



COMMERCIAL WATER REUSE SYSTEMS

Tailor-Made Water Reuse Solutions

Hotels | Commercial Buildings | Industry

Greywater recycling, rainwater harvesting and combined systems engineered around the actual requirements of each project.

Live Green. Save Blue.

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OUR APPROACH

One system does not fit every project.

GREHA starts with the building, the water balance and the intended reuse - not with a fixed catalogue configuration.

Every project has a different water profile. A hotel, office building, industrial facility or mixed-use development may have completely different sources, consumption patterns, hydraulic constraints and reuse priorities.

The system is therefore configured around the project so that treatment, storage, pumping, controls and redundancy match the real operating conditions.



What we assess before design

- Available greywater, rainwater and other approved water sources
- Daily water generation profile and non-potable water demand
- Required reuse applications and target water quality
- Available plant-room, external or underground installation space
- Hydraulic conditions, storage requirements and distribution pressure
- Automation, BMS, remote monitoring and operational requirements
- Local regulations, project specifications and maintenance strategy

From compact commercial installations to large multi-module systems.

Treatment capacity engineered according to project demand.

GREYWATER RECYCLING

RAINWATER HARVESTING

COMBINED WATER REUSE

ENGINEERED AROUND THE APPLICATION

A complete system, configured project by project.

Depending on the project requirements, a GREHA solution can include any combination of the following elements.

Collection & Storage

- Greywater collection and diversion
- Rainwater collection and pre-filtration
- Above-ground, basement or underground tanks
- Equalisation and treated-water storage
- Level monitoring and overflow management

Treatment & Water Quality

- Coarse filtration and solids separation
- Biological treatment and aeration
- Membrane bioreactor (MBR) treatment
- Ultrafiltration (UF) where required
- Activated carbon treatment where required
- UV disinfection and/or chlorination

Control & Distribution

- Booster pumps and pressure control
- Automatic mains-water backup with air-gap protection
- PLC-based automation and HMI control
- BMS integration and alarm outputs
- Remote monitoring and fault diagnostics
- Flow, pressure and water-quality instrumentation

Project-specific sources require project-specific treatment.

Laundry wastewater and industrial process-water streams are assessed case by case following water characterization. The treatment train is selected only after the contaminant profile and intended reuse are understood.

HOTELS & COMMERCIAL BUILDINGS

Turn daily wastewater into a reliable non-potable resource.

High water demand creates a strong opportunity to recover water that would otherwise be discharged after a single use.



Typical water sources

- Showers
- Bathtubs
- Washbasins
- Laundry - subject to water characterization

Typical reuse applications

- WC and urinal flushing
- Irrigation and landscape watering
- Floor and service-area cleaning
- Laundry where technically suitable
- Cooling or other non-potable services

Why it matters

- **Lower mains-water demand**
Use treated water where drinking-water quality is not required.
- **Stronger sustainability performance**
Support resource-efficiency, ESG and building sustainability objectives.
- **Reduced operating water costs**
Reduce dependence on purchased mains water and sewer discharge.
- **Reliable building integration**
Automatic controls, monitoring, backup water and pressure distribution can be integrated into the plant room.

INDUSTRIAL APPLICATIONS

Industrial water reuse starts with the water itself.

There is no single "industrial wastewater" profile. GREHA evaluates each source and reuse target before selecting the treatment process.



Suitable starting points

- Greywater from showers, changing rooms and washbasins
- Rainwater collected from suitable roof areas
- Low-contamination process-water streams after characterization
- Existing non-potable storage or water infrastructure that can be reused

Potential reuse applications

- WC flushing
- Washdown and floor cleaning
- Irrigation
- Vehicle washing
- Cooling or process-water applications where technically suitable

Before process-water reuse, we evaluate:

- Water chemistry and contaminant profile
- Temperature and flow variability
- Required treatment quality
- Compatibility with the intended reuse
- Operating and maintenance constraints

Modular tanks, MBR/UF, disinfection, pumping and controls can be combined...

Design around the project - not the other way around.

GREHA can integrate new equipment into existing plant rooms, external equipment areas or underground storage arrangements, with the final layout developed during detailed engineering.

HOW WE WORK

A clear engineering process from first data to operating system.

GREHA can support the project from initial water-balance assessment through commissioning and after-sales support.

01

Understand the building

Sources, occupancy, operating profile and available infrastructure.

02

Calculate the water balance

Available supply versus non-potable demand.

03

Define the reuse target

Required applications, water quality and reliability.

04

Engineer the treatment

Select treatment, storage, pumping and controls.

05

Integrate with the building

Develop hydraulic, electrical and BMS interfaces.

06

Commission & support

Start-up, handover, maintenance and technical support.

GREHA SCOPE CAN INCLUDE

- Water balance & initial assessment
- Process design
- Equipment selection
- Detailed system configuration
- System supply
- Installation supervision
- Commissioning
- After-sales support & maintenance

Design references

EN 16941-2 - Greywater
EN 16941-1 - Rainwater
EN 1717 - Potable-water protection
+ local regulations and project requirements

Tell us about your project.

To prepare an initial concept, send us the basic project information: building type and location, occupancy, available water sources, water consumption or design flows, intended reuse applications, available installation space, and any drawings or plant-room photos.

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