Recommended revisions to the VACS BMP Manual for FY2024 – Individual BMPs

Individual BMPs have been revised to reflect the recommendations discussed in the AgBMP TAC subcommittee tables or recommendations from the Department.

Additional Department recommendations for individual specifications:

- After discussions with Districts that participated in the *Whole Farm Approach Pilot Program* this year, the following revisions are being recommended:
    - Clarification that the practices (WFA-CC and WFA-NM) are not eligible for tax credits. There was language copied from individual specifications that referenced tax credits; however, it is stated in the "General Policies and Specifications" section under "Rates" that the practices are ineligible or tax credits.
    - Language has been added to both the WFA-CC and the WFA-NM related to unimproved pastures being eligible to participate in the WFA. *Unimproved pasture acres (pasture acres that do not receive nutrient management or nutrient applications) may be excluded from the tract within the nutrient management plan.*
    - Payment for PSNT sample collection has been included in the WFA-NM specification.

- The Department recommends that the *Dry Manure Storage Structure Agreement* be removed from the WP-4 specification and instead be included in the Glossary as an additional form. The requirement to sign the *Dry Manure Storage Structure Agreement*, or similar District agreement, remains and is included in several other specifications (WP-4B; WP-4LC; WP-4LL; WP-4SF), although the *Agreement* is not currently included with all specifications. References to the *Agreement* in several of the specifications were outdated; maintaining one version of the Agreement ensures consistency within the Program.

Continuing Conservation Initiative
Name of Practice: FORESTED RIPARIAN BUFFER MAINTENANCE PRACTICE
DCR Specifications for No. CCI-FRB-1

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Continuous Conservation Initiative Forested Riparian Buffer best management practice, which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

A riparian forest buffer is a permanent area of trees, usually accompanied by shrubs and other vegetation, that is adjacent to a body of water and is managed to maintain the integrity of stream channels and shorelines. A buffer also reduces the impact of upland sources of pollution by trapping, filtering and converting sediments, nutrients and other chemicals; to supply food, cover and thermal protection to fish and other wildlife (from Virginia's Riparian Buffer Implementation Plan; July 1998).

The purpose of this practice is to offer an incentive that will maintain land use change that has occurred within the last 15 years and maintain a riparian forest buffer to provide streambank protection and to control soil erosion, sedimentation, and nutrient loss from surface runoff to improve water quality. This practice will also maintain riparian forest areas to benefit wildlife and aquatic environments.

B. Policies and Specifications

1. This practice will maintain buffer areas as a forested zone along streams for protection and filtering of agricultural non-point source pollution from up gradient agricultural production land.

2. This practice must not be in lifespan from any other conservation program.

3. The minimum Chesapeake Bay Preservation Act or other local ordinance(s) required buffer is not to receive cost-share.

4. The acceptance of prior cost-share assistance for the establishment of the buffer (site preparation, seedlings, labor, etc.) does not render the site ineligible for receiving this payment, so long as the lifespan of the establishment practice has expired.

5. Any forest management activities shall be pursuant to a Department of Forestry Cost Share Plan, at a minimum. The practice shall be maintained for a minimum of five years following the calendar year of implementation.

6. This practice is designed to maintain riparian forest buffers that are adjacent to and buffer cropland and pastureland that have been in production three of the last five years. Buffer areas that are coming out of an agricultural BMP practice lifespan are eligible. Forestland that has been replanted following timber harvest is not eligible.
7. Flash grazing (allowing livestock to graze the excluded riparian area) is not allowed as a management alternative during the lifespan of this practice. No mowing is allowed in the buffer area.
8. Strip Width - Minimum width of the wooded buffer will be the same as the NRCS Technical Guide as follows: A minimum width of 35 feet from the edge of the stream bank, ~~or up to one-third of the flood plain,~~ not to exceed 100 feet is required.
9. This practice is subject to the specifications as outlined in NRCS 391 Riparian Forest Buffer Standard.
10. All practice components implemented must be maintained for a minimum of five years following the calendar year of installation. The lifespan begins on Jan. 1 of the calendar year following the calendar year of certification of completion. By accepting a cost-share payment 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.

C. Rate(s)

The state cost share rate is a single payment of $200.00 per acre paid up front for the maintenance and protection of a forested riparian buffer for the five year lifespan.

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 2020~~April 2023

Continuing Conservation Initiative
Name of Practice: HERBACEOUS RIPARIAN BUFFER – MAINTENANCE PRACTICE
DCR Specification No. CCI-HRB-1

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Continuous Conservation Initiative Herbaceous Riparian Buffer best management practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

Herbaceous riparian buffers are communities of grass-like plants and forbs located along the banks of water courses, that filter runoff, anchor soil particles, and protect soils from scour and erosion. Herbaceous riparian buffers trap eroded soil, help keep sediment out of streams, and improve water quality by filtering out fertilizers, pesticides, and microorganisms that otherwise might reach waterways.

Incentive payments will be provided to maintain herbaceous riparian buffers that are located adjacent to streams and water bodies.

B. Policies and Specifications

1. The herbaceous riparian buffer must be maintained in a manner to filter sheet flow, rather than concentrated flow, and that will not degrade the quality of the environment or interfere with the proper functioning of the buffer.

2. The practice must not be in lifespan from any other conservation program.

3. The minimum Chesapeake Bay Preservation Act or other local ordinance(s) required buffer is not to receive cost share.

4. Hay land is not considered cropland for implementing this practice.

5. Herbaceous riparian buffers planned for sediment and related pollutant control must be a minimum of 35 feet wide from the edge of the stream bank, ~~or up to one-third of the flood plain~~ not to exceed 100 feet.

6. Flash grazing (allowing livestock to graze the excluded riparian area) is not allowed as a management alternative during the lifespan of this practice. Mowing of the buffer area shall not occur between April 1 and August 15 to protect wildlife.

7. The buffer area cannot be used as a roadway or equipment turning area.

8. Control of non-native invasive species is allowed; avoid damaging buffer area with herbicides or other controls.

9. All practice components implemented must be maintained for a minimum of five years following the calendar year of installation. The lifespan begins on Jan. 1 of the calendar year following the calendar year of certification of completion. By accepting a cost-share payment 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.

C. Rate(s)

The state cost share rate is a single payment up front of $50.00 per acre of buffer for 35' to 100' wide buffers.

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 2020~~April 2023

Name of Practice: AFFORESTATION OF CROP, HAY AND PASTURE LAND
DCR Specifications for No. FR-1

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's afforestation of crop, hay and pasture land best management practice, which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice will plant trees (hardwoods and/or conifers) on land currently used as crop, hay or pastureland in order to make a permanent land use conversion to forest.

The purpose of this practice is to offer cost-share for tree establishment, plus a per acre payment, that will change land use to one that will more effectively control the soil and nutrient loss from surface runoff, thus improving water quality. This practice will also provide forest areas for the benefit of wildlife.

B. Policies and Specifications

1. A Virginia Department of Forestry (DOF) forester will develop and /or approve a management plan (Form 7.8 or other plan), specifying the appropriate tree species before work is started.

2. Crop, hay and pastureland must have been in production for at least two out of the past five years. Forestland being replanted following timber harvest is not eligible.

3. Gullied or eroded areas shall be stabilized with a temporary or suitably durable grass cover until trees are established. Pure stands of fescue are discouraged due to tree establishment competition.

4. Grazing of livestock is not permitted for the lifespan of the practice.

5. In any subsequent program year within the lifespan of the practice, a single replanting due to mortality losses from circumstances outside the control of the participant may receive cost-share on only the eligible component costs necessary to replant the site for the same acreage. In order to be considered for cost-share on replanting, the participant must notify District staff within six months of a suspected failure. District staff will review conditions and determine eligibility for replanting in consultation with Department of Forestry. See Practice Failure section of Guidelines for further clarification. Other sources of funding may be used for replanting.

6. Cost-share payments may not be authorized for land enrolled under the FSA Conservation Reserve Enhancement Program (CREP).

7. Cost-share payments are not authorized for Christmas tree production.

8. Filter efficiency may also be improved by the addition of low growing or ground cover vegetation. Herbaceous plantings/shrubs are encouraged to provide soil stabilization and to provide long-term benefits for wildlife. The Department of Forestry will recommend appropriate species.

9. This practice is subject to the density determined by a DOF forester in accordance with DOF Form 7.8.

10. All practice components implemented must be maintained for a minimum of 10 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. Control of noxious and invasive plants to ensure the survival of the stand is the responsibility of the participant. 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 rate is $100 per acre for a 10-year lifespan, or $150 per acre for a 15-year lifespan, and 75% of the ~~eligible approved component costs~~approved estimated cost or eligible actual cost, whichever is less.

2. Eligible component cost receiving 75% cost-share are as follows:
   i. Site preparation – mechanical and/or chemical
   ii. Labor
   iii. Seedlings
   iv. Seed for ground cover (Fescue is discouraged)
   v. Herbaceous plantings/shrubs
   vi. Protective fencing

3. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

4. 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.

Name of Practice: WOODLAND BUFFER FILTER AREA
DCR Specifications for No. FR-3

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Woodland Buffer Filter Area best management practice, which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice creates a woodland buffer filter area to protect waterways or water bodies by reducing erosion, sedimentation, and the pollution of water from agricultural non-point sources.

The purpose of this practice is to offer cost-share for tree establishment plus a per acre payment that will change land use and establish a forest buffer to provide stream bank protection and to control soil erosion, sedimentation, and nutrient loss from surface runoff to improve water quality. This practice will also provide forest areas for the benefit of wildlife and aquatic environments.

B. Policies and Specifications

1. A Virginia Department of Forestry (DOF) forester will develop and/or approve a management plan (Form 7.8 or other plan), specifying the appropriate tree species before work is started.

2. Crop, hay and pastureland must have been in production for at least two out of the past five years. Forestland being replanted following timber harvest is not eligible.

3. Gullied or eroded areas shall be stabilized with a temporary or suitably durable grass cover until trees are established. Pure stands of fescue are discouraged due to tree establishment competition.

4. Grazing of livestock in the buffer is not permitted for the lifespan of the practice.

5. In any subsequent program year within the practice lifespan, a single replanting due to mortality losses from circumstances outside the control of the participant may receive cost-share on only the eligible component costs necessary to replant the site for the same acreage. In order to be considered for cost-share on replanting, the participant must notify District staff within six months of a suspected failure. District staff will review conditions and determine eligibility for replanting in consultation with Department of Forestry. See Practice Failure section of Guidelines for further clarification. Other sources of funding may be used for replanting.

6. Cost-share payments may not be authorized for land enrolled under the FSA Conservation Reserve Enhancement Program (CREP).

7. Cost-share payments are not authorized for Christmas tree production.

8. Filter efficiency may also be improved by the addition of low growing or ground cover vegetation. Herbaceous plantings/shrubs are encouraged to provide soil stabilization and provide long-term benefits for wildlife. Department of Forestry will recommend appropriate species.

9. This practice is subject to the density determined by a DOF forester in accordance with DOF Form 7.8.

10. The width of the wooded buffer will be a minimum of 35 feet from the edge of the stream bank. The entire flood plain is eligible for planting, not to exceed 100 feet.

11. All practice components implemented must be maintained for either 10 or 15 years, depending on the lifespan for which the participant signs up, as outlined in C.1. 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. Control of noxious and invasive plants to ensure the survival of the stand is the responsibility of the participant. 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 rate is 95% of the ~~eligible approved component costs~~approved estimated cost or eligible actual cost, whichever is less, plus an incentive:
   i. For conifer buffers, $100.00 per acre for a 10 year lifespan, OR $150 per acre for a 15 year lifespan.
   ii. For hardwood buffers, $100 per acre for a 10 year lifespan, OR $250 per acre for a 15 year lifespan.

2. Eligible component costs receiving 95% cost-share are as follows:
   i. Site preparation – mechanical and/or chemical
   ii. Labor
   iii. Seedlings
   iv. Seed for ground cover (Fescue is discouraged)
   v. Herbaceous plantings/shrubs
   vi. Protective Fencing

3. Acreage planted into forested buffer is eligible for a buffer payment at the rate of $80 per acre per year. The buffer payment rates shall be provided for a maximum of 15 acres:

Lifespan	Buffer payment rate	Buffer payment cap
15 years	$80 per acre per year	$18,000 per contract
10 years	$80 per acre per year	$12,000 per contract

NOTE: The buffer payment cap is the maximum a participant can be paid per tract even when multiple practices with buffer payments are approved in a given program year (for example, but not limited to, FR-3, SL-6F, SL-6W, WP-2W and WQ-1).

4. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

5. 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.

Name of Practice: WOODLAND EROSION STABILIZATION
DCR Specifications for No. FR-4

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

A. Description and Purpose

This practice will promote land shaping and planting of permanent vegetation on critically eroding areas on forest harvesting sites.

The purpose of this practice is to improve water quality by stabilizing soil, thus reducing the movement of sediment and nutrients from the site.

B. Policies and Specifications

1. State cost-share and tax credit are authorized for measures needed to stabilize a source of sediment, such as grading, shaping, and filling, the establishment (including soil amendments such as fertilizer and lime) of grass and legumes, vehicle barriers and fencing needed to protect the established area, and other similar measures that are practical for the solution of the problem.

2. Cost-share and tax credit are also authorized for associated structural measures, such as diversion, water bars, etc., only if essentially needed to protect vegetated areas from runoff related damages.

3. Consideration should be given to wildlife and enhancing the appearance of the area when establishing the protective measures.

4. Soil loss rates must be computed for all applications for use in establishing priority considerations.

5. This practice is not intended to correct problems currently being created by an active logging operation which is not applying the required BMPs. Sites are eligible for cost-share assistance one year after timber product harvesting activities are completed.

6. Grazing livestock on established areas is prohibited.

7. Areas established should be protected from vehicle traffic. This practice is not intended for roadways that receive infrequent but regular use. All stabilized areas must have some type of vehicle barrier (cable, chain, posts, etc.).

8. This practice is subject to NRCS Standard No. 342 Critical Area Planting, 362 Diversion, and 382 Fence or Virginia's Forestry Best Management Practices for Water Quality, Technical Manual.

9. All practice components implemented must be maintained for a minimum of five 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 when combined with any other cost-share program will not exceed 75% of the ~~total eligible costs~~approved estimated cost or eligible actual cost, whichever is less.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

Name of Practice: SIDEDRESS APPLICATION OF NITROGEN ON CORN AT THE 6-LEAF STAGE OR AT LEAST 15" IN HEIGHT AND/OR GRAIN SORGHUM AT THE 5-LEAF STAGE OR AT LEAST 12" IN HEIGHT
DCR Specification for No. NM-3C

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

A. Description and Purpose

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

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

B. Policies and Specifications

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

2. The total number of corn acres specified by the nutrient management plan to receive manure will determine the maximum acres to qualify for cost-share payment for the PSNT. Cost-share payment for PSNT laboratory analysis will be made only for those PSNT tests that are submitted for laboratory analysis.
   i. The PSNT must be done when corn is approximately 12 inches in height.
   ii. PSNT samples should represent a minimum of 7 acres on average and a maximum of 20 acres on average.

3. Checks to ensure compliance with this practice may be conducted by the District or appropriate agency personnel and failure to comply may result in forfeiture of cost-share funds.

4. The producer must sign up prior to April 1 and provide a written verification of contracted sidedress application cost (including the PSNT results) to the District within two weeks of the sample analysis.

5. Application of any sidedress nitrogen must be made after the corn is at the 6-leaf stage or at least 15 inches in height and/or grain sorghum is at the 5-leaf stage or at least 12 inches in height.

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

~~6.~~7. Total nitrogen to be applied to the ~~cornfield~~ corn and/or grain sorghum field must be consistent with the nutrient management plan or determined by using a PSNT (as applicable for corn) consistent with procedures contained in the Nutrient Management Training and Certification Regulations (4VAC50-85 et. Seq).

~~7.~~8. Acres receiving a zero application rate based on a PSNT result also qualify for a payment rate of $6 per acre. This is for manure only; biosolids are not eligible for payment.

~~8.~~9. This is an annual practice.

C. Rate(s)

1. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

2. For participants who are not receiving payment for a sidedress application of nutrients to corn and/or grain sorghum from any other source on the same acreage, a state cost share payment rate of 75% of the application charge, up to a maximum amount of $6.00 per acre for the sidedress application, shall be paid based upon the contracted sidedress application acreage. Producers applying their own sidedress applications will receive $6.00 per acre applied.

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

D. Technical Responsibility

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

Name of Practice: WOODLAND EROSION STABILIZATION
DCR Specifications for No. FR-4

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

A. Description and Purpose

This practice will promote land shaping and planting of permanent vegetation on critically eroding areas on forest harvesting sites.

The purpose of this practice is to improve water quality by stabilizing soil, thus reducing the movement of sediment and nutrients from the site.

B. Policies and Specifications

1. State cost-share and tax credit are authorized for measures needed to stabilize a source of sediment, such as grading, shaping, and filling, the establishment (including soil amendments such as fertilizer and lime) of grass and legumes, vehicle barriers and fencing needed to protect the established area, and other similar measures that are practical for the solution of the problem.

2. Cost-share and tax credit are also authorized for associated structural measures, such as diversion, water bars, etc., only if essentially needed to protect vegetated areas from runoff related damages.

3. Consideration should be given to wildlife and enhancing the appearance of the area when establishing the protective measures.

4. Soil loss rates must be computed for all applications for use in establishing priority considerations.

5. This practice is not intended to correct problems currently being created by an active logging operation which is not applying the required BMPs. Sites are eligible for cost-share assistance one year after timber product harvesting activities are completed.

6. Grazing livestock on established areas is prohibited.

7. Areas established should be protected from vehicle traffic. This practice is not intended for roadways that receive infrequent but regular use. All stabilized areas must have some type of vehicle barrier (cable, chain, posts, etc.).

8. This practice is subject to NRCS Standard No. 342 Critical Area Planting, 362 Diversion, and 382 Fence or Virginia's Forestry Best Management Practices for Water Quality, Technical Manual.

9. All practice components implemented must be maintained for a minimum of five 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 when combined with any other cost-share program will not exceed 75% of the ~~total eligible costs~~approved estimated cost or eligible actual cost, whichever is less.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

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

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Precision Nutrient Management on Cropland – Nitrogen Application best management practice which are applicable to all contracts entered into with respect to that practice.

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 production systems (see Glossary for definition).

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 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.

2. 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.

3. 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 samples may be used by the participant to support this practice.
   ii. Variable rate nitrogen applications or zone application of nitrogen based upon

the soil test results of (subfield) sampling on row crops, specialty crops or small grains. Other macro-micro nutrients may be applied concurrently.

iii. Three or more split applications of nitrogen on small grains.

iv. Two or more split sidedress applications of nitrogen on corn or cotton.

v. Two or more applications of nitrogen on highly managed hayland production systems (other than alfalfa, which is not eligible).

vi. Injection at sidedress.

4. 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.

5. 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.

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

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

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

~~8.~~9. Where this practice is applied, there must be a note in the narrative or elsewhere in the nutrient management plan indicating that the soils were sampled in an appropriate manner.

~~9.~~10. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

~~10.~~11. Acres receiving a zero application rate based on a PSNT result also qualify for a payment rate of $8 per acre.

~~11.~~12. 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.

~~12.~~13. Participants shall provide written verification of the recommendation and the resulting application(s) (e.g. results of laboratory test, a work order or bill, as-applied application map of field) to the District within 45 days of the final nitrogen application.

~~13.~~14. The participant **must** sign up for this practice before April 1st of each year that the practice will be utilized.

~~14.~~15. Fields that have received applications of biosolids within the previous 24 months are not eligible.

~~15.~~16. 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, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices, as discussed in the Tax Credit Guidelines of the VACS Manual.

