ORGANICA'S SOLUTION PRESERVES HISTORIC LANDSCAPE AND SAVES COSTS

Municipal Wastewater Treatment – Gençay, France

CHALLENGE

Located in Western France, Gençay is a small community and medieval heritage site with a 13th-century fortress - Chateau de Gençay - in its center. Facing new water quality standards, Gençay, together with the neighboring town of Saint-Maurice-La-Clouere, decided to find a wastewater solution that fits into the local setting.

In selecting the appropriate wastewater solution, the towns considered: stable operation to protect the discharging water body, small footprint to fit the facility on the dedicated site, look and feel not to damage the view of the castle, and completely odourless operation since the dominating wind blows towards the town itself. In addition, the solution's operation needed to be as economical as possible.

Wastewater solutions don't have to mar a beautiful, historic landscape

SOLUTION

The Organica solution was selected over other alternatives as it combines all the positive characteristics required, all incorporated in a single structure. Effluent water quality is firmly below strict regulatory limits, and the facility fit in the limited site space, just 100 meters from the historic fortress. Additionally, the positive visuals of a greenhouse enclosure and rich green space, combined with odour-free operation do not mar the beautiful landscape of the area. Another key to the success of the solution has been its cost-efficiency: the custom-tailored, highly automated control system minimizes downtime, and an Organica plant consumes significantly lower energy and requires much less chemicals than other wastewater treatment solutions.

RESULT

The Organica wastewater solution satisfies all the needs and expectations, while also adding tangible savings for the community. Initially, savings on operating expenses (electricity and chemicals) have been projected to be a 22 percent reduction over traditional activated sludge processes, and 62 percent less than SBR. After beginning operation, the plant was able to exceed these expectations: in its first year, the facility demonstrated a savings of 37 percent on electricity and 61 percent on chemicals over projections, increasing total OPEX savings to 36 percent versus conventional activated sludge.

"A standard wastewater treatment facility would never have been acceptable to Gençay. The Organica solution is not only highly reliable, but the aesthetics are very appealing, too."

Marcus Agbekodo
General Manager of Siveer (WWTP operator)

Location
Gençay, France

Project Scope
Municipal WWTP, design and technology supply

Operational since
2011

Footprint
500 m^2 (5 380 sq ft)

Hydraulic Capacity
600 m^3/day
(159 000 gallons/day)

Community Served
4 000 people

THE ORGANICA SOLUTION

Organica Water is a global provider of innovative solutions for the treatment and recycling of wastewater. The Organica solution is an Integrated Fixed-Film Activated Sludge (IFAS) system utilizing a fixed-bed biofilm that grows on root structures, all housed in a compact, odourless, botanical garden-like facility.

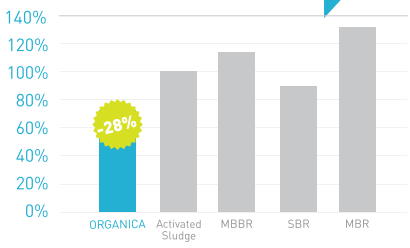
The resulting solution offers a significantly reduced physical footprint, zero "psychological" footprint, and lower operational and infrastructure costs when compared to other activated sludge-based wastewater treatment solutions.

Cost savings on CAPEX

» Reduced civil costs

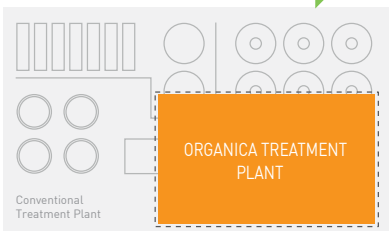
Cost savings on OPEX

» 30%+ lower energy consumption
» 30%+ less sludge production



Footprint Savings

» 50-75% smaller geographic footprint



PERFORMANCE SUMMARY OF THE GENÇAY FACILITY

Parameter	Influent (mg/L)		Effluent (mg/L)	
	Design	Actual	Limit	Actual
COD	800	575	60	57
BOD	400	238	15	11
NH4-N	-	-	3	1.9
TN	100	45	10	4.2
TP	27	6.8	1.5	1.3
TSS	600	266	30	25

2012-2013 averages from monthly spot samples

RELIABLE AND RESILIENT

As a result of their unique ecological diversity, Organica facilities are not only able to meet the strictest effluent limits, but also are highly resilient to changes in influent conditions. This is especially important where industrial flows can unpredictably mix with municipal flows and threaten biological processes. The enhanced diversity of the Organica solution means the system can adapt to rapid spikes in influent much more effectively than other approaches. And because almost all of the biomass is fixed on root structures, oxygen transfer is much more efficient, resulting in significatly lower energy requirements. All of these benefits make the Organica solution ideal for nearly any application.