

**AGRICULTURAL BMP TECHNICAL ADVISORY COMMITTEE  
COVER CROP AND NUTRIENT MANAGEMENT SUBCOMMITTEE  
Town of Orange Public Works, 235 Warren St. Orange, VA  
August 6, 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  
Alston Horn, Chesapeake Bay Foundation  
Ben Rowe, Virginia Farm Bureau  
Buck Tharpe, Southside SWCD  
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

**Voting Members Not Present**

Wayne Davis, Virginia Association of SWCDs  
Conner Miller, Virginia Grain Producers Association

**Non-Voting Members Present**

Robert Waring, Chair, DCR  
Allen Jackson, Blue Ridge SWCD  
Nicole Keller, DCR  
Kemper Marable, Hanover-Caroline SWCD  
Marissa Roland, DCR

**WELCOME**

Chair Robert Waring called the meeting to order at 10:05am. A quorum was established with 10 voting present. The subcommittee scheduled the next meeting for September 9, 2021 at 10am in the same location (Town of Orange Public Works Community Building). Robert Waring reviewed the logistics of the upcoming TAC meeting, rules of the meeting, and presented the agenda.

**SUBCOMMITTEE ACTIONS**

- 1C - Creation of New Cover-Crop Maintenance Practice, SL-8M
  - Proposed language attached (Attachment 1)

- Purpose of the new practice is to allow for fall manure application on cover-crops.
- Committee reviewed proposed language, which was adapted from the SL-8B and SL-8H practice.
- General discussion followed:
  - The payment rate in comparison to the SL-8B and SL-8H was debated; the reduction in Bay Model credits was reviewed; and the relative attractiveness of the new practice over existing practices was weighed.
  - Concerns were registered over planting dates and soil test requirements. PSNT requirements may be needed in order for the practice to be eligible for NM credits.
  - The committee debated whether tweaking the NM-7 would be an acceptable alternative.
- The committee discussed adding language to clarify that an NMP must be on file and in practice before a producer is eligible for the new practice.
- No action was taken. Chair requested that the Blue Ridge District and Keith Burgess review the proposed language and present edits/suggestions at the next meeting, or else recommend that the committee adapt the NM-7.
- 2C - Allow for Fall Cover Crop with Nutrients Applied
  - Robert Waring discussed recent research efforts by the VA Extension Service and others in the Coastal Plain that show a relationship between early application of inorganic nitrogen and increased biomass in the spring. More research is underway.
  - General discussion followed regarding the proposed NM-8M, model credit for inorganic nutrients applied in the fall on cover crop, as well potential future studies.
  - A motion to Table the item was made and seconded. Motion passed unanimously.
- 3C - Increasing Rates of the WQ-1 Practice
  - Proposed language submitted to the subcommittee attached (Attachment 2)
  - The item seeks to increase the cost-share rate to 95% and add a buffer payment to offset land being taken out of production.
  - Committee reviewed proposed edits to the WQ-1.
  - General discussion followed:
    - Grass filter strips garner tremendous Bay Model credit.
    - The draft language strikes hayland and animal holding areas from eligibility; the relative benefits of the language change was debated. The subcommittee discussed striking hayland and maintaining animal holding areas as eligible.
    - A request was registered for additional language limiting producers who want to harvest hay from the strip to one or two harvests to prevent overharvesting. After general discussion on management and maintenance, a separate suggestion was made to strike the harvesting option completely and insert language to protect from flash grazing.
    - There was general discussion regarding the differences between the WQ-1 buffer strips with potential changes as compared to the SL-1 full conversion.
  - The committee generally agreed to the following additional edits:
    - Proposed rates need to be edited to allow for a “percent of total cost up to a maximum of [x]” instead of “or a maximum of [x].”
    - Language should be added clarifying that if hay is harvested from the strip, the producer would not receive a buffer bonus, only construction costs.
    - The rates table from SL-6W should be included.

