



Natural Resources Conservation Service  
U.S. DEPARTMENT OF AGRICULTURE



# 2025 Regional Nutrient Mgmt Updates

FARM PRODUCTION AND CONSERVATION  
FSA | NRCS | RMA | Business Center



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U.S. DEPARTMENT OF AGRICULTURE

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## WI State Agronomist



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# Today's Topics



**590 UPDATE PROCESS AND  
STATUS REPORT**



**SOIL MAP UNIT UPDATES**



**CONTOUR FARMING  
CLARIFICATION**



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# 590 Update Process



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# NRCS Standards Update Process

- **National NRCS releases a standard...states update their standard**
  - Current National 590 – 2019
  - Current Wisconsin 590 – 2015



United States Department of Agriculture

CPS 590-1

**Natural Resources Conservation Service**  
**CONSERVATION PRACTICE STANDARD**  
**NUTRIENT MANAGEMENT**  
**Code 590**  
**(Ac.)**

**I. DEFINITION**

Managing the amount (rate), source, placement (method of application), and timing of plant nutrients and soil amendments.

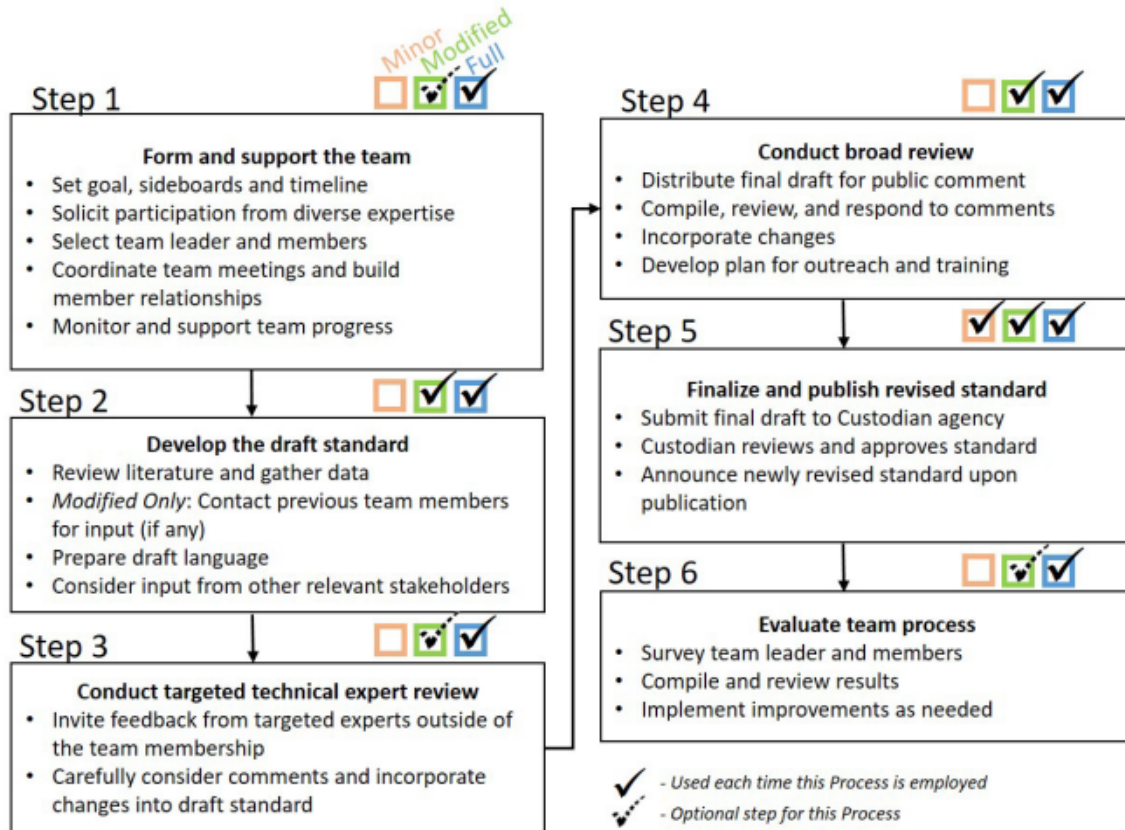
**II. PURPOSES**

To budget, supply, and conserve nutrients for plant production. To minimize the risk of agricultural nonpoint source pollution of surface and groundwater resources. To properly utilize manure or organic by-products as a plant nutrient source. To protect air quality by reducing odors and reactive nitrogen emissions (ammonia, inorganic oxidized forms, and organic compounds). To maintain or improve the physical, chemical, and biological condition of the soil.

