



moulton niguel water district

NOTICE AND CALL OF SPECIAL MEETING OF THE BOARD OF DIRECTORS

MOULTON NIGUEL WATER DISTRICT

26880 Aliso Viejo Pkwy, Suite 150, Aliso Viejo

September 29, 2020

6:00 PM

Approximate Meeting Time: 2 Hours

IN AN EFFORT TO PREVENT THE SPREAD OF COVID-19 (CORONAVIRUS), AND IN ACCORDANCE WITH THE GOVERNOR'S EXECUTIVE ORDER N-29-20, THERE WILL BE NO PUBLIC LOCATION FOR THE PUBLIC TO ATTEND THIS BOARD MEETING IN PERSON. MEMBERS OF THE PUBLIC MAY LISTEN AND PROVIDE PUBLIC COMMENT TELEPHONICALLY BY CALLING THE FOLLOWING NUMBER:

DIAL: 1-669-900-9128

MEETING ID: 942-941-7034#

PASSCODE: 26161#

NOTICE IS HEREBY GIVEN that a Special Meeting of the Board of Directors of the Moulton Niguel Water District ("MNWD") has been called by the Chairman of the Board of Directors to be held on September 29, 2020, at 6:00 PM. The following business will be transacted and is the Agenda for this Special Meeting:

AGENDA

1. CALL MEETING TO ORDER

2. PLEDGE OF ALLEGIANCE

3. PUBLIC COMMENTS

Persons wishing to address the Board of Directors on matters not listed on the Agenda may do so at this time. "Request To Be Heard" forms are available at the entrance to the Board Room. Comments are limited to five minutes unless further time is granted by the Presiding Officer. Submit form to the Recording Secretary prior to the beginning of the meeting. Those wishing to address the Board of Directors on any item listed on the Agenda should submit a "Request To Be Heard" form to the Recording Secretary before the Presiding Officer announces that agenda item. Your name will be called to speak at that time.

DISCUSSION ITEMS

4. SYSTEM RELIABILITY WORKSHOP

ADJOURNMENT

The Board of Directors' Meeting Room is wheelchair accessible. If you require any special disability related accommodations (i.e., access to an amplified sound system, etc.), please contact the Moulton Niguel Water District Secretary's office at (949) 831-2500 at least forty-eight (48) hours prior to the scheduled meeting. This agenda can be obtained in alternate format upon written request to the Moulton Niguel Water District Secretary at least forty-eight (48) hours prior to the scheduled meeting.

Agenda exhibits and other writings that are disclosable public records distributed to all, or a majority of, the members of the Moulton Niguel Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection at the District Office, 26880 Aliso Viejo Parkway, Suite 150, Aliso Viejo, CA ("District Office"). If such writings are distributed to members of the Board less than twenty-four (24) hours prior to the meeting, they will be available in the reception area of the District Office at the same time as they are distributed except that, if such writings are distributed immediately prior to, or during the meeting, they will be available in the Board meeting room and on the District website at www.mnwd.com.

The foregoing Notice was personally delivered, faxed, mailed or e-mailed to each member of the MNWD Board of Directors at least twenty-four (24) hours prior to the scheduled time of the Special Meeting so noticed above; and posted twenty-four (24) hours prior to the time of the Special Meeting at the usual agenda posting location of MNWD (bulletin board outside main office entrance).



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System Reliability Workshop

Special Board Meeting
September 29, 2020

Presentation Overview

- Water Reliability Policy (2008)
- Policy Topics
- Define System Reliability vs. Supply Reliability
- Overview of State, Regional and Local Water System
- Seismic Risk and Resilience
- Seismic Upgrades (Diemer WTP)
- System Reliability Scenarios
- Supply Options and Considerations
- Proposed Policy Recommendations

MNWD's Water Reliability Policy Updates

- MNWD Resolution No. 08-38, Adopted November 13, 2008
 - Outlined Goal for System Reliability
- Purpose of Policy Update
 - Reflect updated seismic studies
 - Reflect MWD potential system outages
 - Further water reliability and resiliency
- Provide framework for staff to evaluate projects for Board consideration



Policy Topics

- What level of water supply reliability should MNWD target for the District?
 - Decide on days of system reliability
 - Decide on the role of demand curtailment, at what level and frequency



