



**Dora**  
Department of Regulatory Agencies

**Office of Policy, Research and Regulatory Reform**

# **2008 Sunset Review: Measurement Standards Act**

October 15, 2008





**Executive Director's Office**  
D. Rico Munn  
Executive Director

Bill Ritter, Jr.  
Governor

October 15, 2008

Members of the Colorado General Assembly  
c/o the Office of Legislative Legal Services  
State Capitol Building  
Denver, Colorado 80203

Dear Members of the General Assembly:

The mission of the Department of Regulatory Agencies (DORA) is consumer protection. As a part of the Executive Director's Office within DORA, the Office of Policy, Research and Regulatory Reform seeks to fulfill its statutorily mandated responsibility to conduct sunset reviews with a focus on protecting the health, safety and welfare of all Coloradans.

DORA has completed the evaluation of the Colorado Measurement Standards Act. I am pleased to submit this written report, which will be the basis for my office's oral testimony before the 2009 legislative committee of reference. The report is submitted pursuant to section 24-34-104(8)(a), of the Colorado Revised Statutes (C.R.S.), which states in part:

The department of regulatory agencies shall conduct an analysis of the performance of each division, board or agency or each function scheduled for termination under this section...

The department of regulatory agencies shall submit a report and supporting materials to the office of legislative legal services no later than October 15 of the year preceding the date established for termination....

The report discusses the question of whether there is a need for the regulation provided under Article 14 of Title 35, C.R.S. The report also discusses the effectiveness of the Colorado Department of Agriculture and staff in carrying out the intent of the statutes and makes recommendations for statutory and administrative changes in the event this regulatory program is continued by the General Assembly.

Sincerely,

D. Rico Munn  
Executive Director





Bill Ritter, Jr.  
Governor

D. Rico Munn  
Executive Director

## 2008 Sunset Review: Colorado Measurement Standards Act

### Summary

#### ***What Is Regulated?***

The Colorado Department of Agriculture (CDA) has regulatory authority over commercially used scales, moisture-testing devices, certified public weighers (CPWs) and scale repair companies.

#### ***Why Is It Regulated?***

The Measurement Standards Act (MSA) was established to provide consumer protection by promoting uniform measurement standards for consumer goods throughout Colorado.

#### ***Who Is Regulated?***

In fiscal year 06-07 there were 7,698 licensed owners of commercially used scales (both small and large capacity) and 238 licensed moisture-testing devices. There were 115 CPW and 6 scale repair company certifications issued.

#### ***How Is It Regulated?***

The CDA is responsible for a variety of regulatory activities that attempt to ensure consumers are adequately protected from deceptive trade practices. There are three program areas within the CDA dedicated to providing consumer protection through equity and integrity in the marketplace. The three program areas that enforce the MSA in Colorado are:

- Small Capacity Scale/Retail Inspection;
- Large Capacity Scale/Certified Public Weigher; and
- Metrology Laboratory/Scale Service Company.

#### ***What Does It Cost?***

The fiscal year 06-07 expenditure to oversee this program was \$1,679,672, and there were 17.4 full-time equivalent employees associated with this program.

#### ***What Disciplinary Activity Is There?***

<b>Period FY 02-03 through FY 06-07</b>	<b>Disciplinary Actions</b>
Scales Requiring Repair	7,932
Stop Sales Notices	3,601
Number of Fines Levied*	167

\*Data available for fines levied only include fiscal years 05-06 and 06-07.

#### ***Where Do I Get the Full Report?***

The full sunset review can be found on the internet at: [www.dora.state.co.us/opr/oprpublications.htm](http://www.dora.state.co.us/opr/oprpublications.htm).

## Key Recommendations

### ***Continue the Measurement Standards Act for nine years, until 2018.***

The MSA provides consumer protection by promoting uniform measurement standards for consumer goods throughout Colorado. Accurate scales, true and correct product labeling and honest price representations are vital to protecting Colorado consumers, as well as providing a level playing field for businesses. The current MSA is providing effective protection to Colorado consumers.

### ***Repeal the requirement for the Commissioner of Agriculture to annually test tuning forks used by cities and counties in Colorado.***

A tuning fork is used to ensure that a radar gun, which is used to determine whether a motorist is exceeding the speed limit, is accurate. Currently, the MSA requires cities and counties to annually test their tuning forks to ensure accuracy through the state metrology laboratory. However, the MSA does not require the Colorado State Patrol to annually test its tuning forks, which creates inconsistency concerning which law enforcement agencies are required to participate. According to CSP staff, the Colorado Supreme Court decision of 1980, *People v. Walker*, provides sufficient evidentiary basis to exclude its tuning forks from testing to ensure accuracy. *Walker* states that two tuning forks may be used to effectively calibrate a radar gun or one tuning fork may be used as long as the single tuning fork has been certified as accurate within a one year period of time. In order to remove this inconsistency, the General Assembly should remove the requirement within the MSA for cities and counties to annually test their tuning forks. Doing so would not comprise public protection, but rather, it would create a uniform practice for all law enforcement agencies in Colorado to rely on the *Walker* decision.

## Major Contacts Made During This Review

American Scale Company  
Colorado Department of Agriculture  
Colorado State Patrol  
Denver Police Department  
National Institute of Standards and Technology  
Northern Colorado Scale Company  
Rocky Mountain Recycling

## What is a Sunset Review?

A sunset review is a periodic assessment of state boards, programs, and functions to determine whether or not they should be continued by the legislature. Sunset reviews focus on creating the least restrictive form of regulation consistent with protecting the public. In formulating recommendations, sunset reviews consider the public's right to consistent, high quality professional or occupational services and the ability of businesses to exist and thrive in a competitive market, free from unnecessary regulation.

Sunset Reviews are Prepared by:  
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## Background

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### *Introduction*

Enacted in 1976, Colorado's sunset law was the first of its kind in the United States. A sunset provision repeals all or part of a law after a specific date, unless the legislature affirmatively acts to extend it. During the sunset review process, the Department of Regulatory Agencies (DORA) conducts a thorough evaluation of such programs based upon specific statutory criteria<sup>1</sup> and solicits diverse input from a broad spectrum of stakeholders including consumers, government agencies, public advocacy groups, and professional associations.

Sunset reviews are based on the following statutory criteria:

- Whether regulation by the agency is necessary to protect the public health, safety and welfare; whether the conditions which led to the initial regulation have changed; and whether other conditions have arisen which would warrant more, less or the same degree of regulation;
- If regulation is necessary, whether the existing statutes and regulations establish the least restrictive form of regulation consistent with the public interest, considering other available regulatory mechanisms and whether agency rules enhance the public interest and are within the scope of legislative intent;
- Whether the agency operates in the public interest and whether its operation is impeded or enhanced by existing statutes, rules, procedures and practices and any other circumstances, including budgetary, resource and personnel matters;
- Whether an analysis of agency operations indicates that the agency performs its statutory duties efficiently and effectively;
- Whether the composition of the agency's board or commission adequately represents the public interest and whether the agency encourages public participation in its decisions rather than participation only by the people it regulates;
- The economic impact of regulation and, if national economic information is not available, whether the agency stimulates or restricts competition;
- Whether complaint, investigation and disciplinary procedures adequately protect the public and whether final dispositions of complaints are in the public interest or self-serving to the profession;
- Whether the scope of practice of the regulated occupation contributes to the optimum utilization of personnel and whether entry requirements encourage affirmative action;
- Whether administrative and statutory changes are necessary to improve agency operations to enhance the public interest.

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<sup>1</sup> Criteria may be found at § 24-34-104, C.R.S.

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## *Types of Regulation*

Regulation, when appropriate, can serve as a bulwark of consumer protection. Regulatory programs can be designed to impact individual professionals, businesses or both.

As regulatory programs relate to individual professionals, such programs typically entail the establishment of minimum standards for initial entry and continued participation in a given profession or occupation. This serves to protect the public from incompetent practitioners. Similarly, such programs provide a vehicle for limiting or removing from practice those practitioners deemed to have harmed the public.

