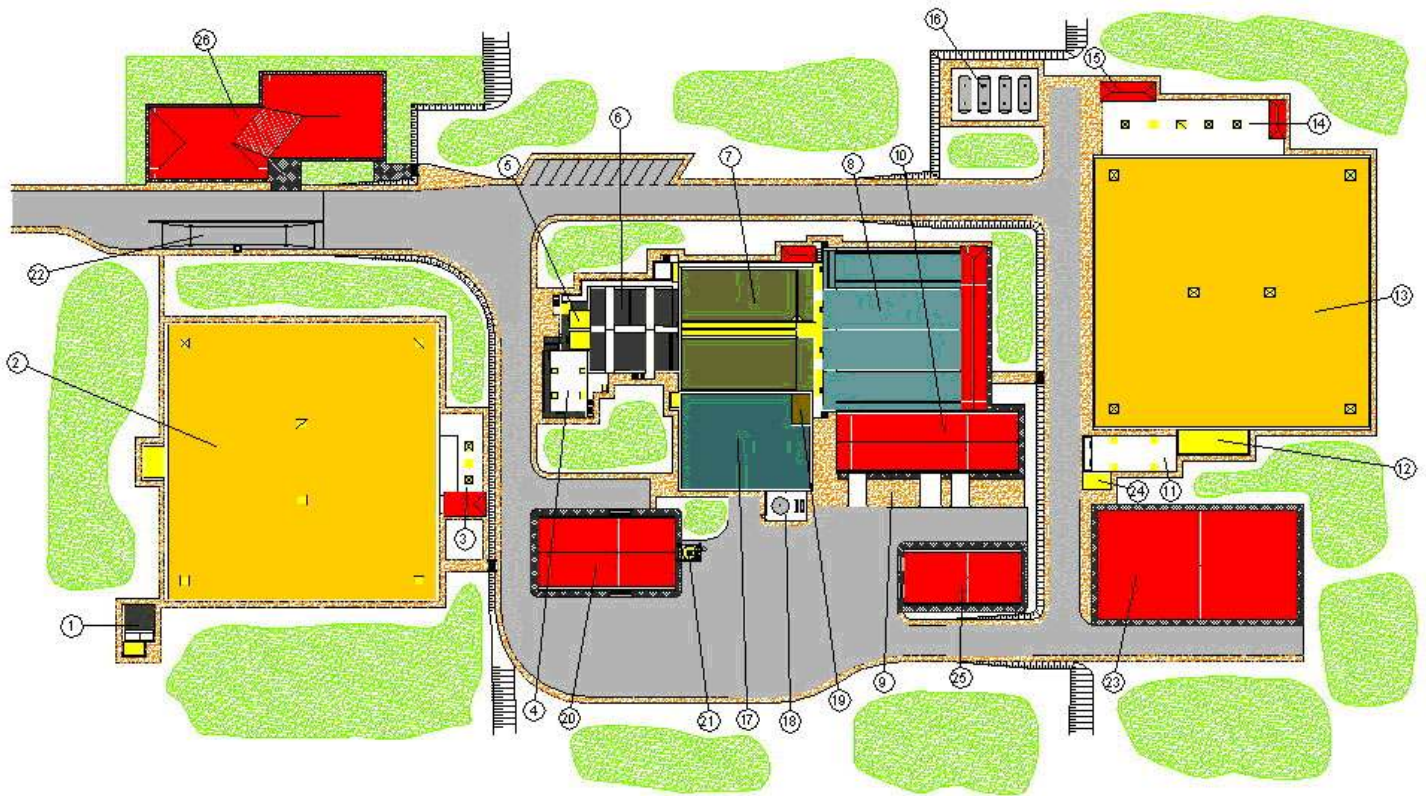


Municipal Drinking Water Purification Plant of Seseña - Toledo

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|---------------------------------------------------------------------|----------------------------------------|--------------------------------------------------|
| 1.Raw water inlet and distribution | 10.Filtered water tank | 19.Oxygen storage |
| 2.Raw water tank | 11.Operations building | 20.Purged sludge tank |
| 3.Pumping and flow control for water going to preliminary ozonation | 12.Post ozonation chambers | 21.Chemical agents and sludge treatment building |
| 4.Flocculation chambers | 13.Treated water flow control pit | 22.Sludge hopper |
| 5.Lamellar decantation | 14.Treated water tank | 23.Scales |
| 6.Preliminary ozonation inlet water pumpin and flow control | 15.Treated water pumping station | 24.Osmosis building |
| 7.Preliminary ozonation chambers | 16.Treated water pumping M.C.C. | 25.Evacuation pumps |
| 8.Quick mixing chambers | 17.Waterhammer prevention system | 26.Trasformer building |
| 9.Sand filters and filter gallery | 18.Filter backwash water recovery tank | 27.Control building |

Location	Seseña - Toledo
Client	Aguas de la Cuenca del Tajo
Duration	21,5 months
Capacity	600 l/s
Contract amount	10.763.372,45€
Increase in capacity	from 600 l/s to 1.200l/s
Date	2006

The purpose of the project is to carry out the works, overhaul the plant and run the corresponding operational tests for the following facilities:

- Seseña drinking water treatment plant with 0,6 m³/s capacity
- Seseña pump station with 0.6 m³/s capacity
- Access road, drinking water piper and power and telephone lines

This project contemplates the following works:

Water line

- Supply main, 10,125 m³ raw water tank in two lines and flow control pump
- Preliminary ozonation in two lines with three compartments each
- Mixing and flocculation in two lines, double chamber flocculation
- Lamellar decantation in two lines and bottom scraper system.
- Sand filtering in four lines with air and water backwash to clean filter
- Preliminary ozonation in two lines with three compartments each
- Disinfection of treated water with sodium hypochlorite and ammonia to form chloramines
- 10,125 m³ tank and pump for treated water in two lines
- Pump station for treated water with five 540 m³/h, 243.2 m.w.c. horizontal centrifugal pumps
- Hydropneumatic system to prevent hammering in pipes, with four 25,000 litre capacity units.

Municipal Drinking Water Purification Plant of Seseña - Toledo

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Sludge line

- Tank for water used to wash filters
- Pump for filter washwater to plant input
- Pump for water purged from sludge from lamellar decanters
- Thickening of sludge decanted with a DAF flotation unit
- Storage tank for thickened sludge
- Pumping of sludge to dehydration
- Pump to lift dehydrated sludge to storage hopper
- Sludge storage hopper

Chemical agents dosing system

- Poly-aluminium chloride
- Anionic polyelectrolyte for the water line
- Potassium permanganate
- Sodium hypochlorite
- Liquid ammonium
- Ozone
- Anionic polyelectrolyte for flotation sludge line
- Cationic polyelectrolyte for sludge to dehydration line

Reverse osmosis facility

- Pumping of filtered water to R.O plant
- Two cartridge filters with 5 μ grade filtration
- Two horizontal centrifugal pumps to feed R.O. racks
- Two R.O. racks
- Low pressure R.O. membranes
- Two displacement tanks
- Membrane clearing equipment: clearing tank, wash pumps, cartridge filters and other equipment
- Storage and agent dosing equipment for the R.O. plant, dispersant, sulphuric acid and sodium bisulphite.

Auxiliary facilities

- Pump for cooling the ozone production system
- Pressure unit for sprinkling, reagents and industrial water
- Laboratory, workshop, spares, furnishing and safety equipment
- Drainage and runoff water network
- Drainage network
- Irrigation network
- Compressed air system