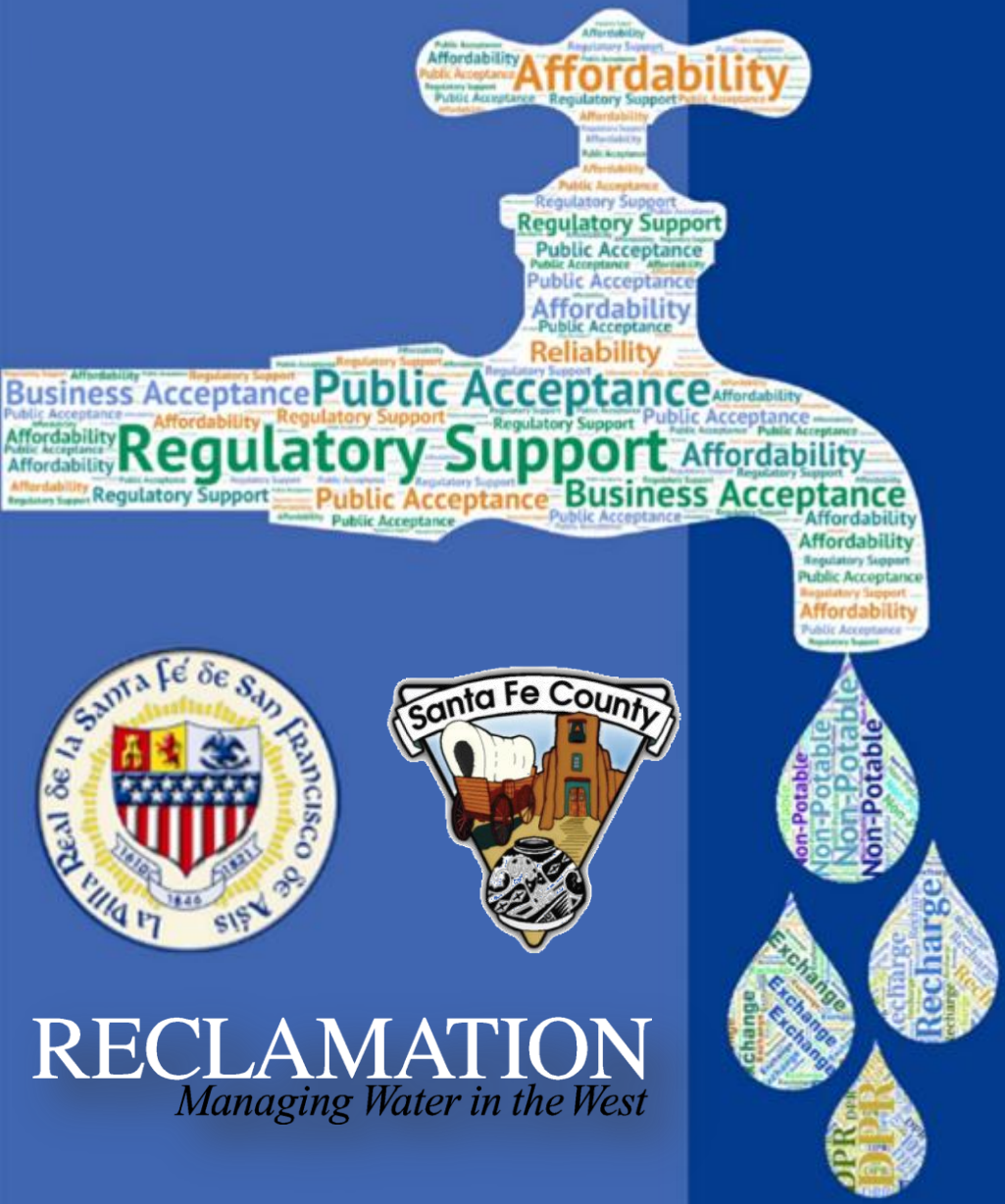

Santa Fe Water Reuse Feasibility Study

Public Forum

January 17, 2017

4:30 – 6:30 pm

Genoveva Chavez Community Center

Santa Fe, New Mexico

RECLAMATION

Managing Water in the West

Santa Fe Water Reuse Feasibility Study

Agenda

- Ground Rules: Lynn Komer
- Welcome: Councilor Rivera
- Study Overview: Bill Schneider
- Santa Fe Basin Study: Dagmar Llewellyn
- Study Findings: John Rehring
- Closing remarks: Councilor Maestas
- Q&A at Tables

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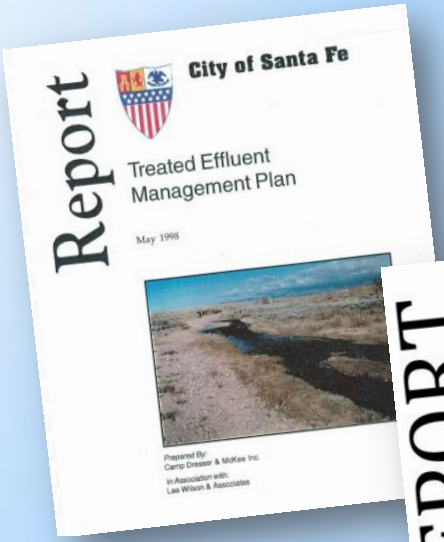
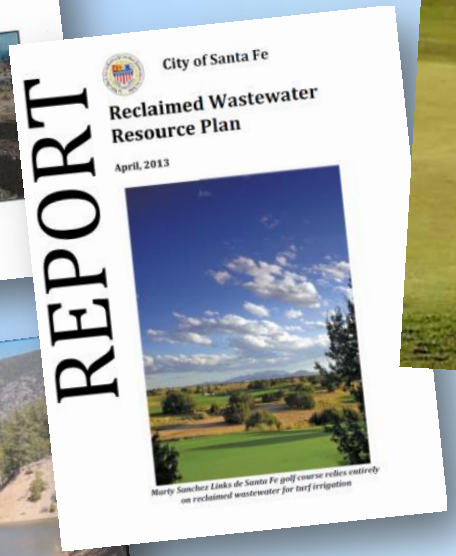
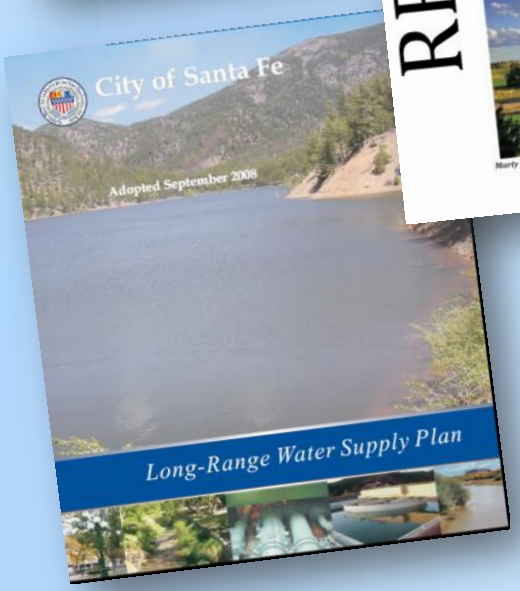
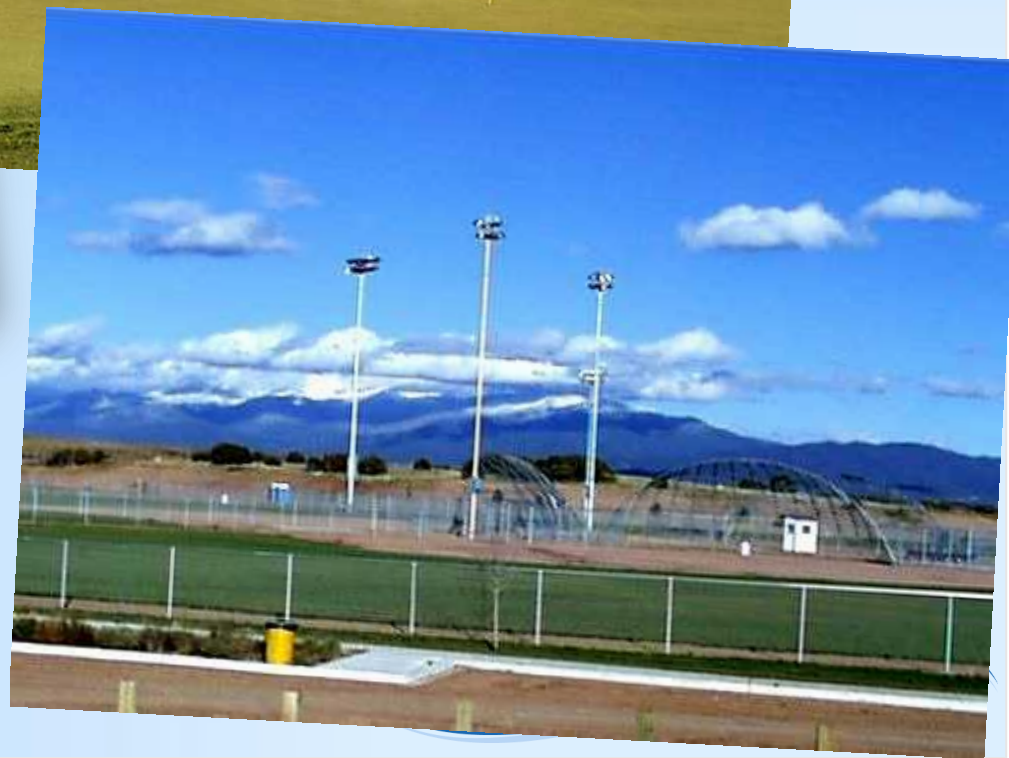
Managing Water in the West

