

# RECLAMATION

*Managing Water in the West*

## ***Moving Forward: Agricultural Water Conservation, Productivity, and Water Transfers Workgroup***

**Water For Agriculture  
Colorado Mesa University  
Grand Junction, CO  
February 25, 2015**



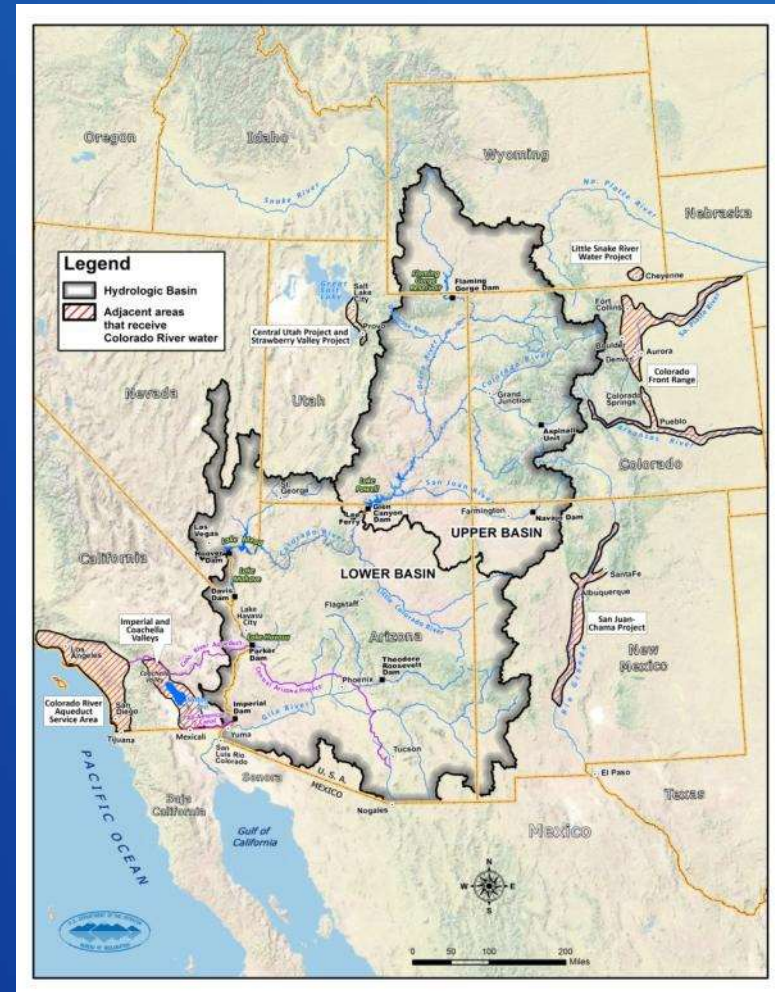
U.S. Department of the Interior  
Bureau of Reclamation

