5 lbs./acre
1) mixture with grass or legume†	2-4 lbs./acre

Summer Seed Type	Rate
Sorghum Sudangrass	1.0 bu./acre
Pearl Millet	20 lbs./acre
Foxtail Millet	20 lbs./acre
Black Oil Sunflower	5 lbs./acre
Buckwheat	60 lbs./acre
Forage Soybean	60 lbs./acre
Cowpea	50 lbs./ac.
Sunnhemp	20 lbs./acre

Fall Seed Type	Rate
Tetraploid Rye (pure strain only)	2.0 bu./acre
Winter Rye	1.5 bu./acre
Winter Barley	2.5 bu. /acre
Winter Annual Ryegrass	20 lbs./acre
Winter Wheat	1.5 bu./acre
Winter Hardy Oats	2.0 bu./acre
Small Grain Mixtures	1 bu./ac.with
a) legume†	10 lbs./acre or,
b) forage radish	6 lb./ acre or,
c) canola or rape	4 lbs./acre
Triticale	1.5 bu. /acre
Forage Radish	6-8 lbs. /acre
1) mixture with grass or legume†	4 lbs./acre
Winter-hardy <i>Brassica</i> (canola/rape)	5 lbs./acre
1) mixture with grass or legume†	2-4 lbs./acre

† - legume = Crimson Clover, Austrian Winter Pea, Canadian Spring Pea, Woolypod Vetch or Hairy Vetch

°Use higher seeding rates for pure stands and lower seeding rates for mixed species plantings

Higher seeding rates are recommended for aerial seeding.

12. This practice is subject to NRCS standard 340 Cover Crop, including reference to the Cover Crop Planning Manual 1.0, Virginia Technical Note, Agronomy #10.
13. This practice has a one-program year completion date eligible for carryover (i.e. participant can apply in early part of a calendar year for summer/fall implementation).

C. Rate(s)

1. For participants who certify in writing that they will not utilize the tax credit set forth below with regard to the implementation of this practice and who are not receiving payment for cover crops from another source on the same acreage, a one-time state cost-share payment rate per acre is available depending on the number of days the cover crop remains on the land after achieving 60% or greater cover, listed below:.

Number of Days Maintained	Rate
60-89 Days	\$15.00/Acre
90-119 Days	\$20.00/Acre
120+ Days	\$25.00/Acre

2. As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.

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.

Created April 2020

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

A planned system designed to manage liquid and/or solid waste from areas where livestock and poultry are concentrated. 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.

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 ~~winter~~-feeding operations located adjacent to riparian areas or other environmentally sensitive feature(s).

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, for construction of a winter feeding facility with dry stacking capabilities all other means of reducing the environmental impacts of animal waste from the existing winter feeding operation must be considered. Lack of space for relocation, economic inefficiency or other factors may be considered. All~~
 - ii. applications for animal waste control facilities, except poultry operations, must have a "Risk Assessment for Water Quality Impairment from heavy Use Areas/Animal Concentrated Areas" completed and must receive a

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| 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 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.
- iv. 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. Determination of the storage capacity of animal waste facilities shall be reviewed and approved by the DCR agricultural BMP engineer except for practices previously sized and engineered by NRCS.

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.
 - a. Permanently installed equipment needed as an integral part of the system.
 - ~~a-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.~~
 - ~~b-c. Fencing and~~ vegetative cover (including mulching needed to protect the facility). ~~Fencing can be included for livestock or poultry exclusion from live and intermittent streams in concentrated holding and winter feeding areas.~~
 - ~~e-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. The DCR Ag 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. Cost share funds for up to six (6) months storage of existing need. All components of a waste storage system (regardless of funding source)~~

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~~must be designed to match the amount of manure storage capacity required. For liquid storage cost share/tax credit may be provided for seven (7) months of storage of existing need. Cost share funds are authorized 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.

~~vi-vii.~~

~~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.

