MICHIGAN COMMISSION OF AGRICULTURE AND RURAL DEVELOPMENT

AgroLiquid 3055 West M-21 (GPS address: 1130 S. DeWitt Road) St. Johns, Michigan 48879

Option to Join via Remote Technology Dial: 1-248-509-0316; Conf. ID 876 711 260#

NOVEMBER 10, 2021 TENTATIVE AGENDA

- 9:00 a.m. 1. Call to Order and Roll Call
 - 2. Approval of Agenda (action item)
 - 3. **Approval of Minutes** from the September 15, 2021, Commission of Agriculture and Rural Development Meeting (**action item**)
 - 4. **Proposed 2022 Meeting Schedule (action item)**
- 9:05 a.m. 5. **Commissioner Comments and Travel (action item)**
- 9:15 a.m. 6. **Commissioner Issues**
- 9:20 a.m. 7. Director's Report
- 9:30 a.m. 8. **USDA Michigan Staff Update**: Brandon Fewins, Rural Development State Director for Michigan
- 9:45 a.m. 9. **Public Comment on Agenda Items** In accordance with the Public Appearance Guidelines in the Commission Policy Manual, individuals wishing to address the Commission must complete a Public Appearance Card and will be allowed up to three minutes for their presentation. Documents distributed at the meeting will be considered public documents and are subject to provisions of the Freedom of Information Act. The public comment time provides the public an opportunity to speak; the Commission will not necessarily respond to the public comment.
- 9:55 a.m. 10. **Nursery Inspection Fees:** Mike Philip, Division Director, Pesticide and Plant Pest Management Division (**action item**)
- 10:05 a.m. 11. **Pesticide Exams**: Mike Philip, Division Director, Pesticide and Plant Pest Management Division (information only)
- 10:20 a.m. 12. **Urban Agriculture and Right to Farm**: Jim Johnson, Division Director, Environmental Stewardship Division (information only.

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- 10:50 a.m. Break
- 11:00 a.m.
 13. Generally Accepted Agricultural Management Practices (GAAMPs) Proposed 2022 GAAMPs: Jim Johnson, Division Director, Environmental Stewardship Division (action item)
- 11:30 a.m. 14. **Agriculture Processing Renaissance Zone**: Menaka Abel, Chief Financial Officer, Request Foods; Kurt Brauer, Partner, Warner Norcross & Judd; and Jamie Zmitko-Somers, Division Director, Agriculture Development Division (action item)
- 11:40 a.m. 15. **Food and Agriculture Investment Fund Requests**: Jamie Zmitko-Somers, Division Director, Agriculture Development Division (**action item**)
- 12:00 p.m. 16. **Midwest Cheese (MWC) Update**: Manish Paudel, MWC Interim Site Director, Glanbia Nutritionals; and Scott Corrin, Director of Operations and Business Development, Mideast Area, Dairy Farmers of America
- 12:20 p.m. 17. **Budget Update**: Sylvia Renteria, Director of Finance and Budget (information only)
- 12:30 p.m. 18. Legislative Update: Ashley Steffen, Legislative Liaison (information only)

12:40 p.m. 19. **Public Comment**

In accordance with the Public Appearance Guidelines in the Commission Policy Manual, individuals wishing to address the Commission will be allowed up to three minutes for their presentation. Documents distributed at the meeting will be considered public documents and are subject to provisions of the Freedom of Information Act. The public comment time provides the public an opportunity to speak; the Commission will not necessarily respond to the public comment.

12:50 p.m. 20. Adjourn (action item)

MICHIGAN COMMISSION OF AGRICULTURE AND RURAL DEVELOPMENT

MSU Detroit Center, Multi-Purpose Room 3408 Woodward Avenue Detroit, Michigan 48201

and

Remote Technology via Microsoft Teams Dial: 1-248-509-0316; Conf. ID 386 784 12#

MEETING MINUTES September 15, 2021

PRESENT:

Dru Montri, Chair, Michigan Commission of Agriculture and Rural Development Charlie Meintz, Vice Chair, Michigan Commission of Agriculture and Rural Development Tim Boring, Secretary, Michigan Commission of Agriculture and Rural Development Patricia Bergdahl, Michigan Commission of Agriculture and Rural Development Andy Chae, Michigan Commission of Agriculture and Rural Development Gary McDowell, Director, Michigan Department of Agriculture and Rural Development

CALL TO ORDER AND ROLL CALL

Chairperson Montri called the meeting of the Commission of Agriculture and Rural Development to order at 9:32 a.m. on September 15, 2021. Commissioner Montri called the roll with Commissioners Bergdahl, Chae, Meintz, and Montri, and Director McDowell present. She noted Commissioner Boring will be joining the meeting shortly.

APPROVAL OF AGENDA

MOTION: COMMISSIONER CHAE MOVED TO APPROVE THE MEETING AGENDA FOR SEPTEMBER 15, 2021. SECONDED BY COMMISSIONER MEINTZ. MOTION CARRIED.

RECESS AND RECONVENE

Chairperson Montri recessed the meeting at 9:35 a.m. for a brief break to resolve technical issues. She reconvened the meeting at 9:40 a.m., at which time Commissioner Boring also joined the meeting.

APPROVAL OF JULY 21, 2021, MEETING MINUTES

MOTION: COMMISSIONER MEINTZ MOVED TO APPROVE THE JULY 21, 2021, MEETING MINUTES. SECONDED BY COMMISSIONER BORING. MOTION CARRIED.

NEXT SCHEDULED MEETING

The next scheduled meeting is November 10, 2021, to be held at AgroLiquid in St. Johns, Michigan.

COMMISSIONER COMMENTS AND TRAVEL

Commissioners shared information relative to their farm operations, as well as agriculture in their respective areas. Although corn and soybean crops are poised for record yields, concerns were expressed regarding the continuing increase in crop input costs, supply chain issues, and labor challenges; revenue needs to remain strong to avoid issues, particularly in the dairy industry. Commissioners also shared details around recent industry meetings they attended.

Commissioners Bergdahl, Boring, Chae, Meintz, and Montri, traveled to attend today's meeting. Commissioner Bergdahl traveled to participate in the Michigan Farm Bureau tour of Hannaville Indian School aquaponics operations in Wilson, Michigan, and Commissioner Chae traveled to Lansing for his Senate Advice and Consent hearing. There was no other travel submitted for approval.

MOTION: COMMISSIONER BERGDAHL MOVED TO APPROVE THE COMMISSIONERS' TRAVEL. SECONDED BY COMMISSIONER CHAE. MOTION CARRIED.

Commissioner Montri encouraged Commissioners to take advantage of the opportunity to participate in the State of Michigan Implicit Bias Training, which offers training on how to be thoughtful and intentional when considering projects and policies that come before the Commission.

Commissioner Montri advised she is excited to be touring some of the urban agriculture operations in the City of Detroit and thanked Commissioner Chae for his organization of the tour. She recognized and expressed appreciation for the incredible amount of urban agriculture projects within the city.

COMMISSIONER ISSUES

Commissioner Montri reviewed a retirement resolution before the Commission recognizing Terrance Philibeck.

MOTION: COMMISSIONER MEINTZ MOVED THE RESOLUTION FOR TERRANCE PHILIBECK BE ADOPTED WITH BEST WISHES FOR HIS LONG AND HEALTHY RETIREMENT. COMMISSIONER BERGDAHL SECONDED. MOTION CARRIED.

DIRECTOR'S REPORT

Director McDowell announced Tom Zimnicki joins the Michigan Department of Agriculture and Rural Development (MDARD) on September 20 as its new

Environmental Policy Advisor. The Director also shared details of meetings in which he recently has or soon will be participating, including grand opening of the Peterson Research Center in Hart, Governor's UP tour and UP State Fair (Donna LaCourt attended on behalf of the Director), recognition of Citizens LLC in Charlotte as the 2021 Ag Exporter of the Year, open house of Zeeland Farm Services in Ithaca, Corn Marketing Board, Michigan Economic Development Corporation Stakeholder Collaboration, recognizing Schramm's Mead in Ferndale as this year's "Rising Star Award" recipient, Michigan Agri-Business Association annual meeting, National Association of State Departments of Agriculture annual meeting, West Michigan Food Processing Association 'FutureFood21" conference, and Tri-National Accord. He invited Commissioners to join MDARD's Employee Awards Ceremony on November 2, which will have a remote component. He also provided updates on the status of remote work for MDARD staff, reauthorization of the Michigan Agriculture Environmental Assurance Program (MAEAP), and the Climate Council activities.

PUBLIC COMMENT (AGENDA ITEMS ONLY)

Jessica Youngblood, Youngblood Vineyard, Ray, Michigan – Ms. Youngblood shared details around their vineyard operations in metro Detroit. They involve the community to offer them a harvest experience and are excited to be a part of urban agriculture.

MICHIGAN AGRICULTURE ENVIRONMENTAL ASSURANCE PROGRAM (MAEAP) STANDARDS – APPROVAL OF 2022 STANDARDS: Jim Johnson, Division Director, and Joe Kelpinski, MAEAP Manager, Environmental Stewardship Division

Mr. Johnson advised the MAEAP Standards, as introduced at the July meeting, are before the Commission for approval today. They would be implemented and used for risk mitigation and MAEAP verification for individual operations during fiscal year 2022. This is a very important program in which farmers are being proactive in addressing environmental issues. The Commission has the statutory responsibility to annually review and approve the MAEAP Standards.

Mr. Kelpinski reiterated there are no recommended changes to the standards for 2022. He requested an overall approval of the maintenance of the standards for 2021 carrying them over to 2022.

Current database development includes incorporating all of the various A-Syst tools into two documents, one intended for farms and the other remaining with Forestry Wetlands and Habitat. The standards will not change. This streamlining will increase efficiencies for the farmers and the department, as well as technicians delivering the tools on farms, entering data in the system, and updating the tools annually for approval.

In response to question from Commissioner Montri, Mr. Kelpinski confirmed there are no major content changes to the standards anticipated for 2023, although there are a few peripheral items being considered. If any new regulation or piece of legislation should arise, it will be addressed as promptly as possible.

MOTION: COMMISSIONER MEINTZ MOVED TO APPROVE THE MICHIGAN AGRICULTURE ENVIRONMENTAL ASSURANCE PROGRAM STANDARDS FOR 2022 AS PRESENTED. SECONDED BY COMMISSIONER BERGDAHL. MOTION CARRIED.

<u>GENERALLY ACCEPTED PROCESSING PRACTICES (GAPPs):</u> Jim Johnson, <u>Division Director, Environmental Stewardship Division</u>

Mr. Johnson advised the Commission is statutorily required to annually approve the Generally Accepted Fruit, Vegetables, Dairy, Meat, and Grain Processing Practices for Noise and Odor (GAPPs) as dictated by the Legislature in 1998. Practices were developed specifically around noise and odor related issues that provide nuisance protection for agricultural processors who are following the standards.

Although the department continues to work with processors, the GAPPs have never been used. Processors have been able to handle issues themselves, making whatever changes are needed to address any complaints.

During a recent committee meeting, members confirmed the standards are very important to the agricultural processing industry. The committee is considering developing standards around fugitive dust as the next nuisance condition.

As indicated in the materials provided to the Commission, there are no changes recommended this year and they can be approved as they currently exist.

MOTION: COMMISSIONER BERGDAHL MOVED TO APPROVE THE GENERALLY ACCEPTED FRUIT, VEGETABLES, DAIRY, MEAT, AND GRAIN PROCESSING PRACTICES FOR NOISE AND ODOR AS PRESENTED. SECONDED BY COMMISSIONER BORING. MOTION CARRIED.

GENERALLY ACCEPTED AGRICULTURAL MANAGEMENT PRACTICES (GAAMPs): Jim Johnson, Division Director, and Mike Wozniak, Right to Farm Program Manager, Environmental Stewardship Division

Mr. Johnson noted the Right to Farm (RTF) Act provides nuisance protection for farm operations that are in conformance with Generally Accepted Agricultural Management Practices (GAAMPs). The Act gives the Commission of Agriculture and Rural Development responsibility for the GAAMPs, which RTF staff use to determine compliance with the conditions necessary under the RTF Act. The Act dictates the GAAMPs be reviewed annually by the Commission and revised as

necessary. Today, the proposed 2022 GAAMPs are introduced for the Commission's review between now and the November meeting, with anticipated decision regarding the 2022 GAAMPs at that time.

Mr. Wozniak recognized the outstanding efforts of the GAAMPs taskforce committees, who worked under a shortened review cycle this year. He provided a summary of the recommended revisions to the 2022 GAAMPs, including minor text and formatting changes, references to new research, and language added regarding depopulation of livestock in emergency circumstances. He further reviewed specific recommendations within each GAAMP, which included consistency between GAAMPs and a change to the preface for each.

Commissioner Montri added the Commission's appreciation for efforts of the taskforce committees and their willingness to change their review timeline to provide for approval in November, which can be inclusive of new Commission members.

Commissioner Chae requested a briefing specific to urban farming within the GAAMPs. Mr. Johnson confirmed there is a provision allowing cities of a certain size to determine what urban farming will look like within those communities and he will provide an update during the November Commission meeting. Mr. Wozniak advised he is also available for conversation at any time.

RECESS AND RECONVENE

Chairperson Montri recessed the meeting at 10:41 a.m. for a brief break. She reconvened the meeting at 10:54 a.m.

BOVINE TUBERCULOUS (TB) PROGRAM UPDATE: Nora Wineland, Division Director and State Veterinarian, Animal Industry Division; and Jared Duquette, Wildlife Division Chief, Michigan Department of Natural Resources

Dr. Wineland provided an update on the Bovine Tuberculous (TB) Program, including positive herds and how they impact MDARD's Memorandum of Understanding (MOU) with the U.S. Department of Agriculture (USDA), general program updates, and status of MOU discussions with USDA.

MDARD's current MOU stipulates USDA will withdraw Michigan's split-state status if we were to identify more than three newly affected herds in the Modified Accredited Zone (MAZ) within any consecutive 12-month period. Currently, we have one newly affected herd since September 15, 2020. We have three positive herds with which MDARD is coordinating a test and removal approach. Details around each specific positive herd were shared.

Dr. Duquette provided an update on deer surveillance conducted by the Michigan Department of Natural Resources (MNDR). Deer surveillance indicates deer positives remain primarily clustered within Deer Management Unit (DMU) 452.

Prevalence was consistent with previous years, with a decrease outside of DMU 452. He reviewed details and methods for this year's proactive implementation plan, targeted at increasing the number of heads submitted by hunters. Localized sharpshooting by USDA Wildlife Services to reduce deer density in localized areas is also planned. A new Force of Infection (FOI) model to view the disease in deer will better portray TB transmission rate at a given time to allow staff to better react. Also reviewed was the ongoing vaccine study, which is currently working to determine the best delivery method.

In conclusion, Dr. Wineland summarized the ongoing weekly discussions with USDA regarding the new MOU. Expiration of the current MOU has been extended to April 15, 2022.

In response to questions from Commissioner Meintz, Dr. Duquette explained taxidermists have received training on how to preserve heads and still provide relevant test samples. MDNR's communication staff is continually working to effectively educate hunters in all aspects of TB testing processes and encouraging hunters to be partners in this ongoing effort.

Commission Montri expressed appreciation for the joint presentation today, anticipates it will be of similar value for updating the Natural Resources Commission, and suggested issues of common interest, such as Bovine TB and CWD, be presented jointly by MDARD and MDNR in the future.

<u>COMMISSION POLICY MANUAL: Brad Deacon, Director, Legal Affairs and</u> <u>Emergency Management</u>

Mr. Deacon emphasized the Commission Policy Manual is an important document, not only for the Commission but for the entire department, as it establishes standards for operations of the Commission, as well as a variety of expectations ranging from equal protection to how appeals are administered under the Right to Farm determinations. The manual is reviewed, revised as needed, and reapproved every other year. Comments from each MDARD division and program, as well as the Commission, were solicited and updates incorporated accordingly.

He noted that included in the manual, is a list of specific responsibilities on pages 3-4 referencing a wide range of Public Acts where the Commission plays a role. Because many of these have not been utilized in recent years, he offered to present at a future meeting to review those issues. In addition, the policy attachments will be updated to ensure most recent versions are included.

Commissioner Montri acknowledged the commitment around including diversity, equity, and inclusion in the manual revisions. Also, to ensure the policies reflect how we do things in practice, she made several recommended revisions that were included. She confirmed the Commission would be interested in receiving

a presentation reviewing the Public Acts which designate a role for the Commission.

MOTION: COMMISSIONER MEINTZ MOVED TO APPROVE THE REVISED COMMISSION POLICY MANUAL. SECONDED BY COMMISSIONER BORING. MOTION CARRIED.

PROTECT MICHIGAN COMMISSION: Chuck Lippstreu, President, Michigan Agri-Business Association; and Meredith Smith, Communications Specialist, Environmental Stewardship Division

Mr. Lippstreu advised the Protect Michigan Commission was created under Executive Order 2020-193. The strategy is educating and empowering Michigan residents about the COVID-19 vaccine, its safety, approval, and effectiveness in the fact that having Michiganders vaccinated is the way out of the pandemic.

The Protect Michigan Commission has been working with a broad range of stakeholders with the goal of reaching 70 percent of Michiganders who are eligible vaccinated. Specifics of the various goals were reviewed. The key focus includes equitable access, inclusiveness in all communities, transparent communications, providing data and relevant facts, and strategic implementation through effective partnerships to protect the health and safety of Michigan's families and workers. Current statistics around vaccine efforts in the state were also reviewed, noting rural communities nationwide tend to lag behind metro areas with number of residents vaccinated, which has driven the development of mobile vaccination events in Michigan, as well as promotional efforts from the leadership of national agriculture and agri-business sectors.

Commissioner Montri thanked Mr. Lippstreu and Ms. Smith for their leadership in this important effort, noting this resource is critical for rural communities.

FOOD AND AGRICULTURE INVESTMENT PROGRAM GRANT AMENDMENTS: Jamie Zmitko-Somers, Division Director, Agriculture Development Division

Ms. Zmitko-Somers reviewed recommended changes to the milestones for the 2019 Food and Agriculture Investment Program KDS, LLC, DBA Schramm's Mead grant project.

MOTION: COMMISSIONER BORING MOVED TO APPROVE THE RECOMMENDED AMENDMENT TO THE FOOD AND AGRICULTURE INVESTMENT PROGRAM GRANT PROJECT MILESTONES FOR KDS, LLC, DBA SCHRAMM'S MEAD. SECONDED BY COMMISSIONER CHAE. MOTION CARRIED.

Ms. Zmitko-Somers next reviewed recommended changes to the milestones for the 2018 Food and Agriculture Investment Program Northern Market grant project. MDARD's portion of this grant was to assist in funding the architectural design and development contract, which allowed them to proceed with fund raising for project construction. Following considerable discussion around the company not yet having broken ground and explanation of the project's current status, the department's confidence level, and planned future engagement in the project, the Commission considered the request to revise milestones and provide for closing out the grant project.

MOTION: COMMISSIONER BORING MOVED TO APPROVE THE RECOMMENDED AMENDMENT TO THE FOOD AND AGRICULTURE INVESTMENT PROGRAM GRANT PROJECT MILESTONES FOR THE NORTHERN MARKET. SECONDED BY COMMISSIONER CHAE. MOTION CARRIED.

In the future, Ms. Zmitko-Somers advised the department will most likely focus more on implementation type grants, being inclusive as possible across the state.

LEGISLATIVE UPDATE: Ashley Steffen, Director of Policy Development and Legislative Affairs

Ms. Steffen referred to the MDARD Legislative Update provided to the Commissioners and reviewed current status and activity around bills of interest to the department. Finalization of the Fiscal Year 2022 budget is hoped within the next two weeks and the department is pleased with what it was able to accomplish through recent meetings with appropriations chairs. MAEAP reauthorization and creation of the Office of Rural Development are proceeding, and changes to the Industrial Hemp Program are anticipated. She explained reasoning behind the department being opposed to House Bill 4561 that would provide for refunding of certain food establishment licensing fees.

PUBLIC COMMENT

No public comment on non-agenda items was requested.

ADJOURN

MOTION: COMMISSIONER MEINTZ MOVED TO ADJOURN THE MEETING. COMMISSIONER BORING SECONDED. MOTION CARRIED.

There being no further business, the meeting adjourned at 12:27 p.m.

Attachments:

- A) Agenda
- B) Agriculture and Rural Development Commission Meeting Minutes July 21, 2021
- C) Commission Resolution Recognizing Terrance J. Philibeck
- D) Director's Update September 15, 2021
- E) Michigan Agriculture Environmental Assurance Program Standards

- *F)* Generally Accepted Fruit, Vegetables, Dairy, Meat, and Grain Processing Practices for Noise and Odor
- G) 2022 Draft Generally Accepted Agricultural Management Practices (GAAMPs)
- H) Summary of Recommended Changes to 2022 GAAMPs
- I) Public Input Meeting Summary 2022 GAAMPs
- J) Public Comment Relative to the 2022 Draft GAAMPs
- K) Bovine Tuberculosis Program Update
- L) Draft Revised Commission Policy Manual
- M) Protect Michigan Commission Update
- N) Food and Agriculture Investment Program Amendment KDS, LLC DBA Schramm's Mead Grant Project
- O) Food and Agriculture Investment Program Amendment Northern Market Grant Project
- P) MDARD Summary of 2021-2022 Michigan Legislature 9/16/2021

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GRETCHEN WHITMER GOVERNOR STATE OF MICHIGAN DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

GARY MCDOWELL DIRECTOR

DRAFT

Michigan Commission of Agriculture and Rural Development

Proposed 2022 Meeting Schedule

Wed., Jan. 26, 2022 9:00 a.m.	Constitution Hall, Con Con Rooms 525 W. Allegan Street, Lansing, Michigan Option to join via remote technology: Dial by telephone: 1-248-509-0316, Conf. ID:#	
Wed., March 16, 2022 9:00 a.m.	Constitution Hall, Con Con Rooms 525 W. Allegan Street, Lansing, MI Option to join via remote technology: Dial by telephone: 1-248-509-0316, Conf. ID:#	
Wed., May 18, 2022 9:00 a.m.	TBD Option to join via remote technology: Dial by telephone: 1-248-509-0316, Conf. ID:#	
Wed., July 20, 2022 9:00 a.m.	TBD Option to join via remote technology: Dial by telephone: 1-248-509-0316, Conf. ID:	_#
Wed. Sept. 14, 2022 9:30 a.m.	TBD Option to join via remote technology: Dial by telephone: 1-248-509-0316, Conf. ID:	_#
Wed., Nov. 9, 2022 9:00 a.m.	TBD Option to join via remote technology: Dial by telephone: 1-248-509-0316, Conf. ID:	_#

November 10, 2021



MICHIGAN COMMISSION OF AGRICULTURE AND RURAL DEVELOPMENT RESOLUTION COMMENDING

ROBERT W. PIGG

The Michigan Commission of Agriculture and Rural Development is pleased to recognize and honor Robert W. Pigg upon his retirement from the State of Michigan, Department of Agriculture and Rural Development (MDARD) on September 30, 2021.

Robert was born in Dayton, Ohio, on November 7, 1954. Robert's father served in the Army Corps of Engineers and before graduating from high school, Robert lived in seven different states across the United States, as well as in Argentina. Robert earned a B.S. in Environmental Science from the University of Virginia and a M.S. in Resource Development from Michigan State University. Prior to working for the State of Michigan, Robert worked as a cook, sous chef, restaurant assistant manager, manager of a consumer food co-op, archaeologist, caterer, research assistant, and teaching assistant.

In 1993, Robert began working for MDARD as a resource analyst for the Groundwater Program, and later becoming a resource specialist. During his time, Robert oversaw Michigan's groundwater monitoring program for private water wells. This involved designing sampling protocols and collection processes, recording water sample analysis results, and making program recommendations based on these results. He also served as MDARD's liaison on groundwater monitoring for state, federal, and local agencies, as well as private industry.

Robert not only developed MDARD's water monitoring data system, but he also worked with many other key information management systems within the Environmental Stewardship Division. He has been very involved with the development and design of the Michigan Agriculture Environmental Assurance Program database, the Right to Farm complaint resolution database, and the Water Use Reporting database. The information in these systems is used to improve environmental impacts, water quality, and food safety throughout Michigan.

