

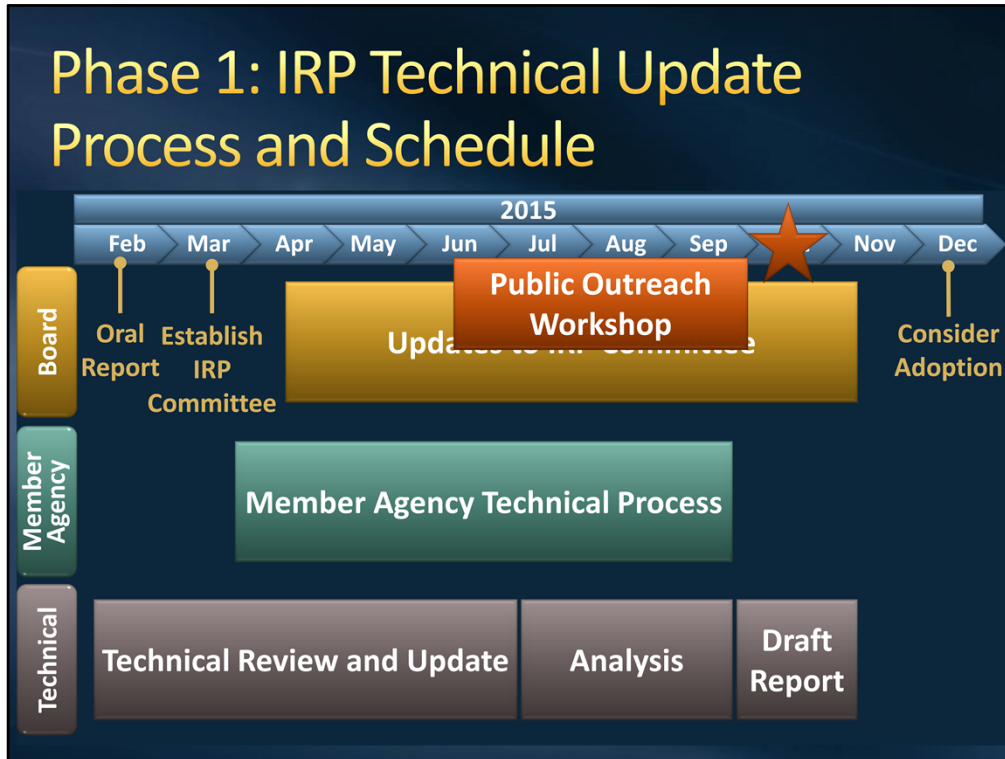


# 2015 IRP Technical Update

Central Basin Caucus Meeting  
November 4, 2015

## Presentation Overview

- Process Overview and Schedule
- Technical Recommendations
- Reliability Discussion
- What Happens if We Do Nothing?
- Summary of Technical Results
- IRP Process Next Steps

