



OSU Environmental Health & Safety Drinking Water Sampling and Testing

The Ohio State University Main campus drinking water supply is provided as a public utility through the City of Columbus. Drinking water supply provided to campus buildings is continuously treated and tested at the treatment facility for many common contaminants. Annual reports are available at the following website for public review.

<http://utilities.columbus.gov/DocListing.aspx?id=38046>

Additionally, the City of Columbus manages watershed issues, water quality and water monitoring. City reporting and information can be found at: <http://publicutilities.columbus.gov/content.aspx?id=38297>.

OSU EHS can provide pricing for drinking water testing services, and collect samples, as requested if concerns regarding water quality are present within a building or buildings. The following table outlines common problems, complaints and testing parameters for drinking water within OSU buildings. Depending on the situation and source of the water quality concerns, departments may be charged for this service.

Problem	Water characteristic/complaint	Test for:
Appearance of water (something in the water, discoloration)	Brown or yellow discoloration	Iron
	Frothy or foamy	Detergents
	Cloudy	Turbidity, Total Dissolved Solids (TDS)
	Brown precipitate	Iron, pH
	Black flakes	Manganese, pH
Staining of fixtures or clothing	Red or brown staining	Iron, pH
	Yellow staining	Iron, hydrogen sulfide, hardness, pH
	Black staining	Manganese, hydrogen sulfide, pH
	Green or blue staining	Copper, pH
Unusual odor or taste of water	Bitter	Nitrate, sulfate
	Rotten egg	Hydrogen sulfide
	Soapy	Detergents, surfactants
	Metallic	pH, iron, zinc, copper, lead
	Salty	TDS, chloride, sodium
	Septic, musty, earthy	Total coliform bacteria, iron, pH
	Gasoline, oil, kerosene	Hydrocarbons, organic compounds
Other	Tarnished silverware	Hydrogen sulfide, pH
	Stomach ache, diarrhea	Total coliform bacteria, nitrate, sulfate, manganese
	White deposits on pots	Hardness, sulfate, TDS
	Corrosion of plumbing	pH, lead, iron, manganese, copper

Typical water testing involves total dissolved solids (TDS), Nickel, Copper, and Lead. Additional testing measures can be taken based on the specific characteristics or concerns of the water to be tested. In addition to considering specific water quality issues for testing, the following recommendations are provided.

Reason for Concern	Consider Testing for:
Lead pipe or lead solder in plumbing*	Lead, copper, zinc, pH, alkalinity
Close to old fuel storage tanks	Hydrocarbons, volatile organic compounds
Close to gas and oil drilling	TDS, lead, pH, volatile organic compounds
Close to a confined livestock area	Nitrate, total coliform bacteria
Close to a landfill or dump site	Volatile organic compounds, heavy metals
Close to a hazardous material spill	Specific materials involved with the spill

* Due to the Lead and Copper Rule of 1991, any building constructed before 1991 should include lead with the water testing parameters.

A note on total coliform bacteria: Typically testing for total coliform bacteria is recommended when the drinking water source is a well or direct ground water; or this is an immediate concern for biological contamination. Because OSU drinking water is supplied through public utilities, testing for total coliform bacteria should not be necessary. However, if adverse health effects arise, total coliform bacteria can be tested as outlined in the table above.

Biological Contamination: If there is a specific outbreak or case potentially related to biological contamination in OSU water systems steps should be taken to test for, and remediate the contamination if necessary. Specifically, biological contamination regulated by the Environmental Protection Agency must be maintained below Maximum Contaminant Levels (MCL) including Cryptosporidium, Giardia lamblia, Legionella, Fecal coliform, E. coli, and Enteric Viruses. In the event of an outbreak of disease/symptoms related to biological contamination, it may be necessary to utilize outside contractors to perform the testing, analysis, and remediation of water systems.