



OCT 2024 – Council for Watershed Health Symposium

Recycled Water (R)evolution

Recycled Water 101

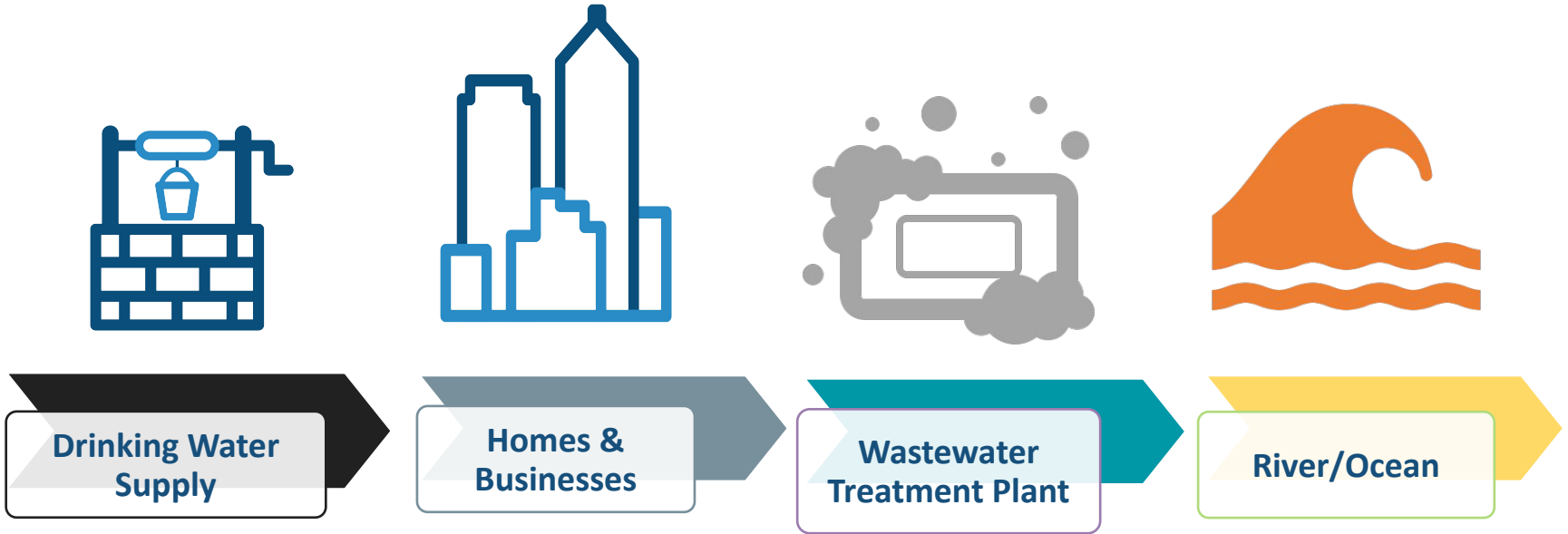


SECURING OUR WATER FUTURE TODAY

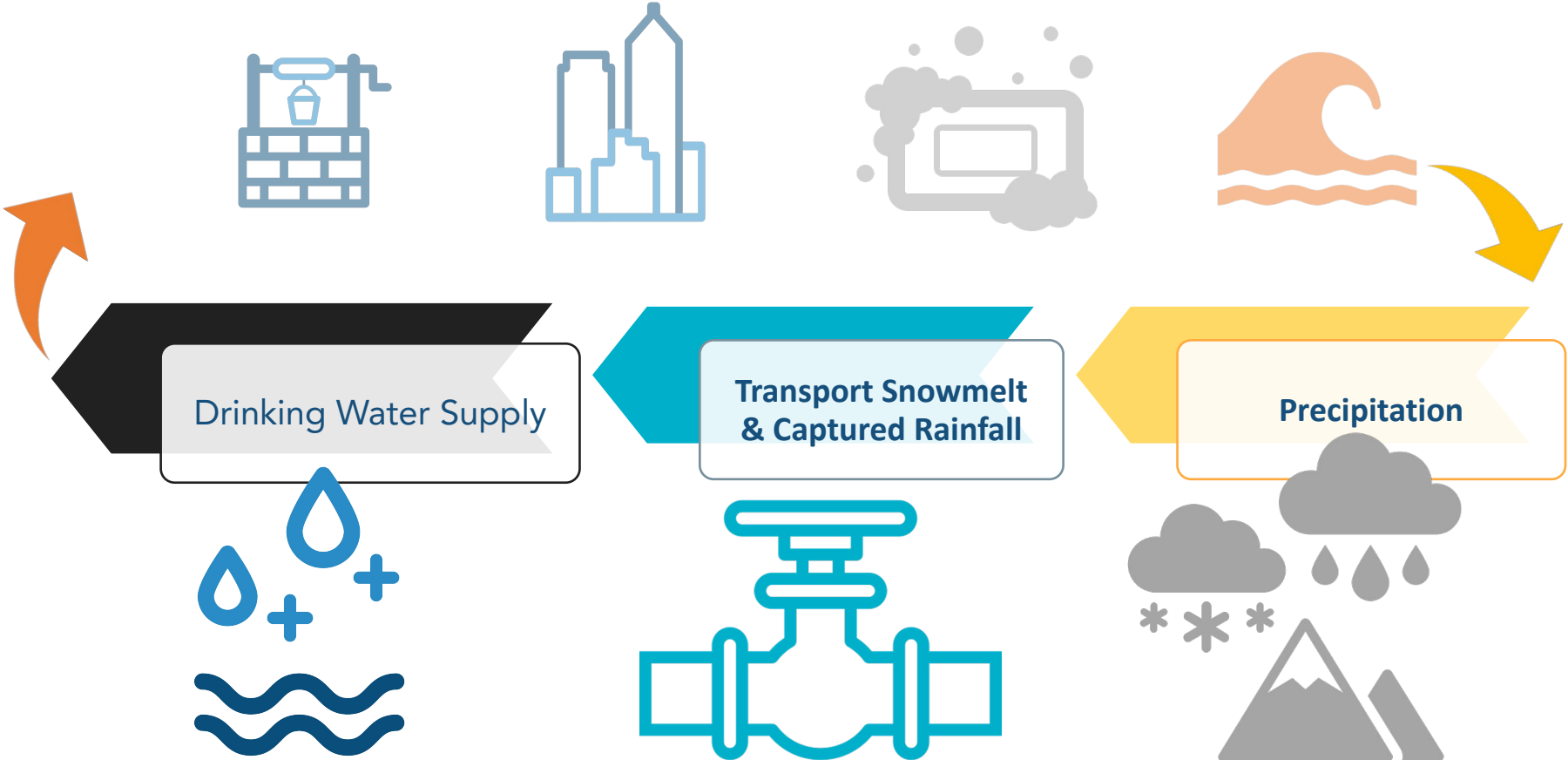
Los Angeles County would not exist as it does today without supplemental water