   For participants who are not receiving payment for precision application of 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 $12.00 per sample, up to one PSNT per field. No per sample cost-share is available for zone soil fertility testing.

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.

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 Cover Crop for Managing Liquid or Semi-Solid Manure 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 on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.), and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified nutrient management planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

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.

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. 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.

16. 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

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

C. Rate(s)

1. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost share payment rate of $~~25~~ 35 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.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

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 2021

Name of Practice: VEGETATIVE STABILIZATION OF MARSH FRINGE AREAS
DCR Specifications for SE-1

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Vegetative Stabilization for Marsh Fringe Areas practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice provides a protection method for eroding tidal shoreline by establishing a fringe marsh buffer area for shoreline stabilization.

The purpose of this practice is to offer cost-share assistance to establish a natural and environmentally acceptable fringe buffer of selected marsh grasses to provide toe stabilization on tidal waters.

B. Policies and Specifications

1. Cost-share and tax credit are authorized for:
   i. The cost of recommended marsh grass plant species used for shoreline protection (purchase).
   ii. The cost of transplanting existing recommended marsh grass plant species to a site covered under cost-share application. Donor site must be approved in planting plan by DCR.
   iii. Labor, fertilizer, and on-site preparation (other than structural work) needed to establish plants.

2. Cost-share is not authorized for general maintenance such as fertilizing, debris removal, or other necessary practices required to maintain an existing marsh.

3. All appropriate local, state, and federal permits must be obtained before cost- share is authorized.

4. All sites receiving cost-share assistance must be on tidal areas and have a written report prepared by DCR.

5. All marsh grass species must be planted/transplanted following the guidelines (spacing, depth, etc.) provided by DCR.

6. All maintenance operations as outlined and required in the written planting plan will be at the applicant's expense.

7. All practice components implemented must be maintained for a minimum of five 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 cost-share rate will be 50% of the approved estimated cost or eligible actual cost, whichever is less, for all necessary components needed to establish the marsh fringe. Cost-share is not eligible on sites receiving any other cost-share for this purpose. This is a one-time incentive payment with no designated life span and not eligible for reapplication if damaged and destroyed.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

Name of Practice: SHORELINE STABILIZATION
DCR Specification for No. SE-2

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's agricultural Shoreline Stabilization practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

Structures and/or vegetative measures will be designed and implemented to stabilize shoreline areas of tidally-influenced streams and rivers, estuaries, bays, and the ocean.

The purpose of this practice is to improve water quality by stabilizing shoreline areas that are being eroded because of waves, boat wake, or overland flow.

B. Policies and Specifications

1. Cost-share and tax credit are authorized:
   i. For land shaping to achieve a stable slope.
   ii. For the construction of riprap revetments, sills (riprap or oyster shell bags), groins, break-waters, and gabion systems.
   iii. For the establishment of vegetation.
   iv. For engineering and design assistance.
   v. For shorelines bordering only agricultural and forestal lands. Other lands such as recreational, urban and built-up or residential lots are not eligible.
   vi. For tidally-influenced waters only.

2. To qualify for cost-share and/or tax credit, all designs must be reviewed by DCR's Shoreline Erosion Advisory Service (SEAS) and meet the intent of SEAS program guidelines.

3. All appropriate local, state, and federal permits must be obtained before cost- share or tax credit is authorized.

4. This is a one-time incentive payment and not eligible for reapplication on the same site. Lifespan requirements can be waived if damaged by acts of nature.

5. Livestock must be excluded from the project area.

6. This practice is subject to the requirements of applicable NRCS Standards including 342 Critical Area Planting, 580 Streambank and Shoreline Protection, 382 Fence, and 612 Tree/Shrub Establishment.

7. All practice components implemented must be maintained for a minimum of 15 years following the calendar year of certification of completion. The lifespan begins on Jan. 1 of the calendar year following the year of implementation. 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 or SEAS 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 rate, alone or if combined with any other cost-share program, will not exceed 75% of the ~~total eligible cost~~approved estimated cost or eligible actual cost, whichever is less, ~~including~~ of all necessary components needed to implement shoreline stabilization.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines.

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.

Name of Practice: LONG TERM VEGETATIVE COVER ON CROPLAND
DCR Specifications for No. SL-1

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Long Term Vegetative Cover on Cropland best management practice which is applicable to all contracts, entered into with respect to that practice.

A. Description and Purpose

Grass and/or legume vegetation will be established on cropland with existing cover of less than 60% converting it to pasture or hayland to reduce soil erosion and enhance water quality.

State cost-share is intended to promote conversion of cropland to fields with a healthy, well-maintained sod.

B. Policies and Specifications

1. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented. The NMP can be either a one-year or three-year plan that is updated to continuously cover the acreage or a five-year grass and hayland plan. This is to ensure proper nutrient application for a successful practice. This plan must be prepared and signed by a Virginia Certified Nutrient Management Planner and on file with the SWCD before a cost-share payment can be made.

2. Soil loss rates must be computed for all applications for use in establishing priority considerations and reflect at minimum a three year cropping history.

3. This practice is not intended to be used to reseed or improve hay or pastureland.

4. Pastures and haylands that are planted under this practice will be grazed or harvested and maintained in accordance with NRCS Standard 512 for the lifespan. Cost-share will be refunded if the cover is destroyed during the lifespan. This practice is subject to verifications by the District throughout the life of the practice and failure to comply may result in the forfeiture of the funds.

5. State cost-share and tax credit will be provided only one time per field, while that field is under the same ownership.

6. State cost-share or tax credit will not be approved for fields with more than 60% cover, with the exception of crop fields that have a row crop or small grain residue, in which case cover in excess of 60% is permissible.

7. State cost-share is allowable only for BMP installations that are not receiving cost-share from other sources.

8. Cost-share and tax credit are not authorized for obstruction removal, fencing, or watering facilities.

9. Fertility - Lime and fertilizer can be applied for maintenance purposes but must be done in accordance with current soil test recommendations (at Virginia Cooperative Extension maintenance rates for the appropriate sod species). Maintenance applications are the obligation of the participant. If biosolids or manure is used, the material must be properly sampled and tested for nutrient content and given credit in fertilizer recommendations.

10. Cost-share and tax credit are not authorized for the planting of pure stands of alfalfa.

11. This practice is subject to NRCS Standard 512 Pasture and Hay Planting.

12. All practice components implemented must be maintained for a minimum of five years and a maximum of 15 years following the calendar year of certification of completion. 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 rate is 75% of the ~~eligible component costs~~approved estimated cost or eligible actual cost, whichever is less, in addition to a one-time incentive payment of $25 per acre for a five-year contract, $100 per acre for a 10-year contract, or $150 per acre for a 15-year contract.

2. Eligible components are as follows:
   i. Eligible seed
   ii. Minerals (fertilizer, lime, manure); if manure (e.g. poultry litter) is purchased from off farm, a bill and nutrient analysis must be presented.
   iii. Herbicides
   iv. Pesticides
   v. Nutrient management planning
   vi. Labor

3. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed

in the Tax Credit Guidelines of the VACS Manual.

4. 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.

Name of Practice: STRIPCROPPING SYSTEMS
DCR Specifications for No. SL-3

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

A. Description and Purpose

This practice will promote growing crops in a systematic arrangement of strips or bands across the general land slope to reduce water erosion and nutrient loss.

The purpose of this practice is to improve water quality by reducing the movement of sediment and nutrients from cultivated crop fields where other cultural and management practices alone are not adequate to reduce losses to tolerable limits.

B. Policies and Specifications

1. Cost-share and tax credit are authorized on a per acre basis to cover a portion of the cost and serve as an incentive to establish a stripcropping system. In addition, a percentage rate has been established for the extra component in those systems that require obstruction removal such as fences, stonewalls, hedgerows, or gullies.

2. Cost-share and tax credit are authorized on a percentage basis for subsurface drains needed to eliminate spot seepage on 8% or greater slopes if the seepage makes cross-slope tillage impractical. Subsurface drains may be the sole component if spot seepage develops and makes cross-slope tillage impractical in existing stripcropping systems.

3. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

4. On acreage devoted to row crops, one of the following must apply:
   i. The crop stubble or residue must be left on the land during the winter.
   ii. A winter cover crop must be established.
   iii. Adequate protective tillage operations must be performed.

5. For contour stripcropping systems, tillage and planting operations must be performed as nearly as practical on the contour.

6. Cost-share and tax credit are not authorized for repeating any approved measures under this practice with the same person on the same acreage. This is a one-time incentive.

7. Soil loss rates must be computed for all applications for use in establishing priority considerations.

8. This practice is subject to NRCS Standard 585 Contour Strip Cropping.

9. All practice components implemented must be maintained for a minimum of five years following the calendar year of installation. The lifespan begins on Jan. 1 of the calendar year following the year of certification of completion. If subsurface drains are installed as the sole component as provided for in subparagraph B.2, the stripcropping system and subsurface drains shall be maintained for at least 10 years following the calendar year in which the drains were installed. 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. An incentive rate of $30 per acre has been established for all acreage within the field. A 75% add on cost-share rate has been established for components in those systems that require obstruction removal or subsurface drainage. Multiplying $30 per acre times the field acreage and adding 75% of the obstruction removal and/or subsurface drainage cost will compute the final amount. The state cost-share payment, alone or when combined with any other cost-share program, will not exceed 75% of the ~~total eligible costs~~approved estimated cost or eligible actual cost, whichever is less.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

Name of Practice: TERRACE SYSTEMS
DCR Specifications for No. SL-4

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

A. Description and Purpose

A terrace system is an earth embankment, channel, or a combination ridge and channel constructed across the slope designed to improve water quality by reducing slope and slope length to one that will slow the movement of sediment and nutrients from cropland.

B. Policies and Specifications

1. Cost-share and tax credit are authorized for:
   i. Terraces and the necessary leveling and filling to permit installation of an effective system.
   ii. Removal of stonewalls or hedgerows, if necessary, to permit installation of an effective system.
   iii. Materials and installation of underground pipe outlets and other mechanical outlets.
   iv. Necessary vegetative protective outlets or waterways.
   v. Converting the present system to a new system ONLY if the present system is not serving its intended conservation purpose. Cost-share may not be authorized to maintain an existing system or if the sole purpose is that of converting because of a change in cropping patterns or equipment used by the farmer.

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 on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia Certified Nutrient Management planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

3. A protective outlet or waterway that is installed solely as an outlet for the terrace system and serves no other conservation purpose should be cost-shared as a component of this practice. A protective outlet or waterway which, by itself solves a conservation problem, but also serves as an outlet for a terrace system, should be cost-shared under practice WP-1 or WP-3.

4. Soil loss rates must be computed for all applications for use in establishing priority considerations.

5. This practice is subject to NRCS Standard 600 Terrace.

6. All practice components implemented must be maintained for a minimum of 10 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 when combined with any other cost-share program, will not exceed 75% of the ~~total eligible costs~~approved estimated cost or eligible actual cost, whichever is less.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

Name of Practice: STREAM EXCLUSION IN FLOODPLAINS
DCR Specifications for No. SL-6F

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Stream Exclusion with Grazing Land Management best management practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practices in intended for use in areas prone to flooding where the producer wishes to retain usage of a portion of the floodplain and also protect exclusion fencing from destruction by flooding. This is 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.

Livestock watering systems and fencing improve water quality, control erosion and eliminate direct access to or a direct runoff input to all live streams or live water. **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.

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 impacts, soil fertility maintenance, access lanes, fencing needs, wetlands, minimum cover or grazing heights, carrying capacity of the land and rotational schedules.

4. A buffer of either (i) at least 35 feet or (ii) at least 50 feet must be established and physically delineated with readily visible posts, rods, signs, or some other identifiable method. This demarcation must remain in place for the lifespan of the practice and be repaired if damaged by flooding. The buffer area must be maintained as perennial species for the practice lifespan and cannot be fertilized. Grazing (including flash grazing) and haying are not allowed in the protected riparian area during the lifespan of this practice. If at any time during the practice lifespan the participant is found to be grazing (including flash grazing) their livestock in the buffer, as documented by photographic evidence, the District shall require the repayment of the entire buffer payment (i.e. non-prorated).
   i. When both sides of the stream are under the same ownership livestock must be excluded from both sides of the stream.

5. The area between the edge of the buffer and the exclusion fencing can be managed for hay and is not eligible to receive a buffer payment. Grazing (including flash grazing) of this area is not permitted. If at any time during the practice lifespan the participant is found to be grazing (including flash grazing) their livestock in this area, as documented by photographic evidence, the District shall require the repayment of the entire buffer payment (i.e. non-prorated).
   i. This area is eligible to participate in other VACS Programs for hayland.

6. The intent of this stream exclusion practice is for the fields adjacent to the exclusion fence (on the non-stream side) to remain in pasture for the length of the contract lifespan. If any part of this practice is damaged or destroyed during contract lifespan, the participant shall be subject to prorated repayment per the Practice Failures section of the VACS Guidelines. If the fields adjacent to the exclusion fence are converted to any other land use during contract lifespan, those fields will be ineligible for any VACS Program funding until the stream exclusion practice lifespan expires or the prorated repayment has been made.

7. 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 minimum fence setback from the stream must be either (i) at least 35 feet or (ii) at least 50 feet, 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.

8. 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 are allowed. 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;
        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;
        d. Capable of being moved in a timely manner from one location to another within the acreage for which the system is designed.

9. 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.

10. 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.

11. 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.

12. 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.

13. No state cost-share or 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.

14. Soil loss rates must be computed for all applications for use in establishing priorities for receiving cost-share funds.

15. All permits or approvals necessary are the responsibility of the applicant.

16. 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.

17. 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 estimated cost or eligible 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 15 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	$18,000 per contract
	10 years	95%	$80 per acre per year	$12,000 per contract
35'	15 years	90%	$80 per acre per year	$18,000 per contract
	10 years	85%	$80 per acre per year	$12,000 per contract

NOTE: The buffer payment cap is the maximum a participant can be paid per tract even when multiple practices are approved in a given program year (for example, but not limited to, FR-3, SL-6F, SL-6W, WP-2W and WQ-1).

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share 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.

~~Created April 2022~~Revised April 2023

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 which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This is 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.

Livestock watering systems and fencing improve water quality control erosion and eliminate direct access to or a direct runoff input to all live streams or live water. **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.

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 impacts, 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.
   i. When both sides of the stream are under the same ownership, livestock must be excluded from both sides of the stream.

5. The intent of this stream exclusion practice is for the fields adjacent to the buffer to remain in pasture for the length of the contract lifespan. If any part of this practice is damaged or destroyed during contract lifespan, the participant shall be subject to prorated repayment per the Practice Failures section of the VACS Guidelines. If the fields adjacent to the buffer are converted to any other land use during contract lifespan, those fields will be ineligible for any VACS Program funding until the stream exclusion practice lifespan expires or the prorated repayment has been made.

6. 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 minimum fence setback from the stream must be either (i) at least 10 feet or (ii) at least 25 feet, 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.

7. 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 are allowed. 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;
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;
d. Capable of being moved in a timely manner from one location to another within the acreage for which the system is designed.

8. 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.

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 or 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 estimated cost or eligible 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 10 years	75% 70%
10'	15 years 10 years	65% 60%

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines.

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.

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 which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This is 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.

Livestock watering systems and fencing improve water quality control erosion and eliminate direct access to or a direct runoff input to all live streams or live water. **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.

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 impacts, 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. If at any time during the practice lifespan the participant is found to be grazing (including flash grazing) their livestock in the buffer, as documented by photographic evidence, the District shall require the repayment of the entire buffer payment (i.e. non-prorated).
    i. When both sides of the stream are under the same ownership livestock must be excluded from both sides of the stream.

5. The intent of this stream exclusion practice is for the fields adjacent to the buffer to remain in pasture for the length of the contract lifespan. If any part of this practice is damaged or destroyed during contract lifespan, the participant shall be subject to prorated repayment per the Practice Failures section of the VACS Guidelines. If the fields adjacent to the buffer are converted to any other land use during contract lifespan, those fields will be ineligible for any VACS Program funding until the stream exclusion practice lifespan expires or the prorated repayment has been made.

6. 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 minimum fence setback from the stream must be either (i) at least 35 feet or (ii) at least 50 feet, 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.

7. 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 are allowed. 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;
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;
   d. Capable of being moved in a timely manner from one location to another within the acreage for which the system is designed.

8. 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.

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 or 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 estimated cost or eligible 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 15 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	$18,000 per contract
	10 years	95%	$80 per acre per year	$12,000 per contract
35'	15 years	90%	$80 per acre per year	$18,000 per contract
	10 years	85%	$80 per acre per year	$12,000 per contract

NOTE: The buffer payment cap is the maximum a participant can be paid per tract even when multiple practices with buffer payments are approved in a given program year (for example, but not limited to, FR-3, SL-6F, SL-6W, WP-2W and WQ-1).

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share 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.

Name of Practice: EXTENSION OF WATERING AND GRAZING MANAGEMENT SYSTEMS
DCR Specifications for No. SL-7

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

A. Description and Purpose

This practice provides a management system to ensure adequate surface cover protection to minimize soil erosion. The system will reduce sediment, nutrients and pathogen loads in runoff.

This practice will improve the quantity, quality and utilization of forage for livestock and will reduce the risk of surface and groundwater contamination from non-point source pollution from pastures by assuring that an adequate stand of forage is available to absorb runoff and reduce pollutants.

B. Policies and Specifications

1. All fields that receive cost share under this practice must have had all livestock previously excluded or concurrently being excluded from all live streams or live water. Any field that is part of a rotational grazing system is eligible.

2. This practice may be installed, in conjunction with a CREP CP-22 and CP-29 contracts, to implement rotational grazing on those fields receiving watering facilities to increase forage cover through the proper grazing and forage management techniques that will allow a pasture to rest and re-grow its cover. The system receiving cost-share should reflect the least costly, most technically feasible, environmentally effective approach to resolve the existing water quality problem. This practice cannot be used with a CREP CP-21 or CP-23, as these practices are applied on cropland only.

3. A written Grazing Management Plan and Operation and Maintenance plan that includes all acres in the grazing system must be prepared, implemented and followed in accordance with NRCS Standard 528 Prescribed Grazing. Factors to be addressed should include water sources, environmental impact, soil fertility maintenance, access lanes, fencing needs, wetlands, minimum cover or grazing heights, carrying capacity of the land, and rotational schedules. Districts will monitor for compliance.

4. Grazing (including flash grazing) and haying are not allowed in the protected riparian area during the lifespan of this practice.

5. To supply water, state cost-share and tax credit are authorized for:

   i. Installing pipelines, watering facilities, hardened pads around watering facilities, storage facilities, cisterns, troughs (portable or fixed), and pumping plant (if needed to meet pressure system requirements). When additional water is needed in CREP fields, the FSA CREP Waiver Process should be considered before authorizing VACS cost-share.
   ii. A water supply system can include a portable system to meet the management requirements necessary for systems operation, rather than a large number of permanent water facilities.

6. 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.

   A portable water supply system is any system or component (i.e. trough, pipe, etc.) that is:

   i. Commercially available or farmer constructed;
   ii. 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;
   iii. Capable of being maintained in a stable position and protected from any damage while the system or component is in use;
   iv. Capable of being moved in a timely manner from one location to another within the acreage for which the system is designed.

7. 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.

8. To facilitate rotational grazing systems, cost-share and tax credit are authorized for temporary or permanent interior fencing and fence chargers (electric or solar) used to electrify permanent or temporary fencing that is part of the grazing system.

9. Any installation of permanent fencing to bring previously unused fields or pastures into the grazing system is the responsibility of the participant, and cannot receive state cost-share or tax credit assistance. Permanent fencing may be installed under this practice to divide existing pasture units only to better manage rotational grazing.

10. 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 the purpose of providing water for the farm or ranch headquarters.

