

A COMPREHENSIVE
ANALYSIS OF WATER
CONSERVATION

4 Cities



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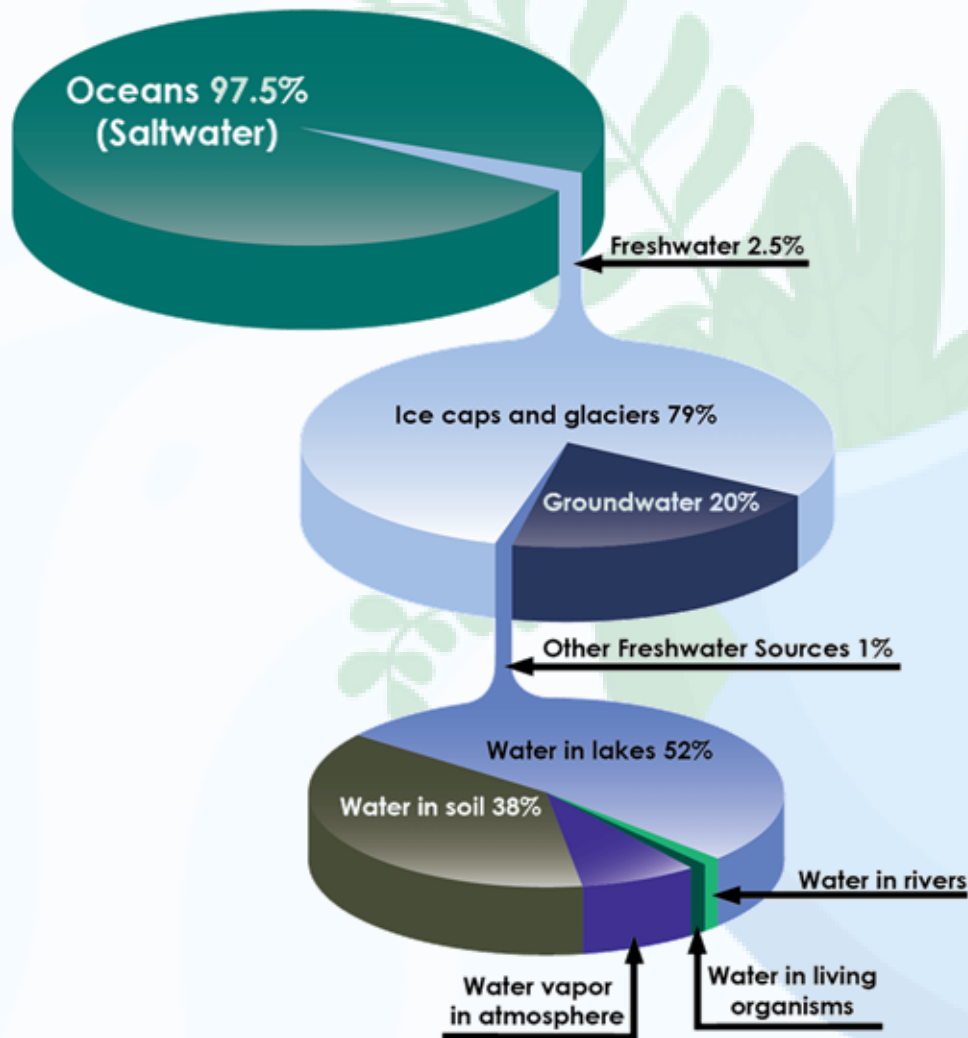
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STATE OF WATER



LIMITED SUPPLY

It is estimated that approximately **2.5 %** of our Earth's water is fresh and **less than 0.5%** is readily available for potable consumption.

CURRENT STATE

Water scarcity is prevalent in many communities today and it is estimated that **over 2 Billion people are currently faced with water scarcity.**

DIRE PREDICTIONS

It's estimated that within 50 years **over 40% of the world's population is expected to live in countries facing water stress or scarcity.**

Water usage **regulations vary widely**, reflecting unique environmental and social contexts.

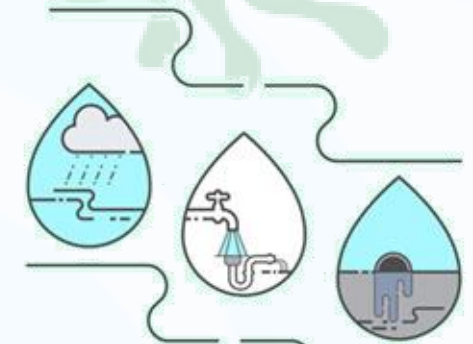


The **IWCCP codes aim to standardize, enhance and pave the path for water conservation efforts** across cities.

