

A dynamic splash of blue water with bubbles and droplets, creating a sense of movement and freshness. The water is captured in mid-air, with some droplets frozen in time.

WATEREUSE ASSOCIATION
NORTHERN CALIFORNIA CHAPTER

FORWARD/REVERSE OSMOSIS -A NEW TECHNOLOGY

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OUTLINE

Part 1: FO/RO Technology

Part 2: Demonstration Test Results

Part 3: Conclusions & Future Thoughts

PART 1: FO/RO TECHNOLOGY

WHAT IS IT?

Dual membrane technology provides for treatment via an osmotic membrane followed by a reverse osmosis membrane system to produce high-quality water.



WHY TEST THIS TECHNOLOGY?



NASA PROMOTED
TECHNOLOGY



PROOF OF CONCEPT



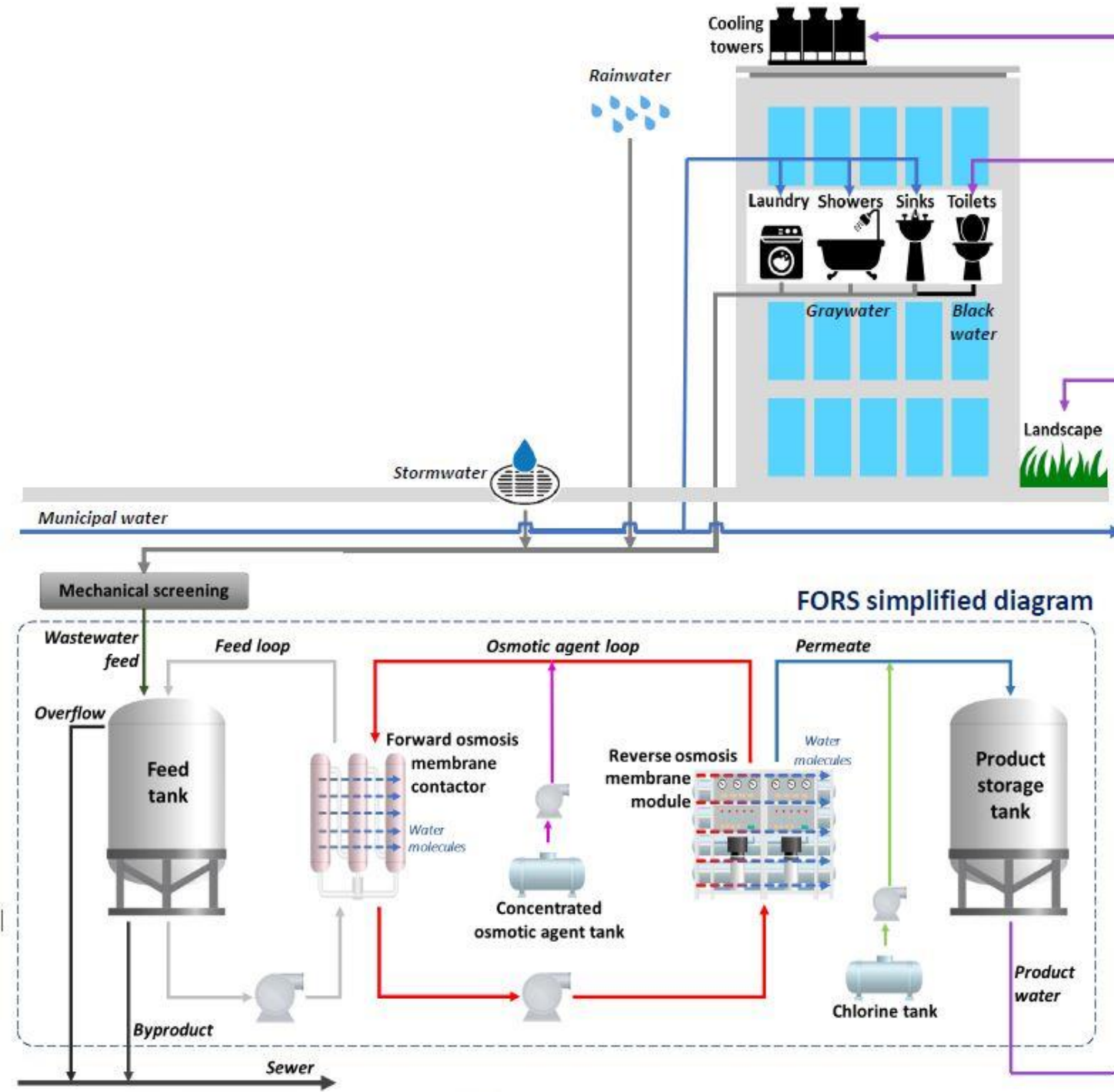
SMALL FOOTPRINT



MECHANICAL SYSTEM-
LOWER OPERATIONS
REQUIREMENT

FO/RO MEMBRANE SYSTEM TECHNOLOGY

Treatment
Process



Building
Water Uses

PART 2: DEMONSTRATION TEST RESULTS

TREATMENT TRAILER by WH2O Inc,

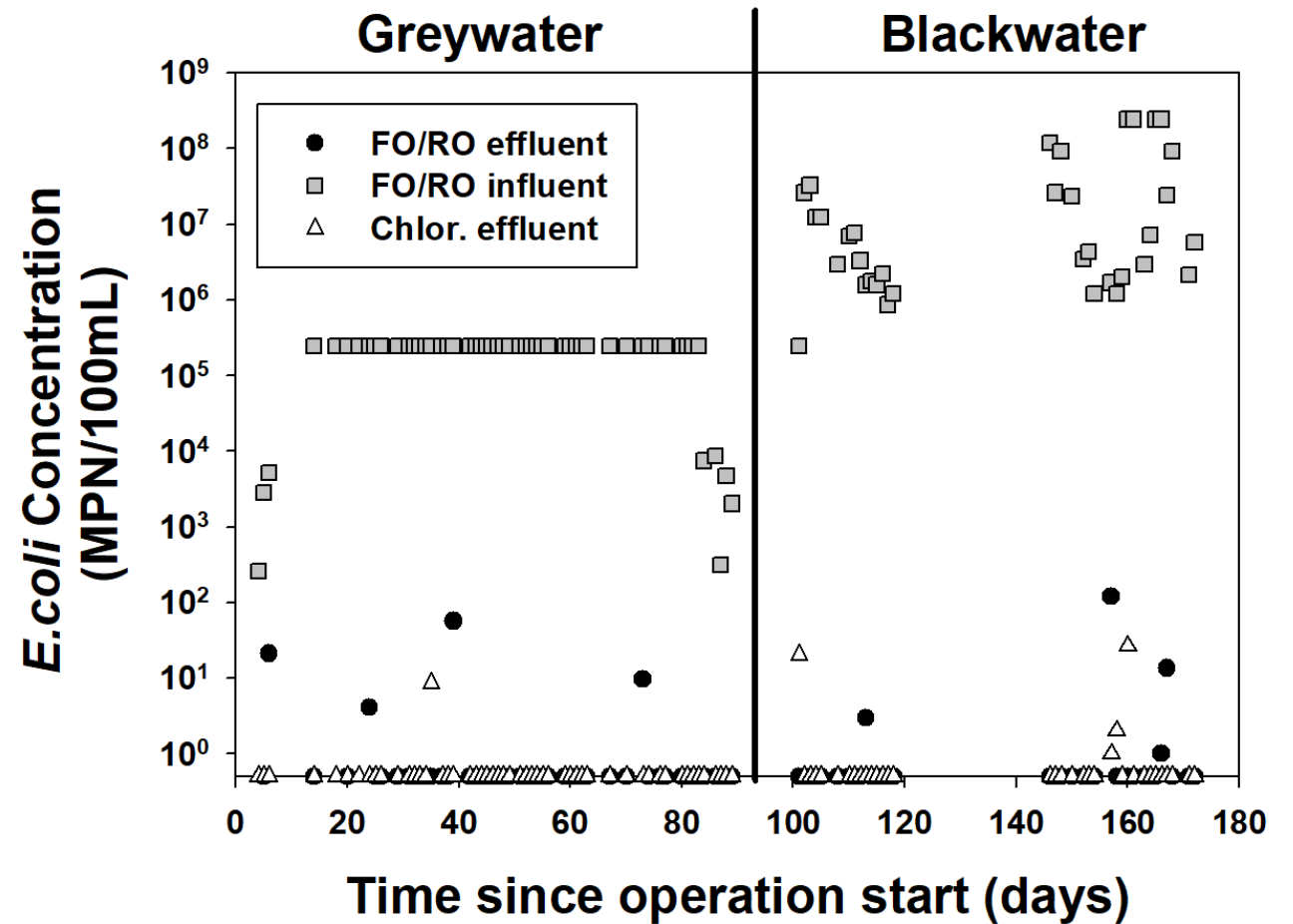
- **150 GPD**
- **Small
footprint**
- **Modular
unit allows
for easy
expansion**



