2024 CONSUMER CONFIDENCE REPORT ON WATER QUALITY

PURDUE UNIVERSITY®

Posted June 2025 – for the period of January 1 to December 31, 2024

Introduction

The Purdue University West Lafayette campus water supply comes from the groundwater aquifer known as the Wabash River Valley Aquifer (also known locally as the Teays River Valley Aquifer).

The water quality report that follows provides information about the source of drinking water, what it contains, and how it compares to Environmental Protection Agency (EPA) and Indiana Department of Environmental Management (IDEM) standards. As in years past, this report has been circulated campus-wide and is available online. The report's content is as required under 327 IAC 8-2.1.

This report covers the period from January 1 to December 31, 2024, and is intended to provide information about your drinking water quality. For more information regarding this report, contact Kurtis Veach, Water Works Supervisor, at 765-496-2705.

Opportunity for Public Participation

Purdue University Water Works has joined with Indiana American Water Company and the City of Lafayette to form a Local Area Planning Team for Wellhead Protection. This team of volunteers from the community is working hard to ensure the drinking water source in the West Lafayette/Lafayette areas remains safe. For more information on how you can play an active role in maintaining safe drinking water in your community, don't hesitate to contact 765-496-2705 to join the Wellhead Protection Local Planning Team.

Sources of Drinking Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and groundwater wells. As water travels over the land's surface or through the ground, it can dissolve naturally occurring minerals and radioactive material. It can pick up substances resulting from the presence of animals or human activity. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants that may cause taste, color or odor problems. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Contaminants that may be present in source water include the following:

- Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides may come from various sources such as agriculture, urban stormwater runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants can naturally occur or result from oil and gas production and mining activities. Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particles and photon radioactivity above the MCL over many years may have an increased risk of getting cancer.
- There is no safe level of lead in drinking water. Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Contact your health care provider for more information about your risks. Lead in drinking water is primarily from materials and parts used in service lines and in plumbing. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. Use only cold water for drinking, cooking and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking or making baby formula, flush your pipes for several minutes by running the tap. If you are concerned about lead in your water contact Purdue Water Works at 765-496-2705. Purdue University Waterworks maintains a public web page at https://pws-ptd.120wateraudit.com/purdueunivwaterworks-in, indicating our current West Lafayette Campus water line material inventory. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available at https://www.epa.gov/safewater/lead.

To ensure that tap water is safe to drink, the EPA prescribes regulations that limit the number of specific contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Some people may be more vulnerable to contaminants in drinking water than the general population. Contaminants in drinking water may affect the water's taste, color or odor. The presence of contaminants does not necessarily indicate that water poses a health risk. Do not hesitate to contact the system's business office for more information on the taste, odor or color of drinking water.

Immuno-compromised people, such as people with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants, can be particularly at risk from infections. These people should seek advice from their healthcare providers about drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Purdue University Water Works is Ground Water

Our water source(s) and source water assessment information are listed below:

	Source Name	Type of Water	Report Status
WELL, 10	WELLHOUSE 5 - WELLS 10 & 11	Ground Water	Active
WELL, 11	WELLHOUSE 5 - WELLS 10 & 11	Ground Water	Active
WELL, 12	WELLHOUSE 6 - WELLS 12 & 13	Ground Water	Active
WELL, 13	WELLHOUSE 6 - WELLS 12 & 13	Ground Water	Active
WELL, 14	WELLHOUSE 7 - WELL 14	Ground Water	Active
WELL, 15	WELL HOUSE 8 - WELL 15	Ground Water	Active
WELL, 16	WELLHOUSE 9 - WELL 16	Ground Water	Active
WELL, 5	WELLHOUSE 2 - WELLS 5 & 6	Ground Water	Active
WELL, 6	WELL HOUSE 2 - WELLS 5 & 6	Ground Water	Active

Water Quality Test Results

Definitions: The following tables contain scientific terms and measures, some of which may require explanation.

