



Michigan Department of Agriculture & Rural Development

Food and Dairy Division

Annual Report
Fiscal Year 2013

October 1, 2012 – September 30, 2013

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**Food and Dairy Division
FY 2013 Annual Report**

Contents:

- Introduction 1**

- Part A – Food Safety 2**
 - I Food Safety and Inspection Program –
 - Michigan Department of Agriculture & Rural Development 2
 - II Food Service Program –
 - Local Health Department Food Service Program..... 6

- Part B – Dairy Safety 9**
 - I Dairy Product Safety and Inspection Program..... 9

- Part C – Foodborne Illness Outbreaks and Food Recalls 13**
 - I Overview of Foodborne Illness Outbreak Results..... 14
 - II Food Recalls 16
 - III Recommendations 20

- Part D - Consumer Outreach and Other Programs 20**

- Appendices**
 - I Workload Data by Local Health Department (LHD) 21
 - II Output Data-Licensing by LHD 22
 - III Program Staffing – Program Revenue by LHD 23
 - IV Foodborne Illness Outbreaks by LHD 24
 - V Five-Year Trend Analysis Charts
 - Local Health Departments 25
 - MDARD Food Safety and Inspection Program 26
 - MDARD Dairy Product Safety and Inspection Program 27

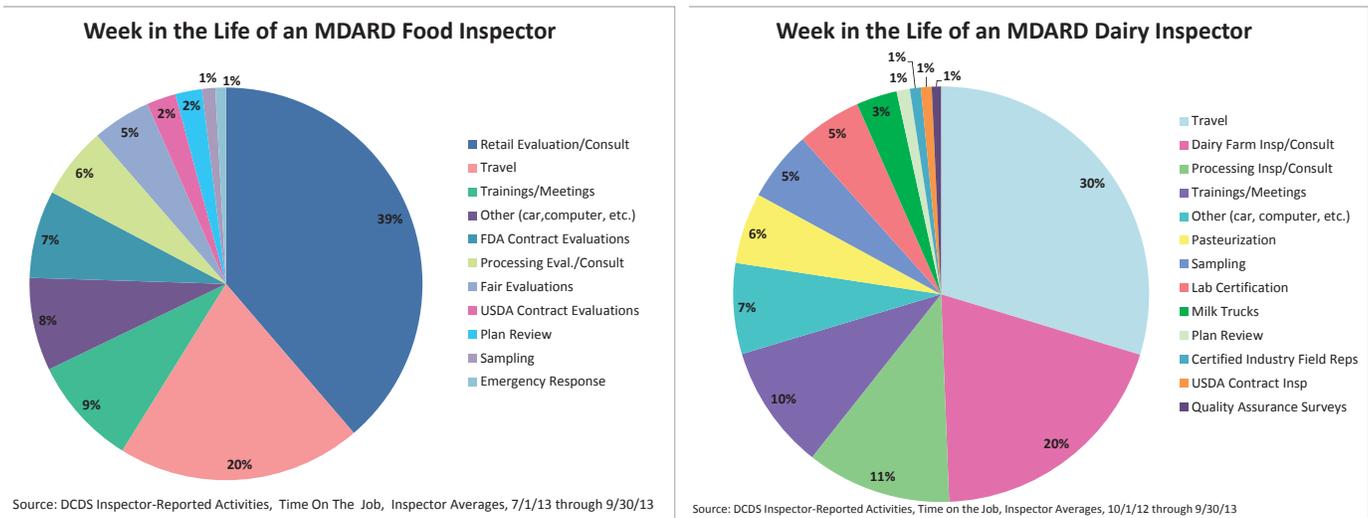
Introduction

The Michigan Department of Agriculture and Rural Development (MDARD), Food and Dairy Division (FDD), is proud to present this annual report of accomplishments to our constituents and stakeholders. Protecting the safety of Michigan’s food and feed products remains the top priority of the department, and FDD, working closely with our federal, state, local and industry partners, takes our role in assuring food and feed safety very seriously.

The vision of FDD for the coming year is to:

- Create a seamless, efficient, customer friendly food safety system that assures a safe food supply and supports the growth of Michigan agriculture.
- Have adequate staff and systems to assist Michigan’s food industry in assuring a high level of compliance with food safety standards and continually improve Michigan’s reputation for providing a diverse, high quality and safe food supply. Key elements of achieving this goal include:
 - o Development of a state and department-wide electronic inspection and licensing system for use by MDARD, local health departments, the food industry and public.
 - o Provide additional resources in the key areas of:
 - Inspection
 - Business compliance assistance
 - Quality assurance
 - Local health support

The graphs below highlight how our inspectors spend their limited time to best protect Michigan’s food safety:



I hope you’ll find this year’s annual report useful in understanding and appreciating the important safety and prevention work provided by the hundreds of state and local professionals dedicated to keeping your food and dairy products safe each day.

Sincerely,

Kevin Besey, Director
Food and Dairy Division

Part A – Food Safety

Michigan's grocery and convenience stores, food processors, food service establishments, and food warehouses are regulated by the Food Safety and Inspection Program of FDD, in partnership with Michigan's local health departments (LHDs). Assuring the safety of Michigan's food supply is our mission. FDD staff works with a variety of food industry, regulatory, consumer, and academic partners to assure the food produced, distributed and sold in Michigan is safe. By working closely with these partners, FDD has been able to identify and resolve public health issues relating to food safety in a timely manner.

In addition to assuring a safe and wholesome food supply, MDARD and LHD food inspectors play a key role in assuring a robust, growing industry. Although the overall number of food establishments has been stable for the past five years, approximately 2,500 new food establishment licenses are issued each year in Michigan. These range from grocery stores and restaurants to small on-farm and specialty food processors and larger processors who distribute their food products worldwide.

State food inspectors assist the owners of these new businesses before, during, and after the licensing process, by giving advice and guidance on building design and processing plans; reviewing labels and standard operating procedures to assure food safety compliance; explaining state and federal regulatory requirements; and connecting new business owners with the resources they need from LHDs, zoning officials and other state departments. Food inspectors also provide marketing resources to new business owners that are available through MDARD's Office of Agriculture Development and the Michigan State University (MSU) Product Center. This assistance helps new businesses get off to a great start, which directly translates to new jobs and a stronger economy.

I. Food Safety and Inspection Program

Approximately 47 MDARD field staff conducted regular evaluations of grocery and convenience stores, food processors, farmers markets, temporary and fair food operations, and food warehouses, ensuring a safe food supply and informing consumers of recalls and other foodborne illness outbreaks. MDARD staff performs plan reviews; conducts evaluations; processes license applications; takes enforcement actions; investigates complaints; collects food samples; and responds to fires, power outages, recalls and other emergency situations. The division also works closely with various industry segments, such as grocers, food processors (including commodities such as fruits, vegetables, shellfish, wine, cider, honey, venison, maple syrup, beverages, leafy greens, bakeries, etc.); egg producers, growers and farmers market operators. Other programs include conducting U.S. Food and Drug Administration (FDA) and U.S. Department of Agriculture (USDA) contract evaluations, registration and evaluation of bottled water manufacturers and providing certificates of free sale for firms exporting foods around the world.

Accomplishments and Projects

During FY13, the Food Section balanced a huge workload, prioritized numerous food safety challenges and responsibilities, completed FDA and USDA contracts, and developed and began implementing a division audit correction plan in response to an audit conducted the Michigan Office of the Auditor General (OAG).

Building Organizational Efficiency:

Quality Review

An improved quality assurance system was developed and implemented for the FDD Food Safety and Inspection Program. As part of implementing the FDD OAG audit correction plan, an updated county/local fair licensing policy was developed and implemented.

Meat Processing Variance Application

Michigan's food law requires licensed food establishments that conduct specialized meat processing for retail sales to obtain a variance, which includes a food safety plan. All specialized meat processors will need to complete a food safety plan and have their variance approved by March 1, 2015. Newly licensed processors must obtain the variance upon licensing. A variance application procedure has been implemented to assist meat processors in complying with the law and identifying controls within complex processing operations in retail food establishments. MDARD continues to work with MSU and other partners to improve the process through training and technical assistance.

Expanded Retail Food Sampling Program

Sample collection as a regulatory surveillance and compliance assurance tool has been expanded to include a proactive approach to identify potential hazards in non-traditional and traditional foods. A number of contaminated products were identified, resulting in recalls.

Shaping National Strategy:

Shellfish Food Safety

The FDD Food Safety and Inspection Program successfully passed the FDA review of Michigan's shellfish dealers food safety program.

FDA Manufactured Food Standards

MDARD completed a self-assessment for all 10 FDA manufactured food standards, which is required to be done annually. Of the 10 standards, standards 1, 7 and 9 were met in 2013. MDARD is participating in this evolving effort to improve the manufactured foods regulatory standards assessment and audit program.

RRT Grant

Through our existing Rapid Response Team (RRT) grant, MDARD worked with other RRT states and FDA to develop a variety of materials that can be used to improve national consistency in food safety emergency response, including a Best Practices Manual.

CIFOR

MDARD participated in the Council to Improve Foodborne Illness Outbreak Response (CIFOR). Staff contributed to the development and recent release of the CIFOR Industry Guidelines.

AFDO

MDARD staff participated at the Association of Food and Drug Officials (AFDO) meeting, and brought back resources and materials to improve Michigan's food safety efforts.

FDA Grants

FDD received numerous FDA grants and made progress in completing and tracking inspector training, emergency response and supporting efforts to meet the FDA Voluntary Manufactured Food Regulatory Program Standards.

FSMA

MDARD hosted an FDA regional listening session in April 2013 to give farmers and food processors an opportunity to get clarification on proposed rules under the federal Food Safety Modernization Act (FSMA). FDD staff continues to work aggressively to coordinate comments on the proposed federal food safety rules as they are posted to the federal register and to inform industry members on how the proposed rules could affect them once implemented.

Workload

Licensed Establishments	2012	2013
Retail Food Establishment.....	13,599	13,581
Extended Retail Food Establishment	1,056	1,065
Wholesale Food Processor	698	733
Limited Wholesale Food Processor.....	1,143	1,155
Food Warehouse	1,086	1,097
Mobile Food Establishment	107	82
Mobile Food Establishment Commissary	61	61
State/County Fair Temporary.....	983	956
Special Transitory Food Unit	41	35
Temporary Food Establishment	3	40
Total Licensed Establishments	18,777	18,805

Number of Licensed Establishments per FTE*

Assigned to Conduct Evaluations.....	400	409
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*Full Time Employee

Workforce

	MDARD Actual	FDA Recommended**
Number of FTEs Assigned to Conduct Food Evaluations (all types).....	46	72-82
Number of FTEs Involved in Technical Support, Management and Administrative Support.....	27	NA
Total Number of FTEs.....	73	NA
Number of Standardized Trainers.....	10	NA

**FDA recommended number from FDA Voluntary Program Standard

Program Output

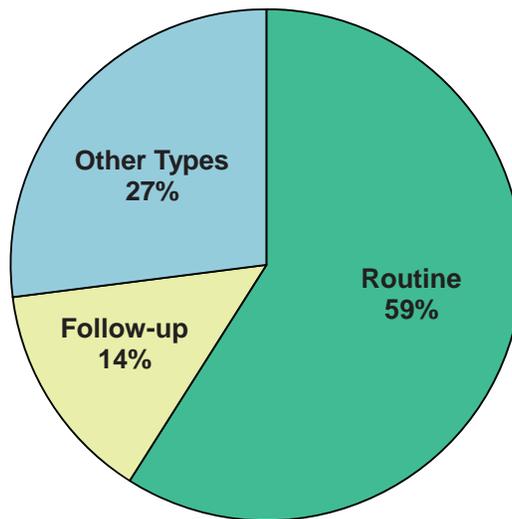
1. Evaluations (Inspections)

Evaluation Type	Evaluations Conducted	Evaluations Due
Routine	8,112	16,693
Follow-up.....	1,926	
Complaint Investigations	1,003	1,003
Fair Vendors	956	956
Shellfish.....	32	32
Other Types^	2,729	2,729
Grand Total.....	13,755	20,410
Total Product Samples Tested		1,552
FDA Import Samples		39
Environmental Samples.....		1,067
Average Number of Evaluations per FTE Assigned to Conduct Food Establishment Evaluations		299

^Other Types include evaluations for new establishments, evaluations associated with complaints, and any other evaluations initiated by the inspector outside of routine or follow-up evaluations.

2. Plan Review	
Number of Plans Received for Review.....	271
3. Complaint Investigations	
Consumer Complaints Investigated (all types).....	1,003
Illness-related	159
Non-illness Related	844
4. Enforcement	
Enforcement Letters (including warning, label and other enforcement letters)	20
Compliance Reviews	2
Consent Agreements/Administrative Fines.....	188/\$79,685
Prosecutions/Fines	0/\$0
Seizures.....	773/1,429,682 lb
Dollar Amount of Seized Product.....	\$3,060,106
Informal Hearings	0
Re-inspections/Fees.....	\$1,800
5. Miscellaneous	
Certificates of Free Sale	2,181
Freedom of Information Act Requests	37
Bottled Water Registrations	1,463

Michigan Food Program Evaluations, by Type



Funding Sources

	FY12	FY13
Fees Collected.....	\$2,756,058	\$2,698,907
Federal/Special Revenue Funds	\$1,014,203	\$ 923,194
General Fund.....	\$6,124,077	\$6,183,440
Total Program Revenue	\$9,894,338	\$9,805,541

General Statistics

Occurrence Per 100,000 Population

Number of Fixed Food Establishments*	178
Food Related Complaints	10

Program Dollars Spent Per

Licensed Establishment.....	\$521.43
Michigan Citizen (Total Program Revenue).....	\$ 0.99
Michigan Citizen (General Fund).....	\$ 0.63
Michigan Citizen (License Fees/Others).....	\$ 0.37

**Fixed food establishments include retail food stores, food processors, and food warehouses.
Michigan population - 9,883,640, U.S. Census Bureau*

II. Food Service Program

Local Health Department Food Service Program

Food safety in Michigan’s restaurants is a collaborative effort among MDARD and the state’s 45 independent LHDs. MDARD provides statewide program policy, direction, consultation, and training services to LHD sanitarians. LHDs perform plan reviews, conduct evaluations, process license applications, take enforcement actions, investigate complaints, and conduct foodborne illness outbreak investigations. LHD performance is evaluated by MDARD every three years in conjunction with the “Michigan Local Public Health Accreditation Program.”

2013 Highlights

Accreditation and Standardization

During 2013, MDARD Food Service Program staff completed 18 accreditations of LHDs and 18 standardization exercises. LHDs currently have 55 standardized trainers.

