

Water

Mindful use of a valuable resource

Water means life for man and nature. At Frankfurt Airport you can see how important water is and how mindful this natural resource is used by a future-oriented company. The airport needs great amounts of water. In addition, part of the airport is located in an area with special groundwater protection requirements. Consequently, all aspects of modern water supply management must be implemented. A water pollution control officer at the airport ensures that water and groundwater protection requirements are observed.

Groundwater

Quality is first priority

Maintaining the high groundwater quality is one of the most important environmental goals of Fraport AG. We are aware of this special responsibility because part of the airport site is located in an area with special groundwater protection requirements.

Comprehensive ground water monitoring program to ensure continued high quality of groundwater
Groundwater quality at the airport is continuously monitored at over 200 monitoring points and wells throughout the airport site and in the close vicinity. Continuous monitoring of ground water and a groundwater database enables us to react immediately if there is any pollution. The Hydranten-Betriebs-Gesellschaft (HGB) petroleum consortium plays an important role in maintaining groundwater quality: Operating and monitoring the underground aviation fuel supply system, the company ensures that no kerosene can leak into the groundwater.

To check seepage water we have installed the so-called "ground porcupine"

An approximately 6-meter deep and accessible shaft next to the south runway enables us to collect seepage water at six different depths in the ground and from two different directions. The water is collected in suction probes ("ground porcupine") and subsequently analyzed. Thus, we have the possibility to see if and how much of the applied runway de-icers penetrate the ground and down to which depth.

Environmentally benign de-icers

As early as 1990, the Frankfurt Airport winter services department began using potassium acetate for de-icing runways and airside operational areas. This nitrogen-free de-icer is biologically easily degradable. De-icers used before 1990 contained nitrogen and resulted in increased nitrate levels in groundwater. Since 2000/01 potassium formate - an even more environmentally benign agent - has been used for area de-icing.

Groundwater remediation

We process groundwater that flows to the Frankfurt municipal drinking water plants to ensure cleanup of contamination dating from the past. Groundwater remediation and optimization is scheduled to be completed by the year 2015.

