

What Will Regulations Look Like After the 'Emergency' is Over?

Southern California Water Dialogue
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San Diego's Water Story

The Early Years – Water



- Early Inhabitants
- Progress



The Early Years – Wastewater

- 1860s San Diego
- Environmental Challenges





City of San Diego



White House Smart Cities Initiative

Intelligent and Green Infrastructure

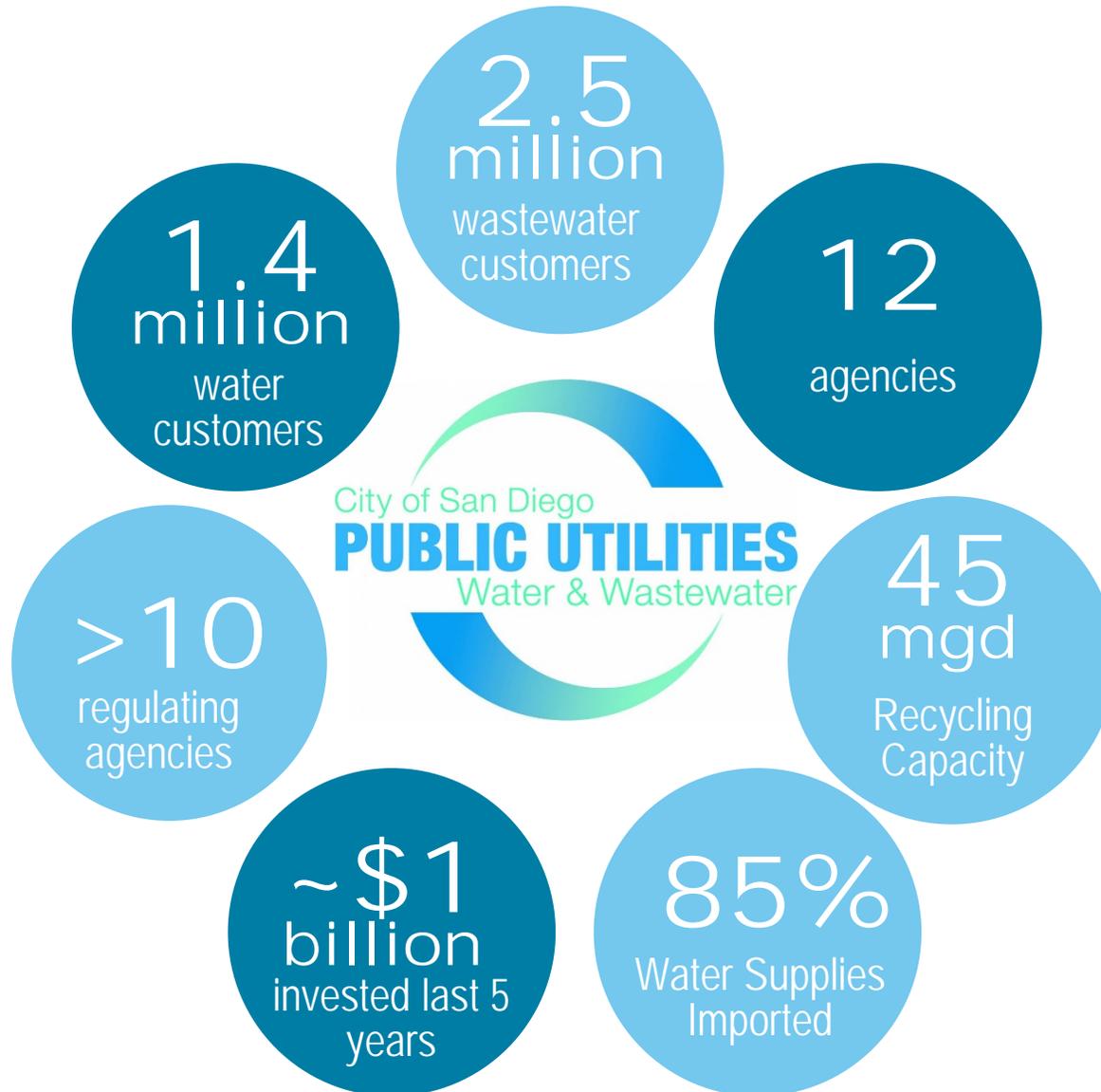
Urban Agriculture Incentive Zone



Traffic Flow Improvements with better Public Transportation Systems



Background



By the Numbers – Water



Vast Infrastructure

- 9 reservoirs
- 49 pump stations
- 3 water treatment plants
- 3,400+ miles of pipeline
- 320,000+ service connections
- 135 pressure zones



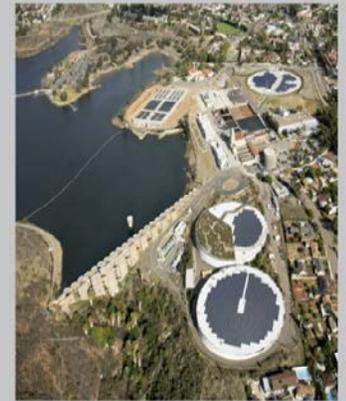
Among the Largest, Most Complex Systems in the World

We can treat

378

million gallons of water per day

Water System



Wastewater Infrastructure

- 2.5 million regional customers
- 3,000 miles of pipelines
- 79 pump stations
- 255 MGD capacity



- 3 wastewater treatment plants
- 2 ocean outfalls
- 1 bio solids center

Drought Response

emergency 

noun, often attributive | emer·gen·cy | \i-'mər-jənt-sē\

