



Discuss and consider key draft findings from IRP needs assessment and approach for implementation phase

Integrated Resources Plan Special Committee

Item 6a

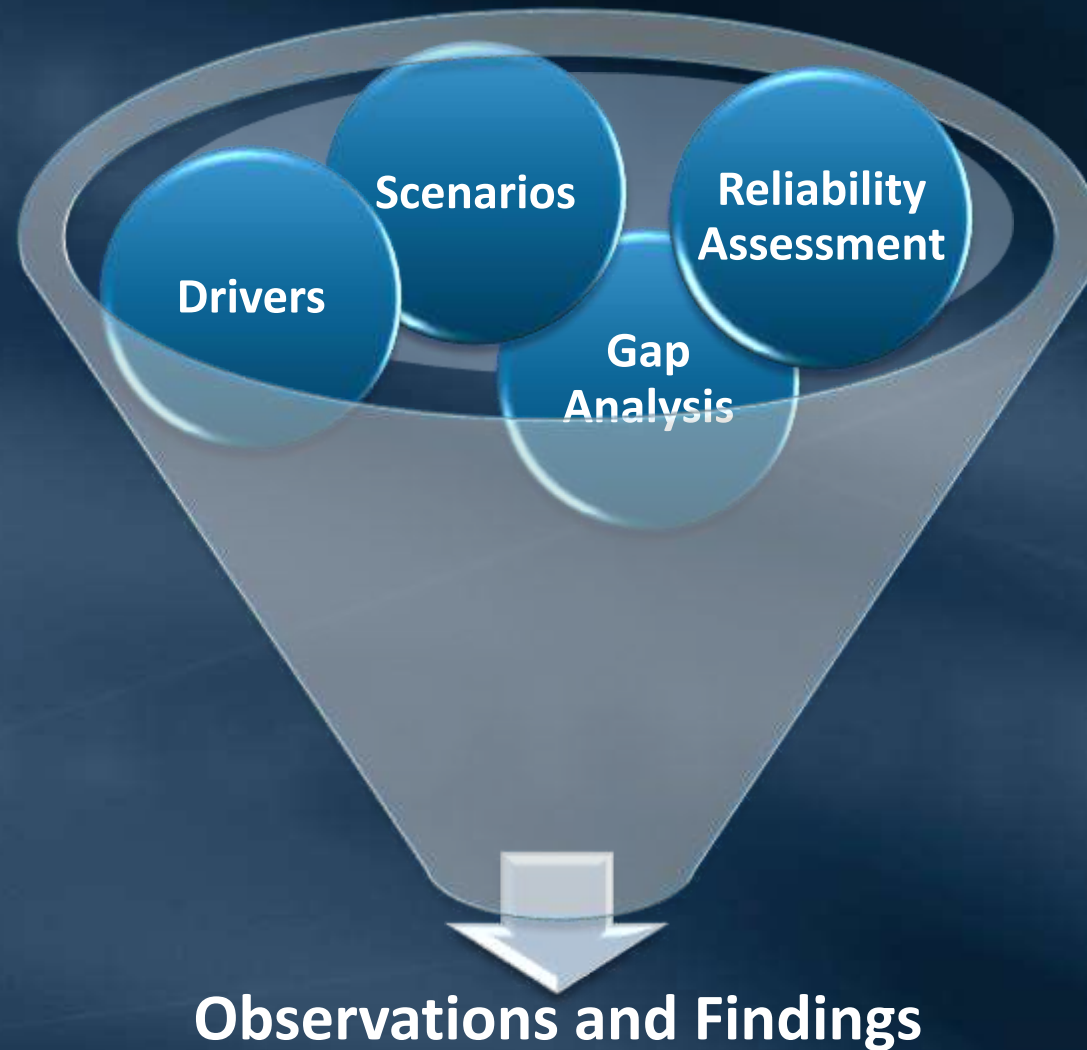
November 23, 2021

Outline

- Key Focus Areas and Observations
- Implementation Phase
- Next Steps

Key Focus Areas and Observations

Needs Assessment Phase



Findings Fall Within Seven Focused Areas



Insights gathered through collaboration with the member agencies, other stakeholders, expert consultants, and modeling analysis performed over the last two years

Focus Area 1: Reliability



Focus Area – Reliability

The goal of Metropolitan's investments is to avoid retail water shortages and mandatory end-use cutbacks

- Tolerance for voluntary conservation varies among member agencies
- Southern California embraces conservation as a way of life – separate and apart from mandatory cutbacks
- Regional success is for every Southern California consumer and business to have access to affordable, high-quality water at all times

Focus Area 2: SWP Dependent Areas



Focus Area – “SWP Dependent Areas”

Portions of Metropolitan’s service area are more susceptible to reductions in SWP supplies

- This is a risk to the region’s reliability. In general, resolving reliability issues for the “SWP Dependent Areas” addresses the larger reliability issues for the entire region.
- The IRP Needs Assessment found that whenever shortages occur, they involve the “SWP Dependent Areas”

Focus Area – SWP Dependent Areas – Cont'd

Areas to investigate in the IRP Implementation Phase to resolve the “SWP Dependent Area” reliability challenges over the long-term

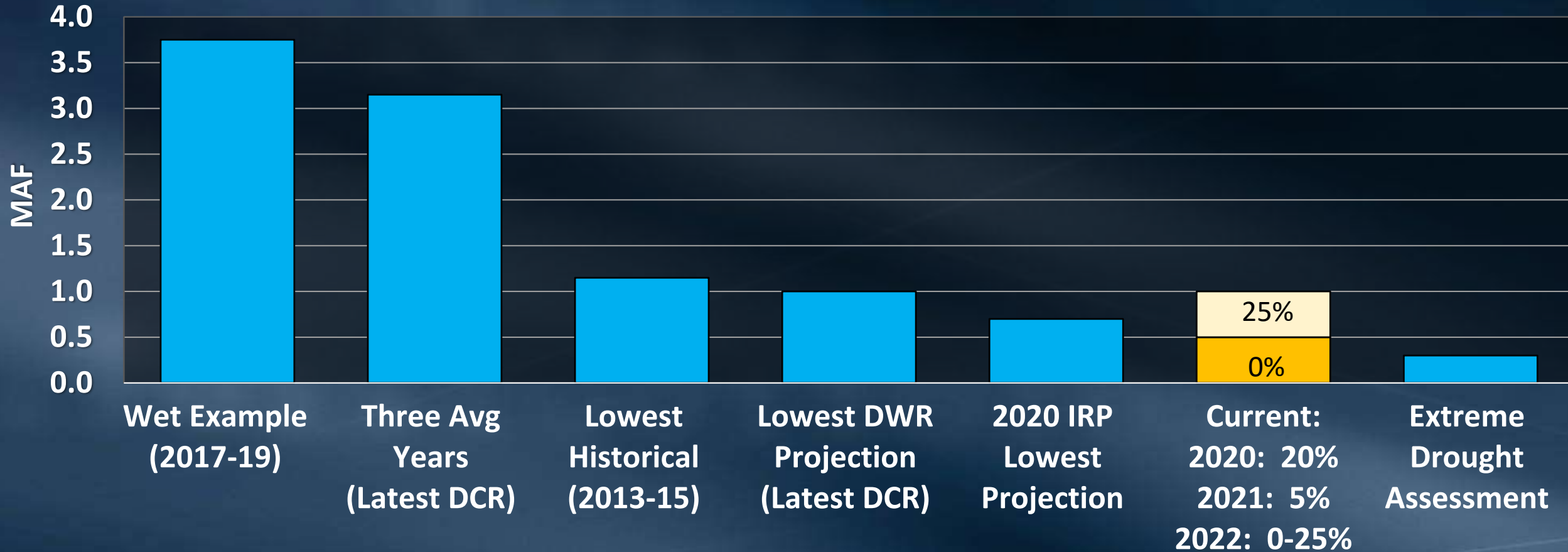
- Investments in distribution system to enhance flexibility
- Maintaining existing SWP supply reliability
- Developing new supplies and/or storage that are accessible to the “SWP Dependent Areas”

