



Cropping System for Field Crop and Vegetable Verification Checklist

A boxed risk level indicates the level required for environmental assurance verification.

Bold black print indicates a violation of state or federal regulation.

Bold blue italic print indicates a management practice consistent with a specified 2017 Right to Farm (RTF) Generally Accepted Agricultural Management Practices (GAAMPs).

(Revised Date: 9-26-17)

NUTRIENT MANAGEMENT PRACTICES - GENERAL

RISK QUESTION	LOW RISK – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE FOR MAEAP VERIFICATION	MEETS CRITERIA
1.00 Has there ever been a formal Right to Farm complaint against the farm?	There has never been a Right to Farm complaint or the concern was not verified or the concern was resolved.		There was a formal Right to Farm Complaint and the concern was not resolved.	Producer's verbal indication of compliant history.	YES NO N/A
1.01 How often are fields tested for nutrient levels (P, K, Ca, Mg and pH)?	<i>All fields are sampled and tested on a regular basis,</i> at 1 to 4 years, depending on crops being grown, and the cropping system.	Most fields are sampled and tested every 1 to 4 years. Producer plans to bring all field soil tests up to date. Manure is not applied to fields without a current soil test.	Fields have not been tested within the past 4 years.	Field names or map. Acres in the cropped portions of the field. Up-to-date soil test reports, or schedule to bring all test us to date.	YES NO N/A
1.02 Do soil sampling procedures adequately represent field conditions?	One composite sample is taken from uniform field areas of 15 to 20 acres or from uniform management areas.	One composite sample is taken from uniform field areas of 20 to 40 acres.	One composite sample is taken from areas greater than 40 acres.	Predominant soil types/soil maps. Cropping histories. Proper soil sampling procedure.	YES NO N/A
1.04 How are crop yield goals established?	Realistic yield goals (achieved 50% of the time) are established based on soil potential and level of crop management.	No yield goals are established.	Excessively high yield goals that have never been achieved.	Previous crops grown over the past three to five years. Actual harvest yields or estimated yields. Running average yield for each of the crops commonly grown in the field. Realistic yield goals for each crop.	YES NO N/A

Comments:

NUTRIENT MANAGEMENT PRACTICES – GENERAL (CONTINUED)

RISK QUESTION	LOW RISK – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORD OR EVIDENCE FOR MAEAP VERIFICATION	MEETS CRITERIA
1.05) How are all sources of nutrients considered when making fertilization decisions?	<i>Credit taken for nutrients supplied by organic matter, legumes and manure or other biological materials</i> (biosolids). Fertilizer rates are reduced accordingly.	When organic matter, legumes manure or other biological materials (biosolids) are used, fertilizer rates are sometimes reduced.	When organic matter, legumes, manure or other biological materials (biosolids) are used, rates are not reduced.	Written records indicate nutrient credits utilized.	YES NO N/A
1.06) How are fertilizer application rates determined?	<i>Consistent with Michigan State University</i> (MSU) <i>recommendations</i> . When MSU recommendations are not available, other land-grant university recommendations developed for the region may be used.	Fertilizer rates are based on soil testing lab recommendations but not consistent with MSU recommendations.	Fertilizer application rates not based on soil testing. Application rates often or always exceed MSU recommendations or crop removal rates.	Applications consistent with MSU recommendations (MSU soil test printout or calculated MSU recommendations on file.) When MSU recommendations are not available, other land-grant university recommendations developed for the region may be used.	YES NO N/A
1.07) How are nutrient management plans for each field annually developed and followed?	Annual nutrient plan is developed for each field that meets crop nutrient needs and minimizes loss of nutrients to the environment.	A nutrient plan is developed each year for each crop species with like yield goal and crop rotation. Soil tests are up to date.	Nutrient plan is not developed, or the same plan is used for more than four years.	Annual nutrient plan by field or by crop grown.	YES NO N/A
1.08) Is fertilizer application equipment checked for proper adjustment?	<i>Application equipment is checked for rate of application and placement</i> . Over, and under applications are monitored and corrected.		Application equipment is not checked.	Name of person responsible for fertilizer applicator adjustments and the dates of adjustments.	YES NO N/A

Comments:

NUTRIENT MANAGEMENT PRACTICES – GENERAL (CONTINUED)

RISK QUESTION	LOW RISK – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORD OR EVIDENCE FOR MAEAP VERIFICATION	MEETS CRITERIA
1.09) What soil nutrient management records are kept?	Records of soil test reports and quantities of nutrients applied to individual fields are maintained. Also crop yields are recorded for evaluating performance and setting future yield goals.	Partial nutrient management records are kept. Complete nutrient management records will be kept in the future, for review at time of reverification.	Minimal or no nutrient management records kept.	Three years of records – or five years, if applying manure - or plans to begin keeping records. Soil fertility tests and/or plant analysis results. Previous crop grown and a yield harvested. Date(s) of application(s). Nutrient composition of fertilizer or other material used. Amount of nutrient-supplying material applied per acre. Method of application and placement of applied nutrients. Vegetative growth and cropping history of perennial crops.	YES NO N/A
1.10) When not in use, where are loaded planting and spray supply vehicles (trailers and trucks) parked to protect water resources from accidental fertilizer and pesticide spills and mischievous activities?	Supply vehicle is returned to a secure location when not in use. Fertilizer and pesticides (including treated seed) are properly stored more than 150 feet down gradient from any well.		Fertilizer and pesticide (including treated seed) supply vehicle is left in an unsecured location. Or, Fertilizer and pesticides are stored less than 150 feet from any well. ¹	Map showing where vehicle should not be parked adjacent to any well. No evidence vehicles left in an unsecured location.	YES NO N/A
PHOSPHORUS MANAGEMENT PRACTICES					
1.14) How are Phosphorus (P) fertilization rates determined?	Based on soil tests or plant tissue analysis using Michigan State University recommended rates.	P fertilization is based on past practices, without regard to soil test P levels.	P fertilization is based on applying as much as is affordable to ensure the best possible yields.	P management consistent with Nutrient Management GAAMPs. Note: When soils have a Bray P1 test of 80-100 lbs./acre (40 to 50 ppm), fertilizer recommendations for P205 will likely be zero for most crops and yields grown in Michigan.	YES NO N/A

Comments:

NUTRIENT MANAGEMENT PRACTICES – GENERAL (CONTINUED)

RISK QUESTION	LOW RISK – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE FOR MAEAP VERIFICATION	MEETS CRITERIA
MANURE MANAGEMENT PRACTICES (IF YOU DO NOT USE MANURE, SKIP THIS SECTION.)					
1.18) What manure management records are maintained?	Complete application <i>records of manure analysis, soil test results and rates of manure application for individual fields are maintained.</i>	A minimum of one season of manure application records, or partial application records have been kept. Complete manure application records will be kept immediately and will be available for review at the time of re-verification.	Minimal or no records are maintained.	Additional nutrient management records that are needed. <ul style="list-style-type: none"> • Date(s) of manure application and incorporation when applicable. • Rate of manure application. • Weather conditions during application of manure (e.g., sunny, 70°F). • Field conditions during application of manure (wet, dry, frozen, etc.) • Manure/wastewater quantities produced and nutrient analysis results. • Records of rental or other agreements for application of manure/wastewater on land not owned by the producer. • Records of manure/wastewater sold or given away to other landowners. 	YES NO N/A
1.19) How is the nutrient content of manure determined?	<i>Laboratory analysis for percent dry matter (solids), ammonium N, and total N, P and K.</i>	Book values or standard nutrient content values used.	Manure nutrient content is unknown or not considered.	All manure analyses or book values on file.	YES NO N/A
1.20) How are desired manure application rates achieved?	Manure analysis (book value, manure test or mass balance) and <i>field application rates are known.</i>		Manure application rate is not known.	Rate of manure applied known for all spreaders. Records indicate date of calibration.	YES NO N/A

Comments:

NUTRIENT MANAGEMENT PRACTICES – GENERAL (CONTINUED)

