



# Michigan Department of Agriculture & Rural Development

Laboratory Division

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## Consumer Protection Section Annual Report 2011

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## **Consumer Protection Section Mission Statement**

*Prevent economic fraud and deception concerning weights and measures, motor fuels quality, labeling and advertising of all commodities.*

*Be responsible for environmental issues as they relate to the distribution of gasoline products.*

*Provide National Institute of Standards and Technology traceability on the state's standards and measures.*

*Provide regulatory resource expertise to the public, industry, and government.*

**Michigan Department of Agriculture & Rural Development  
 Laboratory Division • Consumer Protection Section  
 Annual Report**

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# Metrology Laboratory

The E.C. Heffron Metrology Laboratory calibrated more than 8,400 standards during fiscal year (FY) 2011. This included internal standards for the State of Michigan, official standards for field investigations, and the overall monitoring of commerce including approximately 150 industry customers. External customers utilizing this “fee-for-service” support included other state metrology laboratories, registered service agencies, the automotive industry, pharmaceutical manufacturers, and a variety of other companies. The Lab also participated in three “round-robin” inter-laboratory comparisons where all test data is reviewed and compared against official data gathered from other states throughout the Midwest. These comparisons assist the Lab in monitoring its uncertainty controls to ensure traceability to official U.S. standards of length, mass, and volume.



A precision 5 gallon volumetric prover is certified by a metrologist.

As part of its program to encourage a high degree of technical and professional competence, the Weights and Measures Division (WMD) at the National Institute of Standards and Technology (NIST) developed performance standards and formalized procedures for recognition of state legal metrology laboratories on a voluntary basis. Certificates of Measurement Traceability are issued upon evaluation of a laboratory’s ability to make reliable metrological measurements (principally mass, volume, length, and temperature). The Lab’s Certificate of Measurement Traceability was renewed by NIST on January 1, 2011.

An onsite audit was conducted by the National Voluntary Laboratory Accreditation Program (NVLAP) in September 2011 and the lab maintained its accreditation for a broad range of high echelon calibrations. NVLAP provides third-party accreditation to testing and calibration laboratories and its programs are established in response to Congressional mandates or administrative actions by the Federal Government or from requests by private-sector organizations. NVLAP is in full conformance with the standards of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC), including ISO/IEC 17025 and Guide 58. Michigan’s scope of accreditation can be found online at <http://ts.nist.gov/ts/htdocs/210/214/scopes/2004080.pdf>.

Benefits of the Lab include: ensuring accuracy and stability in the commercial measurement system; technical support of other state agencies; the facilitation of high tech and precision manufacturing; protecting Michigan’s roads from overweight vehicles through the use of portable wheel load scales; and the promotion of safety.

***Metrology—  
“the science of measurement” - provides the uniform standards  
upon which all other measurements utilized in commerce are based.***

**Michigan's standards are traceable to the U.S. Standards maintained at the National Institute of Standards and Technology in Gaithersburg, Maryland.**



NVLAP Lab Code 200408-0



The E.C. Heffron Laboratory is nationally accredited and provides the most precise calibration services to industry and laboratories across the nation.

## Laboratory Activities

Mass standards are test weights used by industry, service companies, and enforcement programs to determine the accuracy of weighing devices. They vary in size from 6,000 pounds to one micropound and from 500 kilograms to one milligram.

### Mass Standards Testing Results

	<u>Echelon I</u>	<u>Echelon II</u>	<u>Echelon III</u>
Internal	64	120	32
External	-	1449	6402

Volumetric Standards are provers used in the testing of liquid measuring devices such as gas pumps, fuel oil, and LP Gas measuring meters.

