CAP:Sam Results

Project Team Meeting #8

April 2, 2018

Ken Seasholes

RECLAMATION

Supply, Demand & Uncertainty

Some of the major factors that affect water supply, demand and reliability:

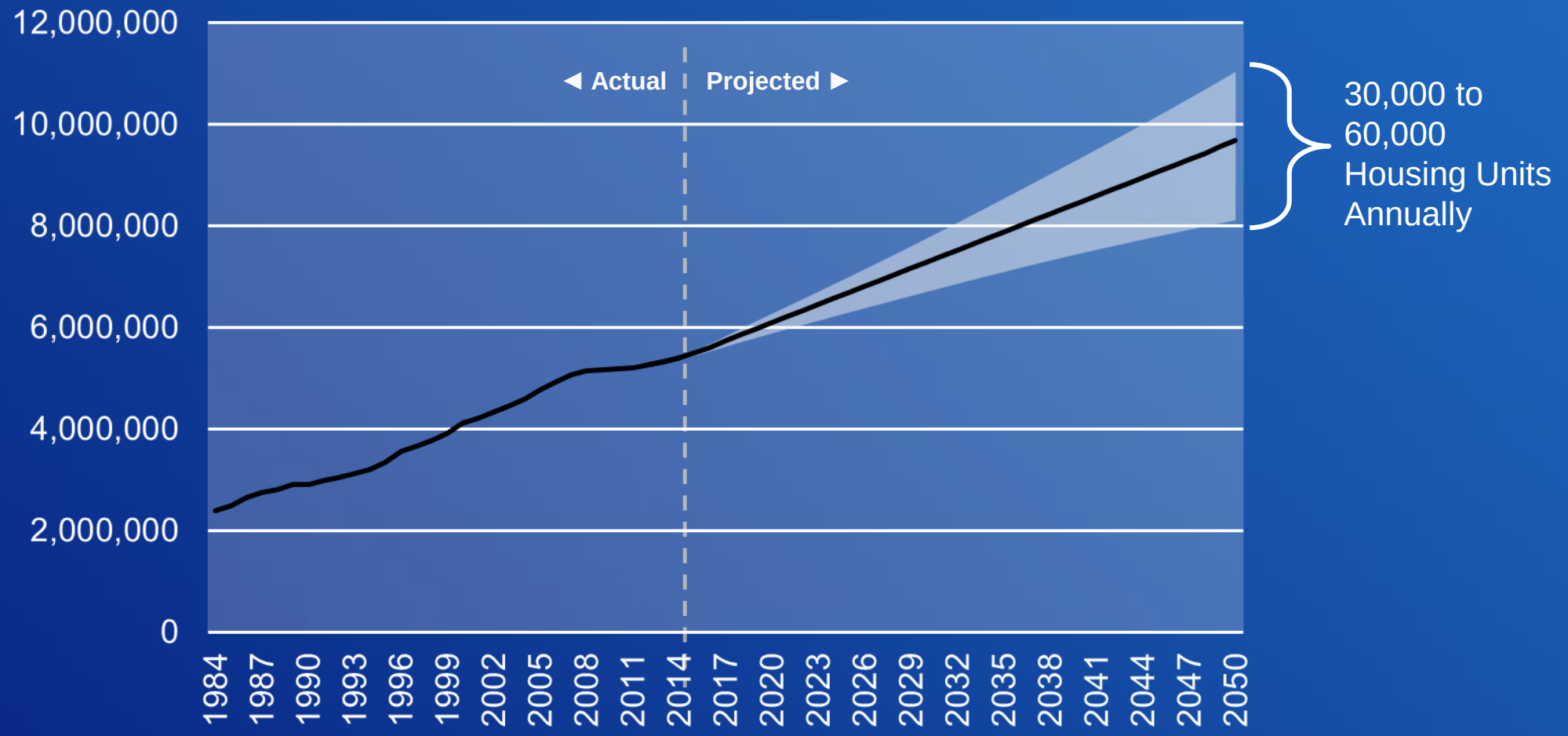
- Growth
- Shortage
- Climate
- Socioeconomics
- Sector Trends
- Policy Changes
- Behavioral Shifts
- ….

"Driving Forces"

RECLAMATION

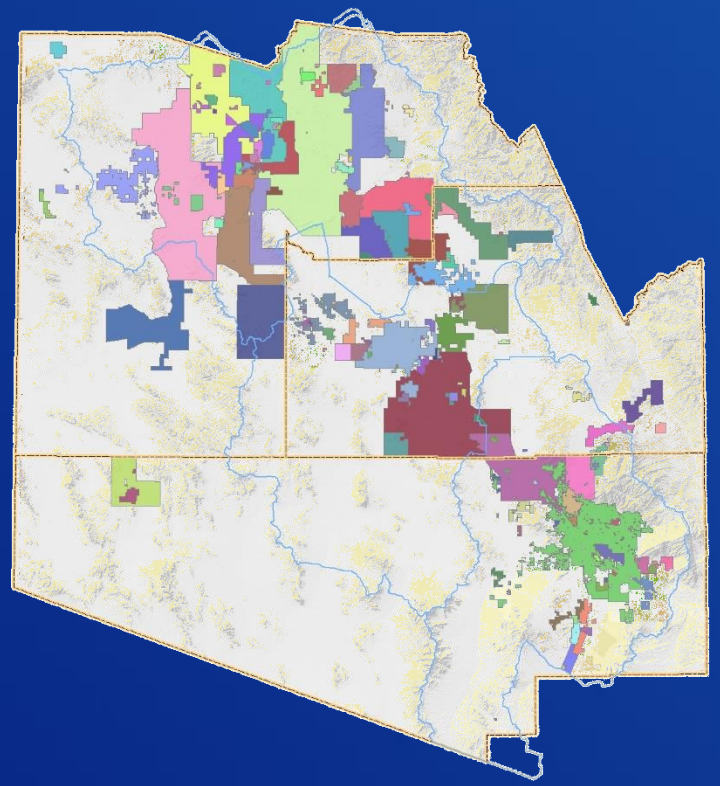
Growth Rate

AZ Department of Administration (Low, Med, High Series)