<https://efotg.sc.egov.usda.gov/#/state/WI/documents/section=4&folder=-161>

# WIL+W Standards Oversight Committee

## Generalized Steps in the Three SOC Processes for Technical Standard Development.



- Step 1 – completed
- Step 2 – completed

- Step 3 – in progress

- Step 4 – TBD
- Step 5 – TBD

<https://socwisconsin.org/projects/nrcs-590-nutrient-management/?portfolioCats=46>



# Broad Review – Public Comment

- **Expected to post in early to mid-October**
  - 3+ week comment period
  - All interested parties invited to comment

- **Access - <https://socwisconsin.org>**  
(Standards in Development, NRCS CPS 590)



About Us ▾

Standards in Development

## NRCS CPS 590 Nutrient Management

Categories: [Standards in Full Process](#)

**Custodian:** NRCS

**Goal:** This technical work team will review and revise the current NRCS Conservation Practice Standard (CPS) 590 Nutrient Management. The team will focus on the following issues:

- disincentives or barriers to implementation;
- specific technical criteria for the development and implementation of nutrient management plans; and
- software tools and technical references.

The team will research, evaluate, and question the conditions for use and the outcomes of nutrient management plans. Criteria for the standard will be based on existing science, the current federal CPS 590, and state laws and regulations. The team will examine existing research, consider new technologies, propose criteria, and consider input through expert and public review, following the Full Process detailed in the SOC [Technical Standards Process Handbook](#).

**Work Team Status:** Team meetings are expected to begin August 24, 2023 and will be held approximately monthly until the draft standard is completed. Details on team resources, including team meeting agendas and notes, will be posted on this website as the work develops.

**Anticipated Initial Review:** Mid 2025 (depending on publication of new national standard)

**Anticipated Broad (Public) Review:** Summer 2025

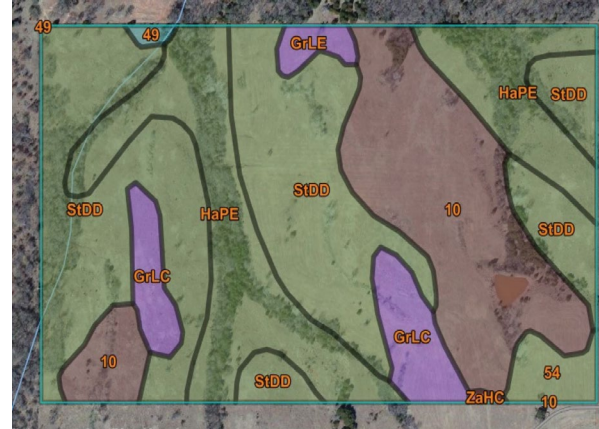
# General Proposed Changes

- **Outlining soil and manure/organic by-product testing and crediting**
- **Adapting current N Restricted Soils and STP/PI requirements to NRCS “Nutrient Loss Risk Assessment” frameworks**
- **Organizing current requirements into “4R” categories**
- **Simplifying Winter Spreading**
- **Clarifying N Restricted Soil and SWQMA application strategies**



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# Soil Map Unit Updates



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# 2025 Soils Update

- Soil data updates occur on October 1 each year
- Consistent, statewide soil map unit nomenclature
  - All alpha-numeric converted to numeric-alpha-numeric
  - Western side of the state – 2006
  - Eastern side of the state – 2025

| Green County, Wisconsin (WI045) |                                                                                 |              |                |
|---------------------------------|---------------------------------------------------------------------------------|--------------|----------------|
| Map Unit Symbol                 | Map Unit Name                                                                   | Acres in AOI | Percent of AOI |
| 194C2                           | Newglarus silt loam, moderately deep, 6 to 12 percent slopes, moderately eroded | 6.0          | 0.5%           |
| 214C2                           | Gale silt loam, 6 to 12 percent slopes, moderately eroded                       | 0.0          | 0.0%           |
| 214D2                           | Gale silt loam, 12 to 20 percent slopes, moderately eroded                      | 2.1          | 0.2%           |
| 305B                            | Richwood silt loam, 1 to 6 percent slopes                                       | 233.1        | 20.6%          |