Focus Area – SWP Dependent Areas

Metropolitan must resolve “SWP Dependent Area” reliability issues during the SWP’s current drought emergency

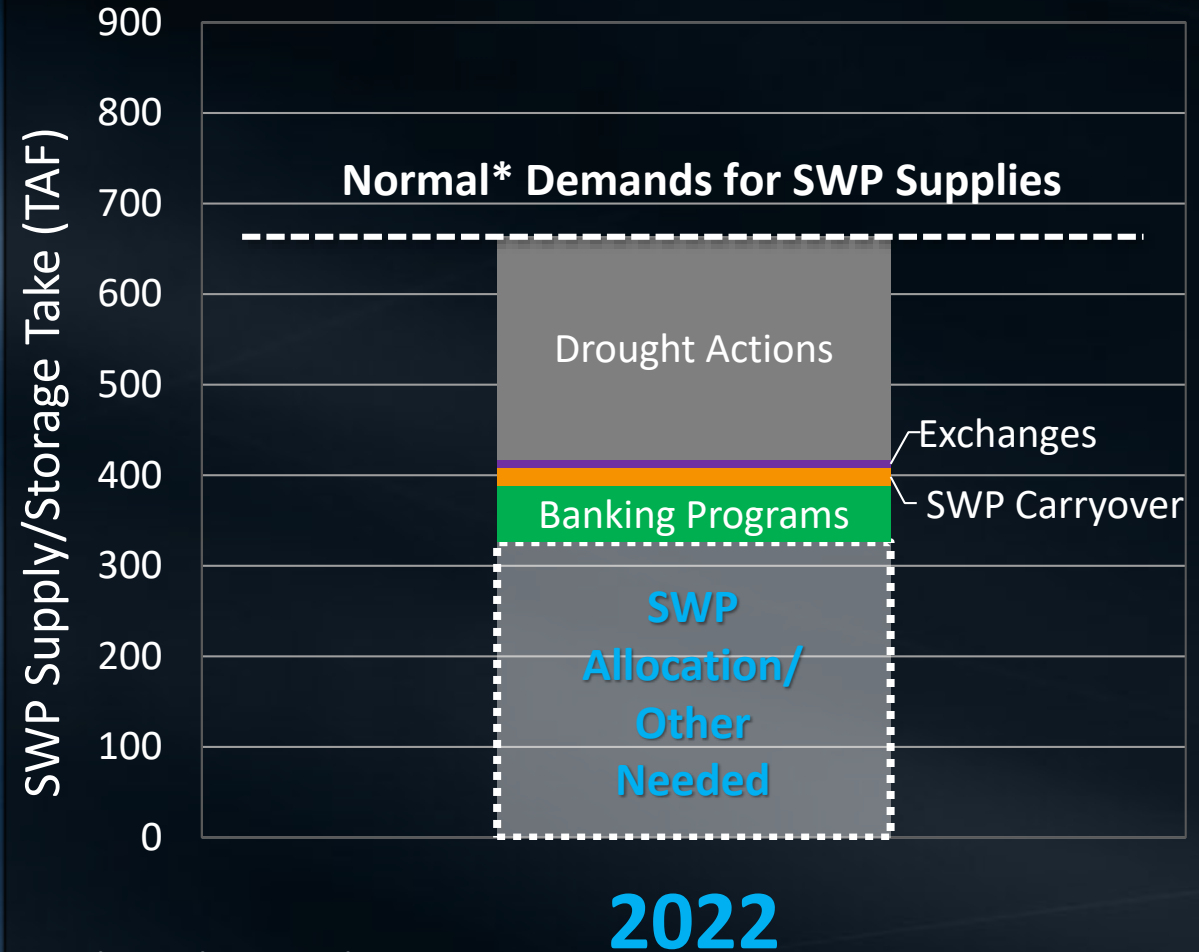
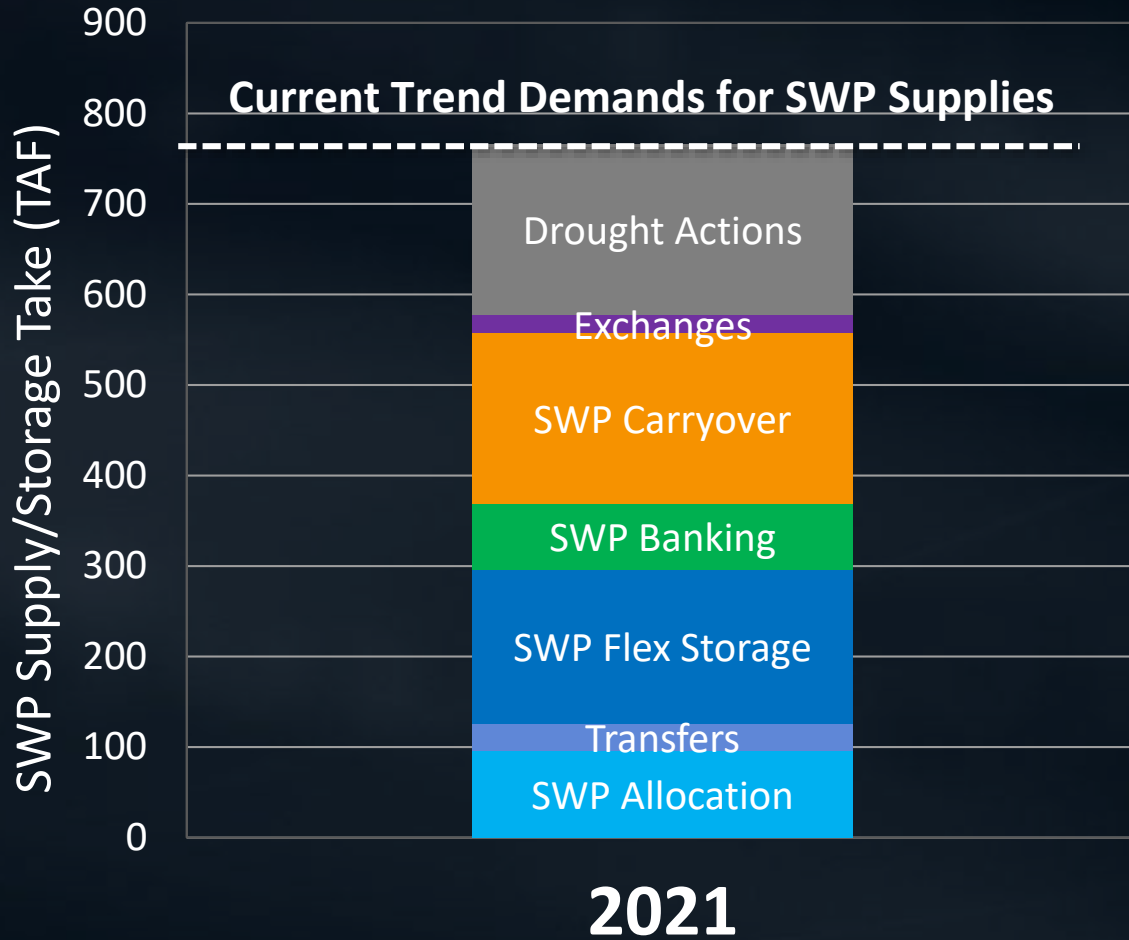
- Manage and meet “SWP Dependent Area” demands
- Enhance system flexibility in order to convey existing supply to the “SWP Dependent Areas”
 - Conduct Severe Drought Assessment to address system flexibility
 - Fast-track actions for short-term implementation to address current drought
 - Longer lead-time actions may be folded into the IRP Implementation Phase

