

Climate Change Challenges

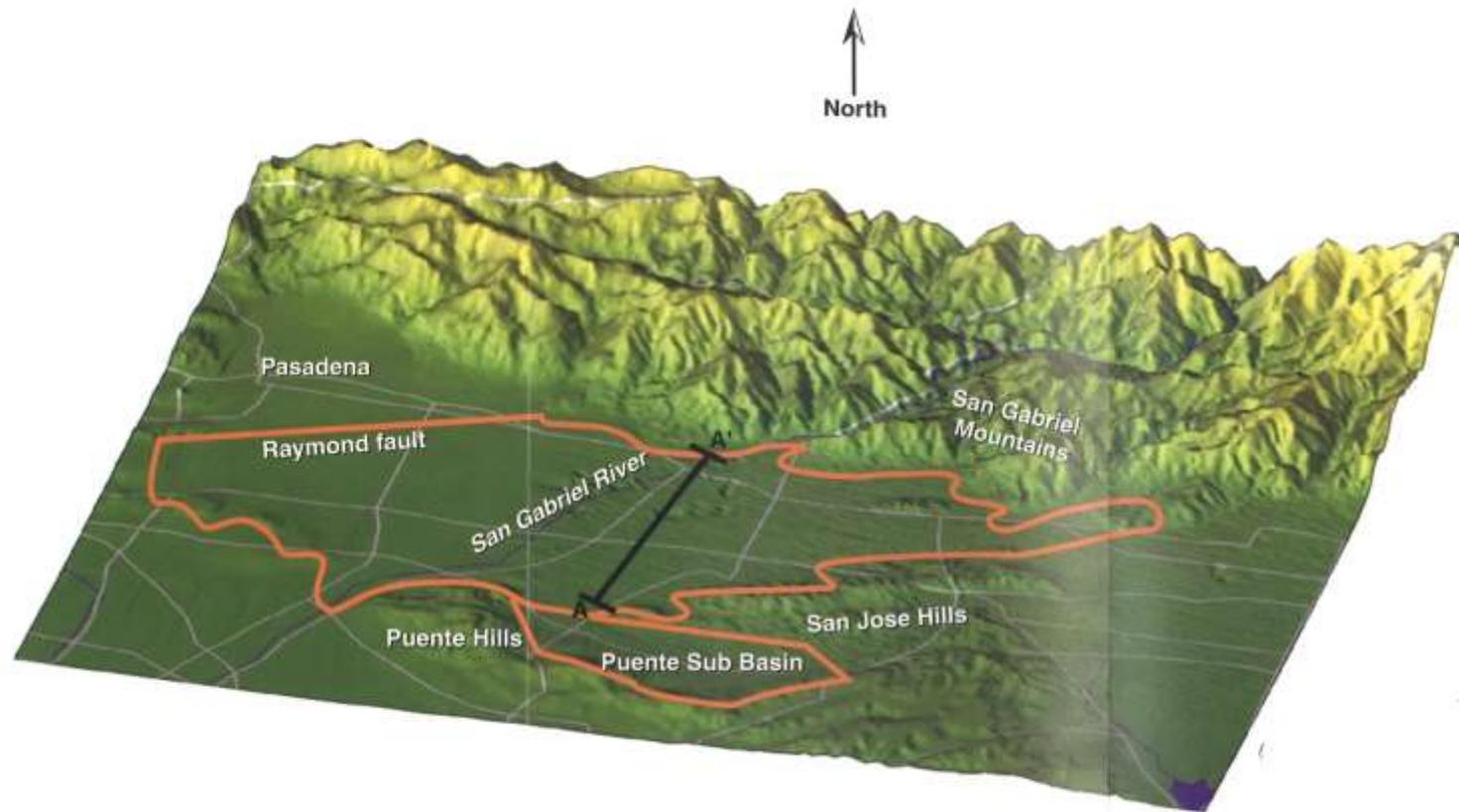


OPPORTUNITIES TO ENHANCE
FUTURE WATER SUPPLY

