



# WATER RECLAMATION AND REUSE IN SABADELL

## Municipal

*The effluent from the Sabadell Riu Sec WWTP is of very good quality, which enables it to be reused for alternative uses. Sabadell was the first city to obtain a concession in Catalonia to supply reclaimed water for toilet flushing.*

### | The challenge

The city of Sabadell has been an important center for producing textiles, a highly water-consuming industry, which is why the city has a historical sensitivity regarding the availability of water resources.

Aigües Sabadell (joint venture, owned by Sabadell City Council and Agbar) has been promoting the use of alternative resources in the city since 2002, incorporating in 2011 the regeneration of water from the Riu Sec WWTP.

This plant is equipped with an advanced purification system with Membrane Bio-Reactor (MBR) that provides high quality treated water. Thanks to the Municipal Ordinance approved in 2010 by Sabadell City Council, the new **Sant Pau de Riu Sec industrial and commercial estate, opened in 2012, already had a double distribution network** (drinking + reclaimed water) to comply with this regulation. Since then, the water from the treatment plant has been used for **toilet flushing and irrigation of green areas, both public and private**. There is also a hydrant for truck tankers 24/365.

### | Veolia's solution

Aigües Sabadell and Sabadell City Council have been working on this project in a progressive and planned manner. The first actions to use resources from disused wells and mines were carried out in 2000-2003. In 2004 the **Master Plan for the Use of External Water in the Distribution Network was approved**, which defined the necessary infrastructures and the economic study and investment planning for the use of alternative resources. In 2007, the municipal water service regulations were updated, incorporating the supply of non-potable water. In 2010 the City Council approved the Municipal Ordinance regulating the use and saving of water in Sabadell, facts that gave an impetus to the growth in the use of alternative resources to drinking water. In 2011, the regeneration had the financial support of the water tariff in Sabadell (price similar to potable water, single block, exemption from the general fee).

Currently, the expansion of the reclaimed water network to other neighbourhoods in the city is under planning; as well as to other cities and towns nearby Sabadell.



**Contract Facts:**  
 Duration: 2012 - 2049  
 Type: PPP  
 reclaimed water

**122,145**  
 m<sup>3</sup>/ year

**135**  
 analytics / year

**33 km**  
 network (reclaimed and phreatic water)



## | The benefits

In Catalonia around 620 Hm<sup>3</sup> wastewater are treated every year. Out of that, less than 10% is reused. Boosting reclaimed water as a resource will allow **reducing water abstraction from Llobregat and Ter rivers**, which will make Catalonia **more resilient against droughts**.

Reclaimed water is an alternative resource that, if not used, would flow to the sea. Through beneficial reuse, this water **saves drinking water**. The water produced by the advanced MBR treatment in the Sabadell Riu Sec WWTP is of high quality and requires only disinfection to be beneficially reused.

A very important benefit of using reclaimed water is that **it is not affected by water restrictions that apply to drinking water in a drought event**, so in many cases it is the only option to ensure certain uses such as streets cleaning, green areas watering or cleaning urban architecture elements and sewers.

The water reuse project in Sabadell is characterized by:

- Utilization of reclaimed water from the Riu Sec WWTP. Water resource for various uses that do not require potable water: irrigation of green areas, street cleaning, industrial uses, toilet flushing...
- There are currently 63 supply points, 104 contracts (58% private, 42% from Sabadell City Council) and more than 33 km of reclaimed underground water distribution network.
- Two newly built areas of Sabadell have already implemented the double distribution network available to all users; the Polígon de Sant Pau de Riu-sec (public, commercial and industrial uses) and the Can Gambús sector (public and residential uses).
- The Riu Sec WWTP was the first concession for sanitary discharge use in Catalonia.
- The reclaimed water dispenser for tanker trucks at the Riu Sec WWTP is operational 24h/365 days. Pioneering experience to promote the use of regenerated water that already has 42 contracts. In the current times of drought, this resource allows activities such as cleaning sewers, cleaning streets and urban architecture elements or gardening certain green areas to continue.
- The growth of the distribution network within Sabadell and the nearby towns make it possible to foresee a growth projection in the distributed volume of the order of 500,000 m<sup>3</sup> per year in the next 5 years.

Altogether, this project puts **Veolia as a key actor for adaptation to climate change in Sabadell city**.



“ Since we have access loading system for tanker trucks with reclaimed water, it has become easier for us to serve our customers in the area in the current drought situation.

Marco, operator of the tanker truck for technical cleanings

VEOLIA'S PURPOSE: committing to a multifaceted performance



### SOCIAL

- Reclaimed water use connects directly with the environmental concerns of the citizens related to water scarcity.



### COMMERCIAL

- New business line - new service (reclaimed water), which is distributed and invoiced.  
Currently there are 104 clients of non-potable reclaimed water in Sabadell city.



### ENVIRONMENTAL

- Drinking water is saved for other uses (street cleaning, toilet flushing, green areas gardening is achieved with reclaimed water). This allows an environmental improvement to reduce abstraction from natural resources.



### HUMAN RESOURCES

- This new business line allows the creation of new jobs and dedicated training of the current manpower resources.