

Approval of Revisions to the *Whole Farm Approach* Specification

§ 10.1-505. Duties of Board.

In addition to other duties and powers conferred upon the Board, it shall have the following duties and powers:

1. To give or loan appropriate financial and other assistance to district directors in carrying out any of their powers and programs.
3. To oversee the programs of the districts.
11. To provide, from such funds appropriated for districts, financial assistance for the administrative, operational and technical support of districts.

§ 10.1-546.1. Delivery of Agricultural Best Management Practices Cost-Share Program.

Districts shall locally deliver the Virginia Agricultural Best Management Practices Cost-Share Program described under §10.1-2128.1, under the direction of the Board, as a means of promoting voluntary adoption of conservation management practices by farmers and land managers in support of the Department's nonpoint source pollution management program.

Background Information

For the FY2022 Virginia Agricultural Best Management Practices Cost-Share Program Manual (VACS Manual), planting dates, as well as the date by which a good vegetative cover is obtained, were amended in cover crop specifications including SL-8B and SL-8H. The cover crop specifications were also revised to allow the use of two different varieties of rye (Elbon and Ryman). However, none of these changes were made to the *Whole Farm Approach* specification.

In order to remain consistent across all of the cover crop specifications, both the planting dates have and the date by which a good vegetative cover must be obtained have also been amended. The specification has also been amended to include the additional varieties of rye.

Recommended Motion:

The Virginia Soil and Water Conservation Board approves the *Whole Farm Approach* specification as revised. The revised specification is effective immediately.

Name of Practice:
Whole Farm Approach – Pilot
DCR Specification for No. WFA-1

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.

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

a. Eligibility

- i. This practice applies to crops and highly managed hay.
- ii. Cropland, which may receive applications of pelletized Class A biosolids that do not require a permit, is eligible as these products are considered commercial fertilizer.
- iii. The nutrient management plan must cover at least twelve months of crop and management practices after the begin date on the NMP cover sheet.
- iv. Plans must be developed based on soil analyses taken within a three year period prior to the begin date of the plan and must be performed by soil testing laboratories approved by DCR.
- v. **Core Nutrient Management Plan Requirement** - A Nutrient Management Plan must be written according to the Nutrient Management and Training Certification Regulations, 4VAC50-85 et seq.
- vi. In order to verify implementation of the NMP, an applicant must provide to the District:
 - a. A completed verification form (DCR199-231) (04/18); or
 - b. A statement signed by the Nutrient Management Planner and producer that nutrients were applied during this period according to a NMP; or
 - c. Nutrient application records for the preceding 12 months (For new producers, or tracts without a current Nutrient Management Plan).

2. Ineligible

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

C. Rates

Cost share rates for components may stack, see the WFA-1 Rate Worksheet for assistance with sign-up. **This practice is a pilot project for program year 2021; the WFA-1 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
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:

	Date	Rate
Early Rye	November 10	\$55.00/acre
Standard Rye	November 30	\$25.00/acre
Rye kill down on May 1 st or later		\$5.00/acre

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

	Date	Rate
Early	November 10	\$45.00/acre
Standard	November 30	\$15.00/acre

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

WFA-1 Nitrogen/Phosphorus Management Option – Banded/In Furrow

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

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

A. Description and Purpose

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

B. Policies and Specifications

1. Eligibility for this practice is limited to the length of the plan recommending the in-furrow or banded practice.
2. A producer must provide a written verification (such as records, a work order, or bill) to the District prior to payment.
3. The total number of crop acres specified by the nutrient management plan to be in-furrow or banded will determine the maximum acres to qualify, with payment being made only to those acres which actually received an in-furrow or banded application of nitrogen and/or phosphorus.
4. In order to be eligible for cost-share, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field that this practice will be implemented on. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations, (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014), must be prepared and certified by a Virginia certified nutrient management planner, and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).
5. District staff should utilize the NMP maps, nutrient balance sheets, and summary sheets to confirm practice implementation. A comparison between crop recommendations and in field conditions shall be used when certifying conservation practice compliance.
6. Checks to ensure compliance with this practice may be conducted by the District or appropriate agency personnel and failure to comply may result in forfeiture of cost-share funds.
7. A producer must provide a written verification of contracted in-furrow or banded

- application cost to the District within two weeks of the sample analysis.
8. Application of the in-furrow or banded application of nitrogen and/or phosphorus must be made at time of planting.
 9. Total nitrogen to be applied to the cornfield must be consistent with the nutrient management plan consistent with procedures contained in the Nutrient Management Training and Certification Regulations, 4VAC50-85 et. seq.
 10. This is an annual practice.

