Pastures & Nutrient Management

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WI Dept. of Agriculture, Trade and Consumer Protection

Existing WI Agricultural Performance Standards

counties will monitor compliance and may suspend eligibility for tax credits

- **Meet tolerable soil loss** (T) on cropped fields
- **Follow 590 NM plan technical standard**
- **Prevent direct runoff from feedlots** or stored manure to waters of the state
- **Limit livestock access** along waters to maintain vegetative cover
- **Maintain manure storage** structures to prevent leaking and overflow
- **Follow manure storage technical standards** for constructing and abandoning

Near surface water or
areas susceptible to groundwater contamination

- **Do not stack** manure in an unconfined pile
- **Divert clean water** away from feedlots, manure storage, and barnyards

NM Then and Now

1997 WI's legislature amended Statute 281.16 & 92 requiring NM

2002 WI's Admin. Codes NR 151 & ATCP 50 passed NM requirements

2005 590 Std. updated for N & P management

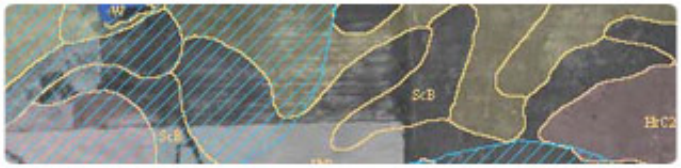
2008 P management could be required

2009 New Farmland Preservation Program $7.50 & $5/ac/year in Ex-Ag Zoning & Ag Enterprise Area, 1st PDF Application Restriction maps available for all WI

2011 Snap Plus checking applications with field attributes for meeting 590 standard – GIS web service and interactive web based restriction maps – NEW NR 151 performance standards promulgated

2012 Launched Runoff Risk weather maps – 590 national standard released requiring states to address new requirements

Wisconsin Manure Advisory System



590 Nutrient Application Restriction Maps -- GeoPDFs

18102 GeoPDF maps have been downloaded since September 2010.A

As of February 1, 2011, the following counties have updated maps: Columbia, Dane, Green, Lafayette, Milwaukee, Ozaukee, Richland, Rock, Sauk, Washington, and Waukesha

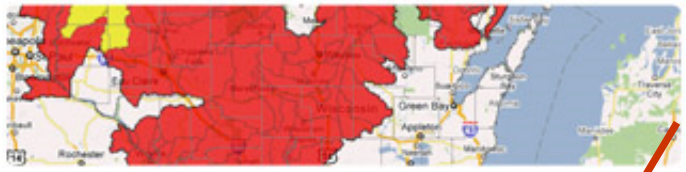
On-farm nutrient management begins with a clear understanding of each field's soils. Knowledge of a soil's ability to accept nutrients is critical to both determining its optimal crop production and protecting local water resources.

Wisconsin's 590 Nutrient Application Restriction Maps show where, when, and how much manure can be applied under Wisconsin state rules (2005 Wisconsin NRCS 590 Nutrient Management Practice Standard).

These freely downloadable maps cover the entire state and are available online for use by planners, producers, and manure applicators.

Interactive/Online 590 Restriction Maps

The DATCP-hosted 590 site includes the "Wisconsin 590 Nutrient Management Restrictions" GIS web-mapping application. This interactive application duplicates many of the GeoPDF functions and allows users to select areas of interest and create maps that span



Runoff Risk Advisory Forecast Model

The ability to predict the risk of runoff for any particular day can greatly assist farmers when making nutrient application decisions.

DATCP, NRCS, USGS, NOAA, NWS, UW (Soil Science, Ag Engineering, Discovery Farms, Pioneer Farm, Extension, and NPM), and others collaborated to develop a surface runoff event model for predicting the likelihood of surface runoff for a given watershed. Paired with field specific knowledge, accurate decisions regarding safe nutrient application can be made in advance.

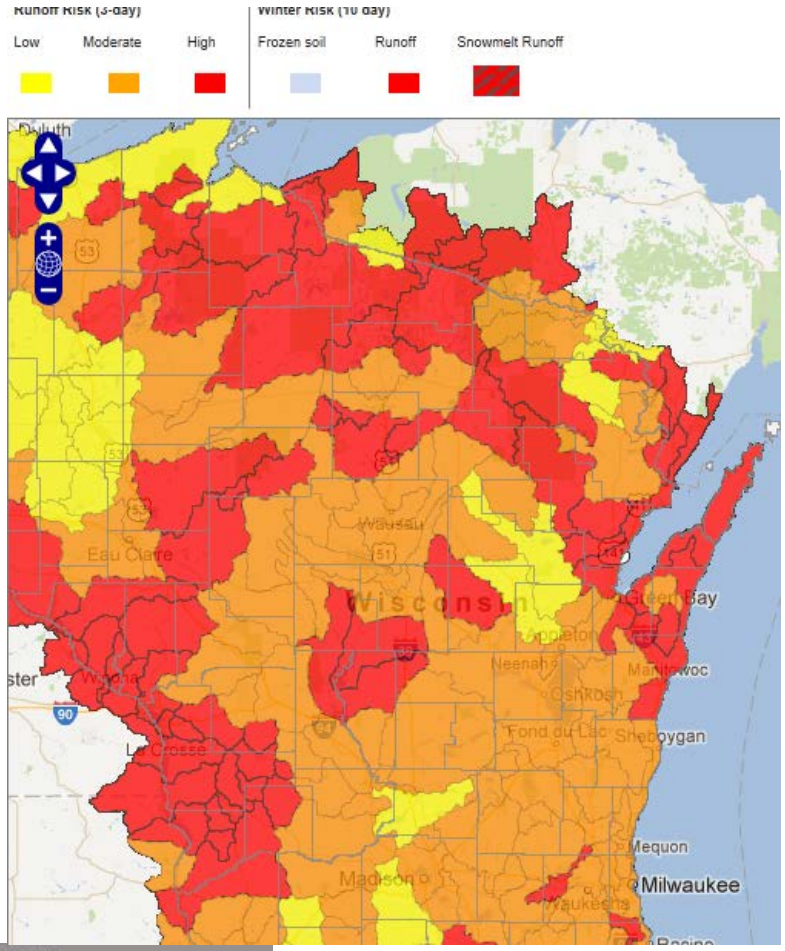
The Runoff Risk Advisory website alerts farmers to the likelihood of runoff events in their watershed. To learn more about the model used in making these predictions, read the model description

DATCP Web Services for 590 Restriction Map Data

The DATCP-hosted 590 site also provides several web services for advanced GIS users who want to incorporate DATCP GIS layers into their own maps. These services can be accessed with GIS software (such as ArcMap) and are beyond the scope of the user guide discussed above. Note that the content of these services is viewable only when accessed with appropriate GIS software. *It is not viewable via a web browser.*

- Web Map Services (OGC/WMS) of the "SWQMA", "Fall N Restrictions" and "Winter Restrictions" layers:

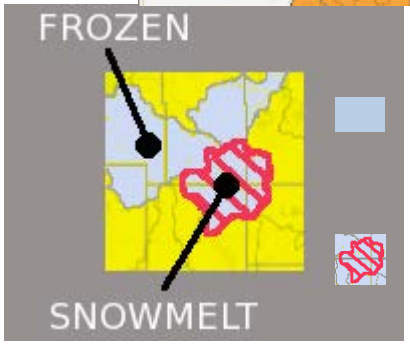
www.manureadvisorysystem.wi.gov



Runoff Risk Advisory Forecast Maps from National Weather Service's flood forecasting

Assess the risk for each field before an application, fields can be saturated and still have a low risk of runoff if no rainfall is predicted

Liquid manure applications increase soil moisture so runoff risk of liquid manure will be higher than what is shown on the risk map

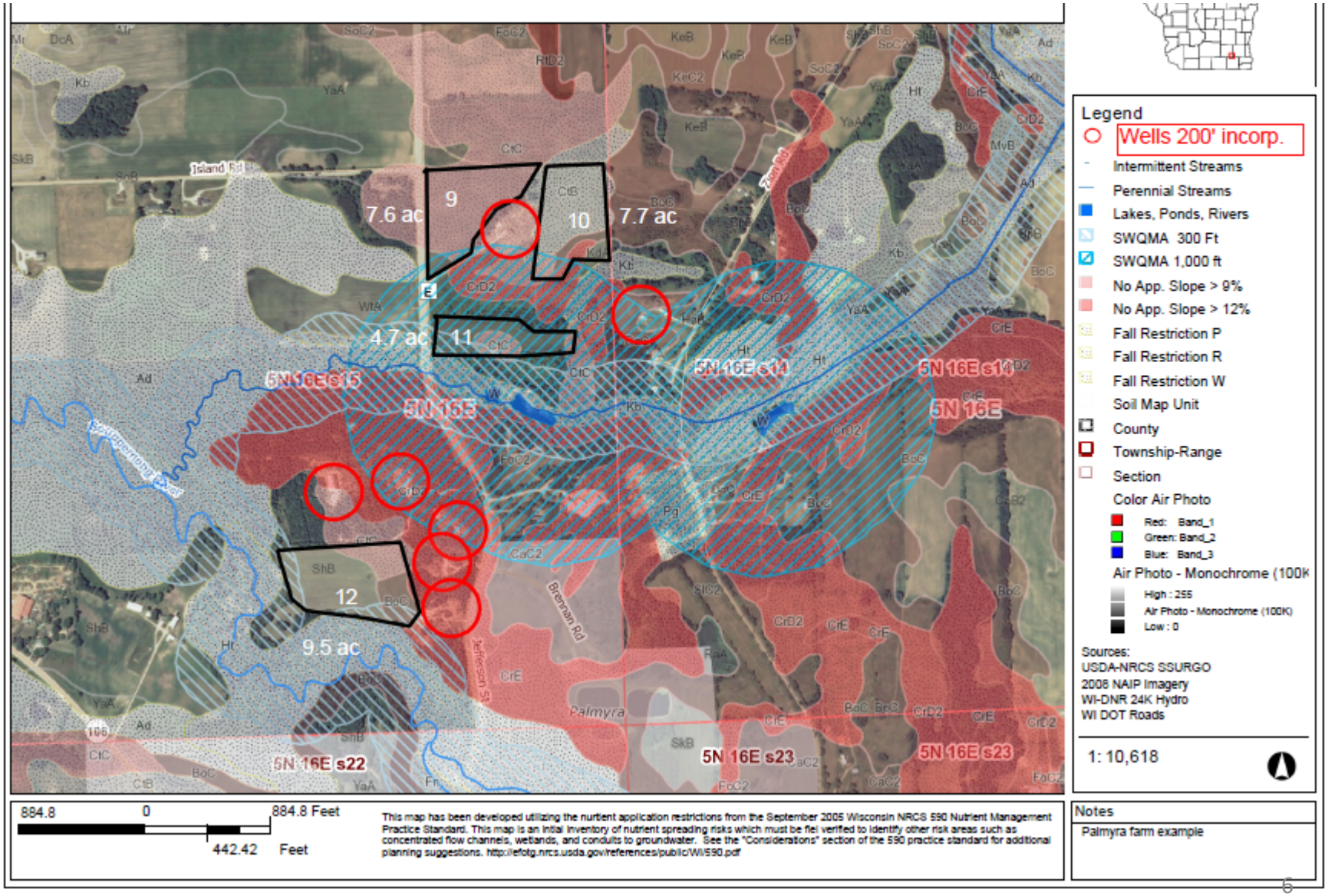


Winter Runoff Risk

Soils are **frozen** or snow-covered and not yet forecasted for runoff. Caution - applications will have limited soil contact and infiltration.

