

Case Study: Surface Water / Algae Blooms



Customer:



Partners:



Location: Berlin (Germany)

Conditions:

Temperature	5-25 °C
pH	6,8-8
TOC	7,5-12,4 mg/l
Turbidity	6-13 NTU
Algae	10.000-50.000 cells/ml Size: 2-30 µm

Challenge

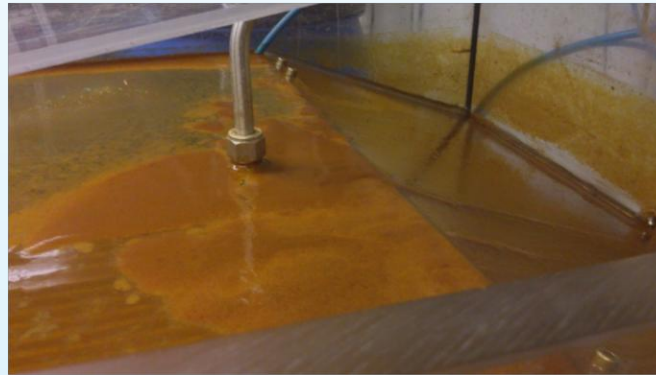
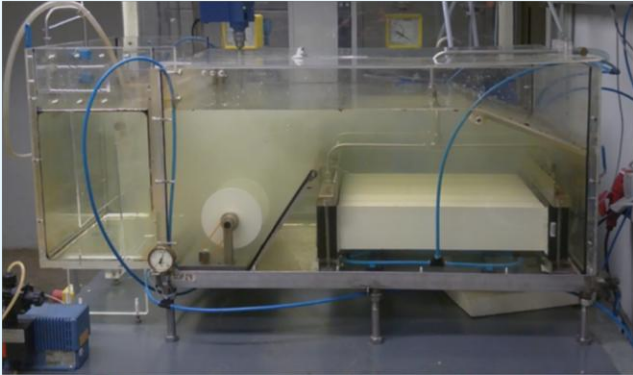
The city river in Berlin is contaminated to the point that fish death events are common. Combined sewage overflows, stormwater runoff and the high traffic of ships are the main sources of contamination. The high amount of nutrients and the high temperatures in the summer make the river prone to algae blooms. For these reasons, the shore of the river was selected as the first pilot location for the akvoFloat™ technology.

The city river Berlin was the perfect challenge to validate its performance in **hard-to-treat waters with high and fluctuating content of organics and frequent algae blooms**. During summer algae blooms often reach 50.000 cells/ml.

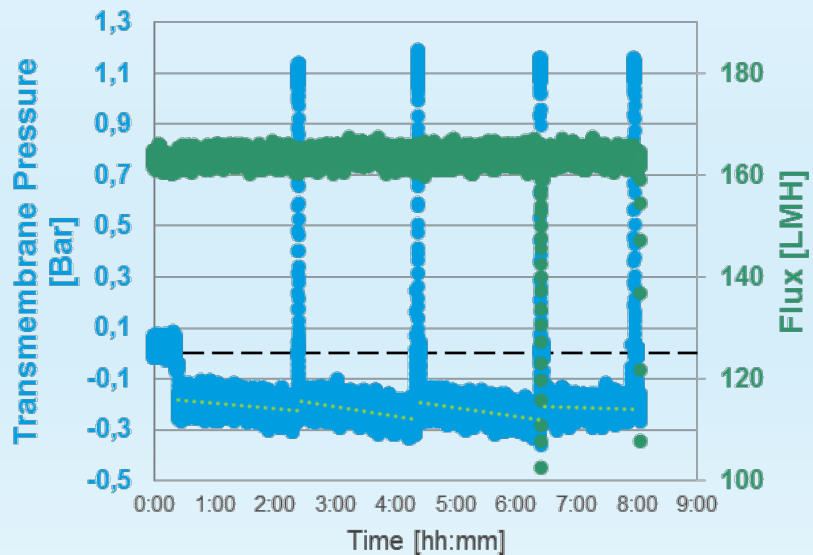
Solution

An akvoFloat™ pilot plant (12 m³/d) was placed at the river shore from April to December 2012. The plant was running during all seasons during which major changes in temperature and organic content were observed. Very high increases in the organic load and turbidity took place during the daily operation of a canal lock, located upstream of the intake point.

Results – Surface Water / Algae Blooms



- ✓ High removal efficiency:
 - Algae (log4)
 - Turbidity (95%)
- ✓ High recovery (> 95%)
- ✓ 10 days of stable unmanned operation
- ✓ High flux (165 l/mh)
- ✓ Low pressure drop (0,1- 0,2 bar)



Removal Efficiency

