

MSABP TECHNOLOGY APPLICATION OF URBAN WASTEWATER TREATMENT COLLECTION AND DECENTRALIZATION IN SMALL TOWNS. CASE STUDIES.

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Abstract

Given the operational advantages of technology MSABP, one of the most obvious is that which enables efficiently treat small flows in the same spot of his generation, without transferring them through expensive sewage systems to points of accumulation other discharges. In this presentation aims to demonstrate practical cases applied technology avoids driving major infrastructure in order to treat in-situ low flows, which also generates the possibility of reusing the resource in the same environment.

Introduction

The familiar problems for wastewater treatment in small populations, caused mainly by high energy costs and the need for qualified personnel for operation and maintenance of facilities, call for the emergence of new systems that facilitate these processes. MSABP system is presented as a highly effective alternative for solving these problems because, by its simple treatment process involves a minimum number of electromechanical equipment and does not require the participation of qualified personnel. This means that small towns get quality effluent costs of operation and maintenance quite bearable. Thus becomes an economically and environmentally sustainable technology.

Case Studies

Urban Plant in Urb. EL VISO in VILLALBILLA (Madrid)

This facility is referred to treat urban waste disposal a high-end development near Madrid. In the green zone of urbanization, has executed the first-line treatment, preparing the ground and common equipment for a second line that will double the flow mate.

		RESULTADOS MSABP VILLALBILLA				
		MEDIAS				
		INFLUENTE	MSABP	FILTRACIÓN	CLORACIÓN	REDUCC
Caudal de diseño	1.200 m ³ /día	DBO ₅	350	<25		93%
Horas de retención	24 hrs	DQO	500	<125		75%
Influyente	Urbana	SST	300	<35	<5	88% - 9
Uso	Riego	NT	50	<15		70%
		PT	20	<1		95%
		Turbidez		<2		
		Nemátodos		<1 huevo/ltr		
		Coliformes			<200 ufc/100ml	



This plan addresses the issue of treatment of discharges of the development away from local collectors, while allowing more water available in the same place of use for irrigation of gardens and green areas, thus saving costs booster.

Municipal Plant in VILLARRIN DE CAMPOS (Zamora)

This project arose from the need to modify an existing conventional plant was not operating due to high operating costs to be borne City Hall. He is currently running smoothly and serving water for irrigation to Municipal Golf Course.

		MEDIAS			
		INFLUENTE	EFLUENTE	REDUCCION	
Caudal de diseño	150 m ³ /día	DQO	482	46	90%
Horas de retención	22 hrs	SST	119	25	79%
Influyente	Urbana				
Uso	Riego Golf				



To a malfunction of a conventional plant operating problems and maintenance costs, can raise conversions of these plants taking advantage of existing civil works. MSABP technology provides a solution that allows operators to reuse the water that was previously not possible to recover

Municipal Plant in MARUGÁN (Segovia)

This plant treats municipal landfill in a small town in the province of Segovia 600. It is the only municipality of its kind in the vicinity that has a system of wastewater treatment in operation today.

Caudal de diseño	75 m ³ /día
Horas de retención	22 hrs
Influyente	Urbana
Uso	Vertido

RESULTADOS MSABP LAFARGE			
MEDIAS			
	INFLUENTE	EFLUENTE	REDUCCION
DBO ₅	100	<10	>90%
DQO	170	40	76%
SST	50	<10	>80%



Solution for small municipalities that do not even have the option to join hands at the lack of nearby processing plants.

Urban Plant in LAFARGE – ASLAND (Toledo)

Plant which is part of the sewage effluent from a small town in the province of Toledo, and whose role in the supply of reclaimed water for cooling towers of a cement factory. The needed for a water supply of high quality health issues caused the company decided to have their own treatment.

Caudal de diseño	50 m ³ /día
Horas de retención	22 hrs
Influyente	Urbana
Uso	Refrigeración

RESULTADOS MSABP LAFARGE			
MEDIAS			
	INFLUENTE	EFLUENTE	REDUCCION
DBO ₅	100	<10	>90%
DQO	170	40	76%
SST	50	<10	>80%



MSABP technology can be applied to improve influent and reuse. In this case, the cooling towers of the plant, to a malfunction of a conventional plant that municipal supplies.

Industrial Plant in PAGO LOS VIVALES (Zamora)

This plant treats industrial waste from a small dairy factory in the province of Zamora.

Caudal de diseño	15 m ³ /día
Horas de retención	60 hrs
Influyente	Industrial
Uso	Vertido

MEDIAS (Puesta en Marcha)			
	INFLUENTE	EFLUENTE	REDUCCION
DBO ₅	1200	6	99%
DQO	1767	32	98%
SST	290	6	98%
MEDIAS (en Operación Actual)			
	INFLUENTE	EFLUENTE	REDUCCION
DBO ₅	1500	22	99%
DQO	3600	120	98%
SST	350	30	98%



Front of the industrial waste from this plant, and the need to reach a discharge as a collector for the municipality does not have collectors near the plant to treat water, MSABP get a load very high, reaching discharge parameters without inputs to unacceptable costs.

Urban Plant in Acciona Central Garage (Madrid)

This plant treats the entire urban waste disposal from the garage company Acciona has in Algete

(Madrid). This plant is designed as a compact polypropylene buried, so that the visual impact was minimal.

Caudal de diseño	15 m ³ /día
Horas de retención	24 hrs
Influyente	Urbana
Uso	Vertido

RESULTADOS MSABP ACCIONA			
	MEDIAS		
	INFLUENTE	EFLUENTE	REDUCCION
DBO ₅	250	<25	96%
SST	180	<10	81%
NT	40	<15	75%



MSABP technology can also be adapted for the treatment of effluents small gray or black water of industries and factories that need a simple and effective treatment at sustainable costs.