

**AGRICULTURAL BMP TECHNICAL ADVISORY COMMITTEE  
COVER CROP AND NUTRIENT MANAGEMENT SUBCOMMITTEE**

**Town of Orange Public Works, 235 Warren St. Orange, VA**

**August 9, 2021**

**10:00AM**

**TIME AND PLACE**

The Cover Crop and Nutrient Management Subcommittee meeting was held in the Town of Orange Public Works Community Building at 235 Warren St., Orange, VA at 10am.

**ATTENDANCE**

**Voting Members Present**

Amy Walker, DCR  
Allyson Ponn, Lord Fairfax SWCD  
Ben Rowe, Virginia Farm Bureau  
Buck Tharpe, Southside SWCD  
Conner Miller, Virginia Grain Producers Association  
Michael Tabor, proxy for Blue Ridge SWCD  
Keith Burgess, Monacan SWCD  
Marian Moody, Hanover-Caroline SWCD  
Megan Trice, Shenandoah Valley SWCD  
Spencer Yager, Culpeper SWCD  
Steven Meeks, proxy for VASWDs

**Voting Members Not Present**

Alston Horn, Chesapeake Bay Foundation

**Non-Voting Members Present**

Robert Waring, Chair, DCR  
David Bryan, DCR  
Nicole Keller, DCR  
Kemper Marable, Hanover-Caroline SWCD  
Marissa Roland, DCR  
Colton Sullivan, VASWCD

**WELCOME**

Chair Robert Waring called the meeting to order at 10:05 am. A quorum was established with 11 voting members present. Robert Waring reviewed the logistics of the upcoming TAC meeting, rules of the meeting, and presented the agenda. Approved the minutes from the previous meeting.

**SUBCOMMITTEE ACTIONS**

**3C - Increasing Rates of the WQ-1 Practice**

- Amy Walker reviewed edits made to the WQ-1 practice (Attachment 1), which reflect the Subcommittee's discussion in the previous meeting as well as providing clarity that the practice is for riparian applications and credited differently in the Chesapeake Bay Model. Changes include practice name change, inserting 'riparian' where appropriate, increased buffer payments, striking the hayland language, and the exclusion of grazing.
- The Subcommittee discussed the value of creating a new specification for partial field retirement versus the SL-1 full-field retirement, which is credited as land retirement by the Chesapeake Bay Model, but no additional changes were made.
- Buck Tharpe made a motion to advance the item with the proposed edits. Keith Burgess seconded the motion. The motion passed unanimously.

### **1C - Creation of New Cover-Crop Maintenance Practice, SL-8M**

- In the previous meeting, Chair Robert Waring had asked the Blue Ridge and Monacan Districts to review the proposed SL-8M language and to present edits/suggestions, or recommend that the Subcommittee adapt the NM-7.
  - Blue Ridge reviewed suggested edits that had been submitted. Concern was raised regarding logistical issues for conducting soil samples and NMP development in time for manure application, especially for producers that did not already have an NMP.
- The Subcommittee discussed planting dates and reached a consensus that this practice should match the newly updated planting dates from the other cover crop practices.
- The Subcommittee discussed soil testing and NMP requirements, especially in regards to soil nitrates.
  - It was noted that nitrate testing before manure application was essential for good conservation planning, however, there may be difficulty completing nitrate testing before manure would need to be applied (specifically for areas that are not faced with concerns of over-applying manure).
  - A suggestion was made that nitrate testing could be completed in the spring before the next crop is planted instead.
  - The Subcommittee reached a compromise by borrowing language from the NM-1A that would allow a producer without an active NMP to sign up for the SL-8M as long as soil tests were conducted in the previous three years and an NMP was under development. The NMP would need to be complete and on file before payment is disbursed. See draft language in Attachment 2.
- The Subcommittee discussed whether poultry litter would be eligible for use in the practice and whether the location of manure generation (on-site vs. imported) should be specified. The Subcommittee agreed to omit these requirements to allow for maximum flexibility.
- This practice, if approved by the TAC in October, will be included in the WFA-NM practice, discussed later.
- Michael Tabor made a motion to advance the SL-8M practice. Buck Tharpe seconded the motion. The motion passed unanimously.

### **4C - Clarifying SL-8**

- Amy Walker presented draft language with updates reflecting Subcommittee discussion last meeting (Attachment 3).
- Point B.5 was reworded to say 'no later than Dec. 15' to be more clear.
- Ben Rowe referred to past subcommittee conversations regarding adding hemp as an eligible crop to the practice.
  - It's included as protected cropland in SL-8A, which is not a creditable practice.
  - At David Bryan's suggestion, point B.1 was edited to match the VACS Manual glossary definition of specialty crops, which includes hemp.
- Buck Tharpe made a motion to advance the item. Michael Tabor seconded the motion. The motion passed unanimously.

### **9C and 5C - Bundling Nutrient Management Practices and late termination of rye cover crop WFA-NN**

- Amy Walker reviewed the WFA-NM specification (Attachment 4), updated to reflect Subcommittee discussion last meeting. She also reviewed how the practice would work in the Conservation Application Suite, including current limitations. David Bryan reports that Tech Services is already preparing for the WFA-NM and WFA-CC rollout next year, pending TAC approval.
- Districts registered concerns over having enough funding to implement the WFA practices, especially in lean funding years.
  - The Subcommittee discussed the importance of the magnitude of data that the state can capture with the WFA approach and how Districts can utilize the ranking system and secondary considerations to help ameliorate funding concerns.
- Amy Walker provided information on the effectiveness of the WFA bundled approach, noting the ability to capture data that provided significant progress towards the Chesapeake Bay WIP goals. In addition the bundled approach was attractive to producers that have dropped out of VACS because they never got funded or had been hesitant to participate in the past.
  - Subcommittee discussed the tradeoffs for producers and Districts alike, and how the bundled practice incentivizes producers to make a bigger commitment.
  - Many members were concerned that the increased rates will jeopardize the total number of acres Districts could afford to enroll in cost-share practices during leaner funding years. The sacrifice could be significant without sufficient funding.
- The Subcommittee discussed the proposed increased rates.
  - While in the pilot, the lower payments were sufficient to incentivize a nearly 100% sign-up rate, the matrix item being reviewed suggested doubling the rates, except for the Nutrient Management Plan base rate (recommended decreasing slightly) to help ensure that sign-ups are maximized to meet 2025 goals.
  - However, several members echoed the perception that many producers are already doing many of these NM practices, just not getting paid for it. Therefore, the lower payment rates would still be highly attractive and encourage sign-ups.
  - The bundled WFA practices would be ranked, just like any other practice, but with CEF and potential changes to Secondary Considerations, the WFA could always rank higher, providing yet another incentive for producers to sign up, without having to increase payment rates, which might jeopardize the number of acres that can be funded in leaner years.

*David Bryan left at 12:00 PM*

**LUNCH - 12:09 - 1:00 PM**

**9C and 5C - Bundling Nutrient Management Practices and late termination of rye cover crop  
WFA-NN (continued)**

- Continued discussion of increased rates.
  - Variable-rate application is very expensive to do, but a very valuable conservation practice, it was suggested to maintain a higher rate for variable rate. A rate of \$7.50/acre was proposed.
  - The Subcommittee discussed multiple sidedress applications after the first are worthy of incentivizing. The subcommittee discussed retaining the \$2.50/acre standard rate for the first sidedress and the 2nd sidedress on small grains. The second sidedress on corn and the 3rd sidedress on other crops will be paid at \$5/acre.
- The subcommittee discussed the core rate and proposed the reduced suggested rate of \$6.00
- The Subcommittee discussed adding a lime practice to the bundle.
  - Soil Health Coalition is looking into adding an incentive for lime.
  - Several members support the idea, stressing that soil pH is critical for proper nutrient management.
  - The Subcommittee discussed the appropriateness of adding lime and debated various payments rates.
  - Ultimately, the Subcommittee agreed to leave out the Lime consideration for this year and to submit its addition to the bundle as a consideration next year.