Simple Definition of EMERGENCY

Popularity: Top 40% of words

: an unexpected and usually dangerous situation that calls for immediate action

Full Definition of EMERGENCY

plural emergencies

- 1** : an unforeseen combination of circumstances or the resulting state that calls for immediate action
- 2** : an urgent need for assistance or relief <the mayor declared a state of *emergency* after the flood>

Call to Action

- ✓ Risk Level Defined
- ✓ Responses Match Identified Risks

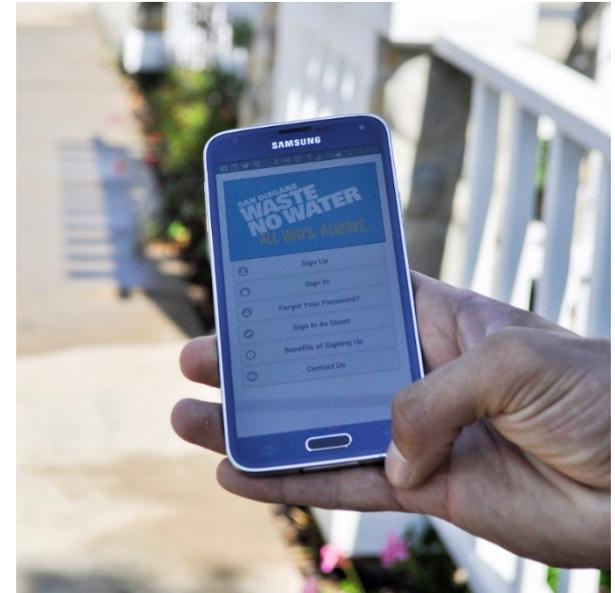




**SAN DIEGANS
WASTE
NO WATER**

ALL WAYS. ALWAYS.

- San Diego's Mandatory Water Use Reduction Target – 16%
- Outdoor Irrigation limited to 2 days a week for only 5 minutes & various other restrictions in place
- Turf Replacement Programs
- Residential & Commercial Water Use Surveys





Long-Term WUE Framework

A graphic featuring a green banner with the word 'SUSTAINABILITY' in white capital letters. To the left of the banner are two green leaves. Below the banner is a stylized city skyline composed of various green buildings of different heights and shapes, some with white window patterns. The background is a light blue gradient.