# Outline

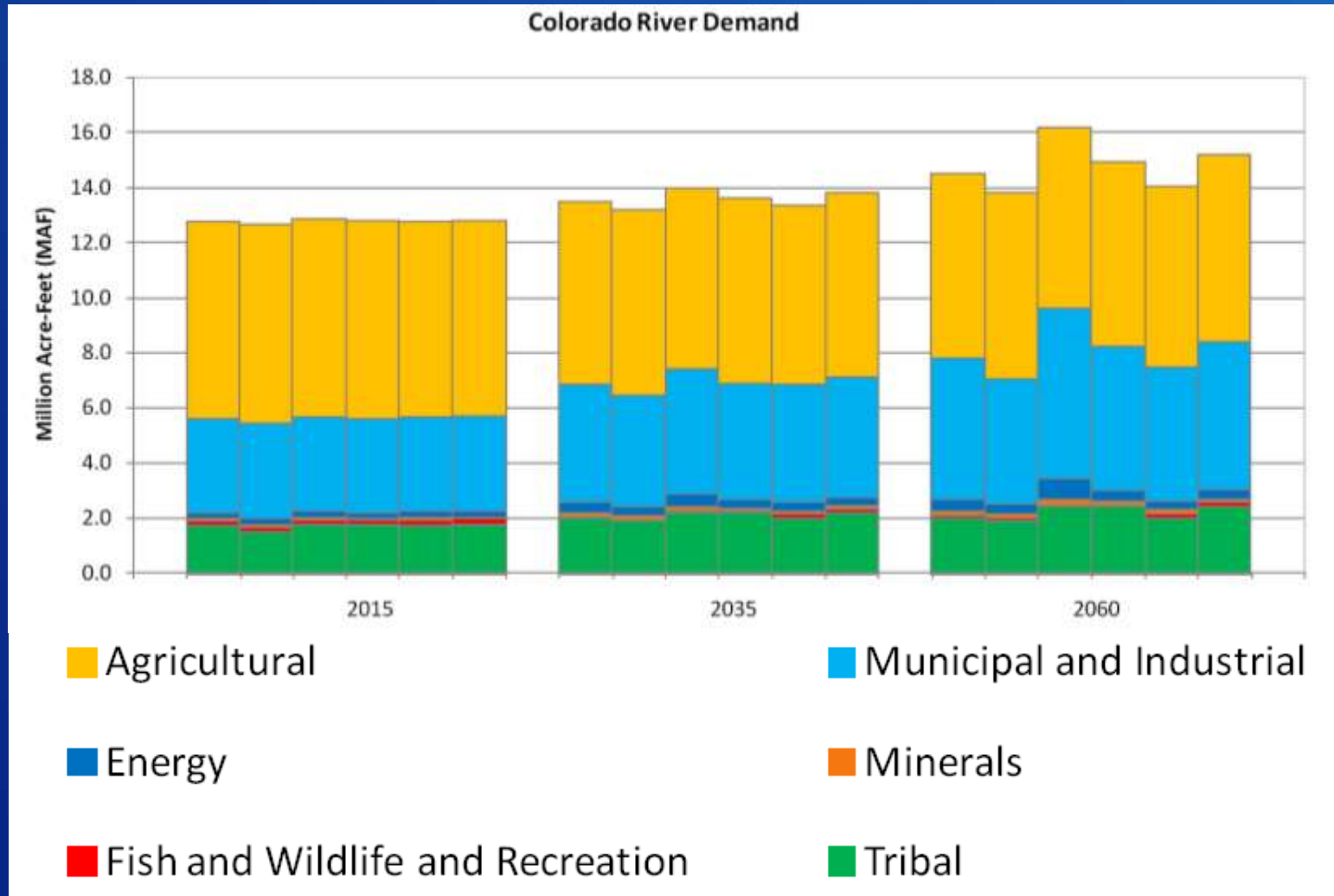
- **Colorado River Basin Study**
- *Moving Forward*
- **Agriculture Workgroup**
- **Publication Status**

# Colorado River Basin Water Supply and Demand Study

- **Study Objective**
  - Assess future water supply and demand imbalances over next 50 years
  - Develop and evaluate opportunities for resolving imbalances
- Study conducted by Reclamation and the Basin States in collaboration with stakeholders throughout the Basin
- Potential for significant future imbalances exists
- Portfolios of options can mitigate risks but not eliminate entirely