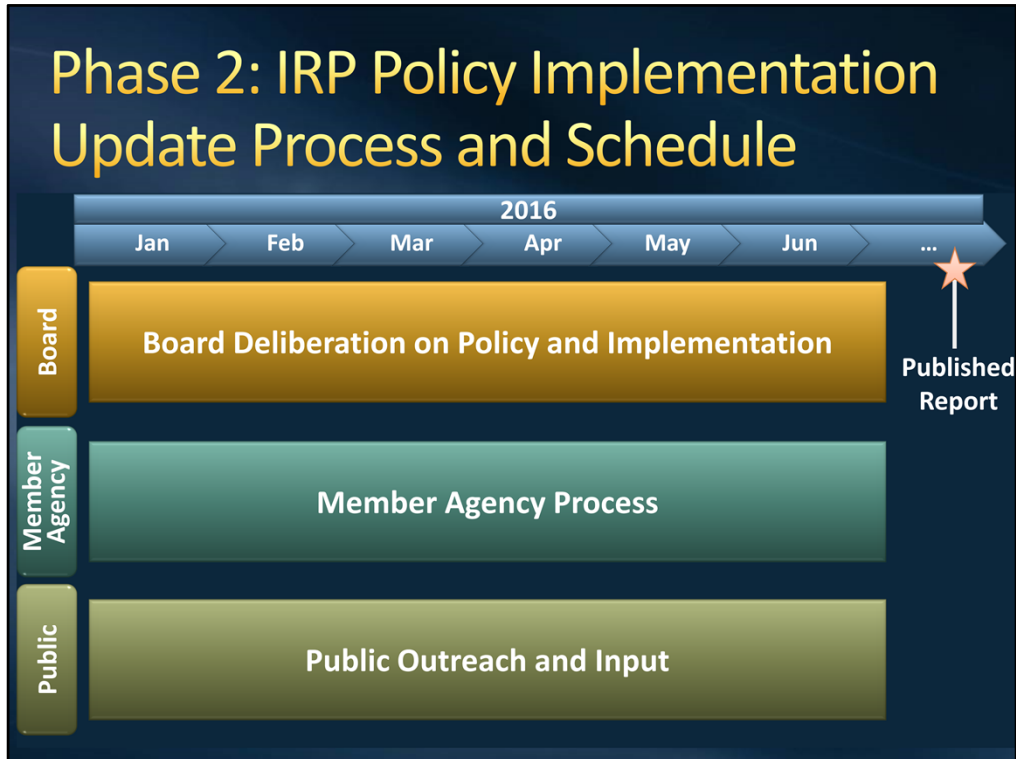


Internal Process –  
Ongoing

MA Technical Process –  
MA workgroup meetings twice a month April through August, as needed through October  
WUE meetings monthly standing meeting April through July

Board –  
Reporting in Feb and March (IRP Committee)  
Monthly Updates from MA tech process  
Wrapping up around the end of the year, head into Board Policy Process

Following slides breakdown activities at Board and MA levels



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# Technical Recommendations



## Summary of Key Technical Findings

- Additional local supply and conservation development is needed to mitigate SWP risk
  - 200 TAF total per year in conservation and local resources
  - Need additional policy discussion on how to ensure local supply target is reached (accounting for risk)
- Stabilizing imported supplies continues to be critical
  - Provide every-year core supplies
  - Maximize use of regional storage resources
- A comprehensive water transfer approach can address shorter-term reliability challenges
- Implementation policy and approach to developing local supplies and conservation is key

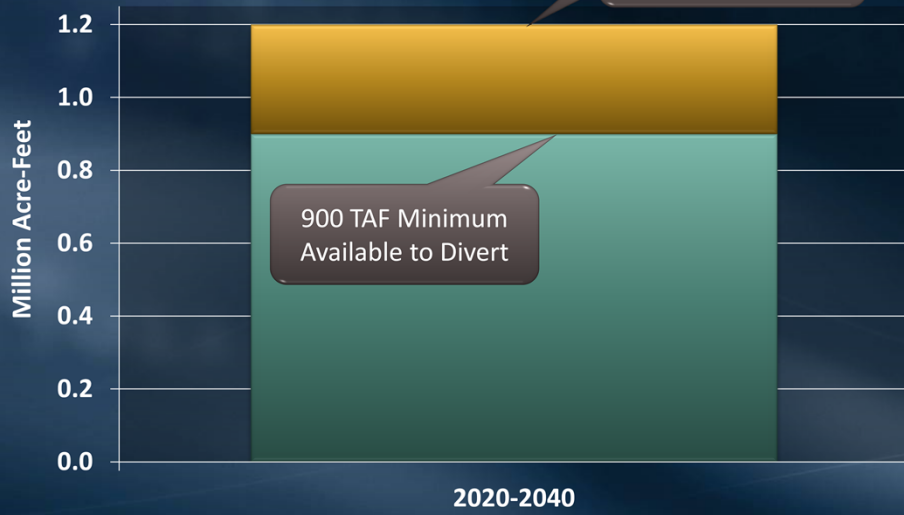
# IRP Technical Recommendations

## Colorado River Aqueduct

- Stabilize CRA base supplies against risks from growing demands, drought, etc.
  - Develop sufficient base supply programs to ensure 900 TAF of diversions
- Maintain flexibility in CRA dry-year programs and storage
  - Ensure access to 1.2 MAF of supplies in dry-years