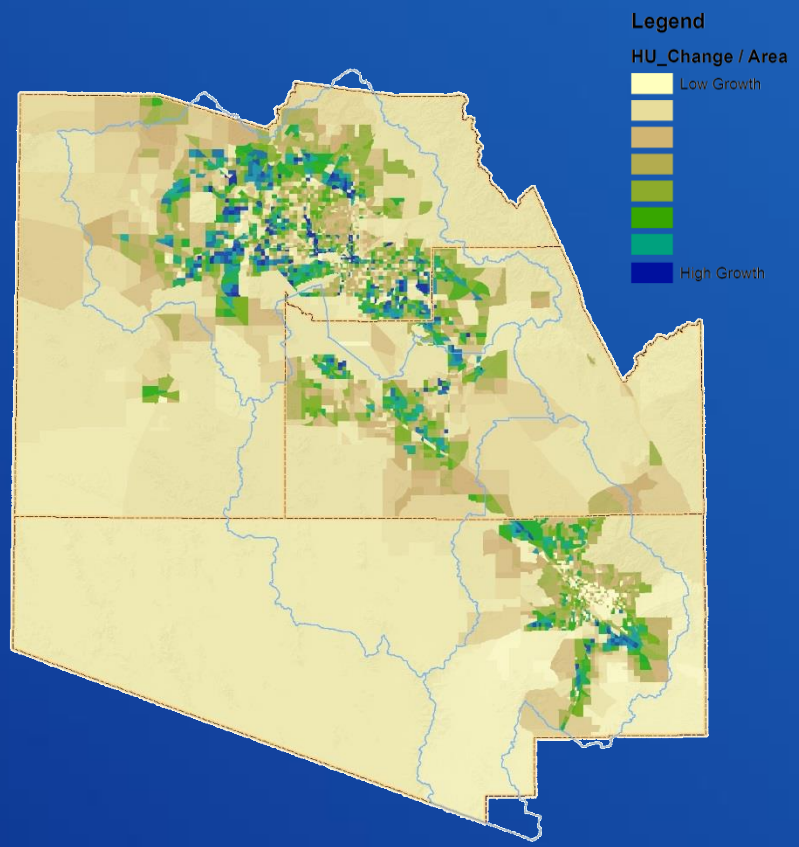


RECLAMATION

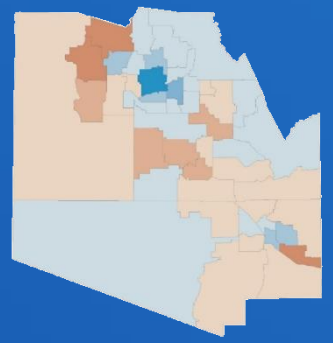
Growth Location



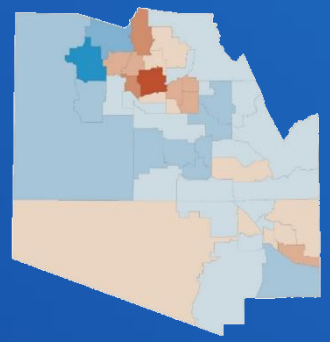
Water Providers



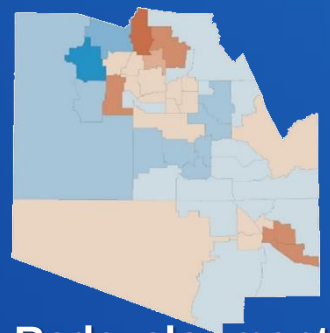
2040 Growth



Outward Growth



Infill

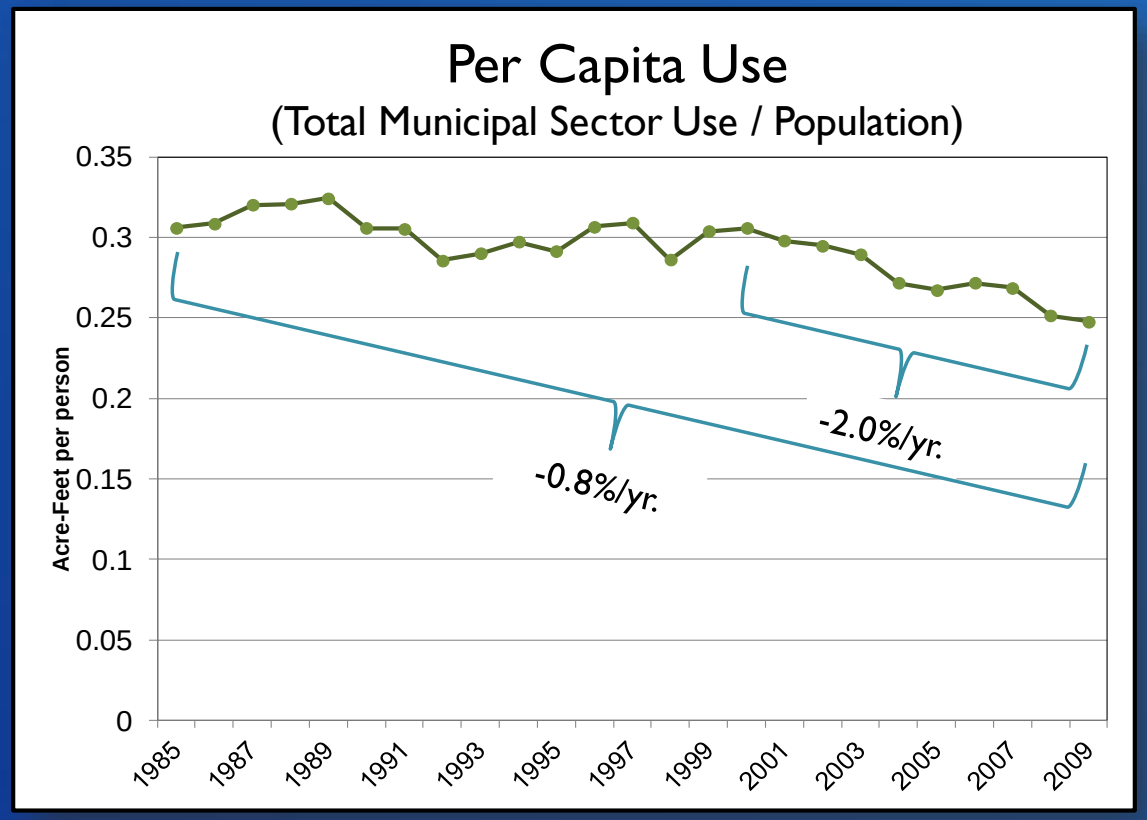


Redevelopment

RECLAMATION

Demand Factors

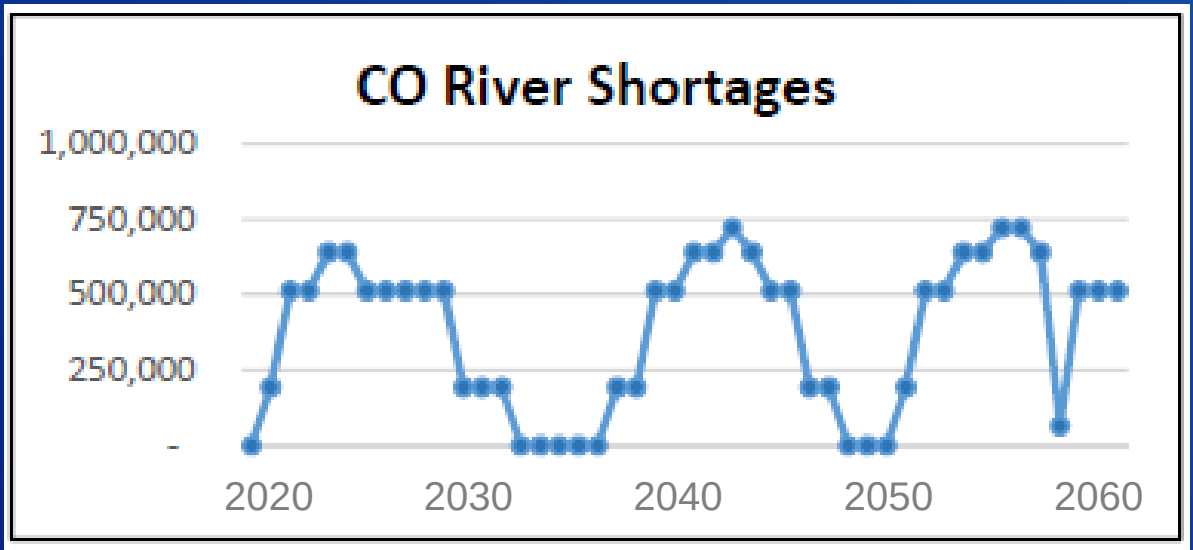
- CAP:SAM differentiates between new and existing demand
- Rates of change can be varied to reflect conservation and climate effects



