

Weights and Measures

*Gasoline Sales ❖ Firewood Sales ❖ Mulch Sales
Market Scales ❖ Home Heating Oil
Price Scanners ❖ Propane*

Equity in the Marketplace



County of Bucks

*Department of Consumer Protection/
Weights and Measures*

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www.BucksCounty.gov/ConsumerProtection

The County Sealer

When you make a purchase at the food store, fill your tank with gasoline at the service station, or buy any merchandise by weight or by measure, you think the transaction is only between you and the vendor. It may be a surprise to know that every such transaction also includes a County Sealer, even though one is not present in person.

The County Sealer is the Weights and Measures official who checks all weighing, measuring, and timing devices used in sales made to the public. This person is always present in spirit, protecting both buyer and seller. Sealers are dedicated persons working quietly and tirelessly to save customers money, and to safeguard vendors' businesses. Errors in either direction, over or under, will cause someone to suffer.

The Weights and Measures official tests and seals all weighing and measuring devices used within Bucks County. To "seal" means to put a lock of sorts on the adjusting mechanism of a device after the item has been inspected and found accurate. "Sealing" prevents an unscrupulous vendor from changing the calibration of a device. An external two-inch round vinyl seal is also placed on each device to inform customers that an accuracy check was performed during a certain month and year.

How Are You Protected?

When you as a consumer make a purchase at a supermarket, gas station, delicatessen, or other retail establishment, do you ever ask yourself if that scale is weighing correctly? Did the prepackaged meat you just purchased have the correct total selling price on the label? Did you receive the correct amount of home heating oil in your last delivery? And the gasoline pump you just used to fill up your tank – did the gas seem a little more costly than usual?

The Weights and Measures inspector is constantly checking and re-checking all of these devices to make sure that any of these mechanical instruments does not malfunction because of normal wear and tear. It is the inspector's job to seek out and find these errors.

***Provided as a public service by
The Bucks County Commissioners
and
The Bucks County Department of
Consumer Protection/Weights & Measures***

How “Short Measure” Adds Up

If a piece of meat selling for \$4.98 a pound has an error in weighing of just one ounce, the error will cost someone 31 cents before the package even leaves the store.

A scale that is incorrect by one ounce on each weighing, making 100 weighs a day over a period of only 300 days a year at a unit price of \$2.00 a pound will add up to an error of \$3,750 a year!

An error of three tablespoons in five gallons on a gasoline pump will result in an error of thousands of dollars a year at today’s average pump volumes.

If you feel you have been shorted in any manner, call the Bucks County Department of Consumer Protection/Weights and Measures at 215-348-6060.

Quality

When you make a purchase, two elements are primary in your decision: quality and quantity.

Quality is a subjective matter. One person’s good quality can be another person’s bad taste. In a free market society, deciding on the level of quality of a purchase is left to the individual’s personal judgment. The government regulates quality only to the extent that certain minimum standards of health and safety are required. Beyond that, each individual must use his or her own judgment when it comes to “quality”.

Quantity

On the other hand, “quantity” can be determined to a high degree of accuracy. It would be unrealistic for each individual consumer to spend the time and effort it takes to verify the amount contained in every package purchased. It is much more realistic to have a few people check the packages for the general public so that the consumer can be reasonably sure that a package labeled “one pound” actually weighs one pound.

Oil Tank Gauge Table							
APPROXIMATE U.S. GALLONS FOR EACH 1-INCH LEVEL							
Size	275H	275V	330H	330V	500	550	1000
Width/Dia.	27x44"	44x27"	44x27"	27x44"	48"	48"	48"
Length	60"	60"	72"	72"	65"	72"	130"
Inches	GALLONS OF OIL IN TANK						
25"	261	158	313	186	268	290	527
26"	269	165	322	195	281	305	554
27"	275	172	330	203	295	320	580
28"		179		211	308	334	606
29"		186		220	321	348	632
30"		193		228	334	362	658
31"		200		237	347	376	683
32"		207		245	360	390	708
33"		214		253	373	404	733
34"		221		262	385	417	757
35"		228		270	397	430	781
36"		235		277	408	443	804
37"		242		285	421	455	827
38"		248		292	432	467	850
39"		254		299	443	479	870
40"		259		305	453	490	890
41"		264		311	463	500	910
42"		268		316	472	510	928
43"		272		320	481	520	945
44"		275		322	488	528	960
45"					495	536	974
46"					501	544	986
47"					506	547	995
48"					509	550	1000

The material in this brochure is for informational purposes only.

