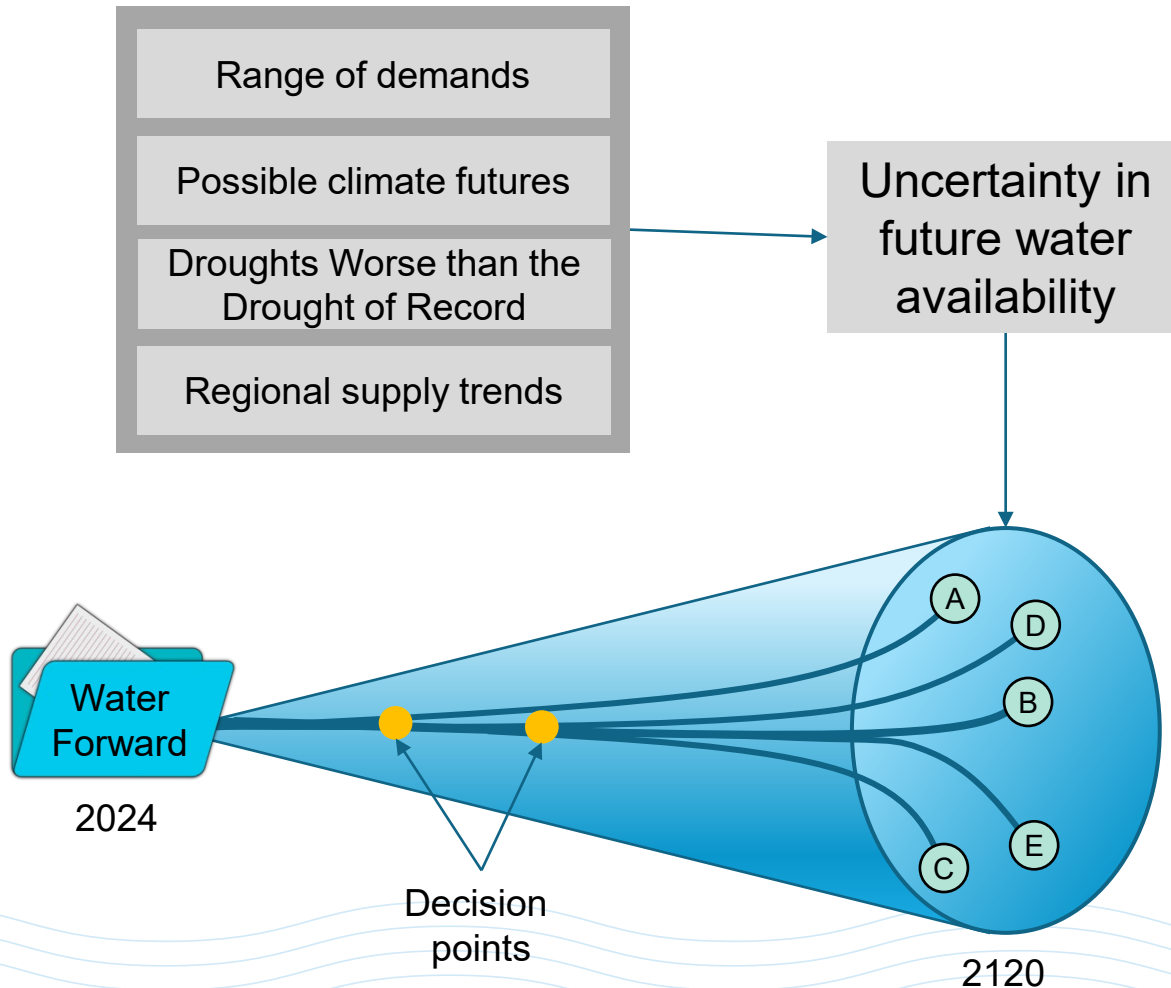




# Water Forward 2024 water management strategies

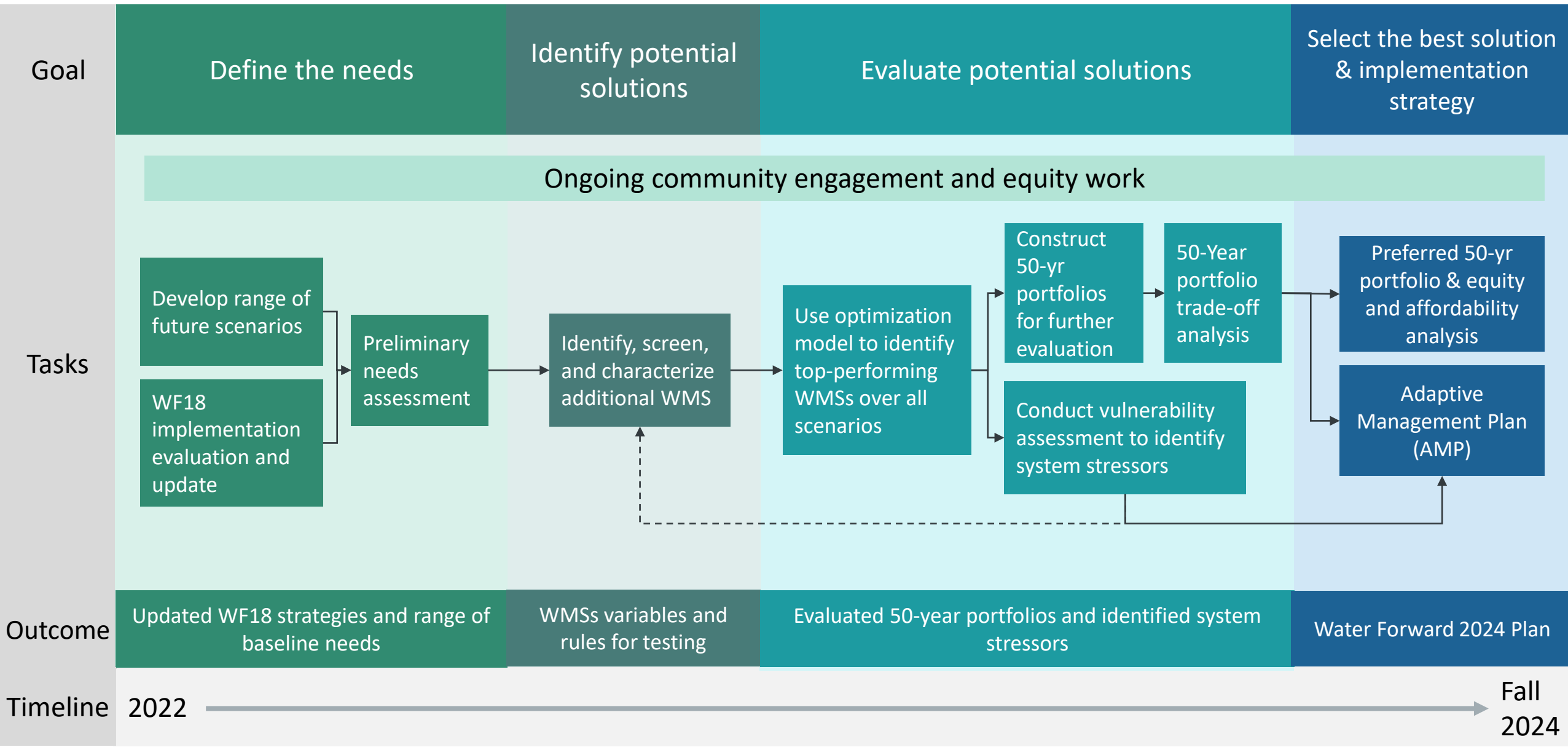
April 15, 2024

# Water Forward 2024: Planning for Uncertainty



- Develop a range of future conditions
- Find common near-term strategies that work for a broad range of futures
- Develop adaptive plan with key decision points
- Re-evaluate at key decision points

# Scenario Planning Methodology



# Strategy Characterization Process

- Review strategies considered and/or recommended in Water Forward (WF)18
- Review progress of ongoing programs
- Identify additional strategies for WF24 initial list
- Identify any variables (operational, scale)
- Update cost and yield characterization for testing



# Strategy Types

## Water Supply

- Strategies that enable the utility to access new sources of water and expand or make better use of existing sources of water

## Demand Management

- Strategies like conservation and reuse that reduce the demands on raw or potable water

## Best Management Practices

- Strategies that advance Water Forward objectives like protecting the health of the Colorado River and improving the utility's resilience.