From a practitioner perspective, regulation can lead to increased prestige and higher income. Accordingly, regulatory programs are often championed by those who will be the subject of regulation.

On the other hand, by erecting barriers to entry into a given profession or occupation, even when justified, regulation can serve to restrict the supply of practitioners. This not only limits consumer choice, but can also lead to an increase in the cost of services.

Regulation, then, has many positive and potentially negative consequences.

There are also several levels of regulation.

### Licensure

Licensure is the most restrictive form of regulation, yet it provides the greatest level of public protection. Licensing programs typically involve the completion of a prescribed educational program (usually college level or higher) and the passage of an examination that is designed to measure a minimal level of competency. These types of programs usually entail title protection – only those individuals who are properly licensed may use a particular title(s) – and practice exclusivity – only those individuals who are properly licensed may engage in the particular practice. While these requirements can be viewed as barriers to entry, they also afford the highest level of consumer protection in that they ensure that only those who are deemed competent may practice and the public is alerted to those who may practice by the title(s) used.

### Certification

Certification programs offer a level of consumer protection similar to licensing programs, but the barriers to entry are generally lower. The required educational program may be more vocational in nature, but the required examination should still measure a minimal level of competency. Additionally, certification programs typically involve a non-governmental entity that establishes the training requirements and owns and administers the examination. State certification is made conditional upon the individual practitioner obtaining and maintaining the relevant private credential. These types of programs also usually entail title protection and practice exclusivity.

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While the aforementioned requirements can still be viewed as barriers to entry, they afford a level of consumer protection that is lower than a licensing program. They ensure that only those who are deemed competent may practice and the public is alerted to those who may practice by the title(s) used.

### Registration

Registration programs can serve to protect the public with minimal barriers to entry. A typical registration program involves an individual satisfying certain prescribed requirements – typically non-practice related items, such as insurance or the use of a disclosure form – and the state, in turn, placing that individual on the pertinent registry. These types of programs can entail title protection and practice exclusivity. Since the barriers to entry in registration programs are relatively low, registration programs are generally best suited to those professions and occupations where the risk of public harm is relatively low, but nevertheless present. In short, registration programs serve to notify the state of which individuals are engaging in the relevant practice and to notify the public of those who may practice by the title(s) used.

### Title Protection

Finally, title protection programs represent one of the lowest levels of regulation. Only those who satisfy certain prescribed requirements may use the relevant prescribed title(s). Practitioners need not register or otherwise notify the state that they are engaging in the relevant practice, and practice exclusivity does not attach. In other words, anyone may engage in the particular practice, but only those who satisfy the prescribed requirements may use the enumerated title(s). This serves to indirectly ensure a minimal level of competency – depending upon the prescribed preconditions for use of the protected title(s) – and the public is alerted to the qualifications of those who may use the particular title(s).

Licensing, certification and registration programs also typically involve some kind of mechanism for removing individuals from practice when such individuals engage in enumerated proscribed activities. This is generally not the case with title protection programs.

### Regulation of Businesses

As regulatory programs relate to businesses, they can enhance public protection, promote stability and preserve profitability. But they can also reduce competition and place administrative burdens on the regulated businesses.

Regulatory programs that address businesses can involve certain capital, bookkeeping and other recordkeeping requirements that are meant to ensure financial solvency and responsibility, as well as accountability. Initially, these requirements may serve as barriers to entry, thereby limiting competition. On an ongoing basis, the cost of complying with these requirements may lead to greater administrative costs for the regulated entity, which costs are ultimately passed on to consumers.

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Many programs that regulate businesses involve examinations and audits of finances and other records, which are intended to ensure that the relevant businesses continue to comply with these initial requirements. Although intended to enhance public protection, these measures, too, involve costs of compliance.

Similarly, many regulated businesses may be subject to physical inspections to ensure compliance with health and safety standards.

### ***Sunset Process***

Regulatory programs scheduled for sunset review receive a comprehensive analysis. The review includes a thorough dialogue with agency officials, representatives of the regulated profession and other stakeholders. To facilitate input from interested parties, anyone can submit input on any upcoming sunrise or sunset review via DORA's website at: [www.dora.state.co.us/pls/real/OPR\\_Review\\_Comments.Main](http://www.dora.state.co.us/pls/real/OPR_Review_Comments.Main).

The regulatory functions of the Measurement Standards Act (MSA) administered by the Colorado Department of Agriculture (CDA) relating to Article 14 of Title 35, Colorado Revised Statutes (C.R.S.), shall terminate on July 1, 2009, unless continued by the General Assembly. During the year prior to this date, it is the duty of DORA to conduct an analysis and evaluation of the MSA pursuant to section 24-34-104, C.R.S.

The purpose of this review is to determine whether the MSA should be continued for the protection of the public and to evaluate the performance of the program and staff of the CDA. During this review, the CDA must demonstrate that the regulation serves to protect the public health, safety or welfare, and that the regulation is the least restrictive regulation consistent with protecting the public. DORA's findings and recommendations are submitted via this report to the legislative committee of reference of the Colorado General Assembly.

### ***Methodology***

As part of this review, DORA staff interviewed CDA staff, officials with the National Institute of Standards and Technology (NIST), wholesalers, retailers, and public scale company personnel; and reviewed Colorado statutes, MSA rules, and the laws of other states.

### ***Profile of the Program***

The MSA was established to provide consumer protection by promoting uniform measurement standards for consumer goods throughout Colorado. The MSA is enforced by the CDA.

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The CDA is responsible for a variety of regulatory activities that attempt to ensure consumers are adequately protected from deceptive trade practices. There are three program areas within the CDA dedicated to providing consumer protection through equity and integrity in the marketplace. The three program areas that enforce the MSA in Colorado are:

- Small Capacity Scale/Retail Inspection;
- Large Capacity Scale/Certified Public Weigher; and
- Metrology Laboratory/Scale Service Company.

In addition to the CDA programs that enforce the MSA, the State of Colorado relies on national information concerning weights and measures from NIST.

NIST is a federal agency, within the United States Department of Commerce, responsible for providing technical support, and uniformity on weights and measures standards.<sup>2</sup> NIST receives input on modifications and revisions on NIST guidelines (NIST Handbooks) from the National Conference on Weights and Measures, which is a collaborative organization of industry representatives and weights and measures officials. NIST publishes several Handbooks related to weights and measures issues, including, but not limited to:

- Handbook 133 – Checking the Net Contents of Packaged Goods;
- Handbook 130 – Uniform Laws and Regulations in the Areas of Legal Metrology and Engine Quality;
- Handbook 44 – Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices;
- Handbook 105-1 – Specifications and Tolerances for Field Standard Weights;
- Handbook 105-2 – Specifications and Tolerances for Field Standard Measuring Flasks; and
- Handbook 105-3 – Specifications and Tolerances for Graduated Neck Type Metal Volumetric Field Standards.

The State of Colorado has adopted all of these NIST Handbooks in their entirety, except Handbook 130. Portions of Handbook 130, which contains model laws and regulations, have been incorporated in the MSA or related rules and policies.

#### Small Capacity Scale/Retail Inspection Program

The Small Capacity Scale/Retail Inspection program tests small capacity scales, performs price verifications and inspects packages for net weight, volume and labeling compliance at retail, wholesale and manufacturing establishments.<sup>3</sup>

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<sup>2</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-8.

<sup>3</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-5.

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Small capacity scales are defined as commercially-used scales with capacities of up to 2,000 pounds. In order to be used for determining the price of items in grocery and other retail stores, shipping centers and manufacturing facilities, scales are required to be inspected annually by the CDA. The inspection includes the use of weights to ensure accuracy, within acceptable tolerances, of the scales. Tolerances are the performance requirements that set the limit of allowable error of departure from true performance or value.<sup>4</sup> The tolerances used by the CDA are adopted from Handbook 44.

