

Virginia Agricultural BMP Advisory Committee
Virginia Department of Forestry
Charlottesville, VA
December 14, 2018
9:30 A.M. – 3:00 P.M.

TIME AND PLACE

The meeting of the Virginia Agricultural BMP Technical Advisory Committee convened at 9:30am on Friday, December 14, 2018 at the Virginia Department of Forestry in Charlottesville, Virginia.

ATTENDANCE

Matt Kowalski, Chesapeake Bay Foundation
Ashley Wendt, DEQ
Nick Livesay, Lord Fairfax SWCD
Emily Horsley, FSA
Chris Barbour, Outside the Chesapeake Bay
District Representative
Tom Turner, John Marshall SWCD
Luke Longanecker, Virginia Association of
Conservation District Employees
Robert Bradford, Area II Representative
Dana Gochenour, Lord Fairfax
Kyle Shreve, Virginia Agribusiness Council
Carrie Swanson, Virginia Cooperative Extension
Lisa Hyatt, Thomas Jefferson SWCD Proxy
Charles Newton, Shenandoah Valley SWCD
Aaron Lucas, Headwaters SWCD
Allyson Ponn, Lord Fairfax SWCD
Kristal McKelvey, Tidewater SWCD
Todd Groh, VDOF
Danny Withers, Three Rivers SWCD
Hobey Bauhan, Virginia Poultry Federation
Darrel Marshall, VDAC
Sam Truban, Lord Fairfax SWCD
Kris Jarvis, John Marshall SWCD
Brandon Dillistin, Northern Neck SWCD
Rick Shiflet, Headwaters SWCD
Kevin Dunn, Peter Francisco SWCD
Rachel McCuller, Headwaters SWCD
Greg Wichelns, Culpeper SWCD
Jim Tate, Hanover-Caroline SWCD
Clair Hilsen, John Marshall SWCD
Keith Horsley, Tidewater SWCD
Tim Higgs, VDACS
Sharon Conner, Hanover-Caroline SWCD
Wilkie Chaffin, Piedmont SWCD
Willie Woode, Northern Virginia SWCD
Dan Goerlich, VCE
Conner Miller, Virginia Grain Producers
Association
Bryan Hofmann, Friends of the Rappahannock
Amanda McCullen, Culpeper SWCD
David Massie, Culpeper SWCD

Steven Meeks, VASWCD
Spenser Yager, VASWCDE
Katie Hellebush, Virginia Forestry Association
Ben Chester, DCR
Mark Hollberg, DCR
Amanda Pennington, DCR
Scott Ambler, DCR
Blair Gordon, DCR
David Kindig, DCR
Amy Walker, DCR
Wayne Davis, DCR
Carl Thiel-Goin, DCR
Stacy Horton, DCR
Roland Owens, DCR
Denney Turner, DCR
Christine Watlington, DCR
Bob Waring, DCR
Darryl Glover, DCR
Jim Echols, DCR

OPENING AND INTRODUCTION

Mr. Darryl Glover welcomed everyone to the TAC meeting. The meeting began with the review of the agenda for the day. Each subcommittee chair will present a report of recommendations discussed during subcommittee meetings and the full TAC will vote to advance, table or amend. The final full Agricultural Best Management Practices Cost-share Program Technical Advisory Committee meeting will be held on January 8, 2019 from 9:30am until 3:00pm.

The meeting will be held at:

Central High School Cultural and Educational Center
2748 Dogtown Rd.
Goochland, VA 23063

CHESAPEAKE BAY WIP III DEVELOPMENT UPDATE

Mr. Glover provided an update on the status of the Chesapeake Bay Watershed Implementation Plan (WIP) development. The current nine Districts that need the most additional nutrient reductions for 2025 are Culpeper, Eastern Shore, Hanover-Caroline, Headwaters, Lord Fairfax, Northern Neck, Shenandoah, Three Rivers and Robert E. Lee. Mr. Glover noted that this list could slightly change in the next couple of weeks, and that DCR will keep everyone updated if any changes should occur.

EQUINE WORKGROUP

The Equine Workgroup will function independently of the DCR Agricultural Best Management Practice Technical Advisory Group (Ag BMP TAC). It will discuss several issues over the course the next few months and will develop consensus recommendations for solutions to equine-related water quality challenges; recommendations are due to DCR by April 30, 2019. DCR will bring this workgroup's recommendations to the Ag BMP TAC when it reconvenes its 2019 series of meetings. Recommendations from the Equine Workgroup will be assigned to one or more subcommittees of the Ag BMP TAC as applicable.

The Virginia Association of Soil and Water Districts included a request of \$100,000 for an urban nutrient management specialist at the Department of Conservation and Recreation as a part of their legislative agenda for the 2019 General Assembly. The new position would support conservation efforts on equine operations including conducting research and providing educational workshops for equine owners related to pasture management and manure management best management practices. The position would work closely with the Agricultural BMP Technical Advisory Committee and the newly-formed Equine Workgroup to coordinate the implementation of recommendations related to best management practices for equine operations. The position would also provide nutrient management plans to equine owners and to large turf operations that would help ensure that necessary nutrient reductions from such operations are achieved to help reach Virginia's Chesapeake Bay and local water quality goals.

BUNDLE PROGRAM- BOB WARING

Mr. Bob Waring presented his concept cost share practice: WFA-1- Whole Farm Approach (row crop) to the full TAC. The approach is similar to the Programmatic Subcommittee's suggestion 12P and was used as a reference for this discussion: Multi-practice or tier approach for a new practice. The WFA-1 would allow for the collection of data, provide a multi-year guaranteed cost share rate, and provide for enhanced agricultural rotational crop BMPs. It was acknowledged that the pilot has been tailored for rotational crop production, but could be restructured for animal operations in the future. There is a need for data relating to the implementation of BMPs; without data it is assumed that the producers are not implementing the practice. There are current methods for entering data voluntarily but a lot of the data is not captured due to time restraints. The WFA-1 practice should capture all BMP data relevant to the farm including nutrient management, fertilizer applications, nitrogen placement and timing, and phosphorus placement timing. Three Rivers Soil and Water Control District will serve as a pilot for this concept. The pilot has been approved by the Virginia Soil and Water Conservation Board for \$1.35 million which includes \$150,000 for technical assistance.

Please see [Attachment 1](#) for further details and information that was projected at the meeting.

AGENCY AND PARTNER UPDATES

Mrs. Emily Horsley gave an agency update for FSA. There is an approved farm bill; it has not been officially signed by the president but has been released. There will be a national shift to align with practices already done in Virginia by NRCS and FSA including water quality and cost-share fencing watering systems.

Virginia Cooperative Extension's new District Director, Dan Goerlich, was introduced.

SUBCOMMITTEE REPORTS

ANIMAL WASTE, CHAIRPERSON: AMANDA PENNINGTON

Mrs. Amanda Pennington presented the report from the Animal Waste Subcommittee which included recommendations that the subcommittee voted to table and amend.

The Animal Waste Subcommittee voted to table the following recommendations:

- 12A: Poultry Litter Management
 - under further discussion with DCR and the Poultry Litter Federation
- 14A: Create Specific VACS Practice to Address Manure Issues on Horse Farms
 - Refer to Equine Workgroup
- 15A: Animal Waste and Winter Feeding
- 16A: Creating Practices for Agriculture Stormwater Management, Cover Crop Practices, Forest Harvest, etc.
- 37P: (WP-4) Have a Clearinghouse of Designs Approved by the State Engineer

Vote: Unanimous, passed

The Animal Waste Subcommittee voted to amend the following recommendations:

Please see attached documents for details of amendments.

- [Attachment 2: WP-4C](#) **Vote: Unanimous**
- [Attachment 3: WP-4B](#) **Vote: Unanimous**

Future Meeting Dates, Times and Locations

Monday December 17, 2019 10am-3pm
Shenandoah Valley Soil and Water District Office
1934 Deyerle Avenue, #B, Harrisonburg, Virginia 22801

FORESTRY, CHAIRPERSON: JIM ECHOLS

Mr. Jim Echols presented the report from the Forestry Subcommittee which included recommendations that the subcommittee voted to table and amend.

The Forestry Subcommittee voted to table the following recommendations:

- 5F: Provide 100% Cost Share on Riparian Buffers
- 6F: Higher Incentives For Tree Planting within Buffer
- 8F: Consider Creating a Cost Share Option for Planting trees in Existing SI-6 Practice Buffers
- 12F: Reduce Restrictions to Make Programs Palatable for Farmers, Flash Grazing, Non-Timber, etc.

- 13F: Develop and Offer a Forest Buffer Maintenance Practice
- 42P: Establish a Silvopasture System To Provide Shade
- 30S: Tree Planning Options in Pastures

Vote: Unanimous, passed

The Forestry Subcommittee voted to amend the following recommendations:

- 1F and 3F: Allow DOF to Make Site-Specific Recommendations on Number of Trees per Acre
 - Forestry Subcommittee recommends striking “NRCS 391 riparian buffer standard” and add adding “Forestry 7.8 Cost Share form” into FR-3.
 - FR-1 and FR-3
 - 8. This practice is subject to the ~~specification outlined in the NRCS 391 Riparian Forest Buffer Standard~~ density determined by a DOF Forester in accordance with DOF Form 7.8.

Vote: One Opposed, passed

- 2F: Remove Incentive Payments and Make FR-1 and FR-3 100% Cost-Share Forestry Subcommittee recommendations:

FR-1:

- Keep the cost-share rate at 75%
- Raise the incentive payment (one-time payment) to \$100/ac for 10 year lifespan
- Raise the incentive payment (one-time payment) to \$150/ac for 15 year lifespan

Vote: 4 Opposed, passed

FR-3:

- Increase the cost share payment to 95%
 - Increase the cap for FR-3 payment from \$50,000 to \$70,000.

Vote: Unanimous, passed

The Forestry Subcommittee voted to advance the following recommendations:

- 4F: If applicant applies for FR-3, in conjunction with and SL-6, Cap Stays at \$70,000 to promote Forested Riparian Buffers

Vote: Unanimous, passed

Future Meeting Dates, Times and Locations

The Forestry Subcommittee has finalized all actions.

NUTRIENT MANAGEMENT, CHAIRPERSON: DAVID KINDIG

Mr. Dave Kindig presented the report from the Nutrient Management Subcommittee which included recommendations that the subcommittee voted to table and amend.

The Nutrient Management Subcommittee voted to advance the following recommendations:

- 12N: Define “Fully implemented Nutrient Management Plan”
 - Fully Implemented Plan-
 1. Plan is written by a current, Virginia certified Nutrient Management Planner
 2. Producer agrees, by a signed document, that as the plan is written, the producer will be able to follow the crop rotation and all the nutrient recommendations on all fields signed up for this practice. (at sign up or prior to payment) Producer signature on Plan cover sheet is sufficient to meet this requirement.
 3. Considered “Fully Implemented Plans” if applicable:
 - 1) “fully implement” applies only those Practice fields eligible for payment or tax credit.
 - 2) those fields must meet the requirements of the practice specifications
 - 3) crops in the plan must accurately match actual crops in the field, and management practices in the plan must be current with field treatments.

Vote: Unanimous

- 13N: Planner Producer form, what is needed to meet this requirement.

Proposed Statement to meet requirement of part b.

