



purification plant for companies on the Oosterhorn industrial estate near Delfzijl. The construction of this plant has been an important step in the fight against the (up to now) unpurified discharge of waste water into the Zeehavenkanaal and therefore into the Waddenzee near Delfzijl. Companies no longer discharge untreated wastewater into the sea; therefore the environment will be less affected. And so we have taken a new step in sustainable business!

**ENERGY AGREEMENT PARTICIPATION:
NEW OPPORTUNITIES FOR SAVING ENERGY**

What is a water company doing in an energy agreement? Waterbedrijf Groningen considers participation in the Energy Agreement Groningen 2008-2011 to be important from the point of view that water has more functions than just drinking water. In many situations saving water also means saving energy, and vice versa. We are investigating how we can contribute to reducing CO₂ discharge. Not because we must, but because we want to.

**GROUND SOURCE HEATING AND COOLING SYSTEMS
AT HAREN**

Consistent with our view on the importance of saving energy, we at Waterbedrijf Groningen are investigating whether it will be possible to install ground source heating and cooling systems at our production location in Haren in the future. This will be to store heat and cold for a yet to be built residential area whereby it will be possible to use wells that are currently being used for obtaining drinking water.

**CLIMATE FOOTPRINT:
LEAVE BEHIND AS LITTLE CLIMATE DAMAGE AS
POSSIBLE FOR THE FOLLOWING GENERATIONS**

The effect an organisation has on climate change is often measured by its annual CO₂ emissions. This climate footprint is very small for Waterbedrijf Groningen. One reason for this is a very low direct CO₂ emission from our activities, the use of 100% green electricity and extensive recycling of residues. We are continually looking for ways of operating in an even more environmentally friendly manner and of reducing our carbon footprint still further.

ADDITIONAL INFORMATION

For information on more projects please visit our website www.waterbedrijfgroningen.nl.

Projects

Waterbedrijf Groningen does more than just supply drinking water. Industrial water, sewerage, waste water purification, water inspections, fire hydrants and supporting projects in developing countries are only a part of our products and services. The following section provides additional information about several of our projects.



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N K R O A N E G B E D R I E F





**DE PUNT PUMPING STATION:
FROM HISTORIC LOCATION TO MODERN ENVIRON-
MENTALLY FRIENDLY PRODUCTION**

In 2009 Waterbedrijf Groningen began the renovation of one of the oldest water purification sites in the Netherlands: production site De Punt in Glimmen. This production site is being converted into an ultramodern pumping station. In a few years time a great deal less groundwater will be pumped from here to preserve wildlife and the environment. Instead, more surface water from the Drentsche Aa will be used. Although this will require more purification steps we consider it to be a socially responsible solution. De Punt production site will be linked to the Annen pumping station belonging to Waterleiding Maatschappij Drenthe. The networks of both companies are linked at several places so that a balanced exchange of drinking water can take place. This approach is part of the mutual long-term water supply plan for the provinces of Groningen and Drenthe. Supply reliability is our number one priority!

**ONNEN EMERGENCY OVERFLOW AREA:
COMBINES WATER EXTRACTION AND EMERGENCY
OVERFLOW**

A recurrence of flooding in the Onner polder is a statistical probability - once in a hundred years according to specialists. Therefore the province of Groningen, the Waterschap Hunze en Aa's, the Groninger Landschap and Waterbedrijf Groningen have combined forces. They have drawn up joint plans that must ensure the drinking water production plant at Onnen keeps its

feet dry if the polder is used as an emergency overflow area. To achieve this function, part of the drinking water plant is installed on the dykes and mound that protect the area. If it is ever necessary to use this area as an emergency overflow area then the plant is high enough to enable us to continue to guarantee safe drinking water. A unique situation which combines several different water interests.

**DE GROEVE/HUNZEDAL:
COMBINATION OF WATER EXTRACTION, WATER
STORAGE AND NATURE RESERVE**

Differing water interests and functions are also combined at the water extraction location De Groeve. The province Drenthe, Stichting Het Drentse Landschap, Waterbedrijf Groningen, Waterschap Hunze en Aa's and the Tynaarlo local authority work together to continue developing Hunzedal, by laying out the Tusschenwater area for nature to develop and for water storage, maintaining and developing the function as drinking water extraction area.

**AVEBE PROCESS WATER PURIFICATION:
FULL-SERVICE WATER PURIFICATION ON-SITE**

An increasing demand for water for the production of starch combined with the required investments in private spring water purification led to AVEBE commissioning the North Water joint-venture to build and exploit a new process water purification plant at their site in Ter Apelkanaal. The technology for the new process purification was specially developed for purifying surface water from the Stadskanaal. The process water produced

by this has almost the same quality as that of drinking water. The high-quality process water is used for starch production, both for low quality uses and for starch that is intended for the foodstuffs industry. In addition the process water is used as feed water for thermal power stations and steam turbines on the site. The technical design is based on a fully automated process that produces water for the various processes at AVEBE 24 hours a day, 365 days a year.

**PROJECTS IN DEVELOPING COUNTRIES:
PROMOTING SAFE DRINKING WATER IN DEVELOPING
COUNTRIES**

Waterbedrijf Groningen spends 0.5% of its annual turnover on projects in developing countries. In the Netherlands we only need to take about three paces to turn on a tap after which we can use as much drinking water as we like. The situation is very different in many countries. Women and children often spend many hours each day fetching water.

With our support the Aqua for All foundation organises many projects that focus on access to safe drinking water and good sanitation. Waterbedrijf Groningen has supported the Aqua for All foundation and its projects, such as the national sponsored run for schoolchildren, since it was founded.

We also support the Basic Water Needs Foundation, a company in India that produces water filters for the poorest people in the world.

Together with regional parties such as the Dienst Landelijk Gebied (DLG), Arcadis, Groningen local authority and Waterschap Hunze en Aa's we are part of a consortium offering assistance on water issues to Romania. In 2007 severe flooding in East Romania caused many deaths and a great deal of damage to houses and infrastructure, drinking water supplies and the sewerage system. The consortium supplies knowledge and support to Romanian colleagues to improve flood defences, drinking water quality and sanitation.

Together with the Srebrenica local authority we are developing plans for repairing and improving the water supply. Employees of Waterbedrijf Groningen have visited this local authority on various occasions to investigate the quality of drinking water and to analyse the problems around the sources, the purification, distribution, metering and administration.

INTEGRAL PLANS FOR EEMSHAVEN

RWE and Nuon support our plan-development for the construction of a multi-client water plant in the Eemshaven. First of all the plans examine the options from the aspect the drinking water infrastructure and secondly the options of custom-made production at the sites themselves.

**SALT WASTEWATER PURIFICATION:
MORE ENVIRONMENTALLY FRIENDLY DISCHARGE OF
WASTEWATER**

North Water has invested six million euros in building a modern and, above all, sustainable waste saltwater