IRP Assessment Captures SWP Risks (multi-year drought) and Opportunities (move water to storage)



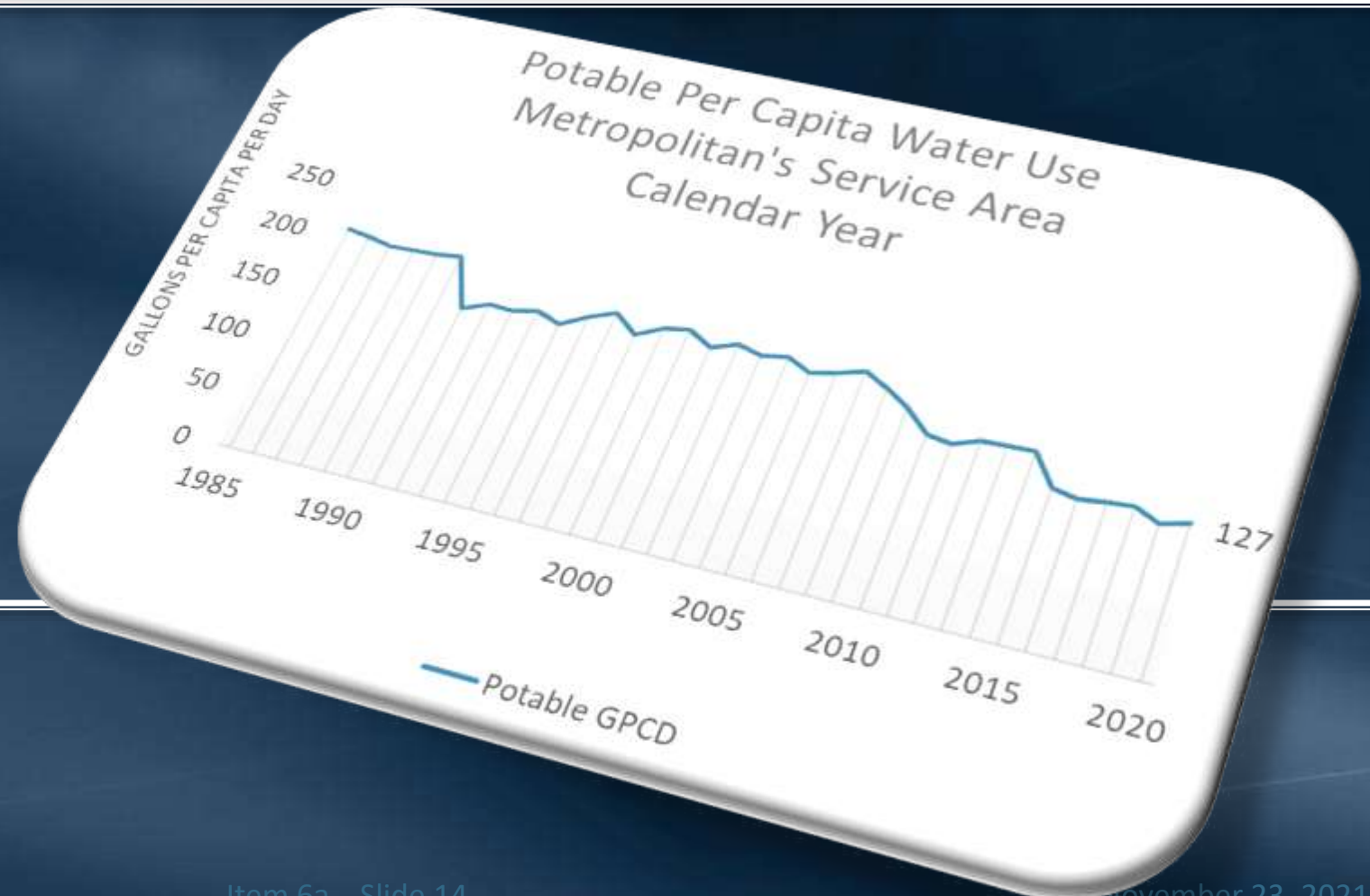
*Values rounded to 50 TAF increments. Values do not include Article 21 supplies.

Near-Term Reliability Challenge Identified



*Normal: average precipitation with demands adjusted for antecedent dry conditions

