

## **CONSTRUCTED WETLANDS FOR ON-SITE WASTEWATER TREATMENT, EXPERIENCES IN FLANDERS**

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### **ABSTRACT - Constructed Wetlands for on-site wastewater treatment, experiences in Flanders**

Constructed wetlands can mimic the filtration processes of natural wetlands, effectively removing contaminants from wastewater. Successful applications for the treatment of municipal wastewater have led to the exploration of the technology for the treatment of other wastewater, including industrial, agricultural, acid mine drainage, storm water, landfill leachate, and urban runoff. During the last two decades, the number of constructed wetlands in Flanders (Belgium) increased exponentially. Design sizes vary between 1 and 2,000 Population Equivalents, with the majority of reed beds having a size smaller than 500 PE. Most reed beds are used as single treatment units, although they are sometimes also combined with other reed beds or even conventional systems. The main purpose is to treat domestic and dairy wastewater. This paper will summarize the state of the technology and illustrate removal mechanisms and performances of CW's.

**Keywords:** constructed wetlands, wastewater, Flanders, nutrient removal