It is meant to give you general information and not specific legal advice.

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Length	60"	60"	72"	72"	65"	72"	130"
Inches	GALLONS OF OIL IN TANK						
1"	6	2	8	2	2	3	5
2"	14	5	17	6	7	8	14
3"	23	9	28	11	13	14	26
4"	32	14	38	16	20	22	40
5"	42	19	50	23	28	30	55
6"	52	25	64	30	36	40	72
7"	63	31	76	37	46	50	90
8"	74	38	90	44	55	60	110
9"	85	44	103	52	66	71	130
10"	96	51	116	60	76	83	150
11"	108	58	131	68	88	95	173
12"	120	65	144	77	99	107	196
13"	132	72	158	85	111	120	219
14"	144	79	172	94	123	133	243
15"	156	86	186	102	135	146	267
16"	168	94	199	110	148	160	292
17"	179	101	214	119	166	174	317
18"	190	108	227	127	174	188	342
19"	201	115	240	136	187	202	368
20"	212	122	254	144	200	216	394
21"	223	129	266	152	214	230	420
22"	233	136	280	161	227	245	446
23"	243	143	292	169	241	260	473
24"	252	151	302	178	254	275	500

Please keep in mind that all calculations using these charts will only be approximations.

There are such people. They are out there checking the quantity of the contents of various packages in your local supermarket. This requires extensive training, a thorough technical knowledge of the varying characteristics of different types of commodities and a wide range of precise measuring equipment and measurement techniques. They are the Weights and Measures inspectors.

Here are just some of the duties of the Weights and Measures inspectors:

- Make sure all fuel dispensing pumps have the mandated price postings.
- Check for water or other contaminants in fuel storage tanks.
- Test the interlock, anti-drain valve and price accuracy of fuel dispensing devices.
- Test and seal meters for accuracy on retail fuel oil delivery trucks.
- Test and seal timing devices such as parking meters and air hoses at gas stations.
- Inspect off-premises pre-packaged food products for accurate weight, e.g. dairy products, cereal, canned goods, pet foods, etc.
- Check prices on items to be sure they are marked correctly and are legible to the consumer.
- Inspect cash register entries and UPC scanners for accuracy.
- Check advertised items for pricing accuracy.
- Test and seal the calibrating unit on gasoline or kerosene dispensing pumps.
- In the summertime, inspect roadside farm stands and boat marinas.
- Inspect fabric stores that sell cloth by linear measure.

Helpful Hints

GASOLINE SALES

When purchasing gas for your vehicle, you should do the following:

- Regardless of the weather, always observe the transaction.
- Make sure all of the numbers on the face of the pump are set to **zero**. You can become the victim of an “inflated” purchase if the previous purchase is on the pump.

- Check the price signs posted for the gas being purchased. See that the price on the sign corresponds with the computer price shown on the pump face.
- Make sure the octane rating is posted on the pump. Use the octane recommended by the vehicle manufacturer.
- Beware of anything that impairs your ability to read the pump numbers.
- Avoid getting gas when a delivery truck is re-filling the main storage tanks. Sediment is stirred up and can clog your car's gas filter.
- Watch all credit card transactions closely. Check the calculations before signing. *Be sure to get a receipt!*
- If you believe that a station is involved in any deceptive practices, call the Bucks County Office of Consumer Protection/Weights and Measures.
- Look for County or State inspection seals, which are usually located on the face of the dispenser.