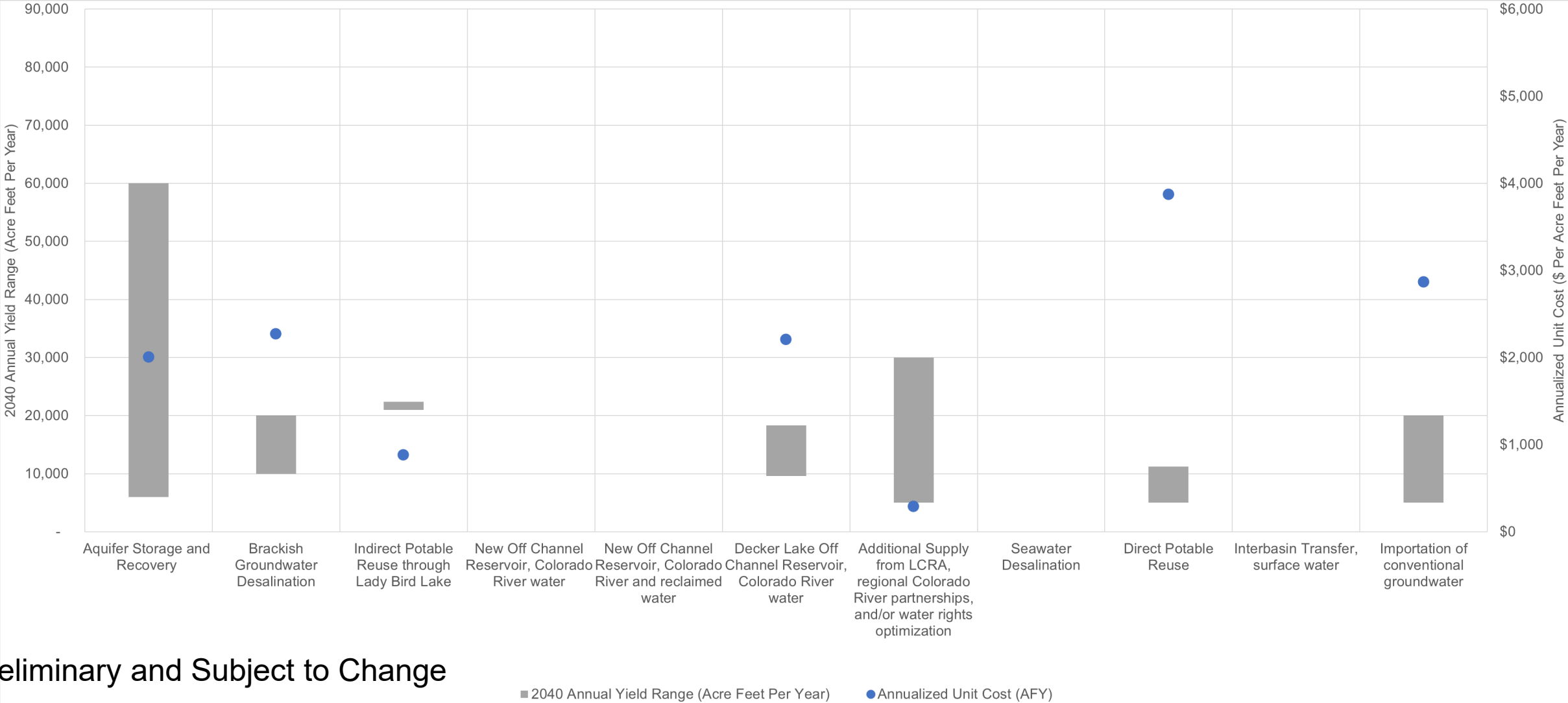


# Strategy Characterization Approach

- As strategies will be modeled with various timing and yields in the WMS optimization analysis, each strategy generally includes a min and max yield at each planning horizon
- Costs for each strategy have been generated at the 2120 max yield
- Cost information includes:
  - Total capital cost, including facilities, contingencies, and land acquisition
  - Total annual costs, including debt service and operations and maintenance
  - Annualized unit costs in dollars per acre feet per year