Small scales that do not pass inspection are tagged with maintenance tags signaling that the relevant scale is not within acceptable tolerance. There are two different tolerance levels used by the CDA regarding the inspection of small scales: maintenance and acceptance. Maintenance tolerances for small scales are used during routine annual inspections. The small scale's capacity followed by the acceptable maintenance tolerances are:

- 0 to 5.00 pounds – plus or minus 0.01 pound;
- 5.01 to 20.00 pounds – plus or minus 0.02 pound; and
- 20.01 to 40.00 pounds – plus or minus 0.03 pound.

The acceptance tolerance is applied to devices inspected within 30 days after installation, repair or reconditioning of scales.<sup>5</sup> The acceptance tolerance is one-half of the maintenance tolerance. The small scale's capacity followed by the allowed acceptance tolerances are:

- 0 to 5.00 pounds – plus or minus 0.005 pound;
- 5.01 to 20.00 pounds – plus or minus 0.01 pound; and
- 20.01 to 40.00 pounds – plus or minus 0.015 pound.

The various tags are as follows:

- Blue;
- Red;
- Yellow; and
- Orange.

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<sup>4</sup> National Institute of Standards and Technology, Handbook 44: Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices, 2007, p. 5.

<sup>5</sup> Colorado Department of Agriculture. Memorandum from Jonathan Handy, Measurement Standards Program Senior, *Tolerances Applied to Commercial and Law Enforcement Weighing & Measuring Devices*, January 31, 2005, p. 1.

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A blue tag is placed on a scale that is not in acceptable tolerance or is not operating properly (e.g., the scale fails to return to zero after weights are removed).<sup>6</sup> If a scale receives a blue tag, which requires maintenance, it may still be used for commercial weighing or measuring purposes. When a blue tag is placed on a scale, the owner of the scale is required to contact a licensed scale company within two days and the scale must be repaired within 30 days.<sup>7</sup> Once the scale is repaired, a state inspector will re-check it to ensure that it is within acceptable tolerance. If the scale passes the inspection, the company may use the scale for commercial use.

Red tags are utilized by inspectors when a scale is inoperable. The owner of the scale cannot operate a scale that has been red tagged until it has been repaired and passed an acceptance tolerance test.

Yellow tags are utilized by inspectors when the annual licensing fee has not been paid to the CDA.<sup>8</sup> Once a yellow tag is placed on a scale, the owner cannot use the scale until the annual fee has been paid.

Orange tags are used by inspectors for scales that are not licensed by the State of Colorado for commercial purposes, but are used for estimating purposes. For example, a hardware store has two scales. One of the scales is at the register, and is certified by the State of Colorado. The scale in the back of the store is used for estimating purposes only and has an orange tag.<sup>9</sup>

The Small Capacity Scale/Retail Inspection program also performs price verifications at retail facilities throughout Colorado. Price verifications entail inspectors checking to determine whether the shelf, tagged and advertised prices are consistent. That is, inspectors ensure that the price provided for merchandise on the shelf is the same price that rings up at the register.

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<sup>6</sup> Colorado Department of Agriculture. Memorandum from Jonathan Handy, Measurement Standards Program Senior, *Tolerances Applied to Commercial and Law Enforcement Weighing & Measuring Devices*, January 31, 2005, p. 3.

<sup>7</sup> Colorado Department of Agriculture. Memorandum from Jonathan Handy, Measurement Standards Program Senior, *Tolerances Applied to Commercial and Law Enforcement Weighing & Measuring Devices*, January 31, 2005, p. 3.

<sup>8</sup> Colorado Department of Agriculture. Memorandum from Jonathan Handy, Measurement Standards Program Senior, *Tolerances Applied to Commercial and Law Enforcement Weighing & Measuring Devices*, January 31, 2005, p. 3.

<sup>9</sup> Colorado Department of Agriculture. Memorandum from Jonathan Handy, Measurement Standards Program Senior, *Tolerances Applied to Commercial and Law Enforcement Weighing & Measuring Devices*, January 31, 2005, p. 3.

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To effectively accomplish this task, the price verification procedures in Handbook 130, which is located in Appendix A on page 32, are incorporated in the MSA. The samples, sample collection and accuracy requirements outlined in Handbook 130 differ depending on the type of store inspected. For instance, inspectors sample a smaller number of products at convenience stores or small retail stores with less than three check-out registers. In this example, the state inspector uses a two-stage sample. The first stage includes identifying 25 items for price verification. If the first-stage sample meets the accuracy requirements, which is zero price errors in the first 25 items, then the second-stage sample is not necessary. If, however, there is one price error in the first 25 items inspected, an additional 25 items are randomly selected for price verification. If more than one error is identified, then the store fails the inspection. The accuracy requirement for a sample must be 98 percent or higher to pass a single inspection.<sup>10</sup>

Retail stores with more than three check-out registers use the two-stage sample system outlined above; however, the sample size is 50 items in the first stage and, if necessary, 50 items in the second stage. If two or more errors are identified during the first stage, an additional 50 items must be tested. If more than two errors are identified in either of the two stages, the store fails the inspection.<sup>11</sup>

There are two methods employed for collecting samples during a price verification inspection: randomized and stratified. A randomized sample collection includes randomly selecting items for price verification in different areas within a facility. Stand-alone counters and displays or whole departments (e.g., bakery, seafood or men's clothing, etc.) are counted as individual areas to be sampled.<sup>12</sup>

A stratified sample collection (i.e., selecting samples from specific merchandise groups) of items on sale, specials, seasonal items or items on end-of-aisle displays) is typically used to focus on specific merchandise groups that appear to have more errors than others.<sup>13</sup>

In a stratified sample collection, items are randomly selected from different merchandise groups within a facility. The samples are tested in the two-stage sample system outlined above.

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<sup>10</sup> National Institute of Standards and Technology, Handbook 130: Uniform Laws and Regulations in the Areas of Legal Metrology and Engine Fuel Quality, 2008, p. 196.

<sup>11</sup> National Institute of Standards and Technology. *Uniform Laws and Regulations in the Areas of Legal Metrology and Engine Fuel Quality*. Retrieved May 28, 2008, from <http://ts.nist.gov/WeightsAndMeasures/upload/06-H130-Complete-Final123.pdf>

<sup>12</sup> National Institute of Standards and Technology, Handbook 130: Uniform Laws and Regulations in the Areas of Legal Metrology and Engine Fuel Quality, 2008, p. 189.

<sup>13</sup> National Institute of Standards and Technology, Handbook 130: Uniform Laws and Regulations in the Areas of Legal Metrology and Engine Fuel Quality, 2008, p. 192.

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Additionally, the Small Capacity Scale/Retail Inspection program inspects packages for net weight, volume and labeling compliance at retail, wholesale and manufacturing establishments.<sup>14</sup> The procedures for conducting inspections of packages are outlined in Handbook 133. Inspectors inspect packaged commodities at various facilities to ensure they are properly labeled and that the package accurately contains the quantity on the label.<sup>15</sup> Failure to comply with Colorado labeling requirements could result in disciplinary action.

Salient labeling requirements for packages include:

- A statement of identity;
- The net quantity of the contents;
- The name and place of business; and
- Location and prominence.

A statement of identity requires that a package contains a clear description identifying the commodity located within the package. Providing a statement of identity enables the consumer to know exactly what is in a package prior to purchasing.

The net quantity of the contents within a package outlines the weight, measure or count of the product in the package.

The name and place of business of the manufacturer, packer or distributor is required for packages for sale in Colorado. If the street address of the business is shown in a current directory, the city, state and zip code are sufficient.<sup>16</sup>

The location and prominence of the label on a package must be definite, plain and conspicuous.<sup>17</sup>

Each package sold in Colorado must contain the net weight of the product within a package. Short weight products are not permitted to be sold to consumers and violations may be written by an inspector.<sup>18</sup>

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<sup>14</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-5.

