

When is a UV light needed?

Not all sources of drinking water are safe. If you are drawing water from a lake, river, stream, dug well or have a drilled well with a poor sampling history (repeated *total coliform* or *e. coli* bacterial counts), treatment of the water is necessary to make the water safe to drink. Use of a UV light is one of the most common methods of disinfecting water.

How does a UV light work?

UV lights disinfect water by inactivating bacteria, viruses and protozoa. The UV rays alter the DNA of virus, bacteria, protozoa so that they cannot reproduce and are considered inactive.

Installation Considerations

One of the first things to consider before installing a UV light is the quality of the raw water to be treated. Suspended solids (turbidity), mineral content (e.g. iron) and color (related to tannin) will have an effect on the ability of the UV light to provide treatment. Before installing a UV light it is advisable to have the raw water tested for these parameters. This will help you to determine what pretreatment equipment, if any is needed (cartridge filters, H₂O softeners, tannin filtration). It is recommended that you consult with a water treatment professional regarding any pretreatment you may require.

Another consideration is the size of UV light you will require. UV lights come in different sizes with different flow capacities. Most single family dwellings will not require a UV light rated for more than 5 gallons per minute. Consult with a water treatment professional regarding the size of UV light you require.



Maintenance

Once installed a UV light will require periodic maintenance. The UV lamp loses its power over time and its ability to inactivate microorganisms drops to levels that are unsafe. Therefore the UV lamp should be changed at least once per year. Most UV lights are equipped with an alarm to indicate when a UV lamp has failed. A UV lamp is encased within a quartz sleeve. This quartz sleeve will require periodic cleaning to remove scale that has formed. This scale will reduce the UV lamp's effectiveness. Any pretreatment equipment will also require periodic maintenance. Always refer to the owner's manual regarding type and frequency of maintenance required for the UV light or pretreatment equipment.

What a UV light does not do

A UV light will not leave a chemical residue in the water to protect against contamination that occurs after treatment. In cases where water is distributed to multiple buildings, additional treatment may be required (e.g. chlorination).

Sampling

It is recommended that you continue to monitor water safety by regular water sampling. You should sample the treated water quarterly to ensure that your UV light is doing its job. Sample bottles are available at each Health Unit office. Samples can be submitted:

MONDAY TO THURSDAY

Burk's Falls Office

7:30 a.m. to 12:00 noon

17 Copeland St, Burk's Falls

Parry Sound Office

7:00 a.m. to 3:00 p.m.

70 Joseph St, Parry Sound

North Bay Office

7:30 a.m. to 3:00 p.m.

345 Oak St W, North Bay

WEDNESDAY ONLY

West Nipissing Municipal Office

8:30 a.m. to 2:00 p.m.

225 Holditch St, Sturgeon Falls

Should you require any further information regarding UV lights or water sampling, contact the North Bay Parry Sound District Health Unit at 705-474-1400 or 1-800-563-2808 extension 5400. Email: environmental.health@healthunit.ca