Current State of Codes and Regulatory Framework



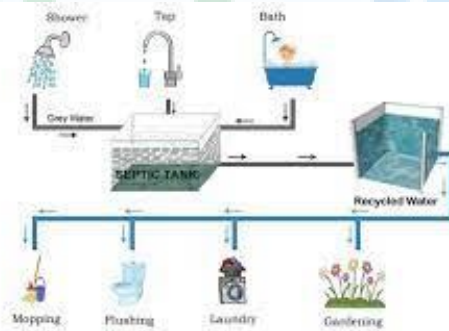
Amid concerns about water scarcity and climate change, **innovative water conservation approaches** have emerged.



IWCCP Response



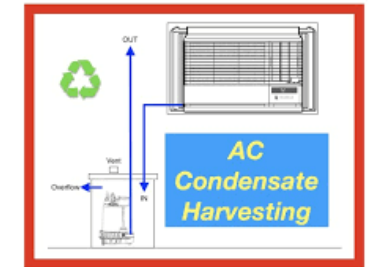
Water-Efficient Fixtures and Appliances



Grey water systems



Rainwater Harvesting



HVAC Condensation Recovery



Hot water systems & Piping



Alternative water resources



Plumbing system design



Landscape irrigation efficiency

UM SUREAL TEAM'S RESPONSE

Communities Selected



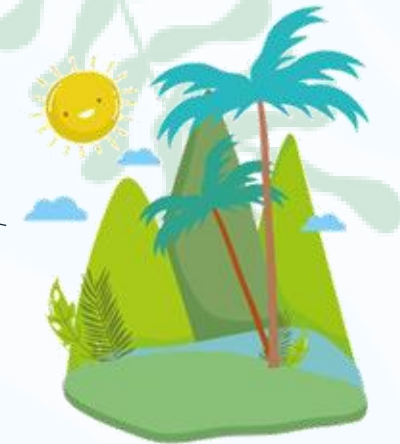
Las Vegas – Nevada
Hot Desert



Phoenix – Arizona
Hot Desert



Des Moines - Iowa
Humid Continental Climate



Houston – Texas
Humid Subtropical

Overview of Phase 2 – Multi-Family Construction



Garden/ Low-Rise

Average unit size: 873 sq.ft.

- 2 bedroom – 2 baths
- 3 stories in height



Mid-Rise

Average unit size: 875 sq.ft.

- 2 bedroom – 2 baths
- 7 stories in height

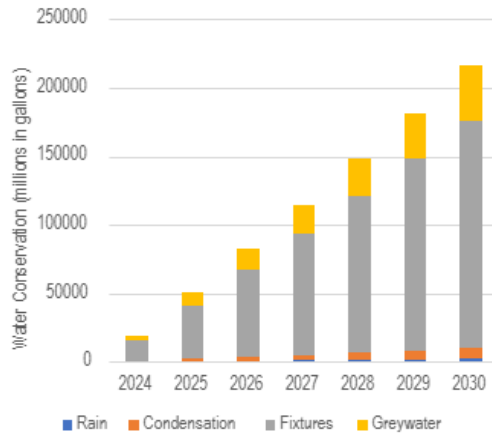


High-Rise

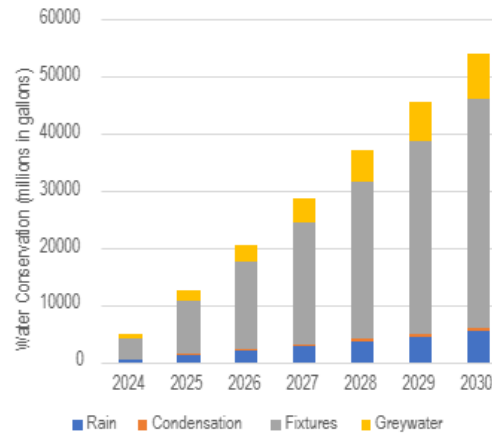
Average unit size: 876 sq.ft.

- 2 bedroom – 2 baths
- 20 stories in height

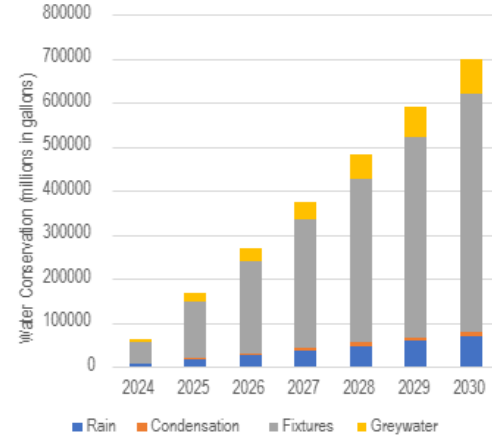
Annual Water Conservation Forecast
(Las Vegas Multifamily Homes Only)



