



One Water (Conservation & Local Resources) Committee

One Water Concepts & Application to Metropolitan

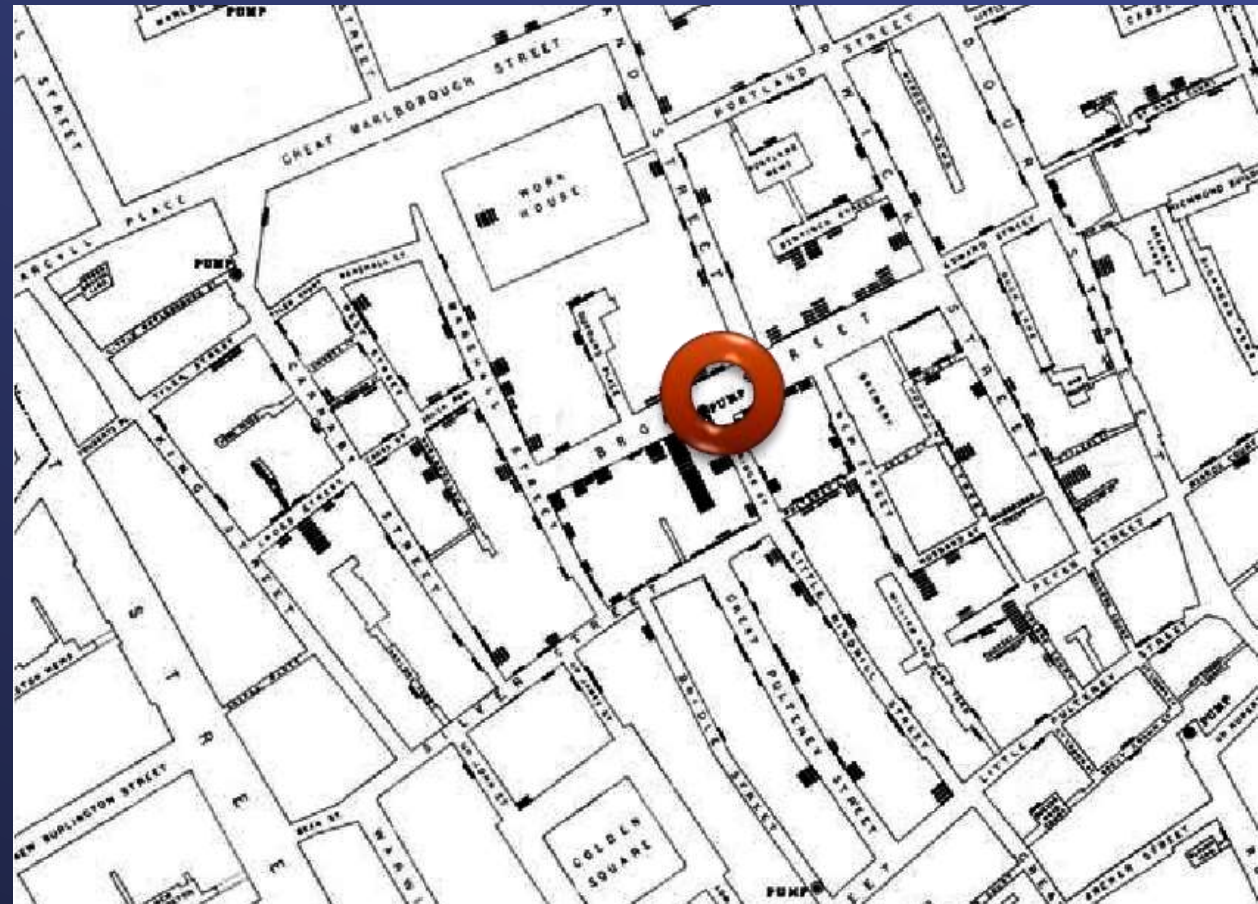
Item 6b

May 24, 2022

Before One Water, two waters reigned

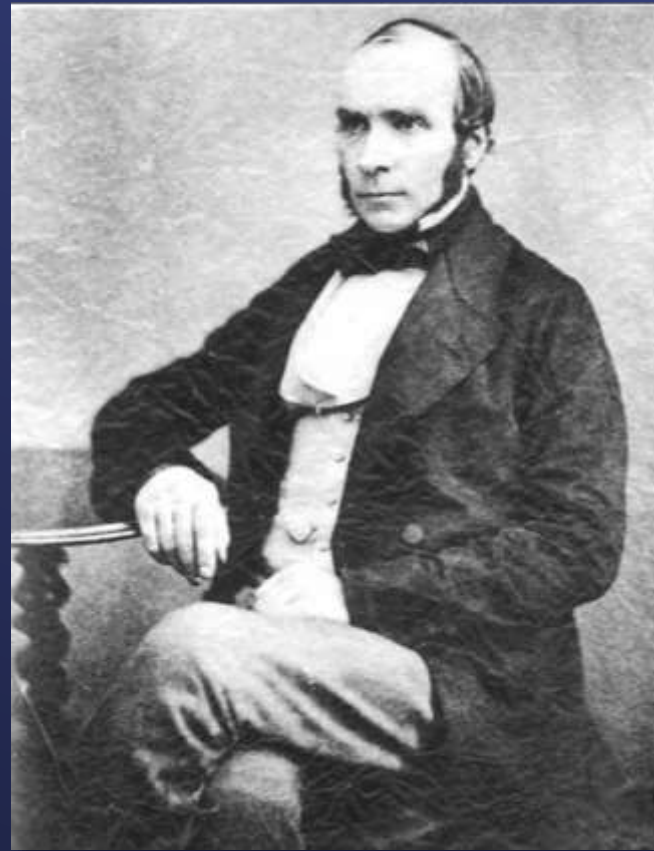
Two Waters Concept

Dr. John Snow's map targeted the Broad Street Pump in London (1854)



Before One Water, two waters reigned

Two Waters Concept



John Snow



Edwin Chadwick

Two Waters Reigned for a Century

One Water considered early at Metropolitan



“...the only practical source for an additional supply is to be found in the waters of the Colorado River. **The single exception is the proposal to reclaim the water of the sewage.** To some extent this may prove possible, but none of the water so reclaimed could be used in any municipal system. All of it would necessarily be devoted to manufacturing and irrigation uses”.

MWD Engineering Board of Review (1930)

Two Waters Reigned for a Century

Reuse considered in Los Angeles in 1930



Los Angeles Experimental Plant

“The final water is clear, clean, odorless, tasteless and suitable for drinking purposes.”

Goudey (1931)

Two Waters Reigned for a Century

Emergency Reclaimed Water
use in Chanute, Kansas
(1956)

Early missteps didn't help



“The treated water had several objectionable characteristics. It had a pale-yellow color and an unpleasant musty taste and odor.”

Metzler (1958)

Two Waters Reigned for a Century

Emergency Reclaimed Water
use in Chanute, Kansas
(1956)

Early missteps didn't help



“The reuse of sewage treatment plant effluent to supplement deficient water supplies should not be considered or permitted except under the most severe emergency conditions.”

Metzler (1958)

