



How to Read a Water Meter

All water meters approved for use by the New York City Department of Environmental Protection (DEP) read much like a car odometer. Many older meters may have several *dials* with pointers, but they are generally considered obsolete and in most cases should be replaced based on age alone. This brochure deals only with odometer-type meters.

A Few Basics:

- 💧 Water meters read in cubic feet.
- 💧 1 cubic foot = 7.48 gallons.
- 💧 Water utilities bill in *hundred cubic foot* (HCF) units.
- 💧 1 HCF = 748 gallons.

All water meter readings are in cubic feet. For smaller meters, the lowest revolving dial (the one furthest to the right) equals one cubic foot. The meter also has a *sweep arm* that reflects the registration of the lowest measured unit. On larger meters, the lowest revolving dial may be showing 10 cubic feet or even 100 cubic feet. Those meters have fixed or painted zeros at the right hand end of the meter. In all cases, if you write down all of the numbers, including any *fixed* or *painted* zeroes, this is a reading in cubic feet.

July 2004 - Calculations based on water/sewer rates for July 1, 2004 - June 30, 2005



A Few Other Important Things to Know About Water Meters

- Each meter has a unique identifying meter serial number, which is usually cast into the brass meter body or affixed to the meter body. It will be an eight-digit number. For meters manufactured by Kent (now ABB) the first two digits of the meter number indicate the year of manufacture. Water utilities identify meters by their meter number. Some older veterans at DEP only use the last four digits of the meter number, which is easier, but can be confusing.



- Most meters have a tag attached to a seal wire for the meter. This tag also has a number on it, but it is not the meter number.
- The meter size is cast into the side or front of the brass meter body. Meters come in 5/8" (generally obsolete), 3/4", 1", 1-1/4" (obsolete), 1-1/2", 2", 3", 4", 6", 8" and larger sizes.
- Compound meters* are two meters with an internal control mechanism which shunts flow to one meter or the other depending on whether flow is relatively high or relatively low. Compound meters are designed to measure consumption in buildings with wide variations in consumption. Readings must be taken from both meter dials. Look at them as if they are two separate meters.

Meter Reading Examples:

Example 1:

A six-unit apartment building has twelve people living in it. The building has a 1" water meter.

Meter Reading January 1: 000123

Meter Reading March 31: 010223

Difference: $10223 - 123 = 10100$ cubic feet = 101 HCF

101 HCF @ \$4.14/HCF = \$418.14 (Water/sewer rate for 7/1/04-6/30/05)

Also, $101 \text{ HCF} \times 748 \text{ gallons/HCF} = 75548$ gallons

$75548 \text{ gallons}/90 \text{ days}/12 \text{ people} = 70$ gallons per person per day

Also, $\$418.14/6 \text{ apartments} = \69.69 per apartment per quarter,
or \$278.76 per apartment per year.

Example 2:

A 30-unit apartment building is served by a compound meter which has a 2" (*high side*) meter and a 3/4" (*low side*) meter.

	Low-Side Meter	High-Side Meter
January 1 Reading	001123	0024560
March 31 Reading	011623	0064560
Difference	10,500 cubic feet	40,000 cubic feet
HCF	105	400

Note that the 2" (high side) meter has seven digits in its reading while the 3/4" meter has six. The zero at the far right of the 2" (high side) meter's dial is a fixed zero. The 2" (high side) meter registers a change every time ten cubic feet of water flow through, while the 3/4" (low side) meter registers a change every one cubic foot of water flow through.

$105 \text{ HCF} + 400 \text{ HCF} = 505 \text{ HCF}$

505 HCF @ \$4.14 /HCF = \$2,090.70

Also, $505 \text{ HCF} \times 748 \text{ gallons/HCF} = 377,740$ gallons

$377,740 \text{ gallons}/90 \text{ days}/30 \text{ apartments} = 140$ gallons per apartment per day

Also, $\$2,090.70/30 \text{ apartments} = \69.69 per apartment per quarter,
or \$278.76 per apartment per year.

Register head for 3/4" or 1" meter:



Register head for 1½" meter with "fixed zero" as the digit furthest to the right:



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