C. Rate(s)

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

WFA-1 Nitrogen Management Option – First Sidedress

FIRST SIDEDRESS APPLICATION OF NITROGEN ON CORN and/or COTTON

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

A. Description and Purpose

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

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

B. Policies and Specifications

1. Eligibility for this practice is limited to the length of the plan recommending the sidedress practice.
2. A producer must provide a written verification (such as records, a work order, or bill) to the District prior to payment.
3. The total number of corn and/or cotton acres specified by the nutrient management plan to be sidedressed will determine the maximum acres to qualify, with payment being made only to those acres which actually received a sidedress application of nitrogen.
4. In order to be eligible for cost-share, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field that this practice will be implemented on. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations, (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014), must be prepared and certified by a Virginia certified nutrient management planner, and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).
5. District staff should utilize the NMP maps, nutrient balance sheets, and summary sheets to confirm practice implementation. A comparison between crop recommendations and in field conditions shall be used when certifying conservation practice compliance.
6. The total number of corn acres specified by the nutrient management plan to receive manure will determine the required number of PSNTs. The PSNT must

be done when corn is approximately 12 inches in height. PSNT samples should represent a minimum of 7 acres on average and a maximum of 20 acres on average.

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

C. Rate(s)

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

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

SECOND TOPDRESS APPLICATION OF NITROGEN ON SMALL GRAIN

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

A. Description and Purpose

Split application of nitrogen on small grain consists of applying nitrogen during the late winter in two increments based on the progression of growth of the small grain crop.

Applying nitrogen based on the progression of growth of the small grain crop in the late winter minimizes the amount lost through leaching and run off.

B. Policies and Specifications

1. Eligibility for this practice is limited to the length of the plan recommending the split nitrogen application.
2. A producer must sign-up and provide written verification (such as records, a work order, or bill) to the District prior to payment.
3. The total number of small grain acres specified by the nutrient management plan to receive split nitrogen applications will determine the maximum acres to qualify, with payment being made only to those acres which actually received split nitrogen applications.
4. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field that this practice will be implemented on. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations, (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014), must be prepared and certified by a Virginia certified nutrient management planner, and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).
5. This cost-share practice is for the split application of late winter nitrogen applications to small grain in which each application must contain nitrogen as a component of the material applied.
6. On fields that have organic sources of nitrogen applied during the crop year or in previous years, or if high residual nitrogen levels are suspected from a previous crop, fall nitrogen rates should be determined by a nitrate test.
7. Late winter nitrogen to be applied to the small grain field(s) must be determined by using the criteria contained in the Virginia Nutrient Management Standards and Criteria, (revised July 2014).
8. Checks to ensure compliance with this practice may be conducted by the District or appropriate agency personnel throughout the life of the practice and failure to

- comply may result in forfeiture of cost-share funds.
9. Sample collection for any soil nitrate tests in the fall, tissue tests, or tiller counts should be done by the plan developer, an employee of the plan developer, or the producer.
 10. In lieu of tiller counts and tissue tests, as listed in the Virginia Nutrient Management Standards and Criteria, revised July, 2014, late winter split application of nitrogen must not exceed 40# of nitrogen for the first application and must not exceed 50# of nitrogen for the second application.
 11. For late winter split application of nitrogen, the two applications must be at least 30 days apart with the first application no earlier than growth stage 25, with nitrogen rates determined based on tiller counts and tissues tests as explained in the Virginia Nutrient Management Standards and Criteria revised July, 2014.
 12. This is an annual practice.

C. Rate(s)

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

WFA-1 Nitrogen Management Option

PRECISION NUTRIENT MANAGEMENT – NITROGEN

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's WFA-1 Nutrient Management Option – Nitrogen Management, for the enhanced nutrient management of nitrogen on crop land that is applicable to all contracts entered into with respect to this practice.

A. Description and Purpose

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

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

The variable rates of nitrogen listed below (in B. 2.) apply to all row and highly managed hay crops (other than alfalfa). Other macro-micro nutrients or soil amendments may be applied concurrently.

B. Policies and Specifications

1. Results from the test conducted to develop a nitrogen application prescription must be used to determine the nutrient application rates for the current or following crop as appropriate; that prescription must be followed during the rate of application of nitrogen.
2. At least one of the following identified components must be implemented to receive any cost-share payment for this practice.
 - i. Soil (pre-sidedress) nitrate test (PSNT). Plant tissue samples or petiole samples must be submitted at the correct growth stage and handled in accordance with laboratory guidelines to ensure sample viability and usability. The results of these tests may be used by the participant to support this practice.