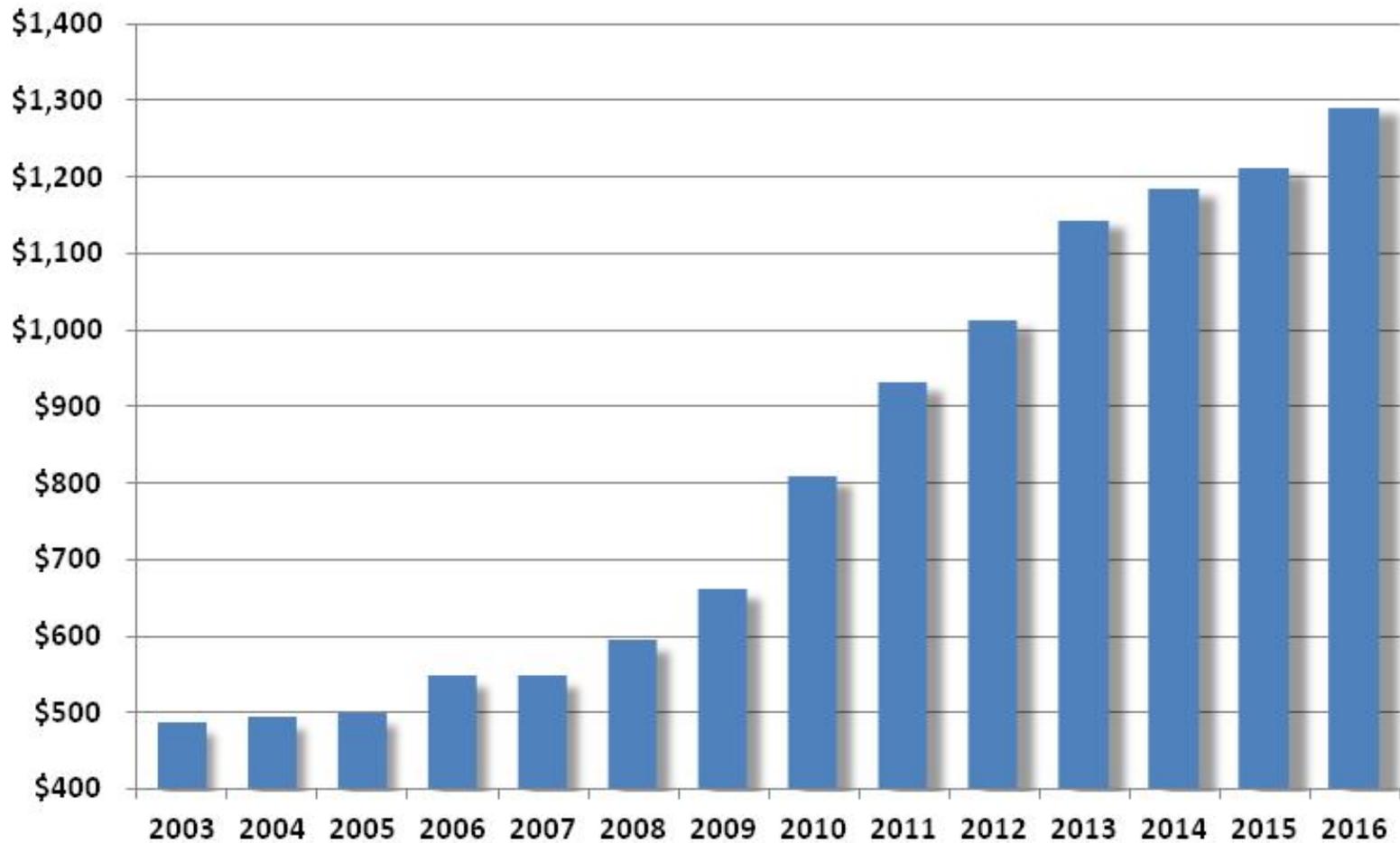
SUSTAINABILITY

Water-Use Efficiency will Continue to Improve
Here's Why...