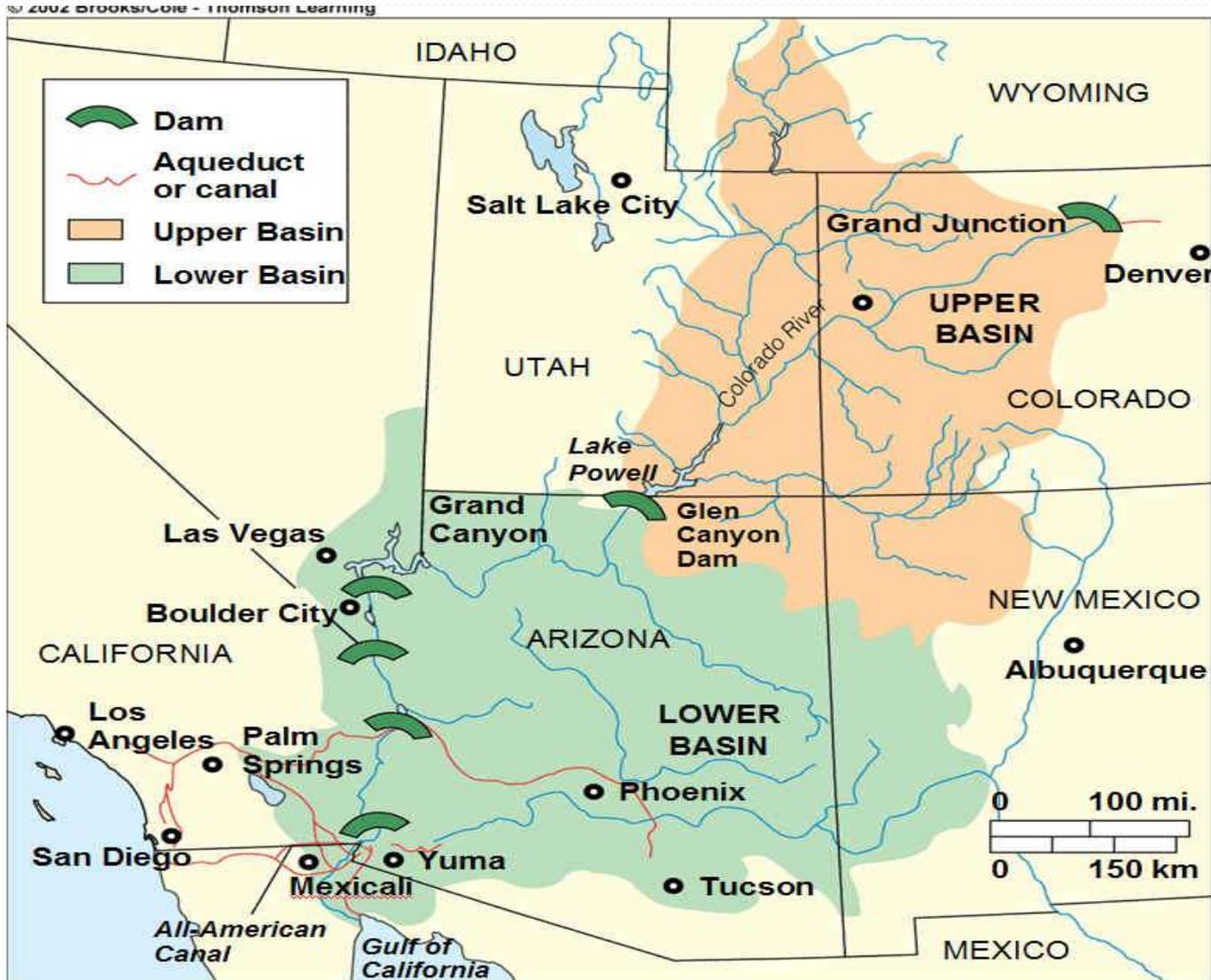
Michael L. Whitehead
Chairman and CEO
San Gabriel Valley
Water Company