Robert's dedication to his wife of 30 years, Sue, and love for his boys, Nicholas and Andrew, are just a couple of his admirable qualities. Robert is also known for delighting folks with his uncanny humor and encyclopedic knowledge of the arcane. He is an extremely generous man of many talents. He sings in a church choir and a men's group that carols at Christmas time to raise money for area food banks. Robert also enjoys gardening, traveling, reading, kayaking, and cooking.

The Michigan Department of Agriculture and Rural Development commends Robert for his 28 years of service and dedication to MDARD, the Environmental Stewardship Division, the agricultural industry, and the people of the State of Michigan. The Commission joins Robert's family, friends, and colleagues in wishing him a long and happy retirement and great success in future endeavors.

Ou montri

Adopted September 22, 2021 Lansing, Michigan

Dru Montri, Chair

DIRECTOR'S UPDATE November 10, 2021 - Ag Commission Meeting

Recognition of Dru Montri & Tim Boring

I want to personally thank Dru Montri and Tim Boring for their incredible service to the Ag Commission. On behalf of all of us, we can't thank you enough for your enthusiasm and engagement in our many complex issues. Good luck in your new roles: Dru with Feeding America; and Tim with USDA Farm Service Agency.

New Environmental Policy Advisor

Tom Zimnicki joined MDARD's team on September 20 as our new Environmental Policy Advisor. He comes to us from the Michigan Environmental Council, and is hitting the ground running. Please give Tom a warm welcome!

FDD Deputy Director

I also wanted to introduce Jen Bonsky who was recently named Deputy Director of our Food & Dairy Division. While Jen has been with the department for several years, she officially started in this position on October 4. Welcome, Jen!

Food & Ag Business Tours

October was a busy month for food and ag tours. Below are the companies visited, most of which included local legislators and media. It was so nice to receive such a warm welcome by some of our most entrepreneurial stakeholders.

- Mastronardi (Coldwater) w/Governor
- Potlach (Gwinn) w/Lt. Governor
- Great Lakes Potato Chips (TC)
- Grand Traverse Pie Co. (TC)
- Grand Traverse Distillery (TC)
- Walters Gardens (Zeeland)
- Critter Barn (Zeeland)
- Hudsonville Ice Cream (Holland)
- o Arauco (Grayling)
- Kirtland Community College (Grayling)
- Austin Brothers Brewing Co. (Alpena)

Country Fresh 75th Anniversary (Grand Rapids)

I had the pleasure of giving remarks at Country Fresh's 75th celebration in Grand Rapids on October 23. As you may know, DFA bought out Country Fresh during their bankruptcy a few years ago. It was exciting to see so many people there supporting this dairy operation.

MDARD Employee Awards Ceremony

The annual Employee Award Ceremony took place on November 2 where 61 staff were recognized for their years of service. Neil Jones from the Laboratory Division celebrated

50 years! It was a great day to honor staff for the great work they do every day! The special award recipients included:

- Every Day Hero (Johnathon Schweda Ag Development Division)
- Leadership (John Switzer Environmental Stewardship Division)
- Front Line Ambassador (Kevin Kern Pesticide & Plant Pest Management Division)
- Rookie of the Year (Chase Hannahs Laboratory Division)

We also took time to honor Mike Lally who passed away unexpectedly on October 26. Mike was a Senior Food Inspector in our West Region who served the department for 31 years. He will be sorely missed by his family and peers.

Return to Office / Remote Work

MDARD is finalizing its plan to transition back to the office on December 6. Staff will continue with a hybrid schedule. All employees have remote work agreements on file which reflects their approved remote/office schedule.

Office of Rural Development

MDARD continues to work with our legislative partners on policy wording that will solidify our implementation of resources obtained in the FY22 budget.

Michigan Commission of Agriculture and Rural Development November 10, 2021 Request for Approval to Increase Nursery and Related Inspection Fees

Purpose

The Pesticide and Plant Pest Management Division (PPPMD) requests the Commission of Agriculture and Rural Development to approve proposed increases in its nursery and related inspection fees.

Authority

The Insect Pest and Plant Disease Act, P.A. 189 of 1931, authorizes PPPMD to:

- Charge an inspection fee based on the cost of doing an inspection
- Annual adjust inspection fees based on the percentage change in the Detroit-Ann Arbor-Flint (now Detroit-Warren-Dearborn) Consumer Price Index (CPI) (determined by the State Treasurer)
 - \circ $\;$ Adjustment not to exceed 5% in a one-year period
 - o Commission must approve adjustment

Fiscal Year Review of the Cost of an Inspection

PPPMD evaluates the cost of conducting plant and plant product inspections at the end of each fiscal year. For the 2021 fiscal year, this evaluation found that:

- Inspection and license fees totaled \$965,000, which did not cover the approximately \$3.2 million cost of these programs
- Approximately \$2.2 million in general fund was required to support these programs

Consumer Price Index (CPI)

The State Treasurer notified MDARD on September 16, 2021 that the Detroit-Warren-Dearborn CPI rose 2.8% in FY 2021.

Inspection Fee Schedules

<u>Current</u> :	\$63/hour	Proposed:	\$65/hour [\$2/hour increase]
	\$57/acre (first acre)		\$59/acre [\$2/acre increase]
	\$34/acre (subsequent acres)		\$35/acre [\$1/acre increase]

Revenue increase: estimated at \$15,000

Persons Affected by Inspection Fee Increases

- Nursery stock growers and dealers
- Exporters of plants and plant products
- · Christmas tree growers shipping cut trees out of state
- Importers of foreign-source nursery stock
- Persons requesting inspections under special circumstances

Effective Period

January 1, 2022 – December 31, 2022

Notification of Proposed Inspection Fee Increases and Effective Period

In October, PPPMD notified, in writing, the proposed changes in fees to the following organizations:

- Michigan Nursery and Landscape Association
- Michigan Green Industry Association
- Michigan Christmas Tree Association
- Michigan Floriculture Growers Council
- Michigan Agribusiness Association

Overview of Pesticide Applicator Certification Exams

MDARD Pesticide and Plant Pest Management Division

BACKGROUND

State law requires commercial pesticide applicators and anyone purchasing restricted use pesticides (RUPs) to demonstrate, by examination, a knowledge of safe pesticide use.

Prior to COVID, PPPMD administered 18,000 written exams annually at locations throughout the state. No exam fee. Unlimited retakes.

Beginning in 2016, Metro Institute began offering paper-based exams for a fee. No money was (or is) exchanged between PPPMD and Metro Institute.

Applicators could (and still can) recertify their credentials by acquiring seminar credits.

Credentials expire after three years.

Administering exams cost PPPMD \$250,000/year. Other program costs were over \$200,000/year. No revenue left to perform inspections or respond to 150+ certification-related use investigations per year.

COVID TIME LINE

March 2020

PPPMD and Metro Institute cancel all exam sessions.

April 2020

PPPMD begins oral exams for private applicators to allow them to purchase RUPs.

Governor issues Executive Order that unexpired and extended pesticide applicator certification credentials that expired on 12/31/2019 to 60 days after the end of the state of emergency.

May 2020

PPPMD introduces temporary registered applicator program to allow certification of new applicators without exams. Allowed application of non-RUPs under supervision of a certified applicator.

June 2020

PPPMD begins no-contact written exams for custom applicators.

September 2020

PPPMD resumes in-person, written exams for all applicators in accordance with Emergency Orders on COVID safety..

November 2020

PPPMD suspends in-person, written exams again as COVID rates surge.

December 2020

Director McDowell issues emergency rule extending all pesticide applicator certification credentials that expired on 12/31/2019 or 12/31/2020 to 6/30/2021. This rule also allowed applicators to renew their credentials by seminar credits <u>after</u> their credentials expired.

March 2021

Metro Institute begins remotely-proctored, online exams that can be taken at any secure location with a computer and high-speed internet.

Throughout 2021

Metro Institute continues to re-open existing testing centers and adding new testing centers.

Metro Institute improves online exam process and hires additional proctors.

September 2021

PPPMD partners with MSU Pesticide Safety Education Program to offer in-person, written exams following core review training sessions.

TODAY

Applicators can become certified or recertify existing credentials four ways.

MSU Extension considering using offices as Metro Institute testing centers.

Saving \$200,000+/year.

Meeting with other exam companies.

Exam pass rate has improved dramatically

SUMMARY AND FUTURE

MDARD and PPPMD used and continues to use multiple legal avenues to allow pesticide applicators to become certified or renew their certification during the pandemic.

COVID-accelerated changes have been difficult for some members of the industry.

PPPMD will continue to improve the exam program to provide better service.

Michigan Department of AGRECULTURE & Rural Development A Brief History of Urban Agriculture and Right to Farm



James Johnson Environmental Stewardship Division Director November 10, 2021

Urban Ag Driven by Backyard Chickens

What does it encompass?

- In the early two thousand teens there was an increased interest in backyard chickens.
- Numerous articles at the time about local units of government not allowing chickens; while others were allowing them in more urban settings but with certain restrictions (i.e., no roosters).
- The fact is the GAAMPs were built to address non-farm residents moving to livestock in the country not the livestock moving to an urban setting.



Right to Farm (RTF) Challenge

 There is no requirement around zoning for the application of RTF benefits in the Right to Farm Act.

• The interpretation is that RTF applies everywhere; regardless of zoning

 This means MDARD would/could be involved in solving neighbor disputes in urban and suburban situations



It Started in Detroit

- MDARD staff from ESD, 3PM F&D and AID met with the Detroit Planning Office; Kathryn Underwood
- They wanted to allow agriculture in the city; but wanted to allow for it in their way.
- They received this legal interpretation from experts at WSU; warning caution in moving forward.
- This was followed by numerous meetings and presentations to the Michigan Commission on Agriculture and Rural Development.

Change to the GAAMPs Preface

- To create clarity around the application of GAAMPs in urban areas, the Commission adopted the following language in the preface of each GAAMP:
 - This GAAMP does not apply in municipalities with a population of 100,000 or more in which a zoning ordinance has been enacted to allow for agriculture, provided the ordinance designates existing agricultural operations present prior to the ordinance's adoption as legal non-conforming uses as identified by the Right to Farm Act for purposes of scale and type of agricultural use.
- This allowed the City of Detroit to move forward with the creation of an ordinance that allows for agriculture within the city limits.
- Detroit completed an ordinance in 2013 for community gardens. They were never able to come to an agreement on an animal agriculture ordinance.



What about Animal Agriculture?

- Siting GAAMP amended in 2014.
- Allows for an evaluation of property for appropriateness for livestock numbers < 50 animal units – Category 3 and 4 sites.
- Creates a "Category 4 Site" which is not acceptable for new and expanding livestock facilities (<50 animal units) and livestock production facilities (>50 animal units).
- It goes on to say, under Category 4 sites, "...the possession and raising of animals may be authorized in such areas pursuant to a local ordinance desired for that purpose."



Evaluating a Site – Density Matters

- If there are more than 13 homes within 1/8 of a mile or have a non-farm residence within 250' of the livestock facility, then it is a Category 4 site.
 - ✓ Not appropriate for livestock
 - Having livestock would not be in conformance with the Siting GAAMP and the operation may not have Right to Farm protection
- If there are less than 13 homes within 1/8 of a mile and no non-farm residences within 250' of the livestock facility, then it is a Category 3 site.
- s st Buchanan St Hiddum Prine th Grin Hiddum St Hiddum S

- ✓ Appropriate for livestock
- ✓ Right to Farm and GAAMPs apply

Urban Livestock Workgroup

- Named by Director Clover Adams and Senator Hune.
- Started working in September 2014; submitted its report on March 15, 2015.
- Workgroup included numerous interest groups associated with livestock agriculture and urban producers
- Intent was to look at both social and technical issues.
- Report made 5 recommendations most importantly recommending the introduction of an urban agriculture bill.
- This was never completed. The report can be found at: <u>Urban</u> <u>Livestock Workgroup Report w Technical Workgroup Guidelines</u> 031315 (michigan.gov)



Technical Report - Another Recommendation

- Purpose to provide livestock producers/planners in urban/suburban settings information that can be used to raise or govern livestock production within their jurisdiction. This covered areas including:
 - ✓Soils

✓ Livestock Health

✓ Livestock Housing

✓Waste/Manure Management

✓ Livestock Slaughter and Euthanasia

✓ Pest Control





- Fewer questions around backyard chickens.
- Some questions involve swine, goats, sheep, and bees.
- Even though the limit is set at 50 Animal Units, we rarely have requests that exceed even 1 animal unit.
- We've never had anything more that 4 Animal Units.



Questions?





@MIDeptofAgriculture



@MichDeptofAg



Michigan Department of Agriculture & Rural Development



@MichiganAgriculture



Michigan Department of Agriculture & Rural Development

URBAN LIVESTOCK TECHNICAL WORKGROUP GUIDELINES

March 5, 2015

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Questions may be directed to <u>MDA-Info@michigan.gov</u>

INTRODUCTION

There is a growing desire by people in more urban and suburban environments to move towards being self-sufficient when it comes to feeding their families. There are also those who are interested in some financial gain in producing their own food. The result of all this is a changing landscape and a greater need for careful consideration for both community planners and people thinking about growing food. A lot of research and practical work has been done to produce food in rural settings; however, this is not the case for urban and suburban settings. While much of the management will be the same, there are special considerations that must be made to be productive in a more densely populated area. While this document does cover a number of production issues, it does not cover all of them. There is a much greater emphasis on livestock related issues since these operations are where most of the conflict between neighbors occurs in rural areas. It is important to remember that in more densely populated areas, it is not acceptable to infringe on your neighbors' right to enjoy their property. This should be an overriding goal as communities move forward. While this document provides many practices to assist with this goal, there is a great deal that is not known or tested in an urban setting to clearly outline practices that assures this goal. There is little doubt that a better understanding will occur over the years ahead.

There are many issues that must be considered when thinking about growing food in an urban environment. Some of these include changes to the land associated with human activity; some include health for both humans and livestock, while others involve cultural practices associated with growing food; the who, what, when, where, and how of agricultural production is important.

This document provides ideas to consider and sources for greater detail for both policy makers and urban producers. It is arranged in major sections including Understanding Your Soils, Livestock Health, Livestock Housing, Waste and Manure Management, Livestock Slaughter and Euthanasia, and Pest Control. Each chapter will introduce the broad issue to be considered and, when available, web links to sites to provide greater section detail and guidance. For purposes of this document, livestock includes all food producing animals.

I. UNDERSTANDING YOUR SOILS

There are many constituents in the soils of Michigan: minerals, organic material, nutrients and in some cases contaminants that can be harmful to plants and animals, including humans. Soil contamination is caused by harmful amounts of contaminants present in the soil. Contaminants can be natural components of soil, like metals, or manmade substances, like flame retardants. Contaminants can be present in soil in harmful amounts due to natural background, such as arsenic in some areas of Michigan, or human activity, such as cadmium from machine shops and metal works. Because some contaminants can be taken up by plants, it is possible to produce contaminated fruits and vegetables. Livestock eat dirt as they graze and poultry can peck at the ground, which can create dust that when inhaled can contaminate meat or other animal products, like eggs and milk. Understanding the potential constituents of your soil is an important part of determining if the site being considered for growing food or raising certain livestock is appropriate.

An urban environment is expected to have more soil contamination than a rural one, in part because of more industrial activities, a greater density of pre-1978 structures, and more vehicular traffic. For example, past management practices for industrial waste included on-site burial for solid waste and on-site lagoons for liquid waste, both of which had the potential of contaminating soil, groundwater, and surface water.

Old commercial and residential structures can also contribute lead to soil and dust from peeling paint since paint made before 1978 commonly contained lead. Additionally, the past use of leaded gasoline has also increased lead concentrations in urban soil. Lead in soil is a particular concern because it is recognized as an important source and predictor of child blood lead levels. http://www.sciencedirect.com/science/article/pii/S0160412013001475

No safe blood lead level in children has been identified. Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement. The effects of lead exposure cannot be corrected.

http://www.cdc.gov/nceh/lead/acclpp/blood_lead_levels.htm

Site Evaluation

An evaluation of a potential site for urban livestock must include the history of the site and its surrounding area to help ensure all potential soil contaminants are identified. Past and current activities together with their typical corresponding contaminants are shown in Appendix A, Sources of Contaminants in Soil.

This may also include a review of what others in the area have seen in their soil sample analysis. Soil analysis for all potential contaminants can be expensive, so doing your homework to narrow down the possibilities can save you money. Site evaluation is important because it will provide a sense of security that you are not going to produce a potentially contaminated crop or animal food product.

Soil Sampling

Soil samples need to be representative of the site's soil and prepared in such a way that the laboratory analysis is accurate.

Representative Sampling

The sampling method may be different depending on the total area to be sampled. For example, if an area the size of a typical urban residential back yard is sampled, the instructions given in the *Urban Agriculture in Michigan: Things to consider about soil and water* document may be sufficient.

<u>http://www.michigan.gov/documents/mdard/Urban Agriculture in Michigan -</u> <u>Things to consider about soil and water 452158 7.pdf?20150114151547</u>. For a larger area, a method using incremental sampling may need to be considered. <u>http://www.itrcweb.org/ism-1/</u>. Please note that the incremental sampling method may need to be conducted by an environmental professional.

Sample Preparation

Soil sample preparation will be different for different types of analytes (potential contaminants). It is important to obtain specific instructions from the laboratory that will be conducting the soil analysis. For example, an analysis for some types of analytes will need the addition of a preservative such as an acid or base to the soil sample.

Interpretation of Laboratory Results

Activities associated with raising livestock in urban areas need to be safe for the livestock, the people working with the livestock, the people consuming the livestock and livestock products, and the environment. Unfortunately, there is no set of soil contaminant concentrations that assures protection of all these exposure pathways. The Michigan Departments of Agriculture and Rural Development (MDARD), Community Health (MDCH), and Environmental Quality (MDEQ) have developed several guidance documents for urban gardening that include lists of soil and water contaminant concentrations protective for gardeners and people consuming the crops. http://www.michigan.gov/documents/mdard/Urban Agriculture in Michigan - Things to consider about soil and water 452158 7.pdf?20150114151547 and http://www.michigan.gov/documents/mdard/Working With Soil in Urban Areas 452152 7.pdf?20150114151547 However, these concentrations may not be protective for livestock and people consuming the livestock and livestock products. For example, there is some evidence that the lead concentrations may be too high for consumption of chicken eggs from chickens raised on soils with these contaminant levels.

http://cwmi.css.cornell.edu/lead nyc garden eggs.pdf
Information regarding safe concentrations of soil contaminants for protection of people consuming the livestock and livestock products are shown in Appendix B, Soil Contaminants and Livestock.

Reduction of Exposure Risk

If a site is known or suspected to have contaminated soil, there are measures that can be implemented to help reduce the exposure risk. These actions include the following:

- Remove contaminated soil and replace with clean soil. This may be the most expensive option; however, it is a more permanent solution than the others.
- Place a barrier between contaminated soil and livestock. Examples include covering the contaminated soil with a sufficient layer(s) of clean soil, concrete, geotextile fabric, and/or rock. The initial cost may be less expensive than soil replacement; however, ongoing monitoring and maintenance will incur future costs.
- Keep livestock above contaminated soil. This action may not be feasible for large livestock; however, it may be workable for chickens, rabbits, and other small animals.
- In the case of growing crops, consider the use of raised beds.

II. LIVESTOCK HEALTH

An increasing number of people wish to raise livestock species in urban areas. The introduction of livestock species to urban environments does concern some people who are nervous about the potential for introducing diseases that are harmful to humans. It will be the responsibility of the urban livestock owner to develop and follow animal management plans for their animals to minimize the risk of disease.

Management practices are the key to animal health whether there are 100 animals or 2. It is widely agreed that disease prevention is ultimately more cost effective than trying to treat a disease after it develops, therefore, animal health plans should include all aspects of animal care, including but not limited to; housing, nutrition, sanitation, and preventive medicine. The primary focus of this section will involve preventive medicine issues; however, proper housing, nutrition, and sanitation are equally important and can greatly reduce the need for medical treatment.

Preventive Veterinary Medicine

The goal of preventive veterinary medicine is to prevent animal disease, promote animal health and wellbeing, protect human health by reducing the risk of zoonotic diseases (those that can be passed from livestock to humans), and prevent contamination of food products meant for human consumption. Preventive veterinary medicine may include the use of veterinary drugs such as vaccinations, de-wormers, treatments for internal and external parasites, and medicated feeds. Owners should discuss the use of veterinary drugs with their animals' veterinarian, and the veterinarian's recommendations should be an integral part of the animals' health management plan. Even the best animal health plan can fail, and owners may find themselves having to treat animals for illnesses.

It is important for a person choosing to raise livestock animals to know what the normal, healthy appearance is for the animal. Knowing what the healthy animal looks like helps owners recognize when there is something wrong. Appendix C lists some of the common indicators of health and illness in chickens, goats, pigs, and rabbits. When signs of illness are seen, owners should seek veterinary help.

State law only requires dogs to be vaccinated for rabies; however, all mammals can be infected by the rabies virus, including humans. Anyone raising livestock animals susceptible to rabies, such as goats or pigs, should discuss rabies vaccination with their veterinarian. Rabies vaccination should be considered for livestock under the following conditions; 1. The livestock are housed in an area where rabies has been found in wildlife and there might be livestockwildlife interactions, and 2. There is increased contact between the livestock and the public. (Compendium of Animal Rabies Control, 2008, National Association of State Public Health Veterinarians).

All drug use, whether part of a preventive medicine plan or used to treat illness should be discussed with the veterinarian before use. The veterinarian will know the disease risks in the area when developing a preventive animal health plan. There are also regulatory reasons why owners should have a working relationship with their veterinarian.

Extra Label Drug Use

The Food and Drug Administration (FDA), is the federal agency responsible for approving drugs for use in animal agriculture. The FDA requires all animal drugs to have the following information on the label or a package insert: list of species for which the drug is approved, the approved dose and route of administration for each approved species, a list of prohibited uses by species, if any, and withdrawal times for milk, meat, and eggs for consumption, if applicable. The term 'extra label' means the drug is being used in a manner different from what is printed on the label or package insert without the consent and advise of a veterinarian. For example, Pen G (penicillin) is an injectable antibiotic approved for use in horses, cattle, sheep, and swine, but not approved for goats, therefore, when Pen G is used to treat a goat the use is "extra label". The only time a product may be used in a manner different from what is listed on the label is if the extra label use is prescribed by, or under the direct supervision of a veterinarian with whom the user has a valid veterinarian-client-patient relationship (VCPR). (CFR - Code of Federal Regulations Title 21)

<u>http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?CFRPart=530</u>). This relationship is required by federal law when using any drug on an animal contrary to label instructions.

Extra label drug use is a concern in both rural and urban agriculture; however, it may occur more often in urban settings because urban farmers may have difficulty forming the required VCPR with a veterinarian. The majority of veterinarians in urban settings work with companion animal species (cats and dogs) or exotic animal species (pocket pets, ferrets, pet birds, and reptiles), so it may be more difficult for urban farmers to find veterinarians willing and able to work with livestock. Increased extra label drug use may lead to increased drug residues in tissue (meat), milk, and eggs.

Drug Residues in Meat, Milk, and Eggs

When veterinary drugs are given to animals raised for food it may be found in the milk, muscles, organs, and eggs for a measurable period of time after administration. This is why the FDA has established withdrawal times for all drugs approved for use in food producing animals. The withdrawal time is the time elapsed between administration of the last dose to the animal, and when the animal will be safe to slaughter (or milk/eggs will be safe for human consumption). All federally approved drugs include the required withdrawal times for that drug on the product label or package insert. If a veterinarian prescribes extra label use of a drug, they are required to put a label on the drug, which includes what they determine the withdrawal time(s) is for meat, milk, or eggs. Below is an example of a residue warning taken from the package insert for Pen G penicillin.

Pen G Penicillin Residue Warnings:

Exceeding the daily dosage of 3,000 units per pound of body weight, administering for more than four consecutive days, or exceeding the maximum injection site volume per injection site may result in antibiotic residues beyond the withdrawal time. Milk taken from treated dairy animals within 48 hours after the last treatment must not be used for food. Discontinue use of this drug for the following time period before treated animals are slaughtered for food:

Cattle - 14 days, Sheep - 9 days, Swine - 7 days.

A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal.

All federally inspected slaughter facilities have inspectors testing meat and organs for drug residues. Carcasses with residues are condemned so they never enter human food channels. Urban farmers are more likely to use custom slaughter facilities (*See Section V. Livestock*)

Slaughter and Euthanasia) or process animals themselves that means tissue samples are less likely to be tested for drug residues.

