

# **Colorado River Basin Water Supply and Demand Study: Moving Forward**

## **Municipal and Industrial Water Conservation and Reuse Workgroup**

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# Workgroup

## Co-chairs

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- Jack Safely, The Metropolitan Water District of Southern California
- Marc Waage, Denver Water

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## Workgroup participants:

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Scott Miller, Arizona Public Service

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Angela Rashid, Colorado River Board of California

John Currier, Colorado River Water Conservation District

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Kevin Reidy, Colorado Water Conservation Board

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Ben Bracken, Green River-Rock Springs-Sweetwater County Joint Powers Water Board

Bart Forsyth, Jordan Valley Water Conservancy District

Penny Falcon, Los Angeles Department of Water & Power

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Mike Greene, Public Service Company of New Mexico

Dan Denhan, San Diego County Water Authority

Thomas Maher, Southern Nevada Water Authority

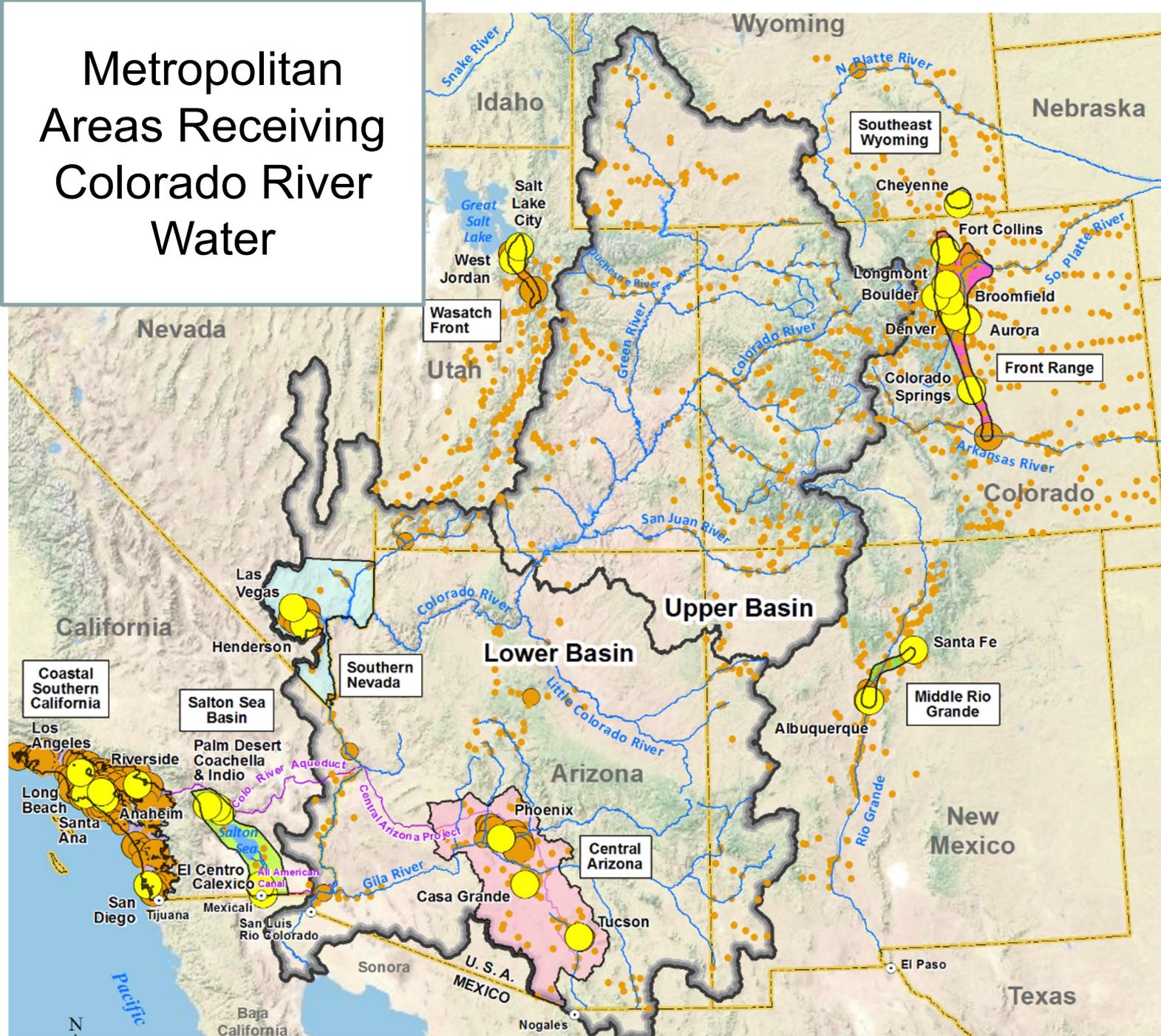
Erin Young, City of Flagstaff

Michael Cohen, Independent Consultant

# Tasks

1	Quantify water savings to date
2	Highlight successful, innovative water savings programs
3	Compile projected future savings
4	Evaluate the impact of savings on Colorado River use
5	Identify future opportunities and challenges

# Metropolitan Areas Receiving Colorado River Water



# 1) Savings

## Municipal use

- Per capita use decreased by 12 percent to 38 percent since 1990
- Uses ranges from 153 GPCD to 314 GPCD.
- At least 1.7 MAFY saved as compared to 1990 per capita levels

## Municipal and industrial reuse

- 700 KAFY reuse in 2012.
- A significant portion of treated wastewater flows are used for non-municipals uses including groundwater recharge, agricultural uses, and wetland habitats.
