How to Talk to Customers About Nitrates

-Adapted from Water Well Journal

What are nitrates?

This may be the first thing you’ll need to explain. The average person may need to know that nitrates are important nutrients for plants. They may also associate nitrates with their use as a food additive in processed meat.

Instead of causing unnecessary alarm and fear, homeowners should realize we consume nitrates in food and water all the time, but higher than normal levels in their water should be addressed.

High levels of nitrate may also be a sign other contaminants are entering the water supply, including pesticides and herbicides from farm fields or pharmaceuticals from septic system wastewater.

Because manure and septic systems can be a cause, nitrates are sometimes associated with the presence of fecal matter and harmful bacteria. Michael Hanten, however, manager of the state-certified Clean Water Testing laboratory in Appleton, Wisconsin, says that’s not completely accurate.

“I don’t like to make that direct correlation simply because the way bacteria and nitrates end up in drinking water aren’t necessarily the same,” he says.

Homeowners should know the land on which their property sits plays a big role in what contaminants make it into the groundwater supply.

Why does the soil matter?

Soil is nature’s filter, and the geological makeup of a region greatly impacts what is removed from surface water before it reaches the aquifer below. However, nitrates can pass through soil fairly readily if there is a lack of organic matter and plant roots to absorb the nutrient.

“Sand is an excellent material to remove bacteria,” Hanten explains. “Regions with sandier soil will see lower instances of bacteria in the aquifer. But sand can’t hold on to nutrients such as nitrate, so you may find higher levels in those areas.”

On the other hand, areas where the geological makeup includes thin soils over fractured rock allow much more to flush down into the water table. As contractors and pump professionals have a solid understanding of an area’s soil quality and geological aspects, you’re in the perfect position to help homeowners understand these factors and how it impacts groundwater quality.

~Continued on Page 5
Welcome

A warm welcome to our new members...

Kevin Boyce  
Bill Brewer  
Keith Clarey

These gentlemen are from the Wyoming Water Development Office.

Thank you for being a part of WGWA.

Have something you would like to see in the newsletter? Please submit it by the 25th of the month.
WWCB Board Vacancy

The WWCB has an At-Large Pump Installation board position available.

If you are interested and would like to apply for the vacancy, please visit:

https://governor.wyo.gov/state-government/boards-commissions

Find us on Facebook!

You can now like WGWA on Facebook. Share our page with your friends.

www.facebook.com/WYGroundWater
PROVIDING INNOVATIVE SOLUTIONS FOR PROFESSIONAL WATER WELL CONTRACTORS SINCE 1890

CPS Distributors has partnered with the most innovative manufacturers in the industry to provide you with the quality products you need at the right price. Visit CPSdistributors.com for a list of training classes and events near you. Your time matters! Shop online 24/7 at Shop.CPSdistributors.com

For more information contact us.
Pumps@cpsdistributors.com
303-394-6040

CPS Distributors

2008 Cameron C-500 Drill Rigs $495

04 Ingersoll Rand T3 $325

2010 Triflo Mud System $38K

1980 Challenger $20 $395

1994 Smeal 12T-33,000lbs. Cap

2008 Atlas Copco AIRVS 606,1250/365 $78K

GD Falcon 40 Topdrive, 40,000lbs cap

GD FDFXX, 5" 12x8 Duplex mud pump $82K

We Buy, Sell & Trade Used Drilling Equipment

(435) 259-7281 • Moab, UT
BeemanEquipmentSales.com

Rigs • Compressors • Pumps • Mud Pits • Drill Pipe,
Collars • Handling Tools • Trucks • Trailers and More!

See Our Entire Inventory at BeemanEquipmentSales.com
Do I have nitrates in my well water?

The only way to know for sure is to test the water. Public awareness and proper testing are two of the most important ways contractors and pump installers can contribute to conversations around nitrate in the water supply. You should be able to supply your customers with the testing services they need to find out if they should be concerned about nitrate and other contaminants.

The federal standard for nitrate in drinking water is a maximum of 10 milligrams per liter (10 mg/L), which was established in the early 1990s as an acceptable level for infants over 6 months old.

