SERVICE LINE
WEST DES MOINES WATER WORKS
NEWS FROM THE WEST DES MOINES WATER WORKS

Winter 2014-15 VOLUME 19 ISSUE 2

WDMWW: Plenty of Supply in Wells; No Nitrate Issues

A community's strength and independence are interrelated with its supply and ready availability of water. That's why many metropolitan areas across the country are so concerned about water and specifically the depletion of supply.

In Iowa, the state and fate of the Jordan aquifer is garnering attention and generating a cascade of discussion about potential water shortages. According to the **Iowa Department of Natural Resources** the amount of water withdrawn from the Jordan aquifer has more than tripled in the past 50 years.

So how does this affect West Des Moines?

"We're not going to run out of water any time soon," emphasized **Mitch Pinkerton**, water production manager for the Water Works. "Our wells are in good shape into the foreseeable future. The Jordan aquifer contains an enormous amount of water, but it's not an endless source; we need to take care of what we have."

WDMWW sources its treated water from 22 wells. Of these, 19 are shallow wells that draw from the Raccoon alluvial aquifer—about 40 feet below ground level.

The utility's three deep wells reach down about 2,500 feet and draw from the Jordan aquifer.

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West Des Moines Treated Water is Free of Nitrates

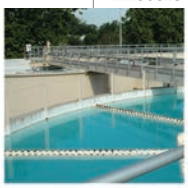
West Des Moines Water Works uses wells as its primary source of water, which virtually eliminates any risk of high nitrate levels. For the second time in a year, however, **Des Moines Water Works** is tackling high nitrate concentrations.

DMWW activated its nitrate removal system in December after nitrate levels in the Raccoon and Des Moines rivers continued to be well above the federal limit of 10 milligrams per liter. With the additional treatment, the nitrate concentration declined to 8.79 milligrams per liter. Customers in the northwest portion of West Des Moines and south of the Raccoon River who receive DMWW water can be assured that it is safe for drinking and other uses.

"High levels of nitrates can create acute problems for infants and pregnant women," noted **Diana Wilson,** general manager of WDMWW. "It is important to note that high nitrates can only be addressed at the watershed or at the treatment facility. Boiling will not remove nitrates from water and actually has the reverse effect of intensifying the concentration."

Board Unanimously Approves Modest Rate Adjustment for 2015

The West Des Moines Water Works Board of Trustees unanimously voted on Dec. 8, 2014, to institute a modest rate adjustment that will ensure the safety and quality of the community's water supply. The roughly 2-percent increase, effective Jan. 1, 2015, will result in a 10-cent increase from $4.45 per 1,000 gallons to $4.55 per 1,000 gallons. Similarly, the rate for irrigation will increase from $4.75 per 1,000 gallons to $4.85 per 1,000 gallons of water.



In addition to addressing general economic inflation, the slight rate adjustment covers the increasing costs of supplies as well as higher expenses associated with water treatment and facility maintenance.

"We continually evaluate our operations for efficiency in an effort to affordably deliver quality water services," said **Diana Wilson**, general manager. "The board only considers rate increases when absolutely necessary. It's important to note that new development is not funded by our ratepayers but rather by connection fees charged to developers and builders."

That study also revealed that the current charge for 1.5-inch and 2-inch water meters was insufficient to cover the costs of installation and meter reading. The new monthly basic service charges for these meters will be $8.10 and $9.60 respectively.

"The adjustment in the basic service charge for these meters affects commercial users primarily and does not apply to the Water Works' residential customers," Wilson added.

Wilson notes that even with the small rise in rates, West Des Moines' prices are regularly among the lowest in the metro area. She explained that this is important not only for the health and happiness of the people living here, but that it is often overlooked as a factor in attracting new businesses.

"We know that providing quality water at an affordable price is critically important to West Des Moines families," Wilson said. "It's also an economic development lure. A reliable, quality water supply is an advantage when courting new businesses and appealing to corporate leaders who are looking to expand their operations."

Philip Dorweiler, a trustee, noted that the Water Works finance and audit committee recommended the increase. "We believe strongly that rates should only be adjusted if that is the most reasonable and responsible option available. That was the case here."