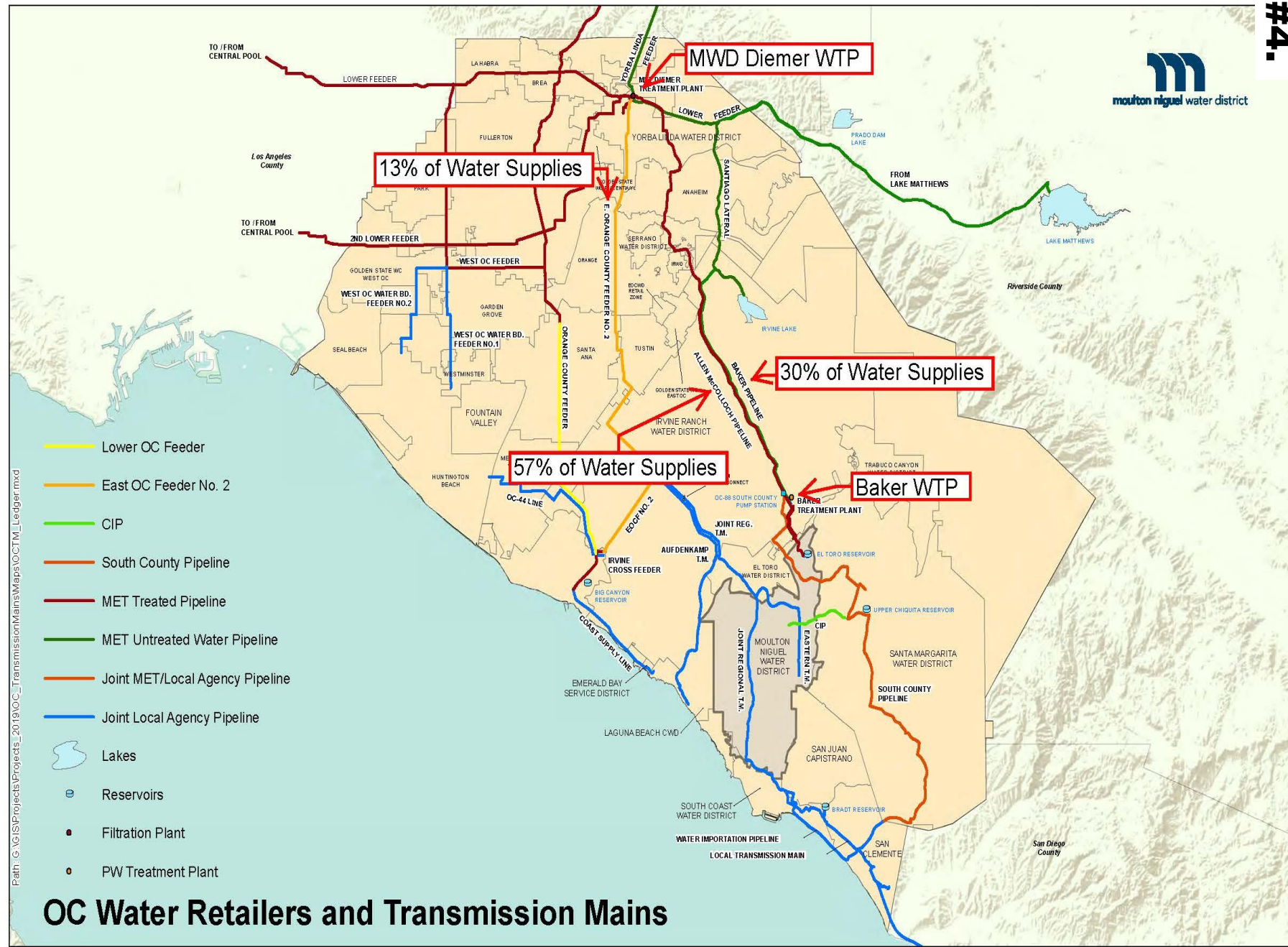
Water System Reliability

- **System Reliability** - Ability to meet customer demands during unplanned emergency outages (e.g., **seismic events, facility failures, and other catastrophic events**) of key facilities (e.g., Diemer Water Treatment Plant)
- **Supply Reliability** - Ability to meet demand based on hydrologic variability (e.g., drought and high temperatures) and long-term changes in available imported water supply (e.g., SWP and CRA)