| Manitowoc County, Wisconsin (WI071) |                                                  |              |                |
|-------------------------------------|--------------------------------------------------|--------------|----------------|
| Map Unit Symbol                     | Map Unit Name                                    | Acres in AOI | Percent of AOI |
| BrC2                                | Boyer sandy loam, 6 to 12 percent slopes, eroded | 1.0          | 0.2%           |
| Hu                                  | Houghton muck, 0 to 2 percent slopes             | 51.5         | 9.0%           |
| KnB2                                | Kewaunee loam, 2 to 6 percent slopes, eroded     | 169.2        | 29.7%          |
| KnC2                                | Kewaunee loam, 6 to 12 percent slopes, eroded    | 114.9        | 20.2%          |
| KnD2                                | Kewaunee loam, 12 to 20 percent slopes, eroded   | 48.6         | 8.5%           |
| MbA                                 | Manawa silt loam, 0 to 3 percent slopes          | 146.3        | 25.7%          |

# Soil Map Unit Symbols - Interpretation

- **First number = soil type**

- **Letter = slope group**

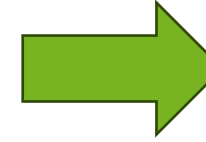
- A      0 < 2%
- B      2 < 6%
- C      6 < 12%
- D      12 < 20%
- E      20 < 30%
- F      30 < 60%
- G      60+%

- **Ending number = erosion class**

- Blank - deposition to slightly eroded
- 2 - moderately eroded
- 3 - severely eroded

- **Exception - Miscellaneous Areas**

- Pits, gravel (P-G), Pit, quarry (P-Q), Dumps and mines (D-M), Water (W), Alluvial land, wet (AL-W), Misc water (M-W), etc...



| Map Unit Legend |                                                                                  |      |      |
|-----------------|----------------------------------------------------------------------------------|------|------|
| 175B2           | Palsgrove silt loam, 2 to 6 percent slopes, moderately eroded                    | 31.1 | 0.9% |
| 175C2           | Palsgrove silt loam, 6 to 12 percent slopes, moderately eroded                   | 29.5 | 0.9% |
| 194D2           | Newglarus silt loam, moderately deep, 12 to 20 percent slopes, moderately eroded | 15.8 | 0.5% |

## ■ “First numeric” interpretation

- <100 >15” or 40 cm of organics
- 100-199 Thin to thick loess overlying limestone or dolostone bedrock
- 200-299 Shallow to moderately deep to sandstone or shale
- 300-399 Silty soils in valleys
- 400-499 Loamy soils in valleys
- 500-599 Sandy soils in valleys
- 600-699 Alluvial soils subject to flooding western WI
- 700-799 Alluvial soils subject to flooding central WI
- 800-899 Underlain by Illinoian till
- 900-999 Underlain by Pre-Illinoian till
- 1000-1999 Complexes or undifferentiated groups
- 2000-2999 Taxon above family
- 3000-4999 WI Age glaciated soils in Rhinelander SSO
- 5000-5999 USFS mapping schema
- 6000-6999 WI Age glaciated soils in Duluth SSO
- 7000-7999 WI Age glaciated soils in Juneau SSO
- 8000-8999 Not used
- 9000-9999 USFS mapping schema

**Example –  
118 (Seaton)**  
**Thin to thick loess over lime/dolostone**  
**Somewhat poorly drained**

**Example –  
811 (Plainfield)**  
**Underlain by Illinoian till**  
**Excessively to well drained**

**100-1999, last number indicates drainage class**

|            |                                      |
|------------|--------------------------------------|
| <b>0-5</b> | <b>Excessively to well drained</b>   |
| <b>6-7</b> | <b>Moderately well drained</b>       |
| <b>8</b>   | <b>Somewhat poorly drained</b>       |
| <b>9</b>   | <b>Poorly to very poorly drained</b> |



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# Contour Farming



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# What Qualifies as “On Contour”?