Santa Fe has been sustainably reusing water since the 1950s









Topics for our Public Forum

1. Why Increase Water Reuse?
2. What Alternatives Were Studied?
3. What does the Feasibility Study Recommend? Why?
4. Next Steps

Santa Fe Water Reuse Feasibility Study

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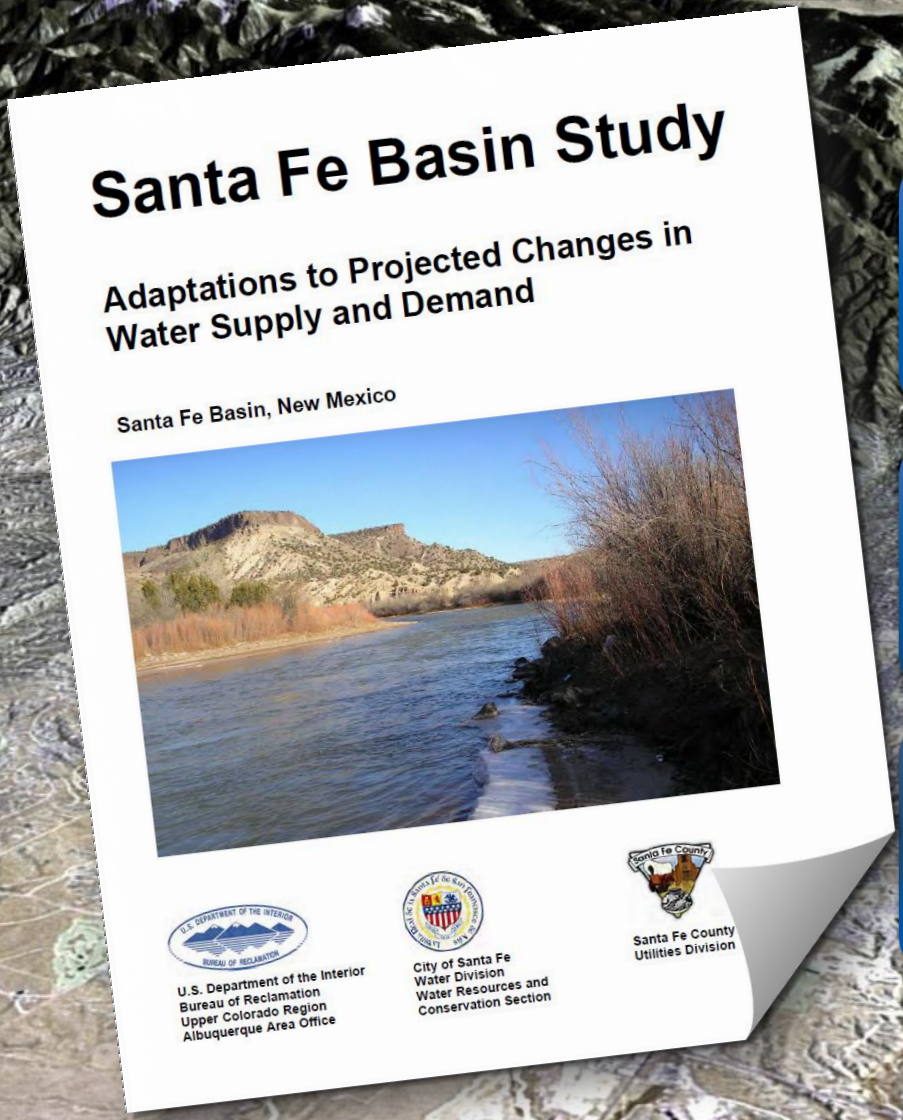
RECLAMATION
Managing Water in the West

