
Office of Consumer
Advocate,

v.
Veolia Water
Pennsylvania Inc.

Telephonic Public Input
Hearing

Docket Nos.:
C-2025-3058757
C-2025-3058865

Pages 156 - 238

Judge's Chambers
Commonwealth Keystone
Building - Plaza Level
400 North Street
Harrisburg, PA

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Hearing Date: July 29, 2026

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the matter of:

Veolia Water Pennsylvania, Inc.	:	Administrative Order
6310 Allentown Blvd, Suite 104	:	Veolia Water PA Public Water System
Harrisburg, PA 17112-2739	:	PWSID No. 7220015
	:	Harrisburg
	:	Dauphin County

ORDER

NOW, this 12th day of September 2025, the Commonwealth of Pennsylvania, Department of Environmental Protection (“Department”), has found and determined:

A. The Department is the executive agency with the duty and authority to administer and enforce the Pennsylvania Safe Drinking Water Act, Act of May 1, 1984, P.L. 206, as amended, 35 P.S. §§ 721.1–721.17 (“Safe Drinking Water Act”); Section 1917-A of the Administrative Code of 1929, Act of April 9, 1929, P.L. 177, as amended, 71 P.S. § 510-17 (“Administrative Code”); and the rules and regulations promulgated thereunder.

B. Veolia Water Pennsylvania, Inc. is a Pennsylvania corporation that has an office and mailing address of 6310 Allentown Blvd, Suite 104, Harrisburg, PA 17112-2739 (“Veolia Water PA”).

C. Veolia Water PA owns and operates a public water system that provides water to customers in Harrisburg and other municipal entities in Dauphin County and Perry County.

D. On or about September 3 and 4, 2025, the Department collected water samples from approximately sixty (60) fire hydrant locations in the Veolia Water PA’s public water distribution system.

E. Analysis of the Department's water samples references in Paragraph D, showed manganese in excess of the 0.05 mg/L secondary Maximum Contamination Limit ("MCL") established by the United State Environmental Protection Agency ("USEPA") in 40 C.F.R. § 143.3 at the following hydrant locations:

- a. 200 Woodley Drive, Harrisburg
- b. 200 Ashwood Way, Harrisburg
- c. 472 Earl Avenue, Harrisburg
- d. 601 S Arlington Avenue, Harrisburg
- e. 3916 Woodvale Road, Harrisburg
- f. Montour Street / Wilhelm Road, Paxtang
- g. PA-850 (Valley Road) / Orchard Drive, Marysville
- h. 121 Nyes Road, Harrisburg
- i. 123 Huntley Drive, Harrisburg
- j. 703 Christian's Drive, Harrisburg
- k. 6421 Terrace Court, Harrisburg
- l. 5901 Locust Lane, Harrisburg
- m. 519 S 29th Street, Harrisburg
- n. Ivy Rd / Park Terrace, Paxtang
- o. Regent Drive / Noble Lane, Harrisburg
- p. Thicket Lane / Crums Mill Road, Lower Paxton Township

F. Analysis of the Department's water samples referenced in Paragraph D, showed manganese in excess of the 0.3 mg/L USEPA health advisory limit ("HAL") for infants at the following hydrant locations:

- a. 15 Rutherford Rd, Harrisburg
- b. Highland Street & Boyer Street, Enhaut (Swatara Township)
- c. 512 Monroe Street, Steelton
- d. Rome Terrace / Pebble Ct, Susquehanna Township
- e. 1640 Fairmont Drive, Harrisburg
- f. 78 Suffolk Highway, Harrisburg
- g. 4493 Winfield Street, Harrisburg
- h. Eshelman Street / Logan Ave, Highspire
- i. Mumma Street / Jury Street, Highspire
- j. Osage Piping & Fabrication – 85 Industrial Road, Highspire
- k. Swan Street / Brisban Street, Paxtang

- l. 4493 Winfield Street, Harrisburg
- m. Eshelman Street / Logan Avenue, Highspire
- n. Mumma Street / Jury Street, Highspire
- o. Osage Piping & Fabrication – 85 Industrial Road, Highspire
- p. Swan Street / Brisban Street, Paxtang

G. Analysis of the Department’s water samples referenced in Paragraph D, showed manganese in excess of the 1 mg/L 1-day and 10-day USEPA HAL for adults at the following hydrant locations:

- a. 78 Suffolk Highway, Harrisburg
- b. 4493 Winfield Street, Harrisburg
- c. N3rd Street / Edwin Avenue, Susquehanna Township
- d. Green Street / Bergner Street, Harrisburg
- e. 6421 Taunton Road, Harrisburg
- f. 6414 Norfolk Place, Harrisburg
- g. 111 S. 47th Street, Harrisburg

H. Analysis of the Department’s water samples referenced in Paragraph D, showed aluminum and iron in excess of their respective secondary MCLs at several hydrant locations.