Reportable Diseases

Reportable animal diseases are diseases that must be reported to the State Veterinarian when suspected or confirmed to be present in one or more animals. Diseases can be reportable for different reasons; 1. The disease is known to exist in Michigan and is reported for the purpose of surveillance; 2. The disease does not exist in Michigan and would have a significant impact on animal health and/or Michigan's animal industry if it was found here; or 3. The disease is zoonotic and would be a threat to human health. Michigan maintains a list of reportable diseases which is updated annually. 2015 Michigan Reportable Animal Diseases List

If the State Veterinarian is notified of a suspected or confirmed reportable disease, a state field staff veterinarian will likely visit the premise where the animal resides to confirm the disease is present and to determine what steps need to be taken to control the spread of the disease. These steps may include: 1. Issuance of a quarantine confining the animal(s) to the premise until they are shown to be free of the disease, either through medical treatment or confirmatory laboratory testing; 2. Some diseases may involve a lifelong quarantine so the animal(s) are confined until they die or are slaughtered; or 3. Depending on the disease, the animal(s) may be ordered by the State Veterinarian to be euthanized in order to protect human and animal health, and the animal industry. In many cases, the premise must be cleaned and disinfected after the infected animal is no longer at the premise.

Animal Identification

In Michigan, cattle, sheep, goats, and swine under specific circumstances, are required to have official identification before leaving the premise where they have been living. In order for an owner to obtain official identification for their animals, they must have a premise identification number. Owners can visit <u>MDARD - Animal ID - State of Michigan</u> (<u>http://www.michigan.gov/mdard/0,4610,7-125-48096_48149---,00.html</u>) to register their premise and obtain approved eartags for their cattle, sheep, and goats. Swine are required to have official identification for the sale of breeding sows and for taking the animal to exhibition. <u>Official Swine ID Options</u> . For further information, owners can call the Michigan Department of Agriculture-Animal Industry Division at 1-800-292-3939.

III. LIVESTOCK HOUSING

The keeping of small livestock and poultry in urban areas presents opportunities to acquaint neighborhoods and household members with the production of food. Although there are social

and physical challenges, owners' attention and care to good husbandry of animals, hygiene, upkeep of animal housing, fencing, and outdoor areas can help to diminish neighbor concerns.

General Shelter Characteristics

The provision of a comfortable shelter for animals should be a high priority for the urban agriculturalist. Since Michigan lies in a temperate zone, and capable of producing severe weather extremes, animals must be provided with a partial (three-sided) or fully enclosed solid roofed shelter depending on the species. In addition to providing comfort, shelters also serve to contain animals from sunset to sunrise, which minimizes potential for disturbance to neighbors, encourages animals to feel secure, and prevents predation. Larger livestock such as goats, pigs, and sheep may be housed in three-sided or fully enclosed roofed sheds. The indoor surface floor can be compact earth or concrete layered with bedding or litter but should be designed to prevent excess wetness resulting in odor, and problems with foot health. Partial and full enclosures should be oriented based on local geography and weather patterns such that they protect from extreme heat or cold and prevailing winds and rain. Animal housing must be sited according to local or city ordinances and typically away from neighbors' property to avoid creating noise, smell and other potential nuisance.

Smaller livestock, like rabbits and poultry, may be kept loose in a coop/room or in specially designed hutches or enclosures that are solid roofed. Each coop or hutch must contain a nesting box, food and water containers and in the case of chickens, areas for perching. Flooring within the coop or hutch should allow for easy daily cleaning and prevention of manure buildup. The provisioning of food in bowls or feeding devices, and water in bowls, bottles, or water devices should be appropriately designed for the species. Since small livestock and poultry are prone to predation, coops, hutches and other shelter types should be designed to prohibit intrusion by foxes, predatory birds, raccoons, dogs, cats, and small predators such as rats.

All shelters should provide a source of ventilation such as wire screened windows or vents that may be opened or closed to maintain desired thermal comfort and to allow fresh air flow to prevent accumulation of indoor gas or humidity. Shelters must be maintained in good physical condition, kept clean and attractive. More specific recommendations for type and design of animal shelters can be found at XXXX

Animals per Unit Area

The number of animals allowed per unit area is dependent on the configuration of the "useable space" of the outdoor area, area inside the animal shelter, breed type, physical status, and behavioral needs of the animals. While this document includes recommendations for minimum space per animal based on the physical and behavioral needs of adult animals or animals of a

certain weight class, these are only recommendations and care must be taken to evaluate each outdoor area and shelter for its unique attributes and ability to house and maintain animals safely and comfortably. Where standards have been set for livestock density based on science and/or legal requirements, numbers will be provided. Where there is not specific consensus or consensus on space allowance, no numerical reference is provided.

The intended purpose of keeping farm animals also guides the number to be kept. If animals are kept primarily for the provision of household food, then no more animals should be kept than what the household requires (nor should it exceed the animal unit capacity of the lot and shelter). The optimal number of animals required to meet household needs can be calculated. For example, all breeds of egg-laying hens have been evaluated for their egg production. These statistics can easily be found on-line. The number of eggs required to provide for the household can be estimated by using the average weekly number of eggs laid by that breed of hen and the average weekly household egg consumption (meals and baking). Keeping records of individual hen daily egg production can provide a more accurate representation of the home flock capability. The same approach may be used to calculate animal numbers required for provision of food to persons living outside the household is a goal, the same estimates can be applied except calculated for more people. In either case, the animal units on the lot will have an upper limit set either by the estimated need for the household (plus others) or the limitations of the lot space and shelter space to accommodate the animals.

Animal Space Recommendations for Indoor Areas

The indoor space within the animal shelter is a source of useable space. Most indoor areas provide animals' access to floor space where animals may rest, move about and fulfill behavioral or dietary needs. Deductions should be made for space that is inaccessible to animals. Only useable space should be counted to determine the number of animals that can be housed within the sheltered area. The recommendations below were derived through review of empirical work and evidence produced through scientific inquiry and practical experience. Based upon size, breed/strain, and physical and behavioral needs, these minimum recommended allowances must be carefully considered as type of indoor housing varies. Since animal size will vary, space allowances (ft² per animal) should be adjusted upward if the minimum recommendations do not allow animals to comfortably lie down together, stand-up, turn around, stretch their limbs, gain access to food and water, or permit normal postural adjustments for maintenance behaviors such as grooming or preening while kept indoors. This should be an overall goal when examining space for livestock.

Table 1

¹Recommended <u>Minimum</u> Indoor Useable Floor Space Allowance per Adult Animal or Final Market Weight

Poultry

,		
	Egg laying hen Meat chicken	 1.0 ft² (smaller breeds/strains); 1.5 ft² (larger breeds/strains) 1.0 ft² per 7 lbs. body weight
Turkey		
	Light weight	4.2 ft ²
	Heavy weight	5.0 ft ²
Rabbit		
	² Enclosed hutch	1.5 ft ² (small breeds); 5.0 ft ² (larger breeds)
	³ Loose floor pen	6.1 ft ²
*Sheep		
	Market lamb	7.5 ft ² (45 – 65 lbs.); 9.0 ft ² (65 -90 lbs.); 11 ft ² (91 - 110 lbs.) market weight
	Ewe	14 ft ² – 20 ft ² (non-pregnant – with lambs)
	Ram	20 ft ² – 32 ft ² (135 - 300 lbs. adult weight)
Goat		
	Doe and kid	18.0 ft ²
	Buck	40.0 ft ²
Pig		
-	Market pig	9.1 ft ² (market weight ~264 lbs.)
	Sow	35 ft^2 (sow with litter); 16.0 ft ² (5 – 20 sows per pen)

¹ Derived from recognized and scientifically developed guideline resources including: Humane Farm Animal Care Certified Humane, American Humane Heartland Certified, and Federation of Animal Science Societies unless otherwise specified.

²American Rabbit Breeders Association based on U.S. Department of Agriculture regulations for housing rabbits.

³ European Union recommendations for floor space.

*Space allowance should be increased for fully fleeced and horned sheep.

Animal Space Recommendations for Outdoor Areas

Outdoor useable space can be measured by calculating the total area of the lot where the animals will be kept, minus the area occupied by animal shelter(s) and other buildings inside the lot (or space restrictions such as patio areas), and deducting any other restrictions required by city or local ordinances, such as property line setbacks. The outdoor useable space is generally the area that will be available for open unobstructed use by the animals.

The outdoor areas used by animals should be properly fenced to contain animals and prevent intrusion by outside predators or burrowing under the fence, provide shaded area, and be

maintained such that dust, mud, water and manure do not accumulate. Maintaining ground surface vegetation is important to mitigating dust, facilitates the use and spread of animal manure, and prevents surface run-off. Maintaining vegetation by resting, reseeding, and rotation of the outdoor areas are important. Sheep and goats graze vegetation and poultry scratch/peck the ground for seeds, worms, and insects, and dust bathe that can create patches or complete loss of vegetation. Rabbits burrow and graze; and pigs create wallows for dissipating body heat and forage by rooting the ground. Through the use of temporary interior fencing, outdoor areas may be divided and used in a rotation. This allows one area to rest and the restoration of ground surface vegetation while the other area is in use. It is highly advisable to maintain vegetative cover because it helps to avoid odor and health concerns.

Recommendations for space allowance per animal will vary depending on the purpose of the outdoor space. If animals are expected to obtain part or all of their daily dietary needs then the type, quantity and quality of available vegetation will determine the number of animals able to be supported. For the purpose of this document, and under most conditions of urban agriculture, open useable space is primarily meant to meet the behavioral rather than dietary needs of the animal. Below is the minimum recommended space per animal for the provision of access to daylight, performance of important behaviors, and exercise.

Table 2

¹Recommended <u>Minimum</u> Outdoor Useable Space Allowance per Adult Animal

Poultry			
	Egg-laying hei	1	43.6 ft ²
	Meat chicken		10.8 ft ² (fast growing strains); 21.6 ft ² (slow growing strains)
	Turkey 65 ft ²		
Rabbit	t		No specific allowances set
Sheep			25 – 40 ft ²
Goat			No specific allowances set
Pig			No specific allowances set

¹ Space allowances are derived from Humane Farm Animal Care standards unless otherwise specified. These standards were developed by a scientific committee and member farmers.

Nutrition and Feeding

An important aspect of maintaining the health and welfare of urban livestock and poultry is the provision of a nutritionally robust diet and access to fresh potable water. The daily diet should be formulated in the right amount and ratio specifically for the species and the animal's stage of life and production. Free access to water is important. Water should be provided in containers that are easily accessed, cleaned to prevent build-up of sediment and algal growth, and regularly checked especially during hot weather or freezing cold. Buckets or other water containers should be placed to avoid injuring the animal, drowning or contamination by feces. Buckets, troughs, or bunks used to feed animals should be kept clean. Leftover feed should be cleaned out and properly disposed of in a secured container to prevent rodent, bird, or other wildlife attraction.

Michigan State University (MSU) Extension (<u>http://msue.anr.msu.edu/topic/info/agriculture</u>) can provide guidance on the nutritional and water requirements for each species and other information resources on animal care may be found. Pre-formulated feed can be purchased at local feed and livestock stores and sometimes hardware stores. Commercially available feed rations are available for organic standard food production. Commercial pre-formulated feed rations typically contain a mix of grains. Ruminant (multi-chambered digestive tract) species such as sheep, goats, and rabbits also have a requirement for preserved or dried stemmed and leafed forages such as hay and legumes such as alfalfa. Hay can be bought as bales from local farmers or feed stores, or in some cases the requirement met through a complete ration such as alfalfa cubes or pellets. Hay should be soft, dry, and light green and be easily pulled apart in flakes. Hay should not be dusty or moldy.

When using automated feeding or watering devices, it is imperative such devices are checked daily to detect blockage, breaks, or power outages to ensure proper feed and water delivery. Regular maintenance to assure smooth operation is important. As these automated devices typically rely on electrical power, in the event of a power outage, emergency back-up power or alternative strategies for delivering feed and water to livestock and poultry should be in place.

Maintaining Feed and Forage Quality

The tag on each bag of a commercial grain-based feed ration will provide information on the nutritional composition of the feed and its ingredients. Forages such as grasses and legumes also constitute an important part of some farm animal diets. To maintain feed ration quality, the proper storage of animal feed and forage is important to preventing spoiled or contaminated feed and moldy or poor quality hay. Freshness and storage of feed is as important to maintaining animal health as it is to properly storing food for the human diet. The feed tag provided on each bag of commercial feed has an expiration date.

is based on optimal storage conditions. Feed products will degrade more quickly and feed spoilage increases under inadequate storage conditions.

Storage of feed includes safeguarding from the attraction of wilds birds, deer, rodents, and insects that can contaminate feed products with feces and saliva or introduce microbial growth and spoilage. It may also present potential nuisance for neighbors. Grain based rations or complete feeds such as forage cubes must be stored in pest resistant sealable metal containers or bins. Avoiding direct ground contact by placing the container and any unopened stored bags of feed on a wooden pallet(s) or raised platforms away from walls discourages access by pests. Containers should also be stored within a room or area that provides shelter, prevents intrusion by pests, and is not subject to moisture or flooding. Hay bales or loose forages should be stored under a roofed or covered area as moisture will cause mold and spoilage. Bales should be elevated off the ground on wooden pallets or a platform and securely stacked on edge (strings or wire on sides not on top and bottom) to allow airflow and prevent spoilage. Left over spoiled or spilled feed should be cleaned up and properly disposed. (*See Feed Storage.*)

IV. WASTE AND MANURE MANAGEMENT

No two farming operations in Michigan are the same due to a large number of site variables. As a result, waste and manure management practices will vary from farm to farm. While the source of manure is obvious, there are other waste streams on a farm. Items such as weeds that have been pulled and piled, discarded materials from crops such as carrot tops, potato skins, cracked eggs, spoiled food, and other organic parts from the growing and harvesting of food can also be sources of your waste stream. The key to not impacting your neighbors is to keep from having organic materials around your facility begin to rot. These management practices will prevent negative impacts on neighbors, the environment, and your livestock.

Periodically scrape the manure or collect organic materials from outside areas

Every day or every few days as needed, all manure and other organic accumulations should be scraped and removed from outside areas. Keeping this area clean and dry will prevent odors, as well as aid in keeping livestock healthy. When dealing with manure, practices such as adding lime or wood shavings can help to further minimize odors with the goal of eliminating odor impacts on neighbors.

Periodically clean all livestock shelters

Every day or every few days as needed, indoor areas should be cleaned and all manure and soiled bedding should be removed. Additives such as lime wood shavings may be used to help reduce odors.

Remove manure from the property

If manure has to be temporarily stacked on the premises prior to being removed, it should be placed in a covered bin or on a concrete pad and covered. Keep the area covered at all times to eliminate odor impacts on neighbors and reduce the chance for attracting pests. Like pet manure, small amounts of manure can be disposed of in regular garbage removal. For larger amounts, there may be a need to move waste to someone who is handling these materials in other ways (e.g. county or farm composting facility or a farmer who is willing to take the material for their use).

Composting

If you plan to compost the manure and other organic waste streams generated on-site, a compost bin should be used. A fully enclosed design keeps pests out, minimizes odor, and will allow you to control moisture and aeration. By continuously turning the material, you will allow oxygen into the system and prevent odors from negatively impacting neighboring properties.

Effective composting will involve several factors:

- Materials high in carbon; typically leaves, straw, and woody materials.
- Materials high in nitrogen; typically grass and manure.
- Good composting processes will need air, water, and to maintain temperatures as recommended in the resources below.

There are many sites that provide valuable information about composting. <u>https://extension.unh.edu/resources/files/Resource000471_Rep493.pdf</u>

http://umaine.edu/publications/1021e/

http://urbanext.illinois.edu/compost/process.cfm

Runoff

Make sure that no runoff leaves the manure, waste, or compost pad. Pooling of runoff from these sites onto bare ground can cause negative environmental impacts, as well as create odors. All manure containment areas should be kept dry to eliminate potential odors.

In addition, no manure or wash water runoff should be allowed to flow onto neighboring properties, into the storm water system, a road ditch, stream, creek or other waterway. A direct discharge into a waterway is illegal and you may incur penalties.

Utilization

Manure or compost can be utilized on site in areas such as gardens. However, because manure contains pathogens, the grower should be sure that manure does not come into contact with crops that will be directly consumed. Understanding the nutrient values in manure or compost is important. Your manure or compost should be analyzed for these nutrients. This, in addition to the soil analysis, will assure you are utilizing the proper amount of manure or compost needed for the plants being grown. Also, anytime manure is utilized in a garden or around the property, it should be disked or turned into the soil immediately to eliminate any potential for odors. Assistance with soil testing can be found at http://www.spnl.msu.edu/. Assistance with manure analysis can be found at http://www.spnl.msu.edu/.

Fencing and Trees

The use of fencing and/or trees can help to dissipate odors moving towards neighboring properties. Perennial flowers, shrubs, or grasses will also help to control odors, as well as provide a pleasing aesthetic for the neighboring properties. Additional technical assistance and information can be found at <u>https://store.extension.iastate.edu/Product/Animal-Housing-Landscaping-Overview</u>.

Feed Storage

All feed should be stored in metal containers with secured lids to prevent pest infestation. Any spilled feed should be cleaned up immediately and all spoiled feed should be put in the trash or composted.

V. LIVESTOCK SLAUGHTER AND EUTHANASIA

In some cases, urban agriculture my involve slaughtering of livestock for food purposes. All slaughtering activities should be handled in an enclosed area. All wash water and slaughter by-products should be captured. This material should not be allowed to flow to a storm water drain or any other body of water. Cleanup should occur as soon as processing is completed. By-products should be securely bagged and tied prior to placing it in the garbage.

Processing By-Products

All processing by-products such as wash water, stems, cull products (not acceptable for consumption or further processing), and fruit and vegetable materials should be captured. This material should not be allowed to flow to a storm water drain or any other body of water. The cull products and fruit and vegetable materials can be composted or put in the garbage. Cleanup should occur as soon as processing is completed.

Regulatory Agencies

Depending on the size and type of operation, there are two different regulatory agencies that may be involved in slaughtering livestock for consumption. The United States Department of Agriculture (USDA) Food Safety and Inspection Service (FSIS) regulates the slaughter and processing of meat and poultry. Operations either require carcass-by-carcass inspections by the USDA, or fall under an exemption. Operations that fall under an exemption can be subject to periodic sanitation inspections by the USDA. MDARD regulates food in commerce in the state of Michigan. Operations that provide food, but are exempt from USDA FSIS inspections, require a license from MDARD. Periodic sanitation inspections are part of the MDARD requirements. Operations that solely produce food inspected under USDA FSIS do not require a MDARD license. Operations that have multiple products or conduct multiple services may be regulated under both agencies.

There is a big difference between a carcass-by-carcass inspection program, conducted by USDA FSIS, and periodic sanitation inspections, conducted by MDARD. The carcass-by-carcass inspection program focuses on the health and condition of each individual animal and requires a USDA FSIS inspector to be onsite during all times of production. The periodic sanitation inspection conducted by MDARD occurs on a routine basis and focuses on the sanitary conditions of the facility/equipment and hygienic practices of personnel. An inspector does not need to be present during all times of production under this program.

Animal Species

The type of animal being slaughtered will impact what regulations apply to the operation. In order to address the different risks associated with different species, the USDA has two separate sets of rules addressing slaughter and processing of animals. One set of rules addresses "meat" and the other addresses "poultry". The term "amenable species" is used to describe the species of animals covered by the USDA regulations. Amenable species in the Poultry Products Inspection Act include turkeys, chickens, ducks, geese, squab, guinea fowl, and ratites (ostrich, emu and rhea). Amenable species in the Federal Meat Inspection Act include cattle, swine, sheep, goat, and equine.

Non-amenable species are not covered by the USDA rules, but do fall under MDARD licensing and inspection requirements. Examples of non-amenable meat species include mammals such as reindeer, elk, deer, antelope, water buffalo, bison, squirrel, opossum, raccoon, rabbits, nutria or muskrat, and non-aquatic reptiles such as land snakes. Non-amenable poultry includes game birds such as pheasant and quail. The food risks associated with these species are not fully known or controlled under the specific USDA inspection requirements. Therefore, MDARD's general food safety regulations apply. <u>Federal Meat Inspection Act</u> <u>Poultry Products Inspection Act</u> <u>The Michigan Food Law P.A. 92 of 2000 as amended</u>

Exemptions

There are some exemptions to the USDA regulations. Both the meat and poultry acts contain "Personal" and "Custom" slaughter exemptions for personal or household use. These two exemptions also apply to MDARD licensing. For your own personal food safety, exempt operations are still expected to have good sanitary standards and provide products that are sound, clean, and fit for human food. However, the carcass-by-carcass inspection requirement does not apply. Food products resulting from these exempt services cannot be sold and must be marked "Not for Sale". The personal slaughter exemption pertains to situations where the owner of the animal slaughters and processes their own animal for personal use. The custom slaughter exemption pertains to situations where someone other than the owner slaughters and processes the animal . The meat is then provided back to the owner for personal use and cannot be sold or used to make food that will be sold. The custom exemption also applies to animals taken by lawful hunting or trapping.

Meat

For amenable species, there are no other exemptions for slaughter under the Federal Meat Inspection Act. All slaughter of cattle, swine, sheep, goat, and equine for meat or meat products require a USDA carcass-by-carcass inspection. For non-amenable species (reindeer, elk, deer, antelope, water buffalo, bison, squirrel, opossum, raccoon, rabbits, nutria, or muskrat), all slaughter and processing activities for meat or meat products require MDARD inspection and licensure.

There are several additional USDA exemptions for poultry.

- <u>1,000 or fewer birds processed annually</u>: A person may raise, slaughter, cut up and sell at retail up to 1,000 poultry and is exempt from all USDA inspections. **MDARD inspection and licensure apply**. USDA may conduct random or complaint initiated investigations.
- <u>1,001 to 20,000 birds processed annually</u>: A person may raise, slaughter, cut up and sell at retail or wholesale from 1,001 to 20,000 chickens or turkeys if the products are labeled "Exempted under Public Law 90 – 492". This type of establishment is exempt from Ante mortem and Post mortem USDA inspection, but is subject to USDA sanitation

inspections on a periodic basis. **MDARD inspection and licensure may apply** (depending on the scope and complexity of the operation).

- 3. <u>20,001 or more birds processed annually:</u> Full USDA FSIS inspections required. No exemption.
- 4. Markets that sell live poultry at retail and slaughter at the request of the retail customer are exempt from all USDA inspections. **MDARD inspection and licensure apply.**

To qualify for any one of the poultry exemptions, the conditions or standards below must be met:

- The poultry is healthy when slaughtered.
- The slaughter and processing are conducted under sanitary standards, practices, and procedures that produce poultry products that are sound, clean, and fit for human food (not adulterated).
- The poultry is not misbranded, identified as exempt product and labeled.
- The business operates under only one exemption during calendar year.
- Product cannot bear the official USDA mark of inspection.
- Poultry products do not move in inter-state commerce.
- Labelling requirements are met.

More information related to on-farm processing of pastured poultry can be found at <u>Guidance</u> for Determining Whether a Poultry Slaughter or Processing Operations is Exempt from Inspection Requirements of the Poultry Products Inspection Act:

Waste

All wash water and slaughter by-products should be captured. This material should not be allowed to flow to a storm drain or any body of water. Wash water can go down a household drain to a treatment plant. Clean up should occur as soon as processing is completed.

Humane Slaughter

All slaughter activities must meet the requirements of the Humane Slaughter of Livestock Act 163 of 1962. The act requires that a humane method of slaughter is used, which is defined as: (1) A method whereby the animal is rendered insensible to pain by mechanical, electrical, chemical or other means that is rapid and effective, before being shackled, hoisted, thrown, cast or cut; or (2) A method in accordance with ritual requirements of any religious faith whereby the animal suffers loss of consciousness by anemia of the brain caused by the simultaneous and instantaneous severance of the carotid arteries with a sharp instrument. Humane Slaughter of Livestock act 163 of 1962

The American Veterinary Medical Association (AVMA) Guidelines for the Euthanasia of Animals: 2013 Edition (https://www.avma.org/kb/policies/documents/euthanasia.pdf) explains in detail the acceptable methods for euthanasia as well as the proper way to perform each method for each species. The document also provides details regarding when a method might not be appropriate for the age or size of an animal. In order for any of the methods to be considered humane, the person dispatching the animal must be adequately trained in the method being used. If a person dispatching the animal does not have adequate training, even an approved method can become accidental torture of the animal.