<sup>15</sup> Colorado Department of Agriculture. *Package and Labeling Inspection: Inspection*. Retrieved June 17, 2008, from <http://www.colorado.gov/cs/Satellite/Agriculture-Main/CDAG/1167928361433?rendermode=preview>

<sup>16</sup> Colorado Department of Agriculture. *Labeling Requirements: Inspection*. Retrieved June 17, 2008, from <http://www.colorado.gov/cs/Satellite/Agriculture-Main/CDAG/1167928361407?rendermode=preview&wwparam=1213721137>

<sup>17</sup> Colorado Department of Agriculture. *Labeling Requirements: Inspection*. Retrieved June 17, 2008, from <http://www.colorado.gov/cs/Satellite/Agriculture-Main/CDAG/1167928361407?rendermode=preview&wwparam=1213721137>

<sup>18</sup> Colorado Department of Agriculture. *FAQ Measurement Standards*. Retrieved May 28, 2008, from <http://www.colorado.gov/cs/Satellite/Agriculture-Main/CDAG/1167928360988?wwparam=1213733116>

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## Large Capacity Scale/Certified Public Weigher Program

The Large Capacity Scale/Certified Public Weigher program is responsible for inspecting commercially-used large capacity scales (scales capable of weighing more than 2,000 pounds) to ensure accuracy. To ensure accuracy, the CDA utilizes a fleet of heavy-duty trucks outfitted with precisely calibrated weights, cranes and carts to test and inspect large capacity commercial and law enforcement scales.<sup>19</sup> Large capacity scales are inspected at a variety of locations in Colorado, including, but not limited to:

- Grain elevators;
- Ports of entry;
- Manufactures' shipping docks;
- Truck stops;
- Meat packing plants;
- Moving and storage companies;
- Mines;
- Power plants;
- Railroads; and
- Sand and gravel companies.

Large capacity scales are an important component in business transactions. Many agricultural businesses rely upon accurate scales to determine the value of their commodities.<sup>20</sup>

Additionally, the Large Capacity Scale/Certified Public Weigher program inspects and tests for accuracy, grain moisture meters. Grain moisture meters are used by feedlots, breweries and grain elevators<sup>21</sup> to determine the moisture content of the grain. The moisture content determines how much grain is actually being purchased minus the moisture content. This ensures that the purchaser is accurately paying for the requested merchandise when purchasing grain.

The Large Capacity Scale/Certified Public Weigher program also issues certifications to Certified Public Weighers (CPW) in Colorado. CPWs operate public scales that are available for use by the general public for a variety of purposes, including weighing commodities and determining vehicle weights.<sup>22</sup>

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<sup>19</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-5.

<sup>20</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08.

<sup>21</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08.

<sup>22</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08.

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## Metrology Laboratory/Scale Service Company Program

Colorado's metrology laboratory is the custodian of the state's official standards and supplies metrology services that are directly traceable to NIST standards.<sup>23</sup> In fact, the Colorado metrology laboratory possesses a Certificate of Traceability from NIST. A Certificate of Traceability is issued when the standards to perform metrology services meet the testing and accuracy requirement imposed by NIST.

The metrology laboratory calibrates and tests a variety of measurement standards for both the public and private sectors, including:

- Mass;
- Length;
- Volume;
- Time and frequency; and
- Grain moisture.

Mass standards are used in agricultural, aerospace, biotech computer and mining industries<sup>24</sup> to determine the precise weight of items or consumer goods.

Length standards are used in law enforcement, manufacturing and highway construction<sup>25</sup> to ensure the precise length of instruments used (e.g., survey tapes, law enforcement tape measures, etc.).

Volume standards are used to ensure the net quantity at dairies, distilleries, gasoline stations and manufacturers of liquid goods.<sup>26</sup>

Time and frequency standards are used by law enforcement agencies to calibrate traffic control devices.<sup>27</sup> For example, local law enforcement agencies are required to have their radar guns calibrated, as well as Light Amplification by Stimulated Emission from Radiation (LASER) traffic speed guns and distance meters. It should be noted that the Colorado State Patrol radar guns and LASER traffic speed guns are not currently required to be calibrated by the state metrology laboratory.

Moisture standards are used to test the accuracy of commercial grain moisture meters at grain warehouses.<sup>28</sup>

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<sup>23</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-5.

<sup>24</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-5.

<sup>25</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-5.

<sup>26</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-5.

<sup>27</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-5.

<sup>28</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-5.

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The state metrology laboratory charges a fee of \$50 per hour for non-governmental entities and \$25 per hour for governmental agencies.<sup>29</sup>

The Metrology Laboratory/Scale Service Company program also ensures that companies that sell or repair commercial weighing and measuring scales are certified by the CDA.<sup>30</sup> These companies are certified to ensure the accuracy of the scales sold, installed or repaired.<sup>31</sup>

## *History of Regulation*

### Federal Regulation

In 1901, the National Bureau of Standards (NBS) was created within the United States Department of Commerce. In 1988, the Congress replaced the NBS with the National Institute of Standards and Technology (NIST). NIST does not have any regulatory authority; however, it does publish several handbooks that provide guidance for weights and measures issues (e.g., acceptable tolerances for various measurements, etc.), as well as provide technical support and training related to weights and measures issues.

### State Regulation

Colorado enacted its first weights and measures statute in 1953. In the original statute, Colorado adopted standards for weights and measures that were in conformity with the current NBS standards. Since its inception, enforcement of the weights and measures law in Colorado has been under the purview of the CDA. The original 1953 law was repealed in 1983 and re-enacted as the MSA.

In 1994, DORA conducted a sunset review of the MSA. The sunset review concluded that the MSA should continue in order to provide protection to the public. However, the sunset review recommended several changes to update the MSA. For example, the third recommendation in the 1994 sunset review prescribed amending the MSA to give the Commissioner of Agriculture the authority to revoke, refuse renewal of, suspend and restrict the certification of as well as place a CPW on probation. The recommendation was subsequently implemented by the General Assembly.

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<sup>29</sup> Colorado Department of Agriculture. *Services and Fees: Metrology Laboratory*. Retrieved on May 28, 2008, from <http://www.colorado.gov/cs/Satellite/Agriculture-Main/CDAG/1167928361301>

<sup>30</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-5.

<sup>31</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-5.

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## Legal Framework

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The Colorado Measurement Standards Act (MSA) is created in section 35-14-101, *et seq.*, Colorado Revised Statutes, (C.R.S.). The MSA directs the Commissioner of Agriculture (Commissioner) to promulgate rules necessary for the enforcement of the MSA.

The Commissioner's duties related to the MSA include, but are not limited to:<sup>32</sup>

- Establishing requirements for labeling, standards of weight, measure or count;
- Conducting investigations to ensure compliance with the MSA;
- Inspecting and testing weights and measures that are commercially used; and
- Testing all weights and measures used in checking the receipt or disbursement of supplies in every state institution.

The Commissioner is also granted special police powers in section 35-14-108, C.R.S., related to the enforcement of the MSA. Special police powers that could be utilized by the Commissioner include:<sup>33</sup>

- Issuing stop-use, hold or removal orders with respect to any weights and measures (commercially used) or packaged commodities or bulk commodities that do not meet the requirements delineated in the MSA or rules associated with the MSA; and
- Seize, for the use as evidence and without a formal warrant, any incorrect or unapproved weight, measure, package or commodity found to be used, retained, offered, or exposed for sale or sold in violation of the MSA or associated rules related to the MSA.

Owners of scales used for commercial weighing are required to obtain a license from the Colorado Department of Agriculture (CDA). Also, owners of scales using them for public weighing are required to designate the scale(s) as a certified public scale.

Additionally, moisture-testing devices are required to obtain a license from the CDA.

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<sup>32</sup> §§ 35-14-107(1)(c),(e),(i) and (j) C.R.S.

<sup>33</sup> §§ 34-14-108(1)(b and c), C.R.S.

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Regulation 5 within the CDA's rules related to measurement standards outlines the minimum information required on a licensing application for commercial use. Regulation 5 requires:<sup>34</sup>

- Name, address, and telephone number of the applicant;
- Number of devices to be licensed;
- Capacity of device where applicable;
- Location of the device; and
- Total fee required.