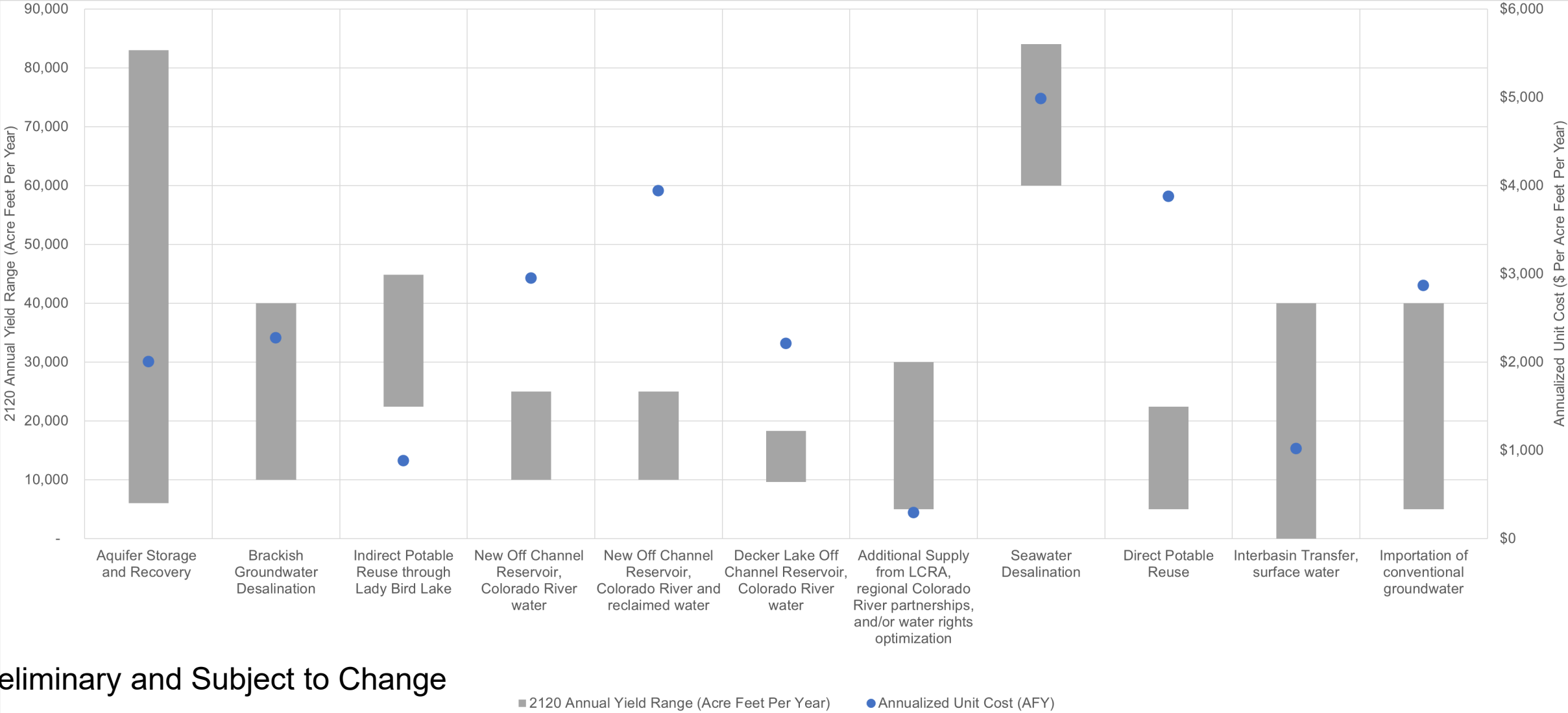


# 2040 Supply Strategy Yield Ranges and Annualized Unit Costs



Preliminary and Subject to Change

# 2120 Supply Strategy Yield Ranges and Annualized Unit Costs



Preliminary and Subject to Change

# Demand Reduction Pathways

- Potable water demand reduction strategies like reuse and conservation are inter-dependent and were modeled together as distinct pathways driven by potential reuse and reclaimed system options

