



Nutrient Management

Virginia Conservation Practice Job Sheet

590

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 an individual certified as a NMP writer by the Virginia Department of Conservation & Recreation.

All information and recommendations in the NMP related to crop rotations, tillage, nutrient incorporation methods, and manure production (including animal numbers and manure storage capacities) must match the NRCS conservation plan and animal waste management system plan.

The NMP and associated NRCS conservation plan must recommend crop rotations, tillage methods, and other practices that will achieve “T” (soil loss tolerance). In addition, no active gully erosion is allowed on any fields meeting the 590 Standard.

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 the Standard for details on minimum NMP content. Minimum NMP content requirements of the VA 590 Standard are as least as stringent as minimum criteria for NMP content in Virginia law.

In addition to obtaining the above NMP, the NRCS client must also implement the following “Basic 590” elements in order to satisfy this Standard:

1. Follow application rate 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 in the absence of 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 590 Standard for details).

4. Follow restrictions in the NMP on nutrient applications to frozen ground or snow. In particular, 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. In particular, 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 the NMP is based on up-to-date soil and manure tests (tests no older than three years; liquid manure tests no older than one year).
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 practices necessary to achieve soil erosion requirements of the VA 590 Standard – “T” (soil loss tolerance) and no active gullies.
10. Keep records detailed enough to demonstrate implementation of all elements listed above.

Considerations

Going beyond the above minimum criteria and implementing “Enhanced 590” is recommended, but not required. Options for enhanced nutrient management include more intensive collection and analysis of nutrient management data. Other options include cropping system changes to enhance nutrient cycling as well as enhancing the rate, timing, placement, and form of nutrient applications to further reduce environmental losses.

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.

JS590 Section A1 – General Information and NRCS Planner Signatures

Instructions:
 Complete boxes A1-01 through A1-05 below, then fill out and attach at least one copy of each of the following sheets:

- JS590 Section A2 – Fields Targeted for 590 Implementation and Planned Performance.
- JS590 Section A3 – Nutrient Management Plan (NMP) Evaluation.
- JS590 Section B – Basic 590 Specifications & Checkout.

Also attach a copy of the client's NMP or at a minimum a copy of the official NMP cover sheet.
 Complete and attach the following **optional** sheets and elements as needed:

- JS590 Section C – Enhanced 590 Specifications & Checkout.
- Virginia NRCS 590 financial assistance worksheets for planning payments.
- Copies of farmer nutrient management records and other primary documentation and notes.

Use all of the above materials to plan 590 activities, convey specifications to the farmer client, and document that all required elements of the practice have been carried out. Use Section A2 as an overall summary of planned level of 590 performance and as documentation of completion.
 When planning is complete, sign A1-06 below. When implementation is complete, sign A1-07 below.

A1-01. Client name:	
A1-02. County:	
A1-03. Contract number: <i>(if applicable)</i>	

A1-04. Client's technical purposes for 590 implementation: *(check at least one and all that apply)*

Budget, supply, and conserve nutrients for plant production.

Minimize agricultural nonpoint source pollution of surface and groundwater resources.

Properly utilize manure or organic by-products as a plant nutrient source.

Protect air quality by reducing odors, nitrogen (N) emissions, and formation of atmospheric particulates.

Maintain or improve the physical, chemical, and biological condition of soil.

A1-05. Time period targeted for 590 implementation:	Start		End	
	Month	Year	Month	Year

A1-06. NRCS Conservation Planner Certification:

The nutrient management practice planned in this job sheet fulfills minimum requirements of VA Practice Standard 590.

NRCS Conservation Planner name, printed	NRCS Conservation Planner signature	Date

A1-07. Certification of Practice Completion

The nutrient management practice planned in this job sheet has been completed according to NRCS specifications.

NRCS Conservation Planner name, printed	NRCS Conservation Planner signature	Date

JS590 Section A2 – Fields Targeted for 590 Implementation and Planned Performance

Instructions:

List below fields targeted for 590 implementation (or use attached sheet(s)). 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 (referred to as “Level A” and “Level B”, respectively, in the VA NRCS 590 financial assistance program). Use JS590 Sections A3 and B to verify that a proper NMP has been obtained and Basic 590 has implemented. Enhanced 590 (“Level C” in financial assistance program) is optional. Indicate planned enhanced techniques as needed in the columns provided below. Since different enhanced techniques may be needed on the same field during different years in the rotation, multiple rows or multiple copies of this sheet may be needed to represent the same field(s) during multiple years. Also consider using Section C of this job sheet and optional 590 financial assistance worksheets to plan and describe enhanced techniques. If plans for enhanced techniques have changed or have not been achieved, modify the appropriate cells in the table below to reflect that.