*Buck Tharpe left at 1:54 PM*

- Allyson Ponn made a motion to advance the WFA-NM with proposed edits. The motion was seconded by Kieth Burgess. The motion passed unanimously.

**WFA-CC**

- Amy Walker reviewed the WFA-CC specification (Attachment 5), updated to reflect Subcommittee discussion last meeting.
- The Subcommittee discussed kill down rates
  - Amy Walker reports that the Soil Health Coalition would like to see a late kill down on all cover crops and an increased payment rate on mixed cover crops.
  - The Subcommittee agreed to expanding the current \$5/acre rate for late kill down of rye to include any cover crop kill down after May 1.
- The Subcommittee discussed adding additional incentives for mixed cover crop species.
  - It was discussed that there is inconsistency in rates between SL-8B and WQ-4. DCR will review standards to ensure language is consistent.
  - Mixed species cover crop was inserted into the traditional cover crop rates section (75-50% small grain; 25-50% mixed) at \$5/acre.
- Michael Tabor made a motion to advance the WFA-CC specification with the proposed edits. Ben Rowe seconded the motion. The motion passed unanimously.

**PREVIOUS MEETING MINUTES**

The Subcommittee voted unanimously to accept the minutes from the August 6 CCNM Subcommittee meeting.

**PUBLIC COMMENT**

None.

**FUTURE MEETINGS**

None.

**ADJOURN- 2:45**

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

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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 gGrass 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, grassriparian 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 grassriparian grass filter strips that are located adjacent to cropland, ~~permanent hayland (when recommended in an approved Resource Management Plan)~~, 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. GrassRiparian 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. Filters 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. Filters must be located within 100-feet 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. GrassRiparian 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.
- 4.5. No-till planting is preferable. If grading is necessary, conventional equipment can be used for preparing the seedbed, fertilizing and maintenance.
- 5.6. Lime and fertilize according to soil test to assure proper establishment. Established filter strips shall not receive any applications of nitrogen or phosphorus.
- ~~6. Hayland is considered cropland if it is in rotation with row crops during the five-year life span of the grass filter strip.~~
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.
  - 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. The buffer must be maintained as perennial species for the practice lifespan.

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v. \_\_\_\_\_  
~~vi.~~ Avoid damaging filter area with herbicides.



~~viii.vi. Hay may be harvested from grass filter strips except when using wildlife option.~~

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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)

~~0. The state cost share payment, alone or when combined with any other cost share program, will not exceed 75% of the total eligible cost, or a maximum of \$100/acre for 35 feet to 100 feet wide filter strips. WQ-1 installed on permanent hayland in accordance with an RMP is eligible for \$100/acre.~~

~~1. The state cost-share payment rates shall be based on the approved or actual cost, whichever is less, and shall vary by the minimum 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:~~

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

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~~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, SL-6W, WP-2W, WQ-1)~~

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2 As set forth by Virginia Code, the Commonwealth currently provides a tax credit for

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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, 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

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.

$$\text{Area} \times \text{Erosion Rate} \times \text{SDR} = \text{Delivered Sediment Load}$$

- b. Determine the amount trapped by multiplying the delivered sediment load times the trapping coefficient of the vegetation.

$$\text{Sediment Load} \times \text{Trapping Coefficient} = \text{Sediment Trapped}$$

Use one of the following coefficients for your calculations:

<u>Strip Width</u>	<u>Coefficient</u>
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: 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

Cost-share or tax credit are provided to establish vegetative cover on specialty cropland, thereby reducing wind and water erosion and improving water quality.

B. Policies and Specifications

1. Eligibility:  
Specialty crops for this practice are defined as:
  - i) Vegetables
  - ii) Tobacco
  - iii) Small grains
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 certified by no later than November 30. A good stand and growth of vegetated cover must be obtained in sufficient time to protect the area or by December 15. The seeding must be planted and certified by November 30. 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.

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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 <i>Brassica</i> (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 \$30 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.

Revised April 2021

Name of Practice: SMALL GRAIN AND MIXED COVER CROP FOR  
NUTRIENT MANAGEMENT AND RESIDUE MANAGEMENT  
WITH FALL MANURE APPLICATION

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DCR Specifications for No. SL-8BM

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Small Grain 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. The purpose is to increase above and below ground biomass returned to the soil by providing adequate fertility to grow the extra bio-mass by increasing the amount of manure amendments while minimizing nutrient loss risk. As well as 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~~ Application of manure (organic) amendments are allowed between the harvesting of the previous crop and March 1 of the next calendar year. No nutrients are allowed at prior to planting.

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~~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.~~

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).

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4. A current Nutrient Management Plan must be on file with the District. 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.

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5. 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) is permitted if all of the following conditions are met:

i. Inadequate manure storage is available for the winter at the source;

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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.

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iii. Manure is applied in accordance with a Nutrient Management Plan prepared by a Virginia certified Nutrient Management Planner.

6. No nutrients may be applied at planting

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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.

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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.

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9. Aerial seeding is not applicable for this practice.

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

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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 crops 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.

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

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9-14. 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 <i>Brassica</i> (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. Aerial seeding is not eligible with this practice.**

10-15. 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

**POTENTIAL ADJUSTMENT OF DATES TO ENSURE GROWTH (OLD SL-8B PLANTING DATES)**

Area	Early Planting Date	Standard Planting Date
Cities of Chesapeake & VA	November 10	November 30
Coastal Plain (including the	October 25	November 15
Piedmont	October 10	November 1
Mountain and Valley	October 5	October 25

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11-16. In all cases, this practice is subject to NRCS standard 340.  
SL-8BM - 3

~~12-17.~~ 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 \$20 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.

~~1-2.~~ 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.

~~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.~~ A \$2230 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 cities of Chesapeake and Virginia Beach that have late November planting dates.~~

~~4-5.~~ A \$810 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,

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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~~~~Draft August 2021~~

Name of Practice:  
Whole Farm Approach – ~~Cover Crop Pilot~~  
DCR Specification for No. WFA-~~CC1~~

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation’s whole farm approach BMP pilot project for bundled agricultural best management practices that are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

The development of a practice to collect data, assure that implemented nutrient management plans are accurate and up to date, ~~to minimize the impact of nutrients used in crop and highly managed hay production,~~ and to 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 Phase 6.0 separates nutrient management into independent sets of practice elements for Nitrogen and Phosphorus, which stack onto a required core (Core Requirements) set of management elements; 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, ~~support multiple enhanced nutrient management components such as precision nutrient management on cropland,~~ and provide an incentive to keep a cover on agricultural land. 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 on Corn Using Pre-Sidedress Nitrate Test; 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; 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; and 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 ~~FSA~~ Tract to be in compliance with this specification.

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

a. Eligibility

- i. This practice applies to crops and highly managed hay.