Using a written, or digital record keeping system, I have diligently recorded all nutrient applications to the fields using the materials and rates at or below those stated in my nutrient management plan for the period (month/year) through (month/year) to the crops specified in my nutrient management plan.	
_____ / / (producer signature)	(date signed)
I have reviewed application records kept by (producer name) and I here by certify that those records have supplied sufficient information to show he - the producer has applied the proper materials and nutrient rates at or below to the to at least 85% of the field acres as specified in the nutrient management plan covering (month/year) through (month/year).	
_____ / / NMP Cert. No. _____ (planner signature, that wrote the plan)	(date signed)

Vote: Unanimous

- 9N: Nitrogen timing and placement as a BMP
NM-5N, B.2. add vi. ...injection at sidedress

Vote: Unanimous, passed

- 10N: Add the following statement: "NMPs approved by DCR staff and/or approved by DCR as part of a VPA or VPDES permit meet the NMP component of this practice. ~~These plans are deemed to be in accordance with VPA or VPDES permit requirements and/or 4VAC50-85-130 D. 2 & 3., 4VAC50-85 et seq., and the Virginia Nutrient Management Standards and Criteria (revised July 2014).~~"

Vote: One Opposed, passed

- 14N: Record Keeping; Set up as separate practice to help support extra involvement of private planners. Set up as verification form, instead of record keeping. Set up single payment based on size of operation. 100-399 acres \$225. 400 – 999 acres \$400; 1,000+ \$600. (Private planners' contractual acres not eligible)

Vote: Unanimous, passed

The Nutrient Management Subcommittee voted to amend the following recommendations:

- 8N: NMP Requirement for SL-1 Practice is Overkill
 - Sent back to subcommittee—bring back language in specification

Vote: Unanimous, passed

The Nutrient Management Subcommittee voted to table the following recommendations:

- 1N: Modify NM-1A so that it is only eligible for new acres or Nutrient Management Plans.
- 2N: Modify NM-3C specification to be consistent with the proposed NM-5N specifications
- 3N: Virginia Agricultural BMP Lime Program
- 4N: Nutrient management payments should be based on implementation not just writing the plan
- 5N: Higher incentives for nutrient management plans on environmentally sensitive areas
- 6N: More focus on precision nutrient management
- 7N: The precision nutrient application practices also need to be expanded to include turf grass, fruit, and vegetables.
- 11N: Take out the statement of turning in verifications to the district in the NM-1A spec.
- 58P: Financial assistance for precision equipment
- 4C: SL-8, Add this to the list of "priority practices" and also adjust the CEF calculations

Vote: Unanimous

Future Meeting Dates, Times and Locations

Thursday December 20, 2019 9am-2:30pm

Virginia Farm Bureau
407 E Main St. Louisa, VA 23093

COVER CROP, CHAIRPERSON: BOB WARING

Mr. Bob Waring presented the report from the Cover Crop Subcommittee. Mr. Waring and Mr. Jim Tate presented items that the subcommittee has tabled, discussions from subcommittee, and amendments that the subcommittee has voted on.

The Cover Crop Subcommittee voted to amend the following recommendations:

- 5C: Add greater flexibility in the timeline for the kill down of cover crop specified in B.11.
 - *During the discussion of the planting dates, an omission was noted within the SL-8B specification #12. The ‘Cities of Chesapeake & VA Beach’ were omitted from the kill down language.*
 - AMEND – SL-8B – B. *Policies and Specifications #12. The cover crop must be killed using mechanical or chemical means or by grazing no earlier than March 15th and no later than ~~May 15 June 1~~ (previous recommendation), ~~for the Coastal Plain, Piedmont, and Mountain and Valley.~~*

Vote: Unanimous, passed

- 16C: Change the planting date deadlines, SL-8B and SL-8H
Please see Attachment 4, Maps and Letter of Support from Wade Thomason
Mr. Glover commented that we will have to send this proposed revision to EPA through DEQ before we can enact.

Amend - SL-8B.

B. Policies and Specifications #5

5. A good stand and good growth of vegetative winter cover must be obtained by December ~~1~~ 15 to protect the area from nutrient leaching and runoff in the fall and winter. ~~, with the exception of the cities of Chesapeake and Virginia Beach that have late November planting dates.~~ All cover crop plantings must maintain a minimum of 60% cover crop plant material on the enrolled acres through the lifespan of the practice.

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

Area	Early Planting Date	Standard Planting Date
Cities of Chesapeake and Va Beach	November 10	November 30
Coastal Plain (including Eastern Shore)	October 25 November 10	November 15 November 30
Piedmont	October 10 October 25	November 1 November 15
Mountain Valley	October 5 October 20	October 25 November 10

Amend – SL-8H.

B. Policies and Specifications #7.

7. A good stand and good growth of vegetative winter cover must be obtained by December ~~1~~ 15 to protect the area from nutrient leaching and runoff in the fall and winter. ~~, with the exception of the cities of Chesapeake and Virginia Beach that have late November planting dates.~~ All cover crop plantings must maintain a minimum of 60% cover crop plant material on the enrolled acres through the lifespan of the practice.

Policies and Specifications #12. Seeding of all seed types must be planted by the dates listed below:

Area	Planting Date
Cities of Chesapeake and Va Beach	November 10
Coastal Plain (including Eastern Shore)	October 25 November 10
Piedmont	October 10 October 25
Mountain Valley	October 5 October 20

Vote: Unanimous, passed

- 55P, 56P, and 58P: Tax Credit Recommendations Referred from the Programmatic Subcommittee
 - The Cover Crop Sub-Committee recommends the Equipment Tax Credit items be handled by a sub-committee of multiple agencies and partners, including finance personnel.

Vote: Unanimous, passed

The Cover Crop Subcommittee discussed the following topics:

Soil Loss Rates- Mr. Jim Tate

- The Cover Crop Committee Recommends the following:
Simplify and provide consistent language throughout the Virginia Agricultural Cost-Share (VACS) BMP Manual for soil loss, to read ‘Soil loss rates must be computed for all applications for use in establishing priority considerations’ (Language from the SL-8); AND

Propose a modification to the Agricultural BMP Tracking Program to incorporate a soil loss calculator based on the RUSLE.

Vote: Unanimous, passed

Determine Regional Frost Dates for cover crop practices

- The Cover Crop Sub-Committee recommends the following:
The Cover Crop Sub-Committee requests DCR to determine a scientific, repeatable process to determine regional frost dates every three to five years.

It was recommended that DCR or DEQ ask EPA how often data, such as regional frost dates, may be submitted for review.

Vote: Unanimous, passed

The Cover Crop Subcommittee voted to table the following recommendations:

The subcommittee requested that the members of the TAC review the following recommendations for an action to table.

- 9C: Remove the maximum acreage limit
- 15C: Allow for later cover crop planting dates
- 17C: Eliminate the planting date restriction
- 18C: Give credit (even if no incentive payment) for cover crop planted that may not meet fall required growth

- 19C: Give credit (even if no incentive payment) for cover crop planted that does meet the specs for growth
- 27C: Offer a multi-year cover crop program
- 32C: Allow for a standard planting date for SL-8H
- 34C: Allow a late cover crop practice
- 35C: Verify cover crop acreage by the percent of residue
- 37C: Establish a low residue cover crop practice

Future Meeting Dates, Times and Locations

The Cover Crop Subcommittee will continue to meet on the 1st Thursday of every month. All meetings will begin at 9:30 a.m. and are scheduled to end at 3:00 p.m.

All meetings will be held at:

Virginia Farm Bureau
12580 West Creek Parkway
Richmond, Virginia 23238

STREAM PROTECTION, CHAIRPERSON: MARK HOLLBERG

Mr. Mark Hollberg presented the report from the Stream Protection Subcommittee on what recommendations have been tabled and referred to other subcommittees. Mr. Tom Turner, Mr. Aaron Lucas and Mr. Luke Longanecker presented items that were extensively discussed and amended in the subcommittee.

The Stream Protection Subcommittee voted to table the following recommendations:

- 2S: Consider offering a 5 year option for SL-6s
- 19S: Offer a top of bank stream exclusion option with 35% cost-share.
- 26S: Summer stockpiling cost share program for the conversion of a cold season grass pasture to native warm season grasses.
- 27S: Cost share to establish native warm season grasses and pollinator habitat within buffer area
- 34S: Increase the flexibility to work with landowners who like to protect the streams on their portion/parcel
- 10P: Expand VACS program participant eligibility
- 43P: Shade alternatives developed for cattle
- 65P: Shoreline stabilization practice for Ag land

Vote: Unanimous, passed

The Stream Protection Subcommittee voted to refer the following recommendations:

- 29C: Higher incentives rates for cropland filter strips and cropland sod waterways
 - Refer to the Programmatic Subcommittee

Vote: Unanimous, passed

The Stream Protection Subcommittee voted to amend the following recommendations:

Mr. Aaron Lucas presented the subcommittee's consensus on the WP-2 Specification.

Please see Attachment 5: WP-2

Vote: Unanimous, passed

Mr. Tom Turner presented the concepts the subcommittee has agreed on related to rates, lifespans and caps (see tables below).

STREAM PROTECTION OPTIONS

Practice	Minimum Fence Setback	Lifespan	C-S Rate	Buffer Payments	Buffer Payment Caps
SL-6.35 (SL-6)	35' from the Top of Stream Bank	10 years	85%	\$80/ac/yr.	\$8,000/ contract
SL-6.35 (SL-6)	35' from the Top of Stream Bank	15 years	90%	\$80/ac/yr.	\$12,000/ contract

Note: Measurements for the purpose of calculating buffer acres are capped at 100 feet from the top of stream bank, or 1/3 of the floodplain up to 300 feet.

One-time up-front payment (buffer payment)

STREAM PROTECTION OPTIONS

Practice	Minimum Fence Setback	Lifespan	C-S Rate	Buffer Payments	Buffer Payment Caps
SL-6.50	50' from Top of Stream Bank	10 years	95%	\$80/ac/yr.	\$8,000/ contract
SL-6.50	50' from the Top of Stream Bank	15 years	100%	\$80/ac/yr.	\$12,000/ contract
SL-6.35 (SL-6)	35' from the Top of Stream Bank	10 years	85%	\$80/ac/yr.	\$8,000/ contract
SL-6.35 (SL-6)	35' from the Top of Stream Bank	15 years	90%	\$80/ac/yr.	\$12,000/ contract
SL-6.25	25' from the Top of Stream Bank	10 years	70%	\$40/ac/yr.	\$4,000/ contract
SL-6.25	25' from the Top of Stream Bank	15 years	75%	\$40/ac/yr.	\$6,000/ contract
SL-6.10 (LE-2)	10' from the Top of Stream Bank	10 years	60%	\$40/ac/yr.	\$4,000/ contract
SL-6.10 (LE-2)	10' from the Top of Stream Bank	15 years	65%	\$40/ac/yr.	\$6,000/ contract
WP-2.35	35' from the Top of Stream Bank	5 years	75%	\$80/ac/yr.	\$2,500/ contract
WP-2.35	35' from the Top of Stream Bank	10 years	80%	\$80/ac/yr.	\$5,000/ contract
WP-2.25	25' from the Top of Stream Bank	5 years	65%	\$40/ac/yr.	\$2,500/ contract
WP-2.25	25' from the Top of Stream Bank	10 years	70%	\$40/ac/yr.	\$5,000/ contract
WP-2.10 (SP-1)	10' from the Top of Stream Bank	5 years	55%	\$40/ac/yr.	\$2,500/ contract
WP-2.10 (SP-1)	10' from the Top of Stream Bank	10 years	60%	\$40/ac/yr.	\$5,000/ contract

Note: Measurements for the purpose of calculating buffer acres are capped at 100 feet from the top of stream bank, or 1/3 of the floodplain up to 300 feet.