A2-01. Fields targeted for 590 implementation: (if this box is checked, list of fields is attached)

Tract(s)	Field(s)	Acres	Planned 590 Technical Activities and Performance							Check if complete
			Obtain NMP (Level A)	Basic 590 (Level B)	Enhanced 590 (Level C)	Planned Enhanced Techniques				
						Technique 1 description or code	Tech 1 month & year	Technique 2 description or code	Tech 2 month & year	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>
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JS590 Section A3 – Nutrient Management Plan (NMP) Evaluation

Instructions:

Answer the questions below to evaluate your client’s NMP. Attach a copy of the client’s 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”.

A2-01.	Does the attached NMP cover sheet include a DCR-certified NMP writer’s name, certification number, and signature?	Check if “YES” <input type="checkbox"/>
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A2-02.	Time period covered by the NMP: <i>Based on NMP content; 5 years or less for pasture/hayland; 3 years or less for other cases.</i>	Start		End	
		Month	Year	Month	Year

A2-03.	Is the time period targeted for 590 implementation in Section A1 covered by the NMP? <i>(compare answers to A1-04 with A2-02)</i>	<input type="checkbox"/>
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A2-04.	Are all fields targeted for 590 implementation in Section A2 covered by the NMP? <i>(compare answers to A2-05 with NMP content, especially Soil Test Summary Page for NUTMAN-generated NMPs)</i>	<input type="checkbox"/>
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A2-05.	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? <i>(You may answer “YES” if rates are at least as stringent as rates based on the P-Index using RUSLE2)</i>	<input type="checkbox"/>
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A2-06.	Are livestock numbers and manure production & usage numbers in the NMP (if any) consistent with client’s current NRCS conservation plan and animal waste management system plan?	<input type="checkbox"/>
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A2-07.	Do crop rotations and tillage systems in the NMP match the client’s NRCS conservation plan?	<input type="checkbox"/>
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A2-08.	Will the planned crop rotations and tillage systems achieve “T” (soil loss tolerance) with no active gullies, as required by the VA NRCS 590 Standard?	<input type="checkbox"/>
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A2-09.	Based on the answers above, will the NMP, <i>when implemented</i>, satisfy the minimum criteria of the VA NRCS 590 Practice for the target fields and time periods listed in Sections A1 and A2? <i>(Answer “YES” to this question only if all questions above are also answered “YES”).</i>	<input type="checkbox"/>
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A2-10.	Comments and/or deficiencies to be remedied:

JS590 Section B – Basic 590 Specifications & Checkout

Instructions:

This sheet specifies the activities that the farmer must carry out to fulfill Basic 590. Use this sheet to evaluate and document that the client carried out all core elements of Basic 590 (“Level B” in the 590 financial assistance program). Base the answers on an interview with the farmer and review of the farmer’s nutrient management records. Attaching copies of farmer nutrient records is not required. Also note in JS590 Section A2 that Basic 590 has been completed.

The recommended approach is to use this sheet to document Basic 590 implementation on an annual basis. With that approach, multiple copies of this sheet will be needed to document implementation for a multi-year conservation plan or contract (see JS590S Section A1). Another approach is to use a single copy of this sheet to cover multiple years. To make clear what approach is used, specify in B-01 the start and end of the time period covered by this sheet.

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. For more detail about documenting such deviations or discrepancies, see the Oct 2014 VA NRCS Tech Note “Clarification on 590 Nutrient Management Implementation” (for direct link click [here](#)).

B-01. Time period covered by this sheet:	Start		End	
	Month	Year	Month	Year

Complete the required activities below to implement “Basic 590”

		Check box if completed	Check box if not applicable
<u>Nutrient Application Rates</u>		DONE	N/A
B-02.	Follow all application rate recommendations for nitrogen (N), phosphorous (P), potassium (K), and lime in the NMP. This includes any P-based restrictions or prohibitions on application of manure or biosolids.	<input type="checkbox"/>	<input type="checkbox"/>
Notes:			
<u>Nutrient Application Timing</u>		DONE	N/A
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 in the absence of an actively growing crop or more than 30 days ahead of planting.	<input type="checkbox"/>	<input type="checkbox"/>
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 than 30 days of planting. Less restrictive application timing may be allowed to manage storage constraints on sites that are <u>not</u> environmentally sensitive – see the NMP for details.	<input type="checkbox"/>	<input type="checkbox"/>
Notes:			