11. This practice is subject to NRCS Standards 382 Fence, 472 Access Control, 516 Livestock Pipeline, 528 Prescribed Grazing, 533 Pumping Plant, 561 Heavy Use Area Protection, 575 Trails and Walkways, 578 Stream Crossing, and 614 Watering Facility.

12. All practice components implemented must be maintained for a minimum of 10 years following the calendar year in installation. When funded concurrently with an SL-6N/W or a CREP practice, the SL-7 must be maintained for a matching lifespan (i.e. 10 or 15 years). The lifespan begins on Jan. 1 of the calendar year following the year of certification of completion. By accepting payment for this practice, the recipient agrees to maintain the practice and the associated exclusion fencing for the specified lifespan. This practice is subject to spot check by the District throughout the lifespan of the practice and failure to comply may result in reimbursement of state cost-share funds and/or tax credits. The associated exclusion fence may be eligible for a Continuing Conservation Initiative practice.

C. Rate(s)

1. The state cost-share payment shall be based on the approved estimated cost or eligible actual cost,
whichever is less, and shall vary by the minimum fence setback and lifespan of the practice. The rates are shown in the table below:

Minimum fence setback (from the top of streambank)	**Lifespan**	**Cost-share rate**
35'	15 years 10 years	80% 75%
<35’	15 years 10 years	55% 50%

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual. 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.

3. Exclusion fencing must be in place prior to issuing cost-share and/or tax credit for SL-7.

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.

Name of Practice: PROTECTIVE COVER FOR SPECIALTY CROPS
DCR Specifications for No. SL-8

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Protective Cover for Specialty Crops best management practice which 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 specialty crop land when it is not being used after harvest of a specialty crop. The purpose is to reduce wind and water erosion, thus improving water quality.

B. Policies and Specifications

1. Eligibility:
Specialty crops for this practice (for the purpose of the Virginia Agricultural Cost-Share Program only) are defined as: Vegetables, tree crops, perennial vine crops, ornamentals, horticultural crops, tobacco, hemp, turf, small grains, and other similar crops.

2. Specialty crops are given consideration due to bare sites and highly erodible soil conditions.

3. Soil loss rates must be computed for all applications for use in establishing priority considerations.

4. Payment is provided as a flat 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 ~~seedi must be planted and~~ planting must be certified no later than November 30. A good stand and growth of vegetative cover must be obtained in sufficient time to protect the area no later than December 15. All cover crop plantings must maintain a minimum of 60% cover crop plant material on the enrolled acres through the lifespan of the practice. After the growth has been maintained for at least 90 days after seeding certification or until the conservation purpose has been served in accordance with NRCS 340, whichever is greater, it may be left on the land or incorporated.

6. Pasturing consistent with good management may be permitted. No vegetative growth may be harvested for hay or seed.

7. Seed type and rates shall be those listed:

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 *Brassica* (canola/rape)	5 lbs./acre
1) mixture with grass or legume†	2-4 lbs./acre

† - legume = Crimson Clover, Austrian Winter Pea 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.

8. This practice is subject to NRCS standard 340 Cover Crop.

C. Rate(s)

1. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost-share payment rate of $40 per acre is available.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

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.

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:
Crop examples for this practice could include, but are not limited to, the following:
   i) Vegetables
   ii) Tobacco
   iii) Turf
   iv) Hemp
   v) Other

2. 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.

3. 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.

4. Soil loss rates must be computed for all applications for use in establishing priority considerations.

5. 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 one year post completion of this practice.

6. Payment is provided as a variable rate per acre incentive to encourage proper establishment and to offset a portion of the cost of seed and the seeding operation.

7. The ~~seeding must be planted and~~planting must be 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% cover 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.

8. 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 on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

9. Manure application may be made in accordance with the Nutrient Management Plan prepared by a Virginia certified Nutrient Management Planner.

10. Pasturing consistent with sound agronomic management is permitted as long as a 60% cover is maintained. In years of drought, if producers anticipate a need for additional feed harvest, they should apply for the SL-8H practice, as harvest is not allowed under this practice.

11. The cover crop shall not be harvested for seed/grain.

12. 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 *Brassica* (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 *Brassica* (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.

13. 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.

14. 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 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	$20.00/Acre
90-119 Days	$30.00/Acre
120+ Days	$40.00/Acre

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

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.

Name of Practice: SMALL GRAIN AND MIXED COVER CROP FOR NUTRIENT MANAGEMENT AND RESIDUE MANAGEMENT
DCR Specifications for No. SL-8B

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Small Grain Cover Crop and Mixed Cover Crop for Nutrient Management and Residue Management Best Management practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

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

This practice will provide an incentive to keep a cover on cropland, which will help prevent the loss of nutrients. The purpose is to reduce erosion and the leaching of nutrients to ground water. This BMP is designed to utilize the maximum amount of residual nitrogen from previous surface nutrient applications and 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. No nutrients from any sources are allowed between the harvesting of the previous crop and March 1 of the next calendar year. No nutrients are allowed at planting.

3. Cost-share is provided as a variable flat rate per acre incentive to encourage proper establishment and to offset a portion of the cost of seed and the seeding operation.

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 on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

5. A good stand and good growth of vegetative winter cover must be obtained by December 15 to protect the area from nutrient leaching and runoff in the fall and winter. All cover crop plantings must maintain a minimum of 60% cover crop plant material on the enrolled acres through the lifespan of the practice.

6. Seeding rates shall be adjusted based on germination rates.

7. The practice is intended to provide an incentive to keep a vegetative cover on cropland, which will help prevent the loss of nutrients by reducing surface erosion and absorbing any excess nutrients from the soil. Current research indicates that early planting of winter rye maximizes the environmental benefit of cover crops in Virginia. The SL-8B is not intended to subsidize crops produced for commodity purposes or for land already in permanent grass.

8. Harvesting for hay, haylage, silage, grain, straw or seed is not permitted. Pasturing consistent with sound agronomic management is permitted as long as a 60% cover is maintained through March 14. **In years of drought, if producers anticipate a need for additional feed harvest, they should apply for the SL-8H practice, as harvest is not allowed under this practice.**

9. 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 mixtures with	1 bu./acre
a) legume† or	10 lbs./acre
b) Diakon (forage or tillage) radish or	6 lb./ acre
c) canola or rape	4 lbs./acre
Diakon (forage or tillage) Radish	6-8 lbs./acre°
mixture with annual rye grass	10 lbs./acre
Winter-hardy *Brassica* (canola/rape)	5 -7 lbs./acre°
mixture with annual rye grass	10 lbs./acre

† - legume = Crimson Clover, Austrian Winter Pea 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 and non-incorporation seeding methods.

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

Area	Early Planting Date	Standard Planting Date
Cities of Chesapeake & VA Beach	November 10	November 30
Coastal Plain (including the Eastern Shore)	November 10	November 30
Piedmont	October 25	November 15
Mountain and Valley	October 20	November 10

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

12. The cover crop must be killed using mechanical or chemical means or by grazing no earlier than March 15 and no later than June 1.The cover crop residue may be left on the field for conservation purposes or the cover crop or its residue may be tilled under. The practice will be considered complete once the cover crop has served its purpose and been killed.

C. Rate(s)

1. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost share payment rate of **$40** 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.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. A **$30** per acre early planting bonus is payable for cover crops planted on or before the early planting date specified for their physiographic region. Districts should not issue cost-share funds if a good stand and good growth of winter cover is not obtained before December 15 and maintained through March 14, with the exception of the Coastal Plain and the cities of Chesapeake and Virginia Beach that have late November planting dates.

4. A **$20** per acre bonus payment is available for all applicants that plant pure stands of rye from the following list on or before either planting date.

    i. The following list of rye cultivars are approved*:

6250 Abruzzi	Paster
Abruzzi	Ryman
Dura	Virginia Abruzzi
Early Grazer	Wheeler
Elbon	Wintergrazer 70
Grazer	Winterking
Graze Master	

*Or any other indeterminate growth tetraploid rye cultivar.

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.

Name of Practice: HARVESTABLE COVER CROP
DCR Specifications for No. SL-8H

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

A. Description and Purpose

Cost-share or tax credits are provided for the establishment of vegetative cover on cropland for protection from raindrop and wind erosion and the reduction of nutrient losses to groundwater. The cover crop may be harvested after the requirements of this specification have been met.

This practice will provide an incentive to keep a cover on cropland, which will help prevent the loss of nutrients. The primary purpose is to reduce winter rain and wind generated erosion; a secondary purpose is to reduce the leaching of nutrients to ground water. This practice is not intended to subsidize winter crop production.

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 verifications.

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 on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

3. No nutrients from any source are allowed between the harvesting of the previous crop and March 1 of the next calendar year, except that use of manure (with less than 40 lbs. N per acre tested) on up to 300 acres is permitted if all of the following conditions are met:
   i. Animals are raised as part of the applicant's operation;
   ii. Inadequate manure storage is available for the winter;
   iii. There are no other vegetated acres available to safely utilize the manure;
   iv. Manure is applied in accordance with a Nutrient Management Plan prepared by a Virginia certified Nutrient Management Planner.

4. No nutrients may be applied at planting.

5. If available as set forth in Section C. 1. of this specification, cost-share is provided as a flat rate per acre incentive to encourage proper establishment of vegetative cover and to offset a portion of the cost of seed and the seeding operation.

6. A good stand and good growth of vegetative winter cover must be obtained by December 15 to protect the area from nutrient leaching and runoff in the fall and winter. All cover crop plantings must maintain a minimum of 60% cover crop plant material on the enrolled acres through the lifespan of the practice.

7. The practice is intended to provide an incentive to keep a vegetative cover on cropland, which will help prevent the loss of nutrients by reducing surface erosion and absorbing any excess nutrients from the soil. Current research indicates that early planting of winter rye maximizes the environmental benefit of cover crops in Virginia. The SL-8H is designed to provide an incentive to farmers to provide year round vegetative cover on as much acreage as possible; it is not intended to subsidize winter crops produced for commodity purposes or land already in permanent grass.

8. Harvesting for hay, haylage, silage, grain, or seed is permitted after March 14. Pasturing consistent with sound agronomic management is permitted as long as 60% cover is maintained through March 14.

9. Land enrolled in this practice may not be enrolled in another state cover crop practice and may not be converted to or from another cover crop practice. Enrolled acres are also ineligible for the NM-4 practice.

10. 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 mixtures with	1 bu./acre
a) legume† or	10 lbs./acre
b) Diakon (forage or tillage) radish or	6 lb./ acre
c) canola or rape	4 lbs./acre
Diakon (forage or tillage) Radish	6-8 lbs./acre°
mixture with annual rye grass	10 lbs./acre
Winter-hardy *Brassica* (canola/rape)	5 -7 lbs./acre°

mixture with annual rye grass	10 lbs./acre

† legume = Crimson Clover, Austrian Winter Pea 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 and non-incorporation seeding methods.

11. 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)	November 10
Piedmont	October 25
Mountain and Valley	October 20

12. Seeding rates shall be adjusted based on germination rates.

13. This practice is subject to NRCS standard 340 as applicable.

14. The cover crop residue may be left on the field for conservation purposes; or the cover crop or its residue may be tilled under; or the cover crop may be harvested after March 14.

~~14.~~15. For cover crop that is harvested for seed or grain only, leaving all remaining straw and residue on the field, a higher incentive rate is available. The seed or grain may be harvested after March 14, all remaining cover crop residue (including straw) must be left on the field for conservation. Straw cannot be cut and baled.

C. Rate(s)

1. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost-share payment rate of $20 per acre is available for cover crop that is harvested for seed/grain and straw, remaining residue may be tilled under. Districts should not issue cost-share funds if a good stand and good growth of winter cover is not obtained before December 15 and maintained through March 14, with the exception of the Coastal Plain and the cities of Chesapeake and Virginia Beach that have ~~late~~ November planting dates.

2. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost-share payment rate of $30 per acre is available for cover crop that is harvested for seed/grain ONLY, all remaining residue must remain on the field (straw cannot be baled). Districts should not issue cost-share funds if a good stand and good growth of winter cover is not obtained before December 15 and maintained through March 14, with the

exception of the Coastal Plain and the cities of Chesapeake and Virginia Beach that have November planting dates.

~~2.~~3. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

~~3.~~4. The cost of fertilizer may not be considered when calculating the participant's tax credit. Participants may receive either a cost-share payment or a tax credit for implementation of this practice, but not both on the same acre.

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.

Name of Practice: SMALL GRAIN AND MIXED COVER CROP FOR NUTRIENT MANAGEMENT AND RESIDUE MANAGEMENT WITH FALL MANURE APPLICATION
DCR Specifications for No. SL-8M

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Small Grain and Mixed Cover Crop for Nutrient Management and Residue Management with Fall Manure Application Best Management practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

Cost-share or tax credit are provided to establish vegetative cover on cropland for protection from erosion and the reduction of nutrient losses to groundwater. This type of cover crop is planted upon cropland where manure is applied following the harvest of a summer crop and prior to cover crop planting. The crop may not be harvested in the spring.

This practice will provide an incentive to keep a cover on cropland, which will help prevent the loss of nutrients, reduce erosion and the leaching of nutrients to ground water. The purpose is to increase above- and below-ground biomass returned to the soil by increasing the amount of manure amendments while minimizing nutrient loss risk, thereby providing adequate fertility to grow the extra biomass. This BMP is designed to utilize the maximum amount of residual nitrogen from previous surface nutrient applications and 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. Application of manure (organic) amendments are allowed between the harvesting of the previous crop and prior to planting.

3. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

4. A current Nutrient Management Plan must be on file with the District Prior to issuing cost share. Cost-share is available for all acres with application rates in compliance with the NMP Spreading Schedule. Acres that receive application rates above NMP are not eligible for cost-share.

5. No nutrients from any source are allowed between the harvesting of the previous crop and ~~March 1~~prior to planting ~~of the next calendar year~~, except that use of manure (with less than 40 lbs. N per acre tested) is permitted if all of the following conditions are met:
    i. Inadequate manure storage is available for the winter at the source;
    ii. Manure is applied in accordance with a Nutrient Management Plan prepared by a Virginia certified Nutrient Management Planner.
    iii. New plans shall be written for a period of one to three years. Before cost-share payment can be made the following items must be submitted:
        a. A complete copy of the NMP containing the planner's Virginia Nutrient Management Certificate number;
        b. An invoice for planning services of the private certified planner;
        c. A completed Imported Manure Supplier Verification form (if applicable).

6. No nutrients may be applied at planting

7. If available as set forth in Section C.1. of this specification, cost-share is provided as a flat rate per acre incentive to encourage proper establishment of vegetative cover and to offset a portion of the cost of seed and the seeding operation.

8. **A good stand and good growth of vegetative winter cover must be obtained by December 15 to protect the area from nutrient leaching and runoff in the fall and winter.** All cover crop plantings must maintain a minimum of 60% cover crop plant material on the enrolled acres through the lifespan of the practice.

9. Aerial seeding is not applicable for this practice.

10. Seeding rates shall be adjusted based on germination rates.

11. The practice is intended to provide an incentive to keep a vegetative cover on cropland, which will help prevent the loss of nutrients by reducing surface erosion and absorbing any excess nutrients from the soil. Current research indicates that early planting of winter rye maximizes the environmental benefit of cover crops in Virginia. The SL-8BM is not intended to subsidize winter crop produced for commodity purposes.

12. Harvesting for hay, haylage, silage, grain, straw or seed is not permitted. Pasturing consistent with sound agronomic management is permitted as long as a 60% cover is maintained through March 14. **In years of drought, if producers anticipate a need for additional feed harvest, they should apply for the SL-8H practice, as harvest is not allowed under this practice.**

13. Land enrolled in this practice may not be enrolled in another state cover crop practice.

14. 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 mixtures with	1 bu./acre
a) legume† or	10 lbs./acre
b) Diakon (forage or tillage) radish or	6 lb./ acre
c) canola or rape	4 lbs./acre
Diakon (forage or tillage) Radish	6-8 lbs./acre°
mixture with annual rye grass	10 lbs./acre
Winter-hardy *Brassica* (canola/rape)	5 -7 lbs./acre°
mixture with annual rye grass	10 lbs./acre

† - legume = Crimson Clover, Austrian Winter Pea or Hairy Vetch
°Use higher seeding rates for pure stands and lower seeding rates for mixed species plantings

Higher seeding rates are recommended for non-incorporation seeding methods. Aerial seeding is not eligible with this practice.

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

Area	Early Planting Date	Standard Planting Date
Cities of Chesapeake & VA Beach	November 10	November 30
Coastal Plain (including the Eastern Shore)	November 10	November 30
Piedmont	October 25	November 15
Mountain and Valley	October 20	November 10

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

17. The cover crop must be killed using mechanical or chemical means or by grazing no earlier than March 15 and no later than June 1. The cover crop residue may be left on the field for conservation purposes or the cover crop or its residue may be tilled under. The practice will be considered complete once the cover crop has served its purpose and been killed.

C. Rate(s)

1. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost share payment rate of **$15** per acre is available. Districts should not issue cost-share funds if a good stand and good growth of winter

cover is not obtained before December 15 and maintained through March 14.

2. The cost of fertilizer may not be considered when calculating the participant's tax credit. Participants may receive either a cost-share payment or a tax credit for implementation of this practice but not both on the same acre.

3. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

4. A **$22** per acre early planting bonus is payable for cover crops planted on or before the early planting date specified for their physiographic region. Districts should not issue cost-share funds if a good stand and good growth of winter cover is not obtained before December 15 and maintained through March 14.

5. A **$8** per acre bonus payment is available for all applicants that plant pure stands of rye from the following list on or before either planting date.

    i. The following list of rye cultivars are approved*:

6250 Abruzzi	Paster
Abruzzi	Ryman
Dura	Virginia Abruzzi
Early Grazer	Wheeler
Elbon	Wintergrazer 70
Grazer	Winterking
Graze Master	

*Or any other indeterminate growth tetraploid rye cultivar.

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.

Name of Practice: PERMANENT VEGETATIVE COVER ON CRITICAL AREAS
DCR Specifications for No. SL-11

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Permanent Vegetative Cover on Critical Areas best management practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice will promote land shaping and planting permanent vegetative cover on critically eroding areas.

The purpose of this practice is to improve water quality by stabilizing soil, thus reducing the movement of sediment and nutrients from the site.

B. Policies and Specifications

1. Cost-share and tax credit are authorized:
   i. For measures needed to stabilize a source of sediment, such as grading, shaping, and filling; the establishment (including minerals) of grasses (including filter strips), trees or shrubs; and measures that are determined to be practical for the solution of the problem.
   ii. For permanent fencing needed to protect vegetative cover. If cost-share is provided for permanent fencing, livestock exclusion is required through the lifespan of the practice.
   iii. Only if the measures will significantly reduce erosion and maintain or improve the quality of water in a stream, lake, pond, or other water source.
   iv. For measures performed on public roadsides only where these measures are essential to solve a farm-based pollution or conservation problem.

2. Livestock must be excluded after planting for a minimum of 12 months.

3. Consideration should be given to wildlife and enhancing the appearance of the area when establishing the protective measures.

4. Soil loss rates must be computed for all applications for use in establishing priority considerations.

5. This practice is subject to NRCS Standard 342 Critical Area Planting, 382 Fence and 484 Mulching.

6. All practice components implemented must be maintained for a minimum of five 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 when combined with any other cost-share program, will not exceed 75% of the ~~total eligible costs~~approved estimated cost or eligible actual cost, whichever is less.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

Name of Practice:
WHOLE FARM APPROACH – COVER CROP BUNDLE
DCR Specification for No. WFA-CC

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Whole Farm Approach – Cover Crop practice for bundled agricultural best management practices which are applicable to all contracts entered into with respect to that practice. **Implementation of WFA-NM is required to be eligible for this practice.**

A. Description and Purpose

This practice will collect data and provide for the establishment of vegetative cover on agricultural land for protection from erosion and the reduction of nutrient losses to groundwater. The Chesapeake Bay Program Watershed Model separates cover crops into independent sets of practice elements, which stack onto a required core set of management elements known as Core Requirements; this practice is intended to enable reporting for each of these practice elements.

