



Quenching our Thirst: Future Scenarios of Water in Phoenix

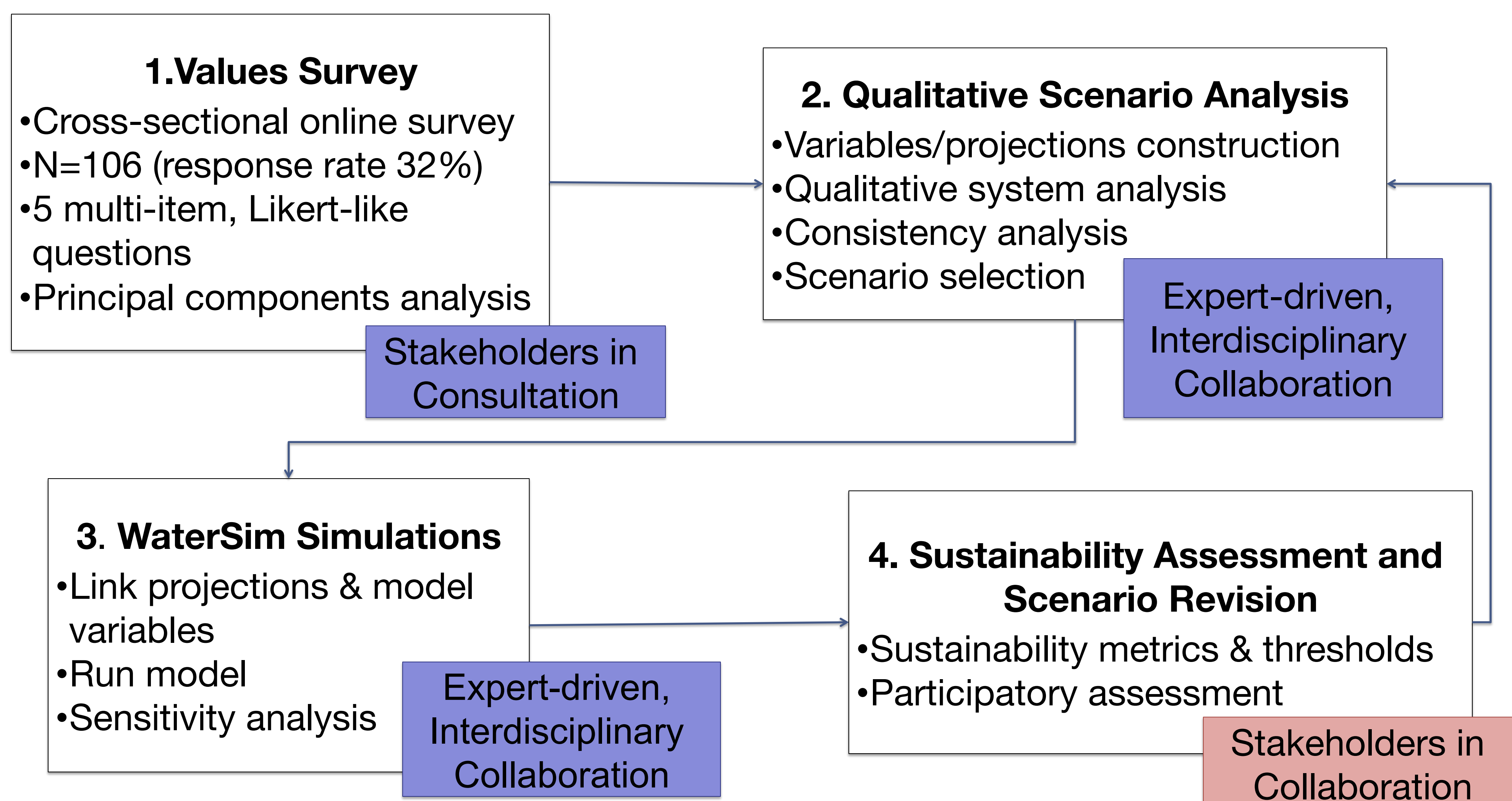
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A research agenda to link stakeholder values with WaterSim, a quantiative, supply-demand model of water in the Phoenix region

