2005 - 2006

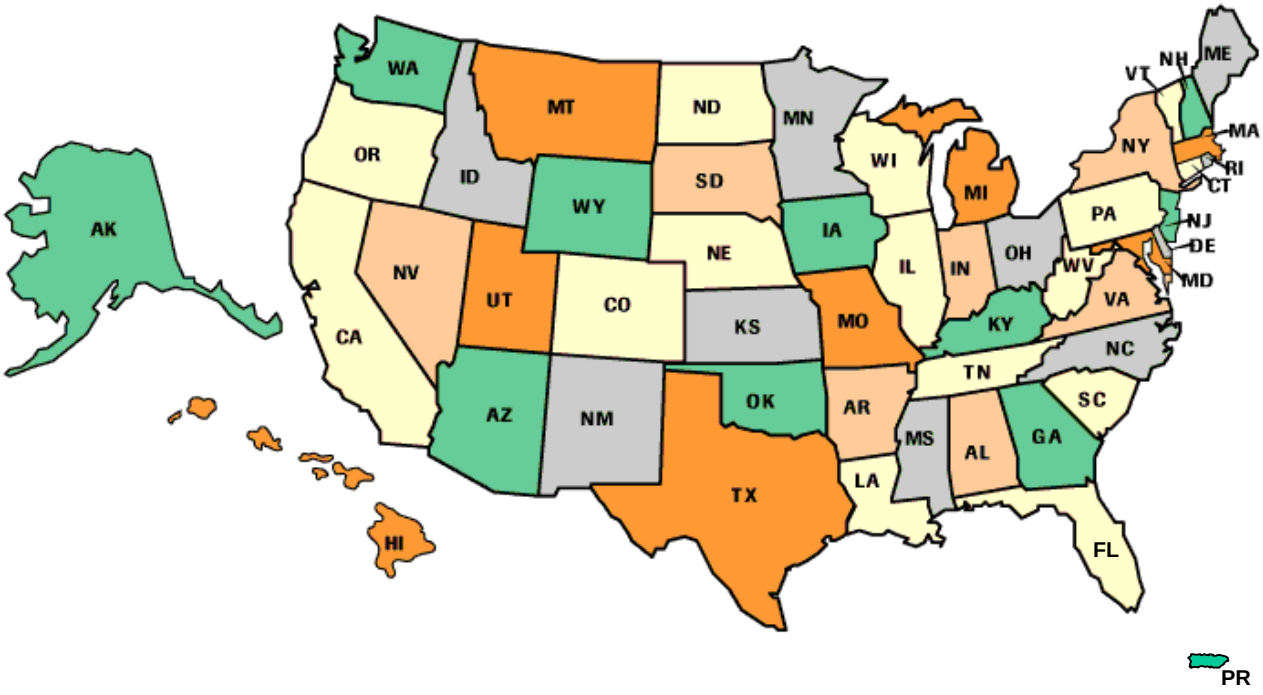
State Laboratory Program

Workload Survey

Summary Graphs and Data

Presented by

NCSLI Legal Metrology Committee (134)



The Committee would like to extend a special Thank You to Ken Fraley, Oklahoma Bureau of Standards, for his work assembling the massive amount of data into the form before you. Without his dedication and tireless efforts to improve the clarity and ensure the accuracy of this report, the document would not exist.

Thanks must be extended to all of the laboratory personnel who gathered and submitted the data. Without you, this survey would not be possible.

Thanks to the NCSLI Legal Metrology Committee, (Georgia Harris, NIST; Val Miller, NIST; Elizabeth Gentry, NIST; L.F. Eason, North Carolina; and Ken Fraley, Oklahoma) for their perceptive review in the development of this report.

Additionally, thanks to the staff and management of NCSLI who made the collection of the data through the NCSLI website possible. Twenty-first century technology; what did we do without it?

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Objectives and History of the Survey

For this survey cycle we requested data for two individual years, 2005 and 2006, anticipating that there might be significant differences. After analysis, the survey results do not show a significant difference between the two years indicating that no data is lost by continuing the biennial survey cycle or possibly even increasing the interval to three years. Though analyzed, in this report the 2005 data has not been presented with the same detail as has been provided the 2006 data. Only totals and percentages of change have been presented for the various measurement areas. Consideration is being given to a supplemental report that will display the 2005 data with the same detail as is being provided the 2006 data. The Survey committee would be interested in feedback on the value of this supplemental report.

The Workload Survey Committee, after examining the data from past surveys determined that there has been inconsistency in the titles as they relate to the year from which data was extracted. To allow proper comparison of the survey data to other available measurement data the comparisons in the charts and tables of the 2005 & 2006 Survey report reflect the year from which data was extracted rather than the year in the survey title.

Survey Title	Year represented by the survey data
1996 State Laboratory Program Workload Survey	1996
1999 State Laboratory Program Workload Survey	1998
2000 State Laboratory Program Workload Survey	1999
2001 State Laboratory Program Workload Survey	2000
2003 State Laboratory Program Workload Survey	2002
2005 State Laboratory Program Workload Survey	2004
2005 & 2006 State Laboratory Program Workload Survey	2005 & 2006

Future surveys will be titled to properly reflect the year in which the measurements reported were actually made.

In 1996, the National Conference on Weights and Measures (NCWM) Metrology Subcommittee surveyed the State Laboratory participants to quantify the workload of the State Laboratory Program (SLP) and document its impact on the United States economy. From the survey analysis, it was clear that the workload statistics were dynamic and only provided a snapshot of the workload at the time. Therefore, the Metrology Subcommittee circulated a revised survey April 16, 1999 to update program statistics and to investigate trends in the National workload. The subcommittee has since recommended that the survey be conducted on a regular basis and that the core survey be kept standardized in order for state labs to develop databases that could automatically generate the information for the survey.

Survey data will be used not only to quantify the impact of the State Laboratory Program on the United States economy, but also to plan and maximize its effectiveness. Training and inter-laboratory comparisons will be designed to meet real needs of the workload. Ultimately, the survey information will increase the efficiency of the entire State Laboratory

Program and maximize the benefits to the National Economy. The results of previous surveys have been used extensively at NIST to gain support and attention for the State Laboratories and have been helpful in putting together budget proposals. The information from the survey is also useful in identifying the diversities of the workload on a national level.

Presentation and Analysis of Data

The NCSLI developed a program that automatically compiled the data into an Access database. Queries were developed to access the data that was then copied into Excel spreadsheets. Excel spreadsheets were used to present the information in graphical form for the different types of standards. The first graph at the top of each page is a map graph in which shading is used to indicate the number of standards each state tested. Also included is a pie graph that provides a further breakdown of the data. The pie graph is automatically placed as an overlay on the map graph and associated with the appropriate State. The bar graph uses the same data as the map graph and provides a further breakdown of the data. The bar graph displays the total number of standards tested above each bar and an average is calculated and plotted.

> *Note: Extreme caution should be used when comparing one state's data with data from another state. It was determined in the 1996 survey that laboratory workload is based somewhat on industrial and population densities that vary by geographical location. Laboratories generally attempt to meet the needs of their customers equally. For this and additional reasons listed elsewhere in this report, variance between individual laboratories concerning the number of devices tested, staffing, and laboratory facility are normal and cannot legitimately be used to rate the quality of any laboratory program.*

Also presented are some comparisons between the calculated laboratory averages from previous surveys. No attempt was made to compare increases or decreases in the workload of individual laboratories due to the fact that laboratories may use different calibration intervals for different standards and their annual workload will fluctuate accordingly. For example, a state may have their volumetric glassware on a two-year calibration interval with the majority of these standards calibrated in one twelve month period with very few that are tested in the following twelve-month period. This does not indicate that the workload is decreasing in that state; it is just a reflection of the calibration interval assigned to those standards.

Participants

The State Laboratory Program (SLP) is comprised of 55 metrology laboratories. There are 50 state laboratories and 5 other government laboratories (Puerto Rico, Washington DC, Los Angeles County, USDA-GIPSA (identified as 'DA' in the survey), and U.S.-Virgin Islands). Of these 55 laboratories, 4 are not active and 4 were temporarily inactive at the time of this survey. The Washington DC, Delaware, U.S.-Virgin Islands, and Rhode Island metrology laboratories were not operational, and the Los Angeles County metrology laboratory was inactive during the 2006 reporting period of the survey. Forty-nine laboratories of the fifty active laboratories responded to the survey. The Montana laboratory was in the midst of a staffing change at the time of the survey data collection and was unable to provide data for this survey.

The following is a list of the SLP laboratories and their participation status in previous surveys.

	1996 Survey Participant	1998 Survey Participant	1999 Survey Participant	2000 Survey Participant	2002 Survey Participant	2004 Survey Participant	2005 Survey Participant	2006 Survey Participant
AK	Yes		Yes	Yes	Yes	Yes	Yes	Yes
AL	Yes				Yes	Yes	Yes	Yes
AR	Yes	Yes	Yes	Yes	Yes	Yes		Yes
AZ	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CO	Yes		Yes	Yes	Yes	Yes	Yes	Yes
CT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DE	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)
FL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
HI	Yes	Yes	Yes	(inactive)	Yes	Yes	Yes	Yes
IA	Yes	Yes	Yes		(inactive)	Yes	Yes	Yes
ID	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KY	Yes	Yes	Yes	Yes	Yes	(inactive)	(inactive)	Yes
LA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MA	Yes		Yes	Yes	Yes	Yes	Yes	Yes
MD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ME	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MI	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MO	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MS	Yes	Yes		(inactive)	Yes	Yes	Yes	Yes
MT	Yes	Yes	Yes	Yes	Yes	Yes		
NC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ND	Yes	Yes	Yes	Yes	Yes	(inactive)	Yes	Yes
NE	Yes	Yes		Yes	Yes	Yes	Yes	Yes
NH	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NJ	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NV	Yes	Yes		Yes	Yes	Yes	Yes	Yes
NY	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
OH	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
OK	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
OR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RI	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)
SC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SD	Yes	Yes			(inactive)	Yes	Yes	Yes
TN	Yes	Yes	Yes	Yes	Yes	(inactive)	Yes	Yes
TX	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
VA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
VT	Yes	Yes	Yes	Yes	Yes	Yes	Partial Data	Partial Data
WA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WI	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WY	Yes	Yes	Yes	Yes	Yes	Yes		Yes
USDA-GIPSA	Yes					Yes	Yes	Yes
Washington DC	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)
Virgin Islands	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)	(inactive)
Puerto Rico	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LA County	Yes	Yes	Yes	Yes	Yes	(inactive)	(inactive)	(inactive)
TOTAL	51	46	45	45	48	47	46	49

Impact and Leveraging of NIST Calibrations

Calibration data for State laboratories was obtained from the NIST Measurement Services Division from 2000 to 2006. One of the measures of impact of NIST calibrations is to quantify the number and impact of downstream calibrations. How many additional calibrations are made by other laboratories using these calibrations? The answer to this question is a measure of the national impact of NIST calibration services and training. This leveraging of NIST calibrations to industry by the State weights and measures laboratories contributes greatly to the economy of the United States.

State weights and measures laboratories account for a small portion of NIST's annual calibrations. In 2005, there were 11 calibrations completed for State laboratories. In 2006, there were 15 calibrations completed for the State labs. Downstream calibrations for State laboratory customers were 361,000 and 365,000 for those two years. This resulted in an average leveraging impact of almost 28,000:1. Given data obtained in the early SLP surveys, almost half of the customer workload in the state laboratories is for industry and other government agencies (i.e., not weights and measures enforcement efforts). Many of these customers are the same customers who in other countries must obtain calibrations from the national laboratory.

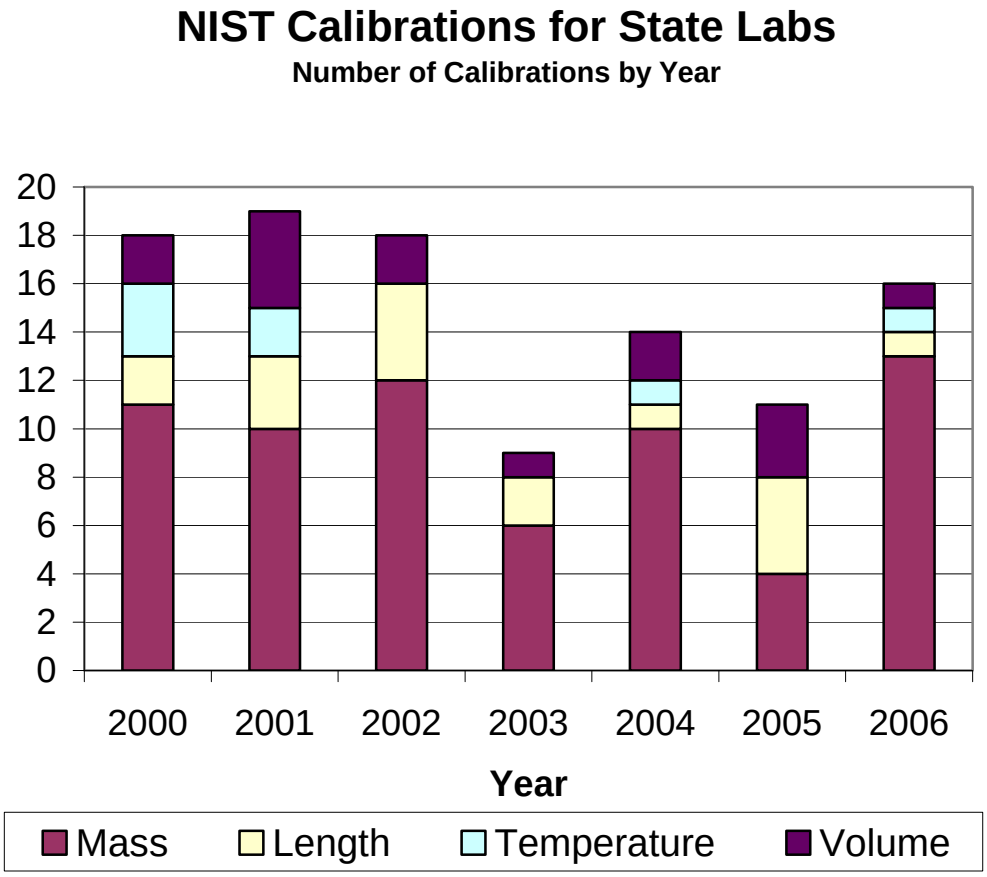
Economic statistics indicate that weights and measures enforcement, supported by these leveraged State weights and measures laboratory calibrations, affects more than half of the $13.2 trillion U.S. GDP. Since nearly half of the State weights and measures laboratory workload does not affect weights and measures enforcement, the economic impact of these calibrations influences virtually all of the U.S. GDP. Accurate measurements ensure product quality for practically every product manufactured, are required for other regulatory functions (EPA, FDA, DOD, DOE, DOT), and are requisite for international trade.

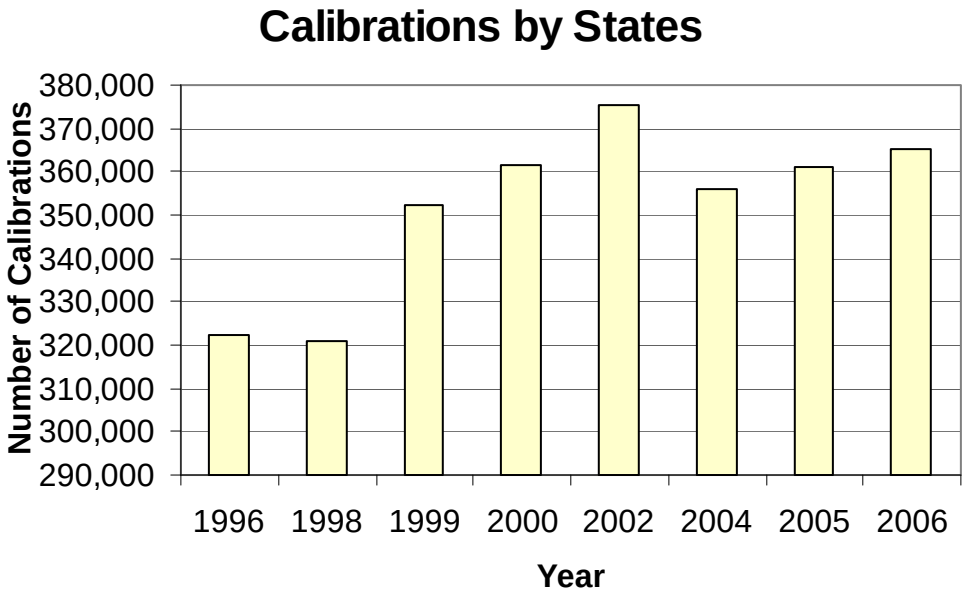
One question that might be asked in looking at this kind of leveraging data, is "are enough calibrations being obtained from NIST by the States?" One responsibility of the NIST Weights and Measures Division is to coordinate the State weights and measures laboratories. Each state laboratory that is recognized by WMD or accredited by NVLAP is required to have calibrations from acceptable sources, which are most often from NIST. WMD recognition or NVLAP accreditation ensure that enough calibrations are obtained from NIST by the State weights and measures laboratories and that the State metrologists are trained adequately. Furthermore, metrologists must prove their proficiency and have specified calibration intervals for laboratory standards to ensure the ongoing ability to provide calibration results that are traceable to SI units or international and national standards. It is estimated better than 96 % of the laboratory standards are calibrated in a timely manner according to these established calibration intervals.

We can also look at comparisons by industry sector. For example, the CENAM in Mexico must calibrate all volumetric standards used by the petroleum industry. In this current report, 8,800 volumetric standards were calibrated by the States to support petroleum meter calibration. A very small fraction of that number are calibrated annually by NIST. The same kind of leveraging comparison can be made for other measurement areas. It would require a very significant expansion of NIST facilities, equipment, and staffing just to handle the number of standards calibrated by the State weights and measures laboratories. Also, the economic impact of cost and downtime to ship standards from all over the United States to NIST for calibration would be crippling to U.S. industry. The recognition of this evolving reality was the primary driving force behind the legislation enabling the "new State standards program" in the 1950's. The State weights and measures laboratories established by that legislation have matured to the efficiently leveraged program documented in this and previous surveys. From this analysis, it is clear that the State weights and measures laboratories are an essential element of the U.S. National Measurement System.

NIST Calibrations for State Labs

Impact & Leveraging of NIST Calibrations…





- Calibrations done by NIST for States & Calibrations done by States
  - 2005: 11:361,000
  - 2006: 15:365,000

Summary of All Standards for 2006
{Total Number of Standards or Devices Tested}

Description

The graphs on the following page are a summary of the total number of standards or devices tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices being tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the categories of mass, volume, length, temperature, time/frequency, wheel load weighers, lottery balls, and other. The bar graph at the bottom of the page shows the same breakdown in categories along with the total number of devices tested by each laboratory. There is also a smaller line graph indicating the totals from previous surveys.

Findings

The 49 reporting laboratories tested a total of 365,004 standards.

Comparison of previous surveys

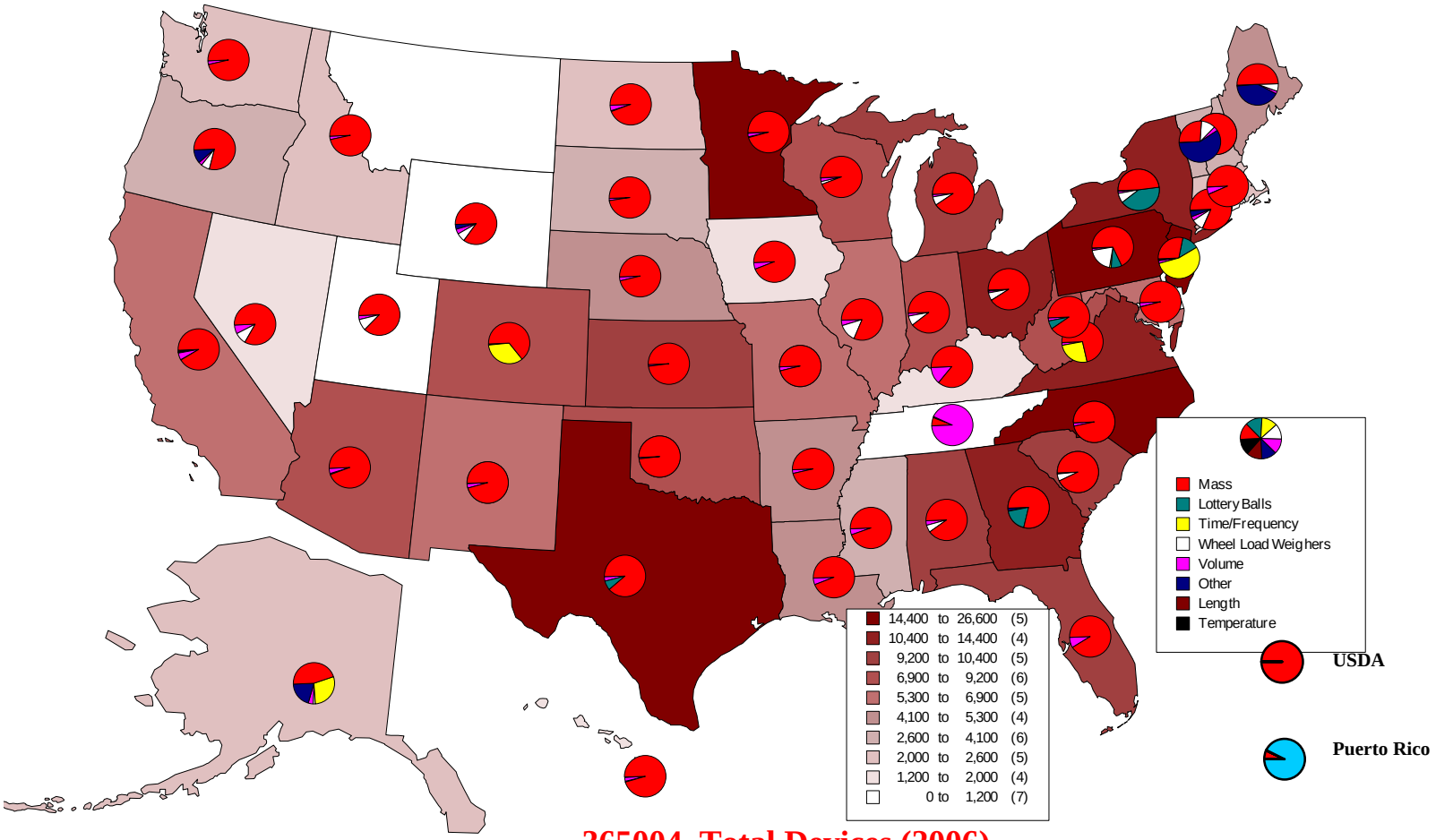
	# Reporting Labs	Total Devices	Lab Average
1996	51	322,472	6,323
1998	46	320,931	6,977
1999	45	352,274	7,828
2000	45	361,600	8,036
2002	48	375,411	7,821
2004	47	355,986	7,574
2005	46	361,054	7,849
2006	49	365,004	7,449

	Using the lab averages:	Using the survey totals:
1996 to 1998	-- An increase of 10 %	-- A decrease of less than 1 %
1998 to 1999	-- An increase of 12 %*	-- An increase of 10 %*
1999 to 2000	-- An increase of 3 %	-- An increase of 3 %
2000 to 2002	-- A decrease of 3 %	-- An increase of 4 %
2002 to 2004	-- A decrease of 3 %	-- A decrease of 5 %
2004 to 2005	-- An increase of 4 %	-- An increase of 1 %
2005 to 2006	-- A decrease of 5 %	-- An increase of 1 %

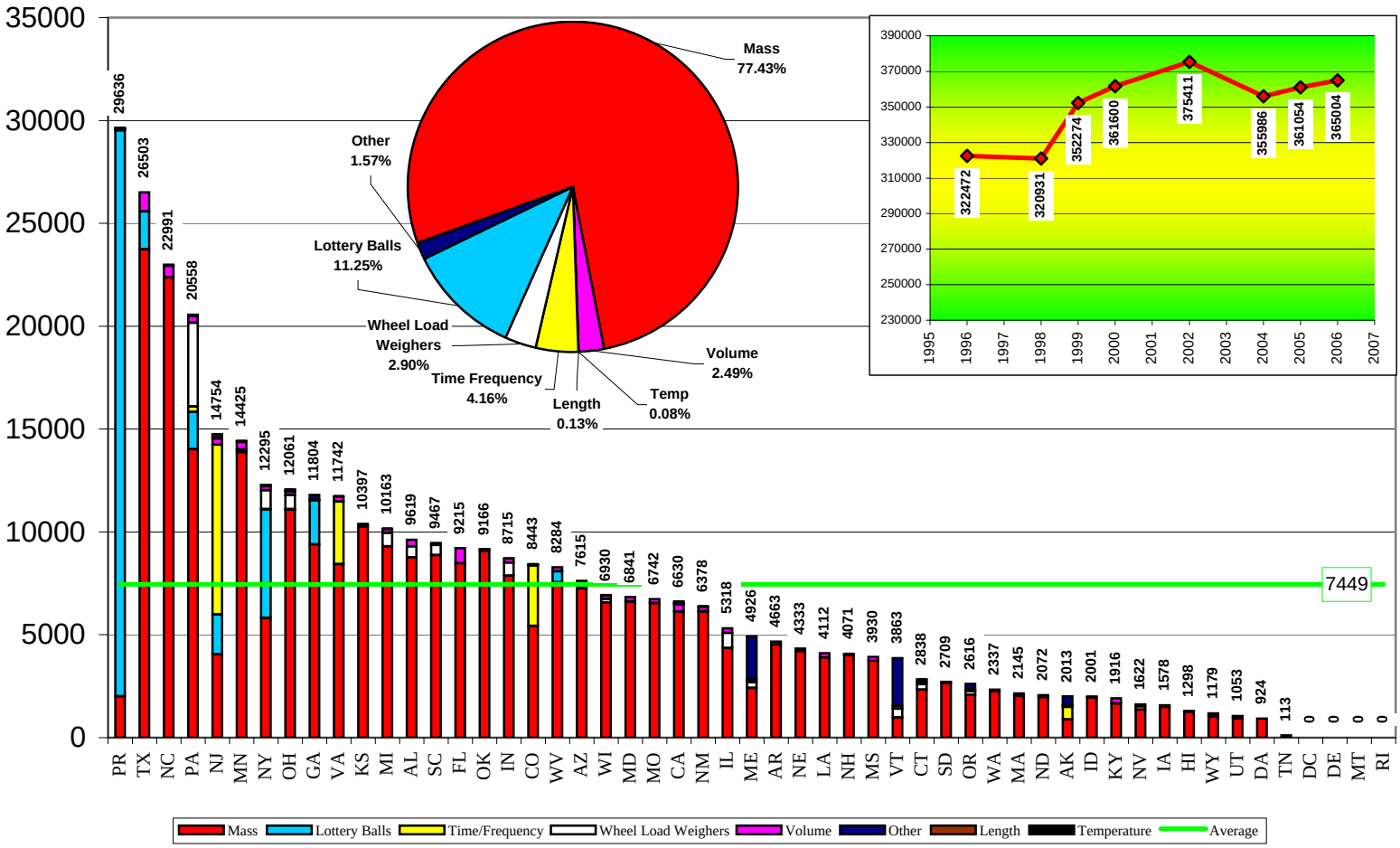
Notes and Comments

*Part of the increase from 1999 to 2000 may be attributed to a new category that was called "Other". These are calibrations done by the laboratory, which did not fall into any of the pre-defined categories of the survey.
Mass standards accounted for 78 % of the total number of devices tested in 2006.

Summary of All Standards by Device Type (2006)



365004 Total Devices (2006)



Summary of All Standards for 2006
(by customer type)
{Lab, W&M, and External}

Description

The graphs on the following page represent the total number of all mass standards tested by the 49 reporting laboratories. The pie graph provides a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the same breakdown along with the total number of devices tested by each laboratory.

Lab – work done for the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

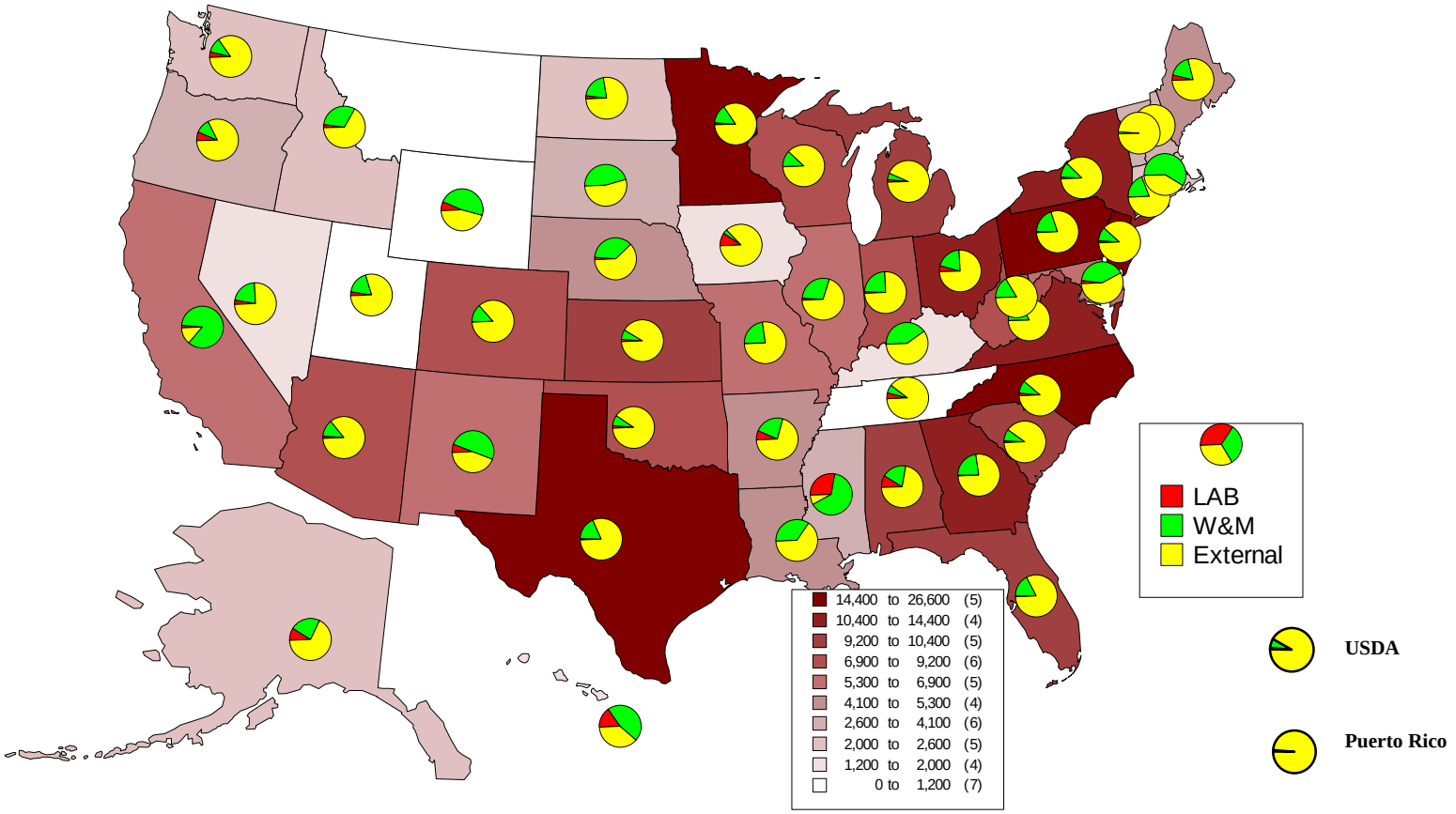
The 49 reporting laboratories tested a total of 365,004 standards.

Notes and Comments

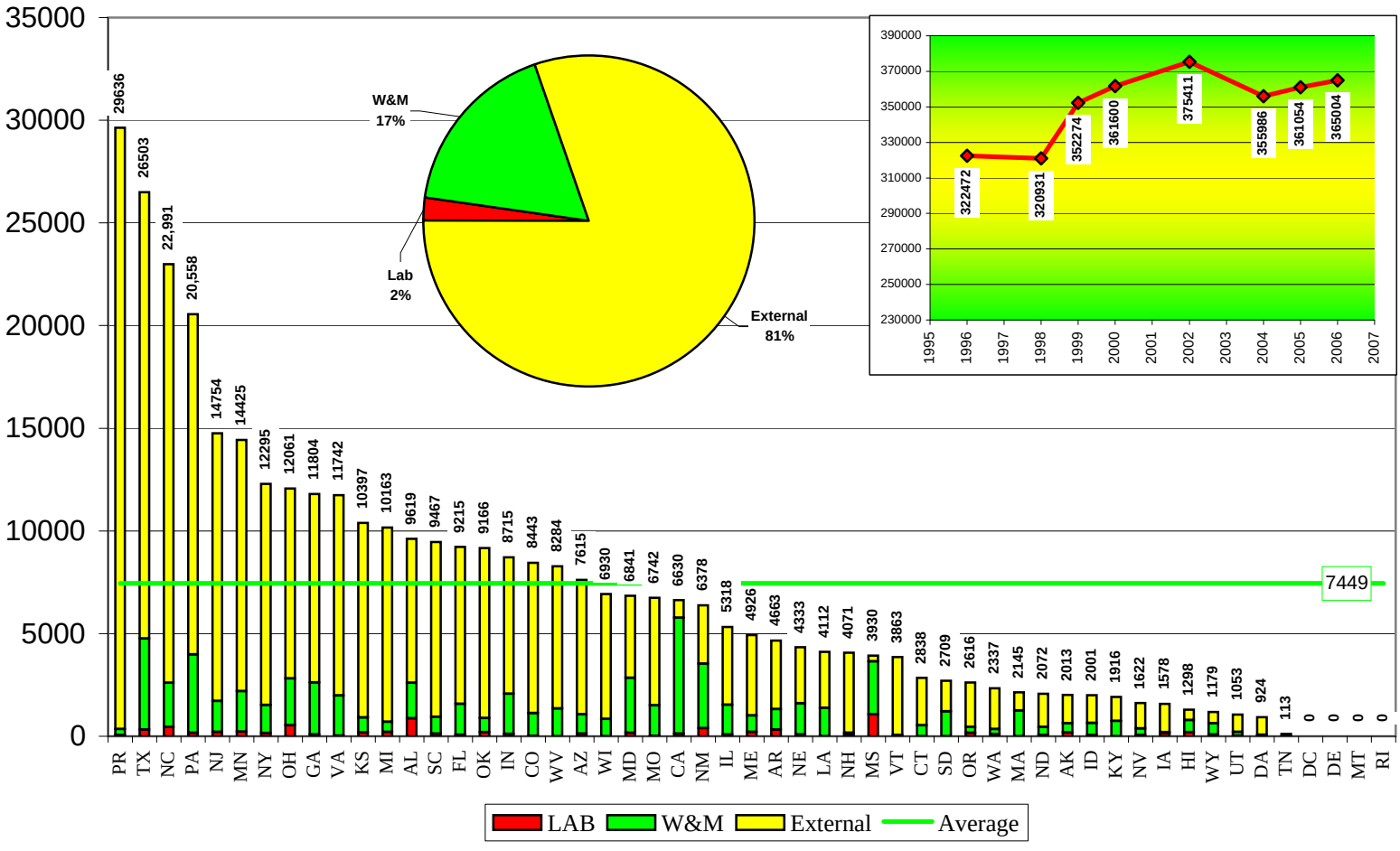
2 % of all standards were calibrated for internal use of the laboratory.
17 % of all standards were calibrated for "Weights & Measures Enforcement Program'.
81 % of all standards were calibrated for 'External' customers.

This 2 % / 17 % / 81 % pattern is very representative of the breakdown of customers. However, it can be noted that the smaller the entire workload of the lab, the greater percentage "Lab" becomes. This reflects the 'basic maintenance' workload necessary to keep a metrology laboratory operational.

Summary of All Standards by Customer Type (2006)



365004 Total Devices (2006)



Mass Total for 2006
(by customer type) & (by accuracy type)

Description

The pie graphs on the following page are for the total number of mass standards tested by the 49 reporting laboratories. The top pie graph provides a breakdown into the customer categories of Lab, W&M, and External.

Lab – work done for the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

The bottom pie graph provides a breakdown in the accuracy echelons of Mass I, Mass II, and Mass III.

Mass I – Precision mass standards that are calibrated using Advanced Weighing Designs and Mass Code Data Reduction regardless of accuracy classification.
Mass II – Precision mass standards that are usually calibrated using 3-1 weighing designs or double substitutions.
Mass III – Mass standards that are usually calibrated using modified or single substitution procedures.

Notes and Comments

Mass By Customer Type

2.2 % of all mass standards were calibrated for internal use by the laboratory.
18.2 % of all mass standards were calibrated for the Weights & Measures Program.
79.5 % of all mass standards were calibrated for External customers.

Mass By Echelon Category

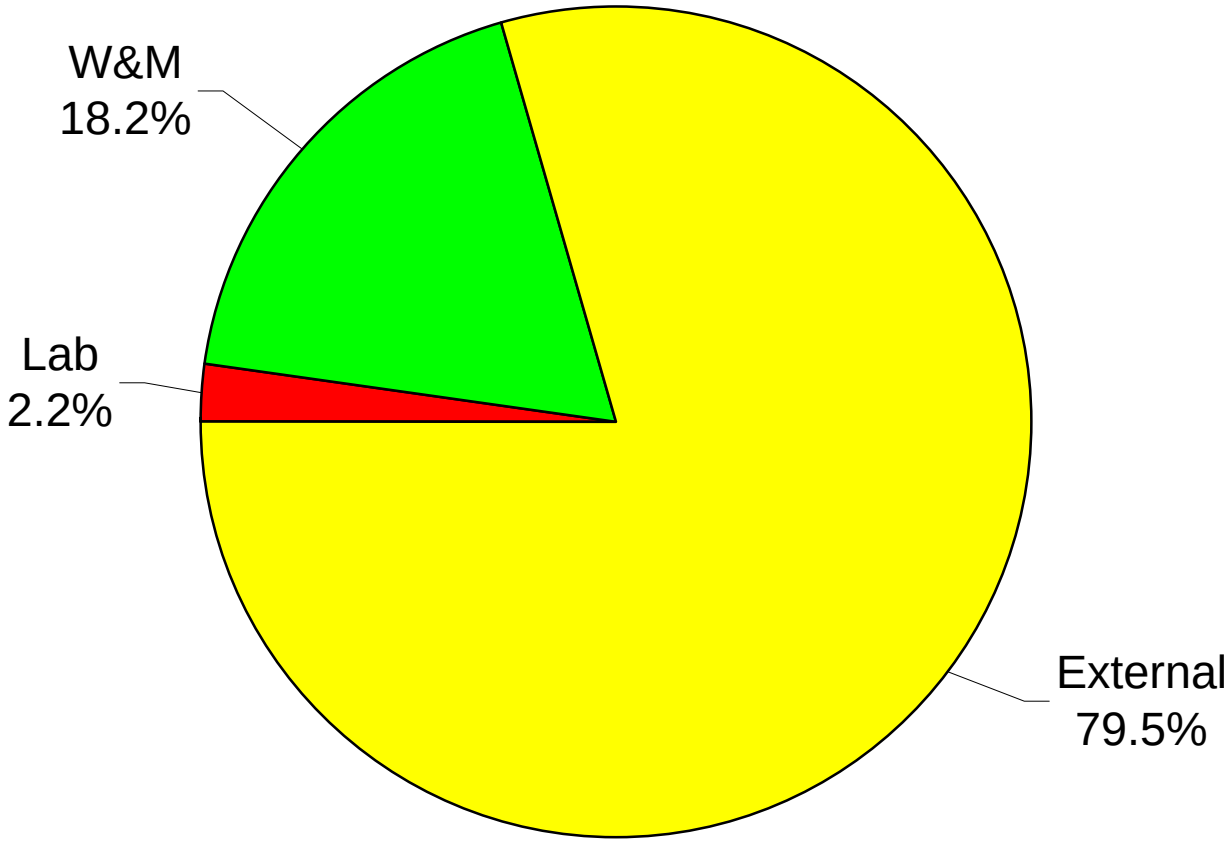
0.9 % (3,025) of all mass standards were calibrated as Mass Echelon I.

6.9 % (22,352) of all mass standards were calibrated as Mass Echelon II.

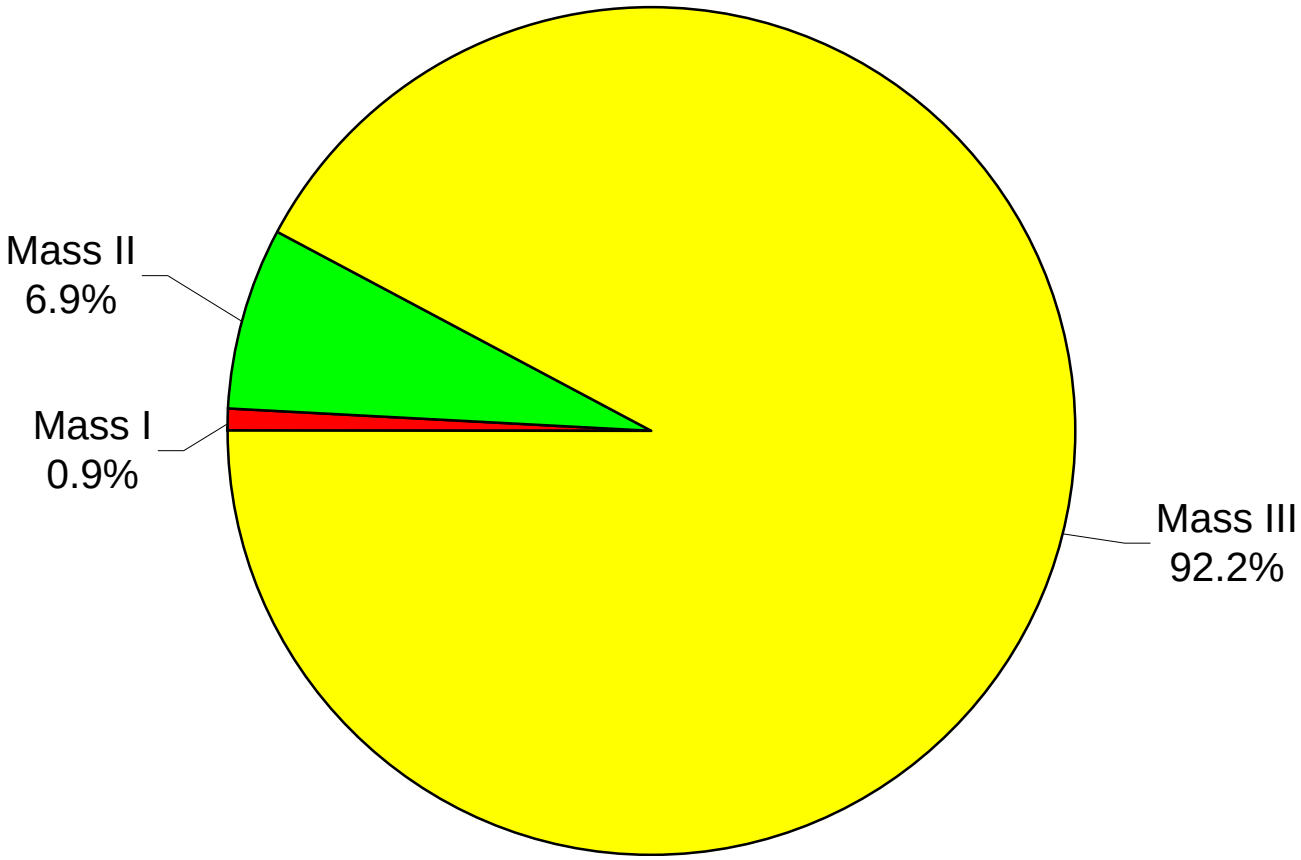
92.2 % (298,300) of all mass standards were calibrated as Mass Echelon III.
(weight carts and lottery balls were included as Mass III tests)

It has been estimated that it takes ten times the number of labor hours to calibrate an Echelon I or II weight as compared to an Echelon III weight. When this is taken into consideration, the same total number of labor hours is probably spent on Echelon I & II calibrations as is spent on Echelon III calibrations.

Total Mass by Customer Type (2006)



Total Mass by Accuracy Type (2006)



Mass Echelon I for 2006

Description

The graphs on the following page represent the total number of Mass Echelon I standards tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the same breakdown along with the total number of devices tested by each laboratory. There is also a smaller line graph indicating the totals from previous surveys.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

Of the 49 reporting laboratories, 14 labs tested a total of 3,025 Mass I standards.

Comparison of previous surveys

The number of laboratories performing Mass I calibrations appears to have stabilized in the range of 14 to 16. It should be noted that Mass I calibration results are typically used as calibration laboratory standards for calibrations of mass standards of lesser accuracy.

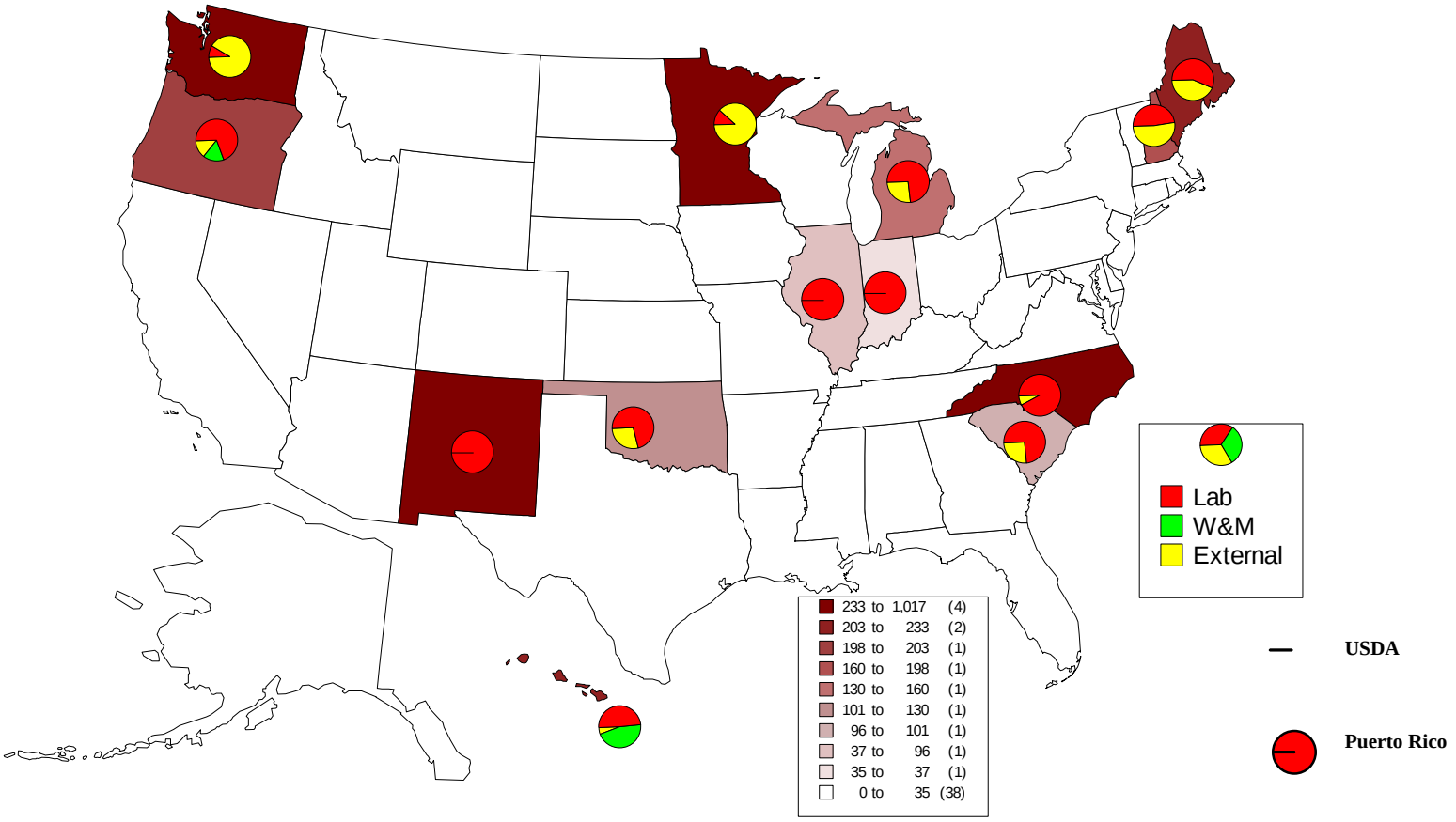
	# Labs Reporting Mass Echelon I	Total Devices	Lab Average	Change using lab averages
1998	10	2,667	267	--
1999	15	5,985	399	+ 50 %
2000	16	5,227	327	- 18 %
2002	15	5,288	353	+ 8 %
2004	14	3,707	265	- 25 %
2005	14	3,103	222	- 16 %
2006	14	3,025	216	- 3 %

Results for Mass I cannot be compared to the 1996 survey. The 1996 survey did not use Mass Echelon I as a category. It used 'Precision Mass' as the category that included both Mass Echelon I and Mass Echelon II calibrations.