In addition, the practice is also intended to offer financial assistance to agricultural producers to provide an incentive to keep cover on agricultural land, increase biomass, and promote biological diversity while providing water quality benefits.

This practice bundles components of the following best management practices:

- SL-8 Protective Cover for Specialty Crops;
- SL-8B Small Grain and Mixed Cover Crop for Nutrient and Residue Management;
- SL-8H Harvestable Cover Crop;
- SL-8M Small Grain and Mixed Cover Crop for Nutrient Management and Residue Management with Fall Manure Application;
- WQ-4 Legume Based Cover Crop

B. General Policies and Specifications

Review the following standards and specifications for the individual practice components of the Whole Farm Approach. Producers receiving cost-share funding for this practice must be implementing recommended nutrient application rates on all agricultural production acres in the Tract to be in compliance with this specification, with the exception of unimproved pasture acres. Unimproved pasture acres (pasture acres that do not receive nutrient management or nutrient applications) may be excluded from the tract within the Nutrient Management Plan.

This is an annual practice with a cost-share payment issued annually. There is no guarantee that cost-share funds will be approved by the local District.

1. Eligibility
    i. This practice applies to crops and highly managed hay.

ii. Cropland which receives applications of pelletized Class A biosolids that do not require a permit are eligible for the WFA-CC framework since these products are considered commercial fertilizer. However, participants should review each individual WFA-CC cover crop option for relevant nutrient application rules.

iii. **Implementation of the WFA-NM is required to be eligible for this practice.** The Nutrient Management Plan shall also contain any specific production management criteria designated in the BMP components listed within this practice.

2. Ineligible
   i. Participants may **NOT** receive cost-share payments on the same crop and field for the WFA-CC and the following VACS practices simultaneously: SL-8, SL-8B, SL-8H, SL-8M, and WQ-4.

C. Rates

Cost-share rates for the following components may stack; see the WFA-CC Rate Worksheet for assistance with sign-up. The WFA-CC core and components are not eligible for tax credit.

1. **Implementation of the WFA-NM is required to be eligible for this practice. Core Nutrient Management Plan Requirement:** The state cost-share payment rate is **$4.00 per acre** for all eligible acres on a Tract where cover crop is established and a Nutrient Management Plan is being fully implemented. Unimproved pasture acres (pasture acres that do not receive nutrient management or nutrient applications) may be excluded from the tract within the Nutrient Management Plan. Participants must provide the District a copy of the current Nutrient Management Plan, which includes amendments or revisions that match all management practices to be implemented in the cropping year to the District to receive the annual payment~~; and~~.

2. **Cover Crop – Standard Cover Crop:**
   i. A state cost-share payment rate per acre is available for pure stands of rye as listed below:

	Rate
Early Pure Rye	**$90.00/acre**
Standard Pure Rye	**$60.00/acre**

   ii. A state cost-share payment rate per acre is available for listed small grains, brassicas, and/or mixtures as listed below:

	Rate
Early	**$70.00/acre**
Standard	**$40.00/acre**

iii. An additional state cost-share payment rate of **$5.00 per acre** is available for a mixed species cover crop that includes 50-75% small grain.

iv. An additional state cost-share payment rate of **$10.00 per acre** is available for a delayed cover crop kill down on May 1 or thereafter, but no later than June 1.

3. **Cover Crop – Fall Manure Application:**
   i. A state cost-share payment rate per acre is available for pure stands of Rye are listed below:

	Rate
Early Rye	**$40.00/acre**
Standard Rye	**$25.00/acre**

   ii. A state cost-share payment rate per acre is available for listed small grains, brassicas, and/or mixtures are below:

	Rate
Early	**$32.00/acre**
Standard	**$20.00/acre**

   iii. An additional state cost-share payment rate of **$5.00 per acre** is available for a mixed species cover crop that includes 50-75% small grain.

   iv. An additional state cost-share payment rate of **$10.00 per acre** is available for a delayed cover crop kill down on May 1 or thereafter, but no later than June 1.

4. **Protective Cover for Specialty Crops:** A state cost-share payment rate of **$40.00 per acre** is available for protective cover for specialty crops.

5. **Cover Crop – Harvestable:** A state cost-share payment rate of **$20.00 per acre** is available for ~~harvestable~~ cover crop~~s~~ that is harvested for seed/grain and straw. A state cost-share payment rate of **$30 per acre** is available for cover crop that is harvested for seed/grain only with all remaining residue left on the field (straw cannot be baled).

6. **Cover Crop – Legume:** A state cost-share payment rate of **$45.00 per acre** is available for legume cover crops.

D. Technical Responsibility

Technical and administrative responsibility for all Components of the WFA-CC 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.

WFA-CC Cover Crop – Standard Cover Crop

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's WFA-CC Standard Cover Crop option which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

Cost-share is provided to establish vegetative cover on cropland for protection from erosion and the reduction of nutrient losses to groundwater.

This practice will provide an incentive to keep a cover on cropland, which will help prevent the loss of nutrients. The purpose is to reduce erosion and the leaching of nutrients to ground water. This BMP is designed to utilize the maximum amount of residual nitrogen from previous surface nutrient applications and 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. No nutrients from any sources are allowed between the harvesting of the previous crop and March 1 of the next calendar year. No nutrients are allowed at planting.

3. Cost-share is provided as a variable flat rate per acre incentive to encourage proper establishment and to offset a portion of the cost of seed and the seeding operation.

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. A good stand and good growth of vegetative winter cover must be obtained by December 15 to protect the area from nutrient leaching and runoff in the fall and winter. All cover crop plantings must maintain a minimum of 60% cover crop plant material on the enrolled acres through the lifespan of the practice.

6. Seeding rates shall be adjusted based on germination rates.

7. The practice is intended to provide an incentive to keep a vegetative cover on cropland,

which will help prevent the loss of nutrients by reducing surface erosion and absorbing any excess nutrients from the soil. Current research indicates that early planting of winter rye maximizes the environmental benefit in of cover crops Virginia. This WFA-CC option is not intended to subsidize crops produced for commodity purposes or for land already in permanent grass.

8. Harvesting for hay, haylage, silage, grain, straw or seed is not permitted. Pasturing consistent with sound agronomic management is permitted as long as a 60% cover is maintained through March 14. **In years of drought if producers anticipate a need for additional feed harvest, they should apply for the Harvestable Cover Crop option as harvesting is not allowed under this practice.**

9. 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 mixtures with	1 bu./acre
a) legume† or	10 lbs./acre
b) Diakon (forage or tillage) radish or	6 lb./ acre
c) canola or rape	4 lbs./acre
Diakon (forage or tillage) Radish	6-8 lbs./acre°
mixture with annual rye grass	10 lbs./acre
Winter-hardy *Brassica* (canola/rape)	5 -7 lbs./acre°
mixture with annual rye grass	10 lbs./acre

† legume = Crimson Clover, Austrian Winter Pea 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 and non-incorporation seeding methods.

10. In order to promote soil health through biodiversity and increased biological activity; an additional incentive is provided for mixed species cover crop consisting of 50-75% small grain.

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

Area	Early Planting Date	Standard Planting Date
Cities of Chesapeake & VA Beach	November 10	November 30
Coastal Plain (including the Eastern Shore)	November 10	November 30
Piedmont	October 25	November 15
Mountain and Valley	October 20	November 10

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

13. The cover crop must be killed using mechanical or chemical means or by grazing no earlier than March 15 and no later than June 1. The cover crop residue may be left on the field for conservation purposes or the cover crop or its residue may be tilled under. The practice will be considered complete once the cover crop has served its purpose and been killed.

14. In order to provide additional nutrient uptake and promote soil health through the increase of biomass above and below the soil surface, an additional incentive is provided for cover crops that are killed using mechanical, chemical or grazing means, on May 1 or thereafter, but no later than June 1.

C. Rate(s)

1. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost-share payment rate per acre for pure stands of Rye are below. Participants may also be eligible for the late kill down incentive.

	Rate
Early Rye	**$90.00/acre**
Standard Rye	**$60.00/acre**

i. The following list of rye cultivars are approved for the rye payments OR any other indeterminate growth tetraploid rye cultivar:

6250 Abruzzi	Paster
Abruzzi	Ryman
Dura	Virginia Abruzzi
Early Grazer	Wheeler
Elbon	Wintergrazer 70
Grazer	Winterking
Graze Master	

2. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost-share payment rate per acre for listed small grains,

brassicas, and/or mixtures are below. Participants may also be eligible for the mixed species and late kill down incentives.

	Rate
Early	**$70.00/acre**
Standard	**$40.00/acre**

3. Mixed Species Cover Crop that consist of 50%-75% small grain are eligible for a **$5.00 per acre** bonus (i.e. pure stands of rye are not eligible).

4. Cover crops that are killed using mechanical, chemical or grazing means, on May 1 or thereafter, but no later than June 1, are eligible for a **$10.00 per acre** bonus.

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.

WFA-CC Cover Crop – Cover Crop with Fall Manure Application

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's WFA-CC Cover Crop with Fall Manure Application option which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

Cost-share ~~or tax credit are~~is provided to establish vegetative cover on cropland for protection from erosion and the reduction of nutrient losses to groundwater. This type of cover crop is planted upon cropland where manure is applied following the harvest of a summer crop and prior to cover crop planting. The crop may not be harvested in the spring.

This practice will provide an incentive to keep a cover on cropland, which will help prevent the loss of nutrients, reduce erosion and the leaching of nutrients to ground water. The purpose is to increase above- and below-ground biomass returned to the soil by increasing the amount of manure amendments while minimizing nutrient loss risk, thereby providing adequate fertility to grow the extra biomass. This BMP is designed to utilize the maximum amount of residual nitrogen from previous surface nutrient applications and 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. Application of manure (organic) amendments are allowed between the harvesting of the previous crop and prior to planting.

3. In order to be eligible for cost-share~~ or tax credit~~, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

4. A current Nutrient Management Plan must be on file with the District Prior to issuing cost-share. Cost-share is available for all acres with application rates in compliance with the NMP Spreading Schedule. Acres that receive application rates above NMP are not eligible for cost-share.

5. No nutrients from any source are allowed between the harvesting of the previous crop and ~~March 1~~prior to planting~~ of the next calendar year~~, except that use of manure

(with less than 40 lbs. N per acre tested) is permitted if all of the following conditions are met:

i. Inadequate manure storage is available for the winter at the source;
ii. 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. The results of these samples may be used by the participant to support this practice.
iii. Manure is applied in accordance with a Nutrient Management Plan prepared by a Virginia certified Nutrient Management Planner.
iv. New plans shall be written for a period of one to three years. Before cost-share payment can be made the following items must be submitted:
    a. A complete copy of the NMP containing the planner's Virginia Nutrient Management Certificate number;
    b. An invoice for planning services of the private certified planner;
    c. A completed Imported Manure Supplier Verification form (if applicable).

6. No nutrients may be applied at planting

7. If available as set forth in Section C.1. of this specification, cost-share is provided as a flat rate per acre incentive to encourage proper establishment of vegetative cover and to offset a portion of the cost of seed and the seeding operation.

8. **A good stand and good growth of vegetative winter cover must be obtained by December 15 to protect the area from nutrient leaching and runoff in the fall and winter.** All cover crop plantings must maintain a minimum of 60% cover crop plant material on the enrolled acres through the lifespan of the practice.

9. Aerial seeding is not applicable for this practice.

10. Seeding rates shall be adjusted based on germination rates.

11. The practice is intended to provide an incentive to keep a vegetative cover on cropland, which will help prevent the loss of nutrients by reducing surface erosion and absorbing any excess nutrients from the soil. Current research indicates that early planting of winter rye maximizes the environmental benefit of cover crops in Virginia. The Cover Crop with Fall Manure Application option is not intended to subsidize winter crop produced for commodity purposes.

12. Harvesting for hay, haylage, silage, grain, straw or seed is not permitted. Pasturing consistent with sound agronomic management is permitted as long as a 60% cover is maintained through March 14. **In years of drought, if producers anticipate a need for additional feed harvest, they should apply for the Harvestable Cover Crop option, as harvest is not allowed under this practice.**

13. Land enrolled in this practice may not be enrolled in another state cover crop practice.

14. 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 mixtures with	1 bu./acre
a) legume† or	10 lbs./acre
b) Diakon (forage or tillage) radish or	6 lb./ acre
c) canola or rape	4 lbs./acre
Diakon (forage or tillage) Radish	6-8 lbs./acre°
mixture with annual rye grass	10 lbs./acre
Winter-hardy *Brassica* (canola/rape)	5 -7 lbs./acre°
mixture with annual rye grass	10 lbs./acre

† - legume = Crimson Clover, Austrian Winter Pea or Hairy Vetch
°Use higher seeding rates for pure stands and lower seeding rates for mixed species plantings

Higher seeding rates are recommended for non-incorporation seeding methods. Aerial seeding is not eligible with this practice.

15. In order to promote soil health through biodiversity and increased biological activity; an additional incentive is provided for mixed species cover crop consisting of 50%-75% small grain.

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

Area	Early Planting Date	Standard Planting Date
Cities of Chesapeake & VA Beach	November 10	November 30
Coastal Plain (including the Eastern Shore)	November 10	November 30
Piedmont	October 25	November 15
Mountain and Valley	October 20	November 10

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

18. The cover crop must be killed using mechanical or chemical means or by grazing no earlier than March 15 and no later than June 1. The cover crop residue may be left on the field for conservation purposes or the cover crop or its residue may be tilled under. The practice will be considered complete once the cover crop has served its purpose and been killed.

19. In order to provide additional nutrient uptake and promote soil health through the increase of biomass above and below the soil surface, an additional incentive is provided for cover crops that are killed using mechanical, chemical or grazing means, on May 1 or thereafter, but no later than June 1.

C. Rate(s)

1. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost-share payment rate per acre for pure stands of Rye are below. Participants may also be eligible for the late kill down incentive.

	Rate
Early Rye	**$40.00/acre**
Standard Rye	**$25.00/acre**

i. The following list of rye cultivars are approved for the rye payments OR any other indeterminate growth tetraploid rye cultivar:

6250 Abruzzi	Paster
Abruzzi	Ryman
Dura	Virginia Abruzzi
Early Grazer	Wheeler
Elbon	Wintergrazer 70
Grazer	Winterking
Graze Master	

2. For participants who are not receiving payment for cover crops from another source (funding) on the same acreage, a state cost-share payment rate per acre for listed small grains, brassicas, and/or mixtures are below. Participants may also be eligible for the mixed species and late kill down incentives.

	Rate
Early	**$32.00/acre**
Standard	**$20.00/acre**

3. Mixed Species Cover Crop that consist of 50%-75% small grain are eligible for a **$5.00 per acre** bonus (i.e. pure stands of rye are not eligible).

4. Cover crops that are killed using mechanical, chemical or grazing means, on May 1

or thereafter, but no later than June 1, are eligible for a **$10.00 per acre** bonus.

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.

WFA-CC Cover Crop – Protective Cover for Specialty Crops

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Protective Cover for Specialty Crops option which 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 specialty crop land when it is not being used after harvest of a specialty crop. The purpose is to reduce wind and water erosion, thus improving water quality.

B. Policies and Specifications

1. Specialty crops for this practice (for the purpose of the Virginia Agricultural Cost-Share Program only) are defined as: Vegetables, tree crops, perennial vine crops, ornamentals, horticultural crops, tobacco, hemp, turf and other similar crops.

2. Specialty crops are given consideration due to bare sites and highly erodible soil conditions.

3. Soil loss rates must be computed for all applications for use in establishing priority considerations.

4. Payment is provided as a flat 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~~planting must be certified no later than November 30. A good stand and growth of vegetated cover must be obtained in sufficient time to protect the area no later than December 15. All cover crop plantings must maintain a minimum of 60% cover crop plant material on the enrolled acres through the lifespan of the practice. After the growth has been maintained for at least 90 days after seeding certification or until the conservation purpose has been served in accordance with NRCS 340, whichever is greater, it may be left on the land or incorporated.

6. Pasturing consistent with good management may be permitted. No vegetative growth may be harvested for hay or seed.

7. Seed type and rates shall be those listed:

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 *Brassica* (canola/rape)	5 lbs./acre
1) mixture with grass or legume†	2-4 lbs./acre

† - legume = Crimson Clover, Austrian Winter Pea 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.

8. This practice is subject to NRCS standard 340 Cover Crop.

C. Rate(s)

1. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost-share payment rate of **$40.00 per acre** is available.

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.

WFA-CC Cover Crop – Harvestable Cover Crop

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Harvestable Cover Crop option which 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 cropland, which will help prevent the loss of nutrients. The primary purpose is to reduce winter rain and wind generated erosion; a secondary purpose is to reduce the leaching of nutrients to ground water. This practice is not intended to subsidize winter crop production. This cover crop may be harvested after the requirements of this specification have been met.

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. No nutrients from any sources are allowed between the harvesting of the previous crop and March 1 of the next calendar year, except that use of manure (with less than 40 lbs N. per acre tested value) is permitted if all of the following conditions are met:
   i. Animals are raised as part of the applicant's operation;
   ii. Inadequate manure storage is available for the winter;
   iii. There are no other vegetated acres available to safely utilize the manure;
   iv. Manure is applied in accordance with a Nutrient Management Plan prepared by a Virginia certified Nutrient Management Planner.

4. No nutrients may be applied at planting.

5. If available as set forth in Section C.1. of this specification, cost-share is provided as a flat rate per acre incentive to encourage proper establishment of vegetative cover and to offset a portion of the cost of seed and the seeding operation.

6. A good stand and good growth of vegetative winter cover must be obtained by December 15 to protect the area from nutrient leaching and runoff in the fall and winter. All cover crop plantings must maintain a minimum of 60% cover crop plant material on the enrolled acres through the lifespan of the practice.

7. The practice is intended to provide an incentive to keep a vegetative cover on cropland, which will help prevent the loss of nutrients, by reducing surface erosion and absorbing any excess nutrients from the soil. Current research indicates that early planting of winter rye maximizes the environmental benefit of cover crops in Virginia. The Harvestable Cover Crop option is designed to provide an incentive to farmers to provide year round vegetative cover on as much acreage as possible; it is not intended to subsidize winter crops produced for commodity purposes or land already in permanent grass.

8. Harvesting for hay, haylage, silage, grain, or seed is permitted after March 14. Pasturing consistent with sound agronomic management is permitted as long as 60% cover is maintained through March 14.

9. Land enrolled in this practice may not be enrolled in another state cover crop practice, and may not be converted to or from another cover crop practice. Acres enrolled for this component are ineligible to receive payment for the WFA-NM Second Topdress Application of Anitrogen on Small Grain component.

10. 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 mixtures with	1 bu./acre
a) legume† or	10 lbs./acre
b) Diakon (forage or tillage) radish or	6 lb./ acre
c) canola or rape	4 lbs./acre
Diakon (forage or tillage) Radish	6-8 lbs./acre°
mixture with annual rye grass	10 lbs./acre
Winter-hardy *Brassica* (canola/rape)	5 -7 lbs./acre°
mixture with annual rye grass	10 lbs./acre

† legume = Crimson Clover, Austrian Winter Pea 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 and non-incorporation seeding methods.

11. 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)	November 10
Piedmont	October 25
Mountain and Valley	October 20

12. Seeding rates shall be adjusted based on germination rates.

13. In all cases, this practice is subject to NRCS Standard 340.

14. The cover crop residue may be left on the field for conservation purposes, or the cover crop or its residue may be tilled under, or the cover crop may be harvested after March 14.

