



Customer Name: _____
 CNMP Preparer's Name: _____
 CNMP Reviewer's Name and Date: _____

COMPREHENSIVE NUTRIENT MANAGEMENT PLAN REVIEW CHECKLIST FOR CERTIFIED CNMP PROVIDERS			
COMPONENT	Yes	No	NA
1. Overview - Brief statement describing the farm operation including enterprises, type of operation, tillable acres, and number of livestock. Indicate if expansion is planned.			
a. Signature page is completed (who did what).			
b. Identify specific water quality concerns.			
c. Statement that a change in livestock numbers and/or land needs requires the plan to be updated. Plan should be reviewed annually.			
d. Farm is over 5,000 Animal Units, statement of working with MDEQ to obtain a groundwater discharge permit. (Include a copy of the producers' letter requesting a groundwater discharge pre-application meeting with MDEQ in the CNMP appendix.)			
2. Farm Headquarters Map - Site map showing locations of farm buildings, animal housing, manure storage facilities, other sources of manure and wastewater, feed storage, livestock travel lanes, nearest crossroads, well(s), distance(s) from any waste storage facilities to well(s) within 800 feet, surface water, North arrow, prevailing wind, fertilizer storage, and farm house(s); along with any other relevant physical features.			
3. Evaluation of Existing Component Letter			
4. Animal Outputs			
A. Production - Identify species, average weight, average total head of livestock, and total amount of manure produced for each location.			
a. Total amount of wastewater, wash water, any process wash water, and other organic by-products generated.			
b. Manure and wastewater nutrient content and quantity for each animal group based on either MWPS-18 (book values) or feed ration mass balance for N, P ₂ O ₅ , and K ₂ O. Manure dilution and additions of rain, wash water, bedding, etc. for adjusted volume and nutrient contents of each storage. May be based on reliable manure samples and producers' records of volumes.			
c. Time animals are in confinement (if not total confinement).			
d. Type and amount of bedding.			
e. Milk house and parlor wastewater.			
f. Water from plate coolers/supplemental cooling.			
g. Runoff from feedlot/barnyard.			
h. Stored manure in quantity (ft ³ , tons, gallons), storage location, and characteristics (solid, semi-solid, liquid).			
i. Stored livestock feed areas.			
j. Silage leachate (volume/ft ³ of silage stored) (where is it going?).			
k. Spoiled feed.			
l. Supporting calculations (method(s) used).			
m. Identify existing water control devices (diversions, roof gutters) to reduce amount of polluted water.			
n. Animal mortality management.			
o. Animal veterinary waste management.			
B. Collection (if not through slats)			

COMPONENT	Yes	No	NA
a. Manure and wastewater collection method(s).			
b. Location of collection points.			
c. Frequency of collection (daily, weekly, monthly, etc.).			
d. Identification of equipment and/or structural facilities needed.			
C. Storage - Any containment facilities of manure and wastewater (including temporary).			
a. Type of storage description.			
b. Location and size of storage facility(s) (dimensions, total, and useable).			
c. Storage total and useable capacity:			
- Volume (ft ³ , gallons)			
- Planned duration of storage time (days, months, or years)			
d. Isolation distance from waste storage facilities to well(s) is addressed.			
e. Assess volume and site suitability for storage:			
- Existing			
- Planned			
f. Means to measure freeboard.			
D. Treatment			
a. Type (composting, chemicals).			
b. Nutrient content.			
c. Capacity of treatment facility(s) in volume (ft ³ , gallons).			
d. Location of treatment facility(s) or equipment.			
E. Transfer - The movement and transportation of manure and wastewater from one point to another.			
a. Method (injection, incorporation, irrigation, etc).			
b. Frequency/Schedule (daily, weekly, etc).			
c. Structures or equipment needed.			
d. Capacity of spreading equipment (if custom applicator - attach details of application rates, i.e., irrigation).			
5. Conservation Practices on Fields Used for Manure Application			
a. Maps showing the field and property boundaries, land use and acres of each field, scale of the map, data needed to locate the specific land unit (such as state, county, township, and section numbers), date prepared, and North arrow.			
b. Soils maps with legends for all fields that will receive manure.			
c. Calculations or other documentation to show soil erosion levels are within "T" (RUSLE2), Wind Erosion Equation (WEQ).			
d. Existing conservation and management practices.			
e. Needed conservation and management practices (e.g., abandoned well closure, setbacks, filterstrips, diversions, roof gutters, etc.).			
f. Identified risks by field.			
g. Table or map to define field sensitive areas (sinkholes, streams, wells, surface inlets, property boundaries, water bodies, setbacks, etc.). Field maps show subsurface tile outlets.			
h. Identification of fields for winter spreading.			
i. Irrigation water management.			
6. Land Application Management			
a. MARI or other method to determine winter spreading.			
b. Nutrient budget for crop plan of N, P, and K from all sources, fertilizer, manure, and past nitrogen fixing crops.			
c. Rates of application based on N or P as limiting nutrient. Commercial fertilizer needs.			
d. Crops to be grown, and yield goals.			
e. Crop yield goals, 50% achievable by records or soil management groups.			
f. Crop removal rate of N, P, and K by total acres and yield goal.			
g. Soil tests are current, 3 years or better.			
h. Describe method used for taking soil test samples.			
i. Describe method used for taking manure test sample(s).			
j. Planned dates of nutrient application (season, day, or calendar).			