Climate change will drive future shortages

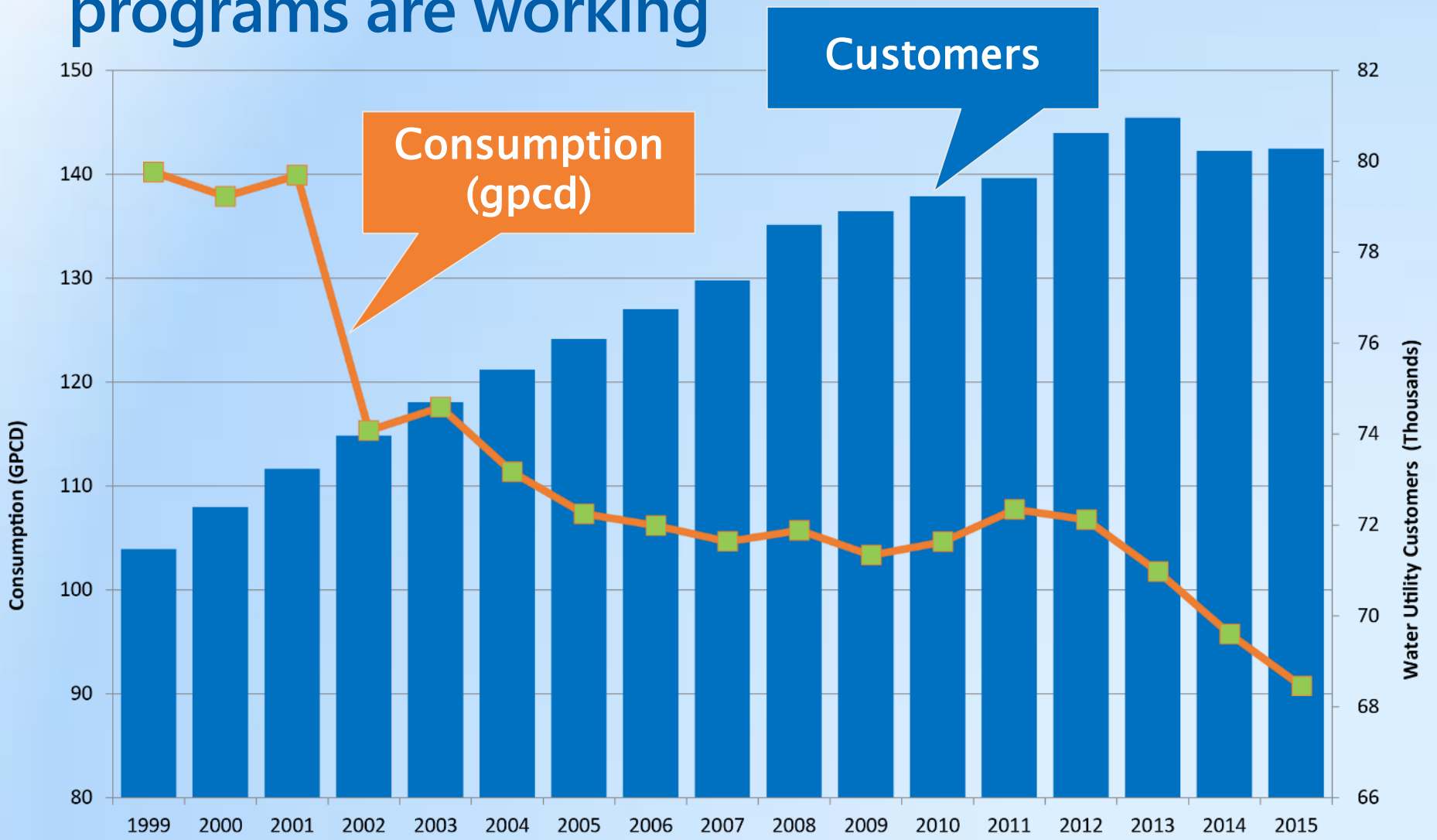


Climate change will impact supply AND demand

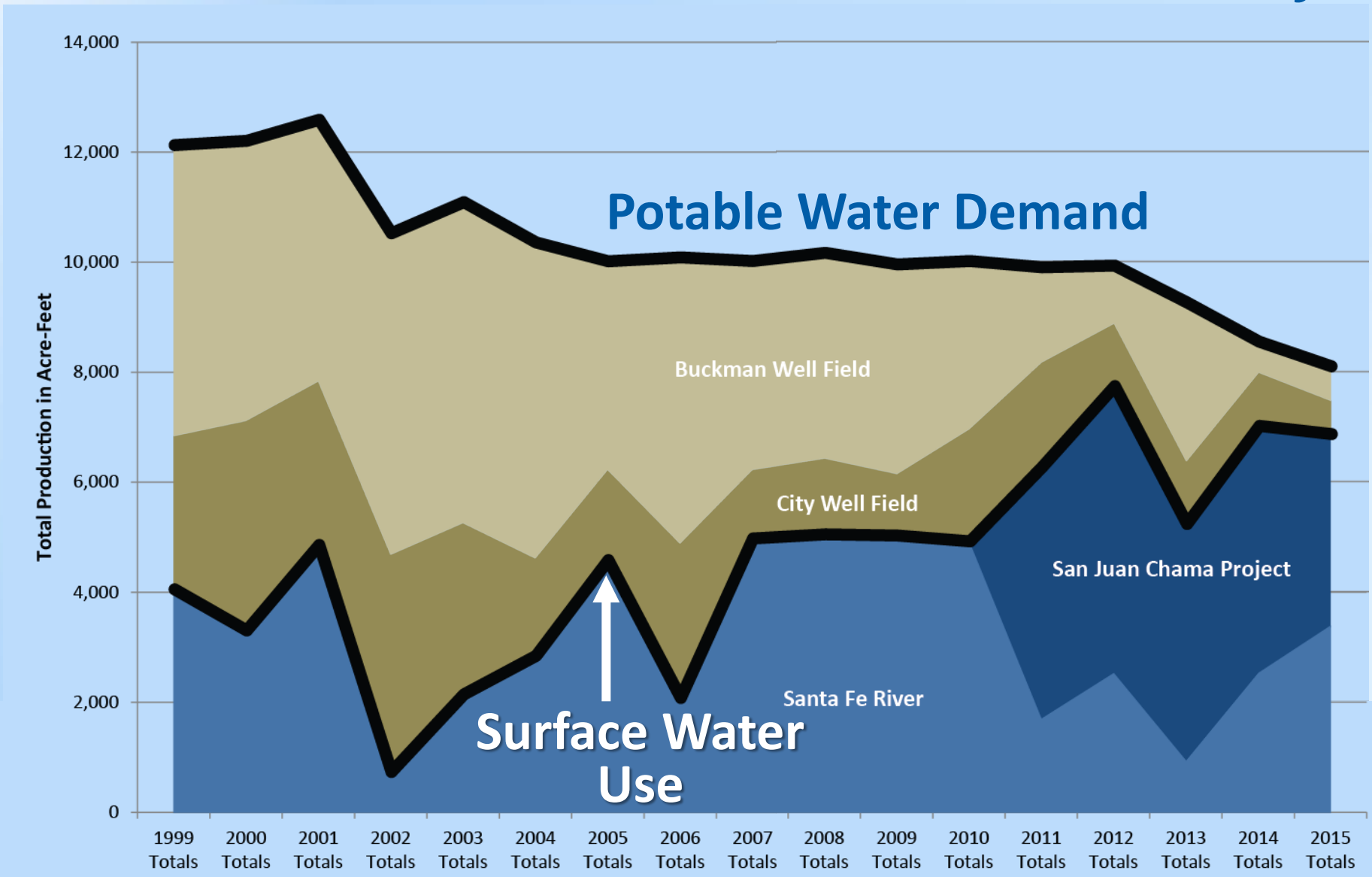
Shortages up to 9,300 AFY by 2055

Expanding water reuse is key for mitigating gaps

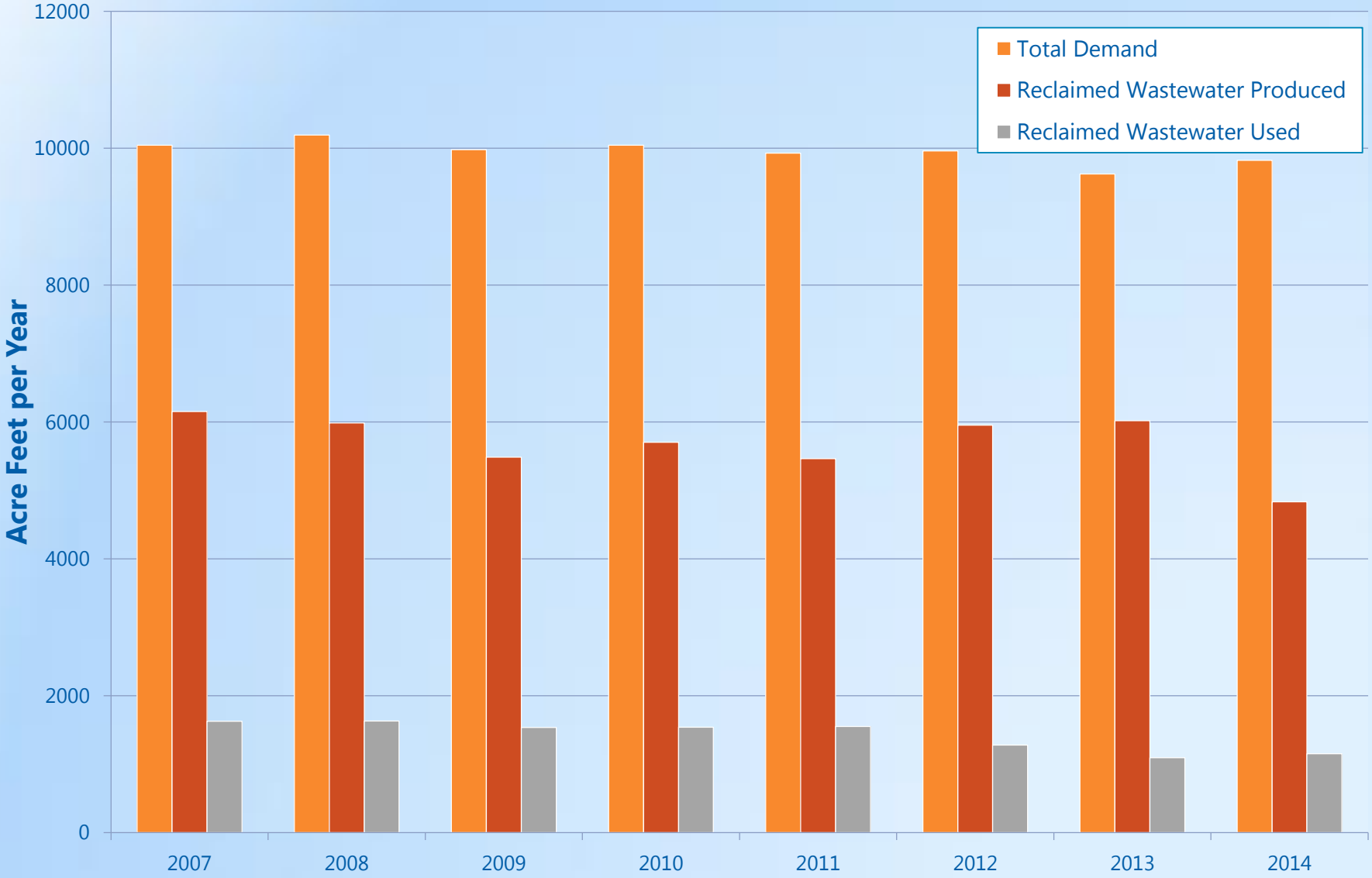
Santa Fe's industry-leading conservation programs are working



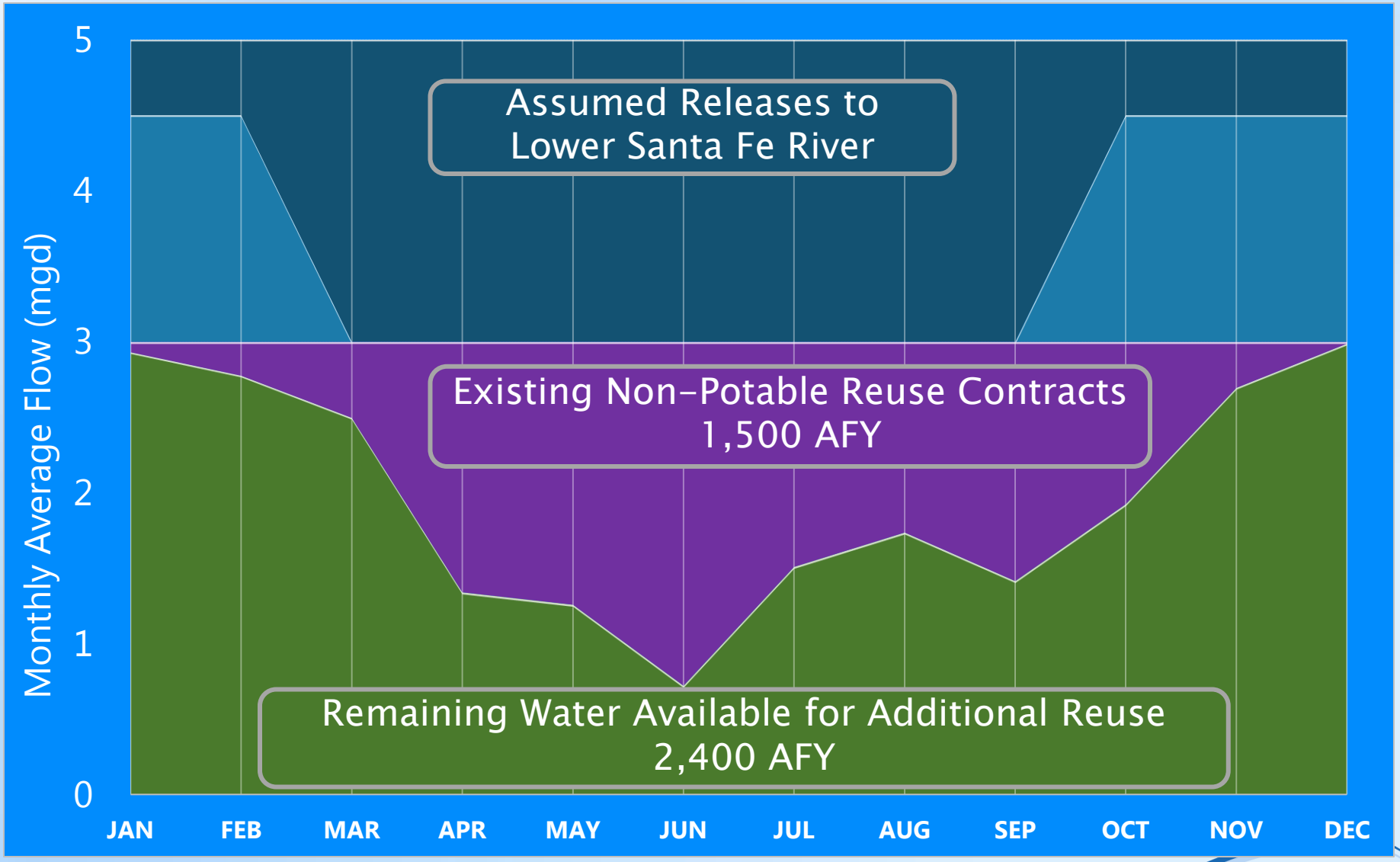
Conservation and conjunctive use have reduced demands and enhanced sustainability