**SnapPlus** JamieTestFarm

HOME FARM FIELDS NUTRIENTS **MANAGEMENT** REPORTS RECORDS AND UPDATES

>> FIELD DETAILS **FIELD VIEW** ANNUAL VIEW TEMPLATE BUILDER

Field Field 4 Group All Subfarm All

<< < > >>

Rotation start 2025

Rotation length 3

Contour On contour

Filter area Designed edge of field

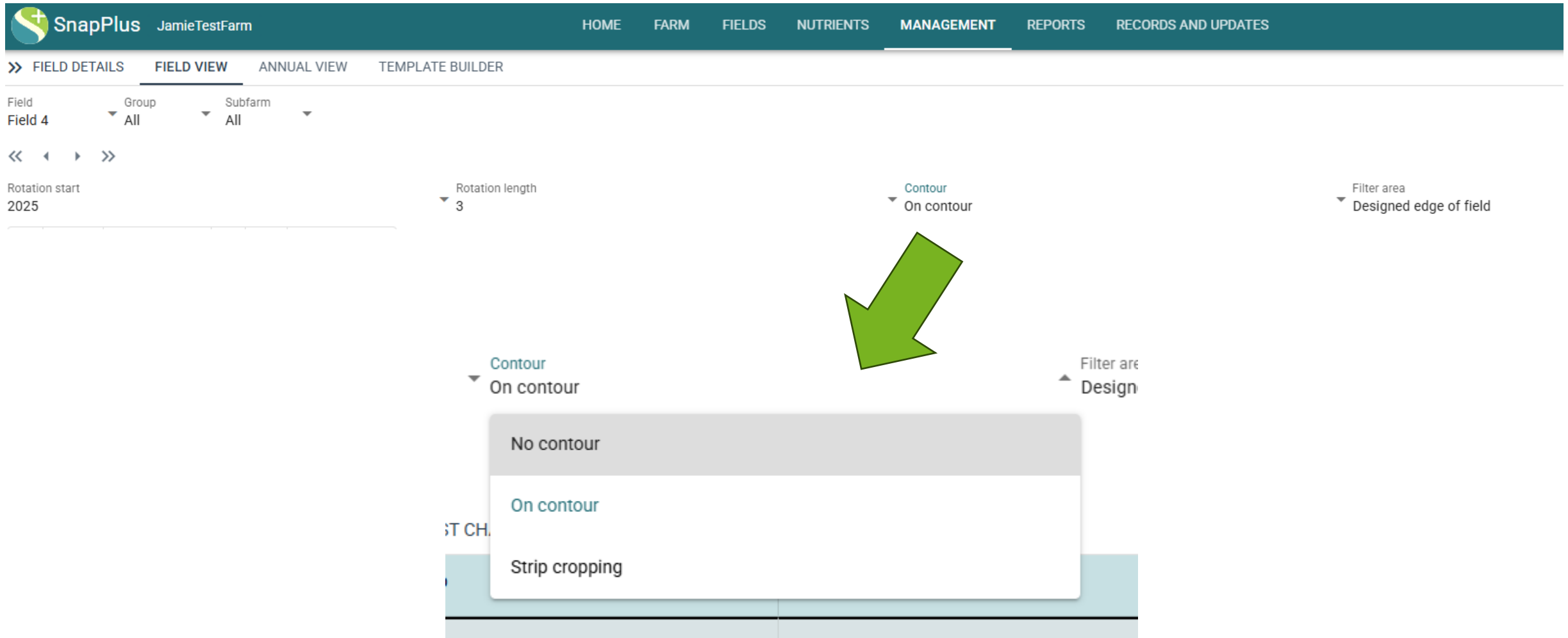