Two
Waters
Reigned for
a Century

Two Waters Established in Legislation...
but provided an opportunity

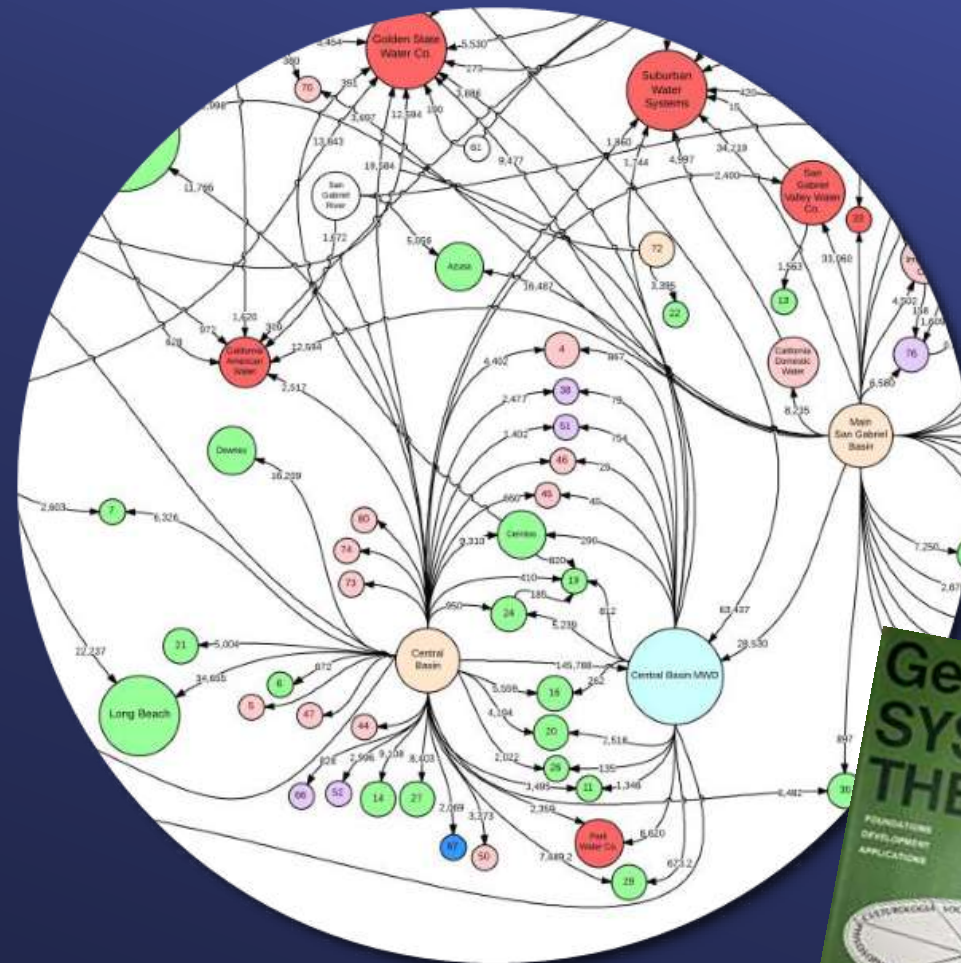


Clean Water Act
(1972)



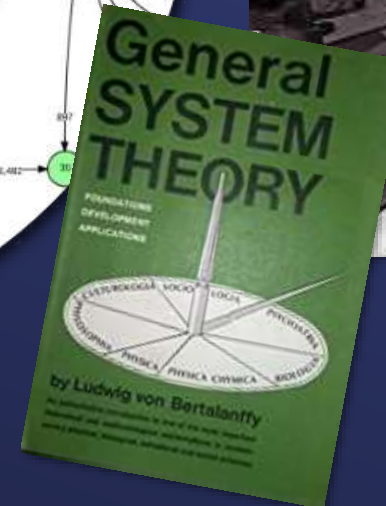
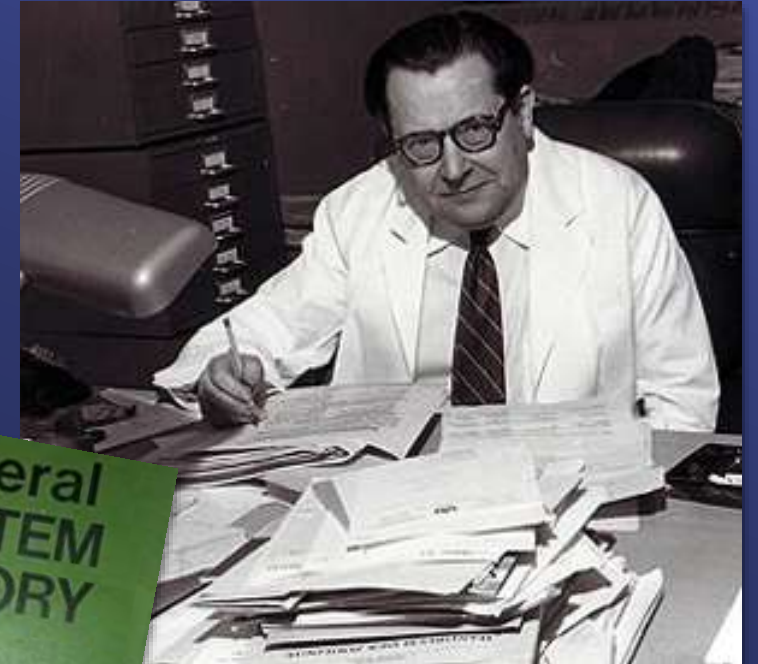
Safe Drinking Water Act
(1974)