- In some metropolitan areas, greater than 90 percent of the reusable supply is currently being reused

Accounting for both changes in per capita use and water reuse, M&I water use could have been nearly 2.4 MAFY higher in 2010.

## 2) Innovative Conservation and Reuse Programs

Over 400 conservation and reuse programs reviewed  
Selected 34 programs as case studies

### Categories

- Metering and billing
- Public education
- System water loss characterization and reduction
- Residential indoor water conservation
- Commercial, industrial, and institutional conservation
- Outdoor landscaping water conservation
- Reuse

### 3) Projected Additional Savings by 2030

- Conservation: 700 KAFY\*
- Reuse: 400 KAFY

\* for the water providers for which numeric targets were identified compared to 2010 per capita water use rates

## 4) Impact of savings on Colorado River use

Municipal providers in the metropolitan areas receiving CR water manage their water supplies conjunctively and many must use surface water supplies first to protect groundwater or prevent groundwater mining and its consequences. Additional M&I conservation and reuse has the potential to reduce the amount of future development of CR water. However, in many regions, conservation and reuse may not result in substantial reductions in diversions of CR water because conservation is typically used to either meet future growth or offset/delay the need for future water supplies. Municipal water providers are planning to use their full entitlements to CR water.

## 5) Categories of Potential Opportunities

1. Outdoor use
2. Social norming with water customers
3. Integration of water/energy conservation programs
4. Integration of land and water use planning
5. Goal setting for conservation and reuse programs
6. Funding and resources for conservation programs
7. Water system losses
8. Partnerships with commercial, institutional and industrial users
9. Conservation oriented water rates and incentive programs
10. Regulations and ordinances

