Evaluation of Regional Storage Portfolio
Metropolitan’s Emergency Storage Objective

MWDOC Workshop Meeting
April 3, 2019

Historic Metropolitan Dry-Year and Emergency Storage
Is 630 TAF still right planning level for emergency storage?

- Plans for damage to all imported water aqueducts
- Full evaluation last completed in May 2010
- Update this storage planning level based on:
  - New seismic information
  - Latest planning assumptions (2015 IRP)
  - Changed conditions at local level

Aqueducts cross San Andreas Fault to deliver imported supplies to the region

Susceptible to:
- Fault rupture
- Ground failure
- Shaking damage
We reviewed emergency storage criteria and recommend updates

Outage Period
Retail Demand Reduction
Local Supply Production

Emergency Storage Objective

Outage Period
Period of time imported water aqueducts are out of service

Findings from Seismic Resilience Taskforce
- DWR, LADWP, Metropolitan
- M7.8 ShakeOut scenario
- Vulnerability assessments and estimated restoration timelines

Lessons learned from recent years of drought and supply challenges
Current criteria is 6 months outage for all imported supply aqueducts

New criteria:

- **6 months**: Areas served by CRA and most areas served by East Branch
- **12 months**: Areas served by West Branch and Los Angeles Aqueduct

Effect: Increases emergency storage need if all other factors remain constant

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Current criteria is 25% reduction

- Based on retail demands in IRP
- Update focused on reducing outdoor use

New criteria:

- **25% to 35%** to be reasonable range
Current criteria is 100% local production

- Member agencies to produce local supplies at IRP level

Update considered damage to local facilities and variable duration of repair

New criteria:
- Local production level at **80% to 100%**

**Emergency Storage Capacity**

Existing DWR and Metropolitan surface reservoir

**Conveyance Systems**
- Metropolitan
- State of Calif.
- Los Angeles

- Pyramid Lake
- Elderberry Forebay
- Castaic Lake
- San Andreas Fault
- Lake Mathews
- Lake Perris
- Diamond Valley Lake
- Lake Skinner
What is the status of evaluating new storage planning level?

- White paper drafted and reviewed
- Emergency storage volume is likely to increase
- Continuing discussions of local storage with some member agencies

We updated the emergency criteria

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<tr>
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<th>Current</th>
<th>Draft Recommendation</th>
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<tr>
<td><strong>Outage Period</strong></td>
<td>6 months</td>
<td>6 months: CRA, EB</td>
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<td><strong>Retail demand Cutback</strong></td>
<td>25%</td>
<td>12 months: WB, LAA</td>
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<td><strong>Local Supply Production</strong></td>
<td>100% MAs reported in IRP</td>
<td>Range: 25% to 35%</td>
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<tr>
<td><strong>Emergency Storage Capacity in Existing Reservoirs</strong></td>
<td>DWR and Metropolitan surface reservoir</td>
<td>Range: 80% to 100%</td>
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<td>Follow-up: Spatial and System Analysis</td>
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<td>Periodic Update of Emergency Storage</td>
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Next Steps

- Emergency Storage Objective
  - Board Information in May 2019
  - White paper documents the updated emergency criteria and storage objective

- Review dry-year storage
  - Spatial and distribution system analyses
  - Evaluation of existing Metropolitan storage programs