Water Affordability

City of San Diego Costs to Purchase Untreated Water from the Metropolitan Water District and San Diego County Water Authority



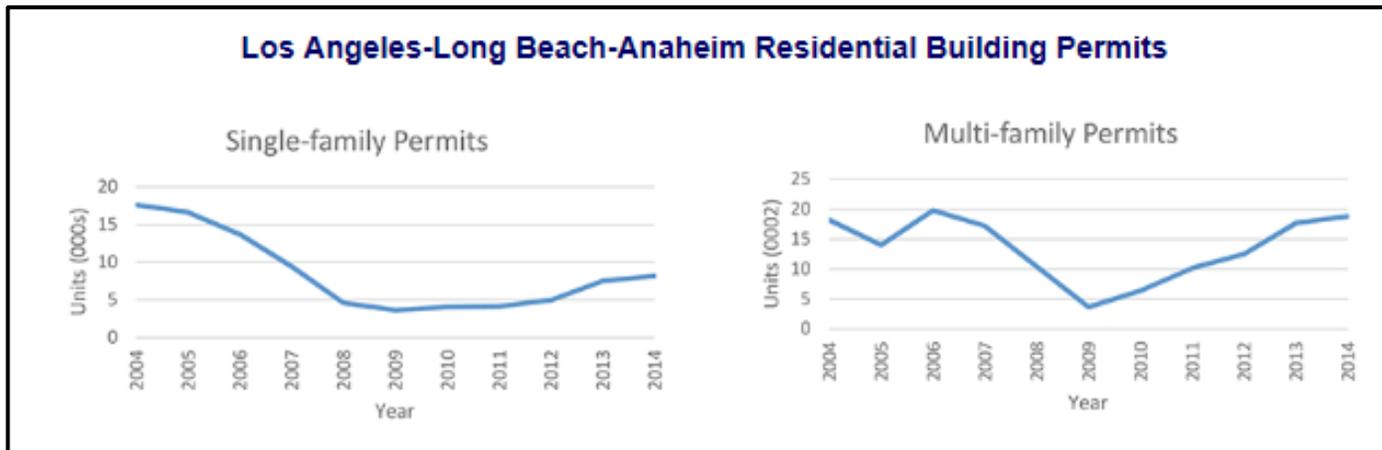
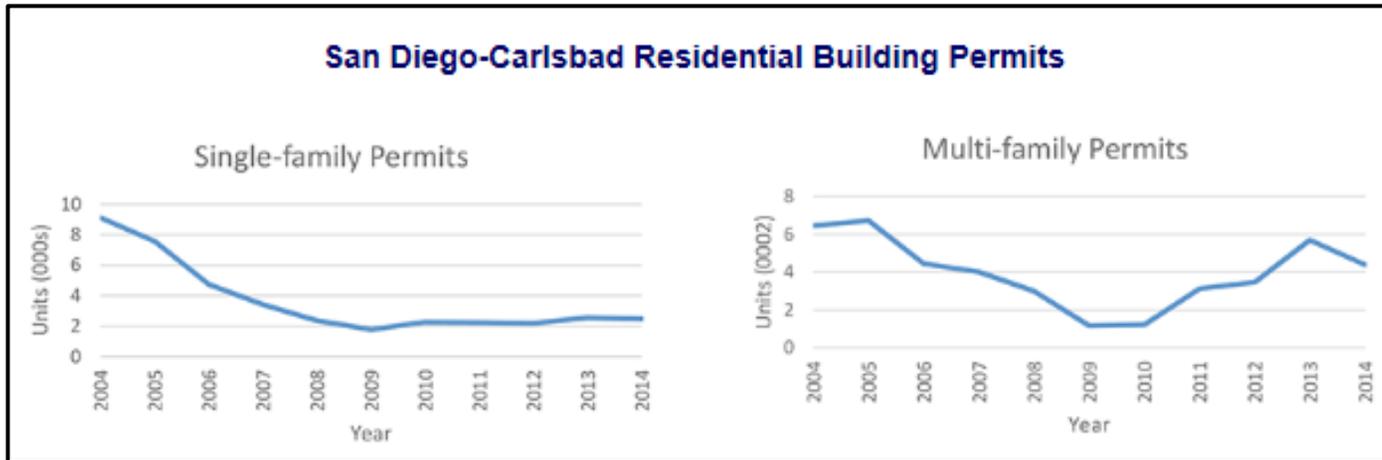