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		Check box if completed	Check box if not applicable
Nutrient Application Timing (cont.)		DONE	N/A
B-05.	Follow all restrictions in the NMP regarding nutrient applications to frozen or snow-covered ground. In particular, never spread inorganic fertilizer or liquid manure/biosolids on frozen or snow-covered ground.	<input type="checkbox"/>	<input type="checkbox"/>
Notes:			
More Restrictive Timing on Environmentally Sensitive Fields		DONE	N/A
B-06.	On any fields listed in the NMP as environmentally sensitive sites, follow more intensive guidelines listed in the NMP for timing of nutrient applications. In particular, 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).	<input type="checkbox"/>	<input type="checkbox"/>
Notes:			
Nutrient Placement		DONE	N/A
B-07.	Follow all NMP recommendations for not spreading manure/biosolids in designated setback areas (near wells, springs, surface water, etc.).	<input type="checkbox"/>	<input type="checkbox"/>
Notes:			
Soil & Manure Testing		DONE	N/A
B-08.	Ensure the NMP is based on up-to-date soil & manure tests (for soil & solid/semi-solid manure, not more than three years old; for liquid manure, not more than one year old).	<input type="checkbox"/>	<input type="checkbox"/>
Notes:			

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		Check box if completed	Check box if not applicable
<u>Nutrient Management Plan Updating</u>		DONE	N/A
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.	<input type="checkbox"/>	<input type="checkbox"/>
Notes:			
<u>Crop Rotations, Tillage Methods, and Erosion Control</u>		DONE	N/A
B-10.	Implement crop rotations, tillage methods, and other conservation practices specified in the NMP and NRCS conservation plan in order to achieve the following soil erosion goals required by VA NRCS 590 Standard – “T” (soil loss tolerance) and no active gully erosion.	<input type="checkbox"/>	<input type="checkbox"/>
Notes:			
<u>Basic Nutrient Management Recordkeeping</u>		DONE	N/A
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 to your NRCS Conservation Planner that all activities have been carried out. Keep records for five years.	<input type="checkbox"/>	<input type="checkbox"/>
Notes:			

The following activity is not required to achieve Basic 590, but NRCS strongly recommend it as a way to make the NMP and this 590 practice more useful. It is required in order to fulfill “Level B” and qualify for payments in the Virginia EQIP / CBWI 590 Multi-Level Nutrient Management Payment Program.

<u>Annual Conference with Certified NMP Writer</u>		DONE	N/A
B-12.	Confer with your certified NMP writer at least once per year to review your NMP, discuss elements that may need updating, and/or discuss NMP implementation. Do this even if no significant cropping or livestock changes occur requiring modification of the NMP.	<input type="checkbox"/>	<input type="checkbox"/>
Notes:			

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B-13. Additional Specifications and/or Comments on Checkout

JS590S Section C – Enhanced 590 Specifications & Checkout

Instructions:

Use this sheet in conjunction with JS590 Section A2 to plan optional activities that the farmer will carry out to fulfill Enhanced 590 (referred to as “Level C” in the 590 financial assistance program). If appropriate, also use optional 590 financial assistance worksheets to help plan Level C enhanced activities.

Then use this sheet in conjunction with JS590 Section A2 to document that enhanced 590 activities were implemented.

Use this sheet to document Enhanced 590 implementation on an annual basis. Multiple copies of this sheet may be needed to cover the overall time period targeted for 590 implementation in the conservation plan or contract (see JS590S Section A1). A single copy of this sheet may be used to cover multiple years.

C-01. Time period covered by this job sheet: (see instructions above)	Start		End	
	Month	Year	Month	Year

Complete the optional activities described below to implement “Enhanced 590” and go beyond the minimum criteria of the VA NRCS Nutrient Management Practice Standard.

C-02. Enhanced Data Collection & Analysis <i>Examples: Measuring & tracking yields on field-by-field basis; soil, tissue, or manure testing beyond minimum NMP requirements; collecting and analyzing GPS-linked data for variable rate fertilizer applications; etc.</i>	Check box if completed
	<input type="checkbox"/>

C-03. Enhanced Nutrient Application Rate <i>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.</i>	Check box if completed
	<input type="checkbox"/>

C-04. Variable Rate (VR) Nutrient Application <i>Vary nutrient or lime rates across different zones within 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.</i>	Check box if completed
	<input type="checkbox"/>

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<p>C-05. Enhanced Nutrient Timing <i>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.</i></p>	<p>Check box if completed</p>
	<p><input type="checkbox"/></p>
<p>C-06. Enhanced Nutrient Placement <i>Examples: Banding fertilizer near row; subsurface injection of fertilizer or manure; increasing setback distances; etc.</i></p>	<p>Check if completed</p>
	<p><input type="checkbox"/></p>
<p>C-07. Enhanced Nutrient Form <i>Examples: Using controlled-release fertilizers, urease or nitrification inhibitors, manure amendments; etc.</i></p>	<p>Check if completed</p>
	<p><input type="checkbox"/></p>
<p>C-08. Cropping to Enhance Nutrient Cycling <i>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.</i></p>	<p>Check box if completed</p>
	<p><input type="checkbox"/></p>
<p>C-09. Other Nutrient Management Enhancements</p>	<p>Check if completed</p>
	<p><input type="checkbox"/></p>