

Risky Business – Adapting to a Drier West: Development Impacts and Mitigation Strategies

ULI Fall Conference San Francisco

October 7, 2015

Panelists

- **Charles E. Teal**, CEO, Saussy Burbank, LLC
- **Thomas Iseman**, Deputy Assistant Secretary for Water and Science, U.S. Department of the Interior
- **Matthew J. Diserio**, President and Co-Founder, Water Asset Management, LLC
- **Ryan Starck**, Senior Vice President Western Region Manager Homebuilder Bank Group, Wells Fargo
- **Thomas DiPrima**, President, Southern California Urban Operations, KB Home

The Urban Land Institute



- The mission of the Urban Land Institute is to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide.
- Established in 1936, ULI has more than 34,000 members worldwide, representing the entire spectrum of the land use and development disciplines.
- It is through member involvement that ULI has been able to set standards of excellence in development practice.

ULI Resilience Program

Building the Resilient City

A ULI Conference Report

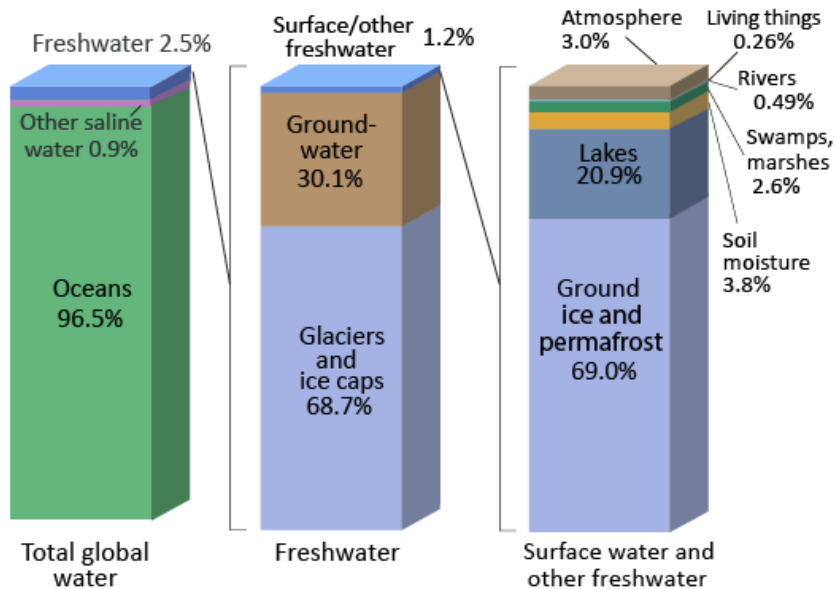


THE KRESGE FOUNDATION

- The Urban Resilience Program works to help communities prepare for increased climate risk in ways that allow a quicker, safer return to normalcy after an adverse event, but also the ability to thrive going forward.
- We can protect the value we have created in our cities and make them more robust when facing adversity.

