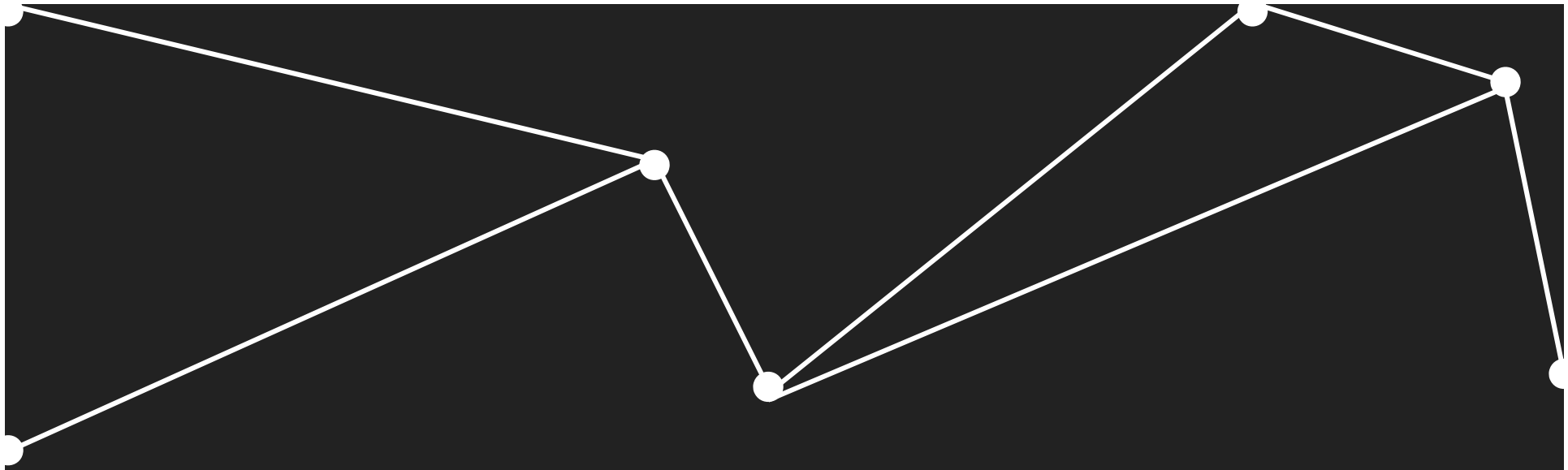
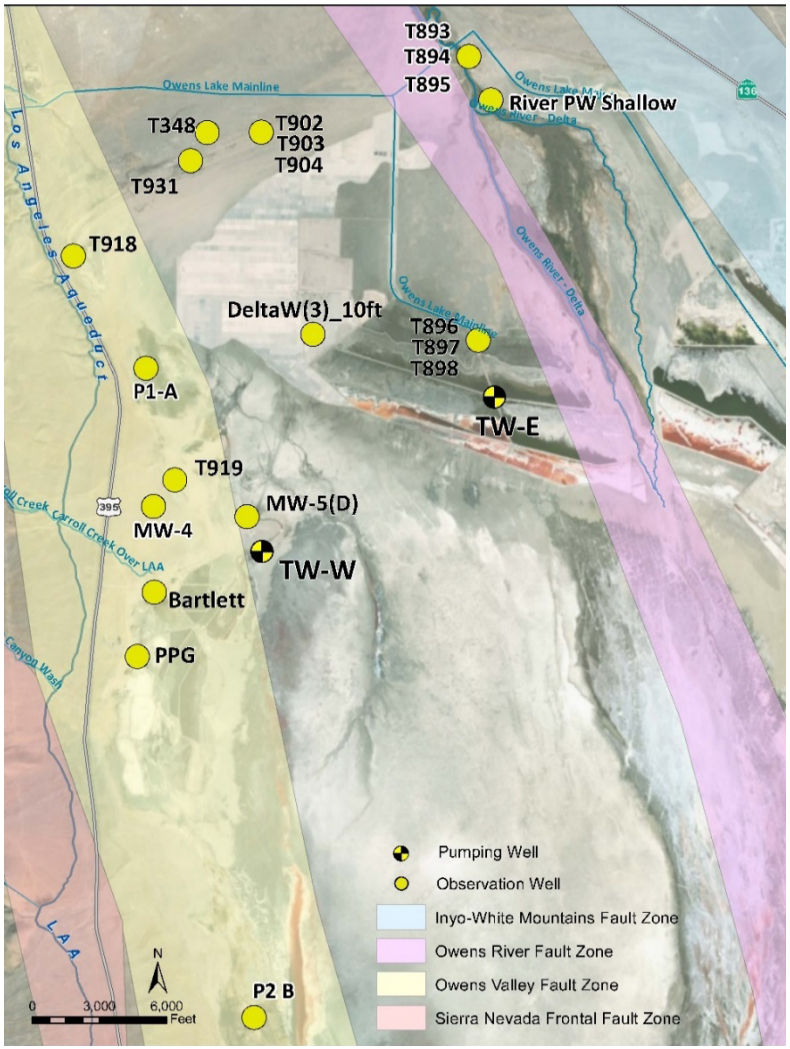