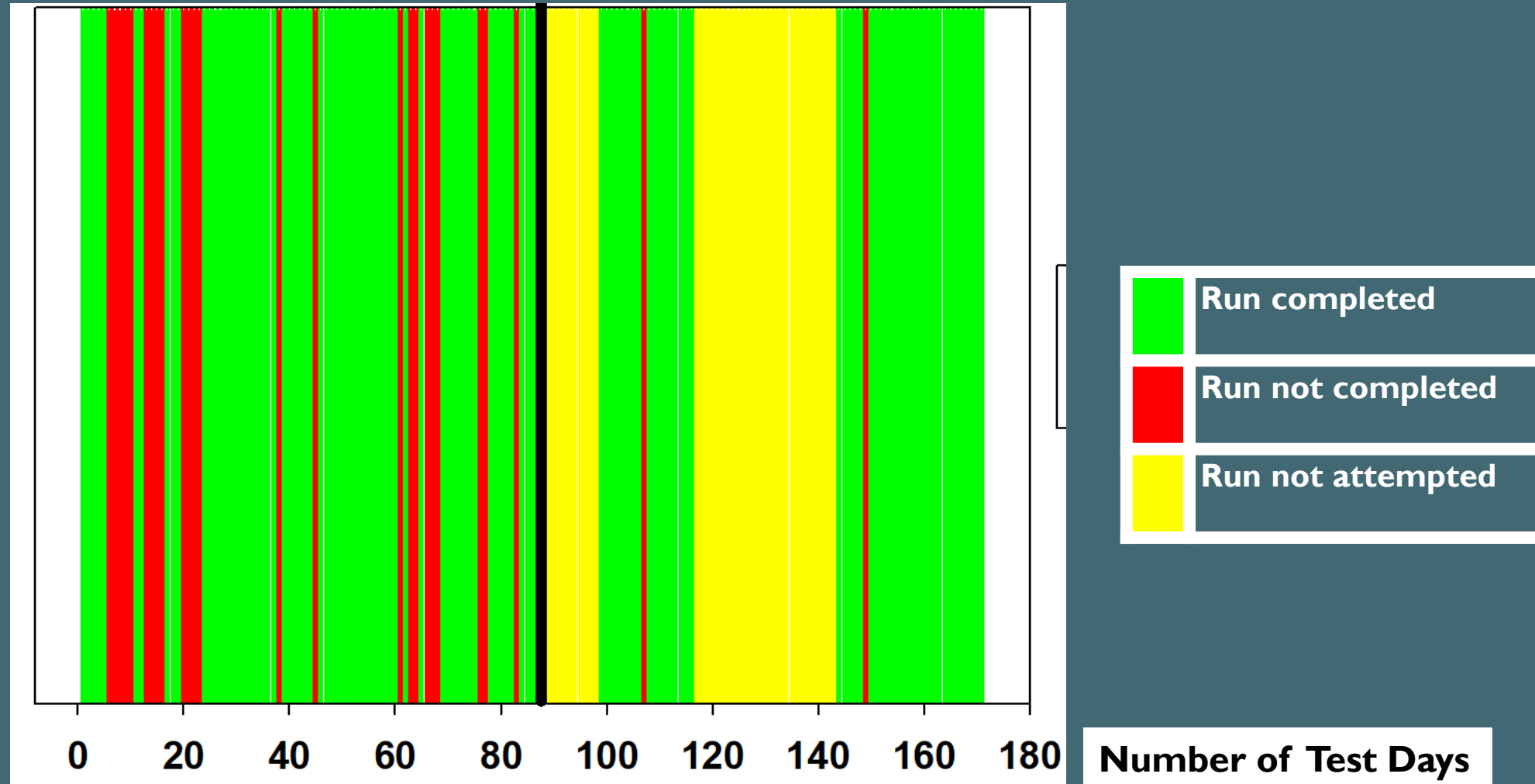
FO/RO WATER QUALITY PERFORMANCE

Meeting Performance Requirements?		
	Greywater	Blackwater
Total Coliform	When disinfection works	When disinfection works
<i>E. coli</i>	When disinfection works	When disinfection works
Total Cl Residual	No	Yes
Turbidity	Yes	Yes
Conductivity	Yes	Yes
TSS	Yes	Yes
BOD5	Yes	Yes
pH	No	Yes
Odor	Yes	Yes
COD	Yes	Yes
Ammonia	Yes	Yes
Nitrate	Yes	Yes
