
“THE PUDDLE”

THE NORTH KINGSTOWN DEPARTMENT OF WATER SUPPLY NEWSLETTER

December 2023

It's That Time of Year!



December is a busy month for many people, and these days, a lot of that busyness centers on gift-giving. As we've mentioned in previous bulletins, the Town of North Kingstown is working hard to reduce the effects of polluted stormwater runoff. So we thought this might be an appropriate time to provide a list of unusual but thoughtful gifts that can benefit us all!

For the person who likes to garden or even a new homeowner, why not try a rain barrel? Diverting rooftop runoff to a rain barrel not only reduces the amount of water that flows to the street, but it also can be used for irrigation. It's estimated that a rain barrel can save 1300 gallons of water during the summer season.

For the auto-enthusiast, try a gift certificate for an oil change at a local garage or a car wash at a licensed facility. Keeping oil and soapy water out of storm drains benefits us all.

For the dog-lover, a gift of a portable bag dispenser (such as Bags on Board®) that attaches to a dog's leash will ensure that Fido's waste is kept off the sidewalks and out of local waters. Now that's something we all can enjoy!

And for any children who enjoy feeding local waterfowl, buy them a disposable camera for those trips to the pond instead. Feeding geese and ducks causes them to concentrate in higher numbers than they would if they had to rely solely on natural food supplies, and results in large quantities of waste for local waters.

To learn more, visit: <http://www.ristormwatersolutions.org>



BILL TOO HIGH?

Please keep in mind that you are being billed for water used over the summer months for this current billing. On the face of the bill please note the "date read" in the upper left corner. Your usage is for approximately 90 days prior to that date.

You can also check your leak detector. This detector is a small red triangle or flower shaped spinner on the face of the meter. When you aren't using any water, if this shape is oscillating or spinning you have a leak. Another great way to detect a leak is to take a reading at night after all water is used, and take another reading before any water is used in the morning. Without a leak, of course, the readings should be the same.

Enjoy the Season!!!!

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NASA inspired technology working to save NK Water’s valuable resource...and dollars too!

In June of 2022 and August of 2023, we had satellite scans for leak inspection done of our entire water system completed the technology firm ASTERRA. This new satellite guided remote leak detection technology was developed by ASTERRA specifically for NASA in the search for water signatures below the surface of the moon and Mars and is now a great tool for detecting common water leaks in a public water system. This service has been a great tool for the North Kingstown Water Department because there are non-surfacing leaks that can stay beneath the ground where they are difficult to detect. This year, ASTERRA has shown decreased leaks from last year’s check and has helped us find a few new areas where smaller leaks have been confirmed. Water loss happens to some degree in all water systems but having a firm like ASTERRA working for us, allows the Department to utilize the latest leak detection technology in targeting areas where water loss may be occurring. By targeting these areas, we have a more reliable system, decrease waste of water, and save money. Through using this advanced technology to detect and service non-surfacing leaks, since June of 2022 the town of North Kingstown has prevented the waste of 127,405,415 gallons of potable water which equates to around \$747,537 in cost savings.

The Town of North Kingstown/USGS Wickford Harbor Tidal Gage Project Update

The new tide gage has been installed and of particular note is the conical device on the gage extended over Wickford harbor, this is the newest technology and rather than monitor tide height via a physical float, this unit tracks it through a sonar style beam which constantly reads the water surface height in relation to the cone. The three parameters that are constantly tracked here are **tidal range**, which is the extent of variation between the mean tide height (shown on the graph as 0) and high and low tides. This will have value in that we can see changes over time in max high tide heights. The unit will also track changes in the mean tide height which, over time, will be valuable in tracking changes to the overall increases to Narragansett Bay/Wickford Harbor water levels as they are impacted by climate change. The second parameter monitored is **water temperature**. This is important over time because, Narragansett Bay/Wickford Harbor overall water temperature increases are the number one driver of changes to the character of biotic community that inhabit the Bay & Harbor. Creatures such as lobsters, whose numbers have decreased dramatically over the last two decades are directly impacted by warming waters in the Bay & Harbor. The third parameter tracked is **specific conductance**. Levels of specific conductance in saltwater directly correlate to suspended and dissolved materials in the water. In a place like Wickford Harbor, specific conductance ranges will follow tidal ranges, as the harbor is a place where freshwater is discharging to the Harbor continuously and directly impacting harbor salinity which will affect conductance levels. At times of low tide more freshwater impacts can be measured, as the tide rises in the harbor it overwhelms the freshwater entering the harbor and salinity increases dissolved. This is also important to track, as algal blooms and increased road runoff, will add suspended and materials to the Harbor which will be reflected in rising conductance levels. The webpage is constantly updated with this data. The next phase of this cooperative effort with USGS will be design and installation of educational signage adjacent to Wickford’s “big anchor” which will explain the purpose and workings of this tide gage to residents and visitors to the village alike. The Water & Planning Depts look forward to working with the local schools in hopes that this information can become a valuable asset to the science curriculum in the future. Check out this interesting project at [USGS Current Conditions for USGS 413413071270400](https://www.usgs.gov/real-time-data/usgs-current-conditions-for-usgs-413413071270400)

WICKFORD TIDE GAGE NORTH KINGSTOWN, RI