

EOR Produced Water Recycling

Derek Mandel
Director of Technology, Flex EDR

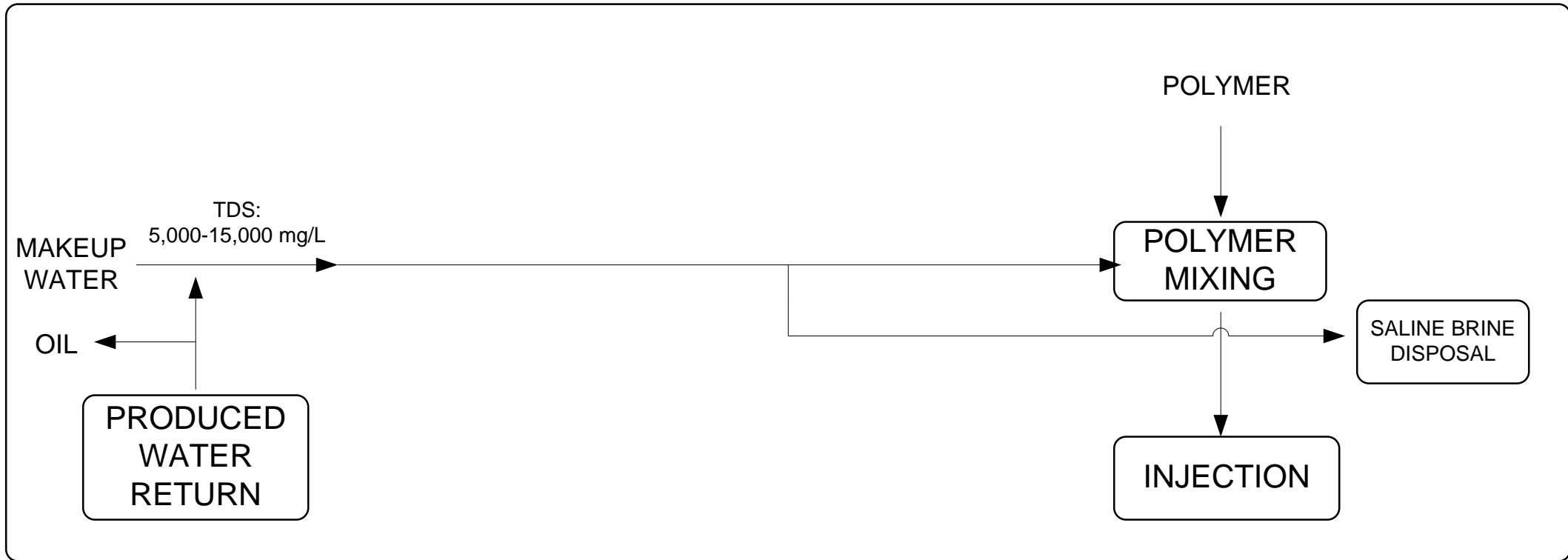


Project Overview

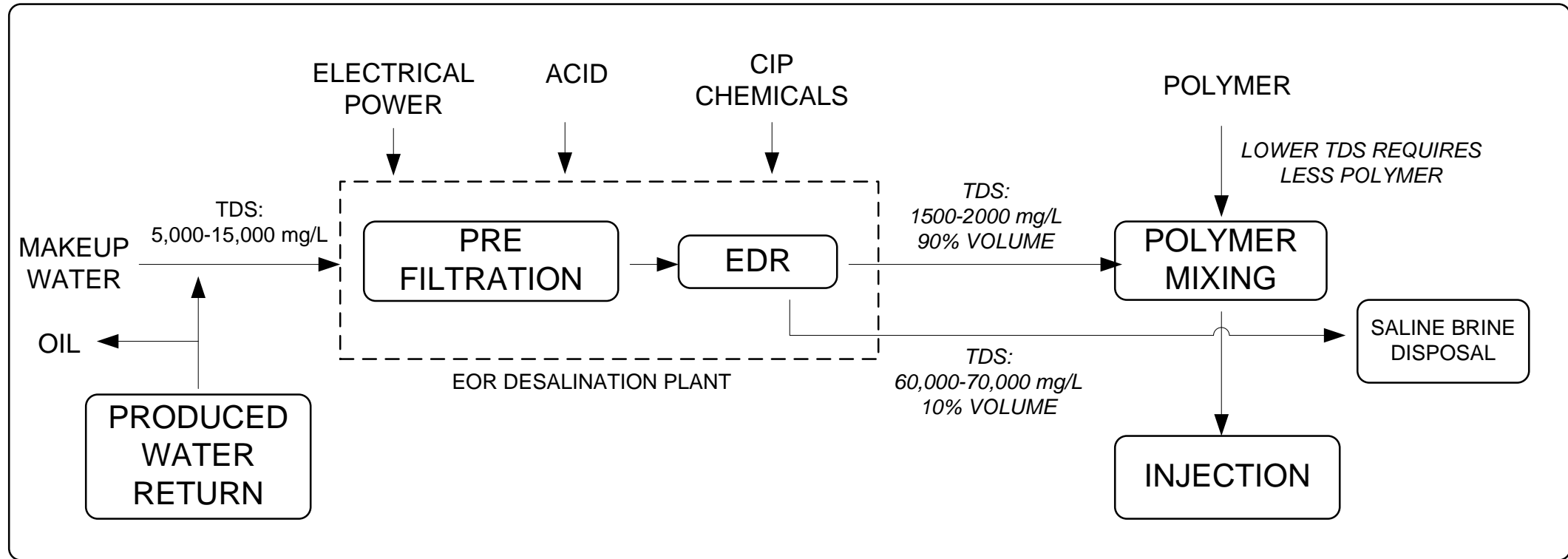
- Desalination of oil and gas produced water
- Desalination saves chemical costs (polymer), which pays for water treatment and yields return on investment, improving EOR economics
- Increased water reuse