I. The USEPA HALs for manganese protect against potential neurological health effects via ingestion of manganese in drinking water.

J. Further sampling of the Veolia Water PA public water system at consumer taps near the hydrant locations may determine if the levels of manganese, aluminum, and iron are elevated in the water being consumed by customers.

Applicable Law

K. Veolia Water PA is a “person” and a “public water supplier” as those terms are defined in Section 3 of the Safe Drinking Water Act, 35 P.S. § 721.3, and 25 Pa. Code § 109.1.

L. Veolia Water Pa's public water system described in Paragraph C. is a "public water system" and a "community water system" as those terms are defined by Section 3 of the Safe Drinking Water Act, 35 P.S. § 721.3 and 25 Pa. Code § 109.1.

M. Under 25 Pa. Code § 109.202(b)(1), public water suppliers must supply drinking water that complies with the secondary MCLs and USEPA's secondary MCLs for manganese and iron that have been incorporated as secondary MCLs under 25 Pa. Code § 109.202(b)(2).

N. Under 25 Pa. Code § 109.4(4), Veolia Water PA is required to take whatever investigative or corrective action is necessary to assure that safe and potable water is continuously supplied to its users.

O. Under Section 721.10 of the Safe Drinking Water Act, 35 P.S. § 721.10, the Department may order a public water system to take such temporary emergency actions as it deems necessary in order to protect the health of such persons.

P. On September 10, 2025, after discussions with Veolia Water PA, the Department issued an administrative order, field order 2025-22-432595-001, to Veolia Water PA requiring it to develop a plan and take samples of water in its distribution system near some of the hydrant locations identified in Paragraphs E, F, and G ("Field Order").

Q. On September 11, 2025, the Department identified sampling results at additional hydrant locations which should also be subject to additional sampling in the distribution system.

R. This administrative order replaces the Field Order in its entirety and the corrective actions below supersede the corrective actions in the Field Order.

ORDER

NOW THEREFORE, under Sections 5, 10, and 12 of the Safe Drinking Water Act, 35 P.S. § 721.5, 721.10, and 721.12, and Section 1917-A of the Administrative Code of 1929, 71 P.S. §510-17, the Department orders Veolia Water PA as follows:

1. Within 24 hours after receiving this order, Veolia Water PA shall complete collection of a sample from a consumer tap in the distribution system nearest each of the following hydrant locations:

- a. 78 Suffolk Highway, Harrisburg
- b. 4493 Winfield Street, Harrisburg
- c. N3rd Street / Edwin Avenue, Susquehanna Township
- d. Green / Bergner Street., Harrisburg
- e. 6421 Taunton Road, Harrisburg
- f. 6414 Norfolk Place, Harrisburg
- g. 111 S. 47th Street, Harrisburg
- h. 15 Rutherford Road, Harrisburg
- i. Highland Street & Boyer Street, Enhaut (Swatara Township)
- j. 512 Monroe Street, Steelton
- k. Rome Terrace / Pebble Ct, Susquehanna Township
- l. 1640 Fairmont Drive, Harrisburg
- m. Eshelman Street / Ligan Avenue, Highspire
- n. Mumma Street / Jury Street, Highspire
- o. Osage Piping & Fabrication – 85 Industrial Road, Highspire
- p. Swan Street / Brisban Street, Paxtang

2. Within 24 hours after receiving this order, Veolia Water PA shall collect a sample from a consumer tap in the distribution system no farther than 5 taps upstream of each of the hydrants at the locations identified in Paragraph 1, a-p.

3. Within 24 hours after receiving this order, Veolia Water PA shall collect a sample from a consumer tap in the distribution system no farther than 5 taps downstream of each of the hydrants at the locations identified in Paragraph 1, a-p.

