



ORGANICA

## What is Organica?

Organica is the world leader in Fixed-Bed Activated Sludge (FBAS) technology. FBAS leverages the use of various natural and engineered media to provide a fixed habitat for a diverse fixed-film bacterial culture which metabolizes the contaminants in wastewater. These populations of organisms live in an attached form on fixed bed media inside the reactors, as opposed to being in constant motion as is the case with conventional technologies such as Activated Sludge or MBBR. Providing a stationary habitat allows an incredibly diverse and robust biofilm to grow and thrive inside the reactors, ultimately offering significantly improved nutrient removal, energy efficiency, and resiliency, all in much less space than conventional technologies.

Organica's Food-Chain-Reactor (FCR) represents the best-of-breed in FBAS wastewater treatment plants. The FCR is a complete wastewater treatment solution incorporated into a compact, single structure.

# ORGANICA FCR

## Solution in Brief

### THE BIOMODULE

This is the basic unit of the Organica Solution. Conditions are created to promote the consumption of contaminants by thousands of species of organisms living within the root zone and the engineered media.

#### AQUATIC PLANTS

Important from a technological viewpoint in providing an ideal fixed film substrate, plants uniquely enhance aesthetics with little additional maintenance.

#### ENGINEERED MEDIA

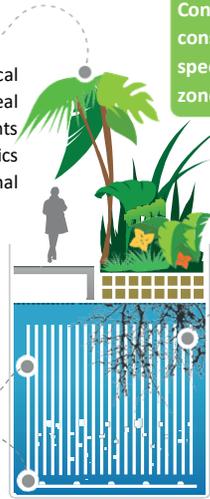
A patented woven textile which provides a place for organisms to attach and thrive.

#### DIFFUSED AERATION

Traditional fine bubble aeration used for aerobic phases.

#### ROOT SYSTEM

Provides an ideal habitat for organisms to live. After establishing in the root zone, species thrive not only on the waste stream, but benefit from symbiotic relationships with the plant roots.



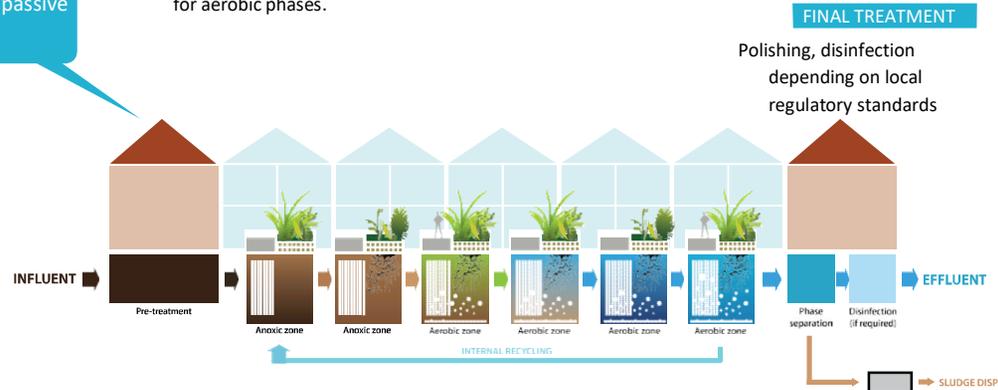
## ORGANICA TREATMENT PLANT

The complete system; from solids removal, biological treatment, phase separation, and final treatment to reuse quality fits inside an attractive structure which in itself provides a space for passive enjoyment in a garden-like setting.

## The Benefits

Organica Solution ensures:

- ✓ Better treatment characteristics and high-water quality;
- ✓ No impact on real estate values;
- ✓ Pleasing and odor-free environment;
- ✓ Lower energy consumption;
- ✓ Cost Savings in operations and in overall footprint;
- ✓ Competitive investment costs.



#### PRETREATMENT

Solids removal can be coupled with other options depending on the influent quality.

#### REACTOR CASCADE

The wastewater flows through a series of reactors that are configured and operated to allow the development of distinct ecosystems arranged to form a complex network.

#### PHASE SEPARATION

Very low TSS in the last reactor allows Disc Filters to be used for phase separation.



#### EXTERIOR OF AN ORGANICA WWTP

This facility serves a population of 8000

## The Solution

Far from being a set of unpleasant concrete structures, the Organica treatment plants are visually pleasing and odor-free. Because they enhance their surroundings, the sustainable designs can be easily located close to the wastewater source, making water reuse feasible. The solution is very flexible in terms of size, spanning a wide range of capacities. Additionally, the solution can easily be applied to the upgrade market adding capacity and efficiency to existing treatment facilities.



#### INSIDE AN ORGANICA TREATMENT PLANT

In their ideal environment, plants thrive to create a lush botanical garden.

<http://www.organicawater.com>