



Draft Retrospective Review of 2015 Integrated Resources Plan

Integrated Resources Plan Special Committee
Item 6a

December 15, 2020

Purpose of Draft Retrospective

- Review planning assumptions in 2015 IRP Update and compare to recent observations
 - **Presentation to IRP Committee in June 2020**
- Examine planning assumptions in context of other recent studies
- Offer lessons learned
- Seek member agency and Board input

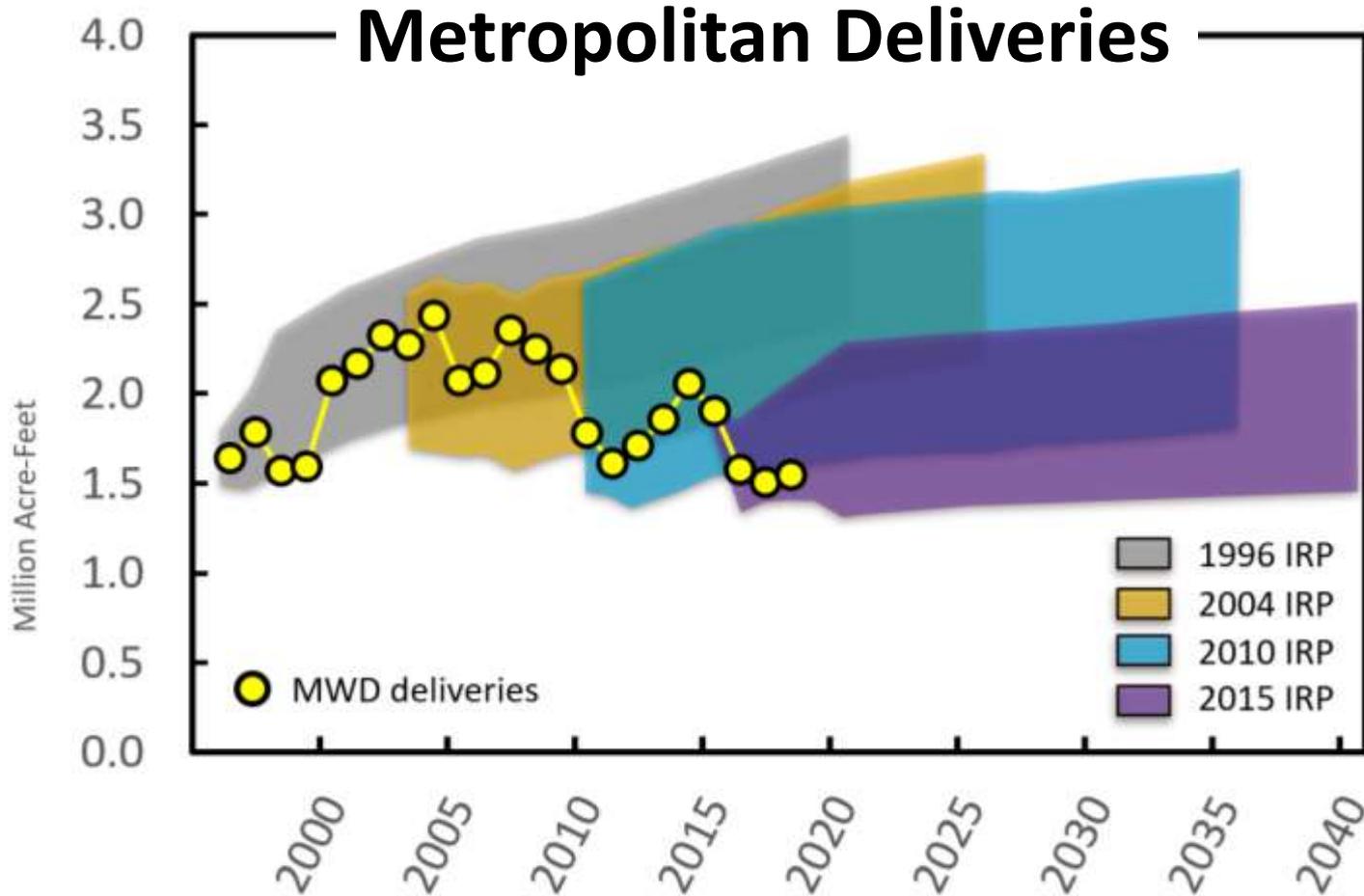
2015 IRP Goals in Two Main Areas

- Reducing demand for imported deliveries
 - Conservation targets
 - Local supply targets
- Improving availability of imported supplies
 - State Water Project targets
 - Colorado River Aqueduct targets

