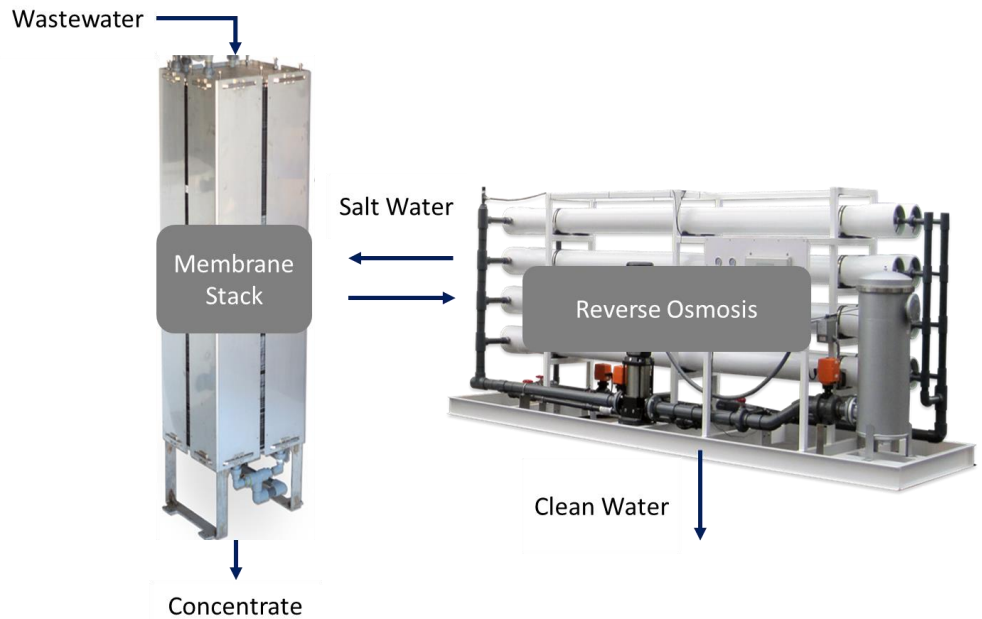


The Two-Step Reverse Osmosis (TSRO) system is comprised of a “Stack” of proprietary forward osmosis membranes working together with traditional reverse osmosis membranes to concentrate wastewater and extract clean water.

Wastewater is first concentrated in the Stack as water is extracted through the membrane and into a salt solution. The salt solution is pumped into the RO where clean water is produced along with brine. The brine is recycled back to the stack and the clean water is discharged.



The advantage of this system is that the Stack can handle high solids wastewater rich in organic matter, has a very low tendency to foul, and uses very little energy because the wastewater is pumped through it at low pressures. By isolating the spiral RO membranes from the wastewater, we can produce very clean effluent, reduce downtime for cleaning, and extend the life of the spiral elements.

Compared to an ultrafiltration system, the TSRO produces substantially cleaner effluent that will look like clear water and have much lower levels of all contaminants. Because both the membranes in the Stack and the RO have >95% rejection of ammonia, organics (including PFOS/PFOA), and most metals, the effluent is very clean.



TSRO System



Wastewater, UF Permeate, and TSRO Permeate

Please inquire today for a customized proposal for your facility and to schedule pilot testing at our facility in Farmington Hills, Michigan.