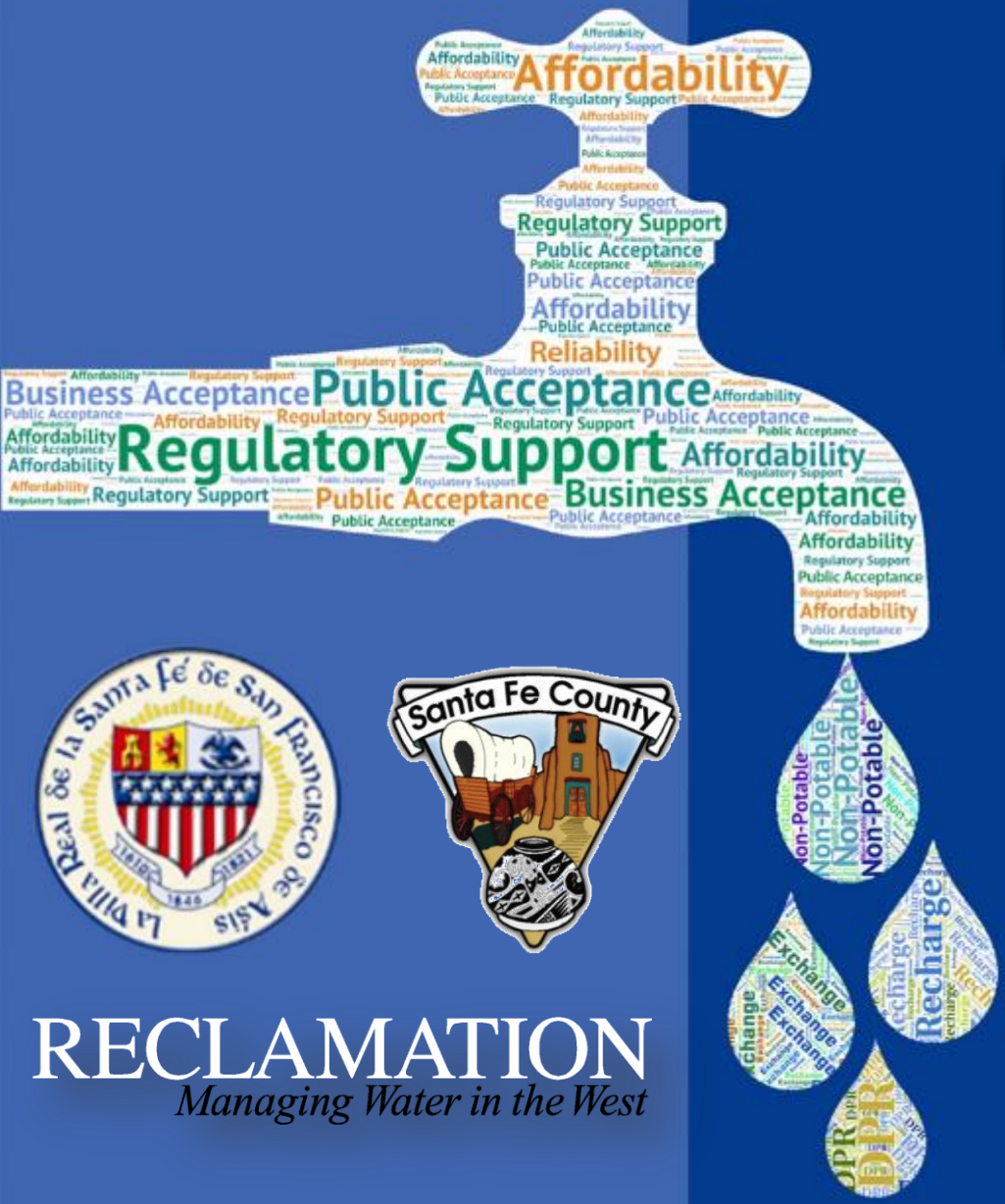
Basin Study: Water Reuse Availability



How much water can we reuse?



Reuse Alternatives



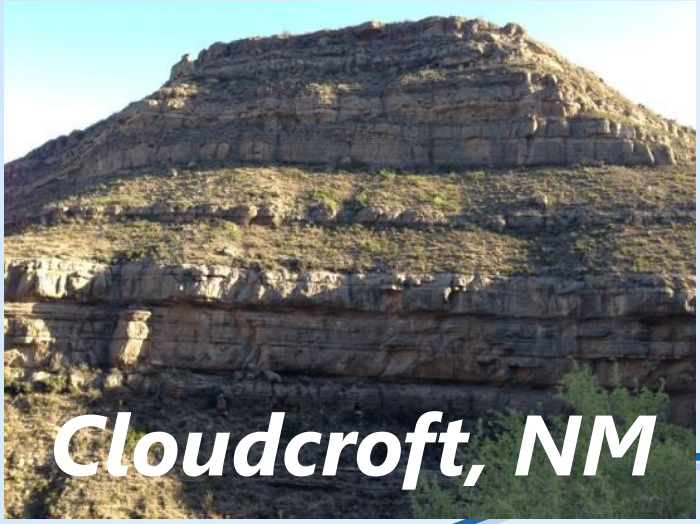
RECLAMATION
Managing Water in the West

Communities nationwide are expanding reuse and augmenting drinking water supplies

Orange County, CA

Gwinnett County, GA

Big Spring, TX



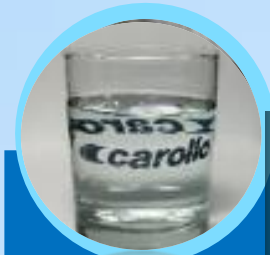
Feasibility Study examined 7 alternatives for expanding water reuse

1 Expand Non-Potable Reuse

Conveyance

2 Rio Grande Return Flow Credits

Conveyance



Indirect or Direct Potable Reuse

Conveyance

Advanced Water Purification Facility

3 Enhanced Living River and Aquifer Storage & Recovery

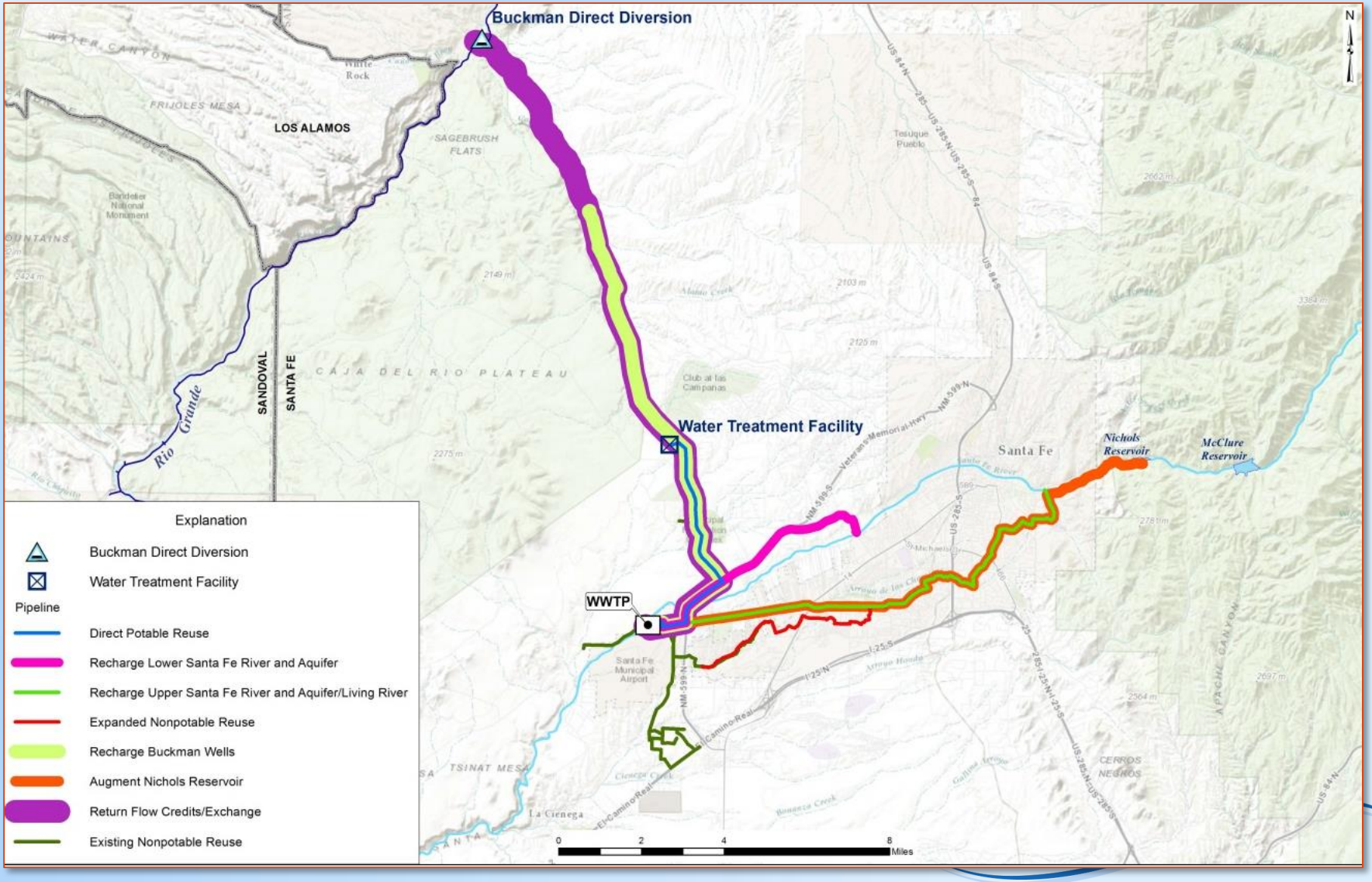
4 Aquifer Storage & Recovery via Lower Santa Fe River

