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BEST BEST & KRIEGER LLP

Water Reuse: The Final Frontier?

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Water Reuse = Sustainable

- The only water resource on Earth that increases with increasing population and industrialization is <u>wastewater</u>
- "Water reuse" is the most sustainable approach to meet future agriculture, energy, industry and domestic water demands + membrane filtration is the heart of the technological solution
 - Industrial → Title 22 → IPR → DPR
- However, the performance, cost and energy associated with reclamation of wastewater are plagued by <u>membrane fouling</u>





Water Planet's Products & Strategy

IntelliFlux®

Artificial intelligence self-optimizing controls lower OpEx 10-20% for any membrane filtration system with no CapEx

Drinking Water **Pental Recycle** Spiral Monolith Municipal WW MFILE Tertiary W_{M} PolyCera IntelliFlux Industrial My ardi'y wolloth OHOHIAN Desalination

PolyCera®

Next-generation fouling-resistant membranes offer 10X lower CapEx and 80% lower OpEx than ceramic membranes

Sell Membranes & Controls through OEMs & EPCs

- International
 - Municipal
- Large Industrial

Membrane Systems

powered by *IntelliFlux* with *PolyCera* inside

Direct Sales in US & Canada

- Industrial
- Water Reuse
 - Services





Example 1: Oilfield to Ag-field Water Reuse

Water Planet's *IMS-5000 Integrated Produced Water Solution* powered by *IntelliFlux* was able to treat 10 different water samples with salinity ranging from 8,000 to 78,000 mg/l, COD from 280 to 2500 and free oil from 2 to 250 ppm to a level that enabled advanced water polishing by standard BWRO.









O&G Produced Water

IMS-5000 + RO

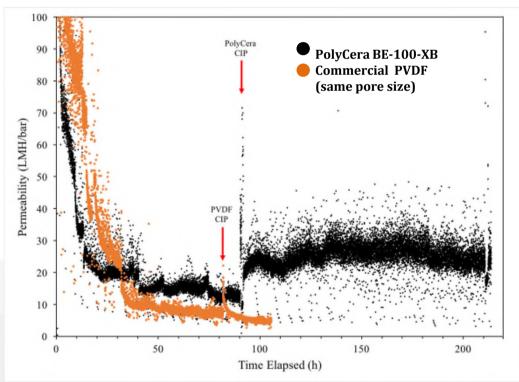
Agricultural Irrigation





Example 2: Mobile Tertiary Water Reuse

Over 6-weeks, Water Planet compared the performance of *PolyCera* and PVDF UF membranes to convert secondary effluent into high purity effluent to meet Texas' Type 1 water reuse standards. PolyCera achieved >5-log removal of bacteria and <0.1 NTU turbidity with 50% lower OpEx than PVDF.











Small-Distributed versus Large-Centralized

- The technology exists to enable smaller, point-of-generation wastewater treatment (and, ideally, recycling/reuse) with:
 - Favorable total cost of water treatment
 - Intelligent controls to improve performance
 - Next-gen membranes to increase longevity
 - Remote monitoring to enhance reliability
- Where do we go from here...together?



