



## Annual Sustainability Programs Update

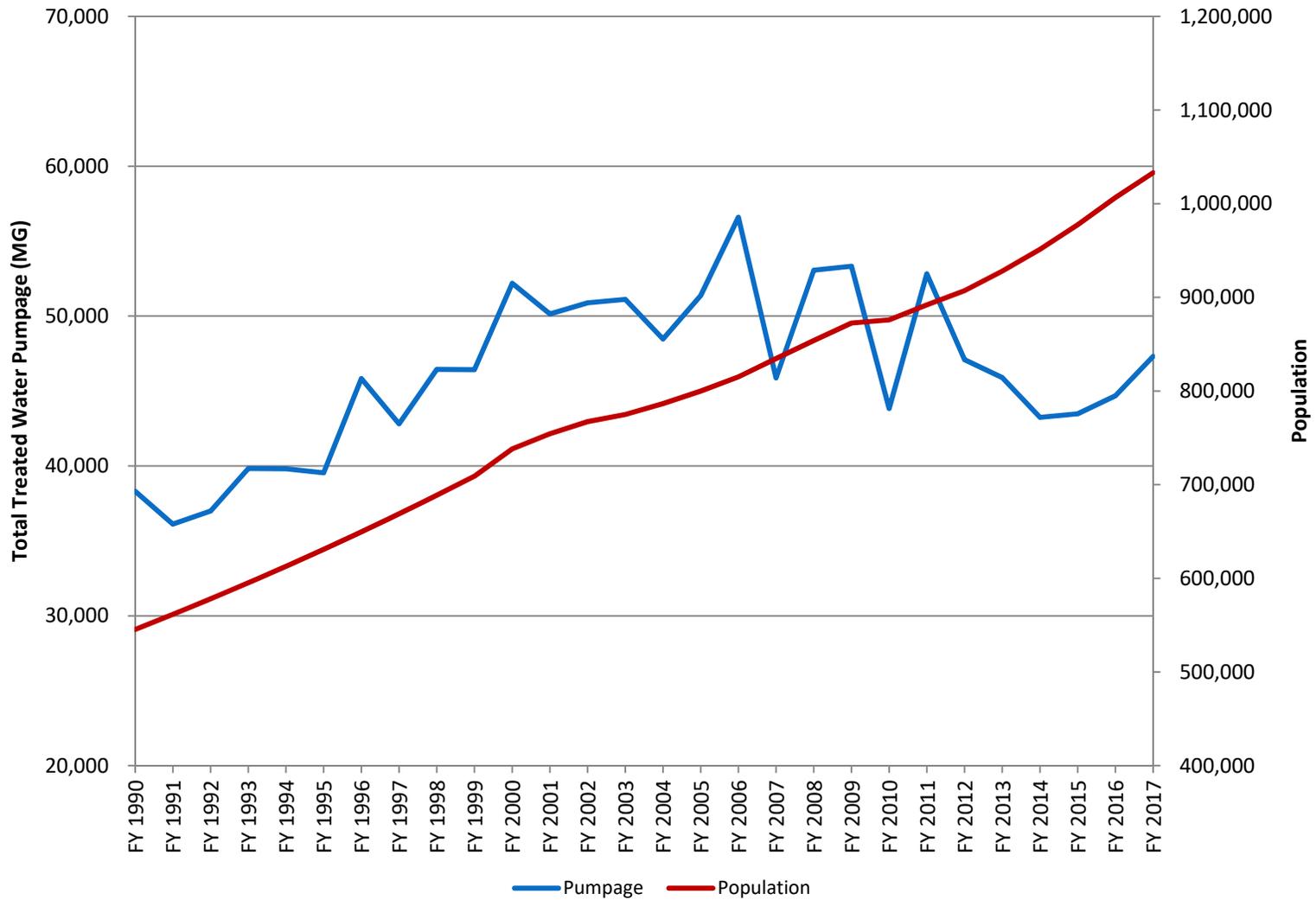
Water and Wastewater Commission, November 8, 2017

