

7. General description of the bathing water in non-technical language

The River Spree rises up out of several springs at a height of 400m in the Upper Lusatian Highlands in Saxony and after following a course of around 400km flows into the (smaller and shorter) Havel in Berlin. The total catchment area is around 9793 km².

Once the river is within Brandenburg, it cuts through the Lusatian Border Wall (*Lausitzer Grenzwall*), an arc-shaped terminal moraine from the ice age before last. From Cottbus onwards the gradient is only low and the Spree forks when it reaches the multiple waterways of the Spree Forest. The natural forking of the river has been considerably expanded by the building of canals (today a total length of 1550km) and a cultivated landscape has been created which is unique in Europe and which enjoys European protection status as the Spree Forest Biosphere Reserve.

Due to the low gradient, the flow velocity is only very low. Between Cottbus and Köpenick in Berlin it is only around 17cm/second. Apart from the low gradient, there is a further reason for the slow flow velocity. The quantity of water which flows along the Spree has considerably decreased since the end of open cast lignite mining. During the 1960's and 1970's the flow of the Spree was considerably increased by the sump water. It has now fallen below its natural level, as on the one hand groundwater levels which were kept low for open cast mining are now increasing again, and on the other hand lakes in the leftover pits have in part filled up with water from the Spree.

The River Spree is heavily regulated by dams. It is thought that people in the early Bronze Age 3000 years ago influenced the Spree. Many things point to a dam being built near Spreewitz to ensure an even flow for the Spree Forest which had become heavily populated. Today, the entire course of the Spree is regulated by dams. Particularly in the summer months, the Spree can become largely standing water between the dams.

With more than 4 million visitors annually, the Spree Forest is one of the most important tourist regions in Brandenburg. The largest town and the hub of the Spree Forest is Lübben. Here, between the Upper and Lower Spree Forest, the forks in the Spree are united for several kilometres. For many visitors, Lübben is the starting point for barge trips or boat tours on the streams of the Spree Forest, of which 500km are navigable, or for cycling tours or hiking.

The water quality of the Spree has improved enormously in recent years. It has been possible to almost halve the nutrient content of since the start of the 1990's. At the SpreeLagune bathing area the water transparency levels vary between 1.2 and 2.0m (mean value: 1.8m) during the season.

The "SpreeLagune" nature bathing area is tested every two weeks by the local office for health as per the Brandenburg Bathing Water Regulations.

In recent years, very high levels of the microbiological parameters *E. coli* and intestinal enterococci have been measured several times. Comprehensive management measures have been initiated since 2017, which were intensified again in 2022. In order to improve the flow in the bathing area in the long term, conversion measures at the inlet and outlet of the drainage pipe were planned in coordination with the water and soil association.

The construction measures were satisfactorily accepted by the health department and the lower water authority in March 2023, and a management concept is to be presented. After 16 test results, a new classification takes place.

Blooms of blue-green algae have not been observed.

text: Kerstin Wöbbecke, enviteam office / Steffi Grunewald, LAVG

sources:

Goldmann, K. (1987): Neue Gesichtspunkte zur Entwicklung der Märkischen Landschaft. – in: Bürger, Bauer, Edelmann; catalogue to the exhibition in the Museum für Vor- und Frühgeschichte, Berlin, 1987

www.luebben.de

Maßnahmekonzept SpreeLagunde Lübben, Asbrand Hydro Consult GmbH, 04.03.2021

Aktennotiz 21.03.23 Abnahme SpreeLagune