### Volumetric Standards Testing Results

	<u>Glassware</u>	<u>LP Gas</u>	<u>Small Volume Provers</u>	<u>&lt;= 5 Gallon Test Measures</u>	<u>&gt; 5 and &lt;= 100 Test Measures</u>	<u>&gt; 100 Gallon Test Measures</u>
Internal	6	1	0	17	1	-
External	6	5	8	120	23	13

### Other Standards Testing Results

	<u>Thermometers</u>	<u>Linear Standards</u>	<u>Wheel Load Weighers</u>
Internal	-	-	-
External	-	2	551

# Weights and Measures Program

Weights and measures staff received 1,912 consumer complaints involving retailers, wholesalers, and manufacturers throughout the lower and upper peninsulas. Consumer concerns involved inaccurate deliveries of gasoline, home heating fuels and propane, short weight packages, product misbranding, deceptive advertising, price advertising violations, scanner errors, commercial device calibrations, and short weight packages. Conducting investigations of consumer complaints is the number one priority for the Weights and Measures Program. The Program also maximizes efficiency and effectiveness through limited duration special projects having a focused scope on areas not commonly involved with consumer related complaints. These projects may include surveying bulk deliveries of commodities to businesses such as agricultural facilities and processing plants, or homes deliveries of items like landscaping supplies. Additionally, year round random or risk based inspections which audit transactions of commercially traded products sold by weight, measure or count are conducted resulting in increased industry awareness and consumer confidence in the marketplace.

Small errors, when combined with steadily increasing material costs and continual advancement in equipment technology challenge these expert civil servants as they apply sound judgment and skill in various technical disciplines to protect the budgets of Michigan residents, businesses, and government units from potential fraud. Consumers can count on weights and measures staff to ensure they get what they pay for, and business can take assurance they are competing on a fair and level playing field. The sheer volume of goods and services bought or sold on the basis of weight, measure or count magnifies the importance of weights and measures oversight as it touches virtually every area of commerce in Michigan.

The Program, one of the nation's oldest, takes great pride in maintaining a strong and active industry outreach initiative through participation in trade events, the development of training curriculum, and offering guidance regarding weights and measures compliance through informative articles and other media. This proactive approach to "Compliance through Cooperation" solidifies a cooperative relationship throughout the marketplace to support Michigan's businesses and consumers on a local, national, and global stage.

In the last quarter of FY11 Michigan's Item Pricing Law was replaced with the Shopping Reform and Modernization Act which resulted in the development of new inspection policies and procedures by weights and measures staff.

The Program provides sole oversight to the State's service industry to ensure compliance with new and repaired commercial weighing/measuring devices. The service registration program continues to thrive as 123 agencies and 450 individuals retain their State registration in good standing. Over 3,000 internal and external administrative audits were conducted as part of the program's routine responsibilities.

Visit us on the Web at [www.michigan.gov/wminfo](http://www.michigan.gov/wminfo)



Randomly selected and complaint targeted consumer commodities undergo net content testing under laboratory conditions when field inspections indicate a potential problem exists.



Weights and Measures inspectors test high capacity scales used in commerce on site with specialized equipment to ensure accurate weight is given.

# State Officials' Inspections

## Net Content Inspections

	<u>Surveys</u>	<u>Packages Approved</u>	<u>Packages Rejected</u>	<u>Compliant</u>	<u>Lots Approved</u>	<u>Lots Rejected</u>	<u>Compliant (%)</u>
Field	680	6836	3463	66.38%	112	286	28.14%

## Weights and Measures Device Inspections

<u>Commercial Device Type</u>	<u>Approved</u>	<u>Condemned for Use</u>	<u>Condemned for Repair</u>	<u>Compliant (%)</u>
Animal Livestock Scale	4	0	0	100
Counter Scale	479	2	7	98.16
Crane Scale	2	0	0	100
Fuel Truck meter	22	0	1	95.65
LPG Meter (25 GPM or less)	23	0	1	95.83
LPG Meter (over 25 GPM)	74	1	4	93.67
Monorail	0	0	0	N/A
Multiple Grade Gasoline Dispenser	10,149	309	558	92.13
Platform Scale (1,500 lbs or less)	43	0	0	100
Platform Scale (over 1,500 lbs)	26	1	4	83.87
Single Grade Gasoline Dispenser	9,783	298	310	94.15
Single Product Meter (over 25 GPM)	337	27	42	83
Terminal Meter	1	0	0	100
Vehicle scale (2 section)	16	1	0	94.12
Vehicle scale (3+ section)	178	7	26	84.36
<b>TOTAL</b>	<b>21,137</b>	<b>646</b>	<b>953</b>	<b>92.97</b>

<u>Miscellaneous Devices / Standards</u>	<u>Approved</u>	<u>Condemned for Use</u>	<u>Condemned for Repair</u>	<u>Compliant (%)</u>
Weights (Field Tested)	0	0	0	N/A

### Certificates Issued

Livestock Weighmasters	16
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Weights and Measures Program field staff assess the suitability of equipment used in packaging processes throughout the State. The Weights and Measures program remains focused on working with industry to arrive at solutions to problems faced by competitors in a global marketplace.