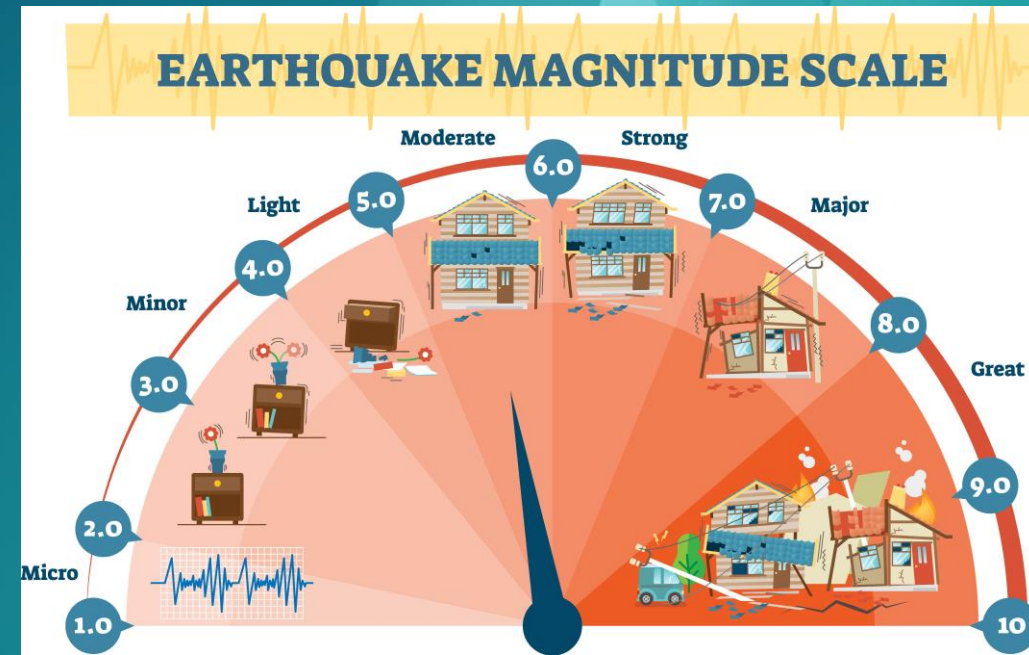


OC Water Retailers and Transmission Lines

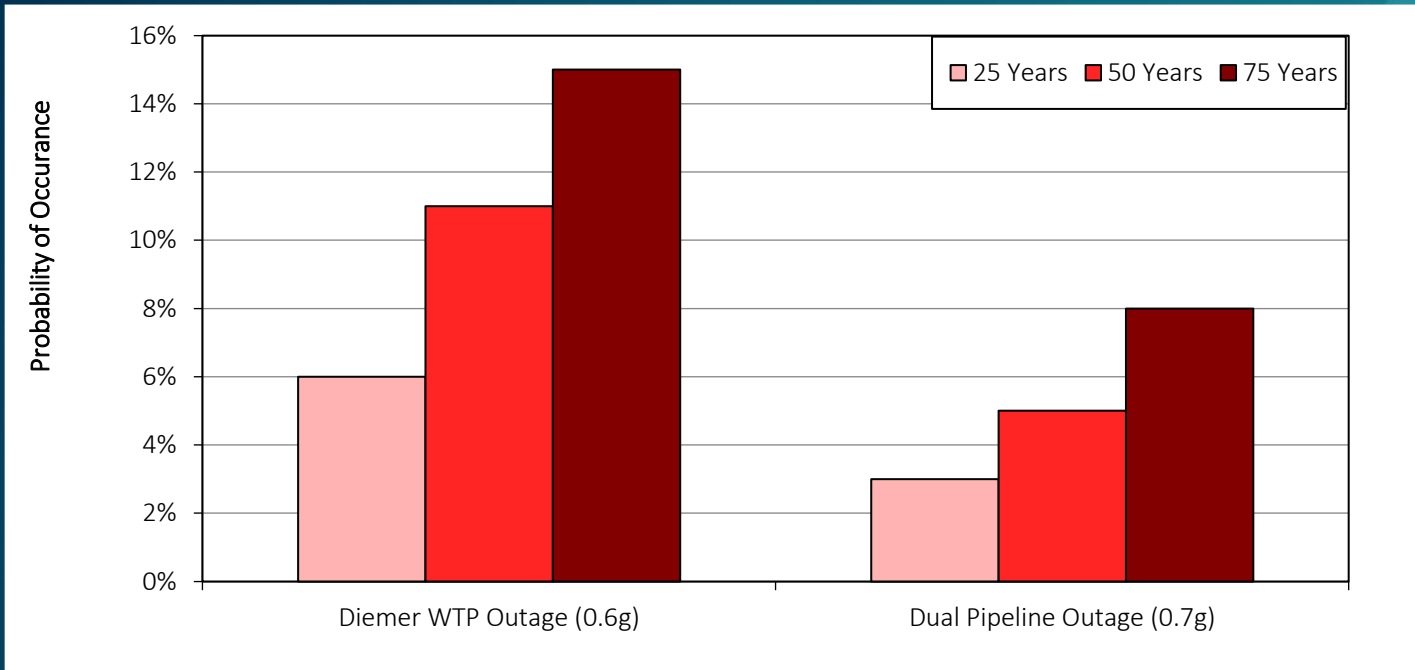


Primary Risk - Seismic

- MWD's 2020 Seismic Resilience Report
- San Andreas Fault – 19% chance for >6.7M earthquake in next 30 years
- Southern California Faults – 93% chance for >6.7M earthquake in the next 30 years
 - 36% chance for >7.5M earthquake in the next 30 years

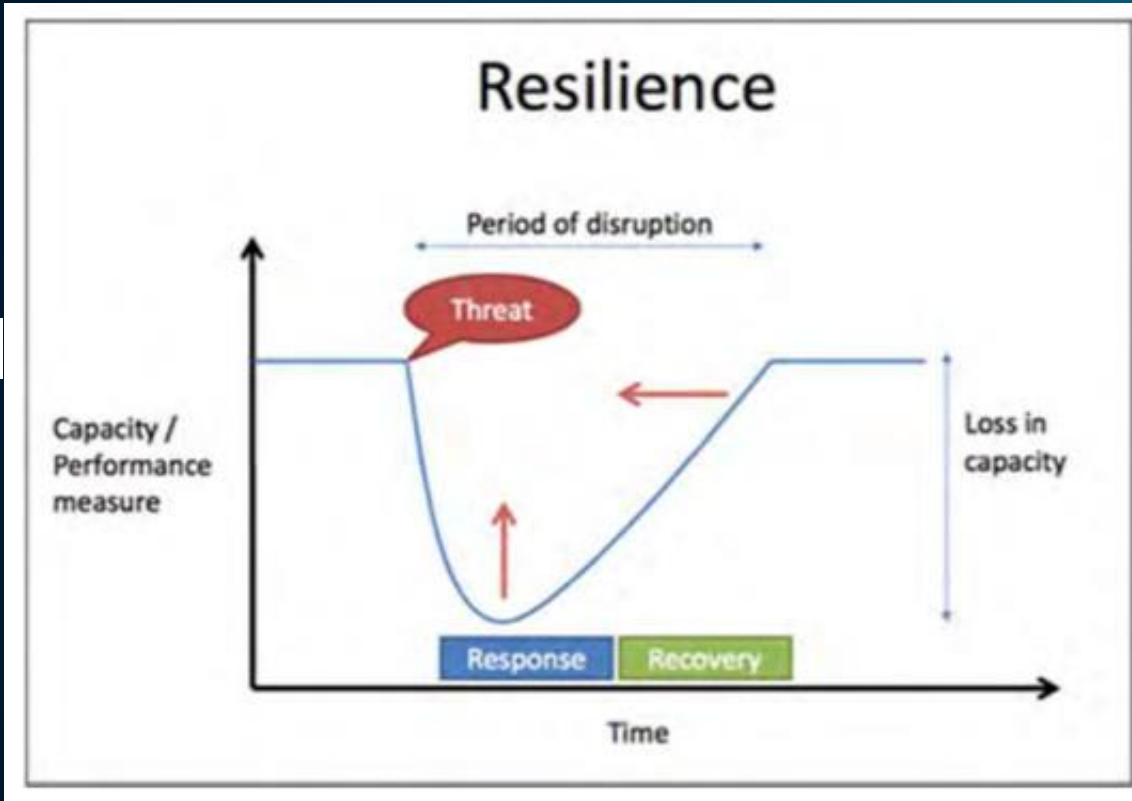


Probability of Facility Outage



Probability of Earthquake Delivering Catastrophic Outage to Key Imported Water Facilities

MWD's Seismic Resilience



- The ability to maintain (or quickly restore) water deliveries following a seismic event.
- Significant progress related to seismic resilience in the last 20 years.
- Seismic resilience strategy evolved over time and benefited from major seismic events around the world.