- ii. Variable rate nitrogen applications based upon the soil test results of (subfield) sampling; other macro-micro nutrients may be applied concurrently
 - iii. Variable rate or zone application of nitrogen on row crops or small grains
 - iv. Second sidedress application of nitrogen on corn, cotton and highly managed hayland (top dress) production systems (other than alfalfa).
3. Third split application of nitrogen on small grains. All split applications will be applied at a growth stage when the plant is entering the highest demand for nitrogen. Application of any sidedress nitrogen, including the 1st split, must be applied after the corn is at the 5-leaf stage or at least 15" in height.
 4. Subsequent sidedress applications must be applied at least 14 days after the most recent application
 5. The third split applications of nitrogen applies to small grains crops. *This practice does not apply to the first or second split application of nitrogen on small grains, (see WFA-1 Second Topdress on Small Grain).*
 6. On fields that have organic (manure) sources of nitrogen applied during the crop year or in previous years, or if high residual nitrogen levels are suspected from a previous crop, fall nitrogen rates shall be determined by a soil nitrate test.
 7. Total nitrogen application rates (including pre-plant and sidedress) on corn shall not exceed 1 lb./bu. expected crop yield.
 8. Where this practice is applied, there must be a note to that effect in the narrative or elsewhere in the nutrient management plan indicating that the soils were sampled in an appropriate manner.
 9. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field that this practice will be implemented on. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations, (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014), must be prepared and certified by a Virginia certified nutrient management planner, and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).
 10. The total number of acres that qualify for this practice will be based upon the total acres that were sampled in zones, had mid-season testing such as soil (Pre-sidedress) Nitrate Testing (PSNT), or received Variable Rate or Zone applications of nitrogen, based upon the zone or grid soil nitrate sampling.
 11. Participants **shall** provide written verification of the recommendation and the resulting application(s) (examples include but are not limited to: results of laboratory test, a work order or bill; and as-applied application map of field) to the District of the final nitrogen application to verify that the recommendations were followed prior to payment.
 12. Fields that have received applications of biosolids within the previous 24 months are not eligible.
 13. This is an annual practice.

C. Rates

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

D. Technical Responsibility

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

WFA-1 Phosphorus Management Option

PRECISION NUTRIENT MANAGEMENT – PHOSPHORUS

A. Description and Purpose

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

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

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

B. Policies and Specifications

1. Results from any test conducted to develop a phosphorous application prescription must be used to determine the phosphorous application rates for the current or following crop as appropriate, and that prescription must be followed during the application of phosphorous.
2. In order to be eligible for cost-share, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field that this practice will be implemented on. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations, (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014), must be prepared and certified by a Virginia certified nutrient management planner, and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).
3. Phosphorous applications must be based upon the soil test results of zone or grid (subfield) sampling recommendations; other macro-micro nutrients may be applied concurrently.
4. Total phosphorus application rates shall not exceed the recommendations of the zone or grid sampling recommendations.
5. The total number of acres that qualify for this practice will be based upon the total acres that were sampled in zones (zone shall be no larger than 20 acres and based upon soil type) grids (grid size shall be of 1 to 4 acres in size), or had mid-season

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

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

C. Rates

1. For participants who are not receiving payment for precision application of phosphorus from another source (funding) on the same acreage, a state cost share payment rate of **\$5.00 per acre**, for the acres receiving variable rate application of phosphorous on row crops, small grains or highly managed hayland production systems.
2. No per sample cost-share is available for zone/grid (subfield) soil fertility testing. Many commercial applicators include zone/grid (subfield) soil fertility sampling in their variable rate application charge.

WFA-1 Cover Crop – Standard Cover Crop

**SMALL GRAIN AND MIXED COVER CROP FOR NUTRIENT AND RESIDUE
MANAGEMENT**

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

A. Description and Purpose

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

This practice will provide an incentive to keep a cover on cropland, which will help prevent the loss of nutrients. The purpose is to reduce erosion and the leaching of nutrients to ground water. This BMP is designed to utilize the maximum amount of residual nitrogen from previous surface nutrient applications and in the first three feet of the soil profile.

B. Policies and Specifications

1. Soil loss calculations using the presently approved NRCS calculation methodology shall be documented and included in the participant file for review during spot checks.
2. No nutrients from any sources are allowed between the harvesting of the previous crop and March 1 of the next calendar year. No nutrients are allowed at planting.
3. Cost-share is provided as a variable flat rate per acre incentive to encourage proper establishment and to offset a portion of the cost of seed and the seeding operation.
4. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field that this practice will be implemented on. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations, (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014), must be prepared and certified by a Virginia certified nutrient management planner, and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production management criteria designated in the BMP practice (4VACV50-85-130G).
5. A good stand and good growth of vegetative winter cover must be obtained by **December 15** to protect the area from nutrient leaching and runoff in the fall and winter. All cover crop plantings must maintain a minimum of 60% cover crop plant material on the enrolled acres through the lifespan of the practice. (Ongoing research in Virginia's coastal plain indicates that a cereal grain crop with 30 plants per square foot of field planted with two tillers per plant (60 tillers per sq.

ft.) by December 1 provides the optimum biomass for scavenging excess nitrogen while protecting the soil from erosion)