# Basin Study Projected Colorado River Demand Scenarios

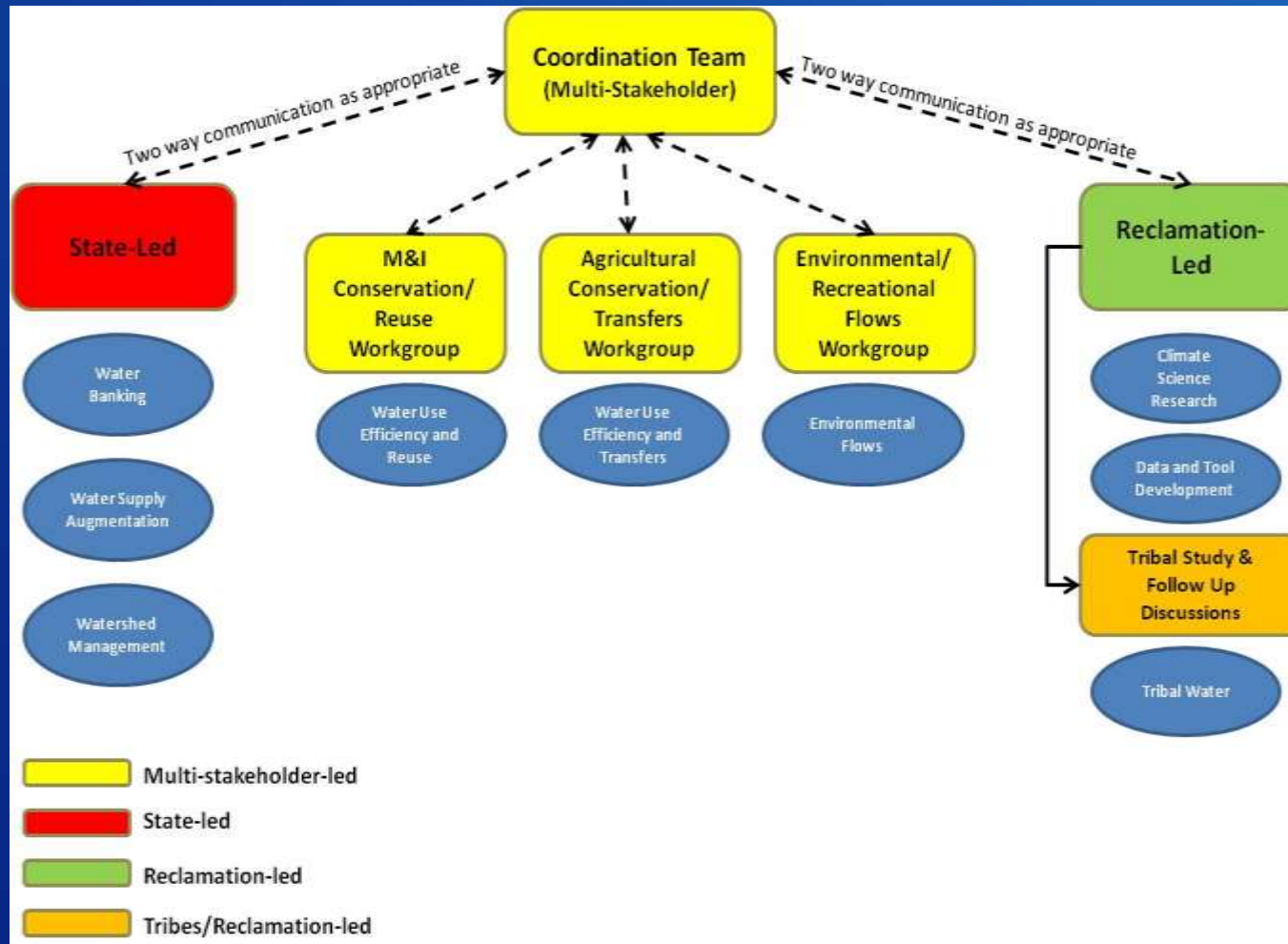


# Agricultural Options

- 9 submitted options
- Classified into 6 categories
  - Advanced irrigation scheduling
  - Deficit irrigation
  - On-farm irrigation system improvements
  - Controlled environment agriculture
  - Conveyance system efficiency improvements
  - Fallowing of irrigated lands
- Computed potential Colorado River savings of 1 MaF/yr



# Moving Forward



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# *Moving Forward Workgroups*

“...all that rely on the Colorado are taking initial steps — *working together — to identify positive solutions that can be implemented to meet the challenges ahead.*”