Vote: One Opposed, passed

CCI STREAM PROTECTION OPTIONS

Approved by Stream Protection Committee 11/29/18

For TAC consideration 12/14/18

Practice	Minimum Fence Setback	Lifespan	C-S Rate	Component Payments
CCI-SE1	Top of Stream Bank	5 years	\$0.50/ ft. of Stream bank	N/A
CCI-WP2.35	35' from the Top of Stream Bank	5 years	\$1.00/ ft. of Stream bank	\$500/crossing
CCI-SL-6.10 or CCI-LE-2	10' from the Top of Stream Bank	5 years	\$0.75/ ft. of Stream bank	\$1000/water System, \$500/crossing, \$250/trough
CCI -SL6.25	25' from the Top of Stream Bank	5 years	\$1.00/ ft. of Stream bank	\$1000/water System, \$500/crossing, \$250/trough
CCI-SL-6.35	35' from the Top of Stream Bank	5 years	\$1.25/ ft. of Stream bank	\$1000/water System, \$500/crossing, \$250/trough

Vote: Unanimous, passed

Mr. Aaron Lucas presented subcommittee's consensus on SL-6, SL-7 and SL-9. Please see:

Attachment 6: SL-6; **Vote: Unanimous, passed**

Attachment 7: SL-7; not voted on, Subcommittee will look into question about CCI

Attachment 8: SL-9; **Vote: Unanimous, passed**

Meeting Dates:

Monday December 17, 2019

Meeting will begin at 9:30 a.m. and be held at:

DCR Staunton Regional Office

12 Sunset Boulevard

Staunton, Virginia 24401

PROGRAMMATIC, CHAIRPERSON: DARRYL GLOVER

Mr. Darryl Glover presented the report from the Programmatic Subcommittee. Mr. Glover presented recommendations that were tabled, referred, advanced, and amended.

The Programmatic Subcommittee voted to table the following recommendations:

- 17P: Consider structuring cost share rates relative to the BMPs associated N/P/Sediment reductions.
- 18P: Cost share payments to be paid by component or in a phase process.
- 28P: All practices included under the conservation planning practice should receive priority consideration in the ranking process.
- 45P: Invasive Species
- 64P: Aquaculture as a new BMP
- 51P: A way for producers not to have to have as large cash upfront outlay

Vote: Unanimous, passed

The Programmatic Subcommittee voted to amend the following recommendations:

- 3P: More funding for education and technical assistance for farmers
 - Programmatic Subcommittee recommends advancing as amended: More funding for outreach and technical assistance for farmers in cooperation with external partners

Vote: Unanimous, passed

- 13P, 14, and 15P: removing all practice caps and program caps
 - Passed by for the day; needs further discussion by subcommittee
- 16P: Anytime cost-share increases above the current program year rates, lifespan should increase.
 - Programmatic Subcommittee recommends advancing as amended: Establish a sliding cost-share scale for BMPs based upon lifespan, if applicable

Vote: Unanimous, passed

- 35P: Consider a practice that provides cost-share or tax credit to rehab or construct a farm pond.
 - Programmatic Subcommittee recommends advancing as amended: Consider a practice that provides cost-share ~~or tax credit~~ to rehab or construct a farm pond.

Vote: Unanimous, passed

- 60P: Grant a second extension to our participants if needed on a case by case circumstance
 - Programmatic Subcommittee recommends advancing as amended: 18 months for eligible practices- DCR Recommendation

Vote: Unanimous, passed

The Programmatic Subcommittee voted to advance the following recommendations:

- 2P: Modify how technical assistance is allocated.

Vote: Unanimous, passed

- 12P: Multi-practice or tier approach for a new practice
 - Subcommittee recommends advancing, Bob Waring's project is the first effort.

Vote: Unanimous, passed

- 20P and 21P: VACS practice that encourages producers to report all conservation practices implemented in their farming operation.
 - Subcommittee recommends advancing, Bob Waring's project is the first effort.

Vote: Unanimous, passed

- 46P: Consider 100% cost share and rental payments for non-riparian tree planting
 - Subcommittee recommends advancing, addressed through Forestry and Stream Protection actions

Vote: Unanimous, passed

- 61P: Consider modifying tracking to allow for the capture of more/better data

Vote: Unanimous, passed

The Programmatic Subcommittee voted to refer the following recommendations:

- 22P, 23P, 24P, and 25P are all equine related recommendations that the subcommittee is referring to the Equine Workgroup.
- 33P: Consider offering 100% cost-share on streams that are identified as impaired by DEQ
 - Referred to Stream Protection

- 39P: Flash grazing of livestock in excluded buffer
 - Referred to Stream Protection
- 40P and 41P: Allow flash grazing of SL-6 buffers
 - Referred to Stream Protection

Vote: Unanimous, passed

Public Comment

None

The meeting was adjourned.

Concept Cost Share Practice: WFA-1 - Whole Farm Approach (row crop)

Core (required)

- Core NM plan – to include the five basic N core requirements and the 6 basic Phosphorus requirements.
 - Plan written and verified for implementation - to include the verification form for amended and revised plans; new plans to be verified per the NM-1A specification. District VACS funds available for NM-1A (nutrient management plan writing and revisions)
 - \$8.00 per ac per year

Nitrogen Option

- Core option plus enhanced nitrogen management
- Split Nitrogen applications on corn and/or small grain and/or cotton
 - To include \$2.50 for either 1st Side Dress application or injection
 - To include \$2.50 for 2nd Side Dress application
 - To include \$2.50 for multiple split applications on small grain
 - To include \$2.50 for banded Nitrogen

Cover Crop Option

- Core option plus cover crop
- Kill/planting dates to be determined by TAC (additional \$ only on field receiving the cover crop practices)
 - \$30 rye per ac per year provided it meets biomass specifications and 60% soil coverage
 - \$25 all other cover crops provided it meets biomass specifications and 60% soil coverage

Phosphorus Option

- Core option plus variable rate phosphorous option
- Must zone or grid sample all acres that will be receiving variable rate Phosphorus
 - To include \$2.50 per acre for banded Phosphorous
 - To include \$2.50 per acre for variable rate Phosphorous

Background: Local district had a producer breakfast and asked producers about a price point for simply providing data, this value was similar to discussion held with other District Managers within the area and the price point was about the same. Below has been discussed within Area III as a potentially viable option that would allow for the collection of data, provide a multi-year guaranteed cost share rate, as well as provide for enhanced agricultural rotational crop BMPs. It is acknowledged that the scenario below has been tailored for rotational crop production, but could be restructured for animal operations. Data is needed, without data it is assumed that the producers are not implementing the practice. There are methods for entering data voluntarily but a lot of the data is not captured due to time constraints.

WFA-1 Concepts:

- Capturing all data relevant to the farm, including nutrient management, applications, nitrogen placement and timing, phosphorus placement timing, lime, potassium, verification of Nutrient management BMPs
- 3-year contractual contract, payments made at end of each year of contract. Rates are per year per acre
- Spot checks conducted mid-season on all cover crops to verify biomass and residue; spot checks conducted on nutrient management plans and precision N and P at the end of the season
- Private sector planners would receive \$2.00 per acre per year to write nutrient management plans and verify implementation. Payment requires forms to be completed for verification. This rate would be independent of the producer cost share cap.
- Ag BMP Tracking program would need to be modified to allow for multi-option check boxes, allowing District staff to click boxes for the various options, this would **auto populate a measures tab**.

Nitrogen CORE Nutrient Management BMP (All applicable core elements required to be implemented and verified)

N rate according to land grant university "LGU" recommendations at field management unit level
Manure analysis and volume
Spreader/applicator calibration
Yield estimates and cropping plan at field management unit level
Cropping and manure history at field management unit level

Phosphorous CORE Nutrient Management BMP (All applicable core elements required to be implemented and verified)

P rate according to land grant university "LGU" recommendations at field management unit level
P soil tests at field management unit level
Manure analysis and volume
Spreader/applicator calibration
Yield estimates and cropping plan at field management unit level
Cropping and manure history at field management unit level

SWCD Area 3

Three Rivers SWCD

BMPs (grey background are Annual BMPs)	Unit	2017	WIP 2	2025 Available
Ag Shoreline Management	feet	-	-	2,145,232
Agricultural Stormwater Management	acres	-	-	17
Alternative Crops	acres	380	-	29,027
Barnyard Runoff Control	acres	6	14	17
Cover Crop Commodity	acres	309	2,367	20,346
Cover Crop Traditional non-Rye	acres	15,537	22,347	75,632
Cover Crop Traditional Rye	acres	5,645	4,597	75,632
Cover Crop Traditional with Fall Nutrients non-Rye	acres	14	-	75,632
Cover Crop Traditional with Fall Nutrients Rye	acres	-	-	75,632
Cropland Irrigation Management	acres	-	-	75,632
Forest Buffer	acres	92	3,552	92,325
Forest Buffer-Streamside with Exclusion Fencing	acres	-	208	4,442
Forest Harvesting Practices	acres	8,233	4,897	5,210
Grass Buffer	acres	101	5,881	92,325
Grass Buffer - Narrow	acres	48	-	92,325
Grass Buffer-Streamside with Exclusion Fencing	acres	36	381	4,442
Horse Pasture Management	acres	-	88	3,572
Land Retirement to Ag Open Space	acres	1,263	3,875	96,767
Land Retirement to Pasture	acres	-	-	78,974
Loafing Lot Management	acres	-	-	17
Manure Incorporation	acres	-	-	75,632
Manure Injection	acres	-	-	75,632
Non Urban Stream Restoration	feet	16,850	5,362	5,945,881
Nutrient Management Core N	acres	66,996	64,682	82,546
Nutrient Management Core P	acres	66,996	64,682	82,546
Nutrient Management N Placement	acres	-	29,151	75,632
Nutrient Management N Rate	acres	-	53,283	78,974
Nutrient Management N Timing	acres	-	50,894	75,632
Nutrient Management P Placement	acres	-	50,894	75,632
Nutrient Management P Rate	acres	-	18,280	75,632
Nutrient Management P Timing	acres	-	50,894	75,632
Off Stream Watering Without Fencing	acres	398	52	3,572
Precision Intensive Rotational/Prescribed Grazing	acres	557	1,984	3,572
Soil Conservation and Water Quality Plans	acres	-	69,016	82,546
Sorbing Materials in Ag Ditches	acres	-	-	82,546
Tillage Management-Conservation	acres	78,755	21,598	75,433
Tillage Management-Continuous High Residue	acres	7,041	42,760	75,433
Tillage Management-Low Residue	acres	-	-	75,632
Tree Planting	acres	532	3,081	97,127
Water Control Structures	acres	69	87	78,974
Wetland Restoration - Floodplain	acres	13	-	96,533
Wetland Restoration - Headwater	acres	-	235	96,767

Animal/Manure BMPs	Unit	AnimalGroup	2017	WIP 2
Animal Waste Management System	AU	AllAnimals	62	4,159
Biofilters	AU	Poultry	-	-
Dairy Precision Feeding and/or Forage Managem	AU	dairy	-	-
Lagoon Covers	AU	Swine	-	-
Manure Compost	AU	AllAnimals	-	-
Manure Transport	dry tons	AllAnimals	-	-
Manure Treatment	AU	AllAnimals	-	-
Mortality Composters	AU	AllAnimals	13	-
Poultry Litter Amendments (alum, for example)	AU	Poultry	2	-

Farmer Max			rye acres	cost share requested	rye acres	cost share approved	
Total ac	year		requested	requested	approved	approved	
1000	2018		325	\$15,600	210	\$10,080	1 yr
	2019		770	\$36,960	500	\$24,000	1 yr
	average			\$26,280	355	\$17,040	1 yr
500	\$30/ac					\$15,000	3 yrs

