Mojave Water Agency

# OESTE GROUNDWATER RECHARGE UPDATE

Presenter: Tony Winkel, PE, PG

Wednesday, Aug 23, 2023

Mojave Water Agency

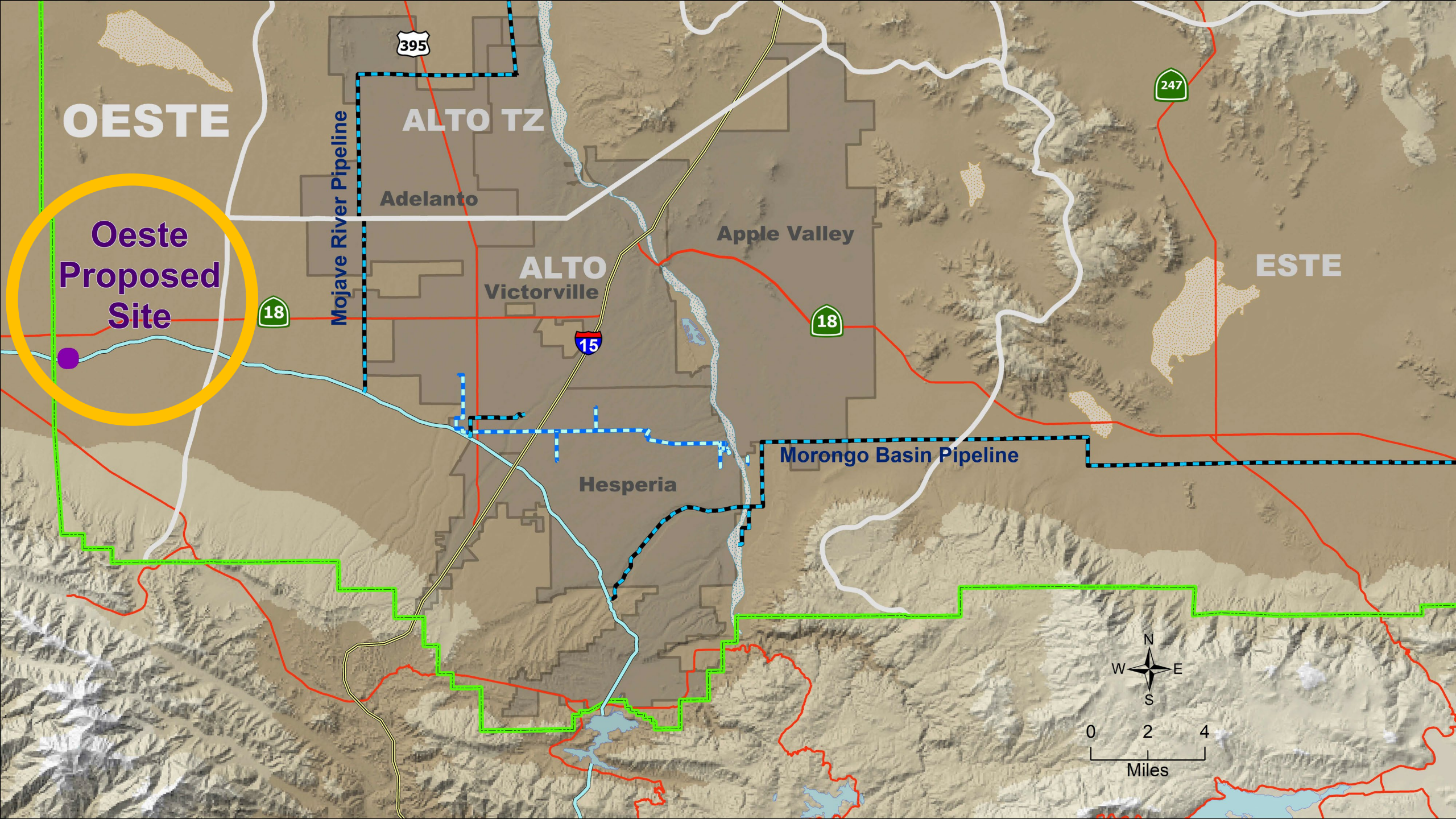
# Why?