# Proposed IRP Target – CRA

## Supplies Available for Diversion





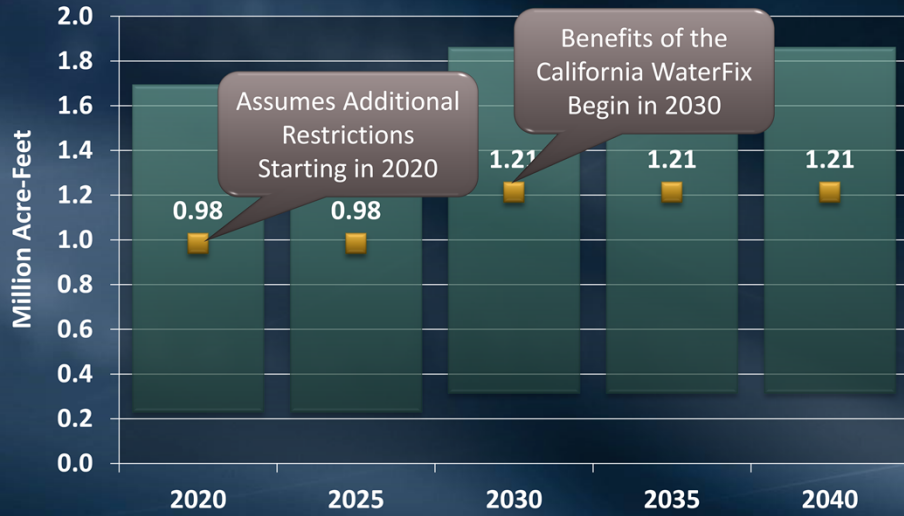
# IRP Technical Recommendations

## State Water Project

- Manage flow and export regulations in the near-term
  - Continue to engage in collaborative science-based approaches
- Pursue a long-term Delta solution
  - Continue active participation in the California WaterFix and the California EcoRestore efforts

# Proposed IRP Target – SWP

## Table A + Article 21 Supplies



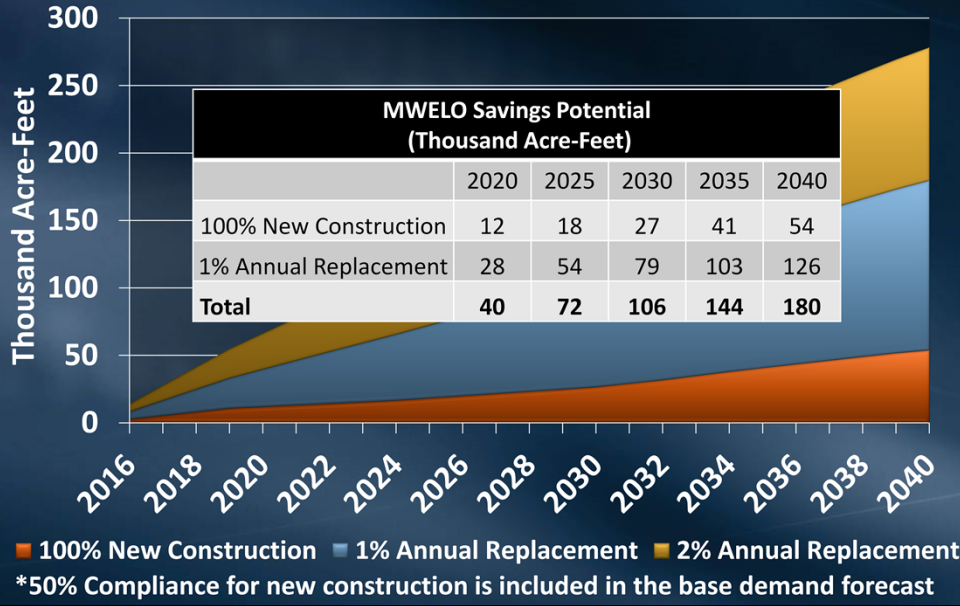
## IRP Technical Recommendations

### Conservation

- Meet regional 20x2020 GPCD reduction
- Pursue additional conservation in support of the State's Model Water Efficient Landscape Ordinance
  - Attain 100% compliance for new construction
  - 1% annual replacement rate for existing homes and businesses
- Continue device-based programs for residential, commercial and industrial

