

WATER

**YOUR PARTNER
IN THE WATER
CYCLE**

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ACCIONA, pioneers in development and sustainability

ACCIONA is one of Spain's major business corporations, a leader in the development and management of infrastructure, renewable energy, water and services.

With more than a century behind it, it is made up of more than 30,000 professionals and enjoys a presence in over thirty countries on five continents. ACCIONA trades on the IBEX-35 blue-chip index and is a benchmark stock on the market.

ACCIONA's position as a pioneer in development and sustainability expresses its capacity to answer the challenge of attaining sustainable development throughout all its business areas. One of its specific commitments is gradually to reduce its climate footprint and lead the transition towards a low carbon economy. To that end, ACCIONA's activities and businesses reduced atmospheric CO₂ emissions last year by 10.34 million metric tons, over 36% more than in 2009.

ACCIONA centers its strategy on two concepts: sustainability and social well-being, as the focal points of economic growth, ecological balance and social progress. This commitment has been confirmed by ACCIONA's inclusion in various sustainability indices, such as the Dow Jones Sustainability World Index (DJSI World) and the Dow Jones Stoxx Sustainability Index (DJSI Stoxx), in which it has been awarded the best scores in its sector.

ACCIONA's commitment to innovation has been consolidated with more investment, projects, programs and human resources to cement the Company's intention to maintain its leadership in the area of solution development and more sustainable alternatives.

sustainability and social wellbeing

Keys for generating H₂O at ACCIONA Agua

The ACCIONA Agua division offers water treatment services and manages the entire water cycle. It is focused on a range of activities, from water capture and producing drinking water through desalination, to purification and return to the environment.

Thanks to the innovative design, execution and operation of water treatment and desalination plants, the Company is a leader in global solutions that contribute to sustainable growth in the water sector.

The strategy of ACCIONA Agua is to maintain a presence throughout the entire water cycle - construction, operation and services – in Spain and in international markets..

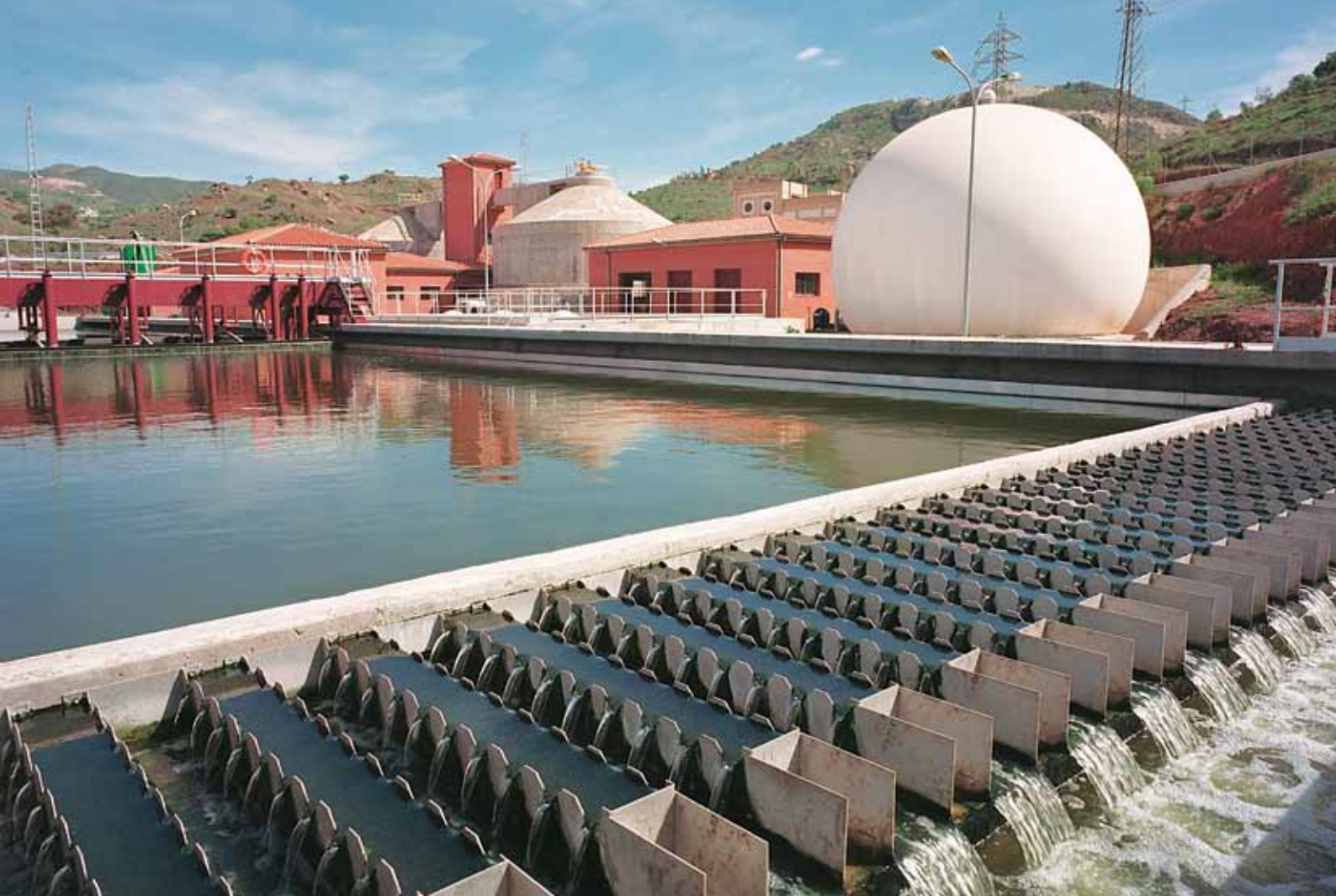
At this time, ACCIONA Agua supplies a total of 50 million people with water in 20 countries around the world.

In 2010 it had a portfolio worth more than 4.8 billion euros and 454 million euros' worth of revenue. The division's workforce came to 2,174 employees.

The main activities in this business area include:

1. The design, construction, commissioning, operation and maintenance (O&M) of water treatment plants including:

- Seawater desalination plants.
- Drinking water treatment plants.
- Wastewater treatment plants.
- Tertiary treatments and recycling.
- Treatment of waste from processing plants.



2. Comprehensive water services encompassing the entire water cycle:

- Management of reservoirs and water distribution networks.
- Treatment, distribution and supply of drinking water.

- Management of supply and sanitation networks.

■ Auxiliary services.

The Company has offices on five continents with a relevant presence in markets that include the United States, Australia, Italy,

Portugal, Algeria, Puerto Rico, Egypt, Turkey, Bulgaria, United Kingdom and Latin America, among others. The Company's professionals have experience and a thorough knowledge of all stages of the water cycle:

- Research and development.
- Design.
- Detail engineering.
- Construction.
- Commissioning.
- O&M.

Commitment to environmental protection, R&D and Innovation and technology

Environmental protection is one of the top priorities of ACCIONA Agua on each one of the projects it undertakes. The object is to minimise the use of resources and the quantity of waste generated.

The Company's strategy hinges on two concepts, sustainability and social wellbeing, to generate wealth, improve the environment and foster social progress.