COMPONENT	Yes	No	NA
k. Tissue Test (required for fruit).			
l. Fertilizer recommendations are consistent with MSU/Tri-State recommendations for field crops.			
m. Nitrogen leaching area identification (required if MARI is not used).			
n. Nitrogen leaching management strategies to prevent groundwater pollution (where applicable).			
o. Identify fields by Bray P ₁ , following GAAMPs.			
p. P risk identification and P management strategies.			
q. Land application of manure and nutrients does not exceed nitrogen crop demand on low testing P fields. (If soil tested, this is taken care of on organic soils.)			
r. Manure rate (does NOT exceed 2 year P removal (when over 150 lbs/ac Bray P ₁)).			
s. PSNT used (optional). N credit taken.			
t. Discussion on farm long-term sustainability based on expected P generated annually based on As-Excreted or Feed Rations Mass Balance compared to crop removal of acres in plan.			
u. A detailed, field-by-field nutrient budget for one crop year plus a spreading window of opportunity plan (see Q&A document) of all manure spread.			
7. Record of CNMP Implementation listed in CNMP and kept on file at the farm (this is a list of the records that the operator needs to maintain)			
a. Maintain records for 5 years (where will records be kept, computer program (MMP, MSUNM), files).			
b. List of Records to be kept by field include:			
- Map of fields (aerial photo, soil map, or other)			
- Current crop			
- Realistic crop yield goals			
- Soil test reports			
- Total volume of manure produced based on number of loads			
- Date(s) of manure/wastewater application(s) (calendar)			
- Source, rate, and form of manure/wastewater applied			
- Date, rate(s), and form of other nutrients applied			
- Date(s) of incorporation			
- Method of application (e.g., surface applied, injected, irrigated)			
- Acres and area of field nutrients applied			
- Weather conditions during application of manure (e.g., sunny 70°F)			
- Field conditions during application of manure (wet, dry, frozen, etc.)			
- Recommended nutrient application rates			
- Previous crops grown and yields			
- Plant tissue sampling and testing reports (where applicable)			
- Pre-Sidedress Nitrate Test (PSNT) reports (where applicable)			
- Complete N, P, and K nutrient budget by field			
c. Other records:			
- Manure/wastewater quantities produced and nutrient analysis results			
- Inspection and maintenance records			
- Records of rental agreements or other agreements for application of manure/wastewater on land not owned by the producer			
- Record of manure/wastewater sold or given away to other landowners			
8. Inputs to Animals – Feed Management			
a. Phytase or managed phosphorus intake rations.			
b. Heavy metal risk with manure (e.g., copper in hog feed).			
9. Alternative Utilization			
a. Sold manure for land application.			
b. Power generation (e.g., methane production, combustion for energy).			
c. Conversion to value - added products (e.g., compost).			
10. Odor Management			
a. Odor management is addressed in the CNMP and consistent with RTF GAAMPs.			

COMPONENT	Yes	No	NA
11. Inspection, Operations & Maintenance, Training			
a. Schedule for inspection of structural and vegetative practices and equipment.			
b. Operation and maintenance practices/activities.			
c. Schedule for review of management practices/activities to ensure implementation of the plan.			
d. Plan for training employees how to follow the CNMP (new hires; new processes, procedures, or equipment).			
e. Calibration of manure application equipment or other plans for verification of field application rate(s).			
12. Schedule of Implementation			
a. New components that are planned and the implementation schedule for each new component.			
b. Annual review and update of plan.			
c. Update plan a minimum of once every 3 years or per soil test needs.			
d. Plans for addressing water quality concerns identified in the plan.			
13. Emergency Action Plan			
a. Actions to take in the event of a spill, discharge, or failure of a collection, storage, or treatment of transfer component.			
b. Telephone numbers to report and seek assistance in the event of an emergency.			
c. Anticipated flow path in the event of a spill, discharge, or failure.			
d. Show anticipated flow path and/or emergency equipment on a site map.			
14. References - Sources of information cited/used in development of the plan.			
15. Appendices			
a. Copies of pertinent references cited in the plan.			
b. Environmental documentation, as appropriate.			
c. Other appropriate supporting documents not included in other parts of the plan (i.e., worksheets, forms, etc.).			

This CNMP Review Checklist has been developed and approved through MAEAP. When a CNMP follows this checklist it will help the farm operator/owner in complying with GAAMPs developed and adopted under the Michigan Right to Farm Act, including the GAAMPs for Manure Management and Utilization, and Site Selection and Odor Controls for New and Expanding Livestock Production Facilities. In addition, the CNMP conforms to the USDA-NRCS Technical Guidance for developing CNMPs which includes meeting NRCS technical standards for structural conservation practices proposed and all management activities in the CNMP.