Focus Area 3: Demand Management



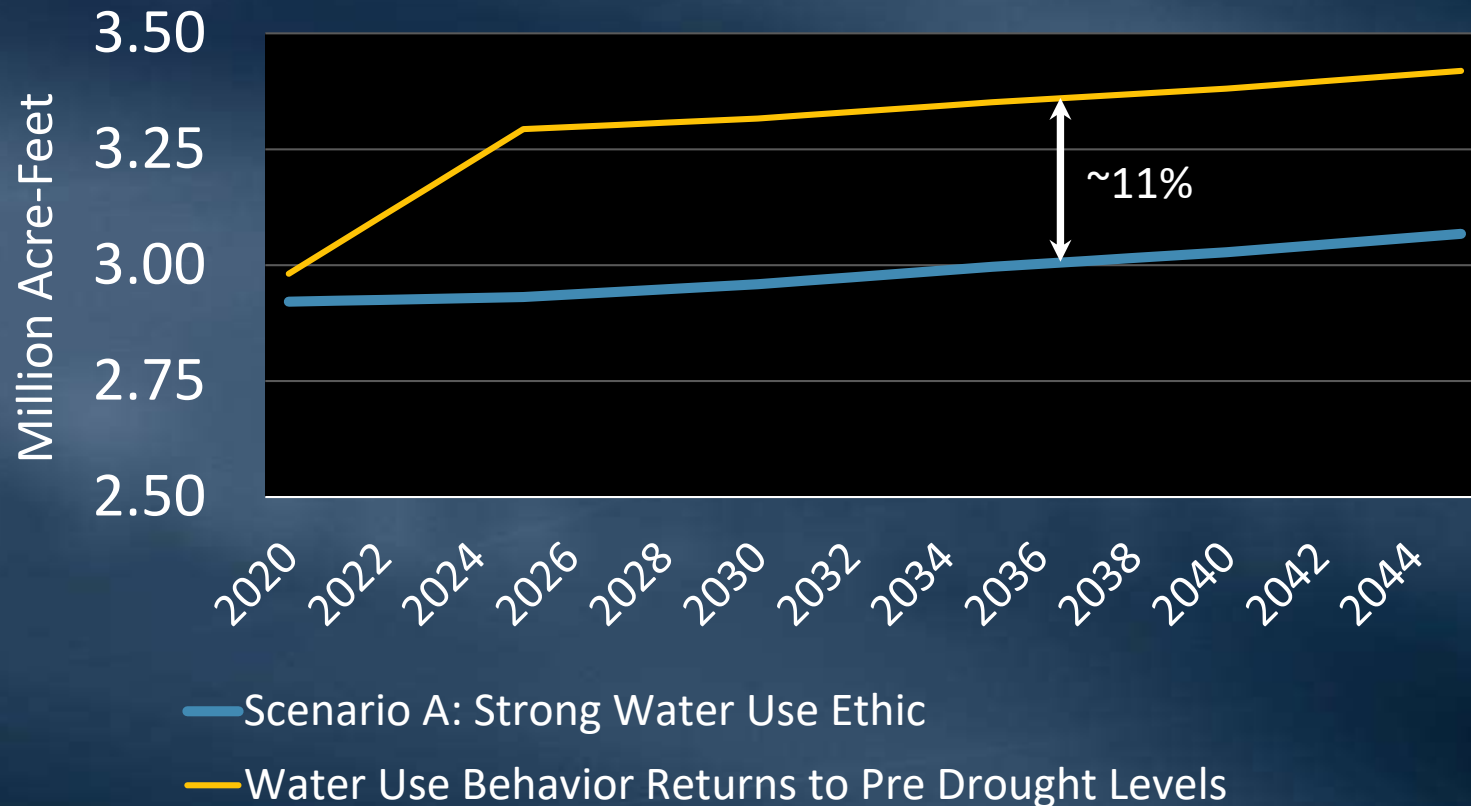
Focus Area – Demand Management

Increased demands, whether from growth or from per capita use, represent a major risk to reliability

- Demand management helps to minimize potential growth in demands
- Baseline conservation programs help every scenario
- Conservation program structure and funding should allow for fluctuating surplus/shortage conditions
 - Scalable and adaptable to changing conditions
 - Considers financial stability of volumetric revenues & changing demands

Water Use Ethic Has a Significant Impact on the Region's Demands

Scenario A - Retail Demand



- The region is at risk if demands are not managed
- A 352 TAF increase (roughly 11%) in demands if water use ethic wanes in Scenario A

Focus Area 4: Imported Supply



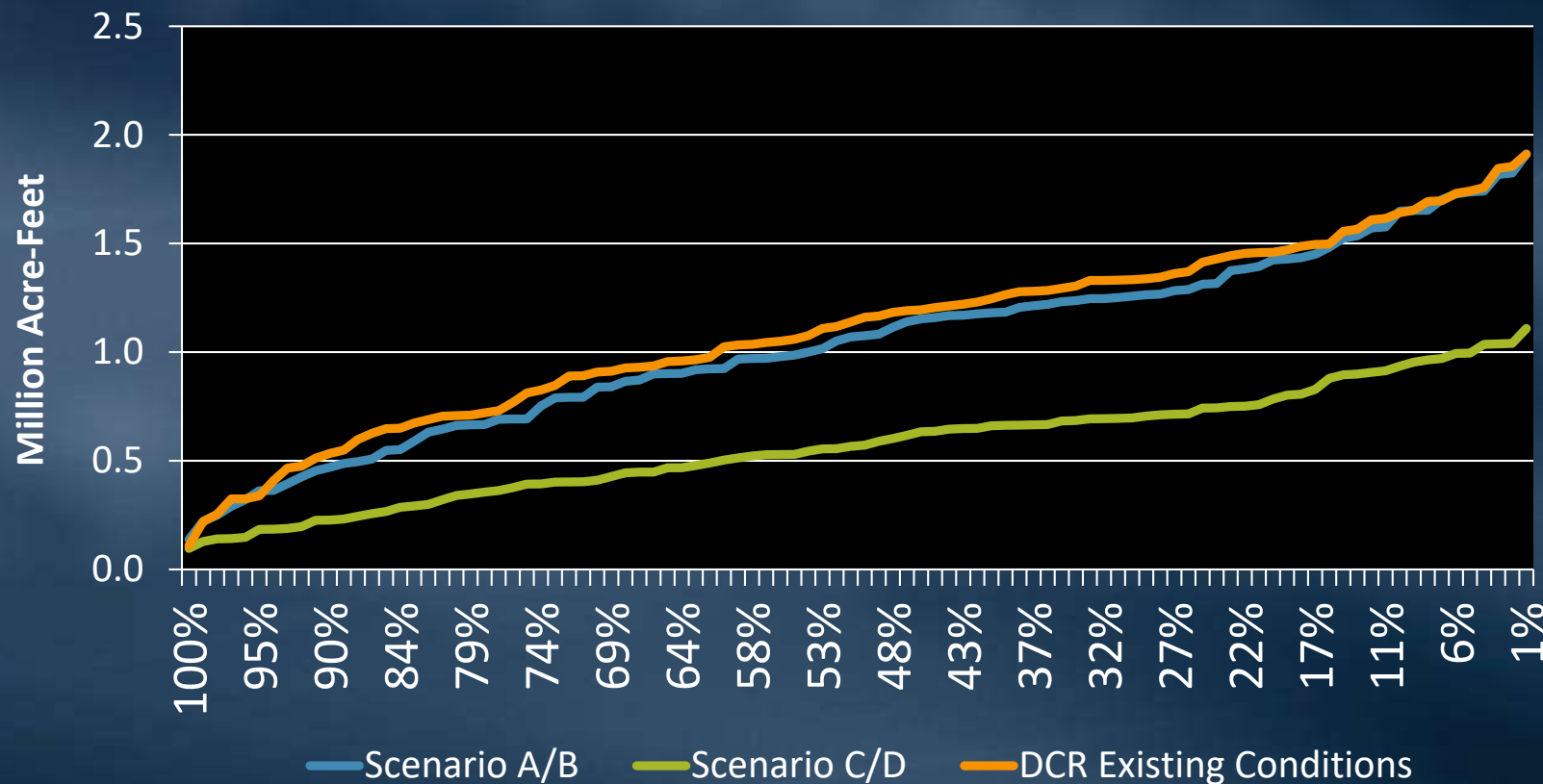
Focus Area – Imported Supply

Imported supplies susceptible to climate change and regulatory constraints

- Protecting existing imported supply avoids the need to invest in new and more costly replacement supplies
- Metropolitan leverages imported supplies by storing available water for use when it is scarce - “Big Gulp, Little Sip”
 - Imported supplies historically provide water for the region’s storage portfolio
 - Reliable imported supplies maximize regional investments in Metropolitan’s storage capabilities