In 2002, the Environmental Management System of ACCIONA Agua obtained ISO 14001 certification and in 2008, its Occupational Health and Safety System was OHSAS certified. However, the Company's commitment far exceeds legal requirements and seeks to continuously improve its environmental protection process and increase the level of awareness among employees.

To do so, ACCIONA Agua focuses its efforts on:

- Optimising the use of natural resources,

- Minimising the production of hazardous waste,
- Achieving the proper environmental management standards for the sewage, waste and by-products generated during the water treatment process,
- Organising employee training and awareness-raising campaigns,
- Conducting internal audits of improvements.

As part of its environmental protection efforts, the Company has conducted inspections of waste and control systems using a specially trained team which have yielded results in the Molina de Segura project (Murcia, Spain). In this case, the use of internal technological innovation directed by R&D and Innovation played a decisive role in each phase, contributing to its ultimate success.

The ongoing support of the R&D and Innovation for all stages of the water cycle is what sets ACCIONA Agua apart from its competitors. In the desalination sector, the Company is working with the

latest membrane model and new energy recovery devices.

The R&D department also conducts ongoing research into new water-treatment techniques. The R&D department provides fundamental technical support and takes charge of the first steps in designing large-scale desalination plants.

The Company's R&D and Innovation activities seek to respond to greater demand for water treatment and increasingly scarce resources. ACCIONA's participation in Spanish and international research projects, alongside universities and public research centers, makes it a technological front-runner and consolidates its opposition as sector leader. Its R&D work has led to important advances such as:

- A variation on modified UCT (University of Cape Town) process, aimed primarily at reducing sludge and consuming less oxygen;
- A patent for a ground-breaking process for biomass,

bringing greater design flexibility, space savings, and easier functioning and control.

- Research into the effects of potentially dangerous substances (e.g. hormones and medicines) in wastewater destined for reuse.

The R&D work carried out has borne its fruits, including 16 patents for desalination, membrane bioreactors and water reuse. The following are just a few examples:

- ELFA (Treatment).
- SEPAFLOC (Desalination / Pre-treatment).
- BIOFILPAS (Drinking Water).
- MEMPACK (Wastewater).
- OPTIMIZACION ENERGÉTICA SPLIT CIEGOS (Desalination).
- ACTIDAFF / ULTRAFLOT (Desalination).

ACCIONA Agua has a highly qualified staff with more than thirty years of experience applying R&D and Innovation to water treatment and the use of membranes, from the most basic laboratory techniques to pilot plants on an industrial scale.





the integrated water cycle

For ACCIONA Agua, Customer Satisfaction is a key management goal. Taking care of water users and sorting out their queries and difficulties is a major management tool in our line of business.

So we make every effort to stay close to our customers: it's about tackling problems, coming up with the best solutions or carrying out the execution, operation and management of plants and sites, the ACCIONA Agua team knows that our

collaboration is vital for ensuring our customers' total satisfaction.

The Integrated Water Cycle starts with the type of water captured, which is turned into drinking water. The process includes desalination, transport and delivery to the man and woman on the street, before coming to a close with wastewater treatment and the water's treatment for reuse, in the state as it was captured or possibly even better.



Desalination plant in Javea (Alicante, Spain)

Drinking water treatment plants

Since the beginning, ACCIONA has offered innovative solutions to address a wide range of problems in the field of drinking water treatment. ACCIONA Agua built the first plants in Spain with chlorine-free pre-oxidation processes and was also a pioneer in the use of intermediate ozonation, between settling and filtering.

ACCIONA Agua has built a total 110 drinking water treatment plants, with a total capacity of 6.5 million m³ per day, delivering water to more than 23.2 million inhabitants.

The Alcantarilla drinking water treatment plant built by ACCIONA Agua, located in Algarve in southern Portugal, is one of the largest on the Iberian Peninsula with a capacity to treat 259,200 m³/day.

CONSTRUCTION: DRINKING WATER

PLANTS	COUNTRY	CAPACITY (m ³ /day)	POPULATION
Enlargement of Valmayor (Madrid)	Spain	1,036,800	2,960,000
Torrelaguna (Madrid)	Spain	518,400	1,728,000
Pu-Dong and the River Changjiang water conduit to the plant	China	400,032	1,800,000
Enlargement of El Bodonal (Tres Cantos, Madrid)	Spain	345,600	100,000
Santillana (Madrid)	Spain	345,600	100,000
Canal Bajo (Madrid)	Spain	345,600	100,000
Alcantarilha	Portugal	259,200	1,050,000
Amerya, Egypt	Egypt	200,000	2,000,000
Casablanca (Zaragoza)	Spain	172,800	690,000
Mundaring	Australia	160,000	100,000
Zaragoza	Spain	144,288	912,072
Sollano Fluorination (Zalla - Vizcaya)	Spain	129,600	450,000
El Cuartillo (Jérez de la Frontera - Cádiz)	Spain	114,912	400,000
Marbella (Malaga)	Spain	110,592	124,333
Mostorod - Cairo	Egypt	110,000	1,200,000
Reggio di Calabria	Italy	108,000	360,000
Rod el Farag, Cairo	Egypt	100,224	900,000
Campotéjar (Murcia)	Spain	100,000	1,000,000
North Helwan I	Egypt	100,000	1,000,000
North Helwan II	Egypt	100,000	1,000,000
El Perelló (Tarragona)	Spain	95,904	383,616
Peravia Multiple Aquaduct	Dominican Republic	86,400	138,000
Albacete (Albacete)	Spain	86,400	345,600
Carambolo (Seville)	Spain	76,032	253,440
Akashat	Irak	71,712	
Pedramaiore (Sicily)	Italy	64,800	259,200
87 additional plants		1,169,526	3,883,014
TOTAL		6,552,422	23,237,275





RELEVANT PROJECTS

PEDRA MAIORE DRINKING WATER TREATMENT PLANT **Sardinia, Italy.**

- Capacity: 64,800 m³/day.
- High season population: 131,000.
- Client: Ente Sardo Acquedotti e Fognature - ESAF.

The plant was built to supply drinking water to the towns of Badesi, Trinità d'Agultu, Valledoria, Castelsardo, Tergu, Santa Maria Coghinias and Viddalba in the province of Sassari on the island of Sardinia. The plant has a pump, three water treatment lines and two sludge treatment lines (one reserve).

Inside the plant, there is a station that collects the water and regulates the flow before it is distributed to the three processing lines.

ALCANTARILHA DRINKING WATER TREATMENT PLANT **Silves, Algarve, Portugal**

- Capacity: 259,200 m³/day.
- Client: Aguas do Algarve.
- Population: 1,050,000.

This plant was designed and built to supply drinking water drawn from the reservoir to the Algarve region of Portugal. The plant has one water and one sludge treatment line.

Sollano DWTP, Vizcaya. Spain.

Desalination

ACCIONA Agua has been a pioneer in the development of reverse osmosis (RO) desalination of both seawater and brackish water.

The R&D and Innovation department plays a fundamental role in applying this experience to each phase of the project, including the design, construction, commissioning and O&M of the plants.