## Weights and Measures Information and Statistics

### Weights and Measures Undercover Activities

Consumer Protection Section employees are equipped with unmarked vehicles holding calibrated false tanks used to conduct unannounced dispenser accuracy checks. Following are the results of these unannounced purchases during FY2011

Number of Purchases	149
Number of Shortages ≥ 1.0%	1
Percentage of Purchases ≥ 1.0% Short	0.7%

### Weights and Measures Complaints Investigated

Item Pricing and Accuracy	88
Retail Motor Fuels Dispensers	*1702
Short Weight / Measure	54
All Other Complaints	7
<b>TOTAL</b>	<b>1,851</b>

\*Motor Fuel complaints were jointly investigated with MDARD's Motor Fuels Quality Program

### Disposition of P.A. 283 Violations

Compliance Meetings	12
Warning Letters	55
Consent Agreements	50
Prosecutions	-
Seizures / Detainment (Short Weight / Measure)	49
Seizures / Detainment (Amount / lbs)	304,843
Seizures / Detainment (Value)	\$293,803
Fine Amounts	\$149,972

### Registered Serviceperson Activities

#### Registration Activities

Agencies Registered	91
Technicians Registered	306
Service Tests Administered	156

#### Devices Placed-In-Service by Registered Agencies

Retail Motor Fuel Dispensers	1822
All Other Meters	442
Small Capacity Weighing Devices	2152
Large Capacity Weighing Devices	884

#### Audit of Serviceperson Activities

	<u>Number Conducted</u>	<u>Compliance Rate</u>
Internal	2,807	92.1%
Field	293	86.7%

Currently 123 Agencies and 450 technicians are successfully registered under the Serviceperson Program.



Test standards used by Registered Service Agencies to calibrate equipment utilized in all phases of buying and selling of product in Michigan are compared to the State standard in the E.C. Heffron metrology laboratory. Adjustments are made to the artifact so it provides an accurate measure.

## Motor Fuels Quality Program

The Motor Fuels Quality (MFQ) Program is responsible for the enforcement of P.A. 44 of 1984, as amended, the Motor Fuels Quality Act; which sets the minimum standards for motor fuels sold in the State of Michigan. During FY 2011, MFQ staff obtained 2,304 motor fuel samples with an overall compliance rate of 93.5%.

In addition to the motor fuels quality inspection and testing done at motor fuel retail outlets during FY 2011, wholesale marketers were closely monitored for compliance with gasoline quality and environmental standards. Motor fuels quality specialists conducted 44 inspections and sampled product at the state's 28 motor fuel distribution terminals that receive motor fuel products by pipeline or barges and sell gasoline. Quality specialists monitored Michigan's only motor fuel refinery for compliance with the state's motor fuel standards. Staff reviewed wholesalers' procedures and documents including checking for compliance with tank labeling rules outlined in Regulation 562 with most terminals found to be in compliance.

Quality specialists obtained 236 enforcement samples including 43 fuel grade ethanol samples and 85 laboratory blends that were submitted for official testing. Laboratory blends are blends of gasoline and ethanol made to simulate blends of gasoline that are sold at retail. These blends are then tested for compliance with gasoline standards.

Monitored terminals continued to make improvements to their policies and procedures for the re-blending of pipeline trans-mix products into the regular grade gasoline; and continue to improve their ethanol blending procedures based on the Motor Fuels Quality program's inspection findings. This continuous improvement has helped prevent misrepresented or poorly blended gasoline products from leaving the terminals, and protects hundreds of retailers and their customers from receiving poor quality gasoline.



Underground fuel storage tanks are routinely checked for water contamination.