Main San Gabriel Basin



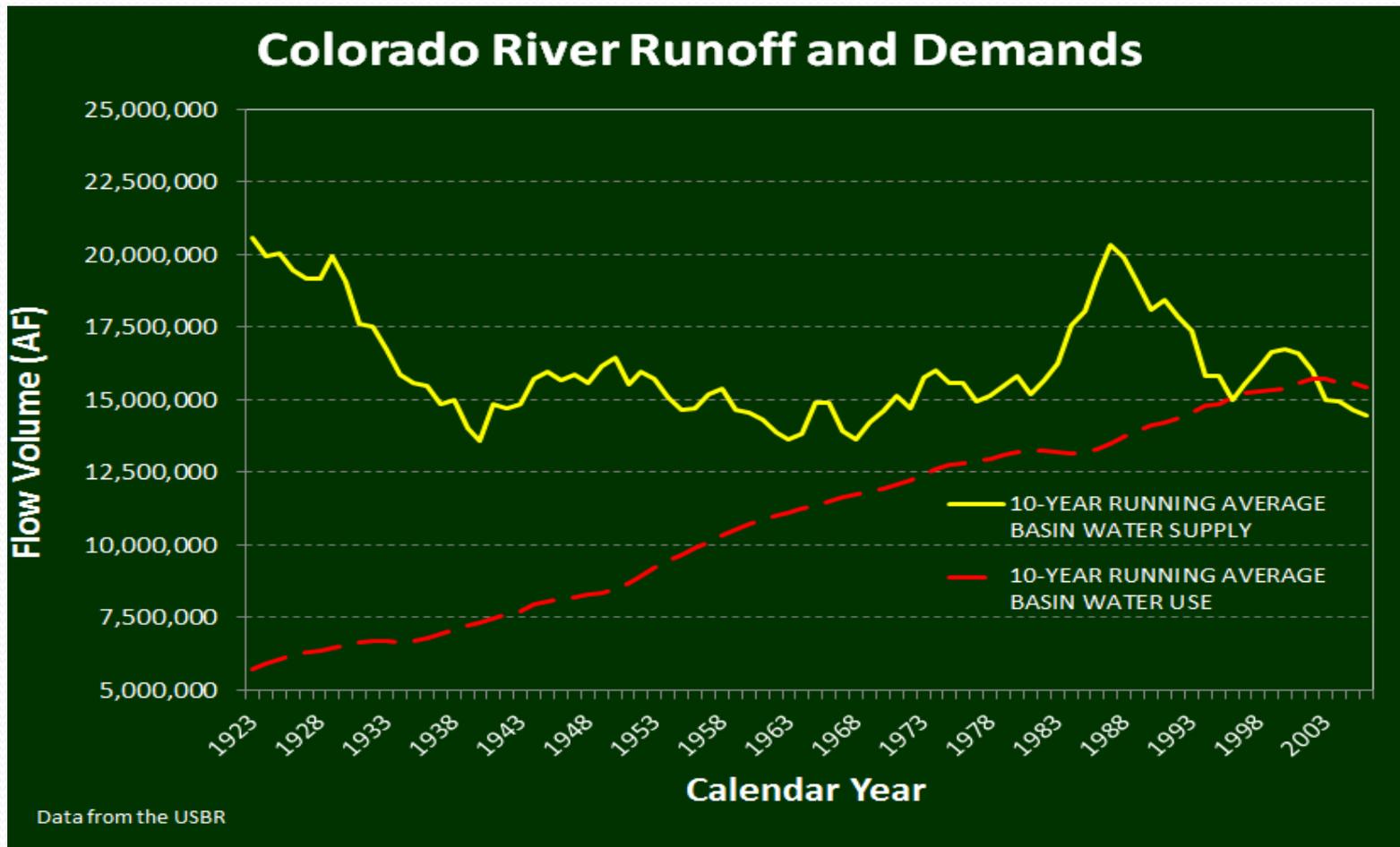
Colorado River



COLORADO RIVER WATER

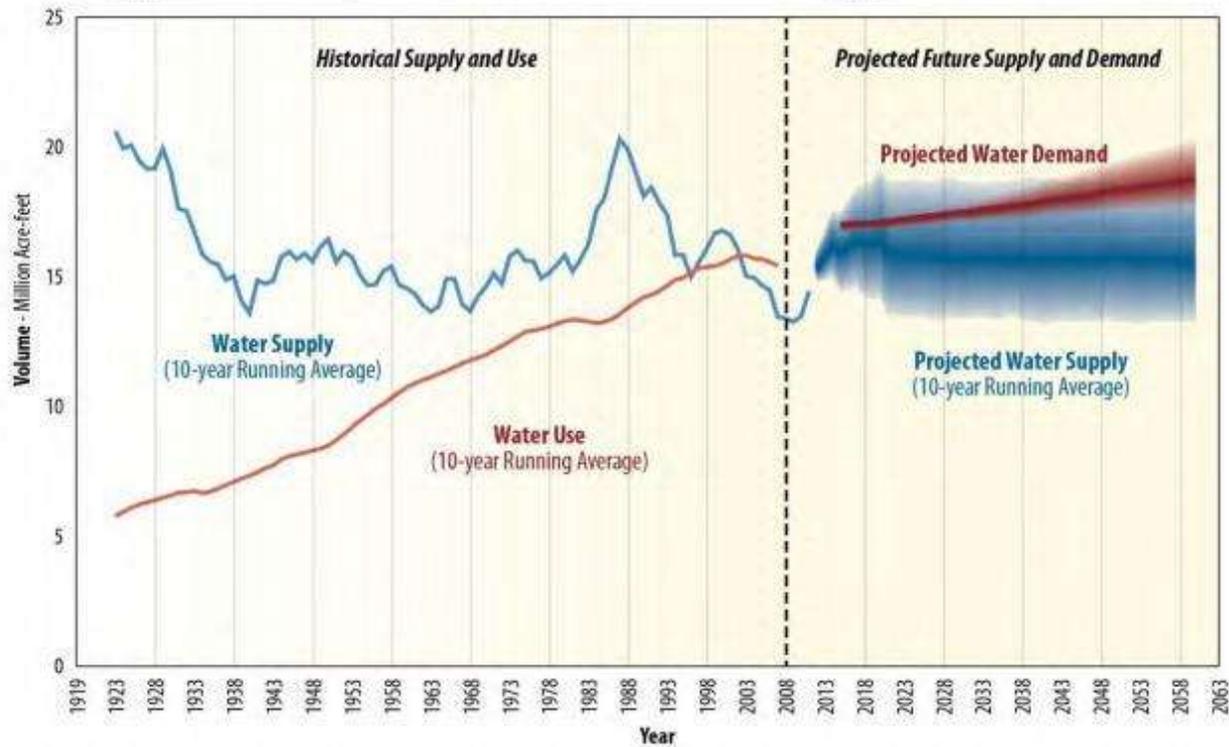
- Changes in water flow in lower Colorado River Basin in last 75 plus years are trending lower
- Colorado River has more low flow years than high flow years
- Colorado River allocations to AZ, NV, CA, and Mexico exceed available river flows – and the deficit is growing