Port Stanvac desalination plant, Adelaide (Australia)

The Port Stanvac desal plant will guarantee the water supply for over half the population of Adelaide

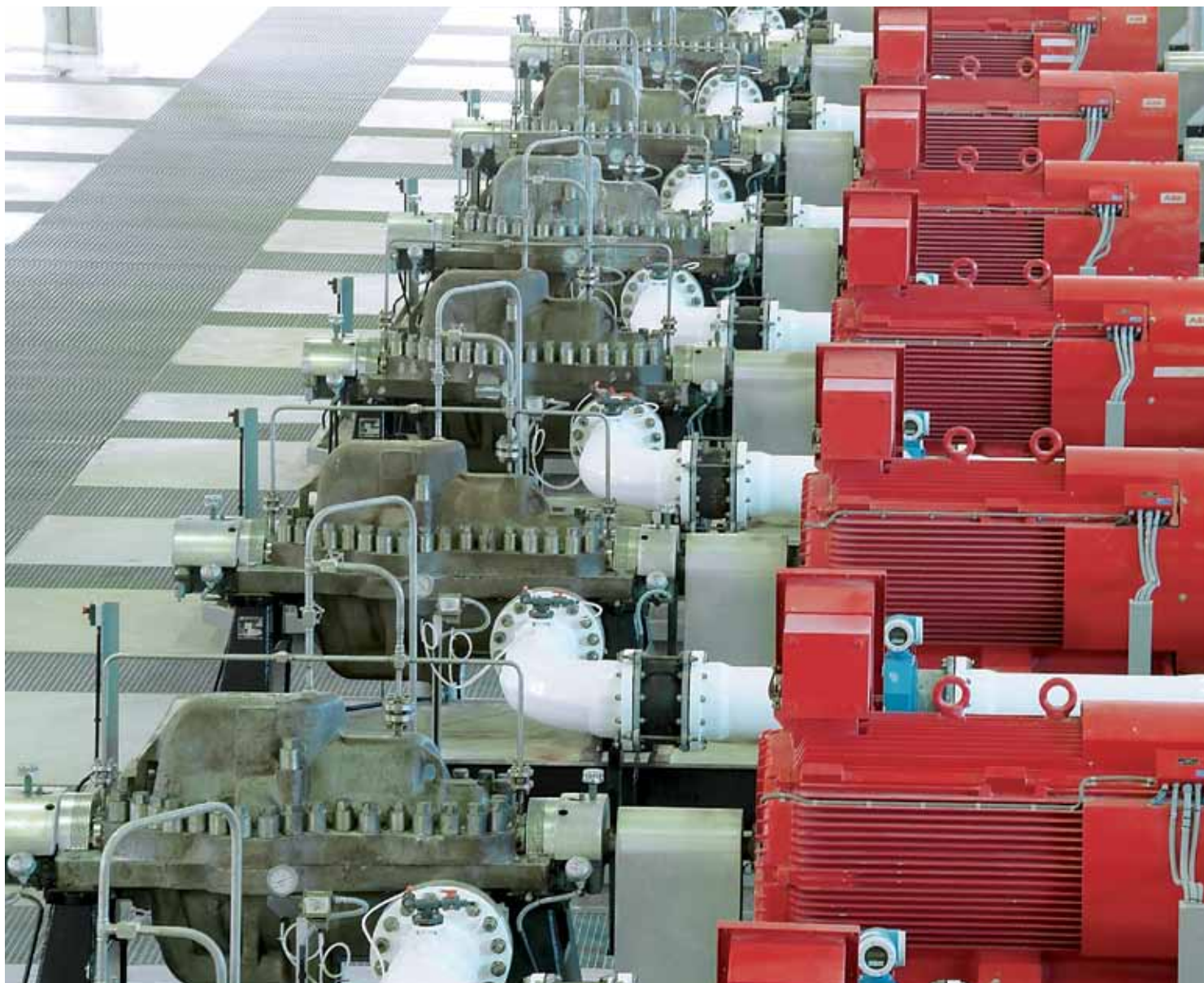
A. DESALINATION PLANTS: construction

ACCIONA Agua has more than 70 plants of reference in this sector with 1.8 million m³/day of installed capacity.

Many of the technological innovations incorporated into the current designs of these types of facilities have been developed and implemented by ACCIONA Agua.

Some of the most relevant innovations include:

- The use of filters for the treatment of highly polluted seawater (Las Palmas III desalination plant, Spain, 1990).
- Use of spiral membranes composed of a fine layer or aromatic polyamide with cross-linking in large desalination plants (Las Palmas III desalination plant, Spain, 1990).
- First reverse osmosis plant to use laminate purifiers to treat the highly polluted river water with varying levels of salinity (I.D.A.S. Denia, Alicante, Spain, 1991).
- Superficial dumping of rejected brine using various distribution pipes in the breakwater area for rapid dilution (Southeast desalination plant, Gran Canaria, Spain, 1993).
- The use of reverse osmosis and pretreatment with filters to desalinate urban wastewater (Southeast Tertiary Treatment, Las Palmas, Spain, 2000).
- Seawater collection using horizontal perforations rather than vertical shafts (New Cartagena Canal, Murcia, Spain, 2001).
- Use of microfiltration for pretreatment and reverse osmosis for the treatment of urban wastewater (Campo Dalías, wastewater treatment plant, Almería, Spain, 2001).
- Dilution of rejected saline water at a ratio of 4:1 so as not to damage the Neptune grass (Jávea desalination plant, Alicante, Spain, 2002).
- Optimisation of electricity usage by recovering energy from isobaric chambers (Talara desalination plant, Peru 2002).





Torrevieja desalination plant,
Alicante. Spain.

B. DESALINATION PLANTS: Operation & Maintenance (O&M)

The maintenance strategy, for desalination plants focuses on minimising operating costs and maximising the useful lives of the assets, which means that the application of essential preventive techniques is essential.

To ensure that this is possible, the R+D and Process Engineering departments work together as a comprehensive desalination technology team, which enables them to achieve objectives such as:

- Minimising the use of pretreatment reactives.
- Improving the quality of pretreated water by optimising the coagulation chemistry.

- Minimise the cleaning frequency of the reverse osmosis membranes.
- Optimising membrane cleaning by detecting contaminating agents, conducting membrane autopsies and improving the efficiency of cleaning systems in situ (CIP).
- Minimising the need to replace membranes.
- Minimising the plant's down time.

To minimise the impact on plant operations, it is critical to detect any abnormal operation early and respond quickly.