15. For cover crop that is harvested for seed or grain only, leaving all remaining straw and residue on the field, a higher incentive rate is available. The seed or grain may be harvested after March 14, all remaining cover crop residue (including straw) must be left on the field for conservation. Straw cannot be cut and baled.

C. Rate(s)

1. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost-share payment rate of **$20 per acre** is available for cover crop that is harvested for seed/grain and straw, remaining residue may be tilled under. Districts should not issue cost-share funds if a good stand and good growth of winter cover is not obtained before December 1 and maintained through March 14.

~~1.~~2. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost-share payment rate of $30 per acre is available for cover crop that is harvested for seed/grain ONLY, all remaining residue must remain on the field (straw cannot be baled). Districts should not issue cost-share funds if a good stand and good growth of winter cover is not obtained before December 15 and maintained through March 14.

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.

WFA-CC Cover Crop – Legume Based Cover Crop

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Legume Based Cover Crop option which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice will improve water quality by providing an adequate residue cover to prevent erosion and serve as desirable mulch for no-till cultivation. Water quality will also be enhanced by the nitrogen fixation of the legume in order to reduce applied amendments.

Cost-share is provided for utilizing an adequate legume mulch residue as a natural source of nitrogen to reduce applied soil amendment nitrogen.

B. Policies and Specifications

1. 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).

2. Cost-share is authorized as an incentive on a per acre basis to add this practice within an established rotation.

3. The amount of nitrogen application must be reduced following a pure legume cover crop according to Table 7-1, Estimating Nitrogen Available to Succeeding Crops from Legumes on page 108 of DCR Nutrient Management Standards and Criteria (Revised 2014).

4. The amount of nitrogen application must be reduced following a mixed species legume cover crop according to the recommendations of a Nutrient Management Plan. A split application of nitrogen based upon the results of a PSNT may be applied as well.

5. Removal of the legume residue by baling or by any other means is not allowed. Grazing is not permitted for this practice.

6. Soil loss rates must be computed for all applications for use in ranking practice applications; applications that are the most cost-effective at preventing the most soil loss should receive cost-share approval first.

7. Mulch Cover
   i. Existing stands: An adequate (minimum 60% legume cover and stand composition) cover that has been planted for at least one year prior to grain planting. Stand can be composed of clover, lespedeza, vetch or alfalfa. Seed must have been inoculated at time of planting.
   ii. New stands: A legume cover crop can be planted during the fall prior to grain planting using the following recommendations. However, planting a cover crop in the fall is at the applicant's own risk, knowing cost-share assistance is not guaranteed.

Type	Rate	Seeding Date
Crimson Clover	20 lbs/acre	by September 28
OR		October 12 for the Coastal Plain
Crimson Clover (with any single grain or single grass below)	10.0 lbs/acre	
1) Annual ryegrass	10.0 lbs/acre	
2) Rye	1.0 bu./acre	
3) Barley	1.0 bu./acre	
4) Oats	1.0 bu./acre	
OR		
Ladino Clover (with either)	2 lbs/acre	
1) Tall Fescue	15.0 lb./acre	
2) Orchard grass	10.0 lb./acre	
OR		
Austrian Winter Pea	30-40 lbs/acre	by October 26
OR		
Austrian Winter Pea (with any single grain or single grass below)	15-20 lbs/acre	
1) Annual ryegrass	10.0 lbs/acre	
2) Rye	1.0 bu./acre	
3) Barley	1.0 bu./acre	
4) Oats	1.0 bu./acre	
OR		
Austrian Winter Pea (with either)	15-20 lbs/acre	
1) Tall Fescue	15.0 lb./acre	
2) Orchard grass	10.0 lb./acre	
OR		
Hairy Vetch	20 lbs/acre	by October 26
OR		
Hairy Vetch (with any single grain or single grass below)	10.0 lbs/acre	
1) Annual ryegrass	10.0 lbs/acre	
2) Rye	1.0 bu./acre	
3) Barley	1.0 bu./acre	
4) Oats	1.0 bu./acre	
OR		
Hairy Vetch (with either)	10 lbs/acre	
1) Tall Fescue	15.0 lb./acre	
2) Orchard grass	10.0 lb./acre	

   iii. Vetch is not recommended in rotations containing small grains. It is very important that seeding dates be met to insure adequate fall growth.
   iv. All seed is required to be inoculated.
   v. Method:
      a) No till drill

OR

b) Aerial Seeding

OR

c) Conventionally drilled as long as 30% of previous crop residue remain

OR

d) Broadcast as long as 30% of previously crop residue remains.

8. Legume cover crop must be left on surface intact to serve as mulch for the no-till planting of grain crops.

9. Applicant must submit documentation (fertilizer recommendation and bills, or signed statement) indicating that the applied nitrogen fertilizer used that crop year (grain) was reduced, or will be reduced only in cases where nitrogen will be applied after June 1, according to Table 7-1 on page 108 "Estimated Nitrogen Availability to Succeeding Crops from Legumes" of DCR Nutrient Management Standards and Criteria (07/2014) per acre from his normal application or rate that was recommended. Consult local extension agent for exact recommendations. Districts shall utilize the signed statement example found on page **WQ-4 - 5** of the Virginia Agricultural Cost-Share BMP Manual and place in the participant's case file.

10. This practice must be implemented on the fields consistent with NRCS Standards 340 Cover Crops. This practice is for use only on land being planted to a grain crop. No till planting must be established into an existing legume stand or newly established legume stand according to the standards of NRCS 329 Residue and Tillage Management, No Till/Strip-Till/Direct Seed, and 340 Cover Crops.

11. The practice may be certified complete once the grain crop has been planted using no-till methods into the legume mulch cover and all applicable specifications listed above have been met.

C. Rate(s)

1. For participants who are not receiving payment for cover crops from another source on the same acreage, a state cost-share payment rate of **$45.00 per acre** is available.

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.

WFA-CC Rate Worksheet

Component	Rate per Acre	Participating Acres
Core WFA-CC Base Payment*	$4.00/acre	
Standard Cover Crop		
Early Pure Rye	$90.00/acre	
Standard Pure Rye	$60.00/acre	
Early - Listed Small Grains, Brassicas, and/or Mixtures	$70.00/acre	
Standard - Listed Small Grains, Brassicas, and/or Mixtures	$40.00/acre	
Mixed Species Cover Crop including 50-75% Small Grain	$5.00/acre	
Cover Crop Kill Down on May 1 or Thereafter, but No Later than June 1.	$10.00/acre	
Cover Crop with Fall Application of Manure		
Early Pure Rye	$40.00/acre	
Standard Pure Rye	$25.00/acre	
Early - Listed Small Grains, Brassicas, and/or Mixtures	$32.00/acre	
Standard - Listed Small Grains, Brassicas, and/or Mixtures	$20.00/acre	
Mixed Species Cover Crop including 50-75% Small Grain	$5.00/acre	
Cover Crop Kill Down on May 1 or Thereafter, but No Later than June 1.	$10.00/acre	
Protective Cover for Specialty Crops	$40.00/acre	
Harvestable Cover Crop	~~$20.00/acre~~	
Grain/seed and straw harvested	$20.00/acre	
Grain/seed only harvested, remaining residue left on field	$30.00/acre	
Legume Cover Crop	$45.00/acre	

*The Core WFA-CC Base Payment applies only to eligible acres on a Tract where cover crop is established and a Nutrient Management Plan is being fully implemented. Acres where cover crop is not established and maintained does not qualify for this payment.

Name of Practice:
WHOLE FARM APPROACH – NUTRIENT MANAGEMENT BUNDLE
DCR Specification for No. WFA-NM

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Whole Farm Approach – Nutrient Management practice for bundled agricultural best management practices which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice will collect data and assure that implemented Nutrient Management Plans are accurate and up to date in order to minimize the impact of nutrients used in crop and highly managed hay production, and reduce nutrient losses to groundwater. The Chesapeake Bay Program Watershed Model separates nutrient management into independent sets of practice elements for Nitrogen and Phosphorus, which stack onto a required core set of management elements known as Core Requirements; this practice is intended to enable reporting for each of these practice elements.

In addition, the practice is also intended to offer financial assistance to agricultural producers to ensure implementation of core nutrient management requirements and support multiple enhanced nutrient management components such as precision nutrient management. Participants are provided an incentive to annually revise plans to accurately reflect field conditions so that farmers can maintain eligibility for other cost-share practices.

This practice bundles components of the following best management practices:

- NM-3C Split Application of Nitrogen on Corn at the 6-~~Lead~~ Leaf Stage or at Least 15" in Height and/or Grain Sorghum at the 5-Leaf Stage or at Least 12" in Height;
- NM-4 Late Winter Split Application of Nitrogen on Small Grains;
- NM-5N Precision Nutrient Management on Cropland – Nitrogen Application;
- NM-5P Precision Nutrient Management on Cropland – Phosphorus Application;
- NM-6 Manure Injection

B. General Policies and Specifications

Review the following standards and specifications for the individual practice components of the Whole Farm Approach. Producers receiving cost-share funding for this practice must be implementing recommended nutrient application rates on all agricultural production acres in the Tract to be in compliance with this specification, with the exception of unimproved pasture acres. Unimproved pasture acres~~,~~ ~~(~~pasture acres that do not receive nutrient management or nutrient applications~~)~~, may be excluded from the tract within the Nutrient Management Plan.~~.~~

This is an annual practice with a cost-share payment issued annually. There is no guarantee that cost-share funds will be approved by the local District.

1. Eligibility
    i. This practice applies to crops, highly managed hay, and pasture as applicable.
    ii. Cropland which receives applications of pelletized Class A biosolids that do not require a permit are eligible for the WFA-NM framework since these products are considered commercial fertilizer. However, many of the individual WFA-NM nutrient application options are not allowed on fields that have received past applications of biosolids. Participants should review each option for relevant biosolids rules.
    iii. The Nutrient Management Plan must cover at least twelve months of crop and management practices after the begin date on the NMP cover sheet.
    iv. Plans must be developed based on soil analyses taken within a three-year period prior to the begin date of the plan and must be performed by soil testing laboratories approved by DCR.
    v. **Core Nutrient Management Plan Requirement** - A Nutrient Management Plan must be written according to the Nutrient Management and Training Certification Regulations, 4VAC50-85 et seq.
    vi. In order to verify implementation of the NMP, an applicant must provide one of the following to the District:
        a. A completed verification form (DCR199-231, 04/18);
        b. A statement signed by the Nutrient Management Planner and producer that nutrients were applied during this period according to a NMP;
        c. For new producers, or tracts without a current Nutrient Management Plan, nutrient application records for the preceding 12 months.
2. Ineligible
    i. Participants may **NOT** receive cost-share payments on the same crop and field for the WFA-NM and the following VACS practices simultaneously: NM-3C, NM-4, NM-5N, NM-5P, NM-6.

C. Rates

Cost-share rates for the following components may stack; see the WFA-NM Rate Worksheet for assistance with sign-up. The WFA-NM core and components are not eligible for tax credit.

1. **Core Nutrient Management Plan Requirement:** The state cost-share payment rate is **$6.00 per acre** for all eligible acres on a Tract, including cropland, highly managed hayland, and/or pasture; that receives commercial fertilizer or a combination of imported or on-farm generated animal manure and commercial fertilizer. Any manure applied must be from a farm within Virginia to receive cost-share payment. Participants must provide the District a copy of the current plan, which includes amendments or revisions that match all management practices to be implemented in the cropping year to the District to receive the annual payment. Unimproved pasture acres are not eligible for the Core Nutrient Management Requirement cost share incentive.

2. **In-Furrow OR Banded (2" x 2") Application of Nitrogen and/or Phosphorus:**

i. A state cost-share payment rate of **$2.50 per acre** is available for either a banded (2" x 2") application or in-furrow application of Nitrogen.
ii. A state cost-share payment rate of **$2.50 per acre** is available for either a banded (2" x 2") application or in-furrow application of Phosphorus.

3. **First Sidedress of Nitrogen on Corn and/or Grain Sorghum:** A state cost-share payment rate of **$2.50 per acre** is available for the first sidedress application or injection, based on the contracted sidedress application acreage.

4. **Second Topdress Application of Nitrogen on Small Grain:** A state cost-share payment rate of **$2.50 per acre** is available for the second topdress application. If only one late winter application is made, no reimbursement is to be provided.

5. **Nitrogen Management:**
   i. A state cost-share payment rate of **$5.00 per acre**, is available for the acres receiving a **second sidedress application of nitrogen** on corn, cotton, and highly managed hayland (other than alfalfa).
   ii. A state cost-share payment rate of **$5.00 per acre**, is available for the acres receiving a **third topdress application of nitrogen** on small grains.
   iii. A state cost-share payment rate of **$7.50 per acre**, is available for the acres receiving a **variable rate application of nitrogen** on row crops or small grains.

6. **Phosphorus Management:** A state cost-share payment rate of **$7.50 per acre** is available for the acres receiving **variable rate application of phosphorous** on row crops, small grains, or highly managed hayland production systems.

7. **Manure Injection:** A state cost-share payment rate of **$40.00 per acre** is available for the acres receiving manure injection on row crops, small grains, highly managed hayland, or pasture.

~~7.~~8. **Soil PSNT**: Costs for PSNT sample collection and analysis by a commercial laboratory that are used to implement this practice will be reimbursed at a flat rate of **$12.00 per sample,** up to one PSNT per field. Cost-share payment for PSNT will be made only for those PSNT tests that are submitted for laboratory analysis. The reimbursement flat rate can only be utilized once per sample.

D. Technical Responsibility

Technical and administrative responsibility for all Components of the WFA-NM 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 verification procedures and any other quality control measures.

WFA-NM Nitrogen/Phosphorus Management Option – In-Furrow or Banded Applications:

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's WFA-NM Nitrogen/Phosphorus Management Option for In-Furrow or Banded Applications which are applicable to all contracts entered into with respect to this practice.

A. Description and Purpose

This practice will encourage the in-furrow or banded applications, also known as 2" x 2" applications, of nitrogen and phosphorus. For fields receiving only nitrogen fertilizer, in-furrow or banded applications will be based upon the Nutrient Management Plan (NMP). For fields receiving nitrogen and phosphorus OR only phosphorus fertilizer, in-furrow or banded applications will be based upon soil sample results and the Nutrient Management Plan (NMP). All in-furrow or banded applications will be applied at planting. Banded 2" x 2" applications are placed two inches beside and two inches below the seed.

B. Policies and Specifications

1. Eligibility for this practice is limited to the length of the plan recommending the in-furrow or banded practice.

2. A producer must provide written verification to the District prior to payment, such as records, a work order, or bill.

3. The total number of crop acres specified by the Nutrient Management Plan to be applied in-furrow or banded will determine the maximum acres that qualify, with payment being made only to those acres which actually receive an in-furrow or banded application of nitrogen and/or phosphorus.

4. 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 on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

5. 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.

6. 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.

7. The producer must provide a written verification of contracted in-furrow or banded application cost to the District within two weeks of the sample analysis.

8. Application of the in-furrow or banded nitrogen and/or phosphorus must be made at time of planting.

9. Total nitrogen to be applied to the cornfield must be consistent with the Nutrient Management Plan consistent with procedures contained in the Nutrient Management Training and Certification Regulations (4VAC50-85 et. seq).

10. This is an annual practice.

C. Rate(s)

1. **In-Furrow or Banded Nitrogen:** For participants who are not receiving payment for in-furrow or banded application of nitrogen from any other funding source on the same acreage, a state cost-share payment rate of **$2.50 per acre** for **EITHER** a banded (2" x 2") application **OR** in-furrow application (i.e. not both), shall be paid based on the contracted in-furrow or banded application acreage. Participants may also be eligible for in-furrow or banded (2" x 2") application of phosphorus.

2. **In-Furrow or Banded Phosphorus:** For participants who are not receiving payment for in-furrow or banded application of phosphorus from any other funding source on the same acreage, a state cost-share payment rate of **$2.50 per acre** for **EITHER** a banded (2" x 2") application **OR** in-furrow application (i.e. not both), shall be paid based on the contracted in-furrow or banded application acreage. Participants may also be eligible for in-furrow or banded (2" x 2") application of nitrogen.

WFA-NM Nitrogen Management Option:
First Sidedress Application of Nitrogen on Corn and/or Grain Sorghum

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

A. Description and Purpose

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

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

B. Policies and Specifications

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

   v. District staff should utilize the NMP maps, nutrient balance sheets, and summary sheets to confirm practice implementation. A comparison between crop

recommendations and in field conditions shall be used when certifying conservation practice compliance.

2. The total number of corn acres specified by the Nutrient Management Plan to receive manure will determine the maximum acres to qualify for cost-share payment in accordance with the PSNT. Cost-share payment for PSNT will be made only for those PSNT tests that are submitted for laboratory analysis.
   i. The PSNT must be done when corn is approximately 12 inches in height.
   ii. PSNT samples should represent a minimum of 7 acres on average and a maximum of 20 acres on average.

3. Checks to ensure compliance with this practice may be conducted by the District or appropriate agency personnel and failure to comply may result in forfeiture of cost-share funds.

4. The producer must sign up prior to April 1 and provide written verification of contracted sidedress application cost, including the PSNT results if applicable, 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 inches in height and/or grain sorghum is at the 5-leaf stage or at least 12 inches in height.

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

~~6.~~7. Total nitrogen to be applied to the field must be consistent with the Nutrient Management Plan or determined by using a PSNT (as applicable for corn) consistent with procedures contained in the Nutrient Management Training and Certification Regulations (4VAC50-85 et. seq).

~~7.~~8. Acres receiving a zero application rate based on a PSNT result also qualify for a payment rate of $2.50 per acre. This is for manure only; biosolids are not eligible for payment.

~~8.~~9. This is an annual practice.

C. Rate(s)

1. **First Sidedress Application of Nitrogen on Corn:** For participants who are not receiving payment for a sidedress application of nitrogen to corn and/or grain sorghum from any other funding source on the same acreage, a state cost-share payment rate of **$2.50 per acre** for the sidedress application shall be paid based on the contracted sidedress application acreage. Producers applying their own sidedress application will receive $2.50 per acre applied.

~~1.~~ Costs for PSNT sample collection and analysis by a commercial laboratory that are used to implement this practice will be reimbursed at a flat rate of **$12.00 per sample,** up to one PSNT per field. The reimbursement flat rate can only be utilized once per sample.

~~2.~~

WFA-NM Nitrogen Management Option:
Second Topdress Application of Nitrogen on Small Grain

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Second Topdress Application of Nitrogen on Small Grain option which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

Late winter split application of nitrogen on small grain consists of applying nitrogen during the late winter in two increments based on the progression of growth of the small grain crop. Applying nitrogen based on the progression of growth of the small grain crop in the late winter minimizes the amount lost through leaching and run off.

B. Policies and Specifications

1. Eligibility
   i. 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 on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).
   ii. The total number of small grain acres specified by the Nutrient Management Plan to receive split nitrogen applications will determine the maximum acres to qualify, with payment being made only to those acres which actually receive split nitrogen applications.
   iii. Eligibility for this practice is limited to the length of the plan recommending the split nitrogen application.
   iv. Farmers must sign up prior to February 1 and provide written verification (such as a work order or bill) to the District within two weeks of the second application and prior to cost-share payment.

2. This cost-share practice is for the split application of late winter nitrogen to small grain. Each application must contain nitrogen as a component of the material applied.

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

~~3.~~4. 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 should be determined by a nitrate test.

~~4.~~5. The amount of late winter nitrogen to be applied to the small grain field must be determined by using the criteria contained in the *Virginia Nutrient Management Standards and Criteria, revised July 2014*.

