Marchfeldkanal

Water for growth

The Marchfeld Canal
brings life to an entire region.

Learn more about the
Marchfeld Canal System:
www.marchfeldkanal.at

THE MARCHFELD CANAL:

Innovative Channel System

The Marchfeld is a fertile, 1.000 km² plain between Vienna and Bratislava and offers ideal growing conditions. Since 1992, the Marchfeld Canal has supplied the Marchfeld with water from the Danube via a 91 km system of near-natural bodies of water. The water network satisfies ecological, economic and touristic requirements in equal measure.

Diagram of the Marchfeld Canal System:
Water is extracted from the Danube at Langenzersdorf via weirs and channelled through the Marchfeld.

THE MARCHFELD CANAL SYSTEM

Roughly 4,000 litres per second flow from the Danube into the Marchfeld Canal at Langenzersdorf, joining the Rußbach in Deutsch-Wagram.
The water flows into the Danube via the Rußbach. The Rußbach also feeds the Obersiebenbrunn Canal, which then supplies the Stempfelbach with water and flows into the river March.
Before being connected to the Marchfeld Canal System, the Rußbach and Stempfelbach were largely deserted. Today, they are once again ecologically healthy habitats.

THE TECHNOLOGY

The control centre in Deutsch-Wagram operates the eight weirs and five pumping stations which regulate the flow rates and water levels, and control groundwater levels. A team of specialists control this sensitive system.

View of the Marchfeld Canal in Vienna looking towards the Kahlenberg. The Marchfeld Canal System is not only important in terms of its technical achievements; it also significantly enhances the beauty of the local landscape.

THE TASK:

Securing a water supply for the future

Water supplies are essential to the economic development of a region, and also contribute to food security. The rich variety of flora and fauna demonstrates how the Marchfeld Canal System supports biodiversity. An attractive recreational landscape has also emerged along the channel system, attracting visitors from the region and beyond.

SECURE WATER SUPPLY

irrespective of weather conditions and climate change. The region also enjoys economic advantages stemming from its role as a receiving area for purified wastewater.

STABILISED GROUNDWATER LEVELS

through targeted recharging. The groundwater recharging plant can infiltrate up to 7 million cubic metres of water annually to raise groundwater levels.

HIGH QUALITY WATER

Rußbach and Stempfelbach are once again ecologically healthy, and recharging has improved the quality of the groundwater.

FLOOD PROTECTION

in a region traditionally at risk of flooding. Dams on the Rußbach have been renovated and upgraded to prevent flooding. Five pumping stations extract water from the area to the east of the Marchfeld as required.

HABITAT

Woodland, reed beds, meadows, and bodies of water are valuable habitats for flora and fauna in this intensively used landscape. The Marchfeld Canal System is one of Austria's most fish-rich flowing water bodies.

RECREATIONAL AREA

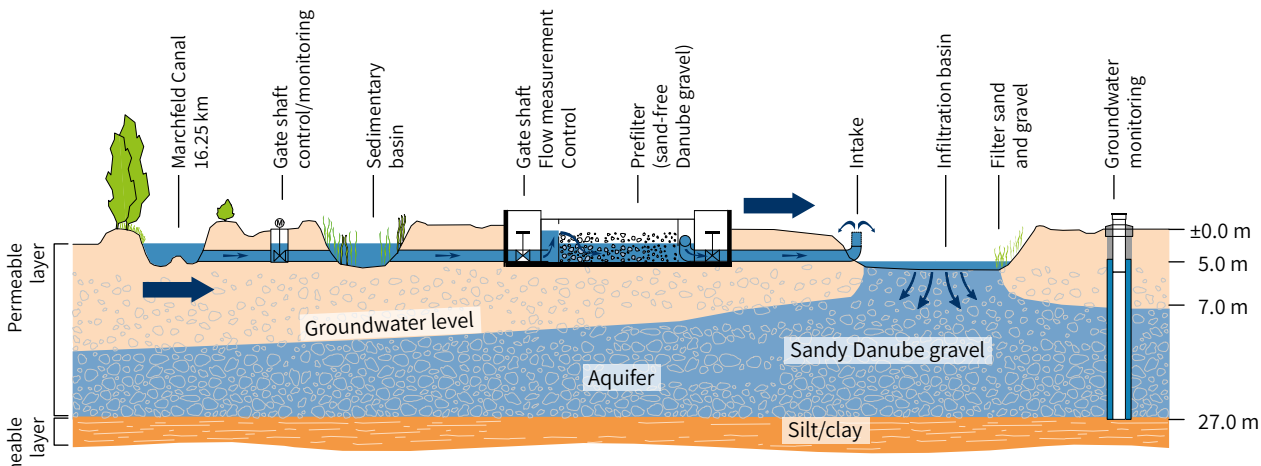
for people in the region. The Marchfeld Canal System offers a range of recreational opportunities in a precious natural environment.
A barrier-free, attractive network of cycle paths connects the cities of Vienna and Bratislava to the Marchfeld.

GROUNDWATER AS A RESOURCE:

What makes the ground so valuable?