UPDATE ON 24-HOUR PUMPING TESTS OF TESTING WELLS TW-EAST AND TW-WEST

update on pumping tests

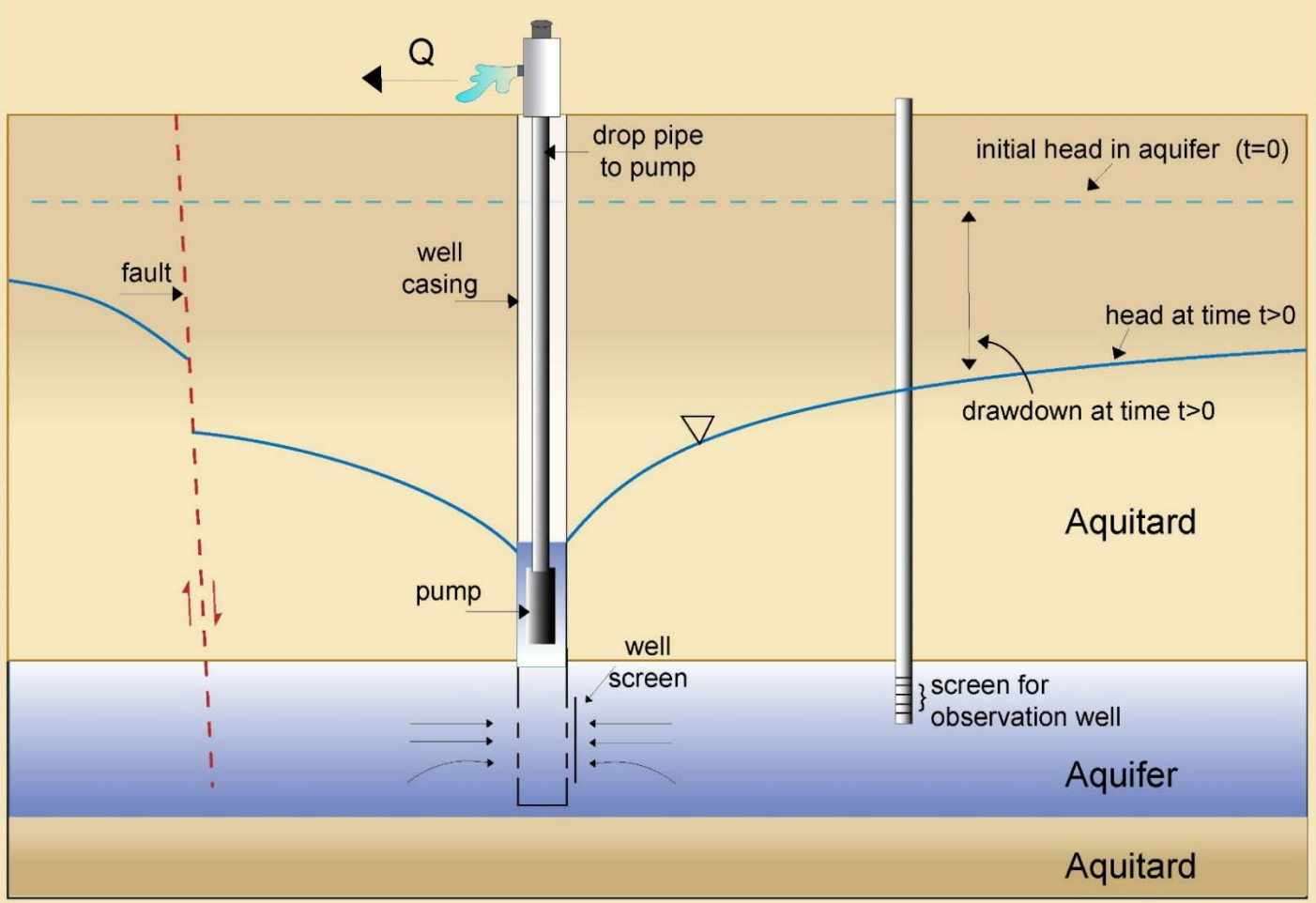
Objectives of 24-Hour Pumping Tests in TW-E and TW-W