CONSTRUCTION AND O&M : DESALINATION PLANTS

PLANTS	COUNTRY	CAPACITY (m ³ /day)	TYPE OF CONTRACT	
			D&C	O&M
Port Stanvac, Adelaide	Australia	300,000	■	■
Torrevieja Alicante	Spain	240,000	■	■
Beckton Phase I and II – London	UK	150,000	■	
Carboneras, Almería	Spain	120,000	■	
Fouka	Algeria	120,000	■	■
Tampa Bay, Florida	USA	108,831	■	■
Paraguaná	Venezuela	75,000	■	
Canal de Cartagena Phase I (BOT), Murcia	Spain	65,000	■	■
Canal de Cartagena Phase II, Murcia	Spain	65,000	■	■
Canal de Alicante (BOT), Alicante	Spain	65,000	■	■
Copiapó	Chile	51,840	■	■
Almería Provincial Capital (BOT)	Spain	50,000	■	■
Las Palmas III, Las Palmas	Spain	42,750	■	
Sureste de Gran Canaria	Spain	33,000	■	■
Tordera (BOT), Gerona	Spain	28,800	■	■
Tordera enlargement, Gerona	Spain	28,800	■	■
Jávea (BOT), Alicante	Spain	26,000	■	■
Reggio Calabria	Italy	25,000	■	■
Lanzarote V	Spain	24,000	■	
Santa Cruz de Tenerife	Spain	20,000	■	
Campo de Dalías, Almería	Spain	20,000	■	
San Antonio, Ibiza	Spain	17,500	■	■
Ceuta, Ceuta	Spain	16,000	■	
Almuñecar, Granada	Spain	16,000	■	■
Denia, Alicante	Spain	16,000	■	
Telde Phase II, Las Palmas	Spain	16,000	■	
Martos Reverse Osmosis Line	Spain	15,552	■	■
Arucas & Moya (BOT), Las Palmas	Spain	15,000	■	■
Ibiza Provincial Capital (Ibiza)	Spain	13,000		■
Ciudadella (BOT), Minorca	Spain	10,000	■	■
Bocabarranco, Las Palmas	Spain	10,000	■	■
Jacarilla, Alicante	Spain	9,000	■	
Cervezas Dam Brewery, Barcelona	Spain	7,200	■	
Cap Milano	Italy	6,480	■	
Praia	Cape Verde	5,000	■	
Roque Prieto, Las Palmas	Spain	5,000		■
Talara	Perú	2,200	■	■
Plus 36 smaller plants		50,304		
TOTAL CAPACITY			1,871,257	1,346,275

D&C Design & Construction ; O&M Operation & Maintenance

Tordera desalination
plant. Gerona, Spain.



MAJOR PROJECTS

PORT STANVAC DESALINATION PLANT

Adelaide, Australia.

- Capacity: 300,000 m³/day.
- Type of contract: design, construction, operation and maintenance (20 years).
- Client: SA Water.

ACCIONA Agua and the Australian company United Utilities Australia, as partners in the AdelaideAqua project, are building the Port Stanvac plant (Adelaide, in South Australia).

The plant was designed as a renewables-fired facility and will have a

daily production capacity of 300,000 m³/day. The plant will satisfy one-fourth of the annual water requirements of the city of Adelaide, with a population of 1 million.

BECKTON DESALINATION PLANT

London, United Kingdom.

- Capacity: 150,000 m³/day.
- Population: 900,000.
- Client: Thames Water.

The decision to build London's first desalination plant was the result of a growing population and a scarcity of natural resources in the area. It will be the

first desal facility plant to extract water from the Thames estuary using reverse osmosis.

In 2009 it was chosen as the most sustainable project of the year by the magazine Global Water Intelligence.

TORREVIEJA DESALINATION PLANT

Torre Vieja, Alicante, Spain.

- Capacity: 240,000 m³/day.
- Client: Ministry of the Environment.

The aim of the project is to install a plant to cover an irrigation deficit in the Tajo-Segura river basin area



In 2010, ACCIONA
was named
“Desalination
Company of the
Year” and “Best Water
Company” by Global
Water Intelligence
magazine



of 60 Hm³/year and a supply shortage in the Vega Baja Oeste of 20 Hm³/year. The Torrevieja complex is the largest plant in Europe and one of the worlds' largest RO facilities.

It meets all of the requirements for the processed water to be used in all kinds of agricultural irrigation and it was designed using the latest technological advances to protect the reverse osmosis membranes and reduce energy consumption. It was also assumed that the saline water released into the environment would not have an impact on the bioflora and biofauna.

TAMPA DESALINATION PLANT Tampa, Florida, USA.

- Capacity: 108,831 m³/day.
- Type of contract: design, construction, operation and maintenance (18 years).
- Client: Tampa Bay Water.

ACCIONA Agua has reconstructed the Tampa Bay (Florida) desalination plant along with the North American company American Water. This is the largest plant of its kind in the United States, built to cover 10% of the region's drinking water needs. Between 2005 and 2008, the two companies rebuilt the desalination plant to make it fully automatic, in addition to improving upon obsolete designs

and correcting and optimising processes and systems. In 2009 it was chosen as the “Desalination plant of the year” by the magazine Global Water Intelligence.





ACCIONA Agua operates on all five continents

END-TO-END WATER SUPPLY AND SANITATION SERVICES

Serving the man and woman on the street is a priority for ACCIONA Agua.

The research of and commitment to technological innovation are the keys to efficient management and sustainable development. Comprehensive water management services include all of the stages involved in the treatment of the water until it is fit for human consumption. For ACCIONA Agua, serving the man and woman on the street is a priority.

These services include the supply of water to the population and the treatment of urban and industrial waste which is billed directly to the end user.

The different stages of the water cycle include:

- Collection
- Treatment
- Distribution
- Sanitation
- Treatment
- Reuse

To verify the status of the water and the maximum quality of the water that flows from the end user's tap, ACCIONA Agua conducts laboratory analyses of the water on a continuous basis.

Furthermore, in order to guarantee the highest performance levels in the municipalities where the Company manages the water, the sewage and sanitation networks are evaluated regularly. ACCIONA Agua uses the latest technologies

available in the market to detect and repair leaks and minimise losses to the extent possible.

The Company also provides technical assistance services such as processing and approving new water supply projects and maintenance work on existing facilities.

The cycle ends with the treatment of the wastewater at the treatment plant. The treated water can be returned to the environment reused for irrigation with a minimal environmental impact.

ACCIONA Agua delivers integrated water cycle services across Spain, managing and operating drinking water and sanitation services. Today, it serves more

than 60 Spanish towns and cities (more than 2.7 million people).

SUSTAINABLE MANAGEMENT AND RESPECT FOR THE ENVIRONMENT

Correct and sustainable management of the water cycle leads to significant improvement in the environment:

- By capturing just enough of the resources required to satisfy a demand. This is achieved by stepping-up technical efficiency, i.e. by keeping leakage and water loss down to a minimum.
- By applying cutting-edge water-treatment technology in order to return water to nature in the best possible state.

PROJECTS CARRIED OUT BY ACCIONA AGUA :

- Since 1993 the Company has been responsible for operating and managing the municipal drinking water, sanitation and water treatment services for the city of Soria.
- Since 1996 the Company has managed the entire water cycle for the Association of Municipalities of the Tropical Coast of Granada under a 25-year contract. The services cover an area of 1,400 km² and serve a population of 110,000 inhabitants during low season and 330,000 in high season in fourteen municipalities and thirty population centers.
- Since 1994 the Company, through the subsidiaries GESBA, S.A. and Compañía de Aguas Paguera, SL, has been providing drinking water and sanitation services to the municipalities of Andratx, Deià and Paguera (Calvià, Mallorca), serving a total population of 23,000

inhabitants in low season and 70,000 in high season and supplying more than 2,5 Hm³ of water each year. In the municipality of Andratx, ACCIONA Agua has invested 10.5 million euros in the hydraulic infrastructures needed to deliver the service.