Accomplishments

Accreditation Efficiencies Committee

An Accreditation Efficiencies Committee was established to align Michigan’s public health accreditation program with national program indicators. The committee issued its final recommendations in 2013. The final recommendations fell into four broad categories:

1. The review process could be changed from a 3-year cycle to a 5-year cycle with a risk-based assessment that uses continuous quality improvement to drive performance.
2. The alignment of Michigan Local Public Health Accreditation Program (MLPHAP) program indicators with Public Health Accreditation Board (PHAB) indicators.
3. The creation of new standards in the optional Quality Improvement Supplement (QIS), creating stretch standards that are not required under the Public Health Code.
4. Creating a system for the electronic submission of required data that is submitted to state departments.

Temporary Food Establishment Application and Guidance

A committee of MDARD and LHD representatives reviewed and updated the Temporary Food Establishment Application to make it more user friendly and created a guidance document to help LHD staff complete inspections in a uniform manner. The following information was reported by LHDs to MDARD:

Workload

	FY2012	FY2013
Licensed Establishments		
Fixed Food and Mobile Commissary	30,906	30,102
Temporary.....	10,093	9,873
Mobile	392	378
Vending.....	3,413	3,411
Special Transitory Food Unit (STFU).....	914	973
Total Licensed Establishments	45,718	44,737

Number of Licensed Establishments per FTE* Assigned to Conduct Evaluations.....	230	239
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*FTE = Full time employee.

NOTE: See pie charts on Page 8 for breakdown by local health department.

Workforce

	LHD Actual	FDA Recommended Minimum	FDA Recommended Maximum
Number of FTEs Assigned to Conduct Food Establishment Evaluations (all types).....	187	188	265
Number of FTEs Involved in Plan Review, Management and Administrative Support.....	178	NA	NA
Total Number of FTEs.....	365	NA	NA
Number of Standardized Trainers.....	58	NA	NA

Program Output

1. Evaluations (Inspections)

Establishment Type	Evaluations Conducted
Fixed Food Service - Routine	56,037
Mobile, Vending, STFU.....	3,629
Subtotal	59,666
Follow-up Evaluations	16,335
Temporary Food Service	9,873
Grand Total	85,874
Average Number of Evaluations per FTE Assigned to Conduct Food Establishment Inspections	459

2. Plan Review

Number of Plans Received for Review.....	1,730
Number of Plans Approved.....	1,469

3. Investigations

Consumer Complaints Investigated (all types).....	3,692
Foodborne Illness Outbreaks (met MI definition).....	41

4. Enforcement

Administrative Action (office conference, informal hearing, formal hearing, civil fine, order)	1,049
Court Action (civil, criminal)	32

Funding Sources

	FY12	FY13
Fees Collected by LHD and Local Tax Dollars	\$22,283,916	22,286,995
State Dollars - Local Public Health Operations (LPHO)	\$7,821,194	7,912,194
Total Local Health Program Revenue	\$30,105,110	30,199,189

General Statistics

Occurrence Per 100,000 Population

Number of Fixed Food Service Establishments	305
Food Related Complaints	37
Foodborne Illness Outbreak Investigations	0.4

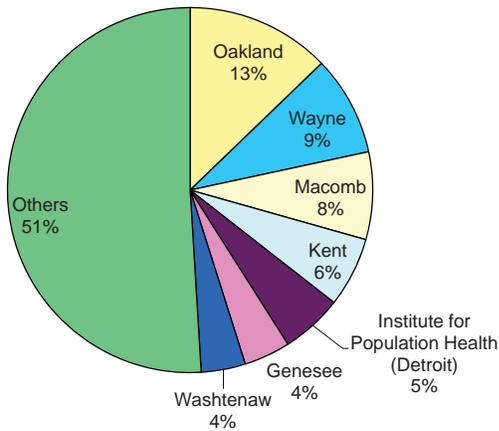
Program Dollars Spent Per

Licensed Establishment.....	\$862.00
Michigan Citizen (Total Program Revenue).....	\$ 3.04
Michigan Citizen (Fees collected by LHDs and local tax dollars).....	\$ 2.24
Michigan Citizen (LPHO/state dollars).....	\$ 0.80

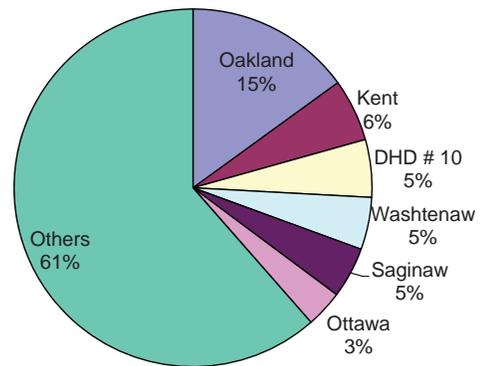
Michigan population - 9,883,640, U.S. Census Bureau

Distribution of License Types by Local Health Department

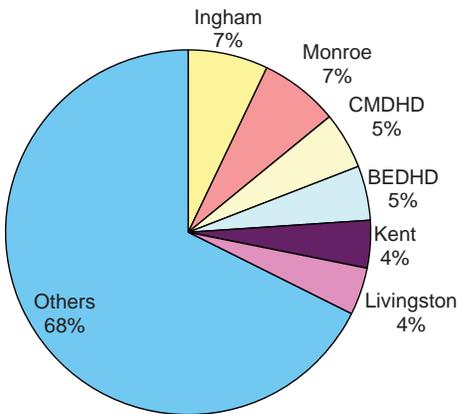
Fixed Licenses



Temporary Licenses



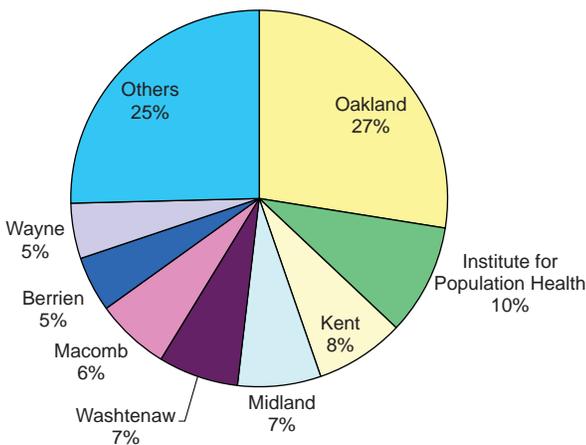
Special Transitory Food Unit (STFU) Licenses



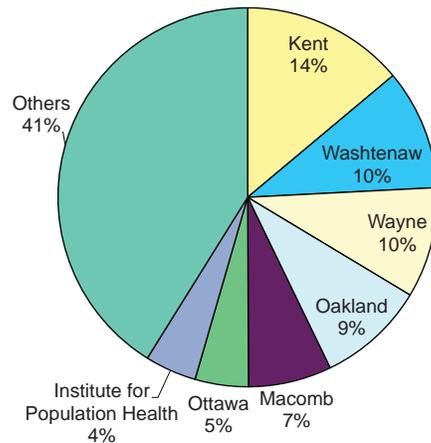
Abbreviations:

DHD #10 - District Health Dept. #10
 CMDHD - Central MI District Health Dept.
 BEDHD = Barry/Eaton District Health Dept
 BHSJ - Benton Harbor/St. Joseph

Mobile Licenses



Vending Licenses



Part B – Dairy Safety

Michigan's dairy industry is a leading segment of Michigan agriculture, with the dairy industry contributing approximately 20 percent of the total cash receipts for Michigan agriculture. Michigan ranks 7th nationally in milk production, up from 8th in 2012. The dairy industry has an estimated \$14.68 billion economic impact on the state. Of this total, \$2.34 billion comes from dairy farming, \$7.97 billion comes from processing and \$4.37 billion comes from wholesaling and retailing. Our state's dairy farms produced approximately 9.2 billion pounds of milk in 2013.

Michigan boasts 2,016 dairy farms, including 1,726 Grade A farms and 290 manufacturing farms, which are inspected by MDARD Dairy Section staff. In addition, the Milk and Dairy Product Safety and Inspection Program licenses and inspects 90 Michigan dairy processing plants and 32 other dairy facilities; and 1,705 milk hauler/samplers, milk tank trucks, and milk transportation companies. Enforcement is a strong component of the program. Law violations resulted in 68 dairy farm permit suspensions and the removal of 1,460,352 pounds of suspect milk from the market with an estimated dollar value of \$280,096.

I. Dairy Product Safety and Inspection Program

MDARD's Milk and Dairy Product Safety and Inspection Program serves the people of Michigan by: assuring a safe, high quality supply of dairy products; providing programs which help to maintain a strong, economically viable dairy industry; ensuring Michigan dairy products continue to move freely in interstate commerce; and participating, in a leadership role, with representatives of the dairy industry, universities and other government agencies in the development of policies and programs to further those aims.

In addition to assuring a safe and wholesome supply of milk and dairy products, MDARD inspectors also play a key role in assuring growth in the state's dairy industry, to help create new jobs and strengthen Michigan's economy. Michigan's dairy industry saw the addition of six new dairy processing facilities in 2013. MDARD dairy inspectors assist these businesses, before, during and after start-up to assure all regulatory requirements are met, and the businesses have the resources they need to succeed.

Inspectors provide advice and guidance on building design and processing plans; reviewing labels and standard operating procedures to assure food safety compliance; explaining state and federal regulatory requirements; and connecting new business owners with the resources they need from local health departments, zoning officials and other state departments. Dairy inspectors also provide marketing resources to new business owners that are available through MDARD's Office of Agriculture Development and the MSU Product Center, to support business growth and create new job opportunities in our state.

Accomplishments

Major accomplishments of the Dairy Safety and Inspection Program in FY13 include:

Dairy Inspection Tanker Team

The dairy inspection tanker team was created by the dairy field staff as a way to gain higher rates of inspection frequency compliance for the state's 745 permitted milk tank trucks. The Pasteurized Milk Ordinance (PMO) requires annual inspections of all milk tank trucks used to transport Grade A milk and dairy products. The FDA requires a minimum of 80 percent of these milk tank trucks to meet the required annual inspection frequency. The tanker team is comprised of several dairy inspectors that take turns inspecting milk tank trucks that deliver into the interstate milk shipments (IMS) dairy facilities. Inspection dates are coordinated with the inspectors assigned to the dairy facilities (in three around-the-clock shifts, if necessary) to complete the required inspections. The team typically inspects between 10 and 35 tankers at each facility depending on the volume of milk being received. Due to

staffing shortages the dairy section has typically only been able to complete 50 percent of the required inspections. The implementation of the dairy inspection tanker team has brought the compliance rate to 82 percent, a significant improvement, which now exceeds FDA's 80 percent threshold for milk tank truck inspection rates.

National Conference on Interstate Milk Shipments

The 2013 National Conference on Interstate Milk Shipments (NCIMS) was held in Indianapolis, Indiana in April 2013. This conference is held biennially in odd numbered years and is the catalyst for adopting changes to the PMO, which establishes minimum criteria for the shipment of Grade A milk and dairy products in interstate commerce. The goal of the NCIMS is to assure the safest possible milk supply for all the people. The conference is composed of individuals from all aspects of the dairy industry, including regulatory officials, dairy plant and farm co-operative personnel, academia and consumer agencies. Proposals are submitted to the conference and are assigned to one of three councils for deliberation. The delegates from the regulatory agency for each of the 50 states and Puerto Rico vote on proposals that each council supports. The proposals approved by the delegates take effect in the updated version of the PMO after they gain concurrence from FDA. Each state and Puerto Rico has one vote. The 2013 NCIMS was attended by FDD Director Kevin Besey, FDD Deputy Director Susan Esser (voting delegate and Executive Board), Dairy West Regional Supervisor Gordon Robinson (Council 3 and Milk Hauler Committee), Dairy East Regional Supervisor Barb Koeltzow (Other Species Committee), and Laboratory Evaluation Officer Paula Dankert (Laboratory Committee). The most recent changes will be released in the 2013 version of the PMO and must be adopted into the Grade A Milk Law in 2014 in order for the Michigan's IMS listed dairy facilities to continue to sell Grade A milk or dairy products in interstate commerce.

Value Added Milk Processing Facilities

MDARD dairy safety inspection staff worked with dairy farmers and other businesses interested in starting local, value added milk processing facilities. These facilities include manufacturers of cow, goat, sheep and water buffalo cheeses as well as on-farm bottling and ice cream making. The dairy safety inspection staff works with these entrepreneurs from the initial planning stage all the way through construction and start-up. This work leads to a smooth transition for the production of safe and wholesome dairy products. In 2013, there were about 20 new dairy processing plants in various stages of construction across the state.

Dairy Plant Expansions

MDARD's dairy safety staff worked with existing dairy processing plants in the state to expand their operations in Michigan. These include: Meijer, Inc., acquisition and expansion of the Bareman's plant in Holland; Prairie Farms in Battle Creek; Reed City Milk Plant (Yoplait) in Reed City; Michigan Milk Producers Association Ovid Plant Butter Churn expansion, which is expected to be operational in summer 2014; Dairy Farmers of America's condensing/drying facility in Cass City, which is expected to be operational in the fall of 2014; Vern Dale Dairy Products #2 roller-dried milk powder production facility for high-end chocolates, in Detroit, expected to be operational in the summer of 2014. (This was a renovation of a purchased vacant facility and is unique in that it is the only roller milk drying powder facility in the U.S.); and, Zingerman's Creamery in Ann Arbor, new dairy facility that will allow production of Grade A dairy products in addition to the cheeses that they currently produce, which may be operational in late 2014.

Certified Industry Farm Inspection Program

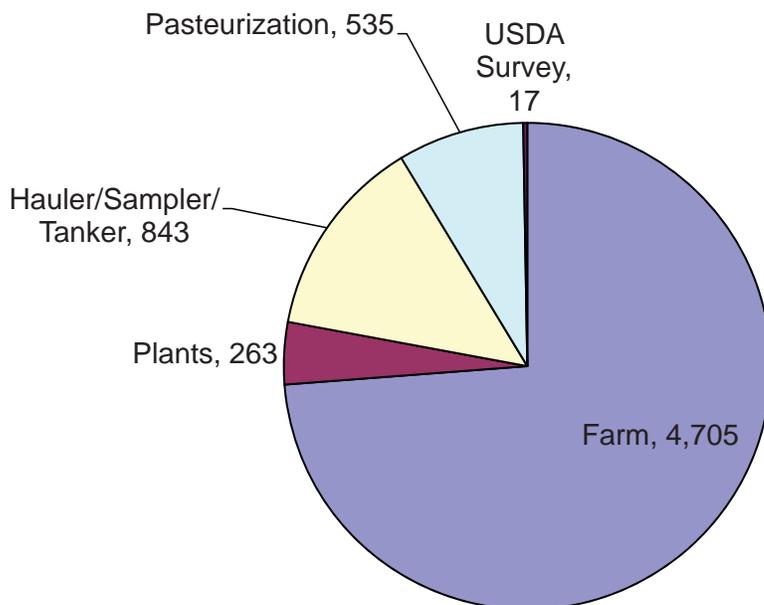
As of March 1, 2013, MDARD dairy inspectors resumed inspecting all dairy farms in the state. Due to a reduction in dairy inspection staff in late 2010 caused by staff retirements and lack of funding to fill the positions, MDARD's Dairy Section, with the cooperation from the dairy industry, instituted the Certified Industry Farm Inspection Program (CIFIP) in late 2010 to cover dairy inspections throughout the state. This program, as outlined in Section 5 of the Grade A PMO, enables Certified Industry Field Representatives (CIFRs) to conduct Grade A dairy farm inspections in place of regulatory inspections

normally conducted by MDARD staff. The CIFIP continued into Fiscal Year (FY)12. With partial restoration of funding to the Dairy Section, three of the six vacant MDARD positions were filled and the CIFIP program was reduced to a nine-county area in February 2012, leaving approximately 22 percent of the dairy farm inspection responsibility to the dairy industry. Additional funding was appropriated for the dairy inspection program for FY13 to fill the three remaining vacancies, bringing the dairy staffing levels back to FY10 levels.