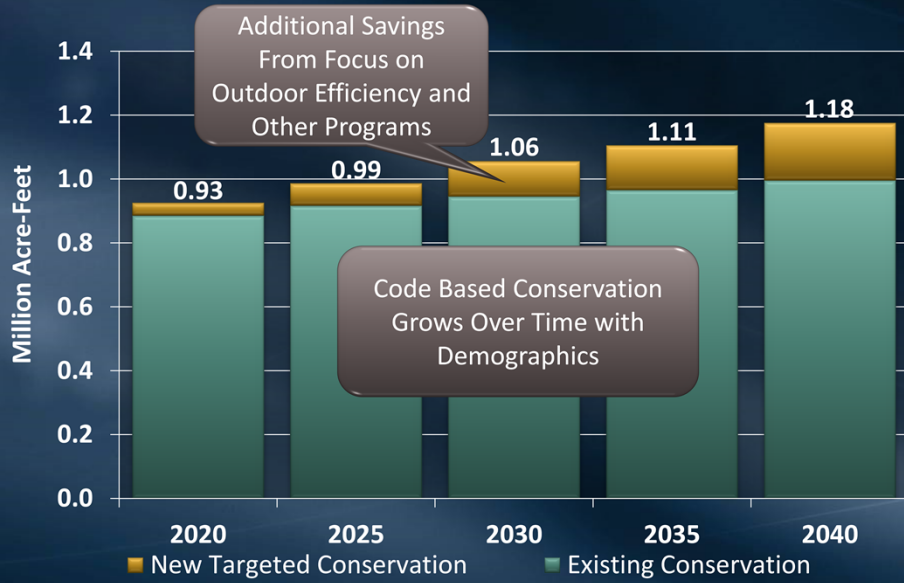
# Potential MWELO Savings\*

From New Construction and Existing Replacement



# Proposed IRP Target - Conservation

## Total Targeted Conservation Savings



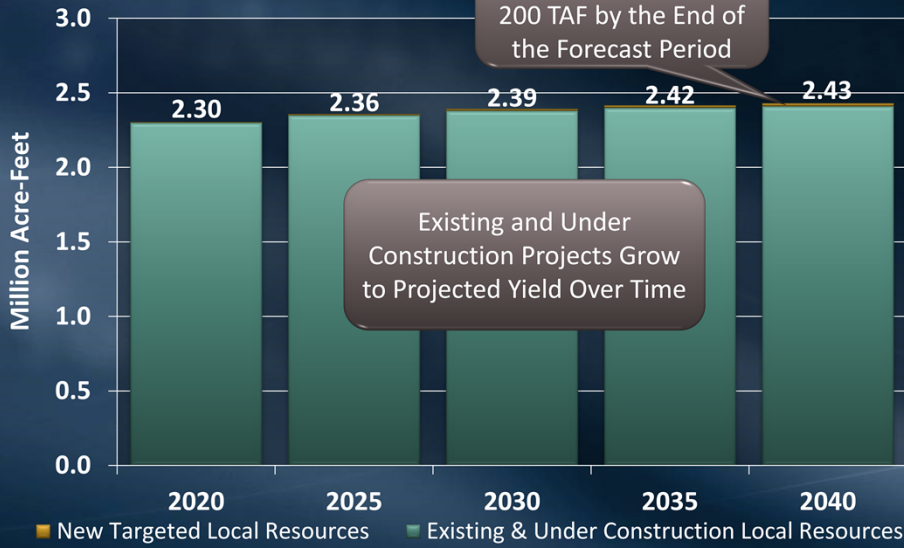
# IRP Technical Recommendations

## Local Resources

- Develop additional local supplies to meet growth and ensure adequate storage reserves
  - Pursue additional recycling, groundwater recovery, and seawater desalination
- Develop additional local supplies to reduce needs for imported replenishment
  - Expand opportunities for groundwater recharge from stormwater and recycling