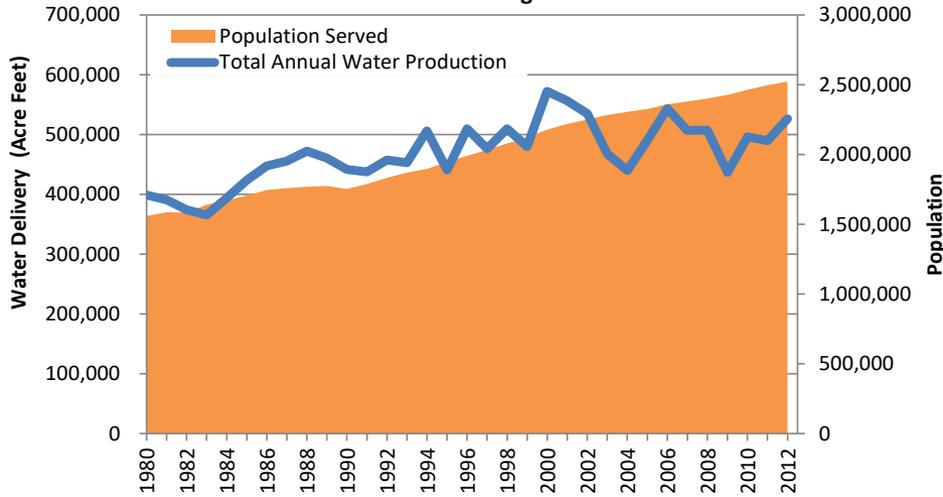


The End

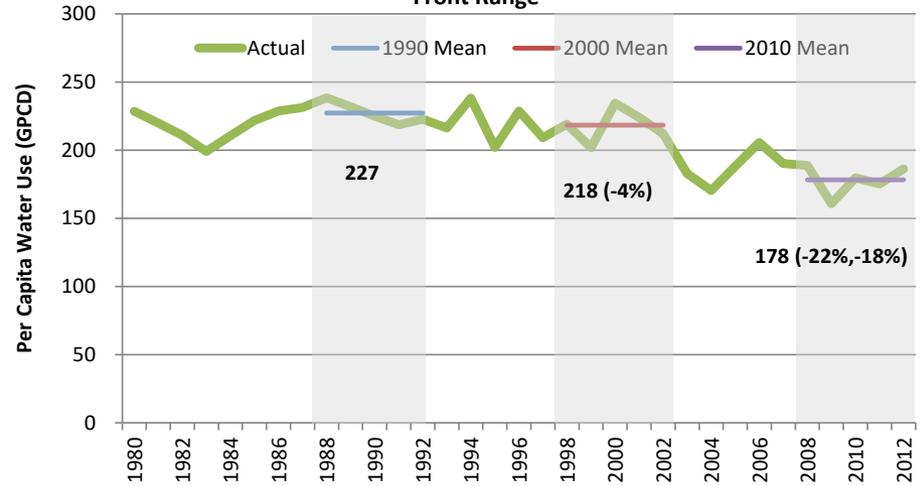
RECLAMATION

# Use Trends: Front Range and Wasatch

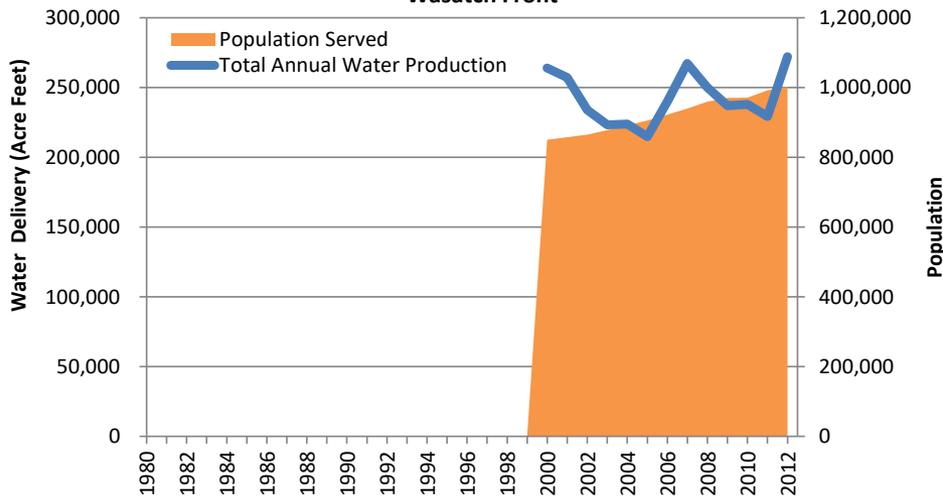