Workload

Licensed Establishments	FY12	FY13
Farms	2,112	2,016
Grade A Plants.....	37	35
Manufacturing Plants (includes cheese & ice cream).....	54	55
Grade A Milk Distributors	21	10
Grade A Transfer Stations/Receiving Stations/Tank Truck Cleaning.....	14	15
Grade A Single Service.....	9	7
Milk Tank Trucks and Can Milk Trucks	703	745
Milk Transportation Companies	125	129
Milk Haulers/Samplers (currently licensed)	814	831
Certified Fieldpersons.....	38	40
Total Licenses.....	3,927	3,883
Labs Approved/Certified	FY12	FY13
Certified Industry Labs.....	3	5
Approved Drug Screening Sites	39	36
Certified Commercial Labs	6	3
Approved/Certified Industry Analysts.....	237	241
Number of Licensed Establishments per FTE Assigned to Conduct Inspections	245	228

Number of Inspections by Type, Performed by the Michigan Dairy Safety Program



Workforce

Number of FTEs Assigned to Conduct Dairy Inspections (dairy farm, plant and other inspections, and pasteurization evaluations)	17
Number of FTEs Involved in Management, Technical and Administrative Support.....	9
Total number of FTEs	26

Program Output

1. Inspections and Evaluations

Inspection/Evaluation Type	Inspections/Evaluations Conducted
Farm*.....	4,705
Plants.....	263
Hauler/Sampler/Tanker.....	856
Pasteurization.....	535
USDA Survey.....	17
Total Inspections	6,376
Average number of inspections per FTE assigned to conduct dairy establishment inspections*	375
Grade A Survey	99
Laboratory Analysts Evaluated.....	90
Laboratories Evaluated.....	3
Drug Residue Screening Sites Evaluated	23
Total Milk and Milk Product Samples Taken	5,351

* Note: Certified Industry Field Representatives conducted a portion of the farm inspections in FY12.

2. Investigations

Consumer Complaints Investigated (all types)	8
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3. Enforcement

Enforcement Letters	205
Informal Hearing/Compliance Reviews	12
Administrative Fines Issued.....	65
Administrative Fines Collected by MDARD (not including Drug Residue Fines).....	\$10,300
Reinspection Fees Collected.....	\$4,000
Drug Residue Fines Collected.....	\$9,950
Prosecutions.....	0
Seizures.....	3
Dollar Amount of Seized Products.....	\$390
Total Permit Suspensions	68
Total Pounds of Suspected Contaminated Milk Disposal	1,460,352 lbs. (\$280,096)

4. Miscellaneous

Certificates of Free Sale.....	267
Freedom of Information Act Requests	46

Funding Sources

	FY12	FY13
Fees Collected by MDARD.....	\$188,285	\$144,948
Federal/Special Revenue Funds	\$33,261	\$36,500
General Funds.....	\$2,894,300	\$3,268,670
Total Program Revenue	\$3,115,846	3,450,118

General Statistics

Occurrence Per 100,000 Population

Number of Dairy Farms	20
Number of Dairy Manufacturers	1

Program Dollars Spent Per:

Licensed Establishment.....	\$888.52
Michigan Citizen (Total Program Revenue).....	\$ 0.35
Michigan Citizen (General Fund).....	\$ 0.33
Michigan Citizen (License Fees/Other)	\$ 0.02

Michigan population - 9,883,640, U.S. Census Bureau

Part C – Foodborne Illness Outbreaks and Food Recalls

Assuring Michigan's food safety system is meeting the needs of the citizens of the state is the number one goal of the department, the division and the Food Safety Planning and Emergency Response Section (FSPER). Engaging with our partners from the private sector and federal, state and local governments to develop and implement policy and procedures has created an open line of communications that speeds the response to food borne illness outbreaks, food product tracebacks and food product recall investigations. By working with and through our partners we are developing strategies to respond to the increasingly complex and globalized nature of the food system in the world and, more specifically, in Michigan.

While LHDs provide the front line investigators for all food borne illness investigations, FSPER staff coordinates activities with LHDs to assure private sector partners, state staff and federal partners are aware of the latest issues and potential food borne illnesses. FSPER staff and Rapid Response Team (RRT) members train other staff and implement food and feed emergency response plans and product traceback and traceforward policies, including food and feed recalls. When a foodborne illness or a food traceback or recall is initiated, the emergency response engages all levels of FDD staff, including field inspectors, regional supervisors, and Lansing office management and administrative support staff. The emergency response takes priority until the emergency is resolved. Speed and accuracy of response ensures the citizens of the state are protected from further illness or injury, which can mean inspection staff in the field are not able to complete regular inspection work. Increasing FDD's capacity to respond to emergencies and maintain regular inspection frequencies will enable the division and FSPER to identify and develop strategies to protect the public.

MDARD is working to increase the capabilities of LHD and MDARD staff through training and collaboration. Michigan has received a multi-year grant Food Safety Modernization Capacity Development grant from FDA to integrate elements from federal, state and local training, policy and procedures and evaluate the feasibility of these integrated elements in delivering useful training for local, state and federal food safety investigators. Year one (2012/2013) of the grant focused on developing the one day multidisciplinary training on three specific areas of concern: Planning, Training and After Action Reviews for front line investigators. Year two (2013/2014) followed that training with a survey to identify additional training needs and the development of one-day training focused on multijurisdictional coordination and communication. This project has been well received at the five training locations it was delivered at in both years throughout the state. While this grant initiative is helpful in the training of investigators, FDD and FSPER continue to work with MDARD, the governor's office and the legislature to increase funding for food and dairy inspection staff to assure emergency response investigatory work and routine inspections are completed in a timely manner, assuring our food supply is as safe as is possible.

Lessons learned from this emergency response work, foodborne illness investigations and ongoing inspection work is utilized by MDARD, other agencies, and the food industry to improve our risk based food regulatory and prevention strategies and limit future outbreaks from the same causes.

Overview of Foodborne Illness Outbreak Results

Investigations of foodborne illness outbreaks are often multi-disciplinary efforts involving sanitarians, food regulators, communicable disease specialists, epidemiologists, and laboratory staff from multiple agencies.

Under Michigan's Public Health Code, PA 368 of 1978 (MCL 333.2433), LHDs are required to investigate the causes of disease. The Michigan Food Law of 2000, sec. 3129(2), requires LHDs to notify MDARD of foodborne illness outbreaks they are conducting. MDARD uses foodborne illness data to:

- Investigate emerging threats;
- Identify trends;
- Adjust risk-based controls to prevent future illnesses, and,
- Ensure accurate reports are reflected at the state and national level.

Total # of incidents reported to MDARD	107	(900 illnesses)
Total # of incidents identified as confirmed or probable foodborne illness outbreaks.....	41	(542 illnesses)
Median number of illnesses reported per confirmed or probable foodborne outbreak	8	

Leading causative agents of foodborne outbreaks reported to MDARD in 2013 were:

Norovirus	6
<i>Salmonella</i> species.....	6
<i>E. coli</i> O157	3
<i>E. coli</i> O26	1
<i>Bacillus cereus</i>	1
<i>Vibrio parahaemolyticus</i>	1

Of the incidents reported to MDARD, 17 percent identified a causative agent.

Foodborne Illness Outbreaks Caused by Norovirus

National data recently released by the Centers for Disease Control and Prevention (CDC) identified norovirus as the leading cause of foodborne illness in the U.S. Norovirus continues to be a public health challenge in multiple settings throughout Michigan. MDCH received 165 norovirus outbreak reports from local health departments from **January 1 – December 31, 2013**. Of the 165 outbreaks, only 7 outbreaks (4.2 percent) were subsequently categorized as restaurant/food related. Healthcare settings and schools continued to report a greater proportion of the outbreaks.

Noteworthy Food and Feed Outbreaks from FY13:

***Vibrio parahaemolyticus* cluster associated with raw oyster consumption, July-August, 2013**

This year has seen an increase in *Vibrio parahaemolyticus* illnesses associated with consumption of shellfish from several Atlantic coast harvest areas, resulting in several harvest bed closures and recalls. Before 2012, *Vibrio parahaemolyticus* infections of this strain were rarely associated with shellfish from that area of the country. MDARD worked with LHDs to conduct a number of investigations at Michigan restaurants and completed tracebacks on cases identified in Michigan. Several cases appeared to be linked to similar harvest areas on the East Coast associated with illnesses in other states.

***E coli* O157:NM Outbreak Linked to Unpasteurized Apple Cider – October, 2012**

A local outbreak of three confirmed cases of *E coli* O157:NM and one probable case occurred in northern Michigan in October 2012. All had reported consuming apple cider processed at a local cider mill. Cider tested from the two case households tested positive for Shiga-toxin producing

E coli O157:NM and matched the genetic fingerprint of the clinical isolates from the ill people. The cider mill was found to be unlicensed by MDARD and had been informed in 2011 by MDARD to cease apple cider production. The property was inspected by MDARD with a search warrant and police escort and evidence collected. Legal action in 2013 and into 2014 resulted in the first-ever felony conviction under Michigan's Food Law.

Multijurisdictional Investigation of an E coli O157:H7 Outbreak Linked to a single restaurant in west Michigan – December 2012-January 2013

A total of four confirmed and one probable case of E. coli O157:H7 was linked to a single western Michigan restaurant during a three-week period between December 2012 and January 2013. At almost the same time, another suspected outbreak of unknown etiology was linked to the same facility, involving at least 17 suspected cases. During these investigations, MDARD worked in consultation with the Michigan Department of Community Health (MDCH) and the two counties where cases resided to determine what foods appeared to be linked with illness and whether there was an indication that the problem was associated with problems at the firm or within the supply chain. These investigations provided the involved agencies the opportunity to fully exercise the procedures outlined in the Michigan Multi-Jurisdictional Food Emergency Response Guidance, including holding an after-action meeting with the LHDs.

Salmonella typhimurium outbreak at several Michigan universities- March-May, 2013

A cluster of nine confirmed cases of S Typhimurium 4,5,12:i:- and additional probable cases were noted across four college campuses in multiple Michigan counties. MDARD worked with MDCH and LHD officials in tracing supply chains for various food items. Traceback information indicating a possible source for an implicated imported food product was collected and shared with federal investigators.

Multistate Shiga-Toxin E. coli outbreak April – May 2013

A number of confirmed illnesses with indistinguishable genetic fingerprint patterns were noted in Minnesota, Michigan, Wisconsin and other states. Certain fast food and retail chains appeared to be common exposures among a number of the cases. MDARD conducted an investigatory traceback of some of the implicated foods in coordination with the other states involved to determine possible common sources. Investigations by Michigan, Minnesota and Wisconsin determined the supply chain to be almost identical for these three states, and did not find any sources that converged with other states' cases.

Salmonella typhimurium in raw beef kibbeh nayeh – December 2012 - January 2013

Nine people in Michigan were diagnosed with S. typhimurium between Dec. 9, 2012 through Jan. 7, 2013. Six of the nine patients had consumed a raw ground beef dish known as kibbeh nayeh at a local restaurant in Southeast Michigan in early December. The strain associated with this outbreak matched that of a multistate outbreak of 22 cases of S Typhimurium in six states seen between early December to February 20, 2013. A traceback of the beef used at the MI restaurant led to two Southeast Michigan retail stores, which resulted in a recall of 950 pounds of ground beef products sold in the area. MDARD conducted environmental assessments and coordinated with USDA to collect additional supply chain information from both stores to look for links to a common supplier. MDARD and MDCH issued a joint press release on the outbreak on January 25, 2013.

Salmonella Infantis Outbreak linked to Lamb Consumption - July 2013

An outbreak of S. Infantis among wedding guests at two separate wedding receptions in a single county in Michigan was investigated by local and state health authorities and MDARD. Seven confirmed cases and seven probable cases reported eating lamb served at the two wedding receptions held at different venues on July 27-28, 2013. The lamb had been prepared by an MDARD-licensed firm not approved for that kind of food operation. The leftover lamb from one reception was donated to a local food bank, so samples were collected by MDARD and found to be contaminated with the outbreak strain. As a result of the investigation, MDARD was able to avert additional outbreaks by insuring the removal of the contaminated cooked product from further distribution.

II. Food Recalls

Multistate Sunflower seed recall due to contamination with *Listeria monocytogenes*

A sample of raw sunflower seeds collected by MDARD as part of its routine food sampling program were found to be contaminated with *Listeria monocytogenes*. Subsequent investigation by MDARD and federal authorities determined the product to have been processed at a Michigan firm. As a result of the MDARD sample results, multiple snack products were recalled across the U.S. No illnesses to date have been linked with consumption of the recalled products.

Imported tahini recall due to *Salmonella* contamination - May 2013

A routine sample collected by MDARD of a nationally distributed brand of tahini was found to be contaminated with *Salmonella*, which was subsequently linked with 16 illnesses in nine states. Collaborative investigation efforts of state, local, and federal public health and regulatory agencies indicated the same brand of tahini sampled by MDARD was the source of this outbreak. Samples of other lots collected after the first sample were also found to be positive for *Salmonella*, resulting in a recall expansion. The product had been imported into the U.S. and packaged by a firm in another state. As a result of MDARD's surveillance monitoring, the FDA placed the Turkish importer of the sesame paste on Import Alert.

