



## PortaWell FAQ's

How long can you survive without water?

- Proper hydration is essential to your survival. Your body needs to consume a significant amount of water each day to function properly. This is because you constantly excrete water through sweat and urination, so your body needs to replenish the lost fluids. You cannot live long without consuming a healthy amount of water. It is only possible to survive without water for a matter of days. You may be susceptible to the effects of dehydration even sooner, depending on certain factors such as age, body size, physical exertion, temperature, etc. <https://www.healthline.com/> .

Is my tap water always safe to drink?

- It is considered generally safe if it comes from a public water system in the United States, such as one run and maintained by a municipality. The Environmental Protection Agency (EPA) has the authority to monitor all public water systems and sets enforceable health standards regarding the contaminants in drinking water. <https://www.webmd.com/>

Why do I need an emergency source of water?

- Following a disaster, clean drinking water may not be available, or your regular water source could become contaminated. Prepare yourself for an emergency by creating and storing a supply of water that will meet your family's needs. <https://www.cdc.gov/>

How much water should be stored for an emergency?

- Store at least one gallon of water per person per day ..... for drinking and sanitation. A normally active person needs about three quarters of a gallon of fluid

daily, from water and other beverages. However, individual needs vary depending on age, health, physical condition, activity, diet and climate where:

- Children, nursing mothers and sick people may need more water.
- A medical emergency might require additional water.
- If you live in a warm weather climate more water may be necessary. In very hot temperatures, water needs can double. <https://www.ready.gov/water>

What are the principal methods to make surface water suitable for drinking?

- Principal methods to treat potentially contaminated water to make it suitable for drinking include: boiling, chlorination, filtration, ultraviolet radiation, and distillation. Each method has its pros and cons with chlorination and filtration being the most practicable in an emergency situation.

What common biologic contaminants found in water can cause illness or death in humans?

- Potential harmful biological (living) contaminants in water include: protozoa (i.e., giardia and cryptosporidium), bacteria (i.e. e coli, cholera, salmonella, typhus, cyanobacteria), and virus (i.e., norovirus, rotavirus).

What common chemical contaminants found in water can cause illness or death in humans?

- Synthetic and volatile organic chemicals can come from gas stations, urban storm water runoff and septic systems. Pesticides and herbicides come from a variety of sources such as agriculture, urban storm water runoff and residential uses.

If the water is clear, is it safe to drink?

- Short answer is no. Microscopic impurities like bacteria, viruses and parasites that contaminate water cannot be smelled, tasted or even seen. Hence even if your water is clear, it does not mean it is safe to drink.

Why is filtration the most common portable method of treating surface water to make it safe for drinking?

- Filtration is effective for removing the widest variety of waterborne contaminants (both biological and chemical) to make the water suitable for drinking. Portable filtration systems can be configured to be small in size, light weight, and adaptable to differing surface water conditions. When filtration alone is not adequate to remove most harmful biologic contaminants, it can be combined with other treatment methods.

If I have stored water, why do I need portable water treatment system?

- A stored water supply works perfectly for a short-term interruption of the municipal water supply due to contamination or localized disaster. This assumes the interruption lasts only for a few days to a couple of weeks. If the outage lasts longer

than that, serious health risks quickly arise due to lack of availability of clean water. Storing enough water for a longer lasting emergency quickly become a guessing game that is expensive as to storage container cost, space to store the containers, and maintenance to treat and rotate the water. It is not practical for the average household to store enough water for a credible longer-term interruption of the water supply. The PortaWell is a low-cost insurance policy that is affordable, small storage footprint, easy to use, scalable to small or large families or groups, and reliable in removal of common harmful biologic and chemical contaminants.

Can any surface water be made a suitable source for drinking water?

- Theoretically the answer is “yes”; however, some water sources may require a more treatment processes than filtration alone. Water that contains heavy metals such as arsenic, mercury, cadmium, lead etc. will require special filters to remove those contaminants. Water that is cloudy caused by excessive silt, algae or other organic matter may require pretreatment to remove the larger particles to prevent early fouling of a finishing (small pore size) filter. Water that has a strong chemical smell may require multiple treatments methods to completely remove the contaminant.

Can “swamp water” be used as a source of surface water for PortaWell?

