

Using the NM Checklist to Review a SnapPlus Nutrient Management (NM) Plan

The information found on the NM Checklist is used to show the plan meets the WI NRCS 2015-590 NM Technical Standard and it is recorded to track the progress of Wisconsin NM planning. NM planning is one of the best practices farmers can use to ensure profitability, reduce excess nutrient applications to cropland, and reduce water quality impacts. Any NM Checklist submitted to your local agency may be selected for a quality assurance review.

On the NM Checklist, circle the planner's qualification found in ATCP 50.48. Certified planners can be verified through the NAICC, CCA, and SSSA. Farmers can sign off on their own plan if they received training within the last four years. For a livestock siting permit, a qualified nutrient management planner other than the farmer must sign-off on the plan.

To review any item and determine compliance with the 590 Standard do the following:

1. Pair the NM Checklist item number with the corresponding sections below.
2. Run the SnapPlus reports abbreviated in each section and defined on the bottom of page 2.

Shaded sections 1c., 1.h., 1.i., 1.n., 1.o., 1.q., 1.s. and all of 2. are for farms with manure or organic-by-product applications. Skip these shaded sections if no manure or organic by-products are applied.

Checklist 1. Does the plan include the following nutrient application requirements to protect surface and groundwater?

1a.	FM6 shows the soil testing laboratory used. These are the current DATCP certified soil testing labs : A & L Great Lakes Laboratories (Fort Wayne, IN), AgSource Laboratories (Bonduel, WI), Dairyland Laboratories (Arcadia and Stratford, WI), Rock River Laboratory (Watertown, WI), UW Soil & Forage Lab (Marshfield, WI), Minnesota Valley Testing Laboratories-MVTL (New Ulm, MN), and Midwest Laboratories (Omaha NE).	1f.	Winter fertilizer applications are not an option in SnapPlus. FM8 and NM5 shows application seasons by year. Open FM8 in Excel to sort by applications, season, crop, or rates.
1b.	NM2 flags if soil samples are not current or exceeding sampling requirements. For fields or pastures with mechanical nutrient applications, soil samples should be collected within the last 4 years according to Std. 590 and UW Pub. A2809 typically collecting 1 sample per 5 acres . Non-responsive fields for P and K can have more than 5 acres per sample. See A2809 for specifics. Soil samples can be grouped for contour strips. Tested samples are then copied into the respective fields to meet the 5 acres per sample. Open FM6 in Excel and sort by P or K levels to correlate the soil test reports to the sampled field. Soil tests are not required on pastures that do not receive mechanical applications of nutrients if either applies: <ol style="list-style-type: none"> 1. The pasture average stocking rate is one animal unit per acre or less at all times during the grazing season. 2. The pasture is winter grazed or stocked at an average stocking rate of more than one animal unit per acre during the grazing season, and a nutrient management plan for the pastures complies with 590 using an assumed soil test phosphorus level of 150 PPM and organic matter content of 6%. 	1g.	NM2 flags if no method is selected for determining nutrient application rates . Calibration methods may be mentioned in the Farm screen's narrative that is printed in NM1. NM4 shows the Nutrient screen's manure production, storage, spreaders, loads hauled, calibration methods, and equipment. NM5 shows application method and rates for nutrients sorted by crop. Rates should be realistic.
1c.	NM2 flags if soils tests are not meeting Std. 590 and UW Pub. A2809 requirements. For plans not meeting these requirements and seeking livestock siting permit approval, the applicant must collect and analyze soil samples meeting the requirements in UW Pub. A2809 within 12 months of permit approval and revise the nutrient management plan accordingly. Until then, either option below maybe used: 1. Assume soil test phosphorus levels are greater than 100 ppm soil test P, or 2. Use preliminary estimates analyzed by a certified DATCP laboratory with soil samples representing > 5 ac/sample.	1h.	All manure needs to be allocated for each year of the rotation, up to eight years, to show that the farm has adequate acres to comply with 590. NM2 will flag if applications do not meet 590 and UW Pub. A2809. NM4 shows if all the manure has been allocated every year and the percent of manure collected. If not 100% collected, the plan should explain where the rest is going. The manure estimator can be used for the first year of the plan, updating the plan with actual volumes produced .
1d.	NM 1, 3, and 5 will show field identification and acres. See SnapMaps for field's identification, restrictions, location, and boundary. Use NM1 for crops, tillage, and the farms acreage for each crop over the rotation. See NM3 for 590 restrictions, crops, and tillage over the rotation.	1i.	NM2 and NM3 provide 590 compliance checks. When fields receive manure or organic by-products during the crop rotation, all sources of P need to be applied in each year of the rotation for an accurate P assessment. These reports show compliance for both P management strategies. Only 1 strategy is required for each farm. PI Strategy : The average PI values for up to an 8-year rotation in each field shall be 6 or lower and may not exceed a PI of 12 in any individual year. Soil test P : SnapPlus calculates P target levels for the rotation length set by the planner for each field using these 590 requirements: If soil test P is 50-100 ppm, then P applications must equal crop removal rates for the rotation. If soil test P is >100 ppm, and applications are necessary, applications shall be 25% less than the annual crop removal over a rotation length of 8 years or less.
1e.	NM2 will flag if applications do not meet 590 and UW Pub. A2809. NM5 shows predominant soil, yields, planned applications , and nutrient credits for a selected year. Open FM8 in Excel to sort by applications, season, crop, or rates.	1j.	NM2 and NM3 show compliance for both P management strategies and tolerable soil loss (T) over the crop rotation. Compare these to the SnapMaps soil selection. Fields exceeding "T" should not receive nutrient applications. Verify on the SnapMaps Fields tabs that critical soils information has been imported back to the SnapPlus Fields tab. If data is bold, then it has not been imported and should be explained.

