



## Una manera de Racer Europa



"Improvement of the current installations and nutrient removal from the wastewater treatment plant in Venta de Baños (Palencia)"

**General Direction of Water** 

# Programa Operativo Plurirregional de España

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Fondo Europeo de Desarrollo Regional

The action "IMPROVEMENT OF THE CURRENT INSTALLATIONS AND NUTRIENT REMOVAL FROM THE WASTEWATER TREATMENT PLANT IN VENTA DE BAÑOS (PALENCIA)" is presented as a good practice.

Venta de Baños Wastewater Treatment Plant (WWTP) came into operation in 1995 and was at the limit of its capacity, both in terms of load and hydraulics.

In general, most of the plant's electromechanical equipment was at the limit of its useful life, with several processes out of service (including the Rotating Biological Contactors, essential for adequate purification performance).

Periodically, discharges arrived from the industrial estate complicating its operation due to the excessive amount of solids from the installed industries. There was also a high flow of water from infiltrations collected by the sewerage system and transported to the WWTP. For all that, the plant ion, was overloaded, with the consequent effluent deterioration.

Venta de Baños WWTP collects the urban discharges from Venta de Baños and Baños de Cerrato, in addition to the discharges from the Venta de Baños industrial estate, having been dimensioned in the actions presented here, for a total population of 32.000 equivalent inhabitants in the horizon year.

The action involves the improvement of wastewater treatment facilities, having



gone from a treatment using Rotating Biological Contactors and secondary decantation to a biological treatment type SBR (Sequential Biological Reactor), more compact and versatile in terms of loads and flows. In addition, the plant is equipped with a storm tank that laminates the influent flows, as well as a compact pre-treatment in which fines are screened, desanding, and degreasing. Biological phosphorus removal is enhanced by adding metallic iron salts at different points of the treatment. The sludge is subjected to thickening and subsequent chemical conditioning and dehydration by means of a centrifuge.

Work has been done to improve the existing sewerage system with the aim of eliminating the water from seepage, through the construction of a separative sewerage system in the industrial estate and the replacement of several sections of collectors and waterproofing of others in the town centre.

The total investment in the project amounts to 5.952.632,25 euros. The eligible cost, once the work has been completed, was 4.349.560,00 euros, with ERDF assistance of 2.609.736,00 euros, which represents 60%.

#### It is considered a Good Practice because:

> The action has been conveniently disseminated among the beneficiaries, potential beneficiaries and the general public.

We have considered all those actions designed to publicize IMPROVEMENT OF THE CURRENT INSTALLATIONS AND NUTRIENT REMOVAL FROM THE WASTEWATER TREATMENT PLANT IN VENTA DE BAÑOS (PALENCIA), with the main objective of informing the public of its objective of improving the quality of treated water.

#### Sing post.



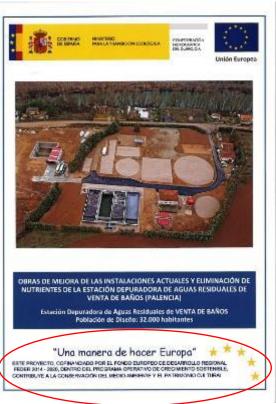


In addition, a number of differentiated communication tools have been implemented, such as:

<u>Informative dossier of the action, published by CH Duero</u>

Copies have been published and distributed at the Town Hall of Venta de Baños.





#### News

The action has been publicised in the local, regional and national media, informing the public of the benefits achieved with the execution of the works, through the reference of the contribution of the FEDER Funds in its execution. It has also been disseminated through the CH Duero's own website.





#### The action incorporates innovative elements

An innovative element in this action is the installation of an SBR in the new configuration of the Venta de Baños WWTP, which is highly adaptable to the changing characteristics of the influent and allows the elimination of both nitrogen and phosphorus, controlling the aerobic, anaerobic and anoxic phases through the duration of the cycle, thus improving the trated water that is discharged into the river Pisuerga.



It is noteworthy that the WWTP has been kept in operation during the development of the works of the new plant.

#### Adequacy of the contents to the objectives pursued

The objectives pursued in this action are mainly based on improving the quality of the receiving water masses and associated ecosystems, thus contributing to the achievement of the objectives set by the Water Framework Directive.

With the implementation of the action, these objectives have been achieved, since, through the purification of wastewater, it is subjected to a series of physical, chemical and biological processes by means of wich the pollutants are reduced to values that are acceptable for discharge into receiving watercourses, in compliance with current regulations on wastewater treatment.

#### > Contributes to the resolution of a regional problem or weakness.

The previous configuration of the Venta de Baños WWTP was at the limit of its capacity, both for load and hydraulics, so that the quality of the effluent flows was conditioned.

Thanks to the execution of the action, the existing problems disappear, and a high quality of the treated water that is finally discharged is obtained.

#### It has a high degree of coverage on the population to which it is addressed.

The action covers the needs of the urban agglomerations of Venta de Baños and Baños de Cerrato in their entirety, as well as those of the industrial estate of Venta de Baños, contributing to the improvement of the state of receiving waters, and providing service to a total of 32,000 equivalent inhabitants.

### > The horizontal criteria of equal opportunities and environmental sustainability have been taken into account.

The horizontal criteria of equal opportunities have been taken into account, since the action benefits the entire population without any discrimination. Furthermore, access to the information of the action has been facilitated to those people without internet access, to through the publication of brochures, which have been distributed at strategic points in the municipalities, for greater accessibility to the public.

The main aspect that has contributed to the environmental sustainability of the area is the contribution of the actions to achieve a good state of water quality and, in particular, in the Pisuerga river, as it is the recipient of the discharges. Secondary aspects that also contribute to environmental sustainability include the reuse of treated water, duly regenerated, for internal plant use in cleaning, dilution and irrigation of green areas.

Likewise, the contracts associated with this action have been tendered through an open procedure, thus guaranteeing equal opportunities for companies interested in obtaining the award of said contracts.

#### Synergies with other policies or instruments of public intervention.

This action has synergy with other actions that it has been carried out within other policies other than the European regional policy, such as the National Water Quality Plan 2007-2015, whose objective, shared with the Water Framework Directive, is the improvement of the quality of water bodies and their sustainable management.





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