RISK QUESTION	LOW RISK – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE FOR MAEAP VERIFICATION	MEETS CRITERIA
MANURE MANAGEMENT PRACTICES (IF YOU DO NOT USE MANURE, SKIP THIS SECTION.)					
1.21) How is manure, and/or compost, generally applied to fields?	<i>Manure, and or compost, is incorporated within 48 hours or injected into the soil, and/or conservation practices (residue management, cover crops, perennial crops etc.) are used to protect against runoff and erosion losses to surface waters.</i>	Manure, and/or compost, is generally surface applied and conservation practices are employed to reduce the risk of runoff.	Manure, and/or compost, is applied in a manner that results in ponding, soil erosion losses, or manure runoff to adjacent property, drainage ditches or discharge directly to surface water. ⁴	Manure, and/or compost, application records.	YES NO N/A
1.22) How are streams, wetlands, farm ditches and other water bodies protected from manure runoff?	<i>Manure is incorporated within 48 hours or injected. Or, surface applications are not done within 150 feet of surface water.</i> Or, filter strips, riparian buffer strips, and other conservation practices are maintained between fields and surface waters on the farm and around surface water inlets.	Conservation practices are maintained on some fields.	Manure is applied within 150 feet of surface waters and not incorporated without conservation practices. And/or manure occasionally reaches neighbor's property.	Field maps with setbacks and conservation practices identified. Records of manure incorporation.	YES NO N/A
1.23) In the field, how is manure temporarily stockpiled in relation to surface water?	<i>Manure stockpiles are kept at least 150 feet from surface waters or areas subject to flooding unless conservation practices are used to protect against runoff and erosion losses to surface waters.</i>		Manure stockpiles are closer than 150 feet to surface waters or areas subject to flooding, and conservation practices are not used to protect against runoff and erosion losses to surface waters. ⁴	Appropriate temporary manure stacking demonstrated in the field for surface water protection.	YES NO N/A

Comments:

NUTRIENT MANAGEMENT PRACTICES – GENERAL (CONTINUED)

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MANURE MANAGEMENT PRACTICES (IF YOU DO NOT USE MANURE, SKIP THIS SECTION.)					
1.24) In the field, what management practices are used to reduce odors and pests from manure temporarily stockpiled?	<i>Stockpiled manure is at least 150 feet away from non-farm homes and stockpiled manure is covered with a tarp, straw, woodchips, or other materials, or additives are used to reduce odors and pests.</i>	<i>Stockpiled manure is at least 150 feet away from non-farm homes.</i>	Stockpiled manure is closer than 150 feet to non-farm homes.	Appropriate manure stacking demonstrated for odor and pest control.	YES NO N/A
1.25) In the field, how long is manure temporarily stockpiled?	<i>Manure is spread as soon as field and weather conditions allow, and does not exceed six month, or if covered with an impermeable cover, twelve months.</i>		Manure stockpiled for more than six months without a cover, or more than twelve months with an impermeable cover.	Manure not stockpiled for more than 365 days. Refer to manure application records. For CNMP's manure may be stockpiled in the field for 20 days on soils with a High N Leaching index and 90 days on soils with a Medium N Leaching index. NRCS Standard 634.	YES NO N/A
1.26) How are manure nitrogen (N) application rates managed?	<i>Manure and N fertilizer are applied at rates that do not exceed the N requirements of the crop and are credited toward fertilizer needs. Presidedress nitrate test (PSNT) may be part of the program.</i>	Manure nitrogen credits are considered but not to their full extent.	Commercial nitrogen is not reduced to account for manure nitrogen credits.	Manure rates do not exceed crop N needs, consistent with GAAMPs.	YES NO N/A

Comments:

NUTRIENT MANAGEMENT PRACTICES – GENERAL (CONTINUED)

