

# Aqua Treat

Clean. Pure. Life





Aquatreat is a leading engineering group that offers a full range of services in the integral water cycle and specializes in the execution of turnkey water and wastewater treatment plants, desalination plants, and biogas plants.

AquaTreat offers complete services from design engineering to commissioning, in addition to operation and maintenance. AquaTreat offices are currently present in strategic areas of the Middle East servicing markets in Jordan, UAE, Bahrain, Saudi Arabia, Oman, Qatar, Iraq, Lebanon, Libya and Kuwait.

AquaTreat offers clients comprehensive solutions covering all aspects of sewage,

industrial effluents and the treatment and disposal of associated sludge, as well as purification, conveyance and desalination of water.

Since its establishment in 1995, AquaTreat has successfully engineered, manufactured, installed and serviced over 200 water and wastewater treatment plants.

AquaTreat is committed to offering clients fast responses and well designed systems using quality components, prompt delivery, complete installation, commissioning and operation. It also offers complete solutions through operation and maintenance services in water, wastewater and sludge treatment.





## Our Mission

“ To be the main provider of engineered solutions for water and wastewater treatment and desalination in the region. ”



## History

The negative impact of current environmental issues on human life has intensified the need for investing in the development of engineered solutions to resolve problems that have so far been underestimated and overlooked. The increase in population and rapid industrial growth have caused the deterioration of scarce water supplies, necessitating water and wastewater treatment.

AquaTreat was established in 1995 as an engineering company specialized in water, wastewater and bio-solids treatment. The company grew from a small fabrication shop that built skid mounted filters, softeners and reverse osmosis units, to an engineering and construction group offering complete solutions for water treatment, wastewater treatment and desalination plants.





# Innovation

Each project is a fresh challenge. At every stage design engineers work hand in hand with project managers in order to develop effective solutions unique to each project, bridging the gap between research and on site application.

AquaTreat's efforts include conducting tests on pilot units, computer simulation and trial runs, utilizing new and approved technologies and process engineering.



## People are Our Greatest Asset

AquaTreat has built a highly motivated and skilled team of professional engineers and technicians, who employ various computerized systems and computer aided drafting facilities to provide clients with customized, practical and cost effective solutions.



## Water Treatment

AquaTreat offers a wide range of water treatment services to meet commercial, industrial, municipal and agricultural demands. Technical studies are conducted to assess the quantity and quality of available resources, as well as the current and future supply requirements, to determine the individual needs of each client.

AquaTreat treatment plants are designed to provide high quality water to ensure maximum safety for the consumer.

AquaTreat supplies systems and services to industrial clients for ultra-pure applications such as dialysis, pharmaceutical utilization, water recycling and numerous other usages.

The AquaTreat philosophy entails in-house development and improvement of processes and technologies. Consequently processes can be optimally adapted for the following applications:

- Removal of Iron and Manganese
- Lamella Settlers
- Nitrate Removal
- Removal of Sulfur
- Neutralization of acidity and alkalinity
- Coarse filtering and coarse screening
- Fine sand filtration
- Dual and multimedia polishing filters
- Flocculation and sedimentation







## Water Desalination

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AquaTreat's desalination plants are capable of removing dissolved solids ranging from 1,000 to over 50,000 PPM , with capacities ranging from one hundred to millions of gallons per day, and are used to treat well , surface and sea water . Depending on clients' needs, such systems can be pre - packaged or assembled on site.

To ensure system reliability, AquaTreat offers complete, simple to operate, low maintenance, membrane - system treatment plants, utilizing quality components.

AquaTreat offers a broad spectrum of services for the manufacturing and construction of desalination plants ranging from design, engineering and market research, to laboratory and pilot plant testing.

In addition to well designed plants , AquaTreat offers complete installation , operation , and commissioning services, full technical assistance and support , comprehensive training of the clients' technicians and engineers.

# Municipal Wastewater Treatment

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Stringent environmental protection legislation, combined with the increased complexity of pollutants found in today's urban sewage, have led to an acute need for the development and application of advanced treatment systems and methodologies. AquaTreat offers a wide range of wastewater services that are tailored to meet municipal needs and environmental standards.

AquaTreat's services include conducting studies to determine optimal treatment options, process selection, pollution control, and sludge and water quality management. AquaTreat also offers rehabilitation of existing collection facilities as well as the design and building of new systems including pumping and lifting stations, pressure pipes, new laterals, mains and interceptor sewers which meet current and anticipated future needs as determined by the individual studies conducted for each site. Alongside conventional treatment, AquaTreat has developed considerable expertise in compact plants that require as little as one tenth of the surface area needed by

standard plants, allowing for smooth integration within existing facilities. These technologies are particularly suitable for plants fully enclosed in buildings or for underground treatment facilities.

