

PurewaterGroup

Systems

- Municipal wastewater treatment
- Municipal water treatment
- Industrial water/waste treatment & reclamation
- Compact water & sewage treatment plants & mobile packages
- Reverse Osmosis brackish & seawater desalination & membrane systems
- Ion exchange softening, demineralisation
- Odor control, gas scrubbing, neutralisation
- Disinfection & chemical conditioning

Services

- Design - Engineering - Fabrication of M+E equipment
- Feasibility studies & engineering design
- Project planning & supervision
- Training of plant operating personnel
- Plant erection - Supervision - Commissioning - Maintenance

Forward

As specialist group of companies in the field of water and wastewater engineering and supply, with over 35 years experience in process design, manufacture, supply and supervision of schemes in Europe, the Middle East, Asia, Africa, and other overseas markets, Purewater are suppliers of specialist equipment and systems for implementation of Water Treatment and Wastewater Treatment plants and ancillary works, especially in overseas markets, such as the Middle East, where we have a long reference list of projects undertaken over the past several decades.

Purewater Systems have several subsidiaries and joint venture (JV) partnerships, either in manufacturing, or in specialist supply of equipment, and maintain a Middle East regional office and subsidiary in Amman, Jordan, **Eastern Water & Waste Engineering Services (EWWES)**.

PUREWATER-Group with its partner companies is pre-qualified for municipal water and wastewater treatment project equipment manufacture and supply to overseas municipalities and industrial-commercial concerns. The JV has designed-manufactured M&E process equipment for major regional contractors, for 3 decades, covering project contracts of municipal authorities in Iraq, Saudi Arabia, the Gulf countries, as well as for major foreign contracting organisations in the Region, such as Bechtel, Parsons, amongst others, via local sub-contracts.



Purewater will undertake design and supply of the main plant equipment, the engineering and manufacture of various electro-mechanical systems and components at specialist fabrication shops in Europe.

The in-house manufacture and component's supply are strictly of West European, U.K. & U.S.A. origin.

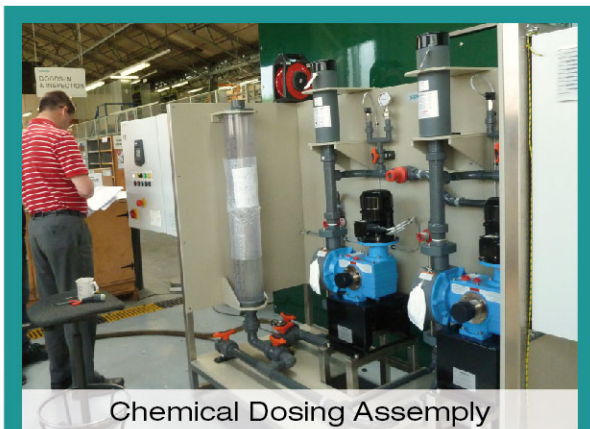
The group partners operate in accordance with the latest codes and standards applicable in the water and wastewater industry in the western world, and within the European Community, complying with relevant BS, ISO, DIN, ASTM equivalent codes & standards, covering design, materials, fabrication and testing, in addition to maintaining QA & QC procedures of high order.

Certificates of EU, UK, USA origin are provided with our equipment supply (depending on specific equipment and relevant manufacturing location). Purewater will arrange for Third-Party inspection of goods through Lloyds, SGS, Bureau Veritas, or similar accredited inspectors, prior to their dispatch from group member works.

Purewater Systems maintain fully qualified staff in the U.K., Italy and in the Middle East for design, as well as fabrication facilities for specialist equipment. Furthermore, our main partners maintain ISO qualified, fully equipped workshop and fabrication facilities where most of the major mechanical plant equipment are produced, and where tests and inspections are carried out.

The design & fabrication of mechanical mixers are undertaken at our associate Mixertech and long facilities in England; while Archimedean screw-pumps and surface aerators are manufactured at Landustrie works in the town of Sneek, Holland, where hydraulic test facilities for aerators are available.