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MANURE MANAGEMENT PRACTICES (IF YOU DO NOT USE MANURE, SKIP THIS SECTION.)					
1.27) How are manure phosphorus (P) application rates managed?	<i>High testing fields (>150 ppm Bray P1) do not receive manure, and fields between 75 and 150 ppm P receive no more than four years, crop P205 removal if one-year application, is impractical.</i>	High testing fields (>150 ppm Bray P1) removed from spreading plan, but crop removal rates are not followed.	Manure application rates are not based on soil tests and/or crop removal rates.	Manure rates do not exceed crop P needs. If developing a CNMP, refer to USDA-NRCS 590 Standard.	YES NO N/A
1.28) How are fields selected for spreading on frozen and snow-covered ground?	No applications on frozen or snow-covered ground without injection or incorporation.	Manure Application Risks Index (MARI) has been completed for each field receiving manure on frozen or snow-covered ground. Frozen or snow-covered fields receiving manure have met MARI criteria for Low or Very Low rating and <i>no liquid manure is applied on slopes greater than 3%, and no solid manure is applied to slopes over 6%.</i>	Applications are made to fields where runoff to water resources may occur.	MARI completed for each field receiving winter manure application, or spreading plan does not include winter spreading.	YES NO N/A
1.29) How are field tiles managed to prevent manure discharge to surface water?	<i>Liquid manure is prevented from reaching tile lines.</i> Management practices are in place to prevent runoff to surface inlets. Tile line outlets are monitored.		Tile outlets are not monitored for manure discharge.	Tiled field identified on map. Record of tile flow before and after application (flow, rate, color and odor).	YES NO N/A

Comments:

SOIL AND WATER CONSERVATION PRACTICES (CONTINUED)

RISK QUESTION	LOW RISK – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE FOR MAEAP VERIFICATION	MEETS CRITERIA
2.02) Is soil erosion under control on the farm fields?	Soil erosion losses are within tolerances as documented by the Revised Universal Soil Loss Equation (RUSLE2) and the Wind Erosion Prediction System (WEPS). Minimal evidence of erosion and no evidence of erosion of concentrated water flows. Cover crop may be in place.	<p>RUSLE2 and WEPS are run on fields that are not:</p> <p>In pasture or hay ground, or no-till planting systems.</p> <p>Receiving fall tillage, with >30% residue on less than 12% slopes.</p> <p>Receiving more than one pass fall tillage that leaves fields rough with >40% residue and less than 8% slopes.</p> <p>And regardless of fall tillage, spring tillage leaves > 20% residue.</p> <p>And for all of the above there is no evidence of sheet, rill or gully erosion.</p>	Excessive soil erosion is occurring on the farm.	RUSCLE2 and WEPS calculations completed and on file.	<p>YES</p> <p>NO</p> <p>N/A</p>

PEST MANAGEMENT PRACTICES

3.11) How are surface water and groundwater protected in and near fields from pesticide contamination?	Pesticide labels with groundwater and surface water advisory statements are followed.		Labeled directions are not followed. ¹⁸ Spray is applied adjacent to, or over the top of, surface water, tile drain inlet or well. Field restrictions for shallow groundwater are ignored.	Field maps indicating pesticide label setbacks (2.01) and shallow groundwater restrictions are followed.	<p>YES</p> <p>NO</p> <p>N/A</p>
3.13) Are the purchasers and applicators of restricted-use pesticides (RUP) certified applicators?	<i>The purchaser and applicator of RUP comply with certification requirements.</i>		Non-certified and unsupervised applicator's use RUP.	RUP certification confirmed.	

Comments:

PEST MANAGEMENT PRACTICES

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PESTICIDE APPLICATION (CONTINUED)					
3.15) If pesticides are mixed and loaded in the field, how are they handled?	A mixing and loading pad is used. Mixing and loading is done more than 150 feet from any well and more than 50 feet from surface waters.	Mixing and loading is done in different locations in the field, more than 150 feet from a private well, more than 800 feet from a public well* and more than 50 feet from surface waters. A mixing and loading pad is not used.	Pesticides are mixed and loaded at the same spot in the field year after year without a mixing and loading pad.	Proper pesticide mixing and loading demonstrated.	YES NO N/A
3.16) How are empty pesticide containers rinsed and disposed?	<i>Containers are triple-rinsed or power rinsed, punctured</i> and returned to dealer, properly recycled, or disposed of in a licensed landfill. Bags are returned to dealer or taken to licensed landfill. Properly rinsed containers can be disposed in a dumpster that is taken to a licensed landfill.	Disposal of empty containers and bags on the farm property. ^{8,18}	Disposal of partially filled containers. Burning of containers on the farm property. ^{8,18}	Evidence of containers being recycled or properly disposed.	YES NO N/A
3.17) Do pesticide applicators read and follow the label instructions?	<i>Everyone using pesticides follows label and labeling instructions.</i>		Label and labeling instructions are not always followed. ¹⁸	Evidence that labels are followed for environmental concerns.	YES NO N/A
3.18) Is a spill kit immediately available to pesticide applicators in the field?	<i>A spill kit</i> containing a shovel, absorbent material, Personal Protective Equipment (PPE) and a container <i>is immediately available.</i>		No spill kit is available ⁶ or no plan is in place to contain spills.	Adequate spill kit present.	YES NO N/A