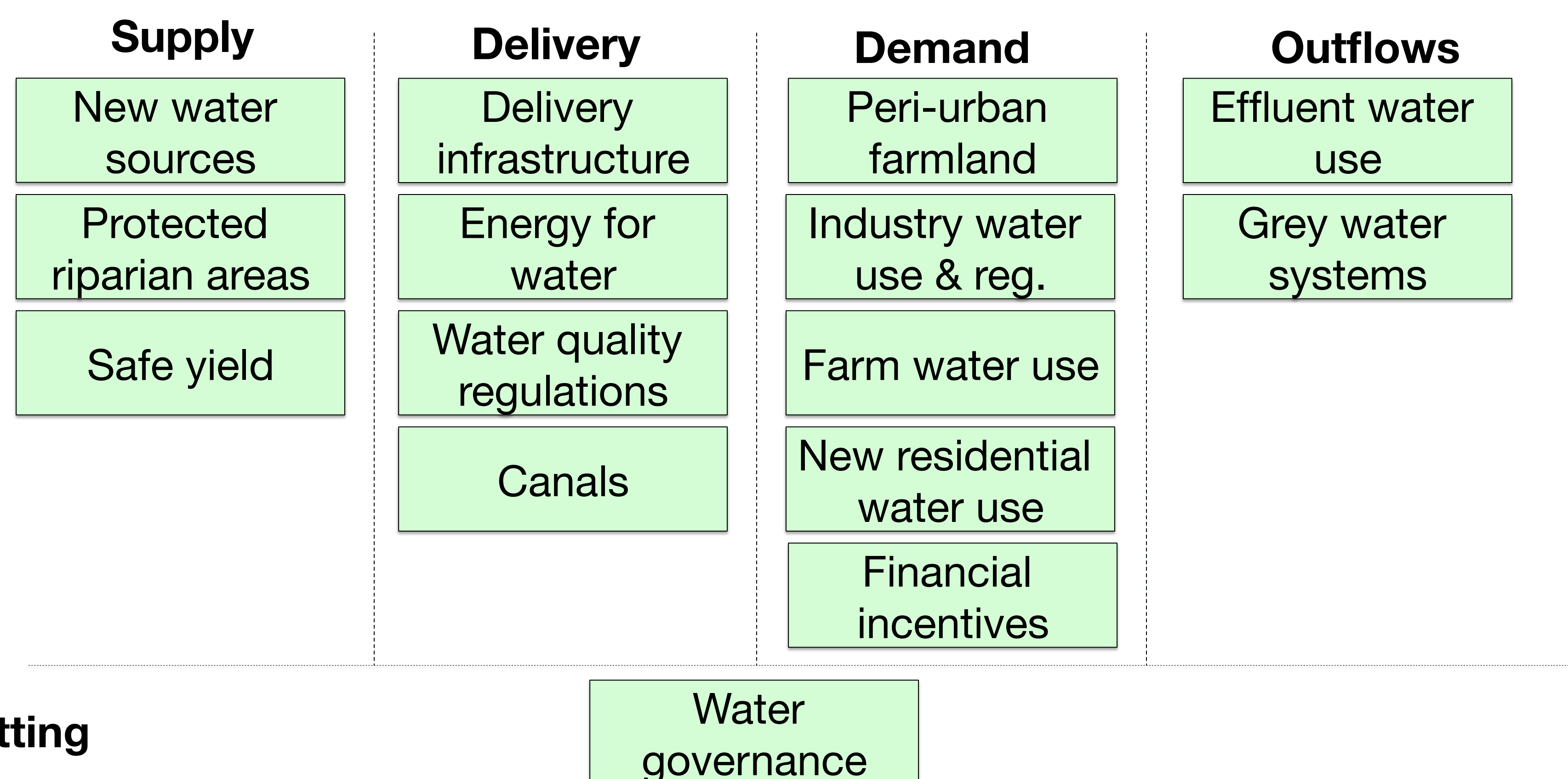
This research project explores the potential consequences of stakeholder values (what stakeholders want) regarding water resources in the greater Phoenix area. This is done through an innovative qualitative-quantitative approach to scenario construction. Key research questions include:

- I. According to stakeholders, how should water be governed and used in the greater Phoenix area in the future?
- II. What are the consequences of different stakeholder values should they be realized?