~~viii.~~ ~~Roofs and covers over dry stack storage and feeding areas associated with the attached manure storage facility.~~

4. Cost share and tax credit are not authorized:
 - i. For measures primarily for the prevention or abatement of air pollution unless the measures also have soil and water conserving benefits.
 - ii. For:
 - a. Portable pumps.
 - b. Pumping equipment ~~or other portable 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.
 - iii. For animal waste facilities that do not meet local or state regulations.
 - iv. For installation primarily for the operator's convenience.
 - v. Dairy, beef, poultry and swine confined feeding operations that are planned or under construction do not qualify for cost-share assistance for an Animal Waste Control Structure (WP-4) under the Virginia Agricultural BMP Cost-Share Program. 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.
 - vi. 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 shall be reviewed and approved by the DCR Ag BMP Engineer (except for

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practices previously sized and engineered by NRCS) and shall be 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 that this practice will be implemented on. 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 Structure, ~~316 Animal Mortality Facility~~, 342 Critical Area Planting, 359 Waste Treatment Lagoon, 362 Diversion, 367 Roofs and Covers, ~~382 Fence~~, ~~412 Grassed Waterway~~, 558 Roof Run Off Management, 561 Heavy Use Protection, ~~575 Trails and Walkways~~, 620 Underground Outlet, 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. ~~The maximum state payment for this practice is not to exceed \$100,000 per landowner per year.~~
2. As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.
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 ~~2020~~2019

**Animal Waste Control Facility Needs Determination Worksheet
for Poultry 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 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 birds per flock do you normally produce? Their size, type, etc.
6. How many flocks per year do you normally produce?
7. How often do you clean out in a year's period? When and how is the litter used and/or stored? Also give the number of partial and total clean outs.
8. What use do you make of the 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 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 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

Name of Practice: COMPOSTER FACILITIES
DCR Specifications for No. WP-4C

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

A. Description and Purpose

A planned system designed to manage the treatment and disposal of poultry and swine carcasses resulting from normal mortality and to improve water quality by composting those carcasses and spreading the composted material at the proper time, rate, and location.

B. Policies and Specifications

1. This practice is designed to provide facilities for composting poultry and swine carcasses from normal mortality, storage of raw materials necessary for composting, storage of the composted end product, and the recycling of composted carcasses by land applying the end product in a manner that will abate pollution that would otherwise result from existing disposal methods for normal poultry and swine mortality carcasses.

All applicants must have:

- i. A written operation and management plan for each composting structure.
- ii. A nutrient management plan developed in accordance with requirements for nutrient management plan content and procedures as stipulated in the Virginia Nutrient Management Training and Certification Regulations for land application of the composted end product and other animal wastes, which are land applied. The nutrient management plan shall be implemented and maintained for the life of the practice.
- iii. A manure test for the composted end product for nutrient analysis and, if applicable, a separate test for any other land applied animal wastes (once during the first twelve months of operation of the structure).
- iv. A thermometer of suitable design, which will permit temperature monitoring through the depth of the composting material within a bin or cell. During the composting process, temperatures must be achieved that are adequate to kill known pathogens.
- v. For composting swine mortality, one of the following high-carbon bulking agents for mortality coverage must be used:
 - a. Sawdust or fine wood chips obtained from a sawmill or other wood processing facility.
 - b. Ginning trash obtained from cotton gins.
 - c. Chopped straw or chopped cornstalks

- d. Other organic materials as recommended by technical composting publications including Virginia Cooperative Extension “Composting for Mortality Disposal on Hog Farms” publication 414-020 (Virginia Tech., 2003); Arkansas Cooperative Extension Service “Disposal of Swine Carcasses in Arkansas” publication MP392 (Univ. of Arkansas, 1997); Missouri Cooperative Extension Service “Composting Dead Swine” publication WQ225 (Univ. of Missouri, 1994).
2. Expenses are authorized for:
 - i. For composting facilities that will contribute significantly to maintaining or improving soil or water quality.
 - ii. For constructed composting facilities, which are free standing or attached to a dry waste stacking facility. Constructed composting facilities may also be housed within dry waste stacking facilities when housing the composting facilities does not interfere with the waste storage and management of stacking facilities.
 - iii. For prefabricated composting including drum composting facilities or poultry mortality freezers, cost-share payment and tax credit shall be based on the least costly technically feasible option.
 - iv. For leveling and filling to permit the installation of an effective system.
 - v. For concrete construction necessary for the structure's foundation and a minimal work area needed for equipment used to load, mix, and unload the compost and bulking materials into or from the composting facilities.
3. Expenses are not authorized:
 - i. For thermometers.
 - ii. For composting facilities that do not meet local and state regulations.
 - iii. For planned facilities. An existing water quality problem must be apparent to be eligible for funds.
 - iv. Cost-share is not authorized for planned enlargement of livestock operations. However, cost-share funds are available for use to solve existing problems.
 - v. For the acquisition of approved bulking agents.
4. All appropriate local and state permits must be obtained before cost-share payments are authorized.
5. 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 that this practice will be implemented on. 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).