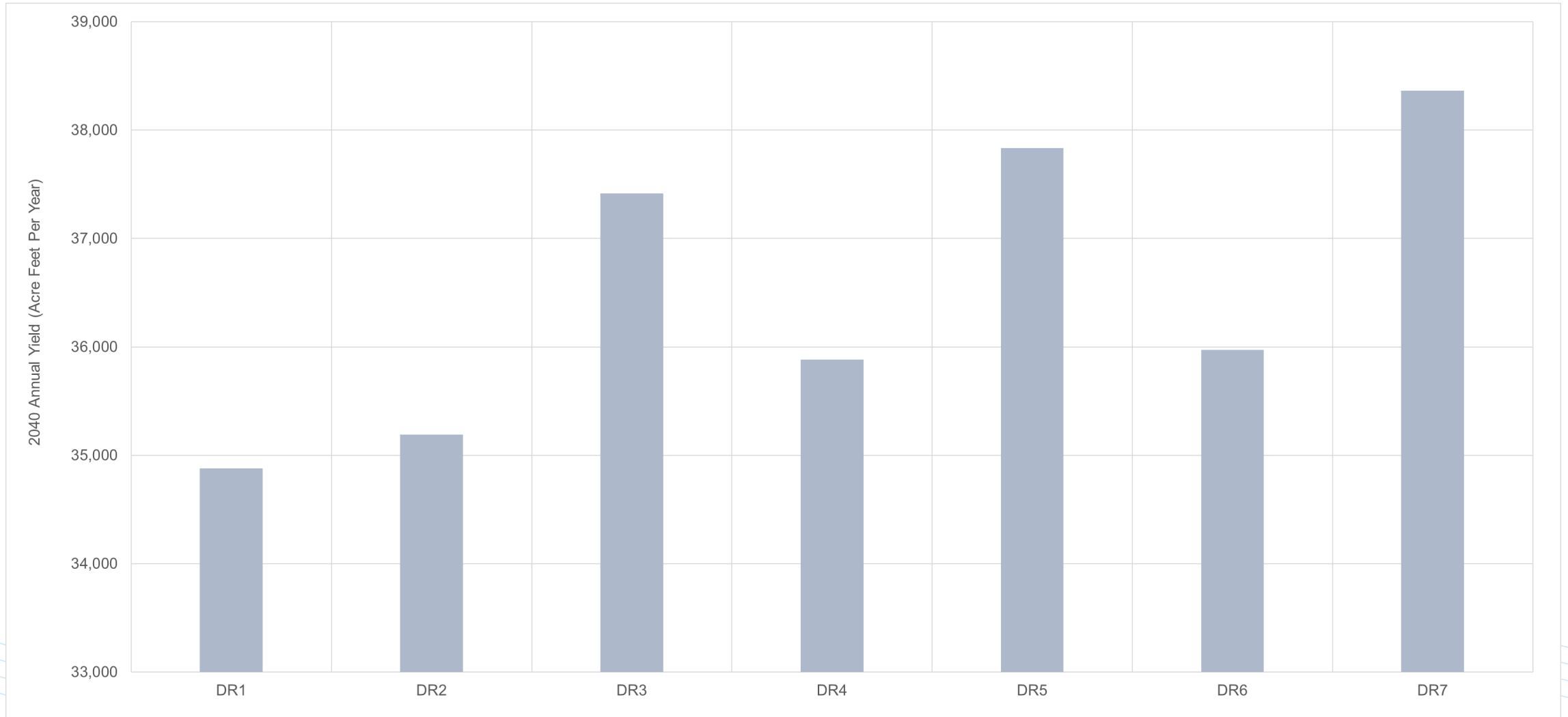


# Demand Reduction Pathways

|                                           | Notes                            | DR1 | DR2 | DR3 | DR4 | DR5 | DR6 | DR7 |
|-------------------------------------------|----------------------------------|-----|-----|-----|-----|-----|-----|-----|
| <b>Utility-Side Water Loss Control</b>    | Dependent                        | x   | x   | x   | x   | x   | x   | x   |
| <b>Customer Side Water Use Management</b> | Dependent                        | x   | x   | x   | x   | x   | x   | x   |
| <b>Native and Efficient Landscapes</b>    | Dependent                        | x   | x   | x   | x   | x   | x   | x   |
| <b>Centralized Reclaimed</b>              | Current requirements             | x   |     |     |     |     |     |     |
|                                           | Larger system area               |     | x   | x   |     |     | x   | x   |
|                                           | Further connection distance      |     |     |     | x   | x   | x   | x   |
| <b>Decentralized Reclaimed</b>            | Phase 1                          | x   | x   | x   | x   | x   | x   |     |
|                                           | Phase 1 & 2                      |     |     |     |     |     |     | x   |
| <b>Onsite Reuse</b>                       | Current requirements             | x   |     |     |     |     |     |     |
|                                           | Smaller building size threshold  |     | x   |     | x   |     | x   | x   |
|                                           | Increased non-potable demand met |     |     | x   |     | x   | x   | x   |

