Agent Population
Natural-language reasoning
78 irrigators or 100 household

Decision context

Proposed action + reasoning

Retry (violated rule)

Institutional Governance

Demand ceiling: ablation
blocks increases above 6.0 MAF

Shortage-tier curtailment (pro-rata)

Rate-of-change limit (±15%/yr)

Validated action

Environmental Context
Drought index, water rights, neighbour decisions

Updated state

Simulation Engine
Reservoir model / flood hazard
Mass balance, shortage tiers

Each time step: agents propose water-use actions; institutional rules validate proposals against physical and policy constraints; the simulation executes validated actions and returns updated environmental signals.