- Observe drawdown
- Calculate aquifer parameters
  - Hydraulic conductivity
  - Storage coefficient
- Evaluate the extent to which faults act as groundwater barriers
- Utilize results to update and improve the groundwater model



update on pumping tests

Components of a Pump Test



Pumping Test in a Confined Aquifer

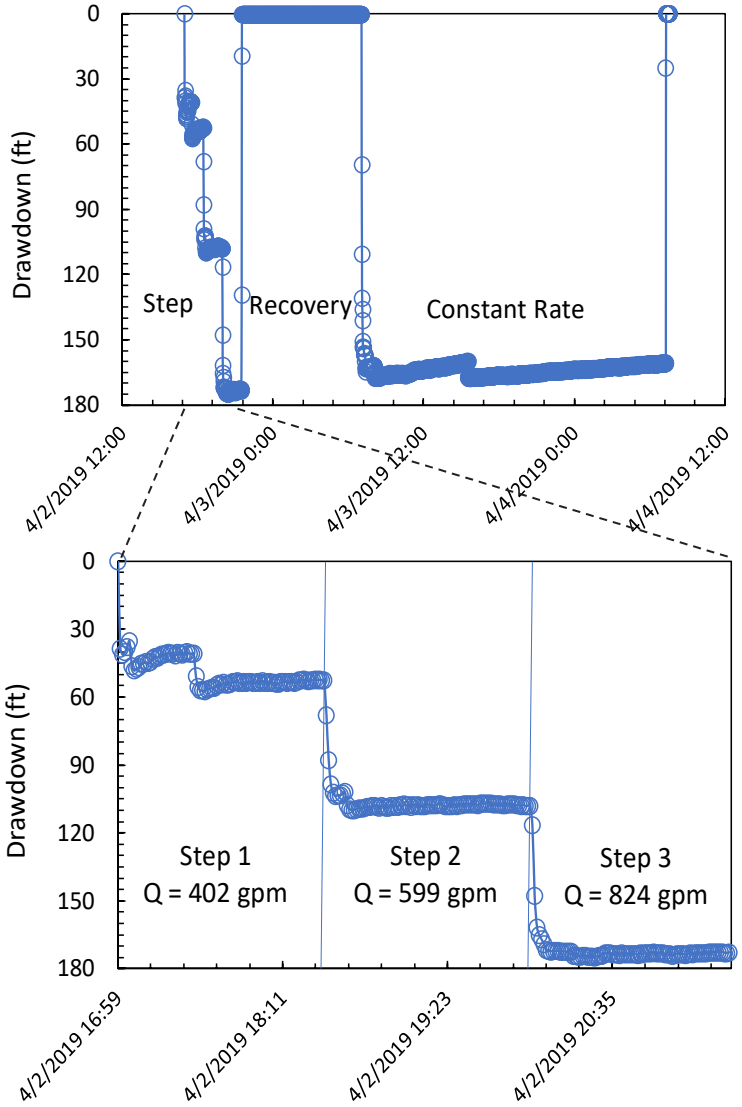
update on pumping tests

TW-E Pump Test

- Step tests (1.5 hours each)
- Recovery within minutes
- 24-hour average pumping rate (860 gpm)
- Rapid recovery observed
- Minimal observation well response