Comments:

PEST MANAGEMENT PRACTICES (CONTINUED)

RISK QUESTION	LOW RISK – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE FOR MAEAP VERIFICATION	MEETS CRITERIA
PESTICIDE APPLICATION (CONTINUED)					
3.19) How is excess spray mixture or rinse water from the interior of the spray system disposed?	<i>Spray mixture is applied to labeled site at or below labeled rate of application</i> or appropriately stored for later use.		Spray mixture dumped at farmstead or in nearby field or pond. ⁴	Satisfactory explanation of procedures for excess spray mixtures.	YES NO N/A
3.20) Where is the exterior of the spray equipment and tractor washed if there is accumulated residue?	Washed in containment or washed in the field in different locations >200' from surface water, catch basins or tile inlets and >150' from a well.		Washed in the same location without collection, or in the field <200' from surface water, catch basins, or tile inlets or <150' from a well.	Satisfactory explanation of procedures for washing spray equipment.	YES NO N/A
3.21) How is accumulated spray building wastewater or other comingled rinsates that cannot be directly applied to growing crops disposed?	Applied to a site where there is growing vegetation or where a crop will be planted following labeled setbacks at or below labeled rates. Application areas are rotated and records of contents of material and application site are kept. Or taken to a hazardous waste landfill.		Dumped at the farmstead, in the field, or a direct discharge to surface water. ⁴		YES NO N/A
3.22) How is the proper and safe operation of pesticide application equipment ensured?	<i>Equipment is correctly calibrated at least annually and leaks are minimized to apply intended rate and distribution pattern.</i>		Pesticide application equipment is not properly calibrated. ⁶	Date equipment calibrated annually.	YES NO N/A
3.23) How are pesticide applications assured to remain on-target and minimize off-target pesticide spray drift?	<i>A written drift management plan is utilized that minimizes off-target drift.</i>	Pesticide applications follow labeled instructions for target pests, but no drift management plan is utilized.	Spraying operations are completed regardless of weather conditions or forecast, and regardless of the potential of off-target drift. ⁷	Written draft management plan on file.	YES NO N/A

Comments:

PEST MANAGEMENT PRACTICES (CONTINUED)

RISK QUESTION	LOW RISK – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE FOR MAEAP VERIFICATION	MEETS CRITERIA
PESTICIDE APPLICATION (CONTINUED)					
3.24) What pesticide application records are kept?	<i>Accurate records are maintained of all agricultural crop applications of pesticides for at least three years.</i>	Partial pesticide records are kept. Complete pesticide application records will be kept in the future, for review at the time of reverification.	No records are kept. Chemicals used are known by memory or invoices only.	Pesticide records for the past three years on file (or plans for records). -Date of application -Time of application -Pesticide brand/product name -Pesticide formulation -EPA registration number -Active ingredient(s) -Restricted-entry interval (REI) -Rate per acre or unit -Crop, commodity, stored product, or site that received the application -Total amount of pesticide applied -Size of area treated -Applicator's name -Applicator's certification number -Location of the application -Method of application -Target pest -Carrier volume per acre	YES NO N/A
3.28) How are agricultural pollution emergencies handled?	Call 911, sheriff, fire or emergency services department for personal safety issues. <i>All uncontained spills or releases should be reported to the MDARD Agriculture Pollution Emergency Hotline: 1-800-405-0101</i> , or the MDEQ Pollution Emergency Alerting System: 1-800-292-4706.		No contact to state or local authorities. Spill discharges directly to surface water.⁴	Farm emergency plan on file, or local emergency telephone numbers immediately available.	YES NO N/A

Comments:

WATER USE REPORTING

RISK QUESTION	Low Risk – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE FOR MAEAP VERIFICATION	MEETS CRITERIA
4.01) If the groundwater and surface water pumps have a combined capacity to pump more than 100,000 gallons per day (70 gallons per minute) for agricultural purposes, has water use been registered and reported to the State of Michigan?	Pump capacity is less than 100,000 gallons per day (70 gallons per minute). Or, Register and report annual water use to Michigan Department of Agriculture and Rural Development by April 1.		Pump capacity is greater than 100,000 gallons per day (70 gallons per minute) and water use is not reported to the State of Michigan.¹³	Farm records indicate compliance.	YES NO N/A
4.02) Is there an unused well located in the cropping area?	No unused well, or abandoned well properly sealed.	Unused well temporarily abandoned properly: -Meets minimum isolation distances -Is disconnected from any water distribution piping -Has the top of the casing securely capped.	Unused, unsealed well in cropping area.¹	Unused well(s) properly sealed.	YES NO N/A
4.03) Have new or increased large quantity water withdrawals been registered (pumping capacity greater than 70 gallons per minute (gpm), or 100,000 gallons per day for systems established after July 9, 2009)?	The Water Withdrawal Assessment Tool (WWAT) was used to determine if a proposed withdrawal or expansion is likely to cause an Adverse Resource Impact, and to register the water withdrawal with MDEQ, prior to beginning the withdrawal. The WWAT and registration site is http://www.miwwat.org/		No, a new water withdrawal exceeding 70 GPM has been established without the use of the WWAT.¹³	Producer's verbal indication of compliance with regulation.	YES NO N/A

Comments:

CROP-SPECIFIC MANAGEMENT PRACTICES

RISK QUESTION	LOW RISK – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORD OR EVIDENCE FOR MAEAP VERIFICATION	MEETS CRITERIA
CORN MANAGEMENT PRACTICES					
5.02) Are label-required setbacks maintained for herbicides with surface water protection advisory statements?	The label-required setbacks from perennial and intermittent streams and rivers are maintained.		The required setbacks are not maintained on all fields. ¹⁸	Field maps (2.01) indicating areas requiring setbacks.	YES NO N/A

PASTURE MANAGEMENT PRACTICES (IF YOU DO NOT HAVE PASTURE, SKIP THIS SECTION.)

6.01) Are there current soil tests on the pastures?	<i>All fields are sampled and tested on a regular basis</i> , at 1 to 4 years, depending on crops being grown and the cropping system.	Most fields are sampled and tested every 1 to 4 years. Producer plans to bring all field soil tests up to date within the next three years. (See also 1.01)	Fields have not been tested within the past four years.	Field names or map. Acres in the cropped portions of the field. Up-to-date soil test reports, or schedule to bring all tests up to date.	YES NO N/A
6.03) How is the pasture managed to protect surface water?	<i>Livestock are excluded from actual contact with streams or watercourses except for controlled crossings and accesses.</i> Flash grazing may be implemented to control vegetation between fenced-in areas.	Herd density in the pasture is such that the stream bank remains vegetated with no eroded areas. Animals are not allowed to congregate under trees close to the waterway causing bare areas. And/or the practice of flash grazing is being implemented to control vegetation between fenced-in areas.	Runoff results in direct discharge to surface waters. ⁴ Livestock have free access to streams or watercourses, causing erosion.	Pasture managed to protect surface water from erosion and contamination demonstrated.	YES NO N/A
6.04) What is the condition of pasture vegetation?	Pasture is well managed with all areas vegetated. <i>Runoff from pasture feeding and watering areas travels through a vegetated filter area to protect surface and groundwater.</i> Or no contaminated runoff is noted.	Pasture is well managed and vegetated except in feeding and watering areas, which are scraped. <i>Runoff from pasture feeding and watering areas travels through a vegetated filter area to protect surface and groundwater.</i> Or, no contaminated runoff is noted.	Pasture is over-grazed with bare spots. Erosion may be present Runoff from pastures is carrying sediment and nutrients to surface waters ⁴ or neighboring property.	No direct discharge from pasture(s).	YES NO N/A

PASTURE MANAGEMENT PRACTICES (IF YOU DO NOT HAVE PASTURE, SKIP THIS SECTION.)

