

**AGRICULTURE/  
WEIGHTS & MEASURES**

**Liquid Measures**

3 teaspoons.....	1 tablespoon
2 tablespoons .....	1 ounce
8 ounce .....	1 cup
2 Liquid Measure cups.....	1 pint
2 pints.....	1 quart
4 quarts.....	1 gallon
31 ½ gallons.....	1 barrel

**Long Measures**

12 inches.....	1 foot
3 feet .....	1 yard
5 ½ yards .....	1 rod
5,280 feet .....	1 mile

**Dry Measures**

2 pints.....	1 quart
8 quarts.....	1 peck
4 peck .....	1 bushel

**Area Measures**

144 square inches.....	1 square foot
9 square feet .....	1 square yard
30 ¼ square yards .....	1 square rod
43,560 square feet .....	1 acre
1 square mile.....	640 acres

**Cubic Measures**

1,728 cubic inches.....	1 cubic foot
27 cubic feet.....	1 cubic yard
128 cubic feet.....	1 cord (wood)
231 cubic inches.....	1 US standard gal.

**Approximate Weight of Liquids**

Milk (1 gal.).....	8.6 lbs
Water (1 gal.).....	8.3 lbs
Diesel (1 gal.).....	7.1 lbs
Regular Gasoline (1 gal.).....	6.05 lbs



**Alameda County Sealer of Weights & Measures** operates under the authority and direction of the California Department of Food and Agriculture, Division of Measurement Standards (DMS). Seven permanent employees operate as a unit within the **Alameda County Department of Agriculture/Weights & Measures**, which is part of the Alameda County Community Development Agency.

The primary purpose of the Sealer is to ensure that “Equity Prevails” in the marketplace. This means that the weighing and measuring devices upon which commercial transactions are based favor neither the buyer nor the seller. To achieve this objective the Sealer enforces the laws and regulations of the Business and Professional Code and the California Code of Regulations. Locally this enforcement protects and promotes the economy and commerce of Alameda County.



ALAMEDA COUNTY | Community Development Agency

**AGRICULTURE/WEIGHTS & MEASURES**

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**WEIGHTS &  
MEASURES**

**May  
equity  
prevail**

**CATHY ROACHE**  
Alameda County  
Agricultural Commissioner/  
Sealer of Weights & Measures



ALAMEDA COUNTY  
Community Development Agency

In addition to inspection activities, Weights & Measures officials provide education and training to the public and the regulated industries. Your W&M official is a “third party” to virtually any transaction you may make based upon the activities in the following programs:

### Service Agents

Persons who sell, rent, install, service, or repair commercial weighing and measuring devices are required to be licensed by the State DMS. Service Agents must report their work to county weights and measures officials. This allows for review of the accuracy of their work and verification that only approved devices are placed into service.

### Devices

Weights and Measures inspectors inspect and test the following types of weighing and measuring devices: gasoline dispensers, check out scales at supermarkets, propane and butane meters, electric meters, taxi meters, odometers and ambulances, pharmacy scales, deli counter scales, livestock scales, concrete batch plant scales and truck scales. Approximately 40,000 such devices are monitored in Alameda County each year. Each device is tested for accuracy and inspected to determine if it is appropriate for its intended use. Once approved, the inspector “seals” the device by placing a paper seal on it.

### Quantity Control

But just because a device has been sealed, how can you know you are getting what you paid for? The Quantity Control program provides that answer. Inspectors conduct routine inspections on packaged goods using statistical sampling procedures to determine if the proper weight, measure or count is being used in the computation of the price. As part of the same inspection, package labeling is examined for compliance with the basic labeling requirements.

“Undercover” test purchases are made at various establishments through the county in order to check the accuracy of transactions. Goods are selected at random and a purchase is made to determine if customers are being charged the advertised price. Consumer complaints received by the department are investigated in this manner to check for any discrepancies. Weights and Measures officials have the authority to inspect any commodity being bought, sold, traded, bartered, etc.

### Petroleum Products

Weights and measures officials collect samples of gasoline to be analyzed for octane rating. Undercover purchases are made to investigate consumer complaints. Labeling regulations are also strictly enforced to provide accurate product identity information to the seller and the consumer.

### Weighmaster

In one way or another, most commerce is affected by the activities of weighmasters. Weighmasters are persons licensed by the State DMS to certify the weighed, measured, or counted quantity of any commodity. They often operate commercial scales used to determine shipping costs, or amounts of industrial or agricultural products.

Weighmasters issue certificates attesting to the weight of such products. Weight and measures officials perform routine inspections of weighmasters to ensure the correctness of the certificates issued.

### Scanner Program

Inspectors from the Department’s Weights and Measures Program routinely inspect point of sale terminals (scanners) at retail locations throughout the County to ensure that prices charged for items agree with the posted prices. Some examples of the type of locations inspected are stores such as grocery, discount, automotive, department, video or any type of retail business that uses scanners to charge its customers. This program is designed to protect both consumers and sellers from incorrect computation of charges

## Weights & Measures

Ensures that “Equity Prevails” in the marketplace by weighing and measuring devices upon which commercial transactions are based – favoring neither the buyer nor the seller.