- ii. Cropland, which may receive applications of pelletized Class A biosolids that do not require a permit, is eligible as these products are considered commercial fertilizer.
- 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 to the District:
  - a. A completed verification form (DCR199-231) (04/18); or
  - b. A statement signed by the Nutrient Management Planner and producer that nutrients were applied during this period according to a NMP; or
  - c. Nutrient application records for the preceding 12 months (For new producers, or tracts without a current Nutrient Management Plan).

2. Ineligible

- i. Participants may **NOT** receive cost share payments on the same crop and field for the ~~WFA-1~~WFA-CC and the following VACS practices simultaneously: ~~NM-3C, NM-4, NM-5N, NM-5P, SL-8, SL-8B, SL-8H, and WQ-4.~~

C. Rates

Cost share rates for components may stack, see the ~~WFA-1~~WFA-CC Rate Worksheet for assistance with sign-up. ~~This practice is a pilot project for program year 2021, the~~ ~~WFA-1~~WFA-CC core and components are not eligible for tax credit.

**Commented [VP2]:** Would this be true if the practice became a VACS bundle?

1. **Core Nutrient Management Plan Requirement:** ~~The state cost share payment rate is \$8.00 per acre for all eligible acres (may include cropland and/or highly managed hayland) on a Tract 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.; and
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 for either a banded (2 x 2) application OR in-furrow application of Nitrogen; and~~
  - ii. ~~a state cost share payment rate of \$2.50 per acre for either a banded (2 x 2) application OR in-furrow application of Phosphorus; and~~
3. ~~First Sidedress of Nitrogen on Corn and/or Cotton~~ a state cost share payment rate of \$2.50 per acre for the first sidedress application or injection, based on the contracted sidedress application acreage; and

~~4. **Second Topdress Application of Nitrogen on Small Grain**—a state cost share payment rate of **\$2.50 per acre** for the second topdress application. If only one late winter application is made, no reimbursement is to be provided; and~~

~~5. **Nitrogen Management**, state cost share payment rates as follows:~~

- ~~i. a state cost share payment rate of **\$5.00 per acre**, is available for the acres receiving the **variable rate application of nitrogen** on row crops or small grains; and~~
- ~~ii. a state cost share payment rate of **\$2.50 per acre**, is available for the acres receiving a **second sidedress application of nitrogen on corn, cotton, and highly managed hayland** (other than alfalfa); and~~
- ~~iii. a state cost share payment rate of **\$2.50 per acre**, is available for the acres receiving a **third topdress application of nitrogen on small grains**; and~~

~~6. **Phosphorus Management**, a state cost share payment rate of **\$5.00 per acre**, for the acres receiving **variable rate application of phosphorous** on row crops, small grains, or highly managed hayland production systems; and~~

**7.2. Cover Crop – Standard Cover Crop**

- a. a state cost share payment rate per acre for pure stands of Rye are listed below:

	<b>Rate</b>
Early Rye	\$55.00/acre
Standard Rye	\$25.00/acre
<del>Late Rye</del>	<del>\$7.50/acre</del>
Rye kill down on May 1 <sup>st</sup> or later	\$5.00/acre

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- b. a state cost share payment rate per acre for listed small grains, brassicas, and/or mixtures are below

	<b>Rate</b>
Early	\$45.00/acre
Standard	\$15.00/acre
<del>Late</del>	<del>\$5.00/acre</del>

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~~8.3. **Cover Crop – Cover for Specialty Crops**, a state cost-share payment rate of **\$20.00 per acre** is available for protective cover for specialty crops.~~

~~9.4. **Cover Crop – Harvestable**, a state cost-share payment rate of **\$10.00 per acre** is available for harvestable cover crop.~~

~~10.5. **Cover Crop – Legume**, a state cost-share payment rate of **\$20.00 per acre** is available for legume cover crop.~~

D. Technical Responsibility

Technical and administrative responsibility for all Components of the ~~WFA-1~~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-1 Nitrogen/Phosphorus Management Option – Banded/In Furrow

### IN-FURROW ~~OR~~ BANDED APPLICATION OF NITROGEN AND/OR PHOSPHORUS

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's WFA-1 Nitrogen Management Option, In Furrow or Banded Application of Nitrogen and/or Phosphorus that is applicable to all contracts entered into with respect to this practice.

#### A. Description and Purpose

This practice will encourage the in furrow or banded (2 x 2) application 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) is 2" beside x 2" 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 a written verification (such as records, a work order, or bill) to the District prior to payment.
3. The total number of crop acres specified by the nutrient management plan to be in furrow or banded will determine the maximum acres to qualify, with payment being made only to those acres which actually received 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 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. 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. A 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 application of 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. ~~For participants who are not receiving payment for in-furrow or banded application of nitrogen from any other source (funding) 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 (not both), 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. ~~For participants who are not receiving payment for in-furrow or banded application of phosphorus from any other source (funding) 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 (not both), 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-1 Nitrogen Management Option—First Sidedress

### FIRST SIDEDRESS APPLICATION OF NITROGEN ON CORN and/or COTTON

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's WFA-1 Nitrogen Management Option, First Sidedress Application of Nitrogen on Corn and/or Cotton option that is applicable to all contracts entered into with respect to this practice.

#### A. Description and Purpose

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

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

#### B. Policies and Specifications

1. Eligibility for this practice is limited to the length of the plan recommending the sidedress practice.
2. A producer must provide a written verification (such as records, a work order, or bill) to the District prior to payment.
3. The total number of corn and/or cotton acres specified by the nutrient management plan to be sidedressed will determine the maximum acres to qualify, with payment being made only to those acres which actually received a sidedress application of nitrogen.
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. 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. The total number of corn acres specified by the nutrient management plan to receive manure will determine the required number of PSNTs. The PSNT must be done when corn is approximately 12 inches in height. PSNT samples should

represent a minimum of 7 acres on average and a maximum of 20 acres on average.

- ~~7. 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.~~
- ~~8. A producer must provide a written verification of contracted sidedress application cost (including the PSNT results) to the district within two weeks of the sample analysis.~~
- ~~9. Application of the first sidedress nitrogen must be made after the corn is at the 5-leaf stage or at least 15" in height.~~
- ~~10. Total nitrogen to be applied to the cornfield and/or cottonfield must be consistent with the nutrient management plan or determined by using a PSNT consistent with procedures contained in the Nutrient Management Training and Certification Regulations, 4VAC50-85 et. seq.~~
- ~~11. This is an annual practice.~~

~~C. Rate(s)~~

- ~~1. For participants who are not receiving payment for a split application of nitrogen to corn and/or cotton from any other source (funding) on the same acreage, a state cost share payment rate of **\$2.50 per acre** for the first sidedress application or injection, based on the contracted split application acreage.~~

## WFA 1 Nitrogen Management Option—Second Topdress on Small Grain

### SECOND TOPDRESS APPLICATION OF NITROGEN ON SMALL GRAIN

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Late Winter Split Application of Nitrogen on Small Grains practice that are applicable to all contracts entered into with respect to that practice.

#### A. Description and Purpose

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 for this practice is limited to the length of the plan recommending the split nitrogen application.
2. A producer must sign up and provide written verification (such as records, a work order, or bill) to the District prior to payment.
3. 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 received split nitrogen applications.
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. This cost share practice is for the split application of late winter nitrogen applications to small grain in which each application must contain nitrogen as a component of the material applied.
6. 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.
7. Late winter nitrogen to be applied to the small grain field(s) must be determined by using the criteria contained in the Virginia Nutrient Management Standards and Criteria, (revised July 2014).
8. Checks to ensure compliance 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.

