



# Michigan Department of Agriculture & Rural Development

Food and Dairy Division

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Annual Report  
Fiscal Year 2012

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*October 1, 2011 – September 30, 2012*

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**Food and Dairy Division  
FY 2012 Annual Report**

**Contents:**

- Introduction** ..... 1
  
- Part A – Food Safety and Inspection Program Summary** ..... 2
  - I Food Establishment Evaluation –
    - Michigan Department of Agriculture & Rural Development ..... 2
  - II Food Service Establishment Evaluation –
    - Local Health Department Food Service Program..... 6
  
- Part B – Milk and Dairy Product Safety and Inspection Program Summary** ..... 10
  
- Part C – Foodborne Illness Outbreaks and Food Recalls** ..... 14
  - I Overview of Foodborne Illness Outbreak Results..... 14
  - II Food Recalls ..... 17
  - III Recommendations ..... 20
  
- Consumer Information**..... 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 Milk and Dairy Product Safety and Inspection Program ..... 27

# Introduction

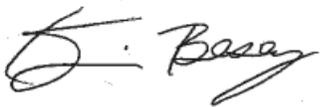
Over the past year, the Michigan Department of Agriculture and Rural Development (MDARD) has strived to be a national food safety leader. We have worked to keep our state food and dairy safety laws consistent with current science and provide a nationally consistent legal framework, yet utilize a simple and common sense approach to implementing food and dairy safety.

Our efforts have also focused on leading national efforts to build a strong emergency response capability and food safety strategy for the state's food processing industry. We strived to rebuild our service capacity following many years of declining budgets and resources by strategically focusing efforts on increased laboratory testing of the food supply, regaining agency oversight of dairy farms and assuring that food safety remains a key component for growth of the food and agriculture industry in Michigan.

The Food and Dairy Division (FDD) also expanded services to include efforts to connect Michigan's food and agriculture industry with obesity reduction and improved nutrition, through programs such as Pure Michigan FIT and Farm to School. Pure Michigan FIT is a nutrition and fitness initiative that provides tools and resources for families to give children a good start toward a long, happy and healthy life. The state's Farm to School initiative, which includes efforts to offer local foods in school cafeterias, establish school garden programs, encourage farmer visits to school classrooms and cafeterias and field trips to nearby farms, results in fresher, more nutritious food being served at schools, supports local farmers and the local economy and helps students to better understand where food comes from.

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,

A handwritten signature in black ink, appearing to read "K. Besey". The signature is fluid and cursive, with a large initial "K" and a stylized "B".

Kevin Besey, Director  
Food and Dairy Division

# **Part A – Food Safety and Inspection Program Summary**

Assuring a safe and wholesome food supply is an important part of Michigan's \$91.4 billion food and agriculture industry. Michigan production has increased to over 300 commodities on a commercial basis, making the state second nationally in agricultural diversity and providing a strong and varied portfolio for our food processing industry. The food processing industry alone has a total economic impact of nearly \$25 billion, and employs nearly 134,000 workers and has approximately 2,000 licensed food processors.

Food safety continues to be a concern for our nation and the State of Michigan. The Centers for Disease Control and Prevention (CDC) estimates that each year roughly one out of six Americans gets sick, 128,000 are hospitalized, and 3,000 die from foodborne diseases. Based on 2010 population estimates, foodborne illness strikes 1.65 million Michigan consumers each year, at a cost of up to \$4.87 billion.

Michigan's grocery and convenience stores, food processors, food service establishments, and food warehouses are regulated by the Food Safety and Inspection Program of the Food and Dairy Division (FDD), in partnership with Michigan's local health departments. 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, Michigan Department of Agriculture and Rural Development (MDARD) and local health department 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.

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 local health departments, 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 Establishment Evaluation**

Approximately 47 MDARD field staff conducted regular evaluations of grocery and convenience stores, food processors, farmers markets, temporary food operations, food operations and state and county fairs, 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 FY12, the Food Section worked to improve food safety in three major areas: engaging stakeholders; shaping national strategy; and building organizational efficiency.

### **Engaging Stakeholders**

**Food Law Update** - The updated Food Law was introduced and passed by the legislature and signed into law, effective October 2012. Major focus areas included: adoption of the 2009 FDA Model Food Code, passage of the Cottage Food Law, developing improved small business and local foods regulatory approaches, and updating Michigan's egg safety law.

**Michigan's Cottage Food Law** - The entrepreneurial spirit and opportunities available in the food industry have been especially apparent in the response to Michigan's Cottage Food Law, P.A. 113 of 2010. Under the Cottage Food Law, non-potentially hazardous foods that do not require time and/or temperature control for safety can be produced in a home kitchen for direct sale to customers at farmers markets, farm markets, roadside stands, or other direct markets. The products can't be sold to retail stores, restaurants, over the Internet, by mail order, or to wholesalers, brokers or other food distributors who resell foods. Selling directly to consumers under the Cottage Food Law provides an opportunity for new, small scale food processors to "test the waters" and see if operating a food business is the right fit for them, and could lead to full-scale, licensed food processing businesses for many cottage food businesses in the future.

### **Shaping National Strategy**

**National Food Safety Integration Efforts** - MDARD participated in FDA's 50-state food safety conference aimed at making significant progress in integrating food safety nationally.

**FDA Manufactured Food Standards** - MDARD has completed a self-assessment for all 10 FDA manufactured food standards, which is required to be done annually. Of the 10, standards 1, 7 and 10 have been met in 2012 and standard 5 will be met shortly. MDARD is also 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 is working 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.

**CIFOR** - MDARD participated in the Council to Improve Foodborne Illness Outbreak Response (CIFOR) and has used the national document recently released to develop a state guide for improving multi-jurisdiction foodborne illness response among local health departments and state agencies.

**AFDO** - MDARD staff attended the Association of Food and Drug Officials (AFDO) meeting, and brought back resources and materials to improve Michigan's food safety efforts. MDARD was also able to invite presenters from the AFDO meeting to speak at industry meetings in Michigan to share their knowledge and expertise.

## Building Organizational Efficiency

**Quality Processing Improvement Project** - A variety of improved inspection forms, guides and industry/regulator reference materials were developed to improve the food safety focus at Michigan’s licensed processing establishments. Staff training and implementation is in progress.

**Emergency Response** - Significant staff training in the use of the incident command system was accomplished throughout the year, with the goal of building several trained incident command response teams. Staff participated in an emergency exercise that focused on building capacity among partners at multiple levels.

**Environmental Sampling at Processing Plants** - Under contract with FDA, MDARD conducted environmental sampling at 10 Michigan processing plants to determine if bacterial contamination was present. Many of the samples collected resulted in enforcement action, with some leading to recalls. Several environmental contamination issues at processing plants were also investigated and resolved. MDARD will continue to build its environmental sampling capacity across the state in conjunction with FDA contract inspections during FY13.

**FDA Voluntary Retail Program Standards** - MDARD continues to conduct self-assessments. Michigan currently meets three of nine standards, and will continue assessing the other six, as resources allow.

**Food Policy Manual** - An updated policy manual was completed and a companion field guide containing various reference documents is in progress, to standardize policy implementation and provide field staff easier access to policy information.

**Meat Processing Variance Application** - A variance application procedure has been developed to assist meat processors in complying with identifying controls within complex processing operations in retail food establishments. MDARD is working with MSU and other partners to implement and improve the process through training and the development of a technical advisory committee.

## Workload

<b>Licensed Establishments</b>	<b>2011</b>	<b>2012</b>
Retail Food Establishment.....	13,784	13,599
Extended Retail Food Establishment .....	1,011	1,056
Wholesale Food Processor .....	670	698
Limited Wholesale Food Processor.....	1,192	1,143
Food Warehouse .....	1,091	1,086

	<b>2011</b>	<b>2012</b>
Mobile Food Establishment .....	114	107
Mobile Food Establishment Commissary .....	61	61
State/County Fair Temporary.....	974	983
Special Transitory Food Unit ....	42	41
Temporary Food Establishment .....	63	3
<b>Total Licensed Establishments</b> .....	<b>19,002</b>	<b>18,777</b>

Number of licensed establishments per FTE* assigned to conduct evaluations .....	432	400
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\*Full Time Employee

<b>Workforce</b>	<b>MDARD Actual</b>	<b>FDA Recommended**</b>
Number of FTEs assigned to conduct food evaluations (all types) .....	47	72-82
Number of FTEs involved in technical support, management and administrative support .....	36	NA
Total number of FTEs .....	83	NA
Number of standardized trainers .....	11	NA

*\*\*FDA recommended number from FDA Voluntary Program Standard*

## **Program Output**

### **1. Evaluations (Inspections)**

<b>Evaluation Type</b>	<b>Evaluations Conducted</b>	<b>Evaluations Due</b>
Routine .....	8,302	17,950
Follow-up .....	1,791	2,076
New License .....	1,617	1,617
Complaint Investigations .....	1,031	1,031
Fair vendors.....	983	983
Shellfish.....	14	14
Other Types^ .....	1,251	1,251
<b>Grand Total.....</b>	<b>14,989</b>	<b>24,922</b>

Total product samples tested.....	544
FDA import samples .....	19
Environmental samples .....	1,055
Average number of evaluations per FTE assigned to conduct food establishment evaluations .....	297

*^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 .....	233
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### **3. Complaint Investigations**

Consumer complaints investigated (all types).....	1,031
Illness-related .....	104
Non-illness related.....	927

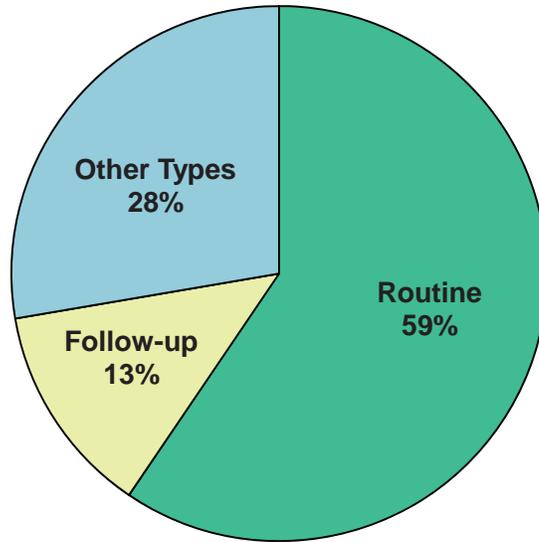
### **4. Enforcement**

Enforcement Letters .....	64
Compliance Reviews .....	23
Consent Agreements/Administrative Fines.....	19/\$22,528
Prosecutions/Fines .....	0/\$0
Seizures.....	660 (999,555 lb.)
Dollar Amount of Seized Product.....	\$2,869,037
Informal Hearings .....	3
Re-inspections/Fees.....	118/\$6,480

### **5. Miscellaneous**

Certificates of Free Sale .....	1,536
Freedom of Information Act Requests .....	54
Bottled Water Registrations .....	1,422

## Michigan Food Program Evaluations, by Type



### Funding Sources

	FY11	FY12
Fees Collected.....	\$2,933,530	\$2,756,058
Federal/Special Revenue funds .....	\$ 426,349	\$1,014,203
General fund.....	\$5,814,300	\$6,124,077
<b>Total program revenue.....</b>	<b>\$9,174,179</b>	<b>\$9,894,338</b>

### General Statistics

#### Occurrence per 100,000 population

Number of fixed food establishments* .....	174
Food related complaints .....	10

#### Program dollars spent per

Licensed establishment.....	\$526.94
Michigan citizen (Total Program Revenue).....	\$ 0.98
Michigan citizen (General Fund).....	\$ 0.61
Michigan citizen (License Fees/Others) .....	\$ 0.37

\*Fixed food establishments include retail food stores, food processors, and food warehouses.  
Michigan population - 2010 estimate, 10,095,643, U.S. Census Bureau

## II. Food Service Establishment Evaluation

### Local Health Department Food Service Program

Food safety in Michigan's restaurants is a collaborative effort among MDARD and the state's 45 independent local health departments (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." The accreditation program helps to assure accountability for the nearly \$8.3 million in state funds utilized for the Food Service Program. With the addition of locally set fees and local tax contributions, LHDs operate a \$30.5 million overall food service program. This means that for every \$0.27 spent in state funds, LHDs deliver \$1.00 worth of programs and services to Michigan residents. In Michigan, almost half of all adults (46 percent) are restaurant patrons on a typical day. In an average month, 78 percent of all households use some form of food carryout or delivery service.