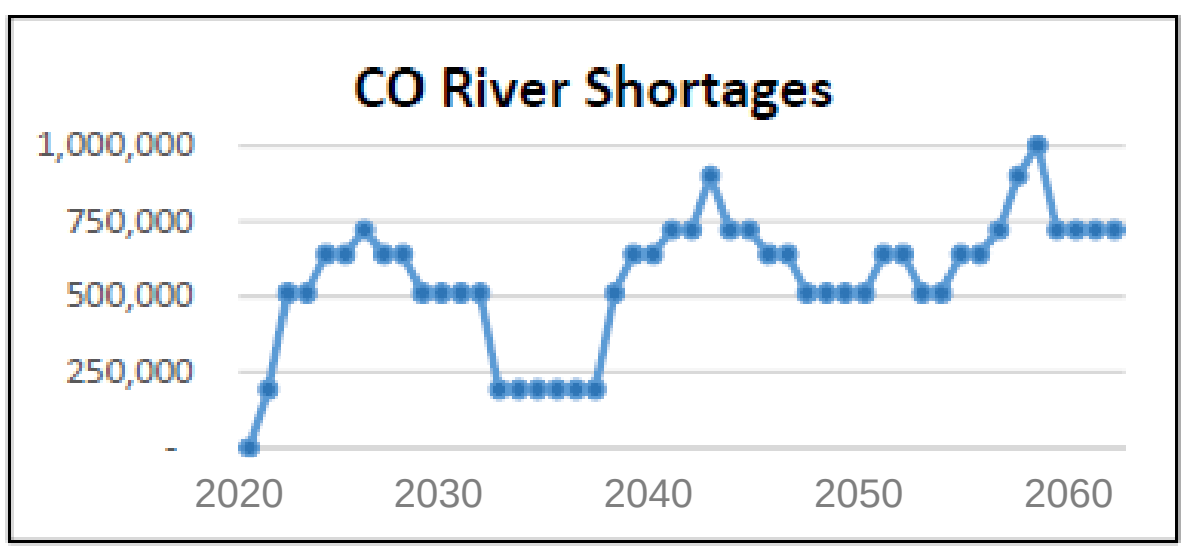
RECLAMATION

Colorado River Shortages

"Synthetic" shortage sequences were created to simulate periods of reduced supply and to test system resilience



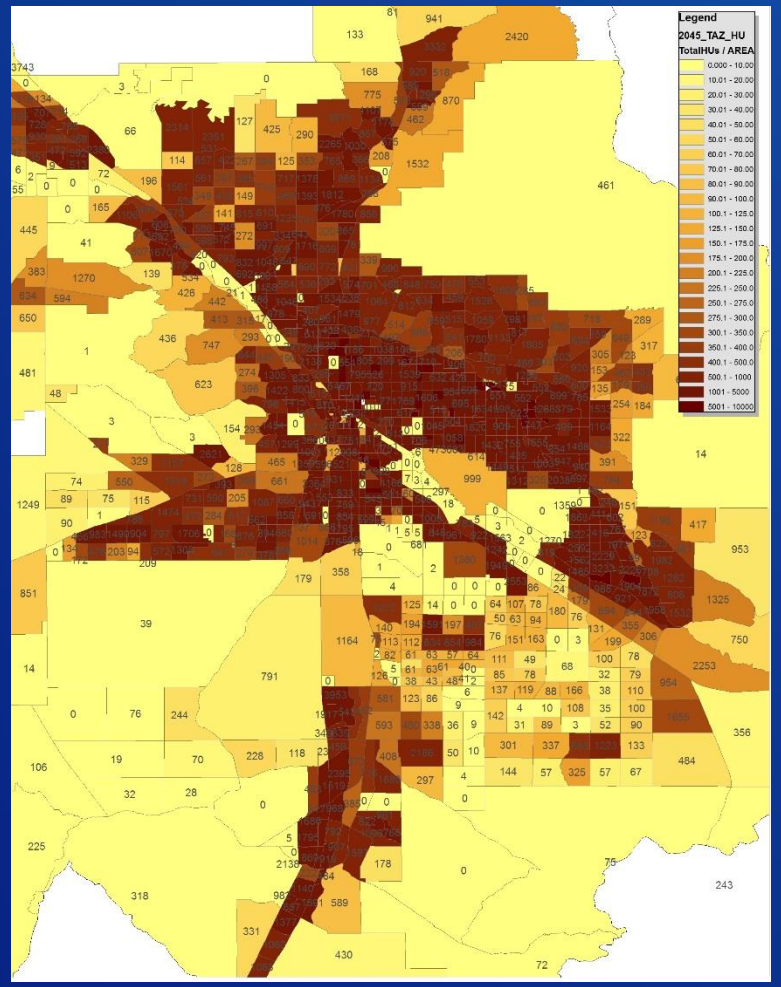
"Historic Climate"



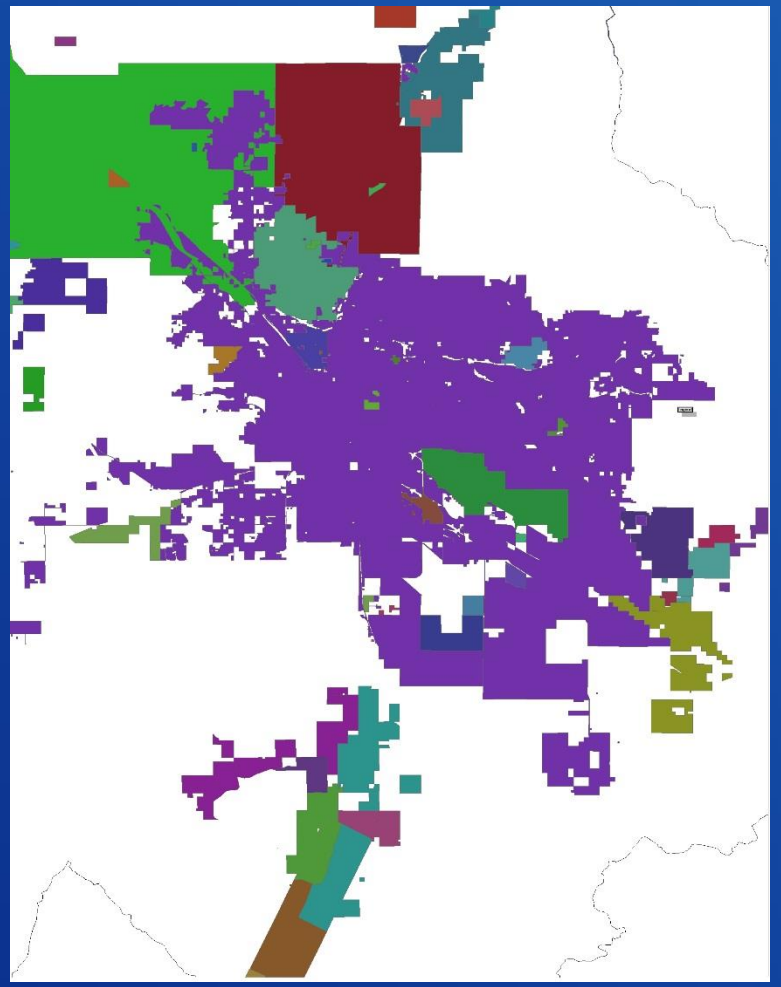
"Dry Climate"