Systems Thinking Changed the Game

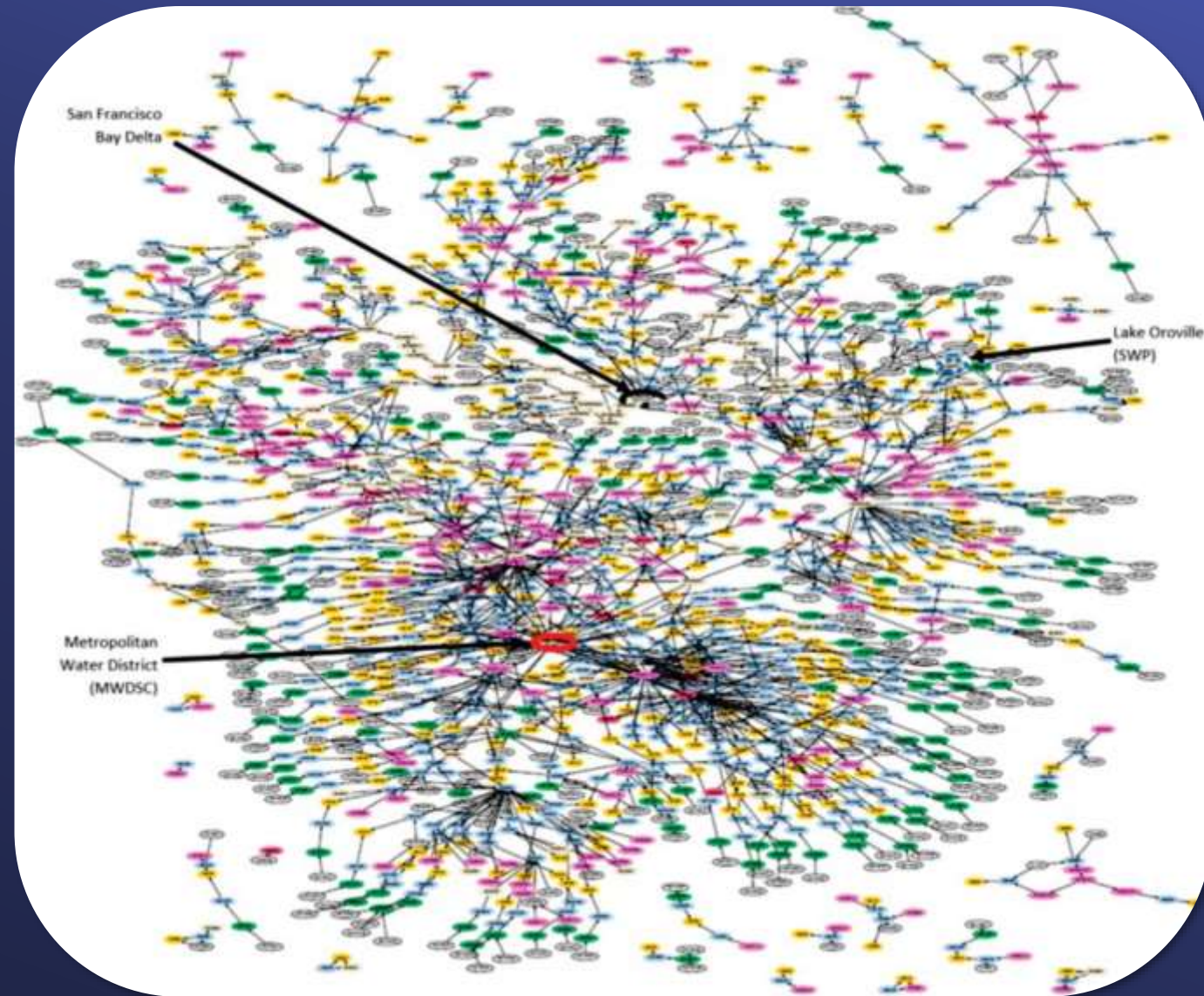


Pincetl & Glickfeld (2015)

