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Managing Water in the West

Overview of the Colorado River Basin Water Supply and Demand Study

Water and Natural Resources Committee
Drought Subcommittee
Farmington, NM
August 28, 2013

U.S. Department of the Interior
Bureau of Reclamation

Colorado River Basin Water Supply and Demand Study

- Study Objective
  - Assess future water supply and demand imbalances over the next 50 years
  - Develop and evaluate opportunities for resolving imbalances
- Conducted through the WaterSMART Basin Study Program
- Conducted by Reclamation and the Basin States, in collaboration with stakeholders throughout the Basin
- Began in January 2010 and completed in December 2012
- A planning study – does *not* result in any decisions, but will provide the technical foundation for future activities

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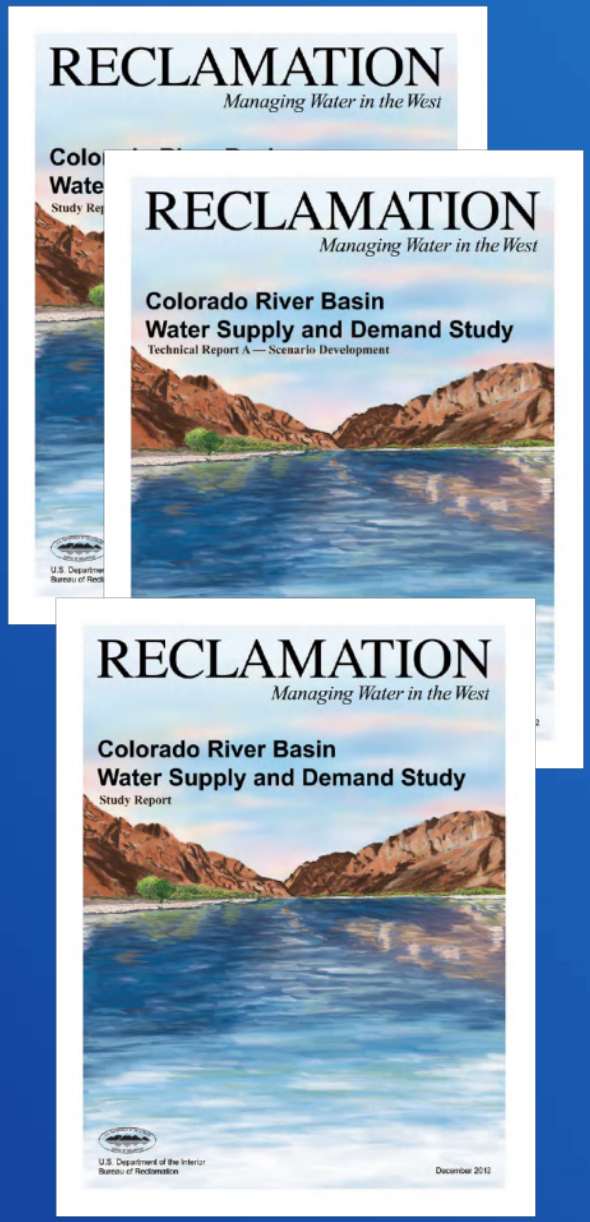
Final Study Reports

- The final Study is a collection of reports available at: http://www.usbr.gov/lc/region/programs/crbstudy/report1.html

Executive Summary
Study Report
Technical Report A – Scenario Development
Technical Report B – Water Supply Assessment
Technical Report C – Water Demand Assessment
Technical Report D – System Reliability Metrics
Technical Report E – Approach to Develop and Evaluate Opportunities to Balance Supply
Technical Report F – Development of Options and Strategies
Technical Report G – System Reliability Analysis and Evaluation of Options and Strategies