5 Buckman Wells ASR

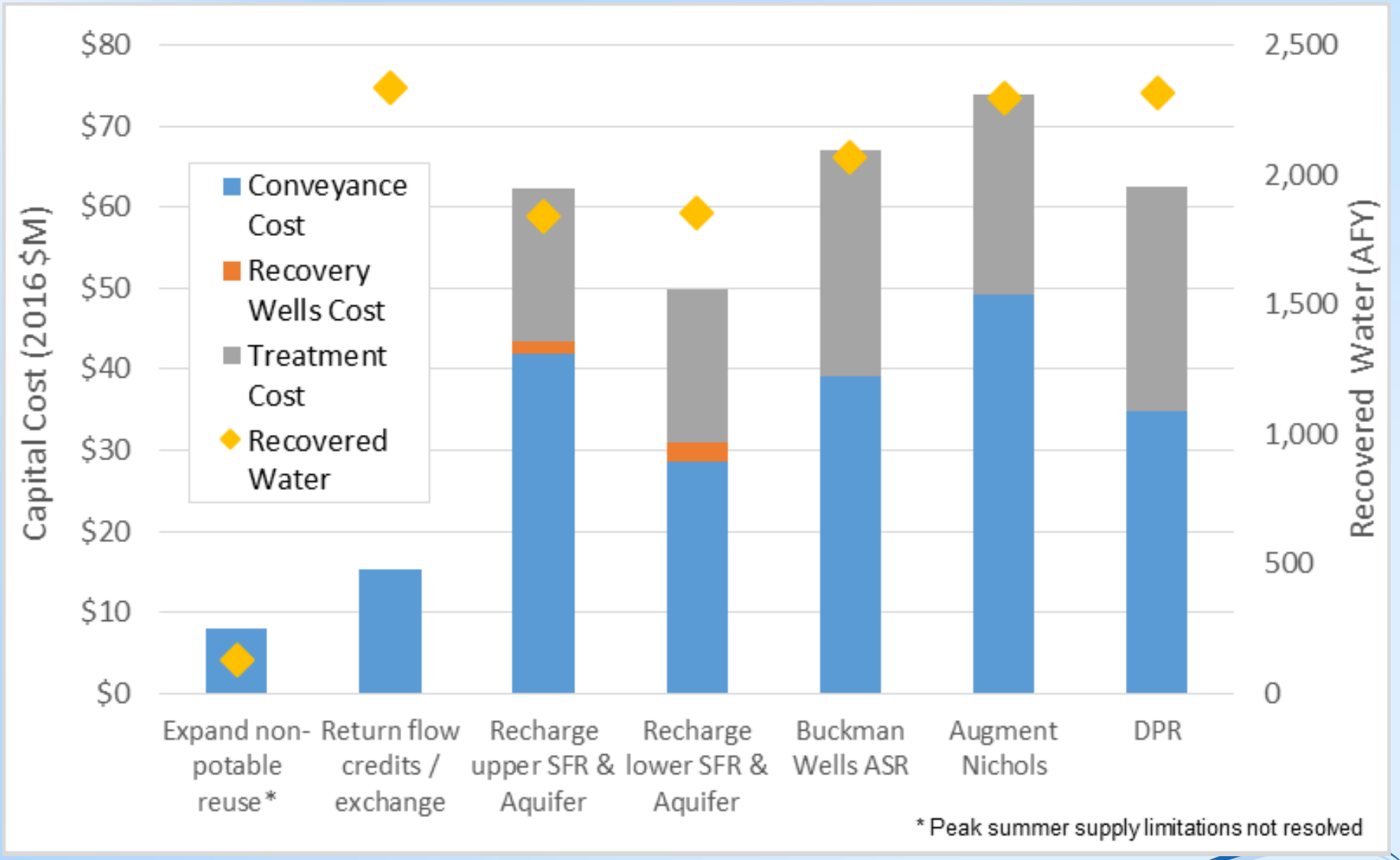
6 Augment Nichols Reservoir

7 Direct Potable Reuse

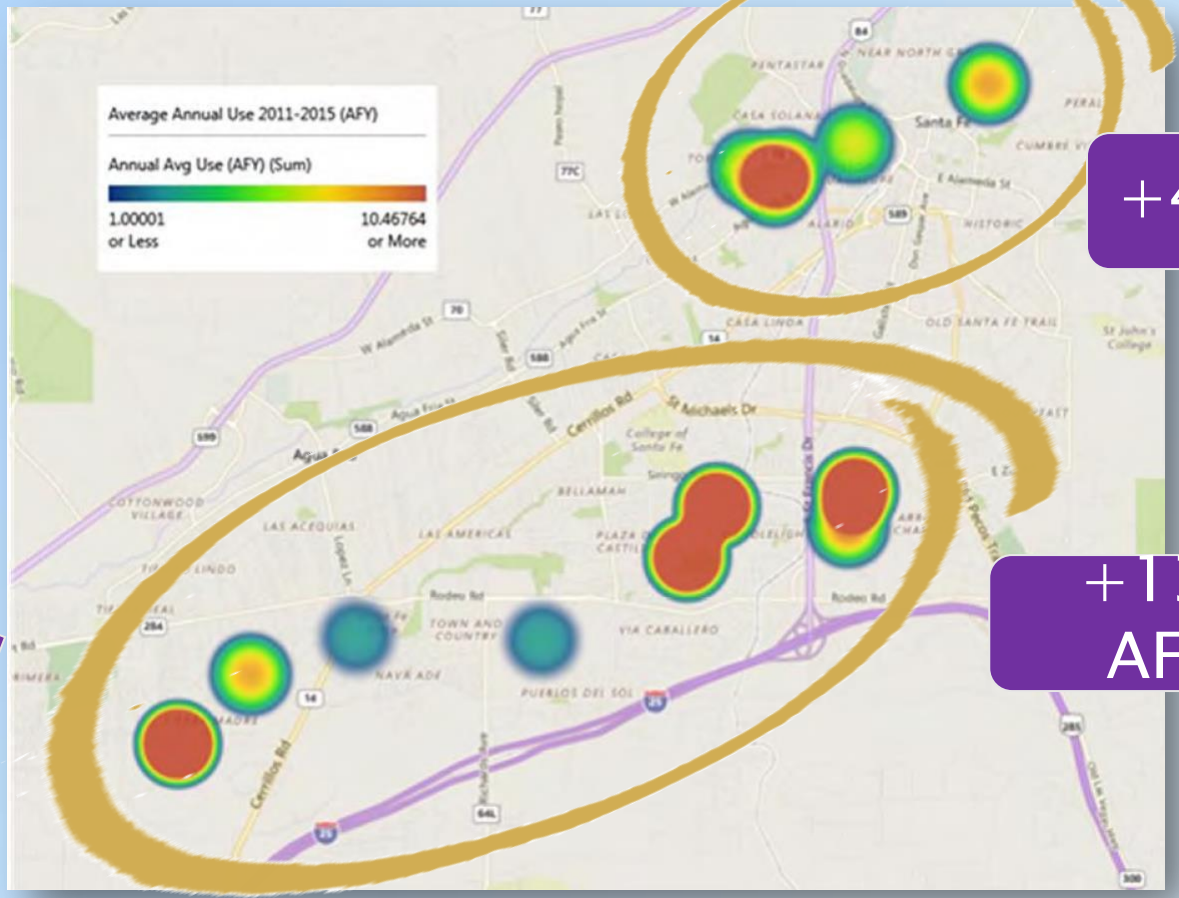
Reuse alternatives vary in the amount of "new plumbing" and treatment required



Cost-effectiveness highlights differences



Challenges in expanding irrigation reuse: Seasonal demand, limited summer supplies