Step Test

- Rapid equilibrium drawdown
- Minimal observation well response

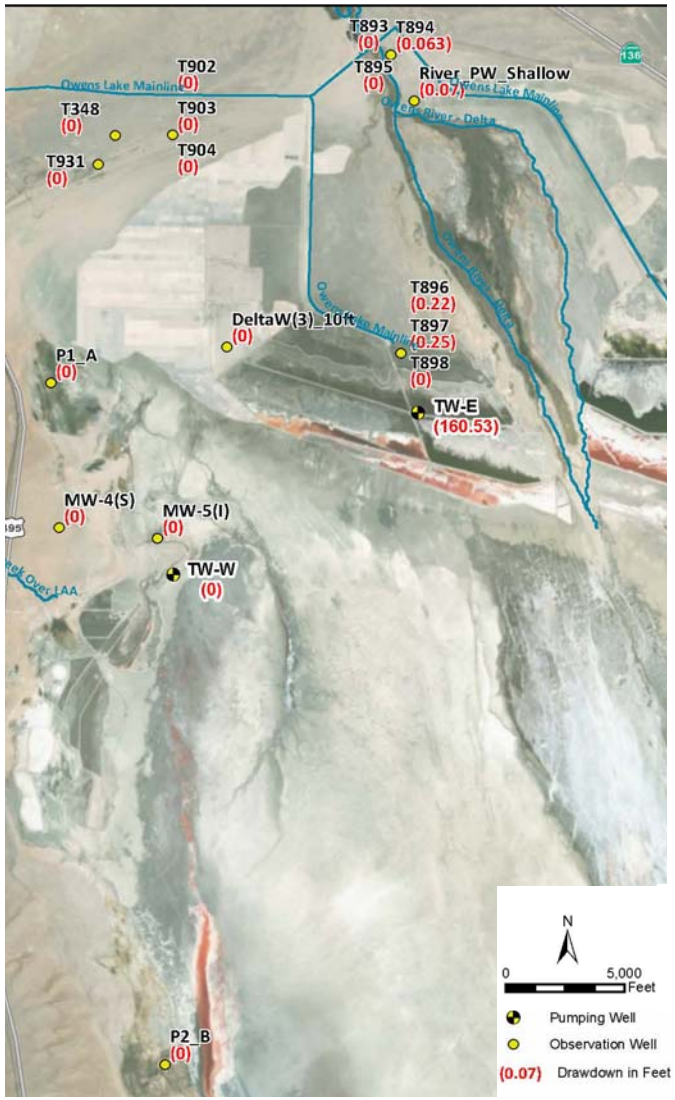


update on pumping tests

TW-E Constant Rate Test Results

Drawdown after 24 hours of pumping:

- Principally observed in pumping well TW-E
- None observed to the west
- Drawdown observed to the north attributed to other wells pumping