~~5.~~6. To ensure the impact of nitrogen to ground and surface waters is minimized in small grain production, nitrogen rates at planting and following applications shall follow recommendations contained in the *Virginia Nutrient Management Standards and Criteria, revised July, 2014*.

~~6.~~7. Compliance checks with this practice may be conducted by the District or appropriate agency personnel throughout the life of the practice and failure to comply may result in forfeiture of cost-share funds.

~~7.~~8. Sample collection for any soil nitrate tests in the fall, tissue tests, or tiller counts should be done by the plan developer, an employee of the plan developer, or the producer.

~~8.~~9. In lieu of tiller counts and tissue tests, as listed in the *Virginia Nutrient Management Standards and Criteria, revised July, 2014*, late winter split application of nitrogen must not exceed 40 pounds of nitrogen for the first application and must not exceed 50 pounds of nitrogen for the second application.

~~9.~~10. For late winter split application of nitrogen, the two applications must be at least 30 days apart with the first application no earlier than growth stage 25, with nitrogen rates determined based on tiller counts and tissues tests as explained in the *Virginia Nutrient Management Standards and Criteria revised July, 2014*.

~~10.~~11. Acres enrolled for this component are ineligible to receive payment for the SL-8H or the WFA-CC Cover Crop – Harvestable component.

~~11.~~12. This is an annual practice.

C. Rate(s)

1. **Second Topdress Application of Nitrogen on Small Grain:** For participants who are not receiving payment for a late winter split application of nitrogen on small grains from any other funding source on the same acreage, a state cost-share payment rate of **$2.50 per acre** for the second application in the late winter. **If only one late winter application is made, no reimbursement is to be provided.**

WFA-NM Nitrogen Management Option:
Precision Nutrient Management Application - Nitrogen

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Precision Nutrient Management Application - Nitrogen option for the enhanced nutrient management of nitrogen on crop land which are applicable to all contracts entered into with respect to this practice.

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 production systems (see Glossary for definition).

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 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. 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 or zone application of nitrogen based upon the soil test results of (subfield) sampling on row crops, specialty crops or small grains. Other macro-micro nutrients may be applied concurrently.
   iii. Three or more split applications of nitrogen on small grains.
   iv. Two or more split sidedress applications of nitrogen on corn or cotton.

v. Two or more applications of nitrogen on highly managed hayland production systems (other than alfalfa, which is not eligible).

vi. 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.

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

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

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

~~7.~~8. Where this practice is applied, there must be a note in the narrative or elsewhere in the Nutrient Management Plan indicating that the soils were sampled in an appropriate manner.

~~8.~~9. 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 on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

~~9.~~10. Acres receiving a zero application rate for a second sidedress application of nitrogen based on a PSNT result also qualify for a payment rate of $5.00 per acre. Acres receiving a zero application rate for a variable rate application of nitrogen based on a PSNT result also qualify for a payment rate of $7.50 per acre.

~~10.~~11. 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.

~~11.~~12. Participants **shall** provide written verification of the recommendation and the resulting application(s) to the District within 45 days of the final nitrogen application and prior to payment e.g. results of laboratory test, a work order or bill; and as-applied application map of field.

~~12.~~13. The participant **must** sign up for this practice before April 1st of each year that the practice will be utilized.

~~13.~~14. Fields that have received applications of biosolids within the previous 24 months are not eligible.

~~14.~~15. This is an annual practice.

~~15.~~16. *This practice does not apply to the first or second split application of nitrogen on small grains. See the WFA-NM Second Topdress Application of Nitrogen on Small Grain for more information.*

C. Rates

~~2.~~1. **Second Sidedress Application of Nitrogen:** For participants who are not receiving payment for a second sidedress of nitrogen on corn, cotton, or a second topdress application on highly managed hayland (other than alfalfa) from any other funding source on the same acreage, a state cost-share payment rate of **$5.00 per acre per year** is available.

~~3.~~2. **Third Topdress Application of Nitrogen on Small Grains:** For participants who are not receiving payment for a third topdress application of nitrogen on small grains from any other funding source on the same acreage, a state cost-share payment rate of **$5.00 per acre** per year is available.

~~0.~~3. **Variable Rate Nitrogen:** For participants who are not receiving payment for a variable rate or zone application of nitrogen on row crops or small grain from any other funding source on the same acreage, a state cost-share payment rate of **$7.50 per acre per year** is available.

4. Costs for PSNT sample collection and analysis by a commercial laboratory that are used to implement this practice will be reimbursed at a flat rate of **$12.00 per sample**. Cost-share payment for PSNT will be made only for those PSNT tests that are submitted for laboratory analysis. The reimbursement flat rate can only be utilized once per sample. PSNT samples should represent a minimum of 7 acres on average and a maximum of 20 acres on average.

~~0.~~5. 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.

WFA-NM Phosphorus Management Option:
Precision Nutrient Management Application - Phosphorus

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's WFA-NM Precision Nutrient Management Application - Phosphorus Management option for the enhanced nutrient management of phosphorus on crop land which are applicable to all contracts entered into with respect to this practice.

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 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, whether they have organic nutrient applications or not, with the exception of biosolids applications.

The variable rates of phosphorus listed below in Section B 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. 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.

3. Total phosphorus application rates shall not exceed the zone or grid sampling recommendations.

4. 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).

5. Acres receiving a zero application rate based upon the soil test results of zone or grid (subfield) sampling recommendations also qualify for a payment rate of $7.50 per acre.

6. The total number of acres that qualify for this practice will be based upon the total acres that were sampled in zones, grids, 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. Zones shall be no larger than 20 acres in size and based upon soil type, whereas grid size shall be one to four acres in size.

7. The participant **must** provide written verification of the recommendation(s), the resulting application(s), and an as-applied application map of field(s) to the District within forty-five days of the phosphorous application and prior to payment. Examples include results of laboratory test(s), a work order or detailed bill/invoice showing application rates.

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

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

10. This is an annual practice.

C. Rates

1. **Variable Rate Phosphorus:** For participants who are not receiving payment for a variable rate application of phosphorous on row crops, small grains or highly managed hayland production systems from another funding source on the same acreage, a state cost-share payment rate of **$7.50 per acre per year** is available.

2. 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.

WFA-NM Manure Injection:

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

A. Description and Purpose

This practice will encourage manure injection on pasture and cropland, which will reduce nutrient transport to waterways and other environmentally sensitive features. Applications must be based upon the Nutrient Management Plan (NMP).

B. Policies and Specifications

1. Definition: Manure injection is the placing of manure below the surface of the ground using direct manure injection equipment as determined by the Soil and Water Conservation District.
2. Eligibility:
   i. This practice is limited to applicants with a current Nutrient Management Plan on file with the District before manure injection application payment~~/tax credit~~ is made.
   ii. Application rates of manure shall be consistent with NMP recommendations.
   iii. Only cropland, highly managed hayland, and/or pasture owned or rented by the applicant is eligible.
   iv. Applicants must use no-till planting methods that follow NRCS defined no- till management on all fields receiving manure injection application.
   v. Applicants must provide written verification (such as a work order or bill) to the District within 30 days of the injection application. Invoice/work order or bill must indicate:
      a. Fields and acreages injected
      b. Application rates
      c. Type of injection equipment used
      d. Person applying manure (contractor, etc.)
   vi. Producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (Revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

3. The maximum acres eligible for the manure injection shall not exceed the acres specified in the Nutrient Management Plan.

4. 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.

5. Cost-share is available for all acres with application rates in compliance with the NMP Spreading Schedule. Acres that receive application rates above NMP are not eligible for cost-share.

6. This is an annual practice.

C. Rate(s)

1. For participants who are not receiving payments for manure injection from another source on the same acreage, a cost-share rate of $40 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 acreage.

2. Eligible equipment purchased for Manure Injection may qualify for a state tax credit through the Virginia Equipment Tax Credit Program.

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~~ Revised April ~~2022~~2023

WFA - NM Rate Worksheet

Component	Rate Per Acre	Participating Acres
Core Nutrient Management Plan Requirement	$6.00/acre	
In-Furrow or Banded Nitrogen	$2.50/acre	
In-Furrow or Banded Phosphorus	$2.50/acre	
First Sidedress Application of Nitrogen	$2.50/acre	
Second Topdress Application of Nitrogen	$2.50/acre	
Second Sidedress Application of Nitrogen	$5.00/acre	
Third Topdress Application of Nitrogen	$5.00/acre	
Variable Rate Nitrogen	$7.50/acre	
Variable Rate Phosphorus	$7.50/acre	
Manure Injection	$40.00/acre	
PSNT Laboratory Analysis, one sample per field	$12.00/sample	

Name of Practice: SEDIMENT RETENTION, EROSION, OR WATER CONTROL STRUCTURES
DCR Specifications for No. WP-1

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Sediment Retention, Erosion, or Water Control Structures best management practice that are applicable to all contracts entered into with respect to that practice

A. Description and Purpose

This practice will promote structures that will collect and store debris or control the grade of drainage ways.

The purpose of this practice is to improve water quality by reducing the movement of sediment and materials from agricultural land to receiving streams.

B. Policies and Specifications

1. Cost-share and tax credit are authorized:
   i. For sediment detention or retention structures, such as erosion control dams (excluding water storage dams), desilting reservoirs, sediment basin, debris basins, or similar structures.
   ii. For channel linings, chutes, drop spillways, and pipe drops that better manage excess water.
   iii. For fencing or otherwise protecting a vegetative cover (including mulching needed to protect the structure) and for leveling and filling to permit the installation of the structure.
   iv. For installing sediment retention structures on public roadsides only where these structures are essential to solve a farm-based pollution or conservation problem.
   v. Only if the measures will contribute significantly to maintaining or improving soil or water quality.

2. Cost-share or tax credit is not authorized for irrigation structures that are part of a distribution system for irrigation water.

3. Consideration should be given to the needs of wildlife when establishing the protective measures.

4. Soil loss rates must be computed for all applications for use in establishing priority considerations.

5. Direct discharge of runoff from crop fields, without filtering, is not allowed under this specification. A 10 foot minimum grass filter must be provided at the pipe inlet in the form of an apron adjacent to the pipe or a permanently vegetated diversion or waterway.

6. This practice is subject to the specifications of NRCS Standards 350 Sediment Basin, 362 Diversion, 382 Fence, 410 Grade Stabilization Structure, 468 Lined Waterway or Outlet, 606-Subsurface Drain, 620-Underground Outlet, and 638 Water and Sediment Control Basin. When a subsurface drain is used in conjunction with this practice, a wetlands determination shall be performed prior to installation.

7. All practice components implemented must be maintained for a minimum of 10 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. A rate based on 90% of the ~~cost of all eligible components~~approved estimated cost or eligible actual cost, whichever is less, has been established. Cost-share may be from state funds or a combination of state and other sources.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

Name of Practice: STREAMBANK STABILIZATION
DCR Specifications for No. WP-2A

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

A. Description and Purpose

This practice promotes protection methods along streams that reduce erosion, sedimentation, and the pollution of water from agricultural non-point sources.

The purpose of this practice is to offer an incentive that will change land use, provide vegetative stabilization or improve management techniques to more effectively control soil erosion, sedimentation and nutrient loss from surface runoff to improve water quality.

B. Policies and Specifications

1. Cost-share and tax credits are authorized for:
   i. Vegetative work. This includes temporary seedings as well as permanent herbaceous, woody, or shrub species. Cost-share and tax credits are authorized for riprap when it is used to secure the slope's toe only. Cost-share and tax credits are not authorized for structural measures such as gabions, walls or riprap on side slopes. If needed in conjunction with vegetative work, it must be at the applicant's expense.
   ii. Grading and shaping of the bank to achieve proper slope and seeding conditions.
   iii. Providing access to water for livestock by installing livestock crossings that will retard sedimentation and pollution. When no other water source is feasible or exists, a controlled hardened access may be used to provide livestock access to water. The installation of livestock crossings and controlled hardened accesses are limited to small streams. Where required, permits must be obtained by the applicant from authorities before the practice will be approved.
   iv. Streambanks bordering only agricultural and forestal lands. Other land, such as recreational, urban and built-up or residential lots are not eligible.

2. Streambank stabilization performed under the practice shall be protected from damage by livestock and equipment. For fencing, the **WP-2 Stream Protection** practice must be used.

3. Cost-share and tax credit are **not** authorized for tidal waters; only freshwater streams are eligible. Cost-share is not authorized for the establishment of marsh or dune stabilization species. All appropriate local, state and federal permits must be obtained before cost-share can be authorized.

4. Consideration must be given to wildlife and environmental issues when designing the practice.

5. Soil loss rates must be computed for all applications for use in establishing priority considerations.

6. This is a one-time incentive and not eligible for reapplication on the same site. Lifespan requirements can be waived if damaged by flooding.

7. This practice is subject to the following NRCS standards on a site specific basis, if utilized: 342 Critical Area Planting, 382 Fence, 472 Use Exclusion, 575 Trails and Walkways, 578 Stream Crossing, 580 Stream bank and Shoreline Protection, and 612 Tree/Shrub Establishment.

8. All practice components implemented must be maintained for a minimum of five 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 when combined with any other cost-share program, will not exceed 75% of the ~~total eligible costs~~approved estimated cost or eligible actual cost, whichever is less.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

Name of Practice: STREAM PROTECTION
(FENCING WITH NARROW WIDTH BUFFER)
DCR Specifications for No. WP-2N

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

A. Description and Purpose

This practice provides stream protection by fencing along all live streams or live water in a field to reduce erosion, sedimentation, and the pollution of water from agricultural non-point sources.

The purpose of this practice is to offer an incentive that will change land use or improve management techniques to more effectively control soil erosion, sedimentation, and nutrient loss from surface runoff to improve water quality.

B. Policies and Specifications

1. Cost-share and tax credit are authorized for:
    i. Permanent fencing to protect streambanks from damage by domestic livestock. Cost-share may be authorized for fencing as a single eligible component that stands alone as a measure that will significantly improve water quality.
    ii. To provide access to water for livestock by installing livestock crossings that will retard sedimentation and pollution. When no other water source is feasible or exists, a controlled hardened access may be used to provide livestock access to the water. The installation of livestock crossings and controlled hardened accesses is limited to small streams. When required, permits must be obtained by the applicant from authorities before the practice will be approved.
    iii. Fencing, as a single eligible component, only if all of the following apply:
        a. The minimum fence setback from the stream must be either (i) at least 10 feet or (ii) at least 25 feet, except as designed in areas immediately adjacent to livestock crossings and controlled hardened accesses. Note: For stream protection projects with a buffer of 35 feet or greater, please use WP-2W.
        b. Wetlands, intermittent springs, seeps and gullies adjacent to streams should be included in the buffer area. Isolated seeps, springs or wetlands may be fenced as well.
        c. There is adequate natural or planted vegetation between the fence and the stream to serve as an effective filter strip to improve water quality.

2. 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.
    i. When both sides of the stream are under the same ownership, livestock must be excluded from both sides of the stream.

3. The intent of this stream protection practice is for the fields adjacent to the buffer to remain in pasture for the length of the contract lifespan. If any part of this practice is damaged or destroyed during contract lifespan, the participant shall be subject to pro-rated repayment per the Practice Failures section of the VACS Guidelines. If the fields adjacent to the buffer are converted to any other use during contract lifespan, those fields will be ineligible for any VACS Program funding until the stream protection practice lifespan expires or the pro-rated repayment has been made.

4. Cost-share and tax credit are not authorized for:
    i. Boundary fencing if it is being used to bring new pasture into production. If the stream is the barrier currently confining the livestock, then fencing is allowed.
    ii. Interior cross fencing that does not exclude livestock from the stream.
    iii. Rebuilding of existing fence.
    iv. Temporary fencing.
    v. Hardened travel lanes that are not attached to a crossing or limited access.

5. 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 may not receive cost-share.

6. Wildlife, environmental, and livestock shade considerations must be given when designing the practice.

7. This is a one-time incentive payment not eligible for reapplication on the same site. Lifespan requirements can be waived if damaged by flooding.

8. Soil loss rates must be computed for all practices for use in establishing priority considerations.

9. This practice phase is subject to NRCS Standards 342 Critical Area Planting, 382 Fence, 390 Riparian Herbaceous Cover, 472 Access Control, 575 Trails and Walkways and 578 Stream Crossing.

10. All practice components implemented must be maintained for a minimum of either five years or 10 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 estimated cost or eligible 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'	10 years	70%
	5 years	65%
10'	10 years	60%
	5 years	55%

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

Name of Practice:
STREAM PROTECTION (FENCING WITH WIDE WIDTH BUFFER)
DCR Specifications for No. WP-2W

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

A. Description and Purpose

This practice provides stream protection by fencing along all live streams or live water in a field, to reduce erosion, sedimentation, and the pollution of water from agricultural nonpoint sources.

The purpose of this practice is to offer an incentive that will change land use or improve management techniques to more effectively control soil erosion, sedimentation, and nutrient loss from surface runoff to improve water quality.

B. Policies and Specifications

1. Cost-share and tax credit are authorized for:
    i. Permanent fencing to protect streambanks from damage by domestic livestock. Cost-share may be authorized for fencing as a single eligible component that stands alone as a measure that will significantly improve water quality.
    ii. Providing access to water for livestock by installing livestock crossings that will retard sedimentation and pollution. When no other water source is feasible or exists, a controlled hardened access may be used to provide livestock access to the water. The installation of livestock crossings and controlled hardened accesses is limited to small streams. When required, permits must be obtained by the applicant from authorities before the practice will be approved.
    iii. Fencing, as a single eligible component, only if all of the following apply:
        a. The minimum fence setback from the stream must be at least 35 feet, except as designed in areas immediately adjacent to livestock crossings and controlled hardened accesses.
        b. Wetlands, intermittent springs, seeps and gullies adjacent to streams should be included in the buffer area. Isolated seeps, springs or wetlands may be fenced as well.
        c. There is adequate natural or planted vegetation between the fence and the stream to serve as an effective filter strip to improve water quality.

2. 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. If at any time during practice lifespan the participant is found to be grazing (including flash grazing) their livestock in the buffer, as documented by photographic evidence, the District shall require the repayment of the entire buffer payment (i.e. non-prorated).
    i. When both sides of the stream are under the same ownership, livestock must be excluded from both sides of the stream.

3. The intent of this stream protection practice is for the fields adjacent to the buffer to remain in pasture for the length of the contract lifespan. If any part of this practice is damaged or destroyed during contract lifespan, the participant shall be subject to pro-rated repayment per the Practice Failures section of the VACS Guidelines. If the fields adjacent to the buffer are converted to any other use during contract lifespan, those fields will be ineligible for any VACS Program funding until the stream protection practice lifespan expires or the pro-rated repayment has been made.

4. Cost-share and tax credit are not authorized for:
    i. Boundary fencing if it is being used to bring new pasture into production. If the stream is the barrier currently confining the livestock, then fencing is allowed.
    ii. Interior cross fencing that does not exclude livestock from the stream.
    iii. Rebuilding of existing fence.
    iv. Temporary fencing.
    v. Hardened travel lanes that are not attached to a crossing or limited access.

5. 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 may not receive cost-share.

6. Wildlife, environmental, and livestock shade considerations must be given when designing the practice.

7. This is a one-time incentive payment not eligible for reapplication on the same site. Lifespan requirements can be waived if damaged by flooding.

8. Soil loss rates must be computed for all practices for use in establishing priority considerations.

9. This practice phase is subject to NRCS Standards 342 Critical Area Planting, 382 Fence, 390 Riparian Herbaceous Cover, 472 Access Control, 575 Trails and Walkways and 578 Stream Crossing.

10. All practice components implemented must be maintained for a minimum of either five years or 10 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 estimated cost or eligible 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 15 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
35'	10 years	80%	$80 per acre per year	$12,000 per contract
	5 years	75%	$80 per acre per year	$6,000 per contract

NOTE: The buffer payment cap is the maximum a participant can be paid per tract even when multiple practices with buffer payments are approved in a given program year (for example, but not limited to, FR-3, SL-6F, SL-6W, WP-2W and WQ-1).