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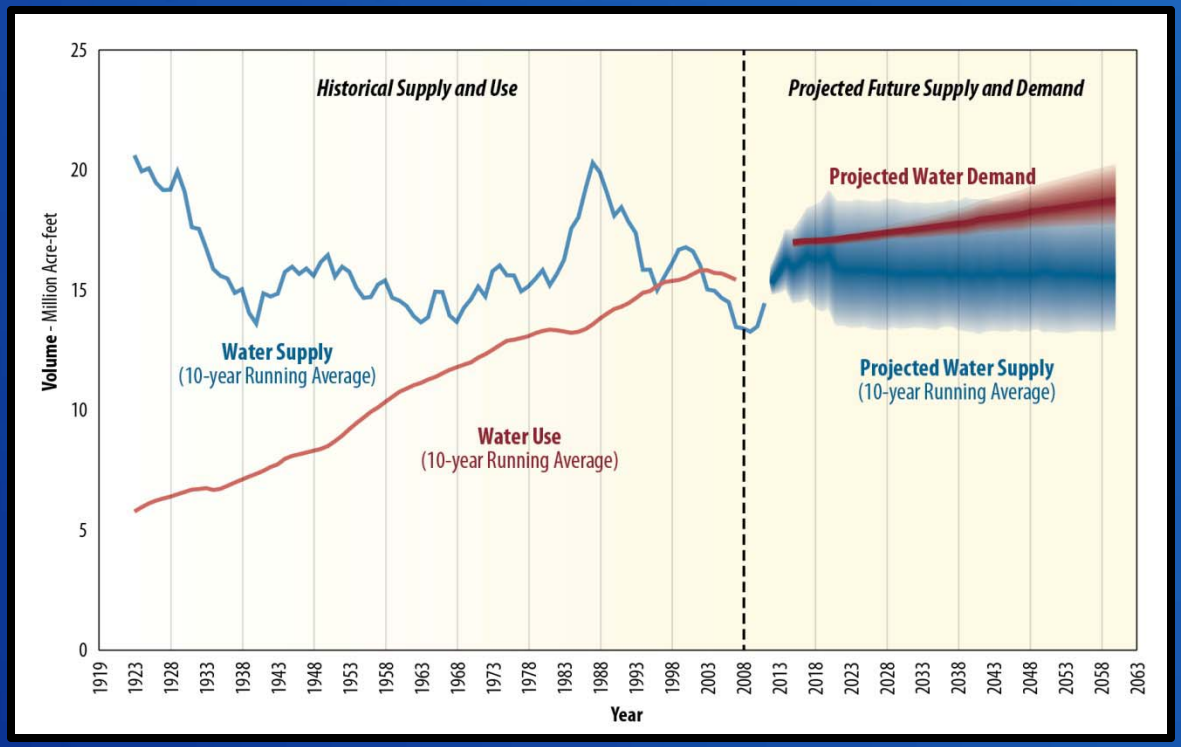
Projected Future Colorado River Basin Water Supply and Demand

- Average supply-demand imbalances by 2060 are approximately 3.2 million acre-feet
- This imbalance may be more or less depending on the nature of the particular supply and demand scenario
- Imbalances have occurred in the past and deliveries have been met due to reservoir storage



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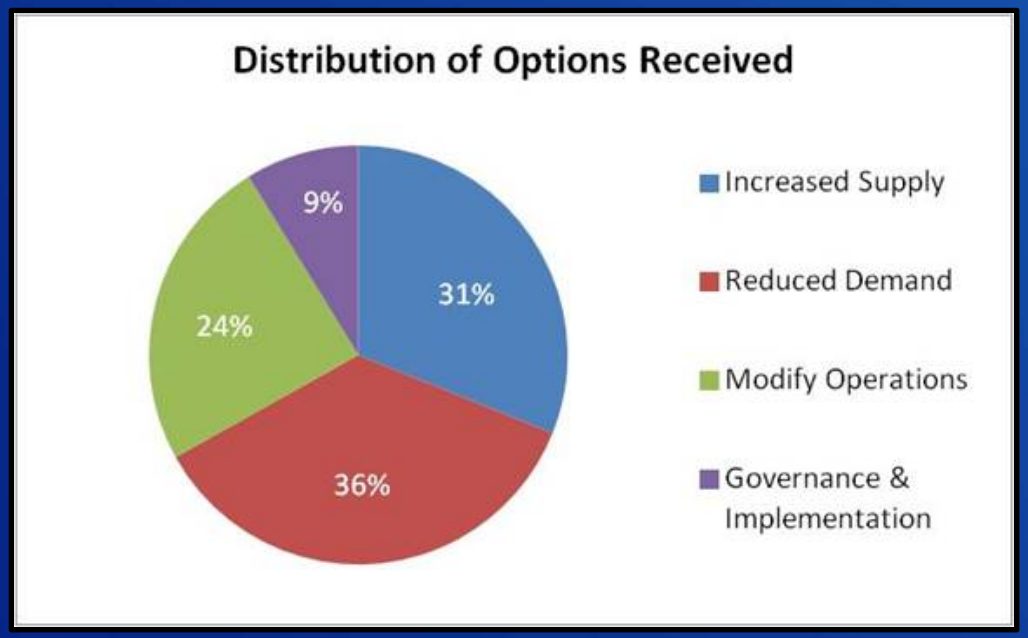
Summary of Options Submitted

- Over 150 options were submitted to the Study from Nov 2011 - Feb 2012
- All options received were included and are reflected in the Study



Increased Supply – reuse, importation, desalination, etc.

Reduced Demand – M&I and agricultural conservation, etc.

Modify Operations – transfers & exchanges, water banking, etc.

Governance & Implementation – stakeholder committees, population control, re-allocation, etc.