Polymer Flood Enhance Oil Recovery (EOR)

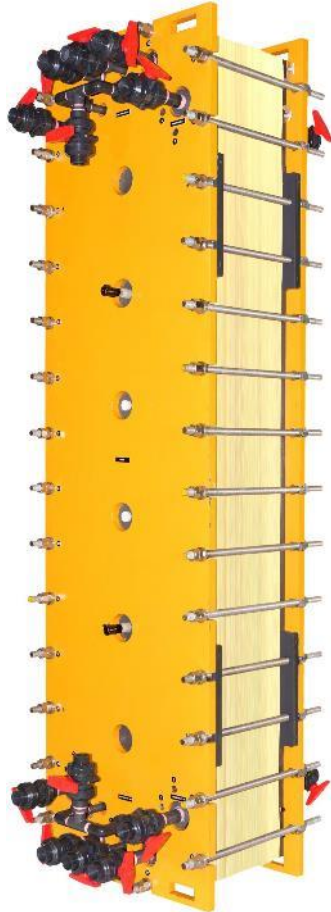


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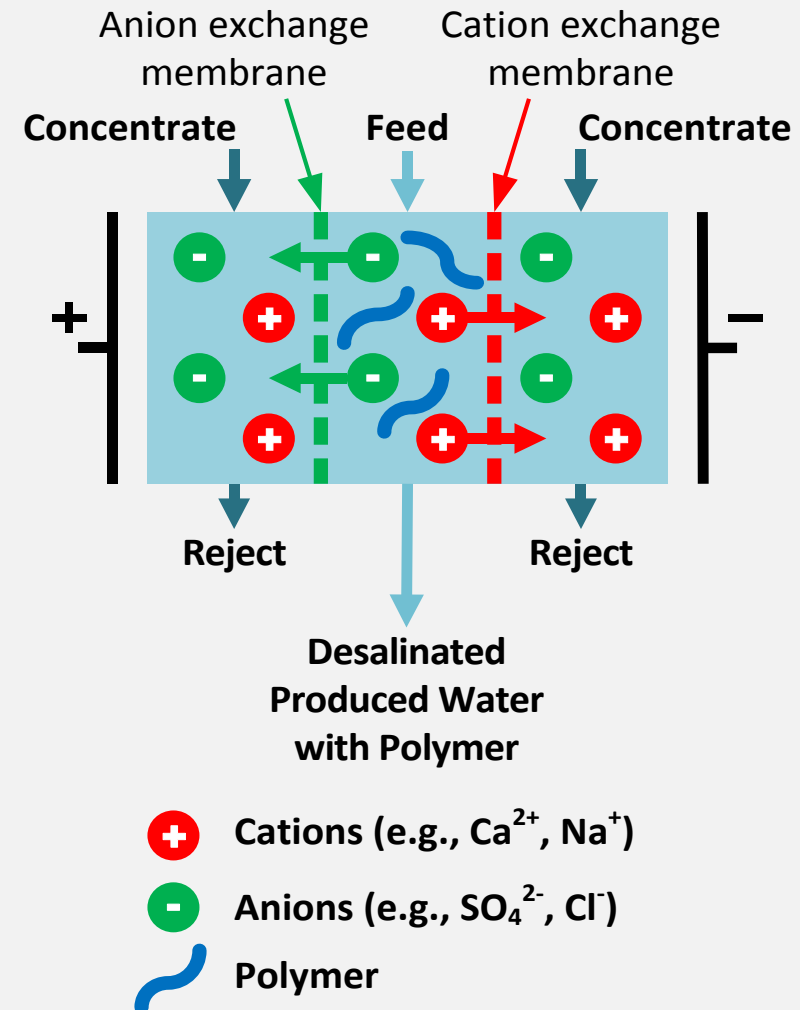