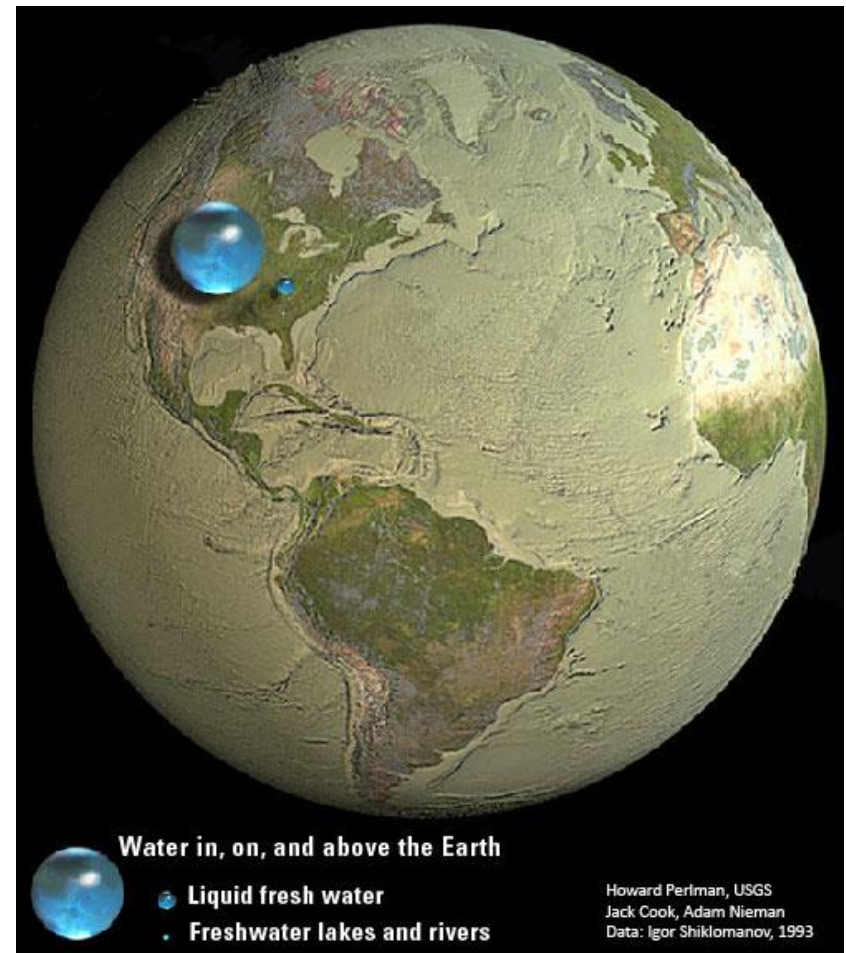
World's Water Usage Representation

Where is Earth's Water?

