



Michigan Department of Agriculture

Laboratory Division

Consumer Protection Section Annual Report 2009

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Stephen Reh

Director
Laboratory Division

Celeste Bennett

Section Director

Michigan Department of Agriculture

E. C. Heffron Metrology Laboratory

940 Venture Lane

Williamston, MI 48895

517-655-8202

www.michigan.gov/mda

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
Laboratory Division • Consumer Protection Section
2009 Annual Report**

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Metrology Laboratory

The E. C. Heffron Metrology Laboratory benefits Michigan citizens and businesses by: ensuring accuracy and stability in the commercial measurement system; providing technical support to other state agencies; facilitating high tech and precision manufacturing; protecting Michigan's roads from overweight vehicles by testing portable wheel load scales; and promoting safety.

The Laboratory calibrated more than 9,600 standards during Fiscal Year (FY) 2009, including: internal standards for the State of Michigan, official standards for field investigations overall monitoring of commerce, and approximately 150 industry customers. The automotive industry, pharmaceutical manufacturers, other states and registered service agencies are just some of the external customers that utilized the "fee-for-service" support the lab provided. The Lab participated in three "round-robin" inter-laboratory comparisons in FY09 to review and compare their test data against official data gathered from other states throughout the Midwest. These comparisons assisted the Lab in monitoring its uncertainty controls to ensure traceability to the official U.S. standards of length, mass, and volume.

The Weights and Measures Division (WMD) at the National Institute of Standards and Technology (NIST) recognized the metrology laboratory's high degree of technical and professional competence and renewed the Lab's "Certificate of Measurement Traceability" on January 1, 2009. NIST developed the performance standards for the certificate and formalized procedures for this voluntary recognition of state legal metrology laboratories as part of the federal government's ongoing effort to ensure reliable metrological measurements throughout the country (principally mass, volume, length, and temperature).

The National Voluntary Laboratory Accreditation Program (NVLAP) also conducted an on-site audit in July 2009 and awarded the Lab accreditation for a broad range of high echelon calibrations. NVLAP provides third-party accreditation to testing and calibration laboratories. NVLAP's accreditation programs are established in response to Congressional mandates, administrative actions by the Federal Government, and requests from private-sector organizations and government agencies. NVLAP operates an accreditation system that is compliant with ISO/IEC 17011, Conformity assessment — General requirements for accreditation bodies accrediting conformity assessment bodies, which requires that the competence of applicant laboratories be assessed by the accreditation body against all of the requirements of ISO/IEC 17025, General requirements for the competence of testing and calibration laboratories. The E.C. Heffron Metrology Laboratory's full scope of accreditation can be found online at <http://ts.nist.gov/ts/htdocs/210/214/scopes/2004080.pdf>.



Metrologist perform a wide variety of precision calibrations. Here a 10 kg weight is checked against the State of Michigan's standard for accuracy.

*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.



Metrologists conduct a pressure test on a liquified petroleum gas prover used to verify meters measuring LP Gas deliveries to homes and businesses give accurate measure.

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 down to one milligram.

Mass Standards Testing Results

	<u>Echelon I</u>	<u>Echelon II</u>	<u>Echelon III</u>	<u>Weight Carts</u>
Internal	64	116	271	5
External	36	1538	6472	17

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></= 5 Gallon Test Measures</u>	<u>>5 and < 100 Test Measures</u>	<u>> 100 Gallon Test Measures</u>
Internal	2	2	-	15	2	2
External	2	8	7	153	21	4

Other Standards Testing Results

	<u>Thermometers</u>	<u>Other</u>	<u>Linear Standards</u>	<u>Wheel Load Weighers</u>
Internal	16	-	1	-
External	1	18	13	648



Equipment used in calibration is maintained to exacting tolerances required for NVLAP Accreditation and NIST Certification of the EC Heffron Metrology Laboratory. Here thermometers are inserted in a precision temperature bath.

Weights and Measures Program

The Weights and Measures Program provides regulatory oversight for all products and services bought and sold by weight, measure or count, under the authority of the Michigan Weights and Measures Law, P.A. 283 of 1964. This program also administers and oversees the service agency/person registration program to ensure the technical expertise and compliance of service companies that install and repair commercial weighing and measuring devices. In addition to weights and measures, program staff are responsible for investigating consumer complaints involving item pricing and electronic checkout scanner systems per the Consumer Pricing and Advertising Act, P.A. 449 of 1976. The diversity of responsibilities is reflected throughout the course of the year as staff investigates consumer complaints, conduct routine inspections, and participate in special risk-based projects.



