

USC Spring Sustainability Forum

Water Conservation



April 2019



Topics:

Regulations

Completed Projects

Long Term Planning

Net Zero Water

Discussion

Regulations:

Policy that shapes strategy

- 2014:

- State of Emergency due to Drought
- Expanded allowable uses of Recycled Water

- 2015:

- Executive Order – Mandatory 25% reduction

- 2017:

- Drought Emergency Lifted/ Conservation Way of Life

- 2019:

- LA Mayor announces 100% of wastewater recycled by 2035

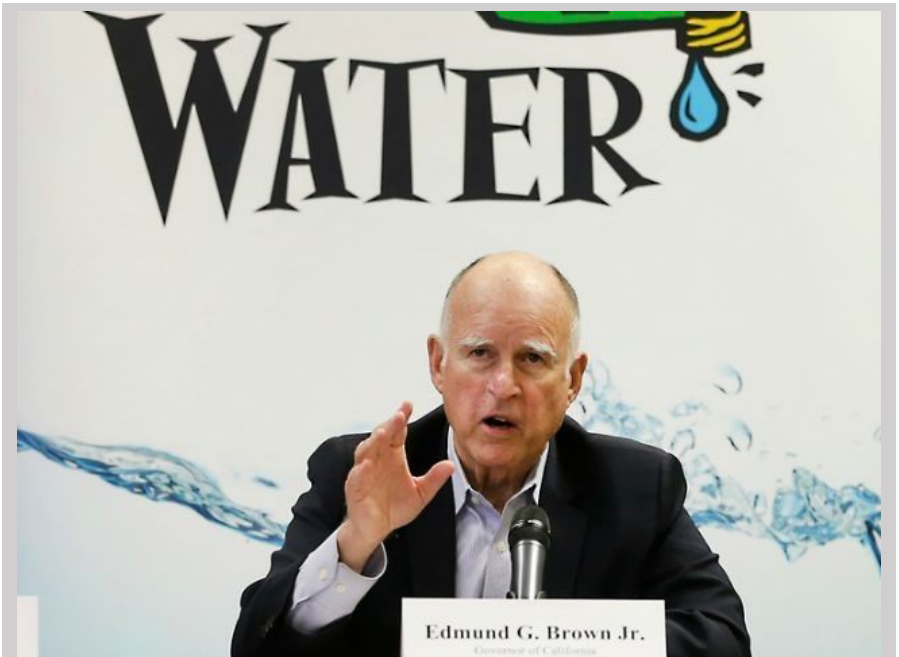


Image from "Jerry Brown Makes Some Drought Restrictions Permanent" by Daniel Nussbaum article for Breitbart , May 10, 2016



Photo by Justin Sullivan/Getty Images



Kirby Lee/Image of Sport-US PRESSWIRE

Completed Projects:

2020 projects completed

- Landscape/Hardscape
 - Native Drought Tolerant Plants
 - Drip Irrigation
 - Synthetic Turf
 - Water efficient equipment
 - Water bottle refill stations



Drought tolerant planting at TTL



Interior water sub-meter



Low flow sensor faucet

Completed Projects:

2020 projects completed

- Sub-Metering
 - Phase 1 – 17 buildings
- Low Flow Fixtures
 - Housing has already replaced fixtures
 - 1,200 fixtures will be replaced

Completed Projects:

2020 projects completed

- Recycled Water
 - FMS install started late 2009
 - Master plan approved 2010
 - Main infrastructure completed Jan 2019
 - Will serve fields irrigation and cooling towers
 - LADWP will bring USC recycled water by end of 2024



Recycled water piping install at McClintock Ave



Infiltration Basin North of University Club



Underground Infiltration system at Robert Zemeckis Center



Stormwater detention piping being delivered to Watt Way

Completed Projects:

2020 projects completed

- Stormwater Management
 - 2004 City of LA stormwater management requirements
 - 2011 Low Impact Development Ordinance
 - Captures rain runoff from an above avg. 24-hr storm
 - Reduces pollution from runoff
 - Recharges the groundwater table

Long Term Planning:

- Need to meet USC goal of 25% reduction
 - Convert more areas to native drought tolerant landscape
 - Sub-meters on bldgs
 - Low Flow Fixtures
 - Pipe cooling towers & fields with recycled water
 - Continue installation of Stormwater BMPs



Native plants at Queens Courtyard



Recycled Water Purple Pipe

Long Term Planning:

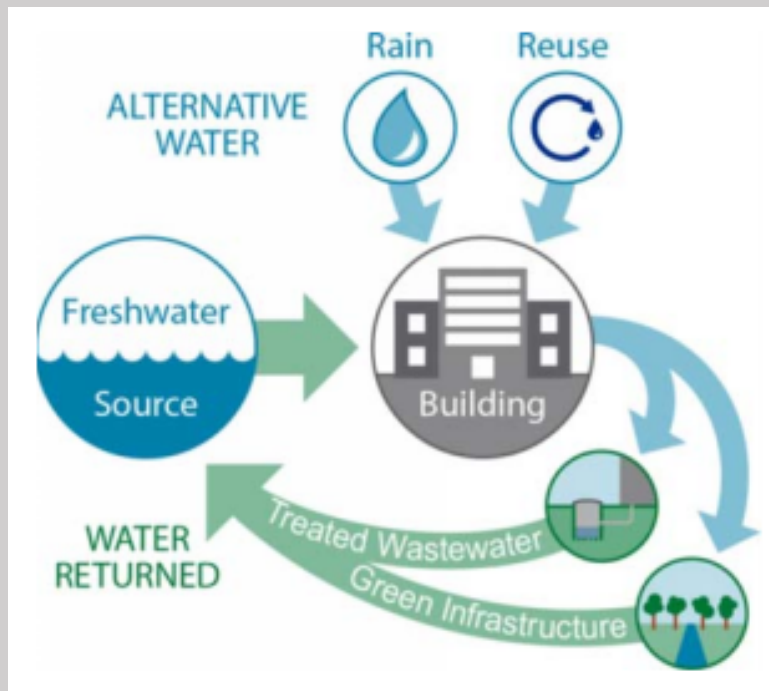
- Landscape
 - Trees
 - Grass/Events
- Recycled Water
 - None at HSC Campus
 - Dependent on LADWP
- Rain Capture & Reuse
 - Avg annual rainfall insufficient
- Graywater Capture & Reuse
 - Cost/benefit



Large Sycamore Tree in Alumni Park



An up close landscape shot of San Jacinto Wildlife Area, Tom Grubbe - Getty Images



$$\begin{array}{c}
 \text{Alternative} \\
 \text{Water use} \\
 + \\
 \text{Water} \\
 \text{Returned} \\
 \hline
 \text{Total} \\
 \text{Water Use}
 \end{array}$$

Net Zero Water:

Reality in LA Basin

- Alternative Water
 - Not enough rain
 - Cannot mine City Sewers/Storm drains
- Water Returned
 - No large areas of open space
- Water Use
 - Widespread change in mentality



Discussion:

Comments and questions