In 2009, ACCIONA Agua was awarded the first contract ever tendered in Spain under a competitive dialogue arrangement proposed by the Andratx City Council for the construction and operation. Under this contract, the company will provide end-to-end water services to 10 housing developments in the municipality with a population of 5,000 for 36 years.

The Company is also a partner in SERCOMOSA, a multiservice jointly-controlled company founded in 1990 and a leader in the Autonomous Region of Murcia with vast experience

in the management of the full range of urban services. It is one of the few companies in Spain that provides all of the public services for a single municipality. Its principal client is the city of Molina de Segura, although its activities have gradually expanded to other cities and towns and it also has a healthy portfolio of private clients.

The services provided by SERCOMOSA at this time are:

- Integral water cycle: supply, sanitation and treatment.
- Street cleaning and collection of solid urban waste.
- Cleaning services for buildings, hospitals and shopping centres.
- Gardening.
- Public lighting.
- Municipal swimming pools.
- Emergency assistance.
- Construction services, road sign maintenance, dog catcher services, etc.

SERVICES					
PLANTS	COUNTRY	POPULATION	PLANTS	COUNTRY	POPULATION
Sanitation services in Valencia	Spain	814,208	Montefrío (Granada)	Spain	6,237
Lower basin Viveros and China A (Madrid)	Spain	803,300	Paguera (Majorca)	Spain	6,000
SOMAJASA (Jaén 34 towns and cities)	Spain	258,786	Villanueva de Algaidas (Malaga)	Spain	4,602
Jerez de la Frontera (Roadworks and meter reading)	Spain	207,532	El Rubio (Seville)	Spain	3,700
Costa Tropical de Granada	Spain	201,256	Orba (Valencia)	Spain	2,616
Getafe (Maintenance of public roads)	Spain	167,164	Voto (Cantabria)	Spain	2,386
Molina de Segura (SERCOMOSA)	Spain	64,065	Villanueva (Murcia)	Spain	2,100
Soria	Spain	39,528	Favara (Valencia)	Spain	2,100
Úbeda (Jaen)	Spain	35,649	Deiá (Majorca)	Spain	2,000
Manzanares (Ciudad Real)	Spain	19,186	Selaya (Cantabria)	Spain	1,985
Pilar de la Horadada (Alicante)	Spain	21,421	Ricote (Murcia)	Spain	1,845
Archena (Murcia)	Spain	18,208	Meruelo (Cantabria)	Spain	1,500
Osuna (Seville)	Spain	17,813	Corrales del Vino (Zamora)	Spain	1,350
Andratx (Majorca)	Spain	15,000	Ulea (Murcia)	Spain	1,273
Villarrubia de los Ojos (Ciudad Real)	Spain	11,191	Llaurí (Valencia)	Spain	1,229
Toro (Zamora)	Spain	9,850	Ruesga (Cantabria)	Spain	1,150
Ceuti (Murcia)	Spain	10,174	Golmayo (Soria)	Spain	1,000
Arévalo (Avila)	Spain	8,030	Liendo (Cantabria)	Spain	995
Suances (Cantabria)	Spain	7,998	Fontiveros (Avila)	Spain	968
Dolores (Alicante)	Spain	7,313	Ojos (Murcia)	Spain	650
Lorquí (Murcia)	Spain	6,996	TOTAL + 60 MUNICIPALITIES		2,790,354

Thanks to the alliance reached in 2007 with the Jaen Provincial Authorities, ACCIONA Agua manages the entire range of the integrated water cycle in 34 towns and cities across the province. The Agreement covers the management of the water supply for more than 250,000 inhabitants for the next 25 years.

Wastewater treatment plants

ACCIONA Agua has provided solutions to a wide and diverse range of wastewater treatment problems. Populations of varying sizes, domestic and industrial wastewater, cities and towns with seasons population fluctuations, plants with limited available space or with visual and/ environmental impact problems and different dumping levels are just some of the challenges the company has had to face.

ACCIONA Agua has built plants for small towns and big cities such as Barcelona, Santander, León, Huelva, Málaga and Almería, all in Spain, as well as in Portugal, Italy and Morocco. It has also developed more than 300 wastewater treatment projects, with a total capacity of 10.5 million m³/day, equivalent to 46.1 million people.

ACCIONA Agua has a thorough understanding of the different processes and technologies needed to provide solutions to different problems, combining the lowest capital outlay with the maximum optimisation of the operations and maintenance process.





MAJOR PROJECTS

BIOLOGICAL TREATMENT AT THE BESÓS PLANT

**Sant Adrià de Besós.
Barcelona. Spain.**

- Capacity: 525,000 m³/day.
- Equivalent population: 2,843,750 inhabitants.
- Client: Ministry of the Environment, Spain. Catalán Water Agency.

The biological treatment area at the Besós plant was enlarged to improve the quality of the seawater along the Barcelona coastline. The most noteworthy feature of the project is that it is a covered plant.

WASTEWATER TREATMENT IN THE LOWER CULEBRO BASIN

Getafe. Madrid. Spain.

- Capacity: 172,800 m³/day.
- Equivalent population: 1,353,600 inhabitants.
- Client: Ministry of the Environment, Tajo Hydrographic Confederation.

This plant was built to treat the wastewater produced by Alcorcón and Leganés which are dumped into the Butarque collector and the wastewater produced by Pinto, Getafe and any excess that cannot be treated by the Cuenca Media del Arroyo Culebro WWTP located in Fuenlabrada.

ATOTONILCO WASTEWATER TREATMENT PLANT

Hidalgo. Mexico.

- Capacity: 3,024,000 m³/day.
- Equivalent population: 10,500,000 inhabitants.
- Client: CONAGUA (National Water Commission).

The Atotonilco WWTP has an average nominal treatment capacity of 35 m³/second and a maximum of 50 m³/s, including the final evacuation of the solid waste and sludge generated during the process. The plant will also be equipped with a co-generation system to take advantage of the biogas produced during digestion for maximum energy savings.

This plant will be the world's largest and one of the biggest projects magnitude ever undertaken by the Water Sustainability Programme of the Mexico Valley Basin.

FOUR WASTEWATER TREATMENT PLANTS IN EGYPT

- Capacity: 146,000 m³/day.
- Equivalent population: 520,000 inhabitants.
- Client: Organización Nacional para el Agua Potable y el Drenaje Sanitario (National Organization for Drinking Water and Sanitation).

Abnoub & El-Fath.

Capacity: 82,000 m³/day.
Equivalent population: 300,000 inhabitants.



Sodfa & El Ghanayem.
Capacity: 29,000 m³/day.
Equivalent population:
100,000 inhabitants.

El Ayah.
Capacity: 29,000 m³/day.
Equivalent population:
100,000 inhabitants.

Abu Simbel.
Capacity: 6,000 m³/day.
Equivalent population:
20,000 inhabitants.
Client: National
Organisation for Drinking
Water and Sanitation.