Keep In Mind!

When comparing the amount of your purchase against your gas tank specifications from your car's owner's manual, remember that the specs in the owner's manual are estimated, uncertified capacities and you may often fit more than those capacities in your tank when filling up.

Also remember that when buying gas in a plastic container for your lawnmower, many of these containers are manufactured in Canada, and Canada's "Imperial Gallon" is a larger measure than the U.S. gallon, and consequently two or five U.S. gallons may not reach the fill line on a container made in Canada

Price Scanners

In February of 1997 a new law took effect requiring annual inspection of Universal Product Code (UPC) scanning systems and Price Look-Up (PLU) devices.

One hundred percent accuracy is the goal for these systems. A test result of 98 percent accuracy or better is required to pass inspection. A test revealing accuracy of less than 98 percent will cause the store to be placed on an increased inspection frequency status. A store in this status will be re-inspected within 30 business days of the original inspection and, if accuracy of less than 98 percent persists, will be inspected within 60 business days of the original inspection. If accuracy of less than 98 percent persists after these three inspections, the store can expect higher-level enforcement actions.

Many stores use electronic scanners to figure the price at the checkout counter. The scanner reads a code on the package. If the scanned price does not agree with the posted price, ask the store manager to correct it. Save the cash register receipt in case you have questions or a problem later on. If the problem is not resolved, contact the Bucks County Office of Consumer Protection/Weights and Measures.

Timing Devices

Parking meters, vacuums, air pumps, and laundromat dryers are regularly inspected and sealed. Money operated devices *other than parking meters* must have clearly displayed information detailing the method to get your money back if the device is not functioning properly. This information must include the name, address and phone number of the local party responsible for the device. This requirement does not apply to devices at locations where employees are on duty and responsible for resolving any monetary discrepancies for the customer.

Home Delivery Heating Fuel Oil

For the past thirty years or more, home heating oil has been the primary energy source for most homeowners. Fuel oil for domestic customers must be metered through a device capable of providing a printed ticket indicating the gallons delivered which shall be rendered to the customer at the time of delivery or with the invoice.

- Purchase fuel oil from a reputable dealer whose meters have been tested and approved for accuracy.
- The delivery meter ticket must be inserted into the meter at the point of delivery and under no circumstances may a ticket be in the meter while the truck is in motion.
- Some oil companies have their drivers compute the total price. Be sure the price per gallon appears on the ticket and the charge agrees with the number of gallons delivered.
- A good working knowledge of your tank capacity and spot checks before and after deliveries will help you note any major discrepancies. A chart to help calculate the capacity of your tank can be found on pages 12 and 13 of this booklet.

Coal (Hard or Soft)

For many years coal was the main source of energy in this country until the advent of fuel oil. Coal is now making a comeback in the northeast with the availability of supplemental coal-fired boilers and space heaters. Most users probably purchase coal by the ton and have it delivered to their cellars.

- Coal must be accompanied by the original weighmaster's certificate, which must be given to the purchaser at the time of delivery.
- All weighmaster's certificates are required to indicate the gross, tare, and net weight of the delivery.
- Know the cubic foot dimensions of your coal bin. The average weight of most coal is about 55 pounds per cubic foot. A ton of coal should occupy about 36 cubic feet.

Understanding Fuel Tank Capacity

The Office of Weights and Measures commonly receives complaints from consumers because they believe that a gas station wrongfully charged them for more fuel than they actually received. While this is sometimes the case, often there is a misunderstanding. Here are some terms you should understand:

Manufacturers rated capacity

Typically, the owner's manual provides a reasonable estimate of your vehicle's fuel tank capacity, but this estimate is neither exact nor certified. To verify the manufacturer's rated capacity of your vehicle's fuel tank, you can go to <http://www.edmunds.com/apps/usedmatrix/UsedMatrix> and view the specifications for your vehicle. *Remember, this is only an estimated capacity.*

Topping off

Sometimes people attempt to deliver additional fuel after the gas pump automatically shuts off, commonly known as "topping off." When this happens, the additional fuel begins to fill the vapor headspace and the filler pipe, which are not considered part of the tank's rated capacity. This may result in receiving more fuel than the rated capacity in the owner's manual.