COLORADO RIVER DEMAND



COLORADO RIVER PROJECTED DEMAND

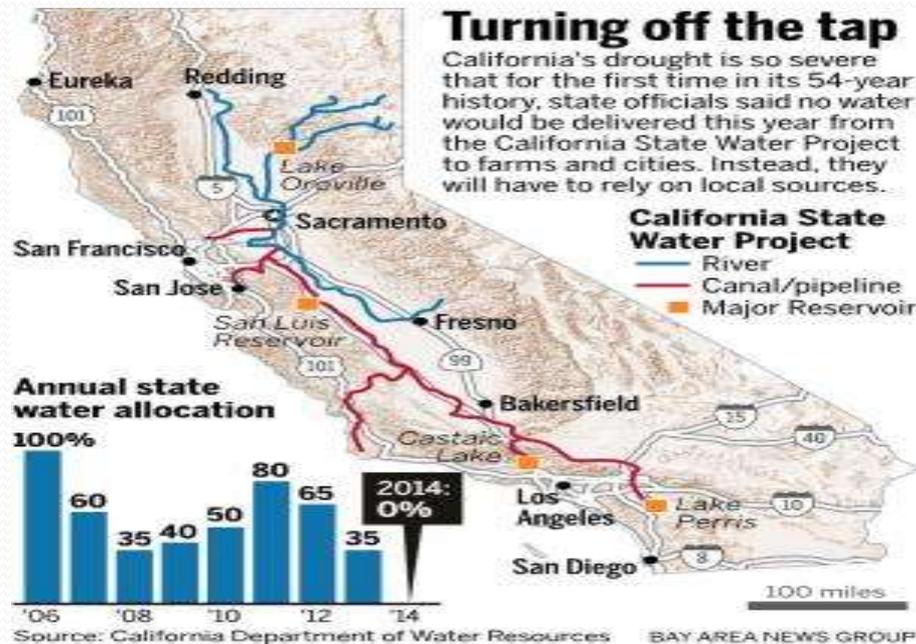
FIGURE 12
Historical Supply and Use¹ and Projected Future Colorado River Basin Water Supply and Demand¹



¹ Water use and demand include Mexico's allotment and losses such as those due to reservoir evaporation, native vegetation, and operational inefficiencies.