Five Years of Changing Conditions

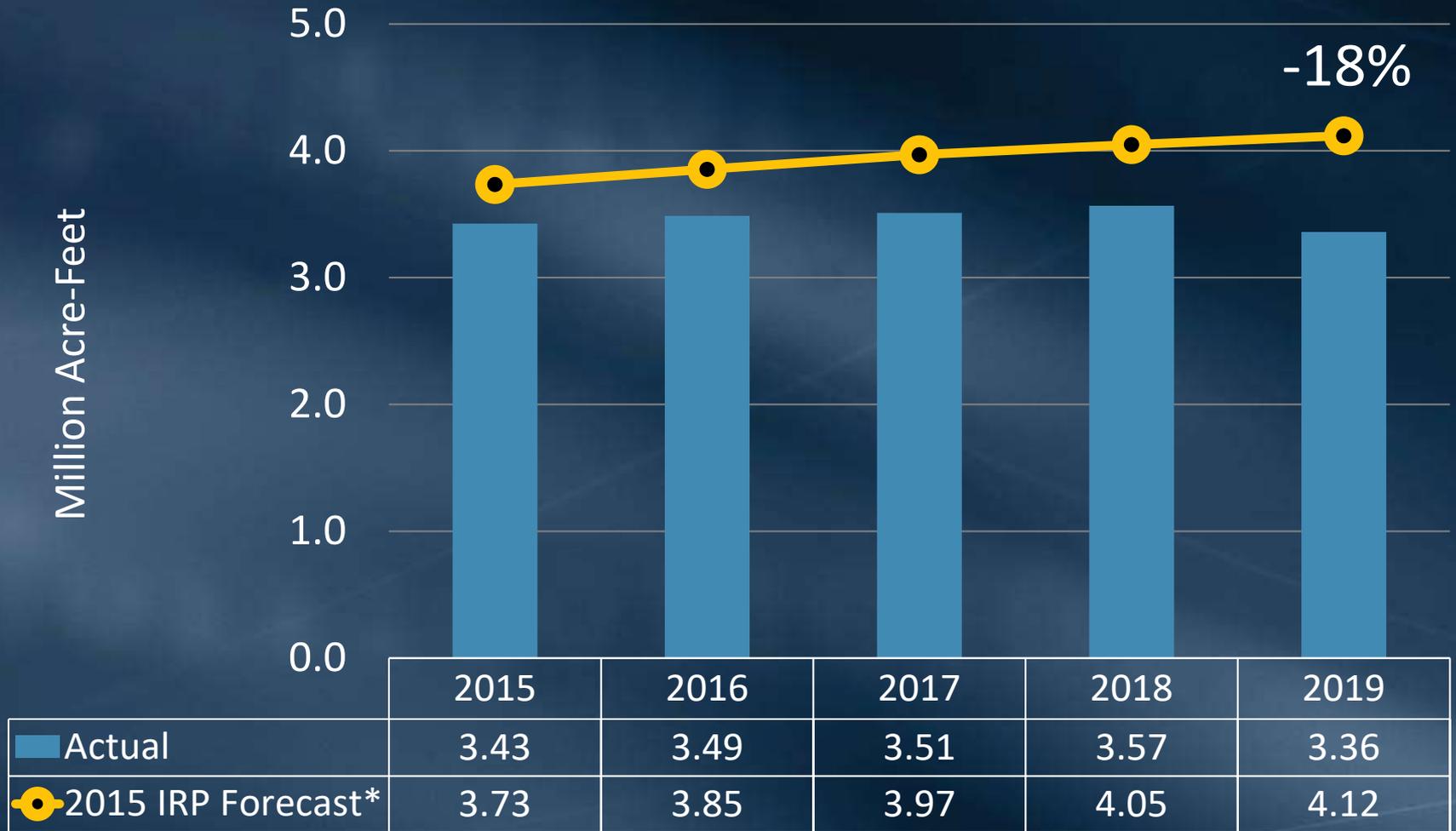
- 2015 IRP Update compiled while California experienced once-per-millennium drought
 - Statewide emergency declarations
 - Mandatory urban conservation
 - Depleted storage
 - Large initiatives to change water use behavior
- Swing from extreme drought to record runoff
- Regulatory actions on constituents of emerging concern in groundwater

2015 IRP Updated Forecasts



Total Retail Demand

2015 IRP Forecast vs. Actual



* Adjusted for hydrologic conditions

What Drives the Gap in Conserved Water?