6. This practice is subject to NRCS Standards 313 Waste Storage Facility, 316 Animal Mortality Facility, 317 Composting Facility, 362 Diversion, 367 Roofs and Covers, ~~382 Fence~~, 558 Roof Runoff Structure, 561 Heavy Use Area, 620 Underground Outlet, 633 Waste Recycling, and 634 Waste Transfer.
7. 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 of poultry and swine composting facilities only. ~~The maximum state payment is \$50,000 per year for the construction or purchase of composting facilities.~~
2. The Tax Credit rate is 25% of the total eligible cost of swine or poultry composting facilities not to exceed \$17,500.00. If a participant receives Cost-Share, only the percent of the total cost of the project that the participant contributed is used to determine the Tax Credit.

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 ~~2019~~2020

Name of Practice: FEEDING PAD
DCR Specifications for No. WP-4FP

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

A planned system designed to prevent those areas exposed to heavy livestock traffic from experiencing excessive manure and soil losses due to the destruction of ground cover and to manage liquid and/or solid waste from areas where livestock are concentrated. The intent of this practice is to improve water quality by preventing manure and sediment runoff from entering watercourses and sensitive karst areas and capturing a portion of the manure as a resource for other uses by storing and spreading waste at the proper time, rate, and location.

A hardened feeding pad is a gravel or concrete pad that provides a stable area for feeding livestock and allows for the capture of manure. Livestock associated with this practice must be excluded from all live streams or live water.

B. Policies and Specifications

1. Eligibility: Cost-share and tax credit are limited to solving the pollution problems where the livestock 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.

2. Practice Development: To develop a hardened pad for feeding of livestock, state cost-share and tax credit are authorized for:
 - i. Grading and shaping, geotextile fabric, gravel, concrete or bituminous concrete. If concrete is utilized, it shall be curbed.
 - ii. The hardened pad will be cost shared based upon the existing herd size and planned feeding method, not to exceed 75 SF per animal unit. Cost-share funds cannot be used to accommodate expansion of the herd size.
 - iii. All other means of reducing the environmental impact of the feeding operation must be explored and rejected, due to economic inefficiency or lack of space for relocation, before cost-share or tax credit can be approved.
 - iv. Before cost-share or tax credit can be approved all other means of reducing the environmental impacts of animal waste from the existing operation must be considered. Lack of space for relocation, economic inefficiency or other

factors may be considered. A “Risk Assessment for Water Quality Impairment from heavy Use Areas/Animal Concentrated Areas” must be completed and a minimum score of 120 is required in order to be eligible. Refer to the “Needs Determination Worksheet” for more guidance on practice development and eligibility.

- v. A nutrient management plan is required to properly manage the manure collected from around the feeding pad that addresses all enriched runoff and manure accumulations associated with the feeding pad.
3. Cost-share and tax credit is not authorized for:
 - i. Facilities that do not meet local or state regulations.
 - ii. Installation primarily for the operator's convenience.
 - iii. Operations that are planned or under construction.
 4. All appropriate local and state permits must be obtained before beginning construction.
 5. Before cost-share or tax credits are provided, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field that this practice will be implemented on and all associated livestock production acreage. 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. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).
 6. This practice is subject to NRCS standards 342 Critical Area Planting, 362 Diversion, and 561 Heavy Use Protection.
 7. 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 § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00. 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

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.

Created April 2020

Name of Practice: LOAFING LOT MANAGEMENT SYSTEM WITH MANURE
MANAGEMENT (EXCLUDING BOVINE DAIRY)
DCR Specifications for No. WP-4LL

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

A planned system designed to prevent those areas exposed to heavy livestock traffic from experiencing excessive manure and soil losses due to the destruction of ground cover and to manage liquid and/or solid waste from areas where livestock are concentrated. The intent of this practice is to improve water quality by preventing manure and sediment runoff from entering watercourses and sensitive karst areas and capturing a portion of the manure as a resource for other uses by storing and spreading waste at the proper time, rate, and location.

