



Water cycle / Design and engineering and operation and maintenance

Two-phase expansion of the La Llagosta WWTP and maintenance of the sanitation system

Client

Consorci Besòs Tordera

Cost

€12,680,000

Location

Barcelona

Work period

Expansion and remodelling: 2020 - 2022
Operation and maintenance: 2020 - 2024

CONSORTIUM

Depuración de Aguas del Mediterráneo (DAM)
Sociedad de Agricultores de la Vega (SAV)

Scope

Expansion and remodelling works on the La Llagosta WWTP to achieve the treatment levels required by legislation, as well as the operation and maintenance of the entire La Llagosta sanitation system.



Description of the work

The aim of the project was to increase the nutrient removal capacity of the plant, in order to bring it into line with current European regulations.

With a treatment capacity of 43,000 m³ of wastewater per day, the La Llagosta WWTP serves a population of over 120,000.

Given the complexity of the project, the work was carried out in two phases while the plant remained in constant operation.

In the first stage, new structures were built, such as the biological treatment by-pass chamber, the bioreactor with two treatment lines, the secondary decanter and a pumping station for the recirculation and purging of sludge, service water and wastewater.

In addition, a flow measurement chamber was installed in biological treatment and at the plant outlet, and the existing bioreactor and secondary decanters were remodelled, as well as the blower building with its respective equipment modernisation.

In the second stage, the two existing secondary decanters were restored, and one of the bioreactors was partially demolished to allow space for a storm water tank to absorb the increased inflow that would otherwise be sent to the river with merely a physical

pre-treatment to eliminate the suspended solids.

In addition, during this phase, the blower room was completely remodelled by replacing all of the equipment's outlet metalwork and adding two new blowers based on magnetic levitation technology. The entire refurbishment was carried out while continuing to supply air to the operating reactors.

The whole project was executed using **BIM methodology**, which involved the complete modelling of the WWTP, the work executed and the existing plant.

Along with the beginning of the project, Sorigué has begun the **operation and maintenance of the La Llagosta sanitation system**.

This system is made up of:

-A 70 km network of upstream sewer pipes covering the municipalities of: Sentmenat, Palau de Plegamans, Santa Perpètua de Mogoda, Polinyà, Sta. Ma de Martorelles, Martorelles, Sant Fost de Campsentelles, Mollet del Vallés (part) and La Llagosta.

-A pumping station located in the municipality of: Santa Perpètua de Mogoda.

-A wastewater treatment plant, located in the municipality of: La Llagosta.