# Proposed IRP Target - Local Resources

Total Targeted Local Resources (Million Acre-Feet per Year)



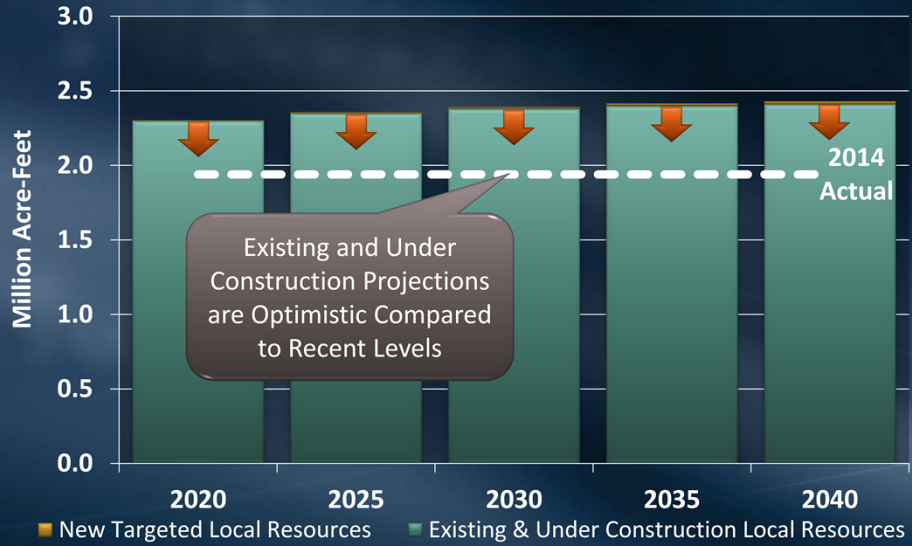
## Sources of Potential Risk to Local Supplies

- Climate change impacts to groundwater recharge or surface supplies
- Water quality impacts to groundwater or other supplies
- Implementation risk to facility expansions
- Infrastructure maintenance risks



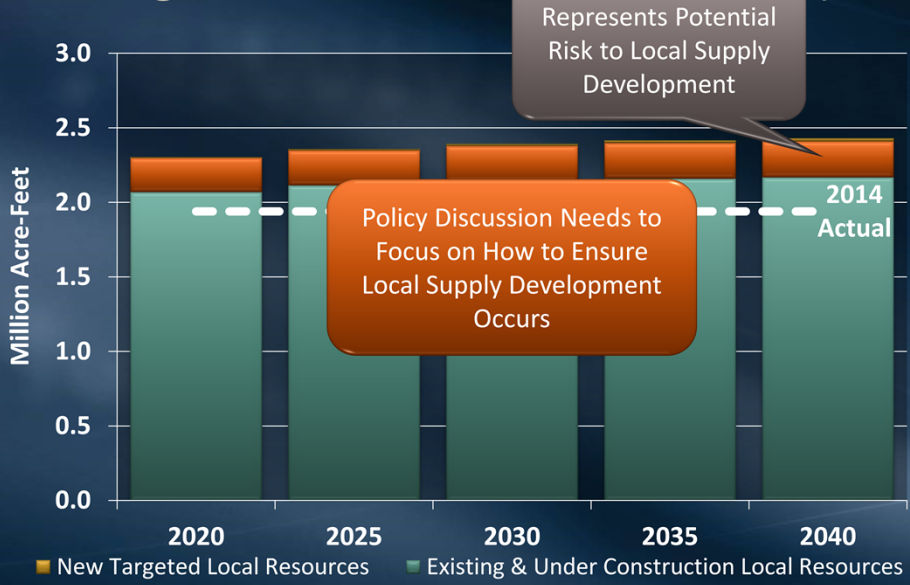
# Proposed IRP Target - Local Resources

Total Targeted Local Resources (Average Year)



# Proposed IRP Target - Local Resources

## Total Targeted Local Resources (Average Year)



## IRP Technical Recommendations

### Transfers and Exchanges

- Develop a comprehensive transfers and exchanges strategy
  - Focus on obtaining additional supplies in normal and wet years
- Ensure strategy works in conjunction with Metropolitan and local storage

# Reliability Discussion



# What Does Reliability Mean?

Nothing comes out the tap?