The Agricultural Commission (Commission) establishes the annual licensing fees for scales based on capacity. In order to determine the licensing fees, the Commission sets fees based on classifications, which are as follows:<sup>35</sup>

- Scales with a capacity of 80,001 pounds and over;
- Scales with a capacity of 30,001 pounds through 80,000 pounds;
- Scales with a capacity of 10,001 pounds through 30,000 pounds;
- Scales with a capacity of 2,001 pounds through 10,000 pounds;
- Scales with a capacity of 451 pounds through 2,000 pounds;
- Scales with a capacity of 76 pounds through 450 pounds; and
- Scales with a capacity of 75 pounds or less.

Certified Public Weighers and scale companies that provide repair services are required to obtain a certification from the CDA.

The Commissioner may impose a civil penalty on a person who violates any provision of the MSA or subsequent rules related to the MSA. Specific violations include, but are not limited to:<sup>36</sup>

- Selling or hiring an incorrect weight or measure or any device or instrument used or calculated to falsify any weight or measure;
- Selling or offering less than the quantity such person represents of any commodity or service;
- Acting or representing oneself as a certified weigher without completing the appropriate actions to be certified in Colorado; and
- Hindering or obstructing in any way the Commissioner or the Commissioner's authorized agent in the performance of the Commissioner's official duties.

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<sup>34</sup> Department of Agriculture. *Measurement Standards Rules*. Regulation 5.

<sup>35</sup> § 35-14-127(4)(a)(l), C.R.S.

<sup>36</sup> §§ 35-14-131(2)(a)(e)(j) and (l), C.R.S.

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A civil penalty for violations of the MSA or corresponding rules cannot exceed \$750 per day per violation.<sup>37</sup>

Any person who willfully makes, installs, sells or offers to sell or uses or allows to be used on his or her weights or measures any counterfeit seal, or seal of the Commissioner without proper authority may be guilty of a misdemeanor.<sup>38</sup>

If a violation of the MSA occurs, the Commissioner must notify the District Attorney in the proper district of any criminal violation of the MSA.<sup>39</sup>

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<sup>37</sup> § 35-14-131(1), C.R.S.

<sup>38</sup> § 35-14-132(1), C.R.S.

<sup>39</sup> § 35-14-132(2), C.R.S.

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## Program Description and Administration

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The Measurement Standards Act (MSA) and its corresponding rules, is enforced by the Colorado Department of Agriculture (CDA).

In order to effectively enforce the MSA, the CDA devoted a total of 17.4 full-time equivalent (FTE) employees to provide professional support in fiscal year 06-07. The FTE are broken down into three programs:

- The Small Capacity Scale/Retail Inspection;
- The Large Capacity Scale/Certified Public Weigher; and
- The Metrology Laboratory/Scale Service Company.

The Small Capacity Scale/Retail Inspection program is responsible for regulating scales and other measuring devices, price verification and packages for net quantity and labeling.<sup>40</sup> The Small Capacity Scale/Retail Inspection program utilizes a total of 9.82 FTE:

- Administrative Assistant – 0.9 FTE;
- Program Administrator – 0.95 FTE;
- Section Chief – 0.19 FTE; and
- Inspectors – 7.78 FTE.

The Large Capacity Scale/Certified Public Weigher program licenses and inspects commercially-used scales and law enforcement large capacity scales, as well as issues certifications to Certified Public Weighers.<sup>41</sup> The Large Capacity Scale/Certified Public Weigher program utilizes a total of 7.2 FTE:

- Administrative Assistant – 1.0 FTE;
- Five Large Scale Inspectors – 4.825 FTE;
- Program Administrator – 1.0 FTE; and
- Section Chief – 0.20 FTE.

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<sup>40</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08.

<sup>41</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08.

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The Metrology Laboratory/Scale Service Company program provides traceable calibration services for mass, volume, length and grain moisture standards.<sup>42</sup> The Scale Service Company Program ensures that companies who sell, repair or install commercial weighing and measuring scales are certified by the CDA. This program uses 2.03 FTE in order to effectively provide services:

- Administrative Assistant – 0.05 FTE;
- Metrologists – 1.6 FTE;
- Five Large Scale Inspectors – 0.175 FTE; and
- Section Chief – 0.21 FTE.

Table 1 highlights the total expenditures for the aforementioned programs in fiscal years 02-03 through 06-07. CDA staff was unable to provide data for fiscal year 02-03 due to the fact that the programs were General Funded and not broken down into specific programs. In fiscal years 03-04 through 06-07, the programs were cash funded.

**Table 1  
Total Expenditures**

Fiscal Year	Expenditures	FTE
02-03	Data Unavailable	Data Unavailable
03-04	\$1,589,472	19.48
04-05	\$1,676,923	19.48
05-06	\$1,673,431	19.70
06-07	\$1,679,672	19.70
Average	\$1,654,875	19.59

### *Licensing and Certification*

The CDA issues two licenses and two certifications related to the MSA. The licenses are:

- Owners of small and large capacity scales; and
- Moisture-testing devices.

Small capacity scales are defined as commercially-used scales with capacities of up to 2,000 pounds. In order to be used for determining the price of items in grocery and other retail stores, shipping centers and manufacturing facilities, small scales are required to be inspected annually by the CDA. The inspection includes the use of weights to ensure accuracy, within acceptable tolerances, of the scales.

<sup>42</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08.

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Additionally, large capacity scales are identified as commercially-used scales capable of accurately weighing more than 2,000 pounds. Large capacity scales are used to determine the value of commodities by weight.

Licenses are issued by the CDA to the owner of the scale if the scale has a certificate of conformance issued by the National Type Evaluation Program (NTEP), which ensures that the scale conforms to the National Institute of Standards and Technology (NIST) Handbook 44 requirements. Although not associated with NIST, NTEP inspects and tests scales to ensure that they meet the conformance requirements outlined in NIST Handbook 44.

Owners of scales that do not provide weighing services to the public are required to possess licenses to operate. For example, a grain elevator company that buys and sells grain and uses its own scale(s) is required to possess a license from the CDA.

A moisture-testing device is also required to obtain a license from the CDA prior to commercial use in Colorado. A moisture-testing device is used to determine the moisture content in grain.

To obtain a moisture-testing device license from the CDA an applicant must complete an application, and the device must conform to the requirements highlighted in NIST Handbook 44.

Additionally, the certifications under the MSA include:

- Certified Public Weigher (CPW); and
- Certification of scale repair companies.

A CPW operates public scales that are available for use by the general public for a variety of purposes, such as weighing commodities and determining vehicle weights.<sup>43</sup>

Examples of public scales include:

- Truckers who need to know the weight of their load. These scales are often found at truck stops;
- Moving companies the fee of which is based, in part, on the weight of the article that is being shipped;
- Recyclers that do not have their own scales;
- Those involved with farm products and commodities who do not have their own scales; and
- Building contractors that do not have their own scales.

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<sup>43</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08.

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Prior to operating as a CPW in Colorado a candidate must complete the following:

- An application offered by the CDA;
- Pay the required application fee (currently \$25); and
- Complete apprentice training by a competent scale operator on procedures for operating scales (applicants with more than six months continuous training are exempt from further training).

Upon completion of the aforementioned requirements a CPW certification is issued. A CPW certification is valid for five years from the date of issue.

Table 2 highlights the number of CPW certifications, issued by the CDA during fiscal years 02-03 through 06-07; however, the CDA was unable to provide information related to the number of new versus renewal CPW certifications. CDA staff stated that the CPW certification system is not automated; therefore, staff cannot distinguish between new and renewal CPW certifications. However, according to CDA staff, the increase in CPW certifications from 55 in fiscal year 02-03 to 115 in fiscal year 06-07 may be attributable to the fact that CPW certifications are valid for five years from the date of issue. As a result, the number of CPW certifications issued varies by year.