- No action was taken. Further information on Bay Model credits for strips not adjacent to a water body and updated language will be presented to the committee next meeting.
- 6C - Examine Seeding Rates for Cover Crops
  - Robert Waring reported conflicting data on the relationship between seeding rates and production, based on conversations he's had with relevant experts in the state. VA Extension is performing additional research. This study will be conducted in the Northern Neck, Gloucester, and Shenandoah Valley.
  - A subcommittee member requests that Robert Waring ask VA Extension Services to include planting dates as a variable to the research.
  - A motion to Table the item was made and seconded. Motion passed unanimously.
- 8C - Proposed Edits to NM-5P
  - Proposed language attached (Attachment 3)
  - Item seeks to add an \$8/acre payment option for acres that are receiving no phosphorus based on soil tests. This would match the payments of the NM-5N.
  - General discussion followed.
  - A motion to advance the edits as they stand was made and seconded. Motion passed unanimously.

The subcommittee adjourned for lunch at 12:00pm and reconvened at 12:45pm.

- 4C - Clarifying SL-8
  - Item asks for clarification of whether 60% cover is required under the practice and when that should be verified.
  - Committee agreed the relevant 60% language from the other cover crop practices should be inserted.
  - No action was taken. Committee will vote on the updated language next meeting.
- 7C – Modifying soil testing reimbursement rate for NM-3C and NM-5N
  - The proposed rate of \$12/sample was discussed by the subcommittee. Rates for various companies and District in-house testing costs were reviewed.
  - Committee agreed to increase the rate for soil testing as recommended.
  - A motion to amend the testing reimbursement rate in the NM-3C and NM-5M was made and seconded. Motion passed unanimously.
- 9C and 5C - Bundling Nutrient Management Practices and late termination of rye cover crop
  - Proposed language attached (Attachments 4 and 5)
  - Based on the success and lessons learned from the Whole Farms Approach (WFA) pilot project, the item seeks to create two bundled practices: one for cover crop practices (WFA-CC) and one for Nutrient Management practices (WFA-NM). The late termination of rye cover crop is also a component of the WFA pilot project and could be included in the WFA-CC proposed language.
  - Committee reviewed proposed language, adapted from the WFA-1 pilot project practice.
  - General discussion followed
    - The pilot project showed the bundled practices were extremely popular with producers. This approach captures significantly more Bay Model credit, as it enables reporting for all BMPs implemented on an operation and BMPs that do not have a relevant practice in the VACS manual. Also makes it easier to adjust plans and reduces the amount of separate contracts that must be handled and canceled.

- The activities of the Soil Health Coalition were noted, this included adding soil health components to existing practices as well as creating bundles that would be applicable to animal operations. The subcommittee discussed adding a small incentive for the application of lime and potash.
- No action was taken. Members will review the proposed language and discuss at the next meeting.

Allyson Ponn left the meeting at 1:30pm.

**PUBLIC COMMENT**

None

**FUTURE MEETINGS**

The Cover Crop and Nutrient Management Subcommittee will meet on September 9, 2021 at 10am at the Town of Orange Public Works Meeting Room.

**ADJOURN- 1:53pm**

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. 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:

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- i. Inadequate manure storage is available for the winter at the source;
- ii. Manure is applied in accordance with a Nutrient Management Plan prepared by a Virginia certified Nutrient Management Planner.

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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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

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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 permitted 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

~~11.16.~~ In all cases, this practice is subject to NRCS standard 340.

~~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)

- 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.

4.2. 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 ~~\$22 (should this be \$20)~~30 per acre early planting bonus is payable for cover crops planted on or before the early planting date specified for their physiographic region. Districts should not issue cost-share funds if a good stand and good growth of winter cover is not obtained before December 15 and maintained through March 14, ~~with the exception of the cities of Chesapeake and Virginia Beach that have late November planting dates.~~

4.5. A ~~\$8 (should this be \$7)~~10 per acre bonus payment is available for all applicants that plant pure stands of rye from the following list on or before either planting date.