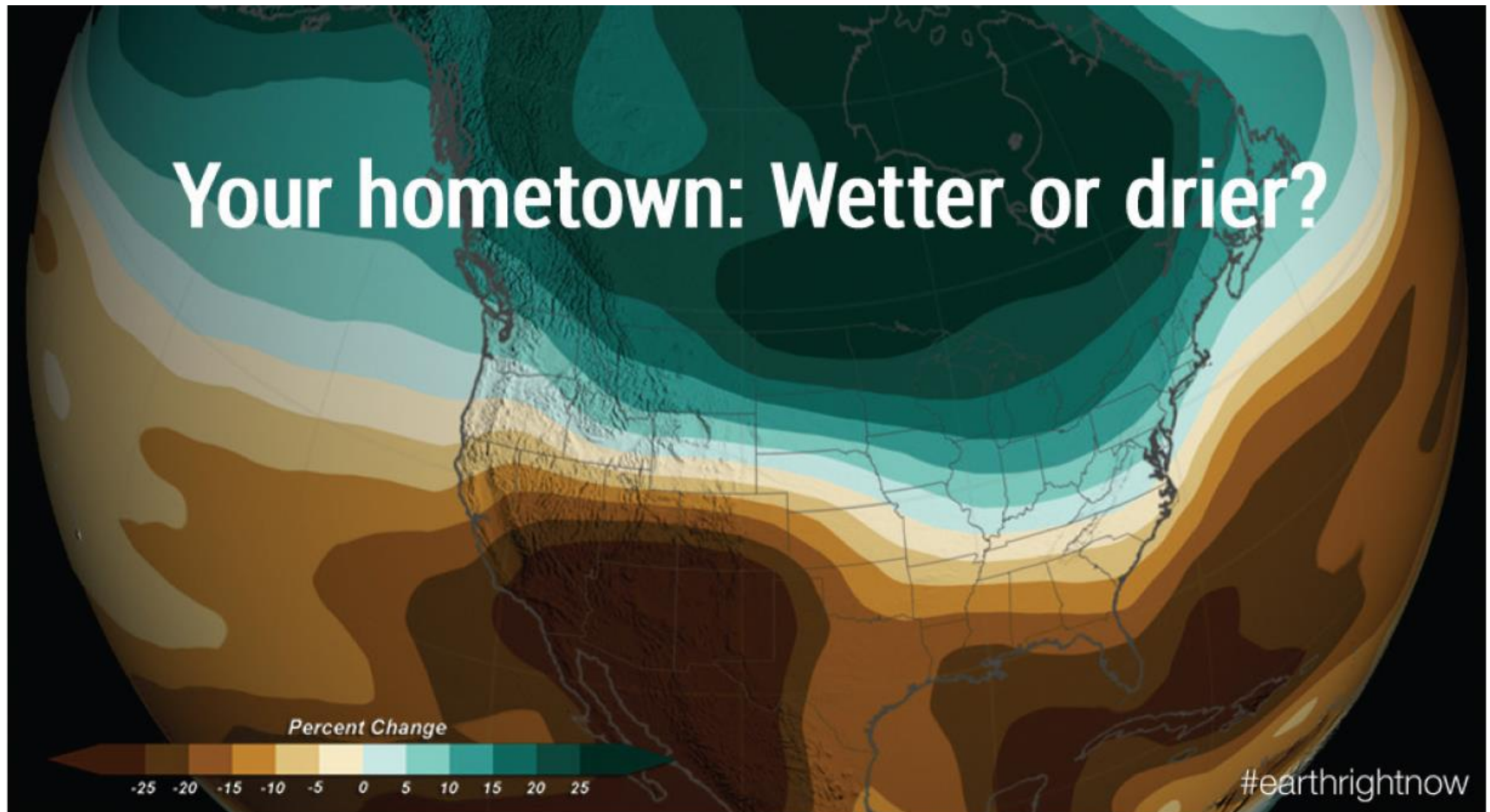


Source: Igor Shiklomanov's chapter "World fresh water resources" in Peter H. Gleick (editor), 1993, *Water in Crisis: A Guide to the World's Fresh Water Resources*.

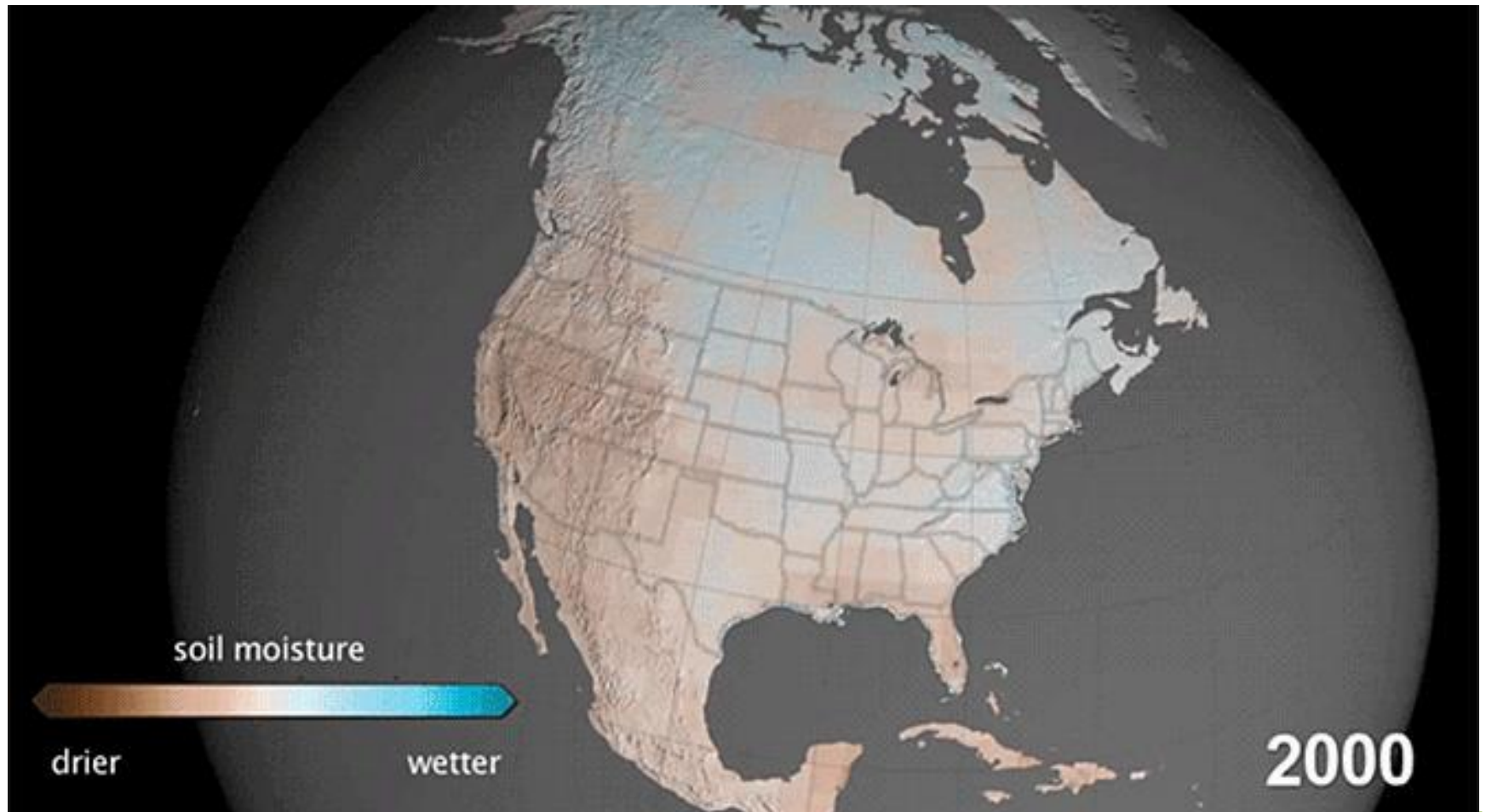
NOTE: Numbers are rounded, so percent summations may not add to 100.



