

FULL RECOVERY DESALINATIONSM

Innovative Ideas At Work Today: Texas Desal 2017

INTRODUCTION TO EWM



- Enviro Water Minerals Company (EWM) is a company focused on game-changing water solutions that provide public, economic and environmental benefits. Win, Win, Win
- EWM has created a revolutionary desalination solution that extracts the dissolved solids contained in a variety of salty water sources for beneficial use, thereby reducing the cost to desalinate water
 - Full resource recovery (no residual waste water / disposal issues)
 - Coupling of revenue from mineral sales and sale of potable water makes business model feasible
- Creates a new “cost point” for high TDS water as a water supply option – cost effective for previously “inaccessible” waters
- Intellectual Property – Portfolio of 12 patents/ patents pending
- Recently completed construction of first treatment plant in collaboration with El Paso Water



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Example Sources

Brackish Water



Seawater



Produced Water



Full Recovery DesalinationSM



- ✓ All contaminants separated into mineral products (zero discharge)
- ✓ Water yield = ~99%
- ✓ Is often cheapest new water supply option available

Example Production

Potable Water



Agricultural Gypsum



Caustic Solution



Milk of Magnesia



Potash Liquid Fertilizer



Bromide Rich Brine



High-Purity Salt



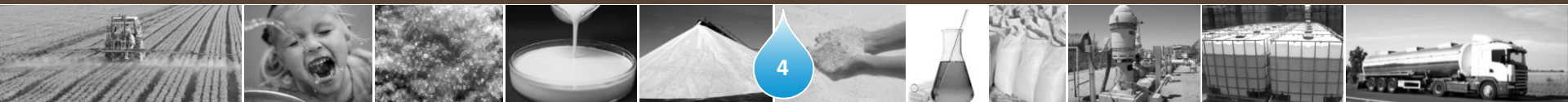
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EL PASO CONSTRUCTION UPDATE 1



Broke ground January 2016



CONSTRUCTION UPDATE CONTINUED



July 2016



August 2016



November 2016



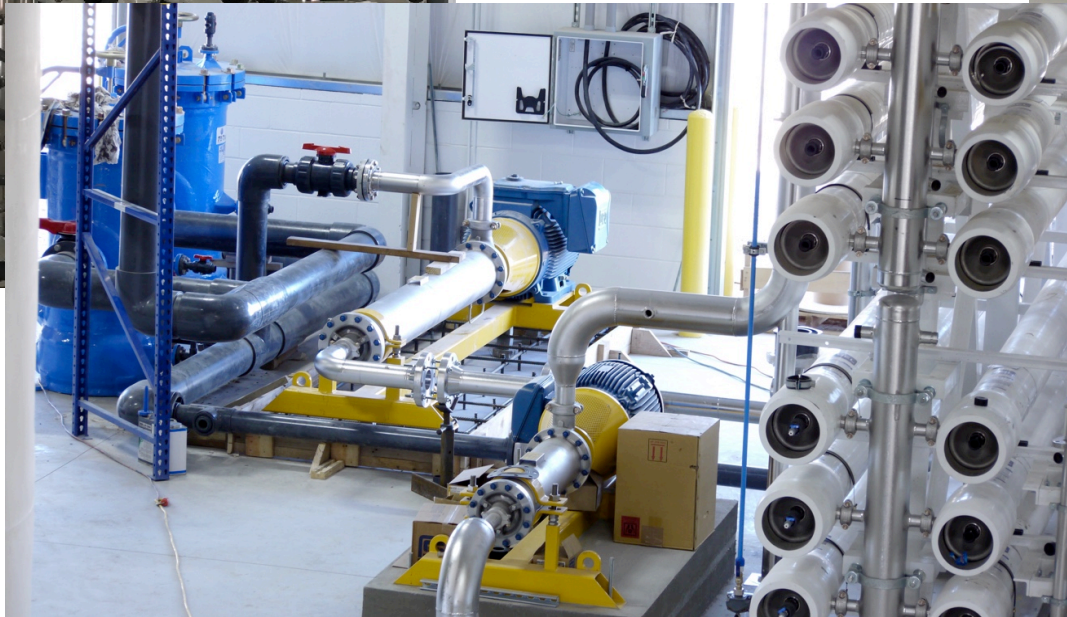
CONSTRUCTION UPDATE CONTINUED



April 2017 -- Ribbon Cutting
Mechanical Completion



SITE PICS: RO / NANO FILTRATION



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Precipitation



Electrodialysis



Ion Exchange

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OUTSIDE EQUIPMENT

6.5 MW Natural Gas CHP



Degassifier



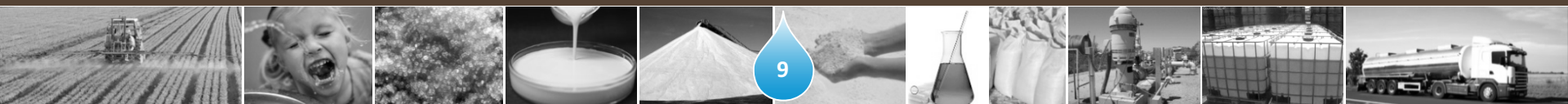
Cooling Towers



Evaporator



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- Process 1.3 mgd of raw brackish water + 1.3 mgd concentrate
 - Influent raw brackish water TDS: 2,500 mg/L
 - Influent concentrate TDS: 13,000 mg/L
- Products:
 - Potable-Quality Water (TDS<800 mg/L)
 - Caustic Soda (50% Concentration)
 - Hydrochloric Acid (35% Concentration)
 - Gypsum (high purity, 100% Soluble)
 - Magnesium Hydroxide (98% Purity, 56% Solid)



■ Commissioning

- Issues Encountered
- Stages of Production
- Current Status



DESALINATION REINVENTED

EWM's Full Recovery Desalination makes beneficial use of contaminants, eliminating costly and environmentally hazardous disposal issue

- All contaminants are separated into mineral products (zero liquid discharge)
- Water yield = ~99%
- Preserves finite aquifer resources
- Avoids disposal issues
- Often is cheapest new water supply option available
- Low CO2 footprint
- 12 Patents / patents pending

**2017
Innovative
Water Supply
Award**

*Winner of the Texas Water Development Board's
2017 Innovative Water Supply Award for the
Technology Category*

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