

Desalination of seawater, nature's way



Jont B Allen, Pete Sauer, Phil Krein, Don Wuebble, Paul Kenis, Chia-Fon Lee

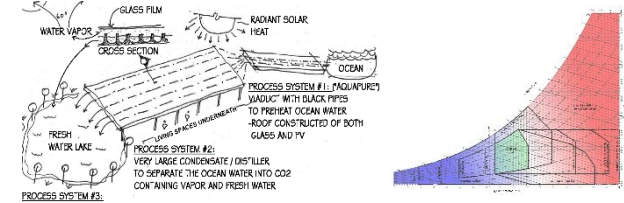
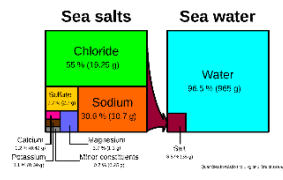
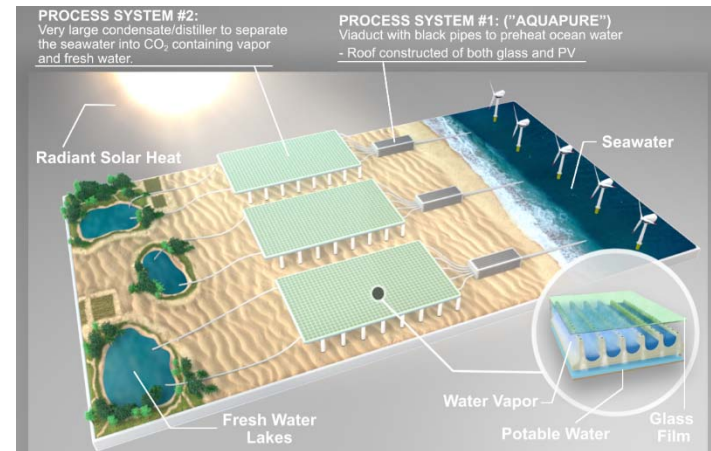
Background:

Humanity faces an existential crisis like none it has ever faced before. Severe weather, intense fires and rising seas, threaten the demands of earth's increasing population. Massive desalination is the solution.

- Technical key contributions include:
 - counter-flow heat exchange.
 - latent heat recovery using a steam energy turbine.

Objectives:

- Using the sun as the sole source of thermal energy, cold seawater is evaporated over hundreds of square-miles of the Sahara desert, to create thousands of lakes.
- As these arid wastelands evolve into jungles, they will naturally remove the CO₂ from the air, solving the problem of global warming over the long term.
- Water and food will become low-cost products. Populations will become less of an issue as long as there are natural resources to support them.



Plans:

- With the help of Burns and McDonnell, we will build a functional demonstration of these ideas, far out-stripping the present desal methods in delivered water, at the lowest cost.
- Example: 1 square mile of land can deliver 8,000 tons of water per day, with only the sun as the energy source.

URL: <https://info.burnsmcd.com/one-water-burns-mcdonnell>

Accomplishments:

- We have created and evaluated a model of direct solar desalination that outlines the basic feasibility of our proposal.

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Team:

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