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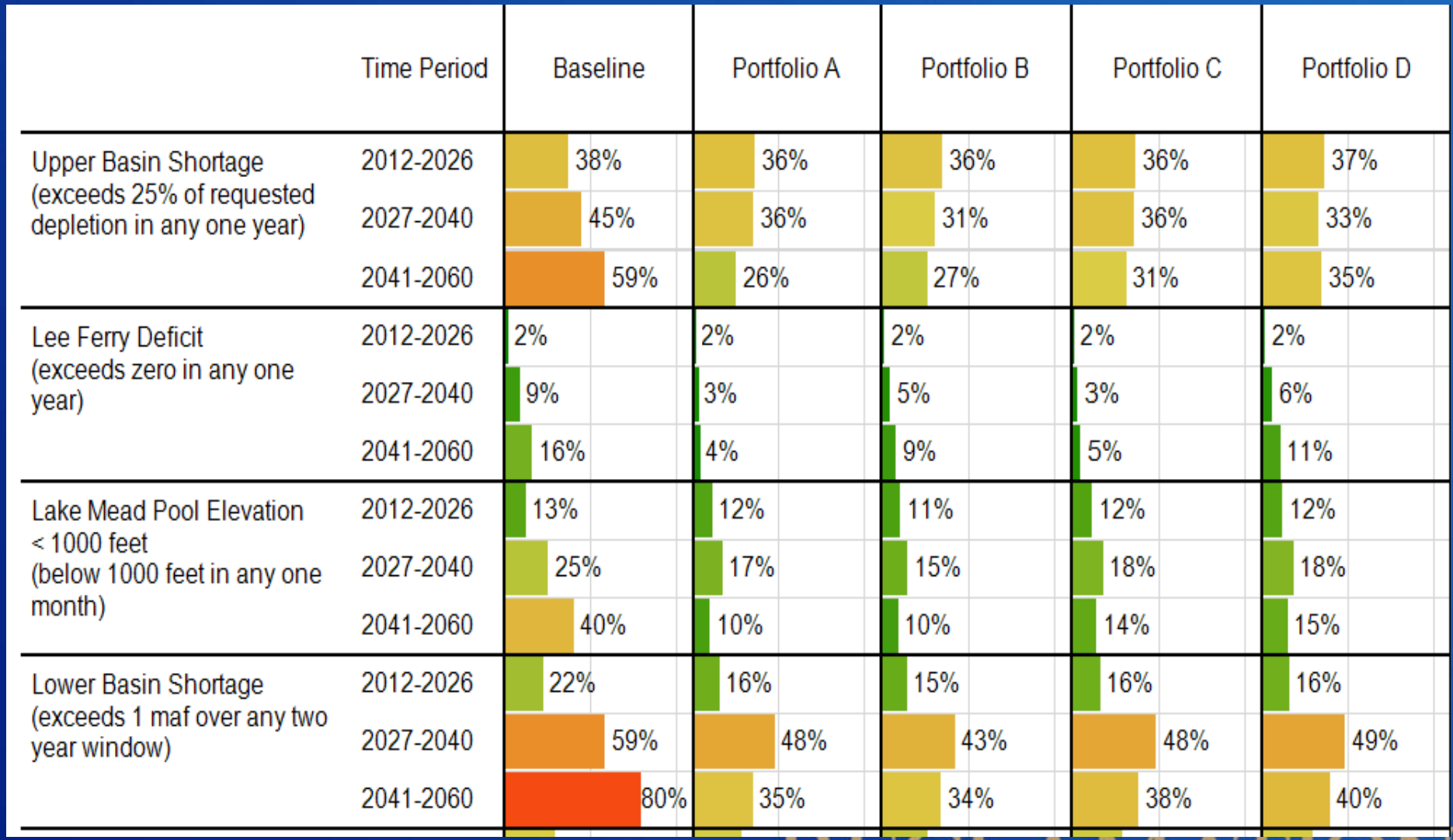
Water Deliveries

Percent of All Plausible Futures that Result in Vulnerability



	Time Period	Baseline	Portfolio A	Portfolio B	Portfolio C	Portfolio D
Upper Basin Shortage (exceeds 25% of requested depletion in any one year)	2012-2026	38%	36%	36%	36%	37%
	2027-2040	45%	36%	31%	36%	33%
	2041-2060	59%	26%	27%	31%	35%
Lee Ferry Deficit (exceeds zero in any one year)	2012-2026	2%	2%	2%	2%	2%
	2027-2040	9%	3%	5%	3%	6%
	2041-2060	16%	4%	9%	5%	11%
Lake Mead Pool Elevation < 1000 feet (below 1000 feet in any one month)	2012-2026	13%	12%	11%	12%	12%
	2027-2040	25%	17%	15%	18%	18%
	2041-2060	40%	10%	10%	14%	15%
Lower Basin Shortage (exceeds 1 maf over any two year window)	2012-2026	22%	16%	15%	16%	16%
	2027-2040	59%	48%	43%	48%	49%
	2041-2060	80%	35%	34%	38%	40%