High snowmelt risk and runoff is predicted within 10 days

www.manureadvisorysystem.wi.gov



NM plan application restrictions

- 200' setback from wells, sinkholes, fractured bedrock at the surface - nutrient applications must be incorporated within 72 hours.

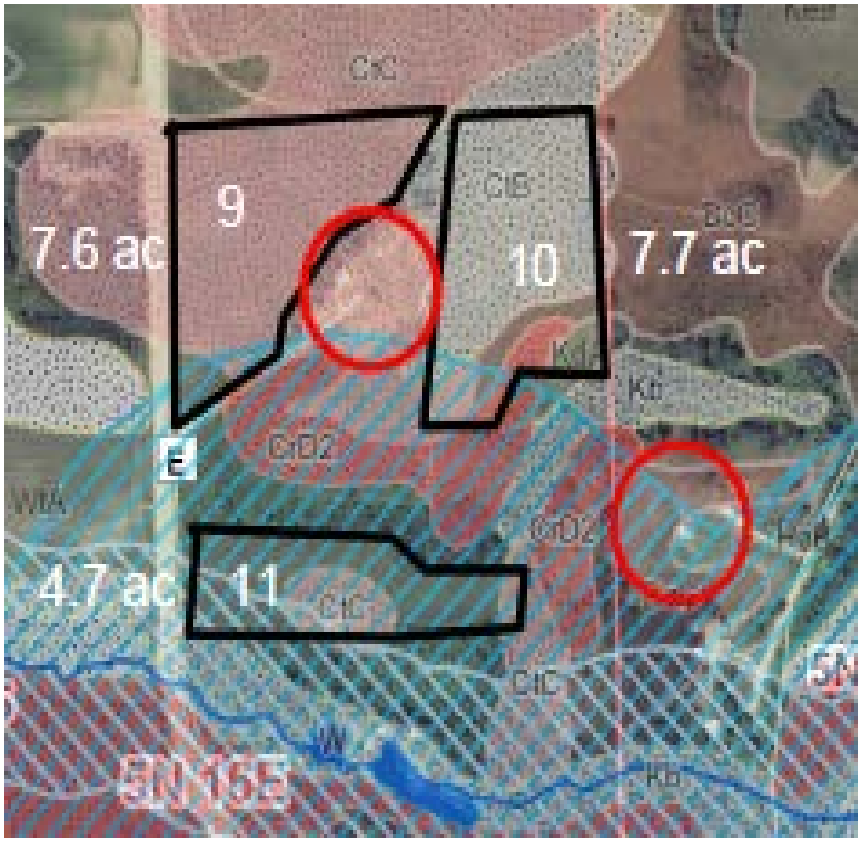
Blue No winter apps 300' from perennial streams, 1,000' from lake and ponds. Other non-winter application restrictions required.

Red No winter apps.

Pink and **clear** can have winter manure apps if contoured or if slopes are 9% or less. Winter manure apps can not exceed 7,000 gals/acre or P removal of the crop.

Yellow Dots No fall apps of fertilizer N. Fall manure apps limited. Best to Spring apply.

Nutrient Application Restriction Maps
available free for all of Wisconsin



Blue non-frozen

Surface Water Quality Management Areas

For all nutrient applications on non-frozen soil within a SWQMA use 1 or more practices:

- permanent buffer
- >30% crop cover after application
- Incorporate nutrients within 72 hrs
- Establish cover crops after application

Unincorporated liquid manure rates are limited by soil type and crop residue

Snap checks SWQMA practices, soil type, and RUSLE2 for > 30% cover

A WI Nutrient Management Plan is Updated Annually

Follows NRCS 590 standard

Soil tested by a DATCP certified lab every 4 years every 5 acres

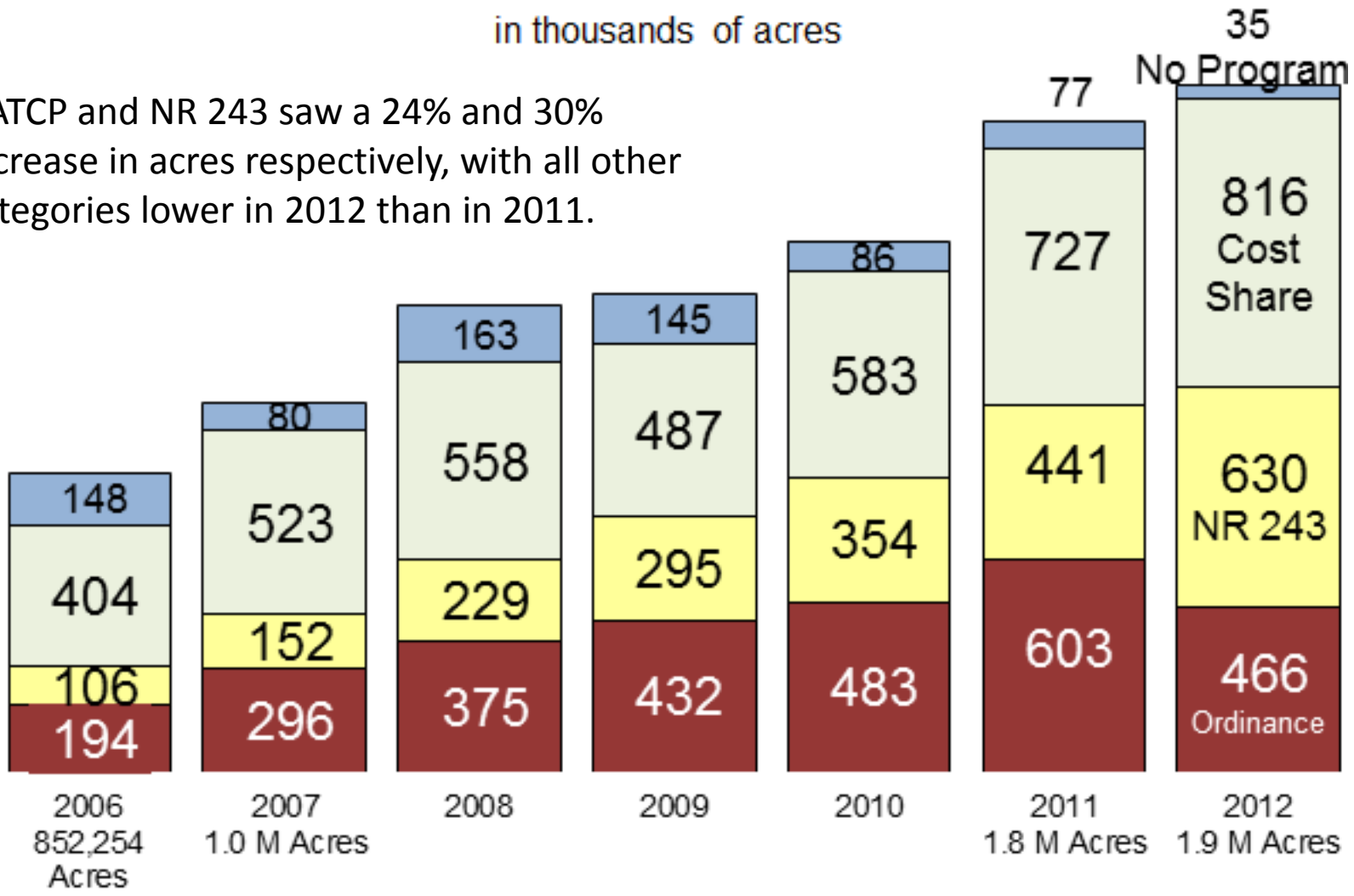
Accounts for all N-P-K applied to fields each year of the crop rotation

Farms can be required to follow a NM Plan with a $28/ac cost share offer or when:

- Regulated under a **County Ordinance** for manure storage or livestock siting
- Participating in a **Farmland Preservation Zoned District** or **AEA**
- Regulated under a DNR **WPDES** permit
- Causing a **pollution discharge** to waters of the state