4. Within one hour after completing all of the sampling at each hydrant location required by Paragraph 1-3, Veolia Water PA shall flush the hydrant at that location in accordance with the procedure determined to be most effective at improving water quality at each location. A properly trained class E certified waterworks operator experienced in hydrant flushing protocol shall provide oversight of the flushing.

5. Within 24 hours after the flushing at each hydrant required by Paragraph 4, Veolia Water PA shall repeat the sampling required by Paragraphs 1-3 at the same hydrants and consumer taps as sampled before the flushing.

6. Veolia Water PA shall have the samples collected as required by Paragraphs 1-3 and 5 analyzed by a Pennsylvania accredited laboratory for manganese, iron, and aluminum. Veolia Water PA shall request expedited analysis of all samples collected under this order.

7. In accordance with Veolia Water PA's current flushing protocol, Veolia Water PA shall provide customers of the system affected by the flushing with notice that flushing is taking place contemporaneously with the flushing and advise that customers should not consume water that is discolored.

8. Within one hour after receiving any results of the sampling analysis required by Paragraph 6, Veolia Water PA shall provide the results to the Department and Veolia shall forward copies of the lab reports pertaining to said sample results to Department within twenty-four (24) hours of receipt.

9. Veolia Water PA shall develop a plan to accomplish the requirements of Paragraphs 1-8 and submit it to DEP.

10. Work performed by Veolia Water PA in response to the Department's Field Order may be used to satisfy requirements of Paragraphs 1-9.

11. Within forty-eight (48) hours after completing the flushing of all hydrant locations as required by Paragraph 4, Veolia Water PA shall submit a report to the Department regarding the number of hydrants flushed, the number of samples collected, any other corrective actions taken. Any report required by this paragraph must also state whether any locations will require additional flushing and sampling, and include any key observations noted during each flushing event.

12. If Veolia Water PA receives any sample results that exceeds an USEPA HAL, Veolia Water PA shall issue an appropriate Tier 1 Do Not Consume Public Notice pursuant to 25 Pa. Code §§ 109.407, 109.408(a)(11).

13. All submissions to the Department required by this Order shall be directed to:

Joseph M. Mattucci
Environmental Program Manager
Safe Drinking Water Program
Department of Environmental Protection
909 Elmerton Avenue
Harrisburg, PA 17110
E-mail: jomattucci@pa.gov

NOTICE OF APPEAL RIGHTS

Any person aggrieved by this action may appeal the action to the Environmental Hearing Board ("Board") pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. § 7514, and the Administrative Agency Law, 2 Pa. C.S.A. Chapter 5A. The Board's address is:

Environmental Hearing Board
Rachel Carson State Office Building, Second Floor
400 Market Street
P.O. Box 8457
Harrisburg, PA 17105-8457

TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984.

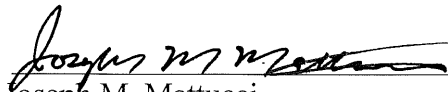
Appeals must be filed with the Board within thirty (30) days of receipt of notice of this action unless the appropriate statute provides a different time. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

A Notice of Appeal form and the Board's rules of practice and procedure may be obtained online at <https://ehb.pa.gov/> or by contacting the Secretary to the Board at 717-787-3483. The Notice of Appeal form and the Board's rules are also available in braille and on audiotape from the Secretary to the Board.

IMPORTANT LEGAL RIGHTS ARE AT STAKE. YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD AT 717-787-3483 FOR MORE INFORMATION. YOU DO NOT NEED A LAWYER TO FILE A NOTICE OF APPEAL WITH THE BOARD.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST BE FILED WITH AND RECEIVED BY THE BOARD WITHIN THIRTY (30) DAYS OF RECEIPT OF NOTICE OF THIS ACTION.

FOR THE COMMONWEALTH OF PENNSYLVANIA,
DEPARTMENT OF ENVIRONMENTAL PROTECTION:



Joseph M. Mattucci

Environmental Program Manager
Safe Drinking Water Program



MANGANESE IN WATER: WHAT TO KNOW

HOW DOES MANGANESE GET INTO MY WATER?