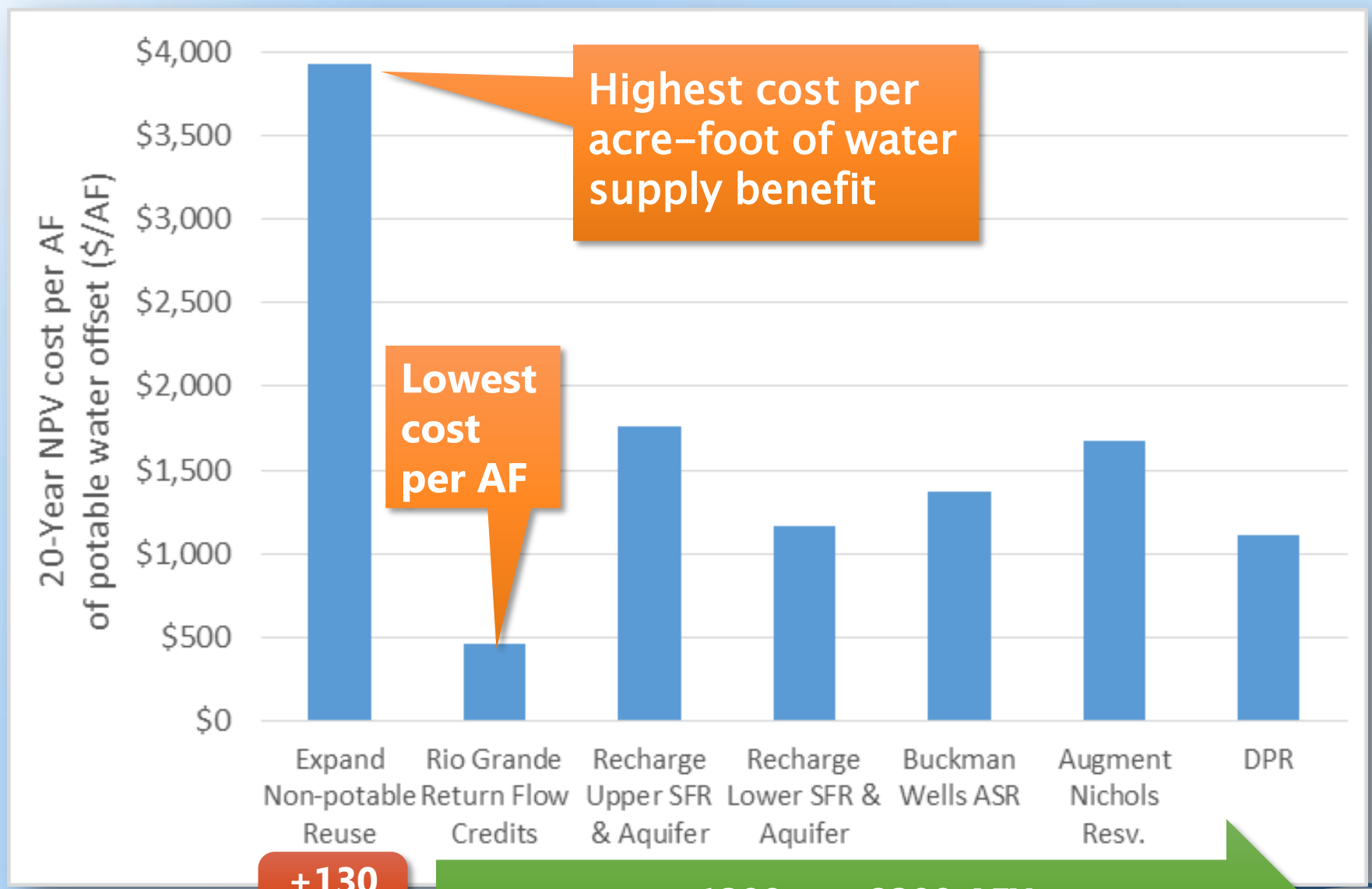
+45 AFY

+130 AFY

Reuse Supply

Demand is Highest when Available Supply is Lowest!

Water supply benefit drives cost-effectiveness



Initial Screening Evaluation: Four of the alternatives could meet our community's needs.

Rio Grande Return Flow Credits

Enhanced Living River and Aquifer Storage & Recovery

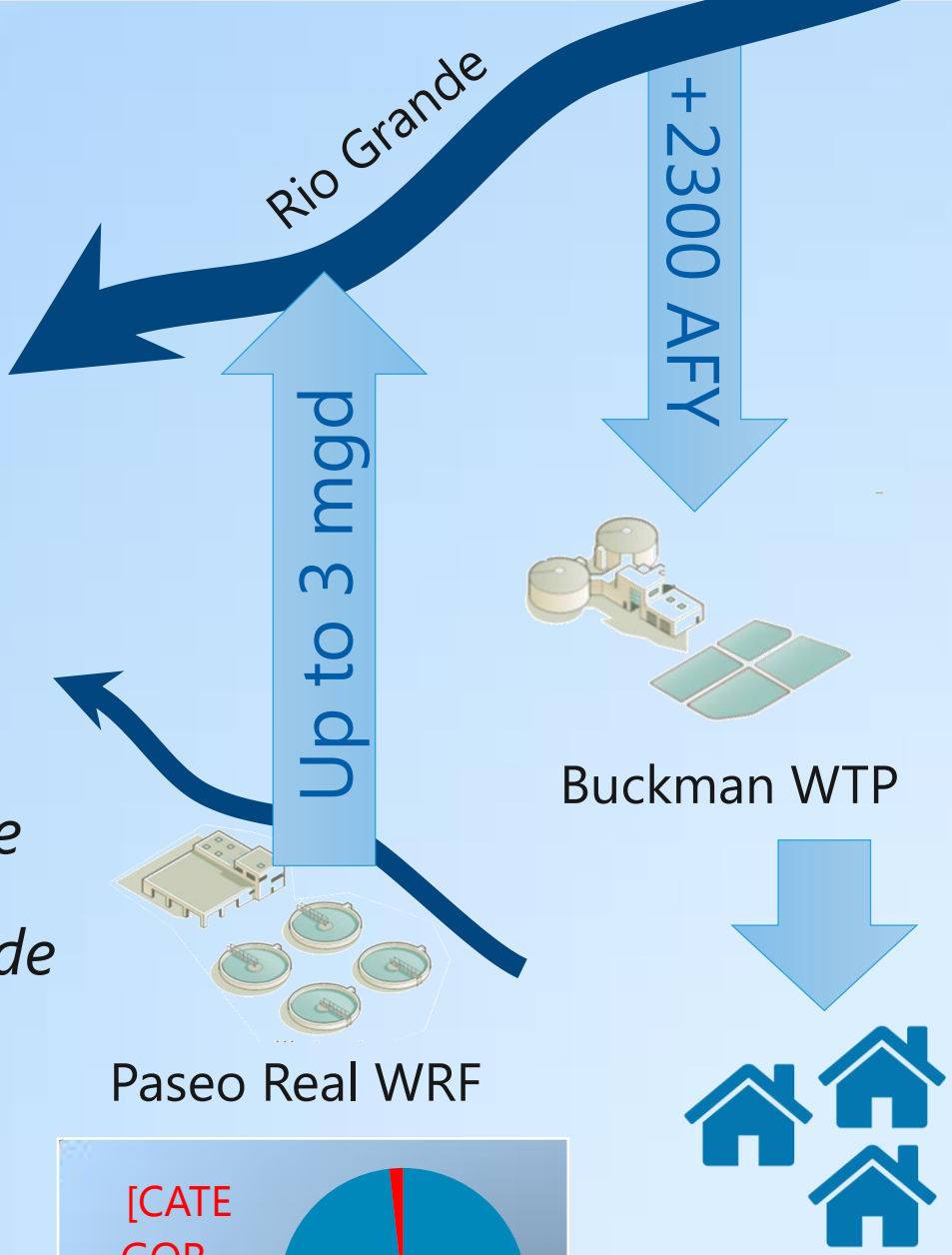
Aquifer Storage & Recovery via Lower Santa Fe River