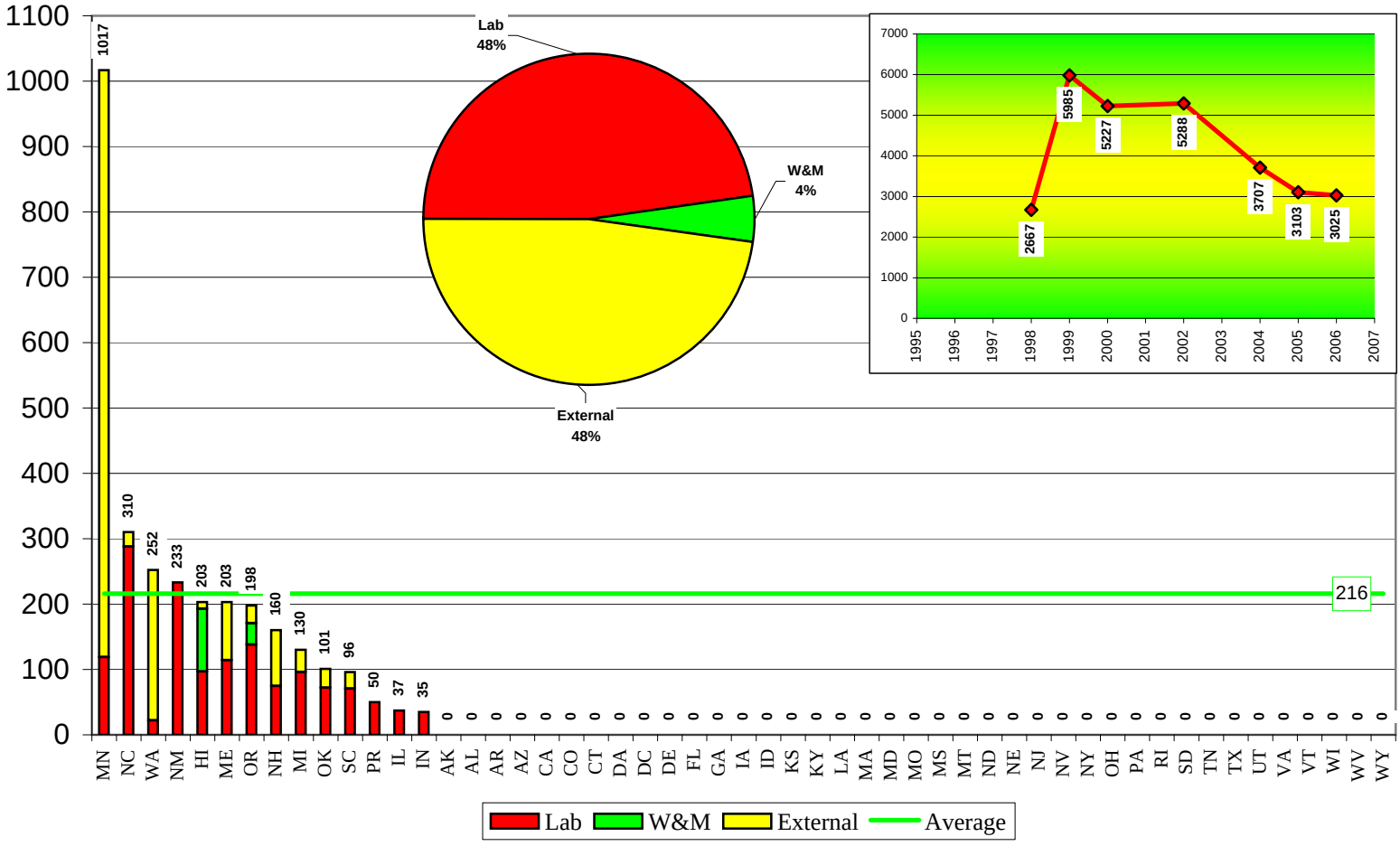
Notes and Comments

48 % of all Mass I standards were calibrated for internal use by the laboratory.
4 % of all Mass I standards were calibrated for the weight and measures program.
48 % of all Mass I standards were calibrated for external customers.

Mass Echelon I (2006)



3025 Total Devices (2006)



Mass Echelon II for 2006

Description

The graphs on the following page represent the total number of Mass Echelon II standards tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the same breakdown along with the total number of devices tested above each laboratory. There is also a smaller line graph indicating the totals from previous surveys.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

Of the 49 reporting laboratories, 33 labs tested a total of 22,352 Mass II standards.

Comparison of previous surveys

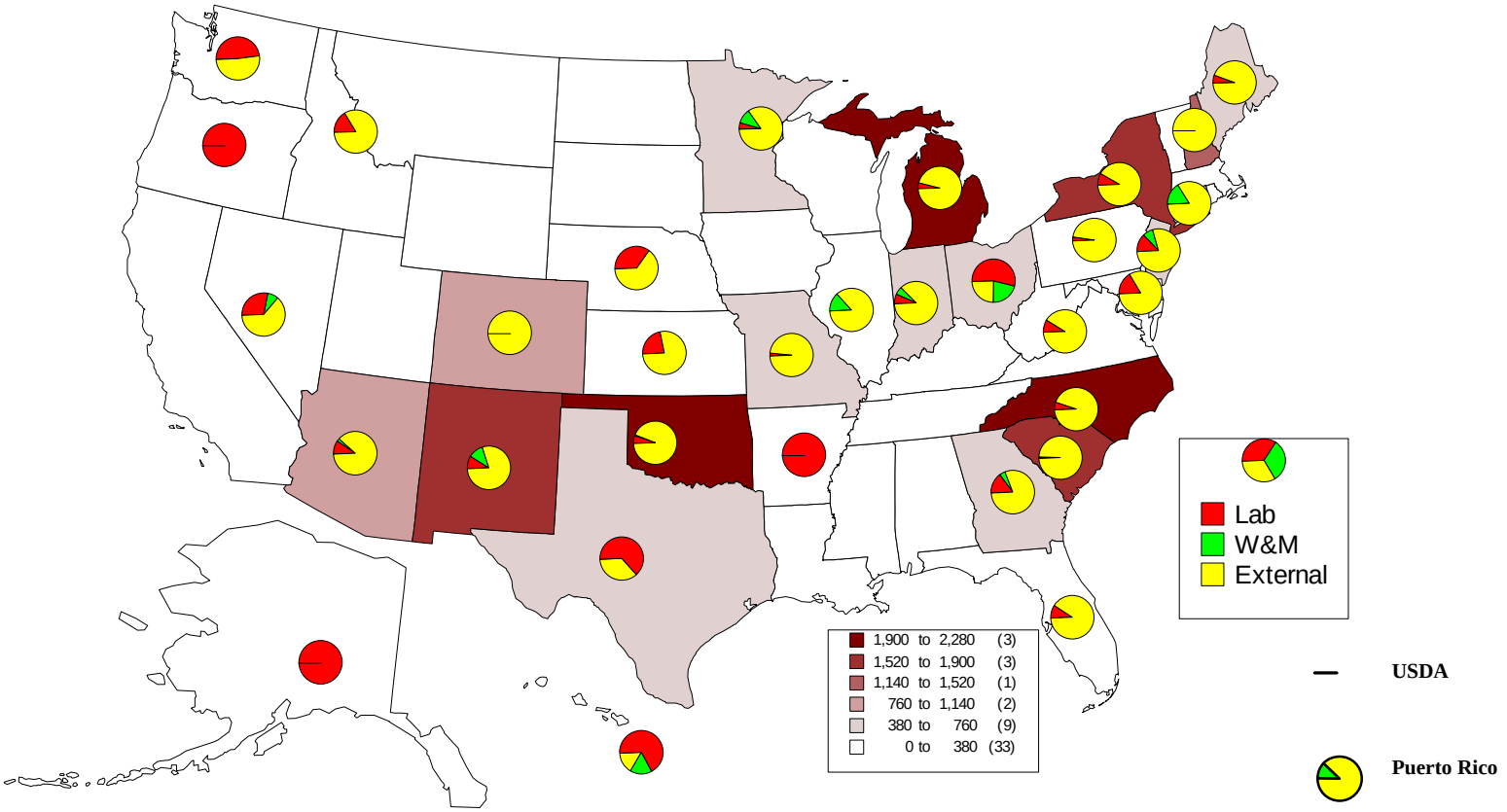
	# Labs Reporting Mass Echelon II	Total Devices	Lab Average	Change using lab averages
1996	38	37,662	991	--
1998	36	24,926	692	- 30 %
1999	35	25,807	737	+ 7 %
2000	38	26,428	695	- 6 %
2002	37	25,847	699	+ 0 %
2004	32	21,714	679	- 3 %
2005	32	20,541	642	- 5 %
2006	33	22,352	677	+ 5 %

The 1996 survey did not use Mass Echelon II as a category. It used 'Precision Mass' as the category that included both Mass Echelon I and Mass Echelon II calibrations.

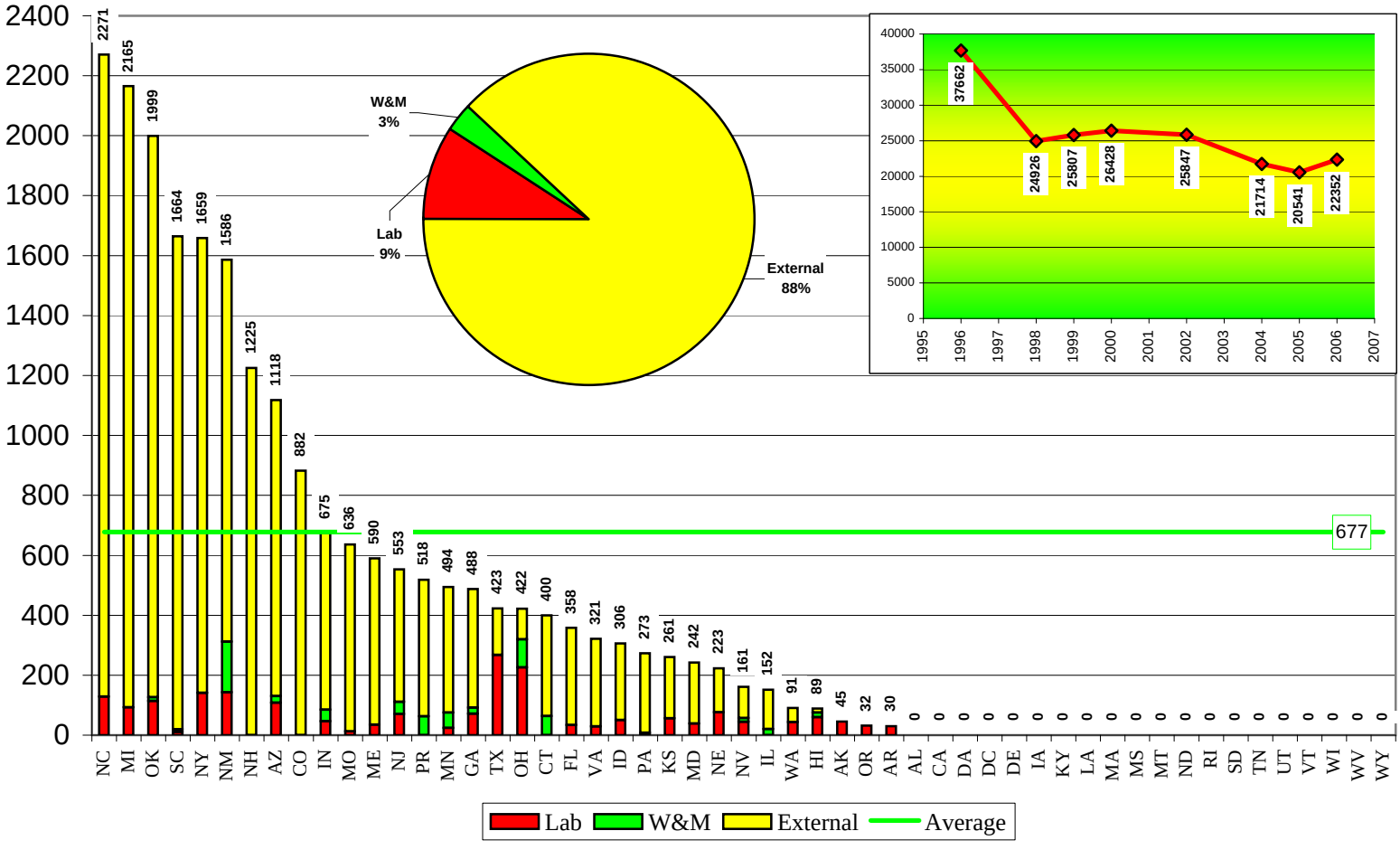
Notes and Comments

9 % of all Mass II standards were calibrated for the internal use of the laboratory.
3 % of all Mass II standards were calibrated for the weights and measures enforcement program.
88 % of all Mass II standards were calibrated for external customers.

Mass Echelon II (2006)



22352 Total Devices (2006)



Mass Echelon III for 2006

Description

The graphs on the following page represent the total number of Mass Echelon III standards tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the same breakdown along with the total number of devices tested by each laboratory. There is also a smaller line graph indicating the totals from previous surveys.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

Of the 49 reporting laboratories, 49 labs tested a total of 256,844 Mass III standards.

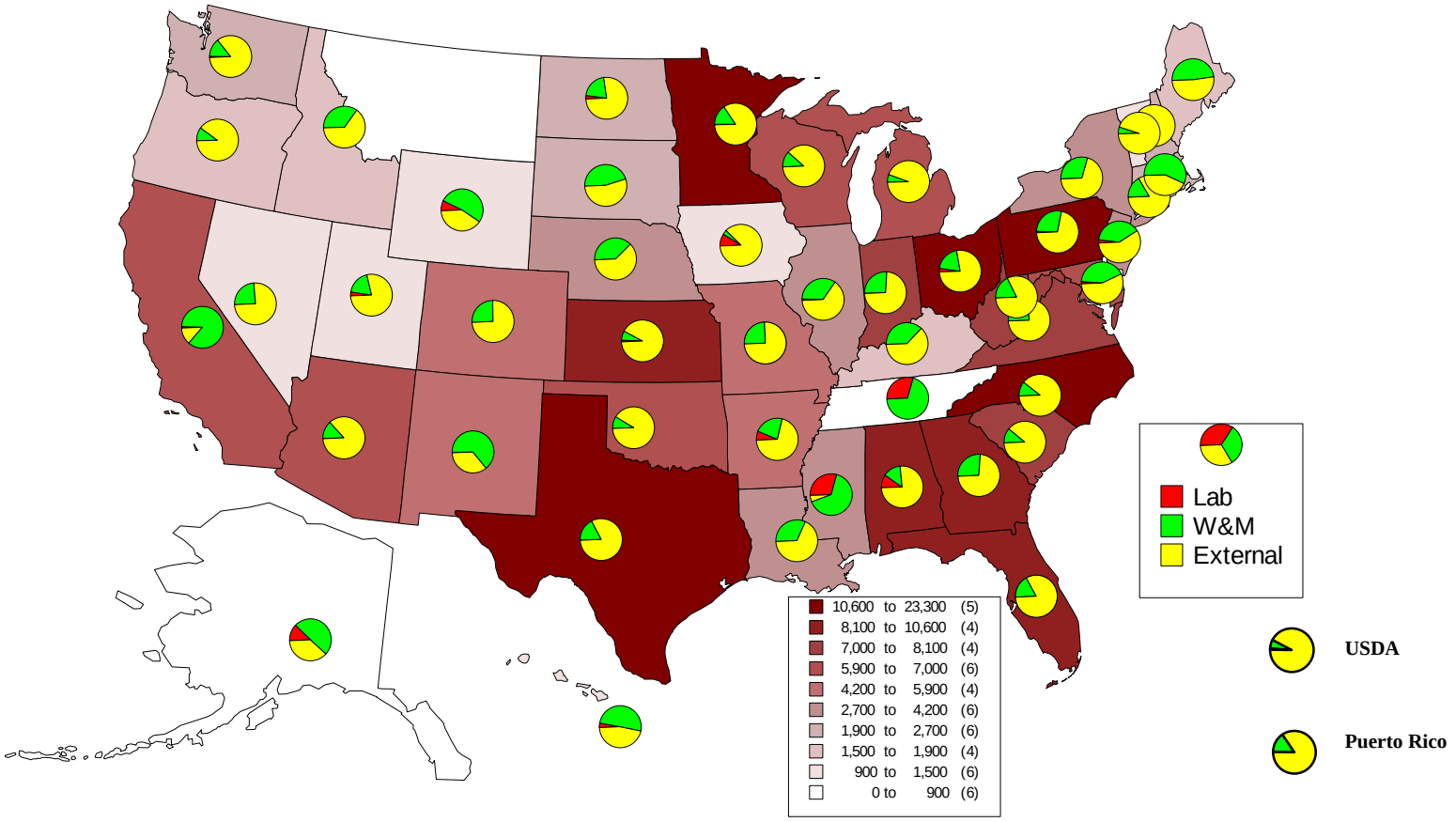
Comparison of previous surveys

	# Labs Reporting Mass III	Total Devices	Lab Average	Change using lab average
1996	51	259,713	5,092	--
1998	46	259,166	5,634	+ 11 %
1999	45	257,938	5,732	+ 2 %
2000	45	260,072	5,779	+ 1 %
2002	47	267,240	5,686	- 2 %
2004	47	248,117	5,279	- 7 %
2005	46	248,650	5,405	+ 2 %
2006	49	256,844	5,242	- 3 %

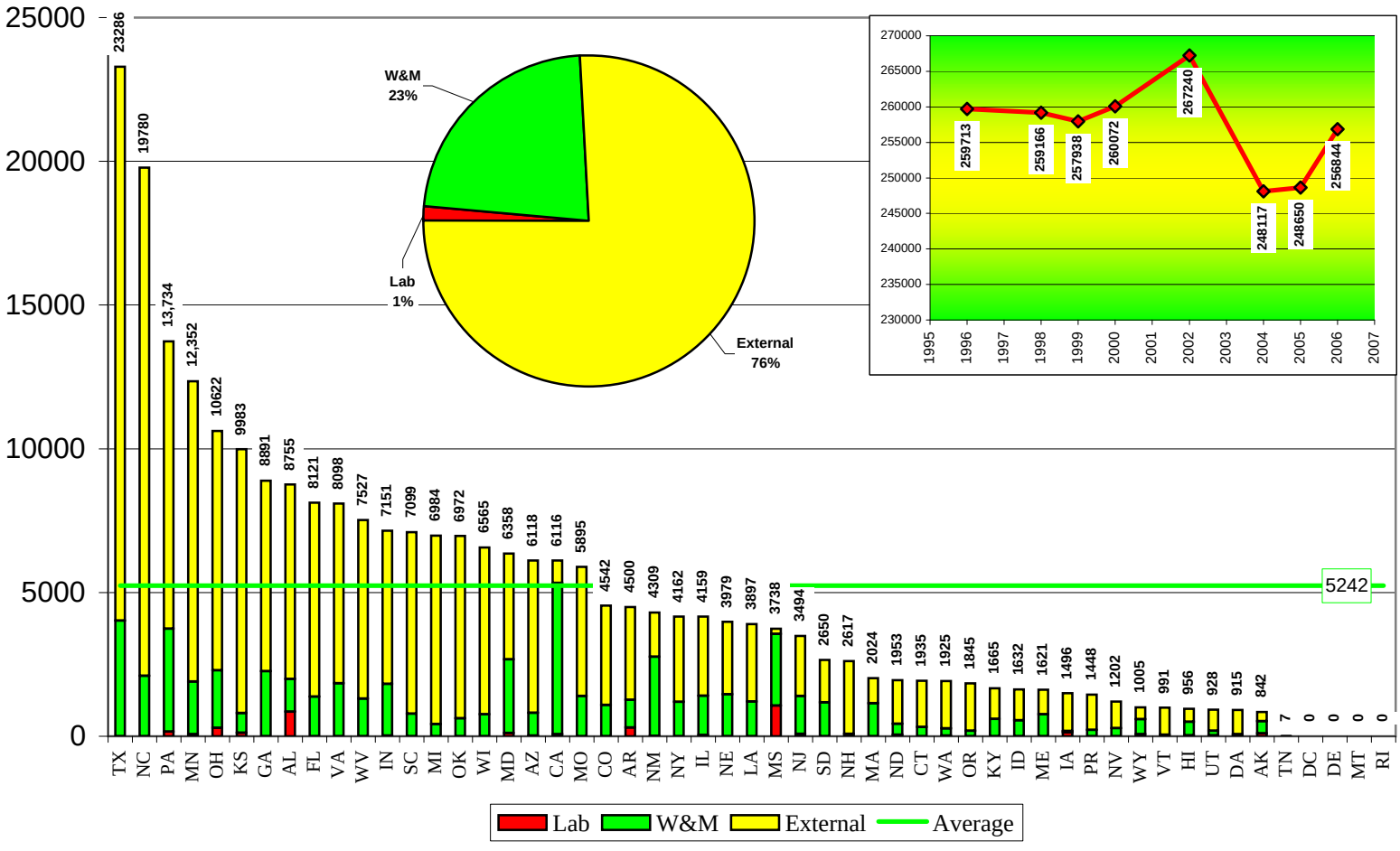
Notes and Comments

1 % of all Mass III standards were calibrated for the internal use of the laboratory.
23 % of all Mass III standards were calibrated for the weights and measures enforcement program.
76 % of all Mass III standards were calibrated for external customers.

Mass Echelon III (2006)



256844 Total Devices (2006)



Weight Carts for 2006

Description

The graphs on the following page represent the total number of weight cart mass standards tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the same breakdown along with the total number of devices tested by each laboratory. There is also a smaller line graph that reflects the totals from previous surveys.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

Of the 49 reporting laboratories, 31 labs tested a total of 388 weight cart mass standards.

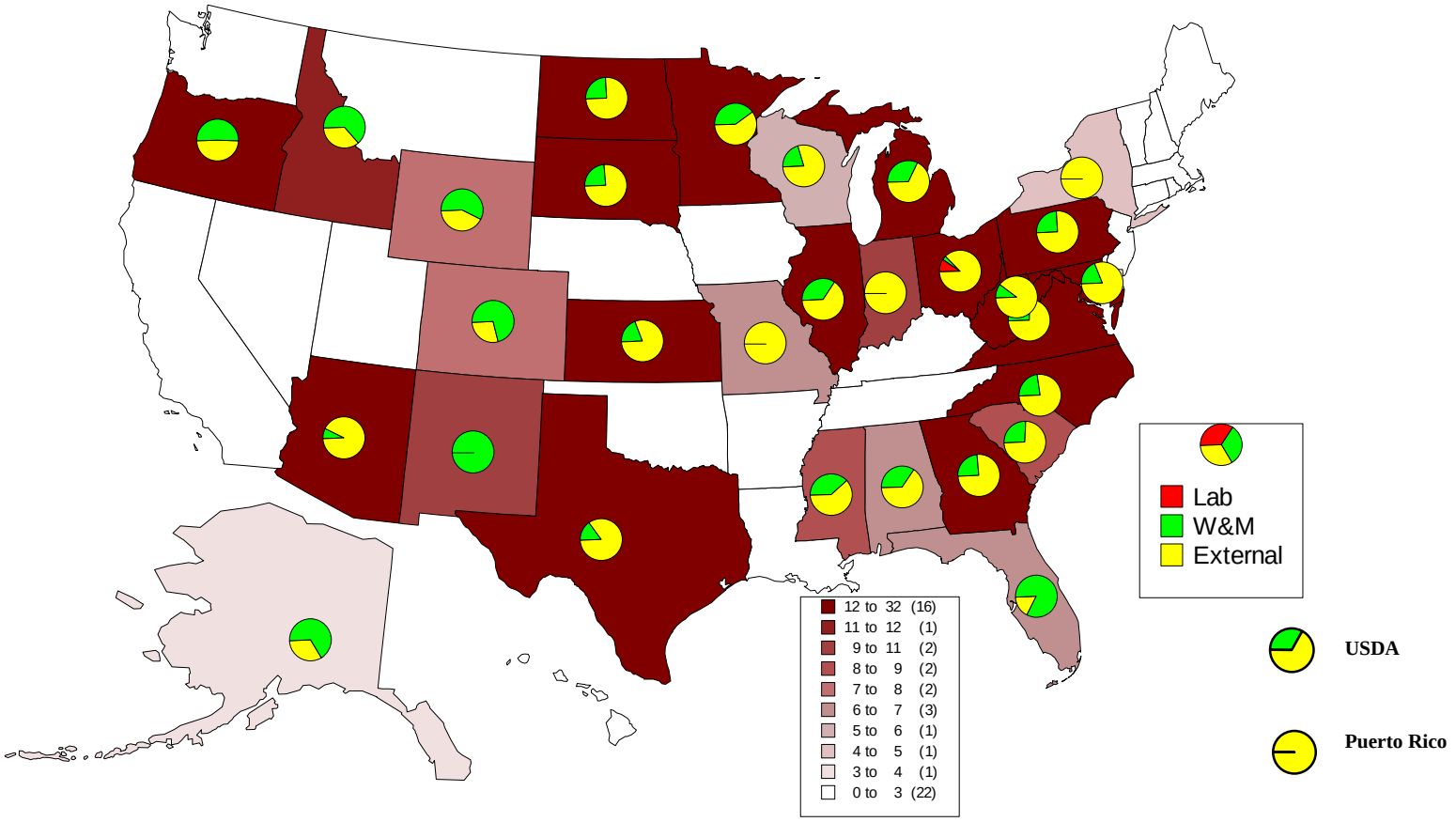
Comparison of previous surveys

	# Labs Reporting Weight Cart Tests	Total Devices	Lab Average	Change using Lab Average
1998	30	297	9.9	--
2000	27	344	12.7	+ 29 %
2002	29	388	13.4	+ 5 %
2004	33	365	11.1	- 17 %
2005	30	410	13.7	+ 23 %
2006	31	388	12.5	- 9 %

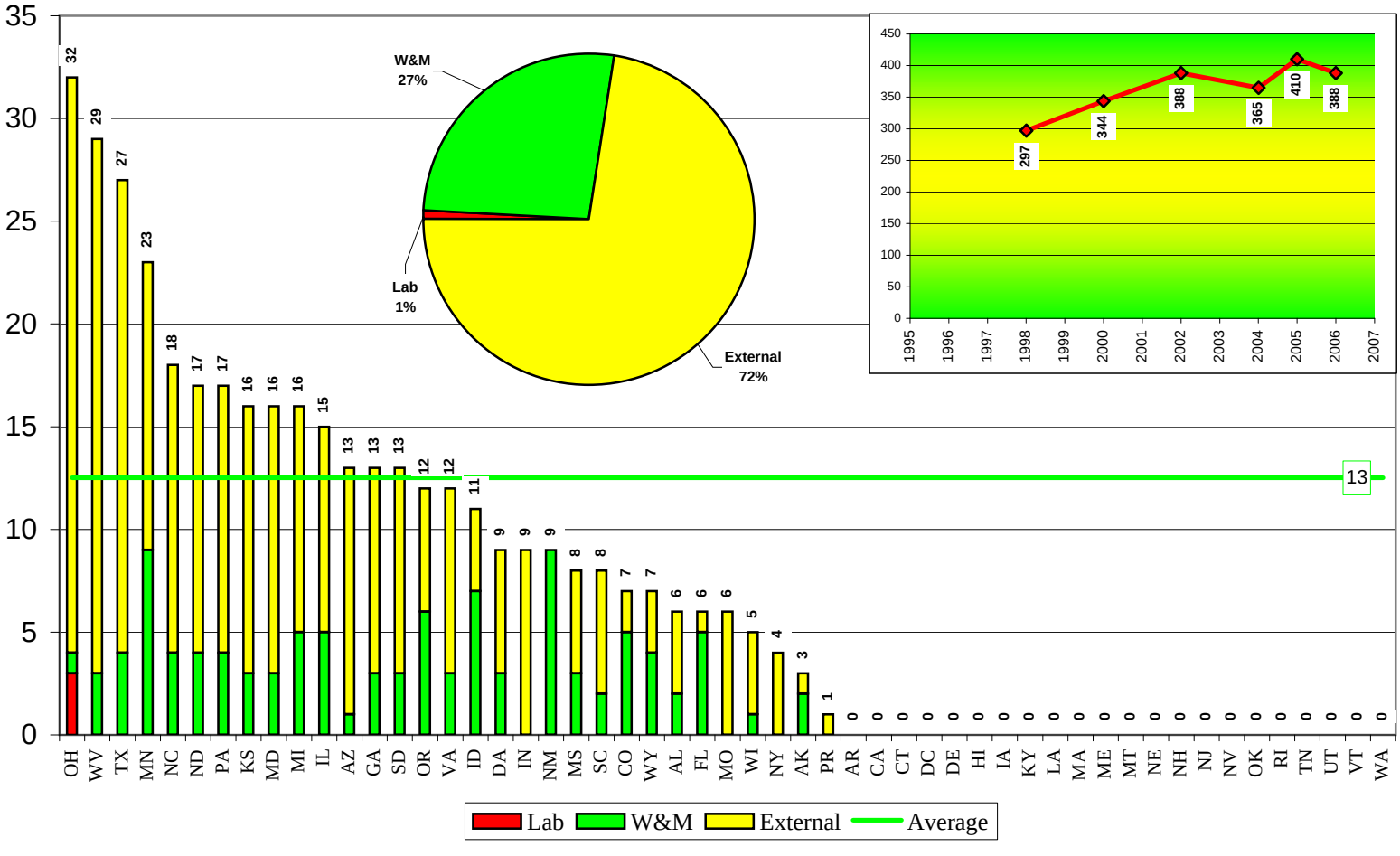
Notes and Comments

1 % of all weight cart standards were calibrated for the internal use of the laboratory.
27 % of all weight cart standards were calibrated for the weights and measures enforcement program.
72 % of all weight cart standards were calibrated for external customers.

Weight Carts (2006)



388 Total Devices (2006)



Length – Tapes for 2006

Description

The graphs on the following page represent the total number of length (tapes) standards tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the same breakdown along with the total number of devices tested by each laboratory. There is also a smaller line graph that reflects the totals from previous surveys.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

Of the 49 reporting laboratories, 18 labs tested a total of 339 length (tape) standards.

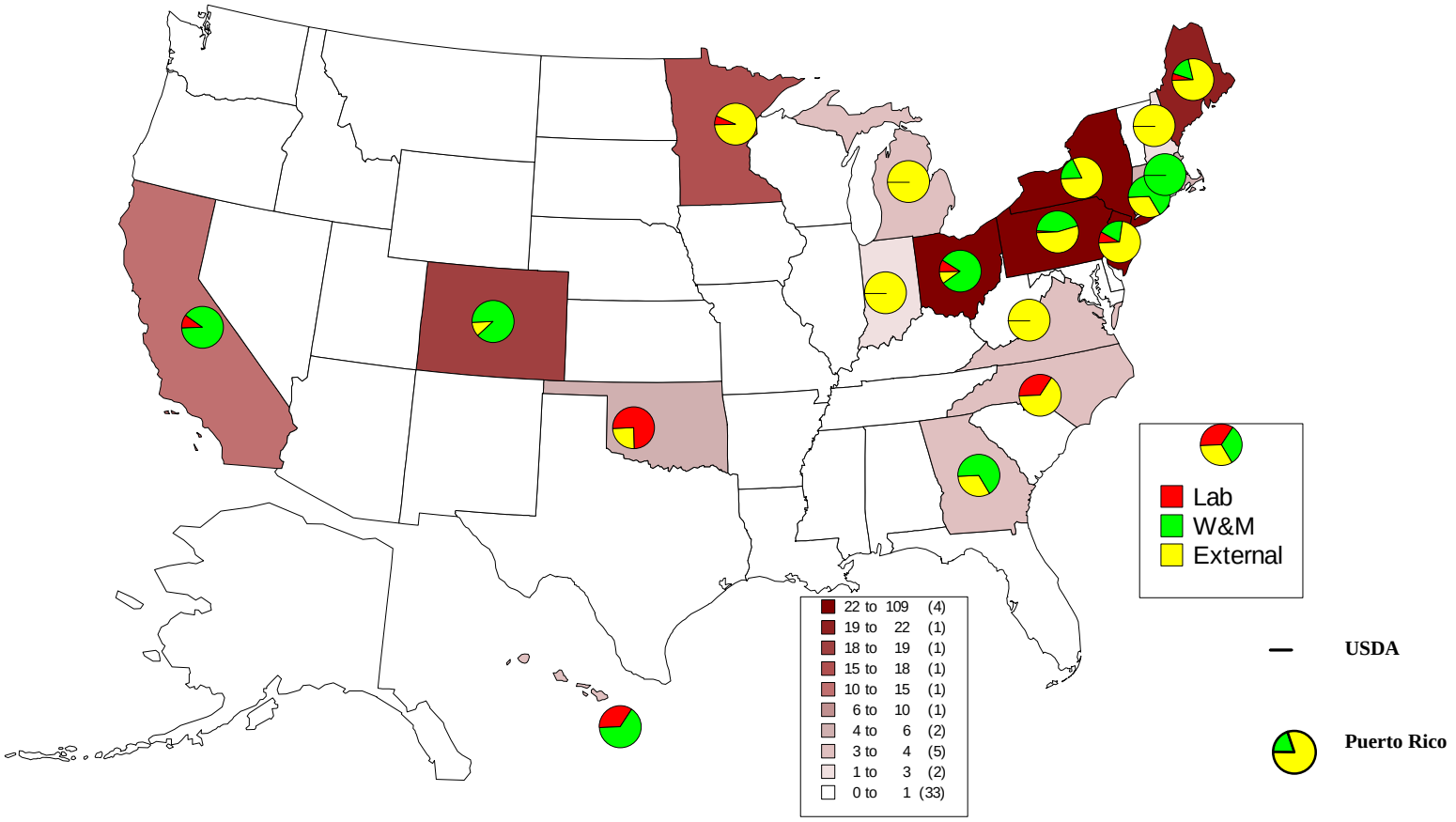
Comparison of previous surveys

	# Labs Reporting Length Tape Tests	Total Devices	Lab Average	Change using Lab Average
1996	27	707	26	--
1998	29	537	19	- 29 %
1999	21	566	27	+ 46 %
2000	22	487	22	- 18 %
2002	21	584	28	+ 26 %
2004	21	319	15	- 46 %
2005	19	304	16	- 5 %
2006	18	339	19	+ 12 %

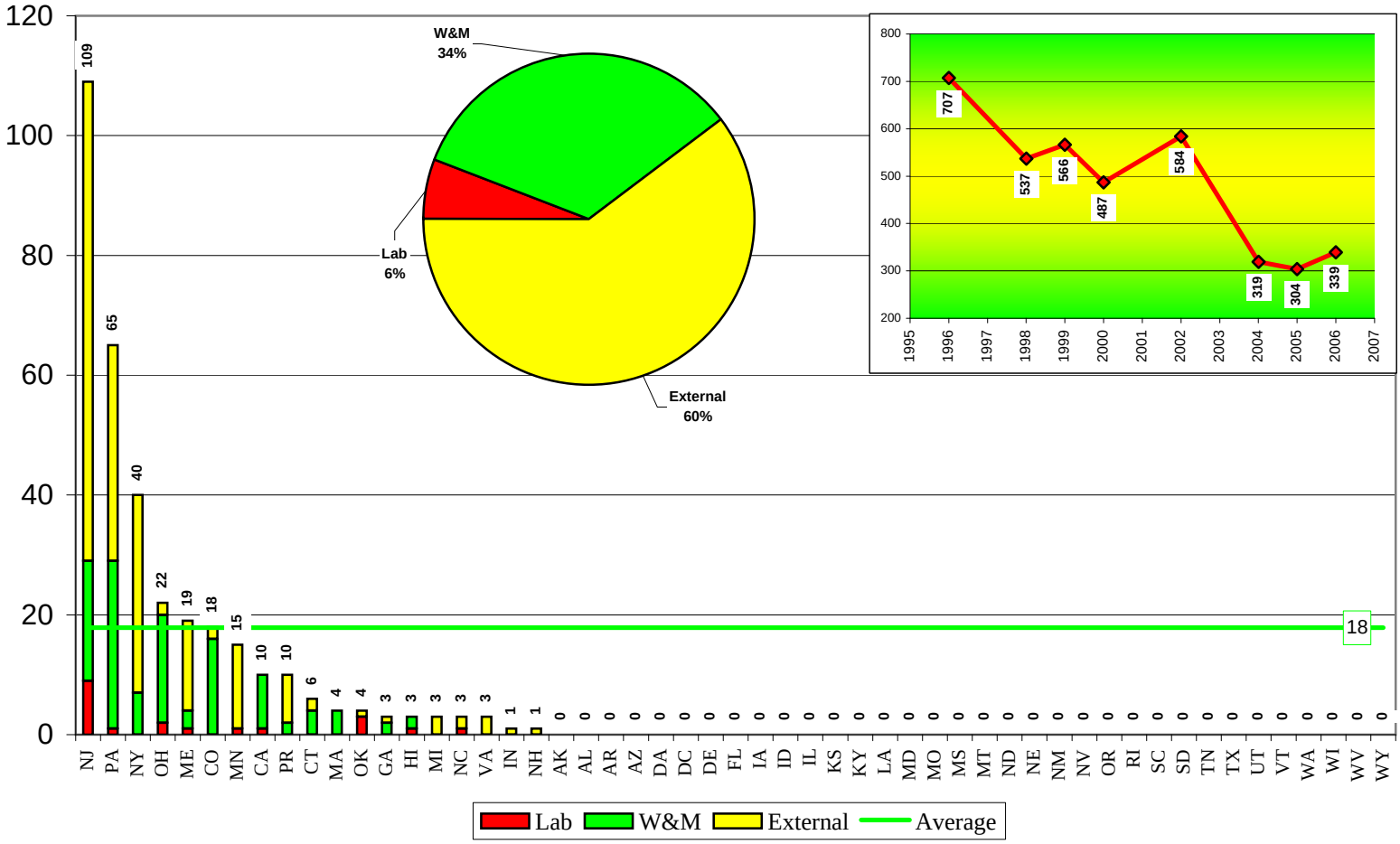
Notes and Comments

6 % of all length (tape) standards were calibrated for the internal use of the laboratory.
34 % of all length (tape) standards were calibrated for the weights and measures enforcement program.
60 % of all length (tape) standards were calibrated for external customers.

Length Tape (2006)



339 Total Devices (2006)



Length – Rigid Rules for 2006

Description

The graphs on the following page represent the total number of length (rigid rules) standards tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the same breakdown along with the total number of devices tested by each laboratory. There is also a smaller line graph that reflects the totals from previous surveys.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

Of the 49 reporting laboratories, 11 labs tested a total of 122 length (rigid rule) standards.

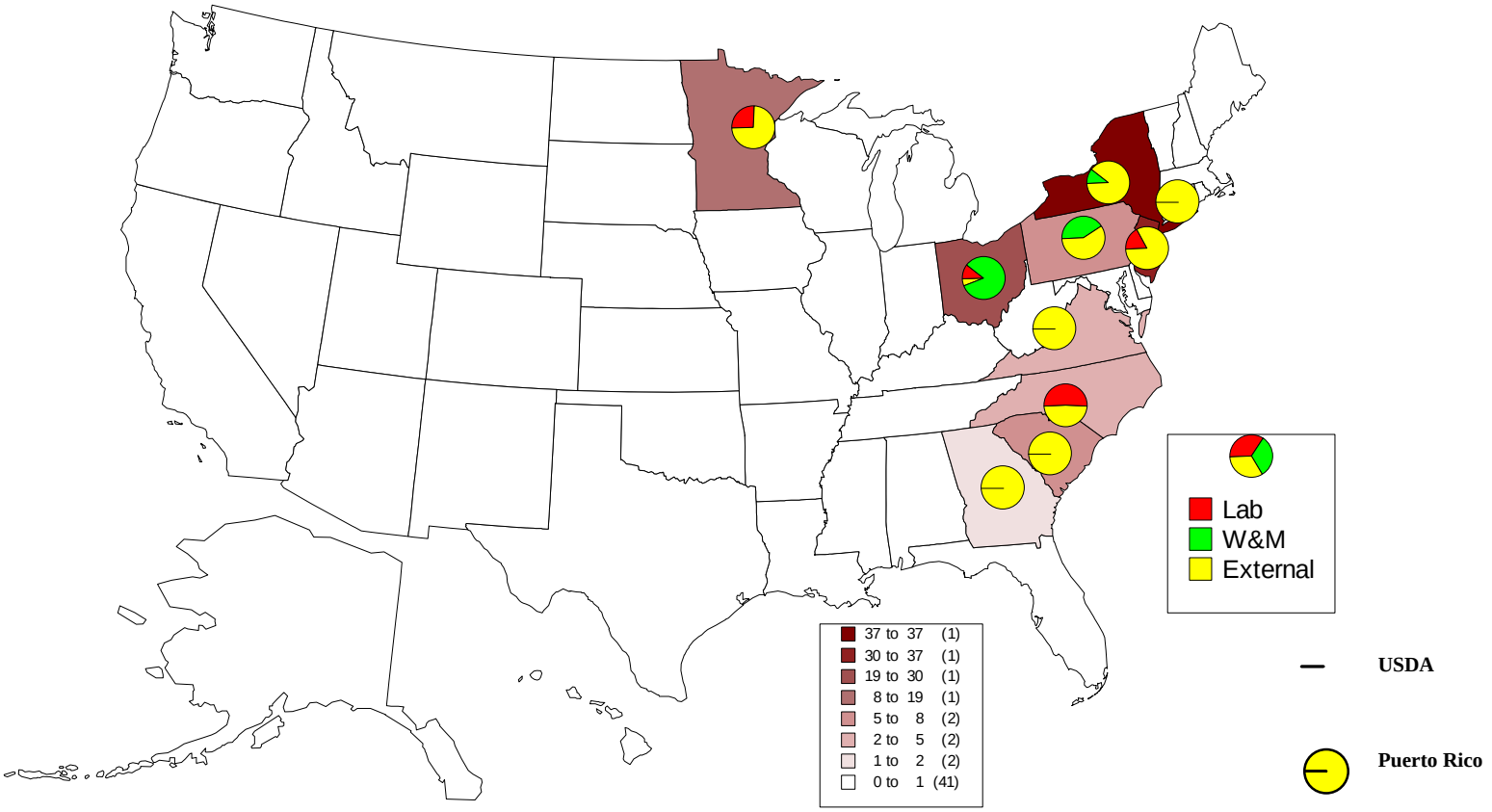
Comparison of previous surveys

	# Labs Reporting Rigid Rule Tests	Total Devices	Lab Average	Change using Lab Average
1996	26	582	22.4	--
1998	29	269	9.3	- 59 %
1999	20	413	20.6	+ 123 %
2000	16	164	10.2	- 50 %
2002	14	138	9.9	- 4 %
2004	12	98	8.2	- 17 %
2005	11	85	7.7	- 5 %
2006	11	122	11.1	+ 44 %

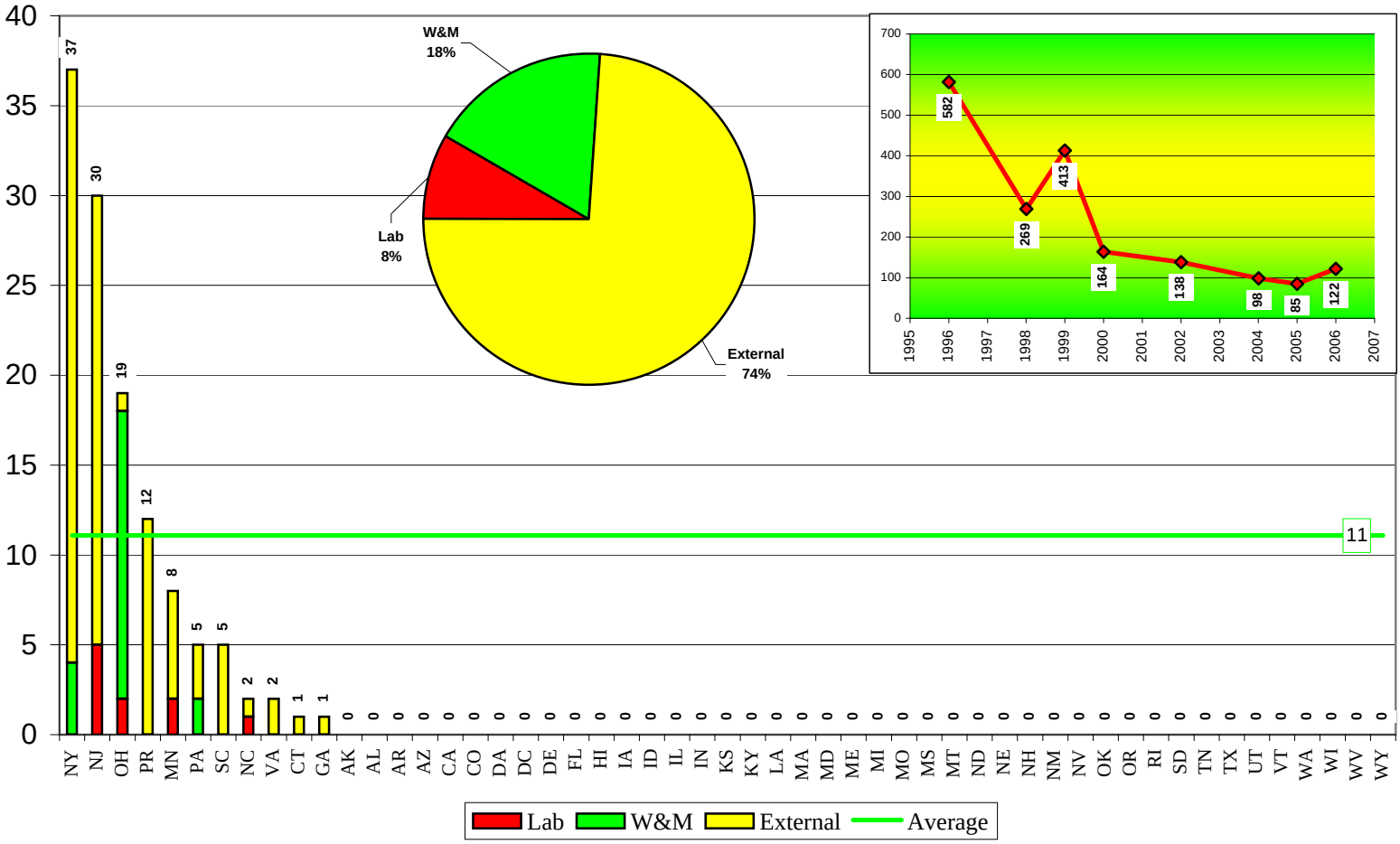
Notes and Comments

8 % of all length (rigid rule) standards were calibrated for the internal use of the laboratory.
18 % of all length (rigid rule) standards were calibrated for the weights and measures enforcement program.
74 % of all length (rigid rule) standards were calibrated for external customers.

Length Rule (2006)



122 Total Devices (2006)



Summary Volume – SVP, Test Measures, & Provers for 2006

Description

The graphs on the following page represent the total number of SVP (small volume provers) and all metal volume standards tested by the 49 reporting laboratories. Note that this data excludes glassware. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the breakdown of which procedure was used, volume transfer or volume gravimetric, along with the total number of devices tested by each laboratory.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

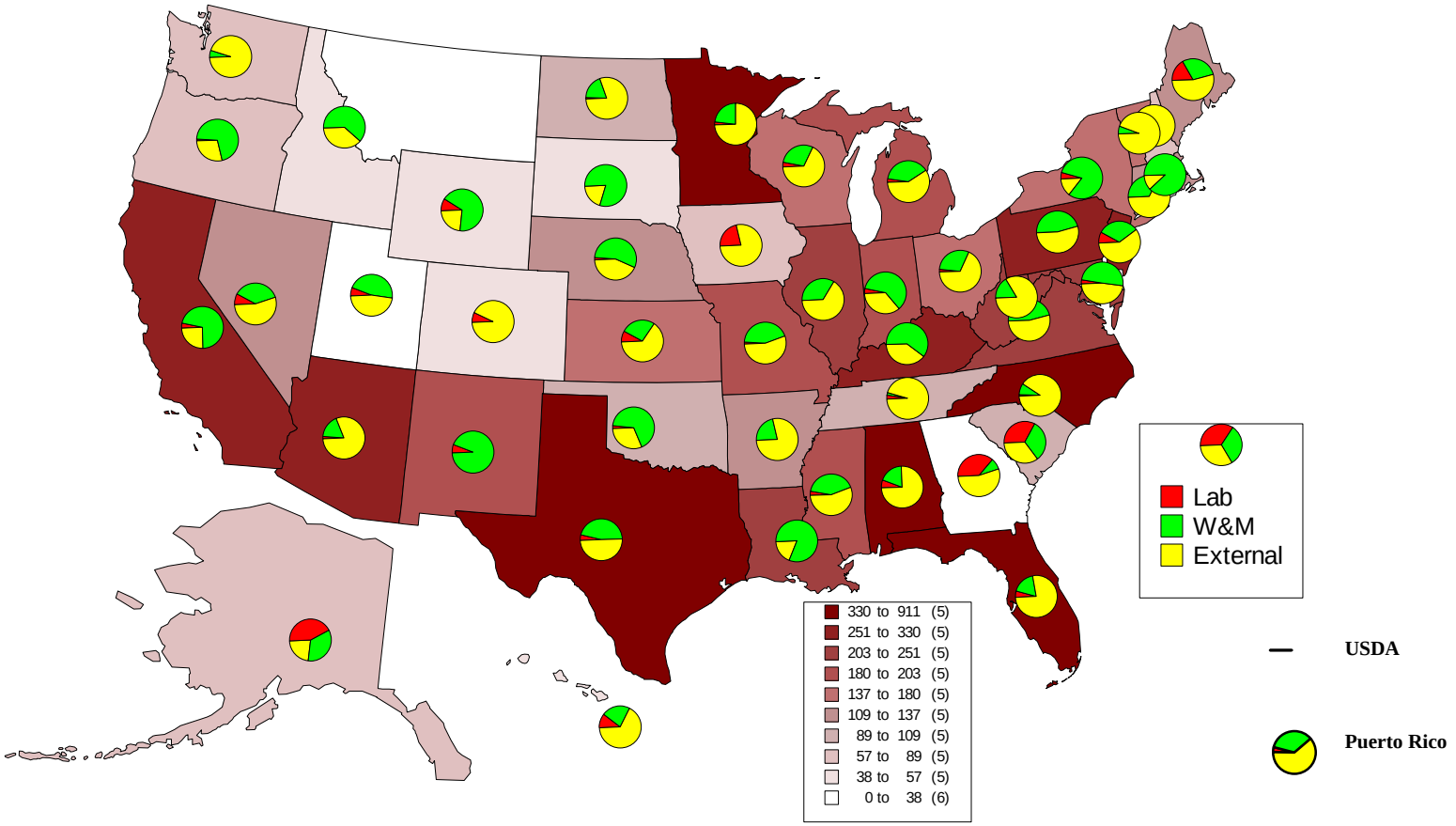
Of the 49 reporting laboratories, 48 labs tested a total of 8,839 SVPs (small volume provers), test measures, and provers.

