

## **Cropping System For Nursery Crop and Christmas Tree Producers 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 9/26/17)

RISK QUESTION	Low Risk – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	High Risk - 1 (Significant hazard)	RECORDS OR EVIDENCE OF MAEAP VERIFICATION	MEETS CRITERIA
<b>1.00)</b> 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 complaint history.	YES NO N/A
<b>1.01)</b> How often are fields tested for nutrient levels (P, K, Ca, Mg and pH)?	All fields are sampled and tested on a regular basis, at one to four years, depending on crops being grown, and the cropping system.	Most fields are sampled and tested every one to four years. Producer plans to bring all field soil tests up to date.	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
<b>1.02)</b> Do soil sampling procedures adequately represent field conditions?	One composite sample taken from uniform field areas.		One composite sample taken from areas greater One composite sample taken from areas greater than 40 acres.	Soil types/soil maps demonstrating uniformity. Cropping histories. Proper soil sampling procedure.	YES NO N/A
<b>1.04)</b> How are all sources of nutrients considered when making fertilization decisions?	Credit taken for nutrients supplied by organic matter, legumes and manure or other biological materials (biosolids). Fertilizer rates are reduced accordingly.	When organic matter, legumes, manure or other biological materials (biosolids, compost) are used, fertilizer rates are sometimes reduced.	When organic matter, legumes, manure or other biological materials (biosolids, compost) are used, rates are not reduced.	Written records indicate nutrient credits utilized.	YES NO N/A
<b>1.05)</b> How are fertilizer application rates determined?	Consistent with Michigan State University (MSU) recommendations. When MSU recommendations are not available, other land-grant university recommendations developed for the region may be used.	Occasionally exceed MSU or equivalent recommendations.	Often or always exceed MSU or equivalent recommendations.	Applications consistent with MSU recommendations. When MSU recommendations are not available, other land-grant university or equivalent recommendations developed for the region may be used.	YES NO N/A

	Nutrient N	Managemen	t Practices (cor	ntinued)	
RISK QUESTION	Low Risk – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE OF MAEAP VERIFICATION	MEETS CRITERIA
1.06) 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 management block. Soil tests are up-to-date.	Nutrient plan not developed or the same plan used for more than 4 years.	Annual nutrient plan by field or by crop grown.	YES NO N/A
<b>1.07)</b> Is fertilizer application equipment checked for proper adjustment?	Application equipment checked annually for rate of application and placement. Over and under applications monitored and corrected.		Application equipment not checked.	Name of person responsible for fertilizer applicator adjustments and the dates of adjustments.	YES NO N/A
1.08) What soil nutrient management records are kept?	Records of soil test reports and quantities of nutrients applied to individual fields are maintained. Also, crop performance evaluated.	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 recordsSoil fertility tests and/or plant analysis resultsPrevious crop grown and yield harvestedDate(s) of application(s)Nutrient composition of fertilizer or other material usedAmount of nutrient-supplying material applied per acreMethod of application and placement of applied nutrientsVegetative growth and cropping history of perennial crops.	YES NO N/A

Comments:			

RISK QUESTION	Low Risk – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE OF MAEAP VERIFICATION	MEETS CRITERIA
1.09) 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) 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 stored less than 150 feet from any well.	Map showing areas adjacent to wells where vehicles should not be parked. No evidence of vehicles left in an unsecured location.	YES NO N/A
<b>1.10)</b> How is manure and/or compost temporarily stockpiled in relation to surface water?	Manure and/or compost stockpiles are kept a 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.		Manure and/or compost 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. <sup>4</sup>	Acceptable temporary manure and/or compost storage demonstrated. Adequate isolation from surface water.	YES NO N/A
1.11) For temporarily stacked manure, and/or compost, how is the site managed to protect surface water, groundwater, and/or neighboring properties?	Manure, and/or compost, is managed in a manner to prevent runoff and/or leaching of nutrients to surface water or groundwater and to minimize odor impacts upon neighbors. Manure is stacked on impermeable surfaces (concrete, etc.) or compacted soils, and storage area contains a well-maintained barrier such as a wooden or concrete wall or earthen berm to trap runoff. Construction and management practices for composing are implemented using NRCS Composting Facility No. 317 standards.	Manure, and/or compost, is stacked on somewhat permeable, medium-textured soils. Partial or no barrier is used to trap runoff. However, runoff is diverted and passes through a vegetated filter strip or other treatment process.	Manure, and/or compost, is stacked on course-textured soils or above tile drains. No means of runoff or leachate control. Slope is toward surface water. Signs of runoff past perimeter of vegetated area or storage site, with runoff reaching surface water. Runoff and/or leachate discharge directly to surface water. <sup>4</sup>	Appropriate temporary manure, and/or compost, storage demonstrated. Adequate isolation from surface water.	YES NO N/A