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6.05) What is being done to reduce manure concentration around watering tanks/feeders in pasture areas?	Water tank/feeding areas are rotated to different areas of pasture. Or, watering/ feeding areas are permanent, but manure is removed frequently to prevent concentration of nutrients. <i>Runoff from pasture feeding and watering areas should travel through a vegetated filter area to protect surface and groundwater.</i>	Watering and/or feeding areas are permanent, but manure is removed at least annually to prevent concentration of nutrients. <i>Runoff from pasture feeding and watering areas should travel through a vegetated filter area to protect surface and groundwater.</i>	Watering/feeding areas are permanent with infrequent or no manure removal. There is evidence of direct discharge to surface water ⁴ or ponding in low areas.	Proper manure management around water and feed demonstrated.	YES NO N/A

IRRIGATION MANAGEMENT PRACTICES (IF YOU DO NOT USE IRRIGATION, SKIP THIS SECTION.)

SYSTEM MANAGEMENT					
7.01) Have all irrigation systems been evaluated for application uniformity?	<i>All irrigation systems have been evaluated for uniformity.</i> Corrections are made to the system to improve uniformity.	Some irrigation systems have been evaluated for uniformity. Remainder of systems scheduled to be evaluated.	Irrigation system uniformity has not been evaluated.	Uniformity tests on file. Schedule for evaluating systems that have not been evaluated.	YES NO N/A
7.02) How is the amount of irrigation water delivered accurately determined?	<i>All water applications are accurately determined:</i> -by knowing actual flow delivered (GPM) and time of application. -or, by using a flow meter. -or, by average output caught with system evaluation.	Water applications are estimated or based on rates given by irrigation vendor or installation company.	Water application amounts not determined. Excess application occurs.	Irrigation water delivered by irrigation is accurately determined.	YES NO N/A

Comments:

IRRIGATION MANAGEMENT PRACTICES (IF YOU DO NOT HAVE IRRIGATION, SKIP THIS SECTION.)

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SYSTEM MANAGEMENT (CONTINUED)					
7.03) Are all sprinkler systems operated to minimize drift and off-target application?	<i>All sprinkler systems are operated to minimize drift and off-target application.</i> No off-target irrigation application present.	Most sprinkler systems operated to minimize drift and off-target application. Few off-target irrigation applications occur.	Sprinkler systems are often operated under windy conditions. Water is sprayed over roads, adjacent property or structures.	No field evidence of off-target applications.	YES NO N/A
RECORD KEEPING					
7.05) Are proper irrigation system management records collected and retained for use in decision-making and for reference in case of complaints?	Irrigation system management records are collected and retained, including: - <i>Crop type and location.</i> - <i>Source of the water used.</i> - <i>Date, method and amount of each irrigation water application.</i> - <i>All system inspections and repairs that influence uniformity and leaks.</i> - <i>Calibration of fertigation and chemigation equipment, if used.</i> - <i>Records on system uniformity evaluation.</i>	Most of irrigation system management records are collected and retained. Plan to maintain complete irrigation records.	Few or no irrigation system management records are collected or retained.	Irrigation records on file, or plans to maintain records.	YES NO N/A

Comments:

IRRIGATION MANAGEMENT PRACTICES (IF YOU DO NOT HAVE IRRIGATION, SKIP THIS SECTION.)