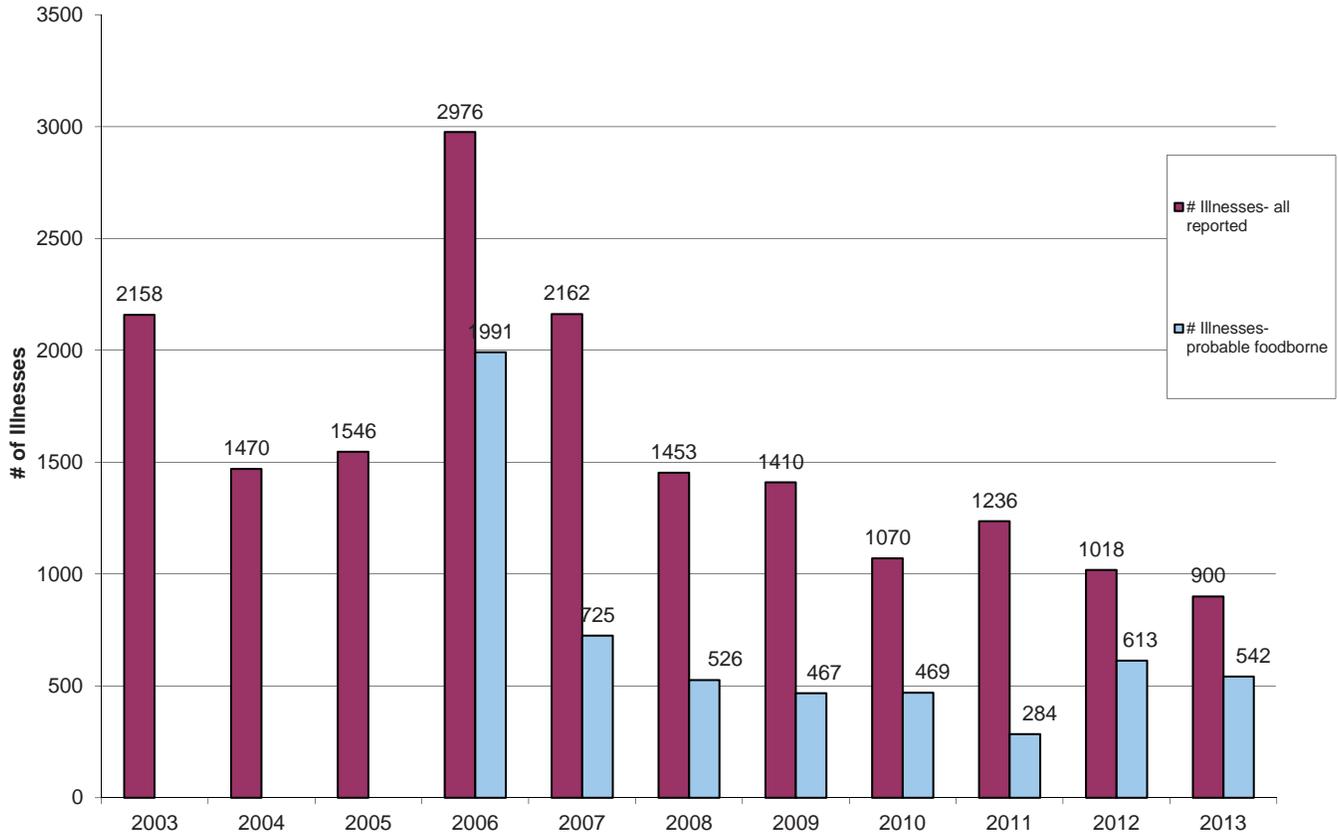
E coli O121 Outbreak and Recall Linked to Frozen Food Products – March-May 2013

A multistate outbreak of 35 cases of *E. coli* O121 in 19 states was linked with frozen food products. Two of the three Michigan cases reported eating the same brand of products prior to onset. The parent company announced the first of several recalls of several frozen food products in late March. In early April, MDCH and MDARD issued a joint press release about the outbreak and recall. MDARD completed a total of nine recall audit checks, and tested five retail product samples, which all tested negative.

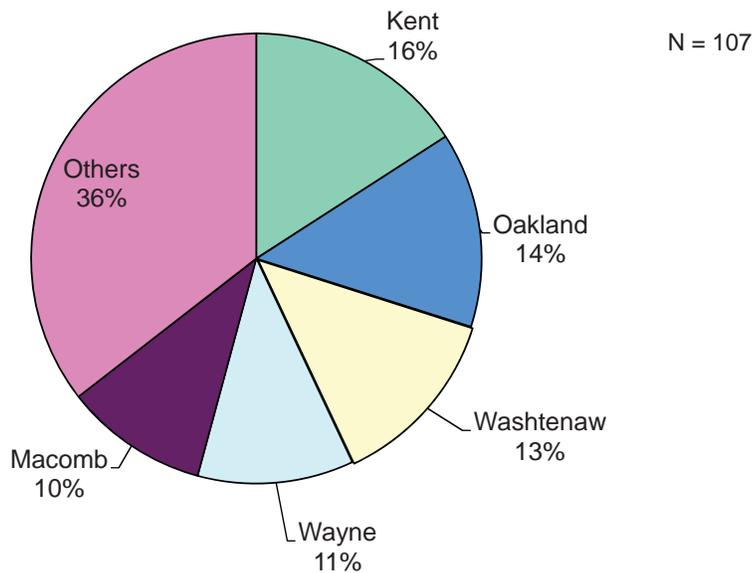
***Listeria monocytogenes* in deli products – August - November 2013**

During routine monitoring by MDARD field staff, a sample of potato salad collected at a retail store on August 13, 2013 was tested by the MDARD Geagley Laboratory and found to be contaminated with *Listeria monocytogenes*. A traceback of the product led to a manufacturer in Wisconsin, which placed further investigative jurisdiction with the FDA. Subsequent investigations at the Wisconsin plant showed multiple food safety issues which may have led to contamination of multiple products. The first recall was announced on Aug 30, and numerous additional recalls of all products manufactured at the plant continued through November 2013. The Wisconsin manufacturer was closed until further notice.

Ten-Year Summary of Foodborne Illness Outbreaks, by Number of Reported Illnesses 2003-2013

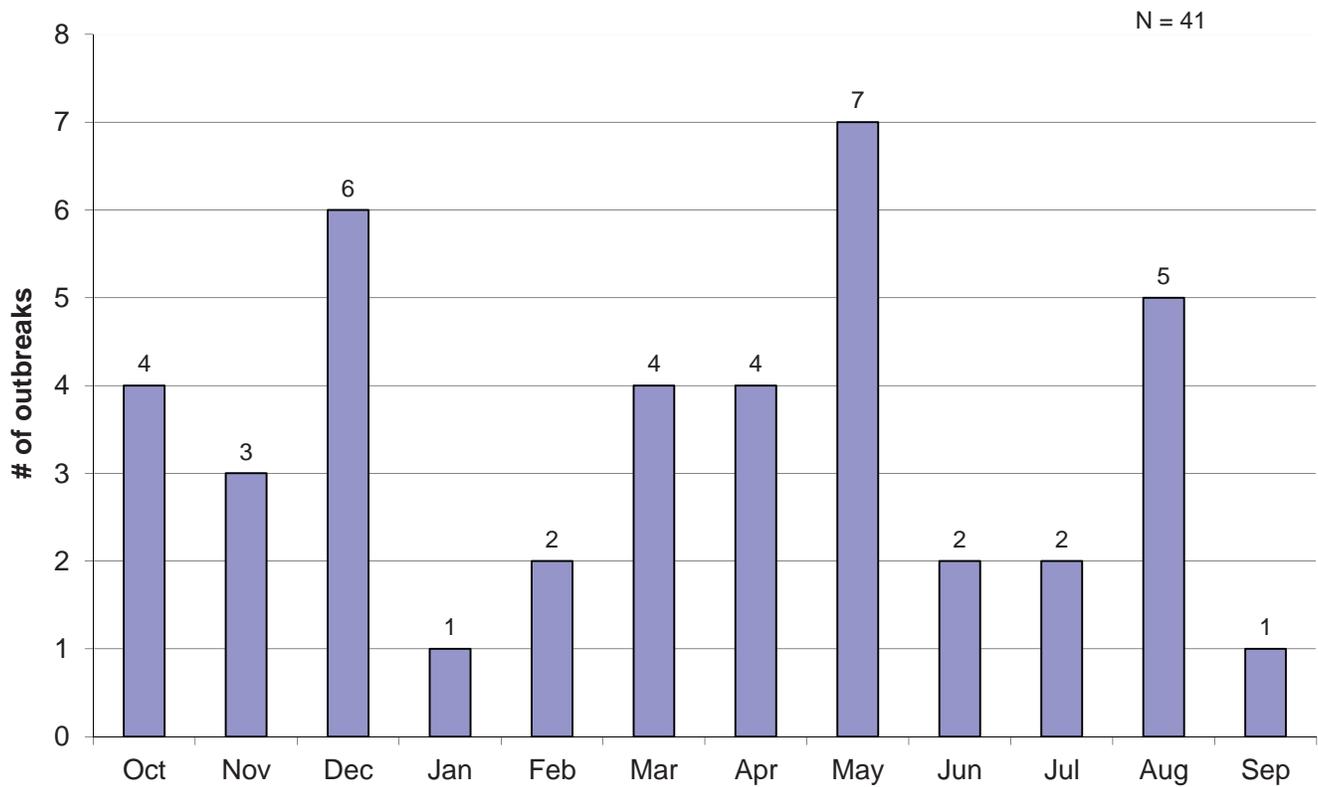


Potential Foodborne Illness Outbreaks, Reported by Local Health Departments

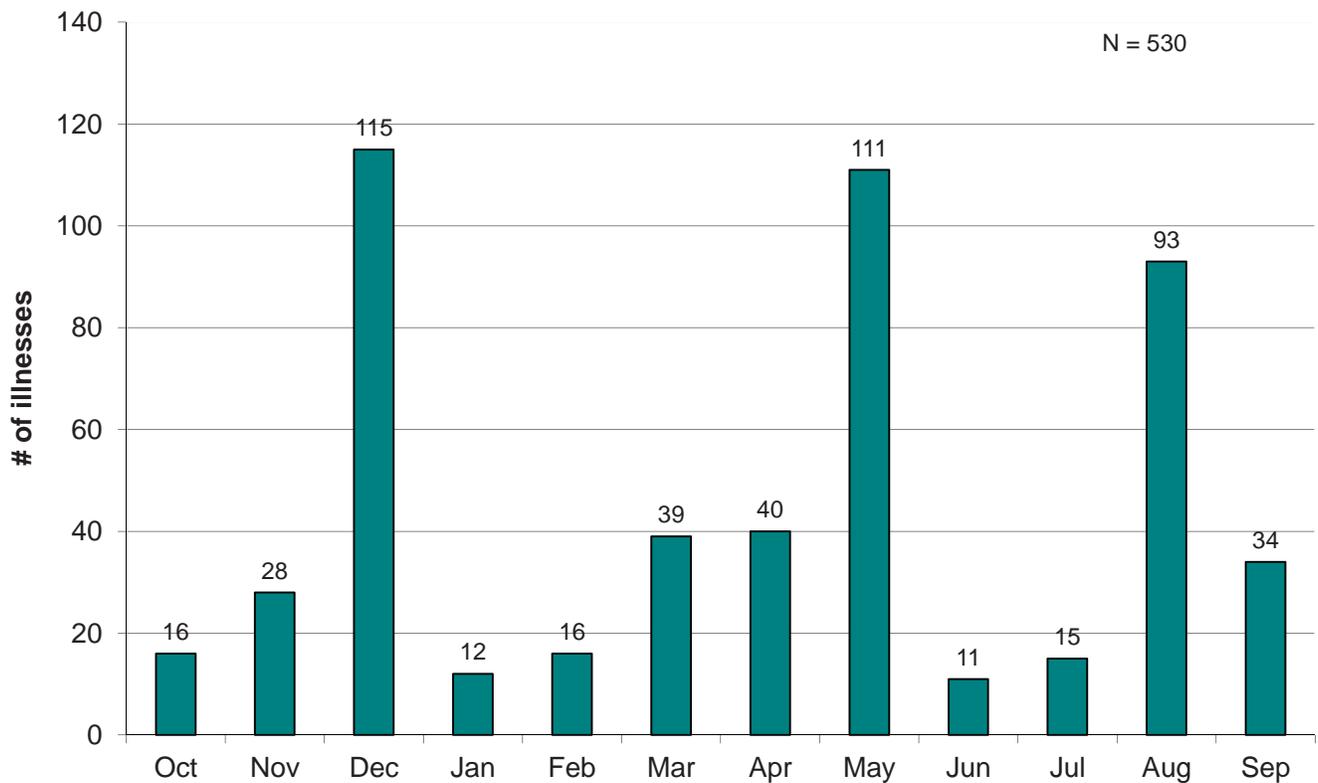


Note: Data cannot be interpreted as an indicator of the relative safety of foods in any jurisdiction. Health departments with larger populations would be expected to have larger numbers of outbreaks.

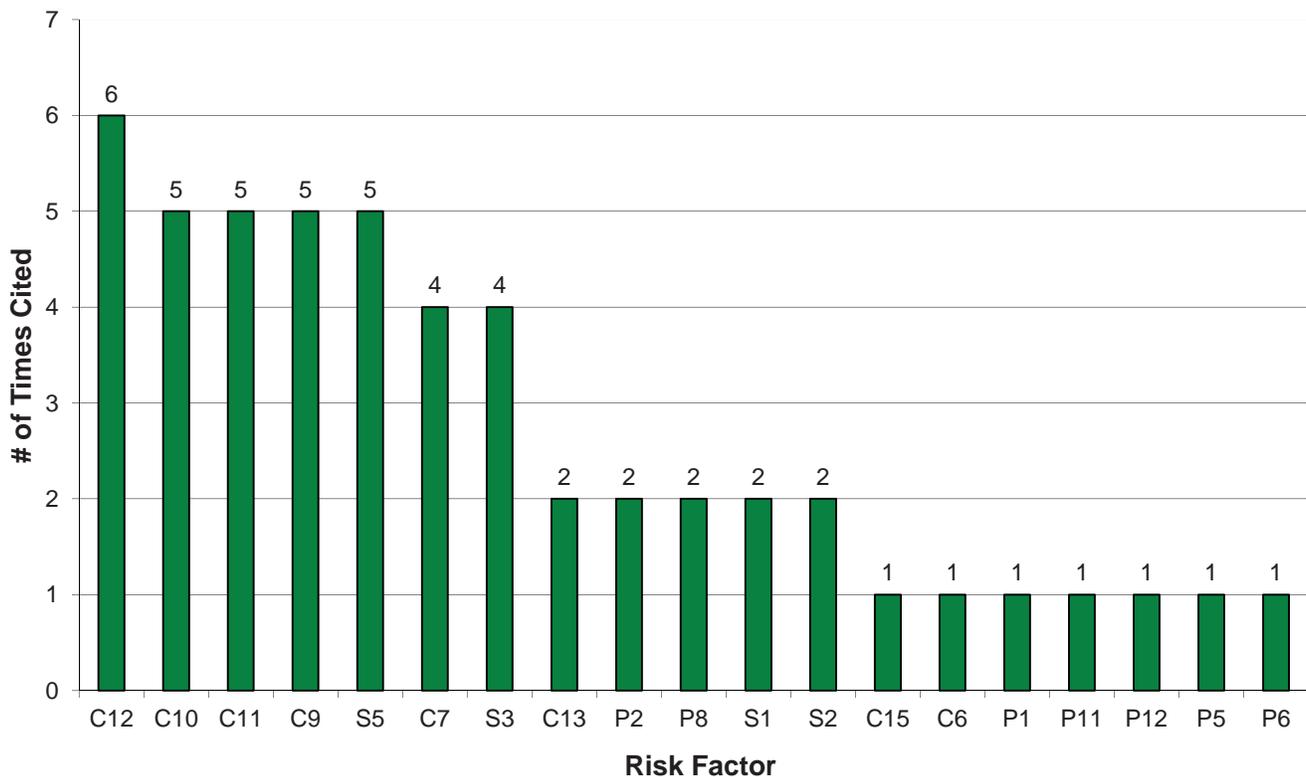
Probable Foodborne Illness Outbreaks, Number of Events, by Month



