



2015 Integrated Resource Plan (IRP) Technical Update

Member Agency Manager Meeting
September 25, 2015

IRP Is About Setting Targets

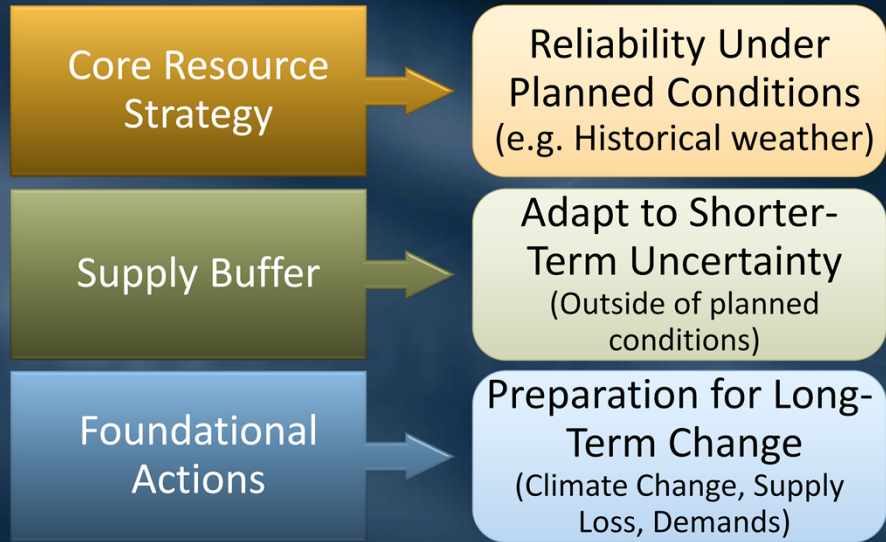
- Targets are to provide regional reliability
- Intent is to be focused on the long-term
- Questions about how to meet specific targets are usually dealt with separately (roles, programs, responsibilities)
- First IRP adopted in 1996
 - Last updated in 2010



Drivers

IRP Adaptive Management Approach

Blueprint for Adapting to Change



Targets From 2010 IRP Update Emphasized A Diverse Approach

Water Use Efficiency

- Achieve a 20% reduction in GPCD as a region by 2020

Local Resources

- Develop ~100 TAF through incentives and partnerships

SWP

- Seek short, mid, and long-term Delta improvements

CRA

- Develop Dry-Year supply programs to fill the aqueduct when needed

Water Use Efficiency

Conservation and recycling to achieve a 20% reduction at the regional level
Commitment is above and beyond 20x2020 legislation

Local Resources

Sought to develop just over 100 TAF of additional local supplies through groundwater recovery, seawater desalination, and recycling

State Water Project

Pursue short, mid, and long-term improvements to help stabilize delta supplies
Short-term examples: emergency preparedness actions, Complete BDCDP
Mid-term examples: Implement BDCP, implement flood control protection
Long-term examples: Water supply conveyance, ecosystem restoration

Colorado River

Continue to develop dry-year supply programs on the Colorado River System
Provide flexibility in conjunction with Lake Mead ICS to provide a full CRA as needed