Averaging: Regulatory compliance with some MCLs is based on running an annual average of monthly samples.

Action Level or AL: The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Maximum Contaminant Level or MCL: The highest level of contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level or MRDL: The highest level of disinfectant allowed in drinking water. There is convincing evidence that adding a disinfectant is necessary to control microbial contaminants.

Maximum Residual Disinfectant Level Goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MFL: Million fibers per liter (a measure of asbestos)

mrem/yr: Millirems per year (a measure of radiation absorbed by the body)

MRL: The lowest amount of analyte in a sample that can be quantitatively determined with acceptable precision and accuracy under stated analytical conditions.

N/A: Not applicable.

pCi/l: Picocuries per liter

ppm or mg/l: Milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

ppb or ug/l: Micrograms per liter, parts per billion - or one ounce in 7,350,000 gallons of water.

ppt or ng/l: Nanograms per liter or parts per trillion - or one ounce in 7,350,000,000 gallons of water.

RAA: Running annual average.

Coliform Bacteria

Maximum Contaminant Level Goal	Samples Per Month	% of Positive Samples	Allowable %	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	60	0	5% per month	0	N	Naturally present in the environment may indicate a sanitation problem
Our water system tests a minimum of 60 samples per month under the Total Coliform Rule for microbiological contaminants. After collecting microbiological samples, the water system collects disinfectant residuals to ensure control of microbial growth.						

Disinfectant	Collection Date	Highest RAA	MRDL	MRDLG	Range of Levels Detected	# Sites Over AL	Units	Violation	Likely Source of Contamination
Chlorine	2024	1	4	4	0.1 - 1.7	0	ppm	N	Water additive used to control microbes

Regulated Contaminants

Lead and Copper

Definitions: The following tables contain scientific terms and measures, some of which may require explanation.

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known expected risk to health. ALGs allow for a margin of safety.

Action Level (AL): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and in plumbing.

Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Lead and Copper	Collection Date	MCLG	Action Level (AL)	90th Percentile	Range of Levels Detected	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2023 - 2024	1.3	1.3	0.64	0.033 - 1.2	0	ppm	N	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead	2023 - 2024	0.0	15.000	1.7	0 - 46	2	ppb	N	Corrosion of building plumbing systems; Erosion of natural deposits

Note: The lead and copper rule establishes an action level (AL) of 0.015 mg/L for Pb and 1.3 mg/L for C U based on the 90th percentile level of tap water samples. An AL exceedance is not a violation but can trigger other requirements.

Regulated Contaminants (cont.)

Disinfectants and Disinfectant By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Total Haloacetic Acids (HAA5)	2023 - 2024	6.0	<1.0 - 6.0	0	60	ppb	N	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	2023 - 2024	6	<1.0 – 6.0	0	80	ppb	N	By-product of drinking water disinfection
Radioactive Contaminants	**Collection Date**	**Highest Level Detected**	**Range of Levels Detected**	**MCLG**	**MCL**	**Units**	**Violation**	**Likely Source of Contamination**
Gross Beta Particle Activity	2022	4.7 pCi/l	3.5 - 4.7 pCi/l	0	50 pCi/l used for screening, not MCL	pCi/l	N	Decay of natural and man-made deposits. Note: MCL's gross beta particle activity is four millirems/year, and the annual dose is equivalent to the total body or any internal organ. 50 pCi/L is used as a screening level.
Combined Radium 226/228	2022	1.72	0.63 - 1.72	0	5	pCi/l	N	Erosion of natural deposits
Gross alpha excluding radon and uranium	2022	1.90	0.6 - 1.9	0	15	pCi/l	N	Erosion of natural deposits
Radium 226	2022	1.00	0.33 - 1.0	0	5	pCi/l	N	Erosion of natural deposits
Radium 228	2022	0.95	0 - 0.95	0	5	pCi/l	N	Erosion of natural deposits
Synthetic Organic Compounds	**Collection Date**	**Highest Level Detected**	**Range of Levels Detected**	**MCLG**	**MCL**	**Units**	**Violation**	**Likely Source of Contamination**
48 tests were performed on each producing well	2024	0.0034	<0.0002 - 0.0034	0.0	0.006	Mg/l	N	Run off from herbicide use, combustion exhaust from industrial facilities, pesticide use, and drug and chemical factories.
Volatile Organic Compounds	**Collection Date**	**Highest Level Detected**	**Range of Levels Detected**	**MCLG**	**MCL**	**Units**	**Violation**	**Likely Source of Contamination**
No Detections - 60 tests performed on each producing well	2024	Below Detection Limit	Below Detection Limit				N	Discharge from factories, including chemical, petroleum, textile, etc.