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EDR Stack

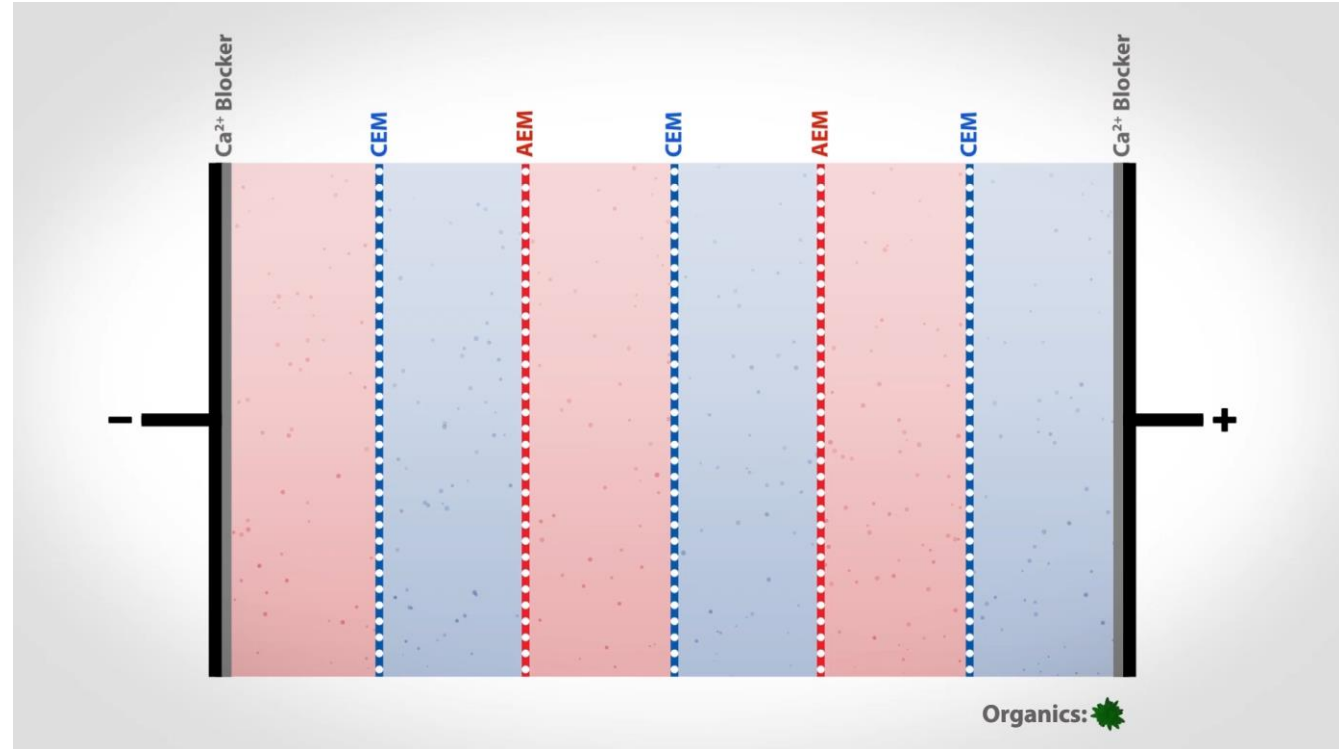
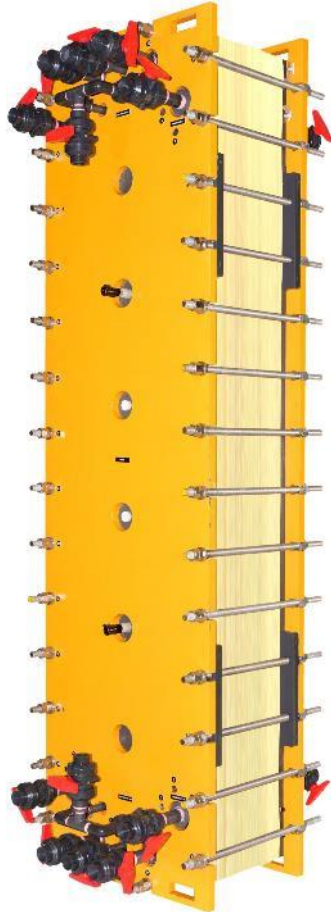