Daryl Slusher, Assistant Director



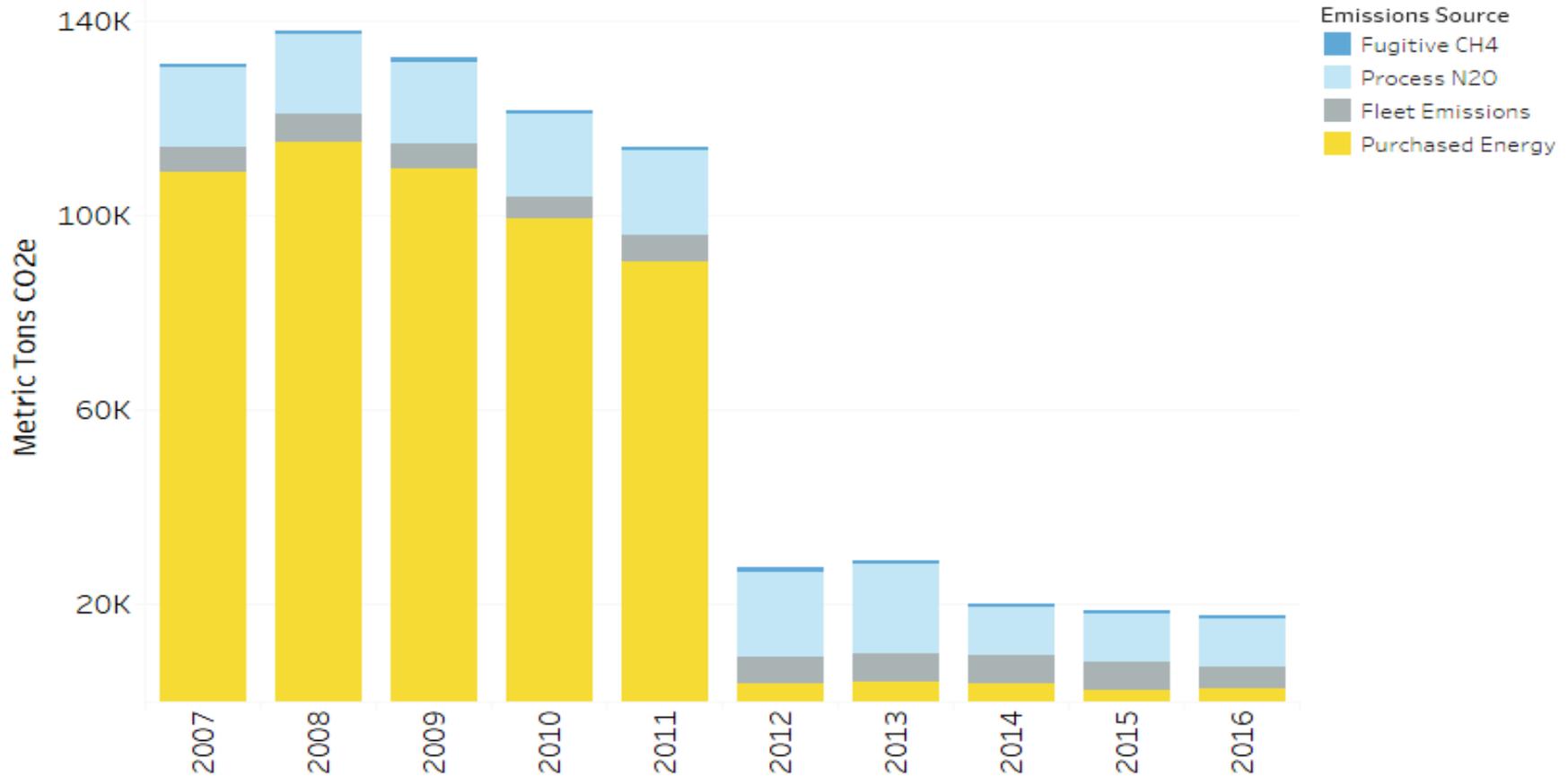
- Population Growth and Conservation
- Energy and Emissions
- Climate Threats and Vulnerabilities
- Adaptation and Resilience

## Austin's Water Demand and Population





# Emission Tracking and Reduction



City of Austin, Office of Sustainability

## Reducing Energy Use and Greenhouse Gas Emissions



**Hornsby Bend Biosolids Management Plant generates renewable electricity and heat that is used by the facility by burning methane gas produced by the treatment process.**

- Green Choice
- Cogeneration at Hornsby Bend Biosolids Facility
- Water Treatment Plant 4
- Glen Bell Service Center Solar Roof
- Energy efficiency gains as infrastructure is maintained and upgraded
- Operational efficiencies
- Hybrids in fleet

# Horizon Innovations

- Developing Mobile Workforce Mapping service requests to find ways to reduce trips and emissions.
- Advancing a risk based asset management framework to account for specific threats stemming from climate change.
- Participated in a national-level effort to develop climate resilient design standards for pipelines to better tolerate shifts in soils.
- Working with our sister departments Watershed Protection and Austin Energy to explore operational synergies.



