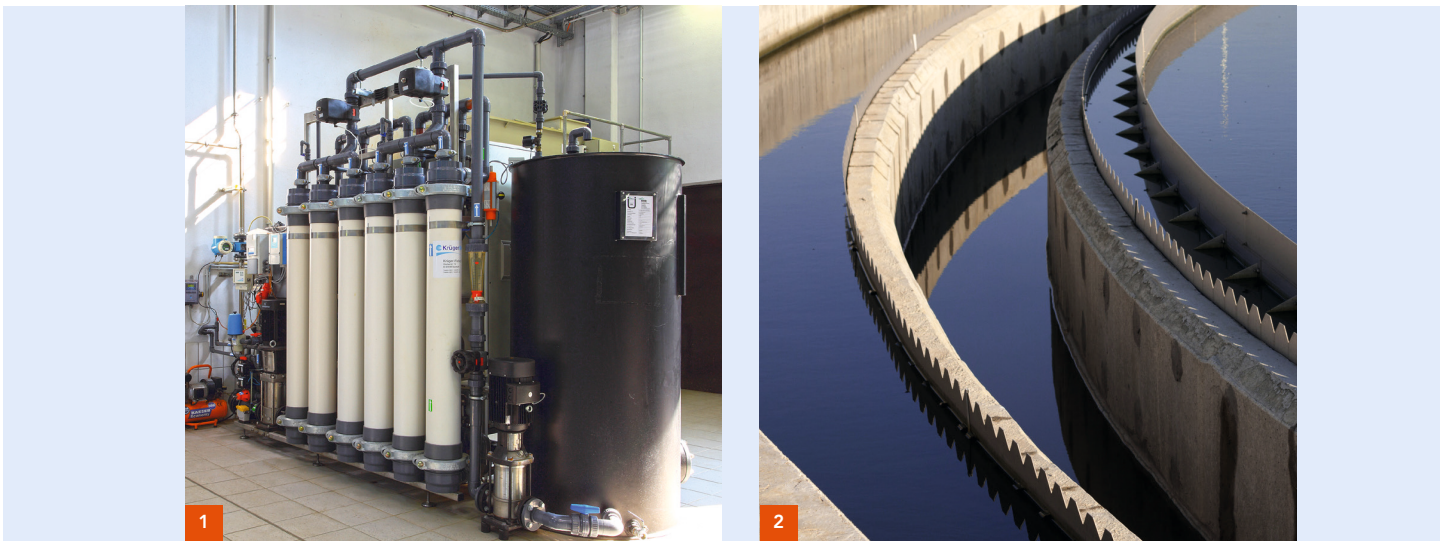


# Wastewater Treatment and Sewage Sludge Utilization



Björnsen Consulting Engineers are known for innovative, economical, and ecological solutions. In the areas of municipal and industrial wastewater treatment, we combine many years of experience with cutting edge know-how. Combined, these enable us to select the optimal alternative for our clients from the multitude of available treatment processes.

We optimize wastewater treatment plants and conduct economic and energy efficiency analyses. Carrying out construction work during ongoing operations is a frequently imposed constraint that we implement cost-efficiently. Our evaluations of total emissions ensure the optimal interoperability of sewer networks and stormwater and wastewater treatment plants with regard to sustainable water protection.

We offer innovative solutions for issues of current interest, such as the minimization of anthropogenic trace substances, advanced phosphorus removal, and the disinfection of treated wastewater. We attach particular importance to the idea of material flow management and rely on selective technologies aimed at water reuse, resource recovery from wastewater and sewage sludge,

and phosphorus recycling.

## We undertake the planning and construction supervision of

- Activated sludge systems
- Rotating biological contactor systems
- Sequencing batch reactors
- Membrane bioreactors
- Constructed wetlands
- Filtration plants
- Microfiltration
- Activated carbon adsorption systems
- Ozonation systems
- UV disinfection systems
- Sludge dewatering plants
- Anaerobic sludge treatment plants
- Facilities to utilize digester gas for energy production
- Facilities for sewage sludge utilization and phosphorus recycling

### 1 Leachate treatment

Tank system with pure oxygen (left) and reverse osmosis container (right)

### 2 Wastewater treatment

Activated sludge plant with anaerobic sludge treatment