

# rejuWATER™

## Sewage Treatment Plant



# SIMPLE SOLUTION TO COMPLEX PROBLEM

Nature has her own methods of dealing with problems and these methods have the most optimal efficiencies. All our technologies have emerged from the recognition of this fact. It can be applied to any size from 0.7 MLD to 200 MLD. It can be used on any type of terrain or geographical condition. The pollution load can vary from 200 to 60,000 mg/L BOD.

## Soil BioFiltration

Wastewater is made to pass through layers of bioactive soil. Treating, transforming and detoxifying the pollutants using solar energy.

## Get Freedom

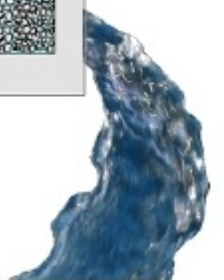
No Electricity, No Chemicals,  
No Machinery, No Skilled  
Maintenance, No Breakdowns,  
No Foul Odour...

## Matchless Performance

Consistent delivery of liveable  
water, the rejuvenated water  
that can hold Life, Again !  
Hence, the name  
rejuWATER™



**Life in Soil Layers  
to clean Wastewater**



# SOIL BIOFILTRATION

## Features

- NO CHEMICALS
- NO ELECTRICITY
- NO MACHINERY
- NO SKILLED OPERATION
- NO BREAKDOWN
- NO PREVENTIVE MAINTENANCE
- NO ODOUR
- Looks beautiful – the flowering plants enhance the aesthetics of the surroundings
- Can bear “Shock-loads” and treat them effectively for up to 5 days
- Stabilisation of the process takes only a few days.
- Wastewater and bacteria form a highly adaptable food chain that can sustain itself
- In the absence of wastewater inputs, the system only needs to be watered daily for the survival of the plants. This is very much unlike the Root Zone Technology, wherein the requirement of continuous wastewater supply is mandatory for survival of the system.

	ASP	Root Zone	rejuWATER™
Wastewater type	Domestic & Industrial wastewaters containing non toxic organic matter only.	Domestic & Industrial wastewaters containing non toxic organic matter only.	Domestic & Industrial wastewaters. Even for wastewater containing toxic organic & inorganic pollutants.
Ancillary units	Requires Equalisation, Neutralisation, Primary Settling & Secondary Settling tanks.	Properly designed treatment tank, Graded filling material, Acclimatised aerobic, anaerobic & facultative bacteria, Acclimatised and selected indigenous plants.	One unit. The only requirement is of neutralisation, if the pH of wastewater is not in the range of 6.5 to 8.5
Hydraulic loading m <sup>3</sup> /m <sup>2</sup> .d	1 - 3	0.06 - 0.25	1 - 2
HRT (h)	4 - 8	5 - 10	Nil
Organic loading (COD/BOD) Kg/m <sup>3</sup> .d	0.32 - 16	0.25	5 - 10
COD/BOD reduction range	85 - 95%	91%	90 - 98%
Sludge production (Kg/Kg BOD)	0.6	Nil	Nil
Key parameters of process	pH, TSS, BOD, COD & Toxic substance	pH, TSS, BOD, COD & Toxic substance	pH
Limitations	Even small concentrations disturb the process.	Even small concentrations disturb the process.	Nil, because it is neutral process.

# rejuWATER™

## RETROFIT IDEAS

rejuWATER™ is the simulation of natural earth filtration process. It contains layers of bio-active (i.e. biologically activated) soil developed from non-toxic and non-hazardous wastes containing a consortium of bacteria which constitute a food chain. This food chain, for which the wastewater forms a primary resource, is self-sustaining and highly adaptable.

Depending on the design parameters, the rejuWATER™ unit can also manage sporadic “shock-loading”. It is not an inanimate machine, but a system that is very much alive.

rejuWATER™ uses ecological engineering principles, environmental chemistry, microbiology, interactions of organisms and succession of biological communities for bioconversion of organic & inorganic pollutants in wastewater in to non-toxic form, which are expended in eco-transformations..



## RETROFIT FEASIBILITY

EXAMPLE: 100 KLD (100,000 Litres per day)  
All costs in Rs. per annum

### (A) OPERATIONAL COSTS

#### Electromechanical STP

Electricity consumption:	~ 300,000/-
PSF media change	~ 40,000/-
ACF media change	~ 40,000/-
O&M agency	~ 420,000/-
Expenditure per year	~800,000/-

#### rejuWATER™ STP

Electricity consumption:	0
PSF media change	0
ACF media change	0
O&M agency	0
Expenditure per year	0

### (B) WATER COSTS

Reliability	60 to 70%	100%
Tanker saved (numbers)	5000	7200
Tanker saved @500/- per tanker (Rs.)	25,00,000/-	36,00,000/-
Net Saving (B - A)	17,00,000/-	36,00,000/-
		<b>Surplus</b> 19,00,000/-

rejuWATER™ is modular and can be added in modules of 1000 litres (1 KLD) each.

Feasibility - build from savings by adding modules as per your convenience!



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