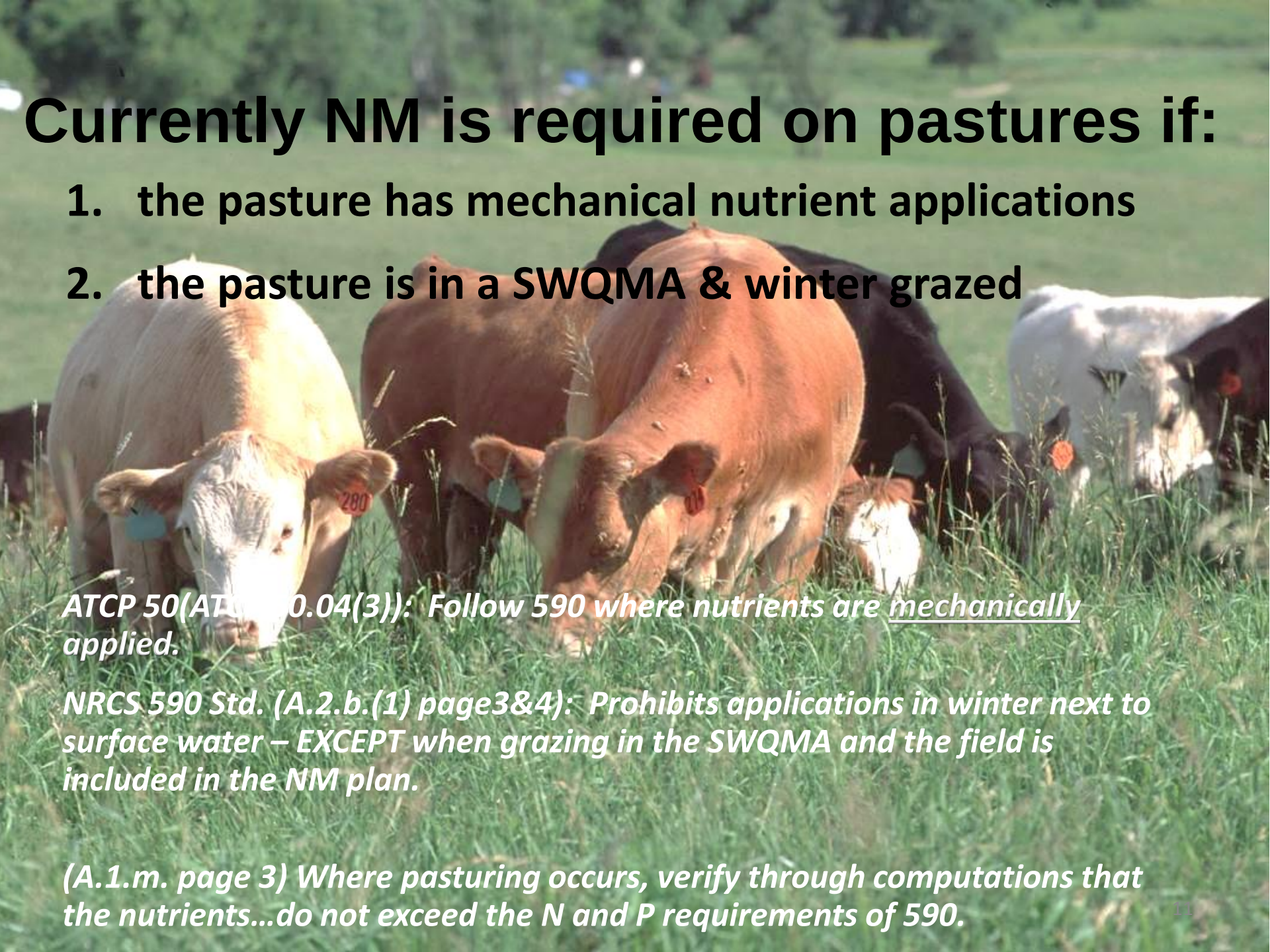
2006-2012
Nutrient Management Plan Acres
Reported by Program

DATCP and NR 243 saw a 24% and 30% increase in acres respectively, with all other categories lower in 2012 than in 2011.



Currently NM is required on pastures if:

1. the pasture has mechanical nutrient applications
2. the pasture is in a SWQMA & winter grazed



ATCP 50(AT 0.04(3)): Follow 590 where nutrients are mechanically applied.

NRCS 590 Std. (A.2.b.(1) page3&4): Prohibits applications in winter next to surface water – EXCEPT when grazing in the SWQMA and the field is included in the NM plan.

(A.1.m. page 3) Where pasturing occurs, verify through computations that the nutrients…do not exceed the N and P requirements of 590.

When will NM be required on all pastures?

1. ATCP 50 will need to incorporate the NR 151 performance standard (Feb. ATCP Board - public hearings for winter 2014)
2. Want a flexible approach to allow farmers time to meet the standard usually 5 years after new standards are incorporated into ATCP 50
3. ATCP 50 defines conservation compliance of the Farmland Preservation Program

NM planning on Pasture in WI

- About 1.5 million acres of land is non-woodland pasture (2007 WI Census of Ag)
- If all get NM planning cost share @ $28/ac = $40 million
- If targeting high risk areas near water (20%) reduces costs to $8 million

2011 Farmland Preservation

protecting water resources & soil productivity

http:workinglands.wi.gov

Working Lands Initiative Started July 1, 2009

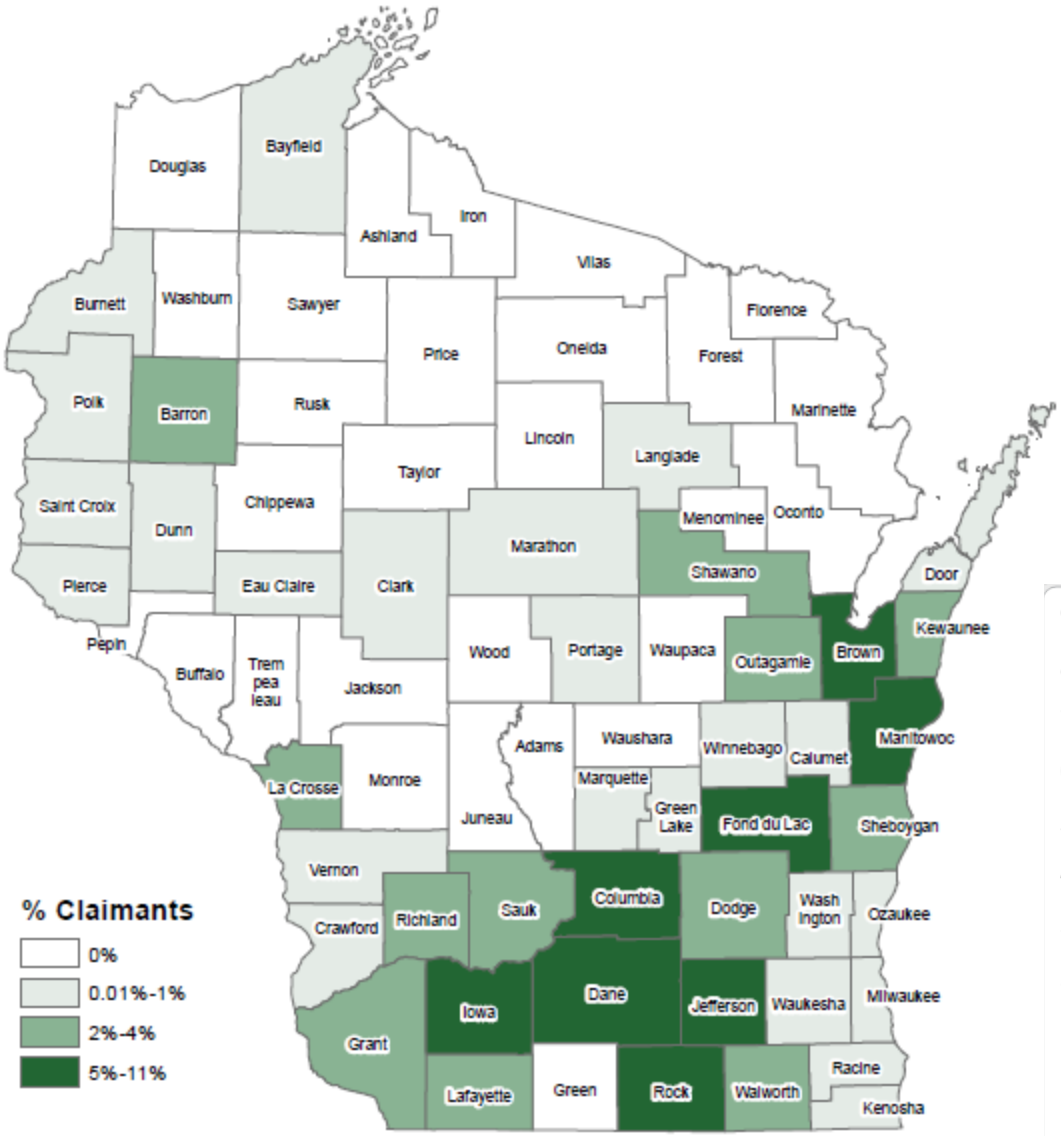
$27M to WI farmers **decreasing tax due or increasing tax refund** in exchange for keeping land in AG use and complying with soil and water conservation requirements

$7.50/acre in a Certified farmland preservation zoning district

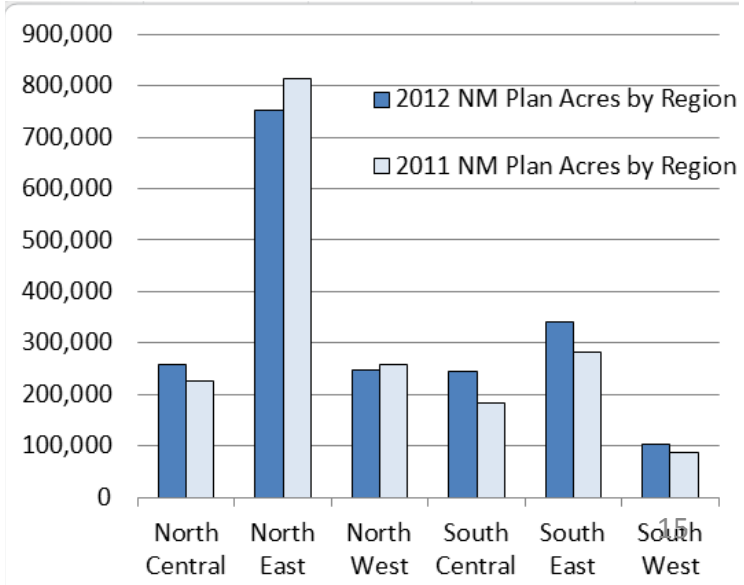
$5.00/acre if farmland preservation agreement in Agricultural Enterprise Area AEA (15 year agreements)

$10.00/acre if agreement in AEA and zoning

Percent of Farmland Preservation 2010 Claimants in Exclusive Agricultural Zoning by County



