

SECRETARÍA DE ESTADO DE PRESUPUESTOS Y GASTOS DE HACIENDA DIRECCIÓN GENERAL DE FONDOS EUROPEOS



**BUENAS PRÁCTICAS** 

Actuaciones Cofinanciadas



# Una manera de lacer Europa

Waste Water Purification Station (EDAR, for its acronym in Spanish) of Navia-Coaña Principality of Asturias

Programa Operativo del Principado de Asturias

Año 2018

Fondo Europeo de Desarrollo Regional

# WASTE WATER SANITATION STATION (WWSS) OF NAVIA-COAÑA

WWSS's project is budgeted at 7 Million Euros, of which 80% are financed by the European Union through FEDER, within the Operative Program of the Principality of Asturias 2014-2020. The total investment was  $\notin 2,222,032.86$ , with an eligible cost of  $\notin 1,666,524.65$  and ERDF aid of  $\notin 833,262.32$ . The purification plant has been designed to give service to a population around 17,000 inhabitants.

It is located in the municipal district of Coaña, in a land plot located at the left bank of Navia's estuary, between the villages As Junqueiras to the South and Foxos to the North. It is located at the upper part of the cliff to the North-east of the water haven after the dike of the estuary's water channel, 600 meters away from the bay.



#### Navia's estuary view

This work is compiled in the Master Plan for the Sanitation of the Principality of Asturias and has been designed as to treat the discharges of Navia's and Coaña's Councils. Also includes the electromechanical equipment of the pre-existing pumps of the system and their electrical supply, together with the WWSS.

The sanitation system of the estuary of Navia is composed of seven control elements and a purification station. The fundamental outline of the system and the relationship among its different elements allow to collect, conduct and filter the residual effluents of Coaña, Ortiguera and Navia, together with the cores of Jarrio, Mohías, El Espín and La Colorada.

# Waste Water Purification Station

These facilities were intended to reach a purified high-quality effluent, with a reduced content of fecal coliforms and fecal streptococci. In general, the treatment lines that compose the waste water purification station of Navia's estuary are the following:

• Works of arrival, large solid screen, pre-treatment and spillway screen. This line is composed of one reception casket for the three collectors that give access to the facilities

(Navia DN 700/250 and Ortiguera DN 400), one solid screen up to 10.00 mm by automatic screen, one small screen up to 3.00 mm, degritters and grease separator by two pre-treatment compact units and by last one auxiliary screen for the flow excess with access to the facilities, which are directed to the storm treatment. The pre-treatment line has a maximum design flow of 200.00 l/s, while the storm screen line has a maximum design flow of 460.00 l/s.



- Biological treatment line. This line is composed by one active sludge biological reactor in prolonged aeration, configuring a system type SBR (Sequencing Batch Reactor) in four cells. The average design flow is 39,35 l/s and the maximum flow 78,70 l/s.
- Tertiary treatment line. This line is composed of a tertiary filtering of 20 micros and a disinfection of the effluent by ultraviolet rays, both stages with a flow design of 78,70 l/s.
- Storm treatment line. This line, destined to give a primary treatment by decantation of storm waters, composed by a physicochemical lamellar settling formed by two parallel lines of coagulation, flocculation and lamellar settling. The total flow of both storm lines goes up to 460.00 l/s.
- Sludge treatment line. This line is composed of one sludge static thickener and one centrifuge for sludge dehydration, both of them designed for sludge production associated to an equivalent population of 17,000 inhabitants.

#### Sanitation System

Due to the WWSS's facilities' situation, the system is based in two sectors, East Zone sector, composed by pumping facilities called Coaña and Navia and West Zone sector, including pumping facilities of Ortiguera, Arnelles, Jarrio and Mohías. All the facilities except Arnelles and Ortiguera, drive their waters towards the mail pumping station called El Espín. Arnelles' EBAR effluents are driven to Ortiguera's EBAR, to be pumped directly to WWSS from there.