Weights and Measures Staff attend an industry trade show as part of an outreach program.

During FY09, staff investigated 1,563 consumer complaints involving short weight/measure packages, misbranded products, false or deceptive advertising, inaccurate weighing or measuring devices, item pricing, and scanner errors. Staff tested 7,371 packages for accurate net content, approving 42 percent and as a result of their efforts approximately 825,000 lbs. of short weight/measure products were removed from sale until corrections could be made.

Staff also inspected and tested 19,319 commercial devices, approving 96 percent of them. The devices tested included retail and wholesale motor fuel dispensers, propane meters, and small and large capacity scales. Both Michigan consumers and businesses benefit when the Michigan Department of Agriculture's weights and measures staff ensure equity in the marketplace.

The program currently monitors the activities of 92 registered service agencies and their 305 registered technicians through the auditing of test data submitted by law as well as field audits conducted on new and repaired devices. Information relevant to device operators and service companies is maintained on the web at www.michigan.gov/wminfo.

Industry outreach programs continue to be a focus of this program's proactive approach to weights and measures compliance. Staff provided current information for program stakeholders both online and through participation in training classes and industry trade shows.

In response to information collected throughout FY09, the program directed more resources to the testing of packages to ensure consumers accurate net content. Constantly compiling and evaluating test data enables the program to maximize scarce resources to best serve Michigan consumers and businesses.



Weights and measures inspections include testing the volume of packaged products.

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	251	3,102	4,269	42.08%	151	427	26.12%

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>
Agri Chemical Mixer	0	0	0	N/A
Animal Livestock Scale	2	0	0	100
Belt Conveter Scale	0	0	0	N/A
Counter Scale	1,283	15	41	95.82
Crane Scale	0	0	0	N/A
Fuel Truck Meter	68	16	6	75.56
Hopper Scale	5	0	0	100
LPG Meter (25 GPM or less)	42	1	3	91.3
LPG Meter (over 25 GPM)	101	3	6	91.82
Mass Flow Meter	0	0	0	N/A
Monorail	0	0	0	N/A
Multiple Grade Gasoline Dispenser	7,391	138	376	93.5
Person Weighing Scale	0	0	0	N/A
Platform Scale (1,500 lbs or less)	52	1	0	98.11
Platform Scale (over 1,500 lbs)	56	3	17	73.68
Railroad Track Scale	0	0	0	N/A
Single Grade Gasoline Dispenser	8,426	231	253	94.57
Single Product Meter (over 25 GPM)	232	6	14	92.06
Terminal Meter	12	3	0	80
Vehicle Scale (2 Section)	34	1	0	97.14
Vehicle Scale (3+ Section)	365	24	92	75.88
TOTAL	18,069	442	808	93.53

Miscellaneous Devices / Standards

	<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	2
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A Weights and Measures Inspector takes a closer look at the test results in order to ensure this gas pump is delivering accurately.



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 FY 2009 :

Number of Purchases	140
Number of Shortages \geq 1.0%	4
Percentage of Purchases \geq 1.0% Short Measure	2.9%

Weights and Measures Complaints Investigated

Item Pricing and Accuracy	126
Retail Motor Fuels Dispensers	*1,377
Short Weight/Measure	35
All Other Complaints	25
TOTAL	1,563

* Gas complaints were jointly investigated with MDA's Motor Fuels Quality Program.

Disposition of P. A. 283 Violations

Compliance Meetings	27
Warning Letters	12
Consent Agreements	50
Prosecutions	-
Seizures / Detainment (Short Weight/Measure)	50
Seizures / Detainment (Amount/lbs)	824,239
Seizures / Detainment (Value)	\$246,405
Fine Amounts	\$236,800

Registered Serviceperson Activities

Registration Activities

Agencies Registered	92
Technicians Registered	304
Service Tests Administered	252

Devices Placed-In-Service by Registered Agencies

Retail Motor Fuel Dispensers	1,548
All Other Meters	502
Small Capacity Weighing Devices	4,066
Large Capacity Weighing Devices	598

Audit of Serviceperson Activities

	<u>Number Conducted</u>	<u>Compliance Rate</u>
Internal	2,418	93.8%
Field	804	90.3%

Currently 136 agencies and 513 technicians are successfully registered under the Serviceperson Program.



A Field Metrologist tests retail motor fuel dispensers for accurate measure.