## Motor Fuels Quality Information and Statistics

### Stop Sale Information

Excess Water in Underground Storage Tank	65
Failure to Meet Quality Standards	36
Gallons of Product Embargoed Per Stop Sale	4,038
Retail Cost of Embargoed Product per Gallon	\$3.119
Total Estimated Retail Value of Embargoed Product	\$1,272,455
Average Vehicle Repair Cost Resulting from Motor Fuel Quality Issue as Reported to MDA	\$808

### Complaint and Motor Fuels Quality Hotline Information

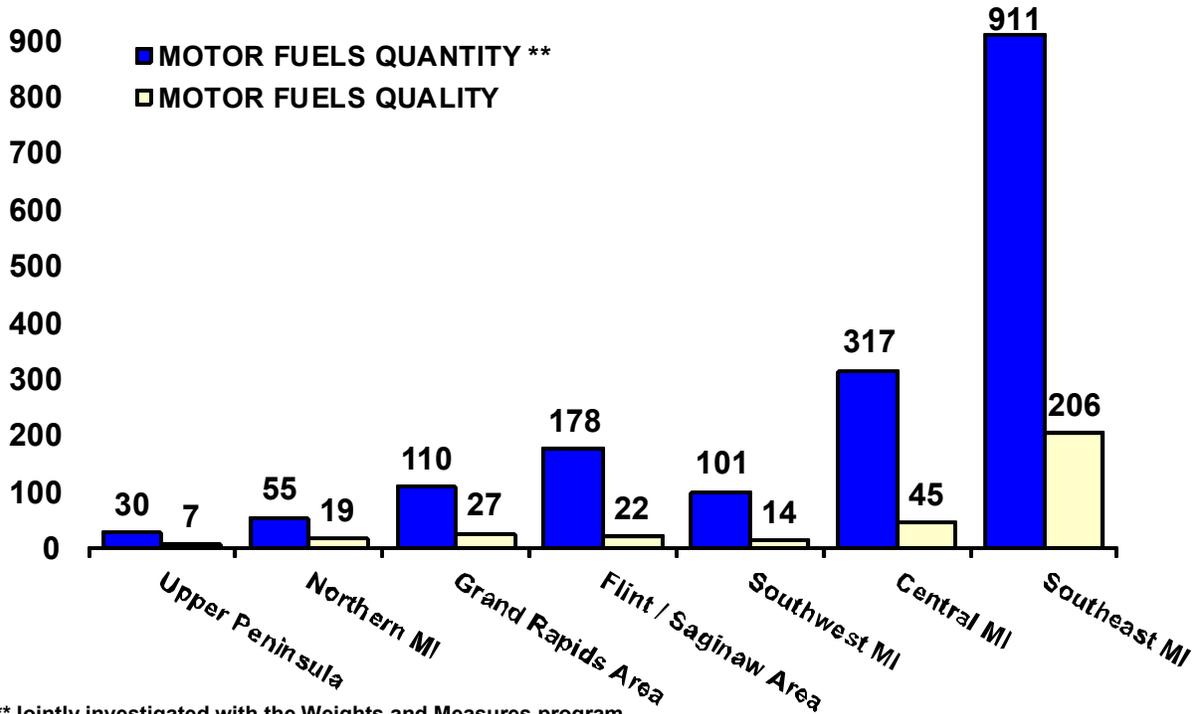
Complaints Received through 1-800-MDA-FUEL	1,702*
Gasoline Quality Complaints Investigated	340

### Disposition of P.A. 44 Violations

Compliance meetings	67
Warning Letters	762
Administrative Fines	131
Prosecutions	0
Fine Amounts	\$96,800

*Note: Complaints outside the Program's area of responsibility received via the MFQ Hotline were forwarded to the appropriate agency. All gasoline quality complaints were investigated.*

**Motor Fuels Quality Information and Statistics** (continued)  
**Complaints Investigated by Region**



\*\*Jointly investigated with the Weights and Measures program

**Samples Procured**

In addition to licensing, inspection, and complaint investigation responsibilities, Motor Fuels Quality Program staff regularly procures gasoline samples for quality testing. The following results are for fiscal year 2011.