Note: This is the June 30, 2004, version. The Checklist and following explanation pages (CNMP Review Checklist 6-30-2005.doc) were edited for usability but not content June 30, 2005. Revisions effective June 30, 2004, are included but are not shown in blue italics.

COMPREHENSIVE NUTRIENT MANAGEMENT PLAN REVIEW CHECKLIST INSTRUCTIONS FOR CERTIFIED CNMP PROVIDERS

The primary use of this checklist is for the review of a CNMP by an agency or organization that certifies CNMP Planners. The goal of this checklist is to provide consistency between CNMP reviewers. The use of this revision will be effective on June 30, 2004.

This checklist is available for optional use by a Certified CNMP provider to verify plan completeness.

This instruction sheet is intended to explain the required elements of a complete CNMP. Inadequate information for any component or sub-component would be considered a "No" in the checklist. Items that are not applicable to the specific operation shall be marked "NA." Where the "NA" column is shaded, "Not Applicable" is unacceptable for a certified Comprehensive Nutrient Management Plan.

The signature page must be signed prior to submission of the CNMP for acceptance.

1. **Overview** - All items for this component of the CNMP need to be addressed. If the farm is over 5,000 animal units, then a copy of the producers' letter requesting a ground water discharge pre-application meeting with MDEQ needs to be included in the CNMP appendix. The Overview would acknowledge working with MDEQ to obtain a groundwater discharge permit (Water Division of DEQ).
2. **Farm Headquarters Map** - The farm headquarters map provides a link with the CNMP narrative to show a visual of how the farm is set up while the CNMP describes the flow of management. The farm site map is an overall view of the farm production site(s) with all building(s), storage facilities, feed storages, livestock travel lanes, wells, fertilizer storage, and other system components that are given in the CNMP narrative that also need to be identified on the site map. In order for others to follow the plan, the site map labeling needs to be consistent with the CNMP narrative. The location of any well within 800 feet of any waste storage facility on the farm needs to be included along with the distance identified between each well and each waste storage facility. The site map may be a well drawn sketch identified as "not to scale" or an identified scale. One may also be inclined to use computer aided drafting and/or a complete site survey for drawing the farm headquarters map but it is not required.
3. **Evaluation of Existing Components** - Existing components are the manure and wastewater handling and storage structures and equipment at the facilities where the livestock are housed. Existing components must be evaluated to assure that they are consistent with the safety guidance of the CNMP; they are consistent with technically sound practice; failure will not impair the structural integrity or operation of new components; they are in good operating condition; and they can be managed as part of the CNMP. This documentation needs to be signed and dated by the person(s) conducting the evaluation.
4. **Animal Outputs** -
 - A. **Production** - All animals should be accounted for in the production quantities. Instances where animals may not be accounted for (i.e., calves) shall be identified within the plan. Since animal numbers are in continuous flux over time, the

production calculations should reflect the average animal numbers held on that operation.

- B. Collection** - Each item of this component needs to be addressed.
 - C. Storage** - This addresses containment of manure and wastewater. Where waste containment is not used on a facility, the plan needs to support why storage is not needed.
 - D. Treatment** - This is an optional component and may not be applicable.
 - E. Transfer** - Transfer is defined as the movement and transportation of manure and wastewater from one point to another. Each item in this component needs to be addressed.
- 5. Conservation Practices on Fields Used for Manure Application** - The description and/or table(s) must address each item on the checklist except where it is stated, "Not Applicable."
 - 6. Land Application Management** - The narrative and/or table(s) need to address each item on the checklist except where Not Applicable.
 - 7. Record of CNMP Implementation** - This is a list of records that the operator needs to maintain on file for 5 years. This list should be included in the CNMP as a reference for the operator.
 - 8. Inputs to Animals - Feed Management** - This is an optional component and may not be applicable.
 - 9. Alternative Utilization** - This is an optional component and may not be applicable.
 - 10. Odor Management** - Describe in the CNMP how odors will be managed in conformance to Right-to-Farm GAAMPs.
 - 11. Inspection, Operation & Maintenance, Training** - The narrative and/or table(s) must address all items on the checklist.
 - 12. Schedule of Implementation** - The narrative and/or table(s) need to address each item on the checklist.
 - 13. Emergency Action Plan** - The plan description and/or table(s) need to address each item on the checklist.
 - 14. References** - Sources of information cited and/or used in the development of the CNMP are listed or included.
 - 15. Appendices** - Pertinent references, calculations, and supporting documentation in the development of the CNMP are included.
 - 16. CNMP Planner Review** - This is a critical component for quality assurance in the development of a CNMP. The CNMP reviewer(s) shall submit a report to the CNMP planner on any revisions that are needed in order for the CNMP to be approved.