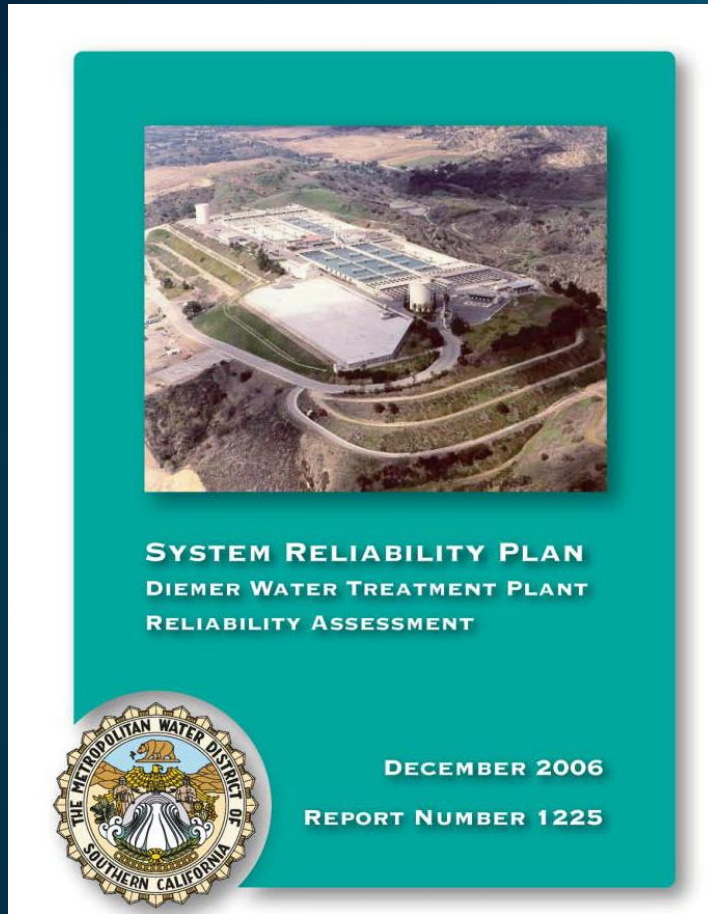
MWD's Emergency Criteria

- Six-month emergency water supply under normal hydrologic conditions
 - 25% retail demand cutback, assuming 30% overall use is outdoor
- Increased emergency storage target to 750,000 ac-ft
- Emergency storage used first, and dry-year storage is used, if necessary and available



Diamond Valley Lake

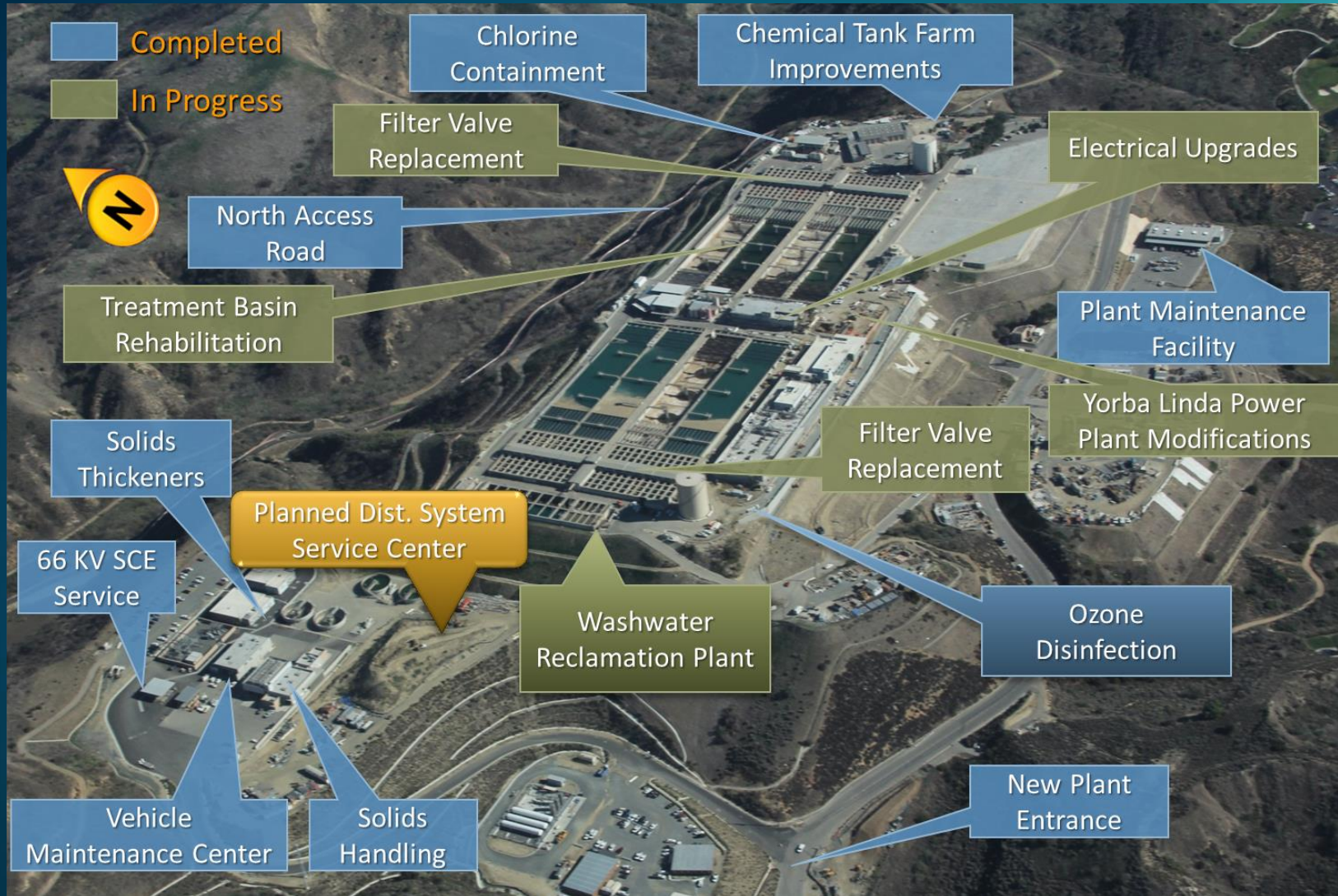
Diemer WTP Vulnerability Assessment



- Evaluate vulnerability to hazards:
 - **Seismic events**
 - Flooding
 - Fire
 - Hydraulic Surge
 - Equipment Failure
 - Vehicle Impact
- Assess impact to facility operation
- Propose mitigation
- Over \$730M invested in Diemer WTP

