



# SANTA FE WATER REUSE FEASIBILITY STUDY

## Community Benefits of the Highest-Ranked Water Reuse Alternative

The Feasibility Study evaluated seven water reuse alternatives in depth, ranging from expanding non-potable uses (primarily irrigation) to augmenting supplies in our reservoirs, rivers, and groundwater.

The alternatives underwent a rigorous engineering analysis to evaluate how each alternative would address the community's needs and values. Criteria included 13 economic and non-economic measures, in five major categories.

**ECONOMIC:**  
Cost-Effective Supply Augmentation

**ENVIRONMENTAL:**  
Protect and Sustain the Environment

**SOCIAL:**  
Public Benefit and Social Acceptability

**TECHNICAL/OTHER:**  
Timely Implementability and Operability

**TECHNICAL/OTHER:**  
Project Risk Mitigation

Expand Non-Potable Reuse

CONVEYANCE

Rio Grande Return Flow Credits

CONVEYANCE

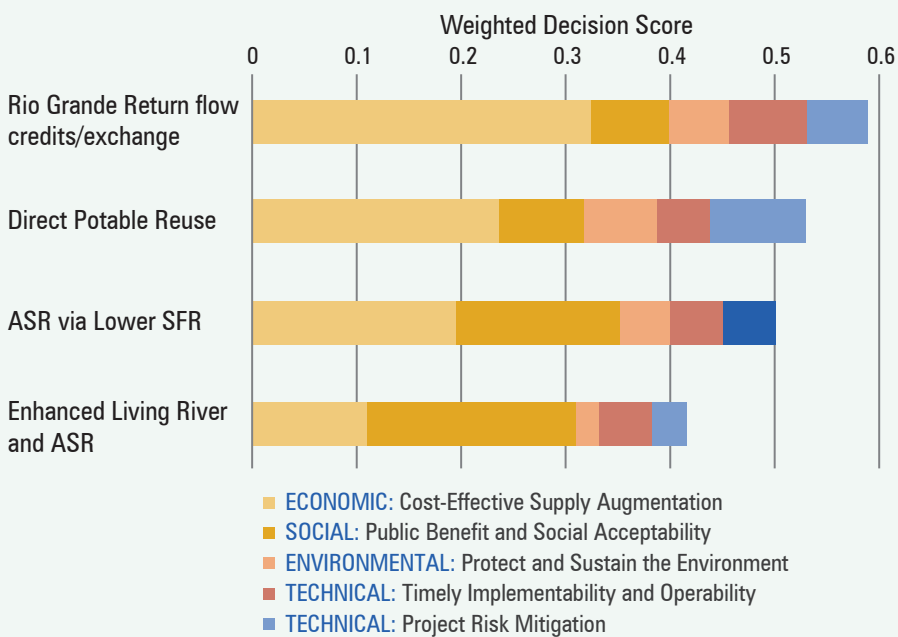
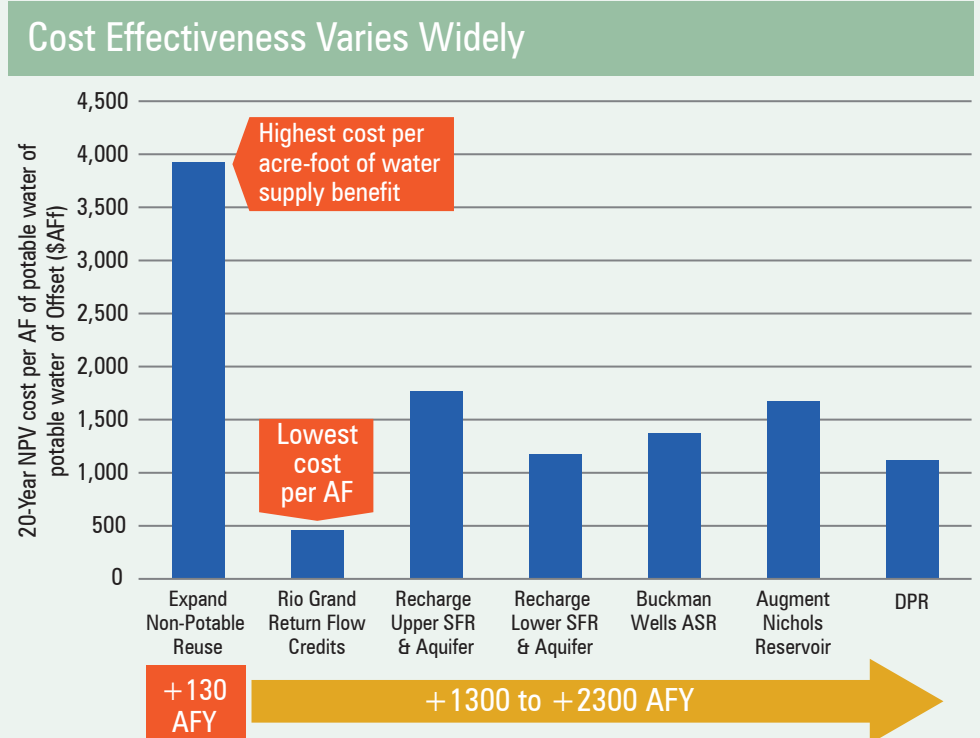
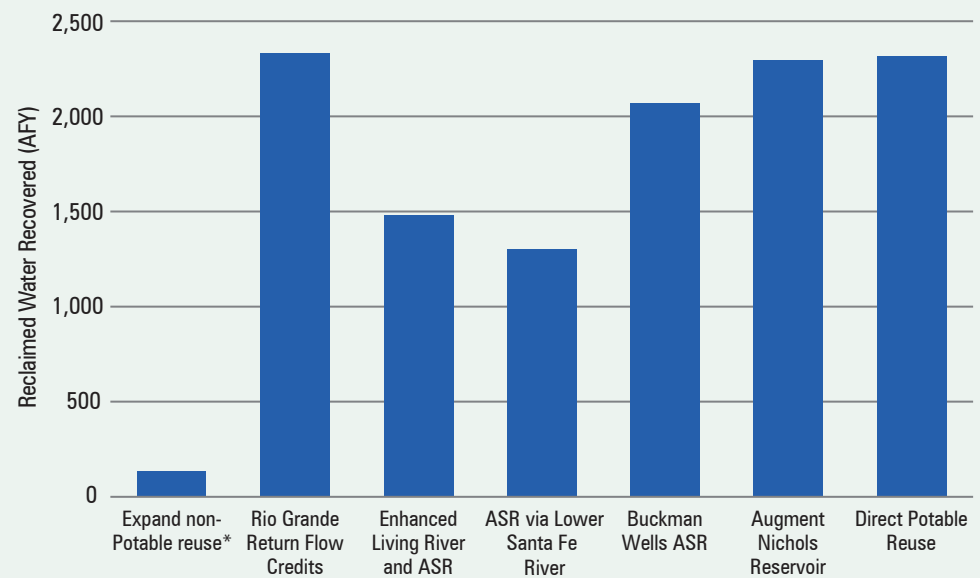
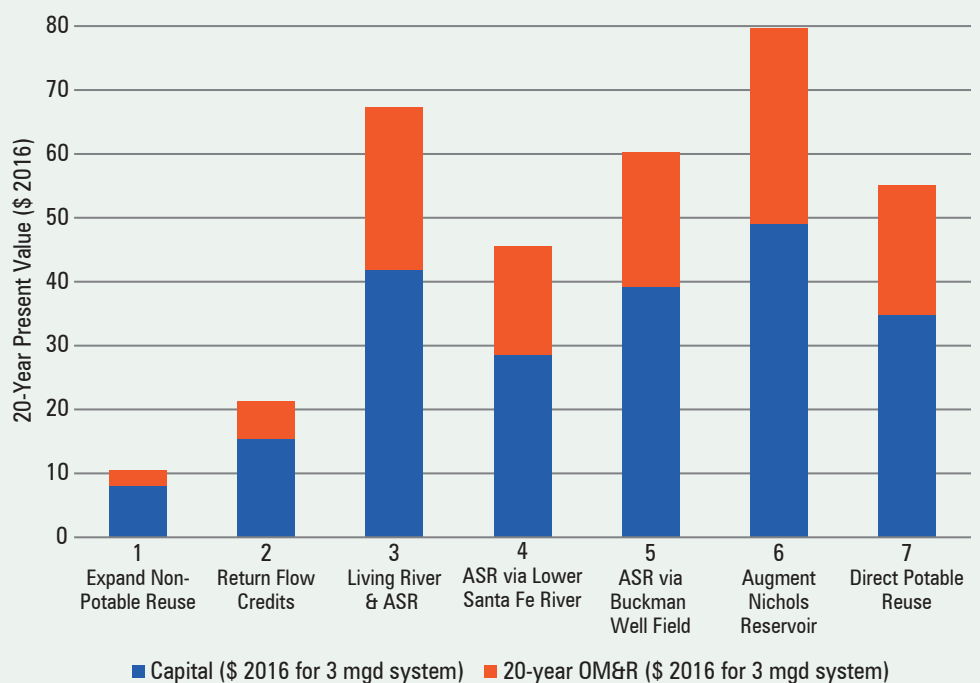
Indirect or Direct Potable Reuse

CONVEYANCE

Advanced Water Purification Facility

- 3 Enhanced Living River and Aquifer Storage and Recovery
- 4 Aquifer Storage and Recovery via Lower Santa Fe River
- 5 Buckman Wells ASR
- 6 Augment Nichols Reservoir
- 7 Direct Potable Reuse

The primary objective of the Feasibility Study was to find the best way to increase our sustainable use of locally available water supplies. Cost-effectiveness is a function of up-front capital and ongoing operating costs and the amount of water produced. **Alternative 2** produces the most water supply benefit and has low costs.