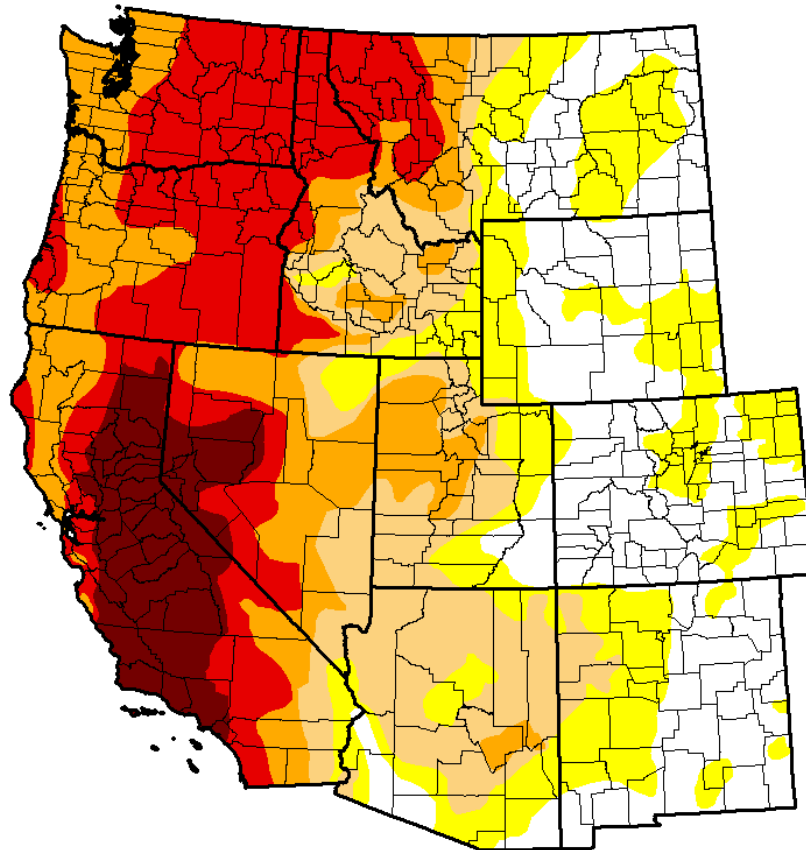
A Changing Climate: NASA Projections



A Changing Climate: NASA Animation



Drought Conditions as of Last Thursday



Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

Water Supply: Lake Powell



Energy Supply: Folsom Dam



Lake Mead and Hoover Dam



Impacts to Recreation



Increasing Wildfire Threats



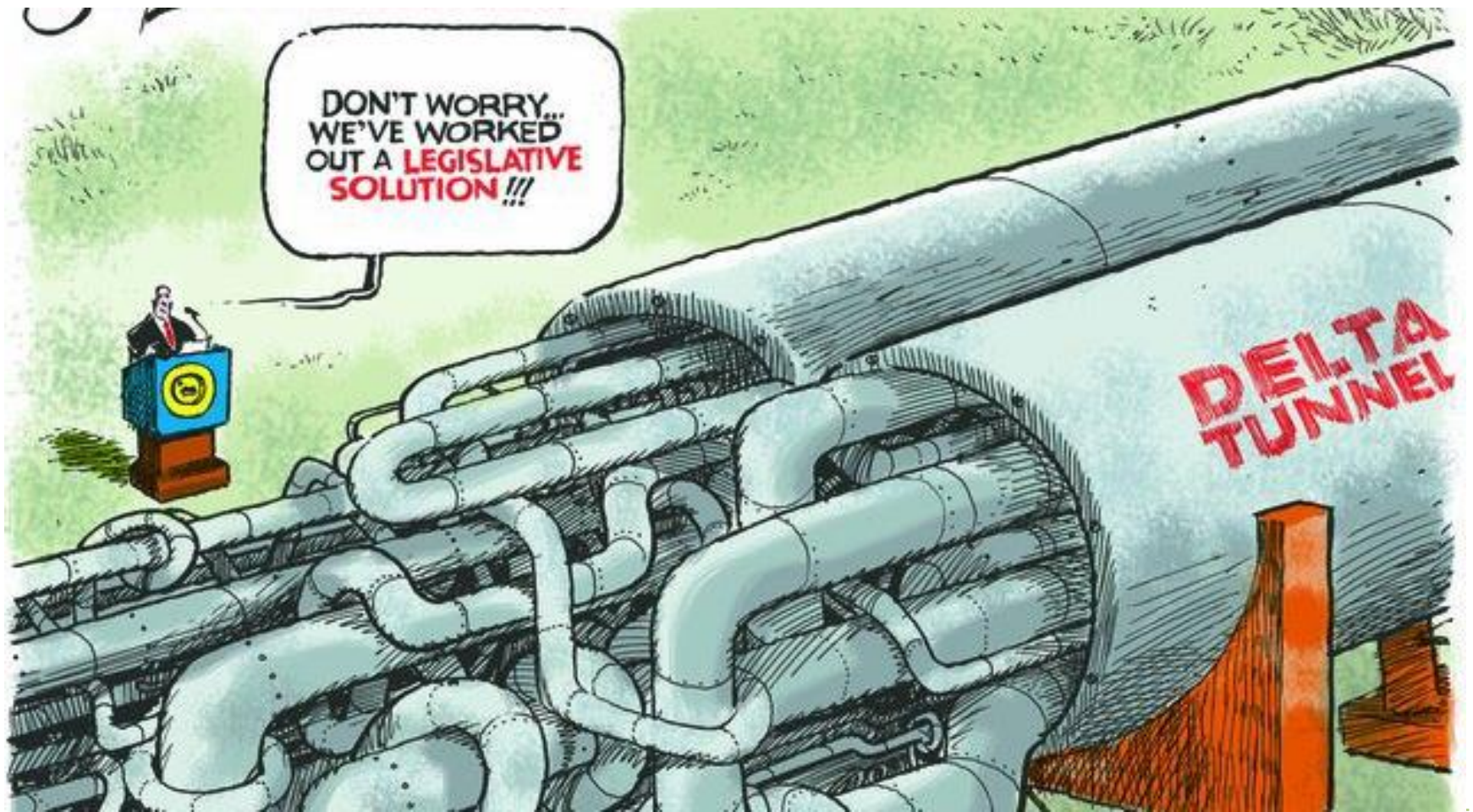
Increasing Wildfire Threats



Water Supply and Allocation



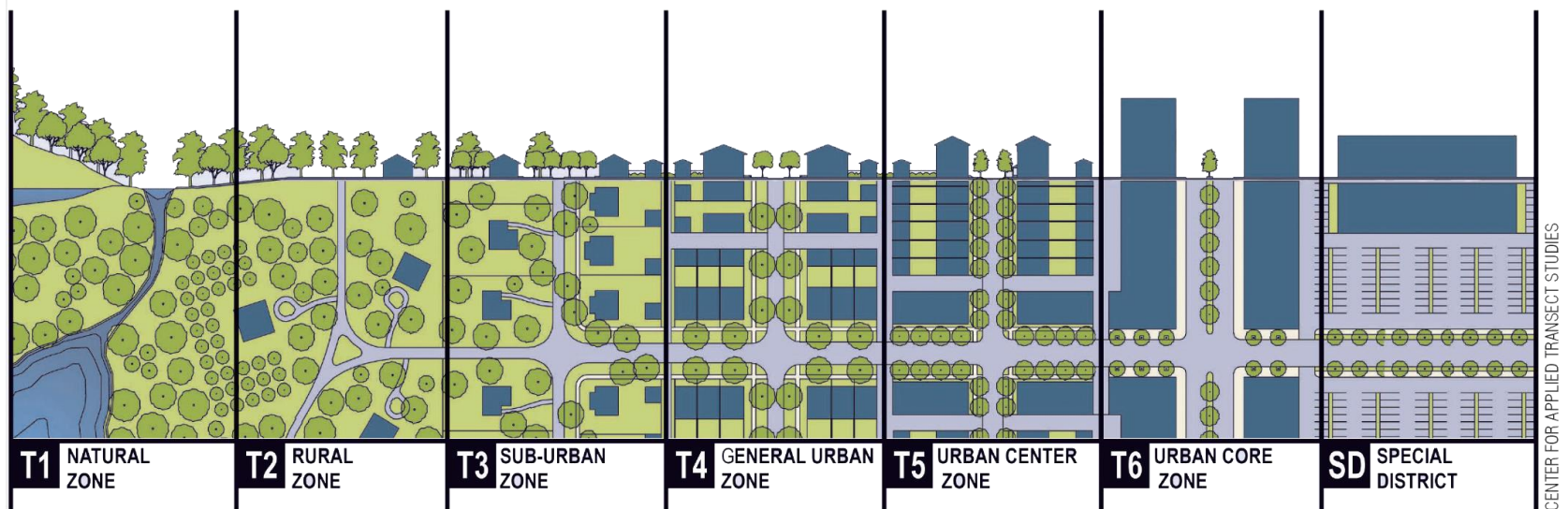
Infrastructure Investment



Regional Resource Protection



The Rural-Urban Transect



