

Operation Community Water Footprint



Research Questions: What you need to find out

-How much raw (fresh) water is brought into the drinking water treatment facility?

-How much treated water is put into the distribution system?

These values should be given in units of volume/time. The volume of water should be measured in cubic metres or litres and the time should be measured in seconds, days or weeks. Measuring time in months is not as useful because the length of a month is variable. It is important that these values be the average over a longer period of time or they will not be representative.

The difference between these two values can tell you how much water is used by the facility during the treatment process for such things as cleaning and maintaining the filters and how much water is lost to evaporation. It might be a good idea to ask about how exactly this water is used.

- What kinds of chemicals are used and in what amounts?

Possible types of chemicals used in water treatment include coagulants, flocculants, disinfectants, oxidants, antiscalants and many more.

This information will need to be units of volume/time just as the raw water and treated water values were. These values may need to be estimated such as saying how many jugs of a chemical get used in a year, be sure to also record the volume of the jugs so you can calculate the total volume of chemical.

Just like any other product, some water is used when manufacturing these chemicals. The amount of fresh water polluted by that manufacturing process and its byproducts can also be taken into account. To calculate the water footprint of the chemicals used in the water treatment process we will use the very conservative conversion of 100L of fresh water for each litre of chemical used.

-What is the total metered water use of the area served by this water treatment facility?

-What is the non-metered water use of the area from such things as fire hydrants?

Water lost in the distribution system, whether through small leaks or large water main breaks, often makes up the most significant portion of the water footprint of tap water. The amount of water lost in the distribution system is equal to the amount of treated water put into the system minus the amount of water taken out of it.

Water utilities keep track of water use with meters at each house, business or anywhere else people use water and should be able to tell you the total amount of metered water being used. They may also be able to estimate the amount of non-metered water being used. This is water that is not being lost to leaks but is not being counted with a meter either such as water taken from fire hydrants.

Just like the other values, these must be in units of volume/time and should be the averages over as long a time period as possible.

-What drinking water quality tests are performed on the local water and how often are they done?

-What have the results of these tests been?

There are several water quality tests that are probably done in your community on a regular basis and a few more that might be performed periodically but less often. The results of these tests should be available to you and if the water treatment facility operator cannot provide them they should be able to tell you who else to contact for this information.

This information may also be available from your provincial or territorial government and some provinces and territories even make drinking water test data available online. You can go to www.safewater.org/PDFS/ocwf/FindingWaterInfo.pdf to find out who you can contact for information in your area.

-What is the population served by this drinking water treatment facility?

This will be used to calculate per capita water footprints in your community.