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SBR - SEQUENCING BATCH REACTORS
COST-EFFECTIVE WASTE WATER TREATMENT



PRESECO SBR WASTE WATER TREATMENT

Sequencing batch reactors (SBR) are industrial processing tanks for the treatment of wastewater. SBR reactors treat waste water such as sewage or output from anaerobic digesters or mechanical biological treatment facilities in batches.

Oxygen is bubbled through the waste water to reduce biochemical oxygen demand (BOD) and chemical oxygen demand (COD) to make suitable for discharge into sewers or for use on land.

While there are several configurations of SBRs the basic process is similar. The installation consists of at least two identically equipped tanks with a common inlet, which can be switched between them. The tanks are connected, allowing raw wastewater (influent) coming in at one end and treated water (effluent) flowing out the other. While one tank is in settle/decant mode the other is aerating and filling.

**COST-EFFECTIVE
ALTERNATIVE**
to achieve lower effluent limits!



TOP QUALITY WATER TREATMENT



KEY BENEFITS OF SBR TECHNOLOGY

1. Capacity to control the biological population
2. High resistance to shock loads
3. High percentage removal of hazardous organic wastes
4. Ability to meet requirements for poorly characterized wastewater
5. Suitable also in developing countries
6. Operational parameters easily adjustable

PRESECO SBR TREATMENT PERFORMANCE

SBRs are used all over the world and have been around since the 1920s. With their growing popularity in Europe and China as well as the United States, they are being used successfully to treat both municipal and industrial wastewaters, particularly in areas characterized by low or varying flow patterns.

Improvements in equipment and technology, especially in aeration devices and computer control systems, have made SBRs a viable choice over the conventional activated-sludge system. These plants are very practical for a number of reasons:

- In areas where there is a limited amount of space, treatment takes place in a single basin instead of multiple basins, allowing for a smaller footprint.
- The treatment cycle can be adjusted to undergo aerobic, anaerobic, and anoxic conditions in order to achieve biological nutrient removal.
- Older wastewater treatment facilities can be retrofitted to an SBR because the basins are already present.
- Wastewater discharge permits are becoming more stringent and SBRs offer a cost-effective way to achieve lower effluent limits.