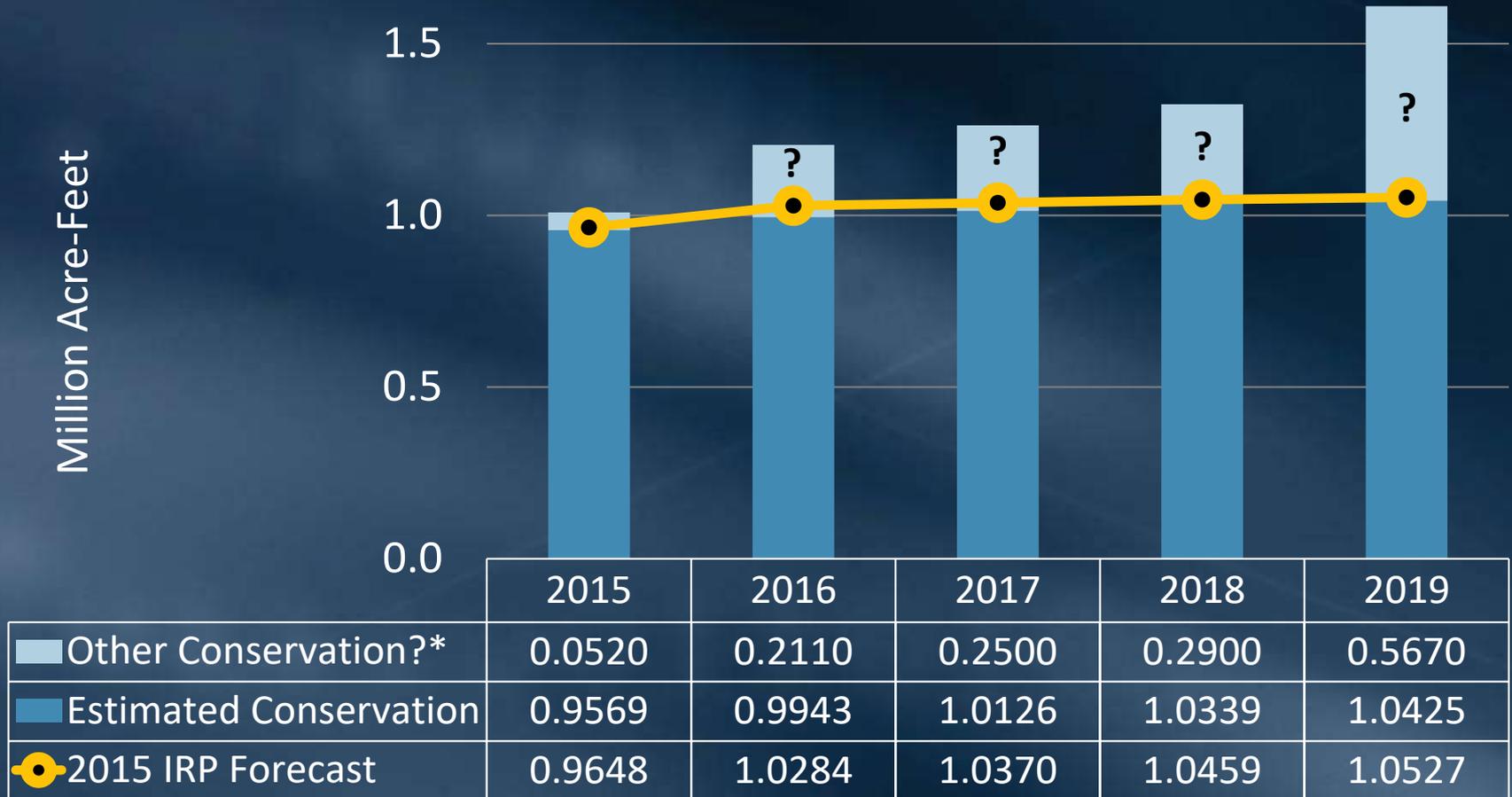
- Conserved Water estimates include
 - Active (incentivized)
 - Code-based (plumbing, building, MWELO)
 - Price-effect
 - Pre-1990
- Other behavioral effect or watering restrictions not accounted for in model
- Metropolitan actively pursues behavioral change

Metropolitan Actions Help Drive Water Use Behavior

- Turf removal program
 - Active savings from converted lawns
 - Halo effect of non-incentivized conversions
 - Study showed 132 conversions for every 100 incentivized projects
- 365 Save Water Every Day campaign
 - Radio, digital advertising, 1,500 billboards
 - 1 billion impressions on social media in FY 2018-2019