9. ~~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.~~
10. ~~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# of nitrogen for the first application and must not exceed 50# of nitrogen for the second application.~~
11. ~~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.~~
12. ~~This is an annual practice.~~

C. ~~Rate(s)~~

1. ~~For participants who are not receiving payment for a late winter split application of nitrogen on small grains from any other source (funding) 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-1 Nitrogen Management Option

### PRECISION NUTRIENT MANAGEMENT—NITROGEN

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's WFA-1 Nutrient Management Option—Nitrogen Management, for the enhanced nutrient management of nitrogen on crop land that is 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 (see glossary for definition) production systems.

This practice supports multiple enhanced nutrient management components such as soil (pre-sidedress) nitrate tests (PSNT), all variable rate nitrogen application technologies, and encourage the second sidedress application of nitrogen on corn, cotton, or highly managed hayland (top dress). This practice may only be used on fields that apply nitrogen based upon test results identified in section B, whether they have organic (manure) nutrient applications or not, with the exception of Biosolids applications. For fields receiving only nitrogen fertilizer, split applications will be based upon soil sample results and the Nutrient Management Plan (NMP). 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.

The variable rates of nitrogen listed below (in B. 2.) apply to all row and highly managed hay crops (other than alfalfa). 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 based upon the soil test results of (subfield) sampling; other macro-micro-nutrients may be applied concurrently~~
- iii. ~~Variable rate or zone application of nitrogen on row-crops or small grains~~
- iv. ~~Second sidedress application of nitrogen on corn, cotton and highly managed hayland (top dress) production systems (other than alfalfa).~~
- 3. ~~Third split application of nitrogen on small grains. 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 1<sup>st</sup> split, must be applied after the corn is at the 5 leaf stage or at least 15" in height.~~
- 4. ~~Subsequent sidedress applications must be applied at least 14 days after the most recent application~~
- 5. ~~The third split applications of nitrogen applies to small grains crops. *This practice does not apply to the first or second split application of nitrogen on small grains; (see WFA-1 Second Topdress on Small Grain).*~~
- 6. ~~On fields that have organic (manure) 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.~~
- 7. ~~Total nitrogen application rates (including pre-plant and sidedress) on corn shall not exceed 1 lb./bu. expected crop yield.~~
- 8. ~~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. ~~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).~~
- 10. ~~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. ~~Participants **shall** provide written verification of the recommendation and the resulting application(s) (examples include but are not limited to: results of laboratory test, a work order or bill; and as applied application map of field) to the District of the final nitrogen application to verify that the recommendations were followed prior to payment.~~
- 12. ~~Fields that have received applications of biosolids within the previous 24 months are not eligible.~~
- 13. ~~This is an annual practice.~~

C. Rates



1. ~~For participants who are not receiving payment for precision application of nitrogen from any other source (funding) on the same acreage, a state cost share payment rate of \$5.00 per acre, is available for the acres receiving the variable rate or zone application of nitrogen on row crops or small grains; and~~
2. ~~For participants who are not receiving payment for a second sidedress of nitrogen on corn, cotton, and highly managed hayland (top dress) from any other source (funding) on the same acreage, a state cost share payment rate of \$2.50 per acre, is available for the acres receiving a second sidedress application of nitrogen on corn, cotton and highly managed hayland (top dress) (other than alfalfa); and~~
3. ~~For participants who are not receiving payment for the third split application of nitrogen on small grains from any other source (funding) on the same acreage, a state cost share payment rate of \$2.50 per acre per year, is available for the acres receiving a third split application of nitrogen on small grains.~~
4. ~~No per sample cost share is available for zone/grid (subfield) soil fertility testing. Many commercial applicators include zone/grid (subfield) soil fertility sampling in their variable rate application charge.~~

#### D. Technical Responsibility

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

## WFA-1 Phosphorus Management Option

### PRECISION NUTRIENT MANAGEMENT—PHOSPHORUS

#### A. Description and Purpose

This practice will encourage the use of precision nutrient management practice components that support a higher intensity of phosphorous management in the field than existing standard nutrient management practices. This practice is limited to row crops, small grains and highly managed hayland including alfalfa hay production systems.

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

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

#### B. Policies and Specifications

1. 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. 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).
3. 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.
4. Total phosphorus application rates shall not exceed the recommendations of the zone or grid sampling recommendations.
5. The total number of acres that qualify for this practice will be based upon the total acres that were sampled in zones (zone shall be no larger than 20 acres and based upon soil type) grids (grid size shall be of 1 to 4 acres in size), or had mid-season

testing such as variable rate or zone/grid (subfield) applications of phosphorus, based upon the zone or grid soil sampling recommendations.

6. The participant **must** provide written verification of the recommendation(s) and the resulting application(s) (examples include but are not limited to: results of laboratory test(s), a work order or detailed bill/invoice showing application rates, and an as-applied application map of field(s) to the District within forty five days of the phosphorous application to verify that the recommendations were followed
7. Fields that have received applications of biosolids within the previous 24 months are not eligible.
8. This is an annual practice.

C. Rates

1. For participants who are not receiving payment for precision application of phosphorus from another source (funding) on the same acreage, a state cost share payment rate of **\$5.00 per acre**, for the acres receiving variable rate application of phosphorous on row crops, small grains or highly managed hayland production systems.
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-1WFA-CC~~ **Cover Crop – Standard Cover Crop**

SMALL GRAIN AND MIXED COVER CROP FOR NUTRIENT AND RESIDUE MANAGEMENT

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation’s small grain cover crop for nutrient management and residue management best management practice that 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. (Ongoing research in Virginia’s coastal plain indicates that a cereal grain crop with 30 plants per square foot of field planted with two tillers per plant (60 tillers per sq. ft.) by December 1 provides the optimum biomass for scavenging excess nitrogen while protecting the soil from erosion)

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 cover crops environmental benefit in Virginia. The SL-8B is not intended to subsidize crops produced for commodity purposes.
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 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 <i>Brassica</i> (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	Late Planting Date
Coastal Plain	October 25	November 15	November 30

Area	Early Planting Date	Standard Planting Date
------	---------------------	------------------------

<u>Cities of Chesapeake &amp; VA Beach</u>	<u>November 10</u>	<u>November 30</u>
<u>Coastal Plain (including the Eastern Shore)</u>	<u>November 10</u>	<u>November 30</u>
<u>Piedmont</u>	<u>October 25</u>	<u>November 15</u>
<u>Mountain and Valley</u>	<u>October 20</u>	<u>November 10</u>

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 (funding) on the same acreage, a state cost share payment rate per acre for pure stands of Rye are below.

	<b>Rate</b>
Early Rye	\$55.00/acre
Standard Rye	\$25.00/acre
Late Rye	\$7.50/acre

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

<u>6250 Abruzzi</u>	<u>Paster</u>
<u>Abruzzi</u>	<u>Ryman</u>
<u>Dura</u>	<u>Virginia Abruzzi</u>
<u>Early Grazer</u>	<u>Wheeler</u>
<u>Elbon</u>	<u>Wintergrazer 70</u>
<u>Grazer</u>	<u>Winterking</u>
<u>Graze Master</u>	
<u>6250 Abruzzi</u>	<u>Abruzzi</u>
<u>Virginia Abruzzi</u>	<u>Dura</u>
<u>Early Grazer</u>	<u>Graze Master</u>
<u>Grazer</u>	<u>Paster</u>
<u>Wheeler</u>	<u>Wintergrazer 70</u>
<u>Winterking</u>	

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

	<b>Rate</b>

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Early	\$45.00/acre
Standard	\$15.00/acre
Late	\$5.00/acre

3. Rye cover crops that are killed using mechanical or chemical means or by grazing no earlier than **May 1** are eligible for a \$5.00 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-1WFA-CC Cover Crop – Cover for Specialty Crops**

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 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 specialty crops when it is not being used after harvest of a specialty crop. Cost-share is provided to establish vegetative cover on specialty cropland. The purpose is to reduce wind and water erosion, thus improving water quality.