### Front Range



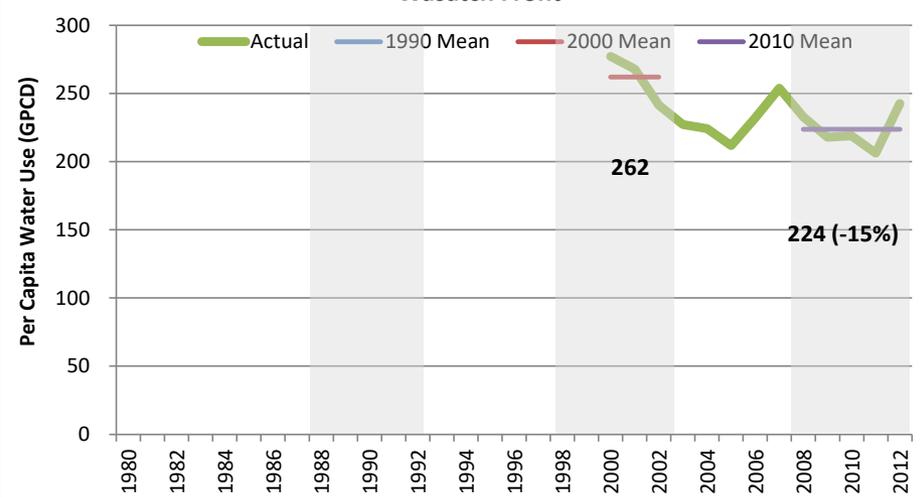
### Front Range



### Wasatch Front

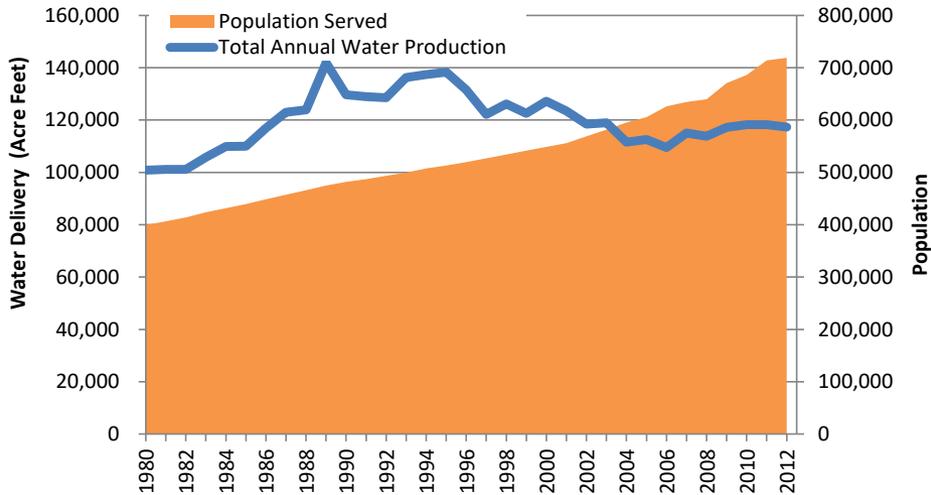


### Wasatch Front

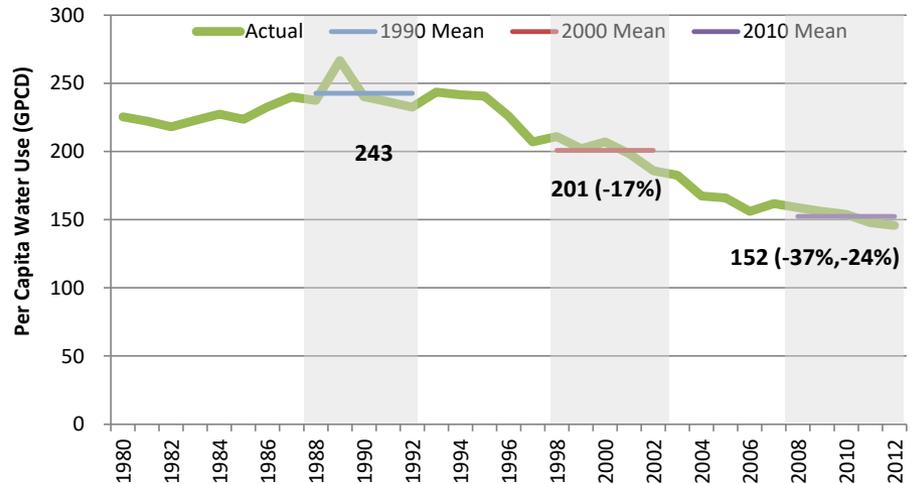