Conserved Water Estimate

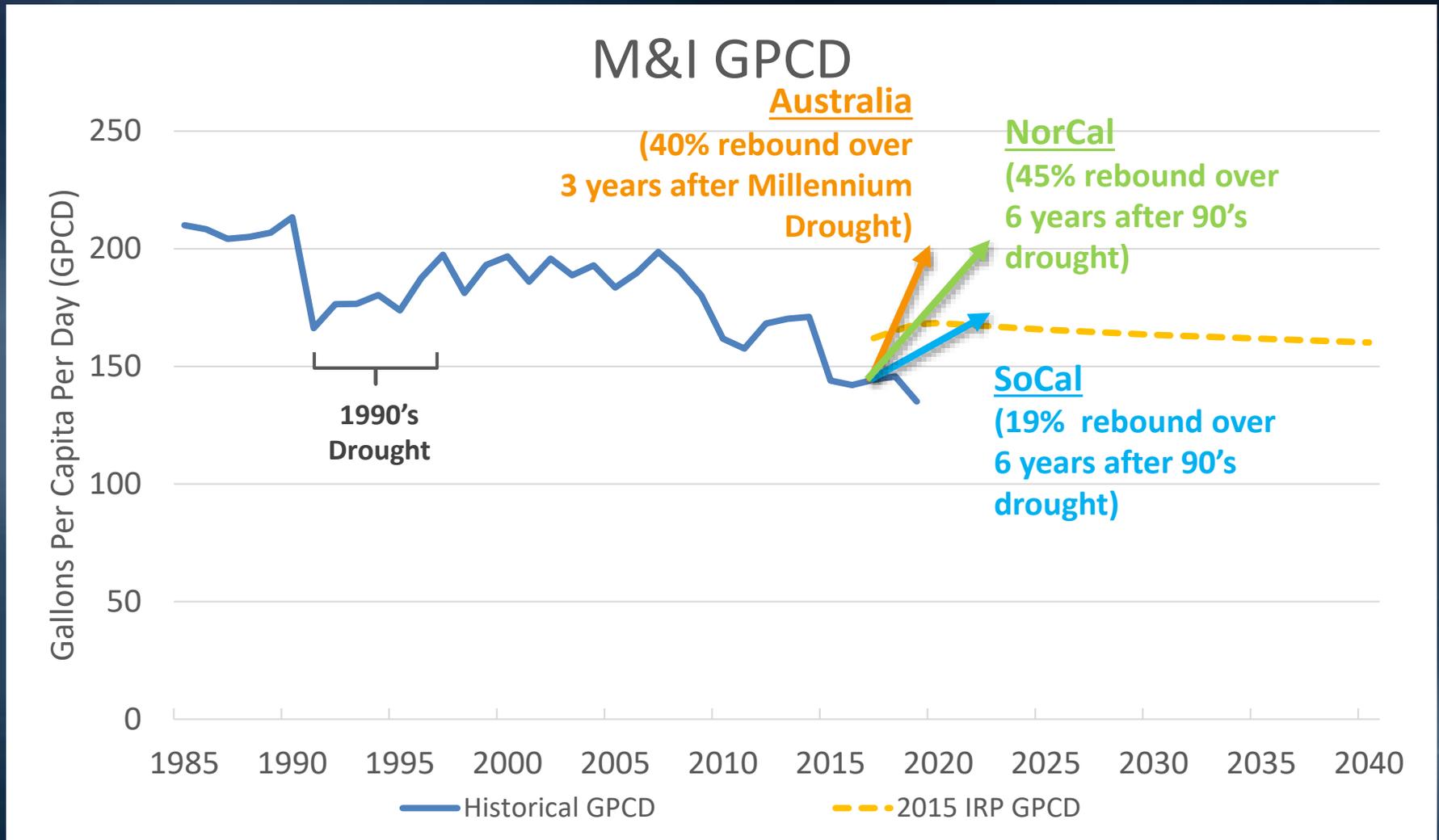
2015 IRP Forecast vs. Actual



*Other conservation calculated using difference in actual and forecast per-capita use