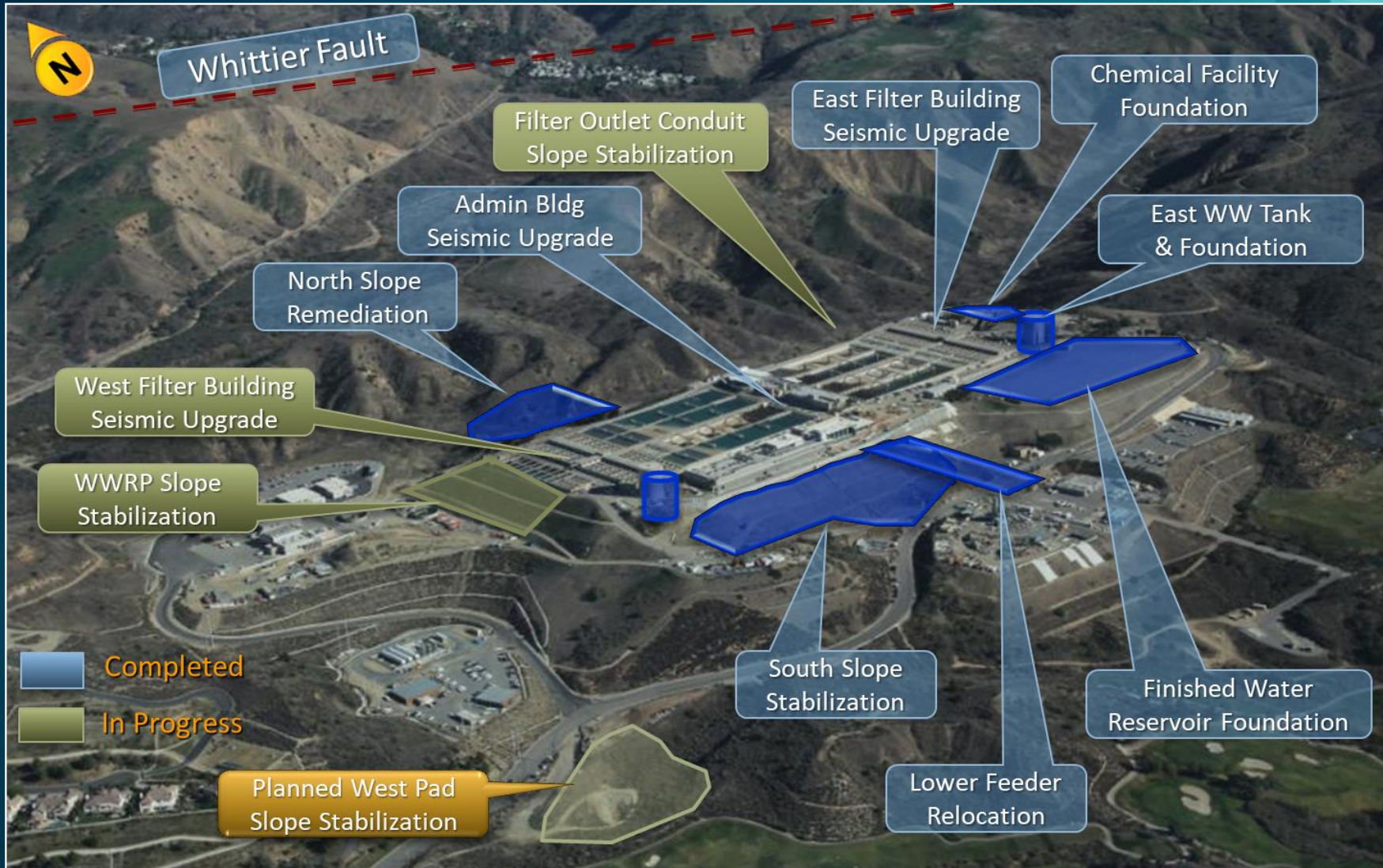
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Diemer Major Rehabilitation, Replacement and Upgrade Projects (Since 2001)



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Diemer Plant Seismic Upgrades



MWD Seismic Risk Outage Scenarios

Regional MWD Facility	Estimated Outage Timeline
Metropolitan – Colorado River Aqueduct	2-6 months
DWR – State Water Project East and West Branches	6-24+ months
Metropolitan – Conveyance and Distribution Pipelines	1 week - 3 months
Metropolitan Treatment Plants (Diemer)	1-2 months (partial flow) Up to 6 months (full capacity)