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<b>1.12)</b> How long is manure and/or compost stockpiled in the field?	Manure is spread as soon as field and weather conditions allow, and does not exceed six months; or if covered with an impermeable cover, twelve months.		Manure stockpiled for more than six months without a cover, or more than twelve months with an impermeable cover.	Manure and/or compost not stockpiled for more than 365 days.	YES NO N/A
1.13) Is clean water (i.e. roof and surface runoff) diverted away from the manure and/or compost storage facility?	Clean runoff is diverted.	Clean water is not diverted but is captured, treated, or stored.	Runoff is not diverted and is contaminated. Runoff water is not captured, treated or stored and discharges directly to surface water.	Visual inspection of storage site(s).	YES NO N/A
NITROGEN MANAGEMENT					
FIELD PHOSPHORUS MANA					
<b>1.15)</b> How are phosphorus (P) fertilization rates determined?	Based on soil tests or plant tissue analysis using Michigan State University or equivalent recommended rates.	P fertilization based on past practices, without regard to soil test P levels.	P fertilization based on applying as much as is affordable.	P management consistent with Nutrient Management GAAMPs.	YES NO N/A
FIELD PHOSPHORUS MANA	AGEMENT PRACTICES (CONTINU	JED)			
1.17) How often is commercial Phosphorus (P) fertilizer applied on frozen or snow-covered fields?	P fertilizer is never broadcast on frozen or snow-covered fields.	Broadcast applications avoided on frozen or snow-covered fields and are not part of the nutrient management plan.	P fertilizer is often broadcast on frozen or snow-covered fields.	Date(s) of application(s) of P fertilizers.	YES NO N/A
Comments:					

RISK QUESTION	Low Risk – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE OF MAEAP VERIFICATION	MEETS CRITERIA
MANURE MANAGEMEN	T PRACTICES (IF MANUI	RE IS NOT USED, SKIP THIS	SECTION.)		
1.18) What manure management records are maintained?	Complete application records of manure analysis, soil test results and rates of manure application for individual fields are maintained.	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 reverification.	Minimal or no records maintained.	Additional records that are needed if manure is used in the nursery cropping system:  -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 and field conditions during application of manure (e.g., sunny, 70°F)  -Recommended nutrient application rates  -Previous crops grown and yields  -Plant tissue sampling and testing reports (where applicable)  -Complete N, P, K nutrient budget by field  -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	YES  NO  N/A
Comments:					

	Nutrient Ma	ınagement Prac	tices (continue	d)	
RISK QUESTION	Low RISK – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE OF MAEAP VERIFICATION	MEETS CRITERIA
MANURE MANAGEMENT	PRACTICES (IF MANURE IS NOT US	ED, SKIP THIS SECTION.)			
<b>1.19)</b> How is the nutrient content of manure determined?	Laboratory analysis for percent dry matter (solids), ammonium, and total N, P and K.	Book values or standard nutrient content values used.	Manure nutrient content is unknown.	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 is known for all spreaders. Records indicate date of calibration.	YES NO N/A
1.21) How is manure, and/or compost, generally applied to fields?	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.	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 discharges directly to surface water. <sup>4</sup>	Fields that receive manure, and/or compost, applications are properly managed.	YES NO N/A
1.22) How are streams, wetlands, farm ditches and other water bodies protected from manure runoff?	Manure is incorporated within 48 hours or injected. Or, surface applications are not done within 150 feet of surface water. 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
<b>1.23)</b> How are manure phosphorus application rates managed?	If Bray P1 reaches 150 ppm, manure applications discontinued.		Manure application rates not based on soil test.	Manure rates do not exceed crop P needs.	YES NO N/A

Comments:	