Urban Densification



Urban Densification

Land Use Trends



Source: <http://www.cmdgroup.com/market-intelligence/articles/graphs-showing-the-history-of-housing-starts-in-21-major-u.s.-cities#top>

Climate Change Policies

Sustainable Building Policy

- The expedited permitting process is estimated to take 75% as much time as the normal permitting process.
- In order to qualify for expedited permitting as a sustainable building, a project must utilize either photovoltaics to generate a "certain percentage" of the project's energy needs, or achieve LEED Silver certification.



Goals and Strategies

Attain Drought Resilience

- ✓ Minimize incidences of water shortages
- ✓ Protect quality of life

Maintain Credibility with our Customers

- ✓ Align messages and actions with the appropriate need



Goals and Strategies

Enhance and Protect System Operations

- ✓ Water quality
- ✓ Hydraulic Flows
- ✓ Energy and GHGs

Invest wisely

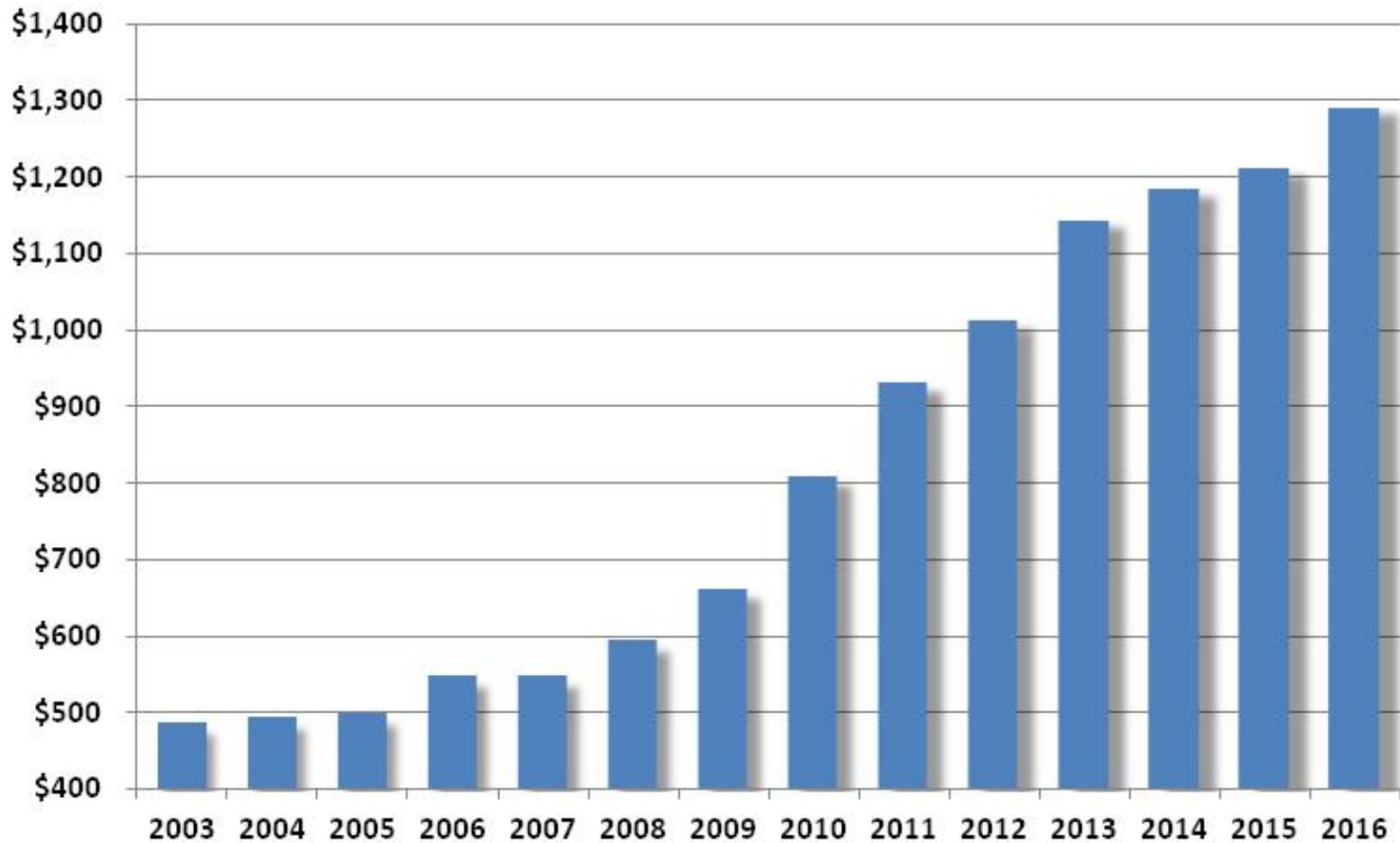
- ✓ Bang for the Buck
- ✓ Integrated Planning