## Accomplishments

Major accomplishments of the Food Service Program in FY12 include:

- Eleven LHDs completed successful accreditation reviews with 100 percent compliance with program standards.
- The Food Service Program's FDA-certified trainers standardized or re-standardized LHD trainers to promote consistent and focused inspection for food service establishments across the state. There are presently 55 active LHD standardized trainers.
- MDARD's Food Service Program staff provided 2,298 CEU equivalent hours of training to LHD inspectors.

## Projects

**Local Health Accreditation** – The Cycle 5 document was modified to reflect updates to the 2009 Food Code. Ten LHDs are presently enrolled to meet FDA Voluntary Retail Program standards; additional applications from LHDs are in pending status.

**Plan Review** – Work continues to upgrade overall plan review documents.

**Michigan's Smoke Free Air Law** - MDARD food service consultants continue to work with the Michigan Department of Community Health and LHDs to aid compliance with the state's non-smoking law in food service establishments. Michigan's Smoke Free Air Law, which took effect May 1, 2010, bans smoking in all Michigan restaurants, bars and businesses (including hotels and motels). The law allows exemptions for some cigar bars, tobacco specialty retail stores and casinos that meet certain requirements. The total number of complaints for the food establishments has fallen from 1,132 the first year to 470 in the second year of the "Michigan Smoke Free Air Law."

The following information was reported by LHDs to MDARD:

## Workload

	FY2011	FY2012
<b>Licensed Establishments</b>		
Fixed Food & Mobile Commissary.....	31,098	30,906
Temporary.....	10,326	10,093
Mobile.....	379	392
Vending.....	3,425	3,413
Special Transitory Food Unit (STFU).....	888	914
<b>Total Licensed Establishments</b> .....	<b>46,116</b>	<b>45,718</b>
Number of licensed establishments per FTE* assigned to conduct evaluations .....	238	230

\*FTE = Full time employee.

NOTE: See pie charts on page 9 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).....	199	193	272
Number of FTEs involved in plan review, management and administrative support .....	153	NA	NA
Total number of FTEs .....	352	NA	NA
Number of standardized trainers .....	55	NA	NA

# Program Output

## 1. Evaluations (Inspections)

Establishment Type	Evaluations Conducted
Fixed food service - routine .....	56,152
Mobile, Vending, STFU.....	3,546
<b>Subtotal .....</b>	<b>59,698</b>
Follow-up evaluations.....	15,795
Temporary food service .....	10,093
<b>Grand Total.....</b>	<b>85,586</b>
Average number of evaluations per FTE assigned to conduct food establishment inspections .....	430

## 2. Plan Review

Number of plans received for review .....	1,863
Number of plans approved .....	1,522

## 3. Investigations

Consumer complaints investigated (all types).....	3,672
Foodborne illness outbreaks (met MI definition).....	37

## 4. Enforcement

Administrative action (office conference, informal hearing, formal hearing, civil fine, order) .....	1,239
Court action (civil, criminal) .....	13

## Funding Sources

	FY11	FY12
Fees collected by local health department and local tax dollars .....	\$19,426,616	\$22,283,916
State dollars - local public health operations (LPHO).....	\$9,317,287	\$7,821,194
<b>Total local health program revenue .....</b>	<b>\$28,743,903</b>	<b>\$30,105,110</b>

## General Statistics

### Occurrence per 100,000 population

Number of fixed food service establishments.....	306
Food related complaints .....	36
Foodborne illness outbreak investigations .....	0.4

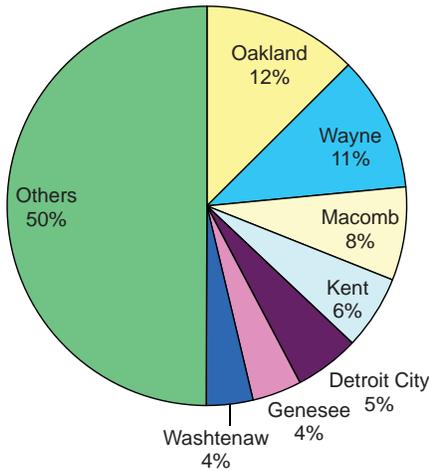
### Program Dollars Spent Per

Licensed establishment.....	\$841.00
Michigan Citizen (Total Program Revenue).....	\$ 3.04
Michigan citizen (Fees collected by LHDs and local tax dollars).....	\$ 2.25
Michigan citizen (LPHO/state dollars) .....	\$ 0.79

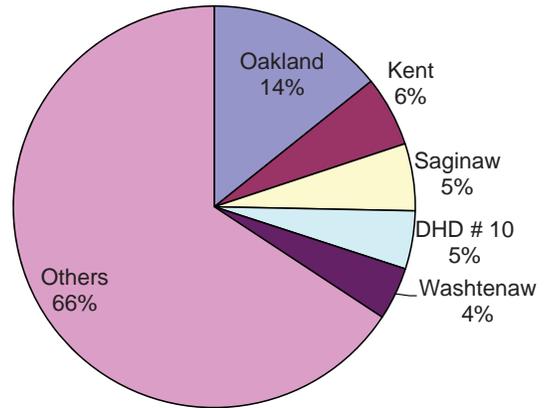
Michigan population - 10,095,643, 2010 estimate, U.S. Census Bureau

# Distribution of License Types by Local Health Department

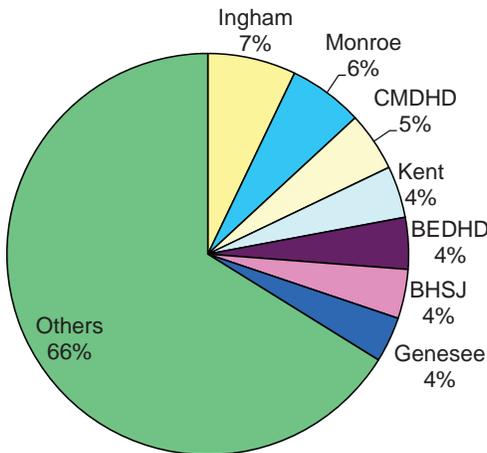
## Fixed Licenses



## Temporary Licenses



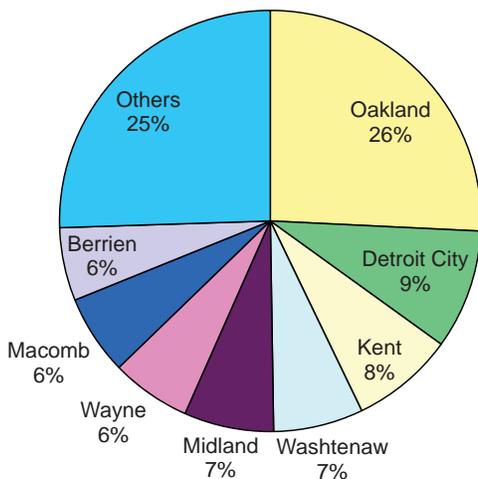
## Special Transitory Food Unit (STFU) Licenses



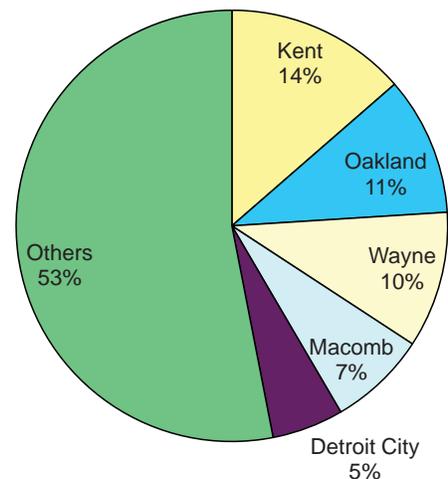
### Abbreviations:

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 – Milk and Dairy Product Safety and Inspection Program Summary**

Michigan's dairy industry is the largest single segment of Michigan agriculture. Milk is the top ranked commodity in terms of cash receipts, with the dairy industry contributing about 22 percent of the total cash receipts for Michigan agriculture annually. Michigan ranks 8th nationally in milk production with a \$14.7 billion impact on the state's economy. Our state's dairy farms produced approximately 8.9 billion pounds of milk in 2012.

Michigan boasts 2,112 dairy farms, including 1,824 Grade A farms and 288 manufacturing farms, which are inspected by MDARD Dairy Section staff. In addition, the Milk and Dairy Product Safety and Inspection Program licenses and inspects 91 Michigan dairy processing plants and 44 other dairy facilities; and 1,642 milk hauler/samplers, milk tank trucks, and milk transportation companies. Enforcement is a strong component of the program. Law violations resulted in 60 dairy farm permit suspensions and the removal of 11,730,662 pounds of suspect milk from the market with an estimated dollar value of \$2,032,924.

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; and ensure 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 2012. 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. This assistance helps new businesses get off to a great start, which directly translates to new jobs and a stronger economy for Michigan.

### **Accomplishments**

Major accomplishments of the Milk and Dairy Product Safety and Inspection Program in FY12 include:

#### **Team Excellence Award: Continental Dairy Team**

Congratulations to Brandon Verhougstraete, Amy Brown, Shari Blonde, Paula Dankert, Beth Swank, Dennis Hunt, Karen McNamara, and Michelle Crook, who received a Team Excellence Award from the Michigan Department of Agriculture and Rural Development for their work with Continental Dairy. MDARD's Continental Dairy Team spent significant time and energy assisting this large dairy plant with meeting all legal requirements in order to start processing milk at their facility approximately three months ahead of schedule. The Continental Dairy plant in Coopersville is one of Michigan's largest dairy processing plants constructed in the last 20 years, which meant hundreds of staff hours were spent reviewing equipment diagrams, consulting on plant construction, ensuring producer security and milk safety requirements were met, conducting training with plant staff to ensure the safety of the product, and addressing waste management issues. The Continental Dairy plant was officially licensed in March 2012. A second dairy processing facility, the Fair Oaks facility, is currently under construction in Coopersville at the site of the Continental Dairy plant. The Fair Oaks facility will produce aseptic and extended shelf life dairy products once completed in the fall of 2013.

## **Value-Added Milk Processing Facilities**

MDARD milk safety inspection staff continues to work 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. The milk 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. Currently there are over a half a dozen new dairy processing plants in various stages of construction across the state.

## **Dairy Plant Expansions**

MDARD's milk safety inspection staff are working with existing dairy processing plants in the state to expand their operations in Michigan. These include the Meijer acquisition and expansion of the Bareman's plant in Holland, Prairie Farms in Battle Creek and the Reed City Milk Plant (Yoplait) in Reed City. Other dairy plants in the state are looking to expand their dairy processing capacity in 2013.

## **Projects**

### **Certified Industry Farm Inspection Program**

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) 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 FY12. 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 on February 1, 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. Those positions were filled and the new staff are training to take their assigned work areas in the spring of 2013. MDARD is slated to resume the entire farm inspection program as of March 1, 2013.

### **Green Cedar Dairy Foodborne Illness Investigation and Recall**

MDARD's Food & Dairy Division began a foodborne illness investigation on December 20, 2011, at Green Cedar Dairy in Dearborn related to the Ackawi Cheese and Chives Cheese produced at this facility. Subsequent testing of cheese samples collected on December 21, 2011 confirmed the presence of *Listeria monocytogenes* and a Class I recall was issued on December 28, 2011. Environmental samples collected on January 11, 2012 from various pieces of equipment and surfaces within the facility yielded results that were positive for *Listeria monocytogenes*. The cheese and environmental samples were PFGE matches to isolates obtained from the victims of the foodborne illness. Production of Ackawi Cheese and Chives Cheese was suspended by MDARD in January 2012 and an administrative hearing was held with the owner of Green Cedar Dairy on January 18, 2012. The Food & Dairy Division has continued to work with Green Cedar Dairy to address the *Listeria monocytogenes* contamination issue in their facility throughout the remainder of 2012. As of March 2013, production of the two cheese products has not been allowed to resume, although other cheese production areas of the plant were not affected by the contamination and cheese is being safely produced in these other areas at the plant. The Food & Dairy Division is continuing to work with Green Cedar Dairy to address the *Listeria monocytogenes* contamination issue in their facility.