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

Name of Practice: SOD WATERWAY
DCR Specifications for No. WP-3

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's sod waterways practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice creates a natural or constructed waterway shaped or graded and established in suitable vegetation in order to safely convey water across areas of concentrated flow.

Its purpose is to improve water quality by reducing the movement of sediment and nutrients from agricultural non-point sources.

B. Policies and Specifications

1. Cost-share and tax credit are authorized for site preparation, grading, shaping, filling, and establishing permanent vegetative cover.

2. Cost-share is also authorized for permanent fencing, subsurface drains or stone lined centers that are necessary for proper functioning of the waterways. If cost-share is provided for permanent fencing, livestock exclusion is required through the lifespan of the practice.

3. Livestock must be excluded after planting for a minimum of 12 months.

4. The cover may consist of sod-forming grasses, legumes, mixtures of grasses and legumes, or other types of vegetative cover that will provide the needed protection from erosion.

5. Close-sown small grains, annuals, or mulching may be used for temporary protection if followed by eligible permanent vegetative cover established by seeding or natural re-vegetation.

6. Soil loss rates must be computed for all applications for use in establishing priority considerations.

7. This practice is subject to NRCS Standard 412 Grassed Waterways, 342 Critical Area Planting, 382 Fence, 484 Mulching, 606 Subsurface Drain, 620 Underground Outlet. When a subsurface drain is used in conjunction with the practice, a wetlands determination shall be performed prior to installation.

8. All practice components implemented must be maintained for a minimum of 10 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. A rate based on 75% of the ~~cost of all eligible components~~approved estimated cost or eligible actual cost, whichever is less, has been established. Cost-share may be from state funds or a combination of state and other sources.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

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

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

A. Description and Purpose

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

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

B. Policies and Specifications

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

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

~~iii. Poultry Dry Stack facilities should only be built after the completion of 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.~~iii. The applicant is ~~also~~ required to sign ~~a~~ the Dry Manure Storage Structure Agreement ~~DCR199-86 (03/18)~~ or similar District agreement which addresses the minimum criteria prior to receiving any funds.

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

3. Cost-share and tax credit is authorized:
   i. For animal waste storage facilities, such as dry stacking storage, aerobic or anaerobic lagoons, liquid manure tanks, solid/liquid separation, holding ponds, collection basins, settling basins, and similar facilities, as well as diversions, channels, waterways, designed filter strips, outlet structures piping, land shaping, and similar measures needed as part of a system on the farm to manage animal wastes as outlined below:
      a. Permanently installed equipment needed as an integral part of the system.
      b. Solid/liquid separation is eligible when the manure storage is not adequate and this is the least cost, technically feasible alternative to a new liquid pit.
      c. Vegetative cover (including mulching needed to protect the facility).
      d. Leveling and filling to permit the installation of an effective system.
   ii. Only if the facilities will contribute significantly to improving the soil or water quality by providing protected storage for on-site generated waste.
   iii. For the waste storage facility as a part of the relocated livestock or poultry operation, if the original facility is contributing significantly to a water quality problem.
   iv. For individual components of animal waste systems, only if:
      a. A DCR Agricultural BMP Engineer determines that the component stands alone as a measure that will significantly improve water quality and
      b. Only where a no-discharge permit for a waste storage facility is not required.
   v. For wastewater storage facilities as a stand-alone component with a minimum storage of 120 days.
   vi. For a waste storage system to store manure produced for a consecutive period up to six months based on existing need. All components of a waste storage system (regardless of funding source) must be designed to match the amount of manure storage capacity required.
   Exceptions to the six month storage criteria are:
      a. Liquid storage which may provide storage for manure produced during a consecutive seven month period based on existing need.
      b. Poultry layer/breeder operations may provide storage for manure

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

vii. The construction of a fabricated liquid waste storage structure and associated components if it is the only acceptable alternative (based on site limitations [i.e., high water table, karst topography, etc.]) for liquid waste management.

4. Cost-share and tax credit are not authorized:
   i. For operations that do not currently have a way to collect manure (i.e., existing feeding facilities, hardened pads, etc.).
   ~~i.~~ii. For measures primarily for the prevention or abatement of air pollution, unless the measures also have soil and water conserving benefits.
   ~~ii.~~iii. For the following:
      a. Portable pumps.
      b. Pumping equipment for unloading facilities.
      c. Buildings or modifications of buildings to house pumping equipment.
      d. Spreading animal wastes on the land, including distribution system using irrigation pipelines.
   ~~iii.~~iv. For animal waste facilities that do not meet local or state regulations.
   ~~iv.~~v. For installation primarily for the operator's convenience.
   ~~v.~~vi. For dairy, beef, poultry and swine confined feeding operations that are planned or under construction. A water quality problem must already exist for cost-share to be approved for a BMP. The number of livestock that would be used to design the animal waste control facility must be present before consideration for cost-share can be given.
   ~~vi.~~vii. For waste storage facilities that will not store manure produced on the operation where the facility is to be located. End user facilities are not authorized.

5. All applicants must have:
   i. The storage capacity calculations of animal waste facilities reviewed and approved by a DCR Agricultural BMP Engineer (except for practices previously sized and engineered by NRCS) and coordinated with the Nutrient Management Plan so that adequate storage capacity is installed.

6. All appropriate local and state permits must be obtained before cost-share and/or tax credits are authorized.

7. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria

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

8. This practice is subject to NRCS standards 313 Waste Storage Facility, 342 Critical Area Planting, 359 Waste Treatment Lagoon, 362 Diversion, 367 Roofs and Covers, 558 Roof Runoff Structure, 561 Heavy Use Protection, 620 Underground Outlet, 632 Solid/Liquid Waste Separation Facility, 633 Waste Recycling and 634 Waste Transfer.

9. All practice components implemented must be maintained for a minimum of 15 years following the calendar year of installation. The lifespan begins on Jan. 1 of the calendar year following the year of certification of completion. By accepting either a cost-share payment or a state tax credit for this practice, the participant agrees to maintain all practice components for the specified lifespan. This practice is subject to spot check by the District throughout the lifespan of the practice and failure to maintain the practice may result in reimbursement of cost-share and/or tax credits.

C. Rate(s)

1. The state cost-share payment, alone or if combined with any other cost-share payment, will not exceed 75% of the ~~total eligible cost~~approved estimated cost or eligible actual cost, whichever is less.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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

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

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~~ waste stored outside? Was this due to unfavorable conditions beyond your control? Explain. Also locate the storage sites utilized.
   a.

   b.

   c.

   Explanation:

5. How many livestock per year or birds per flock do you normally ~~produce~~raise? Their size, type, etc.

6. How many flocks/herds per year do you normally ~~produce~~raise?

7. How often do you clean out or scrape in a year's period? When and how is the ~~litter~~ waste used and/or stored? Also give the number of partial and total clean outs for poultry.

8. What use do you make of the ~~litter~~ waste 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~~ waste on in your operation?

Pasture acres _ Hay acres _ Cropland _

Completed by: _

_____ _____

Signature Date Title

Dry Manure Storage Structure Agreement

The Waste Storage Structure or winter-feeding facility must be utilized in accordance with a Nutrient Management Plan prepared and certified by a Virginia certified Nutrient Management Planner and, if needed, a transfer plan prepared by a Virginia certified Nutrient Management Planner for any livestock or poultry waste. The Plan identifies specific requirements related to waste storage, utilization and disposal. These requirements must be met in order to remain in program compliance.

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.

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.

The structure must be maintained in strict accordance with the NRCS maintenance guidelines.

The District imposes that (District check one of the following):

The structure is to be used for storage of manure only. ____

The applicant must request prior district approval for storage of non-manure items. ____.

During times when the structure is not filled with manure, shavings or temporary housing of mobile farm equipment or composted poultry carcasses resulting from normal mortality is permitted. This is only if it does not affect compliance with the Nutrient Management Plan or transfer plan. ____

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

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~~

~~DCR199-86 (04/19) Revised April 2020~~

Name of Practice: DAIRY LOAFING LOT MANAGEMENT SYSTEM
DCR Specifications for No. WP-4B

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Dairy Loafing Lot Management System best management practice which are applicable to all contracts entered into with respect to that practice.

A. Purpose and Description

This practice is designed to prevent those areas exposed to heavy livestock traffic on dairy operations from experiencing excessive manure and soil losses due to the destruction of ground cover. Unimproved loafing lots that are used for dairy herd exercise and loafing are usually denuded of vegetation and harbor undesirable plants.

The intent of this practice is to prevent manure and sediment runoff from entering watercourses and sensitive karst ~~areas~~ features and to capture a portion of the manure as a resource for other uses such as crop fertilizer. This is accomplished by dividing the area into lots. The dairy cattle are rotated from lot to lot as is necessary to maintain a vegetative cover. One lot is designated as a sacrifice area for use in periods of wet weather. If a sacrifice area is impractical due to soil and/or topographical conditions, a loose housing structure may be substituted for the sacrifice lot. The sacrifice lot or covered facility includes a feeding area as well as a bedded area with a manure storage area if needed. This practice is for dairy cattle only.

B. Policies and Specifications

1. A management plan and practice design are to be developed with consultation from a qualified consultant, VCE, NRCS and/or District.

2. A minimum of three grassed loafing paddocks are required. Each grassed loafing paddock will be sized based on soil type, topography and herd size, not to exceed a stocking rate of twenty cattle (1,000 lb. EAU) per acre, and be maintained in permanent forage.

3. All live streams must be fenced from livestock use in the loafing paddocks and sacrifice area. A minimum 35 foot buffer must be maintained.

4. Concrete walkway(s) with curbing or other hardened walkway(s) may be installed to facilitate herd movement from the barn to the loafing lots. Crusher run is not an acceptable surface material. Slope shall be no greater than 8%. See VCE publication on installing dairy lanes.

5. A sacrifice area is required unless adequate housing facilities are available (e.g. free stall barns):
   i. Sacrifice area (if needed) must be scraped periodically.
   ii. The sacrifice area should be sized between 600 and 650 square feet per animal (1,000 lb. equivalent). It should be sloped between 1% minimum to 8% maximum.

iii. Divert surface water away from the sacrifice area.
iv. Provide filter strip per NRCS Standard 393 to filter runoff from the sacrifice area.

6. In order for the forage to take up nutrients such as nitrogen, it must be managed for growth and harvested for hay when possible. Dry cows or other grazers can be used to remove forage growth.

7. Critical eroding and sensitive areas will be fenced out and permanent cover established.

8. If a sacrifice lot is impractical due soil and/or topographical conditions, a loose housing structure may be substituted for the sacrifice lot:
   i. All other potential more cost-effective approaches to reducing the water quality impact from the unimproved loafing lot must have been explored and rejected due to economic inefficiency or lack of space for relocation before cost-share or tax credit can be approved for constructing a loose housing structure.
   ii. Cost-share funding for a loose housing structure will only be authorized if a *Risk Assessment for Water Impairment from Concentrated/Feeding/Loafing Livestock Areas* has been completed and a score of 120 or greater has been obtained.
   iii. General Design guidelines for Loose Housing Structures
      a) Bedded pack space requirements:
         - 60 sq. ft. per heifer minimum
         - 100 sq. ft. per lactating cow minimum
         - 120 sq. ft. per dry cow
      b) If the loose housing structure is to have a roof, wind and snow loads shall be as specified in NRCS 367 Roofs and Covers or ASAE EP288.5 Agricultural Building Snow and Wind Loads. A Professional Engineer shall certify roof designs. If the facility is to serve as part of a foundation or support for a building, the total load shall be considered in the structural design.

9. 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, is required for either land application or a planned waste management system for any other uses of manure produced. The Nutrient Management Plan should address all the acreage that the participant farms onto which manure from the loafing lot system will be applied. The Nutrient Management Plan should be implemented and maintained for the life of the practice. Storage capacity of animal waste facilities should be coordinated with the Nutrient Management Plan so that adequate storage capacity is installed for the specific cropping system.

10. If a loose housing structure is included as part of the practice, manure storage associated with the manure collection area of the feed lane should be considered as an eligible component of the practice.

i. The applicant is required to sign ~~a~~ the Dry Manure Storage Structure Agreement ~~(DCR199-86, Revised 03/18)~~ or similar District agreement which addresses the minimum criteria prior to receiving any funds.
ii. When a feed lane is utilized, manure storage shall be sized based upon livestock time at feed bunks, up to six (6) months storage of existing need.

11. Cost-share is authorized for watering facilities in the loafing lots.

12. 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 upon which this practice will be implemented (including all associated 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; 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).

13. This practice is subject to NRCS Standards 313 Waste Storage Facility, 342 Critical Area Planting, 362 Diversion, 356 Dike, 367 Roofs and Covers, 382 Fencing, 391 Riparian Forest Buffer, 393 Filter Strip, 412 Grassed Waterway, 512 Pasture and Hay Planting, 516 Livestock Pipeline, 533 Pumping Plant, 558 Roof Runoff Structure, 561 Heavy Use Area Protection, 574 Spring Development, 575 Trails and Walkways, 578 Stream Crossing, 614 Watering Facility, 620 Underground Outlet, 632 Solid Liquid Separation Facility, 633 Waste Recycling, 634 Waste Transfer, and 642 Water Well.

14. 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~~approved estimated cost or eligible actual cost, whichever is less.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

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.

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 which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice creates a planned system designed to manage the treatment and disposal of poultry, small ruminant 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, small ruminant 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 mortality carcasses.

2. 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. 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).

3. Expenses are authorized:
   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.

4. 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. 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.

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 upon which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

6. All appropriate local and state permits must be obtained before cost-share payments are authorized.

7. This practice is subject to NRCS Standards 313 Waste Storage Facility, 316 Animal Mortality Facility, 317 Composting Facility, 362 Diversion, 367 Roofs and Covers, 558 Roof Runoff Structure, 561 Heavy Use Area, 620 Underground Outlet, 633 Waste Recycling, and 634 Waste Transfer.

8. 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~~approved estimated cost or eligible actual cost, whichever is less, of poultry, small ruminant and swine composting facilities only.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the Manual.

3. 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.

Name of Practice: ANIMAL MORTALITY INCINERATOR FACILITIES
DCR Specifications for No. WP-4F

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Animal Mortality Incinerator Facility which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice provides a planned mortality incineration system that will dispose of poultry and livestock carcasses resulting from normal mortality.

B. Policies and Specifications

1. Cost-share and tax credit programs are available to participants to implement an incineration facility to protect and improve water quality by encouraging better mortality management by incinerating poultry and livestock carcasses resulting from normal mortality and spreading or properly disposing of the residual material at the proper time, rate, and location.

2. This practice is designed to provide facilities for incinerating poultry and livestock carcasses from normal mortality. Incinerators must be sized to accommodate normally expected mortality from the existing operation, and may not consider future expansion of the operation.

3. Authorized participants receive cost-share funds to construct an incineration facility to meet their needs and management capabilities. All applicants must have:
   i. A written operation and management plan for each incineration facility.
   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 animal wastes, which are land applied. The Nutrient Management Plan shall be implemented and maintained for the life of the practice.
   iii. A method of disposal of the residual from the incineration facility that does not increase non-point source contamination of state waters if a nutrient management plan is not required for that residual.

4. Expenses are authorized for incinerators sized to accommodate normal expected mortality based upon the type and number of animals currently managed at the operation including:
   i. For leveling and filling to permit the installation of an effective system.
   ii. For concrete construction necessary for the structure's foundation and a minimal work area needed to operate the incinerator.
   iii. For a fuel tank and/or fuel lines sized to supply the incinerator.
   iv. For concrete construction necessary for the structure's foundation and a minimal work area needed for equipment to load and unload the residuals from incineration.

5. Expenses are not authorized:
   i. For incinerator facilities that do not meet local, state or federal regulations.
   ii. For planned facilities. An existing water quality problem must be apparent to be eligible for funds.
   iii. For replacing or upgrading an existing incinerator. Cost-sharing is not authorized for planned enlargement of animal operations. However, cost-share funds are available for use to solve existing water quality problems.

6. Compliance with all appropriate local and state laws, regulations and zoning ordinances is required before cost-share payments are issued. This includes, but is not limited to, acquisition of permits and completion of inspections as required.

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 upon which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

8. This practice is subject to the NRCS Standards 316 Animal Mortality Facility, 317 Composting Facility, 362 Diversion, 367 Roofs and Covers, 558 Roof Runoff Structure, 561 Heavy Use Area, 620 Underground Outlet, 633 Waste Utilization and 634 Waste Transfer.

C. All practice components implemented must be maintained for a minimum of 10 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.

D. 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~~approved estimated cost or eligible actual cost, whichever is less, of the animal mortality incinerator facility only.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If the participant receives cost-share payments, only the percent of the total cost of the project that the participant contributed is used to determine the tax credit.

E. 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.

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 Feeding Pad best management practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice provides 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~~ features 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. 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.

3. 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 50 sq. ft. per animal unit. Cost-share funds cannot be used to accommodate expansion of the herd size.

4. 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.

5. 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.
    i. 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.

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

7. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented (including all associated 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; 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 342 Critical Area Planting, 362 Diversion, and 561 Heavy Use Protection.

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~~approved estimated cost or eligible actual cost, whichever is less.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices, as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

Name of Practice: ANIMAL WASTE CONTROL FACILITY FOR CONFINED LIVESTOCK OPERATIONS
DCR Specifications for No. WP-4LC

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Animal Waste Control Facilities for Confined Livestock Operations best management practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice provides 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 environmentally sensitive features such as karst ~~areas~~features, as well as capturing a portion of the manure as a resource for other uses by storing and spreading waste at the proper time, rate, and location.

Each covered facility requires 100% confinement of livestock which includes a feeding area, as well as a bedded or manure pack area with a manure storage area, if needed. Permanent removal of livestock from all acres associated with the confined livestock is required. All associated acres must be re-vegetated. This practice is not intended for grazing operations.

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. The District shall consider all existing animal waste storage facilities on the same property when sizing a new manure storage facility. The District should determine on a case-by-case basis whether any existing manure storage facilities (cost-shared or non-cost-shared) are adequate for continued manure storage. Existing storage deemed adequate shall be deducted from the total storage need calculation to determine the amount of additional storage eligible for cost share.
    ii. Before cost-share or tax credit can be approved all 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.

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

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

v. The confinement structure shall be managed as either a:

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 four feet 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.

vi. All associated acres shall be re-vegetated to ensure permanent grass cover (reference SL-11 practice specification) or shall be converted to cropland and managed to a soil loss of T and managed in compliance with the SL-15B practice specification. For backgrounding and finishing operations, only the acres associated with the concentrated feeding that contribute to the resource concern must be converted.

vii. This practice is not applicable on the same acreage associated with an active stream exclusion contract that is under lifespan, winter feeding facility, or feeding pad.

3. Cost-share and tax credit is authorized for:

i. Pack area sized based on the current herd size and planned feeding method, not to exceed 75 sq. ft. per animal unit. Pack area feeding or feed lane shall be sized based on the planned feeding method.

ii. Feed lane for a bedded pack facility. When a feed lane is utilized, a manure storage area sized based on livestock time at feed bunks, up to six (6) months storage of existing need.

iii. Water system components to provide a functional structure.
iv. Roofs over the feeding area and manure storage area and roof runoff system.
v. Establishment of permanent vegetative cover on acreage addressed by this practice.
vi. 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;
    b. Only where a no-discharge permit for a waste storage facility is not required.
vii. Appurtenances needed to contain manure within the facility.