Karl Ludwig von Bertalanffy

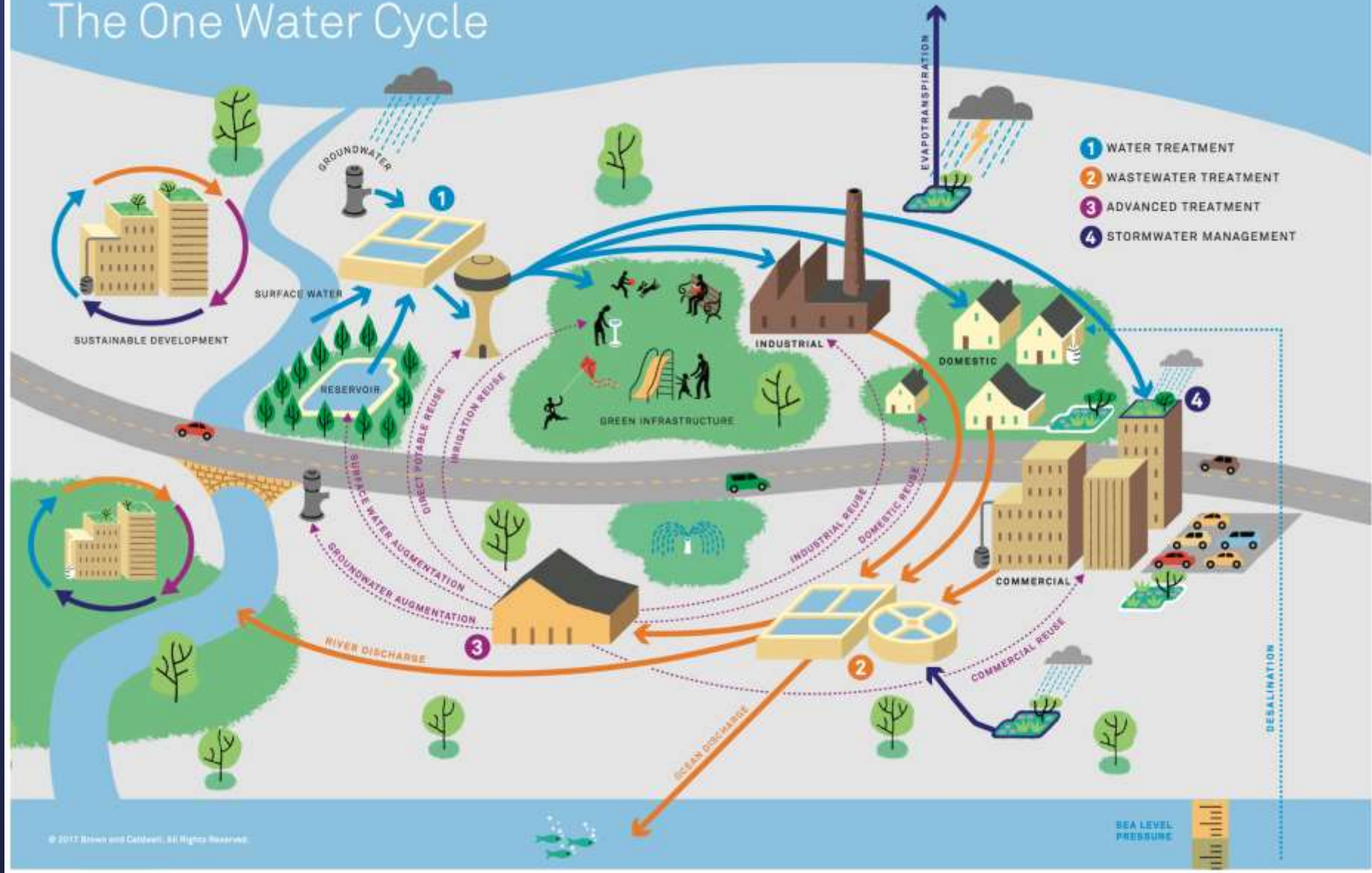


Systems Thinking Changed the Game



Stokes-Draught (2017)

The One Water Cycle



Paulson et al. (2017)



Definition



“Managing all water in an integrated, inclusive, and sustainable manner to secure a bright, prosperous future for our children, our communities, and our country.”

US Water Alliance (2016)



“An integrated planning and implementation approach to managing finite water resources for long-term resilience and reliability, meeting both community and ecosystem needs.”

Paulson et al. (2017)



Definition

The mission of the Metropolitan Water District of Southern California is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.



“An integrated planning and implementation approach to managing finite water resources for long-term resilience and reliability, **meeting both community and ecosystem needs.**”

Paulson et al. (2017)