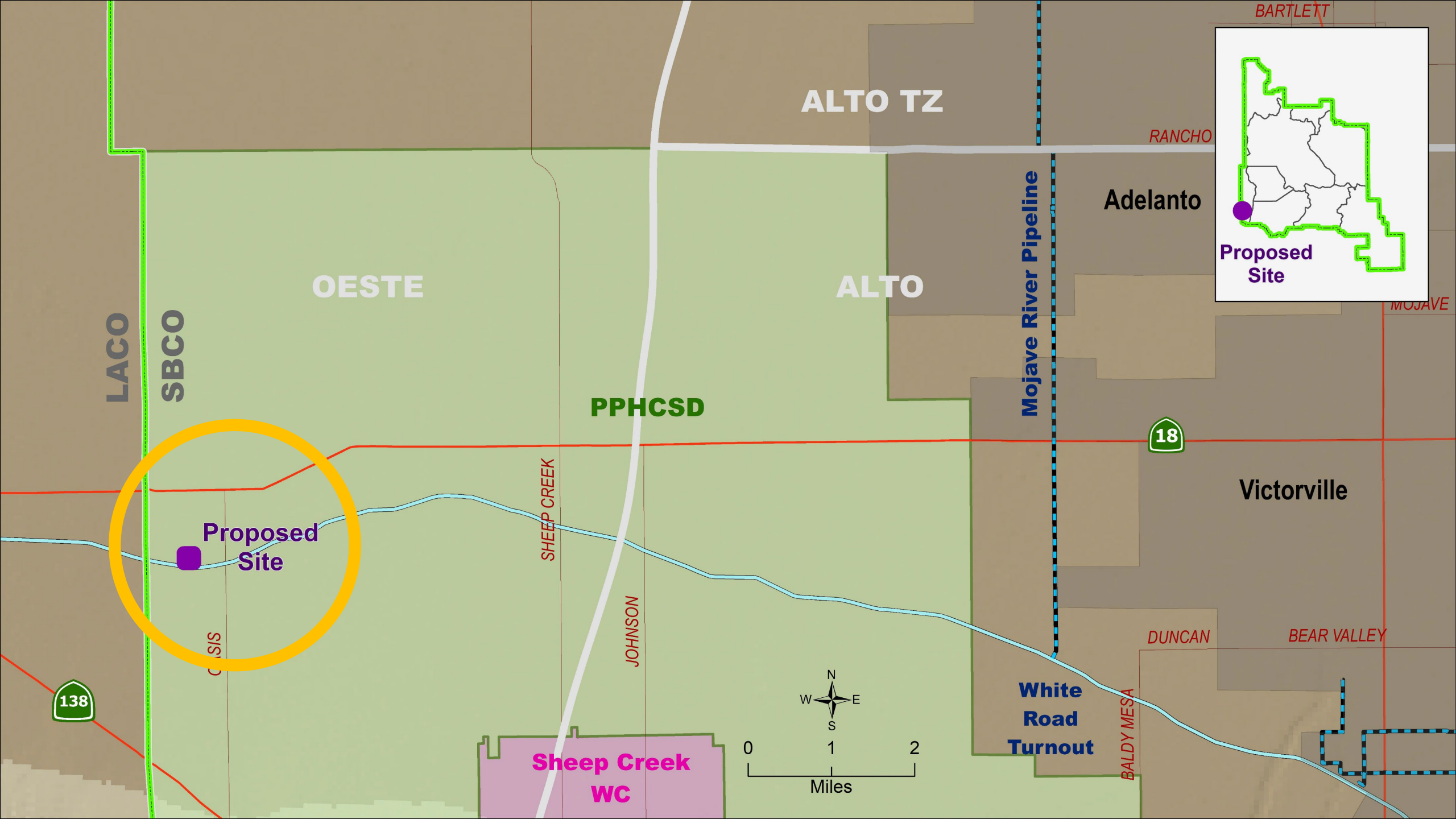
*Long-term groundwater declines led to the 1996 Mojave Basin Area Judgment with an obligation to import supplemental water supplies to the Oeste Subarea*

Mojave Water Agency

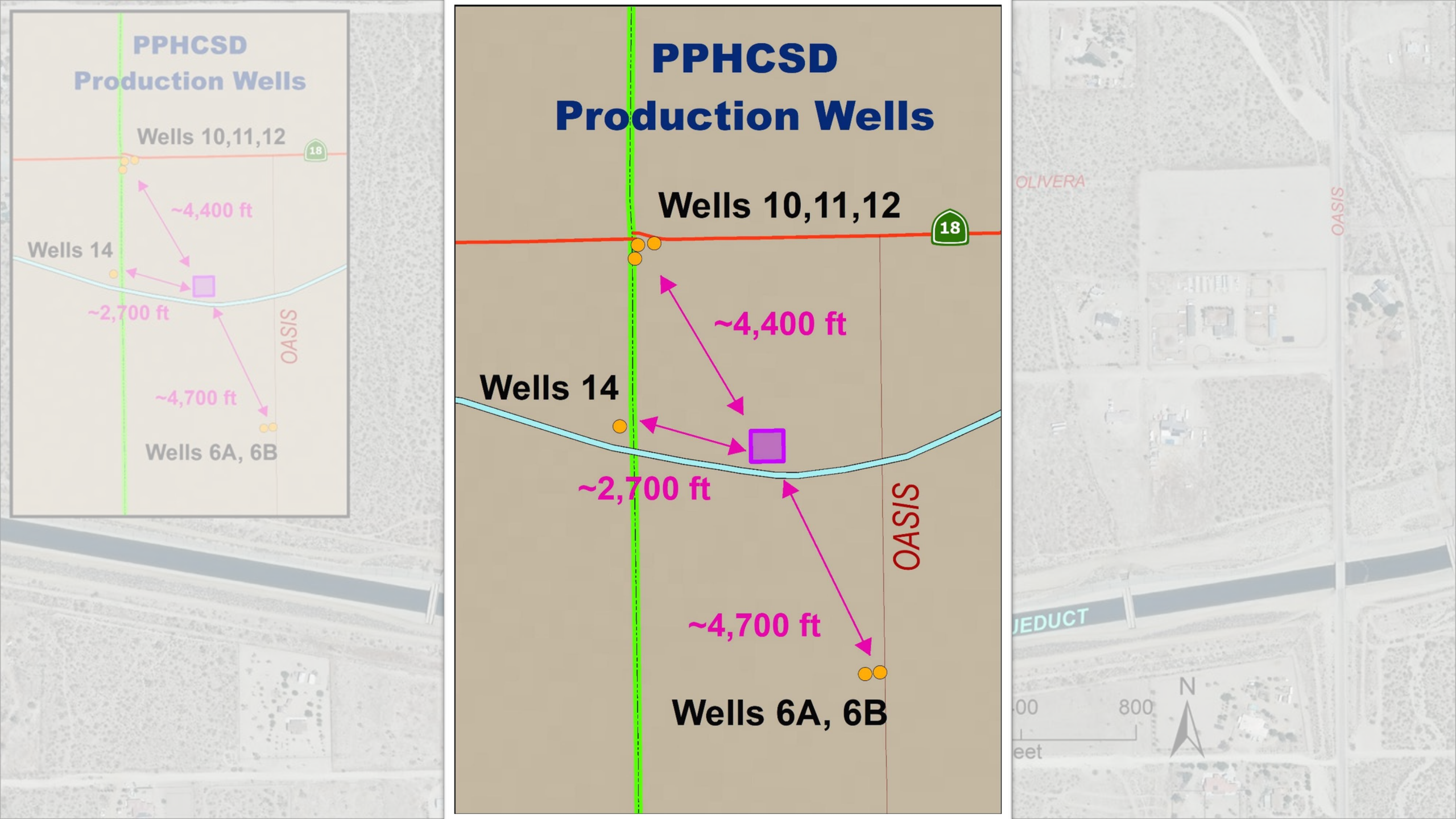
# OVERVIEW

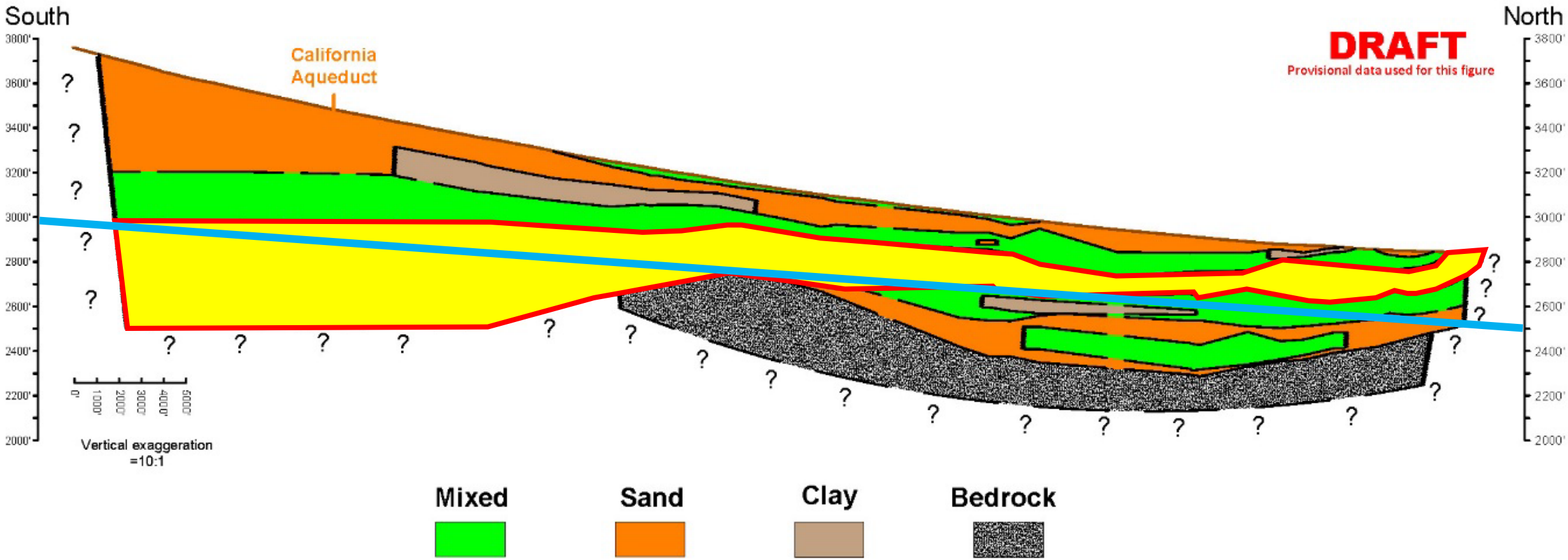
- Project Location
- Preliminary Investigations
- Geophysical Surveys
- Percolation Testing
- Monitoring Well Installation
- Preliminary Design
- Request for Proposals (RFP)
- Facility Construction

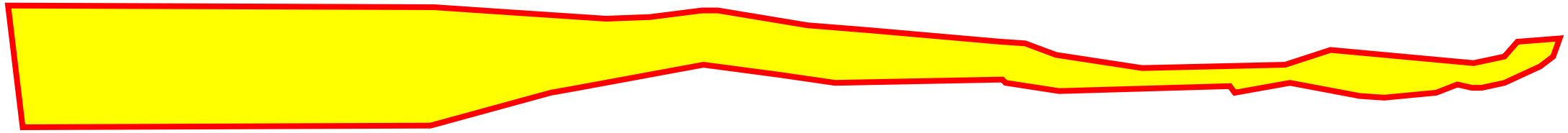

OESTE
ALTO TZ
Adelanto
Mojave River Pipeline
Oeste
Proposed
Site
ALTO
Victorville
Apple Valley
ESTE
Hesperia
Morongo Basin Pipeline
395
18
15
247
N
W
E
S
0
2
4
Miles

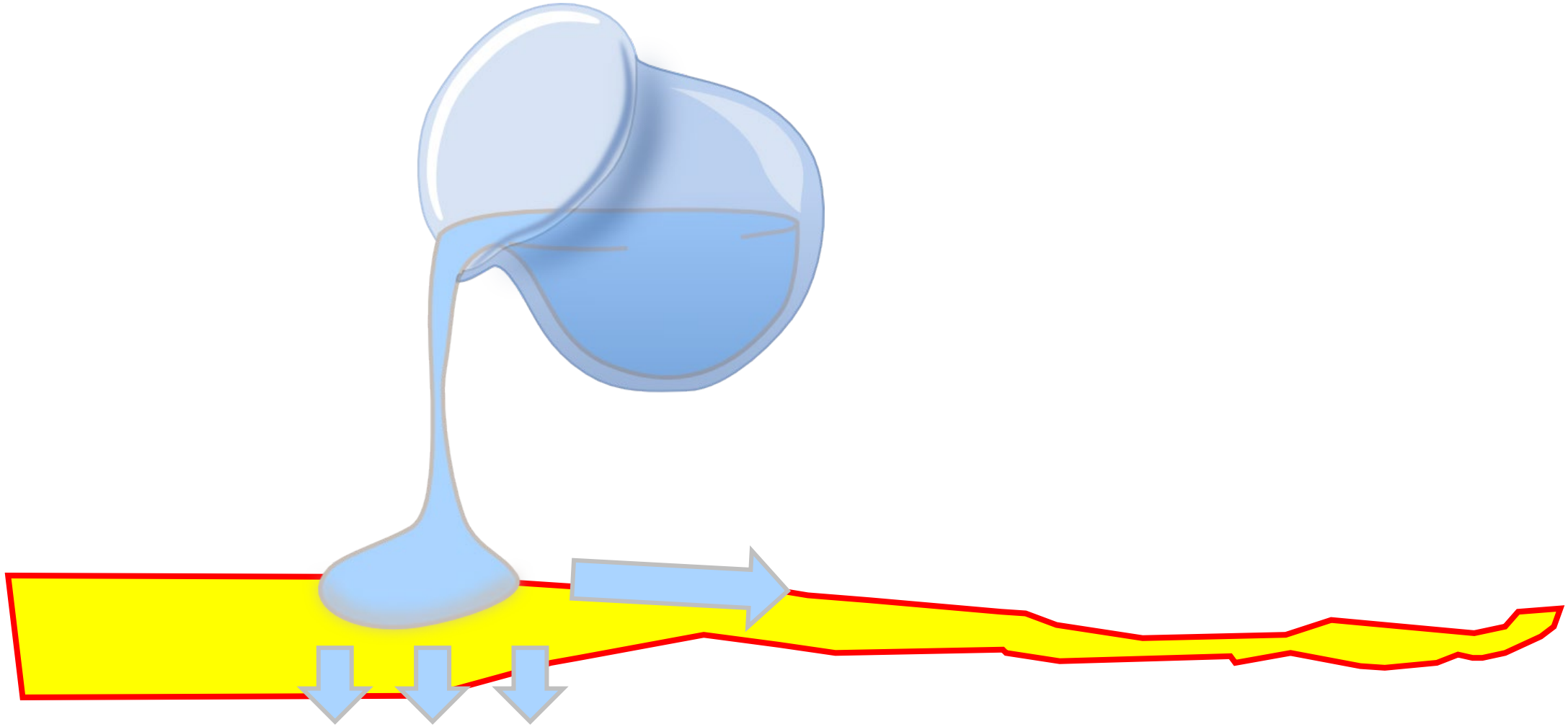

ALTO TZ
OESTE
ALTO
PPHCSD
LACO
SBCO
Mojave River Pipeline
Adelanto
Victorville
BARTLETT
RANCHO
MOJAVE
DUNCAN
BEAR VALLEY
BALDY MESA
SHEEP CREEK
JOHNSON
OASIS
Proposed Site
Proposed Site
White Road Turnout
Sheep Creek WC
18
138
N
W
E
S
0
1
2
Miles


PPHCSD
Production Wells
Wells 10,11,12
18
~4,400 ft
Wells 14
~2,700 ft
OASIS
~4,700 ft
Wells 6A, 6B
LUNA
MOUNTAIN
OLIVERA
OASIS
ALTA VISTA
CAYUCOS
CA AQUEDUCT
LA MESA
0
400
800
Feet
N

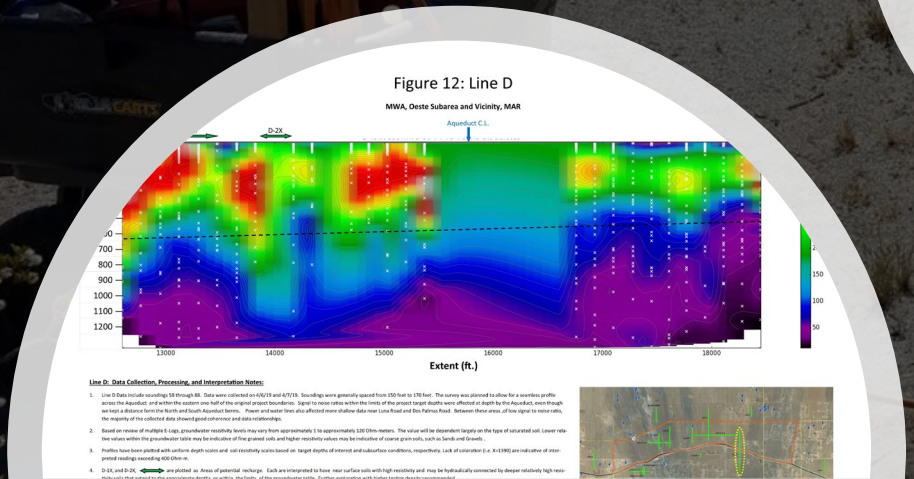

PPHCSD
Production Wells
Wells 10,11,12
18
~4,400 ft
Wells 14
~2,700 ft
OASIS
~4,700 ft
Wells 6A, 6B
OLIVERA
OASIS
JEDUCT
800
N
eet

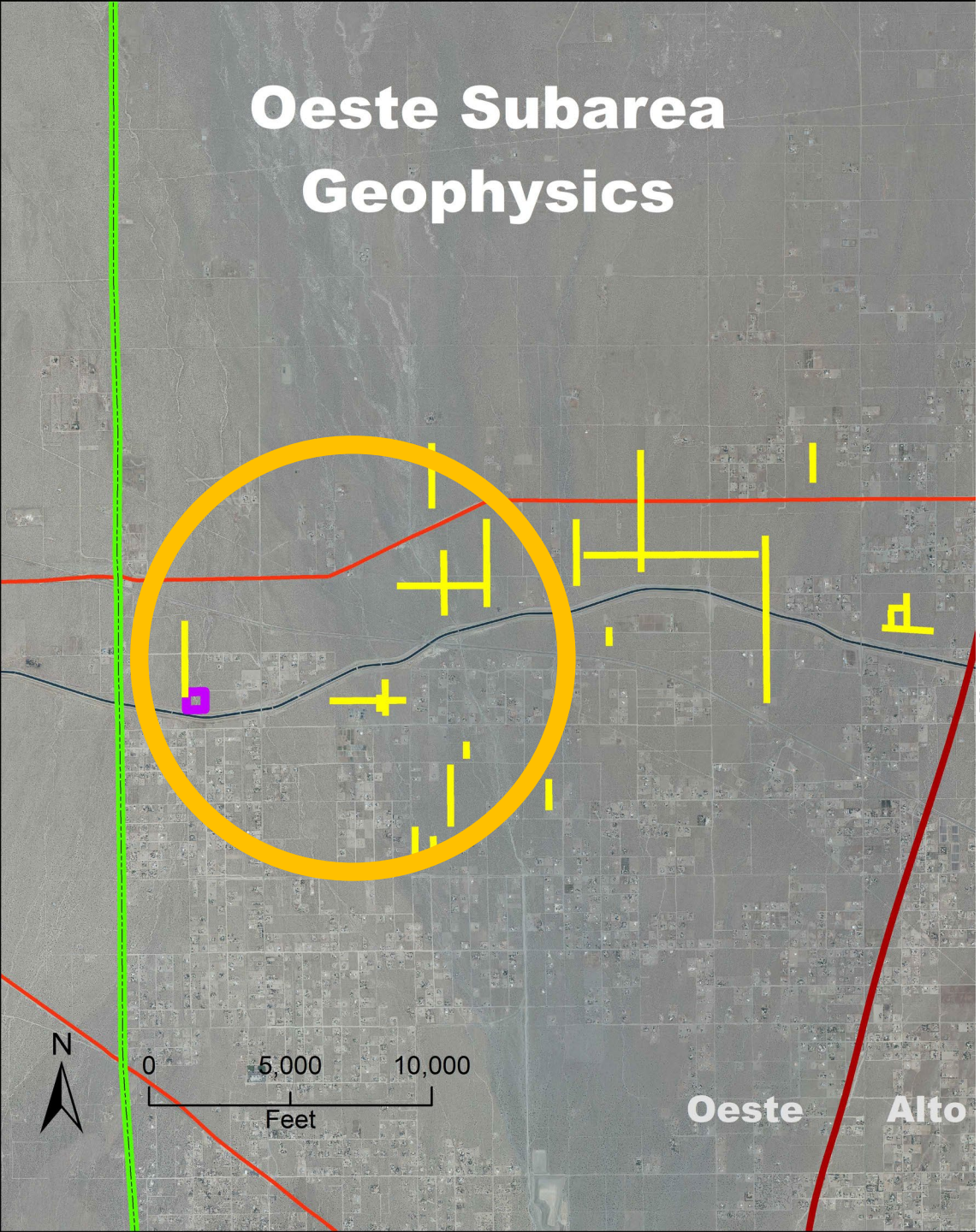

South
North
DRAFT
Provisional data used for this figure
California
Aqueduct
3800'
3600'
3400'
3200'
3000'
2800'
2600'
2400'
2200'
2000'
0
1000'
2000'
3000'
4000'
5000'
Vertical exaggeration
=10:1
Mixed
Sand
Clay
Bedrock

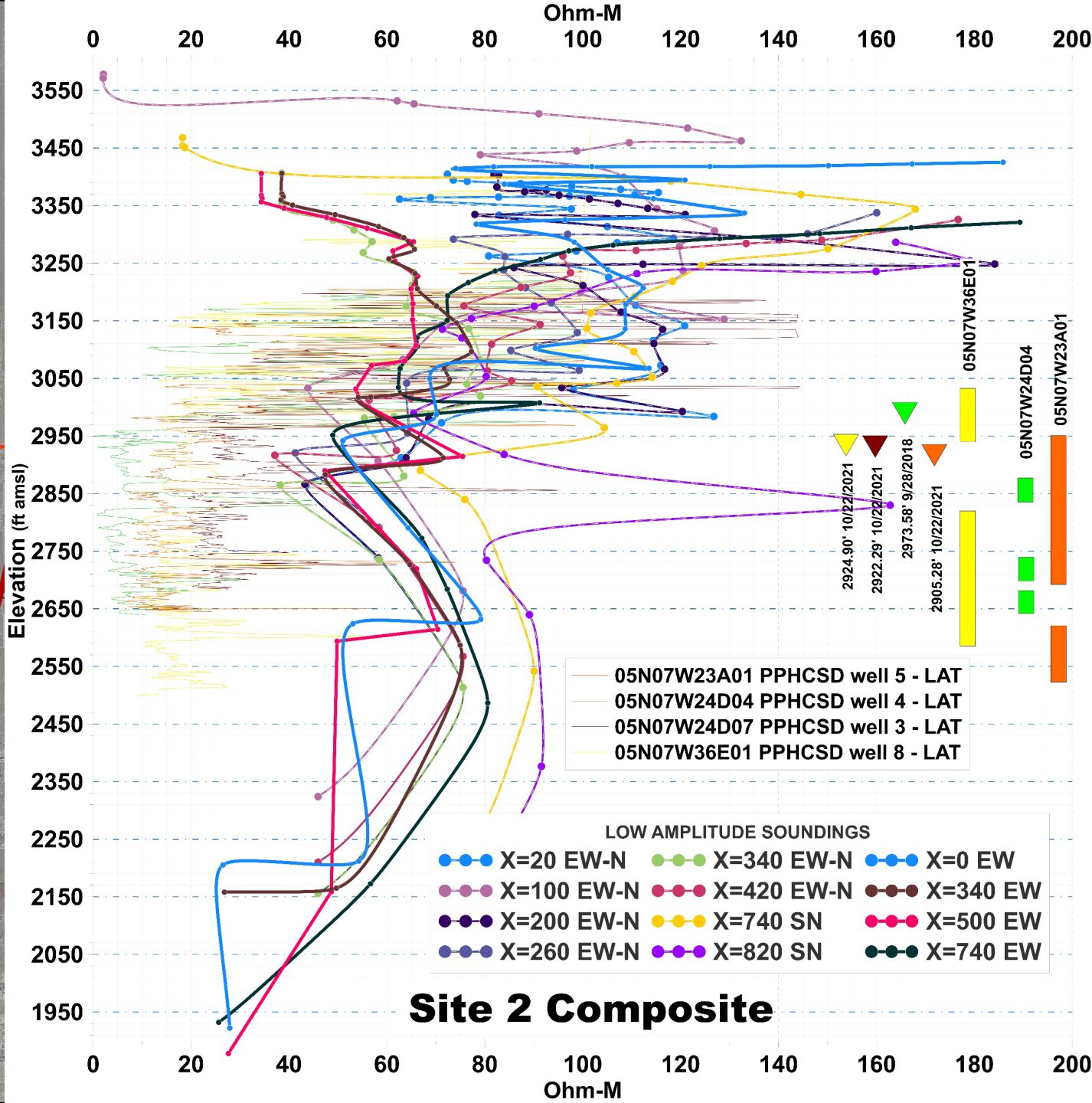




# Surface Geophysics

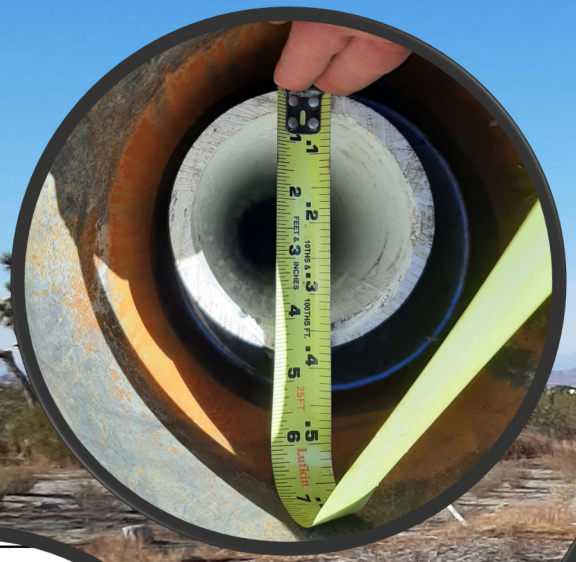


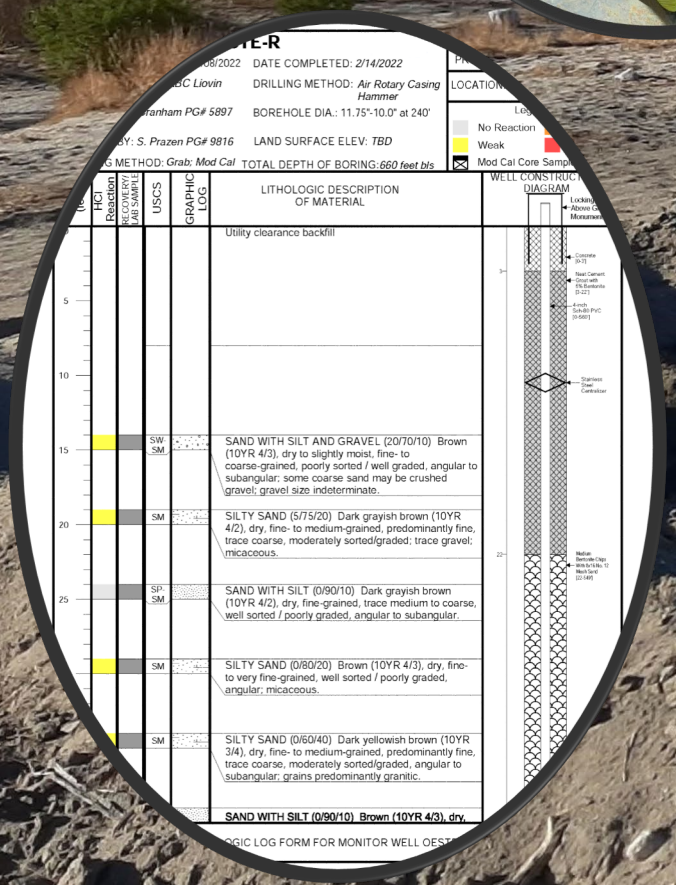


Oeste Subarea
Geophysics
N
0
5,000
10,000
Feet
Oeste
Alto

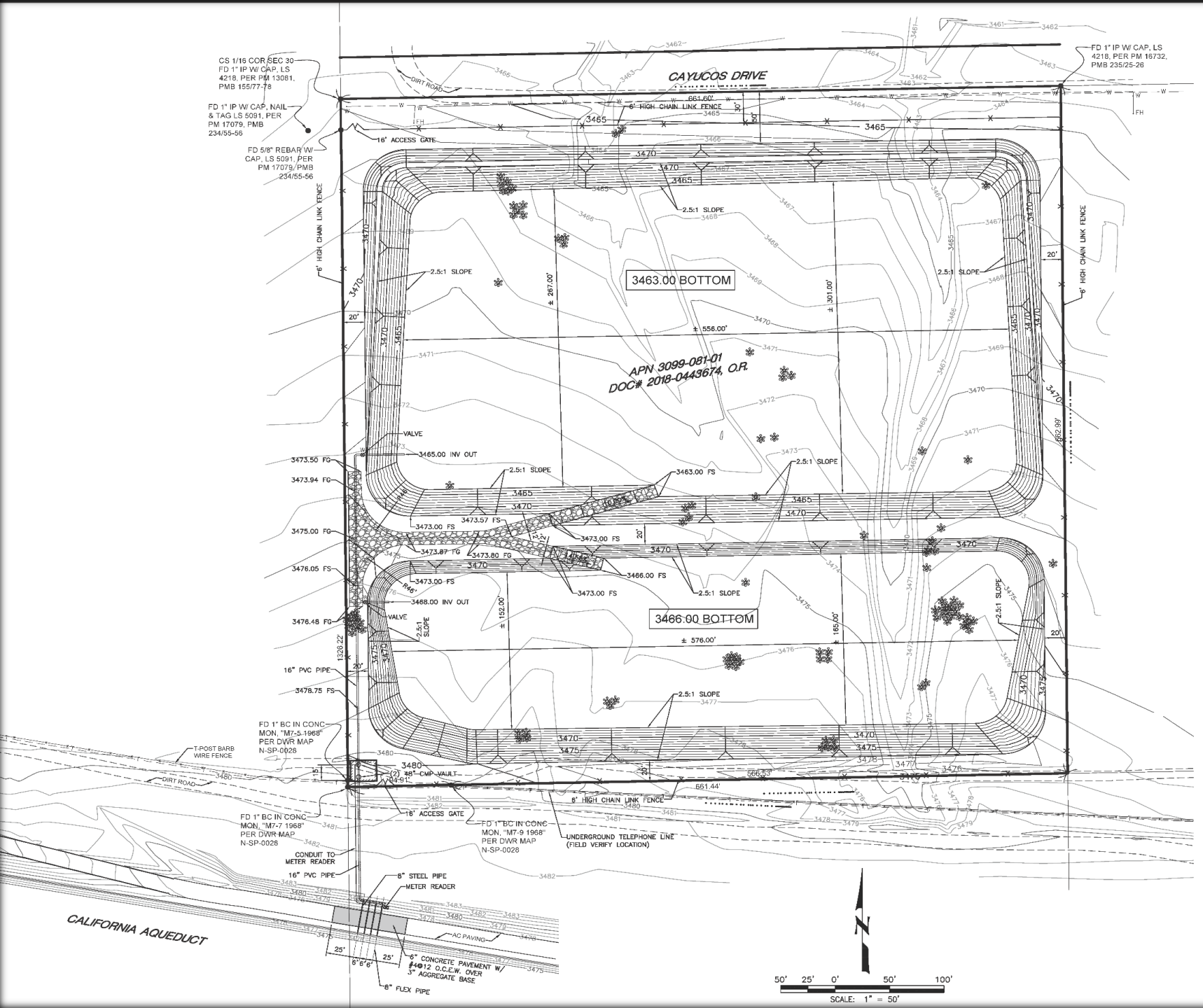

Ohm-M
0
20
40
60
80
100
120
140
160
180
200
Elevation (ft amsl)
3550
3450
3350
3250
3150
3050
2950
2850
2750
2650
2550
2450
2350
2250
2150
2050
1950
05N07W36E01
05N07W24D04
05N07W23A01
2924.90' 10/22/2021
2922.29' 10/22/2021
2973.58' 9/28/2018
2905.28' 10/22/2021
05N07W23A01 PPHCSD well 5 - LAT
05N07W24D04 PPHCSD well 4 - LAT
05N07W24D07 PPHCSD well 3 - LAT
05N07W36E01 PPHCSD well 8 - LAT
LOW AMPLITUDE SOUNDINGS
X=20 EW-N
X=340 EW-N
X=0 EW
X=100 EW-N
X=420 EW-N
X=340 EW
X=200 EW-N
X=740 SN
X=500 EW
X=260 EW-N
X=820 SN
X=740 EW
Site 2 Composite

# Percolation Test

# Monitoring Wells



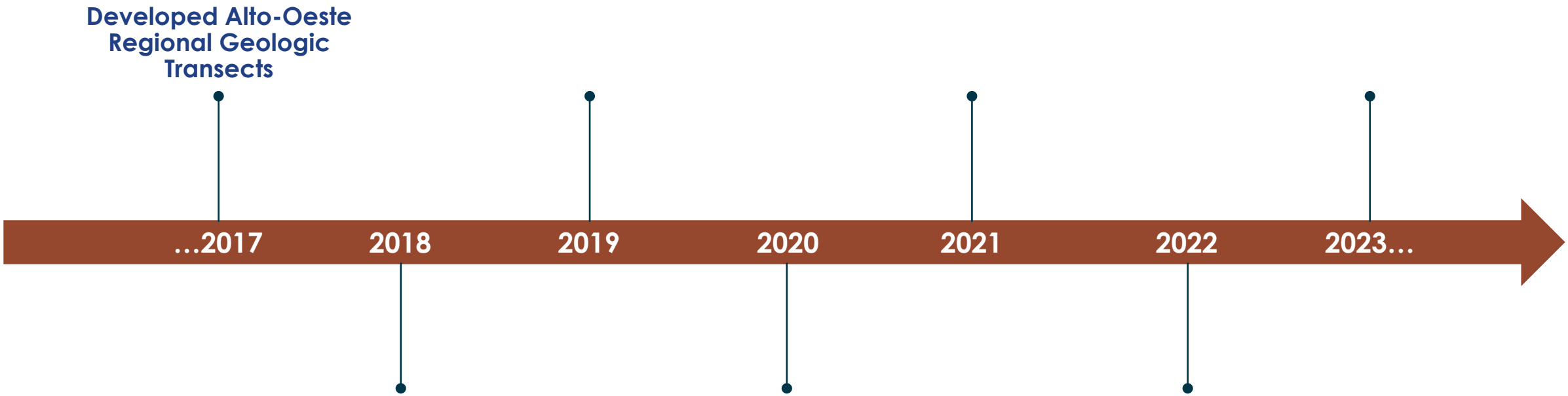

# Preliminary Basin Design

**NOTE:**

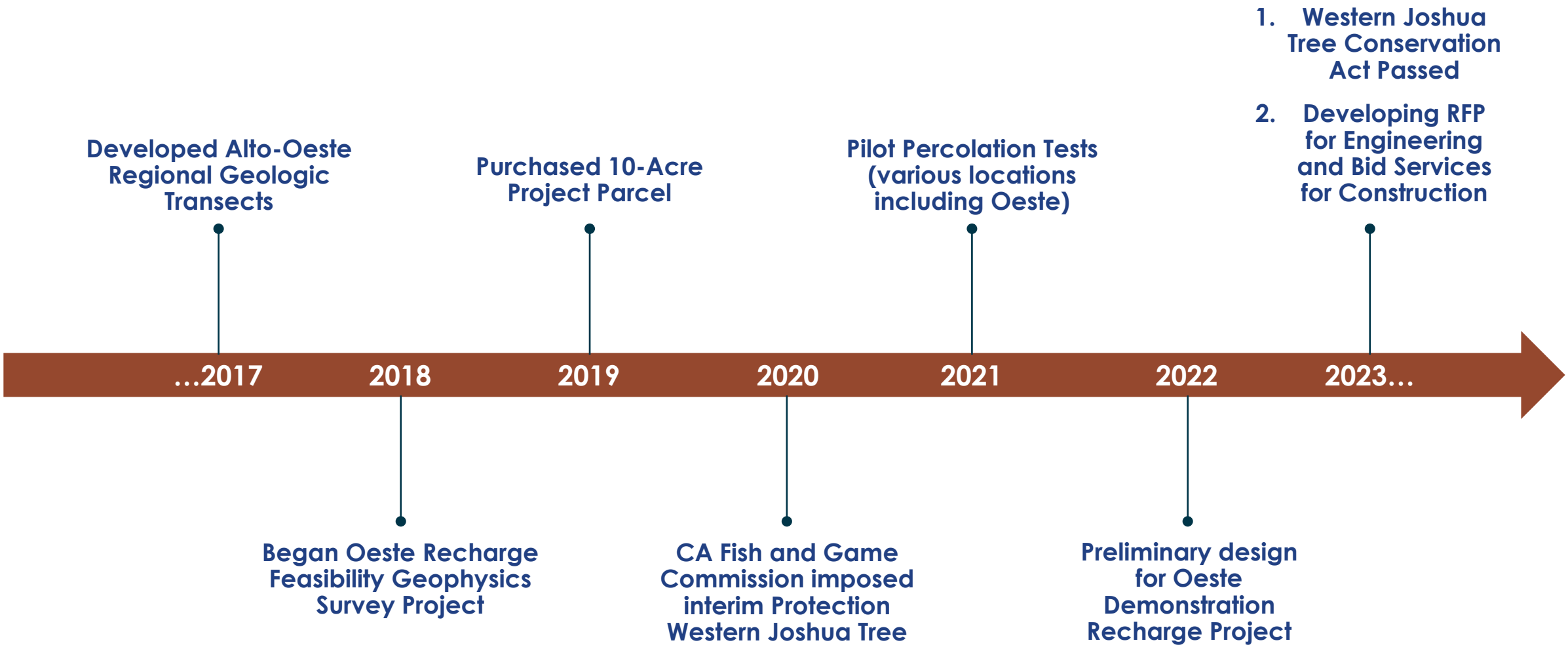
TOP BASIN AREA = 125,195 S.F.
BOTTOM BASIN AREA = 223,390 S.F.
CUT = 84,131 C.Y.
FILL =3,722 C.Y.
NET = 80,409 C.Y.

THE SIDE SLOPES ARE 2.5:1 (2.5 FEET RUN PER 1.0 FOOT RISE)
THE MAX CUT DEPTH ON THE NORTHERLY BASIN IS 11 FEET. THE CONSTRUCTED DEPTH FROM TOP OF SLOPE TO BASIN BOTTOM IS 9 FEET.
THE MAX CUT DEPTH ON THE SOUTHERLY BASIN IS 12 FEET. THE CONSTRUCTED DEPTH FROM TOP OF SLOPE TO BASIN BOTTOM IS 7 FEET.

# Oeste Recharge Facility Timeline



# Oeste Recharge Facility Timeline



# CONTACT US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SECURING WATER FOR TODAY AND TOMORROW...