Probable Foodborne Illness Outbreaks, Number of Illnesses, by Month



CDC Risk Factors Reported by MDARD and Local Health Departments, Fiscal Year 2013



Key: Partial list of risk factors, from CDC form 52.13

C6	Contaminated raw product-food was intended to be consumed after a kill step
C7	Contaminated raw product- food was intended to be consumed raw or undercooked/processed
C9	Cross-contamination of ingredients
C10	Bare-hand contact by handler/worker/preparer who is suspected to be infectious
C11	Glove-hand contact by handler/worker/preparer who is suspected to be infectious
C12	Other mode of contamination (excluding cross-contamination) by a food handler/worker/preparer suspected to be infectious
C13	Foods contaminated by non-food handler/worker/prepared who is suspected to be infectious
C15	Other source of contamination
P1	Food preparation practices that support proliferation of pathogens (during food preparation) No attempt was made to control the temperature of implicated food or the length of time food was out of temperature control (during food service or display of food)
P2	Improper cold holding due to an improper procedure or protocol
P5	Improper hot holding due to malfunctioning equipment
P6	Improper/slow cooling
P8	Inadequate processing (acidification, water activity, fermentation)
P11	Other situations that promoted or allowed microbial growth or toxic production
P12	Insufficient time and/or temperature control during initial cooking/heat processing
S1	Insufficient time and/or temperature during reheating
S2	Insufficient time and/or temperature control during freezing
S3	Other process failures that permit the agent to survive
S5	

III. Recommendations

General Recommendations for Food Regulators

- During routine food safety inspections, focus on finding and eliminating unsafe food handling practices that are highly associated with foodborne illness.
- Evaluate cleaning and sanitizing practices for food equipment and utensils.
- Evaluate cooling practices, to ensure compliance with proper time and temperature standards.
- Insure timely information sharing during multi-agency investigations.
- Work with food safety partners to improve food product traceability and recordkeeping.
- Continue to sponsor and encourage participation in foodborne outbreak investigation training.

MDARD Recommendations for Local Health Departments

- Submit clinical and food specimens when possible.
- Provide a completed CDC Form 52.13 with all events deemed probable foodborne illness outbreaks.
- In final reporting and termination reports for outbreaks, give a conclusion stating whether or not the outbreak was deemed foodborne based on investigation findings.

Part D - Consumer Outreach and Other Programs

Consumer Food Safety

For more information about the Michigan Department of Agriculture & Rural Development, Food and Dairy Division, or to receive Food Recall Alerts from MDARD, visit www.michigan.gov/foodsafety.

Social Media

For general information about department programs and activities, follow MDARD on our social networks:

Facebook: www.facebook.com/MIDeptofAgriculture

Twitter: twitter.com/Michdeptofag

Youtube: http://www.youtube.com/channel/UCgMbB_ew0h32kN8l1AAf5uw

Non-Regulatory Food and Dairy Division Programs

Pure Michigan FIT

In 2012, to address the problem of childhood obesity and related health problems, Michigan Governor Rick Snyder announced a new public/private partnership to improve the health and well-being of babies and young children by providing health and nutrition education, information, and access to web-based tools to citizens in our state. Pure Michigan Fit is part of the Governor's Healthy Michigan initiative to take a stand against obesity and help build a stronger, healthier Michigan. Pure Michigan FIT is a nutrition and fitness initiative that connects Michigan families to resources and information from statewide partners who specialize in healthy food and nutrition, physical fitness and healthcare needs. In 2013, Pure Michigan FIT focused on promotions in retail grocery stores and health, outdoor recreation and fitness events, to provide healthy eating tips, nutrition guidelines, child-friendly recipes, fun fitness activities and more. For more information, visit www.michigan.gov/puremichiganfit.

Farm to School

Under the Farm to School Procurement Act, Act 315 of 2008, MDARD is charged to designate a farm to school point person to coordinate efforts among MDARD, and the Michigan departments of Education and Community Health to grow farm to school initiatives in our state. In accordance with the legislation, a state Farm to School workgroup was formed and meets on a regular basis (usually quarterly). Representatives from the three state agencies, as well as staff from Michigan's Farm to Institution program at the MSU Center for Regional Food Systems, serve on the workgroup, to coordinate farm to school efforts. MDARD farm to school efforts in 2013 focused on food safety information dissemination to school food service programs; local foods promotions, including an asparagus promotion in May; and helping connect school food service programs with area farmers to increase purchase and consumption of Michigan products in school food service programs. For more information, visit www.mifarmtoschool.msu.edu/

Michigan Food Policy Council (MFPC)

Established in June 2005, and funded in part by grants from the W.K. Kellogg Foundation, the MFPC recommends programs and policies that enhance economic growth through the state's diverse agriculture industry, while cultivating a safe, healthy and available food supply for all Michigan residents. In 2013, MFPC issued a report of recommendations based on work by the council's task forces, including to: Build capacity of Michigan's farmers market sector to increase access to healthy food; Help small-scale farms achieve food safety certification to increase their sales to the retail food industry, institutional buyers and consumers; and, support a state Healthy Food Financing Initiative (HFFI) to provide access to financial capital for job creation in local food systems. A copy of the report is available at www.michigan.gov/mfpc.

Appendix I – Workload Data by LHD

Michigan Local Health Department Quarterly Reports Summary, 2013											
	INSPECTIONS CONDUCTED					INSPECTIONS DUE	PLAN REVIEW		INVESTIGATIONS		EVALUATION SCHEDULE
	3. Fixed food establishments	4. Mobile, vending & sfu	5. Temporary food establishments	6. Follow-up inspections	Total Number of Inspections Conducted (all inspection types)		8. Number of plans received for review	9. Number of plans approved	10. Consumer Complaints Investigated	Number of Consumer Complaints per 100,000 People	
						7. Fixed, mobile, vending & sfu Inspections due (annual total)					11. Current evaluation frequency schedule in risk category order- Z/Y/X (i.e. 6/6/12, 6/12/12, 6/12/18, etc. Indicate 6/6/6 if the standard 6 month schedule is used.
Allegan	654	30	113	144	941	653	7	7	11	9.87	6/6/6
BEDHD	869	55	128	171	1,223	1,084	35	34	40	23.96	6/6/6
Bay	852	37	140	167	1,196	888	10	5	40	37.12	6/6/6/
Benzie-Leelanau	261	35	90	68	454	386	38	19	9	22.94	6/6/6
Berrien	1,090	54	253	116	1,513	1,100	21	14	23	14.67	6/6/6
BHSJ	958	147	271	232	1,608	1,090	14	8	49	31.98	6/6/6
Calhoun	688	77	150	111	1,026	N/A	25	11	54	39.66	6/12/12
CMDHD	1,173	97	202	217	1,689	1,213	29	28	60	31.45	6/6/6
Chippewa	284	4	40	72	400	352	3	3	11	28.56	6/6/6
Delta-Menominee	313	22	193	110	638	638	4	10	16	26.19	6/6/6
Institute for Popu	2,470	128	265	966	3,829	2,709	73	47	153	21.44	6/12/18
Dickinson-Iron	304	0	36	82	422	0	1	1	10	26.33	6/6/6
DHD # 2	366	31	129	38	564	564	11	11	36	53.60	6/12/18
DHD # 4	559	9	86	42	696	638	14	12	18	22.82	6/6/6
DHD # 10	1,240	127	514	262	2,143	45	25	15	71	27.14	6/6/6
Genesee	2,015	122	206	137	2,480	2,529	31	18	144	33.82	6/6/12
Grand Traverse	535	66	94	156	851	766	45	39	21	24.14	6/6/12
Huron	265	26	130	167	588	295	7	5	4	12.08	6/12/12
Ingham	1,763	171	124	1,044	3,102	1,090	61	63	100	35.60	6/6/6/
Ionia	332	24	83	45	484	374	9	7	18	28.17	6/6/6
Jackson	807	50	87	121	1,065	833	16	10	56	34.95	6/6/6/
Kalamazoo	1,696	121	263	263	2,343	0	58	45	93	37.15	6/6/12
Kent	3,821	298	558	782	5,459	4,083	103	101	259	42.98	6/6/6
Lapeer	350	47	83	72	552	469	13	16	17	19.25	6/6(12Sea)/6
Lenawee	588	74	307	44	1,013	616	16	15	48	48.05	6/6/6
Livingston	781	67	70	69	987	882	19	20	118	65.21	6/6/6/
LMAS	420	19	191	33	663	540	6	9	10	27.91	6/6/6
Macomb	4,299	111	297	1,224	5,931	4,075	117	93	347	41.26	6/6/6
Marquette	363	25	119	144	651	359	15	8	22	32.80	6/12/18
Midland	508	75	144	92	819	819	28	21	84	100.44	6/6/6
Mid-Michigan	914	92	191	256	1,453	1,112	30	26	10	5.52	6/6/12
Monroe	784	39	124	76	1,023	1,023	20	6	57	37.49	6/6/12
Muskegon	1,047	103	193	476	1,819	885	27	29	121	70.27	6/6/6/
Northwest	1,013	65	189	114	1,381	1,192	29	23	18	16.92	6/6/6
Oakland	8,569	633	1,481	4,448	15,131	8,772	360	328	846	70.36	6/6/6
Ottawa	1,186	57	332	394	1,969	1,404	63	37	58	21.99	6/6(12Sea)/6
Saginaw	1,048	45	455	161	1,709	1,660	23	23	90	44.96	6/12/12
Sanilac	211	27	52	7	297	226	8	6	5	11.60	6/6/6/
Shiawassee	230	41	56	8	335	335	2	2	3	4.25	6/12/18
St. Clair	1,061	10	218	155	1,444	1,070	26	27	72	44.16	6/6/6
Tuscola	287	26	149	132	594	295	4	4	4	7.18	6/6/6
VanBuren-Cass	525	47	142	45	759	713	4	5	1	0.78	6/6/6
Washtenaw	2,351	109	466	579	3,505	2,424	87	80	176	51.05	6/6/6
Wayne	5,555	174	281	2,128	8,138	5,525	185	170	257	23.22	6/12/12/
Western UP	632	12	178	165	987	546	8	8	32	45.17	6/12/18
Totals	56,037	3,629	9,873	16,335	85,874	56,271	1,730	1,469	3,692	37.35	XXX
Average	1,245	81	219	363	1,908	1,279	38	33	82	37.35	XXX
Median	784	54	150	144	1,026	826	21	15	40	29	XXX
Minimum	211	0	36	7	297	0	1	1	1	1	0
Maximum	8,569	633	1,481	4,448	15,131	8,772	360	328	846	100	0

Appendix II – Output Data - Licensing by LHD

Michigan Local Health Department Quarterly Reports Summary 2013														
	ENFORCEMENT CONDUCTED		LICENSED FACILITIES											
	12. Administrative Action: office conference, informal conference, formal hearing, civil fines, orders	13. Court Action: civil, criminal	Licensed Fixed Food Establishments	Fixed Licenses- % of Total Fixed Licenses	Licensed Mobile Establishments	Mobile Licenses- % of Total Mobile Licenses	Licensed STFU Establishments	STFU Licenses- % of Total STFU Licenses	Licensed Vending Establishments	Vending Licenses- % of Total Vending Licenses	Licensed Temporary Establishments (Number of temporary inspections used to equal # of Licenses)	Temporary Licenses- % of Total Temporary Licenses	Total Licensed Establishments (excluding temporary)	Fixed Food Establishments per 100,000 people
Allegan	3	0	350	1	2	1	37	4	55	2	113	1	444	314
BEDHD	9	0	506	2	1	0	47	5	51	1	128	1	605	303
Bay	7	2	377	1	4	1	6	1	16	0	140	1	403	350
Benzie-Leelanau	1	0	192	1	2	1	10	1	1	0	90	1	205	489
Berrien	1	0	592	2	18	5	10	1	55	2	253	3	675	378
BHSJ	16	0	486	2	5	1	36	4	87	3	271	3	614	317
Calhoun	10	0	450	1	14	4	9	1	53	2	150	2	526	331
CMDHD	13	0	680	2	3	1	49	5	30	1	202	2	762	356
Chippewa	5	0	176	1	2	1	2	0	5	0	40	0	185	457
Delta-Menominee	20	0	252	1	0	0	17	2	12	0	193	2	281	412
Institute for Popula	76	0	1640	5	36	10	5	1	150	4	265	3	1831	230
Dickinson-Iron	11	0	207	1	0	0	2	0	12	0	36	0	221	545
DHD # 2	3	0	304	1	0	0	16	2	7	0	129	1	327	453
DHD # 4	0	0	395	1	0	0	13	1	0	0	86	1	408	501
DHD # 10	21	0	944	3	4	1	35	4	75	2	514	5	1058	361
Genesee	3	0	1235	4	11	3	30	3	109	3	206	2	1385	290
Grand Traverse	6	0	348	1	7	2	38	4	33	1	94	1	426	400
Huron	3	0	170	1	1	0	20	2	19	1	130	1	210	513
Ingham	8	0	980	3	0	0	69	7	79	2	124	1	1128	349
Ionia	5	0	166	1	0	0	9	1	22	1	83	1	197	260
Jackson	1	0	449	1	1	0	23	2	62	2	87	1	535	280
Kalamazoo	19	0	822	3	4	1	36	4	88	3	263	3	950	328
Kent	163	27	1860	6	29	8	41	4	474	14	558	6	2404	309
Lapeer	6	0	224	1	2	1	8	1	22	1	83	1	256	254
Lenawee	0	0	315	1	2	1	2	0	45	1	307	3	364	315
Livingston	5	0	412	1	4	1	41	4	20	1	70	1	477	228
LMAS	0	0	280	1	4	1	7	1	8	0	191	2	299	781
Macomb	156	3	2337	8	24	6	18	2	242	7	297	3	2621	278
Marquette	16	0	263	1	0	0	8	1	11	0	119	1	282	392
Midland	0	0	259	1	27	7	23	2	14	0	144	1	323	310
Mid-Michigan	18	0	505	2	3	1	34	3	60	2	191	2	602	279
Monroe	1	0	454	2	4	1	68	7	28	1	124	1	554	299
Muskegon	33	0	582	2	3	1	37	4	109	3	193	2	731	338
Northwest	10	0	106	0	1	0	7	1	5	0	189	2	119	100
Oakland	141	0	3850	13	104	28	25	3	314	9	1,481	15	4293	320
Ottawa	24	0	675	2	0	0	28	3	155	5	332	3	858	256
Saginaw	59	0	676	2	1	0	6	1	81	2	455	5	764	338
Sanilac	0	0	168	1	3	1	6	1	9	0	52	1	186	390
Shiawassee	1	0	209	1	0	0	25	3	9	0	56	1	243	296
St. Clair	19	0	478	2	4	1	10	1	68	2	218	2	560	293
Tuscola	9	0	147	0	0	0	6	1	16	0	149	2	169	264
VanBuren-Cass	0	0	356	1	3	1	7	1	23	1	142	1	389	277
Washtenaw	27	0	1181	4	26	7	12	1	351	10	466	5	1570	343
Wayne	90	0	2658	9	18	5	29	3	322	9	281	3	3027	240
Western UP	30	0	386	1	1	12	6	1	4	0	178	2	397	545
Totals	1,049	32	30,102	XXX	378	XXX	973	XXX	3,411	XXX	9,873	XXX	34,864	15,659
Average	23	1	669	XXX	8	XXX	22	XXX	76	XXX	219	XXX	775	305
Median	9	0	412	XXX	3	XXX	17	XXX	33	XXX	150	XXX	477	320
Minimum	0	0	106	0	0	0	2	0	0	0	36	0	119	100
Maximum	163	27	3,850	13	104	28	69	7	474	14	1,481	15	4,293	781

