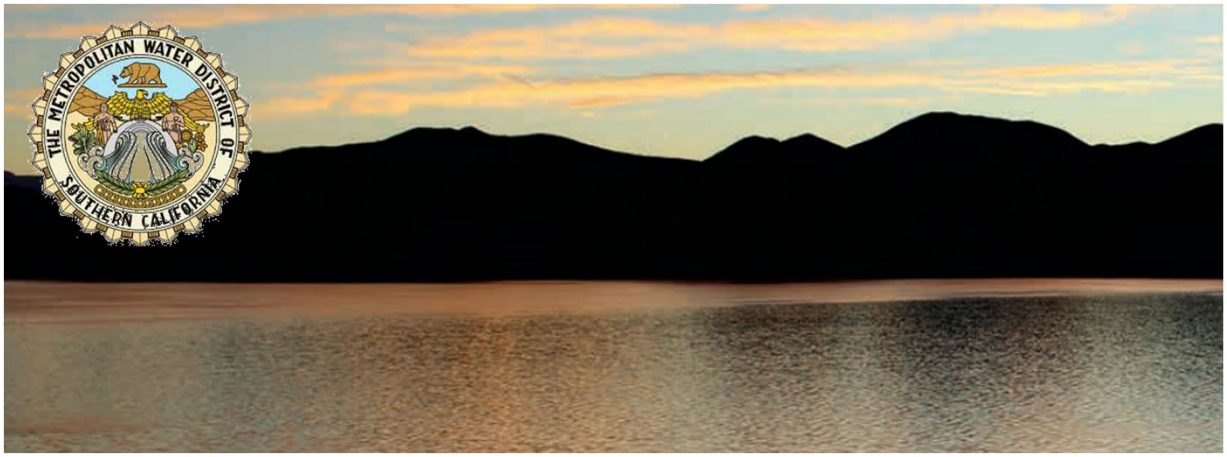
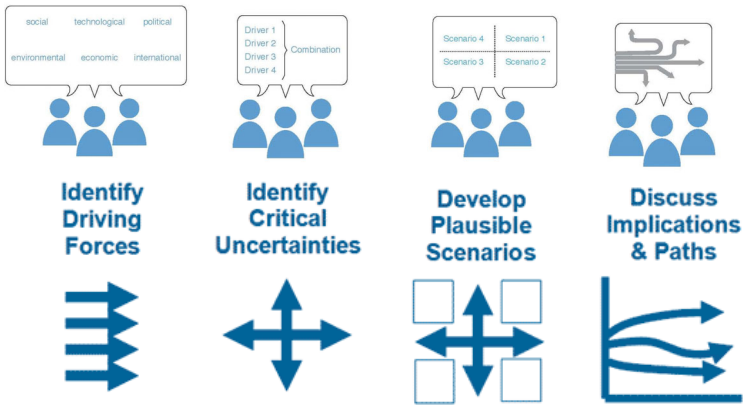


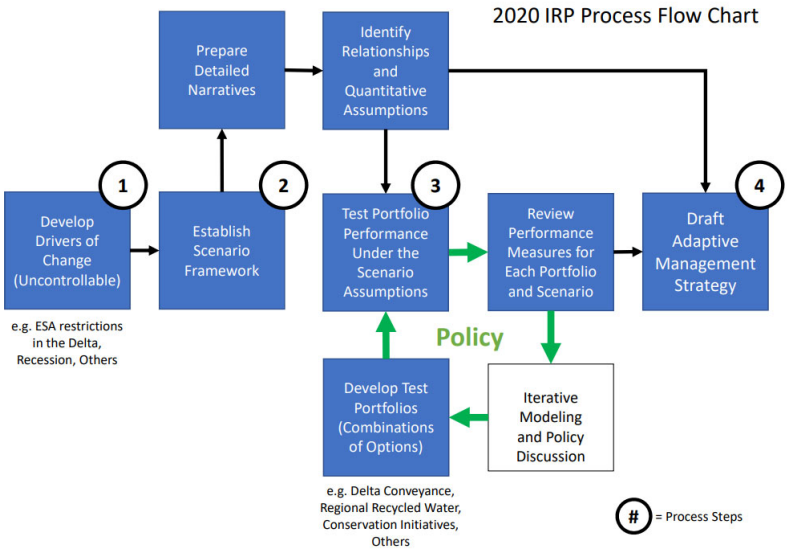
Metropolitan's Integrated Resources Plan
Discussion Series #9