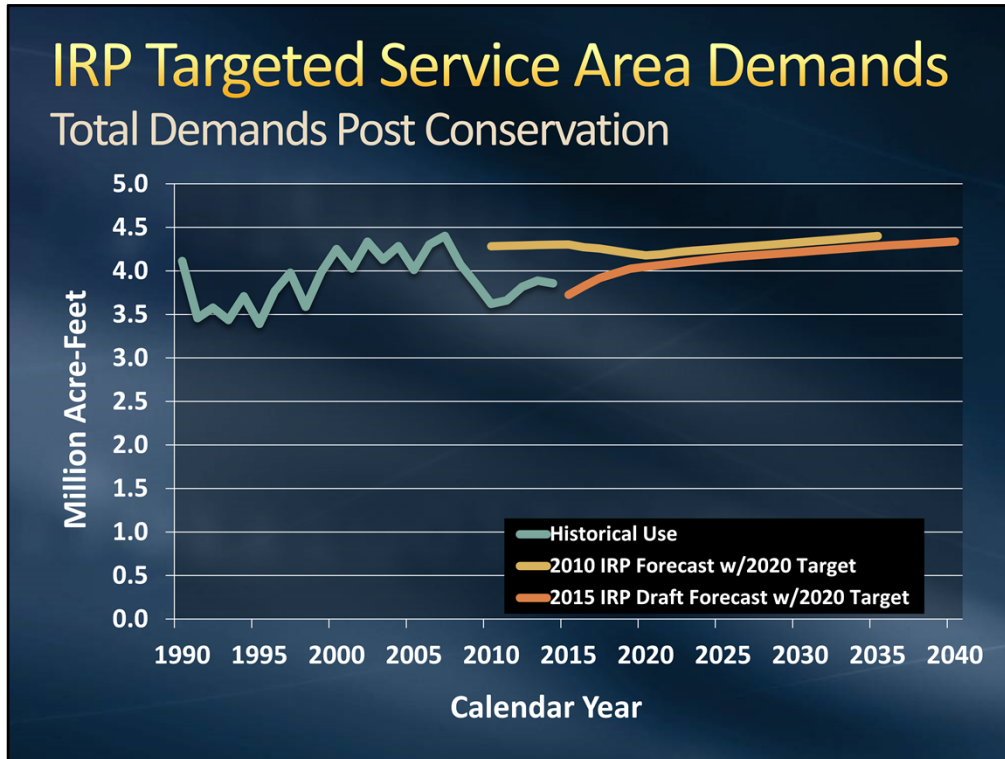
Much Has Changed Since 2010

- Demands
 - Lower demographic projections
 - Significant new conservation savings
- Local Supplies
 - Some new supplies coming online
 - Major reductions in groundwater projections
- Delta Fix
 - Projected yield of SWP is lower
- Additional Risks To Consider

- Things we've learned since 2010 ("the claim for change")

Demand Projections Are Lower

- Net change from 2010 IRP
 - Retail demands lower by ~120 TAF in 2035
- Revised demographics resulting from 2010 Census
- Adjustments for recent water use patterns
- Updated conservation savings projections



2015 IRP draft forecast includes adjustments to account for decline in water use due to the drought.

Includes conservation: active + passive + MELO (50% new home compliance)

2035:

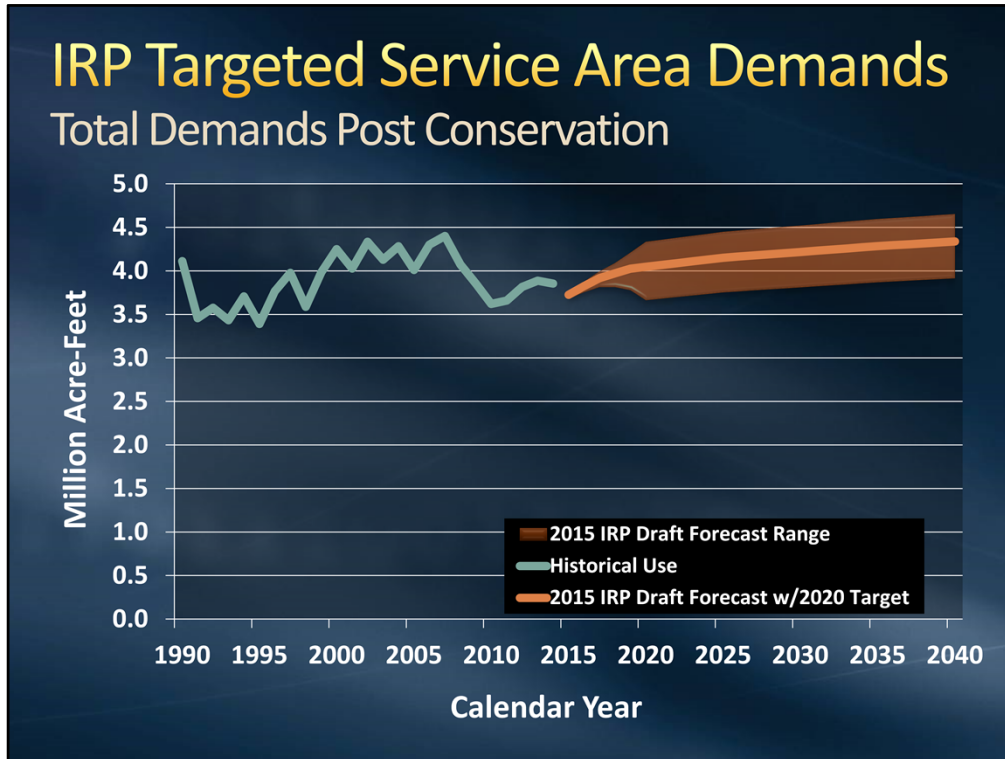
2010 IRP Forecast: 4.51 MAF

2010 IRP Forecast with 20x2020 Target: 3.92 MAF

2015 IRP Forecast: 3.87 MAF

2015 IRP Forecast with 20x2020 Target: 3.76 MAF

About 600 TAF less demand in 2035



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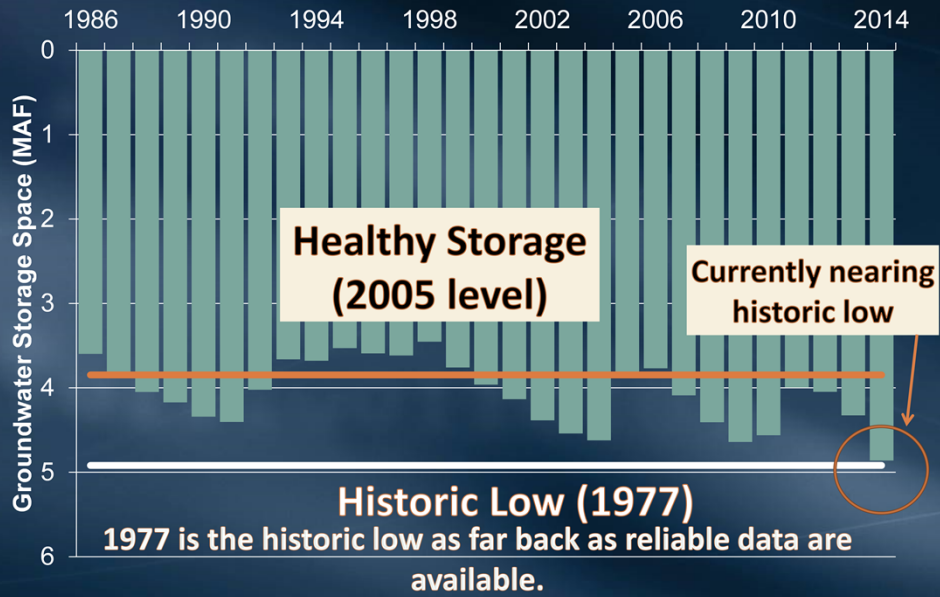
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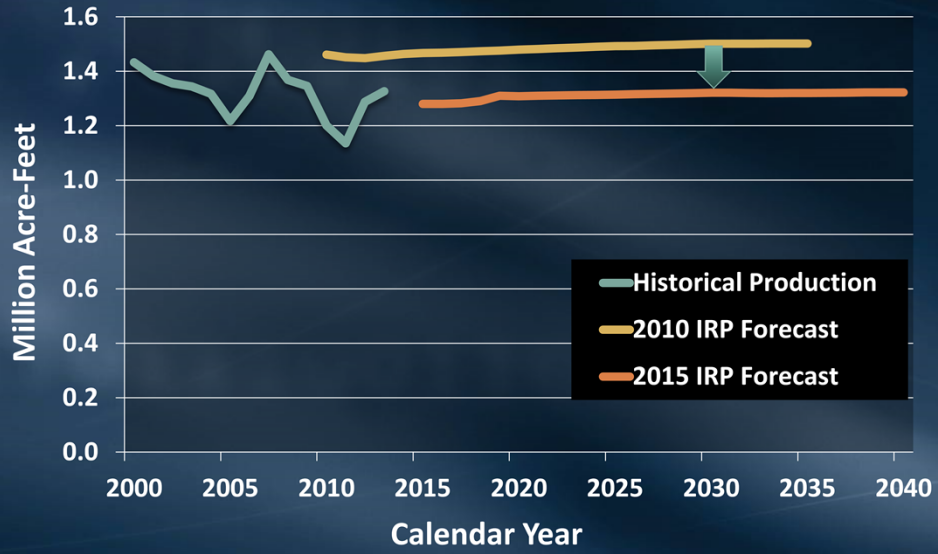
Groundwater Levels Have Declined

