

Weights and Measures



Weights and Measures is the story of one of the earliest of government services. The early standards were parts of the body or common articles like grains of wheat or barley. A cubit was the length of the forearm from elbow to the ends of the fingers. A span was the width of the hand spread and a foot was the length of the foot. The weight of a carob bean was one standard that has become what is known as a carat. As we can see there was quite a difference sometimes. The Bible says in Proverbs 20:10 "Divers weights and divers measures, both of them are alike abomination to the Lord". Today we have standards that have been developed over the years and more accurate means to measure them.

The United States Constitution in Article 1 Section 8 says "The Congress shall have power to coin money, regulate the value thereof, and of foreign coin, and fix the standard of weights and measures". The weights and measures part is done today through the National Institute of Standards and Technology or NIST. Besides maintaining the Federal or National Standards to compare with the States' Standards, NIST also publishes various Handbooks for "cooperation with the states in securing uniformity of weights and measures laws and methods of inspection."

In 1846 New York State received Federal Standards, which were stored away in the original wrappings until 1907. In 1910 the Cobb-Merritt law established uniform standards throughout the state, uniform methods of inspection, testing and sealing, and the protection of the consumers and business interests.

Today the state provides supervision, support, and training and maintains the standards for testing the standards for the local municipalities. The state also contracts for and pays for the petroleum quality program to test gasoline and diesel fuel.

In 2008, as the Tioga County Weights and Measures Director, I made 159 inspections in 134 establishments. Out of a total of 758 devices I tested all but 18. Out of 258 scales 93.8% tested correct 2 tested over and 12 indicated under. Out of 364 liquid measuring devices, 306 or 86.4% were correct, 33 tested over and 13 tested under. I investigated 5 complaints, 4 on gasoline and 1 on short weight. I took 48 gasoline samples and 10 diesel fuel samples and made one investigation of an out of tolerance octane sample. If a device is out of tolerance in the customer's favor the owner is informed and the device is ordered repaired with no time limit. If the device is out of tolerance not in the customer's favor, a stop- use, a stop-removal, or a removal order is issued until corrected.

One question that is sometimes asked is "what if the device is adjusted after it is inspected so that the customer is cheated?" The answer is that most type approved devices have a means to physically seal so that it cannot be changed without breaking the seal. The owner can break the seal to adjust the device only if he notifies the Director of Weights and Measures so that the device can be retested.

We had one case in 2008 in which the gas station tampered with the seal covers to adjust the pumps without breaking the seal and without notification. I was made aware of the possibility of this happening by the State Specialist and after inspection found that indeed six pumps had been tampered with. I required the sealed covers that were damaged to be replaced and fined the company \$300 for the first violation and \$600 each for the other five for a total of \$3300. Part of any inspection is the inspection of the seals to determine if they are intact at the time of testing.

The weights and measures program is important to ensure confidence in the fairness in the marketplace. The old Roman "caveat emptor", let the buyer beware, needs the help of the Weights and Measures to protect both the buyer and the seller.