

News & Updates from  
DES MOINES WATER WORKS

# H2O LINE

SEPTEMBER 2013

## Capital Investments Made to Treat Nitrate Naturally

Recent attention to nitrates in the Des Moines and Raccoon Rivers has raised the awareness of the resources Des Moines Water Works spends to treat Des Moines' degraded source waters. This past spring and summer, Des Moines Water Works was able to narrowly meet the Environmental Protection Agency (EPA) nitrate drinking water quality standard during the highest demand months for 500,000 central Iowa customers.

Des Moines Water Works built a \$4.1 million Nitrate Removal Facility in 1992 – and is still the largest known facility in the world. The cost to operate the facility is approximately \$7,000 per day, a cost that is passed on to customers. This past spring and summer, Des Moines Water Works operated the facility for 76 days, at a cost of over \$900,000 to ratepayers, when other operational factors are included.

Due to the cost and labor needed to operate the Nitrate Removal Facility, for the past 17 years, Des Moines Water Works has also invested a significant amount of capital funds in projects for natural nitrate removal or avoidance.

The natural denitrification facilities include Water Works Park ponds, Crystal Lake, and the recent purchase of a gravel pit near Des Moines Water Works' L.D. McMullen Water Treatment Plant. In this natural process, nitrate is consumed and converted to nitrogen gas by the life processes of microorganisms. At Crystal Lake and soon at the newly purchased gravel pit, Raccoon River water is pumped into one end of the lake and water is pumped out from the other end as a low nitrate water supply for the McMullen Water Treatment Plant. Although the ultimate source of water is the Raccoon River, this approach maximizes the time the water is in the lake and allows the nitrate concentration in the river water to be reduced via biological reduction.

The design of recently-constructed Des Moines Water Works' Saylorville Water Treatment Plant included reverse osmosis (RO) membranes that soften water and remove nitrate from the water. The cost to purchase just the RO membranes was \$3.6 million. Additional costs were incurred to install the membranes in the treatment plant.

To avoid high nitrate water in a particular source water, Des Moines Water Works has also invested capital funds for projects that provide access to water with very little nitrate levels (Aquifer Storage and Recovery wells) or water with lower nitrate concentration (Des Moines River Intake facility) that can be blended with other water sources to meet EPA drinking water quality standards. Des Moines Water Works' two ASR wells store finished water in wells for distribution to customers at a later date. Although originally developed to smooth out spikes in treatment demand during high customer demand periods, the ASR wells were utilized this year to meet customer demand during high nitrate levels.

The Des Moines River Intake facility was constructed to provide additional raw water supply for the Fleur Drive Water Treatment Plant. With the Saylorville Reservoir upstream from the intake, the nitrate concentration in the Des Moines River is almost always lower than the Raccoon River. Access to the Des Moines River provides Des Moines Water Works with another lower nitrate water supply option that was not available prior to construction of this facility.

Des Moines Water Works is actively pursuing other properties for the purpose of natural denitrification. Ultimately, the best way to reduce the amount of nitrate in the Raccoon and Des Moines Rivers is nutrient management and watershed protection; however, Des Moines Water Work is committed to producing **water you can trust for life**, even during adverse water quality episodes.

Des Moines  
Water Works  
Water You Can Trust for Life

# Re-envisioning Water Works Park

**T**hrough generous community support, Des Moines Water Works has achieved its goal of raising \$200,000 to fund a master plan for re-envisioning Water Works Park. Grants and funds totaling \$165,000 have been received from the Community Foundation of Greater Des Moines, Gray's Lake Park & Meredith Trail Fund, Polk County, The Principal Financial Group, Bankers Trust, Merchants Bonding Company, and CDS Global. Donations from private donors total an additional \$35,000.

The Master Plan for Water Works Park will be developed by a consultant team from Sasaki Associates, in collaboration with RDG Planning & Design and Applied Ecological Services. This team was selected as the winning team of the Parkitecture competition in January 2012.

The Parkitecture competition, aptly named for its emphasis on the fundamental role landscape architecture and design play in re-envisioning Water Works Park, began June 2011. The competition sought proposals to integrate the ecological and social function of a park and river into a unified landscape, generate discussion about watershed issues/best practices, and offer innovative design solutions to address ecological and recreational challenges specific to Water Works Park.

The Master Plan will include developing a phased plan for implementation of park improvements, based on priorities identified by DMWW and the Greater Des Moines community.

Water Works Park, a 1,500-acre urban park in the heart of Des Moines, has provided the main water supply for the city since the early 1900s. It is also a major component of the city's open space system and trail network.

Des Moines Water Works appreciates the generous support and enthusiasm from the community. The support from local donors will allow us to take the next step towards re-envisioning Water Works Park. Des Moines Water Works hopes to build on the enthusiasm and move ahead with plans to reshape Water Works Park into a destination that balances outdoor recreational opportunities with water quality, education and watershed awareness.



## Water Service Line Protection

**A**s a homeowner, you are responsible for your water service line, from Des Moines Water Works' water main to the water meter inside your home. Des Moines Water Works offers a low-cost water service line coverage available through HomeServe. This coverage offers protection for water service line breaks for single-family residents in the City of Des Moines and Des Moines Water Works' total service areas. This program is voluntary and the decision to insure this risk is entirely yours. Currently, 20,000 Des Moines Water Works customers have enrolled in the program.

The coverage costs \$3.99 a month and customers are billed directly on their monthly Des Moines Water Works statement.

For more information, contact HomeServe directly at 1-855-695-1493. To sign up for coverage, visit [www.dmwaterplans.com](http://www.dmwaterplans.com).

## E-statement Rebate

**Y**ou still have time to enroll in E-statements and receive a \$5.00 rebate on your next water bill. To sign up, visit [www.dmww.com](http://www.dmww.com) to set up an online account. Once logged into your account, simply select Go Paperless from the top green navigation bar. You must sign up by December 31, 2013, to receive the rebate.

There are many advantages to choosing E-statements. They are convenient, environmentally friendly, help prevent identity theft and they help reduce costs, which in turn, helps keep water rates low.

For more information on E-statements, visit [www.dmww.com](http://www.dmww.com) or contact a Customer Service Representative at (515) 283-8700.