ACCIONA Agua is
responsible for the design,
supply and O&M of the
four facilities.

LUGO WASTEWATER TREATMENT PLANT

Lugo, Spain.
■ Capacity: 76,500 m³/day.
■ Equivalent population:
200,000 inhabitants.
■ Client: Ministry of the
Environment; Confederación
Hidrográfica del Norte
(Northern Water Authority).

This new WWTP is one of the
actions envisaged in Lugo's
Sanitation Improvement Plan.
The facility treats Lugo's
urban and industrial
wastewater.

VALE VARO WASTEWATER TREATMENT PLANT

Albufeira. Portugal.
■ Capacity: 24,000 m³/day.
■ Equivalent population:
130,000 inhabitants.

■ Client: Aguas do Algarve.

Designed to treat the
wastewater produced by
Albufeira on the Algarve
coast, this plant is fully
covered and designed to
blend in with the surrounding
landscape, including gardens
and an artificial lake.

SICILY WASTEWATER TREATMENT PLANT

Sicily, Italy.
■ Capacity: 10,800 m³/day.
■ Type of contract: design,
construction, operation.
■ Client: Sicilian Regional
Council.

ACCIONA Agua was
engaged to design, build
and commission a new
wastewater treatment plant

in Sicily, which included one
water treatment line, a sludge
treatment line and pump
stations.

GAFO RIVER WASTEWATER TREATMENT PLANT

Casielles, Asturias. Spain.
■ Capacity: 19,632 m³/day.
■ Equivalent population:
56,105.
■ Client: Cantabrian
Hydrographic Confederation.

The WWTP will condition
the intermediate/high
ground of the Nalón River to
accommodate the passage
of fish to the higher grounds
of the river basin thereby
enabling the salmon to
complete their life cycle and
culminating the process of
cleaning up the Nalón River.

Treatment plants and reuse of wastewater

Because of the growing demand for water for farming, urban parkland, golf courses and for saving aquifers from the invasion of saline waters, ACCIONA Agua has made it a point to investigate, develop and implement innovative technologies for the tertiary treatment of wastewater to allow it to be recycled and used for a number of different purposes.

The Company has extensive experience with the design and construction of tertiary treatment plants using the following processes:

- Settling using conventional or lamellar gravity.
- Single layer, dual layer and suspended bed filtrations.

- Microfiltration and ultrafiltration.
- Ozone, ultraviolet and chlorine disinfection.
- Reverse osmosis to eliminate salt.

TERTIARY TREATMENT

	TYPE OF TREATMENT	m ³ /day
EDAR Crispijana (Álava)	Settling and filtration	40,000
EDAR Horta Nord (Valencia)	Filtration and ultraviolet	40,000
EDAR La China (Madrid)	Filtration	36,000
EDAR Vélez-Málaga (Málaga)	Filtration and ultraviolet	20,000
EDAR Vendrell (Tarragona)	UV ray filtration and disinfection	17,132
EDAR Ciutadella Sud (Menorca)	Microfiltration	15,000
EDAR Roquetas de Mar (Almería)	R.O. microfiltration	10,000
EDAR Galindo (Vizcaya)	Filtration and ultrafiltration	9,504
EDAR Sureste (Gran Canaria)	Prelayer and R.O.	6,000
EDAR Almería Este (El Toyo) (Almería)	Filtration	6,000
EDAR El Ejido (Almería)	R.O. microfiltration	5,000
EDAR Adra (Almería)	R.O. microfiltration	5,000
EDAR La Barrosa (Cádiz)	R.O. microfiltration	3,600
EDAR Arroyo Culebro (Madrid)	Ring filters and ultraviolet	2,880
EDAR Es Migjorn i Sant Tomas (Mallorca)	Ultraviolet	1,375
EDAR Torrejón de Ardoz (Madrid)	Filtration and ultraviolet	1,200
TOTAL		218,691

EDAR: Wastewater treatment plant (WWTP)





MAJOR PROJECTS

TERTIARY TREATMENT OF WATER FROM THE SURESTE WWTP **Gran Canaria, Spain.**

The tertiary treatment plant was built in 1999 in response to the need to condition the water treated at the Sureste WWTP by reverse osmosis in order to make it suitable for use as irrigation water. The plant was a pioneer in the use of microfiltration prior to the reverse osmosis for the treatment of urban wastewater.

TERTIARY TREATMENT OF WATER FROM THE LA CHINA WWTP **Madrid, Spain.**

The construction of the La China WWTP began in

1932 and was subsequently expanded and adapted over the years with the aim of improving the quality of the effluent and environmental aspects such as the elimination of noise and odours. Among these improvements was the introduction of tertiary treatment by filtration which was implemented by ACCIONA Agua.

TERTIARY TREATMENT OF WATER FROM THE CAMPO DALIAS WWTP **Almeria, Spain.**

The new wastewater treatment plants for the Campo Dalías Project are located in an area of intense farming activity. The quality of the water in the aquifers is affected by overfarming

and the extremely polluted water in the aquifer of the Adra River delta. Because of this situation, it became essential to introduce tertiary treatments, microfiltration and reverse osmosis to guarantee the highest quality of the treated effluent so that it could be used to irrigate the hothouse crops and possibly to replenish the aquifer.

Tertiary treatment of water from the Campo Dalías WWTP in Almeria, Spain.

Treatment of waste: thermal drying and composting

Increasingly stringent national and international regulations governing the disposal of urban waste and the sludge produced at urban wastewater treatment plants have accelerated the need to incorporate new waste treatment technologies.

The aim of these new processes is to minimise the volume of the waste while at the same time neutralising it. The processes used by ACCIONA Agua include mechanisation, hygienisation, thermal drying and composting.





SEWAGE TREATMENT. THERMAL DRYING

	CAPACITY (m ³ /day)
Loeches (Madrid)	10,320
Guadalhorce (Málaga)	7,250
QuartBenager (Barcelona -2 units)	4,000
Fuengirola (Málaga)	2,350
MontornésVallés (Barcelona)	2,000
Maqua (Asturias)	2,000
León	1,940
Costa Tropical de Granada (EDAR Motril)	1,200
Guadarrama middle river basin (Madrid)	1,000
Baiña (Asturias)	500
TOTAL	32,560

WASTE TREATMENT

	WASTE TREATED (t/year)
Ecoparque (La Rioja)	75,000
Loeches (Madrid)	50,000
TOTAL	125,000

O&M of Plants and Services

In the operation and maintenance area, ACCIONA Agua seeks to:

- Optimise the process by minimising energy consumption,
- Guarantee optimum treatment performance,
- Control water quality through analysis,
- Correctly manage environmental aspects and the by-products generated during the treatment process.

Comprehensive plant management includes preventive maintenance and conservation.

The Company's maintenance strategy focuses on minimising operating costs and maximising the life of the installation.

Operation and Maintenance (WWTP & DWTP)

To date, ACCIONA Agua has been awarded more than 82 Operation and Maintenance contracts for conventional water treatment plants with a total treatment capacity of 4.2 million m³/day.