Motor Fuels Quality Program

In addition to the Motor Fuels Quality inspection and testing done at gasoline retail outlets, wholesale marketers were also closely monitored for compliance with gasoline quality and environmental standards during FY2009. Motor Fuels quality specialists conducted inspections and sampled product at 47 motor fuel distribution racks housed at the state's 29 gasoline terminals and also checked the only refinery located in Michigan for compliance with the state's fuel standards. Staff reviewed wholesalers' procedures and documents and obtained 115 motor fuel and 27 fuel grade ethanol samples.



Increased Motor Fuels Quality testing at the terminal aided in industry policy and procedure improvements.

Special investigations ensued at four terminals when sample testing revealed improper ethanol blending and gasoline quality issues. The involved terminals made improvements to their policies and procedures for the re-blending of pipeline transmix product into the regular grade gasoline and improved their ethanol blending procedures based on the Motor Fuels Quality program's inspection findings. These changes and implementation of precautions will help prevent misrepresented or poorly blended product from leaving the terminals, thus protecting hundreds of retailers and their customers from the receipt of poor quality gasoline.

Motor Fuels Quality Information and Statistics

Establishments Licensed

Gasoline Retail Outlets	4,816
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Stop Sale Information

Excess Water in Underground Storage Tank	70
Failure to Meet Quality Standards	27
Gallons of Product Embargoed per Stop Sale (average)	4,355
Retail Cost of Embargoed Product per Gallon (average)	\$2.499
Total Estimated Retail Value of Embargoed Product	\$1,055,689
Average Vehicle Repair Cost Resulting from Motor Fuel Quality Issue as Reported to MDA	\$916

Complaint and Motor Fuels Quality Hotline Information

Complaints Received through 1-800-MDA-FUEL	1,706*
Gasoline Quality Complaints Investigated	329

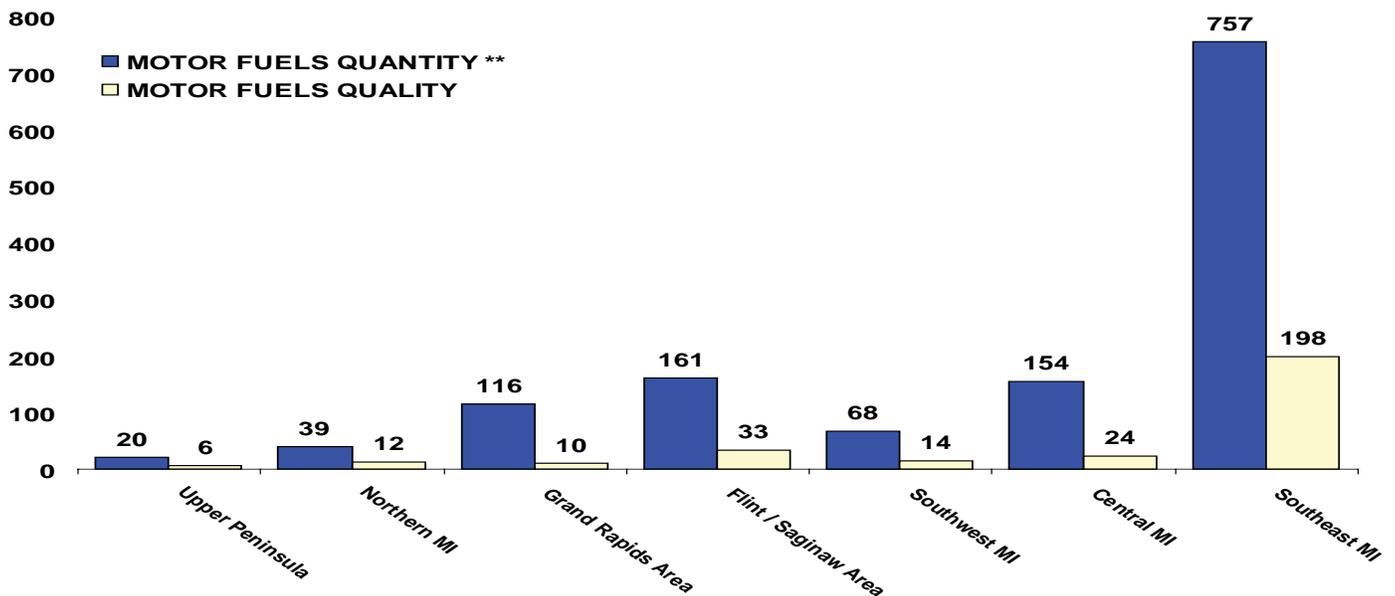
Disposition of P.A. 44 Violations

Compliance Meetings	33
Warning Letters	875
Administrative Fines	101
Prosecutions	0
Fine Amounts	\$80,572