Price Point for New Supplies

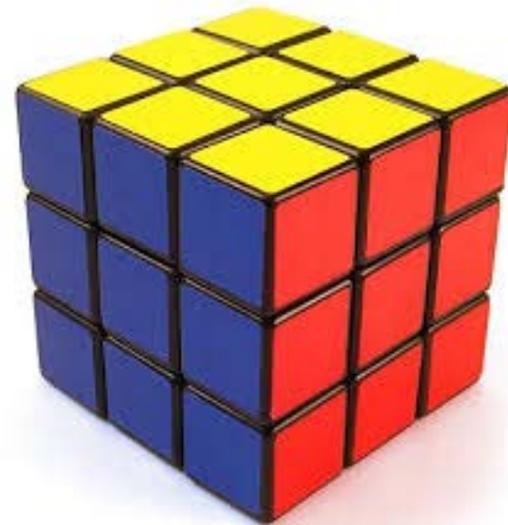
City of San Diego Costs to Purchase Untreated Water from the Metropolitan Water District and San Diego County Water Authority



Drought Resilience

- ✓ Water-Use Efficiency
- ✓ New Sustainable Water Supplies
- ✓ Storage
- ✓ Voluntary Water Transfers

- ✓ Recycling and Reuse



Long Term WUE Framework

✓ Local Water Management Planning focused on:

- Realistic Supply and Demand Analysis over Normal and Multiple Dry Year Scenarios
- Water Shortage Contingency Plans
- Self-Certification
- SWRCB Back-stop

✓ Supply and WUE Mix Depends on Local Conditions and:

- Net Reductions in Reliance on Imported Water
- Development of Sustainable Local Supplies
- Integrated Water Management/Watershed Approach

Pure Water San Diego

The City's Pure Water Program is a phased, multi-year program that:

- Uses proven technology to produce a safe, sustainable and high quality water supply
- Is drought-proof and locally-controlled to significantly improve our water reliability
- Is a cost-effective investment for San Diego's Water Future
- Is a Sustainable Water-Use Efficiency Program
- Will provide 1/3 of San Diego's future water supplies