Manganese is a metal commonly found in rocks, soil, and minerals. It often mixes with elements like oxygen or sulfur. It naturally occurs in groundwater, but pollution can raise its levels.¹ In Pennsylvania, deep wells often have more manganese because the water has been touching rock for a long time.^{2,3} In coal mining areas, mining can also release manganese into the water.⁴

Manganese is used in making steel to make it harder and stronger. It can also be added to gasoline to raise the octane rating, which helps engines run more smoothly and efficiently. Pollution or runoff from these sources can get into groundwater, which can contaminate the water supply for wells. The Pennsylvania Department of Environmental Protection (PA DEP) found that areas with a history of land disturbance, like mining, often have much higher levels of manganese in surface water.^{5,6}

Manganese causes a strong metallic taste in water. Water containing manganese might appear colorless initially, but black stains or particles will quickly appear as the manganese is exposed to oxygen. In Pennsylvania, manganese and iron often co-occur in water, which can increase the metallic taste and discoloration. This is most commonly seen in the northern and western regions of Pennsylvania.³

PUBLIC DRINKING WATER STANDARD

The U.S. Environmental Protection Agency (EPA) does not have a strict drinking water rule for manganese, but it does recommend a limit of 0.05 mg/L.^{7,8} Water with more manganese than this can cause stains to laundry and sinks, bad taste, or discoloration of skin or teeth, but it is not likely to harm your health.

Public water systems in PA are required to test for manganese by state law and to keep levels below the EPA Secondary Maximum Contaminant Limit (SMCL).⁹ In PA, public water systems may be managed by the municipality or a private company. To learn more about public drinking water quality, visit the website of your local public water supplier. Private wells are not regulated by the Commonwealth. For more information about private wells, see the “Private Well” section below.

MANGANESE AND HEALTH

Manganese is a nutrient that the body needs in small amounts. It is found in some vitamins and in many foods, like nuts, grains, leafy vegetables, and tea. Manganese helps with bone growth and the way the body uses proteins, fats, and carbohydrates. Getting too much manganese can be harmful, especially from water or supplements.

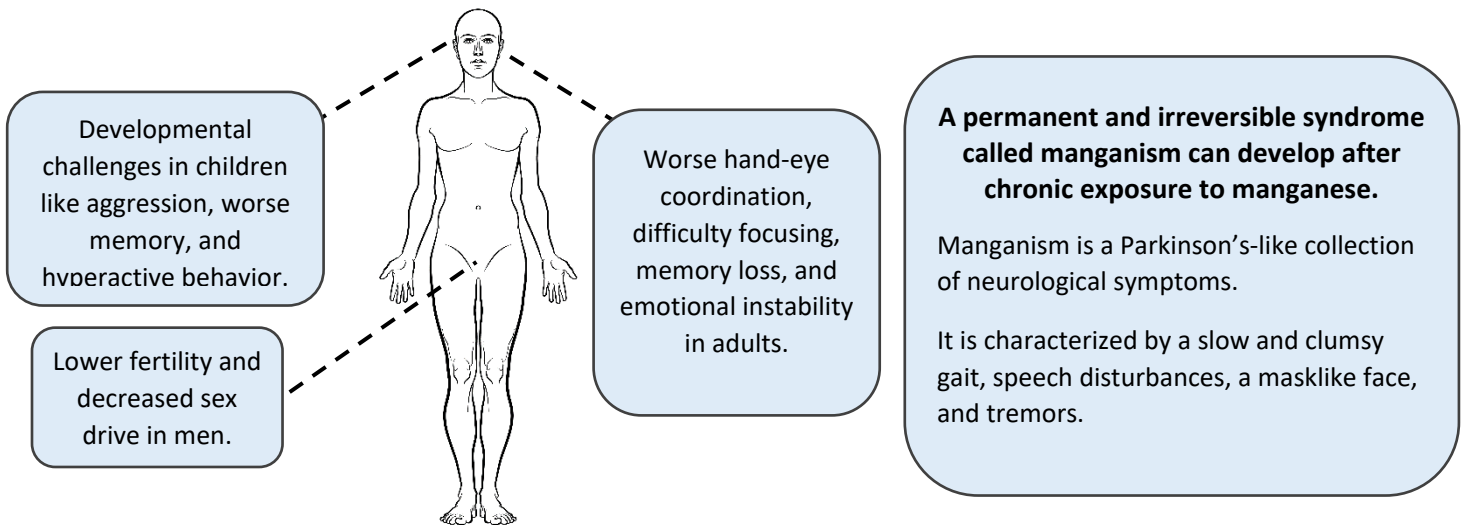
The Institute of Medicine gives advice on how much manganese people should get each day through food and water. The recommended daily amounts range from 0.003 mg for babies (0–6 months old) to 2.3 mg for adults. The most an adult should have in one day is 11 mg. This is called the Tolerable Upper Intake Level, and it’s the highest amount that is likely safe. Manganese in drinking water is usually safe if it stays below 0.3 mg/L over a lifetime. For people older than 6 months, short-term exposure (10 days or less) is safe if levels are under 1 mg/L. But babies under 6 months should not drink water with more than 0.3 mg/L of manganese.^{10,11} Some states have developed more stringent health-based thresholds for manganese in water, especially for infants. Some states use stricter rules to protect infants. For example,