	Nutrient	Management Pra	actices (continu	ed)	
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MANURE MANAGEMENT	PRACTICES (IF MANURE IS NO	OT USED, SKIP THIS SECTION.)			
1.24) How are fields selected for manure 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 no liquid manure is applied on slopes greater than 3%, and no solid manure is applied to slopes over 6%.	Applications are made to fields where runoff to water resources may occur.	Completed MARI for each field receiving winter manure application, or spreading plan that does not include winter spreading.	YES NO N/A
<b>1.25)</b> How are field tiles managed to prevent manure discharge to surface water?	Liquid manure is prevented from reaching tile lines. 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 fields identified on map. Record of tile flow before and after application (flow, rate, color and odor).	YES NO N/A
BIOSOLIDS MANAGEMEN	T PRACTICES (If biosolids a	re not used, skip this section.)			
1.27) Has nutrient content information on the biosolids applied to the farm or nursery been received?	Received laboratory analysis for percent dry matter (solids), ammonium N (NH4-N), and total N,P and K and utilize nutrient credits when planning nutrient program.		Have not received any biosolids analysis information.	Biosolids analyses on file.	YES NO N/A
Comments:					

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BIOSOLIDS MANAGEMENT	PRACTICES (IF BIOSOLIDS AR	E NOT USED, SKIP THIS SECTION)			
<b>1.28)</b> How are the rates of biosolids (in gallons or dry tons per acre) and applied biosolids nutrients known?	Received actual application rated from the biosolids generator or its land application contractor. Nutrient rates are consistent with MSU or equivalent recommendations.		Have not received any biosolids rate or nutrient application information.	Biosolids application records.	YES NO N/A
	Soil an	d Water Conserv	ation Practice	es	
2.01) Have environmentally sensitive areas been identified (land near surface water, highly erodible soils, soils with high leaching or runoff potentials, wells, surface drains and inlets) that require additional management when applying nutrients and pesticides?	Environmentally sensitive areas are identified. Family members, employees and contractors are aware of and understand the management practices to protect these areas.	Some environmentally sensitive areas are identified.	Environmentally sensitive areas are not considered.	Areas identified on field maps with appropriate management or setbacks. Areas: -Next to surface watersFields with shallow groundwaterFields with water wellsAreas near surface water inletsFields with highly erodible soilsFields with highly leachable soilsSurface drainsFields with high runoff potential. Training/communications plan to inform workers and contractors of appropriate management or setbacks.	YES NO N/A
Comments:					

RISK QUESTION	Low Risk – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE OF MAEAP VERIFICATION	MEETS CRITERIA
2.02) Is soil erosion under control on the nursery 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 concentrated water flows. Cover crop may be in place.	RUSLE2 and WEPS are run on fields that are not:  In pasture or hay ground, or no-till planting systems.  Receiving fall tillage, with >30% residue on less than 12% slopes.  Receiving more than one pass fall tillage that leaves fields rough with >40% residue and less than 8% slopes.  And regardless of fall tillage, spring tillage leaves > 20% residue.  And for all of the above there is no evidence of sheet, rill or gully erosion.	Excessive soil erosion is occurring on the farm.	RUSLE2 and WEPS calculations completed for worst-case fields on the basis of soils, slopes, rotation, etc.	YES NO N/A
	Pes	t Management Pra	ctices		
<b>3.01)</b> Are pesticides stored in the field?	Pesticides are not stored in the field.	Pesticides are stored in the field meeting all of the pesticide storage requirements from the FAS Section 3, Pesticide Storage and Handling.	Pesticides are stored throughout the year and do not meet all of the pesticide storage requirements from the FAS 107: Section 3, Pesticide Storage and Handling.	Appropriate pesticide storage demonstrated.	YES NO N/A
Comments:					•