4. Cost-share and tax credit is not authorized for:
    i. Conversion to cropland of acreage addressed by this practice.
    ii. Fencing and/or walkways.
    iii. Storage of manure generated outside of this facility.
    iv. Grazing operations
    v. Dry material, tillage, ventilation and/or aeration.
    vi. Concrete floors for bedded pack facilities.
    vii. Feed lane and associated manure storage for a manure pack facility.

5. Compliance checks 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 VACS 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 Agricultural 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. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented (including all associated 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; 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).

9. This practice is subject to NRCS standards 313 Waste Storage Facility, 342 Critical Area Planting, 362 Diversion, 367 Roofs and Covers, 412 Grassed Waterway, 558 Roof Run Off Structure, 561 Heavy Use Protection, 620 Underground Outlet, 633 Waste Recycling and 634 Waste Transfer.

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. 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~~approved estimated cost or eligible actual cost, whichever is less.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

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

This practice creates 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~~ features 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.

The sacrifice lot or covered facility 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 feet 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~~ the Dry Manure Storage Structure Agreement ~~(DCR199-86, Revised 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.
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 strips 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 feet 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 six 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. 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 VACS 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 Agricultural 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. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented (including all associated 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; 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).

9. This practice is subject to NRCS standards 313 Waste Storage Facility, 342 Critical Area Planting, 362 Diversion, 367 Roofs and Covers, 382 Fence, 393 Filter Strip, 412 Grassed Waterway, 512 Pasture and Hay Planting, 516 Livestock Pipeline, 533 Pumping Plant, 558 Roof Runoff Structure, 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~~approved estimated cost or eligible actual cost, whichever is less.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

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 Seasonal Feeding Facility with Attached Manure Storage best management practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice provides 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~~ features 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.

This covered concrete facility 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~~ the Dry Manure Storage Structure Agreement ~~(DCR199-86, Revised 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.

iv. Feeding area shall be sized on the current herd size and planned feeding method, not to exceed 50 sq. ft. 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. Individual components of animal waste systems, only if the DCR Agricultural 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. 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. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented (including all associated 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; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

8. This practice is subject to NRCS Standards 313 Waste Storage Facility, 342 Critical Area Planting, 362 Diversion, 367 Roofs and Covers, 382 Fence, 412 Grassed Waterway, 558 Roof Runoff Structure, 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. 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~~approved estimated cost or eligible actual cost, whichever is less.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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

Revised April ~~2021~~2023

Name of Practice: RIPARIAN GRASS FILTER STRIPS
DCR Specification No. WQ-1

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

A. Description and Purpose

Riparian grass filter strips are vegetative buffers that are located along the banks of water courses to filter runoff, anchor soil particles, and protect banks against scour and erosion. Even the best conservation measures on a farm allow some soil movement during heavy rains. Filter strips are the stream's last line of defense against pollution. Since filter strips trap eroded soil, they help keep sediment out of streams. The strips also improve water quality by filtering out fertilizers, pesticides, and microorganisms that otherwise might reach waterways. In addition, riparian grass filter strips along streams serve as environmental corridors. They provide valuable food, cover, and travel ways for some wildlife species. As a result, they permit a greater diversity of wildlife, which, in turn, contributes to a more stable environment. Also, these living filters are aesthetically pleasing.

Cost-share will be provided to install and maintain riparian grass filter strips that are located adjacent to cropland or animal holding areas.

B. Policies and Specifications

1. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

2. Filter strips planned for sediment and related pollutant control are subject to the following state specifications:
   i. Riparian grass filter strips shall be designed and installed to filter sheet flow, rather than concentrated flow. If concentrated flow will occur, land smoothing or the use of some other BMP or combination of BMPs may be required (such as Grassed Waterways and Structures for Water Control).
   ii. Filter strips must be a minimum 35' in width. The maximum filter width eligible for cost-share payment and tax credit is 100', except for wider segments of a contoured filter where the contour is typically 35' to 100' wide.

3. Riparian grass filter strips must be located within 100'of a live or intermittent waterway,

open sinkhole, abandoned well or Chesapeake Bay Preservation Act Resource Protection Area as defined by local ordinance. An intermittent waterway is considered as being, but not limited to, any channel or flood-prone area where periodic water flow or storage is diverted by surface drainage. Riparian grass filter strips may be installed along intermittent waterways where judged appropriate and feasible by the local technical authority.

4. All trees, stumps, brush, rocks and similar materials that may interfere with installing the filter strip should be removed. The materials should be disposed of in a manner that will not degrade the quality of the environment or interfere with the proper functioning of the filter strip.

5. No-till planting is preferable. If grading is necessary, conventional equipment can be used for preparing the seedbed, fertilizing and maintenance.

6. Lime and fertilize according to soil test to assure proper establishment. Established filter strips shall not receive any applications of nitrogen or phosphorus.

7. Soil loss rates must be computed for all applications for use in establishing priority considerations and reflect at minimum a 3-year cropping history.

8. State cost-share and tax credit will be provided only one time per filter strip, while that land is under the same ownership.

9. Select an appropriate planting mix for filtering runoff and protecting water quality from the NRCS Plant Establishment Guide for Virginia.

10. Maintenance
    i. In cropland, a vegetative filter strip should be maintained on each side of the watercourse. The buffer must be maintained as perennial species for the practice lifespan.
    ii. Protect the filter strip from damage by livestock. Grazing (including flash grazing) and haying are not allowed in the protected riparian area during the lifespan of this practice. If at any time during the practice lifespan the participant is found to be grazing (including flash grazing) their livestock in the buffer, as documented by photographic evidence, the District shall require the repayment of the entire buffer payment (i.e. non-prorated).
    iii. Do not use as a roadway.
    iv. Avoid operations that leave tillage or wheel marks.
    v. Woody stems should not be allowed to exceed 2 inches in diameter.
    vi. Avoid damaging filter area with herbicides.

11. Filter strips planned for runoff from concentrated livestock areas or controlled overland flows for the treatment of liquid wastes are subject to NRCS Specification 393 Filter Strip. This practice is subject to NRCS Standards 393 Filter Strip, 466 Land Smoothing, 572 Spoil Spreading and Leveling.

12. All practice components, including the vegetative cover implemented, must be maintained for a minimum of five years following the calendar year of certification of completion. Cost-share and tax credit must be refunded if the operator destroys the cover during this time. The lifespan begins on Jan. 1 of the calendar year following the year of implementation. 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 verification 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 estimated cost or eligible actual cost, whichever is less, and shall vary by the minimum buffer width and lifespan of the practice. The buffer payment rates shall be provided for a maximum of 15 acres. The rates including the buffer payment rates are:

Minimum Riparian Grass Filter	Lifespan	Cost-share rate	Buffer payment rate	Buffer payment cap
50'	15 years	100%	$80 per acre per year	$18,000 per contract
	10 years	95%	$80 per acre per year	$12,000 per contract
35'	15 years	90%	$80 per acre per year	$18,000 per contract
	10 years	85%	$80 per acre per year	$12,000 per contract

NOTE: The buffer payment cap is the maximum a participant can be paid per tract even when multiple practices with buffer payments are approved in a given program year (for example, but not limited to, FR-3, SL-6F, SL-6W, WP-2W and WQ-1).

2 As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share 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 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.

METHOD OF CALCULATING EROSION REDUCTION FOR FILTER STRIP (WQ-1)

The effectiveness of vegetative filter strip is directly related to a variety of site-specific conditions. Except for the actual area of grass vegetation, filter strips do not reduce active erosion in the contributing field, but only trap a percentage of the delivered sediment passing through this grass vegetation. Not all of the sediment that occurs in the field reaches the filter strip. For these reasons, the effectiveness of a filter strip must take into account sediment delivery and trapping efficiency in the calculation of water quality benefits.

Step 1: Determine size of filter strip and erosion rate.

a. Determine the length (ft.) and width (ft) for calculating the area (acres) of the filter strip. Acres will be the extent technically authorized.

b. Using RUSLE2, determine soil loss occurring in the field. Place this erosion rate in under the Sheet and Rill (tons/ac/yr) erosion reduction field in the Tracking Program

Step 2: Determine trapping efficiency of the filter area.

a. Determine the amount of delivered sediment to the filter strip by calculating the effective length of slope of the contributing field to the filter area. Maximum length allowed is 400 feet. Multiply the length of the filter strip (lfs) from Step 1 times the length of slope. Divide this number by 43,560 sq. ft. /acre to determine the contributing acreage.

$$\frac{\text{Length of Filter Strip} \times \text{Length of Slope}}{43{,}560}$$

Next, the contributing acreage is multiplied by the soil loss rate occurring on the field (previously calculated in Step #1) times a sediment delivery ratio (SDR) occurring in the field itself. Assume a SDR of 0.5.

Area x Erosion Rate x SDR = Delivered Sediment Load

b. Determine the amount trapped by multiplying the delivered sediment load times the trapping coefficient of the vegetation.

Sediment Load x Trapping Coefficient = Sediment Trapped

Use one of the following coefficients for your calculations:

Strip Width	Coefficient
35'	0.35
50'	0.50
100'	0.75

This trapping efficiency expressed in tons/year is placed in under Gross Erosion Reduction in tons/yr. field of the Tracking Program.

Example: 1,000-foot filter strip is planned for a 50-acre field; the slope length of the contributing area is approximately 250 feet. US soil loss rate is approximately 6 tons/ac./year. The filter strip itself is 50' wide.

Step 1: Size of filter area is to be placed in Extent Requested - 1.15 acres.

Erosion rate of 6 tons/ac/year to be placed in Sheet & Rill Reduction.

Step 2: Trapping efficiency

a. Delivered Sediment

Length of filter strip (1,000) x Length of Slope (250) 43,560

1,000 x 250 = 5.7 acres of contributing field 43,560

Area (5.7 ac) x Erosion Rate (6 tons/ac/yr) x SDR (0.5)

5.7 x 6 x 0.5 = Delivered Sediment Load of 17.1

b. Trapping coefficient

Sediment Load (17.1) x Trapping Coefficient (0.5) = 8.55 Round 8.55 up to 9

and place under Gross Erosion Reduction.

Name of Practice: WATER TABLE CONTROL STRUCTURES
DCR Specifications for No. WQ-5

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Water Table Control Structures best management practice which are applicable to all contracts, entered into with respect to that practice.

A. Description and Purpose

This practice establishes a water control structure for the management of drainage water designed to regulate and manage drainage water to improve water quality by trapping sediment and managing dissolved or suspended nutrients.

B. Policies and Specifications

1. Cost-share and tax credit are authorized for the construction or purchase of and installation of a water control device within a drainage system which will regulate the water level for nutrient uptake by plants and allow for denitrification by natural factors.

2. Control structures must meet all engineering requirements for drainage.

3. Cost-share is not authorized where the main purpose is sub-irrigation. The intent is for effective nutrient management by controlling water levels for specific site conditions throughout the year.

4. Soil loss rates do not need to be computed for this practice. Effectiveness is based on drainage area above the structure and the nutrient reduction achieved.

5. This practice is subject to NRCS Standard 587 Structure for Water Control.

6. All practice components implemented must be maintained for a minimum of 10 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. A rate based on 75% of the ~~cost of all eligible components~~approved estimated cost or eligible actual cost, whichever is less, has been established. Cost-share may be from state funds or a combination of state and other sources.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

Name of Practice: AGRICULTURAL SINKHOLE PROTECTION
DCR Specifications for No. WQ-11

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

A. Description and Purpose

This practice will provide a protection method to improve groundwater quality from surface contamination.

The purpose of this practice is to improve water quality by removing sources of pollution from sinkholes and providing an adequate buffer to trap and filter sediments and nutrients from surface flows that enter the groundwater through sinkholes.

B. Policies and Specifications

1. Cost-share and tax credits are authorized:
   i. For measures to remove and properly dispose of all foreign materials and debris dumped in and around sinkholes.
   ii. For associated structural and agronomic measures to provide adequate vegetation for filtering and sediment trapping of surface run off.
   iii. For fencing in order to provide livestock exclusion and personal safety in these areas.

2. Consideration should be given to wildlife, any rare, threatened and/or endangered species (federal or state), and enhancing the appearance of the area when establishing the protective measures.

3. Site geology and hydrology must be considered in planning and installing component practices. Any openings such as swallets or cave entrances encountered with the installation of this practice will be documented and reported to The Department of Conservation and Recreation Division of Natural Heritage.

4. All debris (except biodegradable woody debris, rocks, and other mineral matter) removed from the sinkhole will be transported off site and disposed of in an environmentally safe manner. Should any hazardous material be anticipated or found during construction, local officials dealing with hazardous materials must be notified. Prevention methods, such as on site "over pack" drums, may be required if hazardous materials are known to exists at the site.

5. Once established, no additional debris or material can be placed within the sinkhole proper or within 50 feet of the drainage ways leading into the sinkhole. Deposition of any foreign material will violate the lifespan requirements of this standard.

6. All land disturbance activity will be adequately stabilized with appropriate vegetation as part of this cleanup effort. Appropriate vegetation will include, whenever possible, native grasses and shrubs.

7. Priority will be given to those sinkholes that:
   i. Have direct livestock access or are connected to drainage ways with livestock access, in which case the sinkhole protection BMP should be installed in conjunction with fencing the livestock out of the drainage way.
   ii. Are actively taking water by way of perennial streams, intermittent streams, or any other channeled flow.
   iii. Are connected to external, non-channelized drainage ways (swales).
   iv. Exhibit multiple characteristics cited in item C.8.

8. This practice is subject to NRCS Standard 500 Obstruction Removal, 342 Critical Area Planting, 362 Diversion, 382 Fence, 390 Riparian Herbaceous Buffer, 391 Riparian Forest Buffer, 393 Filter Strip, 472 Access Control, and 612 Tree and Shrub Establishment.

9. All practice components implemented must be maintained for a minimum of 10 years following the calendar year of certification of completion. The lifespan begins on Jan. 1 of the calendar year following the year of implementation. 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. This practice pays 75% of the ~~cost~~ approved estimated cost or eligible actual cost, whichever is less, of all eligible components required to protect the sinkhole and remove debris.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

Name of Practice: ROOF RUNOFF MANAGEMENT SYSTEM
DCR Specifications for No. WQ-12

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

A. Description and Purpose

This practice establishes a planned system designed to manage roof runoff from agricultural structures in areas where concentrated runoff creates a water quality concern through contact with animal waste such as barnyards and feeding areas. This practice is designed to collect, control and convey precipitation runoff from a roof to an appropriate discharge area in a way that will protect water quality.

The purpose of this practice is to protect water quality by capturing roof runoff and routing it away from contaminated and/or sensitive areas to control bacteria and nutrient input.

B. Policies and Specifications

1. Eligibility: Cost-share and tax credit are limited to solving an identified water quality concern resulting from precipitation runoff from the roof of an existing agricultural structure that becomes contaminated by contact with animal waste and is polluting surface or ground water. This practice is for retro-fit of an existing agricultural structure only. The existing structure shall be suitable and adequate for installation of properly designed gutters over the course of the lifespan of the practice. Roof runoff management systems on new or planned structures and/or non-agricultural structures are not eligible.

2. Cost-share and tax credit are authorized:
   i. For gutters, down spouts, fascia boards, snow and ice retaining systems, collector pipes, cisterns, subsurface drains, underground outlets, diversions, channels, waterways, designed filter strips, land shaping, and similar measures needed as part of a system to manage roof runoff.
   ii. Only if the planned system will contribute significantly to protecting the water quality by keeping roof runoff away from contaminated and/or sensitive areas.

3. This practice is subject to NRCS standards: 362 Diversion, 558 Roof Runoff Structure, 561 Heavy Use Protection, 342 Critical Area Planting, 393 Filter Strip, 412 Grassed Waterway, 468 Lined Waterway or Outlet, 606 Subsurface Drain, and 620 Underground Outlet.

4. All practice components implemented must be maintained for a minimum of 10 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~~approved estimated cost or eligible actual cost, whichever is less.

2. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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.

Name of Practice: RELOCATION OF CONFINED FEEDING OPERATIONS FROM ENVIRONMENTALLY SENSITIVE AREAS
DCR Specification for No. WP-8

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Relocation of Confined Feeding Operations from Environmentally Sensitive Areas best management practice which are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

This practice provides for the relocation of confined feeding operations from areas that have an increased chance of contaminated runoff entering the state's stream, rivers and estuaries.

The purpose of the practice is to improve water quality by relocating confined feeding operations away from environmentally sensitive areas such as sinkholes, streams and rivers to reduce or eliminate the amount of pollution-laden runoff reaching these areas.

B. Policies and Specifications

1. Tax credit is authorized:
   i. For using engineered plans for feeding structures available from the MidWest Plan Service (MWPS), the Natural Resources, Agriculture, and Engineering Services (NRAES), or a professional engineer (P.E.).
   ii. For construction of new facilities of equal volume.
   iii. For construction of access to the relocated facility.
   iv. For demolition (only when necessary) and stabilization of the existing facility.

2. The replaced facility must not be used for animal confinement feeding or any other operation that would increase the amount of polluting runoff entering sensitive areas.

3. Tax credit is not authorized for new startup facilities or expanded portion of any existing or relocated facility.

4. The relocation of a facility must substantially reduce the amount of runoff entering streams, rivers and/or estuaries.

5. A management plan and best management practice design is to be developed with consultation from a VCE Agent, NRCS, and/or District. For a tax credit on feeding structures that exceed $5,000 in cost, plans from MWPS, NRAES, or a P.E. must be used.

6. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

7. This practice is subject to NRCS Standards 313 Waste Storage Facility, 327 Conservation Cover, 342 Critical Area Planting, 350 Sediment Basin, 356 Dike, 359 Waste Treatment Lagoon, 362 Diversion, 382 Fencing, 393 Filter Strip, 412 Grassed Waterway, 472 Access Control, 516 Pipeline, 558 Roof Runoff Structure, 560 Access Road, 561 Heavy Use Area Protection, 574 Spring Development, 587 Structure for Water Control, 614 Watering Facility, 360 Waste Facility Closure, 633 Waste Utilization, and 642 Water Well.

8. All practice components implemented must be maintained for a minimum of 10 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 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. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices as discussed in the Tax Credit Guidelines of the VACS Manual.

2. 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.

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

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Voluntary Precision Nutrient Management on Cropland – Nitrogen Application practice, which are applicable to all contracts entered into with respect to that practice.

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 production systems (see Glossary for definition).

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, 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.

2. 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.

3. At least one of the following identified components must be implemented.

   i. Soil pre-sidedress nitrate test (PSNT): Plant tissue samples or petiole samples must be submitted at the correct growth stage and handled in accordance with laboratory guidelines to ensure sample viability and usability. The results of these samples may be used by the participant to support this practice.
   ii. Variable rate nitrogen applications or zone applications of nitrogen based upon the soil test results of (subfield) sampling on row crops, specialty crops, or small grains. Other macro-micro nutrients may be applied concurrently
   iii. Three or more split applications of nitrogen on small grains.

iv. Two or more split sidedress applications of nitrogen on corn and cotton.
v. Two or more applications of nitrogen on highly managed highland production systems (other than alfalfa, which is not eligible).
vi. Injection at sidedress.

4. 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.

5. 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.

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

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

~~7.~~8. A minimum of 20 lbs of inorganic nitrogen per acre must be applied to be considered a split or sidedress application for the management of nitrogen.

~~8.~~9. 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.

~~9.~~10. Producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field on which this practice will be implemented. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014); must be prepared and certified by a Virginia certified Nutrient Management Planner; and must be on file with the local District. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).

~~10.~~11. 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.

~~11.~~12. The producer shall maintain written verification of the recommendation and the resulting application(s) (e.g. results of laboratory test, a work order or bill, as-applied application map of field) to verify that the recommendations were followed.

~~12.~~13. Fields that have received applications of biosolids within the previous 24 months are not eligible.

C. Technical Responsibility

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

Revised April ~~2022~~2023