Source: MWDOC 2018 Reliability Study

60 Days without MWD Supply

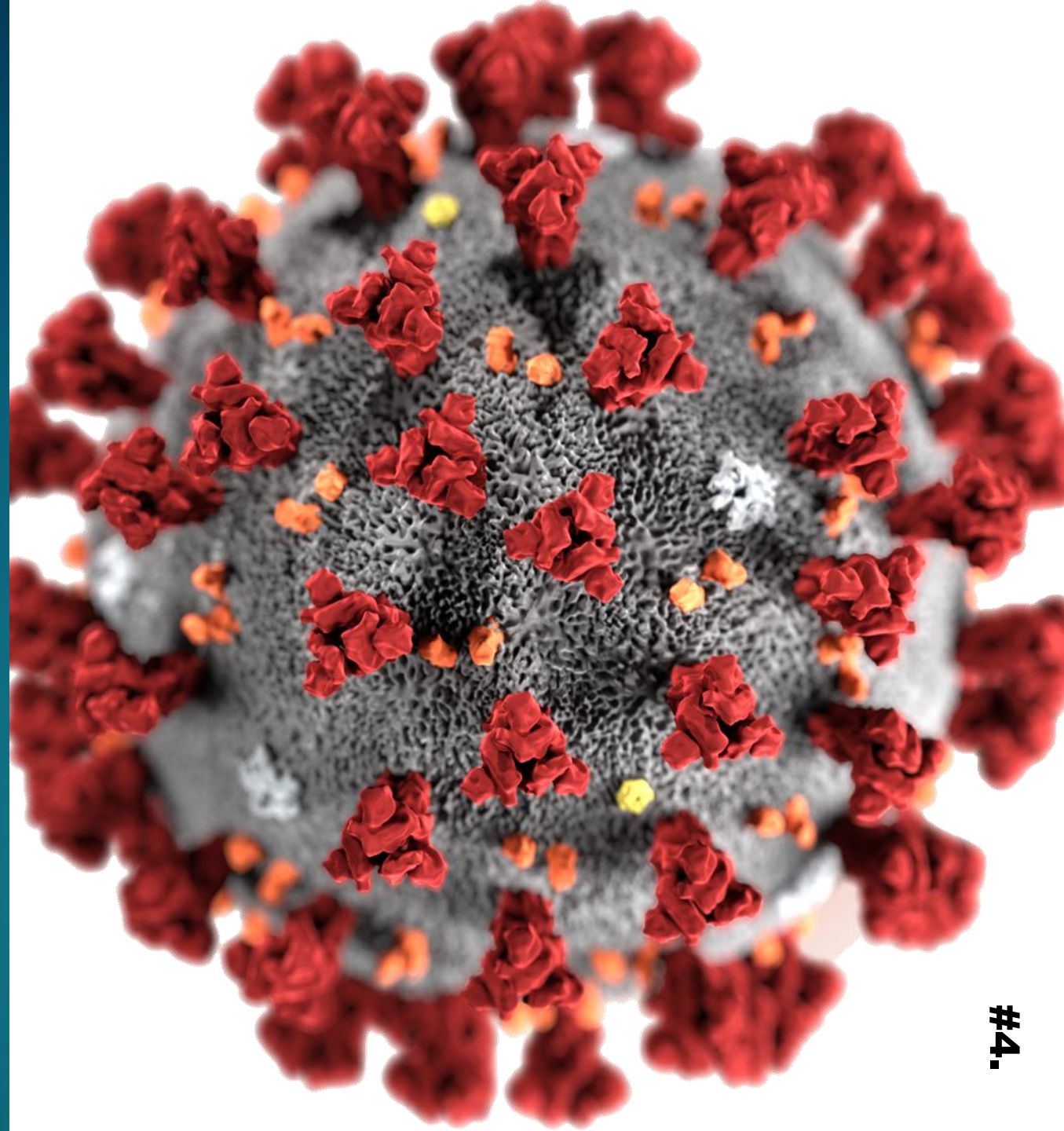
MNWD Points of Vulnerability

- System reliability gaps greatest in summer
- SOC Interconnection ending 2030; no supply in summer
- Unforeseen issues
 - Deferred maintenance due to Covid
 - Local and Regional
 - Greater effects occur later
 - Potentially more down time

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#4.

How Far Have We Come?

- System Reliability improved from average supply of 2 days in 2008 to 30 days in 2019
- Local Capacity Investments
- Demand Management
 - Reduced average supply needed by over 5,000 AF/Year since 2014
- Recycled Water Expansion

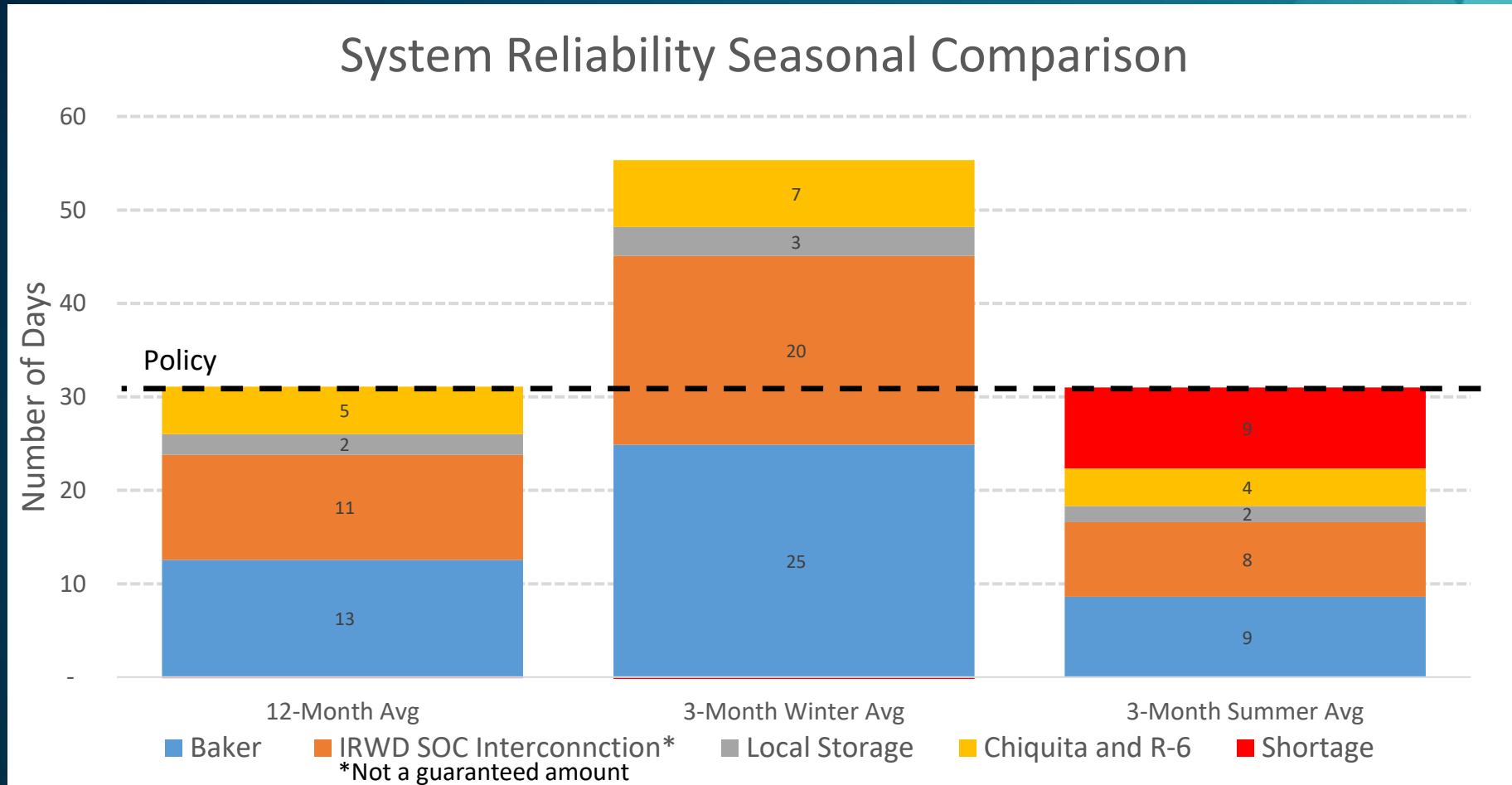
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1967 construction of the uncovered 233-million-gallon R-6 Reservoir enabled the El Toro Water District to store imported water for later use.