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

Motor Fuels Quality Information and Statistics

Complaints Investigated by Region



Samples Procured

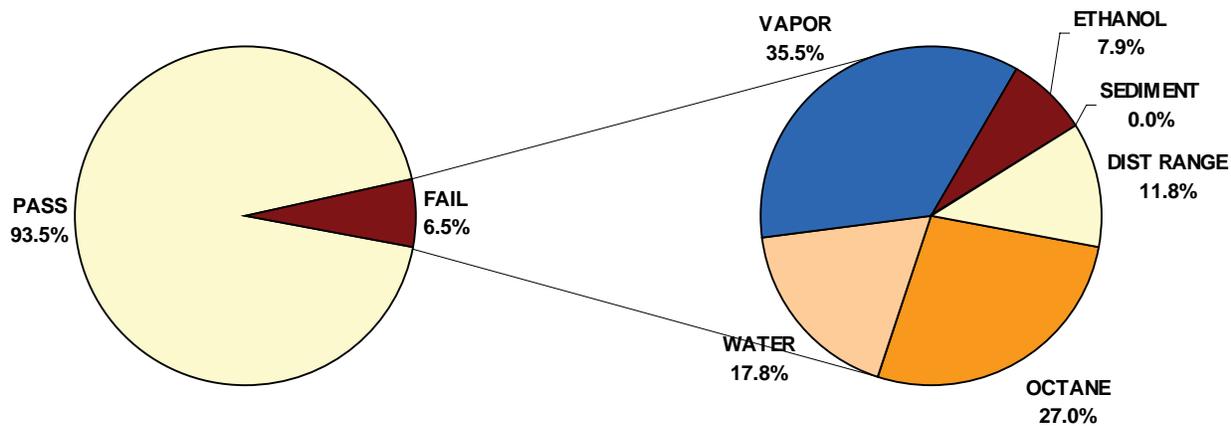
In addition to licensing, inspection, and complaint investigation responsibilities, Motor Fuels Quality Program staff regularly procures gasoline samples for quality testing. The following results are for fiscal year 2009:

Results	Number
Approved	2,266
Warning Letters	113
Non-actionable	9
Administrative Fines	36
Investigations In Progress	0
Total	2,424

Total Sample Violation Rate and Breakdown



Motor Fuels Quality Samples are collected across the State of Michigan in all seasons to ensure required standards designed to reduce pollutants are met.



Samples were procured for the following reasons: a monthly random/stratified program, on-going 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>
Routine	657	22	96.7%
Complaint	273	28	89.7%
Re-sample	160	30	81.3%
Investigation	58	16	72.4%
Confidential/Undercover	799	39	95.1%
Other	143	2	98.6%
Delinquent License	36	0	100.0%
Quality Risk Assessment	167	12	92.8%
Terminal Sampling	131	9	93.1%
TOTAL	2,424	158	93.5%

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	42	3	92.9%
87	1167	31	97.3%
88	2	0	100.0%
89	508	35	93.1%
90	16	1	93.8%
91	31	1	96.8%
92	116	10	91.4%
93	484	72	85.1%
94	28	5	82.1%
Other	30	0	100.0%
TOTAL	2,424	158	93.5%

Sample Results by Region

<u>Region</u>	<u>Number of Samples</u>	<u>Number of Violations</u>	<u>Compliant (%)</u>
Upper Peninsula	253	34	86.6%
Northern Michigan	240	9	96.3%
Grand Rapids Area	256	16	93.8%
Flint / Saginaw Area	337	22	93.5%
Southwest Michigan	198	10	94.9%
Central Michigan	283	22	92.2%
Southeast Michigan	857	45	94.7%
TOTAL	2,424	158	93.5%

Vapor Recovery and Reduction

High gasoline vapor pressure levels increase the evaporation of the gasoline into the atmosphere. The volatile organic compounds (VOC's) that evaporation releases add to the formation of ground level ozone and smog. Ground level ozone and smog contribute to environmental and health problems, especially in individuals with respiratory diseases.

