

Pilot project for hygienisation and reuse of domestic wastewater by a SBR and constructed wetland combination system in Mexico City (2009 – 2012)

Employer:

Asociación de Ayuda Social de la Comunidad Alemana i. A. P. (AASCA)/Mexico

PPP (Public-Private-Partnership) project, co-financed by Deutsche Investitions- und Entwicklungsgesellschaft mbH (DEG)

Design, construction and performance analyses of a pilot plant for domestic wastewater treatment and for natural hygienisation by a planted soil filter system. Underground storage, final UV-disinfection and reuse for parc irrigation after three-stage treatment at a retirement home.

Design capacity: 17 m³/d domestic wastewater

Planning: April 2009 – June 2010

Construction: July 2010 – November 2010

Start-up of operation: November 2010

First treatment step:

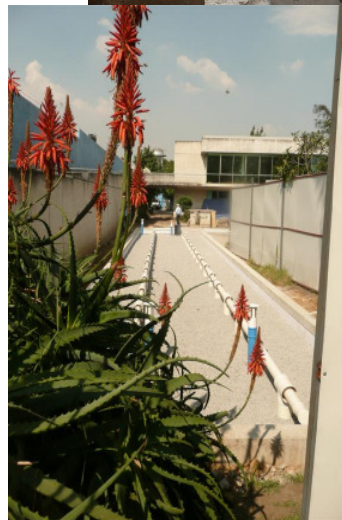
SBR (sequencing batch reactor) of ATB Company, Porta-Westfalica, Germany and Aquatec Mexico

Second treatment step (by Blumberg Engineers, Germany):

- Constructed wetland with vertical subsurface flow for hygienisation (78 m²)
- Underground storage tanks below constructed wetland (16 m³) for water reuse of parc irrigation
- Final UV-disinfection
- Recirculation technique to suppress reinfection of storage water by pathogenic germs



Underground storage boxes



Artificial wetland after construction before planting



Hygienisation filter (vertical subsurface flow constructed wetland) in 2011

