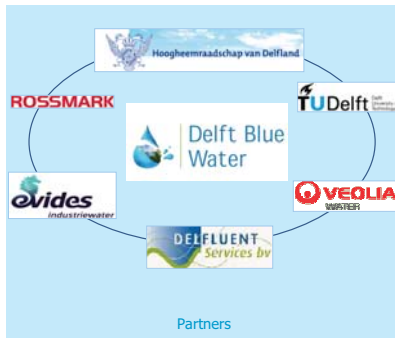


Producing greenhouse water and fresh surface water from WWTP effluent



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Delft Blue Water

The Harnaspolder wastewater treatment plant (WWTP), near Delft is the largest WWTP of the Netherlands. The plant is as part of a public private partnership with Delfland operated by Delfluent Services BV., Currently the effluent is discharged to the North Sea. On the other hand the Delfland area faces risks of becoming more brackish and the request for fresh water is increasing. A special situation is the greenhouses in the Westland area. The greenhouse sector in the area extracts brackish ground water, desalinates this water and then returns the brine into the ground. This will be restricted or even prohibited in the future. An alternative water source is then needed. The use of reclaimed water for agriculture is an interesting alternative source and is gradually becoming common practice in the world. Therefore, the option under investigation is to treat the effluent of the Harnaspolder WWTP and reuse this water for agricultural and for purposes of environmental purposes (greenhouse water, flush surface water, water level control system, aquifer recharge). Therefore, a pilot investigation started under the name of Delft Blue Water. Delft Blue Water is a cooperation between Delfland, Delfluent Services BV, Evides Industry Water, Veolia Water NI and Rossmark Waterbehandeling. Delft University of Technology conducts additional scientific research.



Harnaspolder WWTP

Objective

The objective of the research is to produce more cost effective, reliable and reusable water from WWTP effluent in order to guarantee a continuously water supply to the greenhouse industry and for purposes of environmental planning.



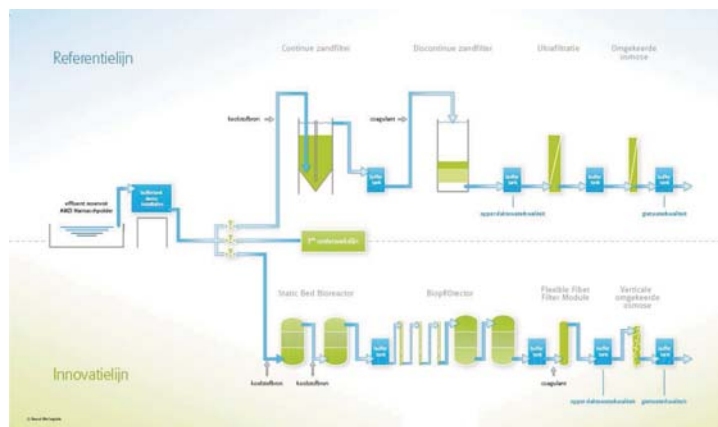
Demonstration hall

Demonstration installation

The installation is divided into two treatment lines: namely the reference line and the innovative line. New innovative techniques are compared with the more commonly used. Both lines consist of two stages, firstly the WWTP effluent is treated to surface water quality (Step 1) after which it is treated with additional techniques to produce green house water (Step 2).



Demonstration installations



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