Diversified Water Sources Help Avoid Supply Shortages

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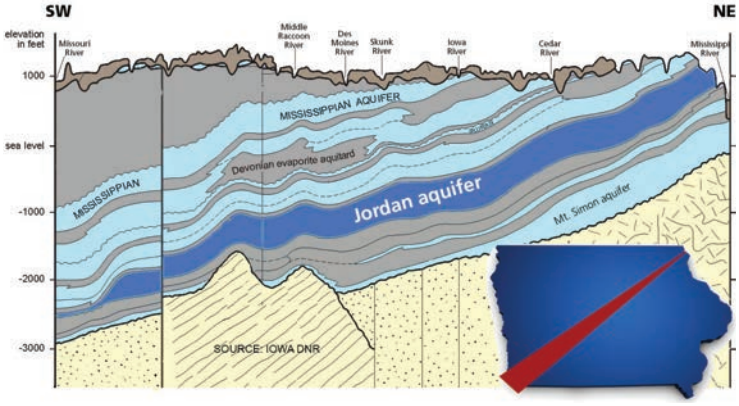
"The water taken from the deep wells has a higher mineral content and is more difficult to treat," Pinkerton pointed out. "We blend the water taken from both kinds of wells at our state-of-the-art treatment facility to produce a better product."

The guidelines being discussed by the state are designed to protect future generations. Pinkerton said, "With the increased use, the potential for long-term challenges exists, especially in other parts of the state where the stress on the aquifer is greater."



From a relatively shallow position in northeast Iowa, the Jordan aquifer gets deeper and more difficult to access as it cuts to the southwest part of the state.

The Jordan Aquifer: History and Facts

The Jordan aquifer runs deep underground throughout a large portion of Iowa and provides water to communities across the state. The aquifer starts out shallow and much closer to the ground's surface up north in Minnesota, Wisconsin and Northeast Iowa.

How much of the water produced by WDMWW comes from the Jordan aquifer?

West Des Moines Water Works draws approximately 1.1 billion gallons of water per year from the Jordan aquifer. Almost 1 billion gallons of water is drawn from the Raccoon alluvial aquifer. Together, the water drawn from the Raccoon alluvial and Jordan aquifers comprise 75% of WDM's water supply.

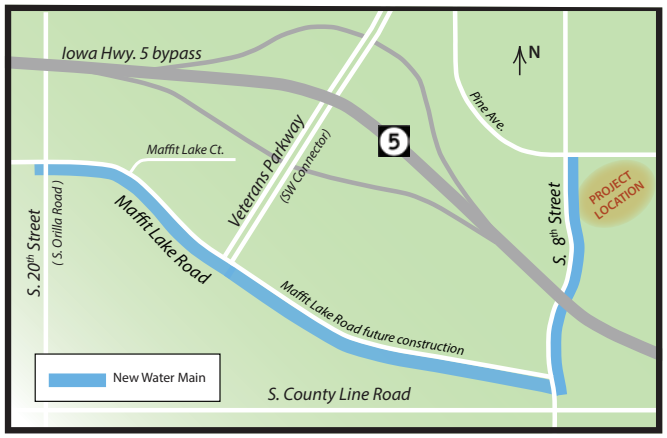
What are the sources for West Des Moines' treated water?

West Des Moines Water Works draws water from three primary sources.

1. The Jordan aquifer
2. The Raccoon River alluvial aquifer
3. The Des Moines Water Works

Construction Projects for 2015 Will Increase Capacity and Improve Water Delivery to New and Existing Customers

West Des Moines Water Works is working with the City of West Des Moines to provide water to Project Alluvion, Microsoft Corp.'s planned $1.1-billion data center expansion. WDMWW customers will benefit from the project with new additional storage resources and improved delivery from upgraded water mains.



Current plans call for a new booster station to ensure superior water pressure for customer use and fire protection. The project will also include an aquifer storage and recovery (ASR) well.

"An ASR well allows for water to be stored over the winter when there is excess capacity and retrieved when it's needed during peak summer use," noted **Diana Wilson**, general manager of WDMWW.

Alluvion opens up a large tract of land for growth and development. To serve new customers in this area, 8,500 feet of large-diameter water mains will be constructed before May of 2015. "As is our policy, developers who benefit from the extension of water service—not ratepayers—cover the cost of constructing mains by way of connection fees," Wilson said.

DID YOU KNOW?

The amount of water required to manufacture a car, including tires, is more than a typical West Des Moines family uses in six months. It takes an estimated 39,000 gallons of water to build an automobile from start to finish including the tires.

Source: U.S. EPA and West Des Moines Water Works

WEST DES MOINES WATER WORKS 4200 Mills Civic Parkway 515-222-3460 fax 515-222-3378 www.wdmww.com
WATER TREATMENT AND DISTRIBUTION 1505 Railroad Avenue 515-222-3465 fax 515-222-3469 TDD 515-222-3334