#### This proceeding is considered good practice because fulfills the following:

# High broadcast between beneficiaries and general public

At this point, a series of communication proceedings which have permitted the commitment of the objectives set in the broadcast of the Finance Program of the European Union, through FEDER.

In the first place, the publication of the tender for the work and the documentation of the administrative file of the same have made reference to the cofinancing of the works by the EU through the ERDF.

• This visibility has been reinforced by the information contained on the JUSA website about the different projects promoted within the framework of the 2014-2020 ERDF PO, among which is the WWSS.



• It has conducted insertion of execution adverts press releases in the media such as La Nueva España and El Comercio newspapers.



• Furthermore, there have been adds in digital press, specifically in La Nueva España.



• Likewise, several **communication media**, both in their traditional versions and in their online versions, have collected information on the development of the project and its completion.



• The 82 issue of the **RETEMA magazine** has also included a reference of the project and the ERDF contribution in its execution, paying special attention to the results achieved thanks to this investment



#### Depuradora de Navia - Coaña e instalaciones electromecánicas de saneamiento, Asturias

Daniel Corbacho Vidoso				
Sacyr Agua I www.sacyragua.com / www.sadyt.com				

82	RETEMA	Septiembre/Octubre 2018	
de Aguas Residuales de Navia-Coaña e Instalaciones Electromecánicas de Sa- neamiento", se incluyen dentro de las		del Norte y el Principado de Asturias, por el que se fija el esquema general de coordinación y financiación para la eje-	El objeto principal dar continuidad a la alizadas para conc
	Coaña (Principado de Astu-	Anexo V.A del convenio de colabora-	El oitado Anexo V.A
	en los Concejos de Navia y	riolio Regional (FEDER) al 80%, en el	Saneamiento y Depu
ĩ.	as actuaciones hidráulicas y de saneamiento desarrolladas	actuaciones contempladas y cofinan- ciadas por el Fondo Europeo de Desa-	cución en el Princips Plan Nacional de Cal

neemiento y Depuración 2007-2015. citado Anexo VA recoge las obras impetencia del Principado de Astuis no incluídas en la Red Natura 2000. El objeto principal de la actuación es er continuidad a las obras previas re-

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• All news regarding the execution of these works were also broadcasted to the different local mass media either press releases as television.



Local Television Report ORT

• The information about the project and its financing by the ERDF has also been disseminated through other information channels. Thus, explanatory leaflets have been designed with the most relevant data of the investment and the community contribution, which have been distributed by the different points foreseen in the Communication Strategy of the ERDF.





This high impact has been empowered by the institutional visits made to know the status of the action, highlighting the one carried out in September 2018, after the completion of the work, which was attended by a delegation of the Government, led by the Minister of Environment, Fernando Lastra. The visit was also attended by the mayors of the municipalities in the area.

# Actualidad La depuradora que tratará las aguas residuales de Navia y Coaña entrará en servicio en octubre · El consejero de Infraestructuras ha inaugurado hoy la planta, pieza clave en el sistema de saneamiento y depuración de la ría naviega, en la que se han invertido más de 20 millones 15/09/2018 El consejero de Infraestructuras, Ordenación del Territorio y Medio Ambiente, Fernando Lastra, ha inaugurado hoy en Foxos (Coaña) la estación depuradora que tratará las aguas residuales de los concejos de Navia y Coaña. La planta dará servicio inicialmente a una población de 12.563 habitantes, que podría incrementarse nasta los 13.500, y el caudal medio depurado será de 3.400 metros cúbicos diarios. La infraestructura, pieza dave del sistema de saneamiento y depuración de la ría de Navia, entrará en funcionamiento en octubre, tras una inversión de más de 20 millones, el 80% cofinanciados <mark>con cargo a los fondos Feder</mark>, en un complejo entramado de colectores y bombeos (12.331.532 euros) y la propia estación (8.172.958 euros). La depuradora está diseñada para que los parámetros de salida cumplan los requisitos del vertido a la ría. Para ello, se han construido dos conducciones, una de las cuales conecta con el emisario de la empresa papelera Ence y otra que desemboca en la ría, a la altura del campo de fútbol de Navia. A los colectores que actualmente recogen los vertidos de la población de Navia se incorporarán próximamente los núcleos de Andés, La Colorada, Anleo, Talarén, Villapedre, Piñera, Puerto de Vega y otros. Estos vertidos se unifican en un aliviadero antes de cruzar la ría y conectarse al aliviadero de El Espín, donde, a su vez, se incorporan los procedentes de Coaña, Folgueras y Mohías, así como los del polígono industrial de Jarrio, para conducirlos a la depuradora. Además, la estación recibirá por el norte, los vertidos de los núcleos de Ortiguera, Arnelles y Foxos Lastra ha destacado que con esta importante actuación se dará cumplimiento a la normativa europea de tratamiento de aguas residuales urbanas, que establece la obligación de dotar de tratamiento secundario a aquellas procedentes de núcleos de más de 2.000 habitantes. Mudio: 2 Mb)