A sacrifice lot or covered facility that includes a feeding area as well as a bedded or manure pack area with a manure storage area if needed. A minimum of three associated grassed lots are required. All streams must be excluded. Streams associated with the grassed lots require a 35' minimum buffer.

B. Policies and Specifications

1. Eligibility: Cost-share and tax credit are limited to solving the pollution problems where the livestock 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.
2. Practice Development
 - i. Before cost-share or tax credit can be approved all other means of reducing the environmental impacts of animal waste from the existing operation must be considered. Lack of space for relocation, economic inefficiency or other factors may be considered. A "Risk Assessment for Water Quality Impairment from heavy Use Areas/Animal Concentrated Areas" must be completed and a minimum score of 120 is required in order to be eligible.
 - ii. 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.

- iii. A minimum of three grassed loafing lots are required and 60% cover on these lots must be maintained at all times.
- iv. Determination of the storage capacity of animal waste facilities shall be reviewed and approved by the DCR agricultural BMP engineer. Storage capacity calculations completed by NRCS may be utilized.
- v. Hardened walkway(s) may be installed to facilitate herd movement from the barn to the loafing lots. The walkway must be designed and installed in accordance with NRCS Standard 575, Trails and Walkways.
- vi. A sacrifice area is required unless adequate housing facilities are available (e.g. free stall barns).
 - a. Uncovered sacrifice areas must be scraped periodically and shall not exceed 600 square feet per animal unit (1000-lb. equivalent). Maximum slope shall not exceed 8%. Divert surface water away from the sacrifice area.
 - Provide filter strip per NRCS standard 393 to filter runoff from the sacrifice area.
 - Manure collected from the sacrifice area must be properly stored in an adequately sized structure. Existing storage structures shall be considered when sizing the manure storage facility.
 - b. Covered sacrifice areas shall not exceed 75 square feet per animal unit (1000-lb. equivalent).
- vii. Manure may be managed as:
 - a. Bedded Pack:
 - The pack area must be maintained to ensure dry conditions for livestock. Dry material, tillage, ventilation and/or aeration may be needed to maintain proper bedding conditions.
 - Does not require a separate manure storage, but it must have walls a minimum of 4' high to contain bedded pack.
 - Manure storage for bedded pack area is not authorized, but storage for manure captured from feed lanes is an eligible component.
 - b. Manure Pack:
 - The pack area shall be maintained to prevent any materials from migrating from the structure limits as to impact water quality. Regular scraping and/or the addition of bedding is required to stabilize the manure.
 - A separate storage component is required to store up to 6 months of manure production.
 - c. When a feed lane is utilized, a dry stack manure storage area is authorized, sized based upon livestock time at feed bunks, up to six (6) months storage of existing need.

3. Cost-share and tax credit is authorized for:
 - i. Roofs over the feeding area, manure storage area and roof runoff system.
 - ii. A hardened sacrifice area.
 - iii. Fencing, walkways, and water system components to provide functional lots.
 - iv. For individual components of animal waste systems, only if the DCR Ag BMP Engineer determines that the component stands alone as a measure that will significantly improve water quality.
 - v. Water system components to provide a functional structure.
 - vi. Seeding of permanent vegetative cover on acreage associated with this practice.
 - vii. Filter strips in accordance with NRCS Standard 393.

4. Cost-share and tax credit is not authorized for:
 - i. Storage of manure generated outside of this facility.
 - ii. Operations with sufficient grazing acreage.

5. Compliance checks for both the covered and uncovered sacrifice lot and the grassed loafing lots are a required component of this practice and shall be performed in accordance with the schedule below:
 - i. Year 1 – All facilities and associated fields shall be checked to ensure compliance with this specification.
 - ii. If compliance is confirmed in Year 1, the facility shall be checked again in Years 4, 8 and 12.
 - iii. If the facility is found to be non-compliant, the identified Practice Failures procedure in the manual shall be followed. Once found to be in compliance, the facility shall be checked one year after compliance is achieved. If compliance is confirmed, checks shall resume in Years 4, 8 and 12.