Indicated volume

When the fuel tank indicates a certain level, consumers often assume that this indication represents a corresponding fraction of fuel tank capacity. For instance, if you have a fuel tank rated at 18 gallons and the fuel gauge indicates that you have half a tank of gas, you might assume that you have 9 gallons of fuel remaining in the tank. If you then fill up the tank and receive more than 9 gallons, you would assume that you now have more than 18 gallons in the tank and would conclude that the gas pump is in error. Besides the fact that the rated capacity is only an estimate, many variables can affect a vehicle's fuel level indication. A shift in the fuel level may occur when the vehicle is not on level ground, such as when on a hill or traveling around a curve.

Device Errors (Legitimate Errors)

In some instances there may actually be a problem with the accuracy of the meter used to dispense fuel, or its manner of use. Consequently, the Office of Weights and Measures investigates all fuel quantity complaints in an attempt to determine the cause of the discrepancy.

Firewood Sales

- Firewood must be sold by the cord or fraction of a cord. A cord is a unit of measure 4 feet by 4 feet by 8 feet, or a total of 128 cubic feet.
- An invoice must accompany all firewood sales. The invoice must include the name, address and phone number of the business, the amount and type of wood purchased, along with the price.
- Do the following when you receive a delivery of firewood:
 - ◊ Stack the wood carefully.
 - ◊ Measure the length, width and height of the stacks in feet.
 - ◊ Multiply the measurements to obtain cubic feet.
 - ◊ Add the cubic feet together to determine if each cord equals 128 cubic feet.
 - ◊ If the measure is short, call the dealer and request delivery of more wood to make up the difference.
 - ◊ If the dealer refuses to make up the difference, call the Office of Consumer Protection/Weights and Measures and report a short measure sale.

Mulch Sales

Examine the load thoroughly before taking delivery. Look for painted wood, glass, and other foreign objects. *Refuse delivery if the mulch appears to be of substandard quality.* In addition, be sure to obtain a receipt with the name, address and phone number of the business, along with the quantity of mulch delivered.

To determine how many cubic yards of mulch you get, measure the volume of the delivery truck. Take the measure of the length, width and height of the leveled load in feet and multiply. Then divide by 27 to obtain the volume of the mulch in cubic yards. Only pay for what is delivered!

Market Scales

- Scale indications must be free and unobstructed so the consumer can have a clear view of the transaction.
- The scale must begin from a zero indication.
- Look for the county seal on the device.
- Read the label. Package labels give consumers helpful information. The amount of the products or the net quantity in the package is marked on the label. The quantity is shown as a weight, measure, or count, such as ounces, pounds, quarts, liters, or square feet.
- Pay only for the product, not the packaging. When you buy potato salad at the deli counter, you should pay only for the salad, not for the weight of the container, commonly referred to as *tare*. Some electronic scales are set to automatically deduct the weight of the packaging. On other scales, the clerk must adjust the scale to deduct the weight of the packaging material. If you have a question, ask to have the package weighed again before you buy.

Liquid Petroleum Gas

In areas where piped-in natural gas is not readily available, many homeowners use home delivered LP Gas. This product, which is compressed and in liquid form, is usually metered through an approved device into the homeowner's storage tank from a delivery truck, except when LP gas is delivered and sold to the purchaser in portable containers referred to as bottles.

- Bottled LP gas is sold by weight with the tare weight stamped on the side of the bottle.
- On metered deliveries from a delivery truck, the seller is required to state on the invoice the date of delivery, name and address of the vendor and the purchaser, and the quantity of product delivered in terms of approved units of measure.
- When refilling your portable tank, the scale used is required to be inspected and sealed to insure accuracy.