**alliance practice worksheet**

VIRGINIA

Nutrient Management Plan - Crops (590)

*The conditions and specifications below are adapted from the Natural Resources Conservation Service. Producers who are installing these practices under the Alliance will use the conditions and implementation guides below but are exempt from NRCS verification and certification. Completing the Purposes and Practice Specifications on this document is sufficient to self-verify practice installation and completion.*

# Farm Info

|  |  |  |
| --- | --- | --- |
| Producer Name |  | |
| County (Farm Location) |  | |
| FSA Farm Number |  | |
| FSA Field Number(s) |  | |
| FSA Tract Number(s) |  | |
| Practice Status:  *If a practice has not yet been implemented, select Planned*  *If a practice has been implemented, select Applied* | Planned | Applied |
| Planned Date of IMPLEMENTATION: | Date Practice was APPLIED: |

# PRACTICE: NUTRIENT MANAGEMENT – CROPS (590)

**DEFINITION**: Manage rate, source, placement, and timing of plant nutrients and soil amendments while reducing environmental impacts.

**MINIMUM REQUIREMENTS FOR NUTRIENT MANAGEMENT PLAN - CROPS (590):**

<https://efotg.sc.egov.usda.gov/api/CPSFile/3950/590_VA_CPS_Nutrient_Management_2020>

**CONSIDERATIONS:**

For producers acquiring and implementing a nutrient management plan for the first time, level A and B only are required. Going beyond the above minimum criteria and implementing “Enhanced 590” is recommended, but not a requirement for basic 590 nutrient management.

For producers that currently maintain and implement a NMP, a single component of Level C is required. Options for enhanced nutrient management include more intensive data collection and analysis; cropping system changes to minimize risk of nutrient loss; and enhancing the rate, timing, placement, and form of nutrient applications.

# GENERAL CRITERIA APPLICABLE TO ALL PURPOSES

* A nutrient management plan (NMP) must be prepared that seeks to maintain or enhance crop production while minimizing resource degradation.
* The NMP shall be prepared by a private sector planner certified to write plans in Virginia. A list of planners is available from your local SWCD. NMPs that have been written by planners employed by DCR, or were billed via the Direct Pay program, will not qualify. Please reach out to your SWCD for clarification if needed.
* The NMP will include crop rotations, tillage methods, and other practices that minimize site-specific risk of soil erosion, runoff, and associated nutrient loss.
* If the NMP recommends manure/biosolids applications on fields with Very High (VH) soil test P levels, those rate recommendations must be derived from the P-Index using RUSLE2 erosion estimates (or the recommended rates must be no greater than the P-Index-derived rate).
* See VA 590 Standard for details on minimum NMP content. Minimum NMP content requirements of VA 590 are at least as stringent as minimum criteria for NMP content in Virginia law.
* In addition to obtaining the above NMP, the producer must also implement the following “Basic 590” elements to satisfy this Standard:

1. Application rates will not exceed recommendations in the NMP for N, P, K, and lime.
2. Follow timing recommendations in the NMP related to N fertilizer. Specifically, apply no inorganic N without a growing crop or more than 30 days ahead of planting.
3. Follow the spreading schedule in the NMP for any applied manures/biosolids. In limited cases, manure/biosolids spreading may be allowed up to 60 days (or more) before planting on sites not identified as environmentally sensitive (see VA 590 Standard for details).
4. Follow restrictions in the NMP on nutrient applications to frozen ground or snow. Never spread fertilizer or liquid manure/biosolids on snow or frozen ground.
5. On fields listed as environmentally sensitive sites, follow more aggressive limits on nutrient timing. Split-apply inorganic N to row crops and small grains. Also, never spread manure/biosolids more than 30 days before planting or in absence of a growing crop.
6. Follow all NMP recommendations for not spreading manure/biosolids in designated setback areas (near wells, springs, etc.).
7. Ensure NMP is based on up-to-date soil and manure tests (liquid manure no older than one year; soil tests for new NMPs two years; soil tests for NMP revisions and solid/semi-solid manure three years).
8. Ensure the NMP is updated to reflect any increases in animal numbers or other significant livestock or cropping system changes that occur after the NMP was first written.
9. Implement crop rotations, tillage methods and other soil conservation practices specified in the NMP.
10. Keep records detailed enough to demonstrate implementation of all elements listed above.