6. Seeding rates shall be adjusted based on germination rates.
7. The practice is intended to provide an incentive to keep a vegetative cover on cropland, which will help prevent the loss of nutrients, by reducing surface erosion and absorbing any excess nutrients from the soil. Current research indicates that early planting of winter rye maximizes the cover crops environmental benefit in Virginia. The SL-8B is not intended to subsidize crops produced for commodity purposes.
8. Harvesting for hay, haylage, silage, grain, straw or seed is not permitted. Pasturing consistent with sound agronomic management is permitted as long as a 60% cover is maintained through March 14. **In years of drought if producers anticipate a need for additional feed harvest, they should apply for the SL-8H practice as harvesting is not allowed under this practice.**
9. Select one of following species and/or mixtures of species to plant in all soils:

Species	bu./acre
Rye (Tetraploid)	2 bu./acre
Winter Rye (not tetraploid)	2 bu./acre
Winter Barley	2 bu./acre
Winter Hardy Oats	2 bu./acre
Winter Wheat or Triticale	2 bu./acre
Winter Annual ryegrass	20 lbs./acre
Small grain mixtures with	1 bu./acre
a) legume† or	10 lbs./acre
b) Diakon (forage or tillage) radish or	6 lb./ acre
c) canola or rape	4 lbs./acre
Diakon (forage or tillage) Radish	6-8 lbs./acre°
mixture with annual rye grass	10 lbs./acre
Winter-hardy <i>Brassica</i> (canola/rape)	5 -7 lbs./acre°
mixture with annual rye grass	10 lbs./acre

† legume = Crimson Clover, Austrian Winter Pea or Hairy Vetch

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

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

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

Area	Early Planting Date	Standard Planting Date	
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Coastal Plain	November 10	November 30	
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11. In all cases, this practice is subject to NRCS standard 340.
12. The cover crop must be killed using mechanical or chemical means or by grazing no earlier than **March 15** and no later than **June 1**. The cover crop residue may be left on the field for conservation purposes; or the cover crop or its residue may be tilled under. The practice will be considered complete once the cover crop has served its purpose and been killed.

C. Rate(s)

1. For participants who are not receiving payment for cover crops from another source (funding) on the same acreage, a state cost share payment rate per acre for pure stands of Rye are below.

	Date	Rate
Early Rye	November 10	\$55.00/acre
Standard Rye	November 30	\$25.00/acre

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

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

2. For participants who are not receiving payment for cover crops from another source (funding) on the same acreage, a state cost share payment rate per acre for listed small grains, brassicas, and/or mixtures are below

	Date	Rate
Early	November 10	\$45.00/acre
Standard	November 30	\$15.00/acre

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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:

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-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 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)

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 30th.**

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

- iii. Vetch is not recommended in rotations containing small grains. It is very important that seeding dates be met to insure adequate fall growth.
- iv. All seed is required to be inoculated.
- v. Method:
 - a) No till drill; **OR**
 - b) Aerial Seeding; **OR**
 - c) Conventionally drilled as long as 30% of previous crop residue remain; **OR**

- d) Broadcast as long as 30% of previously crop residue remains
- 8. Legume cover crop must be left on surface intact to serve as mulch for the no-till planting of grain crops.
- 9. Applicant must submit documentation (fertilizer recommendation and bills, or signed statement) indicating that the applied nitrogen fertilizer used that crop year (grain) was reduced, or will be reduced only in cases where nitrogen will be applied after June 1, according to Table 7-1 on page 108 “Estimated Nitrogen Availability to Succeeding Crops from Legumes” of DCR Nutrient Management Standards and Criteria (07/2014) per acre from his normal application or rate that was recommended. Consult local extension agent for exact recommendations. Districts shall utilize the signed statement example found on page **WQ-4 - 5** of the Virginia Agricultural Cost-Share BMP Manual and place in the participants’ case file.
- 10. This practice must be implemented on the fields consistent with NRCS Standards 340 Cover Crops. This practice is for use only on land being planted to a grain crop. No till planting must be established into an existing legume stand or newly established legume stand according to the standards of NRCS 329 Residue and Tillage Management, No Till/Strip-Till/Direct Seed, and 340 Cover Crops.
- 11. The practice may be certified complete once the grain crop has been planted using no-till methods into the legume mulch cover and all applicable specifications listed above have been met.

C. Rate(s)

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

D. Technical Responsibility

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

WFA-1 Rate Worksheet

Component	Rate per acre	Participating
<i>Nutrient Management</i>		
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	
<i>Cover Crops</i>		
Early Rye	\$55.00	
Standard Rye	\$25.00	
Rye kill down on May 1 st or later	\$5.00	
Early	\$45.00	
Standard	\$15.00	
SL-8 Specialty	\$20.00	
Legume	\$20.00	
Harvestable	\$10.00	