

Cascade of ponds and constructed wetlands for treatment of agricultural polluted surface runoff

Reed bed treatment system Hennersdorf as an event-driven wetland

Owner:
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Treatment of polluted surface run-off from a cow farm (1.400 cows) and a biogas plant, in total 1,5 ha.

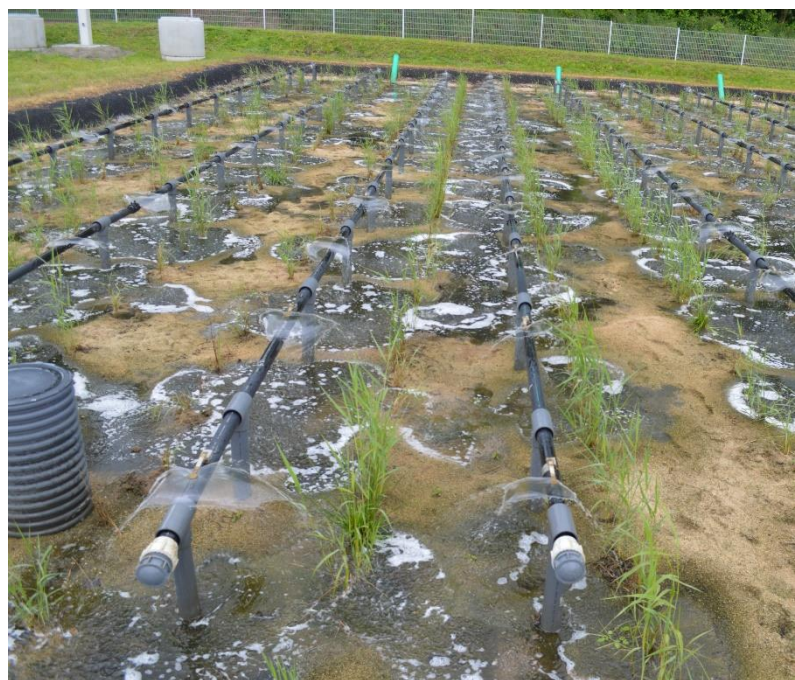
Design capacity: 30 m³/d

Treatment cascade:
Sedimentation pond: 413 m²
Buffer pond: 441m²
Both ponds are covered with floating islands.
Vertical subsurface flow constructed wetland: 1.014 m²
Horizontal subsurface flow constructed wetland: 475 m²

Steering device: Programmable Logic Controller (PLC)

In operation since 2013

Depending on the stormwater conditions (precipitation intensity) and the amount of organic solids on the paved areas the influent concentrations are fluctuating between 3.400 mg/l and 32.700mg/l COD, with a median of 10.100 mg/l COD and a pH of 4,9 (median). Effluent concentrations below 150 mg/l COD and 40 mg/l BOD₅.



This plant is also described in [Biogas Journal Sonderheft 2017](#) (German language).