Minnesota recommends that babies under one year old who drink formula should not have water with more than 0.1 mg/L of manganese.¹²

Drinking water with more than 0.3 mg/L of manganese for a long time may lead to health problems. These can include brain and nerve issues, such as a condition like Parkinson's disease called manganism. The risk depends on how much manganese a person takes in, how long they are exposed, and how sensitive they are to it.^{10,11}

SYMPTOMS OF CHRONIC MANGANESE EXPOSURE



PUBLIC HEALTH GUIDANCE

If manganese in water is higher than 1 mg/L, the Pennsylvania Department of Health (PA DOH) advises against using the water for drinking or cooking. PA DOH also recommends avoiding drinking water with more than 0.3 mg/L of manganese over a long period of time. Babies under six months old should never drink water or formula made with water that has more than 0.3 mg/L of manganese. It is best for babies this age to have water with less than 0.1 mg/L of manganese.

Most water with manganese above 0.05 mg/L (the SMCL) but below 0.3 mg/L is usually safe to use for a short time, except for certain people who may be more sensitive. Manganese does not go into the air and is not taken in through the skin, so it is still safe to shower, bathe, and wash dishes or clothes, even if the water has too much manganese for drinking.



Table 1: Safety Considerations at Different Manganese Levels^{10,11,12}

MANGANESE Level	Overall Safety	Safe Food and Drinking Uses	Other Safe Household Uses
< 0.05 mg/L	Safe for all uses	All uses	All uses
0.05 – 0.1 mg/L	In most cases, not likely to pose a health risk. Consult with a physician if you are on a manganese-restricted diet. Water may taste metallic or appear brownish red in color. May stain laundry or sink ware.	All uses	Most uses, though laundry or sink ware may experience cosmetic damage. Showering, bathing, washing dishes, washing clothes, and brushing teeth are all OK.
0.1 – 0.3 mg/L	Infants younger than 6 months should only consume tap water or formula made with tap water containing manganese at this concentration if absolutely necessary and alternative water sources are not available. Consult with a physician if you are on a manganese restricted diet. Water may taste metallic or appear brownish red in color. May stain laundry or sink ware.	Possibly unsafe for infants younger than 6 months old. Safe for most other uses.	Most uses, though laundry or sink ware may experience cosmetic damage. Showering, bathing, washing dishes, washing clothes, and brushing teeth are all OK.
0.3 – 1 mg/L	Avoid drinking water with manganese concentration in this range as it is above the lifetime health advisory level. Infants less than 6 months old should not consume water with this amount of manganese, including in formula made with tap water. Consult with a physician if you are on a manganese restricted diet. Water may taste metallic or appear brownish red in color. May stain laundry or sink ware.	Possibly unsafe for individuals older than 6 months to consume. Not safe for infants less than 6 months old.	Laundry or sink ware likely to experience cosmetic damage. Showering, bathing, washing dishes, washing clothes, and brushing teeth are all OK.
>1 mg/L	Unsafe for consumption in water or food at any age. Above 2 mg/L may harm some sensitive plants if used for garden irrigation.	Not safe for drinking water or food preparation.	Laundry or sink ware likely to experience cosmetic damage. Showering, bathing, washing dishes, washing clothes, and brushing teeth are all OK.