Contour On contour

Filter are Design

No contour

On contour

Strip cropping





United States Department of Agriculture

330-CPS-1

**Natural Resources Conservation Service**

**CONSERVATION PRACTICE STANDARD**

**CONTOUR FARMING**

**CODE 330**

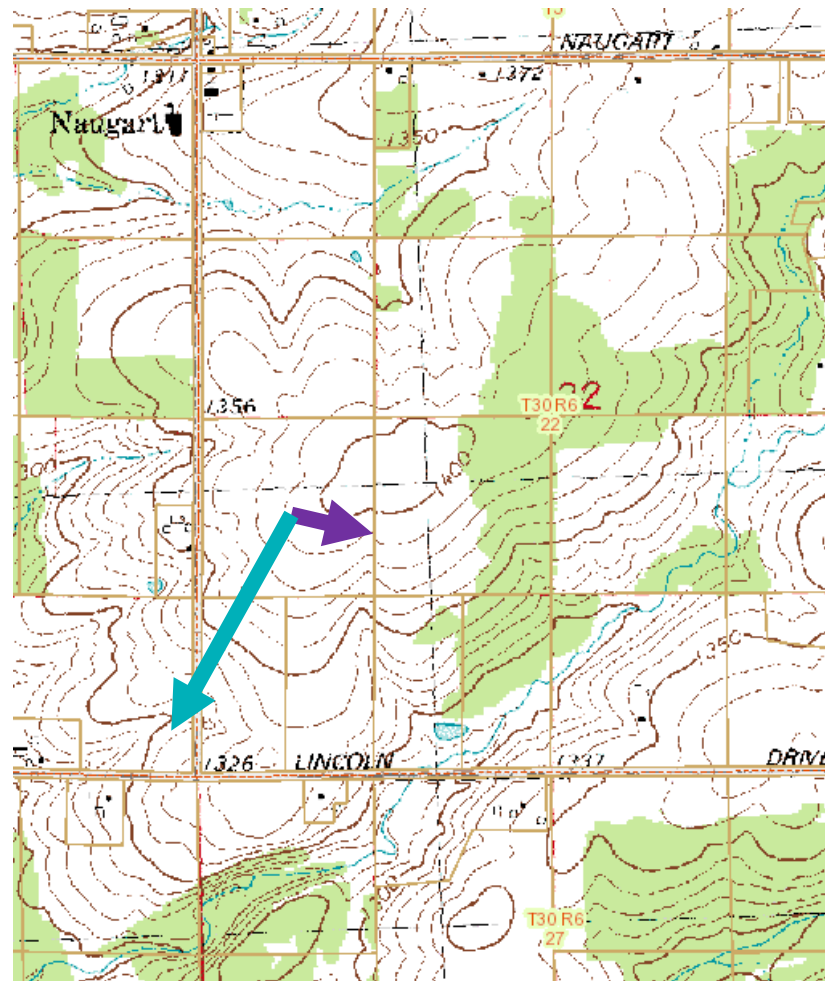
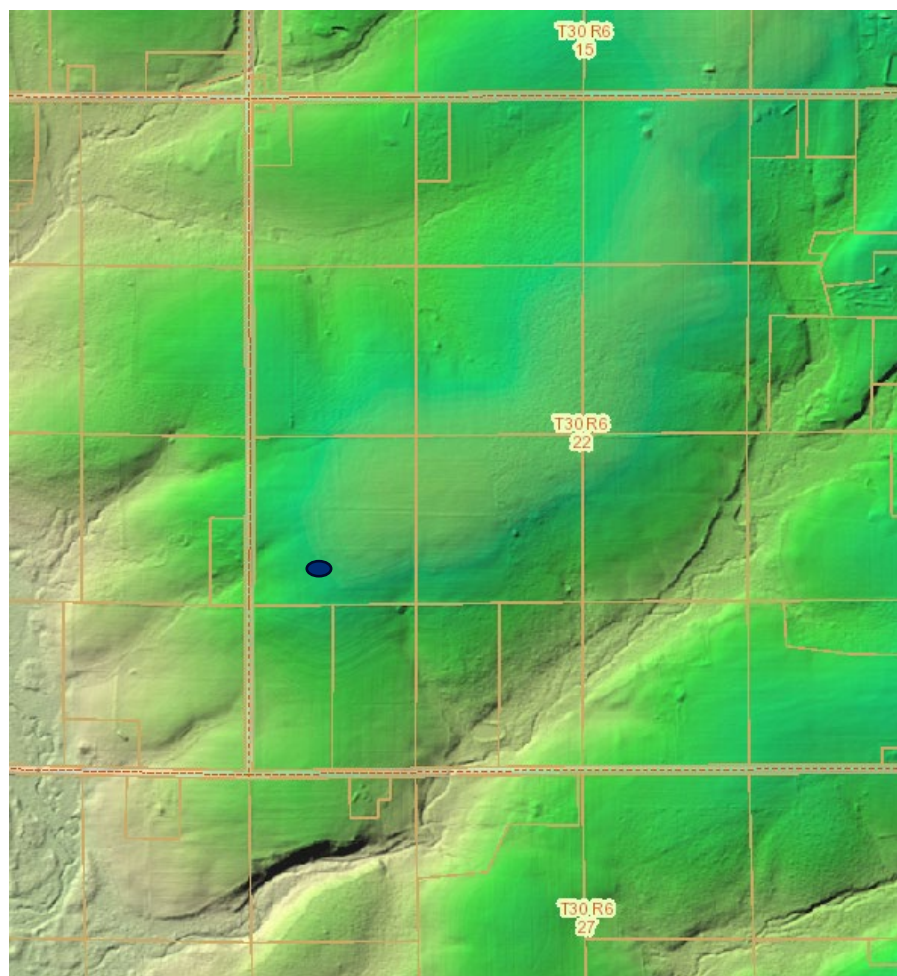
**(ac)**