Traditionally, the LA water cycle seemed more linear than cyclical



The full LA water cycle stretched far beyond LA County's borders



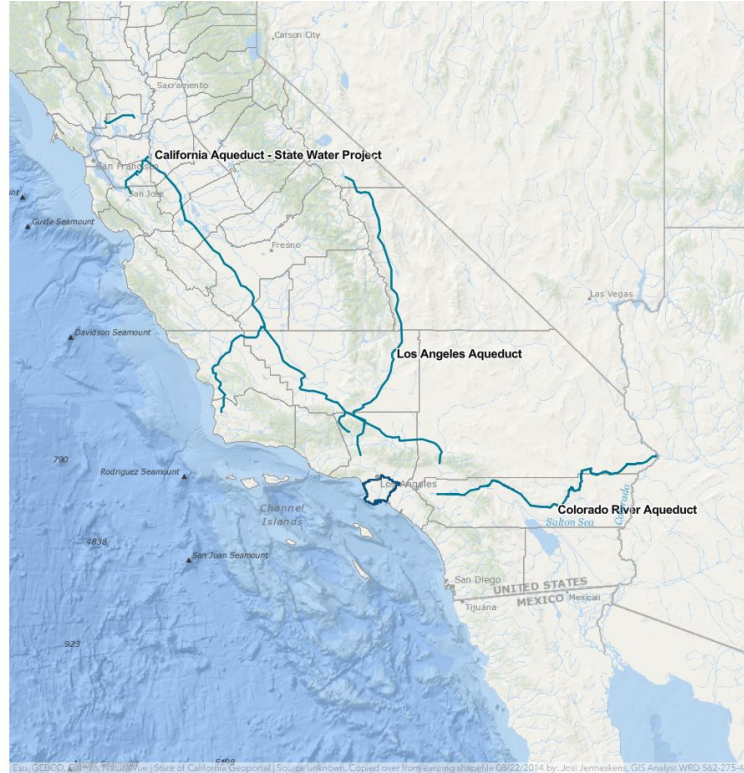
This imported water cycle became unsustainable