Climate Change and Regulatory Impacts Degrade SWP Reliability

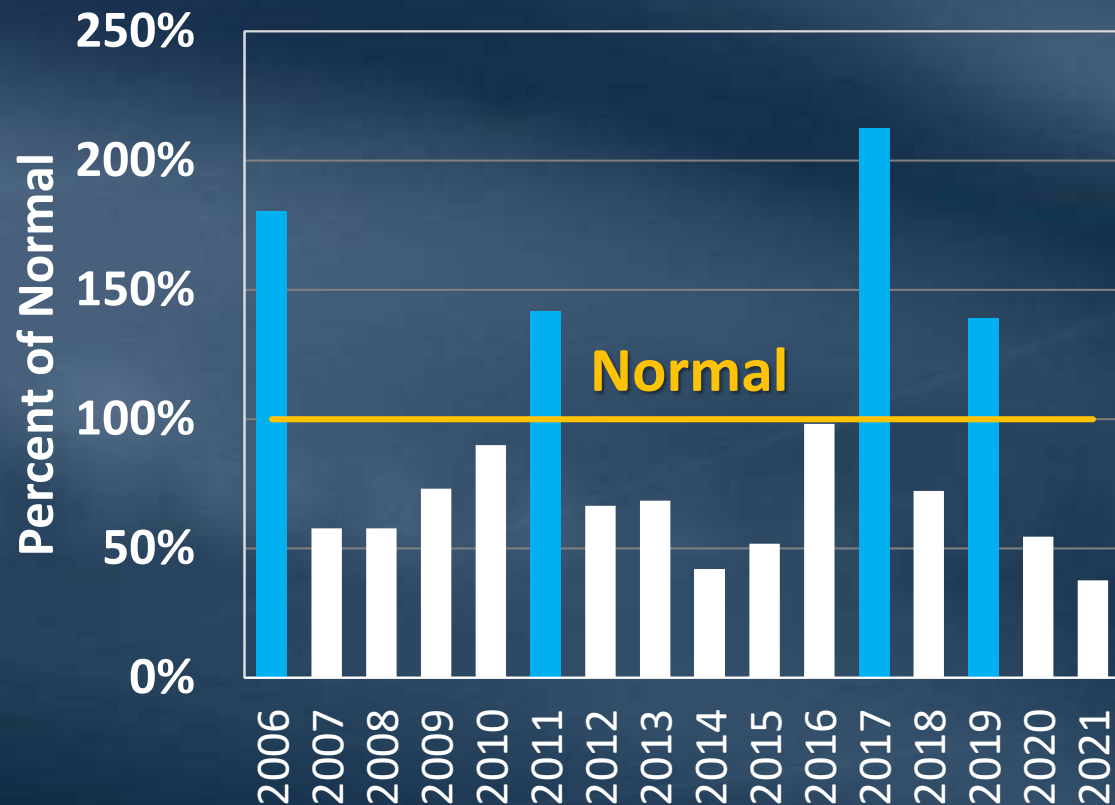
State Water Project Imported Supply Reliability (2045)



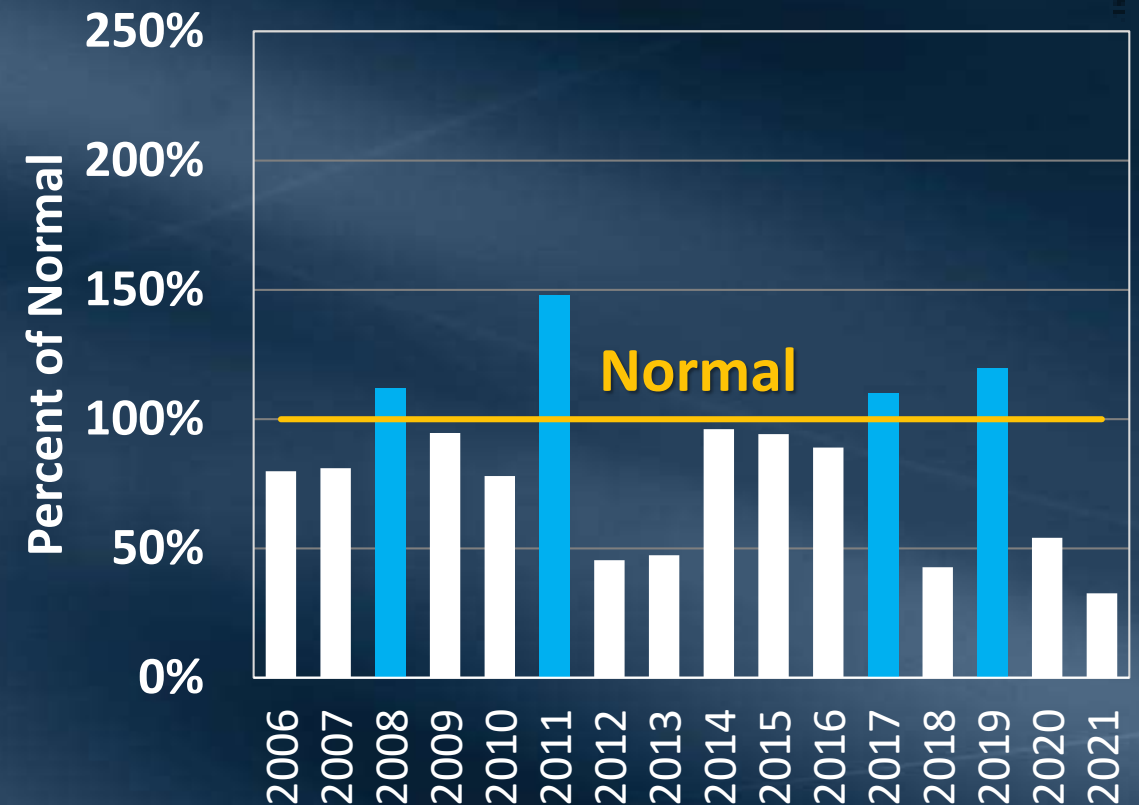
- Scenarios A/B assume gradual climate change and minimal regulatory constraints
- Scenarios C/D assume severe climate change and higher regulatory constraints

Predominately below average runoff as a result of both dry and progressively hotter conditions

Sacramento River Runoff



Powell Unregulated Inflow



Focus Area 5: Storage



Focus Area – Storage

Storage is a proven tool that gives Metropolitan a unique advantage in successfully managing through droughts

- Investments in storage leverage existing and new supply sources
- Metropolitan’s storage portfolio allows adherence to the “Big Gulp, Little Sip” philosophy
- Absent action, Metropolitan’s storage capabilities will decline over time as contracts expire
- Metropolitan should develop new storage capacity that is accessible to the “SWP Dependent Areas” to help reduce the reliability risk

