

## NRCS 590 and NR 243 Nutrient Management requirements

Nutrient Management Criteria	NRCS 590	NR 243
P Management	<ul style="list-style-type: none"> <li>• Apply P Index or Soil Test P; apply uniformly to <b>all fields</b> in NM plan</li> <li>• PI must be 6 or less</li> </ul> <p>Soil Test P</p> <ul style="list-style-type: none"> <li>• &lt; 50 ppm - apply at N needs of crop</li> <li>• 50-100 ppm - apply P at P removal rates up to 8 yr rotation</li> <li>• &gt; 100 ppm, manure applications <b>25 % less</b> than cumulative annual crop removal <b>over max 8 year period</b></li> <li>• Conservation plan required</li> </ul>	<ul style="list-style-type: none"> <li>• &lt; 100 ppm P - select Soil Test P or P Index to <b>individual</b> fields</li> <li>• Fields using Soil Test P – must meet NRCS 590 req’s</li> <li>• Fields using PI must be 6 or less</li> <li>• &gt; 200 ppm no manure allowed; DNR approval &gt; 100 ppm fields: <ul style="list-style-type: none"> <li>• must calculate PI;</li> <li>• PI must be 6 or less over 4 year period</li> </ul> </li> <li>• Manure applications <b>50%</b> less than cumulative annual crop removal <b>over max 4 year period</b></li> <li>• No conservation plan required</li> </ul>
N management – procedures for N restricted soils	<ul style="list-style-type: none"> <li>• Reduce Fall Manure applications on W, R, P soils to 90/120 lbs N / acre. Application based on taking soil temperature (+/- 50 degrees); apply remainder of N crop need in spring or summer</li> <li>• No Fall Commercial N applications (30 lb cover crops exception)</li> <li>• Spring commercial applications – split or delay application after crop establishment;</li> <li>• Use N inhibitor with ammonium forms of N</li> </ul>	<ul style="list-style-type: none"> <li>• Manure or process wastewater applications prohibited on areas of fields where groundwater of bedrock is within 24 inches of surface</li> <li>• If groundwater or bedrock &gt; 24 inches depth, follow NRCS 590 requirements for W or R soils.</li> <li>• Requires verifying groundwater or bedrock depth prior to application – DNR guidance available</li> </ul>
Nutrient Credits	<ul style="list-style-type: none"> <li>• Take 1<sup>st</sup> year manure credits; second year recommended</li> <li>• Take 1<sup>st</sup> and 2<sup>nd</sup> year <u>legume</u> credits</li> </ul>	<ul style="list-style-type: none"> <li>• Take 1<sup>st</sup> and 2<sup>nd</sup> year <u>manure and legume</u> credits</li> </ul>

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SWQMAs – definition + manure application restrictions	<ul style="list-style-type: none"> <li>• 300 ft from navigable waters consisting of perennial streams, using USGS topo map</li> <li>• 1000 ft from lake, pond, flowage</li> <li>• Use Table 1 for surface manure applications within SWQMA and additional practices (veg buffers, 30% residue, incorporate within 72 hrs, cover crop establishment)</li> </ul>	<ul style="list-style-type: none"> <li>• 300 ft from OHWM of navigable waters (i.e.rivers, perennial or intermittent streams, ditches) using USGS topo map and conduits to navigable waters (ditches, flow channels, grassed waterways that discharge directly to navigable waters)</li> <li>• 1000 ft from navigable lake, pond, flowage</li> <li>• Select specific NR 243 SWQMA option for each field; where applicable apply NRCS 590 Table 1 criteria within SWQMA.</li> <li>• 25 ft wetland setbacks.</li> </ul>
Winter spreading (frozen or snow covered ground)	<ul style="list-style-type: none"> <li>• Winter Spread Plan</li> <li>• No application within SWQMA- solids or liquids</li> <li>• No application within areas ID in conservation plan</li> <li>• Liquid manure limited to 7000 gallons per acre</li> <li>• No nutrients on slopes greater than 9% except for manure on slopes up to 12% where contoured or contour strip cropped.</li> </ul>	<ul style="list-style-type: none"> <li>• Solid Manure prohibited between Feb 1 – March 31</li> <li>• Surface Liquid Manure applications prohibited.</li> <li>• See NR 243.14 (6-8) for more restrictive requirements for winter spreading (i.e., limited application rates, calculating acute PI, setbacks from SWQMA’s and conduits to groundwater, slope restrictions, etc</li> <li>• 590 Winter Spread Plan</li> <li>• Prohibited on fields with soils 60 inches or less over fractured bedrock</li> </ul>
Drinking Water Well setbacks	<ul style="list-style-type: none"> <li>• 50 ft setback for all wells</li> </ul>	<ul style="list-style-type: none"> <li>• 100 ft setbacks drinking water wells</li> <li>• 1000 ft setback for municipal wells</li> </ul>
Conduits to GW setbacks	<ul style="list-style-type: none"> <li>• 200 ft setback for <u>upslope areas</u> that flow towards conduits unless incorporated within 72 hrs</li> </ul>	<ul style="list-style-type: none"> <li>• 100 ft standard setbacks</li> <li>• 200 ft setback for upslope areas that flow towards conduits unless incorporated within 72 hrs</li> </ul>
Manure on saturated soils	<ul style="list-style-type: none"> <li>• Prohibited within SWQMA</li> </ul>	<ul style="list-style-type: none"> <li>• Prohibited over entire field</li> </ul>
Manure Ponding, Runoff or Drainage to Subsurface Tiles	<ul style="list-style-type: none"> <li>• Prohibited</li> </ul>	<ul style="list-style-type: none"> <li>• Prohibited during dry weather. Wet weather prohibition, except under ag stormwater/25yr-24 hr precip event; VERY limited situation</li> </ul>