Farmer Waring			barley acres	cost share requested	barley acres	cost share approved	
Total ac	year		requested	requested	approved	approved	
900	2018		360	\$14,400	90	\$3,600	1 yr
	2019		360	\$14,400	None	\$0	1 yr
	average			\$14,400		\$1,800	1 yr
450	\$30/ac					\$13,500	3 yrs

Waring cancelled all contracts accepted no cost share

Farmer Michele			rye acres	cost share requested	rye acres	cost share approved	
Total ac	year		requested	requested	approved	approved	
200	2018		200	\$9,600	200	\$9,600	1 yr
	2019		200	\$9,600	None	\$0	1 yr
	average			\$9,600		\$4,800	1 yr
100	\$30/ac					\$3,000	3 yrs

Farmer Danny			rye acres	cost share requested	rye acres	cost share approved	
Total ac	year		requested	requested	approved	approved	
100	2018		50	\$2,400	50	\$2,400	1 yr
	2019		50	\$2,400	50	\$2,400	1 yr
	average			\$2,400		\$2,400	1 yr
50	\$30/ac					\$1,500	3 yrs

total ac	2200				2018	550 ac	cover crop ac only	\$25,680
50% ac	1100 ac	all data	\$33,900		2019	550 ac	cover crop ac only	\$26,400

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

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

A. Description and Purpose

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

B. Policies and Specifications

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

All applicants must have:

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

publications including Virginia Cooperative Extension “Composting for Mortality Disposal on Hog Farms” publication 414-020 (Virginia Tech., 2003); Arkansas Cooperative Extension Service “Disposal of Swine Carcasses in Arkansas” publication MP392 (Univ. of Arkansas, 1997); Missouri Cooperative Extension Service “Composting Dead Swine” publication WQ225 (Univ. of Missouri, 1994).

2. Expenses are authorized for:
 - i. For composting facilities that will contribute significantly to maintaining or improving soil or water quality.
 - ii. For constructed composting facilities, which are free standing or attached to a dry waste stacking facility. Constructed composting facilities may also be housed within dry waste stacking facilities when housing the composting facilities does not interfere with the waste storage and management of stacking facilities.
 - iii. For prefabricated composting including drum composting facilities and/or poultry mortality freezers, cost-share payment and tax credit should be based on the least costly technically feasible option.
 - iv. For leveling and filling to permit the installation of an effective system.
 - v. For concrete construction necessary for the structure's foundation and a minimal work area needed for equipment used to load, mix, and unload the compost and bulking materials into or from the composting facilities.
3. Expenses are not authorized:
 - i. For thermometers.
 - ii. For composting facilities that do not meet local and state regulations.
 - iii. For planned facilities. An existing water quality problem must be apparent to be eligible for funds.
 - iv. Cost-share is not authorized for planned enlargement of livestock operations. However, cost-share funds are available for use to solve existing problems.
 - v. For the acquisition of approved bulking agents.
4. All appropriate local and state permits must be obtained before cost-share payments are authorized.
5. In order to be eligible for cost-share or tax credit, producers must be fully implementing a current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field that this practice will be implemented on. The NMP must comply with all requirements set forth in the Nutrient Management Training and Certification Regulations, (4VAC50-85 et seq.) and the Virginia Nutrient Management Standards and Criteria (revised July 2014), must be prepared and certified by a Virginia certified nutrient management planner, and must be on file with the local District before any cost-share payment is made to the participant. Plans shall also contain any specific production

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

6. This practice is subject to NRCS Standards 313 Waste Storage Facility, 316 Animal Mortality Facility, 317 Composting Facility, 362 Diversion, 367 Roofs and Covers, 382 Fence, 558 Roof Runoff Structure, 561 Heavy Use Area, 620 Underground Outlet, 633 Waste Recycling, and 634 Waste Transfer.
7. All practice components implemented must be maintained for a minimum of 150 years following the calendar year of installation. The lifespan begins on Jan. 1 of the calendar year following the year of certification of completion. By accepting either a cost-share payment or a state tax credit for this practice the participant agrees to maintain all practice components for the specified lifespan. This practice is subject to spot check by the District throughout the lifespan of the practice and failure to maintain the practice may result in reimbursement of cost share and/or tax credits.

C. Rate(s)

1. The state cost-share payment, alone or if combined with any other cost-share payment, will not exceed 75% of the total eligible cost of poultry and swine composting facilities only. The maximum state payment is \$50,000 per year for the construction or purchase of composting facilities.
2. The Tax Credit rate is 25% of the total eligible cost of swine or poultry composting facilities not to exceed \$17,500.00. If a participant receives Cost-Share, only the percent of the total cost of the project that the participant contributed is used to determine the Tax Credit.

D. Technical Responsibility

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

Revised March, 2018

Name of Practice: [DAIRY LOAFING LOT MANAGEMENT SYSTEM](#)
DCR Specifications for No. WP-4B

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

A. Purpose and Description

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

The intent of this practice is to prevent manure and sediment runoff from entering watercourses and sensitive karst areas and to capture a portion of the manure as a resource for other uses such as crop fertilizer. This is accomplished by dividing the area into lots. The [dairy](#) cattle are rotated from lot to lot as is necessary to maintain a vegetative cover. One lot is designated as a sacrifice area for use in periods of wet weather. [This practice is for dairy cattle only.](#)

B. Policies and Specifications

1. A management plan and practice design is to be developed with consultation from a qualified consultant, VCE, NRCS and/or District.
2. A minimum of three grassed loafing paddocks are required. Each grassed loafing paddock will be sized based on soil type, topography and herd size not to exceed a stocking rate of twenty (1,000 lb. EAU) cattle per acre and be maintained in permanent forage.
3. All live streams must be fenced from livestock use in the loafing paddocks and sacrifice area. A minimum 35-ft. buffer must be maintained.
4. Concrete walkway(s) with curbing or other hardened walkway(s) (crusher run is not an acceptable surface material) may be installed to facilitate herd movement from the barn to the loafing lots. Slope is to be no greater than 8%. See VCE publication on installing dairy lanes.
5. A sacrifice area is required unless adequate housing facilities are available (e.g. free stall barns).
 - i. Sacrifice area (if needed) must be scraped periodically.
 - ii. The sacrifice area should not be sized to exceed 600 to 650 square feet per animal (1,000-lb. equivalent). It should be sloped between 1% minimum to 8% maximum.
 - iii. Divert surface water away from the sacrifice area.

- iv. Provide filter strip per NRCS standard 393 to filter runoff from the sacrifice area.
6. In order for the forage to take up nutrients such as nitrogen it must be managed for growth and harvested for hay when possible. Dry cows or other grazers can be used to remove forage growth.
7. Critical eroding and sensitive areas will be fenced out and permanent cover established.
8. If a sacrifice lot is impractical due soil and/or topographical conditions, a loose housing structure may be substituted for the sacrifice lot.
 - i. All other potential more cost-effective approaches to reducing the water quality impact from the unimproved loafing lot must have been explored and rejected, due to economic inefficiency or lack of space for relocation, before cost-share or tax credit can be approved for constructing a loose housing structure.
 - ii. Cost share funding for a loose housing structure will only be authorized if a “Risk Assessment for Water Impairment from Concentrated/Feeding/Loafing* Livestock Areas” has been completed and a score of 120 or greater has been obtained.
 - iii. General Design guidelines for Loose Housing Structures
 - a) Bedded pack space requirements:
 - 1) 60 sq. ft. per heifer minimum
 - 2) 100 sq. ft. per lactating cow minimum
 - 3) 120 sq. ft. per dry cow
 - b) If the loose housing structure is to have a roof, wind and snow loads shall be as specified in NRCS 367 Roofs and Covers or ASAE EP288.5 Agricultural Building Snow and Wind Loads. A PE shall certify roof designs. If the facility is to serve as part of a foundation or support for a building, the total load shall be considered in the structural design.
9. A nutrient management plan developed in accordance with requirements for nutrient management plan content and procedures as stipulated in the Virginia Nutrient Management Training and Certification Regulations for land application or a planned waste management system for any other uses of manure produced. The nutrient management plan should address all the acreage, which the participant farms where manure from the loafing lot system will be applied. The nutrient management plan should be implemented and maintained for the life of the practice. Design storage capacity of animal waste facilities should be

coordinated with the nutrient management plan so that adequate storage capacity is installed for the specific cropping system.

10. Cost-Share is authorized for watering facilities in the loafing lots.
11. 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).
12. This practice is subject to NRCS Standards 313 Waste Storage Facility, 342 Critical Area Planting, 362 Diversion, 356 Dike, 367 Roofs and Covers, 382 Fencing, 391 Riparian Forest Buffer, 393 Filter Strip, 412 Grassed Waterway, 516 Livestock Pipeline, 561 Heavy Use Area Protection, 574 Spring Development, 575 Trails and Walkways, 580 Stream bank and Shoreline Protection, 614 Watering Facility, 632 Solid Liquid Separation Facility, 633 Waste Recycling, ~~and~~ 634 Waste Transfer, [642 Water Well](#), [533 Pumping Plant](#), ~~and~~ [578 Stream Crossing](#).
13. All practice components implemented must be maintained for a minimum of ~~150~~ years following the calendar year of installation. The lifespan begins on Jan. 1 of the calendar year following the year of certification of completion. By accepting either a cost-share payment or a state tax credit for this practice the participant agrees to maintain all practice components for the specified lifespan. This practice is subject to spot check by the District throughout the lifespan of the practice and failure to maintain the practice may result in reimbursement of cost share and/or tax credits.

C. Rate(s)

1. The state cost-share payment, alone or if combined with any other cost-share payment, will not exceed 75% of the total eligible cost. The maximum state cost share payment is \$70,000 per year for the construction of a system to manage concentrated livestock traffic.
2. As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.

D. Technical Responsibility

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

Revised March, 2018



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November 12, 2018

Robert Waring
Va Dept of Conservation and Recreation
Precision Agriculture Nutrient Management Specialist
Eastern Region
P.O. Box 1425
Tappahannock Va, 22560

Robert:

In 2018, Dr. Bee Chim, a former post-doctoral associate in my program and I, completed an analysis of recent and historic fall temperature trends in Virginia. The objective of this analysis was to revise small grain and winter annual cover crops planting date recommendations with the most recent data possible. Daily weather data from 137 official NOAA reporting stations located throughout Virginia were extracted from: <https://www.ncdc.noaa.gov/cdo-web/> for the period 2007-2017. These data were compared to the same stations for the most recent 30-year aggregate data from 1981-2010. For each site in each year we calculated the calendar date in the fall that would allow the accumulation of 250, 400, 700 and 1100 growing degree days (GDD) (base 32F) by December 31. These GDD values correspond (roughly) to what that would develop, two leaves, one tiller, two tillers and 3-4 tillers, respectively when 250, 400, 700 and 1100 GDD were experienced by the plant.

A set of graphics displaying those data for each of the periods is attached to this letter. In summary, it is apparent that temperatures in November and December were warmer in the period 2007-2017 than from 1981-2010. This warmer weather equates to more fall growth. In relation to cover crops, the implication is that seeding can occur later and still accumulate enough plant growth to protect from soil erosion and scavenge nutrients.