Limited outdoor watering?

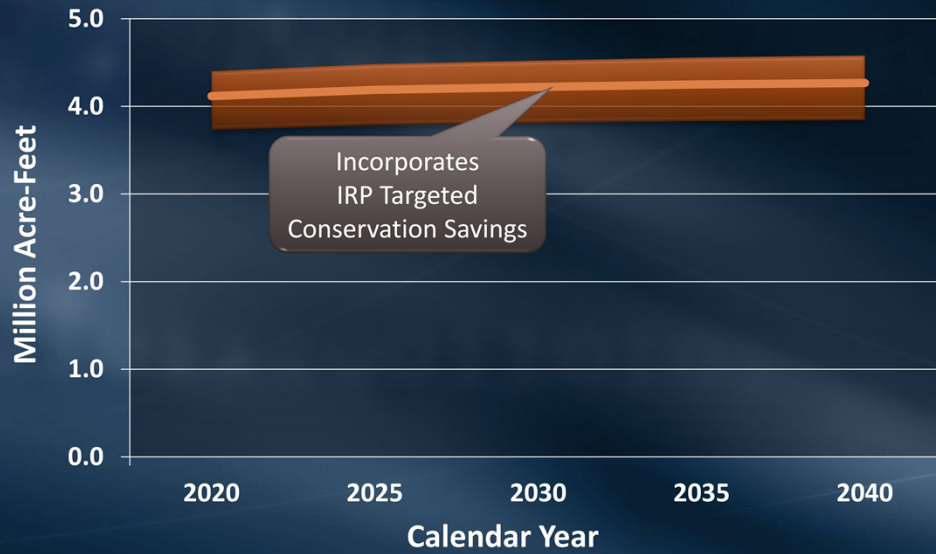


Limits enforced by fines and penalties?

## What is the Purpose of Reliability Analysis?

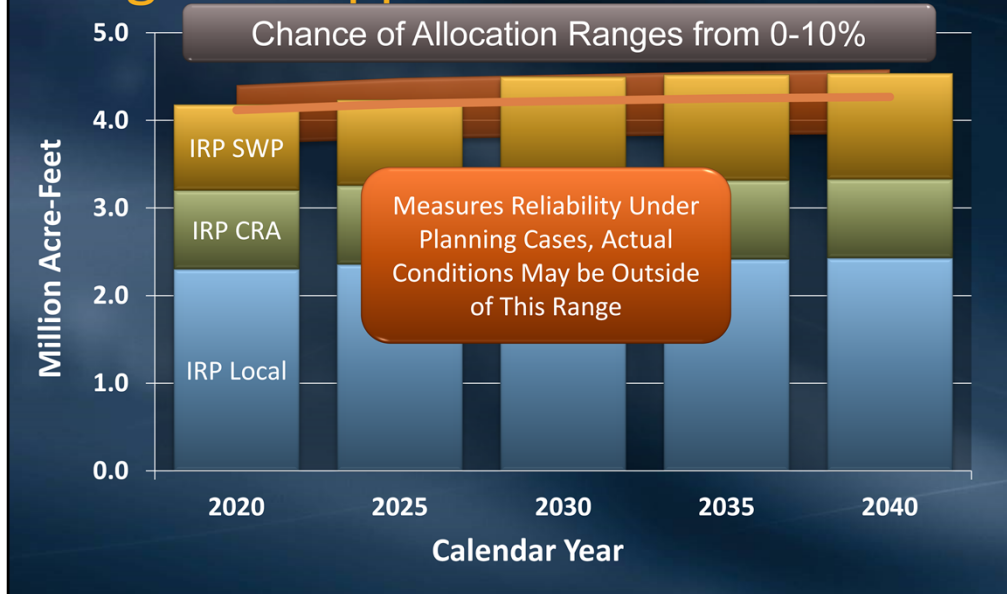
- Evaluates whether a supply mix meets demands in a manner consistent with reliability goals
- Serves as a test case
  - Tests supply and demand forecasts
  - Test ranges and variability due to climate and hydrologic factors sampled from 1922-2012
- Shows how many times out of 91 that there is no shortage, and what the resulting storage conditions are

