

## Level monitoring of grey water and rain water

With rising costs on the retention of groundwater and the treatment of fresh water to potable water standards over the last years, many actions have been taken to increase the utilization of lightly soiled water, such as grey water and rain water, instead. This has led to an increasing demand of measuring solutions especially suited for level monitoring of grey water and rain water.



In many applications, water is not required to be pure or even treated to potable water standards and will not be used for any critical applications. Lightly soiled water, such as grey water, which is mainly water that has been used for showering, hand washing, etc., or rain water, available free of costs, has therefore heavily increased in utilization. This lightly soiled water is collected separately in tanks or basins, which requires a suitable level monitoring for grey water and rain water to control the pumps handling this media, and after a simple disinfection via UV or by a filtration process, can be used e.g. for flushing toilets and irrigation.

Rainwater capture, often called rainwater harvesting, is a technique to maximize the collection and storage of rain water mainly around buildings and has become very popular in many new construction projects. Rain water harvesting systems are most commonly combined with grey water systems for flushing and irrigation water.

Whenever domestic grey water is recovered and rain water harvested, the level monitoring of grey water and rain water is essential to control the rainwater captured and waste water recovered in storage tanks, to ensure that when grey water is not available, the systems automatically switches to fresh water until sufficient grey water is available again. This process carries on continuously by highly automated level monitoring and process control.

In these systems, hydrostatic level transmitters respectively submersible pressure transmitters have found widespread use, as the hydrostatic level measurement has proved to be the most simple and reliable approach by far.

Sewage system infrastructure builders are nowadays heavily working on trying to separate waste water and rainwater, as when heavy rain occurs it can cause the sewers to overflow spilling sewage out into public areas. Over the past few years intensive targets have been set for level monitoring of waste water in sewage systems, initially to monitor how often and where these overflow spillages occur, but now working actively on preventing overflow completely, by hindering rain water to enter the sewage system in case of heavy rain.



Whenever rain water is harvested from highways, roads and other hard surfaces, it may need to be checked for water quality as it may be polluted by contaminating chemicals, from motor vehicles, road salts, etc.. These quality tests are normally carried out in the storage tanks in a combined analysis and level monitoring solution for grey water and rain water.

Potable water is a valuable resource with increasing costs for extraction and the treatment to potable water standards and should therefore not be wasted. These rising costs have proved it to be economical to spend more on harvesting rain water and reusing lightly soiled grey water. In all of these applications, reliable and accurate level monitoring guarantee an efficient utilization of both, fresh and re-used water.

Please find further information on this topic on our information platform [www.wika.com/hydrostatic-level](http://www.wika.com/hydrostatic-level)



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