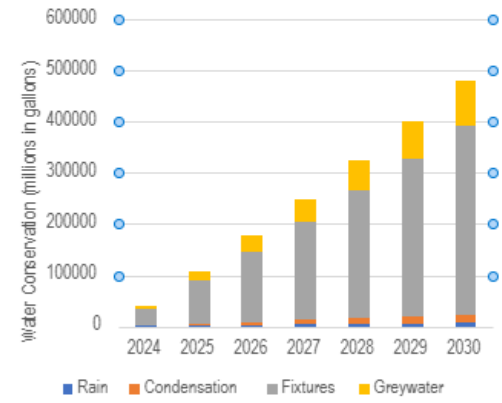
Annual Water Conservation Forecast
(Des Moines Multifamily Homes Only)



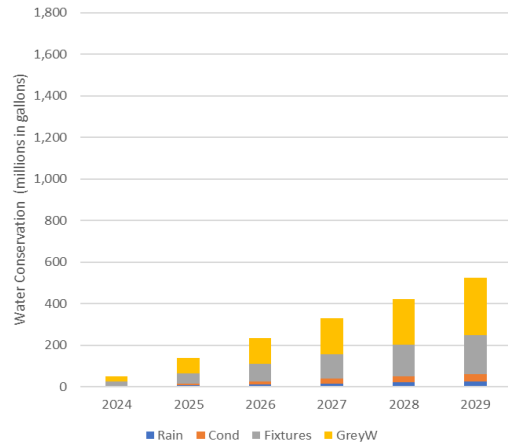
Annual Water Conservation Forecast
(Houston Multifamily Homes Only)



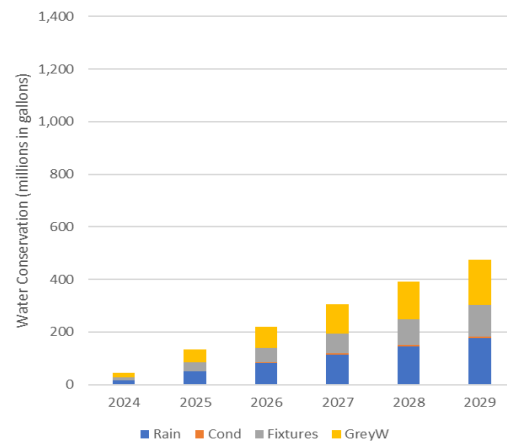
Annual Water Conservation Forecast
(Phoenix Multifamily Homes Only)



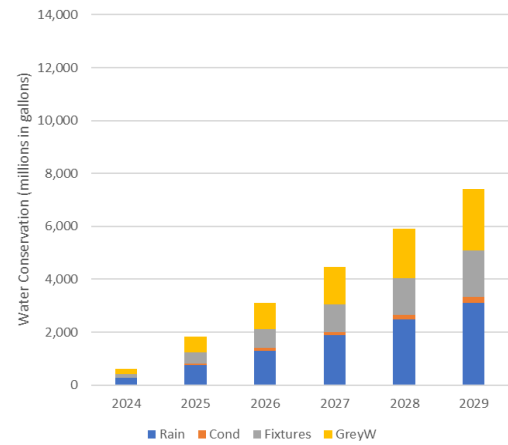
Annual Water Conservation Forecast
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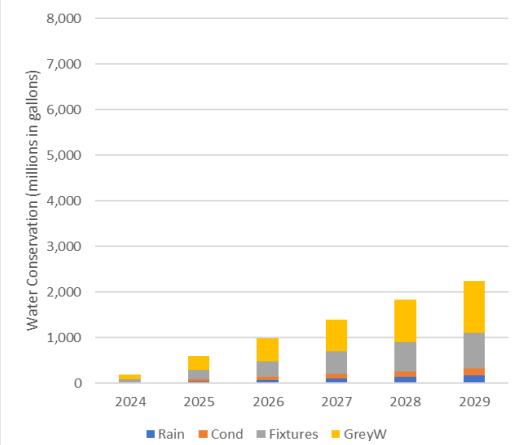
Annual Water Conservation Forecast
(Des Moines New Homes Only)



Annual Water Conservation Forecast
(Houston New Homes Only)



Annual Water Conservation Forecast
(Phoenix New Homes Only)



Conclusions



Path to Resilience



Multi Faceted Approach



Regulatory Considerations



Cost Effectiveness



Regional Adaptation



Environmental Benefits



Thank you!
Questions?



Scan For
Contact Information
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