



# Metropolitan Water Reclamation District of Greater Chicago

## Press Release

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## Water quality measurements keep MWRD monitors busy

### *MWRD joins Water Environment Federation, International Water Association in launching World Water Monitoring Challenge*

Last year, nearly 340,000 people representing 77 countries tested the quality of their waterways and shared their findings with a common goal of protecting our most precious resource, water. The number of participants rose significantly since 2007 when 30,000 were involved.

Beginning March 22, the Metropolitan Water Reclamation District of Greater Chicago (MWRD) will join the Water Environment Federation (WEF) and the International Water Association (IWA) to encourage the public to monitor water quality while continuing to measure Chicago area waterways.

“Water quality monitoring is important to the MWRD because we want to ensure our resources and efforts have maximum impact on our area waterways,” explained MWRD executive director David St. Pierre. “Monitoring is used for setting goals and ensuring their achievement, for setting benchmarks before and after we implement changes to our treatment, for making sure the waterways to which we discharge are meeting Clean Water Act goals, and for ensuring the waterways meet water quality standards set by the Illinois Environmental Protection Agency.”

The MWRD has a continuous water quality monitoring program, and equipment distributed at 18 locations throughout the waterways takes hourly measurements of dissolved oxygen, acidity or pH, and conductivity. Data is downloaded into the MWRD database and used to assess water quality under various circumstances.

The MWRD also has an Ambient Water Quality Monitoring Program which measures water quality at 59 stations on a monthly basis. Staff look at general chemistry, nutrients, algae, metals, and more. This effort involves collecting and analyzing samples in MWRD laboratories and reporting and interpreting the data.

Another way the MWRD measures health of the waterways is through biological sampling. “We collect living things like fish and bugs in the waterways and use this information to characterize how the water quality and the habitat may be affecting these organisms,” said St. Pierre.

For the public interested in learning more about measuring the health of the waterways, there are four factors used: dis-

solved oxygen level, temperature, the pH or acidity, and turbidity or water clarity.

Dissolved oxygen can be measured using a chemical test or a probe used in the field. Aquatic organisms need oxygen to live, just like humans do. Depending on the type and location of the waterbody you are assessing, and the time of year, dissolved oxygen standards in Illinois usually range from 3.5-5.0 mg/L. Cooler water can hold more oxygen, so temperature also affects dissolved oxygen concentrations in the environment.

In the field, temperature is measured with a thermometer. Expected temperatures vary widely depending on the location of a waterbody and whether or not there are industrial discharges and other factors that might increase the temperature.

The acidity of water is measured by pH and ranges from 0-14. The higher the pH value, the less acidic the water. Seven is considered neutral. The water quality standard in Illinois for pH is 6.5-9.0.

Turbidity measures water clarity. It can be measured visually by using a probe. Excess turbidity can be caused by erosion, siltation, algae, storms, and even from fish like carp disturbing silty bottom sediments. Turbidity keeps light from penetrating into the water so it affects aquatic plant growth. Different fish tolerate varying amount of turbidity in the water. Some need clearer water to feed and reproduce, whereas others are able to tolerate more turbidity.

“Water is a precious resource, and we all must do our part to protect it,” said MWRD executive director David St. Pierre. “The MWRD strives to improve the quality and manage water throughout 884 square miles of Cook County to protect the health and safety of the public. We work hard on a day to day basis to do this, but it helps to have the public recognize what they can do to lessen their impact and even help share monitoring responsibilities.”

For more details about the World Water Monitoring Challenge, visit [www.MonitorWater.org](http://www.MonitorWater.org). For more information about the MWRD, visit [www.mwrdd.org](http://www.mwrdd.org).

**Our water environment... Take it personally.**

*Established in 1889, the MWRD ([www.mwrdd.org](http://www.mwrdd.org)) is an award-winning, special purpose government agency responsible for wastewater treatment and stormwater management in Cook County, Illinois.*