Where Are We Now?



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How Much Further Do We Need To Go?



- Provide customers predictability in times of uncertainty
- Foresee need to increase days of system reliability
- Foresee need to plan for system resiliency investment

Policy Recommendations for Board Consideration



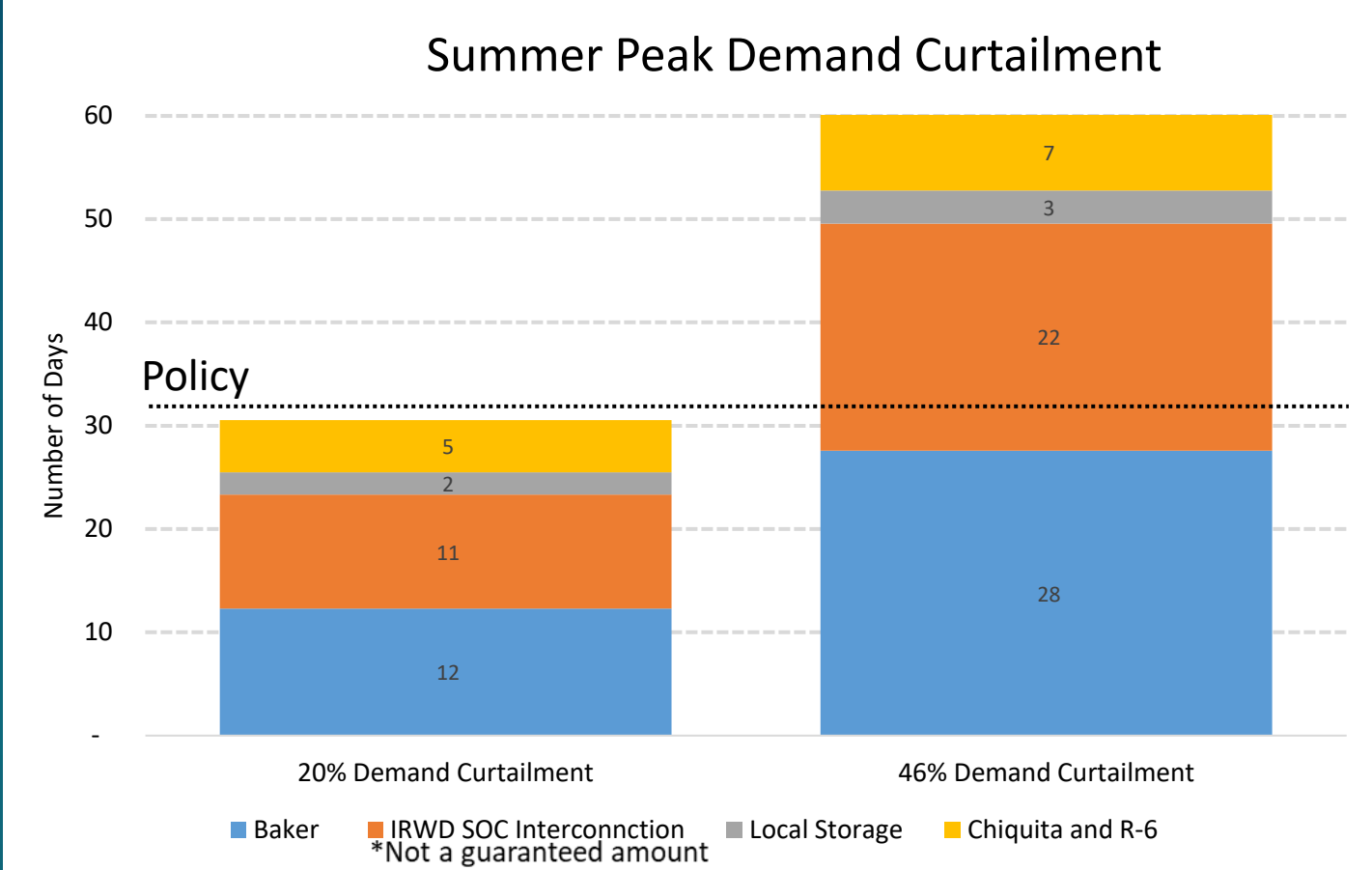
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- Update 31-day annual average to 60-day annual average
- Add statement regarding reducing or eliminating outdoor water use, when required, based on anticipated duration outage
- Add statement reinforcing engagement with MWD, MWDOC and other local water agencies to enhance system reliability

Customer Participation

- Continuous communication with customers
 - Part of solution to reduce cost
- No watering outdoors during emergency event
- AWIA, Communication Plan
 - Emergency Response and Notification