To protect Michigan's air quality, the Motor Fuel Quality Act, P.A. 44 of 1984, as amended, limits the vapor pressure of gasoline sold during the summer to no more than 9.0 pounds per square inch (psi). Eight southeastern Michigan counties have further restrictions on vapor pressure that limits it to no more than 7.0 psi from June 1 to September 15 to assist in controlling ground level ozone and smog formation in those areas. All retailers in the state are monitored for vapor pressure, however, the retail gasoline stations in Wayne, Oakland, Macomb, Washtenaw, St. Clair, Monroe, Lenawee, and Livingston counties receive on-site vapor pressure audits in addition to their routine sampling to ensure only lower vapor pressure gasoline is being sold during the summer.

Gasoline containing 10 percent ethanol is afforded a federal 1 psi waiver which allows the vapor pressure to be up to 8.0 psi in southeastern Michigan during the summer. All gasoline tested in southeast Michigan during the 2009 audit period contained ethanol.

Increased efficiencies in field procedures and assignments allowed the Motor Fuel Quality staff to obtain 230 more vapor audit samples in 2009 for greater compliance monitoring. During the 2009 control period, seven locations (0.1 percent) were found to be in violation of the lower vapor pressure standard. MFQ inspectors sampled a total of 684 locations and conducted on site audits at 824 locations to monitor vapor pressure requirements in southeast Michigan.

Field Audit and Sample Results*

	<u>Field Audits</u>	<u>Official Samples</u>	<u>Total</u>
Number of Establishments*	474	279	684
Number of Audits Conducted*	482	342	824
Overall Establishments in Violation	1	7	7
Establishment Violation Rate	<0.01%		

* 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

<u>Number of Field Audits per County</u>	
Lenawee.....	12
Livingston.....	11
Macomb.....	83
Monroe.....	20
Oakland.....	100
St. Clair.....	17
Washtenaw.....	29
Wayne.....	210

Field Audits without Ethanol (7.0 psi RVP limit)*

Field Audits with Ethanol (8.0 psi RVP limit)

<u>Octane</u>	<u>RVP Average</u>	<u>Number Collected</u>	<u>Number of Violations</u>
86	-	-	-
87	7.75	440	-
88	-	-	-
89	7.73	16	-
90	-	-	-
91	-	-	-
92	7.54	1	-
93	7.73	24	2
94	7.63	1	-
TOTAL	7.74	482	2

*All gasoline tested in southeast Michigan during the 2009 audit period contained ethanol.

STATE OF MICHIGAN



Executive
Office

Jennifer M. Granholm
Governor

CERTIFICATE OF PROCLAMATION

On behalf of the citizens of Michigan, I, Governor Jennifer M. Granholm,
do hereby proclaim the week of March 1, 2009,

Weights and Measures Week

Whereas, Each year, the first week in March is set aside to commemorate the enactment of our nation's first weights and measures Law in 1799, and to increase public awareness of the importance of this law; and,

Whereas, The weights and measures program of the Michigan Department of Agriculture Laboratory Division serves to meet the public need of standard weights and measures in the state of Michigan; and,

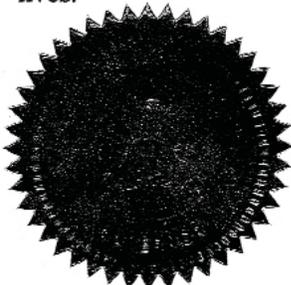
Whereas, The employees of the weights and measures program are responsible for ensuring that all weighing and measuring devices used in commerce are accurate in both their design and operation; and,

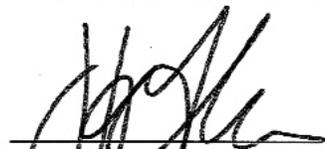
Whereas, There is a growing awareness of consumers for accurate measurement and clear labeling of products when trying to make informed purchasing decisions; and,

Whereas, There is a growing need to protect businesses from unfair trade practices and create assurance that standards used in manufacturing and commerce are accurate and traceable; and,

Whereas, The theme of the National Conference on Weights and Measures: "Making a Difference" recognizes Michigan's efforts to make a difference in our everyday lives through accuracy in measurements;

Now, Therefore, be it Resolved, That I, Jennifer M. Granholm, governor of the state of Michigan, do hereby proclaim the week of March 1, 2009, Weights and Measures Week in Michigan. I ask all citizens to recognize the importance of the weights and measures law and to see how it effects our daily lives.




Jennifer M. Granholm
Governor

This report is issued under the provisions 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 2009 Annual Report may be obtained via www.michigan.gov/mda.