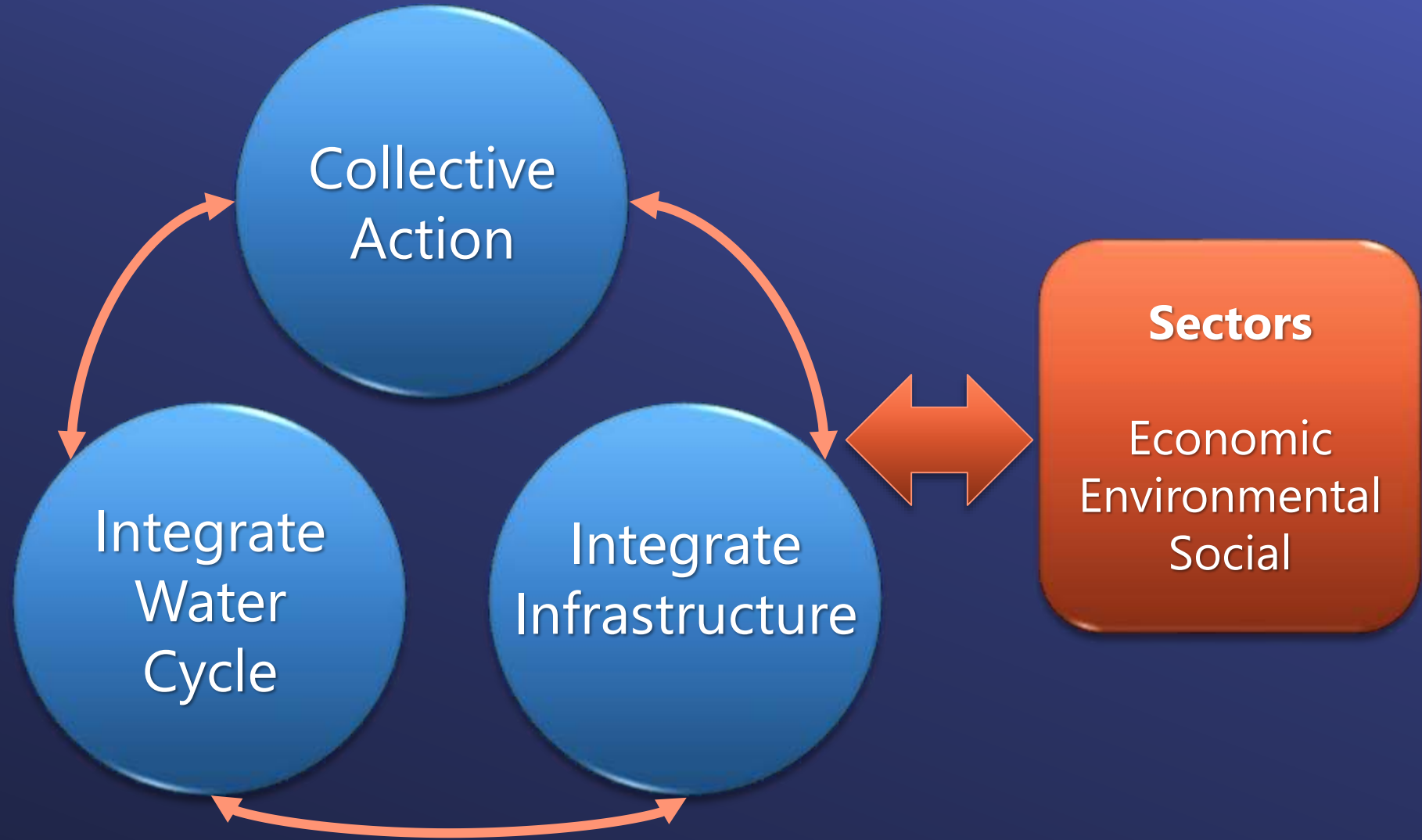
Strategic Priorities Support One Water

- **Empower**
Empower the workforce and promote diversity, equity, and inclusion
- **Sustain**
Sustain Metropolitan's mission with a strengthened business model
- **Adapt**
Adapt to changing climate & water resources
- **Protect**
Protect public health, regional economy, & Metropolitan's assets
- **Partner**
Partner with interested parties and the communities we serve