	Pest M	anagement Pra	actices (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	Ň				
<b>3.11)</b> 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. <sup>17</sup> Spray applied adjacent to or over top of surface water, tile drain inlet or well. Field restrictions for shallow groundwater are ignored.	Field maps (risk question 2.01) indicating pesticide label setbacks and shallow groundwater restrictions are followed.	YES NO N/A
3.13) Are the purchasers and applicators of Restricted Use Pesticides (RUP) certified applicators?	The purchaser and applicator of RUP comply with the certification requirements.		Non-certified and unsupervised applicators use RUP. <sup>6</sup>	RUP certification confirmed.	YES NO N/A
<b>3.15)</b> If pesticides are mixed and loaded in the field, how are they handled?	A mixing and loading pad is used. Mixing and loading are done more than 150 feet from any well and more than 50 feet from surface waters.	Mixing and loading are 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
<b>3.16)</b> How are empty pesticide containers rinsed and disposed?	Containers are triple rinsed or power rinsed, punctured and returned to dealer, recycled, or taken to licensed landfill. Bags are returned to dealer or taken to licensed landfill. Properly rinsed containers can be disposed of in a dumpster that is taken to a licensed landfill.	Disposal of empty containers and bags on the farm or nursery property.	Disposal of partially filled containers. Burning of container on the farm or nursery property. <sup>8,17</sup>	Evidence of containers being recycled or proper disposal.	YES NO N/A
<b>3.17)</b> Do pesticide applicators read and follow the label instructions?	Everyone using pesticides follows label and labeling instructions.		Label and labeling instructions not always followed. <sup>17</sup>	Evidence that labels are followed for environmental concerns.	YES NO N/A

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PESTICIDE APPLICATION	(CONTINUED)				
s.19) Is a spill kit mmediately available to esticide applicators in he field?	A spill kit, containing a shovel, absorbent material, PPE, and a container is immediately available.		No spill kit is available or no plan is in place to contain spills.	Adequate spill kit present.	YES NO N/A
a.20) How is excess pray mixture or rinse vater from the interior of the spray system lisposed?	Spray mixture is applied to labeled site at or below labeled rate of application or appropriately stored for later use.		Spray mixture dumped at farmstead or in nearby field or pond. <sup>4</sup>	Evidence that excess mixtures and rinsates are properly managed.	YES NO N/A
2.21) Where is the exterior of the spray equipment and tractor vashed 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 the surface water, catch basins or tile inlets or <150' from a well.	Satisfactory explanation of procedures for washing spray equipment.	YES NO N/A
i.22) How is accumulated spray building wastewater or other comingled rinsates that cannot be directly applied to growing crops lisposed?	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. <sup>4</sup>	Records of application are provided.	YES NO N/A
Comments:					

	Pest	wanagemen	t Practices (co	entinued)	
RISK QUESTION	Low Risk – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE OF MAEAP VERIFICATION	MEETS CRITERIA
PESTICIDE APPLICA	TION (CONTINUED)				
3.23) How is the proper and safe operation of pesticide application equipment ensured?	Equipment is correctly calibrated at least annually and leaks minimized to apply intended rate and distribution pattern.		Pesticide application equipment not properly calibrated. <sup>6</sup>	Date equipment calibrated annually.	YES NO N/A
3.24) How are pesticide applications assured to remain on-target and minimize off target pesticide spray drift?	A written drift management plan is utilized that minimizes off target drift.	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 potential for off-target drift. 6	Written drift management plan on file.	YES NO N/A
3.25) What pesticide application records are kept?	Accurate records maintained of all agricultural crop applications of pesticides for at least three years.	Partial pesticide records kept. Plan to maintain complete pesticide application records.	No record is kept. Chemicals used are known by memory or invoices only.	Pesticide records for the past three years on file (or plans to maintain records).  - Date of application  - Time of application  - Pesticide brand/product name  - Pesticide formulation  - EPA registration number  - Active ingredient(s)  - Restricted-entry interval  - 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/acre	YES NO N/A

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PESTICIDE APPLICATIO	N (CONTINUED)				
<b>3.29)</b> How are agriculture pollution emergencies handled?	Call 911, sheriff, fire or emergency services department for personal safety issues. All uncontained spills or releases should be reported to the MDARD Agriculture Pollution Emergency Hotline: 1-800-405-0101, 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
Irri	igation Managem	ent Practices (	If Irrigation is not used	l, skip this section.)	
<b>4.01)</b> Have all irrigation systems been evaluated for application uniformity?	All irrigation systems have been evaluated for uniformity. 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
<b>4.02)</b> How is the amount of irrigation water delivered accurately determined.	All water applications are accurately determined — -by knowing actual flow delivered (GPM) and time of applicationor, 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
<b>4.03)</b> Are all sprinkler systems operated to minimize drift and offtarget application?	All sprinkler systems operated to minimize drift and off-target application. 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 often operated under windy conditions. Water sprayed over roads, adjacent property or structures.	No field evidence of off-target applications.	YES NO N/A