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

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

\*Or any other indeterminate growth tetraploid rye cultivar.

#### D. Technical Responsibility

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

Revised April 2021/Draft August 2021

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Name of Practice: GRASS FILTER STRIPS ***FOR CROPLAND***

DCR Specification No. WQ-1

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

A. Description and Purpose

Grass filter strips are vegetative buffers that are located along the banks of water courses to filter runoff, anchor soil particles, and protect banks against scour and erosion. Even the best conservation measures on a farm allow some soil movement during heavy rains. Filter strips are the stream's last line of defense against pollution. Since filter strips trap eroded soil, they help keep sediment out of streams. The strips also improve water quality by filtering out fertilizers, pesticides, and microorganisms that otherwise might reach waterways. In addition, 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. As well, these living filters are aesthetically pleasing.

Cost-share will be provided to install and maintain 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 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 (4VAC50-85-130G).
2. Filter strips planned for sediment and related pollutant control are subject to the following state specifications:
  - i. ***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 BMP's 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. Grass filter strips may be installed along intermittent waterways where judged appropriate and feasible by the local technical authority.

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. No-till planting is preferable. If grading is necessary, conventional equipment can be used for preparing the seedbed, fertilizing and maintenance.
5. 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 5 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, *if applicable.*
  - ii. Protect the filter strip from damage by livestock.
  - iii. Do not use as a roadway.
  - iv. Avoid operations that leave tillage or wheel marks.
  - v. Woody stems should not be allowed to exceed 2 inches in diameter.
  - vi. Avoid damaging filter area with herbicides *and be conscious of herbicide drift.*

vii. Hay may be harvested from grass filter strips.

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 practices subject to NRCS Standards 393 Filter Strip, 466 Land Smoothing, 572 Spoil Spreading and Leveling.

i All practice components including the vegetative cover implemented must be maintained for a minimum of **10** 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 spot check by the District throughout the lifespan of the practice and failure to maintain the practice may result in reimbursement of cost share and/or tax credits.

C. Rate(s)

The state cost-share payment alone or when combined with any other cost-share program will not exceed **95% of the total eligible cost, or a maximum of \$250/acre for 35' to 100' wide filter strips.** ~~WQ-1 installed on permanent hayland in accordance with an RMP is eligible for \$100/acre.~~ **In addition to the eligible component cost, a one-time incentive payment of \$80/acre/year will be provided.**

1. *Eligible component are as follows:*

i. *Site preparation –mechanical (shaping/grading) or chemical (herbicide)*

ii. *Eligible seed*

iii. *Minerals (fertilizer, lime, manure\*); \*If manure (litter) is purchased from off farm, a bill and nutrient analysis must be presented.*

iv. *Labor and equipment*

v. *Nutrient Management Planning or soil testing*

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

3. If a participant receives cost-share, only the participant is 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 December 2020

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>	Coefficient
35'	0.35
50'	0.50
100'	0.75

This trapping efficiency expressed in tons/year is placed in under Gross Erosion Reduction in tons/yr. field of the Tracking Program.

Example: 1,000-foot filter strip is planned for a 50-acre field; the slope length of the contributing area is approximately 250 feet. US soil loss rate is approximately 6 tons/ac./year. The filter strip itself is 50' wide.

Step 1: Size of filter area is to be placed in Extent Requested - 1.15 acres.

Erosion rate of 6 tons/ac/year to be placed in Sheet & Rill Reduction.

Step 2: Trapping efficiency

a. Delivered Sediment

$$\frac{\text{Length of filter strip (1,000)} \times \text{Length of Slope (250)}}{43,560}$$

$$\frac{1,000 \times 250}{43,560} = 5.7 \text{ acres of contributing field}$$

Area (5.7 ac) x Erosion Rate (6 tons/ac/yr) x SDR (0.5)

$$5.7 \times 6 \times 0.5 = \text{Delivered Sediment Load of 17.1}$$

b. Trapping coefficient

$$\text{Sediment Load (17.1)} \times \text{Trapping Coefficient (0.5)} = 8.55$$

Round 8.55 up to 9 and place under Gross Erosion Reduction.