AquaTreat provides a variety of solutions ranging from pre-engineered and pre-packaged, to custom built treatment plants with a capacity of more than one million PE.

These solutions are designed to meet effluent requirements for current and projected future conditions. AquaTreat uses a wide range of processes to treat municipal wastewater which include:

- Activated Sludge systems
- Rotating Biological Contactors
- Sludge handling Contactors
- Constructed Wet lands
- Membrane Bioreactors (MBR)
- Trickling Filters and Biofilters
- Screening and grit removal
- Moving Bed Biofilm Reactors (MBBR)







## Industrial Effluent Recycling

AquaTreat's customized solutions are tailor - made using processes and technologies developed and perfected in-house to suit the individual needs of each client. Aqua-Treat offers extensive services that include the determination of the optimal treatment process, pollution control , and sludge and water quality management, for specific process steps or complete industrial process treatment plants.

AquaTreat utilizes modern membrane techniques which are effective in a wide range of industrial effluent treatment applications.

AquaTreat customizes its solutions according to the specific features and requirements of each industry and effluent , such as :

- Paper Mill Effluents
- Oil and Gas Facilities
- Food Processing Effluents
- Refineries
- Vegetable Oil Effluents
- Pharmaceutical
- Textile Factories Effluents
- Chemical Facilities Effluents



## Sludge Treatment

AquaTreat provides intensive sludge digestion technology for the extraction of usable material from sewage sludge. This entails the stabilization of the sludge in digestion tanks anaerobically and the conversion of the organic mass into Biogas, gas and water.

Sludge digestion results in a large number of technical benefits such as volume reduction and improved sludge dewatering.

AquaTreat offers a range of sludge handling processes which include:

- Lime dosing
- Composting
- Thermal sludge drying
- Co-fermentation with other organic matters
- Thickening and dewatering
- Production of Biogas
- Incineration





## Waste Treatment and Biogas Plants

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Mechanical-biological waste treatment allows for the extensive recycling of valuable substances extracted from municipal solid waste. Similar to Biowaste treatment, intensified fermentation is key to ensure the stabilization of the waste fraction with high organic load and the production of Biogas.

The services offered by AquaTreat cover remediation of contaminated sites and landfill engineering or

rehabilitation or both in addition to the operation of landfills and post - operative monitoring, utilization and incineration of landfill gas. AquaTreat can provide tailor made plants for the utilization and thermal oxidation of digester and Biogas, as well as comprehensive range of solutions which include engineering, remediation, supply and operation of processing plants and execution of complex remediation measures.

## Pipeline & Pumping Stations

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AquaTreat undertakes the design, development and construction of new pumping and lifting stations, pressure pipes and interceptor sewers which meet current and projected future needs.

In addition to the design, selection, installation and construction of pumping stations, AquaTreat services include the manufacture of surge systems

and the supply and installation of proper instrumentation for the protection , monitoring and controlling of pump stations using SCADA or telemetry systems.





## Operation & Maintenance

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Aquatreat specializes in the operation and maintenance of water and wastewater treatment and desalination plants and biogas pumps station. AquaTreat offers comprehensive solutions through consultation, operation and maintenance services in the treatment of drinking and industrial water, municipal sewage plants, industrial wastewater treatment plants, water desalination treatment and biogas plants in the Middle East and North Africa.

AquaTreat offers full service packages that guarantee maximum operational safety as part of its commitment to quality, efficiency and excellence.

AquaTreat's carefully selected team of professionals helps ensure clients are satisfied with the full operation and maintenance service solutions it provides. AquaTreat provides extensive, specialized and professional service in the fields of:

- Desalination plants
- Municipal sewage plants
- Industrial wastewater treatment plants
- Water treatment plants
- Organic or domestic refuse treatment plants
- Cooling water plants
- Pumping stations

# SCADA for Water Treatment

## SYSTEM SOLUTIONS:



AquaTreat designs, develops, tests, and installs complete supervisory control and data acquisition (SCADA) systems to monitor and control your systems or processes across a widely dispersed infrastructure. We have experience providing various system sizes, ranging from simple standalone to complex networked systems. Several subsystems combine to make up an entire SCADA solution. A HMI presents data to a human operator who can then monitor and control the process. Data acquisition is made possible through sensors placed throughout

the process or facilities. Our knowledgeable engineers will work with your operations requirements, preferred software, and existing equipment to create a SCADA solution that is right for you. Optimal production goals places increased demand on accurate fault detection, consistent data collection and trending, secure remote access and other industry challenges. AquaTreat's wide array of scalable and automated solutions builds reliability and accuracy into your new or existing cyber infrastructures.

