## Oasis Clearwater

## POWER USAGE FOR TEXASS 2000-3000

There are two components to power consumption in the operation of a TEXASS Wastewater Treatment System, the air pump and the irrigation pump. The following provides a general guide to power consumption.

## Recirculation pump power usage (using factory settings)

Runs 2 minutes every 30 minutes $=96$ minutes $=1.6$ hours per day
LESS AIR = LESS BACTERIA = LESS TREATMENT OF WASTEWATER (SEWAGE).

| Recirculation Pump Power Use | $0.4 \mathrm{~kW}(400 \mathrm{~W})$ per hour |
| :--- | :--- |
| Amount of power used per day <br> $=1.6$ hours $\times 0.4 \mathrm{~kW}$ | 0.64 kW |
| Cost per day at $\$ 0.25$ <br> $=\mathbf{0 . 2 5} \times 0.64$ | $\mathbf{\$ 0 . 1 6}$ per day |

## Irrigation pump power usage

The runtime of the irrigation pump is based on the amount of dripline. Each 100 m of dripline discharges at 6.5 litres per minute:

| Pump rate for 400 metres of dripline (normal length required <br> for a 4 bedroom house) <br> $=400 / 100 \times 6.5$ | 27 litres/minute |
| :--- | :--- |
| Pump run time for 1,500 litres/day (6 people at 250 <br> litres/person/day) <br> $=1,500$ litres $/ 27$ litres/minute | 55 minutes per day <br> $=0.92$ hours per day |
| Power usage per day (for 0.6 kW pump) <br> $=0.92$ hours per day $\mathbf{x} 0.6 \mathrm{~kW}$ | 0.55 kW per day |
| Cost per day at $\$ 0.25$ per kW hour <br> $\mathbf{0 . 2 5} \mathbf{0 . 5 5}$ | $\mathbf{\$ 0 . 1 4}$ per day |

## THEREFORE: TOTAL RUNNING COST PER DAY = \$0.16 + \$0.14 = \$0.30/day

## TOTAL RUNNING COST PER 31 DAY MONTH = \$8.68

NOTE: HOLIDAY MODE draws about $25 \%$ of this figure. Holiday mode occurs automatically when the system hasn't pumped out for a 24 hour period.
As a comparison a 2.4 kW heater running 8 hours per day $=19.2 \mathrm{~kW}$ per day $=\$ 4.80$ per day ( $19.2 \times \$ 0.25$ ). The total per 31 day month is $=\$ 148.80$ ! ( 31 days $\times \$ 4.80$ )

## TESTING POWER USAGE

A simple way to test that the TEXASS Wastewater Treatment Plant is not the cause of the increased electricity usage is to compare electricity usage with the system running and not running. To do this read the power meter at a set time when household water usage will be minimal. At say 7pm, turn the system off. At 7am read the meter again (12 hour period) remembering to turn the system back on.

Compare this reading with a meter reading taken over the same period ( 7 pm to 7 am ) with the system running. ENSURE that ALL other household electricity usage is about the same over the two test periods e.g. same heaters, lights, etc.