Colorado River Aqueduct. Image courtesy of the Metropolitan Water District



State Water Project Water Deliveries



Traditional imported water supplies for Los Angeles County

Los Angeles Aqueduct

LA Dept of Water & Power

Colorado River Aqueduct

Metropolitan Water District

California Aqueduct

CA Department of Water Resources

Resources

To understand 'local water' we can look at two critical pieces of water infrastructure in southern Los Angeles County



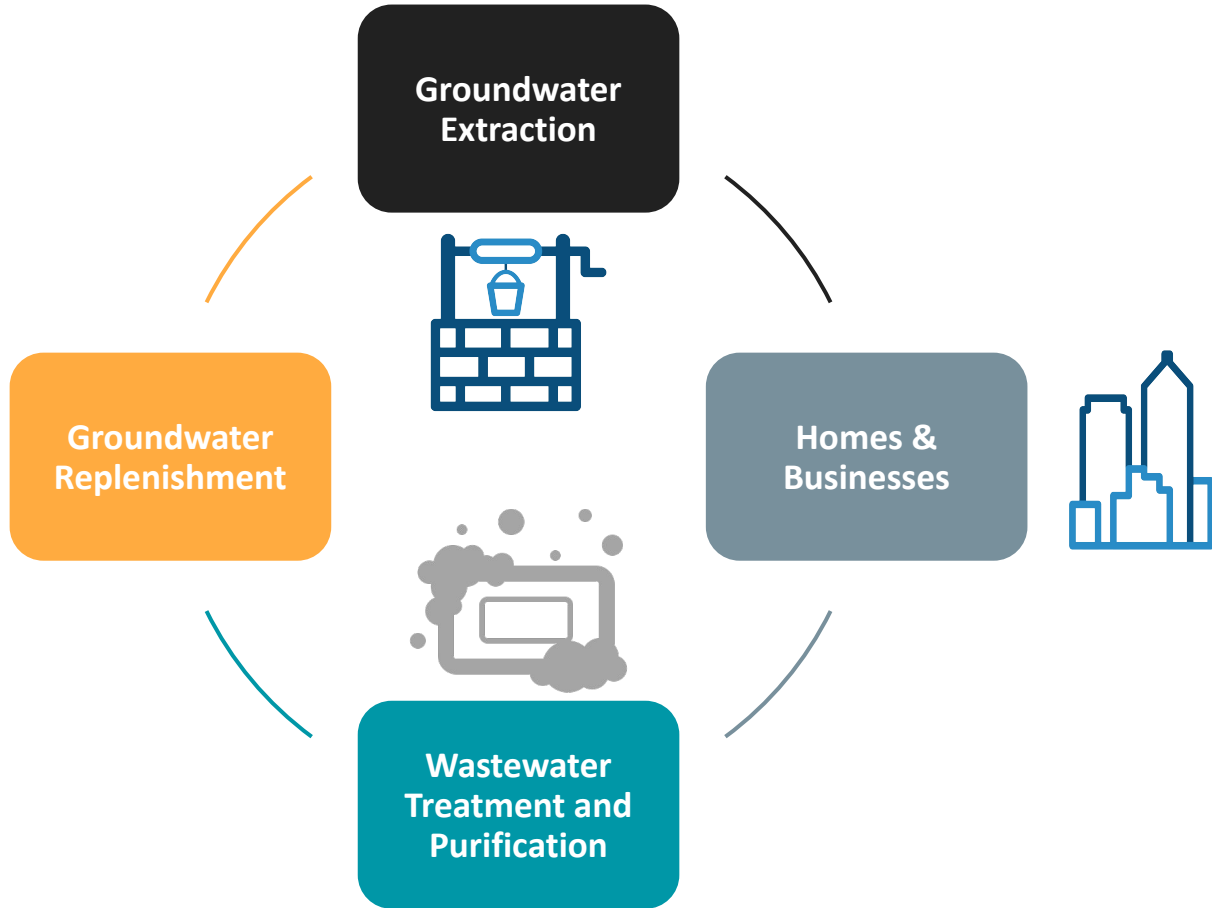
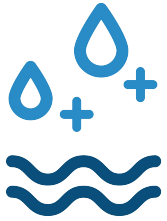
LA County Injection Wells