The Rural-Urban Transect: Denver



The Rural-Urban Transect: LA



Impacts to the Natural Zone



Impacts to the Natural Zone



Impacts to the Rural Zone



Impacts to the Rural Zone



Impacts to the Rural Zone



Impacts the Suburban Zone



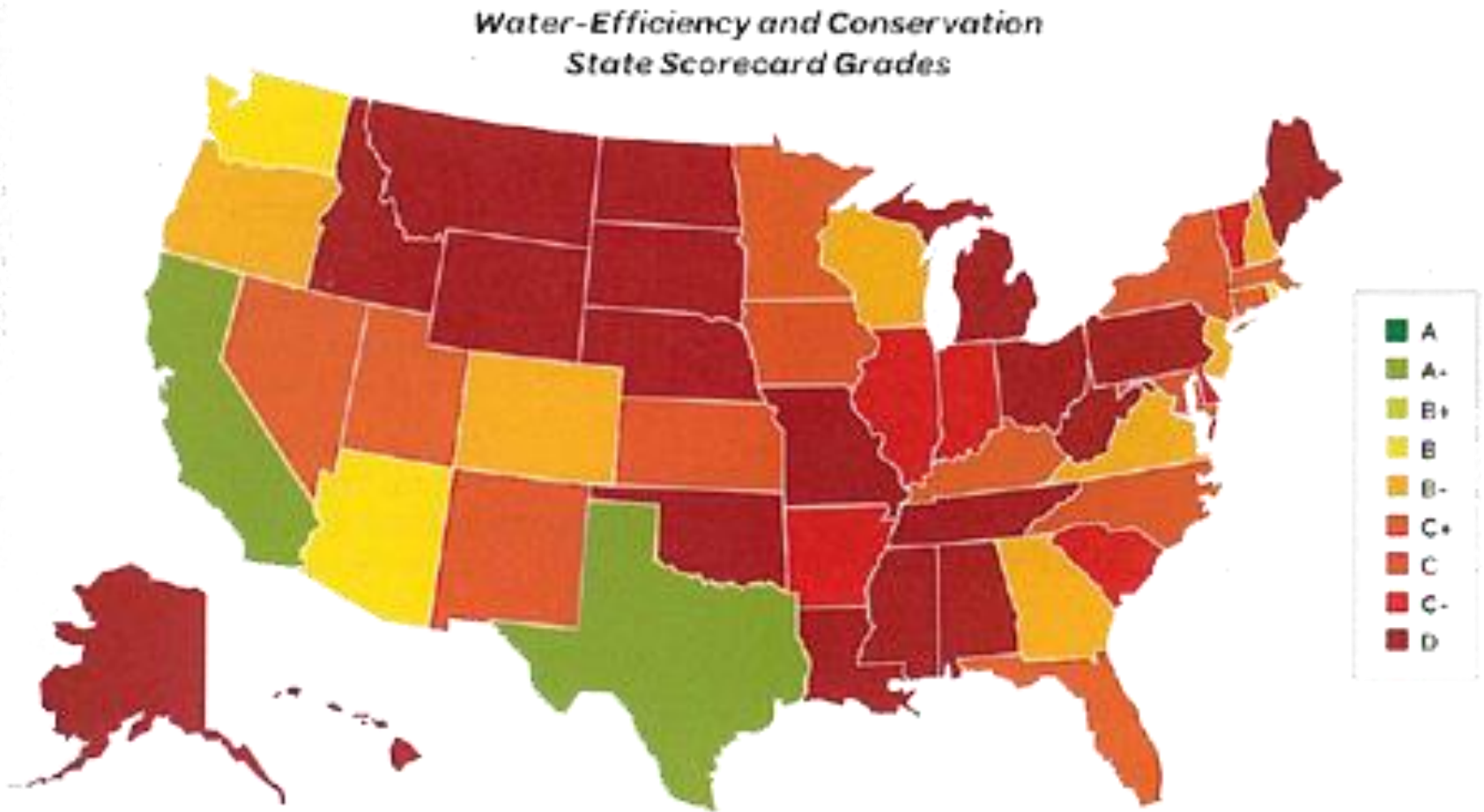
Impacts to the General Urban Zone



Impacts to the Urban Core



Alliance for Water Efficiency: 2013

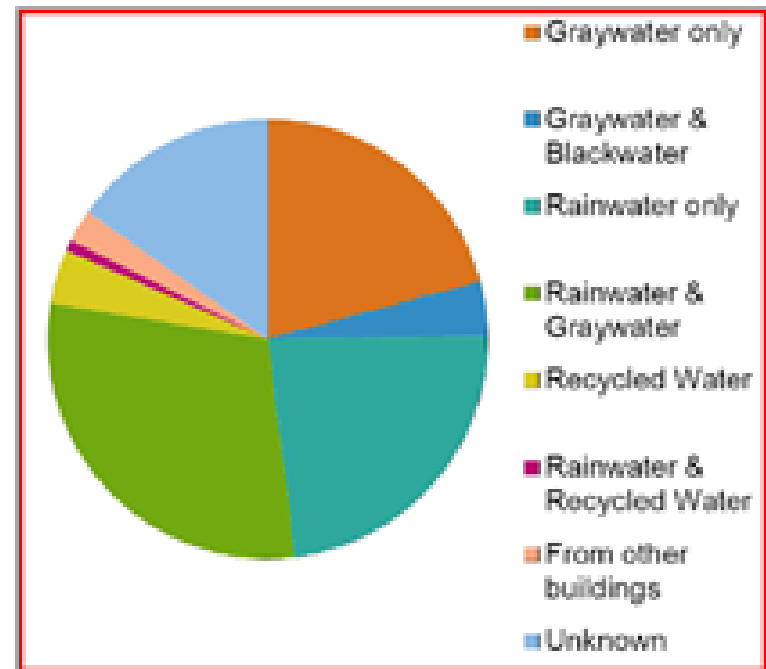


Finding Usable Water

New Water

60% of non-potable water demand in Tokyo is met by recycled water

- *Conservation*
- *Reuse*
- *Desalinization*
- *Rainwater*
- *Gray water*
- *Treated On-Site Sources of Water?*



Increasing Efficiency of Use

**One major Problem,
Water waste?:**



One Solution that saves energy and water: Recycler by Nexus



Reverse Osmosis Center



Research Facility in Alamogordo, NM



Public Awareness



Public Awareness



You could paint the lawn?



You could paint the lawn?



Resilient Lawns with Native Plants



Resilient Lawns with Native Plants



Resilient Lawns with Native Plants



Resilient Lawns with Native Plants



Consolidated Irrigation Company



Thank you!

Go to uli.org/resilience for more information about the resilience program and reports