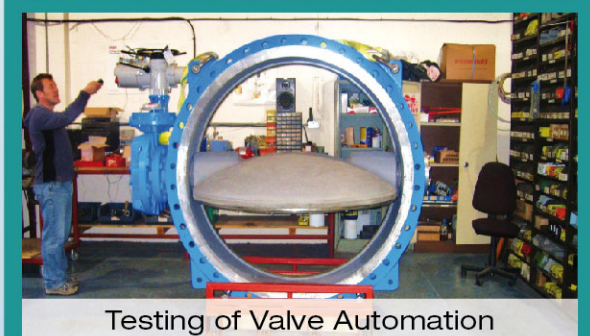
Through its regional office in Jordan “Eastern Water & Waste Engineering Services [EWWES]”, Purewater Systems Ltd. maintain representation, agency agreement, or supply partnerships with a number of European manufacturers.



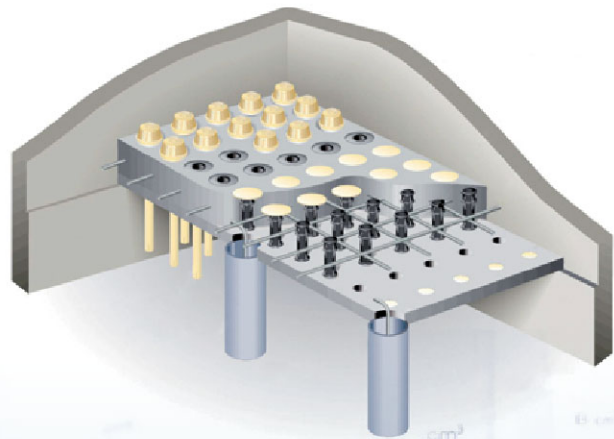
Chemical Dosing Assembly



Fully Integrated Control Center



Testing of Valve Automation



Rapid Gravity Filter Underbed



Mechanical Mixer Assembly

Our engineered water & wastewater treatment products cover the following :-

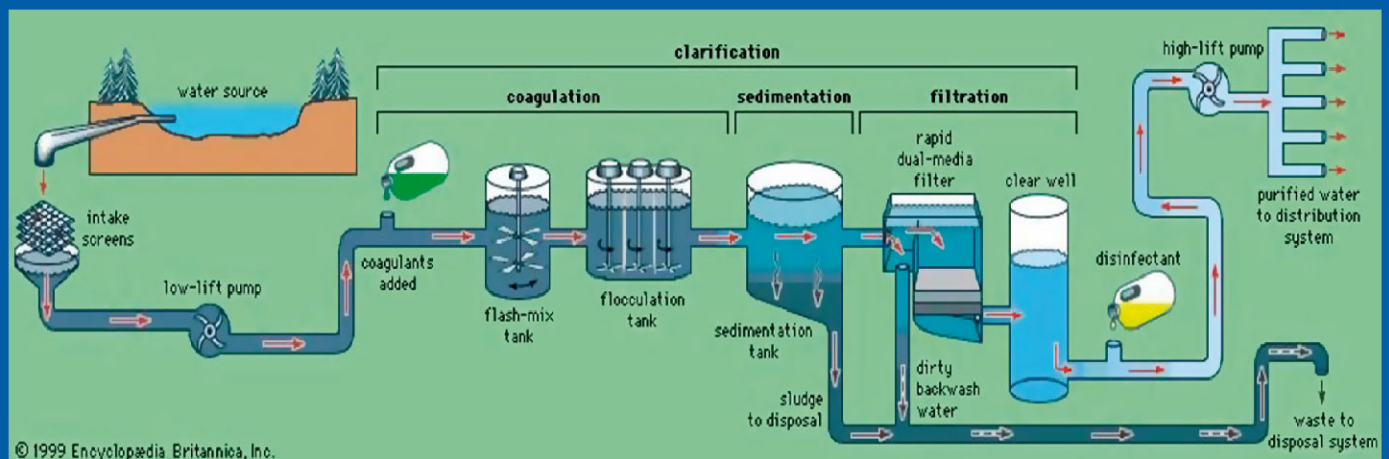
POTABLE WATER TREATMENT

Systems for surface water treatment, comprising flash-mixing, chemical conditioning, flocculation-clarification, inclined lamella plate and tube systems, sand & multi-media filtration (pressure and open-gravity), disinfection by pre & post chlorination or by other photo-chemical means, flow - level - pressure - turbidity - residual chlorine sensing, monitoring instrumentation & control.