Austria's largest contiguous groundwater reservoir lies below the Marchfeld. It contains over 1 billion cubic metres of water! Using the Marchfeld Canal System to manage this body of groundwater secures the availability of groundwater over the long term. The favourable climate conditions and fertile soils in the region, together with the groundwater or Marchfeld Canal System as a source of irrigation, contributes to the value of the region and improves predictability for agriculture.

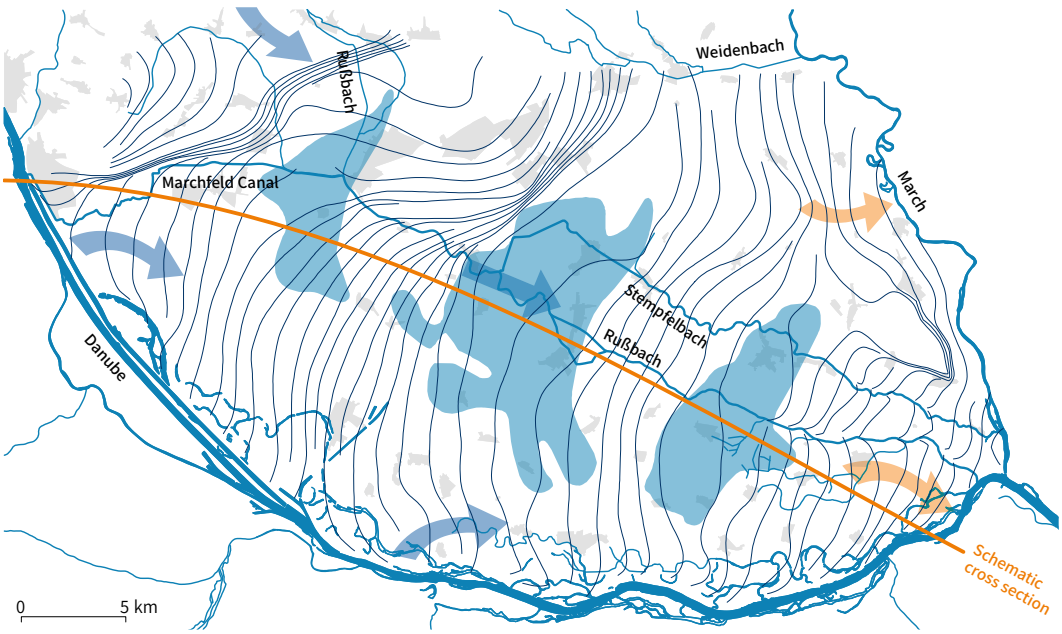
Replenishment. Three groundwater recharge plants direct up to 7 million cubic metres of filtered surface water underground to restore groundwater levels. This equates to the average annual volume of water drawn from the groundwater, which is particularly important in light of the growing impact of climate change.
Water quality. Infiltrating high quality surface water improves the quality of the groundwater. Despite intensive agricultural use of the Marchfeld, the nitrate concentration is far below the permissible limit of 50 mg/l for drinking water.



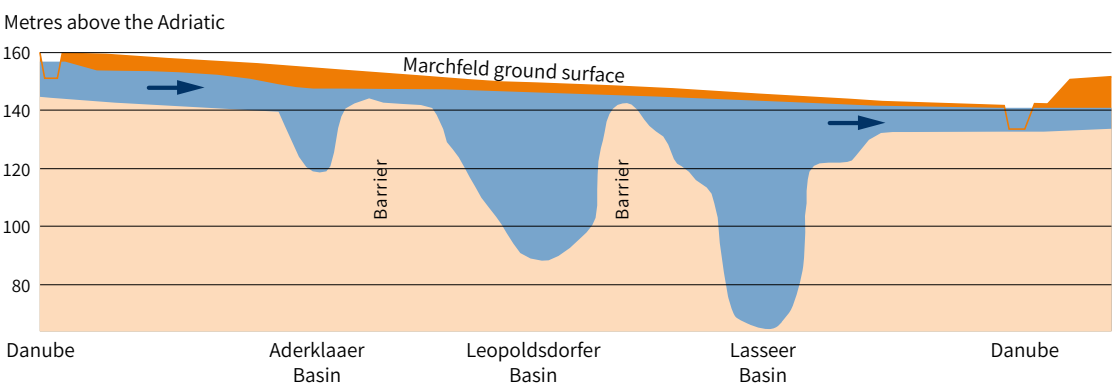
The groundwater recharge plant at Deutsch-Wagram (cross section shown) ensures the groundwater is constantly replenished with fresh water. Water in the Marchfeld Canal drains freely through a sedimentary basin and a prefilter in an infiltration basin. From there, the filtered water seeps downwards, enriching the groundwater both quantitatively and qualitatively.

Groundwater reservoir. Due to its underlying geology, the ground below the Marchfeld is divided into three large basins. Filled with between 30 and 80 metres of gravel during the Ice Age, these basins constitute the Marchfeld aquifer.

Austria's largest contiguous groundwater reservoir holds over 1 billion cubic metres of water.



The plan showing the layers of groundwater in the Marchfeld indicates the typical underground currents. The groundwater lines represent the level of the groundwater. Each line marks a difference of 0.5 metres in height. The groundwater flows from west to east, from a height of around 160 metres to 140 metres above the level of the Adriatic.



The diagram shows a schematic cross section of the ground below the Marchfeld.

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Kompetenzzentrum
Bewässerung

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