



#### GENERAL DESCRIPTION:

Water filtration unit, skid mounted for mobile or permanent installations for the production of 25,000 gallons of potable water per day. The design will supply potable water for over 5,000 people at a rate of 5 gallons per day per person. The unit can be powered by either "4" 180 Watt solar panels, a wind generator, gravity, or line voltage. The unit also comes with a gas or diesel generator option. The unit can be trailer mounted or vehicle mounted. The unit is heavily ruggedized for marginal terrain overland travel, air drop, and seaborne delivery. The unit is designed for long term trouble free service and maintenance. The design objective satisfies the need for a mobile water treatment unit that needs limited hardware such as chemicals, cartridge filters and other water filtration products. The unit is simple, tough and easy to maintain with limited know-how required under field conditions. There are no automatic backwashing valves or high tech, high maintenance hardware. The unit is engineered for operations in remote, marginal, and compromised areas commonly encountered under natural disasters conditions, military support or military theater areas, medical/humanitarian relief efforts, and distribution of human consumption potable water.

#### TECHNICAL SPECIFICATIONS;

The unit is designed to pump and purify water at a minimal rate of 20 and maximal rate of 30 gallons per minute. The unit will handle source water wells, bore holes, lakes, ponds, rivers, streams, agricultural ponds, and catch basins. Existing water mains where water is not potable can be piped in and out of unit for purification also. Pumping depths is a maximum of 100 ft (options of different pumps can be engineered to unit-3 GPM to 60 GPM. .Possible depths: 1 - 600 ft). The unit is capable of producing drinking water free of physical, biological and viral contaminations under any of the powered options.

The unit design is based on a process of gradual decontamination of water through a 10 step filtration system; starting with reduction of large sedimentation to bacteriological, cryptosporidium, and viral removal. The unit can be operated to bypass some steps of the process for non potable water such as live stock and agriculture needs (utility water). All filter media and hardware are of EPA and NSF approved products and meet or surpass EPA or WHO standards for potable water. The unit removes most industrial pollutants such as heavy metals and arsenic. All operations, metering and sampling aspects can be controlled via a multi-language and language neutral control. The units dimensional footprint is 1.2m W x 2.5m L x 1.2m H . The unit is built to metric measurement standards (USA and UK Standard built units are also available on request). If maintained correctly the unit has a field life expectancy of over 8 years. The unit will require filler media renewal, depending on average water quality, every 2-8 years.



NOTE: The unit can be mounted on a single-axle trailer suitable for moving on rough terrain; mounted on Toyota Hi-lux, Land Rover, HUMVEE, and other international military and relief agencies vehicles. The unit can be air deployed from transport planes and helicopters. The unit can be moved with farm equipment (such as tractors). Skid design allows for permanent installation on ground, industrial buildings or general village or barrack installations or large mobile platforms such as ships or heavy overland vehicles.

#### OPTIONAL EQUIPMENT:

- 1- Set of spare parts needed for in the field repairs or maintenance.
- 2 - Set of tools for normal field operation and small repairs.
- 3 - Collapsible water storage bladder tanks (pillow tanks).
- 4 - Air drop kit.
- 5 - Well drop pipe 1" 10' lengths
- 6 - 1" hose of 50' rolls (offset hose from unit to water source).
- 7 - Submersible pumps cable-12/2..10/2..8/2 with ground.
- 8 - Submersible pumps. 3 gpm to 75 gpm.
- 9 - Accessories and parts for adapting to existing infrastructure.

#### ENGINEERED AND CUSTOMIZED SPECIFICATIONS:

Conditions of water vary as greatly as topographical conditions do on the surface of the planet. This unit is designed to handle 97% of water encountered in compromised areas such as combat areas, relief areas and camps, and disaster zones. In addition, unit can be adjusted for water conditions that may be unusually "off the scale" such as industrial contamination, highly atypical pH levels, high ferric iron concentration, and lime and calcium count, etc. As an option, customized units can be engineered to handle unique field/platform/delivery needs and water conditions.



#### SUPPORT AND TRAINING OPTION:

User manuals will be provided on each unit. Factory and field training is an option and recommended. Logistics and topographical support for shipping and deployment is an option and also recommended.

#### ENDING SUMMARY:

Green Power Resource Management Inc. has manufactured a water filtration unit that has been designed to be deployed in the worst conditions in the world. We have engineered a mobile water treatment unit from the “trenches” in a no-nonsense construction manner. Simply stated, this unit is the ultimate in field friendliness and toughness. All filters are self cleaning and need no periodic renewals, all parts are ruggedized for true field use, power can be obtained under all field conditions, and if repairs are needed these can be carried out with tools from local stores or street markets. Design is aimed at heavy duty low tech hardware. In short, this unit will produce potable water longer and better than any other mobile unit in the world.