Appendix III – Program Staffing – Program Revenue by LHD

Michigan Local Health Department Quarterly Reports Summary 2013													
	IMPORTANT FACTOR IV STAFFING						FINANCIAL						
	14. Total number of FTEs assigned to the food program in the following areas: plan review, supervision, coordination, clerical and other food related non-FDA	15. Total number of FTEs assigned to conduct food establishment inspections (all types)	Total FTEs	Minimum Inspection Staffing per FDA	Recommended Inspection Staffing per FDA	Average Number of Inspections per FTE Assigned to Conduct Food Establishment Inspections	LHD Contribution (fees collected & local tax dollars)	LPHO Dollars	Total Program Revenue	Program Dollars per Licensed Establishment	Program Dollars per FTE	Program Dollars per Citizen	Population
Allegan	0.50	2.00	2.5	2.4	3.3	471	294,293.00	81,841.00	376,134.00	847.15	150,453.60	3.38	111,408
BEDHD	2.04	2.95	4.99	3.1	4.5	415	502,741.00	124,286.00	627,027.00	1,036.41	125,656.71	3.76	166,932
Bay	0.35	1.75	2.1	2.3	3.2	683	297,281.00	84,640.00	212,641.00	527.65	101,257.62	1.97	107,771
Benzie-Leelanau	0.90	0.50	1.4	1.2	1.7	908	105,573.00	38,634.00	144,207.00	703.45	103,005.00	3.68	39,233
Berrien	1.00	4.50	5.5	3.8	5.3	336	228,716.00	144,860.00	373,576.00	553.45	67,922.91	2.38	156,813
BHSJ	5.15	3.75	8.9	3.6	5.0	429	312,523.00	121,645.00	434,168.00	707.11	48,782.92	2.83	153,231
Calhoun	1.20	2.65	3.85	2.8	4.0	387	230,018.00	169,982.00	400,000.00	760.46	103,896.10	2.94	136,146
CMDHD	3.20	1.90	5.1	4.1	5.8	889	358,847.00	202,866.00	561,713.00	737.16	110,139.80	2.94	190,805
Chippewa	0.99	0.44	1.432	1.0	1.4	905	95,405.00	41,353.00	136,758.00	739.23	95,501.40	3.55	38,520
Delta-Menominee	1.92	1.45	3.37	1.9	2.5	440	126,452.00	48,637.00	175,089.00	623.09	51,955.19	2.87	61,098
Institute for Population Health	8.00	9.00	17	9.0	13.1	425	827,304.00	499,701.00	1,327,005.00	724.74	78,059.12	1.86	713,777
Dickinson-Iron	2.00	1.50	3.5	1.1	1.6	281	126,197.00	52,356.00	178,553.00	807.93	51,015.14	4.70	37,985
DHD # 2	2.49	0.92	3.41	1.9	2.6	613	148,031.00	70,182.00	218,213.00	667.32	63,992.08	3.25	67,168
DHD # 4	0.81	1.78	2.59	2.1	3.0	391	145,382.00	74,570.00	219,952.00	539.10	84,923.55	2.79	78,891
DHD # 10	1.00	6.00	7	6.4	8.8	357	573,626.00	200,312.00	773,938.00	731.51	110,562.57	2.96	261,616
Genesee	12.00	10.00	22	6.8	9.9	248	690,258.00	427,007.00	1,117,265.00	806.69	50,784.77	2.62	425,790
Grand Traverse	0.70	2.00	2.7	2.2	3.2	426	198,764.00	70,396.00	278,160.00	652.96	103,022.22	3.20	86,966
Huron	1.17	0.53	1.7	1.4	1.8	1,109	100,522.00	32,732.00	133,254.00	634.54	78,384.71	4.02	33,118
Ingham	11.25	8.75	20	5.4	7.9	355	853,690.00	199,807.00	1,053,497.00	933.95	52,674.85	3.75	280,895
Ionia	0.20	0.82	1.02	1.2	1.6	590	82,127.00	50,699.00	132,826.00	674.24	130,221.57	2.08	63,905
Jackson	2.75	2.00	4.75	2.7	3.9	533	255,064.00	113,573.00	368,637.00	689.04	77,607.79	2.30	160,248
Kalamazoo	8.00	6.00	14	5.1	7.2	391	442,910.00	277,751.00	720,661.00	758.59	51,475.79	2.88	250,331
Kent	11.00	9.00	20	12.5	17.9	607	1,047,267.00	244,283.00	1,291,550.00	537.25	64,577.50	2.14	602,622
Lapeer	2.50	1.00	3.5	1.4	2.0	552	143,326.00	72,946.00	216,272.00	844.81	61,792.00	2.45	88,319
Lenawee	0.81	1.42	2.23	2.6	3.5	713	209,441.00	98,338.00	307,779.00	845.55	138,017.49	3.08	99,892
Livingston	1.00	2.75	3.75	2.4	3.4	359	388,511.00	113,386.00	501,897.00	1,052.19	133,839.20	2.77	180,967
LMAS	0.73	1.69	2.42	2.0	2.6	392	149,171.00	115,696.00	264,867.00	885.84	109,449.17	7.39	35,830
Macomb	5.00	16.00	21	12.6	18.5	371	1,111,693.00	521,953.00	1,633,646.00	623.29	77,792.67	1.94	840,978
Marquette	0.85	1.44	2.29	1.7	2.3	452	158,855.00	49,507.00	208,362.00	738.87	90,987.77	3.11	67,077
Midland	1.80	1.40	3.2	1.9	2.6	585	164,124.00	63,752.00	227,876.00	705.50	71,211.25	2.72	83,629
Mid-Michigan	1.90	2.33	4.23	3.3	4.7	624	360,759.00	225,144.00	585,903.00	973.26	138,511.35	3.23	181,200
Monroe	0.40	1.65	2.05	2.9	4.1	620	261,849.00	73,481.00	335,330.00	605.29	163,575.61	2.21	152,021
Muskegon	2.54	5.00	7.54	3.9	5.5	364	572,988.00	94,994.00	667,982.00	913.79	88,591.78	3.88	172,188
Northwest	6.00	3.25	9.25	1.2	1.4	425	362,508.00	184,601.00	547,109.00	4,597.55	59,146.92	5.14	106,387
Oakland	36.80	27.80	64.6	24.0	33.6	544	3,888,681.00	785,661.00	4,674,342.00	1,088.83	72,358.24	3.89	1,202,362
Ottawa	1.65	4.60	6.25	4.9	6.8	428	770,837.00	131,186.00	902,023.00	1,051.31	144,323.68	3.42	263,801
Saginaw	1.21	3.12	4.33	4.9	6.6	548	604,643.00	244,884.00	849,527.00	1,111.95	196,195.61	4.24	200,169
Sanilac	0.93	1.01	1.937	1.0	1.4	294	74,107.00	44,535.00	118,642.00	637.86	61,250.39	2.75	43,114
Shiawassee	0.32	1.00	1.32	1.3	1.8	335	125,067.00	67,617.00	192,684.00	792.94	145,972.73	2.73	70,648
St. Clair	5.50	4.00	9.5	3.2	4.5	361	392,590.00	153,699.00	546,289.00	975.52	57,504.11	3.35	163,040
Tuscola	0.40	0.65	1.05	1.2	1.6	914	78,715.00	39,205.00	117,920.00	697.75	112,304.76	2.12	55,729
VanBuren-Cass	1.40	2.00	3.4	2.2	3.1	380	151,776.00	92,271.00	244,047.00	627.37	71,778.53	1.90	128,551
Washtenaw	3.40	8.40	11.8	8.5	12.0	417	1,311,219.00	255,559.00	1,566,778.00	997.95	132,777.80	4.54	344,791
Wayne	23.00	15.00	38	14.4	21.1	543	2,735,137.00	1,014,221.00	3,749,358.00	1,238.64	98,667.32	3.39	1,106,807
Western UP	0.87	1.13	2	2.4	3.2	873	228,007.00	97,445.00	325,452.00	819.78	162,726.00	4.59	70,851
Totals	177.63	186.83	364	188	265	23,282	22,286,995.00	7,912,194.00	30,038,909.00	39,218.86	4,344,647.28	143.70	9,883,640
Average	3.95	4.15	8	4	6	460	495,266.56	175,826.53	667,531.31	861.60	82,420.54	3.04	219,636
Median	1.65	2.00	4	3	3	429	261,849.00	113,386.00	373,576.00	739.23	90,987.77	2.96	136,146
Minimum	0.20	0.44	1	1	1	248	74,107.00	32,732.00	117,920.00	527.65	48,782.92	1.86	33,118
Maximum	36.80	27.80	65	24	34	1,109	3,888,681.00	1,014,221.00	4,674,342.00	4,597.55	196,195.61	7.39	1,202,362

Note: Holland City inspections reported through Allegan and Ottawa health departments.

Appendix IV – Foodborne Illness Outbreaks by LHD

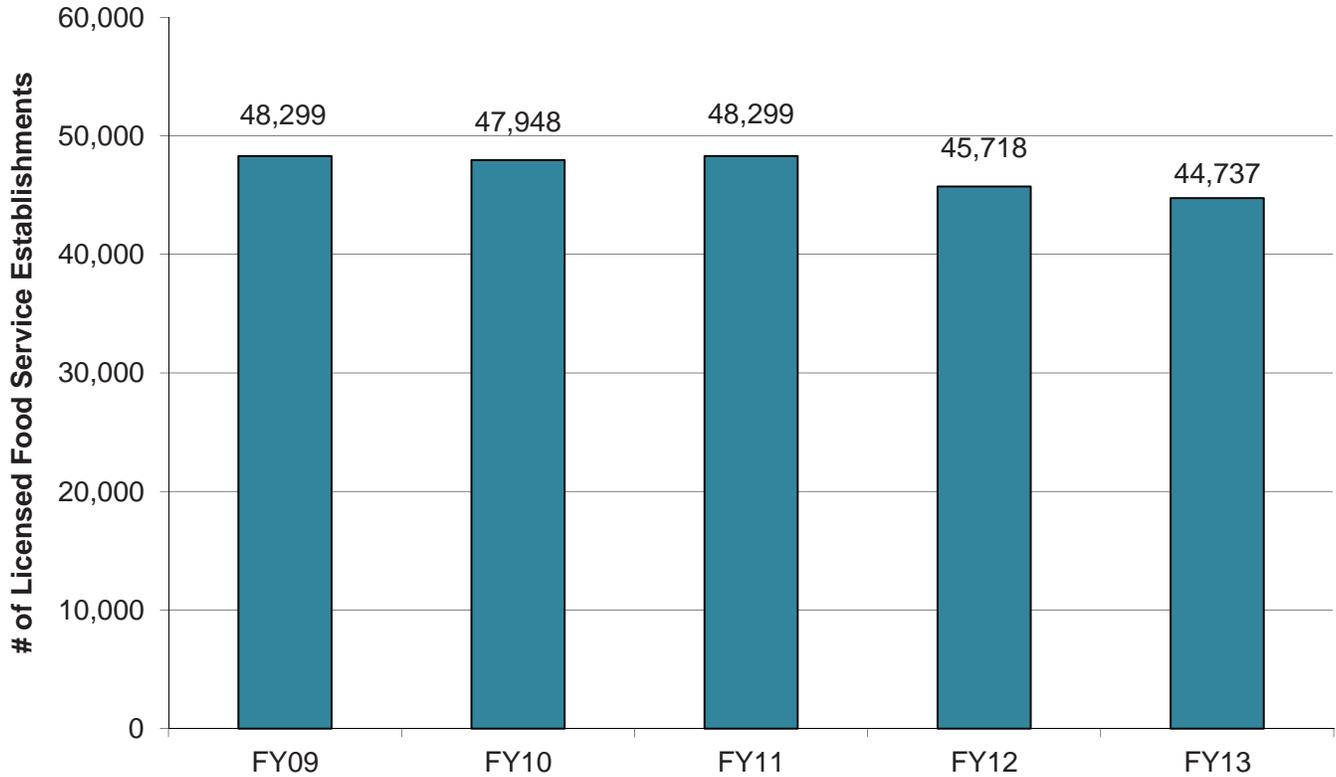
Jurisdiction	Potential FBI Outbreaks	% of Total FBIs	% of Total MI FSEs	Population	% of Total Population	Reports Filed w/ State	Missing Reports
KENT	17	15.9%	6.2%	602,622	6%	17	0
OAKLAND	15	14.1%	12.8%	1,202,362	12%	15	0
WASHTENAW	14	13.2%	3.9%	344,791	3%	14	0
WAYNE	12	11.2%	8.8%	1,106,807	11%	12	0
MACOMB	11	10.3%	7.8%	840,978	9%	11	0
DETROIT	6	5.6%	5.4%	713,777	7%	6	0
MULTI-JURISDICTIONAL	4	3.7%	~	N/A	N/A	3	1
GENESEE	2	1.9%	4.1%	425,790	4%	2	0
BR-HILLS-STJOE	2	1.9%	1.6%	153,231	2%	2	0
OTTAWA	2	1.9%	2.2%	263,801	3%	2	0
MIDLAND	2	1.9%	0.9%	83,629	1%	2	0
BARRY-EATON	2	1.9%	1.7%	166,932	2%	2	0
KALAMAZOO	2	1.9%	2.7%	250,331	3%	2	0
NORTHWEST MI	2	1.9%	0.4%	106,387	1%	2	0
MUSKEGON	1	0.9%	1.9%	172,188	2%	1	0
ST CLAIR	1	0.9%	1.6%	163,040	2%	1	0
VANBUREN-CASS	1	0.9%	1.2%	128,551	1%	1	0
HURON	1	0.9%	0.6%	33,118	0%	1	0
IONIA	1	0.9%	0.1%	63,905	1%	1	0
ALLEGAN	1	0.9%	1.2%	111,408	1%	1	0
BAY	1	0.9%	1.3%	107,771	1%	1	0
DHD #2	1	0.9%	1.0%	67,168	1%	1	0
LENAWEE	1	0.9%	1.0%	99,892	1%	1	0
LIVINGSTON	1	0.9%	1.4%	180,967	2%	1	0
MID-MI DHD	1	0.9%	1.7%	181,200	2%	1	0
SANILAC	1	0.9%	0.6%	43,114	0%	1	0
SHIAWASSEE	1	0.9%	0.7%	70,648	1%	1	0
MARQUETTE	1	0.9%	0.9%	67,077	1%	1	0
	107	100%	~	~	~	106	1