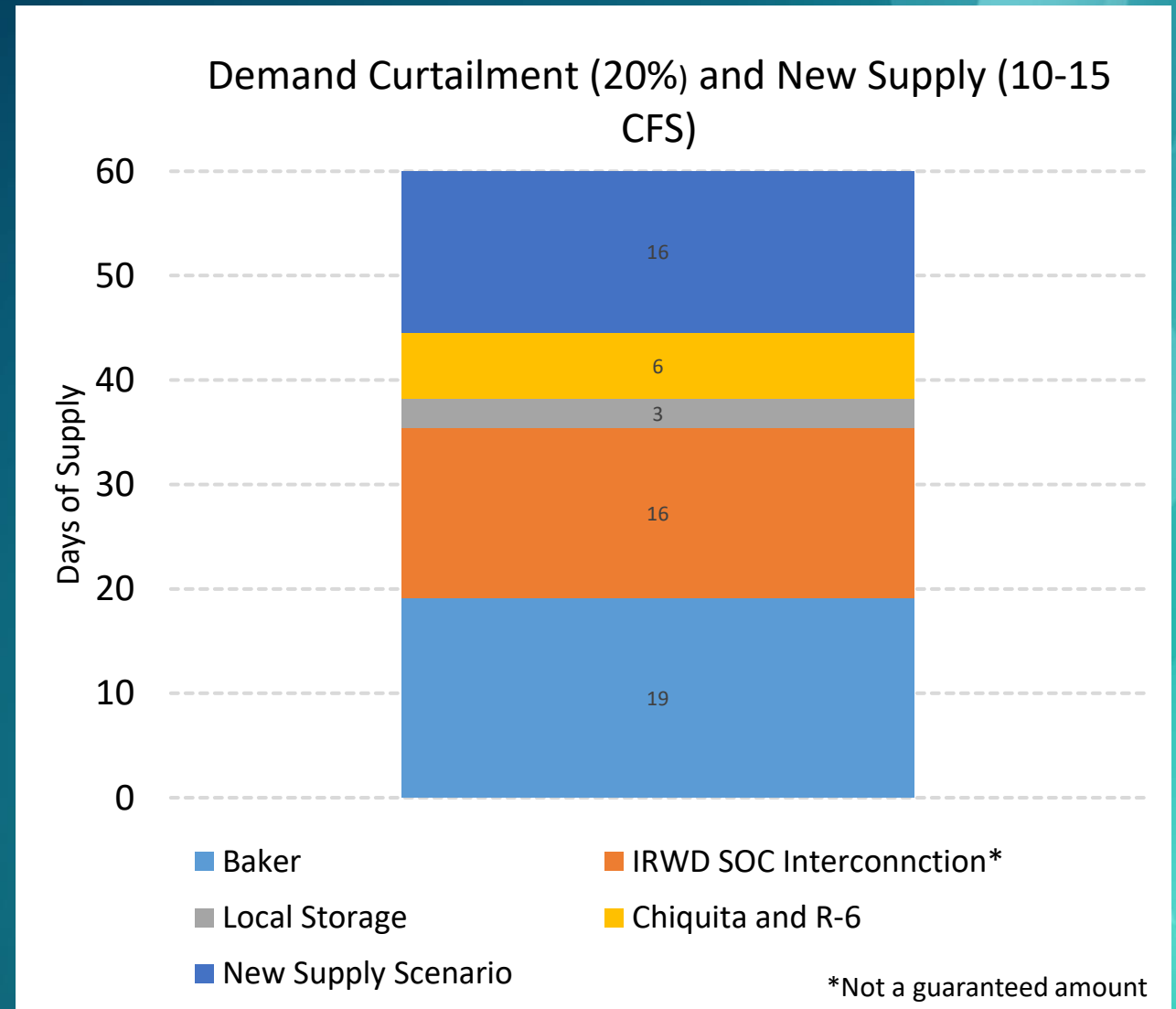
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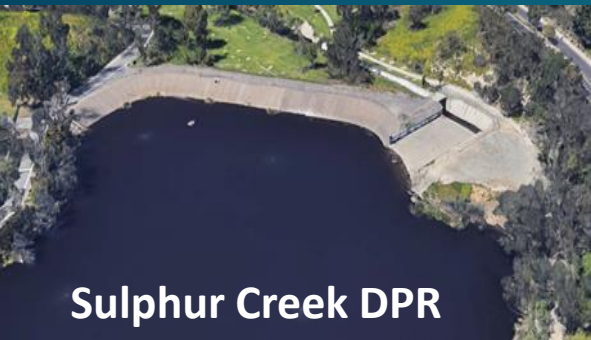
Proposal: How We Get There

- 60-Day Annual Average Days of Supply
 - 20% Demand Curtailment
 - New Supply, 10-15 CFS

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Future Supply Options



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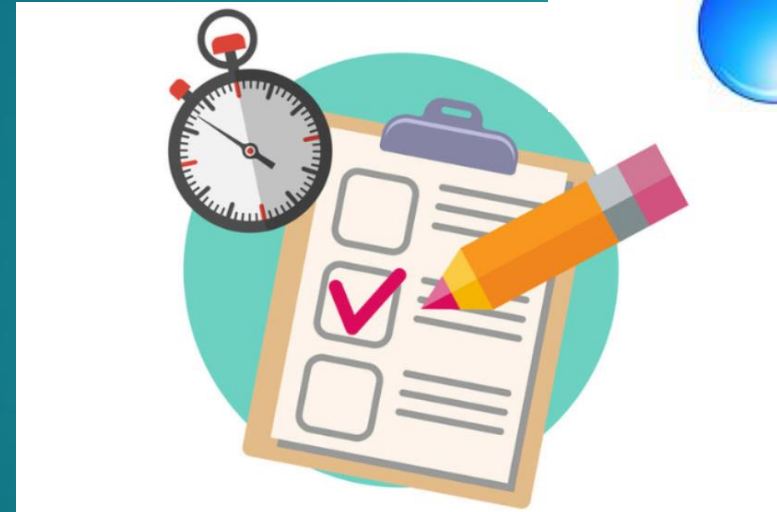


Expanded South Orange County Interconnection



Criteria to Evaluate New Supply Projects

- Type of Supply
 - Base-Loaded vs. On-Demand
- Timing of Project
- Cost Compared to MWD Rates
 - Potential Rate Impacts
- System Integration
 - Stranding Assets



Reliability Next Steps

- Supply Reliability Workshop - November 2020
- Staff recommendations on changes to Water Reliability Policy - December 2020
- 2020 Long-Range Water Reliability Update Report – December 2020
- Potential Board Action – January 2021