On rural farms, the most common method of euthanasia for cattle, swine, sheep, and goats is gunshot, and for chickens, the most common method is cervical dislocation. Gunshot is not likely to be an allowed method inside city limits in most jurisdictions, so people wishing to slaughter their own livestock will need to find someone who is trained or willing to train them in one of the other methods. For farm animals, killing for slaughter or for welfare reasons is often done the same way. Local authorities should be consulted regarding restrictions on dispatching livestock for slaughter or welfare reasons. Acceptable methods for both include:

Poultry – gunshot, manually applied blunt force trauma, cervical dislocation, decapitation, electrocution, and captive bolt.

Sheep/goats – gunshot, captive bolt followed by an adjunctive method such as exsanguination (bled out).

Swine – gunshot, non-penetrating and penetrating captive bolts, electrocution, and blunt force trauma (in suckling piglets only).

Euthanasia for welfare reasons can be done by a veterinarian using injectable euthanasia agents or gas overdose, but the carcass would then need to be disposed of in a manner consistent with the Bodies of Dead Animals Act rather than being used for food. <u>Bodies of Dead Animals: Public Act 239 of 1982</u>, <u>Regulations for Public Act 239 of 1982</u>

VI. PEST CONTROL

Pesticide Use According to Label

Any person who uses a pesticide must follow all label use directions. Every label contains pesticide use restrictions, directions for use, and in the case of agricultural pesticides, worker protection standards.

Pesticides are classified as general use or restricted use. In agricultural production settings, general use pesticides may be applied by an uncertified applicator but the uncertified applicator must have received handler training in accordance with the federal worker protection standards. Applicators that use or supervise the use of restricted use pesticides must become a private certified applicator. (*See Applicator Certification*.) This certification meets the requirements of the federal worker protection standards.

Pesticides may only be applied to crop sites that are listed on the pesticide's label. The label will also have other use directions such as proper mixing and loading instructions, limitations on the rate of application, the number of applications or the frequency of the application, requirements for personal protective equipment, and storage and disposal directions. Many agricultural pesticides include a preharvest interval. The preharvest interval is the number of days after a pesticide application that a producer must wait before harvesting the crop. More information about pesticide labels can be found at

http://www.epa.gov/pesticides/regulating/labels/product-labels.htm.

Agricultural pesticides contain very specific federal worker protection standards to protect the pesticide applicator, called a handler, and workers who may enter treated areas, called workers. These standards require pesticide safety training, restrictions on reentry intervals during which time workers and handlers may not reenter the treated area, decontamination materials, posting, and recordkeeping requirements. More information on the federal worker protection standards can be found at <u>http://www.epa.gov/pesticides/health/worker.htm</u>.

Pesticide Selection

When selecting a pesticide for use on a crop, the producer should consider toxicity as one way to reduce pesticide risk. Pesticide labels contain signal words that are based on the toxicity of the pesticide. The three signal words are caution (lower risk), warning (greater risk) and danger/poison (highest risk). The level of risk is determined when the U.S. Environmental Protection Agency (EPA) initially registers the pesticide based on the registrant's research data. More information on signal words can be found at http://npic.orst.edu/factsheets/signalwords.html.

Another consideration when choosing a pesticide is its toxicity to pollinators. Pollinators include honeybees, bumblebees, and other bee species that forage for nectar and pollen. Pesticides that are in any way toxic to honeybees will include label use directions that restrict use when bees are foraging in the treatment area. These restrictions are often found under the Environmental Hazards label statements. EPA is currently modifying pesticide labeling to add additional use restrictions to protect pollinators that will be found in other sections of the

pesticide label so reading and following all label use directions is very important. More information on EPA's efforts to protect pollinators through label use directions can be found at <u>http://www2.epa.gov/pollinator-protection</u>.

Producers can also implement a variety of stewardship practices to protect pollinators. Information on stewardship and best practices to protect pollinators can be found at <u>http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx</u>.

Business Licensing

In the event an urban agricultural producer wishes to hire a pesticide applicator to perform applications to their crops, the producer should check to make sure the business is properly licensed with MDARD. Licensed businesses use certified applicators and have a minimum of two seasons of application experience. They must also carry general liability insurance. A list of licensed businesses in Michigan can be found on the MDARD's web site at http://michigan.gov/mdard/0,4610,7-125-1569_16988_35288-11993--,00.html.

Applicator Certification

Any agricultural producer who wants to purchase and use a restricted use pesticide must first become a private certified applicator. Information on how to become a certified applicator can be found on MDARD's web site at http://michigan.gov/mdard/0,4610,7-125-1569_16988_35289---,00.html.

The certification process includes obtaining the private core training manual from MSU, studying the manual, and passing the private core exam. Bring a completed application and the fee with you to your exam session. To schedule an exam, visit the online pesticide exam schedule at https://secure1.state.mi.us/OPES/Login.aspx.

Drift

Pesticide drift from the treatment site is a violation of State law. Drift may be the result of windy conditions, small droplet size, high spray pressure, or low volume applications. Written drift management plans can be a useful tool in preventing drift. Regulatory information related to drift management plans can be found in Regulation 637, Rule 10, which can be found at http://www7.dleg.state.mi.us/weborrgsa/102 10 AdminCode.pdf.

APPENDIX A

SOURCES OF CONTAMINANTS IN SOIL

	Sites and Sou	urces									
Contaminants	Agriculture, green space	Car wash, parking lots, road and maintenance depot, vehicle services	Dry cleaning	Existing commercial or industrial building structures	Junkyards	Machine shops and metal works	Residential areas; buildings with lead- based paint; where coal, oil, gas or garbage was burned	Stormwater drains and retention basins	Underground and aboveground storage tanks	Wood	Chemical manufacture, clandestine dumping, hazardous material storage and transfer, industrial lagoons and pits, railroad tracks and yards, research labs
Arsenic											
Asbestos				Х							
Barium		Х			Х	Х	Х	Х		Х	Х
Cadmium		Х			Х	Х	Х	Х		Х	Х
Chromium		Х			Х	Х	Х	Х		Х	Х
Copper											
Fluoride											Х
Mercury											
Lead				Х			Х				
Molybdenum											
Selenium											
Sodium		Х						Х			Х
Sulfer											
Zinc		Х			Х	Х	Х	Х		Х	Х
Dioxin ⁸											
PCBs ⁷				Х							
PAHs ¹		Х					Х				
Petroleum Products ²		Х		Х	Х	Х	Х	Х	Х	Х	Х
Pest/Herb ³	Х							Х	Х		
Solvents ⁴		Х	Х	Х	Х	Х		Х	Х	Х	Х
Surfactants ⁵		Х				Х					
Phenols ⁶										Х	Х
Nitrate	Х										Х
Sulfate					Х					Х	Х
Radioactivity											Х
Other											ļ
References	А	А	А	А	А	А	А	А	A	А	А

Contaminants	Waste Incineration: municipal waste combustion, hazardous waste incineration, medical waste incineration, crematoria, sewage sludge incineration, tire combustion, combustion of wastewater sludge at bleached chemical pulp mills, biogas combustion	Power/Energy Generation: motor vehicle fuel combustion, wood combustion, oil combustion, coal combustion	Other High-Temperature Sources: cement kilns, lightweight aggregate kilns, asphalt mixing plants, petroleum refining catalyst regeneration, cigarette smoking, pyrolysis of brominated flame retardants, carbon reactivation furnaces, kraft black liquor recovery boilers, and others	Minimally Controlled and Uncontrolled Combustion Sources: combustion of landfill gas, accidental fires, landfill fires, forest and brush fires, backyard barrel burning, residential yard waste burning, land-clearing debris burning, uncontrolled combustion of polychlorinated biphenyls, volcanoes, fireworks, open burning and open detonation of energetic materials
Arsenic				
Asbestos				
Barium				
Cadmium				
Chromium				
Copper				
Fluoride				
Mercury				
Lead				
Molybdenum				
Selenium				
Sodium				
Sulfer				
Zinc				
Dioxin ⁸	Х	Х	Х	Х
PCBs ⁷				
PAHs ¹				
Petroleum Products ²				
Pest/Herb ³				
Solvents ⁴				
Surfactants ⁵				
Phenols ⁶				
Nitrate				
Sulfate				
Radioactivity				
Other				
References	В	В	В	В

Contaminants	Metal Smelting and Refining: ferrous and nonferrous metal smelting/refining, ferrous foundaries, scrap electric wire recovery, drum and barrel reclamation furnaces, solid waste from primary/secondary iron/steel mills/foundries	Chemical Manufacturing and Processing Sources: bleached chemical wood pulp and paper mills; manufacture of chlorine, chlorine derivatives, and metal chlorides; manufacture of halogenated organic chemicals; other chemical manufacturing and processing sources	Ball clay	High Traffic Areas	Treated Lumber	Manure	Existing or former smelters, fossil fuel- fired electrical power plants, or cement manufacturing facilities	Structures once painted with lead-based paint
Arsenic		,			Х		Х	
Ashestos								
Barium								
Cadmium								
Chromium					v			
Connor					×	v		
Eluorido					^	^		
Moreury								
				v			v	v
Malubdapum				^			^	^
Solonium								
Seletium								
Sulfar								
Sulfer								
Zinc	N.	N N		Х		X		
Dioxin®	X	Х	X					
PCBs/								
PAHs ¹				Х				
Petroleum Products ²								
Pest/Herb ³								
Solvents ⁴								
Surfactants ⁵								
Phenols ⁶								
Nitrate								
Sulfate								
Radioactivity								
Other								
References	В	В	В	C, D	С	С	D	D

Contaminants	Tailings from current or former metal ore mines	Paint (before 1978): Old residential buildings; mining; leather tanning; landfill operations; aircraft component manufacturing	High traffic areas: Next to heavily trafficked roadways or highways; near roadways built before leaded fuel was phased out	Treated lumber: Lumber treatment facilities	Burning wastes: Landfill operations	Contaminated manure: Copper and zinc salts added to animal feed	Coal ash: Coal-fired power plants; landfills	Sewage sludge: Sewage treatment plants; agriculture	Petroleum spills: Gas stations; residential/commercial/industrial uses (anywhere an aboveground or underground storage tank is or has been located)	Pesticides: Widespread pesticide use, such as in orchards (especially pre-1947); pesticide formulation, packaging and shipping
Arsenic	Х			Х						X
Asbestos										
Barium										
Cadmium								Х		
Chromium				Х						
Copper				Х		Х		Х		
Fluoride										
Mercury										Х
Lead	Х	Х	Х					Х		Х
Molybdenum							Х			
Selenium										
Sodium										
Sulfer							Х			
Zinc			Х			Х		Х		
Dioxin ⁸					Х					
PCBs/					N.				N/	
PAHS ¹			X		X				X	
Petroleum Products ²									X	
Pest/Herb ³										X
Surfactants ⁵										
Nitrate										
Sulfate										
Radioactivity										
Other										
References	D	E	E	E	E	E	E	Е	E	D, E

Contaminants	Commercial/industrial site use	Dry cleaners	Burning coal, lead- acid batteries, leaded gasoline, lead-based paints, solder	Burning coal, rechargeable batteries, TVs, steel, phosphate fertilizer, galvanized water pipes	Certain pesticides, iron and steel production, treated lumber, burning coal	Metal plating, treated lumber	Attic and wall insulation, insulated water pipes, roofing shingles, ceiling and floor tiles, cement, automobile parts	Parking lots and carwashes	Demolished commercial or industrial buildings	High-traffic roadways (vehicle exhaust)	Former parks and lands adjacent to railroad rights-of- way
Arsenic	Х				X						
Asbestos							Х		х		
Barium											
Cadmium	Х			Х							
Chromium	Х					Х					
Copper											
Fluoride											
Mercury	Х										
Lead	Х		Х						Х	Х	
Molybdenum											
Selenium											
Sodium											
Sulfer											
Zinc	Х										
Dioxin ⁸											
PCBs ⁷								Х	Х		
PAHs ¹	Х									Х	
Petroleum Products ²	Х							Х			
Pest/Herb ³											Х
Solvents ⁴	Х	Х						Х			
Surfactants ⁵								Х			
Phenols ⁶											
Nitrate											
Sulfate											
Radioactivity											
Other											
References	E	E	F	F	F	F	F	G	G	G	G

Contaminants	Federal-Mogul nearby properties, Detroit, Michigan	Tittabawassee River Floodplain, Michigan	St. Louis, Michigan
Arsenic		N N	
Asbestos			
Barium			
Cadmium			
Chromium			
Copper			
Fluoride			
Mercury			
Lead	Х		
Molybdenum			
Selenium			
Sodium			
Sulfer			
Zinc			
Dioxin ⁸		Х	
PCBs ⁷			
PAHs ¹			
Petroleum Products ²			
Pest/Herb ³			
Solvents ⁴			
Surfactants ⁵			
Phenols ⁶			
Nitrate			
Sulfate			
Radioactivity			
Other			PBBs, DDT
References	Н	I	J

¹PAHs = Polycyclic Aromatic Hydrocarbons (benzo[a]pyrene, benzo[b]fluoranthene, etc.)

²Petroleum Products = gasoline, kerosene, fuel oil.

³Pest/Herb = Pesticides and/or Herbicides

⁴Solvents = tetrachloroethene, trichloroethene, trichloroethanes, dichloroethenes, dichloroethanes, etc.

⁵Surfactants = various products such as Triton, Dowfax, and others.

⁶Phenols = phenol, chlorophenols, methylphenols, nitrophenols.

⁷PCBs = Polychlorinated Biphenyls

⁸Dioxins can persist in the environment for decades (half-life about 50 - 100 years), so dioxins from sources that were active in the 1800's and 1900's may still be present today.

A. U.S. EPA (Environmental Protection Agency). (2011) Brownfields and Urban Agriculture: Interim Guidelines for Safe Gardening Practices. http://www.epa.gov/brownfields/urbanag/pdf/bf_urban_ag.pdf.

B. U.S. EPA (Environmental Protection Agency). (2006) An inventory of sources and environmental releases of dioxin-like compounds in the United States for the years 1987, 1995, and 2000. National Center for Environmental Assessment, Washington, DC; EPA/600/P-03/002F. http://epa.gov/ncea.

C. Turner AH. (2009) University of Louisville, Practice Guide #25, Urban Agriculture and Soil Contamination: An Introduction to Urban Gardening. http://louisville.edu/cepm/publications/practice-guides/pdf/25.-urban-agriculture-and-soil-contamination-an-introduction-to-urban-gardening.

D. Peryea FJ. (2001) Washington State University Cooperative Extension, Gardening on Lead- and Arsenic-contaminated soil. http://www.ecy.wa.gov/programs/tcp/area_wide/aw/appk_gardening_guide.pdf.

E. U.S. EPA (Environmental Protection Agency). (2011) REUSING POTENTIALLY CONTAMINATED LANDSCAPES: Growing Gardens in Urban Soils. http://cluin.org/download/misc/urban_gardening_fact_sheet.pdf.

F. The Johns Hopkins Center for a Livable Future. (2014) Soil Safety Resource Guide for Urban Food Growers. http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-alivable-future/_pdf/projects/urban-soil-safety/CLF%20Soil%20Safety%20Guide.pdf.

G. Environmental Health Perspectives. (2013) Urban Gardening – Managing the Risks of Contaminated Soil. 121(11-12):A327-A333. http://ehp.niehs.nih.gov/121-A326/.

H. U.S. EPA (Environmental Protection Agency). Region 5 Cleanup Sites: Federal-Mogul. http://www.epa.gov/Region5/cleanup/federalmogul/index.html. I. U.S. EPA (Environmental Protection Agency). Region 5 Cleanup Sites: Tittabawassee River / Saginaw River / Saginaw Bay Cleanup. http://www.epa.gov/region5/cleanup/dowchemical/index.htm.

J. U.S. EPA (Environmental Protection Agency). Region 5 Cleanup Sites: Velsicol Corp. (Michigan) Superfund Site. http://www.epa.gov/region5/cleanup/velsicolmichigan/

APPENDIX B

SOIL CONTAMINANTS AND LIVESTOCK

Line	State	Jurisdiction	Regulatory/Guidance	Application	Contaminants Specified	References	Details
1	New York	Statewide	Regulatory	Brownfield and Superfund Remedial Soil Cleanup. Unrestricted use soil cleanup objectives protect for child and adult consumption of vegetables from a home garden and home produced animal products such as meat, eggs and milk.	Metals and other inorganics, PCB's, pesticides, semivolatile organic compounds, and volatile organic compounds.	(a), (b)	Maximum soil concentrations for unrestricted land use are listed for 85 contaminants.
2	New York	Statewide	Guidance	Protection of human, plant, and animal health for all land uses.	Arsenic, Cadmium, Hexavalent Chromium, Trivalent Chromium, Copper, Lead, Nickel, and Zinc.	(c)	New York's unrestricted use soil cleanup objectives (maximum soil concentrations) (Line 1) are listed for these 8 contaminants.
3	New York	Statewide	Guidance	Urban gardening that includes raising chickens for eggs.	Lead: Two Guidance Values. Guidance Value I is 200 ppm, Guidance Value II is 400 ppm.	(d)	No practices recommended for <200 ppm lead in soil, some for 200 to 400 ppm, and additional ones for >400 ppm.
4	California	Statewide	Guidance	Eggs from backyard chickens that forage on the ground.	Dioxin: Consumption Advisory.	(e)	"Do Not Eat" advisory for eggs from chickens that have contact with the ground located near industries releasing dioxins into the environment.

(a) New York State Department of Environmental Conservation. Subpart 375-6: *Remedial Program Soil Cleanup Objectives*. Effective December 14, 2006.

(b) New York State Department of Environmental Conservation and New York State Department of Health. New York State Brownfield Cleanup Program, *Development of Soil Cleanup Objectives*, Technical Support Document. September 2006.

(c) Cornell University, Waste Management Institute, College of Agriculture and Life Sciences, Department of Crop & Soil Sciences. *Guide to Soil Testing and Interpreting Results*. April 2009.

(d) New York State Department of Health; Cornell University, College of Agricultue and Life Sciences, Department of Crop and Soil Sciences; and Cornell University, Cooperative Extension, New York City. Understanding Your Test Results: Lead in Soil and Chicken Eggs. October 2012.

(e) California Department of Health Services, Environmental Health Investigations Branch. *Backyard Chicken Eggs in California: Reducing Risks Questions and Answers.* August 2004.

WORKGROUP CONTRIBUTORS

Jim Johnson, Chair

Director Environmental Stewardship Division, Michigan Department of Agriculture and Rural Development **Kristin Esch** Right to Farm Inspector Environmental Stewardship Division, Michigan Department of Agriculture and Rural Development

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Jerry May Senior Educator Michigan State University Extension

Dr. Wendy Powers

Professor, Director of Environmental Stewardship for Animal Agriculture Livestock Environment Management, Michigan State University Brian Rowe Pesticide Section Manager Pesticide and Plant Pest Management, Michigan Department of Agriculture and Rural Development **Dr. Dale Rozeboom** Professor, Extension Specialist Swine Nutrition & Production Management, Michigan State University Tim Slawinski **Emerging Issues Specialist** Food and Dairy Division, Michigan Department of Agriculture and Rural Development Dr. Janice Swanson Chairperson and Professor Animal Behavior and Welfare, Michigan State University

MICHIGAN DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

PUBLIC INPUT MEETING REPORT

GENERALLY ACCEPTED AGRICULTURAL AND MANAGEMENT PRACTICES

Public Input Meeting Held on August 25, 2021

Pursuant to the Michigan Right to Farm Act, (Act 93 of 1981, MCL 286.471 *et seq.*), the Michigan Commission of Agriculture and Rural Development may define Generally Accepted Agricultural and Management Practices (GAAMPs) developed with assistance by the Michigan Department of Agriculture and Rural Development and with written recommendations from Michigan State University's College of Agriculture and Natural Resources, Extension Service, and AgBioResearch, as well as the United States Department of Agriculture's Natural Resources Conservation Service and Farm Service Agency; the Michigan Department of Natural Resources and other professional and industry organizations. In addition to public comment at Commission meetings, the Commission asked the Department to hold a public meeting to provide an opportunity for the public to comment on proposed changes to the GAAMPs. This meeting occurred on August 25, 2021. The public input meeting was conducted virtually through Microsoft Teams to allow greater public participation.

Present from the Michigan Department of Agriculture and Rural Development: Michael Wozniak, Olivia Reynero, Meredith Smith, Steve Mahoney, Jim Johnson, Regan McGuill, and Brad Deacon as hearings officer. Commissioner Dru Montri also attended.

Information about this meeting was released to the public and media on July 31, 2021. Media organizations as well as food, farm, environmental, conservation, legislative, and other organizations and individuals were notified. Copies of proposed changes to the GAAMPs were also posted on the Michigan Department of Agriculture and Rural Development website, as was a summary document.

All GAAMPs are developed and reviewed by multi-agency Task Force Committees which are chaired by Michigan State University faculty. GAAMPs are then presented to the Michigan Commission of Agriculture and Rural Development for consideration and adoption under the authority of the Michigan Right to Farm Act. Since their initial adoption, each set of GAAMPs has undergone annual review by the respective Task Force committees, which include scientists and others with expertise, education, and knowledge in the field. The Chair of each Task Force gathers comments from committee members and interested stakeholders and then makes recommendations for revisions of the GAAMPs to the Michigan Commission of Agriculture and Rural Development. The Commission ultimately has the authority to approve, amend, or reject those recommendations.

This meeting was held to receive public comment on the 2021 proposed drafts of the Generally Accepted Agricultural and Management Practices for:

- Manure Management and Utilization
- Care of Farm Animals
- Site Selection and Odor Control for New and Expanding Livestock Facilities
- Farm Markets
- Nutrient Utilization
- Cranberry Production
- Irrigation Water Use
- Pesticide Utilization and Pest Control

The deadline to receive written comments was 5 p.m., August 27, 2021

The following members of the public attended the public input meeting:

• Andrew Bashi, Great Lakes Environmental Law Center

Mr. Bashi said he would be submitting detailed comments in writing, but spoke advocating for improvements to the GAAMPs in the areas of air quality and groundwater protection.

Mr. Tom Zimnicki with the Michigan Environmental Council and Lyndon Kelley with the MSU College of Agriculture and Natural Resources both attended the public input meeting to hear public comments; both are on GAAMPs task forces.

The public input meeting began at 9:11 a.m., and concluded at 9:32 a.m.

<u>Bradley N. Deacon</u>

Bradley N. Deacon Hearings Officer August 30, 2021



August 27, 2021

By email to MDARD-RTF@Michigan.gov

Michigan Department of Agriculture and Rural Development Environmental Stewardship Division P.O. Box 30017 Lansing, MI 48909

Re: Public Input on Agricultural Management Practices

1. Introduction

The following comment is submitted to the Agriculture Commission and Michigan Department of Agriculture and Rural Development by the Great Lakes Environmental Law Center (GLELC). A nonprofit legal organization, GLELC's team of lawyers continue an over decade's long legacy of providing legal support to frontline environmental justice communities and their allies across the state of Michigan.

2. Background

Through our work, GLELC attorneys are continuously made aware of concerning deficiencies in the system of laws and policies that residents assume will protect them from, at the very least, the most glaring of hazardous industrial practices. Few threats to the health and safety of families across our state better demonstrate the need for action than those to air and drinking water posed by Concentrated Animal Feeding Operations (CAFOs).

Fortunately, changes to Michigan's Generally Accepted Agricultural and Management Practices (GAAMPs) could transform these ongoing and increasing risks into an opportunity for our state to become a leader in preserving rural communities and the farms that have sustained them for generations.