How do nitrates get into groundwater and who is to blame?

When homeowners learn about elevated levels of nitrate in their water, they'll want to know where it came from. You'll need to explain the most likely sources.

“Wherever a nutrient is added to the land surface, there is an increased risk of nitrate ending up in the aquifer, especially if the soil is saturated with nutrients or doesn’t have the ability to hold on to them,” Hanten says.

That means nitrate could come from fertilization of farm fields, manure spreading and storage, as well as fertilization of golf courses, lawns, and gardens. Septic systems are another common cause of nitrate contamination.

“Septic systems are designed to remove bacteria, not nutrients like nitrate,” Hanten explains. “Wastewater goes into a drain zone that’s below the root systems of plants and trees that would absorb those nutrients. So, eventually the nitrate makes its way down into the aquifer.”

The tendency is to want to point fingers at one particular cause, which often ends up being agricultural practices. But don’t be too quick to blame farms when there are many other potential contributors.

Contractors can help homeowners by assessing the situation, including the geological makeup and possible sources, so customers can make informed decisions about fixing water quality.

Is a new well required?

Drilling deeper or moving a water well to a new location should certainly be explored as an option for addressing nitrate contamination.

It may also be the case that a well has structural issues or isn’t up to code and needs to be fixed. Contractors should avoid any sort of guarantee they can eliminate nitrate from the water supply.

How can I protect my family?

While fixing or drilling a new well is certainly a viable option for addressing nitrate contamination, you can’t change the contents of the water a well is pulling from the ground.

If a new well isn’t an option or won’t solve the problem, identifying a water treatment solution is a possibility that will give your customers some peace of mind. The best option is a reverse osmosis system. RO reduces nitrates by as much as 80%, and it also greatly reduces levels of pesticides, herbicides, and pharmaceuticals that may come along with nitrate.

Contractors and pump installers who also offer residential water treatment solutions like RO installation can diversify their businesses and extend the ways they help homeowners.
Attention Exhibitors!

If you would be willing to host a class at the 2020 convention...

Please contact Jade.

We are still looking for a couple of classes.
Wyoming OSHA

Matthew Young is a Senior OSHA Consultant with Wyoming OSHA that guides employers towards compliance with safety regulations and making their place of employment safer. Previously, he was an OSHA Compliance Officer for 4 years. He holds a Bachelor of Science in Fire Protection and Safety Engineering Technology from Oklahoma State University. He is an Associate Member of the American Society of Safety Professionals and 2018-2019 President Elect for Rotaract Club of Casper. In his spare time, he enjoys all of the outdoor activities that Wyoming has to offers such as skiing, running, backpacking, hiking, cycling, and biathlon.

Wyoming OSHA Consultants provide full or limited safety and health technical visits to private and public sector employers at no charge upon request. Visits help improve safety culture, prevent accidents, and lower workers’ compensation costs. Visits do not results in citations or penalties but any hazards identified must be corrected. For more information and to submit a request for services, go to http://wyomingworkforce.org/businesses/osha/consultation.

WARWS Spring Conference

The Wyoming Association of Rural Water Systems held their annual Spring Conference in April at the Ramkota. WARWS held four full days of classes for CEU points, as well as a trade show and game night.

Area 3 Director, John Zupan, and our Executive Director, Jade Slaymaker attended and represented the Wyoming Ground Water Association. They were able to answer questions and we gained a few new members as well.

Hopefully, there will be a few more members as well as some new vendors they met joining WGWA.

To learn more about WARWS visit their website at https://www.warws.com/.
Board of Directors

Matt Bebout—President  RW Riehemann—Vice President
Danielle Dover—Secretary  Joe Veches—M/S Rep
Aaron Wilson—Past President  Kevin Dover—Area 1 Director
Wes Moody—Area 2 Director  John Zupan—Area 3 Director
Cody Smith—Area 4 Director  Travis Hueller—Area 5 Director
Kristen Moldaschel—Assistant  Jade Slaymaker—Executive Director

Visit our website: www.wywaterwell.org