**Table 2**  
**Total New and Renewal CPW Certifications Issued**

<b>Fiscal Year</b>	<b>Certified Public Weigher Certifications</b>
02-03	55
03-04	62
04-05	136
05-06	110
06-07	115

A scale company must possess a certification from the CDA in order to provide repair services for scales in Colorado. Table 3 delineates the total number of scale service provider companies that were issued certifications during fiscal years 02-03 through 06-07. The decrease in certifications issued to scale service companies, from 21 in fiscal year 05-06 to six in fiscal year 06-07, is attributable to the fact that certificates issued to scale service companies are valid for five years from the date of issue, so the number of certified scale companies that obtain a new certification varies by year. According to CDA staff, the total number of certified scale service companies operating in Colorado has remained constant.

**Table 3**  
**Total New and Renewal Scale Service Company Certifications Issued**

Fiscal Year	Certified Scale Service Companies
02-03	21
03-04	17
04-05	10
05-06	21
06-07	6

### *Examinations*

In order to obtain a CPW certification in Colorado, a candidate is required to pass an examination, which is administered by the CDA. The examination includes 10 questions related to the proper operation of the scale.

The CDA provides a study sheet on its website so a candidate can prepare for the examination. If a candidate fails the examination, he or she may re-take the examination as many times as necessary in order to pass.

Table 4 delineates the total number of examinations given by the CDA in fiscal years 02-03 through 06-07.

**Table 4**  
**Total Certified Public Weigher Examinations**

Fiscal Year	Examinations
02-03	55
03-04	62
04-05	136
05-06	110
06-07	115

### *Inspections*

The CDA conducts a variety of inspections at retailer, wholesaler and manufacturing establishments to enforce the MSA, including:

- Small capacity scales;
- Large capacity scales;
- Price verifications; and
- Packages for net weight, volume, and labeling requirements.

The CDA utilizes a Risk Based Management System (RBMS), which determines the frequency of inspections. The basic premise of RBMS is that wholesaler and retailer facilities are assigned a risk value of between “0” (no violations identified) and “6” (several or major violations identified). The wholesaler, retailer and manufacturing establishments are assigned a risk value based on several inspections. RBMS assigns a risk value based on the average risk for each facility.

The RBMS assists inspectors in planning future inspections based on risk levels. The risk levels are outlined as follows:

- Low risk (risk average greater than “1” and less than “3”);
- Medium risk (risk average greater than “3” and less than “5”); and
- High risk (risk average greater than or equal to “5”).

If a facility’s risk average is low, the inspector will plan the next inspection in a year. Medium risk facilities are inspected within six months, and high-risk facilities are inspected within three months.

Additionally, inspectors conduct inspections on both small and large capacity scales to ensure accuracy. If an inspector identifies that a scale is inaccurate, depending on the severity, the scale receives a blue or red tag. Table 5 highlights the total number of small and large scales inspected, as well as corresponding blue or red tags (if applicable), for fiscal years 02-03 through 06-07.

**Table 5  
Total Number of Small and Large Scale Inspections**

Fiscal Years	Total Scales Tested	Large Scales	Small Scales	Scales Approved	Blue Tag	Red Tag
02-03	25,082	4,543	20,539	23,526	1,104	452
03-04	23,710	4,214	19,496	22,219	1,066	425
04-05	27,672	3,953	23,719	25,993	1,266	413
05-06	25,626	4,536	21,090	23,951	1,387	288
06-07	22,956	3,584	19,372	21,425	1,227	304

The data in Table 5 demonstrate that less than five percent of the small and large scales inspected during fiscal years 02-03 through 06-07 received a blue tag, requiring repairs within a 30-day period. The data also demonstrate that small and large scales received a red tag as a result of an inspection less than two percent of the time during fiscal years 02-03 through 06-07. This illustrates that the majority of scales, both small and large, are accurate and working properly.

Inspectors also conduct price verification tests in order to determine whether an establishment’s prices are consistent from the shelf to the check-out counter. That is, if a store advertises a price for a specific item on the shelf where merchandise is located, the same price must come up at the check-out counter.

Table 6 illustrates the following price verification data for fiscal years 02-03 through 06-07:

- Total number of inspections completed;
- Number of items inspected;
- Number of items accurate;
- Percent of items accurate;
- Number of items over the price at the check-out counter with the listed price on the shelf; and
- Number of items under the price at the check-out counter with the listed price on the shelf.

**Table 6  
Price Verification Data**

<b>Fiscal Year</b>	<b>Total Inspections</b>	<b>Total Items Inspected</b>	<b>Number of Accurate Items</b>	<b>Percent of Accurate Items</b>	<b>Number of Items Over</b>	<b>Number of Items Under</b>
02-03	954	60,943	58,929	96.70%	779	1,235
03-04	790	49,396	47,892	96.96%	593	891
04-05	1,296	74,650	71,635	95.96%	1,558	1,738
05-06	1,228	72,502	69,253	95.52%	1,620	1,629
06-07	872	48,534	46,325	95.45%	1,056	1,153

Finally, inspectors conduct inspections to verify information on packages, as well as label requirements for goods in Colorado. Table 7 illustrates the total number of package tests completed by inspectors, including the number of stop sale notices issued for a failed inspection and the fines associated with the failed inspections. According to CDA staff, the decrease in inspections from 1,228 in fiscal year 05-06 to 872 inspections in fiscal year 06-07 was attributable to staff vacancies in various inspector territories throughout Colorado.

The CDA was unable to provide information concerning fines levied during fiscal years 02-03 through 04-05 due to the fact that the CDA did not have an effective system in place to accurately track fines. However, CDA staff states that an effective system is currently in place to provide accurate and detailed information related to the nature and amount of each fine issued.

CDA staff stated that fines in fiscal years 05-06 and 06-07 are generally attributable to companies that fail to account for a tare weight (e.g., with bulk coffee-the weight of the bag is not deducted at the register and the customer is charged for the coffee and the bag – gross weight – rather than only the coffee). The number of failed tests appears to be high due to the fact that inspectors focus more inspections on the facilities that have a higher value in the RBMS.

**Table 7  
Total Number of Package Testing Inspections**

<b>Fiscal Year</b>	<b>Packages Tested</b>	<b>Stop Sales</b>	<b>Percentage of Failed Tests</b>	<b>Fines</b>
02-03	41,884	956	23	Data Unavailable
03-04	34,931	666	19	Data Unavailable
04-05	45,367	756	20	Data Unavailable
05-06	41,999	663	19	65
06-07	34,691	560	18	102

***Complaints/Disciplinary Actions***

Table 8 highlights the total number of complaints received by the CDA concerning the MSA in fiscal years 02-03 through 06-07.

**Table 8  
Total Number of Complaints**

<b>Fiscal Year</b>	<b>Complaints</b>
02-03	16
03-04	19
04-05	Data Unavailable
05-06	49
06-07	17

The number of complaints was relatively stagnant in the aforementioned fiscal years except fiscal year 04-05, where information was not provided by CDA, and fiscal year 05-06, where there appeared to be a spike in complaints. CDA staff cannot provide information as to the reason information was unavailable. However, CDA staff did state that prior to fiscal year 07-08, CDA’s complaint tracking system was inconsistent. Recently, CDA has instituted a new complaint tracking system, which staff states, will provide more accurate complaint tracking in the future.

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As noted in Table 8, there were 17 complaints in fiscal year 06-07 concerning the MSA. Due to the fact that the MSA encompasses a variety of regulatory programs, the types of complaints vary. For example, one complaint filed alleged inaccurate cargo scales at the airport that were overweighing items, and thus overcharging consumers. Upon investigating the complaint, the state inspector condemned (red tagged) one scale because it was severely out of tolerance and underweighing items. Another complaint fielded by CDA staff alleged multiple overcharges on merchandise. The store was investigated by the CDA staff who identified one overcharge.

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## Analysis and Recommendations

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### *Recommendation 1 – Continue the Measurement Standards Act for nine years, until 2018.*

The first sunset criterion asks whether regulation is necessary to protect the health, safety or welfare of the public. The Measurement Standards Act (MSA) provides consumer protection by promoting uniform measurement standards for consumer goods throughout Colorado. To further enhance consumer protection, the MSA has adopted several National Institute of Standards and Technology (NIST) Handbooks, which address model laws and regulations. NIST is a federal agency responsible for providing technical support, and uniformity on weights and measures standards.<sup>44</sup> The NIST Handbooks provide a baseline concerning uniform measures standards.

