

**Blue Earth River Watershed CSP****NUTRIENT AND PEST MANAGEMENT CHECKLIST****NUTRIENT MANAGEMENT CHECKLIST**

Place an "X" in the box next to each question if you can answer yes.

- Do you have **Field Specific Records** of Nutrient Management Activities for the **past 2 years**?  
This documentation includes:
- An Annual Field Specific Nutrient Management Plan
    - crops and yields,
    - planting and harvest dates
    - commercial fertilizer and manure applications (including rates, timing, nutrient content, and method of application and incorporation)
  - Additional requirements if you have livestock manure:
    - quantity of manure and other organic products produced annually
    - acres needed and available for nitrogen and phosphorus based manure applications (estimates will be submitted within 6 months of acceptance into CSP)\*
    - manure removed from system for feeding, energy production or export from the operation
    - quantity of manure transported off-site to land not owned or controlled and name and address of commercial hauler or applicator receiving this manure
- Do you have current **soil test results** for all eligible fields?
- no older than 4 years
  - analyzed for pH, organic matter (O.M.), phosphorus (P), and potassium (K) at a minimum
  - samples represent no more than 40 acres
  - from a Minnesota Department of Agriculture (MDA) certified soil-testing lab  
<http://www.mda.state.mn.us/appd/soilabs.htm>
    - If not, you must submit new soil test results from a certified lab in time to use those results when developing a nutrient management plan for the 05 crop year.\*
- Do you have current **manure test results** from each manure source?
- no older than 1 year
  - analyzed for total N, P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O at a minimum
  - from a Minnesota Department of Agriculture (MDA) certified manure-testing lab  
<http://www.mda.state.mn.us/appd/manurelabs.htm>
    - If not, new analyses will be submitted from a certified lab in time to use those results when developing a nutrient management plan for the 05 crop year.\*
- Have you determined **realistic yield goals**?
- Take yields for the last five years, drop the lowest yield, and average the four remaining yields.
- Do you base **Crop N, P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O fertilizer and/or manure application rates on University of Minnesota (UofMN) fertilizer recommendations** (BU-6240-GO Fertilizer Recommendations for Agronomic Crops in Minnesota (or analogous crop specific bulletins)?)
- Do these rates account for nutrients provided by **previous legume crops and past manure applications**?

- Are application rates within **15 pounds per acre** of these recommendations?

Is your manure and fertilizer **application equipment calibrated**?

If you **fall apply commercial N fertilizer, applications:**

- Are made after the **soil temperature** at a 6" depth are **below 50° F** (Approx. Nov. 1).
- do not contain **nitrates**.
- are not made to soils in the textural classes of **loamy sand and sand**. Sidedress or split-applications are used.
- are not made within the source water management areas for the cities of **Fairmont and Mankato**. Spring-preplant application of anhydrous ammonia or urea is preferred.

Have you identified or will you identify\* areas **sensitive** to nutrient applications?

- streams, lakes, public water wetlands
- water supply wells, mines, quarries, sinkholes
- coarse textured soils, frequently flooded soils, shallow water table and bedrock areas
- surface inlets to drainage systems.

\* in time to develop a nutrient management plan for the 05 crop year.

**Have you implemented Manure Best Management Practices (most are state law) in sensitive areas?**

- **Manure applications are based on crop P<sub>2</sub>O<sub>5</sub> removal** where required by Minn. state law or results of a Minnesota NRCS Phosphorus Loss Assessment. This includes fields without field edge filter strips if those fields have soil test phosphorus values greater than 21 ppm Bray 1 (16 ppm Olsen) and are within 300 feet of lakes and streams.
- **No manure is applied** in road ditches; within 25 feet of lakes, perennial and intermittent streams and public water wetlands and within 50 feet of water supply wells, mines, quarries, sinkholes receiving surface runoff, or other direct conduits to groundwater. No traveling gun or center pivot manure applications within 300 feet of lakes, perennial and intermittent streams and public water wetlands.
- **No wintertime manure applications** (ground is frozen, snow-covered, or actively thawing) within 300 feet upslope from lakes, perennial and intermittent streams and public water wetlands. Additionally no wintertime application on any field with sheet and rill soil losses greater than 4 tons/acre/year (solid manure) or greater than 2 tons/acre/year, (liquid manure).
- **Manure is injected or incorporated within 24 hours** upslope from and within 300 feet of surface tile intakes, water supply wells, mines, quarries, sinkholes receiving surface runoff, or other direct conduits to groundwater; or on fields within 25 feet of lakes, perennial and intermittent streams and public water wetlands if those fields do not have field edge filter strips.
- **No manure is applied during usual peak flood periods on "frequently" flooded soils** (floods 50-100 times in 100 years).
- **Fall manure applications on coarse textured soils are delayed until after November 1.**
- **A 15 inch or greater separation is maintained** between applied manure and fractured bedrock or high water table.

Have you conducted an **environmental assessment** to evaluate the potential impacts of your manure applications?