Notes and Comments

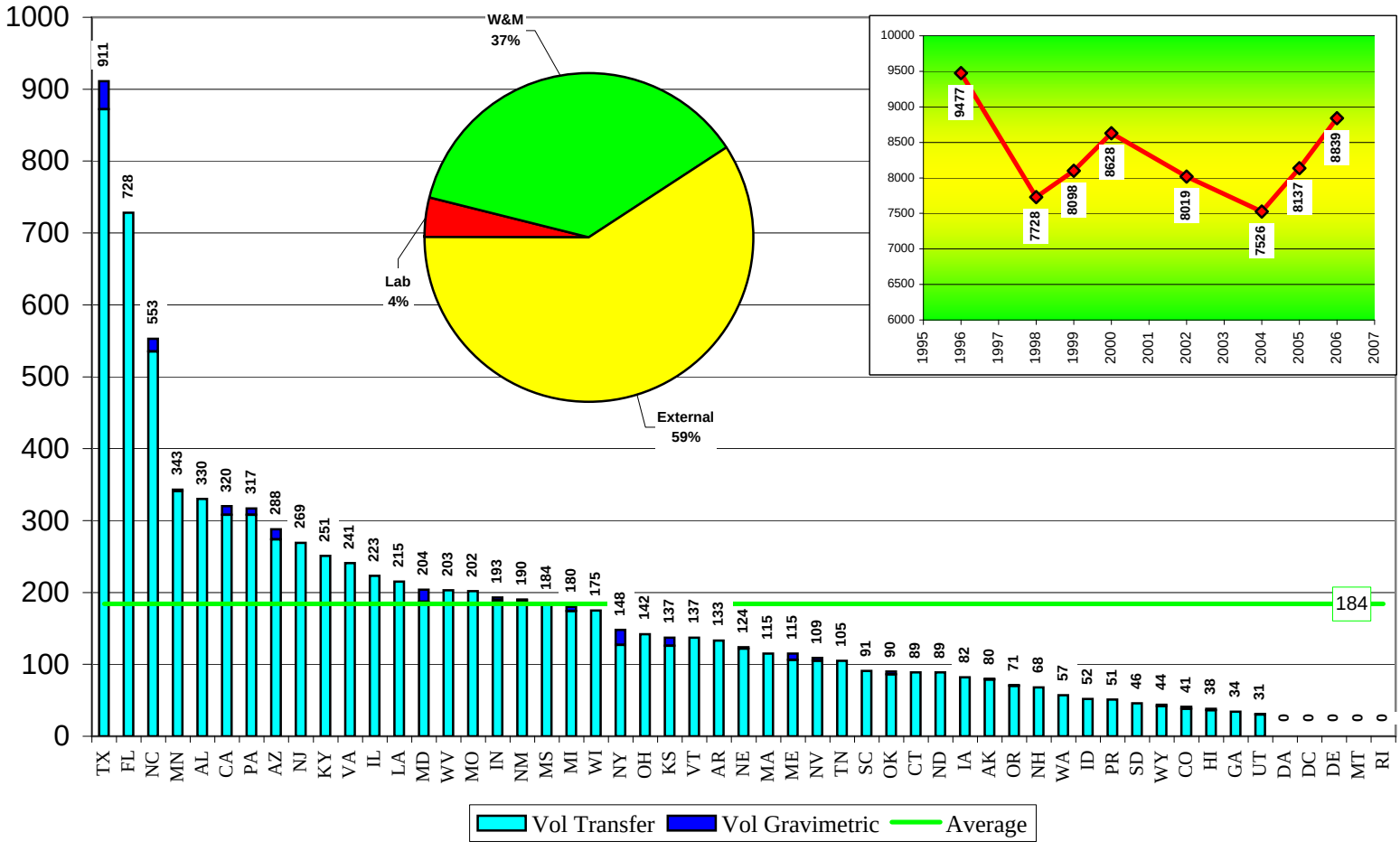
4 % of all volume (prover) standards were calibrated for the laboratory.
37 % of all volume (prover) standards were calibrated for weights and measures enforcement program.
59 % of all volume (prover) standards were calibrated for external customers.

2005: Volume-Transfer 8,003 standards (98 %); Volume-Gravimetric 134 standards (2 %).
2006: Volume-Transfer 8,656 standards (98 %); Volume-Gravimetric 183 standards (2 %).

Summary Volume - SVP, Test Measures, & Provers (2006)



8839 Total Devices (2006)



Volume – Glassware for 2006

Description

The graphs on the following page represent the total number of volume (glassware) standards tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the breakdown of which procedure was used, volume transfer or volume gravimetric, along with the total number of devices tested by each laboratory. There is also a smaller line graph that reflects the totals from previous surveys.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Volume Categories:

- Glassware – most glassware are kits that contain volumetric standards from 1 gallon to 2 fluid ounces.
- Test Measures – most are metal volumetric standards nominally 5 gallons or less.
- Provers – most are metal volumetric standards nominally larger than 5 gallons.

Findings

Of the 49 reporting laboratories, 18 labs tested a total of 254 volumetric glassware standards.

Comparison of previous surveys

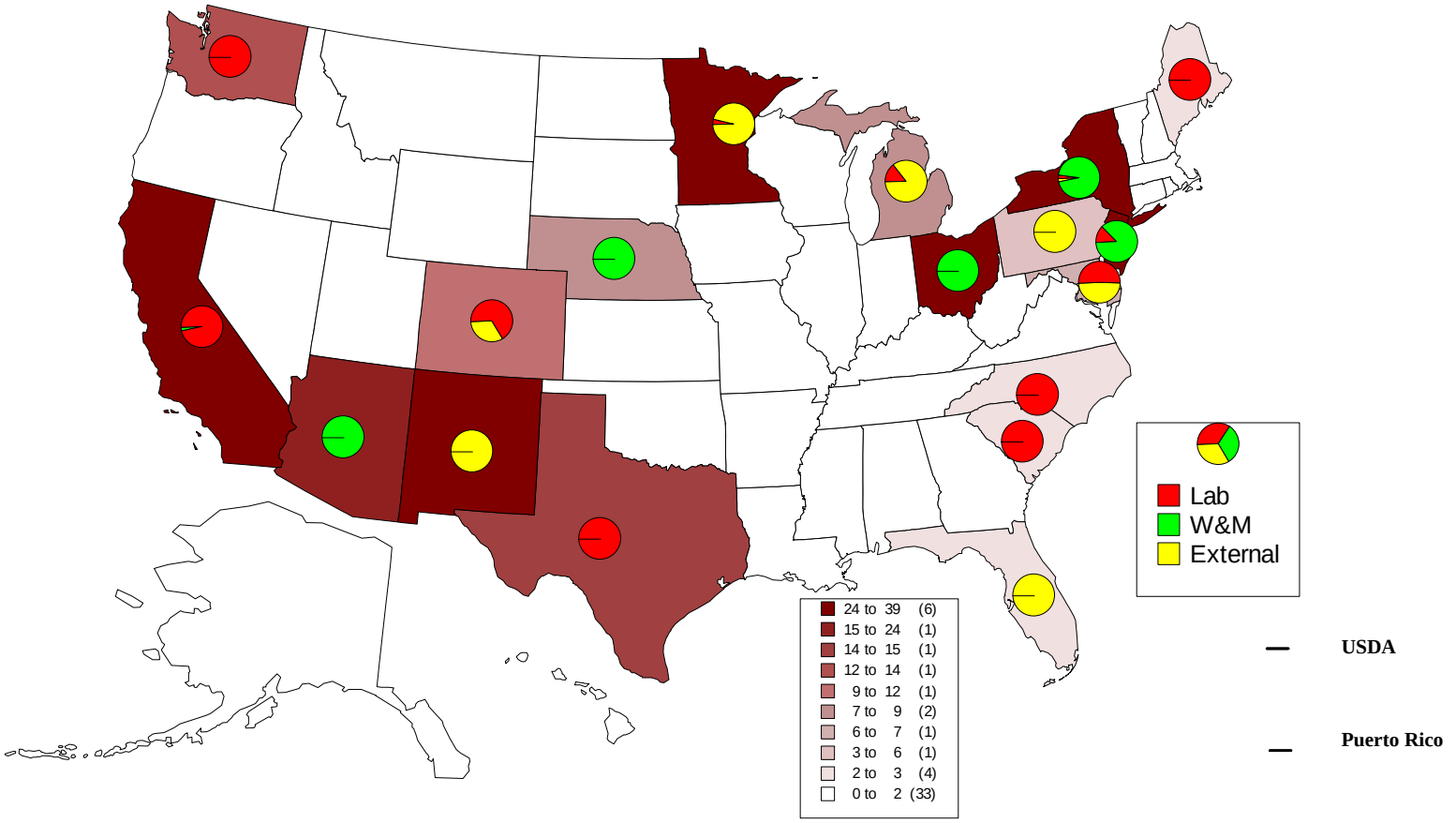
	# Labs Reporting Glassware Tests	Total Devices	Lab Average	Change using Lab Average
1996	29	1,205	41.55	--
1998	24	844	35.17	- 15 %
1999	25	853	34.12	- 3 %
2000	27	668	24.74	- 27 %
2002	24	555	23.13	- 7 %
2004	17	332	19.53	- 16 %
2005	20	209	10.45	- 46 %
2006	18	254	14.11	+ 35 %

Notes and Comments

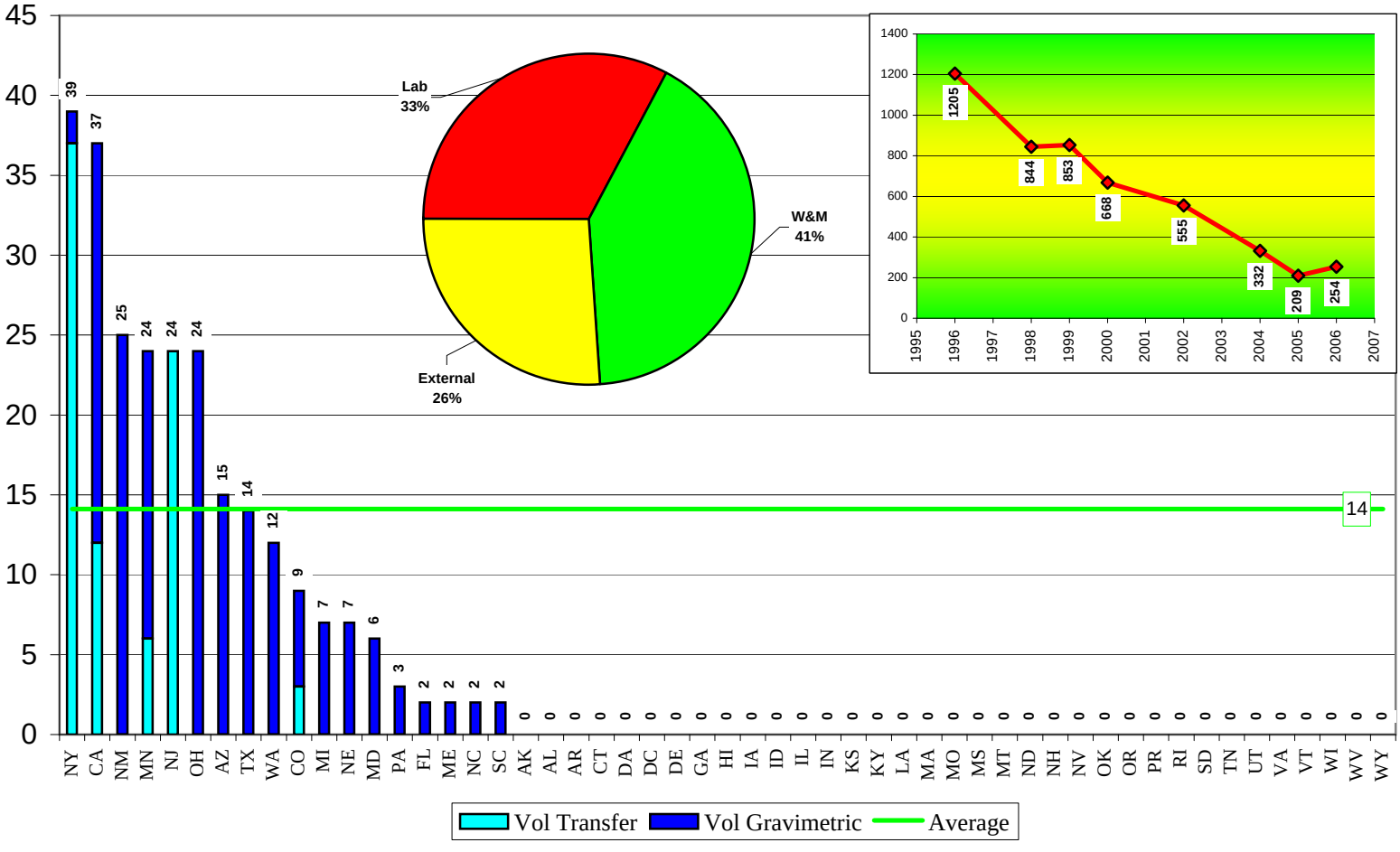
33 % of all volume (glassware) standards were calibrated for the laboratory.
41 % of all volume (glassware) standards were calibrated for weights and measures enforcement program.
26 % of all volume (glassware) standards were calibrated for external customers.

2005: Volume-Transfer 69 standards (33 %); Volume-Gravimetric 140 standards (67 %).
2006: Volume-Transfer 82 standards (32 %); Volume-Gravimetric 172 standards (68 %).

Volume Glassware (2006)



254 Total Devices (2006)



Volume – Test Measures for 2006

Description

The graphs on the following page represent the total number of volume (test measure) standards tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the breakdown of which procedure was used, volume transfer or volume gravimetric, along with the total number of devices tested by each laboratory. There is also a smaller line graph that reflects the totals from previous surveys.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

The 49 reporting laboratories, 46 labs tested a total of 7,532 volume (test measure) standards.

Comparison of previous surveys

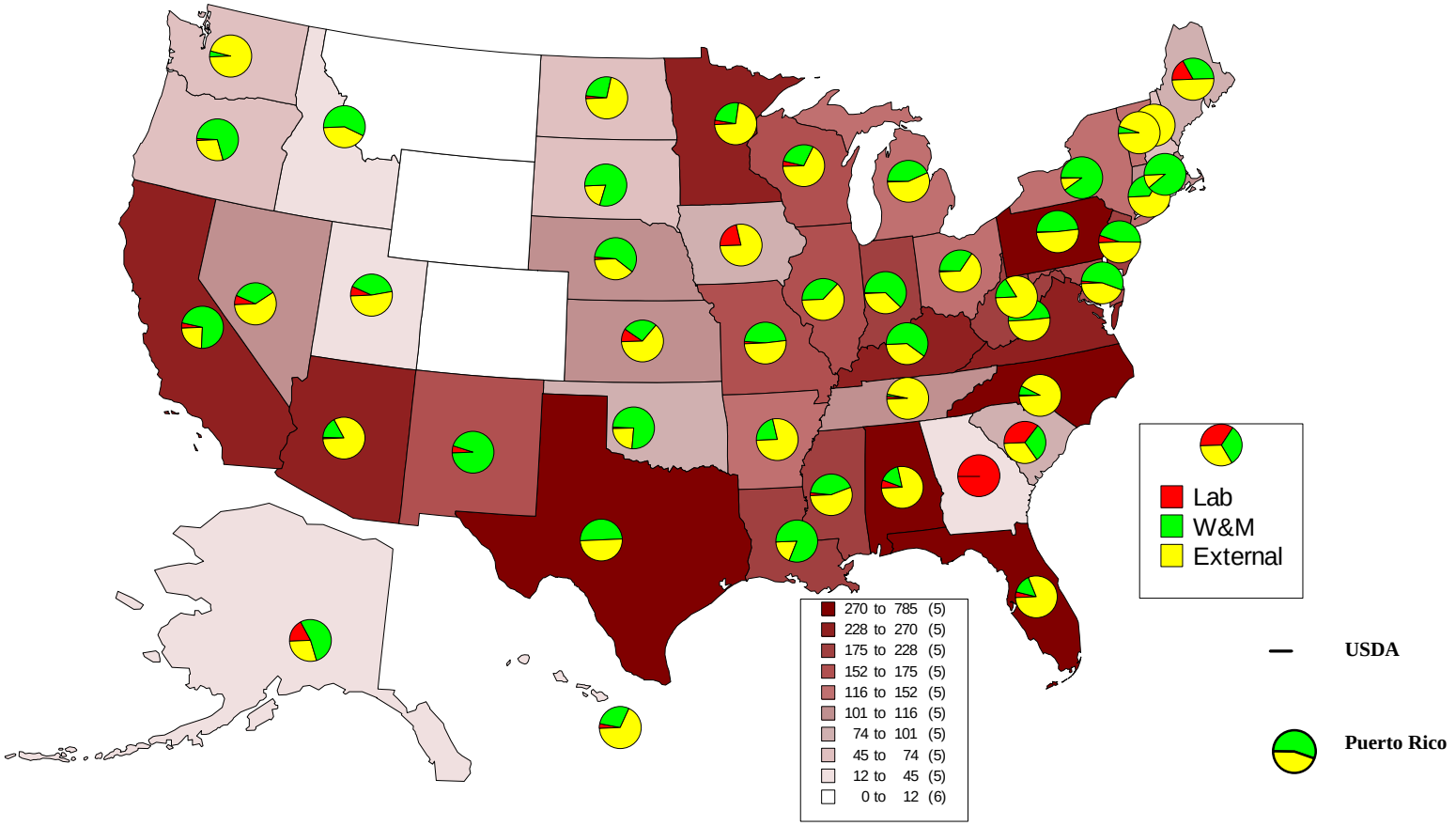
	# Labs Reporting Test Measures	Total Devices	Lab Average	Change using Lab Average
1996	48	8,290	173	--
1998	46	6,861	149	- 14 %
1999	45	6,986	155	+ 4 %
2000	45	7,368	164	+ 5 %
2002	48	6,966	145	- 11 %
2004	45	6,400	142	- 2 %
2005	42	6,925	165	+ 16 %
2006	46	7,532	164	- 1 %

Notes and Comments

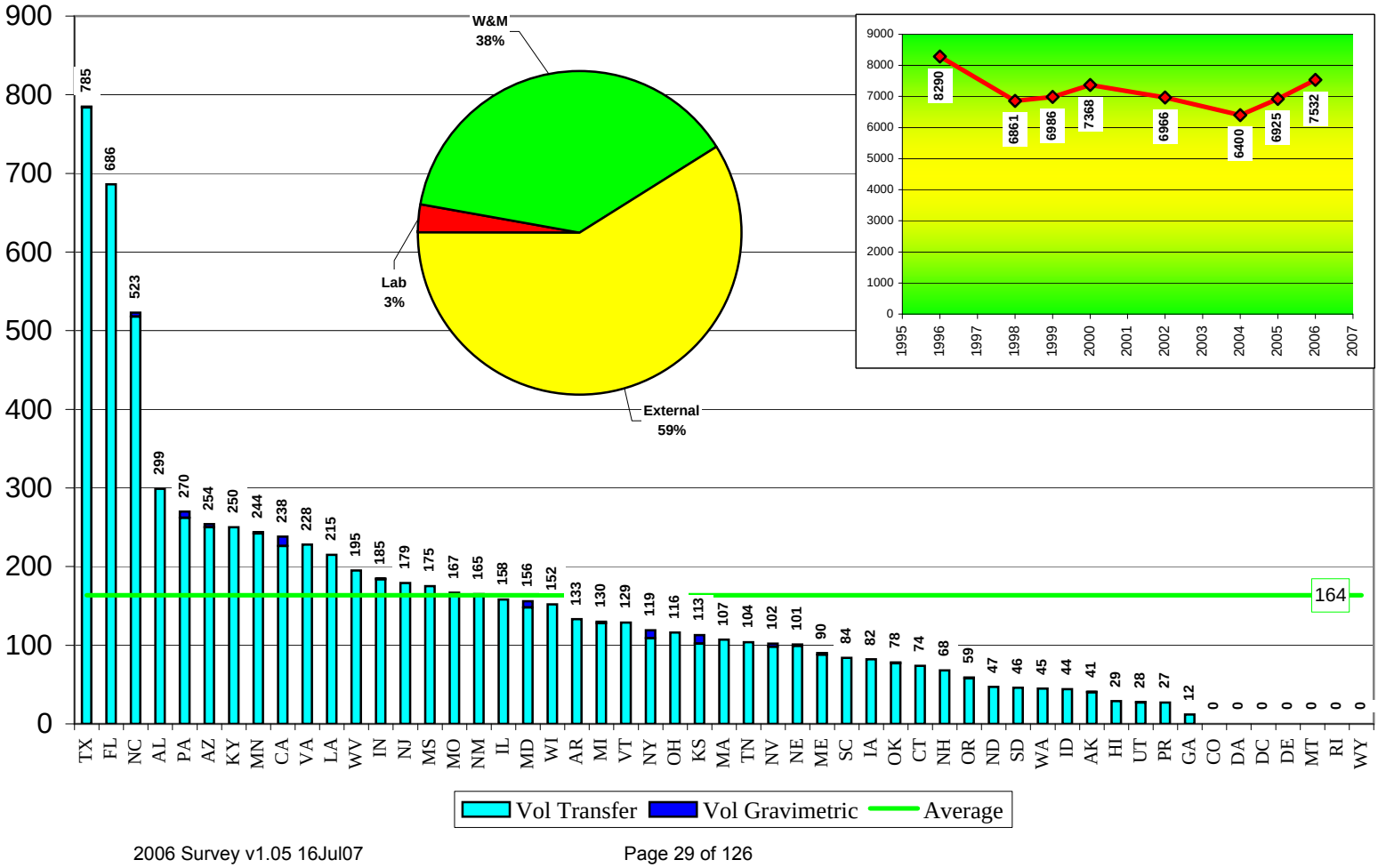
3 % of all volume (test measure) standards were calibrated for the laboratory.
38 % of all volume (test measure) standards were calibrated for weights and measures enforcement program.
59 % of all volume (test measure) standards were calibrated for external customers.

2005: Volume-Transfer 6,850 standards (99 %); Volume-Gravimetric 75 standards (1 %).
2006: Volume-Transfer 7,455 standards (99 %); Volume-Gravimetric 77 standards (1 %).

Volume Test Measures ≤ 5 gallon (2006)



7532 Total Devices (2006)



Volume – Medium Provers (> 5 gallon & ≤ 100 gallon) for 2006

Description

The graphs on the following page represent the total number of volume (provers) standards tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the breakdown of which procedure was used, volume transfer or volume gravimetric, along with the total number of devices tested by each laboratory.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Volume Categories:

- Glassware – most glassware are kits that contain volumetric standards from 1 gallon to 2 fluid ounces.
- Test Measures – most are metal volumetric standards nominally 5 gallons or less.
- Provers – most are metal volumetric standards nominally larger than 5 gallons.

Findings

Of the 49 reporting laboratories, 41 labs tested a total of 841 medium volume standards (provers > 5 gallon and ≤ 100 gallon).

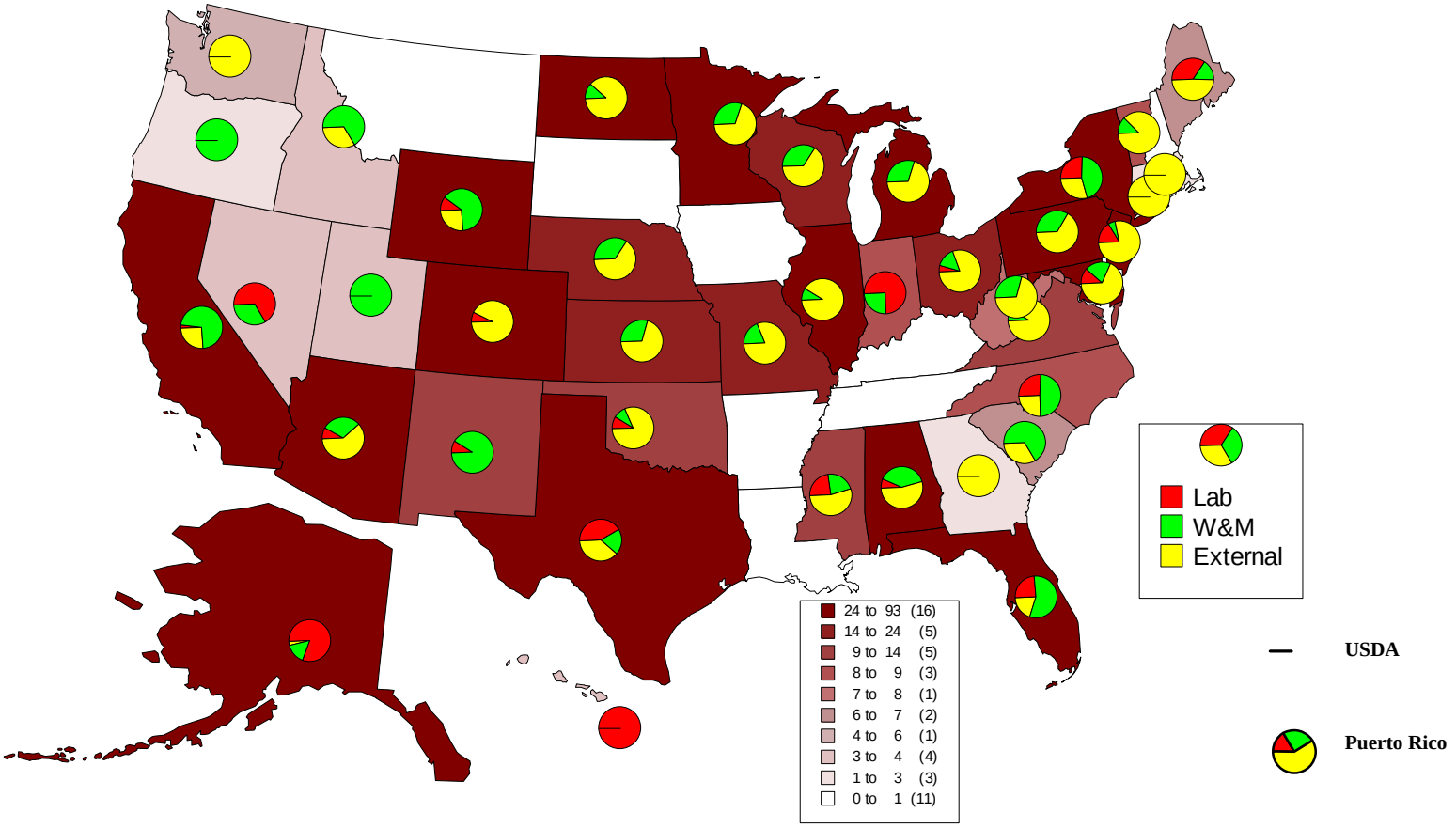
This is a new data break-down so historical comparison data is not available.

Notes and Comments

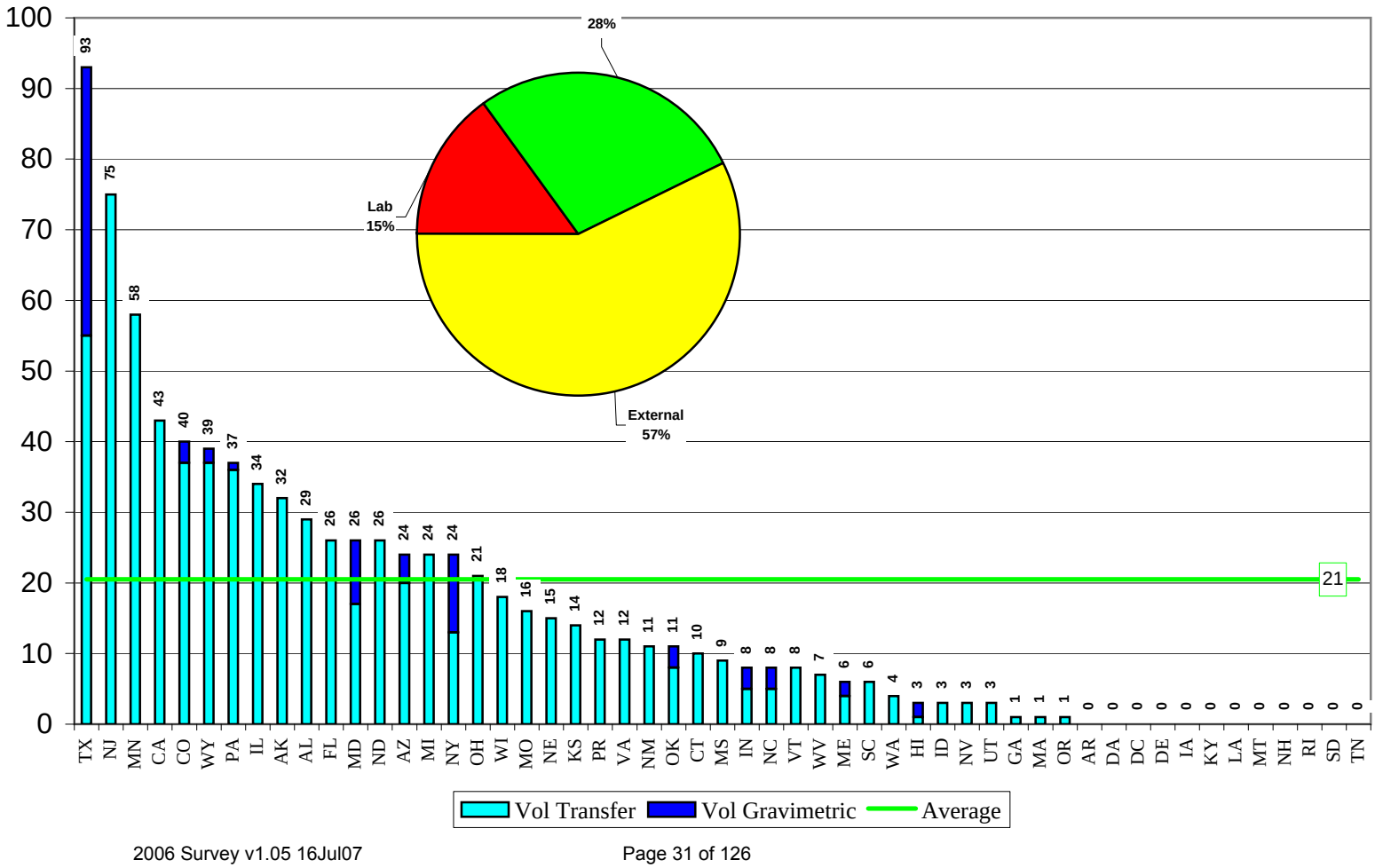
15 % of all volume (prover) standards were calibrated for the laboratory.
28 % of all volume (prover) standards were calibrated for weights and measures enforcement program.
57 % of all volume (prover) standards were calibrated for external customers.

2005: Volume-Transfer 726 standards (94 %); Volume-Gravimetric 47 standards (6 %).
2006: Volume-Transfer 760 standards (90 %); Volume-Gravimetric 81 standards (10 %).

Volume Medium Provers > 5 gallon and ≤ 100 gallon (2006)



841 Total Devices (2006)



Volume -- Large Provers (> 100 gallon) for 2006

Description

The graphs on the following page represent the total number of volume (provers) standards tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the breakdown of which procedure was used, volume transfer or volume gravimetric, along with the total number of devices tested by each laboratory.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Volume Categories:

- Glassware – most glassware are kits that contain volumetric standards from 1 gallon to 2 fluid ounces.
- Test Measures – most are metal volumetric standards nominally 5 gallons or less.
- Provers – most are metal volumetric standards nominally larger than 5 gallons.

Findings

Of the 49 reporting laboratories, 30 labs tested a total of 207 large volume standards (provers > 100 gallon).

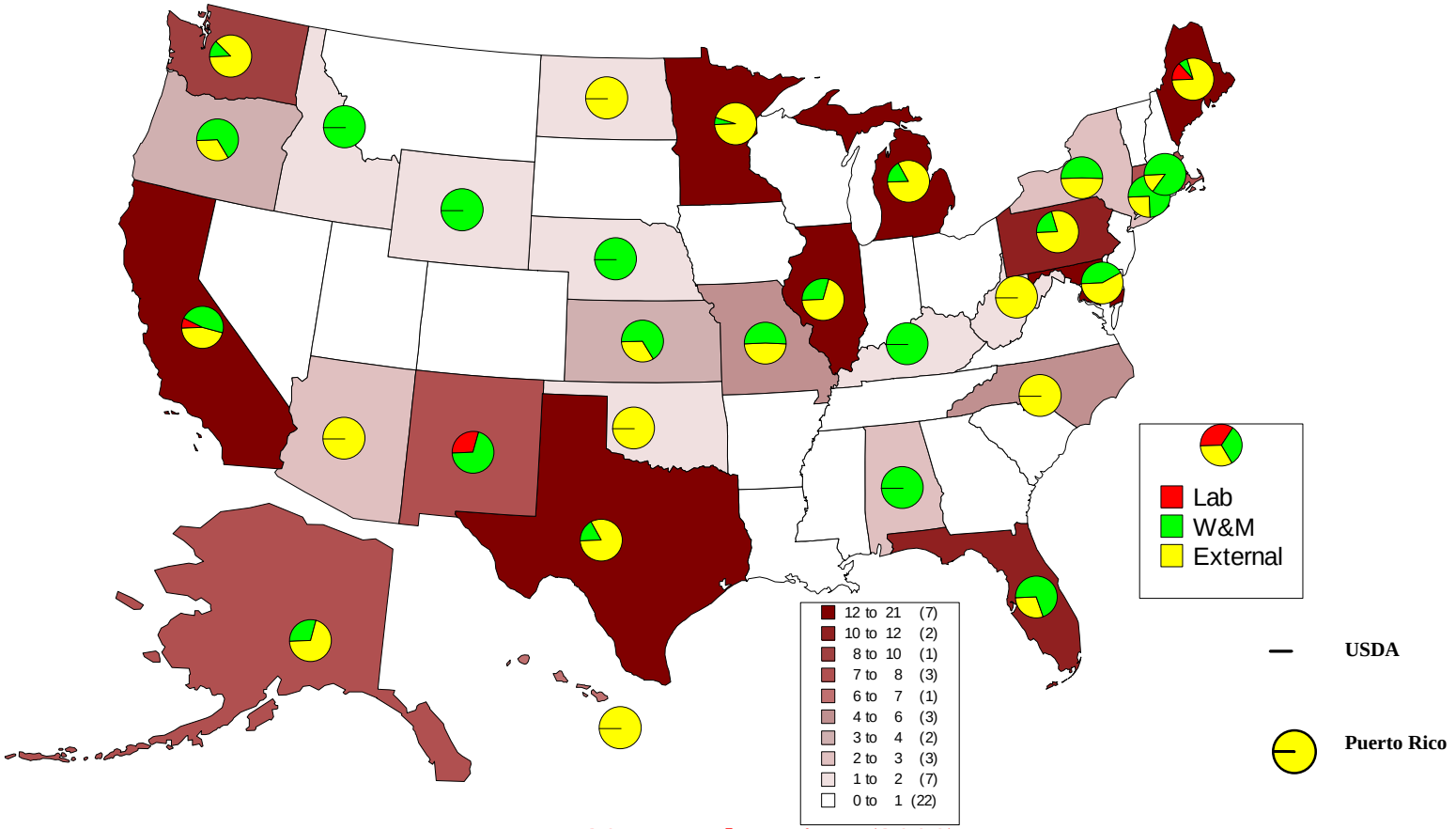
This is a new data break-down so historical comparison data is not available.

Notes and Comments

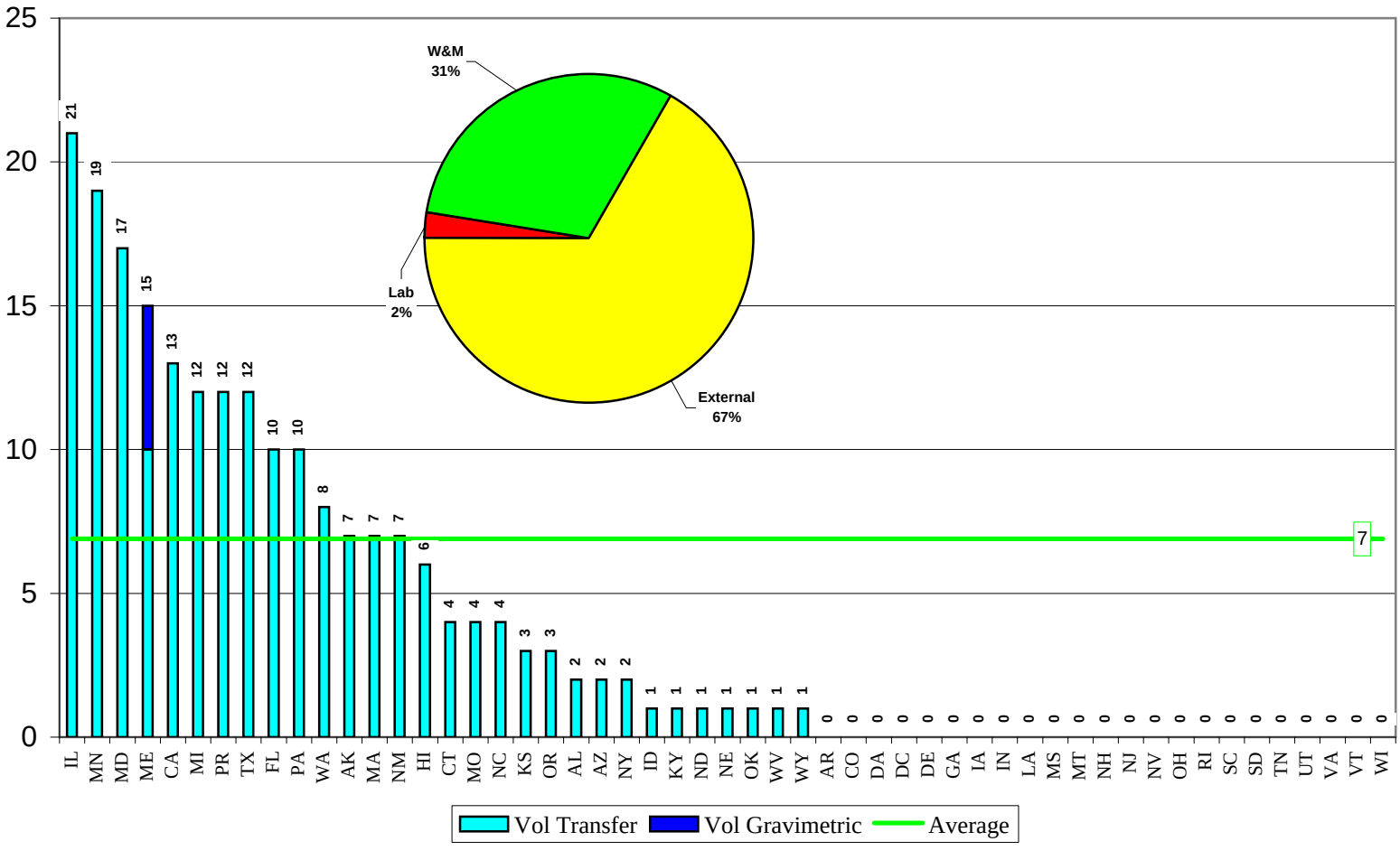
2 % of all volume (prover) standards were calibrated for the laboratory.
31 % of all volume (prover) standards were calibrated for weights and measures enforcement program.
67 % of all volume (prover) standards were calibrated for external customers.

2005: Volume-Transfer 201 standards (99.5 %); Volume-Gravimetric 1 standards (0.5 %).
2006: Volume-Transfer 202 standards (98 %); Volume-Gravimetric 5 standards (2 %).

Volume Large Provers > 100 gallon (2006)



207 Total Devices (2006)



Volume -- LPG Provers for 2006

Description

The graphs on the following page represent the total number of LPG volume (provers) standards tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the breakdown of which procedure was used, volume transfer or volume gravimetric, along with the total number of devices tested by each laboratory.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

Of the 49 reporting laboratories, 29 labs tested a total of 239 LPG provers.

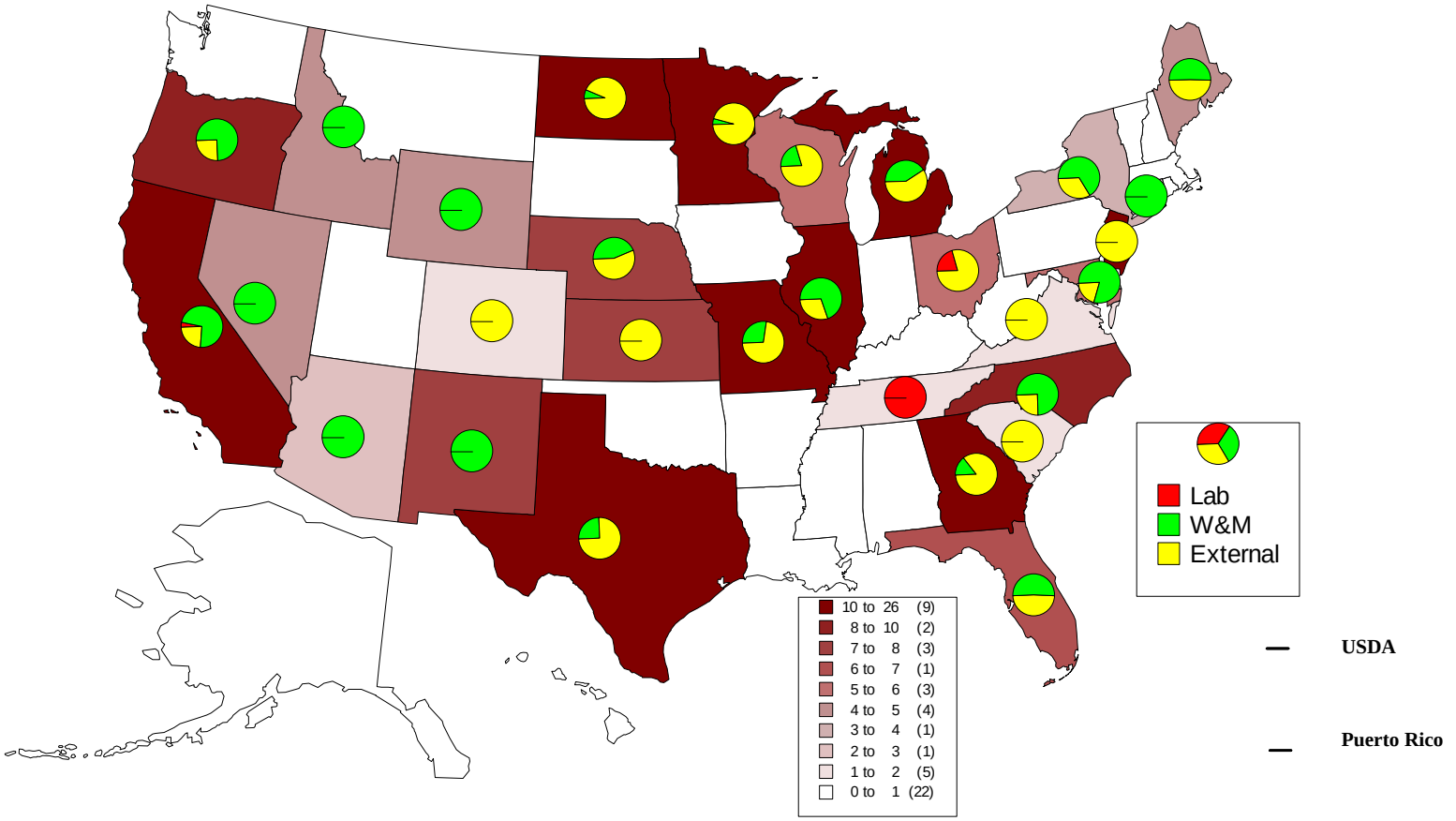
This is a new data break-down so historical comparison data is not available.

Notes and Comments

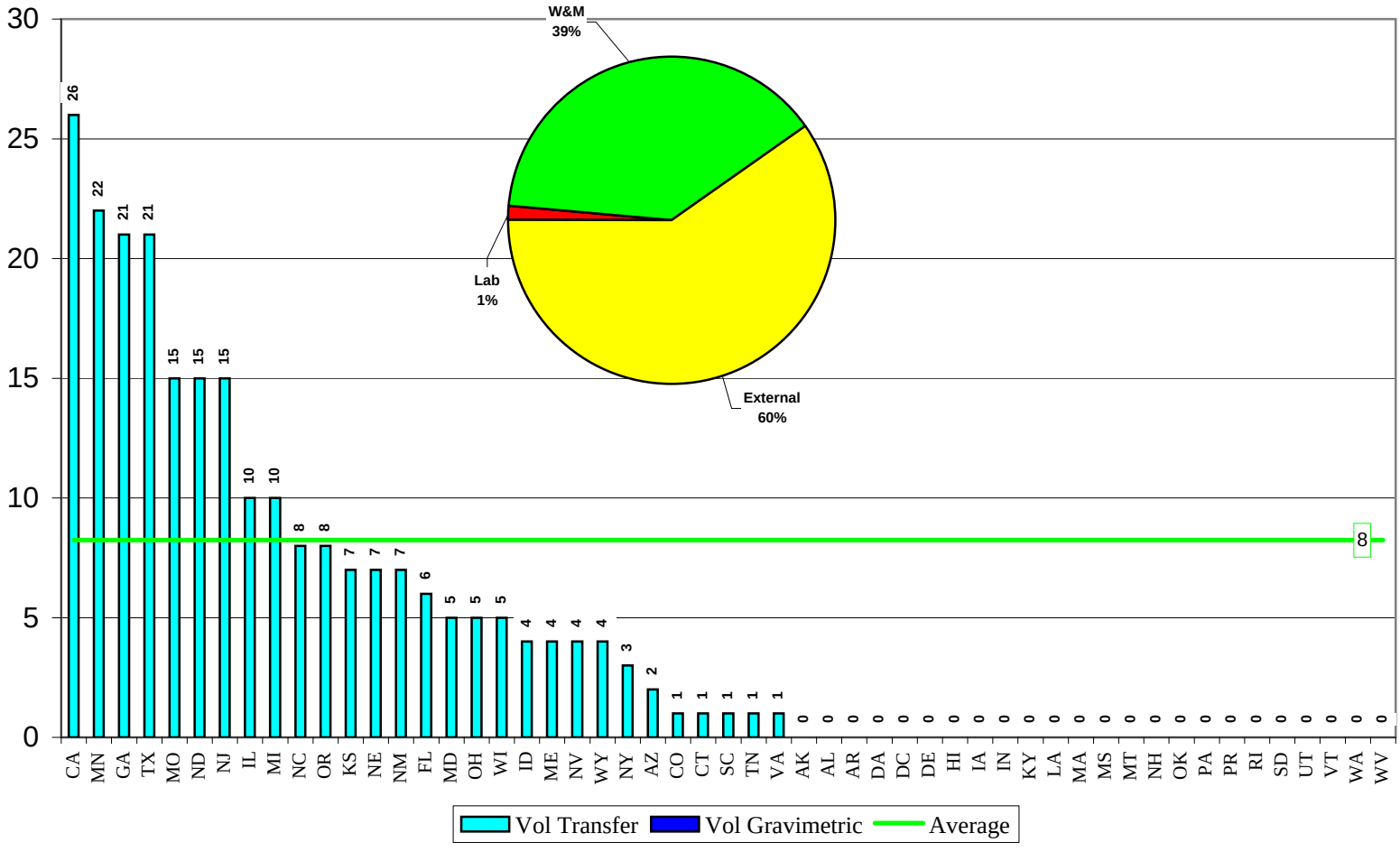
1 % of all volume (prover) standards were calibrated for the laboratory.
39 % of all volume (prover) standards were calibrated for weights and measures enforcement program.
60 % of all volume (prover) standards were calibrated for external customers.

2005: Volume-Transfer 226 standards (100 %); Volume-Gravimetric 0 standards (0 %).
2006: Volume-Transfer 239 standards (100 %); Volume-Gravimetric 0 standards (0 %).

Volume LPG (2006)



239 Total Devices (2006)



Volume – SVP (Small Volume Provers) for 2006

Description

The graphs on the following page represent the total number of SVP (small volume provers) tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the breakdown of which procedure was used, volume transfer or volume gravimetric, along with the total number of devices tested by each laboratory.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

Of the 49 reporting laboratories, 3 labs tested a total of 20 SVP (small volume provers).