- GW levels dropping – levels in some basins are reaching historic lows
- Available GW storage space increased by over 1 MAF in past 10 years
 - 2005 – 3.8 MAF
 - 2014 – 4.9 MAF
- Agencies have reassessed their long-term yield projections
 - Generally lower than before

Storage Space in GW Basins



Agencies Are Projecting Lower Groundwater Production



Imported Supplies Provide An Important Baseline For The Region



Colorado River Aqueduct

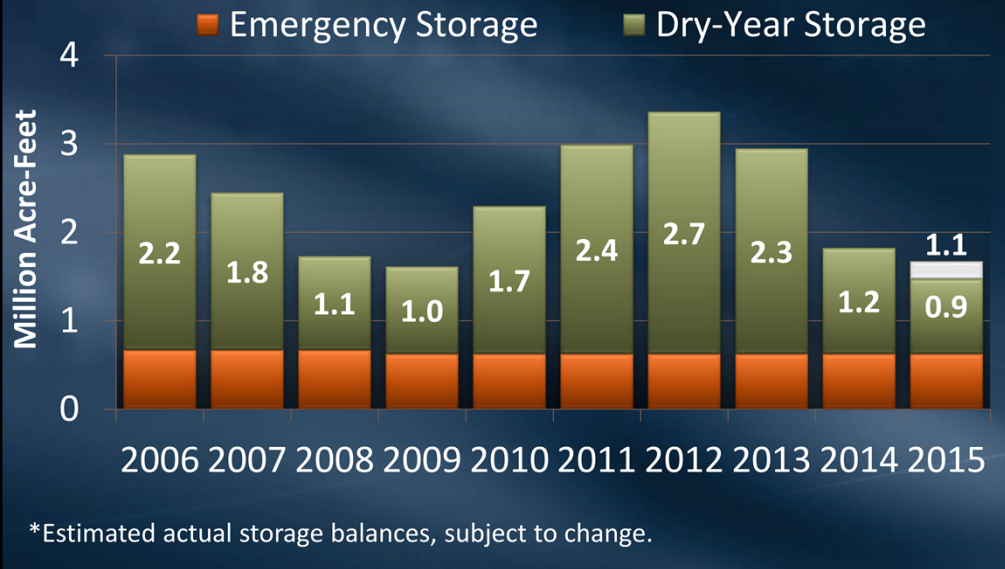
- CRA deliveries being maintained through various programs