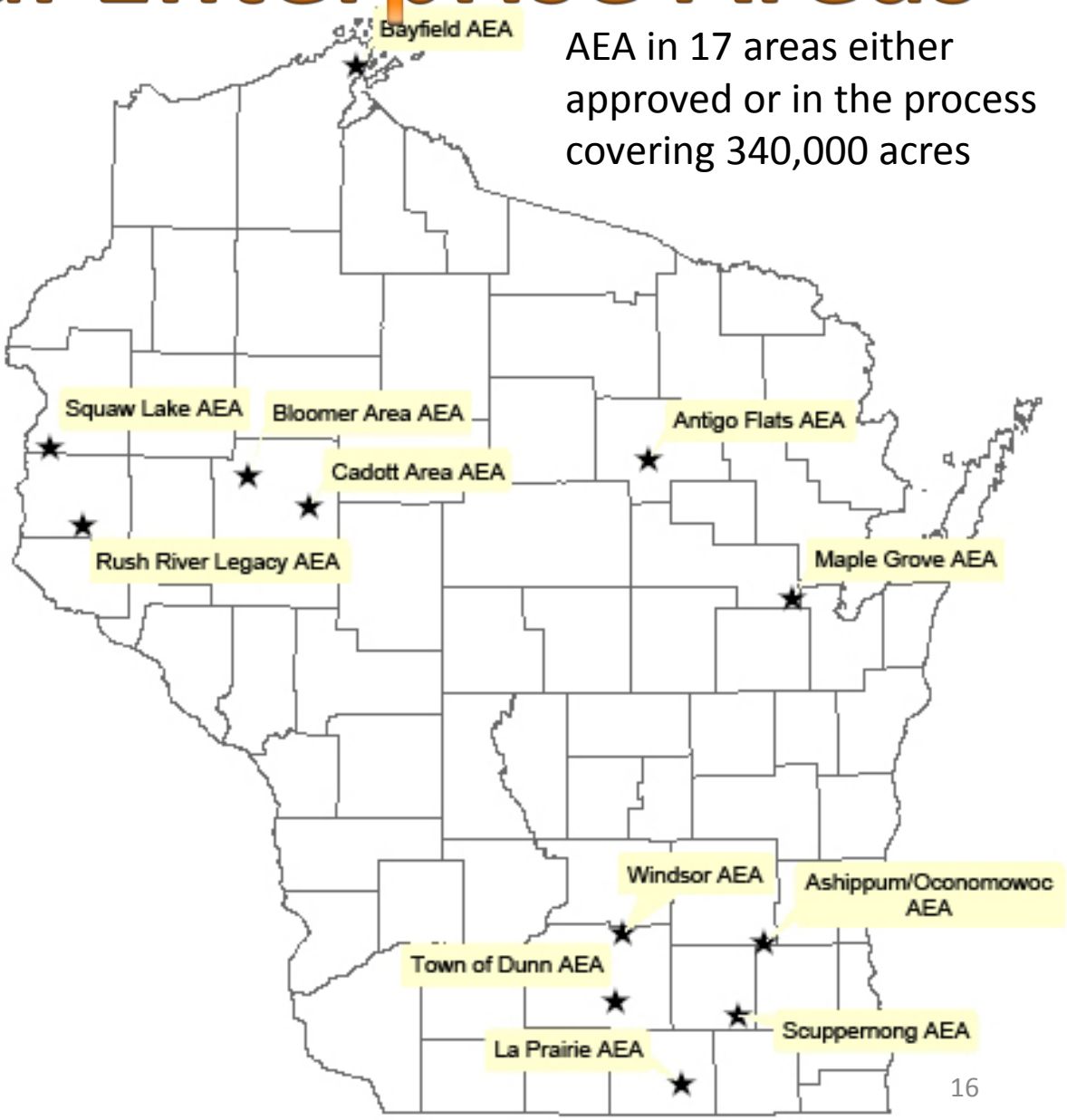
- Almost 13,000 of the 15,000 FPP claimants live in Exclusive Agricultural Zoned areas.
- Counties of Dane, Fond du Lac, Jefferson, Rock, Iowa, Manitowoc, Brown, and Columbia have 6,600 or 53% of these total FPP participants in these zoned areas - **Manitowoc** added **57K** and **Columbia 29K acres**.
- Collectively these counties have 600K acres in NMPs increasing NM plans in 2012 by 133K acres from 2011.



Agricultural Enterprise Areas

- At least 5 eligible farm owners located in a contiguous area primarily in agricultural use petition DATCP
- Eligible farmers in a designated area can enter into voluntary farmland preservation agreements with DATCP
- Farmers with an agreement receive income tax credits in return for keeping their land in agricultural use for a minimum of 15 years.
- DATCP designates through administrative Rule process

AEA in 17 areas either approved or in the process covering 340,000 acres



FC-A Wisconsin farmland preservation credit

Schedule FC-A and instructions

Farmland Preservation Zoning Districts &

New or Modified agreements 2010 tax year or later

farmers that did not collect a farmland preservation tax credit in the previous year:

- **Must obtain a Certificate of Compliance** from the County Land Conservation Committee showing compliance with the state agricultural performance standards under NR 151 & ATCP 50
- **Include with the tax return**

farmers that did collect a tax credit without a Certificate of Compliance in the previous year:

- Must obtain a **Schedule of Compliance** that enables claimants to comply with state conservation standards by a specific deadline set by the county before 2016

Core 590

Nutrient applications **must not run off** the intended application site

Fields receiving nutrients **must** have sheet and rill soil erosion controlled to tolerable soil loss rates or “T” over the crop rotation

Areas of concentrated flow, resulting in reoccurring gullies, **must** be protected with perennial vegetative cover and nutrients should not be applied to established water ways

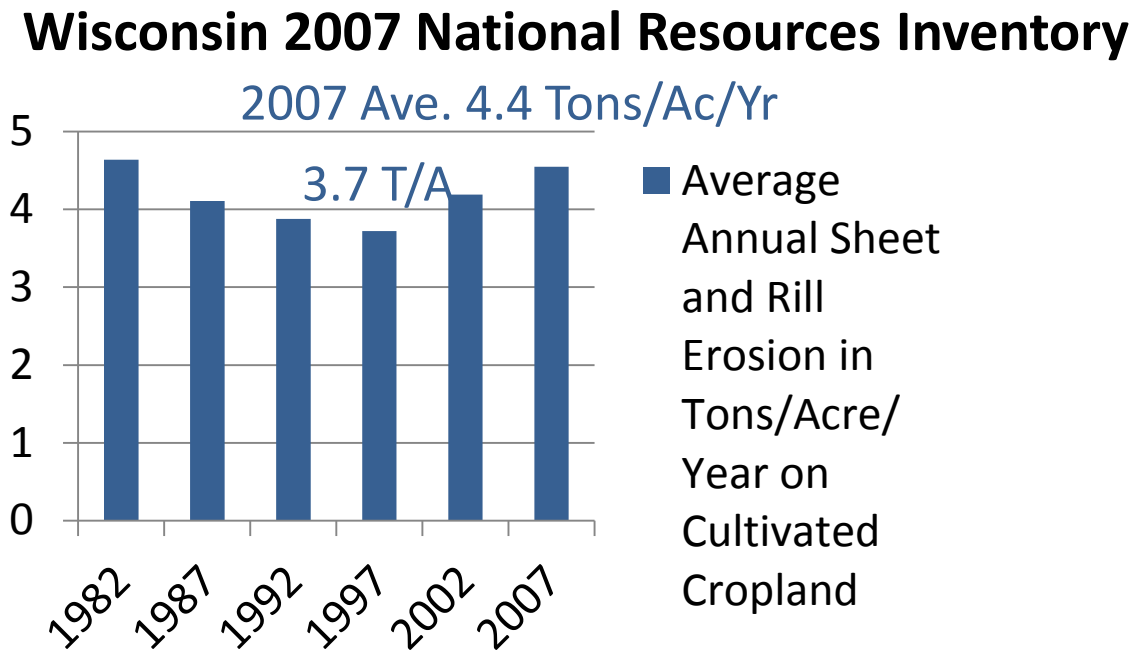
Erosion is still the number one source of nonpoint source pollution in the US

Sediment

- Destroys fish and wildlife habitats
- Reduces property values
- Reduces recreational uses of waters (boating, fishing, swimming)
- Increases the cost of treating public water supplies

WI Soil Erosion
Wisconsin Land and Water Conservation Annual Progress Report

- The three most common activities conducted by counties are soil erosion control, manure management and nutrient management.



Core 590 spreading restrictions

- Frozen and snow covered ground
  - No nutrient spreading 1000’ lakes and 300’ streams [other restrictions fall, spring, winter]
  - Limit liquid manure applications to 7,000 gallons per acre or the P removal of the next crop, whichever is less.
- 200 ft incorporation of nutrient on area draining to groundwater conduits
- Manure deposited near a well by grazing does not require incorporation

Core 590

- Follow annual UW soil test N recommendation of non-legume crop
- Can combine all P and K applications for the rotation
  - 590 requires fields with only commercial fertilizer applications follow the soil test & crop need
  - Snap Plus will flag if annual P application for **commercial fertilizer** exceeds crop need

Current Phosphorus Management

For non-permitted animal operations

- The 590 std's P Index (PI) or Soil Test P phosphorus assessment is available <u>where manure or other organic by-products are applied</u>
  - ✓ PI> 6 then no manure

  OR
  - ✓ soil test P >100 PPM then P2O5 balance <25% of crop removal over 8 yrs or less