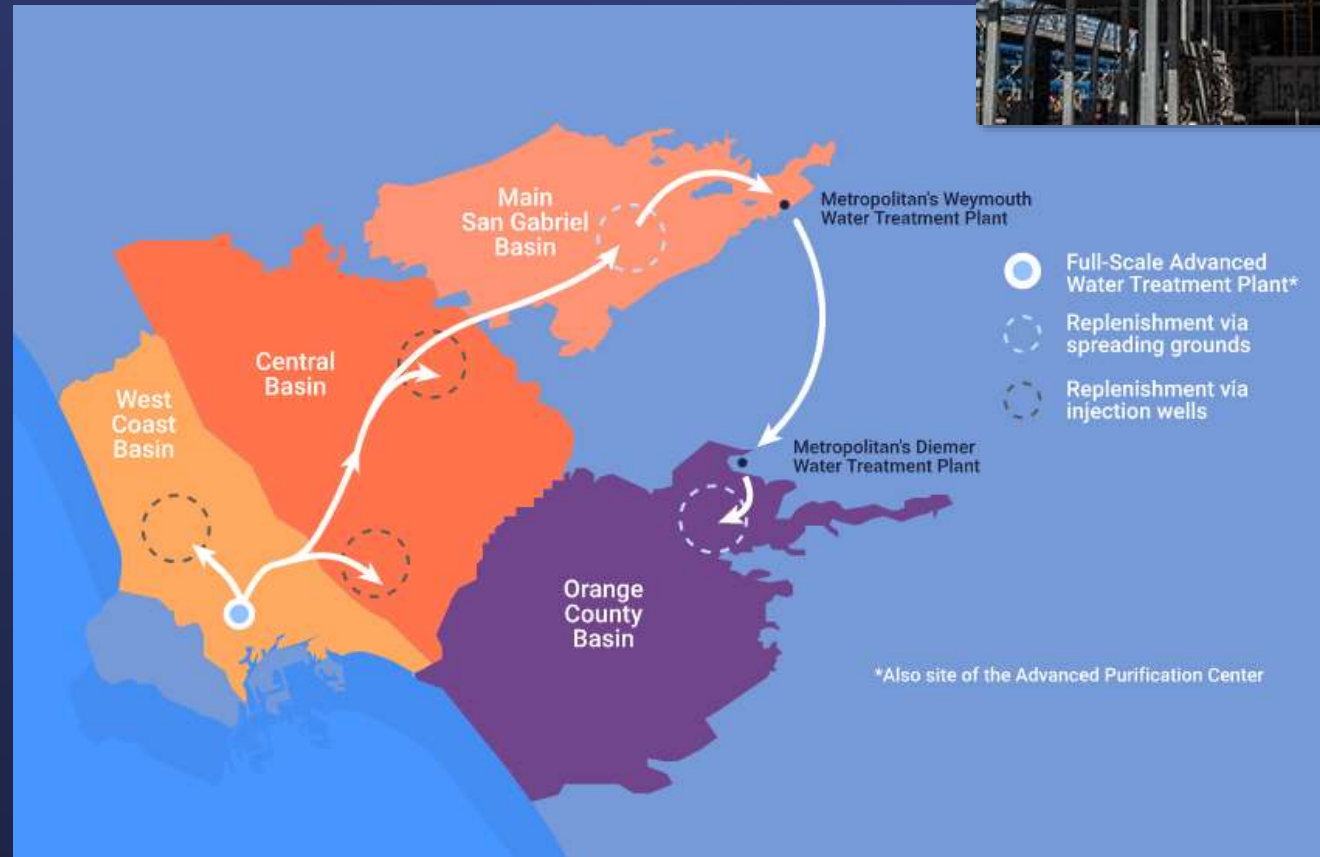
Attributes & Coordination



Grigg (2021)