B. Policies and Specifications

1. Specialty crops are given consideration due to bare sites and highly erodible soil conditions. Specialty crops for this practice are defined as:
  - i. Vegetables
  - ii. Tobacco
  - iii. Small grains
2. Soil loss rates must be computed for all applications for use in establishing priority considerations.
3. 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.
4. A good stand and good growth of cover must be obtained in sufficient time to protect the area. The seeding must be planted and certified by November 30. 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.
5. Pasturing consistent with good management may be permitted. No vegetative growth may be harvested for hay or seed.
6. This practice is subject to NRCS standard 340 Cover Crop.



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 <i>Brassica</i> (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 and non-incorporation seeding methods.**

C. Rate(s)

- For participants who are not receiving payment for cover crops from another source (funding) on the same acreage, a state cost-share payment rate of **\$20.00 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-1WFA-CC Cover Crop – Harvestable

### HARVESTABLE COVER CROP

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's harvestable cover crop 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 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, and
  - 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 1 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. (Ongoing research in Virginia's coastal plain indicates that a cereal grain crop with 30 plants per square foot of field planted with two tillers per plant (60 tillers per sq. ft.) by December 1 provides the optimum biomass for scavenging excess nitrogen while protecting the soil from erosion)

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 cover crops environmental benefit 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.
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.
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 <i>Brassica</i> (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 standard planting date, November 15<sup>th</sup>.
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.

C. Rate(s)

1. For participants who are not receiving payment for cover crops from another source (funding) on the same acreage, a state cost-share payment rate of **\$10 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 1 and maintained through March 14.

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-1WFA-CC Cover Crop – Legume**

LEGUME BASED COVER CROP

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation’s legume cover crop best management practice that 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 N 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
<b>Crimson Clover</b>	20 lbs/acre	by September 28
<b>OR</b>		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	
<b>OR</b>		
Ladino Clover (with either)	2 lbs/acre	
1) Tall Fescue	15.0 lb./acre	
2) Orchard grass	10.0 lb./acre	
<b>OR</b>		
<b>Austrian Winter Pea</b>	30-40 lbs/acre	by October 26
<b>OR</b>		
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	
<b>OR</b>		
Austrian Winter Pea (with either)	15-20 lbs/acre	
1) Tall Fescue	15.0 lb./acre	
2) Orchard grass	10.0 lb./acre	
<b>OR</b>		
<b>Hairy Vetch</b>	20 lbs/acre	by October 26
<b>OR</b>		
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	
<b>OR</b>		
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 participants’ 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.

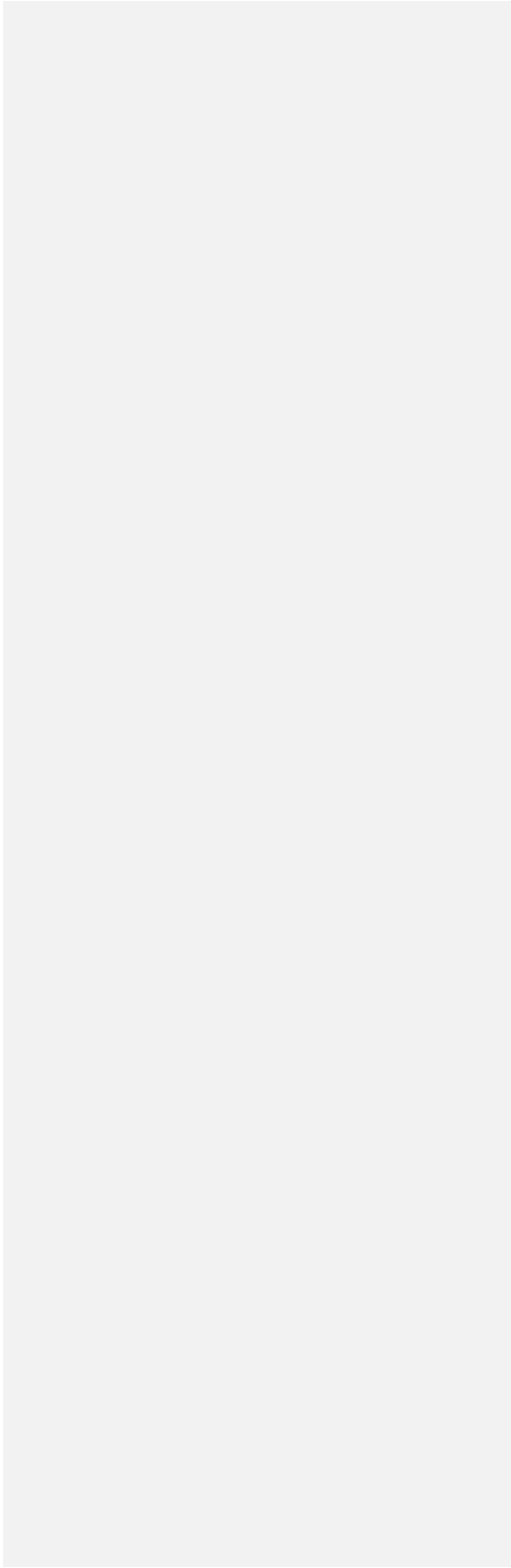
C. Rate(s)

1. For participants who are not receiving payment for cover crops from another source (funding) on the same acreage, a state cost-share payment rate of **\$20.00 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.

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<u>Standard</u>	<u>\$15.00</u>	-
-		-
<u>SL-8 Specialty</u>	<u>\$20.00</u>	-
-		-
<u>Legume</u>	<u>\$20.00</u>	-
-		-
<u>Harvestable</u>	<u>\$10.00</u>	-

Name of Practice:  
Whole Farm Approach – ~~Nutrient Management Pilot~~  
DCR Specification for No. WFA-~~NM4~~

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation’s whole farm approach BMP pilot project for bundled agricultural best management practices that are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

The development of a practice to collect data, assure that implemented nutrient management plans are accurate and up to date, to minimize the impact of nutrients used in crop and highly managed hay production, and ~~to 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 Phase 6.0 separates nutrient management into independent sets of practice elements for Nitrogen and Phosphorus, which stack onto a required core (Core Requirements) set of management elements; 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, support multiple enhanced nutrient management components such as precision nutrient management ~~on cropland, and provide an incentive to keep a cover on agricultural land.~~ 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 on Corn Using Pre-Sidedress Nitrate Test; 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; ~~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; and 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 ~~FSA~~-Tract to be in compliance with this specification.

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

a. Eligibility

- i. This practice applies to crops and highly managed hay.

- ii. Cropland, which may receive applications of pelletized Class A biosolids that do not require a permit, is eligible as these products are considered commercial fertilizer.
- 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 to the District:
  - a. A completed verification form (DCR199-231) (04/18); or
  - b. A statement signed by the Nutrient Management Planner and producer that nutrients were applied during this period according to a NMP; or
  - c. Nutrient application records for the preceding 12 months (For new producers, or tracts without a current Nutrient Management Plan).