Checklist 1. Continued

Does the plan include the following nutrient application requirements to protect surface and groundwater?

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Many of the application restrictions mentioned on this page show up on report NM3. SnapMaps can automatically mark the spreading restrictions in 1p., 1q., 1r., and 1s. in the *Restriction Features* box on the Fields tab when the maps are downloaded into your SnapPlus database. See SnapPlus Help menu for instructions.

1k.	NM2 will flag if a field has comments to control gully erosion. NM1 shows the narrative and NM7 shows ephemeral erosion guidance. Use contours; reduced tillage; adjust the crop rotation; or implement other practices to prevent ephemeral erosion; and maintain perennial vegetative cover to prevent reoccurring gullies in areas of concentrated flow. Grassed waterways should only receive nutrient applications during their establishment.	1o.	Manure or organic by-product applications to locally delineated areas must be substantially buried within 24 hours. These areas are identified by the conservation office as contributing runoff to direct conduits to groundwater and the narrative should mention this requirement.
1l.	SnapPlus will not allow nutrient applications where the crop is not harvested and NM2 will flag. Exclusion areas, not harvested, should be added to field maps for accurate cropland spreadable acres. NM7 provides a guidance message to prohibit nutrient applications within 8' around irrigation wells.	1p.	NM7 provides implementation guidance. NM2 will flag if applications of fall commercial N fertilizer exceeds 36 lbs. of N per acre on: fall seeded crops; P, W, R Soils where a blended fertilizer is needed to meet A2809; soils with depths of 5 feet or less to bedrock; and areas within 1,000 feet of community wells. If SnapMaps Fields data is bold after downloading, then it was not imported to SnapPlus. NM3 shows N restricted soils symbols.
1m.	NM7 provides a guidance message to prohibit nutrient applications other than grazing or corn starter fertilizer within 50' of all direct conduits to groundwater .	1q.	NM2 will flag if manure applications in late summer or fall exceed A2809 and 590 levels on P, R, W Soils .
1n.	NM2 will flag if untreated manure sources are applied near community wells. Only the community wells are in SnapMaps, Non-community wells need to be identified by the planner. Planners will need to add treated manure sources that have substantially eliminated pathogens in the nutrient screen.	1r.	NM2 will flag if non-frozen soils have applications in the Surface Water Quality Management Area (SWQMA) that require conservation practices.
		1s.	NM2 will flag if mechanical applications of unincorporated liquid manure exceeds 12,000 gallons/ac where subsurface drainage is present and/or in the SWQMA .

Checklist 2. When frozen or snow-covered soils prevent effective incorporation, does the plan have winter spreading applications for all mechanically applied manure or organic by-products?

Use NM6 to satisfy all winter planning requirements. The winter spreading requirements of this section apply to mechanically applied manure. NM6 will show winter: manure production, storage, and fields with no spreading restrictions. It will also calculate all winter manure applications, including manure deposited through winter gleaning/pasturing of plant residue.

2a.	After filling the "Manure production estimator", a sub-tab of the Nutrients screen, NM6 calculates winter-produced quantities. Winter applications from the Cropping screen, including those through grazing/gleaning are calculated to show adequate acreage. For emergencies, farms with plenty of winter manure storage must note in the plan narrative or the field's season notes where 14 days of manure could be applied.	2d.	NM6 and NM2 flag liquid manure applications in February and March where Silurian dolomite is within 60 inches of the soils surface or where DNR Well Compensation funds provided replacement water supplies
2b.	NM6 and NM4 show storage capacity so it can be compared to manure production.	2e.	NM6 and NM2 flag if areas within 300 feet of direct conduits to groundwater receive winter manure applications. If applications can't drain to well it should be noted in the plan.
2c.	NM6 and NM 2 flag mechanically applied winter manure in the SWQMA .	2f.	NM6 shows fields available for winter applications and flags if all winter manure applications exceed 60 lbs. of P2O5/acre , the P removal of the following growing season's crop, or 7,000 gallons/acre .
		2g.	NM6 shows field winter manure applications and the practices listed in NM Checklist when a field's slope is > 6% or has concentrated flow areas.

SnapPlus report abbreviations referenced above:

Core 590 Reports:

NM1: Narrative & Crops Report
NM2: Compliance Check
NM3: Field Data & 590 Assessment
NM4: Manure Tracking
NM5: Spreading & NM Sorted by Crop
NM6: Winter Spreading Plan
NM7: Guidance

Optional Reports:

CNM1: DNR CAFO Annual Spreading
CNM2: Animal Units
CNM3: DNR Daily Log
CNM4: DNR CAFO Nutrient Balance
CNM5: CAFO Emergency Spreading
FM1: Annual Manure Production
FM2: Applications Summary
FM3: Producers Plan
FM4: Crop Production Trends
FM5: Lime Report
FM6: Soil Test Summary

FM7: Soil Test – Sample Log
FM8: Spreading Plan
FM9: Nutrient Management Plan
FM10: Annual PI
SL1: Soil Conservation
SL2: Annual Soil Loss
SL3: Transect Survey
WQ1: P Trade
DD1: Annual Cropping Data
DD2: Applications Data
DD3: Precision Recommendations