Operating principle



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EDR Stack

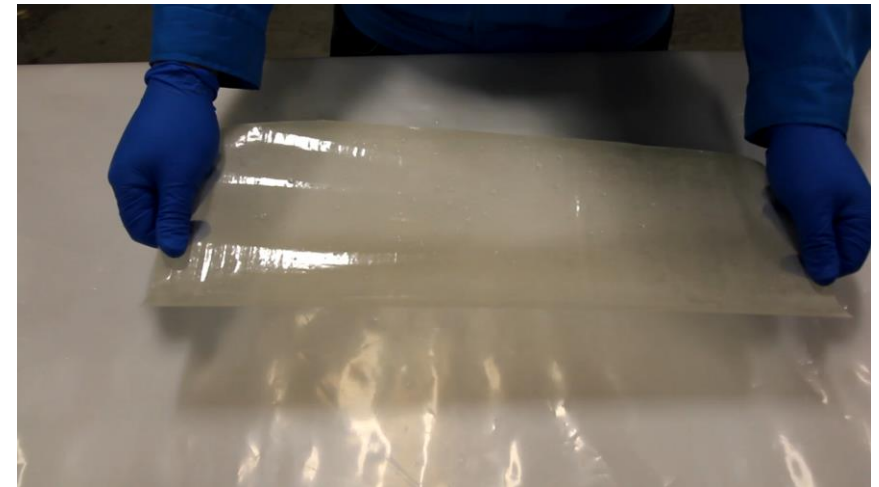


To View Animation, visit:

<https://www.youtube.com/watch?v=ExMWiTvnUfg>

IonFlux Ion Exchange Membranes

- Robust chemically tolerant polymer
- Selective ion removal & separation
- Highly resilient to oxidizing agents, including bleach
- Resilient in scaling and oily wastewaters
- Temperature tolerance: 0 – 60 °C
- pH tolerance: 0 - 12