The Company's strategy is focused on improving efficiency, cutting operating costs and extending the facilities' useful life

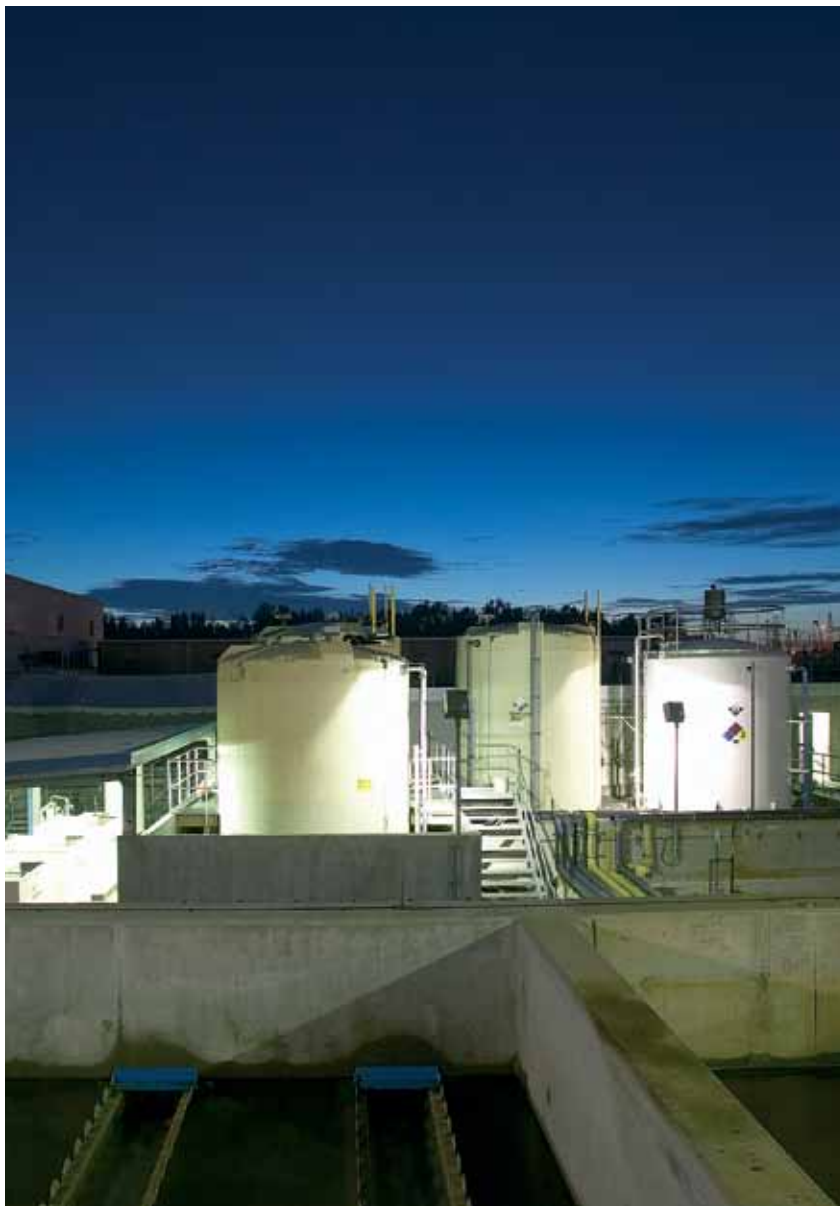


DRINKING WATER TREATMENT PLANTS – O&M

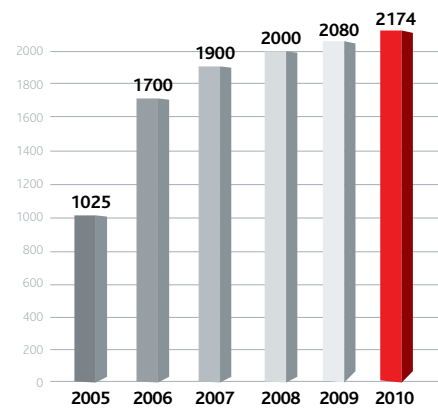
PLANTS	COUNTRY	CAPACITY (m ³ /day)	INHABITANTS
Sollano (Vizcaya)	Spain	129,600	263,000
Soria	Spain	21,600	45,000
Cruces (Vizcaya)	Spain	13,700	55,000
Alcarrache (Barcarrota-Badajoz)	Spain	12,960	21,650
Lekue (Vizcaya)	Spain	6,850	27,400
Yesa (Navarra)	Spain	5,760	7,700
Valtierra-Arguedas (Navarre)	Spain	5,184	4,700
Arévalo (Avila)	Spain	3,974	10,000
San Cristobal (Vizcaya)	Spain	2,740	10,960
Orduña (Vizcaya)	Spain	1,920	9,600
Balmaseda (Vizcaya)	Spain	1,650	6,600
Arratoz (Navarre)	Spain	518	1,000
La Felicidad (Vizcaya)	Spain	410	2,050
Mendaaur (Navarre)	Spain	346	2,300
Ubidea	Spain	20	250
Total		207,233	467,210
TOTAL		207,233	467,210

Gueñes WWTP. Vizcaya. Spain.