Retrospective Report

Analysis of Rebound

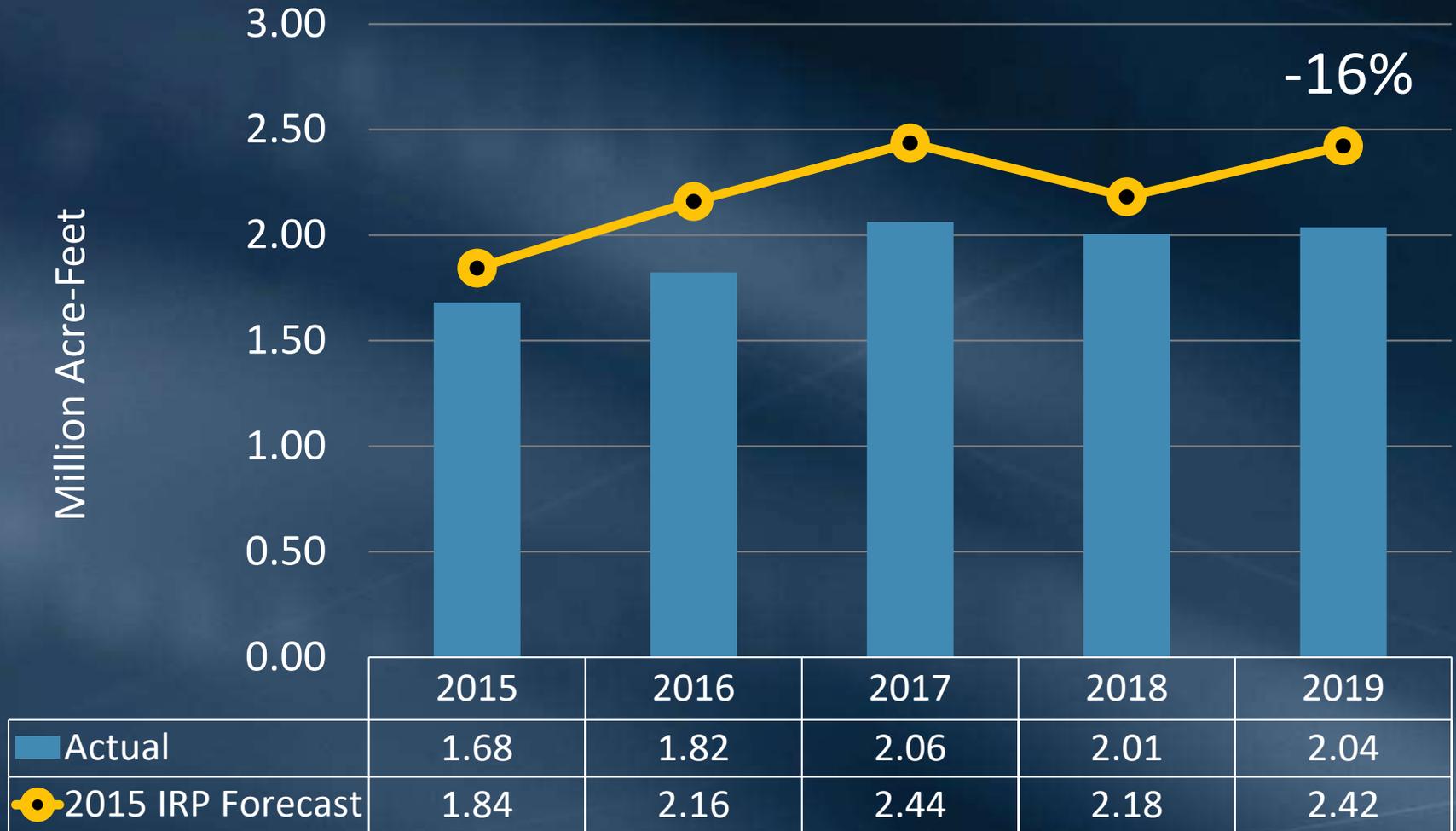


New Studies Focus on Widespread Water-Use Declines

- Studies followed 2015 IRP Update
 - Focus on behavioral factors and “drought saliency”
- Studies express uncertainty about rebound
 - “Even though it may be easy for a community to cut back on water use during drought, it is also easy for them to return to high pre-drought water demand simply by returning to old habits in the absence of effective social and institutional interventions” (Gonzales and Ajami, 2017)