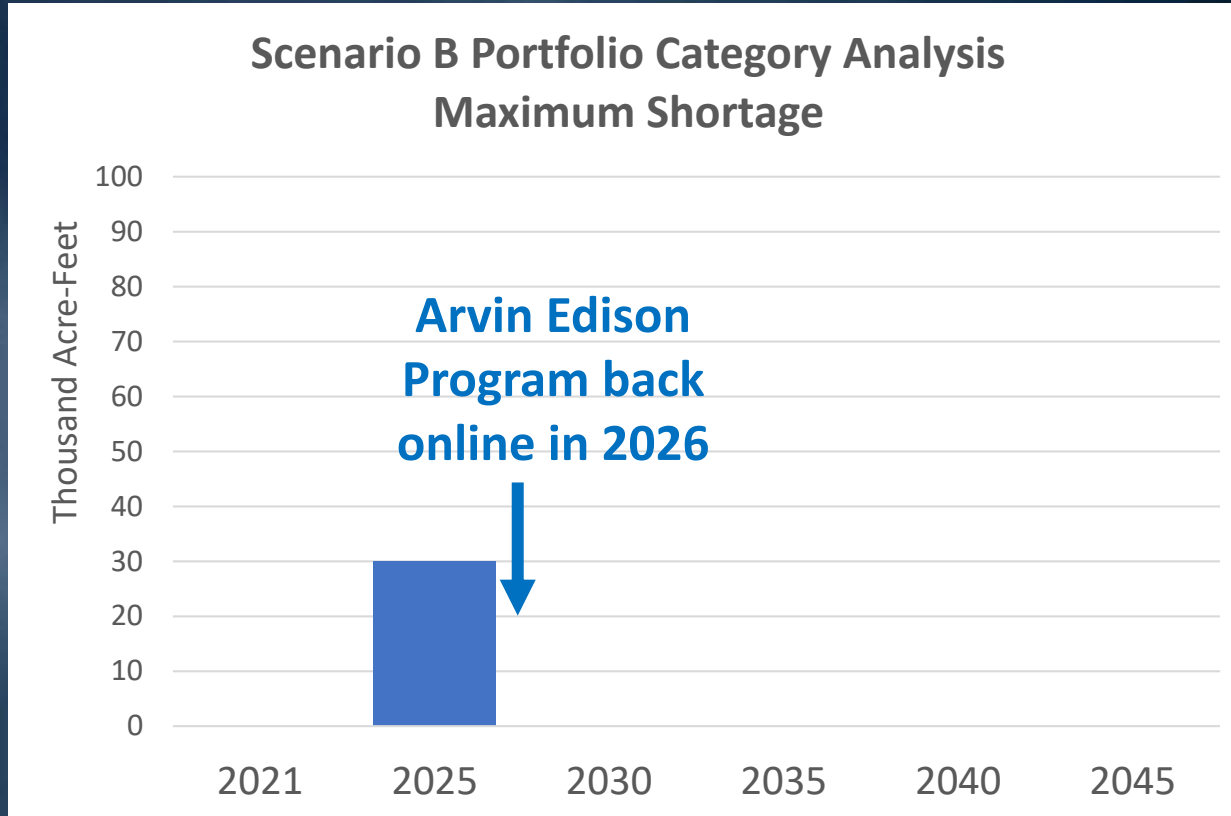
Storage Leverages Supplies

IRP Portfolio Category Analysis Summary Table

Modeled Storage (TAF)	New Supply Needed by 2045 (TAF)		
	Scenario B	Scenario C	Scenario D
0	100	50	650
100	70	15	600
250	30	15	550
500	30	15	500
1,000	Not Modeled	Not Modeled	400

- As we increase storage capacity, we are able to reduce need for new supply development