STATE WATER PROJECT

- Major cutbacks on SWP deliveries
- zero allocation in 2014

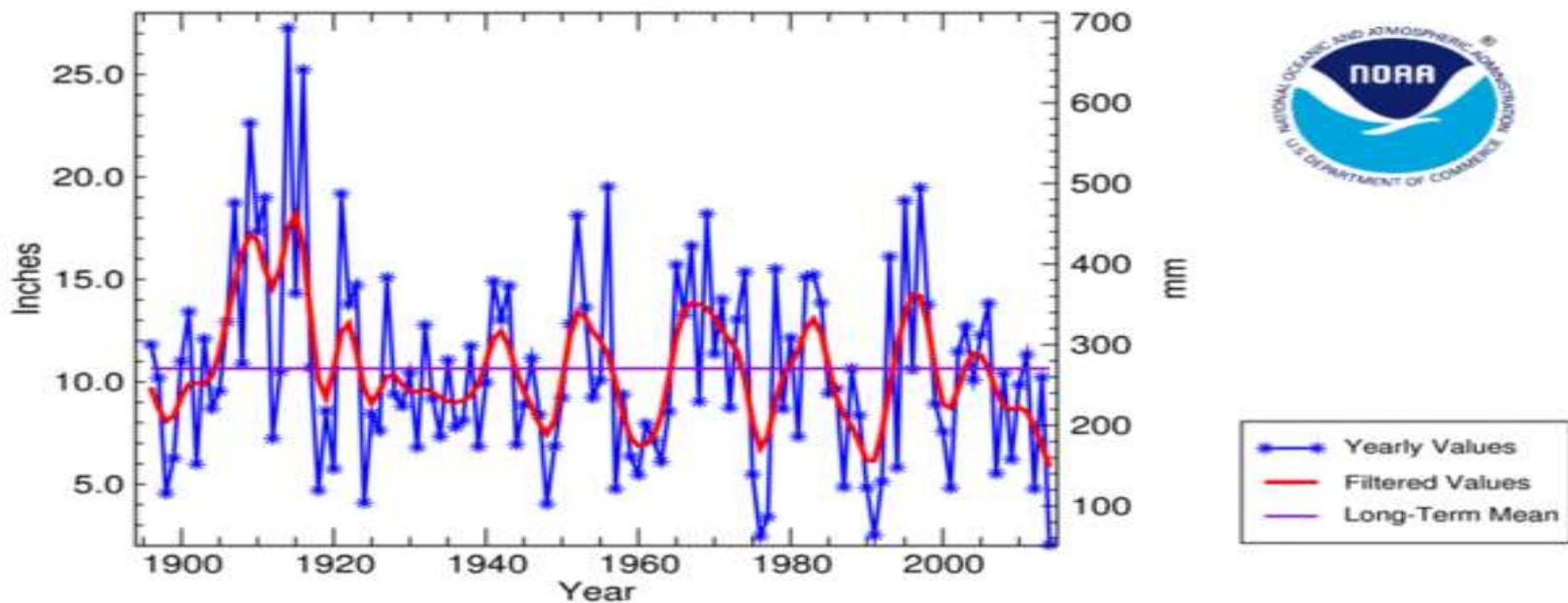


STATE WATER SUPPLY

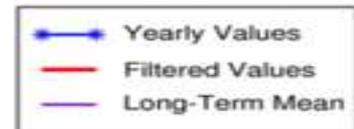
- State Water Project dependent on regular and abundant snow pack in the Sierras
- Precipitation has become unpredictable
- Drought has affected water supply and ability to provide water to Central Valley and Southern California

Historical Precipitation

California Statewide Precipitation
November - January, 1895 - 2014



National Climatic Data Center / NESDIS / NOAA



GROUNDWATER STORAGE

Groundwater Storage advantages include:

- No Evaporation
- Storage Capacity is plentiful
- Makes use of a natural resource
- Storage comes at relatively low cost
- Allows us to store more water during wet years

Aquifer Storage Capacity

- The Association of Groundwater Agencies (AGWA)
- Has documented that over 21.5 Million Acre Feet of Storage Capacity
- Acre foot of water is equal to 326,000 Gallons
 - More than 7 trillion gallons of storage capacity
- Capacity Equal to filling Diamond Valley Lake 26 Times

Chart Summary of Long Term

Summary of Long-Term Storage Potential of the Basins Included in This Guide.

Basin Groupings	Potential Storage for Use in Dry Years* (Acre-Feet)
Kern County Basin	8,000,000
Tehachapi/Cummings Basin	Not Available as of July 2000
Ventura County Basins	500,000
San Fernando Valley Basins	150,000
Raymond Basin	144,000
San Gabriel Basin	400,000
Los Angeles Coastal Plain Basins	1,089,000
Orange County Coastal Plain Basin	300,000
Six Basins	30,000
Upper Santa Ana River Basins	1,854,000
Bunker Hill Basin	0
San Jacinto Watershed Basins	1,284,000
Upper Santa Margarita River Basins	200,000
San Diego County Basins	270,700
Mojave River Basins	1,790,100
Hayfield Basin	500,000
Cadiz Valley Basin	1,000,000
Coachella Valley Basin	4,000,000
TOTAL	21,511,800

* Data provided by groundwater basin managers

Climate Change Opportunities

- Groundwater Storage
 - Ability to store Millions of Acre Feet of Water
 - Low cost
 - No Evaporation
- Recycled Water
 - Expand recycled water plants capacity
 - Use for Irrigation and Infiltration Projects
 - Lessens demand on potable water
- Conservation
 - Expand Recycled water pipelines
 - Utilize Conservation Products ,Waterless Urinals, Smart Sprinkler Systems