October 7, 2020

Where we are in the process

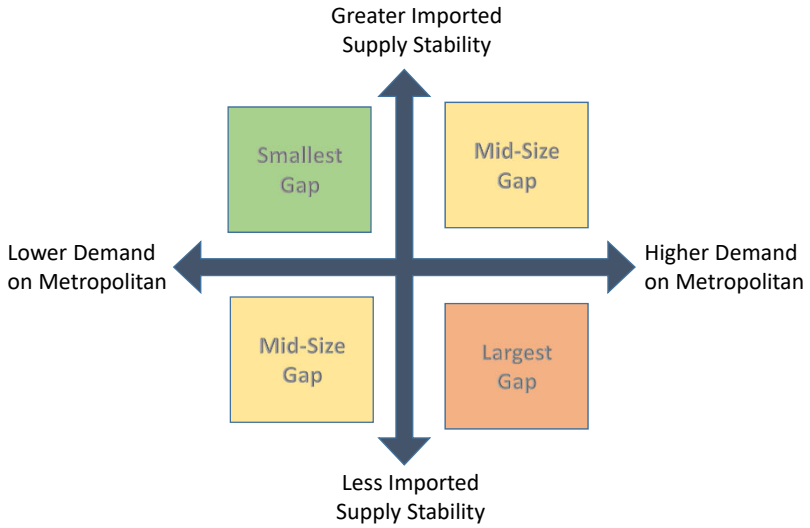


Where we are in the process



Scenario Framework Approach

Constructing Scenarios – Working Draft

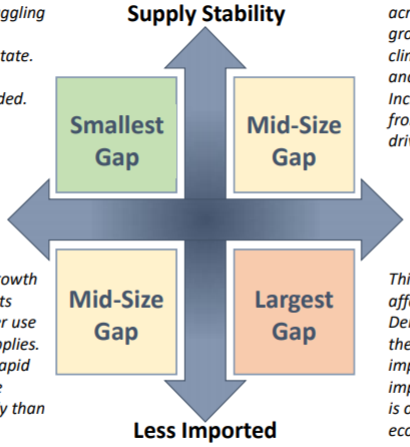


Constructing Scenarios – Working Draft

This scenario is driven by a combination of plentiful regional and local supplies, a struggling economy, low population growth, and a strengthening water use ethic across the state. Member agency efforts to reduce their dependence on Metropolitan have succeeded.

Greater Imported Supply Stability

This scenario reflects increasing retail demands across the region resulting from population growth and a strong economy. Fortunately, climate change impacts have been manageable and imported supplies have remained stable. Increased reliance on Metropolitan resulting from groundwater contamination has also driven up demands for imported water.



Lower Demand on Metropolitan

Higher Demand on Metropolitan

This scenario combines slow population growth and a weak economy with successful efforts among member agencies to manage water use behavior and drought-proof their local supplies. It couples a struggling economy with the rapid onset of climate change impacts that have affected imported supplies more drastically than less-vulnerable local systems

This scenario is driven by severe climate impacts affecting both imported and local supplies. Demands on Metropolitan are increasing due to the loss of local groundwater supply as well as impaired yield on the LAA. Losses in regional imported supplies are equally dramatic. All this is occurring during a period of population and economic growth

Less Imported Supply Stability

MWDOC

Constructing Scenarios – Bookend Extremes

	Low Demand Stable Imports	High Demand Reduced Imports
Climate Change	Gradual impacts to imported and local supply	Significant impacts to imported and local supply
Economic Impacts	Minimal growth, fewer jobs, flat housing	High growth, ag demand increases
Leg & Regs	Fewer groundwater mandates and Delta regs	Meeting regs reduce available supplies
Demographics	Slow pop growth, less suburban sprawl	High pop growth, conservation fatigue
Fed & State	Limited regional, state, and federal help	High desire to invest, but unsuccessful collaboration
Tech Advances	Off-grid technologies help wealthier communities	Less acceptance of DPR and SW not able to supplement water recycling
Aging Infrastructure	Deferred maintenance with manageable impacts	More frequent unplanned outages from system stress

Constructing Scenarios – Mid-Size Imbalance

	High Demand Stable Imports	Low Demand Reduced Imports
Climate Change	Gradual impacts to imported and local supply	Significant impacts to imported supply
Economic Impacts	High growth, ag demand increases	High growth, ag demand increases
Leg & Regs	Moderate local regulatory requirements	Expanding leg. and reg. on imported supply
Demographics	High pop growth, less crowding	Slow pop growth, more infill, strong WUE ethic
Fed & State	More cooperation and collaboration	Delta and Colorado River turmoil, every state for itself
Tech Advances	Continue investment in local and regional infrastructure	Local investments redirected to repairs and rate relief
Aging Infrastructure	Keeping up repair and maintenance	More frequent unplanned outages from lack of funding

Strawman Assumptions (Working Draft)

Impact on Supply-Demand Gap for considered for each driver category

Categorical Drivers

- **Climate Change**
- **Economic Impact**
- **Legislation & Regulation**
- **Demographics**
- **Federal & State**
- **Tech. Advances**
- **Aging Infrastructure**

	2020 IRP Low Demand Stable Imports	2020 IRP High Demand Stable Imports	2020 IRP Low Demand Reduced Imports	2020 IRP High Demand Reduced Imports
Retail Demands	RTP 20 and Series 14 – Reduced (less growth/improved WUE)	RTP 20 and Series 14 -Increased (more households/jobs- slight GPCD rebound)	RTP 20 and Series 14 -Reduced (growth/strong WUE/bad economy)	RTP 20 and Series 14 - Increased (more households/jobs - GPCD rebound)
Local Supply	• Existing Project continue to yield • Planned projects begin to perform	• Existing Project start to decrease in yield • Planned projects do not perform as well	• Existing Project continue to yield • Planned projects begin to perform	• Existing Project start to decrease in yield • Planned projects do not perform as well
Colorado River Supply	Hydrology • CMIP 3 (13.7 MAF) Operation • DCP in place through planning horizon	Hydrology • CMIP 3 (13.7 MAF) Operations • DCP in place through planning horizon	Hydrology • Stress Test (13.1 MAF) Operations • DCP in place through planning horizon	Hydrology • Stress Test (13.1 MAF) Operations • DCP in place through planning horizon
State Water Project Supply	Use hydrology and operations assumption from the 2019 Delivery Capability Report	Use hydrology and operations assumption from the 2019 Delivery Capability Report	Start with 2019 Delivery Capability Report with following changes: • Additional climate change impacts • More restrictive South Delta • Increase outflow requirements	Start with 2019 Delivery Capability Report with following changes: • Additional climate change impacts • More restrictive South Delta • Increase outflow requirements

What's Next

- Qualitative and quantitative assessment of drivers ongoing
- Provide preliminary assessment of key supply and demand impacts

- October – Refine Scenarios
  - Demand drivers
  - Climate change impacts

Scenario planning allows the Board to consider a wide range of challenges to future reliability.