Total Local Supply

2015 IRP Forecast vs. Actual



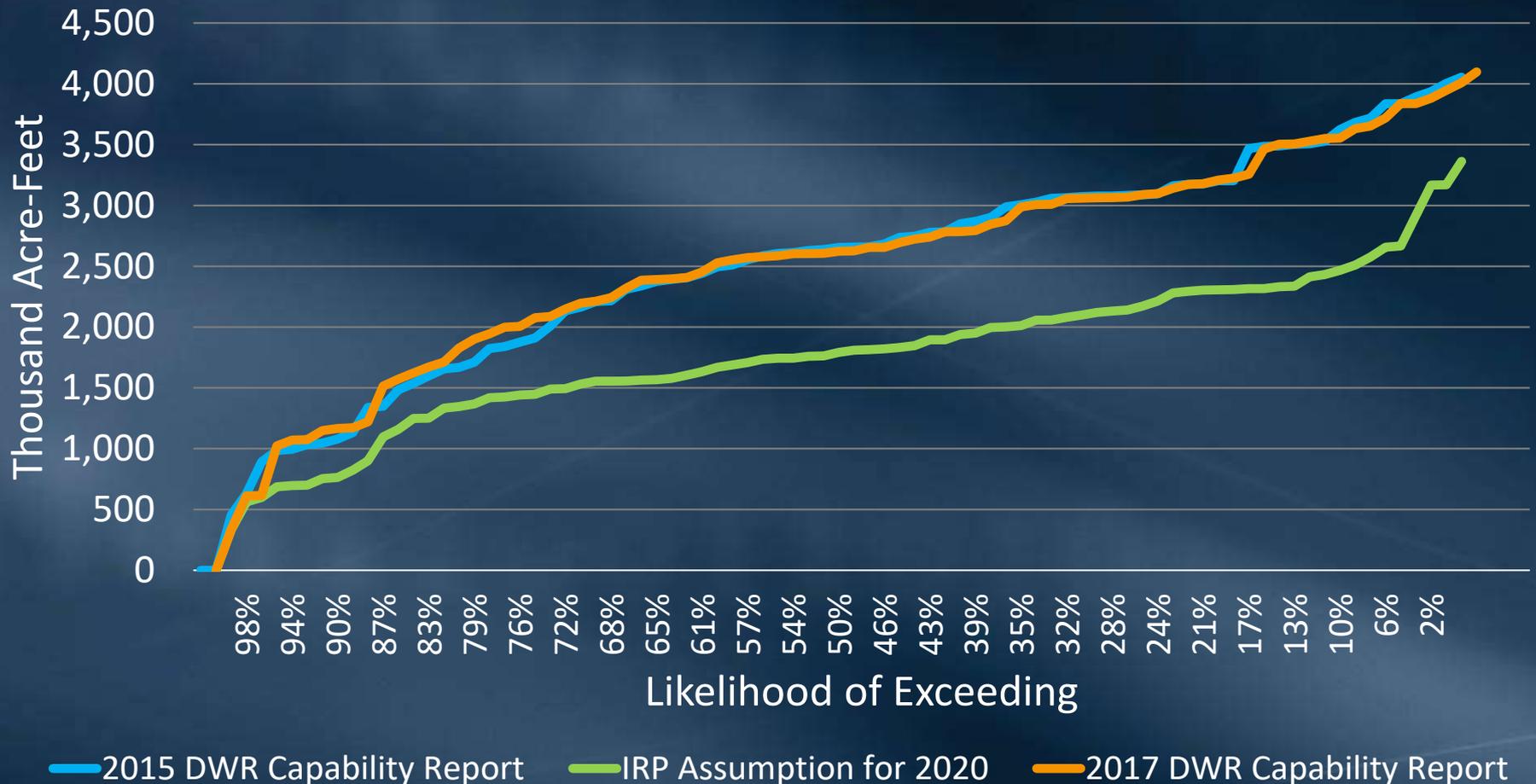
* Adjusted for hydrologic conditions

Metropolitan Actions Help Support Local Supplies

- Since adoption of 2015 IRP Update, Metropolitan Board approved 16 Local Resource Program projects with combined yield of 88,172 AF/year
- Metropolitan Board increased LRP production target goal in Oct. 2018 to 170,000 AF/year
- Four LRP applications under review with a total yield of 43,500 AF/year