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

A. Description and Purpose

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

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

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

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

B. Policies and Specifications

1. This is an annual practice.
2. 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.
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 zone or grid sampling recommendations.
5. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field 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).

6. 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 \$8.00 per acre.

6-7. The total number of acres that qualify for this practice will be based upon the total acres that were sampled in zones (zones shall be no larger than 20 acres and based upon soil type), grids (grid size shall be 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.

7-8. The participant **must** provide written verification of the recommendation(s) and the resulting application(s) (e.g. results of laboratory test(s), a work order or detailed bill/invoice showing application rates, an as-applied application map of field(s) to the District within forty-five days of the phosphorous application.

8-9. The participant **must** sign up for this practice before April 1<sup>st</sup> of each year that the practice will be utilized.

9-10. Fields that have received applications of biosolids within the previous 24 months are not eligible.

### C. Rates

1. As set forth by Virginia Code, the Commonwealth currently provides a tax credit for implementation of certain agricultural best management practices, as discussed in the Tax Credit Guidelines of the VACS Manual.
2. For participants who are not receiving payment for precision application of phosphorus from another funding source on the same acreage, a state cost share payment rate of 75% of the application charge, up to a maximum amount of \$8.00 per acre per year, is available for the acres receiving variable rate zone or grid (subfield) application of phosphorous on row crops, small grains or highly managed hayland production systems.
3. No per sample cost-share is available for zone/grid (subfield) soil fertility testing.

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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:  
Whole Farm Approach – ~~Cover Crop Pilot~~  
DCR Specification for No. WFA-~~CC~~

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-1WFA-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-1WFA-CC~~ Rate Worksheet for assistance with sign-up. ~~This practice is a pilot project for program year 2021, the WFA-1WFA-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~~  
~~— 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~~  
~~— 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~~

~~6. 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

~~8. **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~~

~~10. **Nitrogen Management**, state cost share payment rates as follows:~~

- ~~— 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~~
- ~~— 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~~
- ~~— 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~~

~~15. **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~~

**17.2. 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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~~18.3. **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.~~

~~19.4. **Cover Crop – Harvestable**, a state cost-share payment rate of **\$10.00 per acre** is available for harvestable cover crop.~~

~~20.5. **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.  
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).
4. 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.
5. Checks to ensure compliance with this practice may be conducted by the District or appropriate agency personnel and failure to comply may result in forfeiture of cost share funds.
5. 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.

- ~~6. Application of the in-furrow or banded application of nitrogen and/or phosphorus must be made at time of planting.~~
- ~~6. 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.~~
- ~~6. This is an annual practice.~~

~~C. Rate(s)~~

- ~~0. 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.~~
- ~~0. 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

2. 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.
2. 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.
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 (4VAC50-85-130G).
1. District staff should utilize the NMP maps, nutrient balance sheets, and summary sheets to confirm practice implementation. A comparison between crop recommendations and in field conditions shall be used when certifying conservation practice compliance.
2. The total number of corn acres specified by the nutrient management plan to receive manure will determine the 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.~~

- ~~2. 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.~~
- ~~2. 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.~~
- ~~2. Application of the first sidedress nitrogen must be made after the corn is at the 5-leaf stage or at least 15" in height.~~
- ~~2. 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.~~
- ~~2. This is an annual practice.~~

C. Rate(s)

- ~~0. 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

2. 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.
2. 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.
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).
2. 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.
2. 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.
1. 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).
1. 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.

- ~~2. 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.~~
- ~~2. 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.~~
- ~~2. 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.~~
- ~~2. This is an annual practice.~~

~~C. Rate(s)~~

- ~~0. 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.

