



# How to Read the Neptune E-Coder® Register

To read your Neptune E-Coder® register, expose the solar panel to sunlight or shine a bright light (i.e. flashlight or cell phone flashlight), and the display will activate.

When activated, the LCD display will first show a segment test:



This screen will be followed by the display of the E-Coder's manufacturing configuration, followed by two (2) reading screens:

**Reading** - Shows the current read with comma separators and decimal place, after initial activation this screen displays for 20 seconds before toggling to Rate Screen. Each additional Read Screen displays for 8 seconds. The below image shows a reading value of 179.21 (one hundred, seventy-nine) US gallons.



**Flow Rate** - When the screen toggles, the rate of flow is visible and is shown in gallons per minute for four seconds. Then it toggles back to the read screen. The image below shows a flow rate of 50.7 (fifty) gpm.



	<p><b>FLOW INDICATOR</b> Shows the direction of flow through the meter:</p> <p><b>ON</b> Water in use. <b>OFF</b> Water not in use. <b>Flashing</b> Water is running slowly. <b>(-)</b> Reverse flow. <b>(+)</b> Forward flow.</p>
	<p><b>LEAK INDICATOR</b> Displays a possible leak:</p> <p><b>OFF</b> No leak indicated. <b>Flashing</b> Intermittent leak indicates that water has been used for at least 50 of the 96 15-minute intervals during the previous 24-hour period. <b>On Continuously</b> Indicates water use for all 96 15-minute intervals during the previous 24-hour period.</p>
<p>RATE</p>	<p><b>RATE OF FLOW</b> Average flow rate is displayed every twelve (12) seconds on LCD display.</p>
	<p><b>LCD DISPLAY</b> Nine-digit LCD displays the meter reading in billing units of measure: U.S. gallons, cubic feet, Imperial gallons, or cubic metres.</p> <p><b>1</b> E-Coder Basic Reading/Customary 6-digit remote reading <b>2</b> Customary sweep hand digits <b>3</b> E-CoderPLUS Reading (8-digit remote reading)</p>

Instructional Guide for Reading Your Water Meter  
NEPTUNE E-CODER R900i

Photo 1 showing Reading



Meter Number

Photoelectric Eye

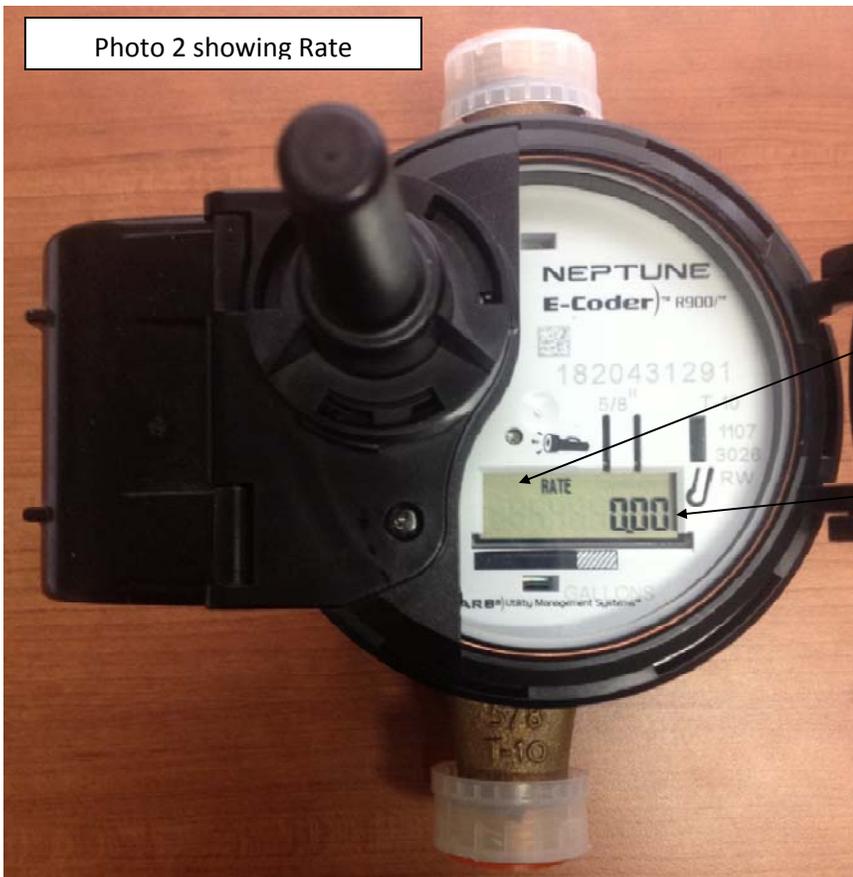
Thousand Gallons reading  
for billing purposes

Reading in Gallons

Decimal Point

For example, the current reading on this  
meter would be 0000000.19 gallons

Photo 2 showing Rate



Leak Indicator Faucet Icon will either  
be on solid or flashing here



Rate of flow indicated in  
Gallons per Minute

**To read a Neptune E-Coder water meter:**

1. Shine a flashlight on the photoelectric eye (look for the flashlight symbol) to activate the screen. The screen eventually will begin to flash between “Reading” and “Rate”.
2. The “Reading” is all water that has passed through the meter in its lifetime – measured in gallons. This is the reading used for billing purposes. Charges are based on units of 1,000 gallons of water used. Be sure to look for the decimal point when reading (see Photo 1). You can calculate how much water is used in a given period by recording the reading at the beginning of the period and at the end of the period. The total water used during that period is:

***End reading – Beginning reading = Total water used during that period in gallons.***

**Example for a Residential Service:**

***Initial reading collected on 4/1/2013: 005234.12 gal***

***Second reading collected on 5/1/2013: 009438.23 gal***

***9438.23 gal - 5234.12 gal = 4204.11 gal water used between 4/1/2013 and 5/1/2013. This calculates to be 4,204.11 gallons used during this period. Note that for billing purposes the amount of water used in gallons is rounded down to the nearest 1000 gallons so 4,204.11 gallons becomes 4,000 gallons billed.***

3. The “Rate” is the amount of water (in gal /min) that is passing thru the meter at that moment. The “Rate” can be used for leak detection: if all water in the building is shut off and a rate is observed this means that water is flowing through the meter. Since all water is shut off there must be leaking somewhere in your system.
4. There is a leak indicator faucet icon (see Photo 2) built into this meter, that will either be on solid or flashing indicating that there has been a leak detected. The solid faucet indicates a continuous leak occurrence over the last 24 hrs. Check the last digit on your screen to see if it is incrementing. If so, check your interior and exterior faucets, the valves in your toilets, and look around the exterior of your home for signs of surface water. The flashing faucet indicates an intermittent leak occurrence over the past 24 hrs. Check your interior and exterior faucets and the valves in your toilets to see if leakage is occurring.