Nitrate	Yes	Yes
Total Phosphorous	Yes	Yes

FO/RO TESTING PROGRAM

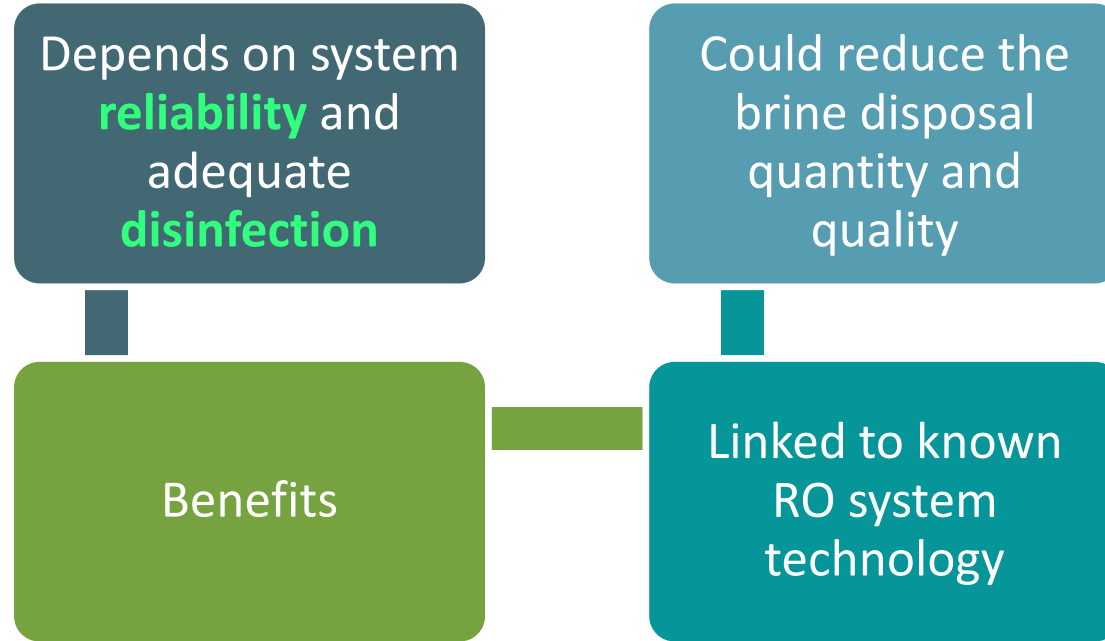


FO/RO PERFORMANCE RELIABILITY



PART 3: CONCLUSIONS & FUTURE THOUGHTS

- Proof of Concept – Yes
- System Reliability ?
- System disinfection needs to be more robust



FO/RO APPLICABILITY FOR REUSE

CONTACT INFORMATION



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QUESTIONS & ANSWERS