**DEFINITION**

Aligning ridges, furrows, and roughness formed by tillage, planting and other operations to reduce velocity and direction of water flow to around the hillslope.

[https://efotg.sc.egov.usda.gov/api/CPSFile/1341/330\\_WI\\_CPS\\_Contour\\_Farming\\_2016\\_pdf](https://efotg.sc.egov.usda.gov/api/CPSFile/1341/330_WI_CPS_Contour_Farming_2016_pdf)

# Grade/Slope vs Row Grade



## CRITERIA

### General Criteria Applicable to All Purposes

The following criteria apply to purpose.

#### 1. Minimum Row Grade:

- Soils with very slow infiltration rates (hydrologic groups C and D) will have a minimum absolute row grade of 0.2 percent on slopes where ponding could be a problem.
- The crop rows shall have sufficient grade to ensure that runoff water does not pond and cause unacceptable crop damage.
- The row grade shall be aligned as closely as possible to the contour to achieve the greatest erosion reduction possible.

#### 2. Maximum Row Grade

- The maximum row grade shall not exceed 4 percent.
- The maximum row grade shall not exceed one half of the up and down hill slope percent used for erosion prediction, or 4 percent, whichever is less.
- Up to 25 percent deviation from the design row grade is permissible within 150 feet of a stable outlet.
- When the row grade exceeds the maximum allowable design grade, a new baseline shall be established up or down slope from the last contour line and used for layout of the next contour pattern.

**Row grade  $\geq$  0.2%**  
**Some circumstances up to 4%**

### Additional Criteria to Increase Water Infiltration

#### 1. Row Grade

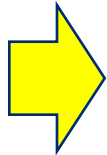
Where increased water infiltration is a conservation planning objective, the maximum row grade shall not exceed 0.2 percent.

#### 4. Maximum Slope Length

Slope length starts at the point where downslope flow begins and ends where deposition or concentrated flow channels begin. Varying slope lengths and slope steepness may result in a number of different contour farming baseline patterns on a hillside. Contour farming layout shall not occur on a hill slope length that is longer than the maximum slope length identified in [Table 1](#) unless:

- a. additional supporting practices are applied (WI NRCS Conservation Practice Standard ([WI NRCS CPS](#)), Terrace (Code 600); Diversion (Code 362); Stripcropping (Code 585); Contour Buffer Strips (Code 332)) or ;
- b. a certified conservation planner or an individual with planning job approval for the practices identified in 3.a. (above), documents in the case file that additional practices are not needed based on a well-defined in-field evaluation of the site conditions.

| Land Slope Percent                                                                                                        | Maximum Length <sup>1</sup> (feet) |
|---------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| 1 to 2                                                                                                                    | 400                                |
| 3 to 5                                                                                                                    | 300                                |
| 6 to 8                                                                                                                    | 200                                |
| 9 to 12                                                                                                                   | 120                                |
| 13 to 16                                                                                                                  | 80                                 |
| 17 to 20                                                                                                                  | 60                                 |
| 21 to 25                                                                                                                  | 50                                 |
| <sup>1</sup> Limit may be increased by 25 percent if residue cover after crop plantings will regularly exceed 50 percent. |                                    |



#### 5. Stable Outlets

Surface water flow from contoured fields must be delivered to a stable outlet.



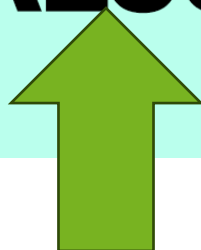
# As Close to the Contour as Possible...



Contour planting on terraces in Montgomery County, Iowa. USDA Photo by Tim McCabe.

