

Nalu e Wai (Waves Into Water)

A Hawaii-India-Sweden Collaboration for Small-scale Wave Powered Desalination



- An innovative, rapidly deployable system tailored to disaster response/remote applications, scalable to larger applications
- Oscillating Wave Surge Converter (OSWC), driving a seawater hydraulic loop and reverse osmosis (RO) desalination
- Relies on lightweight materials and modularity for compact shipping and easy assembly
- Modularity allows rapid flap size adaptability to varying wave conditions and deployment locations
- Will achieve total dissolved solids under 500 mg/L
- Will produce ~ 50 – 250 L/hr of fresh water in low to higher wave conditions, based on flap size anticipated in competition
- Hydraulic compressor cylinder connected to the flap will directly pressurize the water to levels required for RO. Settling tank and various pre-filters to treat water before entering RO module.
- Recycle some brine until concentration becomes too high for RO, avoiding the use of a pressure exchanger.