Integrated Scenario Methodology



Scenario Variables Reduced from Values Survey



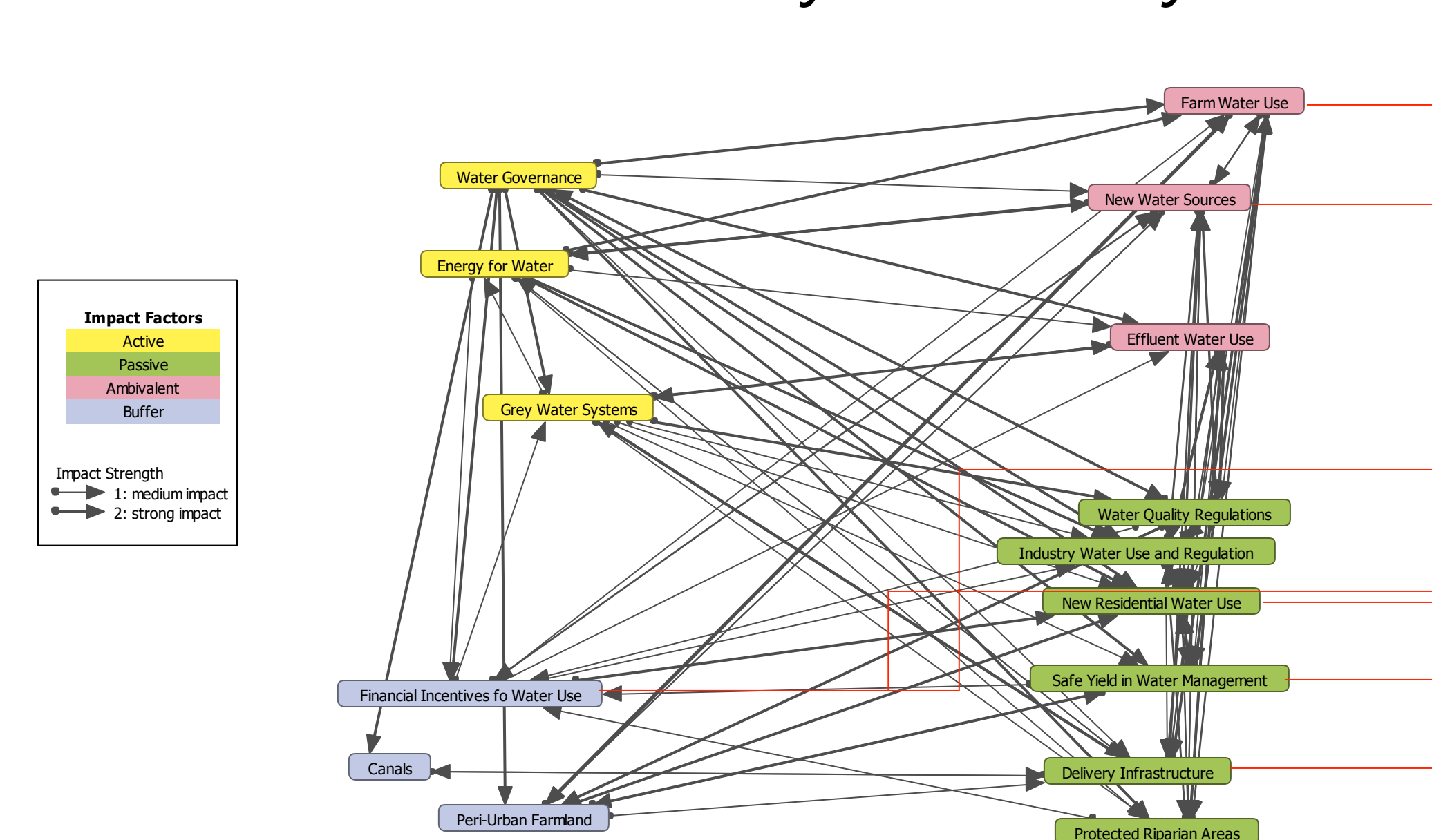
Results

Initially Selected Scenarios

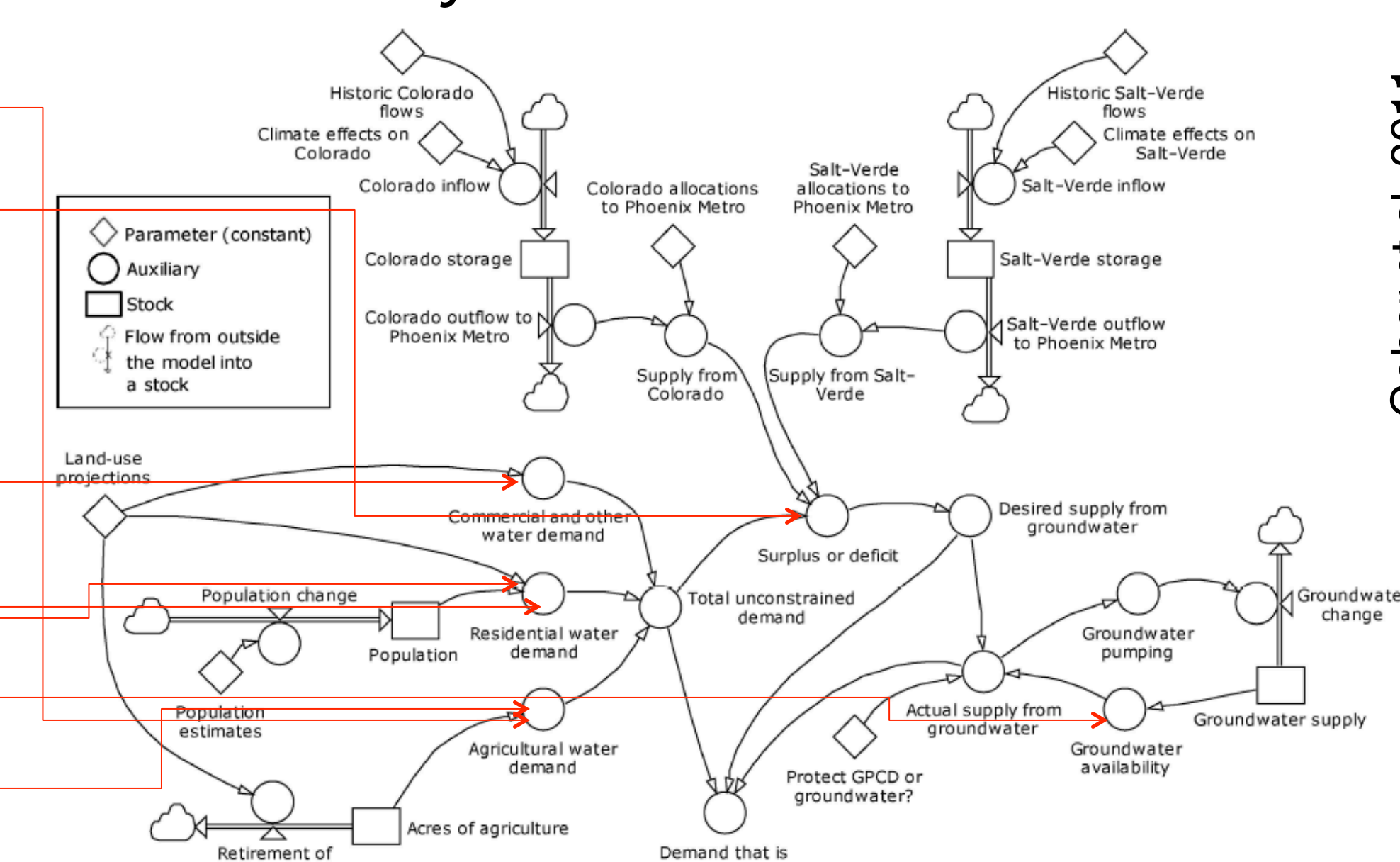
Variables	Supply	Delivery	Demand	Outflows	Cross-Cutting
Strong Groundwater and Demand Management	Not Pursued	100% Renewable	Growth controlled	Groundwater recharge and wildlife benefits	Active public engagement in decisions
Water Infrastructure for Megapolitan Development	Pursued	Mix, Renewable & Non.	No growth control/ addl. regulations	Direct reuse as drinking water	Top-down with minimal consultation