LA County Spreading Grounds

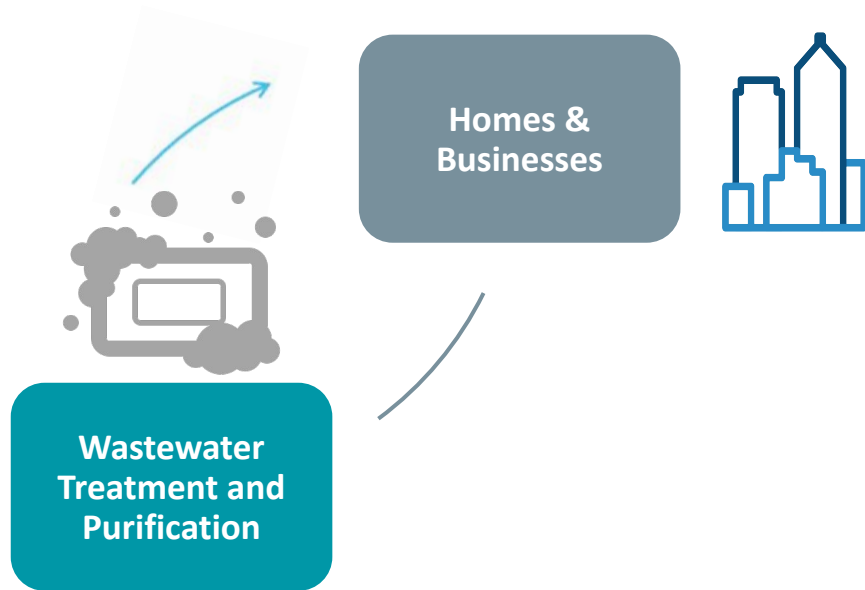
Recycling water allows us to tighten the loop and keep it local

INDIRECT POTABLE REUSE



New regulations could shorten the cycle even further

DIRECT POTABLE REUSE

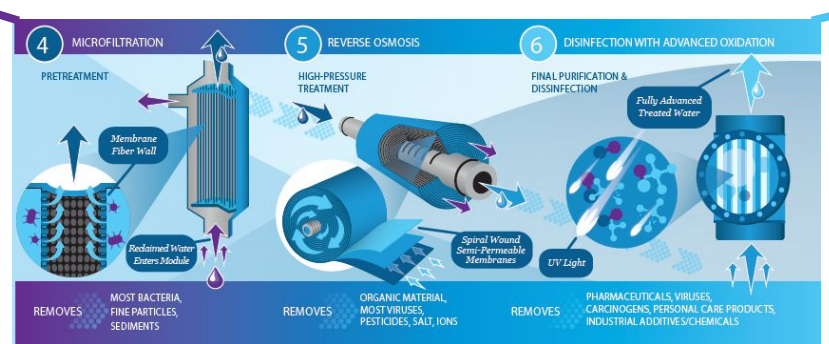
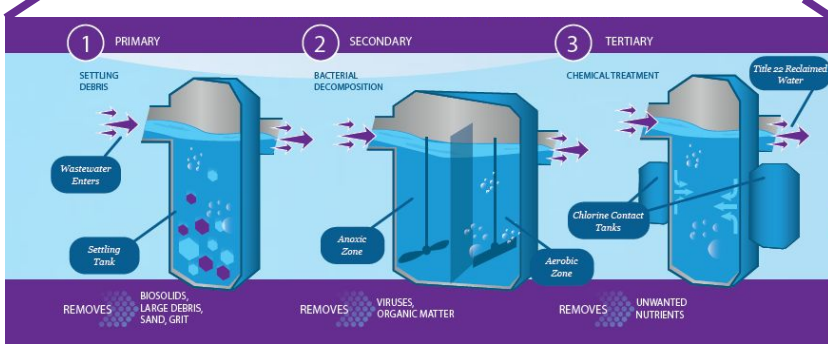


