



Feasibility study using reclaimed water to cover irrigation demand of the Allianz Arena

Master thesis in collaboration with the Münchner Stadtentwässerung, the FC Bayern and the Allianz Arena

Your tasks

The irrigation demand of the Allianz Arena currently represents more than 10% of the annual drinking water consumption of the entire Stadium operation. In order to develop a more sustainable and long-term solution in saving drinking water supplies, covering the irrigation demands by using reclaimed water from the WWTP Gut Großlappen across the motorway might be a viable option.

This master thesis topic will explore the boundary conditions of establishing a reclaimed water system to cover current and potentially future irrigation demands. Your tasks will involve:

- an evaluation of current irrigation demands and locations
- water quality considerations and risk characterization
- treatment requirements according to the EU and German water reuse regulations (including the new technical guidance document DWA-M 1200)
- proposal for technical treatment implementation
- conveyance options using existing sewer infrastructure or a new pipeline to deliver reclaimed water to the user considering the current sewer system of the MSE
- storage options to cover peak demand
- monitoring requirements to maintain a safe supply and operation.

The study is intended as a feasibility study in close collaboration with all involved partners (Münchner Stadtentwässerung, FC Bayern, Allianz Arena) to prepare for a full-scale installation of a water reuse scheme at the Allianz Arena.

What we like to see

- You are studying Environmental Engineering or Civil Engineering with an emphasis on urban water systems engineering
- Proficiency in water and wastewater treatment
- Water quality investigations; risk assessment
- Motivation and interest in developing alternative water supply options
- Any prior technical experience would be beneficial
- High degree of independence and reliable time management
- Language skills English and German (communication level)

What we offer

- Working on sustainable and alternative water supply options in a highly visible environment
- Interdisciplinary working environment
- Working in a project team with frequent exchange and feedback
- Joint supervision by Dr. Bernhard Böhm (Münchner Stadtentwässerung) and Prof. Dr. Jörg Drewes (TUM)



Timing

The master thesis is scheduled to start at the beginning of September and will be completed with 6 months.

Application

Please send your application with your CV, copy of transcript and 2-page write-up detailing your thoughts and motivation to engage in this project using the keyword 'Allianz Arena'.

Contact person:

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