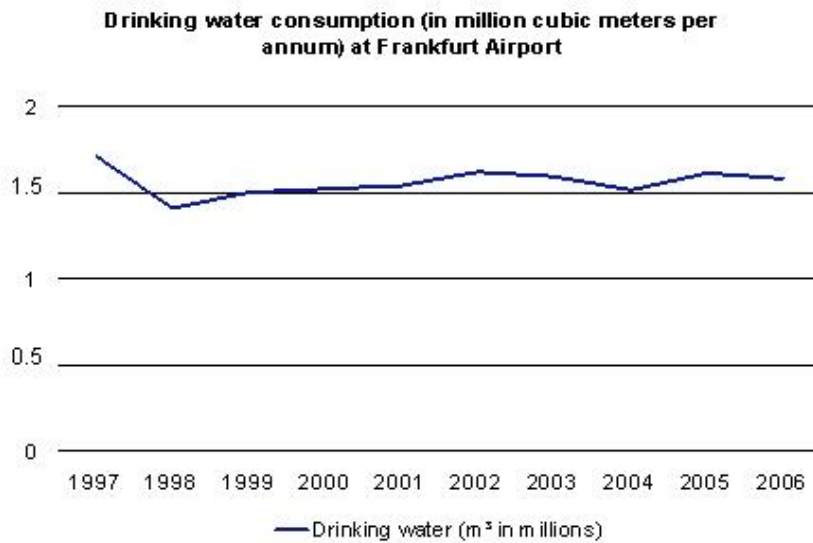


Drinking water

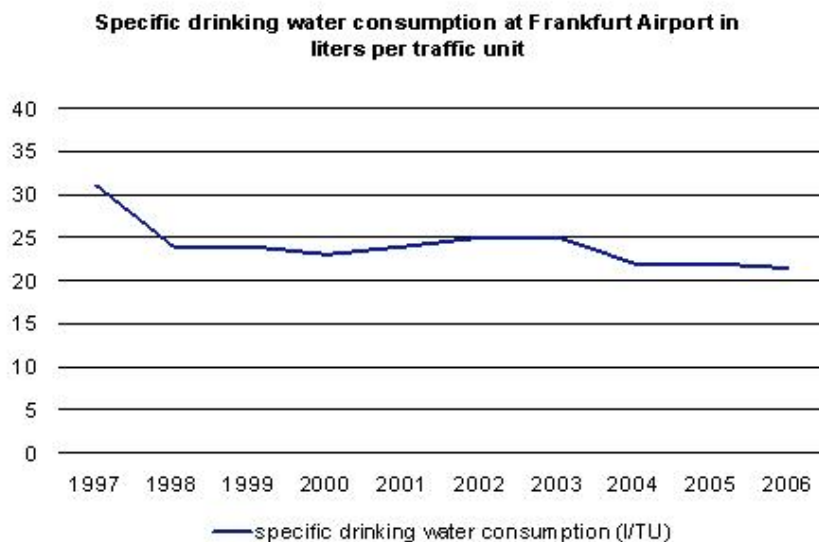
Success due to consistent savings

Fraport AG is committed to using water efficiently and to saving water in order to keep consumption at a constant level despite growing traffic. Total water consumption at the airport fell from 2.1 million cubic meters in 1991 to 1.6 million cubic meters in 2006.

Frankfurt Airport gets its water from the "Hinkelstein" drinking water plant which is located on Frankfurt municipal grounds about 3 kilometers north of the airport. Our concept for water consumption at the airport is to save drinking water by using industrial water to the maximum possible extent. This strategy has been successful: In the 1980s we used 50 liters per traffic unit (one passenger or 100 kg freight). Currently (2006) this rate is down to only 21,4 liters.



Drinking water consumption (in million cubic meters per annum) at Frankfurt Airport



Specific drinking water consumption at Frankfurt Airport in liters per traffic unit. One traffic unit corresponds to one passenger with luggage or 100 kg freight.



Industrial Water

Rain is coming out of the sprinkler.

The use of industrial water is decisive for saving water. Terminal 2 and CargoCity South are best examples.

All sanitary and fire-fighting equipment in Terminal 2 is fed with rain water or - during dry periods - with treated water from of the Main river. Six tanks on the roof of Terminal 2 hold the collected rain water. At CargoCity South rainwater run-off from roads, roofs and areas is collected in four reservoirs which can hold 24,400 cubic meters. Part of this water is fed into the industrial water pipeline. However, most of this water is fed back to the groundwater via seepage ditches with a total length of 1,200 meters.

The use of flow limitation equipment on faucets helps to save thousands of cubic meters every year.

Sewage

Less is more

The usage of water produces waste water. Fraport's goal is to produce as little waste water as possible and to make use of rainwater to the greatest possible extent.

Frankfurt Airport produces the same amount of waste water as a medium-size city (1.626 million cubic meters in 2006). Despite growing air traffic the amount of waste water produced at the airport has remained unchanged in recent years. The waste water rate per traffic unit fell from 30 liters in 1992 to 22 liters in 2006.

At automatic measuring and sampling points throughout the airport's over 200-kilometer long sewer system we continuously monitor and sample the quality and quantity of sewage water (waste water and rainwater run-off). Control systems at restaurants, canteens, workshops, fueling areas, etc. ensure that certain substances are removed from effluent at source and thus prevented from entering the sewer system.

Unlike in the years before and including 2001, separate airport waste water monitoring is technically no longer possible, i.e., exclusive of the sewage water produced at the Lufthansa base and the Air Base. Starting 2002 only total sewage produced on airport grounds has been monitored. This influenced environmental indicators in terms of waste water in 2002 to such an extent that a comparison with previous years is no longer possible.

Between 1992 and 2001 the annually generated volume of waste water ranged between 1.2 million cubic meters (1998) and 1.5 million cubic meters (2000). In 2006 some 1.6 million cubic meters of waste water were produced at the airport, including the Lufthansa base and the U.S. Air Base.