## Typical System Features

- Master and local substation human-machine interfaces (HMIs)
- Protection data network
- Station- and system-wide sequential events recorder (SER)
- System-wide relay event retrieval
- Synchrophasor data collection Master SCADA server redundancy
- Remote access
- Fast response to HMI control outputs
- 1 ms SER resolution
- Self-testing
- Time synchronization
- IED polling
- Enterprise and local power system report manager
- Industry standard protocol



# Process Equipment:

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AquaTreat specializes in designing, manufacturing, fabrication and on-site installation of process equipment, key components and plant systems for the water, power and hydrocarbon industry. AquaTreat manufactures complete process equipment in addition to stainless steel and mild steel tanks, pressure vessels, industrial filters and softeners, packaged sewage treatment plants, scrapers, screens, grit and grease removal, oil and gas separators, DAF units and containerized water treatment and desalination plants.

AquaTreat offers complete solutions covering engineering, laboratory testing, pilot plant testing and training. "EN ISO 9001" certification and internal quality assurance systems are strictly implemented to make sure that all equipment produced are in strict conformity with related EU mechanical and electrical directives and CE mark.

AquaTreat's know-how offers customers from municipalities and industries investment security, reliability and effective solutions.

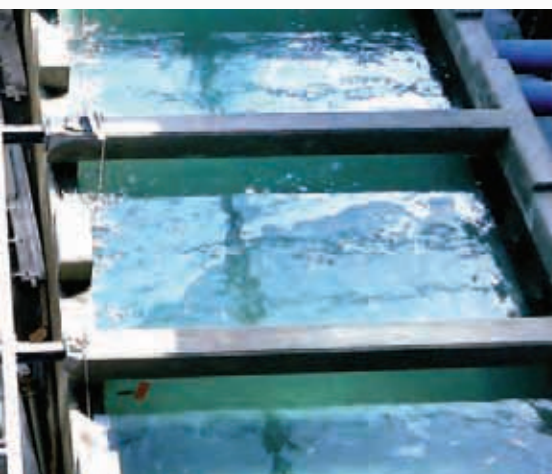




## MANAGEMENT OF Drinking Water Services:

AquaTreat has a vast experience in managing and operating facilities under contracts or concessions with public authorities and private entities. AquaTreat excels in developing solutions to help clients deal with their specific requirements of water services and maintains the quality of the facilities managed and operated. The strategies offered are inclusive of all water sources, including water reuse, and provide long term sustainable solutions, in addition to focusing on business needs using world-class tools and methods in managing major projects with empowered employees who are able to implement actions rapidly.

AquaTreat optimizes performance through upgrading of facilities and infrastructure and developing methods for better water quality and implementing risk management programs. Water management service provides solutions for technical, economic, and regulatory issues related to water and wastewater. We utilize the most effective water management strategy to meet production objectives and lower operating expenses associated with water sourcing and disposal.





## Industrial Projects:

AquaTreat has extensive experience in industrial and electromechanical projects and provides complete electrical and mechanical systems installation in accordance with needed requirements. AquaTreat services cover the realization and assembly of installations along with all the necessary assistance for putting these projects into operation.

Apart from its excellence in industrial processes, in engineering and in the management of complex technical projects, AquaTreat also guarantees the technological confidentiality of equipment to be installed.

### Construction and / or Installation services for:

- Water Pipelines
- Fuel Pipelines
- Specialty Products and Technologies
- Natural Gas Terminals and Networks
- Automation and SCADA Systems Installations
- Industrial Installations
- Electromechanical Installations for Buildings, Factories and Sports Facilities.

## Quality Statement

### SYSTEM CERTIFICATION

## Quality Policy

AquaTreat is fully aware of the mounting environmental issues and economic pressures facing its clients, and provides product excellence by embracing and contributing to the rapid technological evolution within the industry.

AquaTreat's objective is to continue offering premium quality solutions to clients, by remaining abreast of the latest technology within the industry, and committing to implementing improvements in quality and design to all its projects and services, thus ensuring the availability of the best possible economical services and products.

AquaTreat believes that quality must be integrated within every level of the organization. This is

achieved by communicating and implementing quality values through encouragement, education and training. Ongoing education and individual support programs provide employees with the tools, knowledge, confidence and motivation to apply the AquaTreat philosophy in their role within the company.

All AquaTreat procedures from offer drafting, engineering and procurement, to fabrication, installation, project management, commissioning and the final hand over, are governed by the AquaTreat Internal Quality Assurance Manual and are periodically audited by the Quality Control Department. Stringent measures are taken against any nonconformity.

**“At AquaTreat, Quality is never compromised”**

AquaTreat Group of companies



**AquaTreat Group**

[www.Aqua-Treat.com](http://www.Aqua-Treat.com)