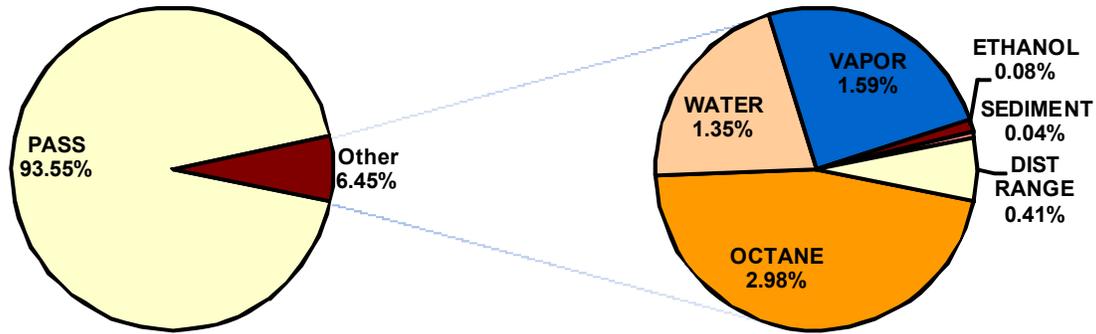
<u>Results</u>	<u>Number</u>
Approved	2150
Warning Letters	92
Non-actionable	4
Administrative Fines	54
Investigations in Progress	4
<b>TOTAL</b>	<b>2304</b>



Motor fuels quality inspectors visit retail gas stations to perform a complete and thorough evaluation of the establishment with regard to the product consumers purchase at the pump. Routine fuel samples are collected for laboratory analysis in addition to measuring the amount of fuel dispensed for comparison against the pumps' display reading.



**Motor Fuels Quality Information and Statistics** (continued)  
**Total Sample Violation Rate Breakdown**



Samples were procured for the following reasons: a monthly random quality assurance program, ongoing investigations, consumer complaints, and to assure establishment compliance when there has been a previous violation.

**Sample Results by Sampling Method**

<u>Sampling Reason</u>	<u>Number of Samples</u>	<u>Number of Violations</u>	<u>Compliant (%)</u>
Complaint	280	46	83.6
Re-Sample	155	37	76.1
Investigation	51	10	80.4
Confidential / Undercover	75	2	97.3
Other	558	25	95.5
Delinquent License	40	0	100
Quality Risk Assessment	998	34	96.6
Terminal Sampling	147	0	100
<b>TOTAL</b>	<b>2,304</b>	<b>154</b>	<b>93.3</b>

**Sample Results by Octane ((R+M)/2)**

<u>Octane (AKI)</u>	<u>Number of Samples</u>	<u>Number of Violations</u>	<u>Compliant (%)</u>
86	23	0	100
87	1,055	34	96.8
88	-	-	-
89	438	38	91.3
90	11	1	90.9
91	64	4	93.8
92	74	5	93.2
93	523	67	87.2
94	1	1	0
Other	115	4	6.5
<b>TOTAL</b>	<b>2,304</b>	<b>154</b>	<b>93.3</b>

## Sample Results by Region

<u>Region</u>	<u>Number of Samples</u>	<u>Number of Violations</u>	<u>Compliant (%)</u>
Upper Peninsula	263	31	88.2
Northern Michigan	242	8	96.7
Grand Rapids Area	179	8	95.5
Flint / Saginaw Area	266	17	93.6
Southwest Michigan	220	20	90.9
Central Michigan	161	8	95
Southeast Michigan	973	62	93.6
<b>TOTAL</b>	<b>2,304</b>	<b>154</b>	<b>93.3</b>



The Michigan Department of Agriculture & Rural Development's toll free complaint hotline is available 24 hours a day year round for consumers that feel they have received a short measure of, or poor quality motor fuel.

## Vapor Recovery and Reduction

The Motor Fuels Quality program helps to protect the environment and Michigan residents through the Low Vapor Pressure gasoline sampling/testing program. Gasoline is a mixture of very volatile organic compounds, some of which are toxic to human health and harmful to the atmosphere. The State of Michigan is under a 1990 U.S. Environmental Protection Agency (EPA) mandate to improve the quality of air in select counties.