- If not, you will need to complete the NRCS Phosphorus Loss Assessment in time to use those results when developing a nutrient management plan for the 05 crop year.\*

## PEST MANAGEMENT CHECKLIST

- Do you have detailed **Field Specific Record** of Pest Management Activities for the **past 2 years**?  
This documentation includes:
- crop and identified pest problem
  - control applied, date applied and results of control
  - if pesticides were used, pesticide brand name, EPA registration number, active ingredient and rates applied
- Do you store, handle, transport, mix, and dispose of all pesticides, pesticide containers, unused pesticides and rinsate in accordance with **state law and safe handling procedures**?  
This includes the following:
- Approved anti-backsiphoning devices in place when using wells and other water supplies to fill application equipment
  - Setbacks from sensitive areas maintained when mixing or loading pesticides or cleaning application equipment. Setbacks vary dependent on state law but are often 150 feet.
  - Compliance with worker protection standards
- Do you implement the concepts and principles of **Integrated Pest Management (IPM)** into your pest management plan?  
These include:
- Promoting crop and forage tolerance to pests by planting in a timely manner and providing proper nutrients, water and soil conditions that favor rapid establishment and vigorous growth.
  - Using disease and weed free seed used to prevent introduction of pests into fields
  - Selecting plant varieties that are resistant to pests and adapted to growing seasons and hardiness in respective areas of the state
  - Consulting **Varietal Trials of Selected Farm Crops**, published annually by the Mn. Ag. Exp. Stations/UofM for information on hardiness and resistance to certain pests
  - Regularly scouting fields to properly identify pest conditions, need for control and timing of control (frequency dependent on pest)
  - Using economic injury levels (EIL) and economic treatment level thresholds when available to determine if control is necessary
  - Using multiple pest control methods including effective biological, mechanical, cultural and chemical pest controls
  - Using product effectiveness information to help select pesticides. The Univ. of Minnesota annually publishes bulletins describing control effectiveness of various pesticides (e.g. **Cultural and Chemical Weed Control in Field Crops**)
  - Following all label requirements when using chemical control treatments
  - Calibrating application equipment before mixing and loading pesticides at the beginning of each season and any time nozzle type is changed. Worn nozzle tips and hoses and faulty gauges are replaced
- Have you identified or will you identify\* **areas or features sensitive** to pesticide applications?  
Those areas or features include:
- shallow soils over water tables and fractured bedrock
  - coarse textured soils and other soils with a high NRCS pesticide leaching or runoff rating
  - wells
  - sinkholes
  - surface waters
  - tile inlets

- land within Source Water Assessment boundaries for the cities of Fairmont and Mankato (maps attached)  
\* in time to use this information when developing a pest management plan for the 05 crop year.\*

- Have you conducted or will you conduct an **environmental assessment** to evaluate the potential impact of your pesticide applications (herbicides, insecticides, fungicides, etc.) and have you implemented or will you implement mitigation practices when applicable (Intermediate, high or Extra High hazard ratings)? See list of mitigation practices below.
- NRCS Windows Pesticide Screening Tool (WIN-PST) assessment must be completed in time to use those results when developing a pest management plan for the 05 crop year.\*

- Have you implemented mitigation practices to minimize the potential environmental impacts of pesticides designated as **common detection** by the Minnesota Department of Agriculture (MDA)? .
- Current list includes Acetochlor, Alachlor, Atrazine, Metolachlor and Metribuzin

Mitigation practices include one or more of the following:

- a) using low end of label rate ranges
- b) timing of applications to reduce potential for movement in runoff or leaching
- c) band applying, spot treating or variable rate applying where appropriate
- d) using companion crops, cover crops and crops residues, when appropriate, to suppress weed growth
- e) using crop cultivation and shallow tillage operations to control annual and biennial weed seedlings
- f) installing additional erosion and runoff control measures to minimize off-site movement of applied pesticides
- g) establishing vegetated buffer areas which separate normal crop production practices from sensitive features such as sinkholes, wells, streams, lakes, waterways and tile inlets

**If you have answered YES to all of the above, please record this information from the past 2 years on the NRCS Nutrient and Pest Management Practices Documentation form.**

**\* You can answer yes to questions followed by asterisks if you will submit the required information within the specified timeframe.**

**For additional detail on nutrient and pest management requirements consult the following references available on-line on the NRCS-Minnesota home page at: <http://www.mn.nrcs.usda.gov/technical/>**

- NRCS-Minnesota Conservation Practice Standards “Nutrient Management” (Code 590), “Waste Utilization” (Code 633), and “Pest Management” (Code 595)
- NRCS Minnesota Amendment MN19 to 180-VI National Planning Procedures Handbook, dtd. August 2003. This amendment addresses baseline, comprehensive and field specific nutrient management planning
- NRCS-Minnesota Amendment MN6 to 180-VI National Planning Procedures Handbook, dtd. 1999. This amendment describes Minnesota NRCS Pest Management Planning Policy

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