## Workload

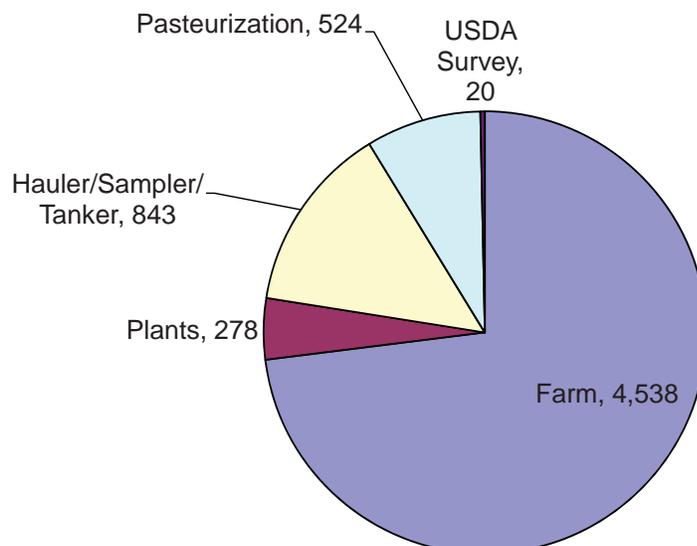
Licensed Establishments	FY11	FY12
Farms .....	2,170	2,112
Grade A Plants.....	33	37
Manufacturing Plants (includes cheese & ice cream).....	51	54
Grade A Milk Distributors .....	13	21
Grade A Transfer Stations/Receiving Stations/Tank Truck Cleaning.....	15	14
Grade A Single Service.....	8	9
Milk Tank Trucks and Can Milk Trucks .....	704	703
Milk Transportation Companies .....	123	125
Milk Haulers/Samplers (currently licensed) .....	1,010	814
Certified Fieldpersons.....	34	38
<b>Total Licenses.....</b>	<b>4,161</b>	<b>3,927</b>

Labs Approved/Certified	FY11	FY12
Certified Industry Labs.....	10	3
Approved Drug Screening Sites .....	36	39
Certified Commercial Labs .....	4	6
Approved/Certified Industry Analysts.....	200	237
Number of licensed establishments per FTE assigned to conduct inspections.....	320	245

## Workforce

Number of FTEs assigned to conduct dairy inspections (dairy farm, plant and other inspections, and pasteurization evaluations) .....	16
Number of FTEs involved in management, technical and administrative support .....	4
Total number of FTEs .....	20

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



# Program Output

## 1. Inspections and Evaluations

Inspection/Evaluation Type	Inspections/Evaluations Conducted
Farm* .....	4,538
Plants.....	278
Hauler/Sampler/Tanker.....	854
Pasteurization.....	524
USDA Survey.....	20
<b>Total Inspections</b> .....	<b>6,214</b>
Average number of inspections per FTE assigned	
to conduct dairy establishment inspections* .....	388
Grade A Survey .....	75
Laboratory Analysts Evaluated .....	162
Laboratories Evaluated.....	14
Drug Residue Screening Sites Evaluated .....	24
Total milk and milk product samples taken.....	5,440

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

## 2. Investigations

Consumer complaints investigated (all types).....	2
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## 3. Enforcement

Enforcement letters .....	173
Informal Hearing/Compliance Reviews .....	9
Administrative Fines Issued.....	79
Administrative Fines Collected by MDARD (not including Drug Residue Fines).....	\$7,950
Reinspection Fees Collected.....	\$2,100
Drug Residue Fines Collected.....	\$6,350
Prosecutions.....	0
Seizures.....	1
Dollar amount of seized products .....	\$6,000
Total Permit Suspensions .....	60
Total Pounds of Contaminated Milk Disposal .....	11,730,662 lbs. (\$2,032,924)

## 4. Miscellaneous

Certificate of Free Sale.....	398
Freedom of Information Act Requests .....	69

## Funding Sources

	FY11	FY12
Fees collected by MDARD .....	\$157,629	\$188,285
Special Revenue Funds .....	\$31,689	\$33,261
General Funds.....	\$2,721,100	\$2,894,300
<b>Total Program Revenue</b> .....	<b>\$2,910,418</b>	<b>\$3,115,846</b>

## General Statistics

### Occurrence Per 100,000 Population

Number of dairy farms .....	21.0
Number of dairy manufacturers .....	0.9

**Program Dollars Spent Per:**

Licensed establishment.....	\$791.43
Michigan citizen (Total Program Revenue).....	\$ 0.31
Michigan citizen (General Fund).....	\$ 0.29
Michigan citizen (License Fees/Other) .....	\$ 0.02

*Michigan population - 10,095,643, 2010 estimate, U.S. Census Bureau*

## **Part C – Foodborne Illness Outbreaks and Food Recalls**

The increasingly globalized and complex nature of our food supply requires the Food and Dairy Division and our food safety partners to work more closely than ever to rapidly detect, investigate, and control food contamination incidents. In fact, the CDC has documented increased numbers of reported multi-state outbreaks in recent years (<http://www.cdc.gov/outbreaknet/outbreaks.html>).

MDARD and Michigan’s 45 LHDs provide the front line investigators for foodborne illness investigations. Staff often coordinates activities with professionals from local, state and federal government and the private sector.

Foodborne illness outbreaks are identified by investigation of both unconfirmed foodborne illness complaints and reports of laboratory confirmed illnesses. Close coordination of response efforts prevents illnesses and saves lives through early detection of outbreaks and rapid implementation of control measures. Control measures include but are not limited to seizures, facility license limitations or closures, and food recalls. Division staff participated in intensive traceback investigations throughout the year as part of larger multi-state investigations. Without accurate tracebacks, outbreaks often cannot be tracked to their sources and the root causes of the outbreaks identified.

Lessons learned from these investigations are utilized by MDARD, other agencies and food industry decision-makers to improve risk-based food regulatory and prevention strategies thereby limiting future outbreaks from the same causes.

Tough budget realities have resulted in reduced staffing and increased staff turnover at both the state and local level health department levels. To meet the increasing need for training and collaboration, MDARD, local health department personnel and staff from the Michigan Department of Community Health (MDCH) worked collectively to provide multi-disciplinary training in foodborne outbreak investigation at the 2012 Michigan Environmental Health Association annual educational conference.

### **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), local health departments are required to investigate the causes of disease. The Michigan Food Law of 2000, sec. 3129(2), requires local health departments 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.

A total of 109 events meeting the Michigan definition of a foodborne illness outbreak were reported by local health departments to MDARD in FY12. Michigan Local Public Health Accreditation Program findings show 99 percent of local health departments responded to a foodborne illness complaint within 24 hours of notification, and 97 percent met foodborne illness investigation procedure requirements relating to documentation and reporting of foodborne illness outbreaks, an improvement over FY11 (91 percent).

*Note: Accreditation minimum program requirement reviews are based on a summary of random sample evaluations, and are not an evaluation of every foodborne illness complaint received.*

Although ill individuals in reported outbreaks shared common food sources, it was often not possible to rule out other routes of illness transmission, particularly in smaller incidents. Of the 109 reported foodborne illness outbreaks, local health departments identified a total of 30 incidents as confirmed or probable foodborne illness outbreaks after complete investigation, an increase of nine percent from FY11. This number continues to be low due to indeterminate conclusions or lack of conclusions stated in final reports.

Total # of incidents reported to MDARD .....	109	(1,018 illnesses)
Total # of incidents identified as confirmed or probable foodborne illness outbreaks.....	30	(613 illnesses)
Median number of illnesses reported per confirmed or probable foodborne outbreak .....	3	

Leading causative agents of foodborne outbreaks reported to MDARD in 2012 were:

Norovirus .....	3
<i>Salmonella</i> species.....	2
<i>E. coli</i> O157 .....	1
<i>E. coli</i> O26 .....	1
<i>Staph aureus</i> .....	1
<i>Clostridium botulinum</i> (botulism) .....	1
<i>Clostridium perfringens</i> .....	1

Of the incidents reported to MDARD, 10.9 percent identified a causative agent.

**Foodborne Illness Outbreaks Caused by Norovirus**

National data recently released by the 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 176 norovirus outbreak reports from local health departments from January 1 – December 10, 2012. Of the 176 outbreaks, only six outbreaks (3.4 percent) were subsequently categorized as restaurant/food related. Healthcare settings and schools continued to report a greater proportion of the outbreaks.

**Noteworthy Incidents from FY12:**

**Haff Disease in SE MI associated with fish consumption**

MDARD was notified by MDCH of a suspected case of Haff Disease in Southeast Michigan. Haff Disease is a rare condition characterized by the development of swelling and breakdown of skeletal muscle with a risk of acute kidney failure within 24 hours of ingesting fish. The case involved fish purchased at a Michigan grocery store and consumed prior to onset of the illness. MDARD and MDCH collaborated on the traceback investigation that was shared with FDA. No other illnesses were reported in Michigan relating to this type of illness.

### ***Listeria monocytogenes* in a food processing plant**

As part of an FDA contract inspection, MDARD food staff conducted routine environmental sampling at a Michigan food processor. Contamination with *Listeria monocytogenes* was found in various areas of the food plant. Production was suspended at the facility during the investigation and decontamination. Human illness surveillance data was reviewed and no illnesses were linked to consumption of foods processed at this location. MDARD worked with FDA, the firm and its consultants to address the contamination issues at the plant and assisted the plant in resuming operations.

### ***Salmonella* Infantis multistate human outbreak associated with dry dog food**

MDARD's Geagley Laboratory in East Lansing detected *Salmonella* in an unopened bag of a nationally distributed dry dog food collected during routine retail testing of dry pet food by the MDARD Pesticide and Plant Pest Division. The pet food originated from a South Carolina plant. The results were shared with public health authorities who used genetic fingerprinting techniques to identify this previously undetected outbreak. By mid-summer, there were 49 known human laboratory confirmed illnesses from 20 states and Canada, including two in Michigan, and dozens of pet illnesses connected to the discovery. A number of the human cases reported exposure to dry dog food. Collaboration between MDARD's Rapid Response Team (RRT) and the Pesticide and Plant Pest Management Division directly contributed to the nationwide recall by the manufacturer of 17 brands of dry dog and cat food (over 30,000 tons of product, or 1.5 million 40 lb. bags). A summary of this investigation is featured on the CDC web page - <http://www.cdc.gov/salmonella/dog-food-05-12/index.html>

## **Noteworthy Food and Feed Outbreaks from FY12:**

### ***Listeria monocytogenes* in soft cheeses produced in Southeast Michigan**

Genetic fingerprinting techniques revealed the bacteria isolated from two 2011 Michigan cases of listeriosis were indistinguishable from *Listeria monocytogenes* found in a cheese sample collected at a Michigan cheese plant in 2002. As a result, MDARD sampled ackawi and chives cheeses from the same manufacturer in December 2011 and found them to be contaminated with the same genetically linked organism found in 2002. Production at the plant was limited during the investigation and clean-up. The firm's ackawi and chives cheeses were subsequently recalled. MDARD's sampling at the plant found multiple locations within the environment contaminated with the organism resulting in a summary suspension of their license to manufacture these and other varieties of cheese. MDARD continues to work with the firm to develop measures to address the environmental and manufacturing issues that might contribute to product contamination. The firm is currently manufacturing two cultured dairy products, and is working with MDARD to initiate the manufacture of the ackawi and chives cheeses in the future.

### ***Clostridium perfringens* outbreak in correctional facility in Kent County**

Over 100 illnesses among prisoners of a county correctional facility were associated with consumption of a contaminated meal. Several inmates were tested and found to be positive for *Clostridium perfringens*. Laboratory analysis of leftover food showed the presence of *C. perfringens* toxin. This toxin is primarily associated with food not being held or cooled at appropriate temperatures, particularly food that is cooked, cooled, and reheated at a later time. MDARD's RRT epidemiologist worked closely with the local health department and MDCH during the investigation, which identified multiple food handling abuses at the facility.

### ***Escherichia coli* O26 outbreak (multistate) associated with clover sprouts**

A total of 29 laboratory-confirmed cases of *Escherichia coli* O26 infection occurred in 11 states, which included 11 confirmed and one probable case in Michigan. Illnesses were associated with consumption of raw clover sprouts purchased at different locations of a popular sandwich chain restaurant. MDARD food staff worked closely with FDA and multiple local health departments to conduct traceback investigations of the implicated product. FDA used this and other states' information to trace the seeds back to a common seed lot that was distributed nationwide. Ultimately, the sandwich chain permanently ceased all service of sprouts in its products as a result of this national outbreak investigation.