# Use Trends: Middle Rio Grande and Southern Nevada

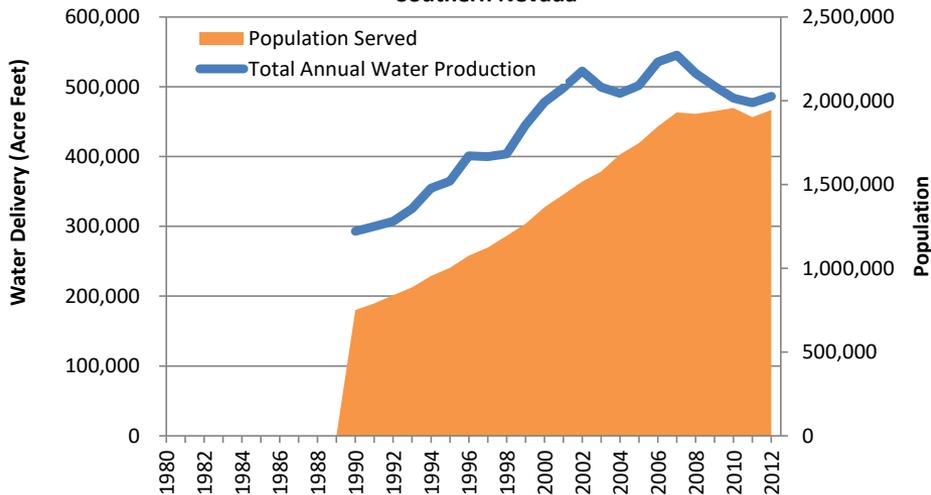
### Middle Rio Grande



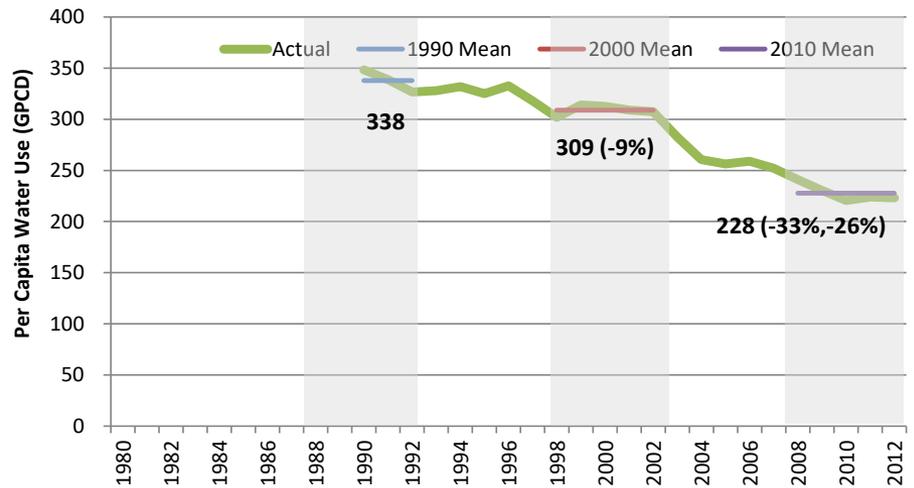
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