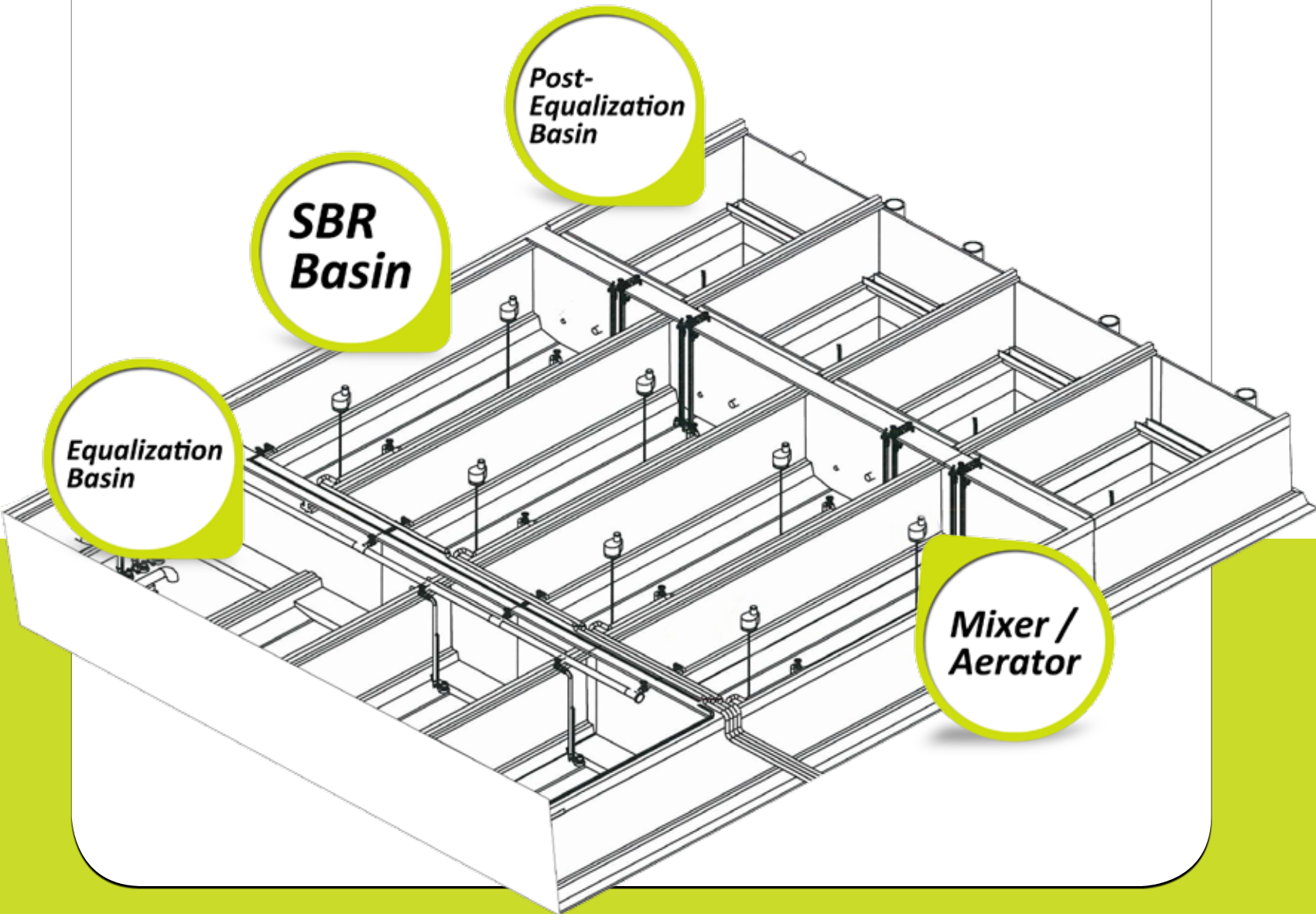
PRESECO SBR TECHNOLOGY PROSPECTS

- Unified design approach
- Optimization of cyclic operation scheme
- Model simulation of strategies for nutrient removal (especially phosphorus)
- Integration of model simulation results to adjust the operating parameters
- Research of possible integration with other treatment processes

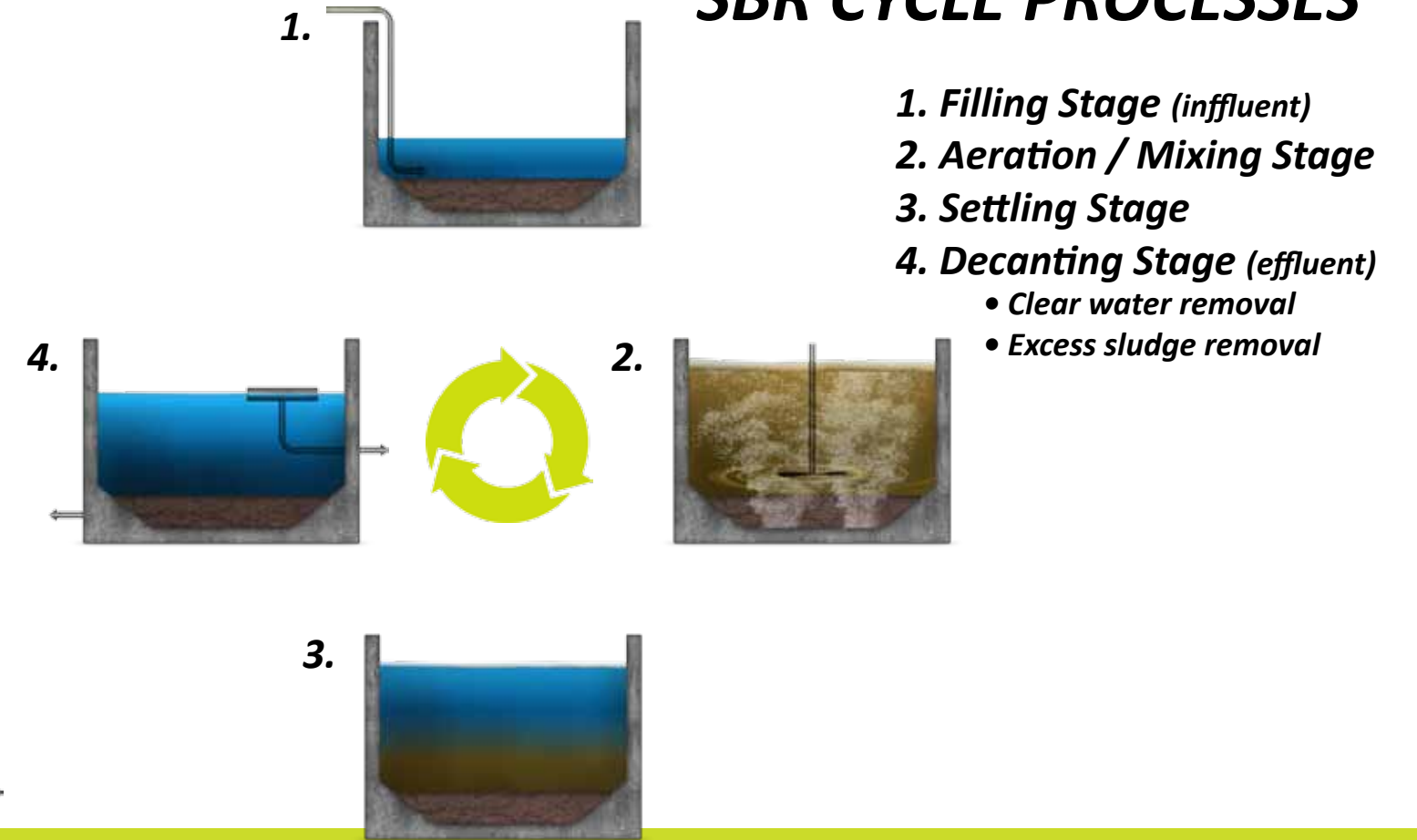
WASTE WATER TREATMENT SOLUTIONS

Preseco offers a wide range of scalable, cost-effective water treatment solutions for both drinking water purification and waste water treatment. Our pre-designed SBR modules are scalable for influent water capacities from 100-200 m³/day up to 3500-4500 m³/day. Our tailored Waste Water Treatment Facilities can accept up to 50,000 m³/day!

SBR LAYOUT & FEATURES



SBR CYCLE PROCESSES



SBR CYCLE

