Status of Metropolitan’s Surface & Groundwater Storage Activities

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Agenda

- Managing Metropolitan supplies
  - Supply
  - Demand
  - Constraints
- Local supply conditions
  - Stormwater
  - Groundwater
2017 Supply Demand Balances
85% SWP Allocation

Million Acre-Feet

- 0.12 Art 21
- 2.75 MAF Estimated Supplies
- 1.48 MAF Current Demand Trend

T/E 0.12
Art 21 2.75
MAF
Metropolitan is Forecasting an Increase in Storage Reserves this Year

End of Year Balances

- Emergency Storage
- Dry-Year Storage
- 2017 Projected Available Supplies

~ 1.27 MAF
Supplies Exceed Demands

Management actions not yet secured
2017 Storage Projections

- **Groundwater**: 359 TAF (157 TAF) + 202 TAF
- **Flex**: 154 TAF (65 TAF) + 89 TAF
- **DVL**: 566 TAF
- **CUP/Cyclic**: 214 TAF (102 TAF) + 110 TAF
- **MEAD ICS**: 214 TAF (186 TAF) + 28 TAF
- **Carryover**: 32 TAF (168 TAF) + 154 TAF + 157 TAF

- **1.3 MAF**: Start of calendar year 2017 storage
- **0.9 MAF**: 2017 projected storage

1 Includes Lakes Mathews and Skinner storage and emergency storage adjustment

Not drawn to scale
Water Management Challenges in 2017

Supplies Increasing
- High SWP Allocation
- Article 21 supplies
- Transfers and Exchanges

Demands Decreasing
- Higher than normal local supplies
- Replenishment deliveries currently reduced
Stormwater is a Key Component of the Region’s Diversified Portfolio

The region has been actively capturing and recharging stormwater for more than a century.

Stormwater largely contributes to the region’s groundwater supply.

- Average groundwater production ~ 1.5 MAFY
- Active stormwater capture ~ 440,000 AFY
- Stormwater capture supports 25-30% of the groundwater pumped in the Metropolitan service area.
Rainfall (inches)

Precipitation Declining

1986 through end of June
Stormwater Capture Declining

Long-term Trend

2017 through end of June
Stormwater Capture Rate Increasing

SW Capture Rate (TAFY/inch of rainfall)
Groundwater Storage Improving

Groundwater Levels are ~200 TAF above 2016 levels

Estimated through June 2017
Sources of Recharge

1986 - 2005
- Passive Recharge: 49%
- Stormwater: 22%
- Recycled: 12%
- Imported: 16%
- Unmet Recharge Needs: 1%

2006 - 2016
- Passive Recharge: 48%
- Stormwater: 19%
- Recycled: 15%
- Imported: 11%
- Unmet Recharge Needs: 7%
Summary

Managing Metropolitan supplies
- Unprecedented water supply conditions
- Reduced replenishment deliveries

Groundwater Conditions
- Precipitation and recharge have declined in last 10 years
- Loss in GW storage of 1.2 MAF from 2005-2016. Recovery of ~0.2 MAF as of June 2017