Additionally, in order to adequately protect the public, the Colorado Department of Agriculture (CDA) is charged with enforcing the MSA. In order to effectively enforce the MSA, the CDA utilizes the following program areas:

- Small Capacity Scale/Retail Inspection;
- Large Capacity Scale/Certified Public Weigher; and
- Metrology Laboratory/Scale Service Company.

The Small Capacity Scale/Retail Inspection program is responsible for inspecting small scales (scales capable of weighing less than 2,000 pounds) to ensure that they are operating within the acceptable tolerance deviations, as outlined in NIST Handbook 44. The inspection of small scales enhances consumer protection by ensuring that consumers are paying for the correct amount of goods that are weighed or measured.

The Small Capacity Scale/Retail Inspection program also performs price verifications and inspects packages for net weight, volume and labeling compliance at retail, wholesale and manufacturing establishments.<sup>45</sup> Doing so protects consumers from deceptive trade practices. One example of a deceptive trade practice that could potentially harm a consumer entails an establishment including the weight of the bag (tare weight) in a bulk coffee purchase. Inspectors have a variety of regulatory enforcement mechanisms available to effectively enforce the MSA and offer protection to the consumer, including issuing fines or stop sale orders when necessary.

Likewise, the Large Capacity Scale/Certified Public Weigher program is responsible for inspecting commercially-used large capacity scales (scales capable of weighing more than 2,000 pounds) to ensure accuracy.

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<sup>44</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-8.

<sup>45</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08, p. 7-5.

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The Large Capacity Scale/Certified Public Weigher program inspects and tests for accuracy, grain moisture meters, which are used by feedlots, breweries and grain elevators to determine the moisture content in grain.

Large capacity scales are an important component in business transactions within Colorado. Many agricultural businesses rely upon accurate scales to determine the value of their commodities.<sup>46</sup> Therefore, regulation is necessary in order to enhance consumer protection.

The Large Capacity Scale/Certified Public Weigher program also issues certifications to Certified Public Weighers (CPW) in Colorado. CPWs operate public scales that are available for use by the general public for a variety of purposes, including weighing commodities and determining vehicle weights.<sup>47</sup> The certification requirement for CPWs ensures that they possess a minimum level of competency in order to effectively and accurately use public scales, which adds to consumer protection.

Additionally, the Metrology Laboratory/Scale Service Company program utilizes Colorado's metrology laboratory to calibrate and test a variety of measurement standards for both the public and private sectors to ensure accuracy of measuring devices, including:

- Mass;
- Length;
- Volume;
- Time and frequency; and
- Grain moisture.

In order to ensure that the metrology laboratory testing services are accurate, it receives a Certificate of Traceability, which is issued by NIST.

In sum, the NIST Handbooks that are adopted within the MSA, as well as the aforementioned program areas utilized by the CDA to enforce the MSA, provide protection to the consumer by ensuring uniform measurement standards for consumer goods throughout Colorado. Many goods sold to consumers are sold by weight, measure or count.<sup>48</sup> Therefore, accurate scales, true and correct product labeling and honest price representations are vital to protecting Colorado consumers, as well as providing a level playing field for businesses.<sup>49</sup>

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<sup>46</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08.

<sup>47</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08.

<sup>48</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08.

<sup>49</sup> Colorado Department of Agriculture. Division of Inspection and Consumer Services Budget Information and Narrative, FY 07-08.

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During this sunset review, the Department of Regulatory Agencies did not identify any major policy issues associated with the MSA. Instead, this review revealed that the current MSA is providing effective protection to Colorado consumers; therefore, the General Assembly should continue the MSA for nine years, until 2018.

***Recommendation 2 – Repeal the requirement for the Commissioner of Agriculture to annually test tuning forks used by cities and counties in Colorado.***

Currently, the MSA requires all weights and measures used by local cities or counties to be tested annually to ensure accuracy. The tuning fork, which is used to determine the accuracy of radar guns, is the most widely used measurement instrument used by local governments that falls under the annual testing requirement. The state metrology laboratory is charged with performing the accuracy test and ultimately certifying tuning forks.

A tuning fork is used to ensure that a radar gun, which is used to determine whether a motorist is exceeding the speed limit, is accurate. To perform an accuracy test on a radar gun, the tuning fork is tapped against a non-metallic object to set it “ringing.”<sup>50</sup> It is then held sideways in front of the radar gun allowing it to read and display a simulated speed which should match the speed stamped on the tuning fork.<sup>51</sup>

The MSA does not include the Colorado State Patrol (CSP) in the requirement of testing its tuning forks. It is unclear as to why the CSP is currently excluded from this requirement; however, it does create inconsistency concerning which law enforcement agencies are required to participate.

According to CSP staff, the Colorado Supreme Court decision of 1980, *People v. Walker*, provides sufficient evidentiary basis to exclude its tuning forks from testing to ensure accuracy. *Walker* states that two tuning forks may be used to effectively calibrate a radar gun or one tuning fork may be used as long as the single tuning fork has been certified as accurate within a one year period of time.<sup>52</sup> This case has set a precedent and is cited by the CSP concerning the accuracy of its radar guns.

CSP staff also stated that the radar units (guns) purchased by the CSP come with a document certifying the accuracy of the gun.

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<sup>50</sup> The Radar Shop. *Radar Accessories*. Retrieved August 3, 2008, from [http://www.theradarshop.com/Radar\\_Accessories.html](http://www.theradarshop.com/Radar_Accessories.html)

<sup>51</sup> The Radar Shop. *Radar Accessories*. Retrieved August 3, 2008, from [http://www.theradarshop.com/Radar\\_Accessories.html](http://www.theradarshop.com/Radar_Accessories.html)

<sup>52</sup> *People v. Walker*, 610 P.2d 496, 500 (Colo. 1980).

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Although required by statute, the Denver Police Department does not submit its tuning forks to the state metrology laboratory for annual testing. Instead, the Denver Police Department relies on the initial certification of the tuning fork, provided by the manufacturer, or if the initial certification documentation is lost or missing, the tuning fork is sent to the state metrology laboratory for certification. Once certified, the Denver Police Department relies on *Walker* to argue the accuracy of its tuning forks, and thus its radar guns.

Thus, the General Assembly has decided that some law enforcement agencies do not have to use the state metrology laboratory to ensure accuracy of tuning forks. Further, case law has determined that a radar gun does not need to be calibrated by the state metrology laboratory in order to be deemed accurate.

Colorado case law, thus, creates a double standard that may unfairly cause local governments that choose to comply with state law to incur costs.

Law enforcement agencies have an incentive to ensure that their radar guns are accurate as both local and state cases involving the disposition of speeding tickets are more effectively prosecuted when the equipment used has been properly tested. Law enforcement agencies, therefore, have two basic options: comply with the statute and have the state metrology laboratory calibrate their tuning forks annually, or adhere to the principles of *Walker*, which states that two tuning forks may be used to effectively calibrate a radar gun or one tuning fork may be used as long as the single tuning fork has been certified as accurate within a one year period of time.

Some law enforcement agencies do not use the state metrology laboratory to certify their tuning forks, instead they rely on the *Walker* case. The advantage of *Walker* is that law enforcement can, and likely does, use more than one tuning fork to test their radar guns to ensure accuracy. In fact, this option also has maximum evidentiary impact because radar guns are tested daily by either two tuning forks or one certified tuning fork. This assures protection to consumers that the equipment used by law enforcement agencies is accurate, thereby ensuring equitable law enforcement practices and engendering consumer confidence.

There is inconsistency within the MSA regarding the law enforcement agencies that are required to annually test their tuning forks. In order to remove this inconsistency, the General Assembly should remove the requirement outlined in the MSA. Doing so would not comprise public protection, but rather, it would create a uniform practice for all law enforcement agencies in Colorado to rely on the *Walker* decision.

