

Town of
Belmont
New Hampshire

August 15, 2014

FAQ'S
WATER METER AND AMR UPGRADE PROJECT

General

1. What is the water meter and AMR project?

The Town of Belmont has approximately 650 water meters that are currently read either using a touch-pad or manually using an odometer located on the outside of customer's homes. With the existing system, water department personnel must physically touch the reading pad on customer's home to obtain the reading from the water meter inside, or manually key in the odometer reading. The new Automatic Meter Reading (AMR) system that will be installed will include the installation of a new radio transmitter either over the existing touch-pad, or in place of the existing odometer. The radio transmitter will allow the Town to read the meters by simply driving near the radio transmitter. Over the past several years, Town personnel have been installing new water meters. Approximately 200 meters that have not yet been replaced by Town personnel will be replaced as part of this project.

2. Why is the Town undertaking this project?

Reading meters using the existing touch-pad or manual odometer system requires meter readers to physically touch the pad on the exterior of each building, or read and key-in data from the odometers. Water Department personnel spend 1 full week every quarter reading meters. Readings are then manually entered into the billing system, which generates customer bills.

The new system will enable meter readers to read the water meters by simply driving near the radio. We expect to be able to read all of the meters in the water system in approximately 4 hours with the new system. This will save time & labor, and will not require water department personnel to enter onto private property to read meters. In addition, the system will allow readings to be automatically transferred from the radio to the reading device, and subsequently to the billing system. This will eliminate the potential for human error with the current system that includes up to two manual transfers of data.

3. Is my water meter being replaced?

Possibly. The project includes replacement of approximately 200 meters. Meters that have not been replaced by water department personnel within the last few years will be replaced. You will be notified to schedule an appointment with the installation Contractor if your meter is scheduled to be replaced.

4. Why is my water meter being replaced?

Water meters are mechanical devices that lose accuracy through use and age and should be replaced every 15 to 20 years. In addition, new metering technology provides better data collection, which can help identify leaks and other water use issues.

5. How does the new radio-read device work?

The AMR system uses two-way communication using an FCC primary licensed radio frequency. When signaled by the reading device, the radio ‘wakes-up’ and transmits a radio signal containing the radio number and the meter reading that can be picked up by the radio receiver in the Water Department’s vehicle. The meter reading from that transmission is used to generate a water bill. The radios are equipped with a single “D” cell battery that the manufacturer warrants for 20 years.

About the installations

6. What exactly will be installed at my property?

Most homes will have a radio installed over the existing touch-pad on the outside of the house. Some homes will have the meter replaced and a small amount of piping and valves around the meter replaced to install a shutoff valve, meter setter, backflow valve, pressure reducing valve and/or expansion tank, if needed. Where meters are replaced, new wiring will be installed from the meter to the radio, which will be mounted on the exterior of the home.

7. What if I don’t want my touch-pad/meter changed?

This is not an option. All touch pads will be equipped with radios. All odometers will be replaced with radios. All meters scheduled for replacement must be changed.

8. Do installers need to come inside my house?

If your meter is being replaced, access to the meter inside your house will be required. The installation Contractor will notify you to make an appointment for the meter installation, and will need access to the water meter. There may be cases where the installation Contractor will need to access the meter for the installation of the radio, but this is not anticipated.

9. Why do they need to come inside my house?

Access to homes should only be necessary where meters are being replaced. In these cases, the Contractor will need access to the meter and surrounding piping. New wiring will be installed from the meter to the radio outside the house. This will replace existing wiring between the meter and the odometer that is currently present.

10. Do I have to be present for the installation?

Yes. An adult must be present during the installation. The installer will not enter your home unless authorized to do so by someone at least 18 years old that is present. Installations should take about an hour or less.

11. Where is my water meter located?

Most water meters are located about three feet off the floor in the basement of your home. It is usually located on the wall facing the street. If you have a basement that has been finished, occasionally meters have been covered by walls, in cabinets or other remodeled areas. It is the customer's responsibility to provide access to the meter.

12. What does my meter look like?

Your water meter is a device with a round face attached on each side to your water pipes. The face has dials and the numbers on the bottom which read like a car odometer.



13. How much will the new radio/meter cost me?

There is no charge to individual customers for the radio or meter replacement. The meters and radios are owned by the Town and are an investment in our infrastructure that will improve billing efficiency and customer service.

14. Who will install the new system?

The Town of Belmont is in the process of hiring an installation Contractor, to install the radios and meters. All employees working on the projects will have completed training and background checks, will have photo IDs, and be registered with the Town's police department.

15. When will the new meter be installed in my home?

Installation of the new radios and meters will progress throughout the fall and early winter. You will be notified by the installation



Contractor and given information on how to schedule an appointment if one is needed.

16. What kind of access is needed to the meter?

Please plan to have clear access to the meter when the installer arrives and please secure any pets. The water meter is the property of the Town and homeowners are obligated to provide clear and unobstructed access to the water meter. If there are boxes or stored items in the way, these items should be cleared prior to the arrival of the meter installer. The installer is not allowed to move your personal items and this may delay the installation process. If for any reason, the water meter has been covered by drywall or paneling, it is the homeowner's responsibility to ensure that the meter is accessible. In addition, the installer will need to install new wires between the meter and the radio on the outside of the house. You should be able to follow the path of the existing wiring from the meter to the odometer outside the house. Access to this area should be clear as well.