(RECOMMENDED)	(POTENTIAL HAZARD)	High Risk - 1 (significant hazard)	RECORDS OR EVIDENCE OF MAEAP VERIFICATION	CRITERIA
The following irrigation system management records are collected and retained:  -Crop type and location -Source of the water used -Date, method and amount of each irrigation water application -All system inspections and repairs that influence uniformity and leaks -Calibration of fertigation and chemigation equipment if used -Records on system uniformity evaluation	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 and retained.	Irrigation records on file, or plans to maintain.	YES NO N/A
NG				
Irrigation water is scheduled on the basis of: -Available soil water for each unit scheduled -Depth of rooting for each crop irrigated - Container capacity for container-grown nursery crops -Allowable soil moisture depletion at each stage of crop growth -Measured, estimated, or published evapotranspiration data to determine crop water use -Measure rainfall in each field irrigated	Irrigation water is scheduled on the basis of observed soil moisture content and/or daily water crop usage.	Irrigation water applied at a set rate per week if no precipitation is received, or amounts of water applied through irrigation are not adjusted for crop stages.	Scheduling system evident by records.	YES NO N/A
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IRRIGATION SCHEDULIN	1 7	(I OTENTIAL HAZAND)	(GIGNIFICANT HAZARD)	WALAI VENITOATION	ORTERIA
<b>4.07)</b> Is there a rain gauge in every irrigated field?	Every field being managed for irrigation has a rain gauge in the field. Rain events are observed and used in conjunction with irrigation scheduling.	Most fields have a rain gauge; plan to have gauge in all fields.	No rain gauges or only one rain gauge at the farmstead.	Rain gauges in all irrigated fields, or plan to maintain in all fields.	YES NO N/A
IRRIGATION PRACTICES	TO AVOID RUNOFF AND LEAC	HING			
<b>4.08)</b> Is irrigation water runoff and ponding minimized?	Sprinkler application rates are below the soil infiltration rate. Nutrient leaching is minimized.	Most sprinkler application rates are below the soil infiltration rate. Some runoff and/or ponding is present.	Sprinkler application rates exceed the soil infiltration rate. Runoff and/or ponding is commonly visible.	No indication of significant runoff or ponding in irrigated fields.	YES NO N/A
4.09) How far is the fertilizer/ pesticide chemigation storage, or fertigation/chemigation system located from surface water (pond, streams, rivers, drains, etc.)?	200 feet or greater.	Less than 200 feet with appropriate security measures.	Less than 200 feet.	Appropriate chemigation storage, or fertigation/chemigation system isolation from surface water.	YES NO N/A
Comments:					

well adequately instruction instructed from reducted contamination from (RP)	ti-backflow device	Anti baaldlass desire			
well adequately instructed from reduced contamination from (RP		And bealdlow dede			
fertilizers when che fertigation or inte chemigation is used? agri che and leas or a well twice	uced pressure zone PZ) valve, double check ve assembly, or emigation valve with an ernal air gap and icultural emical/fertilizer storage d preparation areas are at st 150 feet from the well, at least 50 feet from the ll containment. Air gap is ce the diameter of the fill e or 6 inches, whichever	Anti-backflow device installed, including a reduced pressure zone (RPZ) valve, double check valve assembly, or chemigation valve with an internal air gap, agricultural chemical/fertilizer storage and preparation areas have secondary containment, but storage and preparation areas are less than 50 feet from the well. <sup>1</sup> Air gap is twice the diameter of the fill pipe or 6 inches,	No anti-backflow device, <sup>1</sup> no secondary containment and less than 150 feet isolation distance from irrigation well.	Isolation distances field confirmed.	YES NO N/A
<b>4.12)</b> If the irrigation well is inter-connected inst	reater. ti-backflow device talled, including a uced pressure zone	whichever is greater.	No anti-backflow device installed.1	Anti-backflow device installed, including a reduced pressure zone	YES
protected from backflow (back pressure and back siphonage) from inte	PZ) valve, double check ve assembly, or emigation valve with an ernal air gap that protects			(RPZ) valve, double check valve assembly, or chemigation valve with an internal air gap.	NO
the well? and well Air of the	well from back pressure d back siphonage into the ll. gap is twice the diameter he fill pipe or 6 inches, ichever is greater.				N/A
Comments:			<del>-</del>		