For CAFO permitted animal operations

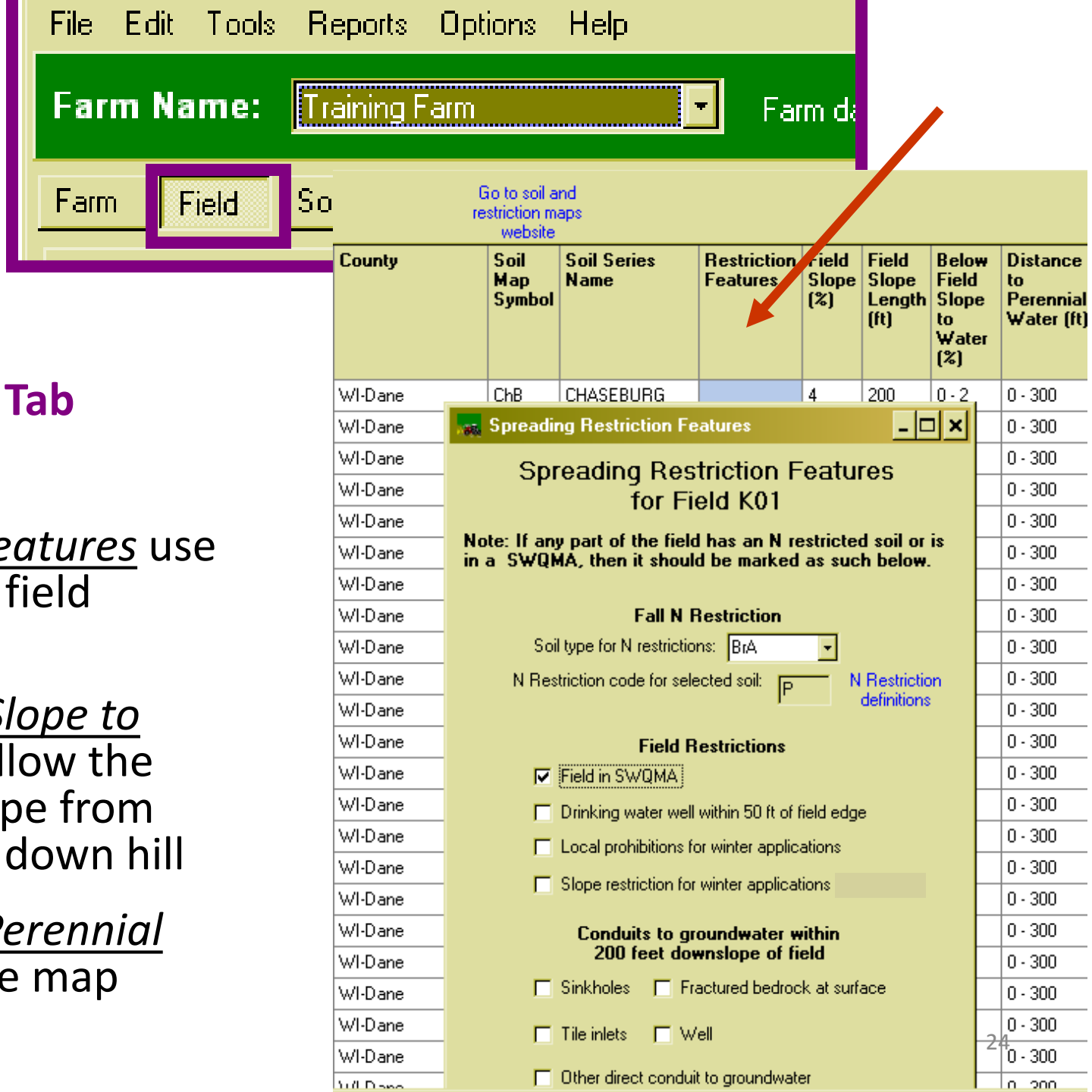
- Follow 590 if soil test P is less than 100 PPM
- Above 100 PPM P use both the PI & soil test P
  - ✓ PI> 6 then no manure app allowed
  - ✓ P2O5 balance <50% of crop removal over 4 yrs or less

The PI is not available for:

- some soils
- fruit crops like cranberries and apples
- some vegetable crop sequences
- crops without a RUSLE2 soil loss estimate
- crops without a UW soil test recommendation

Snap Plus Field Tab

- *Restriction Features* use maps to find field attributes
- *Below Field Slope to Water (%)* follow the soil types slope from edge of field down hill
- *Distance to Perennial Water (ft)* use map scale

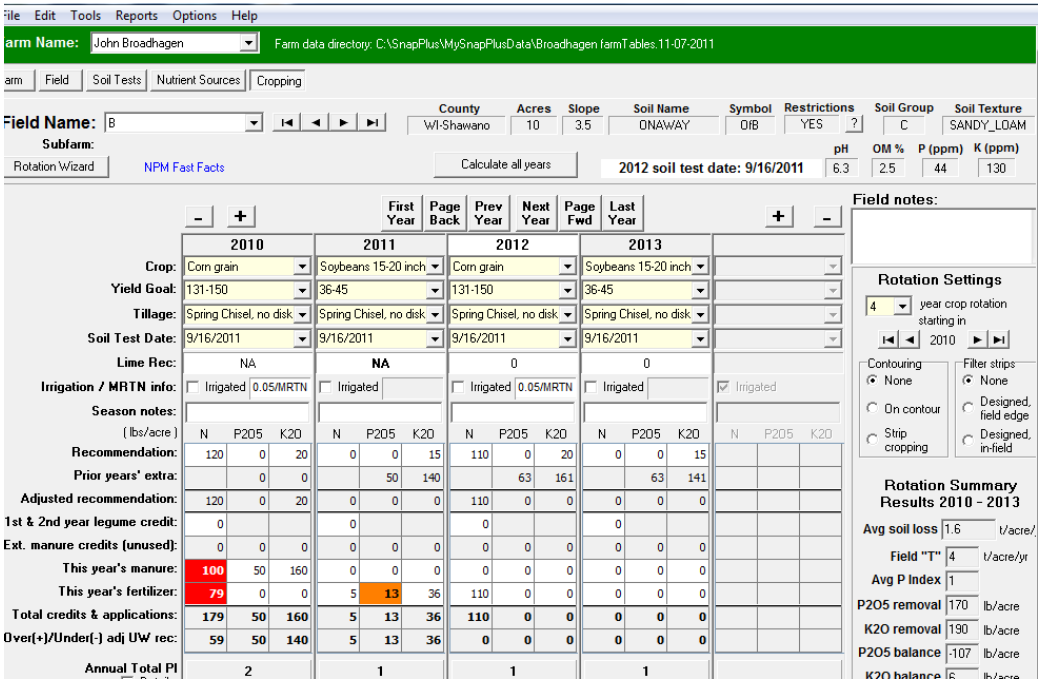


Conservation & NM Planning

Are you using the current 1.132.8 version of Snap Plus?

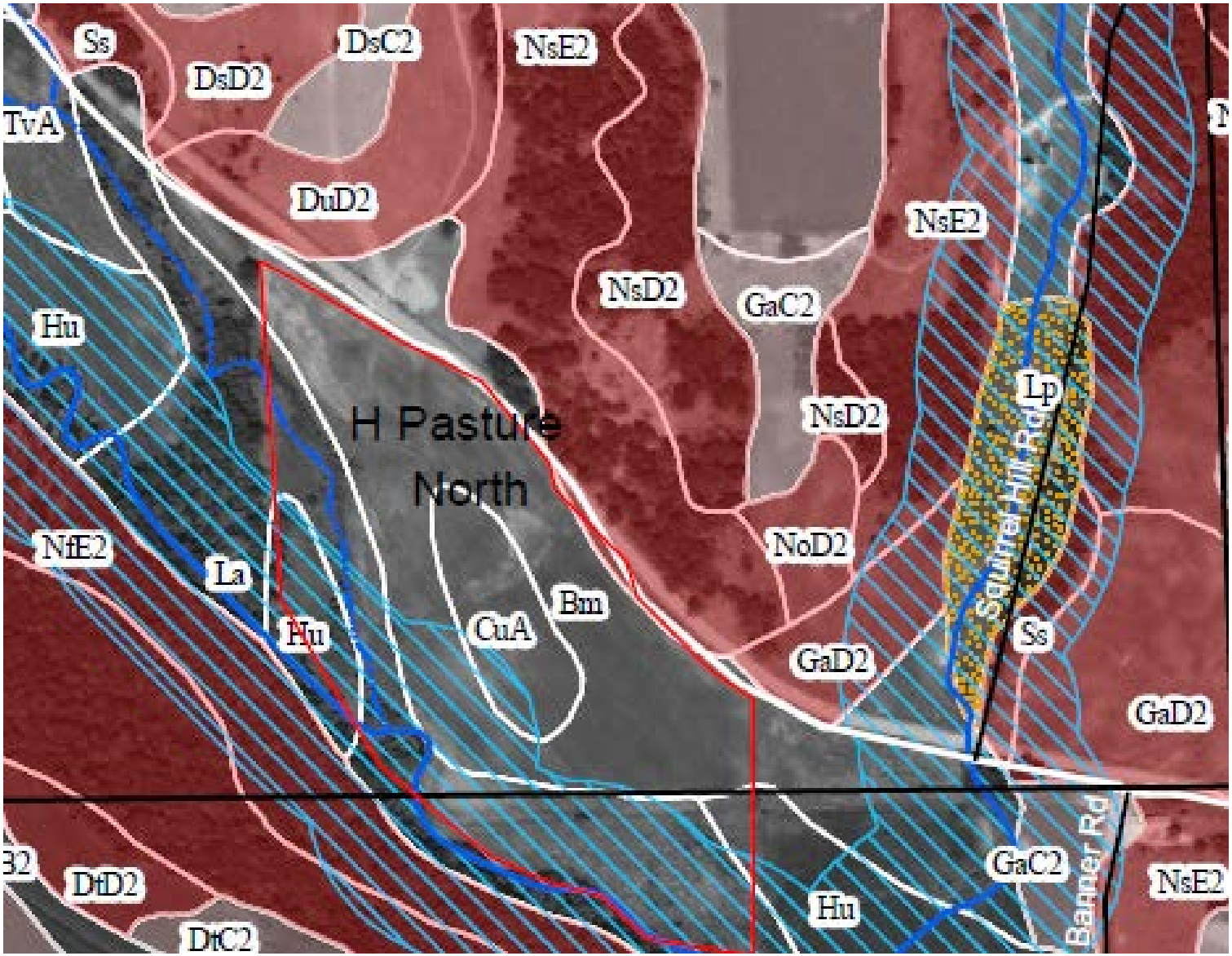
- Checks spreading restrictions against applications
- Calculates soil erosion with nutrient applications
- Provides P Index to show P field loss

