

Project for Turbidity Removal in Drinking Water, Urrea de Jalón (Zaragoza, Spain)



Technical Summary of the Article:

- **Influent:** Well Water
- **Technology:** BIOBOX turbidity
- **Flow rate:** 66 GPM / 15 m³/h
- **Effluent Output Turbidity:** <0,8 UNF
- **Plant Features**
 - Coagulation
 - Specific Filtration Process
 - Chlorination

Figure 1: BIOBOX Plant Turbidity 66 GPM / 15m³/h

The turbidity removal project in Urrea de Jalón (Zaragoza) ensures high-quality drinking water for the local population. The treatment plant, designed for a flow rate of 66 GPM (15 m³/h), uses BIOBOX® Turbidity technology, which combines coagulation, filtration, and chlorination processes to guarantee completely safe water that complies with current health regulations.

Since its implementation, the plant has reduced turbidity levels to less than 0.8 UNF, meeting the required quality standards. This automated, compact system makes operation easier and maximizes efficiency, achieving a savings of over 60% in operational costs (OPEX) compared to traditional technologies.

The project, led by BIOBOX in collaboration with the Urrea de Jalón Town Hall, improves the quality of life for the population by ensuring a constant supply of drinking water and reinforcing the commitment to technological innovation in service of local communities.

Table 1: Treatment Results

Parameter	Influent	Treated effluent
Flow rate (GPM)	66	
Flow rate (m ³ /h)	15	
Turbidity (UNF)	-	<0,8

Process Description:

This plant consists of a three-stage treatment process:

- **Coagulation:** In this first stage, small particles that cannot be efficiently removed by filtration alone are aggregated.
- **Filtration:** Using a specific process, this stage allows filtration speeds more than 40% higher than conventional media. This results in high efficiency in removing larger particles and significantly improves the clarity of the water. Additionally, it achieves over 60% savings in operational costs (OPEX) compared to traditional technologies.
- **Chlorination:** In the final stage, the elimination of microorganisms is ensured, guaranteeing that the treated water is potable and safe for consumption.

The implementation of this turbidity removal plant in Urrea de Jalón represents a significant advancement in the management of drinking water for the local community. With this project, BIOBOX reaffirms its commitment to continuous improvement in water treatment, laying the foundation for a healthier and safer future.



Figure 2: Photos of the interior of the BIOBOX Turbidity 15m³/h plant