2. Ineligible

- i. Participants may **NOT** receive cost share payments on the same crop and field for the WFA-NM4 and the following VACS practices simultaneously: NM-3C, NM-4, NM-5N, NM-5P, ~~SL-8, SL-8B, SL-8H, and WQ-4.~~

C. Rates

Cost share rates for components may stack, see the WFA-NM4 Rate Worksheet for assistance with sign-up. ~~This practice is a pilot project for program year 2021. The WFA-1WFA-NM core and components are not eligible for tax credit.~~

1. **Core Nutrient Management Plan Requirement:** The state cost share payment rate is **\$8.00 per acre** for all eligible acres (may include cropland and/or highly managed hayland) on a Tract 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.; and
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** for either a banded (2 x 2) application **OR** in-furrow application of Nitrogen; and
  - ii. a state cost share payment rate of **\$2.50 per acre** for either a banded (2 x 2) application **OR** in-furrow application of Phosphorus; and
3. **First Sidedress of Nitrogen on Corn and/or Cotton** a state cost share payment rate of **\$2.50 per acre** for the first sidedress application or injection, based on the contracted sidedress application acreage; and

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4. **Second Topdress Application of Nitrogen on Small Grain** - a state cost share payment rate of **\$2.50 per acre** for the second topdress application. If only one late winter application is made, no reimbursement is to be provided; and
5. **Nitrogen Management**, state cost share payment rates as follows:
  - i. a state cost share payment rate of **\$5.00 per acre**, is available for the acres receiving the **variable rate application of nitrogen** on row crops or small grains; and
  - ii. a state cost share payment rate of **\$2.50 per acre**, is available for the acres receiving a **second sidedress application of nitrogen on corn, cotton, and highly managed hayland** (other than alfalfa); and
  - iii. a state cost share payment rate of **\$2.50 per acre**, is available for the acres receiving a **third topdress application of nitrogen on small grains**; and
6. **Phosphorus Management**, a state cost share payment rate of **\$5.00 per acre**, for the acres receiving **variable rate application of phosphorous** on row crops, small grains, or highly managed hayland production systems; and

~~7. **Cover Crop – Standard Cover Crop**~~

- ~~a. a state cost share payment rate per acre for pure stands of Rye are listed below:~~

	<b>Date</b>	<b>Rate</b>
<del>Early Rye</del>	<del>October 25</del>	<del>\$55.00/acre</del>
<del>Standard Rye</del>	<del>November 15</del>	<del>\$25.00/acre</del>
<del>Late Rye</del>	<del>November 30</del>	<del>\$7.50/acre</del>
<del>Rye kill down on May 1<sup>st</sup> or later</del>		<del>\$5.00/acre</del>

- ~~b. a state cost share payment rate per acre for listed small grains, brassicas, and/or mixtures are below~~

	<b>Date</b>	<b>Rate</b>
<del>Early</del>	<del>October 25</del>	<del>\$45.00/acre</del>
<del>Standard</del>	<del>November 15</del>	<del>\$15.00/acre</del>
<del>Late</del>	<del>November 30</del>	<del>\$5.00/acre</del>

- ~~8. **Cover Crop – Cover for Specialty Crops**, a state cost share payment rate of **\$20.00 per acre** is available for protective cover for specialty crops.~~
- ~~9. **Cover Crop – Harvestable**, a state cost share payment rate of **\$10.00 per acre** is available for harvestable cover crop.~~
- ~~10. **Cover Crop – Legume**, a state cost share payment rate of **\$20.00 per acre** is available for legume cover crop.~~

D. Technical Responsibility

Technical and administrative responsibility for all Components of the ~~WFA-1~~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 spot check procedures and any other quality control measures.

**WFA-4WFA-NM Nitrogen/Phosphorus Management Option – Banded/In Furrow**

IN-FURROW **OR** BANDED APPLICATION OF NITROGEN AND/OR PHOSPHORUS

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's ~~WFA-4WFA-NM~~ Nitrogen Management Option, In-Furrow or Banded Application of Nitrogen and/or Phosphorus that is applicable to all contracts entered into with respect to this practice.

A. Description and Purpose

This practice will encourage the in-furrow or banded (2 x 2) application 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) is 2" beside x 2" 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 a written verification (such as records, a work order, or bill) to the District prior to payment.
3. The total number of crop acres specified by the nutrient management plan to be in-furrow or banded will determine the maximum acres to qualify, with payment being made only to those acres which actually received 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 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. 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. A 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 application of 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. For participants who are not receiving payment for in-furrow or banded application of nitrogen from any other source (funding) 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 (not both), 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. For participants who are not receiving payment for in-furrow or banded application of phosphorus from any other source (funding) 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 (not both), 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-1WFA-NM Nitrogen Management Option – First Sidedress**

FIRST SIDEDRESS APPLICATION OF NITROGEN ON CORN and/or COTTON

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's ~~WFA-1WFA-NM~~ Nitrogen Management Option, First Sidedress Application of Nitrogen on Corn and/or Cotton option that is applicable to all contracts entered into with respect to this practice.

A. Description and Purpose

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

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

B. Policies and Specifications

1. Eligibility for this practice is limited to the length of the plan recommending the sidedress practice.
2. A producer must provide a written verification (such as records, a work order, or bill) to the District prior to payment.
3. The total number of corn and/or cotton acres specified by the nutrient management plan to be sidedressed will determine the maximum acres to qualify, with payment being made only to those acres which actually received a sidedress application of nitrogen.
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. 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. The total number of corn acres specified by the nutrient management plan to receive manure will determine the required number of PSNTs. The PSNT must be done when corn is approximately 12 inches in height. PSNT samples should

represent a minimum of 7 acres on average and a maximum of 20 acres on average.

7. 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.
8. A producer must provide a written verification of contracted sidedress application cost (including the PSNT results) to the district within two weeks of the sample analysis.
9. Application of the first sidedress nitrogen must be made after the corn is at the 5-leaf stage or at least 15" in height.
10. Total nitrogen to be applied to the cornfield and/or cottonfield must be consistent with the nutrient management plan or determined by using a PSNT consistent with procedures contained in the Nutrient Management Training and Certification Regulations, 4VAC50-85 et. seq.
11. This is an annual practice.

C. Rate(s)

1. For participants who are not receiving payment for a split application of nitrogen to corn and/or cotton from any other source (funding) on the same acreage, a state cost share payment rate of **\$2.50 per acre** for the first sidedress application or injection, based on the contracted split application acreage.

**WFA-1WFA-NM Nitrogen Management Option – Second Topdress on Small Grain**

SECOND TOPDRESS APPLICATION OF NITROGEN ON SMALL GRAIN

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's Late Winter Split Application of Nitrogen on Small Grains practice that are applicable to all contracts entered into with respect to that practice.

A. Description and Purpose

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 for this practice is limited to the length of the plan recommending the split nitrogen application.
2. A producer must sign-up and provide written verification (such as records, a work order, or bill) to the District prior to payment.
3. 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 received split nitrogen applications.
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. This cost-share practice is for the split application of late winter nitrogen applications to small grain in which each application must contain nitrogen as a component of the material applied.
6. 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.
7. Late winter nitrogen to be applied to the small grain field(s) must be determined by using the criteria contained in the Virginia Nutrient Management Standards and Criteria, (revised July 2014).
8. Checks to ensure compliance 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.