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***Recommendation 3 – Authorize the Commissioner of Agriculture to promulgate rules clarifying when a scale should receive a blue or red tag.***

Section 35-14-124(1), Colorado Revised Statutes (C.R.S.), states that a blue tag must be placed on a scale that the Commissioner of Agriculture (Commissioner) has deemed to be out of tolerance or in need of repairs. If a scale receives a blue tag, which requires maintenance, it may still be used for commercial weighing or measuring purposes.

If a blue tag is issued, the owner or agent of the scale is required to notify a service company within two days of the issuance of the blue tag. Repairs to the scale must be completed within 30 days of the issuance of the blue tag. If the scale is not repaired within the 30-day period, it must be removed from commercial use. However, if there is a delay in repairing a scale that has received a blue tag due to a delay in obtaining parts used to repair the scale, the Commissioner has the authority to extend the 30-day requirement.

Section 35-14-124(1), C.R.S., does not clearly define how far out of tolerance a scale must be in order to receive a blue tag. Further, the statute does not define what “minor repairs” to a scale means. The ambiguity of when a scale could receive a blue tag creates inconsistency as to when a blue tag is placed on a scale.

Additionally, section 35-14-124(2), C.R.S., states that a red tag is placed on a scale that must be removed from use. However, the statute does not highlight the circumstances in which a scale should receive a red tag.

In order to alleviate the ambiguity of determining when a scale receives a blue or red tag, the General Assembly should authorize the Commissioner to promulgate rules clarifying the circumstances under which a blue or red tag should be issued. Doing so would provide a clear delineation of when a scale receives a blue or red tag, which would eliminate the subjectivity associated with the unclear circumstances under which a scale receives either a blue or red tag. This would provide additional consumer protection by clearly delineating when a scale should receive either tag.

***Recommendation 4 – Repeal obsolete language from the MSA.***

The MSA contains obsolete language that should be repealed by the General Assembly:

- Section 35-14-102(14), C.R.S., defines laboratory as the metrology laboratory of the Measurement Standards Section of the Division of Inspection and Consumer Services. “Measurement Standards Section” should be removed from statute because this section no longer exists, and therefore, is not necessary in the statute.

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- Section 35-14-102(17), C.R.S., defines moisture content to mean the percentage content of moisture and other volatiles on a wet basis in a grain sample or official grain sample as determined in a manner recognized by the United States Department of Agriculture. “Official grain sample” should be removed from the MSA because the grain sample referenced in the definition, in practicality, serves as the official grain sample. Removing “official grain sample” would remove unnecessary and duplicative language from the MSA.
  - Section 35-14-102(21), C.R.S., provides a definition of non-consumer package or package of non-consumer commodity. This definition should be removed from the MSA because it does not appear in the MSA and therefore is not necessary.
  - Section 35-14-102(25), C.R.S., defines primary standards to mean the physical standards of the state which serve as the legal reference from which all other standards and weights and measures are derived. In 1993, NIST changed the term “primary standards” to “reference standards;” therefore, in order to update the MSA with current language used by NIST, the term “primary” should be replaced with “reference.”
  - Section 35-14-102(30), C.R.S., defines secondary standards to mean the physical standards which are traceable to the primary standards through comparisons, using acceptable procedures, and are used in the enforcement or weights and measures laws and regulations. The definition should be amended to remove “primary” and replace it with “reference.” Doing so serves to update the MSA to current language used by NIST.
  - Section 35-14-104, C.R.S., uses the term “primary” standards and should be replaced with “reference” standards. This would update the existing MSA to use current language utilized by NIST.
  - Section 35-14-102(26), C.R.S., defines a principal display panel as a part of a label that is designed to be displayed, presented, shown or examined under normal and customary conditions of display and purchase. When there is more than one principal display panel on a package, each panel must meet the requirements pertaining to the principal display panel. This definition should be removed from the MSA because it does not appear in the MSA and therefore, is not necessary.
  - Section 35-14-102(31.6), C.R.S., provides a definition for type evaluation; however, “type evaluation” does not appear in the MSA and therefore, should be removed from the statute.

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***Recommendation 5 – Repeal the licensing classifications for scales from the MSA, and allow the Commissioner to establish such classifications by rule .***

Section 35-1-107(5)(a), C.R.S., authorizes the Commissioner to establish classifications and sub-classifications for the MSA by rule. Therefore, the General Assembly should remove the current licensing classifications for scales as delineated in section 35-14-127(4)(a)(I), C.R.S. The Commissioner should establish a classification system by rule, and should be able to amend classifications through the rulemaking process. This allows more flexibility in amending the classifications *via* rule rather than a statutory change, enabling the Commissioner to actively respond to issues that may arise concerning classifications.

***Administrative Recommendation 1 – Post current rules related to the MSA on the CDA website.***

Currently, the rules related to the MSA are not available to the public or registrants *via* the CDA website. The absence of the rules on the CDA website presents a potential barrier to both consumers and registrants in obtaining the most current rules related to the MSA.

The rules are an important component for the effective regulation of weights and measures in Colorado. For example, the rules outline the label requirements for packages. Limiting access to the current rules could compromise a businesses ability to provide the required information on packages outlined in rule. This would obviate protection purportedly offered to consumers by the rule.

The CDA website is a useful and convenient resource for information concerning weights and measurement standards in Colorado. Therefore, providing the rules on the CDA website would serve as an additional resource for both consumers and businesses, and would foster an environment that improves access to information. Improving accessibility could potentially increase the individuals who have knowledge of the regulation of the weights and measurement standards in Colorado.

In sum, posting current rules related to the MSA offers an additional venue for both the public and businesses to easily access information related to the regulation of weights and measures in Colorado. The rules exist to protect the public, but if consumers and businesses cannot access them, public protection is potentially jeopardized. Therefore, the CDA should post the current rules related to the MSA on its website.

## Appendix A – NIST Handbook 130 Samples, Sample Collection and Accuracy Requirements

Column 1. Type of Store	Column 2. Samples	Column 3. Sample Collection Procedures	Column 4. Accuracy Requirements
<p>Convenience or Any Other Small Retail Store</p> <p>Note: For this procedure, a small store is typically one with 3 or less check-out registers</p>	<p>Two-Stage Sample</p> <p>First Stage = 25 items</p> <p>Second Stage = 25 items or more</p> <p>Total = 50 items or more</p> <p>or</p> <p>Single-Stage Sample</p> <p>50 items or more</p>	<p>Use Randomized Sample Collection in 7.3.1 or the Stratified Sample Collection in 7.3.2.</p> <p>and</p> <p>Use the Manual or Automated Inspection Procedures</p>	<p>If 1 error is found in the 25 item sample, test an additional 25 items.</p> <p>If more than 1 error is found in the 50 item sample, the store fails</p> <p>Note: If more than 1 error is found in the first 25 items the</p>
<p>All Other Retail Stores</p>	<p>Two-Stage Sample</p> <p>First Stage = 50 items</p> <p>Second Stage = 50 items or more</p> <p>Total = 100 items or more</p>	<p>Note: Test the store as a whole unit by taking samples from all "areas" of the store,</p> <p>or</p> <p>divide the store into "areas" and select samples from several "areas" (e.g., at least 10 or one-third of the "areas")</p>	<p>If 1 error is found in the 50 item sample, the store passes.</p> <p>If 2 errors are found in the 50 item sample, test an additional 50 items.</p> <p>If more than 2 errors are found in the 100 item sample, the store fails.</p> <p>Note: If more than 2 errors are found in either stage the store fails.</p>
	<p>Single-Stage Sample</p> <p>100 or more items</p>		<p>If more than 2 errors are found in the 100 item sample the store fails, or</p> <p>If more than 100 items are sampled, the error rate shall not exceed 2 %</p>

Source: National Institute of Standards and Technology, *Handbook 130: Uniform Laws and Regulations in the Areas of Legal Metrology and Engine Fuel Quality*, 2008, p. 188.