Frequently Asked Questions
About Nitrate in Columbus' Drinking Water

What causes elevated nitrate in the Columbus drinking water?
Nitrogen occurs naturally and is essential for plant growth, which is why it is applied as fertilizer to farmland, lawns, and golf courses. During certain weather conditions, the fertilizer can run off into streams and rivers where it reacts with water to form nitrate. The Scioto River receives runoff from more than 1,000 square miles of land, 80% of which is agricultural, before reaching the Dublin Road Water Plant intake. Therefore, the Scioto River is more susceptible to nitrogen runoff than the other water sources in Columbus.

How is the public notified of a nitrate alert?
Water suppliers are required by the Ohio EPA to notify the public when nitrate levels are more than 10 parts per million in the drinking water. The Division of Water's Water Quality Assurance Laboratory monitors nitrate levels regularly. When the levels exceed the standards, advisories are provided to local television, radio and newspaper media outlets, and are also posted on the city's web site at: www.columbus.gov/utilities/

What does "parts per million" mean?
"Parts per million" (ppm) is a measure of the concentration of a substance (such as nitrate) in water. As an example, let's say a bucket of water has nitrate in it at a level of 10 parts per million (or mg/L). If the bucket of water had a million drops of water in it, 10 of those drops would be nitrate and the rest of the drops would be water.[1]

Who should be concerned?
When a nitrate advisory is in effect, customers in the Nitrate Advisory Area identified below are advised to not give tap water to **infants below the age of six months** or use it to make infant formula, juice, or baby cereal. Until the advisory is lifted, bottled water should be used for infants below the age of six months. **DO NOT BOIL THE TAP WATER; boiling increases nitrate levels in the tap water.** Healthy adults and older children can consume higher levels of nitrate because they have fully developed digestive systems. Nitrate is commonly consumed by older children and adults as it is contained in many foods such as processed meats and lettuce. Those who are pregnant, nursing or have any medical conditions should consult their doctor on nitrate concerns.

The Ohio Department of Health will make bottled water available to pregnant women and infants below 6 months of age who reside in the impacted areas (including WIC clients) and who are unable to otherwise obtain water on their own. Columbus Public Health will begin water distribution this evening from 4:00 p.m. to 7:00 p.m. in the front loop at 240 Parsons Avenue, and Franklin County Public Health will begin water distribution at Westland Mall, in front of the former Macy's, at 4141 West Broad Street. Water distribution will continue at both locations from 11:00 a.m. to 1:00 p.m., and 4:00 to 6:00 p.m. daily as long as the advisory is active.

What are the possible health effects of nitrate?
Nitrate is considered a toxin to infants below the age of six months. Please see the enclosed fact sheet from the Ohio Environmental Protection Agency (OEPA) for more information.
http://epa.ohio.gov/Portals/28/documents/pws/Nitrate_in_Public_Drinking_Water.pdf

Is it safe to shower or bathe in my water if it is over 10 parts per million?
Nitrate is only a concern for ingestion (eating and drinking). It is not absorbed through your skin.[2]

Can baby bottles be washed with tap water during a nitrate alert?
Yes, it is safe to wash baby bottles in tap water containing nitrate. Please remember to use bottled water for mixing any formula, juice, or cereal for infants below the age of six months.

Is elevated nitrate a concern for pets?
The water should be safe for consumption by household pets, including puppies, kittens and elderly pets, but if you have concerns, please contact your veterinarian. Pocket pets, because of their small size and

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[1] Source: United States Environmental Protection Agency
[2] Source: United States Environmental Protection Agency

many different intestinal considerations, should always be given bottled water. Neonatal calves and pigs are more susceptible to high concentrations of nitrates in the water.

I use a carbon filter. Will this help?
Activated carbon filters, such as those in a "Brita" water pitcher, DO NOT remove nitrates.[3]

What about home filter systems?
Point of use (POU) filter systems treat water at a single tap. Point of entry (POE) filter systems treat water used throughout the house. Two types of systems that will remove nitrates from your water are:
* Reverse osmosis unit
* Distillation unit

> **IMPORTANT**: All POU and POE filter systems or treatment units need maintenance to operate effectively. If they are not maintained properly, contaminants may accumulate in the units and make your water worse.

In addition, some vendors may make claims about their effectiveness that are not based on science. EPA does not test or certify treatment units, but two organizations that do are
* NSF International (http://www.nsf.org), and
* Underwriters Laboratory (http://www.ul.com)[4]

How often are nitrate advisories issued in Columbus?
In the past fifteen years, nitrate levels exceeded standards on just two occasions, in 2000 and in 2006. The frequency is dependent upon a variety of factors including weather patterns.

How long do the advisories usually last?
The advisories can last from a few days to several weeks. They are lifted when the source nitrate levels return to normal.