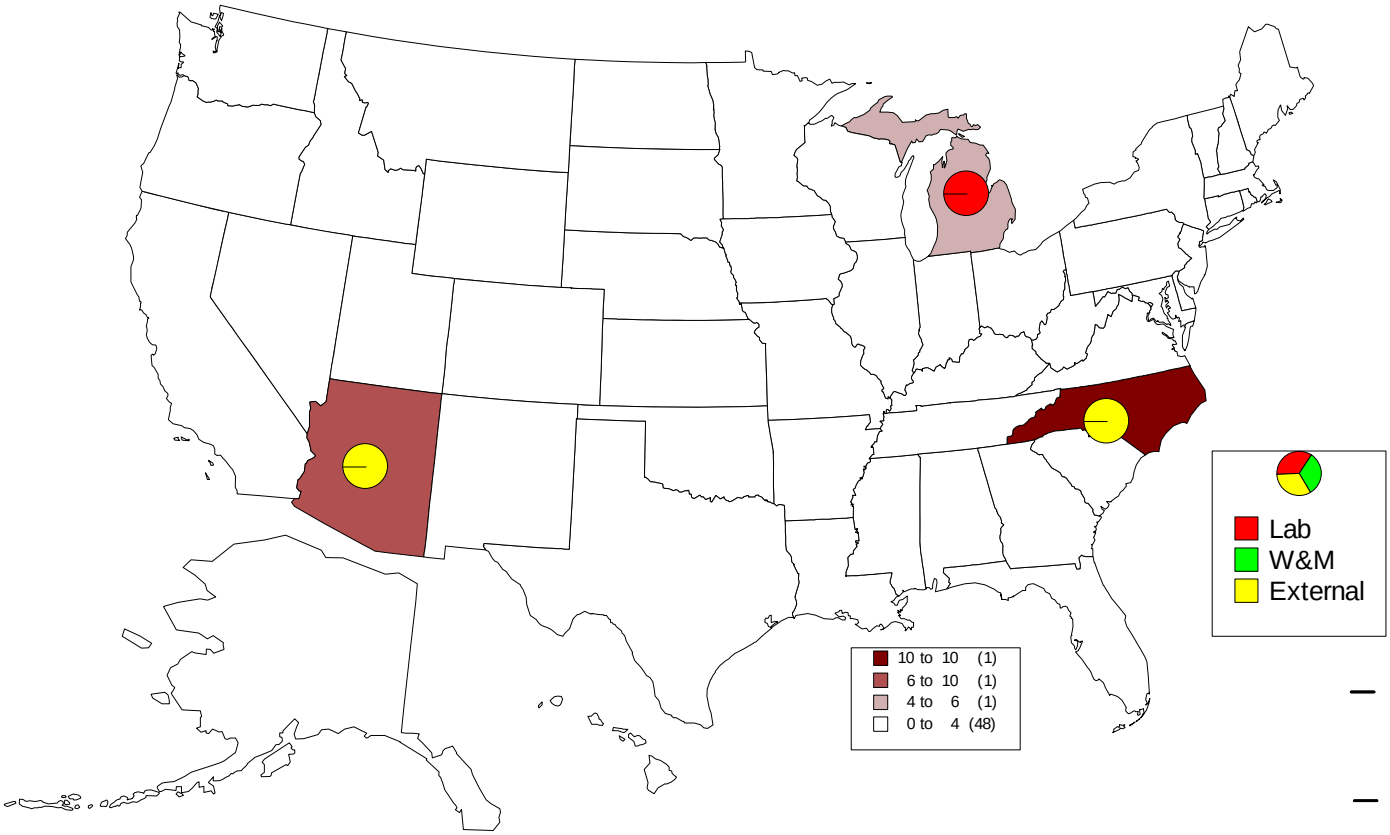
This is a new data break-down so historical comparison data is not available.

Notes and Comments

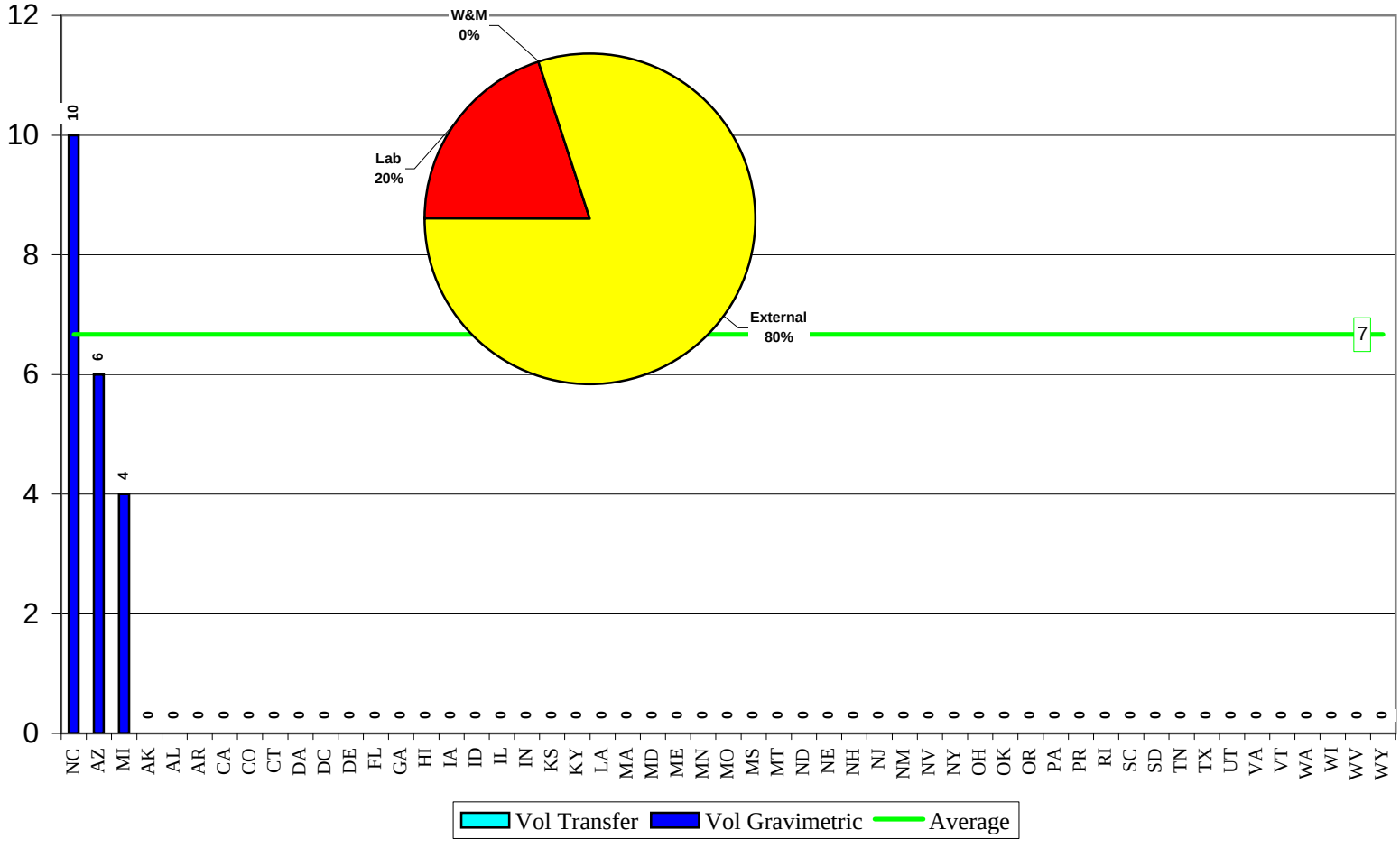
20 % of all volume (prover) standards were calibrated for the laboratory.
0 % of all volume (prover) standards were calibrated for weights and measures enforcement program.
80 % of all volume (prover) standards were calibrated for external customers.

2005: Volume-Transfer 0 standards (0 %); Volume-Gravimetric 11 standards (100 %).
2006: Volume-Transfer 0 standards (0 %); Volume-Gravimetric 20 standards (100 %).

Small Volume Provers (SVP) (2006)



20 Total Devices (2006)



Temperature for 2006

Description

The graphs on the following page represent the total number of temperature standards tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the same breakdown along with the total number of devices tested by each laboratory. There is also a smaller line graph that reflects the totals from previous surveys.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

Of the 49 reporting laboratories, 12 labs tested a total of 281 temperature standards.

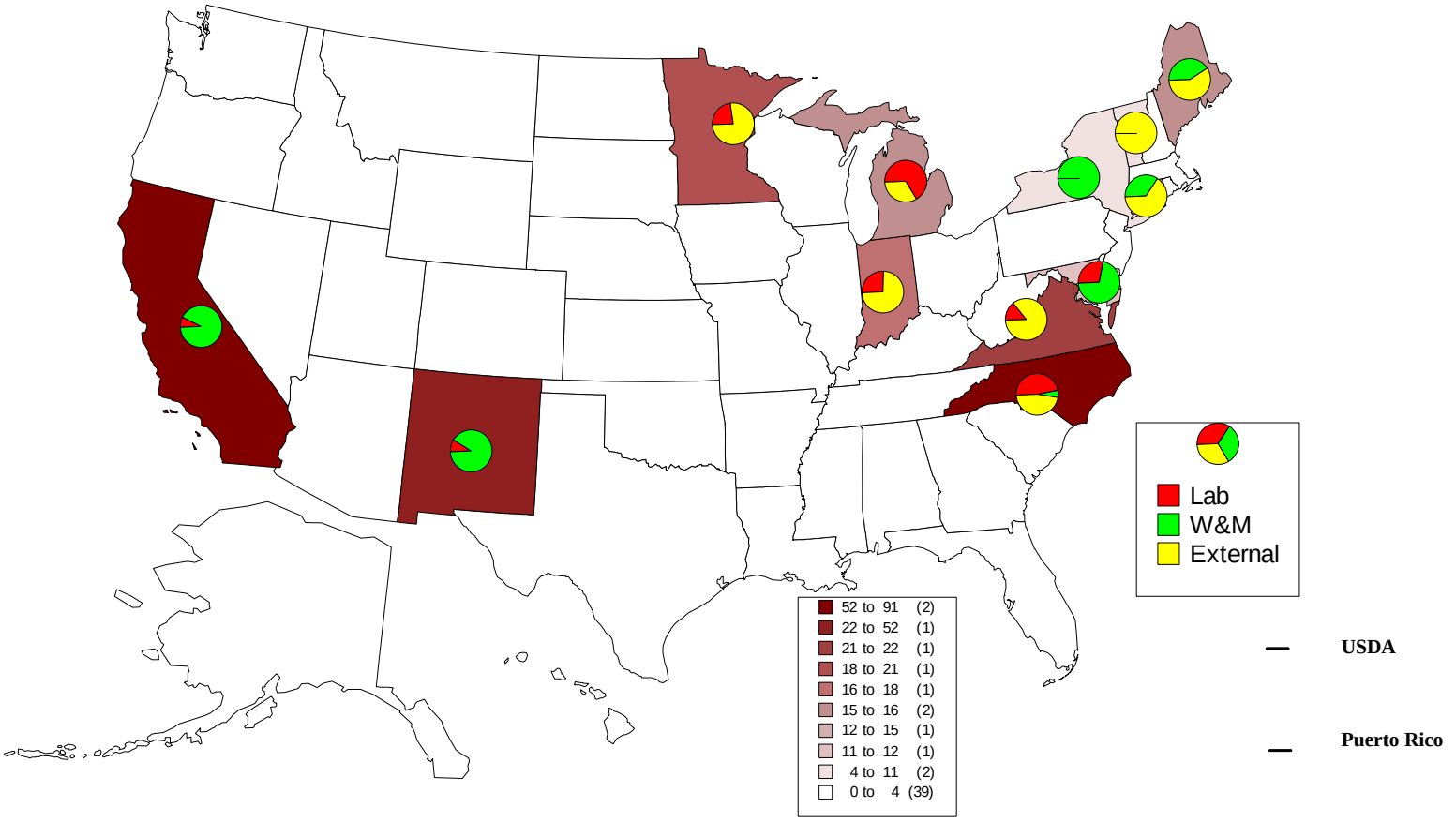
Comparison of previous surveys

	# Labs Reporting Temperature tests	Total Devices	Lab Average	Change using Lab Average
1996	20	447	22	--
1998	11	378	34	+ 54 %
1999	12	514	43	+ 25 %
2000	16	460	29	- 33 %
2002	13	456	35	+ 22 %
2004	12	315	26	- 25 %
2005	15	418	28	+ 6 %
2006	12	281	23	- 16 %

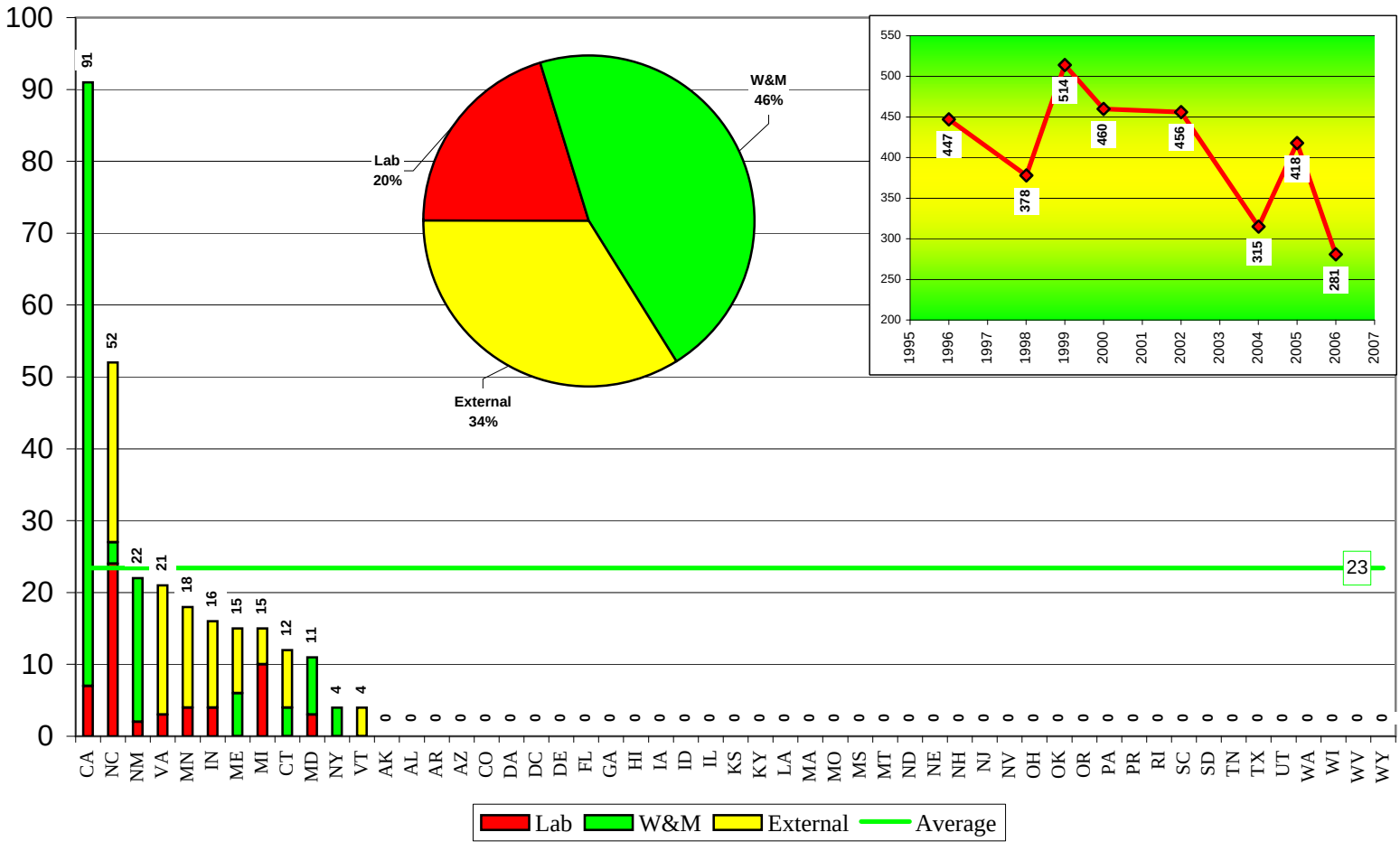
Notes and Comments

20 % of all temperature standards were calibrated for the laboratory.
46 % of all temperature standards were calibrated for weights and measures enforcement program.
34 % of all temperature standards were calibrated for external customers.

Temperature (2006)



281 Total Devices (2006)



Frequency for 2006

Description

The graphs on the following page represent the total number of frequency standards tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the same breakdown along with the total number of devices tested by each laboratory. There is also a smaller line graph that reflects the totals from previous surveys.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

Of the 49 reporting laboratories, 4 labs tested a total of 14,832 frequency standards.

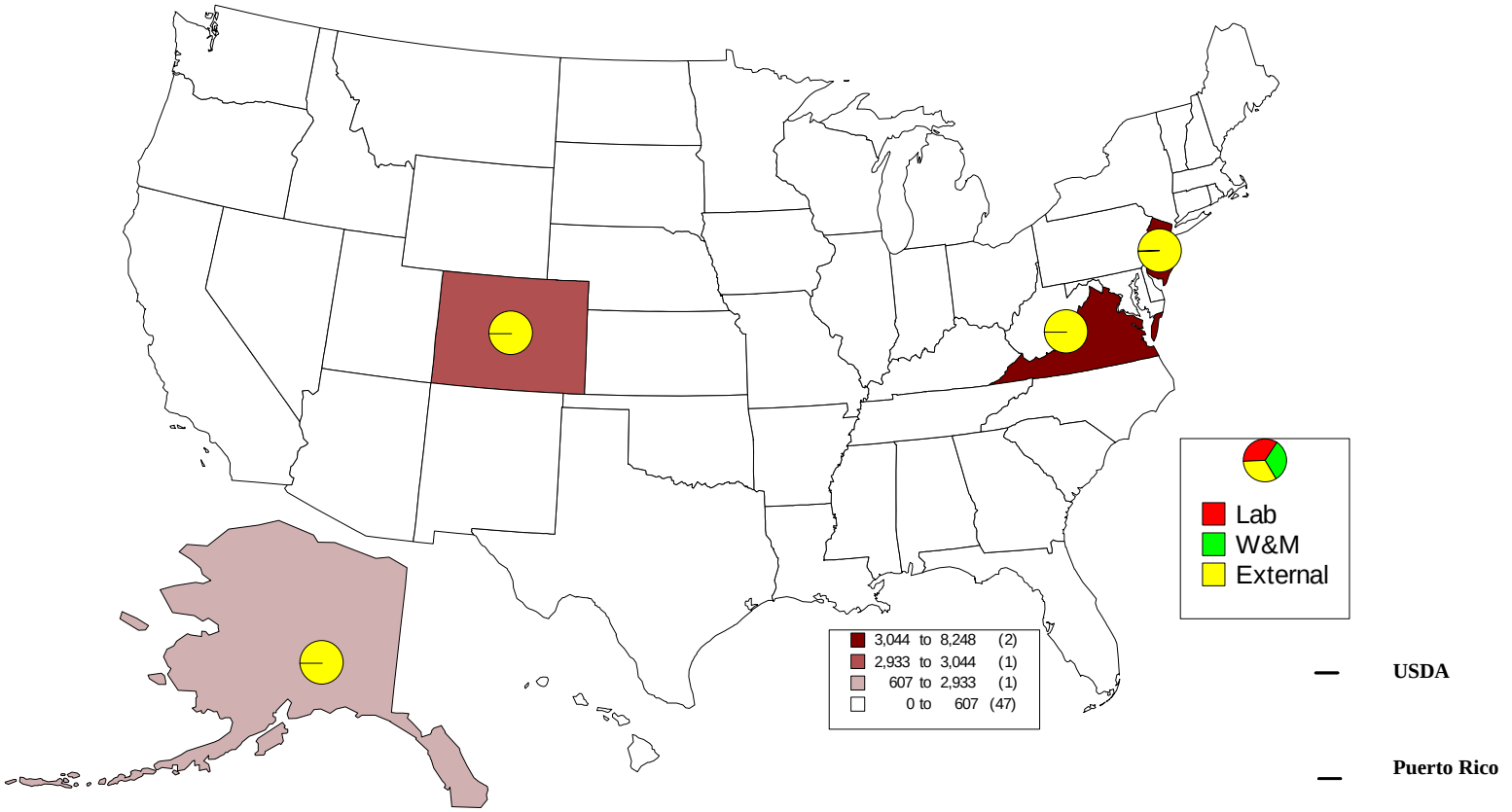
Comparison of previous surveys

	# Labs Reporting Frequency Tests	Total Devices	Lab Average	Change using Lab Average
1996	6	12,518	2,086	--
1998	4	11,561	2,890	+ 39 %
1999	5	13,518	2,704	- 6 %
2000	7	14,670	2,096	- 22 %
2002	6	13,785	2,298	+ 10 %
2004	3	14,772	4,924	+ 114 %
2005	4	15,162	3,791	- 23 %
2006	4	14,832	3,708	- 2 %

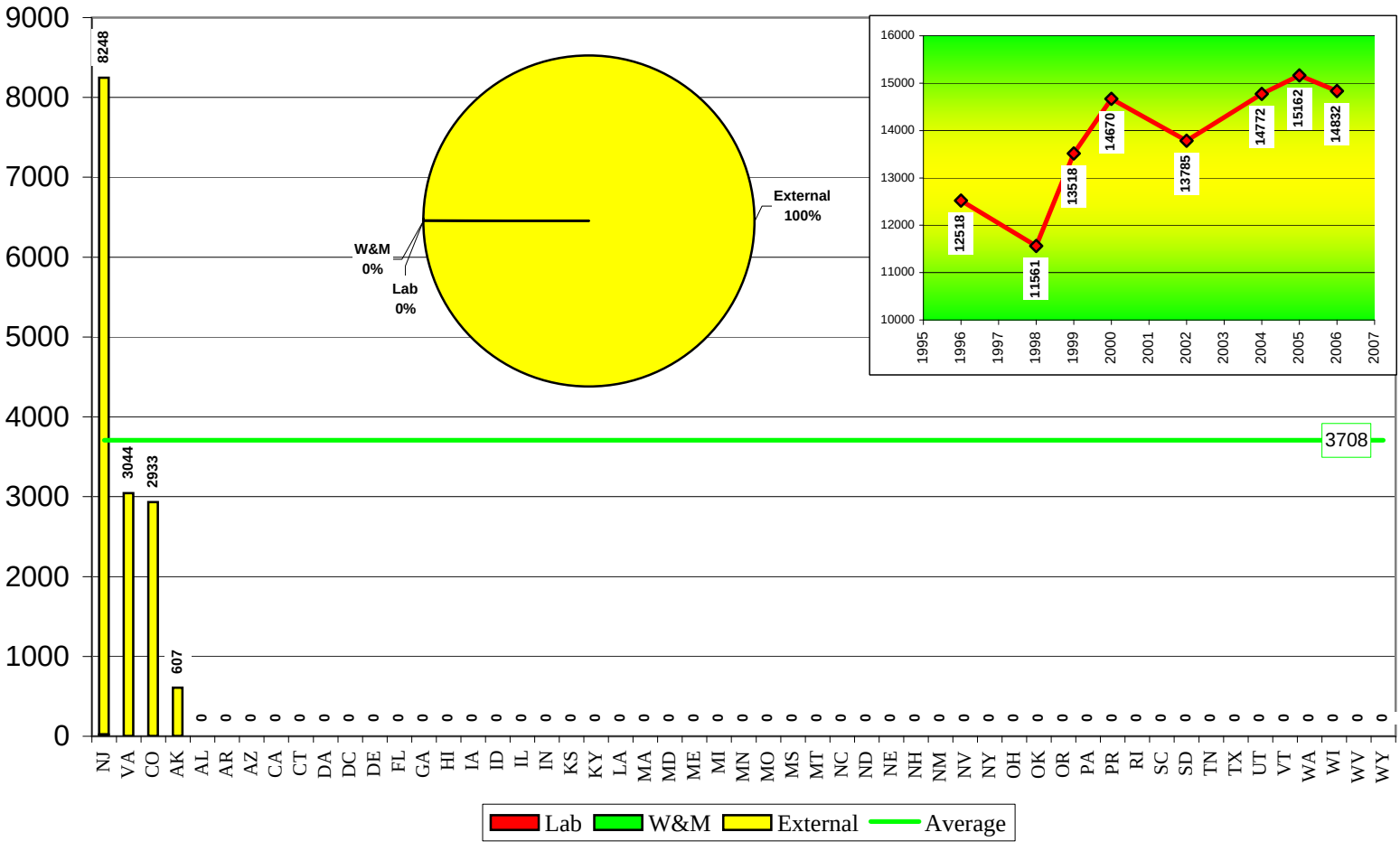
Notes and Comments

0 % of all frequency standards were calibrated for the laboratory.
0 % of all frequency standards were calibrated for weights and measures enforcement program.
100 % of all frequency standards were calibrated for external customers.

Frequency (2006)



14832 Total Devices (2006)



Time for 2006

Description

The graphs on the following page represent the total number of timing devices tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the same breakdown along with the total number of devices tested by each laboratory. There is also a smaller line graph that reflects the totals from previous surveys.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

Of the 49 reporting laboratories, 11 labs tested a total of 365 timing devices.

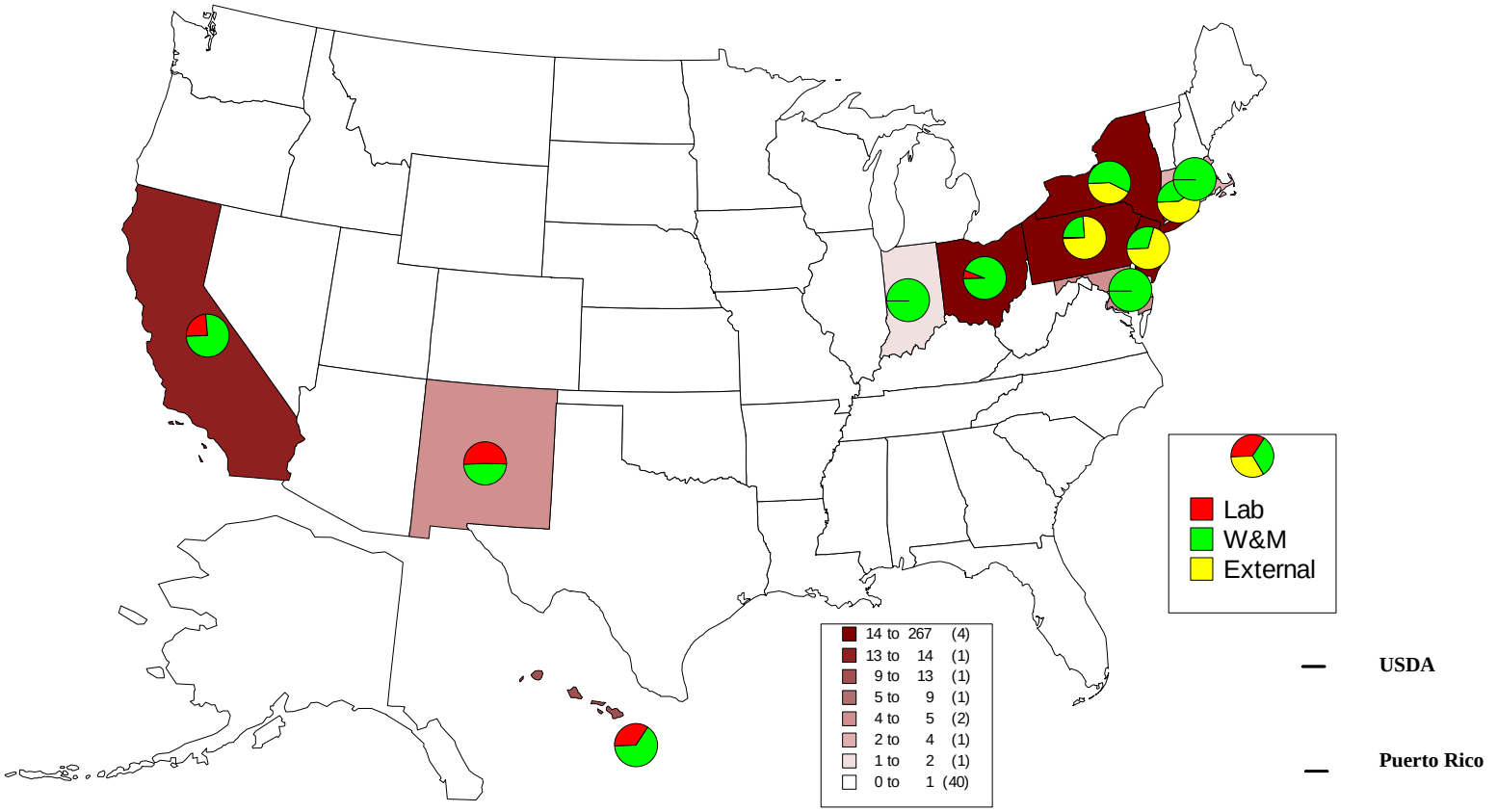
Comparison of previous surveys

	# Labs Reporting Time Tests	Total Devices	Lab Average	Change using Lab Average
1996	13	161	12	--
1998	11	380	35	+ 179 %
1999	14	451	32	- 7 %
2000	13	554	43	+ 32 %
2002	11	479	44	+ 2 %
2004	9	951	106	+ 143 %
2005	8	387	48	- 54 %
2006	11	365	33	- 31 %

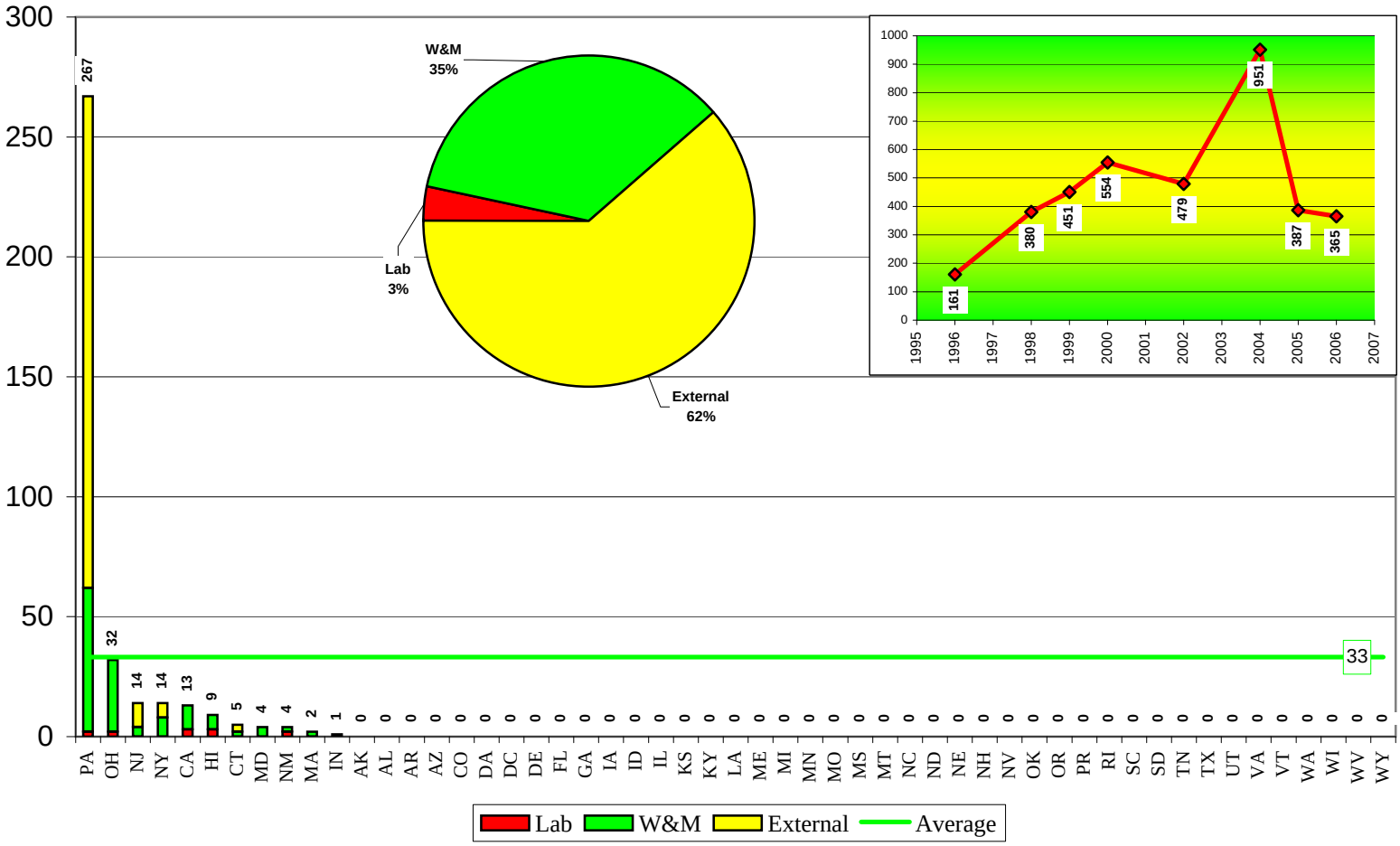
Notes and Comments

3 % of all timing devices were calibrated for the laboratory.
35 % of all timing devices were calibrated for weights and measures enforcement program.
62 % of all timing devices were calibrated for external customers.

Time (2006)



365 Total Devices (2006)



Wheel Load Weighers for 2006

Description

The graphs on the following page represent the total number of wheel load weighers tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the same breakdown along with the total number of devices tested by each laboratory. There is also a smaller line graph that reflects the totals from previous surveys.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

Of the 49 reporting laboratories, 20 labs tested a total of 10,567 wheel load weighers.

Comparison of previous surveys

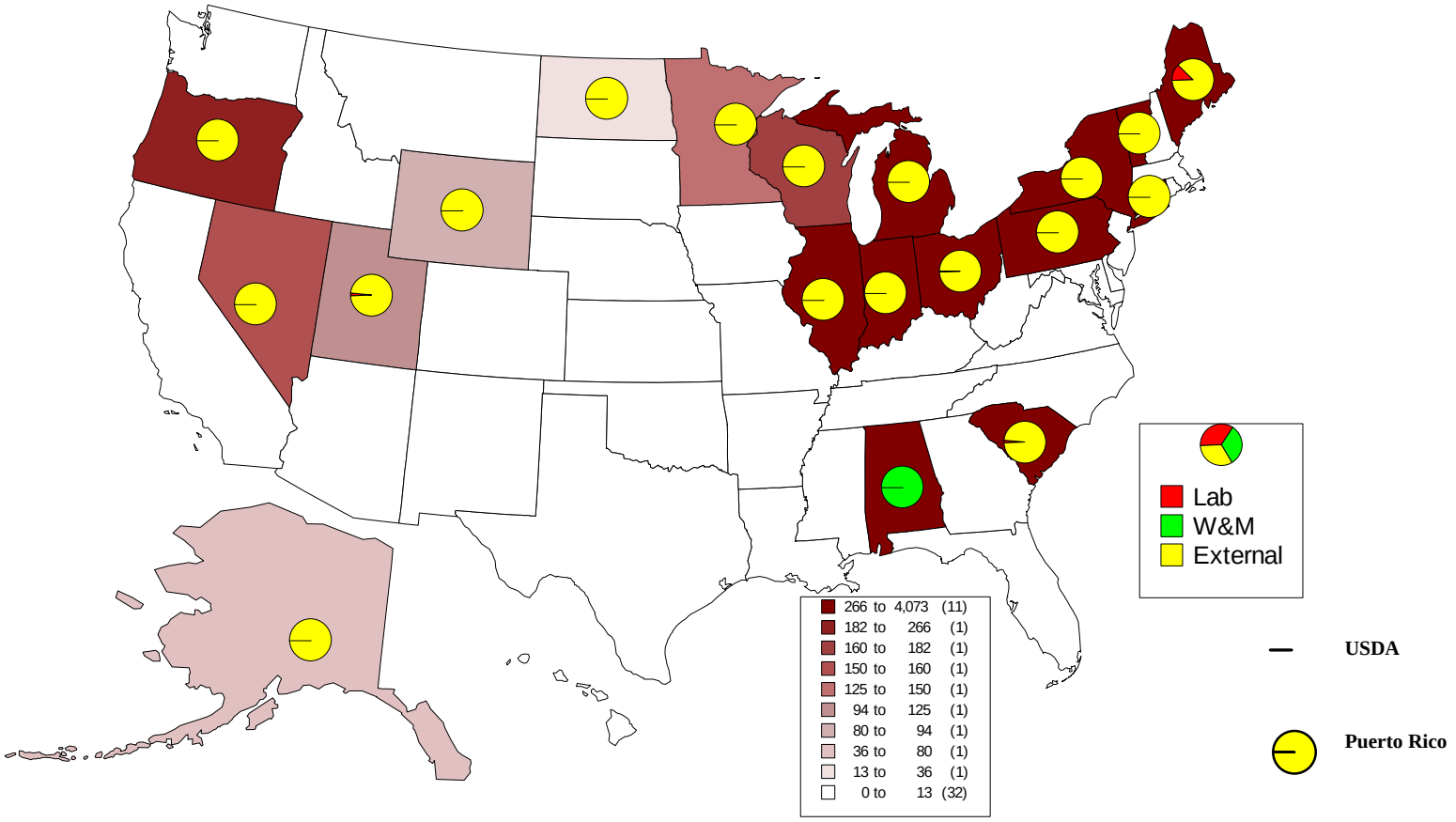
	# Labs Reporting Wheel Load Weigher Tests	Total Devices	Lab Average	Change using Lab Average
1998	19	12,178	641	--
1999	20	12,781	639	0 %
2000	22	13,699	623	- 3 %
2002	23	10,350	450	- 28 %
2004	21	10,884	518	+ 15 %
2005	19	9,748	513	- 1 %
2006	20	10,567	528	+ 3 %

Notes and Comments

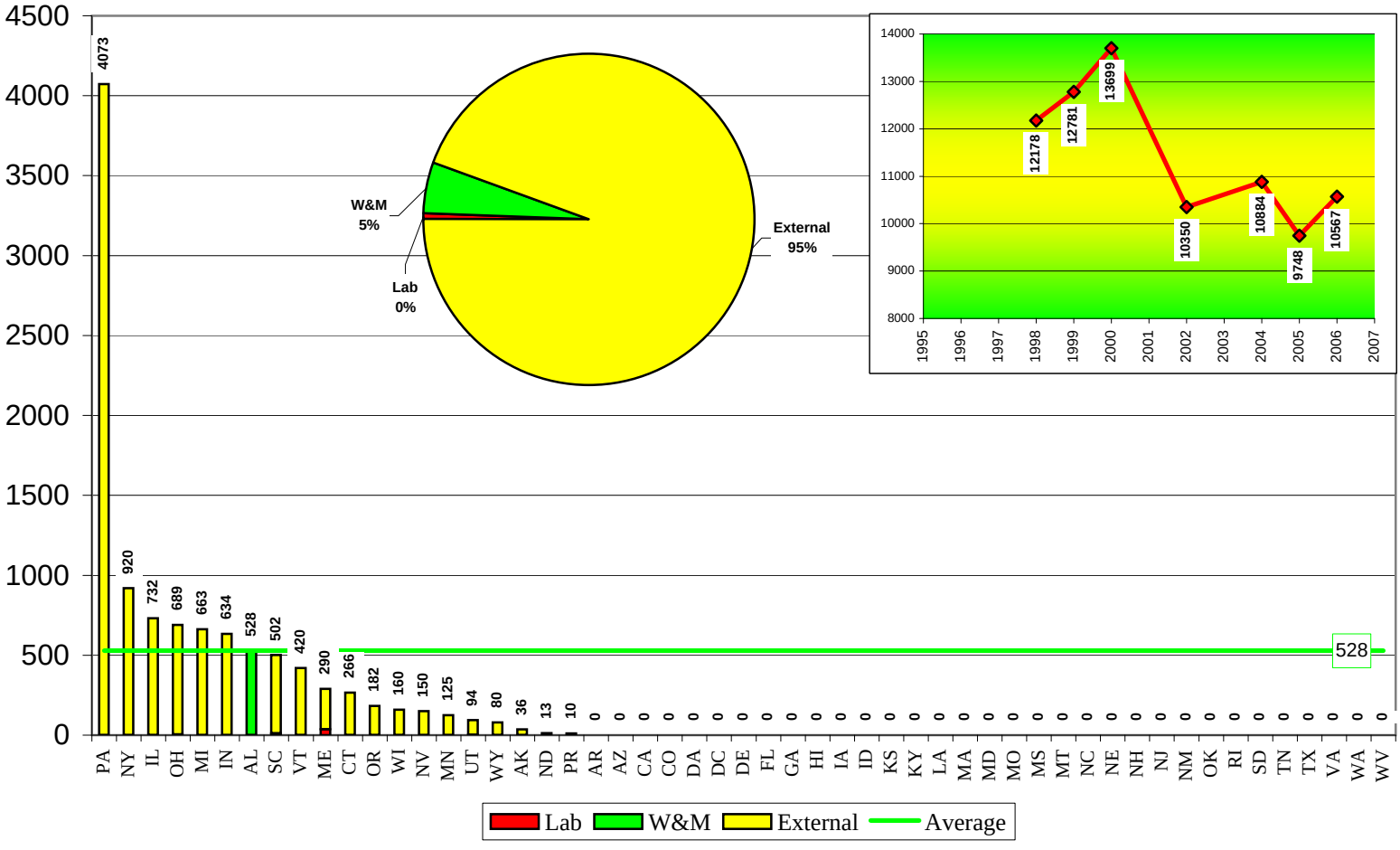
0 % of all wheel load weighers were calibrated for the laboratory.
5 % of all wheel load weighers were calibrated for weights and measures enforcement program.
95 % of all wheel load weighers were calibrated for external customers.

Pennsylvania laboratory performed 4,073 tests on wheel load weighers (39 % of the national total).

Wheel Load Weighers (2006)



10567 Total Devices (2006)



Lottery Balls for 2006

Description

The graphs on the following page represent the total number of lottery balls tested by the 49 reporting laboratories. The map graph gives a geographical distribution of these standards. Darker shading indicates more devices were tested. There are pie graphs located on the map for each individual lab and a larger pie graph that reflects the totals. The pie graphs provide a breakdown into the customer categories of Lab, W&M, and External. The bar graph at the bottom of the page shows the same breakdown along with the total number of devices tested by each laboratory. There is also a smaller line graph that reflects the totals from previous surveys.

Lab – work done for the internal use of the metrology laboratory.
W&M – work done for the weights and measures enforcement program.
External – work done for customers who do not fall into any of the above categories.

Findings

Of the 49 reporting laboratories, 9 labs tested a total of 41,068 lottery balls.

Comparison of previous surveys

	# Labs Reporting Tests on Lottery Balls	Total Devices	Lab Average	Change using Lab Average
1999	9	19,982	2,220	--
2000	13	24,702	1,900	- 14 %
2002	11	35,818	3,256	+ 71 %
2004	11	40,939	3,722	+ 14 %
2005	9	47,920	5,324	+ 43 %
2006	9	41,068	4,563	- 14 %

Notes and Comments

0 % of all lottery balls were calibrated for the laboratory.
0 % of all lottery balls were calibrated for weights and measures enforcement program.
100 % of all lottery balls were calibrated for external customers.

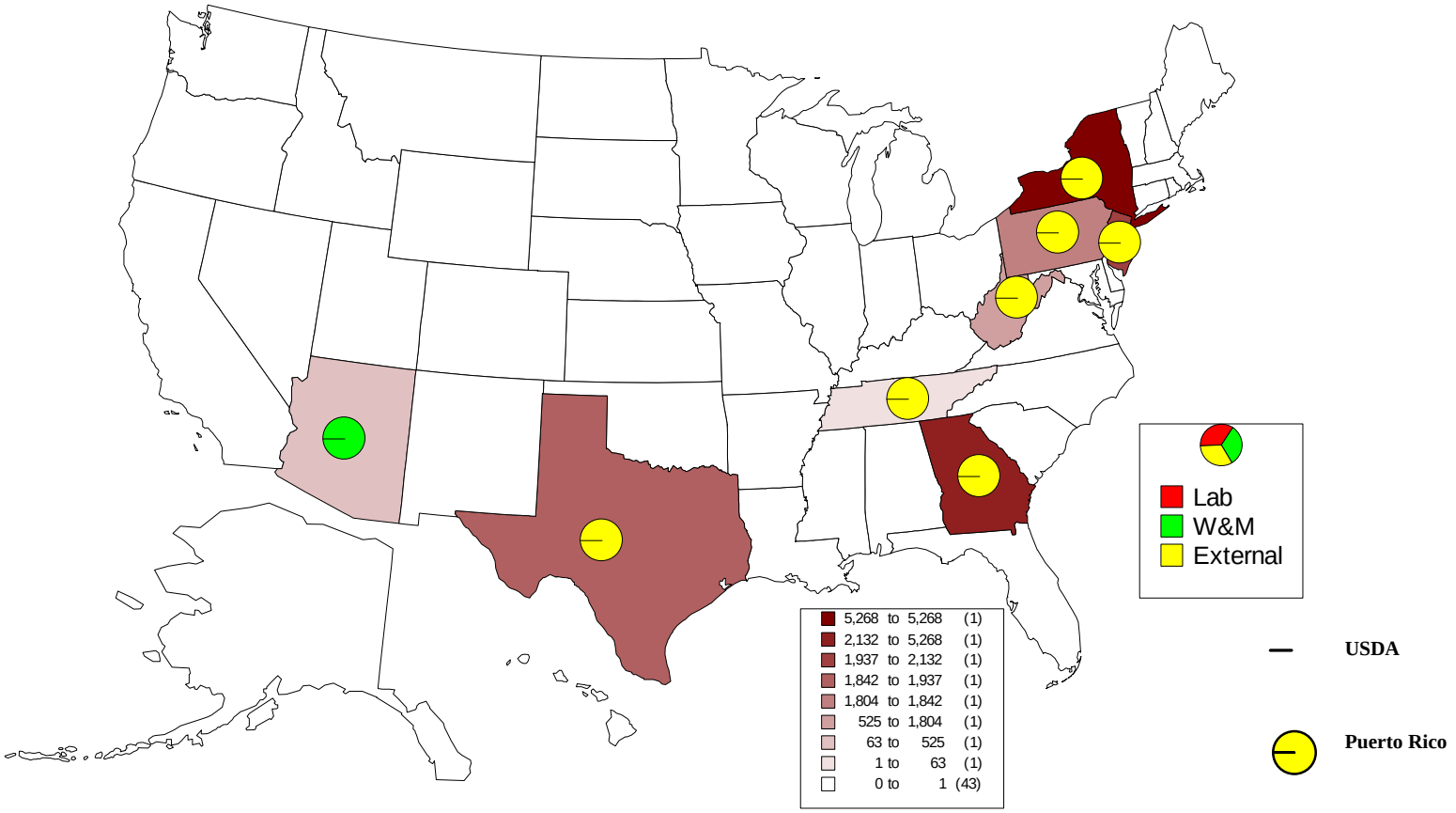
Puerto Rico laboratory performed 27,496 tests on lottery balls (67 % of the national total).

This is a new survey category starting in 2004. In previous surveys, laboratories reported lottery balls under the category of ‘other tests’.

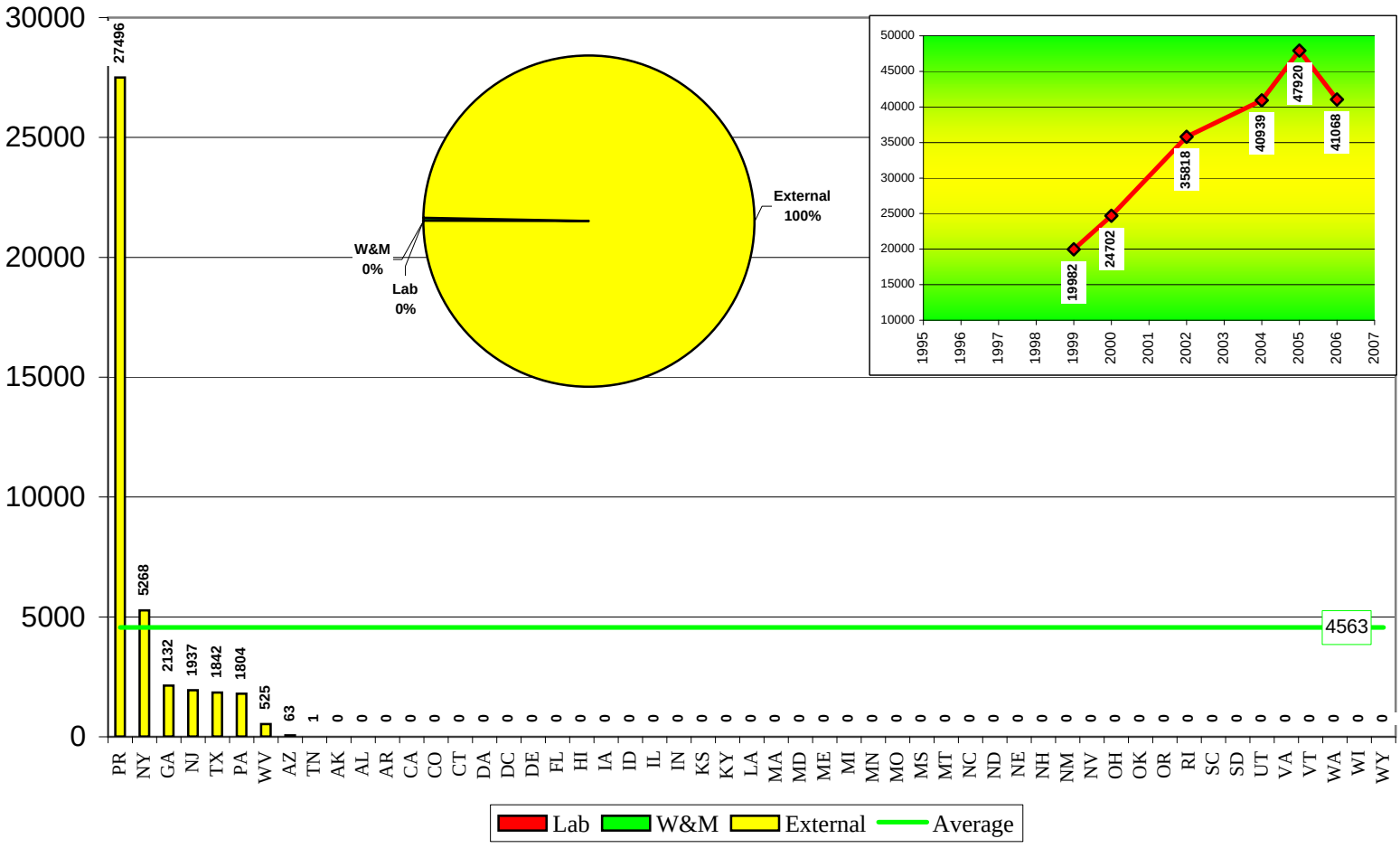
A supplemental question on lottery balls asked what characteristics were tested.