RECLAMATION

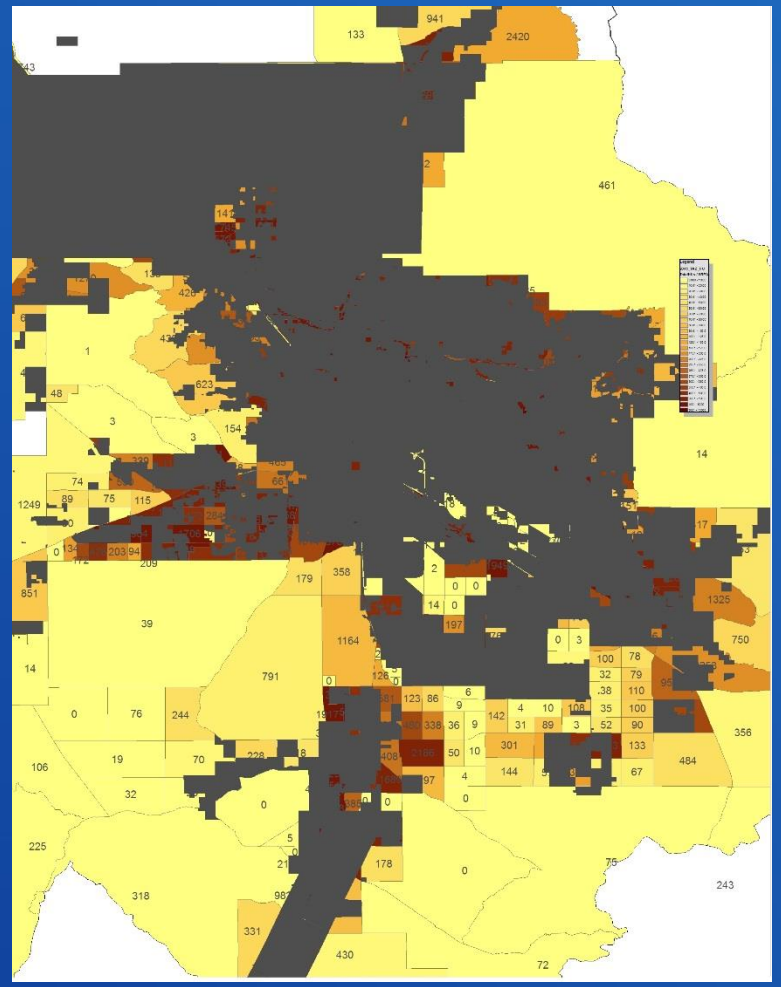
Groundwater Dependence



Housing Density



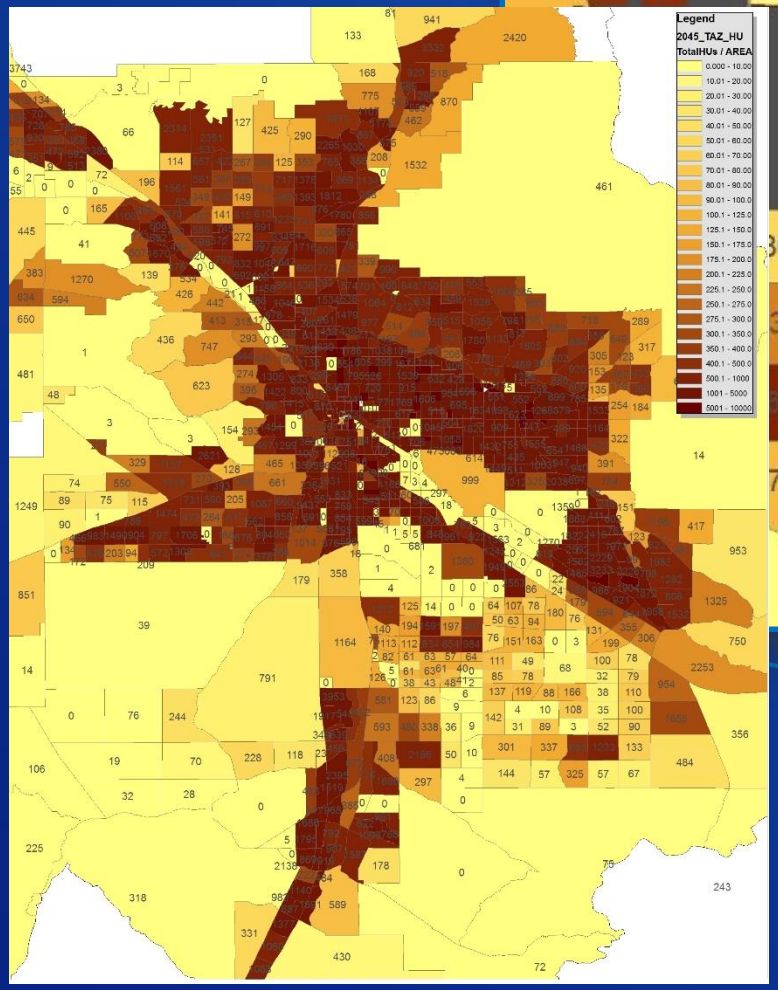
Water Providers



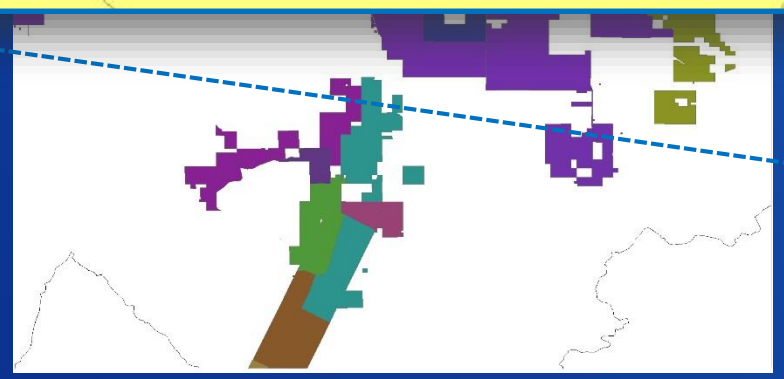
Overlay

RECLAMATION

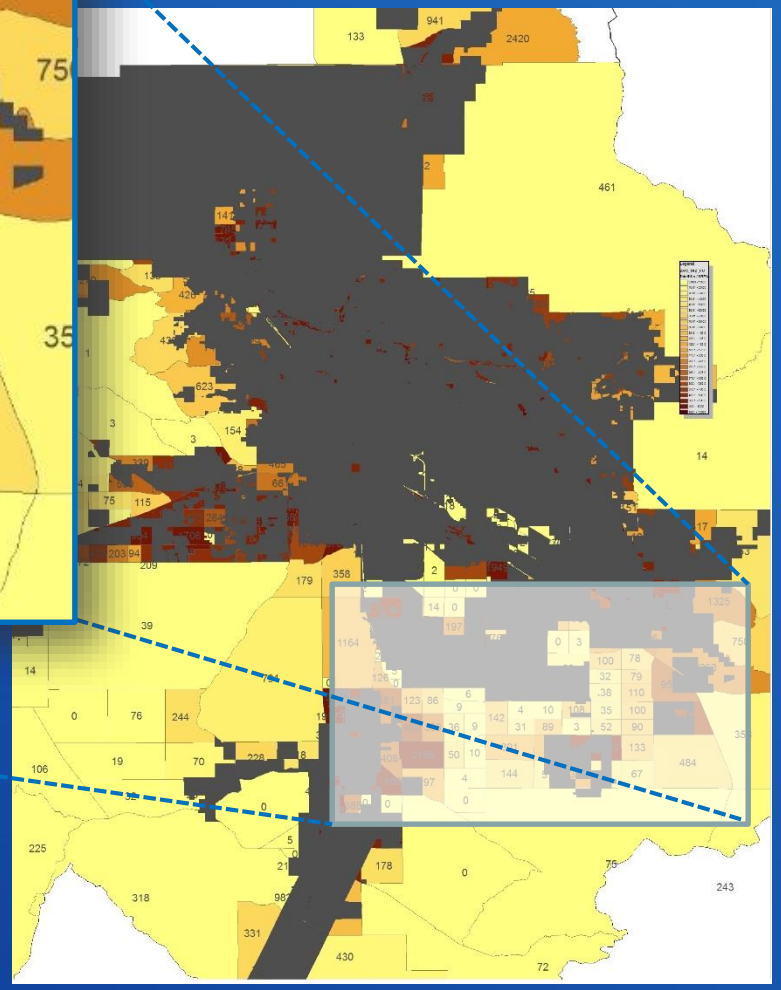
Groundwater Dependence – Focus on Green Valley



