



## LAND DEVELOPMENT

### Significant Savings

- Small Foot-Print saves building cost
- Water reuse reduces overall consumption
- Remote Monitoring available
- Easy maintenance avoids labor costs and regulations

### Land Development

- Residential Housing
- Office Parks
- Apartment Complexes
- Recreational Facilities

### Technology Benefits

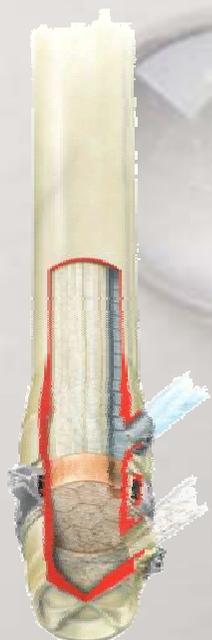
- Membrane separation system uses long-lasting tubular Ultrafiltration (UF) membranes
- Simple mechanical process
- Consistent high quality water
- Ability to reuse purified water
- Low operating costs
- Unattended operation
- Minimal sludge disposal costs
- Retrofit existing conventional treatment systems

### Contaminants Removed

- BOD5
- TSS
- Nitrogen
- Phosphorous

### Services Provided

- Systems Design
- Equipment and Installation
- Operator Training



### Dynatec's "Dyna-Lift" Membrane Bioreactor Process

Decentralized Wastewater Treatment is the latest trend in responsible land development. With more new developments being sited in areas where centralized municipal services are not available, small, efficient and cost effective alternatives are required.

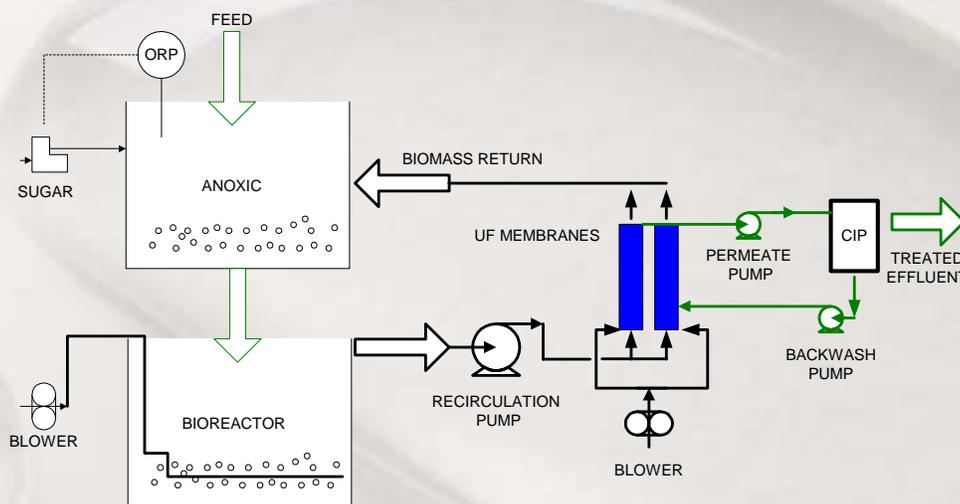
### Strict Effluent Requirements

Dynatec's "Dyna-Lift MBR" system is available to meet these needs for lower effluent nutrient levels that allow discharge to sensitive disposal areas or in some cases wastewater reuse. The simple and reliable process assures cost effective compliance with minimal operator involvement.

### Lower Power Requirement

The Dyna-Lift MBR uses a combination of biomass recirculation as well as an air-lift pump principle to create scouring velocity inside the tubular membranes. Total power requirements are approximately 0.1 kWh/m<sup>3</sup> (0.38 kWh/1000 gal.) of effluent treated

### Dynatec's "Dyna-Lift MBR" with de-nitrification



### Achievable Effluent Quality

MBR technology has traditionally been used in difficult wastewater reuse applications where high quality and reliability was required. Now that normal effluent limits have reached lower requirements (5.0 mg/l total N and < 0.1 mg/l P) the Membrane Bioreactor Process is being utilized more often than in the past to meet these new effluent limits. The effluent quality and lack of system upsets means that water reuse is now a realistic option.

### Economical Compliance

Costs of membranes in the past has limited the market for membrane bioreactors. With recent membrane cost reductions; however, MBR's are now less expensive than conventional treatment plants that require extra unit processes to meet low effluent limits.