RISK QUESTION	LOW RISK – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE FOR MAEAP VERIFICATION	MEETS CRITERIA
WELLHEAD PROTECTION					
7.13) Is the irrigation well adequately protected from contamination from pesticides and fertilizers when fertigation or chemigation is used?	Anti-backflow device installed , including a reduced pressure zone (RPZ) valve, double check valve assembly, or chemigation valve with an internal air gap, and agricultural chemical/fertilizer storage and preparation areas are at least 150 feet from the well or at least 50 feet from the well with secondary containment. Air gap is twice the diameter of the fill pipe or 6 inches, whichever is greater.	Anti-backflow device is installed , including a reduced pressure zone (RPZ) valve double check valve assembly, or chemigation valve with an internal air gap, and agricultural chemical/fertilizer storage and preparation areas have secondary containment, but storage and preparation areas are less than 50 feet from the well. ¹ Air gap is twice the diameter of the fill pipe or 6 inches, whichever is greater.	No anti-backflow device , no secondary containment and less than 150 feet isolation distance from irrigation well. ¹	Adequate protection of the well provided.	YES NO N/A
7.14) If the irrigation well is inter-connected with a surface water source, is the well protected from backflow (back pressure and back siphonage) from the surface water into the well?	Anti-backflow device installed , including a reduced pressure zone (RPZ) valve, double check valve assembly, or chemigation valve with an internal air gap, that protects the well from back pressure and back siphonage into the well. Air gap is twice the diameter of the fill pipe or 6 inches, whichever is greater.	Anti-backflow device installed , including a reduced pressure zone (RPZ) valve double check valve assembly, or chemigation valve with an internal air gap, to protect some irrigation water sources. Air gap is twice the diameter of the fill pipe or 6 inches, whichever is greater.	No anti-backflow device installed. ¹	Anti-backflow device installed, including a reduced pressure zone (RPZ) valve, double check valve assembly, or chemigation valve with an internal air gap.	YES NO N/A
7.15) If manure or wastewater is applied through the irrigation system, are appropriate backflow prevention devices in place and properly maintained for all irrigation water sources?	Anti-backflow device installed , including a reduced pressure zone (RPZ) valve double check valve assembly, or chemigation valve with an internal air gap, to protect all irrigation water sources. Air gap is twice the diameter of the fill pipe or 6 inches, whichever is greater.	Anti-backflow device installed , including a reduced pressure zone (RPZ) valve double check valve assembly, or chemigation valve with an internal air gap, to protect some irrigation water sources. Air gap is twice the diameter of the fill pipe or 6 inches, whichever is greater.	No anti-backflow device is installed. ^{1,4}	Anti-backflow device installed, including a reduced pressure zone (RPZ) valve, double check valve assembly, or chemigation valve with an internal air gap, protects both groundwater and surface water sources.	YES NO N/A

Comments:

IRRIGATION MANAGEMENT PRACTICES (IF YOU DO NOT HAVE IRRIGATION, SKIP THIS SECTION.)

RISK QUESTION	LOW RISK – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE FOR MAEAP VERIFICATION	MEETS CRITERIA
WELLHEAD PROTECTION (CONTINUED)					
7.16) Is a Horizontal Sock Well (HSW) present in the cropping system?	-HSW outlets are clearly identified as not being suitable for human consumption. -HSW is completely separated (no common piping) from any potable water supply system. -HSW meets isolation distance requirements the entire horizontal length of the HSW -Both ends of the HSW are identified.	-HSW outlets are clearly identified as not being suitable for human consumption. -HSW is completely separated (no common piping) from any potable water supply system. -HSW meets isolation distance requirements the entire horizontal length of the HSW, except for chemigation/fertigation systems during active use season that have an anti-backflow prevention device installed , including a reduced pressure zone (RPZ) valve, double check valve assembly, or chemigation valve with an internal air gap, and secondary containment. -Both ends of the HSW are identified.	HSW is being used for human consumption, shares common piping with a potable water supply, does not have both ends clearly identified OR Does not meet State of Michigan isolation distances or MAEAP Standard for its entire horizontal length. ^{1,3}	Low or medium risk criteria are present or demonstrated.	YES NO N/A
7.17) How far is the irrigation fuel tank from a storm drain, surface water or designated wetland?	Tank is more than 50 feet away or has some other engineering control present that would control or divert a spill from reaching a storm drain, surface water or designated wetland.		Tank is 50 feet or less away from surface water ¹⁶ and without an engineering control in place.	Appropriate fuel storage isolation distance from surface water. Engineering control, such as double-walled tank or dike.	YES NO N/A

OTHER ENVIRONMENTAL RISKS IN THE CROPPING SYSTEM

8.02) Are there other activities, products, processes/ equipment services, byproducts and/or wastes in the cropping areas that pose contamination risks to groundwater or surface water?	No risk(s) identified.	Risk(s) identified and plan to mitigate the contamination risk(s).	No plan to mitigate contamination risk(s).	No other environmental risks found at farmstead.	YES NO N/A
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Comments:

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