Flex EDR Field Pilot Medicine Hat, Alberta

September 2017

150 m³ treated

>90% uptime

24/7 Automated Operation

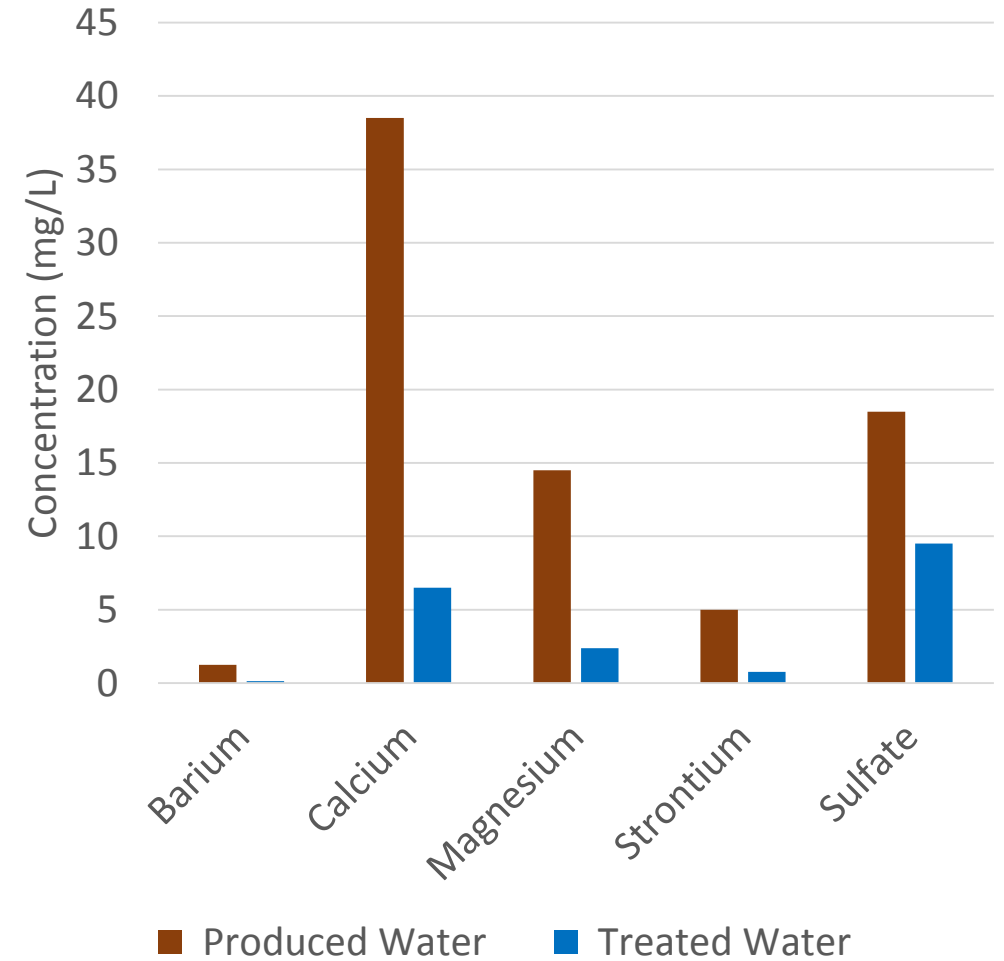
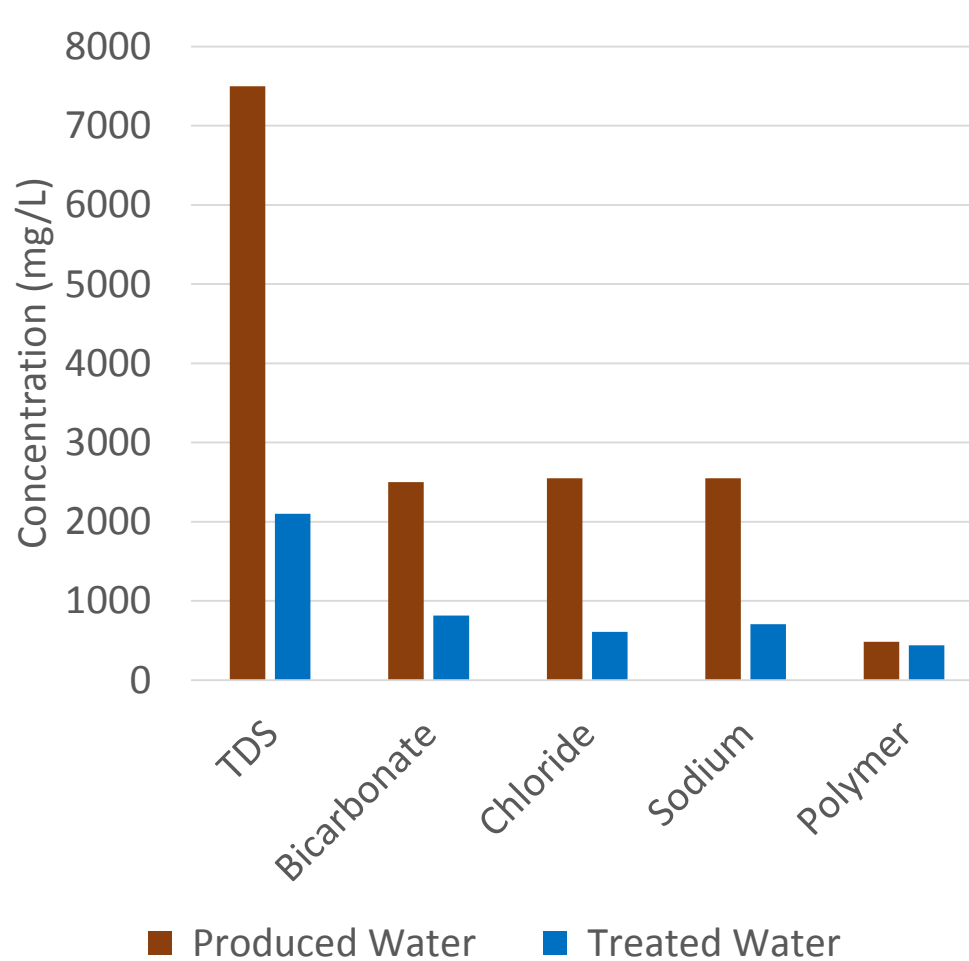