Regulated Contaminants (cont.)

Inorganic Compounds	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	2023	3.0820	0.737 - 3.082	0.00	10.00	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium	2023	0.1420	0.101 - 0.142	2.00	2.00	mg/l	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	2023	0.7700	0.13 - 0.77	4.00	4.00	mg/l	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Sodium	2023	34.8000	7.91 - 34.8	No MCLG	No MCL	mg/l	N	Naturally occurring; Runoff from road salt
Nickel	2023	0.0010	<0.0007 - 0.001	0.10	0.10	mg/l	N	Nickel is a very abundant natural element.
Nitrate - Nitrite	2024	0.273	<0.1 - 0.273	10.00	10.00	mg/l	N	Runoff from fertilizer use, leaking from septic tanks, sewage, erosion of natural deposits
Selenium	2023	1.2210	0.0 - 1.221	50.00	50.00	ppb	N	Discharge from petroleum and metal refineries, erosion of natural deposits and discharge from mines.
Dibromochloromethane	2023	0.00168	0 - 0.00168	0.00	0.10	mg/l	N	By-product of drinking water disinfection

Note: Eight additional inorganics were tested for and not detected.

Organic Compounds	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
No Detections - 14 ea. tests performed on each producing well	2023	Below Detection Limit	Below Detection Limit				N	Runoff from herbicides used on row crops, discharge from factories, chemical plants and other industrial activities, and leaching from gas storage tanks and landfills.

Unregulated Contaminants

PFAS Compounds	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Hazard Index	Violation	Likely Source of Contamination
Perfluorobutanoic acid (PFBA)	2023	5.60	<3.0 - 5.6	N/A	N/A	ppt	N/A	N	PFAS have characteristics that make them useful in a variety of applications and products, including nonstick cookware, waterproof clothing, firefighting foam and certain manufacturing processes.
Perfluoropentanoic acid (PFPeA)	2023	11.50	<3.0 - 11.5	N/A	N/A	ppt	N/A	N	
Perfluorohexanoic acid (PFHxA)	2023	11.30	<3.0 - 11.3	N/A	N/A	ppt	N/A	N	
Perfluorooctanoic acid (PFOA)	2023	0.0	0.0 - 0.0	0.0	4.0	ppt	N/A	N	
Perfluorononanoic acid (PFNA)	2023	0.0	0.0 - 0.0	10.0	10.0	ppt	1.0	N	
Perfluorobutanesulfonic acid (PFBS)	2023	17.40	<3.0 - 17.4	2000	N/A	ppt	1.0	N	
Perfluoropentanesulfonic acid (PFPeS)	2023	8.40	<3.0 - 8.4	N/A	N/A	ppt	N/A	N	
Perfluorohexanesulfonic acid (PFHxS)	2023	6.80	<3.0 - 6.8	10.0	10.0	ppt	1.0	N	
Perfluorooctanesulfonic acid (PFOS)	2023	0.0	0.0 - 0.0	0.0	4.0	ppt	N/A	N	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA) (Gen X)	2023	0.0	0.0 - 0.0	10.0	10.0	ppt	1.0	N	

Note: The EPA adopted the permanent rule creating MCL and MCLG for PFAS compounds on 4/10/2024. That data is now shown above in MCLG, MCL and the Hazard Index.