3. Air Quality

Gaseous and particulate substance releases continue to cause degradation of air quality and uncontained odors in communities housing CAFOs. These facilities emit a plethora of harmful air pollutants, including ammonia, hydrogen sulfide, particulate matter, volatile organic compounds (VOCs), and nitrous oxide.¹⁻⁸

Land application of CAFOgenerated waste also contributes to air quality concerns. Gaseous releases occur twice during the application process. First, when the

CAFO Emissions	Source	Traits	Health Risks
Ammonia	Formed when microbes decompose undigested organic nitrogen compounds in manure	Colorless, sharp pungent odov	Respiratory irritant, chemical burns to the respiratory tract, skin, and eyes, severe cough, chronic lung disease
Hydrogen Sulfide	Anaerobic bacterial decomposition of protein and other sulfur containing organic matter	Odor of rotten eggs	Inflammation of the moist membranes of eye and respiratory tract, olfactory neuron loss, death
Methane	Microbial degradation of organic matter under anaerobic conditions	Colorless, odorless, highly flammable	No health risks. Is a greenhouse gas and contributes to climate change.
Particulate Matter	Feed, bedding materials, dry manure, unpaved soil surfaces, animal dander, poultry feathers	Comprised of fecal matter, feed materials, pollen, bacteria, fungi, skin cells, silicates	Chronic bronchitis, chronic respiratory symptoms, declines in lung function, organic dust toxic syndrome

Figure 1 Typical pollutants found in air surrounding CAFOs

Center for Disease Control, Hribar, Carrie. "Understanding concentrated animal feeding operations and their impact on communities." (2010).

manure is initially applied to land, gaseous ammonia is released into the air as it volatilizes. After application, the land undergoes nitrification and denitrification, releasing nitrous oxide.

¹ Heinzen T. *Recent developments in the quantification and regulation of air emissions from animal feeding operations*. Current Environmental Health Reports. (2015).

² Rumsey IC, Aneja VP, Lonneman WA. *Characterizing reduced sulfur compounds emissions from a swine concentrated animal feeding operation*. Atmospheric Environment. (2014).

³ Rumsey IC, Aneja VP. *Measurement and modeling of hydrogen sulfide lagoon emissions from a swine concentrated animal feeding operation*. Environmental Science & Technology. (2014).

⁴ Pavilonis BT, O'Shaughnessy PT, Altmaier R, Metwali N, Thorne PS. *Passive monitors to measure hydrogen sulfide near concentrated animal feeding operations*. Environmental Science: Processes & Impacts. (2013).

⁵ Rumsey IC, Aneja VP, Lonneman WA. *Characterizing non-methane volatile organic compounds emissions from a swine concentrated animal feeding operation*. Atmospheric Environment. (2012).

⁶ Blunden J, Aneja VP, Lonneman WA. *Characterization of non-methane volatile organic compounds at swine facilities in eastern North Carolina*. Atmospheric Environment. (2005).

⁷ Hoff SJ, Hornbuckle KC, Thorne PS, Bundy DS, O'Shaughnessy PT. *Emissions and community exposures from CAFOs. Iowa Concentrated Animal Feeding Operations Air Quality Study*. (2002).

⁸ Wilson SM, Serre ML. *Examination of atmospheric ammonia levels near hog CAFOs, homes, and schools in Eastern North Carolina*. Atmospheric Environment. (2007).

Research has suggested correlative adverse health effects for communities housing CAFOs. Some of these include increased risk of respiratory illnesses,² increased incidence of chest tightness, wheezing, coughing, nausea, fainting, headache, plugged ears, and a higher prevalence of anger, depression, fatigue, and stress, sore throat, diarrhea, and burning eyes.³

The stench from anaerobic lagoons and open-field spraying attracts flies, mosquitoes, mice, and other diseases carrying pest species. Odors often force nearby residents to remain indoors, interfering with the use and enjoyment of their property. Wind carries hazardous mists of biological waste into nearby neighborhoods to be inhaled by residents and coat their homes. Scientists have isolated numerous multi-drug resistant bacteria strains from airborne particles collected near CAFOs.⁴

Bacteria	Antibiotic resistance pattern	No. of isolates (%)
Enterococcus		
E. dispar $(n = 4)$	Ery, Clin, Tet	4 (100)
E. durans $(n = 2)$	Erv. Clin	1 (50)
	Ery, Clin, Virg	1 (50)
E. faecalis $(n = 6)$	Tet	1 (17)
	Ery, Clin, Tet	4 (66)
	Erv, Clin, Tet, Virg	1(17)
E, faecium $(n = 1)$	Ery, Clin, Tet, Virg	1 (100)
E hirae $(n = 14)$	Erv. Clin	1 (7)
Contraction of the Contraction o	Ery, Clin, Tet	9 (64)
	Erv. Clin. Tet, Virg	4 (29)
Other Enterococcus (n = 11)	Ery, Clin, Tet	9 (82)
A STATE OF A STATE OF A	Erv. Clin. Tet. Virg	2(18)
Staphylococcus aureus $(n = 1)$	Ery, Clin, Tet	1 (100)
Coagulase-negative staphylococci (n = 42)	Ery, Tet	1(2)
and the second free second	Erv, Clin, Tet	B (19)
	Ery, Clin, Vira	6(14)
	Ery, Virg, Tet	1 (2)
	Erv. Clin. Tet. Virg	26 (62)
Viridans group streptococci (n = 43)	Tet	Z (5)
5	Ery, Clin	1(2)
	Erv. Tet	2 (5)
	Erv. Clin. Tet	35 (81)
	Ery, Clin, Tet, Virg	3(7)

Abbreviations: Clin, clindamycin; Ery, erythromycin; Tet, tetracycline; Virg, virginiamycin.

Figure 2 Phenotypes of antibiotic resistance among airborne bacteria collected from a swine CAFO.

Sapkota, Amy & Rule, Ana & Gibson, Kristen & Buckley, Timothy & Schwab, Kellogg. Airborne Multidrug-Resistant Bacteria Isolated from a Concentrated Swine Feeding Operation. Environmental health perspectives. (2005).

Despite the obvious health risks posed by storing thousands,

sometimes millions, of gallons of animal feces and urine in open-air pools and the spreading of said raw sewage onto fields abutting residences, current GAAMPs do not protect from even the worst effects of CAFOs.

They can, and they should.

To do so, GAAMPs should include minimum air quality monitoring practices for CAFOs and each respective land application site. Hand in hand with air quality monitoring, GAAMPs should specify acceptable air quality parameters for which the expansive immunity provided by the Right to Farm Act is afforded.

² Greger M, Koneswaran G. *The public health impacts of concentrated animal feeding operations on local communities*. Family & Community Health. (2010).

³ Von Essen SG, Auvermann BW. *Health effects from breathing air near CAFOs for feeder cattle or hogs*. Journal of Agromedicine. (2005).

⁴ Sapkota, Amy & Rule, Ana & Gibson, Kristen & Buckley, Timothy & Schwab, Kellogg. *Airborne Multidrug-Resistant Bacteria Isolated from a Concentrated Swine Feeding Operation*. Environmental health perspectives. (2005).

4. Groundwater

45% of Michigan residents rely on groundwater for their freshwater supply. In total, 700 million gallons of groundwater are used in the state per day.⁵ At 231 million gallons per day, nearly one-third of the total groundwater accessed in the state is via private household wells that serve 2.6 million Michiganders.⁶

Despite the millions of residents relying on private household wells for all of their freshwater needs, they are wholly unprotected by the Safe Drinking Water Act and our state's implementing laws and policies. This glaring deficiency is of particular concern in rural communities with little or no access to regulated public water systems and simultaneously house CAFOs or land application sites. CAFOs pose a significant unregulated threat to the safety of groundwater supplies sustaining these communities.

The most commonly recognized sources for CAFO groundwater contamination are runoff and leaching from land application of manure and leaks or breaks in storage or containment units. Numerous studies have documented the movement of land-applied contaminants into vulnerable aquifers even where recommended application rates are strictly followed.⁷

Groundwater contaminated by CAFO waste poses immense health risks to those relying on it. These ways play host to numerous deadly pathogens, including *Salmonella, E. coli,* and *Cryptosporidium.*⁸ Shielded from high temperatures and the sun's ultraviolet rays, many pathogens can survive for extended times in groundwater.⁹ One single contamination event can cause pathogens to attach to sediment near

 ⁵ Michigan Department of Environmental Quality, Drinking Water & Municipal Assistance Division, *GROUNDWATER STATISTICS*, https://www.michigan.gov/documents/deq/deq-wd-gws-wcu-groundwaterstatistics_270606_7.pdf
 ⁶ Id.

⁷ Westerman et al. (1995) found 3–6 mg nitrate (NO₃)/L in surface runoff from sprayfields that received swine effluent at recommended rates; Stone et al. (1995) measured 6–8 mg total inorganic N/L and 0.7–1.3 mg P/L in a stream adjacent to swine effluent sprayfields. Evans et al. (1984) reported 7–30 mg NO₃/L in subsurface flow draining a sprayfield for swine wastes, applied at recommended rates. Ham and DeSutter (2000) described export rates of up to 0.52 kg ammonium m⁻² year⁻¹ from lagoon seepage; Huffman and Westerman (1995) reported that groundwater near swine waste lagoons averaged 143 mg inorganic N/L, and estimated export rates at 4.5 kg inorganic N/day. Thus, nutrient losses into receiving waters can be excessive relative to levels (~ 100–200 μg inorganic N or P/L) known to support noxious algal blooms (Mallin 2000).

⁸ Burkholder, Joann et al. "Impacts of waste from concentrated animal feeding operations on water quality." *Environmental health perspectives* vol. 115,2. (2007).

⁹ Center for Disease Control, Hribar, Carrie. *"Understanding concentrated animal feeding operations and their impact on communities."* (2010).

groundwater and leach into water over a long period.¹⁰ Groundwater surveys have also confirmed significant microbial and antibiotic resistance exhibited by pathogens present in groundwater near CAFOs, attributable to the use of veterinary antibiotics, which have also been documented in private water wells.¹¹

Elevated nitrate levels, common in contaminated groundwater, can significantly impede the ability of blood to carry oxygen and cause nitrate poisoning.¹² Infants are particularly susceptible to disease or death by elevated nitrates via blue baby syndrome.¹³ Low blood oxygen in adults can lead to congenital disabilities, miscarriages, and poor general health.¹⁴ Nitrates have also been linked to higher rates of stomach and esophageal cancer.¹⁵

Regular testing of water wells for total and fecal coliform bacteria and nitrate levels is a crucial practice necessary for discovering dangerous contamination conditions. GAAMPs should include regular groundwater monitoring at CAFO facilities, ground application sites, and private wells within the vicinity of both. GAAMPs should also delineate the parameters of safe water quality and restrict land application where exceeded.

At the same time, the density of existing livestock operations should be considered during site selection. Exceedingly high concentrations of total animals housed by numerous discrete facilities in close proximity create immense amounts of waste that is eventually applied to nearby fields. The burden on fields in surrounding communities is likely to further exacerbate negative impacts on the groundwater upon which they rely.

¹⁰ Id.

 ¹¹ Li, X., Atwill, E.R., Antaki, E., Applegate, O., Bergamaschi, B., Bond, R.F., Chase, J., Ransom, K.M., Samuels, W., Watanabe, N. and Harter, T. (2015), *Fecal Indicator and Pathogenic Bacteria and Their Antibiotic Resistance in Alluvial Groundwater of an Irrigated Agricultural Region with Dairies*. J. Environ. Qual., 44: 1435-1447.
 ¹² Center for Disease Control, Hribar, Carrie. "Understanding concentrated animal feeding operations and their impact on communities." (2010).

¹³ Id. ¹⁴ Id.

¹⁵ Bowman, A., Mueller, K., & Smith, M. *"Increased animal waste production from concentrated animal feeding operations (CAFOs): Potential implications for public and environmental health."* Nebraska Center for Rural Health Research." (2000).

Thank you in advance for your consideration, and please do not hesitate to contact me directly via the information provided below.

Sincerely,

Andrew Bashi Staff Attorney Great Lakes Environmental Law Center 4444 2nd Avenue Detroit, MI 48201 andrew.bashi@glelc.org 313-782-3372 ext. 2


To: The Michigan Commission of Agriculture and Rural Development From: Hallie Fox, Legislative Aide Date: August 23, 2021 Re: Protecting Farms and MI Water Through 2022 GAAMPs

Members of the Michigan Commission of Agriculture and Rural Development,

The Michigan League of Conservation Voters would like to express our concerns with the proposed 2022 GAAMPs in light of recent frequent severe weather events and the cumulative effects of nutrient runoff on our lakes, rivers, and streams. The GAAMPs are a useful and effective tool that can not only help farmers protect the environment, but also protect their farms from the effects of climate change. With rising evidence of climate change's impact on the Great Lakes region, and with ever-increasing threats to our drinking water, we must ensure that the GAAMPs include guidelines that set farmers up to successfully deal with climate-related hazards and protect our source waters.

Michigan's Farms Must Be Fully Prepared for More Frequent, More Intense Storms

Michigan's farmers have borne the brunt of climate change in recent years, with more intense storms overwhelming fertilizer and manure storage containers and causing widespread yield loss. Unfortunately, climate modeling has predicted that extreme, single-day rainfall events will only continue to happen more often in the state. As a result, Michigan farmers must be fully prepared to handle increased rainfall.

While the MSU Extension has provided farmers with resources to deal with the aftermath of intense flooding, they also point to MDARD's GAAMPs as guidelines that are sufficient to protect farmers from dealing with manure and fertilizer spillage from overwhelmed storage containers (see Farm Safety and Infrastructure Management). While current guidelines advise farmers to build containers that can handle once in a 25-year rainfall, recent years and projected trends demonstrate that Midwest farmers must be prepared for regular, more intense rainfall (up to once in 100-year floods). We strongly urge the commission to reconsider and increase the current 25-year rainfall guideline within the Manure Management GAAMPs.

Protecting Water Quality Requires Holistic Solutions

Through the GAAMPs and other targeted programs, the Michigan Department of Agricultural and Rural Development, universities, and farmers have made some progress towards combating agriculturally related nutrient loading in Michigan's lakes, rivers, and streams. However, there is still work to be done to ensure that Michigan's water is adequately protected from bacterial contamination, chemical, and nutrient pollution that threaten our state's public health.

Specifically, while Michigan's current GAAMPs contain guidance on nutrient utilization and manure management in their respective GAAMPs, the recommended nutrient loads do not take into account cumulative impacts on individual water bodies. Consequently rural rivers and streams, which often receive runoff from multiple farms, continue to have significant levels of phosphorus, nitrogen, E.coli, and other contaminants. This is especially true for <u>Michigan's smaller tributaries</u>, whose adjacent farmers may not receive as much targeted assistance from federal and state nutrient reduction programs as their large-tributary counterparts. As a result, we recommend that the Commission re-evaluate the GAAMPs' current nutrient guidelines to better account for the cumulative impacts of nutrient pollution on water bodies.

Michigan's GAAMPs could be utilized as a tool to help farmers both act as enhanced stewards of the environment and protect their property from the effects of climate change. Therefore, as climate change increasingly impacts Michigan farms we must ensure that the GAAMPs are regularly updated to reflect the best available ecological science and climatic trends. On behalf of our members, Michigan LCV urges the Michigan Commission on Agriculture and Rural Development to incorporate the above concerns into the 2022 GAAMPs.

Sincerely,

Hallie Fox Michigan League of Conservation Voters



7373 West Saginaw Highway, Box 30960, Lansing, Michigan 48909-8460 Phone (517) 323-7000

August 26, 2021

Michigan Department of Agriculture & Rural Development Environmental Stewardship Division PO Box 30017 Lansing, MI 48909

To whom it may concern,

The following are comments of the Michigan Farm Bureau (MFB) regarding the annual review of the Generally Accepted Agricultural and Management Practices (GAAMPs) as developed under the authority of the Michigan Right to Farm Act.

We believe Michigan's Right to Farm Act is the model for our country. The act has allowed all sectors of commercial agriculture to move forward utilizing existing and new technologies through generally accepted management practices on a voluntary basis while enhancing the environment.

This year with very few proposed changes to the GAAMPs we just want to express our strong support for the Right to Farm Act and GAAMP process.

Thank you for your consideration of these comments.

Regards,

Matthew Keepp

Matthew D. Kapp Government Relations Specialist 517-679-5338

From:	Rick Sietsema
То:	MDARD-rtf
Cc:	Allison Brink (info@mipoultry.com); Rick Sietsema
Subject:	comment period for 2020 GAAMPs
Date:	Thursday, August 5, 2021 10:34:06 AM
Importance:	High

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

I have the following comment on behalf of our poultry producers.

The definition of a "New Livestock Production Facility" =

A place where livestock will be kept and/or manure storage structure that will be built at a new site and is not part of another livestock production facility. A new livestock production facility also is a place that is 1) expanding the animal unit capacity for livestock by 100 percent or greater and the resulting holding animal unit capacity will exceed 749 animal units, or 2) any construction to expand animal unit capacity within three years of completion of an existing facility documented in an MDARD final verification letter and the resulting animal unit capacity will exceed 749 animal units.

A Category 3 Site would have greater than 20 non-farm residences within a ½ mile radius. <u>The</u> <u>current GAAMPs state that Category 3 sites are not acceptable for NEW livestock facilities.</u>

Now if a farm has expanded (even just a little from housing conversions) and submits another application within a 3 year window of the previous application <u>and</u> has greater than 20 non-farm residences, the response from MDARD is a hard NO. That NO goes out in a letter to the local public authority. This is problematic where we have existing egg laying facilities that are undergoing complete overhauls for cage-free production. The conversion is a systematic tear down and rebuild of every house on a farm occurring over many years. In every case, the farm does not have it ALL figured out how the conversion is going to go. They plan, plan again and re-plan as the process unfolds.

As long as they did not construct any new holding capacity (100% replacement housing) they were not required to go the Siting.

I realize this is a very specific concern (industry demands for "animal space" like California's Prop 12), but I can see the potential challenge for other existing livestock farm that may have greater than 20 non-farm residences (they add up faster than you expect). To maintain the existing herd size, additional building space would be required.

The original intent of this GAAMP language was to prevent gradual expansion to avoid specific setback requirements. However, in the current scenario of cage-free conversions (or Prop 12 conversions) there are unintended consequences for long-standing existing farm operations.

My suggestion is to strike the highlighted language under the "New Livestock Production Facility" as

there are no qualifiers for actual capacity, only the activity of construction.

Have a Meaningful Day, Rick Sietsema rsietsema@sietsemafarms.com Office: 616-895-7493 Sietsema Farms 11304 Edgewater Dr. Suite A Allendale, Mi 49401 Michael Wozniak, PE MDARD, Right to Farm Program 517-285-1752

From: MDA-Info <MDA-Info@michigan.gov>
Sent: Friday, April 23, 2021 10:41 AM
To: Wozniak, Michael (MDARD) <WozniakM1@michigan.gov>
Subject: FW: Proposed Admendment to Chickens in residential area

Referral from MDA-Info

Bonnie Loney Michigan Department of Agriculture & Rural Development Call Center Agent 800-292-3939

From: Christopher Whiteaker <<u>deadoninc2010@yahoo.com</u>>
Sent: Tuesday, April 20, 2021 4:13 PM
To: MDA-Info <<u>MDA-Info@michigan.gov</u>>
Subject: Proposed Admendment to Chickens in residential area

CAUTION: This is an External email. Please send suspicious emails to <u>abuse@michigan.gov</u>

Thank you in advance for taking time to read this! I recently spoke with one of your agents and he advised to me to reach out to you in hopes that you would give serious thought to change some of the GAAMP's regarding chickens in a residential area.

He said that people like me get "screwed"all the time even though we have more than enough room for chickens..

I believe that these changes could really help people like me. "small operation" on .65 acre in a primarily residential area.

1. No roosters.

2. Chicken coop must not be within 50ft of any occupied area of neighboring home with a clear line of site.

ie - coop 25 ft from neighboring home with a garage in between coop and home is okay.

3. Chicken run must not be closer than 10ft of of any neighboring property line.

4. No more than 15 chickens on 1/2 acre or under in primarily residential area.

Current GAAMP, chickens cant be within 250ft of any residence is unobtainable within a residential area and only necessary when you have roosters.

The proposed changes to the right to farm act above would really help people like me who want to be as self sufficient as possible to feed my family of six..

My 12 yr old son made business cards, went door to door with free sample eggs.

Now he he delivers farm fresh eggs on his bike to our community.. " neighbors get theirs free" Both the elderly and parents with young children walking by always stop and chat it up with the chickens.. You wouldn't believe the smiles and friendly conversations that come from complete strangers because of the chickens.

And i don't need to tell you how rare that is in this day in age..

I believe if we can bring about small changes in the rules regarding residential area farms.. We can help people smile and bring back memories of a simpler time...

I feel that it is important to keep things like residential farming to feed your family and community alive.

Teaching children how to grow/raise their own food isn't just a "Big farm" thing, It's American freedom, More so.. A human right.. And to deny that for any reason is wrong...

Some of my fondest memories as a child at my grandparents house in Riverview MI "across the street from where I live now"

Involved chickens and picking tomatoes and beans so grandma could " fix us some supper".. Just 40 yrs ago, My mother had a horse!! In Riverview!! That would truly be a sight today!! If we as a society don't hold on to our lost ways, we' II have a lost county run by lost children who cant feed themselves. This is about more than just chickens... What next? Can't grow vegetables in the city limits?

If you have any questions or concerns about the proposed changes..

Feel free to email, call or txt me anytime..

I believe together we can make a better way of life available for those who want it, regardless of where they can afford to live.

Sincerely,

Christopher Whiteaker 14748 Pennsylvania Rd Southgate MI, 48195 Phone# 734-308-4576 Sent from Yahoo Mail on Android

RE: GAAMP Comments From: Louise Gorenflo 2005 Pauline Court Ann Arbor, MI 48103 Igorenflo@gmail.com

1. Language problem with "Right to Farm"

The GAAMPs need to make a distinction between farming and industrialized meat production. Perhaps **Right to "Factory Farm"?**

The diversified, independent family owned farm of the 1960s that produced a variety of crops and a few animals is disappearing as an economic entity, being replaced by much larger livestock operations.

The EPA defines the size of a livestock operation for it to be a CAFO. Perhaps MDARD could follow that definition in distinguishing farms from industrialized meat production operations.

2. Confusion of Best Practices

The current Right to Farm GAAMPS are confusing because they include both best practices from small to medium farms and industrial-scale meat production. They even take on urban farming!

MDARD needs to make a division between the Right to Farm and the Right to Factory Farm.

3. Accountability problem for waste handling

Corporate owners of the animals make the local contracts growers responsible by contract for disposition of animal waste and carcasses of animals died prior to delivery to corporate processors. MDARD should require that the corporate owners be held liable for deterioration of waste quality, clean air, and other environmental degradations.

4. Require industrialized meat production operations to pay for its externalities.

True cost of food needs to be structured within state regulations and subsidies for the food system to be aligned to promote environmental and human-well-being.

5. GAAMPS should promote the kind of farm production that most benefits the people of Michigan.

The ultimate purpose of the Right to Farm Act and the GAAMPs are to make Michigan a state friendly to industrialized meat production. MDARD subsidizes this industry even though it drives serious health problems within Michigan, eutrophication of the Great Lakes, and the crossing of planetary boundaries of nutrient overloading of water, climate change, and biodiversity loss.

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I would like to make some suggestions to amend the GAAMPs for honeybees for the state of Michigan. In the section on commercial beekeeping, I felt that the subject of holding yards was not adequately addressed. Commercial beekeepers will place hives in pollination in western Michigan and then move the hives out to holding yards for the rest of the beekeeping season, often into November. There is no regulation on how many hives can be placed in these yards. My suggestion is to limit the number of hives per yard to five pallets of six hives, or 30 hives. At the very least these holding yards should be placed three miles away from one another. This would help with the density pressure placed on small local beekeepers when hundreds of unwelcome hives come into their forage areas for the entire honey season.

Secondly, I feel the number of hives on an acre or less should be reduced to two, except for brief periods when nucs are being made up or other increase is in progress. If every suburban home had six hives in their backyard, the forage would certainly be inadequate to sustain that number of colonies, and disease and collapse would inevitably result.

I feel the biggest threat to honeybee health is inadequate natural forage, which is greatly exacerbated by the intensive hive density created by commercial beekeepers literally "dumping" hundreds of hives in yards for the summer. I feel more needs to be done to encourage the commercial beekeepers to spread out their hives. This would benefit all beekeepers, both commercial and backyard beekeepers by decreasing hive density, which would result in more forage for all and better overall honeybee health statewide.

Also, as a side note, in the euthanasia section, the word, "diesel" was misspelled.

Thank you for your time and consideration.

Caroline Abbott 1386 108th Ave. Otsego, MI 49078 Abbottsustainablefarms.com

From:	<u>dj kehrig</u>
То:	MDARD-rtf
Subject:	Public comment re: Farm Mkt GAAMPs
Date:	Tuesday, August 17, 2021 2:44:35 PM

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The statement "A farm market should have a written site plan for potential MDARD review that preempts local government regulations." is ambiguous.

