

# waterrings

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## Spotlight on Conservation

Unlike our ancestors who regularly carried buckets of water from the nearest stream, or perhaps worked the pump handle for several minutes simply to get a cool drink, our generation has been able to take the public water supply for granted.

However, clean and safe drinking water remains at only about 3% of the world's water supply. Unfortunately, this fact is becoming more evident. Almost every day we see at least one news story about a town or city in the U.S. experiencing a water crisis. Until recently, most of us thought of a water crisis as something that occurred only in developing countries. However, it is happening here, in our country, today.

The North Wales Water Authority has invested millions of dollars to provide you and your home or business with a plentiful and safe supply of water. It is our business. However, together we should not take this supply for granted, waste even a drop - causing you to pay any more for your water than is needed.

We are continuing to explore environmental improvements in all of our operations, to reduce our carbon and water footprints and to reduce our environmental impact upon the community. You can help us do so by eliminating any unnecessary water use and by seeking conservation opportunities in your home and place of business. We need to become concerned when we see sprinklers running over the sidewalk or into the street. We need to consider the value of maintaining that green fairway at our favorite golf course during hot summer months or the cost of a lack of water conservation fixtures in so many of our older buildings.

The North Wales Water Authority intends to become a leader of water and energy conservation and efficiency efforts, not only in our water supply, but in every element of our operations. Together we can work to maintain an environmentally responsible, safe and reliable supply of drinking water for our homes, our businesses, and our families. Together we can make sure we never take this precious resource for granted.

## Winterizing Tips

During the cold weather months, there are simple things you can do to help prevent frozen pipes and leaks in your home.

- Fit exposed pipes with insulation sleeves or wrapping to slow the heat transfer.

- Seal cracks and holes in outside walls and foundations near water pipes with caulking.

- Keep a slow trickle of water flowing through faucets connected to pipes that run through an unheated or unprotected space.



- Remove all hoses from outside faucets and shut them off from the inside. Leave the fixtures open to drain.

- Secure and drain all underground lawn sprinkler systems.

- And if you plan to be away for an extended time during the winter months, it is very important to maintain minimum temperatures in your home to prevent freezing of the interior plumbing fixtures.

Remember, your indoor plumbing is your responsibility. Protecting your pipes saves water and money!



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## Automated Water Quality Monitoring

Under the Safe Drinking Water Act, water utilities are required to perform water sampling on an on-going, routine basis at a variety of distribution points throughout their systems. To supplement these tests and further ensure the quality of our water once it leaves our Forest Park Water Treatment Plant, the Authority has installed six automated water quality monitors at key points in our distribution system.

Tom Bradbury, Director of Regulatory Affairs, led the team responsible for the selection of the monitors. Bradbury indicated that the monitors selected by the Authority are the same as those used in both the 2002 Winter Olympics in Utah and more recently, the 2008 Summer Olympics in Beijing, China.

What makes these monitors so important to the Authority is that they provide us with daily, real-time, around-the-clock monitoring of the health or condition of the water throughout the distribution system. In addition, all sampling results are stored in the Authority's computerized control system, providing a rich history of water quality information.

Having a record of naturally occurring fluctuations in the water chemistry enables us to make more informed, faster decisions when changes in the system do occur. In addition, having this thorough sampling history allows us to cut back on the number of manual samples we have to collect. We save miles of driving time and hours of manual sampling and testing time, thus saving us money.

Bradbury reports that the monitoring panels have also helped when troubleshooting unusual incidents with our customers. For example, one company reported having an elevated turbidity (i.e., cloudy water) problem at its facility. "One of our monitoring panels is located just a couple hundred yards from where their supply comes off, so we ran the turbidity history of the panel," Bradbury says. "We were able to give them a printout of the turbidity data that showed a consistent history of low turbidity." Once NWWA was eliminated as a source of the problem, further investigation found that a large internal loop on the customer's property needed to be flushed.



**Q:** *Does the Authority use chloramines for disinfection purposes?*

**A:** The Authority has never used chloramines for disinfection purposes and does not anticipate its use in the future.

We currently use two forms of chlorine: gas and sodium hypochlorite solution. The hypochlorite solution being used at the Forest Park Water Treatment Plant is actually generated on-site. Hypochlorite used in the distribution system is either in liquid solution or tablets depending on the facility and application.

Although Forest Park utilizes ozone as the primary disinfectant throughout the treatment process, all water produced at the plant has a disinfectant residual from the injection of chlorine as it enters the distribution system. This is due to the fact that ozone has a very short chemical life and dissipates out of water rapidly. Additionally, chlorine residuals are checked and maintained at various points throughout the distribution system.

Chloramines are produced in drinking water by adding ammonia to the free chlorine used for disinfection purposes. Chloramines are weaker disinfectants than chlorine, but can maintain a residual for a longer period of time. The combination does reduce disinfection by-products in many systems, however, can cause problems by making the water corrosive to system components and residential plumbing fixtures. This method of disinfection can also cause problems with dialysis equipment and aquariums as the ammonia diminishes the oxygen carrying capacity of the blood.

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