

Raw Water Definitions

Raw water is naturally occurring water found in the environment that has not been treated and is not approved for human consumption (non-potable). Raw water includes rain water, storm water, ground water, and water from bodies like lakes and rivers. This report will not address other alternative water sources that are categorized as recycled or reused water, such as grey water from buildings, treated water from the waste water treatment plant, or reused water from spray pads and paddling pools.

Rain water is collected from roof surfaces or other manmade, above grade collection surfaces. Rain water harvesting systems directly collect rain when it falls. The result is a higher quality of water than storm water, however, rainwater may be contaminated through air pollution and collection systems tend to be smaller scale.

Storm water is collected from at grade surfaces such as drains, creeks, or ponds. Storm water systems often contain water that has contacted the landscape, and where contamination can be picked up, however, storm water systems are typically larger scale than rain water collection systems.

Ground water, also known as well or aquifer water, is a renewable source of naturally occurring water that is found beneath the ground surface. Surface water, such as rain, seeps into the ground and is collected in underground reservoirs called aquifers. Water quality may vary depending on the soluble minerals that characterize the aquifer and any other substances that may find their way into the aquifer.

River or lake water is a renewable source of naturally occurring water. Water quality may vary based on the source and the season.

Irrigation is the supply of water to a park's soft landscape surface area, such as grass, sports fields, ornamental gardens, community gardens (that may include food), and trees to supplement natural rainfall. This report does not include other potable or non-potable uses of water within a park such as spray pads, paddling pools, outdoor swimming pools, toilets, sinks, drinking fountains, or decorative fountains.

Raw water systems must be separated from potable water systems to prevent contamination of the potable water systems. A raw water park irrigation system would need to comply with the *Saskatchewan Plumbing Regulation*; requirements would depend on the specific project.

Raw water for park irrigation may be implemented as new parks are built or existing park irrigation systems may be retrofitted (in isolation from the potable water system) in order to use raw water. Each raw water irrigation system is unique depending on the source of water and water quality. The system may require storage, filtration, treatment, and a pumping system, plus a source of electricity to operate the pumps. A method to monitor water quality and procedures to ensure water used meets minimum safety standards is also required. Measures to alert park staff and the public of non-potable water use could include the use of purple pipes (which is the industry standard to identify non-potable water) and signage.