Regional Recycled Water Program





Connecting Two Watersheds





Agricultural Partnerships



Voluntary fallowing



Irrigation efficiency



Flow measurement and control



Seeking Delta Solutions



Delta Partnerships



Delta Science



Potential Delta
Conveyance Corridors



Expanding Storage



Antelope Valley East Kern
Water Bank





Supporting Local Projects



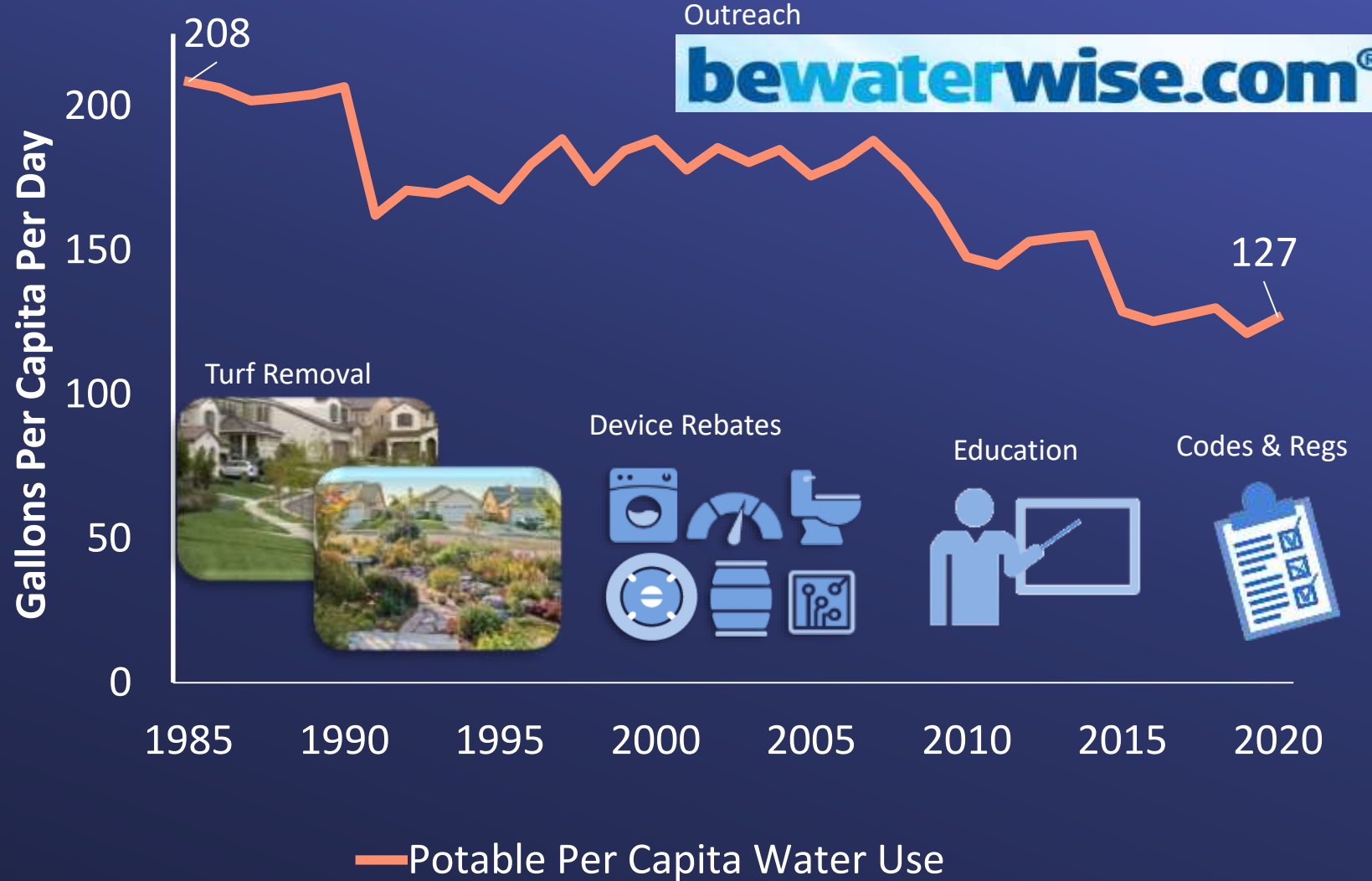
San Diego



Santa Monica

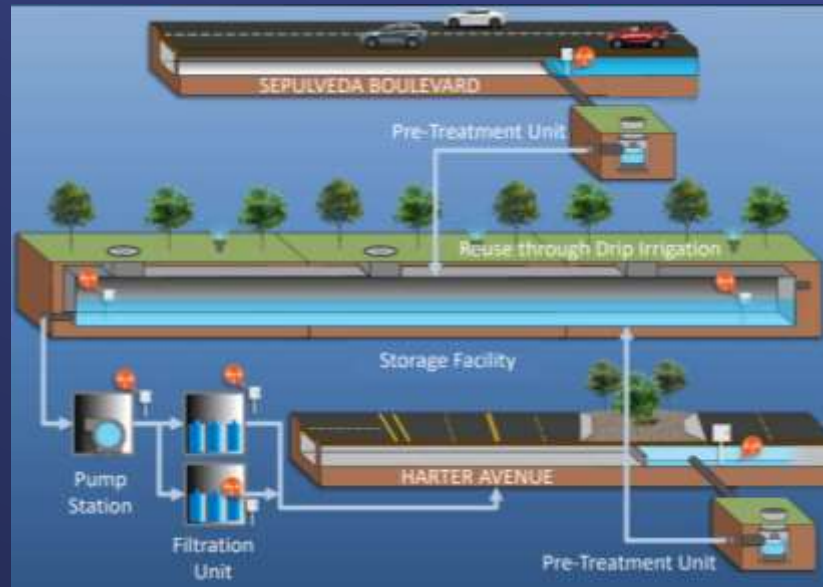


Expanding Water Efficiency