A decrease in shortages if groundwater storage programs return to full use



Arvin Edison Water Management Program*

	Capacities (TAF)
Total Storage	350
Take	~ 40-75

Analysis assumes SWP Banking Program contracts are extended

Focus Area 6: Local Supply

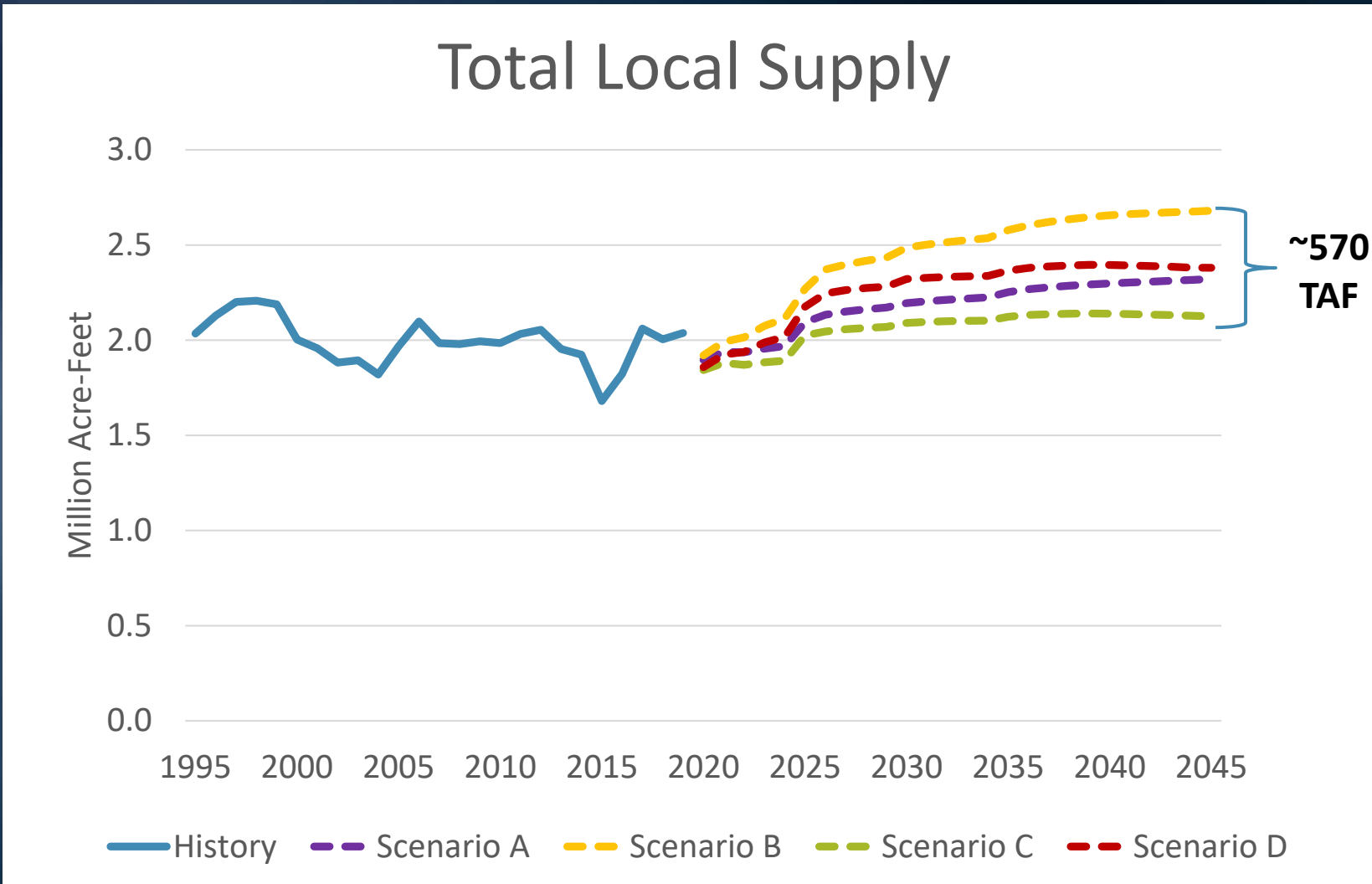


Focus Area – Local Supply

Regional reliability is dependent on local supply production

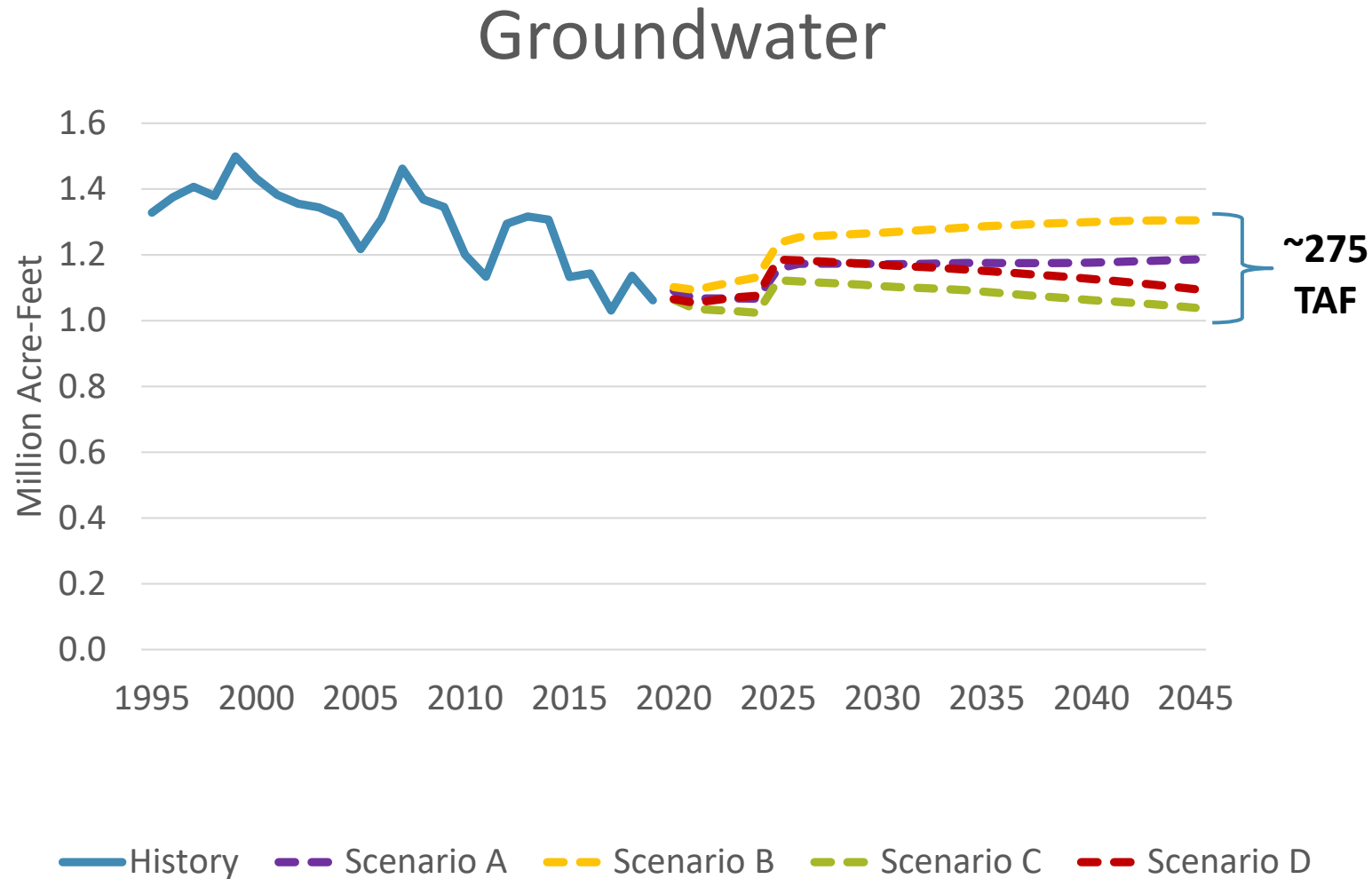
- Local supplies account for half of the region's water supply
- Maintaining existing local supplies and developing new local supplies is important to regional reliability
 - Current local supply production and future supply development must consider climate change and regulatory impacts
- As Metropolitan increases its commitments to enhancing local supplies, Metropolitan's business model may also need to be reconsidered to ensure financial sustainability

Range of Uncertainty in Local Production



- There is uncertainty in future local supply production
- Many factors can impede or facilitate local supply development and production

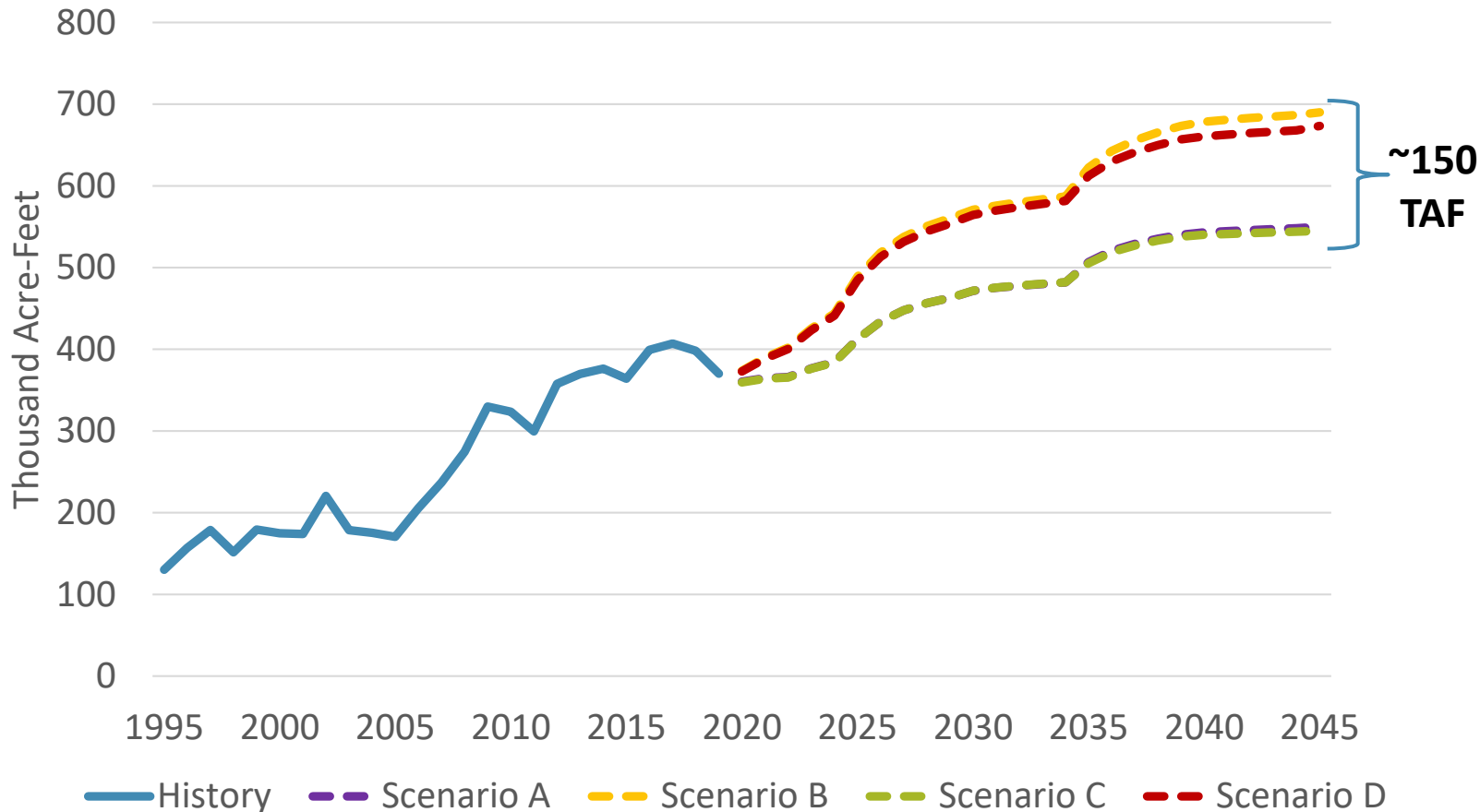
Region Depends on Healthy Groundwater Basins