- **Brings wider stakeholder group with expertise to address topics identified in the Basin Study**
- **More detailed analysis and discussion than was considered in the Basin Study**

# Workgroup Membership

- **Workgroup Chairs**

- Ken Nowak, Bureau of Reclamation
- Reagan Waskom, Colorado State University
- Tina Shields, Imperial Irrigation District

- **Participating Entities**

- California Department of Water Resources
- Central Arizona Project
- Coachella Valley Water District
- Colorado River Board of California
- Colorado River Commission of Nevada
- Colorado River Indian Tribes
- Colorado River Water Conservation District
- Colorado Water Users
- Environmental Defense Fund
- Family Farm Alliance
- Los Angeles Department of Water & Power
- Maricopa-Stanfield Irrigation & Drainage District
- Metropolitan Water District of Southern California
- Natural Resources Conservation Service
- New Mexico Office of the State Engineer
- Northern Colorado Water Conservancy District
- Palo Verde Irrigation District
- San Diego County Water Authority
- San Juan Water Commission
- Southeastern Colorado Water Conservancy District
- Southern Nevada Water Authority
- The Nature Conservancy
- Trout Unlimited
- Upper Colorado River Commission
- Utah Division of Water Resources
- Welton-Mohawk Irrigation & Drainage District
- Wyoming State Engineer's Office

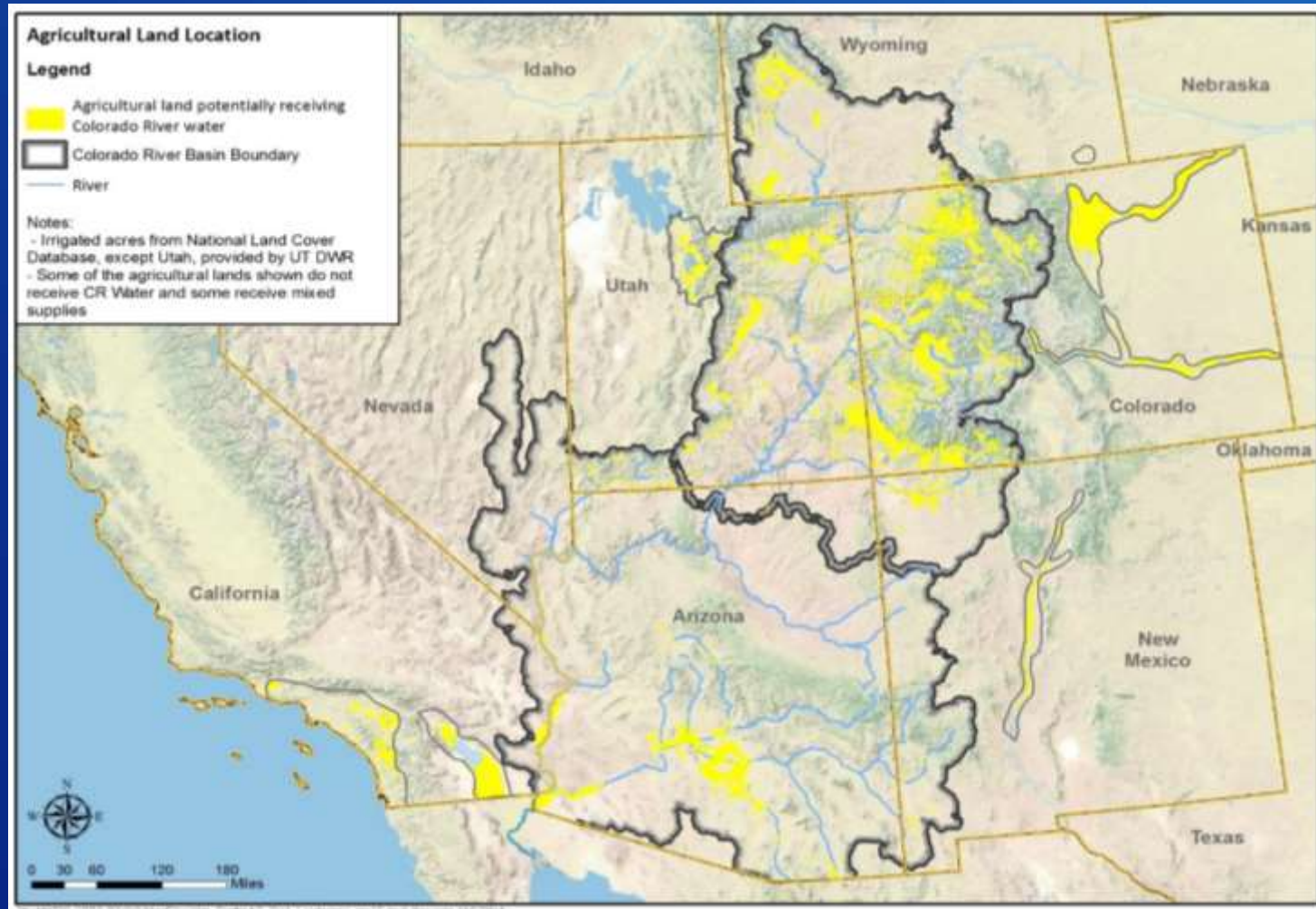
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# Workgroup Scope Summary