Linking Qualitative Scenarios to WaterSim Model

Qualitative System Analysis



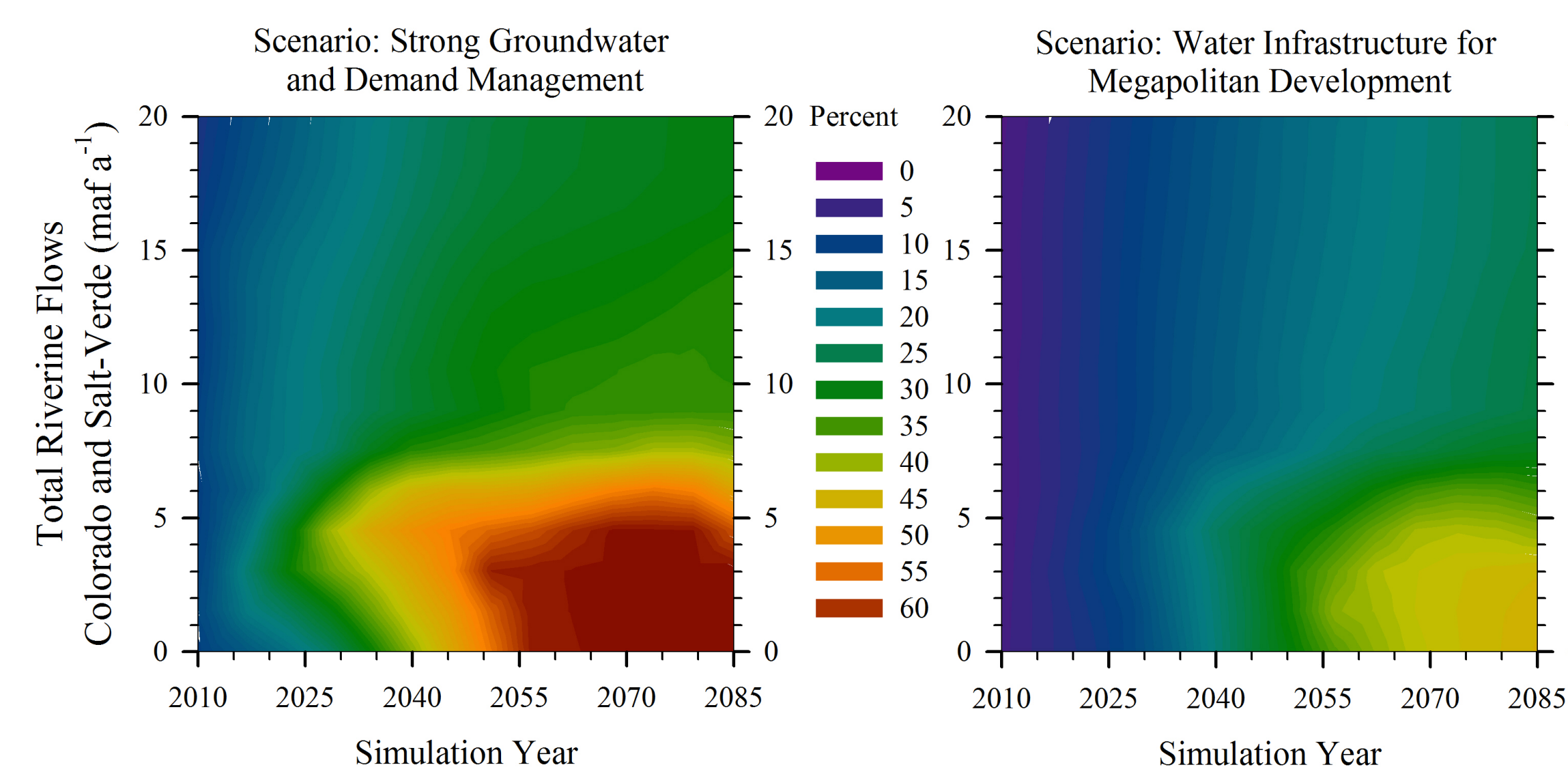
WaterSim Dynamic Quantitative Model



