

Disneyland Paris, France - waste water recycling plant

Reuse | Case Study

The Customer

Disneyland Paris, France - Since it opened in 1992, Disneyland Paris has welcomed more than 215 million visitors. It is Europe's leading tourist destination and employs 14,500 people. It is the number one private-sector employer in the Seine-et-Marne department and the largest single-site employer in the Greater Paris region. As well as creating direct jobs, Disneyland Paris is also a major driver of the departmental and regional economies, generating around 56,000 direct and indirect jobs throughout France.



Applications

Urban Reuse

- » Golf course and landscape irrigation
- » Internal technical needs

Environmental Reuse

- » Maintaining reservoir levels

Key Figures

- » Commissioning : 2014
- » Total plant capacity: 3,600 m³ per day
- » Reuse capacity: 904 m³ per day
- » **Reuse Rate: 25%**

The Challenges

Since Disneyland Paris opened in 1992, there have been various attempts to reduce its impact on water resources. The company's own efforts reduced average water consumption per visitor per day from 142 to 130 liters between 2006 and 2009 (a reduction of 8.5%). Disneyland Paris' environmental policy is

aligned with *The Walt Disney Company's* global strategy—which aims at limiting the environmental impact of its activities and at raising awareness about environmental conservation among its different audiences.

Disneyland Paris was looking for a solution to treat waste water from its two Disney theme parks and the Disneyland Hotel in Marne-la-Vallée.



The Solution

The OTV-SADE consortium was commissioned to build a waste water treatment and recycling plant (740,000 m³ per year) and the associated pipelines. OTV was tasked with installing a biological treatment line, using Biosep® membrane filtration technology, alongside UV disinfection and chlorination phases.

SADE, meanwhile, built 3 km of upstream pipelines to supply the plant, along with downstream pipelines to carry the treated water to its destination points.

Almost all the treated water is used to sprinkle the site's green spaces and supply internal technical needs (in accordance with the decree issued by the Departmental Directorate of Health and Social Affairs on February 9, 2009).

The remaining water is stored in one of the local reservoirs. The entire plant is housed within an enclosed building to keep unpleasant odors and noise to a minimum.

Process Description

The waste water goes through comprehensive pretreatment and is then strained and pumped through a Biosep® biological treatment process (activated sludge waste water treatment and membrane separation).

The water then undergoes UV disinfection and chlorination.

Once disinfected, the treated water is stored for subsequent reuse.



Key Technologies

- Biosep® MBR
- UV
- Chlorination

Results

In addition to the Design & Build contract, Disneyland Paris awarded Veolia Water Ile de France a 12-year operating contract. An annual carbon assessment will be carried out to evaluate environmental performance, using the Ec'Eau® method—an adaptation of Ademe's Bilan Carbone® method that is directly applicable to water and sanitation facilities and services. A range of different technologies will be used to process the byproducts, including sludge recovery for power generation.

Disneyland Paris is the first theme park operator in Europe to build a recycling plant to reduce drinking water consumption. With savings in the region of 330,000 m³ per year, this initiative reflects the customer's environmental policy and directly targets local water resource preservation concerns.

This alternative resource is also an effective way to counter water stress (a frequent concern in the Seine-et-Marne department), helping to preserve water resources and keeping drinking water for essential uses only.

The project showcases the dedication of Veolia's construction and operations teams and their ability to work together effectively. It is also one of France's leading examples of residual urban waste water reuse in a non-golf-course context.

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