Housing Density



Water Providers

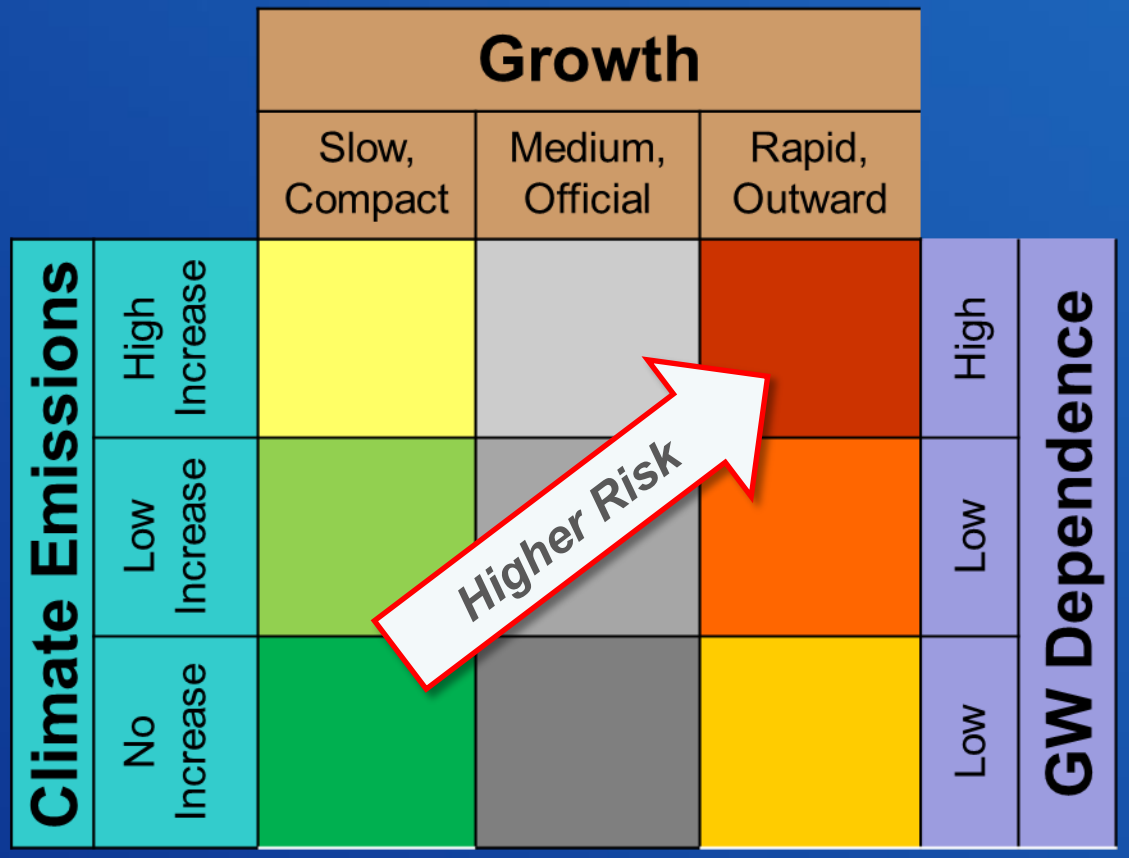


Overlay

RECLAMATION

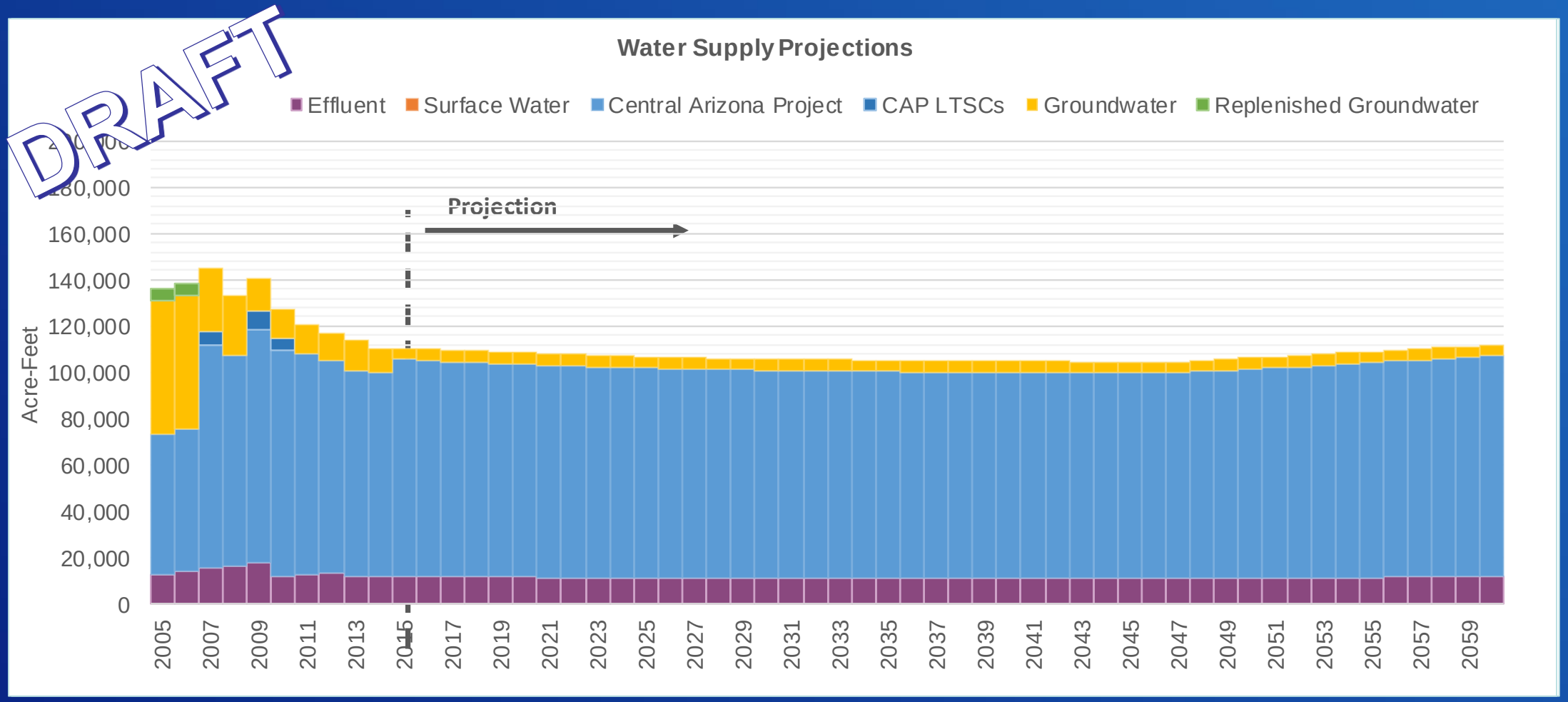
Scenario Matrix

- Scenarios compare three primary dimensions of risk: Growth, Climate & Groundwater Dependence
- Additional factors are varied in logically consistent ways
  - e.g., higher rates of evapotranspiration in higher emissions scenarios