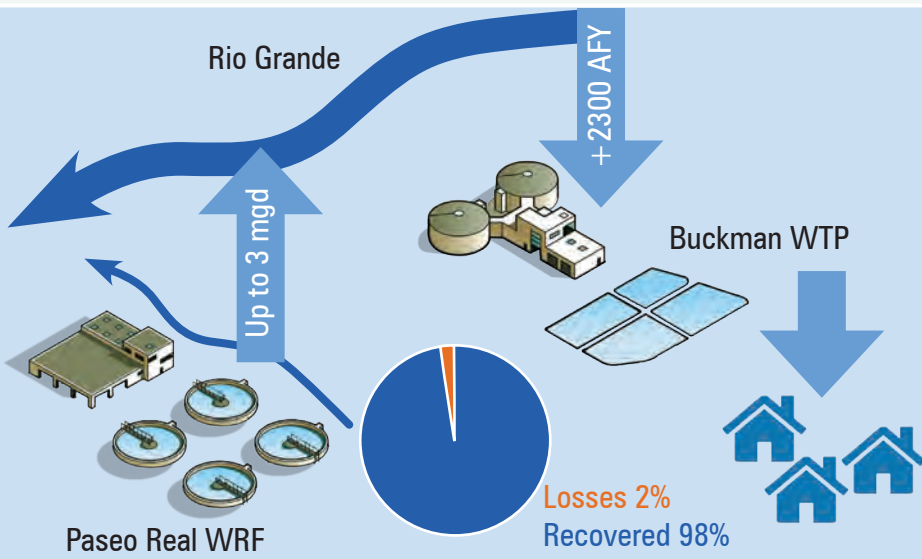


Four alternatives were evaluated in further detail, using rigorous engineering analyses to refine costs and characterize benefits. **Alternative 2** was found to best meet the community's needs while reflecting its values and priorities. It minimizes costs by avoiding the need for advanced water purification technologies, and leverages our existing investments in the Buckman Direct Diversion System.

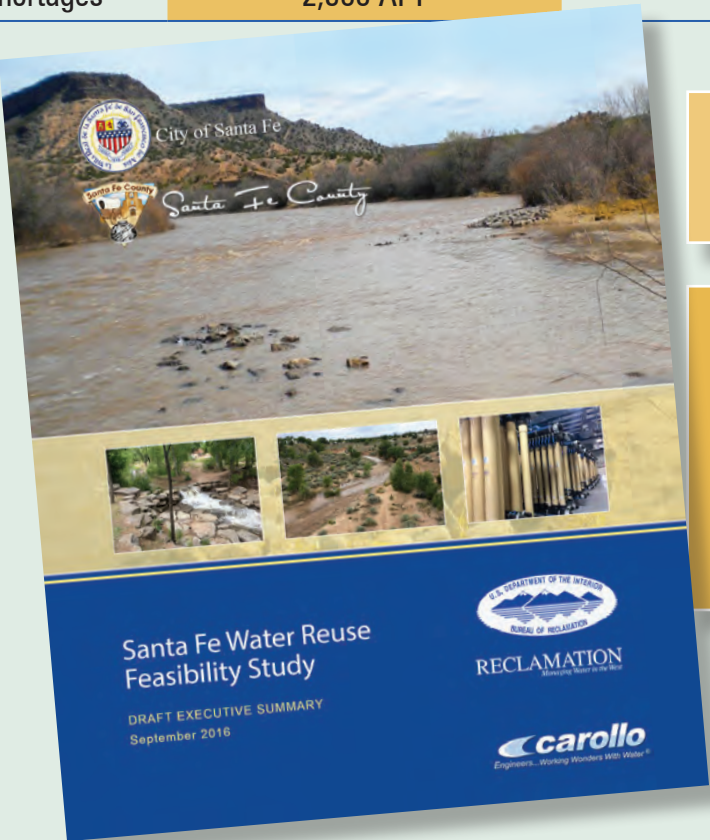
### ALTERNATIVE 2

#### 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



Consideration	Alternative 2: Full Consumption of SJCP Water via Rio Grande Return Flow Credits	Alternative 3: Enhanced Living River and Aquifer Storage and Recovery	Alternative 4: Aquifer Storage and Recovery via Lower Santa Fe River	Alternative 7: Direct Potable Reuse
Capital Cost	Best Alternative \$17.8M (2016 \$)	2.7 X Cost of Alternative 2	1.7 X Cost of Alternative 2	2.1 X Cost of Alternative 2
Operations and Maintenance Cost	Best Alternative \$0.3M/year (2016 \$)	3.9 X Cost of Alternative 2	2.4 X Cost of Alternative 2	2.8 X Cost of Alternative 2
Reduction in Future Water Shortages	Best Alternative 2,300 AFY	37% Less than Alternative 2	44% Less than Alternative 2	Similar to Alternative 2



Full Use Of SJCP Water

Lowest Cost

Least Complex Permitting and Implementation

Leverages Existing Capacity in Buckman Direct Diversion

No Advanced Treatment

Best Return on Investment

Flexible and Adaptable