# Wildlands Conservation

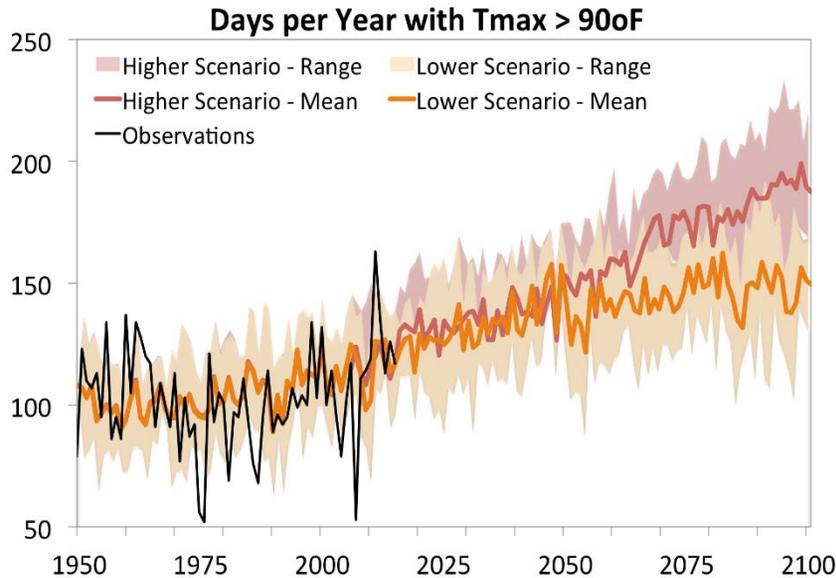
- Protecting drinking water quality long before it reaches treatment plants
- Protecting Barton Springs water quality
- Conserving endangered species directly and indirectly
- More than 43,000 acres managed for water quality and endangered species protection
- Reviving Texas natural heritage and native ecosystems
- Funding for additional land purchases under consideration by Citizen Bond Committee



# A Changing Climate in Austin

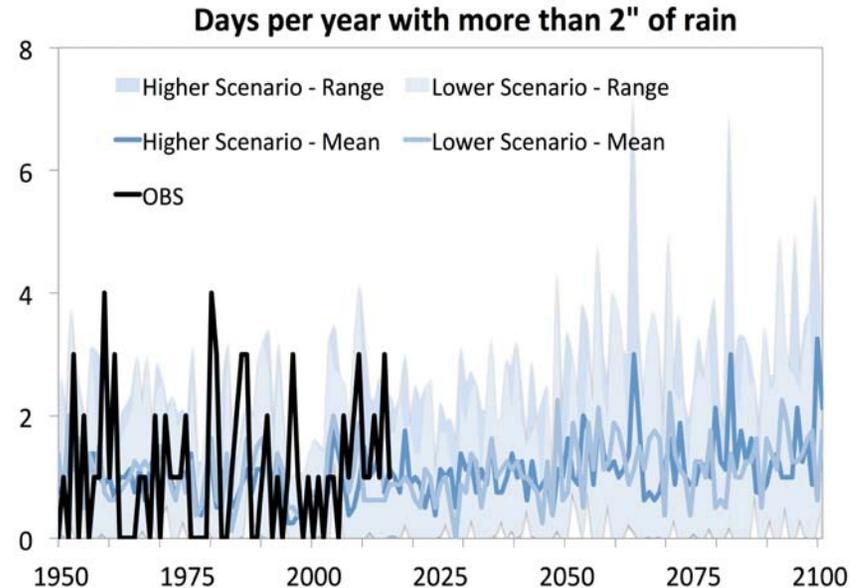
## Higher temperatures

- Projected temperature increases
- Higher evaporation and increased drought intensity