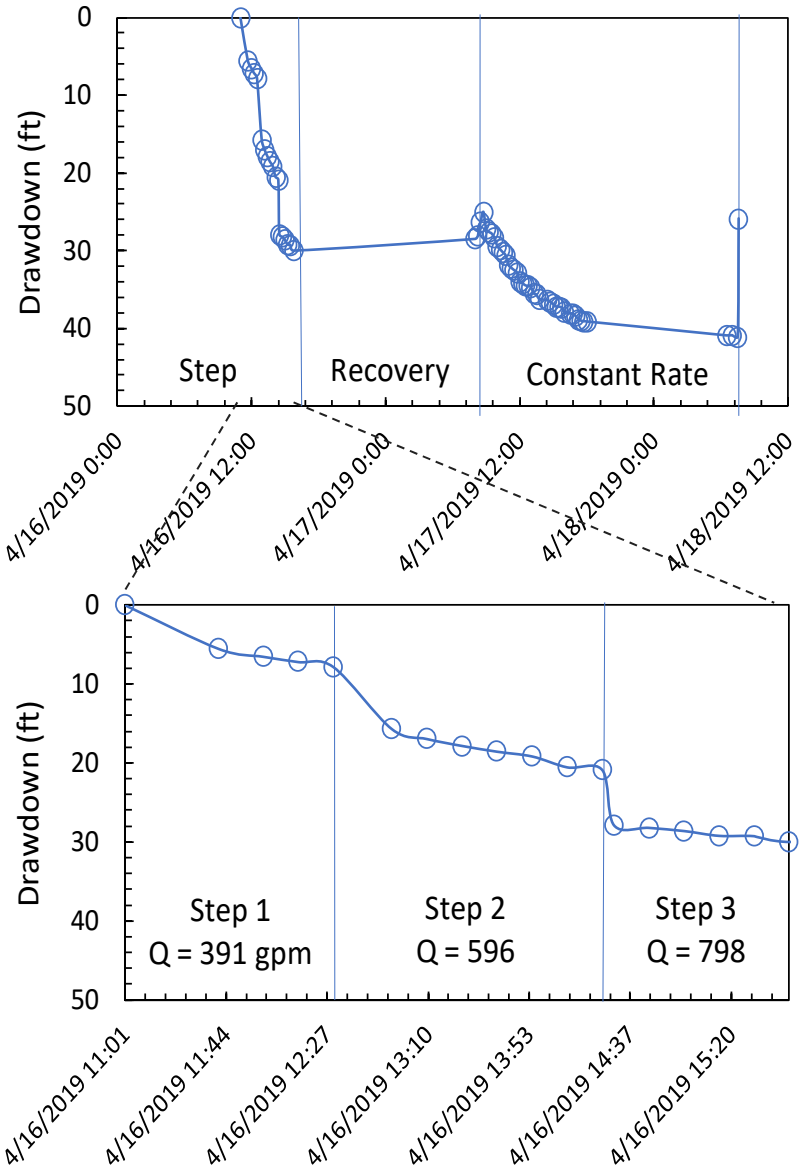
update on pumping tests

TW-W Pump Test

- Flowing well
- Step tests (1.5 hours each)
- Partial recovery
- 24-hour average flow rate (720 gpm)
- Observed well response in MW-5 (deep) and TW-E

Step Test

- Slower step equilibration
- Minor response in TW-E and MW-5

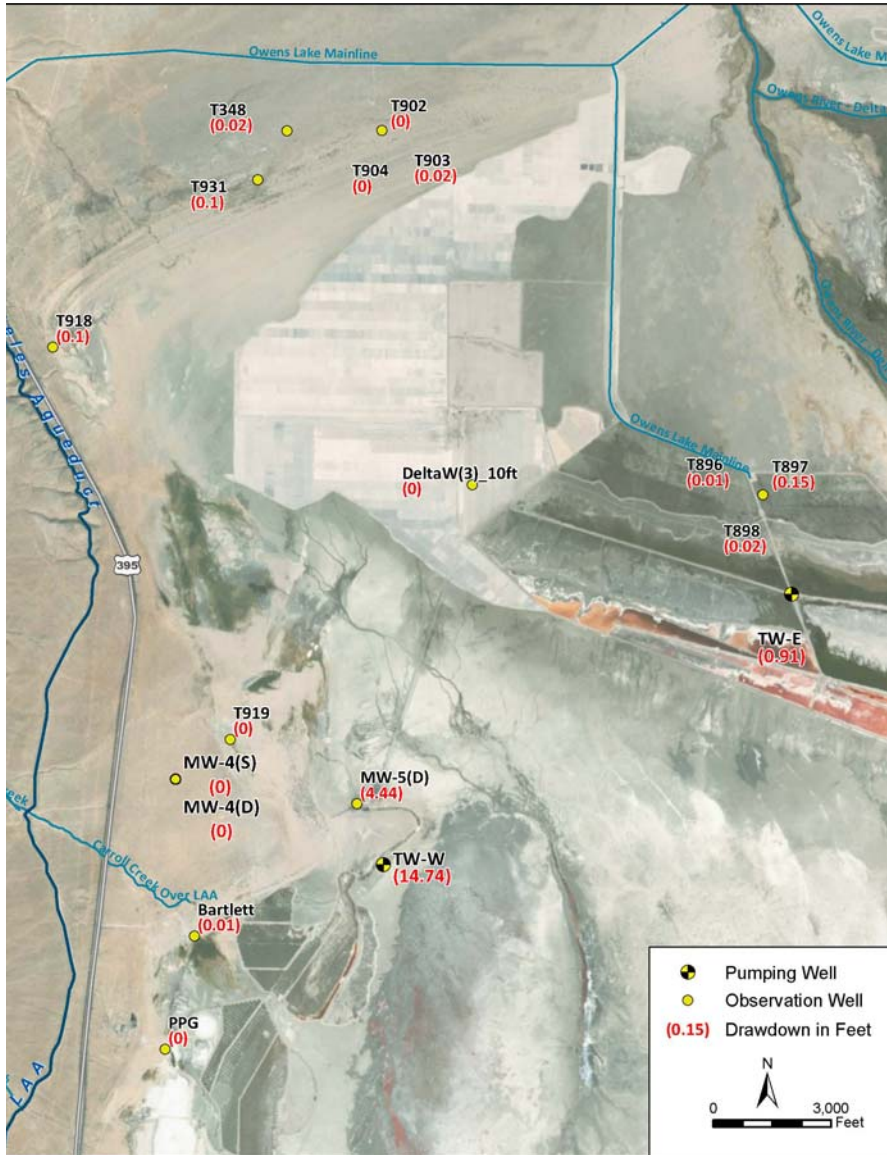


update on pumping tests

TW-W Constant Rate Test Results

Drawdown after 24 hours of flowing well test:

- Principally observed in flowing well TW-W
- MW-5 (deep) over 4 feet
- TW-E appears to respond by less than 1 foot
- Drawdown observed to the north attributed to other wells pumping



update on pumping tests

Constant Rate 24-Hour Test Results

- TW-E has lower specific capacity and transmissivity than TW-W
- Limited observation well response to testing
- Limited ability to evaluate aquifer properties
- Low pumping rate and short duration prevented collection of water level response across faults
- 24-hour test was insufficient stress to describe fault effects

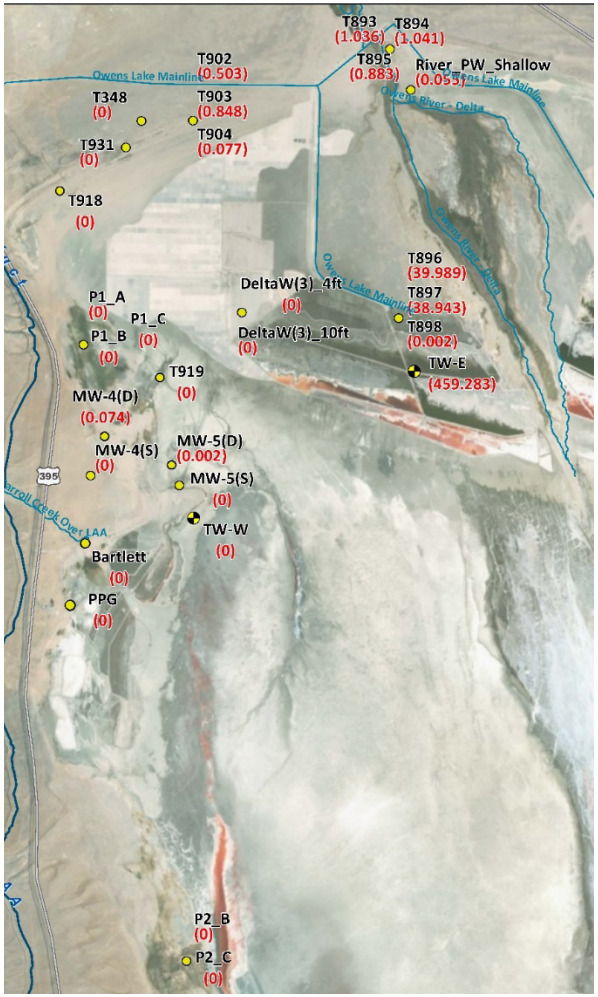
Constant-Rate Test	TW-E	TW-W
Pumping/Flow rate (gpm)	860	720
Drawdown (ft)	161.48	14.7
Specific capacity (gpm/ft)	5.33	17.51
Transmissivity (gpd/ft)	15	12,000
Storage Coefficient	0.0048	0.0014
Recovery (minutes)	3	5

update on pumping tests

Recommendations

- Conduct longer term aquifer test at TW-E at higher rate
- To address fault effects on groundwater flow
- Should provide for observation well response
- Allows for determination of distributed hydraulic and storage properties
- Should provide parameter updates for the model calibration

Simulation of pumping TW-E at 1,200 gpm for 6 months. Multiple scenarios will be simulated.



Proposed Long-Term Pumping Test of TW-E

Background

- The 24-hour pumping test resulted in minimal aquifer response beyond TW-E
- No observed aquifer response across Owens Valley and Owens River Faults
- Hydraulic characteristics of faults could not be evaluated
- Previous long-term pumping tests in 1999 and 2012 at Owens Lake included minimal monitoring locations

update on pumping tests

Planned Pumping Test

- Proposed long-term pumping test from August 2020 to January 2021
- Pumping rate of 1,000 to 1,200 gpm, based on model simulations
- Extensive monitoring in the area between and across Owens River and Owens Valley Faults
- The current RPPs will be utilized
- Don’t expect to reach trigger level 1 for any of the resources

update on pumping tests

Expected Benefits

- Improved aquifer characteristics including horizontal and vertical conductivity and storage coefficients in each aquifer
- Improved aquifer characteristics of Owens River and Owens Valley Faults
- Improved model calibration and post audit of the model performance
- A good dry run of RPPs to evaluate their effectiveness
- Measurement of potential effect of pumping on groundwater levels under the VDAs