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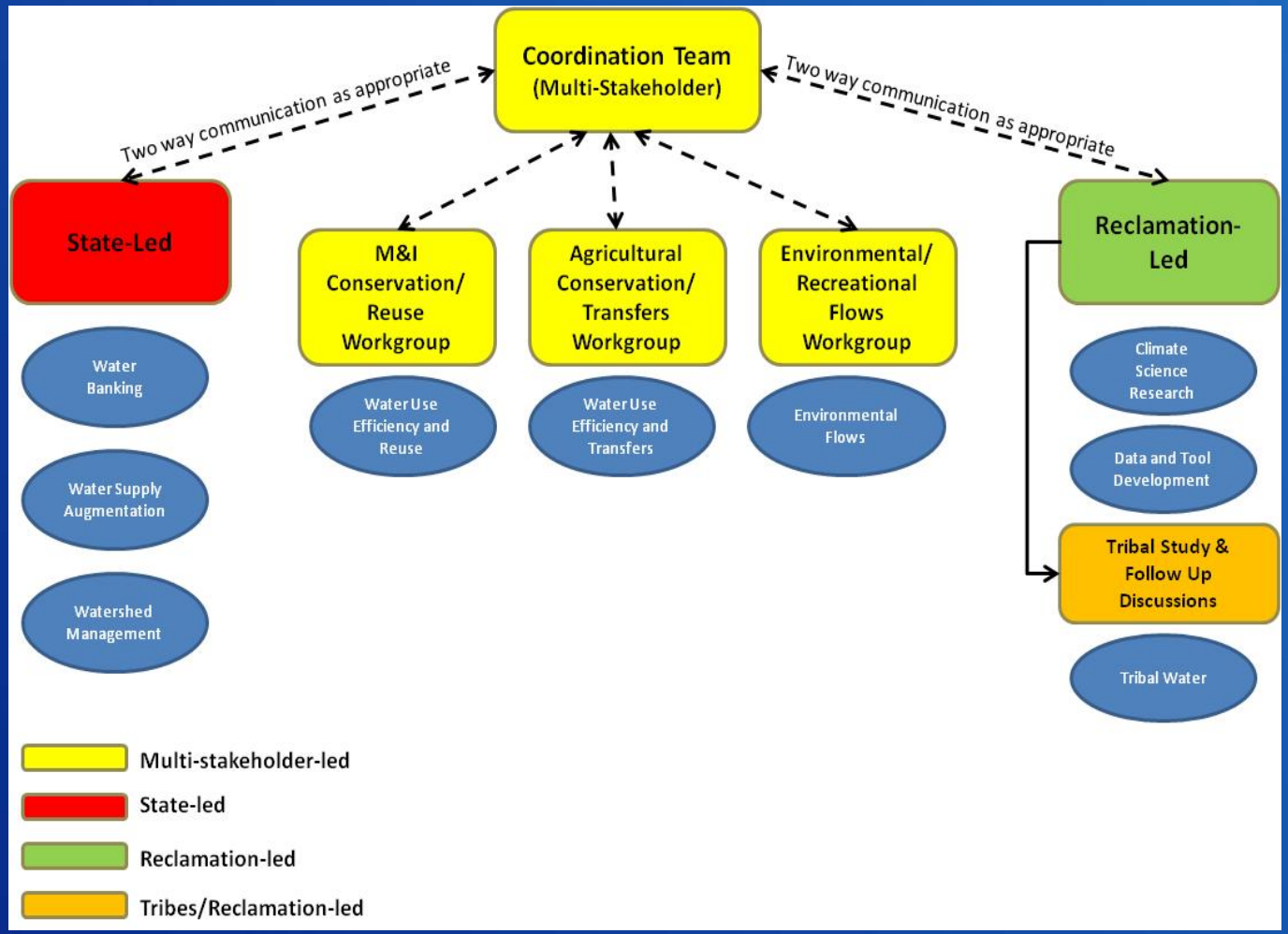
Summary

- The system is vulnerable if we do nothing
- Doing something greatly reduces that vulnerability and makes the system more resilient to adverse conditions but does not eliminate vulnerability
- In the near term, all portfolios show that conservation, transfers, and reuse are cost-effective ways to reduce vulnerability
- In the longer term, more tradeoffs emerge to achieve an acceptable level of risk in terms of options, cost, resources, and other implications.

Moving Forward
Next Steps after the Study

- Addressing future imbalances will require diligent planning and collaboration at all levels
- Phase I underway and anticipated to be completed by Summer 2014



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Colorado River Basin Water Supply and Demand Study

Study Contact Information

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