- Document agriculture conservation, efficiency, and transfers that have occurred to date
- Identify existing plans and agreements or potential opportunities for future conservation programs
- Document issues or challenged related to conservation and transfers

# Agriculture Served by Colorado River Water



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# Ag Water Conservation Meaning

- **Decreased crop consumptive use**
- **Improved irrigation application efficiency**
- **Increased crop water productivity**
- **Increased irrigation water diversion and delivery efficiencies**
- **Reduced water use or evaporation through adoption of conservation measures and new technologies**
- **Increased capture and utilization of precipitation**

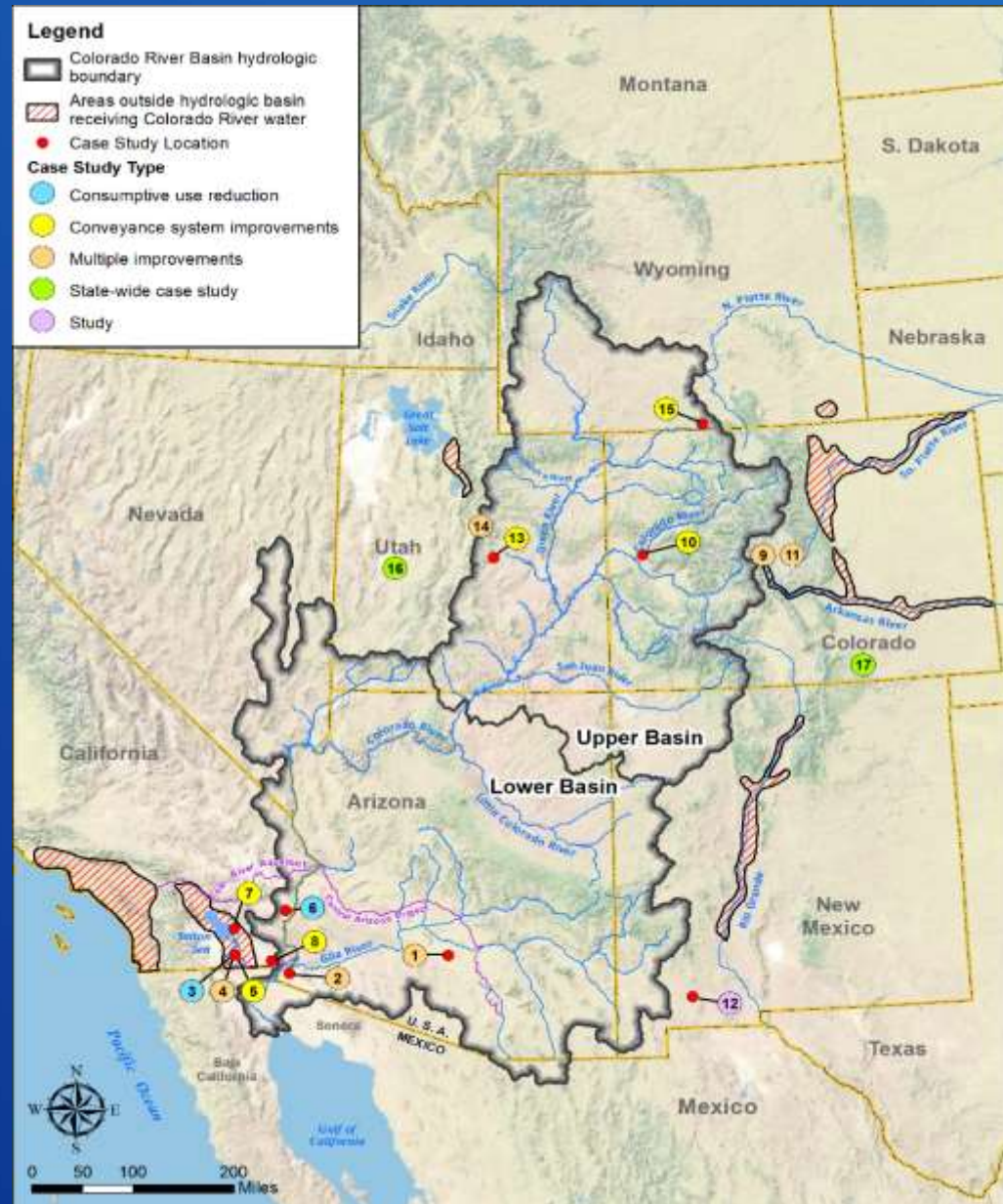
# Ag Water Programs and Practices

- **Primer on Ag water use**
  - Basic terminology
  - Practices
  - Ag “water cycle”
- **Programs for Ag water use**
  - Federal
  - State
  - District
  - Other



# Case Studies

- Objective
  - Highlight information
    - Projects
    - Partnerships
    - Funding
    - Scientific Studies