1 laboratory tested diameters only.
3 laboratories tested mass only.
3 laboratories tested the diameters and mass.

Lottery Balls (2006)



41068 Total Devices (2006)



Summary of "Other Tests" for 2006

Description

The category "Other Tests" was for tests performed by the metrology laboratory that did not fit into any of the listed categories in the survey.

The graphs on the following page represent the total number of "Other Tests" performed by 15 reporting laboratories. The pie graph provides a further breakdown into the following categories:

Hydrometers	1 laboratory [VT]	2,311 tests
Filters-EPA	1 laboratory [ME]	2,044 tests
Speed Detection †	1 laboratory [AK]	395 tests
Special Volume	2 laboratories [ME, OR]	279 tests
Grain Moisture	2 laboratories [GA, CO]	253 tests
Scales	6 laboratories [CT, NJ, OH, WY, PR, WI]	177 tests
Special Linear/Dimensional	2 laboratories [ME, NJ]	67 tests
Density	1 laboratory [MN]	3 tests
Railroad Test Cars	3 laboratories [WY, MN, MO]	39 tests
Electrical	2 laboratory [AK, CA]	48 tests
Special Mass	2 laboratories [CT, MN]	112 tests

† *(Includes electronic testing of the radar unit, not just calibration of the tuning forks)*

The bar graph at the bottom of the page shows the same breakdown in categories along with the total number of "Other Tests" performed above each laboratory.

Findings

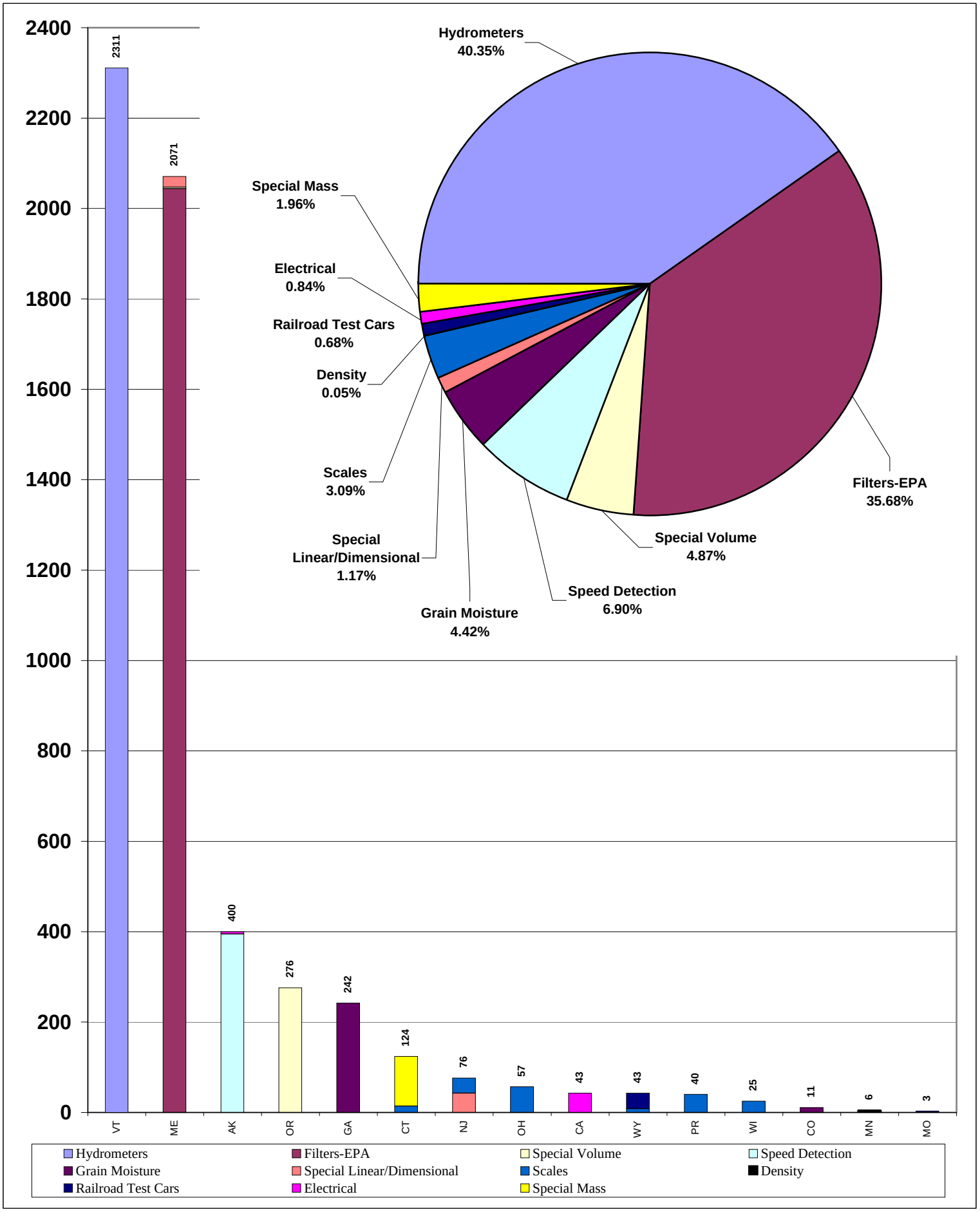
Comparison of previous surveys

	# Labs Reporting Other Tests	Total Devices Tested	Lab Average	Change using Lab Average
1999	24	25,350	1,056	--
2000	26	30,199	1,162	+ 10 %
2002	24	42,282	1,762	+ 52 %
2004	22	6,006	273	- 85 %
2005	16	5,980	374	+ 37 %
2006	15	5,728	382	+ 2 %

The main reason for the decrease in the number of 'Other Tests' is that 'Lottery Balls' and 'LPG Provers' have been moved to separate categories.

Summary of Other Tests (2006)

5728 Total Devices



Fees for 2006

Description

This information would be valuable for those labs that are attempting to implement fees for the first time and also to those labs that may be in the process of amending their fees. The next seven pages contain eight graphs. In the past surveys the fee schedule or hourly rate that each lab provided was used to calculate the fees for certain routine work. However a problem arises when using hourly rates. The time it takes to calibrate a particular artifact will vary from state to state depending on weight handling equipment, balances, experience and number of employees. Another factor is that while one state may track the total time it takes to log in, unpack, test, re-pack, and log out an item, another state may only track the actual time required to complete the test. This year, in an attempt to gain more accurate information, we asked each lab to quote the typical fee that they would charge for the various routine calibrations. The fees indicated are typical. Actual fees charged may differ from those indicated.

Mass Echelon I - Class 0 Precision Weight Kit for 2006

Description

The top graph represents the fees charged for calibrating a Class 0 precision weight kit containing 21 individual weights from 100 gram down to 1 milligram using Mass Echelon I procedures.

Comparison of previous surveys

	# of Labs	Average Fee	% Change
2004	15	$617.87	--
2006	16	$758.75	+ 23 %

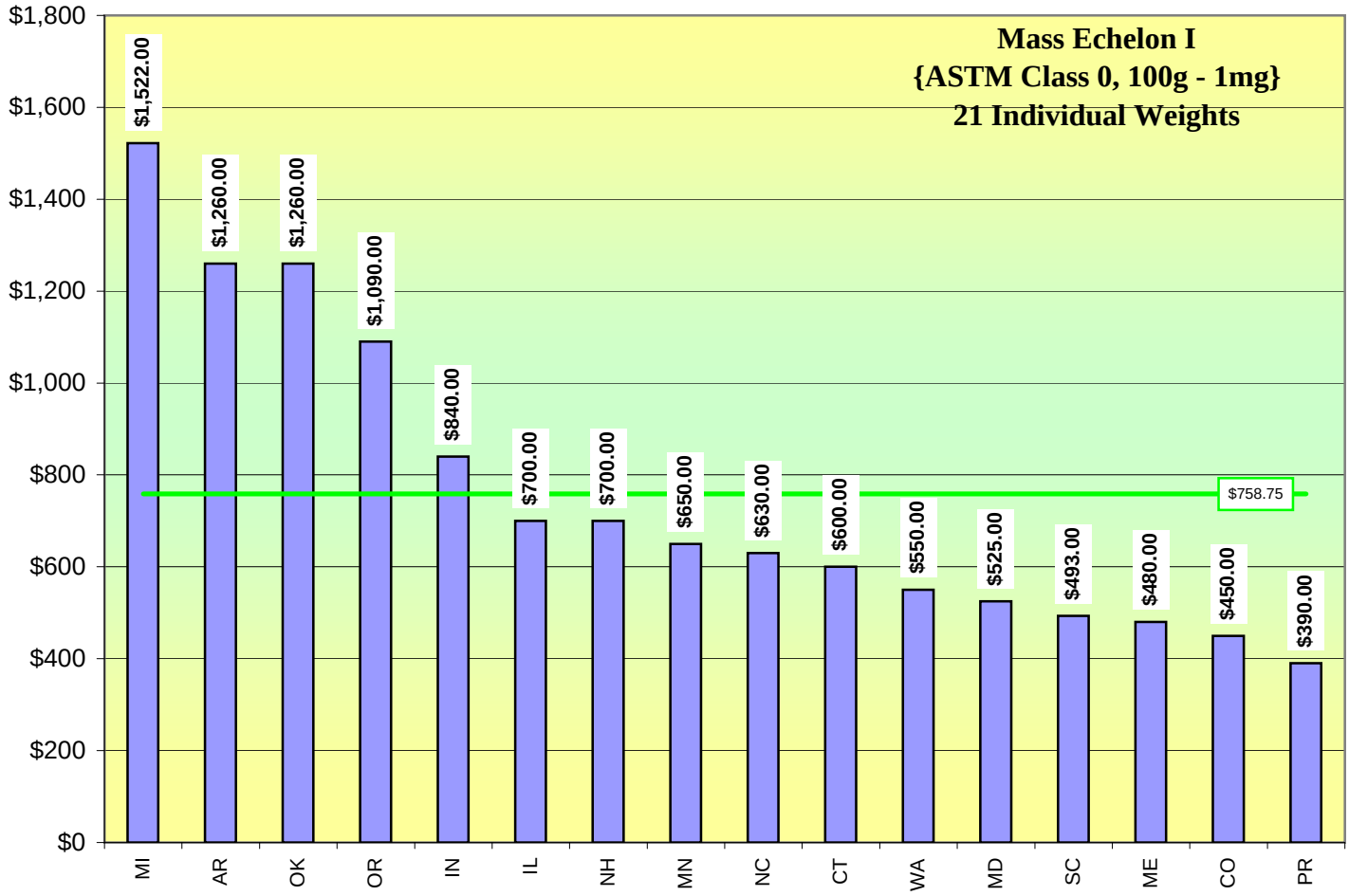
Mass Echelon II - Class 2 Precision Weight Kit for 2006

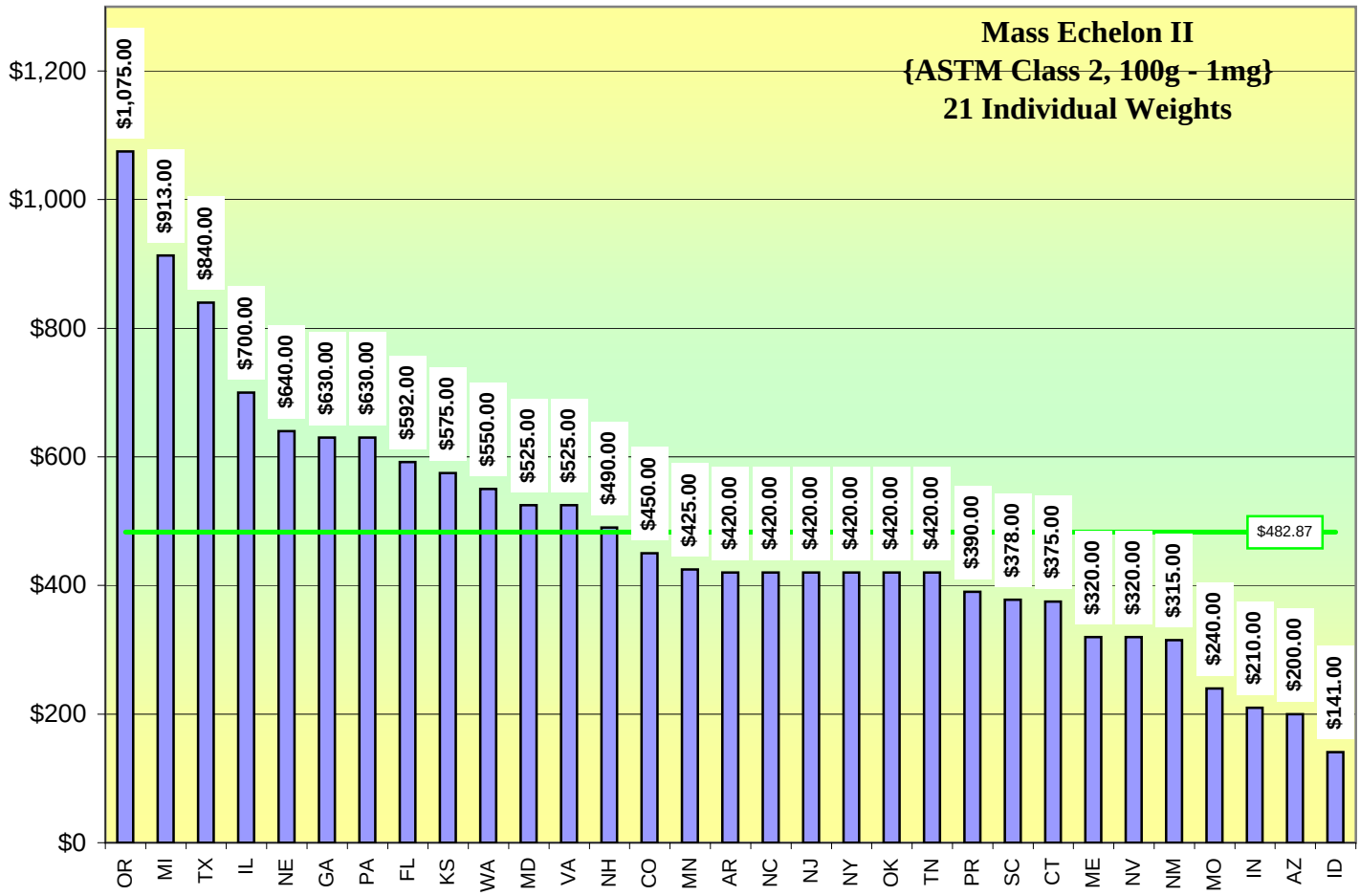
Description

The bottom graph represents the fees charged for calibrating a Class 2 precision weight kit that contains 21 individual weights from 100 gram down to 1 milligram using Mass Echelon II procedures.

Comparison of previous surveys

	# of Labs	Average Fee	% Change
2000	33	$334.00	--
2002	39	$414.32	+ 24 %
2004	30	$431.43	+ 4 %
2006	31	$482.87	+ 12 %


Mass Echelon I
{ASTM Class 0, 100g - 1mg}
21 Individual Weights
$1,800
$1,600
$1,400
$1,200
$1,000
$800
$600
$400
$200
$0
$758.75
MI $1,522.00
AR $1,260.00
OK $1,260.00
OR $1,090.00
IN $840.00
IL $700.00
NH $700.00
MN $650.00
NC $630.00
CT $600.00
WA $550.00
MD $525.00
SC $493.00
ME $480.00
CO $450.00
PR $390.00


Mass Echelon II
{ASTM Class 2, 100g - 1mg}
21 Individual Weights
$1,200
$1,000
$800
$600
$400
$200
$0
$482.87
OR $1,075.00
MI $913.00
TX $840.00
IL $700.00
NE $640.00
GA $630.00
PA $630.00
FL $592.00
KS $575.00
WA $550.00
MD $525.00
VA $525.00
NH $490.00
CO $450.00
MN $425.00
AR $420.00
NC $420.00
NJ $420.00
NY $420.00
OK $420.00
TN $420.00
PR $390.00
SC $378.00
CT $375.00
ME $320.00
NV $320.00
NM $315.00
MO $240.00
IN $210.00
AZ $200.00
ID $141.00

Mass Echelon III - Class F Weight Kit for 2006
{31 lb kit} 22 Individual Weights

Description

The top graph represents the fees charged for calibrating a Class F weight kit that contains 22 individual weights using Mass Echelon III procedures.

Comparison of previous surveys

	# of Labs	Average Fee	% Change
2000	36	$77.00	--
2002	41	$94.99	+ 23 %
2004	38	$121.13	+ 28 %
2006	42	$135.64	+ 12 %

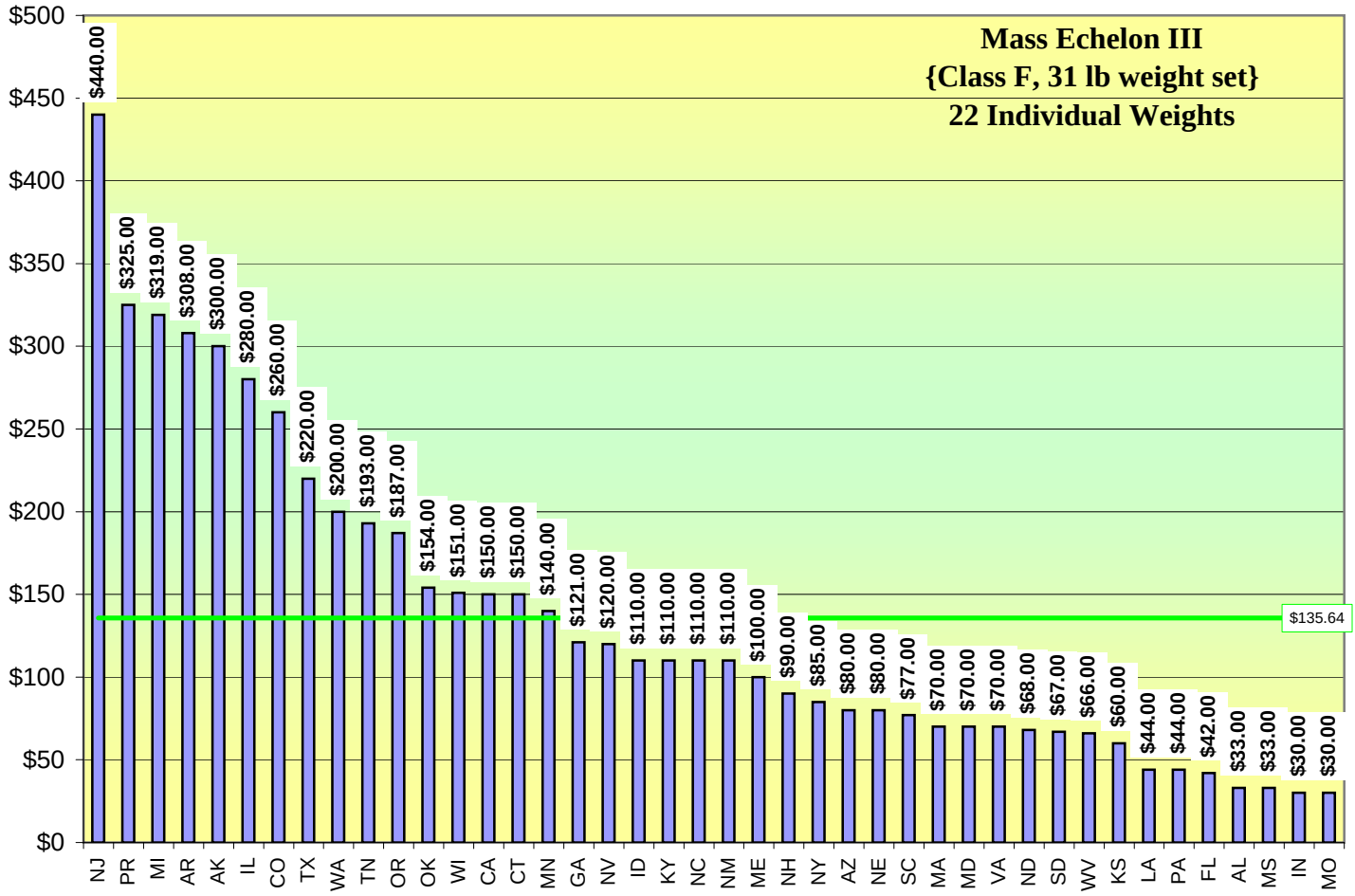
Mass Echelon III - 5000 lb Weight Cart for 2006

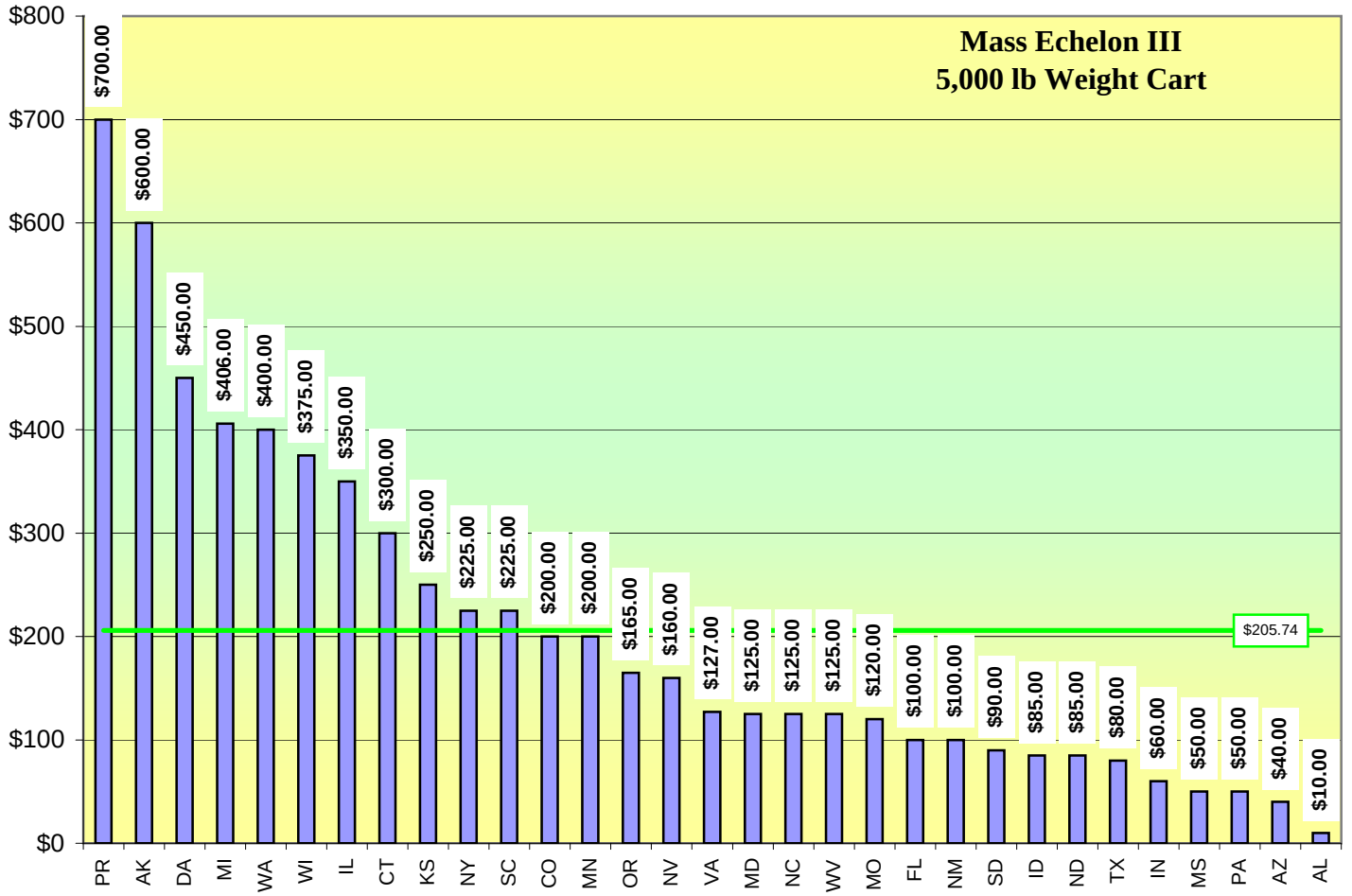
Description

The bottom graph represents the fees charged for calibrating a 5000 lb weight cart using Mass Echelon III procedures.

Comparison of previous surveys

	# of Labs	Average Fee	% Change
2004	28	$163.27	--
2006	31	$205.74	+ 26 %


Mass Echelon III
{Class F, 31 lb weight set}
22 Individual Weights
$500
$450
$400
$350
$300
$250
$200
$150
$100
$50
$0
$440.00
$325.00
$319.00
$308.00
$300.00
$280.00
$260.00
$220.00
$200.00
$193.00
$187.00
$154.00
$151.00
$150.00
$150.00
$140.00
$121.00
$120.00
$110.00
$110.00
$110.00
$110.00
$100.00
$90.00
$85.00
$80.00
$80.00
$77.00
$70.00
$70.00
$70.00
$68.00
$67.00
$66.00
$60.00
$44.00
$44.00
$42.00
$33.00
$33.00
$30.00
$30.00
$135.64
NJ PR MI AR AK IL CO TX WA TN OR OK WI CA CT MN GA NV ID KY NC NM ME NH NY AZ NE SC MA MD VA ND SD WV KS LA PA FL AL MS IN MO


Mass Echelon III
5,000 lb Weight Cart
$800
$700
$600
$500
$400
$300
$200
$100
$0
$700.00
$600.00
$450.00
$406.00
$400.00
$375.00
$350.00
$300.00
$250.00
$225.00
$225.00
$200.00
$200.00
$165.00
$160.00
$127.00
$125.00
$125.00
$125.00
$120.00
$100.00
$100.00
$90.00
$85.00
$85.00
$80.00
$60.00
$50.00
$50.00
$40.00
$10.00
$205.74
PR AK DA MI WA WI IL CT KS NY SC CO MN OR NV VA MD NC WV MO FL NM SD ID ND TX IN MS PA AZ AL

Mass Echelon III - Class F Typical Scale Truck for 2006
24 – 1000 lb (5 adjusted)
20 – 50 lb (5 adjusted)
2 – 31 lb Weight Kits (22 weights each)

Description

The top graph represents the fees charged for calibrating a typical scale truck using Mass Echelon III procedures.

Comparison of previous surveys

	# of Labs	Average Fee	% Change
2004	39	$1,050.56	--
2006	43	$1,060.77	+ 1 %

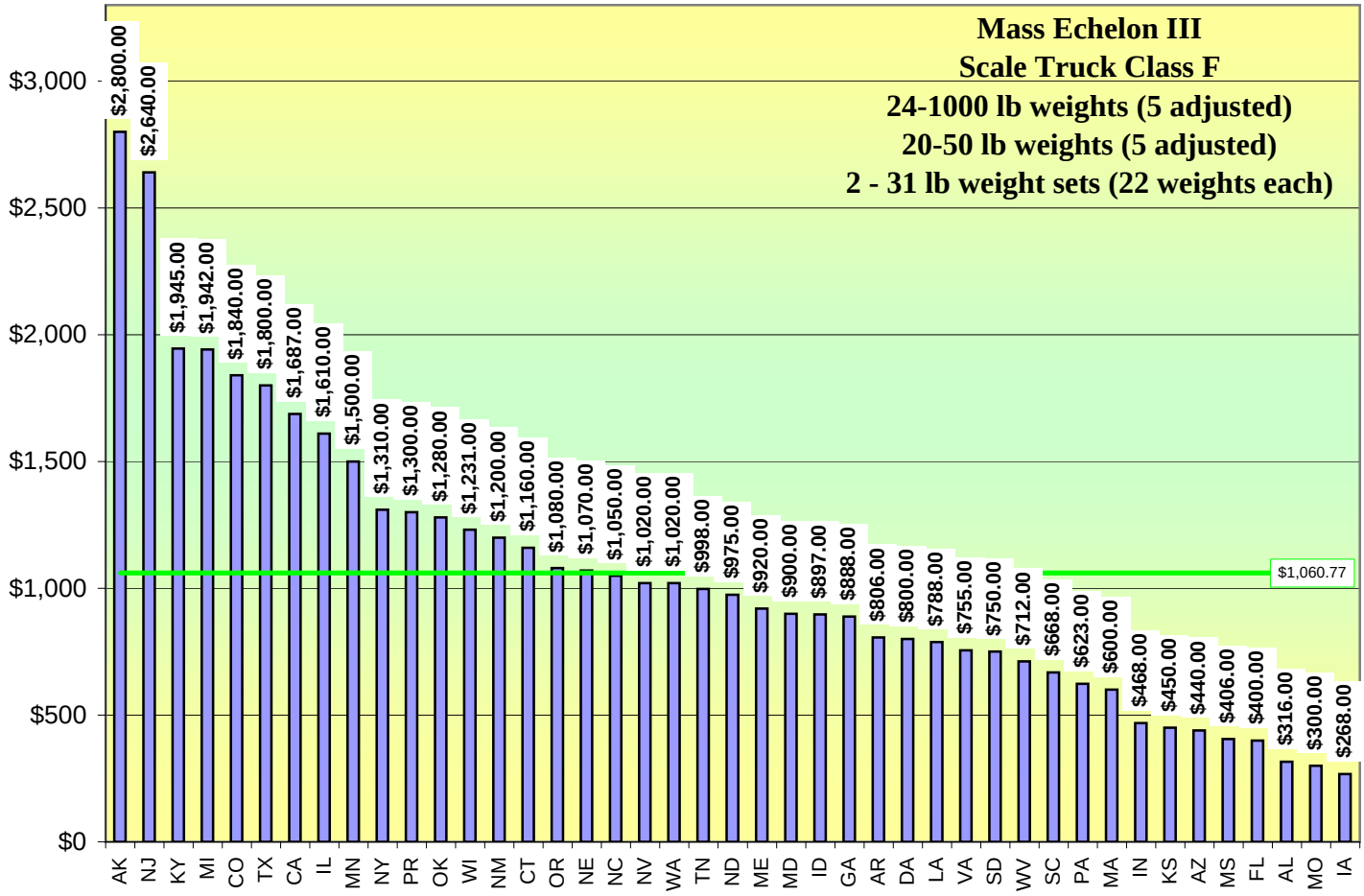
100 foot Tape for 2006
19 Points Tested

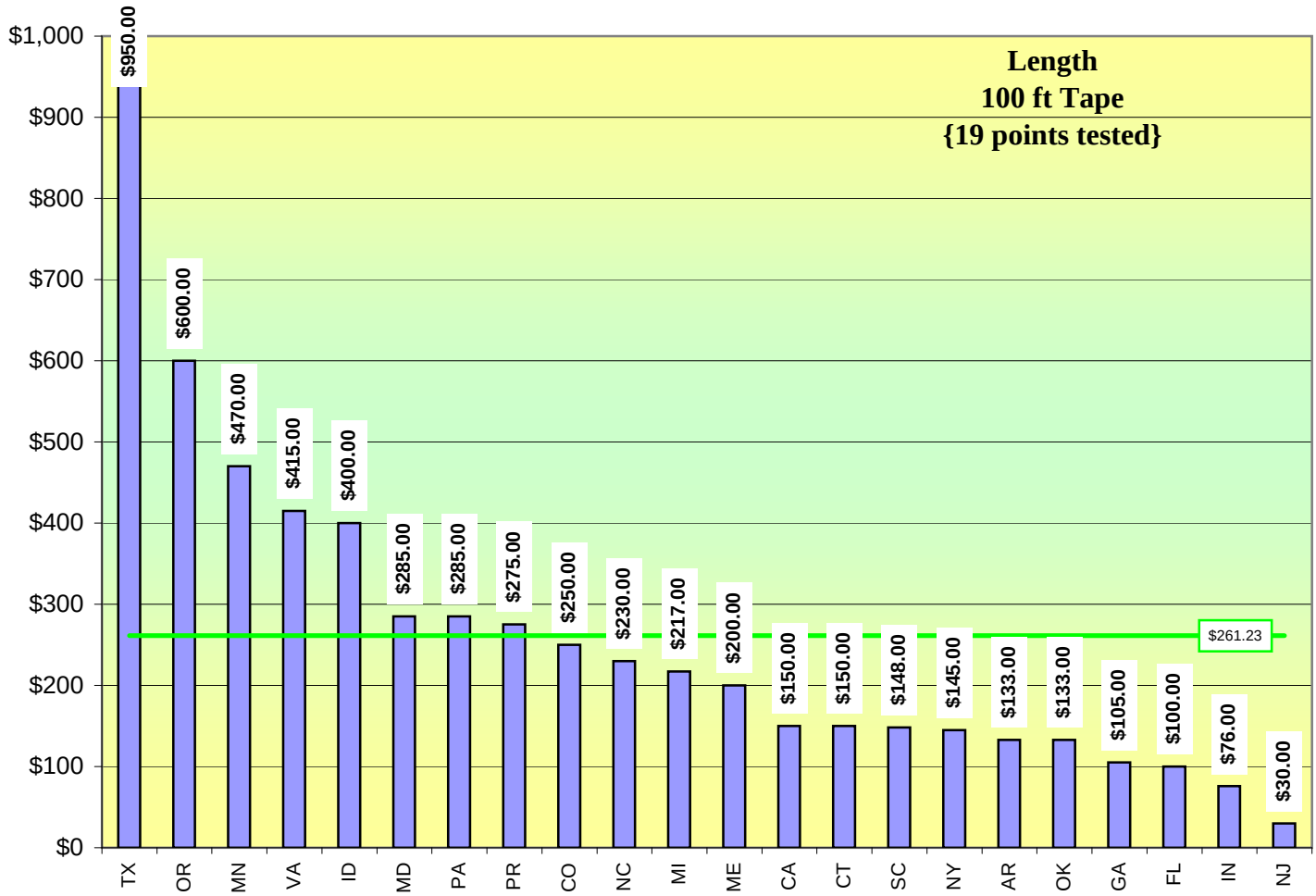
Description

The bottom graph represents the fees charged for a 100 foot steel tape that contained 19 points to be calibrated. There were 22 laboratories that quoted fees and the average fee charged was $250.89.

Comparison of previous surveys

	# of Labs	Average Fee	% Change
2000	33	$133.00	--
2002	36	$173.07	+ 30 %
2004	22	$250.89	+ 45 %
2006	22	$261.23	+ 4 %


Mass Echelon III
Scale Truck Class F
24-1000 lb weights (5 adjusted)
20-50 lb weights (5 adjusted)
2 - 31 lb weight sets (22 weights each)
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
$1,060.77
AK $2,800.00
NJ $2,640.00
KY $1,945.00
MI $1,942.00
CO $1,840.00
TX $1,800.00
CA $1,687.00
IL $1,610.00
MN $1,500.00
NY $1,310.00
PR $1,300.00
OK $1,280.00
WI $1,231.00
NM $1,200.00
CT $1,160.00
OR $1,080.00
NE $1,070.00
NC $1,050.00
NV $1,020.00
WA $1,020.00
TN $998.00
ND $975.00
ME $920.00
MD $900.00
ID $897.00
GA $888.00
AR $806.00
DA $800.00
LA $788.00
VA $755.00
SD $750.00
WV $712.00
SC $668.00
PA $623.00
MA $600.00
IN $468.00
KS $450.00
AZ $440.00
MS $406.00
FL $400.00
AL $316.00
MO $300.00
IA $268.00


Length
100 ft Tape
{19 points tested}
$1,000
$900
$800
$700
$600
$500
$400
$300
$200
$100
$0
$261.23
TX $950.00
OR $600.00
MN $470.00
VA $415.00
ID $400.00
MD $285.00
PA $285.00
PR $275.00
CO $250.00
NC $230.00
MI $217.00
ME $200.00
CA $150.00
CT $150.00
SC $148.00
NY $145.00
AR $133.00
OK $133.00
GA $105.00
FL $100.00
IN $76.00
NJ $30.00

5 Gallon Test Measure – Volume Transfer for 2006

Description

The top graph represents the fees charged for calibrating a 5 gallon test measure using volume-transfer procedures.

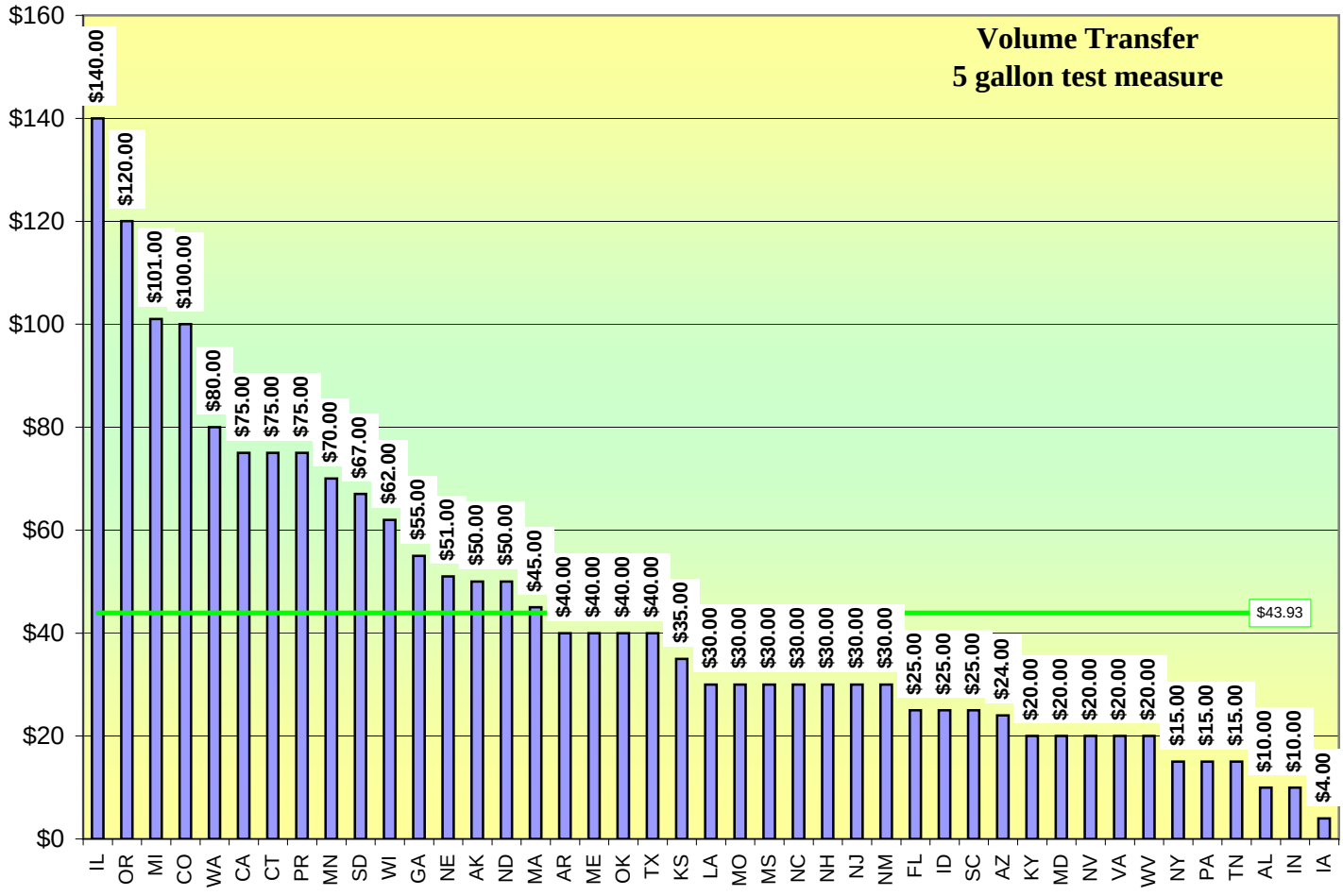
Comparison of previous surveys

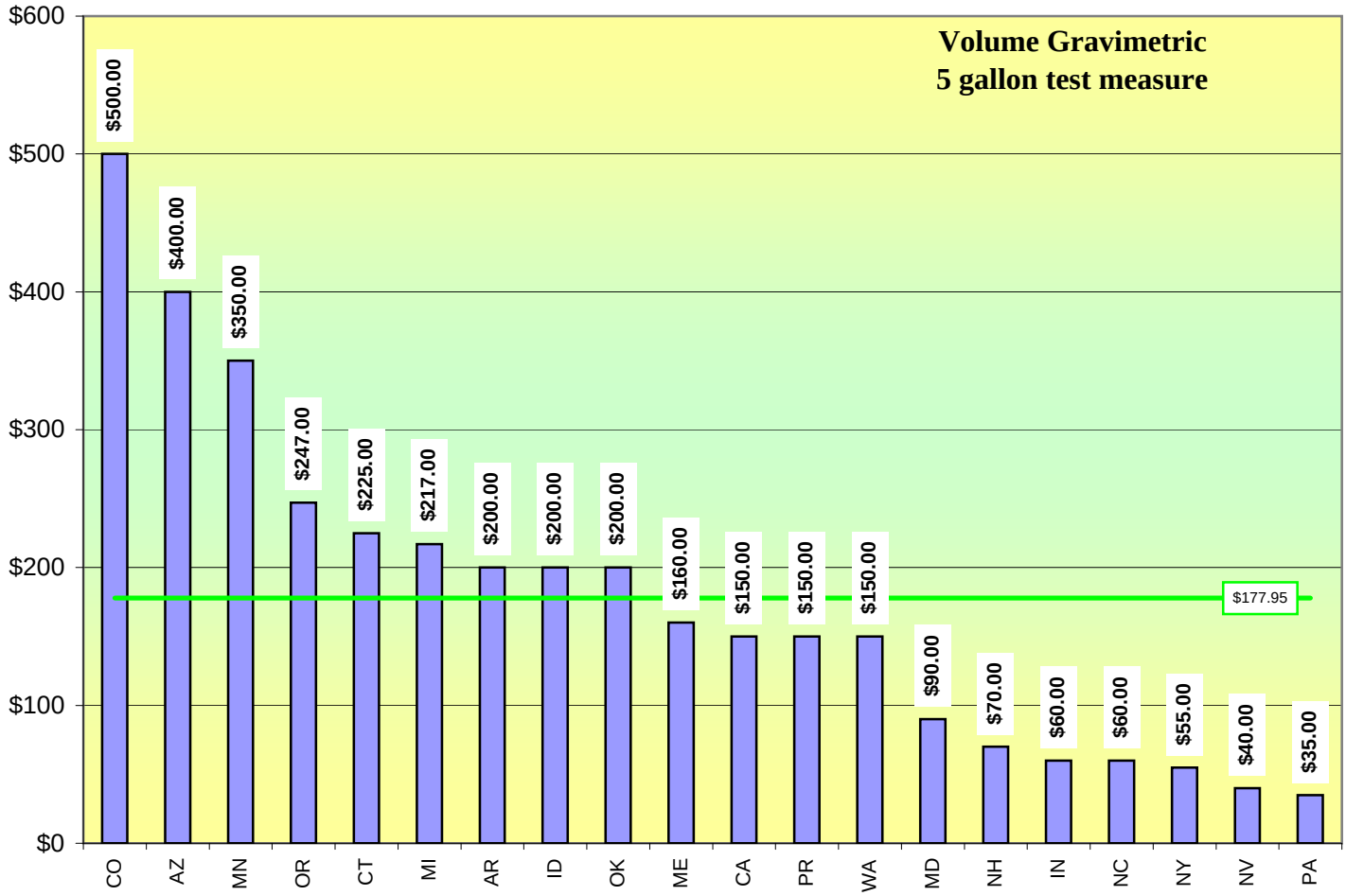
	# of Labs	Average Fee	% Change
2000	35	$35.00	--
2002	41	$41.46	+ 18 %
2004	39	$42.06	+ 1 %
2006	43	$43.93	+ 4 %

5 Gallon Test Measure – Volume Gravimetric for 2006

Description

The bottom graph represents the fees charged for calibrating a 5 gallon test measure using volume-gravimetric procedures. There were 20 laboratories that quoted fees and the average fee charged was $177.95. These fees cannot be compared to previous survey results.


Volume Transfer
5 gallon test measure
$160
$140
$120
$100
$80
$60
$40
$20
$0
$140.00
$120.00
$101.00
$100.00
$80.00
$75.00
$75.00
$75.00
$70.00
$67.00
$62.00
$55.00
$51.00
$50.00
$50.00
$45.00
$40.00
$40.00
$40.00
$40.00
$35.00
$30.00
$30.00
$30.00
$30.00
$30.00
$30.00
$30.00
$25.00
$25.00
$25.00
$24.00
$20.00
$20.00
$20.00
$20.00
$20.00
$15.00
$15.00
$15.00
$10.00
$10.00
$4.00
$43.93
IL
OR
MI
CO
WA
CA
CT
PR
MN
SD
WI
GA
NE
AK
ND
MA
AR
ME
OK
TX
KS
LA
MO
MS
NC
NH
NJ
NM
FL
ID
SC
AZ
KY
MD
NV
VA
WV
NY
PA
TN
AL
IN
IA


Volume Gravimetric
5 gallon test measure
$600
$500
$400
$300
$200
$100
$0
$500.00
$400.00
$350.00
$247.00
$225.00
$217.00
$200.00
$200.00
$200.00
$160.00
$150.00
$150.00
$150.00
$90.00
$70.00
$60.00
$60.00
$55.00
$40.00
$35.00
$177.95
CO
AZ
MN
OR
CT
MI
AR
ID
OK
ME
CA
PR
WA
MD
NH
IN
NC
NY
NV
PA

20 Gallon SVP – Volume Transfer for 2006

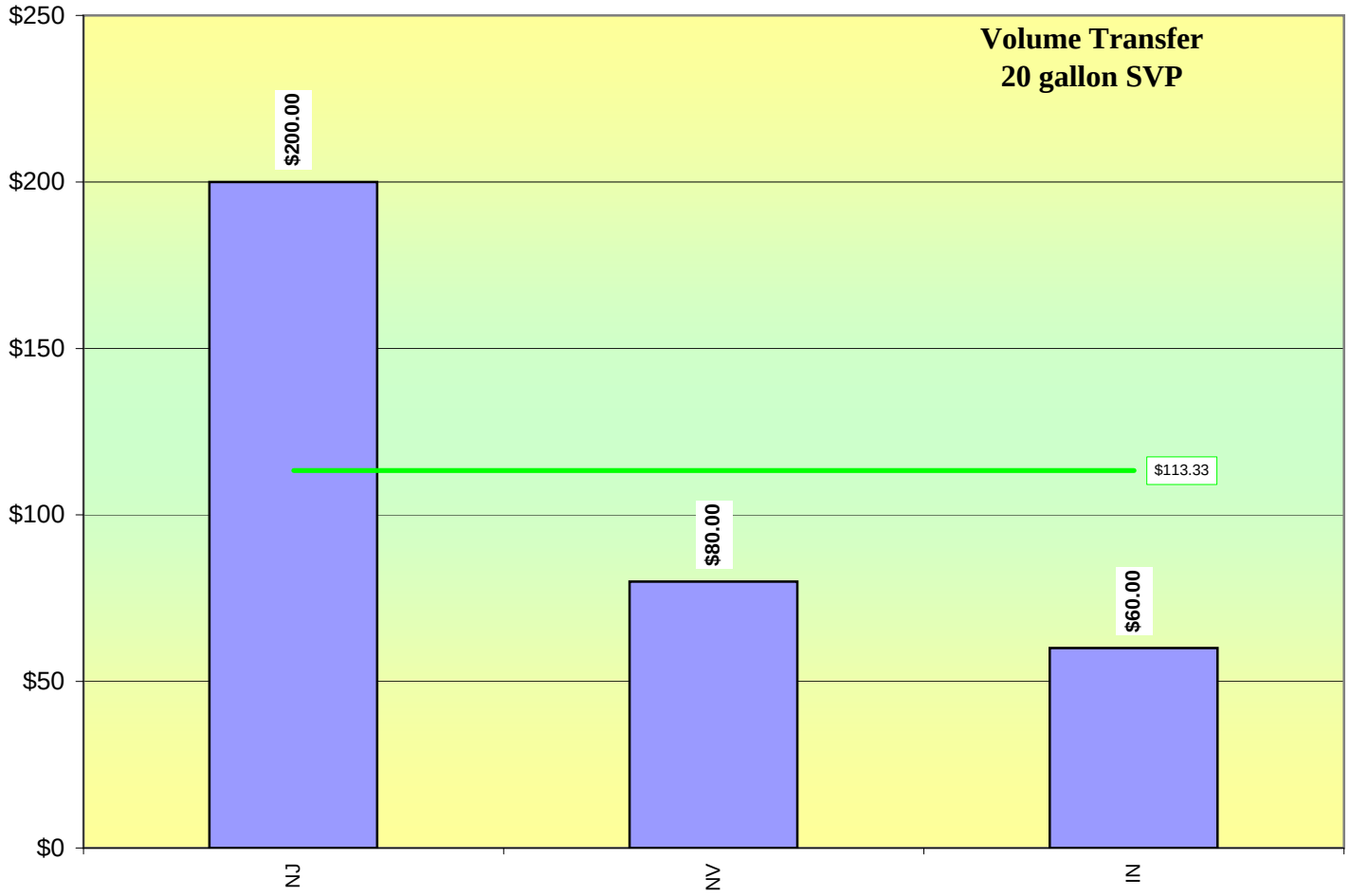
Description

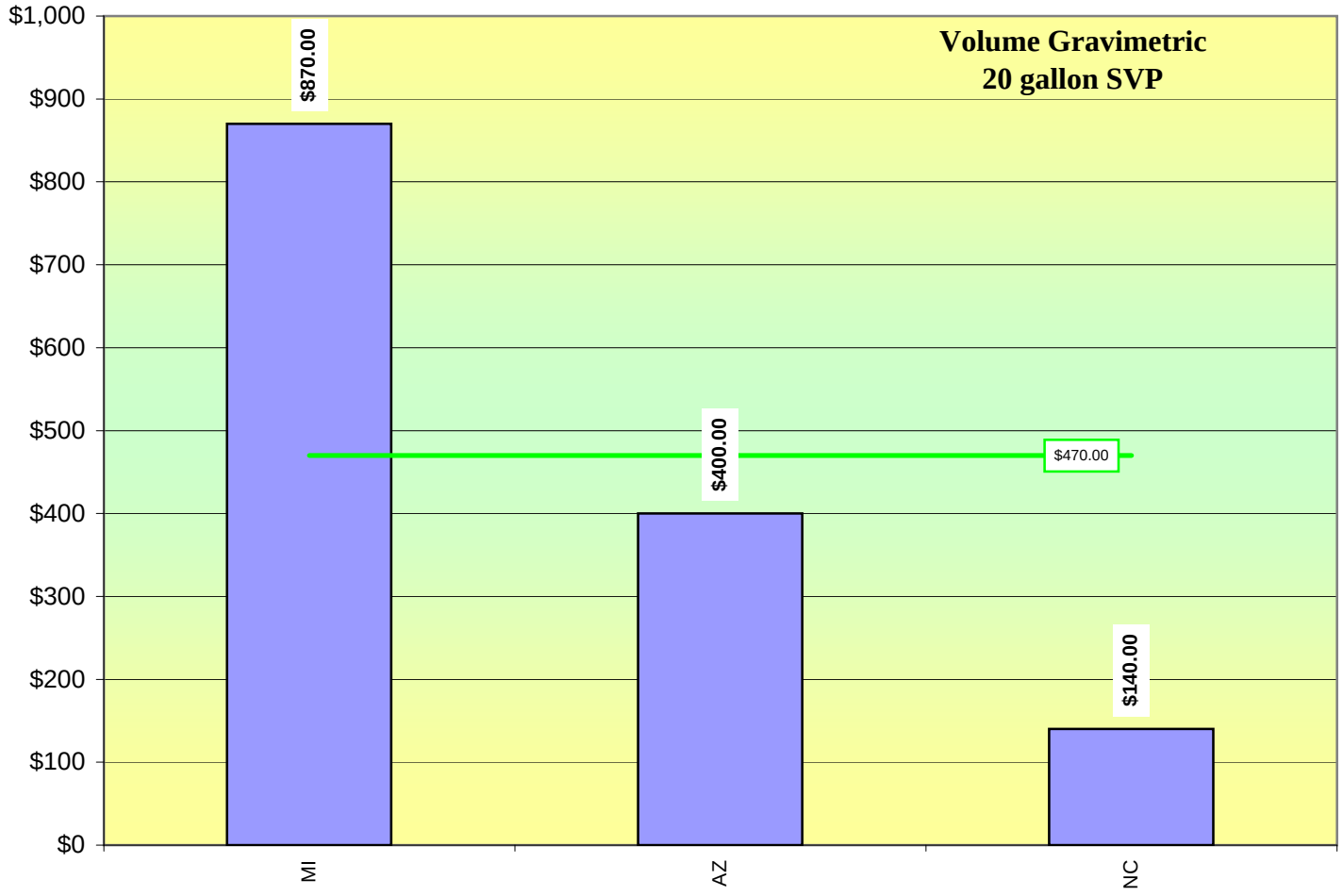
The top graph represents the fees charged for calibrating a 20 gallon SVP using volume-transfer calibration procedures. There were 3 laboratories that quoted fees and the average fee charged was $113.33. These fees cannot be compared to previous survey results.