What is the City of Columbus doing to prevent nitrate levels from rising?
The Department of Public Utilities is a partner in the Conservation Reserves Enhancement Program for agricultural landowners to encourage specific conservation practices. The Division of Water's Watershed Management staff also works with property owners along the reservoirs to encourage environmental stewardship. Additional efforts include recent installation of green infrastructure around Griggs, O'Shaughnessy and Hoover reservoirs to naturally filter stormwater that carries nitrates, and an upcoming comprehensive study of the Scioto River watershed to identify long-term nitrate reduction solutions. Lastly, the Dublin Road Treatment Plant is in the midst of a $200 million project to expand capacity and improve treatment to meet EPA regulations; this work includes a $35 million ion exchange treatment facility which, when completed in 2017, will allow the plant to more effectively treat nitrate events such as this one.

How can I find out if I am in the affected service area?
You can check a map on our Web site that will show any areas under a nitrate advisory at www.columbus.gov/utilities/, or for an interactive map, visit http://arcg.is/1HQZDe1. If you do not have Internet access, you can call the DPU Customer Service Center at 614-645-8276 during regular business hours (7:00 a.m. – 6:00 p.m., Monday through Friday).
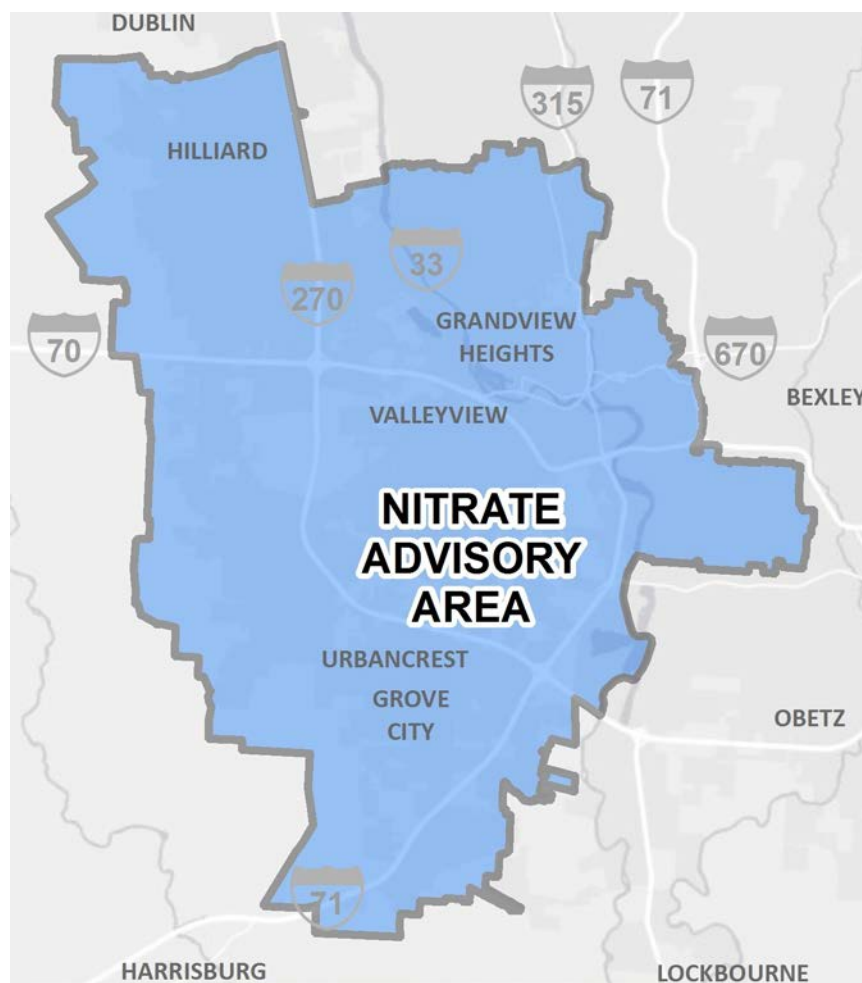
What if I need more information?
Please review the enclosed Ohio EPA fact sheet, Nitrate in Public Drinking Water, http://epa.ohio.gov/Portals/28/documents/pws/Nitrate_in_Public_Drinking_Water.pdf

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[3] Source: United States Environmental Protection Agency
[4] Source: United States Environmental Protection Agency

The affected area includes portions of west, central, and southwest Columbus, as well as Grandview Heights, Grove City, Hilliard, Lincoln Village, Marble Cliff, Upper Arlington, Urbancrest, and Valleyview. For an interactive map, please visit http://arcg.is/1HQZDe1

Nitrate Advisory Area Map:

For an online, informational brochure on Columbus' drinking water quality, please visit www.columbus.gov/utilities.