It is being interpreted as meaning that the need for a site plan or any local govt regulation is eliminated.

Could it be made clear that this site plan is for MDARD only and that a site plan for local govt may still be required?

Maybe adding that local ordinances not covered by these GAAMPs still must be followed.

Thank you,

DJ Kehrig Armada Twp Planning Chair

Changes to the 2021 GAAMPs for approval and use in 2022

Below is a summary of changes that the corresponding Advisory Committees are proposing to the Michigan Commission of Agriculture and Rural Development for adoption in the 2022 Generally Accepted Agricultural Management Practices.

Summary of Care of Farm Animals GAAMPs proposed changes:

- Minor text changes throughout related to flow, formatting, and updates to references and research.
- Most livestock sections added a section related to depopulation of livestock in response to urgent circumstances (pages 8, 19, 25, 34, 43, 52, 58, 65, 70, 76, 85, 94,101).

Additional changes were included in the following sections:

- Beef Cattle and Bison:
 - Language added related to housing types (Manure Management and Sanitization section; on page 5).
 - Language added related to observing livestock and ensuring livestock have feed and water (Health care and medical procedures section; page 7).
- Sheep and Goats
 - Revised language related to: water requirements and Management language updates (page 55).
- Domestic Rabbits
 - Added language in the nutrition section focusing on feed restriction and digestive disorders (page 72).
 - Added language related to transport duration (page 73).
- Aquaculture:
 - Language added related to shipping, transport, and handling recommendations (pages 88 and 89)
 - Language added to better illustrate dissolved O₂ level considerations in cold and warm water fish (pages 87,90,91).
 - Language added discussing Nitrogen saturation concerns (page 91).
 - Language added for better description of health care and sick animals (page92).
- Apiary Management (pages 104 120):
 - Overhaul of chapter including:
 - Re-vamped Overview

- In the Management practices section:
 - Addition of the following subsections:
 - o Handling
 - Nutrition
 - $\circ \quad \text{Hive Orientation} \\$
 - o Facilities and equipment
 - Removal of the following subsections:
 - Social structure
 - Internal and external factors related to foraging behavior
 - Revision of language in the following sections:
 - Hive Density recommendations
 - Recommendations for neighbor relations,
 - Hive placement
 - o Swarming
 - o Provision of water
 - \circ Queens
 - Robbing transportation of bees
 - Use of consolidation yards
- Health Care section :
 - Revision of language in the following subsections:
 - Language added addressing disease control
 - Language added describing minimizing pesticide exposure during pollination
 - Language added addressing Euthanasia
- Removal of definitions page

Summary of Farm Market GAAMPs proposed changes:

Text from "PHYSICAL CHARACTERISTICS OF A FARM MARKET" and the "USE OF SPACE" paragraph on page 3 was relocated to the DEFINITIONS section on page 2, under "Farm Market."

Farm Market – A farm market is a year-round or seasonal location where transactions and marketing activities between farm market operators and customers take place. <u>A farm market may be a physical structure such as a building or tent, or simply an area where a transaction between a customer and a farmer is made. The farm market does not have to be a physical structure. The farm market must be located on property owned or controlled (e.g., leased) by the producer of the products offered for sale at the market. While the location must take place on property controlled by the affiliated farm, it does not have to be a physical structure such as a building. Fresh products as well as processed products may be sold at the farm market. At least 50 percent of the products offered must be produced on and by the affiliated farm measured by retail floor space during peak production season, or 50 percent of the average gross sales for up to the previous five years or as outlined in a business plan. Processed products will be considered as produced on and by the farm if at least 50 percent of the produced on and by the farm if at least 50 percent of the produced on and by the farm if at least 50 percent of the produced on and by the farm if at least 50 percent of the produced on and by the farm if at least 50 percent of the produced on and by the farm if at least 50 percent of the produced on and by the farm if at least 50 percent of the produced on and by the farm if at least 50 percent of the produced on and by the farm if at least 50 percent of the produced on and by the farm if at least 50 percent of the produced on and by the farm if at least 50 percent of the product's primary or namesake ingredient was produced on and by the farm, such as apples used in apple pie, maple sap in maple syrup, strawberries in strawberry jam, etc.</u>

PHYSICAL CHARACTERISTICS OF A FARM MARKET

Use of spaceLocation

A farm market may be a physical structure such as a building or tent, or simply an area where a transaction between a customer and a farmer is made. The farm market must be located on property owned or controlled (e.g., loased) by the producer of the products offered for sale at the market. All retail space, farm market structures, and locations where transactions occur, at a<u>A</u> new or expanding farm market, that are is greater than 120 square feet must meet a minimum setback of 165 feet from all non-farm residences, and a

HnNew or expanding farm markets are not authorized under this GAAMP on platted lots within a subdivision created under the Michigan Land Division Act (Act 288 of 1967, MCL 560.101, *et seq.*) or preceding statues and on condominium units within a condominium (sometimes referred to as "site-condos") created under the Michigan Condominium Act (Act 59 of 1978, MCL 559.101, *et seq.*), However, farm markets are permitted in such areas if authorized by association rules or pursuant to a local ordinance designed for that purpose, unless prohibited by association rules.

A farm market should have a written site plan for potential MDARD review that preempts local government regulations.

Summary of Irrigation Water Use GAAMPs proposed changes:

The Irrigation GAAMPs committee members focused on three different aspects of the irrigation GAAMPs for updates in 2022. These areas included Irrigation System Uniformity, Chemigation and Backflow Prevention, and Odor from Irrigation Water.

In SYSTEM MANAGEMENT Section, Irrigation Uniformity was addressed by

• Updated language in GAAMP #3 and GAAMP #4 (both on pg 3)

3. Evaluate the irrigation system uniformity.

The objectives of this procedure are to eEnsure the irrigation system hardware is in good operating condition and the irrigation system is built as designed, is matched to the site conditions. It will also indicate where system management can be improved so distribution uniformity and overall potential application efficiency is increased. System uniformity evaluation involves 1) the overall condition of the system, and 2) how the design and management of this system work together to achieve high er low distribution uniformities and application efficiencies. Checklists are available from NRCS, irrigation dealers, and MSUE, and can be used to evaluate the overall conditions of the irrigation system and to assure that all vital components are in place.

Observe the system at the time of construction to ensure the system as built matches the design. After any major repair work involving the water distribution equipment, observe the sprinklers or distribution equipment to make sure the repair stays true to the design. Replace sprinklers that will not apply water uniformly or that exhibit malfunction in water distribution pattern.

Ensure center pivot interlock systems are present that stop water flow if the distribution system stops moving.

4. Maintain the irrigation system in good working condition.

<u>M</u>The objective of this practice is to maximize the potential application efficiency by maintaining the sprinkler system so that it operates as designed. An important aspect of uniformity is to make sure every component is in good operating condition and the nozzles/emitters are not worn. Regular inspection observation for obvious-visible equipment malfunctions such as leaky pipelines or riser gaskets should take place. Make sure cornering arm or Z arm control integrity is maintained when the system is used and repair any malfunction identified. The system should be periodically inspected for leaky pipeline or riser gaskets. Leaks can result in a significant loss of water. Deep percolation from leaking pipes could leach nutrients or chemicals to groundwater. Pressure should be checked in the system regularly.

• Updated language in GAAMP #5 (pg 3 & 4)

5. Pressure variations can be an early indication of problems with a pump that could indicate a malfunctioning or an incorrectly set valve. Correct system pressure is essential for efficient operation. Keep a record of when inspections are made. Systems that link active pumping with forward movement of the irrigation system can improve water use and energy efficiency and avoid over-application. Operate sprinkler systems to minimize drift and off-target application. Accurately measure irrigation system supply pressure at the manifold for each distribution system.

Observe pressure at start up in the spring and at mid-season or time of peak use. Correct malfunctions or leaks that have resulted in water supply pressure being out of design parameters. Pressure variations can be an early indication of problems with a pump, indicate a supply line leak or malfunction, or an incorrectly set valve. Correct system pressure is essential for efficient operation.

Added a new bolded entry GAAMP #6 (pg 4)

6. Operate sprinkler systems to minimize drift and off-target application.

The objective of this practice is to reduce the detrimental effects of wind on application uniformity and Systems should be both designed and managed to avoid off-target application of water. Observe the system at start up to minimize High winds can greatly reduce application uniformity and wastewater. Avoiding operation under high wind situations will improve application uniformity and reduce the potential for water applications to non-target areas. Care should be taken to avoid drift or direct spraying of water over roads, adjacent property, or structures due to system placement or high winds. Observe end guns at start up to ensure they are operating as designed to avoid over- or under-application of water. Systems should be both designed and managed to avoid off-target application that does not fall on the irrigated field.

- Backflow Prevention
 - Language added to #24 (formerly #24)
 - Language added (new bullets #25 and #26)

- 24. Incorporate appropriate backflow-prevention safety devices if a chemigation system is used. <u>A chemigation valve contains a functional check valve, vacuum relief valve, and a low-pressure drain.</u>
- 25. Irrigation systems used for applying chemigation should have a properly installed, maintained, and tested chemigation valve, reduced pressure zone valve, or air gap. An air gap is twice the diameter of the fill pipe or 6 inches, whichever is greater. Repair or replacement of any nonfunctioning components should be done with a professionally manufactured valve.
- 26. The chemigation check valve device should be inspected by the operator annually to ensure it is working properly and written records of the inspection must be maintained for a minimum of five years.

The annual test shall consist of the following:

- Opening the inspection port and checking the condition of the check valve seat and the internally loaded (i.e., spring) check is functioning.
- With the system pressurized and the well pump off, remove the low-pressure drain to ensure the main check valve is not leaking. [This may only be possible for vertical turbine pump systems.]
- Visual inspection of the air/vacuum relief, low-pressure drain and plunger, lowpressure drain hose, and injection line check valve for signs of failure.

Summary of Manure Management and Utilization and GAAMPs proposed changes

The Manure GAAMPs Advisory Committee focused on making the language in these GAAMPs more understandable to the Agricultural Community as well as the general public.

• In RUNOFF CONTROL AND WASTEWATER MANAGEMENT Section, removal of ambiguity contained in GAAMP 1 (pg 2).

RUNOFF CONTROL AND WASTEWATER MANAGEMENT

Rainfall and snowfall-induced runoff from uncovered livestock facilities <u>(regardless of the facility's surface characteristics)</u> requires control to protect neighboring land areas and prevent direct discharge to surface or groundwaters. Livestock facilities, which require runoff control, include all holding areas where livestock density precludes sustaining vegetative growth on the soil surface.

1. Facilities may be paved, partially paved around waters and feed bunks, or unpaved.

1. Runoff control is required for any facility if runoff from a lot leaves the owner's own property or adversely impacts surface and/or groundwater quality. Examples include runoff to neighboring land, a roadside ditch, a drain ditch, stream, lake, or wetland.

• In RUNOFF CONTROL AND WASTEWATER MANAGEMENT Section, language revised to provide consistency across the document (pg 2).

2. Milk parlor and milk house wastewater shall be managed in a manner to <u>protect groundwater and surface waters.</u> prevent pollution to waters of the state.

3. Provisions should be made to control and/or treat ILeachate and runoff from stored manure, silage, food processing by-products, or other stored livestock feeds <u>shall be</u> <u>managed in a manner</u> to protect groundwater and surface waters.

For runoff control and wastewater management guidance, refer to the USDA Natural Resources Conservation Service (NRCS) Michigan (MI) Conservation Practice Standard *Waste Treatment 629* (USDA-NRCS-MI Field Office Technical Guide [FOTG]), chapter 4 of *Livestock Waste Facilities Handbook 3rd Edition*, (MidWest Plan Service, 1993), the *Guideline for Milking Center Wastewater* (Wright and Graves, 1998) and the *Milking Center Wastewater Guidelines* (Holmes and Struss, 2009). For construction Design standards and specifications, see GAAMP Number 19, Construction design for manure storage, runoff storage, and treatment facilities must meet standards and specifications.

• In RUNOFF CONTROL AND WASTEWATER MANAGEMENT Section, the removal of redundancy in GAAMP 4 (pg 3) that is addressed later in the GAAMPs

Storage Facilities for Runoff Control

Runoff control can be achieved by providing facilities the option to collect and store the runoff for later application to cropland.

4. Runoff storage facilities should be designed to contain normally occurring direct precipitation and resulting runoff and manure that accumulate during the storage times projected in the MMSP. In addition, storage volume should be provided that will contain the direct rainfall and runoff that occur as a result of the average 25-year, 24-hour rainfall event for the area. Storage facilities must be constructed to reduce scepage loss to acceptable levels.

Refer to the NRCS-MI Conservation Practice Standard *Waste Storage Facility 313* for controlling seepage from waste impoundments (USDA-NRCS-MI FOTG). Additional guidance can also be found in Chapter 10, Appendix 10D of the *Agricultural Waste Management Field Handbook (AWMFH)*, Part 651, (USDA-NRCS, 2008).

Land Application of Wastewater and Runoff

Equipment must be available for land application of stored runoff wastewater. Land application should be done when the soil is dry enough to accept the water.

5. Application rates should be determined based upon the ability of the soil to accept and store the runoff and wastewater and the ability of plants growing in the application area to utilize nutrients. Land application should be done when the wastewater can be used beneficially by a growing crop. On fields testing over 150 ppm P (300 lb. P/acre) soil test Bray P1, (202 ppm or 404 lb./acre Mehlich-3 P) there may be instances where on-farm generated wastewater, <1 percent solids, can be utilized if applied at rates that supply 75 percent or less of the annual phosphorus removal for the current crop or next crop to be harvested.

 Within the ODOR MANAGEMENT section, revisions to provide management descriptions for farmstead stockpiling (pg 8,9).

Farmstead Stockpiling

Stockpiling manure at a farmstead is an acceptable practice that should be protective of the environment and mindful of neighbors. Manure should be stockpiled on a hard surface pad (such as concrete or asphalt) with sides to prevent leachate and runoff. Stockpiling manure on the ground is also an acceptable practice with appropriate management such as rotating locations and complete periodic removal of manure from the location annually or more frequently, records documenting timing of removal and location used, and seeding of the previous location after removal to allow for vegetation to take up the nutrients that have accumulated in the soil. Stockpile locations should remain vegetated without stockpiled manure for a minimum of three years before reusing the site. In addition, the stockpile should be in a location that does not allow for runoff to flow onto neighboring property or into surface waters. The location should also consider odors and pests if the stockpile is in close proximity to homes, schools or other high use areas. Practices such as covering stockpiled manure with a tarp, fleece blanket¹, straw, woodchips or other materials, planting or establishing a screen, shaping the stockpile into a conical shape, placing the stockpile to avoid overland flow of precipitation runoff, or using additives such as lime, can be used to help reduce odors and pests. Unless a tarp, fleece blanket1, or straw cover is maintained, manure stockpiles need to be kept at least 50 feet away from property lines or 150 feet away from non-farm homes. Manure stockpiles need to be kept at least 150 feet from non-farm homes, if possible. If not possible, stockpiles need to be kept at least 50 feet from the property line or, if neither setback distance is possible, a tarp, fleece blanket¹, or straw cover must be maintained.

• Within the ODOR MANAGEMENT section, further clarifying definition of incorporation (pg 13).

18. Incorporate manure into soil during, or as soon as possible after, application. This can be done by (a) soil injection or (b) incorporation within 48 hours after a surface application when weather conditions permit. Incorporation may not be feasible where manures are applied to pastures, forage crops, wheat stubble, or where notill practices are used to retain crop residues for erosion control.

Incorporation <u>typically</u> means the physical mixing or movement of surface applied manures and other organic byproducts into the soil <u>profile</u> so that a significant

amount of the material is not present on the soil surface. The physical mixing can be done by using minimal disturbance tillage equipment such as aeration tools. Incorporation also <u>includesmeans</u> the soaking of liquid-<u>materials into the soil</u> <u>profile by infiltration into soils that are not saturated and have void air space.</u> <u>These liquid materials include, but are not limited tomaterial being applied with</u> <u>irrigation water</u>, barnyard manure runoff, liquid manure, silage leachate, milk <u>parlor and</u> house wash <u>water/wastewater</u>, and <u>water</u>, or liquids from a manure treatment process that separates liquids from solids <u>into the surface soil</u> <u>layer by infiltration</u>, thereby moving surface applied liquid into soils that have void air space not completely filled by soil water. These materials may be applied directly to soils or in combination with irrigation water using conventional manure <u>application equipment or irrigation equipment</u>

 Include Runoff Storage to CONSTRUCTION DESIGN AND MANAGEMENT FOR MANURE STORAGE, RUNOFF STORAGE, AND TREATMENT FACILITIES (pg 14)

CONSTRUCTION DESIGN AND MANAGEMENT FOR MANURE STORAGE, RUNOFF STORAGE, AND TREATMENT FACILITIES

Construction Design

19. Construction design for manure storage, runoff storage, and treatment facilities must meet standards and specifications.

• Within MANURE APPLICATION TO LAND section, update to include Tri-State Fertilizer Recommendations (pg 16)

Fertilizer Recommendations

23. Use current fertilizer recommendations, consistent with those of Michigan State University (MSU), <u>Tri-State Fertilizer</u> <u>Recommendations</u>, or other appropriate recommendations to determine the total nutrient needs for crops to be grown on each field that could have manure applied.

Fertilizer recommendations made by MSU Extension (Warncke *et al.*, 2009a and 2009b) or Tri-State Fertilizer Recommendations (Bulletin 974) are based on the soil fertility test, soil texture, crop to be grown, a realistic yield goal (average for past 3-5 years), and past crop. Fertilizer recommendations can then be utilized by the livestock producer to help identify on which fields manure nutrient s will have the greatest value in reducing the amounts of commercial fertilizers

needed, thereby returning the greatest economic benefit. For additional information, see the current GAAMPs for Nutrient Utilization.

 Within MANURE APPLICATION TO LAND; MANURE NUTRIENT LOADINGS section, update to include current Nutrient Management Program and Tri-State Fertilizer Recommendations (pg 18)

The rate of decomposition (or mineralization) of manure organic matter will be less than 100% during the first year and will vary depending on the type of manure and the method of manure handling. Therefore, in order to estimate how much of the total manure N in each ton, or 1000 gallons of manure, will be available for crops (and a credit against the N fertilizer recommendation), some calculations are needed. The total N and NH4-N content from the manure analysis can be used with the appropriate mineralization factors to calculate this value. Management tools to assist with these calculations include (a) Recordkeeping System for Crop Production (E2342)--Manure Management Sheet #2 (Jacobs, 2015), (b) Utilization of Animal Manure for Crop Production Bulletins MM-2 and MM-3 (Jacobs 1995a and b), (c) Nutrient Recommendations for Field Crops in Michigan Bulletin E-2904 (Warncke et al., 2009a), (d) Nutrient Recommendations for Vegetable Crops in Michigan Bulletin E-2934 (Warncke et al., 2009b) or the MSU Nutrient Management (MSUNM) computer software program (Jacobs and Go. 2001)Computer Assisted Nutrient Management Planning Program (CANMaPP) at https://iwr.msu.edu/canmapp/.

> If the Bray P1 soil test level for P reaches 150 26. Ib./acre² (75 ppm), (Mehlich-3 P 202 lb./acre, 101 ppm) manure applications should be managed at an agronomic rate where manure P added does not exceed the P removed by the harvested crop. (If this manure rate is impractical due to manure spreading equipment or crop production management, a quantity of manure P equal to the amount of P removed by up to four crop years may be applied during the first crop year. If no additional fertilizer or manure P is applied for the remaining crop years, and the rate does not exceed the N fertilizer recommendations for the first crop grown). If the Bray P1 soil test reaches 300 lb./acre (150 ppm) or higher, manure applications should be discontinued until nutrient harvest by crops reduces P test levels to less than 300 Ib./acre. To protect surface water quality against discharges of P, adequate soil and water conservation practices should be used to control runoff, erosion and leaching to drain tiles from fields where manure is applied.

• Within MANURE APPLICATION TO LAND; MANAGEMENT OF MANURE APPLICATIONS TO LAND section, update to include current Nutrient Management Program and Tri-State Fertilizer Recommendations (pg 24)

Management of Manure Applications to Land

33. Records should be kept of manure analyses, soil test reports, and rates of manure application for individual fields. Records should include manure analysis reports and the following information for individual fields:

- a. Soil fertility test reports;
- b. date(s) of manure application(s);
- c. rate of manure applied (e.g., gallons or wet tons per acre);
 - d. previous crops grown on the field; and,
 - e. yields of past harvested crops.

Good record keeping demonstrates good management and will be beneficial for the producer.

An important ingredient of a successful program for managing the animal manure generated by a livestock operation is "planning ahead". An early step of a manure application plan is to determine whether enough acres of cropland are available for utilizing manure nutrients without resulting in excess nutrient application to soils. This is often referred to as 'agronomic balance."

Determination of agronomic balance requires estimates of manure quantities and manure nutrients produced by different types of livestock and estimates of crop nutrient removal. Balance is most often determined for phosphorus, but may also include projections for other nutrients. Animal manure and crop removal estimates may be obtained using the following:

- Table A4 of these GAAMPs which was derived by ASAE (2014) using the default or average for each animal type. Together, Table A4 and A5 can provide further guidance regarding N losses that can occur during handling and storage or manures before they are applied.
- Nutrient Recommendations for Field Crops in Michigan Bulletin E-2904 (Warncke *et al.*, 2009a)
- Nutrient Recommendations for Vegetable Crops in Michigan Bulletin E-2934 (Warncke et al., 2009b).
- <u>Tri-State Fertilizer Recommendations Bulletin 974 (Culman,</u> Fulford, Camberato, and Steinke, 2020)

Computer software has been developed to assist with development of manure spreading plans, the determination of agronomic balance, and the maintenance of manure spreading-crop production records:

• <u>MSUNM (Jacobs and Go, 2001)2The Computer Assisted</u> Nutrient Management Planning Program (CANMaPP) at https://iwr.msu.edu/canmapp/

• *Manure Management Planner* (Purdue Research Foundation, 2014)

• *Nutrient Inventory* (Koelsch and Powers, 2010; 2013).

Summary of Nutrient Utilization and GAAMPs proposed changes

Updated INTRODUCTION to include updated production and use numbers. (pg 4)

In 1920, Michigan had 19.0 million acres of cropland, but in 1970, 1990, 1999, and 2004 total land in farms had decreased to 12.7, 10.8, 10.4, and 10.1 million acres, respectively (MDARD, 1991, 2005) and 9.8 million in 2020 (USDA/NASS, 2020). As a result of modern agricultural practices, Michigan's agricultural system has become one of the most productive in the world.

The median soil test level for P in soil samples received by the Michigan State University (MSU) Soil Testing Laboratory in the 1994-95 season was 106 pounds of Bray P1 per acre (Warncke and Dahl, 1995). The median soil test P-value has declined over the years from 100 pounds of Bray P1 in 2001 to 74 pounds in 2015 (Silva, 2016).

- Updated references to reflect updated fertilizer recommendation from MSU and Tri-State throughout, with additions to text where new research prompted changes.
- Within ON-FARM FERTILIZER STORAGE AND CONTAINMENT PRACTICES; FERTILIZER STORAGE FACILITIES SECTION; movement of the Regulation No 641 language into the bolded heading. (pg 6)
- 2. Dry fertilizer should be stored inside a structure or device capable of preventing contact with precipitation and/or surface water. Bulk dry fertilizer should be stored in accordance with Regulation No. 641, "On Farm Fertilizer Bulk Storage," NREPA, Part 85.

The storage area should be able to handle and contain fertilizer spills properly. The structure or device should consist of a ground cover or base and a cover or roof top. Walls and floors should prevent absorption or loss of fertilizer. Dry fertilizer in an individual quantity of more than 2,000 pounds is considered "bulk fertilizer" and is regulated by Regulation No. 641, "Commercial Fertilizer Bulk Storage." Producers are encouraged to follow the guidance provided in Regulation No. 641 when bulk quantities of dry fertilizer are stored on their farm.

- Within FERTILIZATION PRACTICES FOR LAND APPLICATION, NITROGEN MANAGEMENT Section; bolded text GAAMP #10 & GAAMP #11 previously were split into A & B, but were updated to GAAMP #10, GAAMP #11, GAAMP #12, & GAAMP #13 to keep consistency with the rest of the document. Subsequent bolded GAAMPs were re-numbered. (pg 11 – 15)
- Minor grammatical and formatting changes throughout.
- Updated advisory committee members. (pg 45)

Summary of *Pest Utilization and Pest Control GAAMPs* proposed changes:

No Changes: review and update of references only. Includes minor formatting and web links only

Summary of *Site Selection for New and Expanding Livestock Facilities GAAMPs* proposed changes:

No Changes: review and update of formatting only.