State Water Project

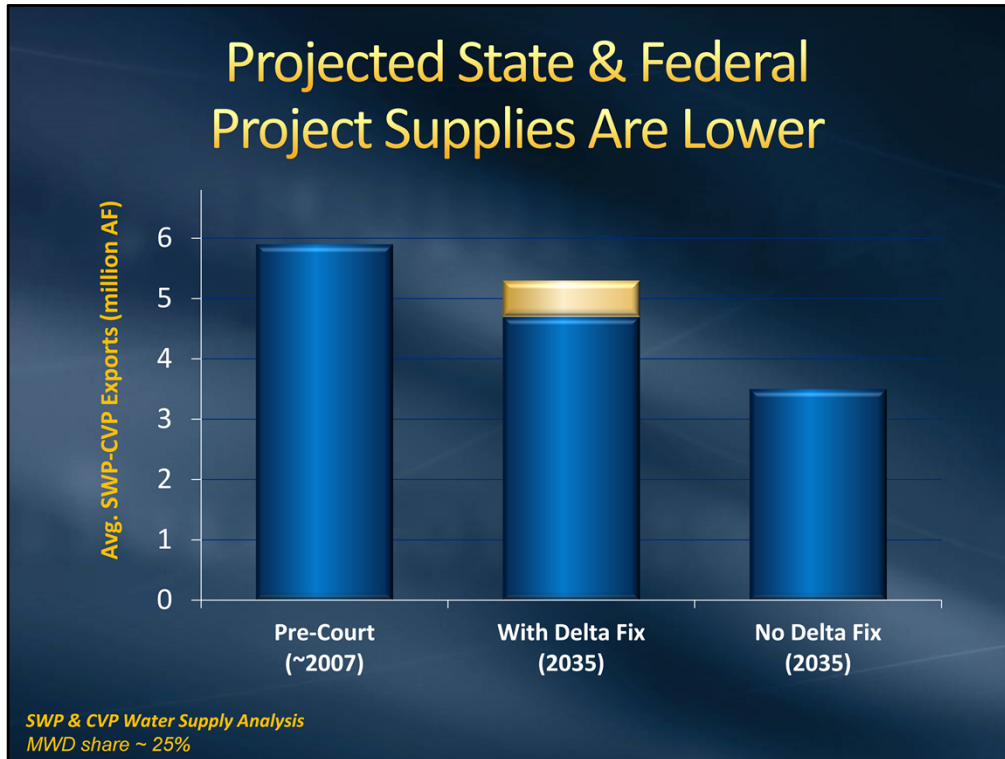
- DWR's projections are lower than before

Capture Wet Year Supplies To Buffer Drought Impacts



Message, we are prepared for a dry year!

2013 ending balance - 2.353 MAF, rounds to 2.4 MAF



SWP/CVP Supply Range

- Pre-Court -- 5.9 million af
- With BDCP – 4.7 to 5.3 maf
- No BDCP – 3.9 to 3.2 maf
- Earthquake -- 0 to 1.5 maf

Status Quo

- Ecosystem decline
- Pumping restrictions (supply reduced 30%)

Major Levee Failure

- Up to three-year disruption of water deliveries
- \$40 billion estimated impact to California's economy

Summary Of Major Changes (2035)

- All data is being updated, but trends are emerging
 - Lower demands/conservation: + ~120 TAF
 - Lower groundwater yield: - ~200 TAF
 - Lower SWP yield: - ~400 TAF
- Figures are under average conditions, but give a sense of general impact
- Additional factors are also being accounted for

There Are Also Additional Risks

- Climate change and increased weather variability
- Water quality impacts to supplies
- Implementation risks and delays
- More aggressive demographic/economic growth

An Adaptive Approach Will Continue

- Continue to focus on diversity in supplies
- Maintaining stable imported supplies will be of critical importance
- Changed conditions point to increased focus on In-Region supplies including water use efficiency
- A supply buffer continues to be important
- May also consider storage threshold as a way to ensure the region can withstand a certain amount of uncertainty
 - Set regional targets not just to avoid shortage, but to maintain certain levels of storage

Message: with risks and resource constraints, effort needed on more local supply and conservation going forward