9. 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.
10. 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# of nitrogen for the first application and must not exceed 50# of nitrogen for the second application.
11. 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.
12. This is an annual practice.

C. Rate(s)

1. For participants who are not receiving payment for a late winter split application of nitrogen on small grains from any other source (funding) 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-1WFA-NM Nitrogen Management Option**

PRECISION NUTRIENT MANAGEMENT – NITROGEN

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation’s ~~WFA-1WFA-NM~~ Nutrient Management Option – Nitrogen Management, for the enhanced nutrient management of nitrogen on crop land that is 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 (see glossary for definition) production systems.

This practice supports multiple enhanced nutrient management components such as soil (pre-sidedress) nitrate tests (PSNT), all variable rate nitrogen application technologies, and encourage the second sidedress application of nitrogen on corn, cotton, or highly managed hayland (top dress). This practice may only be used on fields that apply nitrogen based upon test results identified in section B, whether they have organic (manure) nutrient applications or not, with the exception of Biosolids applications. For fields receiving only nitrogen fertilizer; split applications will be based upon soil sample results and the Nutrient Management Plan (NMP). 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.

The variable rates of nitrogen listed below (in B. 2.) apply to all row and highly managed hay crops (other than alfalfa). 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 based upon the soil test results of (subfield) sampling; other macro-micro nutrients may be applied concurrently
  - iii. Variable rate or zone application of nitrogen on row crops or small grains
  - iv. Second sidedress application of nitrogen on corn, cotton and highly managed hayland (top dress) production systems (other than alfalfa).
3. Third split application of nitrogen on small grains. 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 1<sup>st</sup> split, must be applied after the corn is at the 5-leaf stage or at least 15" in height.
  4. Subsequent sidedress applications must be applied at least 14 days after the most recent application
  5. The third split applications of nitrogen applies to small grains crops. *This practice does not apply to the first or second split application of nitrogen on small grains, (see ~~WFA-WFA-NM~~ Second Topdress on Small Grain).*
  6. On fields that have organic (manure) 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.
  7. Total nitrogen application rates (including pre-plant and sidedress) on corn shall not exceed 1 lb./bu. expected crop yield.
  8. 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. 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).
  10. 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. Acres receiving a zero application rate based on a PSNT result also qualify for a payment rate of \$5.00 per acre
  12. Participants **shall** provide written verification of the recommendation and the resulting application(s) (examples include but are not limited to: results of laboratory test, a work order or bill; and as-applied application map of field) to the District of the final nitrogen application to verify that the recommendations were followed prior to payment.
  - ~~11-13.~~ **The participant must sign up for this practice before April 1<sup>st</sup> of each year that the practice will be utilized.**
  - ~~12-14.~~ Fields that have received applications of biosolids within the previous 24 months are not eligible.

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~~13.15.~~ This is an annual practice.

C. Rates

1. For participants who are not receiving payment for precision application of nitrogen from any other source (funding) on the same acreage, a state cost share payment rate of **\$5.00 per acre per year**, is available for the acres receiving the variable rate or zone application of nitrogen on row crops or small grains; and
2. For participants who are not receiving payment for a second sidedress of nitrogen on corn, cotton, and highly managed hayland (top dress) from any other source (funding) on the same acreage, a state cost share payment rate of **\$2.50 per acre per year**, is available for the acres receiving a second sidedress application of nitrogen on corn, cotton and highly managed hayland (top dress) (other than alfalfa); and
3. For participants who are not receiving payment for the third split application of nitrogen on small grains from any other source (funding) on the same acreage, a state cost share payment rate of **\$2.50 per acre per year**, is available for the acres receiving a third split application of nitrogen on small grains.
4. No per sample cost-share is available for zone/grid (subfield) soil fertility testing. Many commercial applicators include zone/grid (subfield) soil fertility sampling in their variable rate application charge.

D. Technical Responsibility

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

**WFA-1WFA-NM Phosphorus Management Option**

PRECISION NUTRIENT MANAGEMENT – PHOSPHORUS

A. Description and Purpose

This practice will encourage the use of precision nutrient management practice components that support a higher intensity of phosphorous management in the field than existing standard nutrient management practices. This practice is limited to row crops, small grains and highly managed hayland including alfalfa hay production systems.

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

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

B. Policies and Specifications

1. 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. 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).
3. 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.
4. Total phosphorus application rates shall not exceed the recommendations of the zone or grid sampling recommendations.
- ~~4.5.~~ 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 \$5.00 per acre.



~~5-6.~~ The total number of acres that qualify for this practice will be based upon the total acres that were sampled in zones (zone shall be no larger than 20 acres and based upon soil type) grids (grid size shall be of 1 to 4 acres in size), or had mid-season testing such as variable rate or zone/grid (subfield) applications of phosphorus, based upon the zone or grid soil sampling recommendations.

~~6-7.~~ The participant **must** provide written verification of the recommendation(s) and the resulting application(s) (examples include but are not limited to: results of laboratory test(s), a work order or detailed bill/invoice showing application rates, and an as-applied application map of field(s) to the District within forty-five days of the phosphorous application to verify that the recommendations were followed

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

~~7-9.~~ Fields that have received applications of biosolids within the previous 24 months are not eligible.

~~8-10.~~ This is an annual practice.

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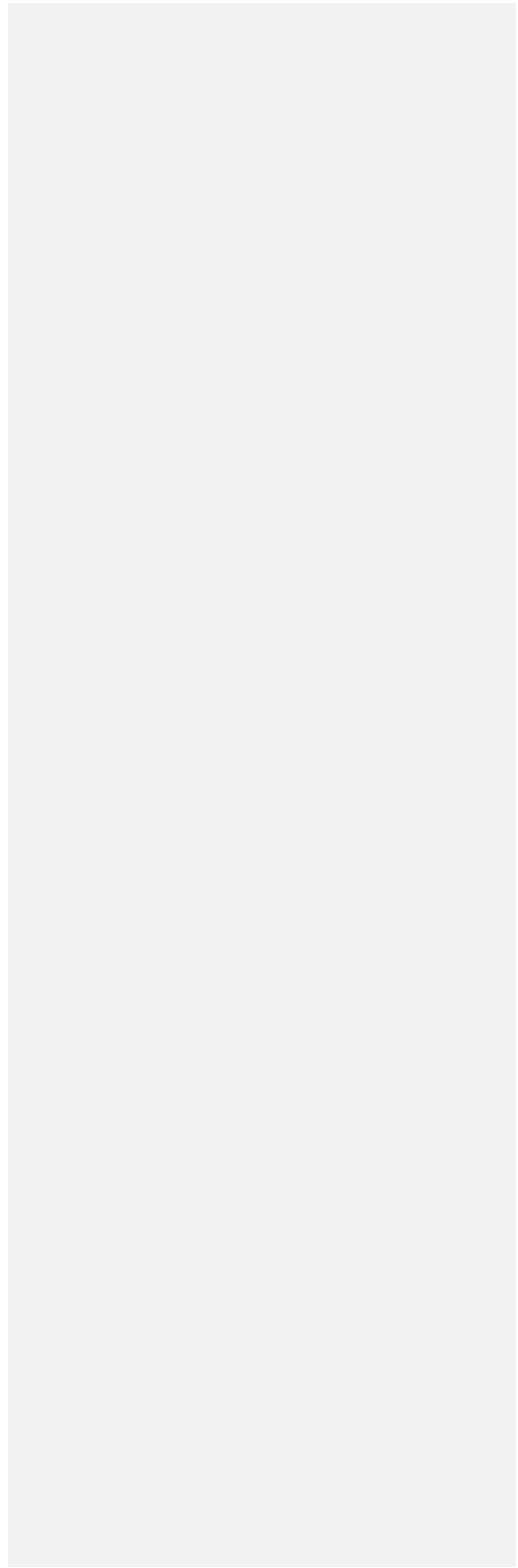
#### C. Rates

1. For participants who are not receiving payment for precision application of phosphorus from another source (funding) on the same acreage, a state cost share payment rate of **\$5.00 per acre per year**, for the acres receiving variable rate application of phosphorous on row crops, small grains or highly managed hayland production systems.
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.

