

# ECOMISTER

## EVAPORATOR



Mining Industry Solutions

**Best In Class Mine Water Disposal Technology**



[ecomister.ca](http://ecomister.ca)

# LEVERAGING NATURE TO PRESERVE NATURE

## The EcoMister Evaporator

Twenty five years ago, the engineering team at Slimline Manufacturing Ltd. developed the EcoMister Evaporator 1.0, the first highly effective portable Evaporator technology for the global mining industry. Since then, we have installed over 600 EcoMister Evaporator Units on sites around the globe.

When Nickel Plate was going into closure a water treatment plant was tasked to deal with the tailings pond waste water. Unfortunately due to the pond's location, after spring melt, fresh water entering the pond was equivalent or greater than total water treated each year. A sprinkler system seemed ineffective.

The initial prototypes were developed and tested at Mascot Mine (currently owned by Barrick Gold) in 1996, in Hedley BC, Canada. The goal of the project was to harness and dramatically accelerate the natural process of evaporation, while sequestering contaminants from the pond, allowing the site to undergo bioremediation, and return to it's natural state.

### THE PROOF IS IN THE POND

The unlined pond, pictured top right, held 120 million gallons of wastewater that was being fed by springs as well as the spring run-off each year, a challenge to reclamation.

Slimline Engineers developed and tested the original EcoMister Evaporator prototypes between 1996 and 1999 on the Mascot Mine.

The project was finished two years ahead of budget and to the right you can see what used to be the tailings pond is now a grassy plain.

**BEFORE**  
1996



**AFTER**  
1999

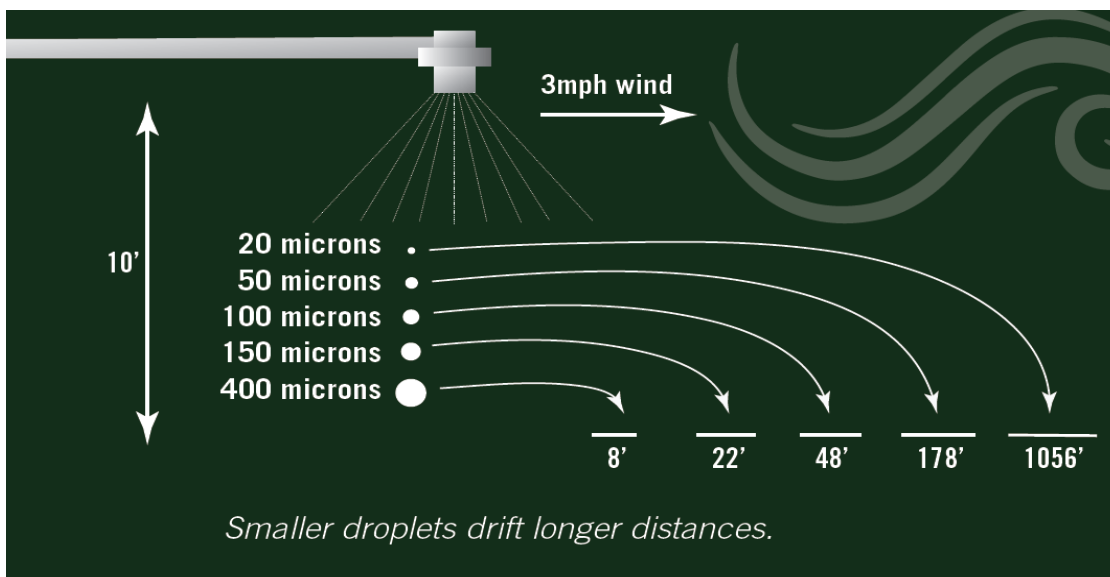
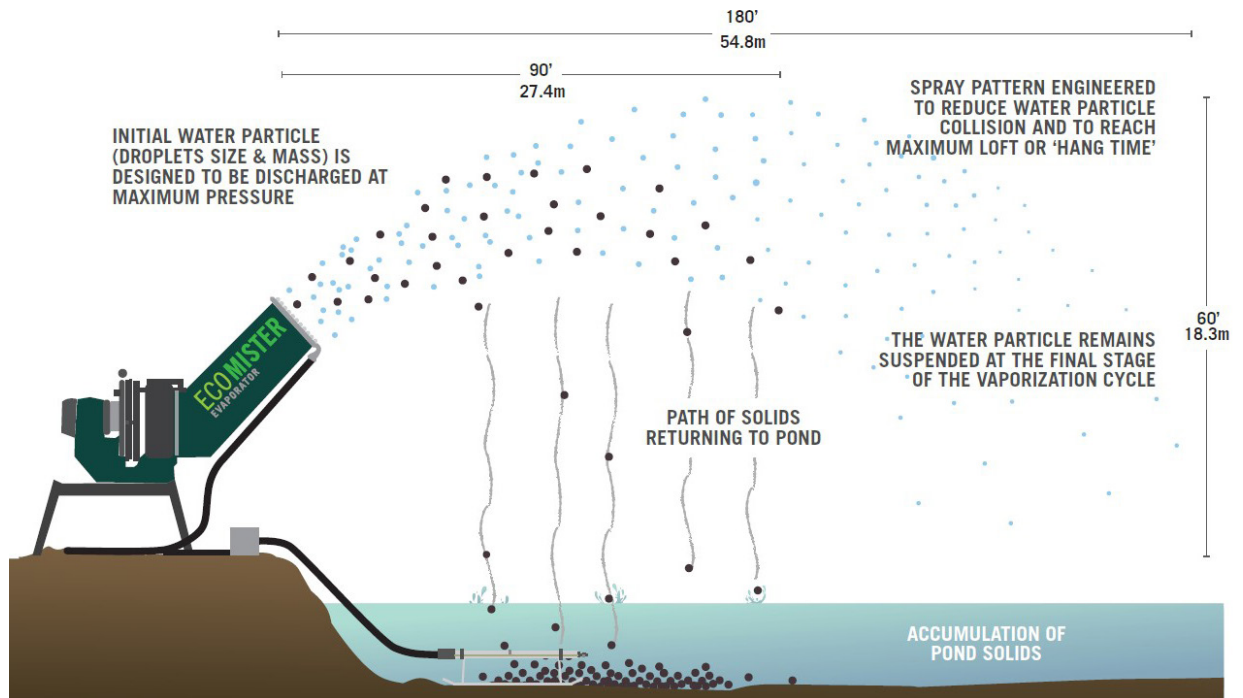