Radio Transmitter

17. Will you need to access my house if only a radio is installed?

Most likely not. In most cases where only a radio is to be installed, it will be installed over the existing touchpad secured to the outside of the house. The installer will need to enter your yard to mount the radio, and test the operation. Please secure any pets indoors if you see the installers working in the area.



18. How secure is the data/information that will be transmitted?

Because of the equipment and frequencies being used, the information would be extremely difficult for unauthorized acquisition or hacking.

19. Is there a hazard from the radio transmitter in my home?

No. The radio only transmits for a few seconds when queried by the water department reader. The radio is normally in 'sleep' mode to preserve the battery.

20. Is there anything hazardous inside the equipment?

No, only ordinary electronics and batteries are inside the equipment.

21. Will the radio interfere with my television, cordless phone or pacemaker?

No, you will not see interference with your television reception, phone or pacemaker.

22. How do the radio-read meters transmit?

As the name implies, radio-read meters transmit data using the same airwaves as your AM or FM radio, only on a different frequency.

23. Where can I find out more information on the radios and water meters?

To find out more about the radios being installed, please see

http://sensus.com/documents/10157/32635/amr_317.pdf

And the meters:

http://sensus.com/documents/10157/30957/Sensus_WaterTechOnline_10-10.pdf

24. Where can I find more information on radio frequencies?

Federal Communications Commission (FCC) Occupational Safety and Health Administration (OSHA)

World Health Organization (WHO) National Institute of Environmental Health Sciences (NEIHS)

Installation Scheduling

25. What if I am a tenant and do not own this property?

If you are a tenant, you will be asked to provide the installer with access to the meter, just as an owner would. We also ask that you notify the owner of the property about the notification letter you received.

26. I'm an owner and have tenants, but I do not reside at the property. What should I do?

If you have tenants but do not reside on your property, you are responsible for calling the installer for an appointment and for providing access to the meter.

27. What hours can you offer me for an appointment?

In general, appointments will be available weekdays until approximately 7 pm, and Saturdays.

28. What if I need to reschedule an appointment?

Call the number where you made your original appointment.

29. How long does it take for an installation?

A typical residential installation will take less than an hour.

30. Will my water service be interrupted during the installation?

If your meter is being replaced, the installer will need to turn off the water during the installation. A typical installation should take less than an hour and the water will be turned back on when complete.

31. What if the valves won't work or a valve is broken during installation?

The installers can freeze the inlet pipe long enough to replace the meter. If the water needs to be turned off at the curb stop, this may involve rescheduling the appointment.

32. Will I pay more for water because of the change?

The installation of the radio should have no affect on your water bill; it simply provides a more efficient way to read the meter. However, water meters lose accuracy with age and use, so an old meter may be under-registering usage. Therefore, if a new meter is installed in your home, you may notice a slight increase in your measured water usage from what it was previously, because the new meter is reading more accurately. If you notice a large increase in usage after the installation that you do not think is correct, call the water department.

33. Will I be able to read my own meter?

Yes, the all meters have a digital odometer-type display, which can be read visually.

34. What if we have a leak after the meter is installed?

Call the installation contractor. They will make every effort to dispatch service personnel as quickly as possible to determine the cause of the leak and to take appropriate action. When your meter is installed, you will receive a 24-hour phone number to call if there are any concerns or emergencies regarding the meter.

35. The installer informed me of a deficiency in my plumbing. What should I do?

The installers have been contracted to install radios, replace certain meters, and in some cases, install new backflow valves, meter setters, pressure reducing valves or expansion tanks. If in inspecting your meter installation before doing that work, they identify an existing leak in your plumbing, the presence of lead piping, a condition that could possibly lead to freezing of the meter, service line, etc.; they will notify you of the deficiency in writing. The homeowner owns, and is responsible for all components of the service from the curb stop at the street, into the home, with the exception of the meter. If deficiencies are identified in your system, you should contact a local plumber to obtain an estimate to have the deficiency repaired at your expense.

36. An expansion tank was installed/replaced at my home. What is this for?

Backflow prevention valves are required by law on all water services. This is to prevent any possible contaminated backflow from the home back into the water system. Thermal expansion

may occur in a home heating system when water is heated, for example by a hot water heater (when water is heated, it expands). When a backflow preventer is installed, the home plumbing system is isolated from the water system and water cannot flow back into the water system. If thermal expansion occurs in an isolated system, it can increase the pressure in the plumbing system, which can cause leaking, or release of the pressure relief valve on the hot water heater, or failure of piping or connections. An expansion tank is often installed to provide a place for this thermal expansion to go. While they are being installed at the Town's expense, expansion tanks are the property of, and responsibility of the homeowner. A new tank may be installed if determined necessary by the Town, when installing a backflow prevention valve.

Additional Questions?

Contact the Water Department at 603-267-8300 Extension 120 or the Town Administrator's office at 603-267-8300 Extension 124