Summary of *Cranberry Production GAAMPs* proposed changes:

No Changes: review and update of references only. Includes minor formatting and web links only.

Draft 2022 Generally Accepted Agricultural and Management Practices (GAAMPs):

Can be found at the following link:

MDARD - Right to Farm (michigan.gov)

Agriculture Processing Renaissance Zones

Background

The Process for Applying and Designating an Agriculture Processing Renaissance Zone (APRZ)

APRZs were established to attract new and expand existing food processing investment in the state of Michigan. Over the course of a decade, 30 zones have been designated. Active zones include:

- Michigan Milk Producers Association, RZA-2021, Expires 12/31/2023
- Request Foods, Inc., RZA-2024, Expires 12/31/2025
- Shoreline Fruit, RZA-2026, Expires 12/31/2027
- Dairy Farmers of America, Inc., RZA-2027, Expires 12/31/2028
- ZFS Ithaca LLC, RZA-2028, Expires 12/31/2031
- Spartan Michigan and Proliant, RZA 2029, Expires 12/31/2029

The application process begins with community and company officials meeting with a Michigan Economic Development Corporation (MEDC) business development manager and Michigan Department of Agriculture and Rural Development, Agriculture Development Division staff, to discuss a project in detail. APRZ applications are submitted by the county or distressed community (Section 11 of PA 346 of 1966) to MEDC. The city, village, or township in which an APRZ is proposed must approve a resolution for abatement of taxes.

To receive recommendation from the Michigan Strategic Fund (MSF), applicants must demonstrate the positive economic impact the project will have on the local unit of government and on the state, as well as the ways in which the project will strengthen Michigan's agricultural community. The taxes that facilities located in a renaissance zone do not pay are state education tax, personal and real property taxes, and local income tax where applicable. Taxes still due are those mandated by the federal government, local bond obligations, the Corporate Income Tax, school sinking fund, or special assessments. Companies are also not exempt from paying Michigan sales and use tax. Companies with agricultural processing facilities located in an APRZ must be current with all state and local taxes in order to be eligible for benefits under the program. Then, the Michigan State Administrative Board (SAB), upon recommendations from the MSF and the Michigan Commission of Agriculture and Rural Development approves or denies the APRZ designations.

If approved, the company enters into an agreement with the MSF outlining private investment and job creation numbers approved by the SAB. Taxes can be abated up to a maximum of 15 years. In all cases, the tax relief is phased out in 25 percent increments over the last three years of the zone designation.



GRETCHEN WHITMER GOVERNOR STATE OF MICHIGAN DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

GARY MCDOWELL DIRECTOR

DATE: November 10, 2021

TO: Michigan Commission of Agriculture and Rural Development

FROM: Jamie Zmitko-Somers, Director, Agriculture Development Division

SUBJECT: Ottawa County - Request for an Agricultural Processing Renaissance Zone (APRZ) in Holland Charter Township for Request Foods, Inc.

Company Background

Request Foods is a national leader of frozen food and food service solutions headquartered in Holland Charter Township. The company co-manufactures a variety of food products including custom entrées, side dishes, and heat and serve portions for retail, wholesale, and foodservice customers. Request Foods currently employs approximately 900 full time individuals and is one of the Holland area's largest employers.

Request Foods currently owns and operates several locations in the City of Holland and in Holland Charter Township, including:

- 375,000 sq. ft. facility at 3460 John F. Donnelly Drive
- 300,000 sq. ft. facility at 12875 Greenly Street
- 30,500 sq. ft. facility at 13044 Quincy Street

Project Description

Request Foods needs to expand its manufacturing to accommodate new lines of business for frozen and ready-to-eat (RTE) food to keep pace with consumer demand and growth in its customer base. Request Foods plans to expand at four locations in Holland to meet the demand for its products. The plans include adding further manufacturing capacity at its Greenly Street location, construction of a cold storage warehouse on Ransom Street, constructing a Ready to Eat (RTE) facility on three parcels of property on Quincy and John F Donnelly Streets, and expanding and upgrading its wastewater pre-treatment plant. Request Foods will construct an 89,000 square-foot RTE facility on the property located within the APRZ to keep pace with customer demand.

The APRZ will give Request Foods the ability to process the Ready-To-Eat meals but will also increase the amount of Michigan-grown vegetables, milk, beef, fruit, and packing utilized by the company. By 2025, Request Foods forecasts to purchase \$48 million annually of Michigan agricultural products, up from their current \$38 million annually. These value chains are critical to Michigan producers. Request Foods is

Michigan Commission of Agriculture and Rural Development November 10, 2021 Page two

already proudly sourcing in Michigan from cooperatives and companies such as buying its vegetables from Michigan Freeze Pack; purchasing milk, cheese, and cottage cheese from Country Dairy and Dairy Farms; sourcing beef from West Michigan Beef; and buying fruit like apples, blueberries, and cherries from Peterson Farms. Request Foods is incredibly proud to be an important market outlet for these cooperatives and businesses and are continually working with these and other suppliers on projects to grow the future.

This project is a \$205 million investment and is expected to create 198 additional jobs. Holland Charter Township approved the APRZ for Request Foods on September 16, 2021, Ottawa County approved the APRZ on September 30, 2021, and the Michigan Economic Development Corporation's Michigan Strategic Funding Board approved it on October 26, 2021, with the desired start date of January 1, 2023.

MDARD Staff Recommendation

MDARD staff recommend the Michigan Commission of Agriculture and Rural Development approve the attached "Resolution for an Agricultural Processing Renaissance Zone" application for Request Foods as presented at the November 10, 2021, Commission Meeting.

Attached for your consideration:

Agricultural Processing Renaissance Zone Resolution

Resolution for an Agriculture Processing Renaissance Zone

A Michigan Commission of Agriculture and Rural Development resolution recommending the application for a proposed agricultural processing facility submitted by the Holland Charter Township, Ottawa County, Michigan, Request Foods, Inc., be designated as an Agricultural Processing Renaissance Zone.

WHEREAS, the Michigan State Legislature by authority of Public Act 284 of 2006, which requires the Michigan Commission of Agriculture and Rural Development to review proposed agricultural processing facilities; and

WHEREAS, the Michigan Commission of Agriculture and Rural Development may recommend to the State Administrative Board the designation of an Agricultural Processing Renaissance Zone; and

WHEREAS, the Ottawa County Board of Commissioners, Ottawa County on September 30, 2021, consented to the creation of an Agricultural Processing Renaissance Zone for a frozen food processing facility within their boundaries by adopting a resolution; and

WHEREAS, the Holland Charter Township, Ottawa County on September 16, 2021, consented to the creation of an Agricultural Processing Renaissance Zone for a frozen food processing facility within their boundaries by adopting a resolution; and

WHEREAS, the Ottawa County Board of Commissioners, Ottawa County, Request Foods, Inc., applied for an Agricultural Processing Renaissance Zone to both the Michigan Department of Agriculture and Rural Development and the Michigan Economic Development Corporation on September 30, 2021; and

WHEREAS, the proposed length of term for the new facility for the Agricultural Processing Renaissance Zone is 15 years, starting January 1, 2023, through December 31, 2037; and

WHEREAS, Request Foods, Inc., will create 198 new as well as invest approximately \$205 million in a new frozen food manufacturing facility in the Holland Charter Township, Ottawa County, with 50 of those jobs and \$73.5 million of that investment attributable to the Agricultural Processing Renaissance Zone; and

WHEREAS, should Request Foods, Inc., meet these requirements, they will receive the full 15 years of benefit from the Agricultural Processing Renaissance Zone designation; and

WHEREAS, the Michigan Economic Development Corporation advised the Michigan Department of Agriculture and Rural Development this is a viable project; and

FURTHER, the Michigan Department of Agriculture and Rural Development concurs this proposed agricultural processing facility will generate a positive economic impact on Michigan agricultural producers, agri-businesses, food processors, and other local suppliers.

THEREFORE, BE IT RESOLVED, the Michigan Commission of Agriculture and Rural Development recommends the application for a proposed food processing facility, manufacturing frozen food and submitted by the Ottawa County Board of Commissioners and Holland Charter Township, Ottawa County, Request Foods, Inc., be designated by the Michigan State Administrative Board as an Agricultural Processing Renaissance Zone and requests a copy of this resolution be provided to them, as well as to the Michigan Strategic Fund Board.

Dated: November 10, 2021 Lansing, Michigan

Dru Montri, Chair Michigan Commission of Agriculture and Rural Development



FOR IMMEDIATE RELEASE October 26, 2021 Contact: achtenbergk@michigan.org

Governor Whitmer announces agribusiness expansion bringing nearly 200 jobs to Holland

LANSING, Mich. – Governor Gretchen Whitmer joined the Michigan Economic Development Corporation (MEDC) to announce economic assistance for projects approved by the Michigan Strategic Fund Board today that, in total, will create more than 250 new jobs and generate more than \$238 million in investment in Michigan.

"I am laser-focused on continuing Michigan's economic growth by creating good-paying jobs, supporting transformational placemaking efforts in communities and investing in initiatives that will ensure long-term economic opportunity in the state," said **Governor Whitmer**. "Through these investments, we can build back our economy stronger than ever before and help communities across Michigan thrive. I will work with anyone to usher in a new era of prosperity for our state."

Tier 1 food products supplier Request Foods expanding in Holland to create 198 jobs, boosting Michigan's agribusiness industry



<u>Request Foods, Inc.</u> is a national leader of frozen food and food service solutions headquartered in **Holland Charter Township.** The company co-manufactures a variety of food

products including custom entrées, side dishes, heat and serve portions, and more, for retail, wholesale, and foodservice customers. Request Foods currently employs approximately 900 full time individuals and is one of the Holland area's largest employers.

Request is experiencing increasing demand for its products and plans to expand at four locations in Holland. The plans include: adding further manufacturing capacity at its Greenly Street location; a construction of a cold storage warehouse on Ransom Street; constructing a Ready to Eat (RTE) plant on three parcels of property on Quincy Street and John F Donnelly Street; as well as expanding and upgrading its wastewater pre-treatment plant.

The project is expected to generate a total capital investment of \$205 million and create up to 198 jobs. To support the project, the Michigan Strategic Fund has approved the following incentives:

- A \$2 million Michigan Business Development Program performance-based grant;
- An Agriculture Renaissance Zone with an estimated value of \$11 million for the RTE facility;
- \$6.9 million in Community Development Block Grant funds to Holland Charter Township for machinery and equipment needed for the RTE facility and the Greenly Street expansion;
- Approval of an Alternative State Essential Services Assessment exemption.

Michigan was chosen for the project over competing sites in South Carolina. The project supports the regional target industry of agricultural business growth and fosters high-wage skills growth. Request has a long history of stewardship with significant contributions to numerous organizations in the community and beyond.

"Request Foods is excited to continue our history of successful growth in West Michigan, by investing over \$200 million during the next few years in four major projects in Holland Charter Township. Our investment is expected to create up to 198 new jobs, with most of our new team members residing in Ottawa County (Holland Township). While we received enticing offers to expand in other states, our commitment to Michigan, coupled with our desire to ensure Holland is recognized as an area of choice to live and work, precipitated our decision to expand locally," said **Request Foods Chief Financial Officer Menaka Abel**. "We are grateful for the cooperation we have received from Holland Charter Township, Ottawa County and the State of Michigan officials – along with the support we have received from Lakeshore Advantage and our partners at Warner Norcross + Judd, which enabled us to bring our expansion plans to fruition.

"With God at the forefront of all that we do, Request is relentless in its pursuit to provide quality food products for its customers and dedicated to the stewardship of its people and community."

The Agricultural Processing Renaissance Zone is being brought before the Michigan Commission of Agriculture and Rural Development for consideration on November 10. "Today's announcement underscores that Michigan is a food and agriculture powerhouse. Request Foods commitment to significant investment in food processing will serve our production agriculture value chains for decades to come while bringing the latest in food manufacturing technology to the state," said **Gary McDowell, director, Michigan Department of Agriculture and Rural Development**. "I appreciate the ongoing partnership of MEDC and Request Foods and I am thrilled to support this project which is slated to bring \$205 million of investment and 198 jobs to Michigan."

Holland Charter Township is supporting the project through the CDBG funds and the Agricultural Processing Renaissance Zone, and anticipates approval of a property tax abatement. In addition, the Holland Board of Public Works has offered an economic development incentive valued at \$260,000 and West Michigan Works! has offered up to \$632,650 in Job Training Assistance to help attract and retain new talent. Lakeshore

Advantage, the economic development organization that assists employers with growth opportunities in Ottawa and Allegan counties, connected the company with local resources to support this project.

"We were able to come alongside Request Foods as an extended member of their team on this expansion project, understand their growth milestones, and deploy state and local resources to support their expansion in Holland Charter Township," said **Jennifer Owens, Lakeshore Advantage President**. "We are pleased to support Request Foods through their expansion process and commend their commitment to West Michigan."

Individuals interested in careers with Request Foods should visit <u>https://www.requestfoods.com/careers/</u>.



GRETCHEN WHITMER GOVERNOR

STATE OF MICHIGAN DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

GARY MCDOWELL DIRECTOR

DATE:	November 10, 2021
TO:	Michigan Commission of Agriculture and Rural Development
FROM:	Jamie Zmitko-Somers Director, Agriculture Development Division
SUBJECT:	Maple Hardwoods – Food and Agriculture Investment Fund

Background

Maple Hardwoods, Inc., is a second-generation timber company in Hessel, Michigan, and their management team have been dealers in hardwood logs, forest management, and the lumber business for more than 50 years. The business currently employs 24 people and produces about 7 million board feet of green lumber annually. The company recently purchased a prefabricated 57,000 square foot prefabricated sawmill building that is being erected in Hessel, two miles from the current sawmill site. The project described below includes equipment purchase and installation, buildout of the building interior, and site improvements.

Project Description

The \$8,807,267 sawmill expansion and modernization project will create 10 new jobs. The project involves equipment installation, interior construction, and buildout in an existing 57,000 square-foot building to support a sawmill line including a ring debarker, two band headrigs, optimization log scanning and edger, and automated board flip with grade scanning for trim optimization to be integrated with 25 percent of the existing sawmill equipment. The new equipment and facility will double green lumber production from 7 million to 14 million board feet and will increase log usage from 5.5 million board feet to 10 million board feet. Current green lumber markets include lumber driers, pallet manufacturers, and flooring companies. The modernized system supports the manufacture of both low- and high-grade lumber and allows the shift between grades as the market changes. The new optimized log scanning, along with optimization at the edger, will allow the input of customer specifications, optimizing customer widths and lengths as compared to the current random length saw system. In addition, the new ring debarker will be less abusive to the cambrian layer of the log. This, coupled with the shift from the current circular saw with a 1/4-inch kerf to a band saw with a 1/16-inch kerf, will generate less waste and provide better access to saw a premium board. All these modernizations will support access to new customer manufacturing cabinetry, furniture, and other hardwood components.

The project will require more logs than currently utilized, which will benefit the region. They will purchase additional logs from their 10 current loggers and add new log suppliers. Forest landowners will also benefit from the increased saw log market volumes to allow them to derive additional value from their timber. The trucking firm that currently ships the mill's finished lumber will be adding at least one additional truck and driver to accommodate the doubling of lumber output. Also, the increased production will provide additional clean chips and sawdust for Arauco in Grayling, Michigan, and Sault Sainte Marie, Ontario, to support their particleboard production. In addition, the business donates sawdust to local farms and fairs for animal stalls. Bark is sold to the landscaping/mulch industry and the project will produce more bark for this market as well.
The project also includes development of a saw filing room, office space overlooking the mill operation, and employee locker room, break room, and weight room. Catwalks with guardrails will be installed over the operation for training and tours to promote the skilled trades to encourage people to work in the forest product sector. By increasing production and revenues, as well as adding higher technology equipment, the business is planning to see pay increases to employees. The company has stated that with increased production and revenue, they will be able to continue giving back to our communities through support of non-profit organizations and assistance to charities and families in need. The company's business proforma shows that well over half of the company's expenditures stay right within the local economy, while over 90 percent of the income is generated is from outside the region.

Additional Impacts

With adding brand new, state of the art sawmill equipment, the process will be more energy efficient than their current sawmill. The company is a Sustainable Forestry Initiative Standard and Forest Stewardship Council Certified for sustainable forest management chain of custody. The additional production will provide additional opportunity for the sustainable management of Michigan's forests. The company does cross training and sends employees to training programs when a promotion is earned. They have sent employees to truck driving school to obtain a CDL, or to lumber inspector training programs, and MIOSHA Trainings to further enforce and encourage a safe working environment. The company offers employee's health, dental, and vision insurance. They also provide them with a comprehensive vacation and 401(k) match plan.

Recommendation

Michigan Department of Agriculture and Rural Development staff recommend the Michigan Commission of Agriculture and Rural Development approve a Food and Agriculture Investment Program performance-based grant of \$90,000 for Maple Hardwoods.



FOOD AND AGRICULTURE INVESTMENT PROGRAM TERMS SHEET

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Company Inform	hation					
Company Legal	Name Maple Hardwoods, Inc.					
Address 271 Hess	1 W. Chard Road sel, MI 49745					
Project Overview	N					
Project Title	Maple Hardwoods, Inc. Modernization & Expansion					
Project Location	Project Location Corner of 3 Mile Road & Rockview Road Hessel, MI 49745					
Total Project Inv	estment \$ 8,807,267					
Total Jobs Creat	t ed 10					
MDARD Project	Support					
Type of Project	Performance Based Grant					
Grant Amount	\$ 90,000					
Milestones	 Complete building construction at the Hessel, Michigan facility, and; Purchase, installation and operation of new machinery and equipment at the new facility in Hessel, Michigan, and; 					

3. Documentation of necessary state permits and local building occupancy permits for the facility in Hessel, Michigan.

Acknowledgement of Terms of Support for Project

All milestones must be completed prior to receiving a disbursement of the performance-based grant.

If the terms of this Letter of Intent for a grant are accepted, the project will be taken to the Agriculture and Rural Development Commission for approval. If approved by the Commission, a grant agreement will be signed between the company and MDARD incorporating the terms included in this term sheet.

Funding is subject to appropriations provided and authorized by the Michigan Legislature.

Mache	- 98/28/21	Jamio Zmills	Smen	10/22/2021
Company Signor	Date	MDARD Signer		Date
Lengine He Janche	Tibecretary	Jamie Zmitko-Somers	Director, Agricultu	ure Development
Print Name	Title	Print Name	Title	



GRETCHEN WHITMER GOVERNOR STATE OF MICHIGAN DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

GARY MCDOWELL DIRECTOR

DATE:	November 10, 2021
то:	Michigan Commission of Agriculture and Rural Development
FROM:	Jamie Zmitko-Somers, Director, Agriculture Development Division
SUBJECT:	West Michigan Beef – Food and Agriculture Investment Program

Background

West Michigan Beef Company (WMBC) LLC was started in 2003 to slaughter beef, veal, and lamb for wholesale customers. Over time, the business changed to slaughtering and processing beef cattle and dairy cows only. Custom slaughter of beef cattle supplies processors in Michigan and northern Indiana and dairy cow slaughter supplies wholesale beef to a variety of customers in Michigan, Indiana, and Illinois. WMBC is family-owned and operated with a long history in Michigan.

Project Description

The project is a \$35,500,000 expansion to increase capacity both for custom slaughter and conventional slaughter for beef. The company will construct a 70,000 square-foot modern beef processing facility in Hudsonville, Michigan. This will enable WMBC to support most of the livestock markets in Michigan, in addition to local 4H livestock sales by giving a local option for slaughter. The company will hire approximately 10 new employees.

Impact on Michigan's Agriculture Industry

The current facility can process 600 animals per week. The new facility will double that capacity. Wholesale beef items are sold to regional processors and boxed beef primals are sold and distributed locally and into Detroit and Chicago markets. Boneless beef trimming and combo items are sold to processors who make beef jerky, frozen prepared foods, and hot dogs, including Request Foods, Tyson, Kent Quality, Ada Valley Meat Company, Brouwer Meats (Distributor to local meat shops), Byron Center Meats, and Yoder Meats (Shipshewana). As Michigan's dairy processing sector grows, the need for animal processing also increases. WMBC is also one of the only facilities that takes dairy cull cows, often these animals must travel as far as Pennsylvania. This project is a positive from an animal welfare perspective.

Additional Impacts

The building project will be LEED certified for energy efficiency. There will also be other efficiencies added. For example, refrigeration equipment will be used to preheat water to 110 F rather than using the boilers. Sustainability has been and will continue to be a priority. The company provides bilingual training in English and Spanish, and they do hire and promote those who have English as a second language. Employees are given food safety training, as well as on the job training for each position.

Michigan Commission of Agriculture and Rural Development November 10, 2021 Page two

MDARD Staff Recommendation

Michigan Department of Agriculture and Rural Development staff recommend the Michigan Commission of Agriculture and Rural Development approve a Food and Agriculture Investment Fund performance-based grant of \$150,000 for West Michigan Beef.



FOOD AND AGRICULTURE INVESTMENT PROGRAM TERMS SHEET

Company Inform	nation
Company Legal	Name West Michigan Beef CO. LLC
Address 300 [°] Hud	7 VanBuren Street sonville, MI 49426
Project Overvie	W
Project Title	Beef Production Facility Expansion
Project Location	3007 VanBuren Street Hudsonville, MI 49426
Total Project Inv	vestment \$ 35,500,000
Total Jobs Creat	ted 10
MDARD Project	Support
Type of Project	Performance Based Grants
Grant Amount	\$ 150,000
Milestones	 Complete new building construction at the Hudsonville, Michigan facility, and; Purchase, installation and operation of new machinery and equipment at the new facility in Hudsonville, Michigan, and; Documentation of necessary state and federal food processing permits and local building occupancy permits for the facility in Hudsonville, Michigan.

Acknowledgement of Terms of Support for Project

All milestones must be completed prior to receiving a disbursement of the performance-based grant.

If the terms of this Letter of Intent for a grant are accepted, the project will be taken to the Agriculture and Rural Development Commission for approval. If approved by the Commission, a grant agreement will be signed between the company and MDARD incorporating the terms included in this term sheet.

Eunding is subject to appropriations provided and authorized by the Michigan Legislature.

0 0/1 10 10/22/2021 Company Signor ARD Signor Date Don Vander Boon Managing Member Jamie Zmitko-Somers Director, Agriculture Development Print Name Print Name Title



GRETCHEN WHITMER GOVERNOR STATE OF MICHIGAN DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

GARY MCDOWELL DIRECTOR

DATE:	November 10, 2021
то:	Michigan Commission of Agriculture and Rural Development
FROM:	Jamie Zmitko-Somers, Director, Agriculture Development Division
SUBJECT:	Sprinkles Donut Shop LLC – Food and Agriculture Investment Program

Background

The vision and passion behind Sprinkles Donut Shop was brought to reality by owner Gary VanderStelt and his father in November 2014 when the Hudsonville, Michigan, bakery opened its doors. Sprinkles continues the legacy of Gary Senior with the same commitment to quality, freshness, and family. With five retail locations (Ada, Allendale, Caledonia, Hudsonville, and Rockford) and more than 30 wholesale customers (J&H Family Stores, Meijer Bridge Street Market, Spectrum Health Hospitals), Sprinkles Donut Shop is a rapidly growing bakery with more demand than current production capacity.

Project Description

To meet demand, Sprinkles must transition from a small retail bakery to an industrial kitchen. The larger space will allow for a more efficient production line, create jobs, and help the company expand local retail and wholesale business, as well as producing and co-packing for a national restaurant chain. The new kitchen will enable Sprinkles to fulfill new wholesale business with multiple national brands, including a Michigan-based business that ships to 26 states. The expansion will allow the company to export product, as well as co-pack over 200,000 donuts a month. The additional wholesale and co-packing sales are estimated at \$1,480,000. The capital investment in the project is \$1,045,810 and will create 10 new jobs.