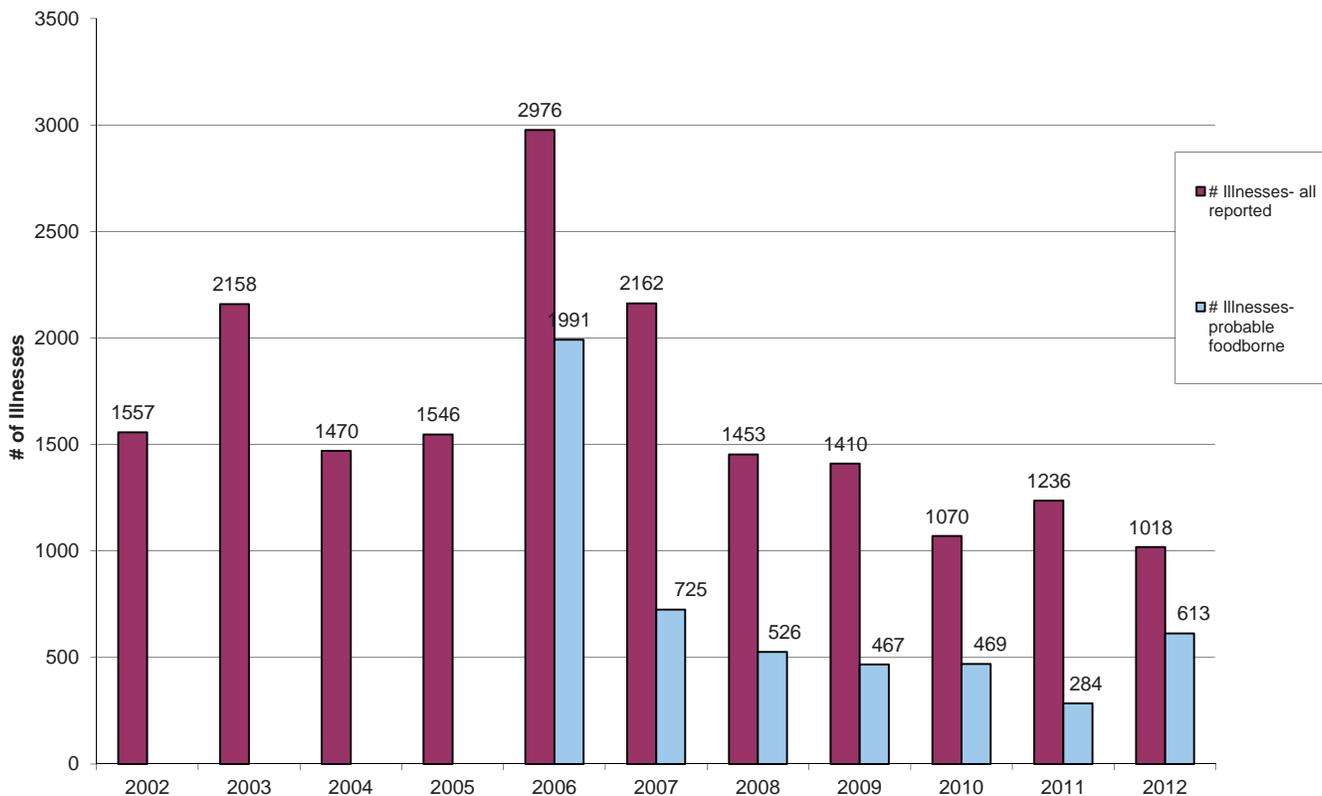
### **Listeria monocytogenes multistate outbreak associated with blue cheese sold interstate**

MDARD was notified by MDCH of a confirmed case of listeriosis in a resident of another state who had consumed a specific brand of cheese at a wedding in Michigan. The implicated cheese had been manufactured in another state and had been recalled after the wedding because testing had found *Listeria monocytogenes* contamination in the finished cheese product. Additional suspect foodborne illness cases in people who had also attended the wedding and consumed the implicated cheese were identified in other states, which included eight cases in Michigan. Following a multi-disciplinary investigation which included a multi-level team of local, state and federal health and regulatory officials, this outbreak was limited in its nature. In this instance, early communication among FDA, industry and state officials allowed for rapid sharing of clinical and food testing results, leading to a recall of the implicated cheese.

## **II. Food Recalls**

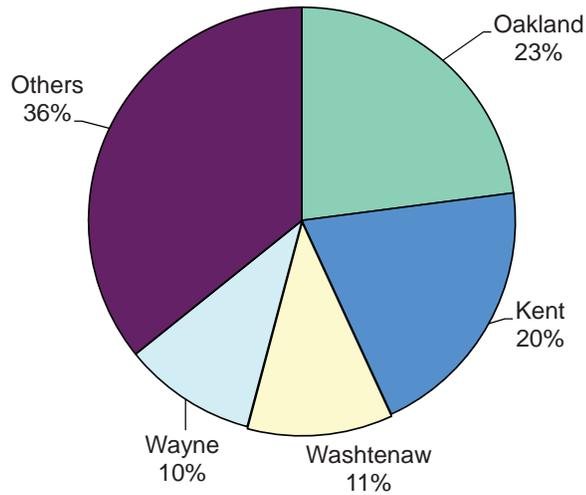
Illnesses traced to consumption of a natural peanut butter manufactured by a processor in New Mexico led to a recall of multiple nut butter products associated with a multi-state outbreak of *Salmonella* Bredeney. A total of 42 people infected with *Salmonella* Bredeney were reported from 20 states, including one laboratory-confirmed case in Michigan. The processor was found to have shipped products that had previously tested positive for Salmonella, and as a result of state and federal investigations, the New Mexico firm recalled all raw and roasted nuts and nut products manufactured between March 1, 2010 and September 24, 2012. Dozens of additional manufacturers who used the products as ingredients subsequently conducted their own recalls, resulting in the recall of hundreds of products.

**Ten-Year Summary of Foodborne Illness Outbreaks, by Number of Reported Illnesses  
2002-2012**



## Foodborne Illness Outbreaks, by Local Health Department

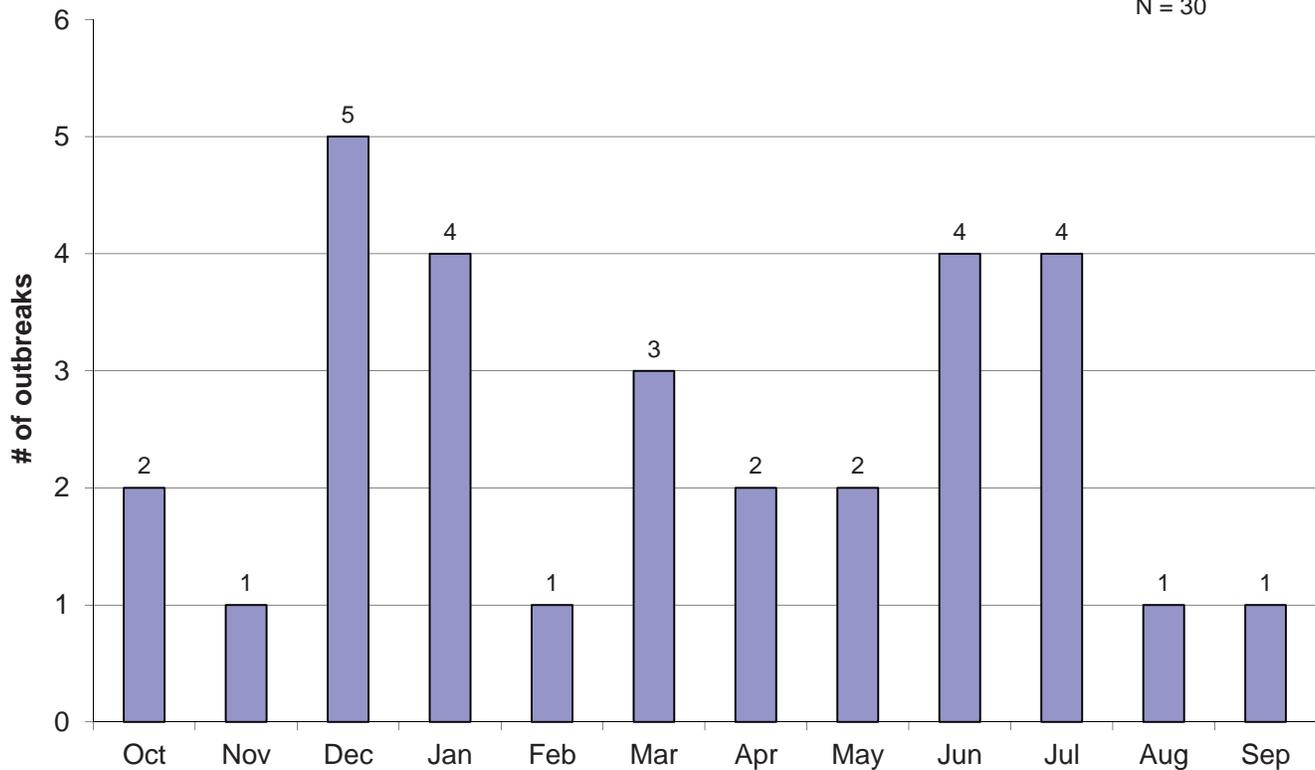
N = 100



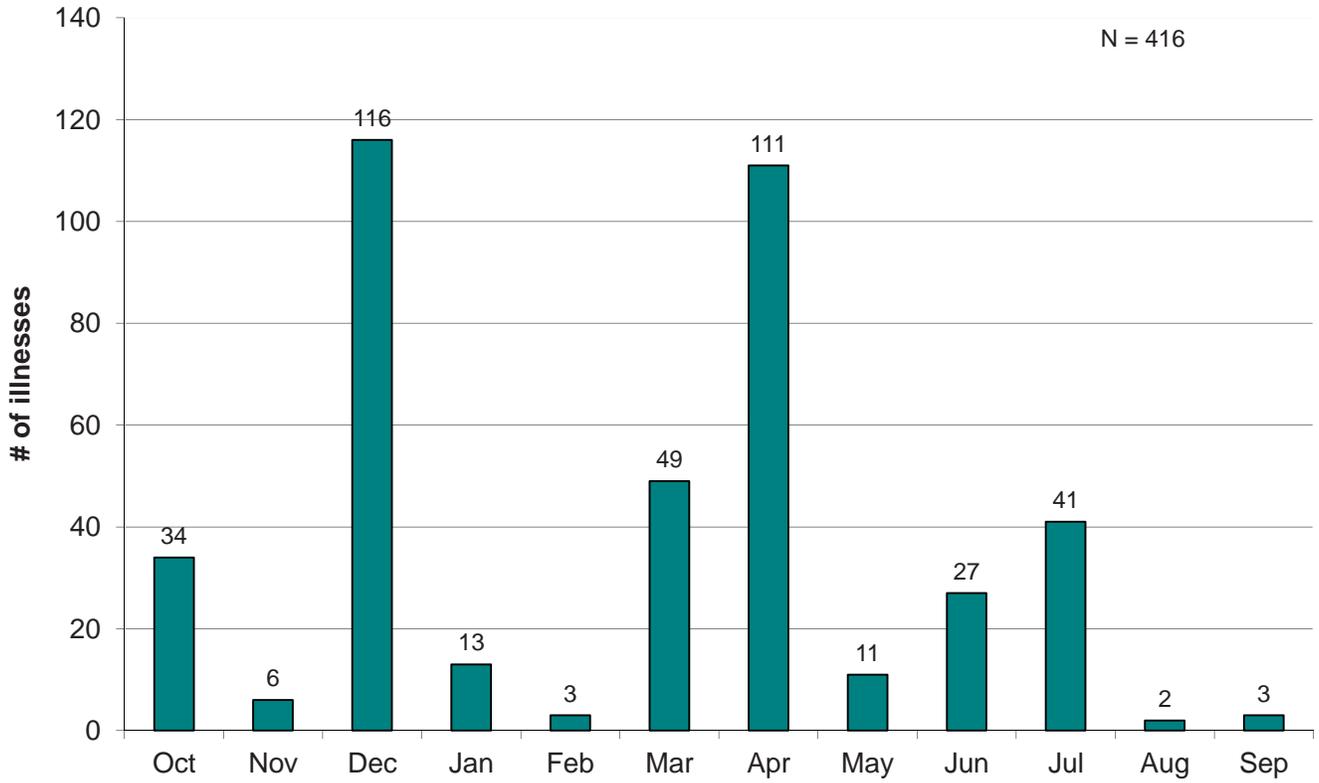
*Note: Data cannot be interpreted as an indicator of the relative safety of foods in any jurisdiction. Health departments with larger populations would be expected to have larger numbers of outbreaks.*