6. The sizing calculations of the practice shall be reviewed and approved by the DCR Ag BMP Engineer (except for practices previously sized and engineered by NRCS) and shall be coordinated with the nutrient management plan so that adequate storage capacity is installed.

7. All appropriate local and state permits must be obtained before beginning construction.

8. Before cost-share or tax credits are provided, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field that this practice will be implemented on and all associated livestock production acreage. 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. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

9. This practice is subject to NRCS standards 313 Waste Storage Structure, 342 Critical Area Planting, 362 Diversion, 367 Roofs and Covers, 382 Fence, 393 Filter Strip, 412 Grassed Waterway, 516 Livestock Pipeline, 533 Pumping Plant, 558 Roof Run Off Management, 561 Heavy Use Protection, 575 Trails and Walkways, 578 Stream Crossing, 614 Watering Facility, 620 Underground Outlet, 633 Waste Recycling, 634 Waste Transfer, 642 Water Well.
10. 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. Rates

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. The maximum state payment for this practice is not to exceed \$100,000 per landowner per year.
2. As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.
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

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.

Created April 2020

Name of Practice: SEASONAL FEEDING FACILITY WITH ATTACHED MANURE
STORAGE
DCR Specifications for No. WP-4SF

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

A planned system designed to prevent those areas exposed to heavy livestock traffic from experiencing excessive manure and soil losses due to the destruction of ground cover and to manage liquid and/or solid waste from areas where livestock are concentrated. The intent of this practice is to improve water quality by preventing manure and sediment runoff from entering watercourses and sensitive karst areas and capturing a portion of the manure as a resource for other uses by storing and spreading waste at the proper time, rate, and location.

A covered concrete facility that includes a feeding area as well as a manure storage area that allows for the capture and storage of manure during inclement weather. An approved rotational grazing plan and stream exclusion are required.

B. Policies and Specifications

1. Eligibility: Cost-share and tax credit are limited to solving the pollution problems where the livestock 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.
2. Practice Development
 - i. Before cost-share or tax credit can be approved all other means of reducing the environmental impacts of animal waste from the existing operation must be considered. Lack of space for relocation, economic inefficiency or other factors may be considered. A "Risk Assessment for Water Quality Impairment from heavy Use Areas/Animal Concentrated Areas" must be completed and a minimum score of 120 is required in order to be eligible.
 - ii. 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.

- iii. Determination of the storage capacity of animal waste facilities shall be reviewed and approved by the DCR agricultural BMP engineer except for practices previously sized and engineered by NRCS.
 - iv. Feeding area shall be sized on the current herd size and planned feeding method, not to exceed 75 SF per animal unit.
 3. Cost-share and tax credit is authorized for:
 - i. Feeding area.
 - ii. A dry stack manure storage area sized for up to six (6) months of manure production.
 - iii. Roofs over the feeding area and manure storage area and roof runoff system.
 - iv. For individual components of animal waste systems, only if the DCR Ag BMP Engineer determines that the component stands alone as a measure that will significantly improve water quality.
 - v. Fencing and walkways.
 4. Cost-share and tax credit is not authorized for:
 - i. Storage of manure generated outside of this facility.
 - ii. Troughs within the structure.
 - iii. For animal waste facilities that do not meet local or state regulations.
5. The sizing calculations of the practice shall be reviewed and approved by the DCR Ag BMP Engineer (except for practices previously sized and engineered by NRCS) and shall be coordinated with the nutrient management plan so that adequate storage capacity is installed.
6. All appropriate local and state permits must be obtained before beginning construction.
7. Before cost-share or tax credits are provided, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field that this practice will be implemented on and all associated livestock production acreage. 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. 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 Structure, 342 Critical Area Planting, 362 Diversion, 367 Roofs and Covers, 382 Fence, 412 Grassed Waterway, 558 Roof Run Off Management, 561 Heavy Use Protection, 575 Trails and Walkways, 620 Underground Outlet, 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. Policies and Specifications

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. The maximum state payment for this practice is not to exceed \$100,000 per landowner per year.
2. As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00. 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.

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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.

Created April 2020