Irri	gation Manage	ment Practices (If Irri	igation is not used,	, skip this section.)	
RISK QUESTION	Low Risk – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE OF MAEAP VERIFICATION	MEETS CRITERIA
WELLHEAD PROTECT	ION (CONTINUED)	,			•
<b>4.13)</b> 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 15 and without an engineering control in place.	Appropriate fuel storage isolation distance from surface water.	YES NO N/A
4.14) Is a horizontal sock well (HSW) present in the cropping system?	-HSW outlets are clearly identified as not being suitable for human consumptionHSW is completely separated (no common piping) from any potable water supply systemHSW 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 consumptionHSW is completely separated (no common piping) from any potable water supply systemHSW meets isolation distance requirements the entire horizontal length of the HSW, except for chemigation/fertigation systems during active use season that have 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 containmentBoth 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. <sup>1,3</sup>	Low or medium risk criteria are present or demonstrated.	YES NO N/A

Comments:			

		Water Use			
RISK QUESTION	Low Risk – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD)	RECORDS OR EVIDENCE OF MAEAP VERIFICATION	MEETS CRITERIA
WATER USE REPORTING					
5.01) 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. <sup>13</sup>	Records indicate compliance.	YES NO N/A
<b>5.02)</b> Is there an unused well located in the cropping area?	No unused well, or abandoned well properly sealed.	Unused well temporarily abandoned properlyMeets minimum isolation distances -Is disconnected from any water distribution pipingHas the top of the casing securely capped.	Unused, unsealed well in cropping area. <sup>1</sup>	Unused well(s) properly sealed.	YES NO N/A
5.03) Have new or increased large quantity water withdrawals been registered (pumping capacity greater than 70 gallons per minute, 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 www.deq.state.mi.us/wwat		No, a new water withdrawal exceeding 70 gallons per minute has been established without the use of the WWAT. <sup>13</sup>	Producer's verbal indication of compliance with regulation.	YES NO N/A

Comments:				

RISK QUESTION	Low Risk – 3 (RECOMMENDED)	MEDIUM RISK – 2 (POTENTIAL HAZARD)	HIGH RISK - 1 (SIGNIFICANT HAZARD	))	RECORDS OR EVIDENCE OF MAEAP VERIFICATION	MEETS CRITERIA
IRRIGATION						
<b>6.01)</b> What happens to runoff in areas with containers?	Runoff is collected, filtered and/or treated and reused.	Runoff does not pond and does not enter surface water.	Runoff is not collected ar directly discharges to surface water.4		No evidence of runoff or erosion.	YES NO N/A
SUBSTRATES						
<b>6.07</b> ) How are unwanted media and other organic wastes disposed?	Media and organic wastes are separated from containers and composted or land applied. Compost pile stored in a location protected		Media and organic waste stored in an unprotected Nutrients can leach into ground water or runoff surface water. <sup>4</sup>	site. o the	Environmentally safe disposal demonstrated.	YES NO N/A
	from leaching and runoff.					
SITE						
<b>6.10)</b> How are old or unusable plant containers and trays disposed?	Containers are recycled or reused appropriately.	Containers are disposed at a licensed landfill or stored on site.	containers burned 8		Evidence that containers are being managed properly.	YES NO
C 44) Hawia waad naby	Poly is recycled through a	y is recycled through a Poly is disposed of in a Poly is burned on site. <sup>8</sup>	3	Evidence of system for	N/A YES	
<b>6.11)</b> How is used poly from overwintering houses disposed?	recycling company or offered to others for reuse.	licensed land fill or stored on site.	Poly is burned on site.	recycling or proper disposal of used poly.		NO
						N/A
	Other Environn	nental Risks ii	n the Croppin	g S	ystem	
OTHER ENVIRONMENTAL	RISKS IN THE CROPPING SYSTE	EM				
7.02) 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?	` ,	Risk(s) identified and plan to mitigate the contamination risk(s).	No plan to mitigate contamination risk(s).		er environmental risks at farmstead.	YES NO N/A