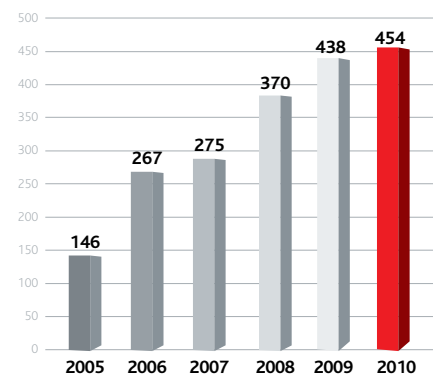
WASTEWATER TREATMENT PLANTS - O&M								
PLANTS	COUNTRY	CAPACITY (m ³ /day)	POPULATION EQUIVALENT		PLANTS	COUNTRY	CAPACITY (m ³ /day)	POPULATION EQUIVALENT
Arrudas (Minas Gerais, Brazil)	Brazil	388,800	1,600,000		Ceutí (Murcia)	Spain	7,970	30,000
Copero (Seville)	Spain	255,000	1,400,000		Alguazas (Murcia)	Spain	7,380	50,000
Arroyo Culebro – Lower Basin	Spain	172,800	1,356,300		Oliva de la Ftra., Fregenal de la Sierra, Villanueva del Fresno, Burguillos del Cerro (Badajoz)	Spain	7,000	40,500
Arroyo Culebro – Middle Basin	Spain	172,800	1,224,620		Grupo Mungia-Gorliz (Vizcaya)	Spain	6,870	22,000
Cagliari Is Arenas (Italy)	Italia	164,000	1,150,000		Amorebieta (Vizcaya)	Spain	6,688	18,000
Maqua (Asturias)	Spain	123,811	214,979		Archena (Murcia)	Spain	5,374	35,000
Lot III: Alcalá West	Spain	89,660	446,490		Tafalla-Olite (Navarre)	Spain	5,147	13,000
LOTE V (MADRID)	Spain	74,932	358,950		Grupo Conca de Barbera (Montblanc, Santa Coloma de Queralt, Espluga de Francolí and Senan)	Spain	5,030	20,958
64 Plants District 6 - Sassari	Italia	71,700	498,000		Lorquí (Murcia)	Spain	5,000	50,000
53 Plants District 5 - Nuoro	Italia	50,300	349,435		Yecla (Murcia)	Spain	5,000	37,501
40 Plants Distrit 7 - Olbia	Italia	37,670	261,620		Socuéllamos (Ciudad Real)	Spain	5,000	29,167
Baiña (Asturias)	Spain	30,000	85,000		Tarancón (Cuenca)	Spain	5,000	25,000
Tudela – Southwest (Navarre)	Spain	28,354	55,833		Valdebernardo (Madrid)	Spain	5,000	9,000
Rubí (Barcelona)	Spain	27,000	135,000		Seseña	Spain	5,000	1,000
Andorra Sud System, Andorra	Andorra	26,500	110,416		Alhama de Murcia	Spain	4,247	24,774
Grupo Igualada (Barcelona)	Spain	25,212	247,700		Cabanillas del Campo (Guadalajara)	Spain	4,000	22,000
Aguilar de la Frontera, Cabra, Fernán-Núñez and Montemayor	Spain	25,000	85,000		Guardo (Palencia)	Spain	3,500	20,000
52 Plantas Distrito 4 - Oristano	Italia	23,400	162,520		Cañon Río Lobos (Soria and Burgos)	Spain	3,010	4,732
Güeñes-Muskiz WWTP (Vizcaya)	Spain	20,000	57,143		Lillo, Cuero, Tembleque, Romeral (Toledo)	Spain	2,575	15,021
Grupo Montsiá (Tarragona)	Spain	17,824	80,370		Comarca del Priorat, Tarragona	Spain	2,452	10,217
Lot Granada (Andalucía)	Spain	15,000	50,000		Bakio (Vizcaya)	Spain	2,400	14,000
Mid-Pyreenees Zone	Spain	14,906	32,552		Altorreal (Murcia)	Spain	2,150	11,950
Soria (Soria)	Spain	14,580	56,133		Los Alcázares (Murcia)	Spain	1,000	60,000
Group ME 2 Minorca (Ciudadella Sur, Ciudadella Norte, Cala Galdana, Ferreries, ES Migjorn)	Spain	12,400	51,660		San Javier (Murcia)	Spain	1,000	60,000
Sureste (Gran Canaria)	Spain	12,000	100,000		San Pedro del Pinatar (Murcia)	Spain	1,000	60,000
Scicli	Italia	11,800	45,000		Campos del Río (Murcia)	Spain	250	17,500
Aragón 8B	Spain	11,710	32,647		St, Martí de Tous (Barcelona)	Spain	240	968
Group MA-7 (Llucmajor, Cas Concos, Felanitx, Porreres, Randa)	Spain		10,500		Carramolina (Zaragoza)	Spain	160	600
Villarrobledo (Albacete)	Spain	9,500	41,000		Albudeite (Murcia)	Spain	150	10,830
Mairena del Alcor (Seville)	Spain	9,220	43,025		Fenazar (Murcia)	Spain	100	2,106
Cangas de Morrazo (Pontevedra)	Spain	9,000	20,000		Aranjuez (Civil Guard)	Spain	60	1,000
Manzanares and Membrilla (Ciudad Real)	Spain	8,800	75,000		TOTAL		2,098,332	11,389,167
Alcantarilla (Murcia)	Spain	8,400	97,000					
Calatayud (Zaragoza)	Spain	8,000	60,000					
Vilanova del Valles, Sant Antoni de vilamajor, Canoves i Samalux, Barcelona	Spain	8,000	33,300					



ACCIONA AGUA – EMPLOYEES



TURNOVER (€M)





CATALONIA

Parc de Negocis Mas Blau II
Avda. de les Garrigues, 22-2ª Planta
08820 El Prat de Llobregat
BARCELONA
Tel. +34 93 335 15 00
Fax. +34 93 336 60 21

ALGERIA

Lot. Hai El Bina n° 14
Dely Ibrahim
16302 Alger,
Algérie
Tel: +213 21 37 42 96
Fax: +213 21 37 43 78

BRASIL

Rua Joaquim Floriano, 1.120 6º Andar,
Itaim Bibi
CEP: 04534-014 São Paulo – SP
+55 11 3074 8300
+55 11 8992 5491

PORTUGAL

R. Cidade de Liverpool, 16 A
1170-097 Lisboa
Tel. +351 2 181 62 555
Fax. +351 2 181 62 549

CANARY ISLANDS

Punta Tenefé
35110 Pozo Izquierdo (Santa Lucía)
LAS PALMAS
Tel. +34 928 75 82 30
Fax. +34 928 75 76 26

AUSTRALIA

ACCIONA Agua Australia PTY. LTD.
Level 1, 95 Coventry Street
South Melbourne VIC 3205
Tel. +61 (3) 9863 9922
Fax. +61 (3) 9686 6120

UNITED ARAB EMIRATES

ACCIONA Agua Middle East
Office 1213, Grosvernor House
Commercial Tower
Sheikh Zayed Road
P.O. Box 118820 Dubai
Tel. + 971 (0) 4 329 78 80
Fax. +971 (0) 4 329 78 81

COLOMBIA

Calle 113 n° 55 -85 Apto 501
Bogotá. Colombia
Tlf: + 57310- 7582598

MADRID

Avda. Europa, 22 bajo
Parque Empresarial la Moraleja
28108 Alcobendas MADRID
Tel. +34 91 790 77 00
Fax. +34 91 790 77 12
E. webmail@acciona.es
www.acciona-agua.com

BALEARIC ISLANDS

Avda. Alejandro Rosselló, 40 9ªA
07002 Palma de Mallorca
ISLAS BALEARES
Tel. +34 971 42 54 59
Fax. +34 971 72 79 59

CHILE

Agustinas 853 Of 1019
Santiago-Chile
Tel. +02-2124904 02-6331234
Fax. +02-2124898 02-6338493
Cel: 08-9034888
Email: acciona.agua@gmail.com

UNITES STATES OF AMERICA

ACCIONA Agua USA
13041 Wyandotte Rd
Gibsonton, Florida 33534
Tel. (001) 813 672 4413
Fax. (001) 813 677 9821

BASQUE COUNTRY

C/ Ramón Rubial, 2
48950 Erandio
VIZCAYA
Tel. +34 94 605 07 00-07
Fax. +34 94 467 64 06

VALENCIA

Avda. Reino de Valencia, 94 Bajo
46006 Valencia
Tel. +34 96 337 94 35
Fax. +34 96 337 94 60

MÉXICO

Paseo de Tamarindos, N° 90
Arcos Bosques Torre I, Piso 30
Col. Bosques de las Lomas
Delegación Cuajimalpa
05120- MEXICO D. F
+ 525 543443999

ITALY

Via Monte San Genesio, 21
28158 Milano. Italia
Tel. +39 02 8312 111
Fax. +39 02 8312 1137

Avda. de Europa, 18
Parque Empresarial La Moraleja
28108 Alcobendas
(Madrid). Spain
www.acciona.com