*NOTE: This summary does not address all requirements and considerations in the VA NRCS Nutrient Management Standard (VA-590). Consult the Standard for further details.*

# INSTRUCTIONS

|  |
| --- |
| **Instructions:** |
| Complete boxes A1-04 through A1-05 below, then fill out and attach at least one copy of each of the following sheets:   * Section A2 – Fields Targeted for 590 Implementation and Planned Performance. * Section A3 – Nutrient Management Plan (NMP) Evaluation. * Section B – Basic 590 Specifications & Checkout.   In addition, attach a copy of the client’s NMP or at least one of the official NMP cover sheet. Complete and attach the following optional sheets and elements as needed:   * Section C – Enhanced 590 Specifications & Checkout. * Farmer nutrient management records and other documentation related to 590 implementation or financial assistance.   Use the above documents to plan 590 activities, convey specifications to the farmer client, and document that required elements of the practice have been carried out. Section A2 can be used to help summarize planned 590 performance and document completion. |

|  |  |
| --- | --- |
| **A1-04.** | **Producer's Technical Purposes For 590** **Implementation:** *(check at least one and all that apply)* |
| Improve plant health and productivity | |
| Reduce excess nutrients in surface and groundwater | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **A1-05.** | **Time Period Targeted For 590** **Implementation:** | | | |
|  | **Start** | | **End** | |
| **Month** | **Year** | **Month** | **Year** |
|  |  |  |  |

# SECTION A2

*Fields targeted for 590 implementation and planned performance.*

**INSTRUCTIONS**

List below fields targeted for 590 implementation. Indicate planned level of 590 performance to be achieved for each field. **The minimum level of performance required to fulfill the 590 is to obtain an NMP and implement Basic 590 (590 Level A and 590 Level B, respectively).** Use JS590 Sections A3 and B to verify that a proper NMP has been obtained and Basic 590 has been implemented.

**Implementation of *ONE Enhanced 590 practice* (590 Level C) is required if already implementing Level A and B.** The columns below provide an option for listing planned enhanced techniques, if desired. Also use Section C of this job sheet (or other attachments) to describe enhanced 590 details.

The far-right column below provides an optional check box to help document that planned 590 performance has been completed for each field.

***ATTACHMENTS OR OTHER FORMATS CAN BE USED TO LIST FIELDS PLANNED FOR 590 IMPLEMENTATION.***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **A2-01.** | **Fields Targeted For 590** **Implementation:** | | | | | | | | |
| **Tract(s)** | | **Field(s)** | **Acres** | **Planned 590 Technical Activities and Performance** | | | | | **CHECK IF COMPLETE** |
| **Obtain / Verify NMP**  **(Level A)** | **Basic 590**  **(Level B)** | **Enhanced 590**  **(Level C)** | **Planned Enhanced Techniques** | |
| **Enhanced Technique 1 Description** | **Tech 1 Timing Month / Year** |
|  | |  |  |  |  |  |  |  |  |
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| Notes: |

# Section A3: NUTRIENT MANAGEMENT PLAN (NMP) EVALUATION

**INSTRUCTIONS**

*Answer the questions below to evaluate your NMP.* *Attach a copy of the NMP or at a minimum a copy of the official NMP cover sheet (and indicate where the complete NMP is filed). If all questions below are answered “Yes”, the client has an NMP that meets minimum VA 590 requirements and has achieved “Level A”.*

|  |  |  |
| --- | --- | --- |
| **A3-01.** | **Does the attached NMP cover sheet include a DCR-certified NMP writer’s name, certification number, and signature?** | Yes |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **A3-02.** | **Time Period Covered by the NMP:**  *Based on NMP content; 3 years or less* | | | |
|  | **Start** | | **End** | |
| **Month** | **Year** | **Month** | **Year** |
|  |  |  |  |

|  |  |  |
| --- | --- | --- |
| **A3-03.** | **Is The Time Period Targeted For 590** **Implementation in Section A1 Covered by the NMP?**  *Compare answers to A1-05 with A3-02, above* | Yes |