Note: The number of reported illnesses cannot be interpreted as indicating the relative risk or safety of food in any jurisdiction.
 Michigan Population Census, 2010 9,883,640 (Source: U.S. Census Bureau)
 Michigan Fixed Foodservice Establishments= 30,102

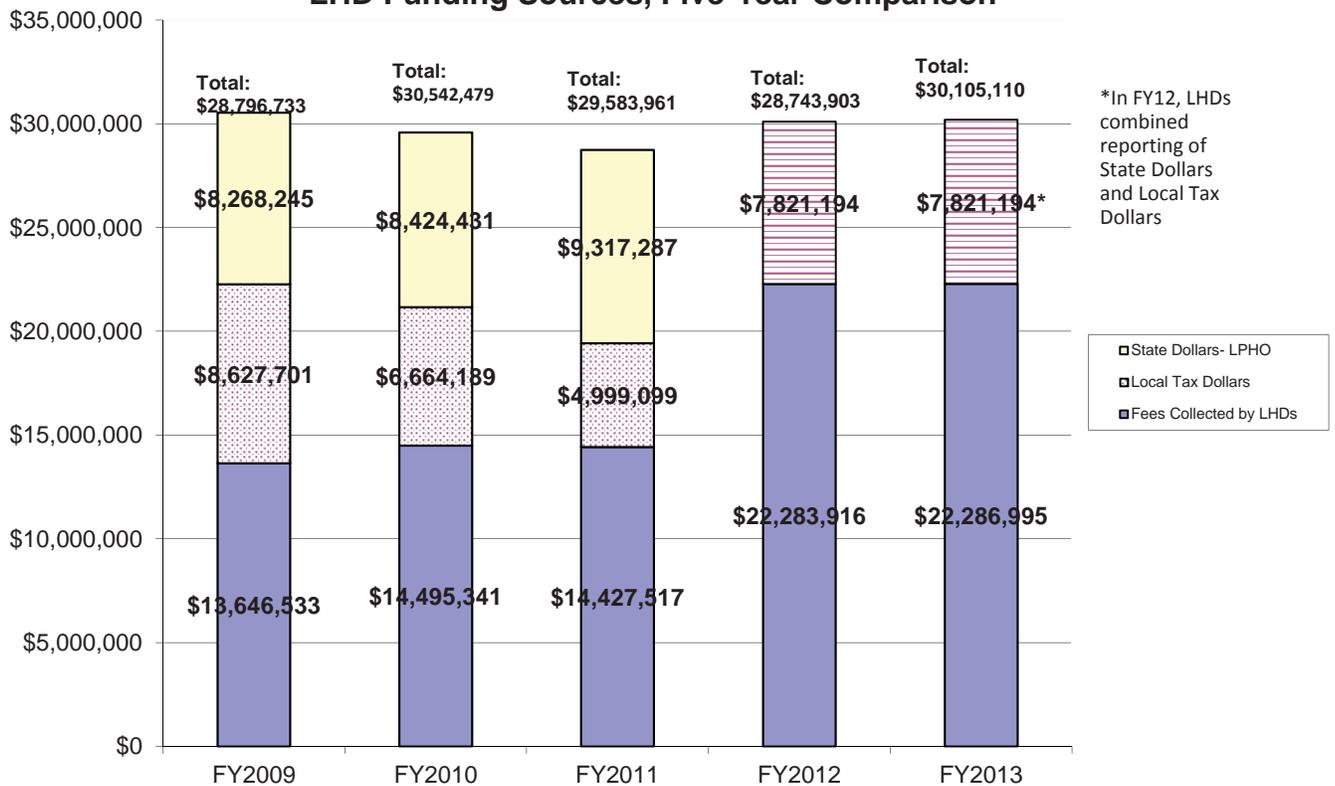
Appendix V – Five-Year Trend Analysis Charts