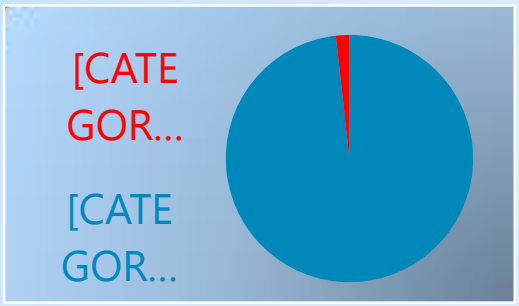
Direct Potable Reuse

Alternative 2

Full Use of SJCP Rights via Rio Grande Return Flow Credits

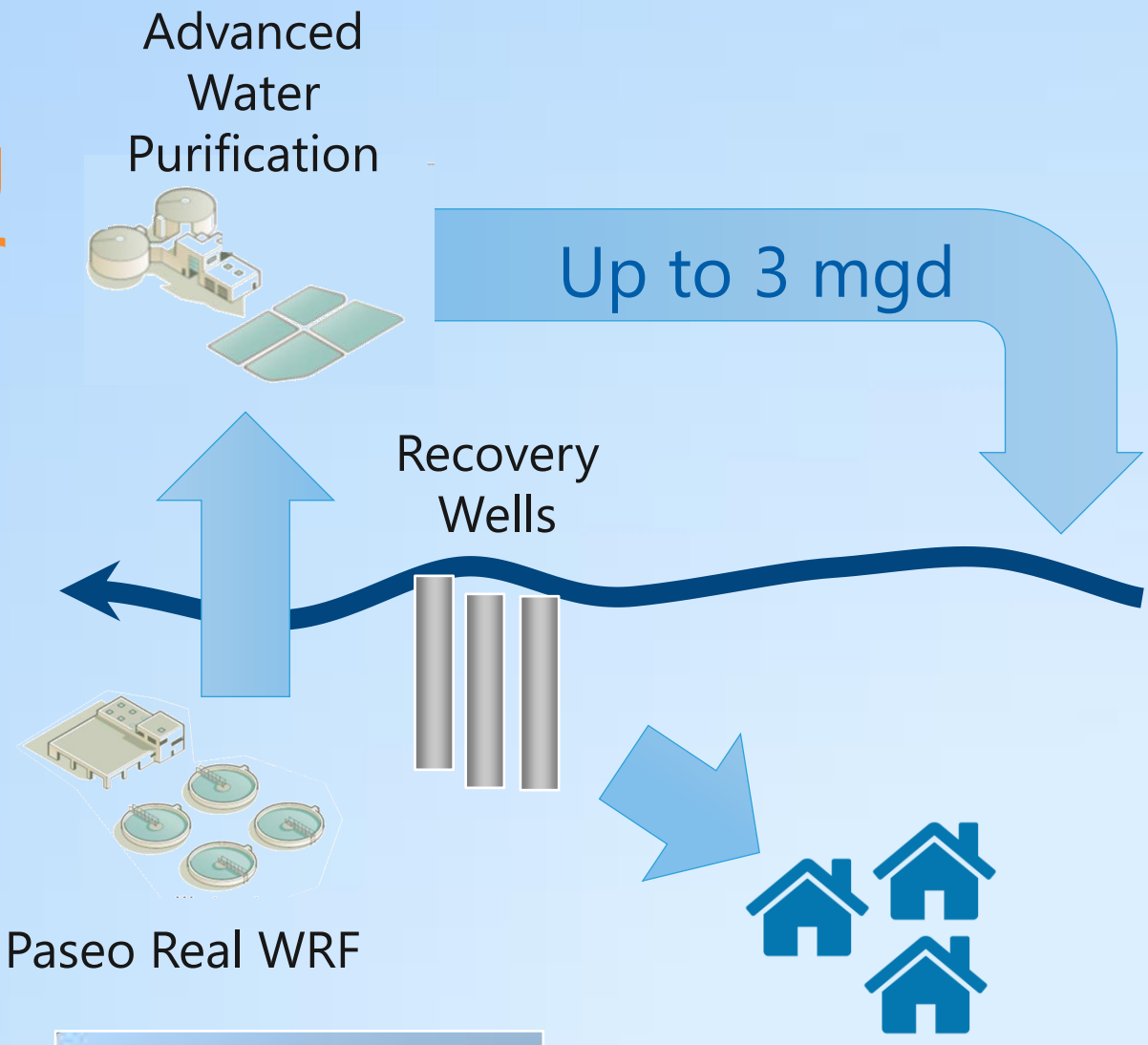
- *Reroute up to 3 mgd WRF discharge by pumping to Rio Grande*
- *Exchange for Rio Grande water*
- *Divert additional 2300 AFY through existing Buckman system*

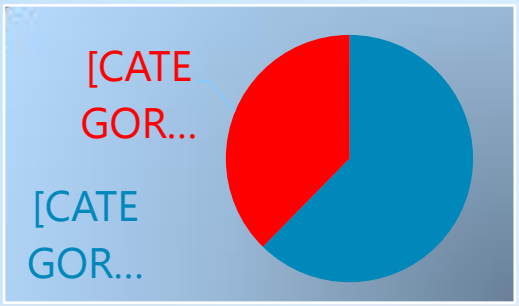




Alternative 3
Enhanced Living River and Upper Santa Fe River Recharge

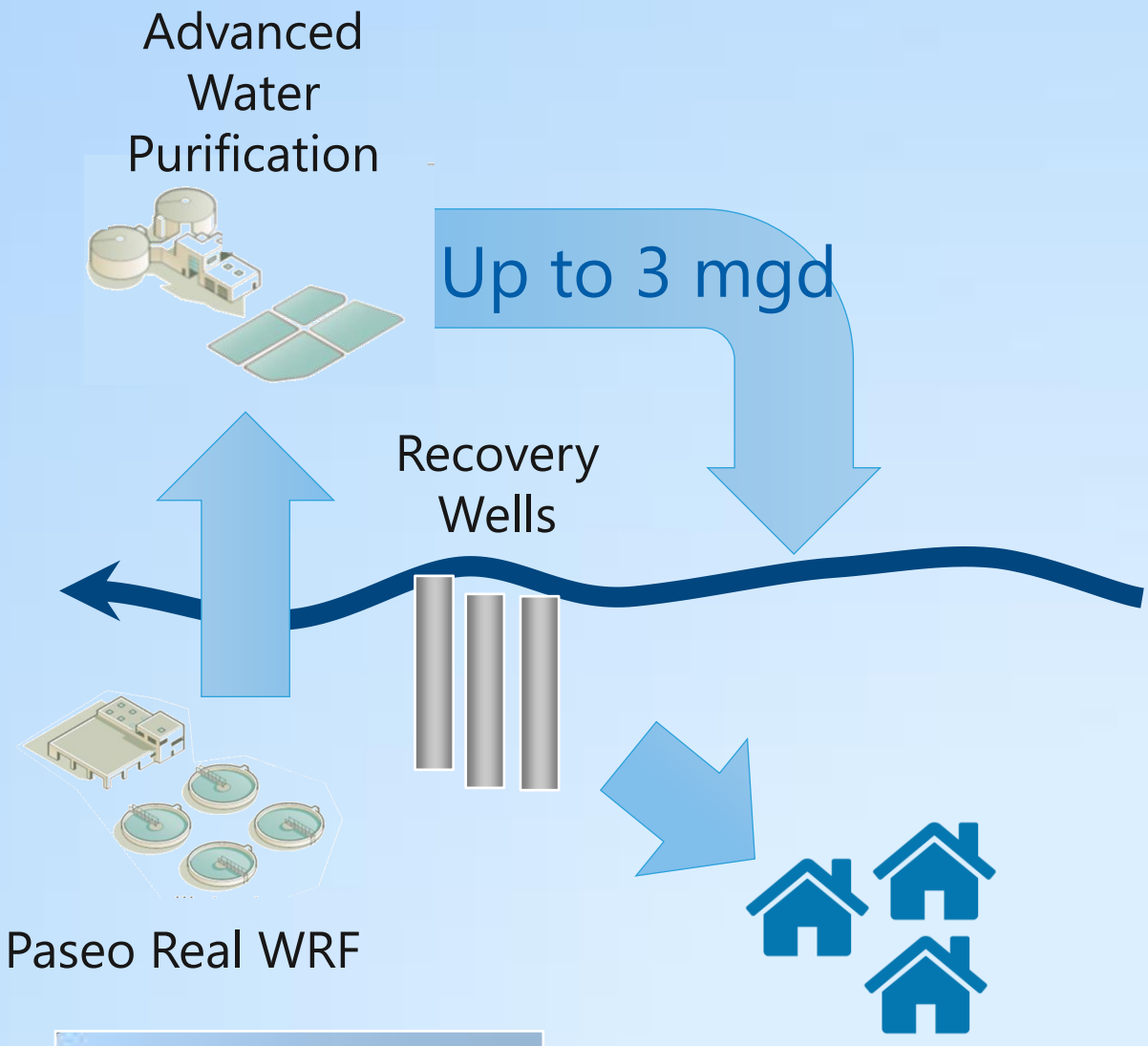
- *Discharge to Upper Santa Fe River at Two Mile*
- *Living River*
- *Divert via upper aquifer wells below Siler Road*