Borehole and brackish water treatment for potable and other usage, inclusive media and membrane filtration, pH adjustment, de-gassing for H₂S, CO₂, iron - manganese - arsenic removal, de-aeration, etc.

Water & effluent purification by Microfiltration, Ultra-Filtration & Reverse Osmosis, including necessary pre-treatment and post treatment systems, to provide purified or low TDS water for potable and industrial usage; also ion-exchange softening & demineralisation systems when called for.

Typical Schematic of Surface Water Treatment Plant



Water-Abstraction > Chemical-Flocculation > Clarification > Filtration > Disinfection > Water-Distribution

Electric control & switchgear equipment, with necessary instrumentation & SCADA systems, PLC-based central control & mimic panels; standby power systems and substations.

Purewater Systems also design and supply compact /packaged units for small community drinking water production, as well as compact wastewater treatment units for small domestic communities, hospitals, camps and commercial enterprises.

Site assembly of large clarifier scraper



Upgrading clarifier basins with Lamella tube + plate packs



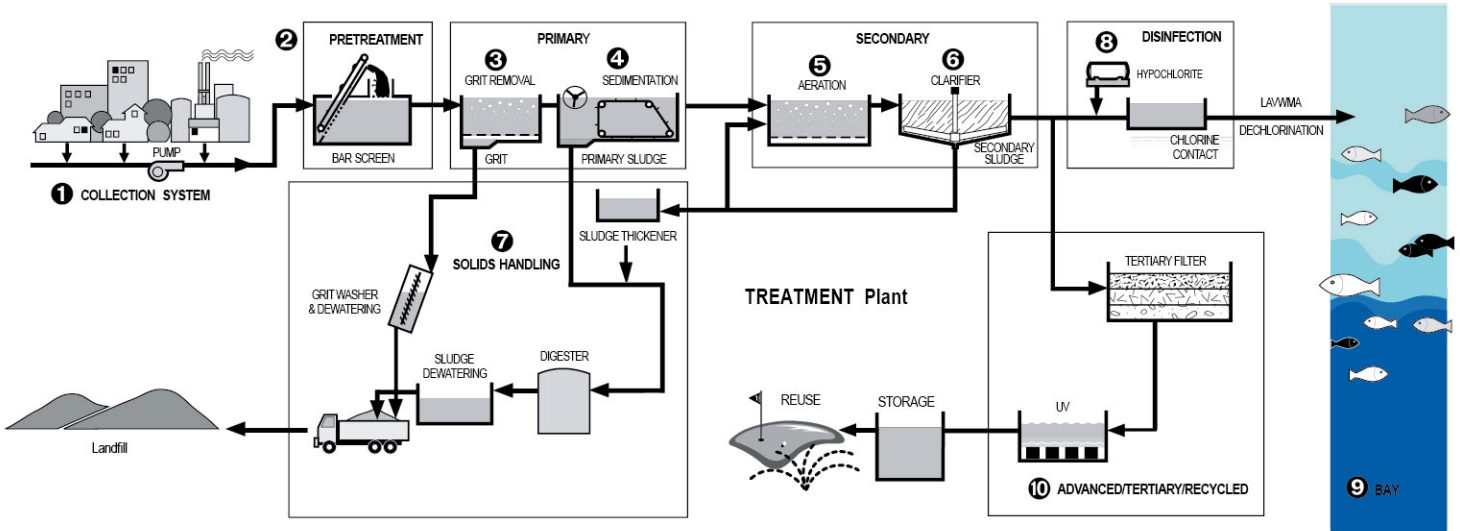
WASTEWATER TREATMENT PLANT

Inlet works of mechanical coarse & fine screening of raw sewage and for water intakes, stoplogs, penstocks & sluice gates, pumping gear, sand-grit and FOG removal, flow - level - pressure - O₂ & gas monitoring instrumentation.

Components for wastewater mixing, flow balancing, primary sedimentation, biological aeration systems by fine or coarse diffused air, by brush rotor, or mechanical surface aerators, followed by secondary sedimentation/clarification, sludge recirculation.

Sludge thickening and sludge conditioning-dewatering processes for land minimisation.

Aerobic and Anaerobic sludge digestion systems, with heat-power cogeneration options.



Schematic of a Municipal Wastewater Treatment Plant

[Courtesy of Livermore City of WWTP]

Tertiary treatment by means of filtration & disinfection of treated waste waters for irrigation or plant reuse; also nutrient removal by biological treatment or chemical precipitation.