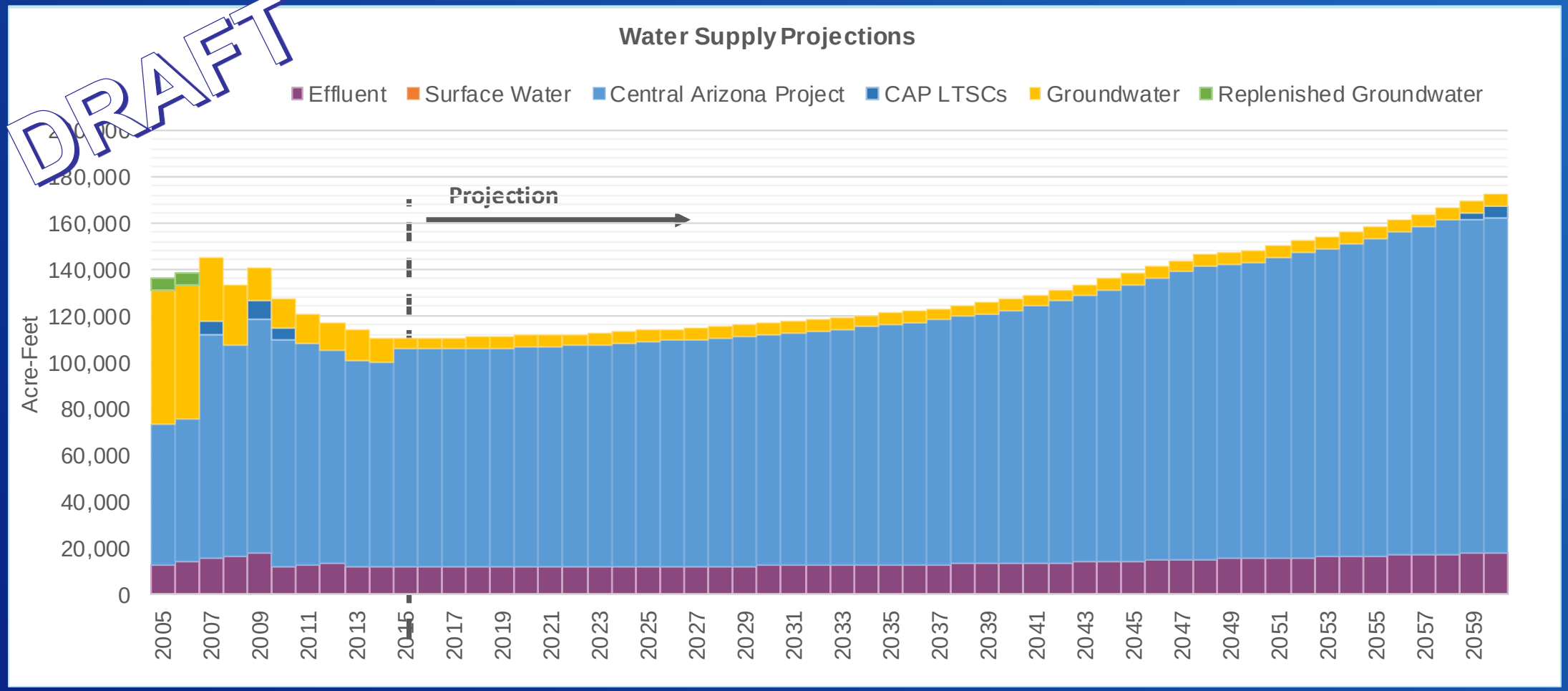
RECLAMATION

Tucson Water: Slow, Compact, Conserve



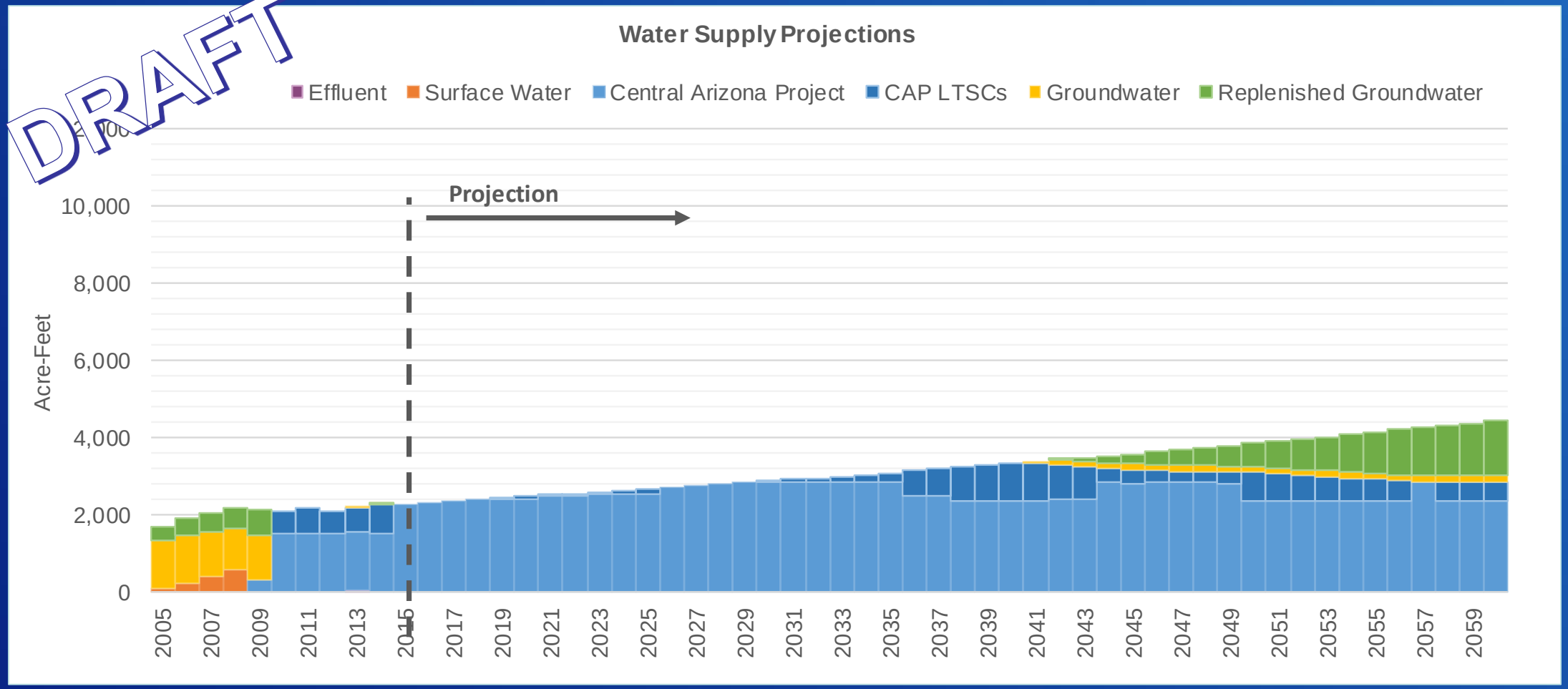
RECLAMATION

Tucson Water: Dry, Rapid Outward



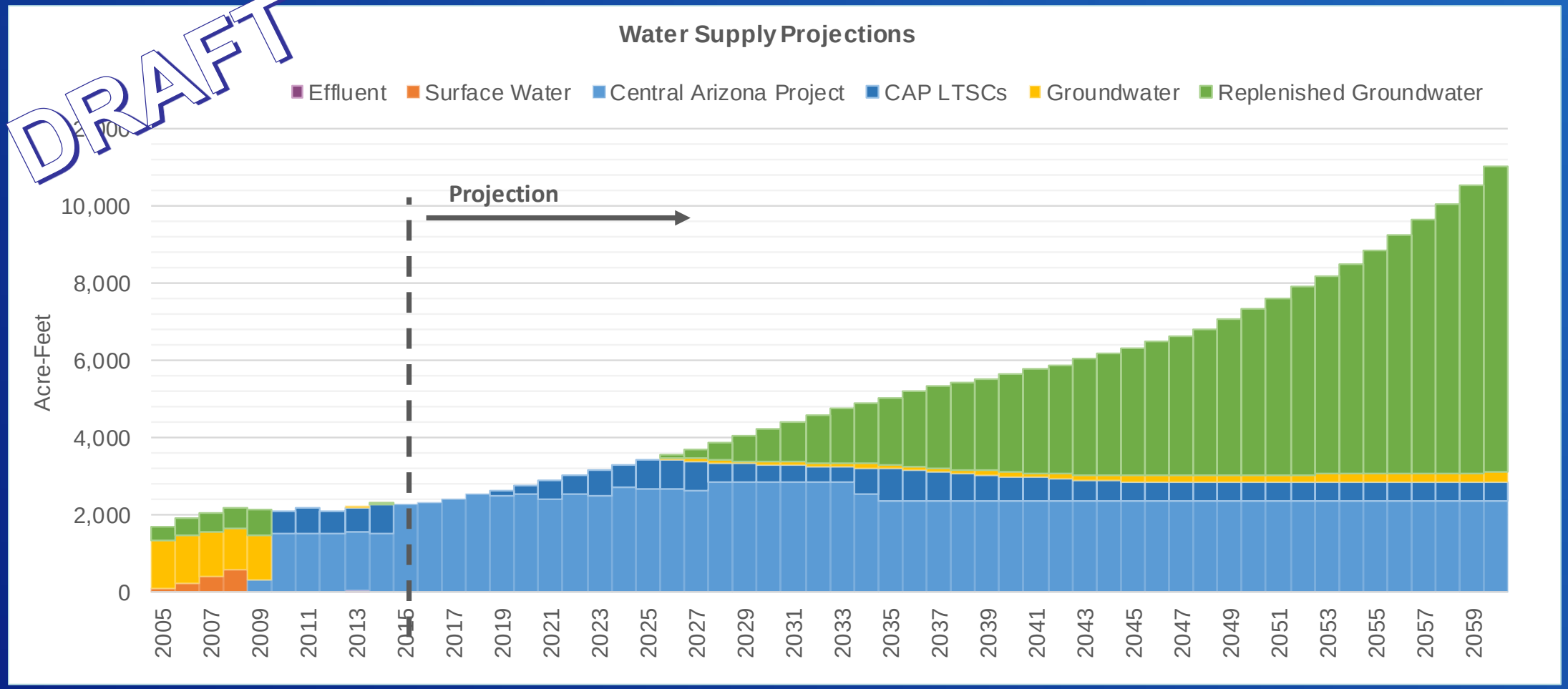