## Probable Foodborne Illness Outbreaks, Number of Events, by Month

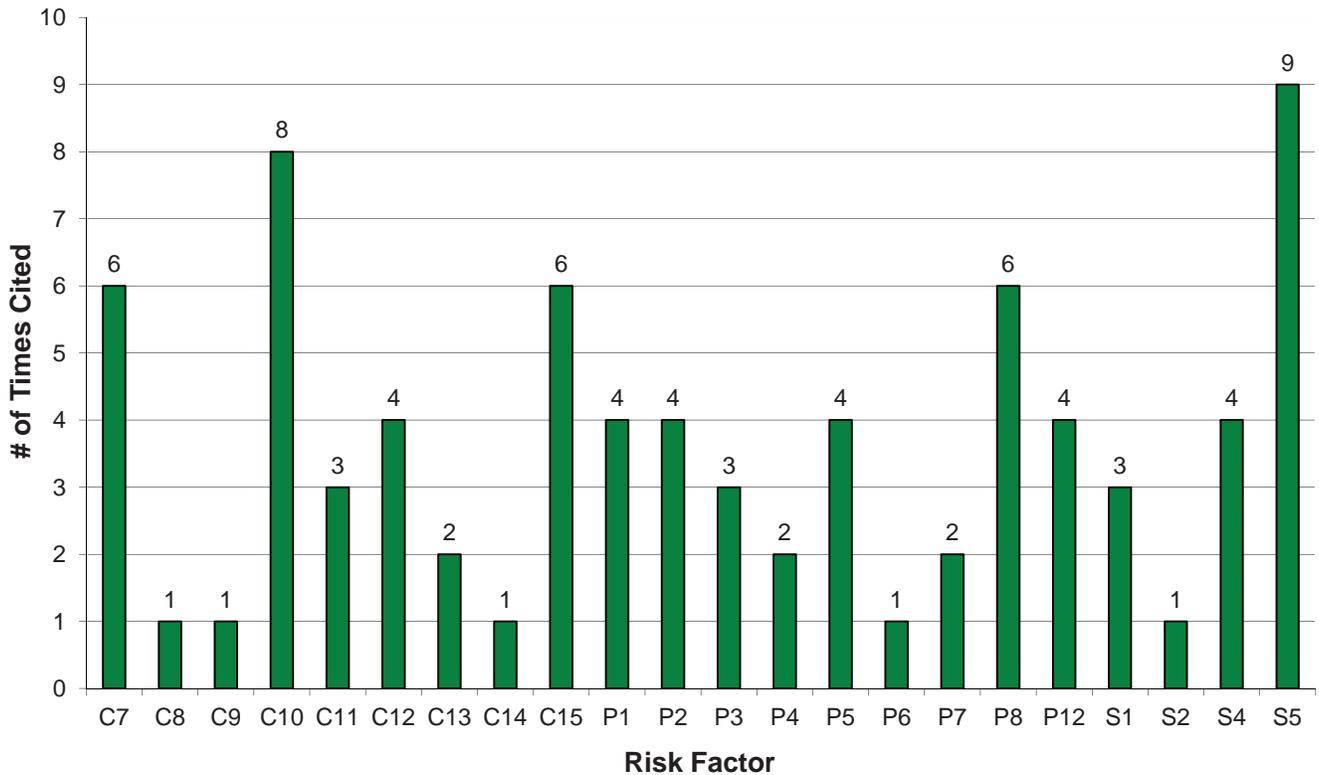
N = 30



### Probable Foodborne Illness Outbreaks, Number of Illnesses, by Month



### CDC Risk Factors Reported by MDARD and Local Health Departments, Fiscal Year 2012



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

C7	Contaminated raw product- food was intended to be consumed raw or undercooked/processed
C8	Foods originating from sources show to be contaminated or polluted
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
C13	Foods contaminated by non-food handler/worker/prepared who is suspected to be infectious
C14	Storage in contaminated environment
C15	Other source of contamination
P1	Food preparation practices that support proliferation of pathogens (during food preparation)
P2	No attempt was made to control the temperature of implicated food or the length of time food was
P3	Improper adherence of approved plan to use Time as a Public Health Control
P4	Improper cold holding due to malfunctioning refrigeration equipment
P5	Improper cold holding due to an improper procedure or protocol
P6	Improper hot holding due to malfunctioning equipment
P7	Improper hot holding due to improper procedure or protocol
P8	Improper/slow cooling
P12	Other situations that promoted or allowed microbial growth or toxic production
S1	Insufficient time and/or temperature control during initial cooking/heat processing
S2	Insufficient time and/or temperature during reheating
S4	Insufficient or improper use of chemical processes designed for pathogen destruction
S5	Other process failures that permit the agent to survive

### 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.

### Consumer Information

#### Consumer Food Safety Information

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](http://www.michigan.gov/foodsafety).

# Appendix I – Workload Data by LHD

## FY12 Workload – Output

Michigan Local Health Department Quarterly Reports											
Summary 2012											
	INSPECTIONS CONDUCTED					INSPECTIONS DUE	PLAN REVIEW		INVESTIGATIONS		EVALUATION SCHEDULE
	3. Fixed food establishments	4. Mobile, vending & sifu	5. Temporary food establishments	6. Follow-up inspections	Total Number of Inspections Conducted (all inspection types)	7. Fixed, mobile, vending & sifu inspections due (annual total)	8. Number of plans received for review	9. Number of plans approved	10. Consumer Complaints Investigated	Number of Consumer Complaints per 100,000 People	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	584	53	128	146	911	649	15	12	11	9.87	6/6/6
BEDHD	691	49	137	114	991	730	35	36	47	28.16	6/6/6
Bay	821	26	139	49	1,035	26	6	6	55	51.03	6/6/6
Benzie-Leelanau	905	26	111	41	1,083	320	12	11	9	22.94	6/6/6
Berrien	1,119	49	305	98	1,571	1,108	20	7	29	18.49	6/6/6
BHSJ	990	150	254	132	1,526	980	29	20	44	28.71	6/6/6
Calhoun	862	60	158	84	1,164	0	14	7	50	36.73	6/12/12
CMDHD	1,159	79	244	203	1,685	1,159	30	26	94	49.26	6/6/6
Chippewa	336	11	40	38	425	332	7	4	6	15.58	6/6/6
Delta-Menominee	306	21	212	100	639	378	7	4	16	26.19	6/6/6
Detroit City	2,168	98	334	474	3,074	0	53	35	100	14.01	6/12/18
Dickinson-Iron	374	6	63	136	579	474	4	4	11	28.96	6/6/6
DHD # 2	366	21	111	30	528	528	14	10	54	80.40	6/12/18
DHD # 4	639	11	85	58	793	951	21	13	14	17.75	6/6/6
DHD # 10	1,494	122	472	187	2,275	1,600	17	23	63	24.08	6/6/6
Genesee	2,355	100	190	167	2,812	1,949	34	32	155	36.40	6/6/12
Grand Traverse	511	71	81	104	767	734	42	34	21	24.14	6/6/12
Holland City*	179	32	11	104	326	194	7	8	17	51.44	6/6/12
Huron	252	24	128	154	558	299	10	6	4	12.08	6/12/12
Ingham	1,657	172	126	1,157	3,112	2,108	103	90	74	26.34	6/6/6
Ionia	338	23	89	36	486	353	6	6	18	28.17	6/6/6
Jackson	844	78	96	62	1,080	1,026	31	21	62	38.69	6/6/6
Kalamazoo	1,697	149	287	314	2,447	0	40	47	114	45.54	6/6/12
Kent	3,454	283	572	974	5,283	3,737	101	81	327	54.26	6/6/6
Lapeer	304	42	86	67	499	477	21	11	28	31.70	6/6(12Sea)/6
Lenawee	667	66	357	48	1,138	676	21	15	38	38.04	6/6/6
Livingston	763	59	73	57	952	822	20	19	89	49.18	6/6/2006
LMAS	448	15	207	38	708	708	20	14	3	8.37	6/6/6
Macomb	4,234	121	234	1,173	5,762	4,348	140	111	270	32.11	6/6/6
Marquette	359	28	119	120	626	383	10	2	18	26.83	6/12/18
Midland	464	53	58	61	636	0	23	23	36	43.05	6/6/6
Mid-Michigan	912	93	223	208	1,436	1,800	41	35	12	6.62	6/6/12
Monroe	791	43	125	84	1,043	1,043	30	10	57	37.49	6/6/12
Muskegon	1,008	92	203	392	1,695	1,098	42	36	110	63.88	6/6/6
Northwest	1,021	68	191	129	1,409	1,089	18	18	7	6.58	6/6/6
Oakland	8,402	594	1,438	4,622	15,056	4,501	364	307	890	74.02	6/6/6
Ottawa	1,002	51	297	433	1,783	1,040	36	27	60	22.74	6/6(12Sea)/6
Saginaw	1,063	4	546	233	1,846	1,846	27	14	54	26.98	6/12/12
Sanilac	221	12	50	4	287	12	7	4	11	25.51	6/6/6
Shiawassee	241	132	69	17	459	260	3	2	6	8.49	6/12/18
St. Clair	1,153	38	240	158	1,589	1,154	32	26	93	57.04	6/6/6
Tuscola	279	11	152	104	546	546	5	5	6	10.77	6/6/6
VanBuren-Cass	632	30	95	55	812	730	12	11	1	0.78	6/6/6
Washtenaw	2,242	106	430	588	3,366	2,425	98	92	165	47.86	6/6/6
Wayne	5,306	157	346	2,167	7,976	5,411	219	186	292	26.38	6/12/12
Western UP	539	17	181	75	812	812	16	11	31	43.75	6/12/18
<b>Totals</b>	<b>56,152</b>	<b>3,546</b>	<b>10,093</b>	<b>15,795</b>	<b>85,586</b>	<b>50,816</b>	<b>1,863</b>	<b>1,522</b>	<b>3,672</b>	<b>37.03</b>	<b>XXX</b>
<b>Average</b>	<b>1,221</b>	<b>77</b>	<b>219</b>	<b>343</b>	<b>1,861</b>	<b>1,105</b>	<b>41</b>	<b>33</b>	<b>80</b>	<b>37.03</b>	<b>XXX</b>
<b>Median</b>	<b>806</b>	<b>52</b>	<b>155</b>	<b>109</b>	<b>1,062</b>	<b>732</b>	<b>21</b>	<b>15</b>	<b>41</b>	<b>28</b>	<b>XXX</b>
<b>Minimum</b>	<b>179</b>	<b>4</b>	<b>11</b>	<b>4</b>	<b>287</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>38,874</b>
<b>Maximum</b>	<b>8,402</b>	<b>594</b>	<b>1,438</b>	<b>4,622</b>	<b>15,056</b>	<b>5,411</b>	<b>364</b>	<b>307</b>	<b>890</b>	<b>80</b>	<b>38,874</b>
Holland City inspections reported through Allegan and Ottawa Health Departments											