State Water Project Reliability

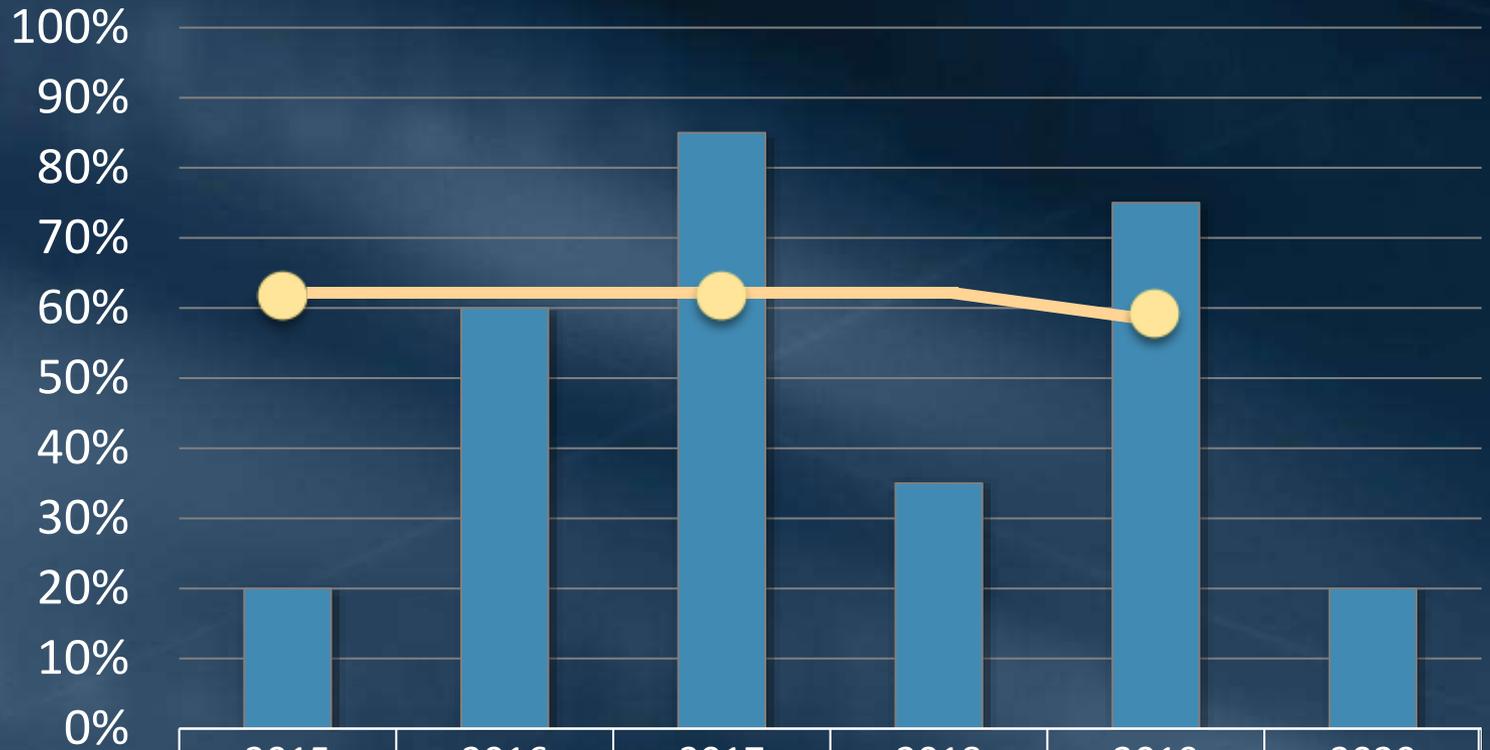
Total Project Table A



State Water Project Supply

Capability Report vs. Actual

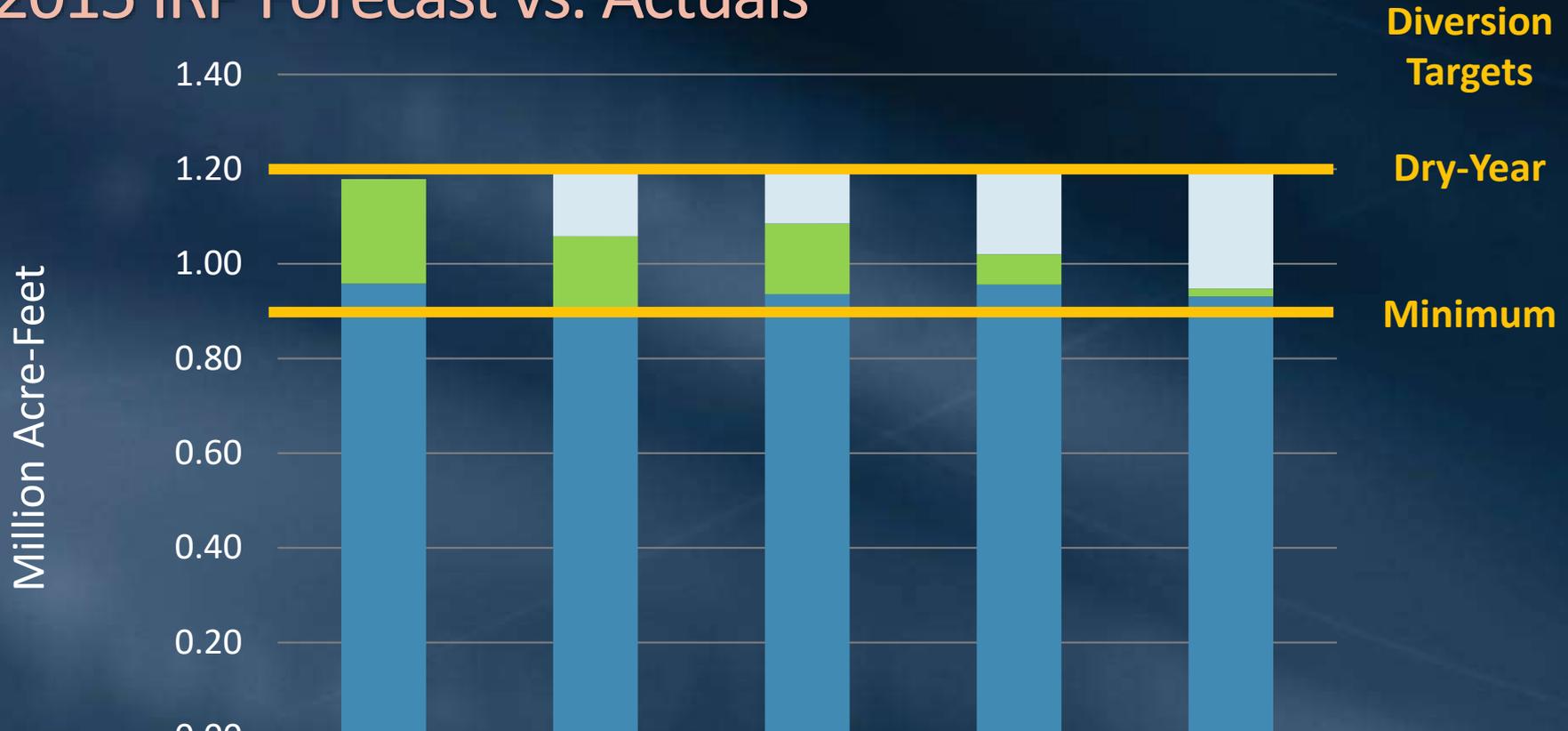
Table A Allocation



	2015	2016	2017	2018	2019	2020
Actual Table A Allocation	20%	60%	85%	35%	75%	20%
DWR Average Supply Capability	62%		62%		58%	