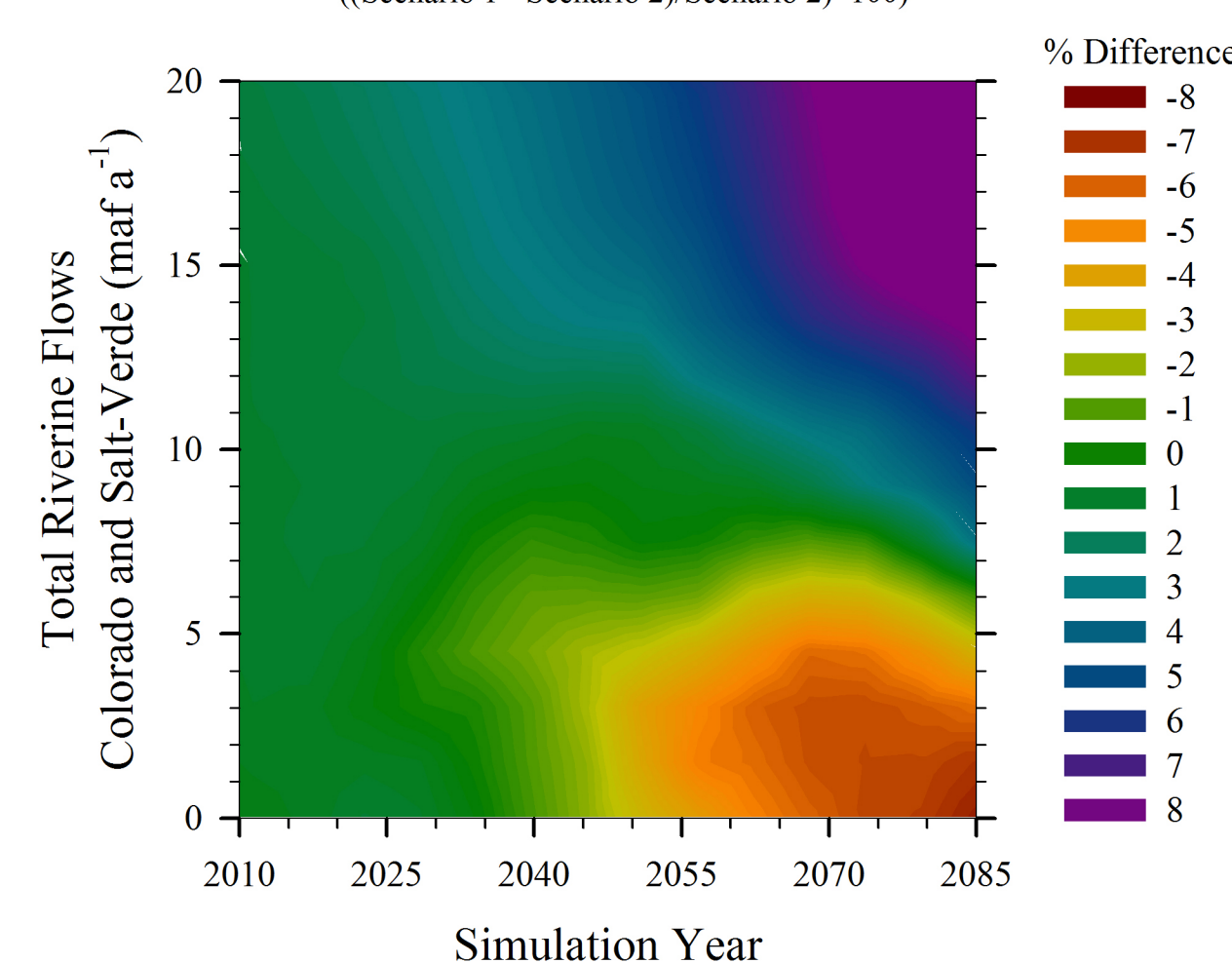
Gober et al. 2011

Future Scenarios of Water in Phoenix: Initial WaterSim Results

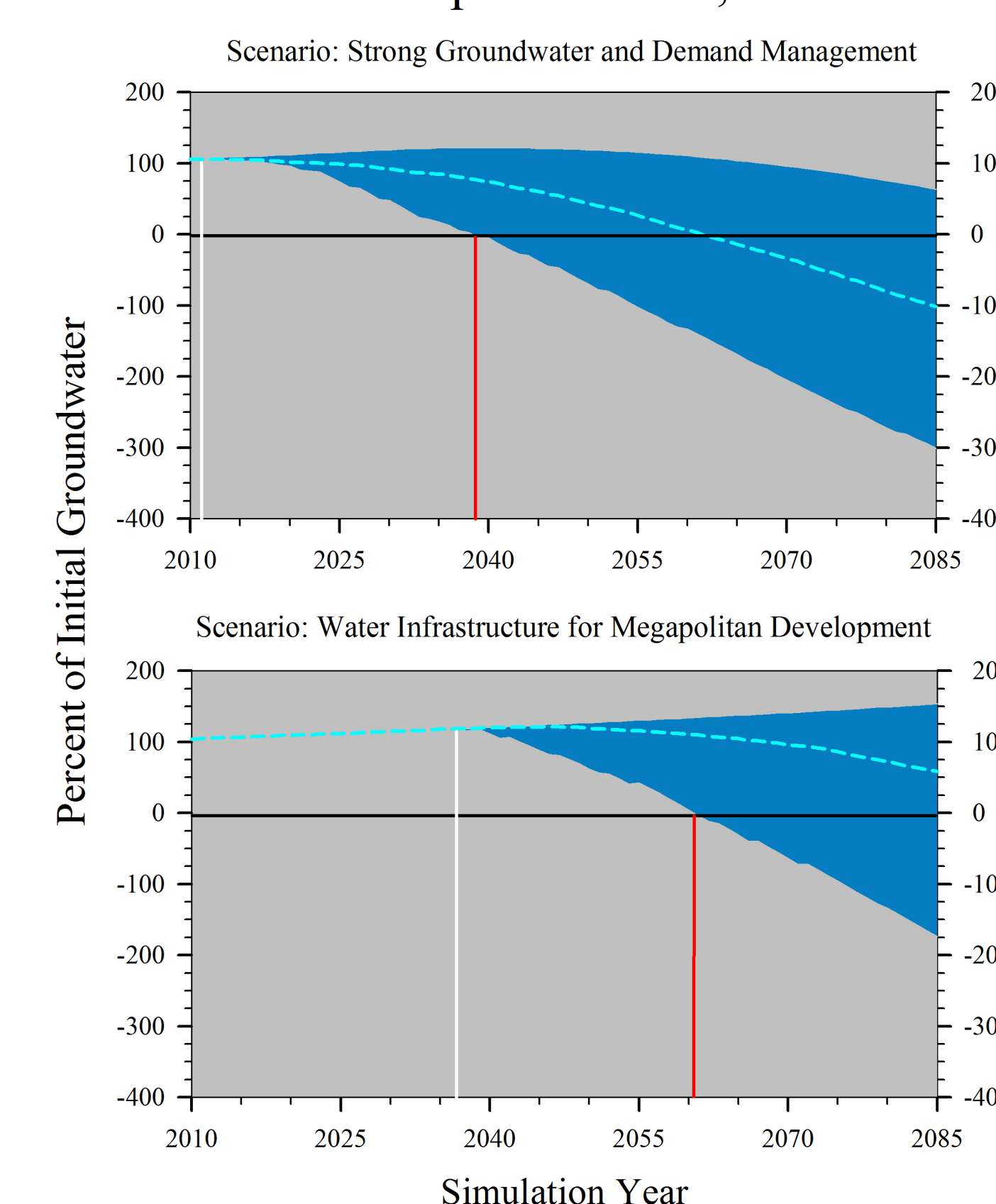
% Annual Demand (regional) Met by Groundwater



Regional Groundwater Difference



Case Example: Phoenix, Arizona



Cross-Cutting

Water governance