Local Health Departments

Licensed Food Service Establishments (LHD), Five-Year Comparison

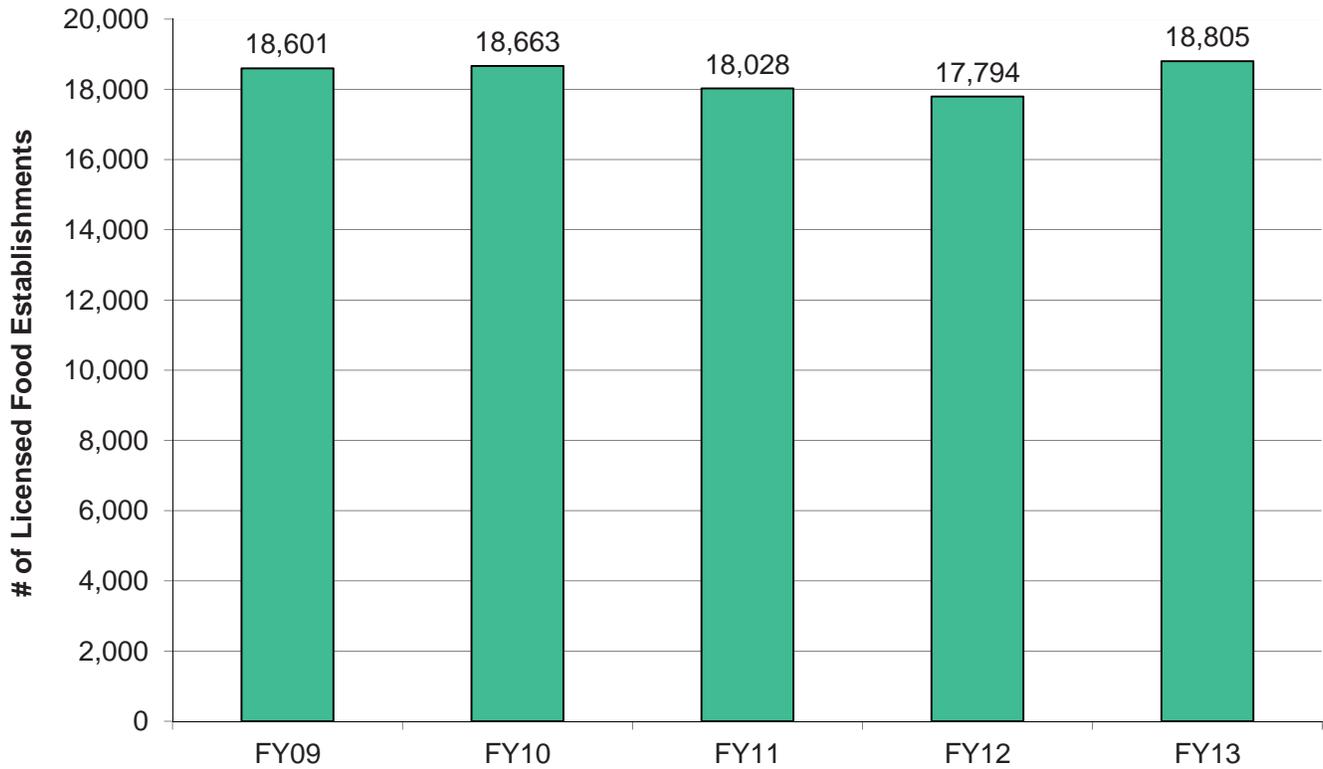


LHD Funding Sources, Five-Year Comparison

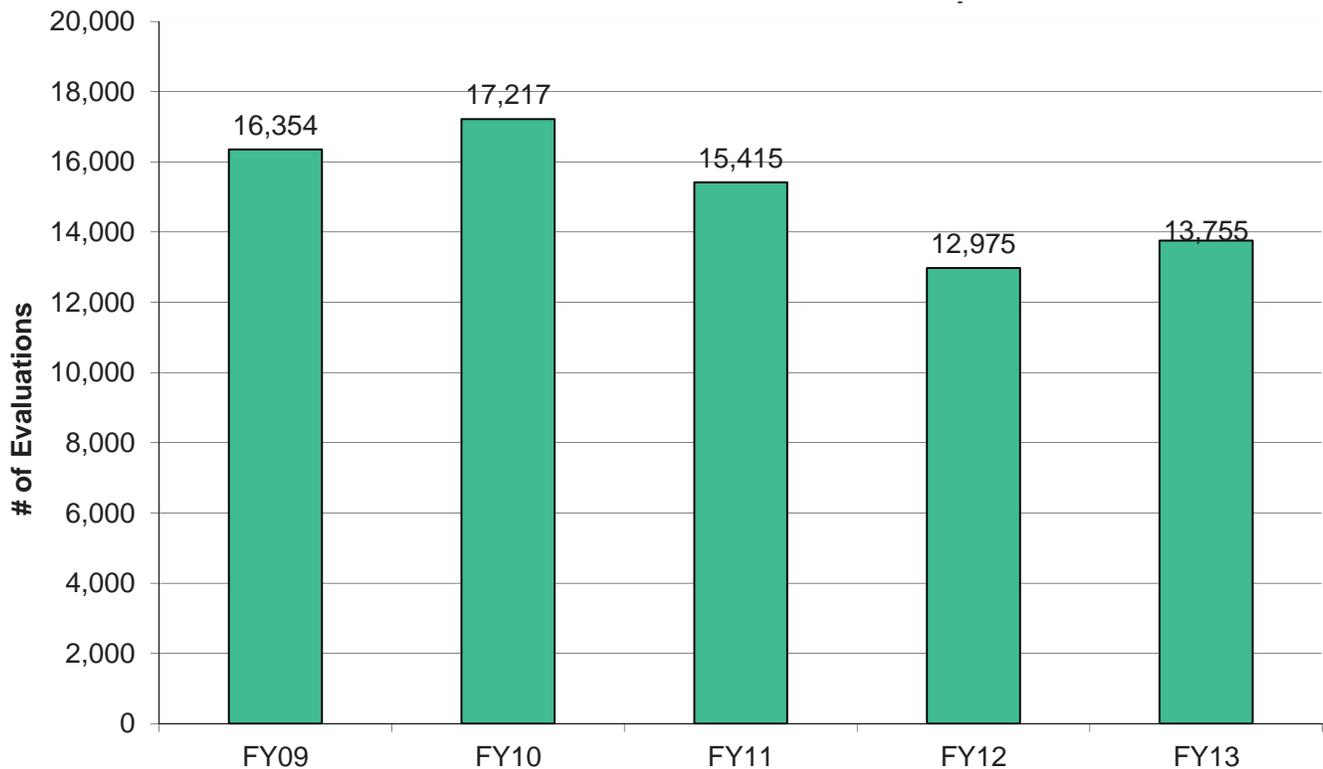


MDARD Food Safety and Inspection Program

Licensed Food Establishments (MDARD), Five-Year Comparison

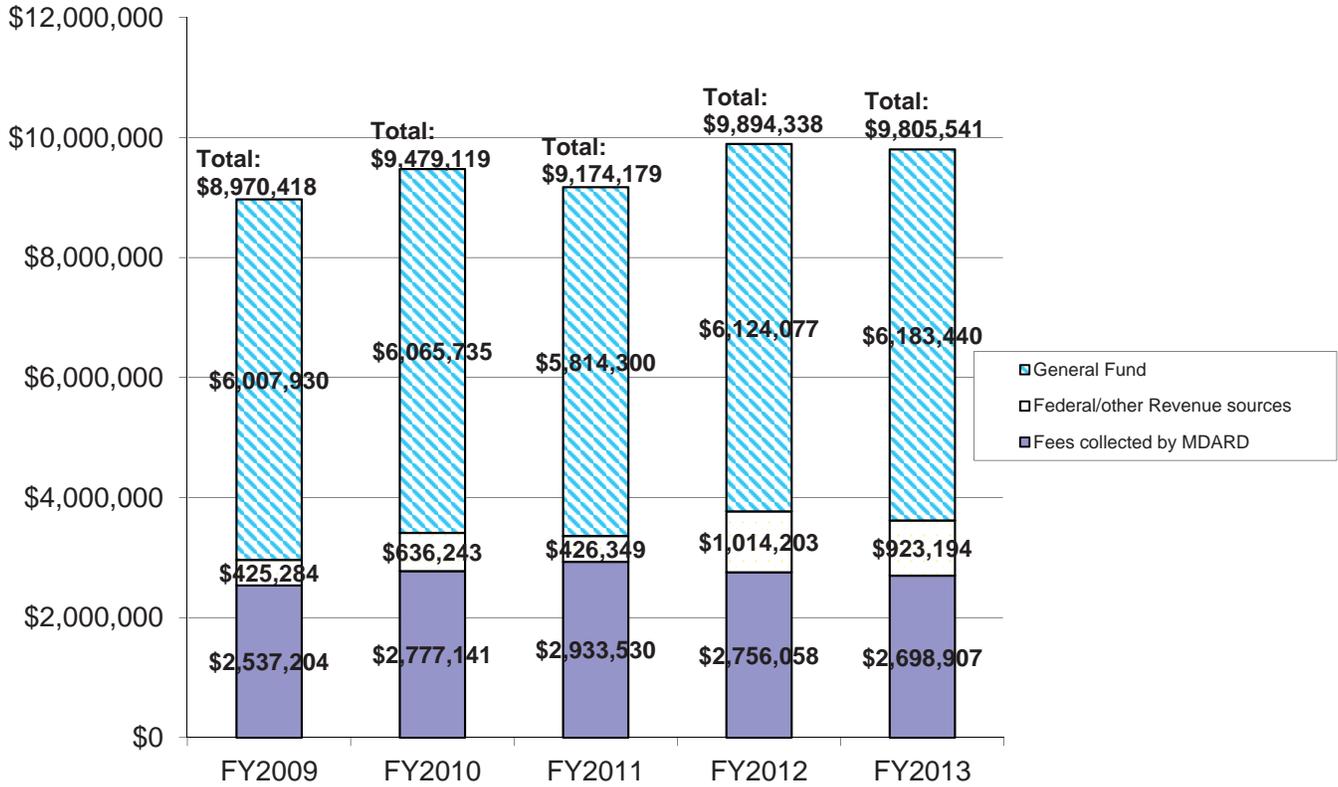


Number of MDARD-Conducted Food Inspections, Five-Year Comparison



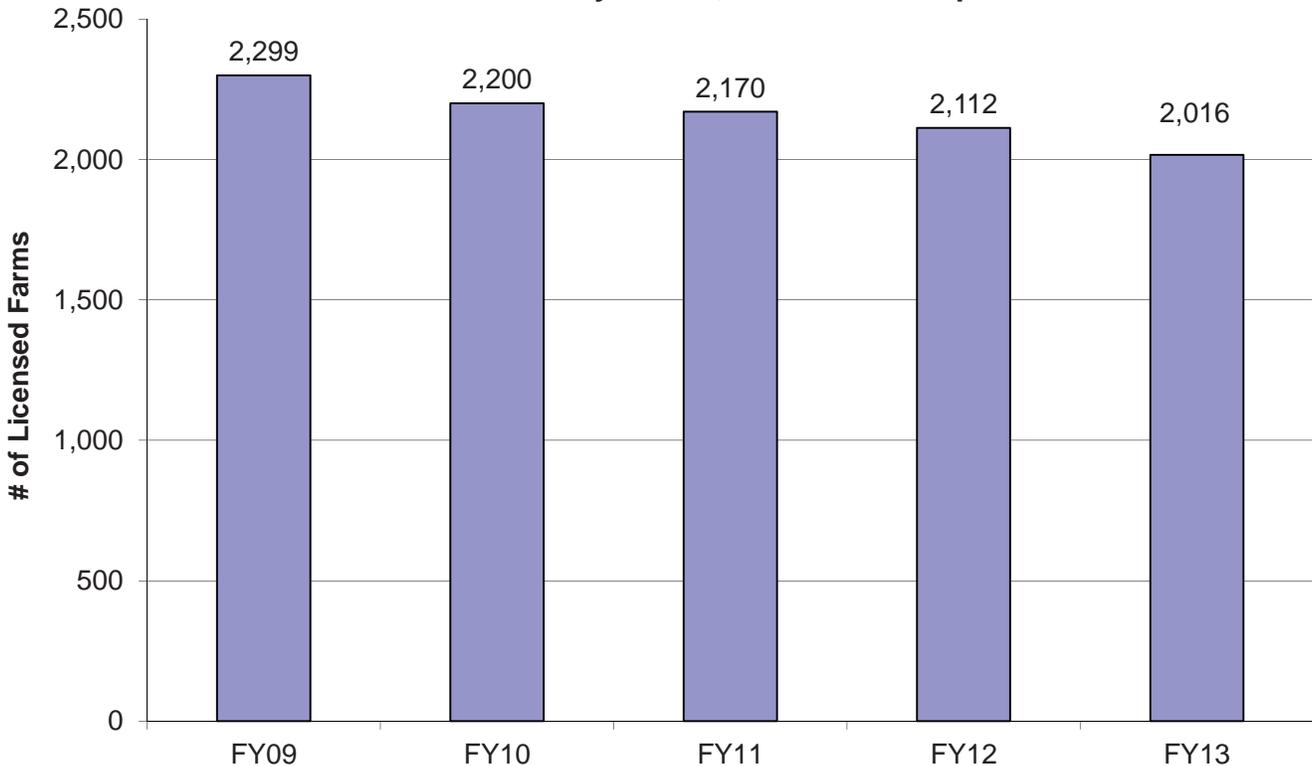
Note: Fair inspections are not included in the food inspection counts for this graph.

MDARD Food Safety Funding Sources, Five-Year Comparison

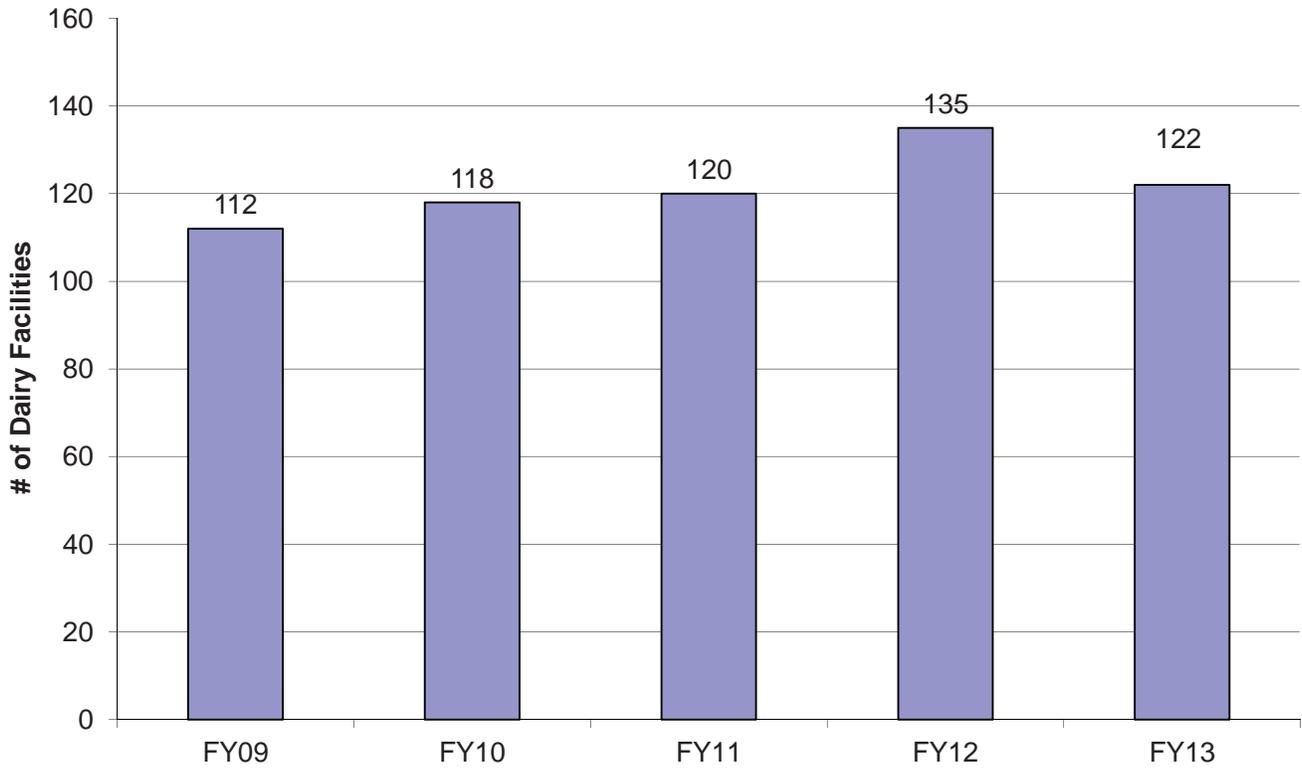


MDARD Dairy Product Safety and Inspection Program

Licensed Grade A Dairy Farms, Five-Year Comparison

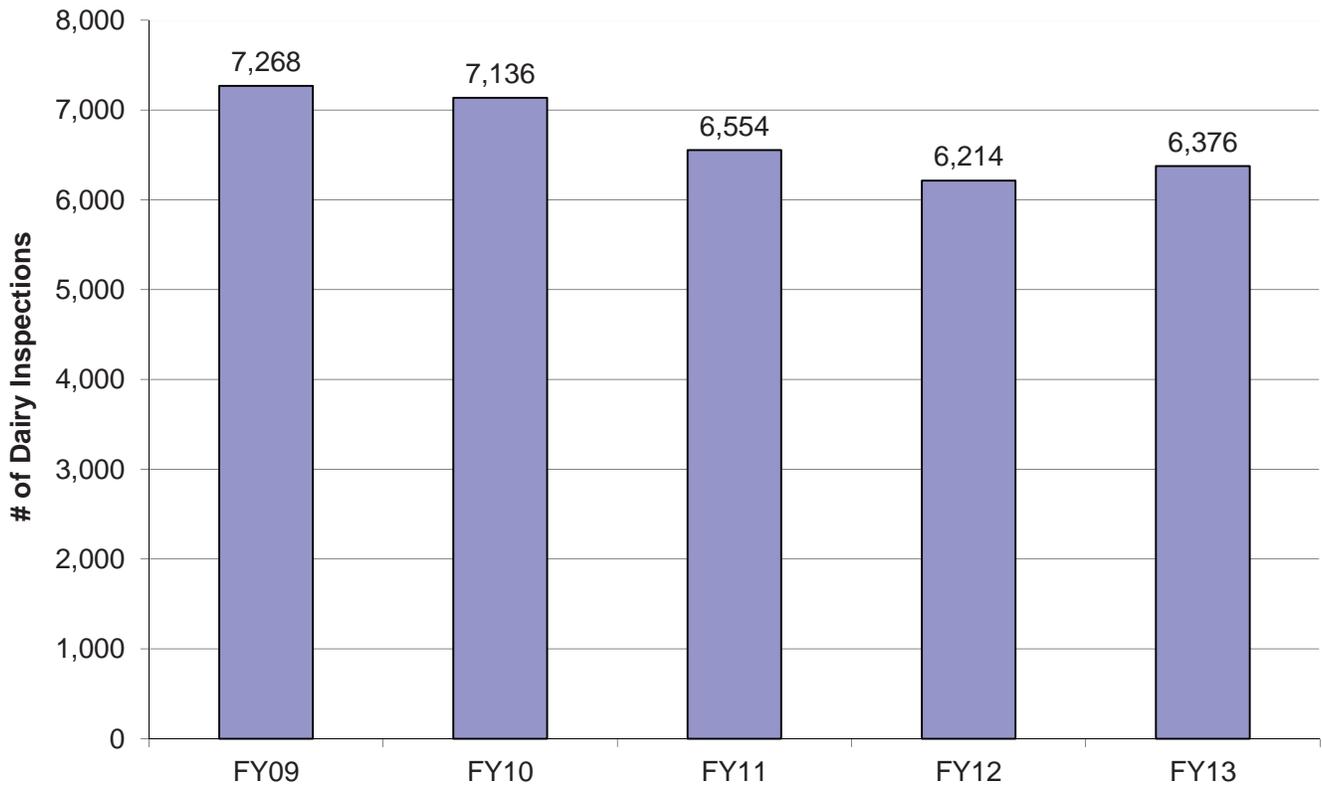


Licensed Dairy Facilities, Five-Year Comparison



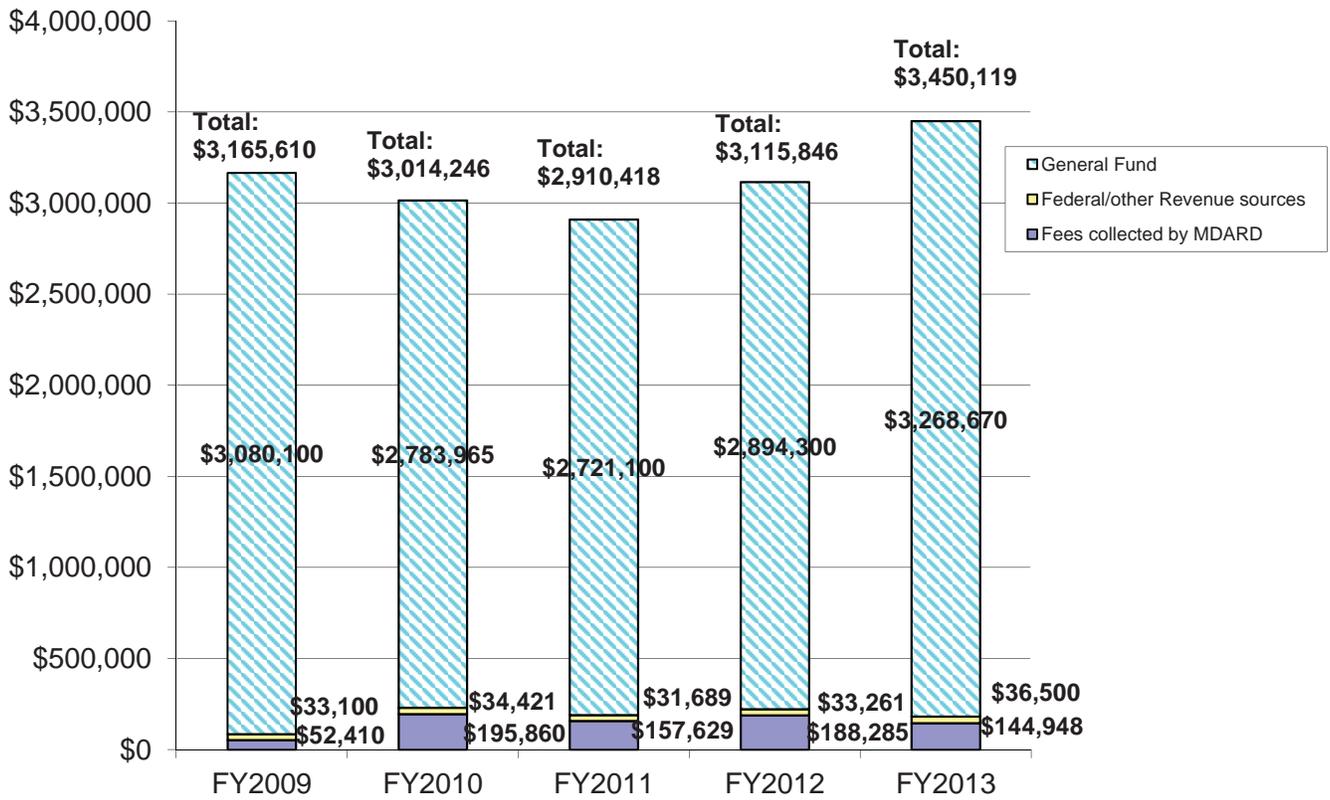
Licensed Facilities Includes: Grade A Plants, Manufacturing Plants, Grade A Milk Distributors, Grade A Transfer Stations/Receiving Stations/Tank Truck Cleaning and Grade A Single Service.

Dairy Inspections, Five-Year Comparison



Inspections Include: Farm, Plant, Hauler/Sampler/Tanker, Pasteurization, and USDA Survey.

MDARD Dairy Product Safety Funding Sources, Five-Year Comparison





www.michigan.gov/mdard

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