Impact on Michigan's Agriculture Industry

Sprinkles is committed to local, Michigan vendor partnerships, totaling over \$540,000 to date in 2021. Michigan ingredients include blueberries, flour, milk, sugar, as well as half-dozen-size donut boxes. Local vendors include Gordon Foods, Cedar Crest Dairy, Michigan Egg, National Flavors, BakeMark, and Dawn Foods. Today, Sprinkles consumes more than 250,000 pounds of flour and forecasts consuming more than 1,000,000 pounds of flour with the expansion, which will allow for the ability to purchase flour direct from King Milling.

Additional Impacts

Sustainability is important to the company as they focus on recycling of cardboard, paper, and plastic and in addition the project will utilize a number of energy efficient items in the project. In 2021, the company hired a doctor in business psychology to create management and leadership training curriculum for Sprinkles team members.

Michigan Commission of Agriculture and Rural Development November 10, 2021 Page two

MDARD Staff Recommendation

Michigan Department of Agriculture and Rural Development staff recommend the Michigan Commission of Agriculture and Rural Development approve a Food and Agriculture Investment Fund performance-based grant of \$60,000 for Sprinkles Donut Shop LLC.



FOOD AND AGRICULTURE INVESTMENT PROGRAM TERMS SHEET

Company Information
Company Legal Name Sprinkles Donut Shop LLC
Address 6450 28th Avenue Hudsonville, MI 49424
Project Overview
Project Title Sprinkles Industrial Kitchen Build-Out
Project Location 3414 Quincy Street Hudsonville, MI 49426
Total Project Investment \$ 1,045,810.00
Total Jobs Created 10
MDARD Project Support
Type of Project Type of Project
Grant Amount \$ 60,000
 Complete building construction at the Hudsonville, Michigan facility, and; Purchase, installation and operation of new machinery and equipment at the new facility in Hudsonville, Michigan, and; Documentation of necessary state and federal food processing permits and local building occupancy permits for the facility in Hudsonville, Michigan.

Acknowledgement of Terms of Support for Project

All milestones must be completed prior to receiving a disbursement of the performance-based grant.

If the terms of this Letter of Intent for a grant are accepted, the project will be taken to the Agriculture and Rural Development Commission for approval. If approved by the Commission, a grant agreement will be signed between the company and MDARD incorporating the terms included in this term sheet.

Funding is subject to appropriations provided and authorized by the Michigan Legislature.

Al	10/27/2021	Jamio Zmille	Some	10/22/2021	
Company Signor	Date	WDARD Sigher		Date	
Gary VanderStelt	Owner/President	Jamie Zmitko-Somers	Director, Agricult	Director, Agriculture Development	
Print Name	Title	Print Name	Title		



FOOD AND AGRICULTURE INVESTMENT PROGRAM AWARD AMOUNT FUNDING LEVELS

Funding levels for grant award amounts are based on total project investment that is considered as part of the approved project. Additional considerations for funding levels include use of Michigan grown or produced products, job creation, local economic impact, as well as food, agriculture, or forest products industry activities strategically important to the state of Michigan. This information is a general guidance, and all grant award amounts and considerations are dependent upon available funding for the program, which can vary throughout the year.

	Company's Total Project Investment	Award Range
Level 1	\$75,000 - \$500,000	\$10,000 - \$50,000
Level 2	\$500,001 - \$3,000,000	\$50,000 - \$75,000
Level 3	\$3,000,001 - \$10,000,000	\$75,000 - \$100,000
Level 4	>\$10,000,000	\$100,000 - \$250,000



FOOD AND AGRICULTURE INVESTMENT PROGRAM
PROCESS OVERVIEW

- 1. Potential projects are identified by MDARD AgD Economic Development (ED) Team, partner state agencies, local and regional partners, or other stakeholder partners.
- 2. ED team member works to gather information about the project the company intends to undertake.
- 3. ED team member brings project to ED Team meeting for team review of the project as described against FAIP Criteria.
 - a. If the project is determined to meet FAIP Criteria and is a viable project, the application is advanced to the Division Director and Division Deputy Director for review.
 - b. If the project is not determined to meet FAIP Criteria, ED team member engages the company for further clarifications.
- 4. At the conclusion of the review by the Division Director, if the project is determined to meet the FAIP Criteria and the company is in good standing, Part 1 of the application is advanced to the MDARD Executive Office for review, and approval or denial for further advancement to the Michigan Agriculture Commission for its review and consideration of funding award.
- 5. If approved by Executive office, ED team member provides application form to the company to complete the application. Company will complete Part 2 and review information in Part 1.
- 6. The Division director presents the project to the Michigan Commission of Agriculture & Rural Development. Companies participate in the meeting to present their project to the commission for consideration.
- 7. Ag Commission votes to approve or disapprove the issuance of the grant.

Major criteria considered include:

- a. Impact to Michigan agriculture.
- b. Impact to Michigan food and agriculture supply chains.
- c. Impact to company including increased opportunities for growth.
- d. Private investment.
- e. Potential job creation.
- f. Project timelines.
- g. Sustainability and social impact of project.
- h. Impact to community.
- i. Project partnerships.
- j. Impact of incentive.





What is MWC? MWC is a Joint Venture. The partners are:





U.S. Milk Supply







MWC Milk Supply

- Michigan has nearly 1,200 dairy farms who care for more than 445,000 cows.
- The average dairy herd in Michigan is just over 300 cows.
- 97 percent of Michigan dairy farms are family owned.
- In 2020, Michigan ranked sixth in milk production in the U.S.
- Dairy cows in Michigan produce 11.6 billion pounds of milk annually.
- The average Michigan cow produces about 27,000 pounds of milk each year. That is over 3,100 gallons of milk.



Glanbia Nutritionals Plant Locations



nutritional

Specialty Operations

Glanbia Nutritionals Global Locations





MWC

One of the most advanced dairy facilities in the world

- \$470 million investment
- 120-acre greenfield site
- 426,000 sq. ft. facility
- 260 employees
- Production started October 2020; fully commissioned June 2021
- Cheese
 - 300 million lbs. of superior quality block cheese annually
 - 21 truckloads of cheese/day
- Whey Proteins
 - 20 million lbs. of value-added whey proteins annually
 - 9 truckloads of whey powder/week
- On time and under budget during a global pandemic





Milk Metrics

- 8,000,000 lbs. milk per day;
 2.9 billion lbs. of milk per year
- 560,000 gallons of raw milk storage capacity
- 4,800,000 lbs. of raw milk storage capacity







Product Volume



- 850,000 lbs./day 40 lb. block cheese
- 425,000 lbs./day 640 lb. block cheese
- 40,000 lbs./day WPI
- 15,000 lbs./day WPC

200,000 gallons/day of 24% solids whey permeate to Proliant across the parking lot via pipe bridge (400,000 lbs./day)



Sustainability

Dairy Wastewater Treatment

- \$25 million state-of-the-art water and wastewater treatment system that cleans and purifies by-products to the strict standards set by the state of Michigan
- 800,000 gpd of water from the polishers (recovered for usage in the plant) – 2/3 of our daily water consumption

Heat from Pasteurization

• Captured and pumped to the whey plant for preheating the whey, saving thermal energy

Air & Energy Efficiency

• Three boilers for steam generation fueled by cleanburning natural gas, with discharges operating at a fraction of the established air permit standards

Lighting & Heating/Cooling Units are all Energy Efficient

Energy Saving Motors

• Over 1,500 motors. 95% of which have variable frequency drives for energy savings

Reduction in Transportation/Trucking

Processing Michigan milk locally rather than shipping out of state



Fun Facts

- 28 miles of utility pipe
- 451 miles of building wire
- 61 miles motor cables
- 47 miles of cable tray
- 132 miles of conduit
- 3 miles of underground process waste pipe
- 25% of all the milk in Michigan started coming to MWC in May 2021
- 48,000 hours of training prior to start-up



Thank You



Commission of Agriculture and Rural Development Budget Update



Sylvia Renteria Director of Finance and Budget

2022 Budget by Fund Source



2022 Budget by Program Area





Water Quality Improvements

- Investment in agricultural nutrient best management practices
- Goal of reducing phosphorus levels in the western Lake Erie basin
- One time general fund of \$25.0 million



Office of Rural Development

- Focus on increasing opportunities for success and addressing challenges
- Areas of concern include broadband, housing, infrastructure, workforce development
- Collaborate with internal and external stakeholders
- Funding support for 1 FTE at \$175,000



Farm Innovation Grants

- New pilot grant for farm innovation projects
- \$3.2 million in one-time general funds
- Focus on innovative solutions to farm problems
- Program to be developed and grant criteria to be established



Conservation Districts

- Investment into conservation districts across the state
- Supports delivery of conservation programming
- \$2.0 million in ongoing general funds
- \$1.0 million in one-time general funds



Additional One Time Initiatives

- Agriculture Equine Industry Development Fund
- County Fairs
- Fair Food Network
- Producer Reimbursements
- Farm Stress

Fiscal Year 2023

- Budget development for fiscal year 2023 has begun
- Working closely with divisions and State Budget Office over next several months

Questions?





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MDARD Summary of 2021-2022 Michigan Legislature (Prepared 11/1/2021)							
Туре	Bill #	Subject	Date of Last Action	Last Action	Primary Sponsor	Position (if applicable)	Notes
House Bill	<u>4801</u>	Public utilities: public service commission; registration procedure for electric vehicle charging stations; provide for.	10/19/2021	Referred to House Energy	Schroeder	No stance in committee/MD ARD opposed going forward	Passed the House 85 18- Sent to Senate Energy
House Bill	<u>4802</u>	Public utilities: public service commission; licensing of electric vehicle charging station operators; provide for.	10/19/2021	Referred to House Energy	Кирра	No stance in Committee from MPSC	Passed the House 88 15 - Sent to Senate Energy
House Bill	<u>5412</u>	Housing: landlord and tenants; allocation of responsibilities; provide for with respect to prevention and management of bedbug infestation.	10/19/2021	Referred to House Regulatory Reform	Alex Garza	N/A	MSHDA/Legal are leads, MDARD 3PM provided comments
House Bill	<u>5406</u>	Creates the office of Rural Development	10/14/2021	Referred to House Gov Ops	Witwer	Support with changes	Companion bill to McBroom's
Senate Bill	<u>494</u>	Agriculture: other; certain reporting requirements for environmental assurance advisory council and funding and standards for the MAEAP; modify, and eliminate water quality protection fee sunset.	10/13/2021	Referred to Senate Agriculture. Re-referred to Senate Appropriations	Daley	Neutral with Budget Deal	Testimony was taken on 6/17/2021
Senate Bill	<u>682</u>	Creates the office of Rural Development	10/7/2021	Referred to Senate Appropriations	McBroom	Support with changes	Pending hearing
House Bill	<u>4561</u>	Food: licensing; licensing fees for certain food establishments; make refundable.	10/6/2021	Referred to Committee on Regulatory Reform	Roth	Opposed	Passed House 97-10 on 6/17, Passed Senate Reg Reform
House Bill	<u>5058</u>	Food: adulterated; adulteration of food containing industrial hemp;	10/2/2021	Referred to Regulatory Reform	TC Clements	Pending	MDARD is working with sponsors. Testimony was taken on 9/20
House Bill	<u>5061</u>	Agriculture: industrial hemp; certain activities under a processor-handler license and definition of industrial hemp commodity and product;	10/2/2021	Referred to Regulatory Reform	Postumus	Pending	MDARD is working with sponsors. Testimony was taken on 9/20

		Crimes: animals; restitution for					
		care and treatment of certain					
		forfeited animals; impose					MDARD/Gov. Legal
		penalty on ownership of animal					are co-leads.
		to person convicted of certain					Testimony heard on
House Bill	<u>4703</u>	crimes against animal.	9/28/2021	Referred to Judiciary	Wozniak	Neutral	9/28
		Animals: care and treatment;					
		restitution for care and					MDARD/Gov. Legal
		treatment of certain forfeited					are co-leads.
		animals; impose penalties					Testimony heard on
House Bill	<u>4704</u>	upon owner.	9/28/2021	Referred to Judiciary	Wozniak	Neutral	9/28
							MDARD is working
		Agriculture: industrial hemp;					with sponsors.
		restrictions under the industrial					Testimony was taken
House Bill	<u>5059</u>	hemp growers act; modify.	9/20/2021	Referred to Regulatory Reform	Mueller	Pulled	on 9/20
							MDARD is working
		Agriculture: industrial hemp;					with sponsors.
		limit liability for growers under			-		Testimony was taken
House Bill	<u>5060</u>	certain circumstances; modify.	9/20/2021	Referred to Regulatory Reform	Outman	Pulled	on 9/20
		Natural resources: nonnative					
		species; advisory council to					
		combat the online sale of					EGLE/DNR leads
		aquatic invasive species;		Referred to Natural Resources			(MDARD contributed
House Bill	<u>5285</u>	establish.	8/18/2021	and Outdoor Recreation	Sarah Anthony	N/A	to analysis)
		Food: other; use of PFAS,					
		bisphenols, and phthalates in		Referred to Environmental			
Senate Bill	<u>591</u>	food packaging; prohibit.	7/15/2021	Quality	Jeff Irwin	N/A	
		Civil rights: open meetings;					
		circumstances permitting public					0
		meetings of certain public					Signed by the
		bodies to be held electronically					Governor on //13/21-
	1000	by telephonic or video	7/10/0001	Referred to the Committee on		Legal took over	PA 54'21 with
House Bill	<u>4603</u>	conferencing; modify.	7/13/2021	Agriculture	Joe Bellino	as lead	immediate effect
		Marihuana: liability; sale of					Signed by the
	4540	marihuana to an individual who	7/10/0001	Referred to the Committee on			Governor on 7/13/21-
House Bill	<u>4516</u>	is younger than 21 years of	7/13/2021	Reg Reform	Hauck	LARA/MRA	PA 55°21
		Maniha ang athan alafiniti ang f		Defermed to the Committee of			Signed by the
Senate Bill		Marihuana: other; definition of	7/10/0001	Referred to the Committee on			Governor on 7/13/21-
	<u>4517</u>	Industrial hemp; modify	7/13/2021	Reg Reform	Rabhi	LARA/MRA	PA 56°21
		Food: other; use of PFAS,					WUARD IS lead, other
	5050	disphenois, and phthalates in	7/4/0001		B		DIII IS ITWIN'S Which
House Bill	<u>5250</u>	tood packaging; prohibit.	//1/2021	Referred to House Agriculture	Rabhi	Pending	WIII DE EGLE
		Food: other; use of PFAS,					
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		bisphenols, and phthalates in					
House Bill	<u>5250</u>	food packaging; prohibit.	7/1/2021	Referred to House Agriculture	Yousef Rabhi		
		Liquor: spirits; markup on					
		spirits; revise based on					
		distiller's use of Michigan					Passed House on
House Bill	4842	distillate.	6/30/2021	Referred to Reg Reform	Outman	LARA opposed	6/30/21: 90-7-3
		Animals: care and treatment;					
		conducting of research or					
		training activities on dogs in a					
		manner that causes pain or					
		distress, and certain related					
		activities, by an affiliate of a					
		public body; prohibit. Creates					
Senate Bill	<u>582</u>	new act.	6/30/2021	Referred to Agriculture	Paul Wojno		
		Medical marihuana: other;					
		smoking medical marihuana in					
House Bill		public places; expand					
		prohibition against to include					
	<u>5128</u>	food service establishments.	6/29/2021	Referred to Reg Reform	Calley	N/A	LARA/MRA is lead
		Marihuana: other; smoking					
		marihuana in public places;					
House Bill		expand prohibition against to					
		include food service					
	<u>5129</u>	establishments.	6/29/2021	Referred to Reg Reform	Calley	N/A	LARA/MRA is lead
		Appropriations: supplemental;					Multiple agencies are
		drinking water and water					included in this
House Bill		infrastructure improvements					supplemental which
		supplemental; provide for.					appropriates \$2.5 B
	<u>565</u>	Creates appropriation act.	6/24/2021	Referred to Appropriations	Bumstead	N/A	Federal relief
		Health occupations:					
		veterinarians; veterinarian-					
		client-patient relationship;					LARA is lead agency,
HOUSE DI		require and provide for other					MDARD is watching,
		amendments to the regulation					hearing on 6/16 in
	<u>4912</u>	of veterinary medicine.	6/16/2021	Referred to House Agriculture	Bezotte	N/A	House Ag
		Food: other; labeling as meat a					
		laboratory-grown meat					
House Bill	4982	substitute; prohibit.	6/10/2021	Referred to Agriculture	Beau LaFave		

		Removes allocation of revenue					
		cap under the lawful internet					
House Bill		gaming act to the Michigan					Passed House Aq 8-3
		agriculture equine industry				Unclear of lead	on 5/19-on third
	4823	development fund.	5/27/2021	Referred to Agriculture	Alexander	agency	reading
		Removes allocation of revenue		<u>_</u>			Ŭ
		cap under the lawful sports					
House Bill		betting act to the Michigan					Passed House Ag 8-3
		agriculture equine industry				Unclear of lead	on 5/19-on third
	4824	development fund.	5/27/2021	Referred to Agriculture	Hertel	agency	reading
		Trade: business regulation;					-
		requirements for advertising of					
		reduced gasoline prices;		Referred to Economic and			
Senate Bill	<u>493</u>	modify.	5/27/2021	Small Business Development	Jim Stamas		
		Agriculture: pesticides; use of					
Senate Bill		neonicotinoid pesticides;					
	<u>4895</u>	regulate.	5/25/2021	Referred to House Agriculture	Kuppa	N/A	Not moving
		Agriculture: plants;					
Sonata Pill		classification of milkweed as a					
Senale Dill		noxious or exotic weed by local					
	<u>4896</u>	governments; prohibit.	5/25/2021	Referred to House Agriculture	Steckloff	N/A	Not moving
		Environmental protection:					
		permits; denial or imposition of					
		additional conditions on;					
		provide for when projects are					
		located in environmentally		Re-referred to Transportation			MDOT/SBO are
House Bill	<u>439</u>	overburdened communities.	5/25/2021	and Infrastructure	Runestad	N/A	leads
		Animals: research facilities;					
		certain research facilities to					
House Bill		offer certain laboratory animals					
		for adoption before					
	<u>4881</u>	euthanization; require.	5/20/2021	Regulatory Reform	Hertel	Requested	
		Animals: research facilities;					
		reporting requirements and					
		penalties for noncompliance;					
House Bill	<u>4882</u>	provide for.	5/20/2021	Regulatory Reform	Brann	Requested	
		Gaming: horse racing;					
		breeders' awards; increase.					
		Amends secs. 8, 19 & 20					Passed House 106-1
House Bill	<u>4599</u>	of 1995 PA 279	5/11/2021	Referred to Agriculture	Alexander	Neutral	on 5/11

		Gaming: horse racing;					
HCR		references to horse racing law					
		of 1995 in 1951 PA 90; update.					Passed House 106-1
	<u>4600</u>	Amends sec. 2 of 1951 PA 90	5/11/2021	Referred to Agriculture	Cherry	Neutral	on 5/11
		Appropriations: zero budget;					
		department of agriculture and					
		rural development; provide for					Passed House 57-50
House Bill	<u>4394</u>	fiscal year 2021-2022.	5/11/2021	Appropriations	Allor	Opposed	on 5/11
		Appropriations: zero budget;					
		department of agriculture and		Referred to the Committee on			
Senate Bill	<u>77</u>	rural development; provide for	5/11/2021	Appropriations	Roger Victory	N/A	
		fiscal year 2021-2022. Creates		Appropriations			Passed the Senate
		appropriation act.					20-15 on 5/11
		Food: licensing; waiver for					
		licensing and registration fees					
		for certain food establishments,					
House Bill		water bottlers, and water					Passed out of the
		dispensing machine owners for					Senate 20-16 on 5/6.
		the 2021 to 2022 licensing		Referred to the Committee on			Referred to House
	<u>353</u>	year; provide for.	5/6/2021	Regulatory Reform	Curtis VanderWall	Opposed	Reg Reform
		Health: local health					
		departments; waiver for					
		licensing fees for certain food					Passed out the
		establishments for the 2021 to					Senate 20-16 on 5/6.
		2022 licensing year; provide		Referred to the Committee on			Referred to house
House Bill	<u>354</u>	for.	5/6/2021	Regulatory Reform	Curtis VanderWall	Opposed	Reg Reform
		Labor: health and safety;					
Senate Bill		violations of reports of injuries				MIOSHA is	Passed House 83-25
	<u>4031</u>	and death; modify	5/6/2021	Referred to Agriculture	Kahle	opposed	on 5/6
		Animals: care and treatment;					
House Bill		definition of shelter for animals;		Referred to the Committee on			
	<u>4784</u>	modify.	5/5/2021	Judiciary	Brann	Pending	No hearing
		Crimes: animals; cross-					
Senate Bill		reference in revised judicature					
	<u>4785</u>	act; update.	5/5/2021	Referred to Agriculture	Brann	Pending	No hearing
		Crimes: animals; cross-					
House Bill		reference in animal welfare					
	<u>4786</u>	fund act; update	5/5/2021	Referred to Agriculture	Brann	Pending	No hearing

							Passed out of House
							Ag on 4/28 10 yeas; 1
Senate Bill		A concurrent resolution to					nay (Carra), Full
		approve a designated open					House 5/4, adopted
		space land application for		Referred to the Committee on			and sent to Senate
	<u>7</u>	property in Kent County.	5/4/2021	Agriculture	Thomas Albert	Support	Nat Resources
		Appropriations: zero budget;					
House Bill		multi-department supplemental					Reported from Full
Tiouse Bill		appropriations; provide for					Appropriations on
	<u>4420</u>	fiscal year 2021-2022.	4/29/2021	Appropriations	Albert	N/A	4/29/21
		Environmental protection:					
House Bill		hazardous products;					MDARD is lead
riouse bill		glyphosate herbicide; prohibit		Referred to the Committee on			agency, won't likely
	<u>370</u>	certain residential uses of.	4/21/2021	Environmental Quality	Rosemary Bayer	N/A	move
		Animals: birds; issuance of					
		carrier pigeon permits; require					
		compliance with local					
Senate Bill		ordinances and regulations,					
		and prohibit the enactment of					
		local ordinances that prohibit		Referred to Committee on			Watching: Probably
	<u>4611</u>	the keeping of carrier pigeons.	4/13/2021	Agriculture	Tulio Liberati	N/A	won't move
		Agriculture: industrial hemp;		Referred to the Committee on			
House Bill	<u>186</u>	regulations for growing	3/25/2021	Agriculture	Dan Lauwers	Support	PA 4 of 2021 signed
		industrial hemp; modify.		Agriculture			on 3/25/2021
		Courts: juries; postponement of				SCAO/Legal	
House Bill		jury service; allow for farmers		Referred to the Committee on		are lead	
	<u>4550</u>	during certain months.	3/23/2021	Agriculture	Postumus	agencies	Awaiting first hearing
		food: licensing; licensing fees					
House Bill	220	for food establishments;	3/11/2021	Referred to the Committee on	Curtic VandorWall	NI/A	
House Dill	225	provide waiver for 2021 to	5/11/2021	Regulatory Reform			Replaced with SB
		2022 licensing year.					353&354
		Health; other; aerial spraying of					
		pesticides to prevent and					
		control diseases and					
House Bill		environmental health hazards;					
House Dill		require department of health					
		and human services to provide					Watching: DHHS is
		notice to the public before		Referred to Committee on			lead agency and is
	<u>4497</u>	implementation.	3/11/2021	Health Policy	Brad Paquette	N/A	opposed
		Trade: business practices; gas		Potorrod to the Committee on			
	4246	tax rates posted at gas pumps:	2/16/2021		Beau LaFave	Opposed	
	7270			rononertetien			

Senate Bill	<u>136</u>	Agriculture: pesticides; registry of individuals seeking to be notified in the event of the emergency use or application of pesticides on or adjacent to their property; provide for. Amends	2/16/2021	Referred to the Committee on Environmental Quality	Rick Outman	N/A	The Department worked with Sen. Outman to create an alert system outside of the legislative process.
House Bill	<u>4186</u>	Animals: exotic; applicability of certain provisions of the large carnivore act based on residency; modify.	2/9/2021	Referred to the Committee on Agriculture	Thomas Albert	Opposed	No hearing
House Bill	<u>4165</u>	Highways: bridges; tractors and farm equipment to cross the Mackinac Bridge; allow under certain conditions. Amends sec. 12 of 1952 PA 214 (MCL 254.322).	2/9/2021	Referred to the Committee on Transportation	Steven Johnson	N/A	MDARD/MDOT are co-leads