RECLAMATION

Marana: Slow, Compact, Conserve



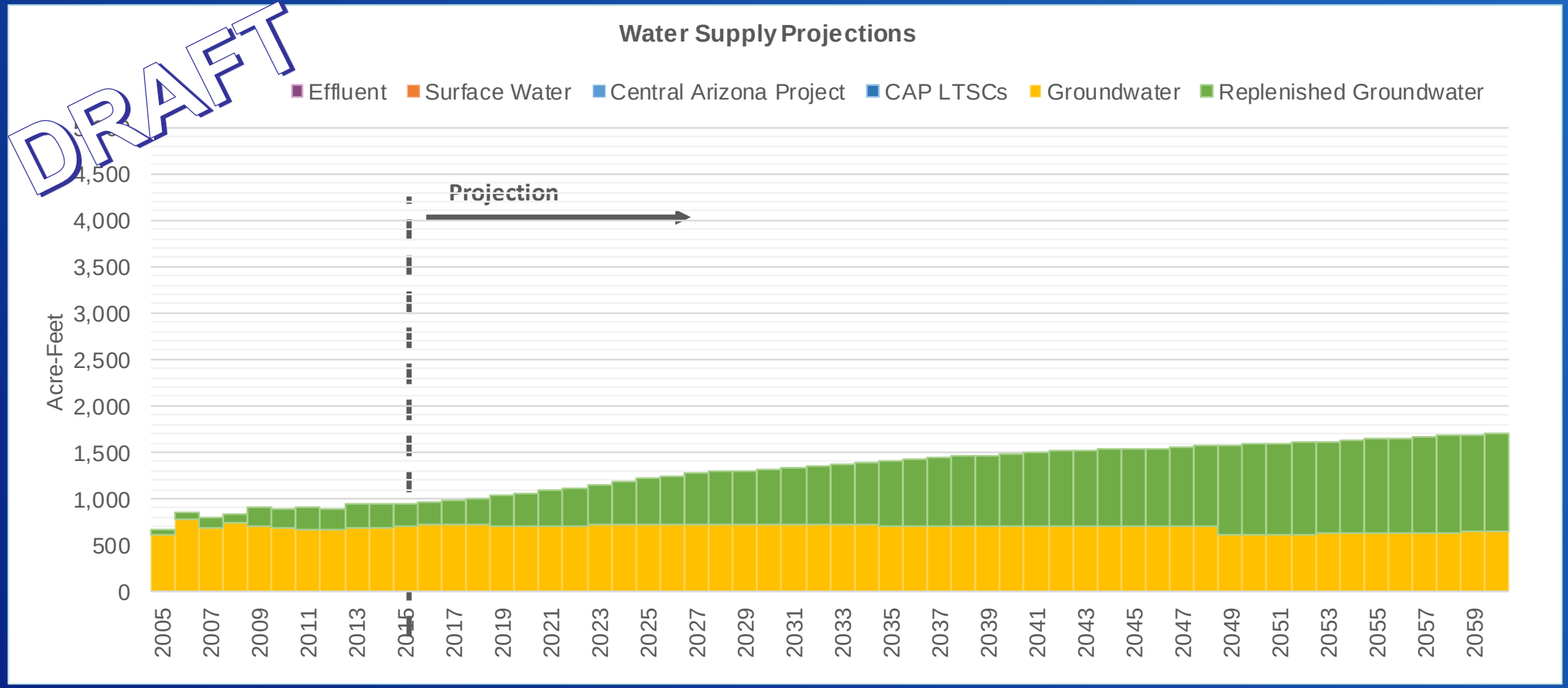
RECLAMATION

Marana: Dry, Rapid Outward



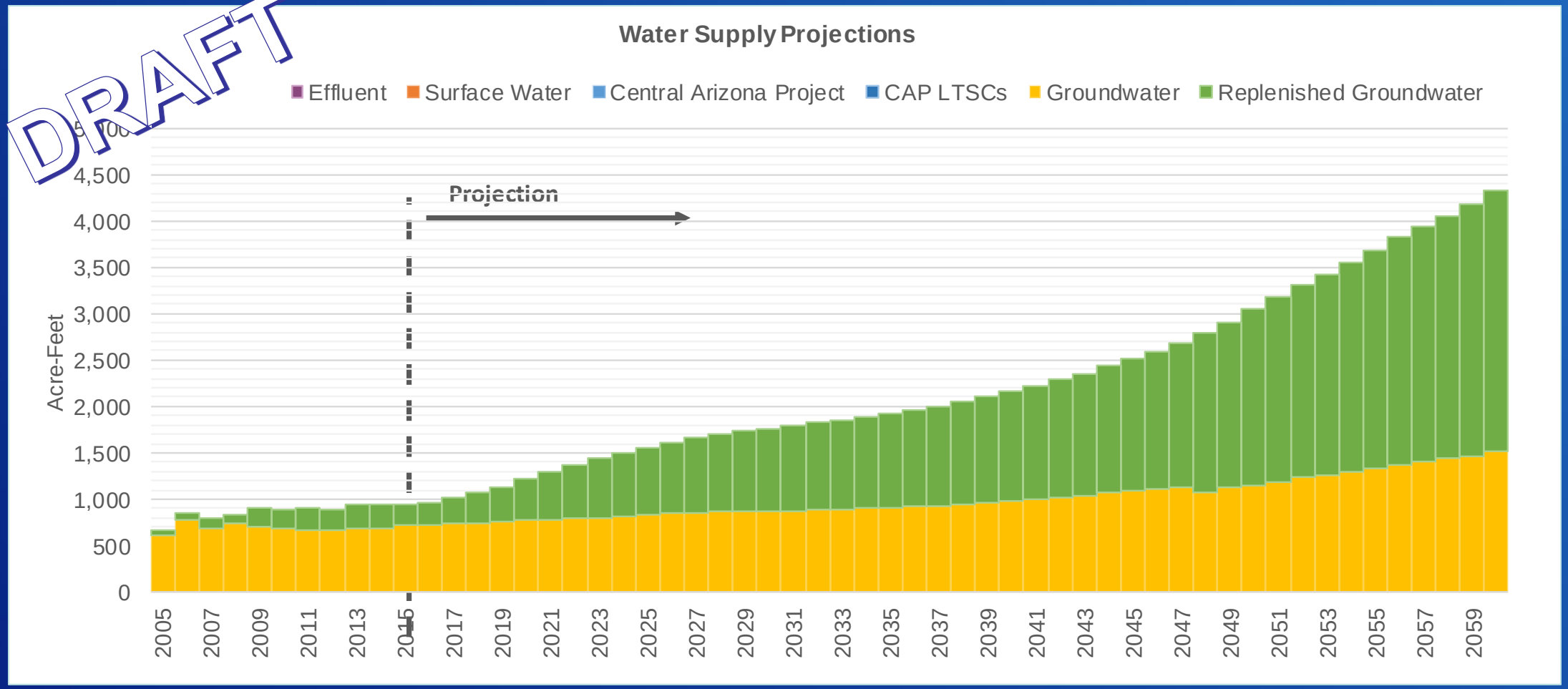
RECLAMATION

FICO: Slow, Compact, Conserve