- “Swamp water” is defined here as water from any source (shallow pool, standing water, pond, slow moving stream, etc.) that has significant turbidity (cloudiness) with visible floating particulate and/or detectable odor. Filtration alone is usually not adequate to make this water source suitable for drinking and this source type should be chosen only as a last resort.

What are the advantages of using the PortaWell versus other popular portable filtration systems?

- Other commercially available portable water filtration systems fall into two main categories: gravity fed and manual pump systems. PortaWell is a dual stage, pumped system that is powered by a small 12-volt rechargeable battery (think portable drill vs screwdriver). The principal advantages PortaWell offers are throughput and capacity. PortaWell effortlessly delivers up to 10 times the amount of drinking water per hour vs comparable manual pumped or gravity fed systems. PortaWell uses large, industry standard filters which greatly expands the volume of water able to be treated before filter cleaning or filter changeout.

What are some of the filter options available for use with PortaWell?

- Because PortaWell uses industry standard 10-inch x 2 ½ inch OBE (open both end), many filter options are available based on your specific need. PortaWell is shipped standard with a ceramic filter for removal of bacteria and cysts, and an activated charcoal carbon block filter for removal of volatile organic chemicals, pesticides, herbicides, and chlorine and a sediment filter to prefilter particulate. This combination of filters will treat the most common waterborne contaminants to make it safe for human consumption.

How much water can be pumped through PortaWell filters before they need to be replaced?

- The ceramic filter is cleanable and is rated for 10,000 gallons total capacity. The charcoal carbon block filter is rated at 1000 gallons total capacity. Poor quality of the source water can significantly reduce these capacities. The ceramic filter is cleanable

How do filtration and chlorination complement each other?

- Filtration will remove biological contaminants down to 0.2 microns which includes pathogenic bacteria and protozoa (i.e. giardia and cryptosporidium). Some biologic contaminants (viruses, prions) are smaller than that and filtration may not remove all of this class of contaminants. Chlorination up to 4 ppm is very effective in killing these contaminants. Chlorination by itself is not effective to kill protozoa cysts (giardia, cryptosporidium) yet the combination of the two are very effective against these biologic contaminants.

How do I safely chlorinate water?

- What are safe levels of chlorine in drinking water? Chlorine levels up to 4 milligrams per liter (mg/L or 4 parts per million (ppm)) are considered safe in drinking water. At this level, harmful health effects are unlikely to occur.  
[https://www.cdc.gov/healthywater/drinking/public/water\\_disinfection.html](https://www.cdc.gov/healthywater/drinking/public/water_disinfection.html)

How do I remove chlorine from the water?

- Chlorine can be reduced by running the water through a filter with activated charcoal. The carbon works by adsorption, the molecular bonding of the chlorine ions to the surface of the charcoal.

How do I clean the PortaWell ceramic filter if it becomes plugged?

- The ceramic filter is washable up to 30 times. The flow rate of the ceramic filter can be easily renewed by simply brushing its outer surface with a clean plastic brush, or soft scouring pad under running water. As the top layer of ceramic and contaminants are brushed off, a new layer becomes available. Do not use soap, detergents, or steel wool.

How do I clean the Carbon Filter?

- The charcoal carbon Block filter is not cleanable and must be replaced.

What size battery do I need to run PortaWell?

- PortaWell requires a 12-volt deep cycle battery with a minimum capacity of 7 Amp Hours. These are available on our website or can be purchased locally from a hardware or automotive supply store.

How long can I run the PortaWell on a battery before it needs recharging?

- PortaWell can operate approximately 1 hour on a 12-volt 7 Amp Hour battery before needing recharging. This will provide 40 to 60 gallons of clean water suitable for drinking.

What do I need to charge a battery using solar power?

- All that is needed to recharge a 12-volt battery is a 12-volt solar panel, a 12 volt, 10 amp (minimum) solar charge controller and cables to connect the battery, charge controller and solar panel and sunshine.

What size solar panel do I need with PortaWell?

- A 30-to-50-watt 12-volt solar panel will completely recharge a 7 Amp hour battery in less than two hours if the battery has a depth of discharge of less than 50% (represents approximately 1 hour of PortaWell running time which generates 40 to 60 gallons of filtered water.)

What are recommended spare parts for PortaWell?

- Recommended spare/service parts include: 1) spare filter housing O-rings, 2) silicon grease for lubricating O-rings, 3) chlorination kit, 4) spare ceramic and carbon block filters.