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Manure Ponding, Runoff or Drainage to Subsurface Tiles	<ul style="list-style-type: none"> <li>Prohibited</li> </ul>	<ul style="list-style-type: none"> <li>Prohibited during dry weather and wet weather except for EPA ag stormwater/25yr-24 hr precip event; applies in VERY limited situations</li> </ul>
Responses for Manure Ponding, Runoff or subsurface tile drainage	<ul style="list-style-type: none"> <li>Stop application</li> <li>Take corrective action to prevent offsite movement</li> <li>Modify application to eliminate offsite movement</li> <li>Notify DNR of spill/release</li> </ul>	<ul style="list-style-type: none"> <li>Same</li> </ul>
Drain Tile Fields	<ul style="list-style-type: none"> <li>No discharge of manure</li> </ul>	<ul style="list-style-type: none"> <li>ID tiles to maximum extent practicable.</li> <li>Monitor tile outlets to verify no manure discharges from tile fields</li> </ul>
Concentrated Flow Channels	<ul style="list-style-type: none"> <li>No manure applications allowed within flow channels; Must ID on spreading maps</li> </ul>	<ul style="list-style-type: none"> <li>Same</li> </ul>
Flow Channel Procedures	<ul style="list-style-type: none"> <li>Must check for presence each year and ID on maps;</li> <li>no manure applications allowed within flow channels;</li> <li>all known channels must be established in perennial vegetation in all areas of conc. flow resulting in reoccurring gullies</li> </ul>	<ul style="list-style-type: none"> <li>Same</li> </ul>
Incorporation time	<ul style="list-style-type: none"> <li>72 hours</li> </ul>	<ul style="list-style-type: none"> <li>48 hours, unless within SWQMA, then immediate</li> </ul>
Nutrient Management over rotation (T, P management)	<ul style="list-style-type: none"> <li>Requires NM plan to include all of rotation. May be mix of real and planned data.</li> </ul>	<ul style="list-style-type: none"> <li>Minimum 5 year permit term; but may be longer. May be mix of real and planned data.</li> </ul>
NM plan must be consistent with A2809	<ul style="list-style-type: none"> <li>Yes, some exceptions apply for fields using soil test P and potato crops</li> </ul>	<ul style="list-style-type: none"> <li>Same</li> </ul>
Manure Storage Requirements	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>180 days liquid storage, based upon herd size; must maintain capacity over time</li> </ul>
Fields Exceeding rotational T	<ul style="list-style-type: none"> <li>Nutrient applications prohibited</li> </ul>	<ul style="list-style-type: none"> <li>Same</li> </ul>

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Weather forecasts and manure applications	<ul style="list-style-type: none"> <li>• Recommends option of using weather forecast as tool to prevent large nutrient losses</li> </ul>	<ul style="list-style-type: none"> <li>• Requires using/tracking weather forecasts when surface applying manure. Must select forecasted rain event (size) that will likely cause field runoff &amp; avoid</li> </ul>
Nutrient Impaired and Outstanding or Exceptional Resource Waters	<ul style="list-style-type: none"> <li>• No requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Must evaluate field proximity to such waterways and manage P to reduce delivery to such waters</li> </ul>
Pastures	<ul style="list-style-type: none"> <li>• Must meet T</li> <li>• Pasturing must maintain vegetative cover over entire area and vegetation must be primary food source for animals</li> <li>• Animals managed to avoid routine concentration of animals within same area of field.</li> <li>• Nutrients deposited as manure by animals must be calculated to verify they do not exceed N &amp; P 590 requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Must meet T</li> <li>• Pastures must be managed in large open areas, that is not adjacent to, or connected to, CAFO production area and where stocking densities, management systems and management of feed sources ensure sufficient vegetative cover is maintained over entire area at all times. Pastures are not animal feeding operations, nor are they considered CAFO outdoor vegetated areas</li> <li>• Soil test result may require using PI</li> </ul>
Nutrient Management over rotation (T, P management)	<ul style="list-style-type: none"> <li>• Requires NM plan to include all of rotation. May be mix of real and planned data.</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum 5 year permit term; but may be longer. May be mix of real and planned data.</li> </ul>
Maps	<ul style="list-style-type: none"> <li>• Soil and aerial map of all fields, facility</li> </ul>	<ul style="list-style-type: none"> <li>• NR 243 requirements often require more maps to meet more restrictive land spreading requirements</li> </ul>
Record Keeping and Reporting	<ul style="list-style-type: none"> <li>• Complete manure and soil testing; calibrate equipment</li> <li>• Track methods, rates, tillage, practices actually implemented</li> <li>• Revise plan annually</li> </ul>	<ul style="list-style-type: none"> <li>• More specific manure testing requirements; calibrate annually</li> <li>• Track methods, rates, tillage, practices actually implemented using DNR forms and submit annual reports to DNR using DNR forms.</li> <li>• Revise plan annually and submit to DNR</li> </ul>

*Please be advised that this document is intended from DNR to be used solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.*