Odor containment & removal systems by bio-filtration or by chemical and carbon scrubbers, including hazardous gas monitoring H₂S, methane, O₂, etc.





Sluice gates, penstocks, stoplogs, weirs for hydraulic flow control

Wastewater sludge digestion



PUREWATER & PARTNERS have well proven track record overseas for design fabrication and supply of water treatment - purification and wastewater/sewage treatment equipment manufacture employed by municipal and commercial organisations in Saudi Arabia, Iraq, Iran, the Gulf region, Egypt, North Africa and West Africa, supplied via various contractors, besides supplies to contractors within Western and Eastern Europe, including the former Soviet states.

To date, PUREWATER SYSTEMS and its associates worldwide have designed, fabricated and supplied systems and equipment for numerous water & wastewater treatment schemes – either as direct project suppliers, or as specialist suppliers to main contractors. Our track record of process design, engineering and fabrication of systems goes back to over 35 years.



Furthermore, Purewater Systems UK have designed & supplied Olympic and club-size swimming pools and hydrotherapy treatment plants , with ancillary equipment, to several countries and organisations in the past 3 decades.



Water treatment schemes in Iraq

In the past decade within Iraq alone, our design & manufacture assignments for water supply projects have covered several clari-flocculator designs and ancillary mechanical process equipment, which were manufactured at the Purewater Group fabrication facilities in Italy and at associate Purewater Systems works in the United Kingdom.

Purewater & Partners have completed and shipped clariflocculators, mixers and ancillary fabrication work for Al-Refaie Water Supply project, for Falluja Town Water Supply scheme, for Al-Islah-Jebaish Water Treatment Plant project, for Al-Manathera Water Treatment Plant, for Karbala Water Supply project, for Misan Governorate (Al-Majer-Qalat Saleh), and supply of specialist process equipment for Al-Hindiya Water Treatment Plant, as subcontractors to principal contractors in Iraq.



Water clarification and treatment



Demineralisation - ion exchange package

Wastewater Schemes in Iraq

For sewerage works, in partnership with Landustrie, the Purewater Group has supplied screw-pumps and mechanical surface aerators for the 3 Phases of the new Karbala City Wastewater Treatment Plant in Iraq, as well as process mechanical equipment for Al-Bterah (Misan) for Baquba town, for Al-Najaf Town, and for Al-Hur (Karbala) Wastewater Treatment plants.

Among other supplies for the Iraq reconstruction schemes, Purewater Group has delivered several large mechanical intake screens and motorized gates for Greater Baghdad Trunk Sewer pump stations, as well as for the Tigris River intake at Sharq-Dijla Municipal Water-works around Baghdad, which have been successfully installed and commissioned; plus contract supplies for Karbala trunk sewer lift stations, Al-Muameera (Babil) sewage project, Falluja Sewer Pump Station / F5, as well as supply of gas scrubbers and polymer systems for the Falluja sewage works. The Baquba Town Sewage Rehabilitation project was undertaken by our Group, while other schemes are awaiting execution.

Numerous large Archimedean screw pumps and mechanical surface aerators have been delivered over the past few years for several sewage works in the Region from our associates, Messrs LANDUSTRIE SNEEK BV, who are represented in Iraq on exclusive basis by Purewater-EWWES regional office and provide backup service in the area.

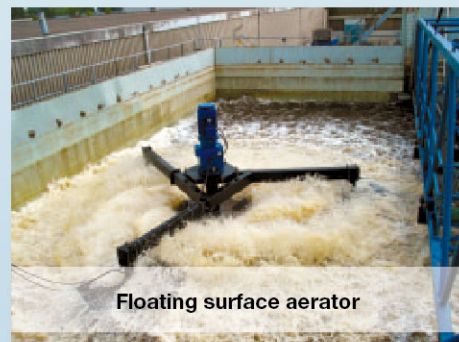
Several mechanical intake screens, numerous sluice gates /penstocks, clarifiers, DAF units, API separators, filter vessels and structural plant components have been processed in our workshops for clients in Europe and overseas.



Landustrie test basin for mechanical aeration



View of sewage works



Floating surface aerator



PUREWATER-ECO.M fabrication facilities

PurewaterGroup

Americas

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