## Appendix II – Output Data - Licensing by LHD

Michigan Local Health Department Quarterly Reports Summary 2012														
	ENFORCEMENT CONDUCTED		LICENSED FACILITIES											
	12. Administrative Action: office conference, informal conference,	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 Temporary Licenses- % of Total Temporary Licenses	Total Licensed Establishments (excluding temporary)	Fixed Food Establishments per 100,000 people	
Allegan	1	0	299	1	0	0	35	4	29	1	128	1	363	268
BEDHD	13	0	499	2	3	1	41	4	58	2	137	1	601	299
Bay	3	0	396	1	5	1	6	1	17	0	139	1	424	367
Benzie-Leelanau	0	0	183	1	1	0	7	1	1	0	111	1	192	466
Berrien	2	0	603	2	22	6	8	1	56	2	305	3	689	385
BHSJ	4	0	493	2	5	1	39	4	95	3	254	3	632	322
Calhoun	6	0	455	1	9	2	10	1	58	2	158	2	532	334
CMDHD	4	0	667	2	1	0	47	5	29	1	244	2	744	350
Chippewa	5	0	174	1	1	0	2	0	5	0	40	0	182	452
Delta-Menominee	3	0	255	1	0	0	15	2	12	0	212	2	282	417
Detroit City	97	11	1622	5	36	9	3	0	183	5	334	3	1844	227
Dickinson-Iron	9	0	199	1	0	0	1	0	14	0	63	1	214	524
DHD # 2	3	0	312	1	0	0	18	2	6	0	111	1	336	465
DHD # 4	0	0	36	0	0	0	6	1	0	0	85	1	42	46
DHD # 10	39	0	889	3	6	2	28	3	84	2	472	5	1007	340
Genesee	23	0	1234	4	11	3	36	4	111	3	190	2	1392	290
Grand Traverse	9	1	342	1	7	2	33	4	32	1	81	1	414	393
Holland City	2	0	36	0	1	0	0	0	32	1	11	0	69	109
Huron	2	0	166	1	1	0	21	2	20	1	128	1	208	501
Ingham	6	0	977	3	1	0	70	8	79	2	126	1	1127	348
Ionia	7	0	162	1	1	0	12	1	21	1	89	1	196	254
Jackson	2	0	448	1	0	0	22	2	63	2	96	1	533	280
Kalamazoo	15	0	818	3	4	1	35	4	90	3	287	3	947	327
Kent	127	1	1855	6	31	8	41	4	464	14	572	6	2391	308
Lapeer	0	0	227	1	2	1	8	1	22	1	86	1	259	257
Lenawee	0	0	310	1	2	1	1	0	48	1	357	4	361	310
Livingston	1	0	415	1	3	1	32	4	23	1	73	1	473	229
LMAS	0	0	277	1	3	1	4	0	8	0	207	2	292	773
Macomb	218	0	2338	8	24	6	17	2	251	7	234	2	2630	278
Marquette	19	0	263	1	0	0	8	1	11	0	119	1	282	392
Midland	2	0	262	1	27	7	15	2	17	0	58	1	321	313
Mid-Michigan	11	0	505	2	3	1	28	3	68	2	223	2	604	279
Monroe	4	0	472	2	7	2	59	6	33	1	125	1	571	310
Muskegon	29	0	578	2	3	1	34	4	131	4	203	2	746	336
Northwest	3	0	622	2	6	2	17	2	28	1	191	2	673	585
Oakland	141	0	3871	13	101	26	22	2	355	10	1,438	14	4349	322
Ottawa	14	0	654	2	0	0	26	3	153	4	297	3	833	248
Saginaw	92	0	665	2	0	0	7	1	88	3	546	5	760	332
Sanilac	1	0	171	1	3	1	8	1	10	0	50	0	192	397
Shiawassee	0	0	203	1	1	0	25	3	8	0	69	1	237	287
St. Clair	38	0	487	2	5	1	9	1	72	2	240	2	573	299
Tuscola	5	0	151	0	0	0	6	1	18	1	152	2	175	271
VanBuren-Cass	0	0	365	1	4	1	10	1	22	1	95	1	401	284
Washtenaw	41	0	1168	4	27	7	13	1	135	4	430	4	1343	339
Wayne	150	0	3384	11	24	6	23	3	349	10	346	3	3780	306
Western UP	88	0	398	1	1	12	6	1	4	0	181	2	409	562
<b>Totals</b>	<b>1,239</b>	<b>13</b>	<b>30,906</b>	<b>XXX</b>	<b>392</b>	<b>XXX</b>	<b>914</b>	<b>XXX</b>	<b>3,413</b>	<b>XXX</b>	<b>10,093</b>	<b>XXX</b>	<b>35,625</b>	<b>15,779</b>
<b>Average</b>	<b>27</b>	<b>0</b>	<b>672</b>	<b>XXX</b>	<b>9</b>	<b>XXX</b>	<b>20</b>	<b>XXX</b>	<b>74</b>	<b>XXX</b>	<b>219</b>	<b>XXX</b>	<b>774</b>	<b>312</b>
<b>Median</b>	<b>5</b>	<b>0</b>	<b>432</b>	<b>XXX</b>	<b>3</b>	<b>XXX</b>	<b>16</b>	<b>XXX</b>	<b>32</b>	<b>XXX</b>	<b>155</b>	<b>XXX</b>	<b>503</b>	<b>322</b>
<b>Minimum</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>42</b>	<b>46</b>
<b>Maximum</b>	<b>218</b>	<b>11</b>	<b>3,871</b>	<b>13</b>	<b>101</b>	<b>26</b>	<b>70</b>	<b>8</b>	<b>464</b>	<b>14</b>	<b>1,438</b>	<b>14</b>	<b>4,349</b>	<b>773</b>

# Appendix III – Program Staffing – Program Revenue by LHD

Michigan Local Health Department Quarterly Reports													
Summary 2012													
	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-inspection time	15. Total number of FTEs assigned to conduct food establishment inspections (all times)	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 Citiz	Population
Allegan	0.50	2.00	2.5	2.0	2.8	456	327,372	81,841	409,213	1,163	163,685	3.67	111,408
BEDHD	3.07	2.00	5.07	3.0	4.3	496	503,170	124,286	627,456	1,082	123,759	3.76	166,932
Bay	0.50	2.00	2.5	2.3	3.2	518	236,976	84,640	321,616	781	128,646	2.98	107,771
Benzie-Leelanau	0.90	0.50	1.4	1.2	1.6	2,166	104,703	38,634	143,337	750	102,384	3.65	39,233
Berrien	1.00	4.50	5.5	4.1	5.6	349	162,810	144,860	307,670	444	55,940	1.96	156,813
BHSJ	1.35	3.80	5.15	3.7	5.2	402	330,107	121,645	451,752	694	87,719	2.95	153,231
Calhoun	1.20	2.65	3.85	2.6	3.7	439	200,757	169,982	370,739	787	96,296	2.72	136,146
CMDHD	4.10	2.10	6.2	2.9	4.0	802	330,689	202,866	533,555	1,112	86,057	2.80	190,805
Chippewa	1.22	0.59	1.812	1.0	1.4	718	83,234	41,353	124,587	670	68,757	3.23	38,520
Delta-Menominee	1.88	1.50	3.38	2.0	2.6	426	116,739	48,637	165,376	589	48,928	2.71	61,098
Detroit City	3.00	10.00	13	9.5	13.6	307	838,089	499,701	1,337,790	712	102,907	1.87	713,777
Dickinson-Iron	1.50	1.50	3	1.2	1.7	386	126,359	52,356	178,715	809	59,572	4.70	37,985
DHD # 2	1.87	0.94	2.806	1.9	2.7	565	159,229	70,182	229,411	665	81,757	3.42	67,168
DHD # 4	0.76	1.61	2.37	2.1	3.0	493	147,309	74,570	221,879	537	93,620	2.81	78,891
DHD # 10	5.00	16.00	21	6.0	8.2	142	486,237	200,312	686,549	686	32,693	2.62	261,616
Genesee	11.00	9.00	20	6.8	9.9	312	763,614	427,007	1,190,621	854	59,531	2.80	425,790
Grand Traverse	0.70	2.00	2.7	2.0	2.9	384	200,856	79,396	280,252	715	103,797	3.22	86,986
Holland City	0.10	0.20	0.3	0.7	1.1	1,630	0	0	0	0	0	0.00	33,051
Huron	1.19	0.55	1.74	1.4	1.8	1,015	101,603	32,732	134,335	640	77,204	4.06	33,118
Ingham	3.54	7.24	10.78	5.4	7.9	430	1,026,151	199,807	1,225,958	1,092	113,725	4.36	280,895
Ionia	0.97	0.75	1.72	1.2	1.7	648	81,083	50,699	131,782	646	76,617	2.06	63,905
Jackson	1.50	2.60	4.1	2.8	4.0	415	255,064	113,573	368,637	674	89,911	2.30	160,248
Kalamazoo	8.00	6.00	14	5.2	7.4	408	459,325	277,751	737,076	768	52,648	2.94	250,331
Kent	11.00	9.00	20	12.5	17.8	587	991,222	244,283	1,235,505	517	61,775	2.05	602,622
Lapeer	1.30	1.10	2.4	1.4	2.0	454	149,481	72,946	222,427	862	92,678	2.52	88,319
Lenawee	1.50	1.00	2.5	2.8	3.7	1,138	258,834	98,338	357,172	960	142,869	3.58	99,892
Livingston	1.00	2.75	3.75	2.4	3.4	346	412,773	113,386	526,159	1,110	140,309	2.91	180,967
LMAS	0.69	1.69	2.38	2.0	2.6	419	141,921	115,696	257,617	907	108,242	7.19	35,830
Macomb	5.00	16.00	21	12.5	18.4	360	1,085,444	521,953	1,607,397	608	76,543	1.91	840,978
Marquette	0.85	1.44	2.29	1.7	2.3	435	174,302	49,507	223,809	780	97,733	3.34	67,077
Midland	1.80	1.40	3.2	1.7	2.4	454	140,404	63,752	204,156	617	63,799	2.44	83,629
Mid-Michigan	1.4 FTE's	3.00	3	3.4	4.8	479	360,759	225,144	585,903	973	195,301	3.23	181,200
Monroe	0.40	1.65	2.05	3.0	4.3	632	288,324	73,481	361,805	617	176,490	2.38	152,021
Muskegon	3.68	2.36	6.04	4.0	5.6	718	576,544	94,994	671,538	909	111,182	3.90	172,188
Northwest	6.00	3.25	9.25	3.7	5.2	434	333,136	84,601	417,737	615	45,161	3.93	106,387
Oakland	37.50	30.50	68	24.5	34.4	494	3,598,741	785,661	4,384,402	987	64,477	3.65	1,202,362
Ottawa	7.50	5.50	13	4.1	5.7	324	687,881	131,186	819,067	1,172	63,005	3.10	263,801
Saginaw	1.21	3.12	4.33	4.7	6.2	592	625,889	244,884	870,773	1,323	201,102	4.35	200,169
Sanilac	1.00	1.00	2	1.0	1.5	287	66,030	44,535	110,565	564	55,283	2.56	43,114
Shiawassee	0.40	0.90	1.3	1.3	1.8	510	107,066	67,617	174,683	740	134,372	2.47	70,648
St. Clair	2.00	4.00	6	3.3	4.5	397	359,783	153,699	513,482	925	85,580	3.15	163,040
Tuscola	0.40	0.65	1.05	1.3	1.7	840	69,061	39,205	108,266	598	103,110	1.94	55,729
VanBuren-Cass	1.30	1.50	2.8	2.1	3.0	541	245,947	92,271	338,218	843	120,792	2.63	128,551
Washtenaw	3.60	8.40	12	7.5	10.6	401	1,201,080	255,559	1,456,639	1,065	121,387	4.22	344,791
Wayne	8.50	17.00	25.5	18.3	26.9	469	3,144,928	1,014,221	4,159,149	1,077	163,104	3.76	1,106,807
Western UP	1.87	1.27	3.14	2.4	3.3	639	222,890	97,445	320,335	795	102,018	4.52	70,851
<b>Totals</b>	<b>153.35</b>	<b>198.51</b>	<b>352</b>	<b>193</b>	<b>272</b>	<b>25,855</b>	<b>22,283,916</b>	<b>7,821,194</b>	<b>30,105,110</b>	<b>36,433</b>	<b>4,432,464</b>	<b>143</b>	<b>9,916,691</b>
<b>Average</b>	<b>3.41</b>	<b>4.32</b>	<b>8</b>	<b>4</b>	<b>6</b>	<b>431</b>	<b>484,433</b>	<b>170,026</b>	<b>654,459</b>	<b>841</b>	<b>85,560</b>	<b>3.04</b>	<b>215,580</b>
<b>Median</b>	<b>1.50</b>	<b>2.00</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>455</b>	<b>256,949</b>	<b>97,892</b>	<b>365,221</b>	<b>774</b>	<b>93,149</b>	<b>2.97</b>	<b>132,349</b>
<b>Minimum</b>	<b>0.10</b>	<b>0.20</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>142</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>33,051</b>
<b>Maximum</b>	<b>37.50</b>	<b>30.50</b>	<b>68</b>	<b>25</b>	<b>34</b>	<b>2,166</b>	<b>3,598,741</b>	<b>1,014,221</b>	<b>4,384,402</b>	<b>1,323</b>	<b>201,102</b>	<b>7.19</b>	<b>1,202,362</b>

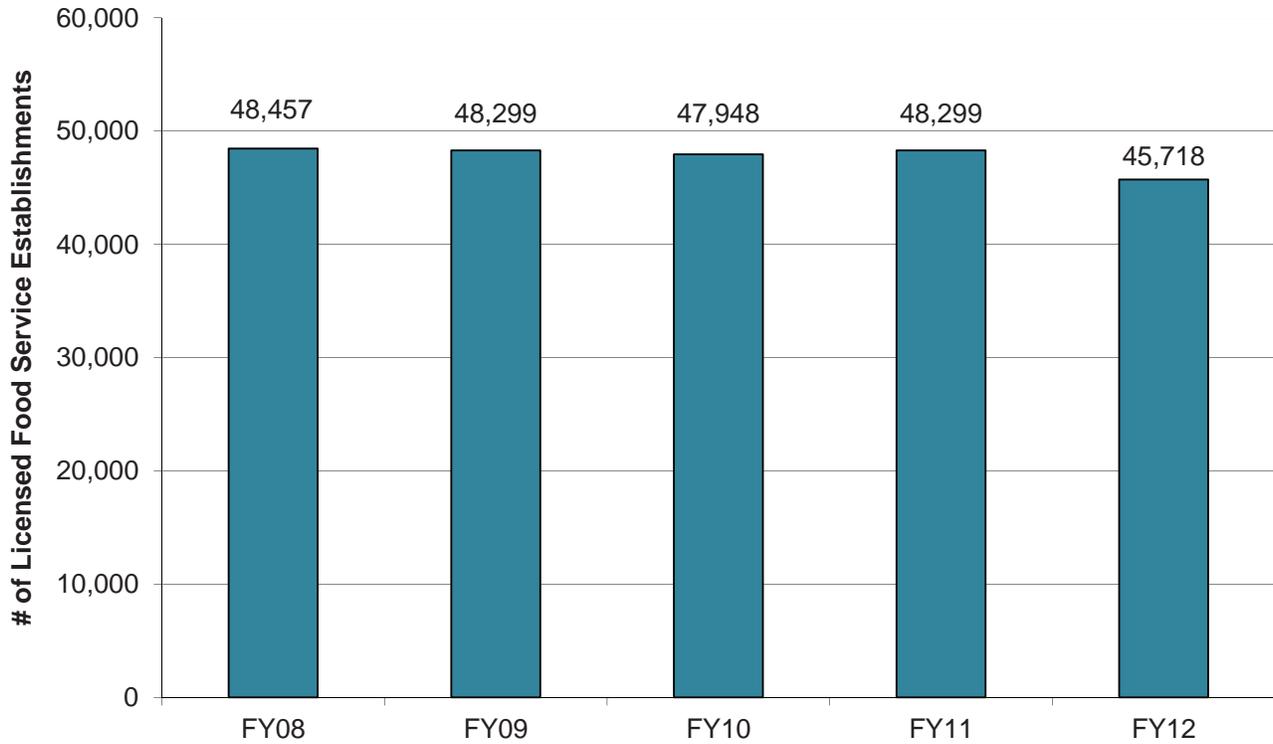
Note: Holland City inspections reported through Allegan and Ottawa Health Departments.