20 Gallon SVP – Volume Gravimetric for 2006

Description

The bottom graph represents the fees charged for calibrating a 20 gallon SVP using volume-gravimetric calibration procedures. There were 3 laboratories that quoted fees and the average fee charged was $470.00. These fees cannot be compared to previous survey results.


Volume Transfer
20 gallon SVP
$250
$200
$150
$100
$50
$0
$200.00
$80.00
$60.00
$113.33
NJ
NV
IN


Volume Gravimetric
20 gallon SVP
$1,000
$900
$800
$700
$600
$500
$400
$300
$200
$100
$0
$870.00
$400.00
$140.00
$470.00
MI
AZ
NC

100 Gallon Prover – Volume Transfer for 2006

Description

The top graph represents the fees charged for calibrating a 100 gallon prover using volume-transfer calibration procedures.

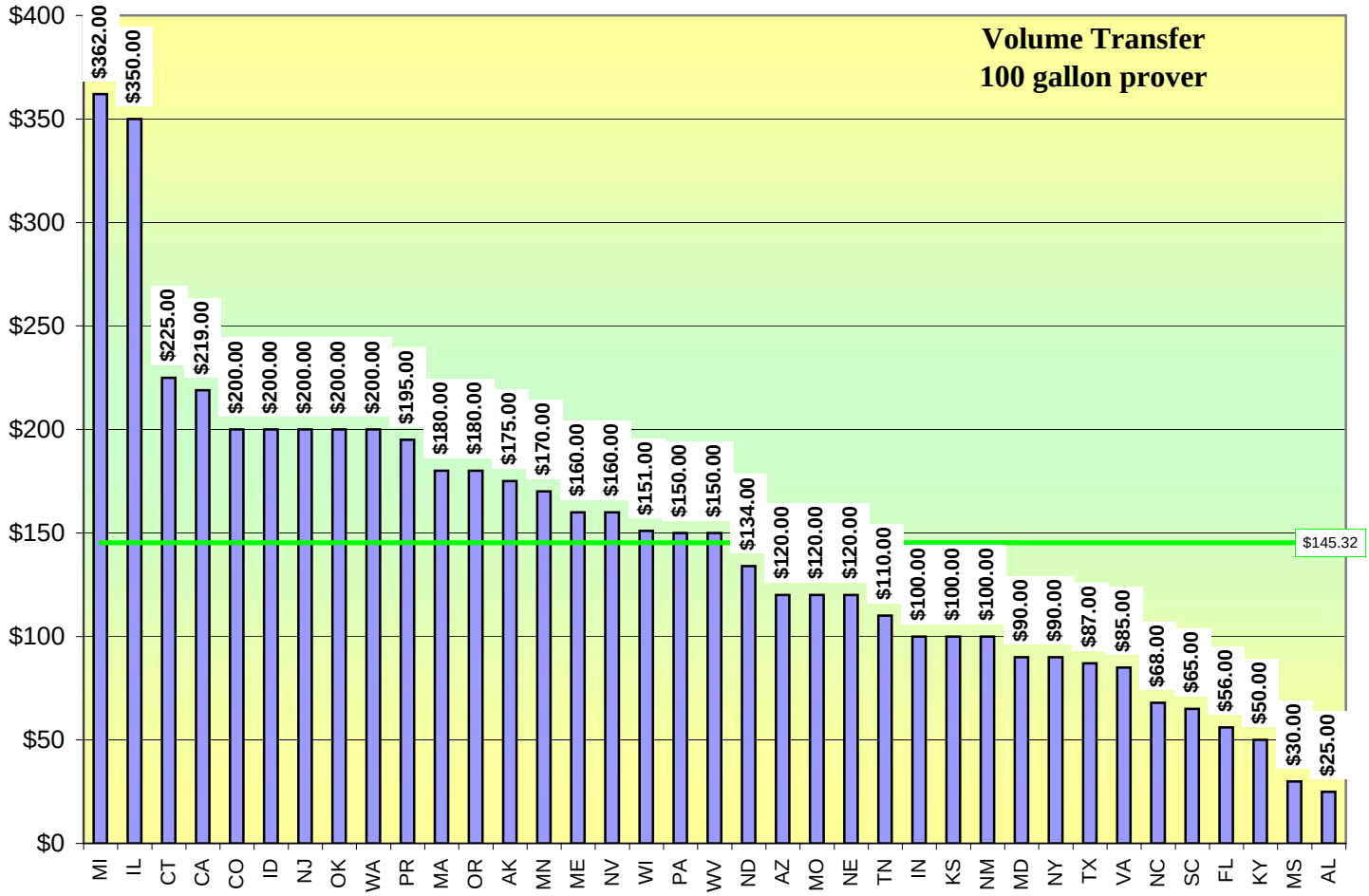
Comparison of previous surveys

	# of Labs	Average Fee	% Change
2000	35	$108.00	--
2002	40	$125.19	+ 16 %
2004	35	$138.73	+ 11 %
2006	37	$145.32	+ 5 %

100 Gallon Prover – Volume Gravimetric for 2006

Description

The bottom graph represents the fees charged for calibrating a 100 gallon prover using volume-gravimetric calibration procedures. There were 4 laboratories that quoted fees and the average fee charged was $265.00. These fees cannot be compared to previous survey results.


Volume Transfer
100 gallon prover
$400
$350
$300
$250
$200
$150
$100
$50
$0
$362.00
$350.00
$225.00
$219.00
$200.00
$200.00
$200.00
$200.00
$200.00
$195.00
$180.00
$180.00
$175.00
$170.00
$160.00
$160.00
$151.00
$150.00
$150.00
$134.00
$120.00
$120.00
$120.00
$110.00
$100.00
$100.00
$100.00
$90.00
$90.00
$87.00
$85.00
$68.00
$65.00
$56.00
$50.00
$30.00
$25.00
$145.32
MI
IL
CT
CA
CO
ID
NJ
OK
WA
PR
MA
OR
AK
MN
ME
NV
WI
PA
WV
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AZ
MO
NE
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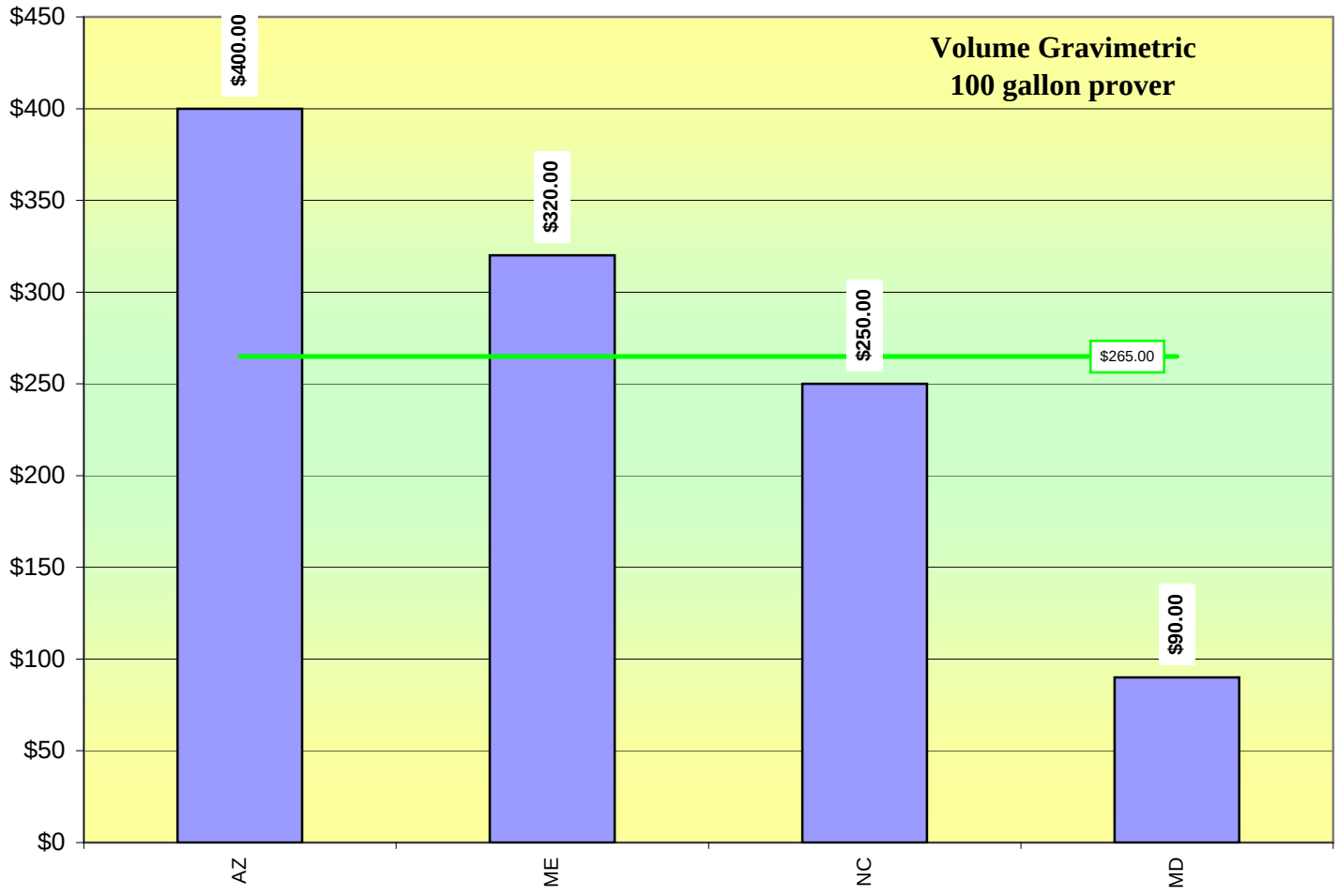
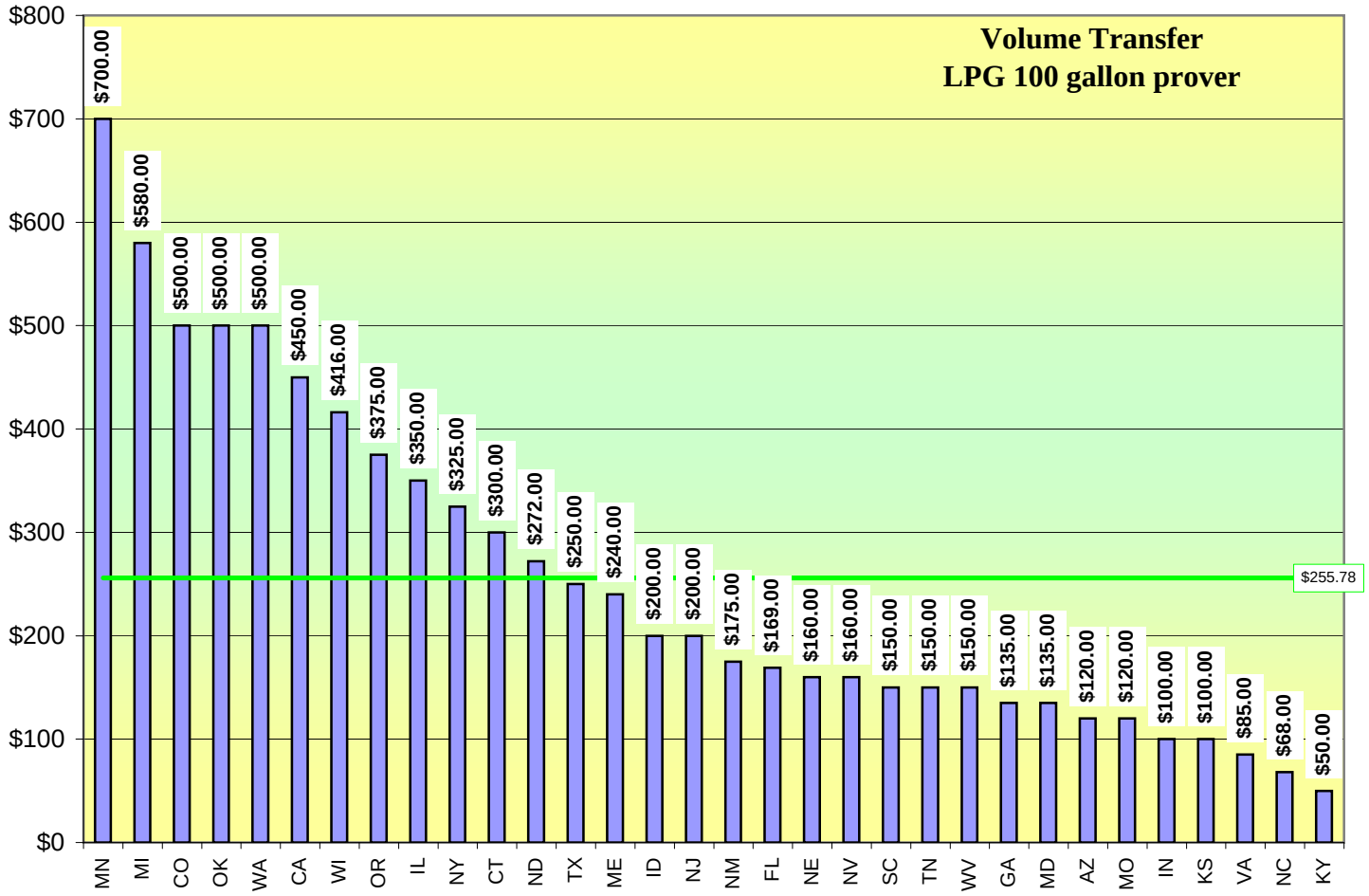
KS
NM
MD
NY
TX
VA
NC
SC
FL
KY
MS
AL


Volume Gravimetric
100 gallon prover
$450
$400
$350
$300
$250
$200
$150
$100
$50
$0
$400.00
$320.00
$250.00
$90.00
$265.00
AZ
ME
NC
MD

100 Gallon LPG Prover – Volume Transfer for 2006

Description

The graph represents the fees charged for calibrating a 100 gallon LPG prover using volume-transfer calibration procedures. There were 32 laboratories that quoted fees and the average fee charged was $255.78. These fees cannot be compared to previous survey results.


Volume Transfer
LPG 100 gallon prover
$800
$700
$600
$500
$400
$300
$200
$100
$0
$700.00
$580.00
$500.00
$500.00
$500.00
$450.00
$416.00
$375.00
$350.00
$325.00
$300.00
$272.00
$250.00
$240.00
$200.00
$200.00
$175.00
$169.00
$160.00
$160.00
$150.00
$150.00
$150.00
$135.00
$135.00
$120.00
$120.00
$100.00
$100.00
$85.00
$68.00
$50.00
$255.78
MN
MI
CO
OK
WA
CA
WI
OR
IL
NY
CT
ND
TX
ME
ID
NJ
NM
FL
NE
NV
SC
TN
WV
GA
MD
AZ
MO
IN
KS
VA
NC
KY

Laboratory Customers for 2006

Description

The graphs on the following page represent the total number of laboratory customers served by the 49 reporting laboratories. The map graph gives a geographical distribution of these customers. Darker shading indicates more customers. The bar graph at the bottom of the page shows the same breakdown along with the total number of customers served by each laboratory. There is also a smaller line graph indicating the totals from previous surveys.

Findings

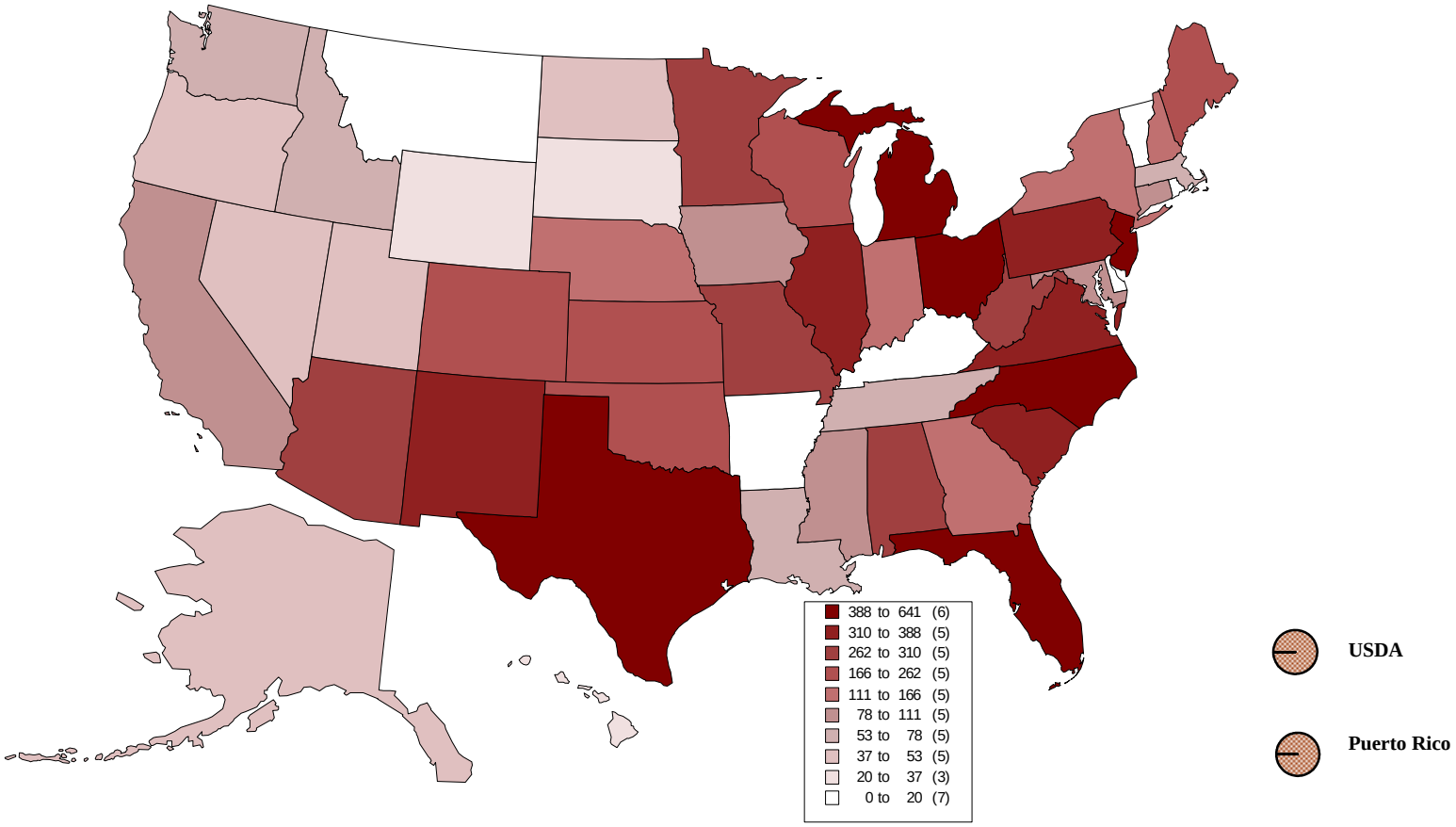
Of the 49 reporting laboratories, 46 labs served a total of 8,947 customers. The other three laboratories failed to respond to this question.

Note:

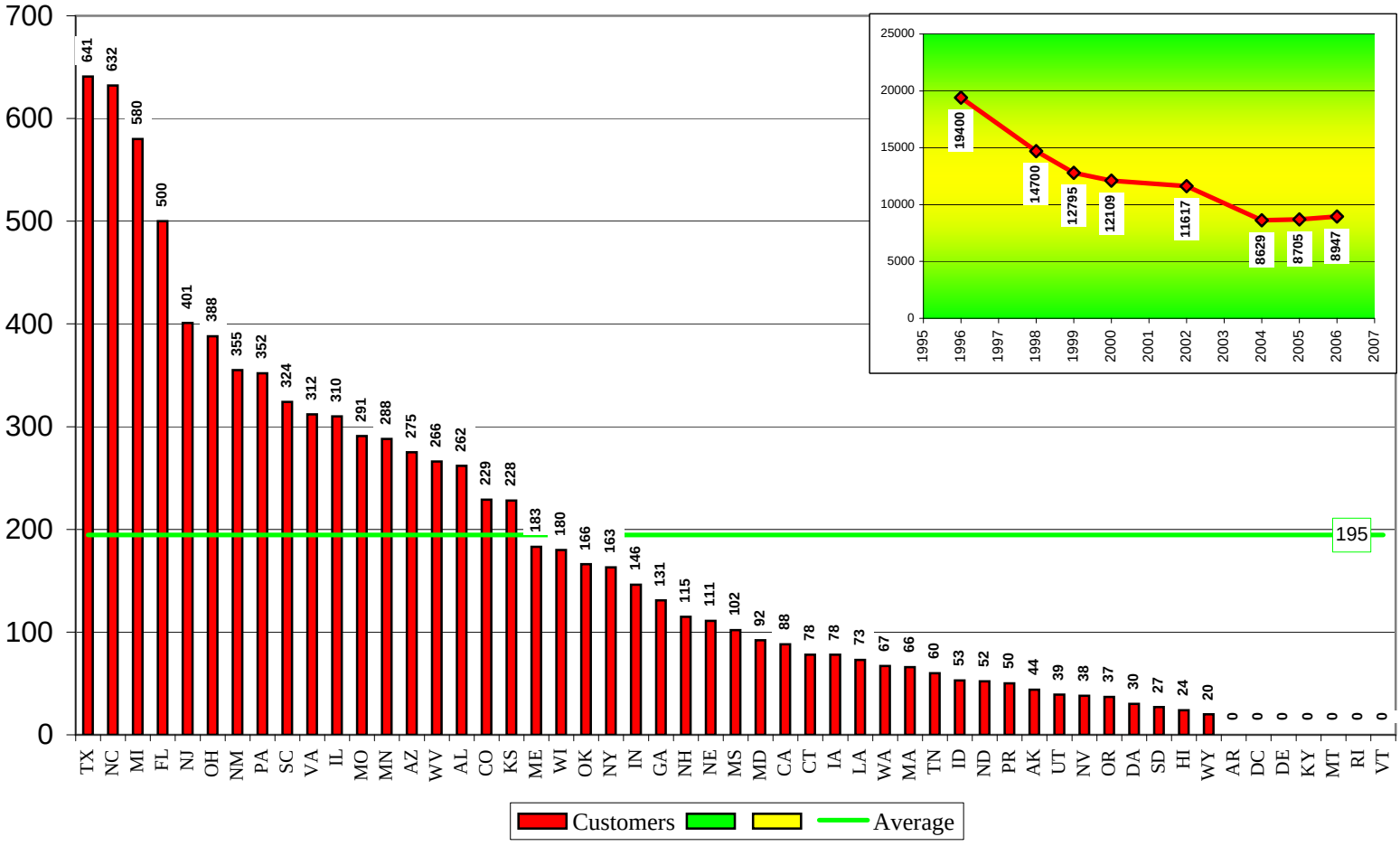
It may be that future surveys will request more information on the customer breakdown. At this time we are accounting for only the three customer types: Laboratory, Weights and Measures and External. However, the External customers also include registered service agencies that also perform a certain level of Weights and Measures type work, as well as a wide range of manufacturing organizations that cover the range from mining, automotive and steel to pharmaceutical and research organizations. There is value in having the additional breakdown of the customer base that is evident from prior requests for this information. The Survey Committee will examine the best way to request and present this information so that laboratories will be able to begin gathering the information before the beginning of the next survey data year.

Additionally, there is value in knowing what customer services are requested, but cannot currently be provided by a laboratory. This information will aid in future planning activities when developing laboratory improvement plans as required by ISO/IEC 17025 section 4.10.

Lab Customers (2006)



8947 Total Customers (2006)



Laboratory Facilities for 2006

Description

Size of Laboratory Facility:

The top graph on the next page represents the size of the laboratory facility in square feet as reported by each laboratory.

Age of Laboratory Facility:

The bottom graph on the next page represents the age of the laboratory facility as reported by each laboratory.

Notes and Comments

Size of Laboratory Facility:

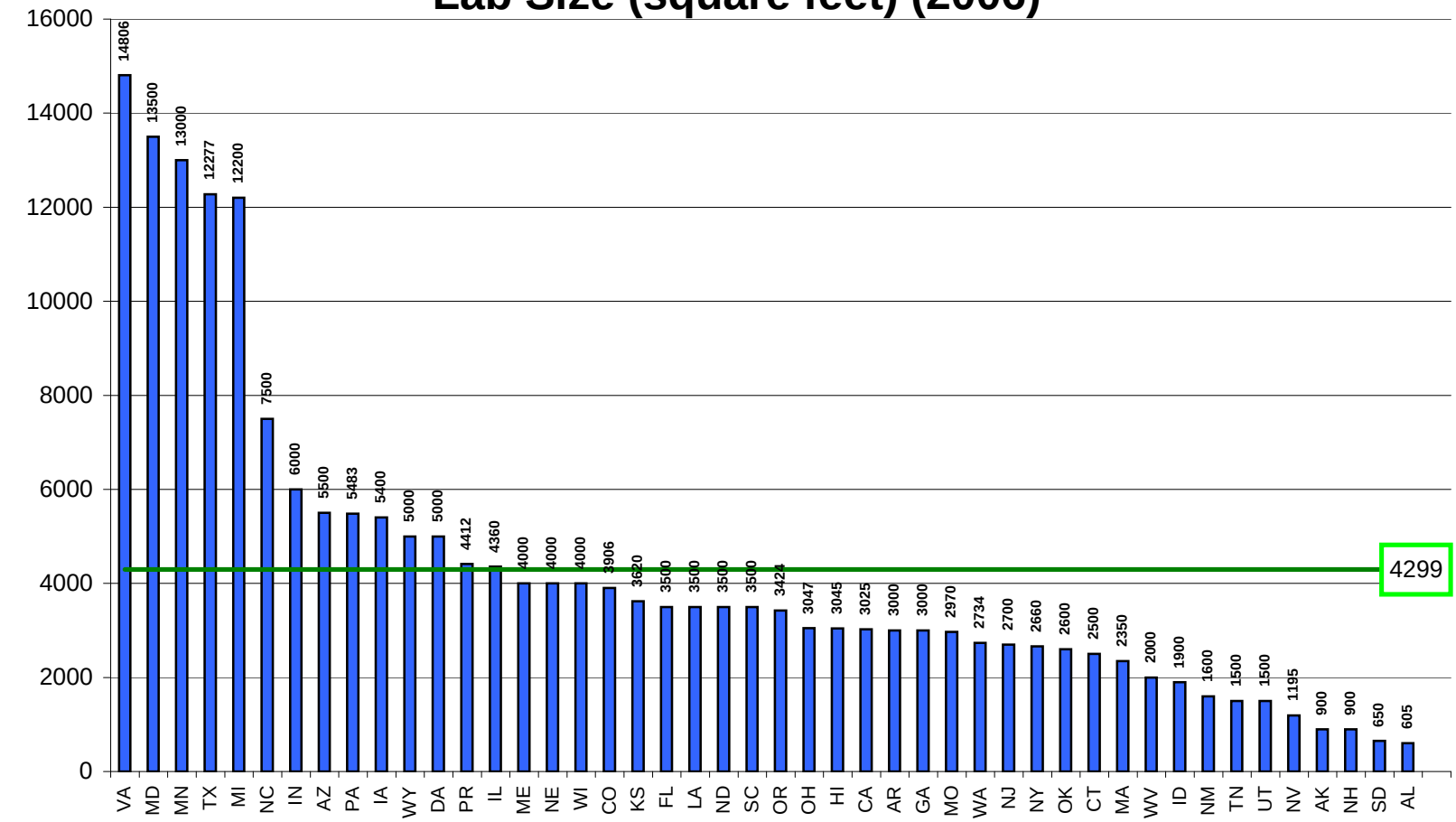
Average	4,299 sq ft
Maximum	14,806 sq ft
Minimum	605 sq ft

Age of Laboratory Facility:

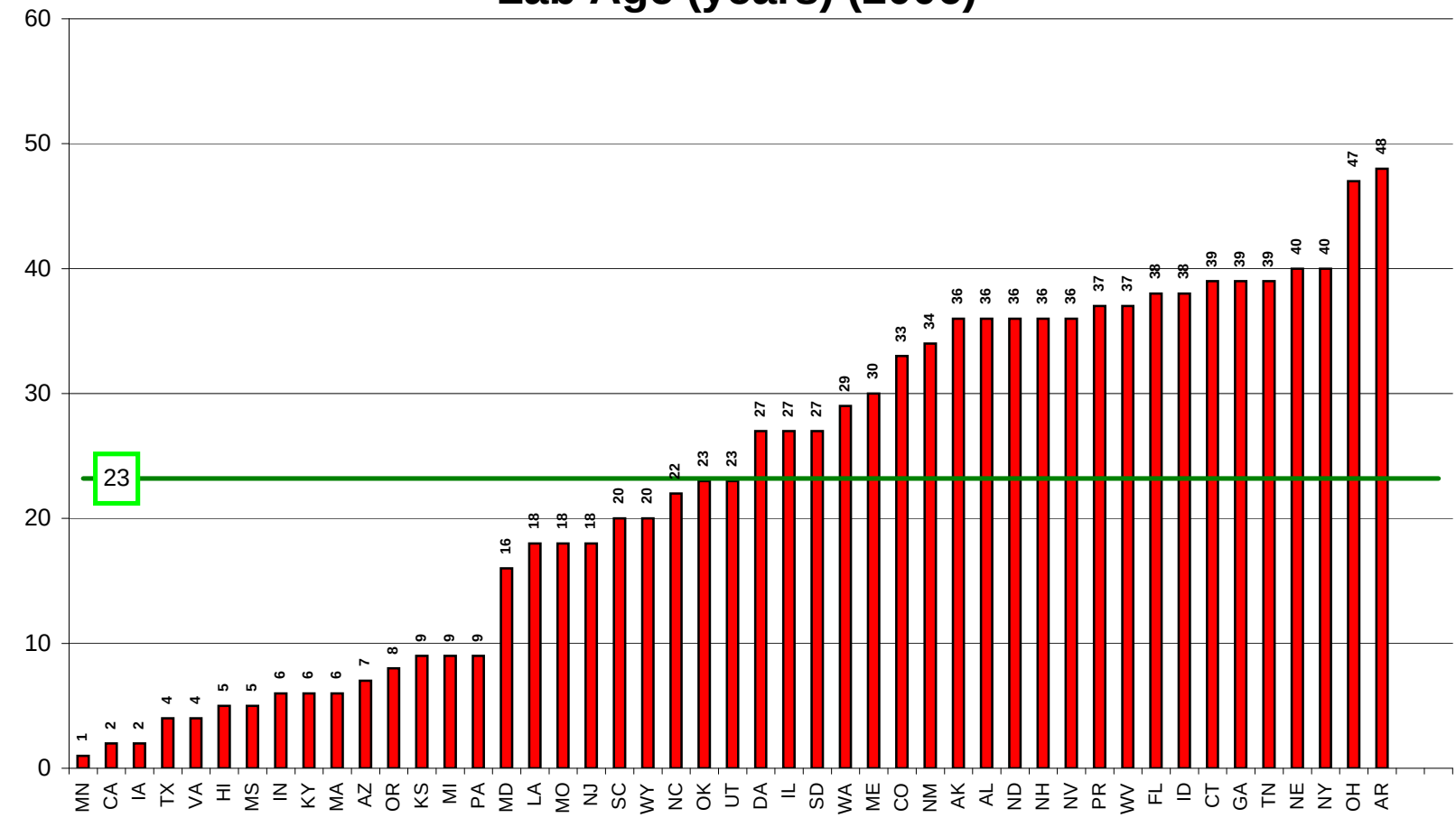
Average	23 years
Maximum	48 years
Minimum	1 year

NOTE: The age of laboratories that are noted here may be somewhat misleading due to the fact that a number of laboratories have had significant renovations to their facility. Many renovations included significant updates to environmental controls and improved security or limited access.

Lab Size (square feet) (2006)



Lab Age (years) (2006)



Metrology Experience for 2006
(By Individual)

Description

Total Metrology Experience:

The bar graph on the next page represents the total metrology experience by individual metrologist. The graph is a stacked bar, the blue portion represents "other metrology experience" and the red portion represents "state laboratory program experience".

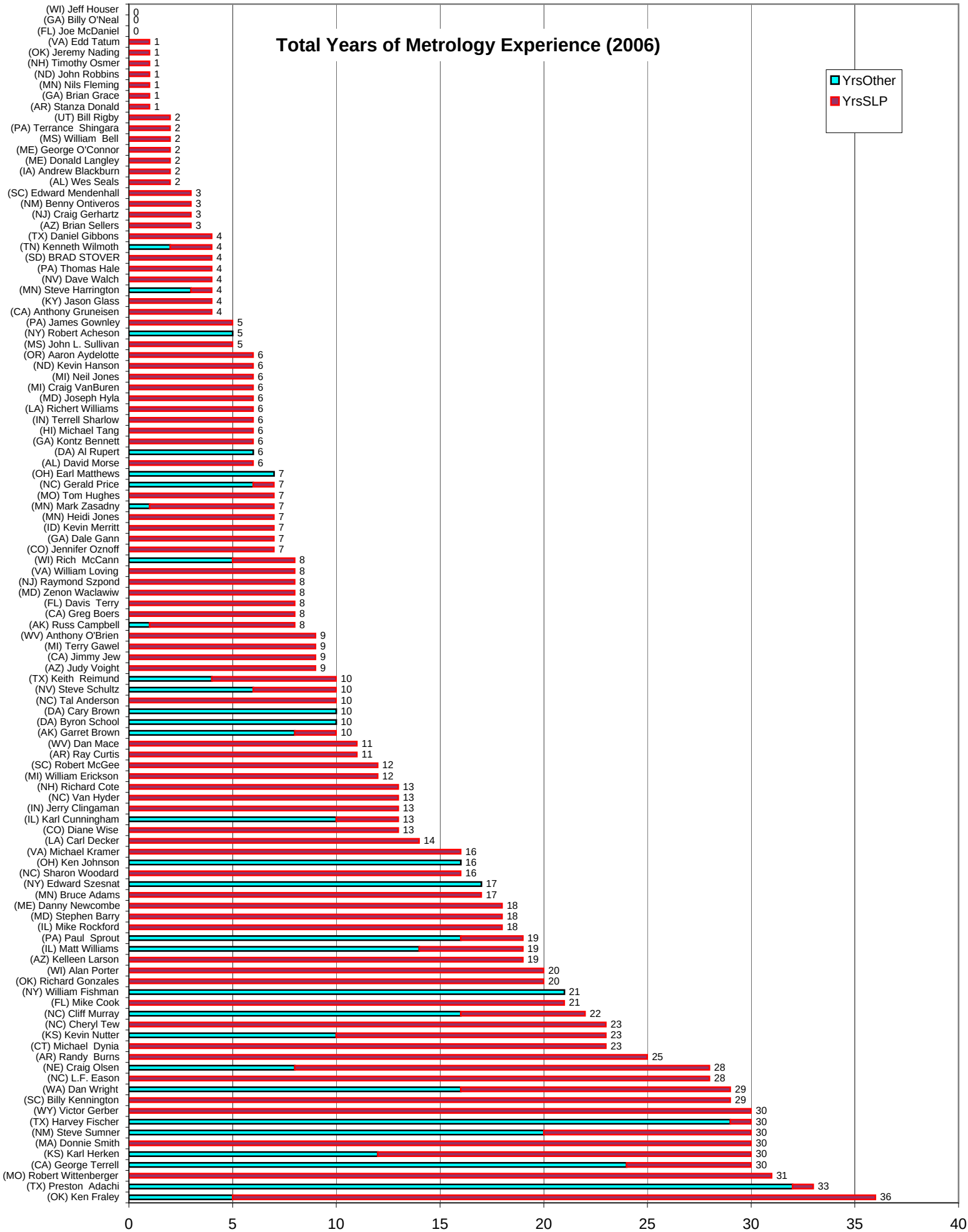
Comparison of previous surveys

	Number of Metrologists	Average SLP Experience	Average Other Experience	Average Total Experience
2000	111	8.7	2.4	11.0
2002	113	9.1	2.1	11.2
2004	111	8.1	2.6	10.8
2006	112	8.3	3.1	11.4

Comments:

Of the 49 responding laboratories:

112 individual metrologists
Overall Average SLP experience – 8.3 years
Overall Average Other experience – 3.1 years
30 metrologists that have Other experience average - 11.3 years
Overall Average Total experience – 11.4 years


Total Years of Metrology Experience (2006)
YrsOther
YrsSLP
(WI) Jeff Houser 0
(GA) Billy O'Neal 0
(FL) Joe McDaniel 0
(VA) Edd Tatum 1
(OK) Jeremy Nading 1
(NH) Timothy Osmer 1
(ND) John Robbins 1
(MN) Nils Fleming 1
(GA) Brian Grace 1
(AR) Stanza Donald 1
(UT) Bill Rigby 2
(PA) Terrance Shingara 2
(MS) William Bell 2
(ME) George O'Connor 2
(ME) Donald Langley 2
(IA) Andrew Blackburn 2
(AL) Wes Seals 2
(SC) Edward Mendenhall 3
(NM) Benny Ontiveros 3
(NJ) Craig Gerhartz 3
(AZ) Brian Sellers 3
(TX) Daniel Gibbons 4
(TN) Kenneth Wilmoth 4
(SD) BRAD STOVER 4
(PA) Thomas Hale 4
(NV) Dave Walch 4
(MN) Steve Harrington 4
(KY) Jason Glass 4
(CA) Anthony Gruneisen 4
(PA) James Gownley 5
(NY) Robert Acheson 5
(MS) John L. Sullivan 5
(OR) Aaron Aydelotte 6
(ND) Kevin Hanson 6
(MI) Neil Jones 6
(MI) Craig VanBuren 6
(MD) Joseph Hyla 6
(LA) Richert Williams 6
(IN) Terrell Sharlow 6
(HI) Michael Tang 6
(GA) Kontz Bennett 6
(DA) Al Rupert 6
(AL) David Morse 6
(OH) Earl Matthews 7
(NC) Gerald Price 7
(MO) Tom Hughes 7
(MN) Mark Zasadny 7
(MN) Heidi Jones 7
(ID) Kevin Merritt 7
(GA) Dale Gann 7
(CO) Jennifer Oznoff 7
(WI) Rich McCann 8
(VA) William Loving 8
(NJ) Raymond Szpond 8
(MD) Zenon Waclawiw 8
(FL) Davis Terry 8
(CA) Greg Boers 8
(AK) Russ Campbell 8
(WV) Anthony O'Brien 9
(MI) Terry Gawel 9
(CA) Jimmy Jew 9
(AZ) Judy Voight 9
(TX) Keith Reimund 10
(NV) Steve Schultz 10
(NC) Tal Anderson 10
(DA) Cary Brown 10
(DA) Byron School 10
(AK) Garret Brown 10
(WV) Dan Mace 11
(AR) Ray Curtis 11
(SC) Robert McGee 12
(MI) William Erickson 12
(NH) Richard Cote 13
(NC) Van Hyder 13
(IN) Jerry Clingaman 13
(IL) Karl Cunningham 13
(CO) Diane Wise 13
(LA) Carl Decker 14
(VA) Michael Kramer 16
(OH) Ken Johnson 16
(NC) Sharon Woodard 16
(NY) Edward Szesnat 17
(MN) Bruce Adams 17
(ME) Danny Newcombe 18
(MD) Stephen Barry 18
(IL) Mike Rockford 18
(PA) Paul Sprout 19
(IL) Matt Williams 19
(AZ) Kelleen Larson 19
(WI) Alan Porter 20
(OK) Richard Gonzales 20
(NY) William Fishman 21
(FL) Mike Cook 21
(NC) Cliff Murray 22
(NC) Cheryl Tew 23
(KS) Kevin Nutter 23
(CT) Michael Dynia 23
(AR) Randy Burns 25
(NE) Craig Olsen 28
(NC) L.F. Eason 28
(WA) Dan Wright 29
(SC) Billy Kennington 29
(WY) Victor Gerber 30
(TX) Harvey Fischer 30
(NM) Steve Sumner 30
(MA) Donnie Smith 30
(KS) Karl Herken 30
(CA) George Terrell 30
(MO) Robert Wittenberger 31
(TX) Preston Adachi 33
(OK) Ken Fraley 36
0
5
10
15
20
25
30
35
40

Metrology Positions – Monthly Salary Ranges for 2006

Description
Listed in the table below are the position title for each position that performs metrology functions.

Lab ID	Position Title	Minimum	Maximum	Mid-Point
AK	State Metrologist II	$ 3,940.00	$ 5,611.00	$ 4,775.50
AK	State Metrologist I	$ 3,421.00	$ 4,909.00	$ 4,165.00
AL	Graduate Engineer	$ 3,209.00	$ 5,654.00	$ 4,431.50
AL	W & M Protection Specialist - Lab	$ 2,218.00	$ 3,715.00	$ 2,966.50
AL	Laborer	$ 1,493.00	$ 2,058.00	$ 1,775.50
AR	Metrologist III	$ 2,600.00	$ 2,800.00	$ 2,700.00
AR	Laboratory Supervisor	$ 2,400.00	$ 2,800.00	$ 2,600.00
AR	Metrologist II	$ 2,400.00	$ 2,600.00	$ 2,500.00
AR	Metrologist I	$ 2,030.00	$ 2,200.00	$ 2,115.00
AZ	Admin Services Officer II	$ 3,882.00	$ 6,618.00	$ 5,250.00
AZ	Metrology Tech	$ 3,246.00	$ 5,530.00	$ 4,388.00
CA	Principal State Metrologist	$ 6,105.00	$ 6,732.00	$ 6,418.50
CA	Measurement Standards Specialist III	$ 3,971.00	$ 4,826.00	$ 4,398.50
CA	Measurement Standards Specialist II	$ 3,304.00	$ 3,968.00	$ 3,636.00
CA	Measurement Standards Specialist I	$ 2,888.00	$ 3,458.00	$ 3,173.00
CO	Metrologist III	$ 3,912.00	$ 5,616.00	$ 4,764.00
CO	Metrologist II	$ 3,550.00	$ 5,094.00	$ 4,322.00
CO	Metrologist I	$ 3,307.00	$ 4,748.00	$ 4,027.50
CT	Dept. of Consumer Protection Metrologist	$ 3,803.00	$ 5,393.00	$ 4,598.00
DA	Industrial Specialist	$ 6,500.00	$ 8,300.00	$ 7,400.00
DA	Industrial Specialist	$ 5,400.00	$ 7,000.00	$ 6,200.00
FL	Senior Metrologist	$ 2,763.00	$ 4,617.00	$ 3,690.00
FL	Metrologist	$ 2,350.00	$ 3,717.00	$ 3,033.50
GA	State Metrologist	$ 2,875.00	$ 5,107.00	$ 3,991.00
GA	Assistant State Metrologist	$ 2,622.00	$ 4,589.00	$ 3,605.50
GA	Metrologist II	$ 1,967.00	$ 3,450.00	$ 2,708.50
GA	Metrologist I	$ 1,786.00	$ 3,128.00	$ 2,457.00
HI	Metrologist 5	$ 4,131.00	$ 5,880.00	$ 5,005.50
HI	Metrologist 4	$ 3,820.00	$ 5,438.00	$ 4,629.00
HI	Metrologist 3	$ 3,393.00	$ 4,833.00	$ 4,113.00
HI	Metrologist 2	$ 3,136.00	$ 4,469.00	$ 3,802.50
HI	Metrologist 1	$ 2,902.00	$ 4,131.00	$ 3,516.50
IA	State Metrologist	$ 3,418.00	$ 5,071.00	$ 4,244.50
ID	Program Manager/Metrologist	$ 3,494.00	$ 5,824.00	$ 4,659.00
IL	State Metrologist / Public Service Administrator	$ 3,116.00	$ 7,979.00	$ 5,547.50
IL	Metrologist Associate	$ 3,245.00	$ 4,322.00	$ 3,783.50
IL	Product & Standards Inspector	$ 3,240.00	$ 4,204.00	$ 3,722.00

Lab ID	Position Title	Minimum	Maximum	Mid-Point
IN	Weight and Measures Inspector I	$ 2,021.00	$ 3,230.00	$ 2,625.50
IN	Metrologist V	$ 1,950.00	$ 3,254.00	$ 2,602.00
KS	Public Service Administrator II	$ 3,336.00	$ 4,472.00	$ 3,904.00
KY	Agriculture Program Coordinator	$ 2,349.00	$ 3,875.00	$ 3,112.00
KY	Agricultural Inspector III	$ 2,135.00	$ 3,522.00	$ 2,828.50
KY	Agricultural Inspector II	$ 1,941.00	$ 3,202.00	$ 2,571.50
KY	Agricultural Inspector I	$ 1,765.00	$ 2,911.00	$ 2,338.00
LA	Assistant Division Director	$ 4,277.00	$ 8,285.00	$ 6,281.00
LA	Laboratory Metrologist	$ 2,851.00	$ 5,520.00	$ 4,185.50
MA	Compliance Officer II	$ 2,739.00	$ 4,157.00	$ 3,448.00
MD	Laboratory Program Manager	$ 2,905.00	$ 4,610.00	$ 3,757.50
MD	Metrologist II	$ 2,732.00	$ 4,320.00	$ 3,526.00
MD	Metrologist I	$ 2,570.00	$ 4,049.00	$ 3,309.50
MD	Metrologist Trainee	$ 2,145.00	$ 3,349.00	$ 2,747.00
ME	Metrologist	$ 3,290.00	$ 4,514.00	$ 3,902.00
ME	Food Inspection Supervisor	$ 2,920.00	$ 4,040.00	$ 3,480.00
ME	Metrologist Assistant	$ 2,451.00	$ 3,314.00	$ 2,882.50
MI	Metrologist Manager 15	$ 4,195.00	$ 6,325.00	$ 5,260.00
MI	Metrology Specialist 14	$ 3,891.00	$ 5,726.00	$ 4,808.50
MI	Metrologist Manager 14	$ 3,886.00	$ 5,720.00	$ 4,803.00
MI	Metrology Specialist 13	$ 3,611.00	$ 5,299.00	$ 4,455.00
MI	Metrologist 12	$ 3,325.00	$ 4,846.00	$ 4,085.50
MI	Metrologist P11	$ 3,168.00	$ 4,459.00	$ 3,813.50
MN	Weights and Measures Assistant Director	$ 4,562.00	$ 6,600.00	$ 5,581.00
MN	State Program Adm. Principal	$ 3,619.00	$ 5,335.00	$ 4,477.00
MN	Weights and Measures Investigator II	$ 3,120.00	$ 4,488.00	$ 3,804.00
MN	State Program Adm. Tech	$ 2,640.00	$ 3,715.00	$ 3,177.50
MO	Laboratory Manager - Metrologist	$ 3,040.00	$ 4,945.00	$ 3,992.50
MO	Metrology Specialist	$ 2,625.00	$ 3,706.00	$ 3,165.50
MS	State Metrologist	$ 2,472.00	$ 4,325.00	$ 3,398.50
MS	Assistant State Metrologist	$ 2,229.00	$ 3,901.00	$ 3,065.00
NC	Standards Laboratory Manager	$ 3,524.00	$ 5,800.00	$ 4,662.00
NC	Metrologist II (Quality Assurance Manager)	$ 2,894.00	$ 4,634.00	$ 3,764.00
NC	Grain Moisture Program Supervisor	$ 2,894.00	$ 4,634.00	$ 3,764.00
NC	Metrologist I (Metrologist)	$ 2,679.00	$ 4,232.00	$ 3,455.50
ND	State Metrologist	$ 3,000.00	$ 3,400.00	$ 3,200.00
ND	Assistant Metrologist	$ 2,700.00	$ 3,000.00	$ 2,850.00
NE	Metrologist	$ 2,962.00	$ 4,289.00	$ 3,625.50
NH	Director	$ 3,331.00	$ 4,539.00	$ 3,935.00
NH	Metrologist	$ 2,477.00	$ 3,317.00	$ 2,897.00
NJ	Supervisor of Metrology	$ 5,660.00	$ 8,209.00	$ 6,934.50
NJ	Inspector 1	$ 4,890.00	$ 7,092.00	$ 5,991.00

Lab ID	Position Title	Minimum	Maximum	Mid-Point
NJ	Inspector 2	$ 4,435.00	$ 6,433.00	$ 5,434.00
NJ	Inspector 3	$ 3,831.00	$ 5,557.00	$ 4,694.00
NM	Specialist III	$ 2,719.00	$ 4,079.00	$ 3,399.00
NM	Specialist I	$ 2,291.00	$ 3,437.00	$ 2,864.00
NV	W&M Inspector IV / Metrologist	$ 3,403.00	$ 5,562.00	$ 4,482.50
NY	Metrologist	$ 3,693.00	$ 4,596.00	$ 4,144.50
NY	Specialist II	$ 3,302.00	$ 4,182.00	$ 3,742.00
NY	Specialist I	$ 2,788.00	$ 3,554.00	$ 3,171.00
OH	Weights & Measures Technologist	$ 2,743.00	$ 3,565.00	$ 3,154.00
OK	Agricultural Services Administrator I	$ 3,229.00	$ 5,381.00	$ 4,305.00
OK	Metrologist III	$ 2,908.00	$ 4,848.00	$ 3,878.00
OK	Metrologist II	$ 2,832.00	$ 3,970.00	$ 3,401.00
OK	Metrologist I	$ 1,982.00	$ 3,304.00	$ 2,643.00
OR	Metrologist	$ 3,183.00	$ 4,657.00	$ 3,920.00
PA	Procurement Quality Supervisor	$ 3,786.00	$ 5,752.00	$ 4,769.00
PA	Metrologist with NIST Intermediate Training	$ 3,869.00	$ 5,043.00	$ 4,456.00
PA	Metrologist with NIST Basic Training	$ 3,706.00	$ 5,043.00	$ 4,374.50
PA	Metrologist	$ 3,543.00	$ 5,043.00	$ 4,293.00
SC	Program Coordinator I	$ 2,425.00	$ 4,820.00	$ 3,622.50
SC	Lab Technician II	$ 2,425.00	$ 4,820.00	$ 3,622.50
SD	STATE INSPECTOR	$ 2,281.00	$ 3,421.00	$ 2,851.00
TN	Metrologist	$ 2,742.00	$ 4,387.00	$ 3,564.50
TX	Coordinator for Metrology Labs	$ 3,600.00	$ 4,400.00	$ 4,000.00
TX	Metrologist II	$ 2,600.00	$ 3,400.00	$ 3,000.00
TX	Lead Metrologist	$ 2,600.00	$ 3,400.00	$ 3,000.00
TX	Metrologist I	$ 2,000.00	$ 2,600.00	$ 2,300.00
UT	State Metrologist	$ 3,359.00	$ 5,328.00	$ 4,343.50
VA	Lab and Research Manager (Metrology and Seed Labs)	$ 3,282.00	$ 6,735.00	$ 5,008.50
VA	Lab and Research Specialist	$ 2,512.00	$ 5,156.00	$ 3,834.00
VT	Metrologist	$ 3,051.00	$ 4,869.00	$ 3,960.00
WA	State Metrologist	$ 2,844.00	$ 3,628.00	$ 3,236.00
WI	Metrologist	$ 3,650.00	$ 7,675.00	$ 5,662.50
WV	Metrologist	$ 2,020.00	$ 3,475.00	$ 2,747.50
WV	Labor Inspector / Asst. to laboratory	$ 1,539.00	$ 2,695.00	$ 2,117.00
WY	Tech Services Inspector II	$ 3,094.00	$ 4,213.00	$ 3,653.50

National Institute of Standards and Technology
Weights & Measures Division
(Information provided by NIST/WMD)

NIST Weights and Measures Division has a strategic plan as a part of its effort to comply with the Baldrige quality framework. Objective 5 of the plan focuses on the State Weights and Measures Laboratories. The laboratory program has the most mature set of measures in the division, and will continue to develop better measures through a defined laboratory score and rating system to evaluate the level of competence of each laboratory.