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| --- | --- | --- |
| **A3-04.** | **Are All Fields Targeted For 590** **Implementation in Section A2 Covered by the NMP?**  *Compare answers to A2-01 with NMP content, especially Soil Test Summary Page for NUTMAN-generated NMPs* | Yes |

|  |  |  |
| --- | --- | --- |
| **A3-05.** | **If The NMP Includes Plans for Manure/Biosolids Applications on Fields with Very High Soil Test P Levels (VA Tech Soil Testing Lab Result Of 55 Ppm or Greater), Are the Manure/Biosolids Application Rates Based on the P-index Using RUSLE2 Erosion Estimates?**  *You may answer “YES” if rates are at least as stringent as rates based on the P-Index using RUSLE2* | Yes |

|  |  |  |
| --- | --- | --- |
| **A3-06.** | **Do the planned crop rotations and tillage systems minimize site-specific risk of soil erosion, runoff, and associated nutrient loss, as required by the VA NRCS 590 Standard?** | Yes |
| **A3-07.** | **Based on the answers above, will the NMP, when implemented, satisfy the minimum criteria of the VA NRCS 590 Practice for the target time periods and fields listed in Sections A1 and A2?**  *Answer “YES” to this question only if all questions above are also answered “YES”.* | Yes |

# Section B

*Basic 590 Specifications & Checkout*

**INSTRUCTIONS**

This sheet specifies activities the farmer must carry out to fulfill Basic 590. Use this sheet to document that all core elements of Basic 590 (590 Level B) are complete.Attaching farmer nutrient records is not required. Also consider noting in JS590 Section A2 that Basic 590 has been completed.

Recommended: Use this sheet to document Basic 590 implementation for the term of the Alliance contract (1 year).

Use the notes sections to explain any “justifiable deviations” by the farmer from the NMP or other discrepancies between the plan and the farmer’s records.

***USE ATTACHMENTS AS NEEDED FOR COMPLETE NOTES OR EXPLANATIONS ON BASIC 590 IMPLEMENTATION***

|  |
| --- |
| Notes: |

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| --- | --- | --- | --- | --- |
| **B-01.** | **Time Covered by this Sheet:** | | | |
|  | **Start** | | **End** | |
| **Month** | **Year** | **Month** | **Year** |
|  |  |  |  |

# COMPLETE THE REQUIRED ACTIVITIES BELOW TO IMPLEMENT “BASIC 590”

|  |  |  |  |
| --- | --- | --- | --- |
| **Nutrient Application Rates** | | Check box if completed | Check box is not applicable |
| B-02. | Follow all application rate recommendations for nitrogen (N), phosphorous (P), potassium (K), and lime in the NMP.  *This includes any P-based limits on manure or biosolids application.* |  |  |
| Notes: |  | | |

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| --- | --- | --- | --- |
| **Nutrient Application Timing** | | Check box if completed | Check box is not applicable |
| B-03. | Follow recommendations in the NMP related to timing of inorganic nitrogen (N) fertilizer applications to all fields. Specifically, apply no inorganic N fertilizer applications without an actively growing crop or more than 30 days ahead of planting. |  |  |
| Notes: |  | | |
| B-04. | Follow the spreading schedule in the NMP for any applied manure/biosolids. Spread manure/biosolids on an actively growing crop or within 30 days of planting. Less restrictive application timing may be allowed to manage storage constraints on sites that are ***not*** environmentally sensitive – see the NMP for details. |  |  |
| Notes: |  | | |
| B-05. | Follow NMP recommendations related to frozen or snow-covered ground. Never apply inorganic fertilizer or liquid manure/biosolids to frozen or snow-covered ground. |  |  |
| Notes: |  | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **More Restrictive Timing on Environmentally Sensitive Fields** | | Check box if completed | Check box is not applicable |
| B-06. | On any fields listed in the NMP as environmentally sensitive sites, follow more intensive guidelines listed in NMP for timing of nutrient applications. Split all inorganic nitrogen (N) applications to row crops and small grains between at least two applications.    Also, follow more restrictive guidelines on timing of any manure/biosolids spreading (i.e., ***never*** spread more than 30 days before planting or in absence of a growing crop). |  |  |
| Notes: |  | | |