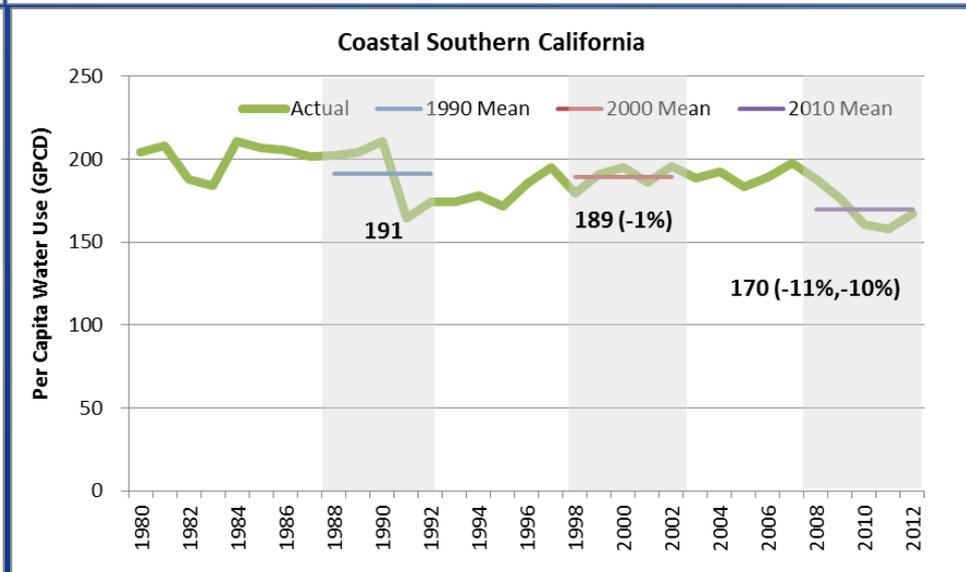
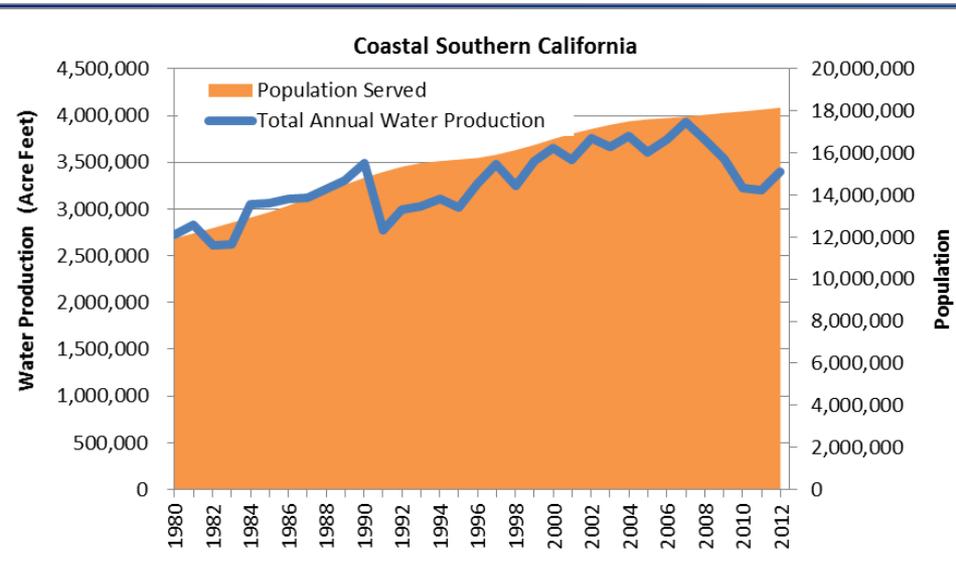
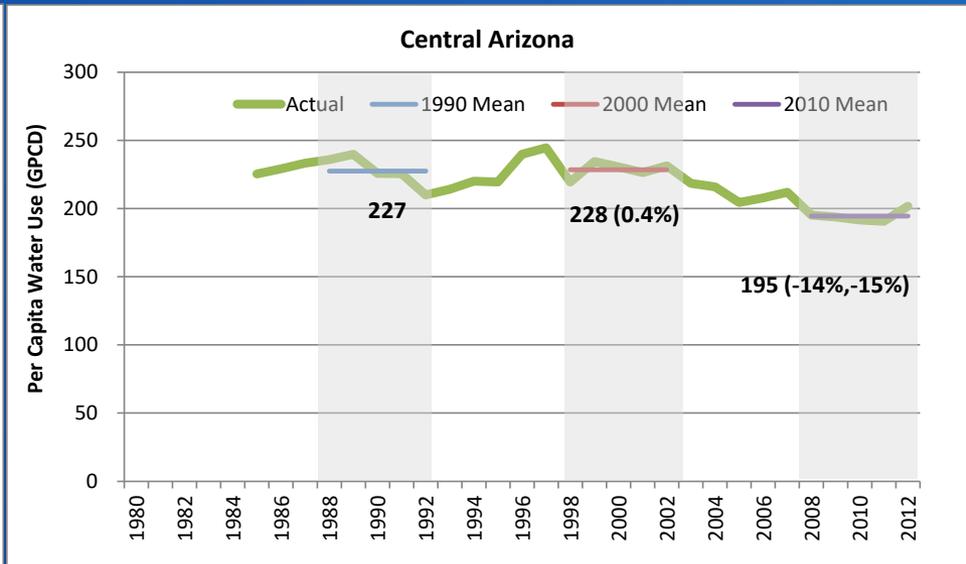
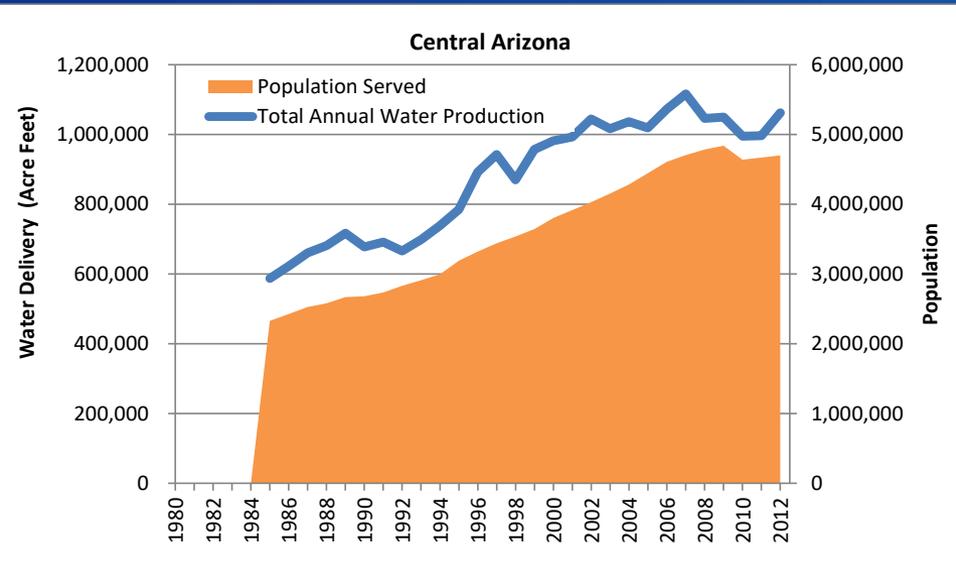
### Southern Nevada