The following information is an excerpt from the WMD strategic plan.

Objective 5: Ensuring Nationally Consistent Measurement Results and the Acceptance of State Lab Measurements

One of NIST's primary responsibilities is to ensure that uniform standards are available to support the nation's measurement infrastructure. State laboratories provide the foundation for over 350,000 calibrations as a critical part of the U.S. measurement infrastructure. Approximately half of these calibrations support commercial weights and measures with the remaining supporting measurements needed by industry and other government agencies. NIST will be successful if measurement results from State laboratories are accurate, traceable, defensible in support of enforcement actions, and widely accepted (both nationally and internationally.)

Objective Measures:

1. Number of W&M labs accredited by NVLAP (third-party independent assessment of compliance to ISO/IEC 17025 criteria).
2. Good proficiency test results and demonstrated corrective action (evidence that training and procedures are effectively implemented in the laboratories).

Strategy: To operate a comprehensive system of lab program assessment, metrology training, proficiency testing, and technical development to increase and measure the knowledge, performance, and services of state metrology laboratories and demonstrate their impact.

Strategy/Outcome Measures:

1. Number of laboratories where measurement results are accepted.
2. Number of active labs considered to have acceptable or above operations (knowledgeable metrologists, adequate quality systems, and submit required data annually) (or the converse: The number of active lab operations evaluated as being below average or less than desirable.)
3. Number of laboratories with acceptable facilities and/or upgrading efforts in progress.

Action Plan for 2007:

1. Update handbook 143 to ensure compliance with the latest version of ISO/IEC 17025:2005 to further acceptance of State laboratory calibration results.
2. Review annual submission data for all State's that submit materials and issue feedback letters and certificates; post laboratory status on the NIST website (used by A2LA and L-A-B to determine acceptance levels). Review Facility compliance status. Encourage laboratories to apply for NVLAP accreditation to enable greater acceptance of calibration results.
3. Conduct Basic, Intermediate, and Advanced Metrology Seminars according to posted/circulated schedule and institute new laboratory auditing program (LAP) problems for evaluating proficiency once training is completed.
4. Conduct proficiency tests and interlaboratory studies in mass, length, volume, temperature, magnetism, and environmental measuring equipment through national and regional comparisons as planned and scheduled in each group according to NIST PT Quality System and ensure laboratory corrective actions are properly identified and completed.

Action Plan Measures:

These measures were updated in 2007 to include the following:

Process measures:

1. Number of metrologists trained by NIST/WMD.
2. Average laboratory score defined.

Impact measures:

1. Increase in number of active W&M labs recognized as satisfying WMD criteria.
2. Increase in number of active W&M labs accredited by NVLAP.
3. Decrease in number of measurement problems revealed by LAP problems and proficiency test results.
4. Increase in number of measurement problems corrected as revealed by LAP problems and proficiency test results.

Based on the WMD efforts and measures, and to promote more effective synergy and awareness of program objectives, additional information is included in this SLP Workload Survey. The WMD measures include the following graphs:

1. Map of laboratories recognized by WMD.
2. Map of laboratories accredited by NVLAP.
3. Laboratory Metrology Training.
4. Laboratory Scoring Model.

Future graphs will include measures of successful proficiency tests and measures associated with corrective action for poor results in proficiency testing or Laboratory Auditing Program (LAP) problems.

NIST Weights and Measures Division
Certificates of Measurement Traceability
(as of July 2007)

Comments:

Conditional Recognition:

Colorado
Connecticut
North Dakota
New Jersey
South Dakota

Incomplete Submissions:

Arkansas
Iowa
Los Angeles County
Nebraska
Tennessee

Not Recognized:

Delaware [CLOSED]
Massachusetts
Montana
Puerto Rico
Rhode Island [CLOSED]
Texas
U.S. Virgin Islands
Washington D.C. [CLOSED]
Wyoming

NIST NVLAP
Accreditation Status
(as of July 2007)

Comments:

16 laboratories are currently accredited by NVLAP.

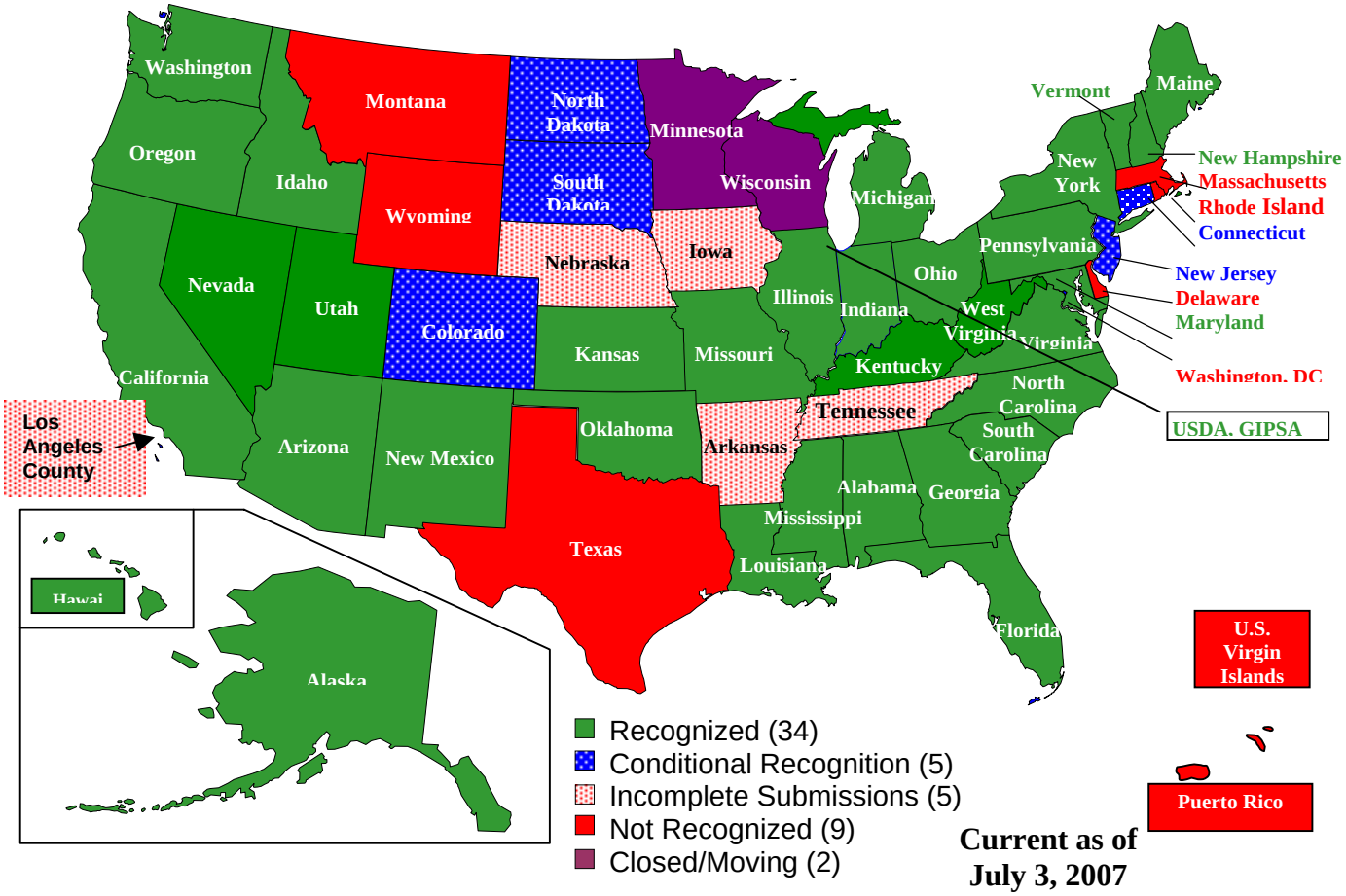
Arizona, Florida, Indiana, Maine, Maryland, Michigan, Minnesota, New Hampshire, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Virginia, and Washington.

There is one application pending for California.

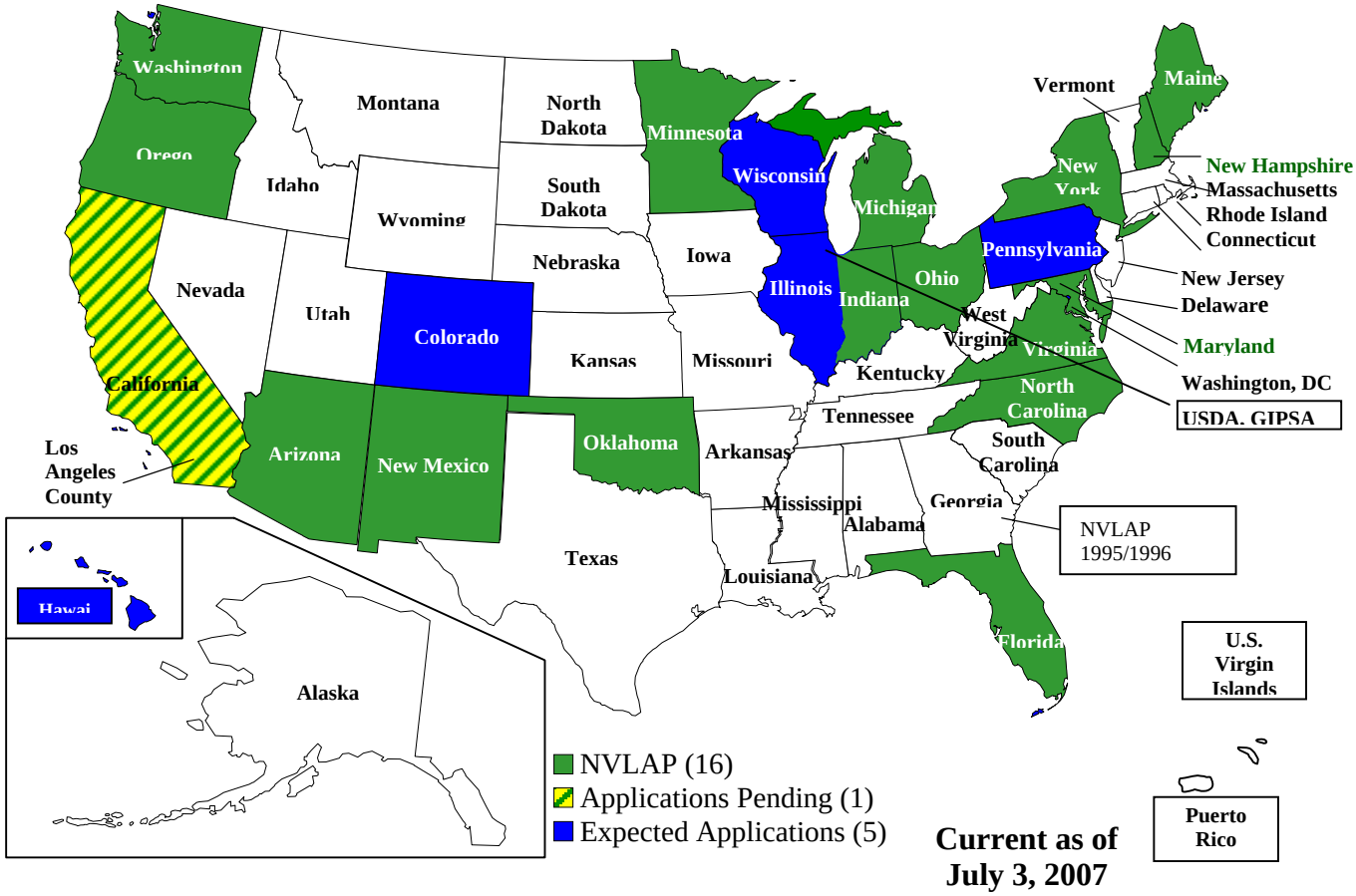
No laboratories have received their initial NVLAP accreditation since the last survey. There are five laboratories that have been encouraged to apply for NVLAP accreditation.

Colorado, Hawaii, Illinois, Pennsylvania, Wisconsin.

WMD Recognition Status (2007)



NVLAP Accreditation Status (2007)



Metrology Training

The training graph shows the number of metrologists and categories of training at NIST since 1990. The training numbers are somewhat cyclical, primarily because the Advanced Mass course has been taught every other year since 1993. Nearly half of all students are from State weights and measures laboratories. The rest are from aerospace, pharmaceutical, defense, energy, biomedical industries and foreign governments. The mix of students is very similar to the non weights and measures calibration customers of the State laboratories.

In addition to training at NIST in the Training and Demonstration laboratory, NIST also provides training at Regional Measurement Assurance Program (RMAP) meetings in six regional groups where attendance is required for ongoing laboratory recognition and participation in the proficiency testing is required. The percentage of State laboratory staff in functional laboratories who are trained through the hands-on laboratory courses at NIST and in the RMAP training sessions is routinely maintained at over 98 %. The goal is 100 %.

Laboratory Scoring Model

A draft laboratory scoring model was developed in 2006 and is based on assigning numbers to each laboratory in a number of categories that correspond to NIST Handbook 143. Points are awarded in the following categories:

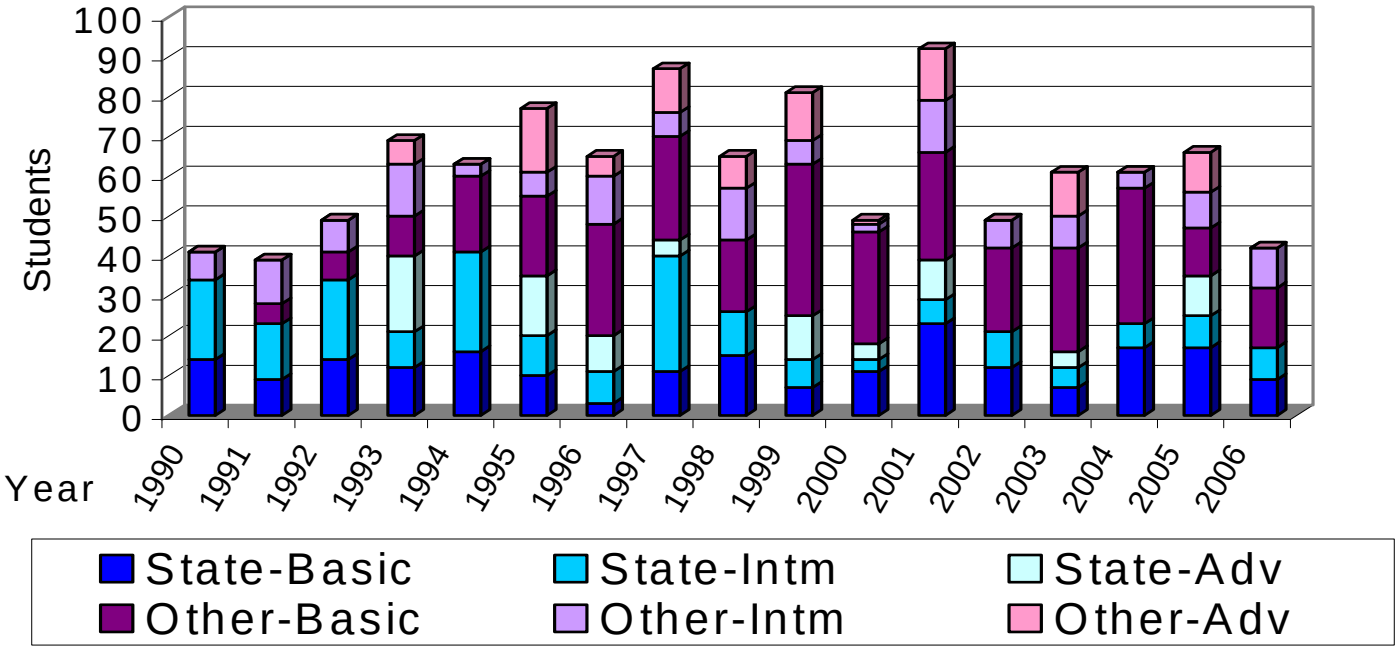
- Quality Management System (0, 10, 20, or 40)
- Administrative Procedures (0, 10, 15)
- Facility (0, 1, 3, 5)
- Equipment (0, 1, 3, 5)
- Standards (0, 3, 5, 10)
- Staff (0, 1, 5, 7, 10)
- Management Support (-5, 0, 5)
- Proficiency Tests (PTs) (0, 5, 7, 10)
- Extra Credit – Timely Submissions (-10, 10)
- Multipliers (NVLAP accreditation, 2.5; WMD, 2 year recognition, 2; WMD, 1 year recognition, 1.5; WMD, 1 year conditional recognition, 1; No recognition, 0.5; Lab Closed, 0)

The model is intended to provide a quality index to the overall laboratory program. The initial scoring model will be refined over time. The scoring model is used internally at NIST to identify where resources and efforts will be allocated. Requests for greater differentiation have been made. The current “top score” possible is 275. The current median score for all laboratories is 97.5 and the current average score is 130. The WMD goal is to see the laboratory scores increase.

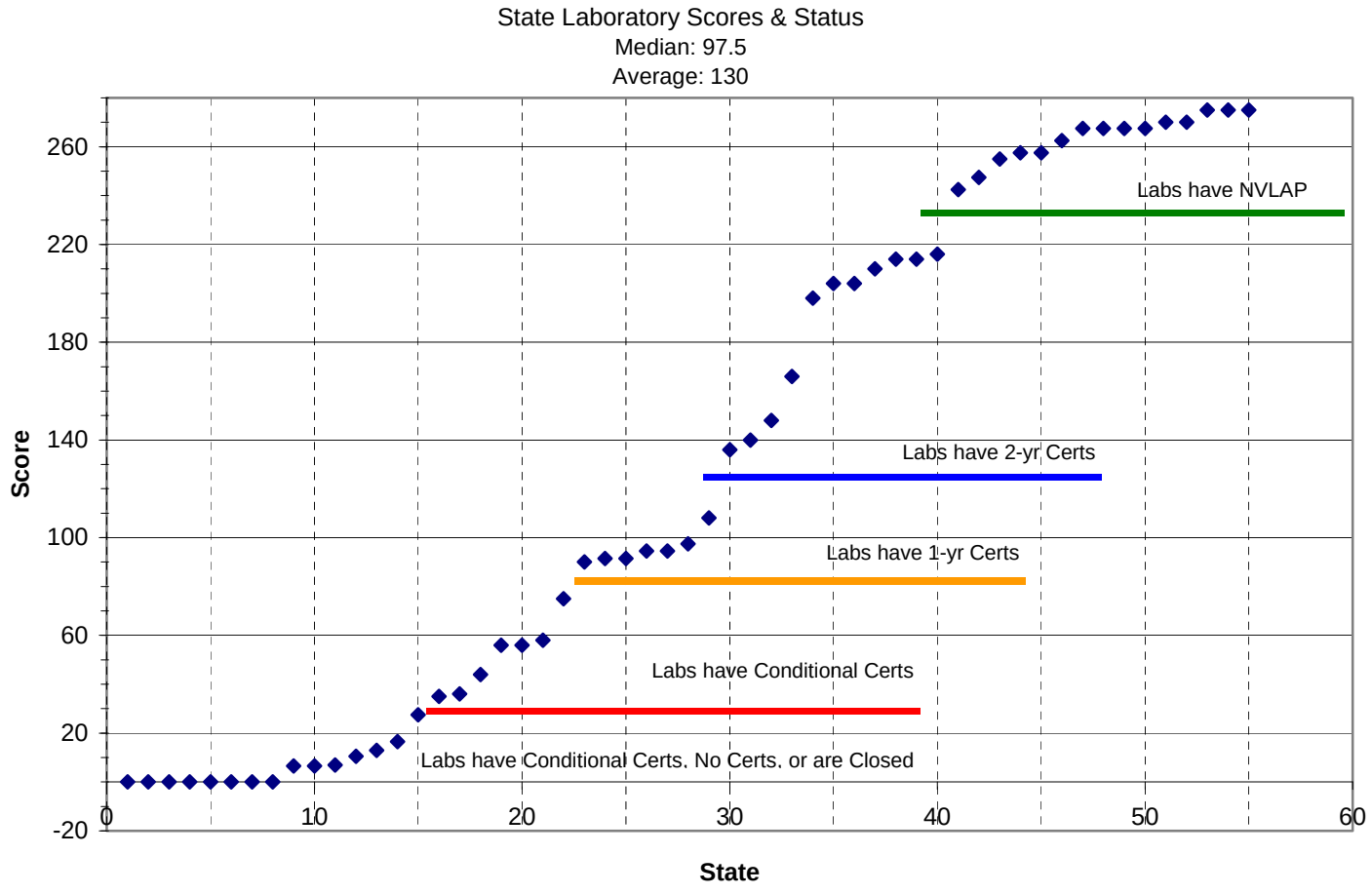
Note: At this time, specific coding is not provided for identifying specific laboratories.

Laboratory Metrology Training

(~1056 participants)



Lab Scoring Model



Appendix – Lab Scoring Criteria

Quality Management System	
40	Full Quality Manual (QM) in place and implemented. Ongoing improvements. Regular reviews and audits.
20	QM in place but not fully implemented or not based on current standard; audits weak; Conditional Recognition - 2 year limit.
10	Baseline QM developed. Follows template; mostly not implemented. Or - major updates are needed. Or staff are not familiar with their own system.
0	No QM in place. No Recognition.
Administrative Procedures (AP)	
15	APs complete and implemented. Ongoing improvements. Regular reviews and audits.
10	APs in place but not fully implemented. Incomplete. Copied/adopted from template or another lab and not tailored.
0	No APs on file. No Recognition.
Facility	
5	Excellent facility and controls. No deficiencies for measurements conducted.
3	Good facility. Only minor deficiencies in some technical areas -- actions taken to minimize impact. OR, facility modifications being done or evidence of progress being planned.
1	Facility marginal. Numerous deficiencies for the levels being measured. Possible security issues. Conditional recognition.
0	No facility or extremely bad. Conditional status TBD based on technical review and combination of other factors.
Equipment	
5	Excellent equipment for the levels being measured. No "risk" based on older equipment. Maintained well; good charts and good standard deviations. No noticeable weaknesses. Uncertainties in PTs reflect good P(n) values for all measurement areas/ranges.
3	Good equipment. Maybe some risk based on older equipment. Control charts demonstrate adequate operations. Uncertainties take extra factors into consideration. P(n) values acceptable for levels of measurements.
1	Deficiencies in equipment in lab. Noted in annual letters and/or reports. May cause Conditional Recognition IF affecting measurement results. P(n) values show failures in PTs.
0	No equipment or major deficiencies. No charts in place to monitor operations and uncertainties. No uncertainties reported.
Standards	
10	Excellent collection of reference, working and check standards in place with no weaknesses. All with current/appropriate calibrations. System for regular calibrations in place with suitable intervals. Hierarchy documented.
5	Good collection of standards -- a few weaknesses that have been identified where action is being taken to obtain new standards or to obtain calibrations. Hierarchy documented.
3	Minimum set of standards. Some problems with calibration intervals and/or lack of enough suitable working standards. No immediate measurement errors are likely, but standards need to be maintained better. Lack of suitable documented hierarchy and/or recalibration problems.
0	Deficiencies in standards and/or calibrations that may impact measurement results. Determine if Conditional or No Recognition.
Staff	
10	Staff have completed Adv Level of Training and Adv LAP problems (successfully). OR Staff have completed the level of training required for their level of recognition. Regular RMAP attendance. Training plan in place. Succession plan in place. Plans being implemented. Staff classified/recognized at suitable level for current requirements.

7	Staff have completed Intermediate seminar and Intm LAP problems successfully. And/or: Training plan and/or succession plan in place, but with minor weaknesses or lack of implementation. Attend Annual RMAP meetings and fully participate.
5	Staff have completed BASIC Seminar and Basic Lap problems successfully. Refresher training recommended. Training plan not in place. Succession plan not in place. Attend Annual RMAP meetings and fully participate.
1	Staff in place without training or without completing Basic LAP problems. Missing RMAPs regularly. No training plan or succession plans. No Recognition.
0	No staff. No Recognition. No RMAP attendance. No training plan. No succession plan. No Recognition.
Management Support	
5	Excellent management support as evidenced with management reviews, regular interactions and support for laboratory operations (and funding). Resources for upgrades to facilities, equipment, standards, training are available as needs are demonstrated. Management participates in regular reviews.
0	Good/general management support for laboratory operations. Management neutral. This is the most likely rating for open labs (extra points demonstrate above/beyond support).
-5	Problems with management support for laboratory operations. Lab Closed. Lack of current management. Management reviews have limited involvement from management.
Proficiency Tests (PTs)	
10	Up to date for all areas. Excellent results, no failures.
7	Up to date on all areas. Consistent performance and corrective action when needed. Proactive (not waiting for final reports when problems are noted.)
5	Completed PTs but with some Recognition areas incomplete or failure to participate in all appropriate/available PTs for areas of recognition. Generally good results and corrective action completed in a timely manner.
0	Completed PTs or very few gaps. Good results. Corrective actions may be in process; ongoing support may not be available to implement appropriate corrective action.
-5	Gaps in PTs and measurement problems due to training or calibration of standards. No corrective action plan = no Recognition.
Extra Credit - re: submissions	
10	Consistently complete and on time. (3 out of 5 years with latest 2 on time.)
-10	Not on time. Routinely incomplete. Not always on time and complete.
Multiplier	
2.5	NVLAP
2	WMD, 2 year cert
1.5	WMD, 1 year cert
1	WMD, 1 year conditional cert
0.5	No recognition
0	Lab Closed

2005-2006 Workload Survey

State Metrology Laboratories
for
Jan 1 – Dec 31, 2005
and
Jan 1 – Dec 31, 2006

February 20, 2007

To: State Metrology Laboratories

DUE by April 15, 2007

Instructions

This year's workload survey will cover two years of workload data. It may be helpful to print out a hardcopy of the survey to use while collecting the survey information. If you don't have internet access or have problem completing the online survey, you can fax your completed hardcopy of the survey to Ken Fraley 405-522-5461 and the online survey will be completed for you.

Procedure for completing the Online Survey:

1) The survey can be found on the NCSLI web site at: **www.ncslisurvey.net/sls2007**

2) Select your state and 2006. Enter your password and log into the survey.

> **NOTE**: There are two options listed for each state, 2005 and 2006. It will be easier to select the 2006 option first.

3) Complete the General Laboratory Information section.

> **NOTE**: Use mouse or tab key to move through the survey, do not use the "Enter Key". Using the "Enter Key" may automatically progress you to the next screen and your survey will be incomplete.

4) Complete the Staff Information section for 2006.

5) Complete the Job Title / Salary Information section for 2006.

6) Complete the entire Workload Information section for 2006, including customers and fees.

> **NOTE**: Fees should be calculated using your current fee system.

7) Comments section: Enter any comments you have that relate to the 2006 workload. When the "Save Comments and Continue to Upload Section" is hit, the 2006 portion of the survey is complete.

8) Log-Out of survey.

IMPORTANT: You must log out before you can proceed to the 2005 portion of the workload.

9) Now you can start the 2005 portion of the survey.

10) Select your state and 2005. Enter your password and log into the survey.

11) General Laboratory Section:

NOTE: Laboratory Name and State are the only required fields, the remaining fields should be **SKIPPED**.

12) Staff Information 2005 – **SKIP THIS SECTION**.

13) Job Title / Salary Information 2005 – **SKIP THIS SECTION**.

14) Complete the Workload Information section for 2005, including customers.

NOTE: **SKIP THE FEE SECTION FOR 2005**

15) Comments section: Enter any comments you have that relate to the 2005 workload. When the "Save Comments and Continue to Upload Section" is hit, the 2005 portion of the survey is complete.

16) Remember to mail a hard copy of your fee schedule to:

Ken Fraley
Oklahoma Bureau of Standards
2800 N Lincoln Blvd
Oklahoma City, OK 73105

17) You're DONE.

Frequently Asked Questions & General Guidance

General Laboratory Information Section:

Staff information:

'Experience' is asking for the number of years of experience in an SLP laboratory and the total number of years of experience in metrology.

Example: Worked 5 years in an Air Force PMEL laboratory and worked 14 years at a state metrology laboratory.

SLP Lab experience = 14 years
Total Metrology experience = 19 years

Job Titles/Salary Ranges (make sure they are <u>monthly</u> salaries):

NOTE: We <u>do not</u> want names or current salaries; we only want the position title and the salary range (this information is usually public record for state government).

Example:	Metrologist I	$1,800.00	$2,400.00
	Metrologist II	$2,000.00	$2,800.00
	Metrologist III	$2,600.00	$3,200.00

The survey covers the workload of your lab for a twelve-month period, preferably Jan 1 through Dec 31. If the reporting period covers a different period make sure it is noted in each of the surveys.

Workload Section:

Each category is also broken down into the following customers: Lab, W&M Program, and Other Customers.

Lab – Those standards calibrated for use by the metrology laboratory, including working standards, surveillance calibrations on primary standards, etc. These tests are also referred to as internal calibrations.

W&M Program – Those standards calibrated for state government weights and measures regulatory agencies.

External Customers – All other standards calibrated by the laboratory.

Workload Categories:
Mass Echelon I – The number of precision mass standards that were calibrated using the Mass Code for data reduction, regardless of accuracy class.
Mass Echelon II – The number of precision mass standards that were calibrated not using the Mass Code for data reduction. Typically, SOP 4 w/ABC or SOP 5 are used.

Mass Echelon III – Do not count weight carts in this category; weight carts have their own category.
Volume – All volume calibrations are broken down into two categories, depending on the procedure used, volume transfer and volume gravimetric procedures.

Calibration Fees:

At the end of the survey there is a section for calibration fees. Please include all fees that would normally be charged including cleaning, shipping, packing, etc.

In general, the survey is asking for the number of individual devices calibrated by the metrology laboratory. Use the following examples as guidelines for reporting numbers for this survey.

Example: A “31 pound weight kit” is not counted as one device; make sure each weight in the kit is counted.

Example: A 100 foot tape is counted as one device; do not count each point tested.

Example: If three double substitutions are used to calibrate a single standard it is counted as one device; do not count it as three devices.

Example: A 100g standard calibrated using a 3-1 weighing design is counted as one device; do not count the check standard. (Same with advanced weighing designs using the mass code, do not count the check standards as they are used solely for defining the measurement process.)

We would also like to know of any other work that is done by your metrology laboratory which was not covered in this survey, therefore, there are several “blank categories” at the end of the survey for any calibrations or tests that do not fall into any of the prescribed categories. Please provide enough detail about these additional tests for it to be clear what is being done.

Laboratory Customers:

The number of customers served by your lab during the 1-year reporting period. Count different locations of the same parent company as separate customers. If there are separate divisions within the same parent company, count each as a separate customer.

ASSISTANCE/QUESTIONS??

You may contact me at:

Phone: (405) 522-5459
Fax: (405) 521-4912
Email: kfraley@oda.state.ok.us

Ken Fraley
Oklahoma Bureau of Standards
2800 N. Lincoln Blvd.
Oklahoma City, Oklahoma 73105

2005-2006 State Laboratory Program Survey
DUE by April 15, 2007

General Laboratory Information

Laboratory:		Name:	
Mail Address:		Phone:	
City, State, Zip:		Fax:	
Age of Lab:	Years	Web Site Address:	
Approx. Sq. Ft.:	Sq ft		

Please list all personnel which perform metrology measurements or functions in the laboratory

Name	e-mail	Full Time or Part Time	#Yrs Experience	
			SLP Lab	Total

List all Job Titles which could be utilized to perform metrology measurements or functions

Job Title	Minimum Monthly Salary	Maximum Monthly Salary

2006 Workload Information

NOTE: The following information should be based on a 12 month period, preferably Jan 1, 2006 through Dec 31, 2006 or the most recent fiscal year. Reported data should not be estimates. If unable to quote actual data, please attach your comments to the end of this survey.

Actual Period of Time Covered: From _____ To _____

2006 - Mass Echelon I		
Number of mass standards calibrated using Advanced Weighing Designs and Mass Code Data Reduction. Regardless of Class.	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - Mass Echelon II		
Number of mass standards. ASTM Class 1, 2, 3 OIML Class E2, F1	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - Mass Echelon III		
Number of mass standards (except weight carts). ASTM Class 4, 5, 6, 7 OIML Class F2, M1, M2, M3 NIST Class F	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - Weight Carts		
Number of weight carts calibrated.	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - Volume – Glassware			
Number of individual pieces of volumetric glassware calibrated. Note: Indicate number of Volume Transfer (V-T) and/or Gravimetric test methods.		Vol-Transfer	Gravimetric
	Lab (Internal)		
	W&M Program		
	External Customers		
	Total		

2006 - Volume – SVP (Small Volume Provers) (NOT 5 gallon test measures)			
Number of small volume provers calibrated. Note: Indicate number of Volume Transfer (V-T) and/or Gravimetric test methods. If you don't know what a SVP is, your answer is probably zero.		Vol-Transfer	Gravimetric
	Lab (Internal)		
	W&M Program		
	External Customers		
	Total		

2006 - Volume – LPG			
Number of individual LPG provers calibrated. Note: Indicate number of Volume Transfer (V-T) and/or Gravimetric test methods.		Vol-Transfer	Gravimetric
	Lab (Internal)		
	W&M Program		
	External Customers		
	Total		

2006 - Volume – Non-Pressurized Small Metal Standards (≤ 5 gallon)			
Number of metal volumetric standards (20 liter / 5 gallon and smaller). Note: Indicate number of Volume Transfer (V-T) and/or Gravimetric test methods.		Vol-Transfer	Gravimetric
	Lab (Internal)		
	W&M Program		
	External Customers		
	Total		

2006 - Volume – Non-Pressurized Medium Metal Standards (> 5 gallon and ≤ 100 gallon)			
Number of metal volumetric standards (larger than 20 liter / 5 gallon and less than or equal to 400 liter / 100 gallon). Note: Indicate number of Volume Transfer (V-T) and/or Gravimetric test methods.		Vol-Transfer	Gravimetric
	Lab (Internal)		
	W&M Program		
	External Customers		
	Total		

2006 - Volume – Non-pressurized Large Metal Standards (> 100 gallon)			
Number of metal volumetric standards (greater than 400 liter / 100 gallon). Note: Indicate number of Volume Transfer (V-T) and/or Gravimetric test methods.		Vol-Transfer	Gravimetric
	Lab (Internal)		
	W&M Program		
	External Customers		
	Total		

2006 - Length - Tapes		
Number of individual tapes (metal, fiberglass, woven fiberglass, cloth, etc.). Please enter #devices tested, NOT number of points tested.	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - Length - Rigid Rules		
Number of rigid rules calibrated.	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - Thermometry		
Number of thermometers tested (mechanical, liquid-in-glass, thermocouples, thermistors, PRTs, SPRTs).	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - Frequency		
Number of frequency standards tested (includes tuning forks).	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - Timing Devices		
Number of timing devices tested (stopwatches).	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - Wheel Load Weighers		
Number of wheel load weighers tested :	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - Lottery Balls		
Number of lottery balls tested : Characteristic Tested: ❑Mass ❑Diameter ❑Other *Describe Other*_____	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - *(A) Other Types of Measurements not covered in this survey*		
Describe type of measurement:	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - *(B) Other Types of Measurements not covered in this survey*		
Describe type of measurement:	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - *(C) Other Types of Measurements not covered in this survey*		
Describe type of measurement:	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2006 - Number of Laboratory Customers served during the reporting period

Count different locations of the same parent company as separate customers. If there are separate divisions within the same parent company, count each as a separate customer.

Laboratory Customers _____

2006 - **Comments on Survey**

Laboratory Fees

In this section please estimate the typical fees charged for each of the described examples.

Does your laboratory charge fees for external customers? YES ❑ NO ❑

Do you have a minimum fee?		$
[Mass Echelon I] ASTM Class 0 Precision mass set 100 g to 1 mg (21 weights)		$
[Mass Echelon II] ASTM Class 2 Precision mass set 100 g to 1 mg (21 weights)		$
One – 31 lb Class F weight set (22 weights)		$
5,000 lb weight cart		$
Scale test truck:	24-1000 lb weights (5 adjusted)	$
	20 - 50 lb weights (5 adjusted)	$
	2 -31 lb weight sets (22 weights each)	$
	TOTAL	$
One – 5 gallon test measure using volume transfer method:		$
One – 5 gallon test measure using gravimetric method:		$
One – 100 gallon prover using volume transfer method:		$
One – 100 gallon prover using gravimetric method:		$
One – 100 gallon LPG prover:		$
One – 20 gallon SVP (small volume prover) using volume transfer method:		$
One – 20 gallon SVP (small volume prover) using gravimetric method:		$
One- 100 foot tape with 19 points tested:		$

Calibration Fees

Please send a hard copy of your current laboratory fees to the following address:

Ken Fraley
Oklahoma Bureau of Standards
2800 N Lincoln Blvd.
Oklahoma City, Oklahoma 73105

2005 Workload Information

NOTE: The following information should be based on a 12 month period, preferably Jan 1, 2005 through Dec 31, 2005 or the most recent fiscal year. Reported data should not be estimates. If unable to quote actual data, please attach your comments to the end of this survey.

Actual Period of Time Covered: From _____ To _____

2005 - Mass Echelon I		
Number of mass standards calibrated using Advanced Weighing Designs and Mass Code Data Reduction. Regardless of Class.	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - Mass Echelon II		
Number of mass standards. ASTM Class 1, 2, 3 OIML Class E2, F1	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - Mass Echelon III		
Number of mass standards (except weight carts). ASTM Class 4, 5, 6, 7 OIML Class F2, M1, M2, M3 NIST Class F	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - Weight Carts		
Number of weight carts calibrated.	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - Volume – Glassware			
Number of individual pieces of volumetric glassware calibrated. Note: Indicate number of Volume Transfer (V-T) and/or Gravimetric test methods.		Vol-Transfer	Gravimetric
	Lab (Internal)		
	W&M Program		
	External Customers		
	Total		

2005 - Volume – SVP (Small Volume Provers) (NOT 5 gallon test measures)			
Number of small volume provers calibrated. Note: Indicate number of Volume Transfer (V-T) and/or Gravimetric test methods. If you don't know what a SVP is, your answer is probably zero.		Vol-Transfer	Gravimetric
	Lab (Internal)		
	W&M Program		
	External Customers		
	Total		

2005 - Volume – LPG			
Number of individual LPG provers calibrated. Note: Indicate number of Volume Transfer (V-T) and/or Gravimetric test methods.		Vol-Transfer	Gravimetric
	Lab (Internal)		
	W&M Program		
	External Customers		
	Total		

2005 - Volume – Non-Pressurized Small Metal Standards (≤ 5 gallon)			
Number of metal volumetric standards (20 liter / 5 gallon and smaller). Note: Indicate number of Volume Transfer (V-T) and/or Gravimetric test methods.		Vol-Transfer	Gravimetric
	Lab (Internal)		
	W&M Program		
	External Customers		
	Total		

2005 - Volume – Non-Pressurized Medium Metal Standards (> 5 gallon and ≤ 100 gallon)			
Number of metal volumetric standards (larger than 20 liter / 5 gallon and less than or equal to 400 liter / 100 gallon). Note: Indicate number of Volume Transfer (V-T) and/or Gravimetric test methods.		Vol-Transfer	Gravimetric
	Lab (Internal)		
	W&M Program		
	External Customers		
	Total		

2005 - Volume – Non-pressurized Large Metal Standards (> 100 gallon)			
Number of metal volumetric standards (greater than 400 liter / 100 gallon). Note: Indicate number of Volume Transfer (V-T) and/or Gravimetric test methods.		Vol-Transfer	Gravimetric
	Lab (Internal)		
	W&M Program		
	External Customers		
	Total		

2005 - Length - Tapes		
Number of individual tapes (metal, fiberglass, woven fiberglass, cloth, etc.). Please enter #devices tested, NOT number of points tested.	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - Length - Rigid Rules		
Number of rigid rules calibrated.	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - Thermometry		
Number of thermometers tested (mechanical, liquid-in-glass, thermocouples, thermistors, PRTs, SPRTs).	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - Frequency		
Number of frequency standards tested (includes tuning forks).	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - Timing Devices		
Number of timing devices tested (stopwatches).	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - Wheel Load Weighers		
Number of wheel load weighers tested :	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - Lottery Balls		
Number of lottery balls tested : Characteristic Tested: ❑Mass ❑Diameter ❑Other *Describe Other*_____	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - *(A) Other Types of Measurements not covered in this survey*		
Describe type of measurement:	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - *(B) Other Types of Measurements not covered in this survey*		
Describe type of measurement:	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - *(C) Other Types of Measurements not covered in this survey*		
Describe type of measurement:	Lab (Internal)	
	W&M Program	
	External Customers	
	Total	

2005 - Number of Laboratory Customers served during the reporting period

Count different locations of the same parent company as separate customers. If there are separate divisions within the same parent company, count each as a separate customer.

Laboratory Customers _____

2005 - **Comments on Survey**

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

DIVISION OF MEASUREMENT STANDARDS
& COMMERCIAL VEHICLE ENFORCEMENT

SARAH PALIN, GOVERNOR

12050 INDUSTRY WAY
ANCHORAGE, AK 99515-3567

PHONE (907) 365-1247
FAX (907) 365-1275

DAN BREEDEN, DIRECTOR

Metrology Laboratory Fees
As of 9 July, 2000

Device	Rates ($)
Volume	
5gal	50
10-100gal	175
101-500gal	500
501-1500gal	950
>1501gal	1200
Mass	
25lb F	10
50lb F	20
500lb F	50
1000lb F	75
Class F weight kit	300
Speed detection devices	
Sngl fork	15
Hndhld 1 fork	50
Sngl ant, 2 fork	60
Dual ant, 2 fork	75
Laser	100
Watthour meters	
Resid Elect Mtr	50
Indust Elect Mtr	125
Devices	
WLW	75
Misc services	75 / hr

"Providing for the movement of people and goods and the delivery of state services"

STATE OF ALABAMA

DEPARTMENT OF AGRICULTURE AND INDUSTRIES

1445 Federal Drive
Montgomery, Alabama 36107-1123

Ron Sparks
Commissioner

Mailing Address:
Post Office Box 3336
Montgomery, AL 36109-0336

RE: Calibration/Tolerance Testing of Weights, Test Measures, and Provers

To Whom It May Concern:

Pursuant to Act 2004-516, and the regulations authorized thereby, the Alabama Legislature and the Alabama Department of Agriculture and Industries have instituted a fee schedule for the calibration of test weights and measures. As of October 1, 2004, the fee schedule for all test weights and measures was implemented. The fee schedule is:

Weights:

0 to 10 pounds or the metric equivalent	$1.50 per weight
greater than 10 pounds to 50 pounds or the metric equivalent	$5.00 per weight
greater than 50 pounds to 1000 pounds or the metric equivalent	$7.50 per weight
greater than 1000 pounds or the metric equivalent	$10.00 per weight

Test Measures/Provers with the capacity of:

0 to 5 gallons or the metric equivalent	$10.00 per test measure
greater than 5 gallons to 50 gallons or the metric equivalent	$15.00 per prover
greater than 50 gallons to 200 gallons or the metric equivalent	$25.00 per prover
greater than 200 gallons to 500 gallons or the metric equivalent	$50.00 per prover
greater than 500 gallons to 1000 gallons or the metric equivalent	$75.00 per prover
greater than 1000 gallons or the metric equivalent	$100.00 per prover

There is a maximum fee of $150.00 per business location for any one year period beginning October 1 and ending September 30. This is for all test weights and measures. If you qualify under Section 80-13-9-.04(5) of the Alabama Administrative Code, the maximum fee is $30.00 per business location per year. Governmental entities are exempt from these fees. If no check is sent with the test weights and measures, an invoice will be mailed out. In the future, the certificate for the test weights and measures will not be sent until the fees are paid.

CA (1 of 2)

STATE OF CA.

2006

METROLOGY LABORATORY SERVICES
PRICE LIST (ESTIMATED) FOR CALIBRATION SERVICES

BASED ON: Current billing rate of $75.00/hour; (minimum billing one hour); submitted items must be prepared for testing (See Note 1); test(s) conducted at State Laboratory (See Note 2); prices available upon request.