# THE SCIENCE BEHIND THE RESULTS

## The EcoMister Evaporator

Harnessing the natural process of evaporation is the future of wastewater disposal. The EcoMister Evaporator series from Slimline Manufacturing uses our patented Turbine technology to loft wastewater into the air, creating optimal 'hang time', and allowing nature to evaporate the water, while the solids are returned to the pond.

The EcoMister Evaporator generates 160 km/hour (100 MPH) air velocity through the wind tunnel, the nozzles propel the liquid exposing the maximum volume of water particles to the air creating optimal hang time, outperforming the competitors.



Research has shown that there is a rapid decrease in the drift potential of water droplets greater than 150-200 Microns. The EcoMister Evaporator utilizes droplet size to help manage drift, while maximizing evaporation efficiency.

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## KEY DIFFERENTIATORS



**FLEXIBILITY**



**LOW OPERATING COSTS**



**BEST IN CLASS EVAPORATION**



**LONGEVITY IN THE HARSHTEST ENVIRONMENTS**

## POWER CONSUMPTION ANALYSIS/HD30 SINGLE PACK

Calculated based on a \$0.06 US dollar per kWh energy rate

### EVAPORATION AND PUMP EFFICIENCY FOR 7 MONTHS (210 DAYS) \*

- Total Gallons Evaporated Over 210 Days= 10,019,934 US Gallons
- 5,112 total hours
- \$9,790.50 Total cost per 7 month evaporation season
- \$0.001 cost per US gallon

\* Using the pan evaporation data from:  
<http://www.wrcc.dri.edu/htmlfiles/westevap.final.html>,  
a US government site, we have calculated the performance of the HD30 from the Beowawe U of N Ranch in Nevada

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