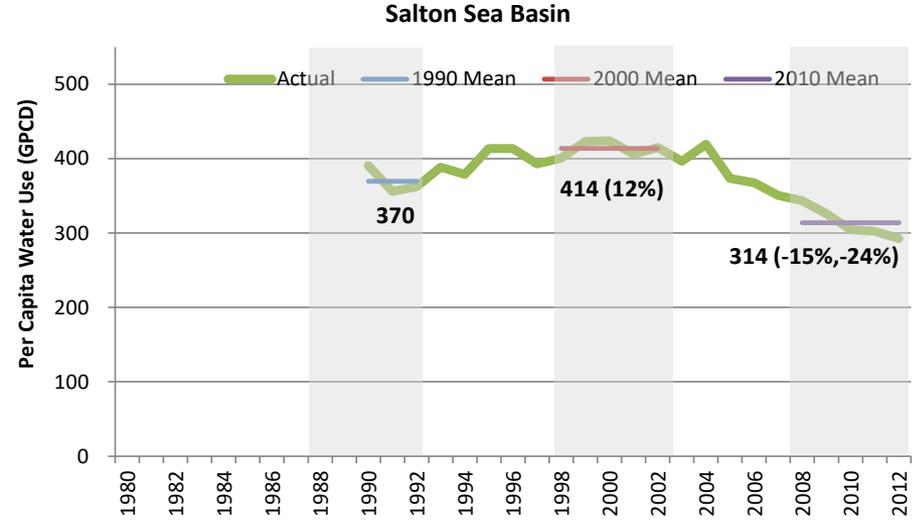
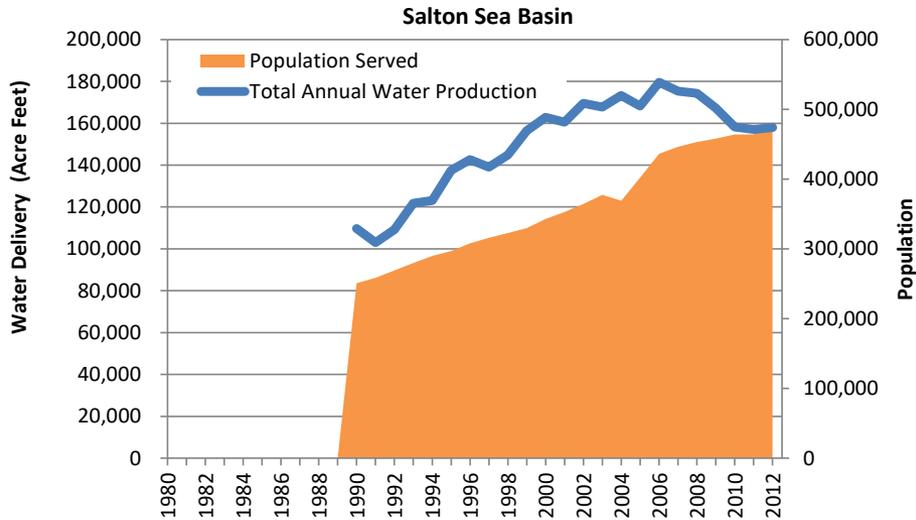
### Southern Nevada



# Use Trends: Central Arizona and Coastal Southern California



# Use Trends: Salton Sea Basin



# Metropolitan Areas Receiving Colorado River Water