- Impacts to groundwater threatens regional reliability
- There has been a decline in the past 20 years
 - Availability of imported supplies for replenishment
 - Variability in natural replenishment from rainfall
 - Emerging contaminants

Success in Developing Recycled Water Projects

Recycled Water



- Success with recycled water development
- Continued success may be difficult going forward
 - Availability of wastewater effluent reduced by conservation
 - Distribution system very costly
 - Rising salinity increases costs

Focus Area 7: Adaptive Management

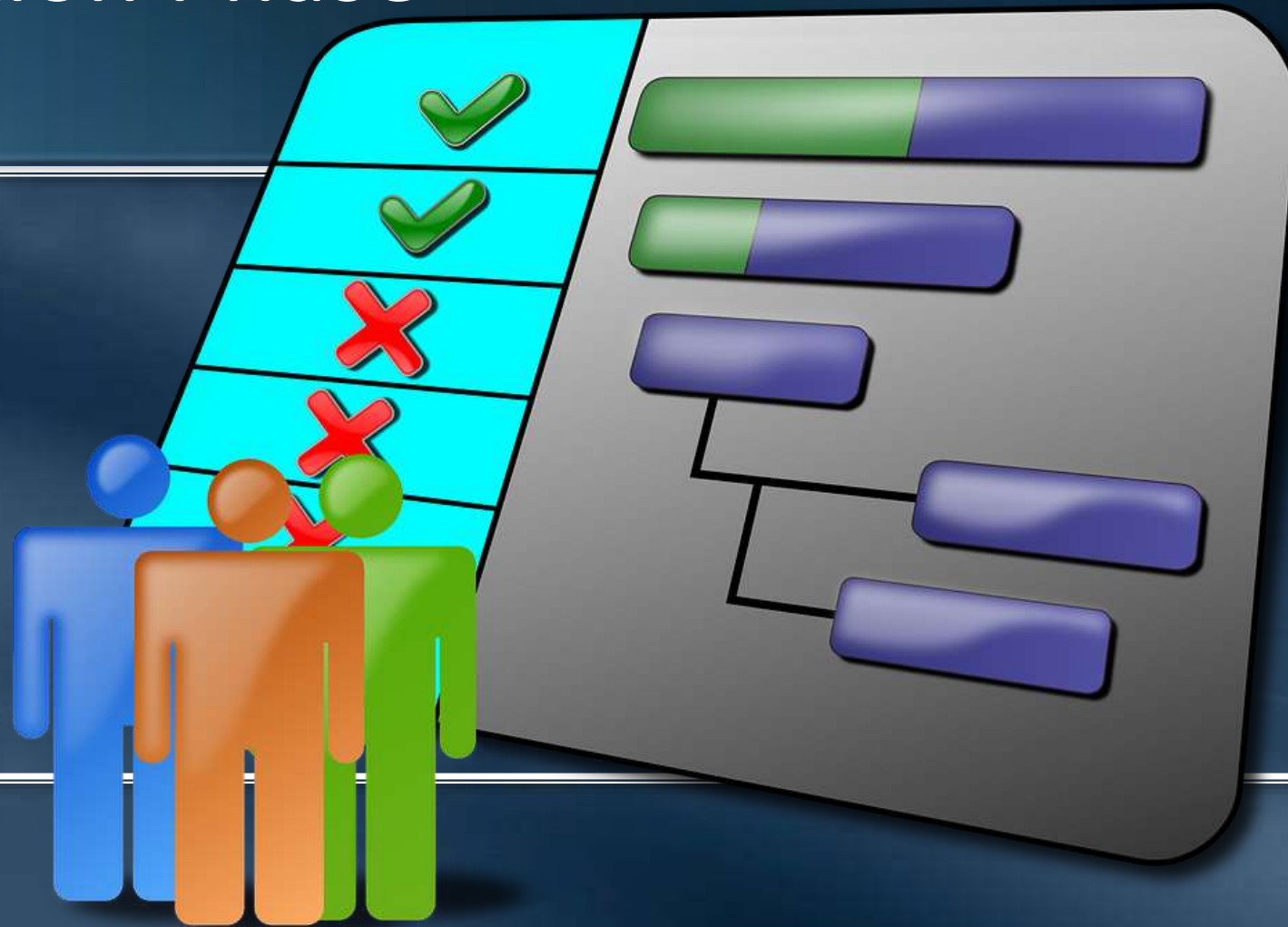


Focus Area – Adaptive Management

Reliability is subject to a wide range of uncertainties. Scenario planning broadens the view of reliability to factors beyond historical hydrology.

- Each scenario warrants different sets of actions to ultimately achieve the reliability goal
- Looking across all scenarios helps to reveal robust actions that work well under multiple scenarios
- Monitoring for indicators (signposts) will inform decision-making on separate sets of actions
 - **Example: Demand Management**
 - Demographic growth
 - Water use ethic (per capita use)
 - Demand trends

Implementation Phase



IRP Phasing

- Phase 1 – Needs Assessment

- Scenario Development
- Gap Analysis
- Portfolio Category Analysis
- Board Adoption of IRP Findings

- Phase 2 – Implementation

- Engage member agencies and stakeholders
- Develop Adaptive Management Plan
- Select robust actions through specific policy and project identification (urgent projects expedited)

Complete
in early
2022

Begins
in 2022
(2 years)

IRP/One Water Implementation Phase



Board Oversight

Committee input and oversight
Recommend actions to full Board

Adaptive Management

Identify Policies, Programs, & Projects to address IRP findings
Involve member agencies and other stakeholders
Identify signposts, timing, no-regret actions, and offramps

Implementation

Initiate common, no-regret actions
Approve urgent programs and projects when triggered
Examine regional benefit
Develop financial plan

Next Steps

Next Steps

- Obtain Board feedback on draft findings and scope of implementation plan today
- Collaborate with the member agencies to recommend a set of IRP findings for Board consideration early next year
- Transition to a collaborative process with member agencies and stakeholders focused on adaptive management and implementation
 - Develop a decision support strategy for thinking through timing, financial models, and basis for adaptive management actions, using available information and evaluation criteria