#### 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.

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## WFA-1 Cover Crop—Standard Cover Crop

### SMALL-GRAIN AND MIXED COVER CROP FOR NUTRIENT AND RESIDUE MANAGEMENT

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's small grain cover crop for nutrient management and residue management best management practice that 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. (Ongoing research in Virginia's coastal plain indicates that a cereal grain crop with 30 plants per square foot of field planted with two tillers per plant (60 tillers per sq. ft.) by December 1 provides the optimum biomass for scavenging excess nitrogen while protecting the soil from erosion)~~

- ~~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 cover crops environmental benefit in Virginia. The SL-8B is not intended to subsidize crops produced for commodity purposes.~~
- ~~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 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 <i>Brassica</i> (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	Late Planting Date
Coastal Plain	October 25	November 15	November 30

- ~~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 (funding) on the same acreage, a state cost share payment rate per acre for pure stands of Rye are below.

	Date	Rate
Early Rye	October 25	\$55.00/acre
Standard Rye	November 15	\$25.00/acre
Late Rye	November 30	\$7.50/acre

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

6250 Abruzzi	Abruzzi
Virginia Abruzzi	Dura
Early Grazer	Graze Master
Grazer	Pastar
Wheeler	Wintergrazer 70
Winterking	

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

	Date	Rate
Early	October 25	\$45.00/acre
Standard	November 15	\$15.00/acre
Late	November 30	\$5.00/acre

3. Rye cover crops that are killed using mechanical or chemical means or by grazing no earlier than **May 1** are eligible for a \$5.00 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

(EJA) for the designed and installed component(s). All practices are subject to spot check procedures and any other quality control measures.

## WFA 1 Cover Crop—Cover for Specialty Crops

### 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 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 specialty crops when it is not being used after harvest of a specialty crop. Cost share is provided to establish vegetative cover on specialty cropland. The purpose is to reduce wind and water erosion, thus improving water quality.~~

#### B. Policies and Specifications

- ~~1. Specialty crops are given consideration due to bare sites and highly erodible soil conditions. Specialty crops for this practice are defined as:
  - i. Vegetables
  - ii. Tobacco
  - iii. Small grains~~
- ~~2. Soil loss rates must be computed for all applications for use in establishing priority considerations.~~
- ~~3. 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.~~
- ~~4. A good stand and good growth of cover must be obtained in sufficient time to protect the area. The seeding must be planted and certified by November 30. 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.~~
- ~~5. Pasturing consistent with good management may be permitted. No vegetative growth may be harvested for hay or seed.~~
- ~~6. This practice is subject to NRCS standard 340 Cover Crop.~~

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 <i>Brassica</i> (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 and non-incorporation seeding methods.**

C. ~~Rate(s)~~

1. ~~For participants who are not receiving payment for cover crops from another source (funding) on the same acreage, a state cost share payment rate of \$20.00 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 1 Cover Crop—Harvestable

### HARVESTABLE COVER CROP

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's harvestable cover crop 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 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, and~~
  - 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 1 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. (Ongoing research in Virginia's coastal plain indicates that a cereal grain crop with 30 plants per square foot of field planted with two tillers per plant (60 tillers per sq. ft.) by December 1 provides the optimum biomass for scavenging excess nitrogen while protecting the soil from erosion)

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 cover crops environmental benefit 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.
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.
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 <i>Brassica</i> (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 standard planting date, November 15<sup>th</sup>.
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.~~

~~C. Rate(s)~~

~~1. For participants who are not receiving payment for cover crops from another source (funding) on the same acreage, a state cost share payment rate of \$10 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 1 and maintained through March 14.~~

~~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 1 Cover Crop—Legume

### LEGUME-BASED COVER CROP

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's legume cover crop best management practice that 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 N 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. Muleh 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
<b>Crimson Clover</b>	20 lbs/acre	by September 28
<b>OR</b>		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	
<b>OR</b>		
Ladino Clover (with either)	2 lbs/acre	
1) Tall Fescue	15.0 lb./acre	
2) Orchard grass	10.0 lb./acre	
<b>OR</b>		
<b>Austrian Winter Pea</b>	30-40 lbs/acre	by October 26
<b>OR</b>		
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	
<b>OR</b>		
Austrian Winter Pea (with either)	15-20 lbs/acre	
1) Tall Fescue	15.0 lb./acre	
2) Orchard grass	10.0 lb./acre	
<b>OR</b>		
<b>Hairy Vetch</b>	20 lbs/acre	by October 26
<b>OR</b>		
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	
<b>OR</b>		
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 participants' 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 (funding) on the same acreage, a state cost-share payment rate of **\$20.00 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 1 Rate Worksheet**

Component	Rate per acre	Participating
<b>Nutrient Management</b>		
Core Nutrient Management Plan	\$8.00	-
In-Furrow or Banded-N	\$2.50	-
In-Furrow or Banded-P	\$2.50	-
1st Sidedress - Corn and/or Cotton	\$2.50	-
2nd Sidedress - Corn, Cotton, Highly Managed Haylands (topdress)	\$2.50	-
2nd Topdress on Small Grain	\$2.50	-
3rd Topdress on Small Grain	\$2.50	-
Variable Rate - Nitrogen	\$5.00	-
Variable Rate - Phosphorus	\$5.00	-
<b>Cover Crops</b>		
Early Rye	\$55.00	-
Standard Rye	\$25.00	-
Late Rye	\$7.50	-
Rye kill down on May 1 <sup>st</sup> or later	\$5.00	-
-	-	-
Early	\$45.00	-
Standard	\$15.00	-
Late	\$5.00	-
-	-	-
SL-8 Specialty	\$20.00	-
-	-	-
Legume	\$20.00	-
-	-	-
Harvestable	\$10.00	-

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**WFA-NM Rate Worksheet**

Component	Current Rate per acre	Proposed Rate per acre
<b>Nutrient Management</b>		
Core Nutrient Management Plan	\$8.00	\$6.00
In-Furrow or Banded-N	\$2.50	\$5.00
In-Furrow or Banded-P	\$2.50	\$5.00
1st Sidedress - Corn and/or Cotton	\$2.50	\$5.00
2nd Sidedress - Corn, Cotton, Highly Managed Haylands (topdress)	\$2.50	\$5.00
2nd Topdress on Small Grain	\$2.50	\$5.00

<u>3rd Topdress on Small Grain</u>	<u>\$2.50</u>	<u>\$5.00</u>
<u>Variable Rate - Nitrogen</u>	<u>\$5.00</u>	<u>\$10.00</u>
<u>Variable Rate - Phosphorus</u>	<u>\$5.00</u>	<u>\$10.00</u>

Potash/lime added for soil health