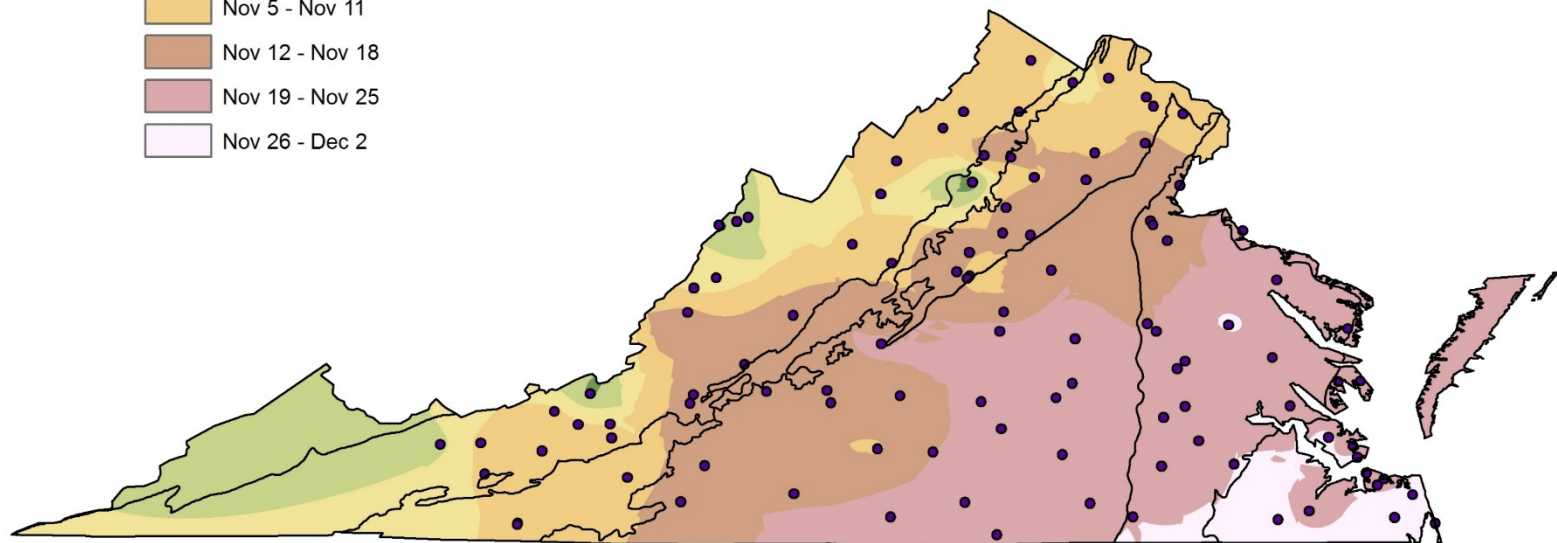
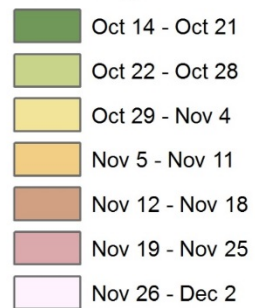
Sincerely,


Wade Thomason

Professor/Grains Specialist
Virginia Polytechnic Institute and State University
422 Smyth Hall (0403)
Blacksburg, VA 24061

AccGDD 250 Year 1981-2010

Date range

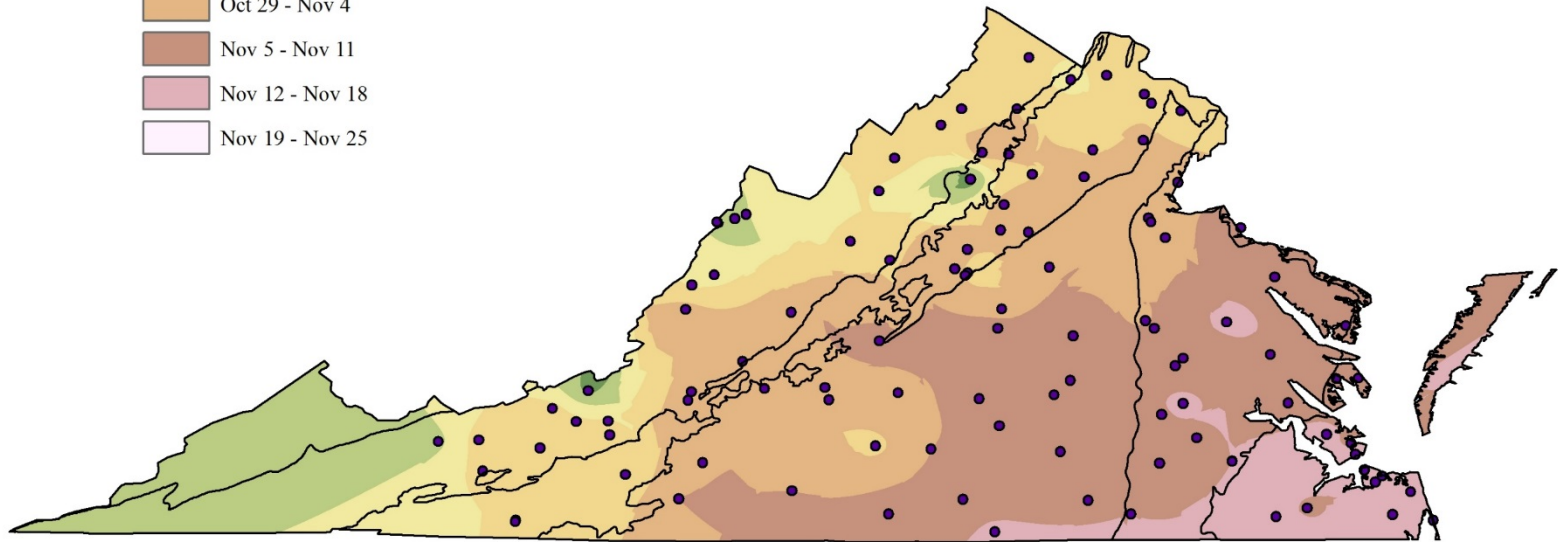
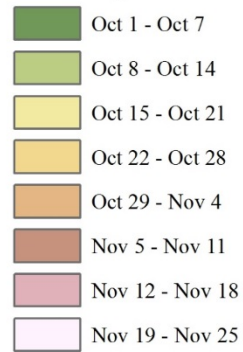


0.9 0.45 0 0.9 Decimal Degrees



AccGDD 400 Year 1981-2010

Date range

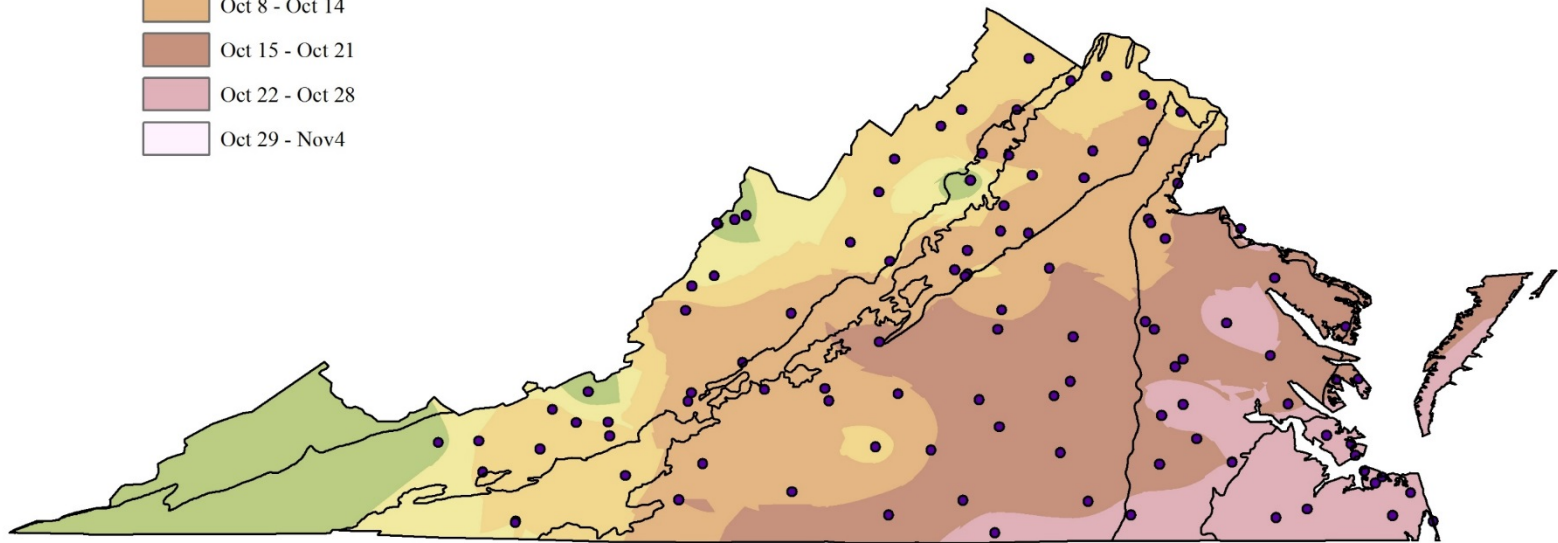


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AccGDD 700 Year 1981-2010

Date range

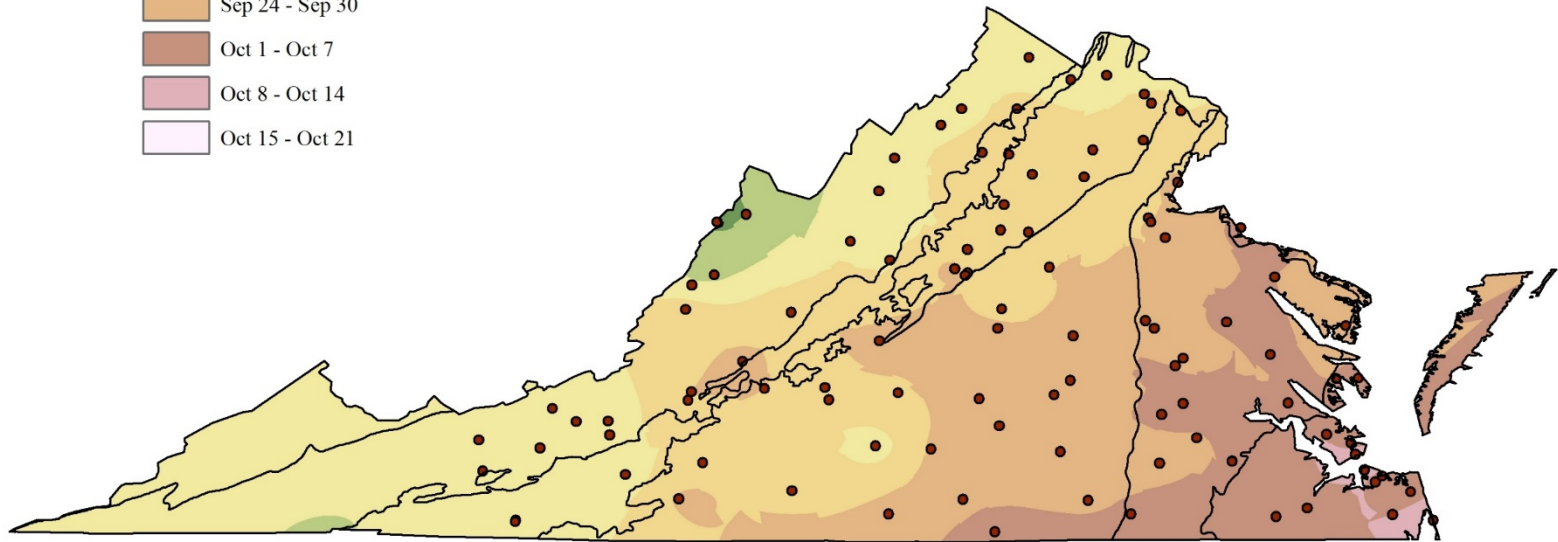
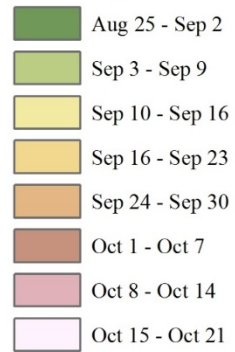