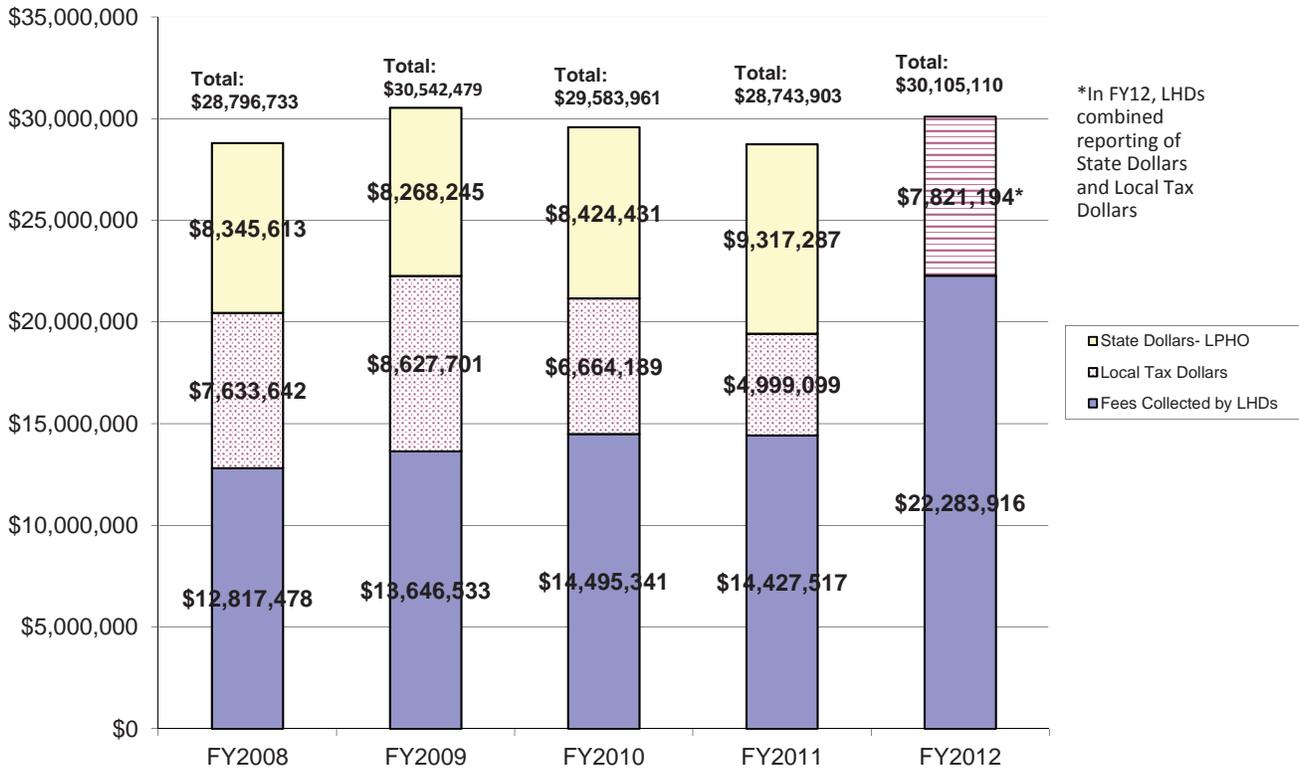
# Appendix V – Five-Year Trend Analysis Charts

