



READING YOUR WATER METER

Overview

Your water meter is an important tool for understanding and monitoring your water use. After you read this information, you will be able to use the meter to determine if you have a water leak, measure the amount of water leaking, and monitor your overall water use. The information in this handout applies to a residence with its own meter.

There are some things you should know before you read your meter. Most residential meters are the digital type. A digital meter is one large dial, and it reads in a straight line, much as a car odometer reads. It also has a sweep hand. Each complete revolution of the hand indicates one cubic foot (7.48 gallons) of water has passed through the meter. Your meter is read about every 30 days, and the result is recorded in billing units. One billing unit is 100 cubic feet, or 748 gallons.

How to Read Your Meter

To read your meter, look at the straight row of numbers on the dial. The last 2 numbers are ignored, as they represent a fraction of one billing unit.

Detecting Leaks

If you have a leak, it usually can be detected at the water meter. You must first make sure that no one will be using even the smallest amount of water while you are checking for leaks. Many newer meters have a small black triangle on the face of the dial. This is a very sensitive "leak detector." Even a small leak will be indicated by a rotating triangle. If after a few seconds, you see no clear movement, you probably don't have a leak, unless it's an intermittent toilet leak.

For meters that have no leak detector, you can use the sweep hand to check for leaks. Make a note of where the sweep hand is pointing, then come back in about 20 minutes. Do not use any water during this test period. If the hand has moved, you have a leak. You can determine how much water is leaking by following the directions under the heading, "Measuring the Water Use of a Fixture."

Projecting Your Water Use

Look on your last bill under the heading "Meter Readings." Listed under the word "Present" is your last read. Subtract that read from the current number that you read off of your meter. The difference is how many units of water you have used since your last water bill. Now look on the bill where it says "Service Period." The second date under that heading is the date your meter was last read. The number of days from that date to the present is the number of days that you have been using water since the last read.

If, for example, you have used 2 units in the 10 days since your last read, you can use that information to estimate how much water you may use by the end of the current billing period. Here is how you do it: Since there are about 30 days in each billing period, divide 30 by the number of days since the last read (10). Take that answer (3) and multiply it by the number of units you used since the last read (2). The answer will be your estimated use.

$$30 / 10 = 3$$

$$3 \times 2 = 6$$

Based on your current rate of use, 6 units is an estimate of the water use that will show up on your next water bill. You can use the information on the back of your bill to translate that number into a dollar amount.

Measuring Water Use of a Fixture

To perform this measurement you will need a calculator, a stopwatch or wristwatch, a pencil and a piece of paper. First make sure that no one will be using water during your test, then turn the water fixture on that you wish to measure. For instance, if you want to measure how much water your back lawn uses, turn on those sprinklers and then go to your meter. You will be measuring your water consumption for one minute.

For a single family residential dwelling, each revolution of the sweep hand means you have consumed 7.48 gallons. The dial is divided into 100 points, and also into units of ten. If you measure water use for one minute, the meter will register how much water you use per minute. Simply count the number of points consumed during the minute and treat it as a decimal value of 7.48 gallons. For instance, if the meter turns 95 points, multiply 7.48 gallons by 0.95, and you get an answer of 7.106 gallons consumed per minute. Simply multiply that answer by the number of minutes you water each time, and your answer will be how many gallons you use each time you water the lawn. In this case, if you water 20 minutes, the problem is solved by the following:

Calculating Water Use

Using the example above:

$$7.106 \text{ gpm} \times 20 \text{ minutes} = 142.12 \text{ gallons consumed each time you water that lawn.}$$

You can convert this number into billing units by multiplying it by the number of times you will water during the 30 day billing period, then dividing the answer by 748.

For example, if you will be watering 12 times, your water use in billing units will be as follows:

$$142.12 \times 12 = 1705.44 \text{ gallons per billing period}$$

$$1705.44 / 748 = 2.28 \text{ billing units}$$

You can attribute 2.28 units on your next water bill to that area of lawn.

The City's water charges are based on the following tiered rate system for single-family residences (bi-month):

1-12 billing units are charged at \$1.16

13-32 billing units are charged at \$1.29

33-64 units are charged at \$1.46

Over 64 units are charged at \$1.77



Additional Information

More information is available on solving your water use problems. If you need to speak with someone, call the Public Works Department at 473-5460.