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| --- | --- | --- | --- |
| **Nutrient Placement** | | Check box if completed | Check box is not applicable |
| B-07. | Follow all NMP recommendations for not spreading manure/biosolids in designated setback areas (near wells, springs, surface water, etc.). |  |  |
| Notes: |  | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Soil & Manure Testing** | | Check box if completed | Check box is not applicable |
| B-08. | Ensure NMP is based on up-to-date soil & manure tests (liquid manure tests no older than one year; soil tests for new NMPs no older than two years; soil tests for NMP revisions and solid/semi-solid manure no older than three years). |  |  |
| Notes: |  | | |

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| --- | --- | --- | --- |
| **Nutrient Management Plan Updating** | | Check box if completed | Check box is not applicable |
| B-09. | Ensure the NMP is updated to reflect any increases in animal numbers or other significant livestock or cropping systems changes that occur after the NMP was first written. |  |  |
| Notes: |  | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Crop Rotations, Tillage Methods, and Erosion Control** | | Check box if completed | Check box is not applicable |
| B-10. | Implement crop rotations, tillage methods, and other conservation practices specified in the NMP to minimize site-specific risk of soil erosion, runoff, and associated nutrient loss, as required by VA NRCS 590 Standard. |  |  |
| Notes: |  | | |

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| --- | --- | --- | --- |
| **Basic Nutrient Management Recordkeeping** | | Check box if completed | Check box is not applicable |
| B-11. | Keep records showing you have carried out all required activities listed above. No specific format or form is required. Nutrient application rates, dates, methods, etc. must be documented in sufficient detail to reasonably demonstrate that all activities have been carried out. |  |  |
| Notes: |  | | |

**THE FOLLOWING IS NOT STRICTLY REQUIRED TO ACHIEVE BASIC 590, BUT NRCS RECOMMENDS IT TO MAKE THE NMP AND THESE 590 PRACTICES MORE USEFUL.**

# Section C

*Enhanced 590 Specifications & Checkout*

**INSTRUCTIONS**

Implementation of ***ONE Enhanced 590 practice*** **(590 Level C) is required if already implementing Level A and B.**

Use this sheet to plan and document implementation of one enhanced 590 practice that the farmer will carry out to go beyond the minimum requirements of Basic 590. Also consider using JS590 Section A2 to record planned Enhanced 590 activities and their completion.

Enhanced 590 can involve a wide range of activities and techniques pertaining to enhanced data collection and analysis, improved rate/placement/timing/form of nutrient application, and/or reduction of nutrient loss risk. This sheet simply offers one possible format for recording those possible activities and techniques.

Recommended: Use this sheet to document Enhanced 590 implementation annually. With that approach, multiple copies of this sheet will be needed to document implementation for a multi-year period (see JS590S Section A1 for overall time frame to be covered). Another approach is to use a single copy of this sheet to cover multiple years. To make clear which approach is used, specify in C-01 the start and end of the period covered by this sheet.