## Range of Retail Demands and IRP Targeted Supplies



520 TAF  
Level 3-5

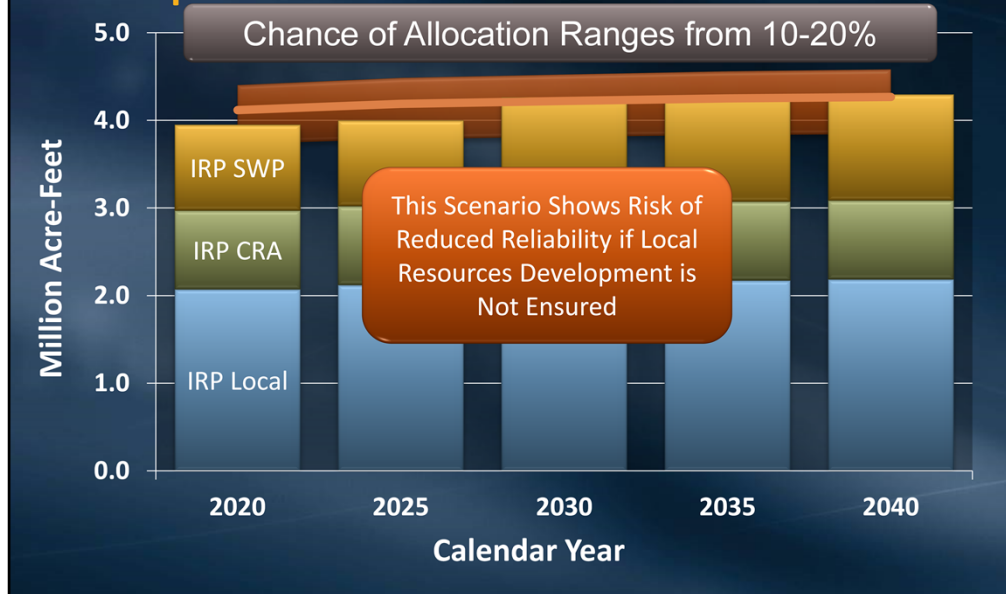
# Range of Retail Demands and IRP Targeted Supplies



820 TAF in 2020  
Level 6-8



## Ensuring Local Supply Target is Met is Important



Another factor is **climate impacts**, we will see this in a number of places as we go through this presentation.

Forecast is not just an average, range, not just min- max either, we look at 90 different climate effects in each year of the forecast

# What Happens If We “Do Nothing”

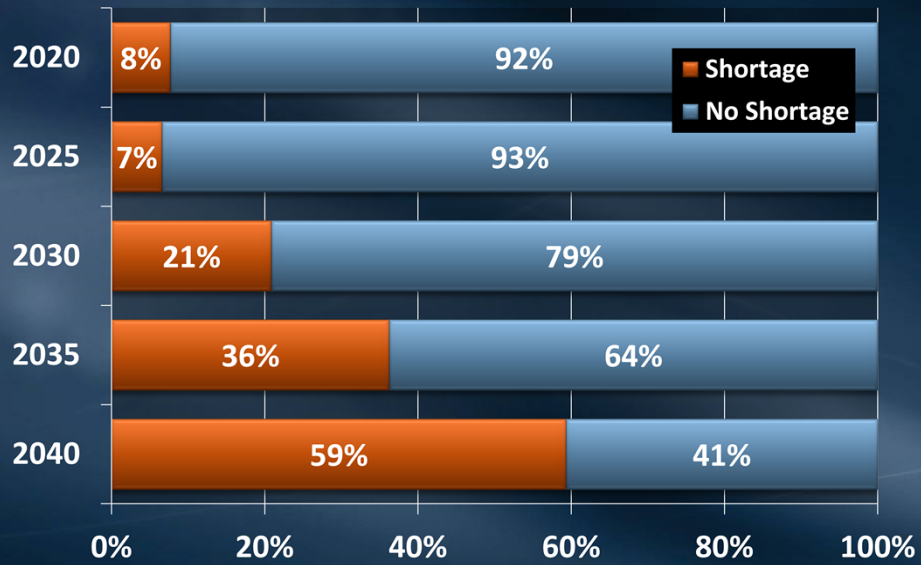


## What do We Mean by “Do Nothing”?

- Current outlook of supplies and demands
  - Existing and under construction supplies
  - Updated demographics and demand model
  - Coordinated data with member agencies
- Water balance analysis showing shortages and storage results
- Identification of additional development needs

