



Civil works/ Hydraulic infrastructure

Construction of the WWTP and upstream sewer pipes for Artesa de Lleida and Puigverd de Lleida

Client

Agència Catalana de l'Aigua (ACA)

Cost

€2,899,051.66 (excluding VAT)

Location

Lleida

Work period

March 2021 – June 2022

Partners

Sorigué Design and Engineering Office
Works management by Aquatec

Scope

Design and construction of a WWTP and upstream sewer pipes to serve these two towns.



Description of the work

The water generated in the municipality of Artesa de Lleida is collected at a single point by collecting the existing discharge from the sewerage network. A catch basin has been built at the interception point, from where the 235 m sewer pipe now runs to the WWTP. A spillway has been installed in the connecting catch basin to evacuate excess water during episodes of rainfall.

The sewer pipe in Puigverd de Lleida is approximately 2,790 m long. Its route intersects three discharge points of the municipality's sewerage network. A spillway is provided at each connection point to prevent overflows during episodes of rainfall.

Wastewater collected by the pipes are treated at the wastewater treatment plant, in the east of the municipality of Artesa. The solution implemented is a purification process by means of an extended A2/O aeration treatment with two lines. This configuration allows for the biological elimination of nitrogen and facilitates the elimination of phosphorus by means of an anaerobic or fermentation chamber. The treatment of the sludge generated by the purification process is channelled through a treatment line consisting of a thickening treatment and subsequent centrifugal dewatering.

The treated water, after decanting, is fed through the discharge outlet, until the beginning of the outfall in the La Femosa irrigation ditch.

The WWTP has an industrial and control building. It incorporates a photovoltaic electricity generation facility.

Key figures of the work

Excavations for structures	6,500	m3
Structural concrete	1,500	m3
Structural steel	94,000	kg
Formwork for structures	4,300	m2
Excavation of trenches	14,000	m3
Piping installed	3,380	ml
Industrial building	300	m2
Ø600 pipe jack under the road	20	ml
Head pumping via 3 2.2 kW pumps		