ITEM DESCRIPTION: TYPICAL EXAMPLES	ESTIMATED $
MASS	
Weight Standards - NIST Handbook 105-1, F Class or ASTM Class 4, 5, 6, or 7: Tolerance tested unless noted	
2500 lb (4 weights)	150.00
Each additional weight or each adjusted weight	37.50
1000 lb or 500 lb (10 weights)	375.00
Each additional weight or each adjusted weight	37.50
50 to 3 lb (10 weights)	112.50
Each additional weight or each adjusted weight	12.50
Weight kits - 2lb to 1/16 oz & 0.3 lb to 0.001 lb	
Weight kits up to 35 pieces	150.00
Each additional weight or each adjusted weight	6.00
VOLUME	
Metal petroleum measures - NIST Handbook 105-3: Tolerance tested unless noted	
1 to 5 gallon	75.00
Each additional measure	37.50
Metal petroleum provers - NIST Handbook 105-3:	
Gallons	
5	75.00
10	81.00
20	94.00
50	206.00
100	219.00
Each additional 100 gallon up to 1500	44.00

(b:met.44/10/96)

VOLUME (Continued)

Liquefied Petroleum Gas (LPG) provers-NIST HB 105-4:

Gallons	
20	300.00
100	450.00

Milk Tank Provers:

Gallons	
25	112.00
50	206.00
100	219.00

Glass measuring flasks - NIST Handbook 105-2:
Tolerance testing - Gravimetric

1 gallon to 2 fluid ounces (1 glass measuring flask)	150.00
Each additional glass measuring flask	75.00

OTHER MEASURING DEVICES

Steel Tape Measure - Tolerance Testing

Up to Feet	
12	75.00
50	112.00
100	150.00

Temperature measuring devices (liquid-in-glass, electronic, dial) **(3)** – NIST HB 105-6:
Tests are conducted at 4 points:
One reference ice point 32 °F (O °C) and three additional fixed points up to 48.89 °C (120 °F).
Accuracy: >±0.05 °C ≤±0.20°C
Fixed Points:

°F	°C	
32	0.00	(Ice Point Reference)
60	15.56	
90	32.22	
120	48.89	

First 4 points	225.00
Each additional fixed point	37.50

NOTES:

(1) Special preparation; billed at hourly rate of $75.00.

(2) For on-site testing, contact 916-229-3024 (Scheduling) to determine feasibility and cost estimate.

(3) Thermometer calibrations conducted in December (must submit by November 30) of each year. For special requests, contact 916-229-3024 (Scheduling) to determine feasibility and cost estimate.

ORIDA METROLOGY LABORATORY
FEE SCHEDULE

Form No: Fee 1 Revision No: 1 Revision Date: March 21, 2002 Page 1 of 1

MASS	UNIT PRICE
Certified to meet ASTM Standard E617 Class 5, 6, 7 or NIST Class F tolerances	
0 - 2 lbs. or metric equivalent	$ 1.95
>2 lbs.- 10 lbs. or metric equivalent	$ 1.95
>10 – 50 lbs. or metric equivalent	$ 5.70
>50 – 500 lbs. or metric equivalent	$ 8.40
>500 – 1000 lbs. or metric equivalent	$ 8.40
>1000 – 2500 lbs. or metric equivalent	$ 25.00
>2500 – 5000 lbs. or metric equivalent	$ 25.00
Certified to meet ASTM Standard E617 Class 4 tolerances	
0 – 10 lbs. or metric equivalent, without adjustment	$ 5.00
0 – 10 lbs. or metric equivalent, with adjustment	$ 9.30
>10 – 50 lbs. or metric equivalent	$ 28.20
>50 – 500 lbs. or metric equivalent	$ 28.20
>500 – 1000 lbs. or metric equivalent	$ 28.20
>1000 – 2500 lbs. or metric equivalent	$ 28.20
>2500 – 5000 lbs. or metric equivalent	$ 28.20
Certified to meet ASTM Standard E617 tolerances of Class 1 or calibrated to determine conventional mass values.	
0 – 10 lbs. or metric equivalent	$ 28.20
>10 – 20 lbs. or metric equivalent	$ 40.00
>20 – 50 lbs. or metric equivalent	$ 50.00
>50 – 1000 lbs. or metric equivalent	$ 50.00
>1000 – 2500 lbs. or metric equivalent	$ 50.00
>2500 – 5000 lbs. or metric equivalent	$ 50.00
Dead Weights / Actual Values	
<10 lbs. or metric equivalent	$ 6.00
10 – 50 lbs. or metric equivalent	$ 10.00

VOLUME	UNIT PRICE
Volumetric flask, graduate, test measure or prover	
0 – 5 gallon or metric equivalent	$ 25.00
>5 – 50 gallon or metric equivalent	$ 35.00
>50 – 200 gallon or metric equivalent	$ 56.70
> 200 – 500 gallon or metric equivalent	$ 141.60
>500 – 1000 gallon or metric equivalent	$ 169.80
>1000 gallon or metric equivalent	$ 228.00
Provers used to test liquid propane or similar gases	
0 – 25 gallon or metric equivalent	$ 112.80
>25 gallon or metric equivalent	$ 169.80
LINEAR	
Certified by Tolerance Test	$ 75.00
Calibrated to determine actual values Rigid Rules (6 calibration points)	$ 100.00
Steel Tapes (12 calibration points) Additional calibration points will be assessed fees according to "special test"	$ 100.00
TEMPERATURE	
Liquid-in-glass or electronic thermometer, tolerance tested	$ 50.00
Liquid-in-glass or electronic thermometer calibrated (6 calibration points) Additional calibration fees will be assessed fees according to "special test"	$ 100.00
MISCELLANEOUS FEES	
Special Tests / Preparations – per hour	$ 50.00
Invoices – minimum charge	$ 25.00

RULES
OF
GEORGIA DEPARTMENT OF AGRICULTURE
FUEL AND MEASURES DIVISION

40-15-2-.10 Weights and Measures Laboratory Calibration Fees.

(1) Authority and Application.
This schedule of fees for calibrations and certifications of standards (a device, item or equipment used to determine mass, volume or length) is pursuant to O.C.G.A. 10-2-5 (15) and shall be assessed for metrology services performed by the Weights and Measures Laboratory of the Georgia Department of Agriculture. The fees are based at $55.00 per hour for tolerance calibrations and $65.00 per hour for precision calibrations.

(2) Schedule of Fees:

(a) Mass (Echelon [redacted] II) Precision Calibrations:
1. NBS 547 Classes M, S, S-1 and ASTM E617 Classes 1, 2, 3.
All mass standards of the above classes..... $ 30.00 each

2. NBS 547 Class P and ASTM E617 Class 4.
All mass standards of the above classes.....$ 20.00 each

The above calibrations are required for the manufacturer-classified weights. Standards are not adjusted or classified by the laboratory. The above calibrations include a Certificate of Traceability, "As Found" values/corrections and the associated uncertainty.

(b) Mass (Echelon III) Tolerance Calibrations

1. NIST 105-1 Class F, ASTM E617 Classes 5, 6, 7 or NBS Classes C, Q, T:
2 kg (5 lb.) and less.....$ 5.50 each
2 kg (5 lb.), < 20 kg (50 lb.).....$ 7.50 each
20 kg (50 lb.) .....$ 12.50 each
> 20 kg (50 lb.) up to and including 500 kg (1000 lb) .....$ 16.50 each
>500 kg (1000 lb.). Not to exceed 1000 kg (2000 lb) .....Quoted
The above calibrations include a Certificate of Traceability. Standards are adjusted (when possible) if out of tolerance and classified. The "As Found/As Left" values/corrections, and the associated uncertainty will be reported upon request.

(c) Volume (based on $55.00 per hour)
LP Gas Provers..... .$135.00 each
All other volume tests..... Quoted
Note: LP Gas provers must be presented cleaned and purged. All valves, reflex gauges, lines, hoses and fittings must be in safe condition and properly installed.

(d) Rigid / Flex Rules
6 inches (150 mm). .....$ 55.00 each
12 inches (300 mm).....$ 65.00 each
18 inches (450 mm).....$ 85.00 each
24 inches (600 mm). .....$ 105.00 each
36 inches (900 mm). .....$ 125.00 each
48 inches (1000 mm).....$ 145.00 each

60 inches (1500 mm)..... $ 165.00 each
72 inches (1800 mm).....$ 185.00 each

(e) Tapes
0 - 10 feet (3 meters) .....$ 55.00 each
11 - 50 feet (15 meters) .....$ 75.00 each
51 - 100 feet (30 meters) ..... $ 100.00 each
Over 100 feet .....Quoted

(f) Cleaning stainless steel, steel, aluminum, brass, chrome and cast iron. Painting cast iron weights and removing decals. .... Based on $55 standards per hour.

(g) Serializing weights..... $1.00 per digit or letter

(h) Minimum charge (Any calibration, service or test)..... $ 55.00

(i) Special tests .....based on $55.00 per hour.

(j) Adjustments to price quote. Any price quoted is subject to change due to unforeseen lab preparations, device adjustments, special handling and/or abnormal costs for lab service or materials.

(k) Quality Manual (uncontrolled copy).....$15.00 per copy

(3) General Considerations.

(a) All calibrations, service and special certification (i.e.: ISO 9000, MIL-STDS) requests must be approved by appointment prior to presenting standards to the Weights and Measures Laboratory.

(b) Customers are responsible for any related shipping arrangements and costs.

(c) Payment must be received prior to release of standards.

(d) The Weights and Measures Lab may decline or refuse to service standards submitted in a hazardous, disrepair or unstable condition.

(e) Out-of-State customer charges. Individuals, industries or business located outside of Georgia shall be charged double the calibration/service rates; **Provided** that the customer has, located within their own state, a governmental metrology lab available to conduct comparable calibrations.

Customer: Company Name
Address:

State Test No.: I-36

2007 Lab Charges

Date 1-9-06

Class	Process Used SOP 4	Rate per Each	Number of Pcs	Total Amount
2,3, S1, F1	0-5kg / 0-10lb	$ 6.75	0	0
F2	> - 5kg / > 10lb	$ 25.00	0	0
	SOP 5			
			0	
1, E1, E2	0-3kg / 0-5lb	$ 20.00	0	0
M, S	> - 3kg / > 5lb	$ 75.00	0	0
	SOP 8			
M1, M2, M3	0-9lb / 0-3kg	$ 5.00	0	0
4, 5, 6, 7, F,	10lb-100lb / < 4kg	$ 6.25	0	0
P, Q, T	500lb-2500lb exc carts	$ 23.00	0	0
	Weight Carts	$ 85.00	0	0
	PROVERS			
	100 gal or less	$ 200.00	0	0
	101 gal or more	$ 300.00	0	0
			0	
	5 gal Test Measures	$ 25.00	0	0
	Volume Flasks	$50 per hour	0	0
	LENGTH	$50 per hour	0	0

NOTE: $50 per hour + calibration charge for damaged, neglected or unsuitable standards that cause a delay in calibration process.

	# Hours	Rate per hour	Total cost
Special Hours	0	50	0
SHIPPING	0		
GRAND TOTAL	**0**	DOLLARS	

Indiana State Department of Health

Weights and Measures

Metrology Laboratory

Fee Schedule

Standards of Mass

Procedure: Modified Substitution or Direct Reading
OIML Class M2
ANSI/ASTM Class "6","7"

NIST Class 'C", "F", & "T"	Test
Weight set with 25 or fewer weights	$30.00
Weight set with 26 to 40 weights	$40.00
Weight set with 41 or more weights	$80.00
Single weight up to and including 5 lbs or 3 kg	$4.00
Over 5 lbs or 3 kg and including 50 lb or 25 kg	$6.00
Over 50 lbs or 25 kg and including 500 lb or 250 kg	$8.00
Over 500 lbs or 250 kg and including 1000 lb or 500 kg	$12.00
Over 1000 lbs or 500 kg	$20.00

Procedure: Modified Substitution or Double Substitution
OIML Class "F2" & "Ml"
ANSI/ASTM Class "4"& "5"

NIST Class "P" & "Q"	Test
Up to and including 5 lbs or 3 kg	$6.00
Over 5 lbs or 3 kg and including 50 lb or 25 kg	$10.00
Over 50 lbs or 25 kg and including 500 lb or 250 kg	$14.00
Over 500 lbs or 250 kg and including 1000 lb or 500 kg	$16.00
Over 1000 lbs or 500 kg	$25.00

Procedure: Decade Design 3-1, Double Substitution Combinations
OIML Class "F1"

ANSI/ASTM Class "1"& "1.1", "2", & "3"

NIST Class "S" & "S-1"

IN (2 of 2)

Up to and including 5 lbs or 3 kg	$10.00
Over 5 lbs or 3 kg and including 50 lb or 30 kg	$20.00
Over 50 lbs or 30 kg and including 1000 lb or 500 kg	$30.00
Over 1000 lbs or 500 kg	$50.00

Procedure: Advanced Weighing Designs
OIML Class "El.' & "E2"
ANSI/ASTM Class "0"

(Tests for other than Metric Weights will be considered Special Tests)	Test
Up to and including 1 kg	$40.00
Over 1 kg	$60.00

Standards of Volume

Test Measures and Glassware	Test
Up to and including 5 gallons or 20 liters	$10.00
Over 5 gallons or 20 liters and including 50 gallons or 200 liters	$50.00
Over 50 gallons or 200 liters	$100.00

Standards of Length

Tapes: $20.00 per device tested, PLUS $4.00 per point tested above five

Other Test Fees

Special Tests (Not Listed in Fee Schedule)	$15.00	per 1/4	hour
Cleaning of Standards (If Necessary)	$10.00	per 1/4	hour

KY (1 of 1)

The Kentucky Department of Agriculture's Metrology Laboratory has instituted a fee schedule. Fees will be charged for any work preformed after January 1, 2007. The fees will be as follows:

MASS (lbs) (weights)						
0-5	5.01-10	10.01-49	50-250	251-500	501-1000	1001-5000
$5.00	$7.50	$15.00	$20.00	$35.00	$50.00	$100.00

VOLUME (gal) (gas cans & provers)					
5	25	50	100	500	1000
$20.00	$35.00	$70.00	$50.00	$250.00	$400.00

If any piece of equipment is out of tolerance and requires that it be adjusted there will be a fee to perform the adjustment. Those fees will be as follows:

MASS (lbs) (weights)						
0-5	5.01-10	10.01-49	50-250	251-500	501-1000	1001-5000
$ 2.50	$ 2.50	$ 5.00	$ 5.00	$ 10.00	$ 20.00	$ 50.00

VOLUME (gal) (gas cans & provers)					
5	25	50	100	500	1000
$ 5.00	$ 5.00	$ 10.00	$ 25.00	$ 50.00	$ 100.00

* Fees for metric weights will be assessed on the appropriate conversion from the list above.

LOUISIANA DEPARTMENT OF AGRICULTURE & FORESTRY

10 A. Metrology Fees For Tolerance Testing

A. Category 1

Weights up to and including 10 Lbs. or 5 Kilograms	$2.00

B. Category 2

Weights over 10 Lbs. or 5 Kilograms and including 100 Lbs. or 60 Kilograms	$5.00

C. Category 3

Weights over 100 Lbs. or 60 Kilograms and and including 1000 Lbs. or 500 Kilograms	$25.00

D. Category 4

Weights over 1000 Lbs. or 500 Kilograms	$50.00

10 B. Fees for mass calibration with report of calibration stating corrections and uncertainties shall be as follows:

A. Category 1

Weights up to and including 3 Kilograms or 5 Lbs.	$25.00

B. Category 2

Weights over 3 Kilograms or 5 Lbs. and including 30 Kilograms or 50 Lbs.	$50.00

Note: All tape certification, volumetric testing and calibration or special test not listed in the fee structure, shall be performed at a rate of $30.00 per hour. (Fees are subject to change by law).

Steve Troxler
Commissioner

North Carolina Department of Agriculture
and Consumer Services
Standards Division

Stephen Benjamin
Director

Fee Schedule for the North Carolina Standards Laboratory

North Carolina General Statutes, Chapter § 81A-12
Effective September 1, 2005

(a) The following fees apply to all weights that are tested and certified to meet tolerances less stringent than the ASTM International E617 Class 4. This includes the National Institute of Standards and Technology (NIST) Class F tolerance. If the weight error exceeds three-fourths of the applicable tolerance, adjustment may be required at an additional fee equal to the normal fee. No extra fee shall be charged for the normal adjustment of a weight cart. Even if weights are rejected or condemned, fees shall be assessed for the test performed.

Customary	Fee/Unit	Metric	Fee/Unit
0-10 lb	$ 5.00	0-5 kg	$ 5.00
11-100 lb	$ 10.00	6-50 kg	$ 10.00
101-1000 lb	$ 20.00	51-500 kg	$ 20.00
1001-2500 lb	$ 30.00	501-1000 kg	$ 30.00
2501-6000 lb	$ 50.00	1001-2500 kg	$ 50.00
Weight Carts	$ 125.00	Up to 6000 lb (includes adjustment)	

(b) The following fees apply to all weights that are tested and certified to meet ASTM International E617 Class 4 or the International Organization of Legal Metrology (OIML) R111 Class F2 tolerances. If the weight error exceeds three-fourths of the applicable tolerance, adjustment may be required at an additional fee equal to the normal fee. Even if weights are rejected or condemned, fees shall be assessed for the test performed.

Customary	Fee/Unit	Metric	Fee/Unit
0-10 lb	$ 10.00	0-5 kg	$ 10.00
11-100 lb	$ 20.00	6-50 kg	$ 20.00
101-1000 lb	$ 40.00	51-500 kg	$ 40.00
1001-2500 lb	$ 60.00	501-1000 kg	$ 60.00
2501-6000 lb	$ 100.00	1001-2500 kg	$ 100.00

(c) The following fees apply to all weights that are calibrated. Calibration means reporting actual mass and conventional mass values with an assigned uncertainty specific to the test. If necessary and considered feasible by the metrologist, adjustments to ASTM International E617 Class 1, 2, or 3 tolerances or OIML R111 Class E2, or F1 tolerances may be made for an additional fee of two times the normal fee. Adjustments to weights of this group shall require a minimum of ten days for weights to return to environmental equilibrium before a final calibration value can be assigned. Even if weights are rejected or condemned, fees shall be assessed for the test performed.

Customary	Fee/Unit	Metric	Fee/Unit
0-20 lb	$ 20.00	0-10 kg	$ 20.00
21-50 lb	$ 40.00	11-30 kg	$ 40.00
51-1000 lb	$ 70.00	31-500 kg	$ 70.00
1001-2500 lb	$ 130.00	501-1000 kg	$ 130.00
2501-6000 lb	$ 200.00	1001-2500 kg	$ 200.00

E-mail: Standards@ncmail.net
1050 Mail Service Center, Raleigh, North Carolina 27699-1050 • (919) 733-3313 • Fax (919) 715-0524

(d) The following fees apply to all weights that are calibrated using NIST weighing de
tested in groups (typically either a 5, 3, 2, 1 series or a 5, 2, 2, 1 series) and are subjec
fee shown. The best uncertainty possible from the North Carolina Standards Laboratory shall be assigned to the mass values of the weights. If necessary and considered feasible by the metrologist, adjustments to ASTM International E617 Class 0, 1, 2, or 3 tolerances or OIML R111 Class E1, E2, or F1 tolerances may be made for an additional fee of two times the normal fee. Adjustments to weights of this group shall require a minimum of ten days for weights to return to environmental equilibrium before a final calibration value can be assigned.

Weight Range	Fee	Unit or Series
0-1 kg	$30.00 each	Minimum charge of $90.00 (3 weights) per series
2-30 kg	$50.00 each	Minimum charge of $150.00 (3 weights) per series
0-2 lb	$30.00 each	Minimum charge of $90.00 (3 weights) per series
3-50 lb	$50.00 each	Minimum charge of $150.00 (3 weights) per series

(e) The following fees apply to volumetric standard calibration.

Provers or Test Measures Tested By the Volume Transfer Method

Customary	Fee/Test Point	Metric	Fee/Test Point
0-5 gal	$30.00	0-20 liters	$30.00
Over 5 gal	Add $0.40 per each additional gallon	Over 20 liters	Add $0.10 per each additional liter

Volumetric Flasks, Graduates, Provers, Slicker Plate Standards, or Test Measures Tested By the Gravimetric Calibration Method

Customary	Fee/Test Point	Metric	Fee/Test Point
0-100 gal	set-up fee $50.00	0-500 liters	set-up fee $50.00
Calibration Fee	Add $2.00 per gallon	Calibration Fee	Add $0.50 per liter

Small Volume Provers (SVPs) Tested By the Gravimetric Calibration Method

Customary	Fee/Test Point	Metric	Fee/Test Point
0-100 gal	set-up fee $100.00	0-500 liters	set-up fee $100.00
Calibration Fee	Add $2.00 per gallon	Calibration Fee	Add $0.50 per liter

(f) The following fees apply to tape measures and rigid rules.

Set-Up Fee	$40.00 per instrument
Calibration Fee	$10.00 per calibration interval

(g) The following fees apply to liquid-in-glass and electronic thermometers.

Set-Up Fee	$40.00 per instrument
Calibration Fee	$20.00 per test point
Resistance Thermometry Coefficient Calculation and Report	$100.00 per instrument

(h) Any special tests or weight cleaning shall be billed at the rate of seventy dollars ($70.00) per hour prorated to the nearest tenth of an hour, with a minimum charge of thirty-five dollars ($35.00).

(i) A minimum charge of twenty-five dollars ($25.00) per invoice shall apply.

(j) If travel is required in connection with the performance of any of these services, the Department shall be reimbursed at the rates provided in G.S. 138-6.

(k) The Department may refuse to accept for testing any weight or measure the Department deems unsuited for its intended use.

(l) The fee for tests performed on weights or measures that will be used primarily outside of the State of North Carolina shall be twice the amounts set forth in this section.

Nebraska Department of Agriculture

Laws & Regulations

Standard Laboratory Operating Procedures and Fees

Title 27 - Chapter 2

002 Standards Laboratory Fee Schedule.

002.01 Weights - Class F Tolerance Testing	
5 lbs. and under	$ 6.25 per weight
Over 5 lbs. to and including 50 lbs.	$ 8.50 per weight
Over 50 lbs. to and including 1,200 lbs.	$23.50 per weight
Over 1,200 lbs.	$80.00 per hour
002.02 Test Weight Kits - All Classes	
Tolerance or Precision Testing	$80.00 per hour
002.03 Dry Measures or Liquid Measures	
Less than 5 gallons	$80.00 per hour
002.04 Metal Volumetric Field Standards	
5 gallons to and including 25 gallons	$51.00 per unit
Over 25 gallons	$80.00 per hour
002.05 Linear Measures	$80.00 per hour
002.06 Pressurized Volumetric Standards	$80.00 per hour
002.07 Pressure Standards and Gauges	$80.00 per hour

002.08 Pre-Calibration Services.

Any standard requiring adjustment and retesting, cleaning, painting, or other pre-calibration services will be charged at a rate of $80.00 per hour plus costs of materials, in addition to the fees set forth in subsections 002.01 through 002.08.

002.09

The cost for laboratory services not included in subsections 002.01 through 002.08 shall be $80.00 per hour.

http://www.agr.state.ne.us/regulate/wam/tilo.htm

New Hampshire
Department of Agriculture, Markets & Food

Stephen H. Taylor, Commissioner

CALIBRATION FEES

Echelon I	$70 per hour (100g kit normally $700)
Echelon II	$70 per hour (100g kit normally $490)
Echelon III:	
31 pound weight kit	$45 with no decimal kit $90 with one decimal kit $135 with two decimal kits
25lb and 50lb weights	$10 each (minimum one hour)
All other weights	$10 each (minimum one hour)
Five-gallon test measure	$30 each
Gravimetric	$70 per hour

NJ (1 of 1)

New Jersey Office of Weights and Measures
P.O. Box 490, Avenel, NJ 07001
Phone: (732) 815-4866 Fax: (732) 382-5298

REGISTRATION NOTICE

Please note that all weighing and measuring devices located within the State and operated or used for commercial purposes are required to be registered with this Office. See N.J.S.A. 51:1-54.2 and N.J.A.C. 13:47F-1.1 et seq. Failure to comply may result in penalties of not less than $100 per device as prescribed by N.J.S.A. 51:1-89.

DEVICE TYPE, I.D. NUMBER, FEES and COST PER DEVICE

EFFECTIVE AS OF SEPTEMBER 19, 2005

I.D. Number	Type of Device	Fee	Cost Per Device	I.D. Number	Type of Device	Fee	Cost Per Device
"01"	Scale of up to and including 1,000 pound capacity	$ 25 $ 200	Each Scale Maximum - 8 scales or more, but not more than $200 per commercial location. Note: The $200 fee does not include the cost for other devices.	"15"	Mass Flow Meter	$ 125	Each Meter
				"16"	Water Meter	$ 100	Each Meter
				"17"	Length Measure	$ 30	Each Length Measure
				"18"	Timing Devices	$ 15 $ 300	Each Timing Device Maximum - 20 Timing Devices or more but not more than $300 per commercial location. Note: The $300 fee does not include the cost of other devices.
"02"	Pharmacy Weight Kit	$ 40	Each Kit.				
"03"	Scale of more than 1,000 pound capacity (other than hopper and vehicle scales)	$ 100	Each Scale				
				"28"	Other Devices such as Pill Counters, etc.	$ 40	Each Device
"04"	Hopper scale	$ 140	Each Scale				
"05"	Vehicle scale	$ 100	Each Scale	"29"	Taximeter	$ 40	Each Taximeter
"06"	Wheel Load Weigher	$ 125	Each Scale		LATE FEE	$ 10	Each Device
					METROLOGY - TESTING & INSPECTION OF DEVICES		
"07"	Belt Conveyor Scale	$ 225	Each Scale				
				"19"	Volumetric Measure of 10 gallons or less.	$ 30	Each Measure
"08"	Automatic Bulk Weighing Scale	$ 225	Each Scale				
				"20"	Volumetric Measure of more than 10 gallons capacity	$ 200	Each Measure
"09"	Retail Vehicle Tank Meter with a maximum flow rate of 100 gallons per minute	$ 50 $ 500	Each Meter maximum - 10 meters or more, but not more than $500 per commercial location. Note: The $500 fee does not include the cost for other devices.	"21"	Test Weight less than 50 pounds	$ 20	Each Weight
				"22"	Test Weight equal to 50 pounds or more	$ 40	Each Weight
"10"	Fuel pump dispenser hose (metering device)	$ 25 $ 200	Each hose (metering device) Maximum - 8 hoses (metering devices) or more but not more than $200 per commercial location. Note: The $200 fee does not include the cost of other devices.	"23"	Tuning Forks	$ 10	Each Tuning Fork
					Steel Tapes less than or equal to 100 feet		
				"24"	Tolerance Test	$ 30	Each Tape
"11"	Wholesale Vehicle Tank Meter	$ 200	Each Meter	"25"	Calibration Test	$ 140	Each Tape
					Steel Tapes longer than 100 feet		
"12"	Rack Meter	$ 200	Each Meter				
"13"	Propane and Natural Gas Meter	$ 150	Each Meter	"26"	Tolerance Test	$ 50	Each Tape
				"27"	Calibration Test	$ 220	Each Tape
"14"	Propane Meter - Test Performed at the State Office of Weights and Measures.	$ 100	Each Meter				

NEW MEXICO DEPARTMENT OF AGRICULTURE

Division of Standards and Consumer Services
MSC 3170, P.O. Box 30005
Las Cruces, NM 88003-8005
Telephone: (505) 646-1616
Fax: (505) 646-2361

December 19, 2005

TO: Device Owners and Operators

FROM: I. Miley Gonzalez, Ph.D., Director/Secretary

SUBJECT: Fees for Weights and Measures Services (SCS 2005 E-13)

This external policy supersedes SCS 2003 E-13 dated August 31, 2004.

This external policy establishes the fees for weights and measures services rate change effective January 1, 2006.

A request for services means a written or oral request by the owner or operator for inspection, testing, or calibration of an apparatus. When the inspection, testing, or calibration of an apparatus is determined to be for the personal benefit of the owner, operator, or user of the apparatus, the fee schedule will apply.

Examples of services that may be for personal benefit include, but are not limited to, the following:

1. Inspection, testing, or calibration of an apparatus that has been approved during the preceding 12 months or;

2. Reinspection for the purpose of placing into service an apparatus that has previously been rejected.

Personnel and mileage charges will be portal to portal. Charges for equipment necessary to provide the service requested will apply while on the job site. Any special equipment or material required to provide the service will be charged at actual cost. When applicable, per diem at the approved departmental rate will be charged.

Within the provisions of this policy, the director of the Division of Standards and Consumer Services is authorized to determine the circumstances under which fees are to be charged. Fees charged shall be limited in amount as set forth in the schedule as follows.

New Mexico Department of Agriculture
Metrology Laboratory
Fee Schedule for Weights & Measures

FEE SCHEDULES EFFECTIVE JANUARY 1, 2006

A minimum of $30.00 will be charged per Work Order.

***(Weights will only be adjusted with owner's permission)**

MASS ECHELON II

OIML Class E2, F1 **ANSI/ASTM Class 1 and 1.1, 2 and 3** **NBS Class S, S-1, and P (Q)**	**Test**	***Test with Adjustment**
Up to and including 2 lbs or 1 kg	**$15.00**	**$ 45.00**
Over 2 lbs or 1 kg and including 20 lbs or 10 kg	**$40.00**	**$ 90.00**
Over 20 lbs or 10 kg and including 50 lbs or 30 kg	**$50.00**	**$110.00**

MASS ECHELON III

OIML Class F2, M1, M2, M3 **ANSI/ASTM Class 4, 6 and 7** **NIST Class F and (Q)**	**Test**	**Test with Adjustment**
Up to and including 10 lbs or 5 kg	**$ 5.00**	**$ 15.00**
Over 10 lbs or 5 kg and including 50 lbs or 30 kg	**$ 10.00**	**$ 30.00**
Over 50 lbs or 30 kg	**$ 20.00**	**$ 60.00**
Weight Carts above 2500 lbs	**$100.00**	

- Most cast weights are NIST Class F, but cast weights below 10 lb or 5 kg are considered to be Class 7
- Slotted cast weights above 10 lb are considered to be Class 6
- Brass weights can no longer be Class F and are now considered to be Class 6

NOTE: Shipping charges will be added as required to the above prices.

NM (3 of 3)

New Mexico Department of Agriculture
Metrology Laboratory
Fee Schedule for Volume

VOLUME TRANSFER

(Test Measures and Provers must be clean and free of fuel)	**Test**
Up to and including 5 gal or 20 L test measures	**$ 15.00**
25 gal	**$ 50.00**
50 gal	**$ 75.00**
100 gal	**$100.00**
200 gal	**$150.00**
500 gal	**$250.00**
600 gal	**$300.00**

An Additional Fee will be charged for provers that are odd denominations (99, 101, 197 or 107 gal)

Volume Gravimetric	**Test**
.5 pint to 5 gal	**$ 50.00**
Over 5 gal	**Quote**

Volume LPG Provers

(Provers must have plugs removed or finger tight and be free of pressure)	**Test**
25 gal	**$ 75.00**
Above 25 to 100 gal	**$175.00**
Above 100 gal (107 gal)	**$200.00**

****

Special Tests or Services (Not Listed in Fee Schedule)	**$60.00 per hour**
Cleaning of Standards or Special Packing Needs (If Necessary)	**$60.00 per hour**

NV (1 of 1)

STATE OF NEVADA

Governor

Rick Gimlin
Acting Director

DEPARTMENT OF AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS

Las Vegas Office:
2300 McLeod Street
Las Vegas, NV 89104-4314
Telephone (702) 486-4690
Facsimile (702) 486-4695

Bureau of Weights and Measures
Bureau of Petroleum Technology
2150 Frazer Avenue Sparks, NV 89431
Telephone (775) 688-1166 Fax (775) 688-2533
Steven Grabski, Administrator

Elko Office:
1351 Elm Street
Elko, NV 89801-3364
Telephone (775) 738-8076
Facsimile (775) 738-2639

Ken Fraley
Oklahoma Bureau of Standards
2800 N. Lincoln Blvd
Oklahoma City, OK 73105

Hi Ken,

As I noted in the comments section of the workload survey we have two hourly rates charge in Nevada:

For Registered Service Agencies: $40.00 per hour. These are scale repair and meter repair companies that maintain devices that weigh or measure to the general public and fall under Weights and Measures jurisdiction. Since we force them to have their mass standards certified every two years and small volume standards annually, they get a break on fees.

For Non RSA's: $80.00 per hour. These are entities such as private laboratories, hospitals, manufacturers, etc., that have their own in house programs and do not impact Weights and Measures programs.

If you have any questions or if I've left anything out, please call or e-mail.

Sincerely,

Steve Schultz
Weights and Measures Inspector IV, Chief State Metrologist
Nevada Division of Measurement Standards / Bureau of Weights and Measures
2150 Frazer Avenue
Sparks, NV 89431
(775) 688-1166 x 233
(775) 688-2533 FAX
e-mail: boxcar53@agri.state.nv.us

Oklahoma Bureau of Stan

Effective July 1, 2005

Fee Schedule

OK (1 of 1)

Mass Echelon I

OIML Class "E1" & "E2" & ANSI/ASTM Class "1"
(This Test Will be for Metric Weights Only)

	Test	Test with Adjustment
Up to and including 1 kg	$60.00	$180.00
Over 1 kg and including 30 kg	$100.00	$300.00

Mass Echelon II

OIML Class "E2", "F1", "F2"
ANSI/ASTM Class "1" & "1.1", "2", "3", & "4" ("5")
NBS Class "S", "S-1", & "P" ("Q")

	Test	Test with Adjustment
Up to and including 2 lbs or 1 kg	$20.00	$60.00
Over 2 lbs or 1 kg and including 20 lb or 10 kg	$40.00	$120.00
Over 20 lbs or 10 kg and including 50 lb or 30 kg	$80.00	$240.00
Over 50 lbs or 30 kg and including 2500 lb or 1250 kg	$100.00	$300.00

Mass Echelon III

OIML Class "M1", "M2", "M3"
ANSI/ASTM Class "6" ("5")
NBS Class "F", & ("Q")

	Test	Test with Adjustment
Up to and including 10 lbs or 5 kg	$7.00	$21.00
Over 10 lbs or 5 kg and including 50 lb or 30 kg	$12.00	$36.00
Over 50 lbs or 30 kg and including 1000 lb or 500 kg	$18.00	$54.00
Over 1000 lbs or 500 kg and including 2500 lb or 1250 kg	$40.00	$120.00

Volume

	Test
Up to and Including 5 gallons or 20 liters	$40.00
Over 5 gallons or 20 liters and including 50 gallons or 200 liters	$100.00
Over 50 gallons or 200 liters and including 100 gallons or 400 liters	$200.00
Over 100 gallons or 400 liters and including 150 gallons or 600 liters	$250.00
Over 150 gallons or 600 liters and including 200 gallons or 800 liters	$300.00
Over 200 gallons or 800 liters and including 375 gallons or 1500 liters	$450.00

Volume Gravimetric

	Test
Up to and including 1 qt or 1 liter	$75.00
Over 1 qt or 1 liter and including 5 gallons or 20 liters	$200.00
Over 5 gallon or 20 liters and including 50 gallon or 200 liters	$500.00

Volume LPG Provers

	Test
Up to and including 100 gallons or 400 liters	$500.00

Length

Tapes & Rigid Rules @ **$7.00** per point tested.

****

Minimum Fee per test or calibration certificate	$40.00
Special Tests or Services (Not Listed in Fee Schedule)	$50.00 per hour
Cleaning of Standards or Special Packing Needs (If Necessary)	$50.00 per hour
Services for Out of State entities are performed at TWICE the Normal Fee	

OR (1 of 1)

Oregon Department of Agriculture

Calibration service prices

More information on metrology

Calibration service prices

Calibration service	Standard lab fee*	NVLAP lab fee**
Mass	$100.00 per hour, $150.00 per hour overtime	$125.00 per hour, $187.50 per hour overtime
Volume		
Length		
Wheel load weighers	$25.00 each	

Contact a metrologist for current laboratory service capabilities and price estimate (503) 986-4667.

Note: Overtime rate is only utilized with customer consent.
*Our current NIST Certificate of measurement traceability.
**Our current NVLAP scope of accreditation.

Back to the top

More information on metrology

- Metrology phone 503/986-4667
- email Aaron Aydelotte, Metrologist
- email Clark Cooney, Metrology Lab Manager
- Calibration services
- Recognition information
- Conventional mass vs. true mass

Back to the top

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG

October 31, 2005

To Whom It May Concern:

The Department of General Services received approval on October 29, 2005 to establish a fee schedule for calibration, evaluation or other testing performed by the Department's Pennsylvania Standards Laboratory. With this approval, the Pennsylvania Standards Laboratory will start charging all non-governmental agencies a fee for their services.

Exempt from payment of the fee are all local (including municipal police departments), state, and federal governmental agencies.

Following this letter is the fee schedule established by the regulation. This letter is to notify you that the regulation is in effect, and that the Pennsylvania Standards Laboratory is charging a fee for calibration and testing services provided to non-governmental agencies.

Sincerely,

Paul Wolf

Paul Wolf, Director
Quality Assurance Division

555 Walnut Street, 6th floor Forum Place, Harrisburg, PA, 17101
717.783.1627 Fax 717.214-9505 pwolf@state.pa.us

General type of test	*Description*	*Fee*
Precision mass	Up to ASTM E 617 Class 2 or best calibration but not to a specific class to and including 30 kg. or 50 lb.	$30.00 per weight
Precision mass	ASTM E617 Class 3 and 4 and OIML Class F1 and F2 to and including 30 kg. or 50 lb.	$12.00 per weight
Ordinary mass	NIST Class F and ASTM E617 Classes 5, 6, 7 and OIML Class M1, M2 and M3 to and including 5 kg. or 10 lb.	$2.00 per weight (without adjustment) $10.00 per weight (with adjustment)
Ordinary mass	NIST Class F and ASTM E617 Classes 5, 6 and 7 from 10 kg. or 20 lb. to 50 kg. or 100 lb.	$5.00 per weight (without adjustment) $10.00 per weight (with adjustment)
Ordinary mass	NIST Class F and ASTM E617 Classes 5, 6 and 7 from 100 kg. or 200 lb. to 2500 kg. or 5500 lb.	$15.00 per weight (without adjustment) $25.00 per weight (with adjustment)
Ordinary mass	Weight Carts	$50.00 per cart
Volume transfer	5 gallon/20 liter test measures	$15.00 per measure (includes adjustment)
Volume transfer	10 gallon to 50 gallon	$50.00 per prover (includes adjustment)
Volume transfer	51 to 100 gallon	$150.00 per prover (includes adjustment)
Volume transfer	Greater than 100 gallon	$150.00 plus $50.00 per each additional 100 gallons or fractions thereof

555 Walnut Street, 6th floor Forum Place, Harrisburg, PA, 17101
717.783.1627 Fax 717.214-9505 pwolf@state.pa.us

Gravimetric Calibrations	Metal Test Measures to 5 gallon or 20 liters or 1 cubic foot	$35.00 per
Length Calibrations	Metal Tapes or Rules	$15.00 per point tested
Timing Devices	Stopwatches	$30.00
Wheel Load Weighers		$6.00 per scale
Special Tests		$75.00 per man-hour

555 Walnut Street, 6th floor Forum Place, Harrisburg, PA, 17101
717.783.1627 Fax 717.214-9505 pwolf@state.pa.us

SOUTH DAKOTA WEIGHTS & MEASURES FEE SCHEDULE

Type (# Facilities)	Current Fee ($)	FY'O8	FY'09	FY'10
Bulk LP	40.00	58.00	76.00	94.00
LP Meter	20.00	36.00	52.00	68.00
Truck Meter	15.00	25.00	36.00	46.00
Pumps	5.00	8.00	11.00	14.00
Retail Scale <31 lbs	10.00	16.00	22.00	28.00
Retail Scale >31 lbs	10.00	16.00	22.00	28.00
WIC Scale	10.00	16.00	22.00	28.00
Wrestling Scale	10.00	16.00	22.00	28.00

"Heavy" Scales

Type	Current Fee ($)	FY'O8	FY'09	FY'10
1001 – 2000 LBS	15.00	20.00	24.00	29.00
2001 – 5000 LBS	25.00	33.00	41.00	48.00
5001 – 40,000 LBS	60.00	67.00	75.00	82.00
>40,000 LBS	75.00	84.00	94.00	103.00
Livestock	100.00	124.00	148.00	173.00

Metrology Lab

Type	Current Fee ($)	FY'O8	FY'09	FY'10
Hourly Fee	45.00	62.00	79.00	96.00

Service Agencies

Type	Current Fee ($)	FY'O8	FY'09	FY'10
Agency Fees	25.00	40.00	55.00	69.00
Agent Fees	5.00	7.00	8.00	10.00

TENNESSEE.GOV The Official Web Site of the State of Tennessee

Department of Agriculture
Ken Givens, Commissioner

Testing and Adjustment Fee Schedule

MASS Tolerance Testing	Without Adjustment	With Adjustment
0-10 lb - NIST Class F ASTM Class 4, 5, 6 OIML Class M1, M2	$7.50 each	$10.00 each
11-50 lb - NIST Class F ASTM Class 4, 5, 6 OIML Class M1, M2	$7.50 each	$15.00 each
51-1000 lb - NIST Class F	$15.00 each	$20.00 each
MASS Calibration	**Without Adjustment**	**With Adjustment**
0-20 lb - ASTM Class 1, 2, 3 OIML E1, E2, F1, F2	$20.00 each	Not Available
VOLUME Calibration	**Without Adjustment**	**With Adjustment**
5 Gallon Test Measures, per NIST HAND BOOK 105-2	$15.00 each	No Additional Charge
Volume Provers, per NIST 105-3	$15.00 plus $1.00 per gallon over 5 gallons	No Additional Charge
Liquid Propane Provers, per NIST 105-4	$1.50 per gallon (Min. $50.00)	No Additional Charge

NOTES: Fees listed apply only to the testing of the standards. All written quotes are given at the "with adjustment" rate. This fee schedule is mandated by TCA 47-26-909. In some cases a standard will appear to be in tolerance, however, when the uncertainty is added or subtracted, the value of the standard is out of tolerance. Quality procedures require the value of the standard to be in tolerance after the uncertainty is added or subtracted from the corrected as left value. This procedure insures the value of the standard is within tolerance. Any standard which is out of tolerance due to these circumstances will be adjusted and charged as such.

Department of Agriculture
Ellington Agricultural Center
Nashville, TN 37204
615.837.5103

http://www.tennessee.gov/agriculture/regulate/weights/fees.html

VA (1 of 2)

DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
DIVISION OF CONSUMER PROTECTION
OFFICE OF PRODUCT AND INDUSTRY STANDARDS

FEES FOR METROLOGY LABORATORY CALIBRATION SERVICES
EFFECTIVE JULY 1, 2001*

*Tuning Fork effective date January 1, 2002

I. Individual test weights Echelon III, (OIML Classes M1, M2, M3; ASTM Classes 4, 5, 6, & 7; NIST Class F)

	Standard Type	Setup Fee	Fee Per Unit
a.	Less than or equal to 10lbs or 5kg		$5.00
b.	Greater than 10lbs or 5kg, less than or equal to 66lbs or 30kg		$6.75
c.	Greater than 66lbs or 30kg, less than or equal to 1000lbs or 500kg		$20.00
d.	Greater than 1000lbs or 500kg, less than or equal to 3000lbs or 1500kg	$60.00	$35.00
e.	Greater than 3000lbs or 1500kg, less than or equal to 5000lbs or 2500kg	$85.00	$42.00
f.	Greater than 5000lbs or 2500kg, less than or equal to 6000lbs or 2700kg	$110.00	$48.00

II. Test weight sets, Echelon III, (OIML Classes M1, M2, M3; ASTM Classes 4, 5, 6, & 7; NIST Class F)

	Standard Type	Setup Fee	Fee Per Unit
a.	Total number of weights is less than or equal to 22		$70.00
b.	Total number of weights greater than 22, less than or equal to 36		$115.00
c.	Total number of weights greater than 36, less than or equal to 54		$160.00

III. Individual and weight sets, Echelon II, (OIML Classes F1, F2; ASTM Classes 2, 3)

	Standard Type	Setup Fee	Fee Per Unit
a.	Less than or equal to 5kg or 10lbs		$25.00
b.	Greater than 5kg or 10lbs, less than or equal to 30kg or 66lbs		$50.00

IV. Temperature

	Standard Type	Setup Fee	Fee Per Unit
a.	Mercury-In-Glass	$35.00	$10.00*
b.	Electronic/Digital	$35.00	$8.00*

*Per Unit fees for each calibration point

V. Length

	Standard Type	Setup Fee	Fee Per Unit
a.	Rigid Rule	$35.00	$15.00*
b.	Flexible Tapes	$35.00	$20.00*

*Per Unit fees for each calibration point

VI. Volumetric

	Standard Type	Setup Fee	Fee Per Unit
a.	Glass - Less than or equal to 5 gallons or 20 liters	$20.00	$25.00
b.	Metal - Less than or equal to 5 gallons or 20 liters		$20.00
c.	Greater than 5 gallons (20 liters), less than or equal to 50 gallons (190 liters)	$35.00	$40.00
d.	Greater than 50 gallons (190 liters), less than or equal to 100 gallons (378 liters)	$35.00	$50.00
e.	Greater than 100 gallons (378 liters), less than or equal to 500 gallons (1893 liters)	$35.00	$135.00
f.	Greater than 500 gallons (1893 liters), less than or equal to 1000 gallons (3785 liters)	$35.00	$210.00
g.	Greater than 1000 gallons (3785 liters), less than or equal to 1500 gallons (5678 liters)	$35.00	$260.00
h.	Greater than 1500 gallons (5678 liters), less than or equal to 2000 gallons (7570 liters)	$35.00	$310.00

VII. Frequency

	Standard Type	Setup Fee	Fee Per Unit
a.	Tuning Forks as used in law enforcement		$6.00

Charges for Special Services

A. Calibration services requiring work to be performed outside the regular work area will include charges for travel tim mileage, and expenses incurred. For services requested the fee shall be based on the following:

1. Hourly Rate: $40.00

2. Vehicle Mileage:

Cars	$0.32
Pick-up trucks	$0.38
Calibration Unit	$1.30
Large Capacity Scale Testing Unit	$1.60

B. Calibration services requiring additional documentation beyond the normal one original certificate will be provided at the charge of $8.00 per document.

METROLOGY LABORATORY
Fees and Services

Effective February 1, 2004 charges are as listed. Charges for calibrations and special requests are based on actual time spent at a rate of $100/hour.

TEST WEIGHTS	FEE PER UNIT
Over 10 lb. to 50 lb.	First Weight $16.00, every weight after $8.00 Adjustments $12.00 each
Over 50 lb. to 100 lb.	First Weight $24.00, every weight after $12.00 Adjustments $18.00 each
Over 100 lb. to 1000 lb.	First Weight $34.00, every weight after $17.00 Adjustments $25.50 each
Over 1000 lb. to 2500 lb.	First Weight $106.00, every weight after $53.00 Adjustments $79.50 each
Weight sets and Individual weights 10 lb. on down Adjustments	 $5.00 per weight $15.00 per weight
As Found As Left Certificates	$25.00 first two pages + $5.00 each additional page
Scales	$50.00 (Up to 50 lb. Capacity) $75.00 (Up to 200 lb. Capacity)
TEST MEASURES	
5 gallon Measure	First Measure $50.00, every measure after $35.00
5 gallon – J Type Measure	First Measure $60.00, every measure after $45.00
Brass Pins	$12.50 each
Sight Glass	$15.00 + Installation (Minimum Charge $25.00)
VOLUME PROVERS (Adjustments Included)	
25 gallon With Bottom Zero	$100.00 / New $140.00 (Includes Scale Accuracy Verification) $125.00 / New $165.00 (Includes Scale Accuracy Verification)
50 & 100 gallon With bottom zero	$135.00 / New $175.00 (Includes Scale Accuracy Verification) $160.00 / New $200.00 (Includes Scale Accuracy Verification)
Over 100 gallon	$75.00 per additional 100 gallons of volume

LPG PROVERS

25 gallon	$300.00 / New $375.00 (Includes Scale Accuracy Verification)
100 gallon	$400.00 / New $475.00 (Includes Scale Accuracy Verification)

STATE PATROL WHEEL LOAD SCALES	FEE PER UNIT
Press Test	$25.00
Weight Test	$50.00
Adjustments & Re-Test	$100.00
Ship and Return to PAT	$50.00

PROVER CLEANING

5 gallon bucket	$8.25 Minimum
25 to 100 gallon	Time and Material

OTHER

Lead Fill	$0.80 per lb.
Minimum handling charge	$20.00 (plus UPS charges if applicable)
Administrative Charge	$16.50
Pallet and banding of weights	Minimum $18.75 per pallet

ADDITIONAL CAST TEST WEIGHT CHARGES

Handling:

Cast Weights up to 50 lb.	$1.50 per weight
Cast Weights over 50 lb. up to 100 lb.	$2.50 per weight
Cast Weights over 100 lb. up to 250 lb.	$3.50 per weight
Cast Weights over 250 lb.	$4.50 per weight

Cleaning and Painting:

Cast Weights up to 50 lb. / 25 kg.	$12.50 per weight (minimum)
Cast Weights over 50 lb. to 100 lb.	$25.00 per weight (minimum)
Cast Weights over 100 lb. to 1000 lb.	$50.00 per weight (minimum)
Cast Weights over 1000 lb. to 2500 lb.	$75.00 per weight (minimum)

Minimum Fee Per Order $50.00

The rates listed are minimum estimates. Additional charges may apply depending on condition of equipment.

All other work
(including preparation of equipment) $100.00 / hour

For further information contact:

Wisconsin State Metrology Laboratory

Shipping Address:
4702 University Avenue
Madison, WI 53705
Phone: (608) 267-3510

Mailing Address:
P.O. Box 7883
Madison, WI 53707-7883
FAX: (608) 264-7644

Test Carts
$250.00
Adjustment 125.00
As found on left sheet
25.00
Admin. Fee
16.50