The Motor Fuels Quality Program monitored gasoline volatility from June 1 through September 15, 2011 on gasoline dispensed in the eight-county Southeast Michigan ozone attainment area (Lenawee, Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne counties). The vapor pressure of the gasoline dispensed in these counties from June 1 to September 15, 2011 is limited to 7.0 pounds per square inch for conventional gasoline and 8.0 pounds per square inch for gasoline containing 10 percent ethanol. By limiting the evaporative tendencies of the gasoline in southeast Michigan, the amount of volatile organic compounds emitted into the atmosphere is reduced; assisting Southeast Michigan in maintaining compliance with the National Ambient Air Quality Standards established by the United States Environmental Protection Agency.

During the 2011 fiscal year, 424 locations were visited for field audits to monitor vapor pressure of the SE Michigan Gasoline. 11 locations were found to be in violation when field audits were conducted resulting in a violation rate of 2.6%.

## Field Audit and Sample Results\*

	<u>Field Audits</u>	<u>Official Samples</u>	<u>Total</u>
Number of Establishments	442	202	562
Number of Audits Conducted*	442	248	690
Overall Establishments in Violation	11	9	17
Establishment Violation Rate	2.6 %	4.5%	3.0%

\*When establishments were found in violation, multiple audits were conducted; and at some establishments multiple samples were collected.

**Number of Field Audits and Samples Per County**

**Number of Field Audits per County**

<b>Lenawee.....</b>	<b>18</b>
<b>Livingston.....</b>	<b>10</b>
<b>Macomb.....</b>	<b>70</b>
<b>Monroe.....</b>	<b>7</b>
<b>Oakland.....</b>	<b>135</b>
<b>St. Clair.....</b>	<b>12</b>
<b>Washtenaw.....</b>	<b>41</b>
<b>Wayne.....</b>	<b>149</b>

**Field Audits without Ethanol (7.0 psi RVP limit)**

<u>Octane</u>	<u>RVP Average</u>	<u># of Audits</u>	<u># of Violative Audits</u>
86	-	-	-
87	7.91	5	5
88	-	-	-
89	6.45	1	0
90	6.22	1	0
91	-	-	-
92	6.92	1	0
93	-	-	-
94	-	-	-
<b>TOTAL</b>	<b>7.39</b>	<b>8</b>	<b>5</b>

**Field Audits with Ethanol (8.0 psi RVP limit)**

<u>Octane</u>	<u>RVP Average</u>	<u># of Audits</u>	<u># of Violative Audits</u>
86	7.73	1	0
87	7.89	397	6
88	-	-	-
89	7.90	17	2
90	-	-	-
91	-	-	-
92	7.35	1	0
93	7.90	18	2
94	-	-	-
<b>TOTAL</b>	<b>7.89</b>	<b>434</b>	<b>10</b>

STATE OF MICHIGAN



CERTIFICATE OF PROCLAMATION

ON BEHALF OF THE PEOPLE OF MICHIGAN

I, Rick Snyder, Governor of Michigan, do hereby proclaim March 1-7, 2011 as

**WEIGHTS AND MEASURES WEEK**

WHEREAS, Michigan was one of eight states that originally partnered together in 1905 to help establish nationwide uniform weights and measures requirements, promoting a competitive and fair marketplace; and,

WHEREAS, the Michigan Department of Agriculture's Weights and Measures program works to meet the public need of standard weights and measures in the state of Michigan and strengthens Michigan's diverse economy. This year's theme is "*Weights and Measures: Educating Today for Tomorrow*," and,

WHEREAS, the employees of the Weights and Measures program are responsible for verifying that all weighing and measuring devices used in manufacturing and commerce are accurate in both design and operation; and,

WHEREAS, it is vital to protect Michigan businesses from unfair trade practices and to ensure standards used remain accurate and in accordance with national and international standards; and,

WHEREAS, each year during the first week of March, we commemorate the enactment of our nation's first weights and measures law, which was created in 1799; and,

NOW, THEREFORE, I, Rick Snyder, Governor of Michigan, do hereby proclaim March 1-7, 2011 as Weights and Measures Week in Michigan.

A handwritten signature in blue ink, appearing to read "Rick Snyder".

Rick Snyder  
Governor



This report is issued under the provision of Act No. 283 of the Public Acts, as amended,  
Section 7, being Section 290.607 of the Compiled Laws of 1979.

Electronic copies of this 2011 Annual Report may be obtained via [www.michigan.gov/mdard](http://www.michigan.gov/mdard)