The term 'recycled water' includes both: tertiary treatment and advanced purification

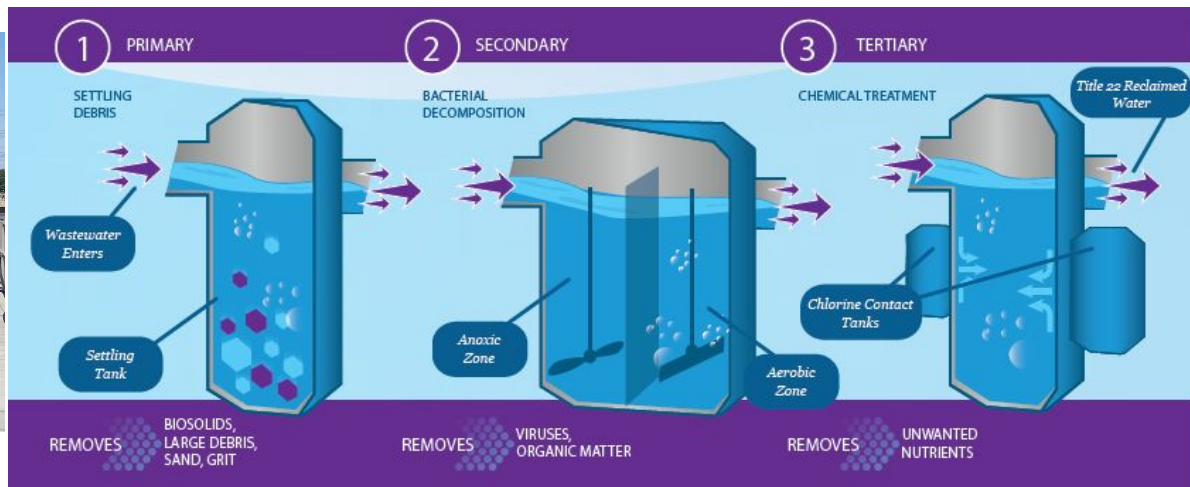
Tertiary Treated Recycled Water



Advanced Purified Recycled Water



Tertiary treated "Purple Pipe" water can be used for irrigation and surface spreading. It has non-potable applications.



Tertiary Treatment Processes

- Gravity
- Bacteria
- Chemicals

Referred to as:
"non-potable reuse"

Advanced purified water can be used for spreading, injection, reservoirs, and possible direct delivery. It is drinking-quality water.



Advanced Treatment Processes

- Pressurized water
- Membranes
- Ultraviolet Light
- Chemicals

Referred to as:
“potable reuse”

Starting in 1962, three Water Reclamation Plants were built and sent purple pipe water to the spreading grounds (1962 – 1972)



Whittier Narrows WRP - 1962



Pomona WRP - 1970



San Jose Creek WRP - 1972



Starting in 1995, three Advanced Water Purification Facilities were built and now send water to the injection wells (1995 – 2006)