2015 IRP Process Split Into Two Parts

- Phase 1: Technical update
 - Develop regional targets to support long-term reliability
- Phase 2: Resource Implementation Policies
 - How might we achieve the targets?
 - Local and regional responsibilities
- Both efforts have extensive interaction with Metropolitan's Board through the IRP Committee

Staff is proposing that IRP Update be completed in a two phase process

The first phase will be a Technical Update of the IRP

- This effort would largely involve metropolitan staff and member agencies
- I will show you a proposed schedule at the end of the presentation

The second phase of the update would begin following completion of the Technical Update

- This effort would largely be a board process to discuss policy issues
- And would be fed by discussions raised in the technical process

Both phases will have extensive interaction through the IRP subcommittee

- ???

Phase 1: IRP Technical Update Process and Schedule

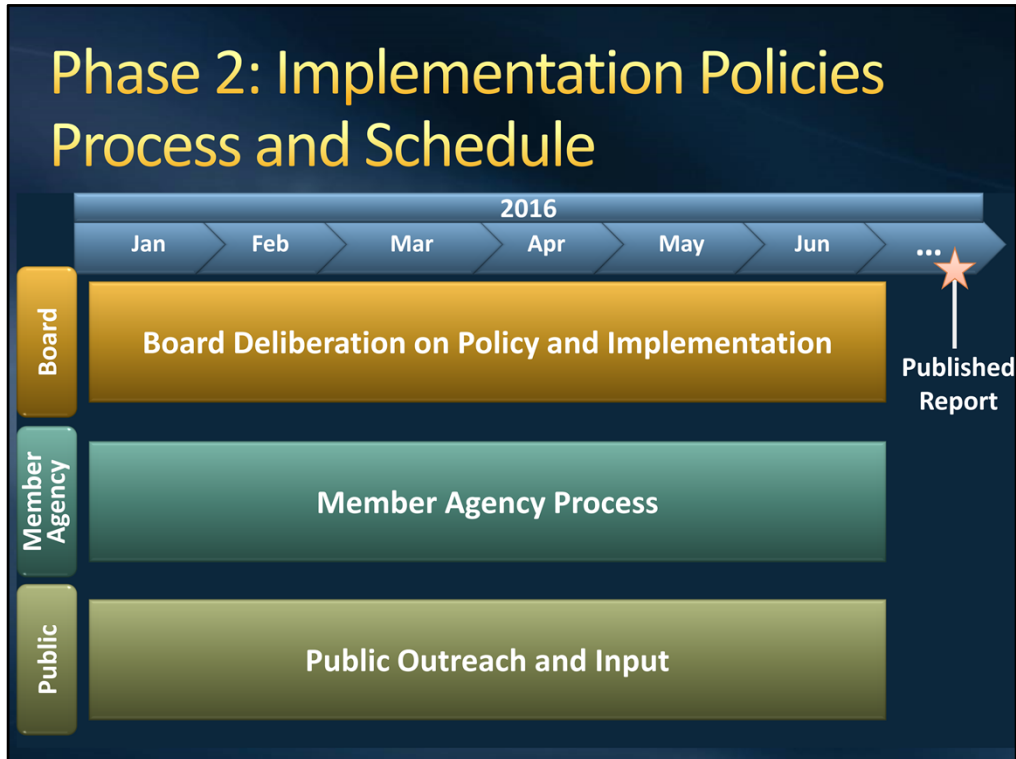


Internal Process –
Ongoing

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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Following slides breakdown activities at Board and MA levels

Summary

- Changed conditions and risks since 2010
 - Adaptive approach is important to deal with constantly changing conditions
 - Diversity of supply continues to be important
 - Must continue to maintain imported supplies
 - Increasing focus on in-region supplies and efficiency
- 2015 IRP Process is in two phases
 - Phase 1: IRP Technical Update
 - Phase 2: IRP Implementation Policies