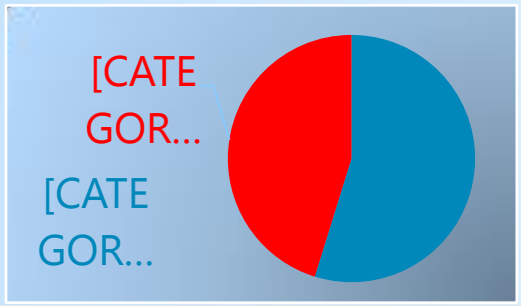




Alternative 4
Aquifer Storage and Recovery via Lower Santa Fe River

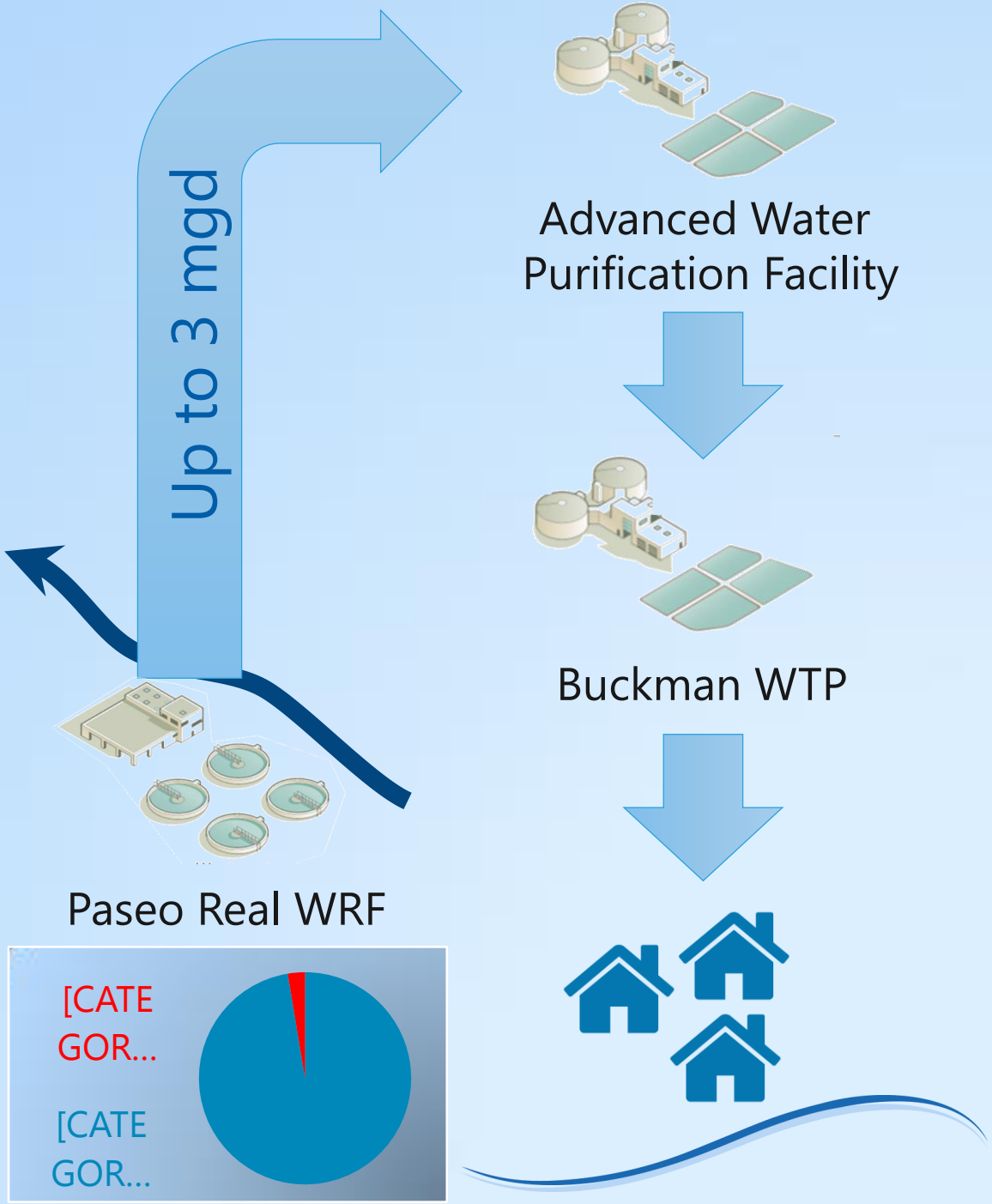
- *Discharge to Lower Santa Fe River at Siler Rd.*
- *Divert via upper aquifer wells below Siler Road*





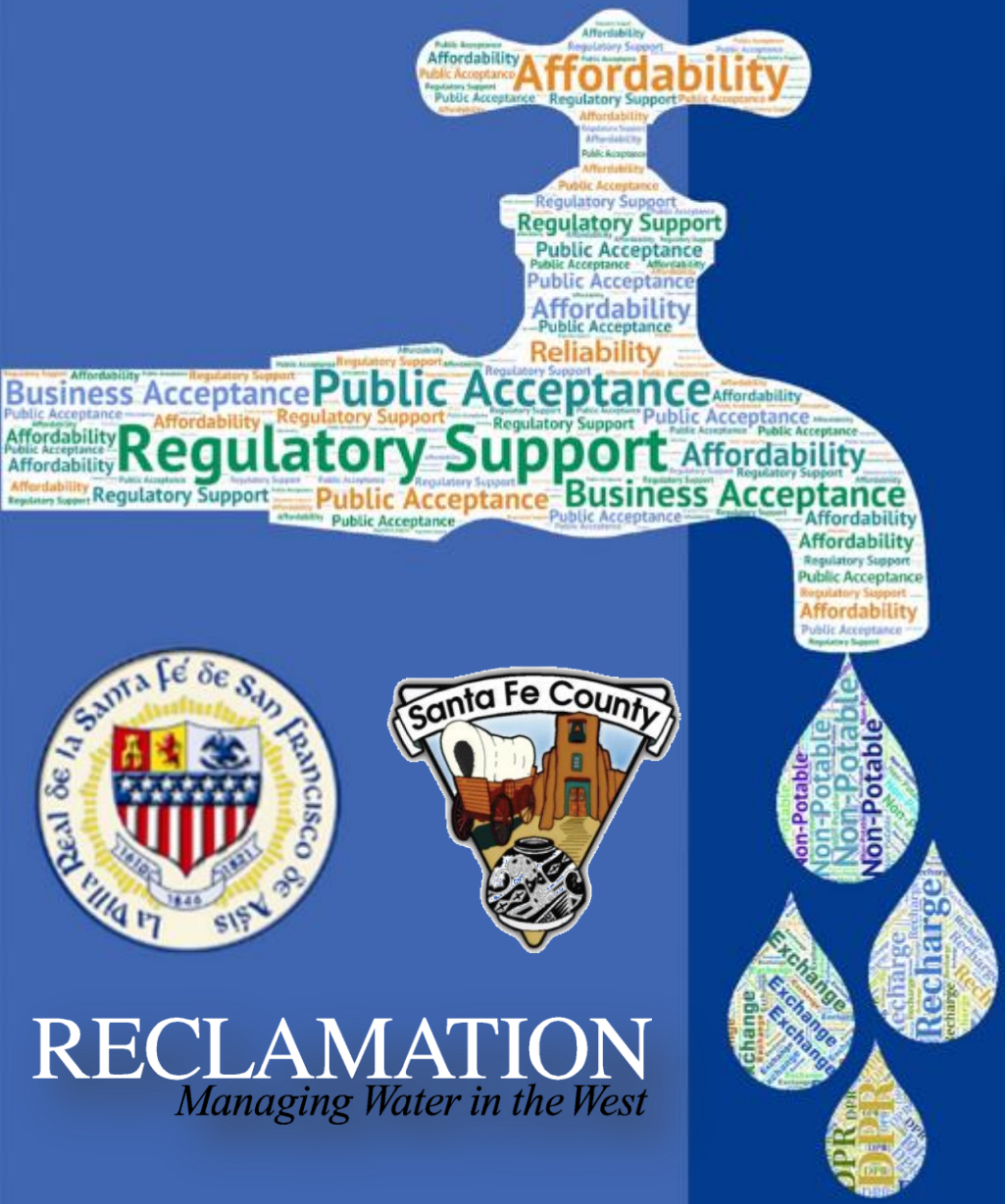
Alternative 7
Direct Potable Reuse

- *Up to 3 mgd to Advanced Water Purification Facility*
- *Pump to Buckman WTP for blending with Rio Grande raw water & further treatment*



Life-cycle costs are much lower for Alt. 2

- ✓ No advanced treatment
- ✓ No recovery wells
- ✓ 1 pump station
- ✓ Use existing BDD



Recommendations and Next Steps

RECLAMATION
Managing Water in the West

"Triple Bottom Line" analysis

ECONOMIC: Cost-Effective Supply Augmentation

SOCIAL: Public Benefit and Social Acceptability

ENVIRONMENTAL: Protect and Sustain the Environment

TECHNICAL / OTHER: Timely Implementability and Operability

TECHNICAL / OTHER: Project Risk Mitigation

Rio Grande Return Flow Credits (Alt. 2) best meets the community's needs

Key Benefits of Alternative 2:
Full Consumption of SJCP Water via Rio Grande Return Flow Credits

- ✓ Full use of SJCP water
- ✓ Lowest cost
- ✓ Best return on investment
- ✓ Leverages existing capacity in Buckman Direct Diversion
- ✓ No advanced treatment
- ✓ Least complex permitting and implementation
- ✓ Living River through reservoir bypass flows
- ✓ Flexible and adaptable

Recommendations and Next Steps

- Alternative that best meets the community's needs: **Full Consumption of San Juan-Chama Project Water via Rio Grande Return Flow Credits**
- Finalize report April 2017 → Bureau of Reclamation approval
- Long-Range Water Supply Plan update: Addressing remaining shortages
- Pursue Congressional authorization for construction under Reclamation Title XVI Program
- Consider Preliminary Design, Final Design, Construction and Startup

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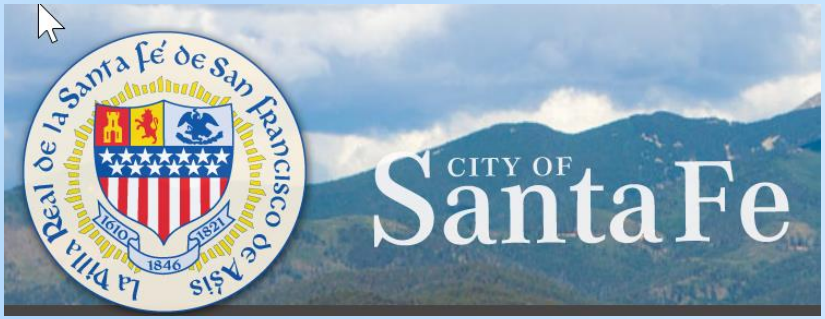
Where can I find more information?

www.savewatersantafe.com / 505.955.4225



http://www.santafenm.gov/reclaimed_wastewater_reuse

Please join us for Q&A at the tables

Drivers for Increasing Water Reuse in Santa Fe and Across the U.S.

Community Benefits of the Highest-Ranked Water Reuse Alternative

Path Toward Implementation

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