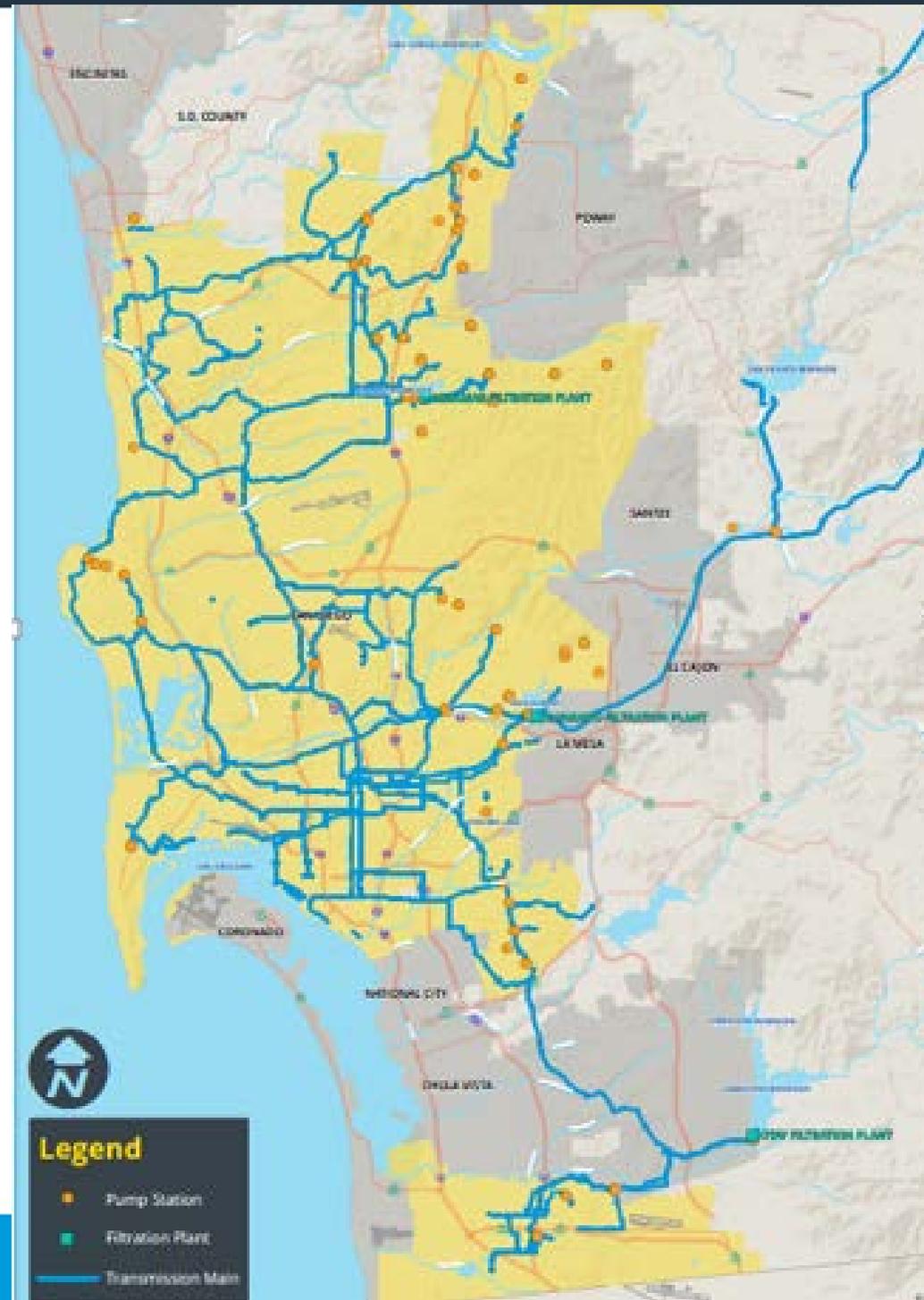


Pure Water San Diego



Final Thoughts

- Multiple drivers are advancing WUE today, not just water agencies.
- Water agencies must always respond to local conditions in determining a preferred drought resiliency strategy.
- Recycling and Reuse provide conservation benefits.





San Diego Public
Utilities



PureWaterSD



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