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# Key Message

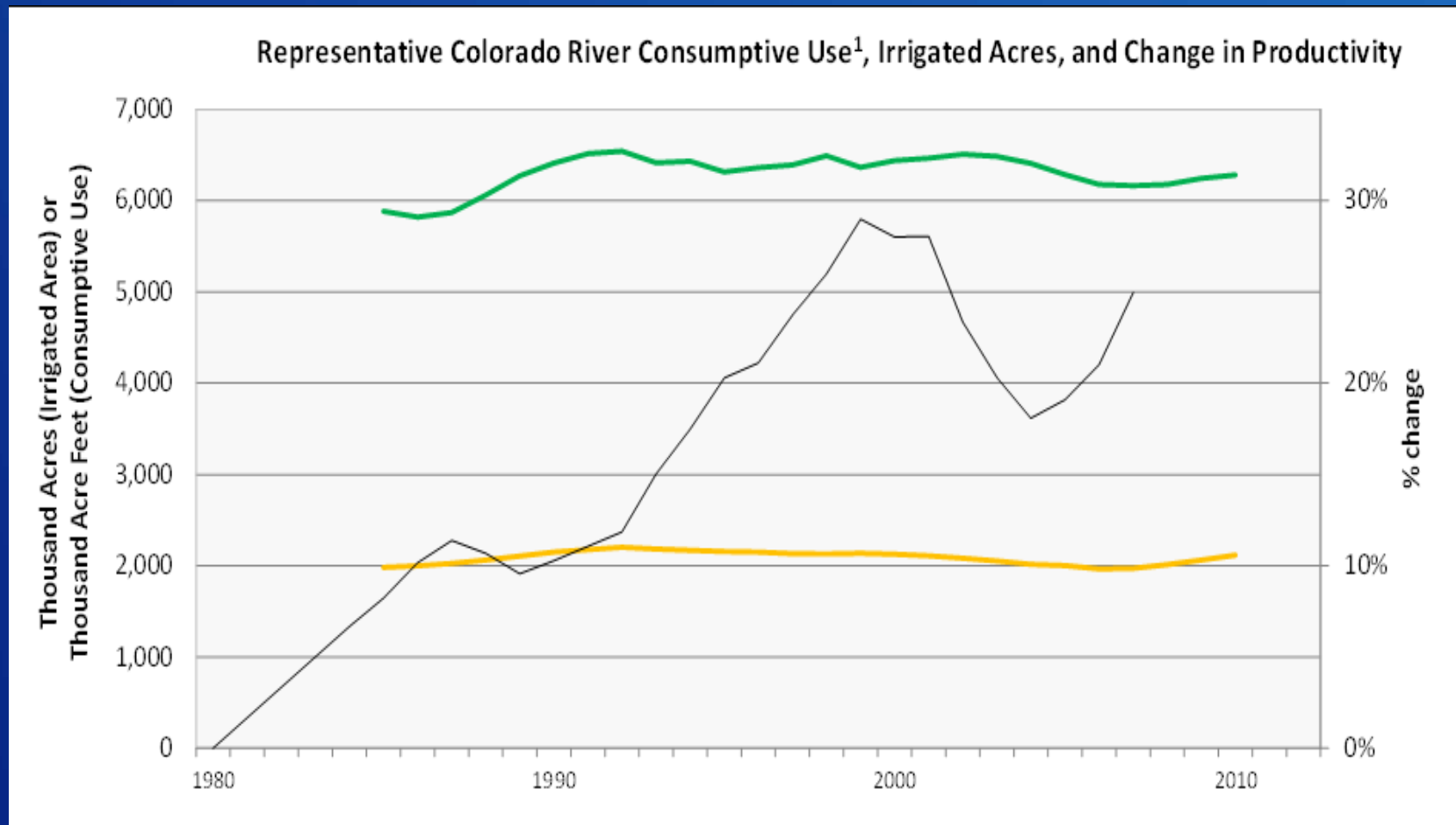
Available data demonstrate that producers have implemented a wide range of conservation and efficiency measures and often increased productivity as a result.

**TABLE 4-4**

Summary of Select Agricultural Conservation Programs with Quantified Acres and Water Savings

Type	Acres	Annual Water Savings <sup>1</sup> (KAFY)	Unit cost (\$ per AFY) <sup>2</sup>
Conveyance System Improvements	N/A	456	20–150
On-Farm Efficiency Improvements	362,227	124	285
Consumptive Use Reduction	73,601	400	30–246
Total		980	
Transfers	N/A	650	

# Basin Productivity



— Consumptive Use (KAF), 5-year average    — Irrigated Acres (thousands), 5-year average    — Change in Productivity (%), 5-year average

# Ag Water Challenges and Opportunities

- **Challenges**

- Legal
- Financial
- Environmental
- Political
- Social
- Data

- **Opportunities**

- Improved water quality
- Drought protection
- Conserved water for other uses
- Partnerships
- Financial benefits



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# *Moving Forward* Report Outline

- Executive Summary
- Chapter 1: Introduction
- Chapter 2: Background
- Chapter 3: Environmental and Recreational Flows
- Chapter 4: Agricultural Conservation, Productivity and Transfers
- Chapter 5: M&I Conservation and Reuse
- Chapter 6: Summary

# Report Publication and Phase 2

- Reports currently in final stages of review
- Publication anticipated soon
- Phase 2 to follow publication



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For more information please visit:

<http://www.usbr.gov/lc/region/programs/crbstudy/MovingForward/index.html>

Questions?

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