## Increases in heavy precipitation

- Projected increases in magnitude and number of heavy rain events



# Threats and Vulnerabilities?

Increasing Frequency

2011 Heat Wave



2008-2015 Drought



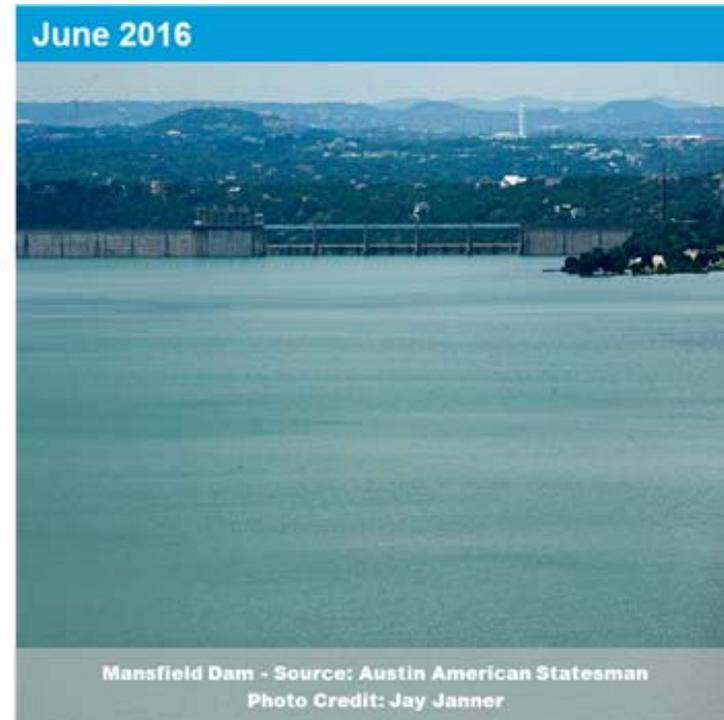
2013 & 2015 Floods



2011 Steiner Ranch and Bastrop Fires

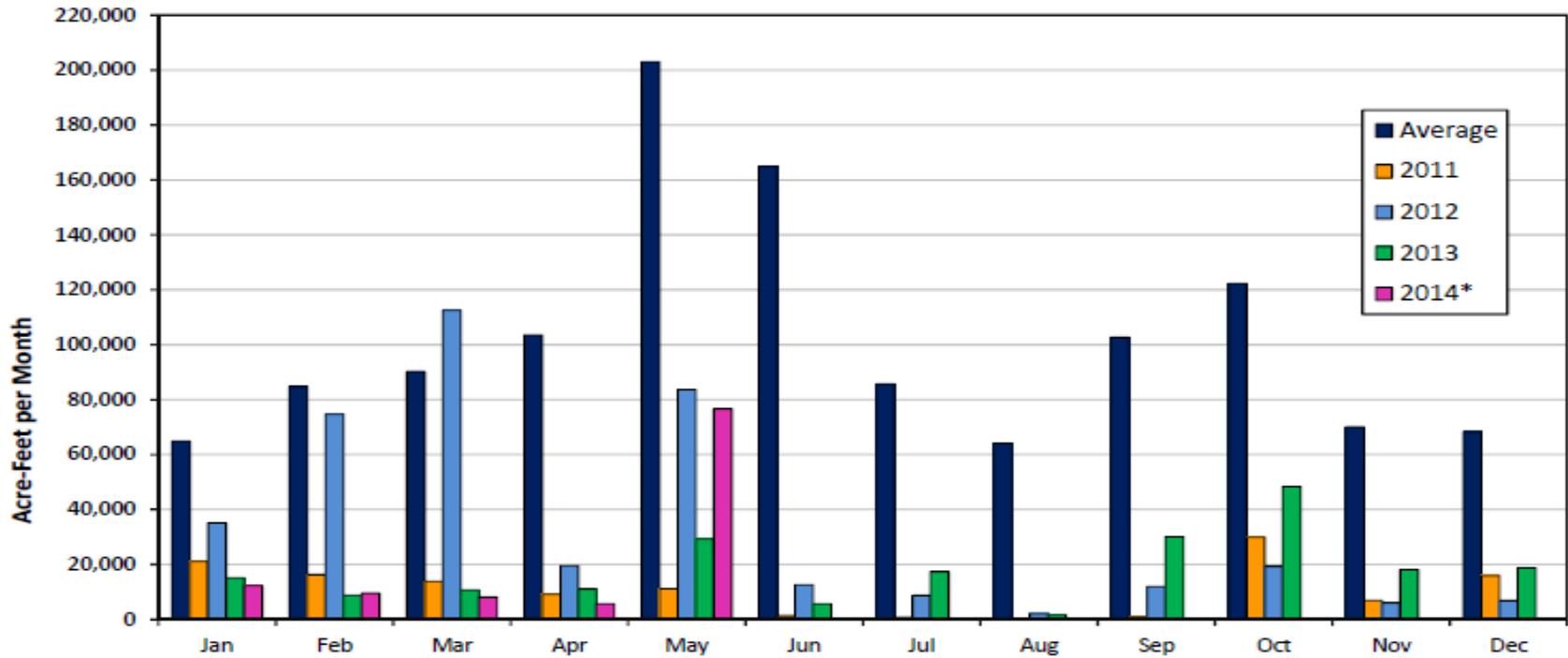


## Lake Travis Before and After



- “...the drought gripping the Highland lakes is now the most severe drought the region has experienced since construction of the lakes began in the 1930s” – LCRA, 2014