# RUSLE2

$$A = RKLS_{CP}$$



| Slope<br>(%) | Horizontal Slope Length (ft.) |      |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |
|--------------|-------------------------------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|              | <3                            | 6    | 9    | 12   | 15   | 25   | 50   | 75   | 100   | 150   | 200   | 250   | 300   | 400   | 600   | 800   | 1,000 |
| 0.2          | 0.05                          | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05  | 0.05  | 0.05  | 0.05  | 0.05  | 0.05  | 0.06  | 0.06  | 0.06  |
| 0.5          | 0.07                          | 0.07 | 0.07 | 0.07 | 0.07 | 0.08 | 0.08 | 0.08 | 0.09  | 0.09  | 0.09  | 0.09  | 0.09  | 0.10  | 0.10  | 0.10  | 0.10  |
| 1.0          | 0.11                          | 0.11 | 0.11 | 0.11 | 0.11 | 0.12 | 0.13 | 0.14 | 0.14  | 0.15  | 0.16  | 0.17  | 0.17  | 0.18  | 0.19  | 0.20  | 0.20  |
| 2.0          | 0.17                          | 0.17 | 0.17 | 0.17 | 0.17 | 0.19 | 0.22 | 0.25 | 0.27  | 0.29  | 0.31  | 0.33  | 0.35  | 0.37  | 0.41  | 0.44  | 0.47  |
| 3.0          | 0.22                          | 0.22 | 0.22 | 0.22 | 0.22 | 0.25 | 0.32 | 0.36 | 0.39  | 0.44  | 0.48  | 0.52  | 0.55  | 0.60  | 0.68  | 0.75  | 0.80  |
| 4.0          | 0.26                          | 0.26 | 0.26 | 0.26 | 0.26 | 0.31 | 0.40 | 0.47 | 0.52  | 0.60  | 0.67  | 0.72  | 0.77  | 0.86  | 0.99  | 1.10  | 1.19  |
| 5.0          | 0.30                          | 0.30 | 0.30 | 0.30 | 0.30 | 0.37 | 0.49 | 0.58 | 0.65  | 0.76  | 0.85  | 0.93  | 1.01  | 1.13  | 1.33  | 1.49  | 1.63  |
| 6.0          | 0.34                          | 0.34 | 0.34 | 0.34 | 0.34 | 0.43 | 0.58 | 0.69 | 0.78  | 0.93  | 1.05  | 1.16  | 1.25  | 1.42  | 1.69  | 1.91  | 2.11  |
| 8.0          | 0.42                          | 0.42 | 0.42 | 0.42 | 0.42 | 0.53 | 0.74 | 0.91 | 1.04  | 1.26  | 1.45  | 1.62  | 1.77  | 2.03  | 2.47  | 2.83  | 3.15  |
| 10.0         | 0.46                          | 0.48 | 0.50 | 0.51 | 0.52 | 0.67 | 0.97 | 1.19 | 1.38  | 1.71  | 1.98  | 2.22  | 2.44  | 2.84  | 3.50  | 4.06  | 4.56  |
| 12.0         | 0.47                          | 0.53 | 0.58 | 0.61 | 0.64 | 0.84 | 1.23 | 1.53 | 1.79  | 2.23  | 2.61  | 2.95  | 3.26  | 3.81  | 4.75  | 5.56  | 6.28  |
| 14.0         | 0.48                          | 0.58 | 0.65 | 0.70 | 0.75 | 1.00 | 1.48 | 1.86 | 2.19  | 2.76  | 3.25  | 3.69  | 4.09  | 4.82  | 6.07  | 7.15  | 8.11  |
| 16.0         | 0.49                          | 0.63 | 0.72 | 0.79 | 0.85 | 1.15 | 1.73 | 2.20 | 2.60  | 3.30  | 3.90  | 4.45  | 4.95  | 5.86  | 7.43  | 8.79  | 10.02 |
| 20.0         | 0.52                          | 0.71 | 0.85 | 0.96 | 1.06 | 1.45 | 2.22 | 2.85 | 3.40  | 4.36  | 5.21  | 5.97  | 6.68  | 7.97  | 10.23 | 12.20 | 13.99 |
| 25.0         | 0.56                          | 0.80 | 1.00 | 1.16 | 1.30 | 1.81 | 2.82 | 3.65 | 4.39  | 5.69  | 6.83  | 7.88  | 8.86  | 10.65 | 13.80 | 16.58 | 19.13 |
| 30.0         | 0.59                          | 0.89 | 1.13 | 1.34 | 1.53 | 2.15 | 3.39 | 4.42 | 5.34  | 6.98  | 8.43  | 9.76  | 11.01 | 13.30 | 17.37 | 20.99 | 24.31 |
| 40.0         | 0.65                          | 1.05 | 1.38 | 1.68 | 1.95 | 2.77 | 4.45 | 5.87 | 7.14  | 9.43  | 11.47 | 13.37 | 15.14 | 18.43 | 24.32 | 29.60 | 34.48 |
| 50.0         | 0.71                          | 1.18 | 1.59 | 1.97 | 2.32 | 3.32 | 5.40 | 7.17 | 8.78  | 11.66 | 14.26 | 16.67 | 18.94 | 23.17 | 30.78 | 37.65 | 44.02 |
| 60.0         | 0.76                          | 1.30 | 1.78 | 2.23 | 2.65 | 3.81 | 6.24 | 8.33 | 10.23 | 13.65 | 16.76 | 19.64 | 22.36 | 27.45 | 36.63 | 44.96 | 52.70 |