## Local Health Departments

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

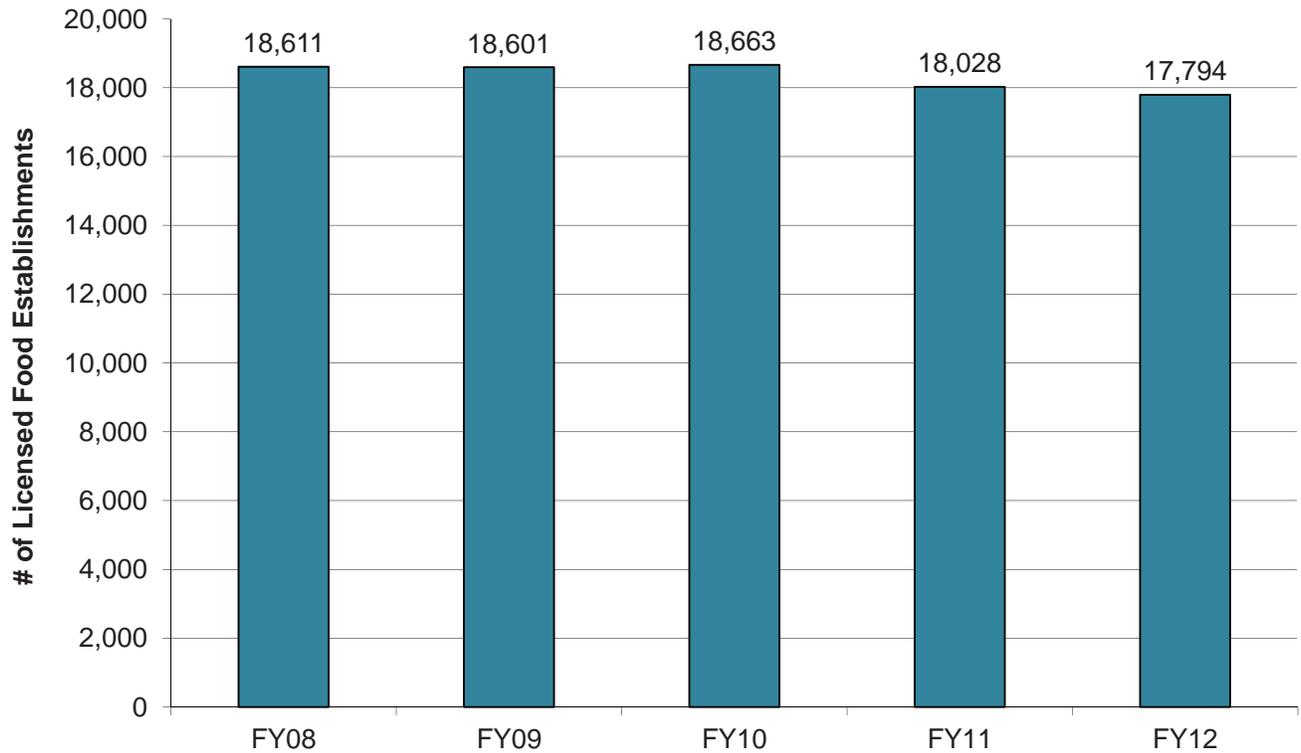


### LHD Funding Sources, Five-Year Comparison

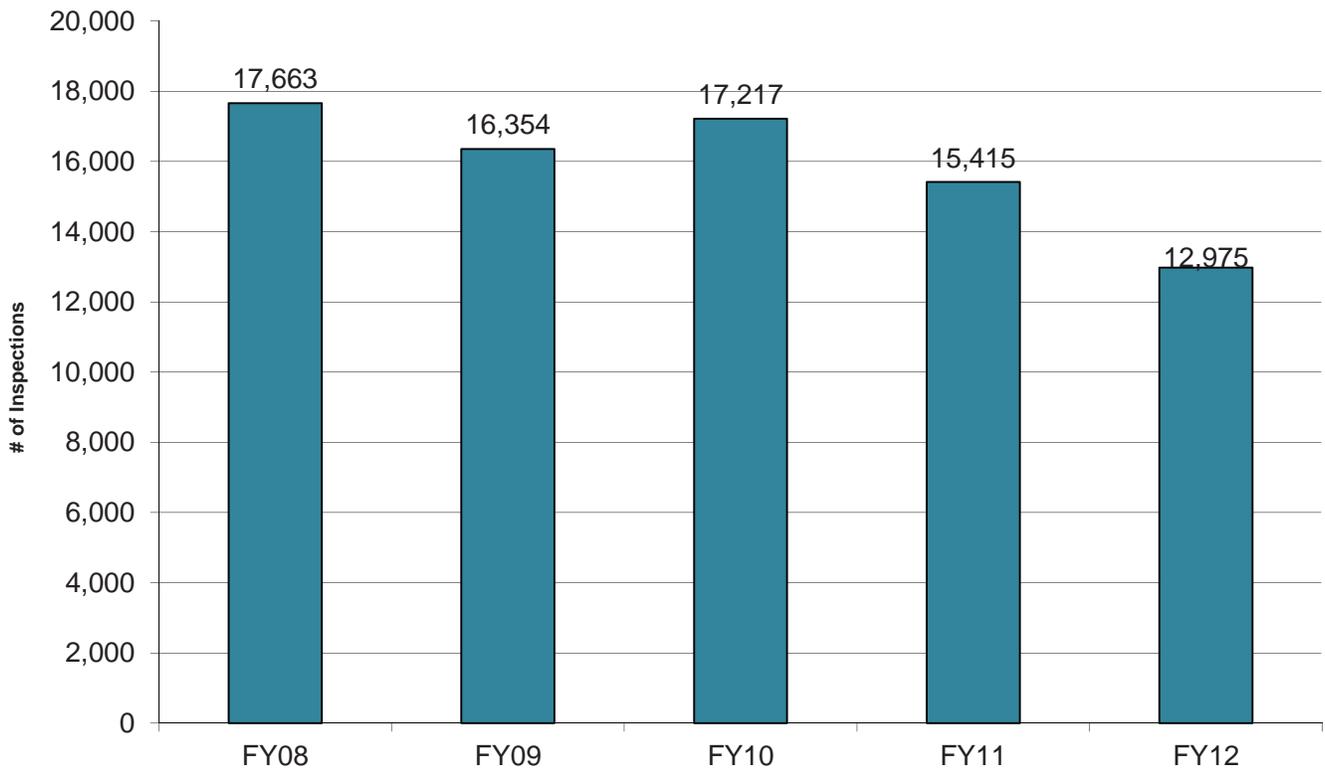


# MDARD Food Safety and Inspection Program

## Licensed Food Establishments (MDARD), Five-Year Comparison



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



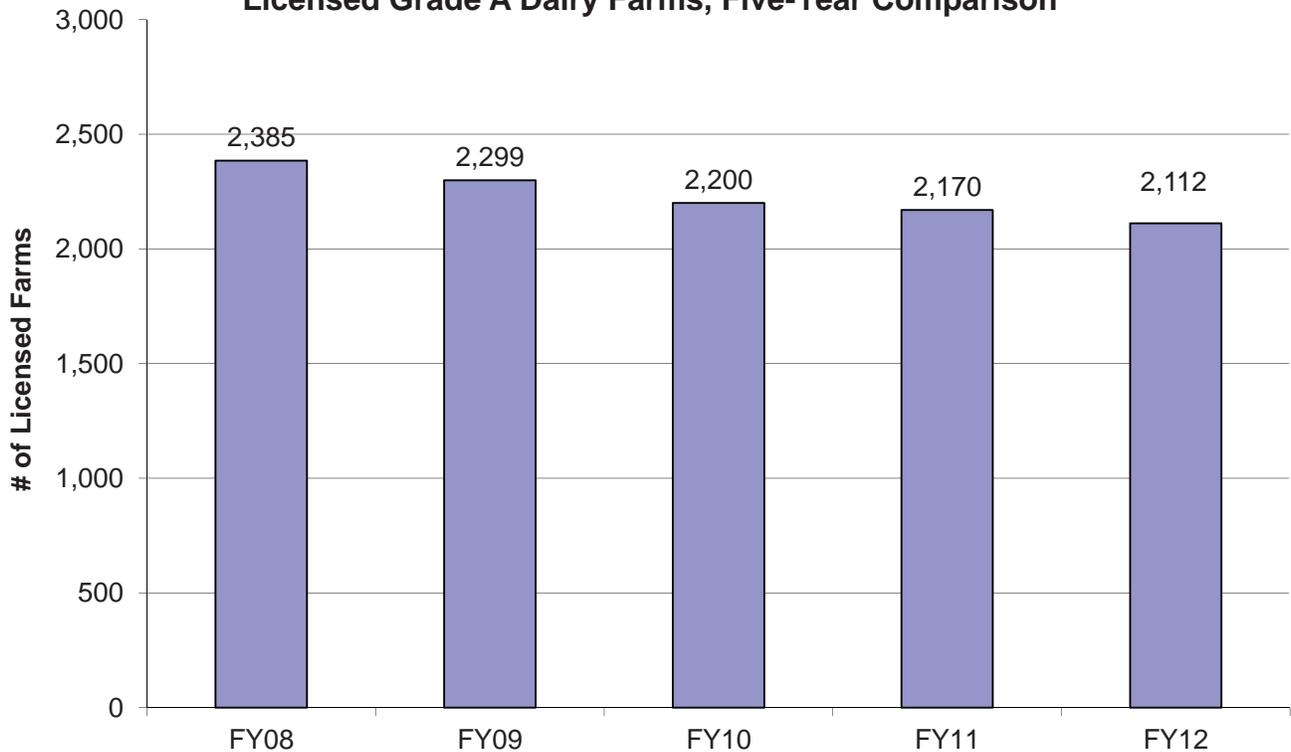
Note: Fair inspections are not included in the food inspection counts for this graph.

### MDARD Food Safety Funding Sources, Five-Year Comparison

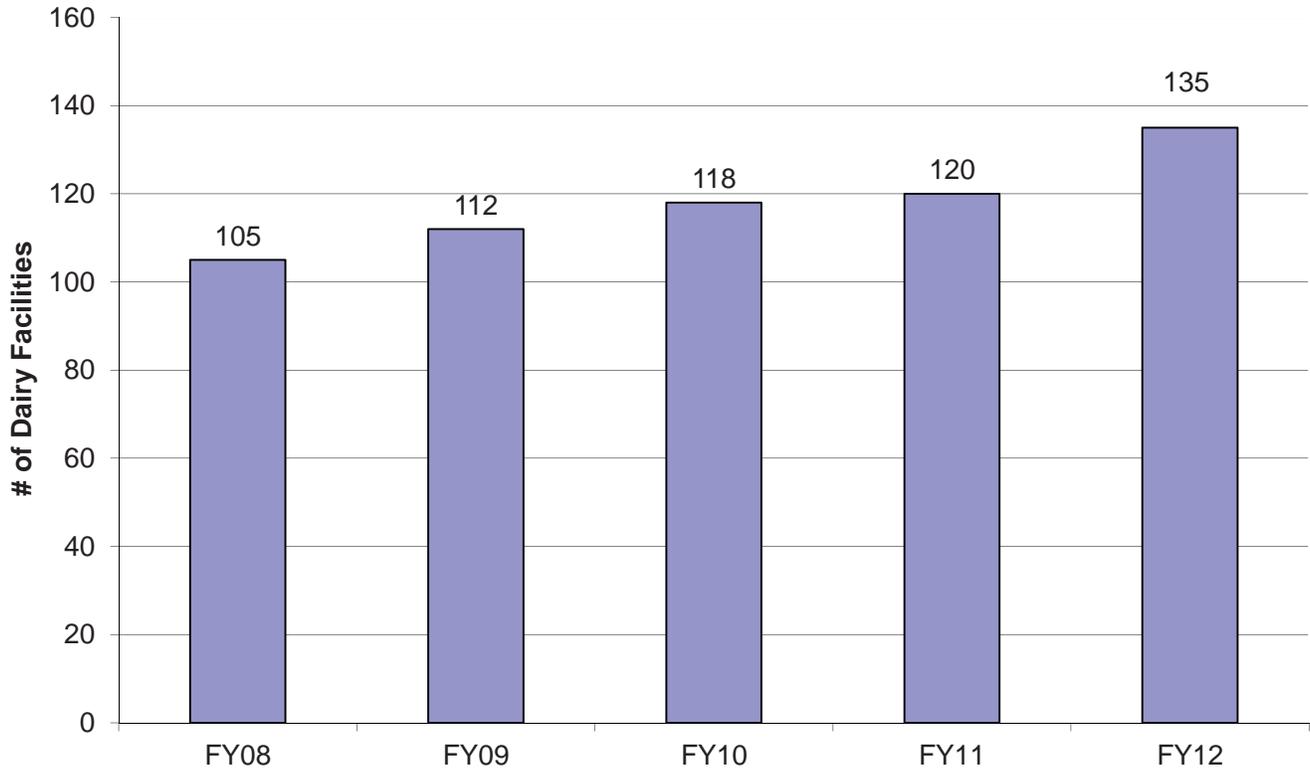


### MDARD Milk and Dairy Product Safety and Inspection Program

#### Licensed Grade A Dairy Farms, Five-Year Comparison

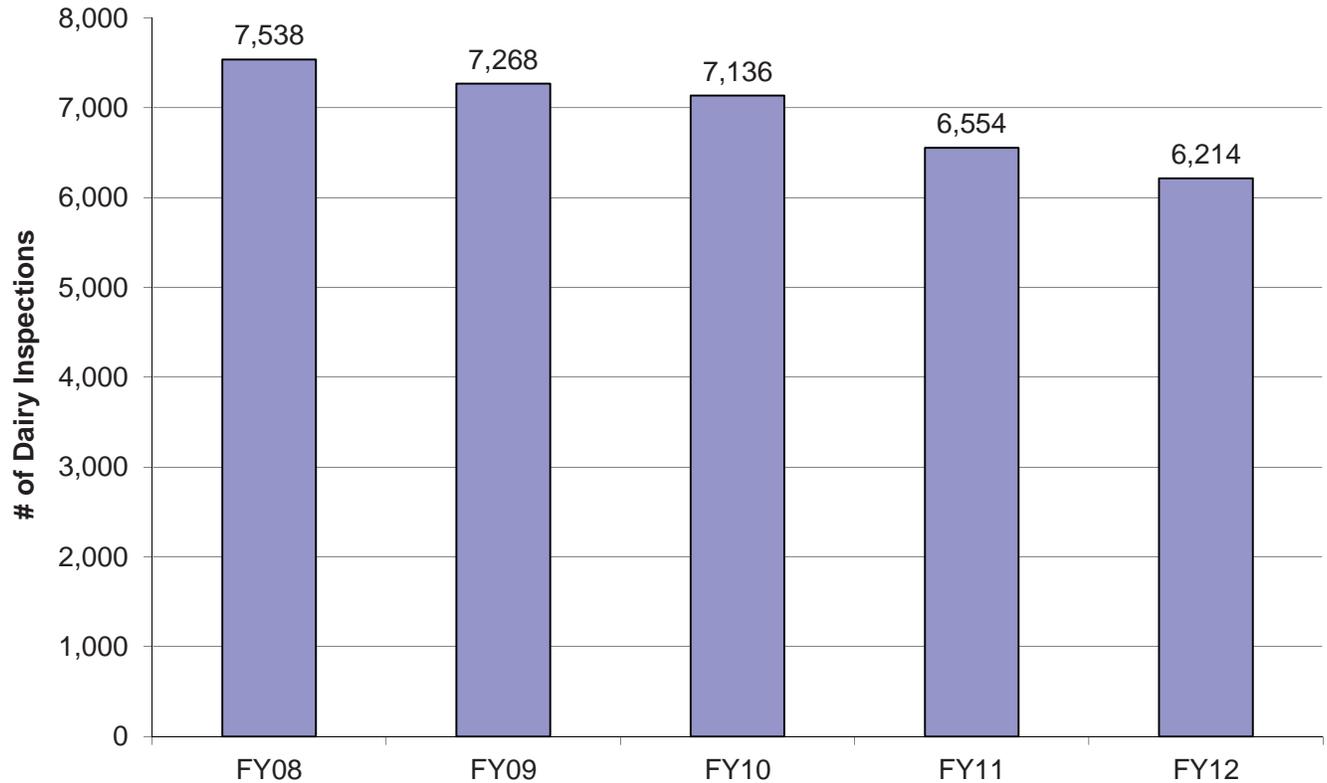


### Licensed Dairy Facilities, Five-Year Comparison



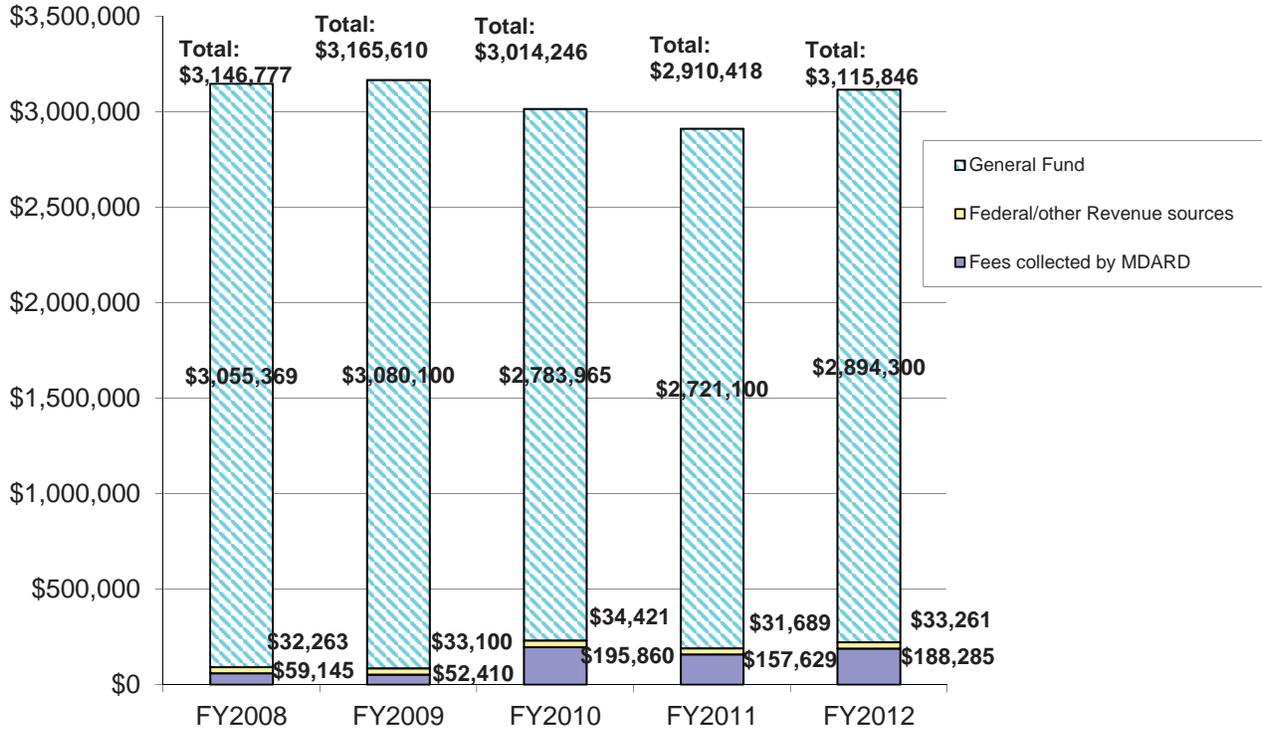
Licensed Facilities Includes: Grade A Plants, Manufacturing Plants, Grade A Milk Distributors, Grade A Transfer Stations/Receiving Stations/Tank Truck Cleaning and Grade A Single Service.

### Dairy Inspections, Five-Year Comparison



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

## MDARD Milk and Dairy Product Safety Funding Sources, Five-Year Comparison





**[www.michigan.gov/mdard](http://www.michigan.gov/mdard)**

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