PRIVATE WELLS

Pennsylvania has more people using private wells than any other state, with over 3.5 million residents depending on them for water. There is no state law that requires private well owners to test their water for harmful substances.¹³



Because manganese can make water taste like metal and leave a black stain, water with these signs should be tested. Use a certified lab to test well water for manganese (see the PA DEP [list of accredited labs](#)).¹¹

Water should be tested for manganese at the following times:^{14,15}

- When buying a new home with a private well used for drinking water.
- After drilling a new well.
- At least once during the wet season and once during the dry season, since manganese levels can change with rainfall. After that, test every 3 years during the season when levels were highest.
- After installing a water treatment system, and then every 3 years.
- If the water starts to taste like metal or leaves a black stain.
- If someone in your home has health problems that may be caused by manganese.
- If new mining starts near your home.

TREATMENT SYSTEMS

If manganese levels in your water are higher than the EPA limit of 0.3 mg/L PA DOH recommends using another source of drinking water or installing a treatment system to lower manganese levels.

Choosing the right treatment system depends on the type of manganese in the water. Some types of manganese dissolve in water, while others stay solid and can be removed with a filter. The form of manganese depends on how it reacts with oxygen and other chemicals—this process is called oxidation.¹⁶

Oxidized manganese becomes a solid and looks like brown, black, or purple particles or sediment. This solid form does not dissolve easily in water. Manganese that hasn't reacted with oxygen can stay dissolved in the water. Most treatment methods work by changing dissolved manganese into solid particles, then filtering them out. Other things in the water—like iron, water hardness, and pH—can also affect which treatment system works best.

Table 2: Manganese Treatment Systems and Considerations^{4,16,17}

Treatment System	Description	Considerations
Oxidation and filtration	Manganese greensand filters oxidize and filter manganese (and iron) in one unit with a potassium permanganate treatment. The oxidation process creates solid forms of manganese that can be captured by a filter. Potassium permanganate must be continually replenished. Birm filters are similar, but do not require a potassium permanganate solution as they use oxygen in raw water for oxidation.	Requires significant maintenance including frequent replenishment of potassium permanganate solution and regular filter cleaning to remove iron and manganese particles. When properly maintained, this is an extremely efficient option for combined iron and manganese treatment. Best for treating water where combined iron and manganese concentration is between 3-10 mg/L. Efficiency of manganese removal using birm filters is highly variable.



Treatment System	Description	Considerations
Oxidation followed by filtration	A chemical solution like potassium permanganate, chlorine dioxide, or ozone is first added to convert dissolved manganese to a solid. Manganese can then be removed from the water by filtration.	Significant system maintenance is required. Chemical solution tanks must be routinely refilled, and the filter must be cleaned to remove accumulated particles. Best for treating water where combined iron and manganese concentration is greater than 10 mg/L.
Ion exchange	Ion exchange is often used in combination with water softening. Water softeners usually remove calcium and magnesium through an exchange process replacing them with water and sodium. Manganese (and iron) removal with ion exchange, when added to a softening system, is accomplished in the same way, by exchanging manganese and iron for sodium. Manganese and iron are then removed from the softener resin bed.	Removal efficiencies vary based on manganese (and iron) concentration, water hardness (presence of calcium and magnesium), and pH. Oxidized forms of manganese and iron will foul the softener resin, so it is critical that raw water not come into contact with oxidizing agents before entering the softener.
Desalting membranes (Nanofiltration and Reverse Osmosis)	Nanofiltration and reverse osmosis membranes are commonly used to remove dissolved constituents in water and are also capable of filtering dissolved manganese ions, without the use of an oxidizing chemical.	Due to concerns over membrane fouling (or clogging of the membrane), selection of nanofiltration or reverse osmosis membranes for manganese removal alone is not advised. However, manganese removal by nanofiltration/reverse osmosis may occur in conjunction with removal of other dissolved constituents, such as heavy metals, that the membrane was designed to remove.

ADDITIONAL INFORMATION

- [ATSDR Manganese ToxFAQs](#)
- [EPA: Drinking Water Health Advisory for Manganese](#)
- [PA DOH How to Interpret Water Test Results](#)
- [PA DOH Private Well Water](#)
- [PA DEP Water Testing](#)
- [Penn State Extension Testing Your Drinking Water](#)

CONTACT US

If you have any questions or concerns about manganese in your water, please contact the Division of Environmental Health Epidemiology at the PA DOH by calling 717-787-3350 or emailing us at dehe@pa.gov.



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