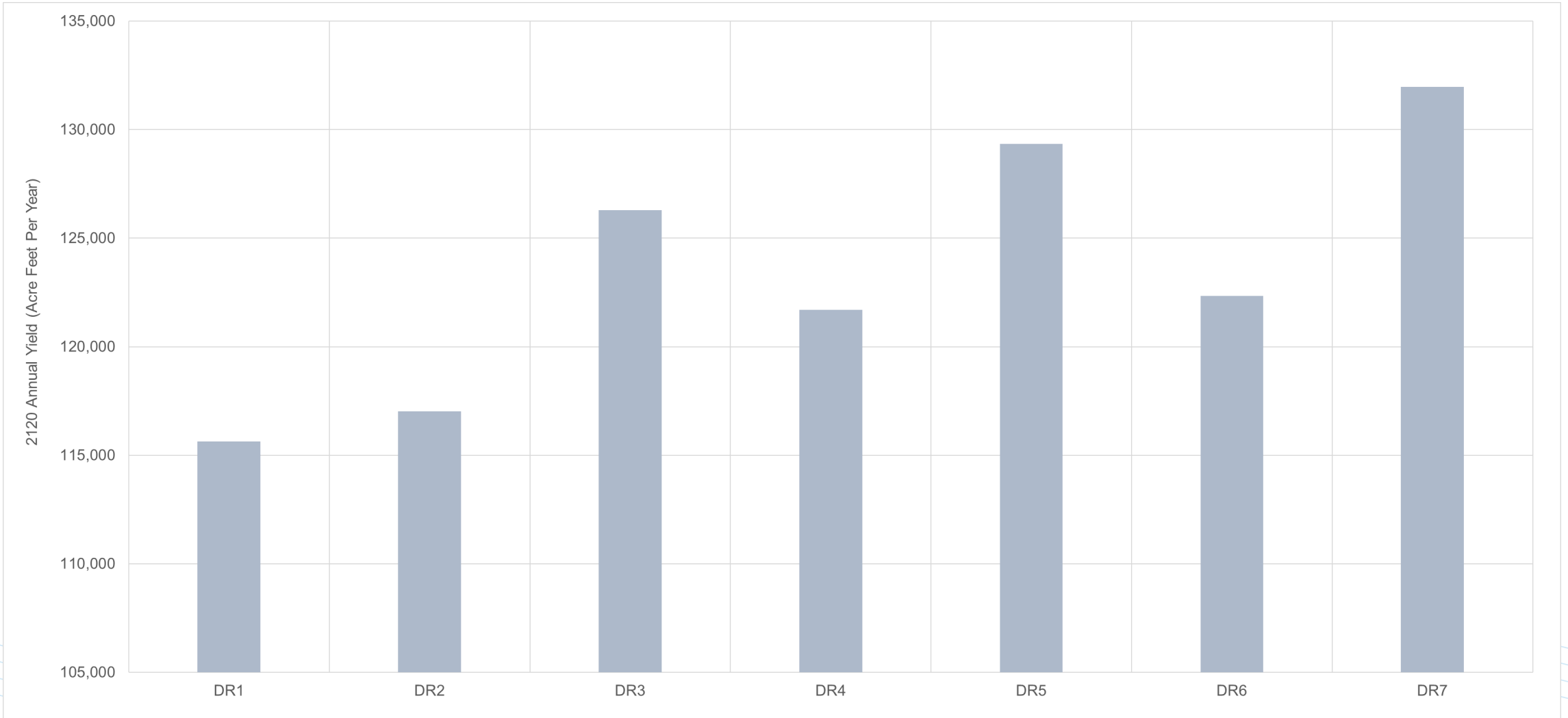
# 2040 Demand Reduction Pathway Yields

Preliminary and Subject to Change



# 2120 Demand Reduction Pathway Yields

Preliminary and Subject to Change



# Next Steps

- Strategy costs and yields will be used as input in WMS Assessment and Vulnerability Evaluation (WAVE) Model
- Top performing strategy configurations and groupings will lead to refinement of strategy yields, timing, and potentially costs
- Top performing groupings will undergo 50-year portfolio evaluation





# Questions?



Austin  
**WATER**