Examining Stormwater



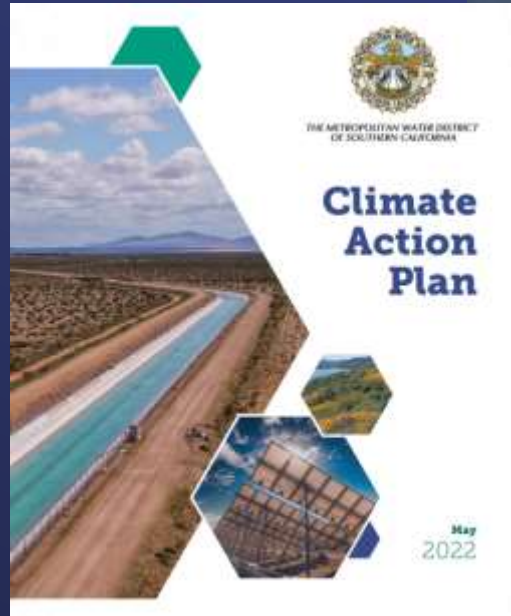
West Basin MWD (City of Culver City)



Western MWD (Victoria Recharge Basin)



Sustainability, Resiliency, & Innovation





One Water and Metropolitan

One Water Expands our Thinking

- Metropolitan's mission and activities overlap with One Water
- One Water expands Integrated Resource Planning
- General Manager's Strategic Priorities emphasize One Water concepts



References

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