**West Basin MWD
Edward C. Little WRF - 1995**



**West Coast Seawater Barrier
Injection Wells**



**Water Replenishment District
Leo J. Vander Lans AWTF - 2005**



**Alamitos Gap Seawater Barrier
Injection Wells**



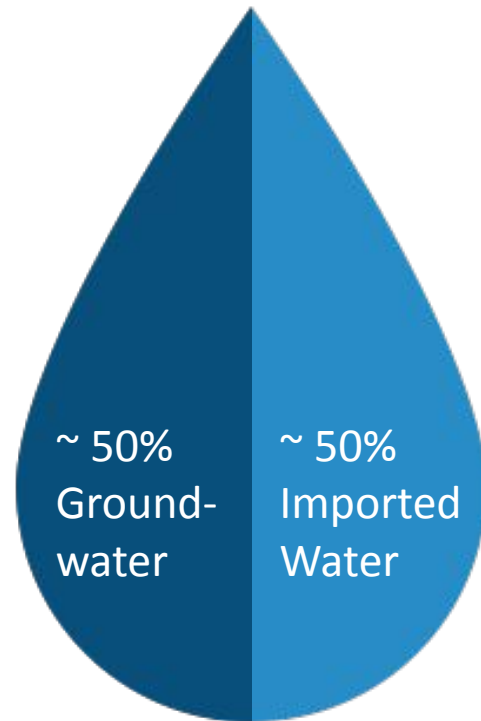
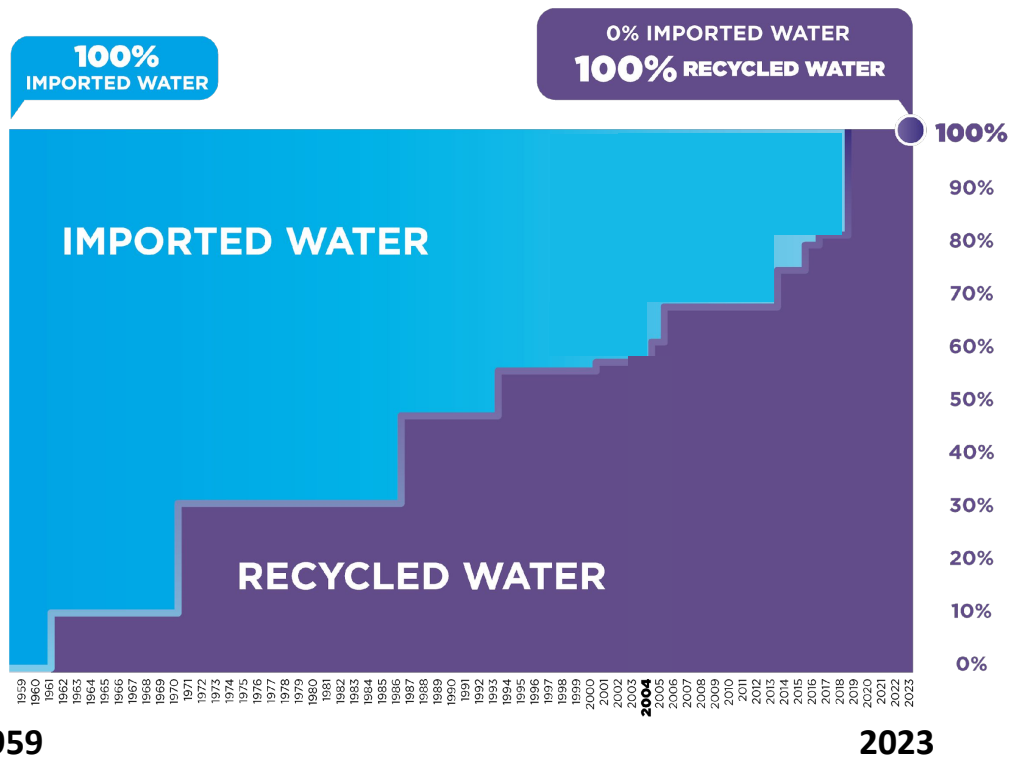
**City of Los Angeles
Terminal Island AWPF - 2006**



**Dominguez Gap Seawater Barrier
Injection Wells**

Currently, all of WRD's groundwater replenishment supply can be met using recycled water and stormwater; but that only accounts for about half the demand

Groundwater Replenishment in the Montebello Forebay Spreading Grounds (1959 – 2023)



To bring our region to a fully sustainable, local water supply will take vision, partnership, and investment (and time!)