All these actions have allowed all the target groups of the investment (the population of the municipality and the whole area, as well as other interested entities such as environmental organizations) to have firsthand information about the development and results of the project.

#### The proceeding includes innovative elements:

It is important to note as an innovative element the implementation of the biological treatment type SBR (Sequencing Batch Reactor) in four cells, since this configuration is more common in industrial facilities rather than urban sanitation systems. This system can be distinguished for compiling within the same civil work the biological processes and the decantation.

It is also relevant to mention as an innovative element the implementation of a physicochemical line for the storm waters, which ensures the appropriate grade of these water's dilution.

#### Adjustment of the obtained results to the preset objectives:

With the proceeding execution, the objectives pursued will be reached, guarantying the quality of the water after the WWSS's water treatment. The elimination of the discharges currently produced to Navia's estuary will be achieved. The results will be the improving of the waters' quality, either surface as underground waters, of the water basins which discharge into Navia's estuary.



Navia's estuary view

#### Contribution to the problem resolution or regional weakness:

This ambitious project allows to avoid the discharge of sewage into the estuary. Therefore, the construction of WWSS has contributed to the existing problem resolution, improving the quality of the waters after their corresponding treatment and ulterior spilling, mitigating the negative effects suffered in Navia's estuary.

Therefore, the improvement of sanitation and water treatment infrastructures is a priority need. In this sense, it is necessary to reinforce investment in the construction and rehabilitation of WWTPs, collectors, interconnectors, etc. so that the wastewater treatment is guaranteed. It is about increasing the coverage of the service and complying with the requirements of the Water Framework Directive.

## High Grade Coverage to the targeted population

The purification plant has been designed to give service to a population around 17,000 inhabitants. The population cores to provide this sanitation and purification service are: Navia, Coaña, Folgueras, Jarrio, Mohías, El Espín, Ortiguera and La Colorada.

#### Consideration of the horizontal criteria of equal opportunities and environmental sustainability:

In relation to sustainable development, the project has a clear positive environmental impact, insofar as it contributes to solving the existing problems in relation to the treatment of wastewater, which directly affects the quality of the waters of the rivers, by preventing environmental and landslide deterioration. In fact, with this investment Asturias progress in the fulfillment of the objectives established in the Water Framework Directive.

This proceeding can be classified as of a paramount and strategic importance for the region. It provides a crucial contribution to the environmental improvement of Navia's estuary and specially to the section of the coastline affected by the river mouth. The treated water discharge in WWSS will directly drive to Cantabrian Sea.

The cleaning of the industrial and private discharges of the estuary is necessary linked with new future uses of the estuary, such as a more active tourism.

The principle of equal opportunities is guaranteed since in the selection of the hiring company there has to be taken into account technical criteria without any existence of gender discrimination.

#### Synergies with other policies or public intervention system:

The works performed have contributed to fulfill the Water Framework Directive.

The intervention joins other major sanitation and purification waste water works developed within the occidental zone of the region, such as Eo's estuary and municipality of El Franco. The works will allow the discharges to arrive clean to the sea improving significantly the quality of the water of one of the best preserved Asturian Coastal strips, from an environmental point of view.



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