

# ZeeWeed\* Membrane Technology

**CUSTOMER BENEFITS** 

# **Ultrafiltration Membrane Technology**

### The Environmental Challenge

Providing wastewater services to homes and companies located outside the reach of municipal sewer lines is often a difficult and costly process. An efficient onsite wastewater treatment system is needed to eliminate the environmentally disruptive construction necessary to connect these homes and companies to municipal sewer lines.

#### Veolia's Innovative Solution

ZeeWeed's state-of-the-art ultrafiltration membrane technology has revolutionized the water and wastewater treatment industries. ZeeWeed ultrafiltration membranes can provide water or wastewater treatment for plants of any size in practically any application. These applications include municipal, industrial, unserviced commercial developments, marine, military, and even residential central water treatment.

ZeeWeed ultrafiltration is an advanced technology designed and manufactured by Veolia, which uses immersed hollow-fiber membranes to separate particles from water. This technology produces superior quality drinking water by removing virtually all harmful pathogens and suspended solids. The ultrafiltration membranes can restore wastewater to such high quality that it can be safely discharged to the most sensitive environments or reused in irrigation, industrial processes, or groundwater recharge.

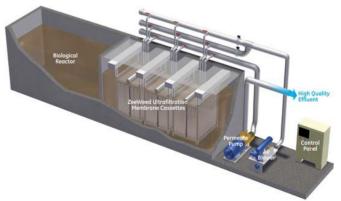
Operating under a low-pressure suction, ZeeWeed ultrafiltration membranes draw clean water in through billions of microscopic pores while rejecting virtually all particles at the surface. This outside-in flow path means that the membranes do not require a pressure vessel and can be immersed directly into process tanks. By incorporating this open-tank design, ZeeWeed ultrafiltration systems have compact plant footprints, require fewer components than pressurized systems, and provide simple, trouble-free operation and maintenance.

# **Environmental Impact**

The unique design of ZeeWeed ultrafiltration technology allows it to conserve energy and precious water resources. The energy savings from a 2.5 million gallon per day ZeeWeed membrane bioreactor plant with advanced process aeration controls is equivalent to the annual power usage for 21 American homes. Over 200 million gallons per day of wastewater is treated with ZeeWeed systems and reused, the equivalent to the amount of water used by 2.5 million Americans daily.

# **Cutting Costs**

ZeeWeed produces a quality of drinking water that meets stringent standards while using up to 60 percent less chemicals, 30 percent less land, and producing 35 percent less residual waste than conventional potable water treatment systems. ZeeWeed also offers up to an 11 percent reduction in capital & operating costs when used as a pretreatment to reverse osmosis for seawater desalination, brackish water treatment, or industrial process water.



Veolia Water Technologies
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