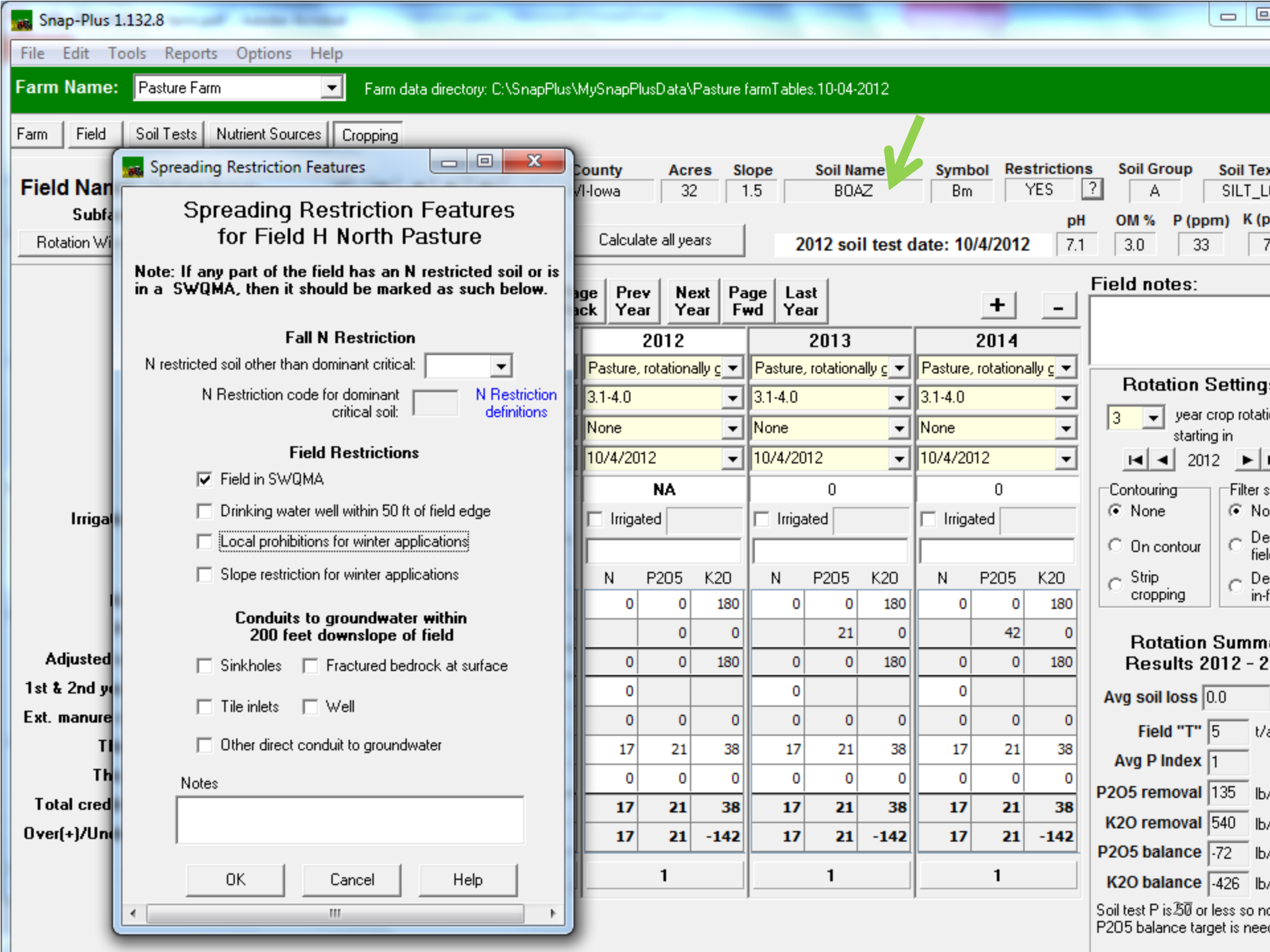
www.snapplus.net



http://datcp.wi.gov/Farms/Nutrient_Management/index.aspx

NM Planning of Pasture




Snap-Plus 1.132.8
File Edit Tools Reports Options Help
Farm Name: Pasture Farm
Farm data directory: C:\SnapPlus\MySnapPlusData\Pasture farmTables.10-04-2012
Farm Field Soil Tests Nutrient Sources Cropping
Spreading Restriction Features
Spreading Restriction Features for Field H North Pasture
Note: If any part of the field has an N restricted soil or is in a SWQMA, then it should be marked as such below.
Fall N Restriction
N restricted soil other than dominant critical:
N Restriction code for dominant critical soil:
N Restriction definitions
Field Restrictions
Field in SWQMA
Drinking water well within 50 ft of field edge
Local prohibitions for winter applications
Slope restriction for winter applications
Conduits to groundwater within 200 feet downslope of field
Sinkholes
Fractured bedrock at surface
Tile inlets
Well
Other direct conduit to groundwater
Notes
OK
Cancel
Help
County
Acres
Slope
Soil Name
Symbol
Restrictions
Soil Group
Soil Tex
VI-Iowa
32
1.5
BOAZ
Bm
YES
A
SILT_L
pH
OM %
P (ppm)
K (p
Calculate all years
2012 soil test date: 10/4/2012
7.1
3.0
33
Prev Year
Next Year
Page Fwd
Last Year
2012
2013
2014
Pasture, rotationally g
3.1-4.0
None
10/4/2012
NA
0
Irrigated
N P2O5 K2O
Field notes:
Rotation Setting
3 year crop rotati
starting in
2012
Contouring
None
On contour
Strip cropping
Rotation Summ
Results 2012 - 2
Avg soil loss 0.0
Field "T" 5
Avg P Index 1
P2O5 removal 135
K2O removal 540
P2O5 balance -72
K2O balance -426
Soil test P is 50 or less so no
P2O5 balance target is need

Snap-Plus 1.132.8

File Edit

Farm Nar

Farm Fie

Field N

Su

Rotation

Irri

Adjust

1st & 2nd

Ext. manu

Total cr

Over(+)/U

Snap-Plus Nutrient Application Planner

Farm nutrient source availability

Values are for first year available nutrients in lbs/ton or lbs/1000 gallons

By Season

Souce name	Nutrient type	Units	N	N incorp	P2O5	K2O	S	Available annual volume	Planned applications	Remaining volume
Beef graze	Beef, grazing	Tons	4.0	5.0	5.0	9.0	1.0	539	614	-75
							Total solid:	539	614	-75
							Total liquid:	0	0	0

Field: H North Pasture Acres: 32 Crop: Pasture/dry lot, sparse grass N P2O5 K2O

Year: 2012 Field Over(+)/Under(-) Application (lbs/acre) 77 96 173

Field Application Restrictions: N Winter Slope SWQMA Groundwater Conduit Other

View Field Restrictions

Manure / Biosolid Applications

Add nutrient app | Delete nutrient app | Crop Year: Fall 2011 - Summer 2012.

Season	Source name	Spread method	Rate	Units	Applied
Winter	Beef graze	Grazing	9.6	T/A	☐
Summer	Beef graze	Grazing	9.6	T/A	☐

Fertilizer Applications

Add fert app | Delete fert app

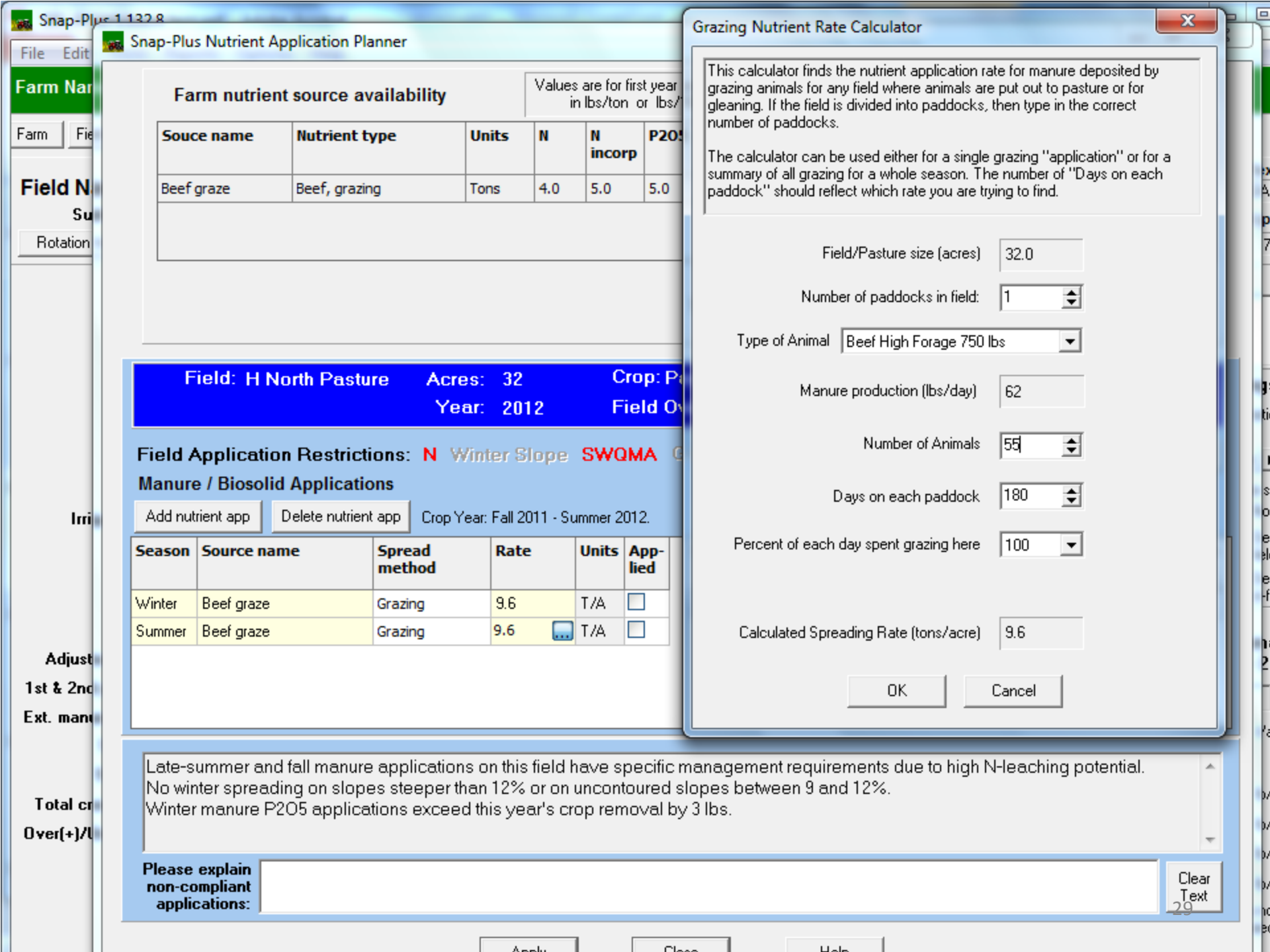
Season	Fertilizer Name	Spread method	Rate	Units	Applied
					☐

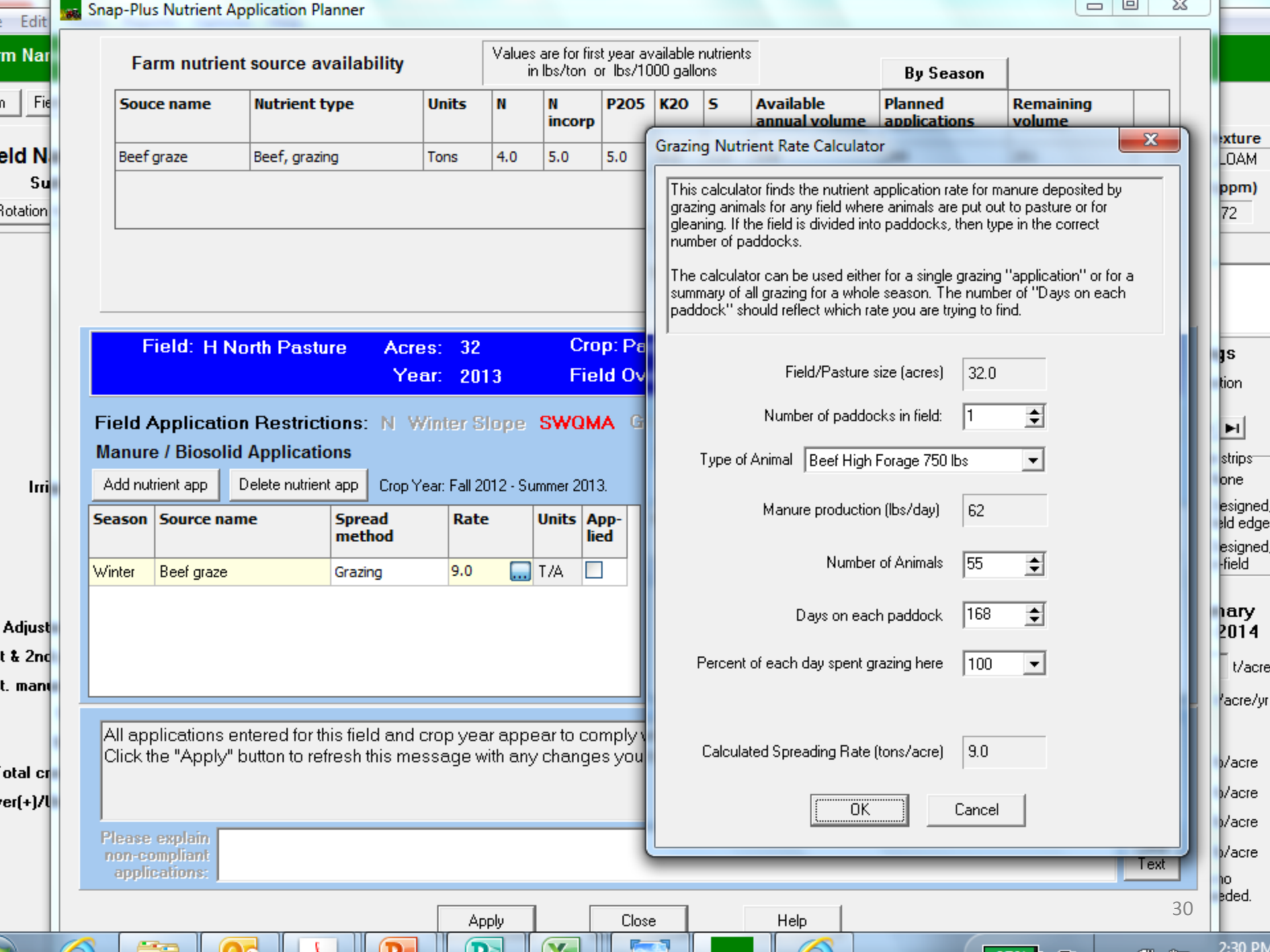
This field is within a SWQMA and is receiving manure nutrients in the winter that are not being recycled by a crop.

Please explain non-compliant applications:

Clear Text

28


Snap-Plus Nutrient Application Planner
Farm nutrient source availability
Values are for first year in lbs/ton or lbs/
Souce name | Nutrient type | Units | N | N incorp | P2O5
Beef graze | Beef, grazing | Tons | 4.0 | 5.0 | 5.0
Field: H North Pasture Acres: 32 Crop: P
Year: 2012 Field O
Field Application Restrictions: N Winter Slope SWQMA
Manure / Biosolid Applications
Add nutrient app
Delete nutrient app
Crop Year: Fall 2011 - Summer 2012.
Season | Source name | Spread method | Rate | Units | Applied
Winter | Beef graze | Grazing | 9.6 | T/A
Summer | Beef graze | Grazing | 9.6 | T/A
Late-summer and fall manure applications on this field have specific management requirements due to high N-leaching potential.
No winter spreading on slopes steeper than 12% or on uncontoured slopes between 9 and 12%.
Winter manure P2O5 applications exceed this year's crop removal by 3 lbs.
Please explain non-compliant applications:
Clear Text
Grazing Nutrient Rate Calculator
This calculator finds the nutrient application rate for manure deposited by grazing animals for any field where animals are put out to pasture or for gleaning. If the field is divided into paddocks, then type in the correct number of paddocks.
The calculator can be used either for a single grazing "application" or for a summary of all grazing for a whole season. The number of "Days on each paddock" should reflect which rate you are trying to find.
Field/Pasture size (acres) 32.0
Number of paddocks in field: 1
Type of Animal Beef High Forage 750 lbs
Manure production (lbs/day) 62
Number of Animals 55
Days on each paddock 180
Percent of each day spent grazing here 100
Calculated Spreading Rate (tons/acre) 9.6
OK
Cancel


Snap-Plus Nutrient Application Planner
Farm nutrient source availability
Values are for first year available nutrients in lbs/ton or lbs/1000 gallons
By Season
Souce name
Nutrient type
Units
N
N incorp
P2O5
K2O
S
Available annual volume
Planned applications
Remaining volume
Beef graze
Beef, grazing
Tons
4.0
5.0
5.0
Field: H North Pasture
Acres: 32
Year: 2013
Field Application Restrictions: N Winter Slope SWQMA
Manure / Biosolid Applications
Add nutrient app
Delete nutrient app
Crop Year: Fall 2012 - Summer 2013.
Season
Source name
Spread method
Rate
Units
App-lied
Winter
Beef graze
Grazing
9.0
T/A
All applications entered for this field and crop year appear to comply
Click the "Apply" button to refresh this message with any changes you
Please explain non-compliant applications:
Text
Apply
Close
Help
Grazing Nutrient Rate Calculator
This calculator finds the nutrient application rate for manure deposited by grazing animals for any field where animals are put out to pasture or for gleaning. If the field is divided into paddocks, then type in the correct number of paddocks.
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Field/Pasture size (acres)
32.0
Number of paddocks in field:
1
Type of Animal
Beef High Forage 750 lbs
Manure production (lbs/day)
62
Number of Animals
55
Days on each paddock
168
Percent of each day spent grazing here
100
Calculated Spreading Rate (tons/acre)
9.0
OK
Cancel

Snap-Plus 1.132.8

File Edit Tools Reports Options Help

Farm Name: Pasture Farm — Farm data directory: C:\SnapPlus\MySnapPlusData\Pasture farmTables.10-04-2012

Farm | Field | Soil Tests | Nutrient Sources | Cropping

Field Name: H North Pasture

County	Acres	Slope	Soil Name	Symbol	Restrictions	Soil Group	Soil Text
WI-Iowa	32	1.5	BOAZ	Bm	YES ?	A	SILT_LO

Subfarm:

Rotation Wizard | NPM Fast Facts | Calculate all years | **2014 soil test date: 10/4/2012**

pH	OM %	P (ppm)	K (pp
7.1	3.0	33	72

First Year | Page Back | Prev Year | Next Year | Page Fwd | Last Year

	2012			2013			2014								
Crop:	Pasture/dry lot, spars			Pasture, rotationally g			Pasture, rotationally g								
Yield Goal:	0-0			3.1-4.0			3.1-4.0								
Tillage:	None			None			None								
Soil Test Date:	10/4/2012			10/4/2012			10/4/2012								
Lime Rec:	NA			0			0								
Irrigation / MRTN info:	Irrigated			Irrigated			Irrigated			Irrigated			Irrigated		
Season notes:															
(lbs/acre)	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
Recommendation:	0	0	0	0	0	180	0	0	180						
Prior years' extra:		0	0		96	173		141	74						
Adjusted recommendation:	0	0	0	0	0	7	0	0	106						
1st & 2nd year legume credit:	0			0			0								
Ext. manure credits (unused):	0	0	0	0	0	0	0	0	0						
This year's manure:	77	96	173	36	45	81	36	45	81						
This year's fertilizer:	0	0	0	0	0	0	0	0	0						
Total credits & applications:	**77**	**96**	**173**	**36**	**45**	**81**	**36**	**45**	**81**						
Over(+)/Under(-) adj UW rec:	**77**	**96**	**173**	**36**	**45**	**74**	**36**	**45**	**-25**						
Annual Total PI Details	**6**			**4**			**3**								
Particulate PI:	**1.7**			**0.2**			**0.0**								
Soluble PI:	**4.7**			**3.9**			**3.0**								
Acute loss (frozen) PI:	**3.0**			**3.2**			**2.7**								

Field notes:

Rotation Settings

3 year crop rotatio starting in 2012

Contouring: None | On contour | Strip cropping

Filter st: Nor | Des field | Des in-fi

Rotation Summe Results 2012 - 20

Avg soil loss	0.3	
Field "T"	5	t/a
Avg P Index	4	
P2O5 removal	90	lb/
K2O removal	360	lb/
P2O5 balance	96	lb/
K2O balance	-25	lb/

Soil test P is 50 or less so no P2O5 balanc@ target is need

Snap-Plus 1.152.8

File Edit Tools Reports Options Help

Farm Name: Pasture Farm — Farm data directory: C:\SnapPlus\MySnapPlusData\Pasture farmTables.10-04-2012

Farm | Field | Soil Tests | Nutrient Sources | Cropping

Field Name: H North Pasture

Subfarm:

Rotation Wizard | NPM Fast Facts | Calculate all years

County	Acres	Slope	Soil Name	Symbol	Restrictions	Soil Group	Soil Tex
WI-Iowa	32	22	NORTHFIELD	NsE2	YES ?	E	LOAI

2014 soil test date: 10/4/2012 — pH 7.1 | OM % 3.0 | P (ppm) 33 | K (p 7

First Year | Page Back | Prev Year | Next Year | Page Fwd | Last Year

	2012	2013	2014		
Crop:	Pasture/dry lot, spars	Pasture, rotationally g	Pasture, rotationally g		
Yield Goal:	0-0	3.1-4.0	3.1-4.0		
Tillage:	None	None	None		
Soil Test Date:	10/4/2012	10/4/2012	10/4/2012		
Lime Rec:	NA	0	0		
Irrigation / MRTN info:	Irrigated	Irrigated	Irrigated	Irrigated	Irrigated
Season notes:					

(lbs/acre)	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
Recommendation:	0	0	0	0	25	180	0	25	180						
Prior years' extra:		0	0		96	87		116	0						
Adjusted recommendation:	0	0	0	0	0	93	0	0	180						
1st & 2nd year legume credit:	0			0			0								
Ext. manure credits (unused):	0	0	0	0	0	0	0	0	0						
This year's manure:	77	96	173	36	45	81	36	45	81						
This year's fertilizer:	0	0	0	0	0	0	0	0	0						
Total credits & applications:	77	96	173	36	45	81	36	45	81						
Over(+)/Under(-) adj UW rec:	77	96	173	36	45	-12	36	45	-99						

Annual Total PI (Details)	34	7	2		
Particulate PI:	30.0	4.0	0.4		
Soluble PI:	4.3	2.6	1.1		
Acute loss (frozen) PI:	1.1	1.7	1.0		

Field notes:

Rotation Settings

3 year crop rotati starting in 2012

Contouring: None | On contour | Strip cropping

Filter st: No | De field | De in-fi

Rotation Summa Results 2012 - 2

Avg soil loss	6.8
Field "T"	2 t/a
Avg P Index	14
P2O5 removal	90 lb/
K2O removal	360 lb/
P2O5 balance	96 lb/
K2O balance	-25 lb/

Soil test P is 50 or less so no P2O5 balance target is need

Snap-Plus 1.132.8

File Edit

Farm Nan

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Field Na

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Rotation

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Ext. manu

Total cre

Over(+)/U

Snap-Plus Nutrient Application Planner

Farm nutrient source availability

Values are for first year available nutrients in lbs/ton or lbs/1000 gallons

By Season

Souce name	Nutrient type	Units	N	N incorp	P2O5	K2O	S	Available annual volume	Planned applications	Remaining volume
Beef graze	Beef, grazing	Tons	4.0	5.0	5.0	9.0	1.0	539	286	253
								Total solid:	539	286	253
								Total liquid:	0	0	0

Field: H North Pasture Acres: 32 Crop: Pasture, rotationally grazed, grass/leg N P2O5 K2O

Year: 2013 Field Over(+)/Under(-) Application (lbs/acre) 36 45 -12

Field Application Restrictions: N Winter Slope SWQMA Groundwater Conduit Other

View Field Restrictions

Manure / Biosolid Applications

Add nutrient app | Delete nutrient app | Crop Year: Fall 2012 - Summer 2013.

Season	Source name	Spread method	Rate	Units	App-lied
Winter	Beef graze	Grazing	9.0	T/A	☐

Fertilizer Applications

Add fert app | Delete fert app

Season	Fertilizer Name	Spread method	Rate	Units	App-lied
					☐

No winter spreading on slopes steeper than 12% or on uncontoured slopes between 9 and 12%.

Please explain non-compliant applications:

Clear Text

33

Snap-Plus 1.132.8

File Edit Tools Reports Options Help

Farm Name: Pasture Farm — Farm data directory: C:\SnapPlus\MySnapPlusData\Pasture farmTables.10-04-2012

Farm | Field | Soil Tests | Nutrient Sources | Cropping

Field Name: H North Pasture

County	Acres	Slope	Soil Name	Symbol	Restrictions	Soil Group	Soil Text
WI-Iowa	32	22	NORTHFIELD	NsE2	YES	E	LOAM

Subfarm:

Rotation Wizard | NPM Fast Facts | Calculate all years | **2014 soil test date: 10/4/2012**

pH	OM %	P (ppm)	K (pp
7.1	3.0	33	72

First Year | Page Back | Prev Year | Next Year | Page Fwd | Last Year

	2012	2013	2014		
Crop:	Pasture/dry lot, spars	Pasture, rotationally g	Pasture, rotationally g		
Yield Goal:	0-0				
Tillage:	None				
Soil Test Date:	10/4/2012	10/4/2012	10/4/2012		
Lime Rec:	NA	0	0		
Irrigation / MRTN info:	Irrigated	Irrigated	Irrigated	Irrigated	Irrigated
Season notes:					

Crop dropdown options: CRP; Pasture seeding, grass/legume; Pasture, rotationally grazed, grass/legume; Pasture/dry lot, sparse grass

(lbs/acre)	2012 N	2012 P2O5	2012 K2O	2013 N	2013 P2O5	2013 K2O	2014 N	2014 P2O5	2014 K2O
Recommendation:	0	0	0	0	25	180	0	25	180
Prior years' extra:		0	0		96	87		116	0
Adjusted recommendation:	0	0	0	0	0	93	0	0	180
1st & 2nd year legume credit:	0			0			0		
Ext. manure credits (unused):	0	0	0	0	0	0	0	0	0
This year's manure:	77	96	173	36	45	81	36	45	81
This year's fertilizer:	0	0	0	0	0	0	0	0	0
Total credits & applications:	77	96	173	36	45	81	36	45	81
Over(+)/Under(-) adj UW rec:	77	96	173	36	45	-12	36	45	-99
Annual Total PI	34			7			2		
Particulate PI:	30.0			4.0			0.4		
Soluble PI:	4.3			2.6			1.1		

Details

Field notes:

Rotation Settings

3 year crop rotation starting in 2012

Contouring: None | On contour | Strip cropping

Filter stri: None | Desi field | Desi in-fie

Rotation Summa Results 2012 - 20

Avg soil loss	6.8 t
Field "T"	2 t/ac
Avg P Index	14
P2O5 removal	90 lb/a
K2O removal	360 lb/a
P2O5 balance	96 lb/a
K2O balance	-25 lb/a

Soil test P is 50 or less so no P2O5 balance target is neede

Snap-Plus 1.132.8

File Edit Tools Reports Options Help

Farm | Field | Soil Tests | Nutrient Sources | Cropping

Field Name: H North Pasture

Subfarm:

Rotation Wizard | NPM Fast Facts | Calculate all years

County	Acres	Slope	Soil Name	Symbol	Restrictions	Soil Group	Soil Text
WI-Iowa	32	22	NORTHFIELD	NsE2	YES	E	LOAM

2014 soil test date: 10/4/2012 — pH 7.1 | OM % 3.0 | P (ppm) 33 | K (pp 72

First Year | Page Back | Prev Year | Next Year | Page Fwd | Last Year

	2012	2013	2014
Crop:	Pasture/dry lot, spars	Pasture/dry lot, spars	Pasture/dry lot, spars
Yield Goal:	0-0	0-0	0-0
Tillage:	None	None	None
Soil Test Date:	10/4/2012	10/4/2012	10/4/2012
Lime Rec:	NA	0	0
Irrigation / MRTN info:	Irrigated	Irrigated	Irrigated
Season notes:			

(lbs/acre)	2012 N	2012 P2O5	2012 K2O	2013 N	2013 P2O5	2013 K2O	2014 N	2014 P2O5	2014 K2O
Recommendation:	0	0	0	0	0	0	0	0	0
Prior years' extra:		0	0		96	87		141	84
Adjusted recommendation:	0	0	0	0	0	0	0	0	0
1st & 2nd year legume credit:	0			0			0		
Ext. manure credits (unused):	0	0	0	0	0	0	0	0	0
This year's manure:	77	96	173	36	45	81	36	45	81
This year's fertilizer:	0	0	0	0	0	0	0	0	0
Total credits & applications:	77	96	173	36	45	81	36	45	81
Over(+)/Under(-) adj UW rec:	77	96	173	36	45	81	36	45	81
Annual Total PI (Details)	71			53			54		
Particulate PI:	61.7			48.9			50.7		
Soluble PI:	9.2			3.8			3.0		
Acute loss (frozen) PI:	2.5			2.2			2.4		

Field notes:

It is about P source and delivery

Rotation Settings

3 year crop rotation starting in 2012

Contouring: None | On contour | Strip cropping

Filter stri: None | Desi field | Desi in-fie

Rotation Summa Results 2012 - 20

Avg soil loss	37.2	t
Field "T"	2	t/ac
Avg P Index	59	
P2O5 removal	0	lb/a
K2O removal	0	lb/a
P2O5 balance	186	lb/a
K2O balance	335	lb/a

Soil test P is 50 or less so no P2O5 balance target is neede

Summary

- We have a great conservation planning tool in Snap Plus
- SNAP Plus helps farmers keep NM plans flexible and updated with correct soil loss
- Easier to know if meeting 590 for improved water quality and profitability

For NM information

http://datcp.wi.gov/Farms/Nutrient_Management/Planning/index.aspx

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