

Clean Water Solutions by Enertopia Corporation

In Partnership with GSWPS (Global Solar Water Power Systems), Enertopia provides clean drinking water solutions from small scale portable units to city utility capacity.

The Enertopia clean water systems can operate 100% independently of conventional electrical or water grids, providing fresh water in areas where there is little or no operating infrastructure. Do you represent an existing water utility? Our units can clean any quantity of water needed, and deliver that water to your existing water distribution system without using grid-supplied electricity.



These systems are designed to meet your needs based on your local water quality analysis and available sunlight (and/or wind) hours.



Do Any of These Water Concerns Apply to Your Current System?

- Water-borne disease?
- Metals contamination?
- Unacceptable turbidity?
- Bad taste?
- Unreliable supply?
- High transportation cost?
- Too many chemicals?
- Electricity shortages?
- Remote locations?



Solar array for mid-sized water purifier.



Portable water purifier on trailer.

- **Safety:** Our safe, high efficiency, water filtration systems are designed to remove virtually all suspended solids and (99.99%) bacteria free from non-brackish surface water sources.

Our systems are custom designed to fit the demands of your local water conditions. They can have different combinations of a pre filter stage; mechanical filtration; reverse osmosis membrane filtration; and ultra violet light processing. Your particular requirement may need fewer stages or more: we'll custom-design to ensure your needs are met.

- **Portability:** The Enertopia water systems are often mounted on reinforced mobile trailers and are capable of being transported and located by nothing more than a pickup truck if road conditions allow. The mobility of the systems allows them to be easily deployed in rural communities or in disaster sites where infrastructure is lacking or damaged.

A significant advantage of the Enertopia water system is its portability from electrical grids. Our systems are typically powered by the sun using a proprietary design. They can also be powered by the wind. There are no diesel generators to re-fuel and our units produce clean water even if

the local electrical grid is not working.

Filtering water at the community level can also save millions of dollars in costly water-pipe systems since distribution costs can be far lower.

Clean water: *wherever* it is needed.

- **Durability:** The GSWPS designed water filtration system is unique in its total design. The creativity of our lead designer has resulted in a new and better way to provide clean water. But the separate sub-components are each established, proven technology.

With proper scheduled maintenance we conservatively assign a 10-year productive life to most of the water components, and the solar components are guaranteed for 20 years.

- **Technology:** Enertopia expects to be involved in a patent-filing process to protect key innovations, during 2010.

As one example we use a solar-tracking mechanism – that uses no electricity – that moves the solar panels to track the sun throughout the day. This feature increases water production by up to 40% versus typical fixed solar systems.

■ Clean Water Output

Levels: Based on a sunny day at mid latitudes around the world with our complete tracking and filtration system one can expect the following clean water output numbers per hour of system operation.

AREA OF SOLAR PANELS	CLEAN WATER LITRES PER HOUR	CLEAN WATER GALLONS PER HOUR
1m ²	1,000	264
3m ²	3,000	792
5m ²	5,000	1,320
10m ²	10,000	2,640

■ Output Water Quality:

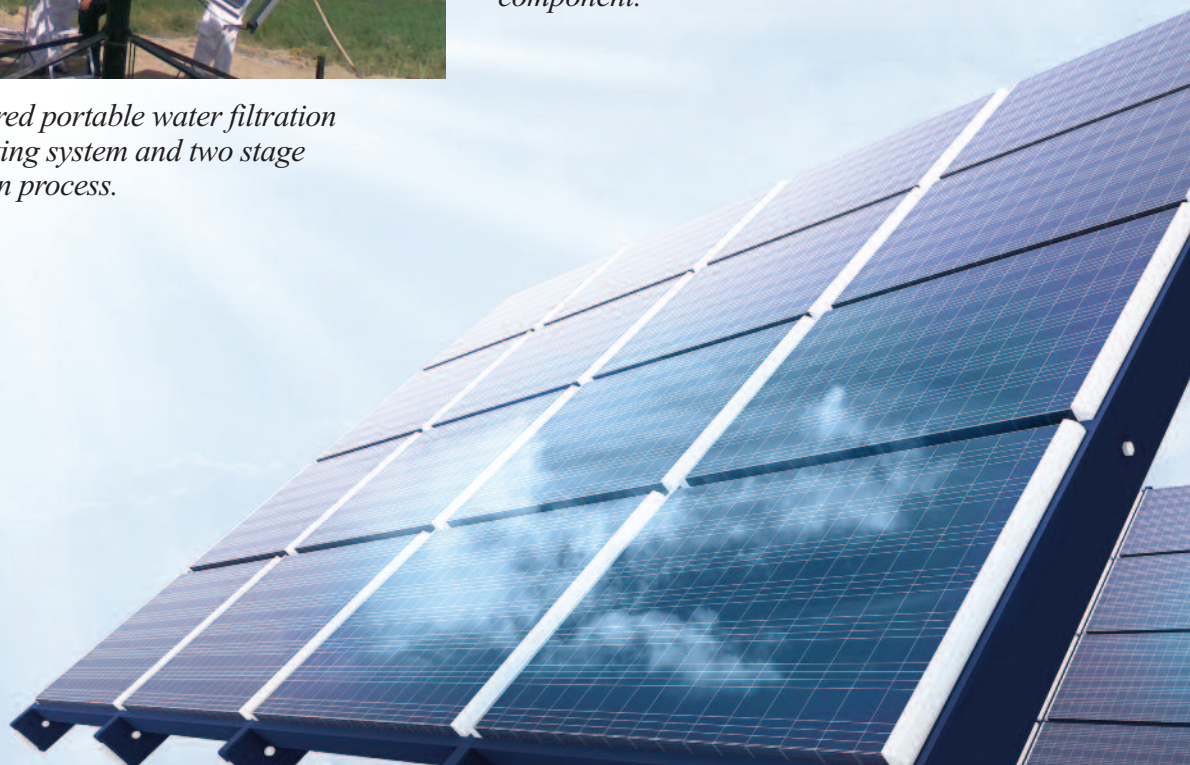
- Total Suspended Solids (TSS) filtration to less than 5ppm
- Nephelometric Turbidity Units (NTU) to less than 0.5 NTU
- 99.99% bacteria free



Setup of solar powered portable water filtration unit with solar tracking system and two stage RO and UF filtration process.



Reverse Osmosis water filtration component.



■ Other Key System Features:

- Ultra efficient multi stage filtration process with automated flushing of all stages
- UV post treatment to eliminate bacteria
- Metered flow chlorination or other injection system
- Fully enclosed working system to protect against unauthorized access or dust and other elements
- Thermostatically cooled water system enclosure with automatic activation
- Solar tracker system with early wake-up functionality
- High efficiency solar panel array
- Automatic low pressure shutdown and restart

- Surge and Lightening protection
- Integrated battery back up system

■ Customer Support:

- Trained authorized Installers on site if required
- Trained authorized well drillers if required
- 24/7 remote monitoring of water units and component performance available
- Comprehensive training available at manufacturing site

■ Warranty:

- Individual component warranties of between 1 year and 20 years

Although the GSWPS/Enertopia water filtration system does reduce bacteria and virus, it is not certified to remove >99.9999% of bacteria and >99.99% of virus required by the US EPA water purifier standard without the injection of chlorine or other agents. Enertopia Corporation has no control over the end use of our water filtration systems therefore our warranty is limited to the replacement of any component we deem defective and any such replacement is at our sole discretion. All component manufacturers' warranties apply. The Enertopia/GSWPS water filtration systems will remove 99.99% of suspended solids and 99.99% of bacteria from most water sources but no water filtration system can remove 100% of bacteria and virus and no claim of reaching 100% effectiveness is made or implied. Injection of chlorine or other agents is available in the Enertopia water filtration units and should be utilized if EPA water purifier standards are desired.

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Authorized Clean Water Partner: