

# WELCOME TO THREE VALLEYS MWD

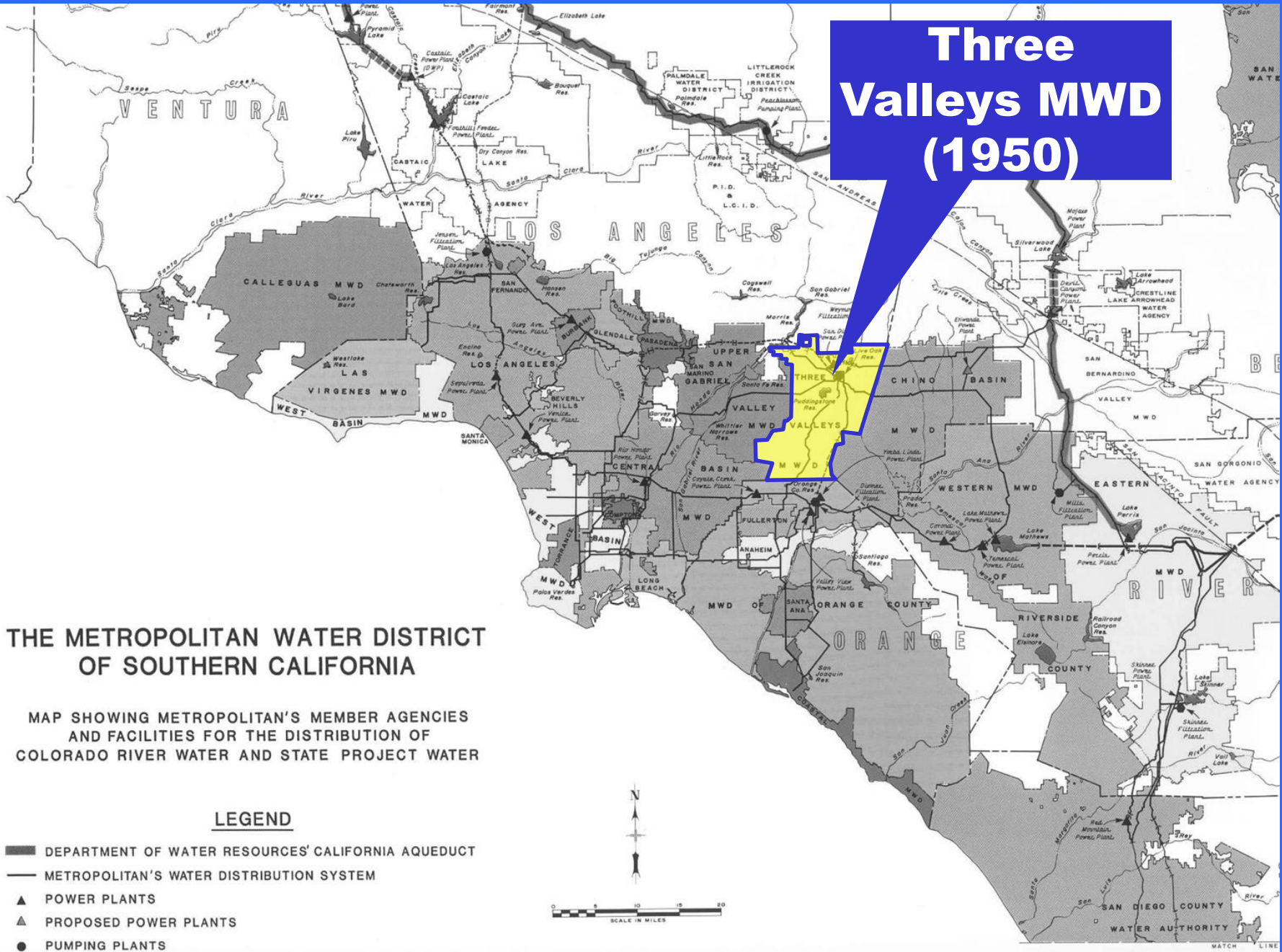




# WHO IS TVMWD?

- Wholesale Water District – Provide Water to Retail Agencies (Golden State Water Company, La Verne...)
- Mission Statement – *TVMWD's mission is to supplement and enhance local water supplies to meet our region's needs in a reliable and cost-effective manner.*

**Three  
Valleys MWD  
(1950)**

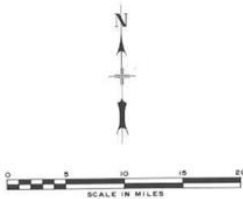


**THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA**

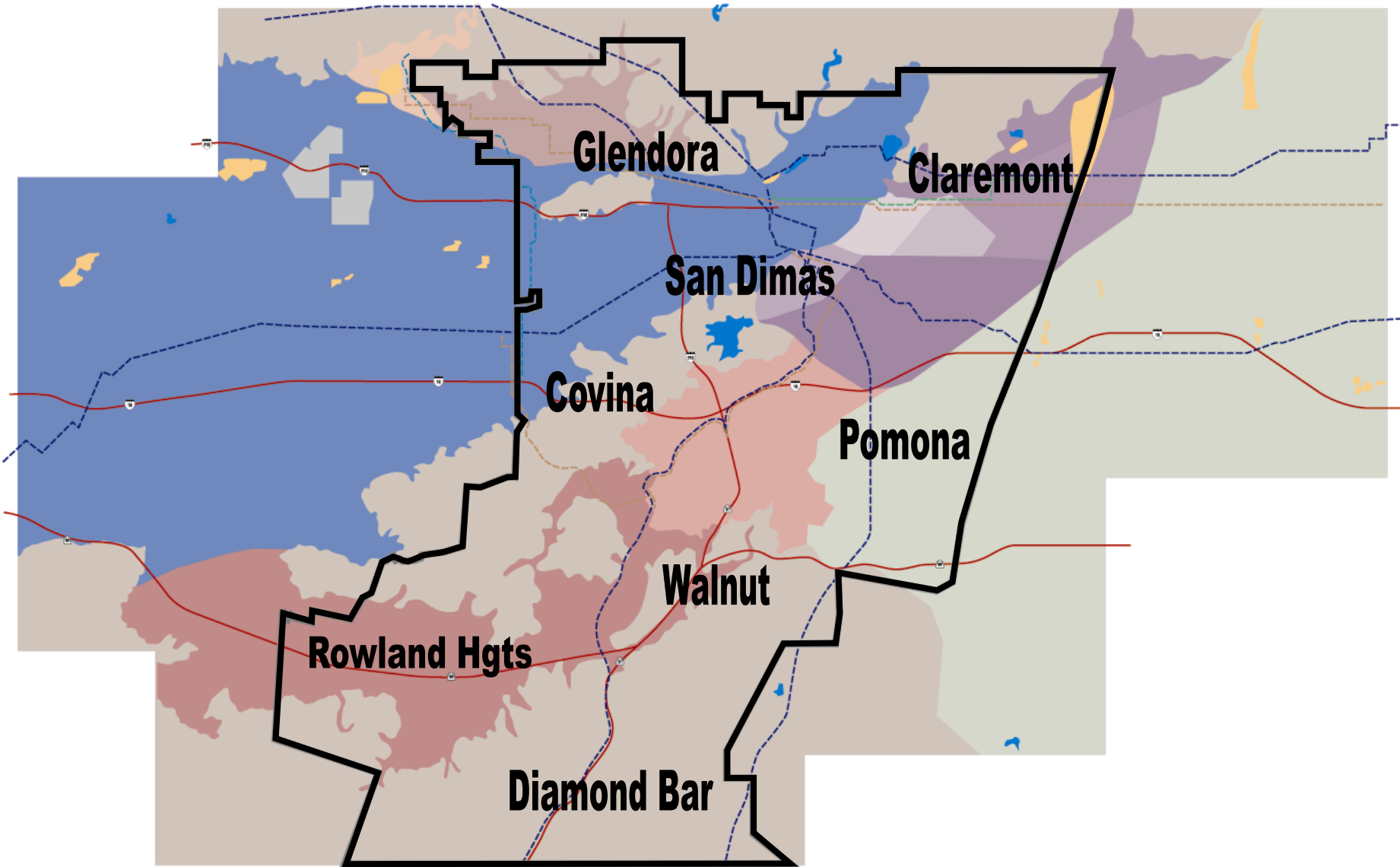
MAP SHOWING METROPOLITAN'S MEMBER AGENCIES  
AND FACILITIES FOR THE DISTRIBUTION OF  
COLORADO RIVER WATER AND STATE PROJECT WATER

**LEGEND**

- DEPARTMENT OF WATER RESOURCES' CALIFORNIA AQUEDUCT
- METROPOLITAN'S WATER DISTRIBUTION SYSTEM
- ▲ POWER PLANTS
- ▲ PROPOSED POWER PLANTS
- PUMPING PLANTS



# CITIES (SERVICE AREA) — 525,000 POPULATION





# MIRAMAR TREATMENT PLANT



- Constructed in 1987
- 90% State Project Water (MWD Imported Northern CA) - \$745/AF
- 10% Groundwater(3 Wells)-\$325/AF



# MIRAGRAND WELL PROJECT

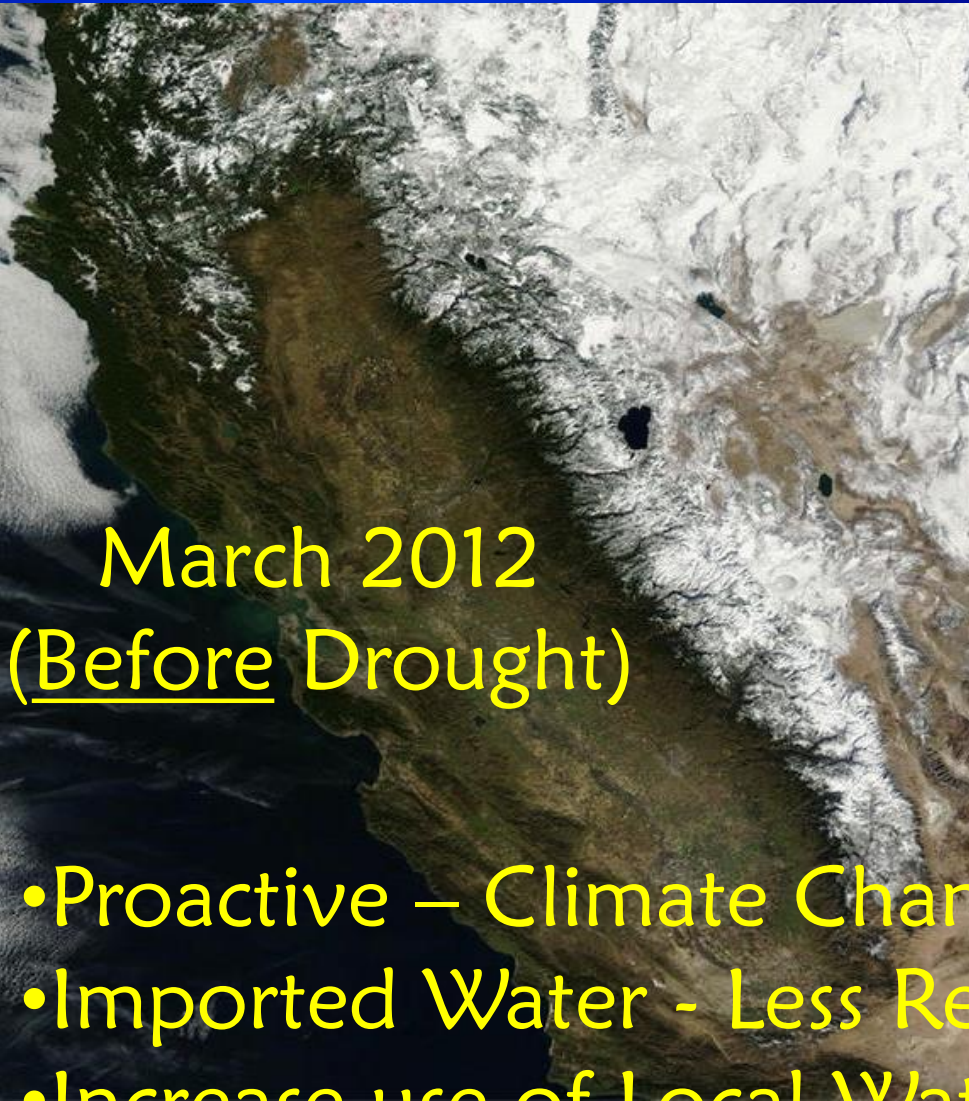
Will enable TVMWD to enhance the use of reliable, less expensive, local water resources over the long-term in a sustainable manner and reduce the need for imported water.



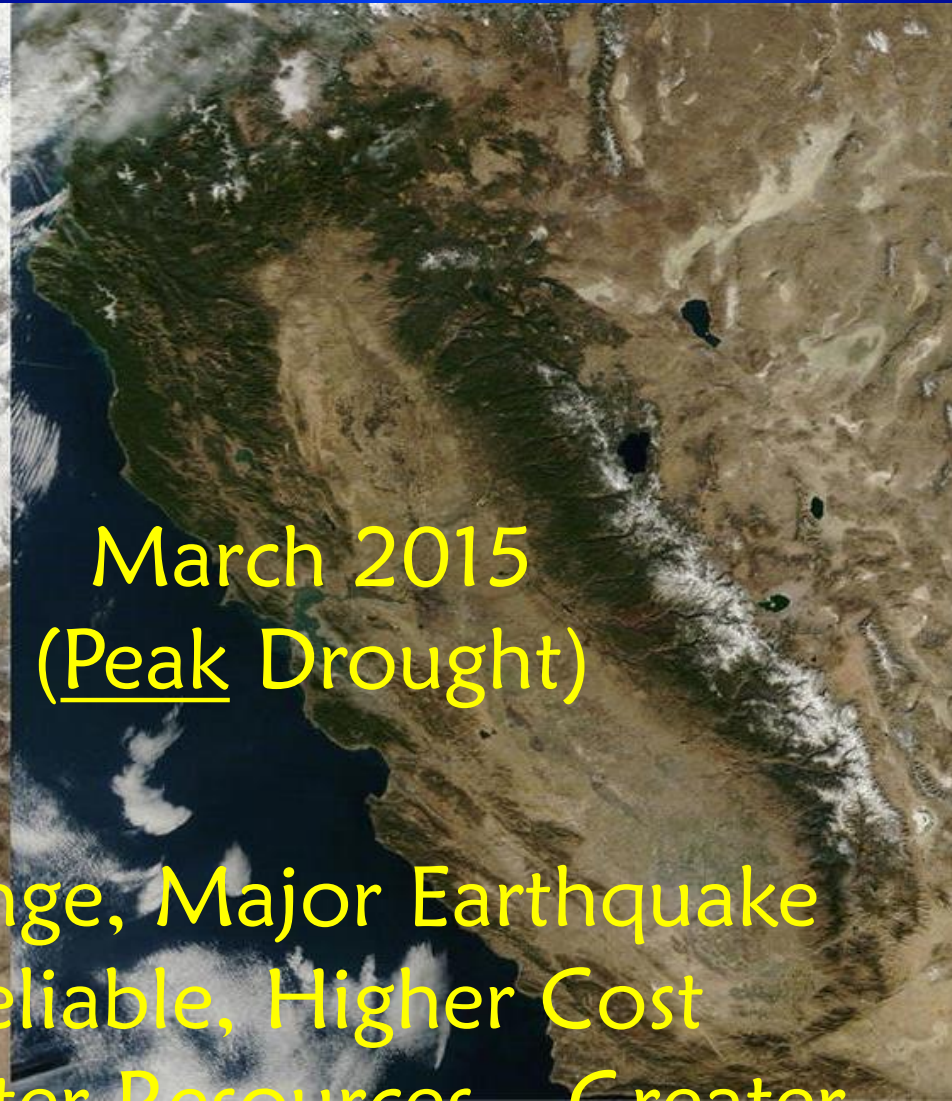
# TVMWD PROJECT CONTACTS

- Primary - Ben Peralta (Project Manager)  
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- Secondary – Tim Kellett (Chief Water Resources Officer) [tkellett@tvmwd.com](mailto:tkellett@tvmwd.com)

# WHY DO WE NEED MORE WELLS?



March 2012  
(Before Drought)



March 2015  
(Peak Drought)

- Proactive – Climate Change, Major Earthquake
- Imported Water - Less Reliable, Higher Cost
- Increase use of Local Water Resources – Greater Reliability/Sustainable, Less Expensive



# PROPOSED WELL LOCATION



TVMWD Property

Miramar Water Treatment Plant

Google Earth



# PHASE 1 – WELL DRILLING (BELOW GROUND)

- 3 to 4 Month Duration – (25 to 30 Days of 24/7 operation)
  1. Borehole Drilling ~ 9 to 12 days; 24/7 operation
  2. Zone Testing ~ 5 days; 24/7 operation
  3. Well Casing Design & Fabrication ~ 15 to 20 days (No Construction activities)
  4. Well Construction(Casing) - 3 to 5 days; 24/7 operation
  5. Initial Development ~ 5 days; 24/7 operation
  6. Test Pump Installation – 2 days; daytime operation
  7. Pumping Development - 5 to 10 days; daytime operation
  8. Pumping Tests ~ 3 days; 24/7 operation



# CONDUCTOR CASING INSTALLATION





# BORE HOLE DRILLING (24/7 OPERATION)





# SOIL SAMPLES COLLECTION





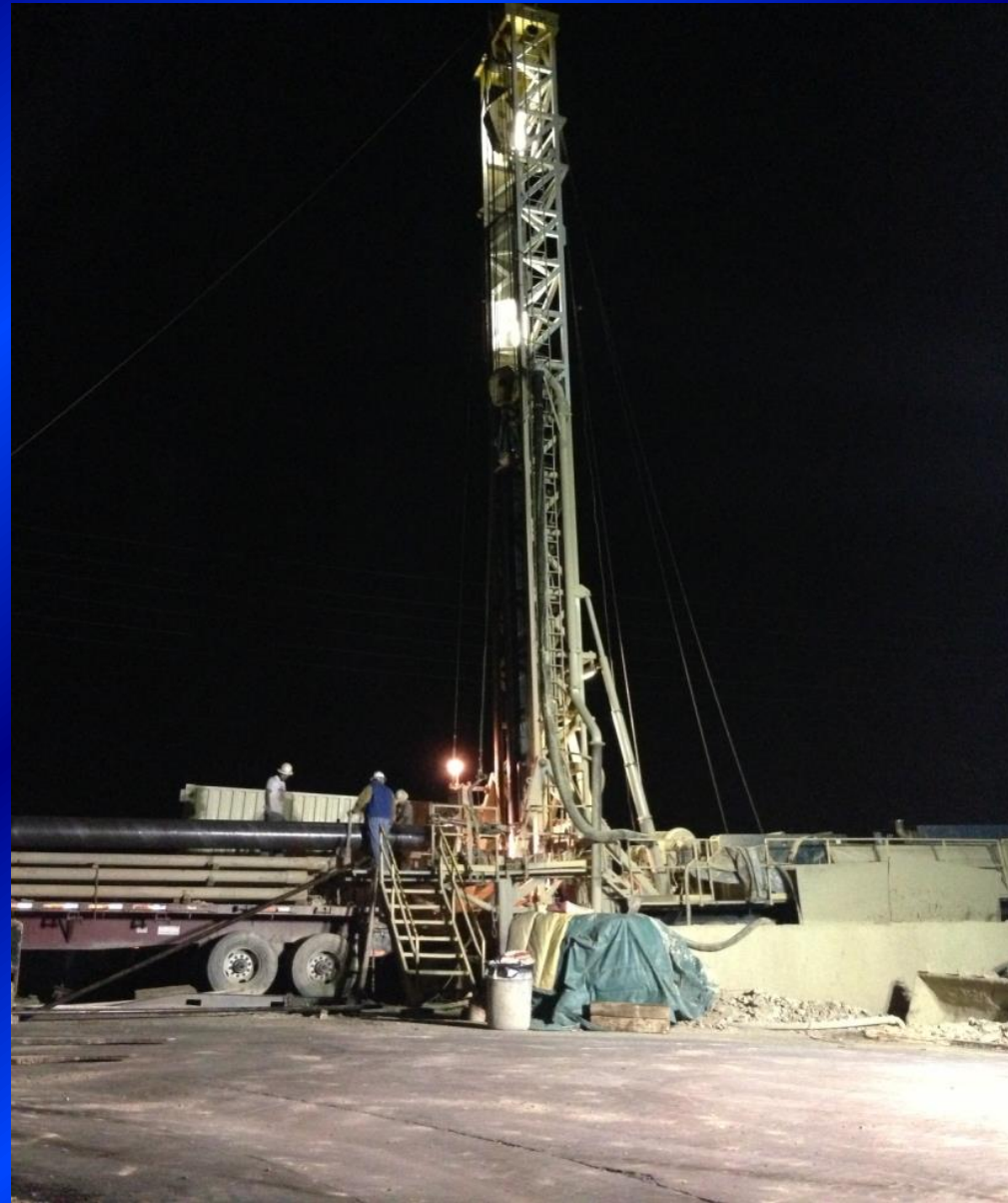
# WELL CASING DESIGN & FABRICATION (15 - 20 DAYS)





# WELL CASING/SCREEN INSTALLATION

~ 3 TO 5 DAYS (24/7 OPERATION)





# PUMPING DEVELOPMENT – 5 TO 10 DAYS





# COMPLETION OF WELL DRILLING (PHASE 1) CONSTRUCTION



# PHASE 2 – WELL EQUIPPING (ABOVE GROUND IMPROVEMENTS)

- Begin about 4 to 5 months after drilling is completed
- 6 - 8 Months Duration - **Daytime** only



# MECHANICAL PIPING





# DISCHARGE PIPING





# PUMP INSTALLATION





# ELECTRICAL CONTROLS & MOTOR





# WELL ENCLOSURE BUILDING





# WELL FENCING - SECURITY





# WELL LANDSCAPING – DROUGHT TOLERANT NATIVE





# WELL SITE IMPROVEMENTS





# POTENTIAL PROJECT IMPACTS & MITIGATION MEASURES

- Aesthetics – Well Enclosure & Landscaping
- Traffic – Traffic Control Measures
- Noise

Construction – Temporary Sound Panels (See photos)

Comply with Claremont Noise Ordinance:

- 65 dB (7 am - 10 pm) Day Time

- 55 dB (10 pm – 7 am) Night Time

Well Operation - Well Enclosure Interior Engineered  
Sound Panels to Dampen Noise



# NOISE LEVEL EXAMPLES

- 100 dB – Motorcycle, Blow-dryer
- 90 dB – Diesel Truck, Power Lawn Mower
- 70 dB – Busy Traffic
- 65 dB – Noise Ordinance (7 am – 10 pm)
- 60 dB – Normal conversation at 3 feet
- 55 dB – Noise Ordinance (10 pm – 7 am)
- 50 dB – Quite Office, Moderate Rainfall
- 40 dB – Quiet Library



Typical  
24' Tall  
Sound  
Panels



**NOISE MITIGATION –  
TEMPORARY SOUND PANELS**



# NOISE MITIGATION

Sound Panels



Drill Rig Sound Panels



# CURRENT ACTIVITIES AND ESTIMATED PROJECT TIMELINE

- Preliminary Design: Completed September 2019
- Environmental (CEQA) Documentation: May – Late November 2019
- Well Design (phase 1): December – April 2020
- Well Drilling Construction: July – Oct. 2020
- Well Equipping Design (phase 2): Sept. – Mar. 2021
- Well Equipping Construction: May – Nov. 2021



**QUESTIONS ?**