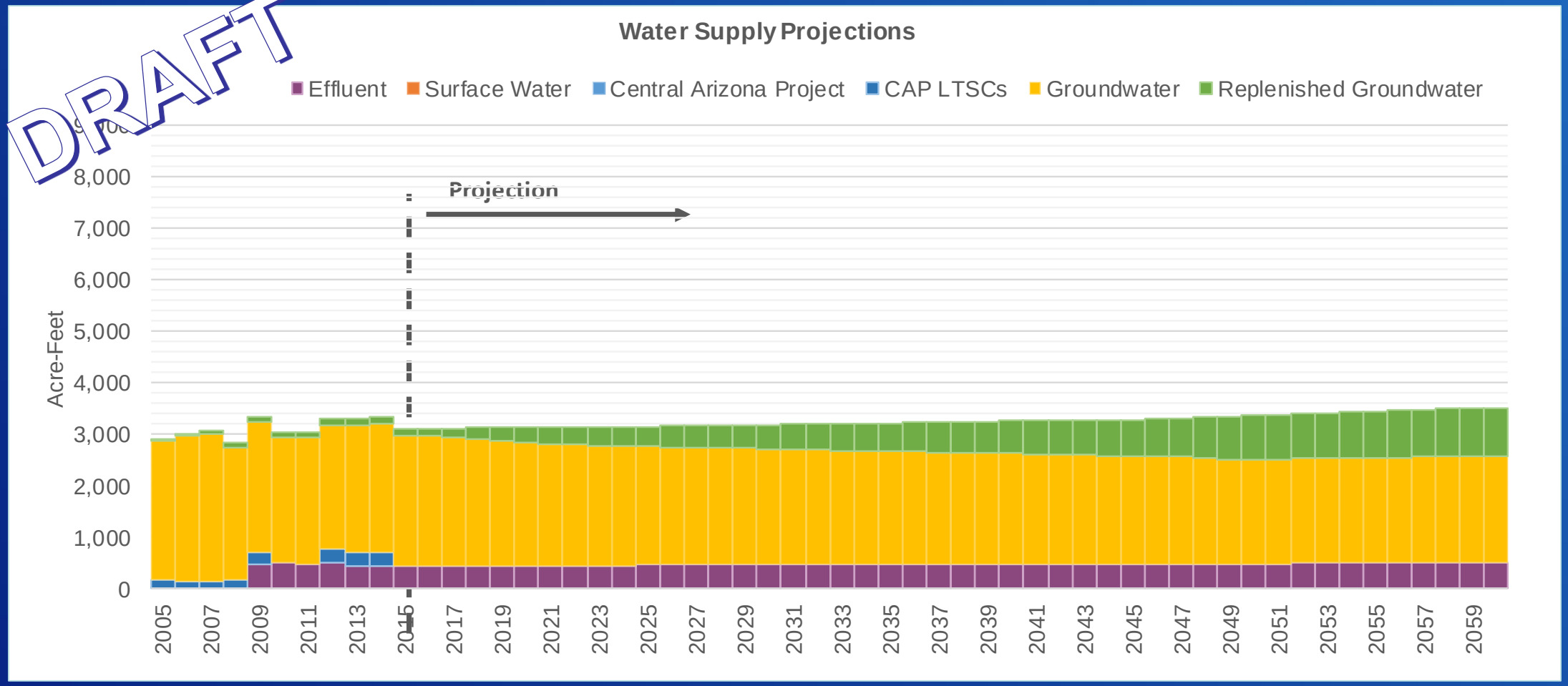
RECLAMATION

FICO: Dry, Rapid Outward



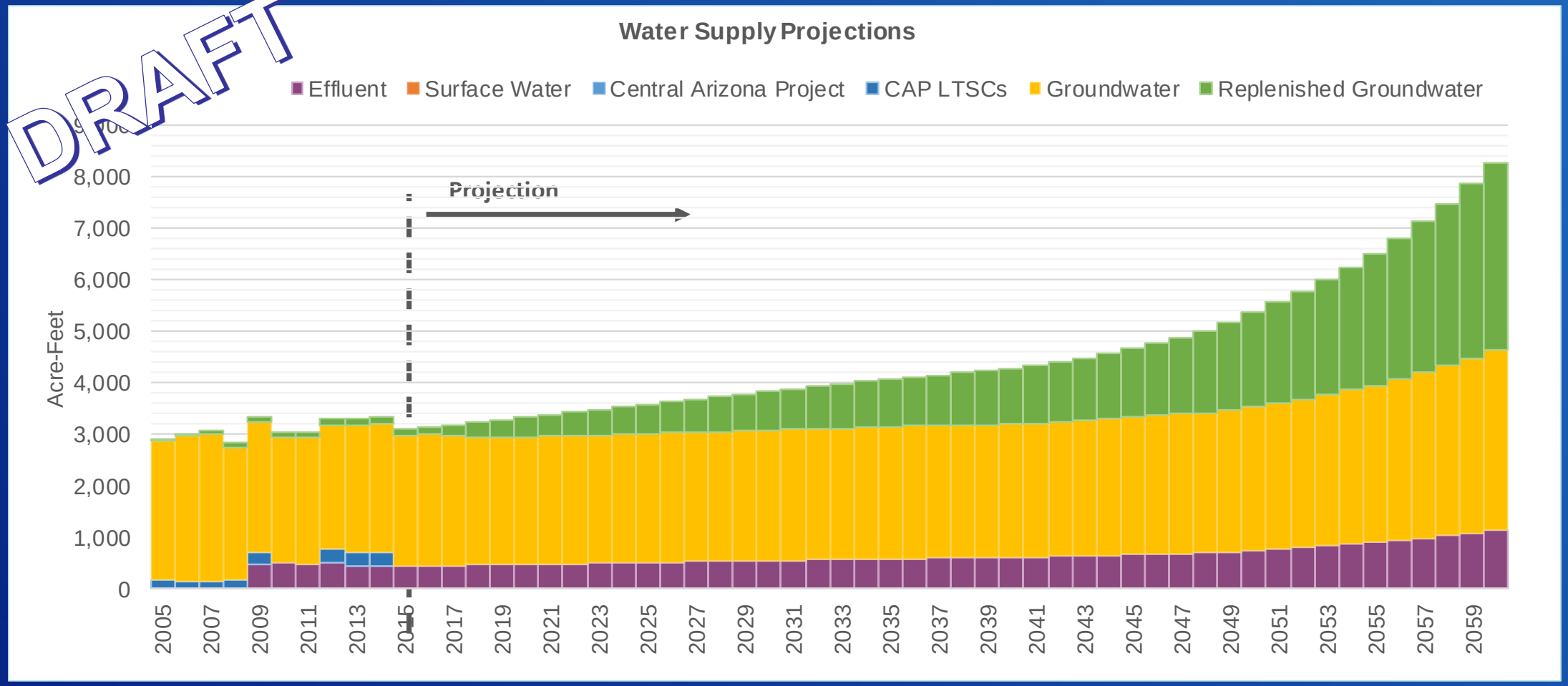
RECLAMATION

Lago Del Oro: Slow, Compact, Conserve



RECLAMATION

Lago Del Oro: Dry, Rapid Outward



RECLAMATION