#### 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.

#### 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.
1. 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.

- ~~i. Variable rate nitrogen applications based upon the soil test results of (subfield) sampling; other macro-micro nutrients may be applied concurrently~~
- ~~i. Variable rate or zone application of nitrogen on row crops or small grains~~
- ~~i. Second sidedress application of nitrogen on corn, cotton and highly managed hayland (top dress) production systems (other than alfalfa).~~
- ~~1. 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.~~
- ~~1. Subsequent sidedress applications must be applied at least 14 days after the most recent application~~
- ~~1. 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).*~~
- ~~1. 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.~~
- ~~1. Total nitrogen application rates (including pre-plant and sidedress) on corn shall not exceed 1 lb./bu. expected crop yield.~~
- ~~1. 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.~~
- ~~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 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).~~
- ~~1. 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.~~
- ~~1. 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.~~
- ~~1. Fields that have received applications of biosolids within the previous 24 months are not eligible.~~
- ~~1. This is an annual practice.~~

~~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~~
- ~~1. 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~~
- ~~1. 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.~~
- ~~1. 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.~~

#### ~~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

#### 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.

#### 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.
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).
1. 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.
1. Total phosphorus application rates shall not exceed the recommendations of the zone or grid sampling recommendations.
1. 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.

1. 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
1. Fields that have received applications of biosolids within the previous 24 months are not eligible.
1. This is an annual practice.

#### Rates

0. 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.
0. 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-1~~WFA-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
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<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
<del>Late Rye</del>	<del>\$7.50/acre</del>

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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

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

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>
<del>WFA+WFA-CC</del>	<del></del>

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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.



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

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, tThe WFA-1/WFA-NM4 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-1WFA-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-1WFA-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-1~~WFA-NM Nitrogen Management Option

### PRECISION NUTRIENT MANAGEMENT – NITROGEN

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's ~~WFA-1~~WFA-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.
  - ~~13.~~ The participant **must** sign up for this practice before April 1<sup>st</sup> of each year that the practice will be utilized.
  - ~~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.

## 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 <sup>†</sup> 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 <sup>°</sup>
mixture with annual rye grass	10 lbs./acre
Winter-hardy <i>Brassica</i> (canola/rape)	5 -7 lbs./acre <sup>°</sup>
mixture with annual rye grass	10 lbs./acre

<sup>†</sup> legume = Crimson Clover, Austrian Winter Pea or Hairy Vetch

<sup>°</sup>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:

	<b>Date</b>	<b>Rate</b>
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:

	<b>Date</b>	<b>Rate</b>
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

~~(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—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:~~

<b>Seed Type</b>	<b>Rate</b>
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. 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.~~





**WFA-1 Rate Worksheet**

<b>Component</b>	<b>Rate per acre</b>	<b>Participating</b>
<b><i>Nutrient Management</i></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	

**WFA-NM Rate Worksheet**

<b>Component</b>	<b>Current Rate per acre</b>	<b>Proposed Rate per acre</b>
<b>Nutrient Management</b>		
Core Nutrient Management Plan	<b>\$8.00</b>	<b>\$6.00</b>
In-Furrow or Banded-N	<b>\$2.50</b>	<b>\$5.00</b>
In-Furrow or Banded-P	<b>\$2.50</b>	<b>\$5.00</b>
1st Sidedress - Corn and/or Cotton	<b>\$2.50</b>	<b>\$5.00</b>
2nd Sidedress - Corn, Cotton, Highly Managed Haylands (topdress)	<b>\$2.50</b>	<b>\$5.00</b>
2nd Topdress on Small Grain	<b>\$2.50</b>	<b>\$5.00</b>
3rd Topdress on Small Grain	<b>\$2.50</b>	<b>\$5.00</b>
Variable Rate - Nitrogen	<b>\$5.00</b>	<b>\$10.00</b>
Variable Rate - Phosphorus	<b>\$5.00</b>	<b>\$10.00</b>