Colorado River Aqueduct Supply

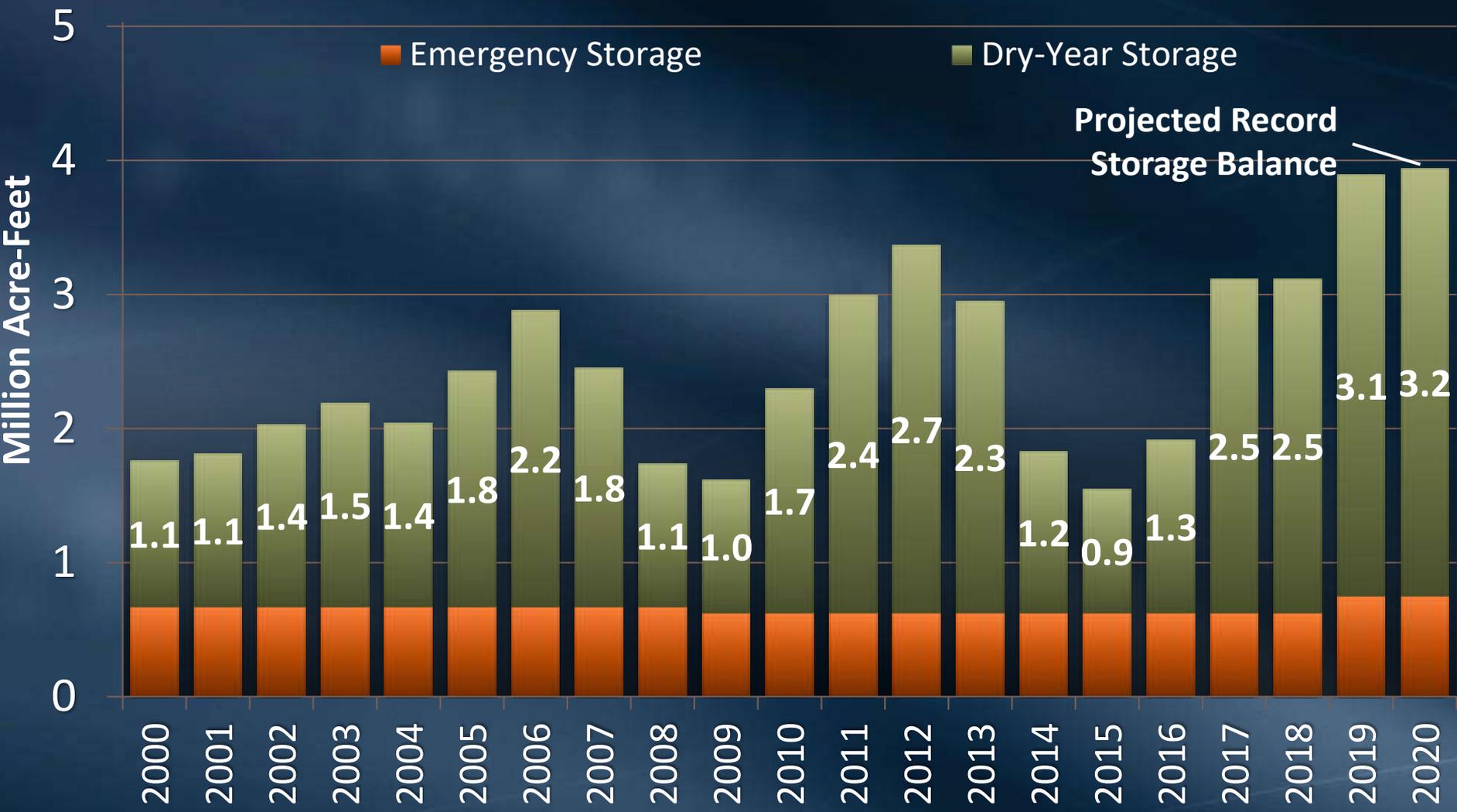
2015 IRP Forecast vs. Actuals



AF (1000s)	2015	2016	2017	2018	2019
Available Flexible	0	142	115	180	252
Flexible Supply	221	150	149	64	17
Core Supplies	958	908	936	956	931

Projected Metropolitan Storage Balances

End of Year Balances



Lessons Learned

- Severe drought and behavioral change persistently suppressed per-capita water demand
- Regional investments helped local supplies hold steady
- Prior investments accelerated recovery from severe drought
- Risks remain and scenario planning offers useful tool to examine risks

Summary

- Metropolitan's near-term reliability is high; long-term outlook remains less certain
- Goals since 2015 IRP Update met or exceeded
 - Colorado River
 - State Water Project (Delta conveyance benefits are delayed)
 - Conservation

Summary (cont.)

- Local supply production has increased, but remains below target
 - **More than offset by successes in other areas**

Next Steps

- Receive comments from Board and Member Agencies on retrospective report
 - Comments requested by December 29, 2020
- Incorporate changes into final version to be filed with Board