***USE ATTACHMENTS AS NEEDED TO DESCRIBE PLANNED AND/OR COMPLETED ENHANCED 590 ACTIVITIES.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **C-01.** | **Time Covered by this Sheet:** | | | |
|  | **Start** | | **End** | |
| **Month** | **Year** | **Month** | **Year** |
|  |  |  |  |

**Complete 1 of the activities described below to implement “Enhanced 590” and go beyond the minimum criteria of the VA NRCS Nutrient Management Practice Standard. Choose 1 enhancement that has not been previously implemented through a NRCS program.**

|  |  |  |
| --- | --- | --- |
| **Enhanced Data Collection & Analysis** | | Check box if completed |
| C-02. | *Examples: Measuring & tracking yields on field-by-field basis; soil, tissue, or manure testing beyond minimum NMP requirements; collecting and analyzing GPS-linked data upon which future variable rate fertilizer applications will be based; etc.*  *Example of documentation may include: yield maps* |  |
| Notes: |  | |

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| --- | --- | --- |
| **Enhanced Nutrient Application Rate** | | Check box if completed |
| C-03. | *Examples: Fine-tuning N rates with in-season tests like PSNT or tissue tests; cutting manure rates more aggressively than required by NMP on soils testing VH in P; etc.*    *Examples of documentation may include: PSNT test results with accompanying work orders/receipts, dates of application, etc.* |  |
| Notes: |  | |

|  |  |  |
| --- | --- | --- |
| **Variable Rate (VR) Nutrient Application** | | Check box if completed |
| C-04. | *Vary nutrient or lime rates across different zones within the same field to better match crop needs. Basis for variation can be soil type, yield maps or zones, grid- or zone-based soil testing, sensor readings (e.g. Greenseeker), or other factors.*    *Example of documentation may include: as-applied maps for N, P , K or Lime with corresponding soil tests.* |  |
| Notes: |  | |

|  |  |  |
| --- | --- | --- |
| **Enhanced Nutrient Timing** | | Check box if completed |
| C-05. | *Examples: “Splitting” N between two or more applications; applying most N as sidedress/topdress to match maximum crop uptake period; applying manure as late as possible prior to planting to minimize nutrient loss potential, etc.*    *Example of documentation may include: 2 as-applied maps, work orders/receipts, dates of application, etc.* |  |
| Notes: |  | |

|  |  |  |
| --- | --- | --- |
| **Enhanced Nutrient Placement** | | Check box if completed |
| C-06. | *Examples: Banding fertilizer near row; subsurface injection of fertilizer or manure; increasing setback distances; etc.*    *Example of documentation may include receipt of starter fertilizer purchase.* |  |
| Notes: |  | |

|  |  |  |
| --- | --- | --- |
| **Enhanced Nutrient Form** | | Check box if completed |
| C-07. | *Examples: Using controlled-release fertilizers, urease or nitrification inhibitors, manure amendments; etc.*    *Example of documentation may include receipt of urease or nitrification inhibitor purchase.* |  |
| Notes: |  | |

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| --- | --- | --- |
| **Cropping to Enhance Nutrient Cycling** | | Check box if completed |
| C-08. | *Examples: Growing legumes ahead of N-fertilized crops to reduce need for added N; prompt fall planting of small grain or N- scavenging crops to reduce winter N leaching potential; etc.*    *Examples of documentation may include: PSNT test results with accompanying work orders, receipts of cover crop seed purchases, planting dates, etc.* |  |
| Notes: |  | |

|  |  |  |
| --- | --- | --- |
| **Other Approved Nutrient Management Enhancements** | | Check box if completed |
| C-09. | |  |
| Notes: |  | |

# PRODUCER SELF-CERTIFICATION

By signing below, I certify that I have reviewed all required documentation, and the information outlined above meet all criteria and requirements as defined in the Natural Resources Conservation Service **NUTRIENT MANAGEMENT PLAN – CROPS (590)** standard and specifications for the identified acres or animal units.

Further, I agree that:

I have not received a payment for his conservation practice on these fields and acres from another USDA Conservation Program or another USDA Partnership for Climate-Smart Commodities grant partner.

I will retain all practice documentation to support this certification for up to 12 months following practice adoption and will provide this documentation to the Alliance if selected for a spot check. *(Up to 10% of enrolled Alliance participants will be randomly selected for spot checks).*

|  |  |  |
| --- | --- | --- |
| **Producer Name:** |  | |
| **Date:** |  |