

CHALLENGE:

The municipal wastewater treatment plant (MWWTP) in Põltsamaa, Estonia, is receiving wastewater from nearby operating industries. Some of the industries in the collection area are carrying out activities, where either hazardous substances or sudden shock loads of nutrients can be found in the wastewater. These can end up in the municipal treatment plant. Earlier the water utility had no capacity for monitoring of the incoming wastewater and it was dependent on the sampling services provided by other companies. This in turn caused several process interruptions as the water utility was not able to react on the abnormal discharge in time.

Põltsamaa Vesi OÜ was established in 2003. It is owned by Põltsamaa and Viljandi municipalities. The designed capacity of the WWTP is 26 000 PE. It operates in the municipality of Põltsamaa (22 300 PE) and in eight smaller wastewater collection areas (180 – 1031 PE).

The WWTP is also collecting and treating raw sludge from small WWTPs in the area (eight WWTPs).

The company owns the region's drinking water and wastewater treatment infrastructure.

SOLUTION: Monitoring equipment - portable automatic wastewater sampler



To increase the wastewater monitoring capacity at the Põltsamaa MWWTP, a portable automatic water sampler was purchased. As the sampler is portable, it can be used for monitoring wastewater in the entire catchment area. The sampler enables the MWWTP to monitor its customers wastewater discharges with increased reliability in situ, which helps the MWWTP in achieving better and more efficient process control.

In addition to the more accurate determination of the influent or effluent of the Põltsamaa MWWTP,

the MWWTP can, if necessary, also identify substances harmful to the treatment plant from the wastewater collection area. Combined with prior knowledge about potential emitters and communication with industrial customers, the sampler helps to identify the source of pollution. This, in turn, provides an opportunity to advise customers and, if necessary, to impose sanctions so that substances that damage the treatment plant's processes do not enter the wastewater.

This can show that the investment in the sampler may be a simple solution significantly contributing to better control of industrial wastewater discharged to municipal systems.

COST DESCRIPTION

The total cost of the sampler was 3300 €

The sampler was purchased from a BEST project grant and it was co-funded by the European Regional Development Fund's Interreg Baltic Sea Region programme.