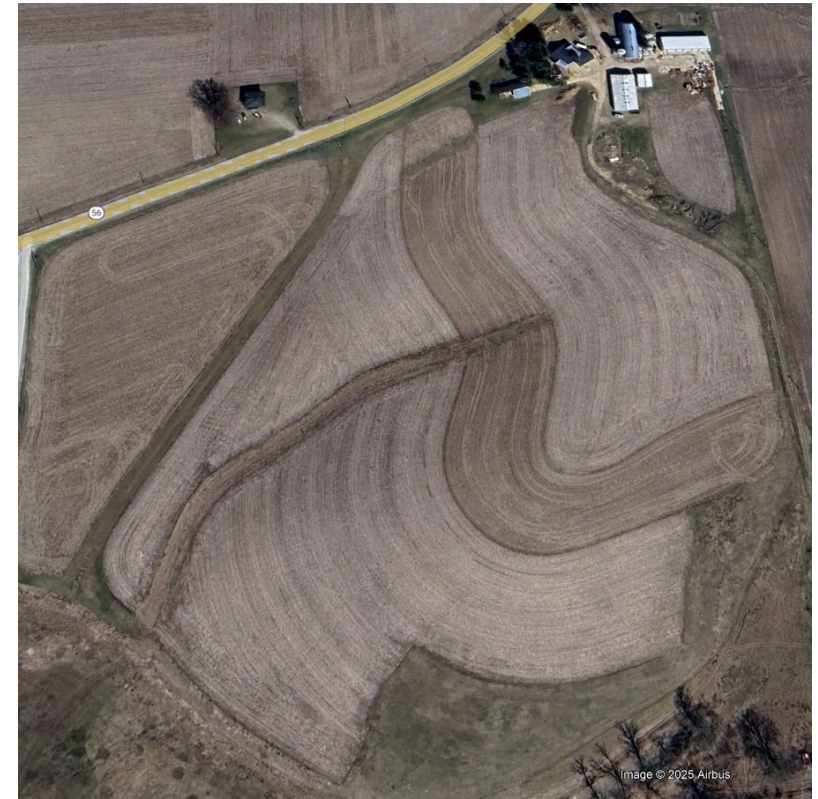
# Quick Glance...On the Contour?

- What's the impact to the LS factor?



# Quick Glance...On the Contour?

- What's the impact to the LS factor?





# Should You Select “On Contour”?

The screenshot shows the SnapPlus web application interface for 'JamieTestFarm'. The top navigation bar includes links for HOME, FARM, FIELDS, NUTRIENTS, MANAGEMENT (which is the active tab), REPORTS, and RECORDS AND UPDATES. Below this, there are tabs for FIELD DETAILS, FIELD VIEW (active), ANNUAL VIEW, and TEMPLATE BUILDER. The main content area displays settings for 'Field 4'. It includes dropdown menus for 'Group' (set to 'All') and 'Subfarm' (set to 'All'). There are navigation arrows (double left, single left, single right, double right). Below these are four settings: 'Rotation start' set to '2025', 'Rotation length' set to '3', 'Contour' set to 'On contour', and 'Filter area' set to 'Designed edge of field'.

**Are the contours “designed” and followed?**

**Are contour lines being “drawn” with field operations?**

**Is water “safely” exiting the field?**



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# Questions?

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