Sand Water Extraction Systems

Extracting Untapped Water Resources

Riverbeds and aquifers consisting of sandy soils function as ‘sand reservoirs’ which collect water and act as water rich storage sources and the main challenge is to efficiently extract water from this sand storage. Additionally the large fluctuations in river water levels make it a challenge to continuously extract the available water from the river.

The SWE System’s unique design makes it ideal to extract water from rivers no matter the water levels on the river’s surface. This is achieved by:

- The design allowing accelerated extraction of water in the sand (Up to 10 times normal infiltration rates);
- The entire system being concealed under the sand and protected against flood damage which results in year round operation capabilities;
- A quick installation time resulting in fast relief for communities in need.

The SWE System is ideal for supplying water to:

- Towns and cities
- Farming applications
- Rural communities
Advantages of the SWE System

- Extraction of water from sources previously unobtainable in large quantities;
- Supply of sediment free water;
- No dams construction needed to collect water within rivers;
- Low maintenance and automated systems with proper training and after sales service;
- System quick and easy to install and cost effective;
- Solar powered systems for remote areas;
- System concealed under the sand: protected against flood damage and theft;
- Can extract water even during floods;
- Water can be extracted to central collection reservoir or holding tanks;
- Irrigation of crops throughout the year with non-polluted water can be realized;
- Sand filtration results in a significant bacterial reduction and decreased purification costs.

The SWE System includes the following:

- Unique patented SWE Unit inserted into the sand
- All pipes and cables
- Control system
- Holding tanks (Optional)
- Treatment plants (Optional)

<table>
<thead>
<tr>
<th>Liters Supplied per second*</th>
<th>Liters Supplied per day</th>
<th>People supplied @ 50 l/day</th>
<th>People supplied @ 100 l/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>172 800</td>
<td>3 456</td>
<td>1 728</td>
</tr>
<tr>
<td>50</td>
<td>4 320 000</td>
<td>86 400</td>
<td>43 200</td>
</tr>
<tr>
<td>100</td>
<td>8 640 000</td>
<td>172 800</td>
<td>86 400</td>
</tr>
<tr>
<td>200</td>
<td>17 280 000</td>
<td>345 600</td>
<td>172 800</td>
</tr>
<tr>
<td>500</td>
<td>43 200 000</td>
<td>864 000</td>
<td>432 000</td>
</tr>
</tbody>
</table>

*Based on river deliver potential and client needs @ 24hours pumping

Contact:
Stephan Pretorius
(+27) 082 338 3994
stephan@lmp-consulting.co.za
www.swesystems.co.za