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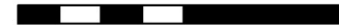


AccGDD 1100 Year 1981-2010

Date range

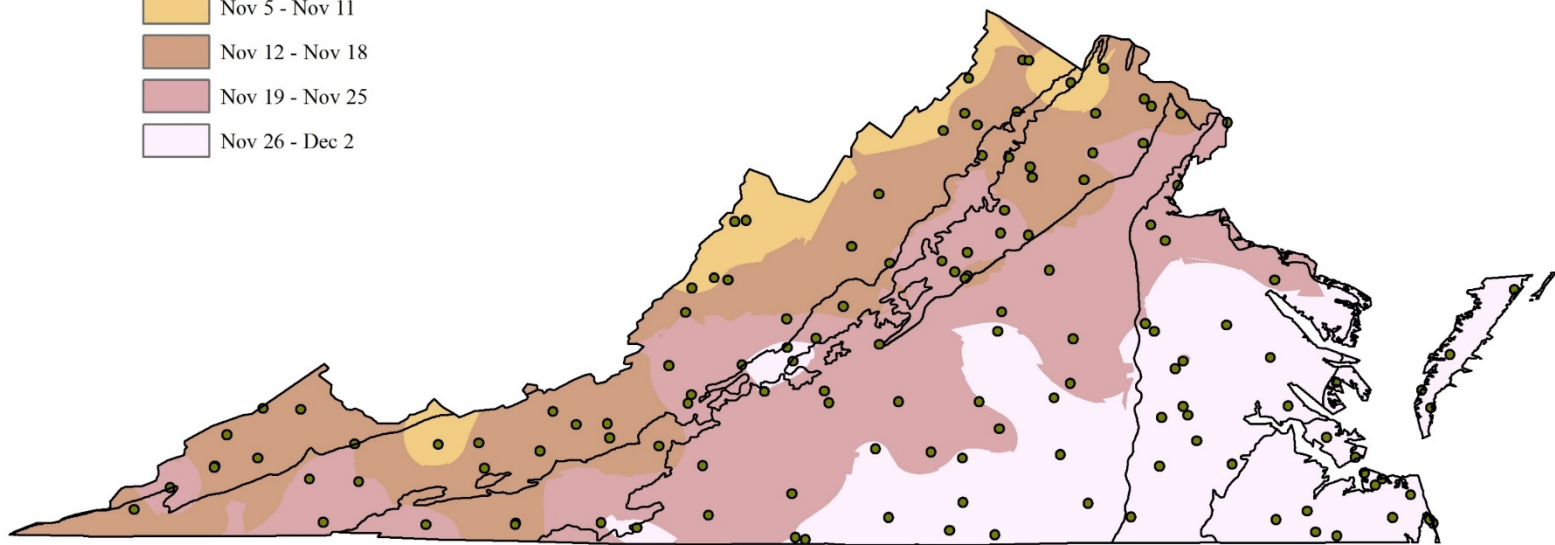


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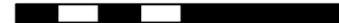


AccGDD 250 Year 2007-2017

Date range

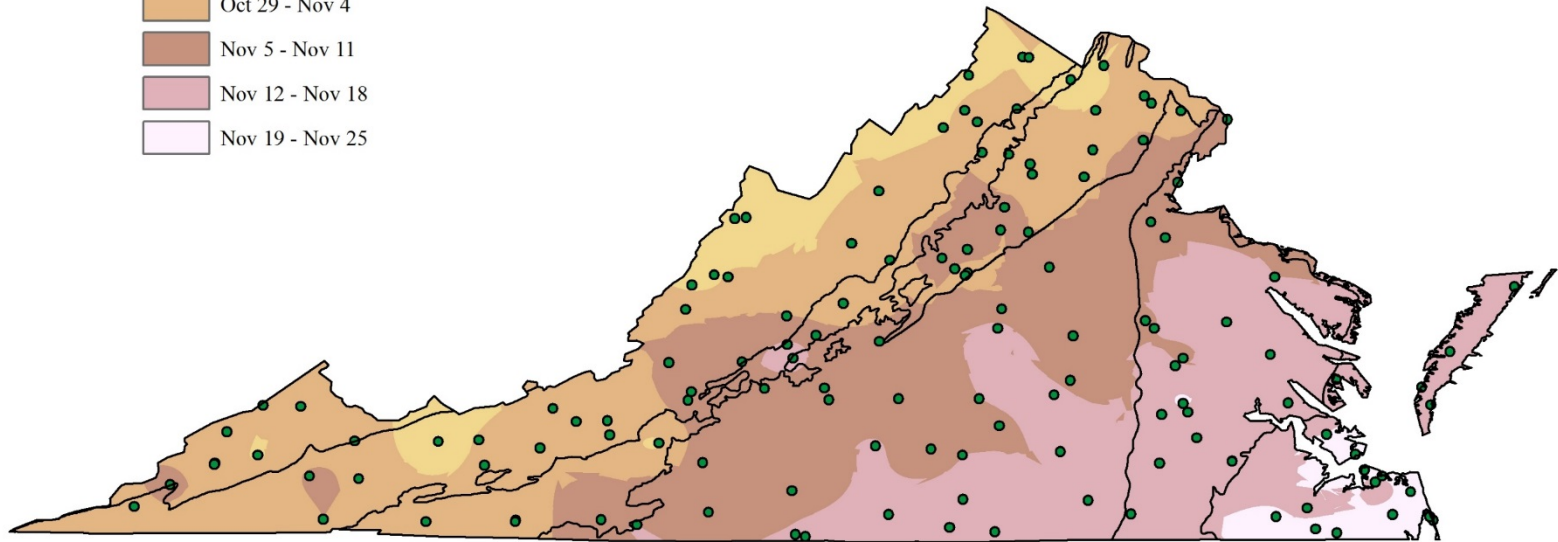
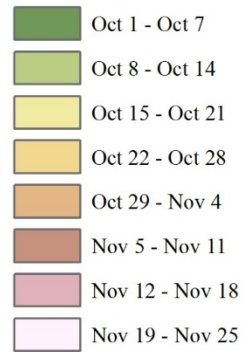


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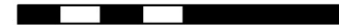


AccGDD 400 Year 2007-2017

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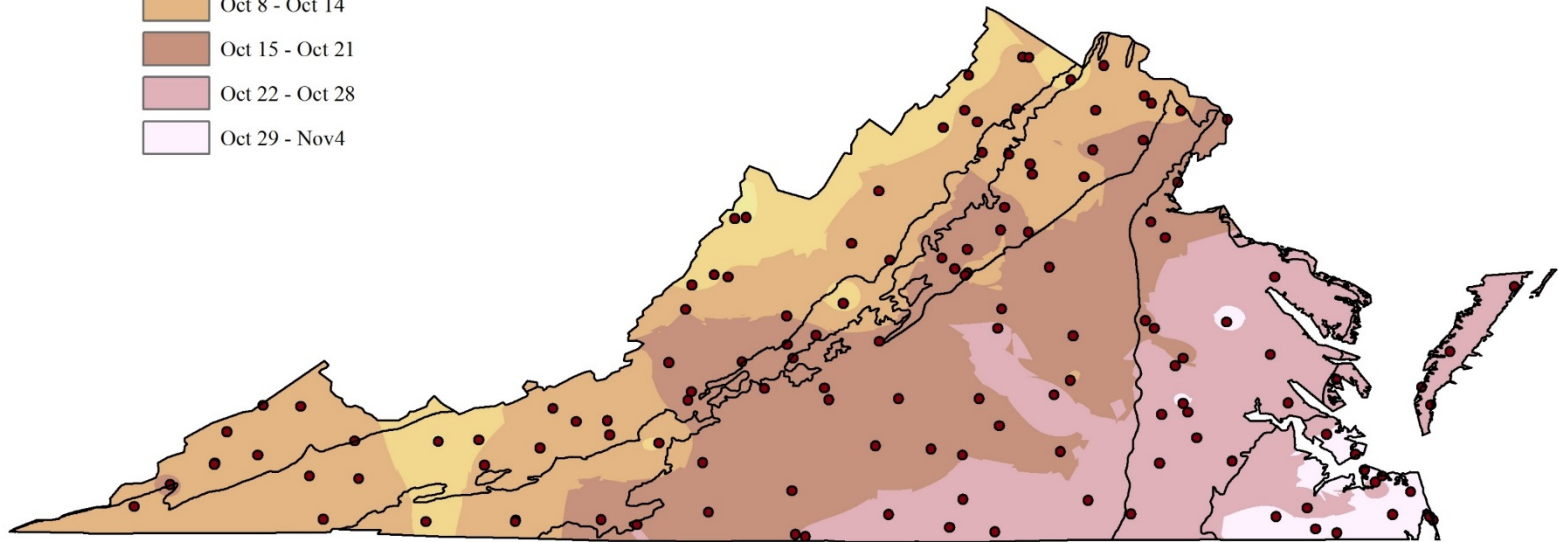
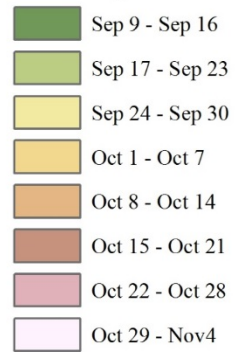


0.9 0.45 0 0.9 Decimal Degrees

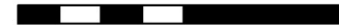


AccGDD 700 Year 2007-2017

Date range

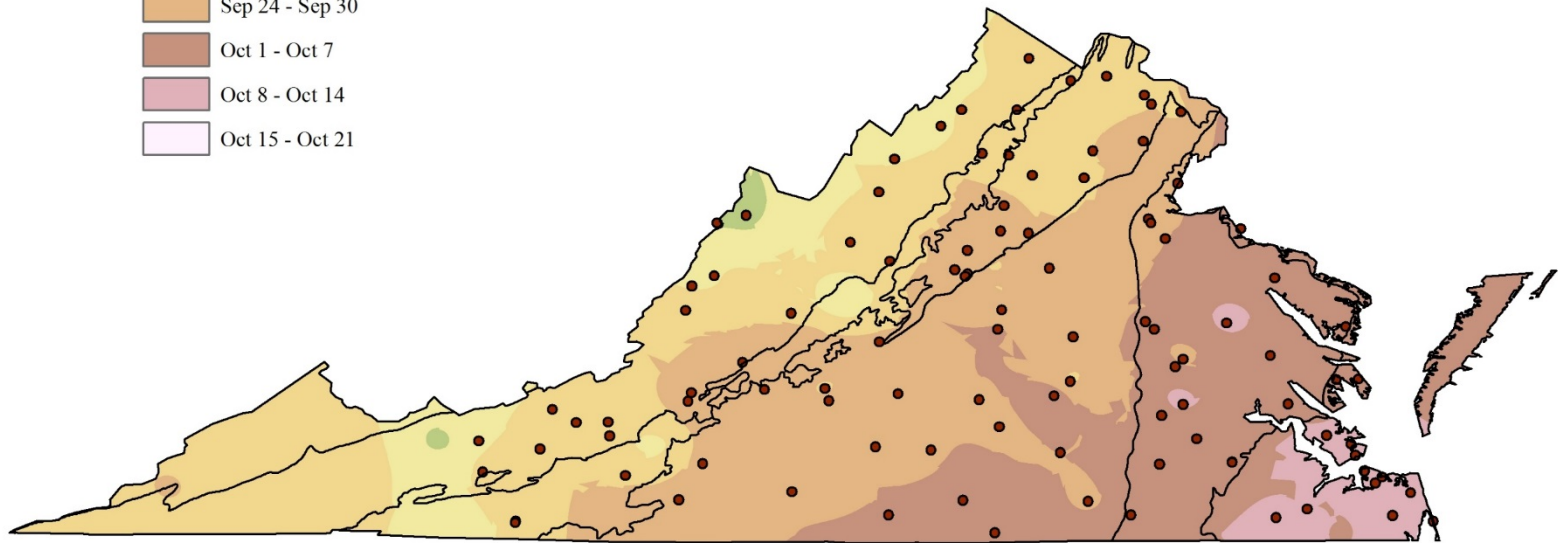
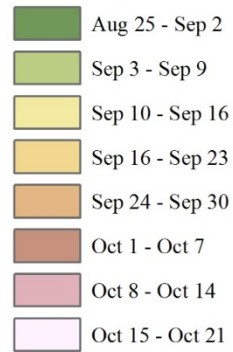


0.9 0.45 0 0.9 Decimal Degrees



AccGDD 1100 Year 2007-2017

Date range



0.9 0.45 0 0.9 Decimal Degrees



Name of Practice: STREAM PROTECTION (FENCING)
DCR Specifications for NO. WP-2

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

A. Description and Purpose

Protection by fencing along all water bodies and streams in a field, to reduce erosion, sedimentation, and the pollution of water from agricultural nonpoint sources.

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

B. Policies and Specifications

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

2. Grazing (including flash grazing) is not allowed in the protected riparian area during the lifespan of this practice. When both sides of the stream are under the same ownership **and/or management**, livestock must be excluded from both sides of the stream.
3. Cost-share and tax credit are not authorized for:
 - i. Boundary fence if it is being used to bring new pasture into production. If the stream is the barrier currently confining the livestock, then fencing is allowed.
 - ii. Interior cross fencing that does not exclude livestock from the stream.
 - iii. Rebuilding of existing fence.
 - iv. Temporary fencing.
 - v. **Hardened travel lanes that are not attached to a crossing or limited access.**
4. The conservation planning process for developing an alternative watering system for livestock should include consideration of some means to provide water to the livestock during emergency conditions. Generators may not receive cost-share.
5. Wildlife, **animal welfare**, and environmental **and livestock shade** considerations must be given when designing the practice.
6. This is a one-time incentive payment not eligible for reapplication on the same site. Life span requirements can be waived if damaged by flooding.
7. Soil loss rates must be computed for all practices for use in establishing priority considerations.
8. This practice phase is subject to NRCS Standards 342 Critical Area Planting, 382 Fence, 390 Riparian Herbaceous Cover, 472 Access Control, 575 Trails and Walkways and 578 Stream Crossing.
9. All practice components implemented must be maintained for a minimum of 5 years following the calendar year of installation. The lifespan begins on Jan. 1 of the calendar year following the year of certification of completion. By accepting either a cost-share payment or a state tax credit for this practice the participant agrees to maintain all practice components for the specified lifespan. This practice is subject to spot check by the District throughout the lifespan of the practice and failure to maintain the practice may result in reimbursement of cost share and/or tax credits.

C. Rate(s) **Subject to change per further discussion with additional subcommittees input**

1. ~~A rate based on 75% of the cost of all eligible components has been established~~
The cost share rate for this practice shall be 55% when stream exclusion fencing is installed at a minimum of 10' along all water bodies in a field, and 75% when exclusion fencing has been installed at a minimum of 35' along all water bodies in a field. In situations where the minimum exclusion distance is 10', any exclusion fencing within that same field that is installed at least 35' away from the stream is eligible for the 75% payment rate. For hardened crossings and limited access areas to receive the payment rate of 75%, the minimum exclusion distance in the field(s) associated with them shall be 35'. Payment shall be based upon the approved or actual cost, whichever is less. The maximum payment for this practice shall be \$70,000. Cost-share may be from state funds or a combination of state and other sources.
2. As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.
3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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

Revised ~~March~~ November, 2018

Name of Practice: STREAM EXCLUSION WITH GRAZING LAND MANAGEMENT
DCR Specifications for No. SL-6

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

A. Description and Purpose

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

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

B. Policies and Specifications

1. State cost-share and tax credit on this practice are limited to pastureland that borders a live stream or Chesapeake Bay Preservation Act Resource Protection Area as defined by local ordinance. An exception to this may be granted in cases of severe environmental degradation occurring in and around features such as: springs, seeps, ponds, wetlands, or sinkholes, etc.
2. An applicant may not apply for or receive cost share funds for ~~SL-6 and SL-7 or~~ CRSL-6 and SL-6 practices funded by the Virginia Agricultural Best Management Practices Cost Share Program on the same fields.
3. A written management plan, to include a rotational grazing component if more than three new grazing units are created by the installation of interior fencing, and operation and maintenance plans must be prepared and followed in accordance with NRCS FOTG. Factors to be addressed in the management plan should include water sources, environmental impact of winter-feeding pad location, runoff from the feeding pad area, soil fertility maintenance, access lanes, fencing needs, wetlands, minimum cover or grazing heights, carrying capacity of the land and rotational schedules.
4. Grazing (including flash grazing) is not allowed in the protected riparian area during the lifespan of this practice. When both sides of the stream are under the same ownership livestock must be excluded from both sides of the stream.

5. To protect stream banks, state cost-share and tax credit are authorized for:
 - i. Fencing to restrict stream access in connection with newly developed watering facilities. The stream exclusion fence must be placed a minimum of 35 feet away from the stream, except as designed in areas immediately adjacent to livestock crossings and controlled hardened accesses.
 - a. Wetlands, intermittent springs, seeps, **ponds connected to streams, or sensitive karst-topography features** and gullies adjacent to streams should be included in the buffer area.
 - b. Isolated seeps, springs, wetlands or ponds without direct connection to a stream may be fenced as well but shall not be used as the sole criteria for determining eligibility for the SL-6 practice.**
 - ii. Stream crossings for grazing distribution or limited water access as long as the fencing adjacent to the crossing restricts access to the excluded area.
 - iii. Fence chargers used to electrify permanent or temporary fencing.

6. To supply an alternative watering system to grazing livestock, state cost-share and tax credit are authorized for:
 - i. Watering developments including:
 - a. Wells, including a permanently affixed pump and pumping accessories;
 - I) Districts may approve cost-share for dry wells and/or well location studies (geotechnical surveys) for the development of an alternative watering systems on a case by case basis and at the discretion of the District's Board.
 - II) Pumps and equipment associated with portable and permanent watering systems. Pumps may operate on purchased electrical current or alternative energy sources such as solar, battery, mechanical or hydraulic energy. The selected pump and associated equipment should be the most cost effective for the specific site and application. The replacement costs of pumps and pumping equipment components which fail to function properly during the lifespan of the practice are considered maintenance expenses and are the responsibility of the participant.
 - b. Connection to existing water supply
 - c. Development of springs, seeps, or stream pickups, including fencing of the area, where needed, to protect the development from pollution by livestock;
 - d. Ponds (if the only cost effective and technically feasible alternative for water source) including fencing of the area, where needed, to protect the development from pollution by livestock
 - e. Pumps and equipment associated with permanent watering systems.
 - ii. Watering facilities including:
 - a. troughs,
 - b. tanks/storage facilities/cisterns,
 - c. hydrants
 - iii. Pipelines to convey water to watering facilities.

- iv. Stream crossings for limited water access as long as the fencing adjacent to the crossing restricts access to the excluded area.

- v. Portable water supply system components such as troughs, pipe, etc. that are:
 - a. Commercially available or farmer constructed,
 - b. Large enough to provide a timely and sufficient volume of water for the livestock to be contained in a specific area for which the system is designed,
 - c. Capable of being maintained in a stable position and protected from any damage while the system or component is in use, and
 - d. Capable of being moved in a timely manner from one location to another within the acreage for which the system is designed.

- 7. To establish pasture management through rotational grazing, state cost-share and tax credit are authorized for:
 - i. Interior fencing and watering facilities that distribute grazing to improve water quality, when combined with the livestock exclusion component of this practice on an adjacent stream or sensitive feature. Consideration must be given, in such cases, to the additional management requirements of such systems.
 - ii. When more than three new grazing units are created by the installation of interior cross fencing, a written grazing management plan must be prepared and implemented. Input from the participant during the development of the plan is required.

- 8. To develop a hardened pad for winter-feeding of livestock state cost-share and tax credit are authorized for:
 - i. Grading and shaping, geotextile fabric, gravel, concrete or bituminous concrete.
 - ii. The winter-feeding hardened pad will be cost shared based upon the existing herd size. Cost-share funds cannot be used to accommodate expansion of the herd size.
 - iii. All other means of reducing the environmental impact of the winter-feeding operation must be explored and rejected, due to economic inefficiency or lack of space for relocation, before cost-share or tax credit can be approved.
 - iv. Cost-share funding for a hardened winter-feeding pad will only be authorized after the “Needs Determination Worksheet” has been completed, and all other methods of resolving the water quality degradation have been considered.
 - v. A nutrient management plan is required to properly manage the manure collected from around the feeding pad that addresses all enriched runoff and manure accumulations associated with the winter-feeding pad.

- 9. Portable or temporary system components (fencing, etc.) cannot be utilized in other areas or moved from fields utilized in the system plan. The replacement costs of portable components which fail to function properly during the lifespan of the practice are considered maintenance expenses and are the responsibility of the participant.

10. The conservation planning process for developing an alternative watering system for livestock should include consideration of some means to provide water to the livestock during emergency conditions. Generators may not receive cost share.
11. The primary water use of the components which were installed with state cost-share and tax credit must be for the purpose of providing water for livestock; however, incidental use is not prohibited. State cost-share and tax credit is not permitted for any electrical, structural, or plumbing supplies, including pipe, or associated construction costs for developing any incidental use. When an incidental use is anticipated, the District Board should consider the applicant's intent before approving the request. Incidental use will be documented in the applicant's file
12. No state cost-share and tax credit is authorized under the practice for any installation that is:
 - i. PRIMARILY for wildlife, dry lot feeding, barn lots, or barns.
 - ii. To make it possible to graze crop residues, field borders, or temporary or supplemental pasture crops.
 - iii. For boundary fencing or water supply systems used to establish new pastures not currently in use.
 - iv. For interior fencing and watering facilities to distribute grazing in fields not receiving exclusion fence. (Applicant may apply for SL-7)
 - v. For the purpose of providing water for the farm or ranch headquarters.
13. Soil loss rates must be computed for all applications for use in establishing priorities for receiving cost share funds.
14. All permits or approvals necessary are the responsibility of the applicant.
15. This practice is subject to NRCS Standards, 382 Fence, 390 Riparian Herbaceous Cover, 472 Access Control, 516 Livestock Pipeline, 533 Pumping Plant, 561 Heavy Use Area Protection, 574 Spring Development, 575 Trails and Walkways, 578 Stream Crossing, 614 Watering Facility and 642 Water Well.
16. All practice components implemented must be maintained for a minimum of 10 years following the calendar year of installation. The lifespan begins on Jan. 1 of the calendar year following the year of certification of completion. By accepting either a cost-share payment or a state tax credit for this practice the participant agrees to maintain all practice components for the specified lifespan. This practice is subject to spot check by the District throughout the lifespan of the practice and failure to maintain the practice may result in reimbursement of cost share and/or tax credits.

C. Rate(s)

1. The state cost-share payment shall not exceed 80% of the eligible actual or estimated cost, whichever is less.

- .
- 2. The maximum state cost-share payment for this practice will be \$70,000.
Multiple SL-6s may be funded in the same program year up to the \$70,000 cap.

Participants receiving \$70,000 in cost-share funds for SL-6 practices shall not be eligible for any additional cost-share funds for any other cost-share practices in the same program year.

3. Examples:
 - i. If total SL-6 payments are equal to \$70,000 then no additional VACS for any other cost-share practices is allowed.
 - ii. If SL-6 payments are \$60,000, then \$10,000 would remain available for additional SL-6s, or \$10,000 would remain available for WP-4 and/or WP-4B but \$0 for other VACS practices.
 - iii. If SL-6 payments are \$40,000, then \$10,000 would remain available for other VACS practices, or \$30,000 for additional SL-6s, or WP-4 and/or WP-4B practices.
4. 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.
5. If a participant receives cost-share from any source (state, federal, or private), only the percent of the total cost of the project that the applicant contributed is used to determine the tax credit.

D. Technical Responsibility

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

Revised. March, 2018

Needs Determination Worksheet for Winter-Feeding Pad
for _____ project

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

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

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

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

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

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

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

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

Pasture acres _____ Hay acres _____ Cropland _____

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

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

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

Completed by:

Signature

Date

Title

Name of Practice: EXTENSION OF WATERING SYSTEMS

DCR Specifications for No. SL-7

Aprvd 11/29/18

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's grazing land management best management practice that is applicable to all contracts entered into with respect to this practice. Pastures are represented by those lands that have been seeded, usually with introduced species (*i.e.*, tall fescue, legumes) or in some cases native plants (e.g. switchgrass or other native warm season grasses), and which are managed using agronomic practices for livestock.

A. Description and Purpose

A management system that will provide and insure adequate surface cover protection to minimize soil erosion. The system will reduce sediment, nutrients and pathogen loads in runoff.

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

B. Policies and Specifications

1. All fields that receive cost share under this practice must have had all livestock previously excluded **or concurrently being excluded with a minimum 35' setback** from all surface waters and sink holes. Any field that is part of a rotational grazing system is eligible.
2. This practice may be installed, in conjunction with a CREP CP-22 contract, to implement rotational grazing on those fields receiving watering facilities to increase forage cover through the proper grazing and forage management techniques that will allow a pasture to rest and re-grow its cover. The system receiving cost-share should reflect the least costly, most technically feasible, environmentally effective approach to resolve the existing water quality problem.
This practice cannot be used with a CREP CP-21, CP-23 or CP-29.
3. A written grazing management plan and operation and maintenance plan that includes all acres in the grazing system must be prepared, implemented and followed in accordance with NRCS Standard 528 Prescribed Grazing. Factors to be addressed should include water sources, environmental impact, soil fertility maintenance, access lanes, fencing needs, wetlands, minimum cover or grazing heights, carrying capacity of the land and rotational schedules. **Districts will monitor for compliance.**
4. Flash grazing (allowing livestock to graze the excluded riparian area) is not allowed as a management alternative during the lifespan of this practice.

5. To supply water, state cost-share and tax credit are authorized for:
 - i. Installing pipelines, watering facilities, hardened pads around watering facilities, storage facilities, cisterns, troughs (portable or fixed) and pumping plant (if needed to meet pressure system requirements). When additional water is needed in CREP fields, the FSA CREP waiver process should be considered before authorizing VACS cost-share.
 - ii. A water supply system can include a portable system to meet the management requirements necessary for systems operation rather than a large number of permanent water facilities.
6. Portable or temporary system components (fencing, etc.) cannot be utilized in other areas or moved from fields utilized in the system plan. The replacement costs of portable components which fail to function properly during the lifespan of the practice are considered maintenance expenses and are the responsibility of the participant.

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

- i. Commercially available or farmer constructed,
 - ii. Large enough to provide a timely and sufficient volume of water for the livestock to be contained in a specific area for which the system is designed,
 - iii. Capable of being maintained in a stable position and protected from any damage while the system or component is in use, and
 - iv. Capable of being moved in a timely manner from one location to another within the acreage for which the system is designed.
7. The primary water use of the components which were installed with state cost-share and tax credit must be for the purpose of providing water for livestock; however, incidental use is not prohibited. State cost-share and tax credit is not permitted for any electrical, structural, or plumbing supplies, including pipe, or associated construction costs for developing any incidental use. When an incidental use is anticipated, the District Board should consider the applicant's intent before approving the request. Incidental use will be documented in the applicant's file.
8. To facilitate rotational grazing systems, cost-share and tax credit are authorized for temporary or permanent interior fencing and fence chargers (electric or solar) used to electrify permanent or temporary fencing that is part of the grazing system.
9. Any installation of permanent fencing to bring previously unused fields or pastures into the grazing system is the responsibility of the participant, and cannot receive state cost-share or tax credit assistance. Permanent fencing may be installed under this practice to divide existing pasture units only to better manage rotational grazing.

10. No state cost-share and tax credit is authorized under the practice for any installation that is:
 - i. PRIMARILY for wildlife, dry lot feeding, barn lots, or barns.
 - ii. To make it possible to graze crop residues, field borders, or temporary or supplemental pasture crops.
 - iii. For boundary fencing or water supply systems used to establish new pastures not currently in use.
 - iv. For the purpose of providing water for the farm or ranch headquarters.
- ~~11. This practice is subject to spot check by the Districts throughout the life of the practice and failure to comply may result in forfeiture of funds.~~
11. This practice is subject to NRCS Standards 382 Fence, 472 Access Control, 516 Livestock Pipeline, 528 Prescribed Grazing, **533 Pumping Plant**, 561 Heavy Use Area Protection, 575 Trails and Walkways, and 614 Watering Facility.
12. All practice components implemented must be maintained for a minimum of 10 years following the calendar year in installation. The lifespan begins on Jan. 1 of the calendar year following the year of certification of completion. By accepting payment for this practice the recipient agrees to maintain the practice **and the associated exclusion fencing** for the specified lifespan. This practice is subject to spot check by the District throughout the lifespan of the practice and failure to comply may result in reimbursement of state cost-share funds and/or tax credits.

C. Rate(s)

1. The state cost-share payment will not exceed 75% of the total eligible cost. The maximum state payment for this practice is not to exceed \$50,000 per landowner per year.
2. As set forth by Virginia Code § 58.1-339.3 and §58.1-439.5, Virginia currently provides a tax credit for implementation of certain BMP practices. The current tax credit rate, which is subject to change in accordance with the Code of Virginia, is 25% of the total eligible cost not to exceed \$17,500.00.
3. If a participant receives cost-share, only the participant's eligible out-of-pocket share of the project cost is used to determine the tax credit.

D. Technical Responsibility

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

Revised March, 2017

DRAFT

Name of Practice: GRAZING LAND MANAGEMENT
DCR Specification for No. SL-9

This document specifies terms and conditions for the Virginia Department of Conservation and Recreation's grazing land management best management practice that is applicable to all contracts entered into with respect to this practice. Pastures are represented by those lands that have been seeded, usually with introduced species (*i.e.*, tall fescue, legumes) or in some cases native plants (e.g. switchgrass or other native warm season grasses), and which are managed using agronomic practices for livestock.

A. Description and Purpose

A management system that will provide and ensure adequate surface cover protection to minimize soil erosion. The system will reduce sediment, nutrients and pathogen loads in runoff.

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

B. Policies and Specifications

All fields that receive cost share under this practice must be perennial pasture and have had all livestock previously excluded from all surface waters and sink-holes. A written grazing management plan and operation and maintenance plan that includes all acres in the grazing system must be prepared, implemented and followed in accordance with NRCS Standard 528 Prescribed Grazing.

1. The system developed with this practice must maintain adequate nutrient and pH levels to improve or maintain desired forage species composition, plant vigor, and persistence ~~Lime shall be applied~~ in accordance with soil test recommendations.
2. Locate infrastructure to facilitate grazing management and manure distribution.
 - i. Manage the type and number of livestock, length of grazing period, based on available forage and allowable utilization targets. Manage livestock rotation to new paddock subdivisions to maintain minimum grazing height recommendations and sufficient rest periods for plant recovery according to NRCS Grazing Heights and Rest Guidelines by Forage Table 1 (attached). Size pasture and subdivisions and manage animal stock densities to minimize grazing periods and maximize manure and urine distribution throughout the pasture.

- ii. Maintain adequate plant cover of $\geq 60\%$ year round and pasture stand density to increase rainfall infiltration and decrease runoff from pasture lands for the lifespan of the practice.
 - iii. Locate feeding areas away from sensitive areas such as wetlands, sink holes streams/creeks and adjacent drainage swales etc.
 - iv. Manage distribution of nutrients and minimize soil disturbance at hay feeding sites by unrolling hay across the upland landscape throughout the pasture system when soils are well drained or moving hay rings periodically.
 - v. Designate a sacrifice lot/paddock to locate livestock for feeding when adequate forage is not available in the pasture system. A sacrifice lot is used during times of drought or during excessively wet soil conditions over the winter feeding season as a place to feed hay and supplements to livestock until pasture conditions are suitable for grazing or feeding without damaging the soil quality or reducing plant cover. Sacrifice lot/paddock should not drain directly into ponds, creeks or other sensitive areas and should not be more than 10% of the total pasture acreage.
3. Pastures must be mowed as needed no lower than indicated in NRCS Table 1, Guidelines for Grazing Heights and Rest Periods [in order](#) to control Woody vegetation and encourage regrowth. Consider wildlife nesting concerns and time accordingly.
 4. Pastures not meeting minimum 60% year round cover criteria should be replanted in accordance to NRCS Standard 512 Forage and Biomass Planting.
 5. ~~Chain harrow~~ Drag pastures at least twice a year to break-up manure piles after livestock are removed from a field to uniformly spread the manure load, or manage manure distribution through rotational grazing where livestock are moved to uniformly distribute manure and maximize forage.
 6. The NRCS Pasture Condition Score will be used to establish a benchmark for pasture evaluation and to document pasture condition and Progress. This score will be tabulated annually at the same time of the year (**during the growing season**) as the initial scoring. The pasture condition score should not exceed 35 to be eligible for sign-up. The pasture condition score should increase each year as better pasture management techniques allow for better forage management and increased utilization.
 7. State cost share will be provided only one time per field.
 8. Fields utilizing this practice must not have a NRCS 528 Prescribed Grazing contract on the same fields.
 9. ~~In order to be eligible for cost share, producers must be fully implementing a~~

~~current Nutrient Management Plan (NMP) on all agricultural production acreage contained within the field 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. This practice is subject to the requirements of NRCS standards, 314 Brush Management, 512 Forage and Biomass Planting, 528 Prescribed Grazing, and 595 Pest Management.
11. Payment will be made after soil test recommendations and the required grazing plan are on file with the District. By accepting payment for this practice the recipient agrees to maintain the practice for the ~~3~~three-year lifespan beginning ~~January 1 the calendar year following the calendar year of certification of completion.~~ This practice is subject to spot checks by the District throughout the lifespan of the practice and failure to comply may result in reimbursement of cost-share funds.

C. Rate(s)

The cost-share rate is an incentive payment of \$25 per acre per year over the three-year lifespan of this practice (for a total of \$75 per acre) and is limited to a maximum of 200 acres per participant per year.

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. Individuals certifying technical need and technical practice installation shall have appropriate certifications as identified above and/or Engineering Job Approval Authority (EJAA) for the designed and installed component(s). All practices are subject to spot check procedures and any other quality control measures.

Revised ~~March, 2018~~ November 6, 2018