# Inflows to Lakes Buchanan and Travis



Calendar Year Totals, ac-ft	
Average:	1,230,284
2011:	127,802
2012:	393,163
2013:	215,138

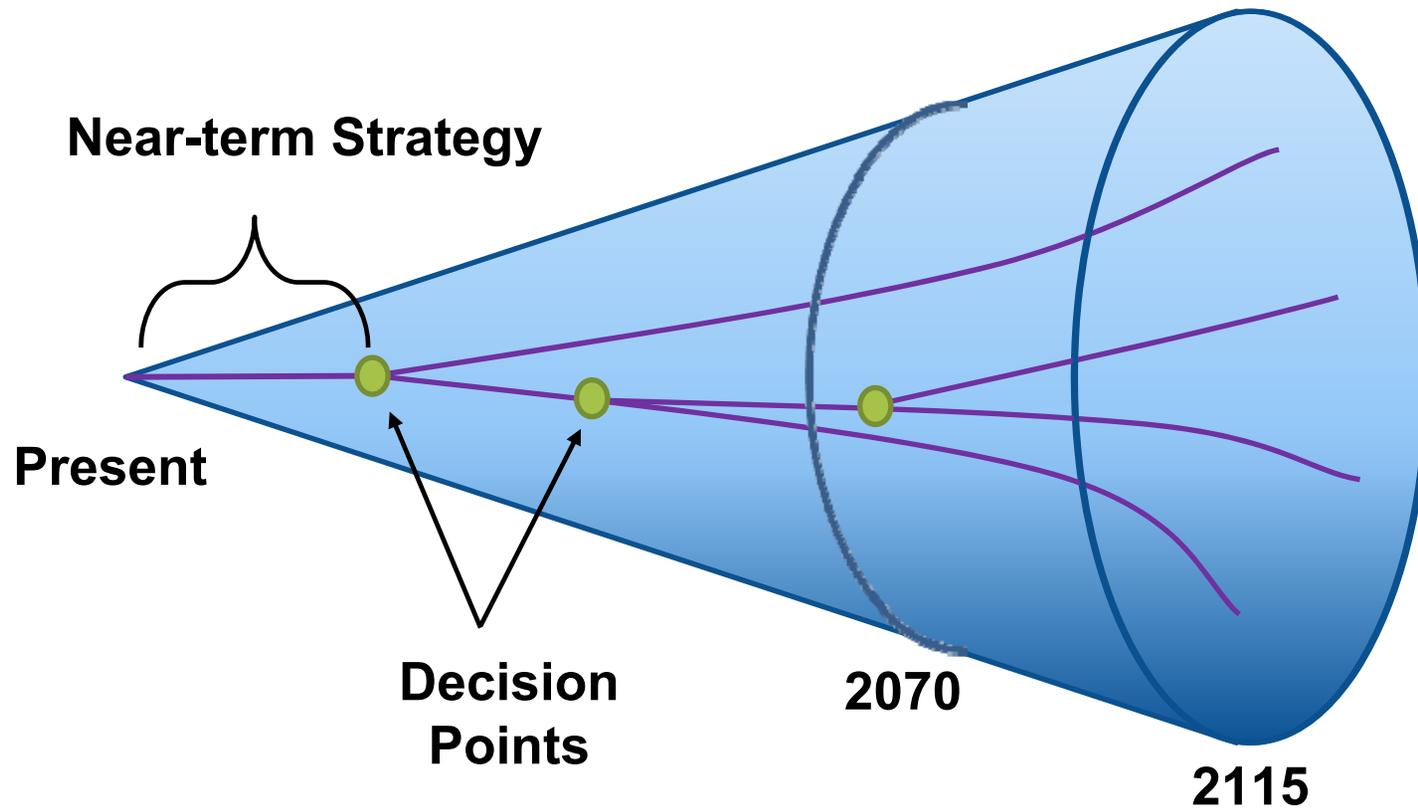
Jan.-May Totals, ac-ft	
Average:	546,288
2011:	71,632
2012:	325,572
2013:	75,042
2014:	112,194

Monthly averages correspond to the historical period of record, 1942 through present.

\*Inflow data for 2014 are preliminary and subject to revision.

### SINCE THE LAKES WERE BUILT

- 2014 January-April: All time driest January-April stretch
- 2014 January-May: 6<sup>th</sup> driest January-May stretch





## Water Utility Climate Alliance

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### Member agencies

The Water Utility Climate Alliance (WUCA) comprises 11 of the nation's largest water providers. WUCA members supply drinking water for more than 50 million people throughout the United States.