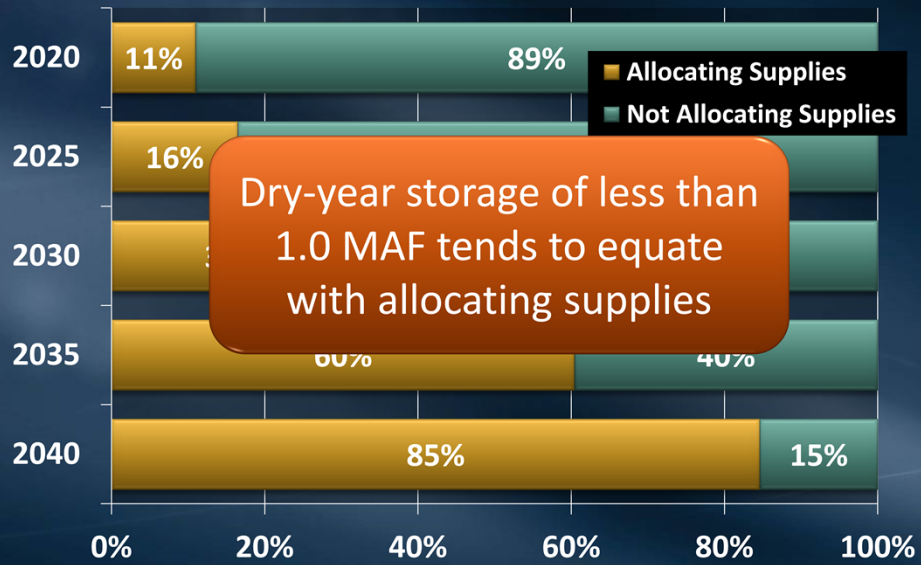
# Summary of Shortage Probability

“Do Nothing” Case Water Balance



# Summary of Ending Dry-Year Storage

## "Do Nothing" Case Water Balance



## Observations

### “Do Nothing” Case Water Balance

- The “do nothing” approach is not sustainable
- Shortage probability and size both increase over time
  - Total retail demands increase over time
  - Constant or decreasing local and imported supplies
- Storage quantity decreases over time
  - Less water to store
  - Higher needs for storage to balance supplies and demands
- Significant resource investments are needed

## Summary of Technical Results



# New Targets are Under Consideration



**Take your turn.**  
Every drop we save counts.

## Conservation

- Meet a 20% Reduction in GPCD
- Pursue efficiencies in outdoor water use
- Continue incentives for water conserving devices



## Local Resources

- Develop additional local supplies to ensure robust storage reserves that guard against risk



## State Water Project

- Pursue a stable water supply for all Californians through the California Water Fix and California Eco Restore



## Colorado River Aqueduct

- Build, stabilize, and protect supply programs against risk and growing demands on the Colorado River
- Maintain flexible programs for dry year use



# IRP Process Next Steps



## Upcoming Technical Process Activities

November-December 2015

- IRP Technical Process - November
  - Report Drafting
- IRP Committee Meeting - December 7th
  - Consider 2015 IRP Technical Update
- IRP Committee - 2016
  - Begin policy discussion

## IRP Technical Policy Issues to Date

### Issues to Be Addressed in Phase 2

- Developed through MA technical process, IRP Issue Paper review, Committee input, and public outreach
- Issues fall into four broad categories
  - Metropolitan's role in local resource development
  - Governance and financial considerations
  - Groundwater as supply and storage
  - Conservation programming
- Full inventory will be posted on IRP website