 **Saltworks**
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Water Chemistry



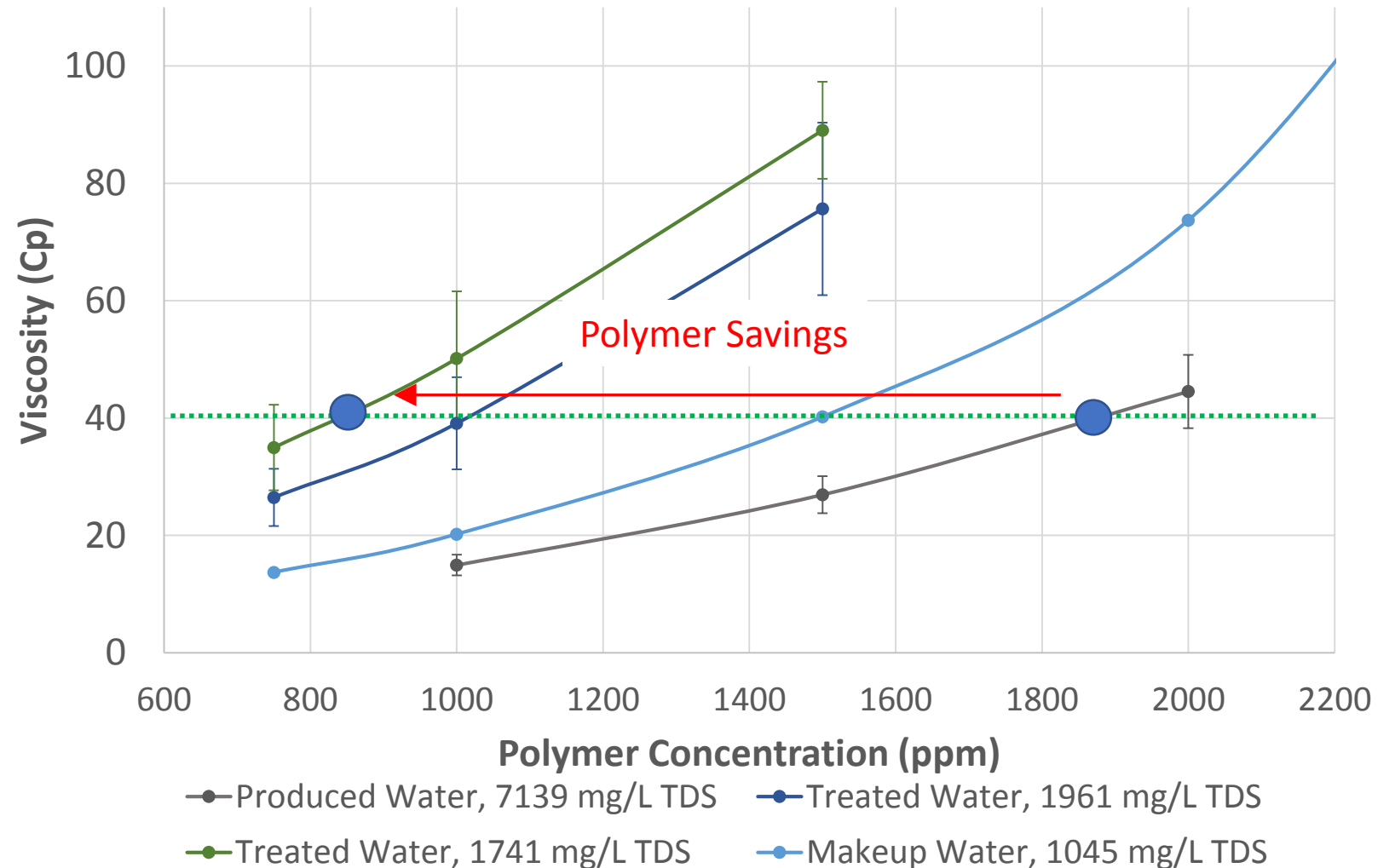
Produced and Treated Water



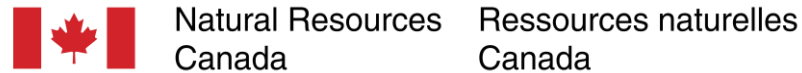
Polymer Savings

Desalinated produced water used less polymer to reach target viscosity

- The data suggests **50% polymer savings.**



Thank You!



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derek.mandel@saltworkstech.com